

GENERAL MECHANICAL NOTES:

- 1 ALL INSTALLATION OF DUCTWORK IS TO TAKE PRECEDENCE OVER THE INSTALLATION OF ALL PLUMBING LINES (EXCEPT GRADE SENSITIVE LINES), ELECTRICAL CONDUIT, AND SPRINKLER LINES, MECHANICAL CONTRACTOR TO COORDINATE IN FIELD WITH ALL DISCIPLINES PRIOR AND DURING CONSTRUCTION.
- 2 MECHANICAL CONTRACTOR TO PROVIDE INTERNALLY INSULATED SHEET METAL PLENUM OF REAR OF SUPPLY GRILLE AND TAP INTO SIDE OF PLENUM WITH BRANCH DUCT. REFER TO DRAWINGS FOR SIZE OF BRANCH DUCT. CONTRACTOR TO USE THIS SETUP ONLY WHEN THE CEILING SPACE DOES NOT ALLOW FOR A SMOOTH ROUND RADIUS ELBOW DOWN TO SUPPLY GRILLE. NO FLEX DUCT ALLOWED. REFER TO TYPICAL DETAIL.
- 3 FLEXIBLE DUCT SHALL NOT PENETRATE ANY WALLS UNLESS SUBMITTED ON FOR PRIOR APPROVAL TO BOTH THE ARCHITECT AND THE MECHANICAL ENGINEER.
- 4 SHEET METAL DUCTWORK SHALL NOT BE SHOP FABRICATED UNTIL FIELD MEASUREMENTS HAVE BEEN VERIFIED BY MECHANICAL CONTRACTOR.
- 5 ALL CONDENSATE LINES SHALL BE INSULATED (EXISTING & NEW), THIS PROJECT. INSULATION TO BE ARMAFLEX UNLESS OTHERWISE NOTED IN SPECIFICATIONS. ALL CONDENSATE LINES TO BE RIGID COPPER, REFER TO SCHEDULES FOR SIZES. SUPPORT CONDENSATE DRAIN WITH UNISTRUT PIPE SUPPORT EVERY 4'-0" AND AT EVERY TURN. PROVIDE NEOPRENE SLEEVE BETWEEN UNISTRUT AND COPPER CONDENSATE LINE. SUPPORTS NOT SHOWN FOR CLARITY.
- 6 PLUMBING CONTRACTOR TO COORDINATE WITH MECHANICAL CONTRACTOR ON EXACT LOCATION OF ALL FLOOR DRAINS AS NOT TO CONFLICT WITH MECHANICAL EQUIPMENT. FLOOR DRAIN LOCATION BASED ON EQUIPMENT ON DRAWINGS. IF DIFFERENT EQUIPMENT IS USED ON JOB PLUMBING CONTRACTOR SHALL COORDINATE NEW FLOOR DRAIN LOCATION AS NOT TO CONFLICT WITH NEW EQUIPMENT.
- 7 MECHANICAL CONTRACTOR TO COORDINATE WITH GENERAL CONTRACTOR ON LOCATION OF ALL FIRE WALL PENETRATIONS BY DUCT. MECHANICAL CONTRACTOR TO PROVIDE 2 HR FIRE DAMPER IN DUCT, TYPICAL ALL FIREWALL PENETRATIONS. GENERAL CONTRACTOR TO FRAME OUT AS REQUIRED FOR DUCTS TO PENETRATE FIREWALL. REFER TO DRAWINGS FOR EXACT LOCATION.
- 8 ALL EQUIPMENT SHALL CONFORM TO MANUFACTURER'S RECOMMENDATIONS SO AS TO MAINTAIN GUARANTEES. CONTRACTOR IS TO PROVIDE AND INSTALL ARE SUPPORTS AND HANGERS THAT ARE REQUIRED FOR A PROPER INSTALLATION.
- 9 HYDRONIC PIPING AND DUCTWORK RUNS ARE SHOWN DIAGRAMMATICALLY. MECHANICAL CONTRACTOR SHALL ROUTE IN MOST DIRECT MANNER AVOIDING ANY OBSTRUCTIONS NOT INDICATED.
- 10 MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COORDINATION BETWEEN THE ELECTRICAL AND OTHER TRADES, ESPECIALLY COORDINATION CONCERNING PENETRATIONS OF THE WALLS AND FLOORS WITH PIPE AND DUCTWORK.
- 11 ALL MODEL NUMBERS SHOWN FOR SPECIFIC MANUFACTURER'S REPRESENT THE TYPE AND QUALITY OF EQUIPMENT TO BE USED. SUBMIT FOR PRIOR APPROVAL ANY EQUIPMENT BEFORE BIDDING.
- 12 COORDINATE ALL UNDERGROUND PIPE (SEWER, WATER, ETC.) WORK WITH EXISTING UNDERGROUND WORK EG. FEEDER CIRCUITS, SEWER, GAS, TELEPHONE, WATER, DRAINAGE (ETC.) LOCATE ALL UNDERGROUND UTILITIES BEFORE WORK TO THIS PROJECT. MARKED UTILITIES DAMAGED BY CONTRACTOR SHALL BE REPLACED OR REPAIRED BY THE CONTRACTOR TO PLACE BACK IN ORIGINAL CONDITION AT NO ADDITIONAL COST TO THE CONSTRUCTION CONTRACT. UNMARKED UTILITIES DAMAGED WILL BE REPAIRED BY USER AGENCY.
- 13 MECHANICAL CONTRACTOR SHALL COORDINATE EXACT LOCATIONS OF ALL EQUIPMENT WITH ALL OTHER DIVISIONS. SHOULD CONFLICTS ARISE WHICH CANNOT BE CORRECTED WITH MINOR VARIATIONS. THE CONTRACTOR SHALL ALL THESE CONFLICTS TO THE DESIGNER'S ATTENTION BEFORE PROCEEDING. ALL EQUIPMENT SHALL BE INSTALLED PER THE MANUFACTURER'S RECOMMENDATIONS AND/OR MOUNTING DETAILS SHOWN WITH MODIFICATIONS OF SAME AS REQUIRED TO SUIT FINISHED CONDITIONS.
- 14 THE MECHANICAL CONTRACTOR SHALL FURNISH AND INSTALL THE MECHANICAL EQUIPMENT AS SHOWN OR DETAILED BY THE CONTRACT DOCUMENTS FOR THIS PROJECT. WHERE SPACE OR SPARE DEVICES ARE SHOWN, CONTRACTOR SHALL PROVIDE.
- 15 MECHANICAL CONTRACTOR SHALL PROVIDE PERMANENT LAMINATED LABELS FOR ALL EQUIPMENT THIS PROJECT (I.E. EACH AIR HANDLING UNITS, PUMPS, CHILLERS, COOLING TOWERS, ETC.). LABELING SHALL BE A MINIMUM OF 3/8" ENGRAVED BLACK LETTERS ON WHITE BACKGROUND. LABELS SHALL BE CONSTRUCTED OF MINIMUM 1" WIDE BY LENGTH AS REQUIRED LAMINATED PLASTIC SECURELY FASTENED TO DEVICE WITH STAINLESS STEEL HARDWARE. PRESSURE SENSITIVE "STICK ON" LABELS SHALL NOT BE ALLOWED.
- 16 MECHANICAL CONTRACTOR SHALL COORDINATE ALL DUCT AND PIPE PENETRATIONS (WALL, FLOOR) WITH ALL OTHER DISCIPLINES IN FIELD PRIOR TO INSTALLATION.
- 17 GENERAL CONTRACTOR TO UNDERCUT ALL DOORS 3/4" UNLESS OTHERWISE SPECIFIED BY ARCHITECT, REFER TO ARCHITECT'S DRAWINGS.
- 18 THE USE OF THE TERM "PROVIDE" SHALL MEAN TO "FURNISH AND INSTALL THE ASSOCIATED DEVICE OR EQUIPMENT, COMPLETE AND READY FOR THE INTENDED USE".
- 19 CONTRACTOR SHALL BE AWARE THAT SPACE IS LIMITED THIS PROJECT. CONTRACTOR SHALL CAREFULLY REVIEW THE SPACE PROVIDED FOR THE DUCTWORK AND PIPE THIS PROJECT AND MAKE REQUIRED ALLOWANCES FOR THE SIZE OF MECHANICAL EQUIPMENT TO BE PROVIDED BEFORE BIDDING.
- 20 WHERE MANUAL VOLUME DAMPERS ARE LOCATED IN INACCESSIBLE LOCATIONS (I.E ABOVE HARD GYPSUM CEILINGS), MECHANICAL CONTRACTOR TO PROVIDE AND INSTALL YOUNG REGULATOR MODEL #270-896 (REGULATOR TO COME WITH ENOUGH WIRE TO MAKE PROPER CONNECTIONS, AND WORM GEAR OPERATOR ATTACHED TO DAMPER). CONTRACTOR TO INSTALL REGULATOR IN CLOSEST ACCESSIBLE LOCATION TO RESPECTIVE MANUAL VOLUME DAMPER. TYPICAL ALL MANUAL VOLUME DAMPERS. REGULATOR COVER SHALL HAVE A PRIMED FINISH FOR FINAL PAINTING IN FIELD DURING CONSTRUCTION (COLOR SELECTION BY ARCHITECT). REFER TO ARCHITECTS DRAWINGS FOR REFLECTED CEILING PLAN. REFER TO MECHANICAL DRAWINGS FOR ALL LOCATIONS OF MANUAL VOLUME DAMPERS. MECHANICAL CONTRACTOR HAS CHOICE TO USE YOUNG REGULATOR SYSTEM OR THE FOLLOWING: UNITED ENERTECH 12 VOLT DC POWER/BALANCE SYSTEM. THE BALANCE SYSTEM CONSISTS OF A DAMPER, PULSE ACTUATOR, CAT 5 CABLE, WALL OR CEILING PLATE, AND HAND HELD POWER PACK. CONTRACTOR TO INSTALL WALL/CEILING IN CLOSEST MECHANICAL ROOM TO RESPECTIVE MANUAL VOLUME DAMPER (IF NO MECHANICAL ROOM AVAILABLE COORDINATE WITH MECHANICAL ENGINEER). TYPICAL ALL MANUAL VOLUME DAMPERS. REFER TO ARCHITECTS DRAWINGS FOR REFLECTED CEILING PLAN. REFER TO MECHANICAL DRAWINGS FOR ALL LOCATIONS OF MANUAL VOLUME DAMPERS. LABEL WALL/CEILING PLATE TO WHAT MANUAL VOLUME DAMPER RESPECTIVE PLATE IS CONNECTED TO.
- 21 NO FLEX DUCT ALLOWED IN EXHAUST, RETURN, & FRESH AIR DUCT SYSTEMS.
- 22 ALL FIRE DAMPERS ARE TO BE RATED AT 2-HR. UNLESS OTHERWISE NOTED ON PLANS, THIS PROJECT. SEAL ALL FIRE WALL PENETRATIONS (DUCT, PIPE, ETC.) WITH UL-LISTED FIRE CAULK.
- 23 ALL EXTERIOR LOUVERS ARE TO BE PRE-FINISHED TO MATCH EXTERIOR OF BUILDING, REFER TO ARCHITECT. ALL EXTERIOR WALL LOUVERS TO BE WEATHERPROOF WITH MINIMUM 50% FREE AREA. ALL LOUVERS TO HAVE DRAIN BLADES WITH SUB SEALS. GREENHECK MODEL #ESD OR APPROVED EQUAL.
- 24 DRAWINGS BASED ON EQUIPMENT SPECIFIED. SHOULD OTHER EQUIPMENT BE USED, IT IS THE MECHANICAL CONTRACTORS RESPONSIBILITY TO COORDINATE ALL STRUCTURAL (ROOF PENETRATIONS, ETC.) AND ELECTRICAL (WIRE SIZES, ETC.) DIFFERENCES WITH ALL OTHER DISCIPLINES AS TO AVOID ANY CONFLICTS PRIOR TO CONSTRUCTION. COLOR SELECTION TO BE BY ARCHITECT.
- 25 ALL DUAL CIRCUIT REFRIGERANT COILS SHALL BE INTERTWINED. STACKED COILS ARE NOT ACCEPTABLE.
- 26 ALL ROUND DUCT SHALL BE MINIMUM 26 GA. AS PER SMACNA STANDARDS. TYPICAL ALL ROUND DUCT.
- 27 ALL RECTANGULAR DUCTWORK IN ATTIC SPACE SHALL HAVE BOTH INTERNALLY LINED INSULATION AND EXTERNALLY WRAPPED INSULATION. COORDINATE WITH MECHANICAL ENGINEER PRIOR TO BID.
- 28 MECHANICAL CONTRACTOR TO COORDINATE EXACT LOCATION OF ALL GRILLES WITH NEW LIGHTS TO BE INSTALLED PRIOR TO CONSTRUCTION.
- 29 ALL DUCTWORK SEPARATED BY THE SYMBOL "/" DESIGNATES OVAL DUCTWORK AND ALL DUCTWORK SEPARATED BY "x" DESIGNATES RECTANGULAR DUCTWORK.
- 30 PROVIDE DISCONNECTS AT ALL VAV BOXES, VARIABLE FREQUENCY DRIVES, EXHAUST FANS, & SUPPLY FANS. TYPICAL ALL MECHANICAL EQUIPMENT.
- 31 PROVIDE CLEAR LOCK BOX COVERS FOR ALL THERMOSTATS & HUMIDISTATS.
- 32 MECHANICAL CONTRACTOR TO INSTALL ALL DUCT SLEEVES (IF APPLICABLE) IN WALLS ABOVE CEILINGS AS HIGH AS POSSIBLE. DUCT SLEEVE TO EXTEND 24" PAST WALL PENETRATION, BOTH SIDES.
- 33 SUBMISSION OF PROPOSAL DIRECTLY OR INDIRECTLY IN CONNECTION WITH THIS WORK SHALL IMPLY THAT THE BIDDER HAS EXAMINED THE JOB SITE UNDER WHICH HE WILL BE OBLIGATED TO OPERATE. SHOULD HE BE AWARDED THE WORK UNDER THIS CONTRACT NO EXTRA CHARGE WILL BE ALLOWED FOR FAILURE OF ANY BIDDER TO EXAMINE THE SITE PRIOR TO BID.
- 34 COORDINATE WITH ENGINEER ON FAN CURVE ORIENTATION AT AIR HANLING UNITS PRIOR TO SUBMITTING PRIOR APPROVAL.
- 35 SUCCESSFULLY PRESSURE TEST ALL REROUTED PIPING SYSTEMS. TEST SHALL BE PERFORMED AT NORMAL SYSTEM OPERATING PRESSURES. REPAIR AND RETEST AS REQUIRED UNTIL SYSTEMS PROVE TIGHT.
- 36 CONTRACTOR SHALL VISIT THE SITE AND VERIFY ALL DIMENSIONS IN THE FIELD, AND SHALL ADVISE THE ARCHITECT/ENGINEER AND THE OWNER OF ANY DISCREPANCIES BEFORE PERFORMING THE WORK.
- 37 PROVIDE ALL NECESSARY TEMPORARY OR PERMANENT CAPS OR PLUGS FOR PIPING. DO NOT LEAVE PIPING OPEN ENDED. TEST SHALL BE PERFORMED AT NORMAL SYSTEM OPERATING PRESSURES. REPAIR AND RETEST AS REQUIRED UNTIL SYSTEMS PROVE TIGHT.
- 38 PRIOR TO SUBMITTING EQUIPMENT, MECHANICAL CONTRACTOR SHALL VERIFY ALL SIZES. JOB DESIGNED AROUND EQUIPMENT WITH SPECIFIED MODEL NUMBERS IN SCHEDULE, OTHER EQUIPMENT SUBJECT TO REJECTION DUE TO TIGHT SPACE CONSTRAINTS, THIS PROJECT.
- 39 THIS CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS AND EXISTING CONDITIONS PRIOR TO PROCEEDING WITH ANY WORK. WHERE DISCREPANCIES OCCUR BETWEEN THESE DOCUMENTS AND EXISTING CONDITIONS, THE DISCREPANCY SHALL BE REPORTED TO THE OWNER AND/OR ENGINEER FOR EXPEDITING AND RESOLVE.
- 40 CLEAN THE JOB SITE DAILY AND REMOVE FROM THE PREMISES ANY DIRT AND DEBRIS CAUSED BY THE PERFORMANCE OF THE WORK INCLUDED IN THIS CONTRACT.
- 41 THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE SAFEKEEPING OF HIS OWN PROPERTY ON THE JOB SITE. OWNER ASSUMES NO RESPONSIBILITY FOR PROTECTION OF PROPERTIES AGAINST FIRE, THEFT AND ENVIRONMENTAL CONDITIONS.
- 42 ALL MANUAL VOLUME DAMPER IN VERTICAL POSITION OF DUCTWORK IN MECHANICAL ROOMS SHALL BE ACCESSIBLE FROM THE FLOOR.
- 43 ALL ROOF MOUNTED EQUIPMENT (FANS, CURBS, VENTS, ETC.) SHALL COME WITH PAINT GRIP FINISH TO BE PAINTED IN FIELD TO MATCH ROOF. COLOR SELECTION BY TO BE BY ARCHITECT.
- 44 THE CONTRACTOR SHALL PROVIDE TRANSITIONS FROM REAR OF ALL GRILLES TO BRANCH DUCT AS REQUIRED. REFER TO CONSTRUCTION DOCUMENTS FOR SIZES OF ALL GRILLES AND BRANCH DUCTS.
- 45 ALL EXPOSED EQUIPMENT TO BE PAINTED, REFER TO ENGINEER/ARCHITECT FOR COLOR SELECTION. PAINTING TO BE DONE IN FIELD DURING CONSTRUCTION.
- 46 MECHANICAL CONTRACTOR TO COORDINATE WITH GENERAL CONTRACTOR AND ARCHITECT PRIOR TO INSTALLING ANY TEMPERATURE SENSORS ON WALLS. ALL TEMPERATURE SENSORS TO BE COORDINATED WITH ALL ARTWORK, SCREENS, FURNITURE, ETC. TO BE INSTALLED ON WALLS.
- 47 MECHANICAL CONTRACTOR TO PROVIDE ACCESS PANELS FOR ALL VALVES, VAV BOXES, ALL EQUIPMENT IN INACCESSIBLE LOCATIONS. ACCESS PANEL TO BE OF SUFFICIENT SIZE TO ACCESS EQUIPMENT. PANELS TO BE FIRE RATED (2 HR.)
- 48 ALL EXHAUST AND FRESH AIR HOODS ARE TO BE LOCATED ON BACKSIDE OF RIDGE.
- 49 TEMPERATURE CONTROLS CONTRACTOR TO PROVIDE ALL VFD'S AND MOTOR STARTERS.
- 50 PROVIDE SMOKE DAMPERS AT ALL LOCATIONS WHERE DUCTWORK PENETRATES SMOKE BARRIER ABOVE LAY-IN CEILING. REFER TO ARCHITECTURAL RCP (500 SERIES) AND LIFE SAFETY PLANS FOR EXACT LOCATIONS. COORDINATE WITH ELECTRICAL CONTRACTOR ON EXACT LOCATIONS AT TIME OF BID AND INCLUDE ALL ELECTRICAL COSTS, EQUIPMENT, LABOR, ETC. PROVIDE IN WRITING TO ARCHITECT/ENGINEER ANY QUESTIONS REGARDING THIS MATTER PRIOR TO BID.
- 51 ALL MECHANICAL ROOMS (ROOMS CONTAINING AIR HANDLING UNITS, PUMPS, ETC.) TO BE LINED WITH PELICAN BOARD SOUND ATTENUATING ASSEMBLY. INTERIOR WALLS, CEILING AND BACK OF DOORS SHALL BE LINED WITH 2" THICK PERFORATED VINYL LINED SOUND INSULATION BOARD. CONTRACTOR TO INSTALL RIGID FIBERGLASS INSULATION WITH PERFORATED VINYL LINED SIDE FACING INSIDE OF MECHANICAL ROOM. NO EXCEPTION. ADHERE INSULATION TO WALL WITH STICK CLIP, DOME WASHERS, AND PROVIDE DOME CAP TO CONCEAL EXPOSED CLIP POINTS.

MECHANICAL PLAN KEYNOTES:

- 1 MANUAL VOLUME DAMPER WITH STAND-OFF BRACKET, ADJUSTABLE & LOCKABLE, TYPICAL.
- 2 VARIABLE SPEED DRIVES (REMOVEDLY LOCATED) FOR CHILLED WATER SYSTEM PUMPS CWSP-1 AND CWSP-2. ELECTRICAL CONTRACTOR TO PROVIDE DISCONNECT FOR SERVICING OF DRIVES. ALSO PROVIDE EMS CONTROL PANEL, 120 VOLT DEDICATED CIRCUIT. PROVIDE TWO (2) 2" CONDUITS (WITH PULL STRING), ONE TO EACH CHILLER.
- 3 8"Ø EXHAUST UP THRU FLOOR, PROVIDE FIRE DAMPER AT FLOOR PENETRATION.
- 4 TURNING VANES, ALL TURNS 30° AND GREATER, RE: TYPICAL DETAIL.
- 5 CLOTHES DRYER EXHAUST DUCT ASSEMBLY WITH WALL CAP EQUIPPED WITH BACKDRAFT DAMPER. SEAL WALL PENTRATION WATER TIGHT. COORDINATE EXACT SIZE OF CLOTHES DRYER VENT WITH MANUFACTURER.
- 6 FIELD ROUTE EXHAUST DUCT TO 30x12 OUTSIDE WALL LOUVER (WEATHERPROOF, EQUIPPED WITH BIRDSCREEN) IN GABLED END OF BUILDING, SEAL ALL AROUND WATER TIGHT.
- 7 CONTRACTOR TO UNDERCUT DOOR MINIMUM 3/4".
- 8 COMBUSTION AIR ASSEMBLY. MECH. CONTRACTOR PROVIDE TWO (2) 48"x30" EXTERIOR WALL LOUVERS, TOP OF ONE LOUVER TO BE WITHIN 12" FROM FINISHED CEILING AND THE BOTTOM OF THE OTHER LOUVER TO BE WITHIN 12" OF FINISHED FLOOR, LOUVER TO BE OPEN TO HOT WATER HEATER ROOM. GENERAL CONTRACTOR TO FRAME AND BRACE OPENING AS REQUIRED FOR LOUVERS.
- 9 RETURN AIR ASSEMBLY TWO (2) 12x12x12 PLENUMS EQUIPPED WITH 12x12 GRILLES (TYPE M) CONNECTED WITH 8"Ø TRANSFER DUCT.
- 10 45° LOW LOSS BRANCH DUCT TAP CONNECTION WITH DAMPER (FLEXMASTER MODEL STODB03), DAMPER CONSTRUCTED OF MINIMUM 26 GAUGE GALVANIZED STEEL. THE DAMPER SHALL HAVE A 2" RAISED HANDLE WITH A HIGH QUALITY LOCKING QUADRANT. A 3/8" CONTINUOUS ROD WITH "U" BOLTS CONNECTS THE DAMPER TO THE ROD. NYLON END BEARINGS ARE REQUIRED WHERE THE ROD PENETRATES THE BARREL. TYPICAL ALL BRANCH DUCTS. TYPICAL.
- 11 12x12 DUCT DOWN TO EXHAUST GRILLE WITH MANUAL VOLUME DAMPER IN DUCT DROP.
- 12 10x10 DISHWASHER EXHAUST DUCT (STAINLESS STEEL), ROUTE AS SHOWN AND TURN UP INTO MECHANICAL ROOM, PROVIDE FIRE DAMPER AT FLOOR PENETRATION, MAINTAIN SLOPE (1/8" PER FOOT) BACK TO DISHWASHER.
- 13 WALL MOUNTED DUCT-LESS MINI-SPLIT SYSTEM (WITH INSTALLATION PLATE) LOCATED IN EQUIPMENT ROOM HIGH ON WALL (12" FROM FINISHED CEILING). ROUTE REFRIGERANT LINES, AND CONDENSATE LINE AS SHOWN. MECHANICAL CONTRACTOR TO COORDINATE EXACT LOCATION OF MINI-SPLIT SYSTEM WITH ALL EQUIPMENT TO BE INSTALLED IN EQUIPMENT ROOM. MECHANICAL CONTRACTOR TO FIGURE IN BID POSSIBLE INCREASE IN PIPE OFFSETS AND PIPE TO ACCOMMODATE NEW LOCATION OF DUCT-LESS SPLIT SYSTEM. MINI-SPLIT TO COME WITH CONDENSATE PUMP.
- 14 ELECTRIC UNIT HEATER (RECESSED IN CEILING) EQUIPPED WITH REMOTE THERMOSTAT, LOCATE WITHIN 12" OF FINISHED CEILING AND PROVIDE LOCK BOX COVER. REFER TO SCHEDULES AND TYPICAL DETAIL.
- 15 CONDENSING UNIT ON CONCRETE HOUSEKEEPING PAD, SIZED AS REQUIRED. REFER TO TYPICAL CONDENSING UNIT DETAIL. PAD TO BE CONTINUOUS WITH BUILDING. PROVIDE REFRIGERANT PIPE SUPPORTS WHERE SHOWN, REFER TO TYPICAL DETAIL. SEAL ALL PENETRATIONS INTO BUILDING AIR TIGHT. PROVIDE HOLLUSEKEEPING PAD IN ADDITION TO CONCRETE CONDENSING UNIT YARD.
- 16 TIMED OVERRIDE BUTTON WITH WIRE GUARD (4 HOUR, ADJ.).
- 17 FIRE DAMPER AT FLOOR PENETRATION.
- 18 NOT USED.
- 19 REFRIGERANT PIPING SUPPORT, REFER TO TYPICAL DETAIL.
- 20 PROVIDE FILTERED KITCHEN HOOD SUPPLY FAN ON ROOF WITH PREFABRICATED ROOF CURB. TRANSITION FROM FAN OPENING TO RECTANGULAR WELDED DUCT (REFER TO DRAWING FOR SIZE OF DUCT) AND ROUTE AS SHOWN TO KITCHEN HOOD SUPPLY OPENING DUCT DROPS, TRANSITION AS REQUIRED. REFER TO TYPICAL DETAIL #9 SHEET M603.
- 21 PROVIDE UPBLAST KITCHEN HOOD EXHAUST FAN ON ROOF WITH PREFABRICATED ROOF CURB, REFER TO SCHEDULE FOR MODEL AND SIZE. TRANSITION FROM FAN OPENING TO WELDED EXHAUST DUCT (REFER TO DRAWINGS FOR DUCT SIZE), ROUTE AND TRANSITION AS SHOWN TO KITCHEN HOOD EXHAUST OPENING DUCT DROPS, INSULATE DUCT WITH 3" "FYREWRA" DUCT INSULATION (UL LISTED). PROVIDE UL LISTED ACCESS DOORS AT ALL TURNS, TRANSITIONS, AND AT EVERY 10'-0". REFER TO SPECIFICATIONS FOR KITCHEN HOOD EXHAUST DUCT CONSTRUCTION. REFER TO DETAIL #8 SHEET M603.
- 22 WELDED RECTANGULAR DUCT (EXTERNALLY WRAPPED WITH 3" "FYREWRA", REFER TO DETAIL #10 SHEET M603) DOWN TO EXHAUST AIR OPENING IN KITCHEN HOOD. CONTRACTOR TO TRANSITION TO HOOD INLET AS REQUIRED. SEAL AIR TIGHT. REFER TO DRAWINGS FOR ALL DUCT SIZES. REFER TO SPECIFICATIONS ON CONSTRUCTION OF DUCT. ALL HORIZONTAL RUNS SHALL BE PITCHED BACK TO HOOD FOR DRAINAGE PURPOSES. BALANCE TO CFM SPECIFIED ON DRAWINGS.
- 23 WELDED ROUND DUCT (EXTERNALLY WRAPPED) DOWN TO SUPPLY AIR OPENING IN KITCHEN HOOD. CONTRACTOR TO TRANSITION TO HOOD INLET AS REQUIRED. SEAL AIR TIGHT. REFER TO DRAWINGS FOR ALL DUCT SIZES.
- 24 ROUTE DUCT UP TO ROOF MOUNTED DISHWASHER EXHAUST FAN WITH PREFABRICATED ROOF CURB. TRANSITION FROM FAN OUTLET TO 12x12 EXHAUST DUCT AND CONNECT TO DISHWASHER CONNECTION AS REQUIRED. ALL DUCT TO BE WELDED, 316 STAINLESS STEEL AND EXTERNALLY WRAPPED. ALL HORIZONTAL RUNS TO BE PITCHED BACK TO HOOD FOR DRAINAGE PURPOSES.
- 25 REFRIGERANT LINES DOWN INSIDE WALL, OUT WALL APPROX. 12" ABOVE FINISHED GRADE AND FIELD ROUTE TO CONDENSING UNIT.
- 26 18x24 DOOR GRILLE, STEEL CONSTRUCTION, DOUBLE FLANGED, INVERTED VEE TYPE, MANUFACTURER: METALAIRE MODEL DG-DF OR APPROVED EQUAL. GRILLE TO BE PAINTED, COLOR SELECTION BY ARCHITECT.
- 27 PROVIDE ROUND DOUBLE WALL GAS FLUE UP TO TYPE B GAS VENT ON ROOF. REFER TO PLUMBING DRAWINGS FOR EXACT SIZE OF VENT PIPE. INNER AND OUTER WALL OF FLUE PIPE TO BE STAINLESS STEEL (316). TYPICAL OF FOUR (4).
- 28 IF ALTERNATE #1 IS NOT EXCEPTED, CONTRACTOR TO CAP DUCT AT THIS AREA AND REBALANCE EXHAUST FAN #19 TO 105 CFM.
- 29 FIELD ROUTE EXHAUST DUCT TO 12x12 OUTSIDE WALL LOUVER (WEATHERPROOF, EQUIPPED WITH BIRDSCREEN) IN GABLED END OF BUILDING, SEAL ALL AROUND WATER TIGHT.
- 30 CONTRACTOR TO OFFSET OVER DUCT, OFFSET ELBOWS NOT TO EXCEED 30-DEGREES.
- 31 WEATHERPROOF LOUVER WITH BIRDSCREEN, SIZE AS INDICATED, TRSITION TO DUCT AS REQUIRED. LOUVER TO BE SEALED ALL AROUND AND BE PAINTED(COLOR SELECTION BY ARCH.)
- 32 MANUAL VOLUME DAMPER, ADJUSTABLE AND LOCKABLE IN DUCT DROP, TYPICAL.
- 33 8"Ø UP FROM FIRST FLOOR, PROVIDE FIREDAMPER AT FLOOR PENETRATION.
- 34 TRANSITION DUCT UNDER STRUCTURE AS REQUIRED. MAINTAIN FREE AREA OF DUCT.

MECHANICAL AIRSIDE LEGEND			
NOTE: ALL SYMBOLS IN THIS LEGEND ARE NOT NECESSARILY FOUND ON THE PLANS			
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
	CEILING SUPPLY AIR DEVICE		EXH OR RETURN AIR DUCT 90° ELBOW DOWN
	CEILING RETURN AIR OR EXHAUST AIR DEVICE		CONNECTION BETWEEN NEW AND EXISTING DUCT
	CEILING SUPPLY AIR SLOT OR SINGLE LIGHT TROFFER		DUCT RISE (CHANGE OF ELEVATION)
	SUPPLY AIR DUCT		DUCT DROP (CHANGE OF ELEVATION)
	DOUBLE SUPPLY AIR SLOT LIGHT TROFFER		DUCT W/MANUAL SPLITTER(ADJUSTABLE & LOCKABLE)
	RETURN AIR OR EXH. AIR DUCT		STANDARD BRANCH FOR SA. OR RA. DUCT
	DUCT WORK		AIR DEVICE TYPE (TYPE-A)
	90 ELBOW W/TURNING VANE DUCT		AIR QUANTITY (150 CFM)
	VOLUME DAMPER OR MANUAL DAMPER, RECT. & ROUND DUCT		REFER TO SHEET M-2
	MOTORIZED DAMPER OR AUTO DAMPER		DETAIL NUMBER (2)
	FIRE DAMPER, RATED FOR 2 HR., TYPICAL		EQUIPMENT
	SMOKE DAMPER		SENSOR FOR THERMOSTAT
	COMBINATION FIRE AND SMOKE DAMPER		THERMOSTAT
	BACK DRAFT DAMPER		FIRESTAT
	FLEXIBLE DUCT (SINGLE LINE OR DOUBLE LINE)		HUMIDISTAT
	SUPPLY AIR DUCT 90° ELBOW UP		SENSOR FOR HUMIDISTAT IN R/A DUCT
	EXH OR RETURN AIR DUCT 90° ELBOW UP		SMOKE DETECTOR
	SUPPLY AIR DUCT 90° ELBOW DOWN		AIR EXTRACTOR
	M.V.D. IN DUCT DROP		45° DUCT LOW LOSS TAP WITH DAMPER

ANDREW GASAWAY, JR., ARCHITECT, AIA, APA
BRET GASAWAY, ARCHITECT, AIA, NCARB
CHRIS BANKSTON, ARCHITECT, AIA, NCARB, LEED AP

GGB
Gasaway | Gasaway | Bankston
Architects + Planners

1007 W. THOMAS ST., SUITE G
HAMMOND, LA 70401
985.345.5047
FAX 985.345.5060

JOSEPH B. LANCASTER
ELEMENTARY SCHOOL
ST. TAMMANY PARISH SCHOOL BOARD
MADISONVILLE, LOUISIANA
STPSB PROJECT #0825

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