

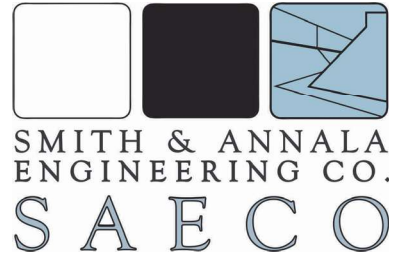
MEMORANDUM 1

July 3, 2024

Attention: Tim Plane

Trench-Ade
3300 N 3rd Avenue
Phoenix, Arizona 85013

Subject: Engineering Services
Road Plate Certification
SAECO Project No. 29.24.5209.06



Smith & Annala Engineering Co. (SAECO) is providing this memorandum based on a request from Mr. Tim Plane of Trench-Ade via e-mail on June 30, 2024. We understand that steel plate is to be used as a load bearing temporary cover for various trenches, and that maximum load ratings are desired for plates of thicknesses of 1 inch and 1.5 inches for trenches of up to 5 feet in width.

Our analysis included reviewing the following documents:

- *AISC Steel Construction Manual, 15th Edition, American Institute of Steel Construction, 2017*

Following is a summary of plate capacities based on our analysis:

Plate Thickness (in)	Max Span (feet)	Maximum Single Point Load (lb)	Maximum Distributed Load (psf)
1.0	5.0	3,000	1,250
1.5	5.0	12,250	4,750

The following safety recommendations should be implemented for plate installations:

- All plates should extend past the edges of the trenches by at least 18-inches.
- The plates must be adequately secured to prevent them from moving while traffic crosses.
- The trench walls must be stable.

SAECO appreciates the opportunity to provide this information. Please call should further information be required.

Sincerely,



Aaron J. Spreiser, E.I.T.
Staff Professional



Jonathan K. Alexander, P.E.
Principal