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

Application Number:	School Name:	School District:
04-120097	Pre Check	Daktronics, Inc.
DSA File Number:	Increment Number:	Date Created:
		2021-05-11 13:37:57

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

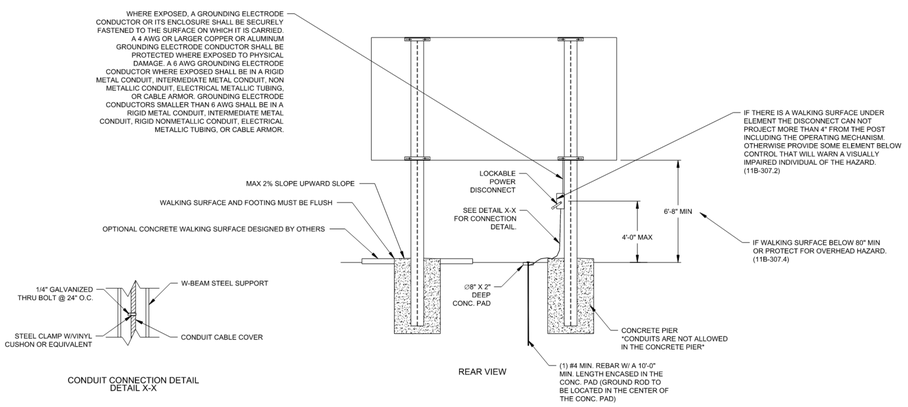
1. TYPE	2. PERFORMED BY
Continuous Indicates that a continuous special inspection is required	GE Indicates that the special inspection shall be performed by a registered geotechnical engineer or his or her authorized representative.
Periodic Indicates that a periodic special inspection is required	LOR 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.

THE REST OF THE DSA 103 FORM CONTINUES ON SHEETS 2 & 3.

CHECKLIST OF DESIGN PARAMETERS:

- RISK CATEGORY: II
- WIND SPEED: 100 MPH OR 130 MPH, AS SELECTED FROM TABLES ON SHEETS 7 THRU 10
- ALL CONNECTIONS AND MOUNTING DETAILS DESIGNED FOR 130MPH.
- EXPOSURE: C
- Kzt = 1.0, Kd = 0.85, g = 0.85
- LATERAL FORCE-RESISTING SYSTEM: SIGNS & BILLBOARDS
- ANALYSIS PROCEDURE: EQUIVALENT LATERAL FORCE PROCEDURE
- SEISMIC DESIGN CATEGORY: E
- SEISMIC IMPORTANCE FACTOR: Ie = 1.0
- SITE CLASS: D
- Ss: 3.00
- S1: 1.50
- SDS: 2.00
- SD1: 1.70
- Fv = 1.7
- Fa = 1.0
- R = 3.0
- Cs: 0.67
- DESIGN BASE SHEAR: V = 0.67*W
- IF PROJECT IS LOCATED IN A FLOOD ZONE OTHER THAN ZONE X, A LETTER STAMPED AND SIGNED FROM A SOILS ENGINEER IS NEEDED TO VALIDATE THE ALLOWABLE SOIL VALUES SPECIFIED IN THIS PC ARE STILL APPLICABLE.
- GEOHAZARD REPORTS ARE NOT REQUIRED FOR NON-BUILDING FREESTANDING SIGN AND SCOREBOARD STRUCTURES. REF. IR A-4.13
- CUT SHEETS FOR MANUFACTURED EQUIPMENT ARE REQUIRED.
- THERE ARE NO APPLICABLE FIRE, LIFE SAFETY, OR ENERGY/CLIMATE DESIGN PARAMETERS.

GROUNDING DETAIL



NOTE:

ALL DISPLAYS MUST BE GROUNDED PER ARTICLE 250 AND 600 OF THE CALIFORNIA ELECTRICAL CODE WITH NO MORE THAN 10 OHMS GROUND RESISTANCE.

CONSTRUCTION SPECIFICATIONS

ALUMINUM: ALL ALUMINUM MEMBER GRADE 6061-T6 (UNLESS NOTED OTHERWISE)
CORROSION RESISTANT MATERIAL SHALL BE PROVIDED BETWEEN FERROUS METAL (STEEL) AND NON-FERROUS METAL (ALUMINUM).

STEEL: DESIGN AND FABRICATION IN ACCORDANCE WITH AISC-ASD, 15th EDITION.
WIDE FLANGE SHAPES ASTM A992 (Fy = 50 ksi)
BOLTS SS304 F593C CW1. Fu=100 KSI OR A325 WITH CORROSION-PREVENTITIVE COATING THAT DEMONSTRATED NO MORE THAN 2% RED RUST IN MINIMUM 1,000 HOURS OF EXPOSURE IN SALT SPRAY TEST PER ASTM B117.
ZINC PLATED FASTENERS DO NOT COMPLY WITH THIS REQUIREMENT AND GALVANIZED HARDWARE IS NOT COMPATIBLE WITH ALL MANUFACTURED EQUIPMENT.
REINFORCING STEEL ASTM 615, GRADE 60 (Fy = 60 ksi)
HSS SHAPES ASTM A500 GR C (Fy = 50 ksi)
STRUCTURAL STEEL SHALL BE HOT-DIP GALVANIZED (MINIMUM ASTM A123 OR A153 CLASS D, AS APPLICABLE) OR PAINTED WITH ZINC-RICH PRIMER, UNDERCOAT, AND FINISH COAT; OR EQUIVALENT PAINT SYSTEM.

WELDING: DESIGN AND FABRICATION ACCORDING TO AWS D1.1, CURRENT EDITION, AWS CERTIFICATION REQUIRED OF ALL STRUCTURAL WELDERS.
E70XX ELECTRODES FOR SMAW PROCESSES
F7X-EXXX ELECTRODES FOR SAW PROCESSES
PROVIDE PERIODIC SPECIAL INSPECTION FOR FIELD WELDING PER 2019 CBC, TABLE 1705A.2.1

CONCRETE: DESIGN AND CONSTRUCTION ACCORDING TO ACI 318-14.
TYPE V CEMENT, MAXIMUM WATER-TO-CEMENT RATIO = 0.45
COMPRESSIVE STRENGTH AT 28 DAYS (Fc) = 4500 PSI, MIN.
CONTINUOUS BATCH PLANT INSPECTION NOT REQUIRED.
PROVIDE SLOPE AWAY FROM BASE OF SUPPORTS.
CONCRETE POURED INTO CONSTRAINED EARTH EXCAVATIONS MUST CURE UNDER PROPER CONDITIONS FOR 4 DAYS PRIOR TO SIGN CABINET INSTALLATION.
EXCEPTION: IF THE OVERALL HEIGHT OF THE SIGN IS LESS THAN 20 FEET ABOVE GRADE AND THE SIGN POLE IS ADEQUATELY BRACED AGAINST WIND LOADS FOR A MINIMUM OF 4 DAYS, THE SIGN CABINET MAY BE INSTALLED THE SAME DAY THE FOOTING IS POURED.

SOILS: SOIL PASSIVE PRESSURE BASED ON 2019 CBC, TABLE 1806A.2, CLASS 5.
LATERAL BEARING PRESSURE = 100 PSF/FT (THIS VALUE IS INCREASED IN THE CALCULATIONS PER CBC SECTION 1806A.3.4 FOR POLE FOOTING DESIGN)
INSPECTOR OF RECORD (IR) SHALL PROVIDE INSPECTION OF SOILS PER TEST AND INSPECTION FORM DSA-103. (IF SOFT OR SANDY SOIL, COLLAPSING OR UNSTABLE SOIL, CORROSIVE SOIL, ORGANIC MATERIALS OR GROUNDWATER ARE ENCOUNTERED, IMMEDIATELY CONTACT THE ARCHITECT OR ENGINEER OF RECORD FOR ADDITIONAL FOUNDATION REQUIREMENTS.)

TESTING & QUALITY CONTROL:

UNLESS NOTED OTHERWISE, CONCRETE MATERIALS SHALL CONFORM TO CHAPTER 19A. SPECIAL INSPECTIONS AND TESTS SHALL BE REQUIRED PER TABLE 1705A.3. FOUNDATION INSPECTION SHALL BE REQUIRED PER 1705A.6.
STEEL SPECIAL INSPECTION AND TESTS SHALL BE REQUIRED PER TABLE 1705A.2.1.

NOTES: SIGN CABINETRY SHALL BE FABRICATED TO PROVIDE ISOLATION OF DISSIMILAR MATERIALS.

DAKTRONICS HAS DESIGNED THE DISPLAY COMPONENTS AND THEIR MOUNTING PER CBC 2019 AND THEY ARE IN COMPLIANCE WITH THE CURRENT CODES.

GENERAL / CODE INFORMATION

DRAWING INDEX

SHEET 1: SCOREBOARD PC COVER SHEET
SHEET 2: DSA 103 SPECIAL INSPECTION FORM
SHEET 3: DSA 103 SPECIAL INSPECTION FORM (CONT.)
SHEET 4: EQUIPMENT MOUNTING DETAILS (WITHOUT VIDEO DISPLAY)
~~SHEET 5: EQUIPMENT MOUNTING DETAILS (WITH VIDEO DISPLAY)~~
SHEET 6: SOUND EQUIPMENT MOUNTING DETAILS
SHEET 7: TWO-COLUMN STRUCTURE DETAILS WITH PIER FOUNDATIONS
~~SHEET 8: TWO-COLUMN STRUCTURE DETAILS WITH SPREAD FOUNDATIONS~~
~~SHEET 9: THREE-COLUMN STRUCTURE DETAILS WITH PIER FOUNDATIONS~~
~~SHEET 10: THREE-COLUMN STRUCTURE DETAILS WITH SPREAD FOUNDATIONS~~

SCOPE: CONSTRUCTION OF 2- OR 3-COLUMN STRUCTURES FOR USE WITH DAKTRONICS SIGNS.

INSPECTOR OF RECORD, CLASS 3

PRECHECK DRAWING CHANGES:
CHANGES IN THE PLANS AND SPECIFICATION SHALL BE MADE BY REVISION DOCUMENTS APPROVED BY DSA. (2019 CALIFORNIA ADMINISTRATIVE CODE SECTION 4-338)

SITE SPECIFIC ARCHITECTURAL DRAWING CHANGES:
ALL WORK SHALL CONFORM TO TITLE 24, CALIFORNIA CODE OF REGULATIONS (CCR) CHANGES TO THE APPROVED DRAWING AND SPECIFICATION SHALL BE MADE BY AN ADDENDUM OR A CONSTRUCTION CHANGE DOCUMENT (CCD) APPROVED BY THE DIVISION OF STATE ARCHITECTS, AS REQUIRED BY SECTION 4-338 PART 1 TITLE 24 CCR.

A PROJECT INSPECTOR EMPLOYED BY THE DISTRICT, OWNER AND APPROVED BY THE DIVISION OF STATE ARCHITECTS SHALL PROVIDE SPECIAL INSPECTION OF THE WORK. THE DUTIES OF THE INSPECTION ARE DEFINED IN SECTION 4-342, PART 1, TITLE 24 CODE.

TITLE 24 CODES

2019 CALIFORNIA ADMINISTRATIVE CODE (CAC)	(PART 1, TITLE 24 CCR)
2019 CALIFORNIA BUILDING CODE (CBC), VOLUMES 1 AND 2	(PART 2, TITLE 24 CCR
2019 CALIFORNIA ELECTRICAL CODE	(PART 3, TITLE 24 CCR)
2019 CALIFORNIA MECHANICAL CODE (CMC)	(PART 4, TITLE 24 CCR)
2019 CALIFORNIA PLUMBING CODE	(PART 5, TITLE 24 CCR)
2019 CALIFORNIA ENERGY CODE	(PART 6, TITLE 24 CCR)
2019 CALIFORNIA FIRE CODE (CFC)	(PART 9, TITLE 24 CCR)
2019 CALIFORNIA GREEN BUILDING STANDARDS CODE	(PART 11, TITLE 24 CCR)
2019 CALIFORNIA REFERENCED STANDARDS CODE	(PART 12, TITLE 24 CCR)

REFERENCE CODE SECTIONS FOR APPLICABLE STANDARDS
2019 CBC, CHAPTER 35
2019 CFC, CHAPTER 80

GENERAL REQUIREMENTS
THE ARCHITECT OR STRUCTURAL ENGINEER IN GENERAL RESPONSIBLE CHARGE SHALL SIGN AND SEAL ALL DRAWINGS AND SPECIFICATIONS.
CHANGES TO THE APPROVED DRAWINGS AND SPECIFICATIONS SHALL BE MADE BY AN ADDENDUM OR A CONSTRUCTION CHANGE DOCUMENT (CCD) APPROVED BY THE DIVISION OF THE STATE ARCHITECTS, AS REQUIRED BY SECTION 4-338, PART 1, TITLE 24, CCR.
A PROJECT INSPECTOR EMPLOYED BY THE DISTRICT (OWNER) AND APPROVED BY THE DIVISION OF THE STATE ARCHITECTS SHALL PROVIDE CONTINUOUS INSPECTION OF THE WORK. THE DUTIES OF THE INSPECTOR ARE DEFINED IN SECTION 4-342, PART 1, TITLE 24, CCR CLASS 3 INSPECTOR.

PRE-CHECK (PC) DOCUMENT

CODE: 2019 CBC

A SEPARATE PROJECT APPLICATION FOR CONSTRUCTION IS REQUIRED.

VECTOR ENGINEERS
WELLS L. HOLMES, S.E.
651 W. GALENA PARK BLVD, STE. 101
DRAPER, UTAH 84020
(801) 990-1773
(801) 990-1776 FAX

REGISTERED PROFESSIONAL ENGINEER WELLS HOLMES 8203 STRUCTURAL STATE OF CALIFORNIA
10/07/2021

STRUCTURAL ENGINEER OF RECORD

APPROVED
DIV. OF THE STATE ARCHITECT
APP: 04-120097 PC
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑ CG ☐
DATE: 10/18/2021

PROJECT-SPECIFIC APPROVALS

Quote: 715512-1-0

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

THIS APPROVAL IS FOR ITEMS WITHIN CLOUDED AREAS ONLY. FOR OTHER INFORMATION NOT CONTAINED WITHIN CLOUDED AREAS, REFER TO ORIGINAL DSA APPROVED PLANS.

DO NOT USE THESE PLANS AS SUBSTITUTE FOR THE ORIGINAL DSA APPROVED PLANS

REV	DATE:	DESCRIPTION	BY:	
02	15 SEP 21	REVISED WALKING SURFACE NOTES UNDER GROUNDING DETAIL. ADDED NOTE TO UPDATED NOTES UNDER CONSTRUCTION SPECIFICATIONS.	SAE	
REV	DATE:	DESCRIPTION	BY:	
01	13 MAY 21	DSA 103-19: LISTING OF STRUCTURAL TESTS AND SPECIAL INSPECTIONS, 2019 CBC	SAE	

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DAKTRONICS

PROJECT:	2019 CBC DSA PRE-CHECK DRAWINGS				
TITLE:	SHEET 1: SCOREBOARD PC COVER SHEET				
DATE:	11 MAY 20	DIM UNITS:	INCHES [MILLIMETERS]	SHEET	REV
SCALE:	1/4" = 1'-0"		DO NOT SCALE DRAWING	1	02
DESIGN:	THOLZER	JOB NO.	PLANT-TYPE-SEQ	4682217	
DRAWN:	THOLZER	P2236	F - 10 - 0		