

# Plan Review and Inspection Procedure for Design & Construction and Facilities Management

Responsible Administrator: Campus Fire Marshal

Revised: October 2023

**Summary**: This section outlines the policy and procedures related to Fire and Life Safety Plan Review and Inspection Procedure for Design & Construction and Facilities Management that are administered through the Environmental Health and Safety (EHS) Department.

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# 1. Program Description

This program serves as a guideline for Design & Construction Services (D&CS) & Facilities Management (FM) projects involving State Fire Marshal (SFM) required plan review and inspection/testing of renovations and new construction projects at the University of California, Irvine (UC Irvine). By establishing these criteria, UC Irvine strives to receive the highest quality of construction workmanship on all construction projects while optimizing the performance of facility fire and life safety systems. UC Irvine's Environmental Health and Safety (EHS), D&CS and FM will work together to implement and accomplish the goals of this program.

#### 2. Scope

This program applies to all new construction and renovations projects on the grounds at UC Irvine. Coordinating plan review, field inspection requests, conducting inspections, and closing out projects are the responsibilities of both the EHS Designated Campus Fire Marshal (DCFM) D&CS and FM project manager.

# 3. Definitions

- Campus Fire Marshal (CFM) The CFM is a campus representative who has the responsibility and authority to enforce fire and life safety requirements in all UC Irvine facilities.
- Designated Campus Fire Marshal (DCFM) At UC Irvine, the State Fire Marshal (SFM) has
  delegated the Designated Campus Fire Marshal (DCFM) and assigned representatives as the
  Authority Having Jurisdiction (AHJ) for plan review and construction inspections. The DCFM also
  has the responsibility and authority to enforce SFM regulations and requirements elsewhere on
  campus.

- Fire Life Safety Systems Comprised of building systems intended to alert and protect occupants of fire dangers and other related perils. These systems help to preserve life and property by protecting a building or facility against fire hazards. These systems include, but are not limited to, smoke control systems, fire alarm detection and notification systems, fire sprinkler systems, and building construction design to protect occupants in the event of a fire.
- **Inspector of Record (IOR)** A D&CS/FM employee who is assigned to record all construction activities and observations that occur on a specific construction site.
- National Fire Protection Association (NFPA) A non-profit educational and technical association that educates and develops fire protection standards for protection of life and property.
- Notice to Proceed (NTP) A notice issued from D&CS/FM Contracts
  Department to the Contractor that a project may proceed to the construction
  phase.
- Project Manager (PM) A D&CS/FM employee who is assigned to manage a FM construction project.
- Request for Information (RFI) Form A form used by the contractor which is sent to D&CS/FM to gather additional information about the construction project.
- SFM Fire Safety Correction Notice (Form EN-11) A form provided to the
  construction site Inspector of Record (IOR) from the DCFM that indicates
  deficiencies and or hazards in need of correction by the General Contractor or
  Subcontractor.
- **SFM Inspection Report (Form EN-2)** A form provided to the construction site IOR from the DCFM that indicates no deficiencies or hazards were identified during the inspection.
- Submittal A proposed plan or specification for various parties' (EHS, Facilities Management) review and approval.

# 4. Responsibilities

- Facilities Management Project Services Department (FMPSD) is responsible for:
  - Ensuring that all project construction follow D&CS/FM department processes and that projects have been properly implemented;
  - Ensuring that all projects that affect fire and life safety systems have been inspected;
  - Assigning project managers (PM) and inspectors of record (IOR) to each construction project on campus:
  - Providing training and resources to PM's and IOR's related to construction safety and fire safety; and
  - Assisting EHS in the implementation of this program.
- D&CS/FM Project Managers (PM) are responsible for:
  - Scheduling and conducting the Scope / Design meetings with the Designated Campus Fire Marshal (DCFM) and other EHS staff members as necessary;
  - Submit "EHS Plan / Document Review Transmittal Form, (Appendix A)" and obtain DCFM approval before sending project to D&CS, FM Contracts Department;

- Conduct bi-monthly meetings with DCFM and other D&CS, FM departments to review project status:
- o Reviewing inspection and non-conformance reports for outstanding items;
- Reviewing outstanding action items with the DCFM in order to agree upon project completion;
- o Communicating to the Project IOR regarding EHS issues on their construction project;
- Assisting EHS in the implementation of this program.
- D&CS/FM Project Inspector of Record (IOR) is responsible for:
  - Scheduling project inspections with the DCFM at least 48 hours in advance;
  - o Communicating on a timely basis to the DCFM about rescheduling or canceling inspections;
  - Ensuring all necessary items have been completed before the start of the inspection;
  - Obtaining the DCFM approval for all SFM required inspections;
  - Ensuring that all necessary paperwork is approved, and all necessary signatures have been obtained;
  - Verifying that there are no outstanding DCFM requests;
  - Assisting the PM and DCFM during the project closeout process;
  - Assisting EHS in the implementation of this program.
- Designated Campus Fire Marshal (DCFM) or assigned representative(s) is responsible for:
  - Conducting SFM required inspections;
  - Testing building construction and approving all fire and life safety systems;
  - Working in conjunction with the D&CS, FM, PM's, IOR's, and Construction Contractors;
  - Approving construction projects for: "Beneficial Occupancy," "Substantial Approval" or "Fire Clearance;"
  - Serving as a fire and life safety technical resource to Facilities Management;
  - Implementing this program for all renovations and new construction projects on campus.
- Environmental Health and Safety (EHS) is responsible for:
  - Coordinating construction safety and fire safety training to D&CS/FM, if necessary;
  - Reviewing EHS Plan / Document Review Transmittal Form, (Appendix A) when requested by the PM;
  - Coordinating construction and fire safety training to D&CS/FM, if necessary;
  - Serving as an EHS technical resource to D&CS/FM;
  - o Coordinating and conducting inspections of existing buildings on campus.

#### 5. Program Components

The procedure to initiate a plan review, construction project site inspection and/or test, and the closing out of a project is described in the following process:

- Plan Review
  - The DCFM shall review all D&CS and FM projects. The PM must submit to the DCFM the project scope and associated documents via the "EHS Plan/ Document Review Transmittal" form. The DCFM shall attend design meetings when requested by the PM. Once the project is approved by the DCFM the project can be sent to D&CS/FM Contracts for processing.
- D&CS/FM and General Contractor Pre-Construction Meeting
  - Before the commencement of any project, a Project Pre-Construction Meeting is held between FM and the Contractor. During this meeting, the project criteria is set and scheduled. This meeting is conducted after the Notice to Proceed (NTP) is sent to the Contractor. PM may request DCFM to attend Pre-Construction meeting if needed.

## Construction User's Meeting

- The DCFM shall periodically, or upon request of the Project IOR or PM, attend the project user's construction meetings to provide fire and life safety technical consultation (e.g., fire access and egress, fire main service, exiting, rated construction, building fire safety systems, through penetrations, fire stopping, and other EHS issues). The IOR or the PM shall schedule these meetings with the DCFM on the DFA calendar system at least 24 hours before the meeting in available time slot on the calendar.
- D&CS/FM shall forward all project meeting minutes to the DCFM for review.

### Pre-DCFM Inspections

- The D&CS/FM Project IOR will inspect the construction area to ensure it is ready for inspection or testing by the DCFM.
- Once the Project IOR has determined that the construction is acceptable, the Project IOR will schedule the DCFM on DFA calendar system. The inspection request should be sent 48 hours prior to the requested inspection time.
- If for some reason the DCFM must cancel the requested inspection, the DCFM must notify the project IOR as soon as possible and reschedule the inspection.
- For same day or next day Request for Inspections, the Project IOR must call the DCFM to schedule an inspection time.
- The DCFM has 24 hours to respond to the Request for Inspection by accepting the Outlook calendar request. An email confirmation will be sent back to the IOR from the DCFM to confirm the inspection request and time.
- When the project IOR is scheduling the DCFM inspection, he or she must include a minimum of 30 minutes to review plans and/or the submittal at the construction site and adequate time for the physical inspection.

#### DCFM Inspection

- The DCFM will walk the job site with the Project IOR after both parties agree to the scope of the inspection.
- Both the DCFM and the Project IOR will take notes of corrections or comments identified during the inspection.
- If during the inspection either the DCFM or the Project IOR feel that the project site is not ready for inspection, either party may cancel the inspection and the Project IOR will reschedule the inspection.
- o If during the inspection the DCFM has questions regarding the construction, he or she will only address the questions to the Project IOR, not to the Contractor or subcontractors.

## DCFM Report

- The DCFM must use the SFM's Notice of Correction, EN-11 form (Appendix B) to document items for correction following all site inspections and tests. The DCFM may also use the SFM Inspection Report, EN-2 form (Appendix C) if no corrective action is required from the inspection. The DCFM shall have 48 hours to provide the Project IOR a completed SFM Report and shall include the following:
  - The DCFM will type an electronic SFM Report and electronically send it or deliver a hard copy to the Project IOR.
  - The Project IOR will then sign the SFM Report and make a copy for his or her records.
  - If an authorized representative of the DCFM has performed the site inspection or test, he or she will take the original SFM Report to the DCFM for his or her signature.
  - The Project IOR will use the photocopied report to follow up and complete all action items and recommendations.
  - The original SFM Report will be available at the EHS building if desired.

- Required inspections and tests to be performed by the DCFM include, but are not limited to:
  - General
    - Review of construction site roads and fencing for fire department access
    - Approved plans in IOR's office or on site stamped by CFM
  - Underground Fire Lines
    - Underground fire service material inspection piping, fittings, and hardware etc.
    - Underground fire service inspection of thrust blocks, depth of bury, and trace wire
    - Underground fire service hydrostatic test this includes the FDC
    - Underground fire service flush test
  - Sprinkler & Standpipe Systems
    - FDC signage and labeling
    - Fire pump acceptance test
    - Structural steel sprayed on fire proofing inspection
    - Sprinkler & standpipe material inspection piping, welds, grooves, etc.
    - Sprinkler & standpipe rough-in inspection
    - Sprinkler & standpipe hanger and seismic bracing inspection
    - Sprinkler & standpipe pipe clearance thru walls and floors
    - Sprinkler & standpipe number, type, and arrangement of heads
    - Sprinkler & standpipe hydrostatic test with all heads and drops installed
    - Sprinkler & standpipe flow test
    - Sprinkler & standpipe drain location inspection
    - Sprinkler & standpipe test flow switch, drain, tamper and supervision
    - Standpipe flow approval
    - Final approval of sprinkler from DCFM
    - NFPA 13 certificate of completion
  - Fire Resistive Assemblies
    - Framing inspection of rated walls and shafts
    - Through-wall penetrations and fire stopping corridor, shafts, stairways, elevators, occupancy walls, area separation walls, floors etc.
    - Joint penetration curtain walls, expansion joints, floors, walls, slip track etc.
    - Roof covering
    - Back-to-back boxes in rated walls
    - Rated recess and success panels/doors
    - Opening protection- area separation walls, roll down doors, corridors, walls, ceiling, exterior walls etc.
  - HVAC
    - Fire/Smoke dampers testing and inspection of angles, labels, screws, bolts, fusible links, and "S" clips, and access doors, duct detector location, and automatic shutdown etc.
    - Duct detector air differential pressure test
  - Automatic Extinguishing Systems
    - Automatic extinguisher systems test i.e., FM200, kitchen hood system, fume hood, CO2, dry/wet chemical etc.

#### Fire Alarm

- Fire alarm rough-in
- Fire alarm strobe candela verification
- Fire alarm inspection and testing test all devices & appliances, audibility/visual verification, main panel & annunciator panel test, elevator recall, flow & tamper, smoke & duct detectors, battery test, panel supervisory test, roll down/won door, fire pump supervision, smoke evacuation test etc.
- NFPA 72 certificate of completion
- Final approval of fire alarm system from DCFM

# Exiting

- Exiting verification widths per approved plans
- Exit sign inspection
- Emergency light inspection to public way
- Stair rise and run, handrail and guardrails
- Signs maximum occupancy, evacuation, and emergency signs

#### Emergency Generator

Emergency generator acceptance test

#### Doors

• Fire rated door inspection – frames, smoke gaskets, label, hardware, swing, rated glass, panic hardware, door/frame clearances etc.

#### Miscellaneous

- Fire extinguisher location portable extinguisher verification and cabinet rating if required
- Interior finishes walls, floors, and ceilings
- Medical gas inspection pressure test, label, and valve location
- Know box inspection location, height, and number of keys (prior to occupancy)
- Comprehensive building final inspection leading to substantial completion

#### • Project Closeout Inspection and Report

- The California State Fire Marshal Fire and Life Safety Checklist (Appendix D) may be used to assist in the Closeout Procedures. All SFM required documentation must be reviewed and signed by the PM, the Project IOR, and the DCFM before final substantial completion, beneficial occupancy or Fire Clearance can be granted.
- The following is a list of documentation and conditions to be reviewed prior to Financial Closeout:
  - All inspection requests must be completed and signed by the DCFM or Fire Inspector;
  - All SFM forms must be completed and signed by the DCFM or Fire Inspector;
  - All detail plans for all fire penetrations and fire rated assemblies have been reviewed, approved, and signed by the DCFM or Fire Inspector;
  - Approved plans and documents have been reviewed and filed;
  - All appropriate RFI's have been reviewed and approved by the DCFM or Fire Inspector;
  - The California State Fire Marshal Fire and Life Safety Checklist must be reviewed, completed, and signed by the DCFM or Fire Inspector, if applicable;
  - Documentation of inspections and tests are completed and signed for acceptance and occupation by the DCFM or Fire Inspector;

- The NFPA 13 "Record of Completion" form for the fire sprinkler systems is accepted and signed by the DCFM or Fire Inspector; and
- The NFPA 72 "System Record of Completion" form for Fire Alarm Systems is accepted and signed by the DCFM or Fire Inspector.

# 6. Reporting Requirements

All DCFM project records and documentation are maintained in the EHS Building Fire Division files.

## 7. References

Title 24 California Code of Regulations (24CCR) California Fire Code (CFC) National Fire Protection Association (NFPA 72 and/or 13)

## Appendices:

- A EHS Plan / Document Review Transmittal Forms FM, D&CS
- B State Fire Marshal's Notice of Correction, EN-11 Form
- C State Fire Marshal's Notice of Correction, EN-2 Form
- D California State Fire Marshal Fire and Life Safety Checklist

UNIVERSITY OF CALIFORNIA, IRVINE – ENVIRONMENTAL HEALTH SAFETY

# EHS Plan/Document Review Transmittal Fire Safety Division 4600 Health Sciences Road, Irvine, CA. 92697-2725 Main Office (949) 824-6200, Fax (949) 824-8539

DATE RECEIVED AT EH&S:	DATE RETURNED TO Facilities	Manager	nent		
EH&S ID:					
FACILITI	IES MANAGEMENT				
1a.) FM Requested Due Date:	1b.)EHS Due Date:				
2) Project Number:					
3) Building Name:					
4) Project Name:					
5) Scope of Work:					
6) Building Type / Occupancy					
7) BACK CHECK: YES	NO BY: (PRINT)				
8a.) Project Manager:	8b.) Phone:				
9) ANSWER "YES" OR "NO" TO EACH	,				
(Items A Thru G relate to the "SCOPE OF		YES	NO		
A. A new building?	"Clar"				
B. Sqft. Added to (E) building?					
C. Change of existing floor plan?					
D. Civil, Mechanical, plumbing or electrical?					
E. Fire alarm and detection system?					
F. Fire extinguishing systems?					
G. Requests for the review of specific E of this document.	H&S departments are indicated on page 2				
			<u> </u>		
	_ `				
	, –	rections			
	0% Review Approval Stamp				
	0% Review Approval for Con	tracts			
Addendum 10	00% Review Other:				
FIRE MARSHAL COMMENTS:					
Job Complete? YES NO					

# $\underline{Environmental\ Health\ Safety\ Review\ Items}$

Biosafety/Other:		YES		NO	
- Animal Care Facilities/Vivarium	- BSL2/BSL3 - Cold Room				
- Autoclaves - Biosafety Cabinet (BSC)	- Cold Room - Recombinant DNA	lissue Cultu	re		
- Biohazard/Biological Agent/Materials	- Select Agents				
			t Christine		10
Plan Reviewer Comments:		44300	or, Judi Abe	gania 4417	'U
		_			
<u>Chemical Safety</u>		YES		NO	
- Chemicals	1	ume Hood			
- Chemical Cabinets - Chemical Storage		Hove Box Aboratory			
- Clean Room		aboratory Iafety Show	er		
		,	<del></del>		
Plan Reviewer Comments:		_ Conta	ct Amir Irai	nnejad 4910	04,
Environmental Management:		YES		NO	
- Emergency Generator	- Stormwater Management		∟∟ r Conditione		
- Hazardous Waste	- Aboveground and Underground Storage Tank		illers		
- Oil Filled Equipment >55 gallons	- Boilers & Water Heaters		6 Switchgear		
Plan Reviewer Comments:		Conta	t: Kirk Mati	n 44578	
1 Izii reeviewei Comments.			SE TAIRE IVER	11 — 11370	
Fire Alarm:		YES		NO	
- Fire Alarm Modification					
- Fire Safety Work Order Required for Suppo	rt				
Plan Reviewer Comments:		Contac	t Jim Bola -	- 49929	
<u>Fire Sprinkler.</u>		YES		NO	
- Fire Sprinkler Modification	2				
- Fire Sprinkler and Fire Safety Work Orders I	Cequired for Support				
Plan Reviewer Comments:		_ Conta	ct Brian Oh:	newehr– 41	L 446
		******		***	
Industrial Hygiene:	F II 1 /I 1 F 1 + 3 I + 3 I + 3 I + 3	YES		NO	
- Asbestos-containing Materials - Clean Room	<ul> <li>Fume Hoods/Local Exhaust Ventilation</li> <li>Indoor Environmental Quality- Chemicals, No</li> </ul>	sice Duset	- Mold		
- Contractor Chemicals	- Lab. Ventilation System-Noise & Dust	/13C, 12U3L		cilities/Res	staurants
- Food Facilities	- Lead-based or Lead —containing surfaces			uality/Chlo	
F		<u> </u>		1 1104	-
Plan Reviewer Comments:		_ Contac	t: Alvin Sam	1a1a — 4481	/
Radiation:		YES		NO	
- Laser Equipment/Magnets	- Radioactive Materials Use/Hoods				
- Radiofrequency/Microwave Antennas	- Reactor Facility, Rowland Hall				
- Partide Accelerators/Room Shidding	- X-Ray Machine Use/Room Shielding				
		Contac	t Bridgette	Neri – 4358	89
Plan Reviewer Comments:			s Matin – 44		
		3/200		NIC	
Safety:		YES		NO	Ш
- Arc Flash Labeling - Control of Hazardous Energy (LOTO)					
- Electrical (Low/High Voltage)					
- Fall Protection					
Plan Reviewer Comments		Contact	· Lennie W···	na ସ୍ଥର ଅଟନ	4270 or
Plan Reviewer Comments:	49940	Contact	:: Jennie Wur	ng 949 880	4270, or

# **UCI - ENVIRONMENTAL HEALTH SAFETY**

Plan/Document Review Transmittal Sheet, Fire Safety Division 4600 Health Sciences Road, Irvine, CA. 92657-2725 Main Office Number (949) 824-6200, Fax (949) 824-8539

ET&O Doe	DATE RECEIVED AT EHS	DATE RETURNED TO D&CS
e On	EHS ID#	Attn: Todd Krzysko, Ext. 4-6630
y y	EHS DUE DATE:	D&CS Processor/Date – Outgoing:
		D&CS Processor/Date: - Incoming:

# DESIGN AND CONSTRUCTION

(FILL OUT FORM ITEMS COMPLETELY)

(FILL OUT FORWITTENS COMPLETELT)							
1) PROJECT NUMBER: 2)			2) REQUESTE	D DUE D	ATE:		
3) PROJECT NAME:							
4) SCOPE OF REQUESTED REVIEW:							
4a) FOR RECORD ONLY: YES: □ NO: □ 5) BACK CHECK: YES:□ NO: □					): 🗆		
6) PROJECT MANAGER: 7) PHONE:							
8) CHECK THE BOX NEXT TO THE TYPE OF DOCUMENT BEING SUBMITTED AND INDICATE THE DOCUMENT NAME/TITLE IN THE ADJACENT SPACE.							
RFI							
SUBMITTAL:							
OTHER:							
9) ANSWER "YES" OR "N							
* (Items A Thru G relate to the "SCOPE OF REQUESTED REVIEW)  YES NO							
A FIRST-TIME PROJECT	SUBMITT	ΓAL?					
B SQ.FT. ADDED TO EX	SQ.FT. ADDED TO EXISTING BUILDING?						
C CHANGE OF EXISTING	CHANGE OF EXISTING FLOOR PLAN?						
D CHANGE(S) TO CIVIL,	MECHAN	ICAL, PL	UMBING, OR E	LECTRI	CAL?		
E CHANGE(S) TO FIRE A	ALARM & I	DETECTI	ON SYSTEM?				
F CHANGE(S) TO FIRE E	CHANGE(S) TO FIRE EXTINGUISHING SYSTEMS?						
G REQUESTS FOR THE				MS ARE	•		
INDICATED ON THE B		OF THIS	S SHEET.		For E	SUSE	DNLY
Fire Marshal Comments	:					<b>t</b>	
Submittal Complete? YES  NO SFM							
Signature:							

# **Environmental Health Safety Review Items**

Biosafety/Other: - Animal Care Facilities/Vivarium	- BSL2/BSL3	YES 🗆	NO □
- Annual Care r aciniles/vivariam	- Cold Room		- Tissue Culture
- Biosafety Cabinet	- Recombinant DNA		- 1133ac Galtare
- Biohazard/Biological Agent/Materials			
0 0	•		
		Contact: Christine Abegania – 4417 46982	e Tafoya - 44365 or Judi 0 or Sandra Conrrad -
Plan Reviewer Comments:		40002	
Chemical Safety:		YES 🗆	NO □
- Chemicals	- Compressed Gases - Fu		
- Chemical Cabinets	- Corrosive Cabinet - Gle	ove Box	
- Chemical Storage		boratory	
- Clean Room	- Flammable Cabinet - Sa	fety Shower	
Plan Reviewer Comments:		Amir Irannejad	
		Samala– 4481	17
Environmental Management:		YES □	NO □
- Emergency Generator - Hazardous Waste	- Stormwater Management	- Air Conditi	
- Hazardous Waste	- Aboveground and Underground Storage	- Chillers	011010
- Oil Filled Equipment >55 gallons	- Boilers & Water Heaters	- SF6 Switcl	ngear
Plan Reviewer Comments:		Contact: Kirk Ma	atin – 44578
Fire Alarm:		YES 🗆	NO □
- Fire Alarm Modification		163 —	NO —
- Fire Alarm Mounication - Fire Safety Work Order Required for Su	pport		
Dian Basissan Comments		O-start line D-	1- 40020
Flati Reviewer Comments:		Contact. Jim Bo	ia – 49929
Fire Sprinkler:		YES □	NO 🗆
- Fire Sprinkler			—
- Fire Sprinkler and Fire Safety Work Ord	lers Required for Support		
Plan Reviewer Comments:		Contact: Brian C	hnewehr- 41446
		_	
Industrial Hygiene:		Contact: Brian C	NO 🗆
Industrial Hygiene: - Asbestos-containing Materials	- Fume Hoods/Local Exhaust	YES 🗆	NO □
Industrial Hygiene: - Asbestos-containing Materials - Clean Room	- Fume Hoods/Local Exhaust - Indoor Environmental Quality- Chemicals,	YES □ Noise, - Mold	NO □
Industrial Hygiene: - Asbestos-containing Materials - Clean Room - Contractor Chemicals	- Fume Hoods/Local Exhaust	YES □ Noise, - Mold	NO □
Industrial Hygiene: - Asbestos-containing Materials - Clean Room - Contractor Chemicals - Food Facilities	- Fume Hoods/Local Exhaust - Indoor Environmental Quality- Chemicals, - Lab. Ventilation System-Noise & - Lead-based or Lead –containing surfaces	YES - Mold - Food - Wate	NO □
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Industrial Hygiene: - Asbestos-containing Materials - Clean Room - Contractor Chemicals - Food Facilities Plan Reviewer Comments:  Radiation: - Laser	- Fume Hoods/Local Exhaust - Indoor Environmental Quality- Chemicals, - Lab. Ventilation System-Noise & - Lead-based or Lead –containing surfaces - Radioactive Materials Use/Hoods	YES   Noise, - Mold - Food - Wate  Contact: Alvin S	NO □
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Industrial Hygiene: - Asbestos-containing Materials - Clean Room - Contractor Chemicals - Food Facilities  Plan Reviewer Comments:  Radiation: - Laser - Radiofrequency/Microwave Antennas - Particle Accelerators/Room Shielding  Plan Reviewer Comments:	- Fume Hoods/Local Exhaust - Indoor Environmental Quality- Chemicals, - Lab. Ventilation System-Noise & - Lead-based or Lead –containing surfaces  - Radioactive Materials Use/Hoods - Reactor Facility, Rowland Hall - X-Ray Machine Use/Room	YES   Noise, - Mold - Food - Wate  Contact: Alvin S  YES    Contact: Bridget Kirk Matin – 445	NO □ In a contraction of the con
Industrial Hygiene: - Asbestos-containing Materials - Clean Room - Contractor Chemicals - Food Facilities  Plan Reviewer Comments:  Radiation: - Laser - Radiofrequency/Microwave Antennas - Particle Accelerators/Room Shielding  Plan Reviewer Comments:  Safety:	- Fume Hoods/Local Exhaust - Indoor Environmental Quality- Chemicals, - Lab. Ventilation System-Noise & - Lead-based or Lead –containing surfaces  - Radioactive Materials Use/Hoods - Reactor Facility, Rowland Hall - X-Ray Machine Use/Room	YES   Noise, - Mold - Food - Wate  Contact: Alvin S  YES   Contact: Bridgel	NO □  If ar Quality/Chlorination samala – 44817  NO □
Industrial Hygiene: - Asbestos-containing Materials - Clean Room - Contractor Chemicals - Food Facilities  Plan Reviewer Comments:  Radiation: - Laser - Radiofrequency/Microwave Antennas - Particle Accelerators/Room Shielding  Plan Reviewer Comments:  Safety: - Arc Flash Labeling	- Fume Hoods/Local Exhaust - Indoor Environmental Quality- Chemicals, - Lab. Ventilation System-Noise & - Lead-based or Lead –containing surfaces  - Radioactive Materials Use/Hoods - Reactor Facility, Rowland Hall - X-Ray Machine Use/Room	YES   Noise, - Mold - Food - Wate  Contact: Alvin S  YES    Contact: Bridget Kirk Matin – 445	NO □ In the property of the Neri - 43589 or 178
Industrial Hygiene: - Asbestos-containing Materials - Clean Room - Contractor Chemicals - Food Facilities  Plan Reviewer Comments:  Radiation: - Laser - Radiofrequency/Microwave Antennas - Particle Accelerators/Room Shielding  Plan Reviewer Comments:  Safety: - Arc Flash Labeling - Control of Hazardous Energy (LOTO)	- Fume Hoods/Local Exhaust - Indoor Environmental Quality- Chemicals, - Lab. Ventilation System-Noise & - Lead-based or Lead –containing surfaces  - Radioactive Materials Use/Hoods - Reactor Facility, Rowland Hall - X-Ray Machine Use/Room	YES   Noise, - Mold - Food - Wate  Contact: Alvin S  YES    Contact: Bridget Kirk Matin – 445	NO □ In the property of the Neri - 43589 or 178
Industrial Hygiene: - Asbestos-containing Materials - Clean Room - Contractor Chemicals - Food Facilities  Plan Reviewer Comments: - Laser - Radiofrequency/Microwave Antennas - Particle Accelerators/Room Shielding  Plan Reviewer Comments:  Safety: - Arc Flash Labeling - Control of Hazardous Energy (LOTO) - Electrical (Low/High Voltage)	- Fume Hoods/Local Exhaust - Indoor Environmental Quality- Chemicals, - Lab. Ventilation System-Noise & - Lead-based or Lead –containing surfaces  - Radioactive Materials Use/Hoods - Reactor Facility, Rowland Hall - X-Ray Machine Use/Room	YES   Noise, - Mold - Food - Wate  Contact: Alvin S  YES    Contact: Bridget Kirk Matin – 445	NO □ In a contraction of the con
Industrial Hygiene: - Asbestos-containing Materials - Clean Room - Contractor Chemicals - Food Facilities  Plan Reviewer Comments: - Laser - Radiation: - Laser - Radiofrequency/Microwave Antennas - Particle Accelerators/Room Shielding  Plan Reviewer Comments:  Safety: - Arc Flash Labeling - Control of Hazardous Energy (LOTO) - Electrical (Low/High Voltage) - Fall Protection	- Fume Hoods/Local Exhaust - Indoor Environmental Quality- Chemicals, - Lab. Ventilation System-Noise & - Lead-based or Lead –containing surfaces  - Radioactive Materials Use/Hoods - Reactor Facility, Rowland Hall - X-Ray Machine Use/Room	YES  Noise, - Mold - Food - Water Contact: Alvin S YES  Contact: Bridget Kirk Matin - 445	NO □  If a continuo c
Industrial Hygiene: - Asbestos-containing Materials - Clean Room - Contractor Chemicals - Food Facilities	- Fume Hoods/Local Exhaust - Indoor Environmental Quality- Chemicals, - Lab. Ventilation System-Noise & - Lead-based or Lead –containing surfaces  - Radioactive Materials Use/Hoods - Reactor Facility, Rowland Hall - X-Ray Machine Use/Room	YES  Noise, - Mold - Food - Water Contact: Alvin S YES  Contact: Bridget Kirk Matin - 445	NO □  If an experiment of the property of the Nor □  tte Neri - 43589 or 578  NO □  Wung - 949 880 4270, Bla

# Appendix B - State Fire Marshal's Notice of Correction, EN-11 Form





#### FIRE SAFETY CORRECTION NOTICE

SFM FILE NUMBER 17 _ 30 _ 03 _ 0002 _ XXX _ 0	UCI PROJECT NUMBER		REPORT#	
17 - 30 - 03 - 0002 - XXX - 0  NAME OF FACILITY				
University of California Irvine		Page	of	
NAME OF BUILDING				
TV MILE OF BOILDING				
ADDRESS				
ACCOMPANIED BY (Name, Title)				
ACCOMPANIED BY (Name, Title)				
The California Health and Safety Code and the State Fire Marshal'	s regulations require the following	g fire safety deficie	ncies be	
corrected.	a mad organization and the manufacture of the control of the contr			
The above deficiencies are to be corrected within 30 days	s. If you have any questions	contact the Can	nnus Fire	
Marshal at (949) 824-9665. Environmental Health & Safe				
PREPARED BY	DATE OF NOTICE			
RECEIVED BY	ISSUED BY (Designated Campus Fi	re Marshal		
I certify that all deficiencies outlined above have been corrected.				
OLONIATURE. DATE:				
SIGNATURE:	DATE:			

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# Appendix C - State Fire Marshal's Notice of Correction, EN-2 Form





## **INSPECTION REPORT**

SFM FILE NUMBER	UCI PROJECT NUMBER		REPORT#
17-30-03-0002-XXX-370-0	XXXXXX		KEFORT#
NAME OF FACILITY	^^^^	T	
University of California Invine		Page 1	of 1
University of California Irvine  NAME OF BUILDING		1 age 1	01 1
XXXXXXXX			
ADDRESS			
7,551,230			
ACCOMPANIED BY (Name, Title)			
* * *			
PREPARED BY	DATE OF INS	PECTION	
XXXXXXX-Campus Fire Inspector			
DECENTED BY	BATE		
RECEIVED BY	DATE		

# Appendix D - California State Fire Marshal Fire and Life Safety Checklist



# FIRE AND LIFE SAFETY INSPECTION CHECKLIST



FACILITY NAME:		PROJECT NUMBER:
FIELD REVIEW OF PLANS:  Approved contract drawings on site  UNDERGROUND FIRE LINES: Approved plans on site  Material inspection  Depth of bury & thrust blocks Hydrostatic test Flush Tracer wire verification Hydrant orientation FDC orientation NFPA 24 certificate of Completion Complete x  STRUCTURAL STEEL PROTECTION: Fire proofing approved plans on site Fire proofing lab reports Fire proofing naterial inspection Inspect for Trade Damage Complete x  SPRINKLER & STANDPIPE SYSTEMS: Approved plans on site Sprinkler rough-in inspection Flush of lead-in & FDC Hydrostatic test (shell/floor) Hydrostatic test (shell/floor) Hydrostatic test final Drain location & function FDC identification sign PIV identification sign PIV identification sign Pipe clearance thru walls & floorings Number, type & arrangement of heads Test flow, drain, tamper & supervision Spare head box Calc plates Standpipe pumper truck flow approval Fire Pump Test Approval fire sprinklers NFPA 13 certificate of completion NFPA 14 certificate of completion NFPA 14 certificate of completion Complete x  HVAC:	AUTOMATIC EXTINGUISHING SYSTEMS: Approved plans on site Chemical Type Pipe pressure test Protection of floor penetrations Protection of wall penetrations Final AES approval Complete x  FIRE ALARM SYSTEM: Approval plans on site Rough-in Inspection Test all devices 100% Smoke Detector Test Hear Detector Test Audio/visual notification throughout Test of supervision Panel test Candelas verified 24 hour back-up battery test 48 hour battery recharge test Duct detector magnehelic test/area detection Verify "Sequence of Operation" Shunt trip test & supervisory alarm Elevator recall Roll down / Won - door Fire pump supervision Smoke control system Auto extinguishing system supervision Final fire alarm Panel "Inside Sign" Phone line test with Central station Final fire alarm approval NFPA 72 certificate of completion Complete x  FIRE RESISTIVE ASSEMBLIES: Framing inspection of walls and shafts Roof coverings Wall fire stopping inspection Shaft fire stopping inspection Elevator shaft construction / fire stopping Back to back electrical junction boxes Rated recessed Panels Access Doors Door / Window Installation	DOORS:  Door frame gap Smoke gasket Door hardware Fire Rated Door & Frame Labels Door swing Self-close and latch Card Key Access/Fail open egress Complete x  EXITING: Exit signs rough-in inspection Exit final inspection Low level exit signs & marking Emergency lighting to a public way Stair – rise & run Stair – Handrails Guardrails < 42" a.f.f. Complete x  EMERGENCY GENERATOR: Load bank test (4 hours total) Annunciator location Start up & transfer Exit sign illumination Safety indications Shutdowns per NFPA 110 Emergency egress lighting Fire alarm paging & phones Complete x  SIGNAGE: Evacuation signs Tactile exit signs Exit route signs Room numbers Max occupancy signs Complete x  MISCELLANEOUS: Interior finishes Rescue Windows Fire-treated retardant wood Knox Box keys Portable fire extinguishers 40bc (Type K) Fire extinguisher in kitchens Building address 800MHz Radio Testing complete
Damper install, instruct, on site Location of access door for inspection Damper Angle inspection 100% smoke damper test by DCFM 100% fire damper test by IOR 10% fire damper drop test by DCFM Location of duct detector for auto shutdown Test Automatic Shutdown Air balance complete & report	☐ Attic Draft Stops ☐ Fire Blocking Complete x	Complete x
All balance complete & report		DCFM Approval

PROJECT CLOSEOUT:

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☐ Temporary Certificate of Occupancy	☐ Certificate of Occupancy	☐ Substantial Completion

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