MEMORANDUM 1

June 18, 2025

Attention: Tim Plane

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

Subject: Engineering Analysis Services
8’ Bridge Rating
SAECO Project No. 29.25.5300.13

Smith & Annala Engineering Co. (SAECO) is providing this memorandum based on a request from Mr. Tim Plane of Trench-Ade, received via e-mail on June 16, 2025.

PROJECT UNDERSTANDING

We understand a verification of the load capacity of D-rings installed on an 8’ bridge as part of their initial fabrication per the provided plans is required for a pick plan to install the bridge in a temporary location using a crane.

Based on the material list included in provided plans for an 8’ bridge, sealed March 30, 2019 by Bradley A. Sims, P.E., of California, the approximate total selfweight of materials required to construct a bridge is 1260 lb. Using a factor of safety of 1.5, we can assume that the maximum total constructed weight of the bridge should not exceed 1,890 lb.

The steel D-rings, installed at the 4 corners of the bridge assembly are each factory cast with a rated working load limit of 4,080 lb, more than sufficient to hold the entire bridge assembly in a worst-case scenario.

LIMITATIONS

The following safety recommendations should be implemented:

- This letter should only be interpreted as applicable to bridges fabricated per the provided bridge plans, sealed March 30, 2019 Bradley A. Sims, P.E., of California.
- D-ring rating castings should be field verified to exceed a working load limit of 2,000 lb.
- D-rings should be inspected prior to use for damage.

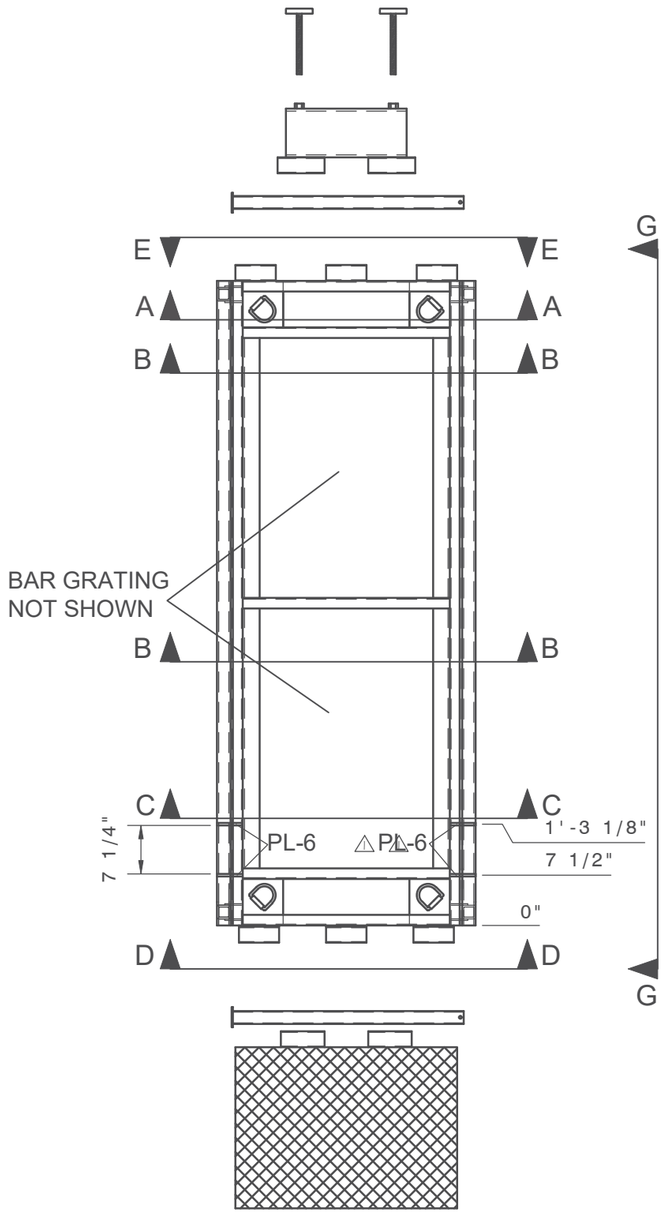
CLOSING

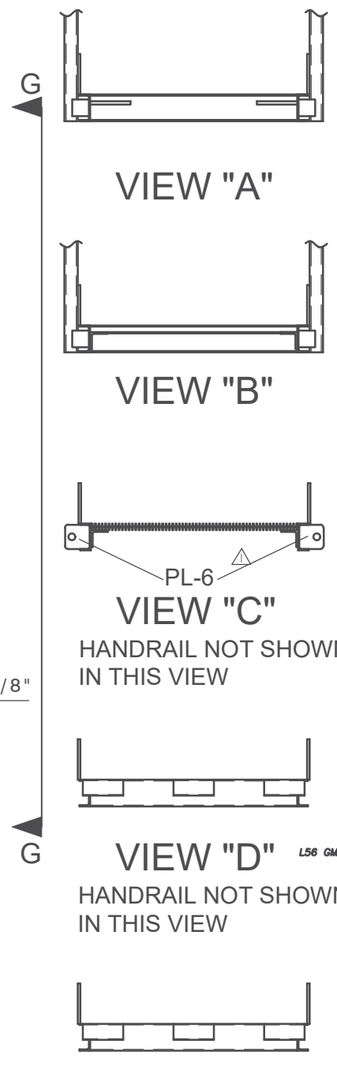
SAECO appreciates the opportunity to provide this information. Please call should further information be required.

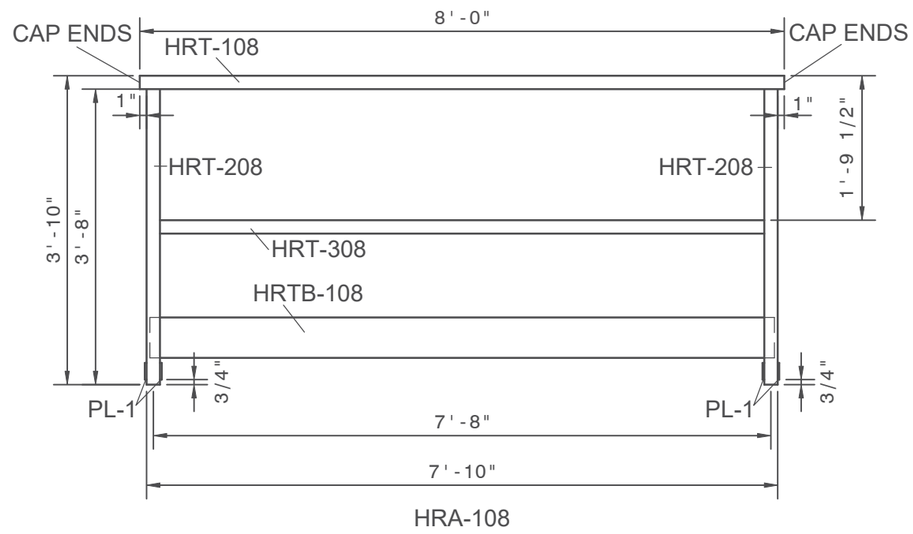
Sincerely,

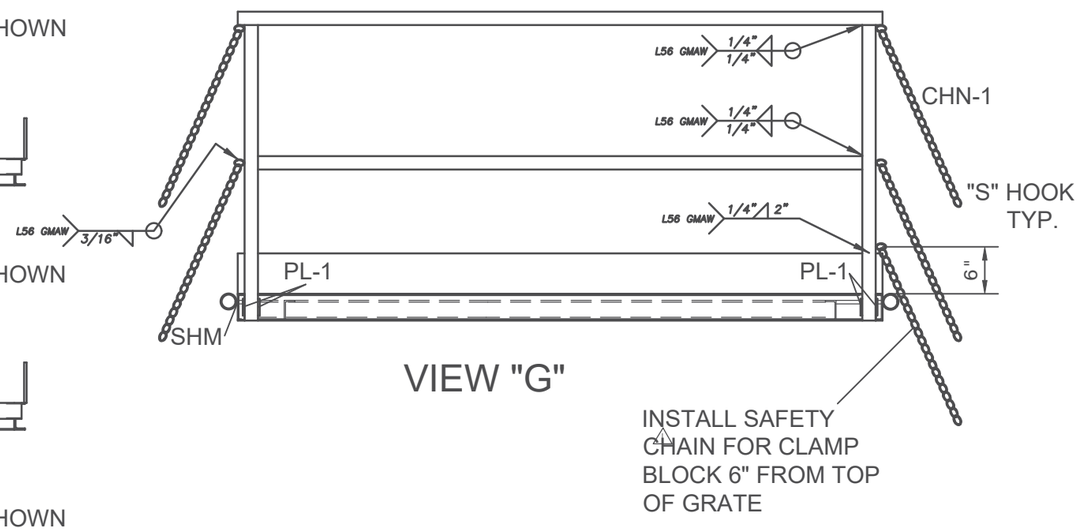
Aaron J. Spreiser, E.I.T.
Staff Professional

Jonathan K. Alexander, P.E.
Principal









3/11/19

MAXIMUM SAFE WORKING LOAD:
50 LBS/LF OR 200 LB
POINT LOAD, ANY DIRECTION

B.A. SIMS ENGINEERING, INC.
5150 E. PACIFIC COAST HWY
STE 209
LONG BEACH, CA 90804
(562) 735-4955
WWW.BASIMS.COM

REGISTERED PROFESSIONAL ENGINEER
BRADLEY A. SIMS
C 58238
EXP. 6/30/20
CIVIL
STATE OF CALIFORNIA

BILL of MATERIALS

MARK	REQ	DESCRIPTION	LENGTH
HRA-108	2	HANDRAIL ASSEMBLY	
HRT-108	2	2 X 2 X 1/4" TUBE STEEL	8' - 0"
HRT-208	4	2 X 2 X 1/4" TUBE STEEL	3' - 8"
HRT-308	2	2 X 2 X 1/4" TUBE STEEL	7' - 6"
HRTB-108	2	3/8" X 6" FLAT BAR	7' - 9"
PL-1	8	1/4" X 0' - 2 1/2" FLAT BAR	0' - 2 1/2"
CHN-1	5	1/4" PROOF COIL GRADE 30 SAFETY CHAIN 28 LINKS	2' - 10"
	2	CLAMP ON SNAP HOOK	

READ ENTIRE DRAWING
BEFORE BEGINNING WORK

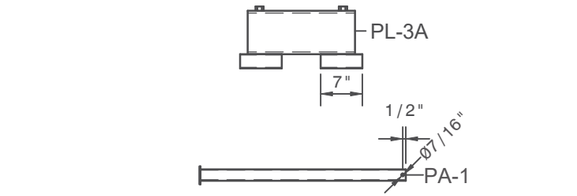
⚠ 5-23-2017 ADDED PL-6 PLATES & ADDED CHAIN NOTES

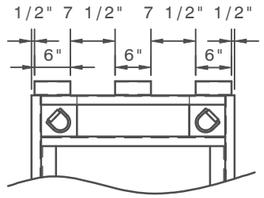
RMR FABRICATION

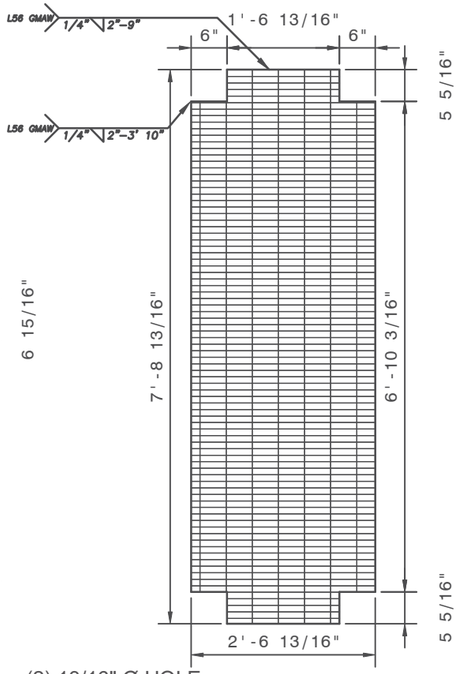
DRAWN BY CM	CKD BY X	SCALE:
DATE: 8-11-18	DATE: X	PRINTED:

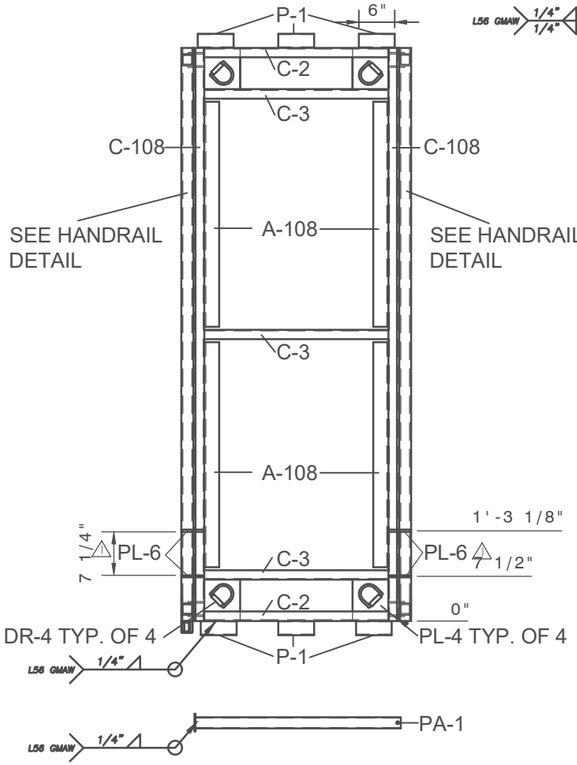
UNITED RENTALS JOB # REV⚠

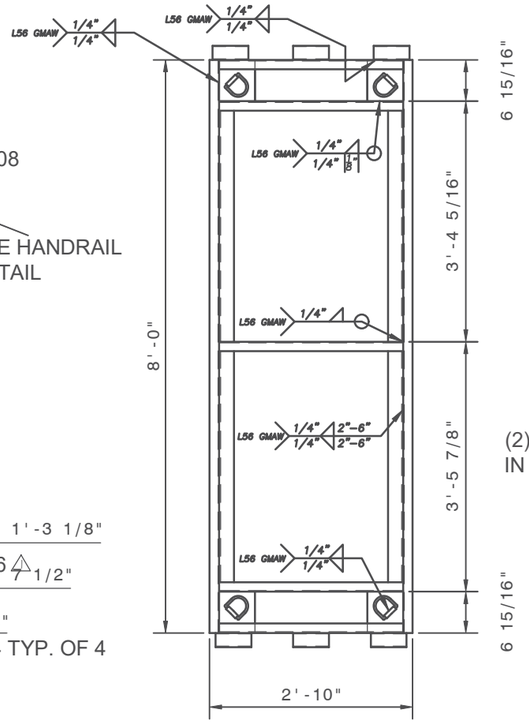
8 FT BRIDGE DRAWING 2 OF 2 DRAWING NUMBER X

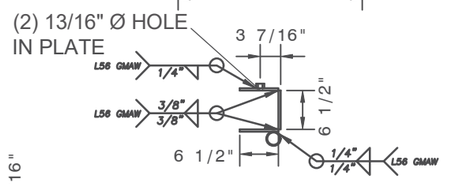


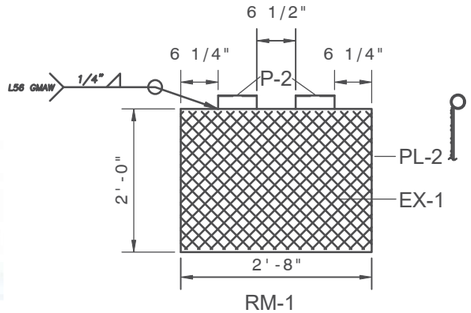




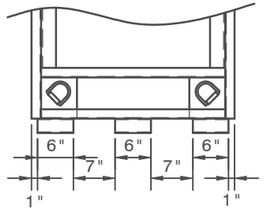








RM-1



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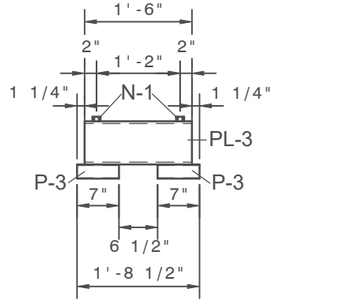
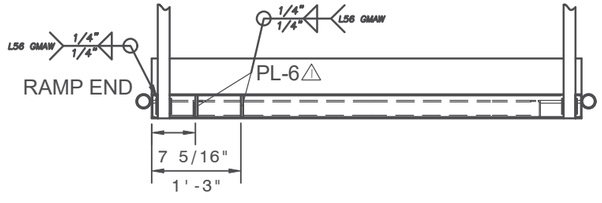
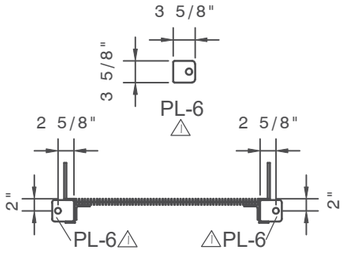


PL-3A





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BILL of MATERIALS

MARK	REQ	DESCRIPTION	LENGTH
C-108	2	C4 X 5.4 CHANNEL	8' - 0"
C-2	2	C4 X 5.4 CHANNEL	2' - 6 13/16"
C-3	3	C3 X 4.1 CHANNEL	2' - 6 13/16"
A-108	4	2 X 2 X 3/16" ANGLE	3' - 1"
P-1	6	2" SCH 40 PIPE	0' - 6"
AT-1	2	3/4 - 10 BOLT	0' - 3"
DR-4	4	"D" RING	
PL-3A	ONE	CLAMP PLATE ASSEMBLY	
PL-3	3	3/8" X 0' - 6 1/2" PLATE	1' - 6"
P-3	2	2" SCH 40 PIPE	0' - 7"
N-1	2	3/4" NUT	
RM-1	ONE	RAMP ASSEMBLY	
PL-2	ONE	3/8" X 2' - 0" PLATE	2' - 9"
P-2	2	2" SCH 40 PIPE	0' - 6 1/2"
EX-1	ONE	3/4 - #9 RAISED EXP. 1'-11"	2' - 8"
PA-1	ONE	ROD ASSEMBLY	
P-6	2	1 1/2" SCH 40 PIPE	2' - 10 3/8"
RP-1	2	1/4" PLATE 2 1/2" DIA.	ROUND
PL-4	4	3/8" X 0' - 6" PLATE	0' - 6 3/4"
PL-6	4	3/8" X 0' - 3 5/8" PLATE	0' -3 5/8"
	ONE	1" BAR GRATE 2' - 6 13/16"	7' - 8 13/16"

READ ENTIRE DRAWING
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8FT BRIDGE — DRAWING 1 OF 2 — DRAWING NUMBER X