California Department of Transportation

DIVISION OF SAFETY PROGRAMS
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May 1, 2023

Mr. Chris Reese
Easi-Set Worldwide
5119 Catlett Road, P. O. Box 400
Midland, Virginia 22728

Dear Mr. Reese:

This letter supersedes the letter dated March 19, 2019 due to a revision on the drawing that modifies the location of the gawk screen anchorage holes in the barrier. This modification does not affect the crash worthiness or effectiveness of the barrier.

J-J Hooks portable concrete barriers in the freestanding, staked-down, and bolted-down configurations are approved for use on California State Highways at test level 3 (TL-3). This approval was recommended by the California Department of Transportation's (Caltrans) Highway Safety Features New Products Committee (HSFNPC), based on the information you provided indicating the device complied with the requirements of the Manual for Assessing Safety Hardware 2016 (MASH-16). The Federal Highway Administration accepted the J-J Hooks freestanding portable concrete barrier at TL-3 on February 9, 2018 (HSST-1/B-300 for a 12-foot length). The staked-down and bolted-down portable concrete barriers at TL-3 were accepted on December 20, 2012 (HSST/B-52C and HSST/B-52B each for a 12.5-foot length).

Our understanding is that J-J Hooks portable concrete barriers are an F-shape barrier with a "J" hook steel connector plate at each end of the barrier. The barrier lengths are 12.5 feet and 20 feet in length, 32 inches in height, and 24 inches wide at the base with a 9-inch width at the top. Each 12.5-foot length weighs 6,000 pounds and each 20-foot length weighs 9,577 pounds. The lengths are connected together by the 18-inch tall interlocking "J" hook connector plates.

When installed in the freestanding configuration the 12.5-foot and 20-foot barrier lengths defined above will be used.

When used on an asphalt surface, with a minimum of 2 inches of asphalt concrete over 6 inches of compacted subbase, the barriers are staked-down using three stakes for the 12.5-foot lengths and four stakes for the 20-foot lengths on the traffic side of the barrier.

When used on a concrete surface, the barriers are bolted down using two anchor

bolts for the 12.5-foot lengths and three anchor bolts for the 20-foot lengths on the traffic side of the barrier. The anchor bolt inserts are embedded 6 inches into concrete. If the barrier is bolted down on a bridge, the bridge deck thickness must be a minimum of 8 ¼ inches.

The minimum radius for the 12.5-foot lengths is 100 feet and for the 20-foot lengths is 165 feet. The following table shows the dynamic deflection and working width for each configuration.

Configuration	Dynamic Deflection (inches)	Working Width (inches)
12.5-foot length		
Freestanding	64.2	84.6
Staked down	8.8	32
Bolted down	5.9	27.5
20-foot length		
Freestanding	62.9	86.5
Staked down	8.8*	32*
Bolted down	5.9*	27.5*

* Estimated values are from the 12.5-foot length tests.

J-J Hooks portable concrete barriers in the freestanding, staked-down, and bolted-down configurations will be included on the Caltrans Authorized Materials List and will be an alternative to other MASH-16 compliant longitudinal barriers. Reference Installation Guide dated 9/28/18 and Drawing numbers JJ01-R2, JJ02-R3, JJ03-R2, JJ04-R1, and JJ05-R1 as the approved plan sheets for Caltrans use. If the device or the drawings are modified, the change(s) must be resubmitted to Caltrans for review. Any changes to the product must result in a product that still meets MASH-16 standards.

If you have any questions, please contact Yu-Ying Chu, HSFNPC Chair at (916) 639-6136 or by email at < yu-ying.chu@dot.ca.gov >.

Sincerely,

Yue Wang, Chief
Office of Safety Systems and Devices
Division of Safety Programs

c: Yu-Ying Chu, Chair, Highway Safety Features New Products Committee