



2020 West El Camino Avenue,
Suite 800
Sacramento, CA 95833

355 South Grand Avenue,
Suite 1900
Los Angeles, CA 90071



Testing, Inspection, and Observation Program

2022 California Building Standards Code - OSHPD 1

This program is prepared and submitted for an OSHPD 1 project. OSHPD 1 projects include all construction and remodel projects for: general acute care hospitals, acute psychiatric hospitals, and general acute care hospitals providing only acute medical rehabilitation center services (2022 CBC 1224.1).

SECTION A		PROJECT INFORMATION	
Facility #:	Facility Name:		Project #:
Street Address:			
City:		County:	
Record Name (Scope of Project):			
Abbreviations:			
CAC: California Administrative Code		AAMA: American Architectural Manufacturers Association	
CBC: California Building Code		NFPA: National Fire Protection Association	
CEC: California Electrical Code		FM: FM Approval Standards	
CMC: California Mechanical Code		DPOR: Design Professional of Record	
CPC: California Plumbing Code		Version: R04.30	

Testing, Inspection, and Observation Stages

Stage No.	Stage Name	Stage Scope / Description
1		

DESIGN PROFESSIONAL OF RECORD RESPONSIBILITY

The administration of the work of construction, including this TIO, shall be under the responsible charge of an architect and structural engineer. When a structural engineer is not substantially involved, the architect shall be solely responsible. Where neither structural nor architectural elements are substantially involved, a mechanical or electrical engineer registered in the branch of engineering most applicable to the project may be in responsible charge. (CAC 7-141(a))

Note: HCAI plan review staff must provide verification that the TIO program has been "Reviewed" prior to plan approval to confirm the applicability of the tests and inspections identified in the TIO program for work scope, building systems, and the construction materials shown in the design drawings. Field staff will issue subsequent "TIO Program Approval".

The "TIO Program Approval" from HCAI field staff must be obtained and included with the notice of start of construction required by CAC Section 7-137(a)4 and 7-145(a)5.A)

Construction shall not commence until the health facility has obtained from HCAI "TIO Program Approval". (CAC Section 7-135(a)3)



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SECTION B		NOTE: Approved agencies, individuals, and all changes to the TIO program shall be identified, evaluated by the DPOR and approved by HCAI prior to proceeding with the related work.				
Facility #:		Facility Name:		Project #:		
		Select with "X" or provide required OPAA information:				
Index #	Stage 1 Required (Select with "X")	TESTS	Samples of Test & Inspection Reports Included	OPAA No. and Expiration Date	Responsible Approved Agency And/Or Individual (Identify Individual)	Compliance Verification by IOR (Initial/Date)

STRUCTURAL TESTS

Foundation

B-F1		Soil fill CBC 1705A.6 Fill material acceptance test				
B-F2		Soil fill CBC 1705A.6 Compaction test				
B-F3		Soil and rock anchors CBC 1811A Load test				
B-F4		Deep foundation elements CBC 1810A.3.1.5.1, 1810A.3.3.1.2, 1810A.3.3.1.5, 1810A.3.3.2, & 1810A.3.10.4 Load test				
B-F5		Shoring CBC 1812A Tie-Back Anchors				
B-F6		Vibro Stone Columns (VSC) CBC 1813A Acceptance Test				
B-F7						
B-F8						

Concrete

B-C1		Concrete CBC 1705A.3, 1903A.6 & 1910A.1; ACI 318 1.9.1 & 26.4.1.1 Cementitious materials				
B-C2		Concrete CBC 1705A.3, 1903A.5; ACI 318 1.9.1 & 26.4.1.2 Aggregates/Reactive aggregates				
B-C3		Concrete CBC 1705A.3; ACI 318 26.4.1.4; ASTM C1602 Water				
B-C4		Concrete CBC 1705A.3 & 1905A.1.17; ACI 318 26.12 Strength test				
B-C5		Concrete CBC 1705A.3 & 1910A.2; ACI 318 20.2, 25.4.5.1 & 26.6.1.2 Metal reinforcement (including welded wire fabric and headed rebar)				
B-C6		Concrete CBC 1705A.3, 1901A.3; ACI 318 20.4 Headed studs and headed stud assemblies				
B-C7		Concrete CBC Table 1705A.3, 1903A.8 Weldability of reinforcing bars				



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B-C8	Concrete CBC 1705A.3 & 1910A.3; ACI 318 20.3, 25.8 & 26.6.1.2 Prestressing tendons and anchorage					
B-C9	Concrete CBC 1911A.2; ACI 503.7 Crack repair by epoxy injection					
B-C10	Concrete CBC 1911A.3; ICC-ES AC 178 § 9 Strengthening by externally bonded FRP					
B-C11	Shotcrete CBC 1705A.3.9.2 & 1908A.2 Preconstruction test					
B-C12	Shotcrete CBC 1705A.3.9 & 1908A.2 Strength test					
B-C13	Post-installed anchors CBC 1910A.5 Installation verification test (includes adhesive, shot pins and mechanical anchors)					
B-C14	Existing post-installed anchors CBC 1708A and CAC Ch 6, § 11.3 In-situ load tests					
B-C15						
B-C16						

Masonry

B-MA1	Masonry CBC 2105A.3 Mortar test					
B-MA2	Masonry CBC 2105A.3 Grout test					
B-MA3	Masonry CBC 2105A.2; TMS 602 1.4.B.3 Compressive strength f _m - prism test					
B-MA4	Masonry CBC 2105A.4 Core test					
B-MA5	Masonry CBC 1705A.4 Masonry anchors					
B-MA6	Veneer CBC 1410.2 Veneer bond strength test					
B-MA7	Architectural Cast Stone CBC 2103A.1 Strength of stone anchorage ASTM C1354					
B-MA8						
B-MA9						

Steel

B-S1	Steel CBC Table 1705A.2.1 & 2202A.1 Testing of unidentified steel or identification test for structural steel and cold formed steel					
B-S2	Steel CBC 2213A.1 & 1705A.2.6 High strength bolts, nuts, and washers					
B-S3	Steel CBC 2213A.2 & 1705A.2.5 End-welded studs					



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B-S4	Steel CBC 1705A.2.5 Nondestructive testing of welds					
B-S5	Steel CBC 2205A.4 & 1705A.14.1 Nondestructive tests for seismic resistance					
B-S6						
B-S7						
Other Structural Materials						
B-OM1	Aluminum CBC 2003.1 Testing					
B-OM2	Structural Sealant Glazing CBC 2410.1.2 AAMA 501.4 & 501.6 Tests - Exterior glass curtain walls					
B-OM3	Thermal Barriers in Aluminum Mullion Systems CBC 2411.1.2 Testing of thermal barriers					
B-OM4						
B-OM5						
Alternative Systems						
B-AS1	Seismic Isolation System CBC 1705A.14.4 Prototype and production test					
B-AS2	Seismic Damping System CBC 1705A.14.4 Prototype and production test					
B-AS3	Structural Design Criteria CBC 104.11.2 Tests to support alternative system					
B-AS4	Wind Tunnel Testing CBC 1609A.1.1; ASCE 7 31.4 & 31.5; ASCE 49 Wind tunnel testing					
B-AS5						
B-AS6						
Nonstructural Components, Supports and Attachments						
B-N1	Special Seismic Certification CBC 1705A.14.3 Shake table test					
B-N2						
B-N3						
ELECTRICAL TESTS						
B-E1	Ground Fault Protection of Equipment CEC 230.95(C) & 517.17(D)					
B-E2	Emergency Systems/Generator Tests CEC 700.3(A) & NFPA 110-2019 § 7.13					
B-E3	Automatic Transfer Switch Test NFPA 110-2019 § 7.13.4.1					
B-E4	Emergency Stored Electrical Energy System Test NFPA 111-2019 § 7.6					



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B-E5	Fire Pump Coordination Study and Testing CEC 695.3(C)(3)					
B-E6	Grounding System in Patient Care Spaces 2018 NFPA 99 6.3.3.1					
B-E7	Hospital Grade Receptacles 2018 NFPA 99 6.3.3.2.5					
B-E8	Isolated Power Systems – Line Isolation Monitor Test 2018 NFPA 99 6.3.3.3.2					
B-E9	Isolated Power Systems – Impedance of Isolated Wiring Test 2018 NFPA 99 6.3.2.9.2.1					
B-E10	Medium Voltage Outdoor Systems Testing CEC 225.56					
B-E11	Medium Voltage Cable Testing CEC 328.14, 225.56 & ANSI/NECA/NCSCB 600-2014					
B-E12	Insulation Testing CEC 110.7					
B-E13	Torque Electrical Connections CEC 110.3(B) & 110.14(D)					
B-E14	Temporary Installation Grounding CEC 590.6					
B-E15	Nurse Call System CEC 517.123					
B-E16	Means of Egress Illumination CBC 1008.2 and 1008.3 Illumination and emergency power					
B-E17						
B-E18						

MECHANICAL TESTS

B-ME1	Listed Hood Assemblies CMC 508.2					
B-ME2	Type I Hood Capture and Containment Test CMC 511.2.2.2					
B-ME3	Commercial Kitchen Hood Ventilation CMC 511.2.2.1 Performance test					
B-ME4	Refrigeration Equipment CMC 1116.0					
B-ME5	Refrigeration Detection and Alarm System CMC 1108.4 & CFC 608.7 Acceptance testing					
B-ME6	Refrigeration Flaring System CMC 1114.3 Safety and effectiveness					
B-ME7	Steam and Hot Water Boilers CMC 1013.0					
B-ME8	Hydronics CMC 1205.2, 1220.4.6 & 1221.3 Pressure test of steam and water piping					
B-ME9	Process Piping CMC 1405.2.2 Pressure test					
B-ME10	Pre-Demolition Air Balance CMC 407.3.1 Pre-demolition air balance test and report					



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B-ME11	Post-Demolition Air Balance CMC 407.3.1 Air balance test and report					
B-ME12	Ventilation System Air Balance CMC 407.3.1 & Table 4-A Areas tested and balanced					
B-ME13	Duct Leakage Test CMC 603.9.2 SMACNA HVAC air duct leakage test					
B-ME14	Airborne Infection Isolation Rooms and Protective Environment Rooms CMC 416.4 Alarm system test					
B-ME15	Airborne Infection Isolation Rooms and Protective Environment Rooms CMC 417.0 Mechanical system tested and balanced					
B-ME16						
B-ME17						

PLUMBING TESTS

B-P1	Disinfection of Potable Water Systems CPC 609.10					
B-P2	Medical Gas and Vacuum NFPA 99-2021 § 5.1.10.11.11 Qualification of brazing procedures and brazing					
B-P3	Medical Gas and Vacuum NFPA 99-2021 § 5.1.12 and 5.1.12.2 Installer performed tests					
B-P4	Medical Gas and Vacuum NFPA 99-2021 § 5.1.12 and 5.1.12.3 System inspection					
B-P5	Medical Gas and Vacuum NFPA 99-2021 § 5.1.12 and 5.1.12.4 System verification					
B-P6	Existing Sewers and Drains CPC 102.4.1, 105.3, & 712.0 Tested for conformance with requirements for new work					
B-P7	Water Supply System CPC 105.3 & 609.4 Pressure tested prior to covering or concealment					
B-P8	Plumbing, Drainage, and Venting Systems CPC 105.3 & 712.0 Water or air tested prior to use, covering or concealment. No air test for plastic piping.					
B-P9	Building Sewer CPC 105.3, 712.0, & 723.0 Water or air tested prior to use, covering or concealment. No air test for plastic piping.					
B-P10	Storm Drain Piping CPC 1107.0 Water or air tested prior to use, covering or concealment					
B-P11	Fuel Gas Piping CPC 1213.0 & CMC 1313.0 Air, CO2 or nitrogen tested prior to use, covering, or concealment					
B-P12	Private Sewer Disposal System CPC 105.0, & CPC Appendix H H1001.2 Tested prior to use, covering, or concealment					
B-P13	Protectively Coated Pipe CPC 312.5 Tested for voids, damage, and imperfections					



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B-P14	Defective Systems CPC 105.3.1, 105.3.2, 712.0 Air test of defective drainage and plumbing systems					
B-P15	Shower Receptors CPC 408.7.5					
B-P16	Backflow Prevention Devices and Assemblies CPC 603.2 & 603.4.2 Assembly tested					
B-P17	Non-Potable Water CPC 1502.0 Testing of alternate water sources and cross-connections					
B-P18	Recycled Water Supply Systems CPC 1505.5 & 1505.13 Initial cross-connection test and system testing before initial operation					
B-P19	On-Site Treated Non-Potable Gray Water Systems CPC 1502.1, 1506.5, & 1506.12 Initial cross-connection test and system testing before initial operation					
B-P20						
B-P21						
B-P22						

FIRE PROTECTION AND LIFE SAFETY SYSTEMS

B-FP1	Fire Alarm CFC 901.5 & CFC 907.7 NFPA 72-2022 §14.4 Acceptance and reacceptance testing					
B-FP2	Fire and Smoke Dampers CFC 901.5 & CFC 907.8 Acceptance testing					
B-FP3	Duct Detectors CFC 901.5, NFPA 72-2022 §14.4 Differential pressure test					
B-FP4	Smoke Control System CFC 901.5, CFC 909.18 & 1705A.19 Acceptance testing					
B-FP5	Fire Sprinkler CFC 901.5 & NFPA 13-2022 Chapter 29 Above ground piping acceptance testing					
B-FP6	Fire Sprinkler CFC 901.5 & NFPA 13-2022 Chapter 29 Underground piping acceptance testing					
B-FP7	Standpipe System CFC 901.5 & NFPA 14-2019 Chapter 11 Above ground piping acceptance testing					
B-FP8	Standpipe System CFC 901.5, CFC 905.3.1 & NFPA 14-2019 Chapter 11 Acceptance testing in buildings 4-stories or more					
B-FP9	Standpipe System CFC 901.5 & NFPA 14-2019 Chapter 11 Underground piping acceptance testing					
B-FP10	Private Fire Mains CFC 901.5 & NFPA 24-2019 § 10.10 Acceptance testing					
B-FP11	Fire Pumps CFC 901.5 & NFPA 20-2019 § 14.1 & 14.2 Acceptance testing					



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B-FP12	Fire Protection Water Tank CFC 901.5 & NFPA 22-2018 Chapter 17 Acceptance testing					
B-FP13	Wet Chemical Extinguishing System CFC 901.5 & NFPA 17A-2021 § 7.4 Acceptance testing					
B-FP14	Clean Agent Extinguishing System CFC 901.5 & NFPA 2001-2018 § 7.7 Acceptance testing					
B-FP15	CO2 Extinguishing System CFC 901.5 & NFPA 12-2018 § 4.4.3 & 4.4.4 Acceptance testing					
B-FP16	Dry Chemical Extinguishing System CFC 901.5 & NFPA 17-2021 § 10.4 Acceptance testing					
B-FP17	Halon 1301 Extinguishing System CFC 901.5 & NFPA 12A-2018 § 6.7 Acceptance testing					
B-FP18	Underground Fuel Storage Tank CFC 5704.2.12 & NFPA 30-2021 § 21.5.1 Initial testing					
B-FP19	Underground Fuel Storage Tank CFC 5704.2.12 & NFPA 30-2021 § 21.5.2 Tightness testing					
B-FP20	Flammable and Combustible Liquid Fuel Piping CFC 5703.6.3 Pressure testing					
B-FP21	Emergency Responder Radio Coverage CFC 510.5.4 Acceptance test procedure					
B-FP22	Testing of Elevator Shutdown CBC 3005.5, NFPA 72-2022 21.4, & ASME A17.1/CSA B44-2019					
B-FP23	Elevator Emergency Operation CBC 3003.2 Emergency recall and in-cart operation					
B-FP24	Elevator Emergency Standby Power CBC 3003.1 Backup generator engaged					
B-FP25	Fire Door, Fire Shutter, and Fire Windows NFPA 80-2019 5.2 Testing					
B-FP26						
B-FP27						

OTHER TESTS

B-OT1	Radiation Shielding Barriers CBC 1705A.1.1 and 3102C Radiation shielding barrier test					
B-OT2	Manufacturer Required Tests					
B-OT3	Designer Required Tests					
B-OT4						
B-OT5						
B-OT6						



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B-OT7							
B-OT8							
B-OT9							
B-OT10							



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SECTION C		NOTE: Approved agencies, individuals, and all changes to the TIO program shall be identified, evaluated by the DPOR and approved by HCAI prior to proceeding with the related work.					
Facility #:	Facility Name:	Project #:					
		Select with "X" or provide required OPAA information:					
Index #	Stage 1 Required (Select with "X")	ON-SITE SPECIAL INSPECTIONS	Samples of Test & Inspection Reports Included	OPAA No. and Expiration Date	Responsible Approved Agency And/Or Individual (Identify Special Inspector)	Compliance Verification by IOR (Initial/Date)	HCAI/FDD Use (Initial/Date)

STRUCTURAL SPECIAL INSPECTIONS

Foundation

C-F1		Soils CBC 1705A.6 Soil fill					
C-F2		Foundation CBC 1705A.7 Driven deep foundations					
C-F3		Foundation CBC 1705A.8 Cast-in-place deep foundations					
C-F4		Foundation CBC 1705A.9 Helical pile foundations					
C-F5		Shoring CBC 1812A Shoring					
C-F6		Vibro Stone Columns (VSC) CBC 1813A Vibro stone columns					
C-F7		Prestressed Soil and Rock Anchors CBC 1811A & 1812A Installation and testing					
C-F8							
C-F9							

Concrete

C-C1		Concrete CBC 1705A.3; ACI-318 26.5.2 & 26.13 Placement of concrete					
C-C2		Concrete CBC 1705A.3; ACI-318 26.4.1.5 Admixtures					
C-C3		Concrete CBC 1705A.3; ACI-318 26.4 Mix design					
C-C4		Concrete CBC 1705A.3; ACI-318 26.13 Reinforcing steel & prestressing steel					
C-C5		Concrete CBC 1705A.3 CIP & post-installed anchors					
C-C6		Concrete CBC Table 1705A.3 Adhesive anchors in horizontal and upwardly inclined positions with sustained tension load					



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C-C7	Concrete CBC 1705A.3; ACI-318 26.13 Specialty inserts, stud rails, rebar mechanical connections, headed rebar					
C-C8	Concrete CBC 1705A.3.4; ACI-318 26.13 Prestressed concrete					
C-C9	Concrete CBC 1705A.3; ACI 318 26.9, 26.13.1 & 26.13.3.3 Precast concrete erection					
C-C10	Shotcrete CBC 1705A.3.9 & 1908A Installation					
C-C11	Concrete CBC 1705A.3 Insulating concrete					
C-C12	Concrete CBC 1705A.3, 1705A.3.1 & 1903A.8 Welding of reinforcing bars					
C-C13	Concrete PCI MNL 128 standard GFRC panels					
C-C14	Concrete CBC 1911A.2; ACI 503.7 Crack repair by epoxy injection					
C-C15	Concrete CBC 1911A.3, ICC AC178 § 3 to 8 Strengthening by externally bonded FRP					
C-C16						
C-C17						
Masonry						
C-MA1	Masonry CBC 1705A.4 Laying and grouting					
C-MA2	Masonry CBC 2104A.1.3 Reinforced grouted masonry					
C-MA3	Masonry CBC 1705A.4 Masonry anchors					
C-MA4						
C-MA5						
Steel						
C-S1	Steel CBC 1705A.2.1 & 1705A.2.5 Automatic end-welded studs					
C-S2	Steel CBC 1705A.2.5 Field welding					
C-S3	Steel AWS D1.1 3 & 4 & AWS D1.8 6.1 Field welding - WPS / WPQR					
C-S4	Steel CBC 1705A.2 & 1705A.2.6 High strength bolt installation					
C-S5	Steel CBC 1705A.2, 1705A.12.2, & 1705A.13.3 Cold-formed steel light frame construction					



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C-S6	C-S6	Steel CBC 1705A.13 Special inspections for seismic resistance					
C-S7	C-S7						
C-S8	C-S8						
Wood							
C-W1	C-W1	Wood CBC 1705A.5, 1705A.5.5, & 1705A.12.1 Glue laminated timber					
C-W2	C-W2	Wood CBC 1705A.5.6, 1705A.11.1, & 1705A.12.1 Installation of timber connectors					
C-W3	C-W3	Wood CBC 1705A.5, 1705A.5.2, & 1705A.5.6 Manufactured trusses					
C-W4	C-W4	Wood CBC 1705A.12.1 & 1705A.13.2 Nailing, screw attachment, bolting, anchoring, field gluing operations, and other fastening					
C-W5	C-W5						
C-W6	C-W6						
Other Structural Materials							
C-OM1	C-OM1	Aluminum CBC 2003.1 Inspection					
C-OM2	C-OM2	Structural Sealant Glazing CBC 2410.1.2 & 1705A.13.5.2 Structural sealants for exterior glass curtain walls					
C-OM3	C-OM3	Thermal Barriers in Aluminium Mullion Systems CBC 2411.1.2 Testing and inspection					
C-OM4	C-OM4						
C-OM5	C-OM5						
Alternative Systems							
C-AS1	C-AS1	Alternative system CBC 1705A.1.1 Construction materials and methods for alternative system					
C-AS2	C-AS2	Seismic Isolation System CBC 1705A.13.8 Fabrication, installation, prototype, and production testing					
C-AS3	C-AS3	Seismic Damping System CBC 1705A.13.8 Fabrication, installation, prototype, and production testing					
C-AS4	C-AS4						
C-AS5	C-AS5						
Nonstructural components, supports and attachments							
C-N1	C-N1	Architectural components CBC 1705A.13.5 & 1705A.17 Cladding, nonbearing walls, and veneer					



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C-N2	Ceiling CBC 1705A.13.5 Suspended ceiling systems and their anchorage					
C-N3	Access floors CBC 1705A.13.5.1 Anchorage of access floor systems					
C-N4	Storage racks 8' or taller CBC 1705A.13.7 Anchorage					
C-N5	Plumbing, mechanical and electrical components CBC 1705A.13.6 Anchorage, bracing, and vibration isolators					
C-N6	Special Seismic Certification CBC 1705A.13.4 Special seismic certification label, anchorage, and mounting					
C-N7						
C-N8						
ELECTRICAL INSPECTIONS						
C-E1	Available Fault and Short-Circuit Current Field Marking CEC 110.16(B), 110.24(A), 620.51(D)(1), & 700.5(E)					
C-E2	Essential Electrical System Adjustable Circuit Breaker Settings CEC 517.31(G)					
C-E3	Elevator Selective Adjustable Circuit Breaker Settings CEC 620.62					
C-E4	Arc Energy Reduction CEC 240.67 & 240.87					
C-E5	Short-Circuit Current Calculations CEC 110.24(A), 409.22, 430.99, 440.10(B)					
C-E6	Arc Flash Hazard Warning CEC 110.16(A)					
C-E7	Medium Voltage Outdoor Systems CEC 225.56					
C-E8						
C-E9						
MECHANICAL INSPECTIONS						
C-M1						
C-M2						
PLUMBING INSPECTIONS						
C-P1						
C-P2						
FIRE PROTECTION AND LIFE SAFETY SYSTEM SPECIAL INSPECTIONS						
C-FP1	Sprayed Fire-Resistant Materials CBC 1705A.15 Spray-applied fireproofing					
C-FP2	Mastic and Intumescent Fire-Resistant Coatings CBC 1705A.16 In accordance with AWCI 12-B					



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C-FP3		Penetration Firestops CBC 1705A.18.1 Penetration firestop systems that are tested and listed					
C-FP4		Fire-Resistant Joint Systems CBC 1705A.18.2 Fire-resistant joint systems that are tested and listed					
C-FP5		Smoke Control Systems CFC 909.18.8, CBC 170.17, & 1705A.19 Ductwork and operation					
C-FP6		Sprinkler System Piping NFPA 13-2022 § 7.5.2 Welded pipe and fittings					
C-FP7		Standpipe System Piping NFPA 14-2019 § 4.4.2 Welded pipe and fittings					
C-FP8		Fire Door, Fire Shutter, and Fire Windows NFPA 80-2019 5.1.4, 5.2 Inspection and labeling					
C-FP9							
C-FP10							

OTHER SPECIAL INSPECTIONS

C-OT1		Exterior insulation and finish systems (EIFS). CBC 1705A.17 EIFS applications					
C-OT2		Water-resistive barrier coating CBC 1705A.17.1 ASTM E2570 barrier coating when installed over a sheathing substrate					
C-OT3		Exit Signs CBC 1013.1 Location, illumination and physical characteristics					
C-OT4		Accessible Signage CBC 11B-703.1 Visual and tactile requirements					
C-OT5							
C-OT6							
C-OT7							
C-OT8							



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SECTION D		NOTE: Approved agencies, individuals, and all changes to the TIO program shall be identified, evaluated by the DPOR and approved by HCAI prior to proceeding with the related work.					
Facility #:	Facility Name:	Project #:					
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Index #	Stage 1 Required (Select with "X")	OFF-SITE SPECIAL INSPECTIONS	Samples of Test & Inspection Reports Included	OPAA No. and Expiration Date	Responsible Approved Agency And/Or Individual (Identify Special Inspector)	Compliance Verification by IOR (Initial/Date)	HCAI/FDD Use (Initial/Date)

STRUCTURAL SPECIAL INSPECTIONS

Concrete

D-C1		Concrete CBC 1705A.3; ACI-318 26.5.2 & 26.13 Placement of concrete					
D-C2		Concrete CBC 1705A.3; ACI-318 26.4.1.5 Admixtures					
D-C3		Concrete CBC 1705A.3; ACI-318 26.4 Mix design					
D-C4		Concrete CBC 1705A.3; ACI-318 26.13 Reinforcing steel & prestressing steel					
D-C5		Concrete CBC 1705A.3 CIP & post-installed anchors					
D-C6		Concrete CBC Table 1705A.3 Adhesive anchors in horizontal and upwardly inclined positions with sustained tension load					
D-C7		Concrete CBC 1705A.3; ACI-318 26.13 Specialty inserts, stud rails, rebar mechanical connections, headed rebar					
D-C8		Concrete CBC 1705A.3.3 Batch plant inspection					
D-C9		Concrete CBC 1705A.3.4; ACI-318 26.13 Prestressed concrete					
D-C10		Concrete CBC 1705A.3 Insulating concrete					
D-C11		Concrete CBC 1705A.3, 1705A.3.1 & 1903A.8 Welding of reinforcing bars					
D-C12		Concrete PCI MNL 128 standard GFRC panels					
D-C13							
D-C14							

Masonry

D-MA1		Masonry CBC 1705A.4 Masonry anchors					
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D-MA2						
D-MA3						
Steel						
D-S1		Steel CBC 1705A.2; AISC 360 & AISC 341 Steel shop fabrication				
D-S2		Steel CBC 1705A.2.1 & 1705A.2.5 Automatic end-welded studs				
D-S3		Steel CBC 1705A.2.5 Shop welding				
D-S4		Steel AWS D1.1 3 & 4 and AWS D1.8 6.1 Shop welding - WPS / WPQR				
D-S5		Steel CBC 1705A.2 & 1705A.2.6 High strength bolt installation				
D-S6		Steel CBC 1705A.2, 1705A.12.2, & 1705A.13.3 Cold-formed steel light frame construction				
D-S7		Steel CBC 1705A.13 Special inspections for seismic resistance				
D-S8						
D-S9						
Wood						
D-W1		Wood CBC 1705A.5, 1705A.5.5, & 1705A.12.1 Glue laminated timber				
D-W2		Wood CBC 1705A.5.6, 1705A.11.1, & 1705A.12.1 Installation of timber connectors				
D-W3		Wood CBC 1705A.5, 1705A.5.2, & 1705A.5.6 Manufactured trusses				
D-W4		Wood CBC 1705A.12.1 & 1705A.13.2 Nailing, screw attachment, bolting, anchoring, field gluing operations, and other fastening				
D-W5						
D-W6						
Other Structural Materials						
D-OM1		Aluminum CBC 2003.1 Inspection				
D-OM2		Structural Sealant Glazing CBC 2410.1.2 & 1705A.13.5.2 Structural sealants for exterior glass curtain walls				
D-OM3		Thermal Barriers in Aluminium Mullion Systems CBC 2411.1.2 Testing and inspection				
D-OM4						



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D-OMS						
Alternative Systems						
D-AS1		Alternative system CBC 1705A.1.1 Construction materials and methods for alternative system				
D-AS2		Seismic Isolation System CBC 1705A.13.8 Fabrication, installation, prototype, and production testing				
D-AS3		Seismic Damping System CBC 1705A.13.8 Fabrication, installation, prototype, and production testing				
D-AS4						
D-AS5						
Nonstructural components, supports and attachments						
D-N1		Architectural Components CBC 1705A.13.5 & 1705A.17 Cladding, nonbearing walls, and veneer				
D-N2		Ceiling CBC 1705A.13.5 Suspended ceiling systems and their anchorage				
D-N3		Access Floors CBC 1705A.13.5.1 Anchorage of access floor systems				
D-N4		Storage Racks 8' or Taller CBC 1705A.13.7 Anchorage				
D-N5		Plumbing, Mechanical, and Electrical Components CBC 1705A.13.6 Anchorage, bracing, and vibration isolators				
D-N6		Special Seismic Certification CBC 1705A.13.4 Special seismic certification label, anchorage, and mounting				
D-N7						
D-N8						
MECHANICAL INSPECTIONS						
D-M1						
D-M2						
PLUMBING INSPECTIONS						
D-P1						
D-P2						
FIRE PROTECTION AND LIFE SAFETY SYSTEMS SPECIAL INSPECTIONS						
D-FP1		Sprayed Fire-Resistant Materials CBC 1705A.15 Spray-applied fireproofing				
D-FP2		Mastic and Intumescent Fire-Resistant Coatings CBC 1705A.16 In accordance with AWCI 12-B				



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D-FP3	Penetration Firestops CBC 1705A.18.1 Penetration firestop systems that are tested and listed					
D-FP4	Fire-Resistant Joint Systems CBC 1705A.18.2 Fire-resistant joint systems that are tested and listed					
D-FP5	Smoke Control Systems CFC 909.18.8 & CBC 170.17 & 1705A.19 Ductwork and operation					
D-FP6	Sprinkler System Piping NFPA 13-2022 § 7.5.2 Welded pipe and fittings					
D-FP7	Standpipe System Piping NFPA 14-2019 § 4.4.2 Welded pipe and fittings					
D-FP8						
D-FP9						

OTHER SPECIAL INSPECTIONS

D-OT1	Exterior Insulation and Finish Systems (EIFS) CBC 1705A.17 EIFS applications					
D-OT2	Water-Resistive Barrier Coating CBC 1705A.17.1 ASTM E2570 barrier coating when installed over a sheathing substrate					
D-OT3						
D-OT4						



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SECTION E			REQUIRED COMPLIANCE FORMS		
Facility #:	Facility Name:		Project #:		
Form #	Required (Select with "X")	DOCUMENT NAME	Responsible Designer Or Installing Contractor	Compliance Verification by IOR (Initial/Date)	HCAI/FDD Use (Initial/Date)
CALIFORNIA ENERGY CODE					
NON-RESIDENTIAL CERTIFICATE OF INSTALLATION (NRCI)					
NRCI-ENV-01-E		ENVELOPE			
NRCI-MCH-01-E		MECHANICAL			
NRCI-PLB-01-E		PLUMBING			
NRCI-LTI-01-E		INDOOR LIGHTING <i>(conditioned, processed spaces)</i>			
NRCI-LTI-02-E		ENERGY MANAGEMENT CONTROL SYSTEM OR LIGHTING CONTROL SYSTEM <i>(conditioned, processed spaces)</i>			
NRCI-LTI-04-E		TWO INTERLOCKED LIGHTING SYSTEMS <i>(conditioned, processed spaces)</i>			



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NRCI-LTI-05-E		ENERGY MANAGEMENT CONTROL SYSTEM OR LIGHTING CONTROL SYSTEM <i>(conditioned, processed spaces)</i>			
NRCI-LTI-06-E		VIDEO CONFERENCE STUDIO LIGHTING <i>(conditioned, processed spaces)</i>			
NRCI-LTI-01-E		INDOOR LIGHTING <i>(conditioned, processed spaces)</i>			
NRCI-LTI-02-E		ENERGY MANAGEMENT CONTROL SYSTEM OR LIGHTING CONTROL SYSTEM <i>(conditioned, processed spaces)</i>			
NRCI-LTI-05-E		ENERGY MANAGEMENT CONTROL SYSTEM OR LIGHTING CONTROL SYSTEM <i>(conditioned, processed spaces)</i>			
NRCI-LTO-01-E		OUTDOOR LIGHTING			
NRCI-LTO-02-E		ENERGY MANAGEMENT CONTROL SYSTEM OR LIGHTING CONTROL SYSTEM <i>(outdoor lighting)</i>			
NRCI-ELC-01-E		ELECTRICAL POWER DISTRIBUTION			
NRCI-PRC-01-E		COVERED PROCESSES <i>(commercial refrigeration)</i>			



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NRCI-PRC-01-E		COVERED PROCESSES <i>(parking garage)</i>			
NRCI-PRC-01-E		COVERED PROCESSES <i>(process boilers greater than 2.5 MM Btu/h)</i>			
NRCI-LTS-01-E		SIGN LIGHTING <i>(indoor and outdoor)</i>			
NON-RESIDENTIAL CERTIFICATE OF ACCEPTANCE (NRCA)					
NRCA-ENV-02-F		FENESTRATION ACCEPTANCE			



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SECTION H	HCAI REVIEWED	
Facility #:	Facility Name:	Project #:
NOTE: When a structural engineer has been delegated responsibility for a portion of this project his or her signature is also required.		
Submitted By:		
I have reviewed the approved construction documents for this project and all tests and special inspections required by Code are marked as "required" on this form.		
Architect/Engineer of Record (Print Name)	Architect/Engineer of Record (Signature)	Date
Structural Engineer of Record (Print Name)	Structural Engineer of Record (Signature)	Date
FOR HCAI USE		
TIO Program Reviewed by HCAI Plan Review Staff:		
<p>Note: HCAI plan review staff must provide verification that the TIO program has been "Reviewed" prior to plan approval to confirm the applicability of the tests and inspections identified in the TIO program for work scope, building systems, and the construction materials shown in the design drawings. Field staff will issue subsequent "TIO Program Approval".</p>		



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SECTION I	TIO PROGRAM APPROVAL		
Facility #:	Facility Name:	Project #:	
<p>This program is prepared and submitted for an OSHPD 1 project. OSHPD 1 projects include all construction and remodel projects for: general acute care hospitals, acute psychiatric hospitals, and general acute care hospitals providing only acute medical rehabilitation center services (2022 CBC 1224.1).</p>			
<p>Samples of Test and Inspection Reports are <i>NOT</i> required for tests performed by laboratories approved through OPAA Program</p>			
<p><i>All test and special inspection reports shall be submitted to the IOR, hospital owner, architect in responsible charge, and the structural engineer by the testing agency per CAC 7-149(a).</i></p>			
<p><i>Verified compliance reports shall be signed by the individual who performed the special inspection(s) as outlined in CAC 7-151 (c). All reports shall clearly state whether the tests or special inspections were performed in accordance with the HCAI stamped approved documents and whether the results indicate compliance with those documents per CAC 7-149 (a). All IORs performing special inspections shall hold the appropriate certification and equipment, and shall obtain approval from the design professional of record and HCAI prior to performing such work.</i></p>			
<p>NOTE: This Test, Inspection, and Observation Report shall be approved by HCAI field personnel prior to start of construction.</p>			
Architect/Engineer of Record (Print Name)	Professional License #	Architect/Engineer of Record (Signature)	Date
FOR HCAI FIELD STAFF USE			
<p>TIO Program Approved by HCAI Field Staff:</p>			
<p>Note: HCAI plan review staff must provide verification that the TIO program has been "Reviewed" prior to plan approval to confirm the applicability of the tests and inspections identified in the TIO program for work scope, building systems, and the construction materials shown in the design drawings. HCAI Field staff will issue subsequent "TIO Program Approval".</p> <p>If "Approved with Comments" is checked the following comments shall be resolved by the designer prior to proceeding with the related construction:</p>			

