MEMORANDUM 1

October 22, 2024

Attention: Tim Plane

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

Subject: Engineering Analysis Services
Deadman Anchor Verification
SAECO Project No. 29.24.5209.11

Smith & Annala Engineering Co. (SAECO) is providing this memorandum based on a request from Mr. Tim Plane of Trench-Ade via e-mail on October 21, 2024.

PROJECT UNDERSTANDING

We understand that concrete deadman blocks have been cast for use as fall protection anchors, and that a verification of the weight provided by the manufacturer is required.

ENGINEERING ANALYSIS

Based on the provided certification letter from Howe Precast of Mesa, Arizona, dated March 2, 2022 and signed by Justin Franks, the precast concrete blocks manufactured for this purpose have the following characteristics:

- Cylindrical in form
- Diameter of 48 inches
- Height of 36 inches
- Concrete unit weight of 4050 lb/cubic yard (150 lb/cubic ft.)

Based on the provided dimensions, the volume of each block is 1.396 cubic yards. Using these parameters, we find that the provided blocks meet or exceed their weight rating of 5,500 lb.

LIMITATIONS

The following safety recommendations should be implemented:

- This letter should only be interpreted as applicable to blocks manufactured by Howe Precast and conforming to the above referenced dimensions and unit weight.
- Block dimensions should be field verified.
- Deadman blocks should be inspected prior to use for damage, especially that which would cause decreases in volume greater than 1%.

CLOSING

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

HOWE PRECAST
MESA, AZ

3/2/2022

Trench-Ade

3300 N. 3rd Ave.

Phoenix, AZ 85013

RE: Deadman Weight

Howe Precast constructed a Deadman block with a 48" Sonotube. It is 3ft in height and constructed with 1.396 cubic yards of concrete @ 4050lb per cubic yard, with a total weight of 5500. We certify that the block was constructed with this form.

Justin Franks

President

MEMORANDUM 2

May 4, 2026

Attention: Tim Plane

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

Subject: Engineering Analysis Services
Deadman Anchor Verification
SAECO Project No. 29.24.5209.11

Smith & Annala Engineering Co. (SAECO) is providing this memorandum based on a request from Mr. Tim Plane of Trench-Ade via e-mail.

PROJECT UNDERSTANDING

We understand that lifting brackets are required for the concrete deadman blocks certified in Memorandum 1 under this project number (dated October 22, 2024).

ENGINEERING ANALYSIS

This bracket (diagram attached) is suitable for installation on the precast cylindrical concrete blocks manufactured by Howe Precast, weighing approximately 5,500 lbs, using ¾ inch diameter Simpson Titen HD screw anchors with a minimum embedment of 5.5 inches.

LIMITATIONS

The following safety recommendations should be implemented:

- Titen HD anchors shall be installed according to the manufacturer's instructions.
- The bracket should be installed centered on the deadman block. No anchor shall be installed within 7 inches of an edge.
- Bracket and anchors should be inspected prior to use for evidence of damage.
- Deadman blocks should be inspected prior to use for damage, especially that which would cause decreases in volume greater than 1%.

CLOSING

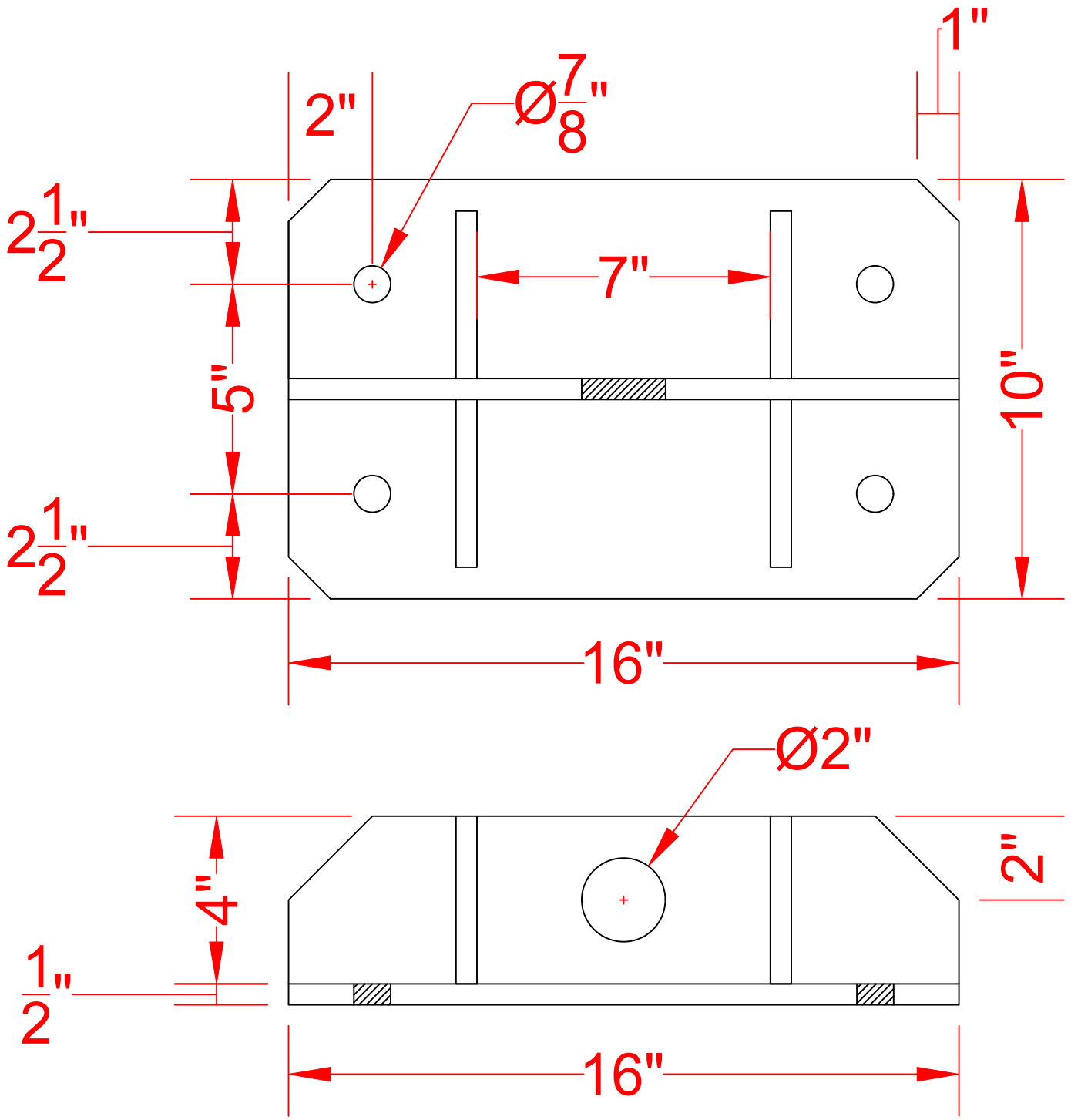
SAECO appreciates the opportunity to provide this information. Please call should further information be required.

Sincerely,

Registered Professional Engineer (Civil)
CERTIFICATE NO.
55164
JONATHAN KIRK
ALEXANDER
DATE SIGNED 5/5/26
ARIZONA, U.S.A.

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

Jonathan K. Alexander, P.E.
Principal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10"
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16"