

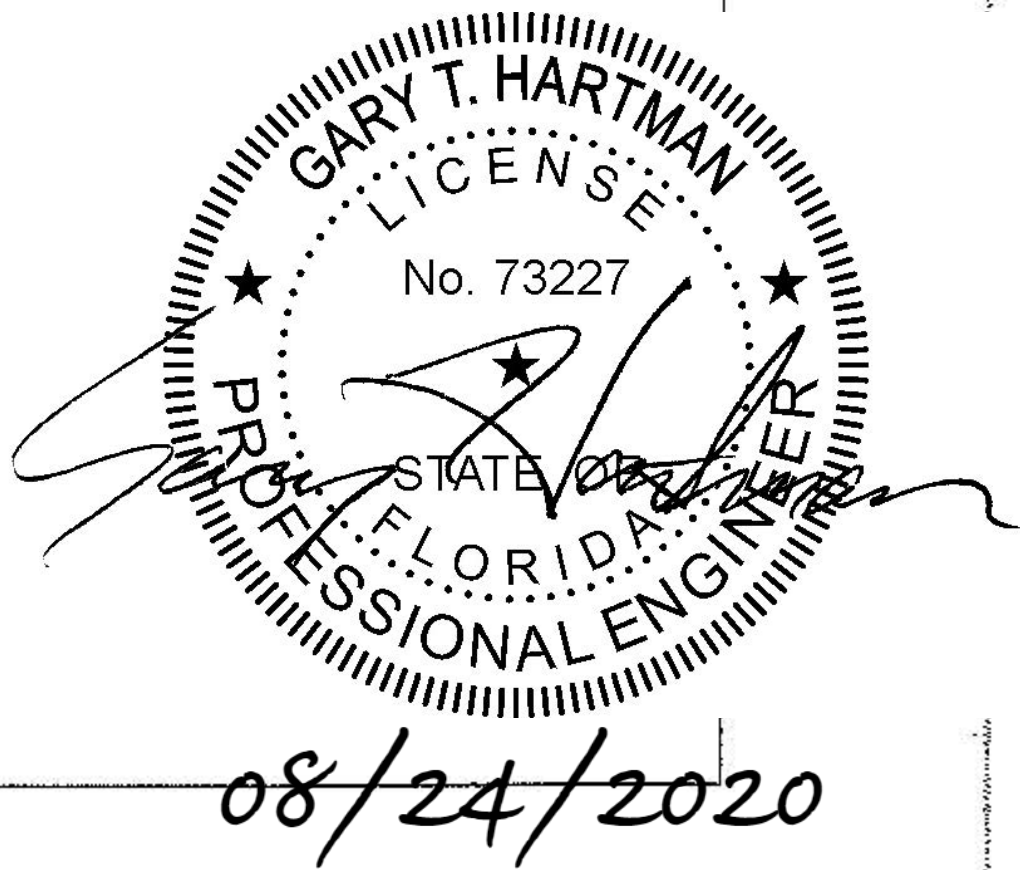
NOTES:

- 1. THE PRODUCT SHOWN HEREIN IS DESIGNED AND MANUFACTURED TO COMPLY WITH REQUIREMENTS OF THE FLORIDA BUILDING CODE INCLUDING THE HVHZ.
- 2. WOOD AND METAL FRAMING AND CONCRETE OPENING TO BE DESIGNED AND ANCHORED TO PROPERLY TRANSFER ALL LOADS TO STRUCTURE. FRAMING AND CONCRETE OPENING IS THE RESPONSIBILITY OF THE ARCHITECT OR ENGINEER OF RECORD.
- 3. 1X BUCK OVER MASONRY/CONCRETE IS OPTIONAL. WHERE 1X BUCK IS NOT USED DISSIMILAR MATERIALS MUST BE SEPARATED WITH APPROVED COATING OR MEMBRANE. SELECTION OF COATING OR MEMBRANE IS THE RESPONSIBILITY OF THE ARCHITECT OR ENGINEER OF RECORD.
- 4. ALLOWABLE STRESS INCREASE OF 1/3 WAS NOT USED IN THE DESIGN OF THE PRODUCT SHOWN HEREIN. WIND LOAD DURATION FACTOR Cd=1.6 WAS USED FOR WOOD ANCHOR CALCULATIONS.
- 5. APPROVED IMPACT PROTECTIVE SYSTEM IS NOT REQUIRED FOR THIS PRODUCT IN WIND BORNE DEBRIS REGIONS.
- 6. FOR ANCHORING INTO WOOD FRAMING OR 2X BUCK USE #12 WOOD SCREWS WITH SUFFICIENT LENGTH TO ACHIEVE A 1 5/8" MINIMUM EMBEDMENT INTO SUBSTRATE. LOCATE ANCHORS AS SHOWN IN ELEVATIONS AND INSTALLATION DETAILS.
- 7. FOR ANCHORING INTO CONCRETE USE 1/4" TAPCONS WITH SUFFICIENT LENGTH TO ACHIEVE A 1 1/4" MINIMUM EMBEDMENT INTO SUBSTRATE WITH 2 1/2" MINIMUM EDGE DISTANCE. LOCATE ANCHORS AS SHOWN IN ELEVATIONS AND INSTALLATION DETAILS.
- 8. FOR ANCHORING INTO METAL STRUCTURE USE #12 SMS OR SELF DRILLING SCREWS WITH SUFFICIENT LENGTH TO ACHIEVE 3 THREADS MINIMUM BEYOND STRUCTURE INTERIOR WALL. LOCATE ANCHORS AS SHOWN IN ELEVATIONS AND INSTALLATION DETAILS.
- 9. ALL FASTENERS TO BE CORROSION RESISTANT.
- 10. INSTALLATION ANCHORS SHALL BE INSTALLED IN ACCORDANCE WITH ANCHOR MANUFACTURER'S INSTALLATION INSTRUCTIONS AND ANCHORS SHALL NOT BE USED IN SUBSTRATES WITH STRENGTHS LESS THAN THE MINIMUM STRENGTH SPECIFIED BELOW:
 - A. WOOD - MINIMUM SPECIFIC GRAVITY OF G=0.55 per Calcs.
 - B. CONCRETE - MINIMUM COMPRESSIVE STRENGTH OF 3,192 PSI.
 - C. METAL STRUCTURE: STEEL 18GA, 33KSI OR ALUMINUM 6063-T5 1/8" THICK MINIMUM.
- 11. THIS APPROVAL IS FOR STRUCTURAL PERFORMANCE AND IMPACT RESISTANCE ONLY. INTERIOR MECHANISM AND/OR ELECTRICAL CIRCUITRY ARE OUTSIDE THE SCOPE OF THIS APPROVAL.
- 12. UNITS WERE NOT TESTED FOR WATER PENETRATION PER FBC, TAS 100(A).

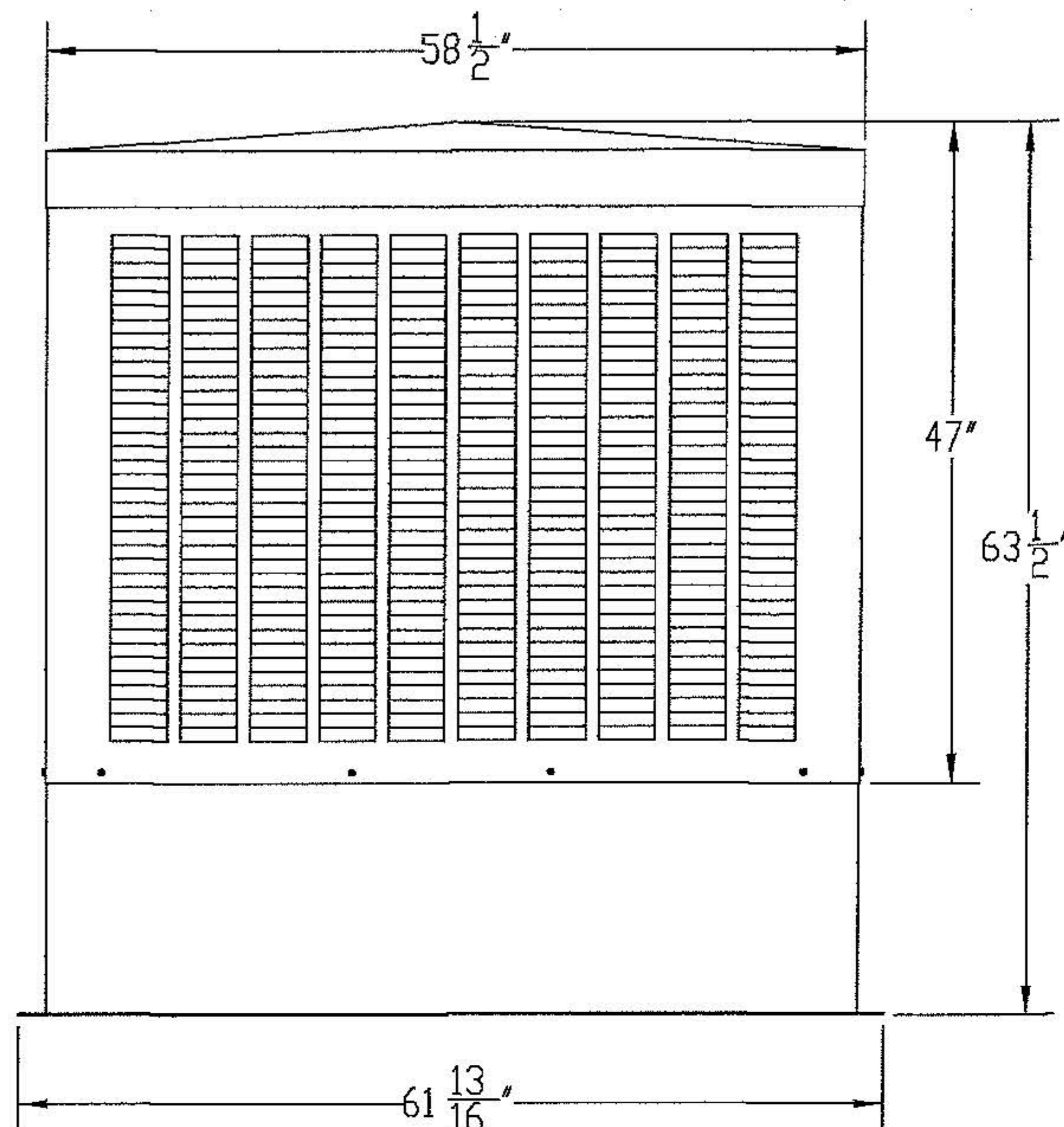
REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
A	-	-	-

TABLE OF CONTENTS	
SHEET NO.	DESCRIPTION
1	GENERAL NOTES
2	ELEVATIONS
3-4	B.I.M AND SECTIONS
5-9	INSTALLATION DETAILS

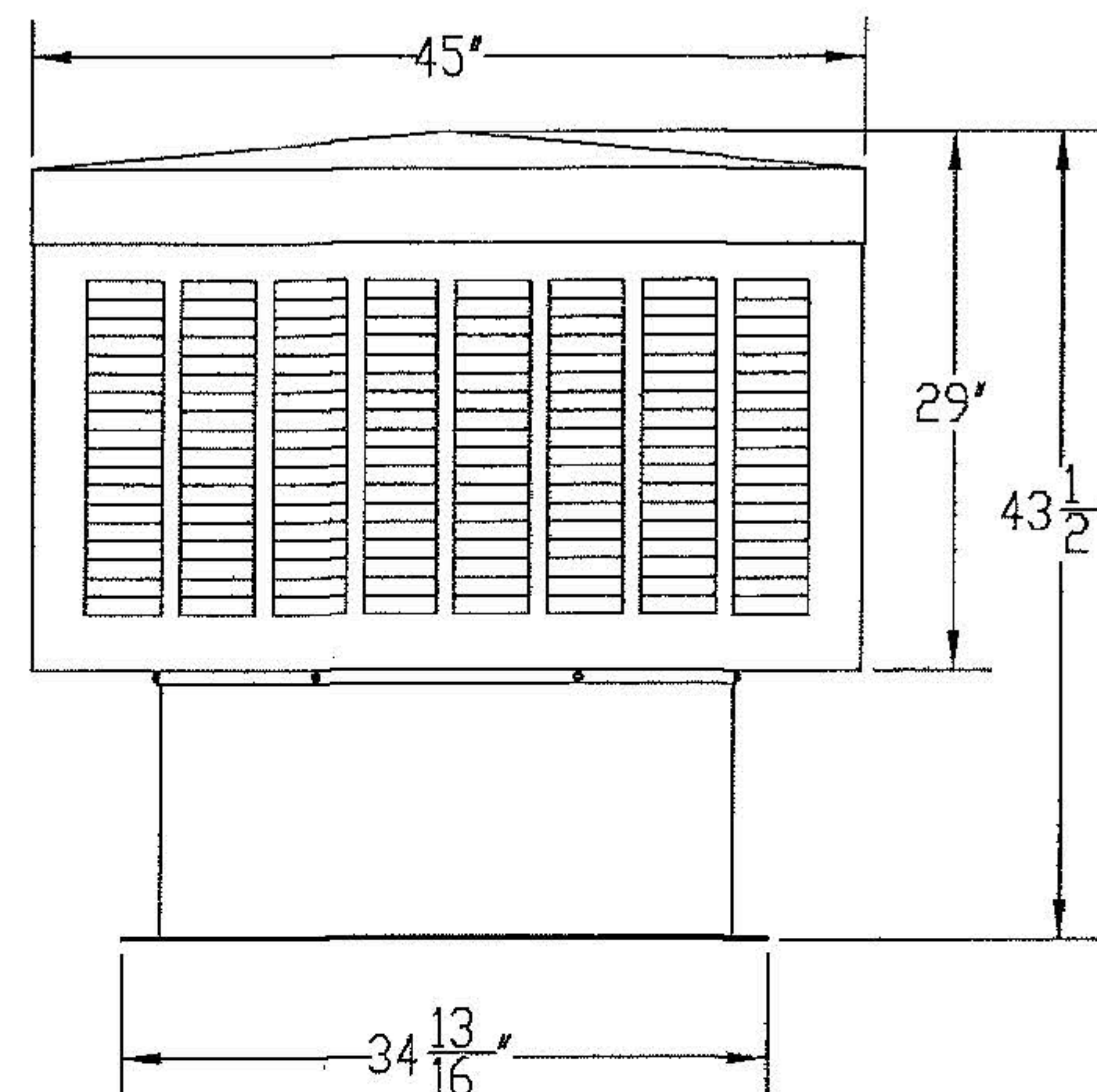
PennBarry 605 Shiloh RD Plano, TX 75074			
MUFFAN STEEL BELT DRIVE & DIRECT DRIVE ROOF VENT GENERAL NOTES			
DRAWN AMIT	DWG NO. 08-01543		REV
SCALE NTS	DATE 08/02/2016	SHEET 1 OF 9	



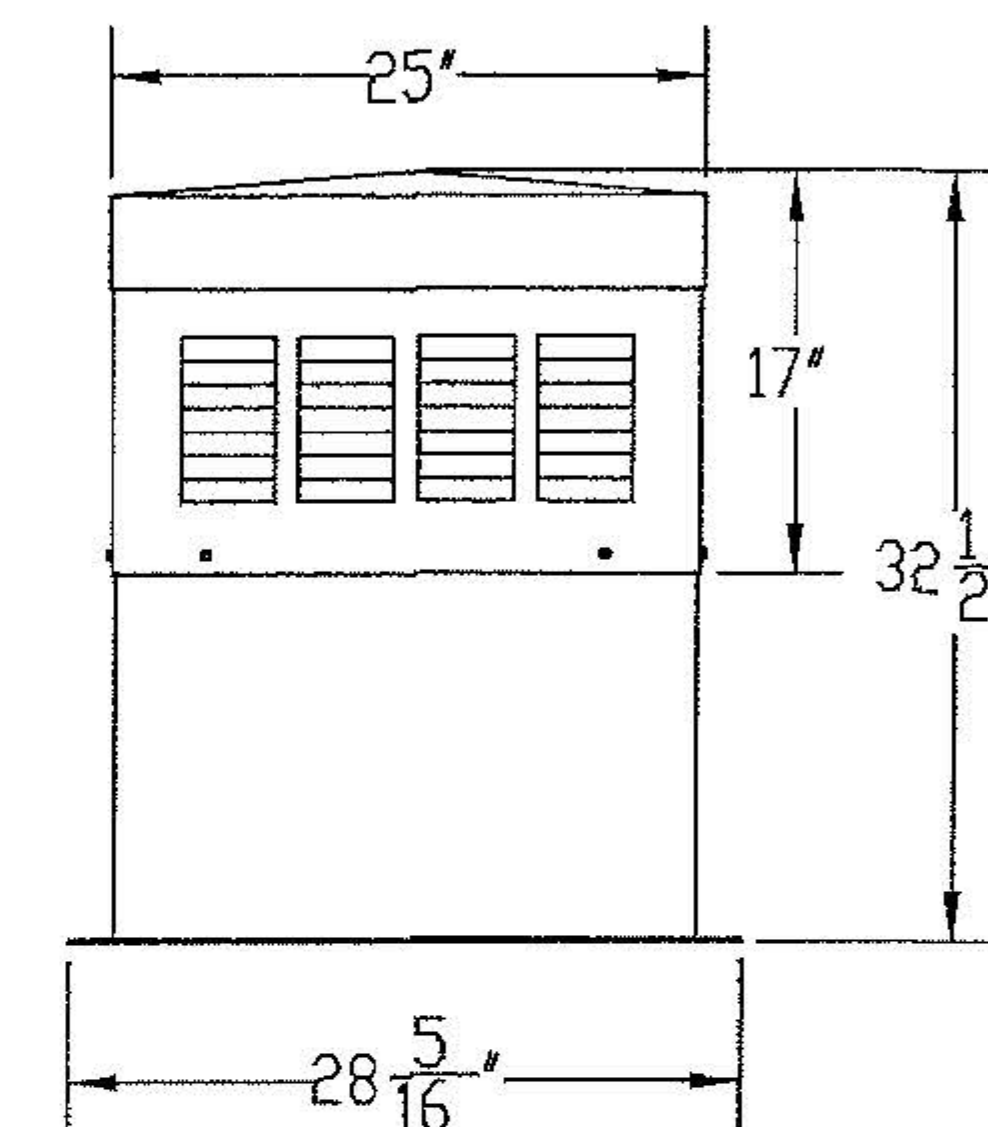
REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
A	-	-	-



MU6020 MUFFAN BELT DRIVE
ELEVATION VIEW



MU5018 MUFFAN BELT DRIVE
ELEVATION VIEW



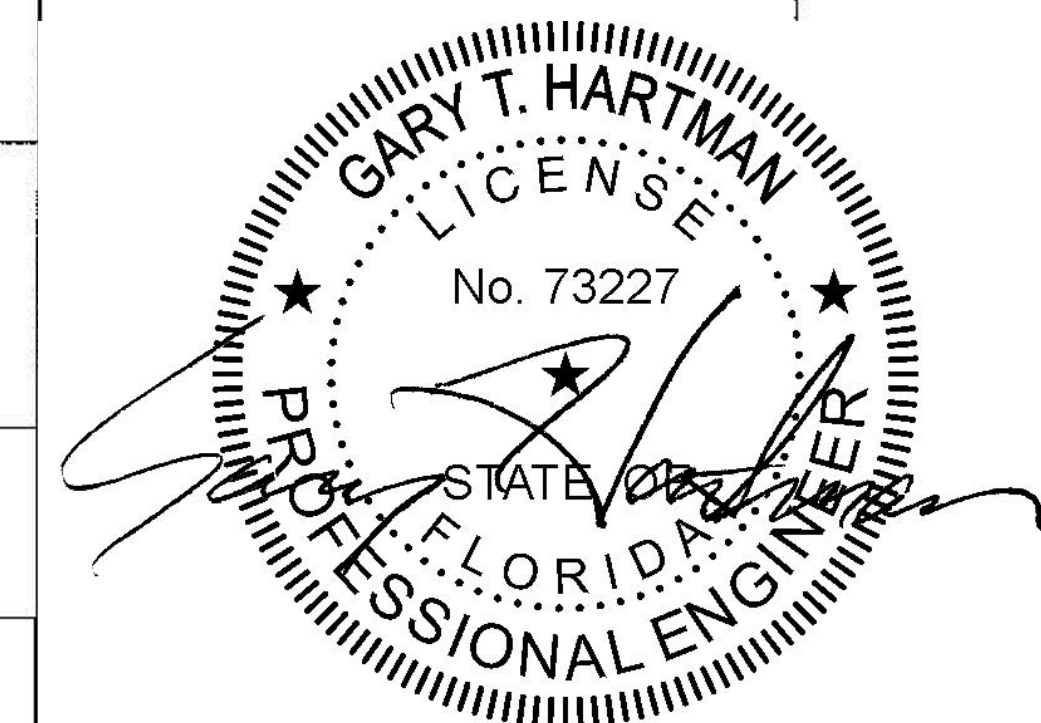
MU10 MUFFAN DIRECT DRIVE
ELEVATION VIEW

DESIGN PRESSURE RATING	IMPACT RATING
± 70.0PSF	LARGE AND SMALL MISSILE IMPACT

MISSILE LEVEL D, WIND ZONE 4, AND HVHZ

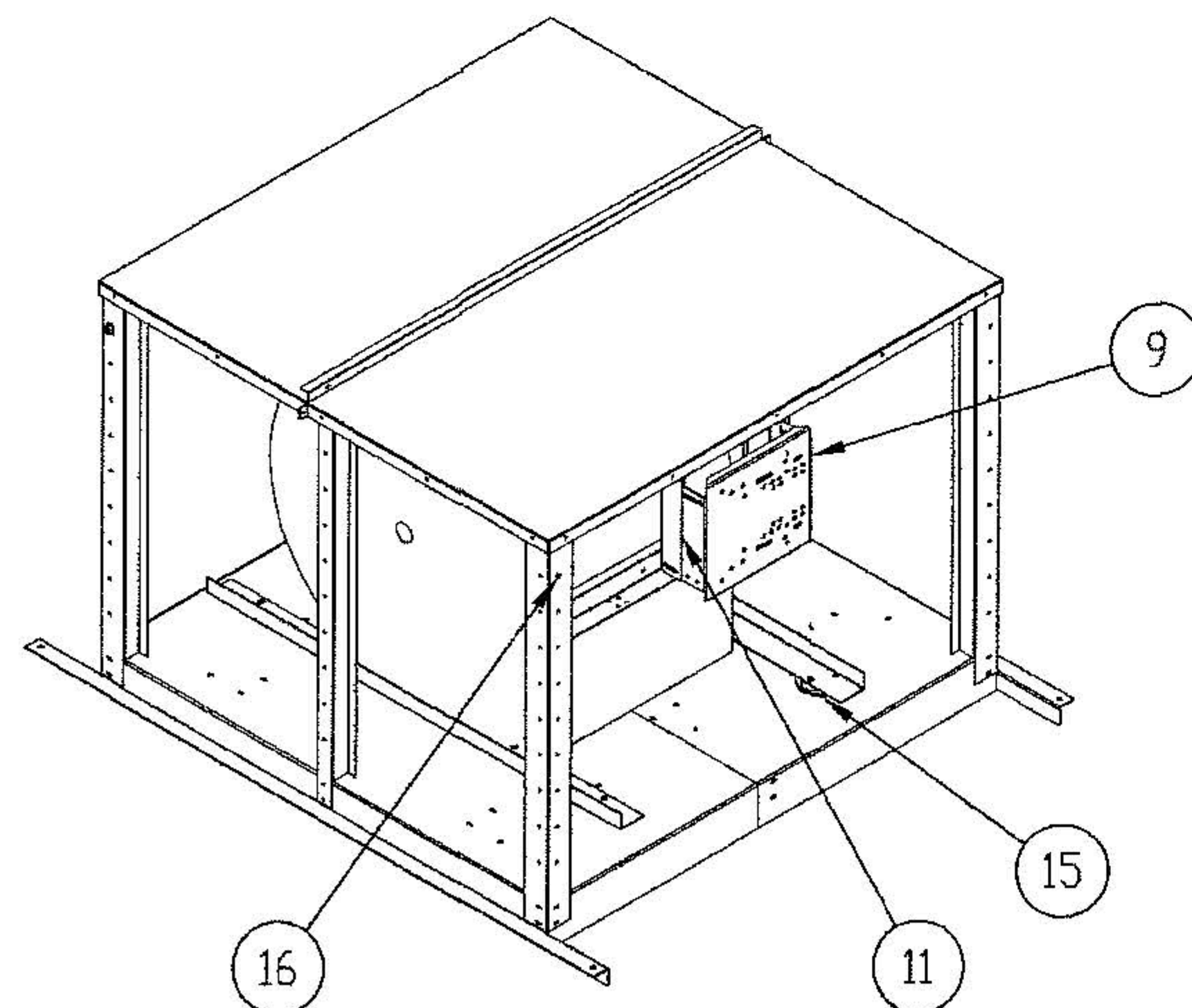
APPROVED MODELS					
NAME	DRIVE	LENGTH (IN)	WIDTH (IN)	HEIGHT (IN)	WEIGHT (LBS)
MU10	DIRECT DRIVE	25	21	17	82
MU20	DIRECT DRIVE	43	22	17	129
MU30	DIRECT DRIVE	43	22	17	156
MU3010	BELT DRIVE	28 1/2	28 1/2	24	139
MU4012	BELT DRIVE	36 1/2	36 1/2	27	211
MU4015	BELT DRIVE	36 1/2	36 1/2	27	221
MU5018	BELT DRIVE	45	45	29	306
MU6020	BELT DRIVE	58 1/2	58 1/2	47	770

PennBarry 605 Shiloh RD Plano, TX 75074		
MUFFAN STEEL BELT DRIVE & DIRECT DRIVE ROOF VENT ELEVATIONS		
DRAWN AMIT	DWG NO. 08-01543	
SCALE NTS	DATE 08/02/2016	SHEET 2 OF 9

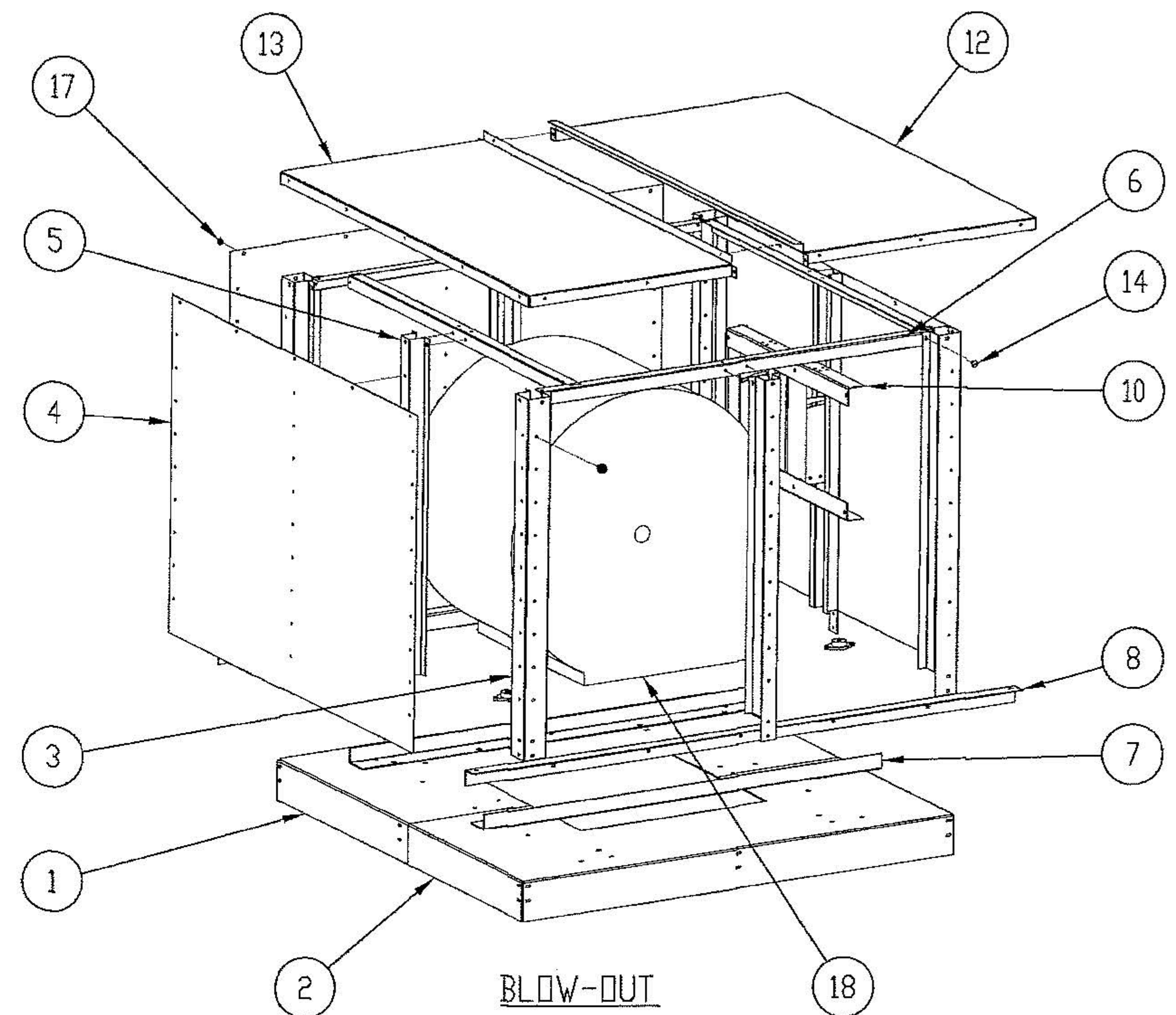


08/24/2020

ITEM NO.	PART NUMBER	DESCRIPTION	MANUFACTURER	MATERIAL
1	13672-M	BASE LONG	PENNBARRY	14GA GALVANIZED STEEL
2	13673-M	BASE SHORT	PENNBARRY	14GA GALVANIZED STEEL
3	13680-M	CORNER	PENNBARRY	14GA GALVANIZED STEEL
4	13676-M	PANEL	PENNBARRY	16GA GALVANIZED STEEL
5	13677-M	CENTER SUPPORT	PENNBARRY	18GA GALVANIZED STEEL
6	17378-M	PANEL SUPPORT	PENNBARRY	14GA GALVANIZED STEEL
7	13674-0	BLOWER SUPPORT ANGLE	PENNBARRY	10GA GALVANIZED STEEL
8	17293-0	LIFTING ANGLE	PENNBARRY	10GA GALVANIZED STEEL
9	19784-0	MOTOR MOUNT	PENNBARRY	10GA GALVANIZED STEEL
10	19786-0	MOTOR SUPPORT ANGLE HORIZONTAL	PENNBARRY	14GA GALVANIZED STEEL
11	19785-0	MOTOR PLATE SUPPORT	PENNBARRY	12GA GALVANIZED STEEL
12	17320-M2	CAP WITH FLANGE	PENNBARRY	16GA GALVANIZED STEEL
13	17320-M1	CAP WITH FLANGE	PENNBARRY	16GA GALVANIZED STEEL
14	56478-0	TRACK BOLT, 1/4-20x5/8"		
15	63004-0	VIBRATION ISOLATOR		
16	55316-0	RIVSERT 1/4-20		
17	55500-0	WHIZ NUT 1/4-20		
18	BLOWER	BLOWER		
19	55696-0	WHIZ BOLT 1/2-20x3/4		



BLOWER ISOMETRIC VIEW
SCALE 1 : 24



BLOW-OUT

PennBarry 605 Shiloh RD Plano, TX 75074

MUFFAN
STEEL BELT DRIVE & DIRECT DRIVE ROOF VENT
B.D.M. & SECTIONS

DRAWN

AMIT

DWG NO.

08-01543

REV

SCALE

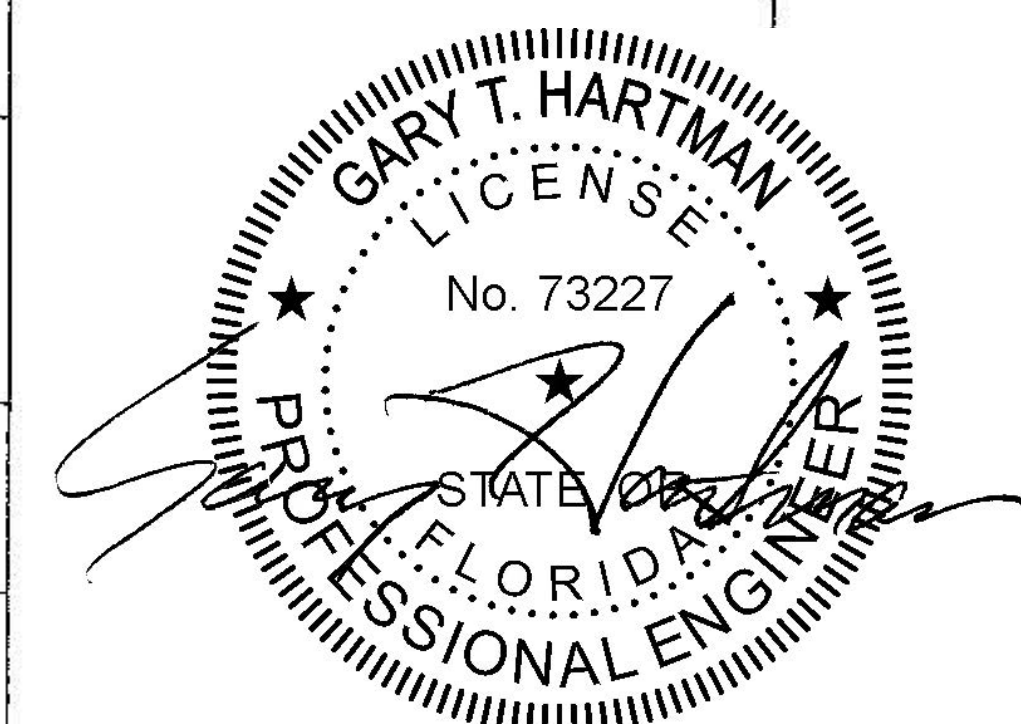
NTS

DATE

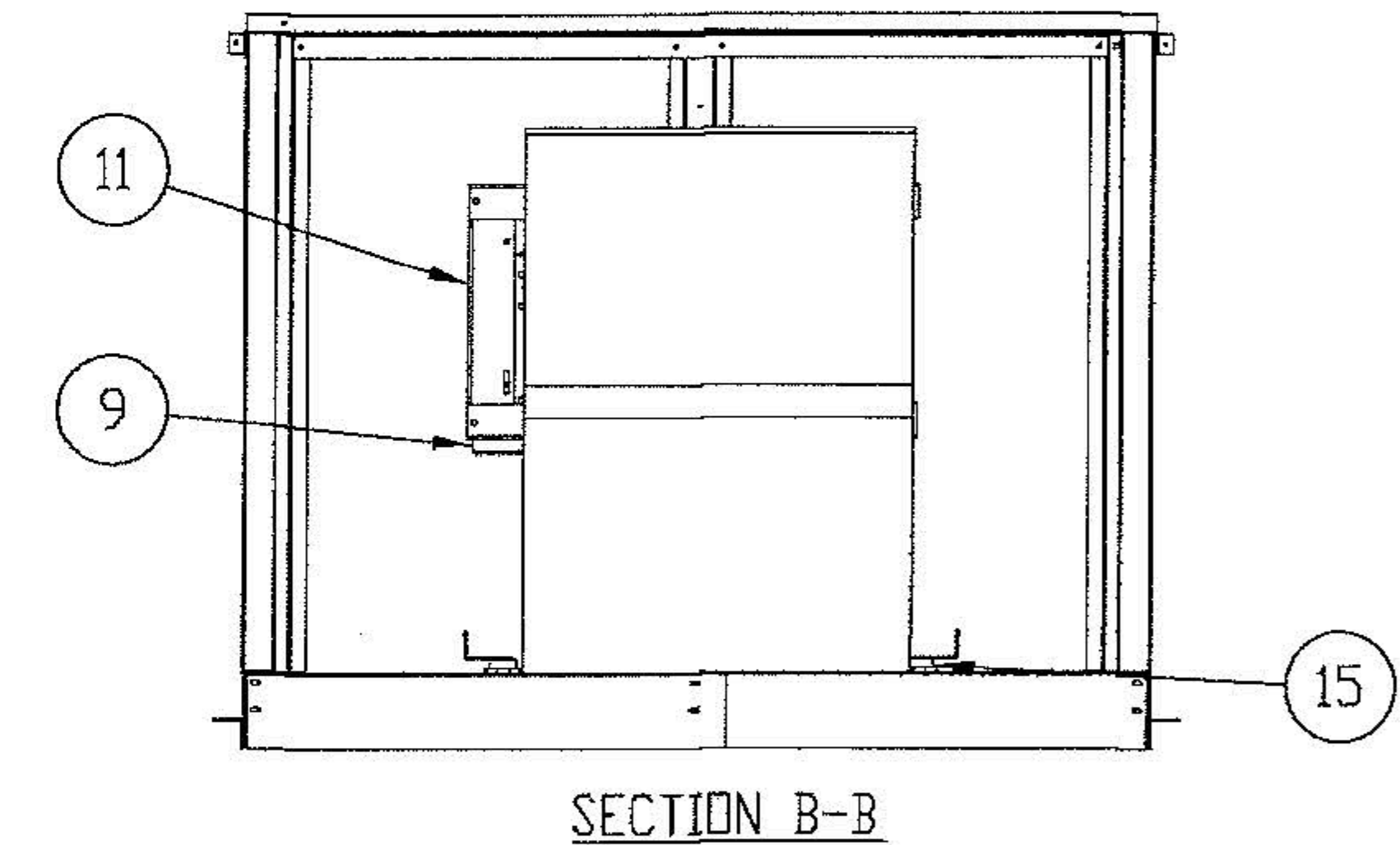
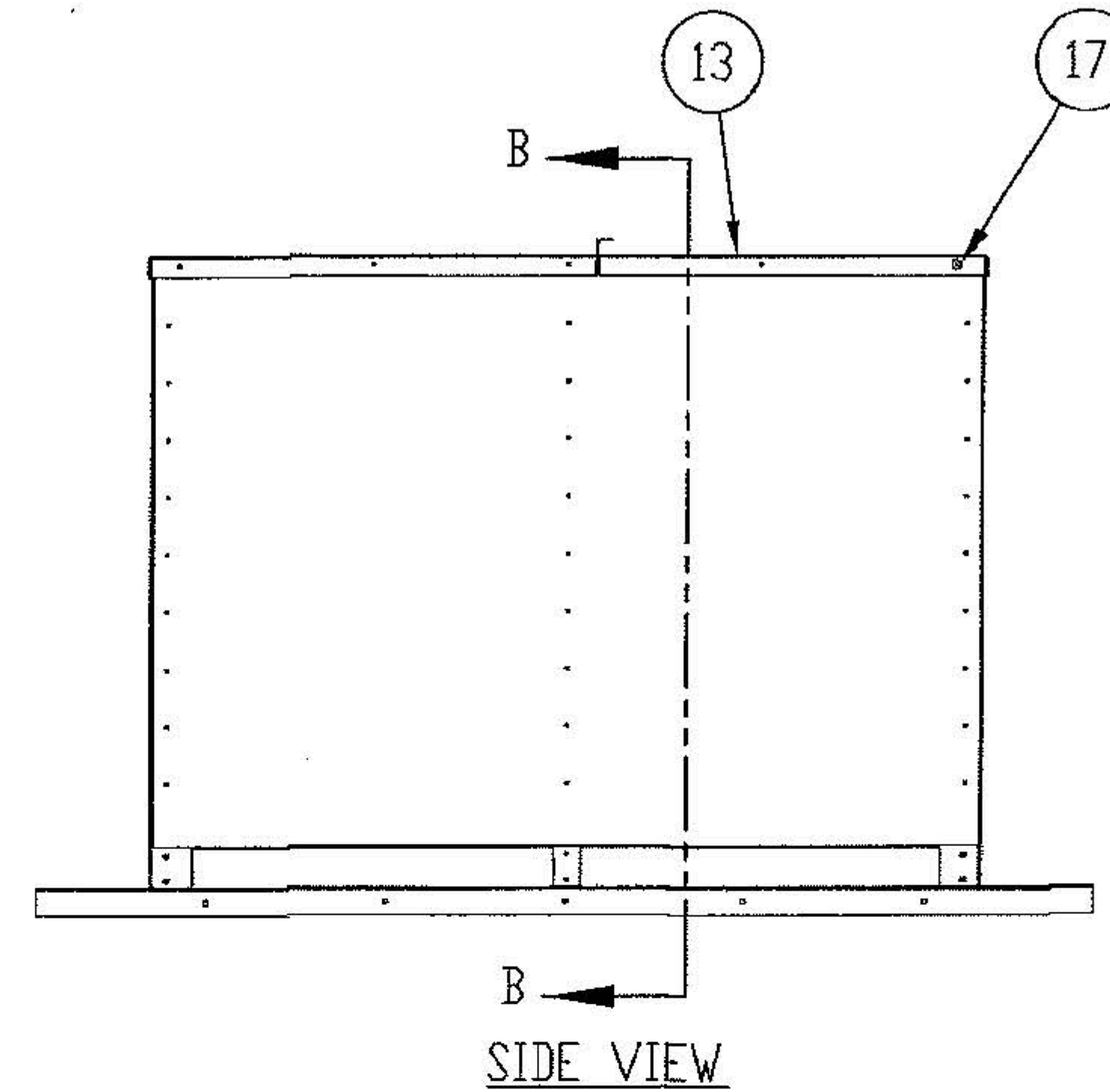
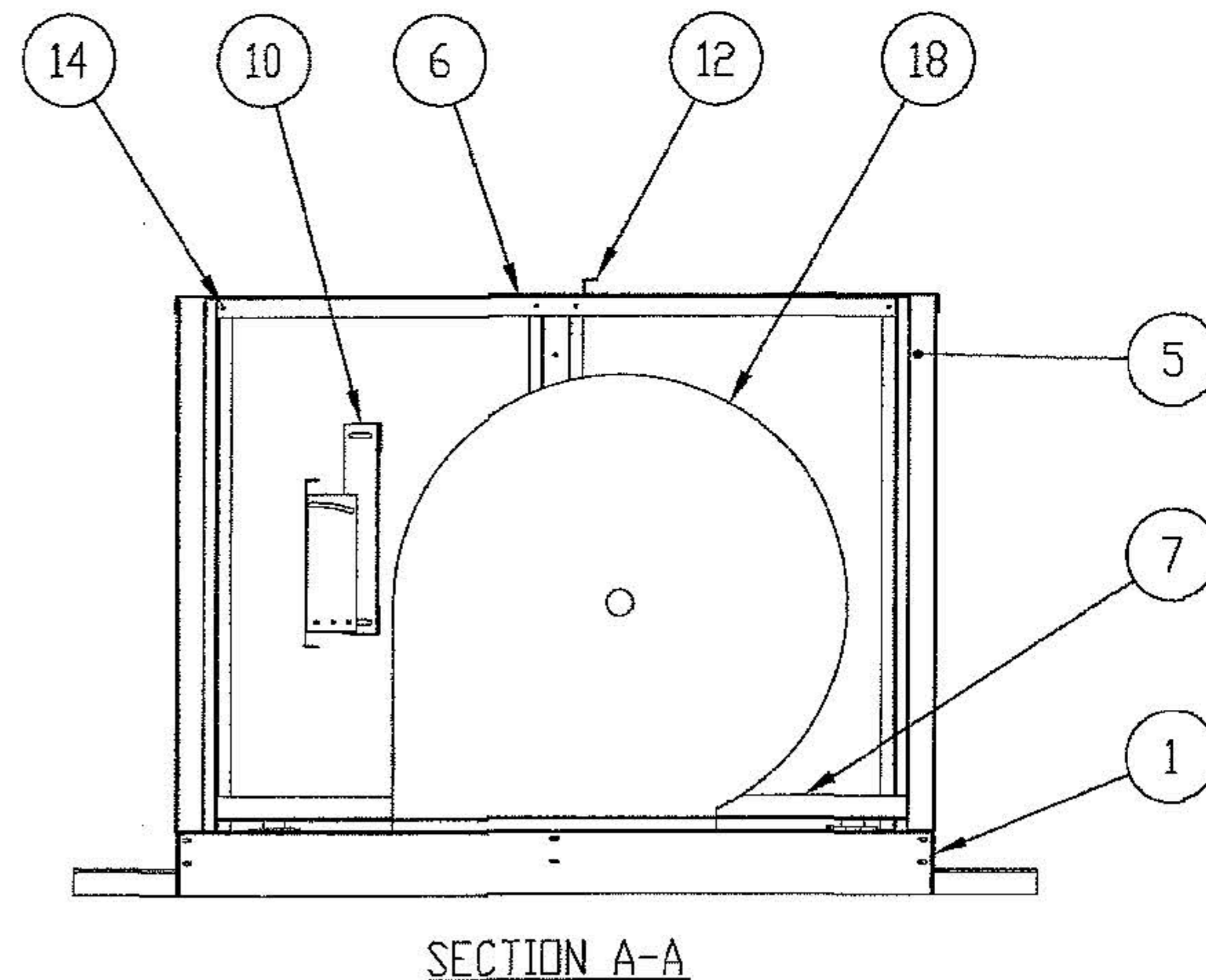
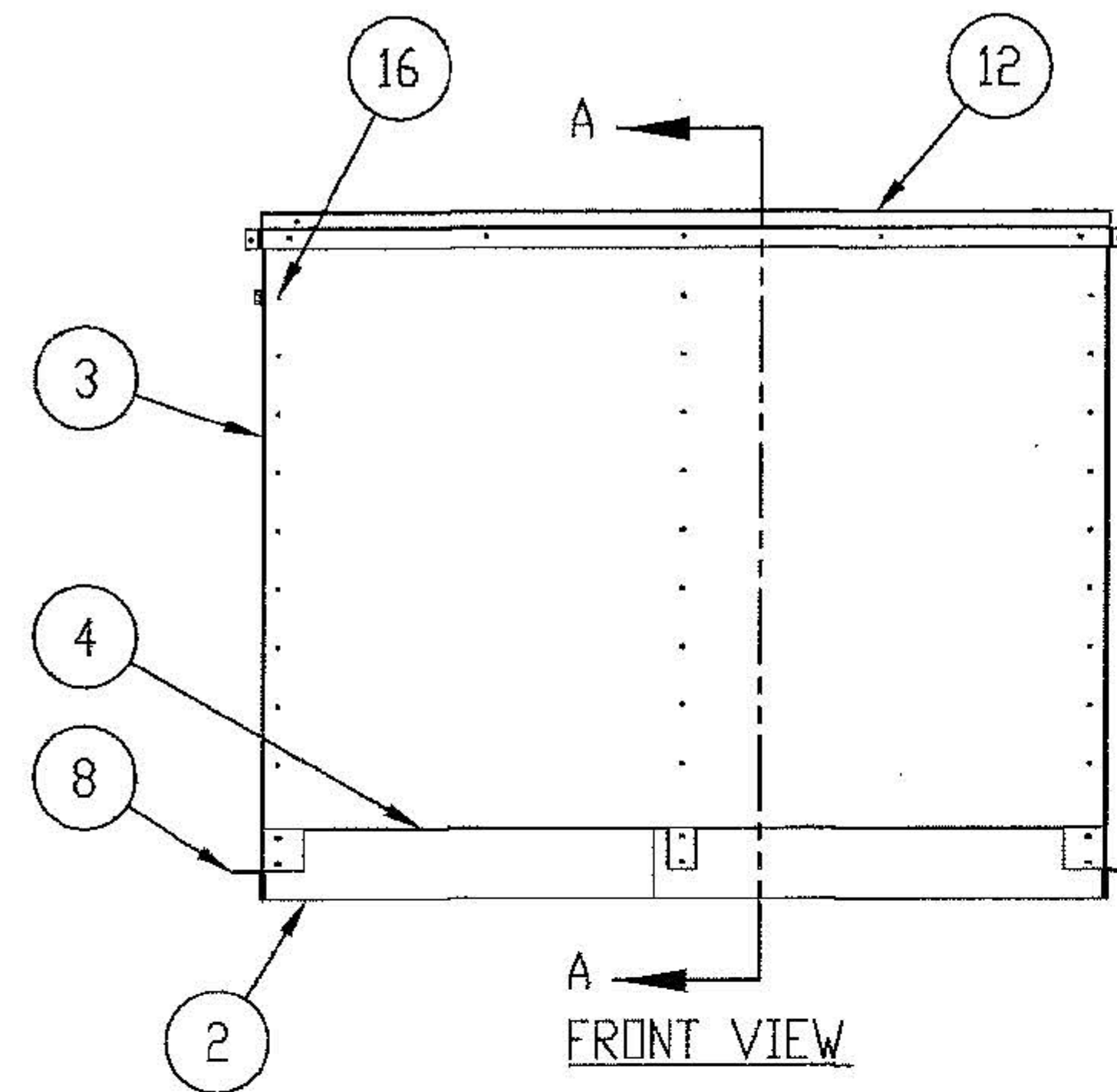
08/02/2016

SHEET

3 OF 9



08/24/2020

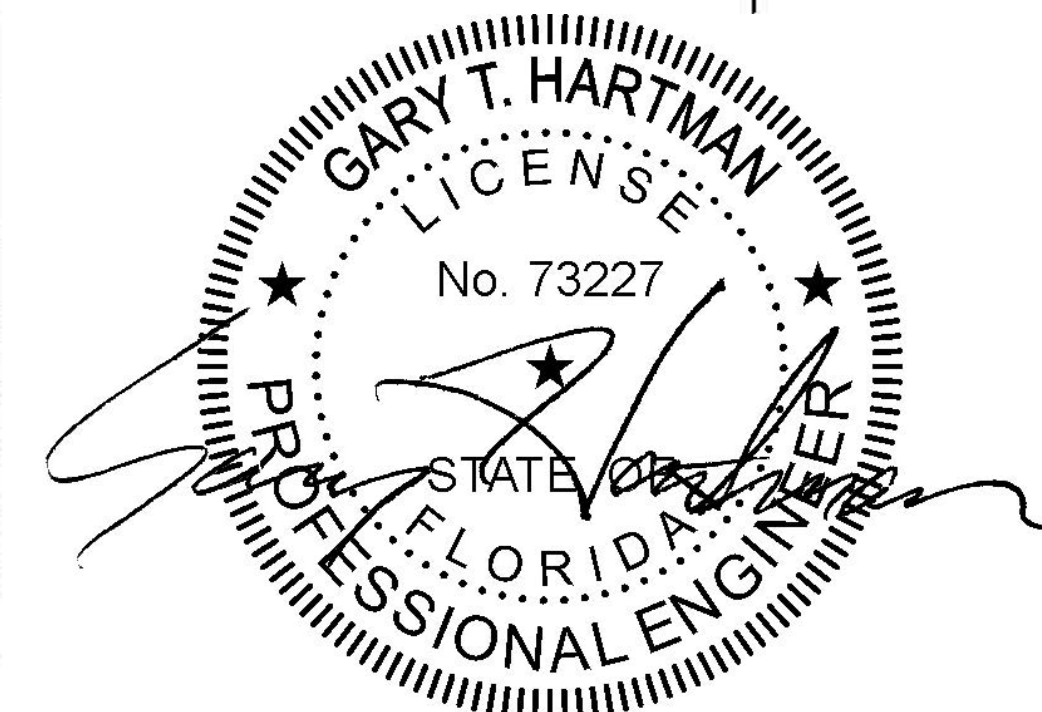


REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
A	-	-	-

PennBarry 605 Shiloh RD Plano, TX 75074

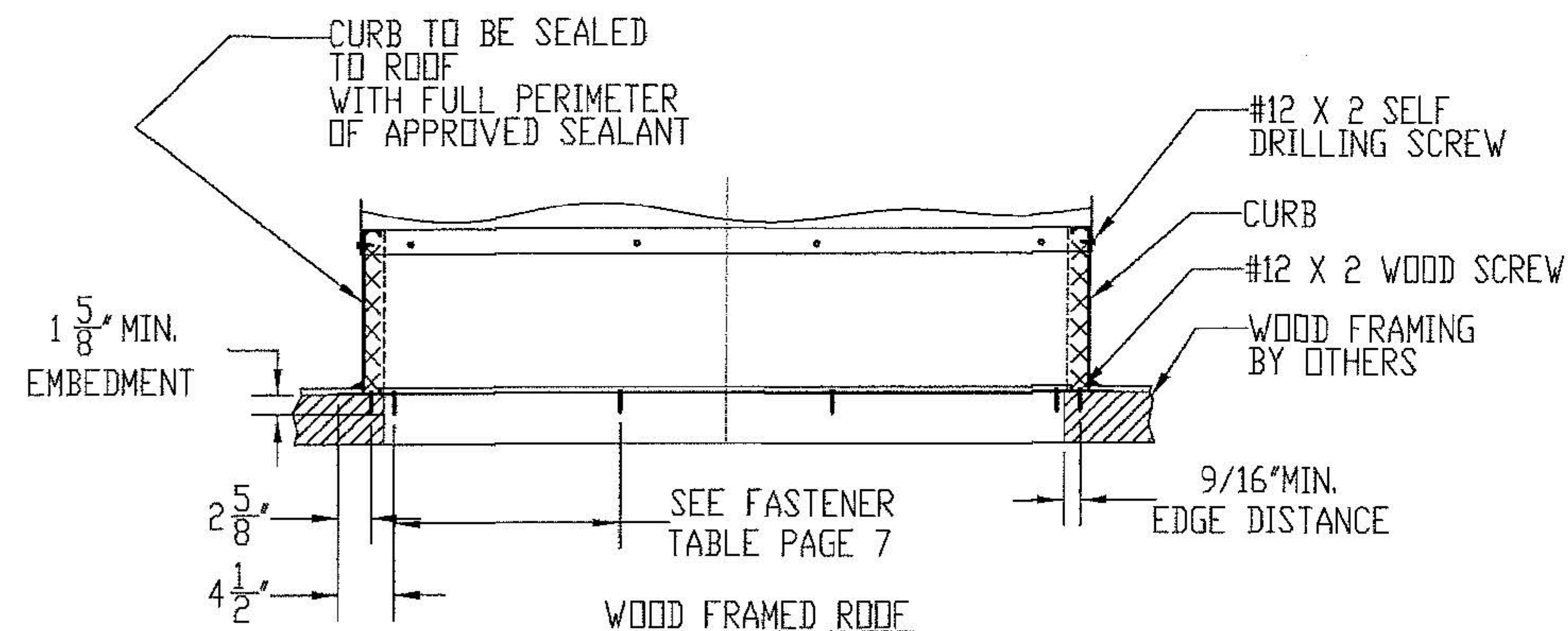
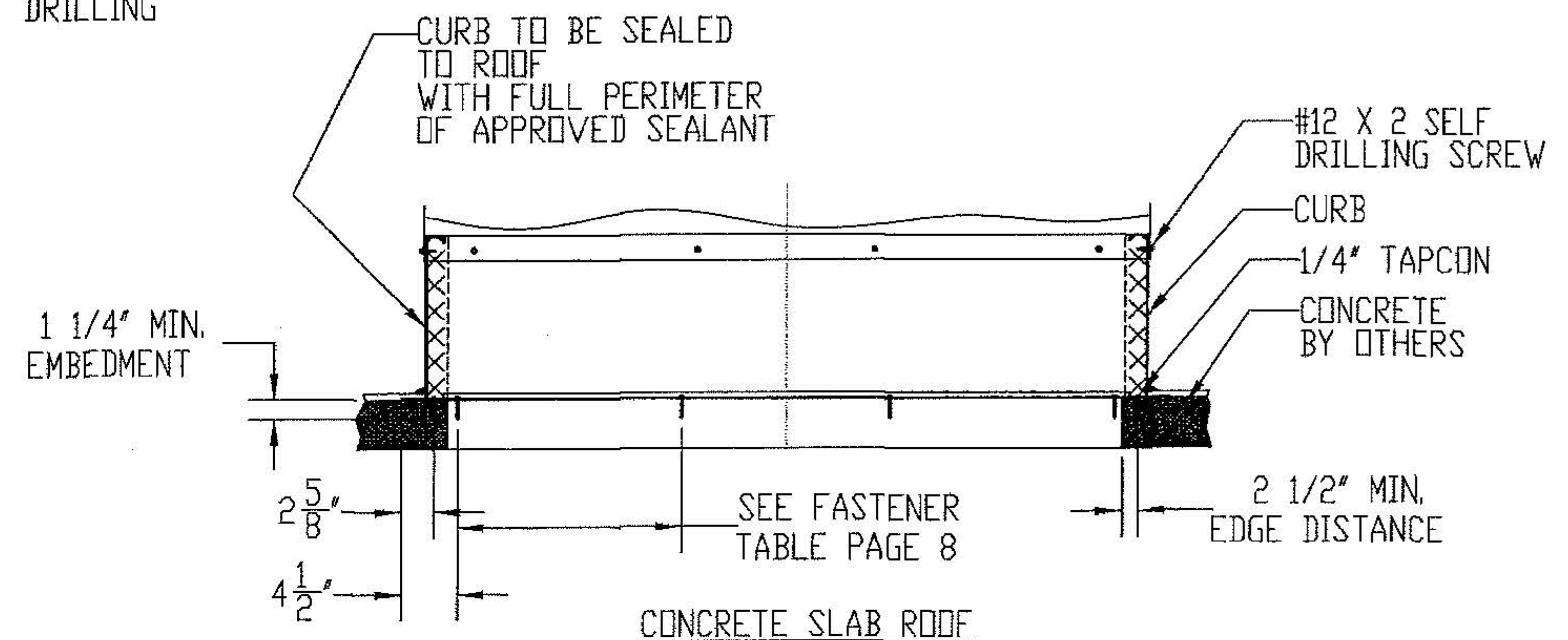
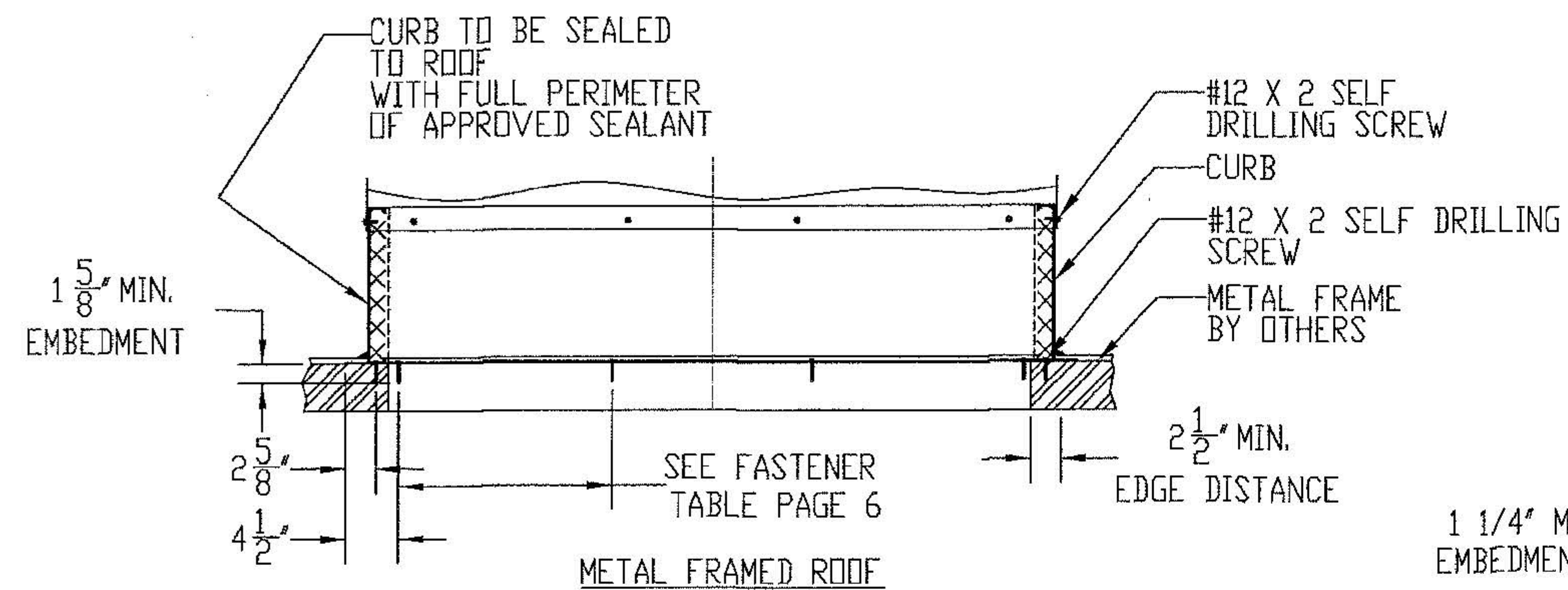
MUFFAN
STEEL BELT DRIVE & DIRECT DRIVE ROOF VENT
SECTIONS

DRAWN AMIT	DWG NO. 08-01543	REV
SCALE NTS	DATE 08/02/2016	SHEET 4 OF 9



08/24/2020

REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
A	CORRECTED NOTE 3 REF	8/22/20	DR



NOTES:

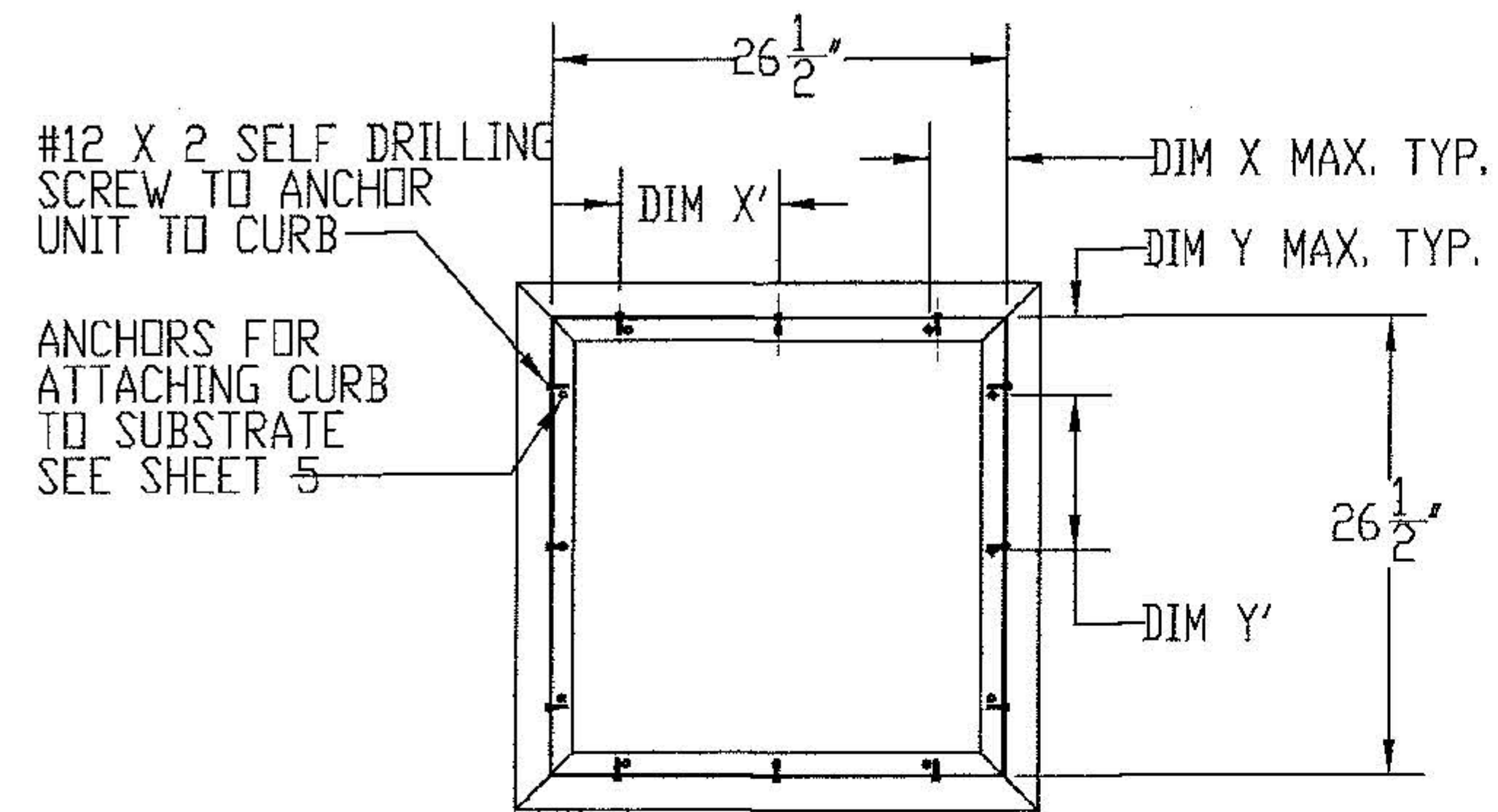
1. ALL FOUR SIDES OF CURB AND BASE ARE ANCHORED IDENTICALLY.
2. ROOF CURB IS INSTALLED TO ROOF FIRST. ONCE CURB IS INSTALLED FAN IS ATTACHED TO CURB USING #12 SELF DRILLING SCREWS AS SHOWN ABOVE.
3. SEE SHEET 9, COMPONENTS FOR ROOF CURB CONSTRUCTION.
4. UNITS MAYBE INSTALLED WITH, ALUMINUM 3003-H14 CURB OR GALVANIZED STEEL CURB.

PennBarry 605 Shiloh RD Plano, TX 75074

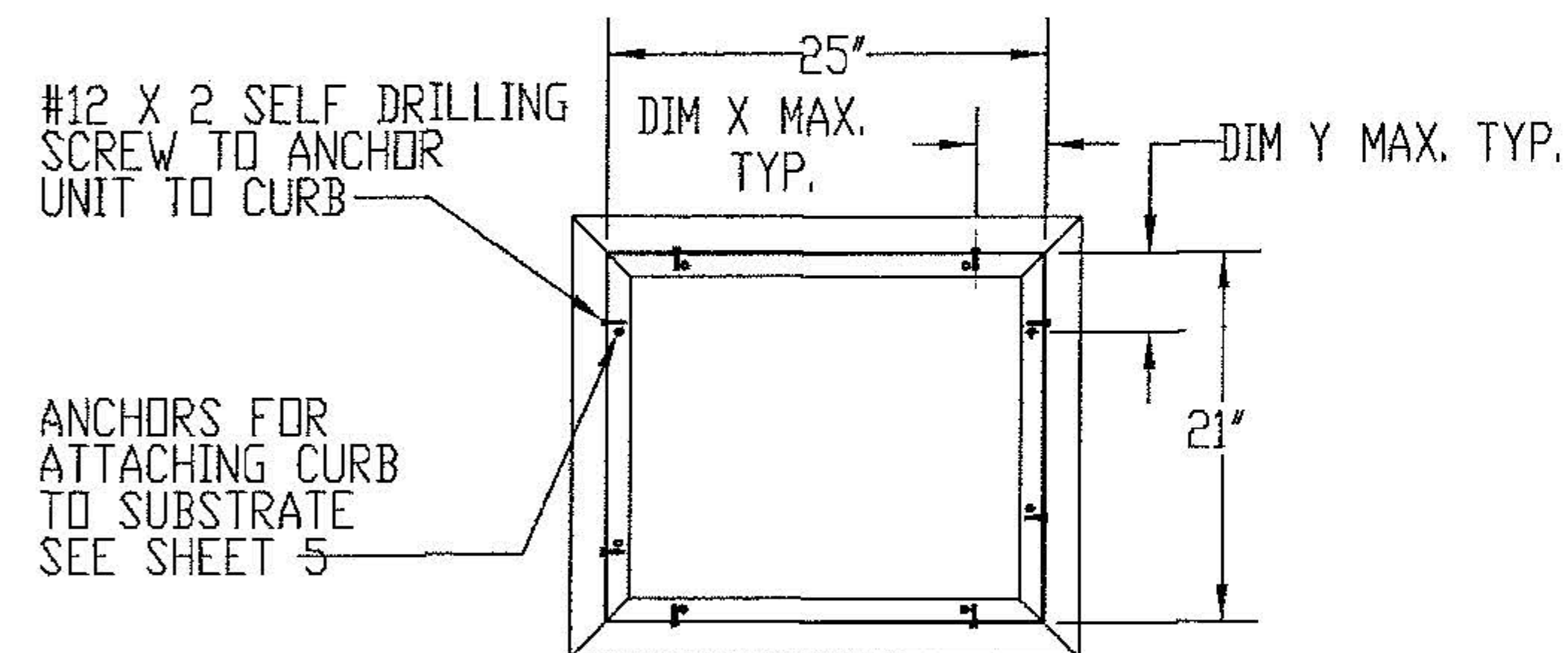
MUFFAN
STEEL BELT DRIVE & DIRECT DRIVE ROOF VENT
INSTALLATION DETAILS

DRAWN	AMIT	DWG NO.	08-01543	REV	
SCALE	NTS	DATE	08/02/2016	SHEET	5 OF 9





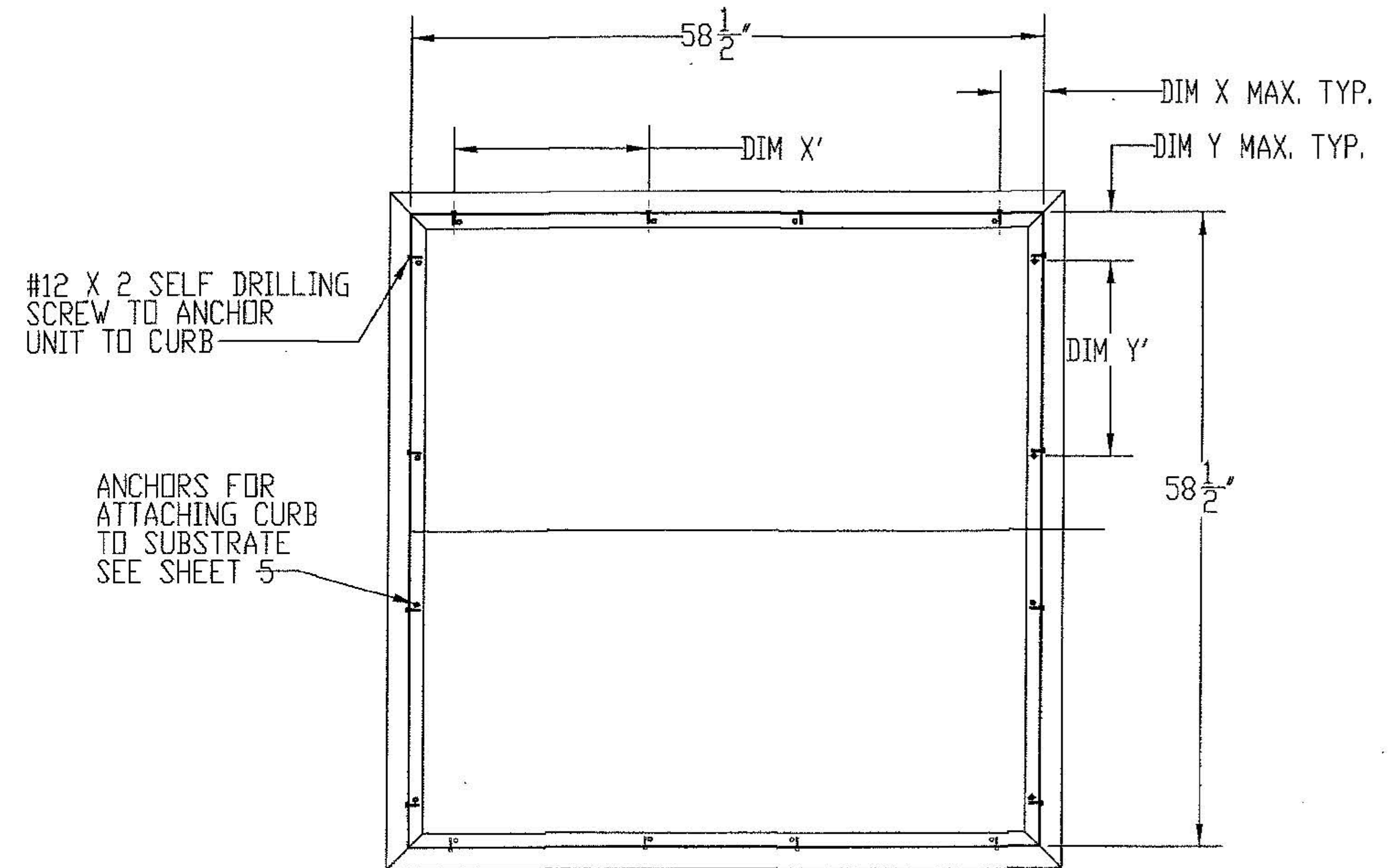
MU5018 PLAN VIEW INSTALLATION DETAILS
INTERIORS COMPONENTS ARE NOT SHOWN FOR CLARITY



MU10 PLAN VIEW INSTALLATION DETAILS
INTERIORS COMPONENTS ARE NOT SHOWN FOR CLARITY
ROOF TYPE-METAL

	# 12x2" screws	XMAX	X'MAX(# of anchors)	# 12x2" screws	YMAX	Y'MAX(# of anchors)
MU10	2	4.5	NA(2)	2	4.5	NA(2)
MU20	4	4.5	12.00(4)	2	4.5	NA(2)
MU30	4	4.5	12.00(4)	2	4.5	NA(2)
MU3010	2	4.5	NA(3)	2	4.5	NA(3)
MU4012	2	4.5	NA(3)	2	4.5	NA(3)
MU4012	3	4.5	10.00(3)	3	4.5	10.00(3)
MU4015	3	4.5	10.00(3)	3	4.5	10.00(3)
MU5018	3	4.5	12.00(3)	3	4.5	12.00(3)
MU6020	4	4.5	14.00(5)	4	4.5	14.00(5)

REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
A	REVISED ANCHORS FOR MU6020	8/22/20	DR

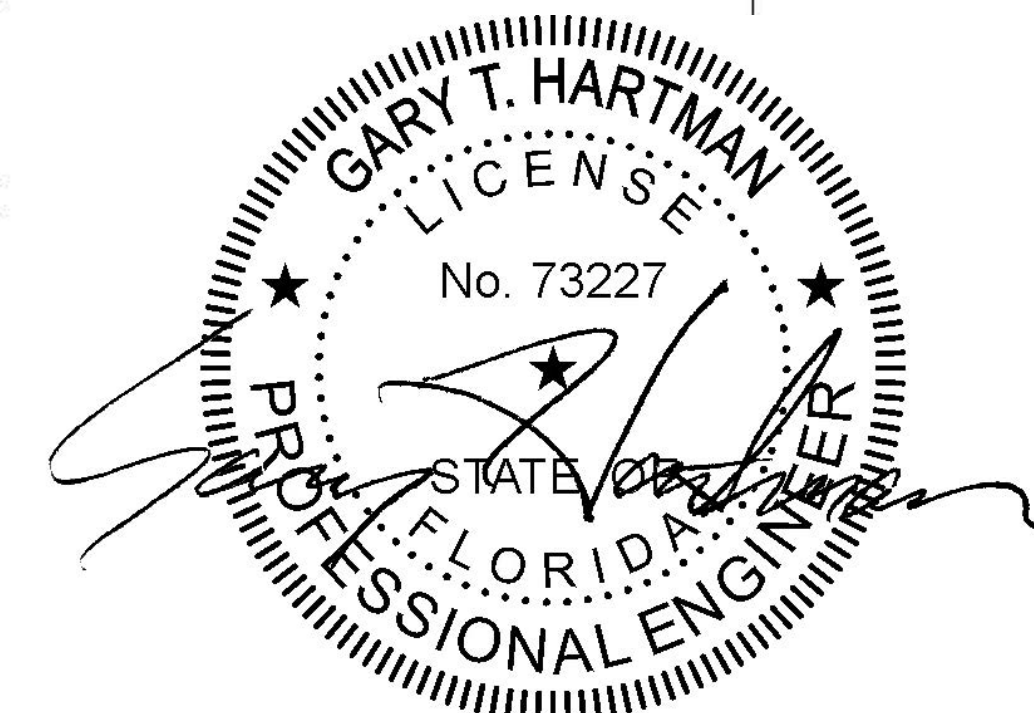


MU6020 PLAN VIEW INSTALLATION DETAILS
INTERIORS COMPONENTS ARE NOT SHOWN FOR CLARITY

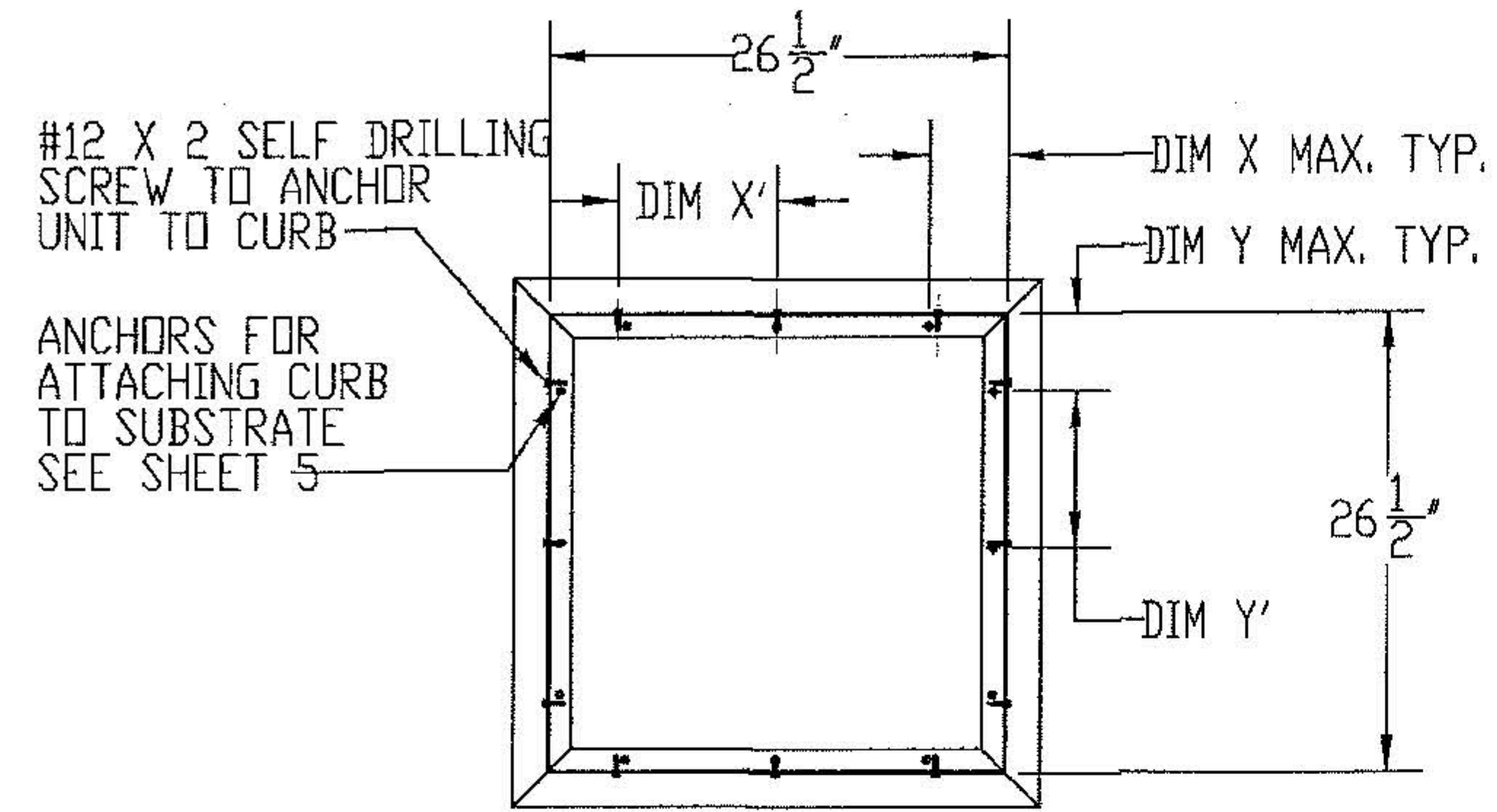
PennBarry 605 Shiloh RD Plano, TX 75074

MUFFAN
STEEL BELT DRIVE & DIRECT DRIVE ROOF VENT
INSTALLATION DETAILS

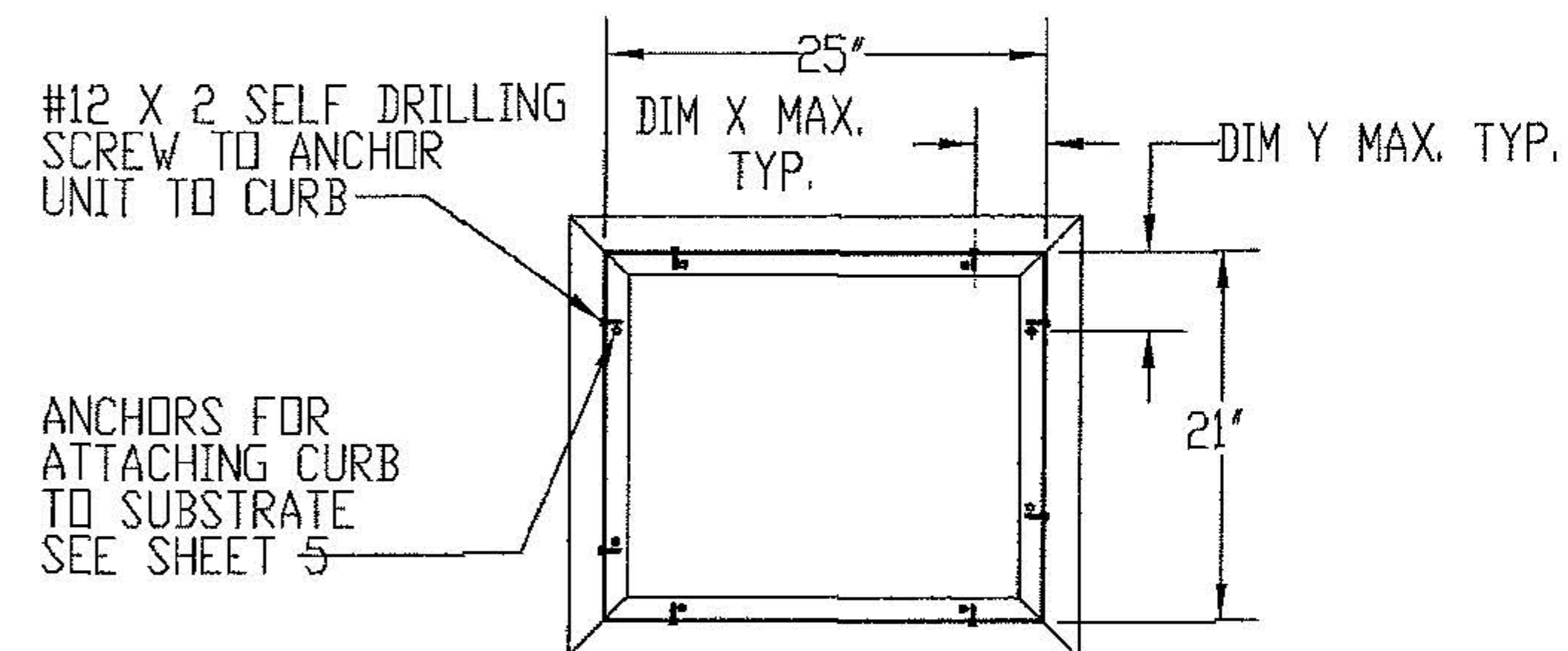
DRAWN AMIT	DWG NO. 08-01543	REV
SCALE NTS	DATE 08/02/2016	SHEET 6 OF 9



08/24/2020



MU5018 PLAN VIEW INSTALLATION DETAILS
INTERIORS COMPONENTS ARE NOT SHOWN FOR CLARITY

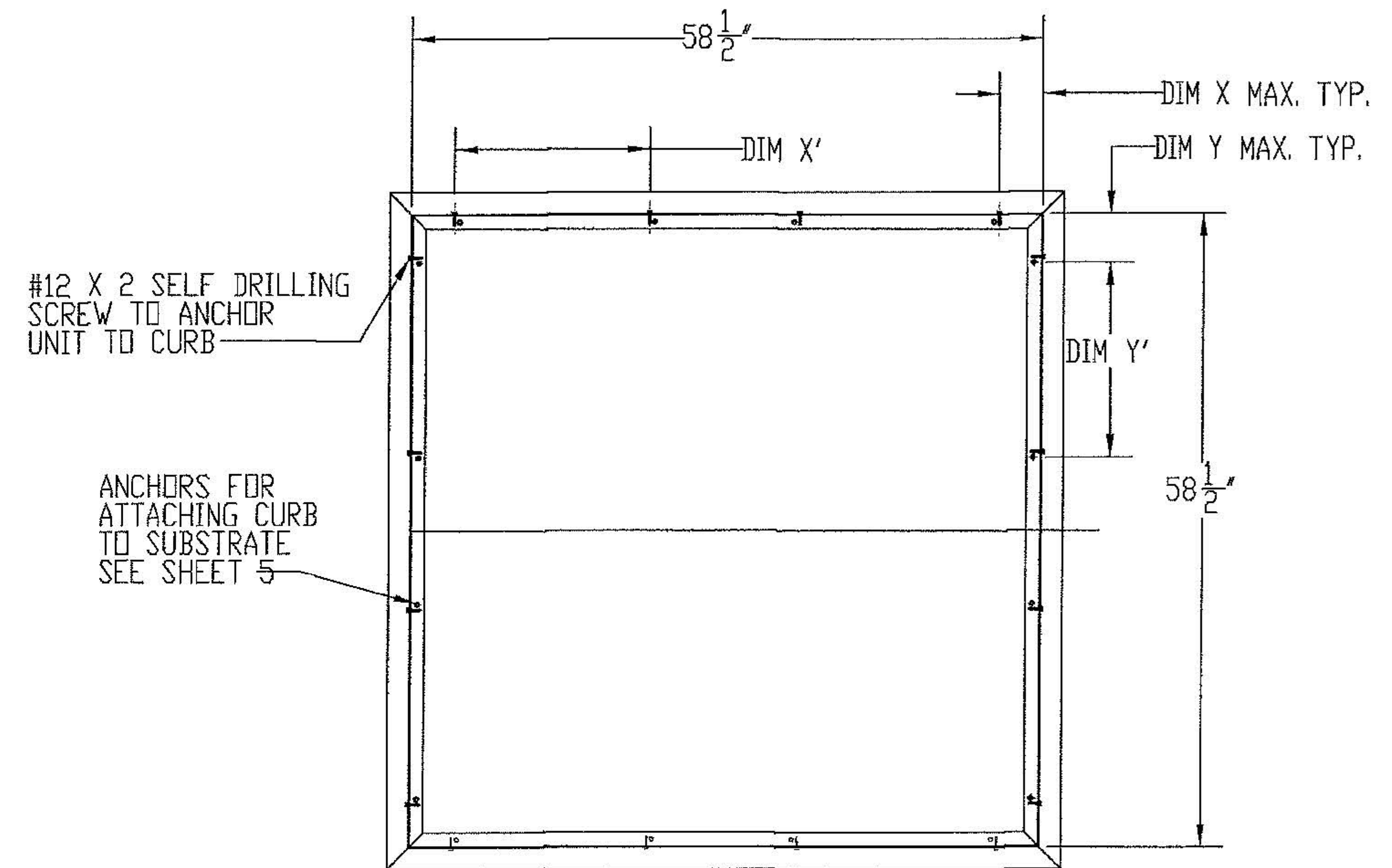


MU10 PLAN VIEW INSTALLATION DETAILS
INTERIORS COMPONENTS ARE NOT SHOWN FOR CLARITY

ROOF TYPE-WOOD

	# 12x2" screws	XMAX	X'MAX(# of anchors)	# 12x2" screws	YMAX	Y'MAX(# of anchors)
MU10	2	4.5	NA(2)	2	4.5	NA(2)
MU20	4	4.5	12.00(4)	2	4.5	NA(2)
MU30	4	4.5	12.00(4)	2	4.5	NA(2)
MU3010	2	4.5	NA(3)	2	4.5	NA(3)
MU4012	2	4.5	NA(3)	2	4.5	NA(3)
MU4012	3	4.5	10.00(3)	3	4.5	10.00(3)
MU4015	3	4.5	10.00(3)	3	4.5	10.00(3)
MU5018	3	4.5	12.00(3)	3	4.5	12.00(3)
MU6020	4	4.5	16.00(4)	4	4.5	18.00(4)

REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
A	-	-	-

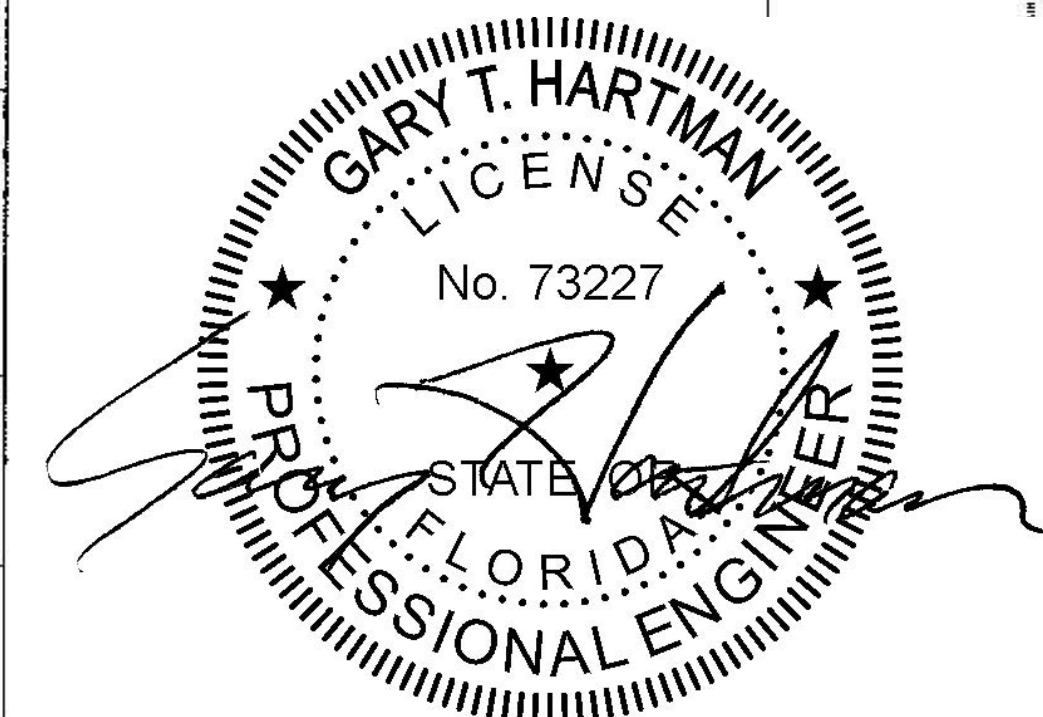


MU6020 PLAN VIEW INSTALLATION DETAILS
INTERIORS COMPONENTS ARE NOT SHOWN FOR CLARITY

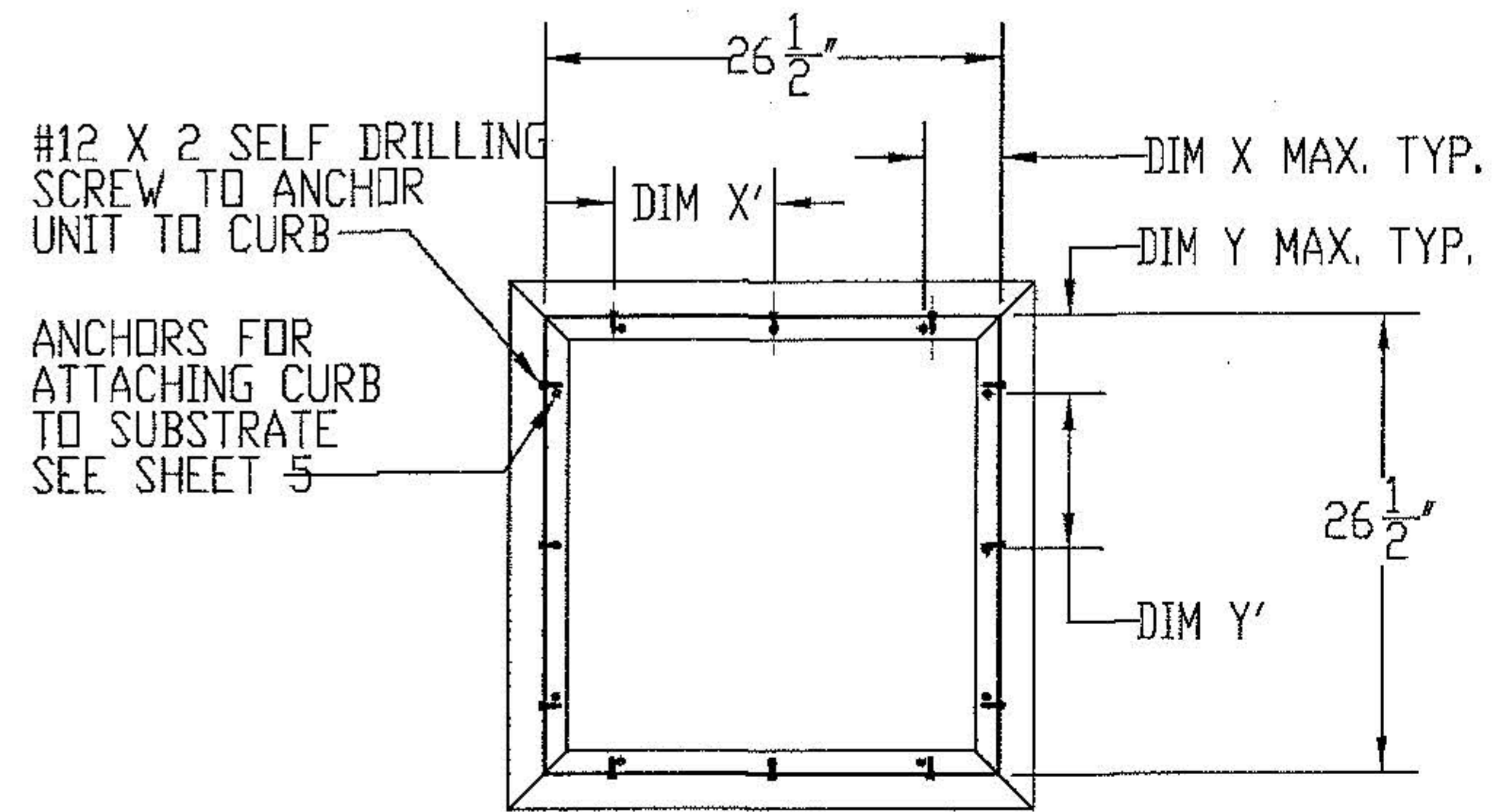
PennBarry 605 Shiloh RD Plano, TX 75074

MUFFAN
STEEL BELT DRIVE & DIRECT DRIVE ROOF VENT
INSTALLATION DETAILS

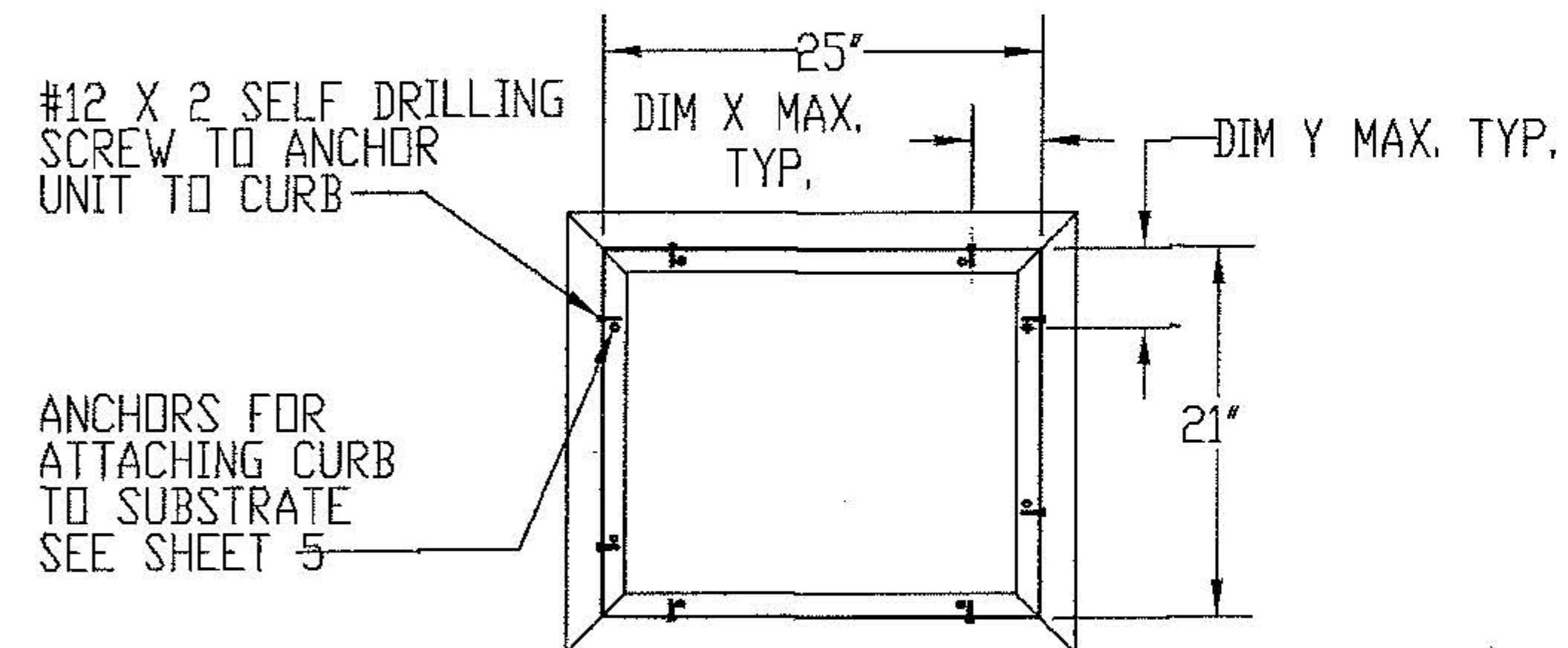
DRAWN AMIT	DWG NO. 08-01543	REV
SCALE NTS	DATE 08/02/2016	SHEET 7 OF 9



08/24/2020



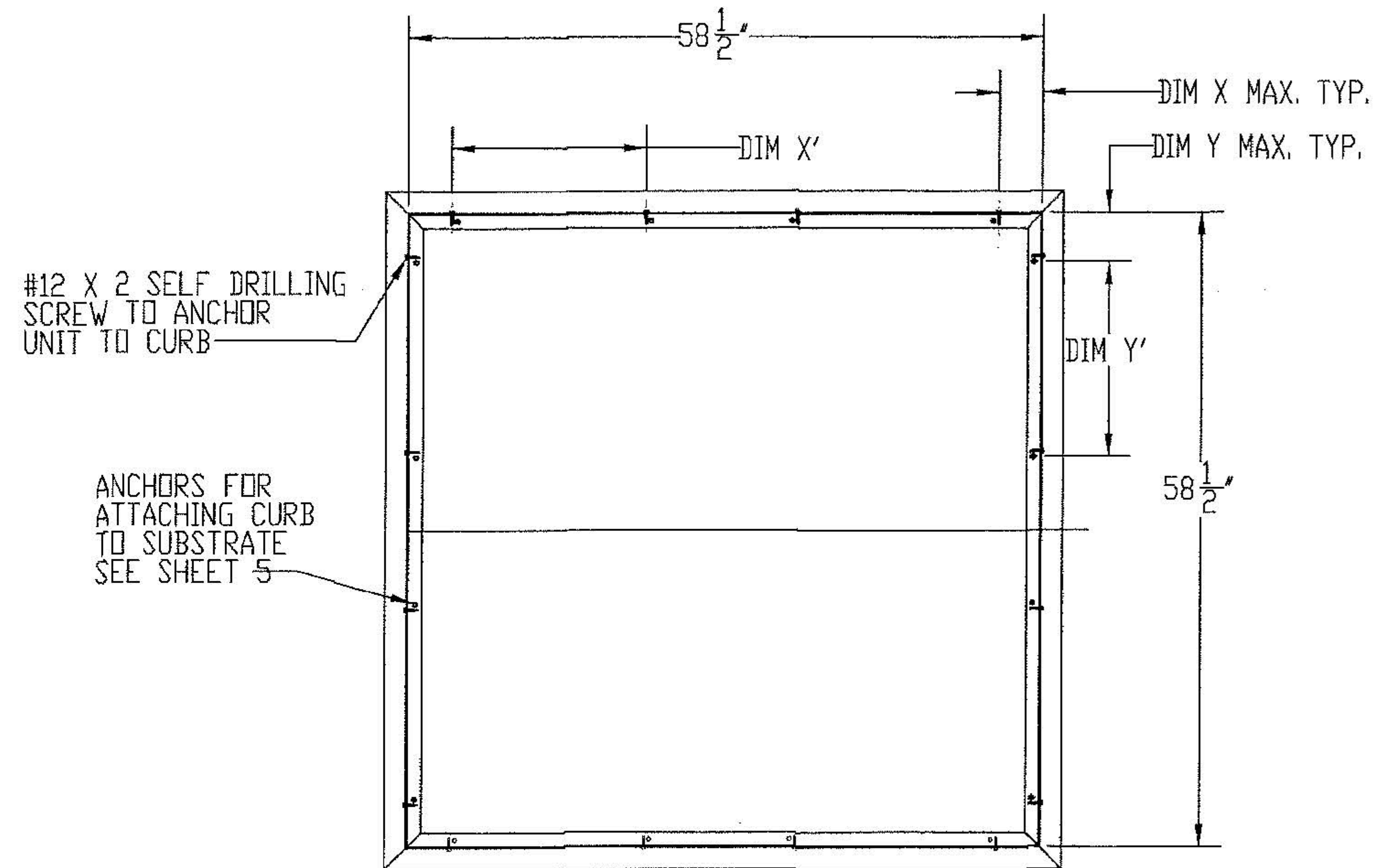
MU5018 PLAN VIEW INSTALLATION DETAILS
INTERIORS COMPONENTS ARE NOT SHOWN FOR CLARITY



MU10 PLAN VIEW INSTALLATION DETAILS
INTERIORS COMPONENTS ARE NOT SHOWN FOR CLARITY
ROOF TYPE-CONCRETE

	# 12x2" screws	XMAX	X'MAX(# of anchors)	# 12x2" screws	YMAX	Y'MAX(# of anchors)
MU10	2	4.5	NA(2)	2	4.5	NA(2)
MU20	4	4.5	12.00(4)	2	4.5	NA(2)
MU30	4	4.5	12.00(4)	2	4.5	NA(2)
MU3010	2	4.5	NA(3)	2	4.5	NA(3)
MU4012	2	4.5	NA(3)	2	4.5	NA(3)
MU4012	3	4.5	10.00(3)	3	4.5	10.00(3)
MU4015	3	4.5	10.00(3)	3	4.5	10.00(3)
MU5018	3	4.5	12.00(3)	3	4.5	12.00(3)
MU6020	4	4.5	16.00(4)	4	4.5	18.00(4)

REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
A	-	-	-



MU6020 PLAN VIEW INSTALLATION DETAILS
INTERIORS COMPONENTS ARE NOT SHOWN FOR CLARITY

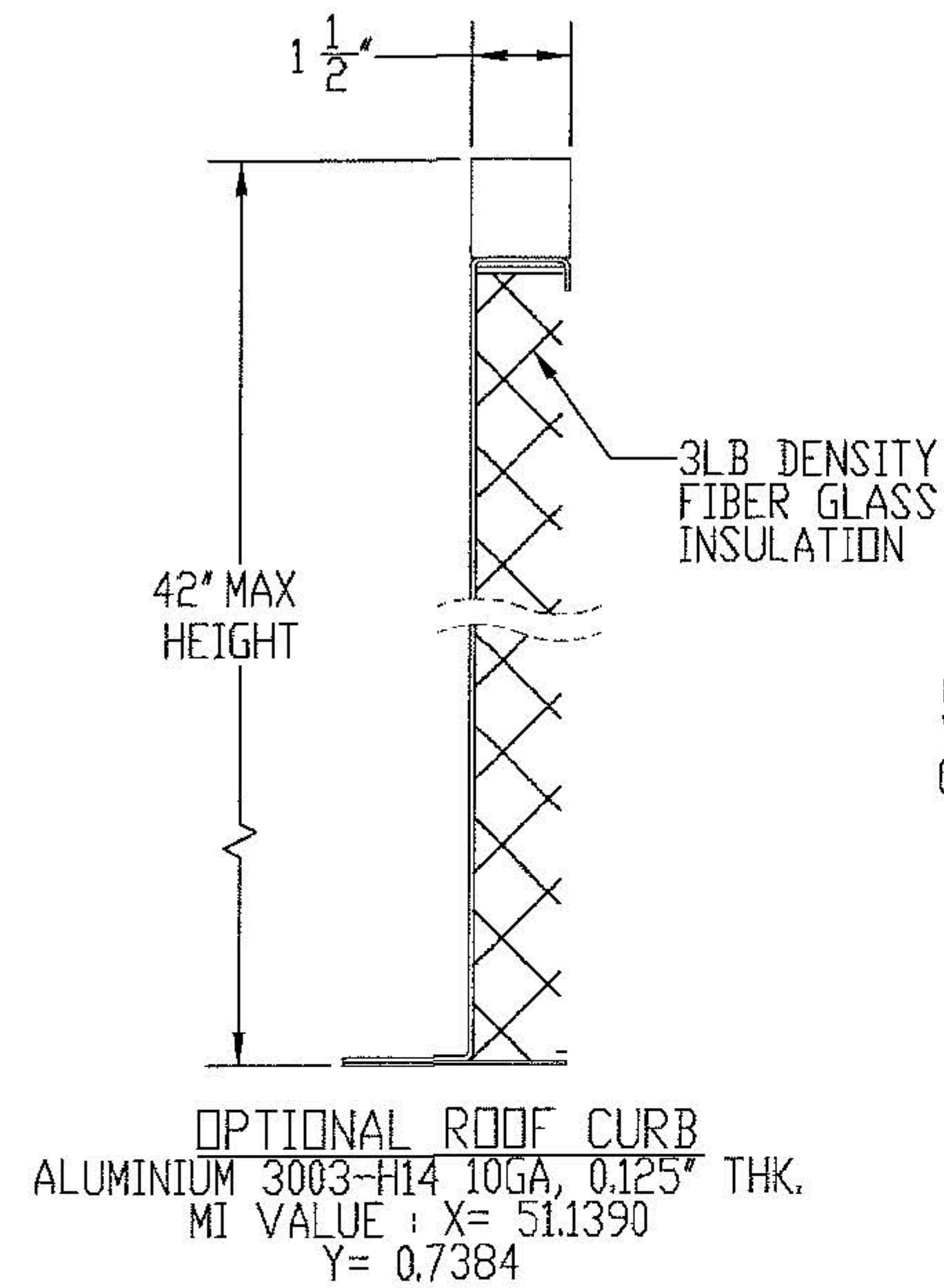
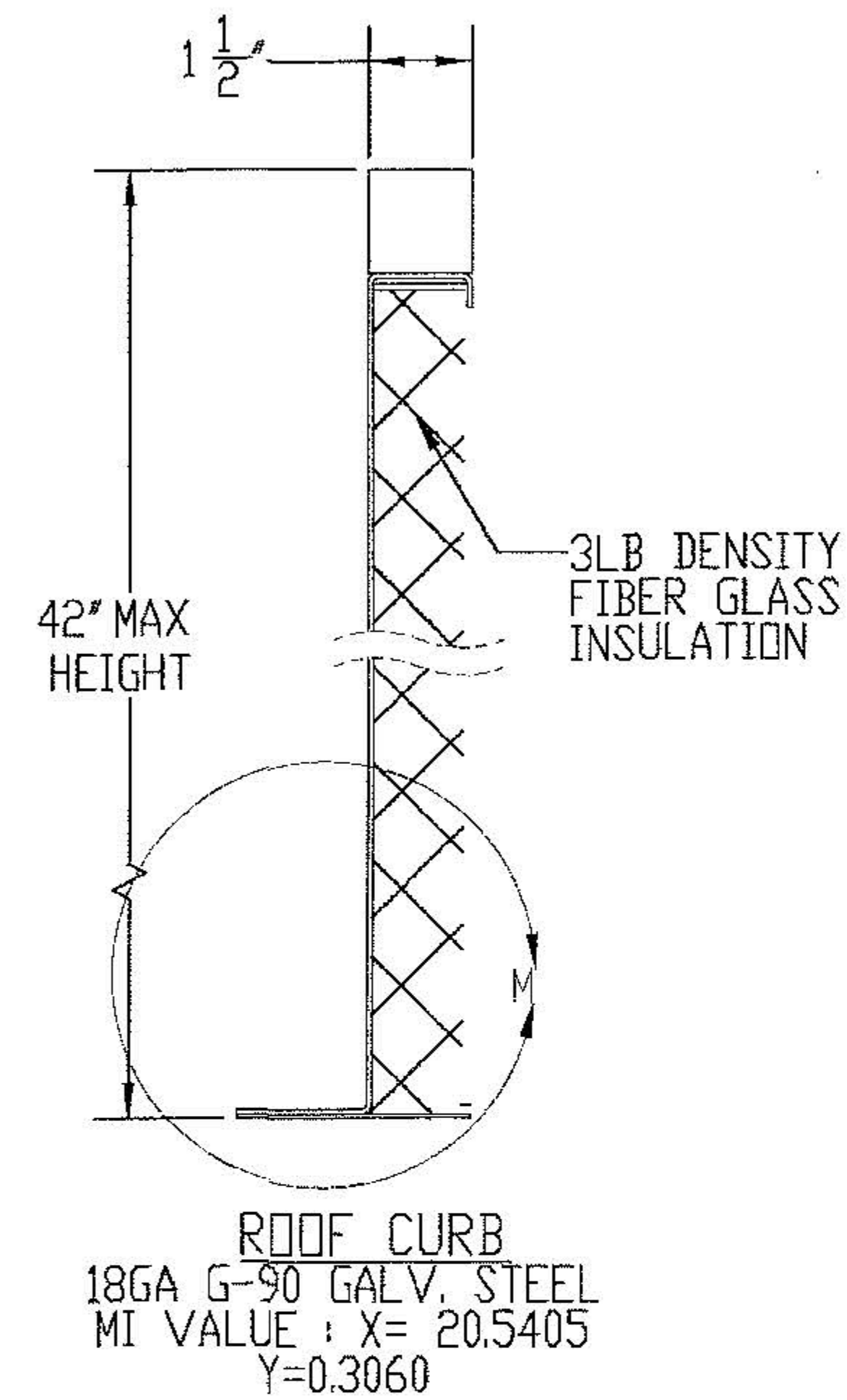
PennBarry 605 Shiloh RD Plano, TX 75074

MUFFAN
STEEL BELT DRIVE & DIRECT DRIVE ROOF VENT
INSTALLATION DETAILS

DRAWN AMIT	DWG NO. 08-01543	REV
SCALE NTS	DATE 08/02/2016	SHEET 8 OF 9

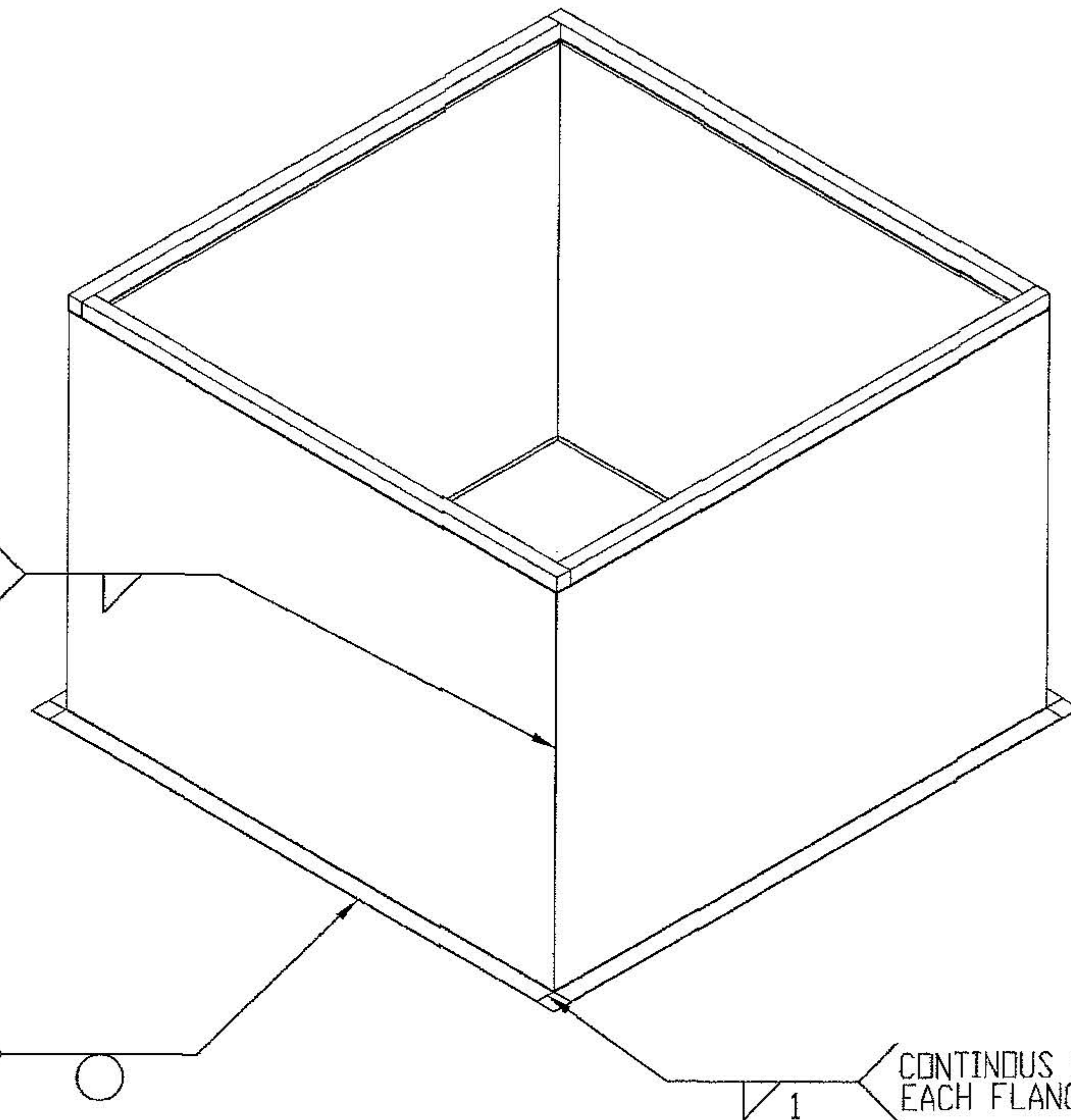


REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
A	-	-	-

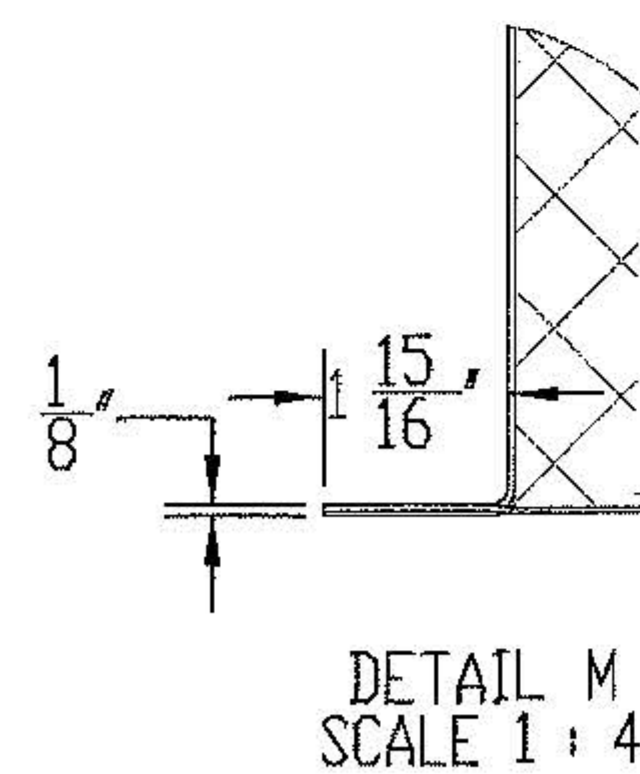


CONTINUOUS WELDED CORNERS TYP.

BASE PLATE TO CURB FLANGE TYP. 6" SPACING



CONTINUOUS WELD FROM CORNER EACH FLANGE 1" TYP



PennBarry 605 Shiloh RD Plano, TX 75074

MUFFAN
STEEL BELT DRIVE & DIRECT DRIVE ROOF VENT
INSTALLATION DETAILS

DRAWN	AMIT	DWG NO.	08-01543	REV	
SCALE	NTS	DATE	08/02/2016	SHEET	9 OF 9

