

APPROVED BY
 MECH DIV AAR, THEIR LETTER
 DATED 30 Sep 93 FILE LR-11.0.136
 SIGNED *Robert E. ...*
 DATE 6 Jun 94
 MTMCTEA, FT EUSTIS, VA

HAWK

LOADING AND BRACING ON FLAT CAR OF FME SHOP 20

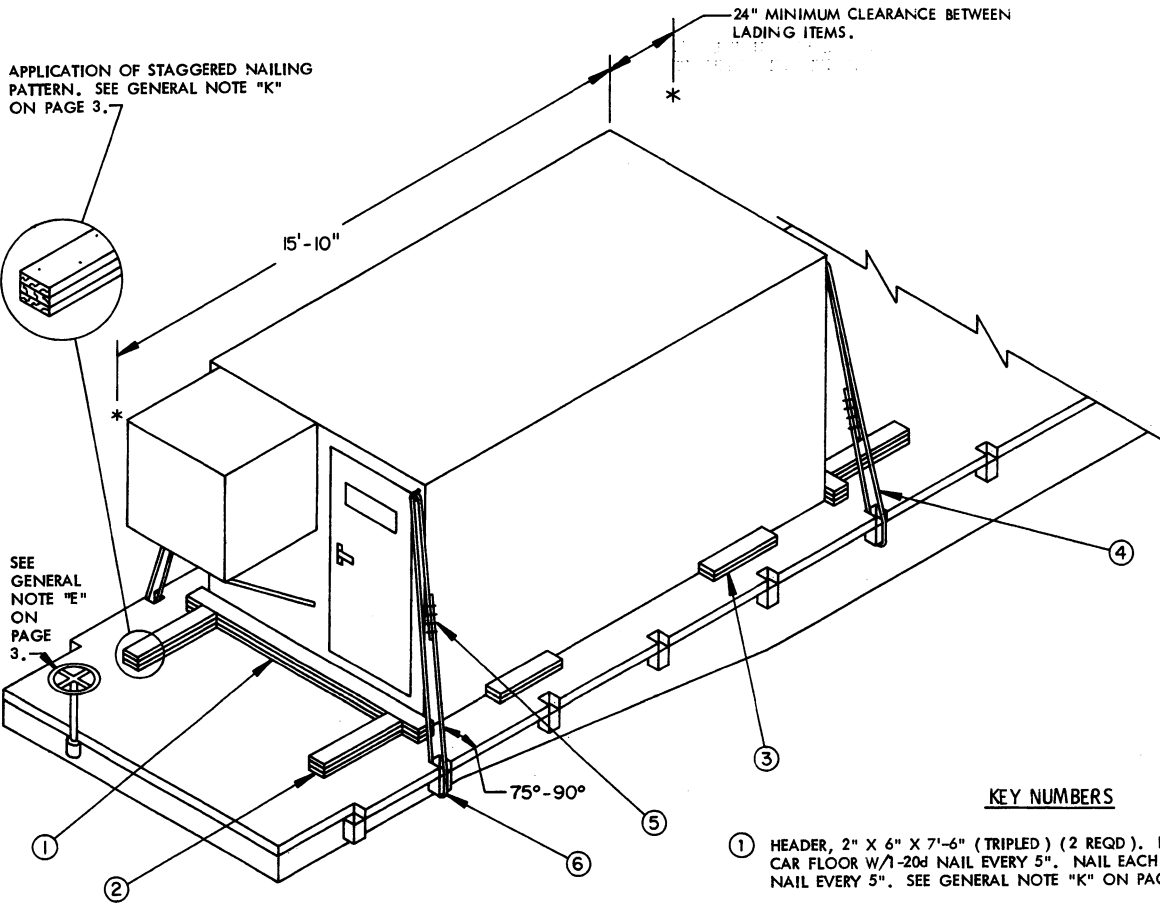
THIS OUTLOADING PROCEDURAL DRAWING INCLUDES
 PROCEDURES FOR GENERAL SERVICE FLAT CARS (FM)
 AND FOR CUSHIONED FLAT CARS (FMS) EQUIPPED
 WITH SPECIAL CHAIN TIE-DOWN DEVICES OF
 VARIOUS DESIGN AND MANUFACTURE.

DO NOT SCALE

REVISIONS				DRAFTSMAN	TM	PROJ ENG	ANESI-LC/MM-DP
				<i>EW</i>		<i>RSP/WEF</i>	<i>REG</i>
				CHECKER		LOG ENGINE OFFICE	
				<i>FRW</i>		<i>W. E. ...</i>	
APPROVED, U.S. ARMY SIGSBLT COMMAND							
<i>Carl ...</i>							
APPROVED BY ORDER OF COMMANDING GENERAL, U.S. ARMY MATERIEL COMMAND (AMC)							
<i>John L. ...</i>							
U.S. ARMY AMC DRAWING							
JULY 1994							
				CLASS	DIVISION	DRAWING	FILE
				19	48	7891	GSE 5HA63

PROJECT GSE 740-88

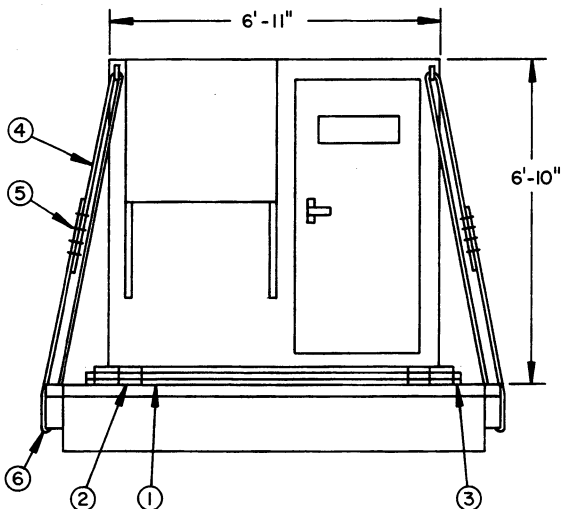
APPLICATION OF STAGGERED NAILING PATTERN. SEE GENERAL NOTE "K" ON PAGE 3.



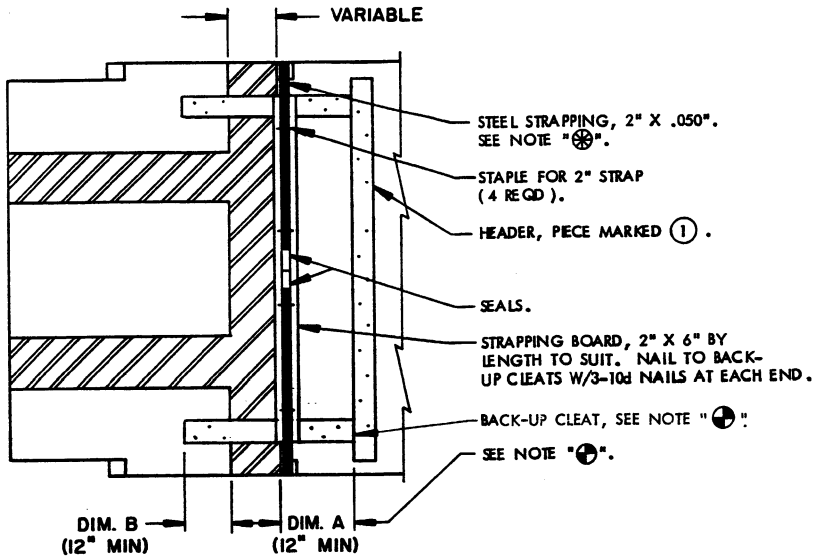
ISOMETRIC VIEW

KEY NUMBERS

- ① HEADER, 2" X 6" X 7'-6" (TRIPLED) (2 REQD). NAIL THE FIRST PIECE TO THE CAR FLOOR W/1-20d NAIL EVERY 5". NAIL EACH ADDITIONAL PIECE W/1-50d NAIL EVERY 5". SEE GENERAL NOTE "K" ON PAGE 3.
- ② BACK-UP CLEAT, 2" X 6" X 30" (TRIPLED) (4 REQD). POSITION 6" FROM THE END OF PIECE MARKED ① AND NAIL THE FIRST PIECE TO THE CAR FLOOR W/8-20d NAILS. NAIL EACH ADDITIONAL PIECE W/8-50d NAILS.
- ③ SIDE BLOCKING, 2" X 6" X 24" (DOUBLED) (4 REQD). NAIL THE FIRST PIECE TO THE CAR FLOOR W/6-20d NAILS. NAIL THE SECOND PIECE TO THE FIRST IN A LIKE MANNER.
- ④ STEEL WIRE ROPE, 3/8" DIAMETER, 6.56 TONS (4 REQD). INSTALL CABLE TO APPROXIMATE THE ANGLE SHOWN AND TO FORM A COMPLETE LOOP FROM STAKE POCKET ON THE CAR THROUGH THE LADING TIEDOWN DEVICE AND BACK TO THE STAKE POCKET. SEE GENERAL NOTES "D", "G", AND "H" ON PAGE 3. LARGER SIZE CABLE MAY BE USED IF AVAILABLE, WHEN SPECIFIED CABLE IS NOT AVAILABLE.
- ⑤ CLIP, SIZE 3/8" (24 REQD). FOUR (4) PER CABLE AND ONE (1) PER THIMBLE. SEE GENERAL NOTE "D" ON PAGE 3, AND KEY NUMBER ⑥ GUIDANCE BELOW.
- ⑥ THIMBLE, STANDARD, SIZE 3/8" (8 REQD). ONE (1) PER STAKE POCKET AND ONE (1) PER LADING TIEDOWN DEVICE. SECURE TO WIRE ROPE, PIECE MARKED ④, W/1-CLIP PER THIMBLE. A STANDARD THIMBLE AS SPECIFIED CAN BE SECURED TO A CABLE WITH A 3/8" CLIP. HOWEVER, IF DESIRED, OR IF THE 3/8" THIMBLE BEING USED IS OF A TYPE WHICH CANNOT BE SECURED TO A CABLE WITH A 3/8" CLIP, A 1/2" CLIP MAY BE USED. NOTE THAT AN "OPEN PATTERN" THIMBLE IS RECOMMENDED. ALT: NO. 14 GAGE WIRE MAY BE USED IN LIEU OF A 3/8" CLIP FOR SECUREMENT OF THE THIMBLE TO THE TIEDOWN CABLE.



END VIEW



NOTE ⊕:

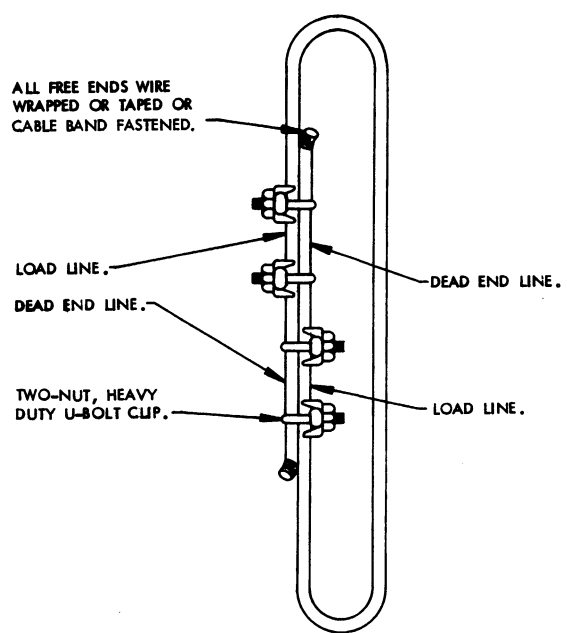
THE OPTIONAL STRAP HOLD DOWN FOR END BLOCKING IS FOR CARS WITH OR WITHOUT EXPOSED STEEL BOLSTERS.

NOTE ⊕:

WHEN LOADING CARS WITH EXPOSED STEEL BOLSTERS, THE TOTAL OF DIMENSION "A" AND DIMENSION "B" (MIN 12") MUST EQUAL THE LENGTH OF THE BACK-UP CLEATS (PIECES MARKED ②) TO PROVIDE FOR PROPER NAILING TO THE CAR FLOOR. SEE PIECE MARKED ② ON PAGE 2 FOR PROPER NAILING.

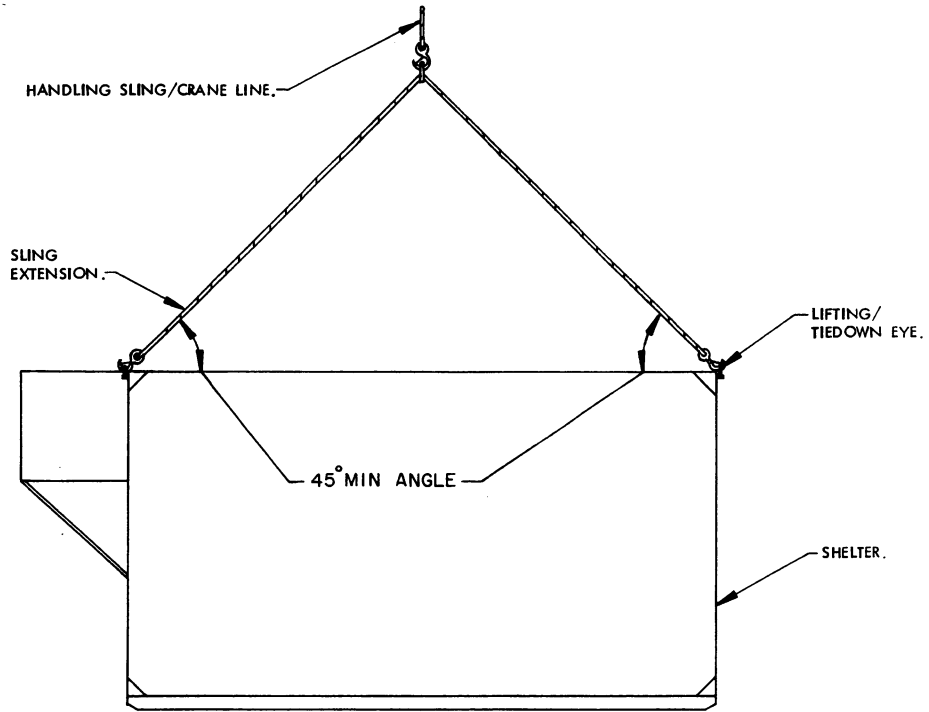
TYPICAL END BLOCKING FOR CARS WITH EXPOSED STEEL BOLSTERS (TOP VIEW)

SEE GENERAL NOTE "F" ON PAGE 3.

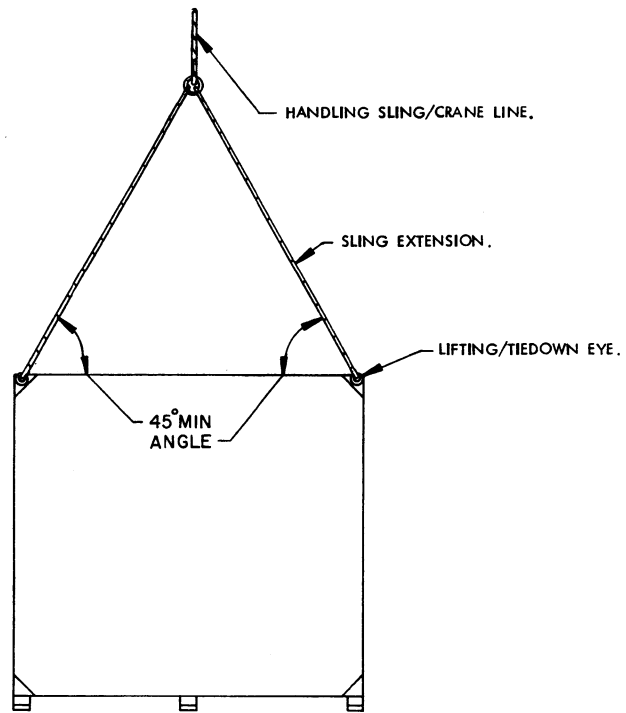


CABLE JOINT

PROPER TIGHTENING OF THE WIRE ROPE CLIP NUTS CAN BE ACCOMPLISHED BY UTILIZING A PROPER SIZED TORQUE WRENCH. AFTER THE NUTS HAVE BEEN INITIALLY TIGHTENED, THE "U" SIDE OF EACH CLIP MUST BE STRUCK SEVERAL TIMES WITH A HAMMER TO INSURE PROPER SEATING INTO THE DEAD END LINE. FINAL TORQUE WILL BE ACQUIRED BY REPEATEDLY AND ALTERNATELY TIGHTENING EACH CLIP NUT.



SIDE ELEVATION VIEW



END VIEW

