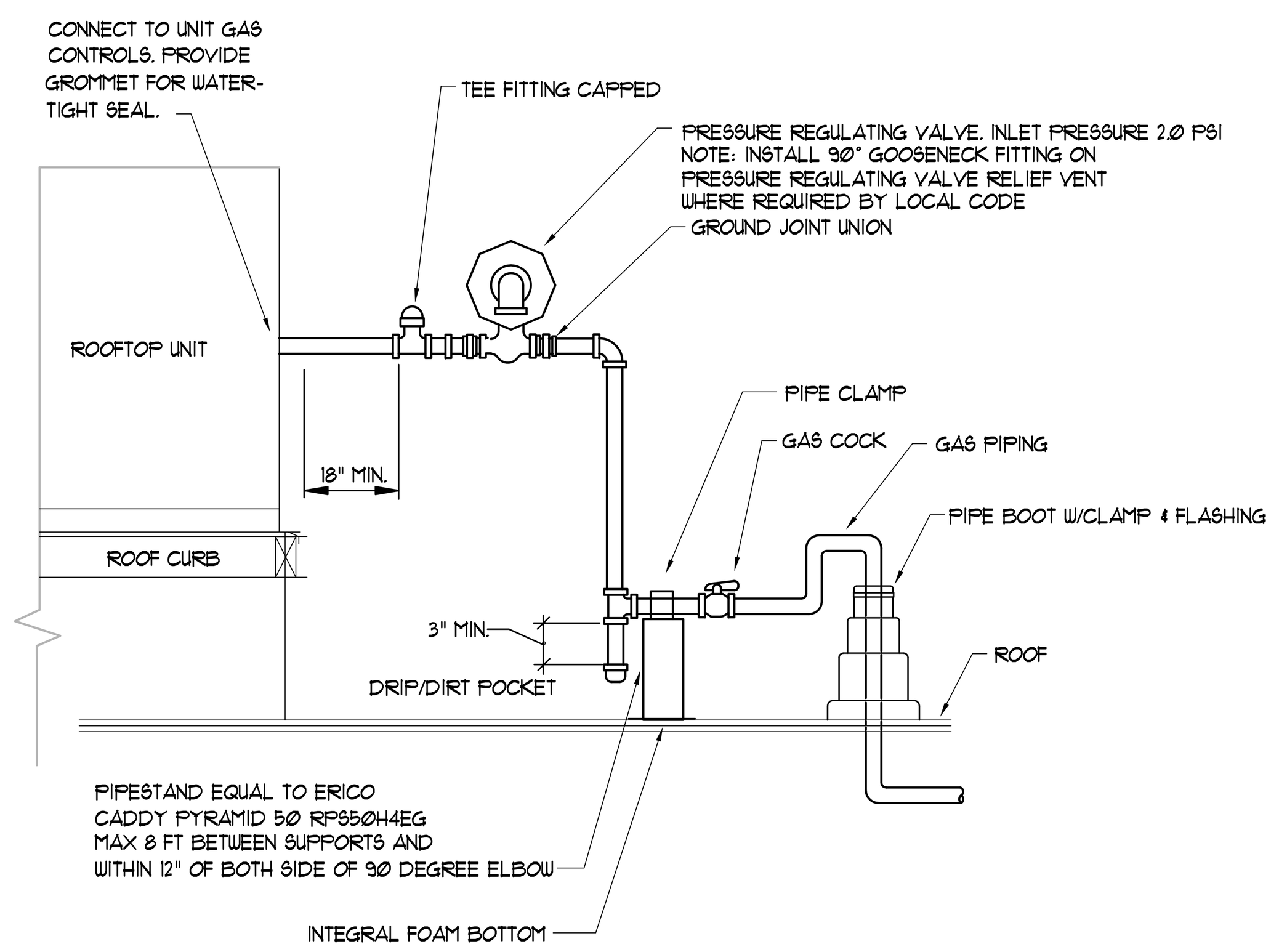
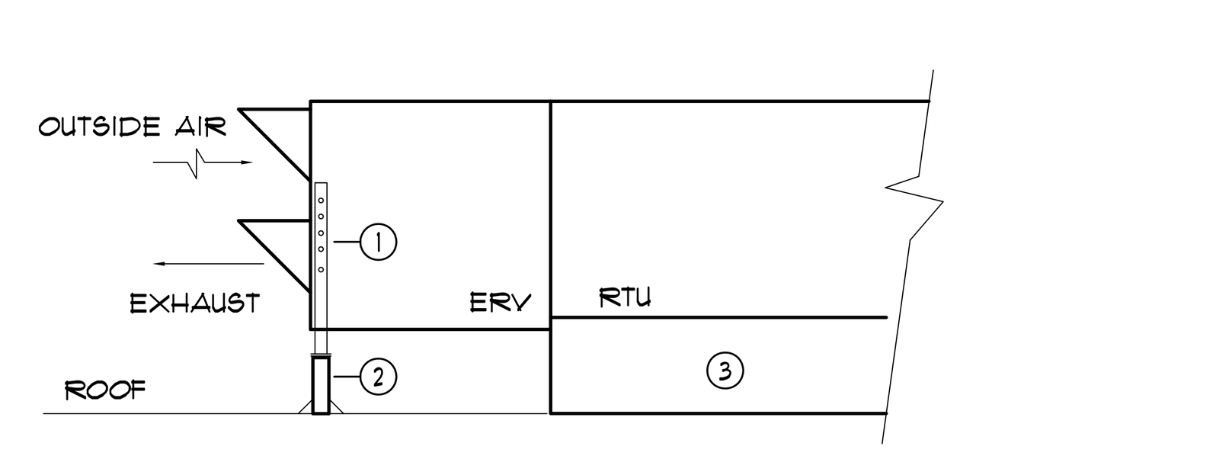


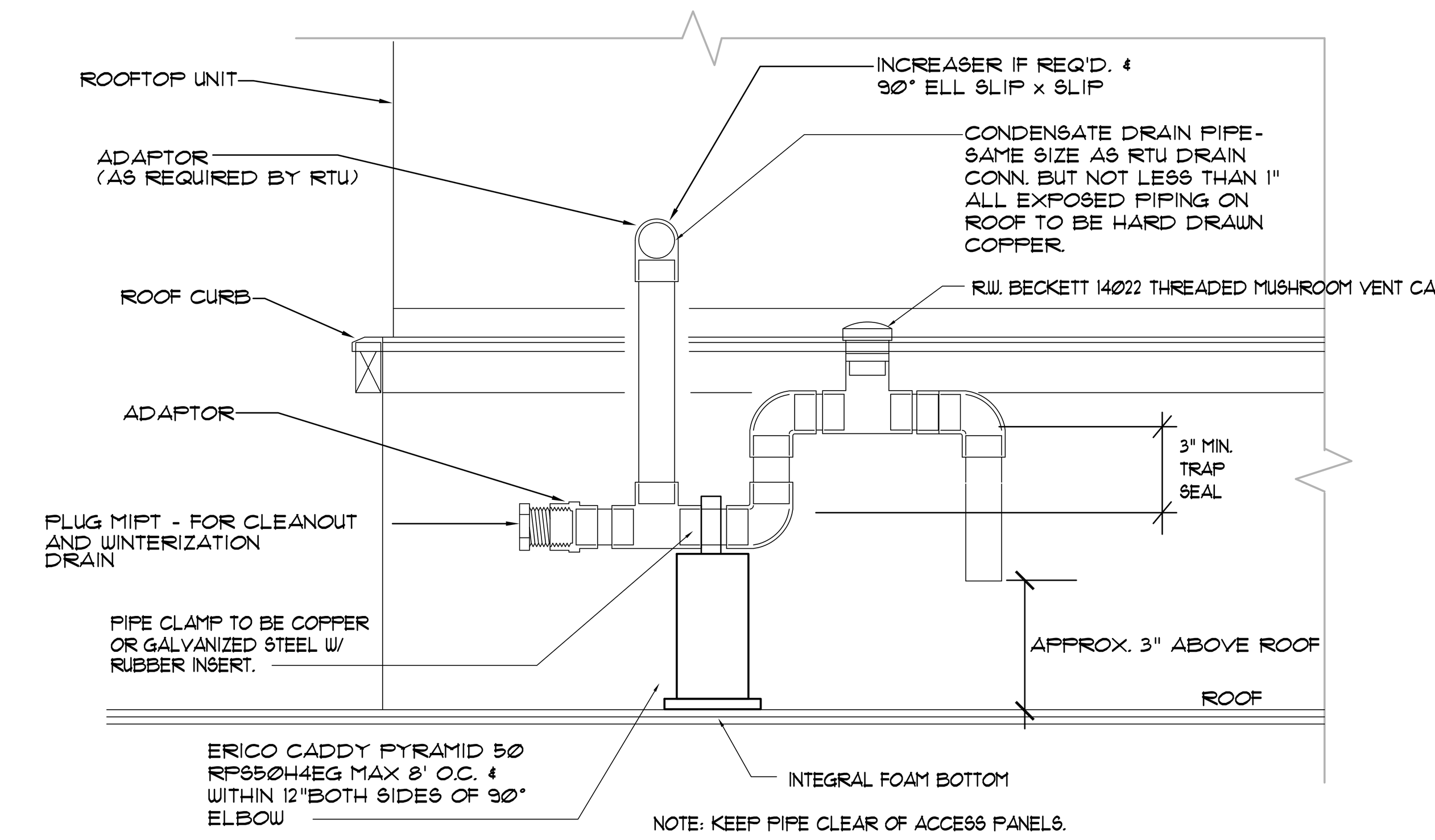
1 M4.0 RTU GAS CONNECTION DETAIL
NOT TO SCALE



KEYED NOTES

1. ERV ADJUSTABLE SUPPORT LEG (2)
2. 14" FLASHED SUPPORT RAIL EQUAL TO PATE-ES-5. TOP OF RAIL 4" WIDE
3. 24" RTU CURB

2 M4.0 ERV SUPPORT
SCALE: NONE



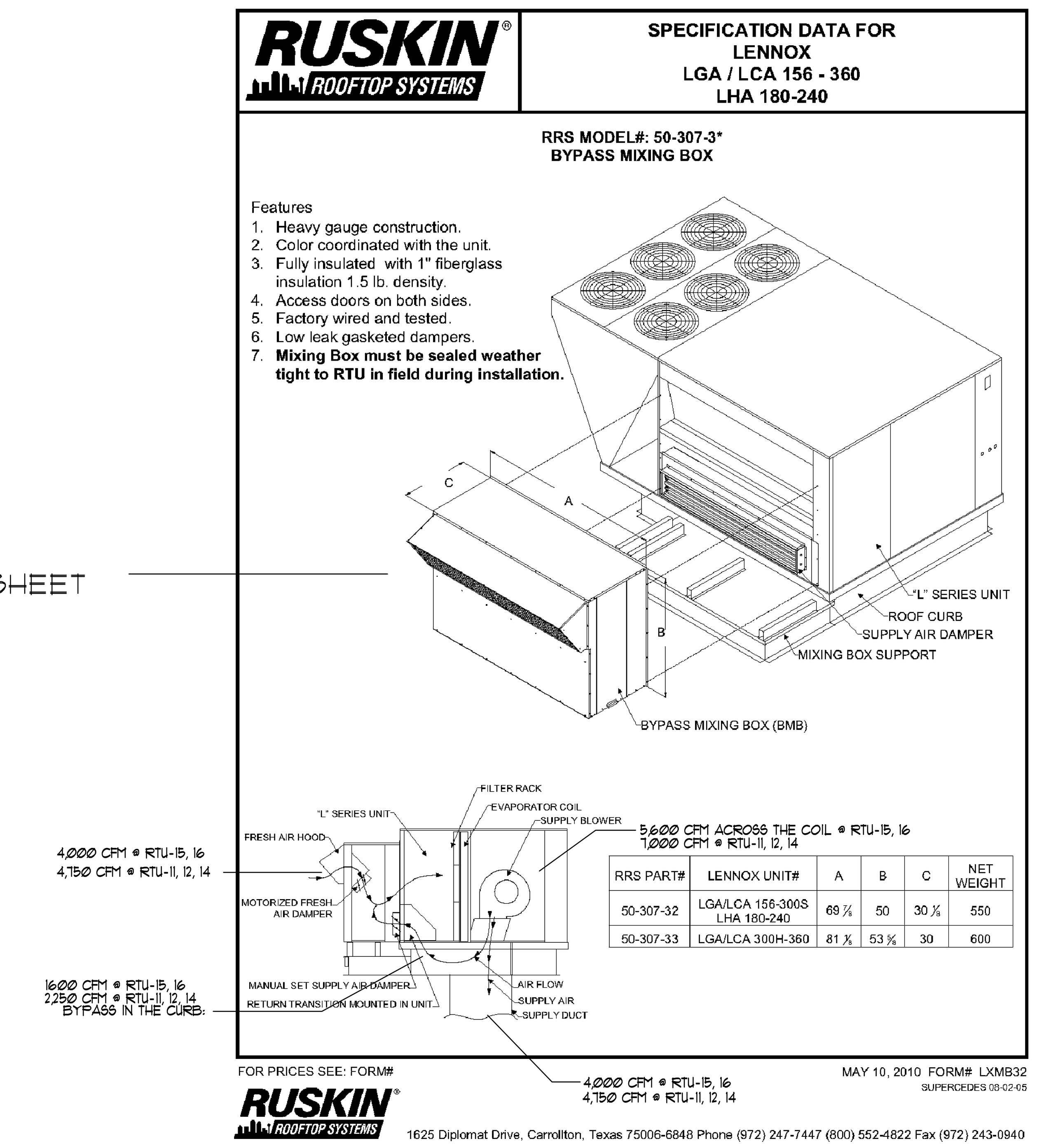
3 M4.0 RTU CONDENSATE DRAIN DETAIL
NOT TO SCALE

A.M. CERRA, JR. P.E.
1827 POWERS FERRY ROAD
BLDG # 18, SUITE # 100
ATLANTA, GEORGIA 30339
770-980-0581

22412.01

5/1/24

SEE NEW MIXING BOX DETAIL THIS SHEET



RUSKIN ROOFTOP SYSTEMS

SPECIFICATION DATA FOR LENNOX LGA / LCA 156 - 360 LHA 180-240

RRS MODEL#: 50-307-3*
BYPASS MIXING BOX

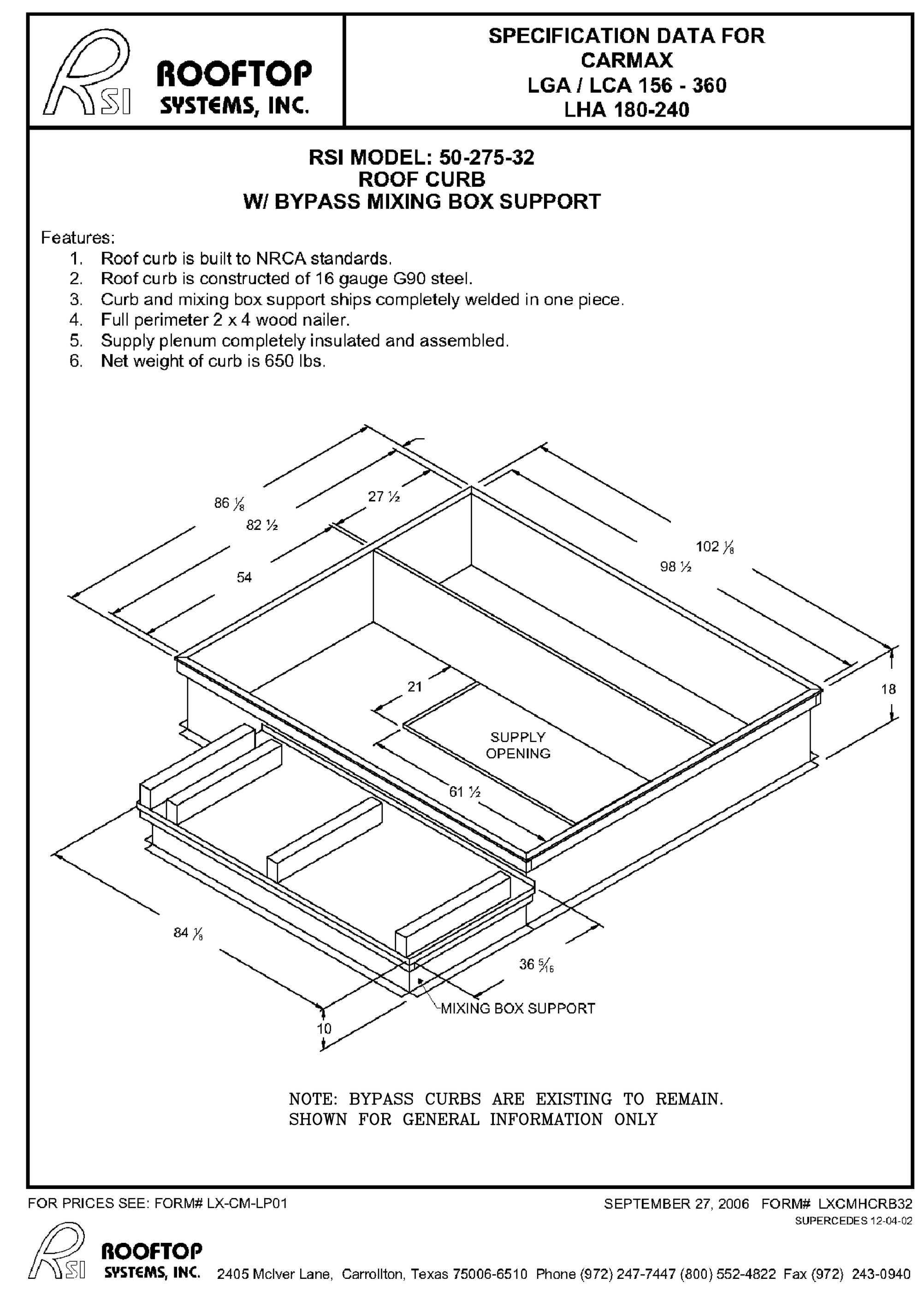
Features
1. Heavy gauge construction.
2. Color coordinated with the unit.
3. Fully insulated with 1" fiberglass insulation 1.5 lb. density.
4. Access doors on both sides.
5. Factory wired and tested.
6. Low leak gasketed dampers.
7. **Mixing Box must be sealed weather tight to RTU in field during installation.**

RRS PART#	LENNOX UNIT#	A	B	C	NET WEIGHT
50-307-32	LGA/LCA 156-300S LHA 180-240	69 7/8	50	30 1/8	550
50-307-33	LGA/LCA 300H-360	81 1/8	53 5/8	30	600

FOR PRICES SEE: FORM#
MAY 10, 2010 FORM# LXMB32
SUPERCEDES 08-02-05

RUSKIN ROOFTOP SYSTEMS 1625 Diplomat Drive, Carrollton, Texas 75006-6848 Phone (972) 247-7447 (800) 552-4822 Fax (972) 243-0940

6 M4.0 MIXING BOX DETAIL
NOT TO SCALE



ROOFTOP SYSTEMS, INC.

SPECIFICATION DATA FOR CARMAX LGA / LCA 156 - 360 LHA 180-240

RSI MODEL: 50-275-32
ROOF CURB
W/ BYPASS MIXING BOX SUPPORT

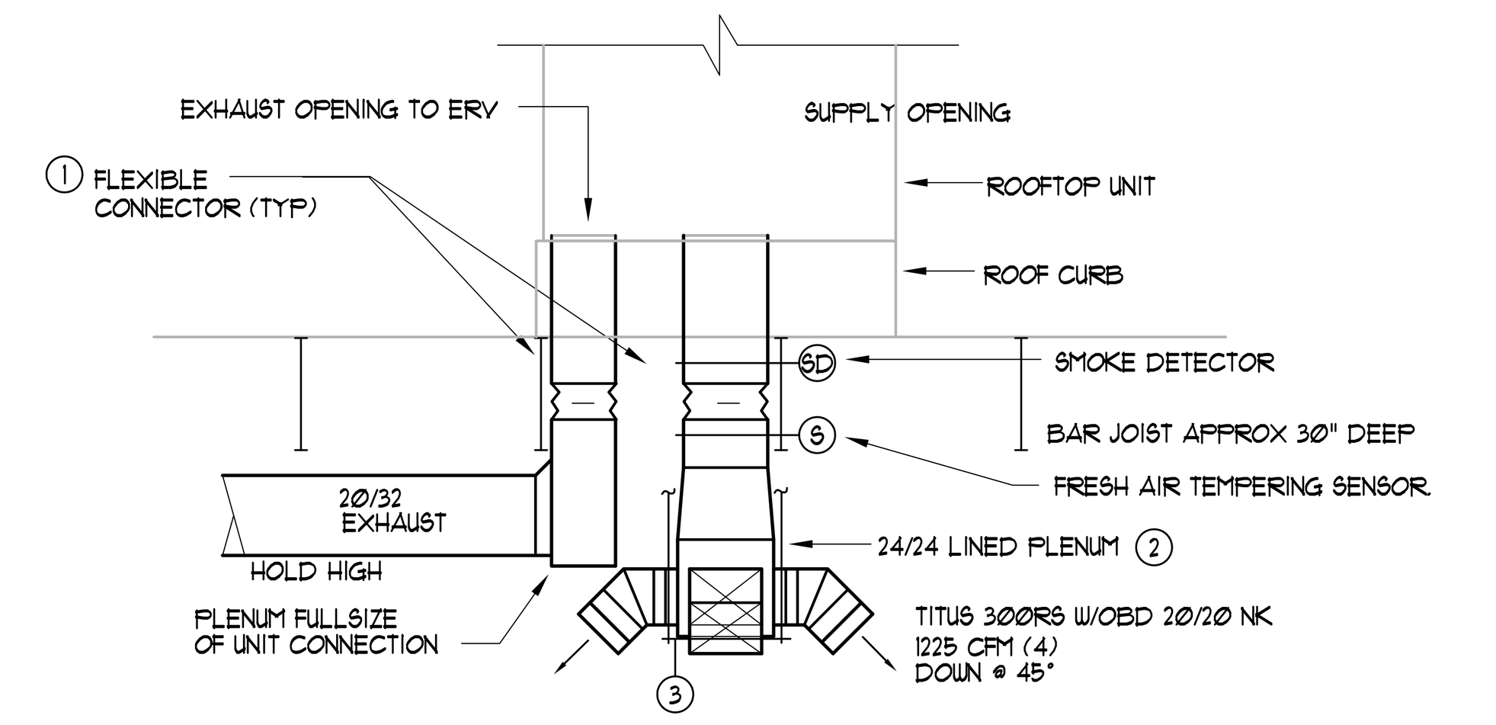
Features:
1. Roof curb is built to NRCA standards.
2. Roof curb is constructed of 16 gauge G90 steel.
3. Curb and mixing box support ships completely welded in one piece.
4. Full perimeter 2 x 4 wood nailer.
5. Supply plenum completely insulated and assembled.
6. Net weight of curb is 650 lbs.

NOTE: BYPASS CURBS ARE EXISTING TO REMAIN. SHOWN FOR GENERAL INFORMATION ONLY

FOR PRICES SEE: FORM# LX-CM-LP01
SEPTEMBER 27, 2006 FORM# LXCMHCRB32
SUPERCEDES 12-04-02

ROOFTOP SYSTEMS, INC. 2405 McIver Lane, Carrollton, Texas 75006-6510 Phone (972) 247-7447 (800) 552-4822 Fax (972) 243-0940

5 M4.0 BYPASS CURB DETAIL
NOT TO SCALE

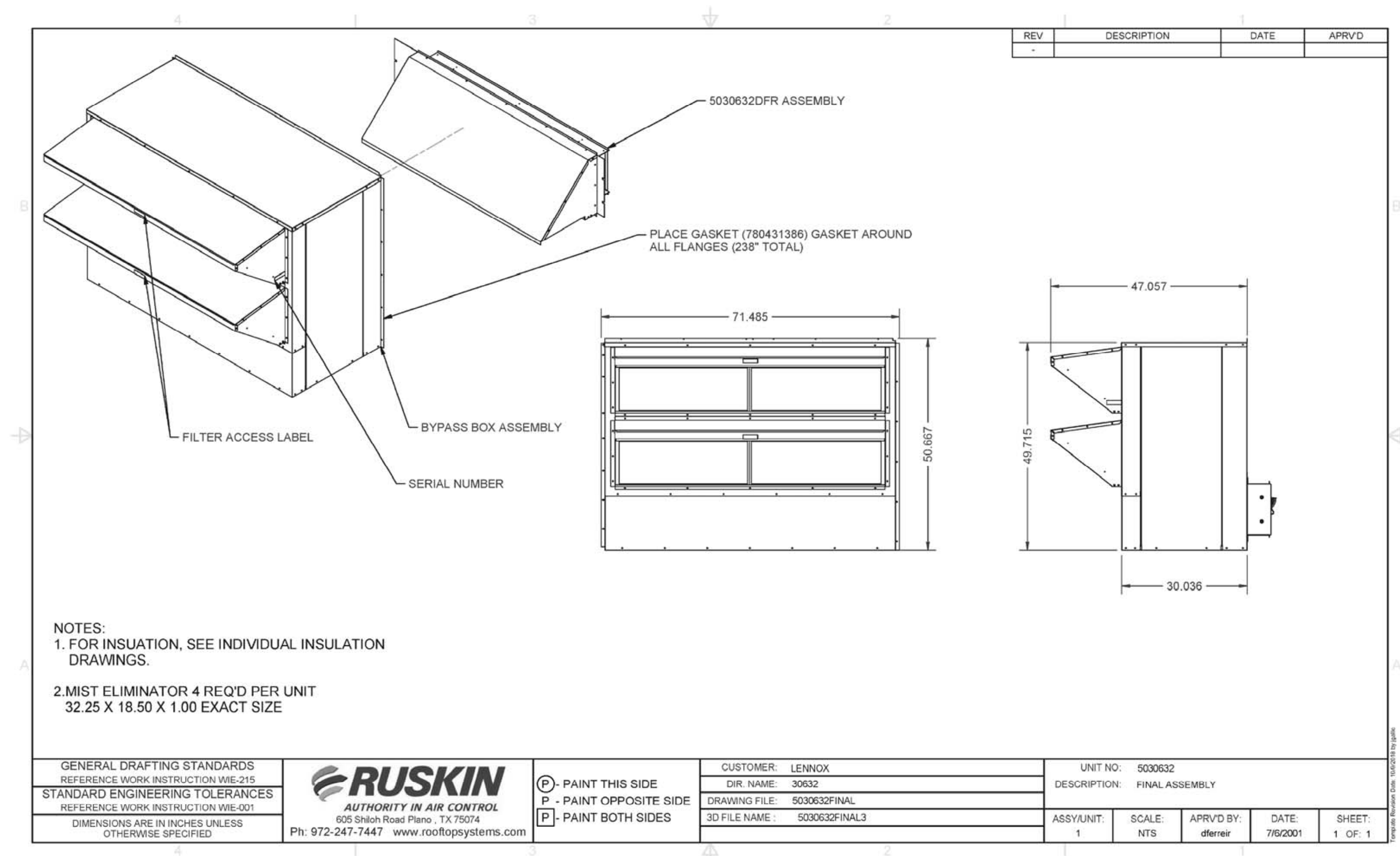


KEYED NOTES:

RTU-13
RTU-10 SIMILAR

1. SUPPORT DUCT ON BOTH SIDES OF FLEX CONNECTOR INDEPENDENT OF EACH OTHER (TYPICAL)
2. ALL SUPPLY PLENUMS & REGISTER FITTINGS LINED.
3. PLENUM SUPPORT FROM BOTTOM OF DUCT. TYPICAL FOR SUPPLY & ERV EXH AUST

4 M4.0 RTU DUCT DETAIL
NOT TO SCALE



7 M4.0 NEW MIXING BOX
NOT TO SCALE

RELEASED FOR CONSTRUCTION

APPROVAL

CARMAX PE

REVISIONS

REV. NO	DATE	DESCRIPTION

CARMAX THE AUTO SUPERSTORE

CARMAX THE AUTO SUPERSTORE, INC.
12800 TUCKAHOE CREEK PKWY RICHMOND, VA 23238
(804) 747-0422

STORE NO. 7270
17606 BURT STREET
OMAHA, NEBRASKA 68118

PROJECT NO 22412.01
DATE 8 MAY 2024
SHEET TITLE DETAILS-HVAC
SHEET NO M4.0

A.M. CERRA, JR. P.E.
1827 POWERS FERRY ROAD
BLDG # 18, SUITE # 100
ATLANTA, GEORGIA 30339
770-980-0581

22412.01

5/1/24

FLOOR PLAN – HVAC

1 / M2.0

SCALE: 1/8" = 1'-0"

KEYED NOTES:

1. HOLD DUCT HIGH
2. UNIT HEATERS CURRENTLY THIRD STAGE GEAT THRU RTU A56 BOARD. FURNISH NEW HEATING ONLY THERMOSTAT FOR INDEPENDENT UNIT HEATER CONTROL. THE ONLY ACCEPTABLE THERMOSTAT IS LITESTAT TGH2-KRO NON-ADJUSTABLE 68F OCCUPIED 55F UNOCCUPIED. INSTALL AT 48" AFF WHERE INSTALLED ON EXTERIOR WALL FURNISH INSULATED WALL PLATE EQUAL TO ICM CONTROLS ACC-WP04
3. CTOF EXHAUST & MAKEUP AIR EXISTING TO REMAIN
4. PAINT BOOTH EXHAUST & MAKEUP AIR EXISTING TO REMAIN
5. EXISTING DRYER VENT TO ROOF TO REMAIN
6. EXISTING MIX ROOM EXHAUS TO ROOF TO REMAIN
7. NEW SECTION OF 18/16 CONNECT TO EXISTING
8. CONNECT EXISTING 18/16 TO NEW 18/16 EXHAUST DUCT
9. PLENUM FULL SIZE OF UNIT CONNECTION
10. EXISTING SMOKE DETECTORS TO BE REMAIN & BE REUSED
11. NEW SUPPLY PLENUM & REGISTERS. SEE DETAIL 4/M4.0
12. CONNECT NEW TRANSITION TO EXISTING 18/16
13. CONNECT NEW 45° TAKEOFF TO EXISTING 18/16
14. EXISTING SUPPLY REGISTERS AND PLENUM TO REMAIN. CLEAN ALL SUPPLY REGISTERS. REPLACE OR REPAIR EXISTING REGISTERS AS NEEDED.

SERVICE AREA AIR BALANCE

ITEM (1)	O.A.	EXHAUST
RTU-10	4900	4600
RTU-11	4750	
RTU-12	4750	
RTU-13	4900	4600
RTU-14	4750	
EF-7		1200
EF-8		300
EF-9		(600)
EF-10		400
EF-12		1500
EF-13		2100
EF-14		2100
EF-15		3000
EF-18		3000
TOTAL	24,050	23,400

(1) FAN ON CONTINUOUSLY DURING OCCUPIED

MINIMUM 1 CFM/SF EXHAUST AT THE FLOOR FOR EXEMPTION TO CLASS 1 DIVISION II PER NEC
NET SERVICE AREA = 14,200 SF
MINIMUM LOW EXHAUST REQUIRED = 14,200 SF(1 CFM/SF)
= 14,200 CFM

TOTAL LOW EXHAUST FROM EF-15&18
AND FROM RTU-10 & 13 ERV'S
= (2X3,000) + (2X4,600)
= 15,200 CFM

MINIMUM EXHAUST PER 2012 IMC
MECHANICAL CODE FOR REPAIR GARAGES
PER TABLE 403.3 IS .75 CFM/SF
NET SERVICE AREA = 14,200 SF
MINIMUM EXHAUST = 14,200 CFM (.75 CFM/SF)
= 10,650 CFM

COSMETIC AREA AIR BALANCE

ITEM (1)	O.A.	EXHAUST
RTU-15	4000	
RTU-16	4000	
EF-9		(200)
EF-20		2850
EF-21		2850
MIXING ROOM		1150 (2)
TOTAL	8,000	7,050

(1) FAN ON CONTINUOUSLY DURING OCCUPIED

MINIMUM 1 CFM/SF EXHAUST AT THE FLOOR FOR EXEMPTION TO CLASS 1 DIVISION II PER NEC
COSMETIC AREA = 4,510 SF
MINIMUM LOW EXHAUST = 4,510 SF(1 CFM/SF)
= 4,510 CFM

TOTAL LOW EXHAUST FROM EF-20 & 21
= (2X2,850)
= 5,700 CFM

MINIMUM EXHAUST PER 2012 IMC
MECHANICAL CODE FOR REPAIR GARAGES
PER TABLE 403.3 IS .75 CFM/SF
COSMETIC AREA = 4,510 SF
MINIMUM EXHAUST = 4,510 SF(.75 CFM/SF)
= 3,383 CFM

(2) MIXING ROOM EXHAUST BY OTHERS.

NOT RELEASED FOR CONSTRUCTION

APPROVAL

CARMAX PE

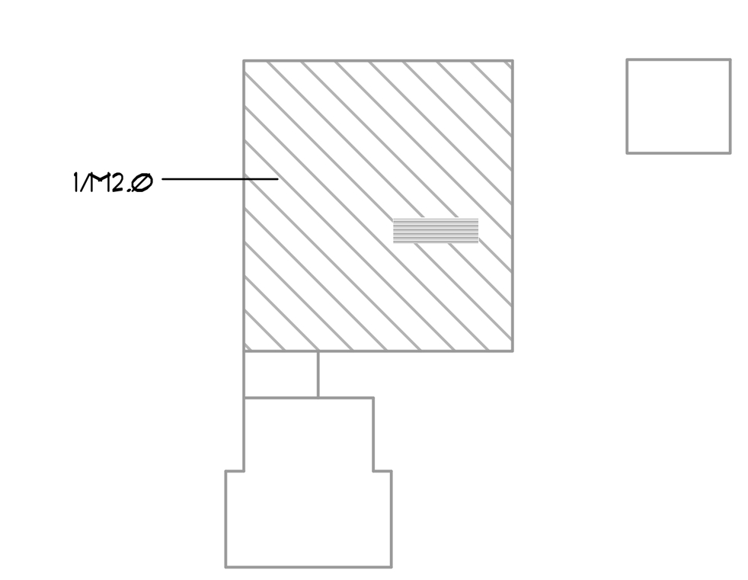
REVISIONS

REV. NO	DATE	DESCRIPTION

CARMAX
THE AUTO SUPERSTORE

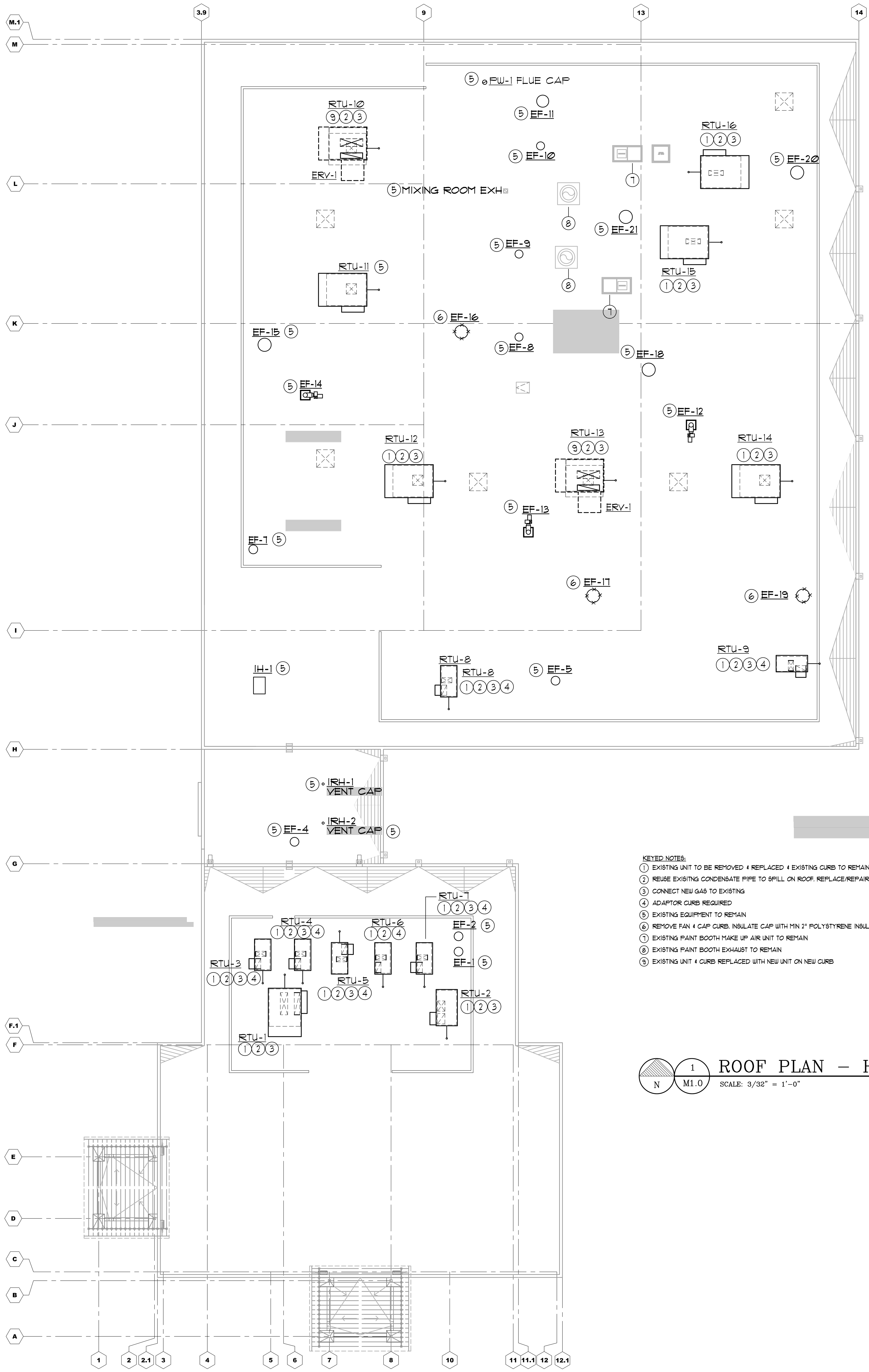
CARMAX THE AUTO SUPERSTORE, INC.
12800 TUCKAHOE CREEK PKWY RICHMOND, VA 23238
(804) 747-0422

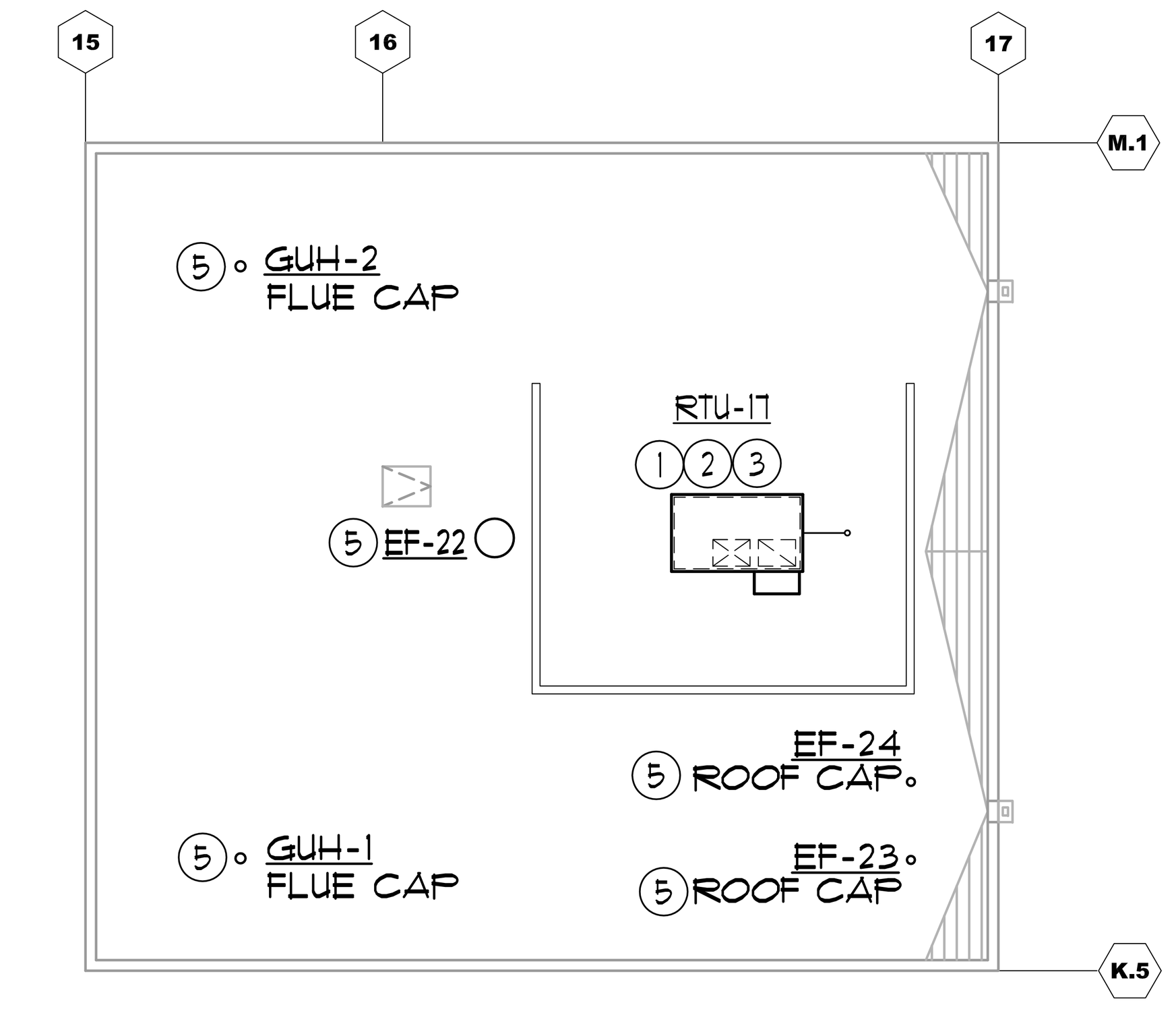
STORE NO. 7270
17606 BURT STREET
OMAHA, NEBRASKA 68118



KEY PLAN

PROJECT NO	22412.01
DATE	8 MAY 2024
SHEET TITLE	FLOOR PLAN - HVAC
SHEET NO	M2.0





A.M. CERRA, JR. P.E.
1827 POWERS FERRY ROAD
BLDG # 18, SUITE # 100
ATLANTA, GEORGIA 30339
770-980-0581

22412.01

5/1/24

KEYED NOTES:

1. EXISTING UNIT TO BE REMOVED & REPLACED & EXISTING CURB TO REMAIN
2. REUSE EXISITNG CONDENSATE PIPE TO SPILL ON ROOF. REPLACE/REPAIR AS NEEDED
3. CONNECT NEW GAS TO EXISTING
4. ADAPTOR CURB REQUIRED
5. EXISTING EQUIPMENT TO REMAIN
6. REMOVE FAN & CAP CURB. INSULATE CAP WITH MIN 2" POLYSTYRENE INSULATION.
7. EXISTING PAINT BOOTH MAKE UP AIR UNIT TO REMAIN
8. EXISTING PAINT BOOTH EXHAUST TO REMAIN
9. EXISTING UNIT & CURB REPLACED WITH NEW UNIT ON NEW CURB

1 / M1.0 ROOF PLAN – HVAC
SCALE: 3/32" = 1'-0"

RELEASED FOR CONSTRUCTION

APPROVAL

CARMAX PE

REVISIONS

REV. NO	DATE	DESCRIPTION

CARMAX THE AUTO SUPERSTORE

CARMAX THE AUTO SUPERSTORE, INC.
12800 TUCKAHOE CREEK PKWY RICHMOND, VA 23238
(804) 747-0422

STORE NO. 7270
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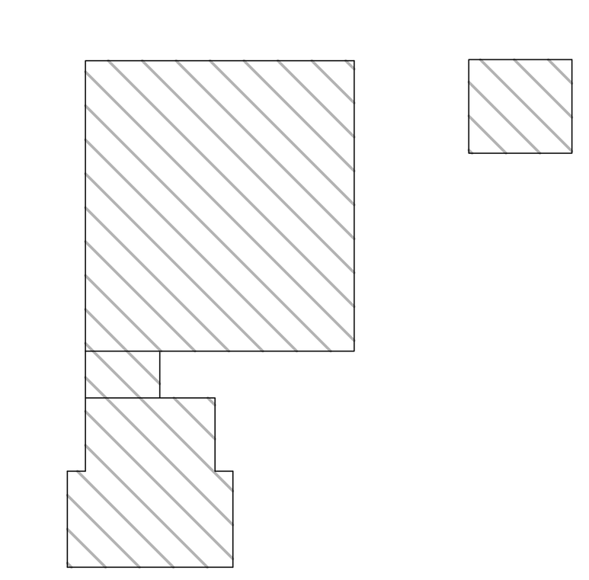


KEY PLAN

PROJECT NO	22412.01
DATE	8 MAY 2024
SHEET TITLE	ROOF PLAN - HVAC
SHEET NO	M1.0

HVAC GENERAL NOTES

1. ALL CONTROL WIRING SHALL BE PERFORMED IN ACCORDANCE WITH THE LATEST EDITION OF N.F.P.A. 70. ALL WIRING SHALL BE CONCEALED.
2. CONTRACTOR SHALL INSTALL ALL ROOF CURBS FOR ROOFTOP UNITS LEVEL TO HORIZON AT (4) CORNERS.
3. AIR TEST AND BALANCE REQUIRED BY INDEPENDENT T&B CONTRACTOR AABC OR NEBB CERTIFIED. SEE TEST AND BALANCE SCOPE ON THIS SHEET
4. EXISTING SMOKE DETECTORS TO REMAIN AND BE REUSED.
5. LENNOX START UP TECH SHALL PROGRAM THE PRODIGY BOARDS IN ALL NEW RTU'S. CORE BOARDS SHALL BE PROGRAMMED PRIOR TO CSUSA RECOMMISSIONING THE EMS.
6. CONTRACTOR SHALL PROVIDE CLEAN FILTERS IN ROOFTOP UNITS PRIOR TO AIR BALANCE AND AGAIN PRIOR TO OWNER ACCEPTANCE.
7. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE 2012 INTERNATIONAL MECHANICAL CODE AND THE 2018 INTERNATIONAL FUEL GAS CODE WITH LOCAL AMENDMENTS. ALL EQUIPMENT AND MATERIALS CAPABLE OF BEING U.L. LABELED OR SHALL BEAR THE U.L. LABEL.
8. CONTRACTOR SHALL PROVIDE A GASKET BETWEEN BASE OF ROOF MOUNTED FANS AND ROOF CURBS TO PROVIDE AN AIRTIGHT JOINT.
9. PROVIDE MISCELLANEOUS STEEL AND/OR WOOD BLOCKING AND SUPPORT AT ROOF CURBS AND OPENINGS AS REQUIRED TO SUPPORT ROOF AND EQUIPMENT. SPECIFIC REQUIREMENTS SHALL BE VERIFIED WITH STRUCTURAL ENGINEER AND APPROVED EQUIPMENT DRAWINGS PRIOR TO PLACEMENT.
10. NEW SUPPY AND EXHAUST DUCT SHALL BE 2.0 IN PRESSURE CLASS.
11. NEW DUCT SHALL HAVE PAINT GRIP FINISH AND BE EITHER GALVANNEALED OR MILL PHOSPHATIZED.
12. ANY NEW SUPPLY DUCT SHALL BE INTERNALLY INSULATED WITH 1" DUCT LINER EQUAL TO OWENS CORNING ACOUSTITEX, 1.5 LB DENSITY, R=3.8. NEW EXHAUST DUCT TO ERV'S IS NOT REQUIRED TO BE INSULATED.

PIPING GENERAL NOTES

1. ANY NEW GAS PIPING SHALL BE ASTM A-120, SCHEDULE 40, BLACK STEEL WITH 150 LB. MALLEABLE IRON SCREWED FITTINGS.
2. ANY NEW EXTERIOR GAS PIPE SHALL BE PAINTED WITH RUST PROHIBITIVE PAINT.

ROOFTOP UNIT NOTES

1. CARMAX AUTO SUPERSTORE, LLC HAS A NATIONAL ACCOUNT WITH LENNOX INDUSTRIES, INC., FOR PRICING AND DELIVERY OF PACKAGED ROOFTOP UNITS IN ACCORDANCE WITH THE FOLLOWING. NO SUBSTITUTIONS WILL BE ALLOWED.

   A. ROOFTOP UNITS SHALL BE AS SCHEDULED.

   THE ELECTRICAL PACKAGE SHALL INCLUDE:
   - UNIT DISCONNECT (INSTALLED AND WIRED)
   - BOTTOM GAS/POWER ENTRY
   - STANDARD LOW AMBIENT CONTROL
   - DUAL 120V GFCI TYPE OUTLETS (TO BE FIELD WIRED)
   - GLOBAL DRY BULD ECONOMIZERS W/FAN POWERED EXHAUST (7.5T AND LARGER UNLESS OTHERWISE NOTED)
   - GLOBAL ECONOMIZERS W/BAROMETRIC RELIEF (6T AND SMALLER)
   - STAINLESS STEEL HEAT EXCHANGER AND FRESH AIR TEMPERING FOR BYPASS RTU'S AND RTU 'S THAT HAVE AN ERV
2. THE LENNOX NATIONAL ACCOUNT CONTACT IS:

   RON JOHNSON
   704-621-2606
3. HVAC EQUIPMENT PERFORMANCE CHECK (EPC)

   UPON COMPLETION OF THE HVAC INSTALLATION AND STARTUP, THE OWNER'S SERVICE CONSULTANT, AT THE OWNER'S EXPENSE, IS TO INSPECT THE JOB AND PERFORM AN (EPC). THIS EPC WILL AID THE CONTRACTOR IN CHECKING EACH MACHINE FOR PROPER OPERATION, CHECKING THE CONTROL PANEL AND ADJUSTING CONTROLS AS NECESSARY.

   THE OWNER'S SERVICE CONSULTANT:
   COMFORT SYSTEMS
   ATTN: VALERIE BEDEL
   P: 317-246-5181
   valerie.bedel@comfortsystemsusa.com

   ALL PROBLEMS DISCOVERED WITH THE EQUIPMENT OR ITS INSTALLATION (EXCLUDING NOVAR INSTALLATION) SHALL BE CORRECTED BY THE HVAC SUBCONTRACTOR IN ACCORDANCE WITH THE OWNER'S SERVICE CONSULTANT.

   AFTER ALL PROBLEMS HAVE BEEN CORRECTED, CARMAX AUTO SUPERSTORE, LLC SHALL VERIFY ALL EQUIPMENT IS OPERATING PROPERLY THROUGH THE NOVAR CONTROLLERS.

   PRIOR TO PERFORMANCE OF THE EPC, THE CONTRACTOR SHALL HAVE SET AND CONNECTED ALL COMPONENTS, COMPLETED THE POWER WIRING, CONNECTED ALL PIPING, REMOVED ALL SHIPPING BLOCKS, COMPLETED THE STARTUP OF ALL UNITS AND FURNISHED THE PRE-EPC CHECKLIST TO THE OWNER'S SERVICE CONSULTANT.

   THE EPC INCLUDES A FULL WRITTEN REPORT. COPIES WILL BE SENT TO THE GENERAL CONTRACTOR, AND CARMAX AUTO SUPERSTORE, LLC. COPIES OF THE EPC SHALL BE INCORPORATED IN TO THE O & M MANUALS BY THE GENERAL CONTRACTOR.

   A. RTU AIR FILTERS SHALL BE CAMFIL FARR AEROPLEAT III PLEATED, 2" THICK MERV 13, OR EQUAL. MARK FILTERS WITH INSTALLATION DATE

   B. THE PACKAGE COMPONENTS WILL BE CLEARLY LABELED (IN LEGIBLE FORM) ON THE EXTERIOR OF ALL BOXES OR CRATES.

   C. SUBMIT RTU SUBMITTALS IN PDF FORMAT TO THE ENGINEER FOR APPROVAL.

HVAC LEGEND

A.F.F.	ABOVE FINISHED FLOOR
VD	VOLUME DAMPER
B.O.S.	BOTTOM OF STEEL
B.O.D.	BOTTOM OF DUCT
U.N.O.	UNLESS NOTED OTHERWISE
VD	VOLUME DAMPER
	SUPPLY GRILLE WITH FLEX DUCT DROP
	RETURN/EXHAUST GRILLE
R, D	R = RISE, D = DROP
T	THERMOSTAT
S	LENNOX ROOM TEMPERATURE/HUMIDITY SENSOR 72" AFF
	SPIN-IN FITTING
	EXISTING DUCT
	EXISTING DUCT TO BE REMOVED

CONTROLS SCOPE OF WORK:

EXISTING RTU'S ARE ON LOGIC ONE BUSS. SAVVY COMMUNICATIONS TO IOM ALL RTUS WITH ETM 2051'S I/O IS BY THE INTEGRATED IOM IN THE SAVVY.

1. ALL NEW RTU'S WILL BE BACNET.
2. THE GENERAL CONTRACTOR SHALL RETAIN COMFORT STSTEMS USA (CSUSA) TO FURNISH AND INSTALL CONTROLS AS INDICATED BELOW. THE CONTACT AT CSUSA IS:

   VALERIE BEDEL 317-246-5181
3. PROVIDE PRE-CONSTRUCTION SCREEN SHOTS FROM NOVAR EMS MONITORING TO INCLUDE UNIT STATUS, MODULE COMMUNICATIONS STATUS AND ACTIVE ALARMS.
4. NOT USED
5. CONNECT NEW RTU'S W/CORE BOARDS TO BACNET COMMUNICATION.
6. FOR NEW RTU'S REPLACE RTU NOVAR TEMPERATURE SENSORS WITH LENNOX SENSORS.
7. REPLACE/UPGRADE SAVVY 31 WITH OPUS XCM105 PANEL. SAME BASE PLATE, MINIMAL RE-WIRING REQUIRED.
8. CONNECT BACNET NETWORK AS REQUIRED.
9. TURN OVER SAVVY 31 PANEL AND ETM'S TO CARMAX FOR FUTURE SERVICE CALL INVENTORY SHIP TO COMFORT SYSTEMS USA, ATTN VALERIE BEDEL, CARMAX EMS ACCOUNT CO-ORDINATOR.
10. UPDATE SOFTWARE PER NEW CARMAX TEMPLATE
11. COMMISSION EMS SYSTEM
12. PROVIDE POST CONSTRUCTION SCREEN SHOTS FROM NOVAR EMS MONITORING TO INCLUDE UNIT STATUS, MODULE COMMUNICATIONS STATUS AND ACTIVE ALARMS.
13. LENNOX/CARMAX RTU SET UP SHEET IS TO BE COMPLETED UPON UNIT STARTUP. A COMPLETED SHEET IS TO BE LEFT IN EACH NEW RTU AND A COPY SUBMITTED WITH CLOSE OUT DOCUMENTATION FOR EACH NEW RTU.
14. FURNISH AND INSTALL ADDITIONAL CONTROL WIRE FOR C02 SENSORS AND UNITS WITH HUMIDITROL.
15. ALL CONTROL, COMMUNICATIONS BUS AND SENSOR WIRING, NEW AND EXISTING, IS PART OF THE CONTROLS CONTRACTOR SCOPE OF WORK. REPLACE ANY DAMAGED WIRE.

TEST & BALANCE SCOPE

MARK	TOTAL AIR ACROSS COIL	OUTSIDE AIR	BYPASS AIR	SUPPLY AIR TO REGISTERS	OTHER
RTU-1 THRU 9 RTU-17	AS SCHEDULED	AS SCHEDULED	--	--	--
RTU-10 & 13	4900	4900	--	--	AIR QTY AT REGISTERS. SEE DETAIL 4/M4.0 OUTSIDE AIR & EXHAUST AT ERV-1
EF- 15 & 18 EF- 20 & 21	--	--	--	--	EXHAUST AT FAN AS SCHEDULED AND AS SHOWN ON 1/M2.0
RTU-11, 12 & 14	7000	4750	2250	4750	AIR QTY AT REGISTERS. 4@1185 CFM EACH
RTU- 15 & 16	5600	4000	1600	4000	AIR QTY AT REGISTERS. SEE 1/M2.0

SUGGESTED TEST & BALANCE PROCEDURE FOR BYPASS UNITS:

RTU- 11, 12 & 14
1. CLOSE BYPASS DAMPER & MAKE AIR QTY 7.000 CFM.
2. GRADUALLY OPEN BYPASS DAMPER UNTIL OUTSIDE AIR IS 4750 CFM. THIS MEANS 2250 CFM IS BEING BYPASSED IN THE CURB
3. OUTSIDE AIR SHOULD EQUAL SUM OF SUPPLY AIR AT THE REGISTERS

RTU- 15 & 16
1. CLOSE BYPASS DAMPER & MAKE AIR QTY 5.600 CFM.
2. GRADUALLY OPEN BYPASS DAMPER UNTIL OUTSIDE AIR IS 4000 CFM. THIS MEANS 1600 CFM IS BEING BYPASSED IN THE CURB
3. OUTSIDE AIR SHOULD EQUAL SUM OF SUPPLY AIR AT THE REGISTERS

ROOFTOP UNIT SCHEDULE

(SHOWN FOR REFERENCE ONLY)

MARK	ZONE	EER	THERM EFF	VOLT/PH	FAN DATA CFM	FAN DATA TSP IN WC	FAN DATA ESP IN WC	FAN DATA HP	COOLING DATA EAT DB/WB	COOLING DATA TOTAL MBH	COOLING DATA SENSIBLE MBH	GAS DATA INPUT MBH	GAS DATA OUTPUT MBH	MIN. O/A CFM	MODEL	WEIGHT	REMARKS (1)
RTU-1	SHOWROOM	12.2	80	480/3	6000	.78	.6	3.0	76.6/63.9	156.8	149.6	260	208	760	LENNOX LGC156H	2900	
RTU-2	SHOWROOM	11.0	80	480/3	4500	1.04	.6	3.0	76.6/63.9	125.3	99.8	130	104	340	LENNOX LGA120H	1600	
RTU-3	CUSTOMER	11.2	80	480/3	1200	.63	.6	1.5	79.6/65.4	36.8	28.8	78	62.4	200	LENNOX LGA036H	900	
RTU-4	BUSINESS	11.2	80	480/3	1150	.62	.6	1.5	80.3/65.6	36.6	28.6	78	62.4	200	LENNOX LGA036H	900	
RTU-5	BUYERS	11.2	80	480/3	1051	.62	.6	1.5	80.9/66.1	36.4	27.4	78	62.4	200	LENNOX LGA036H	900	
RTU-6	DATA/PBX	11.2	80	480/3	960	.63	.6	1.5	74/67	34	23	-	-	-	LENNOX LCA036H	900	
RTU-7	BREAK/CONF	11.3	80	480/3	1300	.63	.6	1.5	78/65.1	42.8	31.3	78	62.4	240	LENNOX LGA042H	900	
RTU-8	PARTS	11.2	80	480/3	1200	.63	.6	1.5	81.5/65.6	36.9	304	78	62.4	160	LENNOX LGA036H	900	
RTU-9	BREAK/TRAIN	11.0	80	480/3	1900	.63	.6	1.5	79.8/67.1	63.5	45.4	78	62.4	480	LENNOX LGA060H	900	
RTU-10	SERVICE AREA (BP)	11.0	80	480/3	7000	1.1	.8	5.0	84/70.6	298.7	184.7	470	376	5200	LENNOX LGC300H	4900	(2)
RTU-11	SERVICE AREA (BP)	11.0	80	480/3	7000	1.1	.8	5.0	84/70.6	298.7	184.7	470	376	5200	LENNOX LGC300H	4900	(2)
RTU-12	SERVICE AREA (BP)	11.0	80	480/3	7000	1.1	.8	5.0	84/70.6	298.7	184.7	470	376	5200	LENNOX LGC300H	4900	(2)
RTU-13	SERVICE AREA (BP)	11.0	80	480/3	7000	1.1	.8	5.0	84/70.6	298.7	184.7	470	376	5200	LENNOX LGC300H	4900	(2)
RTU-14	SERVICE AREA (BP)	11.0	80	480/3	7000	1.1	.8	5.0	84/70.6	298.7	184.7	470	376	5200	LENNOX LGC300H	4900	(2)
RTU-15	COSMETIC AREA (BP)	11.0	80	480/3	5600	.88	.8	5.0	86.8/71.8	252.7	157.4	470	376	4500	LENNOX LGA240H	4900	(2)
RTU-16	COSMETIC AREA (BP)	11.3	80	480/3	5600	.88	.8	5.0	86.8/71.8	252.7	157.4	470	376	4500	LENNOX LGA240H	4900	(2)
RTU-17	FQC	11.3	80	480/3	3000	.91	.6	2.0	80/67	93.8	67.5	130	104	300	LENNOX LGA090H	1600	

(1) PROVIDE WITH FACTORY INSTALLED NOVAR CONTROL MODULE: LGA UNIT SERIES (MODEL 2051) LENNOX A56 BOARD, F.A.T.

(2) BY PASS CURB AND BY PASS MIXING BOX

ROOFTOP UNIT SCHEDULE (OMAHA)

MARK	ZONE	EER (SEER)	VOLT/PH	FAN DATA CFM	FAN DATA TOT IN WC	FAN DATA ESP IN WC	FAN DATA HP	COOLING DATA (9) EAT DB/WB	COOLING DATA TOTAL MBH	COOLING DATA SENSIBLE MBH	GAS DATA INPUT MBH	GAS DATA OUTPUT MBH	MIN. O/A CFM	MODEL (1)	WEIGHT	REMARKS (2)(4)(5)(14)
RTU-1	SHOWROOM	12.0	480/3	6,000	1.1	.80	3.0	80/67	--	--	260	208	760	LENNOX LGT156H4M	2500	(6) (13)
RTU-2	SHOWROOM	12.1	480/3	4,500	1.5	.80	3.75	80/67	--	--	130	104	340	LENNOX LGT120H4E	1400	(6) (13) (17)
RTU-3	CUSTOMER	12.8	480/3	1200	.80	.6	.5	80/67	--	--	65	53	200	LENNOX LGT036H4E	1020	(6) (12) (16)
RTU-4	BUSINESS	13.3	480/3	1150	.90	.7	.5	80/67	--	--	65	53	200	LENNOX LGT036H4E	1020	(6) (12) (16)
RTU-5	BUYERS	12.8	480/3	1050	.80	.6	.5	80/67	--	--	65	53	200	LENNOX LGT036H4E	1020	(6) (12) (16)
RTU-6	DATA/PBX	(17.0)	480/3	975	.82	.7	.5	72/65	--	--	--	--	--	LENNOX LCT036H4E	850	(16)
RTU-7	BREAK.CONF	12.8	480/3	1300	.90	.7	1.0	80/67	--	--	65	53	240	LENNOX LGT048H4E	1020	(6) (12) (16)
RTU-8	PARTS	12.8	480/3	1200	.90	.7	.5	80/67	--	--	65	53	160	LENNOX LGT036H4E	1020	(6) (12) (16)
RTU-9	BREAK/TRAIN	12.7	480/3	1900	1.0	.7	1.0	80/67	--	--	108	81	480	LENNOX LGT060H4E	1200	(6) (12) (16) (18)
RTU-10	SERVICE (ERV)	12.0	480/3	4900	1.0	.75	3.0	81/67	203	144	360	292	4900	LENNOX LGT210H4M	4300	(3) (6) (8) (10) (20)
RTU-11	SERVICE (BP)	10.3	480/3	7,000	1.4	1.3	5.0	83/70	290	193	480	389	4750	LENNOX LGT300S4M	EXISTING	(15) (19)
RTU-12	SERVICE (BP)	11.6	480/3	7,000	1.4	1.2	5.0	83/70	315	202	480	389	4750	LENNOX LGH300H4B	4500	(3) (6) (7) (8) (10) (15)
RTU-13	SERVICE (ERV)	12.0	480/3	4900	1.0	.75	3.0	81/67	203	144	360	292	4900	LENNOX LGT210H4M	4300	(3) (6) (8) (10) (20)
RTU-14	SERVICE (BP)	11.6	480/3	7,000	1.5	1.1	5.0	83/70	315	202	480	389	4750	LENNOX LGH300H4B	4500	(3) (6) (7) (8) (10) (15)
RTU-15	COSMETIC (BP)	12.0	480/3	5600	1.3	1.0	5.0	84/70	246	166	480	389	4000	LENNOX LGT240H4M	4000	(3) (6) (7) (8) (10) (11)
RTU-16	COSMETIC (BP)	12.0	480/3	5600	1.3	1.0	5.0	84/70	246	166	480	389	4000	LENNOX LGT240H4M	4000	(3) (6) (7) (8) (10) (11)
RTU-17	FQC	12.1	480/3	3000	1.1	.7	3.75	80/67	--	--	180	144	300	LENNOX LGT120H4E	1400	(12) (17)

(1) ONLY ACCEPTABLE MANUFACTURER IS LENNOX. SEE "ROOFTOP UNIT NOTES"
(2) FIELD ADJUST SUPPLY FAN R.P.M. TO PROVIDE AIR QUANTITIES AS SCHEDULED ABOVE. INSTALL FIELD-SUPPLIED MOTOR AND/OR DRIVE AS REQ'D
(3) INSTALL F.A.T. DISCHARGE AIR TEMPERATURE SENSOR. SHIPPED LOOSE IN RTU CABINET, INSTALL SENSOR IN SUPPLY IN SUPPLY DUCT APPROX 3FT BELOW ROOF DECK.
(4) BACNET/CORE CONTROL, NEW TEMPERATURE OR COMBO T/H SENSOR.
(5) DRAIN PAN OVERFLOW SWITCH MODEL ZISNSR90A1
(6) HUMIDITROL & COMBO HUMIDITY/TEMPERATURE SENSOR
(7) NEW MIXING BOX, REUSE EXISITNG BYPASS CURB
NEW MIXING BOX RUSKIN DWG FILE 5030632 WITH TWO INTAKE HOODS. SEE DETAIL 7/M4.0
(8) FRESH AIR TEMPERING, 100% OUTSIDE AIR
(9) 95°F CONDENSER AIR
(10) MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE FOR THE CONNECTION OF WIRING HARNESS SHIPPED LOOSE W/ RTU THAT ARE ASSOCIATED WITH OUTSIDE AIR DAMPER. THIS WILL INCLUDE CONTROL/INTERLOCK WIRING FOR ERV'S
(11) 5600 CFM ACROSS THE COIL, 1600 CFM BYPASSED IN THE CURB, 4000 CFM TO SUPPLY
(12) GLOBAL ECONOMIZER WITH BAROMETRIC RELIEF
(13) GLOBAL ECONOMIZER WITH POWERED EXHAUST
(14) 2 STAGE HEAT (EXCEPT FOR PBX RTU)
(15) 7000 CFM ACROSS THE COIL, 2250 CFM BYPASSED IN THE CURB, 4750 CFM TO SUPPLY
(16) ADAPTER CURB
(17) RETURN AIR ADAPTER PLATE
(18) PROVIDE WITH DEMAND VENTILATION, CO2 SENSOR, MODULATING OUTSIDE AIR DAMPER OUTSIDE AIR DAMPER 5% OPEN. ON A CALL FOR VENTILATION, OUTSIDE AIR DAMPER STARTS TO OPEN AT 800 PPM AND AT 1200 PPM MOVES TO % OPEN TO GIVE OUTSIDE AIR QUANTITY AS INDICATED IN SCHEDULE ABOVE. INSTALL CO2 SENSOR @ 48 " AFF BELOW TEMPERATURE/HUMIDITY SENSOR
(19) IN PROGRESS TO REPLACE JANUARY 2024. EXISTING TO REMAIN
(20) 24" HYBRID CURB

FAN SCHEDULE

MARK	CFM	STATIC PRESS. IN. W.C.	APPROX. FAN RPM	FAN TYPE	DAMPER	VOLT/PH	HP	MANUFACTURER / MODEL	REMARKS
EF-20	2850	.25	--	UPBLAST	BACKDRAFT	120/1	3/4	COOK ACRU-B 180R6B	(1) (2)
EF-21	2850	.25	--	UPBLAST	BACKDRAFT	120/1	3/4	COOK ACRU-B 180R6B	(1) (2)
EF-15	3000	.25	--	UPBLAST	BACKDRAFT	120/1	3/4	COOK ACRU-B 195R6B	(1) (3)
EF-18	3000	.25	--	UPBLAST	BACKDRAFT	120/1	3/4	COOK ACRU-B 195R6B	(1) (3)

(1) EXISTING TO REMAIN
(2) REPLACE SHEAVE IF REQUIRED FOR REDUCED AIR QTY FROM 3000 CFM ORIGINAL DESIGN
(3) REPLACE SHEAVE IF REQUIRED FOR REDUCED AIR QTY FROM 3550 CFM ORIGINAL DESIGN

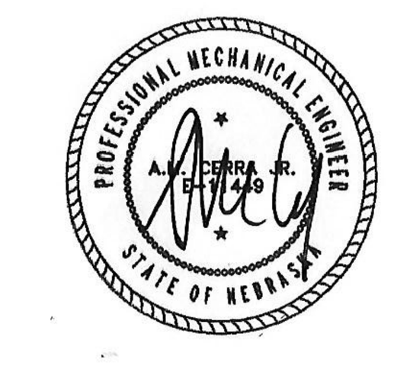
ENERGY RECOVERY WHEEL SCHEDULE

MARK	SERVES	OUTSIDE AIR FAN HP	OUTSIDE AIR FAN VOLT/PH	OUTSIDE AIR CFM	COOLING DATA E.A.T.	COOLING DATA L.A.T.	COOLING DATA TOT	COOLING DATA SENS	HEATING DATA SENS	HEATING DATA E.A.T.	HEATING DATA L.A.T.	(3) EXHAUST AIR FAN HP	EXHAUST AIR FAN VOLT/PH	EXHAUST AIR CFM	MODEL	WEIGHT	REMARKS
ERV-1	RTU- 13 & 10	5.0	480/3	4900	94/75	81/67	139	65	280	-8/-9	46/38	5.0	480/3	4600	LENNOX 50R6252xH	1450	(1)(2)(4)

(1) PROVIDE 14" FLASHED EQUIPMENT SUPPORT EQUAL TO PATE-ES-5. SEE 1/M4.0
(2) FIELD FURNISHED & INSTALLED DISCONNECT
(3) EXHAUST AIR TEMP AT 68°F HEAT & 75°F/63°F COOLING
(4) ERV BYPASS DAMPER SHALL REMAIN CLOSED. ALL AIR THROUGH WHEEL

A.M. CERRA, JR. P.E.
1827 POWERS FERRY ROAD
BLDG # 18, SUITE # 100
ATLANTA, GEORGIA 30339
770-980-0581

22412.01



5/1/24

RELEASED FOR CONSTRUCTION

APPROVAL

CARMAX PE

REVISIONS

REV. NO	DATE	DESCRIPTION

CARMAX THE AUTO SUPERSTORE

CARMAX THE AUTO SUPERSTORE, INC.
12800 TUCKAHOE CREEK PKWY RICHMOND, VA 23238
(804) 747-0422

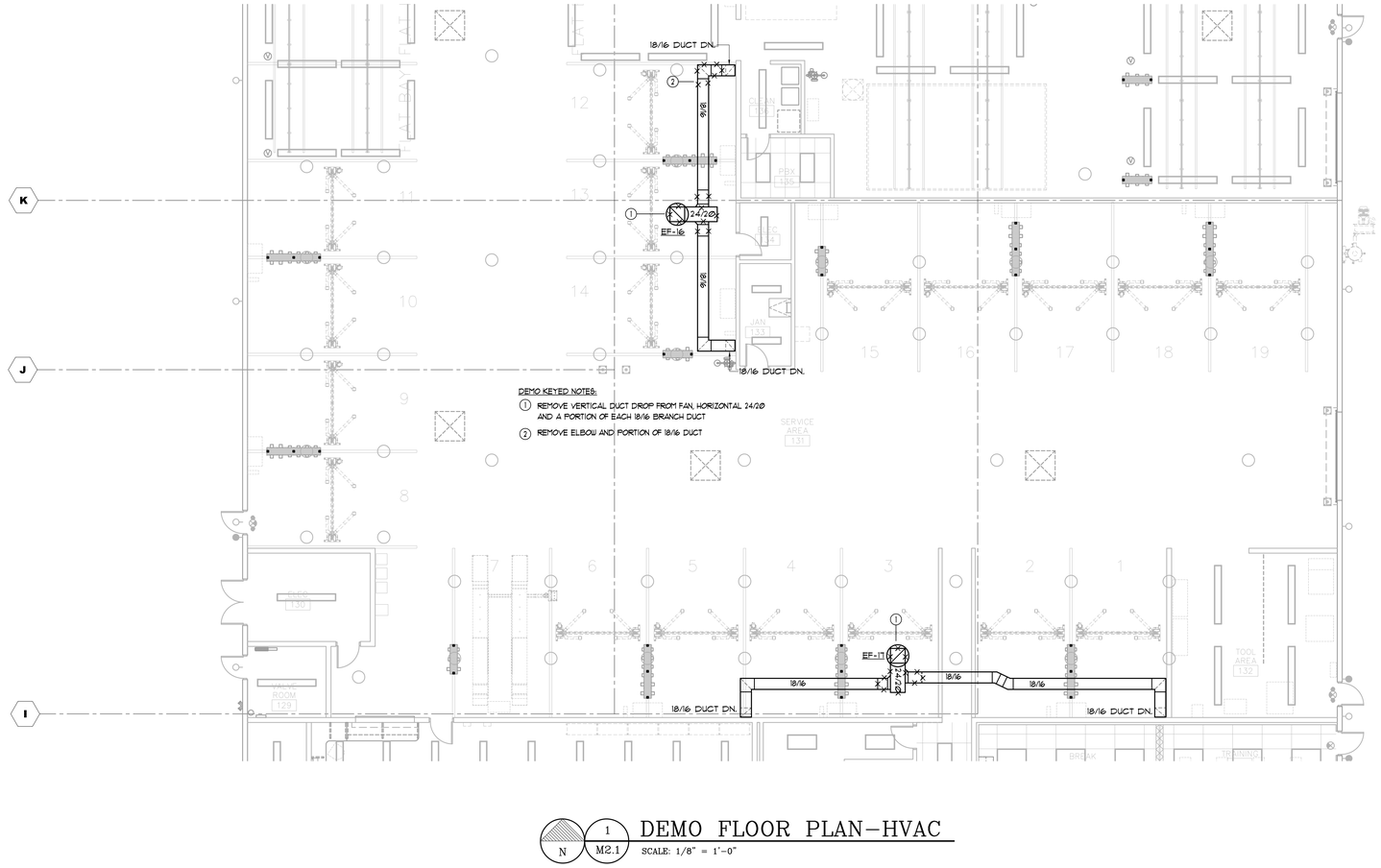
STORE NO. 7270
17606 BURT STREET
OMAHA, NEBRASKA 68118

PROJECT NO 22412.01

DATE 8 MAY 2024

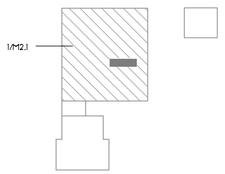
SHEET TITLE SCHEDULES–HVAC

SHEET NO M3.0



N 1 M2.1 DEMO FLOOR PLAN–HVAC

SCALE: 1/8" = 1'–0"



KEY PLAN

A.M. CERRA, JR. P.E.
1827 POWERS FERRY ROAD
BLDG # 18, SUITE # 100
ATLANTA, GEORGIA 30339
770-980-0581

22412.01

PROFESSIONAL MECHANICAL ENGINEER
A.M. Cerra, Jr.
STATE OF NEBRASKA

5/1/24

NOT RELEASED FOR CONSTRUCTION

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PROJECT NO	22412.01
DATE	8 MAY 2024
SHEET TITLE	DEMO FLOOR PLAN - HVAC
SHEET NO	M2.1