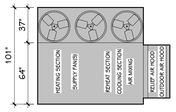
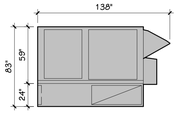


PLAN - TOP VIEW



ELEVATION - SIDE VIEW

ROOFTOP UNIT

RTU-102B: PACKAGED ROOFTOP UNIT

TYPE: VAV PACKAGED ROOFTOP UNIT, BASED ON AAON "RNA030" SERIES.
OUTSIDE AIR: 2100 CFM MAX DEMAND CONTROL VENTILATION REQUIREMENT, 250 CFM MIN DEMAND CONTROL VENTILATION REQUIREMENT, UP TO 100% ECONOMIZER.
WEIGHT: 3600 LB
UNIT MOUNTING: MOUNTED ON 4" HOUSEKEEPING PAD WITH 24" INSULATED CURB AND INTEGRAL PERFORATED DOUBLE WALL SUPPLY/RETURN PLENUMS WITH TURNING VANES, FOR SIDE DUCT CONNECTIONS.

SOUND POWER LEVELS (AHRI 260 *db*)								
	63 HZ	125 HZ	250 HZ	500 HZ	1 kHZ	2 kHZ	4 kHZ	8 kHZ
RETURN AIR	93	90	89	83	79	79	75	67
SUPPLY AIR	95	94	95	96	92	90	91	87
OUTDOOR AIR	---	---	---	---	---	---	---	---
EXHAUST AIR	93	91	94	91	82	82	78	70
CASING	---	---	---	---	---	---	---	---

RELIEF FAN(S): 7500 MAX CFM, 0 MIN CFM, 1.00" ESP, (QTY.1) 5.1 BHP, INTEGRAL VARIABLE FREQUENCY DRIVE OR EC MOTOR, BAROMETRIC OR MOTORIZED RELIEF DAMPERS, PROVIDE SHAFT GROUND RINGS FOR MOTORS USED WITH VARIABLE FREQUENCY DRIVES.

AIR MIXING SECTION: LOW LEAK MODULATING OUTDOOR AND RETURN AIR DAMPERS, FOR ECONOMIZER CONTROL AND CO2 CONTROL. 2" MERV 8 OR GREATER PRE FILTER, 4" MERV 13 OR GREATER FINAL FILTRATION, ALLOW FOR MIDLIFE DIRTY FILTER PRESSURE DROP, ECONOMIZER DAMPER FAILURE DETECTION, DIRTY FILTER DETECTION, OUTDOOR AIRFLOW MEASURING STATION.

HEAT PUMP SECTION: (DX CONDENSER EAT 95°F) 7500 CFM, 322.0 TMBH, 212.1 SMBH, 78°F/68°F EAT DBWB, 52°F/52°F LAT DBWB, R-454B DX MODULATING DIGITAL OR VFD SCROLL COMPRESSOR(S), 10.4 IEER @ AHRI.
(DX CONDENSER EAT 5°F) 7500 CFM, 151.0 MBH, 54°F EAT DB, 71°F LAT DB, R-454B DX MODULATING DIGITAL OR VFD SCROLL COMPRESSOR(S), 2.1 COP @ 17°F AHRI.
CONDENSER COIL HAIL GUARDS.

HOT GAS REHEAT SECTION (DX): 7500 CFM, 52°F EAT DB, 70°F LAT DB, MODULATING HOT GAS REHEAT FOR HUMIDITY CONTROL.

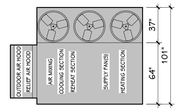
SUPPLY FAN(S): 7500 MAX CFM, 2400 MIN CFM, 1.0" ESP, (QTY. 1) 7.5 BHP, INTEGRAL VARIABLE FREQUENCY DRIVE OR EC MOTOR, SUPPLY AIRFLOW MEASURING STATION. PROVIDE SHAFT GROUND RINGS FOR MOTORS USED WITH VARIABLE FREQUENCY DRIVES.

HEATING SECTION (LP GAS FIRED HX): 7500 CFM, 405.0 MBH INPUT, 328.1 MBH OUTPUT, 55°F EAT DB, 95°F LAT DB, MODULATING STAINLESS STEEL INDIRECT FIRED HEAT EXCHANGER.

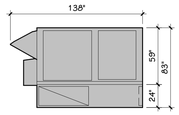
ELECTRICAL: PROVIDE UNIT WITH FUSED DISCONNECT SWITCH WITH INTEGRAL PHASE MONITOR AND CONVENIENCE OUTLET, 460/3/60 (93 MCA, 110 MOCP).

NOTES: MANUFACTURER TO PROVIDE UNIT WITH INTEGRAL BACNET CONTROLS FOR SINGLE ZONE VAV OPERATION, AS SPECIFIED IN 237413 "PACKAGED, OUTDOOR, CENTRAL-STATION AIR-HANDLING UNITS", WITH REMOTE SAFETY SHUTDOWN TERMINAL FOR INTEGRATION OF ALARM CONTROL MODULES, SUCTION AND DISCHARGE COMPRESSOR ISOLATION VALVES, LIQUID LINE SIGHT GLASS, AND INTEGRAL A2L REFRIGERANT LEAKAGE DETECTION CONTROL DEVICE WITH ALARM. CONTROLS CONTRACTOR TO PROVIDE UNIT WITH BACNET INTERFACE TO ROOFTOP UNIT, AND PROGRAMMING FOR CONTROL. EQUIPMENT INSTALLER TO PROVIDE UNIT WITH WITH FLEXIBLE CONNECTIONS FOR DUCTWORK, PIPING, AND POWER, FOR VIBRATION ISOLATION. FIRE ALARM INSTALLER TO PROVIDE UNIT WITH ADDRESSABLE SUPPLY AND RETURN AIR SMOKE DETECTORS, INSTALL FIRE ALARM CONTROL MODULES WITHIN 3 FEET OF UNITS CONTROL PANEL, FOR SHUTDOWN OF EQUIPMENT.

ALTERNATE: PROVIDE ADD ALTERNATE ON BID FORM FOR AAON EXTREME SERIES PACKAGED ROOFTOP UNIT WITH REFRIGERANT INJECTION, 290.0 MBH HEAT PUMP HEATING CAPACITY AT DX CONDENSER EAT 22°F, REDUCING LP GAS FIRED HEATING USE TO ONLY HEAT PUMP FAILURE, EMERGENCY OPERATING CONDITIONS, AND OPTIMIZING ENERGY COST.



PLAN - TOP VIEW



ELEVATION - SIDE VIEW

ROOFTOP UNIT

RTU-102A: PACKAGED ROOFTOP UNIT

TYPE: VAV PACKAGED ROOFTOP UNIT, BASED ON AAON "RNA030" SERIES.
OUTSIDE AIR: 2100 CFM MAX DEMAND CONTROL VENTILATION REQUIREMENT, 250 CFM MIN DEMAND CONTROL VENTILATION REQUIREMENT, UP TO 100% ECONOMIZER.
WEIGHT: 3600 LB
UNIT MOUNTING: MOUNTED ON 4" HOUSEKEEPING PAD WITH 24" INSULATED CURB AND INTEGRAL PERFORATED DOUBLE WALL SUPPLY/RETURN PLENUMS WITH TURNING VANES, FOR SIDE DUCT CONNECTIONS.

SOUND POWER LEVELS (AHRI 260 *db*)								
	63 HZ	125 HZ	250 HZ	500 HZ	1 kHZ	2 kHZ	4 kHZ	8 kHZ
RETURN AIR	93	90	89	83	79	79	75	67
SUPPLY AIR	95	94	95	96	92	90	91	87
OUTDOOR AIR	---	---	---	---	---	---	---	---
EXHAUST AIR	93	91	94	91	82	82	78	70
CASING	---	---	---	---	---	---	---	---

RELIEF FAN(S): 7500 MAX CFM, 0 MIN CFM, 1.00" ESP, (QTY.1) 5.1 BHP, INTEGRAL VARIABLE FREQUENCY DRIVE OR EC MOTOR, BAROMETRIC OR MOTORIZED RELIEF DAMPERS, PROVIDE SHAFT GROUND RINGS FOR MOTORS USED WITH VARIABLE FREQUENCY DRIVES.

AIR MIXING SECTION: LOW LEAK MODULATING OUTDOOR AND RETURN AIR DAMPERS, FOR ECONOMIZER CONTROL AND CO2 CONTROL. 2" MERV 8 OR GREATER PRE FILTER, 4" MERV 13 OR GREATER FINAL FILTRATION, ALLOW FOR MIDLIFE DIRTY FILTER PRESSURE DROP, ECONOMIZER DAMPER FAILURE DETECTION, DIRTY FILTER DETECTION, OUTDOOR AIRFLOW MEASURING STATION.

HEAT PUMP SECTION: (DX CONDENSER EAT 95°F) 7500 CFM, 322.0 TMBH, 212.1 SMBH, 78°F/68°F EAT DBWB, 52°F/52°F LAT DBWB, R-454B DX MODULATING DIGITAL OR VFD SCROLL COMPRESSOR(S), 10.4 IEER @ AHRI.
(DX CONDENSER EAT 5°F) 7500 CFM, 151.0 MBH, 54°F EAT DB, 71°F LAT DB, R-454B DX MODULATING DIGITAL OR VFD SCROLL COMPRESSOR(S), 2.1 COP @ 17°F AHRI.
CONDENSER COIL HAIL GUARDS.

HOT GAS REHEAT SECTION (DX): 7500 CFM, 52°F EAT DB, 70°F LAT DB, MODULATING HOT GAS REHEAT FOR HUMIDITY CONTROL.

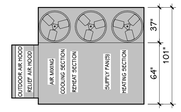
SUPPLY FAN(S): 7500 MAX CFM, 2400 MIN CFM, 1.0" ESP, (QTY. 1) 7.5 BHP, INTEGRAL VARIABLE FREQUENCY DRIVE OR EC MOTOR, SUPPLY AIRFLOW MEASURING STATION. PROVIDE SHAFT GROUND RINGS FOR MOTORS USED WITH VARIABLE FREQUENCY DRIVES.

HEATING SECTION (LP GAS FIRED HX): 7500 CFM, 405.0 MBH INPUT, 328.1 MBH OUTPUT, 55°F EAT DB, 95°F LAT DB, MODULATING STAINLESS STEEL INDIRECT FIRED HEAT EXCHANGER.

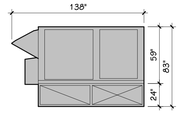
ELECTRICAL: PROVIDE UNIT WITH FUSED DISCONNECT SWITCH WITH INTEGRAL PHASE MONITOR AND CONVENIENCE OUTLET, 460/3/60 (93 MCA, 110 MOCP).

NOTES: MANUFACTURER TO PROVIDE UNIT WITH INTEGRAL BACNET CONTROLS FOR SINGLE ZONE VAV OPERATION, AS SPECIFIED IN 237413 "PACKAGED, OUTDOOR, CENTRAL-STATION AIR-HANDLING UNITS", WITH REMOTE SAFETY SHUTDOWN TERMINAL FOR INTEGRATION OF ALARM CONTROL MODULES, SUCTION AND DISCHARGE COMPRESSOR ISOLATION VALVES, LIQUID LINE SIGHT GLASS, AND INTEGRAL A2L REFRIGERANT LEAKAGE DETECTION CONTROL DEVICE WITH ALARM. CONTROLS CONTRACTOR TO PROVIDE UNIT WITH BACNET INTERFACE TO ROOFTOP UNIT, AND PROGRAMMING FOR CONTROL. EQUIPMENT INSTALLER TO PROVIDE UNIT WITH WITH FLEXIBLE CONNECTIONS FOR DUCTWORK, PIPING, AND POWER, FOR VIBRATION ISOLATION. FIRE ALARM INSTALLER TO PROVIDE UNIT WITH ADDRESSABLE SUPPLY AND RETURN AIR SMOKE DETECTORS, INSTALL FIRE ALARM CONTROL MODULES WITHIN 3 FEET OF UNITS CONTROL PANEL, FOR SHUTDOWN OF EQUIPMENT.

ALTERNATE: PROVIDE ADD ALTERNATE ON BID FORM FOR AAON EXTREME SERIES PACKAGED ROOFTOP UNIT WITH REFRIGERANT INJECTION, 290.0 MBH HEAT PUMP HEATING CAPACITY AT DX CONDENSER EAT 22°F, REDUCING LP GAS FIRED HEATING USE TO ONLY HEAT PUMP FAILURE, EMERGENCY OPERATING CONDITIONS, AND OPTIMIZING ENERGY COST.



PLAN - TOP VIEW



ELEVATION - SIDE VIEW

ROOFTOP UNIT

RTU-101: PACKAGED ROOFTOP UNIT

TYPE: VAV PACKAGED ROOFTOP UNIT, BASED ON AAON "RNA030" SERIES.
OUTSIDE AIR: 2400 CFM MAX DEMAND CONTROL VENTILATION REQUIREMENT, 900 CFM MIN DEMAND CONTROL VENTILATION REQUIREMENT, UP TO 100% ECONOMIZER.
WEIGHT: 3600 LB
UNIT MOUNTING: MOUNTED ON 4" HOUSEKEEPING PAD WITH 24" INSULATED CURB AND INTEGRAL PERFORATED DOUBLE WALL SUPPLY/RETURN PLENUMS WITH TURNING VANES, FOR SIDE DUCT CONNECTIONS.

SOUND POWER LEVELS (AHRI 260 *db*)								
	63 HZ	125 HZ	250 HZ	500 HZ	1 kHZ	2 kHZ	4 kHZ	8 kHZ
RETURN AIR	92	90	88	82	78	78	74	66
SUPPLY AIR	94	92	94	95	92	89	91	87
OUTDOOR AIR	---	---	---	---	---	---	---	---
EXHAUST AIR	92	90	93	90	81	81	77	69
CASING	---	---	---	---	---	---	---	---

RELIEF FAN(S): 7400 MAX CFM, 0 MIN CFM, 0.75" ESP, (QTY.1) 4.5 BHP, INTEGRAL VARIABLE FREQUENCY DRIVE OR EC MOTOR, BAROMETRIC OR MOTORIZED RELIEF DAMPERS, PROVIDE SHAFT GROUND RINGS FOR MOTORS USED WITH VARIABLE FREQUENCY DRIVES.

AIR MIXING SECTION: LOW LEAK MODULATING OUTDOOR AND RETURN AIR DAMPERS, FOR ECONOMIZER CONTROL AND CO2 CONTROL. 2" MERV 8 OR GREATER PRE FILTER, 4" MERV 13 OR GREATER FINAL FILTRATION, ALLOW FOR MIDLIFE DIRTY FILTER PRESSURE DROP, ECONOMIZER DAMPER FAILURE DETECTION, DIRTY FILTER DETECTION, OUTDOOR AIRFLOW MEASURING STATION.

HEAT PUMP SECTION: (DX CONDENSER EAT 95°F) 7400 CFM, 326.0 TMBH, 210.1 SMBH, 78°F/70°F EAT DBWB, 52°F/52°F LAT DBWB, R-454B DX MODULATING DIGITAL OR VFD SCROLL COMPRESSOR(S), 10.4 IEER @ AHRI.
(DX CONDENSER EAT 5°F) 7400 CFM, 153.6 MBH, 51°F EAT DB, 68°F LAT DB, R-454B DX MODULATING DIGITAL OR VFD SCROLL COMPRESSOR(S), 2.1 COP @ 17°F AHRI.
CONDENSER COIL HAIL GUARDS.

HOT GAS REHEAT SECTION (DX): 7400 CFM, 52°F EAT DB, 70°F LAT DB, MODULATING HOT GAS REHEAT FOR HUMIDITY CONTROL.

SUPPLY FAN(S): 7400 MAX CFM, 3100 MIN CFM, 1.0" ESP, (QTY. 1) 6.9 BHP, INTEGRAL VARIABLE FREQUENCY DRIVE OR EC MOTOR. PROVIDE SHAFT GROUND RINGS FOR MOTORS USED WITH VARIABLE FREQUENCY DRIVES.

HEATING SECTION (LP GAS FIRED HX): 7400 CFM, 405.0 MBH INPUT, 328.1 MBH OUTPUT, 55°F EAT DB, 95°F LAT DB, MODULATING STAINLESS STEEL INDIRECT FIRED HEAT EXCHANGER.

ELECTRICAL: PROVIDE UNIT WITH FUSED DISCONNECT SWITCH WITH INTEGRAL PHASE MONITOR AND CONVENIENCE OUTLET, 460/3/60 (93 MCA, 110 MOCP).

NOTES: MANUFACTURER TO PROVIDE UNIT WITH INTEGRAL BACNET CONTROLS FOR VAV OPERATION, AS SPECIFIED IN 237413 "PACKAGED, OUTDOOR, CENTRAL-STATION AIR-HANDLING UNITS", WITH REMOTE SAFETY SHUTDOWN TERMINAL FOR INTEGRATION OF ALARM CONTROL MODULES, SUCTION AND DISCHARGE COMPRESSOR ISOLATION VALVES, LIQUID LINE SIGHT GLASS, AND INTEGRAL A2L REFRIGERANT LEAKAGE DETECTION CONTROL DEVICE WITH ALARM. CONTROLS CONTRACTOR TO PROVIDE UNIT WITH BACNET INTERFACE TO ROOFTOP UNIT, AND PROGRAMMING FOR CONTROL. EQUIPMENT INSTALLER TO PROVIDE UNIT WITH WITH FLEXIBLE CONNECTIONS FOR DUCTWORK, PIPING, AND POWER, FOR VIBRATION ISOLATION. FIRE ALARM INSTALLER TO PROVIDE UNIT WITH ADDRESSABLE SUPPLY AND RETURN AIR SMOKE DETECTORS, INSTALL FIRE ALARM CONTROL MODULES WITHIN 3 FEET OF UNITS CONTROL PANEL, FOR SHUTDOWN OF EQUIPMENT.

ALTERNATE: PROVIDE ADD ALTERNATE ON BID FORM FOR AAON EXTREME SERIES PACKAGED ROOFTOP UNIT WITH REFRIGERANT INJECTION, 290.0 MBH HEAT PUMP HEATING CAPACITY AT DX CONDENSER EAT 22°F, REDUCING LP GAS FIRED HEATING USE TO ONLY HEAT PUMP FAILURE, EMERGENCY OPERATING CONDITIONS, AND OPTIMIZING ENERGY COST.

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PROPOSED SITE IMPROVEMENTS FOR:
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TOWNE SOUTH CHURCH
2224 PEARTREE RD
ELIZABETH CITY, NC 27909

KEY PLAN

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NO.	DESCRIPTION	ISSUE DATE
A	ISSUED FOR 100% DD	2026.01.30
B	ISSUED FOR PERMIT	2026.03.23
C	ISSUED FOR 95% CD	2026.04.30

NOT FOR CONSTRUCTION

PROJECT NAME
TOWNE SOUTH CHURCH
2224 PEARTREE RD,
ELIZABETH CITY, NC 27909

CURRENT ISSUE
ISSUED FOR 95% CD
2026.04.30

SHEET NAME
MECHANICAL SCHEDULES AND DETAILS

PROJECT NUMBER
25-623

SCALE
NONE

DRAWING NUMBER
M-501

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