

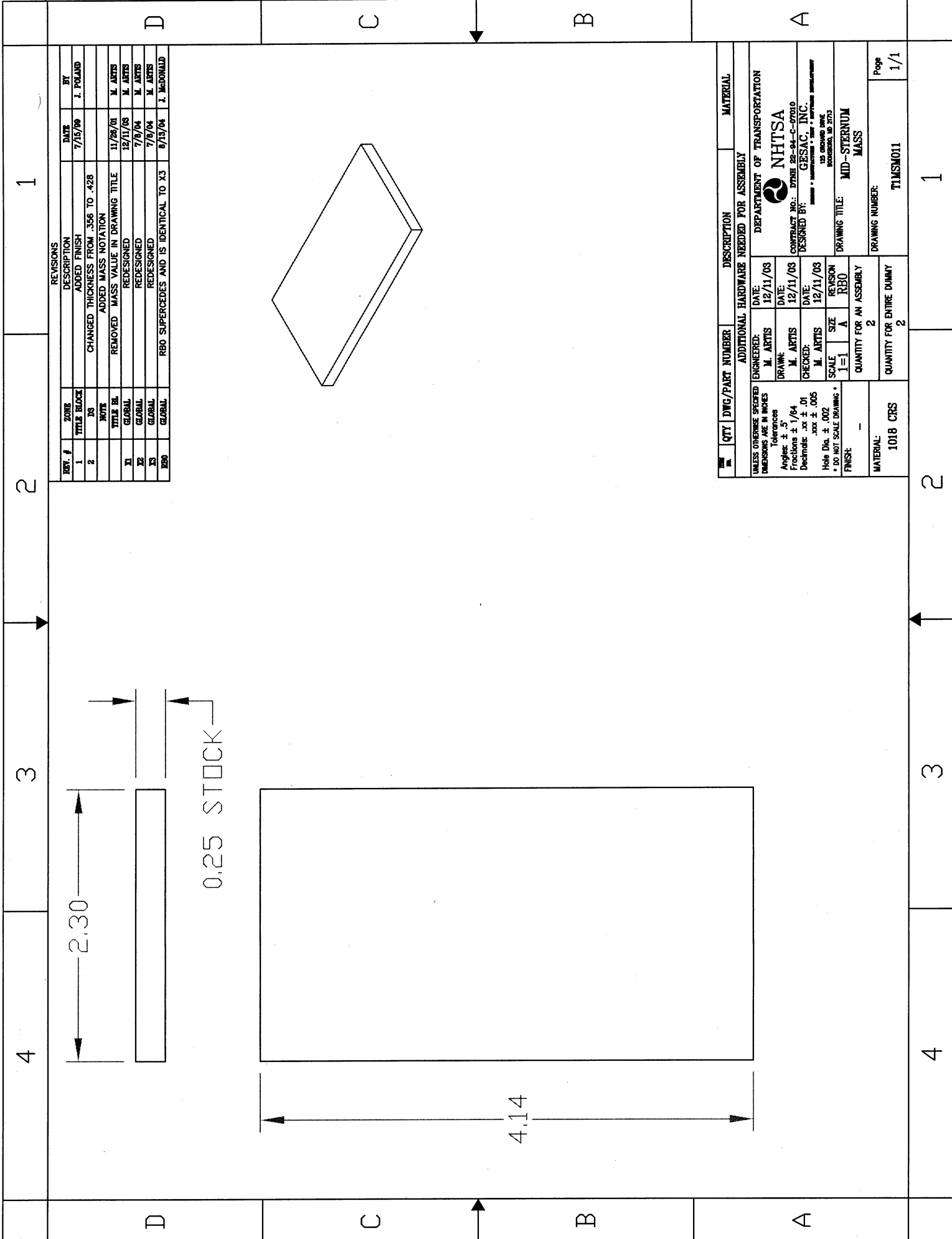
- NOTES:
- 1 SAND BLAST AND CLEAN WITH ACETONE THE AREA OF EACH METAL PLATE THAT WILL MAKE CONTACT WITH EITHER THE FOAM OR RUBBER.
 - 2 ALIGN & CENTER THE FRONT EDGE OF ITEM 2 WITH ITEM 1. MAKE SURE THAT THE HOLE PATTERN ON THE METAL PLATE IS AS SHOWN.
 - 3 CENTER EACH MIDSTERNIUM MASS PLATE (ITEM 3) ON EACH MASS DAMPING FOAM (ITEM 2 & 4).
 - 4 BOND THE FOAM & RUBBER PAD TO EACH METAL PLATE WITH PLIIBOND 30 INDUSTRIAL ADHESIVE (MCM# 7468A37).
 - 5 MASK & PAINT (BLACK) ALL BARE METAL SURFACES.

REV. #	ZONE	DESCRIPTION	DATE	BY
1	C-7	MOVED LOCATION OF ACCELEROMETER	6/10/80	J. DODDARD
2	B-4	CHANGED FINISH	7/16/80	J. POLARD
3	C-8	SIMPLIFIED DIMENSIONS	4/30/80	J. POLARD
20	GLOBAL	REDESIGNED	12/11/03	M. ARTS
22	GLOBAL	REDESIGNED	7/22/04	M. ARTS
230	GLOBAL	SUPERCEDES AND IS IDENTICAL TO T1MSM005-X2	8/10/04	J. BIGNARD

ITEM #	QTY	DTG/PART NUMBER	DESCRIPTION	MATERIAL
5	1	T1MSM015	RUBBER PAD	BUNA N RUBBER
4	1	T1MSM012	MASS DAMPING FOAM #2	CHARCOAL/POLY FOAM
3	2	T1MSM011	MID-STERNIUM MASS	1018 CES
2	1	T1MSM014	MASS DAMPING FOAM #1	CHARCOAL/POLY FOAM
1	1	T1MSM010	MID-STERNIUM PLATE	STEEL
M				

UNLESS OTHERWISE SPECIFIED		ADDITIONAL HARDWARE NEEDED FOR ASSEMBLY	
ENGINEERED	DATE:	ENGINEERED	DATE:
M. ARTS	12/11/03		
DRAWN:	DATE:	DEPARTMENT OF TRANSPORTATION	
M. ARTS	12/11/03	NHTSA	
CHECKED:	DATE:	CONTRACT NO.: DTMB 28-94-C-07010	
M. ARTS	12/11/03	DESIGNED BY: GESAC, INC.	
SCALE	SIZE	MATERIAL	
1-1	B	STEEL	
* DO NOT SCALE DRAWING *		DRAWING TITLE: MID-STERNIUM BONDING ASSEMBLY	
FINISH:		DRAWING NUMBER: T1MSM005	
QUANTITY FOR AN ASSEMBLY		QUANTITY FOR ENTIRE DUMMY	
1		1	
MATERIAL:		Page	
		1/1	

8	7	6	5	4	3	2	1																																																												
D	STEP 1: MACHINING				C	D																																																													
C					B	C																																																													
B	STEP 2: BEND 5 DEGREES				A	B																																																													
A					A	B																																																													
<p>REVISIONS</p> <table border="1"> <thead> <tr> <th>REV. #</th> <th>ZONE</th> <th>DESCRIPTION</th> <th>DATE</th> <th>BY</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>C-7</td> <td>MOVED LOCATION OF ACCELEROMETER</td> <td>6/19/06</td> <td>J. DRUMMOND</td> </tr> <tr> <td>2</td> <td>P-4</td> <td>CHANGED FINISH</td> <td>7/15/06</td> <td>J. POLARD</td> </tr> <tr> <td>3</td> <td>C-4</td> <td>SIMPLIFIED DIMENSIONS</td> <td>4/20/04</td> <td>J. POLARD</td> </tr> <tr> <td>20</td> <td>GLOBAL</td> <td>REDESIGNED</td> <td>12/11/03</td> <td>M. ARTIS</td> </tr> <tr> <td>200</td> <td>GLOBAL</td> <td>R80 SUPERCEDES AND IS IDENTICAL TO X0</td> <td>8/13/04</td> <td>J. McDONALD</td> </tr> </tbody> </table>								REV. #	ZONE	DESCRIPTION	DATE	BY	1	C-7	MOVED LOCATION OF ACCELEROMETER	6/19/06	J. DRUMMOND	2	P-4	CHANGED FINISH	7/15/06	J. POLARD	3	C-4	SIMPLIFIED DIMENSIONS	4/20/04	J. POLARD	20	GLOBAL	REDESIGNED	12/11/03	M. ARTIS	200	GLOBAL	R80 SUPERCEDES AND IS IDENTICAL TO X0	8/13/04	J. McDONALD																														
REV. #	ZONE	DESCRIPTION	DATE	BY																																																															
1	C-7	MOVED LOCATION OF ACCELEROMETER	6/19/06	J. DRUMMOND																																																															
2	P-4	CHANGED FINISH	7/15/06	J. POLARD																																																															
3	C-4	SIMPLIFIED DIMENSIONS	4/20/04	J. POLARD																																																															
20	GLOBAL	REDESIGNED	12/11/03	M. ARTIS																																																															
200	GLOBAL	R80 SUPERCEDES AND IS IDENTICAL TO X0	8/13/04	J. McDONALD																																																															
<p>NOTES:</p> <p>1 HEAT TREAT TO Rc 40-43</p>																																																																			
<table border="1"> <thead> <tr> <th>QTY</th> <th>DWG/PART NUMBER</th> <th>DESCRIPTION</th> <th>MATERIAL</th> </tr> </thead> <tbody> <tr> <td>1</td> <td></td> <td>ADDITIONAL HARDWARE NEEDED FOR ASSEMBLY</td> <td></td> </tr> <tr> <td>1</td> <td></td> <td>ENGINEERED: M. ARTIS</td> <td></td> </tr> <tr> <td>1</td> <td></td> <td>DATE: 12/11/03</td> <td></td> </tr> <tr> <td>1</td> <td></td> <td>DRAWN: M. ARTIS</td> <td></td> </tr> <tr> <td>1</td> <td></td> <td>DATE: 12/11/03</td> <td></td> </tr> <tr> <td>1</td> <td></td> <td>CHECKED: M. ARTIS</td> <td></td> </tr> <tr> <td>1</td> <td></td> <td>DATE: 12/11/03</td> <td></td> </tr> <tr> <td>1</td> <td></td> <td>SCALE: 1=1</td> <td></td> </tr> <tr> <td>1</td> <td></td> <td>SIZE: B</td> <td></td> </tr> <tr> <td>1</td> <td></td> <td>REVISION: R80</td> <td></td> </tr> <tr> <td>1</td> <td></td> <td>QUANTITY FOR AN ASSEMBLY</td> <td></td> </tr> <tr> <td>1</td> <td></td> <td>QUANTITY FOR ENTIRE DUMMY</td> <td></td> </tr> <tr> <td>1</td> <td></td> <td>DRAWING NUMBER: TIMSMOIO</td> <td></td> </tr> <tr> <td>1</td> <td></td> <td>Page: 1/1</td> <td></td> </tr> </tbody> </table>								QTY	DWG/PART NUMBER	DESCRIPTION	MATERIAL	1		ADDITIONAL HARDWARE NEEDED FOR ASSEMBLY		1		ENGINEERED: M. ARTIS		1		DATE: 12/11/03		1		DRAWN: M. ARTIS		1		DATE: 12/11/03		1		CHECKED: M. ARTIS		1		DATE: 12/11/03		1		SCALE: 1=1		1		SIZE: B		1		REVISION: R80		1		QUANTITY FOR AN ASSEMBLY		1		QUANTITY FOR ENTIRE DUMMY		1		DRAWING NUMBER: TIMSMOIO		1		Page: 1/1	
QTY	DWG/PART NUMBER	DESCRIPTION	MATERIAL																																																																
1		ADDITIONAL HARDWARE NEEDED FOR ASSEMBLY																																																																	
1		ENGINEERED: M. ARTIS																																																																	
1		DATE: 12/11/03																																																																	
1		DRAWN: M. ARTIS																																																																	
1		DATE: 12/11/03																																																																	
1		CHECKED: M. ARTIS																																																																	
1		DATE: 12/11/03																																																																	
1		SCALE: 1=1																																																																	
1		SIZE: B																																																																	
1		REVISION: R80																																																																	
1		QUANTITY FOR AN ASSEMBLY																																																																	
1		QUANTITY FOR ENTIRE DUMMY																																																																	
1		DRAWING NUMBER: TIMSMOIO																																																																	
1		Page: 1/1																																																																	

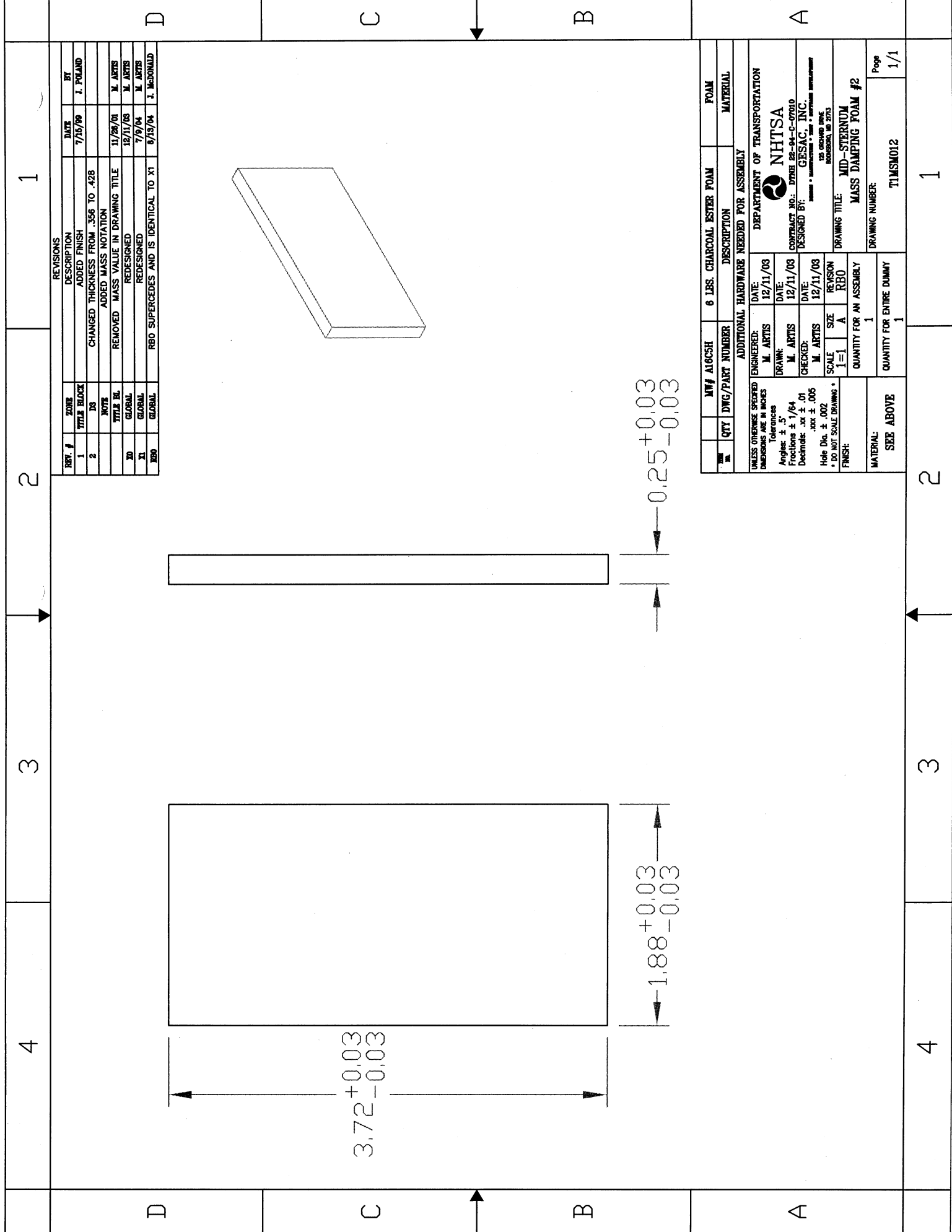


REV. #	ZONE	DESCRIPTION	DATE	BY
1	DS	ADDED FINISH	7/15/06	J. POLAND
2	DS	CHANGED THICKNESS FROM .356 TO .428		
	NOTE	ADDED MASS NOTATION		
	TITLE BL	REMOVED MASS VALUE IN DRAWING TITLE	11/28/01	M. ARTIS
X1	GLOBAL	REDESIGNED	12/11/03	M. ARTIS
X2	GLOBAL	REDESIGNED	7/16/04	M. ARTIS
X3	GLOBAL	REDESIGNED	7/16/04	M. ARTIS
R80	GLOBAL	R80 SUPERCEDES AND IS IDENTICAL TO X3	6/13/04	J. McDONALD

QTY	DWG/PART NUMBER	DESCRIPTION	MATERIAL
		ADDITIONAL HARDWARE NEEDED FOR ASSEMBLY	
UNLESS OTHERWISE SPECIFIED			
DIMENSIONS ARE IN INCHES			
Tolerances			
Angles: ± .5			
Fractions: ± 1/64			
Decimals: .xx ± .01			
.xxx ± .005			
Hole Dia. ± .002			
* DO NOT SCALE DRAWING *			
FINISH: -			
MATERIAL:		1018 CRS	
QUANTITY FOR AN ASSEMBLY		2	
QUANTITY FOR ENTIRE DUMMY		2	
DRAWING NUMBER:		TIMSM011	
Page		1/1	



DRAWING TITLE: MID-STERNUM MASS



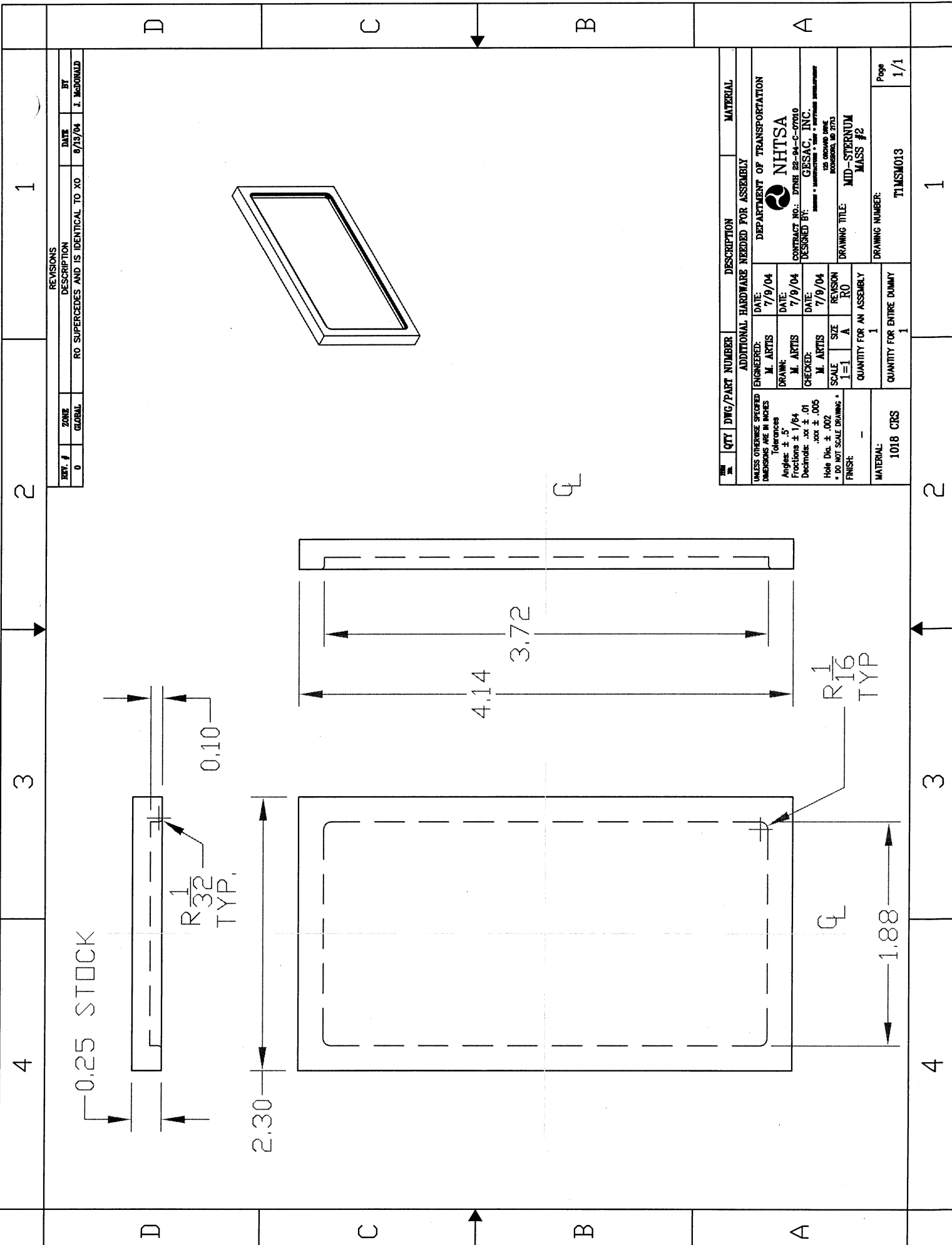
REV. #	ZONE	DESCRIPTION	DATE	BY
1	TITLE BLOCK	ADDED FINISH	7/15/99	J. POLAND
2	DS	CHANGED THICKNESS FROM .356 TO .428		
	NOTE	ADDED MASS NOTATION		
X0	TITLE BL	REMOVED MASS VALUE IN DRAWING TITLE	11/26/01	M. ARTIS
	GENERAL	REDESIGNED	12/11/03	M. ARTIS
X1	GENERAL	REDESIGNED	7/9/04	M. ARTIS
R00	GENERAL	RBO SUPERCEDES AND IS IDENTICAL TO X1	9/13/04	J. McDONALD

MT#	QTY	DWG/PART NUMBER	MT# A16C5H	6 LBS. CHARCOAL ESTER FOAM	DESCRIPTION	FOAM MATERIAL
					ADDITIONAL HARDWARE NEEDED FOR ASSEMBLY	
UNLESS OTHERWISE SPECIFIED		ENGINEERED:	M. ARTIS	DATE:	12/11/03	DEPARTMENT OF TRANSPORTATION
DIMENSIONS ARE IN INCHES		DRAWN:	M. ARTIS	DATE:	12/11/03	NHTSA
Tolerances		CHECKED:	M. ARTIS	DATE:	12/11/03	CONTRACT NO.: DTRM 28-94-C-07010
Angles: ± .5°						DESIGNED BY: GESAC, INC.
Fractions: ± 1/64						125 ORLAND DRIVE
Decimals: .xx ± .01						ROSELAND, NJ 07068
Hole Dia: ± .002		SCALE	1=1	SIZE	A	
* DO NOT SCALE DRAWING *		REVISION				
FINISH:		QUANTITY FOR AN ASSEMBLY	1			
MATERIAL:		QUANTITY FOR ENTIRE DUMMY	1			
SEE ABOVE		DRAWING NUMBER:	T1MSM012			
		Page	1/1			

3.72^{+0.03}_{-0.03}

1.88^{+0.03}_{-0.03}

0.25^{+0.03}_{-0.03}



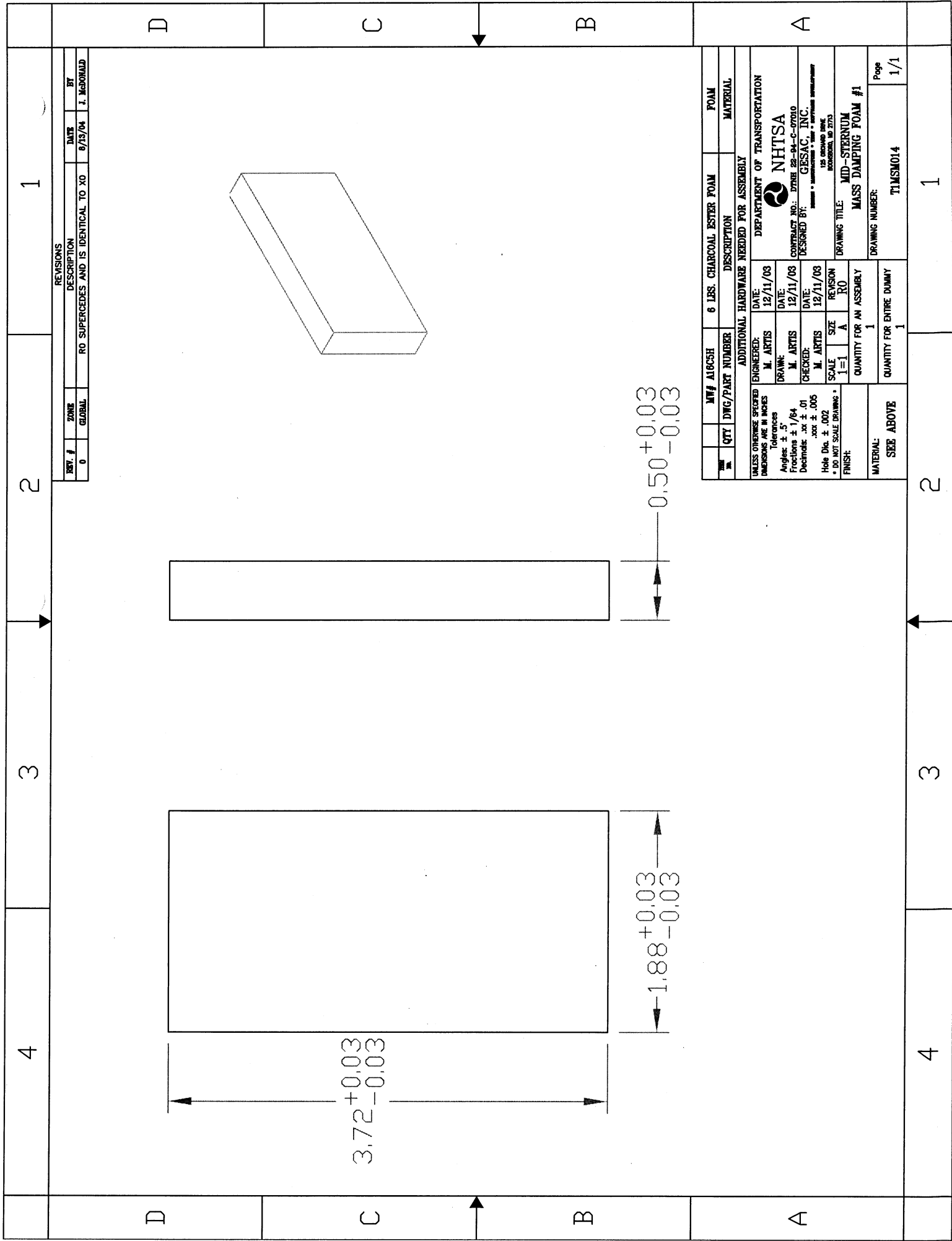
REV. #	ZONE	DESCRIPTION	DATE	BY
0	GLOBAL	RO SUPERCEDES AND IS IDENTICAL TO XO	8/13/04	J. McDONALD

QTY	DWG/PART NUMBER	DESCRIPTION	MATERIAL
1		ADDITIONAL HARDWARE NEEDED FOR ASSEMBLY	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES			
ENGINEERED:	M. ARTIS	DATE:	7/9/04
DRAWN:	M. ARTIS	DATE:	7/9/04
CHECKED:	M. ARTIS	DATE:	7/9/04
SCALE:	1=1	SIZE:	A
REVISION:	RO	QUANTITY FOR AN ASSEMBLY:	1
FINISH:	-	QUANTITY FOR ENTIRE DUMMY:	1
MATERIAL:	1018 CRS	DRAWING NUMBER:	T1MSM013
		Page:	1/1

DEPARTMENT OF TRANSPORTATION
NHTSA
 CONTRACT NO.: DTRH 22-94-C-07010
 DESIGNED BY: **GESAC, INC.**
DESIGN • MANUFACTURE • TEST • SERVICE SUPPORT
 120 GARDNER DRIVE
 BOSTON, MA 02125
 DRAWING TITLE: **MID-STERNUM**
MASS #2

1 2 3 4

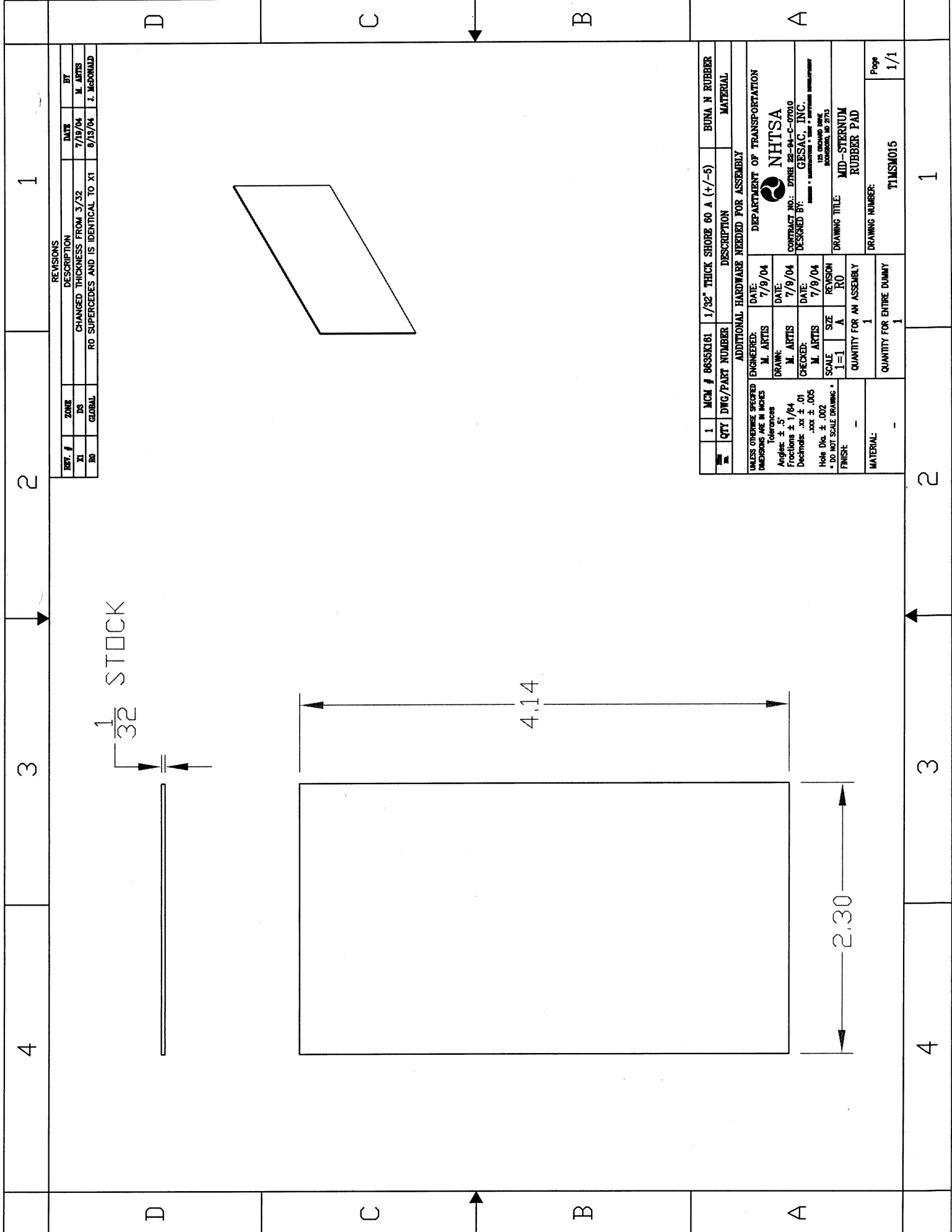
4 3 2 1



REVISIONS		
REV. #	ZONE	DESCRIPTION
0	GLOBAL	RO SUPERCEDES AND IS IDENTICAL TO XO
		DATE: 8/15/04
		BY: J. McDONALD

6 LBS. CHARCOAL ESTER FOAM	FOAM
DESCRIPTION	MATERIAL
ADDITIONAL HARDWARE NEEDED FOR ASSEMBLY	
ENGINEERED: M. ARTIS	DATE: 12/11/03
DRAWN: M. ARTIS	DATE: 12/11/03
CHECKED: M. ARTIS	DATE: 12/11/03
SCALE: 1=1	SIZE: A
REVISION: RO	QUANTITY FOR AN ASSEMBLY: 1
FINISH:	QUANTITY FOR ENTIRE DUMMY: 1
MATERIAL: SEE ABOVE	
DRAWING TITLE: MID-STERNIUM MASS DAMPING FOAM #1	
DRAWING NUMBER: T1MSM014	
Page: 1/1	

DEPARTMENT OF TRANSPORTATION
NHTSA
 CONTRACT NO.: DTN8 22-94-C-07010
 DESIGNED BY: GESAC, INC.
125 ORANGE AVE. BOZEMAN, ID 2175



1/32 STOCK

4.14

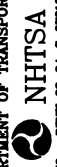
2.30

REVISIONS		
REV. #	ZONE	DESCRIPTION
XI	DS	CHANGED THICKNESS FROM 3/32
RO	GLOBAL	RO SUPERCEDES AND IS IDENTICAL TO X1

D C B A

D C B A

1	MCM # 8656K161	1/32" THICK SHORE 60 A (+/-5)	BUNA N RUBBER
QTY	DWG/PART NUMBER	DESCRIPTION	MATERIAL
ADDITIONAL HARDWARE NEEDED FOR ASSEMBLY			
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES			
Tolerances			
Angles: ± .5°			
Fractions: ± 1/64			
Decimals: .xx ± .01			
.xxx ± .005			
Hole Dia. ± .002			
* DO NOT SCALE DRAWINGS *			
FINISH: -			
MATERIAL: -			
ENGINEERED: M. ARTIS DATE: 7/9/04			
DRAWN: M. ARTIS DATE: 7/9/04			
CHECKED: M. ARTIS DATE: 7/9/04			
SCALE: 1=1 SIZE: A			
REVISION: R0			
QUANTITY FOR AN ASSEMBLY: 1			
QUANTITY FOR ENTIRE DUMMY: 1			
DRAWING NUMBER: T1MSM015			
Page: 1/1			



DEPARTMENT OF TRANSPORTATION

CONTRACT NO.: DTRR 22-94-C-0700

DESIGNED BY: GESSAC, INC.

100 GREENWAY DRIVE
BIRMINGHAM, AL 35203

DRAWING TITLE: MID-STERNUM RUBBER PAD

1 2 3 4 1 2 3 4