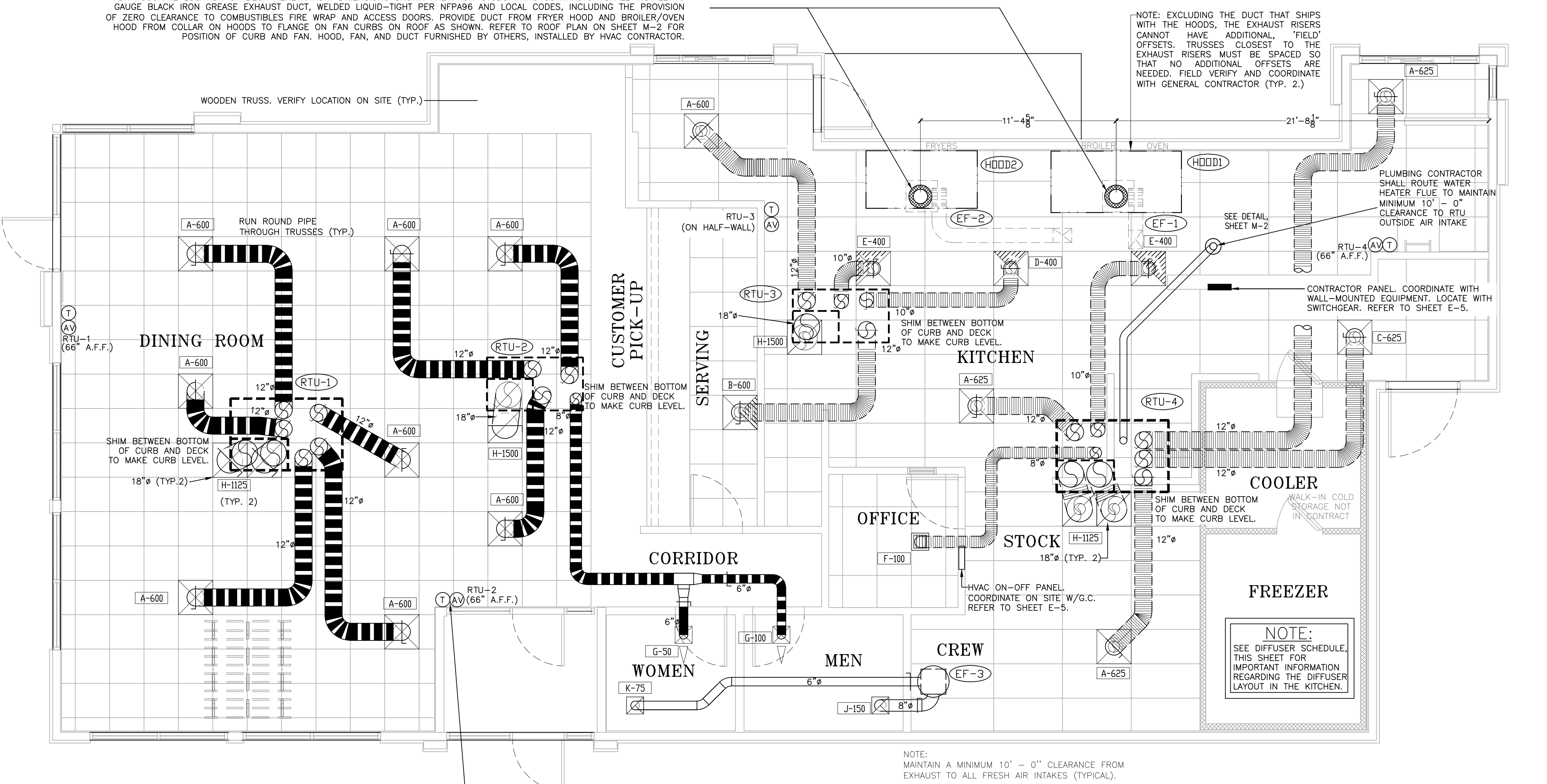


VERIFY LOCATION ON SITE WITH MOST RECENT KITCHEN EQUIPMENT PLANS. MARK RISER LOCATION ON FLOOR AND PLUMBING UP FOR ACCURATE LOCATION OF DECK PENETRATION. DIMENSIONS SHOWN ARE FROM STUDS. HVAC CONTRACTOR SHALL INSTALL 16 GAUGE BLACK IRON GREASE EXHAUST DUCT, WELDED LIQUID-TIGHT PER NFPA96 AND LOCAL CODES, INCLUDING THE PROVISION OF ZERO CLEARANCE TO COMBUSTIBLES FIRE WRAP AND ACCESS DOORS. PROVIDE DUCT FROM FRYER HOOD AND BROILER/OVEN HOOD FROM COLLAR ON HOODS TO FLANGE ON FAN CURBS ON ROOF AS SHOWN. REFER TO ROOF PLAN ON SHEET M-2 FOR POSITION OF CURB AND FAN. HOOD, FAN, AND DUCT FURNISHED BY OTHERS, INSTALLED BY HVAC CONTRACTOR.

NOTE: EXCLUDING THE DUCT THAT SHIPS WITH THE HOODS, THE EXHAUST RISERS CANNOT HAVE ADDITIONAL 'FIELD' OFFSETS. TRUSSES CLOSEST TO THE EXHAUST RISERS MUST BE SPACED SO THAT NO ADDITIONAL OFFSETS ARE NEEDED. FIELD VERIFY AND COORDINATE WITH GENERAL CONTRACTOR (TYP. 2.)



1 H.V.A.C. PLAN
SCALE: 1/4" = 1'-0"

HVAC SYSTEM
N-C-A
CONSULTANTS / GROUP
NATIONAL CORPORATE ACCOUNT SERVICES, INC.

DESIGNED BY: []
DATE: 10-12-18 (PROTOTYPE USE ONLY) []
NOT FOR CONSTRUCTION

DRAWINGS SHOWN ARE FOR PROTOTYPICAL CONSIDERATIONS ONLY. SITE-SPECIFIC DESIGN IS REQUIRED BY BURGER KING CORPORATION. AS A COURTESY, NCA CONSULTANTS PROVIDES SITE-SPECIFIC DESIGN WITH SITE-SPECIFIC PROFESSIONAL ENGINEER SEAL UNDER AN AGREEMENT BETWEEN NCA CONSULTANTS AND BURGER KING CORPORATION.
FOR SITE-SPECIFIC DESIGN, ARCHITECTS EMAIL REFLECTED CEILING PLAN, ELEVATIONS, KITCHEN PLANS, FLOOR PLAN, SITE PLAN, EXTERIOR ELEVATIONS, AND ROOF STRUCTURAL PLAN TO DESIGN@NCACONSULTANTS.COM
TO CONTACT THE NCA CONSULTANTS BY PHONE, CALL TOLL-FREE (877) 530-0078.

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ATTENTION GENERAL CONTRACTOR: "RE-ENGINEERING" DEVIATIONS FROM THE SHOWN DESIGN AND REQUIRED HVAC EQUIPMENT MUST BE APPROVED IN ADVANCE BY THE ARCHITECT AND PROFESSIONAL ENGINEER. UNAUTHORIZED SUBSTITUTIONS OR ALTERATIONS WILL VOID THE SIGNATURE AND SEAL OF THE PROFESSIONAL ENGINEER AND LEAVE VIOLATORS RESPONSIBLE FOR RESUBMISSION OF SIGNED AND SEALED DRAWINGS.

CONTRACTORS NOTES

- HVAC CONTRACTOR SHALL FURNISH AND INSTALL THE HVAC SYSTEM AS SHOWN IN THE NCA HVAC EQUIPMENT PACKAGE NOTE, THIS SHEET. ALL FANS SHALL BE U.L. LISTED.
- THE HVAC CONTRACTOR SHALL INSTALL THE EXHAUST HOOD. REFER TO MOST RECENT KITCHEN PLANS ON SITE. HOOD EXHAUST DUCT IS FACTORY-MANUFACTURED, NON-WELD, DOUBLE-WALLED DUCT WITH ZERO-CLEARANCE TO COMBUSTIBLES RATING. MANUFACTURED BY METAL-FAB. INSTALL ALL HOOD EXHAUST DUCT PER MANUFACTURERS PUBLISHED REQUIREMENTS THAT SHIP WITH THE DUCTWORK. VERIFY LOCATION ON SITE WITH MOST RECENT KITCHEN EQUIPMENT PLAN.
- ALL AIR CONDITIONING UNIT CURBS SHALL BE SUPPLIED BY NCA CONSULTANTS.
- ALL AIR CONDITIONING UNIT CURBS SHALL BE FABRICATED BY NCA CONSULTANTS FROM 18 GA. GALVANIZED METAL WITH WELDED SEAMS, WATER TIGHT AND INTERNALLY INSULATED.
- SHIMS SHALL BE PROVIDED BY HVAC CONTRACTOR BETWEEN THE ROOF DECK AND THE CURB AS NEEDED TO COMPENSATE FOR ROOF PITCH.
- ALL FLEX DUCT SHALL BE FOIL-BACKED, R-6, U.L. LISTED, CLASSIFIED AS A CLASS 1 AIR DUCT, AND MEET LOCAL CODE REQUIREMENTS.
- EXCLUDING ANY EXPOSED DUCTWORK, ALL NON-FLEXIBLE DUCT AND ALL AIR DISTRIBUTION DEVICES SHALL BE INSULATED WITH R-6, 2" X .75 DENSITY FOIL-BACKED INSULATION, WITH FIRE AND SMOKE RATING [25]-[50].
- ALL DUCTWORK SHALL BE INDEPENDENTLY HUNG FROM STRUCTURAL MEMBERS.
- ALL DUCTWORK SHALL BE FABRICATED AND INSTALLED PER SMACNA LOW-VELOCITY DUCT MANUAL (LATEST ISSUE).
- EXCEPT OTHERWISE NOTED, EVERY SUPPLY TAP COLLAR SHALL HAVE A LOCKING MANUAL VOLUME DAMPER.
- THE HVAC CONTRACTOR SHALL COORDINATE DIFFUSER LOCATIONS ON SITE WITH THE MOST RECENT REFLECTED CEILING PLAN.
- THE HVAC CONTRACTOR SHALL FURNISH A WRITTEN GUARANTEE COVERING A ONE-YEAR PERIOD FOR ALL EQUIPMENT AND AN ADDITIONAL FOUR-YEAR PERIOD FOR THE COMPRESSORS IN THE AIR CONDITIONING UNITS.
- UPON COMPLETION OF PROJECT THE HVAC CONTRACTOR SHALL HIRE AN A.A.B.C. OR N.E.B.B. CERTIFIED, INDEPENDENT TEST AND BALANCE COMPANY TO CONDUCT A COMPLETE, CERTIFIED TEST AND BALANCE OF ALL HVAC EQUIPMENT. PROVIDE A WRITTEN REPORT TO NCA CONSULTANTS. ALL CAPACITIES MUST BE SET TO AMOUNTS INDICATED ON THE FLOOR PLANS AND SCHEDULES.
- THE HVAC CONTRACTOR SHALL VERIFY LOCATIONS OF THE EXHAUST HOOD AND EF-1 FROM MOST RECENT KITCHEN EQUIPMENT PLANS ON SITE. THIS IS TO ENSURE NO OFFSETS IN EXHAUST DUCTWORK.
- HVAC CONTRACTOR IS TO MAKE ALL LOW-VOLTAGE WIRING FINAL CONNECTIONS FOR ALL HVAC EQUIPMENT INCLUDING SENSORS, THERMOSTATS, AUDIO-VISUAL ANNUNCIATORS, ROOF-TOP UNITS, SMOKE DETECTORS, CONTACTOR PANEL, AND CONTROL PANEL.

- PLENUMIZED CURB INSTALLATION NOTES**
- CAREFULLY LOCATE AND MARK ROOF CURB LOCATIONS SO THAT DUCT WORK CAN BE INSTALLED IN THE APPROXIMATE LOCATIONS AS SHOWN BY THE FLOOR PLAN. PAY ATTENTION TO THE LOCATION OF THE ROOF STRUCTURE IN ORDER TO ACCOMMODATE THE DUCT DROPS.
 - MARK THE EXACT LOCATION OF EACH ROOF CURB. LAY OUT ALL EQUIPMENT LOCATIONS IN ORDER TO MAINTAIN PROPER CLEARANCES FROM EXHAUST FANS AND VENTS AS WELL AS PROVIDING FOR ROOF SERVICE CLEARANCES.
 - GENERAL CONTRACTOR SHALL CUT ROOF DECKING MATERIAL TAKING CARE TO AVOID CUTTING ANY STRUCTURAL COMPONENTS. GENERAL CONTRACTOR SHALL ALSO INSTALL ANY NECESSARY FRAMING OR BLOCKING AT OPENINGS.
 - WITH ROOF CURB UPSIDE DOWN (SOLID METAL BOTTOM UP) MEASURE AND MARK THE LOCATION OF ANY JOISTS OR OTHER FRAMING MEMBERS THAT MUST BE AVOIDED. MEASURE AND MARK THE LOCATION OF ALL THE DUCT TAPS.
 - CUT ALL DUCT TAPS INTO THE BOTTOM PANEL OF THE ROOF CURB. BE CAREFUL NOT TO DAMAGE THE ROOFING SURFACE WHILE MAKING THESE CUTS.
 - INSTALL DUCT TAP FITTINGS AND MANUAL DAMPERS INTO THE OPENINGS PREVIOUSLY CUT. SEAL ALL CONNECTIONS ON BOTH THE BOTTOM AND THE TOP SIDES OF THE TAPS.
 - FLATTEN TAB OF START COLLAR INSIDE CURB, TIGHT AGAINST INSULATION. SEAL INSIDE OF COLLAR AND TAPS TO INSULATION USING MASTIC DUCT SEALER. ALLOW SEALER TO DRY PRIOR TO PROCEEDING.
 - APPLY DUCT SEALER TO OPEN END OF COLLAR. SLIDE INNER CORE OF FLEXIBLE DUCT ONTO COLLAR, AND CONNECT PANDUIT STRAP PER MANUFACTURERS INSTRUCTIONS.
 - SLIDE OUTER INSULATION SLEEVE OF FLEX TIGHT TO BOTTOM OF CURB. SEAL INSULATION TO BOTTOM OF CURB WITH PRESSURE-SENSITIVE FOIL TAPE. DO NOT USE TAPE MEANT FOR RIGID DUCTBOARD. SQUEEGEE OUT ALL AIR BUBBLES FOR PROPER ADHESION.
 - TURN CURB RIGHT SIDE UP. LEVEL CURB BETWEEN BOTTOM OF CURB AND DECK. INSTALL IN ROOF OPENING. SECURE CURB TO ROOF FRAMING AS REQUIRED.
 - GENERAL CONTRACTOR OR ROOFING CONTRACTOR SHALL FLASH AND ROOF IN THE CURB AS DETAILED ON THE DRAWINGS.
 - INSIDE BUILDING, THE DUCT RUNS SHALL BE INSTALLED FROM THE TAPS TO THE DIFFUSER LOCATIONS AS SHOWN ON THE PLANS. SUPPORT PER SMACNA AND LOCAL CODES.
 - NOTE: IF NECESSARY, FLEX DROPS MAY BE CONNECTED TO TAPS AFTER CURB HAS BEEN INSTALLED. REFER TO STEPS #8 AND #9.

AIR BALANCE SCHEDULE

TAG	SUPPLY AIR	OUTSIDE AIR	RETURN AIR	EXHAUST AIR	BLDG. PRESSURE	% OUTSIDE AIR
RTU-1	3000 CFM	600 CFM	2400 CFM	---	+ 600 CFM	25
RTU-2	2000 CFM	600 CFM	1400 CFM	---	+ 600 CFM	25
RTU-3	2000 CFM	600 CFM	1400 CFM	---	+ 600 CFM	25
RTU-4	3000 CFM	600 CFM	2400 CFM	---	+ 600 CFM	25
EF-1	---	---	---	1100 CFM*	- 1100 CFM	---
EF-2	---	---	---	800 CFM*	- 800 CFM	---
EF-3	---	---	---	225 CFM*	- 225 CFM	---
TOTAL	9600 CFM	2400 CFM	7200 CFM	2125 CFM	+ 275 CFM	25

*NOTE: UPON START-UP VERIFY THAT THE EXHAUST FAN CURRENT SENSOR IS SET TO THE MOTOR AMPERAGE. IF IT IS NECESSARY TO ADJUST THE AMPERAGE OF THE EXHAUST HOOD FAN MOTOR, THE FAN MOTOR CURRENT SENSOR MUST BE RESET BY THE ELECTRICAL CONTRACTOR AS FOLLOWS: ADJUST UNDERCURRENT POTENTIOMETER TO MINIMUM (CLOCKWISE IS MAXIMUM). APPLY CURRENT. ONCE CURRENT IS STABILIZED, INCREASE UNDERCURRENT POT UNTIL RED LED LIGHTS. WITHIN SEVEN SECONDS TURN DOWN UNTIL RED LIGHT TURNS OFF. IF A LIGHT REMAINS ON FOR MORE THAN TEN SECONDS, DISCONNECT SUPPLY VOLTAGE TO RESET. SEE MANUFACTURERS OPERATING INSTRUCTIONS THAT SHIP WITH THE FAN. WITH LIMITED BUILDING PRESSURE, THE ±10% TOLERANCE IS NOT ACCEPTABLE. SET CFM AS SPECIFIED. ENSURE THAT EXHAUST FAN PULLEY IS ADJUSTED FOR PROPER ALIGNMENT.

AIR DEVICE SCHEDULE

SYM	SIZE	TYPE	DUCT SIZE	MODEL #	FINISH	BOOT SIZE	OPENING SIZE	QTY
A*	24X24	SUPPLY 4 WAY	12"ø	NCA12	WHITE	12"ø	T-BAR	12
B*	24X24	SUPPLY 3 WAY	12"ø	NCA12-3	WHITE	12"ø	T-BAR	1
C*	24X24	SUPPLY 2 WAY (PARALLEL)	12"ø	NCA12-2P	WHITE	12"ø	T-BAR	1
D*	24X24	SUPPLY 3 WAY	10"ø	NCA10-2C	WHITE	10"ø	T-BAR	1
E*	24X24	SUPPLY 2 WAY (CORNER)	10"ø	NCA10-3	WHITE	12"ø	T-BAR	2
F	12X12	SUPPLY 1 WAY W/O.B.D.	8"ø	630	WHITE	12X12	SIZE + 1/4"	1
G	12X12	SUPPLY 1 WAY W/O.B.D.	6"ø	630	WHITE	12X12	SIZE + 1/4"	2
H	24X24	RETURN	18"ø	630TB	WHITE	22X22	T-BAR	6
J	12X12	EXHAUST	8"ø	630	WHITE	12X12	SIZE + 1/4"	1
K	12X12	EXHAUST	8"ø	630	WHITE	12X12	SIZE + 1/4"	1

ALL DIFFUSERS SHALL BE MANUFACTURED BY METALARE OR EQUIVALENT AND 100% ALUMINUM CONSTRUCTION
* PROVIDE WITH PVC99 SLIDING-BLADE DAMPER
** PROVIDE WITH EIGHT 14"ø-10-12"ø REDUCERS FOR INSTALLATION ON TOP OF DIFFUSERS
NOTE: LOCATION AND ORIENTATION OF DIRECTIONAL BLOW PATTERN DIFFUSERS IN THE KITCHEN IS CRITICAL. INSTALLER WILL ENSURE PROPER INSTALLATION OF DIFFUSERS. CONTACT THE NCA CONSULTANTS PROJECT COORDINATOR IMMEDIATELY WITH ANY CONFLICTS THAT PREVENT INSTALLATION PER THE PROPOSED DESIGN.

PACKAGE ROOFTOP UNIT SCHEDULE (RTU-1,2,3,4)

TAG	MANUFACTURER	RTU-1,4	RTU-2,3
		CARRIER	CARRIER
		48HCED08 (7.5 TON)	48HCEA06 (5 TON)
		ROOF: 78" X 50"	ROOF: 67" X 37"
		NATURAL GAS	NATURAL GAS
		TOTAL COOLING CAPACITY, MBTU/HR	71.0
		SENSIBLE COOLING CAPACITY, MBTU/HR	47.9
		ENTERING AIR CONDITIONS, DB/F W/B/F	80/67
		AMBIENT AIR DB TEMPERATURE, °F	95
		SUPPLY AIR, CFM	3000
		OUTSIDE AIR, CFM	600
		EXTERNAL STATIC PRESSURE, "WG	0.75
		BHP - MEDIUM STATIC MOTOR	2.4
		I.E.F.R.	12.0
		GAS INPUT MBTU/HR	120/180
		GAS OUTPUT MBTU/HR	98/148
		UNIT WEIGHT, LBS.	1100
		ELECTRICAL REQUIREMENT, V/PHASE/HZ	208-230/3/60
		MINIMUM CIRCUIT AMPERAGE	38.8
		MAXIMUM OVER CURRENT PROTECTION	50

ACCESSORIES:
1. 100% ECONOMISER WITH BAROMETRIC RELIEF
2. NCA PLENUMIZED CURB TO ORDER CALL TOLL-FREE (877) 530-0078.
3. ONE YEAR COMPLETE PARTS AND LABOR WARRANTY
4. ADDITIONAL FOUR YEAR PARTS WARRANTY COVERING COMPRESSORS
5. SMOKE DETECTOR (SEE HVAC ROOF PLAN, SHEET M-2)
6. AQUAGUARD AG-3190E MOISTURE SENSOR FOR PRIMARY PAN
NOTE: COORDINATE RTU LOCATION ON SITE PRIOR TO SETTING EQUIPMENT. IF ADJUSTMENT IS NECESSARY MAINTAIN FRESH AIR INTAKE CLEARANCES

FAN SCHEDULE

TAG	MANUFACTURER	FF-1	FF-2	FF-3
		600K	600K	600K
		120 CPS-BK	100 CPS-BK	100C10DH
		ROOF	ROOF	ROOF
		BROILER	FRYERS	RESTROOM
		1100*	800*	225
		1.85"	2.5"	0.25
		1.0	1.0	1/25
		1957	2675	911
		BELT	BELT	DIRECT
		208-230/1/60	208-230/1/60	120/1/60
		22X22	22X22	13.5X13.5
		YES	YES	YES
		NO	NO	YES
		NO	NO	YES
		YES	YES	NO
		YES	YES	NO

* SEE AIR BALANCE SCHEDULE
NOTE: VERIFY ALL INFORMATION WITH MANUFACTURER PRIOR TO ORDERING AND INSTALLATION

NCA HVAC EQUIPMENT PACKAGE
PLAN AND SPECIFICATIONS AS PER P.E. SEAL

BURGER KING CORPORATION HAS A NATIONAL ACCOUNT AGREEMENT WITH THE NCA GROUP. NCA SHALL VISIT THE SITE, AS AUTHORIZED, TO VERIFY ALL MATERIALS, EQUIPMENT, AND INSTALLATION ARE PER THE PROFESSIONAL ENGINEER SEAL. PLANS ARE NCA DESIGN COPYRIGHT 2018.

FOR COMPLETE INFORMATION AND PRICING ON THE FOLLOWING PACKAGE OF EQUIPMENT AND ACCESSORIES CONTACT THE NCA GROUP MARKETING DEPARTMENT TOLL-FREE AT (877) 530-0078.

HEATING/COOLING EQUIPMENT PACKAGE
INCLUDES ALL ROOFTOP (OR SPLIT SYSTEM) AIR CONDITIONING EQUIPMENT WITH ALL ACCESSORIES AS SPECIFIED ON THESE PLANS.

FAN PACKAGE
INCLUDES ALL FANS WITH ALL ACCESSORIES AS SPECIFIED ON THESE PLANS.

AIR DEVICE PACKAGE
INCLUDES ALL GRILLES, REGISTERS AND DIFFUSERS PER PLANS. SQUARE TO ROUND TRANSITIONS PROVIDED WHERE REQUIRED.

CURB PACKAGE
INCLUDES ONE-PIECE, FULLY WELDED NCA PLENUMIZED ROOF CURBS FOR ALL ROOF MOUNTED HEATING/COOLING EQUIPMENT, AND ALL FAN CURBS. ALTERNATIVES TO NCA PLENUMIZED CURBS MAY NOT BE USED.

EXHAUST HOOD PACKAGE
INCLUDES EXHAUST FANS, HOODS, SHROUDS AND ANSUL SYSTEM, AS CODE REQUIRES.

CONTROLS PACKAGE
INCLUDES PRESET DIGITAL THERMOSTATS, THERMOSTAT WIRE, LOCKING COVERS, AND AS CODE REQUIRES SMOKE DETECTORS AND AUDIBLE-VISUAL DEVICES; OCCUPIED/UNOCCUPIED PANEL, AND INTERLOCK PANEL IF REQUIRED.

NOTE: "RE-ENGINEERING" DEVIATIONS FROM THE SHOWN DESIGN AND REQUIRED HVAC EQUIPMENT MUST BE APPROVED IN ADVANCE BY THE ARCHITECT AND PROFESSIONAL ENGINEER. UNAUTHORIZED SUBSTITUTIONS OR ALTERATIONS WILL VOID THE SIGNATURE AND SEAL OF THE PROFESSIONAL ENGINEER AND LEAVE VIOLATORS RESPONSIBLE FOR RESUBMISSION OF SIGNED AND SEALED DRAWINGS

UPON COMMENCEMENT OF ROUGH-IN AS SCHEDULED BY NCA CONSULTANTS, THE AIR CONDITIONING CONTRACTOR IS TO REMAIN ON THE JOB SITE FULL TIME UNTIL THE ROUGH-IN IS 100% COMPLETE. THE GENERAL CONTRACTOR'S SITE SUPERINTENDENT WILL VERIFY. UPON COMMENCEMENT OF TRIM-OUT AS SCHEDULED BY NCA CONSULTANTS, THE AIR CONDITIONING CONTRACTOR IS TO REMAIN ON THE JOB SITE FULL TIME UNTIL THE TRIM-OUT IS 100% COMPLETE. THE GENERAL CONTRACTOR'S SITE SUPERINTENDENT WILL VERIFY.

Issued: [] Date: []

Revisions:	Date:
1	
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Seal PROJECT ARCHITECT/ENGINEER DATE []

Seal PROJECT LEAD DATE []

Seal PROJECT DESIGNER DATE []

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Project Name & Location:
HVAC PLAN & SCHEDULE
Drawing Name:

Date: 11/8/2021
Type: BK ROC-60
Drawn By: SR
Scale: As Noted

Project No.
21-0458
M-1
Drawing No.