

UNITIZATION PROCEDURES[⊕] FOR CARTRIDGE, 5.56MM, PACKED 1800 PER COMMERCIAL FIBERBOARD BOX, UNITIZED 60 BOXES PER SPECIAL SIZE 40" X 49" PALLET; APPROX BOX SIZE 16-3/16" L X 8" W X 6-3/16" H

⊕ THE PROCEDURES AS DELINEATED IN THIS DRAWING ARE FOR INTERPLANT/DEPOT SHIPMENT ONLY.

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U.S. ARMY MATERIEL COMMAND DRAWING

APPROVED, U.S. ARMY RESEARCH, DEVELOPMENT,
 AND ENGINEERING COMMAND

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 THE MOST CURRENT VERSION OF THIS DOCUMENT. THIS IS PAGE 1 OF 8.**

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APRIL 2007

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CLASS	DIVISION	DRAWING	FILE
19	48	4355	20PA1010

GENERAL NOTES

(GENERAL NOTES CONTINUED)

- A. THIS DOCUMENT HAS BEEN PREPARED AND ISSUED IN ACCORDANCE WITH AR 740-1 AND AUGMENTS TM 743-200-1 (CHAPTER 5) AND CONFORMS TO MIL-STD-1660 (LEVEL C).
- B. THIS DOCUMENT INCLUDES MATERIAL SPECIFICATIONS AND UNITIZING STANDARDS APPLICABLE TO UNITIZATION, PLUS INFORMATION RELATIVE TO TYPICAL POSITIONING OF BOXES ON A PALLET AND INSTALLATION OF UNITIZING STEEL STRAPPING. FOR THE SPECIFIC PALLET UNIT DATA, SEE THE CHART ON PAGE 6. FOR THE APPROVED CONFIGURATION OF THE UNIT LOAD, THE SPECIFIC UNITIZATION SPECIFICATIONS SEE THE "UNITIZATION PROCEDURES" ON PAGE 7.
- C. A FIBERBOARD BOX (EXTERIOR PACK) WILL NOT CONTAIN MORE THAN ONE LOT OF AMMUNITION PER BOX. UNIT LOADS WILL NOT CONTAIN MORE THAN TWO LOTS PER UNIT LOAD, EXCEPT WHERE REQUIRED FOR BALLISTIC SAMPLE SHIPMENT OR FOR TROOP USE AT POST, CAMP, OR STATION. SEE GENERAL NOTE "P" ON PAGE 3 FOR FURTHER GUIDANCE.
- D. LESS-THAN-FULL BOXES OF AN AMMUNITION ITEM (LIGHT BOXES) ARE LIMITED TO ONLY ONE LIGHT BOX PER ITEM LOT. A UNIT LOAD WILL NOT CONTAIN MORE THAN ONE LIGHT BOX PER ITEM LOT ON A PALLET. ADDITIONAL REQUIREMENTS ARE SPECIFIED IN THE "LESS-THAN-FULL LAYER UNIT LOADS" PROCEDURES ON PAGE 5.
- E. A UNIT LOAD, SUCH AS THE LAST UNIT LOAD FOR AN AMMUNITION LOT, CAN BE ASSEMBLED WITH LESS LAYERS THAN SPECIFIED FOR THE BASIC UNIT LOAD. THE UNIT LOAD CAN ALSO BE ASSEMBLED WITH PARTIAL TOP LAYER PROVIDING IT IS TO BE SHIPPED WITHIN CONUS TO A DEPOT, DEPOT ACTIVITY, POST, CAMP, OR STATION. SEE THE "LESS-THAN-FULL-LAYER UNIT LOADS" PROCEDURES ON PAGE 5.
- F. ANY REQUESTS FOR DEVIATION FROM THE STANDARDS DESCRIBED IN GENERAL NOTES "C", "D", OR "E" OR FROM THE UNITIZATION PROCEDURES DELINEATED ON PAGE 7 MUST BE DIRECTED TO THE COMMANDER, US ARMY ARMAMENT RESEARCH, DEVELOPMENT AND ENGINEERING COMMAND/ARMY RESEARCH, DEVELOPMENT AND ENGINEERING CENTER, ATTN: AMSRD-AAR-AIL-TP, ROCK ISLAND, IL 61299-7300, FOR SPECIFIC APPROVAL. CONFIGURATION MANAGEMENT PROCEDURES CONTAINED IN MIL-STD-973 DO NOT APPLY TO THIS DRAWING.
- G. EXCEPT AS OTHERWISE STATED IN GENERAL NOTE "E" ABOVE, UNIT LOADS MUST ONLY BE MADE UP WITH FULL LAYERS. FOR REDUCED QUANTITIES, HOWEVER, ONE OR MORE FULL LAYERS MAY BE OMITTED. ONLY ONE UNIT LOAD HAVING A REDUCED QUANTITY OF ITEMS SHOULD BE PERMITTED PER LOT OF THAT ITEM. EACH LAYER OF BOXES WILL BE POSITIONED SO AS TO BE CENTERED LENGTHWISE AND WIDTHWISE ON THE DECK OF THE PALLET. CARE SHALL BE TAKEN TO INSURE THAT THE BOXES ARE EVENLY ASSIGNED HORIZONTALLY AND VERTICALLY SO THAT THE SIDES AND END OF THE UNIT LOAD DO NOT EXCEED A 1/2" TOLERANCE, RELATIVE TO THE PALLET DECK. SEE "ALLOWABLE TOLERANCES FOR ASSEMBLING UNITS" DETAILS ON PAGE 4.
- H. DIMENSIONAL LUMBER SPECIFIED THROUGHOUT THIS PROCEDURAL DRAWING IS NOMINAL SIZE UNLESS OTHERWISE SPECIFIED. FOR EXAMPLE, 1" X 4" MATERIAL IS ACTUALLY 3/4" THICK BY 3-1/2" WIDE AND 2" X 4" MATERIAL IS ACTUALLY 1-1/2" THICK BY 3-1/2" WIDE.

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MATERIAL SPECIFICATIONS

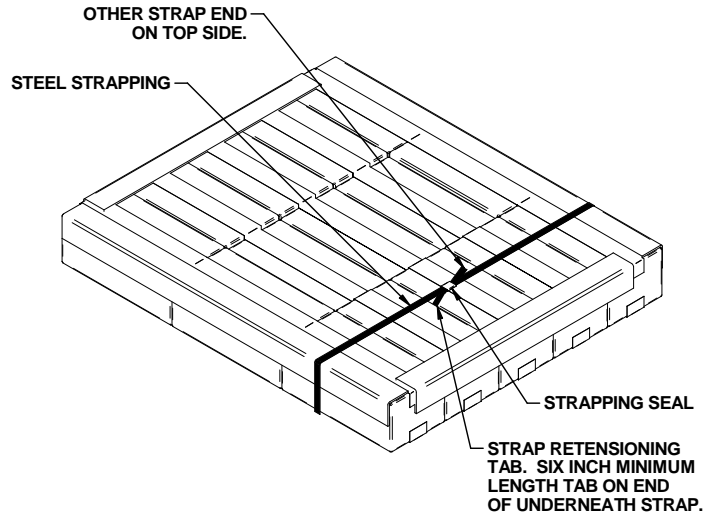
- EDGEBOARD** - - - - - : LAMINATED PAPERBOARD, 3" X 3" X .225" THICK, GREAT NORTHERN CORP VBOARD OR EQUIVALENT.
- LUMBER** - - - - - : ASTM D 6199; CLASS 2, GROUP IV.
- NAILS** - - - - - : ASTM F 1667 TYPE I, STYLE 18 - PALLET NAIL (F 1667 NLPL - 04 B).
- PALLET EDGEBOARD** - - - : GREAT NORTHERN CORPORATION PF PALLET TOP, 49" X 40-1/2" CONSTRUCTED OF 3" X 3" X .225" THICK EDGEBOARD.
- STRAPPING, STEEL** - - - : ASTM D3953; FLAT STRAPPING, TYPE I, HEAVY DUTY, FINISH B (GRADE 2), SIZE 3/4" X .035" OR .031". NOTE: BRITTE OR SLIT EDGES SHALL HAVE FINISH A OVERLAY.
- SEAL, STRAP** - - - - - : ASTM D3953; CLASS H, FINISH B (GRADE 2) DOUBLE NOTCH TYPE, STYLE I, II, III, OR IV. ALTERNATE SEAL FINISH: SIGNODE OR DELTA PAINTED SEALS MAY BE USED AS AN ALTERNATIVE IF ALL SURFACES ARE PAINTED. GRITTED BACKING IS NOT PERMITTED.
- STAPLE** - - - - - : ASTM F1667; STFC-122; 1/2" CROWN WIDTH X 3/4" LEG.

- J. IN ORDER TO OBTAIN COMPACT (SOUND) UNIT LOADS, ALL STRAPS SHALL BE LOCATED IN PROPER ALIGNMENT AND TENSIONED UNTIL THEY START TO CRUSH THE PROTECTIVE EDGEBOARD AND/OR CUT INTO THE PALLET DECK. **CAUTION:** OVER TENSIONING THE STRAPPING MAY CAUSE THE FIBERBOARD BOXES TO CRUSH AND POTENTIALLY DAMAGE THE AMMUNITION. AFTER TENSIONING, EACH STRAP WILL BE SECURED USING ONE SEAL AND TWO PAIR OF NOTCHES PER SEAL. SEALS MAY BE LOCATED ON A SIDE OR ON THE TOP OF THE UNIT AS REQUIRED BY OPERATIONAL NECESSITY.
- K. WHEN APPLYING ANY STRAP, CARE MUST BE EXERCISED TO ASSURE THAT THE ENDS OF THE STRAP ON THE UNDERSIDE OF THE JOINT EXTENDS AT LEAST 6" BEYOND THE SEAL. THIS EXTRA MINIMUM LENGTH OF THE STRAP IS REQUIRED TO PERMIT SUBSEQUENT TIGHTENING OF LOOSENED STRAPPING. RETENSIONING CAN BE ACCOMPLISHED WITHOUT REPLACING STRAPPING OR SPLICING STRAPPING THROUGH THE USE OF A MANUAL OR PNEUMATIC FEEDWHEEL TYPE TENSIONING TOOL AND THE APPLICATION OF ONE ADDITIONAL SEAL.
- L. DETERMINATION OF LENGTH OF STRAPPING. THE FOLLOWING DEFINITIONS APPLY:
 - L = LENGTH OF STRAP REQUIRED IN INCHES
 - A = LENGTH OF UNIT IN INCHES
 - W = WIDTH OF UNIT IN INCHES
 - H = HEIGHT OF UNIT, INCLUDING PALLET, IN INCHES
- 1. THE LENGTH OF A LOAD STRAP REQUIRED FOR A SPECIFIC UNIT WHERE THE STRAP PASSES THROUGH THE STRAP SLOT WILL BE DETERMINE BY USING THE FOLLOWING FORMULA: $L = 2W + 2H + 2"$.
- 2. THE LENGTH OF A HORIZONTAL STRAP REQUIRED FOR SPECIFIC UNIT, WHERE THE STRAP ENCLOSES THE UNIT LOAD, WILL BE DETERMINED BY USING THE FOLLOWING FORMULA: $L = 2A + 2W + 12"$.
- 3. THE LENGTH OF A TIEDOWN STRAP REQUIRED FOR A SPECIFIC UNIT, WHERE THE STRAP PASSES AND THE PALLET DECK, WILL BE DETERMINED BY USING THE FOLLOWING FORMULA: $L = 2A + 2H + 2"$.
- M. PALLET UNIT LOADS SHALL BE INSPECTED FOR TORN, DETERIORATED OR LOOSENED STRAPPING PRIOR TO SHIPPING.
 - 1. TORN OR BROKEN STRAPS SHOULD BE REPLACED BY CONTRACTORS, BUT MAY BE REPAIRED AT THE DEPOT/FIELD LEVEL BY SPLICING IN A MANNER SIMILAR TO THAT DESCRIBED IN GENERAL NOTE "M.4(B)" BELOW.
 - 2. DETERIORATION DUE TO A MINOR AMOUNT OF RUST WILL NOT NECESSARILY BE CAUSE FOR REPLACING A STRAP. HOWEVER, AN EXTENSIVELY RUSTED/SCALED/PITTED STRAP IS CAUSE FOR REPLACING THE STRAP.
 - 3. A DAMAGED OR DEFECTIVE SEAL IS SUFFICIENT CAUSE FOR REPLACEMENT OF THE SEAL.
 - 4. LOOSE STRAPS SHOULD BE CHECKED FOR DEGREE OF LOOSENESS BY POSITIONING THE HOOK OF A SCALE (COMMONLY KNOWN AS A FISH SCALE) BEHIND THE STRAPS NEAR THE MIDPOINT AT THE TOP OR SIDE OF THE UNIT LOAD. PULL THE SCALE UNTIL A READING OF 20 POUNDS IS OBTAINED. THE DISTANCE BETWEEN THE BOX AND THE STRAP MUST NOT EXCEED 1-1/2". IF THE MEASUREMENT EXCEEDS 1-1/2", THE STRAP MUST BE TIGHTENED OR REPLACED. TIGHTENING CAN BE ACCOMPLISHED BY EITHER OF TWO METHODS.
 - (A) A STRAP TENSIONING TOOL CAN BE USED IF THE STRAP HAS AT LEAST A 6" LONG TAB AT THE SEAL. SEE GENERAL NOTE "K" ABOVE.
 - (B) AN 18" OR LONGER STRAP CAN BE USED AS A SPLICE PIECE. CUT THE LOOSE STRAP ON BOTH SIDES OF THE ORIGINAL SEAL AND DISCARD THE CUT OUT SECTION. OVERLAP ONE END OF THE STRAP SPLICE PIECE TO ONE END OF THE ORIGINAL STRAPPING SO AS TO PROTRUDE SLIGHTLY BEYOND THE END OF THE SEAL TO BE USED. POSITION AND SECURE SEAL TO OVERLAPPED SECTION WITH TWO PAIR OF NOTCHES. USING A STRAPPING TOOL, TENSION AND SEAL THE LENGTHENED STRAP. THE STRAP SPLICE PIECE MAY BE CUT FROM NEW STRAP OR USED STRAP, PROVIDED IT IS AT LEAST OF AS GOOD A QUALITY AS THE STRAP TO WHICH IT IS BEING SECURED. NOTE: ONLY ONE SPLICE PER STRAP IS ALLOWED ON UNIT LOADS OF AMMUNITION.
 - 5. **CAUTION:** WHEN A STRAP IS REPLACED/SPLICED OR RETENSIONED, AND THE OTHER STRAPS ON A UNIT LOAD ARE NOT, CARE MUST BE EXERCISED TO INSURE THAT THE TENSION ON THE AFFECTED STRAP IS NEARLY THE SAME AS THAT OF THE OTHER STRAPS.
- N. UNIT LOAD MARKING WILL BE ACCOMPLISHED IN ACCORDANCE WITH DAC DRAWING ACV00561, UNIT LOAD MARKING FOR SHIPMENT AND STORAGE, AMMUNITION AND EXPLOSIVES.

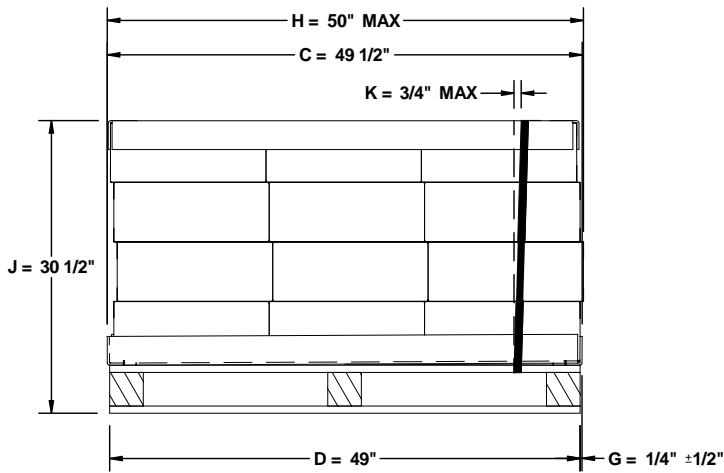
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(GENERAL NOTES CONTINUED FROM PAGE 2)

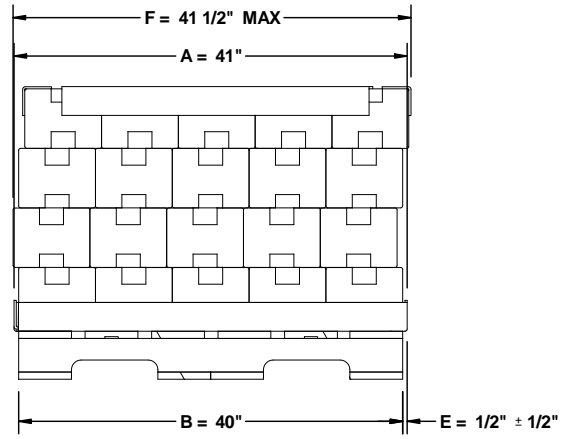
- O. CONVERSION TO METRIC EQUIVALENTS: DIMENSIONS WITHIN THIS DOCUMENT ARE EXPRESSED IN INCHES, AND WEIGHTS ARE EXPRESSED IN POUNDS. WHEN NECESSARY, THE METRIC EQUIVALENTS MAY BE COMPUTED ON THE BASIS OF ONE INCH EQUALS 25.4MM AND ONE POUND EQUALS 0.45 KG.
- P. GENERAL NOTE "E" ON PAGE 2 SPECIFIES THAT NO MORE THAN TWO LOTS OF AMMUNITION WILL BE CONTAINED ON A SINGLE PALLET UNIT AT THE END OF A PRODUCTION LOT UNLESS IN SUPPORT OF BALLISTIC SAMPLE SHIPMENT OR TROOP USE AT POST, CAMP OR STATION. THIS IS INTENDED TO BE APPLIED TO PALLETIZING OPERATIONS BEING PERFORMED AT A LOAD, ASSEMBLE AND PACK PLANT OR TO MAJOR MAINTENANCE OPERATIONS BEING PERFORMED AT AN AMMUNITION DEPOT WHEN THE QUANTITY OF BOXES COMPRISING A LOT IS GREAT ENOUGH TO CONSTRUCT MORE THAN ONE PALLET UNIT. **NOTICE:** MULTIPLE (MORE THAN TWO) LOTS ARE PERMITTED TO BE PALLETIZED TOGETHER AS A UNIT LOAD WHEN A SINGLE LOT QUANTITY IS INSUFFICIENT TO COMPLETE ONE FULL-SIZE OR REDUCED-LAYER (TO SATISFY A SMALL-QUANTITY SHIPMENT) UNIT LOAD. ADDITIONALLY, MULTIPLE LOTS ON A PALLET UNIT MAY CONSIST OF ONE OR MORE NSNS, PROVIDED ALL ITEMS ARE COMPATIBLE AND THEY ARE SHIPPED TO A SINGLE CONUS POST, CAMP OR STATION DESTINATION. PALLET UNITS CONTAINING MULTIPLE NSNS WILL NOT BE SHIPPED TO CONUS DEPOTS. MULTIPLE NSN PALLET UNITS WILL HAVE STEEL STRAPPING APPLIED SIMILAR TO STRAPPING GUIDANCE GIVEN FOR THE BASIC UNIT LOAD. ALL ITEM BOXES ON THE PALLET MUST BE RESTRAINED IN SUCH A MANNER TO PROVIDE A SAFE, SECURE, AND COMPACT PALLET UNIT FOR SHIPMENT. MULTIPLE LOT/NSN UNIT LOADS WILL BE MARKED IN ACCORDANCE WITH DAC DRAWING ACV00561.
- Q. TWO METHODS ARE APPROVED FOR DETERMINING THE AVERAGE WEIGHT THAT IS TO BE SHOWN ON PALLETIZED UNITS OF AMMUNITION THAT ARE BEING PRODUCED AT LOAD, ASSEMBLE AND PACK PLANTS.
1. PREFERRED METHOD FOR DETERMINATION OF UNIT LOAD WEIGHT: THE WEIGHT OF AMMUNITION UNIT LOADS MAY BE DETERMINED BY RANDOMLY SELECTING FIVE UNIT LOADS FROM THE CURRENT MONTH'S PRODUCTION. EACH UNIT LOAD SHALL THEN BE WEIGHED. THE CALCULATED AVERAGE WEIGHT OF THE FIVE UNIT LOADS (TOTAL WEIGHT OF THE FIVE UNIT LOADS DIVIDED BY FIVE) WILL BE USED AS THE UNIT LOAD WEIGHT FOR WHICHEVER IS LESS, EITHER A 60-DAY PERIOD OR UNTIL A DIMENSIONAL OR CONFIGURATION CHANGE IS MADE TO THE UNIT LOAD.
 2. ALTERNATIVE METHOD FOR DETERMINATION OF UNIT LOAD WEIGHT: THE WEIGHT OF AMMUNITION UNIT LOADS MAY BE DETERMINED BY RANDOMLY SELECTING AND WEIGHING FIVE GROUPS OF UNIT LOAD COMPONENTS (PALLET, STRAPPING, SEALS, ETC). FROM THE CURRENT MONTH'S PRODUCTION AND ADDING TO IT THE WEIGHT OF THE LOADED BOXES TO BE PLACED ON THE PALLET. THE WEIGHT OF THE LOADED BOXES WILL BE DETERMINED BY USING THE FOLLOWING PROCEDURES:
 - (A) WEIGH FIVE LOADED BOXES INDIVIDUALLY AND RECORD THE TOTAL WEIGHT.
 - (B) WEIGH THREE INDIVIDUAL GROUPS OF FIVE LOADED BOXES EACH AND RECORD EACH GROUP WEIGHT.
 - (C) WEIGH THREE INDIVIDUAL GROUPS OF TEN LOADED BOXES EACH AND RECORD EACH GROUP WEIGHT.
 - (D) TOTAL ALL RECORDED WEIGHTS AND DIVIDE BY 50. THE RESULT IS THE APPROVED LOADED BOX GROSS WEIGHT.THE APPROVED LOADED BOX GROSS WEIGHT WILL THEN BE MULTIPLIED BY THE QUANTITY OF BOXES TO BE PLACED ON THE PALLET AND ADDED TO EACH GROUP OF UNIT LOAD COMPONENTS. THE CALCULATED AVERAGE WEIGHT OF THE FIVE UNIT LOAD GROUPS (TOTAL WEIGHT OF THE FIVE UNIT LOAD GROUPS DIVIDED BY FIVE) WILL BE USED AS THE UNIT LOAD WEIGHT FOR WHICHEVER IS LESS, EITHER A 60-DAY PERIOD OR UNTIL A DIMENSIONAL OR CONFIGURATION CHANGE IS MADE TO THE UNIT LOAD.
- R. WHEN UN PERFORMANCE ORIENTED PACKAGING (POP) MARKING IS REQUIRED ON BOXES, THIS MARKING WILL SHOW IN AT LEAST ONE PLACE ON THE UNITIZED LOADS.
- S. REFER TO DAC DRAWING ACV00617 FOR APPROVED SOURCES FOR SEALLESS (CLIPLESS) SEALING TOOL. THESE APPROVED SEALING TOOLS CAN BE USED IN PLACE OF SEALS CURRENTLY SPECIFIED IN THE "MATERIAL SPECIFICATIONS" LISTED ON PAGE 2.



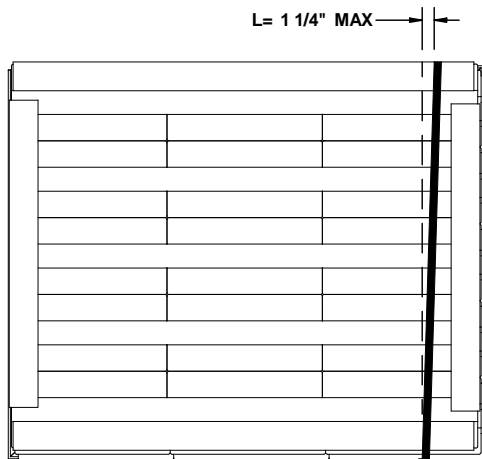
STRAP RETENSIONING TAB
SEE GENERAL NOTE "K" ON PAGE 2.



UNIT WIDTH VIEW



UNIT LENGTH VIEW

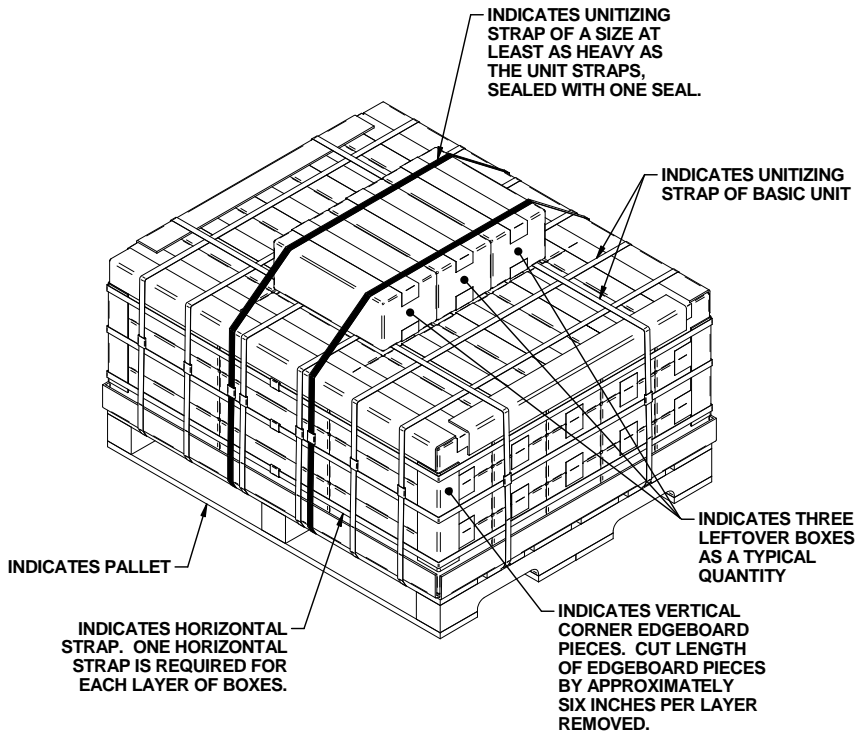


UNIT TOP VIEW

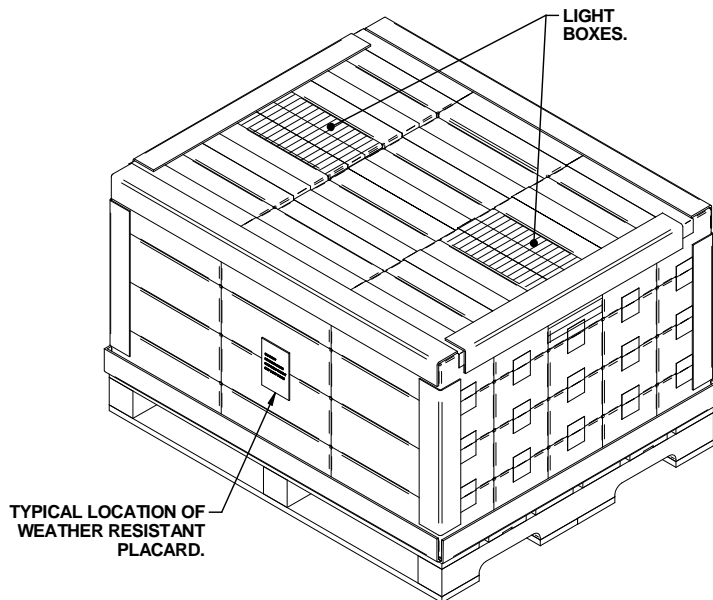
SPECIAL NOTES:

1. DIMENSIONS APPLICABLE TO ALLOWABLE TOLERANCES ARE EXPRESSED IN INCHES AND IDENTIFIED BY LETTERS AS FOLLOWS:
 - A = UNIT LENGTH
 - B = PALLET LENGTH
 - C = UNIT WIDTH
 - D = PALLET WIDTH
 - E = LENGTHWISE OVERHANG = $\frac{A-B}{2}$ WITH A PLUS OR MINUS 1/2" TOLERANCE FOR EACH LAYER AND EACH STACK
 - F = ALLOWABLE UNIT LENGTH = "A" PLUS 1/2" MAXIMUM
 - G = WIDTHWISE OVERHANG = $\frac{C-D}{2}$ WITH A PLUS OR MINUS 1/2" TOLERANCE FOR EACH LAYER AND FOR EACH STACK
 - H = ALLOWABLE UNIT WIDTH = "C" PLUS 1/2" MAXIMUM
 - J = UNIT HEIGHT
 - K = VERTICAL STRAP ALIGNMENT = 3/4" MAXIMUM FROM TRUE ALIGNMENT
 - L = TRANSVERSE STRAP ALIGNMENT = 1-1/4" MAXIMUM FROM TRUE ALIGNMENT
2. BOX ALIGNMENT TOLERANCES APPLY TO EACH LAYER AND TO EACH STACK RELATIVE TO THE PALLET DECK. SEE GENERAL NOTE "G" ON PAGE 2.
3. STRAPPING TOLERANCERS APPLY TO ALL STRAPS AND TO ALL SURFACES WHICH EACH STRAP ENCOMPASSES, I. E., TOP, BOTTOM, AND BOTH SIDES.

SPECIAL NOTES



REDUCED-FULL-LAYER PALLET UNIT WITH SECUREMENT OF LEFTOVER BOXES

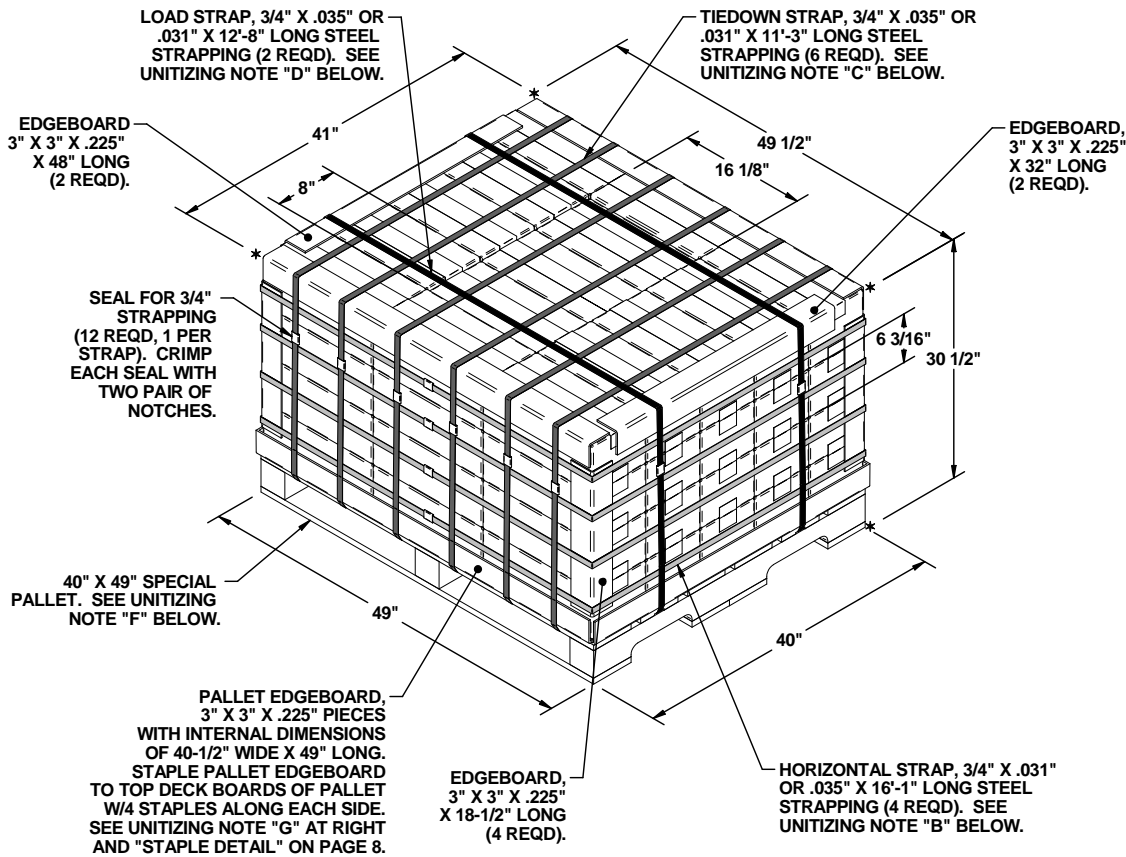


USE OF LIGHT BOXES TO ACHIEVE A FULL LAYER
(UNITIZING STRAPS HAVE BEEN OMITTED FROM THE DETAIL ABOVE FOR CLARITY PURPOSES)

1. SHIPMENTS OF PALLET UNITS OF AMMUNITION SHOULD CONSIST OF FULL-HEIGHT UNITS TO THE MAXIMUM EXTENT POSSIBLE. HOWEVER, THE END OF A LOT OR THE QUANTITY OF ITEMS NEEDED TO FILL A REQUISITION, MAY NECESSITATE THE SHIPMENT OF A SINGLE PALLET UNIT THAT CONTAINS REDUCED-FULL-LAYERS AND/OR ONE OR MORE LEFTOVER BOXES. SHIPMENT OF A REDUCED-FULL-LAYER PALLET UNIT AND/OR A PALLET UNIT WITH LEFTOVER BOXES IS APPLICABLE FOR CONUS MOTOR CARRIER SHIPMENTS FROM DEPOT TO DEPOT OR FROM DEPOT TO POSTS, CAMPS, AND STATIONS, OR UPON APPROVAL FROM HIGHER HEADQUARTERS, FOR SHIPMENTS FROM LOAD, ASSEMBLY, AND PACK PLANTS TO DEPOTS. **CAUTION:** A UNIT LOAD CONTAINING LEFTOVER BOXES IN ANY AMOUNT WHICH IS LESS THAN A FULL LAYER, AND SECURED TO THE TOP OF A FULL OR REDUCED LAYER UNIT, IS ONLY APPLICABLE TO CONUS MOTOR CARRIER SHIPMENTS.
2. WHEN ONE OR MORE FULL LAYERS ARE OMITTED (REDUCED-FULL-LAYER PALLET UNIT), THE HORIZONTAL STRAPPING AND THE EDGEBOARD USED ON THE FOUR VERTICAL CORNERS WILL BE ADJUSTED. FOR EACH LAYER REMOVED, ONE LESS HORIZONTAL STRAP IS REQUIRED (ONLY ONE HORIZONTAL STRAP PER LAYER IS REQUIRED). THE FOUR VERTICAL CORNER EDGEBOARD PIECES WILL BE CUT DOWN BY APPROXIMATELY SIX INCHES FOR EVERY LAYER REMOVED.
3. LEFTOVER BOXES ARE DESCRIBED AS A QUANTITY OF BOXES WHICH ARE INSUFFICIENT TO FORM A REDUCED-FULL-LAYER PALLET UNIT FOR SHIPMENT ON TOP OF A LOAD OR WITHIN A TIER. THEY ARE USUALLY BOXES OF THE SAME AMMUNITION ITEM AS THE BALANCE OF THE LOAD ALTHOUGH THEY MAY BE ANY OTHER COMPATIBLE ITEM.
4. THE QUANTITY OF LEFTOVER BOXES THAT CAN BE SECURED TO FULL OR REDUCED-FULL-LAYER PALLET UNITS MAY VARY FROM ONE TO NOT MORE THAN THE QUANTITY IN ONE LAYER ON THE UNIT. IN OTHER WORDS, NOT MORE THAN THREE BOXES CAN BE STRAPPED TO A 3-BOX LONG UNIT. LEFTOVER BOXES MUST NOT BE STACKED. IF THE QUANTITY OF LEFTOVER BOXES TO BE SHIPPED IS MORE THAN THE QUANTITY IN ONE FULL LAYER, BOXES MUST BE STRAPPED TO MORE THAN ONE UNIT.
5. LEFTOVER BOXES MUST BE SECURED TO A FULL OR REDUCED-FULL-LAYER PALLET UNIT WITH A MINIMUM OF TWO PIECES OF STEEL STRAPPING (SEPARATE FROM UNIT STRAPS) OF AT LEAST AS HEAVY AS THE STRAPPING USED TO SECURE THE BOXES ON THE PALLET UNIT UNDERNEATH THE LEFTOVER BOXES TO THE PALLET BASE. THE "REDUCED-FULL-LAYER PALLET UNIT WITH SECUREMENT OF LEFTOVER BOXES" DETAIL DEPICTS THE TYPICAL STRAP APPLICATION. THREAD THE STRAP UNDER THE TOP DECK BOARDS (AS APPLICABLE) AS NEAR AS PRACTICAL TO THE PALLET POST. COMPLETELY ENCIRCLE THE PALLETIZED UNIT AND THE LEFTOVER BOXES, TENSION, AND SEAL THE JOINT WITH ONE DOUBLE CRIMPED SEAL. **CAUTION:** LEFTOVER BOXES WILL BE POTENTIALLY CRUSHED ON THE UPPER EDGES DUE TO STRAPPING. AVOID TENSIONING THE STRAPPING TO A DEGREE THAT WOULD INDUCE TEARING INTO THE FIBERBOARD BOXES.
6. LESS-THAN-FULL BOXES OF AMMUNITION (LIGHT BOXES) WILL BE PAINTED AND MARKED AS SPECIFIED IN ARDEC DRAWING 8796522 OR 12982865. **NOTE:** DUE TO THE INSTABILITY OF THE FIBERBOARD BOXES, LIGHT BOXES MUST CONTAIN APPROPRIATE INTERNAL FILLER MATERIAL AS SPECIFIED IN ARDEC DRAWING 13014881. LIGHT BOXES WILL ONLY BE PLACED IN THE TOP LAYER OF A UNIT LOAD AND LOCATED AT THE OUTER EDGES OF THE CENTER ROW. NOT MORE THAN TWO LIGHT BOXES (ONE PER LOT) WILL BE PLACED IN A SINGLE PALLET UNIT LOAD. SEE NOTE 7 BELOW.
7. EACH PALLET UNIT LOAD CONTAINING LIGHT BOXES WILL HAVE A WEATHER RESISTANT PLACARD OR TAG PREPARED AND APPLIED TO THE UNIT LOAD AS STATED IN DAC DRAWING ACV00561.

PALLET UNIT DATA				
ITEMS INCLUDED		*HAZARD CLASS AND DIVISION	*COMPATIBILITY GROUP	APPROX WEIGHT (LBS)
NSN	DODIC			
1305-01-550-5648	AA33	1.4	S	3,436

*HAZARD AND CLASSIFICATION DATA CONTAINED IN THE ABOVE CHART IS FOR GUIDANCE AND INFORMATIONAL PURPOSES ONLY. VERIFICATION OF THE SPECIFIED DATA SHOULD BE MADE BY CONSULTING THE MOST RECENT JOINT HAZARD CLASSIFICATION SYSTEM LISTING OR OTHER APPROVED LISTING(S).



PALLET UNIT
SEE UNITIZING NOTE "A" BELOW.

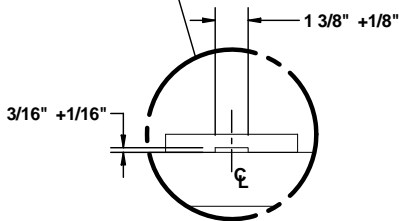
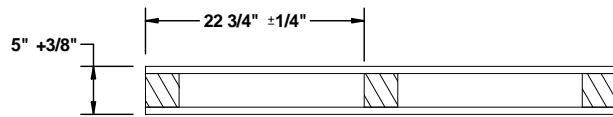
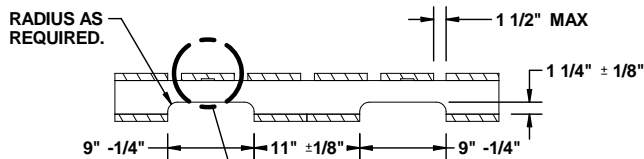
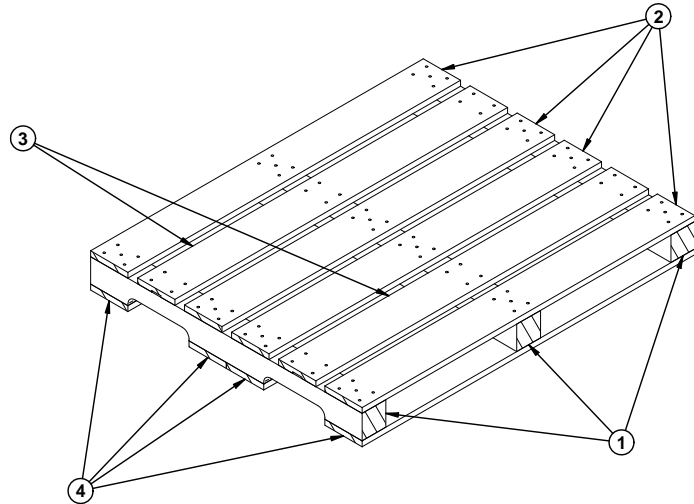
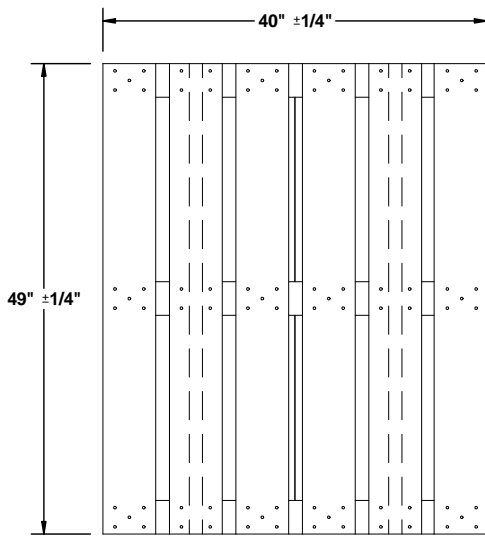
60 BOXES OF 5.56MM CARTRIDGES (1,800 PER BOX) @ 55 LBS-	3,300 LBS
DUNNAGE - - - - -	26 LBS
PALLET - - - - -	110 LBS
TOTAL WEIGHT - - - - -	3,436 LBS (APPROX)
CUBE - - - - -	35.9 CU FT (APPROX)

UNITIZING NOTES

- A. DIMENSIONS, CUBE AND WEIGHT OF A PALLET UNIT WILL VARY SLIGHTLY DEPENDING UPON THE ACTUAL DIMENSIONS OF THE BOXES AND THE WEIGHT OF THE SPECIFIC ITEM BEING UNITIZED.
- B. INSTALL EACH HORIZONTAL STRAP TO ENCIRCLE A LAYER OF BOXES ON THE PALLET UNIT. NOTE THAT THE STRAPS WILL BE LOCATED AS SHOWN, NEAR THE CENTER OF EACH LAYER.
- C. INSTALL EACH TIEDOWN STRAP TO PASS UNDER THE DECK/STRINGER BOARDS OF THE PALLET AND TO BE LOCATED AS SHOWN. TIEDOWN STRAPS WILL NOT BE APPLIED UNTIL THE HORIZONTAL STRAPS HAVE BEEN TENSIONED AND SEALED.
- D. INSTALL EACH LOAD STRAP TO THREAD THROUGH THE STRAP SLOTS OF THE PALLET. LOAD WILL NOT BE APPLIED UNTIL THE TIEDOWN STRAPS HAVE BEEN TENSIONED AND SEALED.
- E. THE FOLLOWING AMC DRAWINGS ARE APPLICABLE FOR OUTLOADING AND STORAGE OF THE ITEMS COVERED BY THIS APPENDIX.

TRUCKLOADING - - -	19-48-4117-11PA1003
STORAGE - - - - -	19-48-4118-1-2-3-4-14-22PA1002
- F. THE SPECIAL PALLET WILL BE CONSTRUCTED AND ASSEMBLED AS SPECIFIED IN THE "PALLET DETAIL" ON PAGE 8. **NOTE:** PALLET IS NOT PRESERVATIVE OR HEAT TREATED.
- G. THE PALLET EDGEBOARD IS CONSTRUCTED FROM TWO NOTCHED EDGEBOARD PIECES RIVETED TOGETHER. THE PALLET EDGEBOARD WILL BE CENTERED ON TOP OF THE PALLET DECK AND STAPLED TO THE TOP DECK BOARDS AS SHOWN IN THE "STAPLE DETAIL" ON PAGE 8. **NOTE:** AVOID FASTENING STAPLES INTO GAPS BETWEEN TOP DECK BOARDS.
- H. FOR DETAILS OF THE FIBERBOARD BOX SEE ARDEC DRAWING 13014881.

BILL OF MATERIAL			
SPECIAL PALLET, 40" X 49"	1 REOD	110 LBS	
STEEL STRAPPING, 3/4"	157.17' REQD	14.03 LBS	
EDGEBOARD, 3" X 3" X .225"	19.5' REQD	7 LBS	
PALLET EDGEBOARD	1 REOD	5 LBS	
SEAL FOR 3/4" STRAPPING	12 REQD	NIL	
STAPLE, 1/2" X 3/4"	16 REQD	NIL	



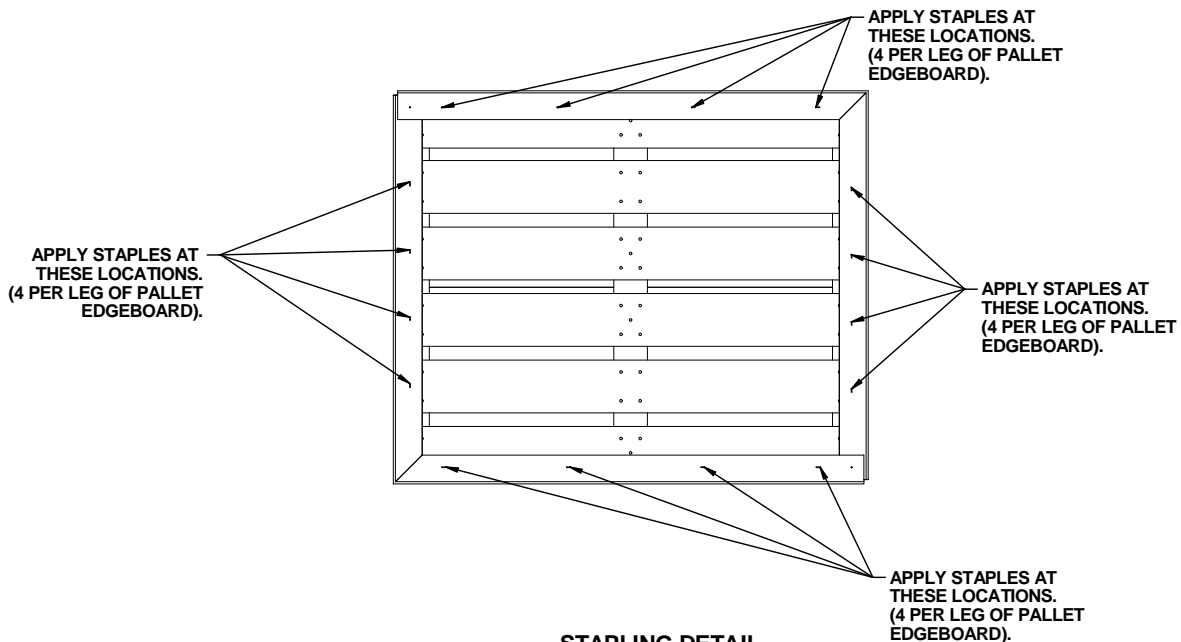
STRAP SLOT DETAIL

KEY NUMBERS

- ① STRINGER, 3-1/2" +1/8" X 3-1/2" +1/8" X 40" ±1/8" (3 REQD).
- ② TOP DECK BOARD, 3/4" +1/8" X 5-1/2" +1/8" X 49" ±1/8" (4 REQD). NAIL TO STRINGERS W/5 NAILS (2-1/4" LONG X 0.120" DIAMETER) AT EACH JOINT IN A STAGGERED PATTERN AS SHOWN.
- ③ TOP DECK BOARD WITH STRAP SLOT, 3/4" +1/8" X 5-1/2" +1/8" X 49" ±1/8" (2 REQD). NAIL TO STRINGERS W/4 NAILS (2-1/4" LONG X 0.120" DIAMETER) AT EACH LOCATION. **NOTE:** AVOID NAILING THRU STRAP SLOTS.
- ④ BOTTOM DECK BOARD, 3/4" +1/8" X 5-1/2" +1/8" X 49" ±1/8" (4 REQD). NAIL TO STRINGERS W/3 NAILS (2-1/4" LONG X 0.120" DIAMETER) AT EACH JOINT IN STAGGERED PATTERN.

PALLET DETAIL

NOTE: ALL DIMENSIONS SHOWN IN PALLET DETAIL ARE ACTUAL DIMENSIONS.



STAPLING DETAIL
(16 STAPLES REQD)