



# Riverside County Fire Department

## Office of the Fire Marshal

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## Technical Policy

<b>Title:</b> SEGS Fire Apparatus Access Roads		
<b>Technical Policy:</b> # TP 15-002	<b>Effective Date:</b> 07/28/2015	<b>Revised Date:</b> 01/07/2020
<b>Code References:</b> 2019 California Fire Code, Sec. 503		

### Scope

This standard has been developed to assist large-scale commercial Solar Energy Generating System (SEGS) development applicants and engineers in the design of fire apparatus access roads from a public way to the SEGS facility and within the SEGS facility for compliance with the intent and minimum Riverside County Fire Department requirements and the best practices of the fire code in the interest of public safety.

### Codes and Standards

This standard is based upon the 2019 California Fire Code (CFC), Chapter 5, Sec. 503 for the *minimum* dimensions of fire apparatus access roads. Additional requirements have been established to facilitate the specific operational needs of the Riverside County Fire Department for conditions and circumstances not readily defined by the minimum provisions of the CFC and are further defined by this standard. Each SEGS project will be reviewed on a case-by-case basis.

### Plans Required

Detailed plans shall be submitted to the Riverside County Office of the Fire Marshal for review and approval prior to construction in accordance with CFC, Sec. 501.3.

### Primary Access Roadway From/To Public Street

Approved fire apparatus access roads shall be provided for every facility, building, or portion of a building (not inclusive of non-habitable enclosures for electrical equipment) hereafter constructed or moved into or within the jurisdiction. The fire apparatus access road shall extend to within 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 facility or building.

Approved fire apparatus access roads shall be all-weather, hard-surfaced right-of-way, not less than 20 feet in width and shall have an unobstructed vertical clearance of not less than 13 feet 6 inches. The grade of the access road shall not exceed 15%. Such right-of-way shall be unobstructed and maintained only as access to the public street. The access road shall be designed, constructed, and maintained to support the imposed load of fire apparatus weighing at least 75,000 pounds and constructed to Riverside County Transportation Standards. A registered engineer shall certify the design and construction of the access road based on the fire apparatus imposed load of 75,000 pounds.

### **Secondary Access Roadway To/From Public Street**

Secondary fire apparatus access road requirements will be determined by the County Fire Marshal based upon potential for impairment of a single road by vehicle congestion, condition of terrain, climatic conditions or other factors that could limit access.

Each SEGS project will be reviewed on a case-by-case basis to determine secondary fire apparatus access requirements to facilitate emergency operations and to minimize the possibility of an access point being subject to congestion or obstruction during an emergency incident. Consideration will be given to the location of the secondary access point at the project development site along with access to/from a public street or the primary fire apparatus access roadway based upon conditions of terrain, climatic conditions or other factors that could limit access.

**Exception:** Photovoltaic SEGS without buildings or other structures.

The secondary access road shall be not less than 20 feet in width and shall have an unobstructed vertical clearance of not less than 13 feet 6 inches. The grade of the access road shall not exceed 15%. The access road shall be designed, constructed, and maintained to support the imposed load of fire apparatus weighing at least 75,000 pounds and constructed to Riverside County Transportation Standards. A registered engineer shall certify the design and construction of the access road based on the fire apparatus imposed load of 75,000 pounds.

### **On-Site Access Roadways**

Each SEGS project will be reviewed on a case-by-case basis to determine the on-site access roadway widths, turn around and turnout locations to all buildings/structures and field equipment for the purposes of fire suppression and/or emergency medical response needs. The onsite access road shall be not less than 20 feet in width and shall have an unobstructed vertical clearance of not less than 13 feet 6 inches. The grade of the access road shall not exceed 15%. The onsite access road shall be designed, constructed, and maintained to support the imposed load of fire apparatus weighing at least 75,000 pounds and constructed to Riverside County Transportation Standards. A registered engineer shall certify the design and construction of the access road based on the fire apparatus imposed load of 75,000 pounds.

**Exception:** On-site access roadways that extend through solar panel arrays (i.e., PV, heliostat, solar troughs, etc.) shall be arranged to allow clear and unobstructed fire access roadways 16 feet wide between the lengths of arrays spaced not to exceed 600 feet in length. Access roadways between the lengths of arrays shall not exceed 5,280 feet in length without providing a Riverside County Fire Department approved turn around or intersecting roadway to allow return travel direction. All roadway intersections shall be designed to allow a minimum outside "wall-to-wall" turn radius of 38 feet in all four directions. (Ref. Exhibit A) Such access roads shall be designed, constructed, and certified by a registered Engineer to be capable of sustaining 50,000 pounds under all weather conditions. Materials other than asphalt or concrete may be considered by the Office of the Fire Marshal.

### **Dead-end fire apparatus access roadway**

Dead-end fire apparatus access roads in excess of 150 feet in length shall be provided with an approved area for turning around fire apparatus. Turning areas shall be designed in accordance with Riverside County Fire Department standards

# Exhibit A

