

REMOVE & REPLACE ROOFTOP AIR CONDITION WOVE & REPLACE ROOFTOP AIR CONDITIONING UNITS WAREHAM WATER POLLUTION CONTROL FACILITY

6 TONY'S LANE WAREHAM, MA 02571

APRIL 18, 2014

CONSULTING ENGINEERS



1740 MASSACHUSETTS AVE, SUITE D BOXBOROUGH, MA 01719 PHONE: 978-266-3711 FAX: 978-266-3712

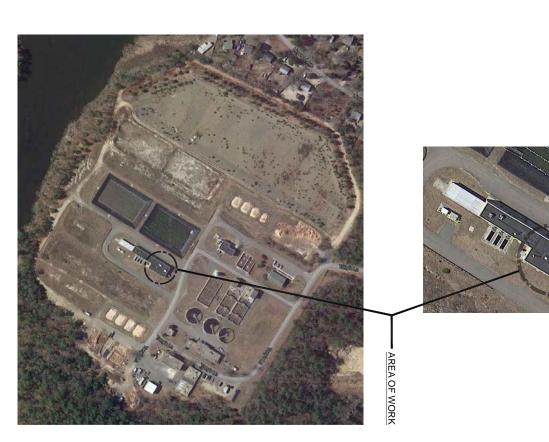
DRAWING INDEX

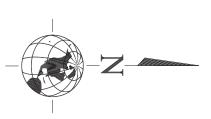
COVER SHEET

M-0 GENERAL NOTES, ABBREVIATIONS & EQUIPMENT SCHEDULE

M-1 DEMOLITION & NEW WORK PLANS

M-2 DETAILS & ELEVATION





/2			
59.8	TOTAL CAPACITY (MBH)		
45.3	SENSIBLE CAPACITY (MBH)		
R-410A	REFRIGERANT TYPE	COOLING PERFORMANCE	
10.80	EFFICIENCY (EER)	ORMANCE	
13.00	SEASONAL EFF RATING (SEER)		
82	SOUND POWER (dBA)		
460	VOLTS		
3	PHASE		
60	HERTZ		
1.73	MAX BHP		
1.50	MOTOR RATING HP	ELECTRICAL	BLOV
1.13	ACTUAL REQ. BHP		VER AC
18.50	MIN. CIRCUIT AMPS		TINU
25	MAX OVERCURRENT PROT. (AMP)		BLOWER AC UNIT SCHEDULE
2000	AIR FLOW (CFM)	SUPPLY	
1074	SPEED (RPM)		
воттом	LOCATION		
BELT	DRIVE TYPE		
33	HEIGHT (IN)		
83	LENGTH (IN)	DIMENSION	
45	WIDTH (IN)	SNOIS	
629	WEIGHT (LBS)		
JOHNSTON CONTROLS #J05ZFC00P4TZZ2	BASIS OF DESIGN		
(1),(2),(3), &(4)	REMARKS		

NOTES:

BACU-1/2

TAG

- PROVIDE MANUFACTURER'S RECOMMENDED 14" HIGH, FLAT, INSULATED, FULL PERIMETER ROOF CURB
- PROVIDE BAROMETRIC DAMPER FOR DOWN FLOW OPERATION.
- PROVIDE MANUFACTURER'S ELECTRONIC LOW AMBIENT CONTROLLER KIT.
- PROVIDE FUSED DISCONNECT AT OR ON EACH UNIT.

GENERAL PROJECT NOTES:

- COORDINATE INSTALLATION OF ALL EQUIPMENT WITH OTHER CONTRACTORS, NOTIFY THE ENGINEER OF ANY DEVATIONS FROM THESE DRAWINGS PRIOR TO FABRICATION AND/OR INSTALLATION.
- CONTRACTOR TO INSTALL ALL EQUIPMENT AND MATERIALS AS SHOWN ON DRAWINGS IN ACCORDANCE WITH THE SPECIFICATIONS, IN THE EVENT OF A CONFLICT BETWEEN DRAWINGS AND SPECIFICATIONS, THE DRAWINGS WILL GOVERN.

- CONTRACTOR SHALL PROVIDE SUBMITTALS, SHOP DRAWINGS AND COORDINATION DRAWINGS WITH ALL OTHER TRADES.
- FINAL "AS-BUILT" DRAWINGS SHALL BE FURNISHED AT THE END OF THIS PROJECT TO OWNER AND ENGINEER.
- THE APPLICABLE CONTRACTOR SHALL PROCURE ALL PERMITS AND MISPECTIONS NECESSARY TO COMPLETE THE ELECTRICAL AND HVAC WORK, THE HOUSING AUTHORITY SHALL BE BILLED DIRECTLY AND WILL PAY THE AFFECTED AGENCY.
- DEVIATIONS TO CONTRACT DRAWINGS SHALL BE SUBMITTED TO ENGINEER FOR APPROVAL.
- THE CONTRACTOR SHALL COORDINATE WORK WITH ALL TRADES FOR PROVISION OF CONNECTIONS FOR APPLIANCES, ELECTRICAL AND MECHANICAL, AND HVAC EQUIPMENT.

- THE INTENT OF THE SPECIFICATION AND THE DRAWINGS IS TO PROVIDE A COMPLETE AND FULLY OPERATIONAL ROOFFOP AIR CONDITIONING UNIT SYSTEMS IN THE BLOWER BULDING ELECTRICAL ROOM. ALL LABOR, UNIT MATERIALS, TOOLS, EQUIPMENT, TRANSPORTATION, HOISTING AND RIGGING, ETIC, NECESSARY TO COMPLETE THE WORK SHALL BE INCLUDED IN CONTRACTORS BID.
- FOLLOW THE LATEST REQUIREMENTS OF NEPA, MASSACHUSETTS ELECTRIC CODE. THE STATE PLUMBING CODES, AND THOSE OF ANY CITY, STATE, OR FEDERAL AGENCY HAVING JURISDICTION OVER THIS PROJECT.

- **ELECTRICAL GENERAL NOTES:** CONTRACTOR TO INSTALL DUCT SUPPORTS AND MATERIALS IN ACCORDANCE WITH THE SPECIFICATIONS AND STATE CODES.
- A MASSACHUSETTS LICENSED ELECTRICIAN SHALL DISCONNECT AND MAKE EQUIPMENT SAFE PRIOR TO COMMENCING WORK AND MAKE ALL ELECTRICAL CONNECTIONS TO EQUIPMENT.

- THIS IS A STANDARD NOTES SHEET. THEREFORE, NOT ALL OF THE INFORMATION MAY BE USED ON THIS PROJECT.

- CONTRACTOR TO VERIFY ALL DUCT ROUTINGS AND DIMENSIONS BEFORE ORDERING MATERIAL OR DOING WORK.
- CONTRACTOR SHALL FIELD VERIFY EXISTING CONDITIONS PRIOR TO SUBMITTING $\ensuremath{\mathsf{BID}}$.
- ALL CUTTING AND PATCHING SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.

SCOPE:

- THE WORK IS INDICATED DIAGRAMMATICALLY, EXACT LOCATION OF ALL COMPONENTS ARE TO BE DETERMINED IN THE FIELD AND BY THE ACTUAL BUILDING CONDITIONS.

HANGERS & SUPPORTS:

- THE HVAC CONTRACTOR SHALL FURNISH ALL DUCT SUPPORTS REQUIRED FOR HIS EQUIPMENT AND MATERIAL.
- ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH ALL STATE AND LOCAL CODES, REGULATIONS AND THE CONTRACT DOCUMENTS. THE CONTRACTOR SHALL OBTAIN ALL REQUIRED LOCAL PERMITS, MET ALL REQUIREMENTS OF INSPECTIONAL SERVICES AND MET ALL REQUIREMENTS OF INSPECTIONAL SERVICES AND MET ALL PAY FOR ALL FEES AND PERMITS REQUIRED TO COMPLETE THE WORK.
- THE LOCATION OF DEVICES IS APPROXIMATE AND SHALL BE ADJUSTED BY THE CONTRACTOR TO SUIT EQUIPMENT SERVED AND TO AVOID BUILDING FEATURES AND OTHER TRADES.

HVAC GENERAL NOTES:

OWNER:

ENGINEERS EVERETT

1740 Massachusetts Ave., Suite D Boxborough, MA 01719 Phone: 978-266-3711 Fax: 978-266-3712

- COORDINATE THE INSTALLATION OF POWERED EQUIPMENT WITH ELECTRICAL CONTRACTOR.
- UNLESS OTHERWISE SPECIFIED (
 MECHANICAL EQUIPMENT SHALL
 STRUCTURE.

PROJECT:

6 TONY'S LANE WAREHAM, MA 02571 Phone: (508) 291-3140 Fax: (508) 291-3116

ABBREVIATIONS:

DIAMETER (ALSO Ø)
DOWN
DOWN

AFF

BACU

BRACU

BRACU DOWN
DOMESTIC WATER SERVICE
DRAWING
EXHAUST FAN
EFFICIENCY
EXTERNAL STATIC PRESSURE
FLOOR DRAIN
FRET PER MINUTE
GALLONS PER MINUTE
HOT DIPPED GALVANIZED
HORSEPOWER
HOT WATER (DOMESTIC)
NCHES
MOTOR OPERATED DAMPER
MAXIMUM
MOTOR OPERATED DAMPER
MAXIMUM
MOTOR OPERATED DAMPER
MAXIMUM
MOTOR OPERATED DAMPER
NUMBER
NUMBER
NUMBER
NUMBER
REVOLUTIONS DER MINUTE
REVOLUTIONS DER MINUTE

REVOLUTIONS PER MINUTE SOUMRE FEET TYPICAL THERMOSTAT/TEMPERATURE SENSOR VOLTS WATTS

- ALL WORK SHALL BE IAW STATE AND LOCAL CODES, REGULATIONS AND ORDINANCES INCLUDING $527\,$ CMR 4.00.
- OR SUPPORTED FROM THE FLOOR, THE BE SUPPORTED FROM BUILDING
- CONTRACTOR SHALL BE RESPONSIBLE FOR ALL REQUIRED SCHEDULING, OBTAINING OF ALL PERMITS AND INSPECTIONS FOR WORK OF THIS CONTRACT.

ABOVE FINISHED FLOOR

AMPS
BLOWER AIR CONDITIONING UNIT
BUILDING ENERGY MONITORING SYSTEM (JCI METASYS)
BRITISH THERMAL UNITS
CUBIC FEET PER MINUTE
COLD WATER (DOMESTIC)

STAMP:

REMOVE & REPLACE
ROOFTOP AIR CONDITIONING UNITS
WAREHAM WATER POLLUTION
CONTROL FACILITY

SHEET TITLE:

GENERAL NOTES,
ABBREVIATIONS &
EQUIPMENT SCHEDULE

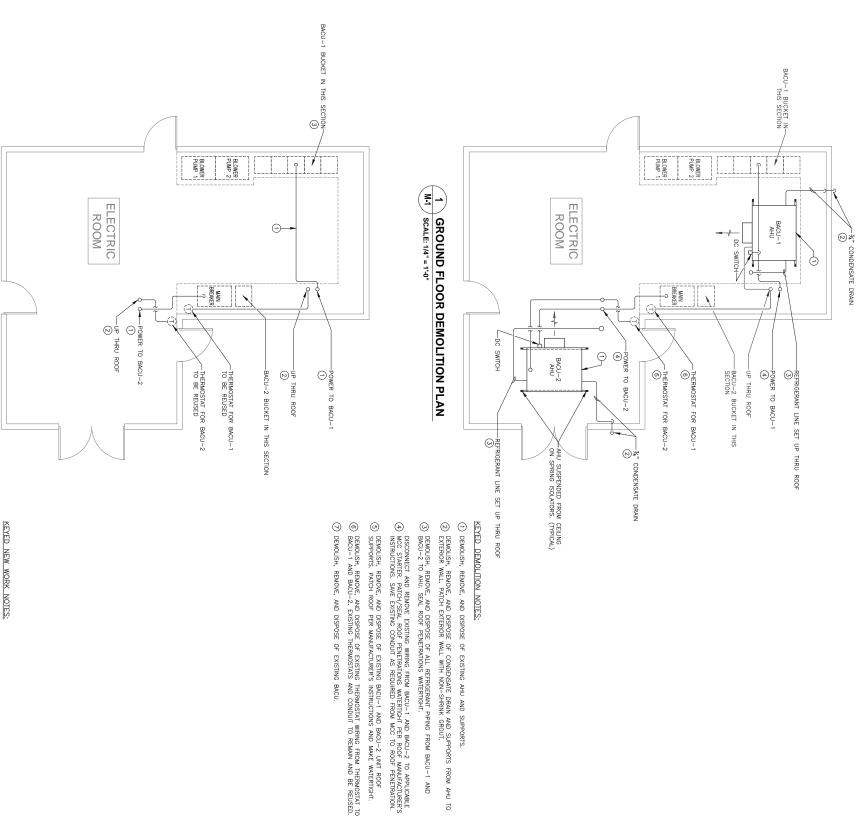
KEY PLAN:

REV DATE
DATE
DESCRIPTION
BY

EE PROJECT #:	SCALE:	CHECKED BY:	DRAWN BY:	DESIGNED BY:	DATE:	
P13050	NONE	RAE	JPS	RAE	APRIL 18, 2014	

SHEET NO.:

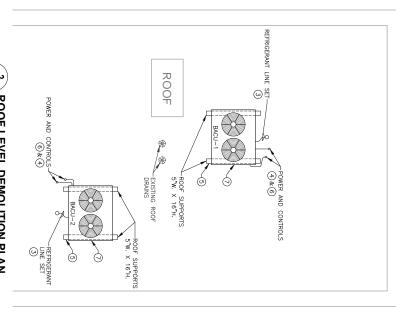




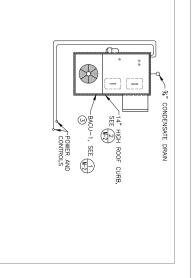
- INSTALL NEW 480V. 65KAIC 25A. 3 POLE CIRCUIT BREAKER IN MCC BUCKET. FURNISH AND INSTALL NEW 3410 & 1410C. TYPE THWN CABLE FROM APPLICABLE MCC FEEDER BUCKET () TO BACU IN EXISTING CONDUIT. USE EXISTING ROOF FENETRATIONS. INSTALL NEW LUDID TIGHT FLEXIBLE CONDUIT FROM ROOF PENETRATION TO FUSED DISCONNECT ON BACU. TERMINATE WIRING AT MCC AND BACU. SEAL ROOF PENETRATION WATERTIGHT.
- $\ensuremath{\textcircled{\sc 2}}$ install new thermostat wiring from applicable thermostat to bacu and terminate $\ensuremath{\textcircled{\sc 2}}$ seal roof penetrations watertight.
- $\ensuremath{\mathfrak{S}}$ position and orient rooftop unit such that return duct is closest to wall and supply duct is closest to middle of electric room.

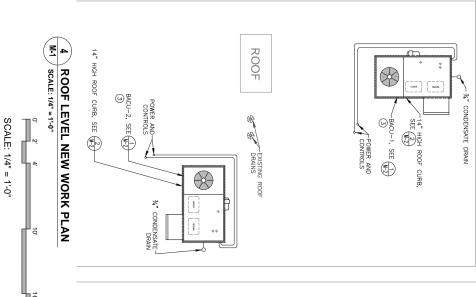
3 GROUND FLOOR NEW WORK PLAN
M-1 SCALE: 14" = 1-0"

(4) ALL ELECTRICAL EQUIPMENT TO BE LABELED PER NEC 110.16.



2 ROOF LEVEL DEMOLITION PLAN
M-1 SCALE: 1/4" = 1-0"





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CONTROL FACILITY

DEMOLITION & NEW WORK PLANS

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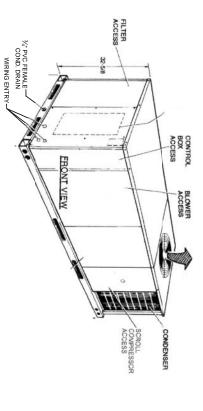
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	JPS	BY:	DRAWN BY:	
	RAE	ED BY:	DESIGNED BY:	
	APRIL 18, 2014		DATE:	
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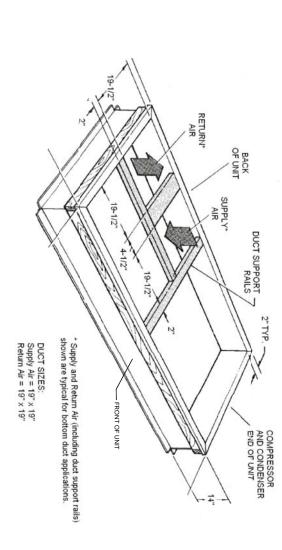
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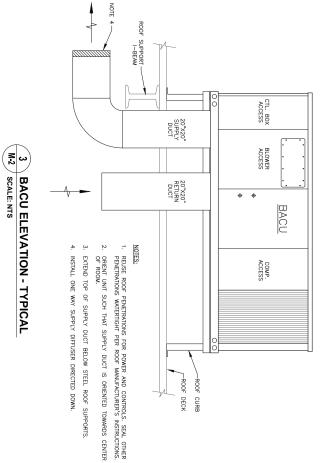
EE PROJECT #: P13050

AS NOTED



DETAIL - ROOFTOP UNITS BACU-1/2
M-2 SCALE: NTS





KEY PLAN:

DATE

DESCRIPTION BY

SHEET TITLE: DETAILS & ELEVATION



STAMP:

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2 DETAIL - ROOFTOP UNIT CURB M-2 SCALE: NTS

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ENGINEERS EVERETT

M-2

SCALE:	NONE
EE PROJECT #:	P13050
SHEET NO:	

CHECKED BY: DRAWN BY: DESIGNED BY:

RAE RAE

APRIL 18, 2014