

AIR CONDITIONING SPECIFICATIONS

1. GENERAL REQUIREMENTS AND SCOPE OF WORK:
THE WORK INCLUDED UNDER THIS SECTION CONSISTS OF FURNISHING ALL MATERIALS, EQUIPMENT AND LABOR, AND THE PERFORMING OF ALL FUNCTIONS, EXCEPT AS OTHERWISE SPECIFIED HEREIN OR SHOWN ON THE DRAWINGS TO BE PERFORMED BY OTHERS, FOR THE INSTALLATION OF COMPLETE AND WORKING AIR CONDITIONING, HEATING AND VENTILATING SYSTEMS WHICH COMPLIES WITH ALL CODES. CHECK FIELD CONDITIONS AND MAKE MEASUREMENTS BEFORE ORDERING MATERIALS.

MAINTENANCE MANUAL SHALL INCLUDE ALL AVAILABLE MANUFACTURERS' OPERATION AND MAINTENANCE INSTRUCTIONS TOGETHER WITH THE RECORD DRAWINGS TO PROPERLY OPERATE AND MAINTAIN THE EQUIPMENT. THE MANUAL SHALL ALSO INCLUDE THE NAME, ADDRESS, AND PHONE NUMBER OF THE GENERAL CONTRACTOR AND ALL SUBCONTRACTORS INVOLVED IN ANY OF THE WORK SPECIFIED HEREIN.

THE CONTRACTOR MUST, AT HIS OWN EXPENSE, OBTAIN ALL NECESSARY PERMITS, PAY ALL LEGAL FEES AND CHARGES AND COMPLY WITH ALL STATE AND MUNICIPAL BUILDING AND SAFETY LAWS, ORDINANCES AND REGULATIONS RELATING TO BUILDING AND PUBLIC HEALTH & SAFETY. ALL WORK AND MATERIALS SHALL BE IN CONFORMANCE WITH THE GOVERNING CODES.

PROVIDE MECHANICAL EQUIPMENT HAVING MOTORS WITH MOTOR PROTECTORS AND INTEGRAL STARTERS. WIRING AND PROPER OPERATION OF THE MECHANICAL EQUIPMENT IS THE RESPONSIBILITY OF THE MECHANICAL CONTRACTOR. ALL WIRING SHALL BE ROUTED IN CONDUIT OR IN PLENUM RATED WIRING.

THE SYSTEM SHALL HAVE A WARRANTY COVERING LABOR, MATERIALS AND EQUIPMENT FOR A PERIOD OF ONE YEAR AFTER COMPLETION AND ACCEPTANCE. REPLACE OR REPAIR ALL DEFECTIVE WORKMANSHIP, EQUIPMENT, AND MATERIALS AT NO ADDITIONAL COST TO THE OWNER.

THE MECHANICAL CONTRACTOR SHALL COORDINATE EXACT DIFFUSER AND GRILLE LOCATIONS WITH ELECTRICAL CONTRACTOR AND ALL OTHER TRADES AND ALSO COORDINATE SPACE AVAILABILITY FOR DUCTWORK ABOVE RECESSED LIGHTING TO AVOID RELOCATING DUCTWORK AT THE MECHANICAL CONTRACTORS EXPENSE. ALL AIR DISTRIBUTION DEVICES IN LAY-IN CEILING SHALL BE INDEPENDENTLY SUPPORTED TO THE STRUCTURE WITH A MINIMUM OF (2) SUPPORT RODS OR WIRES IN COMPLIANCE WITH SECTION 2.3.1.3 OF THE NFPA 90A & BUILDING CODE IF REQUIRED BY THE LOCAL CODE AUTHORITY.

SHOULD A CHANGE ORDER TO THE CONTRACT DOCUMENTS BE NECESSARY, THE CONTRACTOR SHALL SUBMIT A FORMAL CHANGE ORDER TO THE ARCHITECT/ENGINEER FOR REVIEW BEFORE ANY WORK COMMENCES. ANY WORK DONE WITHOUT PRIOR WRITTEN APPROVAL IS SUBJECT TO COMPLETION AT THE CONTRACTOR'S EXPENSE. CHANGE ORDERS SHALL INCLUDE A DETAILED MATERIAL, EQUIPMENT, AND LABOR TAKE-OFF IDENTIFYING ALL NEW AND CREDITED ITEMS. COSTS FOR SUCH ITEMS SHALL NOT EXCEED THE VALUES LISTED IN THE LATEST EDITION OF THE MEANS ESTIMATING GUIDE.

SPECIAL INSPECTIONS OR OBSERVATIONS SUCH AS DUCT SMOKE DETECTORS AND GREASE DUCT WRAP MAY REQUIRED THE PROFESSIONAL ENGINEER OF RECORD TO SEAL CERTIFICATE COMPLIANCE OR OBSERVE INSTALLATION ARE SUBJECT TO ADDITIONAL CHARGES MINIMUM OF \$500.00 DEPENDING ON SIZE OF PROJECT.

PERFORM COMPLETE TESTING AND BALANCING OF ALL MECHANICAL SYSTEMS IN ACCORDANCE WITH AABC OR NEBB LATEST STANDARDS WITH REPORT. MECHANICAL CONTRACTOR TO PROVIDE BALANCE REPORT TO MECHANICAL INSPECTOR AT FINAL INSPECTION.

2. CONDENSATE DRAIN PIPING:

USE TYPE "M" HARD DRAWN COPPER FOR ALL CONDENSATE DRAIN LINES WITH MINIMUM FALL 1/8" PER FOOT FROM UNITS TO APPROVED PLUMBING CONNECTION. PROVIDE TRAPS AT UNIT AND INSTALL OVERFLOW DRAINS AS REQUIRED BY MECHANICAL CODE. TEST CONDENSATE PIPING TO HIGHEST POINT IN SYSTEM AND HOLD FOR FOUR HOURS.

3. DUCTWORK:

INSTALL ALL DUCTWORK IN ACCORDANCE WITH SMACNA GUIDELINES AND LOCAL STANDARDS FOR A MINIMUM OF 1" STATIC PRESSURE. RADIUS ELBOWS SHALL HAVE A MINIMUM RADIUS OF 1.5 TIMES THE DUCT DIMENSION IN THE DIRECTION OF TURN, AND SQUARE ELBOWS SHALL HAVE SINGLE THICKNESS TURNING VANES. ALL JOINTS SHALL BE TAPED WITH GLASS CLOTH AND HARDCAST OR ADHESIVE (UL LISTED). ALL DUCT SIZES ARE TO THE INSIDE OF LINING, INCREASE OUTSIDE DIMENSIONS AS NECESSARY. COVERINGS, LININGS, ADHESIVES AND INSULATION SHALL HAVE A SPREAD INDEX OF NOT OVER 25 AND A SMOKE-DEVELOPED INDEX OF NOT OVER 50. ALL INSULATION SHALL COMPLY WITH THE INTERNATIONAL ENERGY CONSERVATION CODE.

ALL INSULATION ADHESIVES & INSTALLATION SHALL COMPLY WITH NFPA_E 84.

CONCEALED DUCTS INSIDE OF BUILDING: SHALL BE SHEET METAL WRAPPED WITH 1" THERMAL INSULATION (MINIMUM OF R-6), WITH VAPOR BARRIER COVER.

EXPOSED SQUARE DUCTS INSIDE BUILDING AND DUCTS WITHIN 10 FEET OF A MECHANICAL UNIT SHALL BE SHEET METAL LINED WITH 1" ACOUSTICAL INSULATION. EXPOSED ROUND DUCTS DO NOT REQUIRE INSULATION.

FLEX DUCT: FLEX DUCT SHALL BE CLASS 0 OR 1 AND TESTED PER UL 181.

DUCTS OUTSIDE BUILDING OR IN UNCONDITIONED CEILING OR ATTIC SHALL BE SHEET METAL LINED WITH 2" ACOUSTICAL INSULATION (MINIMUM OF R-8).

4. GRILLES AND REGISTERS

GRILLES AND REGISTERS SHALL BE OF THE TYPE AND FINISH AS INDICATED ON THE DRAWINGS, COMPLETE WITH OPPOSED BLADE DAMPERS EXTRACTORS AND STRAIGHTENING GRIDS AS REQUIRED

5. AIR CONDITIONING UNITS (SPLIT SYSTEM HEAT PUMP)

DESCRIPTION: PROVIDE ALL LABOR, MATERIALS, EQUIPMENT, AND SERVICES NECESSARY TO FURNISH AND INSTALL INDOOR BLOWER COIL SECTION, OUTDOOR SECTION WITH COMPRESSOR, CRANKCASE HEATER, COIL AND CONTROLS, FAN AND REFRIGERANT PIPING, OSA INTAKE, AND INSULATION INCLUDING PIPING VALVES, HANGERS, SUPPORTS, CONNECTIONS, ETC FOR A COMPLETE AND OPERATIONAL SYSTEM. ITEMS NOT LISTED BUT REQUIRED DUE TO LOCAL CODES OR OPERATIONAL REQUIREMENTS SHALL BE INCLUDED UNDER BASE BID. UNIT SHALL COME OPERATIONAL DOWN TO 20%F AMBIENT. 1" DISPOSABLE TYPE WITH HINGED FILTER ACCESS AT REAR OF UNIT.

CONTROLS AND POWER WIRING: THE CONTROLS SHALL INCLUDE A 7-DAY PROGRAMMABLE LOW VOLTAGE ROOM THERMOSTAT EQUAL TO HONEYWELL TH8000 SERIES WITH A FAN "ON_AUTO" SWITCH AND A SYSTEM "HEAT_OFF_COOL" SWITCH. EACH UNIT SHALL BE COMPLETELY FACTORY WIRED FOR TERMINAL CONNECTIONS OF THERMOSTAT AND POWER WIRING.

REFRIGERANT ACCESSORIES REQUIRED: REFRIGERANT SYSTEMS OF LESS THAN 60 MBH SCHEDULED TOTAL CAPACITY PER COMPRESSOR (SEE DRAWINGS) SHALL BE PROVIDED WITH THE FOLLOWING ACCESSORIES, TO BE FIELD-PIPED IF NOT INCLUDED BY THE MANUFACTURER IN THE UNIT: FILTER DRYER, EXPANSION DEVICE, SITE GLASS (PLACE IMMEDIATELY UPSTREAM OF EXPANSION DEVICE), CHARGING VALVE, AND REFRIGERANT SHUT-OFF VALVE IN SUCTION AND LIQUID LINE AT OR NEAR CONDENSING UNIT.

REFRIGERANT PIPING: HARD DRAWN COPPER TUBING, TYPE "L" ESPECIALLY DESIGNATED AS AIR CONDITIONING REFRIGERANT PIPING OR PRECHARGED REFRIGERANT PIPING DESIGNED FOR SPLIT SYSTEM INSTALLATION.

DRYER SIZE SHALL BE FULL LIQUID LINE SIZE AS INDICATED ON DRAWINGS. SIGHT GLASS SHALL BE MOISTURE INDICATING TYPE. SOLENOID VALVE SHALL BE FULL LIQUID LINE SIZE WITH MANUAL OPENING STEM AND VALVE SHALL BE COMPLETELY MOISTURE PROOF. MANUAL REFRIGERANT SHUT-OFF VALVES SHALL BE REFRIGERATION SERVICE WITH BACK SEATING CONSTRUCTION AND CAP SEALS. FLEXIBLE CONNECTIONS SHALL BE PROVIDED IN EACH LIQUID LINE, HOT GAS LINE, AND EACH SUCTION LINE AT EACH PIECE OF EQUIPMENT. CONNECTIONS SHALL BE FOR REFRIGERANT SERVICE WITH BRONZE SEAMLESS CORRUGATED HOSE AND BRONZE BRAIDING.

REFRIGERANT PIPING CALCULATION SUBMITTAL: IN ADDITION TO THE SUBMITTAL REQUIREMENTS THE MANUFACTURER'S REPRESENTATIVE FOR EQUIPMENT PROVIDED IN THIS SPECIFICATION SHALL INCLUDE WITH ITS SUBMITTAL, TABLES AND/OR DRAWINGS OF REFRIGERANT PIPING AND ACCESSORIES, INCLUDING RECOMMENDED SIZES OF PIPES, VALVES, FITTINGS, ETC.

REFRIGERANT PIPING: TO BE INSTALLED BY AND UNITS STARTED UP BY A REFRIGERANT CONTRACTOR LICENSED BY THE STATE.

PIPE INSULATION: INSULATE ALL REFRIGERANT GAS PIPING WITH 1/2" THICK FLEXIBLE FOAMED PLASTIC CLOSED CELL PIPE INSULATION, "K" FACTOR OF NOT MORE THAN .26 @ 70%F, ASTM C177-63 AND ASTM C355-64 WATER METHOD. SEAL JOINTS AND BUTT ENDS WITH FIRE RETARDANT, WATERPROOF ADHESIVE EQUAL TO ARMSTRONG 520. FINISH ALL PIPE INSULATION EXPOSED TO WEATHER WITH TWO COATS OF ARMAFLEX FINISH (OR APPROVED EQUAL). SEAL AROUND PIPE IN SLEEVES WITH SILICONE SEALANT FOR NON-FIRE RATED WALLS. SEAL AROUND PIPE IN SLEEVES PASSING THROUGH FIRE RATED WALLS OR FLOORS WITH APPROVED FIRE RATED PACKING.

6. START-UP FOR MECHANICAL EQUIPMENT

ALL UNITS SHALL BE INSPECTED, CHECKED, AND STARTED UP BY MANUFACTURER'S FACTORY CERTIFIED HVAC TECHNICIAN. UPON COMPLETION, MANUFACTURER SHALL PROVIDE ONE YEAR PARTS AND LABOR WARRANTY.

7. EXHAUST FANS

DESCRIPTION: PROVIDE ALL LABOR, MATERIALS, EQUIPMENT, AND SERVICES NECESSARY TO FURNISH AND INSTALL EXHAUST FANS AND BLOWERS FOR A COMPLETE AND OPERATIONAL SYSTEM. ITEMS NOT LISTED BUT REQUIRED DUE TO LOCAL CODES OR OPERATIONAL REQUIREMENTS SHALL BE INCLUDED UNDER BASE BID.

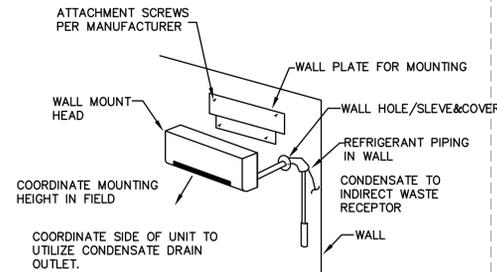
PROVIDE ROOF CAPS, WALL CAPS, FLASHINGS, BASES, SPEED SWITCHES, APPROVED VIBRATION ISOLATORS, INTEGRAL INLET GRILLES, INTEGRAL STARTERS AND DUCT CONNECTIONS AS INDICATED OR SPECIFIED. PROVIDE INTERNAL DISCONNECTING MEANS AND OVERLOAD PROTECTION ON ALL UNITS 1/2 HP AND SMALLER AND/OR 120 VOLT, SINGLE PHASE. TWO SPEED MOTOR SHALL BE TWO WINDING TYPE. ALL BELT DRIVEN EXHAUST FANS SHALL HAVE ADJUSTABLE MOTOR PULLEYS FOR FAN SPEED CONTROL. RATE BELTS FOR 150% OF MOTOR RATED HP. ALL FANS, EXCEPT TOILET EXHAUST FANS 200 CFM AND BELOW, SHALL BE AMCA CERTIFIED AND APPROVED.

MECHANICAL EQUIPMENT SCHEDULE

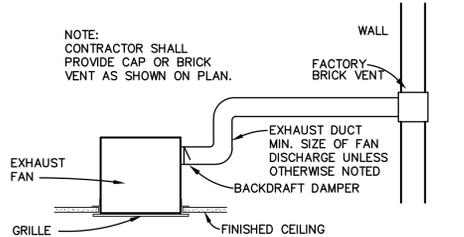
NOTE: 1. AMBIENT TEMPERATURE 115 F COOLING, 31 F HEATING.
2. NO EQUIPMENT WITH LESS THAN 98% OF LISTED CAPACITIES WILL BE APPROVED. COOLING CAPACITY INCLUDES FAN HEAT.
3. FILTERS SHALL HAVE A MAXIMUM VELOCITY OF 500 FPM, 1" DEEP, 30% ATMOSPHERIC EFFICIENT.
4. UNIT SHALL HAVE LOW AMBIENT COMPRESSOR LOCKOUT THERMOSTAT.
5. SEE SPECIFICATION SECTION AIR CONDITIONING UNITS AND FILTERS FOR ADDITIONAL REQUIREMENTS.
6. PROVIDE ONE ELECTRICAL CONNECTION FOR EACH UNIT.
7. VERIFY ON PLAN FOR HORIZONTAL OR VERTICAL INSTALLATION.
8. APPROVED HVAC MANUFACTURERS ARE: TRANE, CARRIER, LENNOX & AMERICAN STANDARD, ONLY.
9. ALL UNITS SHALL BE INSPECTED, CHECKED, AND STARTED UP BY MANUFACTURER'S FACTORY CERTIFIED HVAC TECHNICIAN. UPON COMPLETION, MANUFACTURER SHALL PROVIDE ONE YEAR PARTS AND LABOR WARRANTY.

UNIT										COOLING				HEATING				OSA CFM	WEIGHT LBS	NOTES
MARK	MANUFACTURER	MODEL	SEER /EER	CFM	ESP "WG"	HP	VOLT	PH	MCA	SEN MBH	TOT MBH	ENT DB	AIR WB	COMP MBH	KW/ STAGES	VOLT	PH			
IU-A1	MITSUBISHI	PKA-A12HA7	21.0	425	-	-	208	-	11.0	9.0	10.1	80	67	14.0	-	-	-	-	40	-
OU-A1	MITSUBISHI	PUZ-A12NKA7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100	-
EF-A1-6	GREENHECK	SP-A110	-	100	0.125	-	120	1	-	-	-	-	-	-	-	-	-	-	40	SW W/ LIGHT

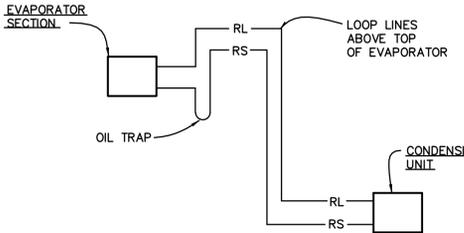
LEGEND: EXHAUST FAN (EF), SPLIT SYSTEM: INDOOR UNIT (IU), OUTDOOR UNIT (OU), HEATPUMP (HP), AIR HANDLING UNIT (AHU), AIR CONDITIONER (AC), EVAPORATIVE COOLER (EC), MAKE-UP AIR UNIT (MUA)



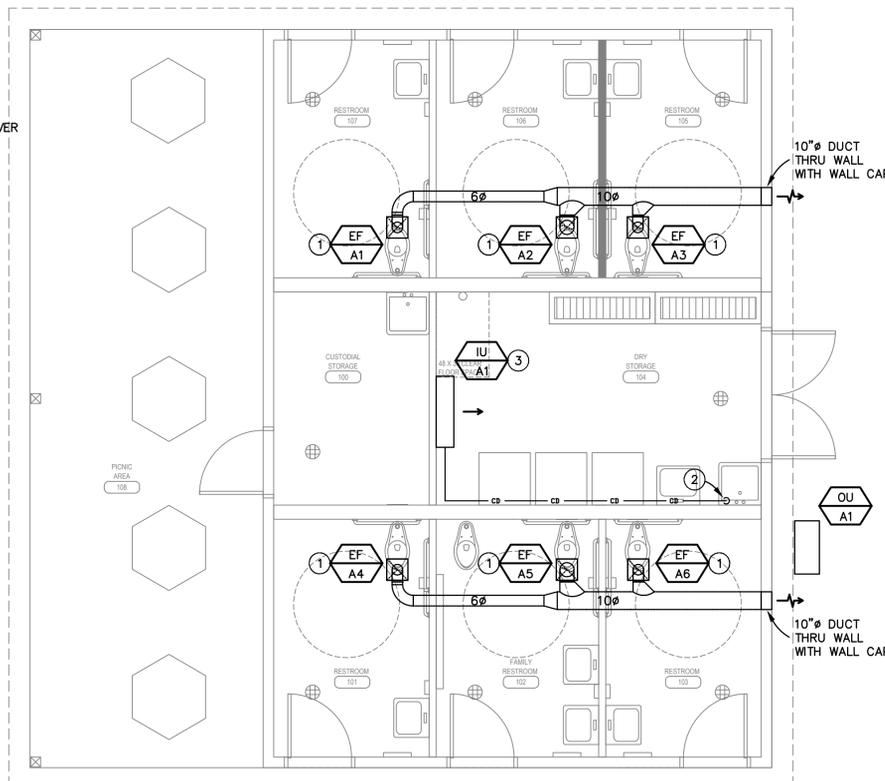
1 WALL MOUNT MINI SPLIT N.T.S.



2 EXHAUST FAN - CEILING TYPE N.T.S.



3 SPLIT SYSTEM N.T.S.



1 MECHANICAL FLOOR PLAN 1/4" = 1'-0"

DUCTWORK SYMBOLS			
SINGLE	DOUBLE	ABBR.	DESCRIPTION
[Symbol]	[Symbol]	•	RECTANGULAR DUCT
[Symbol]	[Symbol]	•	ROUND DUCT
[Symbol]	[Symbol]	•	45 DEG. TAP: USE AT BRANCH DUCTS ONLY
[Symbol]	[Symbol]	•	DUCT SPLIT W/DAMPER: USE AT ELBOWS AND TEES: PROPORTION DUCT AREAS BY CFM'S
[Symbol]	[Symbol]	•	CURVED ELBOW-MIN. RADIUS R: 1.5 WIDTH
[Symbol]	[Symbol]	•	90 DEG. ELBOW WITH SINGLE RADIUS TURNING VANES
[Symbol]	[Symbol]	•	FLEXIBLE DUCT CONNECTION
[Symbol]	[Symbol]	FD	FIRE DAMPER
[Symbol]	[Symbol]	BD	BALANCING DAMPER (USE O.B.D. UNLESS NOTED OTHERWISE)
[Symbol]	[Symbol]	•	SPIN-IN FLEX DUCT TAKE-OFF W/DAMPER
[Symbol]	[Symbol]	SA	SUPPLY AIR
[Symbol]	[Symbol]	EXH	EXHAUST AIR
[Symbol]	[Symbol]	RA	RETURN AIR
[Symbol]	[Symbol]	REL	RELIEF AIR
[Symbol]	[Symbol]	OSA	OUTSIDE AIR
[Symbol]	[Symbol]	T	THERMOSTAT X: UNIT OR ZONE NUMBER
[Symbol]	[Symbol]	T	THERMOSTAT W/SHERWOOD GUARD
[Symbol]	[Symbol]		POINT OF CONNECTION
[Symbol]	[Symbol]		SMOKE DUCT DETECTOR

KEYED NOTES :

- EXHAUST FAN MOUNTED AT CEILING. ROUTE EXHAUST TO TERMINATE THRU WALL WITH WALL CAP.
- ¾"CD TO TERMINATE AT MOP SINK TERMINATE WITH AIR GAP.
- PROVIDE WALL MOUNTED MINI SPLIT UNIT. MOUNT AS HIGH AS POSSIBLE AND MAINTAIN A MINIMUM OF 6" FROM CEILING.

GENERAL NOTES :

- MOUNT THERMOSTATS 48" ABOVE FINISH FLOOR TO CENTER.
- DUCTWORK AND EQUIPMENT SHOWN IS DIAGRAMMATIC. COORDINATE AND ROUTE DUCTWORK TO MEET JOB REQUIREMENTS. LOCATION OF EQUIPMENT MUST BE COORDINATED WITH ALL DISCIPLINES BEFORE FINAL LOCATIONS ARE SELECTED. WEIGHTS OF EQUIPMENT MUST BE VERIFIED AND COORDINATED WITH STRUCTURAL SYSTEMS BEFORE EQUIPMENT CAN BE INSTALLED AT JOBSITE.
- SPACE ALLOCATED FOR MECHANICAL AND OTHER WORK ABOVE THE SUSPENDED CEILING IS CRITICAL. LIGHT FIXTURES AND AIR DIFFUSERS HAVE BEEN LOCATED TO ACHIEVE A DEFINITE ARCHITECTURAL EFFECT AND MAY NOT BE CHANGED WITHOUT THE CONSENT OF THE ARCHITECT. BECOME FAMILIAR WITH THE ARCHITECTURAL, STRUCTURAL, MECHANICAL AND ELECTRICAL DRAWINGS PRIOR TO FABRICATING AND INSTALLING ANY MATERIALS. HANG DUCTWORK AS CLOSE AS POSSIBLE TO THE STRUCTURE ABOVE, UNLESS INDICATED OTHERWISE.
- COORDINATE THE LOCATION OF CEILING DIFFUSERS, REGISTERS AND GRILLES WITH THE ARCHITECTURAL REFLECTED CEILING PLANS.
- PASSAGES OF PIPES, CONDUITS, BUS DUCTS, CABLES, WIRES, AIRDUCTS, PNEUMATIC DUCTS, AND SIMILAR BUILDINGS SERVICE EQUIPMENT THROUGH FIRE BARRIERS SHALL BE PROTECTED AS FOLLOWS: THE SPACE BETWEEN THE PENETRATING ITEM AND FIRE BARRIER SHALL BE FILLED WITH A MATERIAL CAPABLE OF MAINTAINING THE FIRE RESISTANCE RATING OF THE FIRE BARRIER PRODUCT. PRODUCT USED MUST MEET TEST METHODS ASTM E814 OR NFPA 251 FOR FIRE RATING.
- CONTRACTOR SHALL FIELD VERIFY ALL EXISTING DUCT & PIPING LOCATIONS IN FIELD AND INCLUDE IN BID EXTENDING TO EXISTING AS REQUIRED.
- CONTRACTOR SHALL BALANCE ALL SYSTEMS TO CFM'S SHOWN. PROVIDE 3RD PARTY INSPECTION & PROVIDE COPY OF REPORT TO THE CITY OF BULLHEAD CITY INSPECTOR AT FINAL MECHANICAL INSPECTION
- EXISTING CONDENSATE DRAINS SUPPLY & RETURN AIR DUCT DROPS ARE EXISTING AND SHALL BE REUSED WHEN-EVER POSSIBLE.
- PLANS SHALL CONFORM TO THE 2018 IMC, 2018 IECC AND ALL CITY OF BULLHEAD CITY ADOPTED CODES AND AMENDMENTS.
- MECHANICAL DESIGN IS INTENDED SO THAT THE AIR CONDITIONING SYSTEM WILL OPERATE CONTINUOUSLY DURING OCCUPIED HOURS TO MAINTAIN CURRENT VENTILATION REQUIREMENTS.
- ALL DIFFUSERS AND GRILLES ARE LESS THAN 20LBS, CONTRACTOR SHALL POSITIVELY ATTACH TO CEILING MAIN RUNNERS
- VENTS SHALL BE TERMINATED A MINIMUM OF 1'-0" ABOVE ROOF AND 2'-0" ABOVE OR 8'-0" AWAY FROM PARAPETS OR WALLS.
- SEE ARCHITECTURAL PLANS FOR LOCATION OF PERMANENT ACCESS TO ROOF.
- ALL NEW UNITS SHALL BE LOCATED AND INSTALLED BELOW THE PARAPET OR A SCREEN WALL PROVIDED,(SEE ARCHITECTURE DRAWINGS FOR SCREENING DETAILS).
- THERMOSTATS ARE LOW VOLTAGE PROGRAMMABLE. THERMOSTATS AND ARE TO BE LOCATED AS SHOWN.
- REFER TO ARCHITECTURAL LOCATION OF DRAWINGS FOR EXACT REGISTERS, GRILLES & DIFFUSERS.
- CALL FOR INSPECTION OF ALL MECHANICAL SYSTEM PRIOR TO COVER AND CONCEALMENT.

CONDENSATE DRAINS

TONNAGE	MIN. PIPE SIZE
0 - 10 TONS	3/4"
OVER 10 TONS	1"
OVER 35 TONS	1-1/4"
OVER 55 TONS	1-1/2"
OVER 120 TONS	2"

SLOPE ALL CONDENSATE DRAIN PIPING AT MINIMUM 1/8" PER FOOT.

ALL CONDENSATE DRAIN PIPING SHALL BE TYPE "M" COPPER.

MAVEN ENGINEERING Job #25RRB204
 Tel: (480) 303-0180
 Fax: (480) 302-7927
 8011 S Avenida del Yagui
 Guadalupe, Arizona 85283
 Note: Any changes made to final bid documents due to field changes will be billed hourly to the contractor.

Professional Engineer
 Kirk J. Hoffman
 No. 24488
 ARIZONA, U.S.A.
 EXPIRES 03/31/27

DRAWINGS AND SPECIFICATIONS REMAIN THE PROPERTY OF THE DESIGN PROFESSIONAL. COPIES OF THE DRAWINGS AND SPECIFICATIONS RETAINED BY THE CLIENT MAY BE UTILIZED ONLY FOR HIS USE AND FOR OCCUPANCY OF THE PROJECT FOR WHICH THEY WERE PREPARED, AND NOT FOR THE CONSTRUCTION OF ANY OTHER PROJECTS.

PROJECT NAME
COMMUNITY PARK RESTROOM - BHC
 1251 HWY 95, BULLHEAD CITY, ARIZONA 86442 APN: 214-01-011

ARCHITECT OF RECORD
SELBERG ASSOCIATES INC.
 ARCHITECTURE & PLANNING
 2480 MESQUITE AVE. SUITE 204
 TUCU, HAVASUT CITY, ARIZONA 86503
 (928) 855-8594

PROJECT NO.	25053
ISSUED FOR:	PERMIT SET
ISSUED DATE:	09-29-2025
REVISION	ISSUE DATE

SHEET TITLE:	MECHANICAL FLOOR PLAN
SHEET NO.	