



DEPARTMENT OF REGULATORY AND ECONOMIC RESOURCES (RER)
 BOARD AND CODE ADMINISTRATION DIVISION
NOTICE OF ACCEPTANCE (NOA)

MIAMI-DADE COUNTY
 PRODUCT CONTROL SECTION
 11805 SW 26 Street, Room 208
 Miami, Florida 33175-2474
 T (786) 315-2590 F (786) 315-2599
www.miamidade.gov/economy

Air System Components, Inc. dba PennBarry
 605 Shiloh Road
 Plano, TX 75074

SCOPE:

This NOA is being issued under the applicable rules and regulations governing the use of construction materials. The documentation submitted has been reviewed and accepted by Miami-Dade County RER-Product Control Section to be used in Miami Dade County and other areas where allowed by the Authority Having Jurisdiction (AHJ).

This NOA shall not be valid after the expiration date stated below. The Miami-Dade County Product Control Section (In Miami Dade County) and/or the AHJ (in areas other than Miami Dade County) reserve the right to have this product or material tested for quality assurance purposes. If this product or material fails to perform in the accepted manner, the manufacturer will incur the expense of such testing and the AHJ may immediately revoke, modify, or suspend the use of such product or material within their jurisdiction. RER reserves the right to revoke this acceptance, if it is determined by Miami-Dade County Product Control Section that this product or material fails to meet the requirements of the applicable building code.

This product is approved as described herein, and has been designed to comply with the Florida Building Code, including the High Velocity Hurricane Zone.

DESCRIPTION: vPlume Laboratory Steel Exhaust Fan

APPROVAL DOCUMENT: Drawing No. **16605801**, titled "vPlume", sheets 1 through 12 of 12, dated 04/26/2018, with revision A dated 02/20/2019, prepared by Air System Components, Inc. dba PennBarry, signed and sealed by Wayne K. Helmila, P.E. on 03/13/2019, bearing the Miami-Dade County Product Control approval stamp with the Notice of Acceptance number and approval date by the Miami-Dade County Product Control Section.

MISSILE IMPACT RATING: Large and Small Missile Impact Resistant

LABELING: Each unit shall bear a permanent label with the manufacturer's name or logo, city, state, model/series, and following statement: "Miami-Dade County Product Control Approved", unless otherwise noted herein.

RENEWAL of this NOA shall be considered after a renewal application has been filed and there has been no change in the applicable building code negatively affecting the performance of this product.

TERMINATION of this NOA will occur after the expiration date or if there has been a revision or change in the materials, use, and/or manufacture of the product or process. Misuse of this NOA as an endorsement of any product, for sales, advertising or any other purposes shall automatically terminate this NOA. Failure to comply with any section of this NOA shall be cause for termination and removal of NOA.

ADVERTISEMENT: The NOA number preceded by the words Miami-Dade County, Florida, and followed by the expiration date may be displayed in advertising literature. If any portion of the NOA is displayed, then it shall be done in its entirety.

INSPECTION: A copy of this entire NOA shall be provided to the user by the manufacturer or its distributors and shall be available for inspection at the job site at the request of the Building Official.

This NOA consists of this page 1 and evidence page E-1, as well as approval document mentioned above.

The submitted documentation was reviewed by **Carlos M. Utrera, P.E.**



Carlos M. Utrera
 05/08/2019

NOA No. 18-1205.04
 Expiration Date: May 16, 2024
 Approval Date: May 16, 2019
 Page 1

NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED

A. DRAWINGS

1. Drawing No. **16605801**, titled “vPlume”, sheets 1 through 12 of 12, dated 04/26/2018, with revision A dated 02/20/2019, prepared by Air System Components, Inc. dba PennBarry, signed and sealed by Wayne K. Helmila, P.E. on 03/13/2019.

B. TESTS

1. Test reports on 1) Uniform Static Air Pressure Test, Loading per FBC TAS 202-94
2) Large Missile Impact Test per FBC, TAS 201-94
3) Tensile Strength Test per ASTM E8-16a
along with marked-up drawings and installation diagram of vPlume Commercial Lab Exhaust Fans, prepared by Intertek, Test Report No. **I3980.01-801-18 R0**, dated 02/08/2019, signed and sealed by Tyler Westerling, P.E.

C. CALCULATIONS

1. Anchoring verification calculations prepared by Rice Engineering, dated 02/18/2019, signed and sealed by Wayne K. Helmila, P.E.

D. QUALITY ASSURANCE

1. Miami-Dade Department of Regulatory and Economic Resources (RER)

E. MATERIAL CERTIFICATIONS

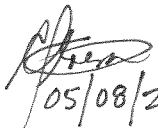
1. None.

F. STATEMENTS

1. Statement letters of code conformance to the 6th edition (2017) of the FBC issued by Rice Engineering, dated 03/13/2019, signed and sealed by Wayne K. Helmila, P.E.
2. Statement letter of no financial interest issued by Rice engineering, dated 03/13/2019, signed and sealed by Wayne K. Helmila, P.E.

G. OTHERS

1. Test proposal # **18-0438**.




05/08/2019

Carlos M. Utrera, P.E.
Product Control Examiner
NOA No. 18-1205.04
Expiration Date: May 16, 2024
Approval Date: May 16, 2019

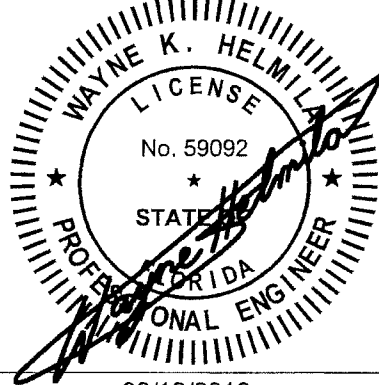
NOTES -

REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
A	ENGINEERING REVISION	02/20/2019	-

1. THIS 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 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 USE 5/8" LAG SCREWS WITH MIN. 6" EMBEDMENT, 3 5/16" THREAD ENGAGEMENT, 2 1/2" EDGE DISTANCE, AS SHOWN ON SHEET 11.
7. FOR ANCHORING INTO UN-CRACKED CONCRETE USE HILTI 5/8" Ø KWIK BOLT TZ'S WITH SUFFICIENT LENGTH TO ACHIEVE A 4 1/2" MINIMUM EMBEDMENT INTO SUBSTRATE WITH 9" MINIMUM EDGE DISTANCE. LOCATE ANCHORS AS SHOWN ON SHEET 11.
- 7.1. FOR ANCHORING INTO CRACKED CONCRETE USE HILTI 3/4" Ø KWIK BOLT TZ'S WITH SUFFICIENT LENGTH TO ACHIEVE A 4 3/8" MINIMUM EMBEDMENT INTO SUBSTRATE WITH 12" MINIMUM EDGE DISTANCE. LOCATE ANCHORS AS SHOWN ON SHEET 11.
8. FOR ANCHORING INTO METAL STRUCTURE USE 1/2-13 DIA THRU-BOLTS OR 5/16" SELF DRILLING SCREWS WITH SUFFICIENT LENGTH TO ACHIEVE 5/16" MINIMUM THREAD ENGAGEMENT BEYOND STRUCTURE INTERIOR WALL. LOCATE ANCHORS AS SHOWN ON SHEET 11.
9. ALL FASTENERS TO BE CORROSION RESISTANT UNLESS OTHERWISE NOTED, ANCHORS SHALL BE 300 SERIES S/S, CONDITION CW, Fy = 65 ksi.
10. THIS APPROVAL IS FOR STRUCTURAL PERFORMANCE AND IMPACT RESISTANCE ONLY. INTERIOR MECHANISM AND / OR ELECTRICAL CIRCUITRY ARE OUTSIDE THE SCOPE OF THIS APPROVAL.
11. UNITS WERE NOT TESTED FOR WATER PENETRATION PER FBC, TAS 100(A).
12. 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 -
 - WOOD - MINIMUM SPECIFIC GRAVITY OF G = 0.5
 - CONCRETE - MINIMUM COMPRESSIVE STRENGTH OF 4,000 PSI. (E.O.R. / ARCH. SHALL DETERMINE IF CONCRETE IS TO BE CONSIDERED CRACKED OR UN-CRACKED.)
 - METAL STRUCTURE: STEEL 5/16" THICK, 36KSI OR ALUMINUM 6063-T5 5/16" THICK MINIMUM.

PRODUCT APPROVED
 as complying with the Florida
 Building Code
 NOA-No. **18-1205.04**
 Approval Date **05/16/2019**
 By 
 Miami-Dade Product Control

RICE
ENGINEERING
 105 School Creek Trail
 Luxemburg, WI 54217
 Phone: (920) 617-1042
 Fax: (920) 617-1100
 www.rice-inc.com
 Florida Firm No: F-01000005061
 Certificate of Authorization: #9090
 Wayne K. Helmila
 Registration No: 59092



03/13/2019
 COA: 9090

TABLE OF CONTENTS			
SHEET NO.	DESCRIPTION	SHEET NO.	DESCRIPTION
1	GENERAL NOTES	7	FAN BODY & EXTENSION
2	1X1 ASSEMBLY	8	WEATHER HOOD & MOTOR COVER
3	2X1 ASSEMBLY	9	BYPASS AIR PLENUMS
4	3X1 ASSEMBLY	10	ROOF CURB
5	NO PLENUM	11	ROOF CURB INSTALLATION
6	NOZZLE	12	ANCHORAGE SCHEDULE

PennBarry 605 Shiloh RD Plano, TX 75074

VPLUME GENERAL NOTES

DRAWN:	ANUP	DWG NO.	16605801	REV	A
SCALE	NTS	DATE	04/26/2018	SHEET	1 OF 12

NOZZLE
(SHEET 6 OF 12)

EXTENSION TUBE
(SHEET 7 OF 12)

ROOF CURB
(SHEET 10 OF 12)

5" FLANGE
TYP.

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Certificate of Authorization: #9090
Wayne K. Helmila
Registration No: 59092

FASTENER F

MOTOR COVER
(SHEET 8 OF 12)

WEATHER HOOD
(SHEET 8 OF 12)

FASTENER E

FASTENER F

FASTENER E

FASTENER F

FASTENER F

FASTENER G

CURB HARDWARE
AND INSTALLATION
(SHEET 11 OF 12)

REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
A	ENGINEERING REVISION	02/20/2019	-

UNIT	FASTENER E		FASTENER F		FASTENER G	
	DESCRIPTION	QTY	DESCRIPTION	QTY	DESCRIPTION	QTY
VPLUME-90	HHCS 1/2-13 1.25 ST STL, WSHR 1/2" SAE 0.53 1.06, WASHER RUBBER.50 1.06 0.14, WSHR 1/2 SPRG LK SST, NUT HEX 1/2-13 SST	24	NUTSERT 3/8-16 X 150, WSHR FL 0.38 0.88 SST, WSHR .38 .69 SPRG LK SST, BOLT 3/8-16 1.5 HHCS STN, WASHER RUBBER 0.38 0.81 0.09	62	SCR, TCS, IHWH,0.313- 18X1.5, TYP-23, MECH ZP	12
VPLUME-105						
VPLUME-122						
VPLUME-135						
VPLUME-150						
VPLUME-165	36			76		
VPLUME-182						

DESIGN LIMITS	
MAX. DESIGN LOAD:	+/- 140 psf (6.7 Kpa)
MAX. OVERALL ENCLOSURE:	39.63 x 57.80 IN. (1007 x 1469 MM)
MAX. OVERALL UNIT HEIGHT:	146 IN. (3709 MM)

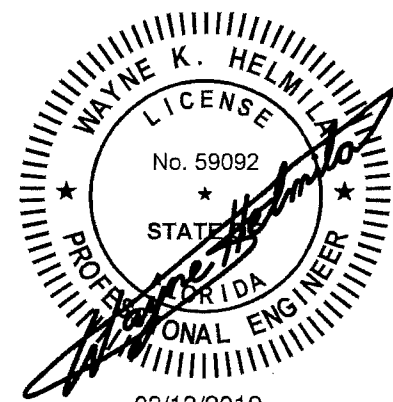
NOTES:

1. UNITS TESTED FOR TAS-201 (LARGE MISSILE IMPACT) & TAS-202 (STATIC LOADING)
2. DESIGN PRESSURE = +/- 140 PSF
3. DESIGN, TESTING AND INSTALLATION CONFORMS TO FLORIDA BUILDING CODE
4. UNITS NOT TESTED FOR WATER PENETRATION PER FBC, TAS 100(A)
5. THIS APPROVAL IS FOR STRUCTURAL PERFORMANCE & IMPACT RESISTANCE ONLY. INTERIOR MECHANISM AND/OR ELECTRICAL CIRCUITRY ARE OUTSIDE THE SCOPE OF THIS APPROVAL

PRODUCT APPROVED
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NOA-No. **18-1205.04**
Approval Date **05/16/2019**
By *[Signature]*
Miami-Dade Product Control

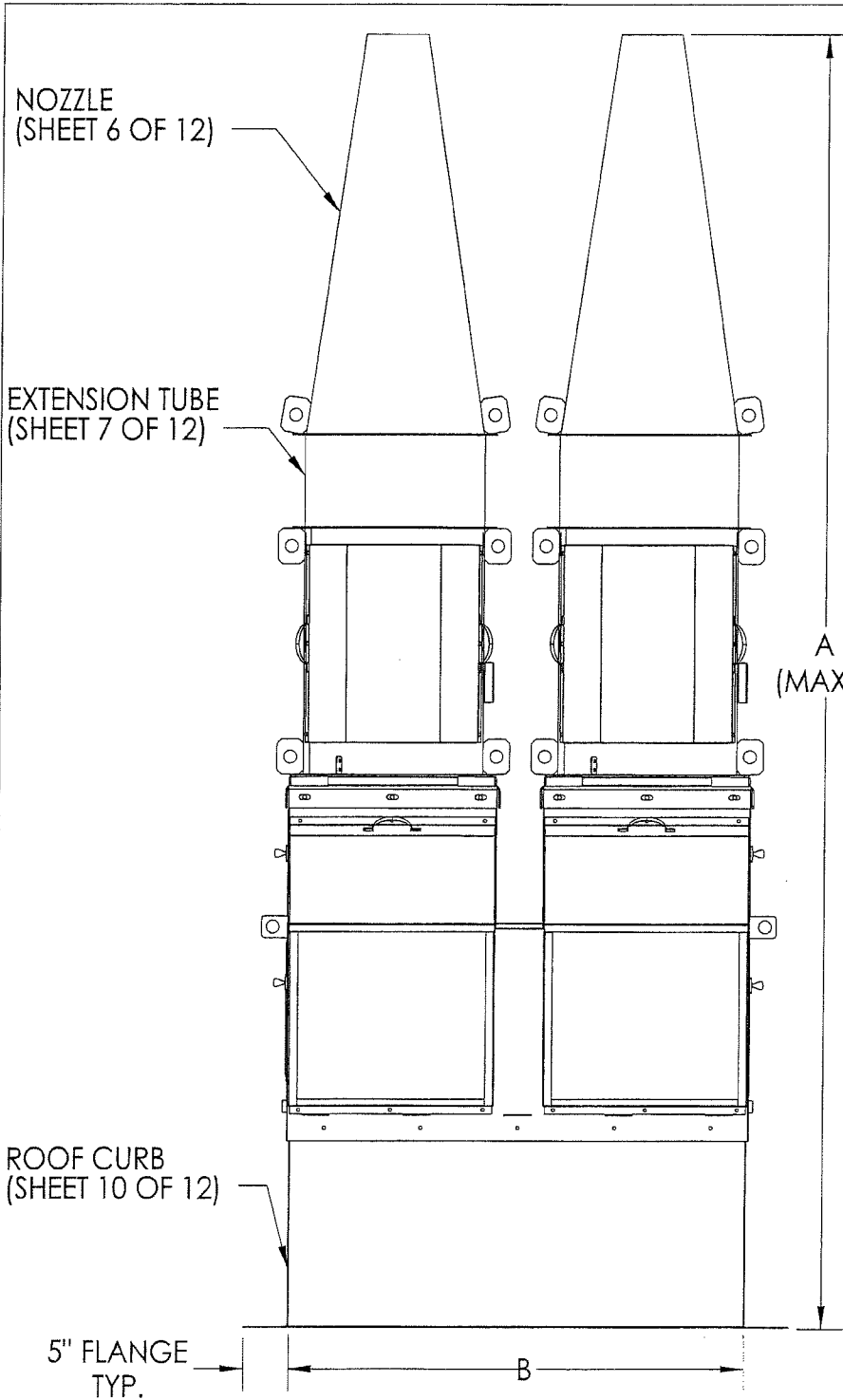
UNIT	A (MAX)	B	C	D	WEIGHT (LBS)
VPLUME-90	146.00	21.42	21.42	45.80	577
VPLUME-105	146.00	21.42	21.42	45.80	578
VPLUME-122	146.00	21.42	21.42	45.80	578
VPLUME-135	146.00	23.42	23.42	47.80	657
VPLUME-150	146.00	25.42	25.42	49.80	732
VPLUME-165	146.00	27.42	27.42	51.80	784
VPLUME-182	146.00	33.42	33.42	57.80	924

ALL DIMENSIONS ARE IN INCHES
WEIGHT DO NOT INCLUDE
MOTOR, DRIVE AND DAMPERS



03/13/2019
COA: 9090

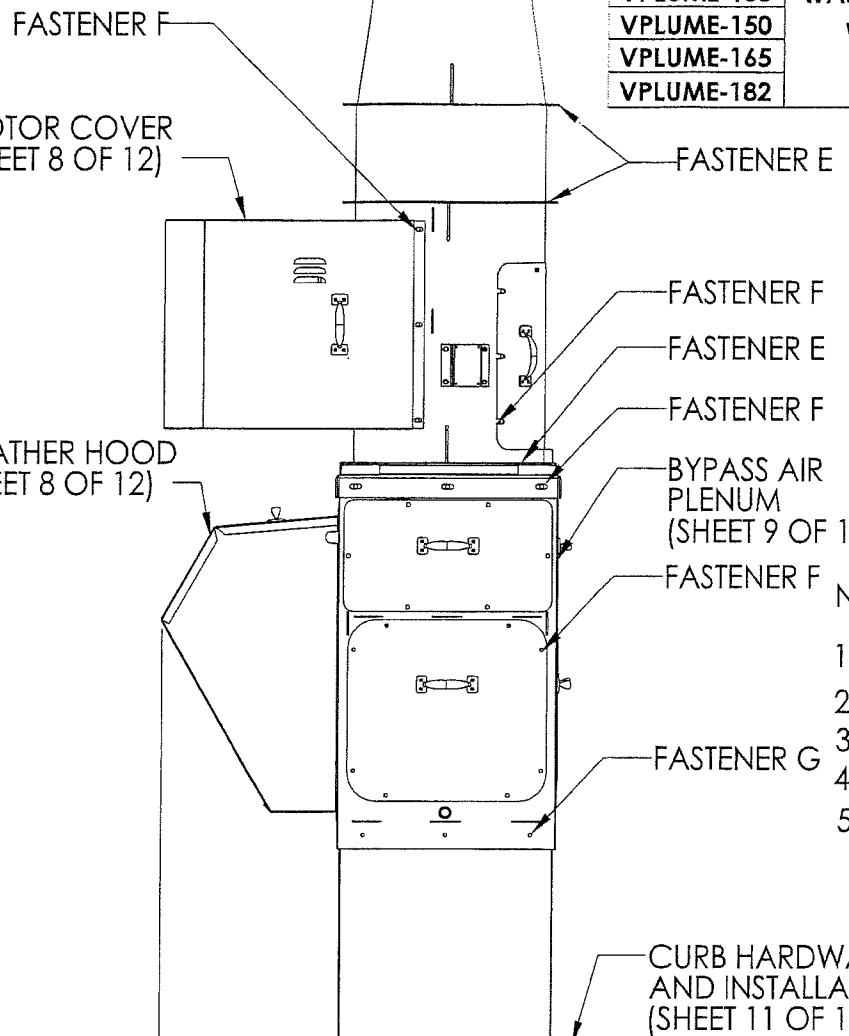
PennBarry 605 Shiloh RD Plano, TX 75074			
VPLUME 1 X 1 ASSEMBLY			
DRAWN: ANUP	DWG NO. 16605801	REV A	
SCALE NTS	DATE 04/26/2018	SHEET 2 OF 12	



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REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
A	ENGINEERING REVISION	02/20/2019	-

UNIT	FASTENER E		FASTENER F		FASTENER G	
	DESCRIPTION	QTY	DESCRIPTION	QTY	DESCRIPTION	QTY
VPLUME-90	HHCS 1/2-13 1.25 ST STL, WSHR 1/2" SAE 0.53 1.06, WASHER RUBBER.50 1.06 0.14, WSHR 1/2 SPRG LK SST, NUT HEX 1/2-13 SST	48	NUTSERT 3/8-16 X 150, WSHR FL 0.38 0.88 SST, WSHR .38 .69 SPRG LK SST, BOLT 3/8-16 1.5 HHCS STN, WASHER RUBBER 0.38 0.81 0.09	124	SCR, TCS, IHWH, 0.313-18X1.5, TYP-23, MECH ZP	16
VPLUME-105						
VPLUME-122						
VPLUME-135						
VPLUME-150						
VPLUME-165	72	128				
VPLUME-182		152				

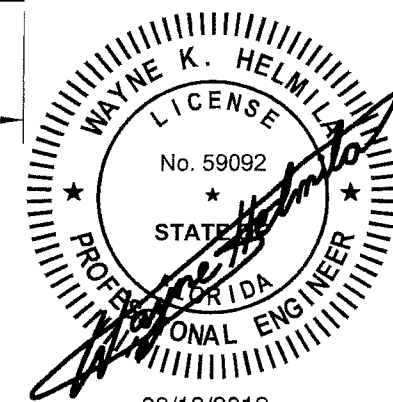
DESIGN LIMITS	
MAX. DESIGN LOAD:	+/- 140 psf (6.7 Kpa)
MAX. OVERALL ENCLOSURE:	78.50 x 57.80 IN. (1994 x 1469 MM)
MAX. OVERALL UNIT HEIGHT:	146 IN. (3709 MM)

PRODUCT APPROVED
as complying with the Florida
Building Code
NOA-No. **18-1205.04**
Approval Date **05/16/2019**
By *[Signature]*
Miami-Dade Product Control

- NOTES:
1. UNITS TESTED FOR TAS-201 (LARGE MISSILE IMPACT) & TAS-202 (STATIC LOADING)
 2. DESIGN PRESSURE = +/- 140 PSF
 3. DESIGN, TESTING AND INSTALLATION CONFORMS TO FLORIDA BUILDING CODE
 4. UNITS NOT TESTED FOR WATER PENETRATION PER FBC, TAS 100(A)
 5. THIS APPROVAL IS FOR STRUCTURAL PERFORMANCE & IMPACT RESISTANCE ONLY. INTERIOR MECHANISM AND/OR ELECTRICAL CIRCUITRY ARE OUTSIDE THE SCOPE OF THIS APPROVAL

UNIT	A (MAX)	B	C	D	WEIGHT (LBS)
VPLUME-90	146.00	48.29	21.42	45.80	1133
VPLUME-105	146.00	48.29	21.42	45.80	1135
VPLUME-122	146.00	48.29	21.42	45.80	1136
VPLUME-135	146.00	52.29	23.42	47.80	1291
VPLUME-150	146.00	56.29	25.42	49.80	1431
VPLUME-165	146.00	60.29	27.42	51.80	1538
VPLUME-182	146.00	72.29	33.42	57.80	1803

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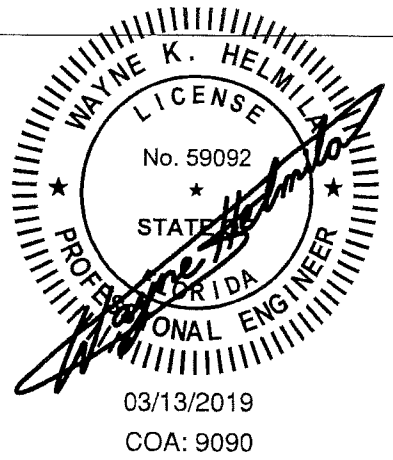


03/13/2019
COA: 9090

PennBarry 605 Shiloh RD Plano, TX 75074

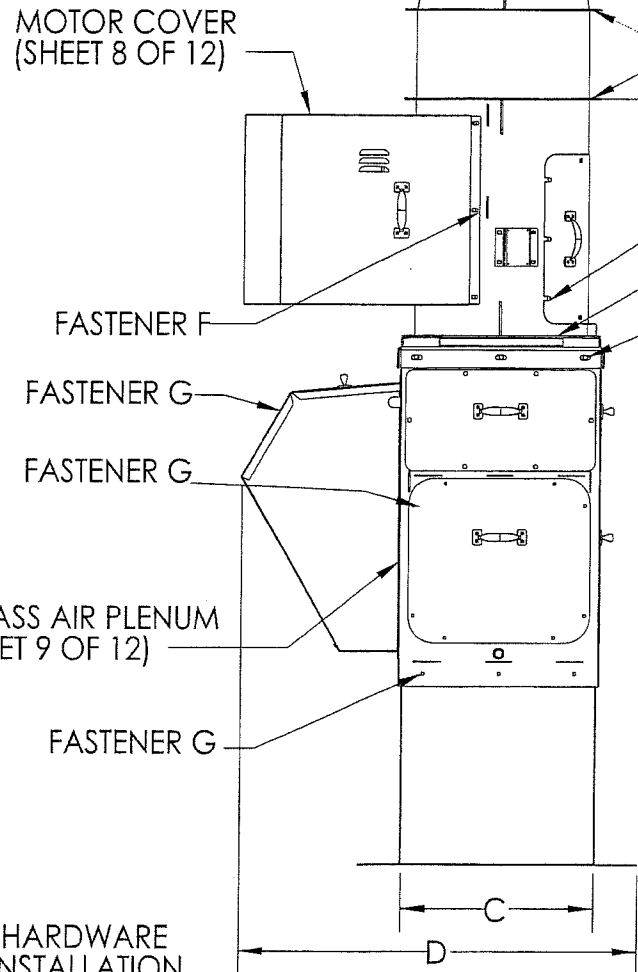
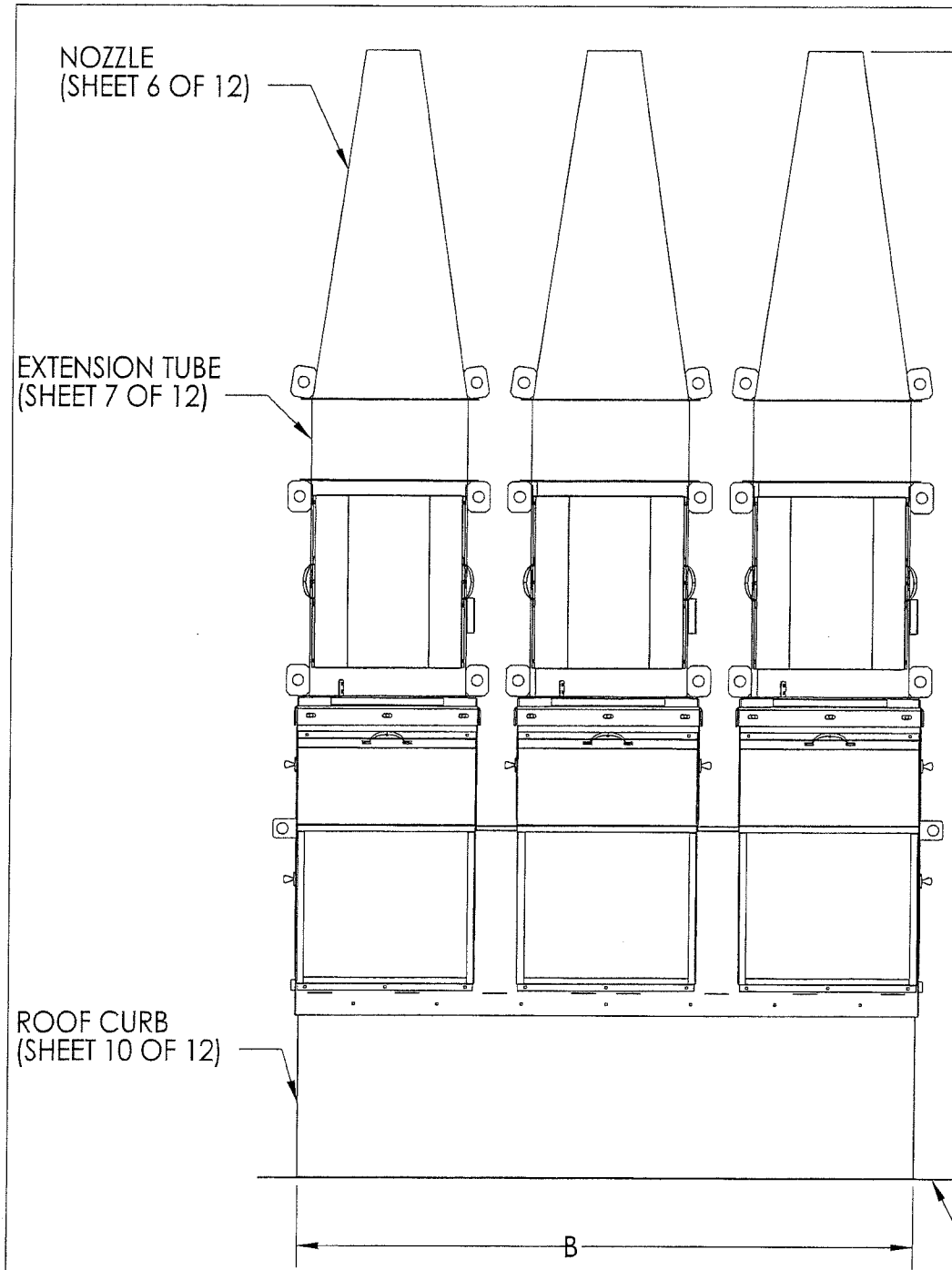
**VPLUME
2 X 1 ASSEMBLY**

DRAWN: ANUP	DWG NO. 16605801	REV A
SCALE NTS	DATE 04/26/2018	SHEET 3 OF 12



REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
A	ENGINEERING REVISION	02/20/2019	

UNIT	FASTENER E		FASTENER F		FASTENER G	
	DESCRIPTION	QTY	DESCRIPTION	QTY	DESCRIPTION	QTY
VPLUME-90						
VPLUME-105	HHCS 1/2-13 1.25 ST STL.	72	NUTSERT 3/8-16 X 150,	184	SCR, TCS, IHWH, .313-18X1.5, TYP-23, MECH ZP	20
VPLUME-122	WSHR 1/2" SAE 0.53 1.06,		WSHR FL 0.38 0.88 SST,			
VPLUME-135	WASHER RUBBER.50 1.06 0.14,		WSHR .38 .69 SPRG LK SST,			
VPLUME-150	WSHR 1/2 SPRG LK SST,		BOLT 3/8-16 1.5 HHCS STN,			
VPLUME-165	NUT HEX 1/2-13 SST	108	WASHER RUBBER 0.38 0.81 0.09	190		
VPLUME-182				226		



F_{U1} = ULTIMATE LATERAL FORCE FOR VPLUME-90
 F_{U2} = ULTIMATE LATERAL FORCE FOR VPLUME-182
 F_{U1} = 9,351 LBF
 F_{U2} = 15,078 LBF

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 Approval Date **05/16/2019**
 By *[Signature]*
 Miami-Dade Product Control

UNIT	A (MAX)	B	C	D	WEIGHT (LBS)
VPLUME-90	146.00	75.10	21.42	45.80	1689
VPLUME-105	146.00	75.10	21.42	45.80	1691
VPLUME-122	146.00	75.10	21.42	45.80	1694
VPLUME-135	146.00	81.10	23.42	47.80	1924
VPLUME-150	146.00	87.10	25.42	49.80	2132
VPLUME-165	146.00	93.10	27.42	51.80	2289
VPLUME-182	146.00	111.10	33.42	57.80	2683

DESIGN LIMITS	
MAX. DESIGN LOAD:	+/- 140 psf (6.7 Kpa)
MAX. OVERALL ENCLOSURE:	117.30 x 57.80 IN. (2980 x 1469 MM)
MAX. OVERALL UNIT HEIGHT:	146 IN. (3709 MM)

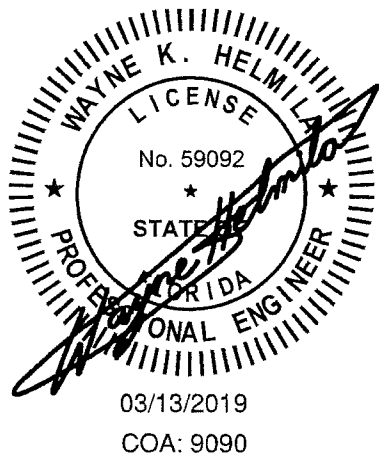
ALL DIMENSIONS ARE IN INCHES
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PennBarry 605 Shiloh RD Plano, TX 75074

VPLUME 3 X 1 ASSEMBLY

DRAWN: ANUP	DWG NO. 16605801	REV A
SCALE NTS	DATE 04/26/2018	SHEET 4 OF 12

REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
A	ENGINEERING REVISION	02/20/2019	-



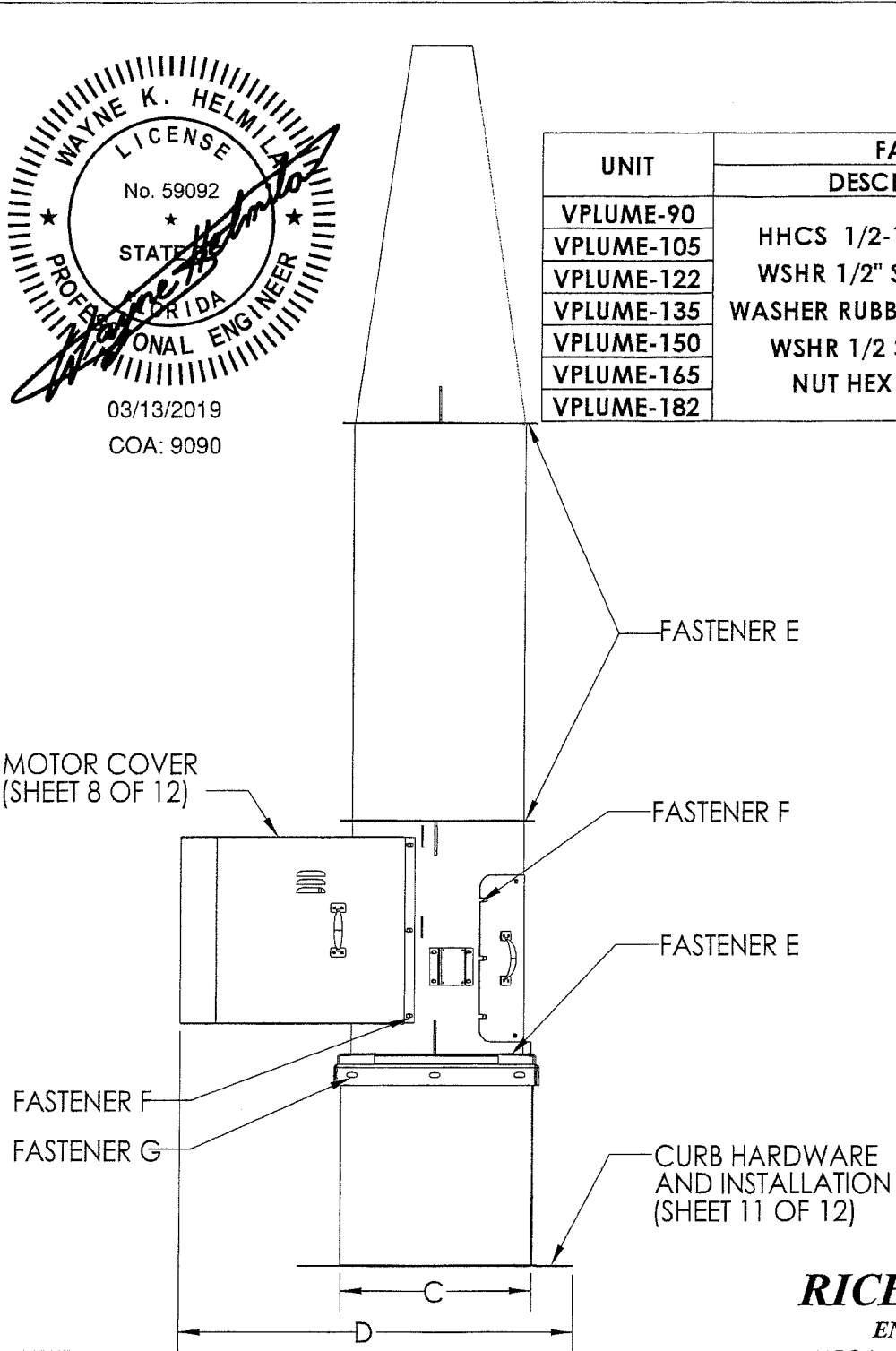
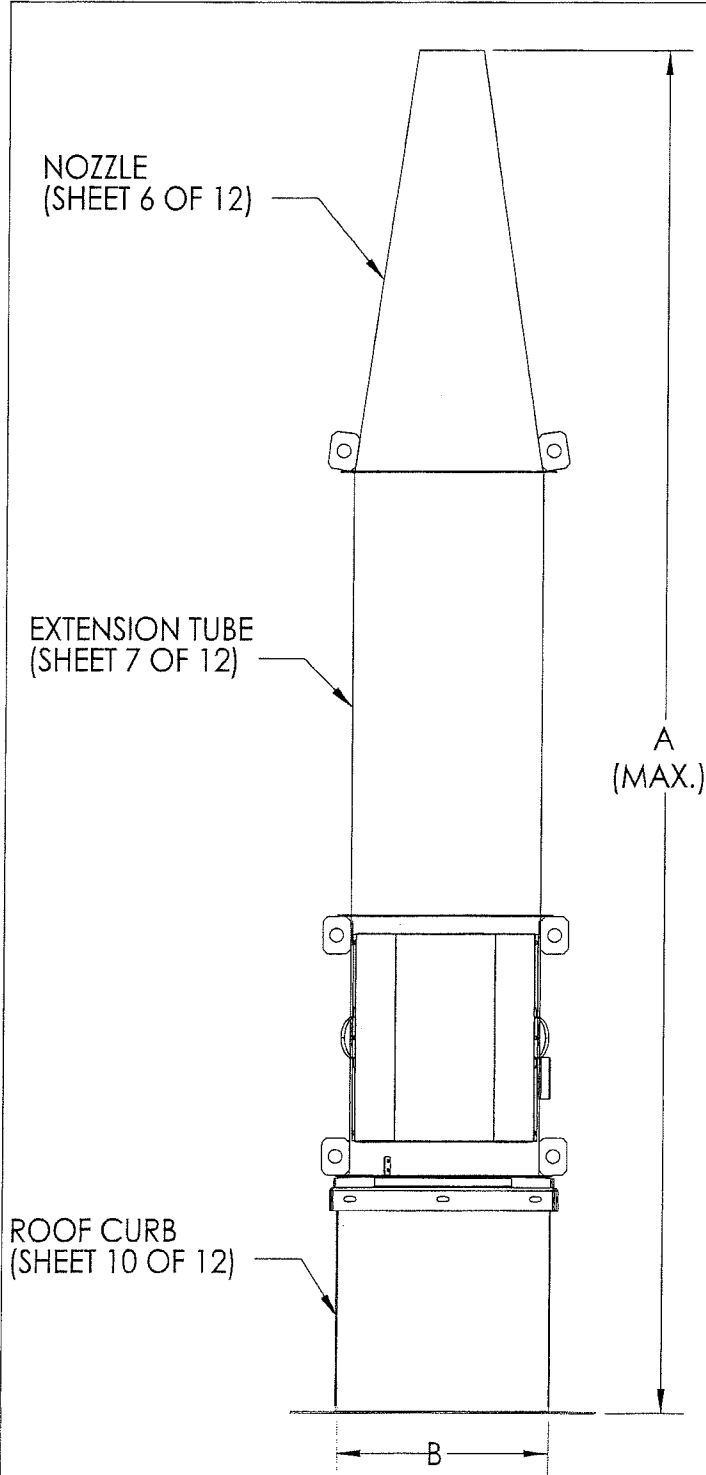
UNIT	FASTENER E		FASTENER F		FASTENER G	
	DESCRIPTION	QTY	DESCRIPTION	QTY	DESCRIPTION	QTY
VPLUME-90	HHCS 1/2-13 1.25 ST STL, WSHR 1/2" SAE 0.53 1.06, WASHER RUBBER.50 1.06 0.14, WSHR 1/2 SPRG LK SST, NUT HEX 1/2-13 SST	24	NUTSERT 3/8-16 X 150, WSHR FL 0.38 0.88 SST, WSHR .38 .69 SPRG LK SST, BOLT 3/8-16 1.5 HHCS STN, WASHER RUBBER 0.38 0.81 0.09	16	SCR, TCS, IHWH, .313-18X1.5, TYP-23, MECH ZP	12
VPLUME-105						
VPLUME-122						
VPLUME-135						
VPLUME-150						
VPLUME-165						
VPLUME-182	36	18	16			

DESIGN LIMITS	
MAX. DESIGN LOAD:	+/- 140 psf (6.7 Kpa)
MAX. OVERALL ENCLOSURE:	39 x 55.04 IN. (1000 x 1398 MM)
MAX. OVERALL UNIT HEIGHT:	146 IN. (3709 MM)

NOTES:

1. UNITS TESTED FOR TAS-201 (LARGE MISSILE IMPACT) & TAS-202 (STATIC LOADING)
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as complying with the Florida Building Code
NOA-No. **18-1205.04**
Approval Date **05/16/2019**
By *[Signature]*
Miami-Dade Product Control



UNIT	A (MAX)	B	C	D	WEIGHT (LBS)
VPLUME-90	146.00	21.42	21.42	44.55	257
VPLUME-105	146.00	21.42	21.42	44.55	258
VPLUME-122	146.00	21.42	21.42	44.55	259
VPLUME-135	146.00	23.42	23.42	47.97	308
VPLUME-150	146.00	25.42	25.42	49.76	344
VPLUME-165	146.00	27.42	27.42	49.98	372
VPLUME-182	146.00	33.42	33.42	55.04	452

ALL DIMENSIONS ARE IN INCHES
WEIGHT DO NOT INCLUDE
MOTOR, DRIVE AND DAMPERS

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Florida Firm No: F-01000005061
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PennBarry 605 Shiloh RD Plano, TX 75074

**VPLUME
NO PLENUM**

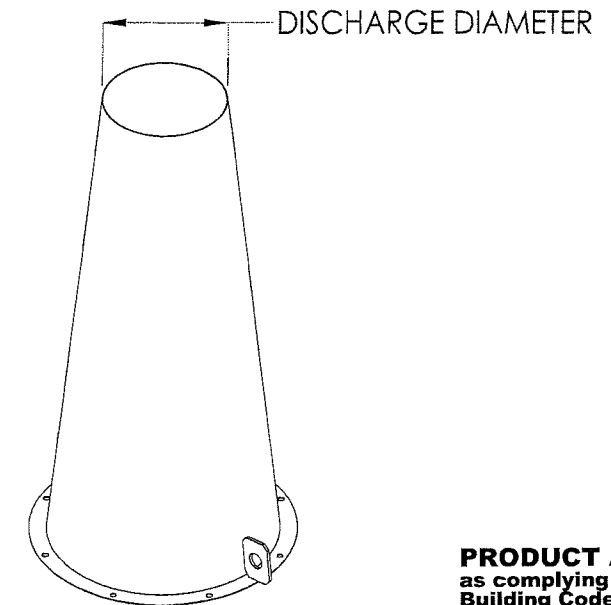
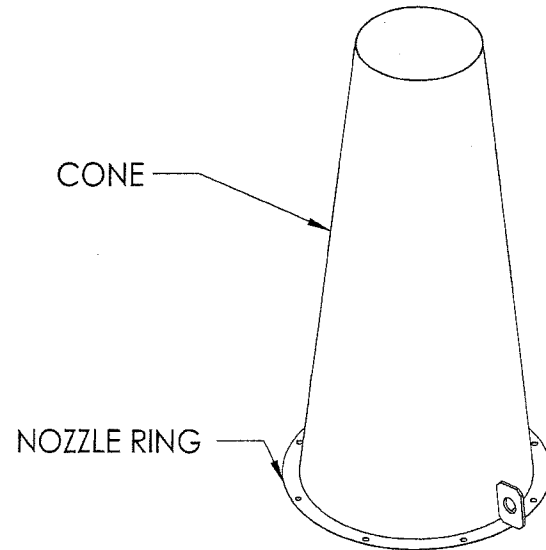
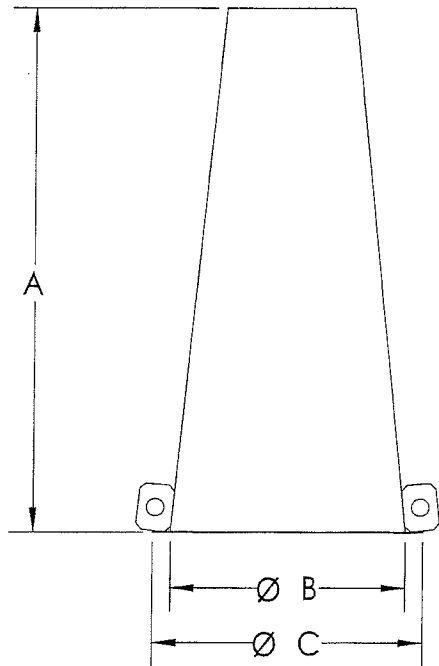
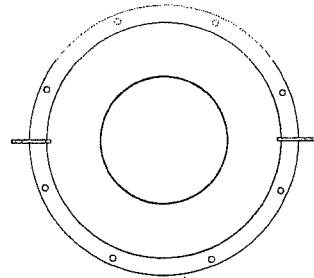
DRAWN: ANUP	DWG NO. 16605801	REV A
SCALE NTS	DATE 04/26/2018	SHEET 5 OF 12

UNIT	A	B	C	MATERIAL	
				CONE	NOZZLE RING
VPLUME-90	45.00	18.25	21.25	14 GA HRS	14 GA HRS
VPLUME-105	45.00	18.25	21.25		
VPLUME-122	45.00	18.25	21.25		
VPLUME-135	45.00	20.25	23.25		
VPLUME-150	45.00	22.31	25.31		
VPLUME-165	45.00	24.69	27.69		
VPLUME-182	45.00	30.06	33.13		

REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
A	ENGINEERING REVISION	02/20/2019	-

UNIT	Discharge Diameter offering
VPLUME-90	4, 5, 6, 7, 8, 9, 10, 11, 12, 13
VPLUME-105	4, 5, 6, 7, 8, 9, 10, 11, 12, 13
VPLUME-122	4, 5, 6, 7, 8, 9, 10, 11, 12, 13
VPLUME-135	7, 8, 9, 10, 11, 12, 13
VPLUME-150	8, 9, 10, 11, 12, 13, 14, 15, 16
VPLUME-165	8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18
VPLUME-182	8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20

ALL DIMENSIONS ARE IN INCHES

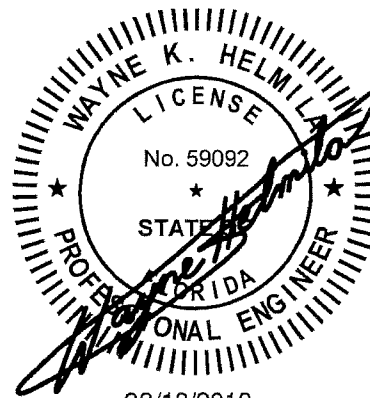


PRODUCT APPROVED
as complying with the Florida
Building Code
NOA-No. **18-1205.04**
Approval Date **05/16/2019**
By *[Signature]*
Miami-Dade Product Control

RICE
ENGINEERING

105 School Creek Trail
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Florida Firm No: F-01000005061
Certificate of Authorization: #9090
Wayne K. Helmila
Registration No: 59092



03/13/2019
COA: 9090

PennBarry 605 Shiloh RD Plano, TX 75074

VPLUME
NOZZLE

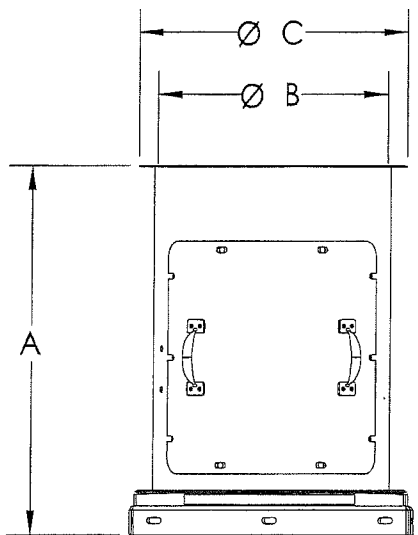
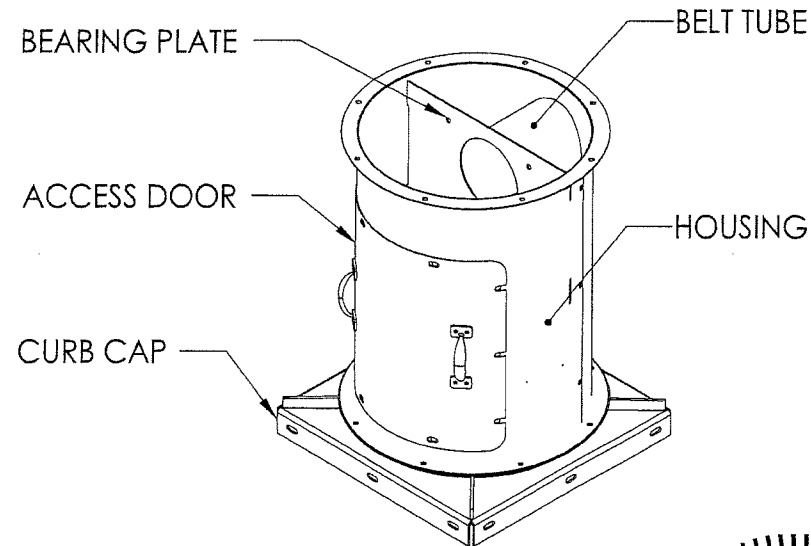
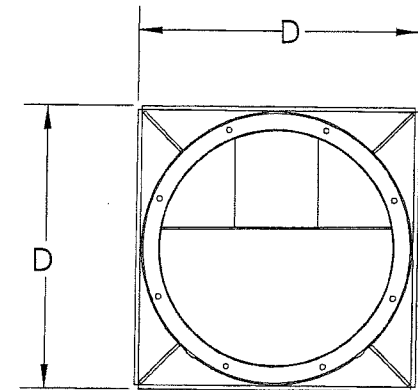
DRAWN: ANUP	DWG NO. 16605801	REV A
SCALE NTS	DATE 04/26/2018	SHEET 6 OF 12

UNIT	A	B	C	D	MATERIAL		
					HOUSING	ACCESS DOOR	CURBCAP
VPLUME-90	29.75	18.25	21.25	22.38	12 GA HRS	12 GA HRS	7 GA HRS
VPLUME-105	29.75	18.25	21.25	22.38			
VPLUME-122	29.75	18.25	21.25	22.38			
VPLUME-135	31.75	20.25	31.75	24.37			
VPLUME-150	33.75	22.31	25.31	26.38			
VPLUME-165	34.00	24.69	27.69	28.38			
VPLUME-182	36.00	30.06	33.06	34.38			

REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
A	ENGINEERING REVISION	02/20/2019	-

UNIT	A1	A2	B	C	MATERIAL EXTENTION
VPLUME-90	49.69	15.50	18.25	21.25	12 GA HRS
VPLUME-105	49.69	15.50	18.25	21.25	
VPLUME-122	49.69	15.50	18.25	21.25	
VPLUME-135	47.68	10.50	20.25	31.75	
VPLUME-150	45.69	7.50	22.31	25.31	
VPLUME-165	45.44	6.50	24.69	27.69	
VPLUME-182	43.26	6.50	30.06	33.06	

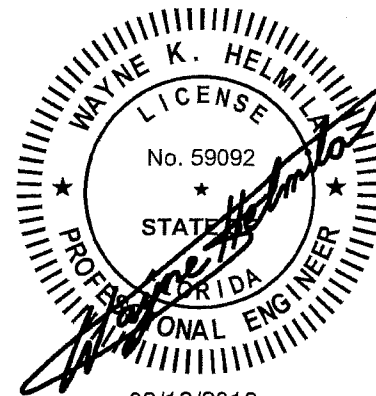
NOTE:
A1: FOR NO PLENUM (SHEET 5)
A2: FOR WITH PLENUM (SHEET 2,3,4)



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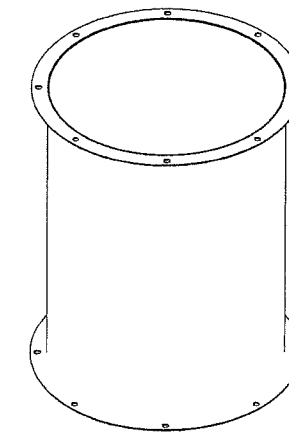
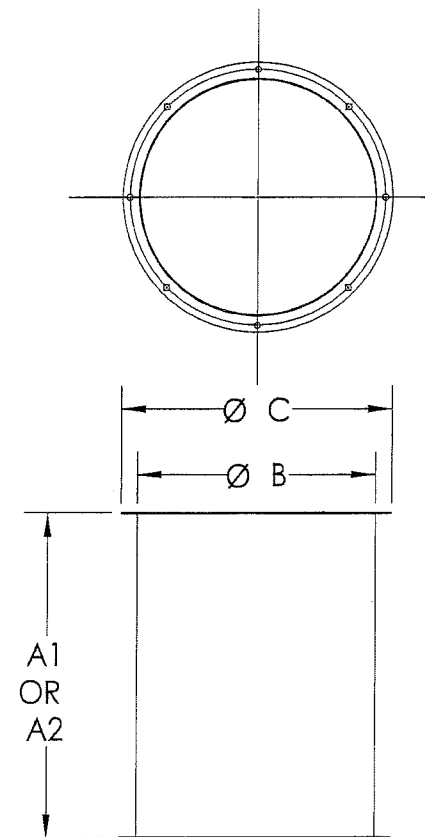
105 School Creek Trail
Luxemburg, WI 54217
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FAN BODY



03/13/2019
COA: 9090

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EXTENTION

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Miami-Dade/Product Control

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**VPLUME
FAN BODY & EXTENTION**

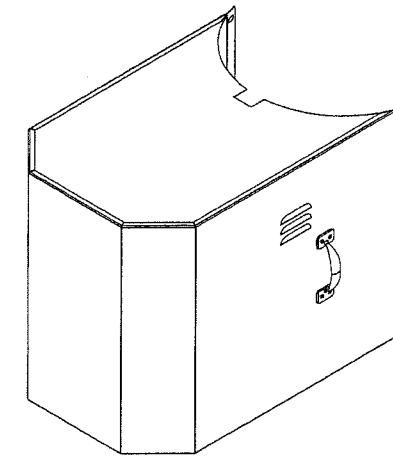
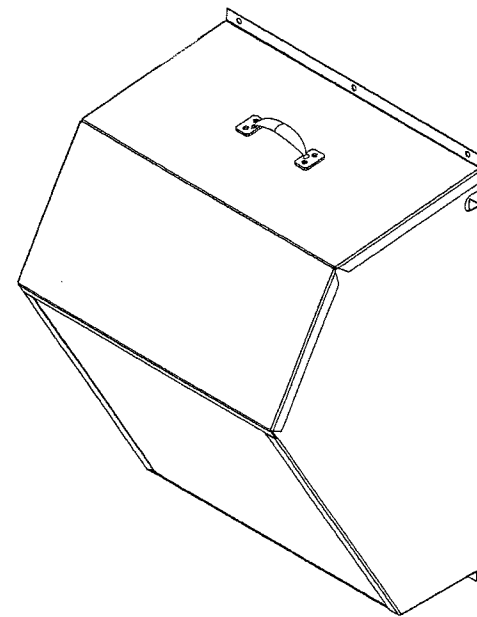
DRAWN: ANUP	DWG NO. 16605801	REV A
SCALE NTS	DATE 04/26/2018	SHEET 7 OF 12

UNIT	A	B	C	MATERIAL
				PANELS/DOORS
VPLUME-90	19.17	30.64	21.52	14 GA HRS
VPLUME-105	19.17	30.64	21.52	
VPLUME-122	19.17	30.64	21.52	
VPLUME-135	19.17	33.61	23.52	
VPLUME-150	19.17	35.64	25.52	
VPLUME-165	19.17	35.64	27.52	
VPLUME-182	19.17	33.61	33.52	

REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
A	ENGINEERING REVISION	02/20/2019	-

UNIT	A	B	C	MATERIAL
				PANELS
VPLUME-90	25.31	22.10	17.76	18GA HRS
VPLUME-105	25.31	22.10	17.76	
VPLUME-122	25.31	22.10	17.76	
VPLUME-135	26.97	22.47	19.30	
VPLUME-150	27.55	25.72	21.07	
VPLUME-165	22.50	26.22	18.87	
VPLUME-182	22.06	25.72	21.20	

ALL DIMENSIONS ARE IN INCHES

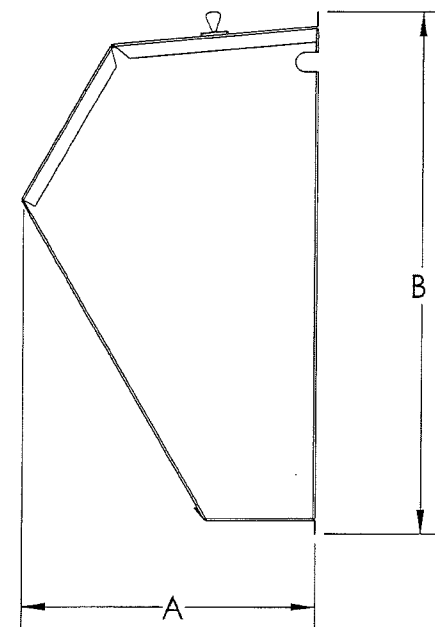
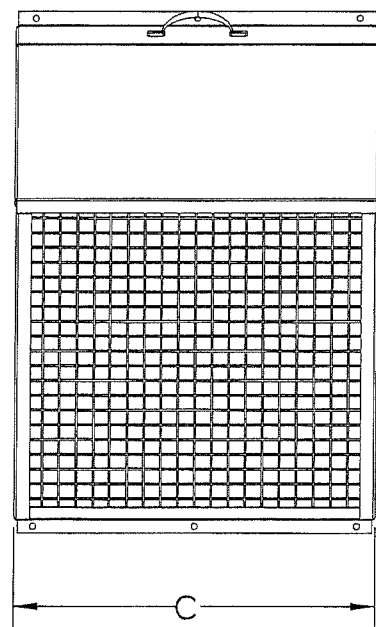
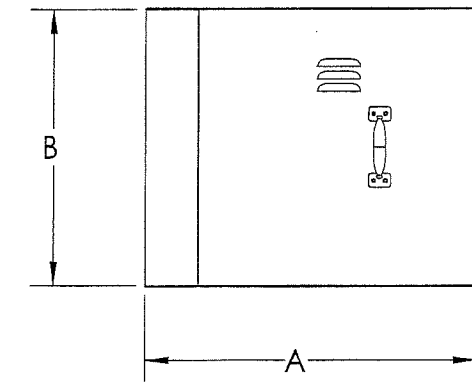
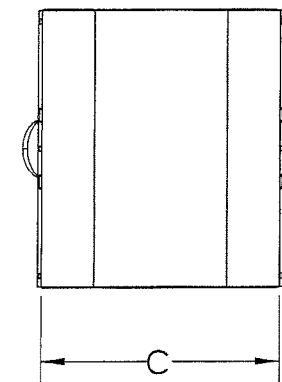


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Miami-Dade Product Control

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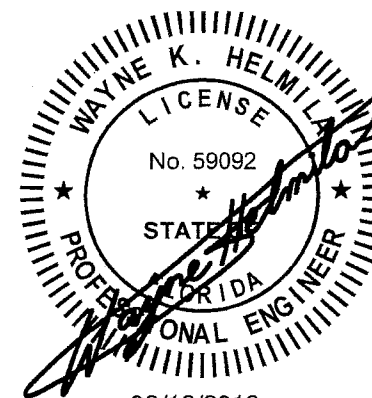
105 School Creek Trail
Luxemburg, WI 54217
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www.rice-inc.com

Florida Firm No: F-01000005061
Certificate of Authorization: #9090
Wayne K. Helmila
Registration No: 59092



MOTOR COVER

WEATHER HOOD



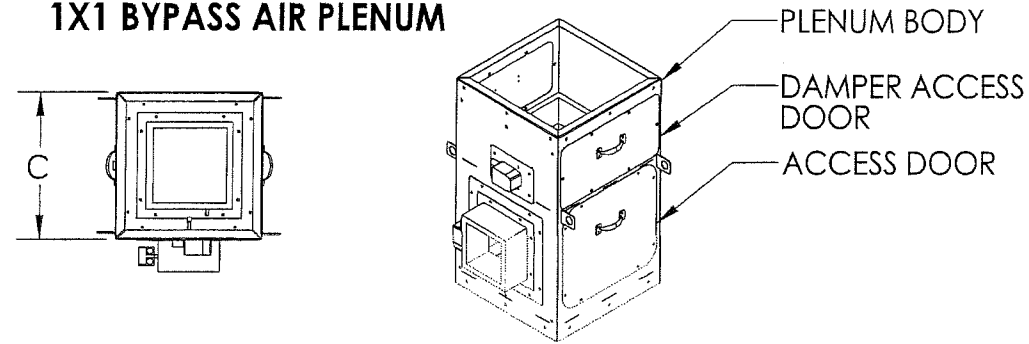
03/13/2019
COA: 9090

PennBarry 605 Shiloh RD Plano, TX 75074

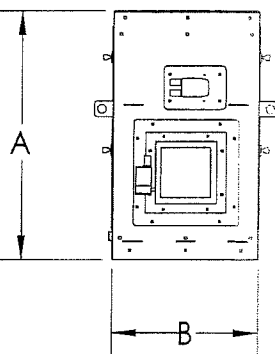
**VPLUME
WEATHER HOOD & MOTOR COVER**

DRAWN: ANUP	DWG NO. 16605801	REV A
SCALE NTS	DATE 04/26/2018	SHEET 8 OF 12

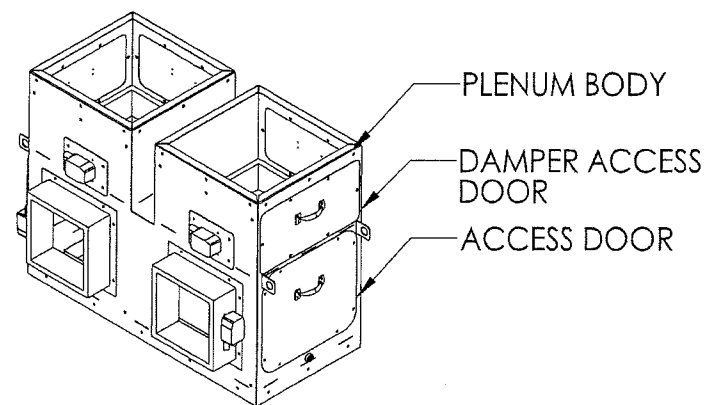
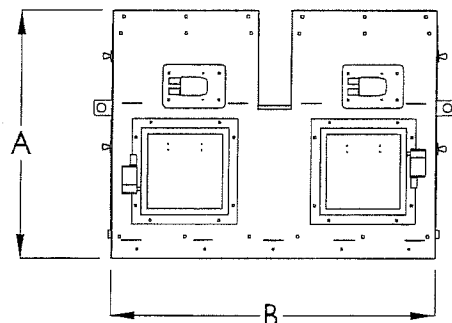
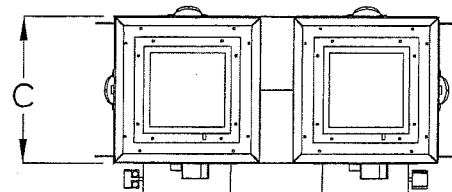
1X1 BYPASS AIR PLENUM



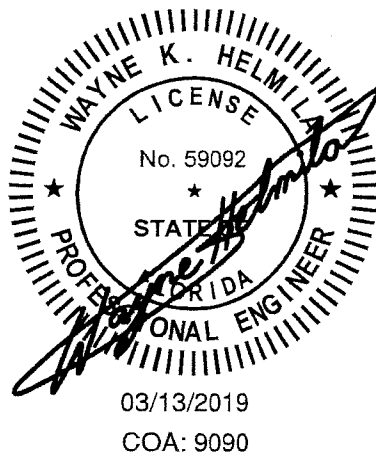
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 Building Code
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UNIT (1X1)	A	B	C	MATERIAL		
				PLENUM BODY	DAMPER ACCESS DOOR	ACCESS DOOR
VPLUME-90	37.00	21.63	21.63	12 GA HRS	14 GA HRS	14 GA HRS
VPLUME-105	37.00	21.63	21.63			
VPLUME-122	37.00	21.63	21.63			
VPLUME-135	40.00	23.63	23.63			
VPLUME-150	42.00	25.63	25.63			
VPLUME-165	42.00	27.63	27.63			
VPLUME-182	40.00	33.63	33.63			



2X1 BYPASS AIR PLENUM



UNIT (2X1)	A	B	C	MATERIAL		
				PLENUM BODY	DAMPER ACCESS DOOR	ACCESS DOOR
VPLUME-90	37.00	48.50	21.63	12 GA HRS	14 GA HRS	14 GA HRS
VPLUME-105	37.00	48.50	21.63			
VPLUME-122	37.00	48.50	21.63			
VPLUME-135	40.00	52.50	23.63			
VPLUME-150	42.00	56.50	25.63			
VPLUME-165	42.00	60.50	27.63			
VPLUME-182	40.00	72.50	33.63			

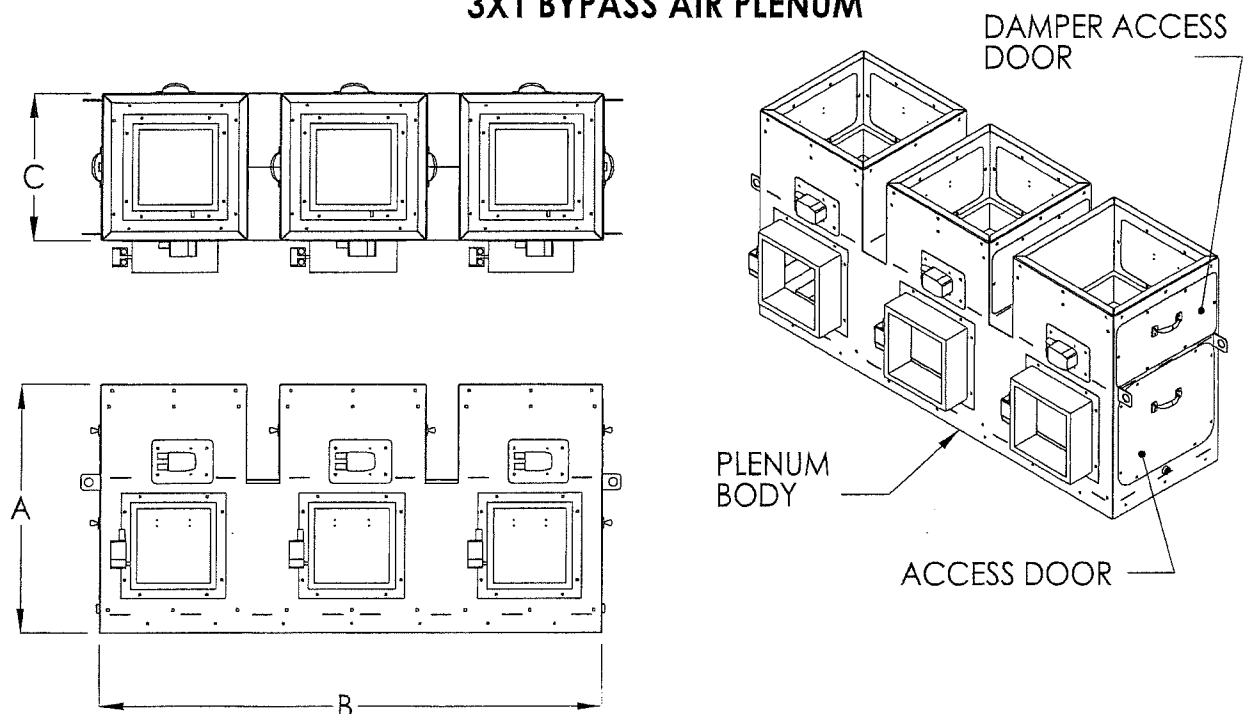
RICE
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 Certificate of Authorization: #9090
 Wayne K. Helmila
 Registration No: 59092

REVISIONS

REV.	DESCRIPTION	DATE	APPROVED
A	ENGINEERING REVISION	02/20/2019	-

3X1 BYPASS AIR PLENUM



UNIT (3X1)	A	B	C	MATERIAL		
				PLENUM BODY	DAMPER ACCESS DOOR	ACCESS DOOR
VPLUME-90	37.00	75.30	21.63	12 GA HRS	14 GA HRS	14 GA HRS
VPLUME-105	37.00	75.30	21.63			
VPLUME-122	37.00	75.30	21.63			
VPLUME-135	40.00	81.30	23.63			
VPLUME-150	42.00	87.30	25.63			
VPLUME-165	42.00	93.30	27.63			
VPLUME-182	40.00	111.30	33.63			

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VPLUME BYPASS AIR PLENUMS

DRAWN: ANUP	DWG NO. 16605801	REV A
SCALE NTS	DATE 04/26/2018	SHEET 9 OF 12

UNIT (2X1)	ACTUAL OUTSIDE (A)	ACTUAL OUTSIDE (B)	ACTUAL OUTSIDE (C)	ACTUAL OUTSIDE (D)	MATERIAL
VPLUME-90	21.00	18.00	48.00	45.00	12 GA GALV
VPLUME-105	21.00	18.00	48.00	45.00	
VPLUME-122	21.00	18.00	48.00	45.00	
VPLUME-135	23.00	20.00	52.00	49.00	
VPLUME-150	25.00	22.00	56.00	53.00	
VPLUME-165	27.00	24.00	60.00	57.00	
VPLUME-182	33.00	30.00	72.00	69.00	

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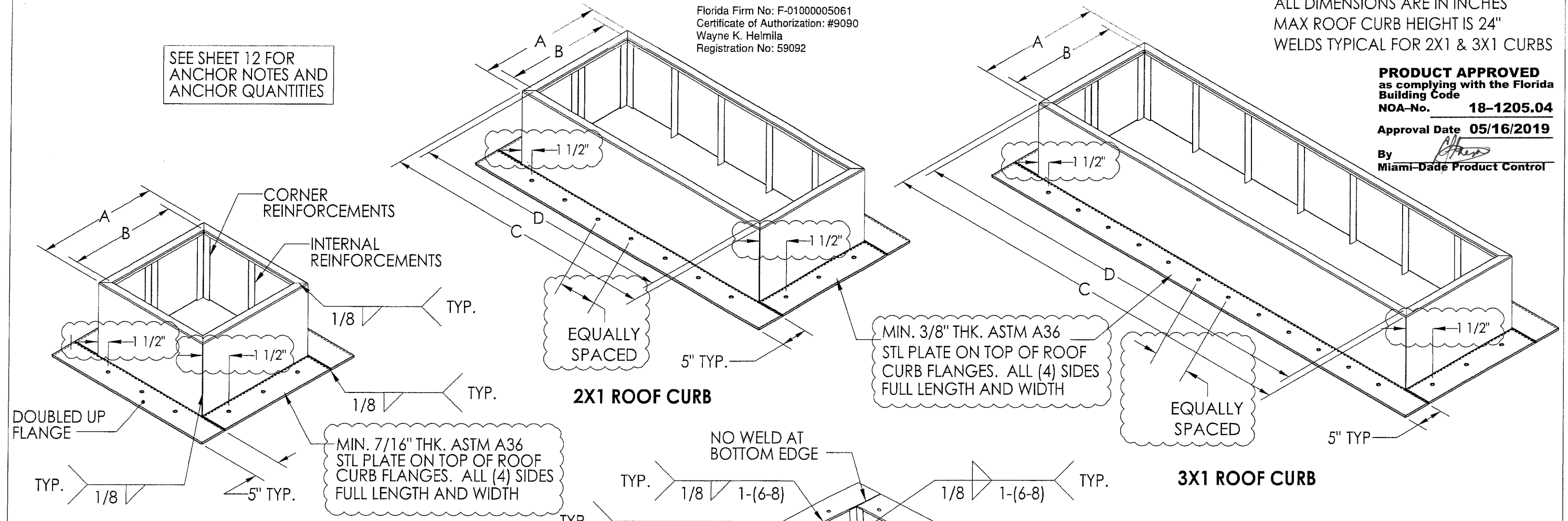
Florida Firm No: F-01000005061
Certificate of Authorization: #9090
Wayne K. Helmila
Registration No: 59092

UNIT (3X1)	ACTUAL OUTSIDE (A)	ACTUAL OUTSIDE (B)	ACTUAL OUTSIDE (C)	ACTUAL OUTSIDE (D)	MATERIAL
VPLUME-90	21.00	18.00	74.50	71.50	12 GA GALV
VPLUME-105	21.00	18.00	74.50	71.50	
VPLUME-122	21.00	18.00	74.50	71.50	
VPLUME-135	23.00	20.00	80.50	77.50	
VPLUME-150	25.00	22.00	86.50	83.50	
VPLUME-165	27.00	24.00	92.50	89.50	
VPLUME-182	33.00	30.00	110.50	107.50	

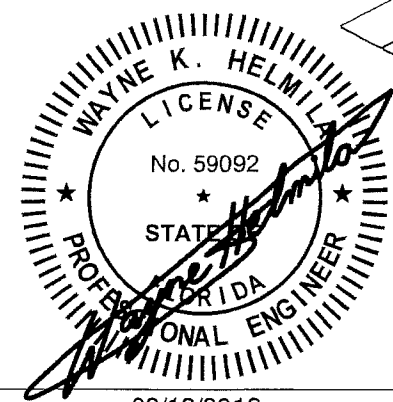
ALL DIMENSIONS ARE IN INCHES
MAX ROOF CURB HEIGHT IS 24"
WELDS TYPICAL FOR 2X1 & 3X1 CURBS

PRODUCT APPROVED
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Building Code
NOA-No. **18-1205.04**
Approval Date **05/16/2019**
By *[Signature]*
Miami-Dade Product Control

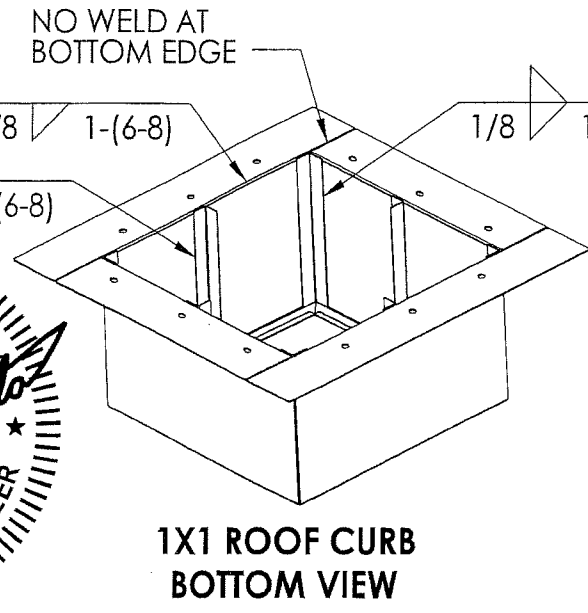
SEE SHEET 12 FOR
ANCHOR NOTES AND
ANCHOR QUANTITIES



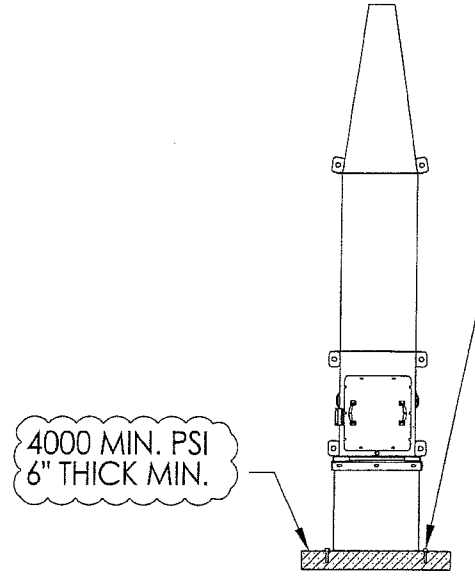
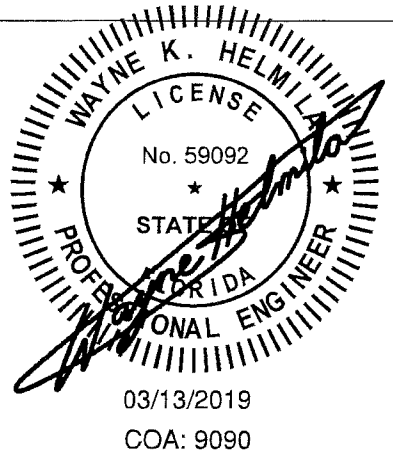
UNIT (1X1)	ACTUAL OUTSIDE A (SQ.)	ACTUAL OUTSIDE B (SQ.)	MATERIAL
VPLUME-90	21.00	18.00	12 GA GALV
VPLUME-105	21.00	18.00	
VPLUME-122	21.00	18.00	
VPLUME-135	23.00	20.00	
VPLUME-150	25.00	22.00	
VPLUME-165	27.00	24.00	
VPLUME-182	33.00	30.00	



03/13/2019
COA: 9090



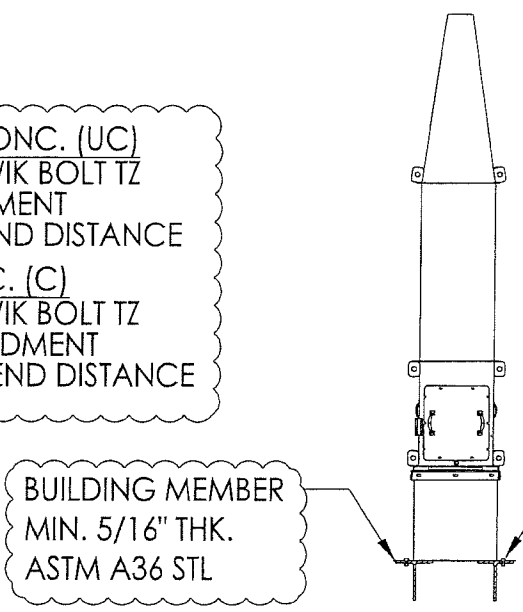
PennBarry 605 Shiloh RD Plano, TX 75074		
VPLUME ROOF CURB		
DRAWN: ANUP	DWG NO. 16605801	REV A
SCALE NTS	DATE 04/26/2018	SHEET 10 OF 12



UN-CRACKED CONC. (UC)
 5/8" DIA. HILTI KWIK BOLT TZ
 4.5" MIN. EMBEDMENT
 9" MIN. EDGE / END DISTANCE
 CRACKED CONC. (C)
 3/4" DIA. HILTI KWIK BOLT TZ
 4.375" MIN. EMBEDMENT
 12" MIN. EDGE / END DISTANCE

4000 MIN. PSI
 6" THICK MIN.

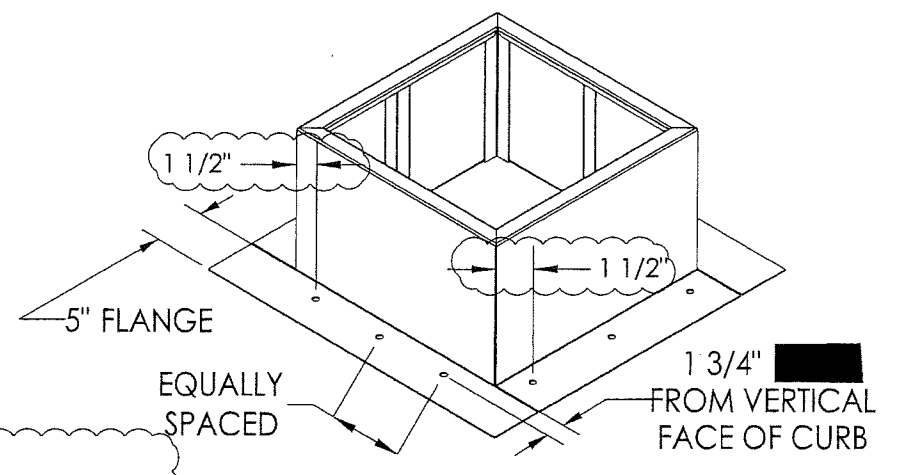
CONCRETE DECK ANCHORING



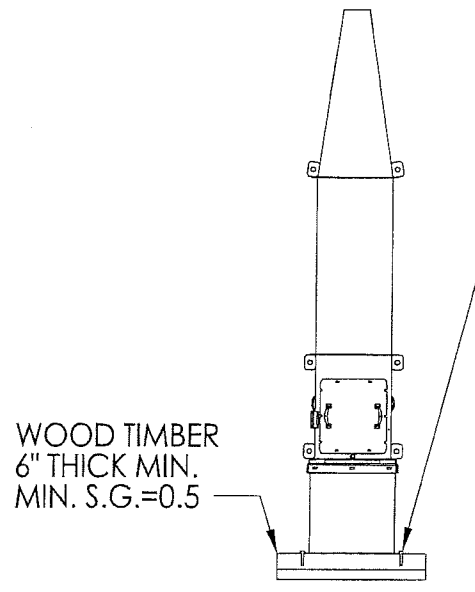
BUILDING MEMBER
 MIN. 5/16" THK.
 ASTM A36 STL

1/2" DIA. THRU BOLT
 1" MIN. EDGE / END DISTANCE ON BUILDING MEMBER

STEEL ANCHORING - THRU BOLT

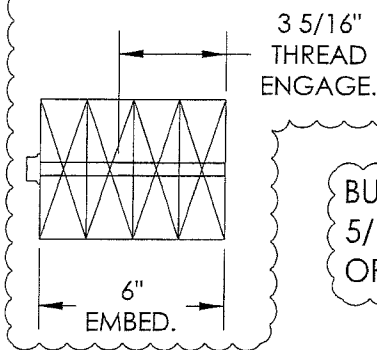


1X1 ROOF CURB



5/8" DIA. LAG BOLT
 6" MIN. EMBEDMENT
 3 5/16" MIN. THREAD ENGAGEMENT
 2 1/2" MIN. EDGE DISTANCE
 2 1/2" MIN. END DISTANCE

WOOD TIMBER
 6" THICK MIN.
 MIN. S.G.=0.5



BUILDING MEMBER
 5/16" THK ASTM A36 STL
 OR 5/16" THK 6063-T5 ALUM.

5/16" DIA. SELF TAPPING SCREW (OR BETTER)
 5/16" MIN. THREAD ENGAGEMENT
 1/2" MIN. EDGE DISTANCE ON BUILDING MEMBER

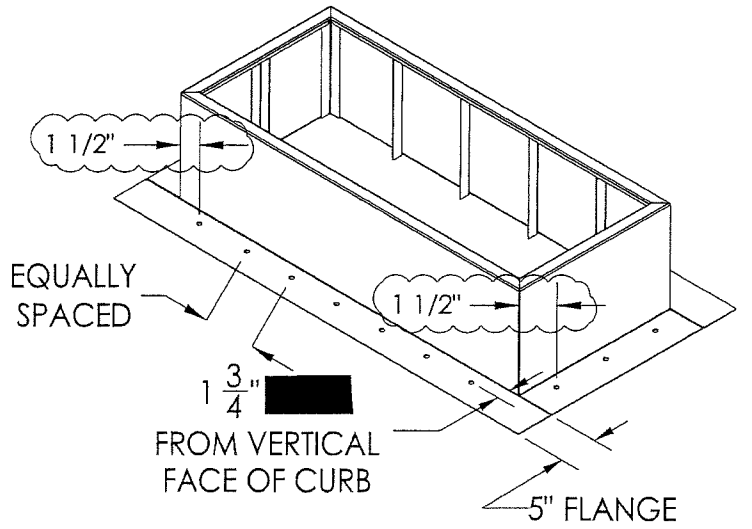
TIMBER ANCHORING

METAL ANCHORING - SELF TAPPING

SEE SHEET 12 FOR
 ANCHOR NOTES AND
 ANCHOR QUANTITIES

RICE
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 Wayne K. Helmila
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2X1 OR 3X1 ROOF CURB

ALL DIMENSIONS ARE IN INCHES

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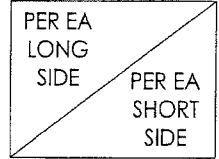
REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
A	ENGINEERING REVISION	02/20/2019	-

PennBarry 605 Shiloh RD Plano, TX 75074			
VPLUME ROOF CURB INSTALLATION			
DRAWN: ANUP	DWG NO. 16605801	REV A	
SCALE NTS	DATE 04/26/2018	SHEET 11 OF 12	

REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
A	ENGINEERING REVISION	02/20/2019	-

UNIT	CONCRETE DECK ANCHORING						TIMBER ANCHORING			STEEL ANCHORING - THRU BOLT			METAL ANCHORING - SELF TAPPING					
	1X1 OR FAN ONLY		2X1		3X1		1X1 OR FAN ONLY	2X1	3X1	1X1 OR FAN ONLY	2X1	3X1	1X1 OR FAN ONLY		2X1		3X1	
	UC	C	UC	C	UC	C							STL	ALUM	STL	ALUM	STL	ALUM
VPLUME-90																		
VPLUME-105	4	4	6	8	9	13		7	12				7	8	10	12	16	18
VPLUME-122		4	4	4	4	4	5	5	5	4	8	8	7	8	10	8	8	8
VPLUME-135				8	5	13												
VPLUME-150	4	5	7	9	5	11	5	8	13	4	4	4	7	9	7	13	7	19
VPLUME-165		5	4	10	5	4		5	5				7	9	9	9	18	9
VPLUME-182			8	4	12	5						10	4				18	7

LEGEND

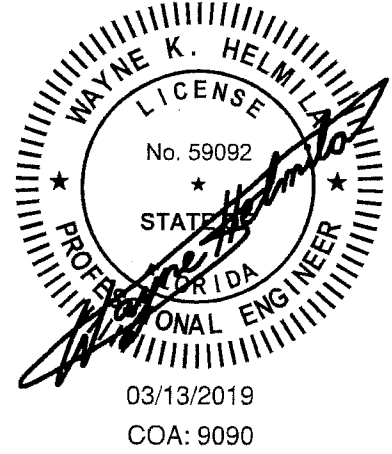


UC = UN-CRACKED CONCRETE
 C = CRACKED CONCRETE
 STL = STEEL
 ALUM = ALUMINUM

NOTE: ALL ANCHORS SHALL BE 1 3/4" FROM VERTICAL CURB FACE. END ANCHORS SHALL BE 1 1/2" FROM VERTICAL EDGE. ALL INTERMEDIATE ANCHORS SHALL BE EQUALLY SPACED BETWEEN END ANCHORS. HOLE QUANTITY AND LOCATION IS ONLY FOR A VISUAL REPRESENTATION AND **DOES NOT** REFLECT THE ACTUAL QUANTITY AND SPACING OF THE ANCHORS. FOR ANCHOR QUANTITY PER SIDE AND ANCHORAGE SUBSTRATE, REFER TO SHEET 12.

PRODUCT APPROVED
 as complying with the Florida Building Code
 NOA-No. **18-1205.04**
 Approval Date **05/16/2019**
 By *[Signature]*
 Miami-Dade Product Control

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 Certificate of Authorization: #9090
 Wayne K. Helmila
 Registration No: 59092



PennBarry 605 Shiloh RD Plano, TX 75074			
VPLUME ANCHORAGE SCHEDULE			
DRAWN:	DWG NO.	REV	
ANUP	16605801	A	
SCALE	DATE	SHEET	
NTS	04/26/2018	12 OF 12	