PITTSBURG UNIFIED SCHOOL DISTRICT
HIGHLANDS ELEMENTARY SCHOOL
PORTABLES REPLACEMENT PROJECT

BID ADDENDUM NO. 1
April 9, 2026

PROJECT: **Highlands Elementary School – Portables Replacement**
4141 Harbor St, Pittsburg, CA 94565

OWNER: Pittsburg Unified School District
3200 Loveridge Road, Pittsburg, CA 94565

Notice is hereby given to all prospective bidders that plans and specifications on the subject project are modified as hereinafter set forth. This Addendum shall be attached to and form a part of the plans and specifications. All bidders must acknowledge receipt of this addendum on the Bid Form. In case of difference with previous addenda or communications, this addendum takes precedence.

It is the responsibility of all bidders to notify all subcontractors from whom they request bids and from whom they accept bids of all changes contained in this addendum.

PROJECT MANUAL

1. **Item No. PM-1**
   Reference: N/A
   Attachment: Mandatory Pre-Bid Conference & Walkthrough Sign-In Sheet
   Description: Pre-bid conference sign-in sheet

2. **Item No. PM-2**
   Reference: Section 00 01 10
   Attachment: Table of Contents
   Description: Replace Section 00 01 10 with the attached that includes Divisions 0 & 1, Technical Specifications and Appendixes for geotechnical data and cutsheets

3. **Item No. PM-3**
   Reference: Section 00 01 20
   Attachment: List of Schedules
   Description: Replace Section 00 01 20 with the attached

4. **Item No. PM-4**
   Reference: Section 00 11 16
   Attachment: Notice to Bidders
   Description: Replace Section 00 11 16 with the attached and referenced attached "Statewide Edicational Wrap Up Program (SEWUP) JPA Owner Controlled Insurance Program (OCIP)

5. **Item No. PM-6**
   Reference: Section 32 31 13
   Attachment: Chain Link Fences & Gates
   Description: Replace Section 32 31 13, “Chain Link Fences & Gates” with the attached.

ATTACHMENTS:

Project Manual:

- **Mandatory Pre-Bid Conference & Walkthrough Sign-In Sheet**
- **Section 00 01 10 Table of Contents**
- **Section 00 01 20 List of Schedules**
- **Section 00 11 16 Notice to Bidders**
  - **“Statewide Edicational Wrap Up Program (SEWUP) JPA Owner Controlled Insurance Program (OCIP)**
- **Section 32 31 13 Chain Link Fences & Gates**

Appendixes:

- **Cutsheets**
  - **Gate Hardware**
  - **Play Equipment**
- **Geotechnical Data**
  - **Geotechnical Engineering Study, Highlands Elementary School: Portable Replacement, Pittsburg, CA, prepared by Geo-Engineering Solutions Inc., dated October 8, 2025, Geo-Eng Project Number 32-1769**
  - **Supplemental Letter to Geotechnical Study, Highlands Elementary School: Portable Replacement, 4141 Harbor Street, Pittsburg, CA, Geo-Eng Project No. 32-1769**
  - **Updated Seismic Design Parameters, Highlands Elementary School: Portable Replacement, 4141 Harbor Street, Pittsburg, CA, Geo-Eng Project No. 32-1769**

END OF BID ADDENDUM #1 ITEMS

Pre-Bid Conference & Walkthrough

Thursday, 04/02/2026 @ 3:00 PM (PDT)
Highlands Elementary School, 4141 Harbor Street, Pittsburg, CA
Highlands ES – Portables Replacement Project, Increment 1

CONFERENCE AGENDA –

I. Introduction of Project Team Members:

Sean Vandermey – PUSD Director of Facilities Management
Keith Holtslander – PUSD Project Manager
Donna Fentanes – PUSD Facilities Specialist
Kati Mejia – PUSD Special Projects Accountant
Matthew Belasco – PUSD Director of MO&T Dept.
Mike Barros – PUSD Supervisor of M&O Dept.
Benjamin Trotter – PUSD Supervisor of M&O Dept.
Roberta Wahl – PLUM Architects
Melissa Mackenzie – PLUM Architects
TBD – PUSD DSA Project Inspector
TBD – Geotechnical Observations & Materials Testing Agency
TBD – Special Inspections & Materials Testing Agency

II. Schedule:

A. Wednesday, April 22, 2026: Pre-Bid RFI's due by 5:00 PM (PST). Pre-Bid RFI's are to be submitted in writing to Melissa Mackenzie at melissa@plumarchitects.com, with a copy to Keith Holtslander at kholtslander@pittsburgusd.net.
B. Tuesday, April 28, 2026 @ 2:00 PM (PdT): Bids Due
C. May 15, 2026: Notice of Award
D. June 08, 2026: Notice to Proceed
E. June 08, 2026: On-Site Construction Work Start
F. July 30, 2027: On-Site Construction Work Completion
G. August 27, 2027: Contract Completion

III. Requirements of the Bid:

A Preparation of Bid Forms – Complete all bid forms; the bids must be signed in the name of the bidder, and submitted in a sealed envelope bearing the name of the bidder and the name of the Project.
B. Bid Security – Each bid shall be accompanied by a Bid Bond, or a Certified Check or Cashier's Check made payable to the District as described in the Contract Documents.
C. Designated Subcontractors List, Site Visit Certification and Non-Collusion Declaration are required to accompany Bid.
D. Delivery of Bids – **2:00 PM (PST) on Tuesday, April 28, 2026**. Bids will be received at the **District Site Support Services Center, 3200 Loveridge Road, Pittsburg, CA 94565**.

E. Insurance Requirements – See General Conditions 00 72 13 Article 13 for Insurance and Bonds, and Special Conditions, 00 73 13, Article 6 for Insurance Policy Limits.
F. Fingerprinting Requirements – See Special Conditions, Article 9 for the specifics.
G. Note that the District's PSA with the Local Trades Council will be applicable to this Project if the bid dollar amount total is $1M or higher.

IV. Site Walk:

A. Area of Work and Site Access

V. Questions and Answers:

Pre-Bid Conference & Walkthrough Sign-In Sheet

Date: Thursday, 04/02/2026 @ 3:00 PM (PDT) at

Highlands Elementary School, 4141 Harbor Street, Pittsburg, CA

Highlands ES – Portables Replacement Project, Increment 1

Print Name	Signature	Company Name	Email Address	Phone #
Andrea Fajardo	Andrea Fajardo	Saboo Inc.	office@sabooinc.com	(626)200-2849
Josie Marrufo		NG Builder Company	Bids@ngbuilders.LLC	707-852-5
Brandon Botteri	Brandon Botteri	NG Builder Company	Bids@ngbuilders.LLC	
Marc Guido		TRIVALLEY EXCAVATING	MARC@TRIVALLEYX.COM	925 7895464
MARCEL EAST		STRAWN CONSTRUCTION	meast@scinc.com	510 707-2526
MELISSA McKENZIE		PLUM ARCHITECTS	melissa@plumarchitects.com	415.837.0900
ROBERTA WAHL		PLUM ARCHITECTS	roberta@plumarchitects.com	415.837.0900
Roberta Wahl		PLUM Architects	roberta@plumarchitects.com	415 837 0900
Diego Barajas		CWS const. group	estimator@cwsconstructiongroup.com	415-209-0224
PREETHAM GARAGA		SWINERTON BUILDERS	preetham.garaga@swinerton.com	9162795942
Will Connell		JL Construction	Will@JLCBuild.com	707-527-5788
Hectos barajas		Kerex engineering, Inc	Hector@kerexengineering.com	925457 7165
Alejandro Garcia	Alejandro Garcia	AMG.	agarcia@amgofca.com	916-709-4630
Andrey Bondarenk		JPB Designs Inc	bids jpbdesigns@gmail.com	916-549-6259
Tim Puris		Xeela Engineering Inc	info@xeelaengineering.com	916 607 1359
Polat Shamyladar		Azul Works	estimating@azulworks.com	415-786-8953

Pre-Bid Conference & Walkthrough Sign-In Sheet

Print Name	Signature	Company Name	Email Address	Phone #
E. KEITH HOLTSLANDER	E. Keith Holtslander	PUSD	KHOLTSLANDER@PITTSBURGUSD.NET	925-473-2428
SEAN VANDERMEY	—	PUSD	SVANDERMEY@ " "	925-473-2438
KATI MEJIA	—	PUSD	KMEJIA@PITTSBURGUSD.NET	925-473-2368

DOCUMENT 00 01 10

TABLE OF CONTENTS

PROCUREMENT AND CONTRACTING REQUIREMENTS, GENERAL REQUIREMENTS

Procurement and Contracting Requirements

Solicitation

Instructions for Procurement

Available Information

Procurement Forms and Supplements

Quality Requirements

Temporary Facilities and Controls

Product Requirements

Execution and Closeout Requirements

TECHNICAL SPECIFICATIONS

Existing Conditions

Concrete

Specialties

Electrical

Division 26	Section	Title
	26 05 00	Basic Electrical Requirements
	26 08 00	Testing
	26 24 00	Service and Distribution System
	26 27 00	Basic Electrical Materials and Methods
	26 51 01	Lighting
	26 56 01	Site Lighting
	26 57 00	Low Voltage Lighting Control System

Earthwork

Division 31	Section	Title
	31 10 00	Site Preparation and Plant Protection
	31 20 00	Earthwork
	31 23 33	Trenching & Backfilling
	31 24 00	Erosion & Sedimentation Controls

Exterior Improvements

Division 32	Section	Title
	32 11 23	Aggregate Base Courses
	32 12 16	Asphalt Paving & Surfacing
	32 17 23	Pavement Markings
	32 31 13	Chain Link Fences & Gates
	32 84 00	Irrigation
	32 93 00	Planting

Utilities

Division 33	Section	Title
	33 40 00	Storm Drainage
	33 40 10	Surface Drainage Systems

APPENDIXES

CUTSHEETS

Gate Hardware

Play Equipment

GEOTECHNICAL

Geotechnical Engineering Study, Highlands Elementary School: Portable Replacement, Pittsburg, CA, prepared by Geo-Engineering Solutions Inc., dated October 8, 2025, Geo-Eng Project Number 32-1769

Supplemental Letter to Geotechnical Study, Highlands Elementary School: Portable Replacement, 4141 Harbor Street, Pittsburg, CA, Geo-Eng Project No. 32-1769

Updated Seismic Design Parameters, Highlands Elementary School: Portable Replacement, 4141 Harbor Street, Pittsburg, CA, Geo-Eng Project No. 32-1769

END OF TABLE OF CONTENTS SECTION

DOCUMENT 00 01 20

LIST OF SCHEDULES

- 07/11/25: A/E Team Proposals Due
- 08/06/25: A/E Proposals Results finalized information due @ 10:00 AM (PDT) for 08/13/25 School Board Meeting
- 08/13/25: School Board Approval of Contract with A/E Team (Information & Action to Award)
- 08/14/25: Formal PO & Contract Issued to A/E Team
- 08/18/25: Start of Increment 1 Design Work & Contract Docs. Preparation
- 01/22/26: Submit Increment 1 (Misc. Site Demolition Work; Bldg. Site Work; Bldg. Site Utilities Work; Shade Structure & Mini-Quad Construction; Main and North Parking Lot Expansion & Alterations Construction, including associated Shade Canopies; all associated Hardscaping & Landscaping Work, Replacement of Existing Kinder. & TK Play Structures; Haz. Mat. Abatement Work; and Demolition & Removal of existing Portable Classrooms Bldgs.) Plans & Specs. to DSA for Review & Approval
- 02/11/26: School Board Approval of the Resolution to Approve Use of Best Value Procurement Method per Assembly Bill (AB) 361 for Turnkey Modular Buildings (Increment 2)
- 03/11/26: School Board presented Item on Approval to Advertise for Bid (Increment 1)
- 03/27/26 & 04/03/26: Advertise for Bid (Increment 1)
- 04/02/26: Pre-Bid Conference & Walkthrough @ 3:00 (PDT) at Highlands Elementary School (Increment 1)
- 04/08/26: Contract Bidding Documents Available to Bidders (Increment 1)
- 04/14/26: Increment 1 Plans & Specs. receive Approval by DSA
- 05/06/26: Best Value RFP for Turnkey Modular Buildings (Increment 2) finalized information due @ 10:00 AM (PDT) for 05/13/26 School Board Meeting
- 05/08/26: Final Due Date for Increment 1 Pre-Bid RFI's @ 5:00 PM (PDT)
- 05/13/26: School Board Approval of the Release of the Best Value RFP for Turnkey Modular Buildings (Increment 2)
- **05/14/26: Bids for Increment 1 Due @ 2:00 PM (PDT) at District Site Support Services Center**
- 05/14/26 & 05/21/26: RFP for Turnkey Modular Buildings (Increment 2) Advertised
- 05/15/26: Best Value RFP for Turnkey Modular Buildings (Increment 2) Issued to Modular Building Companies
- 05/19/26: Bid Protest Period Ends @ 2:30 PM (PDT) (Increment 1)
- 05/20/26: Bid Results & Contract Award finalized information due @ 10:00 AM (PDT) for 05/27/26 School Board Meeting (Increment 1)
- 05/27/26: School Board Approval & Contract Award (Increment 1)

- 05/28/26: Notice of Award & Contract Issued (Increment 1)
- 05/29/26: Final Due Date for Increment 2 RFP RFI's @ 4:00 PM (PDT)
- 06/04/26: Proposals for Turnkey Modular Buildings (Increment 2) Due @ 12:00 PM Noon (PDT)
- 06/04/26: End of 2025-2026 School Year
- 06/08/26: Increment 1 Notice to Proceed Issued (tentative pending Contract turnaround time)
- 06/08/26: **On-Site Construction Work Start Date for Increment 1, Schedule Milestone #1** (Main Parking Lot & North Parking Lot Expansion & Alterations, including Shade Canopies) & **Schedule Milestone #2** (New Bldgs. Pad & Site Utilities Work)
- 06/09/26: Decision Made on Turnkey Modular Buildings Manufacturer (Increment 2)
- 06/10/26: RFP for Turnkey Modular Buildings (Increment 2) Results & Contract Award finalized information due @ 10:00 AM (PDT) for 06/17/26 School Board Meeting
- 06/17/26: School Board Approval of the Purchase of the Turnkey Modular Buildings (Increment 2)
- 06/18/26: Formal PO & Contract Issued to Turnkey Modular Buildings Manufacturer (Increment 2)
- 07/31/26: Submit Increment 2 (Turnkey Modular Buildings) Plans & Specs. to DSA for Review & Approval
- 08/05/26: Start of 2026-2027 School Year
- 09/04/26: **On-Site Construction Completion Date of Increment 1, Schedule Milestone #1** (Main Parking Lot & North Parking Lot Expansion & Alterations, including Shade Canopies)
- 09/25/26: **On-Site Construction Completion Date of Increment 1, Schedule Milestone #2** (New Modular Buildings Pad & Site Utilities Work)
- 09/25/25: Increment 2 Plans & Specs. receive Approval by DSA
- 10/05/26: Increment 2 Notice to Proceed Issued (tentative pending Contract turnaround time)
- 10/05/26: **On-Site Construction Work Start Date for Increment 2** (New Modular Buildings and Replacement of the School's Existing PA and Clock & Bell System)
- 06/03/27: End of 2026-2027 School Year
- 06/04/27: District to Vacate Existing Portables
- 06/07/27: **On-Site Construction Work Start Date for Increment 1, Schedule Milestone #3** (Demolition & Removal of Existing Portables, Connection of the New Buildings' Downspouts to the Storm Drain Lines, Construction of Hardscaping directly adjacent to the New Buildings, Construction of Shade Structure & Mini-Quad including All Landscaping & Hardscaping; and Replacement of Existing Kinder. & TK Play Structures, including Shade Structure)

- 07/23/27: **On-Site Construction Completion Date of Increment 2** (New Modular Building and Replacement of the School's Existing PA and Clock & Bell System)
- 07/26/27: District to Move Into & Occupy New Building
- 07/30/27: **On-Site Construction Completion Date of Increment 1, Schedule Milestone #3** (Demolition & Removal of Existing Portables, Connection of the New Buildings' Downspouts to the Storm Drain Lines, Construction of Hardscaping directly adjacent to the New Buildings, Construction of Shade Structure & Mini-Quad including All Landscaping & Hardscaping; and Replacement of Existing Kinder. & TK Play Structures, including Shade Structure)
- 08/04/27: Start of 2027-2028 School Year
- 08/27/27: **Contract Completion Date**
- 09/15/27 or 09/29/27: School Board Approval to file Notice of Completion

END OF DOCUMENT

DOCUMENT 00 11 16

NOTICE TO BIDDERS

1. Notice is hereby given that the governing board ("Board") of the Pittsburg Unified School District ("District") will receive sealed bids for the following project, Bid No. **26-003**, Bid Package **Highlands ES – Portables Replacement Project, Increment 1** ("Project" or "Contract"):

   Highlands ES – Portables Replacement Project, Increment 1

2. The Project consists of:

   Increment 1 of the Contract - Miscellaneous Site Demolition Work; Bldg. Site Work; Bldg. Site Utilities Work; Shade Structure & Mini-Quad Construction; Main and North Parking Lot Expansion & Alterations Construction, including associated Shade Canopies; all associated Hardscaping & Landscaping Work, Replacement of Existing Kinder. & TK Play Structures: Haz. Mat. Abatement Work; and Demolition & Removal of existing Portable Classrooms Bldgs.

3. To bid on this Project, the Bidder is required to possess one or more of the following State of California contractors' license(s)**:**

   A or B

   The Bidder's license(s) must remain active and in good standing throughout the term of the Contract.

4. To bid on this Project, the Bidder is required to be registered as a public works contractor with the Department of Industrial Relations pursuant to the Labor Code. The Bidder's registration must remain active throughout the term of the Contract.

5. Contract Documents will be available on or after **Wednesday, April 08, 2026** for review, and/or purchase, at ABC Imaging, 1381 Franquette Avenue, Concord, CA 94520. Phone 925-674-0900, Fax 925-674-0993. In addition, Contract Documents are available for bidders' review at the following builders' exchanges:

   A. Bay Area Builder's Exchange (510) 483-8880
   B. Construction Bid Board (800) 424-3996
   C. Dodge Data & Analytics (877) 958-5062
   D. Peninsula Builders Exchange (650) 591-4486
   E. Sacramento Builders Exchange (916) 442-8991
   F. Solano-Napa Builders Exchange (707) 255-2515
   G. Builders of Santa Clara (408) 727-4000
   H. San Francisco Builders Exchange (415) 282-8220
   I. Marin Builders Exchange (415) 462-1220
   J. Builders Exchange of Stockton (209) 478-1005

6. Contract Documents, in hard copy format, are available for purchase for Two Hundred Dollars ($200.00), or in electronic format for Fifty Dollars ($50.00), each set at ABC Imaging. The fee is non-refundable. Payment is to be made directly to ABC Imaging. Contract Documents will also be available on or after **Wednesday, April 08, 2026** for review electronically on the PUSD Website under the Facilities Planning & Management Department tab

7. Sealed bids will be received until **2:00 PM (PDT), Thursday, May 14, 2026**, at the **District Site Support Services Center, 3200 Loveridge Road, Pittsburg, CA 94565**, at or after which time the bids will be opened and publicly read aloud. Any bid that is submitted after this time shall be nonresponsive and returned to the bidder. Any claim by a bidder of error in its bid must be made in compliance with section 5100 et seq. of the Public Contract Code.

8. Pursuant to Public Contract Code section 20111.6, only prequalified bidders will be eligible to submit a bid for contracts $1 million or more using or planning to use state bond funds. Any bid submitted by a bidder who is not prequalified shall be non-responsive and returned unopened to the bidder. Moreover, any bid listing subcontractors holding C-4, C-7, C-10, C-16, C-20, C-34, C-36, C-38, C-42, C-43 or C-46 licenses, if used, who have not been prequalified, shall be deemed nonresponsive and will not be considered. A prequalification application can be obtained from Ms. Donna Fentanes at dfentanes@pittsburgusd.net.

9. All bids shall be on the form provided by the District. Each bid must conform and be responsive to all pertinent Contract Documents, including, but not limited to, the Instructions to Bidders.

10. A bid bond by an admitted surety insurer on the form provided by the District, cash, or a cashier's check or a certified check, drawn to the order of the Pittsburg Unified School District, in the amount of ten percent (10%) of the total bid price, shall accompany the Bid Form and Proposal, as a guarantee that the Bidder will, within seven (7) calendar days after the date of the Notice of Award, enter into a contract with the District for the performance of the services as stipulated in the bid.

11. A mandatory pre-bid conference and site visit will be held on **Thursday, April 02, 2026, at 3:00 PM (PDT)** at **Highlands ES @ 4141 Harbor Street in Pittsburg, CA 94565**. Failure to attend or tardiness will render bid ineligible.

12. The successful Bidder shall be required to furnish a 100% Performance Bond and a 100% Payment Bond if it is awarded the Contract for the Work.

13. The successful Bidder may substitute securities for any monies withheld by the District to ensure performance under the Contract, in accordance with the provisions of section 22300 of the Public Contract Code.

14. The District has elected to provide an owner-controlled or wrap-up insurance program ("OCIP"). The successful Bidder and its subcontractors shall be required to participate in and comply with the OCIP.

15. The Contractor and all Subcontractors under the Contractor shall pay all workers on all Work performed pursuant to this Contract not less than the general prevailing rate of per diem wages and the general prevailing rate for holiday and overtime work as determined by the Director of the Department of Industrial Relations, State of California, for the type of work performed and the locality in which the work is to be performed within the boundaries of the District, pursuant to section 1770 et seq. of the California Labor Code. Prevailing wage rates are also available from the District or on the Internet at: <http://www.dir.ca.gov>.

16. This Project is subject to labor compliance monitoring and enforcement by the Department of Industrial Relations pursuant to Labor Code section 1771.4 and subject to the requirements of Title 8 of the California Code of Regulations. The Contractor and all Subcontractors under the Contractor shall furnish electronic certified payroll records directly to the Labor Commissioner weekly and within ten (10) days of any request by the District or the Labor Commissioner. The successful Bidder shall comply with all requirements of Division 2, Part 7, Chapter 1, Articles 1-5 of the Labor Code.

17. The District has entered into a Project Stabilization Agreement that is applicable to this Project. For questions or assistance concerning the Project Stabilization Agreement, contact Mr. Sean Vandermey @ 925-473-2438, or at 3200 Loveridge Road in Pittsburg, California 94565.

18. The District shall award the Contract, if it awards it at all, to the lowest responsive responsible bidder based on:

    A. The base bid amount.

19. The Board reserves the right to reject any and all bids and/or waive any irregularity in any bid received. If the District awards the Contract, the security of unsuccessful bidder(s) shall be returned within sixty (60) days from the time the award is made. Unless otherwise required by law, no bidder may withdraw its bid for ninety (90) days after the date of the bid opening.

END OF DOCUMENT

SECTION 32 31 13

CHAIN LINK FENCES AND GATES

PART 1 - GENERAL

1.1 SUMMARY

A. This Section includes the following:

1. Galvanized steel chain-link fabric.
2. Galvanized steel framework.
3. Galvanized steel gates.

1.2 DEFINITIONS

A. CLFMI: Chain Link Fence Manufacturers Institute.

B. Zn-5-Al-MM Alloy: Zinc-5 percent aluminum-mischmetal alloy.

1.3 SUBMITTALS

A. Product Data: Material descriptions, construction details, dimensions of individual components and profiles, and finishes for the following:

1. Fence and gate posts, rails, and fittings.
2. Chain-link fabric, reinforcements, and attachments.
3. Gates and hardware.

B. Shop Drawings: Show locations of fence, each gate, posts, rails, and tension wires and details of extended posts, extension arms, gate swing, or other operation, hardware, and accessories. Indicate materials, dimensions, sizes, weights, and finishes of components. Include plans, elevations, sections, gate swing and other required installation and operational clearances, and details of post anchorage and attachment and bracing.

C. Product Certificates: Signed by manufacturers of chain-link fences and gates certifying that products furnished comply with requirements.

D. Qualification Data: For firms and persons specified in "Quality Assurance" Article to demonstrate their capabilities and experience. Include lists of completed projects with project names and addresses, names and addresses of architects and owners, and other information specified.

E. Field Test Reports: Indicate and interpret test results for compliance of chain-link fence and gate grounding and bonding with performance requirements.

1.4 QUALITY ASSURANCE

A. Installer Qualifications: An experienced installer who has completed chain-link fences and gates similar in material, design, and extent to those indicated for this Project and whose work has resulted in construction with a record of successful in-service performance.

B. Source Limitations for Chain-Link Fences and Gates: Obtain each grade, finish, type, and variety of component for chain-link fences and gates from one source with resources to provide chain-link fences and gates of consistent quality in appearance and physical properties.

C. Emergency Access Requirements: Comply with requirements of authorities having jurisdiction for automatic gate operators serving as a required means of access.

1.5 PROJECT CONDITIONS

A. Existing Utilities: Do not interrupt utilities serving facilities occupied by Owner or others unless permitted under the following conditions and then only after arranging to provide temporary utility services according to requirements indicated:

1. Notify Construction manager not less than two days in advance of proposed utility interruptions.
2. Do not proceed with utility interruptions without Construction written permission.

B. Field Measurements: Verify layout information for chain-link fences and gates shown on Drawings in relation to property survey and existing structures. Verify dimensions by field measurements.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Manufacturers: Subject to compliance with requirements, provide products by one of the following or equal:

1. Chainlink Fence
   a. Anchor Fence Co.
   b. All Fence Company, Inc.
   c. Diamond Fence Co., Inc.

2.2 CHAIN-LINK FENCE FABRIC

A. Steel Chain-Link Fence Fabric: Height to match existing Fence. Provide fabric fabricated in one-piece widths for fencing in height of 12 feet (3.6 m) and less. Comply with CLFMI's "Product Manual" and with requirements indicated below:

1 Galvanized Steel Fabric: 9 gauge, 2” mesh, Type II, zinc coated (galvanized) with a minimum coating weight Class 2, not less than 2 oz./sq. ft. of uncoated wire surface.

2. Coat selvage ends of fabric that is metallic coated during the weaving process with manufacturer's standard clear protective coating.

2.3 INDUSTRIAL FENCE FRAMING

A. Round Steel Pipe: Standard weight, Schedule 40, galvanized steel pipe complying with ASTM F 1083. Comply with ASTM F 1043, Material Design Group IA, external and internal coating Type A, consisting of not less than 1.8-oz./sq. ft. zinc. Strength and stiffness requirements, Line, End, Corner, and Pull Posts and Top Rail: Per requirements for Light Industrial Fence. Posts to be set in concrete, minimum of 2-feet deep. Depth of footings shall be proportionate to height of fence posts.

B. Post Brace Rails: Match top rail for coating and strength and stiffness requirements. Provide brace rail with truss rod assembly for each gate, end, and pull post. Provide two brace rails extending in opposing directions, each with truss rod assembly, for each corner post and for pull posts. Provide rail ends and clamps for attaching rails to posts.

H. Top Rails: Fabricate top rail from lengths 21 feet or longer, with swedged-end or fabricated for expansion-type coupling, forming a continuous rail along top of chain-link fabric.

I. Intermediate Rails: Match top rail for coating and strength and stiffness requirements

J. Bottom Rails: Match top rail for coating and strength and stiffness requirements.

K. Extended Members: Extend posts above top of chain-link fabric to match existing as required to attach barbed wire assemblies.

2.4 TENSION WIRE

A. General: Provide horizontal tension wire at the following locations: As indicated on Drawings.

B. Metallic-Coated Steel Wire: 0.177-inch- diameter, marcelled tension wire complying with ASTM A 824. Type II, zinc coated (galvanized) by the hot-dip process with the following minimum coating weight: Matching chain-link fabric coating weight.

2.5 PEDESTRIAN SWING GATES

A. General: Comply with ASTM F 900 and Section 1133 B.2.4.1 for the following swing-gate types: Single gate, and double gate. Gates are to be ADA compliant and have accessible hardware if in the path of travel.

B. Metal Pipe and Tubing: Galvanized steel.

C. Frames and Bracing: Fabricate members of galvanized aluminum for the gate fabric height: As indicated on Drawings.

D. Frame Corner Construction: Welded or assembled with corner fittings and 5/16-inch- diameter, adjustable truss rods for panels 5 feet wide or wider.

E. Gate Posts: Fabricate members from round schedule 40 pipe, hot-dipped galvanized pipe with outside dimension and weight according to ASTM F 900.

F. Hardware: Provide hardware and accessories for each gate:

HARDWARE SET: 01 GATE 01

3	Ea	Hinge	5BB1HW 5 X 4.5 NRP	630	IVE
1	EA	VANDL CLASSROOM SEC	ND98TD RHO 47342586	626	SCH
2	EA	PRIMUS CORE	20-740-XP	626	SCH
1	Ea	Floor Stop	FS18L	BLK	IVE

HARDWARE SET: 02 GATE 02&03

1	EA	PANIC HARDWARE	CD-OUT-PA-AX-99-L-KC-06-WH	626	VON
1	EA	Primus Rim Cylinder	20-757-XP	626	SCH
1	EA	Primus Mort. Cylinder	20-771-XP XQ11-948	626	SCH
1	EA	Closer	MAMMOTH-HD	SILV	LOX
1	EA	Chain Link Adapter	CLB-MAMMOTH	689	LOX
1	EA	Floor Stop	FS18L	BLK	IVE

HARDWARE SET: 03 GATE 04

3	Ea	Hinge	CI3000	DDT	IVE
1	Ea	Panic Hardware	CD-OUT-PA-AX-99-L-KC-06-WH	626	VON
1	Ea	Primus Rim Cylinder	20-757-XP	626	SCH
1	Ea	Primus Mort. Cylinder	20-771-XP XQ11-948	626	SCH
1	Ea	Floor Stop	FS18L	BLK	IVE

2.8 FITTINGS

A. General: Provide fittings for a complete fence installation, including special fittings for corners. Comply with ASTM F 626.

B. Post and Line Caps: Hot-dip galvanized pressed steel or hot-dip galvanized cast iron. Provide weathertight closure cap for each post. Provide line post caps with loop to receive tension wire or top rail.

C. Rail and Brace Ends: Hot-dip galvanized pressed steel or hot-dip galvanized cast iron. Provide rail ends or other means for attaching rails securely to each gate, corner, pull, and end post.

D. Rail Fittings: Provide the following:
   1. Top Rail Sleeves: Hot-dip galvanized pressed steel or hot-dip galvanized cast iron . Not less than 6 inches long.
   2. Rail Clamps Hot-dip galvanized pressed steel. Provide line and corner boulevard clamps for connecting intermediate rails in the fence line to line posts.

E. Tension and Brace Bands: Hot-dip galvanized pressed steel.

F. Tension Bars: Hot-dip galvanized steel, length not less than 2 inches shorter than full height of chain-link fabric. Provide one bar for each gate and end post, and two for each corner and pull post, unless fabric is integrally woven into post.

G. Truss Rod Assemblies: Hot-dip galvanized steel rod and turnbuckle or other means of adjustment.

H. Tie Wires, Clips, and Fasteners: Provide the following types according to ASTM F 626:

1. Standard Round Wire Ties, for attaching chain-link fabric to posts, rails, and frames, Hot-Dip Galvanized Steel: 0.148-inch- diameter wire; galvanized coating thickness matching coating thickness of chain-link fence fabric.
2. Power-driven fasteners.
3. Round Wire Hog Rings: Hot-dip galvanized steel or aluminum for attaching chain-link fabric to horizontal tension wires.

2.9 FOOTINGS

A. Provide Class A ready-mixed concrete. Batch mixing at site not acceptable. Adding water to concrete after initial batching is subject to approval of the Testing Lab Technician and/or Project Inspector.

Use Portland Cement Concrete containing not less than 564 pounds of Portland Cement per cubic yard, with a compressive strength of not less than 3000 p.s.i.

B. Indicate water added to mix at job site on each delivery ticket. Show quantity of water added. Site water tempered mixes exceeding specified slump range will be rejected as not complying with specification requirements.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine areas and conditions, with Installer present, for compliance with requirements for a verified survey of property lines and legal boundaries, site clearing, earthwork, pavement work, and other conditions affecting performance. Do not begin installation before final grading is completed.

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

3.2 PREPARATION

A. Stake locations of fence lines, gates, and terminal posts. Do not exceed intervals of 500 feet or line of sight between stakes. Indicate locations of utilities, lawn sprinkler system, underground structures, benchmarks, and property monuments.

3.3 INSTALLATION, GENERAL

A. General: Install chain-link fencing to comply with ASTM F 567 and more stringent requirements specified.

B. Post Excavation: Drill or hand-excavate holes for posts to diameters and spacings indicated, in firm, undisturbed or compacted soil.

C. Post Setting: Hand-excavate holes for post foundations in firm, undisturbed or compacted soil. Set terminal, line, and gateposts in concrete footing. Protect portion of posts aboveground from concrete splatter. Place concrete around posts and vibrate or tamp for consolidation. Using mechanical devices to set line posts per ASTM F 567 is permitted. Verify that posts are set plumb, aligned, and at correct height and spacing, and hold in position during placement and finishing operations until concrete is sufficiently cured.

1. Dimensions and Profile: As indicated on Drawings.
2. Exposed Concrete Footings: Extend concrete to grade, smooth, and shape to shed water.
3. Posts Set into Concrete in Voids: Form or core drill holes not less than 5 inches deep and 3/4 inch larger than OD of post. Clean holes of loose material, insert posts, and fill annular space between post and concrete with anchoring cement, mixed and placed to comply with anchoring material manufacturer's written instructions, and finished sloped to drain water away from post.

3.4 CHAIN-LINK FENCE INSTALLATION

A. Terminal Posts: Locate terminal end, corner, and gate posts per ASTM F 567 and terminal pull posts at changes in horizontal or vertical alignments.

B. Line Posts: Space line posts uniformly at not more then 10’ o.c.

C. Post Bracing Assemblies: Install according to ASTM F 567, maintaining plumb position and alignment of fencing. Install braces at end and gate posts and at both sides of corner and pull posts. Locate horizontal braces at midheight of fabric on fences with top rail and at two-thirds fabric height on fences without top rail. Install so posts are plumb when diagonal rod is under proper tension.

D. Tension Wire: Install according to ASTM F 567, maintaining plumb position and alignment of fencing. Pull wire taut, without sags. Fasten fabric to tension wire with 0.120-inch- diameter hog rings of same material and finish as fabric wire, spaced a maximum of 24 inches o.c. Install tension wire in locations indicated before stretching fabric.

1. Top Tension Wire: Install tension wire through post cap loops.
2. Bottom Tension Wire: Install tension wire within 6 inches of bottom of fabric and tie to each post with not less than same gage and type of wire.

E. Top Rail: Install according to ASTM F 567, maintaining plumb position and alignment of fencing. Run rail continuously through line post caps, bending to radius for curved runs and terminating into rail end attached to posts or post caps fabricated to receive rail at terminal posts. Provide expansion couplings as recommended by fencing manufacturer.

F. Intermediate Rails: Install in one piece as indicated on Drawings, spanning between posts, using fittings, special offset fittings, and accessories.

G. Bottom Rails: Install, spanning between posts, using fittings and accessories.

H. Chain-Link Fabric: Apply fabric to outside of enclosing framework. Leave 1 inch between finish grade or surface and bottom selvage, unless otherwise indicated. Pull fabric taut and tie to posts, rails, and tension wires. Anchor to framework so fabric remains under tension after pulling force is released.

I. Tension or Stretcher Bars: Thread through fabric and secure to end, corner, pull, and gate posts with tension bands spaced not more than 15 inches o.c.

J. Tie Wires: Use wire of proper length to firmly secure fabric to line posts and rails. Attach wire at one end to chain-link fabric, wrap wire around post a minimum of 180 degrees, and attach other end to chain-link fabric per ASTM F 626. Bend ends of wire to minimize hazard to individuals and clothing.

1. Maximum Spacing: Tie fabric to line posts 12 inches o.c. and to braces 24 inches o.c.

K. Fasteners: Install nuts for tension bands and carriage bolts on the side of the fence opposite the fabric side. Peen ends of bolts or score threads to prevent removal of nuts.

O. Tennis Court Fencing: Construct tennis court fence according to ASTM F 969.

3.5 GATE INSTALLATION

A. General: Install gates according to manufacturer's written instructions, level, plumb, and secure for full opening without interference. Attach fabric as for fencing. Attach hardware using tamper-resistant or concealed means. Install ground-set items in concrete for anchorage. Adjust hardware for smooth operation and lubricate where necessary.

3.6 ADJUSTING

A. Gate: Adjust gate to operate smoothly, easily, and quietly, free from binding, warp, excessive deflection, distortion, nonalignment, misplacement, disruption, or malfunction, throughout entire operational range. Confirm that latches and locks engage accurately and securely without forcing or binding.

B. Lubricate hardware, and other moving parts.

3.7 DEMONSTRATION

A. Engage a factory-authorized service representative to train Owner's personnel to adjust, operate, and maintain gates.

1. Test and adjust hardware, and other operable components. Replace damaged or malfunctioning operable components.

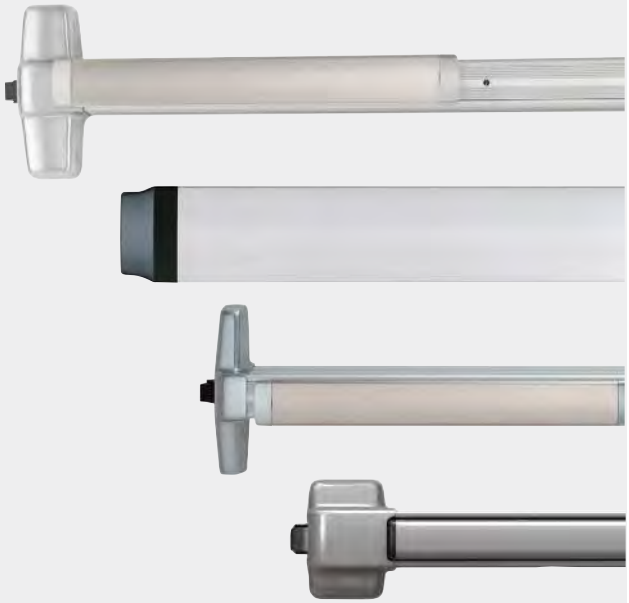
END OF SECTION

ALLEGION™

VON DUPRIN®

AX exit devices

Featuring the 98/99, 94/95, 33/35A and 22 Series devices



The exit device that requires only 5 pounds of force to operate

The AX was born out of a need to provide the market with a solution that meets the 2010 ADA Standards for Accessible Design (Chapters 404.2.7 and 309.4) that state the force reqiured to activate operable parts shall be 5 pounds maximum. The 2013 California Building Code (Chapter 11B-309.4) adopted virtually identical requirements that went into effect January 1st, 2014, and has been carried forward into subsequent editions of the CBC.

Since pioneering the first exit device in 1908, Von Duprin life safety products have provided unparalleled quality, performance and flexibility for schools, hospitals, stadiums and public buildings. These products come with the support and customer care only offered by Von Duprin, providing the confidence and peace of mind at critical moments of life safety.

AX device code compliance

- ANSI/BHMA A156.3
- 2010 ADA Standards for Accessible Design (Chapters 404.2.7 and 309.4)
- California Building Code (Chapter 11B-309.4)]
- UL305 Panic Exit
- UL305, UL10C Fire Exit Hardware

How to identify the Von Duprin AX device

1. Look for the “AX” Prefix in the hardware schedule and/or specification.
2. In the field, look for the compliance note on the UL label and the AX device label. Both labels can be found on the center case cover of the exit device as shown below.

UL label

Contact Allegion today at 877-671-7011 or us.allegion.com to learn how the AX device can help you provide accessibility without compromise.

AX98/99 Series specifications

Device types	AX98/99 - Rim AXXP98/99 - Rim AX98/9927 - LBR AX98/9950 WDC - LBL AX98/9949 - LBL and LBL-AFL - Concealed Vertical Cable Less Bottom Latch
Device functions	EO, DT, NL, NLOP, L, LBE, LDT, LNL
Device lengths	3’ / 4’
Rating	Panic and Fire
Electric options	QELX - Quiet Electric Latch Retraction for AX LX - Latchbolt monitor switch LXLC - Latchbolt monitor switch low current LXRX - Latchbolt pushpad monitor LXRXLC - Latchbolt pushpad monitor low current RX - Pushpad monitor switch RXLC - Pushpad monitor switch low current RX2 - Double pushpad monitor switch ALK - Alarm kit SS - Signal switch
Mechanical options	GBK - Glass bead kit -2 - Double cylinder -2SI - Double cylinder with Security Indicator QM - Quiet Mechanical SNB - Sex bolts SEC - Security screws WP - Weep holes
Dogging options*	Hex key dogging = Standard CD - Cylinder dogging CDSI - Cylinder dogging with Security Indicator DI - Dogging indicator HDSI - Hex dogging with security indicator LD - Less dogging SD - Special dogging

AX94/95 Series specifications

Device types	AX94/9547
Device functions	EO, DT, L, LDT, LBE, LNL
Device lengths	3’ / 4’
Rating	Panic and Fire
Electric options	LX - Latchbolt monitor switch

*For panic devices only

AX33/35A Series specifications

Device types	AX33/35A - Rim AX33/3549 - LBL & LBL-AFL - Concealed Vertical Cable Less Bottom Latch
Device functions	EO, DT, NL, NLOP, L, LBE, LDT
Device lengths	3’ / 4’
Rating	Panic and Fire
Electric options	QELX - Quiet Electric Latch Retraction for AX LX - Latchbolt monitor switch LXLC - Latchbolt monitor switch low current LXRX - Latchbolt pushpad monitor LXRXLC - Latchbolt pushpad monitor low current RX - Pushpad monitor switch RXLC - Pushpad monitor switch low current RX2 - Double pushpad monitor switch ALK - Alarm kit SS - Signal switch
Mechanical options	GBK - Glass bead kit QM - Quiet Mechanical SEC - Security screws WP - Weep holes
Dogging options*	Hex key dogging = Standard CD - Cylinder dogging CDSI - Cylinder dogging with Security Indicator HDSI - Hex dogging with security indicator LD - Less dogging

AX22 Series specifications

Device types	AX22 - Rim AX2227 - LBR
Device functions	EO, DT, NL, NLOP, L, LBE
Device lengths	3’ / 4’
Rating	Panic and Fire
Electric options	LX - Latchbolt monitor switch RX - Pushpad monitor switch RX2 - Double pushpad monitor switch ALK - Alarm kit
Mechanical options	GBK - Glass bead kit
Dogging options*	Hex key dogging = Standard LD - Less dogging

Ordering information

AX - 98 - - L - F - -2 - US26D - 3' - RHR - 996L - 06 - SNB

Prefix	Series	Device type	Function	Rating	Suffix	Finish	Door Width	Handing	Trim	Lever Style	Accessories
1	2	3	4	5	6	7	8	9	10	11	12

Selections correspond with the numbers above. See price book for specific configuration options.

1 Prefix

AX*	Accessible Device
QELX	Quiet Electric Latch Retraction for AX
QM	Quiet Mechanical
CDSI	Cylinder dogging with Security Indicator
HDSI	Hex dogging with Security Indicator
LX	Latchbolt Monitor Switch
LXLC	Latchbolt Monitor Switch Low Current
LXRX	Latchbolt Pushpad Monitor
LXRXLC	Latchbolt Pushpad Monitor Low Current
RX	Pushpad Monitor Switch
RXLC	Pushpad Monitor Switch Low Current
RX2	Double Pushpad Monitor Switch
SS	Signal Switch

*Must be specified; may select more than one prefix.

2 Series

XP98	Series XP98 - smooth
98	Series 98 - smooth
XP99	Series XP99 - grooved
99	Series 99 - grooved
94	Series 94 - smooth
95	Series 95 - grooved
33A	Series 33A - grooved
35A	Series 35A - smooth
22	Series 22

3 Device type

N/A	Rim
27	Surface Vertical Rod
47	Concealed Vertical Rod
49	Concealed Vertical Cable

4 Function

EO	Exit Only
DT	Dummy Trim
NL	Night Latch
NLOP	Night Latch - Optional Pull
L	Lever
LBE	Lever - Blank Escutcheon
LDT	Lever, Rigid - Dummy Trim
LNL	Lever, Rigid - Night Latch

5 Rating

N/A	Panic
F	Fire-rated

6 Suffix

-2	Double Cylinder
-2SI	Double Cylinder with Security Indicator
LBL	Less Bottom Latch
LBR	Less Bottom Rod
LBL-AFL	Less Bottom Latch with Fire Pin
WH	Weep Holes

7 Finish

See pricebook for finish offering

8 Door Width

3’	Standard Default
4’	

9 Handing

RHR	Right Hand Reverse
LHR	Left Hand Reverse

10 Trim

See pricebook for trim/control offering

11 Lever style

See pricebook for lever style offering

12 Accessories

ALK	Alarm Kit
GBK	Glass Bead Kit
SNB	Sex Bolts

Contact Allegion today at 877-671-7011 or us.allegion.com to learn how the AX device can help you provide accessibility without compromise.

About Allegion

Allegion (NYSE: ALLE) is a global pioneer in safety and security, with leading brands like CISA®, Interflex®, LCN®, Schlage®, SimonsVoss® and Von Duprin®. Focusing on security around the door and adjacent areas, Allegion produces a range of solutions for homes, businesses, schools and other institutions. Allegion is a $2 billion company, with products sold in almost 130 countries. For more, visit **www.allegion.com.**

KRYPTONITE ■ LCN ■ SCHLAGE ■ STEELCRAFT ■ VON DUPRIN

ALLEGION™

010333 Rev. 9/20
www.allegion.com/us

LOCINOX

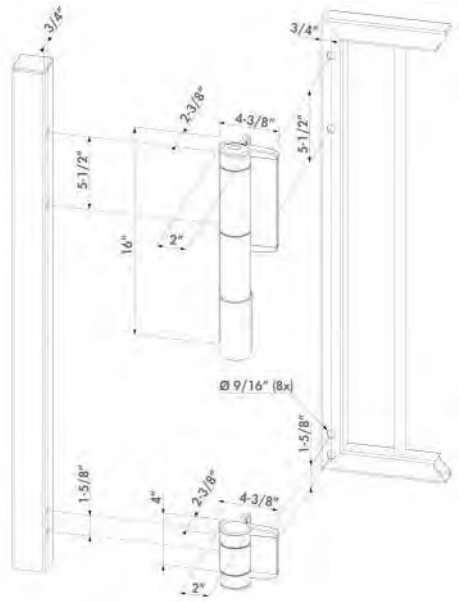
New Fit

MAMMOTH-180-USA

https://www.locinoxusa.com/gate-closers/new-fit/p00009620

Finish shall be Silver

Sleek and powerful self-closing hinge for 180° gate situations. The Mammoth is perfectly fit for gates up to 330 lbs. It is equipped with a double bearing for exceptional functionality. An Active Thermal System guarantees a constant closing speed, unaffected by weather conditions. The Dino hinge is included.



TECHNICAL SPECIFICATIONS

Left-Right Adjustability	Yes
Profile Type	Round
	Square
Gate Width	35-7/16 - 60in
Gate Weight	0 - 330 lbs
Force	11.80 ft-lbs
Maximum Opening Angle	180°
Final Snap Adjustability	Yes
Speed Adjustability	Yes
Horizontal Adjustability	13/16 in
Vertical Adjustability	13/16 in
Hydraulic Gate Closer	Yes
Materials Main Part(s)	Powder Coated Aluminium
Temperature Range	-30°C / 70°C
Norms	ADA
	PMR
Hours of Salt Spray Testing	500
Test Frequency	500000
Years of Warranty	3

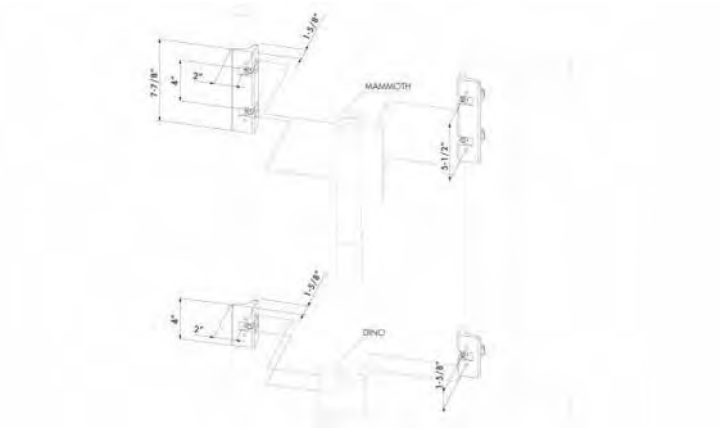
LOCINOX

Chain link adapters

CLB-MAMMOTH

https://www.locinoxusa.com/gate-closers/chain-link-adapters/p00004465

High quality aluminum bracket for installation of Mammoth gate closer on round chain link fences. The brackets are installed between gate closer and post. A perfect, firm and easy installation is guaranteed thanks to the drilling jig. The brackets for the Dino hinge are included.



TECHNICAL SPECIFICATIONS

ALLEGION™

SCHLAGE®

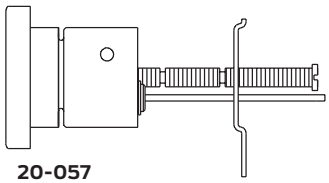
Key systems

Product and application reference guide

FSIC cylinders to use with rim and mortise exit devices

Security	Key mechanism	Pins	Patent protected keyway families	Rim cylinders for exit devices: Core and housing	Mortise cylinders for Von Duprin and other straight cam applications: Cylinder with compression ring, spring and blocking ring	Cylinder with compression ring and spring
Basic security Open keyways	Standard pin and tumbler	6	–[1]	20-057	20-061	26-091
	Check pin	6	S (Everest 29)			
Enhanced security Restricted use	Check pin	6	T (Everest 29)	20-057	20-061	26-091
	SL	7	R (Everest 29)	91-170	91-173	91-171
Upgraded security Primus level restricted use, geographic exclusivity, and independent sidebar	Legacy Primus	6	S, T (Everest 29)	20-757	20-771	20-763
	Primus RP	6	Obverse[1] (Classic)	20-757-RP	20-771-RP	20-763-RP
	Primus XP	6	S, T (Everest 29)	20-757-XP	20-771-XP	20-763-XP
	Primus XP SL	7	R (Everest 29)	91-870-XP	91-873-XP	91-871-XP
Housing less core				20-079	26-094	26-064

1. Out-of-patent keyways like Classic Obverse are available. Obverse, however, can gain patent protection in a Primus RP or XP cylinder. RP is recommended because patent coverage carries to 2029 versus 2024 for Primus XP.



20-057

Security	Key mechanism	Pins	Patent protected keyway families	Adams Rite MS, 4500 and 4700 Series, Lori 4500 Series, and Corbin Russwin DL3000 Series deadlocks/deadlatches: Cylinder with compression ring, spring and 3/16" plus 3/8" blocking rings	Cylinder with compression ring and spring	Adams Rite 4070 deadbolt: Cylinder with compression ring, spring and 3/16" plus 3/8" blocking rings
Basic security Open keyways	Standard pin and tumbler	6	–[1]	20-062	26-098	20-091
	Check pin	6	S (Everest 29)			
Enhanced security Restricted use	Check pin	6	T (Everest 29)	20-062	26-098	20-091
	SL	7	R (Everest 29)	91-174	91-172	91-175
Upgraded security Primus level restricted use, geographic exclusivity, and independent sidebar	Legacy Primus	6	S, T (Everest 29)	20-766	--	20-722
	Primus RP	6	Obverse[1] (Classic)	20-766-RP	--	20-722-RP
	Primus XP	6	S, T (Everest 29)	20-766-XP	--	20-722-XP
	Primus XP SL	7	R (Everest 29)	91-874-XP	--	91-875-XP
Housing less core				20-060[2]	--	20-090[2]

1. Out-of-patent keyways like Classic Obverse are available. Obverse, however, can gain patent protection in a Primus RP or XP cylinder. RP is recommended because patent coverage carries to 2029 versus 2024 for Primus XP.
2. Housing only - does not come with compression ring, spring, or blocking ring.

K510-711
Adams Rite MS cam

B520-378
Adams Rite 4070 cam

SHUTIt® BADASS™

Industrial Weld-On Hinges. Adjustable. Maintenance Free.

CI3000
Shut-It® Badass™
Original

CI3000R
Shut-It® Badass™
Round Yoke

CI3100
Shut-It® Badass™
Rusted Original

CI3200
Shut-It® Badass™
Combo with
Steel Body

CI3300
Shut-It® Badass™
Combo with
Aluminum Body

CI3400
Shut-It® Badass™
Aluminum

CI3500
Shut-It® Badass™
Heavy Duty

CI3520
Shut-It® Badass™
Hundred Year

CI3800
Shut-It® Badass™
Stainless

Click on hinge photo for more product information.

Why Shut-It® Badass™ Heavy Duty Weld-On Hinges Are Better

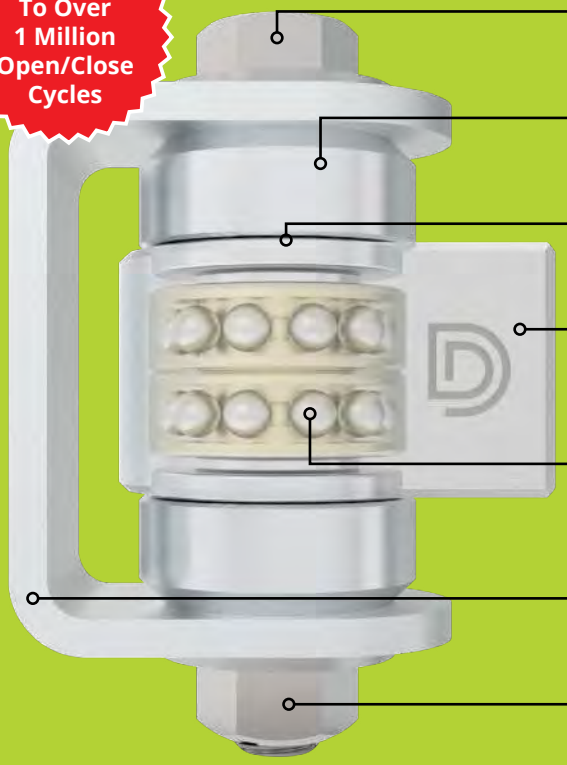
- High-temperature sealed bearings – safe to powder coat with hinges installed on gate (except CI3800)
- No greasing or maintenance required on sealed bearings. EVER!
- Horizontally adjustable for perfect installations
- Durable – Tested to over 1 Million open/close cycles
- Low friction operation helps extend the life of the gate operator mechanism
- Models available for both aluminum and steel gates

D&D Technologies®
World's most trusted gate hardware

CODE	PRODUCT DESCRIPTION	YOKE MATERIAL	BODY MATERIAL	YOKE SHAPE	BODY SHAPE	GAP VARIANCE	MAX GATE WEIGHT
CI3000	Shut-It® Badass™ Original	Steel	Steel	Square	Square or Round	2½ - 3"	1,000 lb
CI3000R	Shut-It® Badass™ Round Yoke	Steel	Steel	Round	Square or Round	2½ - 3"	1,100 lb
CI3100	Shut-It® Badass™ Rusted Original	Steel	Steel	Square	Square or Round	2½ - 3"	1,100 lb
CI3200	Shut-It® Badass™ Combo With Steel Body	Aluminum	Steel	Square	Square or Round	2½ - 3"	600 lb
CI3300	Shut-It® Badass™ Combo With Aluminum Body	Steel	Aluminum	Square	Square	2½ - 3"	600 lb
CI3400	Shut-It® Badass™ Aluminum	Aluminum	Aluminum	Square	Square	2½ - 3"	600 lb
CI3500	Shut-It® Badass™ Heavy Duty	Steel	Steel	Square	Square or Round	2½ - 3"	1,500 lb
CI3520	Shut-It® Badass™ 100 Year	Steel	Steel	Square	Square or Round	2½ - 3"	1,500 lb
CI3800	Shut-It® Badass™ Stainless Steel	Sainless Steel	Sainless Steel	Square	Square or Round	2½ - 3"	1,100 lb

Click Here for Shut-It® Load Chart

Tested To Over 1 Million Open/Close Cycles



Heavy Duty Shaft (bolt)
On all hinges gives the highest weight ratings in the industry

Precision Bushing
Distributes gate load for optimal performance

Tightest Tolerance in the Industry
CNC machined to perfection and virtually frictionless movement

Zinc Electroplating
- Long lasting rust and corrosion protection
- No need to grind off before welding

High-Temperature Sealed Bearings
- No greasing or maintenance required on sealed bearings. EVER!
- Safe from powder coating heat

Adjustable Yoke
Horizontally adjustable for perfect installation and flexibility

Stover Lock Nut
Uniquely shaped threads that provide a vibration resistant friction fit so the nut stays put

Click here to access product specifications and CAD drawings: https://us.ddtech.com/pages/specifications-cads-drawing

: (800) 716-0888 : ddtech.com : news.ddtech.us@assaabloy.com

LIFETIME LIMITED WARRANTY

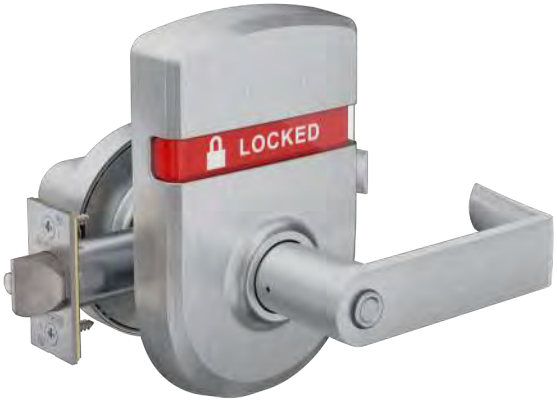
Warranty conditions vary according to gate or door application and usage. See full Warranty details and limitations on D&D Technologies' website.

5 Years on Bearings

D&D Technologies®
World's most trusted gate hardware www.ddtech.com

ND Series

Grade 1 Cylindrical Locks

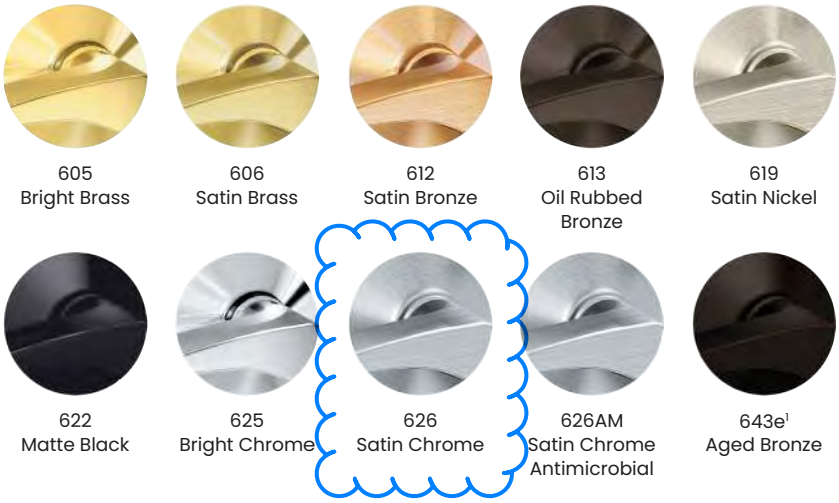


OVERVIEW

Beyond Grade 1 performance is the hallmark of the mechanical and electrified ND Series locks. These locks are put through extreme levels of testing and are proven to withstand 3,100 in-lb. of abusive lever torque-more than 2-1/2 times the Grade 1 standard requirement. Offset lever pull testing up to 1,600 lbs. assures you of the lock's superb resistance against pry bar attacks. More than strong, ND Series is built to last and shows nearly zero droop or wobble after 16 million cycles.

All ND Series locks including electronic functions, ligature-resistant trims, and ground-breaking, high-visibility status indication trims use the common cylindrical ANSI 161L door preparation making them easily interchangeable. They are ideal for all new construction and retrofit applications where Grade 1 strength and security are desired.

FINISHES



605
Bright Brass

606
Satin Brass

612
Satin Bronze

613
Oil Rubbed Bronze

619
Satin Nickel

622
Matte Black

625
Bright Chrome

626
Satin Chrome

626AM
Satin Chrome Antimicrobial

643e[1]
Aged Bronze

1. e = an equivalent finish to the BHMA standard

LEVER STYLES

ATH (Athens)
8AT - Milled tactile warning

BRK (Boardwalk)
8BK - Knurled tactile warning

BRW (Broadway)
8BY - Knurled tactile warning

LAT (Latitude)
8LT - Milled tactile warning

LON (Longitude)
8LN - Milled tactile warning

OME (Omega)

RHO (Rhodes)[1]
8RO - Milled tactile warning[1]

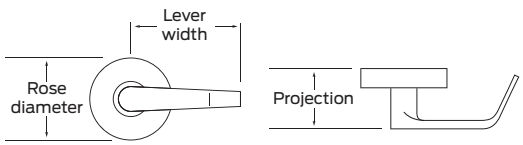
SPA (Sparta)
8SP - Milled tactile warning

TLR (Tubular)
8TR - Milled tactile warning

Dimensions		
Lever	**Width**	**Projection**
ATH (Athens)	4.56"	3.31"
BRK (Boardwalk)	4.94"	3.06"
BRW (Broadway)	4.50"	3.06"
LAT (Latitude)	4.50"	3.13"
LON (Longitude)	4.94"	3.13"
OME (Omega)	5.06"	3.31"
RHO (Rhodes)	4.56"	2.94"
SPA (Sparta)	4.94"	3.50"
TLR (Tubular)	4.94"	3.00"

Rose	**Diameter**
Standard	3.44"

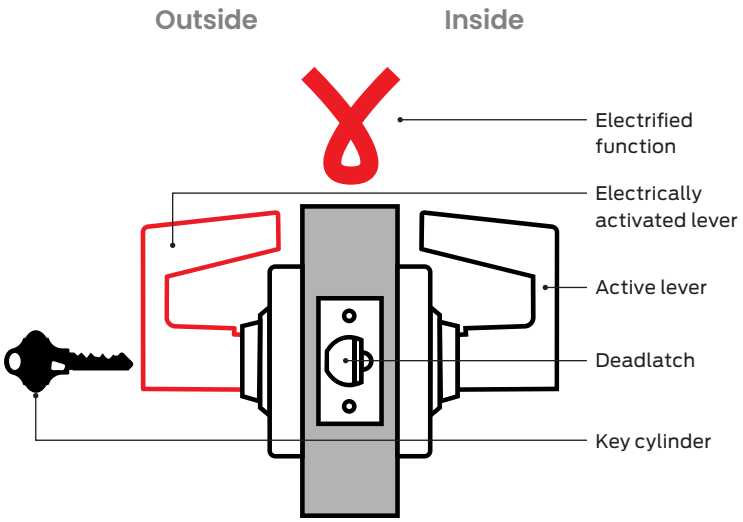
Return to door meets 1/2" requirement for Boardwalk (BRK), Longitude (LON), Omega (OME), Rhodes (RHO), Sparta (SPA) and Tubular (TLR) levers



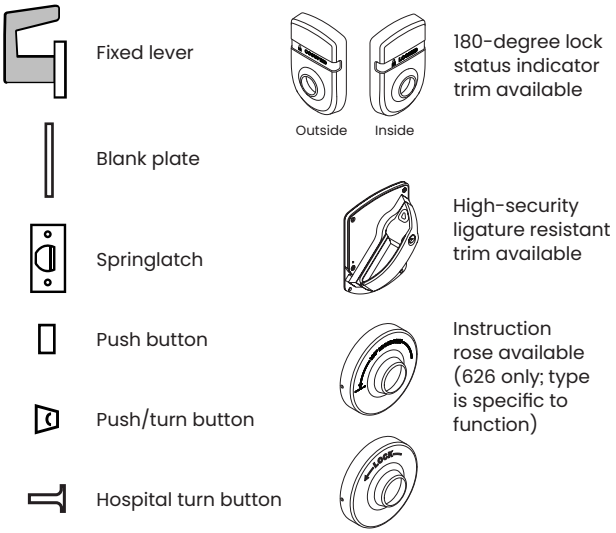
1. Optional break-away feature available on Rhodes levers for most locking functions. This allows the handheld part of the lever to break away from the shank when extreme torque is applied protecting the spring cage and locking mechanism from exterior access to help prevent unauthorized break-in.

MECHANICAL LOCK FUNCTIONS

Legend



Key



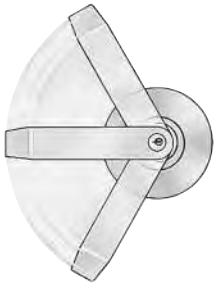
Product Identification Guide

ND60 with XL12-001

Lock series

Function code

Functions requiring special ordering nomenclature

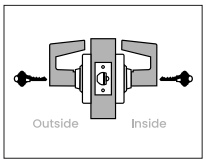


Vandlgard® functions.

Some functions feature Vandlgard locked lever protection. It allows the outside lever to rotate freely up and down when locked to limit the ability of vandals to apply excessive force to the chassis helping to prevent damage to internal components.

MECHANICAL KEYED, DOUBLE CYLINDER FUNCTIONS

Schlage **ANSI**
ND82 **F87**

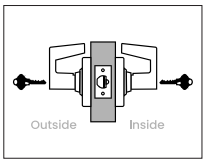


Institution lock

- Lever with key cylinder both sides; deadlatch
- Both levers are always fixed
- Key in either lever retracts latch only

Caution: Double cylinder locks on any door, in any structure which is used for egress are a life safety hazard in times of emergency and their use is not recommended. Installation should be in accordance with existing codes only.

Schlage **ANSI**
ND93 **F88**



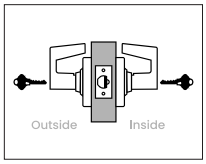
Vandlgard® vestibule lock

- Lever with key cylinder both sides; deadlatch
- In unlocked state latch is retracted by either lever
- Outside lever is made inoperative by key inside; key outside does not lock; Vandlgard® allows outside lever to rotate freely when locked
- Key outside retracts latch but cannot unlock outside lever; only key inside unlocks
- Inside lever always free for immediate egress

Note: Available with optional instruction rose identifying key rotation direction for rapid lockdown. 626 finish only.

To order with instruction rose specify function and note XN12-035 as a special option.

Schlage **ANSI**
ND98 **F110**



Vandlgard® classroom security lock (180-degree lockdown)

- Lever with key cylinder both sides; deadlatch
- In unlocked state latch is retracted by either lever
- Outside lever is made inoperative by rotating key in either lever 180 degrees counter-clockwise and returning to start position; Vandlgard® allows outside lever to rotate freely when locked
- Unlock outside lever by rotating key 180 degrees clockwise in either lever and returning to start position
- Inside lever always free for immediate egress

Locks ordered in 626 finish come standard with instruction rose (47342586) identifying key rotation direction for rapid lockdown. Other finishes receive a standard rose.

Note: Locks ordered with indicator trim fit 1-3/4" doors. Sold separate spacer kits allow application to doors 1-3/8" to 1-11/16".

CYLINDERS

Conventional cylinder	
P	6-pin Conventional (keyed 5)
P6	6-pin Conventional (standard)
Z	SL 7-pin Conventional (A2 pinning)
L	Less Conventional
C	Less 6-pin Conventional double cylinder

Full size interchangeable core (FSIC)	
R	6-pin FSIC
M	SL 7-pin FSIC (A2 pinning)
J	Less FSIC
T	Refundable FSIC construction core

Small format interchangeable core (SFIC)	
G	7-pin SFIC (A2 pinning)
B	Less SFIC
BDC	Disposable SFIC construction core
H	Refundable SFIC construction core

SPECIFICATIONS

Chassis	
Material	Modular design of zinc and steel components plated for corrosion protection
Door thickness	**Standard:** 1-5/8" (41 mm) to 2-1/8" (54 mm) **Optional:** 1-3/8" (35 mm) - 6" (152 mm) EE, EO, EI, ED configurations
Handing	Non-handed
Trim	
Levers	**Standard:** Pressure cast zinc, plated to match product finish specification in nine designs - Athens (ATH), Boardwalk (BRK), Broadway (BRW), Latitude (LAT), Longitude (LON), Omega (OME), Rhodes (RHO), Sparta (SPA), and Tubular (TLR) **Optional:** Tactile feature available on all designs, specify 8AT, 8RO, 8SP, 8TR, 8LT, 8LN, 8OM, 8BY, or 8BK
Rose/escutcheon	Wrought brass or zinc, plated to match product finish specification
Finishes	**Nine available:** 605, 606, 612, 613, 619, 622, 625, 626, 643e; optional antimicrobial coating is available on 626–order as 626AM
Latch	
Backset	**Standard:** 2-3/4" (70 mm) **Optional:** 2-3/8", 3-3/4", 5" (60, 92, 127 mm)
Latch bolt	**Standard:** 1/2" (12 mm) throw spring latch or deadlatch (Stainless Steel) **Optional:** 3/4" (19 mm) throw anti-friction deadlatch available for pairs of doors
Strike	**Standard:** ANSI curved lip: 1-1/4" x 4-7/8" x 1-3/16" (32 mm x 124 mm x 30 mm) **Optional:** T Strike, ANSI strikes with alternative lip lengths, dust box options
Keying	
Formats	**Standard:** 6-pin Conventional cylinder with two patented keys **Optional:** FSIC, SFIC, and 7-pin SL cylinder formats plus less cylinder options made to fit non-Schlage cylinders from Best, Corbin Russwin, Medeco, Sargent and Yale
Access security	**Standard:** 6-pin, patented Everest 29 S123 keyway **Optional:** Open, restricted, Primus®, master keying, and construction keying
Wired electrified	
Input voltage	Autodetecting 12-24V DC, +/- 10%
Operating mode	Fail safe or fail secure via switch on chassis
Current draw	0.24 amps maximum; 0.01 amps holding
Request to Exit	Modular - 3A @ 125VAC / 2A @ 30VDC
Warranty	
	10 years mechanical, 3 year wired electrified
Certifications	
ANSI/BHMA	All ND Series comply with A156.2-2011, Series 4000 Grade 1 cylindrical locks; Wired electrified complies with A156.25 (indoor)
ICC	Complies with ICC A117.1 Accessible and Usable Buildings and Facilities
UL/cUL	UL 10C and CAN/ULC-S104; All locks 3-hour A label single fire door 4'0" x 10'0"; pair doors 3-hour fire door 8'0" x 8'0" with 3/4" latch option; pair doors 90-minute fire 8'0" x 10'0" with 3/4" latch option
CA Fire Code	All levers with a return to door of 1/2" (13 mm) or less comply (Rhodes, Sparta, Tubular, Omega, Longitude and Boardwalk)
FL Building Code	Complies with Florida Building Code (ASTM E330, E1886, E1996) and Miami Dade (TAS 201, 202, 203) requirements for hurricanes
Federal	Meets FF-H-106C Series 161 BAA compliant, all functions

013158, Rev. 10/24

FS18S/FS18L

Floor stop

- FS18S - 1 1/2", FS18L - 3 1/2"
- Security door stops designed for use in high vandalism areas
- Molded from black flame resistant, resilient material around a heavy-duty stud
- Once grouted in concrete, leaves no exposed fasteners to be tampered with or removed
- Ideal for jail or security cell areas where floor mounted stops are required
- FS18L also ideal for concrete wall applications

Specifications

Material substrate	Made from rubber

Finishes

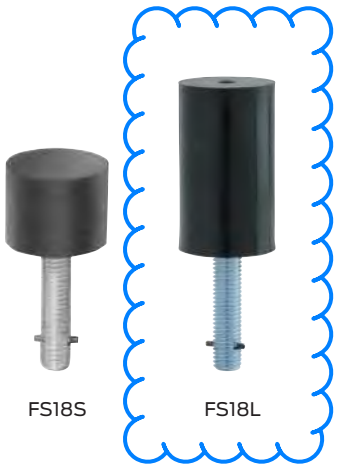
- Black rubber

Dimensions - FS18S

Height	Diameter	Stud length
1 1/2"	2"	2 1/2"

Dimensions - FS18L

Height	Diameter	Stud length
3 1/2"	2"	2 1/2"



FS434

Floor stop

- For undercut doors up to 1 1/2"
- Packed with fasteners for light duty masonry and wood applications
- Soft, resilient black rubber

Specifications

Material substrate	Made from wrought steel

Dimensions

Overall height	Base size
2 5/8"	1 1/2" W x 2 3/4" L

Finish

BHMA	Description	Substrate	Finish
604	Zinc Plated	Steel	US2C

Available accessories

- Replaceable soft, resilient black rubber

430

Floor door stop

- For undercut doors up to 1 1/2"
- Welded wood screws for wood applications
- White rubber tip

Specifications

Material substrate	Made from cast brass and aluminum

Dimensions

Overall height	Base size
2 5/8"	1 1/2" W x 2 3/4" L

Finishes - brass

BHMA	Description	Substrate	Finish
605	Bright Brass	Brass	US3
606	Satin Brass	Brass	US4
609	Blackened Brass	Brass	US5
613	Oil Rubbed Bronze	Brass	US10B
619	Satin Nickel	Brass	US15
625	Bright Chrome	Brass	US26
626	Satin Chrome	Brass	US26D

Finishes - aluminum

BHMA	Description	Substrate	Finish
666	Bright Brass	Aluminum	A3
–	Blackened Brass	Aluminum	A5
669	Bright Nickel	Aluminum	A14
673	Aluminum Clear Coat	Aluminum	A92

For other colors, consult factory.

Available accessories

- Replaceable white or black rubber tips

Risk Management Sign

Note: English version shown.

MODEL	PRODUCT	GROUND SPACE	CONCRETE
787	Risk Management Sign - English	1'-6" x 3'-6"	0.09 cu. yd.
787FR	Risk Management Sign - French	1'-6" x 3'-6"	0.09 cu. yd.
787FRENG	Risk Management Sign - French/English	1'-6" x 3'-6"	0.09 cu. yd.
787SP	Risk Management Sign - Spanish	1'-6" x 3'-6"	0.09 cu. yd.
787BD	Risk Management Sign - English Surface MT	1'-6" x 3'-6"	site specific
787BDFR	Risk Management Sign - French Surface MT	1'-6" x 3'-6"	site specific
787BDFRENG	Risk Management Sign - French/English SM	1'-6" x 3'-6"	site specific
787BDSP	Risk Management Sign - Spanish Surface MT	1'-6" x 3'-6"	site specific

DESCRIPTION

The Risk Management Sign is intended to inform the parents and children that adult supervision is recommended, along with smart play on the equipment in the play area.

MATERIAL

Sign:	Fiberglass embedded, gloss finish, 0.125" thick.
Steel Frame:	2-3/8" OD 12 gauge galvanized steel tubing, 13 gauge galvanized steel sheet for mounting sign, and 3/8" thick hot rolled steel base plate on each leg.
Extension Tube:	2.375 12GA GLV-IL X 24' tube round.
Hardware:	Stainless steel that requires tooling to install or remove.
Finish:	The frame shall have a Mira-Cote finish.

Concerto™ - Tall Chimes, Vibes, Cabasas and Congas

450-1, 450-1BD
Tall Chimes

450-2, 450-2BD
Vibes

450-3, 450-3BD
Spin Small Cabasas

450-4, 450-4BD
Spin Medium Cabasas

450-5, 450-5BD
Spin Large Cabasas

450-6, 450-6BD
Two-Congas

450-7, 450-7BD
Three-Congas

450-8, 450-8BD
Five-Congas

MODEL	PRODUCT
450-1	Concerto Tall Chimes, In Ground
450-1BD	Concerto Tall Chimes, Bolt Down
450-2	Concerto Vibes, In Ground
450-2BD	Concerto Vibes, Bolt Down
450-3	Concerto Spin Small Cabasas, In Ground
450-3BD	Concerto Spin Small Cabasas, Bolt Down
450-4	Concerto Spin Medium Cabasas, In Ground
450-4BD	Concerto Spin Medium Cabasas, Bolt Down
450-5	Concerto Spin Large Cabasas, In Ground
450-5BD	Concerto Spin Large Cabasas, Bolt Down
450-6	Concerto Two-Congas, In Ground
450-6BD	Concerto Two-Congas, Bolt Down
450-7	Concerto Three-Congas, In Ground
450-7BD	Concerto Three-Congas, Bolt Down
450-8	Concerto Five-Congas. In Ground
450-8BD	Concerto Five-Congas, Bolt Down

Consult the "Glossary of Technical Data for Materials, Processes and Finishes" for definitions of underlined items.

450-1, 450-1BD, 450-2, 450-2BD, 450-3, 450-3BD, 450-4, 450-4BD, 450-5, 450-5BD, 450-6, 450-6BD, 450-7, 450-7BD, 450-8, 450-8BD

Concerto™ - Tall Chimes, Vibes, Cabasas and Congas

DESCRIPTION

The Concerto line of outdoor musical equipment allows children of all abilities to experience the joy and benefits of making music. Designed at a more accessible angle and height, these instruments can be played comfortably by all kids, including those with mobility devices.

Note: Chimes and Vibes must be installed OUTSIDE of the playground area in regions that follow CSA certification; chimes and vibes that are installed INSIDE of the playground area in regions that follow CSA certification, mallets must not be installed. This is in order to meet playground compliance since there are several issues with the instruments using mallets that will not meet the guidelines.

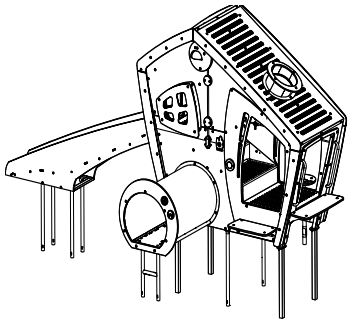
Weldment:	Galvanized 14 ga. sheet; Galvanized 3mm sheet; 3/8" black sheet zinc plated; 1/4" black plated; and Galvanized 2" pipe.
Plastic Panels:	1/2" and 3/4" HDPE (high density polyethylene) sheets - Cabasas - Vibes
Hardware:	18-8 Stainless Steel, Tamper resistant - All Components
Coating:	Super durable, electrostatically applied powder coat - All Components
Steel Posts:	5.00" OD x 11 gauge galvanized steel tubing - Congas post; 3.50" OD x 13 gauge galvanized steel tubing or 3.500" OD x 11 gauge galvanized steel tubing - Tall Chimes frame - Vibes post - Cabasas post
Aluminum:	6063 Aluminum - Chimes
Congas:	ABS plastic
Post Caps:	Aluminum

Consult the "Glossary of Technical Data for Materials, Processes and Finishes" for definitions of underlined items.

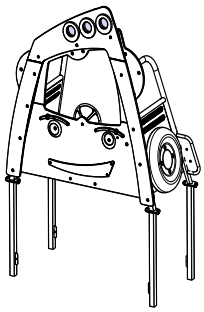
Miracle Product Specifications

Mini City - Community Helper, Truck, Playhouse, Silly Tree, Garden Crawl Tunnel, Sensory Garden Wall (Double Sided), Traffic Light, Chattery

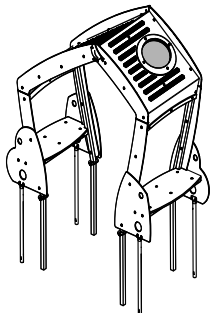
MR0880, MR0880BD
Mini City Community Helpers



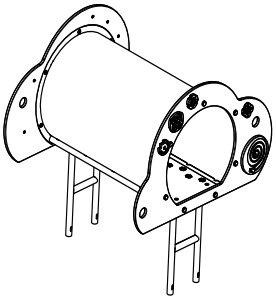
MR0881, MR0881BD
Mini City Truck



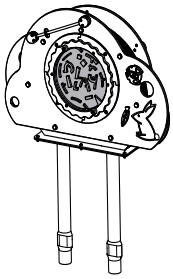
MR0882, MR0882BD
Mini City Playhouse



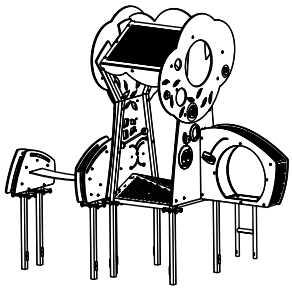
MR0883, MR0883BD
Mini City Garden Crawl



MR0884, MR0884BD
Mini City Sensory Garden
Wall Double Sided

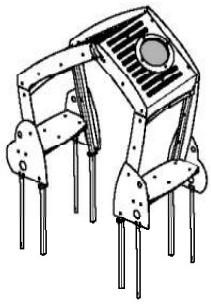


MR0885, MR0885BD
Mini City Silly Tree

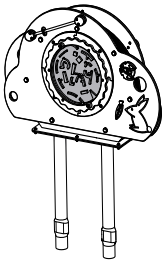


MR0886, MR0886BD
Mini City Traffic Light

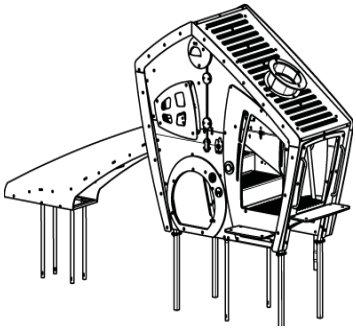
MR0887, MR0887BD
Mini City Chattery



MR0888, MR0888BD
Mini City Sensory Garden
Wall Single Sided



MR0889, MR0889BD
Mini City Community Helpers
w/o Crawl Tube



Consult Miracle's "Glossary of Technical Data for Materials, Processes and Finishes" for specifications of underlined items.

Mini City - Community Helper, Truck, Playhouse, Silly Tree, Garden Crawl Tunnel, Sensory Garden Wall (Double Sided), Traffic Light, Chattery

MODEL	PRODUCT	GROUND SPACE	CONCRETE
MR0880	Mini City Community Helpers (In-Ground)	29'-0" x 23'-0"	1.10 cu. yds.
MR0880BD	Mini City Community Helpers (Bolt Down)	29'-0" x 23'-0"	1.10 cu. yds.
MR0881	Mini City Truck (In-Ground)	NA	0.24 cu. yds.
MR0881BD	Mini City Truck (Bolt Down)	NA	0.24 cu. yds.
MR0882	Mini City Playhouse (In-Ground)	14'-0" x 17'-0"	0.48 cu. yds.
MR0882BD	Mini City Playhouse (Bolt Down)	14'-0" x 17'-0"	0.48 cu. yds.
MR0883	Mini City Garden Crawl (In-Ground)	17'-0' x 17'-0'	0.06 cu. yds.
MR0883BD	Mini City Garden Crawl (Bolt Down)	17'-0' x 17'-0'	0.06 cu. yds.
MR0884	Mini City Sensory Garden Wall Double Sided (In-Ground)	NA	0.12 cu. yds.
MR0884BD	Mini City Sensory Garden Wall Double Sided (Bolt Down)	NA	0.12 cu. yds.
MR0885	Mini City Silly Tree (In-Ground)	23'-0" x 18'-0"	NA
MR0885BD	Mini City Silly Tree (Bolt Down)	23'-0" x 18'-0"	NA
MR0886	Mini City Traffic Light (In-Ground)	NA	0.13 cu. yds.
MR0886BD	Mini City Traffic Light (Bolt Down)	NA	0.13 cu. yds.
MR0887	Mini City Chattery (In-Ground)	NA	0.48 cu. yds.
MR0887BD	Mini City Chattery (Bolt Down)	NA	0.48 cu. yds.
MR0888	Mini City Sensory Garden Wall Single Sided (In-Ground)	NA	0.12 cu. yds.
MR088BD	Mini City Sensory Garden Wall Single Sided (Bolt Down)	NA	0.12 cu. yds.
MR0889	Mini City Community Helpers w/o Crawl Tube (In-Ground)	29'-0" x 20'-0"	1.10 cu. yds.
MR0889BD	Mini City Community Helpers w/o Crawl Tube(Bolt Down)	29'-0" x 20'-0"	1.10 cu. yds.

DESCRIPTION

The Mini City Playhouses are designed to be enjoyed by children of all abilities, including autism, developmental delays and those that use mobility devices. Children can use their imagination, improve strength, agility and mobility.

MATERIALS

Steel Frame: Shall be constructed from 2" square tubing, 16-gage galvanized steel tubing, 1/4" steel plates.

Steel Frame: (Sensory Garden Wall, Traffic Light) Shall be constructed from 12-gage and 14-gage galvanized steel.

Steel Roof/End Walls: Shall be constructed from 12-gage galvanized steel plate.

Stairs: Shall be constructed from 12-gage steel coated with durable, thermoplastic coating.

Deck Platform: Shall be constructed from 12-gage steel coated with durable, thermoplastic coating.

Consult Miracle's "Glossary of Technical Data for Materials, Processes and Finishes" for specifications of underlined items.

Mini City - Community Helper, Truck, Playhouse, Silly Tree, Garden Crawl Tunnel, Sensory Garden Wall (Double Sided), Traffic Light, Chattery

MATERIALS cont.

Rope:	Shall be 16mm rope with aluminum connector.
Steel Crawl Tube:	Shall be constructed from 14-gage galvanized steel, 8-gage galvanized steel, 1-1/4" pipe, 13-gage galvanized steel tubing.
Steel Climber:	Shall be constructed from 1-1/2" pipe, 13-gage galvanized steel tubing, 8-gage and 1/4" steel plate.
Plastic Slide:	Shall be 1/2" HDPE bedway, 3/4" HDPE sides.
Plastic Steps/Seat:	Shall be 3/4" textured HDPE.
Plastic Walls/Ends/ Panels:	Shall be 3/4" HDPE.
Plastic Tire:	Shall be rotationally molded LLDPE.
Skylight: (Chattery)	Shall be 1/4" Koda XT.
Skylight: (Playhouse, Chattery)	Shall be 3/16" screen printed Lexan.
Castings:	Shall be 319 aluminum.
Finishes:	Finishes shall be in Mira-Cote.
Fasteners:	All fastening hardware shall be Fastener Style A.
Shelves:	Shall be constructed from 12-gage steel.
Graphic Panels:	Shall be 1/4" fiberglass signs.
Dog Door/Belt Bridge:	Shall be 3/8" Flextread.
Colored Lenses:	Shall be 1/8" acrylic colored panels with 3/16" Lexan covers.

Consult Miracle's "Glossary of Technical Data for Materials, Processes and Finishes" for specifications of underlined items.

MR0880, MR0881, MR0881BD, MR0882, MR0883, MR0884, MR0885, MR0886, MR0887, MR0888, MR0889

Kids' Choice® - Mira-Therm II

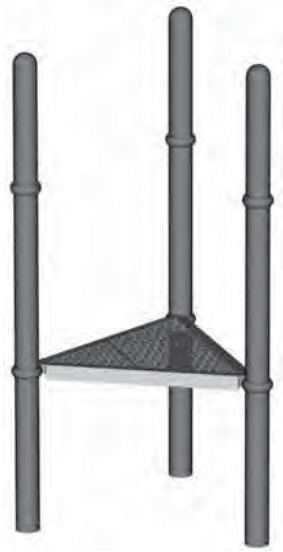
Decks

Deck Posts not included in these assemblies.

714-501-9

Triangle Deck

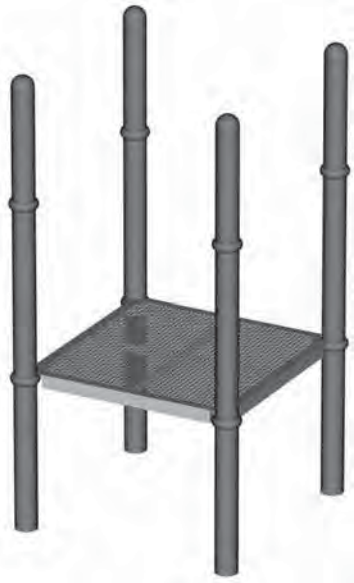
Model # 714-501-9 requires three (3) Posts.



714-502-9

Square Deck

Model # 714-502-9 requires four (4) Posts.



714-503-9

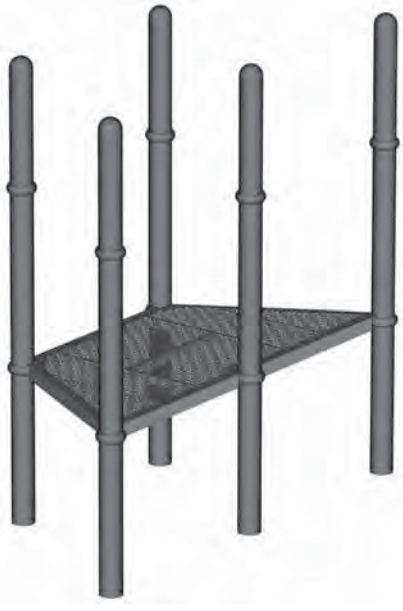
Half Hex Deck (Full)

Model # 714-503-9 requires four (4) Posts.

714-504-9

Half Hex Deck

Model # 714-504-9 requires five (5) Posts.



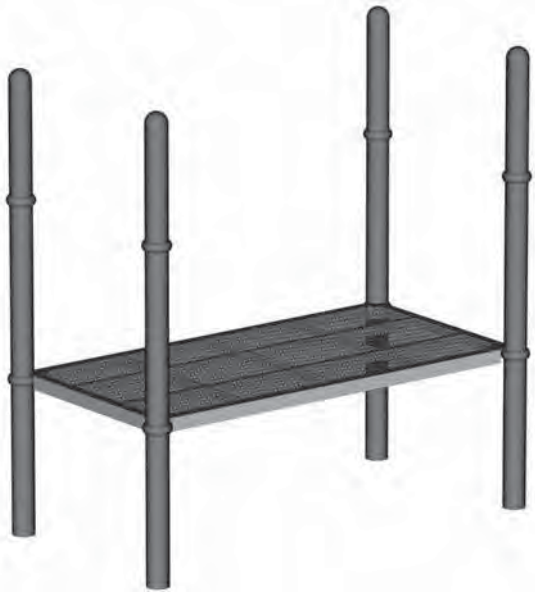
Kids' Choice® - Mira-Therm II

Decks

714-508-9

Rectangle Deck (Full)

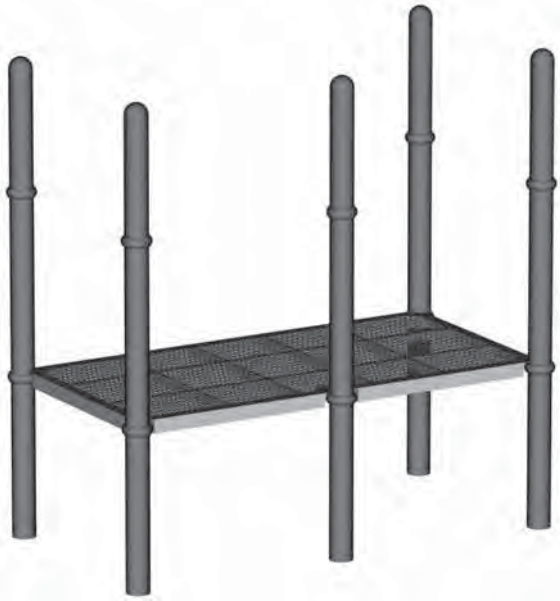
Model # 714-508-9 requires four (4) Posts.



714-509-9

Rectangle Deck (Half Open)

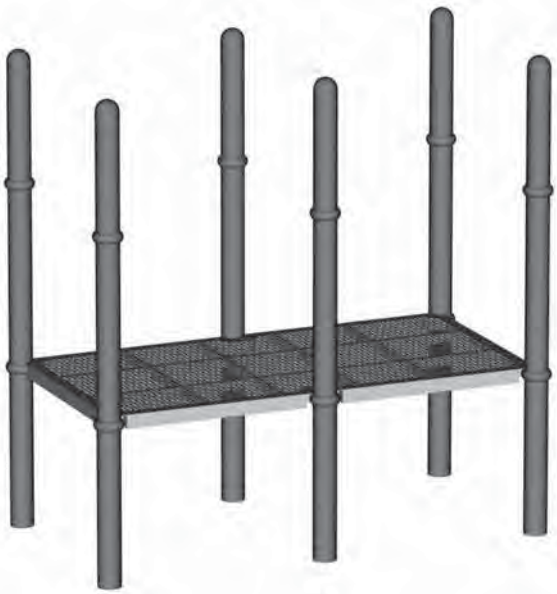
Model # 714-509-9 requires five (5) Posts.



714-510-9

Rectangle Deck (Open)

Model # 714-510-9 requires six (6) Posts.



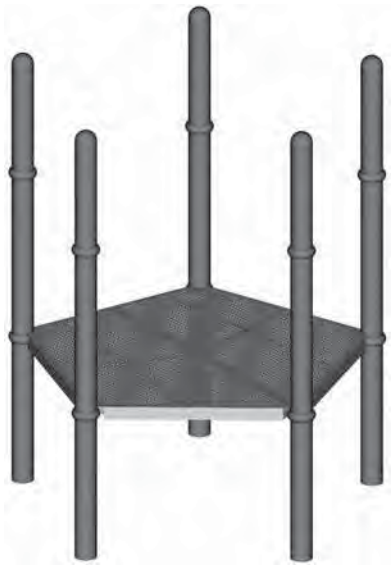
Kids' Choice® - Mira-Therm II

Decks

714-512-9

Pentagon Deck

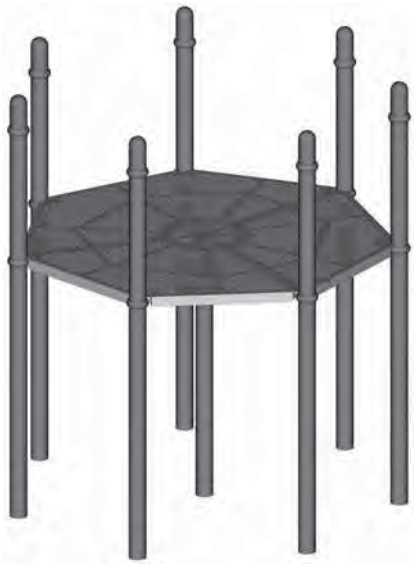
Model # 714-512-9 requires five (5) Posts.



714-517-9

Heptagon Deck

Model # 714-517-9 requires seven (7) Posts and one (1) middle support post.



THIS SPACE INTENTIONALLY LEFT BLANK

Kids' Choice® - Mira-Therm II

Decks

MODEL #	PRODUCT	POSTS REQ'D	DECK SURFACE	CONCRETE
714-501-9	Triangle Deck	3	7 sq. ft.	See Post specs
714-502-9	Square Deck	4	16 sq. ft.	"
714-503-9	Half Hex Deck (Full)	4	21 sq. ft.	"
714-504-9	Half Hex Deck (Open)	5	21 sq. ft.	"
714-508-9	Rectangle Deck (Full)	4	32 sq. ft.	"
714-509-9	Rectangle Deck (Half Open)	5	32 sq. ft.	"
714-510-9	Rectangle Deck (Open)	6	32 sq. ft.	"
714-512-9	Pentagon Deck	5	26.5 sq. ft.	"
714-517-9	Heptagon Deck	7	55 sq. ft.	"

DESCRIPTION

Mira-Therm II deck models include an equilateral triangle deck, a square deck, two half hexagon decks, three rectangular decks, a pentagon deck, and a heptagon deck. Decks are designed for maximum flexibility in height of deck surface, from 0" to 6'-6" (in 6" increments), though 3', 5', and 6'-6" are considered standard deck heights.

Decks are designed on a 48" center-to-center spacing on 5" deck posts, at equal or varied heights. All deck-to-post connections are made with a deck support clamp. All deck connections are made beneath deck with no exposed fasteners on deck perimeter. Decks with 8' wide open side are designed to attach to another deck with 8' wide open side at same deck height.

MATERIALS

Decks: All decks shall be constructed with folded 11 ga. steel sheet forming 3" tall sides. Decking sheets shall be perforated with a staggered pattern of 3/8" diameter holes at 5/8" apart center-to-center. The decking shall have 7 ga. by 2" flat steel braces and corner braces of 7 ga. steel. The entire assembly shall be solid welded prior to PVC coating.

Fasteners: Deck assemblies shall contain Versalok Fasteners and Fastener Style A hardware.

Finishes: All deck surfaces shall be coated in Mira-Therm. Clamps shall have a Mira-Cote finish.

Consult Miracle's "Glossary of Technical Data for Materials, Processes & Finishes" for specifications of underlined items.

Kids' Choice®

Steel Posts (5" O.D., 11 ga. Round Tube) & Aluminum Posts

Steel Posts - 5" O.D., 11ga.

MODEL	DESCRIPTION	USES	PART NUMBER
714-545-3	144" Deck Post (Cheer Roof)	3' Deck	997292*
714-545-5	168" Deck Post (Cheer Roof)	5' Deck	997294*
714-545-6	186" Deck Post (Cheer Roof)	6'-6" Deck	908813*
714-545-8	204" Deck Post (Cheer Roof)	8' Deck	997297*
714-545-10	228" Deck Post (Cheer Roof)	10" Deck	908812*
714-549-1	88" Maze Post	Sensory Panel	925341*
714-549-3	112" Deck Post	3' Decks	995228*
714-549-4	124" Deck Post	4' Decks	995229*
714-550-3	206" Deck Post (PlayCover)	3' Deck & less	997215*
714-550-5	219" Deck Post (PlayCover)	3'-6" to 5' Decks	997218*
714-550-6	243" Deck Post (PlayCover)	5'-6" to 6'-6" Decks	997203*
714-550-8	258" Deck Post (PlayCover)	7' to 8' Decks	997315*
714-551	106" Deck Post	2'-6" Decks & less	713551*
714-552	136" Deck Post	3' to 5' Decks	713552*
714-552L	136" Deck Post w/CPSIA Label	3' to 5' Decks	996061*
714-553	160" Deck Post	5'-6" to 6'-6" Decks	713553*
714-554	178" Deck Post	7' to 8' Decks	713554*
714-556	196" Deck Post	10' Deck	985244*
714-571	106" Post (Roof)	Ground Level	713561*
714-571L	106" Post (Roof) w/CPSIA Label	Ground Level	996352*

Note: An (*) by a part number indicate: Color Code Required.

Consult Miracle's "Glossary of Technical Data for Materials, Processes and Finishes" for specifications of underlined items.

714-545-3, 714-545-5, 714-545-6, 714-545-8, 714-545-10, 714-549-1, 714-549-3, 714-549-32, 714-549-4, 714-549-42, 714-550-3, 714-550-5, 714-550-6, 714-550-8, 714-551, 714-551-2, 714-552, 714-552L, 714-552-2, 714-552-2L, 714-553, 714-553-2, 714-554, 714-554-2, 714-556, 714-571, 714-571-2, 714-571L, 714-572, 714-572-2, 714-573, 714-573-2, 714-574, 714-574-2, 714-575, 714-576, 714-576-8, 714-576-10

5" O.D., 11 ga. Steel Posts & Aluminum Posts

Kids' Choice®

Steel Posts (5" O.D., 11 ga. Round Tube) & Aluminum Posts

Steel Posts - 5" O.D., 11ga. cont.

MODEL	DESCRIPTION	USES	PART NUMBER
714-572	144" Deck Post (Roof)	3' Decks & less	713572*
714-573	168" Deck Post (Roof)	3'-6" to 5' Decks	713573*
714-574	186" Deck Post (Roof)	5'-6" to 6'-6" Decks	713574*
714-575	196" Deck Post (Uses 2 for Flippo Roof)	6'-6" Deck	985260*
714-576	204" Deck Post (Roof)	8' Deck	713818*
714-576-8	228" Deck Post (Topper)	8' Deck	994097*
714-576-10	252" Deck Post (Topper)	10' Deck	994407*

Aluminum Posts - 5" O.D.

MODEL	DESCRIPTION	USES	PART NUMBER
714-549-32	112" Deck Post	3' Decks	995230*
714-549-42	124" Deck Post	4' Decks	995231*
714-551-2	106" Deck Post	2'-6" Decks & less	713593*
714-552-2	136" Deck Post	5' Decks	713594*
714-552-2L	136" Deck Post w/CPSIA Label	5' Decks	996065*
714-553-2	160" Deck Post	5'-6" to 6'-6" Decks	713595*
714-554-2	178" Deck Post	7' to 8' Decks	713599*
714-571-2	106" Post (Roof)	Ground Level	713588*
714-572-2	144" Deck Post (Roof)	3' Decks & less	713589*
714-573-2	168" Deck Post (Roof)	3'-6" to 5' Decks	713590*
714-574-2	186" Deck Post (Roof)	5'-6" to 6'-6" Decks	713591*

Consult Miracle's "Glossary of Technical Data for Materials, Processes and Finishes" for specifications of underlined items.

714-545-3, 714-545-5, 714-545-6, 714-545-8, 714-545-10, 714-549-1, 714-549-3, 714-549-32, 714-549-4, 714-549-42, 714-550-3, 714-550-5, 714-550-6, 714-550-8, 714-551, 714-551-2, 714-552, 714-552L, 714-552-2, 714-552-2L, 714-553, 714-553-2, 714-554, 714-554-2, 714-556, 714-571, 714-571-2, 714-571L, 714-572, 714-572-2, 714-573, 714-573-2, 714-574, 714-574-2, 714-575, 714-576, 714-576-8, 714-576-10

Kids' Choice®

Steel Posts (5" O.D., 11 ga. Round Tube) & Aluminum Posts

CONCRETE 0.13 cubic yards required per post
0.26 cubic yards per post for model's 714-550-3, 714-550-5, 714-550-6 and 714-550-8.

DESCRIPTION Posts are used for support of deck systems and freestanding components.

MATERIALS

Steel Post Assembly: Steel posts shall be constructed of 5" tube, 11 ga. Posts not designed for roof assemblies shall have 5" round end caps pressed in at the factory.

Aluminum Post Assembly: Aluminum posts shall be constructed of 5" aluminum tube. Posts not designed for roof assemblies shall have 5" round end caps pressed in at the factory.

Fasteners: Components shall be field assembled to Posts by means of Versalok Fasteners, Fastener Style A hardware and/or Fastener Style B hardware.

Finishes: Post assemblies and clamps shall be finished in Mira-Cote.

Consult Miracle's "Glossary of Technical Data for Materials, Processes and Finishes" for specifications of underlined items.

5" O.D., 11 ga. Steel Posts & Aluminum Posts

714-545-3, 714-545-5, 714-545-6, 714-545-8, 714-545-10, 714-549-1, 714-549-3, 714-549-32, 714-549-4, 714-549-42, 714-550-3, 714-550-5, 714-550-6, 714-550-8, 714-551, 714-551-2, 714-552, 714-552L, 714-552-2, 714-552-2L, 714-553, 714-553-2, 714-554, 714-554-2, 714-556, 714-571, 714-571-2, 714-571L, 714-572, 714-572-2, 714-573, 714-573-2, 714-574, 714-574-2, 714-575, 714-576, 714-576-8, 714-576-10

Product Specifications

Kids' Choice®

Fence Posts, 4' & 8' Fence Sections, Archway for Fence

714-555, 714-555-2* & 714-555-3* and 714-577-4 | 714-577-8 & 714-578

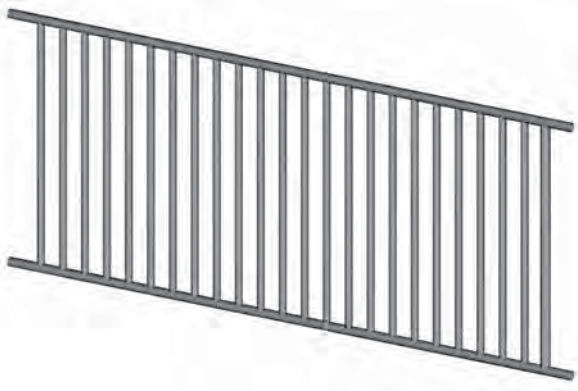
Fence Post, Steel, 5" OD x 76"

* Model # 714-555-2 Fence Post, Aluminum, 5" OD x 76" and Model # 714-555-3 Fence Post, Steel, 5" OD x 76" not shown. Appearances are identical but material specifications differ.

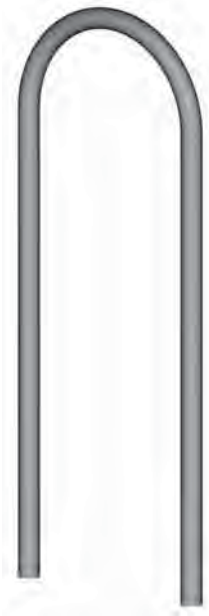
4' Fence Section, Straight

714-555, 714-555-2* & 714-555-3* and 714-577-4 | 714-577-8 & 714-578

8' Fence Section, Straight



Archway for Fence, 5" OD



Fence System

Kids' Choice®

Fence Posts, 4' & 8' Fence Sections, Archway for Fence

MODEL #	PRODUCT	CONCRETE REQ'D
714-555	5" OD x 76" Fence Post, Steel	0.13 cu. yds.
714-555-2	5" OD x 76" Fence Post, Aluminum	0.13 cu. yds.
714-555-3	5" OD x 76" Fence Post, Steel	0.13 cu. yds.
714-577-4	4' Fence Section	N/A
714-577-8	8' Fence Section	N/A
714-578	Archway for Fence	0.26 cu. yds.

DESCRIPTION

These models comprise a fence system with virtually limitless configuration possibilities. This fence system is not playground equipment, therefore protective surfacing to 6' from perimeter is not required. However, this does not permit exclusion of protective surfacing when required by playground equipment which intersects fence area, e.g. if a fence were to connect to a deck system, required protective surfacing of deck components would "overrule" fence's lack of a requirement for surfacing.

MATERIALS

Fence Sections: The fence sections shall consist of a welded assembly handrail system with a top and bottom rail constructed of 1" pipe, and infill consisting of uprights constructed of 1" tube. The fence section shall measure 36-5/16" high and 4' or 8' long.

Archway: The archway shall be a single piece, "U"-shaped component constructed of 5" tube, measuring 4' from leg center to leg center and 132" from leg end to inside apex height.

Steel Posts: Model # 714-555 shall be constructed of 5" tube, 11 ga. with a 5" round end cap pressed into its top end. Model # 714-555-3 shall be constructed of 5" tube with a 5" round end cap pressed into its top end.

Aluminum Posts: Model # 714-555-2 shall be constructed of 5" aluminum tube with a 5" round end cap pressed into its top end.

Fasteners: The assembly shall contain Versalok Fasteners and Fastener Style A hardware.

Finishes: The fence sections, posts, archway, and clamps shall have a Mira-Cote finish.

714-555, 714-555-2, 714-555-3, 714-577-4, 714-577-8, 714-578

Consult Miracle's "Glossary of Technical Data for Materials, Processes and Finishes" for specifications of underlined items.

Kids' Choice®

Steel Panels - Below Deck

714-602-10B: Steel Tic Tac Toe Panel

714-602-11B: Steel Window Panel

714-602-12B: Steel Door Panel

714-602-13B: Steel Counter Panel

Kids' Choice®

Steel Panels - Below Deck

714-713-9B: Alex's Lemonade Stand Panel

714-602-14B: Steel Valance

714-602-15B: Steel Steering Wheel Panel

Kids' Choice®

Steel Panels - Below Deck

MODEL #	PRODUCT	GROUND SPACE	PROTECTIVE AREA
714-602-10B	Steel Tic Tac Toe Panel	4'-6" x 6-3/4"	17' x 13'-0 3/4"
714-602-11B	Steel Window Panel	4'-6" x 11-1/4"	17' x 13'-5 1/4"
714-602-12B	Steel Door Panel	4'-6" x 11-1/4"	17' x 13'-5 1/4"
714-602-13B	Steel Counter Panel	4'-6" x 11-1/4"	17' x 13'-5 1/4"
714-602-14B	Steel Valance	4'-6" x 11-1/4"	17' x 13'-5 1/4"
714-602-15B	Steel Steering Wheel Panel	4'-6" x 7-1/2"	17' x 13' - 0'
714-713-9B	Alex's Lemonade Stand Panel	4'-6" x 11-1/4"	17' x 13'-5 1/4"

DESCRIPTION

Steel Panels are durable below-deck components designed to enhance imaginative play. The Steel Tic Tac Toe Panel shall allow children to play the classic game cooperatively. The Steel Window Panel shall resemble house windows, Steel Door Panel shall resemble the front entry of a house, the Steel Counter Panel shall resemble a toy store counter top, the Steel Valance shall resemble a toy store sign, and the Steel Steering Wheel Panel shall resemble a car console.

Alex's Lemonade Stand Panel shall resemble a lemonade stand and have ALSF Branding.

MATERIALS

Panels: Model # 714-602-10B shall comprise an 11 ga. sheet panel and bolting bracket with two 35" rungs and two 41-1/2" rungs of 1" pipe, Gator Grip. Entire Tic Tac Toe Panel shall measure 37-5/16" in width and 36-1/4" in height. Model #s 714-602-11B and # 714-602-15B shall comprise an 11 ga. sheet panel, with two 35" rungs and two 41-1/2" rungs of 1" pipe, Gator Grip. Entire Steel Window Panel and Steel Steering Wheel Panel shall measure 41-1/2" in width and 36-1/4" in length. Steering Wheel and knob shall be constructed of aluminim. Model # 714-602-12B shall comprise an 11 ga. sheet panel and an arch rung, bottom and side enclosure rungs, and a top rung constructed of 1-1/4" tube, all solid welded. Entire Steel Door Panel assembly shall measure 41-1/2" in width and 36-1/4" in height. Model # 714-602-13B shall comprise two panels of 11 ga. sheet, and horizontal supports, top tube frames, vertical supports, and a bottom rung of 1-1/4" tube, all solid welded. Entire Steel Counter Panel assembly shall measure 41-1/2" in width and 18-1/16" in height. Model # 714-602-14B shall comprise an 11 ga. sheet panel, with side enclosures and rungs of 1-1/4" tube, all solid welded. Entire Valance assembly shall measure 41-1/2" in width and 12-1/16" in height. Model # 714-713-9B shall comprise an 11 ga. sheet panel, two 28-1/4" and two 52-3/8" rungs of 3/4"x1" oval tube and two 37" rungs of 1-5/16" tube, Gator grip. A fiberglass embedded, gloss finish, 0.125" thick sign with ALSF Branding shall be affixed to the panel with stainless steel fasteners. Entire panel assembly shall measure 37" in width and 55" in height.

Tic Tac Toe Cylinders (714-602-10B only): Tic Tac Toe cylinders shall be constructed of cast aluminum with etched "x's" and "o's". Cylinders will attach to panel via an axle constructed of 1" O.D. x 14 ga. tube, A-60 with stainless steel hardware and plastic spacers.

Fasteners: Each assembly shall contain Versalok Fasteners and Fastener Style A hardware.

Finishes: The rungs, clamps, and steel panels shall have a Mira-Cote finish.

Plastic: The lemons, name plate, counter top and panel plastic shall be Miralene.

Consult Miracle's "Glossary of Technical Data for Materials, Processes & Finishes" for specifications of underlined items.

Product Specifications

MIRACLE RECREATION EQUIPMENT COMPANY

Kids' Choice®
Pod Hopper

714-619-3

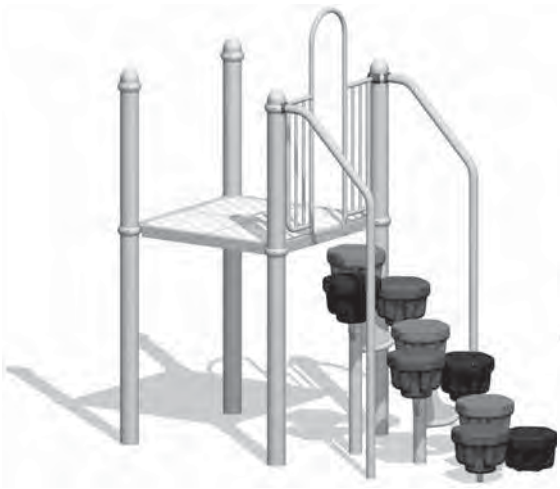
Pod Hopper for 3' Deck

714-619-4

Pod Hopper for 4' Deck

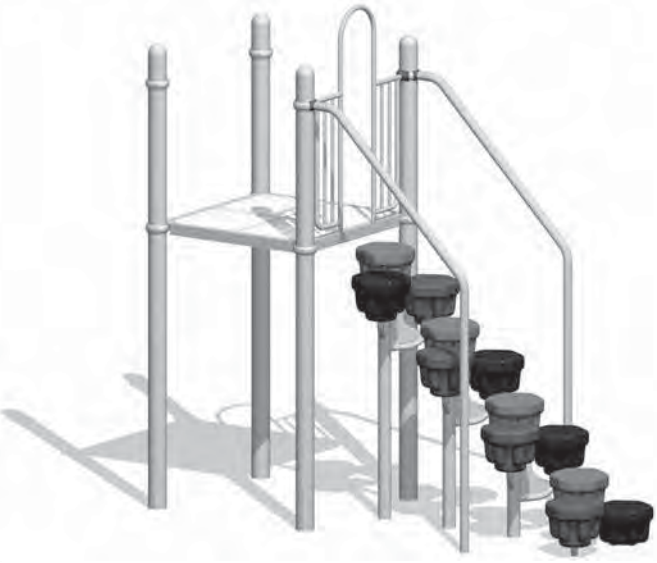
714-619-5

Pod Hopper for 5' Deck



714-619-6

Pod Hopper for 6'-6" Deck



Pod Hopper

Kids' Choice®

Pod Hopper

MODEL #	PRODUCT	GRND. SPC.	PROT. AREA	CONCRETE
714-619-3	Pod Hopper for 3' Deck	4'-2 1/4" x 3'-11 1/4"	16'-8 1/4" x 16'-5 1/4"	0.17 cu yds
714-619-4	Pod Hopper for 4' Deck	4'-2 1/4" x 5'-6 1/4"	16'-8 1/4" x 18'-1 1/4"	0.22 cu yds
714-619-5	Pod Hopper for 5' Deck	4'-2 1/4" x 5'-6 1/4"	16'-8 1/4" x 18'-1 1/4"	0.22 cu yds
714-619-6	Pod Hopper for 6'-6" Deck	4'-2 1/4" x 7'-3 1/4"	16'-8 1/2" x 19'-10 1/4"	0.26 cu yds

DESCRIPTION

These models each comprise a post assembly with 3 attached hex-shaped pods ascending to 3', 4', 5' or 6'-6" deck systems, with an arch entry enclosure and formed hand supports on both sides.

MATERIALS

Post Assemblies: Each post assembly shall comprise a center tube of 3-1/2" tube, supporting arm bracket of 7 ga. galvanized steel sheet, pod supporting arms of 1-1/4" pipe, pod mounting plate of 11 ga. galvanized steel sheet, pod support tube of 1-1/4" pipe, support tube brace plate of 11 ga. galvanized steel sheet, and base plate of 7 ga. galvanized steel sheet. All post assemblies shall measure 22 13/16" in length center to center and 6-5/8" in width center to center. Model # 714-619-3 post assemblies shall measure 60-5/16" and 44-5/16" in height. Model # 714-619-4 post assemblies shall measure 72-5/16", 60-5/16" and 44-5/16" in height. Model # 714-619-5 post assemblies shall measure 84-5/16", 66-5/16" and 48-5/16" in height. Model # 714-619-6 post assemblies shall measure 102-5/16", 84-5/16", 66-5/16" and 48-5/16" in height. Post assemblies shall be solid welded.

Stepping Pods: Each pod shall be constructed of Rockite containing a textured, hex-shaped top surface measuring approximately 16" diameter. Pod shall measure 12" in height.

Arch Entry Enclosure: The arch enclosure assembly shall consist of top supports, a bottom support, and an arched upright constructed of 1" pipe, formed, mashed and punched, and vertical rung infill constructed of 1" tube, all solid welded.

Hand Supports: Hand supports shall be constructed of 2" pipe.

Fasteners: The assembly shall contain Versalok Fasteners and Fastener Style A hardware.

Finishes: The Rockite pods and stumps shall have color molded in. The post assemblies, hand supports, enclosure and clamps shall be finished in Mira-Cote.

Consult Miracle's "Glossary of Technical Data for Materials, Processes and Finishes" for specifications of underlined items.

714-619-3, 714-619-4, 714-619-5, 714-619-6

Product Specifications

MIRACLE RECREATION EQUIPMENT COMPANY

Kids' Choice®

How Tall RU Panel

714-633
How Tall RU Panel

MODEL #	PRODUCT	GRD SPACE	PROT AREA	CONCRETE
714-633	How Tall RU Panel	8" x 3-3/4"	13'-2" x 12'-9 3/4"	N/A

DESCRIPTION

The How Tall RU Panel is an easy, colorful way for kids to see how quickly they grow. Simple post mounted Panel is marked in both centimeters and feet.

MATERIALS

Panel:	The panel shall be constructed of Mira-Lene with all corners rounded. Panel shall have routered inches/feet and centimeters. Panel shall measure 39 7/8" x 8".
Brackets:	Brackets shall be constructed of 11 ga. A-60 sheet.
Fasteners:	Each assembly shall contain Fastener Style A hardware.
Finishes:	Panel and brackets shall have a Mira-Cote finish.

Miracle Product Specifications

Kids' Choice®

Vortex Groove II® Slides

714-638-4U

4' Vortex Groove II Slide

714-638-5U

5' Vortex Groove II Slide

714-638-6U

6' & 6'-6" Vortex Groove II Slide

714-638-8U

8' VortexGroove II Slide

MODEL #	PRODUCT	GRND SPC.	PROT. AREA	CONCRETE
714-638-4U	4' Vortex Groove II Slide	2'-2" x 5'-9"	16' x 15'	.04 cu. yds.
714-638-5U	5' Vortex Groove II Slide	2'-2" x 7'-6"	20' x 15'	.04 cu. yds.
714-638-6U	6' & 6'-6" Vortex Groove II Slide	2'-2" x 10'-3"	24' x 15'	.08 cu. yds.
714-638-8U	8' Vortex Groove II Slide	2'-2" x 13'-1"	28' x 15'	.08 cu. yds.

DESCRIPTION

The Vortex Groove II Slides features a hooded canopy and a streamline slide design. Groove II is designed to exit from either a 4', 5', 6', 6'-6" or 8' Deck.

Kids' Choice®

Vortex Groove II® Slides

MATERIALS:

Slide: The canopy panel and one-piece slide shall be constructed of double wall Rockite. The slide shall have 6" high side rails, an overall width of 25", an 18" wide sliding surface and approximate 7' (714-638-4), 9' (714-638-5), 12' (714-638-6) and 15' (714-638-8) bedway length. The canopy panel shall be field mounted to deck and to post clamps via a 41-1/2" long rung constructed of 1" pipe.

Legs: The legs shall be 2" pipe, welded to an 11 ga. A-60 Galvannealed mounting bracket.

Fasteners: Each assembly shall contain Versalok Fasteners and Fastener Style A hardware.

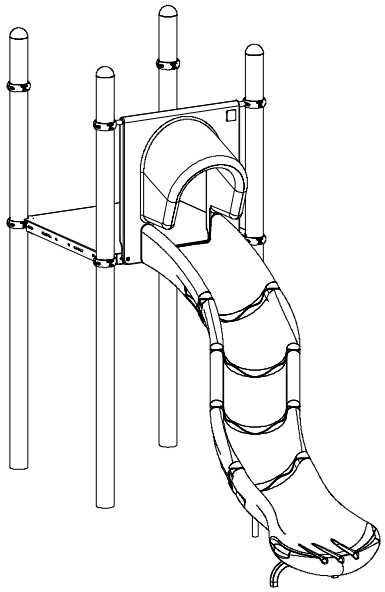
Finishes: The rung, legs, and clamps shall have a Mira-Cote finish. The Rockite slide and canopy shall have molded-in color.

Miracle Product Specifications

Kids' Choice®

Chameleon II Slide System

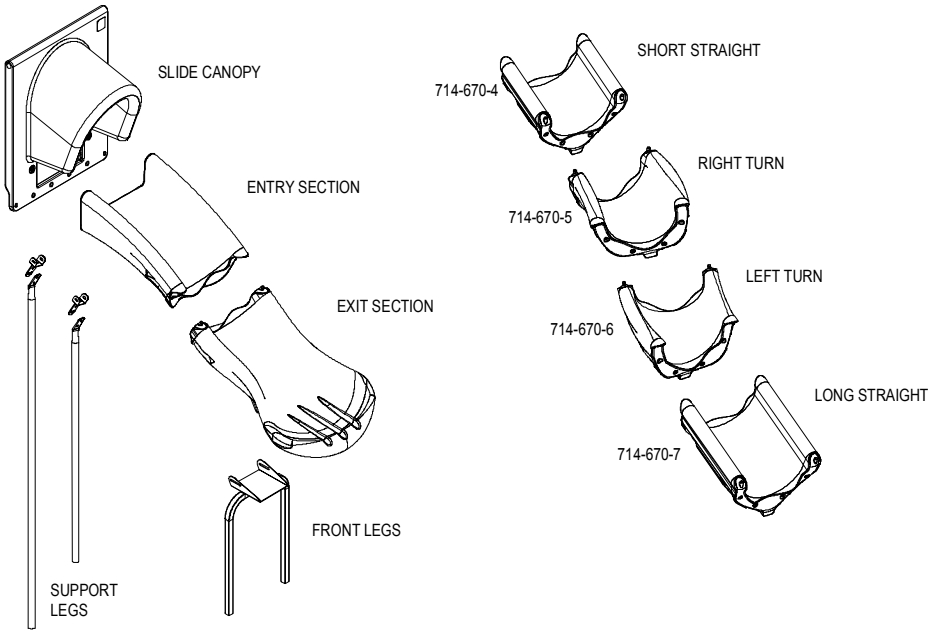
Chameleon II Slide (Sample)



714-670,
714-670-1,
714-670-2,
714-670-4,
714-670-5,
714-670-6,
714-670-7

All Chameleon Slide systems contain one Model # 714-670 and up to seven additional pieces (determined by deck height) in any combination of remaining models (-5, -6, -7).

SECTIONAL SLIDE COMPONENTS



714-670; 30" TO 54" DECK HT; NO SUPPORT LEGS
714-670-1; 60" TO 78" DECK HT; ONE SHORT SUPPORT LEG
714-670-2; 84" TO 102" DECK HT; TWO SUPPORT LEGS

714-670, 714-670-1, 714-670-2, 714-670-4, 714-670-5, 714-670-6, 714-670-7

Chameleon Slide System

Kids' Choice®

Chameleon II Slide System

MODEL #	PRODUCT
714-670	Chameleon II Entry & Exit 2'-6" - 4'-6"
714-670-1	Chameleon II Entry & Exit 5' - 6'-6"
714-670-2	Chameleon II Entry & Exit 7' - 8'-6"
714-670-4	Chameleon II Short Straight Section
714-670-5	Chameleon II Right Section
714-670-6	Chameleon II Left Section
714-670-7	Chameleon II Long Straight Section

Note: Ground space and protective area required are dependent upon the specific configuration. Footings for the assembly require 0.05 cu. yds. of concrete for models attached to decks 3', 0.10 cu. yds. of concrete for models attached to decks 5' and 4', 0.15 cu. yds. of concrete for models attached to decks 6', 6'-6" and 8'.

DESCRIPTION

The Chameleon Slide System features interchangeable bedway sections to present maximum versatility in design configuration. The componentized, open bedway slide assembly may be attached to 2'-6" - 8'-6" decks.

MATERIALS

Slide Assembly:	The bedway sections, entry panel and exit section shall be constructed of double wall Rockite with a 18" bedway and 13-3/4" high sidewalls. The entry panel shall be supported by a rung of 1" pipe.
Front Leg:	The front leg shall be constructed of 1.5" X 16 ga. square tube and a bracket of 7 ga. galvanized sheet steel.
Support Legs:	Support legs shall be constructed of 1.66 OD x 13 ga. tube and a mounting bracket of 7 ga. sheet, solid welded.
Leg Bracket:	Shall be constructed of 7 ga. galvanized sheet steel, solid welded.
Fasteners:	The assembly shall contain Versalok Fasteners and Fastener Style A hardware.
Finishes:	The rung, front leg, support legs and leg brackets shall have a Mira-Cote finish. The Rockite slide sections shall have color molded in.

Consult Miracle's "Glossary of Technical Data for Materials, Processes & Finishes" for specifications of underlined items.

714-670, 714-670-1, 714-670-2, 714-670-4, 714-670-5, 714-670-6, 714-670-7

Miracle Product Specifications

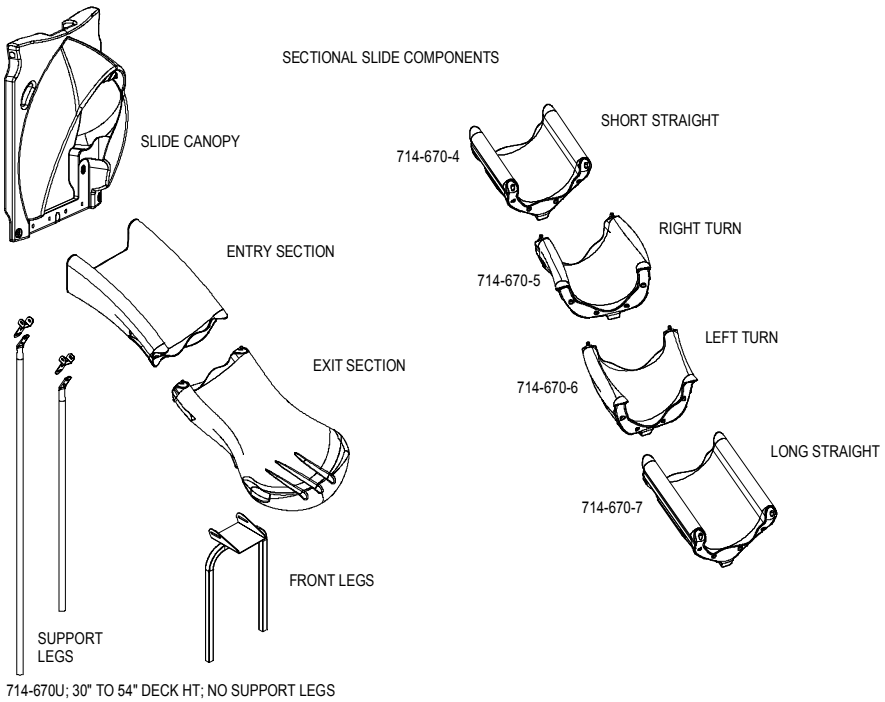
Kids' Choice®

Chameleon II Vortex Slide System

Chameleon II Vortex Slide (Sample)

714-670U,
714-670-1U,
714-670-2U,
714-670-4,
714-670-5,
714-670-6,
714-670-7

All Chameleon Slide systems contain one Model # 714-670U and up to seven additional pieces (determined by deck height) in any combination of remaining models (-5, -6, -7).



714-670U; 30" TO 54" DECK HT; NO SUPPORT LEGS
714-670-1U; 60" TO 78" DECK HT; ONE SHORT SUPPORT LEG
714-670-2U; 84" TO 102" DECK HT; TWO SUPPORT LEGS

Kids' Choice®

Chameleon II Vortex Slide System

MODEL #	PRODUCT
714-670U	Chameleon II Vortex Entry & Exit 2'-6" - 4'-6"
714-670-1U	Chameleon II Vortex Entry & Exit 5' - 6'-6"
714-670-2U	Chameleon II Vortex Entry & Exit 7' - 8'-6"
714-670-4	Chameleon II Short Straight Section
714-670-5	Chameleon II Right Section
714-670-6	Chameleon II Left Section
714-670-7	Chameleon II Long Straight Section

Note: Ground space and protective area required are dependent upon the specific configuration. Footings for the assembly require 0.05 cu. yds. of concrete for models attached to decks 3', 0.10 cu. yds. of concrete for models attached to decks 5' and 4', 0.15 cu. yds. of concrete for models attached to decks 6', 6'-6" and 8'.

DESCRIPTION

The Chameleon Slide System features interchangeable bedway sections to present maximum versatility in design configuration. The componentized, open bedway slide assembly may be attached to 2'-6" - 8'-6" decks.

MATERIALS

Slide Assembly: The bedway sections, entry panel and exit section shall be constructed of double wall Rockite with a 18" bedway and 13-3/4" high sidewalls. The entry panel shall be supported by a rung of 1" pipe.

Front Leg: The front leg shall be constructed of 1.5" X 16 ga. square tube and a bracket of 7 ga. galvanized sheet steel.

Support Legs: Support legs shall be constructed of 1.66 OD x 13 ga. tube and a mounting bracket of 7 ga. sheet, solid welded.

Leg Bracket: Shall be constructed of 7 ga. galvanized sheet steel, solid welded.

Fasteners: The assembly shall contain Versalok Fasteners and Fastener Style A hardware.

Finishes: The rung, front leg, support legs and leg brackets shall have a Mira-Cote finish. The Rockite slide sections shall have color molded in.

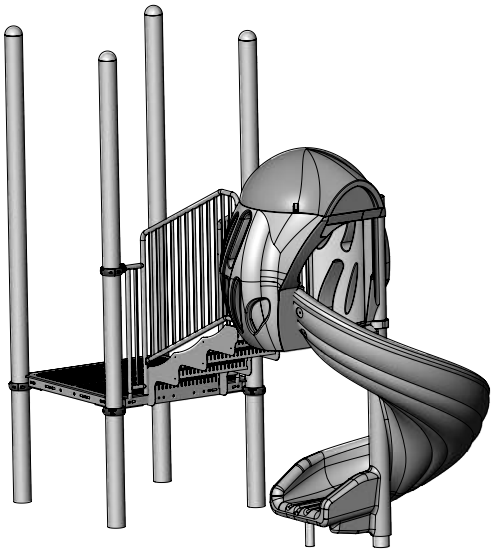
Consult Miracle's "Glossary of Technical Data for Materials, Processes & Finishes" for specifications of underlined items.

Kids' Choice® - Mira-Therm II

Typhoon Slides w/Domed Wave Hood 270° from 3', 4' and 5' Decks

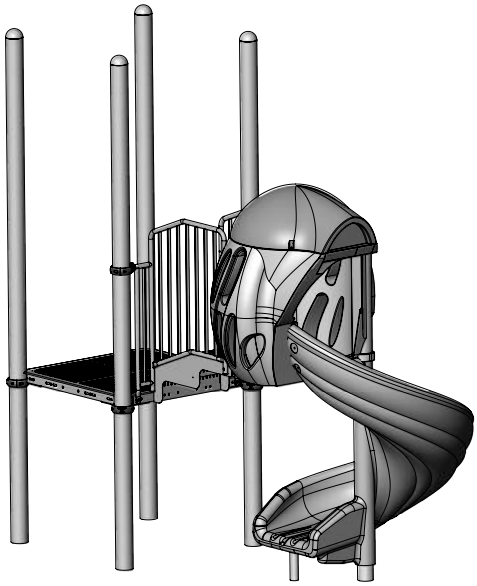
714-675-39U

Typhoon Slide w/Domed Wave Hood from 3' Deck, 270º



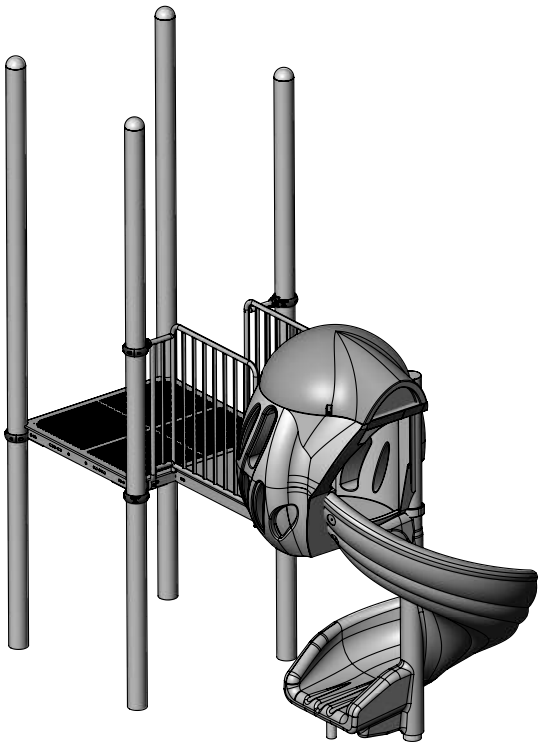
714-675-49U

Typhoon Slide w/Domed Wave Hood from 4' Deck 270º



714-675-59U

Typhoon Slide w/Domed Wave Hood from 5' Deck, 270º



Kids' Choice® - Mira-Therm II

Typhoon Slides w/Domed Wave Hood 270° from 3', 4' and 5' Decks

MODEL #	PRODUCT	OVERALL HT.	GRND. SPC.	PROT. AREA	CONCRETE
714-675-39U	Typhoon Slide from 3' Deck	approx. 9'-2"	8'-9" x 5'-10"	23'-5" x 18'-5"	0.35 cu. yds.
714-675-49U	Typhoon Slide from 4' Deck	approx. 9'-2"	7'-6" x 5'-10"	22'-4" x 18'-5"	0.35 cu. yds.
714-675-59U	Typhoon Slide from 5' Deck	approx. 9'	7'-6" x 5'-10"	22'-4" x 18'-5"	0.35 cu. yds.

DESCRIPTION

The Typhoon spiral slides are 270° one-piece open bedway slides, with 5' or 5'-2" platform, domed wave hood and step or ramp assembly, designed for attachment to 3', 4' and 5' decks.

MATERIALS

Slide Assembly: The slide bedway shall be constructed of 1/4" to 5/16" wall Rockite. The slide bedway shall be 30" wide with a 15" high side wall. The center post shall be constructed of 4-1/2" tube.

Step Assembly: The step assembly shall be constructed of 11 ga. steel sheet folded and perforated with a staggered pattern of 3/8" diameter holes at 5/8" apart center-to-center, solid welded to stringers of 11 ga. black steel.

Handrail Assembly: The handrail assembly shall consist of a top and bottom rail and newel post formed, constructed of 1" pipe with infill of 3/4" x 1" oval tube. The step enclosure assembly shall be solid welded. Plastic pipe plugs shall close open ends.

Deck Enclosures: The deck enclosures shall consist of a vertical rail, and top and bottom rail, formed, constructed of 1" pipe with an upright of 3/4" x 1" oval tube, and 3/8" aluminum inserts in the rail ends for attachment to the step enclosures. The deck enclosure assemblies shall be solid welded.

Slide Hood: The slide hood shall be Rockite. The hood shall have molded-in view grooves for viewing children.

Back-up Plate: The back-up plates used to connect the step assembly and the barrel shall be constructed of 1/4" x 1" x 4-1/2" flat steel.

Front Leg: The front leg shall be constructed of 2" pipe and shall be attached to the slide using a channel constructed of 7 ga. sheet.

Fasteners: The asssembly shall contain Versalok Fasteners and Fastener Style A hardware.

Finishes: The Rockite slide and slide hood shall have color molded in. The step shall be finished in Mira-Therm. The handrail assemblies, deck enclosures, front leg, and clamps shall have a Mira-Cote finish. The back-up plate shall have a zinc plate finish.

Consult Miracle's "Glossary of Technical Data for Materials, Processes and Finishes" for specifications of underlined items.

Typhoon Slides w/Domed Wave Hood - 270°

714-675-39U, 714-675-49U, 714-675-59U

Kids' Choice®

Imagination Panels & Activity Panels - Below Deck

Models included:

MODEL	DESCRIPTION
714-602-6B	Steel Panel, Crawl Through
714-617-B	Space Ship Panel
714-713-5B	Door Panel
714-713-17B	Door Panel Below Deck
714-713-18B	Window Panel Below Deck
714-713-19B	Store Panel Below Deck
714-713-20B	Door Panel W/Welcome Below Deck
714-713-21B	Space Maze Panel KC Below Deck
714-713-22B	Alphabet Panel KC Below Deck
714-713-23B	Braille Panel KC Below Deck
714-713-24B	Sign Language Phrases Panel KC Below Deck
714-713-25B	Sign Language Alphabet Panel KC Below Deck
714-714-2B	Fire Truck Panel
714-714-4B	Train Panel
714-714-11B	4 X 4 Panel KC Below Deck
714-714-11HB	4 X 4 Half Panel KC Below Deck
714-714-12B	Big Rig Panel Below Deck
714-714-13B	Plane Panel KC Below Deck
714-715-3B	3' Jump Panel
714-715-5B	5' Jump Panel
714-715-13B	Calypso 3-Drum Panel
714-715-20B	Activity Panel Frame

MODELS CONTINUED ON NEXT PAGE

Consult Miracle's "Glossary of Technical Data for Materials, Processes & Finishes" for specifications of underlined items.

714-602-6B, 714-617-B, 714-713-5B, 714-714-2B, 714-714-4B,, 714-715-13B, 714-715-20B, 714-761-2B, 714-761-3B, 714-761-4B, 714-713-17B, 714-713-18B, 714-713-19B, 714-713-20B, 714-714-11B, 714-714-11HB, 714-714-12B, 714-714-13B, 714-715-25B, 714-715-26B, 714-715-27B, 714-715-28B, 714-715-29B, 714-715-3B, 714-715-5B, 714-895-1B, 714895-2B, 714-895-3B, 714-713-21B, 714-713-22B, 714-713-23B, 714-713-24B, 714-713-25B

Kids' Choice®

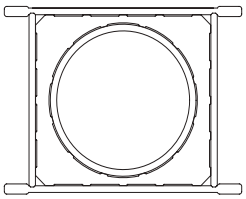
Imagination Panels & Activity Panels - Below Deck

Models included: (continued):

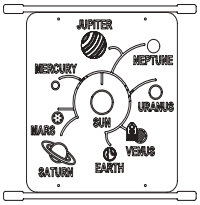
MODEL	DESCRIPTION
714-715-25B	Museum Mosaic Disk Panel KC Below Deck
714-715-26B	Museum Opt Illusion Panel KC Below Deck
714-715-27B	Museum Pin Panel KC Below Deck
714-715-28B	Museum Washer Panel KC Below Deck
714-715-29B	Museum Zoetrope KC Below Deck
714-761-2B	Piston Panel
714-761-3B	Gear Panel
714-761-4B	Sliding Tile Panel
714-895-1B	Barn Wall Panel
714-895-2B	Barn Door Panel
714-895-3B	Barn Window Panel

Note:
Deck systems are NOT included in these assemblies. Please refer to Construction Drawings for the model particular to your system.

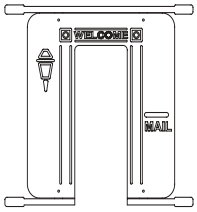
714-602-6B:
Steel Panel, Crawl Through



714-617-B:
Space Ship Panel

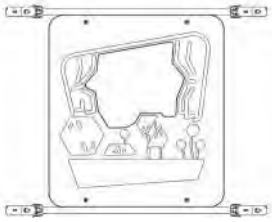


714-713-5B:
Door Panel

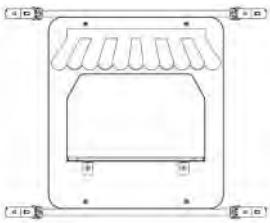


714-713-17B
Door Panel
Below Deck

714-713-18B
Window Panel
Below Deck



714-713-19B
Store Panel
Below Deck



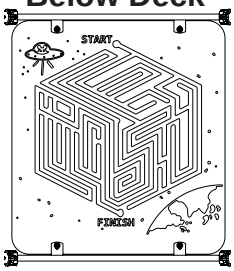
714-713-20B
Door Panel W/Welcome
Below Deck

714-602-6B, 714-617-B, 714-713-5B, 714-714-2B, 714-714-4B,, 714-715-13B, 714-715-20B, 714-761-2B, 714-761-3B, 714-761-4B, 714-713-17B, 714-713-18B, 714-713-19B, 714-713-20B, 714-714-11B, 714-714-11HB, 714-714-12B, 714-714-13B, 714-715-25B, 714-715-26B, 714-715-27B, 714-715-28B, 714-715-29B, 714-715-3B, 714-715-5B, 714-895-1B, 714895-2B, 714-895-3B, 714-713-21B, 714-713-22B, 714-713-23B, 714-713-24B, 714-713-25B

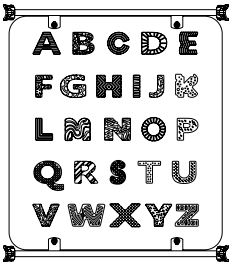
Kids' Choice®

Imagination Panels & Activity Panels - Below Deck

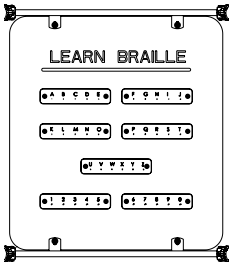
714-713-21B: Space Maze Panel KC Below Deck



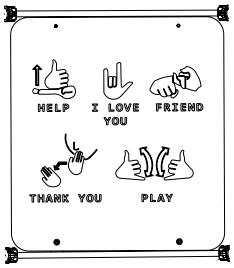
714-713-22B: Alphabet Panel KC Below Deck



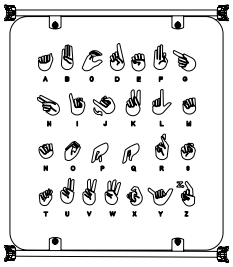
714-713-23B: Braille Panel KC Below Deck



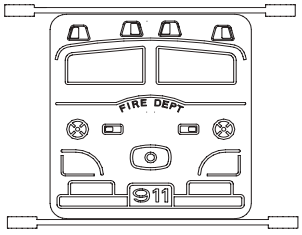
714-713-24B: Sign Language Phrases Panel KC Below Deck



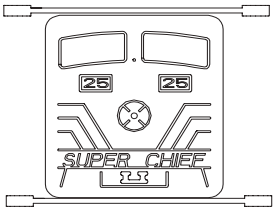
714-714-25B: Sign Language Alphabet Panel KC Below Deck



714-714-2B: Fire Truck Panel



714-714-4B: Train Panel



714-714-11B 4 X 4 Panel KC Below Deck

714-602-6B, 714-617-B, 714-713-5B, 714-714-2B, 714-714-4B,, 714-715-13B, 714-715-20B, 714-761-2B, 714-761-3B, 714-761-4B, 714-713-17B, 714-713-18B, 714-713-19B, 714-713-20B, 714-714-11B, 714-714-11HB, 714-714-12B, 714-714-13B, 714-715-25B, 714-715-26B, 714-715-27B, 714-715-28B, 714-715-29B, 714-715-3B, 714-715-5B, 714-895-1B, 714895-2B, 714-895-3B, 714-713-21B, 714-713-22B, 714-713-23B, 714-713-24B, 714-713-25B

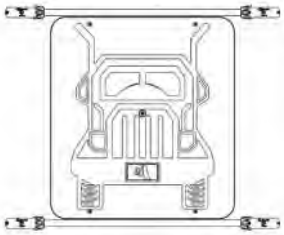
Imagination & Activity Panels (Below Deck)

Kids' Choice®

Imagination Panels & Activity Panels - Below Deck

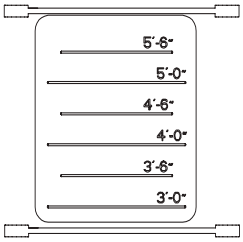
714-714-11HB
4 X 4 Half Panel KC
Below Deck

714-714-12B
Big Rig Panel
Below Deck

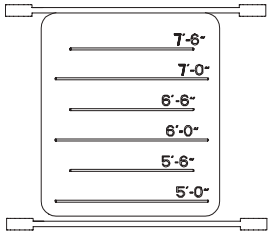


714-714-13B
Plane Panel KC
Below Deck

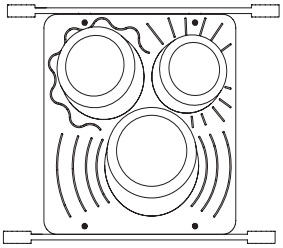
714-715-3B:
Jump Panel
(3' Deck)



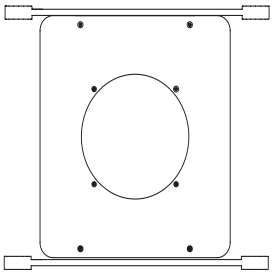
714-715-5B:
Jump Panel
(5' Deck)



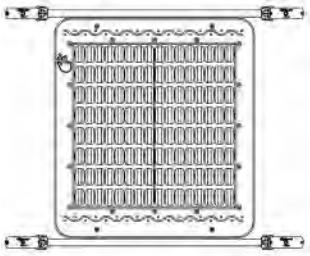
714-715-13B:
Calypso 3-Drum Panel



714-715-20B:
Activity Panel Frame

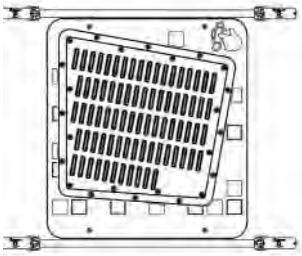


714-715-25B
Museum Mosaic Disk
Panel KC Below Deck

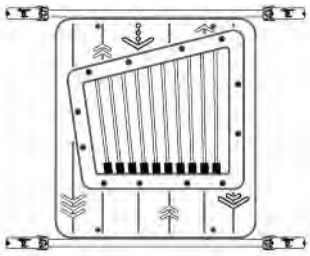


714-715-26B
Museum Opt Illusion Panel
KC Below Deck

714-715-27B
Museum Pin Panel
KC Below Deck



714-715-28B
Museum Washer Panel KC
Below Deck



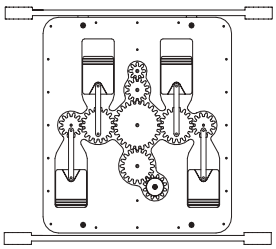
714-715-29B
Museum Zoetrope
KC Below Deck

714-602-6B, 714-617-B, 714-713-5B, 714-714-2B, 714-714-4B,, 714-715-13B, 714-715-20B, 714-761-2B, 714-761-3B, 714-761-4B, 714-713-17B, 714-713-18B, 714-713-19B, 714-713-20B, 714-714-11B, 714-714-11HB, 714-714-12B, 714-714-13B, 714-715-25B, 714-715-26B, 714-715-27B, 714-715-28B, 714-715-29B, 714-715-3B, 714-715-5B, 714-895-1B, 714895-2B, 714-895-3B, 714-713-21B, 714-713-22B, 714-713-23B, 714-713-24B, 714-713-25B

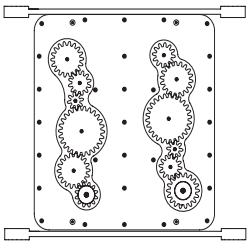
Kids' Choice®

Imagination Panels & Activity Panels - Below Deck

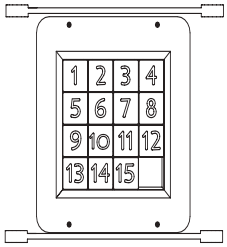
714-761-2B:
Piston Panel



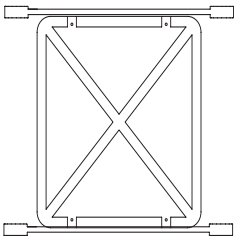
714-761-3B:
Gear Panel



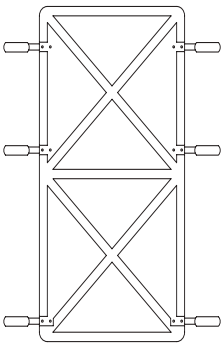
714-761-4B:
Sliding Tile Panel



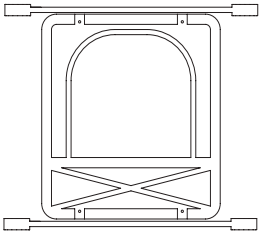
714-895-1B:
Barn Wall Panel



714-895-2B:
Barn Door Panel



714-895-3B:
Barn Window Panel



714-602-6B, 714-617-B, 714-713-5B, 714-714-2B, 714-714-4B,, 714-715-13B, 714-715-20B, 714-761-2B, 714-761-3B, 714-761-4B, 714-713-17B, 714-713-18B, 714-713-19B, 714-713-20B, 714-714-11B, 714-714-11HB, 714-714-12B, 714-714-13B, 714-715-25B, 714-715-26B, 714-715-27B, 714-715-28B, 714-715-29B, 714-715-3B, 714-715-5B, 714-895-1B, 714895-2B, 714-895-3B, 714-713-21B, 714-713-22B, 714-713-23B, 714-713-24B, 714-713-25B

Kids' Choice®

Imagination Panels & Activity Panels - Below Deck

DESCRIPTION

These representational activity panels, designed to enhance imagination and creative play, may be freestanding, clustered or below deck.

- Vehicle-themed panels feature steering wheel assemblies.
- The Piston Panel and Gear Panel contain dynamic, user-driven parts sealed behind a transparent, tamper-resistant cover.
- The Sliding Tile Panel contains 15 routed, moveable tiles with one empty space challenging users to shift the tiles into proper sequence.
- The Calypso 3-Drum Panel allows musical expression, that may be struck with the hands to create different sounds.

MATERIALS

Panels:	The panels shall be constructed of Mira-Lene with all corners rounded. Panels shall measure 36-1/2" x 40" and shall contain routered designs in several themes. The panel shall be supported between posts by top and bottom rungs of 1" pipe, each with two tabs of 11 ga. A-60 Galvannealed sheet, solid welded.
Steel Panel, Crawl Through Model 714-602-6B only	The steel crawl through panel shall comprise rungs and a ring of 1" pipe, Gator Grip, and a 7 ga. sheet, laser cut panel measuring 33-5/8" x 36".
Barn Door Panel: Model 714-895-2B only	In addition to the above materials and specifications, Model 714-895-2B shall be supported between posts by top, middle and bottom rungs of 1" pipe, each with two (2) tabs of 11 ga. A-60 Galvannealed sheet, solid welded. Panel shall measure 36-1/2" x 71-1/2".
Gear Panel and Piston Panel: Model 714-761-3B, 714-761-2B only	In addition to the above materials and specifications, Model 714-761-3B shall contain a clear polycarbonate cover mechanically fastened over two side-by-side sets of 1/4" thick gears, to be constructed of high-density polyethylene, which shall turn on nylon bushings, except for black nylon handles and drive gears which shall turn on bronze bushings. Its opposite side shall contain side-by-side routed finger mazes. Model 714-761-2B shall contain a cover, gears, and knob as described herein, and connecting rod and piston shapes of 1/4" thick high-density polyethylene as well. Its opposite side shall contain routed designs.
Sliding Tile Panel: Model 714-761-4B only	In addition to material and specifications detailed in "panels" paragraph above, Model 714-761-4B shall contain 15 moveable, tongue-and-groove tiles with routed numerals constructed of 1/4" thick high-density polyethylene.
Store Panel: Model 714-713-19B only	In addition to material and specifications detailed in "panels" paragraph above, Model 714-713-19B shall contain brackets holding the counter panel on constructed of 7ga. glv bent sheet steel.
Braille Panel KC: 714-713-23B only	In addition to material and specifications detailed in “panels” paragraph above, model 714-713-23B shall contain 3/32" lexan.

Consult Miracle's "Glossary of Technical Data for Materials, Processes & Finishes" for specifications of underlined items.

714-602-6B, 714-617-B, 714-713-5B, 714-714-2B, 714-714-4B,, 714-715-13B, 714-715-20B, 714-761-2B, 714-761-3B, 714-761-4B, 714-713-17B, 714-713-18B, 714-713-19B, 714-713-20B, 714-714-11B, 714-714-11HB, 714-714-12B, 714-714-13B, 714-715-25B, 714-715-26B, 714-715-27B, 714-715-28B, 714-715-29B, 714-715-3B, 714-715-5B, 714-895-1B, 714895-2B, 714-895-3B, 714-713-21B, 714-713-22B, 714-713-23B, 714-713-24B, 714-713-25B

Kids' Choice®

Imagination Panels & Activity Panels - Below Deck

MATERIALS *(continued)*

Calypso 3-Drum Panel: Model 714-715-13B only	In addition to material and specifications detailed in "panels" paragraph above, Model 714-715-13B shall contain 3 rotational molded drums of low density polyethylene resin. Each drum is attached to the panel through a cover plate constructed of 11 ga. galvanized steel sheet with a Mira-Cote finish.
Museum Pin Panel KC: 714-715-27B only	In addition to material and specifications detailed in “panels” paragraph above, model 714-715-27B shall contain polystyrene high impact static cylinders in red and blue and ½” stainless steel rods.
Museum Washer Panel KC: 714-715-28B only	In addition to material and specifications detailed in “panels” paragraph above, model 714-715-28B shall contain ½” stainless steel acme threaded rod.
Museum Zoetrope KC: 714-715-29B only	In addition to material and specifications detailed in “panels” paragraph above, model 714-715-29B shall contain the weldment for the spinner event which shall be constructed of SHST HR 4.5mm (7 ga.) and 1215 steel.
Rung Bracket:	The rung brackets shall be constructed of 1" pipe with bolting tabs of 11 ga. A-60 Galvannealed sheet, all solid welded.
Steering Wheel:	The steering wheel on vehicle-themed panels shall be constructed of a high density polyethylene produced from high performance, U.V. stabilized rotational molding grade resins with a comprehensive additive package. These resins are tested in accordance with ASTM testing procedures D-1505, D-1248, D-1693 (b), D-638, D-790 and D-746. Resin's properties shall exhibit a balance of toughness, rigidity, environmental stress crack resistance and excellent low temperature impact performance. Wall thickness shall be 1/8". The steering wheel hub cover shall be constructed of injection molded polypropylene which shall contain U.V. light stabilizers. Model 714-714-11B 4X4 Panel shall contain two side-by-side steering wheels for cooperative play.
Star Brackets:	Themed for Space Ship Panel, star brackets shall be constructed of 11 ga. HRPO steel and powder coat painted.
Fasteners:	Each assembly shall contain Versalok Fasteners and Fastener Style A hardware.
Finishes:	The steering wheel and two-color panels shall have molded-in color. The rungs, clamps, and steel panel shall have a Mira-Cote finish.

Consult Miracle's "Glossary of Technical Data for Materials, Processes & Finishes" for specifications of underlined items.

714-602-6B, 714-617-B, 714-713-5B, 714-714-2B, 714-714-4B,, 714-715-13B, 714-715-20B, 714-761-2B, 714-761-3B, 714-761-4B, 714-713-17B, 714-713-18B, 714-713-19B, 714-713-20B, 714-714-11B, 714-714-11HB, 714-714-12B, 714-714-13B, 714-715-25B, 714-715-26B, 714-715-27B, 714-715-28B, 714-715-29B, 714-715-3B, 714-715-5B, 714-895-1B, 714895-2B, 714-895-3B, 714-713-21B, 714-713-22B, 714-713-23B, 714-713-24B, 714-713-25B

Miracle Product Specifications

Kids' Choice®

Electronic Panels - Below Deck

714-715-16B
Electronic Piano Panel

714-715-17B
Electronic Animal Panel

DESCRIPTION

These below deck electronic activity panels are designed to enhance imagination and creative play. Panels play either music or animal noises to incorporate sound and learning into any playground theme.

MATERIALS

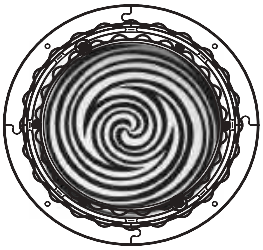
Panels:	The panels shall be constructed of Mira-Lene with all corners rounded. The panels shall measure 36-1/2" x 40" and designs routed in the front and back.
Rung/Brackets:	The rung shall be constructed of 1" pipe Gator Grip, bracket tabs shall be constructed of 11 ga. A-60 Galvannealed sheet, all solid welded.
Batteries:	Each assembly shall contain three (3) "D" size alkaline batteries.
Fasteners:	Each assembly shall contain Versalok Fasteners and Fastener Style A hardware.
Finishes:	The rung brackets and clamps shall have a Mira-Cote finish.

Miracle Product Specifications

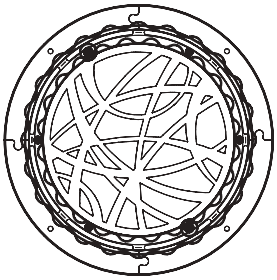
Activity Panel Inserts

ACTIVITY PANEL INSERTS

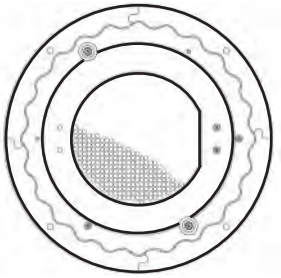
714-715-201
Hypnotize Insert



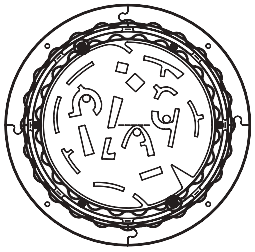
714-715-202
Funhouse Insert



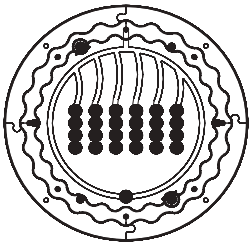
714-715-203
Very Buried Insert



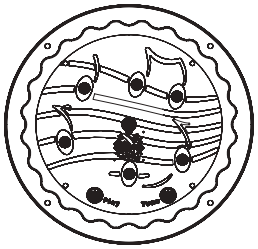
714-715-204
A-maze-ing Insert



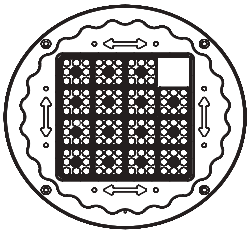
714-715-205
Four-the-Win Insert



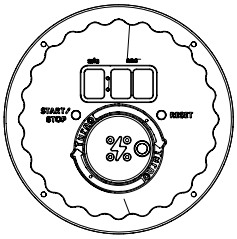
714-715-206
Magical Music Insert



714-715-207
Slide & Solve Insert

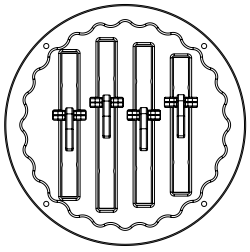


714-715-208
3-Digit RG Timer Insert

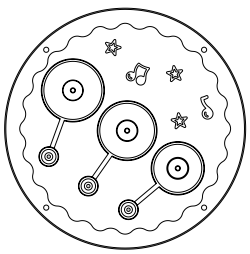


714-715-216
Solar Explorer Panel Insert
f/ KC/TC/TCX

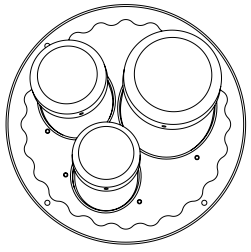
714-715-209
Cam Chimes Panel Insert
f/ KC/TC/TCX



714-715-212
3 Bell Panel Insert
f/ KC/TC/TCX



714-715-213
Bongo Panel Insert
f/ KC/TC/TCX



Consult Miracle's "Glossary of Technical Data for Materials, Processes & Finishes" for specifications of underlined items.

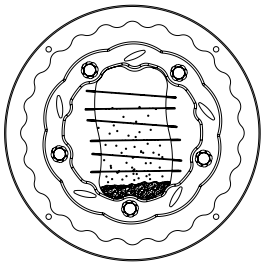
714-715-201, 714-715-202, 714-715-203, 714-715-204, 714-715-205, 714-715-206, 714-715-207, 714-715-208, 714-715-209, 714-715-211, 714-715-212, 714-715-213, 714-715-214, 714-715-215, 714-715-216

Activity Panel Inserts

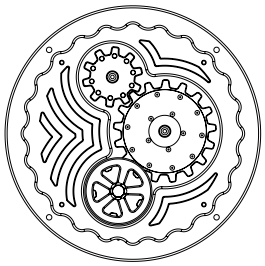
Activity Panel Inserts

714-715-214
Tongue Drum Panel Insert
f/ KC/TC/TCX

714-715-211
Make It Rain Panel Insert
f/ KC/TC/TCX



714-715-215
Tumble Cog Panel Insert
f/ KC/TC/TCX



DESCRIPTION

These representational activity panel inserts are designed to enhance imagination and creative play.

MATERIALS

Insert Panel Options: Insert panel options shall be constructed from a combination of 1/2" thick high-density polyethylene, 3/4" thick high-density polyethylene, 3/16" thick polycarbonate, linear low-density polyethylene caps and stainless steel ball bearings.

714-715-201, 714-715-202, 714-715-203, 714-715-204, 714-715-205, 714-715-206, 714-715-207, 714-715-208, 714-715-209, 714-715-211, 714-715-212, 714-715-213, 714-715-214, 714-715-215, 714-715-216

Product Specifications

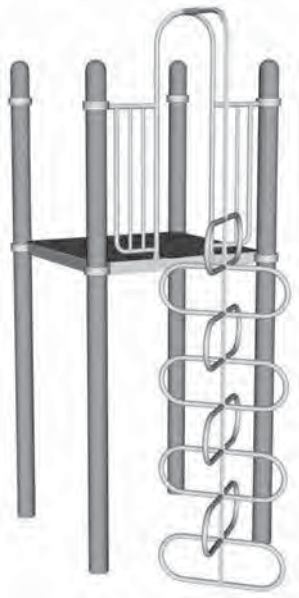
Kids' Choice®

Vertical Climbers Trap Door Climber, Climbing Pole, Spider Climber, Spiral Climber, Wiggly Worm Climber & Bumper Ladder

714-731* & 714-731-6

Trap Door Climber for 6'-6" Deck

* Model # 714-731 Trap Door Climber for 3' or 5' Deck not shown.



714-808 & 714-808-8*

Climbing Pole for 3', 5' or 6'-6" Deck

* Model # 714-808-8 Climbing Pole for 8' Deck not shown.

714-908

Spider Climber for 3', 5' or 6'-6" Deck

714-969 & 714-969-5

Spiral Climber for 6'-6"Deck

* Model # 714-969-5 Spiral Climber for 3' or 5' Deck not shown.

714-731, 714-731-6, 714-808, 714-808-8, 714-908, 714-969, 714-969-5, 714-974-6, 714-974-8, 714-976-3, 714-976-5, 714-976-6

Kids' Choice®

Vertical Climbers

714-974-6* & 714-974-8

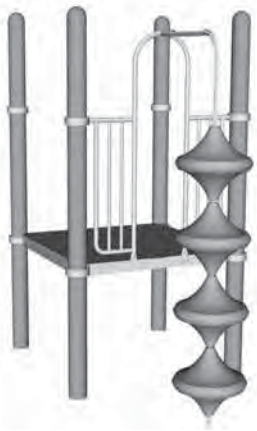
Wiggly Worm Climber for 8' Deck

*Model # 714-974-6 Wiggly Worm Climber for 5' & 6'-6" Deck not shown.

714-976-3 & 714-976-5*

Bumper Ladder for 3' Deck

* Model # 714-976-5 Bumper Ladder for 5' Deck and Model # 714-976-6 Bumper Ladder for 6'-6" Deck not shown.



Kids' Choice®

Vertical Climbers

MODEL #	PRODUCT	GRND SPC	PROT. AREA	CONCRETE
714-731	Trap Door Climber, 3' or 5' Deck	3'-0" x 3'-0"	9'-0" x 15'-0"	0.05 cu. yds.
714-731-6	Trap Door Climber, 6-'6" Deck	3'-0" x 3'-0"	9'-0" x 15'-0"	0.05 cu. yds.
714-808	Climbing Pole, 3', 5' or 6'-6" Deck	3'-0" x 3'-0"	9'-0" x 15'-0"	0.05 cu. yds.
714-808-8	Climbing Pole, 8' Deck	3'-0" x 3'-0"	9'-0" x 15'-0"	0.05 cu. yds.
714-908	Spider Climber, 3', 5' or 6-'6" Deck	3'-0" x 3'-0"	9'-0" x 15'-0"	0.05 cu. yds.
714-969	Spiral Climber, 6'-6" Deck	3'-0" x 3'-0"	9'-0" x 15'-0"	0.05 cu. yds.
714-969-5	Spiral Climber, 5' Deck	3'-0" x 3'-0"	9'-0" x 15'-0"	0.05 cu. yds.
714-974-6	Wiggly Worm Climber, 5' or 6'-6" Deck	3'-0" x 3'-9"	9'-0" x 15'-9"	0.05 cu. yds.
714-974-8	Wiggly Worm Climber, 8' Deck	3'-0" x 3'-9"	9'-0" x 15'-9"	0.05 cu. yds.
714-976-3	Bumper Ladder, 3' Deck	3'-0" x 3'-0"	9'-0" x 15'-0"	0.05 cu. yds.
714-976-5	Bumper Ladder, 5' Deck	3'-0" x 3'-0"	9'-0" x 15'-0"	0.05 cu. yds.
714-976-6	Bumper Ladder, 6'-6" Deck	3'-0" x 3'-0"	9'-0" x 15'-0"	0.05 cu. yds.

DESCRIPTION

These challenging vertical climbers are used for access to and egress from deck systems of various heights. The assemblies contain arched enclosures for field assembly to decks.

MATERIALS

Trap Door Climber: The pole shall be die-formed 1-1/4" pipe. The pole extension and "U" shaped rungs shall be die-formed 1" pipe. The assembly shall be solid welded.

Climbing Pole: The climbing pole shall be constructed of 1" pipe, 12 ga.

Spider Climber: The pole and "U" shaped rungs shall be die-formed 1" pipe. The spider climber shall be a welded assembly.

Spiral Climber: The spiral climber and extension tube shall be entirely constructed of 1" pipe, formed, drilled and all solid welded construction with plastic pipe plugs inserted in open ends.

Wiggly Worm Climber: The assembly shall comprise loops solid welded to frames, all of 1-1/4" pipe, 10 ga.

Bumper Ladder: The "top" shaped bumper shall be constructed of Rockite supported internally by a pole constructed of 1" pipe, 10 ga. Each bumper shall measure 18" high x 19" wide.

Arch Enclosure: The enclosure assembly shall consist of top supports, an extension tube, and an arched upright, which shall be constructed of 1" pipe, drilled, formed, and mashed, and vertical rungs which shall be constructed of 1" tube. The enclosure assembly shall be solid welded.

Fasteners: The assembly shall contain Versalok Fasteners and Fastener Style A hardware.

Finishes: The climber assemblies, arch enclosure, and clamps shall have a Mira-Cote finish. The Rockite bumpers used on Bumper Ladders shall have color molded in.

Consult Miracle's "Glossary of Technical Data for Materials, Processes and Finishes" for specifications of the underlined items.

Product Specifications

Oct. 3, 2000 Rev. B

MIRACLE RECREATION EQUIPMENT COMPANY

Kids' Choice

Crunch Station

714-782

Crunch Station

Kids' Choice

Crunch Station

MODEL #	PRODUCT	PROT. AREA	CONCRETE
714-782	Crunch Station	6'-8" radius/post	See Post Spec.

DESCRIPTION:

The Crunch Station is a semi-circular horizontal rung assembly designed for mounting on a 5" steel deck post with the rung set 50" - 80" from finished grade. The Crunch Station enables the user to perform leg lifts and crunches in a standing position.

MATERIALS:

Crunch Station: The Crunch Station shall be constructed of a cut and formed 1" pipe segment solid welded to support and bolt plates of 7 ga. galvanized steel.

Fasteners: All hardware for deck and component attachment shall be Fastener Style A.

Finish: The Crunch Station shall have a Mira-Cote finish.

Product Specifications

April 14, 2005

Rev. C

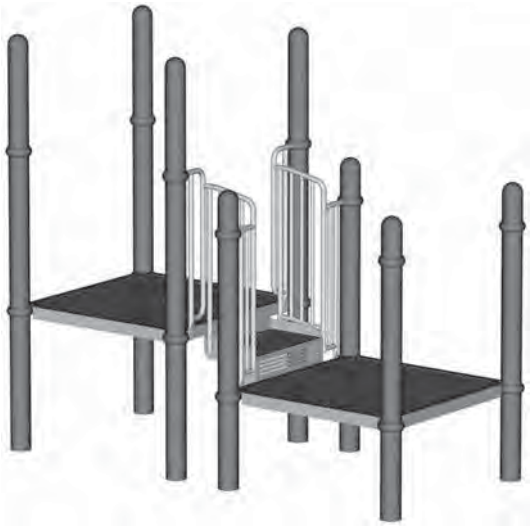
MIRACLE RECREATION EQUIPMENT COMPANY

Kids' Choice® - Mira-Therm II

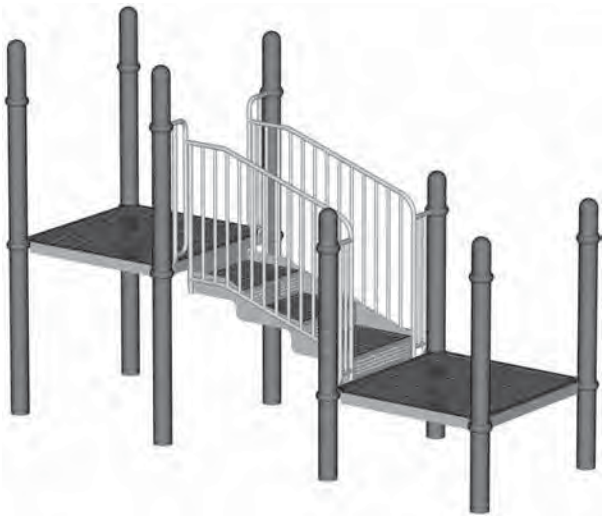
ADA Stairs Between Decks - 1', 2', 2'-6" & 1'-6" Rise

714-810-9 & 714-959-9 | 714-959-59 & 714-959-49 | 714-959-459 | 5 additional stair models

Stair (ADA) - 1' Rise Between Decks with Spoked Handrails, 1'-4" Span

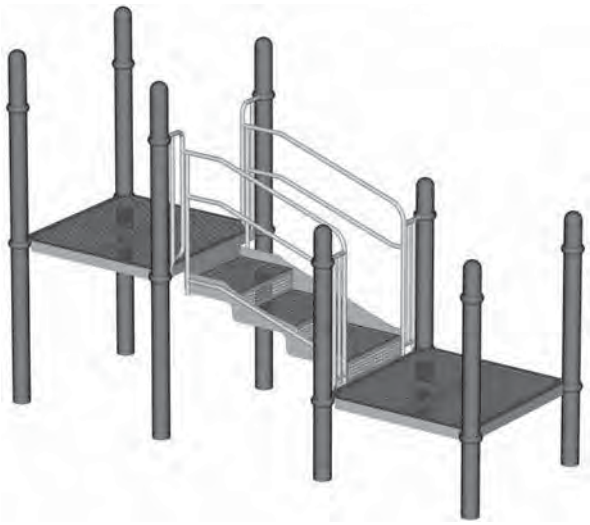


Stair (ADA) - 2' Rise Between Decks with Spoked Handrails, 4'-6" Span

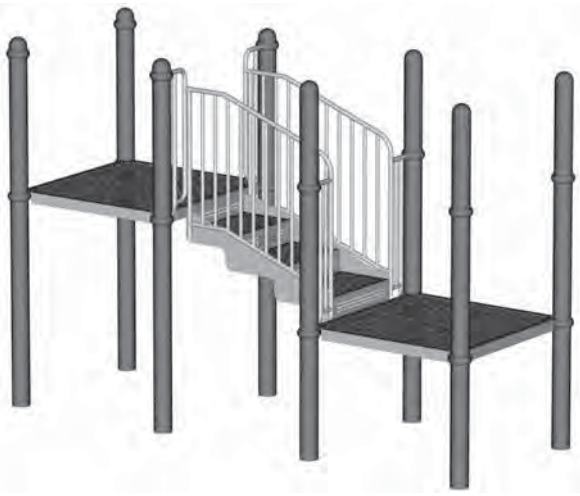


714-810-9 & 714-959-9 | 714-959-59 & 714-959-49 | 714-959-459 | 5 additional stair models

Stair (ADA) - 2' Rise Between Decks with Open Handrails, 4'-6" Span



Stair (ADA) - 2' Rise Between Decks with Spoked Handrails, 4'-0" Span



ADA Stairs Between Decks

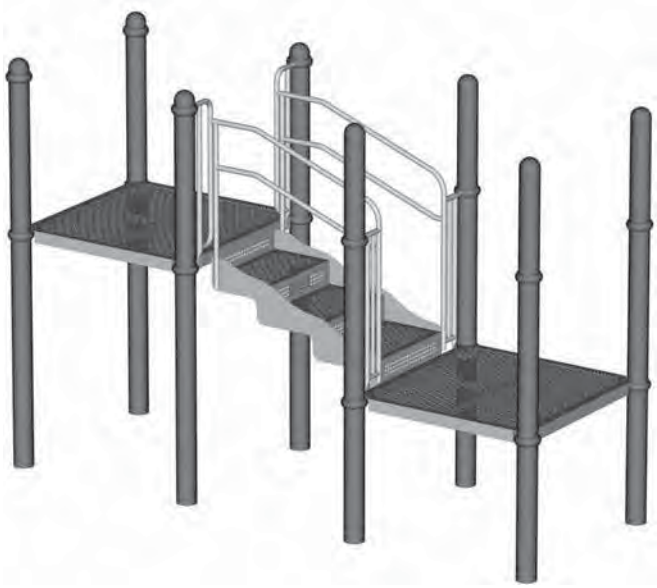
714-810-9, 714-959-9, 714-959-59, 714-959-49, 714-959-459, 714-960-9, 714-993-9, 714-993-59, 714-993-49, 714-993-459

Kids' Choice® - Mira-Therm II

ADA Stairs Between Decks

714-810-9 & 714-959-9 | 714-959-59 & 714-959-49 | 714-959-459 | 5 additional stair models

Stair (ADA) - 2' Rise Between Decks with Open Handrails, 4'-0" Span



5 additional stair models | 714-960-9 | 714-993-9 & 714-993-59 | 714-993-49 & 714-993-459

Stair (ADA) - 2'-6" Rise Between Decks with Spoked Handrails, 6'-0" Span

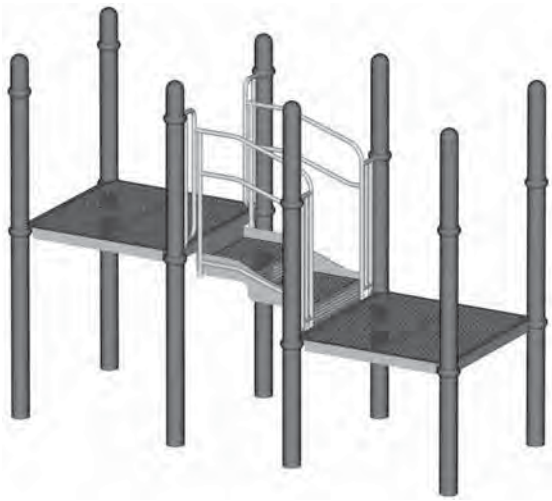
MIRACLE RECREATION EQUIPMENT COMPANY

Kids' Choice® - Mira-Therm II
ADA Stairs Between Decks

5 additional stair models | 714-960-9 | 714-993-9 & 714-993-59 | 714-993-49 & 714-993-459

Stair (ADA) - 1'-6" Rise Between Decks with Spoked Handrails, 3'-0" Span

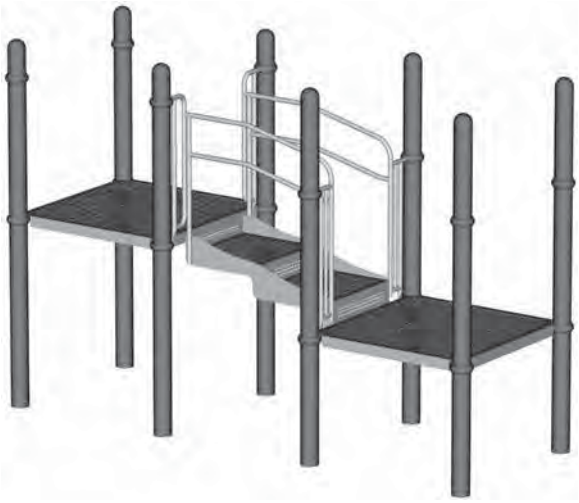
Stair (ADA) - 1'-6" Rise Between Decks with Open Handrails, 3'-0" Span



5 additional stair models | 714-960-9 | 714-993-9 & 714-993-59 | 714-993-49 & 714-993-459

Stair (ADA) - 1'-6" Rise Between Decks with Spoked Handrails, 4'-0" Span

Stair (ADA) - 1'-6" Rise Between Decks with Open Handrails, 4'-0" Span



714-810-9, 714-959-9, 714-959-59, 714-959-49, 714-959-459, 714-960-9, 714-993-9, 714-993-59, 714-993-49, 714-993-459

ADA Stairs Between Decks

Kids' Choice® - Mira-Therm II

ADA Stairs Between Decks

MODEL #	PRODUCT
714-810-9	ADA Stair Between Decks, 1' Rise, Spoked Handrails, 1'-4" Span
714-959-9	ADA Stairs Between Decks, 2' Rise, Spoked Handrails, 4'-6" Span
714-959-59	ADA Stairs Between Decks, 2' Rise, Open Handrails, 4'-6" Span
714-959-49	ADA Stairs Between Decks, 2' Rise, Spoked Handrails, 4'-0" Span
714-959-459	ADA Stairs Between Decks, 2' Rise, Open Handrail, 4'-0" Span
714-960-9	ADA Stairs Between Decks, 2'-6" Rise, Spoked Handrails, 6'-0" Span
714-993-9	ADA Stairs Between Decks, 1'-6" Rise, Spoked Handrails, 3'-0" Span
714-993-59	ADA Stairs Between Decks, 1'-6" Rise, Open Handrails, 3'-0" Span
714-993-49	ADA Stairs Between Decks, 1'-6" Rise, Spoked Handrails, 4'-0" Span
714-993-459	ADA Stairs Between Decks, 1'-6" Rise, Open Handrails, 4'-0" Span

DESCRIPTION

These ADA-compliant stairs connect decks of differing heights and include handrails.

MATERIALS

Steps: The wide step assemblies, approximately 26-3/8" before PVC-dip coating, shall be constructed of steel stringers solid welded to formed treads of 11 ga. steel sheet that are perforated with a staggered pattern of 3/8" diameter holes at 5/8" apart center-to-center. The braces shall be constructed of 11 ga. black.

Spoked Handrails: Spoked handrail enclosures shall consist of a top and bottom rail and newel post, all of 1" pipe, and uprights of 3/4" x 1" oval tube, all solid welded. The top rails shall contain 3/8" aluminum inserts. Plastic pipe plugs shall close open ends.

Open Handrails: Open handrail enclosures shall consist of a top and bottom rail and newel post, all of 1" pipe, solid welded. The top rails shall contain 3/8" aluminum inserts. Plastic pipe plugs shall close open ends.

Top Stair Enclosure: The top stair enclosure shall consist of enclosure rails and an upright, both of 1" pipe, drilled and solid welded. The upright shall be mashed on one end.

Bottom Deck Enclosure: The bottom deck enclosure shall consist of enclosure rails and an upright of 1" pipe, drilled, and a spoke of 3/4" x 1" oval tube, all solid welded. The upright shall be mashed on one end. Plastic pipe plugs shall close open ends.

Fasteners: The assembly shall contain Versalok Fasteners and Fastener Style A hardware.

Finishes: The stairs shall be finished in Mira-Therm. The handrails, enclosures, and clamps shall have a Mira-Cote finish.

Consult Miracle's "Glossary of Technical Data for Materials, Processes & Finishes" for specifications of underlined items.

Kids' Choice®

Handhold for Transfer Point, Wall Enclosures, Recycled Plastic Enclosure, Wire Mesh Enclosure, Treehouse Wall and Enclosure Wall w/Steering Wheel

714-811
Handhold for Transfer Deck
(1' or 1'-6" Deck)

714-816
Wall Enclosure

714-816R
Wall Enclosure Recycled Plastic

714-816-1
Wire Mesh Enclosure

714-816-45
Wall Enclosure, Wide Side

714-817
Treehouse Wall w/Seat

714-900
Wall Enclosure w/Steering Wheel

Consult Miracle's "Glossary of Technical Data for Materials, Processes and Finishes" for specifications of underlined items.

Kids' Choice®

Handhold for Transfer Deck, Wall Enclosures, Recycled Plastic Enclosure, Wire Mesh Enclosure, Treehouse Wall and Enclosure Wall w/Steering Wheel

MODEL	PRODUCT	PROT. AREA	GRND. SPACE	CONCRETE
714-811	Handhold for Transfer Deck (1' or 1'-6" Deck)	NA	NA	NA
714-816	Wall Enclosure	NA	NA	NA
714-816R	Wall Enclosure Recycled Plastic	NA	NA	NA
714-816-1	Wire Mesh Enclosure	NA	NA	NA
714-816-45	Wall Enclosure, Wide Side of 511 TRI-DK	NA	NA	NA
714-817	Treehouse Wall w/Seat	NA	NA	NA
714-900	Wall Enclosure w/Steering Wheel	NA	NA	NA

DESCRIPTION

Model 714-811 Handhold for Transfer Deck, is a support rail to assist wheelchair users with access to a 12" to 18" transfer point deck.

Model 714-816R Recycled Plastic Enclosure, Model 714-816 Wall Enclosure and Model 714-816-1 Wire Mesh Enclosure, are designed to be a barrier on any open side of a deck.

Model 714-816-45 Wall Enclosure, Wide Side is designed to be a barrier on the hypotenuse of a right triangle (split) deck.

Model 714-817 Treehouse Wall w/Seat is an enclosure with a PVC-dipped steel seat for use on 6-sided and 8-sided decks only.

Model 714-900 Wall Enclosure w/Steering Wheel is designed to be a barrier designed to enhance imaginative play.

MATERIALS

Wall Enclosure, Wire Mesh Enclosure, Handhold for Transfer Point: The wall enclosure and wire mesh enclosure supports shall consist of a solid welded handrail assembly with top, side and bottom rails constructed of 1" pipe and spoked infill of 3/4" x 1" oval tube. Wire mesh shall be 3 ga. resistance welded at each intersection.

Steering Wheel Mounting Bracket: The steering wheel mounting bracket shall be 7 ga. G-90 Galvanized sheet steel welded to the wall enclosure.

Recycled Plastic Enclosure: The recycled plastic enclosure shall consist of top and bottom support rails constructed of 1" pipe and uprights constructed of 3-1/2 x 2-1/2" recycled plastic timbers.

Enclosure with Seat: The wall enclosure with seat shall comprise a top and bottom rail and end uprights constructed of 1" pipe and spoked infill of 3/4" x 1" oval tube and a seat assembly, all solid welded. The seat assembly shall comprise a frame of 1" pipe with bolting brackets of sheet 7 ga. black HR CQ and a factory-assembled 19" wide seat constructed of 11 ga. sheet, perforated with a staggered pattern of 3/8" diameter holes at 5/8" apart center-to-center. The seat surface shall be approximately 14" from the deck surface.

Kids' Choice®

Handhold for Transfer Point, Wall Enclosures, Recycled Plastic Enclosure, Wire Mesh Enclosure, Treehouse Wall and Enclosure Wall w/Steering Wheel

MATERIALS cont.

Steering Wheel: The steering wheel shall be constructed of a high density polyethylene produced from high performance, U.V. stabilized rotational molding grade resins with a comprehensive additive package. These resins are tested in accordance with ASTM testing procedures D-1505, D-1248, D-1693(b), D638, D-790 and D-746. Resin's properties shall exhibit a balance of toughness, rigidity, environmental stress crack resistance, and excellent low temperature impact performance. Wall thickness shall be 1/8". The steering wheel hub cover shall be constructed of injection-molded polypropylene with U.V. light stabilizers.

Fasteners: The assembly shall contain Versalok Fasteners and Fastener Style A hardware.

Finishes: The wall enclosure assemblies, handhold and clamps shall have a Mira-Cote finish. The seat shall be finished in Mira-Therm. The steering wheel and plastic timbers shall have color molded in.

Consult Miracle's "Glossary of Technical Data for Materials, Processes and Finishes" for specifications of underlined items.

Product Specifications

MIRACLE RECREATION EQUIPMENT COMPANY

Kids' Choice®

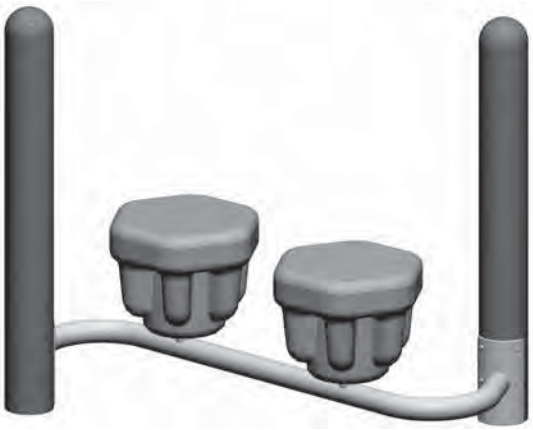
Single & Double Pod and Big Timber® Stump Seats

714-817-3B

Single Pod Seat

714-817-4B

Double Pod Seats



714-817-5B

Big Timber Single Stump Seat

714-817-6B

Big Timber Double Stump Seats

MIRACLE RECREATION EQUIPMENT COMPANY

Kids' Choice®

Single & Double Pod and Big Timber® Stump Seats

MODEL #	PRODUCT	GRND SPC.	CONCRETE	PROTECTIVE AREA
714-817-3B	Single Pod Seat	1'-6" x 15"	N/A	6'-3" dia.
714-817-4B	Double Pod Seats	4'-5" x 2'-5""	N/A	14'-5" x 12'-5" dia.
714-817-5B	Big Timber Single Stump Seat	1'-6" x 15"	N/A	6'-3" dia.
714-817-6B	Big Timber Double Stump Seats	4'-5" x 2'-5""	N/A	14'-5" x 12'-5" dia.

DESCRIPTION: Single and Double Pod and Big Timber Stump Seats are designed to attach to existing Kids' Choice® deck post(s).

MATERIALS:

Pod Seats — Pods shall be constructed of Rockite and shall contain a hex-shaped top surface measuring approximately 14-1/2" diameter. Stumps shall be constructed of Rockite and shall contain a log-shaped top surface measuring approximately 17" diameter. Pods and Stumps shall measure 12" high without frame.

Frame Assemblies: Frame shall be constructed of a horizontal bar constructed of 2" pipe; a 5" diameter bolting plate of 5" Sch 40 pipe solid welded to the Frame's horizonal bar; seat support post(s) measuring 11" constructed of 1-1/2" pipe solid welded to the Frame's horizonal bar; Post Mount Plate(s) measuring 5-7/8" x 5-7/8", constructed of 11 ga. galvanized solid welded to the seat support post(s). Frame length for Model # 714-8173B shall be 11-1/4" before field assembly to Pod Seat. Frame length for Model # 714-817-4B shall be 43" before field assembly to Pod Seats.

Fasteners: All fasteners shall be Fastener Style A.

Finishes: The Rockite Pod and Stump Seats shall have color molded in. The frames shall be finished in Mira-cote.

Consult Miracle's "Glossary of Technical Data for Materials, Processes & Finishes" for specifications of underlined items.

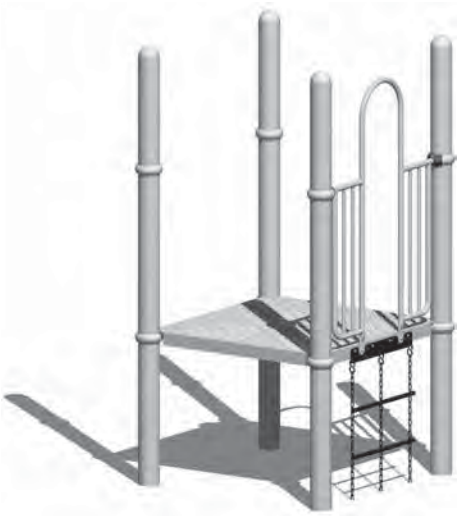
Product Specifications

MIRACLE RECREATION EQUIPMENT COMPANY

Kids' Choice®
Cargo Climb-Overs

714-844-3

Vertical Cargo Climber for 3' Deck



714-844-4

Vertical Cargo Climber for 4' Deck

MIRACLE RECREATION EQUIPMENT COMPANY

Kids' Choice®

Vertical Cargo Climber

714-844-5

Vertical Cargo Climber for 5' Deck

714-844-6

Vertical Cargo Climber for 6'-6" Deck

MIRACLE RECREATION EQUIPMENT COMPANY

Kids' Choice®

Vertical Cargo Climber

MODEL #	PRODUCT	GROUND SPACE	PROTECT. AREA	CONCRETE
714-844-3	Vertical Cargo Climber for 3' Deck	4'-6" x 6"	17' x 13'	.10 cu. yds.
714-844-4	Vertical Cargo Climber for 4' Deck	4'-6" x 6"	17' x 13'	.10 cu. yds.
714-844-5	Vertical Cargo Climber for 5' Deck	4'-6" x 6"	17' x 13'	.10 cu. yds.
714-844-6	Vertical Cargo Climber for 6'-6" Deck	4'-6" x 6"	17' x 13'	.10 cu. yds.

DESCRIPTION:

These dynamic ground-to-deck vertical cargo climbers help children develop hand-to-eye coordination, balance, and muscle control.

MATERIALS:

Vertical Cargo Climber: The cargo climber shall consist of 11 ga. sheet bracket and 1" tube rungs connected by three vertical supports of 4/0 straight link coil chain. The rungs shall be solid welded to the chain. The chain shall be attached to an anchor and the bracket by 5/16" "S"-hooks. The cargo climber for the 3', 4', 5', and 6'-6" decks shall measure 45-1/2", 56-1/2", 67-1/2", and 86-3/4" in length respectively.

Anchor: The anchor shall be constructed of 1" pipe, formed, with three "U" shaped loops of 5/16" diameter wire welded to the top.

Enclosure: The arch enclosure shall comprise top supports and an arched upright of 1" pipe and spoked infill of 1" tube, all solid welded.

Versalok Fasteners: All Versalok Fasteners for deck and component attachment shall be aluminum alloy.

Fasteners: All fastening hardware shall be Fastener Style A.

Finishes: The anchor and Versalok Fasteners shall have a Mira-Cote finish. The Vertical Cargo Climber chain shall be PVC coated.

Consult Miracle's "Glossary of Technical Data for Materials, Processes & Finishes" for specifications of underlined items.

Miracle Product Specifications

Kids' Choice® - Mira-Therm II

Observation Deck®, Observation Deck® with Arched Entry & Observation Deck® with Extended Steering Wheel

714-849

Observation Deck

714-849-A

Observation Deck with Arched Entry

714-849-6

Observation Deck with Extended Steering Wheel

Kids' Choice® - Mira-Therm II

Observation Deck®, Observation Deck® with Arched Entry & Observation Deck® with Extended Steering Wheel

MODEL #	PRODUCT	GROUND SPACE	PROT. AREA	CONCRETE
714-849	Observation Deck	1'-9" x 3'-10"	N/A	N/A
714-849-A	Observation Deck with Arched Entry	1'-9" x 3'-10"	N/A	N/A
714-849-6	Observation Deck with Extended Steering Wheel	1'-9" x 3'-10"	N/A	N/A

DESCRIPTION

The Observation Decks each consist of a curved deck extension and a curved deck enclosure designed to enhance imaginative play. Model # 714-849-A is designed to be used with vertical climbing attachments. Model # 714-849-6 features an extended steering wheel attached to enclosure crossbars to be more easily grasped by wheelchair-bound users.

MATERIALS

Platform: The platform shall be constructed with 11 ga. steel sheet perforated with a staggered pattern of 3/8" diameter holes at 5/8" apart center-to-center. The frame shall be constructed by folding edges to form 3" tall walls and shall be supported by solid welded supports of 1/4" x 1-1/2" flat steel. The platform shall be approximately 40" long with a radius of 9-7/16".

Enclosure: The enclosure shall consist of enclosure rails, uprights, and two center stubs which shall support the bottom rail. The enclosure rails shall be constructed of 3/4" x 1" oval tube. The uprights shall be constructed of 1-1/4" tube, mashed on both ends. The top and bottom rails shall be constructed of 1-1/4" tube. The arch for Model # 714-849-A shall be constructed of 1-1/4" tube. The entire assembly shall be solid welded.

Steering Wheel Mounting Bracket: # 714-849-6 only The mounting bracket shall be 11 ga. A-60 Galvannealed sheet steel welded to the wall enclosure.

Steering Wheel: # 714-849-6 only The steering wheel shall be constructed of a high density blow molded polyethylene produced from high performance, U.V. stabilized resins with a comprehensive additive package. These resins shall be tested in accordance with ASTM testing procedures D-1505, D-1248, D-1693(b), D-638, D-790, and D-746. Resin's properties shall exhibit a balance of toughness, rigidity, environmental stress crack resistance, and excellent low temperature impact performance. Wall thickness shall be 1/8". The steering wheel hub cover shall be constructed of injection molded polypropylene which shall contain U.V. light stabilizers.

Fasteners: The assembly shall contain Versalok Fasteners and Fastener Style A hardware.

Finishes: The platform shall be finishished in Mira-Therm. The enclosure and clamps shall have a Mira-Cote finish.

Consult Miracle's "Glossary of Technical Data for Materials, Processes and Finishes" for specifications of underlined items.

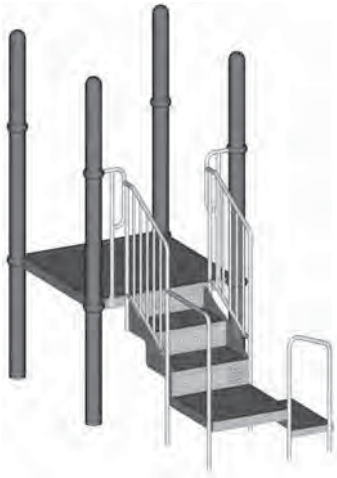
Kids' Choice® - Mira-Therm II™

Square Transfer Points - 3', 4', 5', 6' & 6'-6" Decks with Closed or Open Handrails

Deck systems not included in these assemblies.

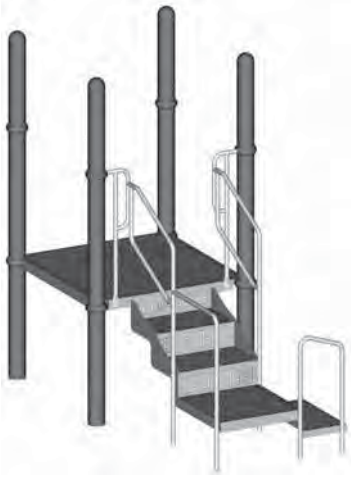
714-851-39

Square Transfer Point for 3' Deck, Closed
Bottom step to exit LEFT



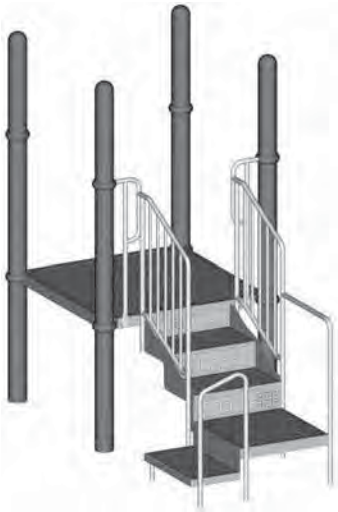
714-851-359

Square Transfer Point for 3' Deck, Open
Bottom step to exit LEFT



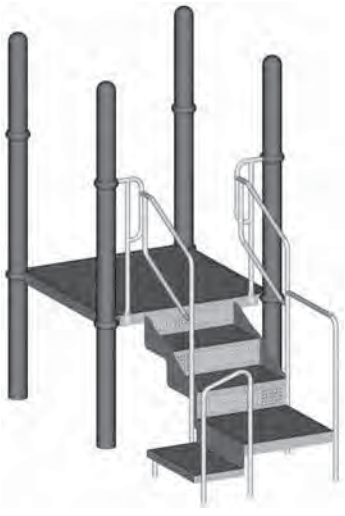
714-851-39

Square Transfer Point for 3' Deck, Closed
Bottom step to exit RIGHT



714-851-359

Square Transfer Point for 3' Deck, Open
Bottom step to exit RIGHT



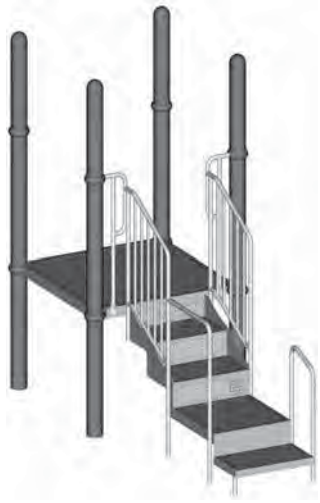
Kids' Choice® - Mira-Therm II™

Square Transfer Points - 3', 4', 5', 6' & 6'-6" Decks with Closed or Open Handrails

Deck systems not included in these assemblies.

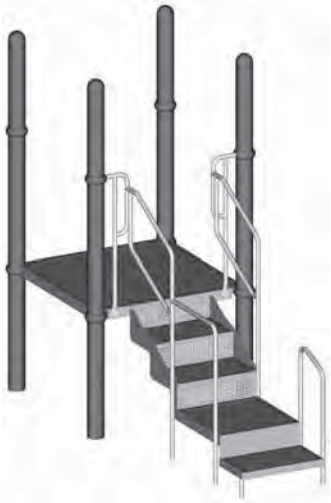
714-851-39

Square Transfer Point for 3' Deck, Closed
Bottom step to exit STRAIGHT
with handrail on LEFT



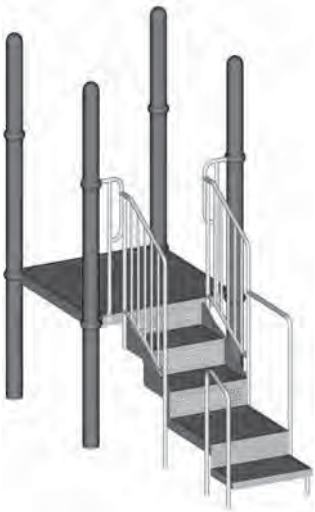
714-851-359

Square Transfer Point for 3' Deck, Open
Bottom step to exit STRAIGHT
with handrail on LEFT



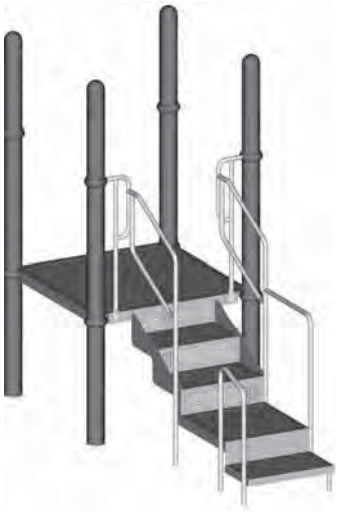
714-851-39

Square Transfer Point for 3' Deck, Closed
Bottom step to exit STRAIGHT
with handrail on RIGHT



714-851-39

Square Transfer Point for 3' Deck, Open
Bottom step to exit STRAIGHT
with handrail on RIGHT



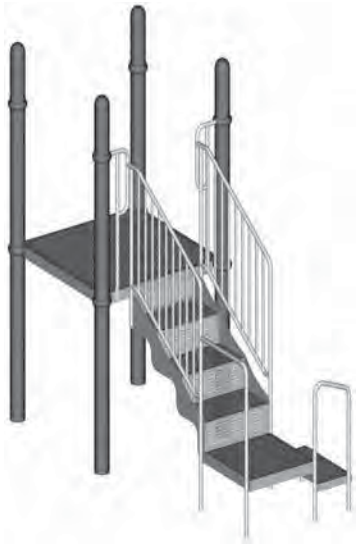
Kids' Choice® - Mira-Therm II™

Square Transfer Points - 3', 4', 5', 6' & 6'-6" Decks with Closed or Open Handrails

Deck systems not included in these assemblies.

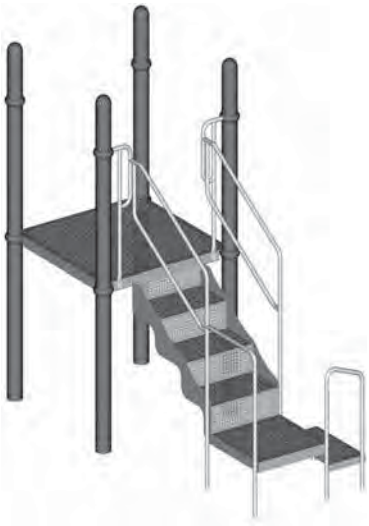
714-851-49

Square Transfer Point for 4' Deck, Closed
Bottom step to exit LEFT



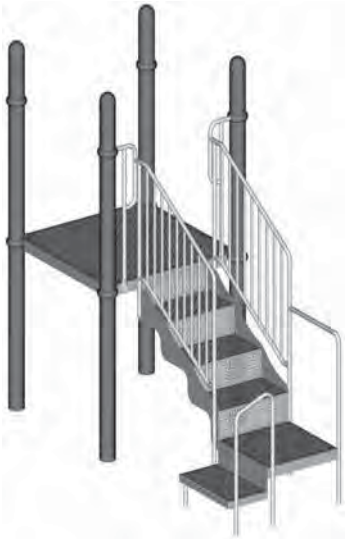
714-851-459

Square Transfer Point for 4' Deck, Open
Bottom step to exit LEFT



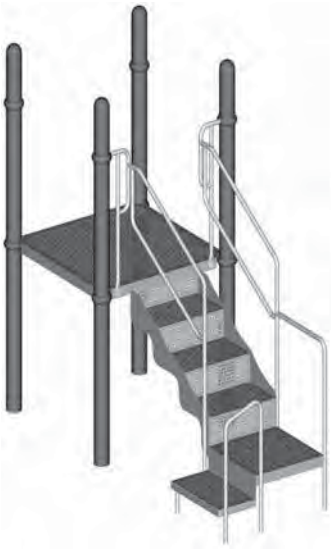
714-851-49

Square Transfer Point for 4' Deck, Closed
Bottom step to exit RIGHT



714-851-459

Square Transfer Point for 4' Deck, Open
Bottom step to exit RIGHT



Kids' Choice® - Mira-Therm II™

Square Transfer Points - 3', 4', 5', 6' & 6'-6" Decks with Closed or Open Handrails

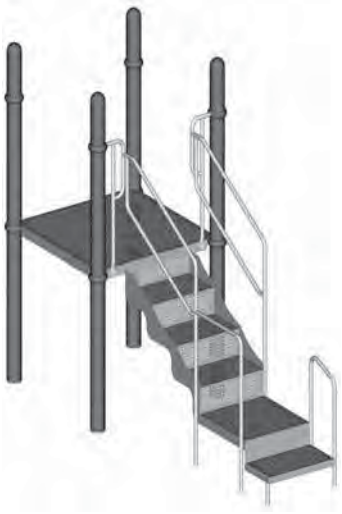
Deck systems not included in these assemblies.

714-851-49

Square Transfer Point for 4' Deck, Closed
Bottom step to exit STRAIGHT
with handrail on LEFT

714-851-459

Square Transfer Point for 4' Deck, Open
Bottom step to exit STRAIGHT
with handrail on LEFT

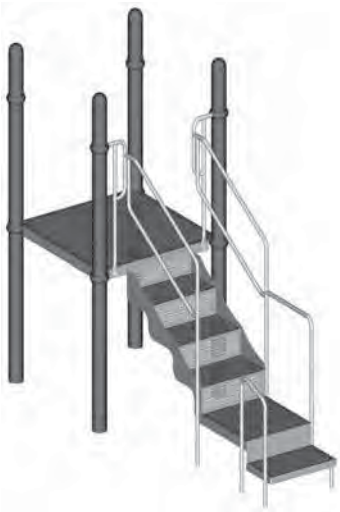


714-851-49

Square Transfer Point for 4' Deck, Closed
Bottom step to exit STRAIGHT
with handrail on RIGHT

714-851-459

Square Transfer Point for 4' Deck, Open
Bottom step to exit STRAIGHT
with handrail on RIGHT



Kids' Choice® - Mira-Therm II™

Square Transfer Points - 3', 4', 5', 6' & 6'-6" Decks with Closed or Open Handrails

Deck systems not included in these assemblies.

714-851-59

Square Transfer Point for 5' Deck, Closed
Bottom step to exit LEFT

714-851-59

Square Transfer Point for 5' Deck, Closed
Bottom step to exit RIGHT

714-851-59

Square Transfer Point for 5' Deck, Closed
Bottom step to exit STRAIGHT
with handrail on LEFT

714-851-59

Square Transfer Point for 5' Deck, Closed
Bottom step to exit STRAIGHT
with handrail on RIGHT

Kids' Choice® - Mira-Therm II™

Square Transfer Points - 3', 4', 5', 6' & 6'-6" Decks with Closed or Open Handrails

Deck systems not included in these assemblies.

714-851-69

Square Transfer Point for 6' & 6'-6"
Deck, Closed
Bottom step to exit LEFT

714-851-69

Square Transfer Point for 6' & 6'-6"
Deck, Closed
Bottom step to exit RIGHT

714-851-69

Square Transfer Point for 6' & 6'-6"
Deck, Closed
Bottom step to exit STRAIGHT

714-851-69

Square Transfer Point for 6' & 6'-6"
Deck, Closed
Bottom step to exit STRAIGHT

Kids' Choice® - Mira-Therm II™

Square Transfer Points - 3', 4', 5', 6' & 6'-6" Decks with Closed or Open Handrails

Deck systems not included in these assemblies.

MODEL #	PRODUCT	ORIENTATION	GRND. SPC.	PROT. AREA	CONCRETE
714-851-39	Sqr. Transfer Point, 3' Dk, Closed	Left or Right ...	4'-9" x 4'-0"	17'-2" x 16'-0"	0.30 cu. yds.
		Straight ...	5'-10" x 3'-6"	18'-3" x 14'-11"	0.30 cu. yds.
714-851-359	Sqr. Transfer Point, 3' Dk, Open	Left or Right ...	4'-9" x 4'-0"	17'-2" x 16'-0"	0.30 cu. yds.
		Straight ...	5'-10" x 3'-6"	18'-3" x 14'-11"	0.30 cu. yds.
714-851-49	Sqr. Transfer Point, 4' Dk, Closed	Left or Right ...	5'-11" x 4'-1"	18'-4" x 16'-0"	0.30 cu. yds.
		Straight ...	7'-0" x 3'-6"	19'-5" x 14'-11"	0.30 cu. yds.
714-851-459	Sqr. Transfer Point, 4' Dk, Open	Left or Right ...	5'-11" x 4'-1"	18'-4" x 16'-0"	0.30 cu. yds.
		Straight ...	7'-0" x 3'-6"	19'-5" x 14'-11"	0.30 cu. yds.
714-851-59	Sqr. Transfer Point, 5' Dk, Closed	Left or Right ...	8'-3" x 4'-0"	20'-9" x 16'-0"	0.30 cu. yds.
		Straight ...	9'-4" x 3'-6"	21'-10" x 14'-11"	0.30 cu. yds.
714-851-69	Sqr. Transfer Point, 6' Dk, Closed	Left or Right ...	10'-8" x 4'-1"	23'-1" x 16'-0"	0.40 cu. yds.
		Straight ...	11'-9" x 3'-6"	24'-2" x 14'-11"	0.40 cu. yds.

DESCRIPTION

These models are designed to assist disabled users gain access to and egress from a deck system.

MATERIALS

Stair Assembly: Each stair assembly shall be constructed of 11 ga. steel stringers solid welded to 11 ga. steel sheet decking that is perforated in a staggered pattern of 3/8" diameter holes at 5/8" apart center-to-center. Approximate dimensions of stair assembly shall be 26" overall width, 14" deep step tread and 8" high step rise.

Transfer Point Deck: Each 26" square (approximate) transfer point deck shall be constructed of 11 ga. steel sheet folded to form approximately 3" high sidewalls. The decking shall be perforated in a staggered pattern of 3/8" diameter holes at 5/8" apart center-to-center. It shall be reinforced with cross braces of 3/16" x 2" HR flat solid welded.

Bottom Step: The bottom step shall be constructed of 11 ga. steel sheet (with folded edges) perforated in an identical pattern. The step shall be approximately 26" wide by 14" deep by 6-1/2" high.

Deck Enclosures: Deck enclosures shall be constructed of formed 1" pipe, including a welded upright of the same material. Each assembly shall be drilled for field assembly of a stair handrail, and shall have its bottom end mashed and punched for field assembly to deck.

Kids' Choice® - Mira-Therm II™

Square Transfer Points - 3', 4', 5', 6' & 6'-6" Decks with Closed or Open Handrails

Deck systems not included in these assemblies.

MATERIALS *(continued)*

Stair Handrail and Stair/Deck Handrail:	Stair handrail assemblies shall be welded upper and lower handrails of formed 1" pipe. Closed handrails shall contain vertical uprights of 3/4" x 1" oval tube welded within. Swaged handrail extensions for field assembly to handrails shall be constructed of 1" pipe. A transfer deck handrail constructed of formed 1" pipe shall be field assembled to one handrail newel upright and transfer point deck edge. Models designed for assembly to 5' and 6' or 6'-6" decks shall contain handrail sleeve supports constructed of 1-1/4" pipe, 10 ga.
Transfer Step Handrail:	The "U"-shaped transfer step handrail shall be formed 1" pipe, drilled for field assembly to transfer point deck and bottom step. Its apex shall be 36-1/8" from finished grade.
Rung Leg:	The rung leg shall be 1" pipe with ends mashed and punched for field assembly to bottom step.
Fasteners:	Each assembly shall contain Versalok Fasteners and Fastener Style A hardware.
Finishes:	The stairs, bottom step, and transfer point deck shall be finished in Mira-Therm. The deck enclosures, handrails, extensions, sleeves, and leg shall be finished in Mira-Cote.

Consult Miracle's "Glossary of Technical Data for Materials, Processes & Finishes" for specifications of underlined items.

Product Specifications

Kids' Choice®

Vine Climbers & Twisted Vine Climbers for 5', 6'-6" and 8' Decks

714-867-15 & 714-867-16 | 714-867-18 | 714-867-25 | 714-867-26 | 714-867-28

Vine Climber for 5' Deck

Vine Climber for 6'-6" Deck

714-867-15 | 714-867-16 | 714-867-18 & 714-867-25 | 714-867-26 | 714-867-28

Vine Climber for 8' Deck

Twisted Vine Climber for 5' Deck

Kids' Choice®

Vine Climbers & Twisted Vine Climbers

Twisted Vine Climber for 6'-6" Deck

Twisted Vine Climber for 8' Deck

MIRACLE RECREATION EQUIPMENT COMPANY

Kids' Choice®

Vine Climbers & Twisted Vine Climbers

MODEL #	PRODUCT	GRND. SPC.	PROT. AREA	CONCRETE
714-867-15	Vine Climber for 5' Deck	4'-0" x 2'-0"	13'-6" x 8'-0"	.05 cu. yd.
714-867-16	Vine Climber for 6'-6" Deck	4'-0" x 2'-0"	13'-6" x 8'-0"	.05 cu. yd.
714-867-18	Vine Climber for 8' Deck	4'-0" x 2'-0"	13'-6" x 8'-0"	.05 cu. yd.
714-867-25	Twisted Vine Climber for 5' Deck	4'-0" x 2'-0"	13'-6" x 8'-0"	.05 cu. yd.
714-867-26	Twisted Vine Climber for 6'-6" Deck	4'-0" x 2'-0"	13'-6" x 8'-0"	.05 cu. yd.
714-867-28	Twisted Vine Climber for 8' Deck	4'-0" x 2'-0"	13'-6" x 8'-0"	.05 cu. yd.

DESCRIPTION

Vine Climbers feature horizontal rungs on a vertical rail field-assembled to an arched entry deck enclosure. The rungs contain a routed leaf design and ascend the climber on opposite sides of the rail for Vine Climbers, or slightly offset to wind upward around the rail for Twisted Vine Climbers. As the name implies, the center pole of the Twisted Vine Climber is not straight.

MATERIALS

Climber Assembly: The climber rail shall be constructed of 1-1/4" pipe, 10 ga. with mounting plate support tubes of 1" tube solid welded, and mounting plates of 7 ga. galvanized also solid welded. Plastic pipe plugs shall close support stub ends. The rail's top end shall be swaged and shall have a threaded aluminum insert factory installed. Leaf pads (stepping surfaces to be field assembled to mounting plates) shall be constructed of Mira-Lene routed with an oak leaf design.

Arch Enclosure: The enclosure assembly shall comprise top supports, an arched upright and extension tube sleeve, all constructed of 1" pipe, drilled, formed and mashed, and vertical rungs constructed of 1" tube, all solid welded.

Fasteners: The assembly shall contain Versalok Fasteners and Fastener Style A hardware.

Finishes: The climber rail with support tubes and mounting plates and arched entry enclosure shall be finished in Mira-Cote. The leaf pads shall have color molded in.

Consult Miracle's "Glossary of Technical Data for Materials, Processes & Finishes" for specifications of underlined items.

Kids' Choice® - Mira-Therm II

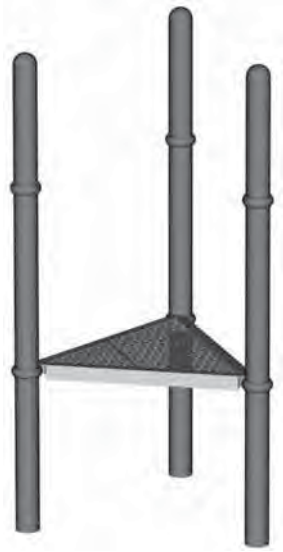
Decks

Deck Posts not included in these assemblies.

714-501-9

Triangle Deck

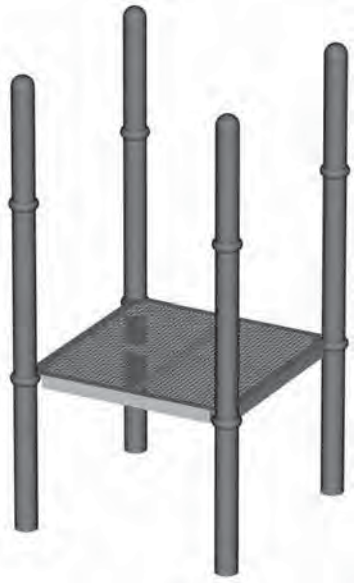
Model # 714-501-9 requires three (3) Posts.



714-502-9

Square Deck

Model # 714-502-9 requires four (4) Posts.



714-503-9

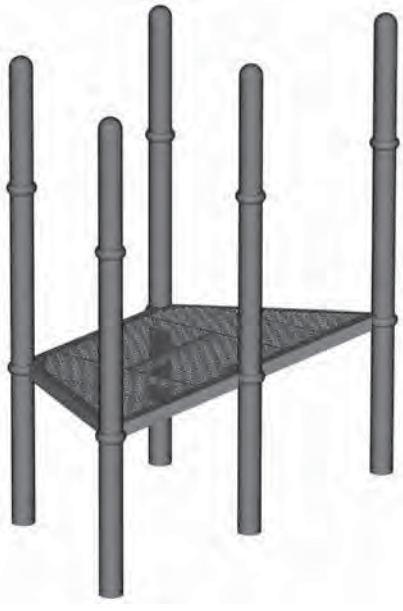
Half Hex Deck (Full)

Model # 714-503-9 requires four (4) Posts.

714-504-9

Half Hex Deck

Model # 714-504-9 requires five (5) Posts.



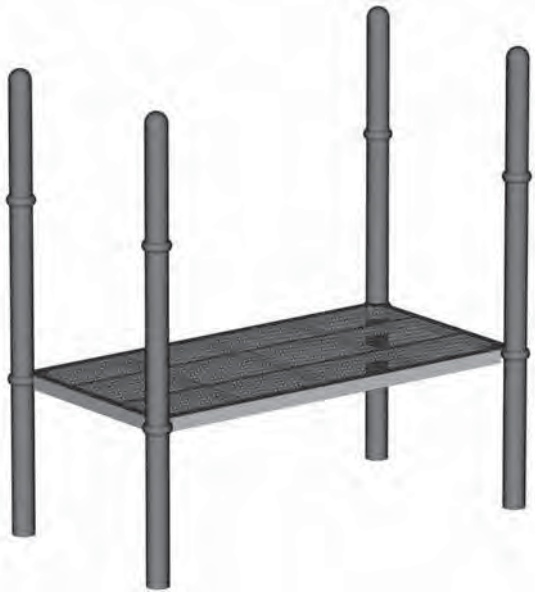
Kids' Choice® - Mira-Therm II

Decks

714-508-9

Rectangle Deck (Full)

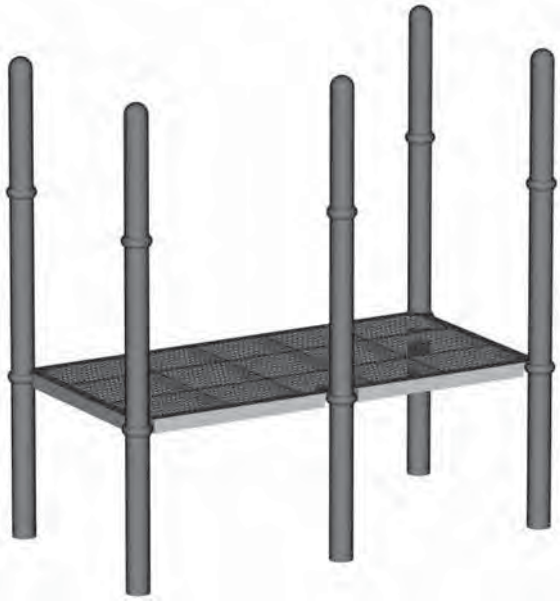
Model # 714-508-9 requires four (4) Posts.



714-509-9

Rectangle Deck (Half Open)

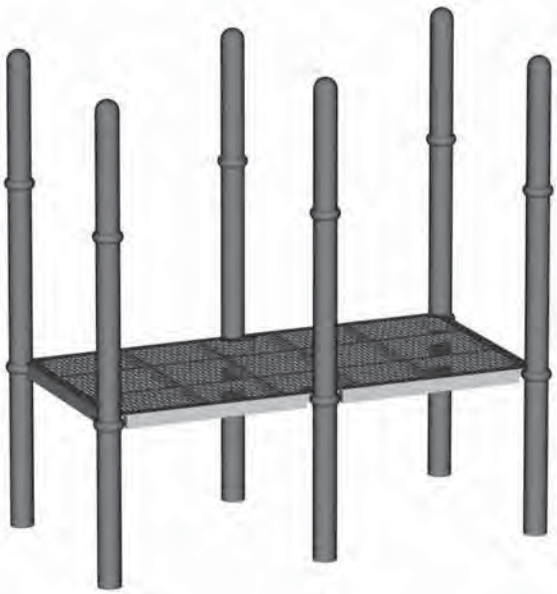
Model # 714-509-9 requires five (5) Posts.



714-510-9

Rectangle Deck (Open)

Model # 714-510-9 requires six (6) Posts.



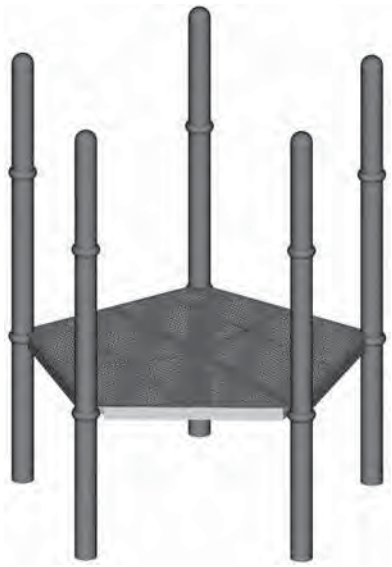
Kids' Choice® - Mira-Therm II

Decks

714-512-9

Pentagon Deck

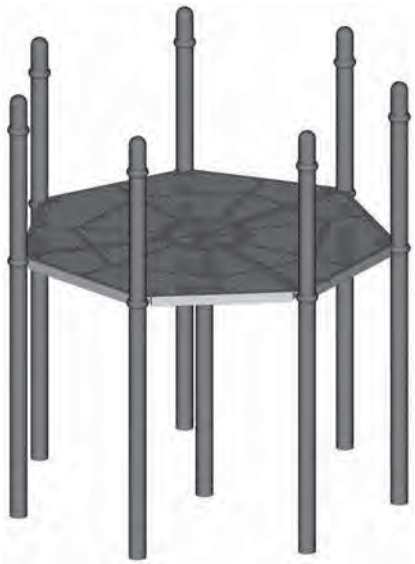
Model # 714-512-9 requires five (5) Posts.



714-517-9

Heptagon Deck

Model # 714-517-9 requires seven (7) Posts and one (1) middle support post.



THIS SPACE INTENTIONALLY LEFT BLANK

Kids' Choice® - Mira-Therm II

Decks

MODEL #	PRODUCT	POSTS REQ'D	DECK SURFACE	CONCRETE
714-501-9	Triangle Deck	3	7 sq. ft.	See Post specs
714-502-9	Square Deck	4	16 sq. ft.	"
714-503-9	Half Hex Deck (Full)	4	21 sq. ft.	"
714-504-9	Half Hex Deck (Open)	5	21 sq. ft.	"
714-508-9	Rectangle Deck (Full)	4	32 sq. ft.	"
714-509-9	Rectangle Deck (Half Open)	5	32 sq. ft.	"
714-510-9	Rectangle Deck (Open)	6	32 sq. ft.	"
714-512-9	Pentagon Deck	5	26.5 sq. ft.	"
714-517-9	Heptagon Deck	7	55 sq. ft.	"

DESCRIPTION

Mira-Therm II deck models include an equilateral triangle deck, a square deck, two half hexagon decks, three rectangular decks, a pentagon deck, and a heptagon deck. Decks are designed for maximum flexibility in height of deck surface, from 0" to 6'-6" (in 6" increments), though 3', 5', and 6'-6" are considered standard deck heights.

Decks are designed on a 48" center-to-center spacing on 5" deck posts, at equal or varied heights. All deck-to-post connections are made with a deck support clamp. All deck connections are made beneath deck with no exposed fasteners on deck perimeter. Decks with 8' wide open side are designed to attach to another deck with 8' wide open side at same deck height.

MATERIALS

Decks: All decks shall be constructed with folded 11 ga. steel sheet forming 3" tall sides. Decking sheets shall be perforated with a staggered pattern of 3/8" diameter holes at 5/8" apart center-to-center. The decking shall have 7 ga. by 2" flat steel braces and corner braces of 7 ga. steel. The entire assembly shall be solid welded prior to PVC coating.

Fasteners: Deck assemblies shall contain Versalok Fasteners and Fastener Style A hardware.

Finishes: All deck surfaces shall be coated in Mira-Therm. Clamps shall have a Mira-Cote finish.

Consult Miracle's "Glossary of Technical Data for Materials, Processes & Finishes" for specifications of underlined items.

Product Specifications

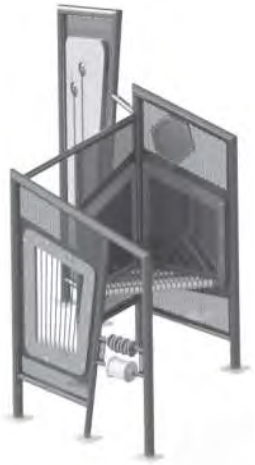
Miracle Museum - SpinAtorium, Odyssey Hall, Dynamics Lab, Grand Gallery, Momentum Corridor, Tranquility Corner Frame (Inground and Bolt Down), Ground Level Panels (Falling Washer, Zoetrope, Push Pin)

453-1, 453-1BD
SpinAtorium

453-2, 453-2BD
Odyssey Hall

453-3, 453-3BD
Dynamics Lab

453-4, 453-4BD
Grand Gallery



453-5, 453-5BD
Momentum Corridor

453-704, 453-704BD
Tranquility Corner Frame

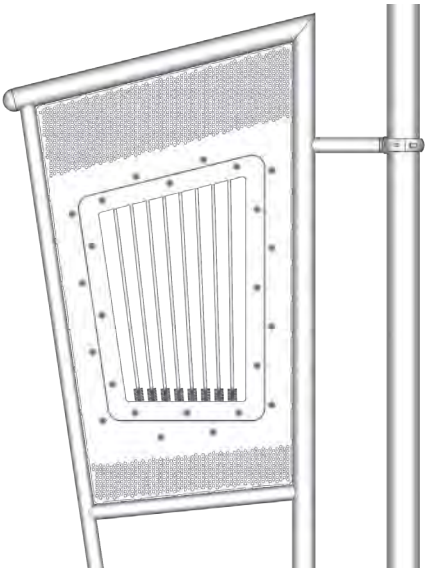
Consult Miracle's "Glossary of Technical Data for Materials, Processes and Finishes" for specifications of underlined items.

453-1, 453-1BD, 453-2, 453-2BD, 453-3, 453-3BD, 453-4, 453-4BD, 453-5, 453-5BD, 453-704, 453-704BD, 7146981, 7146982, 7146983, 7186981, 7186982, 7186983

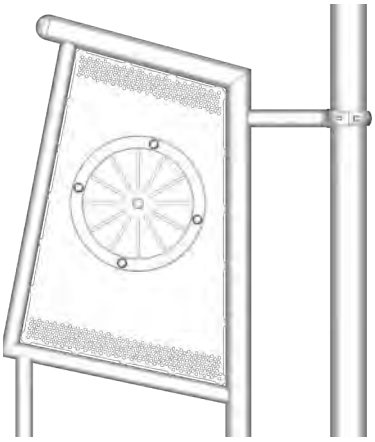
Miracle Museum

Miracle Museum - SpinAtorium, Odyssey Hall, Dynamics Lab, Grand Gallery, Momentum Corridor, Tranquility Corner Frame (Inground and Bolt Down), Ground Level Panels (Falling Washer, Zoetrope, Push Pin)

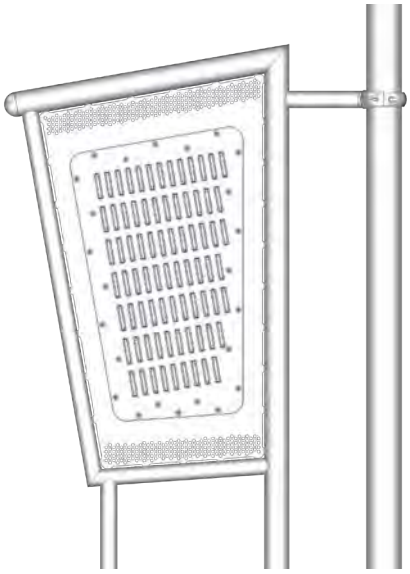
7146981
Museum Washer Panel
KC - ground level



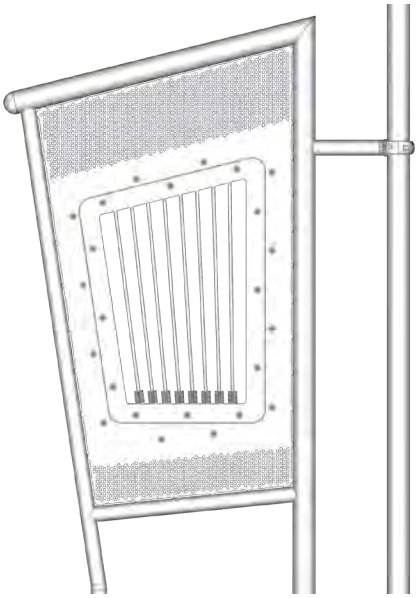
7146982
Museum Zoetrope Panel
KC - ground level



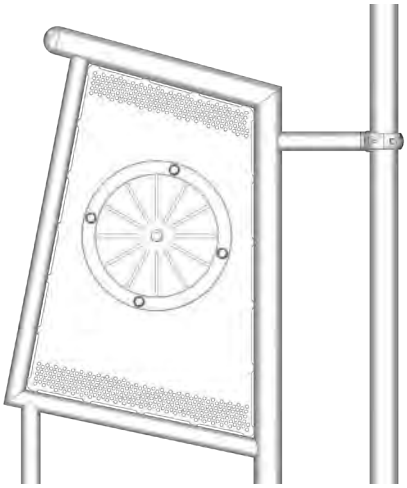
7146983
Museum Push Pin Panel
KC - ground level



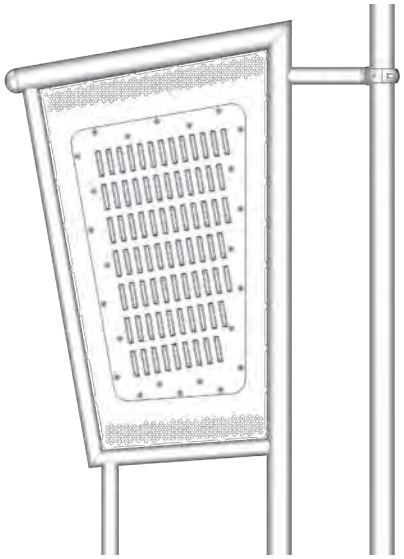
7186981
Museum Washer Panel
TC - ground level



7186982
Museum Zoetrope Panel
TC - ground level



7186983
Museum Push Pin Panel
TC - ground level



453-1, 453-1BD, 453-2, 453-2BD, 453-3, 453-3BD, 453-4, 453-4BD, 453-5, 453-5BD, 453-704, 453-704BD, 7146981, 7146982, 7146983, 7186981, 7186982, 7186983

Miracle Museum - SpinAtorium, Odyssey Hall, Dynamics Lab, Grand Gallery, Momentum Corridor, Tranquility Corner Frame (Inground and Bolt Down), Ground Level Panels (Falling Washer, Zoetrope, Push Pin)

Model #	*Product*	*Ground Space*	*Concrete*
453-1	MM SpinAtorium (Inground)	N/A	0.13 cu.yds.
453-1BD	MM SpinAtorium (Bolt Down)	N/A	N/A
453-2	MM Odyssey Hall (Inground)	9' x 7'	2.40 cu.yds.
453-2BD	MM Odyssey Hall (Bolt Down)	9' x 7'	N/A
453-3	MM Dynamics Lab (Inground)	7' x 5'	0.39 cu.yds.
453-3BD	MM Dynamics Lab (Bolt Down)	7' x 5'	N/A
453-4	MM Grand Gallery (Inground)	10' x 10'	0.96 cu.yds.
453-4BD	MM Grand Gallery (Bolt Down)	10' x 10'	N/A
453-5	MM Momentum Corridor (Inground)	3' x 12'	0.48 cu.yds.
453-5BD	MM Momentum Corridor (Bolt Down)	3' x 12'	N/A
453-704	MM Tranquility Corner Frame	5' x 5'	0.50 cu.yds.
453-704BD	MM Tranquility Corner Frame Bolt Down	5' x 5'	N/A
714-698-1	Museum Washer Panel KC-Ground Level	1' x 6'	0.24 cu. yds.
718-698-1	Museum Washer Panel TC-Ground Level	1' x 6'	0.24 cu. yds.
714-698-2	Museum Zeotrope Panel KC-Ground Level	1' x 5'	0.24 cu. yds.
718-698-2	Museum Zeotrope Panel TC-Ground Level	1' x 5'	0.24 cu. yds.
714-698-3	Museum Push Pin Panel KC-Ground Level	1' x 5'	0.24 cu. yds.
718-698-3	Museum Push Pin Panel TC-Ground Level	1' x 5'	0.24 cu. yds.

Miracle Museum - SpinAtorium, Odyssey Hall, Dynamics Lab, Grand Gallery, Momentum Corridor, Tranquility Corner Frame (Inground and Bolt Down), Ground Level Panels (Falling Washer, Zoetrope, Push Pin)

DESCRIPTION

The Miracle Museum playevents are designed to be enjoyed by children of all abilities, including autism, developmental delays and those that use mobility devices. Children can use their imagination and enhance creative play. The Miracle Museum playevents may be freestanding, clustered or grouped with other Miracle Museum playevents.

MATERIALS

Spinner Assembly:	Shall be constructed from 3/4" and 1/2" Mira-lene routed panels, bronze bearing and polymer and stainless steel balls inside the spinner and covered by a transparent polycarbonate bubble.
Post Weldment:	Shall be made from 3/5" x 11ga. galvanized steel tubing, 7 ga. galvanized steel sheet and 3/8" steel plate.
Odyssey Hall Frame Weldments:	Shall be constructed of tube 3.500 OD x 11 ga. galvanized with tabs and blocks made from SHST GAL 3.0mm (11ga.) and 5/8" mild steel block hanger.
Cross Members:	Shall be constructed from tube 2.375 OD x 12 ga. galvanized with tabs and blocks made from SHST GAL 3.0mm (11 ga.) and 5/8" mild steel block hanger.
Spinners:	Shall be made from rotational molded plastic and 9.5mm (.38") grey textured styrene butadiene rubber (SBR).
Ropes:	Shall be steel reinforced nylon braided rope with a galvanized foundation steelwork.
Chains:	Shall be 4/O straight link coil chain.
Odyssey Hall Finish:	The frame shall have a MICA-Cote™ finish.
Dynamics Lab Frame Weldments:	Shall be constructed of tube 3.500 OD x 11 ga. galvanized, tube 2.375 OD x 16 ga. galvanized and SHST GAL 3.0mm (11 ga.). Footings for bolt down version will be made from plate 9.5mm (3/8") A36 and welded to the main frame.
Gear Spinner:	Shall be constructed from 1/2" Mira-lene routed gears separated by spacers constructed from 1/4" Mira-lene. Gears and spacers are to be assembled onto a M10 threaded rod.
Ground Level Panel Weldments:	Shall be constructed of tube 3.500” OD x 11 ga. galvanized tube, 2.375” OD x 10 ga. galvanized, tube 2.375” OD x 12 ga. galvanized tube and 3.0mm (11 ga.) galvanized sheet.

Consult Miracle's "Glossary of Technical Data for Materials, Processes and Finishes" for specifications of underlined items.

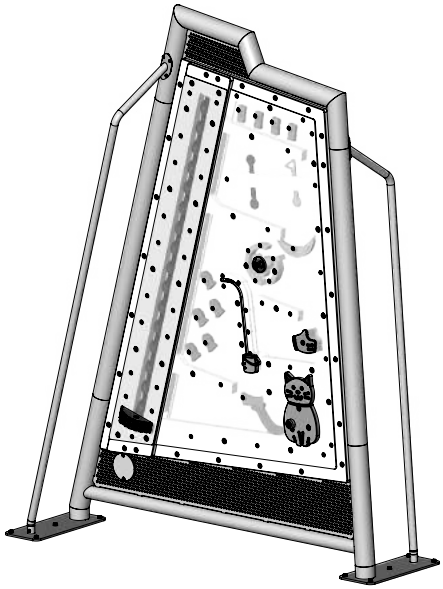
Miracle Museum - SpinAtorium, Odyssey Hall, Dynamics Lab, Grand Gallery, Momentum Corridor, Tranquility Corner Frame (Inground and Bolt Down), Ground Level Panels (Falling Washer, Zoetrope, Push Pin)

Mounting Weldments:	Shall be constructed of RDTB ILG 42.2 x 3.0, SHST GAL 3.0mm (11ga.) and tube 1.315 OD x 11 ga. galvanized and used to mount the drum. The weldment for the spinner events shall be constructed of SHST HR 4.5mm (7 ga.) and 1215 steel.
Router Events:	Shall be constructed from 3/4" sheet laminated HDPE or 1/2" sheet HDPE.
Dynamics Lab Finish:	The frame shall have a MICA-Cote™ finish.
Grand Gallery Frame:	Shall be constructed of 3 1/2" OD x 11 ga. galvanized tube, 2 3/8" OD x 12 ga. galvanized tube, 1 5/8" x 11 ga. galvanized tube and 3.0mm galvanized sheet. Footings for bolt down version shall be constructed of 3/8" A36 plate, welded.
Activities:	Shall be constructed from 1/2" laminated high-density polyethylene, 3/4" laminated high-density polyethylene, 1/4" translucent colored polycarbonate, cast alloyed aluminum bells, golf balls, mirrored finish stainless steel, polystyrene high impact static cylinders in red and blue and 1/2" stainless steel acme threaded rod.
Momentum Corridor Slide:	Slide sides shall be constructed of 4.6mm galvanized sheet, 3 1/2" x 13 ga. galvanized tube and 25.4 x 14 ga. tube. Slide decks shall be constructed of 2.3mm galvanized sheet. Rollers shall be constructed of 2" aluminum tubing with nitrile bearings on stainless steel shafts.
Roof:	Slide roof shall be constructed of 4.6mm galvanized sheet, 3.0mm galvanized sheet, 1 7/8" x 11 ga. tube and 1 5/16" x 14 ga. tube.
Support:	Slide support shall be constructed of 1 5/8" x 11 ga. galvanized tube and 4.6mm galvanized sheet.
Tranquility Corner Top Weldment:	Top weldment shall be made from: corner cross member 1, tube rnd 3.500 11ga. glv; corner cross member 2, tube rnd 3.500 11ga. glv; corner cross member 3, tube rnd 2.375 12ga. glv; corner bolt panel 1, 2 and 3, sheet 11ga. galv (3.0mm).
Triangle Roof (KODA):	Shall be constructed of KODA XT 1/4".
Corner Leg 1 and 2:	Shall be constructed of tube rnd 3.500 11ga. glv.
All Models Fasteners:	All hardware shall be Fastener Style A.
Finishes (unless otherwise stated):	The frame assembly and Versalok Fasteners shall have a Mira-Cote™ finish.
Versalok Fasteners:	All Versalok Fasteners for component attachment shall be aluminum alloy.

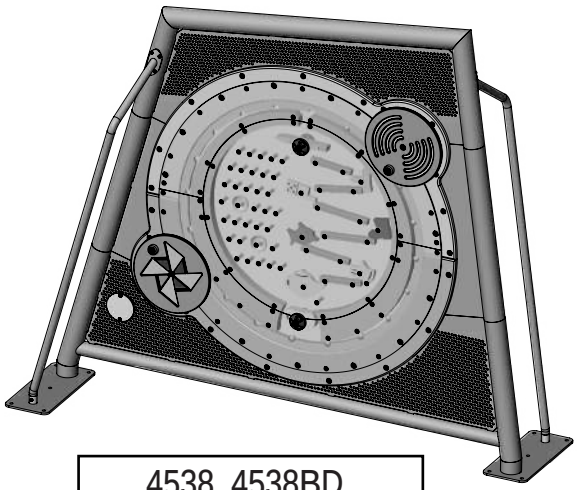
Consult Miracle's "Glossary of Technical Data for Materials, Processes and Finishes" for specifications of underlined items.

Miracle Machines - Curiosity Thrilled the Cat, My Cup of Tea, GOOOAAALLL (inground and bolt down)

4539, 4539BD
MM GOOOAAALLL



4536, 4536BD
MM Curiosity Thrilled the Cat



4538, 4538BD
MM My Cup of Tea

Model #	*Product*	*Ground Space*	*Concrete*
4536	MM Curiosity Thrilled the Cat (inground)	3' x 3'	0.35 cu.yds.
4536BD	MM Curiosity Thrilled the Cat BD (bolt down)	3' x 3'	N/A
4538	MM My Cup of Tea (inground)	8' x 3'	0.35 cu.yds.
4538BD	MM My Cup of Tea BD (bolt down)	8' x 3'	N/A
4539	MM GOOOAAALLL (inground)	11' x 3'	0.35 cu.yds.
4539BD	MM GOOOAAALLL BD (bolt down)	11' x 3'	N/A

Consult Miracle's "Glossary of Technical Data for Materials, Processes and Finishes" for specifications of underlined items.

Miracle Machines - Curiosity Thrilled the Cat, My Cup of Tea, GOOOAAALLL (inground and bolt down)

DESCRIPTION

The Miracle Machines play events are designed to be enjoyed by children of ages. They feature sensory-rich details with fun auditory feedback. Interactive gears and levers at a variety of heights and reach ranges provide children of varying abilities with a real play choice. The Miracle Machines play events may be freestanding, clustered or grouped with other Miracle Machines, and Miracle Museum play events.

MATERIALS

Frame Weldments	The frame weldments shall be constructed of tube 3.500 OD x 11 ga galvanized with sheet steel 3.0mm thick (11ga) galvanized welded to it. The supports shall be constructed of 1" pipe gator grip. Footings for bolt down version will be made from plate 7.9mm thick and welded to the main frame. For inground, the bolt on legs shall be constructed of 5" 11ga pipe with a 7.9mm plate welded to it.
Panel Activity	The structure shall be constructed from 3/4" sheet laminated HDPE, with a 1/8" sheet of polycarbonate on the outsides. The insides of the panel shall be constructed of 3/4" and 1/4" mira-lene routed panels, bronze bushings, 1” square galvanized pipe and stainless-steel balls.
Finishes	The frame shall have a Mira-Cote™ Finish.

Consult Miracle's "Glossary of Technical Data for Materials, Processes and Finishes" for specifications of underlined items.

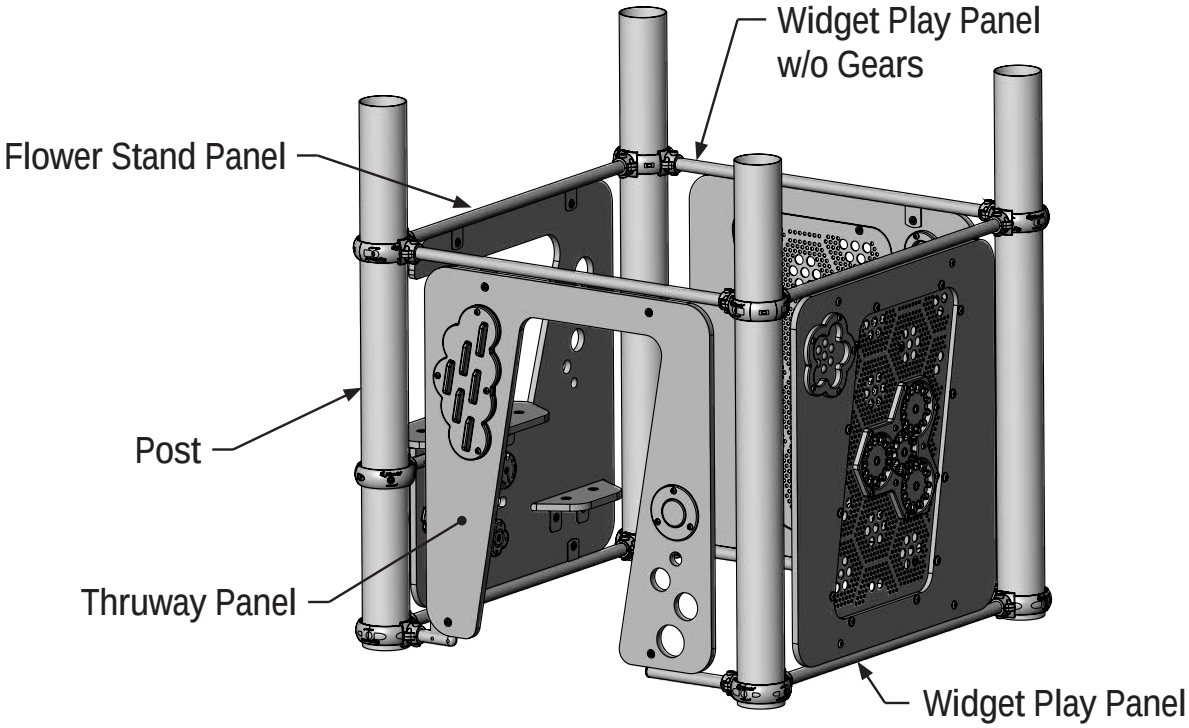
Product Specifications

05OCT23

Rev. A

Tots' Choice ® Tots' Choice Expansion ® Kids' Choice ®

Flower Stand Panel, Thruway Panel, Widget Play Panel



Model #	*Product*
70471521B	FLOWER STAND PANEL BELOW DECK TCX
71471521B	FLOWER STAND PANEL BELOW DECK KC
71871521B	FLOWER STAND PANEL BELOW DECK TC
70471522B	THRUWAY PANEL BELOW DECK TCX
71471522B	THRUWAY PANEL BELOW DECK KC
71871522B	THRUWAY PANEL BELOW DECK TC
70471523	WIDGET PLAY PANEL TCX
70471523B	WIDGET PLAY PANEL BELOW DECK TCX
71471523	WIDGET PLAY PANEL KC
71471523B	WIDGET PLAY PANEL BELOW DECK KC
71871523	WIDGET PLAY PANEL TC
71871523B	WIDGET PLAY PANEL BELOW DECK TC
70471524	WIDGET PLAY PANEL W/O GEARS TCX
70471524B	WIDGET PLAY PANEL W/O GEARS BELOW DK TCX
71471524	WIDGET PLAY PANEL W/O GEARS KC
71471524B	WIDGET PLAY PANEL W/O GEARS BELOW DK KC
71871524	WIDGET PLAY PANEL W/O GEARS TC
71871524B	WIDGET PLAY PANEL W/O GEARS BELOW DK TC

Flower Stand Panel, Thruway Panel, Widget Play Panel

70471521B, 71471521B, 71871521B, 70471522B, 71471522B, 71871522B, 70471523, 70471523B, 71471523, 71471523B, 71871523, 71871523B, 70471524, 70471524B, 71471524, 71471524B, 71871524, 71871524B

Flower Stand Panel, Thruway Panel, Widget Play Panel

Tots' Choice ® Tots' Choice Expansion ® Kids' Choice ®

Flower Stand Panel, Thruway Panel, Widget Play Panel

DESCRIPTION

The play events are designed to be enjoyed by children of all abilities. Children can use their imagination and enhance creative play. The play events can be used in a variety of ways such as freestanding, above deck, below deck, clustered or grouped together with other play events.

MATERIALS

Panels:	The panels shall be constructed of Mira-Lene™. The panels shall be supported between posts by tops and bottom rungs (as required) of 1" pipe, each with two tabs of 11 ga. A-60 Galvannealed sheet, solid welded.
Flower Stand Panel:	In addition to above panel materials, panel shall feature Mira-Lene™ flower accents fastened to the panel. Seats shall be supported with tabs of 7 ga. A-60 Galvannealed sheet, bent.
Thruway Panel:	In addition to above panel materials, panel shall feature a combination of ¼" and ½" HDPE interactive accents fastened to the panel. The panel shall attach to the panel bracket with a tab of 7 ga. A-60 Galvannealed sheet.
Widget Play Panel:	In addition to above panel materials, panel shall feature a combination of perforated 11 ga. A-60 Galvannealed sheet, ½" HDPE, and marble accents fastened to the panel.
Posts:	The posts shall be comprised of 5" tube or 3 1/2" tube, 11 ga. or 13 ga. wall thickness
All model fasteners:	Panel assemblies shall contain Versalok Fasteners. All hardware shall be fastener style A.
Finishes (unless otherwise stated):	The rungs, clamps, and other steel frames and accents shall have a Mira-Cote™ finish.

Consult Miracle's "Glossary of Technical Data for Materials, Processes & Finishes" for specifications of underlined items.

70471521B, 71471521B, 71871521B, 70471522B, 71471522B, 71871522B, 70471523, 70471523B, 71471523, 71471523B, 71871523, 71871523B, 70471524, 70471524B, 71471524, 71471524B, 71871524, 71871524B

Kids' Choice® - Mira-Therm II

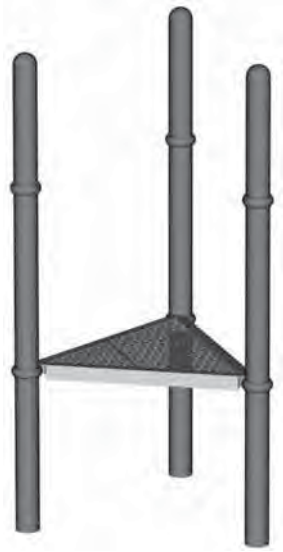
Decks

Deck Posts not included in these assemblies.

714-501-9

Triangle Deck

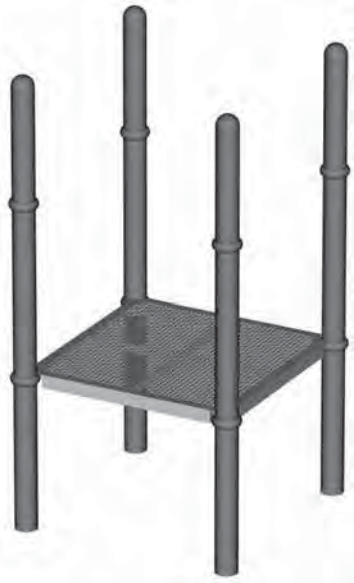
Model # 714-501-9 requires three (3) Posts.



714-502-9

Square Deck

Model # 714-502-9 requires four (4) Posts.



714-503-9

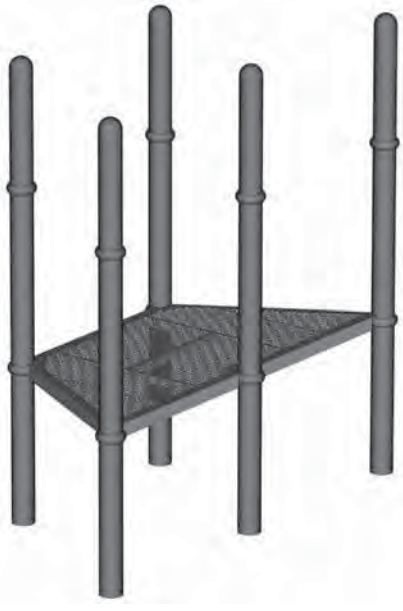
Half Hex Deck (Full)

Model # 714-503-9 requires four (4) Posts.

714-504-9

Half Hex Deck

Model # 714-504-9 requires five (5) Posts.



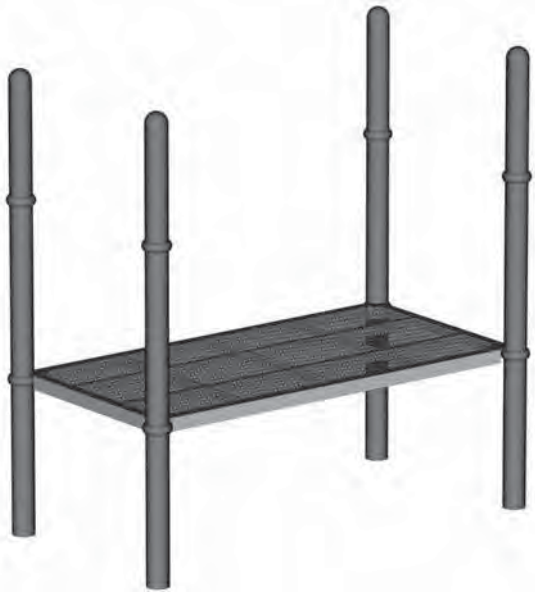
Kids' Choice® - Mira-Therm II

Decks

714-508-9

Rectangle Deck (Full)

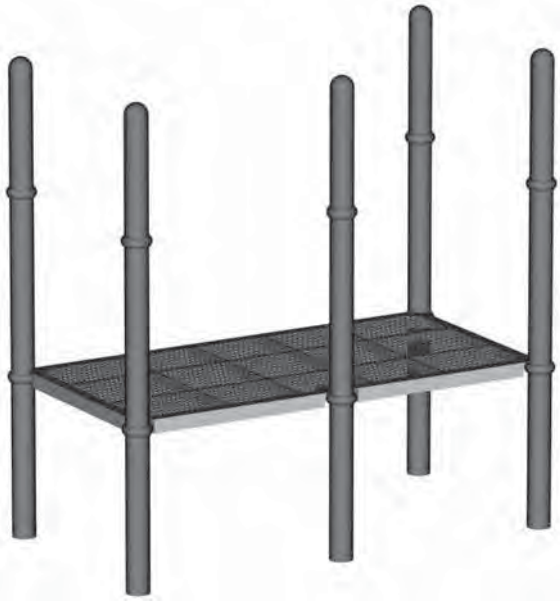
Model # 714-508-9 requires four (4) Posts.



714-509-9

Rectangle Deck (Half Open)

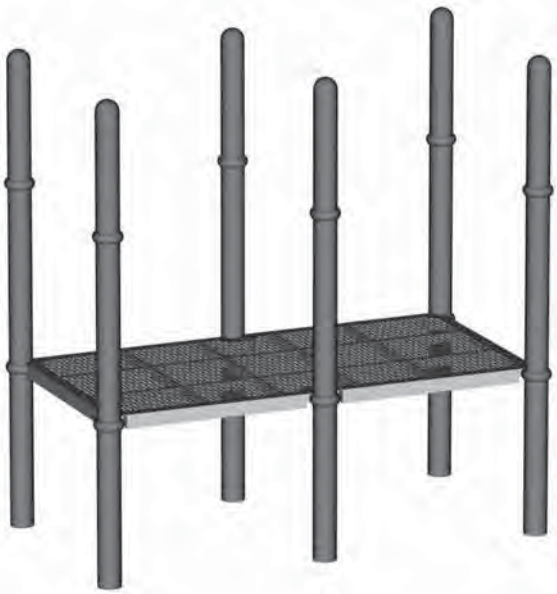
Model # 714-509-9 requires five (5) Posts.



714-510-9

Rectangle Deck (Open)

Model # 714-510-9 requires six (6) Posts.



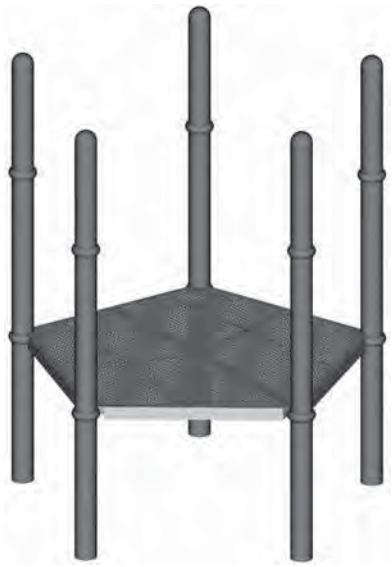
Kids' Choice® - Mira-Therm II

Decks

714-512-9

Pentagon Deck

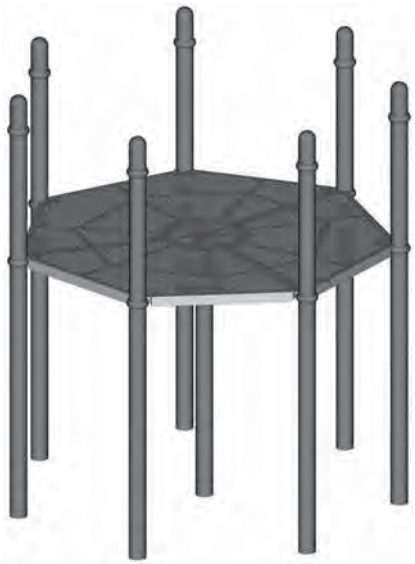
Model # 714-512-9 requires five (5) Posts.



714-517-9

Heptagon Deck

Model # 714-517-9 requires seven (7) Posts and one (1) middle support post.



THIS SPACE INTENTIONALLY LEFT BLANK

Kids' Choice® - Mira-Therm II

Decks

MODEL #	PRODUCT	POSTS REQ'D	DECK SURFACE	CONCRETE
714-501-9	Triangle Deck	3	7 sq. ft.	See Post specs
714-502-9	Square Deck	4	16 sq. ft.	"
714-503-9	Half Hex Deck (Full)	4	21 sq. ft.	"
714-504-9	Half Hex Deck (Open)	5	21 sq. ft.	"
714-508-9	Rectangle Deck (Full)	4	32 sq. ft.	"
714-509-9	Rectangle Deck (Half Open)	5	32 sq. ft.	"
714-510-9	Rectangle Deck (Open)	6	32 sq. ft.	"
714-512-9	Pentagon Deck	5	26.5 sq. ft.	"
714-517-9	Heptagon Deck	7	55 sq. ft.	"

DESCRIPTION

Mira-Therm II deck models include an equilateral triangle deck, a square deck, two half hexagon decks, three rectangular decks, a pentagon deck, and a heptagon deck. Decks are designed for maximum flexibility in height of deck surface, from 0" to 6'-6" (in 6" increments), though 3', 5', and 6'-6" are considered standard deck heights.

Decks are designed on a 48" center-to-center spacing on 5" deck posts, at equal or varied heights. All deck-to-post connections are made with a deck support clamp. All deck connections are made beneath deck with no exposed fasteners on deck perimeter. Decks with 8' wide open side are designed to attach to another deck with 8' wide open side at same deck height.

MATERIALS

Decks: All decks shall be constructed with folded 11 ga. steel sheet forming 3" tall sides. Decking sheets shall be perforated with a staggered pattern of 3/8" diameter holes at 5/8" apart center-to-center. The decking shall have 7 ga. by 2" flat steel braces and corner braces of 7 ga. steel. The entire assembly shall be solid welded prior to PVC coating.

Fasteners: Deck assemblies shall contain Versalok Fasteners and Fastener Style A hardware.

Finishes: All deck surfaces shall be coated in Mira-Therm. Clamps shall have a Mira-Cote finish.

Consult Miracle's "Glossary of Technical Data for Materials, Processes & Finishes" for specifications of underlined items.

Kids' Choice®

Steel Posts (5" O.D., 11 ga. Round Tube) & Aluminum Posts

Steel Posts - 5" O.D., 11ga.

MODEL	DESCRIPTION	USES	PART NUMBER
714-545-3	144" Deck Post (Cheer Roof)	3' Deck	997292*
714-545-5	168" Deck Post (Cheer Roof)	5' Deck	997294*
714-545-6	186" Deck Post (Cheer Roof)	6'-6" Deck	908813*
714-545-8	204" Deck Post (Cheer Roof)	8' Deck	997297*
714-545-10	228" Deck Post (Cheer Roof)	10" Deck	908812*
714-549-1	88" Maze Post	Sensory Panel	925341*
714-549-3	112" Deck Post	3' Decks	995228*
714-549-4	124" Deck Post	4' Decks	995229*
714-550-3	206" Deck Post (PlayCover)	3' Deck & less	997215*
714-550-5	219" Deck Post (PlayCover)	3'-6" to 5' Decks	997218*
714-550-6	243" Deck Post (PlayCover)	5'-6" to 6'-6" Decks	997203*
714-550-8	258" Deck Post (PlayCover)	7' to 8' Decks	997315*
714-551	106" Deck Post	2'-6" Decks & less	713551*
714-552	136" Deck Post	3' to 5' Decks	713552*
714-552L	136" Deck Post w/CPSIA Label	3' to 5' Decks	996061*
714-553	160" Deck Post	5'-6" to 6'-6" Decks	713553*
714-554	178" Deck Post	7' to 8' Decks	713554*
714-556	196" Deck Post	10' Deck	985244*
714-571	106" Post (Roof)	Ground Level	713561*
714-571L	106" Post (Roof) w/CPSIA Label	Ground Level	996352*

Note: An (*) by a part number indicate: Color Code Required.

Consult Miracle's "Glossary of Technical Data for Materials, Processes and Finishes" for specifications of underlined items.

714-545-3, 714-545-5, 714-545-6, 714-545-8, 714-545-10, 714-549-1, 714-549-3, 714-549-32, 714-549-4, 714-549-42, 714-550-3, 714-550-5, 714-550-6, 714-550-8, 714-551, 714-551-2, 714-552, 714-552L, 714-552-2, 714-552-2L, 714-553, 714-553-2, 714-554, 714-554-2, 714-556, 714-571, 714-571-2, 714-571L, 714-572, 714-572-2, 714-573, 714-573-2, 714-574, 714-574-2, 714-575, 714-576, 714-576-8, 714-576-10

5" O.D., 11 ga. Steel Posts & Aluminum Posts

Kids' Choice®

Steel Posts (5" O.D., 11 ga. Round Tube) & Aluminum Posts

Steel Posts - 5" O.D., 11ga. cont.

MODEL	DESCRIPTION	USES	PART NUMBER
714-572	144" Deck Post (Roof)	3' Decks & less	713572*
714-573	168" Deck Post (Roof)	3'-6" to 5' Decks	713573*
714-574	186" Deck Post (Roof)	5'-6" to 6'-6" Decks	713574*
714-575	196" Deck Post (Uses 2 for Flippo Roof)	6'-6" Deck	985260*
714-576	204" Deck Post (Roof)	8' Deck	713818*
714-576-8	228" Deck Post (Topper)	8' Deck	994097*
714-576-10	252" Deck Post (Topper)	10' Deck	994407*

Aluminum Posts - 5" O.D.

MODEL	DESCRIPTION	USES	PART NUMBER
714-549-32	112" Deck Post	3' Decks	995230*
714-549-42	124" Deck Post	4' Decks	995231*
714-551-2	106" Deck Post	2'-6" Decks & less	713593*
714-552-2	136" Deck Post	5' Decks	713594*
714-552-2L	136" Deck Post w/CPSIA Label	5' Decks	996065*
714-553-2	160" Deck Post	5'-6" to 6'-6" Decks	713595*
714-554-2	178" Deck Post	7' to 8' Decks	713599*
714-571-2	106" Post (Roof)	Ground Level	713588*
714-572-2	144" Deck Post (Roof)	3' Decks & less	713589*
714-573-2	168" Deck Post (Roof)	3'-6" to 5' Decks	713590*
714-574-2	186" Deck Post (Roof)	5'-6" to 6'-6" Decks	713591*

Consult Miracle's "Glossary of Technical Data for Materials, Processes and Finishes" for specifications of underlined items.

714-545-3, 714-545-5, 714-545-6, 714-545-8, 714-545-10, 714-549-1, 714-549-3, 714-549-32, 714-549-4, 714-549-42, 714-550-3, 714-550-5, 714-550-6, 714-550-8, 714-551, 714-551-2, 714-552, 714-552L, 714-552-2, 714-552-2L, 714-553, 714-553-2, 714-554, 714-554-2, 714-556, 714-571, 714-571-2, 714-571L, 714-572, 714-572-2, 714-573, 714-573-2, 714-574, 714-574-2, 714-575, 714-576, 714-576-8, 714-576-10

Kids' Choice®

Steel Posts (5" O.D., 11 ga. Round Tube) & Aluminum Posts

CONCRETE 0.13 cubic yards required per post
0.26 cubic yards per post for model's 714-550-3, 714-550-5, 714-550-6 and 714-550-8.

DESCRIPTION Posts are used for support of deck systems and freestanding components.

MATERIALS

Steel Post Assembly: Steel posts shall be constructed of 5" tube, 11 ga. Posts not designed for roof assemblies shall have 5" round end caps pressed in at the factory.

Aluminum Post Assembly: Aluminum posts shall be constructed of 5" aluminum tube. Posts not designed for roof assemblies shall have 5" round end caps pressed in at the factory.

Fasteners: Components shall be field assembled to Posts by means of Versalok Fasteners, Fastener Style A hardware and/or Fastener Style B hardware.

Finishes: Post assemblies and clamps shall be finished in Mira-Cote.

Consult Miracle's "Glossary of Technical Data for Materials, Processes and Finishes" for specifications of underlined items.

5" O.D., 11 ga. Steel Posts & Aluminum Posts

714-545-3, 714-545-5, 714-545-6, 714-545-8, 714-545-10, 714-549-1, 714-549-3, 714-549-32, 714-549-4, 714-549-42, 714-550-3, 714-550-5, 714-550-6, 714-550-8, 714-551, 714-551-2, 714-552, 714-552L, 714-552-2, 714-552-2L, 714-553, 714-553-2, 714-554, 714-554-2, 714-556, 714-571, 714-571-2, 714-571L, 714-572, 714-572-2, 714-573, 714-573-2, 714-574, 714-574-2, 714-575, 714-576, 714-576-8, 714-576-10

Product Specifications

Kids' Choice®

Fence Posts, 4' & 8' Fence Sections, Archway for Fence

714-555, 714-555-2* & 714-555-3* and 714-577-4 | 714-577-8 & 714-578

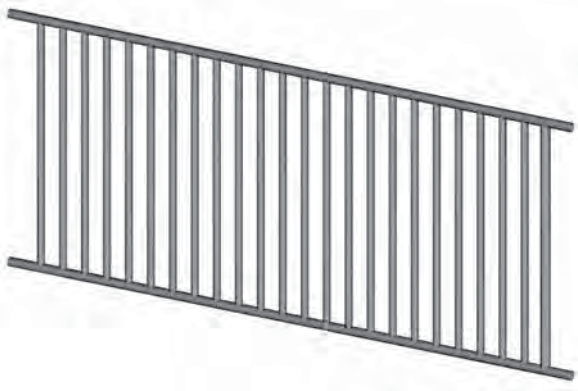
Fence Post, Steel, 5" OD x 76"

* Model # 714-555-2 Fence Post, Aluminum, 5" OD x 76" and Model # 714-555-3 Fence Post, Steel, 5" OD x 76" not shown. Appearances are identical but material specifications differ.

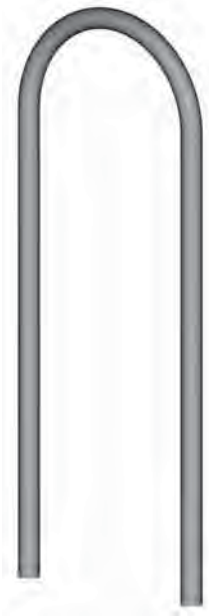
4' Fence Section, Straight

714-555, 714-555-2* & 714-555-3* and 714-577-4 | 714-577-8 & 714-578

8' Fence Section, Straight



Archway for Fence, 5" OD



Fence System

Kids' Choice®

Fence Posts, 4' & 8' Fence Sections, Archway for Fence

MODEL #	PRODUCT	CONCRETE REQ'D
714-555	5" OD x 76" Fence Post, Steel	0.13 cu. yds.
714-555-2	5" OD x 76" Fence Post, Aluminum	0.13 cu. yds.
714-555-3	5" OD x 76" Fence Post, Steel	0.13 cu. yds.
714-577-4	4' Fence Section	N/A
714-577-8	8' Fence Section	N/A
714-578	Archway for Fence	0.26 cu. yds.

DESCRIPTION

These models comprise a fence system with virtually limitless configuration possibilities. This fence system is not playground equipment, therefore protective surfacing to 6' from perimeter is not required. However, this does not permit exclusion of protective surfacing when required by playground equipment which intersects fence area, e.g. if a fence were to connect to a deck system, required protective surfacing of deck components would "overrule" fence's lack of a requirement for surfacing.

MATERIALS

Fence Sections: The fence sections shall consist of a welded assembly handrail system with a top and bottom rail constructed of 1" pipe, and infill consisting of uprights constructed of 1" tube. The fence section shall measure 36-5/16" high and 4' or 8' long.

Archway: The archway shall be a single piece, "U"-shaped component constructed of 5" tube, measuring 4' from leg center to leg center and 132" from leg end to inside apex height.

Steel Posts: Model # 714-555 shall be constructed of 5" tube, 11 ga. with a 5" round end cap pressed into its top end. Model # 714-555-3 shall be constructed of 5" tube with a 5" round end cap pressed into its top end.

Aluminum Posts: Model # 714-555-2 shall be constructed of 5" aluminum tube with a 5" round end cap pressed into its top end.

Fasteners: The assembly shall contain Versalok Fasteners and Fastener Style A hardware.

Finishes: The fence sections, posts, archway, and clamps shall have a Mira-Cote finish.

714-555, 714-555-2, 714-555-3, 714-577-4, 714-577-8, 714-578

Consult Miracle's "Glossary of Technical Data for Materials, Processes and Finishes" for specifications of underlined items.

Kids' Choice®

Steel Panels - Below Deck

714-602-10B: Steel Tic Tac Toe Panel

714-602-11B: Steel Window Panel

714-602-12B: Steel Door Panel

714-602-13B: Steel Counter Panel

Kids' Choice®

Steel Panels - Below Deck

714-713-9B: Alex's Lemonade Stand Panel

714-602-14B: Steel Valance

714-602-15B: Steel Steering Wheel Panel

Kids' Choice®

Steel Panels - Below Deck

MODEL #	PRODUCT	GROUND SPACE	PROTECTIVE AREA
714-602-10B	Steel Tic Tac Toe Panel	4'-6" x 6-3/4"	17' x 13'-0 3/4"
714-602-11B	Steel Window Panel	4'-6" x 11-1/4"	17' x 13'-5 1/4"
714-602-12B	Steel Door Panel	4'-6" x 11-1/4"	17' x 13'-5 1/4"
714-602-13B	Steel Counter Panel	4'-6" x 11-1/4"	17' x 13'-5 1/4"
714-602-14B	Steel Valance	4'-6" x 11-1/4"	17' x 13'-5 1/4"
714-602-15B	Steel Steering Wheel Panel	4'-6" x 7-1/2"	17' x 13' - 0'
714-713-9B	Alex's Lemonade Stand Panel	4'-6" x 11-1/4"	17' x 13'-5 1/4"

DESCRIPTION

Steel Panels are durable below-deck components designed to enhance imaginative play. The Steel Tic Tac Toe Panel shall allow children to play the classic game cooperatively. The Steel Window Panel shall resemble house windows, Steel Door Panel shall resemble the front entry of a house, the Steel Counter Panel shall resemble a toy store counter top, the Steel Valance shall resemble a toy store sign, and the Steel Steering Wheel Panel shall resemble a car console.

Alex's Lemonade Stand Panel shall resemble a lemonade stand and have ALSF Branding.

MATERIALS

Panels: Model # 714-602-10B shall comprise an 11 ga. sheet panel and bolting bracket with two 35" rungs and two 41-1/2" rungs of 1" pipe, Gator Grip. Entire Tic Tac Toe Panel shall measure 37-5/16" in width and 36-1/4" in height. Model #s 714-602-11B and # 714-602-15B shall comprise an 11 ga. sheet panel, with two 35" rungs and two 41-1/2" rungs of 1" pipe, Gator Grip. Entire Steel Window Panel and Steel Steering Wheel Panel shall measure 41-1/2" in width and 36-1/4" in length. Steering Wheel and knob shall be constructed of aluminim. Model # 714-602-12B shall comprise an 11 ga. sheet panel and an arch rung, bottom and side enclosure rungs, and a top rung constructed of 1-1/4" tube, all solid welded. Entire Steel Door Panel assembly shall measure 41-1/2" in width and 36-1/4" in height. Model # 714-602-13B shall comprise two panels of 11 ga. sheet, and horizontal supports, top tube frames, vertical supports, and a bottom rung of 1-1/4" tube, all solid welded. Entire Steel Counter Panel assembly shall measure 41-1/2" in width and 18-1/16" in height. Model # 714-602-14B shall comprise an 11 ga. sheet panel, with side enclosures and rungs of 1-1/4" tube, all solid welded. Entire Valance assembly shall measure 41-1/2" in width and 12-1/16" in height. Model # 714-713-9B shall comprise an 11 ga. sheet panel, two 28-1/4" and two 52-3/8" rungs of 3/4"x1" oval tube and two 37" rungs of 1-5/16" tube, Gator grip. A fiberglass embedded, gloss finish, 0.125" thick sign with ALSF Branding shall be affixed to the panel with stainless steel fasteners. Entire panel assembly shall measure 37" in width and 55" in height.

Tic Tac Toe Cylinders (714-602-10B only): Tic Tac Toe cylinders shall be constructed of cast aluminum with etched "x's" and "o's". Cylinders will attach to panel via an axle constructed of 1" O.D. x 14 ga. tube, A-60 with stainless steel hardware and plastic spacers.

Fasteners: Each assembly shall contain Versalok Fasteners and Fastener Style A hardware.

Finishes: The rungs, clamps, and steel panels shall have a Mira-Cote finish.

Plastic: The lemons, name plate, counter top and panel plastic shall be Miralene.

Consult Miracle's "Glossary of Technical Data for Materials, Processes & Finishes" for specifications of underlined items.

Kids' Choice®

Side-by-Side Slide, Bump & Glide Slides and Bunny Hill Slide

714-700

Slide 5' Side-by-Side w/Canopy 3' Deck

714-728-4

Slide Bump & Glide One Piece 4' Deck

714-728-5

Slide Bump & Glide One PC 4'-6", 5', 5'-6" DK

714-736

Slide Bunny Hill w/Canopy 3' Deck

Consult Miracle's "Glossary of Technical Data for Materials, Processes and Finishes" for specifications of underlined items.

Side-by-Side, Bump & Glide and Bunny Hill Slide

Kids' Choice®

Side-by-Side Slide, Bump & Glide Slides and Bunny Hill Slide

MODEL	PRODUCT	GRND SPACE	PROT. AREA	CONCRETE
714-700	Slide 5' Side-by-Side w/Canopy 3' Deck	4'-1" x 5'-8"	16' x 18'-1"	.05 cu. yds.
714-728-4	Slide Bump & Glide One Piece 4' Deck	4'-1" x 8'-11"	16'-1" x 22'-5"	.10 cu. yds.
714-728-5	Slide Bump & Glide One PC 4'-6", 5', 5'-6" DK	4'-1" x 10'-1"	16'-1" x 24'-6"	.10 cu. yds.
714-736	Slide Bunny Hill w/Canopy 3' Deck	4'-1" x 7'-5"	16'-3" x 19'-10"	.05 cu. yds.

DESCRIPTION

Model 714-700 is a dual bedway Groove slide for 3' Deck; Model 714-728-4 and 714-728-5 are double bedway slides for a 4' deck and 5' deck respectively, with one bedway Mogul, the other Groove; Model 714-736 is a single wide-bedway Groove slide for a 3' deck. Each slide features a Rockite canopy.

MATERIALS

Side-by-Side Slide: 714-700 — The slide shall be constructed of Rockite with threaded fasteners incorporated for assembly. The dimensions shall be: each bedway width, 17"; outside overall, 42"; rail width, 3"; top of bedway to top of rail, 4-1/2"; bedway thickness, 3"; and bedway length, 5'-5".

Bump & Glide Slides: 714-728-4 & 714-728-5 — The slide shall be constructed of Rockite with threaded fasteners incorporated for assembly. The dimensions shall be: bedway width, 16-1/4"; outside overall, 40"; inside rail width, 1-1/4"; outside rail widths, 1-1/2"; top of bedway to top of rail, 7-1/2" - 8-1/2"; bedway thickness, 4-1/2" - 5-1/2"; and bedway length, approximately 8' (for 714-728-4) and 10' (for 714-728-5.)

Bunny Hill Slide: 714-736 — The slide shall be constructed of Rockite with threaded fasteners incorporated for assembly. The dimensions shall be: bedway width, 31-1/4"; outside overall, 40"; rail width, 3-5/8"; top of bedway to top of rail, 6-1/2"; and bedway thickness, 4-1/2".

"T" Leg: The front "T" leg, and middle leg for Model 714-728-4 and 714-728-5, shall comprise an upright and a top. The upright shall be constructed of 2" pipe with a 1-1/4" x 3-1/4" channel top constructed of 11 ga. sheet, welded to the upright in a "T" configuration.

Canopy: The canopy shall be constructed of Rockite with threaded fasteners incorporated for assembly. The canopy shall have an inside width of 39" and an outside width of 44" and shall be slanted at 37 degrees. It shall be field-attached to the posts via clamps and a 41-1/2" rung of 1" pipe.

Fasteners: Each assembly shall contain Versalok Fasteners and Fastener Style A hardware.

Finishes: The Rockite slide and canopy shall have color molded in. The legs, rung, and clamps shall have a Mira-Cote finish.

Consult Miracle's "Glossary of Technical Data for Materials, Processes and Finishes" for specifications of underlined items.

Kids' Choice®

Imagination Panels & Activity Panels - Below Deck

Models included:

MODEL	DESCRIPTION
714-602-6B	Steel Panel, Crawl Through
714-617-B	Space Ship Panel
714-713-5B	Door Panel
714-713-17B	Door Panel Below Deck
714-713-18B	Window Panel Below Deck
714-713-19B	Store Panel Below Deck
714-713-20B	Door Panel W/Welcome Below Deck
714-713-21B	Space Maze Panel KC Below Deck
714-713-22B	Alphabet Panel KC Below Deck
714-713-23B	Braille Panel KC Below Deck
714-713-24B	Sign Language Phrases Panel KC Below Deck
714-713-25B	Sign Language Alphabet Panel KC Below Deck
714-714-2B	Fire Truck Panel
714-714-4B	Train Panel
714-714-11B	4 X 4 Panel KC Below Deck
714-714-11HB	4 X 4 Half Panel KC Below Deck
714-714-12B	Big Rig Panel Below Deck
714-714-13B	Plane Panel KC Below Deck
714-715-3B	3' Jump Panel
714-715-5B	5' Jump Panel
714-715-13B	Calypso 3-Drum Panel
714-715-20B	Activity Panel Frame

MODELS CONTINUED ON NEXT PAGE

Consult Miracle's "Glossary of Technical Data for Materials, Processes & Finishes" for specifications of underlined items.

714-602-6B, 714-617-B, 714-713-5B, 714-714-2B, 714-714-4B,, 714-715-13B, 714-715-20B, 714-761-2B, 714-761-3B, 714-761-4B, 714-713-17B, 714-713-18B, 714-713-19B, 714-713-20B, 714-714-11B, 714-714-11HB, 714-714-12B, 714-714-13B, 714-715-25B, 714-715-26B, 714-715-27B, 714-715-28B, 714-715-29B, 714-715-3B, 714-715-5B, 714-895-1B, 714895-2B, 714-895-3B, 714-713-21B, 714-713-22B, 714-713-23B, 714-713-24B, 714-713-25B

Kids' Choice®

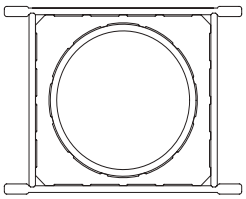
Imagination Panels & Activity Panels - Below Deck

Models included: (continued):

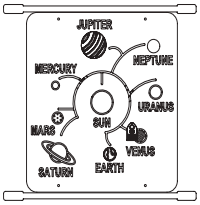
MODEL	DESCRIPTION
714-715-25B	Museum Mosaic Disk Panel KC Below Deck
714-715-26B	Museum Opt Illusion Panel KC Below Deck
714-715-27B	Museum Pin Panel KC Below Deck
714-715-28B	Museum Washer Panel KC Below Deck
714-715-29B	Museum Zoetrope KC Below Deck
714-761-2B	Piston Panel
714-761-3B	Gear Panel
714-761-4B	Sliding Tile Panel
714-895-1B	Barn Wall Panel
714-895-2B	Barn Door Panel
714-895-3B	Barn Window Panel

Note:
Deck systems are NOT included in these assemblies. Please refer to Construction Drawings for the model particular to your system.

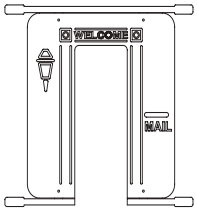
714-602-6B:
Steel Panel, Crawl Through



714-617-B:
Space Ship Panel

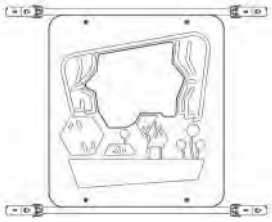


714-713-5B:
Door Panel

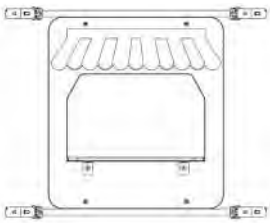


714-713-17B
Door Panel
Below Deck

714-713-18B
Window Panel
Below Deck



714-713-19B
Store Panel
Below Deck



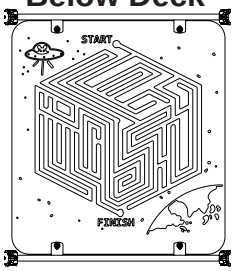
714-713-20B
Door Panel W/Welcome
Below Deck

714-602-6B, 714-617-B, 714-713-5B, 714-714-2B, 714-714-4B,, 714-715-13B, 714-715-20B, 714-761-2B, 714-761-3B, 714-761-4B, 714-713-17B, 714-713-18B, 714-713-19B, 714-713-20B, 714-714-11B, 714-714-11HB, 714-714-12B, 714-714-13B, 714-715-25B, 714-715-26B, 714-715-27B, 714-715-28B, 714-715-29B, 714-715-3B, 714-715-5B, 714-895-1B, 714895-2B, 714-895-3B, 714-713-21B, 714-713-22B, 714-713-23B, 714-713-24B, 714-713-25B

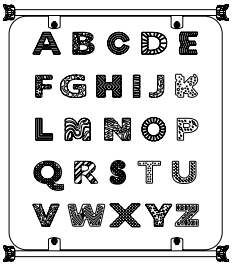
Kids' Choice®

Imagination Panels & Activity Panels - Below Deck

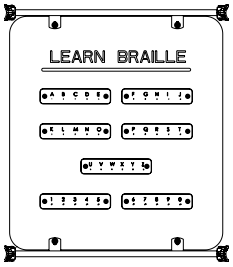
714-713-21B: Space Maze Panel KC Below Deck



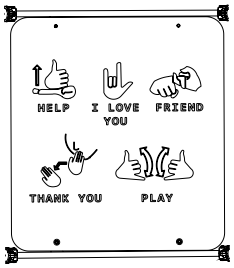
714-713-22B: Alphabet Panel KC Below Deck



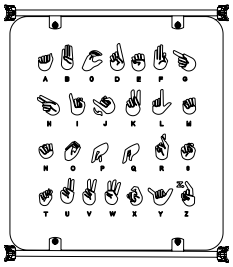
714-713-23B: Braille Panel KC Below Deck



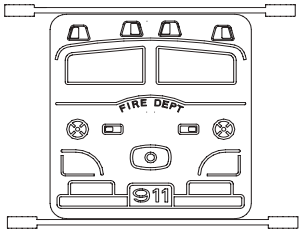
714-713-24B: Sign Language Phrases Panel KC Below Deck



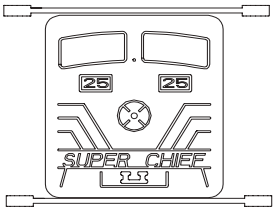
714-714-25B: Sign Language Alphabet Panel KC Below Deck



714-714-2B: Fire Truck Panel



714-714-4B: Train Panel



714-714-11B 4 X 4 Panel KC Below Deck

714-602-6B, 714-617-B, 714-713-5B, 714-714-2B, 714-714-4B,, 714-715-13B, 714-715-20B, 714-761-2B, 714-761-3B, 714-761-4B, 714-713-17B, 714-713-18B, 714-713-19B, 714-713-20B, 714-714-11B, 714-714-11HB, 714-714-12B, 714-714-13B, 714-715-25B, 714-715-26B, 714-715-27B, 714-715-28B, 714-715-29B, 714-715-3B, 714-715-5B, 714-895-1B, 714895-2B, 714-895-3B, 714-713-21B, 714-713-22B, 714-713-23B, 714-713-24B, 714-713-25B

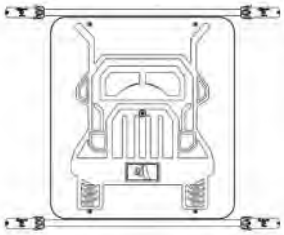
Imagination & Activity Panels (Below Deck)

Kids' Choice®

Imagination Panels & Activity Panels - Below Deck

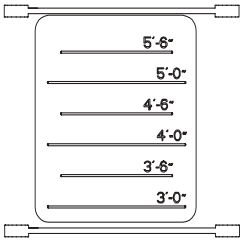
714-714-11HB
4 X 4 Half Panel KC
Below Deck

714-714-12B
Big Rig Panel
Below Deck

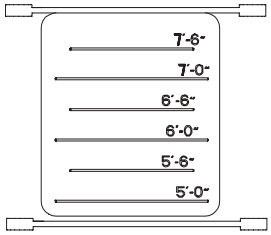


714-714-13B
Plane Panel KC
Below Deck

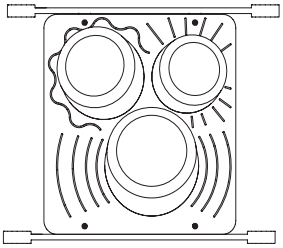
714-715-3B:
Jump Panel
(3' Deck)



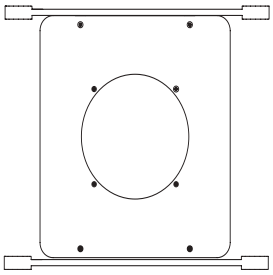
714-715-5B:
Jump Panel
(5' Deck)



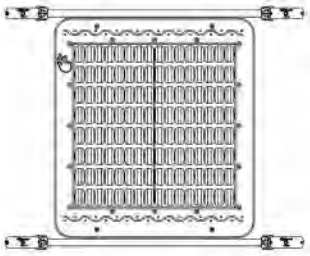
714-715-13B:
Calypso 3-Drum Panel



714-715-20B:
Activity Panel Frame

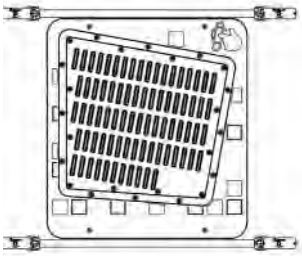


714-715-25B
Museum Mosaic Disk
Panel KC Below Deck

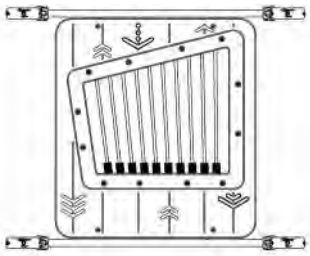


714-715-26B
Museum Opt Illusion Panel
KC Below Deck

714-715-27B
Museum Pin Panel
KC Below Deck



714-715-28B
Museum Washer Panel KC
Below Deck



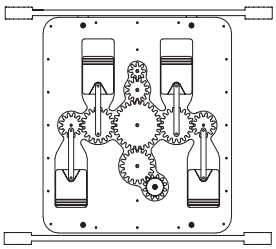
714-715-29B
Museum Zoetrope
KC Below Deck

714-602-6B, 714-617-B, 714-713-5B, 714-714-2B, 714-714-4B,, 714-715-13B, 714-715-20B, 714-761-2B, 714-761-3B, 714-761-4B, 714-713-17B, 714-713-18B, 714-713-19B, 714-713-20B, 714-714-11B, 714-714-11HB, 714-714-12B, 714-714-13B, 714-715-25B, 714-715-26B, 714-715-27B, 714-715-28B, 714-715-29B, 714-715-3B, 714-715-5B, 714-895-1B, 714895-2B, 714-895-3B, 714-713-21B, 714-713-22B, 714-713-23B, 714-713-24B, 714-713-25B

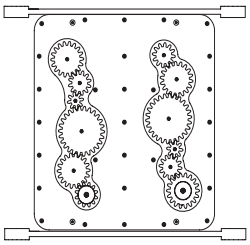
Kids' Choice®

Imagination Panels & Activity Panels - Below Deck

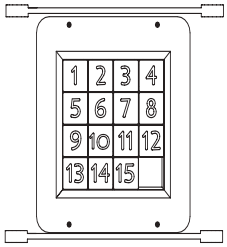
714-761-2B:
Piston Panel



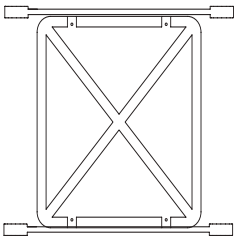
714-761-3B:
Gear Panel



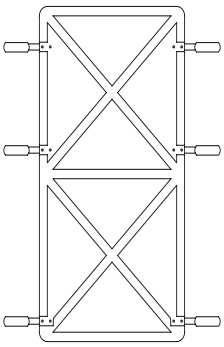
714-761-4B:
Sliding Tile Panel



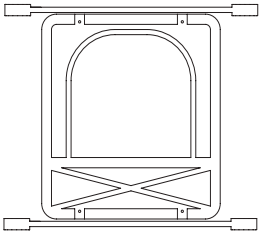
714-895-1B:
Barn Wall Panel



714-895-2B:
Barn Door Panel



714-895-3B:
Barn Window Panel



714-602-6B, 714-617-B, 714-713-5B, 714-714-2B, 714-714-4B,, 714-715-13B, 714-715-20B, 714-761-2B, 714-761-3B, 714-761-4B, 714-713-17B, 714-713-18B, 714-713-19B, 714-713-20B, 714-714-11B, 714-714-11HB, 714-714-12B, 714-714-13B, 714-715-25B, 714-715-26B, 714-715-27B, 714-715-28B, 714-715-29B, 714-715-3B, 714-715-5B, 714-895-1B, 714895-2B, 714-895-3B, 714-713-21B, 714-713-22B, 714-713-23B, 714-713-24B, 714-713-25B

Kids' Choice®

Imagination Panels & Activity Panels - Below Deck

DESCRIPTION

These representational activity panels, designed to enhance imagination and creative play, may be freestanding, clustered or below deck.

- Vehicle-themed panels feature steering wheel assemblies.
- The Piston Panel and Gear Panel contain dynamic, user-driven parts sealed behind a transparent, tamper-resistant cover.
- The Sliding Tile Panel contains 15 routed, moveable tiles with one empty space challenging users to shift the tiles into proper sequence.
- The Calypso 3-Drum Panel allows musical expression, that may be struck with the hands to create different sounds.

MATERIALS

Panels:	The panels shall be constructed of Mira-Lene with all corners rounded. Panels shall measure 36-1/2" x 40" and shall contain routered designs in several themes. The panel shall be supported between posts by top and bottom rungs of 1" pipe, each with two tabs of 11 ga. A-60 Galvannealed sheet, solid welded.
Steel Panel, Crawl Through Model 714-602-6B only	The steel crawl through panel shall comprise rungs and a ring of 1" pipe, Gator Grip, and a 7 ga. sheet, laser cut panel measuring 33-5/8" x 36".
Barn Door Panel: Model 714-895-2B only	In addition to the above materials and specifications, Model 714-895-2B shall be supported between posts by top, middle and bottom rungs of 1" pipe, each with two (2) tabs of 11 ga. A-60 Galvannealed sheet, solid welded. Panel shall measure 36-1/2" x 71-1/2".
Gear Panel and Piston Panel: Model 714-761-3B, 714-761-2B only	In addition to the above materials and specifications, Model 714-761-3B shall contain a clear polycarbonate cover mechanically fastened over two side-by-side sets of 1/4" thick gears, to be constructed of high-density polyethylene, which shall turn on nylon bushings, except for black nylon handles and drive gears which shall turn on bronze bushings. Its opposite side shall contain side-by-side routed finger mazes. Model 714-761-2B shall contain a cover, gears, and knob as described herein, and connecting rod and piston shapes of 1/4" thick high-density polyethylene as well. Its opposite side shall contain routed designs.
Sliding Tile Panel: Model 714-761-4B only	In addition to material and specifications detailed in "panels" paragraph above, Model 714-761-4B shall contain 15 moveable, tongue-and-groove tiles with routed numerals constructed of 1/4" thick high-density polyethylene.
Store Panel: Model 714-713-19B only	In addition to material and specifications detailed in "panels" paragraph above, Model 714-713-19B shall contain brackets holding the counter panel on constructed of 7ga. glv bent sheet steel.
Braille Panel KC: 714-713-23B only	In addition to material and specifications detailed in “panels” paragraph above, model 714-713-23B shall contain 3/32" lexan.

Consult Miracle's "Glossary of Technical Data for Materials, Processes & Finishes" for specifications of underlined items.

714-602-6B, 714-617-B, 714-713-5B, 714-714-2B, 714-714-4B,, 714-715-13B, 714-715-20B, 714-761-2B, 714-761-3B, 714-761-4B, 714-713-17B, 714-713-18B, 714-713-19B, 714-713-20B, 714-714-11B, 714-714-11HB, 714-714-12B, 714-714-13B, 714-715-25B, 714-715-26B, 714-715-27B, 714-715-28B, 714-715-29B, 714-715-3B, 714-715-5B, 714-895-1B, 714895-2B, 714-895-3B, 714-713-21B, 714-713-22B, 714-713-23B, 714-713-24B, 714-713-25B

Kids' Choice®

Imagination Panels & Activity Panels - Below Deck

MATERIALS *(continued)*

Calypso 3-Drum Panel: Model 714-715-13B only	In addition to material and specifications detailed in "panels" paragraph above, Model 714-715-13B shall contain 3 rotational molded drums of low density polyethylene resin. Each drum is attached to the panel through a cover plate constructed of 11 ga. galvanized steel sheet with a Mira-Cote finish.
Museum Pin Panel KC: 714-715-27B only	In addition to material and specifications detailed in “panels” paragraph above, model 714-715-27B shall contain polystyrene high impact static cylinders in red and blue and ½” stainless steel rods.
Museum Washer Panel KC: 714-715-28B only	In addition to material and specifications detailed in “panels” paragraph above, model 714-715-28B shall contain ½” stainless steel acme threaded rod.
Museum Zoetrope KC: 714-715-29B only	In addition to material and specifications detailed in “panels” paragraph above, model 714-715-29B shall contain the weldment for the spinner event which shall be constructed of SHST HR 4.5mm (7 ga.) and 1215 steel.
Rung Bracket:	The rung brackets shall be constructed of 1" pipe with bolting tabs of 11 ga. A-60 Galvannealed sheet, all solid welded.
Steering Wheel:	The steering wheel on vehicle-themed panels shall be constructed of a high density polyethylene produced from high performance, U.V. stabilized rotational molding grade resins with a comprehensive additive package. These resins are tested in accordance with ASTM testing procedures D-1505, D-1248, D-1693 (b), D-638, D-790 and D-746. Resin's properties shall exhibit a balance of toughness, rigidity, environmental stress crack resistance and excellent low temperature impact performance. Wall thickness shall be 1/8". The steering wheel hub cover shall be constructed of injection molded polypropylene which shall contain U.V. light stabilizers. Model 714-714-11B 4X4 Panel shall contain two side-by-side steering wheels for cooperative play.
Star Brackets:	Themed for Space Ship Panel, star brackets shall be constructed of 11 ga. HRPO steel and powder coat painted.
Fasteners:	Each assembly shall contain Versalok Fasteners and Fastener Style A hardware.
Finishes:	The steering wheel and two-color panels shall have molded-in color. The rungs, clamps, and steel panel shall have a Mira-Cote finish.

Consult Miracle's "Glossary of Technical Data for Materials, Processes & Finishes" for specifications of underlined items.

714-602-6B, 714-617-B, 714-713-5B, 714-714-2B, 714-714-4B,, 714-715-13B, 714-715-20B, 714-761-2B, 714-761-3B, 714-761-4B, 714-713-17B, 714-713-18B, 714-713-19B, 714-713-20B, 714-714-11B, 714-714-11HB, 714-714-12B, 714-714-13B, 714-715-25B, 714-715-26B, 714-715-27B, 714-715-28B, 714-715-29B, 714-715-3B, 714-715-5B, 714-895-1B, 714895-2B, 714-895-3B, 714-713-21B, 714-713-22B, 714-713-23B, 714-713-24B, 714-713-25B

Miracle Product Specifications

Kids' Choice®

Electronic Panels - Below Deck

714-715-16B
Electronic Piano Panel

714-715-17B
Electronic Animal Panel

DESCRIPTION

These below deck electronic activity panels are designed to enhance imagination and creative play. Panels play either music or animal noises to incorporate sound and learning into any playground theme.

MATERIALS

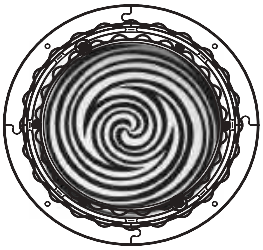
Panels:	The panels shall be constructed of Mira-Lene with all corners rounded. The panels shall measure 36-1/2" x 40" and designs routed in the front and back.
Rung/Brackets:	The rung shall be constructed of 1" pipe Gator Grip, bracket tabs shall be constructed of 11 ga. A-60 Galvannealed sheet, all solid welded.
Batteries:	Each assembly shall contain three (3) "D" size alkaline batteries.
Fasteners:	Each assembly shall contain Versalok Fasteners and Fastener Style A hardware.
Finishes:	The rung brackets and clamps shall have a Mira-Cote finish.

Miracle Product Specifications

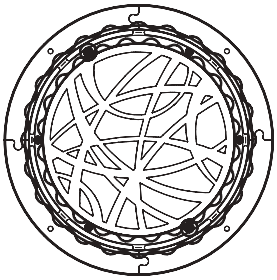
Activity Panel Inserts

ACTIVITY PANEL INSERTS

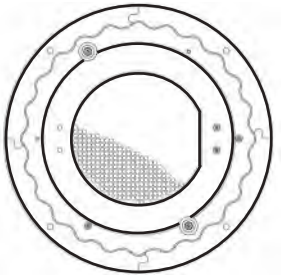
714-715-201
Hypnotize Insert



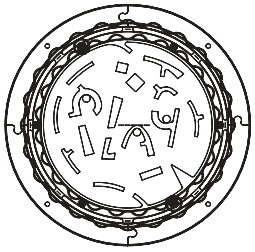
714-715-202
Funhouse Insert



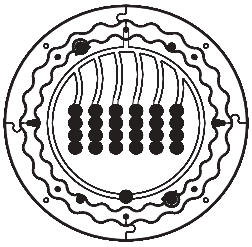
714-715-203
Very Buried Insert



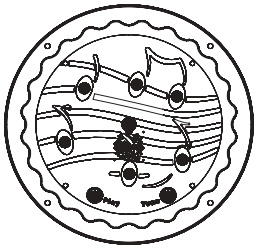
714-715-204
A-maze-ing Insert



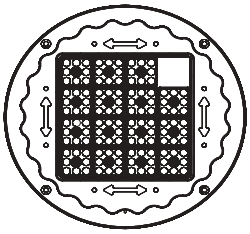
714-715-205
Four-the-Win Insert



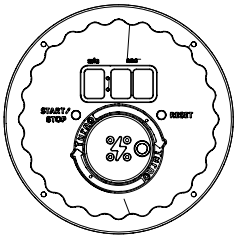
714-715-206
Magical Music Insert



714-715-207
Slide & Solve Insert

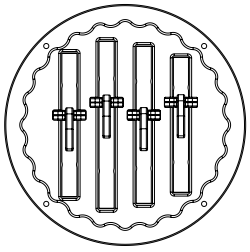


714-715-208
3-Digit RG Timer Insert

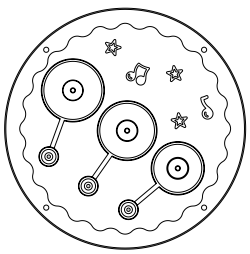


714-715-216
Solar Explorer Panel Insert
f/ KC/TC/TCX

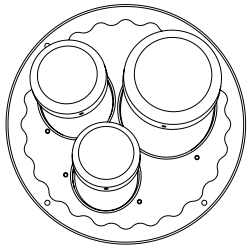
714-715-209
Cam Chimes Panel Insert
f/ KC/TC/TCX



714-715-212
3 Bell Panel Insert
f/ KC/TC/TCX



714-715-213
Bongo Panel Insert
f/ KC/TC/TCX



Consult Miracle's "Glossary of Technical Data for Materials, Processes & Finishes" for specifications of underlined items.

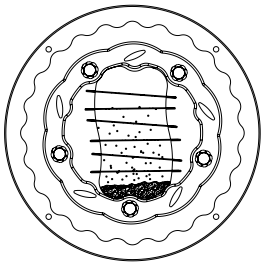
714-715-201, 714-715-202, 714-715-203, 714-715-204, 714-715-205, 714-715-206, 714-715-207, 714-715-208, 714-715-209, 714-715-211, 714-715-212, 714-715-213, 714-715-214, 714-715-215, 714-715-216

Activity Panel Inserts

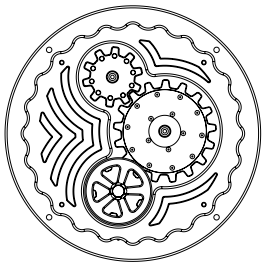
Activity Panel Inserts

714-715-214
Tongue Drum Panel Insert
f/ KC/TC/TCX

714-715-211
Make It Rain Panel Insert
f/ KC/TC/TCX



714-715-215
Tumble Cog Panel Insert
f/ KC/TC/TCX



DESCRIPTION

These representational activity panel inserts are designed to enhance imagination and creative play.

MATERIALS

Insert Panel Options: Insert panel options shall be constructed from a combination of 1/2" thick high-density polyethylene, 3/4" thick high-density polyethylene, 3/16" thick polycarbonate, linear low-density polyethylene caps and stainless steel ball bearings.

714-715-201, 714-715-202, 714-715-203, 714-715-204, 714-715-205, 714-715-206, 714-715-207, 714-715-208, 714-715-209, 714-715-211, 714-715-212, 714-715-213, 714-715-214, 714-715-215, 714-715-216

Product Specifications

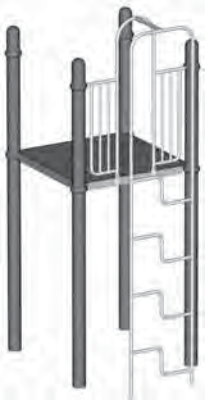
MIRACLE RECREATION EQUIPMENT COMPANY

Kids' Choice
Cliff Climber and Canyon Climber for 3', 5', 6'-6" & 10' Decks

714-719* and 714-719-6

Cliff Climber for 6'-6" Deck

* Model # 714-719 Cliff Climber for 3' or 5' Deck not shown.



714-721*, 714-721-6 and 714-721-10*

Canyon Climber for 6'-6" Deck

* Model # 714-721 Canyon Climber for 3' or 5' Deck and Model # 714-721-10 Canyon Climber for 10' not shown.

MODEL NO:	PRODUCT:	GRND SPC.	CONCRETE:
714-719	Cliff Climber, 3' or 5' Deck	3'-0" x 3'-0"	0.10 cu. yds.
714-719-6	Cliff Climber, 6'-6" Deck	3'-0" x 3'-0"	0.10 cu. yds.
714-721	Canyon Climber, 3' or 5' Deck	3'-0" x 3'-0"	0.10 cu. yds.
714-721-6	Canyon Climber, 6'-6" Deck	3'-0" x 3'-0"	0.10 cu. yds.
714-721-10	Canyon Climber, 10' Deck	3'-0" x 3'-0"	0.10 cu. yds.

DESCRIPTION:

The cliff climber and canyon climber are to be used as an entry to or an exit from a 3', 5', 6'-6" or 10' deck.

MATERIALS:

Cliff Climber: The cliff climber side rails, rungs shall be constructed of 1" pipe, formed, drilled and all solid welded construction with plastic pipe plugs inserted in open ends. The extension tube shall be constructed of 1 1/4" pipe, 10 ga.

Canyon Climber: The climber shall consist of a frame and curved rungs all constructed of 1" pipe solid welded. The rungs shall be curved in a semi-circle shape with a 19" diameter and shall alternate sides of the frame as they ascend.

Deck Enclosure Assembly: The enclosure assembly shall consist of top supports, an extension tube, and an arched upright, which shall be constructed of 1" pipe, drilled, formed, and mashed, and vertical rungs which shall be constructed of 1" tube. The enclosure assembly shall be solid welded.

Fasteners: All hardware shall be Fastener Style A.

Versalok Fasteners: All Versalok Fasteners for deck and component attachment shall be aluminum alloy.

Finishes: The cliff climber, canyon climber, enclosure assembly, and Versalok Fasteners shall have a Mira-cote finish.

Product Specifications

Kids' Choice ®

Cylinder Panels Freestanding or Below Deck

Model #	*Product*	*Concrete*
7147631B	PANEL CRITTER PUZZLE BELOW DECK	see post specifications
7147633B	PANEL 3 LETTER WORD SPELLER BELOW DECK	see post specifications
7147635B	PANEL CYLINDER PLANET BELOW DECK	see post specifications
7147636B	HEXS AND XS PANEL KC BELOW DECK	see post specifications
7147637B	DINOSAUR PANEL KC BELOW DECK	see post specifications
7147638B	CRITTER PANEL KC BELOW DECK	see post specifications

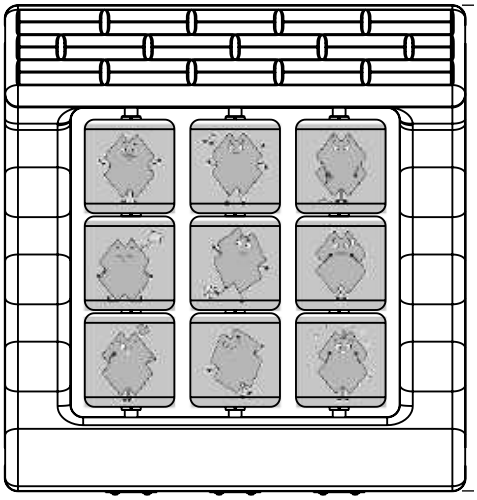
7147631B
PANEL CRITTER PUZZLE
BELOW DECK

7147633B
PANEL 3 LETTER WORD
SPELLER BELOW DECK

7147635B
PANEL CYLINDER
PLANET BELOW DECK

Kids' Choice ®

Cylinder Panels Freestanding or Below Deck



7147637B
DINOSAUR PANEL KC
BELOW DECK

7147636B
HEXS AND XS PANEL KC
BELOW DECK

7147638B
CRITTER PANEL KC
BELOW DECK

7147631B, 7147633B, 7147635B, 7147636B, 7147637B, 7147638B

Kids' Choice ®

Cylinder Panels Freestanding or Below Deck

DESCRIPTION

These Cylinder Panels, designed for below deck, clustered or freestanding installation, are panel assemblies which contain nine cylinders in rows and columns of three. The cylinders spin independently of one another, and each contains two molded-in graphic images on opposite sides.

Safety Note: If installing Panel beneath Deck, vertical clearance space between Panel Assembly and lowest point of Deck must be either (A) between 1" and 3", or (B) a minimum of 10".

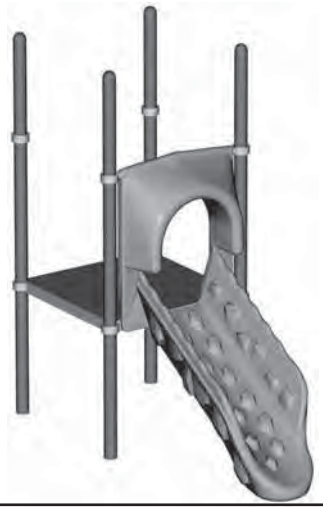
MATERIALS

Panel	The panel shall be constructed of Rockite with all corners rounded, and shall have cylinder assemblies factory-installed using tamper-proof hardware.
Cylinders	Each cylinder shall be constructed of Rockite with molded-in graphics on two "sides." Cylinder axles shall be constructed of 1" pipe.
Enclosures	Each enclosure shall consist of a vertical upright and horizontal stubs of 1" pipe solid welded, drilled and formed. Plastic pipe plugs shall close top ends.
Versalok Fasteners	All Versalok Fasteners for deck and component attachment shall be aluminum alloy.
Fasteners	All hardware shall be Fastener Style A.
Finishes	The Rockite panel and cylinders shall have color molded in. The enclosures shall have a Mira-Cote finish.

Consult Miracle's "Glossary of Technical Data for Materials, Processes & Finishes" for specifications of underlined items.

Kids' Choice

Climber Tot Rock 3' Deck



714-787

Climber Tot Rock 3' Deck

MODEL	PRODUCT	GROUND SPACE	PROTECTIVE AREA	CONCRETE
714-787	Climber Tot Rock 3' Deck	4'-7" x 4'-0"	17'-0" x 16'-0"	0.05 cu. yds.

DESCRIPTION

This Climber Tot Rock 3' Deck features a formed "bedway" with protrusions for users to grasp and step upon and a single-user safety canopy. Some rock climber protrusions feature molded-in graphics of various fossil types.

MATERIALS

Rock Climber: The climber shall be constructed of formed and drilled double-wall Rockite, and shall have an overall width of approximately 27-1/2" and an inside width at lowest point of 16". The assembly's top end shall have factory-installed aluminum threaded inserts for field attachment to canopy panel.

Canopy: The canopy panel shall be constructed of formed and drilled Rockite with all corners rounded, and shall measure 35-1/2" wide by 44-1/4" tall by 12-1/4" deep (panel alone 2-1/2" deep.) The opening shall measure approximately 24" wide by 31" tall.

Leg: The front leg shall be 1-1/2" tube, welded to a 7 ga. A-60 Galvannealed mounting bracket.

Enclosure: The deck enclosures shall consist of uprights and support bars, to be constructed of 1" pipe, drilled, formed, and solid welded.

Versalok Clamps: All Versalok Fasteners for deck and component attachment shall be aluminum alloy.

Fasteners: The assembly shall contain Fastener Style A hardware.

Finishes: The climber and canopy shall have color molded in. The leg, enclosure and clamps shall be finished in Mira-Cote.

Consult Miracle's "Glossary of Technical Data for Materials, Processes & Finishes" for specifications of underlined items.

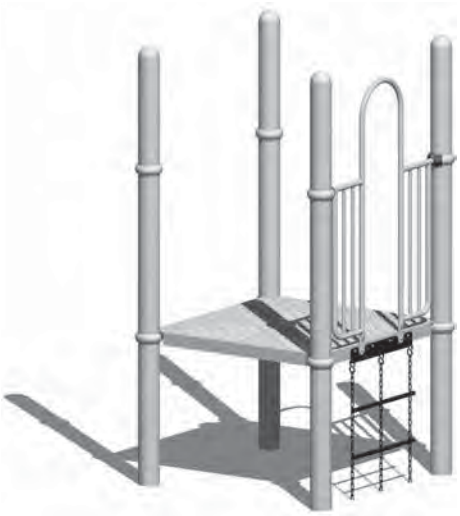
Product Specifications

MIRACLE RECREATION EQUIPMENT COMPANY

Kids' Choice®
Cargo Climb-Overs

714-844-3

Vertical Cargo Climber for 3' Deck



714-844-4

Vertical Cargo Climber for 4' Deck

MIRACLE RECREATION EQUIPMENT COMPANY

Kids' Choice®

Vertical Cargo Climber

714-844-5

Vertical Cargo Climber for 5' Deck

714-844-6

Vertical Cargo Climber for 6'-6" Deck

MIRACLE RECREATION EQUIPMENT COMPANY

Kids' Choice®

Vertical Cargo Climber

MODEL #	PRODUCT	GROUND SPACE	PROTECT. AREA	CONCRETE
714-844-3	Vertical Cargo Climber for 3' Deck	4'-6" x 6"	17' x 13'	.10 cu. yds.
714-844-4	Vertical Cargo Climber for 4' Deck	4'-6" x 6"	17' x 13'	.10 cu. yds.
714-844-5	Vertical Cargo Climber for 5' Deck	4'-6" x 6"	17' x 13'	.10 cu. yds.
714-844-6	Vertical Cargo Climber for 6'-6" Deck	4'-6" x 6"	17' x 13'	.10 cu. yds.

DESCRIPTION:

These dynamic ground-to-deck vertical cargo climbers help children develop hand-to-eye coordination, balance, and muscle control.

MATERIALS:

Vertical Cargo Climber: The cargo climber shall consist of 11 ga. sheet bracket and 1" tube rungs connected by three vertical supports of 4/0 straight link coil chain. The rungs shall be solid welded to the chain. The chain shall be attached to an anchor and the bracket by 5/16" "S"-hooks. The cargo climber for the 3', 4', 5', and 6'-6" decks shall measure 45-1/2", 56-1/2", 67-1/2", and 86-3/4" in length respectively.

Anchor: The anchor shall be constructed of 1" pipe, formed, with three "U" shaped loops of 5/16" diameter wire welded to the top.

Enclosure: The arch enclosure shall comprise top supports and an arched upright of 1" pipe and spoked infill of 1" tube, all solid welded.

Versalok Fasteners: All Versalok Fasteners for deck and component attachment shall be aluminum alloy.

Fasteners: All fastening hardware shall be Fastener Style A.

Finishes: The anchor and Versalok Fasteners shall have a Mira-Cote finish. The Vertical Cargo Climber chain shall be PVC coated.

Consult Miracle's "Glossary of Technical Data for Materials, Processes & Finishes" for specifications of underlined items.

Miracle Product Specifications

Kids' Choice® - Mira-Therm II

Observation Deck®, Observation Deck® with Arched Entry & Observation Deck® with Extended Steering Wheel

714-849

Observation Deck

714-849-A

Observation Deck with Arched Entry

714-849-6

Observation Deck with Extended Steering Wheel

Kids' Choice® - Mira-Therm II

Observation Deck®, Observation Deck® with Arched Entry & Observation Deck® with Extended Steering Wheel

MODEL #	PRODUCT	GROUND SPACE	PROT. AREA	CONCRETE
714-849	Observation Deck	1'-9" x 3'-10"	N/A	N/A
714-849-A	Observation Deck with Arched Entry	1'-9" x 3'-10"	N/A	N/A
714-849-6	Observation Deck with Extended Steering Wheel	1'-9" x 3'-10"	N/A	N/A

DESCRIPTION

The Observation Decks each consist of a curved deck extension and a curved deck enclosure designed to enhance imaginative play. Model # 714-849-A is designed to be used with vertical climbing attachments. Model # 714-849-6 features an extended steering wheel attached to enclosure crossbars to be more easily grasped by wheelchair-bound users.

MATERIALS

Platform: The platform shall be constructed with 11 ga. steel sheet perforated with a staggered pattern of 3/8" diameter holes at 5/8" apart center-to-center. The frame shall be constructed by folding edges to form 3" tall walls and shall be supported by solid welded supports of 1/4" x 1-1/2" flat steel. The platform shall be approximately 40" long with a radius of 9-7/16".

Enclosure: The enclosure shall consist of enclosure rails, uprights, and two center stubs which shall support the bottom rail. The enclosure rails shall be constructed of 3/4" x 1" oval tube. The uprights shall be constructed of 1-1/4" tube, mashed on both ends. The top and bottom rails shall be constructed of 1-1/4" tube. The arch for Model # 714-849-A shall be constructed of 1-1/4" tube. The entire assembly shall be solid welded.

Steering Wheel Mounting Bracket: # 714-849-6 only The mounting bracket shall be 11 ga. A-60 Galvannealed sheet steel welded to the wall enclosure.

Steering Wheel: # 714-849-6 only The steering wheel shall be constructed of a high density blow molded polyethylene produced from high performance, U.V. stabilized resins with a comprehensive additive package. These resins shall be tested in accordance with ASTM testing procedures D-1505, D-1248, D-1693(b), D-638, D-790, and D-746. Resin's properties shall exhibit a balance of toughness, rigidity, environmental stress crack resistance, and excellent low temperature impact performance. Wall thickness shall be 1/8". The steering wheel hub cover shall be constructed of injection molded polypropylene which shall contain U.V. light stabilizers.

Fasteners: The assembly shall contain Versalok Fasteners and Fastener Style A hardware.

Finishes: The platform shall be finishished in Mira-Therm. The enclosure and clamps shall have a Mira-Cote finish.

Consult Miracle's "Glossary of Technical Data for Materials, Processes and Finishes" for specifications of underlined items.

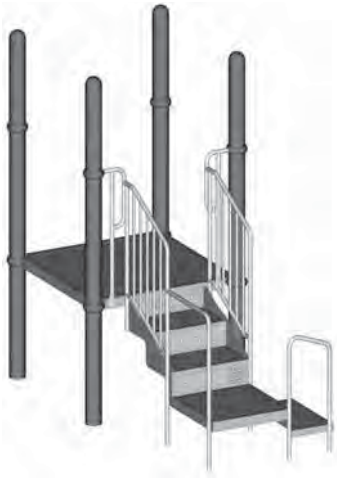
Kids' Choice® - Mira-Therm II™

Square Transfer Points - 3', 4', 5', 6' & 6'-6" Decks with Closed or Open Handrails

Deck systems not included in these assemblies.

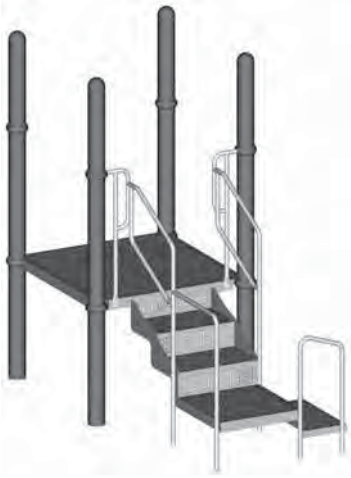
714-851-39

Square Transfer Point for 3' Deck, Closed
Bottom step to exit LEFT



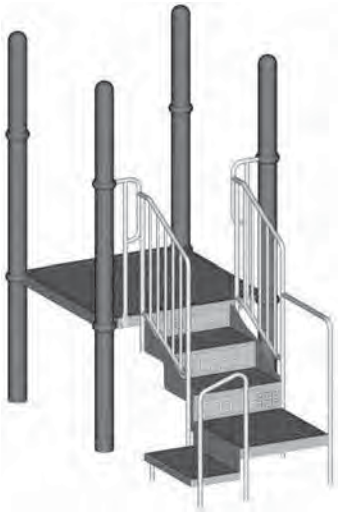
714-851-359

Square Transfer Point for 3' Deck, Open
Bottom step to exit LEFT



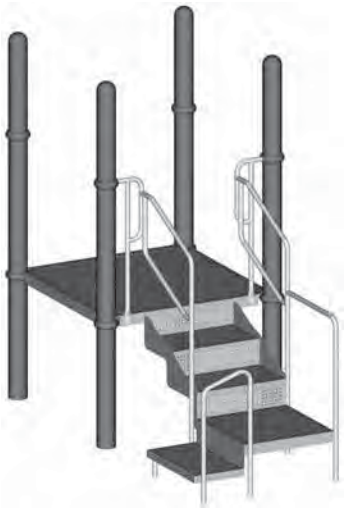
714-851-39

Square Transfer Point for 3' Deck, Closed
Bottom step to exit RIGHT



714-851-359

Square Transfer Point for 3' Deck, Open
Bottom step to exit RIGHT



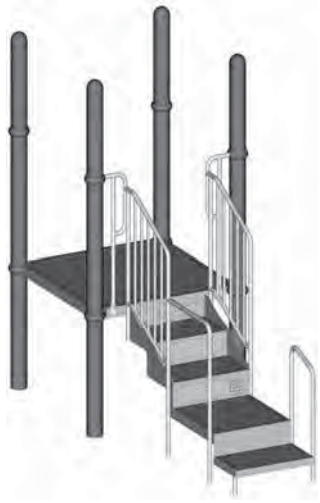
Kids' Choice® - Mira-Therm II™

Square Transfer Points - 3', 4', 5', 6' & 6'-6" Decks with Closed or Open Handrails

Deck systems not included in these assemblies.

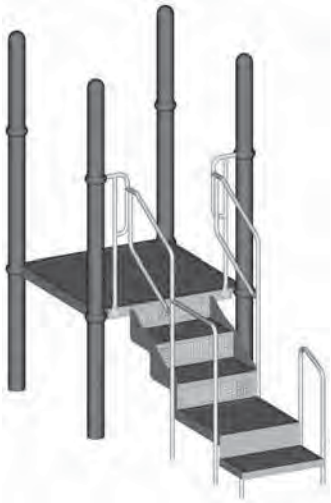
714-851-39

Square Transfer Point for 3' Deck, Closed
Bottom step to exit STRAIGHT
with handrail on LEFT



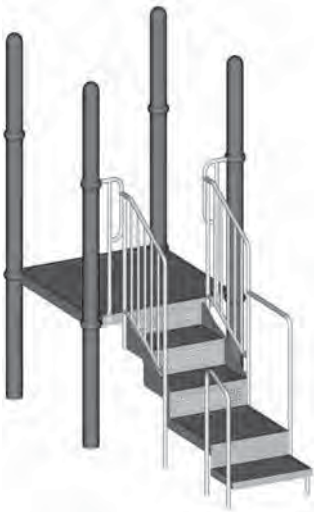
714-851-359

Square Transfer Point for 3' Deck, Open
Bottom step to exit STRAIGHT
with handrail on LEFT



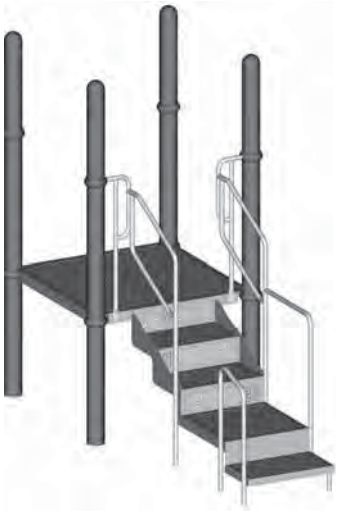
714-851-39

Square Transfer Point for 3' Deck, Closed
Bottom step to exit STRAIGHT
with handrail on RIGHT



714-851-39

Square Transfer Point for 3' Deck, Open
Bottom step to exit STRAIGHT
with handrail on RIGHT



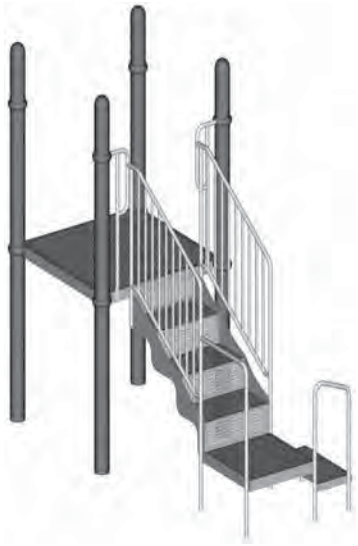
Kids' Choice® - Mira-Therm II™

Square Transfer Points - 3', 4', 5', 6' & 6'-6" Decks with Closed or Open Handrails

Deck systems not included in these assemblies.

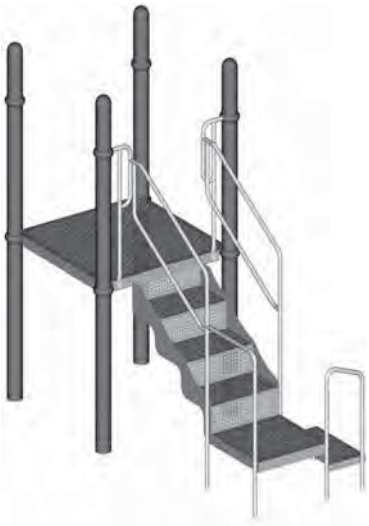
714-851-49

Square Transfer Point for 4' Deck, Closed
Bottom step to exit LEFT



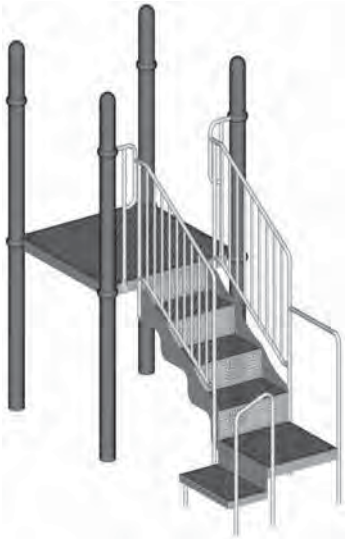
714-851-459

Square Transfer Point for 4' Deck, Open
Bottom step to exit LEFT



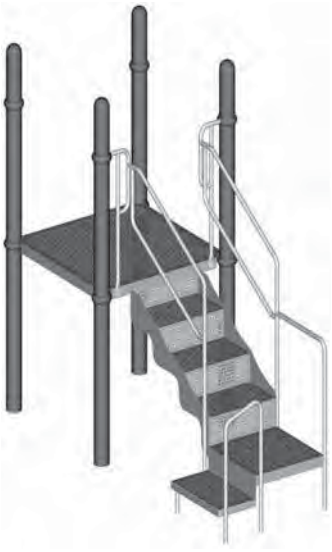
714-851-49

Square Transfer Point for 4' Deck, Closed
Bottom step to exit RIGHT



714-851-459

Square Transfer Point for 4' Deck, Open
Bottom step to exit RIGHT



Kids' Choice® - Mira-Therm II™

Square Transfer Points - 3', 4', 5', 6' & 6'-6" Decks with Closed or Open Handrails

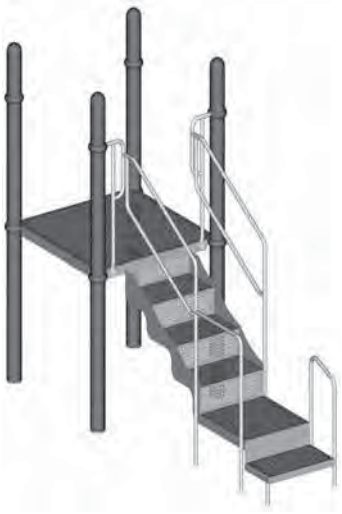
Deck systems not included in these assemblies.

714-851-49

Square Transfer Point for 4' Deck, Closed
Bottom step to exit STRAIGHT
with handrail on LEFT

714-851-459

Square Transfer Point for 4' Deck, Open
Bottom step to exit STRAIGHT
with handrail on LEFT

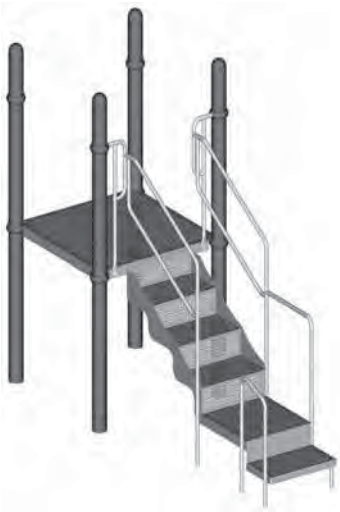


714-851-49

Square Transfer Point for 4' Deck, Closed
Bottom step to exit STRAIGHT
with handrail on RIGHT

714-851-459

Square Transfer Point for 4' Deck, Open
Bottom step to exit STRAIGHT
with handrail on RIGHT



Kids' Choice® - Mira-Therm II™

Square Transfer Points - 3', 4', 5', 6' & 6'-6" Decks with Closed or Open Handrails

Deck systems not included in these assemblies.

714-851-59

Square Transfer Point for 5' Deck, Closed
Bottom step to exit LEFT

714-851-59

Square Transfer Point for 5' Deck, Closed
Bottom step to exit RIGHT

714-851-59

Square Transfer Point for 5' Deck, Closed
Bottom step to exit STRAIGHT
with handrail on LEFT

714-851-59

Square Transfer Point for 5' Deck, Closed
Bottom step to exit STRAIGHT
with handrail on RIGHT

Kids' Choice® - Mira-Therm II™

Square Transfer Points - 3', 4', 5', 6' & 6'-6" Decks with Closed or Open Handrails

Deck systems not included in these assemblies.

714-851-69

Square Transfer Point for 6' & 6'-6"
Deck, Closed
Bottom step to exit LEFT

714-851-69

Square Transfer Point for 6' & 6'-6"
Deck, Closed
Bottom step to exit RIGHT

714-851-69

Square Transfer Point for 6' & 6'-6"
Deck, Closed
Bottom step to exit STRAIGHT

714-851-69

Square Transfer Point for 6' & 6'-6"
Deck, Closed
Bottom step to exit STRAIGHT

Kids' Choice® - Mira-Therm II™

Square Transfer Points - 3', 4', 5', 6' & 6'-6" Decks with Closed or Open Handrails

Deck systems not included in these assemblies.

MODEL #	PRODUCT	ORIENTATION	GRND. SPC.	PROT. AREA	CONCRETE
714-851-39	Sqr. Transfer Point, 3' Dk, Closed	Left or Right ...	4'-9" x 4'-0"	17'-2" x 16'-0"	0.30 cu. yds.
		Straight ...	5'-10" x 3'-6"	18'-3" x 14'-11"	0.30 cu. yds.
714-851-359	Sqr. Transfer Point, 3' Dk, Open	Left or Right ...	4'-9" x 4'-0"	17'-2" x 16'-0"	0.30 cu. yds.
		Straight ...	5'-10" x 3'-6"	18'-3" x 14'-11"	0.30 cu. yds.
714-851-49	Sqr. Transfer Point, 4' Dk, Closed	Left or Right ...	5'-11" x 4'-1"	18'-4" x 16'-0"	0.30 cu. yds.
		Straight ...	7'-0" x 3'-6"	19'-5" x 14'-11"	0.30 cu. yds.
714-851-459	Sqr. Transfer Point, 4' Dk, Open	Left or Right ...	5'-11" x 4'-1"	18'-4" x 16'-0"	0.30 cu. yds.
		Straight ...	7'-0" x 3'-6"	19'-5" x 14'-11"	0.30 cu. yds.
714-851-59	Sqr. Transfer Point, 5' Dk, Closed	Left or Right ...	8'-3" x 4'-0"	20'-9" x 16'-0"	0.30 cu. yds.
		Straight ...	9'-4" x 3'-6"	21'-10" x 14'-11"	0.30 cu. yds.
714-851-69	Sqr. Transfer Point, 6' Dk, Closed	Left or Right ...	10'-8" x 4'-1"	23'-1" x 16'-0"	0.40 cu. yds.
		Straight ...	11'-9" x 3'-6"	24'-2" x 14'-11"	0.40 cu. yds.

DESCRIPTION

These models are designed to assist disabled users gain access to and egress from a deck system.

MATERIALS

Stair Assembly: Each stair assembly shall be constructed of 11 ga. steel stringers solid welded to 11 ga. steel sheet decking that is perforated in a staggered pattern of 3/8" diameter holes at 5/8" apart center-to-center. Approximate dimensions of stair assembly shall be 26" overall width, 14" deep step tread and 8" high step rise.

Transfer Point Deck: Each 26" square (approximate) transfer point deck shall be constructed of 11 ga. steel sheet folded to form approximately 3" high sidewalls. The decking shall be perforated in a staggered pattern of 3/8" diameter holes at 5/8" apart center-to-center. It shall be reinforced with cross braces of 3/16" x 2" HR flat solid welded.

Bottom Step: The bottom step shall be constructed of 11 ga. steel sheet (with folded edges) perforated in an identical pattern. The step shall be approximately 26" wide by 14" deep by 6-1/2" high.

Deck Enclosures: Deck enclosures shall be constructed of formed 1" pipe, including a welded upright of the same material. Each assembly shall be drilled for field assembly of a stair handrail, and shall have its bottom end mashed and punched for field assembly to deck.

Kids' Choice® - Mira-Therm II™

Square Transfer Points - 3', 4', 5', 6' & 6'-6" Decks with Closed or Open Handrails

Deck systems not included in these assemblies.

MATERIALS *(continued)*

Stair Handrail and Stair/Deck Handrail:	Stair handrail assemblies shall be welded upper and lower handrails of formed 1" pipe. Closed handrails shall contain vertical uprights of 3/4" x 1" oval tube welded within. Swaged handrail extensions for field assembly to handrails shall be constructed of 1" pipe. A transfer deck handrail constructed of formed 1" pipe shall be field assembled to one handrail newel upright and transfer point deck edge. Models designed for assembly to 5' and 6' or 6'-6" decks shall contain handrail sleeve supports constructed of 1-1/4" pipe, 10 ga.
Transfer Step Handrail:	The "U"-shaped transfer step handrail shall be formed 1" pipe, drilled for field assembly to transfer point deck and bottom step. Its apex shall be 36-1/8" from finished grade.
Rung Leg:	The rung leg shall be 1" pipe with ends mashed and punched for field assembly to bottom step.
Fasteners:	Each assembly shall contain Versalok Fasteners and Fastener Style A hardware.
Finishes:	The stairs, bottom step, and transfer point deck shall be finished in Mira-Therm. The deck enclosures, handrails, extensions, sleeves, and leg shall be finished in Mira-Cote.

Consult Miracle's "Glossary of Technical Data for Materials, Processes & Finishes" for specifications of underlined items.

Kids' Choice® - Mira-Therm II

4' Level Bridge MT II, 4' and 12' Arch Bridges MT II

714-856-49

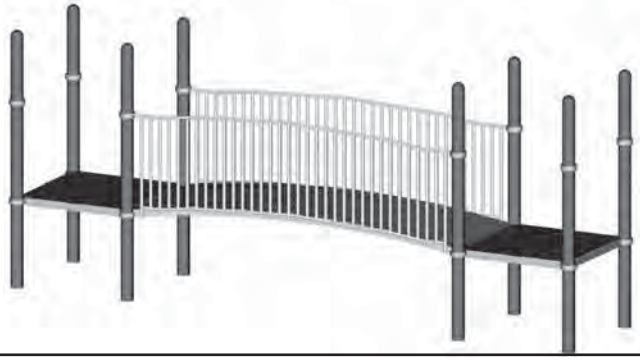
Bridge 4' Level Between Decks MT II

714-970-49

Arch Bridge 4' Between Decks MT II

714-970-129

Arch Bridge 12' MT II



MODEL	PRODUCT	GROUND SPACE	CONCRETE
714-856-49	Bridge 4' Level Between Decks MT II	4'-0" X 4'-0"	NA
714-970-49	Arch Bridge 4' Between Decks MT II	4'-0" X 4'-0"	NA
714-970-129	Arch Bridge 12' MT II	4'-0" X 12'-0"	NA

DESCRIPTION

These bridges are dynamic assemblies designed to permit users to travel between deck systems. Each model contains spoked handrails. The arched bridges meet 1:12 slope guidelines.

Consult Miracle's "Glossary of Technical Data for Materials, Processes & Finishes" for specifications of underlined items.

Kids' Choice® - Mira-Therm II

4' Level Bridge MT II, 4' and 12' Arch Bridges MT II

MATERIALS

Bridge and Arched Bridge Sections: The bridge and arched bridge sections shall be constructed with folded 11 ga. steel sheet forming 3" tall sides. Decking sheets shall be perforated with a staggered pattern of 3/8" diameter holes at 5/8" apart center-to-center. Braces shall be 1/4" x 1-1/2" flat. The entire assembly shall be solid welded.

Enclosure/Handrails: Each enclosure/handrail assembly shall consist of a top and bottom rail and spoked upright infill. The top and bottom rails shall be constructed of 1" pipe; the uprights shall be 1" tube. The assemblies shall be solid welded. End uprights (and middle uprights for Model # 714-970-129) shall have mashed and drilled bottom ends for field attachment to ramp or bridge assemblies.

Versalok Fasteners: Versalok Fasteners for deck and component attachment shall be aluminum alloy.

Fasteners: All fastening hardware shall be Fastener Style A.

Finishes: The enclosures and Versalok Fasteners shall be finished in Mira-Cote. The bridge sections shall be coated in Mira-Therm.

Consult Miracle's "Glossary of Technical Data for Materials, Processes & Finishes" for specifications of underlined items.

Product Specifications

Kids' Choice®

"L" Slide from 3' Deck; Right Exit

714-907-1

"L" Slide from 3' Deck; Right

"L" Slide

Kids' Choice®

"L" Slide

MODEL #	PRODUCT	OVERALL HT.	GRND. SPC.	PROT. AREA	CONCRETE
714-907-1	"L" Slide from 3' Deck; Right Exit	6'-2"	5' x 5'	17' x 18'	.05 cu. yds.

DESCRIPTION

The "L" slide with canopy is designed to exit right from a 3' deck.

MATERIALS

Slide and Canopy Panel: The one-piece slide shall be constructed of double-wall Rockite and shall have 6-1/4" high side rails, an overall width of 25-5/8", and an 18" wide sliding surface. The canopy panel shall also be constructed of double-wall Rockite and shall be field mounted to deck and to post clamps via a 41-1/2" long rung constructed of 1" pipe.

Leg: The leg shall be 1-1/2" tube, welded to a 7 ga. A-60 Galvannealed mounting bracket.

Fasteners: The assembly shall contain Versalok Fasteners and Fastener Style A hardware.

Finishes: The rung, leg, and clamps shall have a Mira-Cote finish. The Rockite slide and canopy shall have molded-in color.

714-907-1

Consult Miracle's "Glossary of Technical Data for Materials, Processes and Finishes" for specifications of underlined items.

Product Specifications

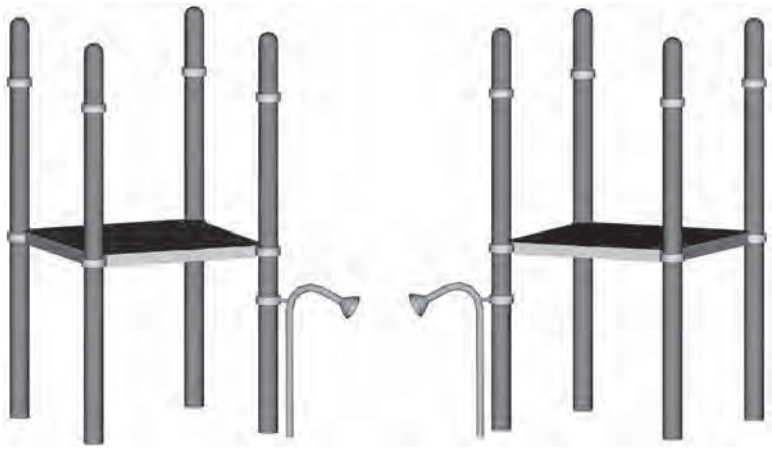
Kids' Choice®

Ground Level Fun Fones™

714-994 | 714-994-1, 714-994-12* & 714-994-13* | 714-994-3

Fun Fones, Ground Level

Two Fun Fone Assemblies (Ground Level)
Two Clamps
One 50' Pipe
Fasteners

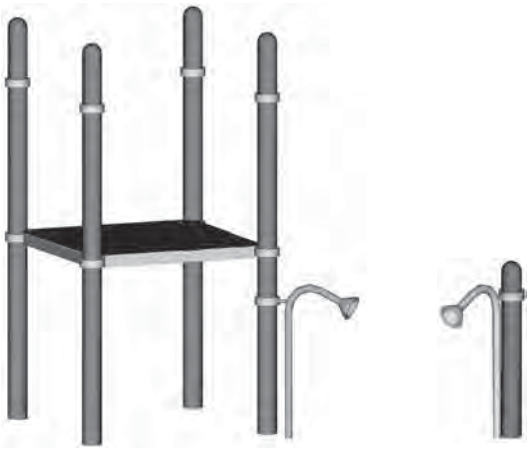


714-994 | 714-994-1, 714-994-12* & 714-994-13* | 714-994-3

Fun Fones, Ground Level to Freestanding Steel Post

* Model # 714-994-12 Fun Fones, Ground Level to Freestanding Aluminum Post & Model # 714-994-13 Fun Fones, Ground Level to Freestanding Steel Post not shown. Appearances are identical but material specifications differ.

Two Fun Fone Assemblies (Ground Level)
One 76" Steel Post
Two Clamps
One 50' Pipe
Fasteners



Kids' Choice®
Ground Level Fun Fones™

Add-A-Fone, Ground Level

One Fun Fone Assembly (Ground Level)
One Clamp
One Tee Coupling
One 50' Pipe
Fasteners

MIRACLE RECREATION EQUIPMENT COMPANY

Kids' Choice® Ground Level Fun Fones™

MODEL #	PRODUCT	CONCRETE
714-994	Fun Fones, Ground Level	0.50 cu. yds.
714-994-1	Fun Fones, Ground Level to Freestanding Steel Post	0.50 cu. yds.
714-994-12	Fun Fones, Ground Level to Freestanding Aluminum Post	0.50 cu. yds.
714-994-13	Fun Fones, Ground Level to Freestanding Steel Post	0.50 cu. yds.
714-994-3	Add-A-Fone, Ground Level	0.25 cu. yds.

DESCRIPTION

Fun Fones feature two mouth pieces connected by tubing so that users may speak into one piece and be heard at the other piece, mounted up to 50' away. These models are designed for attachment to deck posts or freestanding posts. The Add-A-Fone model permits additional Fun Fones to be interconnected (up to four per line maximum recommended).

MATERIALS

Fun Fone Assembly: The Fun Fone assembly shall contain a mouth piece, formed tube, mounting stub, and anchor leg, all solid welded. The tube assembly shall be 2" pipe. The funnel-shaped mouth piece shall be 16 ga. galvanized steel. The stub and anchor leg shall be 1" pipe.

Tubing: The 2" I.D. tubing shall be 50' long and constructed of polyethylene.

Post: The steel post for Model # 714-994-1 shall be constructed of 5" tube, 11 ga. The aluminum post for Model # 714-994-12 shall be constructed of 5" aluminum tube. The steel post for Model # 714-994-13 shall be constructed of 5" tube. Each shall have a 5" round end cap mechanically to its top end. The post shall measure 76" long.

Pipe Connectors: The pipe connectors shall be constructed of rubber and shall contain hose clamps at each end.

Fasteners: The assembly shall contain Versalok Fasteners and Fastener Style A hardware.

Finishes: The Fun Fone assembly, post, and clamps shall have a Mira-Cote finish.

Consult Miracle's "Glossary of Technical Data for Materials, Processes & Finishes" for specifications of underlined items.

Risk Management Sign

Note: English version shown.

MODEL	PRODUCT	GROUND SPACE	CONCRETE
787	Risk Management Sign - English	1'-6" x 3'-6"	0.09 cu. yd.
787FR	Risk Management Sign - French	1'-6" x 3'-6"	0.09 cu. yd.
787FRENG	Risk Management Sign - French/English	1'-6" x 3'-6"	0.09 cu. yd.
787SP	Risk Management Sign - Spanish	1'-6" x 3'-6"	0.09 cu. yd.
787BD	Risk Management Sign - English Surface MT	1'-6" x 3'-6"	site specific
787BDFR	Risk Management Sign - French Surface MT	1'-6" x 3'-6"	site specific
787BDFRENG	Risk Management Sign - French/English SM	1'-6" x 3'-6"	site specific
787BDSP	Risk Management Sign - Spanish Surface MT	1'-6" x 3'-6"	site specific

DESCRIPTION

The Risk Management Sign is intended to inform the parents and children that adult supervision is recommended, along with smart play on the equipment in the play area.

MATERIAL

Sign:	Fiberglass embedded, gloss finish, 0.125" thick.
Steel Frame:	2-3/8" OD 12 gauge galvanized steel tubing, 13 gauge galvanized steel sheet for mounting sign, and 3/8" thick hot rolled steel base plate on each leg.
Extension Tube:	2.375 12GA GLV-IL X 24' tube round.
Hardware:	Stainless steel that requires tooling to install or remove.
Finish:	The frame shall have a Mira-Cote finish.

GEO-ENGINEERING SOLUTIONS, INC.

Geotechnical Engineering • Engineering Geology • Materials Testing

GEOTECHNICAL ENGINEERING AND GEOLOGIC HAZARDS STUDY

Highlands Elementary School
New Classroom Buildings
4141 Harbor Street
Pittsburg, California 94565

October 8, 2025

Prepared for:

Pittsburg Unified School District
3200 Loveridge Road
Pittsburg, California 94565

Prepared by:

GEO-ENGINEERING SOLUTIONS, INC.
2570 San Ramon Valley Boulevard, Suite A102
San Ramon, California 94583
Project No. 32-1769

GEO-ENGINEERING SOLUTIONS, INC.
2570 San Ramon Valley Blvd., Suite A102
San Ramon, CA | 925-433-0450

October 8, 2025

Pittsburg Unified School District
3200 Loveridge Road
Pittsburg, California 94565

Attention: Mr. Keith Holtslander

Subject: **Geotechnical Engineering and Geologic Hazards Study**
Highlands Elementary School-Portable Replacement
4141 Harbor Street, Pittsburg, CA 94565
Geo-Eng Project No. 32-1769

Dear Mr. Holtslander:

In accordance with your authorization, **Geo-Engineering Solutions, Inc. (Geo-Eng)** has completed a Geotechnical Engineering and Geologic Hazards Study for the proposed new District office buildings at the Highlands Elementary School in Pittsburg, California. Transmitted herewith are the results of our findings, conclusions, and recommendations for the design and construction of the proposed building foundations, site grading, drainage, and utility trench backfilling. In general, the proposed improvements at the site are considered to be geotechnically and geologically feasible provided the recommendations of this report are implemented in the design and construction of the project.

Should you or members of the design team have questions or need additional information, please contact the undersigned by email: nhaddad@geo-eng.net or eswenson@geo-eng.net or at (925) 433-0450. We greatly appreciate the opportunity to provide our services to the Pittsburg Unified School District and to be involved in the design of this project.

Sincerely,

GEO-ENGINEERING SOLUTIONS, INC.

Nicolas B. Haddad, P.E.
Senior Geotechnical Engineer

Eric J. Swenson, G.E., C.E.G.
President

TABLE OF CONTENTS

TABLE OF CONTENTS (cont'd.)

FIGURES

1.0 INTRODUCTION

1.1 Purpose and Scope

The purpose of our work was to prepare a Geotechnical Engineering Study, evaluate the subsurface conditions at the site and prepare geotechnical recommendations for the proposed development. We have provided specific recommendations regarding suitability and geotechnical concerns relative to the proposed structural design.

The scope of this study included the field exploration, laboratory testing, engineering analysis of the collected samples and test results, and preparation of this report. The conclusions and recommendations presented in this report are based on the limited samples collected and analyzed during this study, and on prudent engineering judgment and experience. This study did not include an in-depth assessment of potentially toxic or hazardous materials that may be present on or beneath the site.

1.2 Site Description

The Highlands Elementary School is located at 4141 Harbor Street in Pittsburg, California, as shown on the attached Figure 1, Site Vicinity Map. The Highlands Elementary School is bordered by Harbor Street to the west, neighboring residential to the north and east, and Buchanan Road to the south. The Highlands Elementary School consists of several buildings, two parking lots, a grass field area to the north, and a playground area to the west. The topography of the site is generally flat with elevations on the order of +150 feet, based on Google Earth elevations. The average geographic coordinates of the site, used in our engineering analyses, are 37.9996 degrees north latitude and -121.8858 degrees west longitude.

1.3 Proposed Development

We understand that, based on the information provided by the District that the proposed project will consist of the construction of a new 12,000 square foot permanent modular buildings on a concrete slab-on-grade on the northern portion of the Highlands Elementary School, as shown on Figure 2-Site Development Plan. It is assumed there will also be other associated minor site improvements such as site grading, landscaping and utilities.

2.0 PROCEDURES AND RESULTS

2.1 Literature Review

Pertinent geologic and geotechnical literature pertaining to the site area, and previous geotechnical studies performed by others for projects in the site vicinity were reviewed. These included United States Geological Survey (USGS), California Geological Survey (CGS), and other online resources, and other applicable government and private publications and maps, as included in the References section.

2.2 Field Exploration

A total of 3 borings (B-1 through B-3) were drilled at the site on August 14, 2025, at the approximate locations shown on Figure 3, *Site Map and Boring Locations*. The borings were drilled by Baje Exploration to a maximum depth of approximately 50 feet below existing ground surface, using a truck mounted B-57 drill rig equipped with eight-inch diameter hollow stem augers.

A Geo-Eng Staff Engineer visually classified the materials encountered in the borings according to the Unified Soil Classification System as the borings were advanced. Relatively undisturbed soil samples were recovered at selected intervals using a three-inch outside diameter Modified California split spoon sampler containing six-inch long brass liners. A two-inch outside diameter Standard Penetration Test (SPT) sampler was also used to obtain SPT blow counts and obtain disturbed soil samples. The samplers were driven by using a 140-pound safety hammer with an approximate 30-inch fall utilizing N-rods as necessary. Resistance to penetration was recorded as the number of hammer blows required to drive the sampler the final foot of an 18-inch drive. All the blow counts recorded using Modified California split spoon samplers in the field were converted to equivalent SPT blow counts using appropriate modification factors suggested by Burmister (1948), i.e., a factor of 0.65 assuming an inner diameter of 2.5 inches. Therefore, all blow counts shown on the final boring logs are either directly measured (SPT sampler) or equivalent SPT (MC sampler) blow counts. Bulk samples were obtained in the upper few feet of the borings from the auger cuttings as needed.

The boring logs with descriptions of the various materials encountered in each boring, the penetration resistance values, and the laboratory test results are presented in Appendix A. The ground surface elevations indicated on the soil boring logs were estimated using Google Earth software. Actual surface elevations at the boring locations may differ slightly than indicated. The locations of the borings should only be considered accurate to the degree implied by the means and methods used to define them.

2.3 Laboratory Testing

Laboratory tests were performed on selected samples to determine some of the physical and engineering properties of the subsurface soils. The results of the laboratory testing are presented on the boring logs and are included in the appendices. The following soil tests were performed for this study:

Dry Density and Moisture Content (ASTM D2937 and D2216) – In-situ density and/or moisture tests were conducted on several samples to measure the in-place dry density and moisture content of the subsurface materials at the tested sample locations and depths. These properties provide information for evaluating the physical characteristics of the subsurface soil. Test results are presented in Appendix B and shown on the boring logs.

Atterberg Limits (ASTM D4318 and CT204) - Liquid Limit, Plastic Limit, and Plasticity Index are useful in the classification and characterization of the engineering properties of soil, including evaluating the expansive characteristics of the soil, and determining the soil type according to the USCS. One test was performed, and the test results are presented in Appendix B and summarized on the boring log.

Particle Size Analysis (Wet and Dry Sieve) and Fines Content (ASTM D422 and D1140) - Sieve analysis or fines content (minus No. 200 sieve) tests were conducted on selected samples to measure the soil particle size distribution. This information is useful for the evaluation of liquefaction potential and characterizing the soil type according to USCS. Test results are presented on the boring logs or in Appendix B.

Unconfined Compressive Strength (ASMT D2166) – Unconfined compressive strength test was conducted on near surface soil samples to evaluate the shear strength of cohesive soils for determining bearing capacity. The test results are presented in Appendix B and summarized on the boring log (B-1).

Soil Corrosivity, Redox (ASTM D1498), pH (ASTM D4972), Resistivity (ASTM G57), Chloride (ASTM D4327), and Sulfate (ASTM D4327) - Soil Corrosivity testing was performed to determine the effects of constituents in the soil on buried steel and concrete. Water-soluble sulfate testing is required by the CBC and IBC. Test results are presented being presented in a supplemental letter.

3.0 GEOLOGIC AND SEISMIC OVERVIEW

3.1 Geologic Setting

The site is in the northern Coast Ranges geomorphic province of California. The Coast Ranges lies between the Pacific Ocean to the west and the Great Valley Geomorphic Province to the east. It extends from the Transverse Ranges in southern California to the Oregon border and is comprised of a northwest-trending series of mountain ranges and intervening valleys that reflect the overall structural gain of the province. The ranges consist of a variably thick veneer of Cenozoic volcanic and sedimentary deposits overlying a Mesozoic basement of sedimentary, metamorphic, and basic igneous Franciscan Formation and primarily marine sedimentary rocks of the Great Valley Sequence. East-dipping sedimentary rocks of the Coast Ranges are flanked on the east by sedimentary rocks of the Great Valley geomorphic province (Page, 1966).

The site is on the East Bay south of the Carquinez Straights of the Sacramento River. The highlands of the southern shore of the straits are composed predominately of sequences of the Cretaceous Aged Great Valley Formation. These rocks are interbedded sandstone, siltstone, and claystone that weathers to a moderate to highly plastic sandy to silty clay. The site is located in an age late Pleistocene alluvial deposits of interbedded sand and clay. For a map of the underlying sediments and regional geology, see Figure 4, *Site Vicinity Geologic Map.*

3.2 Geologic Evolution of the Northern Coast Ranges

The subject site is located within the tectonically active and geologically complex northern Coast Ranges, which have been shaped by continuous deformation resulting from tectonic plate convergence (subduction) beginning in the Jurassic period (about 145 million years ago). Eastward thrusting of the oceanic plate beneath the continental plate resulted in the accretion of materials onto the continental plate. These accreted materials now largely comprise the Coast Ranges. The dominant tectonic structures formed during this time generally through east-dipping reverse faults.

Beginning in the Cenozoic time period (about 25 to 30 million years ago), the tectonics along the California coast changed to a transpressional regime and right-lateral strike-slip displacements as well as thrusting were superimposed on the earlier structures resulting in the formation of northwest-trending, near-vertical faults comprising the San Andreas Fault System. The northern Coast Ranges were segmented into a series of tectonic blocks separated by major faults including the San Andreas, Hayward, and Calaveras. The project site is situated 41 miles northeast of the San Andreas fault and about 22 miles northeast of the Hayward Fault. The Hayward Fault

is the closest fault to the subject property with Holocene movement. The site is not mapped within an Alquist-Priolo Earthquake Fault Zone.

3.3 Regional Faulting and Tectonics

Regional transpression has caused uplifts and folding of the bedrock units within the Coast Ranges. This structural deformation occurred during periods of tectonic activity that began in the Pliocene and continues today. The site is located in a seismically active region that has experienced periodic, large magnitude earthquakes during historic times. This seismic activity appears to be largely controlled by displacement between the Pacific and North American crustal plates, separated by the San Andreas Fault zone located about 41 miles (65.98 km) southwest of the site. This plate displacement produced regional strain that is concentrated along major faults of the San Andreas Fault System including the San Andreas, Hayward, and Calaveras faults in the greater San Francisco Bay area.

The subject property is in a seismically active region dominated by the Hayward Fault, which is located approximately 22 miles (35.41 km) to the southwest of the subject property. Other major faults within the vicinity of the site include the San Andreas Fault, located about 41 miles (65.98 km) southwest of the site, the northern portion of the Calaveras Fault, located 14.37 miles (23.13 km) southwest of the site. Other active faults include the Concord-Green Valley Fault, located approximately 9.34 miles (15.03 km) west of the site, and the Greenville-North (Clayton-Marsh Creek) Fault, located approximately 4.2 miles (6.76 km) west of the site. The site is not mapped within an Alquist-Priolo Earthquake Fault Zone. The site location relative to active and potentially active faults in the San Francisco Bay Area is shown on Figure 5, *Regional Fault Map*. A discussion of these faults follows.

3.3.1 Hayward Fault

The Hayward Fault trends northwesterly and extends from the Milpitas area to San Pablo Bay, totaling about 55 miles (88 km) in length. The Hayward Fault has been divided into two main segments, the Northern and Southern segments. The Rodgers Creek Fault, considered as a possible extension of the Hayward Fault, extends northward from beneath San Pablo Bay up to near Healdsburg, where it is aligned with the Healdsburg Fault zone, currently considered to be inactive. The site is located approximately 22 miles east of the northern segment of the Hayward Fault. The slip rate on this segment of the Hayward Fault is estimated to be about 9 mm/year and has been assigned a moment magnitude (M_{max}) of 6.4 (CGS, 2003). The Working Group on California Earthquake Probabilities (WG07) has estimated that there is a 31 percent probability of at least one magnitude 6.7 or greater earthquake before 2037 along the Hayward – Rodgers Creek Fault system.

3.3.2 San Andreas Fault

The northwest-trending San Andreas Fault runs along the western coast of California is about 800 miles (1,287 km) in length, running from the north near Point Arena to the Salton Sea area in southern California (Jennings, 1994). The fault zone has been divided into 11 segments. The site is located about 41 miles east of the Peninsula segment. The slip rate on the Peninsula segment of the San Andreas Fault is estimated to be about 17 mm/year and has been assigned a moment magnitude (M_{max}) of 7.1 (CGS, 2003). The Working Group on California Earthquake Probabilities (WG07) has estimated that there is a 21 percent probability of at least one magnitude 6.7 or greater earthquake before 2037 along the San Andreas Fault.

3.3.3 Calaveras Fault

The Calaveras Fault trends northwesterly and extends from near Hollister to north of the Danville area, totaling about 76 miles (123 km) in length. The Calaveras Fault has been divided into three segments, the Northern, Central, and Southern segments. The site is located 14.37 miles northeast of the Calaveras Fault. The slip rate on the north segment of the Calaveras Fault is estimated to be about 6 mm/year and has been assigned a moment magnitude (M_{max}) of 6.8 (CGS, 2003). The Working Group on California Earthquake Probabilities (WG07) has estimated that there is a seven percent probability of at least one magnitude 6.7 or greater earthquake before 2037 along the Calaveras Fault.

3.3.4 Green Valley Fault

The north to northwest trending Green Valley Fault is thought to be an extension of the active Concord Fault, which extends from the approximate central Walnut Creek and Concord border, northward into the Green Valley Fault. The Green Valley Fault extends northward from Suisun Bay up to just west of Lake Curry, northeast of Napa. The site is located 9.34 miles east of the Green Valley Fault. The slip rate of the Green Valley Fault (south segment) is estimated to be about 5 mm/year and has been assigned a moment magnitude (M_{max}) of 6.2 (CGS, 2002). The Working Group on California Earthquake Probabilities (WG07) has estimated that there is a three percent probability of at least one magnitude 6.7 or greater earthquake before 2037 occurring on the Concord – Green Valley Fault system (USGS, 2008).

3.3.5 Greenville-Marsh Creek-Clayton Fault

The northwest-trending Greenville-Marsh Creek-Clayton Fault system lies within the Diablo Range and extends from Arroyo Mocho southeast of Livermore, across the eastern edge of the Livermore Valley and the northeast edge of Mt. Diablo into the Clayton Valley area. On the east side of Mt. Diablo, the fault has been referred to as the Marsh Creek Fault, connecting to the Clayton Fault in the Clayton Valley. The fault zone has been divided (CGS, 2002) into two segments, Greenville-North and Greenville-South. The site is located 4.2 miles east of the Greenville-Marsh Creek-Clayton Fault. The slip rate of the Greenville-North segment is estimated to be about 2 mm/year and has been assigned a moment magnitude (M_{max}) of 6.6 (CGS, 2002). The Working Group on California Earthquake Probabilities (WGCEP2007) has estimated that there is a three percent probability of at least one magnitude 6.7 or greater earthquake before 2037 along the Greenville Fault (USGS, 2008).

3.4 Historic Seismicity

As discussed above, the San Francisco Bay Area is subject to a high level of seismic activity. Between the year 1900 to present time there were an estimated five earthquakes exceeding a Richter magnitude of 6.0 within an approximate 100-mile radius of the site, with two exceeding 6.5 and one exceeding 7.5. In addition, there have been four major Bay Area Earthquakes from the year 1800 to 1900; this includes earthquakes in 1836 and 1868 on the Hayward-Rodgers Creek Fault, one in 1861 on the Calaveras Fault, and one in 1838 on the San Andreas Fault. Notable Bay Area earthquakes from 1900 to present time include the 1906 and 1989 earthquakes on the San Andreas Fault.

4.0 SUBSURFACE CONDITIONS

4.1 Subsurface Soil Conditions

During our subsurface exploration program, we investigated the subsurface materials and evaluated soil conditions to a maximum depth of 50 feet below ground surface in the borings performed for this study, as shown on Figure 3, *Site Map and Boring Locations*. From the collected data, we conclude that the proposed project site is generally underlain by layers of hard sandy clay and medium dense clayey sand to the maximum depth explored of 50 feet below existing ground surface.

Test results of near-surface soil samples recovered in the uppermost 3.5 feet of the soil profile collected from Borings B-2 and B-3 indicated measured Liquid Limits (LL) of 54 and 45, Plastic Limits (PL) of 11 and 14, and corresponding Plasticity Indices (PI) of 43 and 31, respectively. Test results of soil samples recovered at 8.5 feet of the soil profile collected from Boring B-1 indicated a measured LL of 30, a PL of 11, and a corresponding PI of 19. Based on these results, the near-surface native clayey soil would be considered to have a high plasticity and have a high expansion (shrink/swell) potential.

Additional details of the soils encountered in the exploratory borings are included in the boring logs presented in Appendix A. Geologic cross sections through the proposed development area are presented in Figure 6, *Schematic Geologic Cross Section A-A'*.

4.2 Groundwater

Groundwater was not encountered in the 3 borings during our field exploration activities. Based on the Seismic Hazard Zone Report for the Pittsburg Quadrangle prepared by the California Geologic Survey (CGS) historic ground water in the vicinity of the subject site, groundwater is expected to be on the order of 50 feet below the ground surface. We note that the borings may not have been left open for a sufficient period to establish equilibrium groundwater conditions. Groundwater levels can vary in response to time of year, variations in seasonal rainfall, well pumping, irrigation, and alterations to site drainage.

4.3 Corrosion Testing

A composite representative sample collected within the upper 5 feet of the soil profile at Boring B-1 was tested to measure sulfate content, chloride content, redox potential, pH, resistivity, and presence of sulfides. Test results are included in Appendix B and are summarized on the following table.

Table 1: Summary of Corrosion Test Results

Soil Description	Sample Depth (feet)	Sulfate (mg/kg)	Chloride (mg/kg)	Redox (mV)	Resistivity (ohm-cm)	Sulfide	pH
Brown Sandy CLAY	5	27	35	160	1,100	Negative	8.66

Water-soluble sulfate can affect the concrete mix design for concrete in contact with the ground, such as shallow foundations, piles, piers, and concrete slabs. Section 4.3 in American Concrete Institute (ACI) 318, as referenced by the CBC, provides the following evaluation criteria:

Table 2: Sulfate Evaluation Criteria

Sulfate Exposure	Water-Soluble Sulfate in Soil, Percentage by Weight or (mg/kg)	Sulfate in Water, ppm	Cement Type	Max. Water Cementitious Ratio by Weight	Min. Unconfined Compressive Strength, psi
Negligible	0.00-0.10 (0-1,000)	0-150	NA	NA	NA
Moderate	0.10-0.20 (1,000-2,000)	150-1,500	II, IP (MS), IS (MS)	0.50	4,000
Severe	0.20-2.00 (2,000-20,000)	1,500-10,000	V	0.45	4,500
Very Severe	Over 2.00 (20,000)	Over 10,000	V plus pozzolan	0.45	4,500

The water-soluble sulfate content was measured to be about 27 mg/kg (ppm) or 0.0017% by dry weight in the soil sample, suggesting the site soil should have negligible impact on buried concrete structures at the site. However, the water-soluble sulfate concentrations can vary due to the addition of fertilizer, irrigation, and other possible development activities.

Table 4.4.1 in ACI 318 suggests use of mitigation measures to protect reinforcing steel from corrosion where chloride ion contents are above 0.06% by dry weight. The chloride content was measured to be 35 mg/kg (ppm) or 0.0035% by dry weight in the soil sample. Therefore, the test result for chloride content does not suggest a corrosion hazard for mortar-coated steel and reinforced concrete structures due to high concentration of chloride.

In addition to sulfate and chloride contents described above, pH, oxidation reduction potential (Redox), and resistivity values were measured in the soil sample. For cast and ductile iron pipes, an evaluation was based on the 10-Point scaling method developed by the Cast Iron Pipe Research Association (CIPRA) and as detailed in Appendix A of the American Water Works Association (AWWA) publication C-105 and shown on Table 3.

Table 3: Soil Test Evaluation Criteria (AWWA C-105)

Soil Characteristics	Points		Soil Characteristics	Points
Resistivity, ohm-cm, based on single probe or water-saturated soil box.			**Redox Potential, mV**	
<700	10		>+100	0
700-1,000	8		+50 to +100	3.5
1,000-1,200	5		0 to 50	4
1,200-1,500	2		Negative	5
1,500-2,000	1		**Sulfides**	
>2,000	0		Positive	3.5
PH			Trace	2
0-2	5		Negative	0
2-4	3		**Moisture**	
4-6.5	0		Poor drainage, continuously wet	2
6.5-7.5	0		Fair drainage, generally moist	1
7.5-8.5	0		Good drainage, generally dry	0
>8.5	5			

Assuming fair site drainage, the tested soil sample had a total score of 11 points, indicating a high corrosive rating. When total points on the AWWA corrosivity scale are at least 10, the soil is classified as corrosive to cast and ductile iron pipe and use of cathodic corrosion protection is often recommended.

These results are preliminary and provide information only on the specific soil sampled and tested. Other soil at the site may be more or less corrosive. Providing a complete assessment of the corrosion potential of the site soils are not within our scope of work. For specific long-term corrosion control design recommendations, we recommend that a California-registered professional corrosion engineer evaluate the corrosion potential of the soil environment on buried concrete structures, steel pipe coated with cement-mortar, and ferrous metals.

5.0 GEOLOGIC HAZARDS

5.1 Seismic Induced Hazards

Seismic hazards resulting from the effects of an earthquake generally include ground shaking, liquefaction, lateral spreading, dynamic settlement, fault ground rupture and fault creep, dam inundation, and tsunamis and seiches. The site is not necessarily impacted by all of these potential seismic hazards. Nonetheless, potential seismic hazards are discussed and evaluated in the following sections in relation to the planned construction.

5.1.1 Ground Shaking

The site may experience moderate to strong ground shaking from a major earthquake originating from one or more of the close or major Bay Area faults such as the Hayward, Concord-Green Valley, or San Andreas faults. Earthquake intensities vary throughout the region depending upon the magnitude of the earthquake, the distance of the site from the causative fault, the type of materials underlying the site and other factors.

In addition to shaking of the structure, strong ground shaking can induce other related phenomena that may have an effect on structures, such as liquefaction and dynamic densification settlement.

5.1.2 Liquefaction Induced Phenomena

Research and historical data indicate that soil liquefaction generally occurs in saturated, loose granular soil (primarily fine to medium-grained, clean sand deposits) during or after strong seismic ground shaking and is typified by a loss of shear strength in the affected soil layer, thereby causing the soil to flow as a liquid. However, because of the higher inter-granular pressure of the soil at greater depths, the potential for liquefaction is generally limited to the upper 40 feet of the soil. Potential hazards associated with soil liquefaction below or near a structure include loss of foundation support, lateral spreading, sand boils, and areal and differential settlement.

Lateral spreading is lateral ground movement, with some vertical component, as a result of liquefaction. The soil literally rides on top of the liquefied layer. Lateral spreading can occur on relatively flat sites with slopes less than two percent under certain circumstances, generally when the liquefied layer is in relatively close proximity to an open, free slope face such as the bank of a creek channel. Lateral spreading can cause surficial ground tension cracking (i.e., lurch cracking) and settlement.

The site, in general, is mapped as outside any CGS or Contra Costa County identified geologic hazard zones requiring liquefaction investigation, as shown on Figure 7, *Seismic Hazard and AP Fault Zone Map*. The soils encountered in the subsurface investigation included layers of very stiff to hard sandy clay and dense clayey sand. These soils are expected to be generally less susceptible to liquefaction due to their relatively high fine-grain content. Additionally, groundwater was not encountered at the time of our investigation and is expected to be on the order of 50 feet below the ground surface. Therefore, the potential for liquefaction of the site subsurface soils is judged to be low.

Since the site does not appear to be near any significant open free slope faces, the potential for lateral spreading at the project site appears to be very low to nil.

5.1.3 Dynamic Compaction (Settlement)

Dynamic compaction is a phenomenon where loose, relatively clean sandy soil located above the water table is densified from vibratory loading, typically from seismic shaking or vibratory equipment. The underlying materials above the water table consist primarily of sandy clay and clayey sand and therefore, in our opinion, are not susceptible to dynamic compaction phenomena.

5.1.4 Fault Ground Rupture and Fault Creep

The State of California adopted the Alquist-Priolo Earthquake Fault Zone Act of 1972 (Chapter 7.5, Division 2, Sections 2621 – 2630, California Public Resources Code), which regulates development near active faults for preventing surface fault rupture hazards to structures for human occupancy. In accordance with the Alquist-Priolo (A-P) Act, the California Geological Survey established boundary zones, or Earthquake Fault Zone surrounding faults or fault segments judged to be sufficiently active, well-defined, and mapped for some distance. Structures for human occupancy within designated Earthquake Fault Zone boundaries are not permitted unless surface fault rupture and fault creep hazards are adequately addressed in a site-specific evaluation of the development site.

The site is not currently mapped or within a designated Earthquake Fault Zone as defined by the State (Hart and Bryant, 1997). The closest Earthquake Fault Zone is associated with the Hayward Fault, about 22 miles west of the site, as shown on Figure 7. Since the site is not within or near an A-P Earthquake Fault Zone, and there are no faults mapped through the site or trending toward the site, the potential for fault ground rupture and fault creep hazards are judged to be very low.

5.1.5 Tsunamis and Seiches

Tsunamis are long-period sea waves generated by seafloor movements from submarine earthquakes or volcanic eruptions that rapidly displace large volumes of water. Coastal communities along the Pacific Ocean are particularly susceptible to such phenomena. The project site is located at an elevation of about 150 feet above mean sea level and approximately 25 miles east of the San Francisco Bay. Therefore, the potential for tsunami inundation at the site is considered to be nil.

Earthquake-induced waves generated within enclosed bodies of water are called seiches. Such waves may overtop dam embankments or extreme cases, cause dam failure, and in either case result in downstream inundation. The site is not within the downstream drainage area of any significant body of water. Therefore, the site is not considered to be susceptible to seiches.

5.2 Other Hazards

Potential geologic hazards other than those caused by a seismic event generally include ground failure and subsidence, consolidation settlement, landslides under static loading conditions, expansive and collapsible soil, flooding, naturally occurring asbestos (NOA) and soil erosion. These are discussed and evaluated in the following sections.

5.2.1 Ground Cracking and Subsidence

Withdrawal of groundwater and other fluids (i.e. petroleum and the extraction of natural gas) from beneath the surface has been linked to large-scale land subsidence and associated cracking on the ground surface. Other causes for ground cracking and subsidence include the oxidation and resultant compaction of peat beds, the decline of groundwater levels and consequent compaction of aquifers, hydro-compaction and subsequent settlement of alluvial deposits above the water table from irrigation, or a combination of any of these causes. Determining the impacts from subsidence on the project is beyond the scope of this study however, subsidence generally impacts a region and should not produce excessive differential settlement in a single location. Local and regional locations prone to subsidence generally subside equally over time.

5.2.2 Consolidation Settlement

Consolidation is the densification of soil into a denser arrangement from additional loading, such as from new fills or foundation loads. Consolidation of clayey soils is usually a long-term process, whereby the water is squeezed out of the soil matrix with time. Sandy soil consolidates relatively rapidly with the introduction of a load.

Consolidation of soft and loose soil layers and lenses can cause settlement of the ground surface or buildings. Based on the very stiff to hard sandy clay and dense clayey sand soils at the site, the near-surface soils are considered to have a low potential for consolidation settlement.

5.2.3 Landslides

Landslides can occur under a variety of loading conditions, including both static and seismic, but involve sloping ground. As shown on Figure 7 the subject site is not adjacent to an "earthquake-induced landslide zone." The site and immediate vicinity are moderately flat and do not exhibit landslide features as determined by our geologic site reconnaissance and literature review. Therefore, the site is not susceptible to landsliding.

5.2.4 Expansive and Collapsible Soils

Highly expansive fine-grained soils were encountered in the upper five feet during our subsurface exploration. The results of the laboratory testing performed on a representative sample of the most expansive near-surface soils indicated measured liquid limits of 54 and 45 with corresponding plasticity indices of 43 and 31, indicative of a high plasticity and high expansion potential. Hence, mitigation for highly expansive soil conditions consisting of combinations of moisture conditioning of the subgrade and use of a non-expansive fill layer below interior floor slabs is recommended for this site. Specific measures to mitigate the potential effects of high expansive soils on foundations and concrete slabs-on-grade are presented herein.

5.2.5 Flooding

The site is not located in a mapped area of flooding hazard, as shown on Figure 8, *Flood Hazard Map*, based on the FIRM (2009) map produced for the site vicinity. The site is located in a non-dotted Zone X, which delineates areas determined to be outside the 0.2% annual chance floodplain.

5.2.6 Soil Erosion

Present construction techniques and agency requirements have provisions to limit soil erosion and resultant siltation during construction. These measures will reduce the potential for soil erosion at the site during the various construction phases. Long-term erosion at the site will be reduced by designing landscaping and/or hardscape areas such as parking lots and walkways with appropriate surface drainage facilities.

5.2.7 Naturally Occurring Asbestos (NOA)

Bedrock was not encountered during our exploratory investigation, and the project site is not located within 10 miles of a mapped geographic ultramafic rock unit (GURU) or serpentinite, as shown on Figure 1. Therefore, it is our opinion that the subject site should be exempt from any special regulation or mitigation procedures relating to NOA before and during construction.

5.2.8 Other Geologic Hazards

Due to the site's location and geology, subsurface soil conditions, groundwater levels and land use factors, the site is not subject to the potential geologic hazards of loss of mineral resources, volcanism, cyclic softening of soils or loss of unique geologic features.

6.0 CONCLUSIONS AND RECOMMENDATIONS

The following conclusions and engineering recommendations are based upon the analysis of the information gathered during the course of this study and our understanding of the proposed improvements.

6.1 Conclusions

The site is considered suitable from a geotechnical and geologic perspective for the proposed improvements provided the recommendations of this report are incorporated into the design and implemented during construction. The predominant geotechnical and geological issues that could affect design and construction at this site are summarized below and addressed in the following sections.

Seismic Considerations – The site is located within a seismically active region and expected to be subjected to moderately strong to very strong ground shaking during the life of the new structures. As a minimum, the building designs should consider the effects of seismic activity in accordance with the latest edition of the California Building Code (CBC).

Expansive Soils – High expansive clay surficial soils were identified within the project site. As a result, footings should be extended to greater depth than normal, and interior slabs-on-grade should be steel reinforced to resist expansion pressures as well as be supported on a nominal layer of select, non-expansive fill. Moisture conditioning of the fill and upper processed cut surfaces should also be performed and import fill should be non-expansive. The building slabs should be supported by a minimum of 18-inches of non-expansive fill.

Corrosivity – The tested soil sample had a total score of 11 points, indicating a high corrosive rating to cast and ductile iron pipe and use of cathodic corrosion protection is often recommended. Providing a complete assessment of the corrosion potential of the site soils are not within our scope of work. For specific long-term corrosion control design recommendations, we recommend that a California-registered professional corrosion engineer evaluate the corrosion potential of the soil environment on buried concrete structures, steel pipe coated with cement-mortar, and ferrous metals.

6.2 Seismic Parameters: Site-Specific Ground Motion Hazard Analysis

The subject site is located within a seismically active region and should be designed to account for earthquake ground motions as described in this report. Based on the subsurface conditions encountered, measured shear wave velocities, and our evaluation of the geology of the site, Site Class “D”, representative of stiff soils averaged over the uppermost 100 feet of the subsurface profile would be appropriate for this site.

For seismic analysis of the proposed site in accordance with the seismic provisions of the 2022 California Building Code (CBC), we recommend the following seismic ground motion values be used for design shown in Table 4, which are based on procedures outlined in ASCE 7-16 Section 11.4 and Table 11.4-2 of Supplement 3. ASCE 7-16 Section 11.4.8 states that a site-specific ground motion hazard analysis should be performed for all structures on Site Class D soils with S_1 greater than or equal to 0.2, unless the exceptions outlined in Section 11.4.8 are followed and the seismic response coefficient is properly modified during design. A site-specific ground motion hazard analysis was not performed for this site and is outside the scope of this report. If a site-specific ground motion hazard analysis is required for this project or if the project is designed under a different building code than CBC 2022, we should be notified so that we may provide the appropriate seismic design parameters.

Table 4: Seismic Parameters Based on 2022 CBC (per ASCE 7-16)

Item	Value	2022 CBC Source[R1]	ASCE 7-16 Table/Figure[R2]
Site Class	D	Table 1613A.3.2.	Table 20.3-1
Mapped Spectral Response Accelerations			
Short Period, S_s	0.758		Figure 22-1
1-second Period, S_1	0.292		Figure 22-2
Site Coefficient, F_a	1.197	Table 1613A.3.3(1)	Table 11.4-1
Site Coefficient, F_v	2.2	Table 1613A.3.3(2)	Table 11.4-2
MCE (S_{MS})	0.907	Equation 16A-37	Equation 11.4-1
MCE (S_{M1})[R3]	0.964	Equation 16A-38	Equation 11.4-2
Design Spectral Response Acceleration			
Short Period, S_{DS}	0.605	Equation 16A-39	Equation 11.4-3
1-second Period, S_{D1}[R3]	0.642	Equation 16A-40	Equation 11.4-4
Peak Ground Acceleration, PGA_M	0.406 g		Equation 11.8-1

R1: California Building Standards Commission (CBSC), "California Building Code," 2022 Edition.
R2: U.S. Seismic "Design Maps" Web Application, https://seismicmaps.org/
R3: Values were increased by 50% in accordance with ASCE 7-16, Supplement 3, effective 11-5-21.

In accordance with ASCE 7-16, Section 11.6, since the design spectral response acceleration parameters for short period, S_{DS} is greater than 0.50, and 1-s period, S_{D1} is greater than 0.2 g, the Seismic Design Category for this site should be classified as "D" for Risk Categories I through IV.

6.3 Site Grading

6.3.1 General Grading and Material Requirements

Site grading is generally anticipated to consist of finish grading to establish site grades, or additional mass grading for improved foundation bearing capacities if desired; utility trench excavation and backfills, preparation of

supporting subgrades for site pavements and hardscape; and placement of aggregate base (baserock) sections for hardscape and pavements.

On-site soils having an organic content of less than three percent by weight can be reused as fill as approved by the Geotechnical Engineer. Imported soil should be non-expansive, having a Plasticity Index of 15 or less, an R-Value greater than 40, and contain sufficient fines so the soil can bind together. Imported materials should be free of environmental contaminants, organic materials and debris, and should not contain rocks or lumps greater than three inches in maximum size. Import fill materials should be approved by the Geotechnical Engineer prior to use on site.

6.3.2 Project Compaction Recommendations

The following table summarizes the recommended minimum compaction requirements for this project. Not all soils, aggregates, and scenarios listed below may be applicable for this project. Specific grading recommendations will be discussed individually within applicable sections of this report.

Table 5: Project Compaction Recommendations

Description	Percent Relative Compaction	Minimum Percent Above Optimum Moisture Content
Building Pad, Onsite Soil	90	3 to 5
Building Pad, Subgrade Soil	90	3 to 5
Building Pad, Imported Select Fill	90	2
Building Pad, Treated Soil	90	2
AC or Concrete Pavement, Subgrade, Upper 6”	95	3 to 5
AC or Concrete Pavement, Onsite Soil or Fill	90	2
AC or Concrete Pavement, Class 2 Baserock	95	2
AC or Concrete Pavement, Treated Soil, Subgrade	93	2
Concrete Flatwork, Class 2 Baserock	90	2
Concrete Flatwork, Subgrade Soil	90	3 to 5
Underground Utility Trench Backfill	90	2
Underground Utility Trench Backfill - Landscape Areas (not including areas below flatwork)	85	2
Underground Utility Trench Backfill, Clean Sand	95	4
Underground Utility Trench Backfill, Upper 3’ Feet below Existing Pavement Sections or 6” below New Pavement Sections	95	2

Fill materials should be properly moisture conditioned in accordance with Table 5 as determined using ASTM D-1557 and placed in uniform loose lifts not to exceed eight inches. Smaller lifts may be necessary to achieve the minimum required compaction using lighter weight compaction equipment. It should be noted that the use of on-site soil for fill will require moisture conditioning (drying or wetting). Moisture conditioning may be difficult

to achieve during cold, wet periods of the year, or during extreme temperatures and after precipitation events.

6.3.3 Site Preparation and Demolition

Site grading should be performed in accordance with these recommendations. A pre-construction conference should be held at the jobsite with representatives from the owner, general contractor, grading contractor, and Geo-Eng prior to starting the stripping and demolition operations at the site.

The site should be cleared of existing pavements (if any), vegetation, organic topsoil, debris, existing undocumented loose or soft fill, and other deleterious materials within the proposed development area. Removed fill soil may be evaluated by the Geotechnical Engineer for possible reuse and placement as engineered fill. The grading contractor should be aware of the possibility of buried objects and underground utilities at the site which are to be removed or abandoned appropriately. Holes resulting from the removal of underground obstructions extending below the proposed finish grade should be cleared and backfilled with properly compacted engineered fill or other material approved by the Geotechnical Engineer. We recommend backfilling operations for any excavations to remove deleterious material be carried out under the observation of the Geotechnical Engineer.

It is possible that existing underground utilities exist and if so, may impact the project construction. If encountered, the utilities will need to be properly abandoned and/or entirely removed from proposed building area. In general, utility pipelines less than four inches in diameter to be abandoned may be left in place provided they will not be in close proximity to new foundation elements or interfere with new utilities. Such pipes should be plugged at the ends with concrete or sand-cement slurry. Larger utility pipelines or pipelines that underlie new foundations should be removed and replaced with engineered fill or left in place and completely grouted with flowable sand-cement slurry or other approved Controlled Density Fill (CDF; also, known as Controlled Low Strength Material, or CLSM).

6.3.4 Building Pad Preparation

Imported soil should be non-expansive, having a Plasticity Index of 15 or less, an R-Value greater than 40, and contain sufficient fines so the soil can bind together. Imported materials should be free of organic materials and debris and should not contain rocks or lumps greater than three inches in maximum size. Import fill materials should be approved by the Geotechnical Engineer prior to use onsite.

Following excavation to the required grades, subgrades in areas to receive engineered fill, slabs-on-grade or hardscape should be scarified to a depth of at least six inches; moisture conditioned and compacted to the requirements for engineered fill presented in Table 5. The compacted surface should be firm and unyielding and should be protected from damage caused by traffic or weather. Soil subgrades should be kept moist during construction. To achieve satisfactory compaction of the subgrade and fill materials, it may be necessary to adjust the water content at the time of construction. This may require that water be added to soils that are too dry, or that scarification and aeration be performed in any soils that are too wet. Fill material should be evenly spread and compacted in lifts not exceeding eight inches in pre-compacted thickness.

Newly exposed near-surface soils under existing site pavement once removed are typically saturated to near-saturated. We measured a subgrade moisture of 16% which is most likely 3 to 4 % over optimum moisture. Therefore, it is anticipated that additional ripping and drying of the subgrade soils should be anticipated. With additional effort, compaction should be feasible for this low plasticity material. Possible options for additional subgrade stabilization include ripping, air-drying and re-compacting exposed subgrade material; admixtures such as cement, or use of reinforcing stabilization geotextile or geogrid, as discussed below. More detailed recommendations can be provided during construction should unstable subgrades be encountered by the contractor.

Unstable subgrades in smaller, isolated areas can be stabilized by over excavating to a minimum of 18-inch depth below finished subgrade elevation where competent, stable soils are not encountered. The bottom of the excavation should then be completely covered with a ground stabilization geotextile fabric such as Mirafi 500X or equivalent and typically backfilled with Class 2 aggregate base. Alternatively, with the approval of the Geotechnical Engineer, such areas can be stabilized by over-excavating at least one foot, placing Tensar TriAx TX-140 or equivalent geogrid on the soil, and then placing 12 inches of Class 2 baserock on the geogrid. The upper six inches of the baserock in either case should be compacted to at least 90 percent relative compaction.

Larger unstable areas if encountered may be remedied using soil admixtures, such as cement. A four percent mixture of cement based on a dry soil unit weight of 110 pcf may be assumed if needed. Treatment should vary between 12 to 18 inches, depending on the anticipated construction equipment loads. More detailed and final recommendations can be provided during construction.

Final grading should be designed to provide positive drainage away from the building. We suggest exposed soil/landscape areas, if any, within 10 feet of the proposed building be sloped at a minimum of three percent away

from the building. Roof leaders and downspouts should discharge onto paved surfaces sloping away from the building or into a closed pipe system channeled away from the building to an approved collector or outfall.

6.3.5 Grading Flatwork Areas

The existing soil in flatwork areas should be scarified to a depth of at least eight inches, moisture conditioned and compacted. Once the compacted subgrade has been reached, it is recommended that baserock in paved areas be placed immediately after grading to protect the subgrade soil from drying. Alternatively, the subgrade should be kept moist by watering until the baserock is placed. Rubber-tired heavy equipment, such as a full water truck, should be used to proof roll exposed pavement subgrade areas where pumping is suspected. Proof rolling will determine if the subgrade soil is capable of supporting construction paving equipment without excessive pumping or rutting.

6.3.6 Site Winterization and Unstable Subgrade Conditions

If grading occurs in the winter rainy season, unstable and unworkable subgrade conditions may be present, and compaction of on-site soils may not be feasible. These conditions may be remedied using appropriate soil admixtures, such as lime or other admixtures. More detailed recommendations can be provided during construction. Stabilizing subgrade in small, isolated areas can be accomplished with the approval of the Geotechnical Engineer by over-excavating one foot, placing Tensar BX1100 or TriAx TX-140 geogrid or equivalent geogrid on the soil, and then placing 12 inches of Class 2 baserock on the geogrid. The upper six inches of the baserock should be compacted to at least 90 percent relative compaction. Alternatively, a non-woven stabilization geotextile such as Mirafi 500X overlain by a minimum 18 inches of baserock may be substituted for geogrid and baserock.

6.4 Utility Trench Construction

Utility trenches may be backfilled with approved native soil above the utility bedding and shading materials compacted to the recommended compaction presented in Table 5. If rocks larger than four inches in maximum size are encountered, these should be removed from the fill prior to placement in the utility trenches. Utility bedding and shading compaction requirements should be in conformance with the requirements of the local agencies having jurisdiction and as recommended by the pipe manufacturers. Jetting of trench backfill is not recommended.

Pea gravel, rod mill (pea gravel with sand), or other similar self-compacting material should NOT be utilized as trench backfill at the site. This material may act as a conduit for subsurface moisture migration. Utility trenches ideally should be completely sealed/cut-off with concrete, clayey soil, sand-cement slurry, or controlled density fill (CDF) where the utility enters the building under the perimeter foundation. This would reduce the potential for migration of water beneath the building through the shading material in the utility trench.

If rain is expected and the trench will remain open, the bottom of the trench may be lined with one to two inches of gravel. This would provide a working surface in the trench bottom. The trench bottom may have to be sloped to a low point to pump the water out of the trench.

6.5 Temporary Excavation Slopes

The Contractor should incorporate all appropriate requirements of OSHA/ Cal OSHA into the design of any temporary construction slopes used during construction. Excavation safety regulations are provided in the OSHA Health and Safety Standards for Excavations, 29 CFR Part 1926, Subpart P, and apply to excavations greater than five feet in depth.

The Contractor, or his specialty subcontractor, should design temporary construction slopes to conform to the OSHA regulations and should determine actual temporary slope inclinations based on the subsurface conditions exposed at the time of construction. For pre-construction planning purposes, the subsurface materials in the areas of the site where excavation may take place may be assumed to consist of stiff clay categorized as OSHA Type B with temporary slope inclination of no steeper than 1:1 (horizontal to vertical). This maximum slope ratio is assumed to be uniform from top to toe of the slope. The type of slope material and actual temporary construction slopes should be confirmed during construction by a competent engineering geologist responsible to the grading contractor.

If temporary slopes are left open for extended periods of time, exposure to weather and rain could have detrimental effects such as sloughing and erosion on surficial soils exposed in the excavations. We recommend that all vehicles and other surcharge loads be kept at least 10 feet away from the top of temporary slopes, and that such temporary slopes are protected from excessive drying or saturation during construction. In addition, adequate provisions should be made to prevent water from ponding on top of the slope and from flowing over the slope face. Desiccation or excessive moisture in the excavation could reduce stability and require shoring or laying back side slopes.

6.6 Foundation Recommendations

6.6.1 General

The elevations for the planned buildings were not available during this phase of design, and they will have an impact on the optimal foundation design. Once planning is further along, we should be consulted regarding the final selection of the foundation type. For the design of the new classroom building and the addition to the existing facilities, we anticipate that the building can be supported on continuous and /or isolated spread footings bearing on undisturbed stiff to very stiff, onsite native soil. We note that modular buildings may be built with a crawl space. If a crawl space is designed, we strongly recommend that the crawl space be covered with a thin layer of concrete a minimum of 2-inches thick to prevent drying and shrinkage of the underlying soil. In these highly expansive soil conditions adverse shrinkage can occur in crawl spaces which would create movement in foundations and adverse structural performance. The crawl space soil should be moisture conditioned to 2% above optimum prior to covering with concrete. The moisture content of the crawl space soil should be verified within 24 hours of pouring the slab.

6.6.2 Shallow Foundations

The proposed buildings can be supported on continuous and/or isolated spread footings bearing on undisturbed stiff to very stiff native soil or engineered fill. Where over excavations below design footing depth is required, the over excavated portion of footing excavation should be backfilled with structural or lean concrete or a Controlled Low Strength Material (CLSM). Footings should be founded a minimum of 24 inches below lowest adjacent finished grade. Continuous footings should have a minimum width of at least 18 inches, and isolated column footings should have a minimum width of at least 24 inches. In addition, footings located adjacent to other footings or utility trenches should bear below an imaginary 1.5:1 (horizontal to vertical) plane projected upward from the bottom edge of the adjacent footings or utility trenches. Footing reinforcement should be determined by the project Structural Engineer.

Footings should be designed for the following allowable bearing pressures, assuming design Factors-of-Safety of 3.0, 2.0 and 1.5 for dead loads, dead plus live loads and total loads, respectively, from the calculated ultimate bearing pressure.

Table 6: Allowable Bearing Pressures for Spread Footings

Load Condition	Allowable Bearing Pressure (psf)
Dead Load	2,000
Dead plus Live Loads	3,000
Total Loads (including wind or seismic)	4,000

These allowable bearing pressures are net values; therefore, the weight of the footing can be neglected for design purposes. Footings should be designed with sufficient reinforcing to provide structural continuity and permit spanning of local irregularities. These pressures assume a uniform embedment into vert stiff native soil or engineered fill. Footings may need to be over-excavated during construction to achieve this requirement, and all footings shall be observed by a Geo-Eng Engineer to confirm this.

If site preparation and foundation observation services are conducted as outlined in the Geotechnical Study report, vertical static settlement is expected to be less than one inch for footings bearing within the materials described in the report and designed to the allowable bearing pressures. Differential settlement across the structure is not expected to exceed about ½ this value within a 30-foot span.

6.6.3 Lateral Resistance

Shallow foundations can resist lateral loads with a combination of bottom friction and passive resistance. An allowable coefficient of friction of 0.35 between the base of the foundation elements and underlying material is recommended. In addition, an *ultimate* passive resistance equal to an equivalent fluid weighing 350 pounds per cubic foot (pcf) acting against the foundation may be used for lateral load resistance against the sides of footings perpendicular to the direction of loading where the footing is poured neat against undisturbed material. The top foot of passive resistance at foundations not adjacent to pavement or hardscape should be neglected. To fully mobilize this passive resistance, a lateral footing deflection on the order of one to two percent of the embedment of the footing is required. If it is desired to limit the amount of lateral deflection to mobilize the passive resistance, a proportional safety factor should be applied. The friction between the bottom of a slab-on-grade floor and the underlying soil should not be utilized to resist lateral forces.

6.6.4 Construction Considerations

Geo-Eng personnel should be retained to observe and confirm that footing excavations prior to formwork and reinforcing steel placement bear in soils suitable for the recommended maximum design bearing pressure. If unsuitable soil or bedrock is present, the excavation should be deepened until suitable supporting material is encountered. The over excavation should be backfilled using engineered soil or lean concrete (or a sand-cement slurry mix acceptable to the Geotechnical Engineer) up to the bottom of the footing concrete.

Footing excavations should have firm bottoms and be free from excessive slough prior to concrete or reinforcing steel placement. Care should also be taken to prevent excessive wetting or drying of the bearing materials during construction. Extremely wet or dry or any loose or disturbed material in the bottom of the footing excavations should be removed prior to placing concrete. If construction occurs during the winter months, a thin layer of concrete (sometimes referred to as a rat slab) could be placed at the bottom of the footing excavations. This will protect the bearing material and facilitate removal of water and slough if rainwater fills the excavations.

6.7 Concrete Slabs-on-Grade

6.7.1 Interior Concrete Slabs

Non-structural concrete interior slab-on-grade floors should be a minimum of five inches in thickness. As a minimum, slab reinforcing should consist of No. 4 steel reinforcement spaced at 18-inch centers each way, and in any case, be sufficient to satisfy the anticipated use and loading of the slab. Slab-on-grade subgrade surfaces should be proof-rolled to provide a smooth, unyielding surface for slab support. The building slabs should be supported by a minimum of 18-inches of non-expansive fill compacted to the requirements of Section 6.3.2. The fill should extend a minimum of 5 feet beyond the building envelope.

Care should be taken to maintain the minimum recommended moisture content in the subgrade until floor slabs and/or engineered fills are constructed. Positive drainage should also be developed away from the building to prevent water from ponding along the perimeter and affecting future floor slab performance. We recommend a positive cutoff in utility trenches at the structure/building lines to reduce the potential for water migrating through the utility trench backfill to areas under the building.

Slab-on-grade concrete floors with moisture sensitive floor coverings should be underlain by a moisture retarder system constructed between the slab and subgrade. Such a system could consist of four inches of free-draining gravel, such as 3/4-inch, clean, crushed, uniformly graded gravel with less than three percent passing No. 200

sieve, or equivalent, overlain by a relatively impermeable vapor retarder placed between the subgrade soil and the slab. The vapor retarder should be at least 10-mil thick and should conform to the requirements for ASTM E 1745 Class C Underslab Vapor Retarders (e.g., Griffolyn Type 65, Griffolyn Vapor Guard, Moistop Ultra C, or equivalent). If additional protection is desired by the owner, a higher quality vapor barrier conforming to the requirements of ASTM E 1745 Class A, with a water vapor transmission rate less than or equal to 0.006 gr/ft^2/hr (i.e., 0.012 perms) per ASTM E 96 (e.g., 15-mil thick "Stego Wrap Class A"), or to Class B (Griffolyn Type 85, Moistop Ultra B, or equivalent) may be used in place of a Class C retarder.

The vapor retarder or barrier should be placed directly under the slab. A capillary rock layer or rock cushion is not required if a Class A barrier is used beneath the floor slab, and a sand layer is not required over the vapor retarder from a geotechnical standpoint. If sand on top of the vapor retarder is required by the design structural engineer, we suggest the thickness be minimized to less than one inch. If construction occurs in the winter months, water may pond within the sand layer since the vapor retarder may prevent the vertical percolation of rainwater. Sand and crushed rock layers may be considered to comprise part of the thickness of the recommended non-expansive fill underlying the interior slab.

ASTM E1643 should be utilized as a guideline for the installation of the vapor retarder. During construction, all penetrations (e.g., pipes and conduits,) overlap seams, and punctures should be completely sealed using a waterproof tape or mastic applied in accordance with the vapor retarder manufacturer's specifications. The vapor retarder or barrier should extend to the perimeter cutoff beam or footing.

6.7.2 Exterior Concrete Flatwork

Exterior concrete flatwork with pedestrian traffic should be at least four inches thick. If an underlying baserock layer is used, the baserock layer should be at least six inches thick and should be cut off from direct moisture transmission from directly adjacent landscape areas by use of a concrete cutoff or a deep header board extending at least two inches below the base of the aggregate base layer. In any case, due to expansive subgrade conditions, we recommend that at least the upper 12-inches of flatwork subgrade be moisture conditioned to a minimum of three to five percent over optimum moisture prior to flatwork construction. This moisture should be verified within 24 hours of placing baserock over the subgrade and again prior to concrete pouring. These measures should help reduce, but may not completely eliminate future slab movement. If minimal future slab movement is desired, exterior slabs and slab subgrades should be constructed in accordance with the recommendations presented for interior concrete slabs in Section 6.7.1.

Flatwork can be reinforced to reduce potential tripping hazards, but welded wire mesh should not be utilized. Where critical, the flatwork can be doweled into the building foundation adjacent to doorways and into curbs to prevent possible tripping hazards. We also recommend that control joints be designed and constructed in accordance with American Concrete Institute (ACI) recommendations. In general, this would require control joints on a maximum spacing of approximately 10 feet by 10 feet, with a closer spacing depending on the shape of the concrete slab.

6.8 Site Retaining Walls

6.8.1 Lateral Earth Pressures

The following recommended lateral earth design pressures assume that on-site soils will be used as wall backfill. For a level backfill condition, unrestrained walls (i.e., walls that are free to deflect or rotate) should be designed to resist an equivalent fluid pressure of 45 pounds per cubic foot. Restrained walls for a level backfill condition should be designed to resist an equivalent fluid pressure of 45 pounds per cubic foot, plus an additional uniform lateral pressure of 7H pounds per square foot, where H = height of backfill above the top of the wall footing, in feet. For seismic design of walls greater than six feet in retained height, unrestrained and restrained walls with level backfill should be designed to resist an additional uniform load equal to 15H psf, added to the *unrestrained* condition in either case. A seismic increment is not required for site walls retaining less than six feet.

Walls with inclined backfill should be designed for an additional equivalent fluid pressure of one pound per cubic foot for every two degrees of slope inclination from horizontal. Walls subjected to surcharge loads should be designed for an additional uniform lateral pressure equal to 0.33 times the anticipated surcharge load for unrestrained walls, and 0.50 times the anticipated surcharge load for restrained walls.

Retaining walls can resist lateral loads with a combination of bottom friction and passive resistance. An allowable coefficient of friction of 0.35 between the base of the foundation elements and underlying material is recommended. In addition, an *ultimate* passive resistance equal to an equivalent fluid weighing 350 pounds per cubic foot (pcf) acting against the foundation may be used for lateral load resistance against the sides of the footing perpendicular to the direction of loading where the footing is poured neat against undisturbed material (i.e., native soils or engineered fills). The top foot of passive resistance at foundations not adjacent to and confined by pavement, interior floor slab, or hardscape should be neglected. To fully mobilize this passive resistance, a lateral footing deflection on the order of one to two percent of the embedment of the footing is required. If it is

desired to limit the amount of lateral deflection to mobilize the passive resistance, a proportional safety factor should be applied.

The lateral earth pressures herein do not include any factor-of-safety and are not applicable for submerged soils/hydrostatic loading. Additional recommendations may be necessary if submerged conditions are to be included in the design.

6.8.2 Retaining Wall Foundations

Retaining and below-grade walls may be founded on spread footing foundations following the recommendations outlined in section 6.6. Assuming a minimum 24-inch footing embedment below lowest adjacent grade, retaining wall footings may be designed using an allowable bearing capacity based off Table 6, in section 6.6.2.

6.8.3 Retaining Wall Drainage

The recommended lateral pressures assume that walls are fully back drained to prevent the build-up of hydrostatic pressures. To reduce the potential for hydrostatic loading on retaining and below-grade walls due to possible seasonal subsurface groundwater seepage, a subsurface drain system may be considered for construction behind below-grade walls. Alternatively, below-grade walls can be designed to accommodate an additional hydrostatic pressure increment.

If used, the drain system should consist of a minimum 12-inch width of free-draining granular soils containing less than five percent fines (by weight) passing a No. 200 sieve placed adjacent to the wall. The free-draining granular material should be graded to prevent the intrusion of fines (e.g., a Caltrans Class 2 permeable material) or encapsulated in a suitable filter fabric. A drainage system consisting of either weep holes or perforated drain lines (placed near the base of the wall) should be used to intercept and discharge water which would tend to saturate the backfill. An impervious soil should be used in the upper layer of backfill to reduce the potential for water infiltration. As an alternative, a prefabricated drainage structure such as a geocomposite drain (e.g., MiraDRAIN 6000) may be used as a substitute for the granular backfill adjacent to the wall.

The retaining wall drainage system should be sloped to discharge by gravity to an adjacent storm drain system or other appropriate facility.

6.8.4 Retaining Wall Backfill Compaction

Retaining wall backfills less than five feet deep should be compacted to at least 90 percent relative compaction using light compaction equipment. Backfill greater than a depth of five feet should be compacted to at least 95 percent relative compaction. If heavy compaction equipment is used, the walls should be appropriately designed to withstand loads exerted by the heavy equipment, and/or temporarily braced. Over compaction or surcharge from heavy equipment too close to the wall may cause excessive lateral earth pressures which could result in excessive outward wall movement.

6.9 Plan Review

It is recommended that Geo-Eng be provided the opportunity to review the foundation, grading, and drainage plans prior to construction. The purpose of this review is to assess the general compliance of the plans with the recommendations provided in this report and the incorporation of these recommendations into the project plans and specifications.

6.10 Observation and Testing During Construction

It is recommended that Geo-Eng be retained to provide observation and testing services during site preparation, site grading, utility construction, and foundation excavation, and to observe final site drainage. This is to observe compliance with the design concepts, specifications and recommendations, and to allow for possible changes in the event that subsurface conditions differ from those anticipated prior to the start of construction. We note that if another firm is retained to perform the construction observation and testing that in accordance with DSA requirements that firm will need to sign a DSA From 109 and they will assume full responsibility as the Geotechnical Engineer of Record.

6.11 Validity of Report

This report is valid for three years after publication. If construction begins after this time period, Geo-Eng should be contacted to confirm that the site conditions have not changed significantly. If the proposed development differs considerably from that described above, Geo-Eng should be notified to determine if additional recommendations are required. Additionally, if Geo-Eng is not involved during the geotechnical aspects of construction, this report may become wholly or in part invalid since Geo-Eng's geotechnical personnel need to verify that the subsurface conditions anticipated preparing this report are similar to the subsurface conditions revealed during construction. Geo-Eng's involvement should include foundation and grading plan review;

observation of foundation excavations; grading observation and testing; testing of utility trench backfills and retaining wall backfill as applicable to the project; and subgrade preparation in flatwork areas.

7.0 LIMITATIONS AND UNIFORMITY OF CONDITIONS

The recommendations of this report are based upon the soil and conditions encountered in the borings. If variations or undesirable conditions are encountered during construction, Geo-Eng should be contacted so that supplemental recommendations may be provided.

This report is issued with the understanding that it is the responsibility of the owner or his representatives to see that the information and recommendations contained herein are called to the attention of the other members of the design team and incorporated into the plans and specifications, and that the necessary steps are taken to see that the recommendations are implemented during construction.

The findings and recommendations presented in this report are valid as of the present time for the development as currently proposed. However, changes in the conditions of the property or adjacent properties may occur with the passage of time, whether by natural processes or the acts of other people. In addition, changes in applicable or appropriate standards may occur through legislation or the broadening of knowledge. Accordingly, the findings and recommendations presented in this report may be invalidated, wholly or in part, by changes outside our control. Therefore, this report is subject to review by Geo-Eng after a period of three (3) years has elapsed from the date of issuance of this report. In addition, if the currently proposed design scheme as noted in this report is altered, Geo-Eng should be provided the opportunity to review the changed design and provide supplemental recommendations as needed.

Recommendations are presented in this report which specifically request that Geo-Eng be provided the opportunity to review the project plans prior to construction and that we be retained to provide observation and testing services during construction. The validity of the recommendations of this report assumes that Geo-Eng will be retained to provide these services.

This report was prepared upon your request for our services, and in accordance with currently accepted geotechnical engineering practice. No warranty based on the contents of this report is intended, and none shall be inferred from the statements or opinions expressed herein.

The scope of our services for this report did not include an environmental assessment or investigation for the presence or absence of wetlands or hazardous or toxic materials in the soil, surface water, groundwater or air, on, below or around this site. Any statements within this report or on the attached figures, logs or records regarding odors noted or other items or conditions observed are for the information of our client only.

8.0 REFERENCES

United Soil Engineering, Inc., Geotechnical Investigation & Pavement Design, March 2011, Proposed R&D Building, Southwestern Corner of Cushing Parkway and Fremont Boulevard, Fremont California.

American Concrete Institute, 2008, Guide for Design and Construction of Concrete Parking Lots: ACI Publication 330R-08.

American Society of Civil Engineers, 2010, Minimum Design Loads for Buildings and Other Structures; ASCE/SEI Standard 7-10.

Association of Bay Area Governments (ABAG), September 2003, Liquefaction Susceptibility maps, based on William Lettis and Associates and USGS mapping, website: http://www.abag.ca.gov

Blake, Thomas F., EQSearch version 3.00, EQFault1 version 3.00, FriskSP version 4.00, software and manuals with 2004 CGS fault model updates.

California Department of Transportation (Caltrans), Memorandum: Foundation Report for Laurel Curve Soil Nail Wall

California Department of Transportation (Caltrans), ARS Online Website: http://dap3.dot.ca.gov/ARS_Online/ (Accessed May 2018)

California Division of Mines and Geology (CDMG), Digital Images of Official Maps of Alquist-Priolo Earthquake Fault Zones of California, Central Coast Region, DMG CD 2000-004, 2000.

California Division of Mines and Geology (CDMG), 1996, Probabilistic Seismic Hazard Assessment for the State of California: CDMG Open-File Report 96-08.

California Geological Survey, 2008, Guidelines for evaluating and mitigating seismic hazards in California: California Geological Survey Special Publication 117A, 98 p.

California Geological Survey, 1996, Probabilistic seismic hazard assessment for the state of California, DMG Open-File report 96-08 (USGS Open-File Report 96-706), and updated Appendix A, Appendix A – 2002 California Fault Parameters.

Cao, T., Bryant, W.A., Rowshandel, B., Branum, D., and Wills, C.J., The Revised 2002 California Probabilities Seismic Hazard Maps, June 2003.

Wagner, D.L., Bortugno, E.J., and McJunkin, R.D., 1991, Geologic map of the San Francisco-San Jose quadrangle, California, 1:250,000: California Division of Mines and Geology, Regional Geologic Map 5A, scale 1:250,000.

Hart, E. W., 1983, Summary Report: Fault Evaluation Program, 1981 – 1982, Area-Northern Coast Ranges region, California, California Department of Conservation, Division of Mines and Geology, Open-File Report 83-10.

Hart, E.W., and Bryant, W.A., 1997, Fault-rupture hazard zones in California: California Geological Survey Special Publication 42, revised 1997 with Supplements 1 and 2 added 1999, 38 p.

Jennings, C.W., and Bryant, W.A., compilers, 2010: 2010 Fault activity map of California: California Geological Survey, Geologic Data Map No. 6, scale 1:750,000, with 94-page Explanatory Text booklet.

Page, B.M., 1966, Geology of the Coast Ranges of California: in Bailey, E.H., Jr., editor, Geology of Northern California: California Geological Survey Bulletin 190, p. 255-276.

Thrust Fault Subgroup 1999, Report to the Working Group on Northern California Earthquake Probabilities, 15 p. plus tables.

Tokimatsu, K. and Seed, H.B., 1987, Evaluation of Settlements in Sands due to Earthquake Shaking: ASCE Journal of Geotechnical Engineering, Vol. 113, No. 8, pp. 861-878.

University of California, Berkeley, Bancroft Library: Historic Maps of California – San Francisco Bay Area: http://sunsite.berkeley.edu/histopo/

U.S. Department of Agriculture, Natural Resources Conservation Service, Web Soil Survey; http://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx

U.S. Geological Survey, 1999, Earthquake probabilities in the San Francisco Bay region: 2000 to 2030 – A summary of findings, by Working Group on California Earthquake Probabilities, Open File Report 99-517, Online Version 1.0.

U. S. Geological Survey Earthquake Information Center, 2003, website earthquake.usgs.gov.

U. S. Geological Survey, Earthquake Hazards Program website eqhazmaps.usgs.gov.

2007 Working Group on California Earthquake Probabilities (WGCEP), 2008, The Uniform California Earthquake Rupture Forecast, Version 2 (UCERF 2): U.S. Geological Survey Open-File Report 2007-1437.

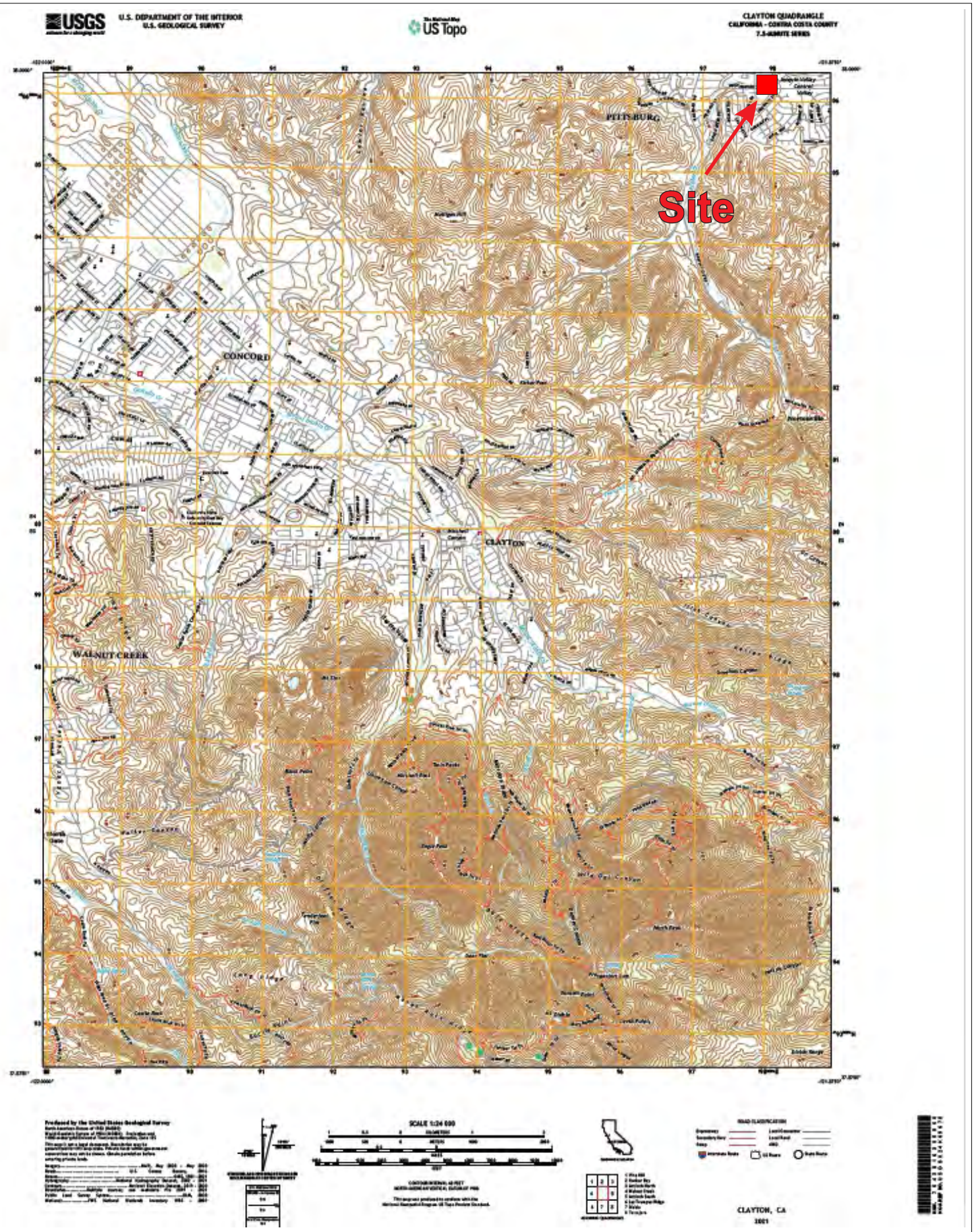
Wagner, D. L., and others, compilers, 1991, Geologic map of the San Francisco – San Jose quadrangle: California Geological Survey, Regional Geologic Map 5A; scale 1:250,000.

Youd, T.L., and Hoose, S.N., 1978, Historic ground failures in northern California triggered by earthquakes: U.S. Geological Survey Professional Paper 993, 177 p., 5 pls. in pocket.

Youd, T.L., Idriss, I.M., Andrus, R.D., Arango, I., Castro, G., Christian, J.T., Dobry, R., Finn, W.D.L., Harder, L.F. Jr., Hynes, M.E., Ishihara, K., Koester, J.P., Liao, S.S.C., Marcuson, W.F. III, Martin, G.R., Mitchell, J.K., Moriwaki, Y., Power, M.S., Robertson, P.K., Seed, R.B., and Stokoe, K.H. II, 2001, Liquefaction Resistance of Soils: Summary Report from the 1996 NCEER and 1998 NCEER/NSF Workshops on Evaluation of Liquefaction Resistance of Soils: ASCE Journal of Geotechnical and Environmental Engineering, Vol. 127, No. 10, October 2001, p. 817-833.

Publications may have been used as general reference and not specifically cited in the report text.

FIGURES

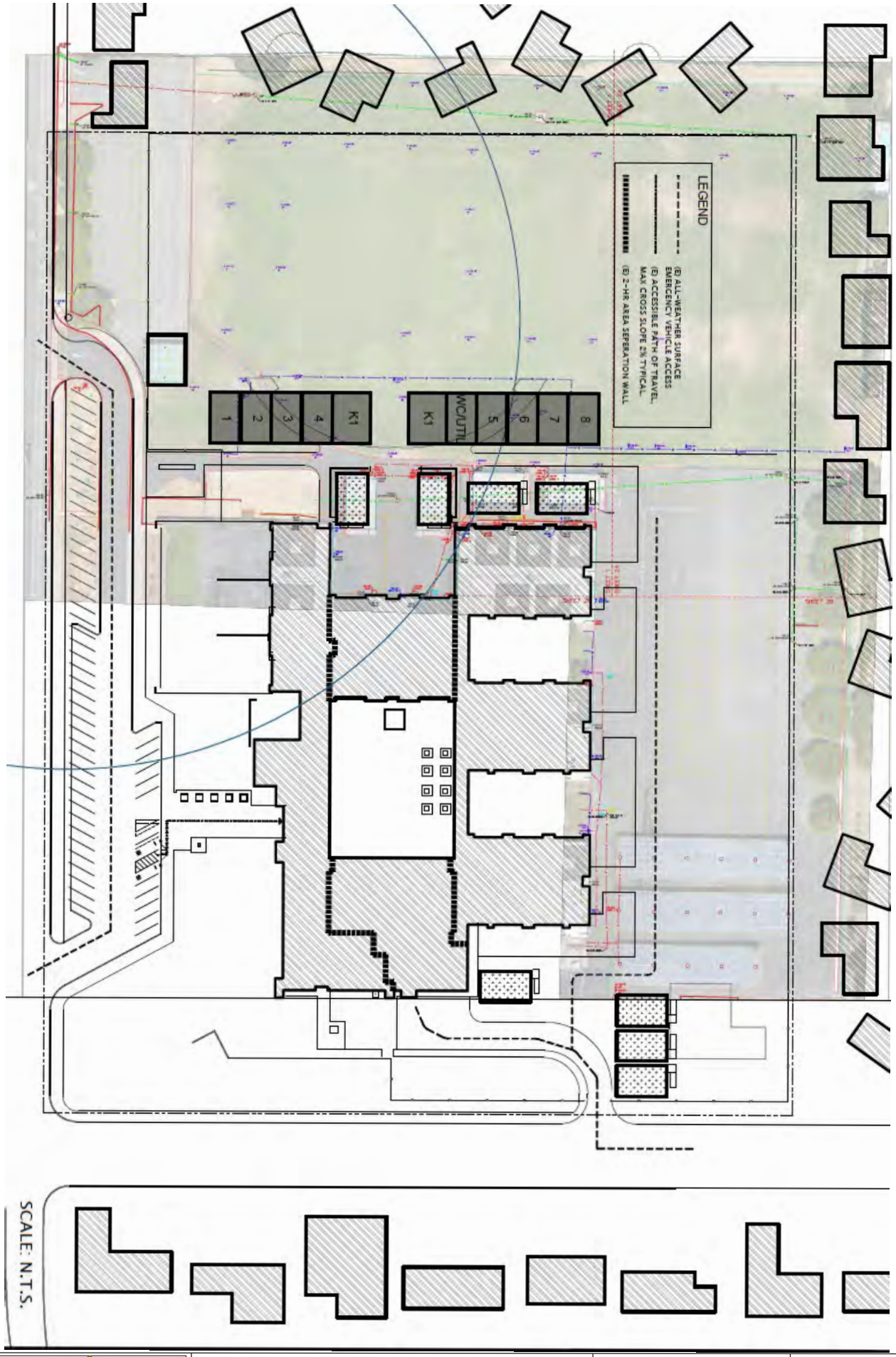


N

GEO-ENGINEERING SOLUTIONS, INC.
A PB COMPANY
Geotechnical Engineering • Engineering Geology • Materials Testing

Highland Elementary School
4141 Harbor Street
Pittsburg, CA

32-1769	**September 2025**
Site Vicinity Map	**Figure 1**

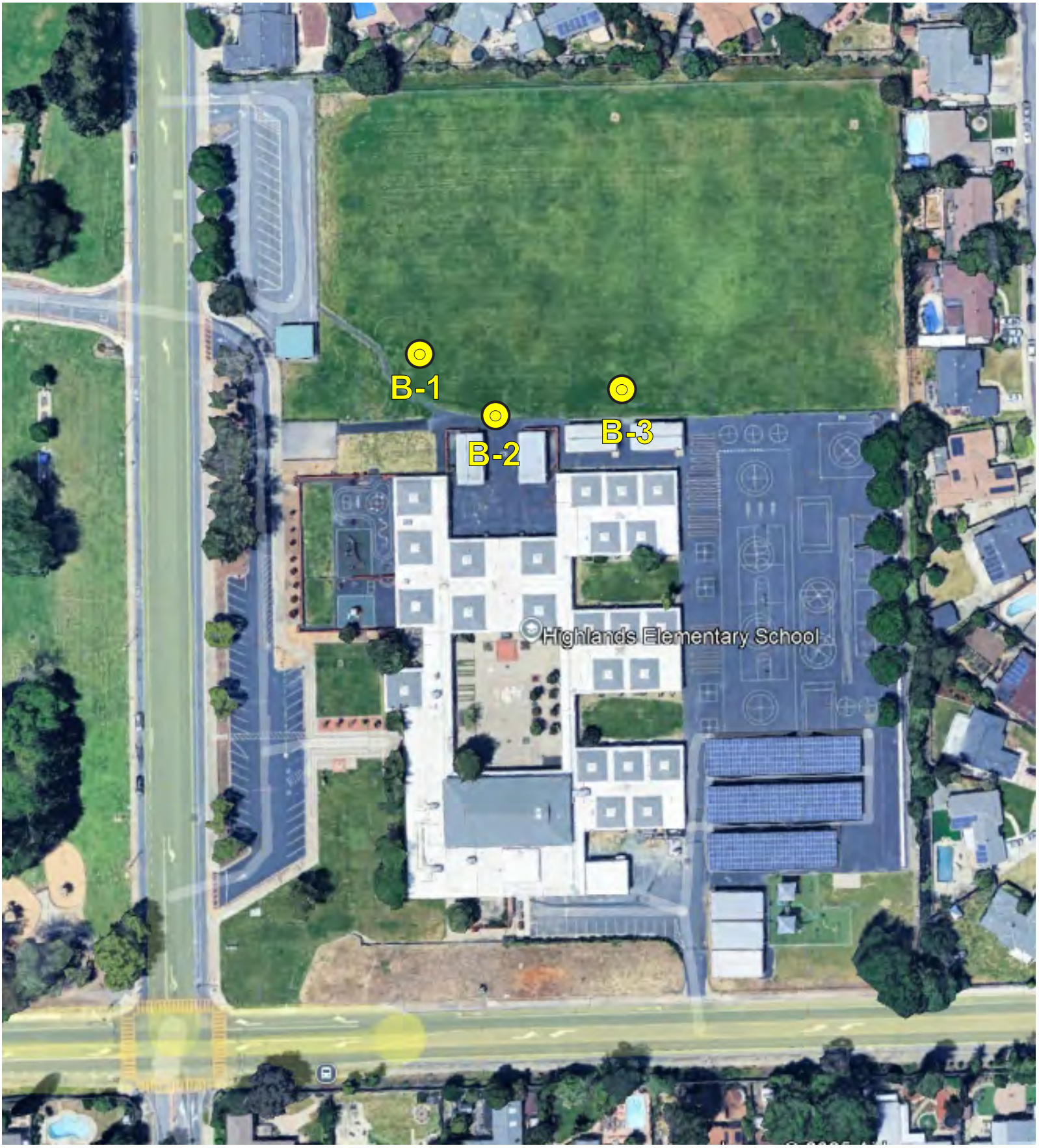


N

GEO-ENGINEERING SOLUTIONS, INC.
A PB COMPANY
Geotechnical Engineering • Engineering Geology • Materials Testing

Highland Elementary School
4141 Harbor Street
Pittsburg, CA

32-1769	**September 2025**
Site Development Plan	**Figure 2**



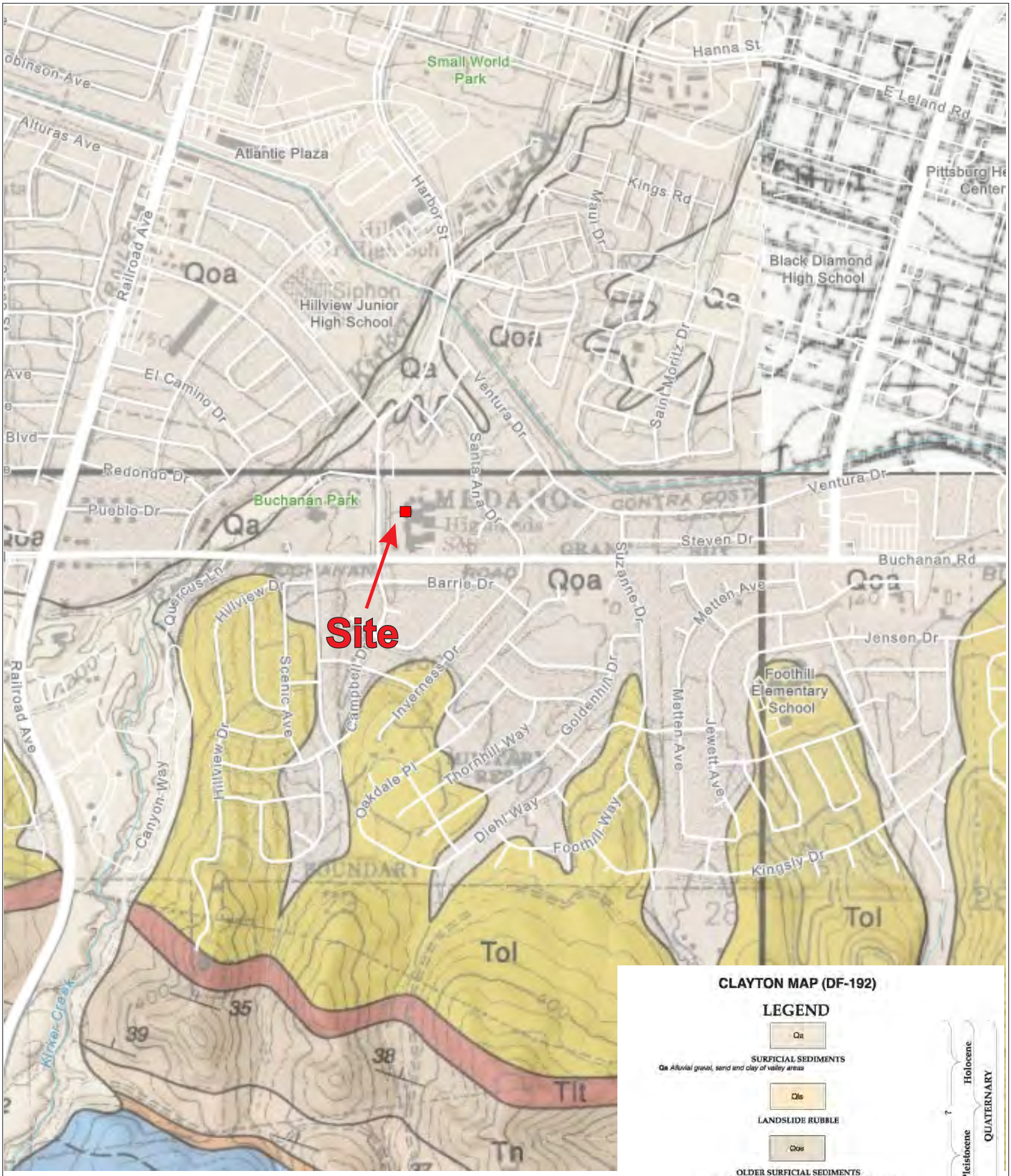
Approximate Boring Location

N

GEO-ENGINEERING SOLUTIONS, INC.
A PB COMPANY
Geotechnical Engineering • Engineering Geology • Materials Testing

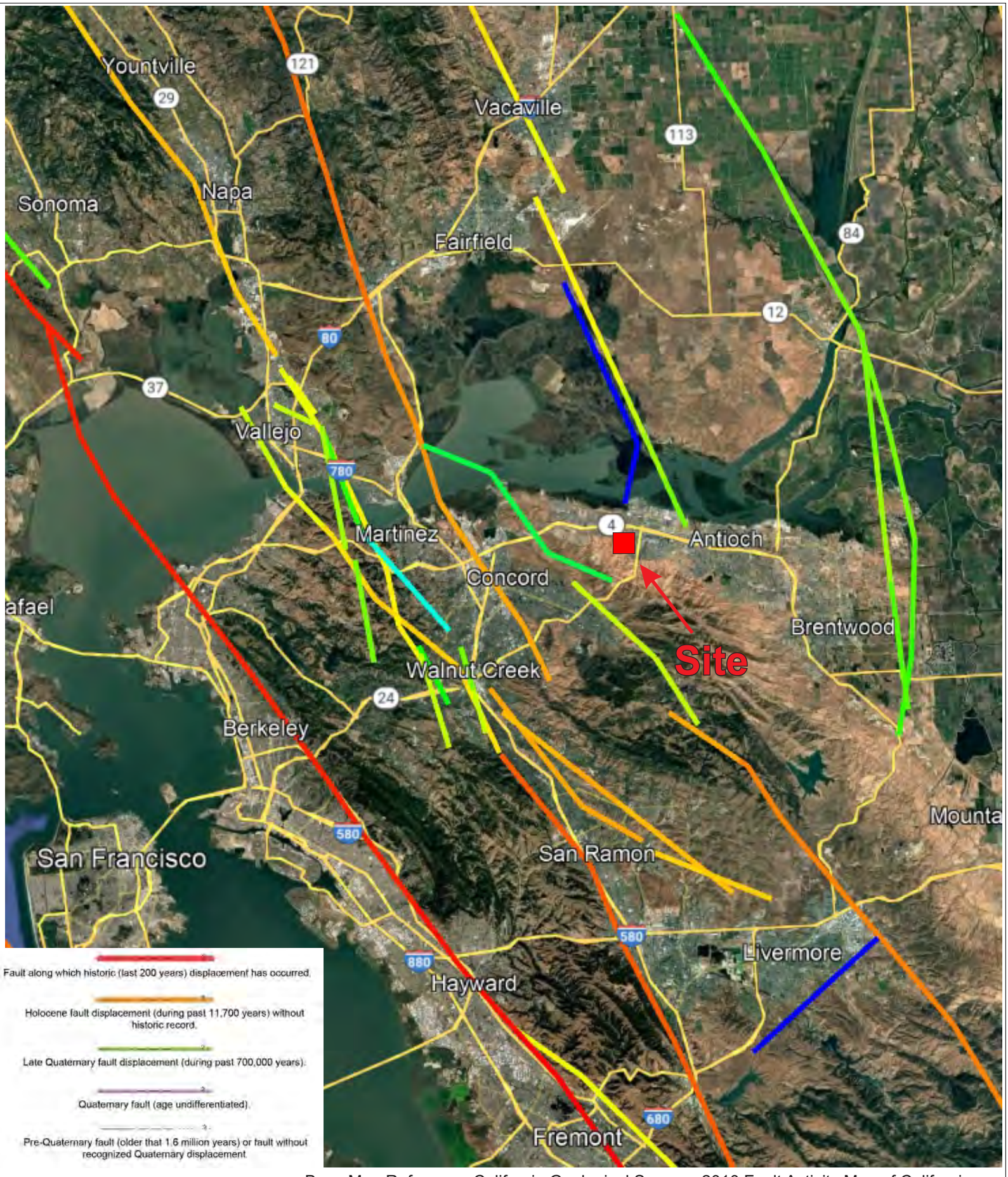
Highland Elementary School
4141 Harbor Street
Pittsburg, CA

32-1769	**September 2025**
Site Map and Boring Locations	**Figure 3**



GEO-ENGINEERING SOLUTIONS, INC.
A PB COMPANY
Geotechnical Engineering • Engineering Geology • Materials Testing

Highland Elementary School **4141 Harbor Street** **Pittsburg, CA**	**32-1769** / **September 2025**
	Site Vicinity Geologic Map / **Figure 4**



Base Map Reference: California Geological Survey - 2010 Fault Activity Map of California

N

GEO-ENGINEERING SOLUTIONS, INC.
A PB COMPANY
Geotechnical Engineering • Engineering Geology • Materials Testing

Highland Elementary School
4141 Harbor Street
Pittsburg, CA

32-1769	**September 2025**
Regional Fault Map	**Figure 5**

Proposed Building Area

A

A’

B-1

B-2

B-3

150’

140’

130’

120’

110’

100’

90’

Approximate Elevation

Sandy CLAY

CLAY

Clayey SAND to Silty Sand

?

?

Sandy CLAY

Note: Elevations approximate (based on Google Earth)

20’

1x Vertical Exaggeration

Horizontal Scale
(approximate)

GEO-ENGINEERING SOLUTIONS, INC.

Highland Elementary School:
4141 Harbor Street
Pittsburg, CA

32-1769

September 2025

Schematic Geologic
Cross Section A-A’

Figure 6

Liquefaction Zones
Areas where historical occurrence of liquefaction, or local geological, geotechnical and ground water conditions indicate a potential for permanent ground displacements such that mitigation as defined in Public Resources Code Section 2693(c) would be required.

Earthquake-Induced Landslide Zones
Areas where previous occurrence of landslide movement, or local topographic, geological, geotechnical and subsurface water conditions indicate a potential for permanent ground displacements such that mitigation as defined in Public Resources Code Section 2693(c) would be required.

Earthquake Fault Zones
Zone boundaries are delineated by straight-line segments; the boundaries define the zone encompassing active faults that constitute a potential hazard to structures from surface faulting or fault creep such that avoidance as described in Public Resources Code Section 2621.5(a) would be required.

Active Fault Traces
Faults considered to have been active during Holocene time and to have potential for surface rupture: Solid Line in Black or Red where Accurately Located; Long Dash in Black or Solid Line in Purple where Approximately Located; Short Dash in Black or Solid Line in Orange where Inferred; Dotted Line in Black or Solid Line in Rose where Concealed; Query (?) indicates additional uncertainty. Evidence of historic offset indicated by year of earthquake-associated event or C for displacement caused by fault creep.

N

GEO-ENGINEERING SOLUTIONS, INC.
A PB COMPANY
Geotechnical Engineering • Engineering Geology • Materials Testing

Highland Elementary School
4141 Harbor Street
Pittsburg, CA

32-1769	**September 2025**
Seismic Hazard and AP Fault Zone Map	**Figure 7**

PIN
- Approximate location based on user input and does not represent an authoritative property location

MAP PANELS
- Selected FloodMap Boundary
- Digital Data Available
- No Digital Data Available
- Unmapped

OTHER AREAS
- NO SCREEN — Area of Minimal Flood Hazard Zone X
- Effective LOMRs
- Area of Undetermined Flood Hazard Zone D
- Otherwise Protected Area
- Coastal Barrier Resource System Area

SPECIAL FLOOD HAZARD AREAS
- Without Base Flood Elevation (BFE) Zone A, V, A99
- With BFE or Depth
- Regulatory Floodway Zone AE, AO, AH, VE, AR

OTHER AREAS OF FLOOD HAZARD
- 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile Zone X
- Future Conditions 1% Annual Chance Flood Hazard Zone X
- Area with Reduced Flood Risk due to Levee. See Notes. Zone X
- Area with Flood Risk due to Levee Zone D

OTHER FEATURES
- 20.2 / 17.5 — Cross Sections with 1% Annual Chance Water Surface Elevation
- Coastal Transect
- Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature

GENERAL STRUCTURES
- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

NATIONAL FLOOD INSURANCE PROGRAM
FLOOD INSURANCE RATE MAP

CONTRA COSTA COUNTY, California

FEMA

N

GEO-ENGINEERING SOLUTIONS, INC.
A PB COMPANY
Geotechnical Engineering • Engineering Geology • Materials Testing

Highland Elementary School
4141 Harbor Street
Pittsburg, CA

32-1769	September 2025
Flood Hazard Map	Figure 8

APPENDIX A

FIELD EXPLORATION
Key to Boring Log Symbols
Boring Logs

Unified Soil Classification (USC) System (from ASTM D 2487)

Major Divisions				Typical Names
Course-Grained Soils More than 50% retained on the 0.075 mm (No. 200) sieve	**Gravels** 50% or more of course fraction retained on the 4.75 mm (No. 4) sieve	Clean Gravels	GW	Well-graded gravels and gravel-sand mixtures, little or no fines
			GP	Poorly graded gravels and gravel-sand mixtures, little or no fines
		Gravels with Fines	GM	Silty gravels, gravel-sand-silt mixtures
			GC	Clayey gravels, gravel-sand-clay mixtures
	Sands 50% or more of course fraction passes the 4.75 (No. 4) sieve	Clean Sands	SW	Well-graded sands and gravelly sands, little or no fines
			SP	Poorly graded sands and gravelly sands, little or no fines
		Sands with Fines	SM	Silty sands, sand-silt mixtures
			SC	Clayey sands, sand-clay mixtures
Fine-Grained Soils More than 50% passes the 0.075 mm (No. 200) sieve	**Silts and Clays** Liquid Limit 50% or less		ML	Inorganic silts, very fine sands, rock four, silty or clayey fine sands
			CL	Inorganic clays of low to medium plasticity, gravelly/sandy/silty/lean clays
			OL	Organic silts and organic silty clays of low plasticity
	Silts and Clays Liquid Limit greater than 50%		MH	Inorganic silts, micaceous or diatomaceous fine sands or silts, elastic silts
			CH	Inorganic clays or high plasticity, fat clays
			OH	Organic clays of medium to high plasticity
Highly Organic Soils			PT	Peat, muck, and other highly organic soils

PENETRATION RESISTANCE (RECORDED AS BLOWS/0.5 FEET)

SAND AND GRAVEL		SILT AND CLAY		
RELATIVE DENSITY	N-VALUE (BLOWS/FOOT)*	CONSISTENCY	N-VALUE (BLOWS/FOOT)*	COMPRESSIVE STRENGTH
Very Loose	0 - 3	Very Soft	0 - 1	0 - 0.25
Loose	4 - 10	Soft	2 - 4	0.25 - 0.50
Medium Dense	11 - 29	Medium Stiff	5 - 7	0.50 - 1.0
Dense	30 - 49	Stiff	8 - 14	1.0 - 2.0
Very Dense	50 +	Very Stiff	15 - 29	2.0 - 4.0
		Hard	30 +	Over 4.0

Particle Sizes		
Components		*Size or Sieve Number*
Boulders		Over 12 inches
Cobbles		3 to 12 inches
Gravels	Coarse	3/4 to 3 inches
	Fine	Number 4 to 3/4 inch
Sand	Coarse	Number 10 to Number 4
	Medium	Number 40 to Number 10
	Fine	Number 200 to Number 40
Fines (Silt and Clay)		Below Number 200

Soil Moisture	
Descriptor	*Description*
Dry	Dry of Standard Proctor Optimum
Damp	Sand Dry
Moist	Near Standard Proctor Optimum
Wet	Wet of Standard Proctor Optimum
Saturated	Free Water in Sample


Bulk Sample


Standard Penetration Test


2.5 Inch Modified California Sampler

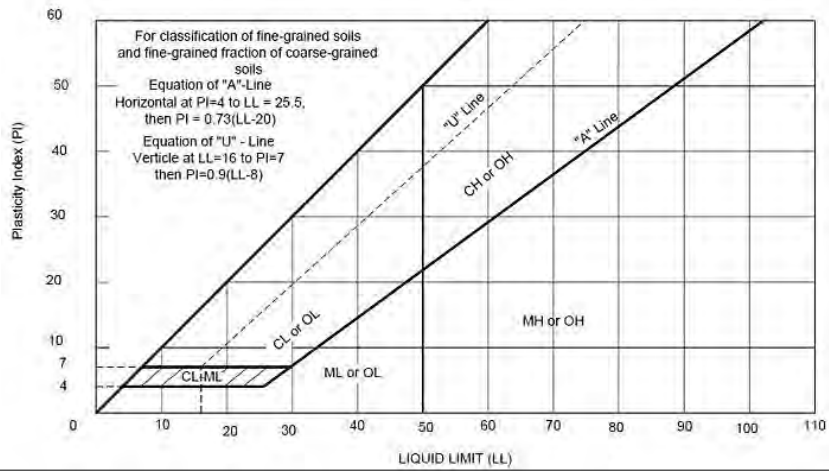

Shelby Tube


First Water Level Reading


Final Water Level Reading

Blow Count
The number of blows of the sampling hammer required to drive the sampler through each of three 6-inch increments. Less than three increments may be reported if more than 50 blows are counted for any increment. The notation 50/5" indicates 50 blows recorded for 5 inches of penetration. Note all of the field blow counts recorded using a Modified California sampler were converted to equivalent SPT blow counts.

N-Value
Number of blows 140 LB hammer falling 30 inches to drive a 2 inch outside diameter (1-3/8 innch I.D.) split barrel sampler the last 12 inches of an 18 inch drive (ASTM-1586 Standard Penetration Test).



General Notes:

1. The boring locations were determined by pacing, sighting and/or measuring from site features. Locations are approximate. Elevations of borings (if included) were determined by interpolation between plan contours or from another source identified in the report. The location and elevation of borings should be considered accurate only to the degree implied by the method.

2.The stratification lines represent the approximate boundary between soil types. The transition may be gradual.

3. Water level readings in the drill holes were recorded at the time and under the conditions stated on the boring logs. It should be noted that flucuations in the level of groundwater may occur due to variations in rainfall, tides and other factors at the time measurements were made

GEO-ENGINEERING SOLUTIONS, INC.
A PEI COMPANY
Geotechnical Engineering • Engineering Geology • Materials Testing

Key to Exploratory Boring Logs

BORING NUMBER B-1

GEO-ENGINEERING SOLUTIONS, INC.

CLIENT Pittsburg Unified School District
PROJECT NAME Highland ES
PROJECT NUMBER 32-1769
PROJECT LOCATION 4141 Harbor St
DATE STARTED 8/14/25 **COMPLETED** 8/14/25
GROUND ELEVATION 764 ft Middletown, CA **HOLE SIZE** 8"
DRILLING CONTRACTOR Baja Drilling
GROUND WATER LEVELS:
DRILLING METHOD Hollow Stem Auger 8"
AT TIME OF DRILLING ---
LOGGED BY JL **CHECKED BY**
AT END OF DRILLING ---
NOTES
AFTER DRILLING ---

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	SPT BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX	FINES CONTENT (%)
0		(CL) **Sandy CLAY** : brown, dry, low plasticity, hard										
5			MC 1-1		10-22-33 (55)							
10		Very stiff	MC 1-2		3-8-18 (26)		110	17	30	11	19	
15			MC 1-3		5-15-28 (43)		101	21				
20		(SC) **Clayey SAND** : brown, dry, fine grains, poorly grade, dense	SPT 1-4		11-13-14 (27)			17				48

(Continued Next Page)

BORING NUMBER B-1

GEO-ENGINEERING SOLUTIONS, INC.

CLIENT Pittsburg Unified School District **PROJECT NAME** Highland ES

PROJECT NUMBER 32-1769 **PROJECT LOCATION** 4141 Harbor St

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	SPT BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX	FINES CONTENT (%)
20		(SC) **Clayey SAND** : brown, dry, fine grains, poorly grade, dense *(continued)*										
			SPT 1-5		5-13-19 (32)			12				44
25												
			SPT 1-6		7-13-19 (32)			18				
30		Bottom of borehole at 30.0 feet.										

GEO-ENGINEERING SOLUTIONS, INC.

BORING NUMBER B-2

CLIENT Pittsburg Unified School District
PROJECT NAME Highland ES
PROJECT NUMBER 32-1769
PROJECT LOCATION 4141 Harbor St
DATE STARTED 8/14/25 **COMPLETED** 8/14/25
GROUND ELEVATION 764 ft Middletown, CA **HOLE SIZE** 8"
DRILLING CONTRACTOR Baja Drilling
GROUND WATER LEVELS:
DRILLING METHOD Hollow Stem Auger 8"
AT TIME OF DRILLING ---
LOGGED BY JL **CHECKED BY**
AT END OF DRILLING ---
NOTES
AFTER DRILLING ---

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	SPT BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX	FINES CONTENT (%)
0		(CL) **CLAY** : brown, moist, high plasticity, very stiff										
5		(CL) **Sandy CLAY** : brown, dry, high plasticity, hard	MC 2-1		4-7-10 (17)		102	21	54	11	43	
10			MC 2-2		5-17-27 (44)		107	19				67
15			MC 2-3		6-14-25 (39)		103	21				
20			SPT 2-4		7-21-20 (41)			19				61

(Continued Next Page)

CLIENT Pittsburg Unified School District **PROJECT NAME** Highland ES

PROJECT NUMBER 32-1769 **PROJECT LOCATION** 4141 Harbor St

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	SPT BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX	FINES CONTENT (%)
20		(CL) **Sandy CLAY** : brown, dry, high plasticity, hard *(continued)*										
		Very stiff	SPT 2-5		13-17-20 (37)			18				52
25												
		(SC) **Clayey SAND** : brown, dry, fine grains, poorly grade, medium dense	SPT 2-6		7-10-13 (23)			15				43
30												
		(SC) **Sandy CLAY** : brown, dry, high plasticity, vert stiff	SPT 2-7		10-19-20 (39)			15				53
35												
			SPT 2-8		6-11-27 (38)			17				
40												

(Continued Next Page)

BORING NUMBER B-2

GEO-ENGINEERING SOLUTIONS, INC.

CLIENT Pittsburg Unified School District **PROJECT NAME** Highland ES

PROJECT NUMBER 32-1769 **PROJECT LOCATION** 4141 Harbor St

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	SPT BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX	FINES CONTENT (%)
		(SC) **Sandy CLAY** : brown, dry, high plasticity, vert stiff *(continued)*										
45			SPT 2-9		7-10-15 (25)			19				
		Moist,stiff										
50			SPT 2-10		7-12-14 (26)			15				

Bottom of borehole at 50.0 feet.

BORING NUMBER B-3

GEO-ENGINEERING SOLUTIONS, INC.

CLIENT Pittsburg Unified School District
PROJECT NAME Highland ES
PROJECT NUMBER 32-1769
PROJECT LOCATION 4141 Harbor St
DATE STARTED 8/14/25 **COMPLETED** 8/14/25
GROUND ELEVATION 764 ft Middletown, CA **HOLE SIZE** 8"
DRILLING CONTRACTOR Baja Drilling
GROUND WATER LEVELS:
DRILLING METHOD Hollow Stem Auger 8"
AT TIME OF DRILLING ---
LOGGED BY JL **CHECKED BY**
AT END OF DRILLING ---
NOTES
AFTER DRILLING ---

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	SPT BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX	FINES CONTENT (%)
0		(CL) **CLAY** : brown, moist, medium plasticity, stiff										
5			MC 3-1		3-4-10 (14)		96	24	45	14	31	
10		(CL) **Sandy CLAY** : brown, dry, high plasticity, hard	MC 3-2		5-16-23 (39)		104	20				62
15		Very stiff	MC 3-3		3-8-18 (26)		109	17				69
20		Hard	MC 3-4		6-13-33 (46)		99	21				75

Bottom of borehole at 20.0 feet.

APPENDIX B

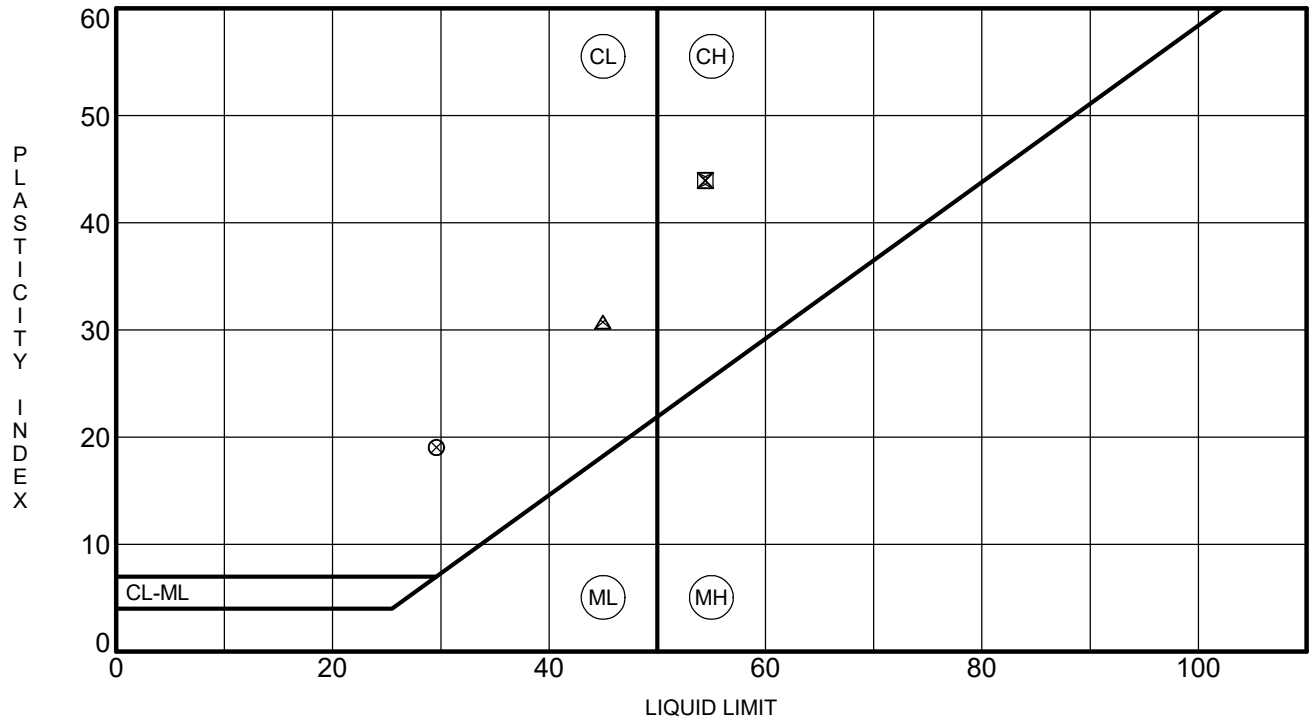
LABORATORY TEST RESULTS
Atterberg Limits Test Report
Grain Size Distribution
Corrosivity Test Results

ATTERBERG LIMITS' RESULTS

GEO-ENGINEERING SOLUTIONS, INC.

CLIENT Pittsburg Unified School District **PROJECT NAME** Highland ES

PROJECT NUMBER 32-1769 **PROJECT LOCATION** 4141 Harbor St



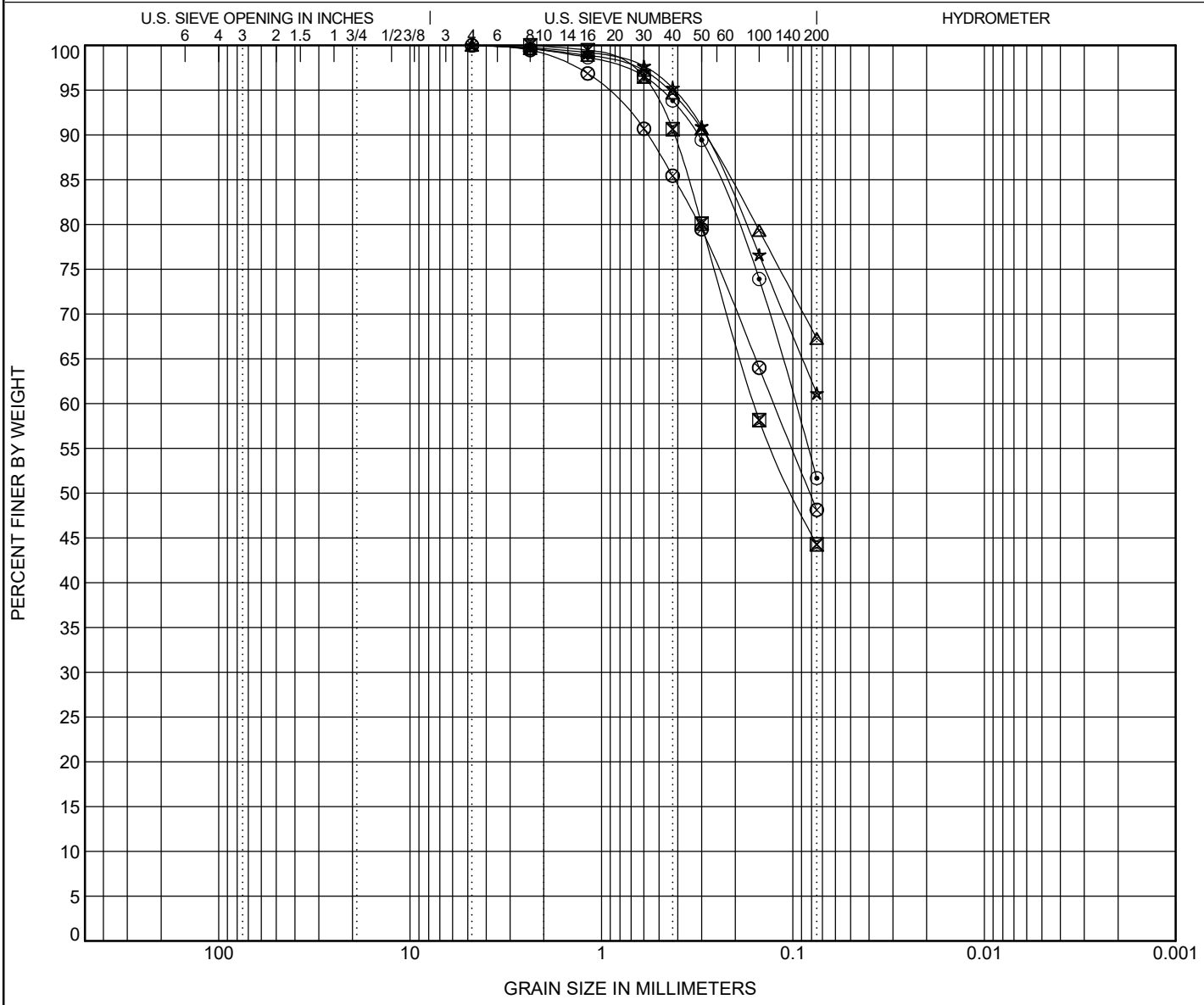
	Specimen Identification		LL	PL	PI	Fines	Classification
⊗	**B-1**	**Depth:8.5'**	**30**	**11**	**19**		
⊠	**B-2**	**Depth:3.5'**	**54**	**11**	**43**		
◬	**B-3**	**Depth:3.5'**	**45**	**14**	**31**		

GRAIN SIZE DISTRIBUTION

GEO-ENGINEERING SOLUTIONS, INC.

CLIENT Pittsburg Unified School District **PROJECT NAME** Highland ES

PROJECT NUMBER 32-1769 **PROJECT LOCATION** 4141 Harbor St



COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

Specimen Identification			Classification	LL	PL	PI	Cc	Cu
⊗	**B-1**	**Depth: 18.5'**						
⊠	**B-1**	**Depth: 23.5'**						
△	**B-2**	**Depth: 8.5'**						
★	**B-2**	**Depth: 18.5'**						
⊙	**B-2**	**Depth: 23.5'**						

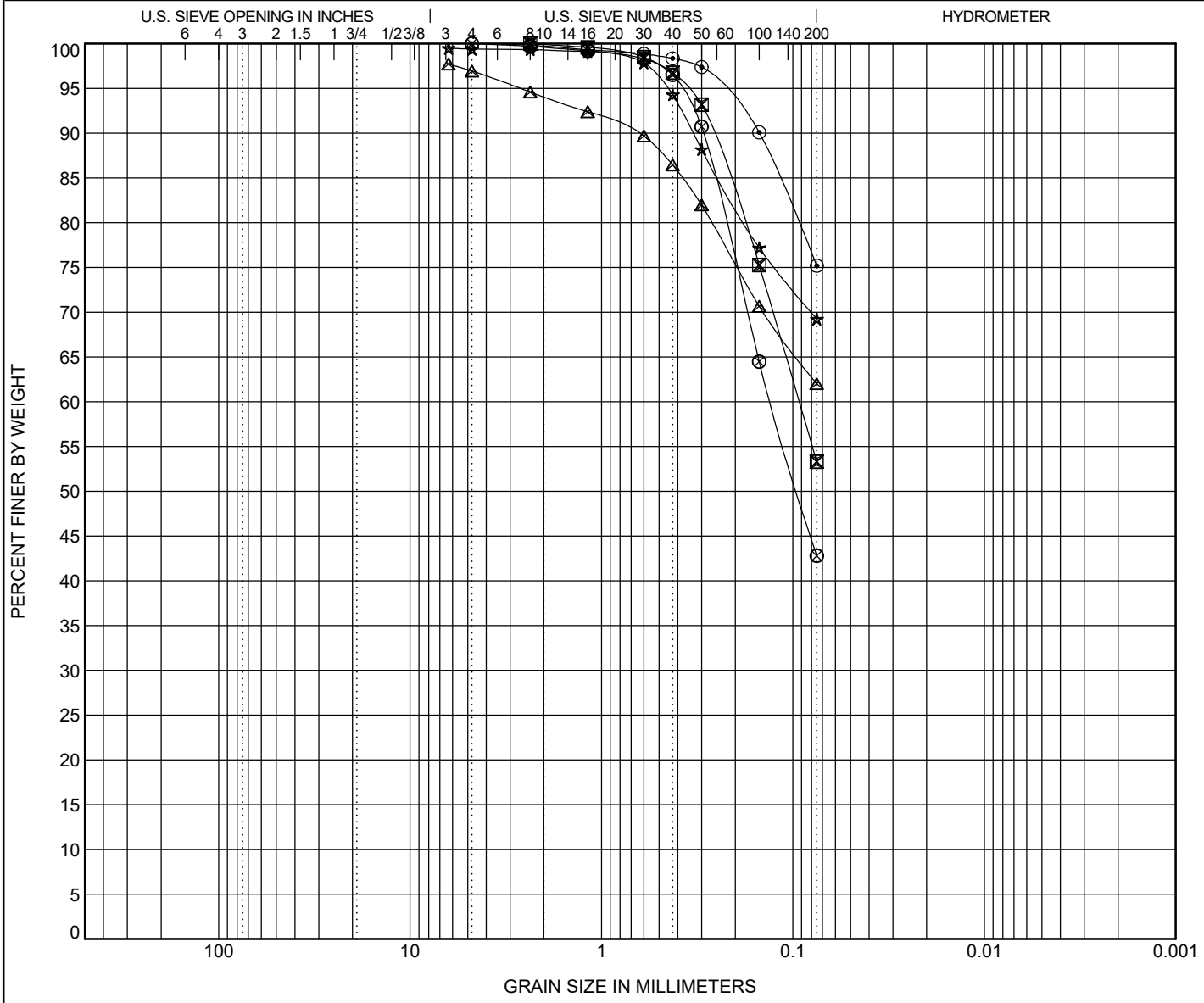
Specimen Identification			D100	D60	D30	D10	%Gravel	%Sand	%Silt	%Clay
⊗	**B-1**	**Depth: 18.5'**	**4.75**	**0.126**			**0.0**	**51.9**	**48.1**	
⊠	**B-1**	**Depth: 23.5'**	**2.36**	**0.159**			**0.0**	**55.7**	**44.3**	
△	**B-2**	**Depth: 8.5'**	**4.75**				**0.0**	**32.7**	**67.3**	
★	**B-2**	**Depth: 18.5'**	**4.75**				**0.0**	**38.8**	**61.2**	
⊙	**B-2**	**Depth: 23.5'**	**4.75**	**0.097**			**0.0**	**48.3**	**51.7**	

GRAIN SIZE DISTRIBUTION

GEO-ENGINEERING SOLUTIONS, INC.

CLIENT Pittsburg Unified School District **PROJECT NAME** Highland ES

PROJECT NUMBER 32-1769 **PROJECT LOCATION** 4141 Harbor St



COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

Specimen Identification			Classification	LL	PL	PI	Cc	Cu
⊗	B-2	Depth: 28.5'						
⊠	B-2	Depth: 33.5'						
◬	B-3	Depth: 8.5'						
★	B-3	Depth: 13.5'						
⊙	B-3	Depth: 18.5'						

Specimen Identification			D100	D60	D30	D10	%Gravel	%Sand	%Silt	%Clay
⊗	B-2	Depth: 28.5'	4.75	0.13			0.0	57.2	42.8	
⊠	B-2	Depth: 33.5'	2.36	0.093			0.0	46.7	53.3	
◬	B-3	Depth: 8.5'	6.3				0.8	34.9	62.0	
★	B-3	Depth: 13.5'	6.3				0.1	30.1	69.2	
⊙	B-3	Depth: 18.5'	4.75				0.0	24.8	75.2	

Geo-Engineering Solutions Inc.

Unconfined Compression Test

Test Methods: ASTM D2166

Project Name	Highland ES	Job Number	32-1769
Tested By	IP	Date	
Soil Type		Sample	B2-4@ 15'

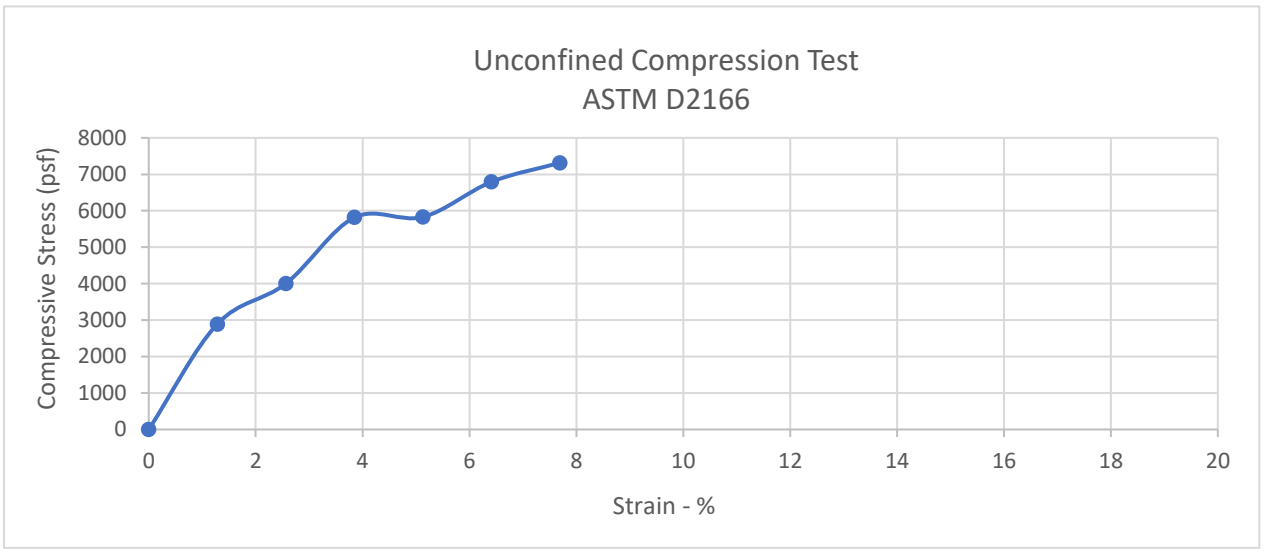
Water Content			Initial Measurments	
Dish ID	C45	**Diameter**	2.40	inch
Mass of Dish (g)	13.58	**Area**	0.03	ft^2
Moist Soil + Dish (g)	251.34	**Height**	4.9	inch
Mass of Dry Soil + Dish (g)	209.78	**Voume**	0.01	ft^3

Elapsed Time (Seconds)	Load Dial (lbs)	Strain Dial (in)	Axial Strain (%)	Corrected Area (ft^2)	Stress (psf)
0	0	4 7/8	0.00	0.03142	0.00
60	92	4 13/16	1.28	0.03182	2890.91
120	129	4 3/4	2.56	0.03224	4000.91
180	190	4 11/16	3.85	0.03267	5815.28
240	193	4 5/8	5.13	0.03311	5828.34
300	228	4 9/16	6.41	0.03357	6792.24
360	249	4 1/2	7.69	0.03403	7316.23
420	259	4 7/16	8.97	0.03451	7504.36
480	280	4 3/8	10.26	0.03501	7998.56
540			100.00	#DIV/0!	#DIV/0!
600			100.00	#DIV/0!	#DIV/0!
660			100.00	#DIV/0!	#DIV/0!
720			100.00	#DIV/0!	#DIV/0!
780			100.00	#DIV/0!	#DIV/0!
840			100.00	#DIV/0!	#DIV/0!
900			100.00	#DIV/0!	#DIV/0!
960			100.00	#DIV/0!	#DIV/0!
1020			100.00	#DIV/0!	#DIV/0!
1080			100.00	#DIV/0!	#DIV/0!
1140			100.00	#DIV/0!	#DIV/0!
1200			100.00	#DIV/0!	#DIV/0!
1260			100.00	#DIV/0!	#DIV/0!
1320			100.00	#DIV/0!	#DIV/0!
1380			100.00	#DIV/0!	#DIV/0!
1440			100.00	#DIV/0!	#DIV/0!
1500			100.00	#DIV/0!	#DIV/0!
1560			100.00	#DIV/0!	#DIV/0!
1620			100.00	#DIV/0!	#DIV/0!

Geo-Engineering Solutions Inc.

Unconfined Compression Test

Test Methods: ASTM D2166



Speciman Failure Photograph	Speciman Test Data		
	Moisture Content:	%	21.2%
	Dry Density:	pcf	92.1
	Diameter:	in.	2.40
	Height:	in.	4.9
	Height/ Diameter Ratio:		2.031
	Calculated Saturation:	%	69%
	Calculated Void Ratio:		0.830184
	Assumed Specific Gravity:		2.7
	Failure Strain:	%	15
	Unconfined Compressive Strength:	(psf)	8533.55
	Undrained Shear Strength	(psf)	4266.78
	Strain Rate:	in/min	0.0625
	Remarks:		

Sample Type:	Mod Cal	Sample:		B2-4@ 15'	
Description:	Sandy Clay	LL:	PL:	PI:	

Moisture Density Data		Water Content	0.212
Number of Rings	1	Total Density (Mg/m^3)	1.788
Mass of Moist Sample + Rings (g)	1113.9	Dry Density (Mg/m^3)	1.475
Specimen Diameter (mm)	62	Total Unit Weight (lbs/ft^3)	111.556
Specimen Height (mm)	152	Dry Unit Weight (lbs/ft^3)	92.056
Total Ring Mass (g)	293.5	Saturation	0.689
Soil Mass (g)	820.4	Void Ratio	0.830
Soil Volume (cm^3)	458.90	Porosity	0.454

CERCO analytical
1100 Willow Pass Court, Suite A
Concord, CA 94520-1006
925 462 2771 Fax. 925 462 2775
www.cercoanalytical.com

Client: Geo-Engineering Solutions
Client's Project No.: 32-1769
Client's Project Name: Highland ES - Pittsburg, CA
Date Sampled: 14-Aug-2025
Date Received: 28-Aug-2025
Matrix: Soil
Authorization: Signed Chain of Custody

Date of Report: 2-Sep-2025

Job/Sample No.	Sample I.D.	Redox (mV)	pH	Resistivity (As Received) (ohms-cm)	Resistivity (100% Saturation) (ohms-cm)	Sulfide (mg/kg)*	Chloride (mg/kg)*	Sulfate (mg/kg)*
2508077-001	B1-1	160	8.66	-	1,100	-	35	27

Method:	ASTM D1498	ASTM D4972	ASTM G187	ASTM G187	ASTM D4658M	ASTM D4327	ASTM D4327
Reporting Limit:	-	-	-	-	50	15	15
Date Analyzed:	29-Aug-2025	29-Aug-2025	-	28-Aug-2025	-	29-Aug-2025	29-Aug-2025

Julia Clauson
Chemist

* Results Reported on "As Received" Basis
N.D. - None Detected (< 15 mg/kg)

Quality Control Summary - **All laboratory quality control parameters were found to be within established limits**

GEO-ENGINEERING SOLUTIONS, INC.
2570 San Ramon Valley Blvd., Suite A102
San Ramon, CA | 925-433-0450

January 23, 2026

Pittsburg Unified School District
3200 Loveridge Road
Pittsburg, CA 94565-5122

Attn: Mr. Keith Holtslander

Subject: **Supplemental Letter to Geotechnical Study**
Highlands Elementary School: Portable Replacement
4141 Harbor Street, Pittsburg, CA
Geo-Eng Project No. 32-1769

Reference:

1) *Geotechnical Engineering Study, Highlands Elementary School: Portable Replacement, Pittsburg, CA, prepared by Geo-Engineering Solutions Inc., dated October 8, 2025, Geo-Eng Project Number 32-1769*

Dear Mr. Holtslander:

In accordance with your request, **Geo-Engineering Solutions, Inc. (Geo-Eng)** is providing this letter as part of the design approval process for the subject project. We previously prepared a design level geotechnical engineering study for the subject project, see reference 1.

It is our understanding that additional recommendations for drilled pier foundations for the proposed shade structure associated with the site improvements are requested.

The foundation for the shade structure may consist of drilled pier foundations, deriving their vertical supporting capacity through skin friction between the side surfaces of the foundations and the adjacent soil and rock. The piers should have a minimum diameter of 24 inches. For design purposes, the allowable skin friction for gravity loads may be assumed to be 400 psf for the portion of pier embedded in native soils, with the upper one foot of the pier to be neglected. This value may be increased by one-third for seismic or transient loads. Uplift loads should be limited to 0.8 times these values.

Lateral resistance for drilled pier foundations may be determined for onsite soils using an allowable passive resistance equal to an equivalent fluid weighing 350 pounds per cubic foot (pcf) acting against the foundation for lateral load resistance against the sides of foundations perpendicular to the direction of loading where the foundation is poured neat against undisturbed material (i.e., native soils, engineered fills or existing fills). For pier foundations, passive pressure can be assumed to act across two times the pier diameter. Geo-Eng personnel should be retained to observe and confirm that soil or bedrock encountered during footing excavations, prior to formwork and reinforcing steel placement, is consistent with the assumptions of this report. If unsuitable soil or bedrock is present, the excavation should be deepened until suitable supporting material is encountered.

We greatly appreciate the opportunity to be of service to you on this project. If you have any questions regarding this letter, please contact Mr. Swenson at eswenson@geo-eng.net.

Respectfully submitted,
GEO-ENGINEERING SOLUTIONS, INC.

Colin Frost, PE
Project Engineer

Eric J. Swenson, GE, CEG
President

February 3, 2026

Pittsburg Unified School District
3200 Loveridge Road
Pittsburg, CA 94565-5122

Attn: Mr. Keith Holtslander

Subject: **Updated Seismic Design Parameters**
Highlands Elementary School: Portable Replacement
4141 Harbor Street, Pittsburg, CA
Geo-Eng Project No. 32-1769

Reference:

1) *Geotechnical Engineering Study, Highlands Elementary School: Portable Replacement, Pittsburg, CA, prepared by Geo-Engineering Solutions Inc., dated October 8, 2025, Geo-Eng Project Number 32-1769*

Dear Mr. Holtslander:

In accordance with the request of the project architect, **Geo-Engineering Solutions, Inc. (Geo-Eng)** is providing this letter as part of the design approval process for the subject project. We previously prepared a design level geotechnical engineering study for the subject project, see reference 1.

It is our understanding that additional recommendations for updated seismic design parameters are required. Our previous report assumed that the project would be processed under older building codes and we understand that the 2025 CBC will be used for this project with code updates effective January 1, 2026.

The subject site is located within a seismically active region and should be designed to account for earthquake ground motions as described in this report. We are assuming the application of the default site classification since we do not have a site-specific shear wave velocity, Vs30, profile of this site.

For seismic analysis of the proposed site in accordance with the seismic provisions of the 2025 California Building Code (CBC), we recommend the following seismic ground motion values be used for design shown in Table 1, which are based on ASCE 7-22 Chapter 11. If a site-specific ground motion hazard analysis is required for this project or if the project is designed under a different building code than CBC 2025, we should be notified so that we may provide the appropriate seismic design parameters. The geographic coordinates utilized for this analysis were Latitude 37.999037 and Longitude -121.886209

Table 1: Seismic Parameters Based on 2025 CBC (per ASCE 7-22)

Item	Value	ASCE 7-22 Table/Figure*
Site Class	DEFAULT	Table 20.2-1
Mapped Spectral Response Accelerations		
Short Period, S_s	2.07	Section 11.4.3
1-second Period, S_1	0.62	Section 11.4.3
MCE (S_{MS})	2.26	Section 11.4.3
MCE (S_{M1})	1.5	Section 11.4.3
Design Spectral Response Acceleration		
Short Period, S_{DS}	1.5	Equation 11.4-1
1-second Period, S_{D1}	1.0	Equation 11.4-2

*U.S. Seismic "Design Maps" Web Application, https://seismicmaps.org/

We greatly appreciate the opportunity to be of service to you on this project. If you have any questions regarding this letter, please contact Mr. Swenson at eswenson@geo-eng.net.

Respectfully submitted,

GEO-ENGINEERING SOLUTIONS, INC.

Colin Frost, PE
Project Engineer

Eric J. Swenson, GE, CEG
President

SEWUP
EDUCATION CONSTRUCTION INSURANCE

www.sewup.org

Statewide Educational Wrap Up Program (SEWUP) JPA

Owner Controlled Insurance Program (OCIP)

Project Insurance Manual

This manual is intended to provide only a general overview of the Owner Controlled Insurance Program and does not in any way alter or take precedence over the language in the actual insurance policies and contracts. It makes no promise to provide insurance to those not enrolled in the Owner Controlled Insurance Program

Program Administrator:
Keenan & Associates
SEWUP Department

Keenan & Associates | CA License No. 0451271 | www.keenan.com

Keenan

XI (v.09-2025)

SEWUP
EDUCATION CONSTRUCTION INSURANCE

Table of Contents

Preface

This Manual

- Identifies responsibilities of the various parties involved in the project
- Provides a basic description of the OCIP coverage and program structure
- Describes audit and administrative procedures
- Provides answers to basic questions about the OCIP
- Provides claim reporting procedures
- Will be updated as necessary

This Manual Does Not

- Provide OCIP coverage interpretations
- Provide complete information about OCIP coverages (Refer to OCIP policies)
- Provide answers to specific claims questions

1.0 Introduction

The Statewide Educational Wrap Up Program JPA (SEWUP), of which this school district is a member, is providing an Owner Controlled Insurance Program (OCIP) for work performed at specific project sites, on behalf of the district, (herein referenced as the "District" or the "Owner"). The OCIP is an insurance program that insures eligible and enrolled subcontractors, for work performed at the Job Site (at times referenced herein as the "Work"). **Keenan & Associates**, hereinafter called "Program Administrator", will administer the OCIP on behalf of the SEWUP JPA.

Certain subcontractors are excluded from this OCIP. These parties are identified in the Contract Documents and Section 3 (Definitions) of this manual.

The Owner / District will pay the insurance premiums for the OCIP coverage described in this manual. You should notify your insurer(s) to endorse your coverage to be excess and contingent over the insurance provided under this OCIP for on-site activities and the related costs. Each bidding prime or general contractor ("Contractor") and subcontractors of every tier ("Subcontractor") is required to exclude from its bid price and requests for payment the cost of insurance coverages that will be provided by the OCIP.

Note
The guidelines in this manual are to be used for informational purposes only. This manual does not constitute a contractual agreement. If conflicts exist between this manual and OCIP Insurance Policies, or this manual and the Contracts between the District, Construction Manager, and Contractor (Enrolled Parties), the OCIP Policies or Owner's Contracts will govern.

1.1 Participation & Contractor Compliance

Participation in the OCIP is mandatory but not automatic. Enrollment eligibility will be determined upon completion of an online enrollment form which will include documentation of trade, scope of work, estimated value, estimated start and completion. All Contractors and Subcontractors of all tiers must register via the OCIP's online portal ("WrapPortal") (www.keenanwrap.com) and adhere to all program requirements, as specified in Section 5.0.

The program Administrator will provide a User Name, Password and URL for website enrollment to each subcontractor upon entry of Subcontractor identifying information into WrapPortal by its Contractor or Parent Subcontractor.

Enrollment of each Contractor's eligible Subcontractors is mandatory. Contractor shall notify Owner and the Program Administrator in writing of the identity of each Subcontractor regardless of enrollment eligibility and shall cause each Subcontractor to notify the Program Administrator in writing of the identity of each of its Sub-subcontractors, prior to such parties' commencement of their portion of the Work and prior to their entry onto the Project. Contractors and subcontractors of all tiers shall not be deemed enrolled until the Program Administrator and OCIP insurers receive and approve a completed Contract Enrollment Form, for each awarded contract. Enrollment is required prior to commencement of on-site activities but no contractor shall be enrolled sooner than 30 days prior to their start date. Each Contractor/Subcontractor shall be solely responsible for any and all losses, damages, claims, liabilities, and suits arising out of such Subcontractor's failure to enroll, or delay in enrolling, any of its Subcontractors.

Enrollment (Definition): Required application and documents to be submitted by Contractors/Subcontractors of all tiers for review by the OCIP Program Administrator for submission to the insurer.

Enrolled Contractor (Definition): All Eligible Contractors/Subcontractors of all tiers are considered Enrolled once required application and documents are received, reviewed, and processed by the OCIP Program Administrator and submitted to the insurer.

1.2 Subcontractor Eligibility

A. Eligible

Includes all Contractors and Subcontractors providing direct labor on the Project and excludes Ineligible contractors as defined below. Temporary labor services and leasing companies are to be treated as Eligible Contractors.

B. Ineligible Contractor (Excluded)

It is not the intent to insure certain entities and scopes of work, including, but not necessarily limited to the following: consultants; suppliers; abatement and/or removal of hazardous materials; vendors; off-site fabricators; materials dealers; surveyors; guard services; non-construction janitorial services; and truckers, including trucking to the Project where delivery is the only scope of work performed; and contractors performing landscape maintenance (though landscape work itself is covered). Ineligible parties are required to ensure that any eligible subcontractors who provide on-site labor comply with the OCIP Enrollment and are provided with a copy of this OCIP Manual. Program Administrator reserves the right to reconsider an ineligible entity's participation in the OCIP should its scope of work or contract change at any time. Ineligible contractors will be required to adhere to insurance certificate requirements as stated in section 4.0, under Contractor-Provided Insurance Coverage. In addition, any party deemed an Ineligible Contractor, but who has direct labor on the Project, will be required to participate in the Project Safety Program (see Section 6.0).

Any questions regarding a Subcontractor's status as "Eligible" or "Ineligible" should be referred by written request to Contractor and Owner and approved by the Program Administrator.

1.3 Project Site and Offsite Premises

Coverages provided by the OCIP are Project Site specific. The Project-Site must be designated by the Owner. The Project Site consists of any and all projects that are endorsed to this policy, which includes the:

1. Ways and means adjoining the endorsed project site.
2. Adjacent locations to the endorsed projects sites where incidental operations are being performed, excluding permanent locations.

With the exception of 1 and 2 mentioned above, off-site locations, labor and operations are not covered by the OCIP. It will be the responsibility of each contractor to maintain off-site insurance, as identified in Section 4.3, which specifies coverage types and minimum limits. Contractor will promptly furnish to the Owner, or their designated representative, Certificates of Insurance evidencing that all required insurance is in force.

2.0 Information Directory

2.1 Program Administrator

Keenan & Associates – SEWUP Department
2355 Crenshaw Blvd., Suite 200
Torrance, CA 90501
Phone: 800.654.8102

Questions Regarding OCIP
Refer questions concerning the OCIP and its administration or coverages to the Program Administrator. Answers to questions may also be found in Section 9.0 - Frequency Asked Questions.

2.2 Insurance Companies

Workers' Compensation	Liberty Mutual Insurance
General Liability	Certain Underwriters at Lloyd's of London
Excess Liability	Certain Underwriters at Lloyd's of London
	Endurance American Specialty Insurance Company
	Crum & Forester Specialty Insurance Company
	Texas Insurance Company
	Fair American Select Insurance Company
	Great American Assurance Company
	Starr Surplus Lines Insurance Company
	Westchester Surplus Lines Insurance Company
	Navigators Specialty Insurance Company
	Fortegra Specialty Insurance Company
Builder's Risk	Illinois Union Insurance Company
Contractor's Pollution Liability	Berkley Assurance Company

See Section 6 For Claims Reporting Instructions and Procedures.

3.0 OCIP Coverages

Description of Owner Controlled Insurance Program (OCIP) Coverages

The OCIP is for the benefit of the Owner and all Enrolled Contractor/Subcontractors who have on-site employees. OCIP coverage applies only to Work performed under the contract at the Project Site specified by the Owner. All Contractors must provide their own insurance for Automobile Liability and off-site locations, labor, and operations. The following coverages are provided by the OCIP:

Workers' Compensation and Employers Liability

Commercial General & Excess Liability

Builder's Risk

Contractor's Pollution Liability

A Certificate of Insurance evidencing workers' compensation & employer's liability, general and excess liability and pollution liability insurance will be issued to each contractor that is enrolled for

coverage in the OCIP ("Enrolled Party") via WrapPortal. Other documentation including forms, posting notices, etc., will be provided to each Enrolled Party.

OCIP Disclaimer
The OCIP is intended to provide broad coverages and high limits, to all Enrolled Contractors/Subcontractors. The Owner does not warrant or represent that the OCIP coverages constitute an insurance program that completely addresses the risks of the Contractors/Subcontractors. Prior to contract award, it is the responsibility of all Contractors/Subcontractors to ensure that the OCIP coverages provided sufficiently address their insurance needs. Upon request, OCIP policies are available for review.

3.1 Workers' Compensation and Employer's Liability Insurance

Workers' Compensation and Employer's Liability Insurance will be provided in accordance with applicable state laws to all Enrolled Contractors/Subcontractors (each as a named insured, and issued an individual policy) reflecting the following Limits of Liability:

Coverage A – Workers' Compensation

Liability imposed by the Workers' Compensation and/or Occupational Disease statute of the State of California or governmental authority having jurisdiction related to the work performed on the Project.

Coverage B – Employers Liability

$1,000,000 Bodily Injury each Accident
$1,000,000 Bodily Injury by Disease – Policy Limit
$1,000,000 Bodily Injury by Disease – Each Employee

Contractor Deductible: None

Exclusions: The known exclusions for this coverage are listed in Section 10.0 – Known Policy Exclusions. This is a summary and may not be exhaustive. The policy language may contain additional exclusionary language, limitations or carve-backs that may not be identified in the list. It is the responsibility of the Contractor/Subcontractor to review the policy for the complete details of all exclusions.

Policy Term: The master policy effective date is October 1, 2025. The policy term is three years, with automatic one-year renewals until the Project is completed. The policy is intended to remain in effect for duration of the contractor's contractual work. Warranty work and post contract repair work are excluded. The policy is intended to remain in effect for the length of the Project or the policy end date, whichever comes first.

3.2 Commercial General Liability & Excess Liability Insurance

All Enrolled Contractors/Subcontractors are considered Named Insureds under SEWUP's Master General & Excess Liability policies. The Master Policies are available for review by Contractors/Subcontractors, upon request to the Owner or the Program Administrator.

Primary Coverage: **Total Limits for Bodily Injury and Property Damage**

$125,000,000 Each Occurrence
$195,000,000 General Liability Aggregate
$125,000,000 Products / Completed Operations Aggregate Limit

- Ten (10) year Products and Completed Operations Extension after project completion with a single non-reinstated aggregate limit.

Policy Forms: **"Occurrence" Form**
Contractor Deductible: **None**

Conditional Warranty:

Subsidence: It is expressly warranted that the Named Insured and all Contractors and Sub-Contractors comply with all recommendations contained in the geotechnical/ environmental reports. Failure to comply will result in subsidence coverage being null and void and a full subsidence exclusion would be re-instated.

EIFS Installation Agreement

The following terms and conditions shall be satisfied in connection with all EIFS work on any Project:

1. EIFS work is to be specifically identified and its value declared.
2. All EIFS work will be monitored by an independent EIFS inspection company to document compliance with manufacturers' handling and installation instructions.
3. EIFS product manufacturers and warranty providers will be identified and provided to the Owner.

Exclusions: This insurance does not provide coverage for products liability of any enrolled party for any product manufactured, assembled or otherwise worked upon away from the Project Site.

The known exclusions for this coverage are listed in Section 10.0 – Known Policy Exclusions. This list is a summary and may not be exhaustive. The policy language may contain additional exclusionary language, limitations or carve-backs that may not be identified in the list. It is the responsibility of the Contractor/Subcontractor to review the policy for the complete details of all exclusions.

Policy Term: The master policy effective date is October 1, 2025. The policy is intended to remain in effect for the length of the Project or through October 1, 2030 at 12:01am, whichever comes first.

3.3 Builder's Risk Insurance

The Builders Risk Master Policy names the Owner as named insured and enrolled Contractors/Subcontractors as additional insureds. This Master policy is available for review by Contractors/Subcontractors, upon request to the Owner or the Program Administrator.

Primary Coverage: Builders Risk coverage will be in place during the course of construction of the Project. Such insurance shall be written on a repair or replacement cost basis, subject to exclusions, sub limits, property limitations and conditions. The policy covers materials, supplies, equipment, fixtures, or machinery, which will become a permanent part of the building or structure at the Project site specified, limited to policy terms, limits, and exclusions.

Deductible: A deductible, which shall be determined by the type of construction, will apply to each occurrence. The deductible schedule is as follows:

New Construction & Renovation

- $5,000 - $50,000 deductible (depending on type of structure) for Wood Frame, Masonry Non-Combustible or Joisted Masonry, and Fire Resistive / Non-Combustible.
- Up to $100,000 deductible for Water Damage to All Construction Classifications.
- Deductibles are subject to increase if a Project's Builder's Risk term is extended 60 days or more

Contractor Deductible: Contractor/Subcontractors shall be responsible for the applicable deductible. The deductible shall apply to each occurrence and must be satisfied prior to payment of the loss. **The deductible shall not be reimbursed by the OCIP Insurance Program or the District.**

Exclusions: The known exclusions for this coverage are listed in Section 10.0 – Known Policy Exclusions. This is a summary and may not be exhaustive. The policy language may contain additional exclusionary language, limitations or carve-backs that may not be identified in the list. It is the responsibility of the Contractor/Subcontractor to review the policy for the complete details of all exclusions.

Policy Term: The policy term is the term of the project.

Note:
All Contractors'/Subcontractors shall be responsible for any loss or damage to their personal property. This would include, but is not limited to, tools, equipment, mobile construction equipment, or materials NOT intended to be a permanent part of the building, whether owned, borrowed, used, leased, or rented by any Contractor/Subcontractor. Any insurance purchased by the Contractors/Subcontractors, or self-insurance, shall be the Contractors'/Subcontractors' sole source of recovery in the event of a loss.

3.4 Contractor's Pollution Liability Insurance

Contractor's Pollution Liability is written under a master liability policy. This Master policy is available for review by Contractors/Subcontractors, upon request to the Owner or the Program Administrator. Certificates of Insurance will be provided to all enrolled Contractors/Subcontractors, as named insured.

Primary Coverage: Bodily Injury or Property Damage from a pollution event as defined within the policy form resulting from covered operations or completed operations.

Limits:	$15,000,000 Per Claim / $25,000,000 Policy Aggregate Defense costs up to $1,000,000 (outside the Limits of Liability)
Self Insured Retention:	$10,000 Each Claim

Contractor/Subcontractor shall be liable, at its expense; to the extent claims payable are attributable to their acts or omissions and/or the acts or omissions of its Subcontractors of any tier or any other entity or person for whom it may be responsible. The deductible amount shall not be reimbursed by the OCIP Insurance Program or the District.

Exclusions: The known exclusions for this coverage are listed in Section 10.0 – Known Policy Exclusions. This is a summary and may not be exhaustive. The policy language may contain additional exclusionary language, limitations or carve-backs that may not be identified in the list. It is the responsibility of the Contractor/Subcontractor to review the policy for the complete details of all exclusions.

Policy Term: The master policy effective date is October 1, 2025. The policy is intended to remain in effect for the length of the Project or through October 1, 2030, at 12:01am, whichever comes first.

3.5 OCIP Certificates

All Enrolled Contractors/Subcontractors will receive their own Workers' Compensation policy. Certificates of Insurance will be furnished for the General Liability, Excess Liability, Contractor's Pollution Liability, and Builder's Risk coverages. These policies are available for review by the Contractor/Subcontractor, upon request to the Owner or the Program Administrator. Such policies or programs may be amended from time to time and the terms of such policies or programs are incorporated herein by reference. Contractors/Subcontractors hereby agree to be bound by the terms of coverage, as contained in such insurance policies and/or self-insurance programs.

4.0 Contractor Required Insurance

For any work under this contract, and until completion and final acceptance of the work by the Owner, the Contractors/Subcontractors shall, at their own expense, promptly furnish required Certificates of Insurance and Additional Insured Endorsements acceptable to the Owner and Program Administrator. Copies should be provided to the Program Administrator via WrapPortal, for both Project Site and Off-Site operations, within ten (10) days after award of the contract to all Contractors/Subcontractors and prior to commencement of on-site activities.

All required insurance shall be maintained, without interruption, from the date of commencement of on-site activities, until the date of the final payment or expiration of any extended period. Certificates and additional insured endorsements shall provide not less than thirty (30) days prior written notice to the Program Administrator, of any material change in the insurance, cancellation or non- renewal.

The OCIP places contractors and subcontractors into one of two main categories: Enrolled Contractors or Ineligible (Excluded) Contractors.

4.1 Verification of Required Insurance Coverages

A. Enrolled Contractor/Subcontractors:

- **Certificates of Insurance** must be provided, evidencing Workers' Compensation & Employer's Liability, and General Liability, Excess/Umbrella Liability insurance for off-site activities, and Automobile Liability insurance for on and off-site activities as per the insurance specifications in the Contract.
- **Additional Insured Endorsements** for Auto Liability. These endorsements must name **the District** specifically as additional insured. If the insured's policy has a 'Blanket' Additional Insured Endorsement and cannot name any entity, provide a copy of the endorsement for our review.

B. Ineligible (Excluded) Contractors/Subcontractors:

- **Certificates of Insurance** must be provided, evidencing Workers' Compensation & Employer's Liability, General Liability, Excess/Umbrella Liability and Automobile Liability insurance for all activities including both on-site and off-site activities as per the insurance specifications in the Contract.
- **Additional Insured Endorsements** for General Liability and Auto Liability. These endorsements must name **the District** specifically as additional insured. If the insured's policy has a 'Blanket' Additional Insured Endorsement and cannot name any entity, provide a copy of the endorsement for our review.
- **Waiver of Subrogation** for Workers Compensation and General Liability in favor of the owner.

4.2 Contractor Maintained Insurance Coverage

***Indicates off-site required coverage / **Indicates off-site & on-site required coverage**

A. Workers' Compensation and Employer's Liability Insurance*

- Enrolled & Ineligible/Excluded Contractors
- Required limits on Certificate of insurance are as follows:

Subcontractors	
Part 1: Workers' Compensation	California Statutory Benefits
Part 2: Employer's Liability	
$1,000,000	Bodily Injury each Accident
$1,000,000	Bodily Injury by Disease – Policy Limit
$1,000,000	Bodily Injury by Disease – Each Employee

- Ineligible/Excluded Subcontractors must also provide **Waiver of Subrogation** for Workers' Compensation in favor of the owner.

B. General Liability Insurance*

- Enrolled & Ineligible/Excluded Subcontractors
- Minimum Required limits of insurance are as follows:

General/Prime Contractor	Subcontractor	
$2,000,000	$1,000,000	Bodily Injury and Property Damage Liability Per Occurrence
$2,000,000	$1,000,000	General Aggregate
$2,000,000	$1,000,000	Products/Completed Operations Aggregate
$2,000,000	$1,000,000	Personal/Adv. Injury Liability Any One Person or Organization

- It is recommended that the Designated Operations Covered by a Consolidated (Wrap-Up) Insurance Program (CG 21 31 05 09) endorsement be added to your primary general liability policy. This will ensure appropriate coverage for any off-site exposures associated with this OCIP project.

C. Automobile Liability Insurance**

- Enrolled & Ineligible/Excluded Subcontractors
- Must cover all vehicles owned by, hired by, or used on behalf of the Contractors/Subcontractors for both Project Site and off-site operations with the following minimum limits of liability:

General/Prime Contractor	Subcontractor	
$2,000,000	$1,000,000	Bodily Injury and Property Damage

D. Professional Liability Insurance**

- Enrolled & Ineligible/Excluded Subcontractors
- If Subcontractor's work requires design and/or design-assist services, or Subcontractor performs professional services of any kind, Subcontractor shall purchase and maintain, at

its sole cost and expense, Professional Liability (Errors and Omissions) insurance for all professional services provided.

- Subcontractor's policy shall include full prior acts coverage sufficient to cover the services under this agreement, with the following minimum limits of liability:
  $2,000,000 per Claim/Annual Aggregate
- Deductible or self-insured retention amount must not be greater than $100,000 per claim, including coverage of contractual liability.
- Coverage must be maintained during the term of the contract and for so long as the insurance is reasonably available as provided herein, for a period of ten (10) years after completion of the services.

E. Environmental and Asbestos Abatement Coverages**

- Ineligible Subcontractors
- If Subcontractor's scope of work involves the removal of asbestos, the removal/replacement of underground tanks, or the removal of toxic chemicals and substances, the Contractor/Subcontractor will be required to provide the following minimum limits of liability, for such exposures subject to requirements and approval of the Owner:

  $2,000,000 per Claim/Aggregate

F. Aircraft or Watercraft Liability Insurance**

- If any Subcontractor requires the use of Aircraft or Watercraft at the Project Site, the Subcontractor shall purchase and maintain or cause the operator of the Aircraft or Watercraft to purchase and maintain, Aircraft or Watercraft liability insurance.
- Must insure passengers and the General Public against personal injury, bodily injury or property damage arising out of the ownership, maintenance, use or entrustment to others.
- Includes Aircraft or Watercraft owned or operated by or rented or loaned to any insured.
- Use includes operation and "loading or unloading". Contractor/Subcontractor will be required to provide the following minimum limits of liability, for such exposures subject to requirements and approval of the Owner:

  $5,000,000 per Claim/Aggregate

  Please note, Drones are considered aircraft and coverage is expressly excluded from the OCIP policies.

4.3 Certificates of Insurance

The Project must be identified on the Certificate of Insurance in the "Description of Operations/Locations/Vehicles/Special Items" section. The Certificates of Insurance should name District, as the Certificate Holder, as specified below:

Certificate Holder:

{Insert District Name}
c/o Statewide Educational Wrap Up Program (SEWUP)
2355 Crenshaw Blvd., Suite 200
Torrance, CA 90501

4.4 Additional Insured Endorsements

The Owner must be specifically named on the Schedule of an Additional Insured Endorsement, under the section titled, "Name of Person or Organization", as specified below:

- **The District, CM, Architect, Inspector, the State of California, their officers, employees, agents, volunteers and independent contractors as additional insureds.**
- All Contractors must provide an additional insured endorsement for automobile liability.
- Ineligible/Excluded Contractors must provide an additional insured endorsement on both the Automobile Liability and General Liability policies and a waiver of subrogation on workers' compensation.

{Insert District Name}
c/o Statewide Educational Wrap Up Program (SEWUP)
2355 Crenshaw Blvd., Suite 200
Torrance, CA 90501

5.0 Contractor Responsibilities / Requirements

Throughout the course of the Project, Subcontractors will be responsible for reporting and maintaining certain records as outlined in this section.

All Subcontractors shall cooperate with, and require their tier Subcontractors to cooperate with, the Owner and the Program Administrator, regarding administration and operation of the OCIP. **Each Subcontractor must include this document with their bid specifications to any and all Subcontractors.**

Responsibilities of Subcontractors:

- Enrolling in the OCIP and assuring all eligible tier subcontractors promptly enroll in the OCIP, via WrapPortal, prior to the start of any work
- Complying with the provisions of the OCIP Manual and cooperating in the administration and operation of the OCIP
- Including OCIP Provisions in all subcontracts, as appropriate
- Identifying and removing from bid the cost of OCIP-provided insurance (by all eligible contractors / subcontractors)
- Providing each Subcontractor with a copy of the OCIP manual
- Providing timely evidence of insurance to the SEWUP Department via WrapPortal
- Notifying the SEWUP Department of all awarded subcontracts via WrapPortal
- Maintaining and reporting monthly payroll records (by all eligible subcontractors) via WrapPortal
- Complying with the OCIP Administrator's requests for information
- Complying with insurance, claim and safety procedures
- Notifying OCIP Administrator immediately of any insurance cancellation or non-renewal of Contractor required insurance
- Complying with the OCIP insurance policy requirements, including but not limited to, physical audit of payroll records by the insurance company or its representatives.

5.1 Contractor Bids & Change Orders - Removing Insurance Costs

The Owner / School District provides insurance for all eligible, Enrolled Contractors/Subcontractors for work performed at the project site(s). The Owner pay's the insurance premiums for the OCIP coverages described in this manual under section 3.0 OCIP Coverages.

A. Contractor Insurance Cost Identification

Contractor's base bid shall exclude all costs for insurance coverages provided under the OCIP. If insurance cost is not removed, the bidder may not qualify as the lowest responsive bidder. The Bidder declares under penalty of perjury under California law, that the base bid excludes any costs relating to any insurance coverages afforded under the OCIP and that each subcontractor to the Bidder has similarly excluded costs for any insurance coverage afforded under the OCIP.

B. Change Order Pricing

All Contractors/Subcontractors declare, under penalty of perjury under California law, that any change order issued to the contract is priced to exclude any costs relating to any insurance coverage afforded under the OCIP.

5.2 Program Compliance

A. Participation in the OCIP is mandatory but not automatic. An Eligible contractor is not enrolled until the Program Administrator receives and approves the following items:

- Completed Contract Enrollment, for each awarded contract, within ten (10) days of Contract Award and prior to commencement of on-site activities. Enrollments can be completed and submitted electronically visiting www.keenanwrap.com
- Certificates of Insurance, evidencing Insurance for Workers' Compensation & General Liability coverages for off-site locations, labor, and operations
- Certificate of Insurance, including an Additional Insured Endorsement, naming the Owner as an Additional Named Insured, for Automobile Liability for both Project Site and Off-Site operations
- Policy Declarations pages, including proof of rates from your current policies

B. All Contractors/Subcontractors of all tiers shall cooperate with, and require their Subcontractors to cooperate with, the Owner and the Program Administrator in regard to the administration and operation of the OCIP.

C. All Contractors/Subcontractors further acknowledge and agree to comply fully and promptly with such safety, loss control, and quality control rules, requirements, and directives as may from time to time be promulgated by Owner, the Program Administrator and/or the OCIP insurers or any of its or their respective consultants, agents, or representatives. Nothing in this document or any other contract document or in the Project Insurance Manual, shall be deemed to render Owner or any of its affiliates of any tier an employer of Contractor/Subcontractor or any of its Subcontractors or any of its or their personnel or employees. **Failure to comply will be considered non-performance under the contract.**

OCIP Enrollment completed through WrapPortal by the following deadline:

- Subcontractors (All Tiers): Within ten (10) days of Contract Award and prior to commencement of On-site activities

All questions regarding enrollment compliance should be directed to the assigned OCIP Administrator.

Any Subcontractor who enrolls in the OCIP after their start date will have to provide a No-Known-Loss Letter to the Program Administrator, along with enrollment documentation.

For any work under this contract, and until completion and final acceptance of the work by the Owner, the Subcontractors shall, at their own expense, promptly furnish Certificates of Insurance to the Program Administrator before commencing work on the Project Site. Automobile Liability Insurance must be maintained for both Project Site and off-site operations.

5.3 Confirmation of Enrollment & Evidence of OCIP Coverages

Upon review of completed enrollment, OCIP Administrator will acknowledge acceptance of the Eligible Subcontractor into the Owner's OCIP, by issuing the following to each Enrolled Party:

- Confirmation Letter
- OCIP Certificates of Insurance
- Claims Kit, including DWC1 and MPN Notices

These documents, as issued by the OCIP Administrator, will clearly identify the effective dates of the OCIP coverages for the Contract. A separate Workers' Compensation policy will be issued and sent to each Enrolled Party.

Should an Enrolled Party perform work on several contracts/projects, an Enrollment Form must be completed for each contract. The OCIP Administrator will issue confirmation letters and certificates of insurance to each Enrolled Party for each separate contract. However, only one individual Workers' Compensation policy (that will apply to all contracts/projects) will be issued to each Enrolled Party.

Note:
Verify that the Workers' Compensation effective date, listed on your OCIP Certificate of Insurance, reflect the same date as your start date.

5.4 Payroll Reporting Compliance

Project Site Monthly Payroll Report Requirements

- Project Site Monthly Payroll must be submitted to the Program Administrator by the 10th of each month via WrapPortal until the completion of the contract and in no event shall be later than the 15th of each month. Payroll shall be reported only for labor performed at the project jobsite.
- Monthly Payroll Reporting is to begin from the enrollment effective date until the completion of the contract or the policy end date.
- Should no work be performed on the Project Site during a given month, each Enrolled Party is required to submit a form stating that "Non-Performance."
- Payroll reporting must summarize the unburdened payroll by Workers' Compensation Class Code. Certified payroll is not a requirement of the OCIP and cannot be accepted.
- If Monthly Payroll Report is not submitted to Program Administrator on a monthly basis, the Construction Manager and/or Owner can withhold payment until the report is received.

- For those Enrolled Parties performing Work under multiple contracts, for each contract, a Monthly Payroll Report is required each month until contract is finalized.
- All reported project site monthly payroll reported from October through the end of September is submitted by Program Administrator to the OCIP Insurance Carrier for auditing.
- Subcontractor shall keep and maintain accurate and classified records of their payroll for operations at the Project Site.
- A carrier audit may be performed using the reported payroll and other supporting documents. Contractor / Subcontractor agrees to cooperate with the OCIP insurance carrier(s) or their third-party auditors by responding to and providing documents as requested in a timely manner.

Workers' Compensation Insurance Rating Bureau Requirements

- **Payroll Reporting for Each Workers' Compensation Policy Issued** – Once an Eligible Contractor/Subcontractor is enrolled into the OCIP, the Program Administrator will issue a separate Workers' Compensation Policy. All Enrolled Subcontractors will need to comply with the rules and regulations of the California Workers Compensation Insurance Rating Bureau (WCIRB). This requires each Enrolled Party to maintain payroll records for each Contract under the policy issued. Such records will allocate the payroll by Workers' Compensation classification(s) and exclude the excess or premium paid for overtime (i.e., only the straight-time rate will apply to overtime hours worked).
- **Insurance Company Payroll Audit** - Each Enrolled Party must properly classify payrolls, as these are reported to the rating bureau for calculation of future Experience Modifiers for the Enrolled Party's firm. All Enrolled Parties shall make available for inspection and copying their respective company books, vouchers, contracts, documents, and records, of any and all types, for physical inspection by the auditors of the OCIP insurance carrier(s) or Owner's representatives. Availability of records must be for a reasonable time during the policy period, any extension, or during a final audit period, as required by the OCIP Insurance Policies.

5.5 Contract Completion / Closeout Compliance

Contractor's Completion Notice

- Contractor's Completion Notice must be submitted to the Program Administrator via WrapPortal, (www.keenanwrap.com) upon completion of contract work at the Project Site, which includes punch list items, but not warranty or service contract work.
- This form evidences all enrolled Contractors'/Subcontractors' actual start and completion dates, per each contract.
- Completion Notice information is reported to OCIP Insurance carrier to confirm coverage and payroll reporting requirements has ended for the contract.

6.0 Safety

It is the responsibility of each Subcontractor to maintain an environment free of recognized hazards. All Subcontractors shall exercise reasonable care to prevent work-related injuries; property and equipment damage at the Project, as well as minimize risk to the public and third-party property.

In the event of an accident, it shall be the responsibility of the employer and/or responsible Subcontractor to see that injured workers or members of the public are provided immediate

medical treatment. All appropriate medical and claim forms must be filed in accordance with the claim procedures developed for this Project by the Program Administrator. This includes notification to the appropriate state authorities, if necessary.

The Program Administrator shall conduct periodic loss control surveys on behalf of the District. These surveys will focus on evaluating the Subcontractors' efforts to minimize loss, assist in identifying loss exposures, and to recommend appropriate corrective measures. The Program Administrator is a resource to supplement the safety and loss prevention activity of Subcontractors. Its loss control survey activities or other activities of the Program Administrator and/or OCIP insurers do not in any way relieve the Contractors/Subcontractors of their responsibilities for Project safety.

6.1 Occupational Safety and Health Compliance

All Contractors/Subcontractors are expected to comply with all applicable local, state, and federal occupational safety and health. If additional safety and health requirements are set forth in the contract specifications, all contractors shall comply with these requirements

In addition, local, state, and federal occupational safety and health laws, the following standards apply to all OCIP Enrolled and Non-Enrolled Contractors/Subcontractors.

6.2 Safety Orientation

a. Subcontractor employees shall be provided with a project specific safety orientation prior the start of the project. At a minimum, the orientation will address the following items:
   i. The District's site safety requirements.
   ii. Site specific safety hazards and protective measures for these hazards.
   iii. Emergency telephone numbers and procedures.
   iv. Local medical clinic/hospital information within the Medical Provider Network (MPN).

6.3 Program Management

a. Each Subcontractors shall have the following safety programs:
   i. Injury and Illness Prevention Plans
   ii. Hazard Communication Programs
   iii. Heat Illness Prevention Plans

b. Each Contractor/Subcontractor shall have an onsite competent person responsible for occupational safety and health. A competent person is one who is capable of identifying existing and predictable hazards in the surroundings or working conditions which are unsanitary, hazardous, or dangerous to employees, and who has authorization to take prompt corrective measures to eliminate them.

6.4 Site Safety

According to industry practices, it is the responsibility of contractors of all tiers to exercise reasonable care to prevent work-related injuries; property and equipment damage at the project site, as well as minimize risk to the third-party persons and property. Subcontractors of all tiers shall be expected to comply with the following safety and loss control requirements:

a. All Subcontractors shall identify their contact person(s) to the General or Prime Contractor.

b. All Contractors/Subcontractors shall follow District procedures for dealing with the media.

c. At all times, hard hats shall be worn in the construction environment. Hard hats shall meet the requirements of ANSI Z89.1. No modification to the shell or suspension is allowed except when such changes are approved by the manufacturer.

d. 100% protective eyewear with side shield protection is required while in the construction environment, shop, or anytime eye hazards exist. Protective eyewear shall bear a legible and permanent "Z87" logo to indicate compliance with applicable ANSI/ASSE Standard.

e. All construction employees shall wear clothing suitable for the weather and work conditions. At a minimum, this shall be short sleeved shirts, long pants, and leather or other protective work shoes or boots.

f. Alcohol is prohibited on District property at all times.

g. Contractors/Subcontractors will be required to respond to all District complaints about objectionable levels of dust or noise and will be required to provide prompt and appropriate abatement.

h. Construction personnel cannot enter District grounds other than the construction site unless accompanied by District personnel and are allowed only "incidental" contact with students. Violations of these requirements by any construction employee will result in a mandatory background check of that employee – including fingerprinting – as required by state law.

i. All prime contractors must attend the site-specific pre-construction meeting.

j. No sexual reference or preference shall be permitted on any piece of clothing or the hardhat. Any employee observed disregarding this policy shall be removed from the job site until further notice.

k. Contractors and subcontractors at all times shall keep premises free from debris such as waste, rubbish, and excess materials and equipment caused by contract work. Contractors and subcontractors shall not leave debris under, in, or about the premises. Upon completion of the contract work, contractors and subcontractors shall clean the interior and exterior of the building or improvement including fixtures, equipment, walls, floors, ceilings, roofs, windowsills and ledges, horizontal projections, and any areas where debris has collected so surfaces are free from foreign material or discoloration. Contractors and subcontractors shall clean and polish all glass, plumbing fixtures, and finish hardware and similar finish surfaces and equipment and contractor shall also remove temporary fencing, barricades, planking and construction toilet and similar temporary facilities from the site. No glass containers are permitted on the site.

l. Theft or willful damage to any property of the District, student, or other contractors will be prosecuted fully.

m. All Contractors/Subcontractors will advise non-English speaking employees in their native language either in a written format or via an interpreter of these policies.

6.5 Mandatory 6 Foot Fall Protection

a. Contractor/Subcontractor employees shall be protected from fall exposures of 6 feet or greater. Activities include but are not limited to:
    i. Steel erection
    ii. Decking
    iii. Roofing
    iv. Framing

v. Work performed from scaffolds
vi. Work performed from ladders

Exceptions: The following exceptions apply only to framers and wood frame activities

i. When installing or "rolling" the joists, Cal/OSHA fall protection requirements shall govern.
ii. When framers are walking/working on securely braced joists, rafters, or roof trusses on center spacing not exceeding 24 inches, and more than 6' from an unprotected side or edge, they shall be considered protected from falls between the joists, rafters, or roof trusses

b. A safety monitor as means of fall protection is prohibited.

c. Ladder jacks, lean-to, and prop-scaffolds are prohibited.

d. Contractor/Subcontractors are required to provide training to their employees who might be exposed to a fall hazard prior to the exposure or upon hiring. This training shall be documented and available for review.

e. Methods of fall protection include but are not limited to the following:

i. Railings
ii. Covers for Floor, Roof, and Wall Openings
iii. Personal Fall Arrest Systems, Personal Fall Restraint Systems, and Positioning Devices
iv. Controlled Access Zones

f. The design and construction of railings shall conform to the Cal/OSHA Construction Safety Orders.

g. The use of wire ropes as top rails and intermediate rails of guardrail systems used for perimeter protection, or at interior openings such as stairways and elevator shafts, shall be installed in accordance with Cal/OSHA requirements. Additionally, wire ropes shall be secured to each support and taut at all times. The maximum deflection of the top rail when a load of 200 pounds is applied in any direction at any point of the top rail shall not exceed 3 inches in one direction which includes the free hanging sag in the wire rope.

h. The minimum parapet height allowed for fall protection is 42 inches or greater.

i. Covers used to cover floor, roof, and wall openings shall be secured in place to prevent accidental removal or displacement and shall be marked in accordance in accordance with Cal/OSHA Construction Safety Orders.

j. Covers used to cover floor and roof openings shall be capable of safely supporting the greater of 400 pounds or twice the weight of the employees, equipment and materials that may be imposed on any one square foot area of the cover at any time.

k. Controlled access zones shall be defined by a control line or other means that restricts access. Each line shall have a minimum breaking strength of 200 pounds. Signs shall be posted to warn unauthorized employees to stay out of the controlled access zone.

l. Control lines shall consist of ropes, wires, tapes, or equivalent materials. Control lines shall be erected and supported in accordance with Cal/OSHA Construction Safety Orders.

m. Scaffold Access/Egress. An internal ladder system with hatches and drop-down ladders or temporary stairs shall be provided for safe access/egress on all scaffolds 20 feet or

greater in height. External straight ladders are prohibited on all scaffolds if it exposes a user to a fall of 20 feet or greater in height.

n. Exception: When adjustable scaffolds are utilized, test platforms shall not exceed 20' vertical intervals.

6.6 Crane Safety

a. In accordance with Title 8, California Code of Regulations, section 5006.1, employers shall only permit operators who have a valid certificate (license) of competency to operate cranes. The operator shall have his license on his person, readily available for review.

b. All cranes used in lifting service, exceeding 3 tons rated capacity, and their accessory gear shall not be used until the employer has ascertained that such equipment has been certificated in accordance with Cal/OSHA as evidenced by current and valid documents. Certificates (annual and quadrennial) attesting to current compliance with testing and examination standards shall be maintained, readily available for each crane.

6.7 Fire Prevention During Welding, Cutting, and Other Hot Work

a. Contractors engaged in welding and allied processes, heat treating, grinding, cutting, thawing pipe, powder-driven fasteners, hot riveting, torch-applied roofing in conjunction with the requirements of NFPA 241, and similar applications producing or using a spark, flame, or heat shall adhere to National Fire Protection Association Standard 51B entitled "Standard for Fire Prevention During Welding, Cutting, and Other Hot Work."

6.8 Incident Investigation Requirements

a. The contractor shall perform thorough, in-depth investigations and evaluations of all incidents. A formal incident investigation shall be conducted whenever any incident occurs, including, without limitation, both non-injury incidents and incidents involving first aid. Additionally, near miss accidents and/or incidents must be reported and undergo the same in-depth investigation, root cause analysis and lessons learned process. The incident investigation report shall be e-mailed to Keenan and Associates within 5 working days.

b. Recommendations and lessons learned to prevent recurrence of incidents shall be documented and communicated to all employees of contractor and subcontractors through safety meetings

6.9 Return to Work

The District and OCIP Carrier are committed to working with all Enrolled Contractors and Subcontractors to promote the successful & timely return to work of injured employees following a work-related injury. The purpose of this policy is to ensure that Enrolled Contractor/Subcontractor employees who temporarily cannot return to their normal duties due to job-related injury or illness but can safely perform transitional duties while recovering is offered appropriate transitional duties for a limited time only.

a. An employee who has experienced a job-related injury requiring medical treatment must provide a proper medical release prior to returning to work.

b. An employee who has been removed from the jobsite ambulatory must provide a proper medical release prior to returning to work.

c. Each Enrolled Contractor/Subcontractor will cooperate with the OCIP Carrier to facilitate the return to work of any injured employee capable of safely performing transitional duties.

d. When the employee is released to transitional duties, it is the Enrolled Contractor/Subcontractor's responsibility to facilitate the injured employee's return to work.

e. The Enrolled Contractor/Subcontractor is fully expected to accommodate the injured employee and facilitate the return to work.

f. It will be the responsibility of the Insurance Carrier to maintain communication with the treating physician and the Enrolled Contractor/Subcontractor to facilitate the prompt return of an employee to full work status.

6.10 Conflicting Safety Requirements:

Contractors and subcontractors shall adhere to all applicable federal, state, local, and contractual safety and health requirements. If there is a conflict between any of these safety and health requirements, the most stringent requirement shall apply.

6.11 Noncompliance and Unsafe Practices

Owner or their representative shall have the authority to immediately cease any and all operation (s) on the jobsite that is deemed by Owner or their representative to be unsafe to property or has the potential to cause Bodily Injury, pursuant to Title VIII California Code of Regulation, Section 1511. Any such cession of work shall not constitute recoverable delay or other contractual remedies for liquidated damages and may expose the offending contractor to any such losses to the District or other trades.

6.12 Professional Conduct Clause

Contractors and subcontractors shall at all times adhere to safety requirements (contractual and regulatory) and shall encourage safe and professional behavior among their employees. Contractor and subcontractors shall not allow on the job site any unfit person, unsafe person, anyone unskilled and unqualified to perform the work assigned to them, or anyone exhibiting such qualities. Any person in the employ of the contractor or subcontractor whom the District or the District's agent/representative may deem incompetent, unsafe, or unfit shall be immediately dismissed from the OCIP job site and shall not again be allowed on the OCIP the job site except with the written consent of District or the District's agent/representative. The District reserves the right to request that the contractor or subcontractor's assigned Project Supervisor/Manager be replaced immediately.

7.0 Claims Reporting

Accident/Claims Reporting Procedures - Overview

This section describes the basic procedures for reporting SEWUP claims: Workers' Compensation, General Liability, Pollution Liability, and Damage to the Project (Builder's Risk).

The OCIP Administrator provides an Accident Claims Reporting Guide to Enrolled Contractors and Subcontractors. The Accident Claims Reporting Guide provides instructions and necessary information for reporting a claim, including policy numbers and site location codes. **This manual includes the required claim forms and postings**. Additional claim forms can be obtained from the OCIP Administrator upon request.

7.1 Workers' Compensation Claim Reporting & Procedures

If the injury requires a doctor (or medical office) visit or involves lost time, please follow the procedures listed below.

Contractors'/Subcontractors' on-site personnel must follow these procedures if any employee is involved in an accident or occurrence resulting in bodily injury or death:

The main responsibility for any Contractor and Subcontractor is first to see that the injured worker receives immediate medical care. Immediately contact 911 for any serious, traumatic, and life-threatening injuries.

If an employee reports a work injury or illness that is minor and does not require a doctor visit or time off from work, the supervisor should refer the employee to the nearest **First Aid Treatment** available at the jobsite.

Call Liberty Mutual Insurance Company at **1-800-362-0000 or email them at** CLclaimsreports@libertymutual.com to report the injury. Access the Workers' Compensation Claim Kit, sent to you by the Program Administrator, which contains forms to be completed by employee and employer, as well as accident reporting guidelines. Have the following items ready when reporting the claim:

- SEWUP **Workers' Compensation Policy Number (Provided at time of enrollment)**
- SEWUP **Site Location Code**

Medical Provider Network (MPN)

Liberty Mutual Insurance, the Statewide Educational Wrap Up Program's insurance carrier, has implemented the following Medical Provider Network (MPN):

Liberty Mutual Insurance MPN

The above MPN is to be utilized for the medical treatment of injured employees, unless the employee has pre-designated their medical provider prior to the date of loss. In emergency situations, it is always recommended that the injured worker be treated at an emergency medical facility first, and then sent to a physician in the Medical Provider Network (MPN).

MPN Regulations & Guidelines:

- California MPN rules and regulations require that the injured worker must receive the Full Written MPN Notification when an injury is reported, or at the time of injury. The English version is given to English speaking employees and the Spanish version is given to Spanish speaking employees. The Full Written MPN Notification must also be given to the injured worker when changing to and transferring open claims to the Gallagher Bassett Platinum MPN.
- The MPN regulations are silent about Employee Acknowledgement Letters. As an employer, you have the right to use acknowledgement letters for your employees to sign when you give your employee the Full Written MPN Notification.
- An MPN Panel Card shall be posted at SEWUP Project Jobsite, Displaying the Name, Address and a Map of Designated Medical Clinic close to the jobsite.
- **For locating participating medical providers** within the Liberty Mutual Insurance MPN, use your Internet Browser to access the below website, which will provide links for locating a medical provider within the network by specialty and by location,

  https://lmi.co/LMnetworks

State Required Workers' Compensation Forms

The Labor Code requires that an employee report any injury immediately to the employer. There are essential requirements for both the employer and employee to after the injury has been reported.

The Labor Code provides for possible penalties to be assessed if the following timelines are not met:

- Provision of the Employee Claim Form, DWC-1; report within one (1) working day of the employer's knowledge of a disability or injury beyond first aid. Each employer is responsible for providing this form to an injured employee. Should the employee not be available for hand delivery, mail the DWC-1 to the employee at their home address.
- Provision of the Employer's Report of Injury, Form 5020; report, within five (5) days of knowledge, every occupational injury or illness which results in lost time beyond the date of the incident or requires medical treatment at a medical facility. In addition, every serious illness/injury or death must be reported immediately by telephone or fax to the nearest office of the California Division of Occupational Safety and Health.

7.2 General Liability Claim Reporting

Contractors/Subcontractor must immediately report all known or suspected First Party, Third Party or Pollution Liability incidents occurring at the Project Site involving bodily injury, death, or any damage to property to the following:

- Keenan & Associates - **1-310-212-0363 x.2116**. Have the following information ready when reporting claim
    - SEWUP **General Liability Policy Number**
    - SEWUP **Site Location Code**
- Program Administrator (SEWUP) – Email: TMyer@Keenan.com & SEWUP@keenan.com, Phone: (800) 654-8102. Notice of Occurrence - Accident/Incident Report may be email or faxed.

Note:
Always take appropriate emergency measures to prevent additional injury or damage, including contacting police and fire authorities as required by law.

7.3 Builder's Risk Claim Reporting

Contractors/Subcontractors must immediately report all property damage to your work or work of any other Contractor/Subcontractor at the Project Site, to the following:

- Keenan & Associates - **1-310-212-0363 x.2116**
- Ace USA Property Claims – Email: Propertyfirstnotices@acegroup.com, Phone: (800) 433-0385
- Program Administrator (SEWUP) – Email: TMyer@Keenan.com & SEWUP@keenan.com, Phone: (800) 654-8102.

Note:
Always take appropriate emergency measures to prevent additional injury or damage, including contacting police and fire authorities as required by law.

7.4 Contractor's Pollution Liability Claim Reporting

Contractors/Subcontractors must immediately report all third-party accidents related to a known or suspected pollution incident at the Project Site involving bodily injury, death, or any damage to property to the following:

- Keenan & Associates - **1-310-212-0363 x.2116**
- Berkley Assurance Company - Electronic Reporting - **BCPclaims@BerkleyCP.com**
- Program Administrator (SEWUP) – Email: TMyer@Keenan.com & SEWUP@keenan.com, Phone: (800) 654-8102.

7.5 Automobile Claim Reporting

NO coverage is provided for automobile use by Contractors/Subcontractors under the OCIP. It is the sole responsibility of each Contractor and Subcontractor to report claims involving their automobiles to their own insurance carrier.

7.6 Instructions and Procedures – Litigation Papers, Legal Documents, etc.

If your firm is served with a lawsuit arising out of your involvement with the Owner's Project, or if receipt of litigation papers or legal documents is your first notice of a claim, forward to the following:

- Program Administrator (SEWUP) – Email: SEWUP@keenan.com, Phone: (800) 654-8102

7.7 Investigation Assistance/Confirmation of Claim Receipt

All Contractors/Subcontractors will assist in the investigation of any accident or occurrence involving injury to persons or property. All Contractors/Subcontractors must cooperate with the companies involved in adjusting any claim by securing and giving evidence and obtaining the participation and attendance of witnesses required for the investigation and defense of any claim or suit.

Upon receipt of the claim or incident from the Contractor, the respective OCIP insurance carrier will send a claims acknowledgment letter with the assigned claims file number. Always cooperate with the Owner or the OCIP insurer representatives in the accident investigation.

8.0 Required Project Forms

- 8.1 First Report of Injury (5020)
- 8.2 Workers' Compensation Claim Form (DWC-1)
- 8.3 Notice of Occurrence - Accident/Incident Report – General Liability, Pollution, Builders Risk

8.1 First Report of Injury (5020)

District Name: _____

Project Name: _____

State of California **EMPLOYER'S REPORT OF OCCUPATIONAL INJURY OR ILLNESS**	PLEASE COMPLETE (TYPE, IF POSSIBLE). MAIL TWO COPIES TO:	**OSHA CASE NO.** ☐ FATALITY

Any person who makes or causes to be made any knowingly false or fraudulent material statement or material representation for the purpose of obtaining or denying workers compensation benefits or payments is guilty of a felony.

NOTICE: California law requires employers to report within five days of knowledge every occupational injury or illness which results in lost time beyond the date of the incident OR requires medical treatment beyond first aid. If an employee subsequently dies as a result of a previously reported injury or illness, the employer must file within five days of knowledge an amended report indicating death. In addition, every serious illness/injury or death must be reported immediately by telephone or telegraph to the nearest office of the California Division of Occupational Safety and Health

EMPLOYER

1. FIRM NAME	1A. POLICY NUMBER	DO NOT USE THIS COLUMN
2. MAILING ADDRESS (Number and Street, City, ZIP)	2A. PHONE NUMBER	Case No.
3. LOCATION, IF DIFFERENT FROM MAILING ADDRESS (Number and Street, City, ZIP)	3A. LOCATION CODE	Ownership
4. NATURE OF BUSINESS, e.g., painting contractor, wholesale grocer, sawmill, hotel, etc	5. STATE UNEMPLOYMENT INSURANCE ACCT NUMBER	Industry
6. TYPE OF EMPLOYER ☐ PRIVATE ☐ STATE ☐ CITY ☐ COUNTY ☐ DIST SCHOOL ☐ GOV – SPECIFY OTHER		Occupation

EMPLOYEE

7. EMPLOYEE NAME	8. SOCIAL SECURITY NUMBER	9. DATE OF BIRTH (mm dd yy)	Sex
10. HOME ADDRESS (Number and Street, City, ZIP)		10A. PHONE NUMBER	Age
11. SEX ☐ MALE ☐ FEMALE	12. OCCUPATION (Regular job title – NO initials, abbreviations or numbers)	13. DATE OF HIRE (mm dd yy)	Daily Hours
14. EMPLOYEE USUALLY WORKS _____ hours per day _____ days per week _____ total wkly hrs	14A. EMPLOYMENT STATUS (check applicable status at time of injury) ___ regular ___ part time ___ temp ___ seasonal	14B. Under what class code of your policy were wages assigned	Days/Week
15. GROSS WAGES/SALARY $_____ PER _____	16. OTHER PAYMENTS NOT REPORTED AS WAGES/Salary (e.g., tips, meals, lodging, overtime, bonuses, etc.)? ☐ YES $_____ PER _____ ☐ NO		Weekly Hours

INJURY OR ILLNESS

17. DATE OF INJURY OR ONSET OF ILLNESS (mm dd yy)	18. TIME INJURY/ILLNESS OCCURRED A.M. P.M.	19. TIME EMPLOYEE BEGAN WORK A.M. P.M.	20. IF EMPLOYEE DIED, DATE OF DEATH (mm dd yy)	Weekly Wage
21. UNABLE TO WORK FOR AT LEAST ONE FULL DAY AFTER DATE OF INJURY ☐ YES ☐ NO	22. DATE LAST WORKED (mm dd yy)	23. DATE RETURNED TO WORK (mm dd yy)	24. IF STILL OFF WORK, CHECK THIS BOX ☐	County
25. PAID FULL WAGES FOR DAY OF INJURY OR LAST DAY WORKED ☐ YES ☐ NO	26. SALARY BEING CONTD? ☐ YES ☐ NO	27. DATE OF EMPLOYER'S KNOWLEDGE NOTICE OF INJURY/ILLNESS (mm dd yy)	28. DATE EMPLOYEE WAS PROVIDED EMPLOYEE CLAIM FORM (mm dd yy)	Nature of Injury
29. SPECIFIC INJURY/ILLNESS AND PART OF BODY AFFECTED, MEDICAL DIAGNOSIS, if available, e.g., second degree burns on right arm, tendonitis of left elbow, lead poisoning				Part of Body
30. LOCATION WHERE EVENT OR EXPOSURE OCCURRED (Number and Street, City)	30A. COUNTY	30B. ON EMPLOYER'S PREMISES ☐ YES ☐ NO		Source
31. DEPARTMENT WHERE EVENT OR EXPOSURE OCCURRED, e.g. shipping department, machine shop.	32. OTHER WORKERS INJURED/ ILL IN THIS EVENT? ☐ YES ☐ NO			Event
33. EQUIPMENT, MATERIALS AND CHEMICALS THE EMPLOYEE WAS USING WHEN EVENT OR EXPOSURE OCCURRED, e.g., acetylene, welding torch, farm tractor, scaffold				Sec. Source
34. SPECIFIC ACTIVITY THE EMPLOYEE WAS PERFORMING WHEN EVENT OR EXPOSURE OCCURRED, e.g., welding seams of metal fence, loading boxes into truck				Extent of Injury
35. HOW INJURY/ILLNESS OCCURRED DESCRIBE SEQUENCE OF EVENTS SPECIFY OBJECT OR EXPOSURE WHICH DIRECTLY PRODUCED THE INJURY/ILLNESS (e.g., worker slipped back to inspect work and slipped on scrap material. As he fell, he brushed against fresh weld and burned right hand). USE SEPARATE SHEET IF NECESSARY				
36. NAME AND ADDRESS OF PHYSICIAN (Number and Street, City, ZIP)		36A. PHONE NUMBER		
37. IF HOSPITALIZED AS AN INPATIENT, NAME AND ADDRESS OF HOSPITAL (Number and Street, City, ZIP)		37A. PHONE NUMBER		

COMPLETED BY (type or print)	SIGNATURE	TITLE	DATE

8.2 Workers' Compensation Claim Form (DWC-1)

Formulario de Reclamo de Compensación para Trabajadores (DWC 1) y Notificación de Posible Elegibilidad

If you are injured or become ill, either physically or mentally, because of your job, including injuries resulting from a workplace crime, you may be entitled to workers' compensation benefits. Attached is the form for filing a workers' compensation claim with your employer. **You should read all of the information below.** Keep this sheet and all other papers for your records. You may be eligible for some or all of the benefits listed depending on the nature of your claim. If required you will be notified by the claims administrator, who is responsible for handling your claim, about your eligibility for benefits.

To file a claim, complete the "Employee" section of the form, keep one copy and give the rest to your employer. Your employer will then complete the "Employer" section, give you a dated copy, keep one copy and send one to the claims administrator. Benefits can't start until the claims administrator knows of the injury, so complete the form as soon as possible.

Medical Care: Your claims administrator will pay all reasonable and necessary medical care for your work injury or illness. Medical benefits may include treatment by a doctor, hospital services, physical therapy, lab tests, x-rays, and medicines. Your claims administrator will pay the costs directly so you should never see a bill. For injuries occurring on or after 1/1/04, there is a limit on some medical services.

The Primary Treating Physician (PTP) is the doctor with the overall responsibility for treatment of your injury or illness. Generally your employer selects the PTP you will see for the first 30 days, however, in specified conditions, you may be treated by your predesignated doctor. If a doctor says you still need treatment after 30 days, you may be able to switch to the doctor of your choice. Special rules apply if your employer offers a Health Care Organization (HCO) or after 1/1/05, has a medical provider network. Contact your employer for more information. If your employer has not put up a poster describing your rights to workers' compensation, you may choose your own doctor immediately.

Within one working day after an employee files a claim form, the employer shall authorize the provision of all treatment, consistent with the applicable treating guidelines, for the alleged injury and shall continue to provide treatment until the date that liability for the claim is accepted or rejected. Until the date the claim is accepted or rejected, liability for medical treatment shall be limited to ten thousand dollars ($10,000).

Disclosure of Medical Records: After you make a claim for workers' compensation benefits, your medical records will not have the same privacy that you usually expect. If you don't agree to voluntarily release medical records, a workers' compensation judge may decide what records will be released. If you request privacy, the judge may "seal" (keep private) certain medical records.

Payment for Temporary Disability (Lost Wages): If you can't work while you are recovering from a job injury or illness, you will receive temporary disability payments. These payments may change or stop when your doctor says you are able to return to work. These benefits are tax-free. Temporary disability payments are two-thirds of your average weekly pay, within minimums and maximums set by state law. Payments are not made for the first three days you are off the job unless you are hospitalized overnight or cannot work for more than 14 days.

Si Ud. se lesiona o se enferma, ya sea física o mentalmente, debido a su trabajo, incluyendo lesiones que resulten de un crimen en el lugar de trabajo, es posible que Ud. tenga derecho a beneficios de compensación para trabajadores. Se adjunta el formulario para presentar un reclamo de compensación para trabajadores con su empleador. **Ud. debe leer toda la información a continuación.** Guarde esta hoja y todos los demás documentos para sus archivos. Es posible que usted reúna los requisitos para todos los beneficios, o parte de éstos, que se enumeran, dependiendo de la índole de su reclamo. Si se requiere, el/la administrador(a) de reclamos, quien es responsable del manejo de su reclamo, le notificará a usted, lo referente a su elegibilidad para beneficios.

Para presentar un reclamo, complete la sección del formulario designada para el "Empleado", guarde una copia, y déle el resto a su empleador. Entonces, su empleador completará la sección designada para el "Empleador", le dará a Ud. una copia fechada, guardará una copia, y enviará una al/a la administrador(a) de reclamos. Los beneficios no pueden comenzar hasta, que el/la administrador(a) de reclamos se entere de la lesión, así que complete el formulario lo antes posible.

Atención Médica: Su administrador(a) de reclamos pagará toda la atención médica razonable y necesaria, para su lesión o enfermedad relacionada con el trabajo. Es posible que los beneficios médicos incluyan el tratamiento por parte de un médico, los servicios de hospital, la terapia física, los análisis de laboratorio y las medicinas. Su administrador(a) de reclamos pagará directamente los costos, de manera que usted nunca verá un cobro. Para lesiones que ocurren en o después de 1/1/04, hay un límite de visitas para ciertos servicios médicos.

El Médico Primario que le Atiende-*Primary Treating Physician PTP* es el médico con toda la responsabilidad para dar el tratamiento para su lesion o enfermedad. Generalmente, su empleador selecciona al *PTP* que Ud. Verá durante los primeros 30 días. Sin embargo, en condiciones específicas, es posible que usted pueda ser tratado por su médico pre-designado. Si el doctor dice que usted aún necesita tratamiento después de 30 días, es possible que Ud. pueda cambiar al médico de su preferencia. Hay reglas especiales que son aplicables cuando su empleador ofrece una Organización del Cuidado Médico (HCO) o depués de 1/1/05 tiene un Sistema de Proveedores de Atención Médica. Hable con su empleador para más información. Si su empleador no ha colocado un poster describiendo sus derechos para la compensación para trabajadores, Ud. puede seleccionar a su propio medico inmediatamente.

El empleador autorizará todo tratamiento médico consistente con las directivas de tratamiento applicables a la lesión o enfermedad, durante el primer día laboral después que el empleado efectúa un reclamo para beneficios de compensación, y continuará proveyendo este tratamiento hasta la fecha en que el reclamo sea aceptado o rechazado. Hasta la fecha en que el reclamo sea aceptado o rechazado, el tratamiento médico será limitado a diez mil dólares ($10,000).

Divulgación de Expedientes Médicos: Después de que Ud. presente un reclamo para beneficios de compensación para los trabajadores, sus expedientes médicos no tendrán la misma privacidad que usted normalmente espera. Si Ud. no está de acuerdo en divulgar voluntariamente los expedientes médicos, un(a) juez de compensación para trabajadores posiblemente decida qué expedientes se revelarán. Si Ud. Solicita privacidad, es posible que el/la juez "selle" (mantenga privados) ciertos expedientes médicos.

Pago por Incapacidad Temporal (Sueldos Perdidos): Si Ud. no puede trabajar, mientras se está recuperando de una lesión o enfermedad relacionada con el trabajo, Ud. recibirá pagos por incapacidad temporal. Es posible que estos pagos cambien o paren, cuando su médico diga que Ud. está en condiciones de regresar a trabajar. Estos beneficios son libres de impuestos. Los pagos por incapacidad temporal son dos tercios de su pago semanal promedio, con cantidades mínimas y máximas establecidas por las leyes estatales. Los pagos no se hacen durante los primeros tres

Return to Work: *To help you to return to work as soon as* pos: you should actively communicate with your treating do claims administrator, and employer about the kinds of work you can do while recovering. They may coordinate efforts to return you to modified duty or other work that is medically appropriate. This modified or other duty may be temporary or may be extended depending on the nature of your injury or illness.

Payment for Permanent Disability: If a doctor says your injury or illness results in a permanent disability, you may receive additional payments. The amount will depend on the type of injury, your age, occupation, and date of injury.

Vocational Rehabilitation (VR): If a doctor says your injury or illness prevents you from returning to the same type of job and your employer doesn't offer modified or alternative work, you may qualify for VR. If you qualify, your claims administrator will pay the costs, up to a maximum set by state law. VR is a benefit for injuries that occurred prior to 2004.

Supplemental Job Displacement Benefit (SJDB): If you do not return to work within 60 days after your temporary disability ends, and your employer does not offer modified or alternative work, you may qualify for a nontransferable voucher payable to a school for retraining and/or skill enhancement. If you qualify, the claims administrator will pay the costs up to the maximum set by state law based on your percentage of permanent disability. SJDB is a benefit for injuries occurring on or after 1/1/04.

Death Benefits: If the injury or illness causes death, payments may be made to relatives or household members who were financially dependent on the deceased worker.

It is illegal for your employer to punish or fire you for having a job injury or illness, for filing a claim, or testifying in another person's workers' compensation case (Labor Code 132a). If proven, you may receive lost wages, job reinstatement, increased benefits, and costs and expenses up to limits set by the state.

You have the right to disagree with decisions affecting your claim. If you have a disagreement, contact your claims administrator first to see if you can resolve it. If you are not receiving benefits, you may be able to get State Disability Insurance (SDI) benefits. Call State Employment Development Department at (800) 480-3287.

You can obtain free information from an information and assistance officer of the State Division of Workers' Compensation, or you can hear recorded information and a list of local offices by calling **(800) 736-7401**. You may also go to the DWC web site at **www.dir.ca.gov**. Link to Workers' Compensation.

You can consult with an attorney. Most attorneys offer one free consultation. If you decide to hire an attorney, his or her fee will be taken out of some of your benefits. For names of workers' compensation attorneys, call the State Bar of California at (415) 538-2120 or go to their web site at **www.californiaspecialist.org**.

ıs en que Ud. no trabaje, a menos que Ud. sea hospitalizado(a) de ıche, o no pueda trabajar durante más de 14 días.

Regreso al Trabajo: Para ayudarle a regresar a trabajar lo antes posible, Ud. debe comunicarse de manera activa con el médico que le atienda, el/la administrador(a) de reclamos y el empleador, con respecto a las clases de trabajo que Ud. puede hacer mientras se recupera. Es posible que ellos coordinen esfuerzos para regresarle a un trabajo modificado, o a otro trabajo, que sea apropiado desde el punto de vista médico. Este trabajo modificado, u otro trabajo, podría extenderse o no temporalmente, dependiendo de la índole de su lesión o enfermedad.

Pago por Incapacidad Permanente: Si el doctor dice que su lesión o enfermedad resulta en una incapacidad permanente, es posible que Ud. reciba pagos adicionales. La cantidad dependerá de la clase de lesión, su edad, su ocupación y la fecha de la lesión.

Rehabilitación Vocacional: Si el doctor dice que su lesión o enfermedad no le permite regresar a la misma clase de trabajo, y su empleador no le ofrece trabajo modificado o alterno, es posible que usted reúna los requisitos para rehabilitación vocacional. Si Ud. reúne los requisitos, su administrador(a) de reclamos pagará los costos, hasta un máximo establecido por las leyes estatales. Este es un beneficio para lesiones que ocurrieron antes de 2004.

Beneficio Suplementario por Desplazamiento de Trabajo: Si Ud. No vuelve al trabajo en un plazo de 60 días después que los pagos por incapcidad temporal terminan, y su empleador no ofrece un trabajo modificado o alterno, es posible que usted reúne los requisitos para recibir un vale no-transferible pagadero a una escuela para recibir un Nuevo entrenamiento y/o mejorar su habilidad. Si Ud. reúne los requisitios, el administrador(a) de reclamos pagará los costos hasta un máximo establecido por las leyes estatales basado en su porcentaje del incapicidad permanente. Este es un beneficio para lesiones que ocurren en o después de 1/1/04.

Beneficios por Muerte: Si la lesión o enfermedad causa la muerte, es posible que los pagos se hagan a los parientes o a las personas que vivan en el hogar, que dependían económicamente del/de la trabajador(a) difunto(a).

Es ilegal que su empleador le castigue o despida, por sufrir una lesión o enfermedad en el trabajo, por presentar un reclamo o por atestiguar en el caso de compensación para trabajadores de otra persona. (El Codigo Laboral sección 132a). Si es probado, puede ser que usted reciba pagos por perdida de sueldos, reposición del trabajo, aumento de beneficios, y gastos hasta un límite establecido por el estado. Ud. tiene derecho a estar en desacuerdo con las decisiones que afecten su reclamo. Si Ud. tiene un desacuerdo, primero comuníquese con su administrador(a) de reclamos, para ver si usted puede resolverlo. Si usted no está recibiendo beneficios, es posible que Ud. pueda obtener beneficios de Seguro Estatal de Incapacidad (SDI). Llame al Departamento Estatal del Desarrollo del Empleo (EDD) al (800) 480-3287.

Ud. puede obtener información gratis, de un oficial de información y asistencia, de la División estatal de Compensación al Trabajador *(Division of Workers' Compensation – DWC)*, o puede escuchar información grabada, así como una lista de oficinas locales, llamando al **(800) 736-7401**. Ud. también puede ir al sitio electrónico en el Internet de la DWC en **www.dir.ca.gov.** Enlácese a la sección de Compensación para Trabajadores.

Ud. puede consultar con un(a) abogado(a). La mayoría de los abogados ofrecen una consulta gratis. Si Ud. decide contratar a un(a) abogado(a), sus honorarios se tomarán de sus beneficios. Para obtener nombres de abogados de compensación para trabajadores, llame a la Asociación Estatal de Abogados de California *(State Bar)* al (415) 538-2120, ó vaya a su sitio electrónico en el Internet en **www.californiaspecialist.org**.

DIVISION OF WORKERS' COMPENSATION

WORKERS COMPENSATION CLAIM FORM (DWC 1)

Employee: Complete the **"Employee"** section and give the form to your employer. Keep a copy and mark it **"Employee's Temporary Receipt"** until you receive the signed and dated copy from your employer. You may call the Division of Workers' Compensation and hear recorded information at **(800) 736-7401**. An explanation of workers' compensation benefits is included as the cover sheet of this form.

You should also have received a pamphlet from your employer describing workers' compensation benefits and the procedures to obtain them.

Any person who makes or causes to be made any knowingly false or fraudulent material statement or material representation for the purpose of obtaining or denying workers' compensation benefits or payments is guilty of a felony.

Estado de California
Departamento de Relaciones Industriales
DIVISION DE COMPENSACIÓN AL TRABAJADOR

PETITION DEL EMPLEADO PARA DE COMPENSACIÓN DEL TRABAJADOR (DWC 1)

Empleado: *Complete la sección* ***"Empleado"*** *y entregue la forma a su empleador. Quédese con la copia designada* ***"Recibo Temporal del Empleado"*** *hasta que Ud. reciba la copia firmada y fechada de su empleador. Ud. puede llamar a la Division de Compensación al Trabajador al* ***(800) 736-7401*** *para oir información gravada. En la hoja cubierta de esta forma esta la explicatión de los beneficios de compensación al trabjador.*

Ud. también debería haber recibido de su empleador un folleto describiendo lo s benficios de compensación al trabajador lesionado y los procedimientos para obtenerlos.

Toda aquella persona que a propósito haga o cause que se produzca cualquier declaración o representación material falsa o fraudulenta con el fin de obtener o negar beneficios o pagos de compensación a trabajadores lesionados es culpable de un crimen mayor "felonia".

Employee—complete this section and see note above. ***Empleado—complete esta sección y note la notación arriba.***

1. Name. *Nombre.* _____ Today's Date. *Fecha de Hoy.* _____
2. Home Address. *Dirección Residencial.* _____
3. City. *Ciudad.* _____ State. *Estado.* _____ Zip. *Código Postal.* _____
4. Date of Injury. *Fecha de la lesión (accidente).* _____ Time of Injury. *Hora en que ocurrió.* _____ a.m. _____ p.m.
5. Address and description of where injury happened. *Dirección/ lugar dónde occurió el accidente.* _____
6. Describe injury and part of body affected. *Describa la lesión y parte del cuerpo afectada.* _____
7. Social Security Number. *Número de Seguro Social del Empleado.* _____
8. Signature of employee. *Firma del empleado.* _____

Employer—complete this section and see note below. ***Empleador—complete esta sección y note la notación abajo.***

9. Name of employer. *Nombre del empleador.* _____
10. Address. *Dirección.* _____
11. Date employer first knew of injury. *Fecha en que el empleador supo por primera vez de la lesión o accidente.* _____
12. Date claim form was provided to employee. *Fecha en que se le entregó al empleado la petición.* _____
13. Date employer received claim form. *Fecha en que el empleado devolvió la petición al empleador.* _____
14. Name and address of insurance carrier or adjusting agency. *Nombre y dirección de la compañía de seguros o agencia adminstradora de seguros.* _____
15. Insurance Policy Number. *El número de la póliza de Seguro.* _____
16. Signature of employer representative. *Firma del representante del empleador.* _____
17. Title. *Título.* _____ 18. Telephone. *Teléfono.* _____

Employer: You are required to date this form and provide copies to your insurer or claims administrator and to the employee, dependent or representative who filed the claim within **one working day** of receipt of the form from the employee.

SIGNING THIS FORM IS NOT AN ADMISSION OF LIABILITY

Empleador: *Se requiere que Ud. feche esta forma y que provéa copias a su compañía de seguros, administrador de reclamos, o dependiente/ representante de reclamos y al empleado que hayan presentado esta petición dentro del plazo de* ***un día hábil*** *desde el momento de haber sido recibida la forma del empleado.*

EL FIRMAR ESTA FORMA NO SIGNIFICA ADMISION DE RESPONSABILIDAD

- ❑ Employer copy / *Copia del Empleador*
- ❑ Employee copy / *Copia del Empleado*
- ❑ Claims Administrator / *Administrador de Reclamos*
- ❑ Temporary Receipt/ / *Recibo del Empleado*

8.3 Notice of Occurrence - Accident/Incident Report – General Liability, Pollution, Builder's Risk

SEWUP

Notice of Occurrence

ACCIDENT / INCIDENT REPORT – GENERAL LIABILITY/POLLUTION/BUILDERS RISK

Keenan & Associates 2355
Crenshaw Blvd. Torrance, CA 90501
www.SEWUP.ORG
License No. 0451271

Date:

Contact:	Project Location Code:	Date of Loss & Time:	☐ AM ☐ PM
Phone:			
Cell:	Carrier:		NAIC Code:
Fax:	Policy No.:		Client ID No.:
Email:			

School District

Name of Insured:		Insureds Mailing Address:	
Contact Name:	Title:		
Primary Phone: ☐ Bus ☐ Cell	Secondary Phone: ☐ Bus ☐ Cell	Primary Email:	Secondary Email:

Contractor

Name of Insured:		Insureds Mailing Address:	
Contact Name:	Title:		
Primary Phone: ☐ Bus ☐ Cell	Secondary Phone: ☐ Bus ☐ Cell	Primary E-mail:	Secondary E-mail:

Occurrence

Location of Occurrence / Address (Describe Location if No Specific Address):	Police or Fire Dept. Contacted?
	Report No.:
Description of Occurrence:	

Property

Premises: Claimant (1) is: ☐ Owner ☐ Tenant ☐ Insured Party		Premises: Claimant (2) is: ☐ Owner ☐ Tenant ☐ Insured Party	
Type of Damage:		Type of Damage:	
Damaged Party (1) Name & Address (If not insured):		Damaged Party (2) Name & Address (If not insured):	
Primary Phone:	☐ Home ☐ Bus. ☐ Cell	Primary Phone:	☐ Home ☐ Bus. ☐ Cell
Secondary Phone:	☐ Home ☐ Bus. ☐ Cell	Secondary Phone:	☐ Home ☐ Bus. ☐ Cell
Primary Email:		Primary Email:	
Secondary Email:		Secondary Email:	
Location of Property for Inspection:		Location of Property for Inspection:	

Injured Party

Damaged Party (1) Name & Address (If not insured):		Damaged Party (2) Name & Address (If not insured):	
Primary Phone:	☐Home ☐Bus ☐Cell	Primary Phone:	☐Home ☐Bus ☐Cell
Secondary Phone:	☐Home ☐Bus ☐Cell	Secondary Phone:	☐Home ☐Bus ☐Cell
Primary E-mail:		Primary E-mail:	
Secondary E-mail:		Secondary E-mail:	
Age: Sex: Occupation:		Age: Sex: Occupation:	
Where Taken:		Where Taken:	
Describe Injury:		Describe Injury:	
What Was Injured Doing:		What Was Injured Doing:	

Witnesses

Damaged Party (1) Name & Address (If not insured):		Damaged Party (2) Name & Address (If not insured):	
Primary Phone:	☐Home ☐Bus ☐Cell	Primary Phone:	☐Home ☐Bus ☐Cell
Secondary Phone:	☐Home ☐Bus ☐Cell	Secondary Phone:	☐Home ☐Bus ☐Cell
Primary E-mail:		Primary E-mail:	
Secondary E-mail:		Secondary E-mail:	

Remarks

Reported By:	Reported To:

9.0 Frequency Asked Questions (FAQs)

General

1. **Who is insured under an Owner Controlled Insurance Program?**

   The Owner and all enrolled Contractors and their enrolled Subcontractors of any tier who perform operations at the Project Site described in the Contract Documents are insured under the OCIP.

2. **Who is managing the Owner Controlled Insurance Program?**

   Keenan & Associates is the Program Administrator for this Owner Controlled Insurance Program, otherwise known as Statewide Educational Wrap Up Program (SEWUP).

3. **Is Project Site Defined?**

   Yes. Project Site is on file with the insurance company, as described in the applicable Contract Documents.

4. **What insurance is provided to Contractors/Subcontractors under the Owner Controlled Insurance Program (OCIP)?**

   The Owner has agreed to procure the following insurance:

   a. Workers' Compensation and Employer's Liability
   b. General Liability Insurance for Personal Injury, Bodily Injury and Property Damage Liability
   c. Builder's Risk
   d. Contractor's Pollution Liability (course of construction only)

5. **Does the OCIP cover any contractor's equipment?**

   No. Contractors and Subcontractors must maintain this coverage.

6. **Are there other types of insurance normally purchased by Contractors, which are not included?**

   Yes. Examples are:

   a. Bonds, if required by contract
   b. Contractor's Automobile Liability and Physical Damage Insurance
   c. Contractor's Equipment Floater

7. Does the Contractor/Subcontractor insured under the OCIP have to provide evidence of insurance?

Yes. The contract requires that, prior to commencement of on-site activities; each Contractor/Subcontractor shall furnish a Certificates of Insurance evidencing coverage for:

a. Workers' Compensation
b. General Liability

Certificates of Insurance and Additional Named Insured Endorsements, specifically naming the Owner, are also required for:

a. Automobile Liability
b. Any other required coverages outlined in the Contract and the Project Insurance Manual.

8. How is the Contractor/Subcontractor's bid to be submitted?

The Contractor/Subcontractor needs to submit their bid excluding certain insurance costs, as outlined in the Contract. Change Orders also need to be submitted without insurance costs.

9. When will the Contractor/Subcontractor receive a Certificate of Insurance insuring them under the OCIP?

Eligible Contractors/Subcontractors awarded a contract will be furnished a Certificate of Insurance upon Program Administrator's review and acceptance of the Contract Enrollment via WrapPortal.

10. Will all Contractors/Subcontractors receive information concerning their loss experience?

This information is available, upon request, from the Program Administrator.

11. How long are the policies kept in-force for the Contractor/Subcontractor?

The policy periods commence on the date of "Award" and terminate as defined in the Contract Documents. The only extension is for General Liability "Completed Operations" which is for ten (10) years after Notice of Completion filed by the District.

12. Does the OCIP provide coverage for truckers, vendors and suppliers?

No. Contractors/Subcontractors, whose sole duties are as truckers, vendors, or suppliers are not included in the program. If contracted with an on-site installer, vendors and/or suppliers should be enrolled in the OCIP for General Liability only, as it pertains to the contractual relationship of the installer's on-site work.

13. Are all Contractors/Subcontractors, of any tier, required to complete their own OCIP enrollment before they will be allowed to begin job site activity?

All Contractors/Subcontractors, regardless of tier, must complete a Contract Enrollment via WrapPortal, prior to commencement of on-site activities. Upon acceptance by the OCIP Administrator, each Contractor/Subcontractor will receive an enrollment confirmation packet, which includes a Certificate of Insurance evidencing the OCIP coverages.

14. What document do I use to show my Agent/Broker and Insurer that I'm covered under the OCIP?

All contractors enrolled under the OCIP program receive individual workers' compensation policies and Certificates of Insurance evidencing coverage under the OCIP program.

Workers' Compensation and Employers' Liability Insurance Questions

1. What insurance company writes the Workers' Compensation and Employer's Liability coverage?

Liberty Mutual Insurance Company.

2. What is the coverage term?

The coverage term for each Contractor/Subcontractor will coincide with the Start Date provided at OCIP enrollment. OCIP Workers' Compensation policies are renewed each year until receipt of OCIP Contractor's Completion Notice.

3. How will the Contractor/Subcontractor's payroll be classified?

Insurance Company will classify payrolls in accordance with California law under the Workers' Compensation Insurance Rating Bureau regulations, classifications, rates and rating plans. The Monthly Project Site Payroll Form will be used for Contractors/Subcontractors' monthly payroll submissions.

4. Will Program Administrator inspect the job and make recommendations regarding loss control and safety?

Yes. The Program Administrator will conduct periodic loss control surveys on behalf of the Owner. These surveys will focus on evaluating the contractors' efforts to control Workers' Compensation, General Liability, and Builders Risk exposures. These surveys are intended to assist contractors in identifying these exposures and take the appropriate actions to minimize the likelihood of loss.

5. Will there be other people who will make job site inspections?

Yes. The insurance company's Risk Engineer may conduct periodic site inspections to verify compliance with State requirements. State, City and Federal inspectors may also make inspections.

General Liability Insurance for Personal Injury, Bodily Injury and Property Damage Liability Questions

1. What insurance company writes the primary coverage for Personal Injury, Bodily Injury, and Property Damage Liability coverage?

Certain Underwriters at Lloyd's of London

2. Is Completed Operations coverage provided beyond acceptance of the work performed under the Contract?

Yes. The extension for General Liability "completed operations" is for ten (10) years after Notice of Completion is filed by the Owner, or date Occupancy is taken.

10.0 Known Policy Exclusions

Workers' Compensation
Bodily Injury Outside US or Canada
Bodily Injury To Any Member of Flying Crew
Bodily Injury To Person Subject To Federal Workers' Compensation
Bodily Injury To Person Subject To Occupational Disease Laws
Contractual Liability
Employees Knowingly Employed Illegally
Employment Related Practices
Intentional or Aggravated Bodily Injury
Obligations Imposed By Disability Benefits or Any Similar Law
Obligations Imposed By Occupational Disease Laws
Obligations Imposed By Unemployment Compensation Laws
Obligations Imposed By Workers' Compensation Laws
State or Federal Law Violation Fines, Penalties

General Liability
Aircraft, Auto or Watercraft
Asbestos
Medical Payments Coverage
Certain Exclusions to Personal and Advertising Injury Liability
Certified Acts of Terrorism
Communicable Disease
Contractual Liability (Limited Coverage Provided)
Cross Suits – Limited
Cyber and Data
Employers Liability
Employment Related Practices
Expected or Intended Injury
Fungi Or Bacteria
Lead
Certain exclusions for transportation or use of
Mobile Equipment
Nuclear
Personal and Advertising Bodily Injury
Pollution and Hazardous Materials
Prior Continuous, or Progressively Deteriorating Injury or Damage
Professional Liability
Property Damage to the Project During the Course of Construction
Punitive Damages
Residential and Condominium Conversion
Recall of Products, Work Or Impaired Property

Silica or Silica Mixed Dust
Subsidence - Conditional Warranty – So long as Contractor/Subcontractors follows specifications of geotechnical/environmental reports then the exclusion will be waived; if not, exclusion will be fully implemented
Violation of Statutes Governing Collecting, Transmitting Information
Violation of Statutes Governing Email, Fax, Phone Calls
War
Workers Compensation and Similar Laws

Builder's Risk
Asbestos
Certain Offsite Property
Certain Release, Discharge, Escape, or Dispersal of Contaminants or Pollutants
Certified Acts of Terrorism (Optional Coverage)
Cessation of Work
Consequential Loss (except as provided in Delay in Opening Coverage)
Communicable Disease
Contractor's Tools, Machinery, Plans, Equipment
Cost of Making Good (Optional Coverage)
Damage to Existing Property (Optional Coverage)
Damage While Testing Prototype or Used Machinery/Equipment
Damages, Fines, Penalties at Government Agency or Court Order
Disappearance or When Revealed by Inventory Shortage Alone
Earth Movement (Optional Coverage)
Electrical, Magnetic, or Errors Related to Electronic Records
Financial Accounts, Instruments, Stamps, Deeds, Precious Material
Flood (Optional Coverage) (rain and the accumulation of rainwater included in Flood definition)
Foreign Terrorism
Infidelity, Dishonesty, Fraudulent Activity of Insured
Land, Values of Land, Cut, & Fill etc. Prior to Project Commencement
Loss Under Any Manufacturer or Supplier Guarantee/Warranty
Normal Subsidence
Nuclear
Offshore or Barrier Island Property
Property That Stores, Processes, or Handles Radioactive Materials
Rolling Stock, Aircraft, Watercraft
Software Loss, unless results from an Open Peril
Standing Timber, Growing Crops, Animals
Vehicles or Equipment Licensed For Highway Use
War and Military Action

Contractors Pollution Liability
Auto, Aircraft, Vessel Or Rolling Stock
Claims Between Certain Insureds
Contractual Liability

Damage To Property
Fines, Penalties, and Treble Damages
Employment Related Practices
Owned Hazardous Materials Facility
Nuclear
Other Entities
Pre-Existing Conditions
Products
Terrorism
War
Workers Compensation and Similar Laws