

EL MONTE HIGH SCHOOL

EL MONTE HIGH SCHOOL - EXTERIOR SHELTER

3048 TYLER AVENUE, EL MONTE, CA

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 03-123272 INC:
REVIEWED FOR:
SS FLS ACS
DATE: 06/02/2023

CSDA DESIGN GROUP

LISTEN COLLABORATE CREATE

610 E. FRANKLIN AVE
EL SEGUNDO, CA 90245
T: 415.689.9800
www.csdadesigngroup.com



DSA FILE NO.: 19-H10

PTN. : 64519-118

DSA APPLICATION NO.: 03-123272

SCOPE OF WORK

PROVIDE (4) 30' X 30' SHADE STRUCTURES FOR OUTDOOR LEARNING SPACES.

PROJECT DIRECTORY

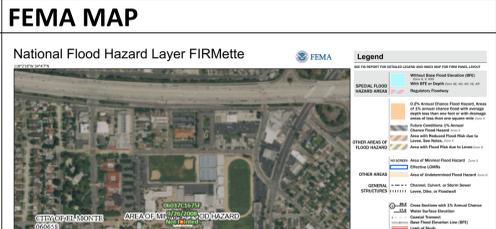
OWNER
EL MONTE HIGH SCHOOL
3048 TYLER AVE, EL MONTE, CA 91731
[T]: 626.444.9201
EDDIE CUEVAS, PRINCIPAL

EL MONTE UNIFIED HIGH SCHOOL DISTRICT
3537 JOHNSON AVENUE, EL MONTE, CA 91731
[T]: 626.444.9005
NORMA MACIAS, OWNER'S AUTHORIZED REPRESENTATIVE

SHEET INDEX

GENERAL	
G-001	COVER SHEET - INDEX, SCOPE OF WORK & VICINITY MAP
G-002	GENERAL NOTES, ABBREVIATIONS & SYMBOL LEGEND
G-101	FIRE LIFE SAFETY SITE PLAN

ARCHITECTURAL	
A-101	OVERALL SITE PLAN
A-102	EXTERIOR SHADE PLAN



CODE ANALYSIS - SHADE STRUCTURE

SHADE STRUCTURE CODE ANALYSIS					
BUILDING	OCCUPANCY	CONSTRUCTION TYPE	AREA (SQ. FT.)	OCCUPANT LOAD FACTOR	OCCUPANT LOAD
SHADE STRUCTURE	A-3	V-B	3,600	15	240

NOTICE:
FABRIC TOP NEEDS TO BE REMOVED IF SNOW EXCEEDING 5 PSF IS ANTICIPATED
FABRIC TOP NEEDS TO BE REMOVED IF WINDS EXCEEDING 115 MPH ARE ANTICIPATED, SEE NOTE 1 OF DESIGN LOADS

ARCHITECT
CSDA DESIGN GROUP
610 E. FRANKLIN AVENUE
EL SEGUNDO, CA, 90245
[T] 415.321.1104
CHRISTOPHER WARD, ASSOC. PRINCIPAL

PRE-APPROVED USA SHADE DRAWINGS

P.C. T-1.0	P.C. TITLE SHEET
P.C. T-2.0	P.C. DOCUMENT
15.2-2000	USA SHADE 30' X 30' TENSION SAILS DSA4183030-19 REACTIONS
15.1-1000	USA SHADE 30' X 30' TENSION SAILS DSA4183030-19 PRODUCT INFORMATION

SHEET COUNT : 09

STRUCTURAL CODE ANALYSIS

STRUCTURAL DESIGN CRITERIA:

CODES:
ALL WORK SHALL BE IN CONFORMANCE WITH THE CALIFORNIA BUILDING CODE (CBC) 2019 EDITION, INCLUDING ALL AMENDMENTS. ALL STANDARDS USED SHALL BE THE LATEST VERSION APPROVED BY THE CODE ENFORCEMENT AGENCY ON THE DATE OF THE PERMIT ISSUANCE UNLESS SPECIFICALLY NOTED OTHERWISE.

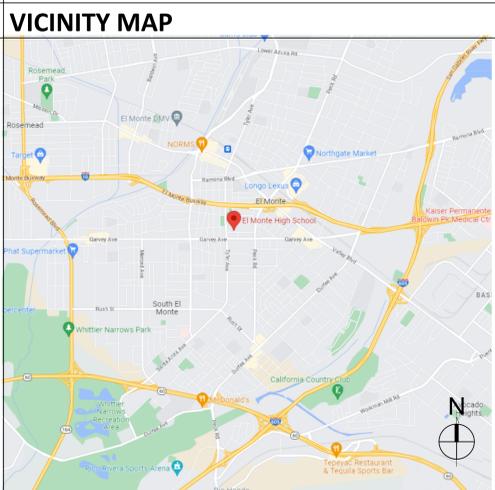
WIND DESIGN INFORMATION

RISK CATEGORY = III	Kd = 0.85	Kzt = 1.0
BASIC WIND SPEED Vm = 102 MPH (3 SEC GUST)	EXPOSURE = C	
INTERNAL PRESSURE COEFF. = +/- 0.18		

SEISMIC DESIGN INFORMATION

I = 1.25	RISK CATEGORY = III	SITE CLASS = D (DEFAULT)
Ss = 1.82	S1 = 0.652	SDS = 1.456
		SD1 = 0.739

SEISMIC DESIGN CATEGORY = D



NOTES

- ALL WORK SHALL CONFORM TO 2022 TITLE 24, CALIFORNIA CODE OF REGULATIONS (CCR).
- CHANGES TO THE APPROVED DRAWINGS AND SPECIFICATIONS SHALL BE MADE BY AN ADDENDUM OR A CONSTRUCTION CHANGED DOCUMENT (CCD) APPROVED BY THE DIVISION OF THE STATE ARCHITECT, AS REQUIRED BY SECTION 4-338, PART 1, TITLE 24, CCR.
- A "DSA CERTIFIED" CLASS 2 PROJECT INSPECTOR EMPLOYED BY THE DISTRICT (OWNER) AND APPROVED BY THE DSA SHALL PROVIDE CONTINUOUS INSPECTION OF THE WORK. THE DUTIES OF THE INSPECTOR ARE DEFINED IN SECTION 4-342, PART 1, TITLE 24, CCR.
- A DSA ACCEPTED TESTING LABORATORY DIRECTLY EMPLOYED BY THE DISTRICT (OWNER) SHALL CONDUCT ALL THE REQUIRED TESTS AND INSPECTIONS FOR THE PROJECT.
- WHENEVER DSA FINDS ANY CONSTRUCTION WORK IS BEING PERFORMED IN A MANNER CONTRARY TO THE PROVISIONS OF CALIFORNIA BUILDING CODE AND THAT WOULD COMPROMISE THE STRUCTURAL INTEGRITY OF THE BUILDING, THE DEPARTMENT OF GENERAL SERVICES, STATE OF CALIFORNIA, IS AUTHORIZED TO ISSUE A STOP WORK ORDER PER SECTION 4-334.1 CALIFORNIA ADMINISTRATIVE CODE (PART 1, TITLE 24, CCR).
- GRADING PLANS, DRAINAGE IMPROVEMENTS, ROAD AND ACCESS REQUIREMENTS AND ENVIRONMENTAL HEALTH CONSIDERATIONS SHALL COMPLY WITH ALL LOCAL ORDINANCES.
- TITLE 24, PARTS 1-5 AND 9 MUST BE KEPT ON SITE DURING CONSTRUCTION.

APPLICABLE CODES

THE WORK ON PUBLIC SCHOOL PROJECTS IN CALIFORNIA IS ADMINISTERED AND ENFORCED BY THE DIVISION OF THE STATE ARCHITECT (DSA), INCLUDING THE STRUCTURAL SAFETY SECTION, THE ACCESS COMPLIANCE SECTION, AND THE STATE FIRE MARSHALL.

1. STATUTORY & JUDICIAL REGULATIONS:

- 2022 BUILDING STANDARDS ADMINISTRATIVE CODE, PART 1, TITLE 24 C.C.R.
- 2022 CALIFORNIA BUILDING CODE (CBC), PART 2, TITLE 24 C.C.R.
- 2022 CALIFORNIA ELECTRICAL CODE (CEC), PART 3 TITLE 24 C.C.R.
- 2022 CALIFORNIA MECHANICAL CODE (CMC), PART 4, TITLE 24 C.C.R.
- 2022 CALIFORNIA PLUMBING CODE (CPC), PART 5, TITLE 24 C.C.R.
- 2022 CALIFORNIA ENERGY CODE, PART 6, TITLE 24 C.C.R.
- 2022 CALIFORNIA FIRE CODE, PART 9, TITLE 24 C.C.R.
- 2022 CALIFORNIA REFERENCE STANDARDS, PART 12, TITLE 24 C.C.R.



STATEMENT OF GENERAL CONFORMANCE

THE DRAWING SHEETS LISTED ON THE SHEET INDEX HAVE BEEN PREPARED BY OTHER DESIGN PROFESSIONALS OR CONSULTANTS WHO ARE LICENSED AND/OR AUTHORIZED TO PREPARE SUCH DRAWINGS IN THE STATE OF CALIFORNIA. I HAVE EXAMINED THE DRAWINGS FOR:

(1) DESIGN INTENT AND THEY APPEAR TO MEET THE APPROPRIATE REQUIREMENTS OF TITLE 24, CALIFORNIA CODE OF REGULATIONS AND THE PROJECT SPECIFICATIONS PREPARED BY MYSELF, AND

(2) COORDINATION WITH MY PLANS AND SPECIFICATIONS, AND ARE ACCEPTABLE FOR INCORPORATION INTO THE CONSTRUCTION OF THIS PROJECT.

THE STATEMENT OF GENERAL CONFORMANCE "SHALL NOT BE CONSTRUED AS RELIEVING ME OF MY RIGHTS, DUTIES, AND RESPONSIBILITIES UNDER SECTIONS 17302 AND 81138 OF THE EDUCATION CODE AND SECTIONS 4-336, 4-341, AND 4-344" OF TITLE 24, PART 1. [PER TITLE 24, PART 1, SECTION 4-317(B)]

I FIND THAT:

ALL DRAWINGS OR SHEETS LISTED ON THE COVER OR INDEX SHEET

IS/ARE IN GENERAL CONFORMANCE WITH THE PROJECT DESIGN INTENT, AND

HAS/HAVE BEEN COORDINATED WITH THE PROJECT PLANS AND SPECIFICATIONS.

PROJECT NO.: **21096.01**
11/05/21

SHEET TITLE:
COVER SHEET - INDEX, SCOPE OF WORK & VICINITY MAP

SHEET NO.:
G-001

SIGNATURE OF ARCHITECT DESIGNATED TO BE IN RESPONSIBLE CHARGE

RESPONSIBLE DESIGN PROFESSIONAL



810

FIRE & LIFE SAFETY SITE CONDITIONS SUBMITTAL

Division of the State Architect (DSA) documents referenced within this publication are available on the DSA Forms or DSA Publications webpages.

To facilitate the Division of the State Architect's (DSA) fire and life safety plan review of project site conditions, DSA requires the design professional to provide the following information at time of project submittal for projects consisting of construction of a new campus, construction of new building(s), additions to existing buildings, and for site alternate design means for fire department emergency vehicle access, and fire suppression water supply.

The Project Information and Fire & Life Safety Information sections are to be completed for all projects and imaged onto the fire access site plan. When an alternate design/means is proposed, all sections on pages 1 and 2 are to be completed and imaged on the fire access site plan.

For additional information refer to the instructions at the end of this form and DSA Policy PL 09-01: Fire Flow for Buildings.

PROJECT INFORMATION
School District/Owner: El Monte Unified High School District
Project Name/School: El Monte High School
Project Address: 3048 Tyler Ave, El Monte, CA 91731

FIRE & LIFE SAFETY INFORMATION
1. Has a fire hydrant flow test been performed within the past 12 months? Yes No
2. Was the fire hydrant water flow test performed as part of this LFA review? Yes No
3. Is the project located within a designated fire hazard severity zone (FHSZ) as established by Cal-Fire? (If yes, indicate FHSZ classification below.)

DSA 810
FIRE & LIFE SAFETY SITE CONDITIONS SUBMITTAL

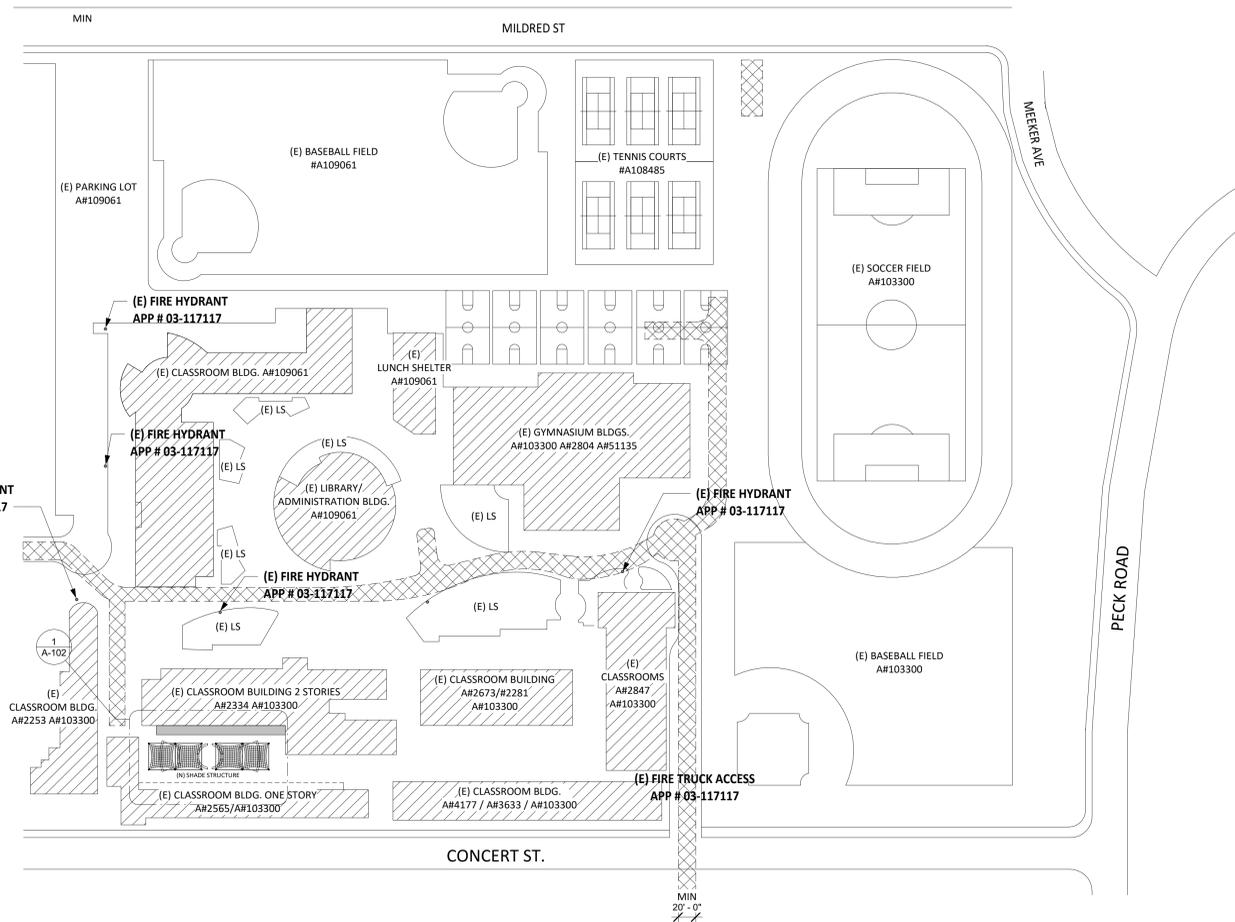
Table with 5 columns: CONDITION MEANS AND METHODS RESOLUTION, ALTERNATE ACCEPTED (Yes, No, N/A, N/R). Rows 4-7a detailing fire hydrant and emergency vehicle access requirements.

School District Acceptance of Acceptable Design Alternates
By signing this form, the school district acknowledges and accepts the proposed design as an alternative to California Building Code (CBC) and California Fire Code (CFC) minimum requirements...

Accepted by: Norma Macias Title: Director of FMOT
Signature: [Signature] Date: Feb 27, 2023

LOCAL FIRE AUTHORITY (LFA) INFORMATION
LFA Agency Name: COUNTY OF LOS ANGELES FIRE DEPARTMENT
LFA Review Official: MICHAEL BRAVO
Title: FIRE PREVENTION ENGINEER ASSIST II
Work Phone: 323-890-4125
Work Email: michael.bravo@fire.lacounty.gov

LFA Reviewer's Signature: [Signature]
APPROVED
M. Bravo
Fire Prevention Engineer
Date: 03/06/2023
FEPC 2023-0623



FIRE LIFE SAFETY PLAN

SCALE: 1" = 80'-0"



SHEET NOTES

- 1. USE A "NON CASE HARDENED LOCK" AT VEHICULAR ENTRY GATES.
2. EXISTING KNOX BOXES AT VEHICULAR ENTRY GATES, PEDESTRIAN GATES, AND MAIN ENTRY TO MPR AND GYM BUILDINGS.
3. FIRE DEPARTMENT VEHICULAR ACCESS ROADS MUST BE INSTALLED AND MAINTAINED IN A SERVICABLE MANNER PRIOR TO AND DURING THE TIME OF CONSTRUCTION. FIRE CODE 501.4.
4. BUILDING ADDRESS NUMBERS SHALL BE PROVIDED AND MAINTAINED SO AS TO BE PLAINLY VISIBLE AND LEGIBLE FROM THE STREET FRONTING THE PROPERTY. THE NUMBERS SHALL BE MINIMUM 4" HIGH WITH A STROKE WIDTH ON 1/2". FIRE CODE 505.1.
5. FIRE ACCESS ENTRANCE SIGNAGE - BOTTOM OF SIGN MUST BE A MINIMUM OF 8'-6" ABOVE GRADE. SIGN SHALL NOT BE LESS THAN 17" X 22" WITH LETTERING NOT LESS THAN 1" IN HEIGHT.
6. ON SITE VEHICULAR GATES IN THE FIRELANES SHALL BE KEPT OPEN DURING OFF HOURS. PROVIDE SIGNAGE AT GATE - BOTTOM OF SIGN SHALL NOT BE LESS THAN 17" X 22" WITH LETTERING NOT LESS THAN 1" IN HEIGHT.

EMERGENCY ACCESS PATH

- EXISTING BUILDING
(E) FIRE TRUCK ACCESS LANE: 20 FT MIN. WIDTH, 10% MAX. SLOPE. APP # 03-117117
EXISTING LANDSCAPING
PATH OF TRAVEL
(N) 30' X 30' SHADE STRUCTURE PER PC-04-119455
(E) FIRE HYDRANT

FLAME RETARDANT Fabric Registration
LICENSE NUMBER: F-052001
COLOURSHADE 190/F5
Product Marketed by: MULTIKNIT (PTY) LTD
Issue Date: 05/16/2022
Expiration Date: 06/30/2023



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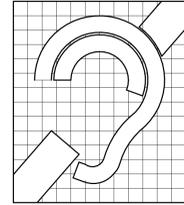
PROJECT OWNER: EL MONTE HIGH SCHOOL
3048 TYLER AVENUE, EL MONTE, CA
PROJECT NAME: EL MONTE HIGH SCHOOL - EXTERIOR SHELTER
3048 TYLER AVENUE, EL MONTE, CA

Table with 2 columns: MARK, DESCRIPTION. Rows 1-4 showing design development and review stages.

PROJECT NO.: 21096.01

SHEET TITLE: FIRE LIFE SAFETY SITE PLAN

SHEET NO.: G-101



A SYMBOL PROPORTIONS

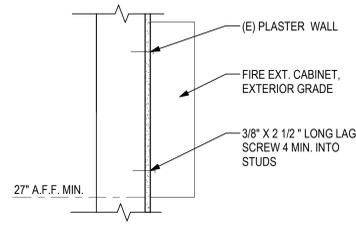
NOTE: THIS DIAGRAM ILLUSTRATES THE SPECIFIC REQUIREMENTS OF THESE REGULATIONS AND IS INTENDED ONLY AS AN AID FOR BUILDING DESIGN AND CONSTRUCTION. VERIFY WITH ARCHITECT BEFORE INSTALLATION.



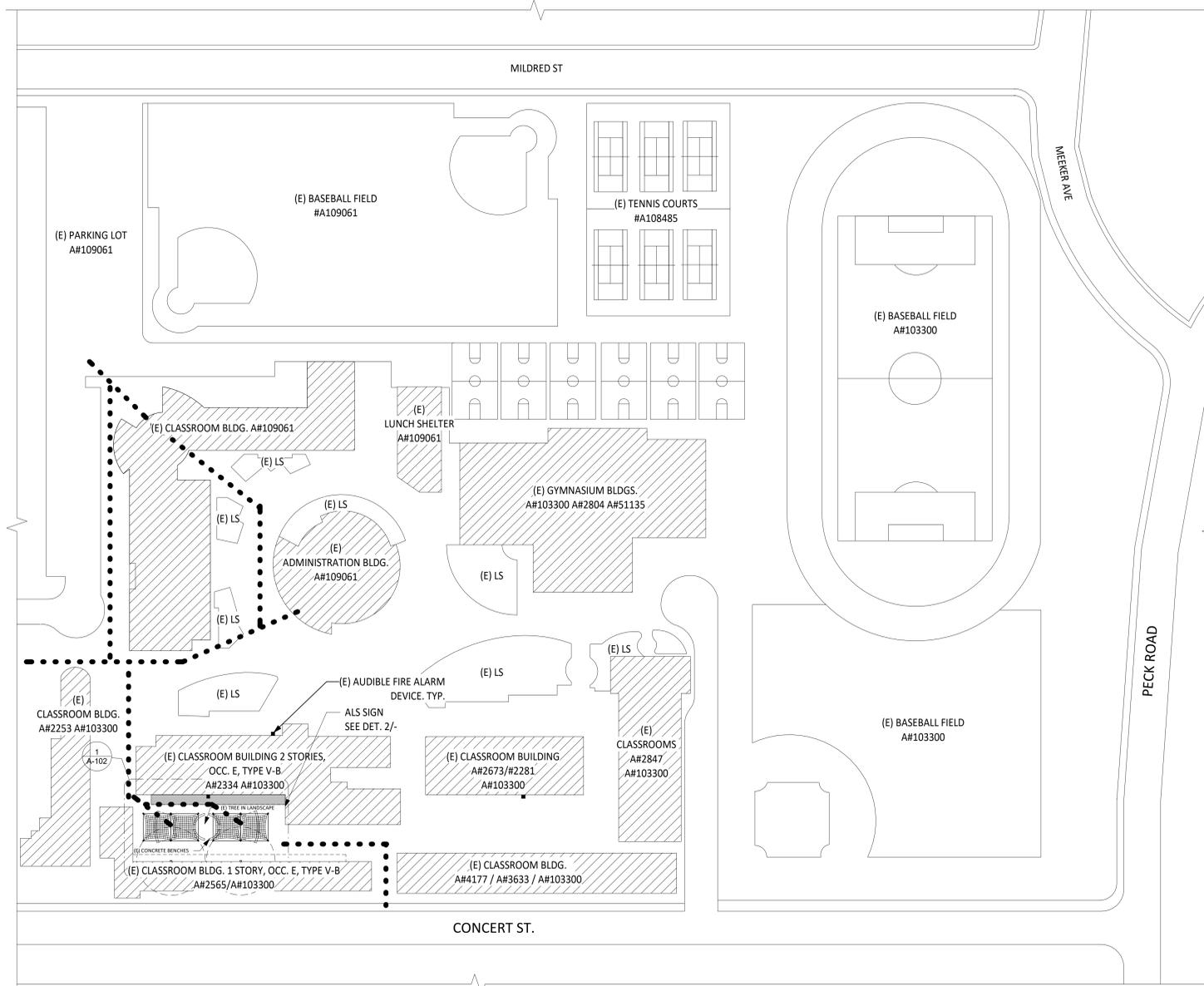
B DISPLAY CONDITIONS

- ASSISTIVE LISTENING SYSTEM AVAILABLE AT THE ADMINISTRATION FRONT DESK (OPTIONAL)
- RADIUS CORNER, TYP.
- CONTRASTING FIELD AND SYMBOL COLORS, BLACK AND WHITE
- NON-GLARE FINISH
- SIGN: SEE SEC. 10400

A.L.S. SIGNAGE MOUNTING DIAGRAM ②
SCALE: 1/2" = 1'-0"



FIRE EXT. CABINET ③
SCALE: 1 1/2" = 1'-0"



SITE PLAN OVERALL ①
SCALE: 1/64" = 1'-0"

SHEET NOTES

1. FIELD VERIFY ALL DIMENSIONS.
2. PREPARE CONCRETE/ASPHALT PAVING FOR NEW WORK.
3. REMOVE ANY OBSTRUCTIONS AT AREA OF WORK. COORDINATE WITH DISTRICT.
4. PROTECT ALL EXISTING SITE AND BUILDING ELEMENTS.
5. EXISTING ALS. INCLUDES 1 LANGUAGE MINI 72MHZ INTERPRETATION SYSTEM 1 TRANSMITTER, 1 HEADWORD MICROPHONE, 20 RECEIVERS, 20 HEADPHONES. ALSO, 72 MHZ MINI RECEIVER LISTENER KIT, 10 RECEIVERS, 10 HEADPHONES.

LEGEND

- EXISTING BUILDING
- EXISTING LANDSCAPING
- (N) 30' X 30' SHADE STRUCTURE PER PC-04-119455

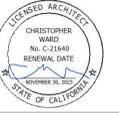


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ARCHITECT STAMP



PROJECT OWNER:

EL MONTE HIGH SCHOOL



3048 TYLER AVENUE, EL MONTE, CA

PROJECT NAME:

EL MONTE HIGH SCHOOL - EXTERIOR SHELTER

3048 TYLER AVENUE, EL MONTE, CA

AUTHORITY APPROVAL:

MARK	DATE	DESCRIPTION
1	07/15/22	DESIGN DEVELOPMENT
2	02/20/23	DISTRICT REVIEW 50%
3	03/01/23	DISTRICT REVIEW 100%
4	04/25/23	DSA OTC

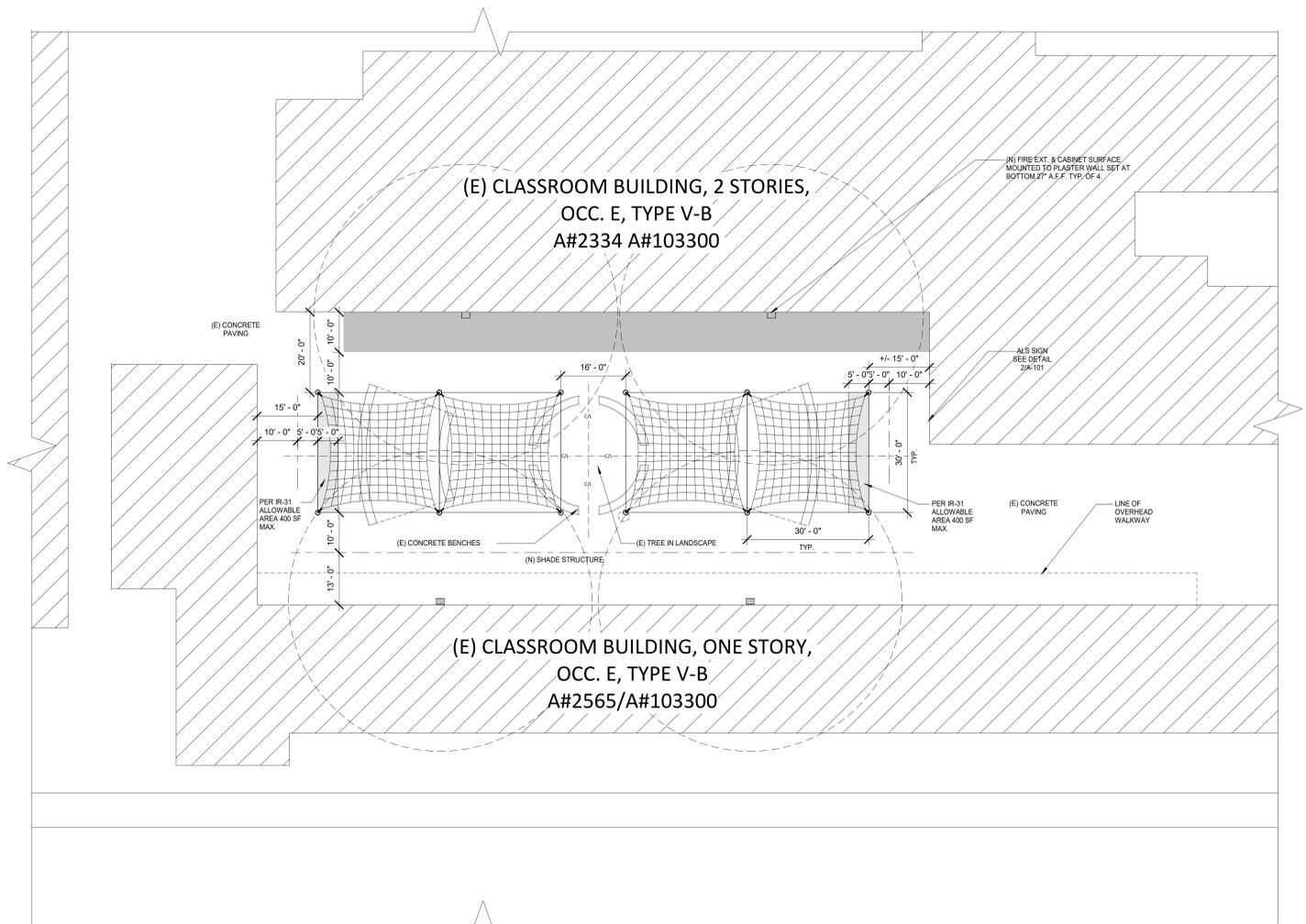
PROJECT NO.: 21096.01

SHEET TITLE:

OVERALL SITE PLAN

SHEET NO.:

A-101



SHEET NOTES

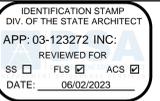
1. FIELD VERIFY ALL DIMENSIONS.
2. PREPARE CONCRETE/ASPHALT PAVING FOR NEW WORK.
3. REMOVE ANY OBSTRUCTIONS AT AREA OF WORK, COORDINATE WITH DISTRICT.
4. PROTECT ALL EXISTING SITE AND BUILDING ELEMENTS.
5. PROVIDE THE FOLLOWING ASSISTIVE LISTENING DEVICE SYSTEM TO DISTRICT STAFF TO STORE IN THE ADMINISTRATIVE OFFICE:
FOR USE IN SHADE SHELTER : 2 RECEIVERS + 2 HEARING-AID COMPATIBLE RECEIVERS

LEGEND

-  EXISTING BUILDING
-  EXISTING LANDSCAPING
-  (N) 30' X 30' SHADE STRUCTURE PER PC-04-119455

FIRE RATING

- REQUIRED RATING (CBC TABLE 601)
0 HR STRUCTURAL FRAME
0 HR EXTERIOR WALLS
- REQUIRED RATING (CBC TABLE 508.4)
A-E 0 HR
- REQUIRED SEPERATION PER (CBC TABLE 602)



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PROJECT OWNER:

EL MONTE HIGH SCHOOL



3048 TYLER AVENUE, EL MONTE, CA

PROJECT NAME:

EL MONTE HIGH SCHOOL -
EXTERIOR SHELTER

3048 TYLER AVENUE, EL MONTE, CA

AUTHORITY APPROVAL:



EXTERIOR SHADE PLAN
1/16" = 1'-0" 1 N

2019 CBC

IMPORTANT: This form is only a summary list of structural tests and some of the special inspections required for the project. Generally, the structural tests and special inspections noted on this form are those that will be performed by the Geotechnical Engineer of Record, Laboratory of Record, or Special Inspector. The actual complete test and inspection program must be performed as detailed on the DSA approved documents. The appendix at the bottom of this form identifies work NOT subject to DSA requirements for special inspection or structural testing. The project inspector is responsible for providing inspection of all facets of construction, including but not limited to, special inspections not listed on this form such as structural wood framing, high-load wood diaphragms, cold-formed steel framing, anchorage of non-structural components, etc., per Title 24, Part 2, Chapter 17A (2019 CBC).

****NOTE:** Undefined section and table references found in this document are from the CBC, or California Building Code.

1. TYPE	2. PERFORMED BY
Continuous – Indicates that a continuous special inspection is required.	GE – Indicates that the special inspection shall be performed by a registered geotechnical engineer or his or her authorized representative. LOR – Indicates that the test or special inspection shall be performed by a testing laboratory accepted in the DSA Laboratory Evaluation and Acceptance (LEA) Program. See CBC Section 18.3.15. PI – Indicates that the special inspection may be performed by a project inspector when specifically approved by DSA. SI – Indicates that the special inspection shall be performed by an appropriately qualified/approved special inspector.
Periodic – Indicates that a periodic special inspection is required.	
Test – Indicates that a test is required.	

Test or Special Inspection	Type	Performed By	Code References and Notes
<input type="checkbox"/> a. Inspect drilling operations and maintain complete and accurate records for each pier.	Continuous	PI	Continuous inspection to be provided by project inspector. Refer to specific items identified in the Appendix listing exemptions for limitations.
<input type="checkbox"/> b. Verify pier locations, diameters, plumbness and lengths. Record concrete or grout volumes.	Continuous	PI	Continuous inspection to be provided by project inspector. Refer to specific items identified in the Appendix listing exemptions for limitations.
<input type="checkbox"/> c. Concrete piers.			Provide tests and inspections per CONCRETE section below.

5. RETAINING WALLS:	Test or Special Inspection	Type	Performed By	Code References and Notes
<input type="checkbox"/> a. Placement, compaction and inspection of backfill.	Continuous	GE*	1705A.6.1.*	* By geotechnical engineer or his or her qualified representative. (See Section 18.03.04.)
<input type="checkbox"/> b. Placement of soil reinforcement and/or drainage devices.	Continuous	GE*		* By geotechnical engineer or his or her qualified representative.
<input type="checkbox"/> c. Segmental retaining walls; inspect placement of units, dowels, connectors, etc.	Continuous	GE*		* By geotechnical engineer or his or her qualified representative. See DSA IR 16-3.
<input type="checkbox"/> d. Concrete retaining walls.				Provide tests and inspections per CONCRETE section below.
<input type="checkbox"/> e. Masonry retaining walls.				Provide tests and inspections per MASONRY section below.

6. OTHER SOILS:	Test or Special Inspection	Type	Performed By	Code References and Notes

Test or Special Inspection	Type	Performed By	Code References and Notes
<input type="checkbox"/> a. Sample and test prestressing tendons and anchorages.	Test	LOR	1705A.3.4, 1910A.3
<input type="checkbox"/> b. Inspect placement of prestressing tendons.	Periodic	SI	1705A.3.4, Table 1705A.3 Items 1 & 9.
<input type="checkbox"/> c. Verify in-situ concrete strength prior to stressing of post-tensioning tendons.	Periodic	SI	Table 1705A.3 Item 11. Special inspector to verify specified concrete strength test prior to stressing.
<input type="checkbox"/> d. Inspect application of post-tensioning or prestressing forces and grouting of bonded prestressing tendons.	Continuous	SI	1705A.3.4, Table 1705A.3 Item 9; ACI 318-14 Section 26.13

9. PRECAST CONCRETE (in addition to Cast-in-Place Concrete tests and inspections):	Test or Special Inspection	Type	Performed By	Code References and Notes
<input type="checkbox"/> a. Inspect fabrication of precast concrete members.	Continuous	SI	ACI 318-14 Section 26.13	
<input type="checkbox"/> b. Inspect erection of precast concrete members.	Periodic	SI*	Table 1705A.3 Item 10.*	* May be performed by PI when specifically approved by DSA.

10. SHOTCRETE (in addition to Cast-in-Place Concrete tests and inspections):	Test or Special Inspection	Type	Performed By	Code References and Notes

Test or Special Inspection	Type	Performed By	Code References and Notes
<input type="checkbox"/> b. Test high-strength bolts, nuts and washers.	Test	LOR	Table 1705A.2.1 Item 1c, 2213A.2; RCSC 2014 Section 7.2; DSA IR 17-6.
<input type="checkbox"/> c. Bearing-type ("snug tight") connections.	Periodic	SI	Table 1705A.2.1 Item 2a, 1705A.2.6, 2204A.2; AISC 360-16 J3.1, J3.2, M2.5 & M2.6; RCSC 2014 Section 9.1; DSA IR 17-9.
<input type="checkbox"/> d. Pretensioned and slip-critical connections.	Periodic	SI	Table 1705A.2.1 Item 2b & 2c, 1705A.2.6, 2204A.2; AISC 360-16 J3.1, J3.2, M2.5 & M2.6; RCSC 2014 Sections 9.2 & 9.3; DSA IR 17-9.* * "Continuous" or "Periodic" depends on the tightening method used.

19. WELDING:	Test or Special Inspection	Type	Performed By	Code References and Notes
<input type="checkbox"/> a. Verify weld filler material identification markings per AWS designation listed on the DSA-approved documents and the WPS.	Periodic	SI	DSA IR 17-3.	1705A.2.5, Table 1705A.2.1 Items 4 & 5; AWS D1.1 and AWS D1.8 for structural steel; AWS D1.2 for Aluminum; AWS D1.3 for cold-formed steel; AWS D1.4 for reinforcing steel; DSA IR 17-3 (See Appendix 4 for exemptions)
<input type="checkbox"/> b. Verify WPS, welder qualifications and equipment.	Periodic	SI	DSA IR 17-3.	

Geotechnical Reports: Project does NOT have and does NOT require a geotechnical report

1. GENERAL:	Table 1705A.6
<input type="checkbox"/> a. Verify that: - Site has been prepared properly prior to placement of controlled fill and/or excavations for foundations. - Foundation excavations are extended to proper depth and have reached proper materials. - Materials below footings are adequate to achieve the design bearing capacity.	See Notes PI Refer to specific items identified in the Appendix listing exemptions for foundations. Placement of controlled fill exceeding 12" depth under foundations is not permitted without a geotechnical report.

2. SOIL COMPACTION AND FILL:	Table 1705A.6
<input type="checkbox"/> a. Verify use of proper materials, densities and inspect lift thicknesses, placement and compaction during placement of fill.	Continuous LOR* * Under the supervision of a geotechnical engineer or LOR's engineering manager. Refer to specific items identified in the Appendix listing exemptions for limitations.
<input type="checkbox"/> b. Compaction testing.	Test LOR* * Under the supervision of a geotechnical engineer or LOR's engineering manager. Refer to specific items identified in the Appendix listing exemptions for limitations.

3. DRIVEN DEEP FOUNDATIONS (PILES):	Table 1705A.7

Test or Special Inspection	Type	Performed By	Code References and Notes
<input type="checkbox"/> a. Soil Improvements	Test	GE*	Submit a comprehensive report documenting final soil improvements constructed, construction observation and the results of the confirmation testing and analysis to CGS for final acceptance. * By geotechnical engineer or his or her qualified representative.
<input type="checkbox"/> b. Inspection of Soil Improvements	Continuous	GE*	* By geotechnical engineer or his or her qualified representative.
<input type="checkbox"/> c.			

Test or Special Inspection	Type	Performed By	Code References and Notes
<input type="checkbox"/> a. Inspect shotcrete placement for proper application techniques.	Continuous	SI	1705A.19, Table 1705A.3 Item 2, 1908A.6, 1908A.7, 1908A.8, 1908A.9, 1908A.11, 1908A.12. See ACI 506-2-13 Section 3.4, ACI 506B-16.
<input type="checkbox"/> b. Sample and test shotcrete (f').	Test	LOR	1908A.2, 1908A.10.

11. POST-INSTALLED ANCHORS:	Test or Special Inspection	Type	Performed By	Code References and Notes
<input type="checkbox"/> a. Inspect installation of post-installed anchors	See Notes	SI	1617A.1, 19, Table 1705A.3 Item 4a (Continuous) & 4b (Periodic), 1705A.3.8 (See Appendix for exemptions); ACI 318-14 Sections 17.8 & 26.13.* May be performed by the project inspector when specifically approved by DSA.	
<input type="checkbox"/> b. Test post-installed anchors.	Test	LOR	1910A.5. (See Appendix for exemptions.)	

12. OTHER CONCRETE:	Test or Special Inspection	Type	Performed By	Code References and Notes
<input type="checkbox"/> a.				

19.1 SHOP WELDING:	Test or Special Inspection	Type	Performed By	Code References and Notes
<input type="checkbox"/> a. Inspect groove welds, multi-pass fillet welds, single pass fillet welds > 5/16", plug and slot welds.	Continuous	SI	Table 1705A.2.1 Items Sa.1-4; AISC 360-16 (and AISC 341-16 as applicable); DSA IR 17-3.	
<input type="checkbox"/> b. Inspect single-pass fillet welds ≤ 5/16", floor and roof deck welds.	Periodic	SI	1705A.2.2, Table 1705A.2.1 Items Sa.5 & Sa.6; AISC 360-16 (and AISC 341-16 as applicable); DSA IR 17-3.	
<input type="checkbox"/> c. Inspect welding of stairs and railing systems.	Periodic	SI	1705A.2.1; AISC 360-16 (and AISC 341-16 as applicable); AWS D1.1 & D1.3; DSA IR 17-3.	
<input type="checkbox"/> d. Verification of reinforcing steel weldability other than ASTM A706.	Periodic	SI	1705A.3.1; AWS D1.4; DSA IR 17-3. Verify carbon equivalent reported on mill certificates.	
<input type="checkbox"/> e. Inspect welding of reinforcing steel.	Continuous	SI	Table 1705A.2.1 Item Sb, 1705A.3.1, Table 1705A.3 Item 2, 1903A.8; AWS D1.4; DSA IR 17-3.	

19.2 FIELD WELDING:	Test or Special Inspection	Type	Performed By	Code References and Notes
<input type="checkbox"/> a. Inspect groove welds, multi-pass fillet welds, single pass fillet welds > 5/16", plug and slot welds.	Continuous	SI	Table 1705A.2.1 Items Sa.1-4; AISC 360-16 (and AISC 341-16 as applicable); DSA IR 17-3.	
<input type="checkbox"/> b. Inspect single-pass fillet welds ≤ 5/16".	Periodic	SI	Table 1705A.2.1 Item Sa.5; AISC 360-16 (and AISC 341-16 as applicable); DSA IR 17-3.	

Test or Special Inspection	Type	Performed By	Code References and Notes
<input type="checkbox"/> a. Verify pile materials, sizes and lengths comply with the requirements.	Continuous	GE*	* By geotechnical engineer or his or her qualified representative.
<input type="checkbox"/> b. Determine capacities of test piles and conduct additional load tests as required.	Test	LOR*	* Under the supervision of the geotechnical engineer.
<input type="checkbox"/> c. Inspect driving operations and maintain complete and accurate records for each pile.	Continuous	GE*	* By geotechnical engineer or his or her qualified representative.
<input type="checkbox"/> d. Verify locations of piles and their plumbness, confirm type and size of hammer, record number of blows per foot of penetration, determine required penetrations to achieve design capacity, record tip and butt elevations and record any pile damage.	Continuous	GE*	* By geotechnical engineer or his or her qualified representative.
<input type="checkbox"/> e. Steel piles.			Provide tests and inspections per STEEL section below.
<input type="checkbox"/> f. Concrete piles and concrete filled piles.			Provide tests and inspections per CONCRETE section below.
<input type="checkbox"/> g. For specialty piles, perform additional inspections as determined by the registered design professional in responsible charge.			* As defined on drawings or specifications.

4. CAST-IN-PLACE DEEP FOUNDATIONS (PIERS):	Table 1705A.8		
<input type="checkbox"/> a. Verify use of required design mix.	Periodic	SI	Table 1705A.3 Item 5, 1910A.1.
<input type="checkbox"/> b. Identify, sample, and test reinforcing steel.	Test	LOR	1910A.2; ACI 318-14 Section 26.6.1.2; DSA IR 17-10. (See Appendix for exemptions.)
<input type="checkbox"/> c. During concrete placement, fabricate specimens for strength tests, perform slump and air content tests, and determine the temperature of the concrete.	Test	LOR	Table 1705A.3 Item 6; ACI 318-14 Sections 26.5 & 26.12.
<input type="checkbox"/> d. Test concrete (f').	Test	LOR	1905A.1.15; ACI 318-14 Section 26.12.
<input type="checkbox"/> e. Batch plant inspection: Periodic	See Notes	SI	Default of "Continuous" per 1705A.3.3. If approved by DSA, batch plant inspection may be reduced to "Periodic" subject to requirements in Section 1705A.3.3.1, or eliminated per 1705A.3.3.2. (See Appendix for exemptions.)
<input type="checkbox"/> f. Welding of reinforcing steel.			Provide special inspection per STEEL, Category 19.1(d) & (e) and/or 19.2(g) & (h) below.

7. CAST-IN-PLACE CONCRETE	Test or Special Inspection	Type	Performed By	Code References and Notes
<input type="checkbox"/> a. Verify use of required design mix.	Periodic	SI	Table 1705A.3 Item 5, 1910A.1.	
<input type="checkbox"/> b. Identify, sample, and test reinforcing steel.	Test	LOR	1910A.2; ACI 318-14 Section 26.6.1.2; DSA IR 17-10. (See Appendix for exemptions.)	
<input type="checkbox"/> c. During concrete placement, fabricate specimens for strength tests, perform slump and air content tests, and determine the temperature of the concrete.	Test	LOR	Table 1705A.3 Item 6; ACI 318-14 Sections 26.5 & 26.12.	
<input type="checkbox"/> d. Test concrete (f').	Test	LOR	1905A.1.15; ACI 318-14 Section 26.12.	
<input type="checkbox"/> e. Batch plant inspection: Periodic	See Notes	SI	Default of "Continuous" per 1705A.3.3. If approved by DSA, batch plant inspection may be reduced to "Periodic" subject to requirements in Section 1705A.3.3.1, or eliminated per 1705A.3.3.2. (See Appendix for exemptions.)	
<input type="checkbox"/> f. Welding of reinforcing steel.			Provide special inspection per STEEL, Category 19.1(d) & (e) and/or 19.2(g) & (h) below.	

17. STRUCTURAL STEEL, COLD-FORMED STEEL AND ALUMINUM USED FOR STRUCTURAL PURPOSES	Material Verification and Testing:	Test or Special Inspection	Type	Performed By	Code References and Notes
<input type="checkbox"/> a. Verify identification of all materials and: - Mill certificates indicate material properties that comply with requirements. - Material sizes, types and grades comply with requirements.	Periodic	SI	Table 1705A.2.1 Item 3a-3c, 2202A.1; AISI S100-16 Section A3.1 & A3.2; AISI S200-15 Section A3.8 & A4; AISI S200-15 Sections A4.6 & A6.* * By special inspector or qualified technician when performed off-site.		
<input type="checkbox"/> b. Test unidentified materials.	Test	LOR	2202A.1.		
<input type="checkbox"/> c. Examine seam welds of HSS shapes.	Periodic	SI	DSA IR 17-3.		
<input type="checkbox"/> d. Verify and document steel fabrication per DSA-approved construction documents.	Periodic	SI	Not applicable to cold-formed steel high-frame construction, except for trusses (1705A.2.4).		

18. HIGH-STRENGTH BOLTS: RCSC 2014	Material Verification and Testing of High-Strength Bolts, Nuts and Washers:	Test or Special Inspection	Type	Performed By	Code References and Notes
<input type="checkbox"/> a. Verify identification markings and manufacturer's certificates of compliance conform to ASTM standards specified in the DSA-approved documents.	Periodic	SI	Table 1705A.2.1 Items 1a & 1b, 2202A.1; AISC 360-16 Section A3.3, J3.2, and N3.2; RCSC 2014 Section 1.5 & 2.1; DSA IR 17-8 & DSA IR 17-9.		

Test or Special Inspection	Type	Performed By	Code References and Notes
<input type="checkbox"/> c. Inspect end-welded studs (ASTM A108) installation (including bend test).	Periodic	SI	2213A.2; AISC 360-16 (and AISC 341-16 as applicable); AWS D1.1; DSA IR 17-3.
<input type="checkbox"/> d. Inspect floor and roof deck welds.	Periodic	SI	1705A.2.2, Table 1705A.2.1 Item Sa.6; AISC 360-16 (and AISC 341-16 as applicable); AWS D1.3; DSA IR 17-3.
<input type="checkbox"/> e. Inspect welding of structural cold-formed steel.	Periodic	SI*	1705A.2.5; AWS D1.3; DSA IR 17-3. The quality control provisions of AISI S200-15 Chapter D shall also apply.* May be performed by the project inspector when specifically approved by DSA.
<input type="checkbox"/> f. Inspect welding of stairs and railing systems.	Periodic	SI*	1705A.2.1; AISC 360-16 (and AISC 341-16 as applicable); AWS D1.1 & D1.3; DSA IR 17-3.* May be performed by the project inspector when specifically approved by DSA.
<input type="checkbox"/> g. Verification of reinforcing steel weldability.	Periodic	SI	1705A.3.1; AWS D1.4; DSA IR 17-3. Verify carbon equivalent reported on mill certificates.
<input type="checkbox"/> h. Inspect welding of reinforcing steel.	Continuous	SI	Table 1705A.2.1 Item Sb, 1705A.3.1, Table 1705A.3 Item 2, 1903A.8; AWS D1.4; DSA IR 17-3.

20. NONDESTRUCTIVE TESTING:	Test or Special Inspection	Type	Performed By	Code References and Notes
<input type="checkbox"/> a. Ultrasonic	Test	LOR</		

GENERAL NOTES
DESIGN LOADS

BUILDING CODE	CBC 2019 (BASED ON IBC 2018)
LIVE LOADS	5 PSF
SNOW LOAD	5 PSF
WIND LOADS	115 MPH (3-Sec. Gust); EXPOSURE C; TOPOGRAPHIC FACTOR $K_{zt} = 1.0$

1. SPECIAL INSPECTION REQUIREMENTS SHALL FOLLOW THE ATTACHED SAMPLE TEST AND INSPECTION LIST (T & I LIST) APPROVED BY DSA. THE SHOP WELDING INSPECTION SHALL INCLUDE WELDING OF ALL STEEL MEMBERS AND IDENTIFICATION OF STEEL THROUGH MILL CERTIFICATE OR MATERIAL TESTING. UNCERTIFIED STEEL SHALL BE TESTED TO THE REQUIREMENTS OF CBC 2019 CHAPTER 17A. THE FIELD SPECIAL INSPECTION SHALL INCLUDE COMPRESSION CYLINDER TESTS FOR THE CONCRETE FOUNDATION.

2. STRUCTURE SHALL BE IN THE LOCATION SHOWN ON THE SITE SPECIFIC DSA APPLICATION DRAWING.

3. FOUNDATION DESIGN BASED ON CBC 2019, TABLE 1806A.2, SOIL CLASS 5 (ALLOWABLE FOUNDATION PRESSURE 1500 PSF)

4. DESIGN PER FOLLOWING CODES: CBC 2019, ASCE 7-16, AISC 360-16, AISC 341-16, ACI 318-14, ASCE 55-16 & ASCE 19-16

STRUCTURAL STEEL

1. FABRICATION OF THE STEEL STRUCTURES SHALL BE PERFORMED BY SHADE STRUCTURES OR AN AUTHORIZED LICENSEE. MATERIAL TESTING (OR MILL CERTIFICATES) AND INSPECTION OF WELDING SHALL BE CONDUCTED PER CBC 2019 SECTIONS 1704A, 1705A, 1705A.2, AND TABLE 1705A.2.1.

2. ONLY CALIFORNIA LICENSED CONTRACTORS AUTHORIZED BY SHADE STRUCTURES SHALL INSTALL THE SHADE STRUCTURES.

3. ALL WORK SHALL CONFORM TO CBC 2019 EDITION, TITLE 24, CALIFORNIA CODE OF REGULATIONS (CCR)

4. ALL STRUCTURAL SHAPES SHALL BE COLD FORMED HSS ASTM A500 GRADE B, UNLESS OTHERWISE NOTED. TYPICAL MECHANICAL PROPERTIES ACHIEVED FOR HSS PRODUCTS:
 SQUARE AND RECTANGULAR 46,000 PSI YIELD STRESS / 58,000 PSI TENSILE STRESS
 ROUND PIPE 42,000 PSI YIELD STRESS / 58,000 PSI TENSILE STRESS

5. ALL PLATES PRODUCTS SHALL COMPLY WITH ASTM A572 GRADE 50.

6. STRUCTURAL STEEL SHALL BE DETAILED, FABRICATED AND ERECTED IN ACCORDANCE WITH A.I.S.C. SPECIFICATIONS.

7. ALL WELDING TO CONFORM WITH AMERICAN WELDING SOCIETY STANDARDS AND SHALL BE INSPECTED BY AN AWS/CW INSPECTOR. AWS D1.1 FOR HOT ROLLED. AWS D1.3 FOR SHEET/COLD FORMED. AWS D1.8 SEISMIC SUPPLEMENT.

8. ALL FULL PENETRATION WELD SHALL BE CONTINUOUSLY INSPECTED PER AWS D1.1 & D1.8.

9. SHOP CONNECTIONS SHALL BE WELDED UNLESS NOTED OTHERWISE. FIELD CONNECTIONS SHALL BE AS INDICATED ON THE DRAWINGS (IF REQUIRED). ALL FILLET WELDS SHALL BE A MINIMUM OF 3/16" ERTOSX ELECTRODES UNLESS OTHERWISE NOTED. EITHER SMAW OR GMAW IS ACCEPTABLE.

10. ALL STRUCTURAL STEEL (ITEMS FROM NOTE 4) SHALL BE POWDER COATED WITH ONE SHOP COAT (2.5 MILS MIN.) OF ZINC-RICH PRIMER, UNDERCOAT, AND FINISH COAT, OR EQUIVALENT PAINT SYSTEM. THIS COAT IS A WEATHER RESISTANT POWDER COATING BASED ON POLYESTER TGIC (MANUFACTURED BY SHERWIN WILLIAMS, KASKO NOBEL, PPG OR TIGER DRYLAC), TO ACHIEVE OPTIMUM ADHESION. IT IS RECOMMENDED THAT THE PROPER TREATMENT AND DRYING TAKE PLACE BEFORE COATING. POLYESTER POWDER (TGIC) SPECIFICATIONS SHALL BE AS FOLLOWS:
 - PENCIL HARDNESS (ASTM D-3363). - HUMIDITY (ASTM D-2247).
 - SOLVENT RESISTANCE (PCI METHOD) - 50 DBL RUBS SL. SOFTNESS.

11. COLD-FORMED STEEL MEMBERS SHALL BE 55% ALUMINUM ZINC ALLOY COATED PER ASTM A792/A792M STANDARD IN ACCORDANCE TO AISI S200 TABLE A4-1. CP 90 COATING DESIGNATION. ALL EXPOSED STEEL FASTENERS SHALL BE STAINLESS STEEL (TYPE 304 MINIMUM), HOT DIP GALVANIZED (ASTM A153, CLASS D MINIMUM OR ASTM F2329), OR PROTECTED WITH CORROSION PREVENTIVE COATING THAT DEMONSTRATED NO MORE THAN 2% OF RED RUST IN MINIMUM 1,000 HOURS OF EXPOSURE IN SALT SPRAY TEST PER ASTM B117. ZINC-PLATED FASTENERS DO NOT COMPLY WITH THIS REQUIREMENT.

CONCRETE SPECIFICATION

1. CONCRETE SHALL BE SAMPLED AND TESTED PER CBC 2019 SECTION 1903A & SHALL BE INSPECTED PER SECTION 1903A.

2. CONCRETE TO BE $F_c = 4500$ PSI, TYPE V CEMENT, WATER/CEMENT RATIO OF 0.45, PER ACI 318-14 CHAPTER 5. REINFORCING STEEL TO BE $F_y = 60000$ PSI, MIN. GR. 60

3. ALL ANCHOR BOLTS SET IN NEW CONCRETE (WHEN APPLICABLE) SHALL COMPLY WITH ASTM F-1554 GRADE 55 (GALVANIZED PER ASTM A153, CLASS D MINIMUM OR ASTM F2329). ANCHOR BOLT'S EMBEDMENT NEEDS TO BE AS FOLLOWS:
 A) ANCHOR BOLT $\phi 1 \frac{1}{4}$ " 30 IN (MINIMUM EMBEDMENT)

4. CERTIFIED MILL TEST REPORTS ARE TO BE PROVIDED FOR EACH SHIPMENT OF REINFORCEMENT.

5. ALL NON-SHRINK GROUT SHALL HAVE A MINIMUM 28 DAYS COMPRESSIVE STRENGTH OF 5000 PSI, AND SHALL COMPLY THE REQUIREMENTS OF ASTM C109, ASTM C939, ASTM C1090, ASTM C1107, WHEN APPLICABLE.

FABRIC SPECIFICATION

1. FABRIC SHALL BE MANUFACTURED BY MULTIKNIT LTD. OR OTHER COMPANY WHO CAN MANUFACTURE FABRIC, WHICH MEETS THE SPECIFICATIONS LISTED ON PAGE 2000, AND SHALL BE FABRICATED FROM POLYETHYLENE MATERIALS.

2. THE FABRIC SHALL RETAIN 80% OF ITS TENSILE AND TEARING STRENGTH AFTER ULTRAVIOLET EXPOSURE PER ASTM G53 USING A 313 NM LIGHT SOURCE FOR 500 HOURS WHILE MOISTENED FOR 1 HOUR EVERY 12 HOURS.

3. PROVIDE CERTIFICATION BY MANUFACTURER AND STATE FIRE MARSHAL TO SCHOOL'S DISTRICT INSPECTOR OF RECORD AT SITE SPECIFIC INSTALLATION. COPY OF FIRE CERTIFICATION SHALL BE SENT TO DSA.

4. FABRIC SHALL REQUIRE ANNUAL INSPECTION AND MAINTENANCE BY THE DISTRICT. FABRICS SAMPLES OF THE SAME MATERIAL WHICH ARE MAINTAINED AT THE PROJECTS SITE SHALL BE TESTED TO BE IN COMPLIANCE WITH ASTM D5034 AND D2261. THE ANNUAL TESTING ON THE APPROVED PLANS SHALL BE COMPARED TO THE FABRIC SPECIFICATIONS INDICATED IN NOTE 1 OF "FABRIC SPECIFICATION" ON THE APPROVED PLANS. THE FABRIC SHALL BE REPLACED WHEN THE TEST RESULTS RETURN LESS THAN 50% OF THE ULTIMATE VALUES IN NOTE 1 OF "FABRIC SPECIFICATION". FIRE TEST ON FABRIC: NFPA 701 TEST 2 AND ASTM E 84 EXTENDED 30 MINUTES TEST. FLAME SPREAD INDEX (FSI): 10. SMOKE DEVELOPED INDEX (SDI): 50. FABRIC IS ACCEPTABLE FOR USE IN WILDLIFE URBAN INTERFACE AREA.

5. FABRIC TOP NEEDS TO BE REMOVED IF SNOW EXCEEDING 5 PSF ARE ANTICIPATED, FABRIC TOP NEEDS TO BE REMOVED IF WINDS EXCEEDING 115 MPH ARE ANTICIPATED.

6. A VISUAL INSPECTION LOOKING FOR TEAR AND ABNORMAL WEAR IN FABRIC MATERIAL AND THREAD IS REQUIRED PRIOR TO RE-INSTALLATION. USA SHADE & FABRIC STRUCTURES SHALL BE NOTIFIED IF SIGNIFICANT DAMAGE IS PRESENT BEFORE RE-INSTALLATION.

AIRCRAFT CABLE

1. FOR FABRIC ATTACHMENT USE $1 \frac{1}{2}$ " 6x19 GALV. CABLE PER ASTM A1023A, ASTM 1023M-02, WITH A BREAKING STRENGTH VALUE OF 20,700 LBS. CABLE SHALL BE TENSIONED TO 250 LBS MINIMUM. CABLE SHALL BE TENSIONED TO 250 LBS MINIMUM. THE MAXIMUM CALCULATED CABLE ALLOWABLE CAPACITY IS $S_a = 7056$ LB.

2. CABLES SHALL BE FED THROUGH THE FABRIC SLEEVES AROUND THE PERIMETER OF THE CANOPY AND TENSIONED UNTIL THE FABRIC PANELS (DESIGNED PURPOSELY UNDERSIZED) REACH A TAUT APPEARANCE. ANY LONG TERM CABLE SAG SHALL BE MINIMIZED DURING THE MAINTENANCE RE-TIGHTING VISITS AS REQUIRED.

CODE ANALYSIS				
BUILDING	OCCUPANCY	CONST. TYPE	AREA (SQ. FT.)	OCCUPANT LOAD FACTOR
SHADE STRUCTURE	A-3	V-N	3,600	15
				240

MAXIMUM OCCUPANT LOAD (PER CBC 2019 TABLE 1604A.5)
 -K-12: 250 PERSONS
 -PUBLIC ASSEMBLY: 300 PERSONS
 -EDUCATIONAL OCCUPANCIES ABOVE 12TH GRADE: 500 PERSONS

2019 CBC PC DESIGN NOTES

FLOOR LIVE LOAD	N/A	
ROOF LIVE LOAD	5 PSF	RLL

ALLOWABLE SOIL PRESSURE:
 DL + LL (CONC FTG) 1500 PSF
 DL + LL + SEISMIC (CONC FTG) 1500 PSF
 LATERAL BEARING DESIGN VALUE 100 PSF/FT BELOW NATURAL GRADE, PER TABLE 1806A.2 PER CBC SECTION 1806A.3.4.
 ALLOWABLE PIER FRICTIONAL RESISTANCE 250 PSF MAXIMUM BASED ON SECTION 1810A.3.3.1.4 (ONE-SIXTH OF THE BEARING VALUE). UPLIFT FRICTIONAL RESISTANCE HAVE A SAFETY FACTOR OF 3.

ROOF SNOW LOAD 5 PSF
 ICE LOAD ZERO PSF
 FLOOD HAZARD AREA NO
 WHEN A SITE SPECIFIC PROJECT IS LOCATED IN A FLOOD ZONE OTHER THAN ZONE X, A LETTER STAMPED AND SIGNED FROM A SOILS ENGINEER IS NEEDED TO VALIDATE THE ALLOWABLE SOIL VALUES SPECIFIED IN THE PC ARE STILL APPLICABLE.

WIND DESIGN DIRECTIONAL PROCEDURE: ASCE 7-16, SECTION 27.3.2
 -BASIC DESIGN WIND SPEED (3 SEC GUST) V 115 MPH
 -WIND EXPOSURE FACTOR C 1
 -TOPOGRAPHIC FACTOR Kzt 1
 -RISK CATEGORY II
 -VELOCITY PRESSURE EXPOSURE COEFFICIENT Kz 0.88
 -VELOCITY PRESSURE qz 25.32 PSF

SEISMIC DESIGN:
 -SITE CLASS D
 Ss 3.00g
 S1 1.389g

-SPECTRAL RESPONSE COEFFICIENTS SDS 2.00
 SD1 1.39
 -LATERAL FORCE RESISTING SYSTEM G.2 ORDINARY CANTILEVERED COLUMN SYSTEM.

-SEISMIC IMPORTANCE FACTOR I 1.0
 -DESIGN BASE SHEAR V 22638 LB
 -SEISMIC RESPONSE COEFFICIENTS Cs 1.6
 -RESPONSE MODIFICATION FACTOR R 1.25
 -ANALYSIS PROCEDURE II
 -RISK CATEGORY E
 -SEISMIC DESIGN CATEGORY Fv 1
 -SITE COEFFICIENT CATEGORY Fv 1.5

GEOHAZARD REPORT IS NOT REQUIRED FOR OPEN FABRIC STRUCTURES 1,600 SQF OR LESS COMPLYING WITH THE REQUIREMENTS OF IR A-4 SECTION 3.1.1. OPEN FABRIC SHADE STRUCTURES GREATER THAN 1,600 SQUARE FEET UP TO A MAXIMUM OF 4,000 SQUARE FEET AND COMPLYING WITH THE REQUIREMENTS NOTED IN IR A-4 SECTION 3.1.1 DO NOT REQUIRE A GEOHAZARD REPORT PROVIDED A GEOTECHNICAL REPORT INDICATES THAT NO LIQUEFACTION POTENTIAL EXISTS.

ARCHITECT OF RECORD TO DETERMINE IF SPECIFIC SITE IS IN GEOLOGIC HAZARD ZONE. GEOHAZARD REPORT REQUIREMENTS PER DSA IR A-4.

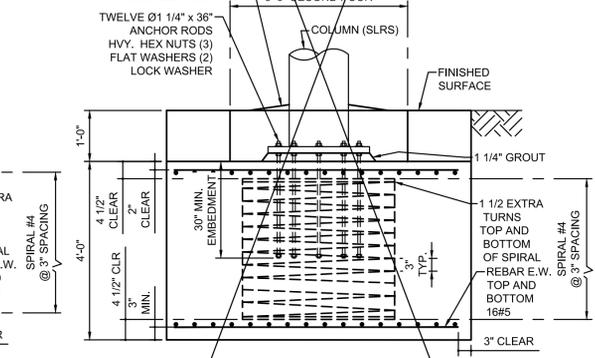
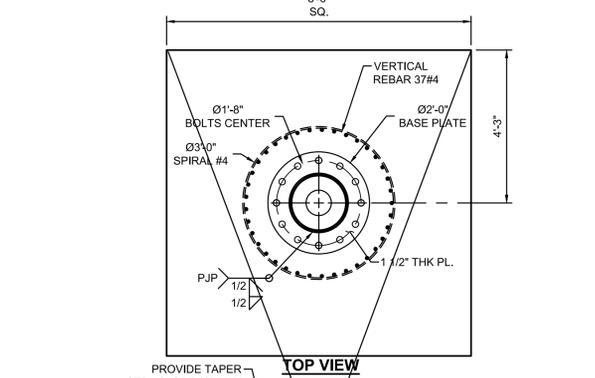
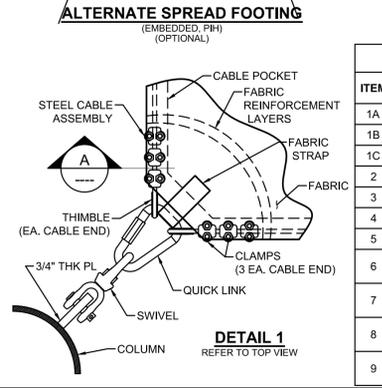
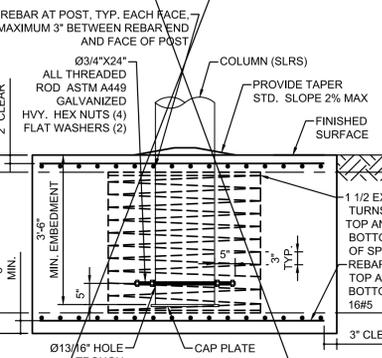
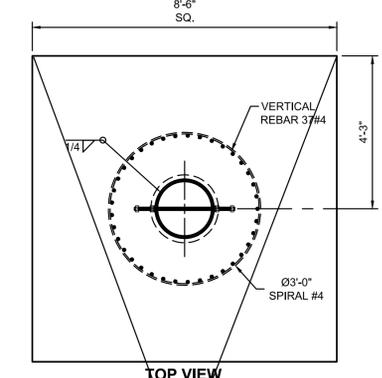
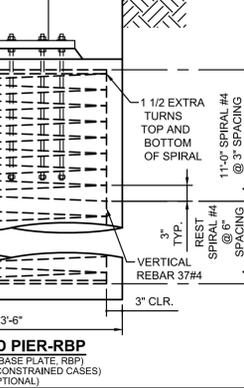
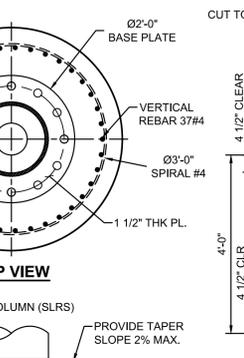
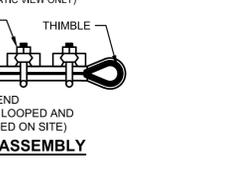
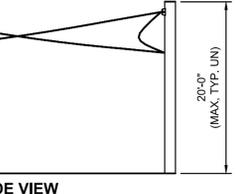
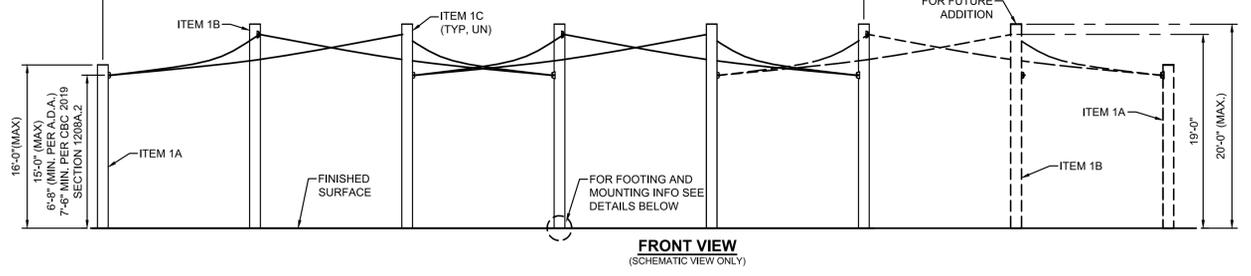
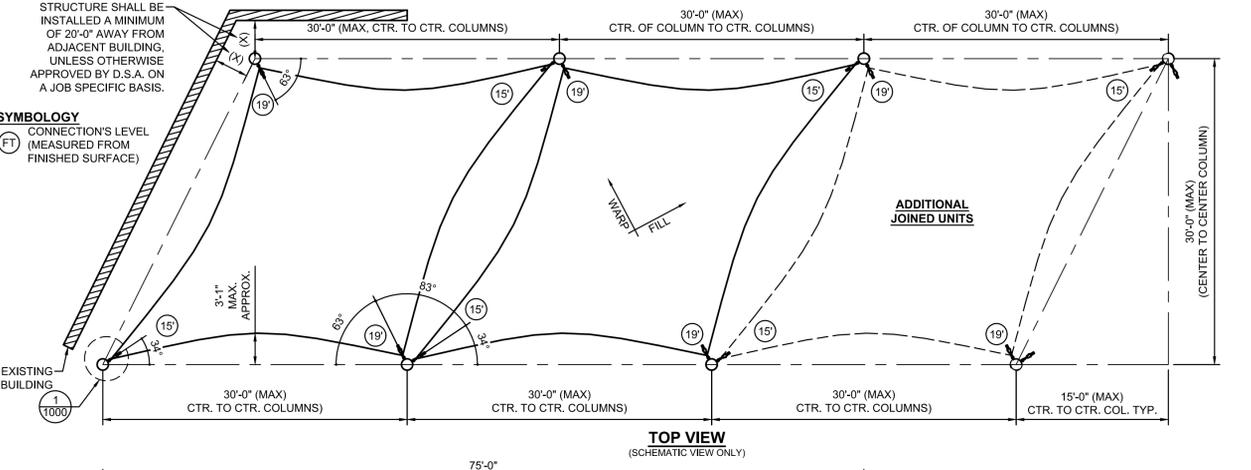
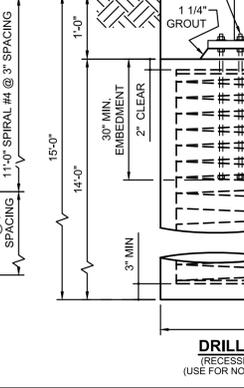
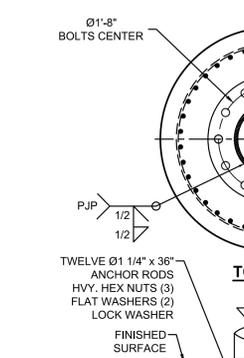
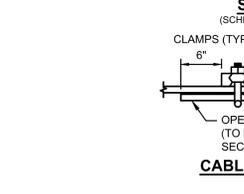
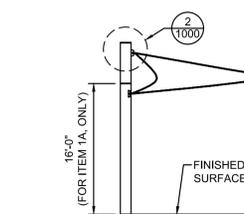
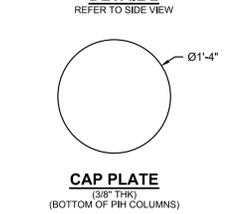
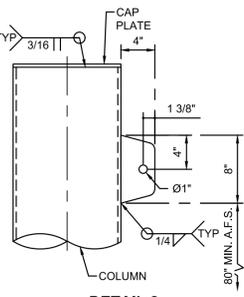
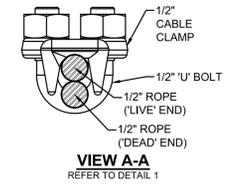
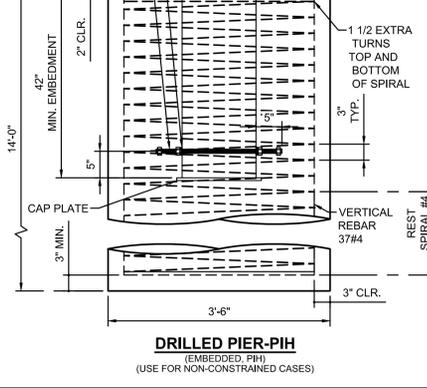
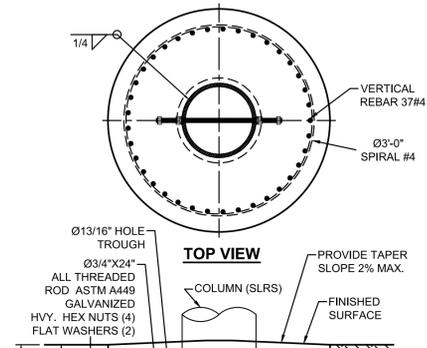
PC OPTIONS SHALL NOT INCLUDE LIQUEFIABLE SOIL (EXCEPTION: OPEN FABRIC SHADE STRUCTURES 1,600 SQUARE FEET OR LESS COMPLYING WITH REQUIREMENTS OF IR A-4 SECTION 3.1.1). IF STRUCTURE IS LOCATED IN AN AREA WITH LIQUEFIABLE SOIL OR SITE CLASS F_o OVER-THE-COUNTER SUBMITTAL IS NOT ALLOWED AND REGULAR PROJECT SUBMITTAL IS REQUIRED. IF SITE IS NOT IN A MAPPED LIQUEFACTION HAZARD ZONE, IT MAY BE PRESUMED THAT NO LIQUEFACTION HAZARD EXISTS ON THAT SITE UNLESS A SITE-SPECIFIC GEOTECHNICAL REPORT IDENTIFIES SUCH HAZARD.

MINIMUM FOUNDATION SETBACK LIMIT IN ADJACENT SLOPE: THE DEPTH OF REQUIRED PIER EMBEDMENT SHALL START FROM AN ELEVATION THAT CORRESPONDS WITH A HORIZONTAL CLEAR DISTANCE OF 24'-6" THAT INTERSECT WITH THE SLOPE (DAYLIGHTING). IF SETBACK LIMITS ARE SMALLER THAN CBC REQUIRES, A SITE-SPECIFIC SOILS REPORT IS REQUIRED.

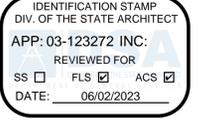
MINIMUM CLASS 2 PROJECT INSPECTOR REQUIRED.

FOOTPRINT CONFIGURATION

1.- THE STRUCTURE CAN BE A SINGLE 4 POST TENSION SAIL.
 2.- THE STRUCTURE CAN BE PLACED FOLLOWING A CURVED CONFIGURATION AS LONG AS THE MAXIMUM DIMENSIONS ARE NOT EXCEEDED.



ITEM	QTY	DESCRIPTION	MATERIAL
1A	TBD	COLUMN	HSS 14.0 x 0.625
1B	TBD	COLUMN	HSS 14.0 x 0.625
1C	TBD	COLUMN	HSS 14.0 x 0.625
2	TBD	FABRIC TOP	FR COLOURSHADE Z25
3	TBD	$\phi 1 \frac{1}{2}$ " CABLE	GALVANIZED STEEL
4	TBD	$\phi 1 \frac{1}{2}$ " THIMBLE	GALVANIZED
5	TBD	$\phi 1 \frac{1}{2}$ " CABLE CLAMP	GALVANIZED
6	TBD	3/4" SWIVEL JAW END	GALVANIZED (W.L. = 7200 LB)
7	TBD	25/32" QUICK LINK	ZINC PLATED (W.L. = 6613 LB)
8	TBD	CAP PLATE (3/8" THK)	ASTM A572 GR. 50
9	TBD	GUSSET PLATE (3/4" THK)	ASTM A572 GR. 50



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USASHADE & Fabric Structures
 CORPORATE HEADQUARTERS
 2580 ESTERS BLVD, SUITE 100
 DFW AIRPORT, TX, 75261
 800-966-5005

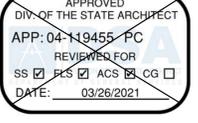
CERTIFICATIONS:
 IAS CERTIFICATION NO: FA-428
 CLARK COUNTY MANUFACTURER CERTIFICATION NUMBER (NEVADA): 355

CUSTOMER:
 El Monte Union HS District

PROJECT NAME:
 El Monte High School

LOCATION:
 3048 Tyler Ave.
 El Monte, CA 91731

MODEL NUMBER:
 DSA4183030-19



STRUCTURE TYPE:
 TENSION SAILS
 DSA

SIZE:
 MAXIMUM
 30' x 133' MAX. x 15'

SCALE: NONE

DRAWING SIZE:
 D

PRE-CHECK (PC) DOCUMENT
 Code - 2019 CBC
 A separate project application for construction is required.

Eng. By: JO 06/26/20
 Design By: JO 06/26/20

Approved By: JO 06/26/20

DRAWING DESCRIPTION:
 PRODUCT INFORMATION

DWG. DSA4183030-19

SHEET 15.1-1000

REV. NC

ENVELOPE JOINT REACTIONS

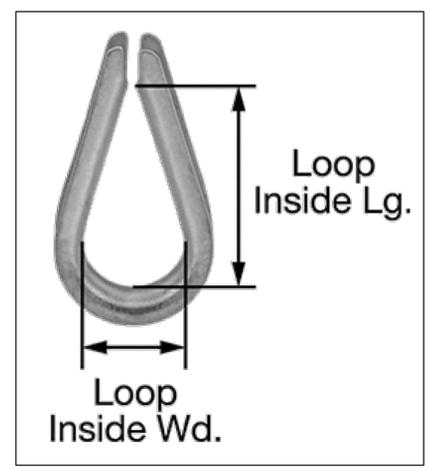
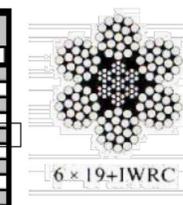
Shear resultant = $\sqrt{F_x^2 + F_y^2 + F_z^2}$ Moment resultant = $\sqrt{M_x^2 + M_y^2 + M_z^2}$

Node	Type	Support Forces (kips)			Support Moments (k-ft)			Support Forces (kips)	Support Moments (k-ft)	Support Forces (kips)	Support Moments (k-ft)	
		F _x	F _y	F _z	M _x	M _y	M _z					
MAXIMUM REACTIONS												
		6.620			118.071			1.921		-5.007		

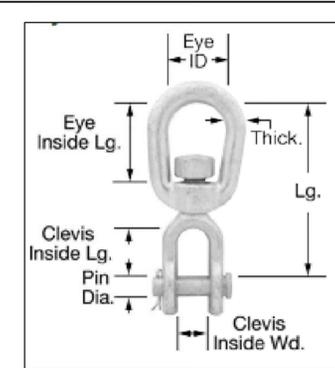
**GALVANIZED IWRC
6 X 19 IWRC**

IMPROVED PLOW STEEL / EXTRA IMPROVED PLOW STEEL

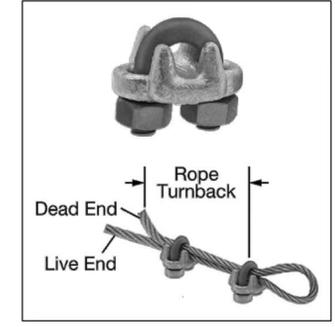
NOMINAL DIAMETER	MIN. BREAKING STRENGTH		WEIGHT	STOCK NUMBER
	IPS	EIPS*		
1/4"	5,300	6,120	0.105	J42
5/16"	8,240	9,480	0.164	K42
3/8"	11,800	13,600	0.236	L42
7/16"	16,000	18,360	0.320	M42
1/2"	20,700	24,000	0.420	N42
9/16"	26,100	30,200	0.530	O42
5/8"	32,200	37,000	0.660	A42
3/4"	46,000	53,000	0.950	Q42
7/8"	62,200	71,600	1.290	R42
1"	80,800	93,000	1.680	S42
1 1/8"	101,800	117,000	2.130	T42
1 1/4"	125,000	143,800	2.630	U42
1 3/8"	150,400	172,800	3.180	V42
1 1/2"	178,000	206,000	3.780	W42



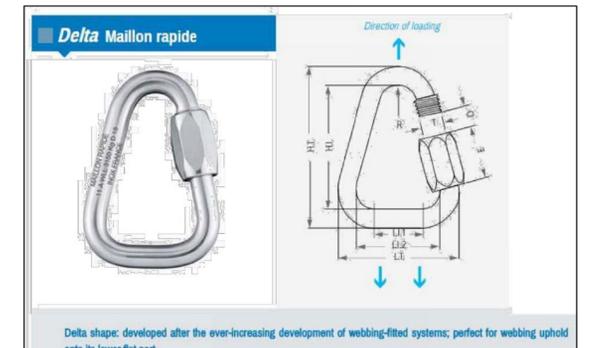
WIRE ROPE THIMBLE
FITTING TYPE: THIMBLE
MATERIAL: GALVANIZED STEEL
FOR WIRE ROPE DIAMETER 1/2"
LOOP
INSIDE LENGTH: 1 7/8"
INSIDE WIDTH: 1 1/8"
SPECIFICATIONS MET FED. SPEC. FF-T-2768



EYE-TO-CLEVIS SWIVEL
MATERIAL: GALVANIZED STEEL
LENGTH: 5 7/8"
EYE:
THICKNESS: 3/4"
INSIDE LENGTH: 1 3/4"
ID: 2"
CLEVIS
INSIDE WIDTH: 1 1/8"
INSIDE LENGTH: 1 3/4"
PIN DIAMETER: 3/4"
PIN TYPE: COTTER
CAPACITY: 7,200 LBS.
FABRICATION: FORGED
SPECIFICATIONS MET FED. SPEC. RR-C-271
FITTING TYPE: SWIVEL
ATTACHMENT TYPE: EYE-TO-CLEVIS



FORGED WIRE ROPE CLAMP
FITTING TYPE: FORGE CLAMP
FABRICATION: FORGED
MATERIAL: GALVANIZED STEEL
FOR WIRE ROPE DIAMETER: 1/2"
NUMBER OF CLAMPS REQUIRED: 3
ROPE TURNBACK: 11 1/2"
FOR WIRE ROPE CONSTRUCTION: 6 x 19
ATTACHMENT TYPE: LOOP
CLAMP
WIDTH: 2 5/16"
HEIGHT: 2 3/8"
THICKNESS: 1 15/16"
REQUIRED INSTALLATION TOOL: TORQUE WRENCH
REQUIRED TORQUE: 65 FT.-LBS.
CAPACITY: 80% OF THE ROPE'S CAPACITY
SPECIFICATIONS MET ASME B30.26, FED. SPEC. FF-C-450



Delta shape: developed after the ever-increasing development of webbing-fitted systems; perfect for webbing uphold onto its lower flat part.

Reference	Diameter		Dimensions - mm										Weight		Quote	
	mm	inches	L.T.	L11	L12	H.T.	H.L.	O	E	R	T	g	kg	lb	Qty	
MRC202.5	2.5	3/32"	22	10	17	27	22	3.5	8	3.5	3.5	3	25	125		
MRC203.6	3	7/64"	27	12.5	21	30	24	4	9	4.25	4	6	40	200		
MRC203.5	3.5	1/8"	31	14	24	36	29	5	11	5	5	9	70	350		
MRC204.8	4	5/32"	35.5	16	27.5	40	32	5.5	12.5	5.75	6	14	100	500		
MRC205.8	5	3/16"	40	17	30	46	38	6.5	16	6.5	7	23	150	750		
MRC206.6	6	1/4"	47	20.5	35	56	44	7.5	19	7.25	9	39	250	1250		
MRC207.6	7	9/32"	51	21	37	63	49	8.5	21.5	8	10	58	400	2000		
MRC208.6	8	5/16"	56	22.5	40	73	57	10	24	8.85	11	86	550	2750		
MRC209.6	9	3/8"	60	23	42	78	60	11	26	9.5	12	115	700	3500		
MRC210.6	10	7/16"	66	25.5	46	87	67	12	29	10.25	13	153	900	4500		
MRC212.6	12	1/2"	75	27.5	51	104	80	15	33	11.75	15	256	1100	5500		
MRC214.6	14	9/16"	85	30.5	57	123	95	17	38.5	13.25	17	404	1800	9000		
MRC216.6	16	5/8"	93	31.5	61	138	106	19	45	14.75	19	612	2200	11000		
MRC218.6	18	11/16"	102	32.5	66	155	119	23	52	16.25	22	845	2600	13000		
MRC220.6	20	25/32"	112	31.5	72	176	136	24	60	17.75	24	1185	3000	15000		

25/32 QUICK LINK UNITS CONVERSION

LT	L11	L12	HT	HR	O	E	R	T	WEIGHT	WORKING LOAD	BREAKING LOAD
[in]	[lb]	[lb]	[lb]								
4.409	1.240	2.835	6.529	5.334	0.945	2.362	0.699	0.945	2.61	6613	33669

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 03-123272 INC:
REVIEWED FOR
SS FLS ACS
DATE: 06/02/2023

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CORPORATE HEADQUARTERS
2580 ESTERS BLVD, SUITE 100
DFW AIRPORT, TX, 75261
800-966-5005

CERTIFICATIONS:
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CERTIFICATION NUMBER (NEVADA): 355

CUSTOMER:
El Monte Union HS District

PROJECT NAME:
El Monte High School

LOCATION:
3048 Tyler Ave.
El Monte, CA 91731
MODEL NUMBER:
DSA4183030-19

APPROVED
DIV. OF THE STATE ARCHITECT
APP: 04-19455 PC
REVIEWED FOR
SS FLS ACS CG
DATE: 03/26/2021

STRUCTURE TYPE:
TENSION SAILS
DSA

SIZE: MAXIMUM
30' x 133' MAX. x 15'e

SCALE: NONE

DRAWING SIZE:
D

PRE-CHECK (PC) DOCUMENT
Code - 2019 CBC
A separate project application for construction is required.

Eng. By: JO 06/26/20
Design By: JO 06/26/20
Approved By: JO 06/26/20

DRAWING DESCRIPTION:
REACTIONS

DWG. DSA4183030-19
SHEET 15.2-2000

REV. NC

Multiknit INTERNATIONAL 190/F5 Fire rated specifications

Standard range Revision 0 28-Oct-12

Colour	Shade %	UV Block %	Average GSM	Average Warp break strength kgs	Average Elongation %	Average Weft break strength kgs	Average Elongation %	Average Burst Kpa	Average Burst to Mass ratio
Desert Sand	80	92	185	50	40	72	73	156	0.84
Blue	80	85	185	50	40	72	73	156	0.84
Brown	85	85	185	50	40	72	73	156	0.84
Green	80	85	185	50	40	72	73	156	0.84
Red	80	86	185	50	40	72	73	156	0.84
Silver	80	81	185	50	40	72	73	156	0.84
Terracotta	75	82	185	50	40	72	73	156	0.84
Yellow	80	89	185	50	40	72	73	156	0.84

CONVERSION TO IMPERIAL UNITS:
185 GSM = .0378 psf
50 KGS = 110 lb
72 KGS = 159 lb
156 Kpa = 3258 psf

Notes:
- 190/F5 conforms to The California State Fire Marshal Title 19 Test for Small scale Fabrics
- Tear tests are done using a 50mm wide strip and a cross head speed of 500mm/min
- This report has been compiled using the mean results from all tests conducted on the given sample by our Quality Control Laboratory, the information provided is considered to be a good reflection of the relevant properties of the fabric tested. These results must only be used as an indication of the quality and characteristics of the fabric tested. Company cannot be held responsible or liable in any way whatsoever should this information differ to that of a registered testing institution.

Deon Jaubert
General Manager - Multiknit (Pty) Ltd

Tommy Rogers
Managing Director - Multiknit (Pty) Ltd

BASIC LOAD CASES

DEAD LOAD 0.0378 PSF (FABRIC)
FLOOR LIVE LOAD N/A
ROOF LIVE LOAD 5 PSF
ROOF SNOW LOAD 5 PSF
SUPERIMPOSED LOADS N/A

WIND LOAD
ULTIMATE DESIGN WIND SPEED (3 SEC GUST) 115 MPH
VELOCITY PRESSURE qz 25.32 PSF
COMPONENT AND CLADDING qz (CABLE AND CABLE HARDWARE ONLY) 25.32 PSF

SEISMIC LOAD
SEISMIC RESPONSE COEFFICIENTS Cs 1.6
DESIGN BASE SHEAR 22638 LB



12/04/2020