

**Moreno Valley Fire Department
Fire Prevention Bureau**

Engineered Alternative Fire Apparatus Access Systems Guideline



Approved and Authorized By:

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Guideline for Engineered Alternative Fire Apparatus Access Systems

PURPOSE

This guideline is intended to provide direction for submitting requests for use of Engineered Alternative Fire Apparatus Access Systems in accordance with the 2010 California Fire Code (CFC), Chapter 5, Section 503.2

SCOPE

Requests for the use and installation of an alternative engineered access surface material for a specific application (e.g., “Turf block,” “Grasscrete”) shall be made in conjunction with a request for Alternate Materials & Methods (see MVFD Guideline for AM&M). Prior to installation, the design professional must incorporate criteria contained in this guideline into a plan submittal subject to approval by the Moreno Valley Fire Department, which reserves the right to limit the amount or extent of alternative surface serving as required fire department access to a structure or site.

Requests shall be evaluated by Moreno Valley Fire Department (MVFD) Fire Prevention Bureau staff to ensure the proposed design, use, or operation satisfactorily complies with the intent of the CFC and the operational needs of the MVFD. Additionally, the alternatives that are being proposed will be evaluated to determine they are at least equivalent to that prescribed in the CFC in all-weather resistance, quality, strength, effectiveness, durability, or safety.

SUBMITTAL REQUIREMENTS

1. General Requirements

- A. Calculations and a statement stamped and signed by a registered civil engineer or other qualified registered professional shall certify that the proposed surface and substrate meets the criteria of an all-weather driving surface and is capable of withstanding the minimum weight of 80,000 pounds imposed by Moreno Valley Fire apparatus. Apparatus weight is distributed as 60,000 pounds on tandem rear axles and 20,000 pounds on the front axle. Calculations shall prove that the engineered surface shall support a minimum of 60,000 pounds at any one point on the surface to

- allow use of apparatus outriggers with the ladder fully extended in the highest demand configuration.
- B. Manufacturer's specification of the material being installed must indicate that the application is consistent with the manufacturer's recommendations.
 - C. Material shall only be installed on slopes of no more than one degree (1.75% grade), unless otherwise specified by the manufacturer, and drainage shall be provided as required to provide adequate traction for Moreno Valley Fire apparatus. Surfaces shall be crowned or sloped to one side to drain water away from the roadway; surfaces shall not have a "V" or other configuration causing water to accumulate in the fire access roadway. This information shall be detailed on the plan.
 - D. The design shall include a curb cut that delineates entry onto the engineered fire access surface from a street. A 4" or lower curb cut or a rolled/ramped curb is acceptable. The curb cut must be shown on the plan. The entry to the area shall be clearly marked as a fire lane with either a red curb or sign to prevent the entry from being blocked.
 - E. A minimum four inch wide concrete strip around the perimeter of the designated area shall be specified on the plan to clearly delineate the extent of fire department access. If the area is accessible to or intended to be used by anyone other than emergency responders, the concrete curb shall be painted red and stenciled "Fire Lane—No Parking" every 30 feet or portion thereof. In areas where painting the curb is not feasible, alternative methods of delineating the extent of the fire access roadway, such as by stamping "Fire Lane—No Parking" into the concrete, posting of signs, or by the use of red reflectors, may be acceptable if approved by Moreno Valley Fire Department Fire Prevention Bureau staff. Describe the method of identifying the extent of the fire access roadway clearly on the plan.
 - F. The following sentence shall be placed, verbatim, as a note on the plan:
"Final approval is subject to actual field acceptance testing utilizing Moreno Valley Fire Department fire apparatus."
 - G. A clause requiring the maintenance of alternative access roadways shall be placed in the CCRs, deed, and/or similar documents
 - H. Detail the alternative engineered fire apparatus access measures as part of an AM&M proposal and how they establish equivalency to those prescribed in the code. The report shall address the concerns of the MVFD and the issues as identified above. Refer to the sample AM&M

proposal letter provided at the end of the AM&M Guideline for content and format.