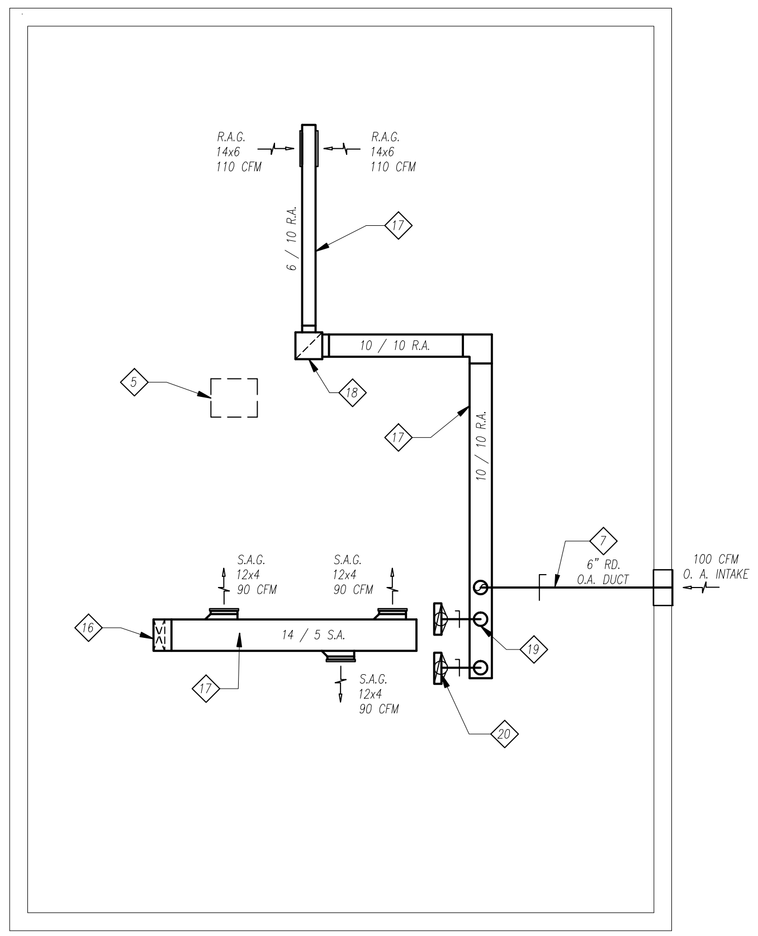
HVAC PLAN KEY NOTES

1. NEW A/C CONDENSING UNIT ALONG THE EXTERIOR WALL OF BUILDING BY THE HVAC CONTRACTOR. PROVIDE A PRECAST FIBERGLASS MOUNTING PAD ON GRADE AND VIBRATION ISOLATION AS REQUIRED. INSTALL CONDENSER LEVEL. COORDINATE LOCATION WITH THE OWNER.
2. RUN REFRIGERATION LINES UP INSIDE WALL AND OVERHEAD ABOVE EXISTING CEILING. CONTINUE OVERHEAD, DROP DOWN AND CONNECT TO MATCHING A-COIL IN FURNACE PLENUM. SUPPORT LINES WITH HANGERS, SPACING AS REQUIRED TO SUPPORT LINES. PROVIDE ALL ACCESSORIES REQUIRED FOR SPLIT SYSTEM TO ACCOMMODATE DISTANCE FROM A-COIL. INSULATE LINES AS REQUIRED.
3. PVC EXHAUST AIR AND COMBUSTION AIR INTAKE LINES FOR FURNACE BY HVAC CONTRACTOR. OFFSET AROUND DUCT AND PLUMBING LINES AS REQUIRED. RUN UP INTO ATTIC SPACE, OFFSET BELOW ROOF 10" MINIMUM FROM OUTDOOR AIR INTAKES. PROVIDE CLOSE COUPLED TERMINATION KIT, SEE DETAIL. SIZE AND MATERIALS AS REQUIRED. SEE FURNACE SPECIFICATIONS.
4. HVAC CONTRACTOR SHALL PIPE CONDENSATE FROM FURNACE AND A-COIL (AS APPLICABLE) TO SAFE WASTE WITH AIRBREAK PER CODE. PROVIDE CONDENSATE NEUTRALIZER KIT AND ALL ACCESSORIES AS REQUIRED. RUN DRAIN PIPE TO SAFEWASTE DRAIN, SLOPE PER CODE. WHERE REQUIRED BY LOCAL CODE, HVAC CONTRACTOR SHALL PROVIDE AN AUXILIARY DRAIN PAN EQUIPPED WITH A WATER LEVEL DETECTION DEVICE FOR EQUIPMENT SHUT DOWN BEFORE DRAIN PAN OVERFLOW. SEE HVAC SPECIFICATIONS. PROVIDE TRAP ON DRAINS PER CODE.
5. FLOOR ACCESS PANEL TO CRAWL SPACE BY OTHERS, COORDINATE WITH GENERAL CONTRACTOR .
6. T'STAT AT MAXIMUM 48" A.F.F., SEE EQUIPMENT SPECIFICATION. COORDINATE LOCATION WITH OWNER.
7. OUTDOOR AIR INTAKE DUCT, CFM AND SIZE AS NOTED. CONNECT TO R.A. DUCT, RUN AS HIGH AS POSSIBLE (IN CRAWL SPACE) AND OUT THRU WALL. PROVIDE OPENING WITH BRICK VENT, FLASHING, AND SCREEN. DUCT SHALL HAVE MANUAL VOLUME DAMPER SET FOR CFM NOTED AND GRAVITY OPERATED DAMPER TO CLOSE WHEN FURNACE IS NOT OPERATING. MAINTAIN 10' MINIMUM FROM ANY EXHAUST DISCHARGE AS REQUIRED, COORDINATE WITH FLOOR FRAMING. WRAP DUCT WITH 1" EXTERNAL INSULATION. WHERE POSSIBLE HVAC CONTRACTOR MAY REUSE OR MODIFY EXISTING VENTILATION OPENINGS FOR CRAWL SPACE. GENERAL CONTRACTOR SHALL INFILL ALL EXISTING VENTILATION OPENINGS, COORDINATE.
8. RUN ROUND EXHAUST AIR DUCT FROM EXHAUST FAN. SIZES AS NOTED. RUN ABOVE CEILING IN ATTIC SPACE, OFFSET TO BE 10' MINIMUM FROM OUTDOOR AIR INTAKES. CONTINUE UP THRU ROOF, PROVIDE SLOPED ROOF JACK. SEE THE EXHAUST FAN SPECIFICATIONS. COORDINATE WITH THE GENERAL CONTRACTOR.
9. ELECTRIC CLOTHES DRYER BY OTHERS. HVAC CONTRACTOR SHALL RUN A 4" OVAL VENT PIPE FOR CLOTHES DRYER UP IN WALL TO ABOVE CEILING. TRANSITION TO 4" ROUND DUCT IN ATTIC SPACE, CONTINUE THRU ROOF WITH ROOF JACK AND BACK DRAFT DAMPER. OFFSET BELOW ROOF AS REQUIRED FOR ROOF STRUCTURE. HVAC CONTRACTOR MAY OPT TO RUN DUCT THRU EAVE WITH EAVE ELBOW AND COVER. WRAP PIPE TO PREVENT CONDENSATION. DRYER EXHAUST DUCT SHALL BE METAL CONSTRUCTION WITH A SMOOTH INTERIOR FINISH, DO NOT USE FLEXIBLE VENT LINE FOR CONNECTION TO DRYER. PROVIDE RECESSED VENT BOX KIT "DRYERBOX" MODEL #425 LOCATED BETWEEN STUDS OF WALL FOR FLUSH INSTALLATION OF DRYER. VERTICAL RISER SHALL HAVE ACCOMMODATIONS FOR A CLEANOUT. CLOTHES DRYER INSTALLATION AND EXHAUST SHALL CONFORM TO THE OMC SECTION 504 AND MANUFACTURER'S WRITTEN INSTRUCTIONS. COORDINATE LOCATION WITH THE GENERAL CONTRACTOR AND DRYER SUPPLIER.
10. THE MAXIMUM LENGTH OF THE CLOTHES DRYER VENT SHALL NOT EXCEED 25' FROM DRYER LOCATION TO THE TERMINATION. THE MAXIMUM LENGTH SHALL BE REDUCED PER CODE FOR EACH ELBOW. THE HVAC CONTRACTOR SHALL COORDINATE WITH THE OWNER TO VERIFY THE MAKE AND MODEL NUMBER OF THE CLOTHES DRYER. WHERE INSTALLATION INSTRUCTIONS ARE PROVIDED TO THE BUILDING OFFICIAL, THE MAXIMUM LENGTH OF THE EXHAUST VENT SHALL BE PERMITTED TO BE IN ACCORD WITH THE MANUFACTURER'S WRITTEN INSTALLATION INSTRUCTIONS. HVAC CONTRACTOR SHALL COORDINATE LOCATION WITH THE OWNER, GENERAL CONTRACTOR AND SUPPLIER PRIOR TO BID.
11. REMOVE EXISTING GAS FIRED FURNACE AND R.A. & S.A. DUCTS COMPLETELY. SEE THE DEMOLITION NOTES.
12. MAINTAIN 30" CLEAR SPACE IN FRONT OF EQUIPMENT AS REQUIRED FOR SERVICING.
13. TRANSITION S.A. DUCT AS REQUIRED. RUN RECTANGULAR S.A. DUCTWORK UP THRU CEILING AND INTO ATTIC SPACE ABOVE NEW ROOF INSULATION. COORDINATE WITH FIELD CONDITIONS.
14. MOUNT FURNACE ON METAL STAND / PLATFORM TO ALLOW ROOM FOR BOTTOM INLET OF R.A. DUCT PLENUM, TRANSITIONS AND TO ACCESS FILTER. PROVIDE FULL SIZE R.A. PLENUM BELOW FURNACE WITH FILTER RACK BEFORE FURNACE, TAP PLENUM WITH 14 x 10 R.A. DUCT AND RUN THRU WALL FOR R.A. GRILLE IN LIVING ROOM. LINE PLENUM AND DUCT BRANCH FOR SOUND ATTENUATION. RUN 12x12 R.A. DUCT DOWN THRU FLOOR AND INTO CRAWL SPACE. SEE CRAWL SPACE PLAN FOR CONTINUATION.
15. RUN RECTANGULAR DUCT DOWN IN WALL FRAMING, THRU FLOOR INTO CRAWL SPACE. SEE THE CRAWL SPACE HVAC PLAN FOR CONTINUATION. COORDINATE WITH EXISTING FLOOR JOISTS.
16. RECTANGULAR DUCT DOWN RUN DOWN THRU FLOOR INTO CRAWL SPACE FROM GROUND FLOOR. SEE THE HVAC PLAN FOR CONTINUATION. COORDINATE WITH EXISTING FLOOR JOISTS.
17. S.A. OR R.A. DUCT RUN IN CRAWL SPACE. DUCTWORK IN CRAWL SPACE SHALL BE SUSPENDED FROM FLOOR JOISTS. SEE THE DUCT HANGING DETAIL. PROVIDE ADDITIONAL BLOCKING AS REQUIRED.
18. 12 x 12 R.A. DUCT DOWN RUN DOWN THRU FLOOR INTO CRAWL SPACE FROM FURNACE ON GROUND FLOOR. SEE THE HVAC PLAN FOR CONTINUATION. COORDINATE WITH EXISTING FLOOR JOISTS.
19. 6" ROUND DUCT RUN OUT FOR GRILLE, RUN IN JOIST SPACE WHERE POSSIBLE. PROVIDE "BOOT" TRANSITION AND RECTANGULAR DUCT AS REQUIRED. COORDINATE WITH JOIST SPACING. TYPICAL OF 2.
20. RUN 3 1/4" x 14" RECTANGULAR R.A. DUCT UP THRU FLOOR FROM CRAWL SPACE TO GROUND FLOOR GRILLE. SEE THE HVAC PLAN FOR SIZES AND LOCATIONS OF GRILLES. COORDINATE LOCATION WITH EXISTING FLOOR JOIST. TYPICAL OF 2.

OUTSIDE AIR FOR COMBUSTION

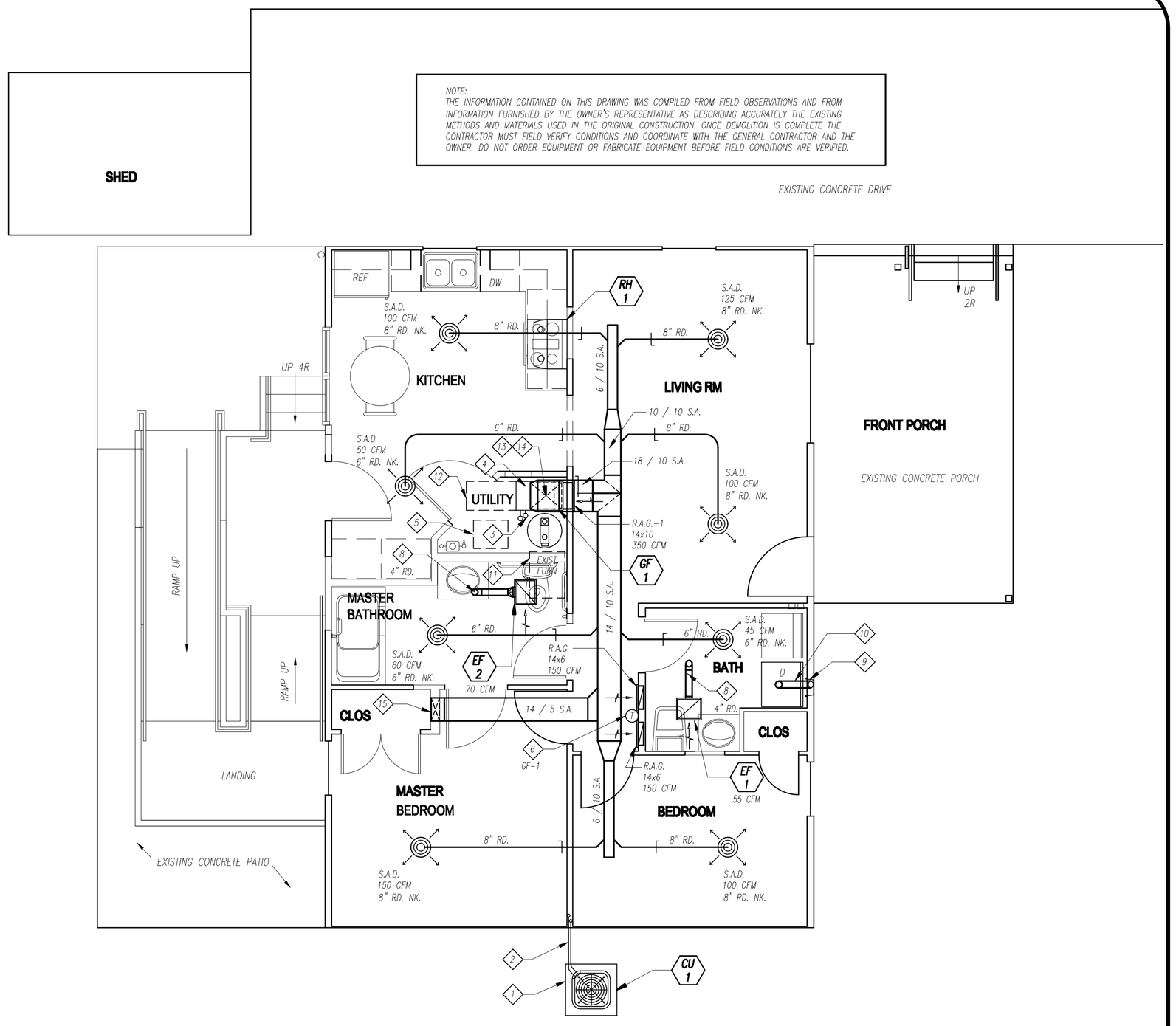
AIR FOR COMBUSTION, VENTILATION AND DILUTION OF FLUE GASES FOR GAS FIRED EQUIPMENT IN THE BUILDING SHALL BE PROVIDED BY INTAKE AND OUTLET PIPING RUN DIRECTLY TO THE BUILDING EXTERIOR. THE GAS FIRED WATER HEATER AND FURNACE COMBUSTION SYSTEMS ARE FORCED AIR / INDUCED COMBUSTION. EXHAUST OF FLUE GASES AND INTAKE AIR FOR COMBUSTION ARE PROVIDED BY PIPING DIRECTLY FROM OUTSIDE OF THE BUILDING. EQUIPMENT COMBUSTION SYSTEMS ARE TOTALLY SEALED FROM THE BUILDING AIR SUPPLY AND WILL NOT REQUIRE ADDITIONAL SEPARATE DUCTS.



CRAWL SPACE HVAC PLAN

SCALE: 1/4"=1'-0"

NOTE:
THE INFORMATION CONTAINED ON THIS DRAWING WAS COMPILED FROM FIELD OBSERVATIONS AND FROM INFORMATION FURNISHED BY THE OWNER'S REPRESENTATIVE AS DESCRIBING ACCURATELY THE EXISTING METHODS AND MATERIALS USED IN THE ORIGINAL CONSTRUCTION. ONCE DEMOLITION IS COMPLETE THE CONTRACTOR MUST FIELD VERIFY CONDITIONS AND COORDINATE WITH THE GENERAL CONTRACTOR AND THE OWNER. DO NOT ORDER EQUIPMENT OR FABRICATE EQUIPMENT BEFORE FIELD CONDITIONS ARE VERIFIED.



GROUND FLOOR HVAC PLAN

SCALE: 1/4"=1'-0"

HVAC EQUIPMENT SPECIFICATIONS

FURNACE (GF-1):
CARRIER, "COMFORT 92", HIGH EFFICIENCY MULTIPOSITION (UPFLOW), FIXED CAPACITY. #58MXB060-100-12 INDUCED COMBUSTION GAS FIRED FURNACE. HEATING INPUT 60,000 BTUH INPUT AND 56,000 BTUH OUTPUT, 93.0% AFUE. 1000 CFM AT 0.5" E.S.P. AND 1/3 hp DIRECT DRIVE FAN MOTOR. UNIT VOLTAGE IS 120v/1 ph, 9.8 MAXIMUM UNIT AMPS AND 15 AMP MAXIMUM OVER CURRENT PROTECTION (HACR BREAKER). PROVIDE DIGITAL PROGRAMMABLE THERMOSTAT #TSTATCCPAD1-B. AUTO CHANGE OVER HEATING AND COOLING. RUN PVC COMBUSTION AIR INTAKE AND EXHAUST VENT AS SHOWN ON DRAWINGS, PROVIDE MATCHING FACTORY CONCENTRIC TERMINATION KIT WITH FLASHING. MATERIALS AND WORK PER MANUFACTURER'S REQUIREMENTS AND CODE. PROVIDE FURNACE WITH FULLY CASED AIR CONDITIONER COIL. COIL TO BE 2 1/2 TON NOMINAL, #CAPVP30-17-4ATA. 27,400 BTUH TOTAL COOLING AND 21,000 BTUH SENSIBLE COOLING. PIPE REFRIGERATION LINES TO MATCHING CONDENSING UNIT. PROVIDE CONDENSATE NEUTRALIZING KIT #P908-0001. PIPE CONDENSATE LINE(S) WITH TRAP TO SAFEWASTE DRAIN PER CODE. PROVIDE R.A. FILTER RACK. COORDINATE WITH ELECTRICAL CONTRACTOR. EQUAL EQUIPMENT BY TRANE, YORK OR LENNOX IS ACCEPTABLE.

CONDENSER (CU-1):
CARRIER "BASE 13" AIR CONDITIONER WITH PURON (R-410A) REFRIGERANT. #24ABB330A-31 CONDENSER, 2 1/2 TON NOMINAL. WITH LOW AMBIENT KIT, REFRIGERANT LINE SET, HIGH AND LOW PRESSURE SWITCH, CRANKCASE HEATER, FREEZESTAT, TIME DELAY CONTROL, WINTER START, SHORT CYCLE PROTECTION AND MOUNTING BASE. PROVIDE COMPLETE AND CONNECT TO THE MATCHING A-COIL IN FURNACE. 3/8" LIQUID LINE AND 7/8" INSULATED SUCTION LINE. VOLTAGE 208/230v/1 ph, MINIMUM CIRCUIT IS 16.8 AMPS. MAXIMUM FUSE (HACR BREAKER) IS 25 AMPS. ARI SEER IS 14.0 / 12.0 EER. PROVIDE VIBRATION ISOLATION. OPERATING WEIGHT IS 115 LBS. EQUAL EQUIPMENT BY TRANE, YORK OR LENNOX IS ACCEPTABLE.

RANGE HOOD (RH-1):
NUTONE / BROAN "ALLURE II" #WS230WW, WHITE FINISH, COORDINATE WITH OWNER. 300 CFM MAXIMUM, 0.9 SONES AT NORMAL SPEED. NON-DUCTED INSTALLATION WITH #BPSF30 FILTER KIT. SELF CONSUMING RANGE HOOD WITH GREASE ACTIVATED CHARCOAL FILTER AND DUAL HALOGEN LAMPS. HVAC CONTRACTOR TO PROVIDE LAMPS. 120 V / 1.9 AMPS

RESTROOM EXHAUST FAN (EF-1):
GREENHECK #SP-B70 CEILING EXHAUST FAN. WHITE ENAMEL FINISH ALUMINUM GRILLE. 55 CFM AT 0.25" S.P. AND 2.4 SONES. 115v/1 ph AND 45 WATTS. WITH INTEGRAL 4" ROUND DUCT CONNECTOR. RUN 4" ROUND DUCT ABOVE CEILING INTO ATTIC SPACE AND UP THRU ROOF AS SHOWN ON THE PLANS. WITH INTEGRAL SPRING LOADED BACK DRAFT DAMPER, MODEL #RJ-4 PITCHED ROOF CAP, INSECT SCREEN AND FLASHING. INSTALL THE EXHAUST FAN WITH PLUG TYPE DISCONNECT AND HANGING VIBRATION ISOLATION KIT. CONNECT TO WALL SWITCH, ELECTRICAL CONTRACTOR SHALL WIRE. EQUALS BY BROAN, DAYTON OR NUTONE ARE ACCEPTABLE.

REST ROOM EXHAUST FAN (EF-2):
GREENHECK #SP-B90 CEILING EXHAUST FAN. WHITE ENAMEL FINISH ALUMINUM GRILLE. 70 CFM AT 0.25" S.P. AND 3.0 SONES. 115v/1 ph AND 50 WATTS. WITH RDC-6 ROUND DUCT (6" x 4") REDUCING CONNECTOR. RUN 4" ROUND DUCT ABOVE CEILING INTO ATTIC SPACE AND UP THRU ROOF AS SHOWN ON THE PLANS. WITH INTEGRAL SPRING LOADED BACK DRAFT DAMPER, MODEL #RJ-6x9 PITCHED ROOF CAP, INSECT SCREEN AND FLASHING. INSTALL THE EXHAUST FAN WITH PLUG TYPE DISCONNECT AND HANGING VIBRATION ISOLATION KIT. CONNECT TO WALL SWITCH, ELECTRICAL CONTRACTOR SHALL WIRE. EQUALS BY BROAN, DAYTON OR NUTONE ARE ACCEPTABLE.

GRILLE SPECIFICATIONS

ROUND SUPPLY AIR DIFFUSER (S.A.D.):
HART & COOLEY #16, ALL STEEL CONSTRUCTION, BRIGHT WHITE ENAMEL FINISH. THREE STEP-DOWN DIFFUSER RINGS FOR 360 DEGREE THROW PATTERN. DIFFUSER OUTER SHELL FASTENS DIRECTLY TO MATCHING ROUND DUCT. DIFFUSER MARGIN TO FIT TIGHT TO CEILING. CFM, NECK SIZE AND THROW AS SHOWN. WITH OPTIONAL #12 BUTTERFLY VOLUME CONTROL DAMPER WITH BRIGHT WHITE ENAMEL FINISH.

RECTANGULAR SUPPLY AIR GRILLE (S.A.G.):
HART AND COOLEY #661, ALL STEEL CONSTRUCTION WITH BRIGHT WHITE ENAMEL FINISH. SIDEWALL STYLE. CFM, NOMINAL SIZE AND THROW AS SHOWN, 1/3" SPACED FINS SET AT 20 DEGREES. TWO WAY DEFLECTION, GALVANIZED MULTI-SHUTTER VALVE, INTERLOCKING VALVE LOUVERS. PROVIDE RECTANGULAR DUCT TAKE OFF, SIZE TO MATCH GRILLE.

RETURN AIR GRILLE:
HART AND COOLEY #661, ALL STEEL CONSTRUCTION, BRIGHT WHITE ENAMEL FINISH. CFM AND SIZE AS SHOWN. 1/3" SPACED BLADES SET AT 20 DEGREES AND POSITIVE VOLUME CONTROL DAMPER. MOUNT IN EXISTING WALL STUD CAVITY AT 12" ABOVE FINISH FLOOR. PROVIDE RECTANGULAR OPENING THRU FLOOR AND WALL PLATE, TRANSITION TO RECTANGULAR DUCT FOR WALL OPENING. PAN STUD SPACING WHERE WOOD STUDS ARE USED, OR LINE SIDES OF OPENING WITH GYP. BD WHERE METAL STUDS ARE USED. COORDINATE WITH EXISTING CONDITIONS AND GENERAL CONTRACTOR.

RETURN AIR GRILLE (R.A.G.-1):
HART AND COOLEY #RCBD, EXTRUDED ALUMINUM CONSTRUCTION, BRIGHT WHITE ENAMEL FINISH. HORIZONTAL CURVED BLADES ON 1 INCH SPACING. #4D ADJUSTABLE OPPOSED BLADE VOLUME DAMPER. CFM AND SIZE AS SHOWN. MOUNT IN EXISTING WALL STUD CAVITY AT 6" ABOVE FINISH FLOOR. COORDINATE OPENING WITH EXISTING FRAMING, PROVIDE NEW OPENING IF REQUIRED.

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SHEET
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