

| MECHANICAL LEGEND |   |
|-------------------|---|
| SYMBOL            | DESCRIPTION   |
|                   | NEW DUCTWORK, PIPING, OR EQUIPMENT                                |
|                   | EXISTING DUCTWORK, PIPING, OR EQUIPMENT TO REMAIN                 |
|                   | FLEXIBLE DUCT   |
|                   | SUPPLY OR OUTSIDE AIR DUCT SECTION                                |
|                   | RETURN OR EXHAUST DUCT SECTION                                    |
|                   | DUCTWORK TRANSITION   |
|                   | MANUAL AIR VOLUME CONTROL DAMPER                                  |
|                   | SUPPLY AIR DEVICE. CLEAR TRIANGLE SIDES INDICATE AIR FLOW PATTERN |
|                   | RETURN, TRANSFER OR EXHAUST AIR DEVICE                            |
|                   | UNDERCUT DOOR 1"  |
|                   | MECHANICAL NOTE - NUMBER  |
|                   | EXISTING WALL MOUNTED THERMOSTAT                                  |
|                   | SMOKE DETECTOR  |
|                   | CONNECTION BETWEEN NEW AND EXISTING WORK                          |
|                   | CEILING DIFFUSER  |
|                   | ROOF TOP UNIT   |
|                   | EXISTING TO REMAIN  |
|                   | NEW EQUIPMENT   |

**EXISTING EQUIPMENT REQUIREMENTS**

CERTAIN EQUIPMENT SHOWN AND DESIGNATED ON THESE DRAWINGS SHALL REMAIN IN PLACE AND BE REUSED FOR THE NEW CONSTRUCTION. THE MECHANICAL CONTRACTOR SHALL FIELD VERIFY THE EXACT SIZE, LOCATION AND CONDITION OF ALL EXISTING EQUIPMENT TO REMAIN IN PLACE AND TO BE REUSED FOR THE NEW CONSTRUCTION. IF THE EXISTING MECHANICAL EQUIPMENT SHOWN AND CALLED TO REMAIN FOR THE NEW CONSTRUCTION IS NOT ADEQUATE TO MEET THE NEW CONSTRUCTION REQUIREMENTS, THE MECHANICAL CONTRACTOR SHALL SUBMIT IN HIS BID ALL MATERIALS AND/OR LABOR AND ALL COSTS ASSOCIATED WITH THE INSTALLATION OF NEW EQUIPMENT TO MEET THE REQUIREMENTS OF THE NEW CONSTRUCTION AS SHOWN OR IMPLIED AND CALLED FOR ON THESE DRAWINGS.

**FIELD VERIFY ALL CONDITIONS**

DESIGN DRAWINGS ARE SCHEMATIC. CONTRACTOR SHALL VISIT THE SITE PRIOR TO BIDDING OR AWARD OF CONTRACT TO INSPECT EXISTING FIELD CONDITIONS. THIS CONTRACT SHALL INCLUDE ALL LABOR AND MATERIALS NECESSARY FOR FIELD MODIFICATIONS DUE TO EXISTING CONDITIONS.

THE CONTRACTOR SHALL CONTACT THE ARCHITECT, ENGINEER OR OWNER PRIOR TO BIDDING FOR INTERPRETATIONS AND CLARIFICATIONS OF THE DESIGN AND INCLUDE IN THEIR BID ALL COSTS TO MEET THE DESIGN INTENT. CLARIFICATIONS MADE BY THE ARCHITECT, ENGINEER OR OWNER AFTER BIDDING WILL BE FINAL AND SHALL BE IMPLEMENTED AT CONTRACTOR'S COST.

BIDDING CONTRACTORS SHALL HAVE A WORKING KNOWLEDGE OF LOCAL CODES AND ORDINANCES AND SHALL INCLUDE IN THEIR BIDS THE COST FOR ALL WORK INSTALLED IN STRICT ACCORDANCE WITH GOVERNING CODES. THE PLANS AND SPECIFICATIONS NOT WITHSTANDING, THE CONTRACTOR SHALL ALERT ARCHITECT, ENGINEER OR OWNER OF ANY APPARENT DISCREPANCIES BETWEEN GOVERNING CODES AND DESIGN INTENT.

| NEW AIR DEVICE SCHEDULE |                |          |                         |             |                        |                          |
|-------------------------|----------------|----------|-------------------------|-------------|------------------------|--------------------------|
| MARK                    | TYPE           | MATERIAL | FINISH                  | ACCESSORIES | MANUFACTURER AND MODEL | MODULE SIZE CEILING TYPE |
| RD                      | ROUND DIFFUSER | ALUMINUM | PAINT TO MATCH DUCTWORK |             | TITUS TMRA-AA          | DUCT MOUNTED             |

NOTES: 1. NECK SIZES AND CFM QUANTITIES SHOWN ON MECHANICAL FLOOR PLAN.  
2. CONTRACTOR SHALL COORDINATE BORDER TYPES WITH CEILING AND/OR WALL TYPES.

| MINIMUM CODE REQUIRED OUTSIDE AIR VENTILATION RATES |                                       |               |            |                   |                   |              |                        |                          |                          |
|---|---------------------------------------|---------------|------------|-------------------|-------------------|--------------|------------------------|--------------------------|--------------------------|
| AREA-SERVED OCCUPANCY CATEGORY                      | DEFAULT OCCUPANT DENSITY P/1,000 S.F. | NET AREA S.F. | AREA O d r | CODE REQ'D OA B d | NUMBER PEOPLE P r | PEOPLE O d r | CODE REQ'D OA Based on | TOTAL OA Required by C d | TOTAL OA SUPPLIED        |
|   |                                       |               |            |                   |                   |              |                        |                          |                          |
| Retail - Sales                                      | 1                                     | 3             | 0.1        |                   | +                 | 1            |                        | 1                        |                          |
| Storage Rooms                                       | ---                                   | 1             | 0.1        | 110               | +                 | 0            | NR                     | 110                      |                          |
| Public Toilet Rooms                                 | ---                                   | 3             | NR         | 0                 | +                 | 0            | NR                     | 0                        | 1 fixture(s) X 50 cfm=50 |
| <b>TOTALS</b>                                       |                                       |               |            |                   |                   |              |                        |                          | 6                        |

| EXISTING EXHAUST FAN SCHEDULE |   |                          |
|-------------------------------|---|--------------------------|
| TAG                           | DESCRIPTION                             | NOTES                    |
| EF-1                          | EXHAUST                                 |                          |
|                               | AIR QUANTITY CFM                        | 50                       |
|                               | EXT. STATIC PRESS. IN. H <sub>2</sub> O | 0.38                     |
|                               | FAN TYPE                                | CEILING                  |
|                               | DRIVE                                   | DIRECT                   |
|                               | SONES                                   | 4.4                      |
|                               | MOTOR WATTS                             | 50                       |
|                               | FAN SPEED RPM                           | EXISTING                 |
|                               | UNIT WEIGHT LBS                         |                          |
|                               | POWER V/ø                               | 120/1                    |
|                               | CONTROL                                 | INTERLOCK W/ WALL SWITCH |
|                               | AREA SERVED                             | TOILET ROOM              |
|                               | MANUFACTURER                            | BROAN                    |
|                               | MODEL                                   | HDBOL                    |

NOTES: ① EXISTING FACTORY PLUG-IN DISCONNECT, BACKDRAFT DAMPER, LIGHT/FAN COMBO, INTAKE GRILLE AND HANGING VIBRATION ISOLATOR KIT TO REMAIN.  
② EXISTING FACTORY FAN SPEED CONTROLLER LOCATED IN FAN HOUSING TO REMAIN.

**DRAWING NOTE:**

- EXISTING RTU-1 TO REMAIN/ BE REUSED. CONTRACTOR SHALL FIELD VERIFY EXACT LOCATION OF UNIT AND REFURBISH UNIT TO LIKE NEW CONDITION INCLUDING CLEANING COILS, DRAIN LINE AND LUBING MOTOR. REBALANCE AIR FLOW AS SCHEDULED. RELOCATE EXISTING THERMOSTAT TO LOCATION AS SPECIFIED ON PLAN. CONTRACTOR SHALL ALSO FIELD VERIFY EXISTING DUCT AND DIFFUSER CONDITION. REUSE EXISTING EQUIPMENT IF AVAILABLE, PROVIDE NEW AS REQUIRED.
- EXISTING CONDENSATE DRAIN TO CODE APPROVED DRAIN LOCATION SHALL REMAIN.
- EXISTING SMOKE DETECTOR, REQUIRED IN THE RTU RETURN AIR DUCT TO REMAIN.
- RELOCATE EXISTING THERMOSTAT TO LOCATION SHOWN ON PLANS.
- PROVIDE/INSTALL NEW DOUBLE WALL SPIRAL ROUND DUCTWORK AS REQUIRED. FLEXIBLE DUCTWORK IS NOT PERMITTED. PAINT COLOR FOR EXPOSED DUCTWORK SHALL BE DETERMINED BY THE ARCHITECT, COORDINATE AS REQUIRED.
- PROVIDE/INSTALL NEW ROUND DIFFUSERS AS REQUIRED. FLEXIBLE DUCTWORK IS NOT PERMITTED. PAINT COLOR FOR EXPOSED DIFFUSERS SHALL BE DETERMINED BY THE ARCHITECT, COORDINATE AS REQUIRED. HOLD FACE OF DIFFUSER 1/2"-0" ABOVE FINISHED FLOOR.
- EXISTING TOILET EXHAUST FAN/LIGHT COMBO TO REMAIN/ BE REUSED. CONTRACTOR SHALL FIELD VERIFY PROPER WORKING ORDER AND REPAIR TO LIKE NEW CONDITION OR REPLACE IF/AS REQUIRED. TOILET ROOM TO BE EXHAUSTED AT MINIMUM 50 CFM (MINIMUM) CODE REQUIREMENT PER ONE WATER CLOSET FIXTURE.
- PROVIDE/INSTALL NEW RETURN AIR PLENUM BOX WITH A 20x24 OPENING ON TOP WITH 2x2 WIRE MESH GRILLE. RETURN AIR PLENUM BOX DETAIL FOR FURTHER INFORMATION. MOUNT BOTTOM OF PLENUM BOX 1'-0" ABOVE FINISHED FLOOR. PAINT COLOR FOR EXPOSED SHEETMETAL PLENUM BOX SHALL BE DETERMINED BY THE ARCHITECT, COORDINATE AS REQUIRED.
- AC-1 IS MOUNTED TO WALLS 10' OFF. AIR CURTAINS SHALL NOT BE VISIBLE FROM EXTERIOR THROUGH GLASS PART ABOVE.

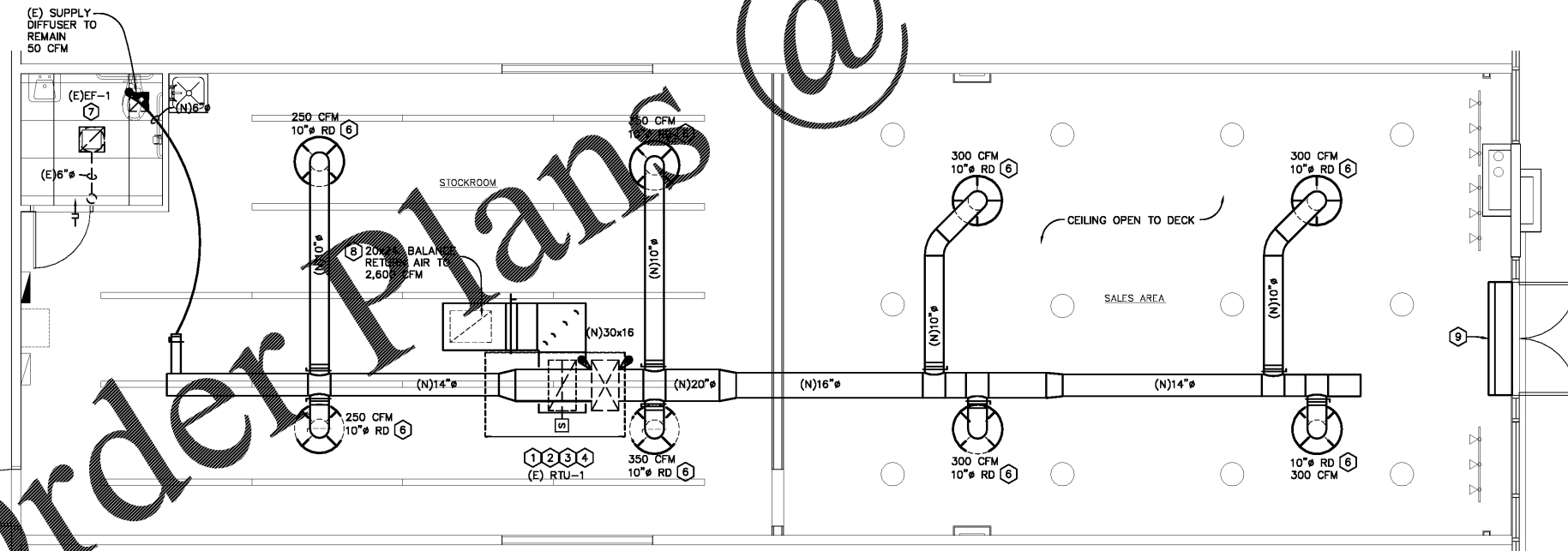
| EXISTING PACKAGED ROOF TOP UNIT SCHEDULE |                      |          |
|--|----------------------|----------|
| EQUIPMENT DESIGNATION                    |                      | RTU-1    |
| NOMINAL TONNAGE                          | TONS                 | 6.0      |
| SUPPLY AIR                               | CFM                  | 2,400    |
| OUTSIDE AIR                              | CFM                  | 525      |
| EXT. STATIC PRESSURE                     | IN. H <sub>2</sub> O | 1.8      |
| FAN SPEED (BELT DRIVE)                   | RPM                  | EXISTING |
| EVAP. MOTOR MAXIMUM                      | B.H.P.               | EXISTING |
| FILTER TYPE                              |                      | 2"-30%   |
| POWER                                    | VOLTS/PH.            | 480/3    |
|  | MCA                  | 20.0     |
|  | MCCP                 | 25.0     |
| TOTAL COOLING CAPACITY                   | BTUH                 | 72,000   |
| SENSIBLE COOLING CAPACITY                | BTUH                 | 47,600   |
| ENT. AIR TEMP. (DB/WB)                   | F/F                  | 80/67    |
| LVG. AIR TEMP. (DB/WB)                   | F/F                  | 58/56    |
| EER/SEER @ ARI CONDITIONS                |                      | -/-      |
| AMBIENT TEMPERATURE                      | F                    | 55       |
| UNIT WEIGHT W/ROOF CURB                  | LBS                  | 900      |
| MANUFACTURER                             |                      | CARRIER  |
| MODEL NO.                                |                      | 35CA07   |
| GAS HEAT (INPUT/OUTPUT)                  | BTUH                 | -/96.0   |

NOTES: ① EXISTING FACTORY ROOF CURB TO REMAIN.  
② EXISTING 7-DAY PROGRAMMABLE THERMOSTAT TO REMAIN.  
③ EXISTING FACTORY ECONOMIZER WITH DRY BULB CONTROLS AND DEMAND CONTROL VENTILATION WITH CO<sub>2</sub> SENSOR, BAROMETRIC RELIEF AND SINGLE POINT ELECTRICAL SERVICE CONNECTION TO REMAIN.  
④ EXISTING FACTORY DISCONNECT SWITCH AND 115V GFI ELECTRICAL CONVENIENCE OUTLET TO REMAIN.  
⑤ EXISTING SMOKE DETECTOR IN RETURN AIR STREAM OF UNIT TO REMAIN.

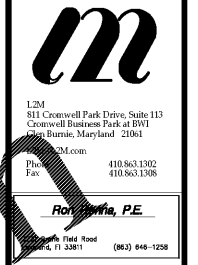
**TYPICAL ROOF TOP UNIT CONTROL SEQUENCE OF OPERATION**

THE ROOF TOP UNIT SHALL BE CONTROLLED BY ITS ELECTRONIC 7-DAY PROGRAMMABLE THERMOSTAT. UNIT SUPPLY FAN SHALL RUN CONTINUOUSLY IN THE OCCUPIED MODE, CYCLE WITH HEATING AND COOLING WHILE UNOCCUPIED. UPON A RISE IN SPACE TEMPERATURE, UNIT COMPRESSORS AND CONDENSER FANS SHALL ACTIVATE IN STAGES TO SATISFY SPACE. UPON A DROP IN SPACE TEMPERATURE, UNIT SHALL ACTIVATE GAS HEAT IN STAGES IN HEATING MOD TO SATISFY SPACE TEMPERATURE. INTERNAL UNIT CONTROLS SHALL OPERATE ECONOMIZER WHEN OUTSIDE AIR ENTHALPY IS LOWER THAN RETURN AIR ENTHALPY. THERMOSTATS SHALL PROVIDE A DEADBAND OF 5', WITHIN WHICH THE SUPPLY OF HEATING OR COOLING ENERGY TO THE ZONE CAN BE REDUCED TO THE MINIMUM. OCCUPANCY SCHEDULES SHALL BE SET TO OCCUPIED MONDAY THRU FRIDAY, 7 AM TO 7 PM. UNOCCUPIED NIGHTS AND WEEKENDS. THERMOSTATS SHALL BE SET FOR OCCUPIED COOLING 75', OCCUPIED HEATING 70', UNOCCUPIED COOLING 85', UNOCCUPIED HEATING 55'. ALL TIME AND TEMPERATURE SETPOINTS SHALL BE VERIFIED BY THE OWNER PRIOR TO PROGRAMMING. THERMOSTATS SHALL BE PROGRAMMED BY MECHANICAL CONTRACTOR IN THE PRESENCE OF OWNER'S REPRESENTATIVE PRIOR TO PROJECT COMPLETION.

| AIR CURTAIN SCHEDULE |                  |             |
|----------------------|------------------|-------------|
| TAG                  | DESCRIPTION      | NOTES       |
| AC-1                 | AC-1             |             |
|                      | MANUFACTURER     | BERNER      |
|                      | MODEL            | CHC10-2072A |
|                      | LOCATION         | ENTRY       |
|                      | TYPE OF HEAT     | ---         |
|                      | SUPPLY AIR CFM   | 3,482       |
|                      | HP               | 201/2       |
|                      | HEATING CAPACITY | ---         |
|                      | UNIT WEIGHT LBS. | 84          |
|                      | ELECTRICAL REQ.  | 120/1/60    |
|                      | MIN. CKT. AMP.   | 13.0        |



**FLOOR PLAN - MECHANICAL**  
SCALE: 1/4"=1'-0" 15188



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|-------|-------------------|----------|
|       | CLIENT REVIEW     | 01/13/17 |

SHEET TITLE:  
**MECHANICAL FLOOR PLAN**

| DRAWN BY: | REVIEWED BY: |
|-----------|--------------|
| TH        | RRR          |

PROJECT #  
16 1  
SHEET #

**M-101**  
FILE NAME:  
16 1 - M101.dwg