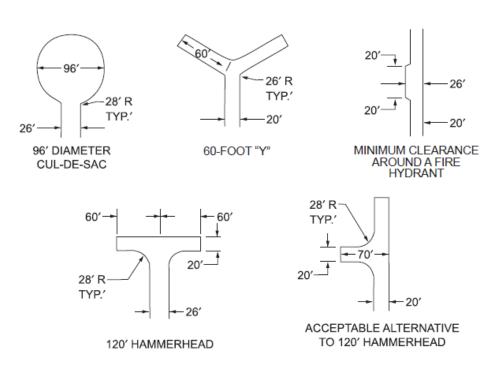


Fire Lane Site Development Checklist

Fire L	ane:
	Dimensions (IFC 503.2.1) Fire apparatus access roads shall have an unobstructed width of not less than 20 feet. (see examples on page 3)
	Fire apparatus access road to extend within one hundred fifty (150) feet of all portions of the facility and all portions of the exterior walls of the first story of the building as measured by an approved route around the exterior of the building or facility. [Ref. IFC 2018 Section 503.1.1]
All-W	Yeather Access Roads during Construction: Access roads shall be in place prior to going vertical with combustible construction or going vertical higher than 6 feet with non-combustible construction.
	Required Access (<i>IFC 3310</i>) Approved vehicle access for firefighting shall be provided to all construction or demolition sites. Vehicle access shall be provided to within 100 feet of temporary or permanent fire department connections. Vehicle access shall be provided by either temporary or permanent roads, capable of supporting vehicle loading under all weather conditions, and maintained until permanent fire apparatus access roads are available.
	Apparatus Access Roads:
(IFC Ch	apter 5 & Appendix D) Fire Apparatus Access Road – A road that provides fire apparatus access from a fire station to a facility, building or portion thereof. This is a general term inclusive of all other terms such as fire lane, public street, private street, parking lot lane and access roadway.
	Dimensions (IFC 503.2.1) Fire apparatus access roads shall have an unobstructed width of not less than 20 feet (exception: width shall be 26 feet minimum when IFC Appendix D105.1 & D105.2 applies), exclusive of shoulders, except for approved security gates and an unobstructed vertical clearance of not less than 13 feet 6 inches.
	Turning Radius (<i>IFC 503.2.4</i>) The required turning radius of a fire apparatus access road shall be designed to accommodate the following radiuses: Inside turning radius of 25 feet minimum & outside turning radius of 48 feet minimum. (see examples on page 3)
	Dead Ends (IFC 503.2.5) Fire apparatus access roads that have a dead-end in excess of 150' in length shall be provided with an approved area for turning around fire apparatus per in accordance with IFC Appendix D, Figure D103.1 and Table D103.4. (See examples on page 3)
	Security Gates (<i>IFC 503.6 and D103.5</i>) Security gates installed across a fire apparatus access road shall be provided with an approved means of emergency operation and be a minimum of 20 feet wide

Site A	ccess:				
	Buildings exceeding three stories or 30 feet in height (<i>IFC Appendix D104.1</i>) Buildings or facilities exceeding 30 feet or three stories in height shall have at least two means of fire apparatus access for each structure.				
	Buildings exceeding 62,000 square feet in area (<i>IFC Appendix D104.2</i>) Buildings or facilities having a gross building area of more than 62,000 square feet shall be provided with two separate and approved fire apparatus access roads. <i>Exception:</i> Projects having a gross building area of up to 124,000 square feet may have a single approved fire apparatus access road, when all buildings are equipped throughout with approved automatic sprinkler systems.				
	Projects having more than 100 dwelling units (<i>IFC D106</i>) Multi-family residential projects having more than 100 dwelling units shall be equipped throughout with two (2) separate & approved fire apparatus access roads. <i>Exception:</i> Projects may have up to 200 dwelling units utilizing a single access road, if the project is protected throughout with a fire sprinkler system (including all non-residential occupancies).				
	Remoteness (<i>IFC Appendix D104.3</i>) Where two fire apparatus access roads are required, they shall be placed a distance apart equal to not less than one half of the length of the maximum overall diagonal dimension of the lot or area to be served, measured in a straight line between accesses.				
Buildi	ngs exceeding 30 feet in height:				
	ngs exceeding 30 feet in height: pendix D) Provided the maximum height of each building(s) shown on page				
	pendix D)				
	Provided the maximum height of each building(s) shown on page Aerial Fire Apparatus Access Roads (IFC Appendix D105.1) Where the vertical distance between the grade plane (Approved Fire Lane) and the highest roof surface exceeds 30 feet in height, an approved aerial fire access road shall be provided. For the purposes of this section, the highest roof surface shall be determined by measurement to the eave of a pitched roof, the intersection of the roof to the exterior wall, or the top of parapet walls, whichever is				

Dead-End Turnaround Examples



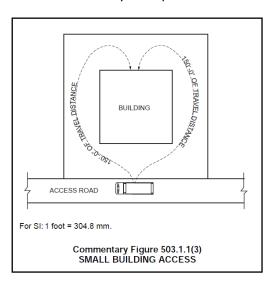
Fire Lane required widths and turnarounds

TABLE D103.4 REQUIREMENTS FOR DEAD-END FIRE APPARATUS ACCESS ROADS

LENGTH (feet)	WIDTH (feet)	TURNAROUNDS REQUIRED	
0-150	20	None required	
151–500	20	120-foot Hammerhead, 60-foot "Y" or 96-foot diameter cul-de-sac in accor- dance with Figure D103.1	
501–750	26	120-foot Hammerhead, 60-foot "Y" or 96-foot diameter cul-de-sac in accor- dance with Figure D103.1	
Over 750		Special approval required	

For SI: 1 foot = 304.8 mm.

Hose lay example





What should my Fire Access Road / Fire Lane Layout Plan include?

- Location of the building on the site along with the length, width and height of building.
- Street locations.
- Private drives and any gates or barriers to traffic.
- Sidewalks and parking rows.
- Fire Department Connections and nearest public fire hydrants as well as hydrants on private property. (Hydrants and Fire Department connections should be highlighted)
- Show overhead structural extensions or obstructions that could affect Fire Lane placement.
- Show proposed fire department Access Roads/Fire Lanes, parking lot /curb striping or sign placements**
- (Cross hatch or otherwise distinguish fire access roads on plans.)
- All above should show size and relative distances from one another.

** Curbs located on either side of a fire lane shall be painted RED or a RED stripe shall be placed along the pavement where there is no curb. Where a fire lane passes between head-in parking spaces, the red stripe should be placed along the rear of these spaces clearly defining the fire lane. Painted curbs and fire lane stripes shall also be conspicuously and legibly marked with the warning "FIRE LANE – NO PARKING - TOW AWAY ZONE" in white letters at least three (3) inches in height, at intervals not exceeding (50) feet. Where fire lanes are clearly defined by curb/pavement striping, fire lane signs are not required. Fire lane signs should be placed every (75) feet along any fire lane where pavement or curb striping is not practical.

Any color other than red may be used in "NO PARKING" areas that are not approved Fire Lanes. RED colored curbs, pavement striping or wheel stops shall be used only to designate approved Fire Lanes.

General Code Requirements

The Fire Lane shall:

- Extend to within one hundred fifty (150) feet of all portions of the facility and all portions of the exterior walls of the first story of the building as measured by an approved route around the exterior of the building or facility. [Ref. IFC 2018 Section 503.1.1]
- Allow the nearest access possible to the main entrance of the building.
- Have a width of no less than twenty (20) feet (unobstructed).
- Have a turning radius of fifteen (15) feet maximum for, driveways entering property from a county road, and a minimum twenty-five (25) feet for turns inside the property.
- Have an unobstructed vertical clearance of at least thirteen and one-half (13.5) feet.
- Be all weather and support a fire apparatus weighing seventy-five thousand (75,000) pounds.
- When dead-end, and in excess of one hundred-fifty (150) feet in length provide an area for turning around the fire apparatus. [Ref. IFC 2018 Appendix D Figure D103.1]

Specific Code Requirements

Requirements for Large Area Buildings [Ref Section D104 of the 2018 IFC]:

D104.1 Buildings exceeding three stories or 30 feet in height. Buildings or facilities exceeding 30 feet (9144 mm) or three stories in height shall have not fewer than two means of fire apparatus access for each structure.

D104.2 Buildings exceeding 62,000 square feet in area. Buildings or facilities having a gross building area of more than 62,000 square feet (5760 m2) shall be provided with two separate and approved fire apparatus access roads.

Exception: Projects having a gross building area of up to 124,000 square feet (11 520 m2) that have a single approved fire apparatus access road where all buildings are equipped throughout with approved automatic sprinkler systems.

D104.3 Remoteness. Where two fire apparatus access roads are required, they shall be placed a distance apart equal to not less than one half of the length of the maximum overall diagonal dimension of the lot or area to be served, measured in a straight line between accesses.

Requirements for Buildings Exceeding 30' in Height [Ref Section D105 of the 2018 IFC]:

D105.1 Where required. Where the vertical distance between the grade plane and the highest roof surface exceeds 30 feet (9144 mm), approved aerial fire apparatus access roads shall be provided. For purposes of this section, the highest roof surface shall be determined by measurement to the eave of a pitched roof, the intersection of the roof to the exterior wall, or the top of parapet walls, whichever is greater.

D105.2 Width. Aerial fire apparatus access roads shall have a minimum unobstructed width of 26 feet (7925 mm), exclusive of shoulders, in the immediate vicinity of the building or portion thereof.

D105.3 Proximity to building. One or more of the required access routes meeting this condition shall be located not less than 15 feet (4572 mm) and not greater than 30 feet (9144 mm) from the building, and shall be positioned parallel to one entire side of the building. The side of the building on which the aerial fire apparatus access road is positioned shall be approved by the fire code official.

D105.4 Obstructions. Overhead utility and power lines shall not be located over the aerial fire apparatus access road or between the aerial fire apparatus road and the building. Other obstructions shall be permitted to be placed with the approval of the fire code official.

Requirements for Multi-Family Residential Developments [Ref Section D106 of the 2018 IFC]:

D106.1 Projects having more than 100 dwelling units. Multiple-family residential projects having more than 100 dwelling units shall be equipped throughout with two separate and approved fire apparatus access roads.

Exception: Projects having up to 200 dwelling units shall have not fewer than one approved fire apparatus access road where all buildings, including nonresidential occupancies, are equipped throughout with approved automatic sprinkler systems installed in accordance with Section 903.3.1.1 or 903.3.1.2.

D106.2 Projects having more than **200** dwelling units. Multiple-family residential projects having more than 200 dwelling units shall be provided with two separate and approved fire apparatus access roads regardless of whether they are equipped with an approved automatic sprinkler system.

D106.3 Remoteness. Where two fire apparatus access roads are required, they shall be placed a distance apart equal to not less than one-half of the length of the maximum overall diagonal dimension of the property or area to be served, measured in a straight line between accesses.

Requirements for One- or Two-Family Residential Developments (Ref Section D107 of the 2018 IFC):

D107.1 One- or two-family dwelling residential developments. Developments of one- or two-family dwellings where the number of dwelling units exceeds 30 shall be provided with two separate and approved fire apparatus access roads.

Exceptions:

- 1. Where there are more than 30 dwelling units on a single public or private fire apparatus access road and all dwelling units are equipped throughout with an approved automatic sprinkler system in accordance with Section 903.3.1.1, 903.3.1.2 or 903.3.1.3, access from two directions shall not be required.
- 2. The number of dwelling units on a single fire apparatus access road shall not be increased unless fire apparatus access roads will connect with future development, as determined by the fire code official.

D107.2 Remoteness. Where two fire apparatus access roads are required, they shall be placed a distance apart equal to not less than one-half of the length of the maximum overall diagonal dimension of the property or area to be served, measured in a straight line between accesses.

Fire Lane Striping and Sign Requirements

Fire Lanes/Fire Apparatus Access Roads shall be marked on the curbs or pavement with a RED stripe 4" in height and stenciled every fifty feet in WHITE letters at least 3" in height with the words, "FIRE LANE – NO PARKING – TOW AWAY ZONE" so as to prevent parking in the area.

NOTE: Where striping is not practical an approved Fire Lane sign shall be placed every seventy-five (75) feet.

1 BUILDING PLANNING & DESCRIPTION	3 MEANS OF EGRESS CHAPTER 10 IBC 2018	5 FIRE-RESISTANCE RATE CONSTRUCTION CHAPTER 6, 7 AND 10 IBC 2018	9 STORAGE: STANDARD & HIGH PILED CHAPTER 32 IFC 2018
NEW CONSTRUCTION SHELL BUILDING CHANGE OF OCCUPANCY SUBSTANTIAL IMPROVEMENT OTHER:	MEANS OF EGRESS # OF REQUIRED EXITS # OF EXITS PROVIDED SHEET # STAIRWAYS (PER FLOOR) EGRESS @ 1ST FL OR LSBO	SHOW DETAILS OF FIRE WALLS OR FIRE BARRIERS MEETING HORIZONTAL WALLS AND ROOF DECKS (SEE SECTION 706.5, 706.6 & 707.5 IBC 2018) FIRE-RESISTANCE RATING REQUIREMENTS (TABLES 601 & 602 IBC 2018)	YES NO PRODUCTS BEING STORED: YES NO STORAGE PACKAGING (I.E. PALLETS, RACKS, SOLID PILED, DRUMS, CARDBOARD BOXES, WRAPPED IN PLASTIC, ETC.): WES NO MAXIMUM HEIGHT OF COMMODITY:
MIXED OCCUPANCY SINGLE OCCUPANCY SEPARATED USE NON-SEPARATED USE	(SECTION 1005.3 IBC 2018) PANIC HARDWARE ON EXIT DOORS? YES NO (SECTION 1008.1.9 IBC 2018) STAIRWAYS (SECTION 1011 IBC 2018)	BUILDING ELEMENTS HOURS REQUIRED PROVIDED UL OR IBC STANDARD USED & DESIGN DETAIL SHOWN ON STRUCTURAL FRAME EXTERIOR DE ARING WALLS	YES NO MAXIMUM HEIGHT OF COMMODITY: YES NO THIS BUILDING IS DESIGNED FOR THE INTENT OF HIGH PILED STORAGE. YES NO FIRE DEPARTMENT ACCESS DOORS
(SECTION 508.3 OR 508.4 IBC 2018) TYPE OF CONSTRUCTION: (CHAPTER 6 IBC 2018) HEIGHT LIMITATION: (TABLE 504.3 IBC 2018)	MINIMUM CLEAR WIDTH SHOWN ON: (EACH STAIRWELL) EGRESS WIDTHS ARE SHOWN ON: ACCESSIBLE AREAS OF REFUGE & 2-WAY COMMUNICATIONS SHOWN ON:	EXTERIOR BEARING WALLS EXTERIOR NON-BEARING WALLS INTERIOR BEARING WALLS	YES NO HIGH PILED STORAGE RACK LAYOUT/ELEVATIONS, CODE ANALYSIS, ETC. SHOWN ON: 10 HAZARDOUS MATERIALS
ADDRESS: CITY, ST: ZIP CODE: SUITE:	(SECTION 1009.3 TO 1009.8 IBC 2018) EXIT SIGNS/EGRESS ILLUMINATION (SECTION 1008 & 1013 IBC 2018)	INTERIOR NON-BEARING WALLS FLOOR CONSTRUCTION	CHAPTER 50 IFC 2018
LIST PURPOSE/USE OF THE BUILDING, AREA BEING REVIEWED, AND ANY SPECIAL CIRCUMSTANCE RELATED TO THIS PROJECT. REVIEWER NOTES	REQUIRED AND SHOWN ON:	ROOF CONSTRUCTION STAIRWELLS (SECTION 1023) ELEVATOR SHAFTS (SECTION 713) CORRIDORS (SECTION 1020)	YES NO DOES THE BUILDING HAVE HAZARDOUS MATERIAL USE OR STORAGE? IF YES, THEN PROVIDE ALL HMIS SUMMARY AND MSDS REPORTS. YES NO IF YES, DO THE QUANTITIES EXCEED THE MAXIMUM ALLOWABLE PER IFC 2018? IF YES, YOU WILL BE REQUIRED TO PROVIDE THE FOLLOWING: CODE ANALYSIS BY FIRE PROTECTION ENGINEER TO SHOW COMPLIANCE WITH IFC 2018. CODES AND REFERENCED STANDARDS SHOWN ON SHEET(S) PROPERTIES WITH FENCE AND GATES SHALL PROVIDE A 911 KEY BOX AT ENTRY GATE
		FIRE RATED DOORS (TABLE 716.1(2)) DEMISING/PARTITION WALL (SECTION 708) FIRE BARRIER (SECTION 707)	
	ELEVATORS NEW EXISTING ELEVATOR KEYBOX LOCATED IN LOBBY? YES NO (MUST BE WITHIN 20' OF THE CALL BUTTON)	FIRE WALL (SECTION 706) DRAFTSTOPS: YES, SHOWN ON: NO (SPRINKLED ATTIC) N/A (SECTION 718.4) HAVE YOU CHECKED WIDTH OF OPENINGS IN FIRE RATED WALLS? YES NO (TABLE 705.8, SECTION 706.8 & 707.6 IBC 2018)	YES NO ATRIUM(S) PER 404 IBC 2018? YES NO HIGH RISE BLDG PER 403 IBC 2018? YES NO ANY FUEL STORAGE TANKS PER 5704 IFC 2018? YES NO PAINT SPRAY BOOTHS, COATINGS, DIPPING OR INDUSTRIAL OVENS USED PER 2404, 2405, 2406 AND CHAPTER 30 IFC 2018?
	4 FIRE PROTECTION & LIFE SAFETY SYS. CHAPTER 9 IBC & IFC 2018 FIRE SEPARATION DISTANCE (FEET) (SECTION 602 IBC 2018) NORTH SOUTH EAST WEST ROOF COVERING CLASSIFICATION PROVIDED: A B C		YES NO CRITICAL FACILITIES YES NO HEALTH DEPARTMENT APPROVAL? REQUIRED FOR ALL ESTABLISHMENTS THAT SERVE/PREPARE FOOD AND BEVERAGES FOR THE PUBLIC OR HAVE REFRIGERATED FOOD STORAGE.
	ALL FIRE PROTECTION PLANS SHALL BE SUBMITTED FOR REVIEW AFTER BUILDING PERMIT HAS BEEN ISSUED (I.E. UNDERGROUND FIRE LINE, SPRINKLER SYSTEM, FIRE ALARM SYSTEM, STANDPIPE, FIRE PUMP ROOM, AND FIRE PROTECTION WATER SUPPLY SYSTEMS) AUTOMATIC FIRE SPRINKLER SYSTEM/ALTERNATIVE AUTOMATIC FIRE EXTINGUISHING SYSTEM	(TABLE 1505.1 IBC 2018) 6 WATER SUPPLY (FOR FIREFIGHTING)	COMMENTS & NOTES
	ALL SPRINKLERS SHALL COMPLY WITH MONITORING AND OCCUPANT NOTIFICATION PER 903.4.2.1 (SECTION 903 & SECTION 903.4 IFC 2018) PROVIDED AS NOTED ON: NOT REQUIRED PER SECTION 903	CHAPTER 5, APPENDIX B & C IFC 2018 GROSS SIZE OF BUILDING IN SQUARE FEET (INCLUDE ALL OVERHANGS UNDER ROOF)	
	SYSTEM PROVIDED: SPRINKLER HEAD PROVIDED: FIRE PUMP PROVIDED: NFPA 13 STANDARD YES NFPA 13R ELO NO	PUBLIC WATER SUPPLY WITH FIRE HYDRANTS (FOR PROPOSED AND EXISTING FIRE HYDRANTS ONLY) NAME OF THE MUNICIPAL UTILITY DISTRICT: NUMBER OF THE MUNICIPAL UTILITY DISTRICT:	
2 OCCUPANCY TYPE AND LOAD CHAPTER 2, 3 & TABLE 1004.5 IBC 2018 OCCUPANCY CLASSIFICATION TYPES	 □ NFPA 13D □ OTHER: □ QUICK RESPONSE FIRE DEPARTMENT ACCESS TO SPRINKLER CONTROLS: □ SPRINKLER RISER ROOM OR POST INDICATOR VALVE SHOWN ON: 	NUMBER OF HYDRANTS WITHIN 400 FT (NON-SPRINKLED) OR 600 FT (SPRINKLED) OF BUILDING:, SHOWN ON: REQUIRED GPM: DURATION: (TABLE B105.1 IFC 2018) 75% REDUCTION? YES NO (MUST MAINTAIN MINIMUM PER TABLE B105.1.(1) OR B105.1.(2)) REVIEWER NOTES	A COPY OF THESE APPROVED CONSTRUCTION PLANS MUST BE KEPT AT PROJECT SITE FOR THE FINAL INSPECTION OF THE BUILDING PROJECT NUMBER: IFC 2018
A-1 A-2 A-3 A-4 A-5 B E F-1 F-2 H-1 H-2 H-3 H-4 H-5 I-1 I-2 I-3 I-4 M R-1 R-2 R-3 R-4 S-1 S-2 U	(SECTION 901.4.6 IFC 2018) The process of the proc		THE PROJECT KNOWN AS (MUST BE THE NAME OF BUSINESS/DBA IF BUILDING IS FOR A SPECIFIC COMPANY)
BREAK DOWN AREAS AND OCCUPANT LOADS PER FLOOR OCCUPANCY CLASSIFICATION SPECIFIC USE SQUARE FOOTAGE OCCUPANT OCCUPANTS	STANDPIPE SYSTEM & HOSE CONNECTIONS (SECTION 905 IFC 2018) (I.E. IN STAIRWAYS, STAGES, MALLS) PROVIDED AS NOTED ON:, TYPE OF SYSTEM PROVIDED: (CLASS I, II OR III) NOT REQUIRED PER SECTION 905	7 FIRE LANE ACCESS CHAPTER 5 & APPENDIX D IFC 2018	REVIEWER NOTES
	PORTABLE FIRE EXTINGUISHERS (SECTION 906 IFC 2018) PROVIDED AS NOTED ON:, NUMBER PROVIDED: (HIGHLIGHT ON PLANS) FIRE ALARM & DETECTION SYSTEMS (SECTION 907 IFC 2018)	FIRE LANE LAYOUT PLAN, WHICH SHALL INCLUDE THE SITE PLAN, THE FIRE LANE & FIRE HYDRANTS, IS SHOWN ON: (HIGHLIGHT THE FIRE HYDRANT LOCATIONS ON THE PLANS) AERIAL ACCESS LAYOUT, FOR BUILDINGS OVER 30 FT, IS SHOWN ON:	
	FIRE ALARM SYSTEM (DEFERRED SUBMITTAL) FIRE ALARM SYSTEM (DEFERRED SUBMITTAL) DEDICATED FUNCTION (SPRINKLER MONITORING, ELEVATOR RECALL, PRE-ACTION, EMERGENCY ALARM, SMOKE CONTROL) OTHER: HVAC & AIR DISTRIBUTION SYSTEM CONTROLS (SECTION 606 IMC 2018) SMOKE DETECTORS PROVIDED TO SHUT DOWN UNITS OVER 2,000 CFM PROVIDED ON: NO HVAC UNITS OVER 2,000 CFM FIRE/SMOKE DAMPERS IN THE BUILDING SHOWN ON: NO FIRE/SMOKE DAMPERS IN THE BUILDING SMOKE CONTROL SYSTEMS (SECTION 909 IFC 2018) (I.E. FOR HIGH RISE, ATRIUMS OR STAIRWAY PRESSURIZATION)	FIRE LANES WIL <u>L BE APPROVED</u> CONCEPTUALLY DURING THE REVIEW PROCESS. HOWEVER, THE FIRE CODE PLAN REVIEWER MAY CHANGE THE FIRE LANE LAYOUT BASED ON THE BUILDING SPECIFICATIONS.	
		8 INTERIOR FINISH CHAPTER 8 & TABLE 803.13 IBC 2018	
		OCCUPANCY EXIT ENCLOSURES AND CORRIDORS ROOMS AND ENCLOSED SHEET #	
	PROVIDED AS NOTED ON: NOT REQUIRED PER SECTION 909 SMOKE & HEAT VENTILATION (SECTION 910 IFC 2018)		
	CALCULATIONS PROVIDED AS NOTED ON: NOT REQUIRED PER SECTION 910 NOTE: WHERE AREAS OF THE BUILDING ARE EQUIPPED WITH EARLY SUPPRESSION FAST-RESPONSE		
TOTAL	NOTE: WHERE AREAS OF THE BUILDING ARE EQUIPPED WITH EARLY SUPPRESSION FAST-RESPONSE (ESFR) SPRINKLERS, AUTOMATIC SMOKE AND HEAT VENTS SHALL BE INSTALLED PER MANUFACTURERS SPECIFICATIONS.		
IFC 2018		DATE SHEET NO.(S)	DESCRIPTION REVIEWER P.E. FIRE COD DESCRIPTION

FIRE CODE DESIGN AND COMPLIANCE REVIEW SHEET

SHEET NO.(S)

DESCRIPTION

REVIEWER P.E.

FIRE CODE

REVIEW

SHEET NUMBER