



ADDENDUM NO. 0A

Date: 05/07/2022

Issued by: Sacramento City Unified School District

Project: Bid No 455-2B  
Shade Structures at Various Sites Group 2B

Bidding and Contract Requirements

AD0A.01 The Bid Date has been changed from May 12<sup>th</sup>, 2022, at 2:00 PM to May 16<sup>th</sup>, 2022 at 2:00 PM.

AD0A.02 Refer to Document 00 00 03, SEALS PAGE for DSA#: 02 -120000, 02-120002, 02-120006 & 02-120007

Replace four (4) Seals pages in their entirety with Attachment AD0A.19.  
x DSA Approval Stamp Added

AD0A.03 Refer to Document 00 01 10 TABLE OF CONTENTS, Division 26









AD0A.18 Refer to Rosa Parks MS Drawings PC 04 -120013 Plan Set:

Add Statement of General Conformance – Attachment AD0A.23

Part D- BIDDERS QUESTIONS  
(Not Used)

List of Attachments:

AD0A.19 Document 00 00 03 SEALS PAGES with DSA Stamp (4 Pages)

AD0A.20 DSA Approved 103s for all four sites (76 Sheets)

AD0A.21 Technical Specifications

Bid Number 455-2B  
Shade Structures at Various Sites Group 2B  
ADDENDUM NO.











**DSA 103-19: LISTING OF STRUCTURAL TESTS & SPECIAL INSPECTIONS, 2019 CBC**



## DSA 103-19: LISTING OF STRUCTURAL TESTS & SPECIAL INSPECTIONS (SOILS), 2019 CBC

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**Application Number:**  
02-120000  
**DSA File Number:**  
34-53

**School Name:**  
Earl Warren Elementary School  
**Increment Number:**

**School District:**  
Sacramento City Unified School District  
**Date Created:**  
2022-04-13 23:38:57

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### Geotechnical Reports:

## DSA 103-19: LISTING OF STRUCTURAL TESTS & SPECIAL INSPECTIONS (SOILS), 2019 CBC

<b>Application Number:</b> 02-120000	<b>School Name:</b> Earl Warren Elementary School	<b>School District:</b> Sacramento City Unified School District
<b>DSA File Number:</b> 34-53	<b>Increment Number:</b>	<b>Date Created:</b> 2022-04-13 23:38:57

	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.

	<b>4. CAST-IN-PLACE DEEP FOUNDATIONS (PIERS):</b>	Table 1705A.8		
	Test or Special Inspection	Type	Performed By	Code References and Notes

# DSA 103-19: LISTING OF STRUCTURAL TESTS & SPECIAL INSPECTIONS (SOILS), 2019 CBC

<b>Application Number:</b> 02-120000	<b>School Name:</b> Earl Warren Elementary School	<b>School District:</b> Sacramento City Unified School District
<b>DSA File Number:</b> 34-53	<b>Increment Number:</b>	<b>Date Created:</b> 2022-04-13 23:38:57

<input type="checkbox"/>	a. Inspect drilling operations and maintain complete and accurate records for each pier.	<b>Continuous</b>	<b>PI</b>	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.	<b>Continuous</b>	<b>PI</b>	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	

## DSA 103-19: LISTING OF STRUCTURAL TESTS & SPECIAL INSPECTIONS (SOILS), 2019 CBC

<b>Application Number:</b> 02-120000	<b>School Name:</b> Earl Warren Elementary School	<b>School District:</b> Sacramento City Unified School District
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<input type="checkbox"/>	<b>a. Soil Improvements</b>	<b>Test</b>	<b>GE*</b>	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>b. Inspection of Soil Improvements</b>	<b>Continuous</b>	<b>GE*</b>	* By geotechnical engineer or his or her qualified representative.
<input type="checkbox"/>	<b>c.</b>			



**DSA 103-19: LISTING OF STRUCTURAL TESTS & SPECIAL INSPECTIONS (Concrete), 2019 CBC**

Table 1705A.3; ACI 318-14 Sections 26.12 & 26.13

# DSA 103-19: LISTING OF STRUCTURAL TESTS & SPECIAL INSPECTIONS (Concrete), 2019 CBC

Table 1705A.3; ACI 318-14 Sections 26.12 & 26.13

<b>Application Number:</b> 02-120000	<b>School Name:</b> Earl Warren Elementary School	<b>School District:</b> Sacramento City Unified School District
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	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		

# DSA 103-19: LISTING OF STRUCTURAL TESTS & SPECIAL INSPECTIONS (Concrete), 2019 CBC

Table 1705A.3; ACI 318-14 Sections 26.12 & 26.13

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# DSA 103-19: LISTING OF STRUCTURAL TESTS & SPECIAL INSPECTIONS (Steel and Aluminum), 2019 CBC

1705A.2.1, Table 1705A.2.1; AISC 303-16, AISC 341-16, AISC 358-16, AISC 360-16; AISI S100-16

<b>Application Number:</b> 02-120000	<b>School Name:</b> Earl Warren Elementary School	<b>School District:</b> Sacramento City Unified School District
<b>DSA File Number:</b> 34-53	<b>Increment Number:</b>	<b>Date Created:</b> 2022-04-13 23:38:57

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 checked="" type="checkbox"/>	a. Verify identification of all materials and: • Mill certificates indicate material properties that comply with rev3A6I3P6NT OF GENERAL SERVICES					

DSA 103-19: LISTING OF NATURAL TESTS & SPECIAL INSPECTIONS (Steel and Aluminum), 2019 CBC DS1705A.2.1, Table

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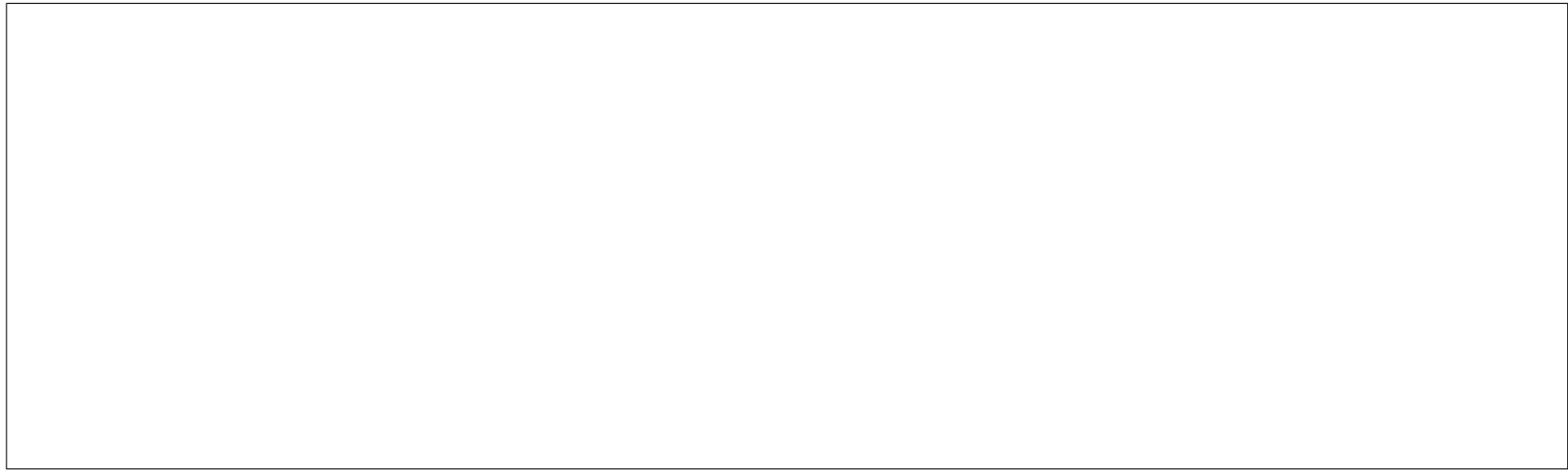
# DSA 103-19: LISTING OF STRUCTURAL TESTS & SPECIAL INSPECTIONS (Steel and Aluminum), 2019 CBC

1705A.2.1, Table 1705A.2.1; AISC 303-16, AISC 341-16, AISC 358-16, AISC 360-16; AISI S100-16

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# DSA 103-19: LISTING OF STRUCTURAL TESTS & SPECIAL INSPECTIONS (Steel and Aluminum), 2019 CBC

1705A.2.1, Table 1705A.2.1; AISC 303-16, AISC 341-16, AISC 358-16, AISC 360-16; AISI S100-16

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# DSA 103-19: LISTING OF STRUCTURAL TESTS & SPECIAL INSPECTIONS (Steel and Aluminum), 2019 CBC

1705A.2.1, Table 1705A.2.1; AISC 303-16, AISC 341-16, AISC 358-16, AISC 360-16; AISI S100-16

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<input type="checkbox"/>	c. Test density.	Test	LOR	1705A.14.5.
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23. ANCHOR BOLTS AND ANCHOR RODS:				
	Test or Special Inspection	Type	Performed By	Code References and Notes
<input checked="" type="checkbox"/>	a. Anchor Bolts and Anchor Rods	Test	LOR	Sample and test anchor bolts and anchor rods not readily identifiable per procedures noted in DSA IR 17-11.
<input type="checkbox"/>	b. Threaded rod not used for foundation anchorage.	Test	LOR	Sample and test threaded rods not readily identifiable per procedures noted in DSA IR 17-11.

Other Steel				
	Test or Special Inspection	Type	Performed By	Code References and Notes
<input type="checkbox"/>	a.			



## Appendix: Work Exempt from DSA Requirements for Structural Tests / Special Inspections

<b>Application Number:</b> 02-120000	<b>School Name:</b> Earl Warren Elementary School	<b>School District:</b> Sacramento City Unified School District
<b>DSA File Number:</b> 34-53	<b>Increment Number:</b>	<b>Date Created:</b> 2022-04-13 23:38:57

<input type="checkbox"/>	3. Non-bearing non-shear masonry walls may be exempt from certain DSA masonry testing and special inspection items as allowed per DSA IR 21-1.16. Refer to construction documents for specific exemptions accordingly for each applicable wall condition.
<input type="checkbox"/>	4. Epoxy shear dowels in site flatwork and/or other non-structural concrete.
<input type="checkbox"/>	5. Testing of reinforcing bars is not required for items given in CBC Section 1910A.2 subject to the requirements and limitations in that section.

	<b>Welding:</b>
<input type="checkbox"/>	1. Solid-clad and open-mesh gates with maximum leaf span or rolling section for rolling gates of 10' and apex height less than 8'-0" above lowest adjacent grade. When located above circulation or occupied space below, these gates are not located within 1.5x gate/fence height (max 8'-0") to the edge of floor or roof.
<input checked="" type="checkbox"/>	2. Handrails, guardrails, and modular or relocatable ramps associated with walking surfaces less than 30" above adjacent grade (excluding post base connections per the 'Exception' language in Section 1705A.2.1); fillet welds shall not be ground flush.
<input type="checkbox"/>	3. Non-structural interior cold-formed steel framing spanning less than 15'-0", such as in interior partitions, interior soffits, etc. supporting only self weight and light-weight finishes or adhered tile, masonry, stone, or terra cotta veneer no more than 5/8" thickness and apex less than 20'-0" in height and not over an exit way. Maximum tributary load to a member shall not exceed the equivalent of that occurring from a 10'x10' opening in a 15' tall wall for a header or king stud.
<input type="checkbox"/>	4. Manufactured support frames and curbs using hot rolled or cold-formed steel (i.e., light gauge) for mechanical, electrical, or plumbing equipment weighing less than 2000# (equipment only) (connections of such frames to superstructure elements using welding will require special inspection as noted in selected item(s) for Sections 19, 19.1 and/or 19.2 of listing above).
<input type="checkbox"/>	5. Manufactured components (e.g., Tolco, B-Line, Afcon, etc.) for mechanical, electrical, or plumbing hanger support and bracing (connections of such components to superstructure elements using welding will require special inspection as noted in selected item(s) for Sections 19, 19.1 and/or 19.2 of listing above).

## Appendix: Work Exempt from DSA Requirements for Structural Tests / Special Inspections

<b>Application Number:</b> 02-120000	<b>School Name:</b> Earl Warren Elementary School	<b>School District:</b> Sacramento City Unified School District
<b>DSA File Number:</b> 34-53	<b>Increment Number:</b>	<b>Date Created:</b> 2022-04-13 23:38:57

<input type="checkbox"/>	6. TV Brackets, projector mounts with a valid listing (see DSA IR A-5) and recreational equipment (e.g., playground structures, basketball backstops, etc.) (connections of such elements to superstructure elements using welding will require special inspection as noted in selected item(s) for section 19, 19.1 and/or 19.2 located in the Steel/Aluminum category).
<input type="checkbox"/>	7. Any support for exempt non-structural components given in CBC Section 1617A.1.18 (which replaces ASCE 7-16, Section 13.1.4) meeting the following: A) when supported on a floor/roof, <400# and resulting composite center of mass (including component's center of mass) above supporting floor/roof, B) when hung from a wall or roof/floor, <20# for discrete units or <5 plf for distributed systems.

# DSA 103-19: LISTING OF STRUCTURAL TESTS & SPECIAL INSPECTIONS(SIGNATURE), 2019 CBC

**Application Number:**  
02-120000  
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34-53

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Earl Warren Elementary School  
**Increment Number:**

**School District:**  
Sacramento City Unified School District  
**Date Created:**  
2022-04-13 23:38:57

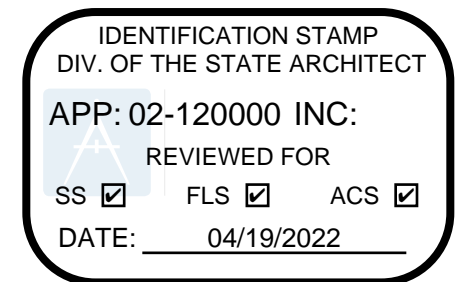
Name of Architect or Engineer in general responsible charge:

Jeffrey Grau

Name of Structural Engineer (When structural design has been delegated):



04/14/22



## DSA 103-19: LIST OF REQUIRED VERIFIED REPORTS, CBC 2019

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<b>Application Number:</b> 02-120000	<b>School Name:</b> Earl Warren Elementary School	<b>School District:</b> Sacramento City Unified School District
<b>DSA File Number:</b> 34-53	<b>Increment Number:</b>	<b>Date Created:</b> 2022-04-13 23:38:57

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1. Structural Testing and Inspection: Laboratory Verified Report Form DSA 291

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2. Post-installed Anchors: Laboratory Verified Report Form DSA 291, or, for independently contracting SI, Special Inspection Verified Report Form DSA 292

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3. Shop Welding Inspection: Laboratory Verified Report Form DSA 291, or, for independently contracting SI, Special Inspection Verified Report Form DSA 292

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4. High-Strength Bolt Installation Inspection: Laboratory Verified Report Form DSA 291, or, for independently contracting SI, Special Inspection Verified Report Form DSA 292

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# DSA 103-19: LISTING OF STRUCTURAL TESTS & SPECIAL INSPECTIONS, 2019 CBC

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Application Number:

02-120002

DSA File Number:

34-53

School Name:

Elder Creek Elementary School

Increment Number:

School District:

Sacramento City Unified School District

Date Created:

2022-04-13 23:48:48

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2019 CBC

IMPORTANT:

# DSA 103-19: LISTING OF STRUCTURAL TESTS & SPECIAL INSPECTIONS (SOILS), 2019 CBC

Application Number: 02-120002 DSA File Number: 34-53	School Name: Elder Creek Elementary School Increment Number:	School District: Sacramento City Unified School District Date Created: 2022-04-13 23:48:48
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Geotechnical Reports: Project does NOT have and does NOT require a geotechnical report

1. GENERAL:		Table 1705A.6		
Test or Special Inspection	Type	Performed By	Code References and Notes	
<input checked="" type="checkbox"/> a. Verify that: <ul style="list-style-type: none"> <li>• Site has been prepared properly prior to placement of controlled fill and/or excavations for foundations.</li> <li>• Foundation excavations are extended to proper depth and have reached proper material.</li> <li>• Materials below footings are adequate to achieve the design bearing capacity.</li> </ul>	See Notes	PI	Refer to specific items identified in the Appendix listing exemptions for limitations. Placement of controlled fill exceeding 12" depth und(• Mater)Tj /6..8	



# DSA 103-19: LISTING OF STRUCTURAL TESTS & SPECIAL INSPECTIONS (SOILS), 2019 CBC

Application Number: 02-120002	School Name: Elder Creek Elementary School	School District: Sacramento City Unified School District
DSA File Number: 34-53	Increment Number:	Date Created: 2022-04-13 23:48:48

	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		

# DSA 103-19: LISTING OF STRUCTURAL TESTS & SPECIAL INSPECTIONS (SOILS), 2019 CBC

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Application Number:  
02-120002  
DSA File Number:  
34-53

School Name:  
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# DSA 103-19: LISTING OF STRUCTURAL TESTS & SPECIAL INSPECTIONS (SOILS), 2019 CBC

Application Number: 02-120002	School Name: Elder Creek Elementary School	School District: Sacramento City Unified School District
DSA File Number: 34-53	Increment Number:	Date Created: 2022-04-13 23:48:48

<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.			

# DSA 103-19: LISTING OF STRUCTURAL TESTS & SPECIAL INSPECTIONS (Concrete), 2019 CBC

Table 1705A.3; ACI 318-14 Sections 26.12 & 26.13

Application Number: 02-120002	School Name: Elder Creek Elementary School	School District: Sacramento City Unified School District
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7. CAST-IN-PLACE CONCRETE				
Test or Special Inspection		Type	Performed By	Code References and Notes
Material Verification and Testing:				
<input checked="" type="checkbox"/>	a. Verify use of required design mix.	Periodic	SI	Table 1705A.3 Item 5, 1910A.1.
<input checked="" type="checkbox"/>	b. Identifiy, sample, and test reinforcing steel.	Test	LOR	1910A.2;

# DSA 103-19: LISTING OF STRUCTURAL TESTS & SPECIAL INSPECTIONS (Concrete), 2019 CBC

Table 1705A.3; ACI 318-14 Sections 26.12 & 26.13

Application Number: 02-120002	School Name: Elder Creek Elementary School	School District: Sacramento City Unified School District
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	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

# DSA 103-19: LISTING OF STRUCTURAL TESTS & SPECIAL INSPECTIONS (Concrete), 2019 CBC

Table 1705A.3; ACI 318-14 Sections 26.12 & 26.13

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<input type="checkbox"/>	a. Inspect shotcrete placement for proper	

# DSA 103-19: LISTING OF STRUCTURAL TESTS & SPECIAL INSPECTIONS (Steel and Aluminum), 2019 CBC

1705A.2.1, Table 1705A.2.1; AISC 303-16, AISC 341-16, AISC 358-16, AISC 360-16; AISI S100-16

Application Number: 02-120002	School Name: Elder Creek Elementary School	School District: Sacramento City Unified School District
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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

# DSA 103-19: LISTING OF STRUCTURAL TESTS & SPECIAL INSPECTIONS (Steel and Aluminum), 2019 CBC

1705A.2.1, Table 1705A.2.1; AISC 303-16, AISC 341-16, AISC 358-16, AISC 360-16; AISI S100-16

Application Number: 02-120002	School Name: Elder Creek Elementary School	School District: Sacramento City Unified School District
DSA File Number: 34-53	Increment Number:	Date Created: 2022-04-13 23:48:48

1705A.211ol Dm83 oot Num502 0.502 0.502 rg q 1 Number:0 m 7 0 I B1 Tf 14 0

<input type="checkbox"/>
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# DSA 103-19: LISTING OF STRUCTURAL TESTS & SPECIAL INSPECTIONS (Steel and Aluminum), 2019 CBC

1705A.2.1, Table 1705A.2.1; AISC 303-16, AISC 341-16, AISC 358-16, AISC 360-16; AISI S100-16

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1705A.2.1, Table 1705A.2.1; AISC 303-16, AISC 341-16, AISC 358-16, AISC 360-16; AISI S100-16

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<input type="checkbox"/>	c. Test density.	Test	LOR	1705A.14.5.
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23. ANCHOR BOLTS AND ANCHOR RODS:				
	Test or Special Inspection	Type	Performed By	Code References and Notes
<input checked="" type="checkbox"/>	a. Anchor Bolts and Anchor Rods	Test	LOR	Sample and test anchor bolts and anchor rods not readily identifiable per procedures noted in DSA IR 17-11.
<input type="checkbox"/>	b. Threaded f 63 /T1_0 1 Tf 10 0 0 10 68.5C0 10 441.86tTj 7 l h f Q 0 i 64.994 289.063 250.2 32.505 re S BT 0 0 0 rg 1 i /T12aET 07 0.827546Test			

## Appendix: Work Exempt from DSA Requirements for Structural Tests / Special Inspections

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02-120002  
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## Appendix: Work Exempt from DSA Requirements for Structural Tests / Special Inspections

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DSA File Number: 34-53	Increment Number:	Date Created: 2022-04-13 23:48:48

<input type="checkbox"/>	3. Non-bearing non-shear masonry walls may be exempt from certain DSA masonry testing and special inspection items as allowed per DSA IR 21-1.16. Refer to construction documents for specific exemptions accordingly for each applicable wall condition.
<input type="checkbox"/>	4. Epoxy shear dowels in site flatwork and/or other non-structural concrete.
<input type="checkbox"/>	5. Testing of reinforcing bars is not required for items given in CBC Section 1910A.2 subject to the requirements and limitations in that section.

	Welding:
<input type="checkbox"/>	1. Solid-clad and open-mesh gates with maximum leaf span or rolling section for rolling gates of 10' and apex height less than 8'-0" above lowest adjacent grade. When located above circulation or occupied space below, these gates are not located within 1.5x gate/fence height (max 8'-0") to the edge of floor or roof.
<input type="checkbox"/>	2. Handrails, guardrails, and modular or relocatable ramps associated with walking surfaces less than 30" above adjacent grade (excluding post base connections per the 'Exception' language in Section 1705A.2.1); fillet welds shall not be ground flush.
<input type="checkbox"/>	3. Non-structural interior cold-formed steel framing spanning less than 15'-0", such as in interior partitions, interior soffits, etc. supporting only self weight and light-weight finishes or adhered tile, masonry, stone, or terra cotta veneer no more than 5/8" thickness and apex less than 20'-0" in height and not over an exit way. Maximum tributary load to a member shall not exceed the equivalent of that occurring from a 10'x10' opening in a 15' tall wall for a header or king stud.
<input type="checkbox"/>	4. Manufactured support frames and curbs using hot rolled or cold-formed steel (i.e., light gauge) for mechanical, electrical, or plumbing equipment weighing less than 2000# (equipment only) (connections of such frames to superstructure elements using welding will require special inspection as noted in selected item(s) for Sections 19, 19.1 and/or 19.2 of listing above).
<input type="checkbox"/>	5. Manufactured components (e.g., Tolco, B-Line, Afcon, etc.) for mechanical, electrical, or plumbing hanger support and bracing (connections of such components to superstructure elements using welding will require special inspection as noted in selected item(s) for Sections 19, 19.1 and/or 19.2 of listing above).

## Appendix: Work Exempt from DSA Requirements for Structural Tests / Special Inspections

Application Number:  
02-120002  
DSA File Number:  
34-53

School Name:  
Elder Creek Elementary School  
Increment Number:

School District:  
Sacramento City Unified School District  
Date Created:  
2022-04-13 23:48:48

<input type="checkbox"/>	

# DSA 103-19: LISTING OF STRUCTURAL TESTS & SPECIAL INSPECTIONS(SIGNATURE), 2019 CBC

Application Number:  
02-120002  
DSA File Number:  
34-53

School Name:  
Elder Creek Elementary School  
Increment Number:

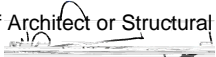
School District:  
Sacramento City Unified School District  
Date Created:  
2022-04-13 23:48:48

Name of Architect or Engineer in general responsible charge:

Jeffrey Grau

Name of Structural Engineer (When structural design has been delegated):

Signature of Architect or Structural Engineer:



Date:

04/14/22

Note: To facilitate DSA electronic mark-ups and identification stamp application, DSA recommends against using secured electronic or digital signatures.

## DSA STAMP

IDENTIFICATION STAMP  
DIV. OF THE STATE ARCHITECT  
APP: 02-120002 INC:  
REVIEWED FOR  
SS  FLS  ACS   
DATE: 04/18/2022



## DSA 103-19: LIST OF REQUIRED VERIFIED REPORTS, CBC 2019

Application Number:  
02-120002  
DSA File Number:  
34-53

School Name:  
Elder Creek Elementary School  
Increment Number:

School District:  
Sacramento City Unified School District  
Date Created:  
2022-04-13 23:48:48

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1. Structural Testing and Inspection: Laboratory Verified Report Form DSA 291

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2. Post-installed Anchors: Laboratory Verified Report Form DSA 291, or, for independently contracting SI, Special Inspection Verified Report Form DSA 292

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3. Shop Welding Inspection: Laboratory Verified Report Form DSA 291, or, for independently contracting SI, Special Inspection Verified Report Form DSA 292

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4. High-Strength Bolt Installation Inspection: Laboratory Verified Report Form DSA 291, or, for independently contracting SI, Special Inspection Verified Report Form DSA 292

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# DSA 103-19: LISTING OF STRUCTURAL TESTS & SPECIAL INSPECTIONS, 2019 CBC

Application Number: 02-120006	School Name: Mark Twain Elementary School	School District: Sacramento City Unified School District
DSA File Number: 34-53	Increment Number:	Date Created: 2022-04-14 00:03:03

## 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.

### KEY TO COLUMNS

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.
Periodic – Indicates that a periodic special inspection is required	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 CAC Section 4-335.
Test – Indicates that a test is required	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.

# DSA 103-19: LISTING OF STRUCTURAL TESTS & SPECIAL INSPECTIONS (SOILS), 2019 CBC

Application Number: 02-120006 DSA File Number: 34-53	School Name: Mark Twain Elementary School Increment Number:	School District: Sacramento City Unified School District Date Created: 2022-04-14 00:03:03
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Geotechnical Reports: Project does NOT have and does NOT require a geotechnical report

1. GENERAL:		Table 1705A.6		
Test or Special Inspection	Type	Performed By	Code References and Notes	
<input checked="" type="checkbox"/> a. Verify that: <ul style="list-style-type: none"> <li>• Site has been prepared properly prior to placement of controlled fill and/or excavations for foundations.</li> <li>• Foundation excavations are extended to proper depth and have reached proper material.</li> <li>• Materials below footings are adequate to achieve the design bearing capacity.</li> </ul>	See Notes	PI	Refer to specific items identified in the Appendix listing exemptions for limitations. Placement of controlled fill exceeding 12" depth und(• Mater)Tj /6..8	



# DSA 103-19: LISTING OF STRUCTURAL TESTS & SPECIAL INSPECTIONS (SOILS), 2019 CBC

Application Number:  
02-120006  
DSA File Number:  
34-53

School Name:  
Mark Twain Elementary School  
Increment Number:

School District:  
Sacramento City Unified School District  
Date Created:  
2022-04-14 00:03:03

<input checked="" type="checkbox"/>	a. Inspect drilling operations and maintain complete and accurate records for each pier.	Continuous	
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# DSA 103-19: LISTING OF STRUCTURAL TESTS & SPECIAL INSPECTIONS (SOILS), 2019 CBC

Application Number: 02-120006	School Name: Mark Twain Elementary School	School District: Sacramento City Unified School District
DSA File Number: 34-53	Increment Number:	Date Created: 2022-04-14 00:03:03

<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.			

# DSA 103-19: LISTING OF STRUCTURAL TESTS & SPECIAL INSPECTIONS (Concrete), 2019 CBC

Table 1705A.3; ACI 318-14 Sections 26.12 & 26.13

Application Number: 02-120006	School Name: Mark Twain Elementary School	School District: Sacramento City Unified School District
DSA File Number: 34-53	Increment Number:	Date Created: 2022-04-14 00:03:03

7. CAST-IN-PLACE CONCRETE				
	Test or Special Inspection	Type	Performed By	Code References and Notes
Material Verification and Testing:				
<input checked="" type="checkbox"/>	a. Verify use of required design mix.	Periodic	SI	Table 1705A.3 Item 5, 1910A.1.
<input checked="" 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 checked="" 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 checked="" type="checkbox"/>	d. Test concrete (¶).	Test	LOR	1905A.1.15; ACI 318-14 Section 26.12.
Inspection:				
<input checked="" type="checkbox"/>	e. Batch plant inspection:	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.		

8. PRESTRESSED / POST-TENSIONED CONCRETE (in addition to Cast-in-Place Concrete tests and inspections):
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# DSA 103-19: LISTING OF STRUCTURAL TESTS & SPECIAL INSPECTIONS (Concrete), 2019 CBC

Table 1705A.3; ACI 318-14 Sections 26.12 & 26.13

Application Number: 02-120006	School Name: Mark Twain Elementary School	School District: Sacramento City Unified School District
DSA File Number: 34-53	Increment Number:	Date Created: 2022-04-14 00:03:03

	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		



# DSA 103-19: LISTING OF STRUCTURAL TESTS & SPECIAL INSPECTIONS (Concrete), 2019 CBC

Table 1705A.3; ACI 318-14 Sections 26.12 & 26.13

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Application Number: 02-120006	School Name: Mark Twain Elementary School	School District: Sacramento City Unified School District
DSA File Number: 34-53	Increment Number:	Date Created: 2022-04-14 00:03:03

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<input type="checkbox"/>	a. Inspect shotcrete placement for proper application teE	

# DSA 103-19: LISTING OF STRUCTURAL TESTS & SPECIAL INSPECTIONS (Steel and Aluminum), 2019 CBC

1705A.2.1, Table 1705A.2.1; AISC 303-16, AISC 341-16, AISC 358-16, AISC 360-16; AISI S100-16

Application Number: 02-120006	School Name: Mark Twain Elementary School	School District: Sacramento City Unified School District
DSA File Number: 34-53	Increment Number:	Date Created: 2022-04-14 00:03:03

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"/>				

# DSA 103-19: LISTING OF STRUCTURAL TESTS & SPECIAL INSPECTIONS (Steel and Aluminum), 2019 CBC

1705A.2.1, Table 1705A.2.1; AISC 303-16, AISC 341-16, AISC 358-16, AISC 360-16; AISI S100-16

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Application Number: 02-120006	School Name: Mark Twain Elementary School	School District: Sacramento City Unified School District
DSA File Number: 34-53	Increment Number:	Date Created: 2022-04-14 00:03:03

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<input type="checkbox"/>
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# DSA 103-19: LISTING OF STRUCTURAL TESTS & SPECIAL INSPECTIONS (Steel and Aluminum), 2019 CBC

1705A.2.1, Table 1705A.2.1; AISC 303-16, AISC 341-16, AISC 358-16, AISC 360-16; AISI S100-16

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Application Number:

02-120006

DSA File Number:

34-53

School Name:

Mark Twain Elementary School

Increment Number:

School District:

Sacramento City Unified School District

Date Created:

2022-04-14 00:03:03

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# DSA 103-19: LISTING OF STRUCTURAL TESTS & SPECIAL INSPECTIONS (Steel and Aluminum), 2019 CBC

1705A.2.1, Table 1705A.2.1; AISC 303-16, AISC 341-16, AISC 358-16, AISC 360-16; AISI S100-16

Application Number: 02-120006	School Name: Mark Twain Elementary School	School District: Sacramento City Unified School District
DSA File Number: 34-53	Increment Number:	Date Created: 2022-04-14 00:03:03

<input type="checkbox"/>	c. Inspect end-welded studs (ASTM A-108) installation (including bend test).	Periodic	SI	2213A.2; AISC 360-16 (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 5a.6; AISC 360-16 (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 S240-15 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 (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 5b, 1705A.3.1, Table 1705A.3 Item 2, 1903A.8; AWS D1.4; DSA IR 17-3.

20. NONDESTRUCTIVE TESTING: 1705A.2.1, Table 1705A.2.1; AISC 303-16, AISC 341-16, AISC 358-16, AISC 360-16; AISI S100-16				
	Test or Special Inspection	Type	Performed By	Code References and Notes
<input type="checkbox"/>	a. Ultrasonic	Test	LOR	1705A.2.1, 1705A.2.5; AISC 341-16 J6.2, AISC 360-16 N5.5; ANSI/ASNT CP-189, SNT-TC-1A; AWS D1.1, AWS D1.8; DSA IR 17-2.

# DSA 103-19: LISTING OF STRUCTURAL TESTS & SPECIAL INSPECTIONS (Steel and Aluminum), 2019 CBC

1705A.2.1, Table 1705A.2.1; AISC 303-16, AISC 341-16, AISC 358-16, AISC 360-16; AISI S100-16

Application Number: 02-120006	School Name: Mark Twain Elementary School	School District: Sacramento City Unified School District
DSA File Number: 34-53	Increment Number:	Date Created: 2022-04-14 00:03:03

<input type="checkbox"/>	b. Magnetic Particle	Test	LOR	1705A.2.1, 1705A.2.5; AISC 341-16 J6.2, AISC 360-16 N5.5; ANSI/ASNT CP-189, SNT-TC-1A; AWS D1.1, AWS D1.8; DSA IR 17-2.
<input type="checkbox"/>	c.	Test	LOR	

21. STEEL JOISTS AND TRUSSES: 1705A.2.1, Table 1705A.2.1; AISC 303-16, AISC 341-16, AISC 358-16, AISC 360-16; AISI S100-16				
	Test or Special Inspection	Type	Performed By	Code References and Notes
<input type="checkbox"/>	a. Verify size, type and grade for all chord and web members as well as connectors and weld filler material; verify joist profile, dimensions and camber (if applicable); verify all weld locations, lengths and profiles; mark or tag each joist.	Continuous	SI	1705A.2.3, Table 1705A.2.3; AWS D1.1; DSA IR 22-3 for steel joists only. 1705A.2.4; AWS D1.3 for cold-formed steel trusses.

22. SPRAY APPLIED FIRE-PROOFING: 1705A.2.1, Table 1705A.2.1; AISC 303-16, AISC 341-16, AISC 358-16, AISC 360-16; AISI S100-16				
	Test or Special Inspection	Type	Performed By	Code References and Notes
<input type="checkbox"/>	a. Examine structural steel surface conditions, inspect application, take samples, measure thickness and verify compliance of all aspects of application with DSA-approved documents.	Periodic	SI	1705A.14.
<input type="checkbox"/>	b. Test bond strength.	Test	LOR	1705A.14.6.



## Appendix: Work Exempt from DSA Requirements for Structural Tests / Special Inspections

Application Number: 02-120006	School Name: Mark Twain Elementary School	School District: Sacramento City Unified School District
DSA File Number: 34-53	Increment Number:	Date Created: 2022-04-14 00:03:03

Exempt items given in DSA IR A-22 or the 2019 CBC (including DSA amendments) and those items identified below with a check mark by the design professional are NOT subject to DSA requirements for the structural tests/special inspections noted. Items marked as exempt shall be identified on the approved construction documents. The project inspector shall verify all construction complies with the approved construction documents.

SOILS:	
<input type="checkbox"/>	1. Deep foundations acting as a cantilever footing designed based on minimum allowable pressures per CBC Table 1806A.2 and having no geotechnical report for the following cases: A) free standing sign or scoreboard, B) cell or antenna towers and poles less than 35'-0" tall (e.g., lighting poles, flag poles, poles supporting open mesh fences, etc.), C) single-story structure with dead load less than 5 psf (e.g., open fabric shade structure, or D) covered walkway structure with an apex height less than 10'-0" above adjacent grade.
<input type="checkbox"/>	2. Shallow foundations, etc. are exempt from special inspections and testing by a Geotechnical Engineer for the following cases: A) buildings without a geotechnical report and meeting the exception item #1 criteria in CBC Section 1803A.2 supported by native soil (any excavation depth) or fill soil (not exceeding 12" depth per CBC Section 1804A.6), B) soil scarification/recompaction not exceeding 12" depth, C) native or fill soil supporting exterior non-structural flatwork (e.g., sidewalks, site concrete ramps, site stairs, parking lots, driveways, etc.), D) unpaved landscaping and playground areas, or E) utility trench backfill.

CONCRETE/MASONRY:	
<input type="checkbox"/>	





## Appendix: Work Exempt from DSA Requirements for Structural Tests / Special Inspections

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# DSA 103-19: LISTING OF STRUCTURAL TESTS & SPECIAL INSPECTIONS(SIGNATURE), 2019 CBC

Application Number:  
02-120006  
DSA File Number:  
34-53

School Name:  
Mark Twain Elementary School  
Increment Number:

School District:  
Sacramento City Unified School District  
Date Created:  
2022-04-14 00:03:03

Name of Architect or Engineer in general responsible charge:

Jeffrey Grau

Name of Structural Engineer (When structural design has been delegated):

Signature of Architect or Structural Engineer:

Date:

04/14/22

Note: To facilitate DSA electronic mark-ups and identification stamp application, DSA recommends against using secured electronic or digital signatures.

## DSA STAMP

IDENTIFICATION STAMP  
DIV. OF THE STATE ARCHITECT  
APP: 02-120006 INC:  
REVIEWED FOR  
SS  FLS  ACS   
DATE: 04/18/2022

## DSA 103-19: LIST OF REQUIRED VERIFIED REPORTS, CBC 2019

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Application Number:  
02-120006  
DSA File Number:  
34-53

School Name:  
Mark Twain Elementary School  
Increment Number:

School District:  
Sacramento City Unified School District  
Date Created:  
2022-04-14 00:03:03

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1. Structural Testing and Inspection: Laboratory Verified Report Form DSA 291

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2. Post-installed Anchors: Laboratory Verified Report Form DSA 291, or, for independently contracting SI, Special Inspection Verified Report Form DSA 292

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3. Shop Welding Inspection: Laboratory Verified Report Form DSA 291, or, for independently contracting SI, Special Inspection Verified Report Form DSA 292

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4. High-Strength Bolt Installation Inspection: Laboratory Verified Report Form DSA 291, or, for independently contracting SI, Special Inspection Verified Report Form DSA 292

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# DSA 103-19: LISTING OF STRUCTURAL TESTS & SPECIAL INSPECTIONS, 2019 CBC

Application Number: 02-120007	School Name: Rosa Parks Middle School	School District: Sacramento City Unified School District
DSA File Number: 34-53	Increment Number:	Date Created: 2022-04-14 00:06:22

## 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.

### KEY TO COLUMNS

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.
Periodic – Indicates that a periodic special inspection is required	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 CAC Section 4-335.
Test – Indicates that a test is required	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.



# DSA 103-19: LISTING OF STRUCTURAL TESTS & SPECIAL INSPECTIONS (SOILS), 2019 CBC

Application Number: 02-120007	School Name: Rosa Parks Middle School	School District: Sacramento City Unified School District
DSA File Number: 34-53	Increment Number:	Date Created: 2022-04-14 00:06:22

	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		
	Test or Special Inspection	Type	Performed By	Code References and Notes

# DSA 103-19: LISTING OF STRUCTURAL TESTS & SPECIAL INSPECTIONS (SOILS), 2019 CBC

Application Number: 02-120007	School Name: Rosa Parks Middle School	School District: Sacramento City Unified School District
DSA File Number: 34-53	Increment Number:	Date Created: 2022-04-14 00:06:22

<input checked="" 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 checked="" 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 2 above).
<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



# DSA 103-19: LISTING OF STRUCTURAL TESTS & SPECIAL INSPECTIONS (SOILS), 2019 CBC

Application Number: 02-120007	School Name: Rosa Parks Middle School	School District: Sacramento City Unified School District
DSA File Number: 34-53	Increment Number:	Date Created: 2022-04-14 00:06:22

<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.			

# DSA 103-19: LISTING OF STRUCTURAL TESTS & SPECIAL INSPECTIONS (Concrete), 2019 CBC

Table 1705A.3; ACI 318-14 Sections 26.12 & 26.13

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# DSA 103-19: LISTING OF STRUCTURAL TESTS & SPECIAL INSPECTIONS (Concrete), 2019 CBC

Table 1705A.3; ACI 318-14 Sections 26.12 & 26.13

Application Number:  
02-120007

School Name:  
Rosa Parks Middle School

School District:  
Sacramento City Unified School District

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# DSA 103-19: LISTING OF STRUCTURAL TESTS & SPECIAL INSPECTIONS (Steel and Aluminum), 2019 CBC

1705A.2.1, Table 1705A.2.1; AISC 303-16, AISC 341-16, AISC 358-16, AISC 360-16; AISI S100-16

Application Number: 02-120007	School Name: Rosa Parks Middle School	School District: Sacramento City Unified School District
DSA File Number: 34-53	Increment Number:	Date Created: 2022-04-14 00:06:22

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 checked="" type="checkbox"/>	a. Verify identification of all materials and: • Mill certificates indicate material properties that comply			

# DSA 103-19: LISTING OF STRUCTURAL TESTS & SPECIAL INSPECTIONS (Steel and Aluminum), 2019 CBC

1705A.2.1, Table 1705A.2.1; AISC 303-16, AISC 341-16, AISC 358-16, AISC 360-16; AISI S100-16

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Application Number:

02-120007

DSA File Number:

34-53

School Name:

Rosa Parks Middle School

Increment Number:

School District:

Sacramento City Unified School District

Date Created:

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# DSA 103-19: LISTING OF STRUCTURAL TESTS & SPECIAL INSPECTIONS (Steel and Aluminum), 2019 CBC

1705A.2.1, Table 1705A.2.1; AISC 303-16, AISC 341-16, AISC 358-16, AISC 360-16; AISI S100-16

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Application Number:

02-120007

DSA File Number:

34-53

School Name:

Rosa Parks Middle School

Increment Number:

School District:

Sacramento City Unified School District

Date Created:

2022-04-14 00:06:22

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# DSA 103-19: LISTING OF STRUCTURAL TESTS & SPECIAL INSPECTIONS (Steel and Aluminum), 2019 CBC

1705A.2.1, Table 1705A.2.1; AISC 303-16, AISC 341-16, AISC 358-16, AISC 360-16; AISI S100-16

Application Number: 02-120007 DSA File Number: 34-53	School Name: Rosa Parks Middle School Increment Number:	School District: Sacramento City Unified School District Date Created: 2022-04-14 00:06:22
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<input type="checkbox"/>	c. Inspect end-welded studs (ASTM A-108) installation (including bend test).	Periodic	SI	2213A.2; AISC 360-16 (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 5a.6; AISC 360-16 (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 S240-15 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 (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 5b, 1705A.3.1, Table 1705A.3 Item 2, 1903A.8; AWS D1.4; DSA IR 17-3.

20. NONDESTRUCTIVE TESTING: 1705A.2.1, Table 1705A.2.1; AISC 303-16, AISC 341-16, AISC 358-16, AISC 360-16; AISI S100-16				
	Test or Special Inspection	Type	Performed By	Code References and Notes
<input type="checkbox"/>	a. Ultrasonic	Test	LOR	1705A.2.1, 1705A.2.5; AISC 341-16 J6.2, AISC 360-16 N5.5; ANSI/ASNT CP-189, SNT-TC-1A; AWS D1.1, AWS D1.8; DSA IR 17-2.



# DSA 103-19: LISTING OF STRUCTURAL TESTS & SPECIAL INSPECTIONS (Steel and Aluminum), 2019 CBC

1705A.2.1, Table 1705A.2.1; AISC 303-16, AISC 341-16, AISC 358-16, AISC 360-16; AISI S100-16

Application Number: 02-120007	School Name: Rosa Parks Middle School	School District: Sacramento City Unified School District
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<input type="checkbox"/>	b. Magnetic Particle	Test	LOR	1705A.2.1, 1705A.2.5; AISC 341-16 J6.2, AISC 360-16 N5.5; ANSI/ASNT CP-189, SNT-TC-1A; AWS D1.1, AWS D1.8; DSA IR 17-2.
<input type="checkbox"/>	c.	Test	LOR	

21. STEEL JOISTS AND TRUSSES: 1705A.2.1, Table 1705A.2.1; AISC 303-16, AISC 341-16, AISC 358-16, AISC 360-16; AISI S100-16				
	Test or Special Inspection	Type	Performed By	Code References and Notes
<input type="checkbox"/>	a. Verify size, type and grade for all chord and web members as well as connectors and weld filler material; verify joist profile, dimensions and camber (if applicable); verify all weld locations, lengths and profiles; mark or tag each joist.	Continuous	SI	1705A.2.3, Table 1705A.2.3; AWS D1.1; DSA IR 22-3 for steel joists only. 1705A.2.4; AWS D1.3 for cold-formed steel trusses.

22. SPRAY APPLIED FIRE-PROOFING: 1705A.2.1, Table 1705A.2.1; AISC 303-16, AISC 341-16, AISC 358-16, AISC 360-16; AISI S100-16				
	Test or Special Inspection	Type	Performed By	Code References and Notes
<input type="checkbox"/>	a. Examine structural steel surface conditions, inspect application, take samples, measure thickness and verify compliance of all aspects of application with DSA-approved documents.	Periodic	SI	1705A.14.
<input type="checkbox"/>	b. Test bond strength.	Test	LOR	1705A.14.6.

# DSA 103-19: LISTING OF STRUCTURAL TESTS & SPECIAL INSPECTIONS (Steel and Aluminum), 2019 CBC

1705A.2.1, Table 1705A.2.1; AISC 303-16, AISC 341-16, AISC 358-16, AISC 360-16; AISI S100-16

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Application Number:  
02-120007

School Name:  
Rosa Parks Middle School

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## Appendix: Work Exempt from DSA Requirements for Structural Tests / Special Inspections

Application Number: 02-120007	School Name: Rosa Parks Middle School	School District: Sacramento City Unified School District
DSA File Number: 34-53	Increment Number:	Date Created: 2022-04-14 00:06:22

Exempt items given in DSA IR A-22 or the 2019 CBC (including DSA amendments) and those items identified below with a check mark by the design professional are NOT subject to DSA requirements for the structural tests/special inspections noted. Items marked as exempt shall be identified on the approved construction documents. The project inspector shall verify all construction complies with the approved construction documents.

	SOILS:
<input type="checkbox"/>	1. Deep foundations acting as a cantilever footing designed based on minimum allowable pressures per CBC Table 1806A.2 and having no geotechnical report for the following cases: A) free standing sign or scoreboard, B) cell or antenna towers and poles less than 35'-0" tall (e.g., lighting poles, flag poles, poles supporting open mesh fences, etc.), C) single-story structure with dead load less than 5 psf (e.g., open fabric shade structure, or D) covered walkway structure with an apex height less than 10'-0" above adjacent grade.
<input type="checkbox"/>	

## Appendix: Work Exempt from DSA Requirements for Structural Tests / Special Inspections

Application Number: 02-120007	School Name: Rosa Parks Middle School	School District: Sacramento City Unified School District
DSA File Number: 34-53	Increment Number:	Date Created: 2022-04-14 00:06:22

<input type="checkbox"/>	3. Non-bearing non-shear masonry walls may be exempt from certain DSA masonry testing and special inspection items as allowed per DSA IR 21-1.16. Refer to construction documents for specific exemptions accordingly for each applicable wall condition.
<input type="checkbox"/>	4. Epoxy shear dowels in site flatwork and/or other non-structural concrete.
<input type="checkbox"/>	5. Testing of reinforcing bars is not required for items given in CBC Section 1910A.2 subject to the requirements and limitations in that section.

	Welding:
<input type="checkbox"/>	1. Solid-clad and open-mesh gates with maximum leaf span or rolling section for rolling gates of 10' and apex height less than 8'-0" above lowest adjacent grade. When located above circulation or occupied space below, these gates are not located within 1.5x gate/fence height (max 8'-0") to the edge of floor or roof.
<input type="checkbox"/>	2. Handrails, guardrails, and modular or relocatable ramps associated with walking surfaces less than 30" above adjacent grade (excluding post base connections per the 'Exception' language in Section 1705A.2.1); fillet welds shall not be ground flush.
<input type="checkbox"/>	3. Non-structural interior cold-formed steel f q 1 0 0 b8 89 59ud b8 0 e15tes IQ 0.5gmy 843t*e87.1partitions,partitionsns,par1sma.ittio..343 cm 0 0 -



# DSA 103-19: LISTING OF STRUCTURAL TESTS & SPECIAL INSPECTIONS(SIGNATURE), 2019 CBC

Application Number:  
02-120007  
DSA File Number:  
34-53

School Name:  
Rosa Parks Middle School  
Increment Number:

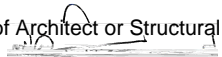
School District:  
Sacramento City Unified School District  
Date Created:  
2022-04-14 00:06:22

Name of Architect or Engineer in general responsible charge:

Jeffrey Grau

Name of Structural Engineer (When structural design has been delegated):

Signature of Architect or Structural Engineer:



Date:

04/14/22

Note: To facilitate DSA electronic mark-ups and identification stamp application, DSA recommends against using secured electronic or digital signatures.

## DSA STAMP

IDENTIFICATION STAMP  
DIV. OF THE STATE ARCHITECT

APP: 02-120007 INC:

REVIEWED FOR

SS  FLS  ACS

DATE: 04/18/2022

## DSA 103-19: LIST OF REQUIRED VERIFIED REPORTS, CBC 2019

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Application Number:  
02-120007  
DSA File Number:  
34-53

School Name:  
Rosa Parks Middle School  
Increment Number:

School District:  
Sacramento City Unified School District  
Date Created:  
2022-04-14 00:06:22

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1. Structural Testing and Inspection: Laboratory Verified Report Form DSA 291

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2. Post-installed Anchors: Laboratory Verified Report Form DSA 291, or, for independently contracting SI, Special Inspection Verified Report Form DSA 292

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3. Shop Welding Inspection: Laboratory Verified Report Form DSA 291, or, for independently contracting SI, Special Inspection Verified Report Form DSA 292

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4. High-Strength Bolt Installation Inspection: Laboratory Verified Report Form DSA 291, or, for independently contracting SI, Special Inspection Verified Report Form DSA 292

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PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Railings and handrails.

1.2 RELATED REQUIREMENTS

A. Section 01 6116, Volatile Organic Compound (VOC) Restrictions; for VOC limits pertaining to adhesives, sealants, fillers, primers, and coatings.

B. Section 32 1600, Site Concrete.

1.3 REFERENCES AND STANDARDS

A. California Building Code (CBC), edition as noted on the Drawings, as adopted by the California Division of the State Architect (DSA).

B. California Green Building Standards Code (CAL Green), edition as noted on the Drawings, as adopted by the California Division of the State Architect (DSA).

C. American Welding Society (AWS):

1. A2.4: Standard Symbols for Welding, Brazing, Nondestructive Examination.
2. B2.1/2.1M: Specification for Welding Procedure and Performance Qualification.
3. D1.1/D1.1M: Structural Welding Code – Steel.

D. ASTM International (ASTM):

1. A36/A36M: Standard Specification for Carbon Structural Steel.
2. A53/A53M: Standard Specification for Pipe, Steel, Black and Hot-Dipped, Zinc-Coated, Welded and Seamless.
3. A123/A123M: Standard Specification for Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products.
4. A153/A153M: Standard Specification for Zinc Coating (Hot-Dip) on Iron and Steel Hardware.
5. A240/A240M: Standard Specification for Chromium and Chromium-Nickel Stainless Steel Plate, Sheet, and Strip for Pressure Vessels and for General Applications.
6. A276A/276M: Standard Specification for Stainless Steel Bars and Shapes.
7. A307: Standard Specification for Carbon Steel Bolts, Studs, and Threaded Rod 60,000 PSI Tensile Strength.
8. A384/A384M: Standard Practice for Safeguarding Against Warpage and Distortion During Hot-Dip Galvanizing of Steel Assemblies.









2. Comply with "Pipe Railing Manual" of National Association of Architectural Metal Manufacturers (NAAMM).

## 2.2 METAL MATERIALS

### A. Steel:

1. Steel Shapes, Plates and Bars: ASTM A36/A36M, unless noted otherwise on plans, except 'W' beams shall conform to ASTM A992/A992M.
2. Sheet: Commercial-quality, cold-rolled, stretcher-leveled, carbon-steel sheet complying with ASTM A1008/A1008M, Class I, matte finish.
3. Hollow Structural Sections (HSS): ASTM A500/A500M, Grade B.
  - a. Square and Rectangular:  $F_y=46$  ksi.
  - b. Round:  $F_y= 42$  ksi.
4. Pipe: ASTM A53/A53M, Type E or S, Grade B,  $F_y=35$  ksi; hot dipped galvanized unless otherwise indicated or specified.
5. Hot-Rolled Carbon-Steel Bars: ASTM A575, grade as selected by fabricator.

### B. Stainless Steel:

1. Alloy: Type 304 at interior, Type 316 at exterior, unless otherwise indicated or specified.
2. Sheet and Plate: ASTM A240/A240M.
3. Bars: ASTM A276/A276M.
4. Tubing for Railings and Guardrails: ASTM A554.
5. Finish on Exposed Surfaces: American Iron and Steel Institute (AISI) N Care B,-011 Tw 284

METAL FABRICATIONS  
SECTION 05 5000  
21-1504

D. Fasteners and Connectors:

1. Bolts and Nuts: ASTM A307, Grade A and supplemental S1.
2. Machine Screws: Cadmium plated steel, Fed. Spec. FF-S-92.
3. Wood Screws: Flat-head carbon steel, Fed. Spec. FF-S-111.
4. Plain Washers: Round, carbon steel, Fed. Spec. FF-W-92.
5. Toggle Bolts: Tumbler-wing type, Fed. Spec. FF-B-588, type, class, and style as required.
6. Lock Washers: Helical spring type carbon steel, Fed. Spec. FF-W-84.
7. Lag Bolts: Square head type, Fed. Spec. FF-B-561.
8. Tamper Resistant Fasteners: Snap-off head, or recessed socket for hex wrench with central pin.
9. Security Fasteners: Unless otherwise noted, security screws and bolts shall be minimum 3/8"-20 stainless steel security socket pin requiring special tool; 8 inches on center maximum.

E. Non-Metallic, Non-Shrink Grout: Premixed, conforming to ASTM C1107/C1107M, with minimum compressive strength of 5000-psi at 28-days.

2.4 GALVANIZING

- A. Surface Preparation Prior to Galvanizing: In accordance with SSPC Specification SP-5, "Commercial Grade Power Tool Cleaning."
- B. The following items shall be hot dip galvanized after fabrication into largest practical section in accordance with ASTM A385/A385M:
  1. Exterior items including those penetrating an exterior wall and only with partial exposure to exterior.
  2. Items embedded in or anchored to concrete at exterior of building even if not directly exposed or visible.
  3. Interior Items: Only where noted or specified to be galvanized.
- C. Comply with ASTM A153/A153M for galvanizing of iron and steel hardware.
- D. Comply with ASTM A123/A123M for galvanizing o





2.7 CUSTOM FABRICATED ITEMS

- A. Pipe Handrails: Fabricate and install as indicated, complete with rails, posts, fittings, brackets and anchorage.
  - 1. Wherever practical, construct bends and sweeps by bending pipe. Use suitable pipe bending jigs to prevent crushing pipe. For short radius bends and sweeps, use formed, flush, welding type fittings.
  - 2. Except where bolted connections are indicated, welding shall comply with the specified "Finishing" requirements.
  - 3. Bolts, fasteners, and miscellaneous items at exterior handrails shall be galvanized.
- B. Railings: Fabricate from material indicated.
  - 1. Ease corners.
  - 2. Pipe shall be smooth without rough spots, voids or other such imperfections, ready for paint.
  - 3. Welding shall comply with the specified "Finishing" requirements.
  - 4. Bolts, fasteners, and miscellaneous items at exterior railings shall be stainless steel or galvanized.
- C. Rough hardware:
  - 1. Provide bent or otherwise custom fabricated bolts, plates, anchors, hanger, dowel, and other miscellaneous steel and iron shapes as required for framing and for anchoring or securing framing to concrete and other structures.
- D. Miscellaneous Framing and Supports:
  - 1. Provide miscellaneous steel framing and supports which are not part of structural steel framework, as required to complete work.
  - 2. Fabricate miscellaneous units to sizes, shapes and profiles shown; or if not shown,



METAL FABRICATIONS  
SECTION 05 5000  
21-1504

2.8 MANUFACTURED ITEMS

A. Handrail Brackets:

1. General:
  - a. Provide handrail brackets complete with hanger bolts at locations as indicated on the Drawings.
  - b. Secure to solid backing or backing plates as indicated on the Drawings.
  - c. Secure to handrail with fasteners in accordance with bracket manufacturer's recommendations.
2. Handrail Brackets with Concealed Fasteners: Julius Blum & Co., Inc. Model No. 378 (curved seat), J.G. Braun Company Model No. 4595 (curved seat), or equal.
  - a. Brackets shall be 3-1/4 inch diameter with a curved seat to receive circular railing centered 2-1/2 inches from face of finish wall.
  - b. Bracket shall be malleable iron for a painted finish.
3. Finishes:
  - a. Channel Supports: Manufacturer's standard prime paint finish.
  - b. Anchors and Fasteners: Galvanized or plated.
  - c. Components, fasteners, and anchors at exterior or exposed to weather shall be galvanized with G90 coating.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Prior to all work of this Section, carefully inspect and verify that the installed work of all other trades is complete to the point where fabrication and installation of the work of this Section may properly commence.
- B. Make all required measurements in the field to ensure proper fit of miscellaneous metal items.
- C. Verify that miscellaneous metal may be fabricated and installed in strict accordance with the original design and the approved Shop Drawings.
- D. In the event of discrepancy, immediately notify the Architect. Do not proceed with fabrication or installation in discrepant areas until discrepancies have been fully resolved.

3.2 PREPARATION

- A. Furnish setting drawings, diagrams, templates, instructions and directions for installation of anchorages, such as concrete inserts, anchor bolts, and miscellaneous items having integral anchors, which are to be embedded in concrete construction. Coordinate delivery of such items to project site.



METAL FABRICATIONS  
SECTION 05 5000  
21-1504

- C. Longitudinal members shall be parallel to each other, to floor surface, or to slope of stairs as shown.
- D. Center line of members within each railing run shall be in same vertical plane.
- E. Adjust railings prior to securing in place to ensure proper matching at butting joints and correct alignment throughout their length. Plumb posts in each direction. Remove any

## PART 1 - GENERAL

### 1.1 SUMMARY

#### A. Section Includes:

1. Code required signage.
2. Exterior building identification and other non-code signage.

### 1.2 RELATED REQUIREMENTS

- A. Section 01 6116, Volatile Organic Compound (VOC) Restrictions; for VOC limits pertaining to adhesives, sealants, fillers, primers, and coatings.
- B. Division 26, Electrical.
- C. Signage requirements included on the Drawings.

### 1.3 REFERENCES AND STANDARDS

- A. California Building Code, edition as noted on the drawings, as adopted by the California Division of the State Architect (DSA).
- B. California Green Building Standards Code (CAL Green), edition as noted on drawings, as adopted by the California Division of the State Architect (DSA).
- C. Title 19, CCR, Article 33.01(i).
- D. American National Standards Institute (ANSI):
  1. A-117.1: Accessible and Usable Buildings and Facilities.
- E. ASTM International (ASTM):
  1. A53/A53M: Standard Specification for Pipe, Steel, Black and Hot-

SIGNAGE  
SECTION 10 1400  
21-1504

1. Prior to production of shop drawings and samples, coordinate a pre-submittal conference with Architect to confirm submittal requirements, schedule, and sign review process.
2. For signs supported by or anchored to permanent construction, advise installers of anchorage devices about specific requirements for placement of anchorage devices and similar items to be used for attaching signs. Provide template for placement of sign-anchorage devices embedded in permanent construction by other installers.



SIGNAGE  
SECTION 10 1400  
21-1504

PART 2 - PRODUCTS

2.1 DESIGN AND PERFORMANCE CRITERIA

A. Regulatory Standards:

1. Except as otherwise specified or shown, signage shall conform to the following:
  - a. ANSI A-

- 1) Pictograms and their field shall have a non-glare finish. Pictograms shall contrast with their field with either a light pictogram on a dark field or a dark pictogram on a light field.
- c. Text Descriptors: Section 11B-703.6.3.
  - 1) Locate text descriptors directly below the pictogram field.
  - 2) Text shall be raised characters with braille directly below.
5. International Symbol of Accessibility: Section 11B-703.7.2.1.
6. Toilet Room Door Symbols: Section 11B-703.7.2.6.
7. Tactile Exit Signs: Tactile exit signage to comply with 1013.4 and 11B-703.4.

C. Sustainable Design:

1. VOC emissions for field-applied adhesives, sealants, and sealant primers must comply with limits specified in Section 01 6116.

D. Materials, Unless Otherwise Noted:

Manufacturer and Product: "Inlaid Tactile Sign" by Accent Signage Systems, Inc. Minneapolis, MN, 800-215-9437 as specified and the basis of design; Ellis & Ellis Sign Systems, Sacramento, CA, 916-924-1936; ASI-Modulex, Los Altos, CA, 650-940-1354; Weidner Architectural Signage, Sacramento, CA; or equal.

1. Sign Face: Two 1/8-inch plies with eased edges; New Hermes "Gravo-Tac," or equal.
  - a. Total Thickness: 1/4 inch.
  - b. Painted signs will not be accepted.
2. Tactile Text: Provide tactile text and "Raster" Braille at plastic tactile signage.
  - a. Tactile text shall be inlaid into sign face 1/32-inch and raised 1/32-inch minimum above sign face surface.
  - b. Inlaid text shall be 1-ply, 1/16-inch thick material; "Gravo-Tac" Exterior or equal.
  - c. Provide text and graphics precisely formed, uniformly opaque to comply with relevant ADA regulations and requirements indicated for size, style, spacing, content, position and colors.
  - d. Symbols where specified shall be International Style.
  - e. Braille shall be Contracted (Grade 2) Braille.
    - 1) Dots shall be 0.10-inch on centers in each cell, 0.30-inch on center between corresponding dots in adjacent cells, and 0.395-inch minimum to 0.400-inch maximum on center between corresponding dots in cell directly below.
    - 2) Dots shall be raised a minimum of 0.025-inch and a maximum of 0.037-inch above the background, and a base diameter of 0.025-inch.



SIGNAGE  
SECTION

- F. Sign Types: Provide braille translation directly below the raised characters.
  - 1. Toilet Room Identification Sign: In addition to the specified Door Symbol, provide a Toilet Room Identification Sign at the strike side of every toilet room door.
    - a. Sign shall include an International Symbol of Accessibility, pictogram, and raised characters, specifying the room name with Braille translation below pictogram.

## 2.2 PLASTIC SIGNS - NON-TACTILE

### A. Materials, Unless Otherwise Noted:

Manufacturer and Product: Acrylic panel sign as manufactured and distributed by Ellis & Ellis Sign Systems, 916-924-1936, as specified and the basis of design, or equal.

- 1. Sign Face: 1/4-inch, matt finish, non-glare acrylic with subsurface vinyl and paint. Painted faces will not be accepted.
- 2. Colors: Colors shall match specified Tactile Signs and as selected by Architect and Owner.
  - a. Integral materials shall be U.V. stabilized.
  - b. Graphics and text shall be in high contrast (light color) with background (dark) color.

### B. Fabrication:

- 1. Sign Thickness: 1/4-inch.
- 2. Character Style, Size and Layout Position:
  - a. Characters shall be a minimum of 1-inch high, unless otherwise indicated.
  - b. The stroke thickness of the uppercase letter "I" shall be 10 percent minimum and 20 percent maximum of the height of the character.
  - c. The width of the uppercase letter "O" shall be 60 percent minimum and 110 percent maximum of the height of the uppercase letter "I".
  - d. Letter style to be Sans Serif, uppercase.
  - e. Space characters 10 percent minimum and 35 percent maximum of height of characters, measured between two closest points of adjacent characters, excluding word spaces.
  - f. Spacing between baselines of separate lines of characters within a message shall be 135 percent minimum and 170 percent maximum of character height.
- 3. Text Schedule: Confirm text, symbols and numbering Architect and Owner using the shop drawing/submittal process.
- 4. Sign Size: As indicated on the Drawings or, if not shown, as reasonably required to accommodate text and symbols.
  - a. Where signs are installed on window glazing, fabricate a blank sign back to match in size and shape to sign.
  - b. Sign backs will cover back side of sign from view through window on opposite side of sign.



1. Gate Sign: 4-inch high lettering in all caps to read: "EXIT".
  - a. Provide at exit gate(s) as shown.
  - b. Colors: As selected by Architect.

### PART 3 - EXECUTION

#### 3.1 EXAMINATION



PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Floor-supported, overhead-braced, solid plastic toilet partitions.
2. Solid plastic urinal screens.

1.2 RELATED REQUIREMENTS

- A. Section 01 6116, Volatile Organic Compound (VOC) Restrictions; for VOC limits pertaining to adhesives, sealants, fillers, primers, and coatings.
- B. Section 10 2800, Toilet Accessories.

1.3 REFERENCES AND STANDARDS

- A. California Building Code (CBC), edition as noted on the Drawings, as adopted by the California Division of the State Architect (DSA).
- B. California Green Building Standards Code (CAL Green), edition as noted on the Drawings, as adopted by the California Division of the State Architect (DSA).
- C. National Fire Protection Agency (NFPA)
  1. NFPA 286: Fire Test for Evaluation Contribution of Wall and Ceiling Interior Finish to Room Fire Growth.
- D. ASTM International (ASTM):
  1. A 167: Standard Specification for Stainless and Heat-Resisting Chromium. Nickel Steel Plate.
  2. B 221: Standard Specification for Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Profiles and Tubes.
  3. E 84: Test Method for Surface Burning Characteristics of Building Materials.

1.4 ADMINISTRATIVE REQUIREMENTS

A. Submittal Procedures:

1. Action Submittals and Informational Submittals shall be submitted in accordance with Section 01 3300, Submittal Procedures.
2. Closeout Submittals shall be submitted in accordance with Section 01 7700, Closeout Procedures.

B. Scheduling and Coordination:

PLASTIC TOILET COMPARTMENTS  
SECTION 10 2113  
21-1504

1. Floor anchor plates for partitions shall be secured to structural subfloor prior to installation of mortar setting bed for tile floor.
2. Coordinate with placement of support framing and anchors in walls.

1.5 ACTION SUBMITTALS

- A. Shop Drawings: Submit plan, interior elevations and details showing components, connections and anchorages, adjacent materials, fully dimensioned and noted. Include blocking layout for use in structural framing.
- B. Product Data: Submit list and manufacturer's complete descriptive data of products proposed for use. Include manufacturer's installation and maintenance instructions.
- C. Samples:
  1. 6-inch-square or larger sample of panel corner in selected color, showing core, edge treatment, and corner treatment.
  2. Manufacturer's full range of colors for Architect's selection.
  3. Hardware samples, if requested by Architect.

1.6 INFORMATIONAL SUBMITTALS

- A. Qualification Data: For manufacturer and installer.
- B. Certification: Submit certification showing independent testing that compartments comply with NFPA 286.
- C. Evidence that plastic panels are Greenguard Certified
- D. Sample of manufacturer's warranty.

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- D. All materials, components, assemblies, workmanship and installation are to be observed by the Owner's Project Inspector. Work not so inspected is subject to uncovering and replacement.

1.9 DELIVERY, STORAGE AND HANDLING

- A.





## PLASTIC TOILET COMPARTMENTS

PLASTIC TOILET COMPARTMENTS  
SECTION 10 2113  
21-1504

5. On outswing doors, door keeper shall prevents door from swinging in beyond stile.
  6. Bumper: Extruded black vinyl.
- E. Locking: Door locked from inside by sliding door latch into keeper.
- F. Coat Hook and Bumper:
1. Combination type.
  2. Equip outswing doors at accessible compartments with second door pull and door stop.
  3. Mount hook at 48-inches above the finished floor in center of door on the inside of the stall.
- G. Door Pulls:
1. Provide door pull and wall stop for outswinging doors.
  2. Equip doors to accessible stall with both inside and outside pulls.
  3. Pulls shall be "U" shaped.
- H. Fasteners: As recommended by partition manufacturer and the following:
1. Use stainless steel hardware to attach panel-to-stile brackets, coat hooks, and latch keepers.
  2. Exposed Bolts and Screws: Theft-resistant, one-way heads, stainless steel, ASTM A167; Type 304, pinhead Torx screws.

2.6 COLORS AND FINISHES

- A. Color of HDPE: match existing.
- B. Stainless Steel: No. 4 satin finish.
- C. Aluminum: Clear Anodized.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Prior to installation, carefully inspect and verify that the installed work of other trades is complete to the point where this installation may properly commence.
- B. Verify that toilet partitions may be installed in complete accordance with the original design. Verify solid blocking has been provided in walls and ceilings at all partition and

3.2 INSTALLATION

A. General:

1. Install all toilet partitions and screens where indicated on the Drawings and reviewed shop drawings, anchoring

PLASTIC TOILET COMPARTMENTS  
SECTION 10 2113  
21-1504

3.5 CLEANING

- A. Upon completion, and as a condition of acceptance, visually inspect the entire work of

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Toilet accessories.

1.2 RELATED REQUIREMENTS

A. Section 10 2113, Plastic Toilet Compartments.

B. Division 26, Electrical.

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TOILET ACCESSORIES  
SECTION 10 2813  
21-1504

1.8 QUALITY ASSURANCE

A.

1. Manufactured accessories not specified shall require approval as a substitution to be considered equal. Refer to substitution requirements specified in Section 01 3300, Submittal Procedures.
2. Although multiple manufacturers may be specified for a specific accessory, all accessories shall be the product of a single manufacturer, unless otherwise specified or approved.

### 2.3 MANUFACTURED UNITS

- A. Grab Bars: 18 gauge 1-1/2 inch outside diameter, type 304 stainless steel welded to 1/8 inch type 304 solid stainless steel wall plates; Bobrick Series B-6806, Bradley 812 Series, or equal.
  1. Configurations and Lengths: As shown.
  2. Grab bar shall withstand a 250 pound point load.
  3. Joints ground and polished.
  4. Finish on Exposed Surfaces: Satin.
  5. Fastening: Concealed, vandal resistant.

### 2.4 FASTENINGS

- A. Toilet accessories shall be complete with required fastenings.
- B. Fastenings shall either harmonize with the item being fastened, or be of the concealed type.
- C. Exposed fastenings shall be theft and vandal-resistant.

## PART 3 - EXECUTION

### 3.1 EXAMINATION

- A. Prior to installation of the Work of this Section, carefully inspect and verify that the installed Work of other trades is complete to the point where this installation may properly commence.
- B. Verify that specified items may be installed in accordance with the approved design.
- C. In the event of discrepancy, immediately notify the Architect. Do not proceed in discrepant areas until discrepancies have been fully resolved.

### 3.2 PREPARATION

- A.



TOILET ACCESSORIES  
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- C. Securely fasten grab bar mounting plates to solid framing or blocking, in accordance with CBC.

3.3 INSTALLATION

- A. Grab bars: Solidly anchor grab bars to withstand minimum downward pull of 500 pounds between any 2 supports after installation.
- B. Sealants: Comply with requirements of Section 07 9200, Joint Sealants.

3.4 CLEANING AND ADJUSTING

- A. Upon completion of installation, remove manufacturer's temporary labels, marks of identification.
- B. Thoroughly wash surfaces, remove foreign materials, polish surfaces.
- C. Leave entire accessories in neat, orderly, clean, acceptable condition as approved.
- D. Replace damaged parts, surfaces which are not free from imperfections.

3.5 PROTECTION

- A. Protect Work and materials of this Section prior to and during installation, and protect the installed Work and materials of other trades.
- B. In the event of damage, make repairs and replacements necessary to the approval of the Architect at no additional cost to the Owner.
- C. Exposed finish shall be free from scratches, dents, permanent discolorations and other defects in workmanship or material.

END OF SECTION

PART 1 GENERAL

1.1 SCOPE

- A. Furnish and install all electrical systems as shown and specified, including wiring and connections to certain equipment furnished by others and any work not specifically noted but that can be reasonably inferred or is necessary to provide a complete functional system.
- B. There is no pre-bid equipment or materials for this project. Contractor shall order, furnish, and install all materials and equipment required for a complete and fully functional installation. All costs for material and installation shall be included in Contractors bid.
- C. Contractor shall guarantee installation, material and equipment for a period of one (1) year from date of final completion.
- D. It is mandatory for all bidders to attend the pre-bid walk.

1.2 RELATED WORK SPECIFIED ELSEWHERE

- A. Section 01 7329 – Cutting and Patching
- B. Section 01 3516 – Alteration Project Procedures
- C. Section 07 8400 – Fire Stopping

1.3 PRODUCT HANDLING

- A. Contractor shall be responsible for delivery, storage, protection and placing of all equipment and materials.
- B. Pro6.3 (ng)]TJ 0 Tc 0nb.3 (ng)]TJ 0 Tc .oM -0.05c 0.002 Tw13M -0..3 (er)-3.C6.3 (non 0 Tc .o4 (e,)7.cor)7.3

ELECTRICAL BASIC MATERIALS AND METHODS  
SECTION 26 0510  
21-1504

1.5 INSPECTIONS

- A. Inspections required during construction shall be arranged by the Contractor. On completion of the work, furnish Engineer with certificates of inspection

1.6 DRAWINGS AND SPECIFICATIONS

- A. Information presented in the specifications and on the drawings are as exact as could be secured but their extreme accuracy is not guaranteed. The Drawings and Specifications are for the assistance and guidance of the Contractor, and exact locations, distances, levels, etc., will be governed by the site and building, and the Contractor shall accept same with this understanding.
- B. The drawings indicate schematically the layouts of equipment, accessories and wiring systems

regarded as general only and shall not relieve the Contractor from complying with the requirements of the Drawings and Specifications; the Contractor shall be responsible, at his own expense, for any damage caused by proposed substitutions, which affect other parts of his own work or the work of other contractors.

- C. Only one proposed substitution will be considered for each item. No consideration will be given to substitutions past 10 day limit. Should the original submittal of a proposed substitution be rejected, the specified item shall be furnished.
- D. The submittal of a proposed substitution shall clearly establish the following:
  - 1. The item can be transported into and installed in the intended space and in the manner shown.
  - 2. Required connections (electrical, conduit, and other) can be properly made and adjoining work can be properly accomplished.
  - 3. The proposed substitute is similar to and of substance equal to that specified, is suited to the same use as that specified, and will perform the functions required by design.
- E. By submitting a proposed substitution, the Contractor agrees to the following:
  - 1. He will assume full responsibility for any and all modifications necessary alterations arising from the use of the substitute item or material including all cost incurred by all other trades.
  - 2. He will assume full responsibility for any delay in the construction schedule resulting from the use of the substitution.
  - 3. He will prove harmless and indemnify the Owner and the Owner's design consultants from real or alleged damages that may result from the installation, use, or performance of a substitute material product.
- F. The following conditions apply to substitutions:
  - 1. Submittals of substitutions are not and do not become part of the contract documents.
  - 2. Contractor shall not order, fabricate, use, or install any substitute product or procedure unless he has received acceptance of the substitution from the Engineer.
  - 3. Should the Contractor install any substitute product in violation of the above he shall remove it and install the specified product at his own expense.
  - 4. The Contractor shall provide a letter stating that all the above items shall apply to all substituted products and equipment.
  - 5. Any submittal for substituted equipment or product that does not clearly show that the substituted item is equal shall be rejected and no further submittal shall be allowed on the substituted item. Provide in submittal format documentation that the proposed item is exactly as specified in the contract documents.

#### 1.11 SHOP DRAWINGS AND SUBMITTALS

- A. General
  - 1. Within 15 calendar days after award of the Contract, and before fabrication and installation of any material, submit for approval six copies of complete submittal data containing complete information and catalog cuts, shop drawings, and other data on all



1.12 WORKMANSHIP

- A. Good workmanship shall be evidenced in the installation of all electrical materials and equipment. Equipment shall be level, plumb and true with the structure and other equipment. All materials shall be firmly secured in place and adequately supported and permanent. The requirements of the codes are mini







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2.4 ELECTRIC METALLIC TUBING (EMT)

- A. Shall be galvanized steel, thin wall. Maximum trade size to be used shall be 4". May not be used underground, under floor, exposed to weather, in concrete, or in any location subject to physical damage.
- B. Connectors and couplings shall be steel rain-tight compression type requiring the tightening of a nut for trade sizes ¾-inch and smaller and set screw type for 1-inch and greater, all with insulated throat.

2.5 FLEXIBLE STEEL CONDUIT

- A. Shall be galvanized steel with minimum trade size of 1/2". In wet and corrosive locations, outside, or motor connections, shall be liquid-tight. May be used to connect recessed lighting fixtures or mechanical controls and equipment. Length shall be kept to a minimum but to allow for movement or removal of equipment. Leave slack in flex connection to maintain flexibility of conduit, minimum of 3' of flex & one (1) 90° bend.
- B. Connectors shall be tite-bite type with insulated throat Crouse-Hinds Series ACB or T & B Series 3110; connectors for liquid-tight shall be with insulated throat Crouse-Hinds Series LTC or T & B Series 5331 with sealing "O"- ring at outside of enclosure.

2.6 INTERMEDIATE METAL CONDUIT

- A. Lightweight rigid steel conduit, light wall, with threaded fittings. Conduit shall be zinc coated on both inside and outside by hot dipping or sherardizing process, use only threaded connections, coupling or fittings.
  - B. Threaded conduit shall be interchangeable with standard rigid steel conduit fittings. Fitting shall be standard rigid steel conduit fittings.
- B. Threaded conduit shall be interchangeable with standard rigid steel conduit fittings. Fitting shall be standard rigid steel conduit fittings.



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- C. Control conductors may be black or color other than shown above.
- D. Conductors in sizes up through #8 AWG shall have solid color finish as listed above. #6 AWG and larger shall be color coded by either solid color finish or application of phase tape for minimum of 6" length on conductor. Coding shall occur at all terminations, pull boxes and splices.
- E. Color-coding shall be continuous and consistent throughout the work. Do not use different colors for switch legs, fixture taps, travelers, etc.
- F. Phasing: Terminals in panelboards, motor control centers, switchboards and other equipment shall be phased A, B, C, reading left to right or to.5 (ent)7do]TJ 0.169 Tw [(phas( )TJ -0bl)6.2 (.7 70

# ELECTRICAL BASIC MATERIALS AND METHODS

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- C. GFCI Receptacles: Rated 20 amperes at 125 volts, double sided contact, back side wired, Ivory color.

Manufacturer

be fitted with steel escutcheon plates, chrome or paint finish as directed. Conduits, which penetrate, floor slabs and concrete or masonry walls shall be grouted and sealed watertight at penetration.

#### 3.4 FIRESTOPPING AND FIRE RATED PENETRATION

- A. Maintain fire rating of all fire rated walls, ceilings, floors, roof, etc. Use UL listed Hilti Construction Chemicals, Inc product, suitable for the application. Installation shall also maintain watertight integrity through all penetrations where water may be present. Install in accordance with manufacturer's recommendations and within UL Listing installation requirements.

#### 3.5 EXCAVATION AND BACKFILL

- A. Perform excavation and backfill required for electrical installation. Restore all surfaces, roadways, walks, curbs, walls, existing underground installations to original condition in an acceptable manner.
- B. Install utility locator tape in all trenches.
  - 1. For all trenches, provide a 6-inch-wide non-biodegradable metal-detectable polyethylene tape at 12 inches below grade, 5-mil thick, labeled "CAUTION ELECTRIC LINE BURIED BELOW". Fluorescent red for electric power conduits and fluorescent orange "TELECOMMUNICATIONS" for telephone and signal conduits. Use Fluorescent red for common trenches. Tape shall be continuous for full length of trench.
- E. Excavation: Dig trenches straight and true to line and grade with bottom smooth of any rock points. Support conduit for entire length of undisturbed original finished or natural grade (unless noted otherwise).
  - 1. Backfill: Backfill shall be tamped in six inch (6") layers, with rock free sand to 6" cover above the conduit then Class #2 Road Base to finish grade as directed by settlement. Backfill under floor slabs on grade shall conform to applicable requirements of other sections of the Specifications.

#### 3.6 EQUIPMENT IDENTIFICATION

- A. Nameplates shall

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- F. Coordinate with the local power utility to obtain the available short circuit current for the electrical service. Provide a phenolic label at the main switchboard noting the available short circuit current and the date the information was obtained.

3.7 EQUIPMENT FINISH AND PAINTING

- A. All electrical equipment, including switchboards, switchboard circuit breakers, panelboards, disconnect switches, time switches, contactors, motor starters, pullboxes, cable tap boxes, etc. located in finished areas shall be painted out to match adjacent finish. Coordinate with Architect to confirm color prior to painting.
  - 1. Refer to section 09 9000 Painting and Coating for requirements.

3.8 GROUNDING AND BONDING

- A. Provide grounding and bonding for all electrical equipment in accordance with the applicable codes, rules and regulations. Permane

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- E. Hanger straps, rods, or pipe supports under concrete shall be attached to inserts set at the time the concrete is poured. Under wood use bolts, lag bolts, or lag screws; under steel joists or trusses use beam clamps.
- F. Conduit shall be supported at intervals not exceeding 10 feet and in all cases with support not more than 3 feet from the outlet and at any point where it changes in direction. Perforated strap and plumber's-tape shall not be used in the support of conduits.

FIELD QUALITY CONTROL

- A. Test all wiring and connections for continuity and grounds before any fixtures or equipment are connected and where such tests indicate faulty insulation or other defects, they shall be located, repaired and tested again at the Contractor's expense. Electrical loads shall be balanced at the panelboards and motors shall be checked for correct rotation.
- B. After the installation is completed and at such time as Project Coordinator may direct, conduct an operating test for approval in accordance with NETA Standards. Demonstrate equipment to be in conformance with applicable Codes and operate in accordance with Requirements 23 (a) (5) - 36 (FDOT) 23 (a) 7 (1) - 40



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3.11 CONDUCTOR SPLICING

A. Visual Inspection

1. Inspect cables for physical damage and proper connection in accordance with single line diagram. Inspect conductor strands for scarring. Any scarring shall require the cutting of the cable/conductor end to remove the damaged strands.
2. Splices shall be tested in accordance with NETA 7.3.2.3 TEST VALUES, paragraph 3 “Microhm or millivolt drop values shall not exceed the high levels of the normal range as indicated in the manufacturer’s published data. If the manufacturer’s data is not available, investigate any values which deviate from similar connections by more than 50 percent of the lowest value.
  - a.) In other words; test all of the splices and compare the values. Splices with test values that exceed 50 percent of the lowest value obtained shall be removed and the conductors re-spliced.
3. After the testing of the splice is complete and the application of the shrink insulation perform an “insulation-resistance test on each conductor with respect to ground and adjacent conductors” with an applied potential of 1000 volts per NETA 7.3.2.2 Electrical Tests and specification 26 00 00, section 3.
  - a.) Per NETA 7.3.2.3.4 “minimum insulation-resistance values should not be less than 50 megohms.

ELECTRIC

A. Section Includes:

1. Engineered fill materials.
2. Imported engineered fill material.
3. Landscape backfill material'
4. Aggregate base.

A. Document 01 5000, Temporary Facilities and Controls.

B. Section 01 5713, Erosion Control.

C. Section 31 2333, Trenching and Backfilling.

D. Section 32 1200, Asphalt Concrete Paving.

E. Section 32 1600, Site Concrete.

F. Section 33 4000, Storm Drainage Utilities.

A. California Building Code (CBC), edition as noted on the Drawings, as adopted by the California Division of the State Architect (DSA).

B.

5. D422-63(2007) e1 Test Method for Particle Size Analysis of Soil.
  6. D4318-05 Test Method for Liquid Limit, Plastic Limit, and Plasticity Limit.
- E. CALTRANS Standard Specifications Section 17.
- F. CAL-OSHA, Title 8, Section 1590 (e).
- G. Site survey: Included in the drawings, was prepared by Warren Consulting Engineers, and is the basis for data regarding current conditions. While the survey is deemed generally accurate, there exists discrepancies and variations due to elapsed time, weather, etc. Existing dirt grades may vary 0.2 ft. from that shown.
- A. Submittal Procedures:
1. Action Submittals and Informational Submittals shall be submitted in accordance with Section 01 3300, Submittal Procedures.
  2. Closeout Submittals shall be submitted in accordance with Section 01 7700, Closeout Procedures.
- B. Site Visitation: All bidders interfacing with existing conditions shall visit the site prior to bid to verify general conditions of improvements. Discrepancies must be reported prior to the bid for clarification.

completion of the project. Correcting of inadequate compaction or moisture content is the sole responsibility of the contractor.

- D. Use only new materials and products, unless existing materials or products are specifically shown otherwise on the Drawings to be salvaged and re-used.
- E. All materials, components, assemblies, workmanship and installation are to be observed by the Owner's Project Inspector. Work not so inspected is subject to uncovering and replacement.
- F. Tests (See Part 3, Article "Testing and Observation" for Compaction Testing).
  
- A. Transport, store and handle in strict accord with the local jurisdiction.
  
  
- A. Contractor shall acquaint himself with all site conditions. If unknown active utilities are encountered during work, notify Architect promptly for instructions. Failure to notify will make Contractor liable for damage to these utilities arising from Contractor's operations subsequent to discovery of such unknown active utilities.
- B. Existing civil and electrical improvements are shown on respective site plans to the extent known. Should the Contractor encounter any deviation between actual conditions and those shown, he is to immediately notify the Architect before continuing work.



B. In accordance with generally accepted construction practices, the Contractor shall be

- A. Engineered Fill Materials: All fill shall be of approved local materials supplemented by imported fill if necessary. "Approved" local materials are defined as local soils tested and approved by Geotechnical Engineer free from debris, and concentrations of clay and organics; and contain rocks no larger than 3-inches in greatest dimension. The soil and rock should be thoroughly blended so that all rock is surrounded by soil. This may require mixing of the soil and rock with a dozer prior to placement and compaction. Clods, rocks, hard lumps or cobbles exceeding 3-inches in final size shall not be allowed in the upper 12 inches of any fill.
- B. Imported Engineered Fill Material: Imported fill may be required to complete work. Proposed import fill material shall meet the above requirements; shall be similar to the native soils. Import fill shall meet the above requirements; shall have plasticity index of 15 or less; an Expansion Index of 20 or less; be free of particles greater than three-inch (3") in largest dimension; be free of contaminants and have corrosion characteristics within the acceptable limits. All import fill material shall be tested and approved by Soils Engineer prior to transportation to the site. Proposed fill material shall comply with DTSC guidelines to include Phase 1 environmental site assessment and related tests. Refer to the October 2001 DTSC Information Advisory for clean imported fill material.
1. DTSC TESTING: Site work contractor is to coordinate testing with an analytical lab, hired by the owner, licensed by the State of California for the DTSC testing. The costs associated with testing will be paid by the contractor.
  2. DTSC testing shall include documentation as to the previous land use, location, and history. Soils shall be analyzed for all compounds of concern to ensure the imported soil is uncontaminated and acceptable. Testing shall be performed per the recommendations included in DTSC Imported Fill Advisory



Greater than 10 Acres	Minimum of 8 locations with 4 subsamples per location
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Up to 1,000 Cubic Yards	1 sample per 250 cubic yards
1,000 to 5,000 Cubic Yards	4 samples for the first 1000 cubic yards + 1 sample per each additional 500 cubic yards
Greater than 5,000 Cubic Yards	12 samples for the first 5,000 cubic yards + 1 sample per each additional 1,000 cubic yards

5. Reports/ Documentation
  - a.



- D. If the Contractor should fail to meet the compaction or design requirements embodied in this document and on the applicable plans, he shall make the necessary readjustments until all work is deemed satisfactory, as determined by the Geotechnical Engineer or Architect/Engineer.
  - E. After each rain event Geotechnical Engineer shall test fill material for optimum moisture. Do not place any fill material until desired moisture is achieved.
- 
- A. Prior to grading, remove all debris off-site. Remove trees and brush including the root systems. Holes resulting from tree and brush removal should be prepared and backfilled in accordance with paragraphs 3.7, 3.8, 3.9, and 3.10. This may require deepening and/or widening the holes to adequately remove disturbed soil and provide room for compaction equipment. Strip the surface of all organics.
- 
- A. Do all cutting necessary to bring finish grade to elevations shown on Drawings.
  - B. When excavation through roots is necessary, cut roots by hand.
  - C. Carefully excavate around existing utilities to avoid unnecessary damage. The contractor shall anticipate and perform hand work near existing utilities as shown on the survey, without additional claims or cost.
- 
- A. General: Excavate to bear on firm material at contract depth shown on Drawings.
  - B. Footings: All footing excavations shall be of sufficient width for installation of formwork, unless earth will retain its position during concreting. All portions of footings above grade must be formed. In the event that footings are placed against earth, footing widths below grade shall be increased 2 inches from those shown on Drawings and positive protection shall be provided for top corners of trench.
  - C. Unsuitable Ground: Any errors in structural excavation, soft ground, or clay soils found when excavating shall be reported to Architect. (ngs)-2 (>BDC -0.0R(ai ( )])TJn ex)(on)10.5 .7 (

least 90% of the maximum dry density as determined by ASTM Test Method D1557. If the existing soils are at a water content higher than specified, the contractor shall provide multiple daily aerations by ripping, blading, and/or discing to dry the soils to a moisture content where the specified degree of compaction can be achieved. After seven consecutive working days of daily aerations, and the moisture content of the soil remains higher than specified, the contractor shall notify the architect. If the existing soils have a moisture content lower than specified, the contractor shall scarify, rip, water and blade existing soil to achieve specified moisture content. The contractor shall make proper allowance in schedule and methods to complete this work.

- C. After subgrade for fill within building pad area or within paved areas has been cleared, plowed and scarified, it shall be disked or bladed until uniform and free from large clods, brought to (optimum) (2% above optimum) moisture content and compacted to not less than 90% of maximum dry density, as determined by ASTM Test Method D1557, and such expressed percentage thereof will be minimum acceptable density for specified work.
  - D. Subgrade in areas to receive landscaping shall be compacted to (90%).
  - E. Where Contractor over-excavates building pads through error, resulting excavation shall be recompacted as engineered fill at Contractor's expense.
- 
- A. Selected fill material shall be placed in layers which, when compacted, shall not exceed 6 inches in compacted thickness. Each layer shall be spread evenly and thoroughly mixed to insure uniformity in moisture content.
  - B. Selected fill material shall be moisture-conditioned to specified moisture content. Selected fill material shall be unfrozen. When moisture content of fill material is below that specified, add water until proper moisture content is achieved. When moisture content is above that specified, aerate by blading or other methods mentioned in 3.08 B until moisture content is satisfactory.
  - C. After each layer has been placed, mixed and spread evenly, it shall be thoroughly compacted to a minimum of 90% as determined by the ASTM D1557 Compaction Test. Compact each layer over its entire area until desired density has been obtained.
  - D. **Recompaction of Fill in Trenches and Compaction of Fill Adjacent to Walls:** Where trenches must be excavated, backfill with material excavated. Place in lifts that when compacted do not exceed 6", moisture conditioned to at least 2% above optimum moisture content, and compact to a minimum of 90% relative compaction in building pad and paved areas, and to 90% relative compaction in landscape areas.
  - E. Jetting of fill materials will not be allowed.

- A. Concrete Flatwork: Upper 12" of all subgrades shall be uniformly compacted at specified moisture content to at least 90% of maximum dry density, as determined by ASTM D1557 Compaction Test, regardless of whether final subgrade elevation is attained by filling, excavation, or is left at existing grade. After acceptance of final compaction test, contractor shall maintain the required moisture content of subgrade until concrete flatwork 12.685ofl conclat fex90lor5 07 A.90Conc072-2 (r)-5.9 (et)-6P Dtpper(l)2.6 |

used for turf areas the finish grade on which it is placed shall be lowered to allow for sod thickness.

B. All landscape areas shall be approved by Architect prior to any planting.

A.

- A. Document 01 5000, Temporary Facilities and
  - B. Section 31 0000, Earthwork.
  - C. Section 33 4000, Storm Drainage Utilities.
- 
- A. California Building Code (CBC), edition as no

- A. Guarantee: Submit subcontractor's guarantee.
  
- A. Contractor / Installer shall have been in business for five (5) years providing/finishing similar size projects and complexity.
- B. Use only new materials and products, unless existing materials or products are specifically shown otherwise on the Drawings to be salvaged and re-used.
- C. All materials, components, assemblies, workmanship and installation are to be observed by the Owner's Project Inspector. Work not so inspected is subject to uncovering and replacement.
  
- A. Transport, store and handle in strict accord with the local jurisdiction.
  
- A. Contractor shall acquaint himself with all existing site conditions. If unknown active utilities are encountered during work, notify Architect promptly for instructions. Failure to notify will make Contractor liable for damage to these utilities arising from Contractor's operations subsequent to discovery of such unknown active utilities.
- B. Trench dewatering may be necessary. Contractor shall provide any and all tools, equipment and labor necessary for trench dewatering no matter what the source. Dewatering shall be continuous until all site utilities are installed and backfilled.
  
- A. Adequate protection measures shall be provided to protect workers and passers-by on and off the site. Adjacent property shall be fully protected throughout the operations. Blasting will not be permitted. Prevent damage to adjoining improvements and properties both above and below grade. Restore such improvements to original condition should damage occur. Replace trees and shrubs outside building area disturbed by operations. Repair all trenches in grass areas with new sod (seeding not permitted) and "stake-off" for protection.
- B. Contractor shall be solely and completely responsible for working conditions at the job site, including safety of all persons and property during performance of the work. This requirement shall apply continuously and shall not be limited to normal working hours.
- C. Any construction review of the Contractor's performance conducted by the Architect or Owner is not intended to include review of the adequacy of the Contractor's safety measures, in, on or near the construction site.
- D. Provide shoring, sheeting, sheet piles and or bracing to prevent caving, erosion or gulling of sides of excavation.



- E. Surface Drainage: Provide for surface drainage during period of construction in manner to avoid creating nuisance to adjacent areas. Keep all excavations free from water during entire progress of work, regardless of cause, source or nature of water.
  - F. Adjacent streets and sidewalks shall be kept free of mud, dirt or similar nuisances resulting from earthwork operations.
  - G. The site and adjacent influenced areas shall be watered as required to suppress dust nuisance.
  - H. Trees: Carefully protect existing trees which are to remain.
- 
- A. General Contractor shall be solely responsible for safety design, construction and coordination with agencies having jurisdiction. If such plan varies from shoring system standards established by Construction Safety Orders, plan shall be prepared by registered civil or structural engineer.
  - B. Nothing herein shall be deemed to allow use of shoring, sloping or protective system less effective than that required by Construction Safety Orders of California State Division of Industrial Safety.
  - C. When trenching through paved surface, provide steel trench plates to cover open trenches daily until trenches are backfilled.
- 
- A. No backfill material shall be placed, spread or rolled during



4. Water pipe – Domestic Supply: 30 inches
- A. Pipe Trench Backfill is divided into three zones:
1. Bedding: Layer of material directly under the pipe upon which the pipe is laid.
  2. Pipe Zone: Backfill from the top of the bedding to 6 inches (compacted) over the top of the pipe.
  3. Upper Zone: Backfill between top of Pipe Zone and to surface of subgrade.
- B. Bedding: Type of material and degree of compaction for bedding backfill shall be as defined in the Details and Specifications.
- C. Pipe Zone and Upper Zone Backfill:
1. Type of material and degree of compaction Pipe Zone and Upper Zone Backfill shall be as required by Drawings, Details, & Specifications.
  2. Upper Zone Backfill shall not be placed until conformance of Bedding and Pipe Zone Backfill with specified compaction test requirements has been confirmed.
  3. Backfill shall be brought up at substantially the same rate on both sides of the pipe and care shall be taken so that the pipe is not floated or displaced. Material shall not be dropped directly on pipe.
- D. Backfill Compaction:
1. Backfill shall be placed in layers which, when compacted shall not exceed 6 inches in thickness. Each layer shall be spread evenly and thoroughly mixed to insure uniformity. Do not backfill over, wet, frozen or soft subgrade surfaces. Employ a placement method that does not disturb or damage foundation walls, perimeter drainage, foundation damp-proofing, waterproofing or protective cover.
  2. When moisture content of fill material is below that required to achieve specified density, add water until proper moisture content is achieved. When moisture content is above that required, aerate by blading or other methods until specified moisture content is met; see Section 31 0000, Part 3, Article "Subgrade Preparation".
  3. After each layer has been placed, mixed and spread evenly, it shall be thoroughly compacted to 90% of maximum dry density while at specified moisture content. Compact each layer over its entire area until desired density has been obtained.
  4. Compaction: All backfill operations shall be observed by the Inspector of Record and/or Geotechnical Engineer. Field density tests shall be made to check compaction of fill material. If densities are not satisfactory, Contractor will be required to change equipment or procedure or both, as required to obtain specified densities. Notify Inspector and Architect at least 24 hours in advance of any operation.
- E. Backfill in Areas Previously Lime or Cement Treated



A. Section Includes:

1. Aggregate.
2. Asphalt paving.
3. Seal coat.
4. Wood headers and stakes.
5. Pavement marking.
6. Precast concrete bumpers.

A. Document 01 5000, Temporary Facilities and Controls.

B. Section 01 6116, Volatile Organic Compound (VOC) Restrictions, for VOC limits pertaining to adhesives, sealants, fillers, primers, and coatings.

C. Section 31 0000, Earth Retention Systems.

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A.



depth of the section. Apply tack coat to vertical surfaces before installing new work. Warp carefully to flush surface, with seal over joints, and feather edge. Sawcut, remove and patch existing paving where cutting is necessary for installation of piping or conduits under Divisions 15, 16 and 33.

8. Seal Coat:

- a. Seal coat shall be applied no sooner than 30 days from time of asphalt placement.
- b. Surface Preparation: surface and cracks shall be clean of all dirt, sand, oil or grease. All cracks shall be filled to a level condition after curing. Make multiple fill applications until a level condition is achieved. Failure to do so will be the reason for rejection. Hose down entire area with a strong jet of

widths indicated with a tolerance of 1/4 inch on straight sections and 1/2 inch on curved sections.

- D. Colors: As directed by Architect
- E. Precast Concrete Bumpers: Install where shown, using steel dowels, and epoxy applied for length to wheel stop without damage to bumpers or asphalt concrete paving.
- A. Upon completion of work of this Section promptly remove from the working area all scraps, debris and surplus material of this Section.
- B. Clean excess material from surface of all concrete walks and utility structures.

A. Section Includes:

1. Concrete curbs and gutters.
2. Concrete pavement, sidewalks and ramps.
3. Steel reinforcing for flatwork and curbs.
- 4.

1. A615/A615M: Standard Specification for Deformed and Plain Carbon-Steel Bars for Concrete Reinforcement.
2. A706/A706M: Standard Specification for Deformed and Plain Low-Alloy Steel Bars for Concrete Reinforcement.
3. C33/C33M: Standard Specification for Concrete Aggregates.
4. C94/C94M: Standard Specification for Ready-Mixed Concrete.
5. C143/C143M: Standard Test Method for Slump of Hydraulic-Cement Concrete.
6. C150/C150M: Standard Specification for Portland Cement.
7. C260/C260M: Standard Specification for Air-Entraining Admixtures for Concrete.
8. C309: Standard Specification for Liquid Membrane-Forming Compounds for Curing Concrete.
9. C330/C330M: Standard Specification for Lightweight Aggregates for Structural Concrete.
10. C494/C494M: Standard Specification for Chemical Admixtures for Concrete.
11. C618: Standard Specification for Coal Fly Ash and Raw or Calcined Natural Pozzolan for Use in Concrete.
12. C920: Standard Specification for Elastomeric Joint Sealants.
13. C1107/C1107M: Standard Specification for Packaged Dry, Hydraulic Cement Grout (Non-Shrink).
14. C1315: Standard Specification for Liquid Membrane-Forming Compounds Having Special Properties for Curing and Sealing Concrete.
15. D1751: Standard Specification for Preformed Expansion Joint Filler for Concrete Paving and Structural Construction (Nonextruding and Resilient Bituminous Types).
16. D5893/D5893M: Standard Specification for Cold Applied, Single Component, Chemically Curing Silicone Joint Sealant for Portland Cement Concrete Pavements.

E. Concrete Reinforcing Steel Institute (CRSI):

1. Manual of Standard Practice.
2. Placing Reinforcing Bars.

F. State of California, Department of Transportation (Caltrans):

1. Division of Engineering Services:
  - a. California Test 342: Method of Test for Surface Skid Resistance with the California Portable Skid Test.
2. Standard Specifications.
  - a. Section 51, Concrete Structures.
  - b. Section 52, Reinforcement.
  - c. Section 73, Concrete Curbs and Sidewalks.
  - d. Section 90, Concrete.

G. US Government General Services Administration (GSA/SAE):

1. GSA/SAE AMS-STD-595A: Colors Used In Government Procurement.

A. Submittal Procedures:

1. Action Submittals shall be submitted in accordance with Section 01 3300, Submittal Procedures.
2. Closeout Submittals shall be submitted in accordance with Section 01 7700, Closeout Procedures.

A. Shop Drawings: Joint pattern layout for walks and pavement.

B. Product Data:

1. A complete list of materials proposed to be used for the site concrete work including, but not limited to, sand, gravel, admixtures, surface treatments, coloring agents, sealers, cast-in-place accessories, forming and curing products, concrete mix designs, reinforcing materials, joint materials, curing materials, and detectable warning surface.
2. Manufacturer's descriptive literature for products proposed for use. Include installation instructions, and maintenance instructions.

C. Concrete Mix Design: The Contractor shall submit three copies of each proposed mix design for each class of concrete in accordance with ACI 301, Sections 3.9 "Proportioning on the Basis of Previous Field Experience or Trial Mixture," or 3.10

2. 2. 2.



B. Delivery tickets as specified for ready-mixed concrete.

C. Sustainable Design:

1. The following information shall be provided:

- a. Adhesives and Sealants: Evidence of compliance that products meet maximum VOC content limits specified in Section 01 6116.
- b. Paints and Coatings: Evidence of compliance that products meet maximum VOC content limits specified in Section 01 6116.

A. Guarantee: Submit subcontractor's guarantee.

A. Qualifications:

1. Manufacturer of ready-mixed concrete products shall meet ASTM C94/C94M requirements for production facilities and equipment.

B. Design, erect, support, brace and maintain foamjEMC /LB.3 (,)( s)-2 (uppo)(i)13.5 (11.3 (f)-6.6 (o)-6 (an



- D. The Contractor shall conform to ACI 305R when mixing and placing concrete during hot weather. When air temperature exceeds 100 degrees F adjust concrete mix with retarding admixture in design mix, and adequately test and take additional measures as directed by concrete supplier.
- E. The Contractor shall maintain access for vehicular and pedestrian traffic as required for other construction activities. Use temporary striping, flagmen, barricades, warning signs, and warning lights as required.
- F. Placing in hot weather: Comply with ACI 305R



- A. Cement: Portland cement in accordance with ASTM C150/C150M, Type II, low alkali.
- B. Concrete Aggregates: Graded from coarse to fine in accordance with

- C. Glare Reduction Colorant: Concentrated pigment dispersions designed to permanently color concrete; "Chromix L10 Base-Black" by ~~Sika~~ Sika Corporation, or t8 3 T69 (as)-c9Coer

H.





- m. Number of cubic yards in load.
  - n. Admixture content.
  - o. Name of Contractor.
  - p. Name of driver.
  - q. Time loaded and first mixing of concrete.
  - r. Reading of revolution counter.
  - s. Color additive.
5. Ticket shall be transmitted to Project Inspector by truck driver with load identified thereon. Project Inspector will not accept load without load ticket identifying mix and will keep daily record of pours, identifying each truck, its load and time of receipt, and will transmit two copies of record to DSA.
  6. At end of project, Weighmaster shall furnish affidavit to DSA on form satisfactory to DSA, certifying that all concrete furnished is in conformance with proportions established by mix designs.
  7. Placement of concrete shall occur as rapidly as possible after batching and in a manner which will assure that the required quality of the concrete is maintained. In no case may concrete be placed more than 90 minutes from batch time.
    - a. When air temperature is between 85 and 90 degrees F, reduce maximum batching to discharge time from 90 minutes to 75 minutes.
    - b. When air temperature is above 90 degrees F, reduce maximum batching to discharge time to 60 minutes.
  8. Water may be added to the mix only if neither the maximum permissible water-cement ratio nor the maximum slump is exceeded.
    - a. The quantity of water used for each batch shall be accurately measured.
    - b. In no case shall more than 10 gallons of wa( bat)4.3 (c)-2 (h s)6 (.diLBody AMt)-6.7 ( t)4

- A. Remove frost, water, and other foreign materials from form surfaces, reinforcement, and embedded items against which concrete will be placed.
  - B. When the ambient temperature necessitates the use of cold or hot weather concreting, make provisions in advance of concrete placement.
  - C. Before placing concrete, clean tools and equipment, and remove debris from areas to receive concrete.
  - D. Clean reinforcing and other embedded items of coatings, oil, mud and soil that may impair bond with concrete.
  - E. Slab-On-Grade: After subgrade has been approved by Geotechnical Engineer, install specified drainage rock base material to thickness shown. Rock base shall be implemented and compacted in accordance with the Geotechnical Report and recommendations of the Geotechnical Engineer.
- 
- A. Form material shall be straight, true, sound and able to withstand deformation due to loading and effects of moist curing. Materials which have warped or delaminated, or require more than minor patching of contact surfaces, shall not be reused.
  - B. Build forms to shapes, lines, grades and dimensions indicated. Construct formwork to maintain tolerances required by ACI 301. Forms shall be substantial, tight to prevent leakage of concrete, and properly braced and tied together to maintain position and shape. Butt joints tightly and locate on solid backing. Chamfer corners where indicated. Form bevels, grooves and recesses to neat, straight lines. Construct forms for easy removal without hammering, wedging or prying against concrete.
  - C. Space clamps, ties, hangers and other form accessories so that working capacities are not exceeded by loads imposed from concrete or concreting operations.
  - D. Build openings into vertical forms at regular intervals if necessary to facilitate concrete

- I. During and immediately after concrete placing, tighten forms, posts and shores. Readjust to maintain grades, levels and camber.
- J. Concrete Paving, Curbs, Curb and Gutters, Ramps:
  - 1. Expansion Joints: Install at locations indicated, and so that maximum distance between joints is 20 feet for exterior concrete unless otherwise shown. Expansion joint material shall be full depth of concrete section. Recess for snap cap and sealant when required.
  - 2. Curbs, Valley Gutter, and Curb & Gutter: Install expansion joints at 60 feet on center, except when placing adjacent to concrete walks, the expansion joints shall align with the expansion joints shown for the concrete walks. Expansion joint material shall



- D. Keep excavations free of standing water, but moisture condition sub-grade before concrete placement.
- E. Placing: Once started, continue concrete pour continuously until section is complete between predetermined construction joints. Prevent splashing of concrete onto adjacent forms or reinforcement and remove such accumulation of hardened or partially hardened concrete from forms or reinforcement before work proceeds in that area. Free fall of concrete shall not to exceed 4'-0" in height. If necessary, provide lower openings in forms to inject concrete and to reduce fall height.
- F. Remove form spreaders as placing of concrete progresses.
- G. Place footings as monolithic and in one continuous pour.
- H. Compacting: Concrete shall be compacted by mechanical vibrators.
  - 1. Concrete shall be thoroughly worked around reinforcement and embedded fixtures and into corners of forms.
  - 2. Vibrating shall not be applied to concrete which has already begun to initially set or be continued so long as to cause segregation of materials.
- A. Remove without damage to concrete surfaces.
  - 1. Sequence and timing of form removal shall insure complete safety of concrete structure.
  - 2. Forms shall remain in place for not less than the following periods of time. These periods represent cumulative number of days during which temperature of air in contact with concrete is 60 degrees F and above.
    - a. Vertical Forms of Foundations, Walls and All Other Forms Not Covered Below: 5 days.
    - b. Concrete Paving Edge Screeds or Forms: 7 days.
  - 3. Concrete shall not be subjected to superimposed loads (structure or construction equipment) until it has attained its full design strength and not for a period of at least 21 days after placing. Concrete systems shall not be subjected to construction loads in excess of design loads.
- B. Patching: Install specified patching mortar per manufacturer's recommendations. Repairs to defective concrete which affect the strength of any structural concrete

- C. Thoroughly water and soak the subgrade of exterior concrete paving, curbs, curb and gutters, with multiple daily waterings for at least three days or as required to achieve required moisture content prior to the concrete pour in order to place the subgrade soils in full expansion.
  - 1. Provide damming as required to keep standing water within the formed area and to allow for proper saturation and full expansion of the subgrade soils.
  - 2. Remove standing water before concrete placement.
- D. Construction Joints:
  - 1. Keep exposed concrete face of construction joints continuously moist from time of initial set until placing of concrete; thoroughly clean contact surface by chipping entire surface not earlier than 5 days after initial pour to expose clean hard aggregate solidly embedded, or by approved method that will assure equal bond, such as green cutting.
  - 2. If contact surface becomes contaminated with soil, sawdust or other foreign matter, clean entire surface and re-chip entire surface to assure proper adhesion.
- A. Concrete Paving: Finish surface as required by ACI 302.1R using manual and vibrating screeds to place concrete level and smooth.
  - 1. Under no circumstances shall water be added to the top surface of freshly placed concrete.
  - 2. Use “jitterbugs” or other special tools designed for the purpose of forcing the course aggregate below the surface leaving a thick layer of mortar 1 inch in thickness.
  - 3. After tamping the concrete, wood float surface to a true and even plane.
  - 4. After floating with a wood bull float, make 2 passes with a steel Fresno trowel to start sealing the concrete surface.
  - 5. While concrete is still wet but sufficiently hardened to bear a persons’ weight on knee boards, start troweling with a steel hand trowel or a machine trowel in larger areas. Use sufficient pressure to bring moisture to surface.
  - 6. After surface moisture has disappeared, finish concrete utilizing steel, hand or power trowel.
  - 7. Completed surface shall be free from trowel marks, depressions, ridges or other blemishes. Tolerance for flatness shall be 1/8-inch in 10 feet.
  - 8. Provide final finish as follows, unless otherwise indicated:
    - a. Medium Broom Finish: Typical finish to be used at all exterior walks, stairs and ramps. Brooming direction shall run perpendicular to slope to form non-slip surface.
- B. Curb Finish: Steel trowel.
- C. Joints and Edges:



2. Maintain exposed concrete in a continuous wet condition for 14 days following removal of forms.
- B. Concrete Paving, Curb, Curb and Gutter, Valley Gutter:
1. Cure utilizing curing compound. If applicable, the Contractor shall verify that the approved curing compound is compatible with the approved colorant system.
  2. Curing compound shall be applied in a wet puddling application. Spotty applications shall be reason for rejection and possibly concrete removal and replacement at the contractor's expense with no compensation from the Owner.
- C. No curing compound shall be applied to areas scheduled to receive resilient track surface including, curbs, ramps, runways, and similar items.
- A. General:
1. Determination of defective concrete shall be made by the Architect or Engineer whose opinion shall be final in identifying areas to be replaced, repaired or patched.
  2. As directed by Architect, cut out and replace defective concrete.
    - a. Defective concrete shall be removed from the site.
    - b. No patching is to be done until surfaces have been examined by Architect and permission to begin patching has been provided.
    - c. Permission to patch an area shall not be considered waiver of right by the Owner to require removal of defective work, if patching does not, in opinion of Architect, satisfactorily restore quality and appearance of surface.
    - d. Remove and replace concrete if repair to an acceptable condition is not feasible.
- B. Defective Concrete Is:
1. Concrete that does not match the approved mix design for the given installation type.
  2. Concrete not meeting specified 28-day strength.
  3. Concrete which contains rock pockets, voids, spalls, transverse cracks, exposed reinforcing, or other such defects which adversely affect strength, durability or appearance.
  4. Concrete which is incorrectly formed, out of alignment or not plumb or level, or outside of the maximum tolerance for flatness and slopes indicated.
  5. Concrete containing embedded wood or debris.
  6. Concrete having large or excessive patched voids which were not completed under Architect's direction.
  7. Concrete not containing required embedded items.
  8. Concrete with excessive shrinkage, transverse cracking, crazing, curling; or defective finish.



9. Concrete that is unsuitable for placement or has set in truck drum for longer than 90 minutes from the time it was batched.
  10. Concrete where expansion joint filler that is not isolating the full depth of the concrete section, and not recessed as required for backer rod and sealant where required.
  11. Concrete that is excessively wet or excessively dry and will not meet the minimum or maximum slump required per mix design.
  12. Finished concrete with oil stains from equipment use, and or rust spots that cannot be removed.
  13. Concrete with control joints (weakened planed joints) that do not meet the required minimum depth shown on the drawings.
  14. Concrete not meeting slip-resistance requirements.
- C. Flatwork: The Owner reserves the right to survey the flatwork, to determine if flatwork is outside of the maximum tolerance for flatness and slopes as indicated.
1. If the flatwork is found to be out of tolerance, then the Contractor is required to replace concrete at no additional expense to the Owner.
  - 2.

- a. Holes in the tile perimeter allow air to escape during the installation process.
  - b. Allow concrete to flow through holes in embedment flanges on underside of tile to lock tile solidly into the cured concrete.
2. Tiles shall be placed true and square.
3. Tiles shall be tamped or vibrated into the fresh concrete to ensure that the field level of the tile is flush to the adjacent concrete surface to permit proper water drainage and eliminate tripping hazards between adjacent finishes.
- D. Immediately after placement, the tile elevation shall be checked with the elevation and slope permitting water drainage, to ensure that the field surface of the tile is flush with the surrounding concrete, and that no ponding is possible on the tile.
- E. While concrete is still workable, a 3/8 inch radius edging tool shall be used to create a finished edge of concrete, then a steel trowel shall be used to finish the concrete around the tile's perimeter, flush to the field level of the tile.
- F. If necessary, adjust tile before the concrete sets. Use two suitable weights of 25 pounds each if necessary to ensure solid contact of the underside of tile to concrete.co(c)-2 (onc)-2





A. Summary Includes:

1. Storm drainage piping systems.

A. Document 01 5000, Construction Facilities and Controls.

B.

5. D 3017-05 Test Methods for Moisture Content of Soils and Soil-Aggregate Mixture by Nuclear Methods (Shallow Depth).
  6. D 4318-05 Test Method for Liquid Limit, Plastic Limit, and Plasticity Limit.
- F. CALTRANS Standard Specifications.
- G. CAL-OSHA, Title 8, Section 1590 (e).
- A. Submittal Procedures:
1. Action Submittals and Informational Submittals shall be submitted in accordance with Section 01 3300, Submittal Procedures.
  2. Closeout Submittals shall be submitted in accordance with Section 01 7700, Closeout Procedures.
  3. Sustainable Design Submittals shall comply with the additional requirements of Section 01 8113, Sustainable Design Requirements.
- A. Provide supplier's descriptive literature for all products to demonstrate compliance with specified attributes.
- B. Substitution: Provide all data of proposed material being submitted as a substitution. Provide comparison with specified product data and identify all differences. Failure to provide comparison will be reason for rejection.
- A. Qualification Data: Contractor / installer.
- B. Provide sieve analysis from accredited testing lab on pipe bedding material. Analysis shall have a current date not older than project contract signing date.
- C. Sustainable Design:
1. General:
    - a. Submit information necessary to establish and document compliance with the California Green Building Standards Code.
    - b. Sustainable design submittals are in addition to other submittals.
  2. The following information shall be provided:
    - a. Adhesives and Sealants: Evidence of compliance that products meet maximum VOC content limits specified in Section 01 6116.
    - b. Paints and Coatings: Evidence of compliance that products meet maximum VOC content limits specified in Section 01 6116.

- A. Guarantee: Submit subcontractor's guarantee.
  
- A. Contractor / Installer shall have been in business for five (5) years providing/finishing similar size projects and complexity.
- B. Contractor shall be solely responsible for all subgrades built. Any repairs resulting from inadequate compaction are the responsibility of the contractor.
- C. The representatives of the Owner's testing lab will not act as supervisor of construction, nor will they direct construction operations. Neither the presence of the Owner's testing lab representatives nor the testing by the Owner's testing lab shall excuse the contractors or subcontractors for defects discovered in their work during or following completion of the project. Correcting inadequate compaction is the sole responsibility of the contractor.
- D. Use only new materials and products, unless existing materials or products are specifically shown otherwise on the Drawings to be salvaged and re-used.
  - 1. Sun damaged or discolored PVC pipe will be rejected.
- E. All materials, components, assemblies, workmanship and installation are to be observed by the Owner's Project Inspector. Work not so inspected is subject to uncovering and replacement.
  
- A. Transport, store and handle in strict accord with the local jurisdiction and manufacturer's written recommendations
- B. Deliver undamaged products to job in manufacturer's sealed containers and/or original bundles with tags and labels intact.
  
- A. Contractor shall acquaint himself with all site conditions. If unknown active utilities are encountered during work, notify Architect promptly for instructions. Failure to notify will make Contractor liable for damage to these utilities arising from Contractor's operations subsequent to discovery of such unknown active utilities.
- B. Existing civil, mechanical and electrical improvements are shown on respective site plans to the extent known. Should the Contractor encounter any deviation between actual conditions and those shown, he is to immediately notify the Architect before continuing work.









3.



Attachment ADOA.23

Earl Warren ES - 02-120000

4/21/22

PC SHADE STRUCTURE

Elder Creek ES - 02-120002

4/21/22

PC SHADE STRUCTURE

4/21/22

PC SHADE STRUCTURE

4/21/22

PC SHADE STRUCTURE