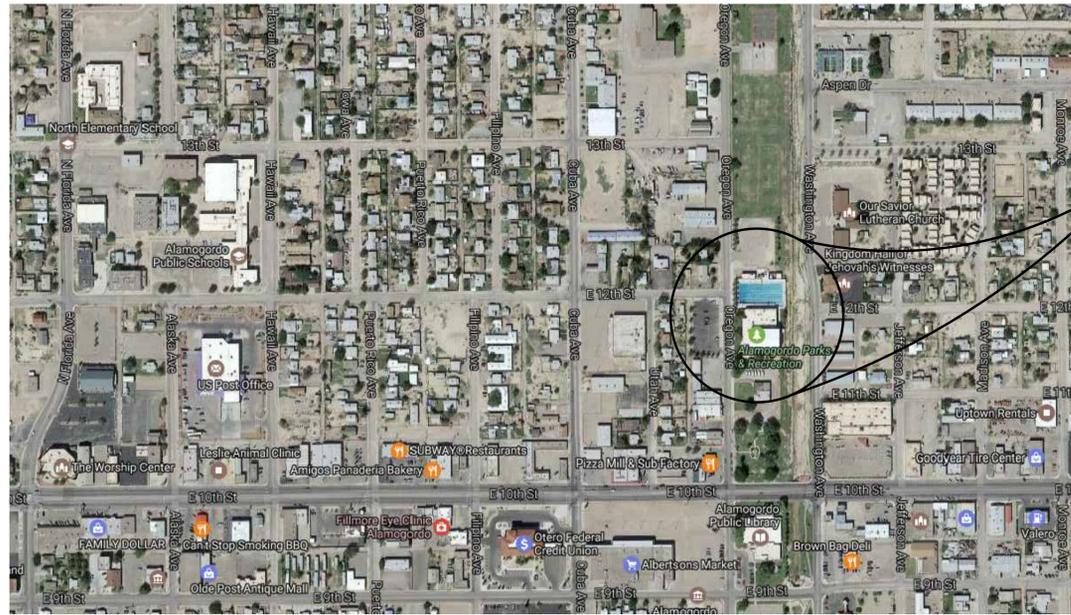


A PROJECT FOR:

ALAMOGORDO FAMILY RECREATION CENTER GYMNASIUM HVAC UPGRADE

Public Works Bid No. 2017-016

ALAMOGORDO, NEW MEXICO



PROJECT LOCATION
1100 OREGON AVENUE
ALAMOGORDO, NEW MEXICO

 LOCATION MAP
SCALE: NONE

INDEX OF DRAWINGS:

- CV-0.1 - COVER SHEET
- MPD-1.0 - EXISTING HVAC & PLUMBING DEMOLITION PLAN
- MP-0.1 - MECHANICAL/PLUMBING GENERAL NOTES, LEGEND & SCHEDULES
- MP-0.2 - MECHANICAL/PLUMBING SCHEMATICS
- MP-1.0 - HVAC & PLUMBING NEW WORK PLAN
- E-1.1 - ELECTRICAL OVERALL BUILDING PLAN
- E-1.2 - ELECTRICAL HVAC POWER PLANS

DATE: 10/20/2017
SET NO. _____

GYMNASIUM HVAC UPGRADE (BID No. 2017-016)
ALAMOGORDO FAMILY RECREATION CENTER
1100 OREGON AVENUE ALAMOGORDO, NEW MEXICO
COVER SHEET

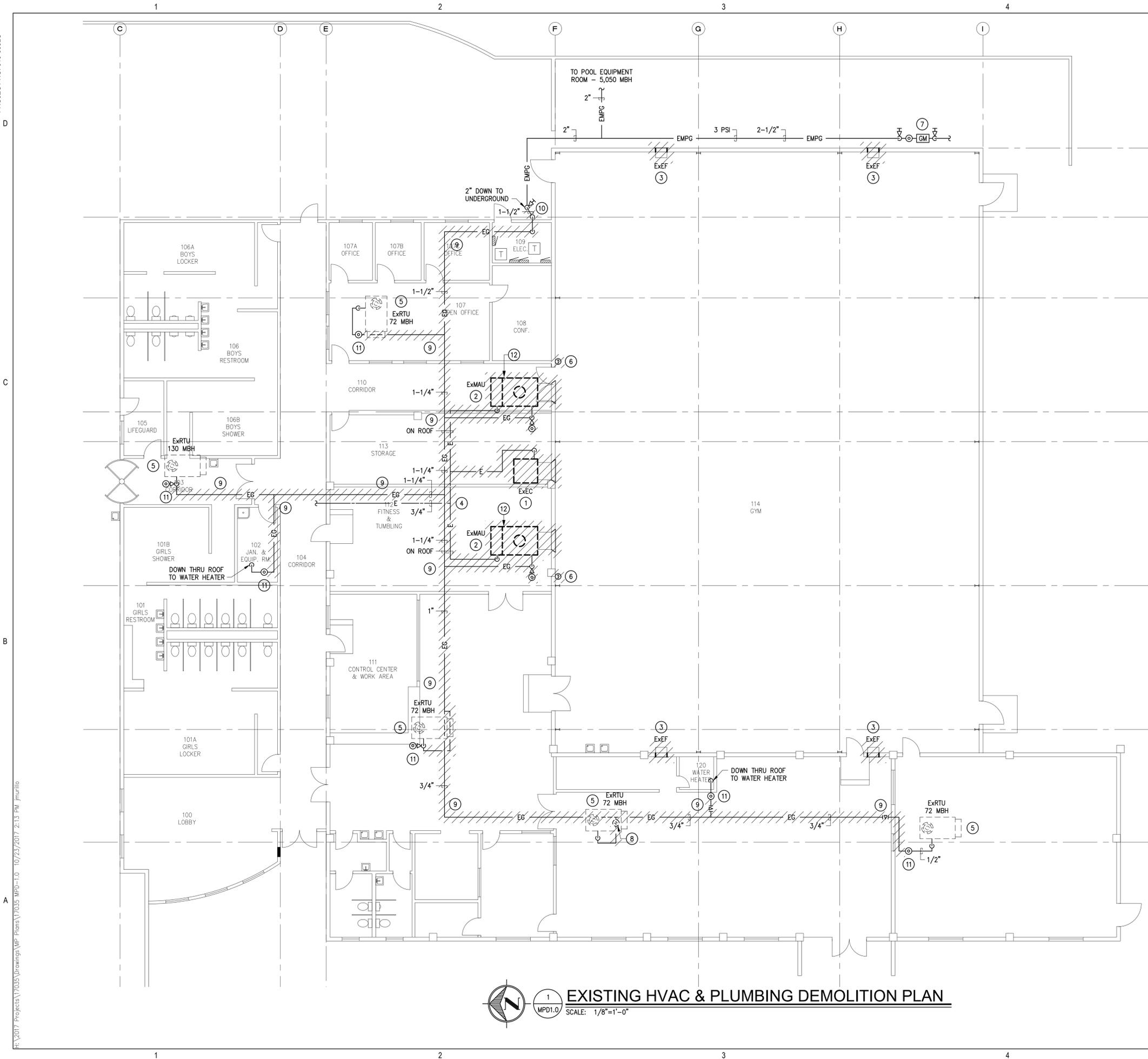
| |
|------------------------|
| date: OCTOBER 20, 2017 |
| drawn by: RBM |
| checked by: RBM |
| revisions: |
| |
| |
| |

CV-0.1

project no. 17035

RBM ENGINEERING INC.
1065 S. MAIN ST. BLDG D STE. A
LAS CRUCES, NM 88005
(575) 647-1554
FAX (575) 647-1563
rbm@rbm.cc





KEYED NOTES

- ① EXISTING ROOF MOUNTED EVAPORATIVE COOLER AND ASSOCIATED FRAME, SUPPLY DUCTWORK, SIDEWALL SUPPLY GRILLE, CONTROLS, DOMESTIC WATER PIPING AND DRAIN PIPING TO BE REMOVED COMPLETELY. REMOVE EXISTING DOMESTIC WATER AND EXISTING DRAIN PIPING COMPLETELY AS REQUIRED. PATCH AND REPAIR EXISTING WALL OPENING TO MATCH EXISTING CONDITIONS.
- ② EXISTING ROOF MOUNTED MAKE-UP AIR UNIT AND ASSOCIATED SUPPLY DUCTWORK, SIDEWALL SUPPLY GRILLE, CONTROLS, NATURAL GAS PIPING AND DOMESTIC WATER PIPING TO BE REMOVED COMPLETELY. PATCH AND REPAIR EXISTING WALL OPENING TO MATCH EXISTING CONDITIONS.
- ③ EXISTING SIDE WALL PROPELLER TYPE EXHAUST FAN AND ASSOCIATED WALL LOUVER TO BE REMOVED COMPLETELY. PATCH AND REPAIR EXISTING WALL OPENING TO MATCH EXISTING CONDITIONS.
- ④ CAP EXISTING DOMESTIC WATER LINE AT PIPE TEE AS REQUIRED.
- ⑤ EXISTING ROOFTOP UNIT TO REMAIN UNDISTURBED.
- ⑥ EXISTING THERMOSTAT AND ASSOCIATED ACCESSORIES TO BE REMOVED COMPLETE.
- ⑦ EXISTING GAS METER AND ASSOCIATED PIPING TO REMAIN, SEE NATURAL GAS LOAD SUMMARY FOR ADDITIONAL INFORMATION.
- ⑧ EXISTING NATURAL GAS PRESSURE REGULATOR TO BE REMOVED AND BE RELOCATED AS INDICATED ON HVAC AND PLUMBING NEW WORK PLAN.
- ⑨ EXISTING NATURAL GAS PIPING ON ROOF TO BE REMOVED COMPLETELY INCLUDING PIPE SUPPORTS.
- ⑩ EXISTING 1-1/2" NATURAL GAS RISER TO BE REMOVED. CAP EXISTING NATURAL GAS PIPING AFTER MAIN SHUT-OFF VALVE AT RISER AS REQUIRED TO ALLOW FOR NEW WORK.
- ⑪ EXISTING NATURAL GAS REGULATOR TO REMAIN. EXISTING NATURAL GAS PIPING DOWNSTREAM OF PRESSURE REGULATOR CONNECTING TO EQUIPMENT IS TO REMAIN. ALL NATURAL GAS PIPING UPSTREAM OF PRESSURE REGULATOR IS TO BE REMOVED COMPLETE. CAP EXISTING PIPING AT REGULATOR AS REQUIRED TO ALLOW FOR NEW WORK, SEE HVAC AND PLUMBING NEW WORK PLAN.
- ⑫ REMOVE EXISTING ROOF CURB COMPLETELY. PATCH DECK WITH MATCHING DECK MATERIAL AND REPLACE INSULATION AND MEMBRANE. SEE ROOF WARRANTY INFO ON SHEET. MP-0.1

RBM ENGINEERING INC.
 1066 S. MAIN ST. BLDG D STE. A
 LAS CRUCES, NM 88005
 (575) 647-1564
 FAX (575) 647-1563
 rbm@rbm.cc



GYMNASIUM HVAC UPGRADE (BID No. 2017-016)
ALAMOGORDO FAMILY RECREATION CENTER
1100 OREGON AVENUE ALAMOGORDO, NEW MEXICO
 EXISTING HVAC & PLUMBING DEMOLITION PLAN

| |
|------------------------|
| date: OCTOBER 20, 2017 |
| drawn by: RBM |
| checked by: RBM |
| revisions: |
| |
| |
| |

MPD-1.0

EXISTING HVAC & PLUMBING DEMOLITION PLAN
 SCALE: 1/8"=1'-0"

PROJECT NO: 016-005LC

CLC 2009 I.E.C.C. COMPLIANCE CERTIFICATE

PROJECT INFORMATION:
 PROJECT TYPE: ALTERATIONS
 PROJECT TITLE: GYMNASIUM HVAC SYSTEM UPGRADE - ALAMOGORDO FAMILY RECREATION CENTER

GENERAL INFORMATION:
 BUILDING LOCATION (FOR WEATHER DATA): ALAMOGORDO, NEW MEXICO
 CLIMATE ZONE: 3B

COMPLIANCE STATEMENT:
 WE THE OFFICE OF RBM ENGINEERING INC. ACKNOWLEDGE THE REQUIREMENTS OF THE 2009 INTERNATIONAL ENERGY CONSERVATION CODE AND HAVE INCORPORATED THE FOLLOWING CLC/HVAC REQUIREMENTS INTO THE DESIGN OF THE "GYMNASIUM HVAC SYSTEM UPGRADE - ALAMOGORDO FAMILY RECREATION CENTER" PROJECT. DATE: JUNE 2015

SECTION 502.1 "INTERIOR DESIGN CONDITIONS" - THE INTERIOR DESIGN TEMPERATURES USED FOR HEATING AND COOLING LOAD CALCULATIONS SHALL BE A MAXIMUM OF 72°F (22°C) FOR HEATING AND MINIMUM OF 75°F (24°C) FOR COOLING.

SECTION 503.1 "GENERAL" - MECHANICAL SYSTEMS AND EQUIPMENT SERVING THE BUILDING HEATING, COOLING OR VENTILATING NEEDS SHALL COMPLY WITH SECTION 503.2 AND EITHER: 1. SECTION 503.3 (SIMPLEX SYSTEMS), OR 2. SECTION 503.4 (COMPLEX SYSTEMS).

SECTION 503.2.1 "CALCULATION OF HEATING AND COOLING LOADS" - DESIGN LOADS SHALL BE DETERMINED IN ACCORDANCE WITH THE PROCEDURES DESCRIBED IN THE ASHRAE/ACCA STANDARD 183. ** LOAD CALCULATIONS WERE COMPLETED USING "TRANE - TRACE 700 HVAC LOAD DESIGN AND ANALYSIS SOFTWARE" **

SECTION 503.2.2 "EQUIPMENT AND SYSTEM SIZING" - HEATING AND COOLING EQUIPMENT AND SYSTEMS CAPACITY SHALL NOT EXCEED THE LOADS CALCULATED IN ACCORDANCE WITH SECTION 503.2.1.

SECTION 503.2.9 "HVAC SYSTEM COMPLETION" - PRIOR TO THE ISSUANCE OF A CERTIFICATE OF OCCUPANCY, THE DESIGN PROFESSIONAL SHALL PROVIDE EVIDENCE OF SYSTEM COMPLETION IN ACCORDANCE WITH SECTIONS 503.2.9.1 THROUGH 503.2.9.3.

SECTION 503.2.9.3 "MANUALS" - THE CONSTRUCTION DOCUMENTS SHALL REQUIRE THAT AN OPERATING AND MAINTENANCE MANUAL BE PROVIDED TO THE BUILDING OWNER BY THE MECHANICAL CONTRACTOR.

COMPLIANCE SIGNATURE:
 ROBERT H. BEASLEY, P.E. - VP, PRINCIPAL 9-12-17
 NAME - TITLE SIGNATURE DATE

HVAC SYMBOL LEGEND

| SYMBOL | DESCRIPTION | SYMBOL | DESCRIPTION |
|--------|----------------------------|--------|---------------------------------------|
| | HVAC EQUIPMENT | | RETURN OR EXHAUST DUCT UP. |
| | ROOF MOUNTED EXHAUST FAN. | | SUPPLY DUCT DOWN. |
| | CEILING MOUNT EXHAUST FAN. | | RETURN OR EXHAUST DUCT DOWN. |
| | VOLUME DAMPER. | | SIDEWALL SUPPLY AIR OUTLET |
| | FIRE DAMPER. | | SIDEWALL RETURN OR EXHAUST AIR OUTLET |
| | THERMOSTAT. | | CEILING DIFFUSER WITH FLEXIBLE DUCT |
| | CONTROL SWITCH. | | CEILING RETURN OR EXHAUST GRILLE. |
| | FLEXIBLE DUCTWORK. | | LONG RADIUS ELBOW WITH OUT VANES. |
| | RIGID DUCTWORK. | | NEW TO EXISTING CONNECTION |
| | DUCT TRANSITION. | | KEYED NOTES |
| | SUPPLY AIR DUCT UP. | | EQUIPMENT DESIGNATION |

DOCUMENT GENERAL NOTES:

- DRAWINGS ARE DIAGRAMMATIC. THEY ARE TO BE USED AS A GENERAL GUIDE AND ARE NOT INTENDED TO BE SPECIFIC INSTALLATION INSTRUCTIONS. CONTRACTOR SHALL CONSTRUCT ACCORDING TO CODE AND/OR MANUFACTURERS INSTALLATION INSTRUCTIONS.
- DRAWINGS ARE BASED UPON ORIGINAL BUILDING PLANS AND/OR FIELD OBSERVATIONS. CONTRACTOR MUST FIELD VERIFY EXACT LOCATIONS AND ROUTING OF: PLUMBING & HVAC.
- CONTRACTOR SHALL EXPECT TO MAKE SOME ROUTING ADJUSTMENTS DURING THE COURSE OF CONSTRUCTION. COORDINATE CHANGES WITH ARCHITECT AND KEEP RECORD OF CHANGES FOR FUTURE USE.
- IT SHALL BE THE GENERAL CONTRACTOR'S RESPONSIBILITY TO COORDINATE ITEMS ON THESE PLANS WITH ANY/ALL SUB-CONTRACTORS. ITEMS LISTED ON PLANS SHALL BE PROVIDED & INSTALLED BY GENERAL CONTRACTOR AND/OR SUBCONTRACTOR. ITEMS LISTED AS "BY OTHERS" DOES NOT MEAN BY OWNER.
- CONTRACTOR FAILURE TO NOT FOLLOW ALL LISTED NOTES AND/OR MEET THE REQUIREMENTS OF CODE REQUIREMENTS AND/OR MANUFACTURERS INSTALLATION GUIDELINES CAN AND MAY RESULT IN ADDITIONAL FEES/SURCHARGES TO THE CONTRACTOR(S) BY/TO OWNER-ARCHITECT-ENGINEER. IF CONTRACTOR(S) HAVE ANY QUESTIONS AND/OR VALUE ENGINEERING ITEMS THAT WOULD LIKE TO BE INCORPORATED INTO PLANS, SUCH ITEMS SHALL BE FORWARDED TO ARCHITECT FOR REVIEW AND ARE REQUIRED TO BE ISSUED PRIOR TO ANY BIDDING OR PRICE-QUOTE DEADLINES. ANY DISCREPANCIES AFTER AWARD/DURING CONSTRUCTION WILL RESULT THAT THE CONTRACTOR FOLLOW THE MORE STRINGENT INSTALLATION METHOD AND/OR MATERIAL TYPES AND SIZES, ETC., ETC.

HVAC GENERAL NOTES:

- COMPLY WITH ALL LOCAL, COUNTY, STATE AND FEDERAL CODES, ORDINANCE, RULES AND REGULATIONS.
 - ALL MECHANICAL WORK MUST BE COORDINATED WITH ARCHITECT, STRUCTURAL, AND ELECTRICAL PRIOR TO INSTALLATION.
 - ALL BRANCH DUCTS SHALL BE FITTED WITH BALANCING DAMPERS. WHERE RADIUS FITTINGS WILL NOT FIT, TURNING VANES SHALL BE PROVIDED IN ALL SQUARE FITTINGS.
 - TEST AND BALANCE SYSTEM PER NEBB STANDARDS.
 - DUCTWORK TO BE GALVANIZED STEEL SHEETS IN ACCORDANCE WITH "ASHRAE GUIDE AND SMACNA STANDARDS."
 - SEAL ALL DUCT JOINTS WITH HIGH PRESSURE DUCT SEALER OR HARD CAST.
 - INSULATE SUPPLY DUCTWORK WITH 2" TYPE 100 FOIL FACED DUCT WRAP.
 - SUPPLY DUCTWORK LOCATED WITHIN CONDITIONED SPACES SHALL NOT BE REQUIRED TO BE INSULATED.
 - DUCT SIZES SHOWN ARE "CLEAR INSIDE" DIMENSIONS.
 - EXACT PLACEMENT OF DIFFUSERS AND REGISTERS TO BE COORDINATED WITH ARCHITECTURAL AND ELECTRICAL DRAWINGS PRIOR TO INSTALLATION. CONTRACTOR SHALL VERIFY CEILING TYPES FOR AIR DISTRIBUTION PRIOR TO ORDERING.
 - CONTRACTOR TO VERIFY LOCATION OF ALL AIR EQUIPMENT SO THAT NO INTERFERENCES ARE ENCOUNTERED WITH OTHER EQUIPMENT OR WITH THE STRUCTURAL ELEMENTS.
 - MECHANICAL CONTRACTOR TO VERIFY THAT ALL DUCTWORK WILL FIT WHERE INDICATED WITHOUT INTERFERENCES.
 - ALL SUPPLY AND RETURN DUCTS MUST DROP BETWEEN ROOF JOISTS (VERIFY BEFORE SETTING UNITS)
 - ALL HVAC EQUIPMENT TO BE MOUNTED LEVEL ON EQUIPMENT CURBS UNLESS OTHERWISE NOTED.
 - FOLLOW CODE GUIDELINES WHEN LOCATING POSITIONS OF EXHAUST OUTLETS, GAS FIRED EQUIPMENT FLUES, AND OUTSIDE AIR INTAKES. MINIMUM OF 10' AWAY OR 2' ABOVE ALL FRESH AIR INTAKES ON UNITS AND ALL VERTICAL PORTIONS OF BUILDING. REFER TO DRAWINGS FOR LOCATIONS.
 - CONTRACTOR TO SHIM-LEVEL A/C UNITS.
 - MECHANICAL CONTRACTOR TO INSTALL NEW FILTERS IN ALL APPLICABLE HVAC UNITS AT BENEFICIAL OCCUPANCY PLUS ONE SET OF SPARE FILTERS.
 - ALL METAL FLUES AND/OR CHIMNEYS FROM FOSSIL FUEL FIRED EQUIPMENT MOUNTED INSIDE THE BUILDING SHALL BE OF CONSTRUCTION CONSISTENT WITH THE CLASSIFICATION OF THAT APPLIANCE. COORDINATE WITH CODE AND MANUFACTURERS RECOMMENDATIONS.
 - ALL EQUIPMENT SHALL BE SELECTED AND EQUIPPED FOR OPERATION AT SITE ALTITUDE. DEMONSTRATE ALTITUDE CORRECTIONS IN EQUIPMENT SUBMITTALS.
 - INSULATE ALL CONDENSATE DRAIN PIPING BELOW ROOF. REFER TO PLUMBING PLANS FOR MORE INFORMATION.
 - ALL HVAC UNITS SHALL BE INSTALLED WITH NEOPRENE VIBRATION ISOLATORS AND DUCT FLEX CONNECTORS.
 - PROVIDE BACK DRAFT DAMPERS AND BIRD SCREENS IN ALL EXHAUST SYSTEMS.
 - FABRICATION OF DUCTWORK SHALL BE BASED ON FIELD MEASUREMENTS. ADJUSTMENTS TO DUCT SIZES AND LAYOUT SHALL BE COORDINATED WITH THE ENGINEER.
 - ALL DEVIATIONS FROM SPECIFIED EQUIPMENT AND MATERIALS MUST COORDINATED WITH THE ENGINEER.
 - ILLUSTRATIONS SHOWN GENERALLY PROVIDED TO CONVEY CONCEPT AND ARE NOT INTENDED FOR AND DO NOT INCLUDE ALL DETAILS FOR ANY SPECIFIC INSTALLATION. ALL INSTALLATIONS MUST COMPLY WITH ALL APPLICABLE CODES AND MANUFACTURERS INSTALLATION INSTRUCTIONS.
 - PROVIDE ACCESS PANELS OR DOORS IN AN ACCESSIBLE CEILING AND/OR CHASES FOR ALL VALVES, TRAPS, DAMPERS, CLEANOUTS, COILS, FANS, CONTROLS, ETC. ACCESS DOOR RATING SHALL MATCH CLASSIFICATION OF WALL AND CEILING FIRE RATING. REFER TO PLANS FOR LOCATIONS.
 - DUCTS SHALL BE SUPPORTED WITH APPROVED HANGERS AT INTERVALS NOT EXCEEDING 10 FEET IN ACCORDANCE WITH THE INTERNATIONAL BUILDING CODE. FLEXIBLE AND OTHER FACTORY MADE DUCTS SHALL BE SUPPORTED IN ACCORDANCE WITH THE MANUFACTURER'S INSTALLATION INSTRUCTIONS.
 - GUARDS SHALL BE PROVIDED WHERE EQUIPMENT THAT REQUIRE SERVICE ARE LOCATED WITHIN 72" OF A ROOF EDGE OR OPEN SIDE OF A WALKING SURFACE AND SUCH EDGE OR OPEN SIDE IS LOCATED MORE THAN 30" ABOVE THE FLOOR, ROOF OR GRADE BELOW.
 - ALL WORK SHALL BE IN ACCORDANCE WITH:
 INTERNATIONAL BUILDING CODE (IBC 2009)
 UNIFORM PLUMBING CODE (UPC 2012)
 UNIFORM MECHANICAL CODE (UMC 2012)
 INTERNATIONAL ENERGY CONSERVATION CODE (IECC 2009)
 INTERNATIONAL FUEL GAS CODE (IFGC 2009)
 AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI 2003)
- PRIOR TO COMPLETION (PRIOR TO ISSUANCE OF A CERTIFICATE OF OCCUPANCY FROM CITY OF ALAMOGORDO)
- MECHANICAL CONTRACTOR SHALL PROVIDE ENGINEER THE FOLLOWING:
 AIR SYSTEM BALANCING REPORT, REFER TO SECTION 503.2.9.1 OF THE INTERNATIONAL ENERGY CONSERVATION CODE FOR MORE INFORMATION.
 HYDRONIC SYSTEM BALANCING REPORT (IF APPLICABLE), REFER TO SECTION 503.2.9.2 OF THE INTERNATIONAL ENERGY CONSERVATION CODE FOR MORE INFORMATION.
 MANUAL, OPERATING AND MAINTENANCE MANUAL, REFER TO SECTION 503.2.9.3 OF THE INTERNATIONAL ENERGY CONSERVATION CODE FOR MORE INFORMATION.
- PACKAGED AIR CONDITIONING EQUIPMENT (ACU'S) INSTALLED ON THE ROOF SHALL BE PROVIDED WITH FACTORY CURB INSTALLATION OF CURB TO FOLLOW MANUFACTURERS GUIDELINES AND SHALL ALSO INCLUDE 10" (MINIMUM) OF UN-FACED THERMAL BATT INSULATION PLACED INSIDE CURB BETWEEN THE UNIT & ROOF, AND PROVIDE BETWEEN FACTORY CURB & ROOF WITH 23/32" TREATED OSB SHEATHING FOR SOUND ATTENUATION.

PLUMBING LEGEND

| SYMBOL | DESCRIPTION |
|--------|-----------------------|
| | GAS LINE |
| | COLD WATER LINE |
| | CONDENSATE DRAIN LINE |
| | GAS COOK VALVE |
| | BALL VALVE |
| | KEYED NOTES |
| | PIPE ELBOW DOWN |
| | PIPE TEE |
| | NATURAL GAS REGULATOR |

NEW MEXICO "ONE CALL SYSTEM" IT'S THE LAW

CALL TWO WORKING DAYS BEFORE YOU DIG IN NEW MEXICO
 #1-800-321-2537 (US)
 #811 (NM)

- ### GENERAL PLUMBING NOTES:
- NEW AND/OR EXISTING EQUIPMENT INDICATED ON THIS DRAWING IS SHOWN IN APPROXIMATE POSITION(S). CONTRACTOR SHALL FIELD VERIFY ALL CONDITIONS INCLUDING EQUIPMENT LOCATIONS, P.O.C.'S AND STRUCTURAL MEMBERS PRIOR TO INSTALLATION. IN ALL CASES, ADEQUATE ACCESS (PER MANUFACTURERS RECOMMENDATIONS AND CODE COMPLIANCE) FOR MAINTENANCE AND REPLACEMENT OF EQUIPMENT SHALL BE PROVIDED.
 - WHERE STRUCTURE IS ALTERED OR DAMAGED DURING CONSTRUCTION, THE CONTRACTOR SHALL REPAIR THE AREA TO MATCH SURROUNDING AREA PER ARCHITECTURAL SPECIFICATIONS.
 - ALL DISSIMILAR METALLIC PIPING AND ACCESSORIES SHALL BE SEPARATED WITH DIELECTRIC FITTINGS AND 10 MIL POLY TAPE.
 - ALL PIPING SHALL BE SUPPORTED APPROPRIATELY IN WALLS, ROOF, CEILING, AND BELOW FLOORS. SEE SPECIFICATIONS AND/OR SCHEMATICS FOR DETAILS.
 - ALL EXPOSED GAS LINE SHALL BE PAINTED, OHSA YELLOW. VERTICAL GAS RISERS SHALL BE PAINTED TO MATCH BUILDING EXTERIOR.
 - ALL WORK TO BE IN ACCORDANCE WITH:
 7. INTERNATIONAL BUILDING CODE (IBC 2009)
 8. UNIFORM PLUMBING CODE (UPC 2009)
 9. UNIFORM MECHANICAL CODE (UMC 2009)
 10. INTERNATIONAL ENERGY CONSERVATION CODE (IECC 2009)
 11. AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI 2003)

MINIMUM PIPE MATERIAL SCHEDULE

| SERVICE TYPE | LOCATION | MATERIAL REQUIRED | COMMENTS |
|------------------|----------------------------------------------|-------------------------|-------------------------------|
| NATURAL GAS | ABOVE GRADE AND/OR WITHIN BUILDING FOOTPRINT | BLACK STEEL SCHEDULE 40 | |
| CONDENSATE DRAIN | THROUGH OUT SYSTEM | COPPER TYPE "K" OR "L" | SIMILAR TO WATER APPLICATIONS |

PIPE MATERIAL SUBSTITUTION NOTES:
 SYNTHETIC PIPING FOR FUEL GAS: POLYETHYLENE MAY BE ALLOWED WHEN PERMITTED BY LOCAL AUTHORITIES AND APPLICABLE CODES WHEN INSTALLED IN ACCORDANCE TO INDUSTRY STANDARD METHODS. THIS PIPING SUBSTITUTION ALLOWED ONLY BELOW GRADE.

INSULATION REQUIREMENTS:
 ALL CONDENSATE PIPING INSTALLED WITHIN BUILDING SHELL SHALL BE INSULATED WITH A MINIMUM 1/2" MATERIAL THICKNESS. APPROVED INSULATION MATERIALS SHALL BE: SLEEVED FIBERGLASS MATERIAL SEALED VAPOR TIGHT IN ACCORDANCE TO APPROVED INDUSTRY STANDARDS AND PRACTICES.

DIFFUSER SCHEDULE

| MARK | MANUFACTURER MODEL NUMBER | DESCRIPTION | REMARKS |
|------|---------------------------|-------------|----------------------------------------------------------------------------------------------------------------------|
| A | PRICE 22DAL | SUPPLY | DOUBLE DEFLECTION LOUVERED AIRFOIL SIDEWALL REGISTER, ALUMINUM CONSTRUCTION, SURFACE MOUNT, OBD DAMPER, WHITE COLOR. |

ROOF WARRANTY

FIRESTONE BUILDING PRODUCTS "RED SHIELD WARRANTY"
 WARRANTY NO RD10665 FBCO# DB9043 SQUARE FOOTAGES 15600 S.F.

BUILDING OWNER: CITY OF ALAMOGORDO
 BUILDING IDENTIFICATION: ALAMOGORDO FAMILY RECREATION CENTER
 BUILDING ADDRESS: 1100 OREGON AVENUE, ALAMOGORDO, NM 88310-5857
 WARRANTY PERIOD OF: 15 YEARS, BEGINNING ON: 11/03/2011
 ROOFING CONTRACTOR: CD GENERAL CONTRACTORS (12783)

ALL WORK SHALL BE DONE IN CONFORMANCE OF THE REQUIREMENTS OF THIS WARRANTY BY A FIRESTONE QUALIFIED ROOFING CONTRACTOR.

AIR CONDITIONING UNIT SCHEDULE

| MARK | MANUFACTURER AND MODEL NO. | CFM | ESP | WGHT. LBS. | NOMINAL TONS. | O.A. CFM | ELEV. IN FT. | COOLING MBH | | COIL ENT. AIR | | COIL LGV. AIR | | AMB dbF | ARI EER | HEATING | | | | ELECTRICAL | | | | REMARKS | | |
|---------|----------------------------|------|------|------------|---------------|----------|--------------|-------------|------|---------------|-----|---------------|-----|---------|---------|--------------|--------------|------|--------|------------|-----|-------|-------|---------|---|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | | | | | | | | TOTAL | SENS | dbF | wbF | dbF | wbF | | | ENT. AIR dbF | LGV. AIR dbF | FUEL | FAN HP | MCA | MOP | VOLTS | PHASE | | | |
| ● ACU-1 | TRANE YHC120 | 4500 | 0.6" | 1610 | 10 | 400 | 4093 | 105 | 95 | 78 | 62 | 56 | 54 | 97 | 12.4 | 168 | 134 | 64 | 98 | NG | 2 | 21.9 | 30 | 480 | 3 | PROVIDE WITH A FACTORY ROOF CURB, MOTORIZED OUTSIDE AIR DAMPER AND ENTHALPY BASED 100% O.A. ECONOMIZER WITH POWER EXHAUST, LOUVERED HALL GUARD, 7-DAY PROGRAMMABLE THERMOSTAT, FACTORY MOUNTED DISCONNECT, UNPOWERED CONVENIENCE OUTLET, "AUXILIARY CONDENSATE SAFETY SWITCH" INSTALLED IN CONDENSATE DRAIN PAN AND WIRED TO THERMOSTAT CIRCUIT TO SHUTOFF UNIT. THRU CURB CONNECTIONS FOR UNIT CONNECTIONS. |
| ● ACU-2 | TRANE YHC120 | 4500 | 0.6" | 1610 | 10 | 400 | 4093 | 105 | 95 | 78 | 62 | 56 | 54 | 97 | 12.4 | 168 | 134 | 64 | 98 | NG | 2 | 21.9 | 30 | 480 | 3 | |

* UNITS SHALL BE PROVIDED WITH A U.L. LISTED SMOKE DETECTOR WITH A REMOTE TEST STATION FOR AUTOMATIC FAN SHUTDOWN IN ACCORDANCE WITH APPLICABLE CODES. MECHANICAL CONTRACTOR SHALL PROVIDE AND INSTALL SMOKE DETECTOR DIVISION 16 CONTRACTOR SHALL WIRE THE UNIT INCLUDING CONTROL INTERLOCK FOR AUTOMATIC FAN SHUTDOWN.

RBME ENGINEERING INC.
 1065 S. MAIN ST. BLDG D STE. A
 LAS CRUCES, NM 88005
 (575) 647-1554
 FAX (575) 647-1563
 rbm@rbm.cc



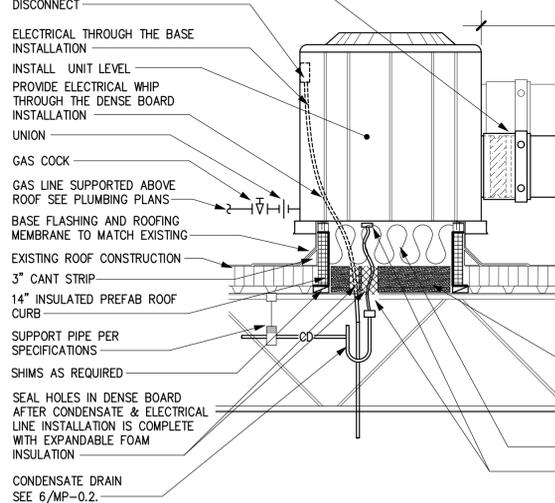
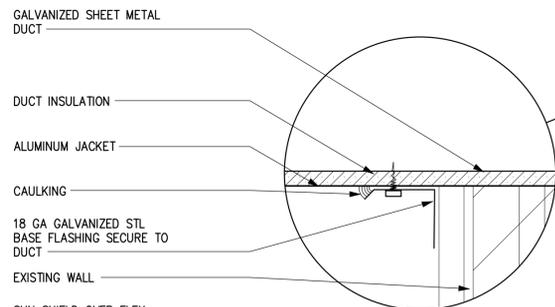
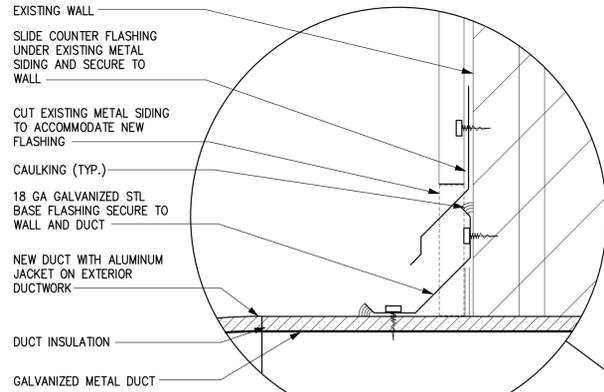
GYMNASIUM HVAC UPGRADE (BID No. 2017-016)
 ALAMOGORDO FAMILY RECREATION CENTER
 1100 OREGON AVENUE
 ALAMOGORDO, NEW MEXICO
 MECHANICAL/PLUMBING GENERAL NOTES, LEGENDS & SCHEDULES

| |
|------------------------|
| date: OCTOBER 20, 2017 |
| drawn by: RBM |
| checked by: RBM |
| revisions: |

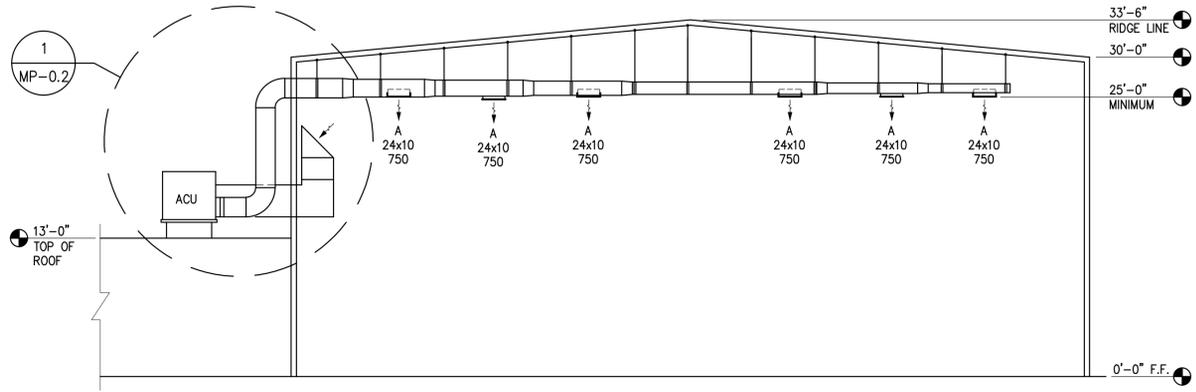
MP-01

project no. 17035

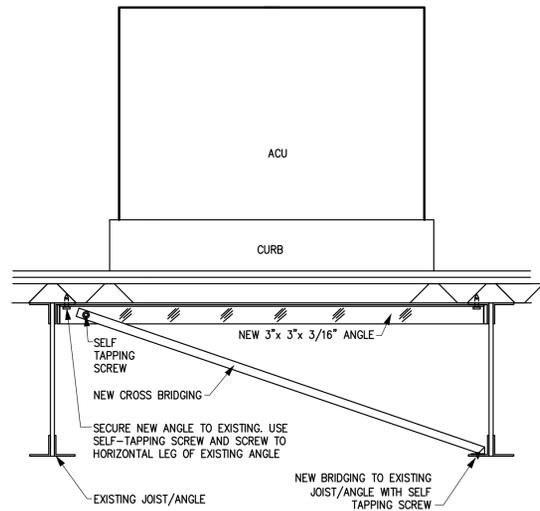
H:\2017 Projects\17035 Drawings\MP Plans\17035_MP-01_10/23/2017_2:13 PM_jrjunillo



1 ACU HORIZONTAL INSTALLATION SCHEMATIC
MP-0.2 SCALE: NONE

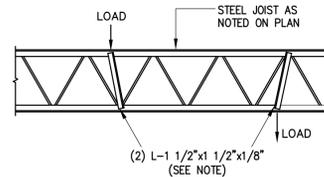


8 HVAC SECTION
MP-0.2 SCALE: 1/8" = 1'-0"



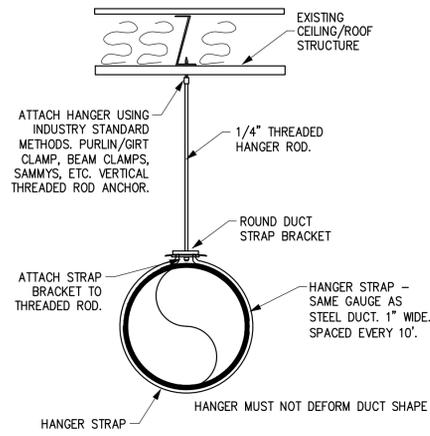
- INSTALL NEW 3" x 3/16" ANGLE AROUND ENTIRE PERIMETER OF CURB
1. ATTACH NEW PERIMETER ANGLE TO EXISTING HORIZONTAL LEG OF EXISTING JOIST WITH 1/2" SELF TAPPING SCREW.
 2. WELD ACU DUCT OPENINGS TO NEW PERIMETER ANGLE (PRIOR TO SECURING TO EXISTING JOIST).
 3. ATTACH NEW 1/2" x 1/2" x 1/8" BRIDGING TO EXISTING WITH SELF TAPPING SCREWS.

4 FASTENER CONNECTION MISC. STEEL SCHEMATIC
MP-0.2 SCALE: NONE

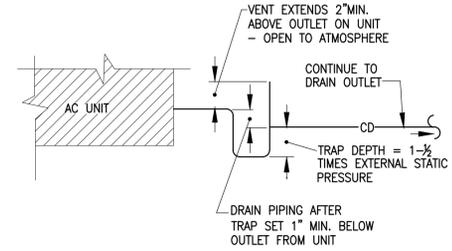


NOTE: JOIST CHORDS ARE NOT DESIGNED FOR CONCENTRATED LOADS BETWEEN PANEL POINTS. IF CONCENTRATED LOADS FROM SUPPORTED OR HANGING EQUIPMENT DOES NOT OCCUR AT A PANEL POINT, FIELD WELD (2) L - 1 1/2" x 1 1/2" x 1/8" ANGLES FROM POINT OF LOAD TO NEAREST PANEL POINT ON OPPOSITE CHORD.

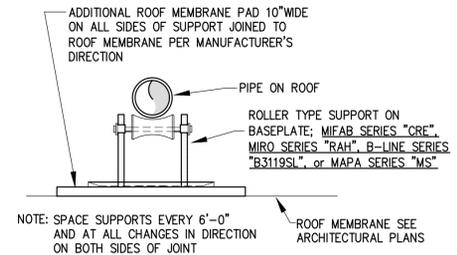
2 JOIST REINFORCING SCHEMATIC
MP-0.2 SCALE: NONE



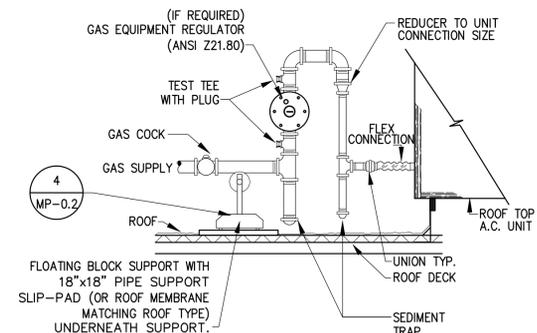
7 DUCT HANGER ATTACHMENTS
MP-0.2 SCALE: NONE



6 CONDENSATE DRAIN TRAP SCHEMATIC
MP-0.2 SCALE: NONE



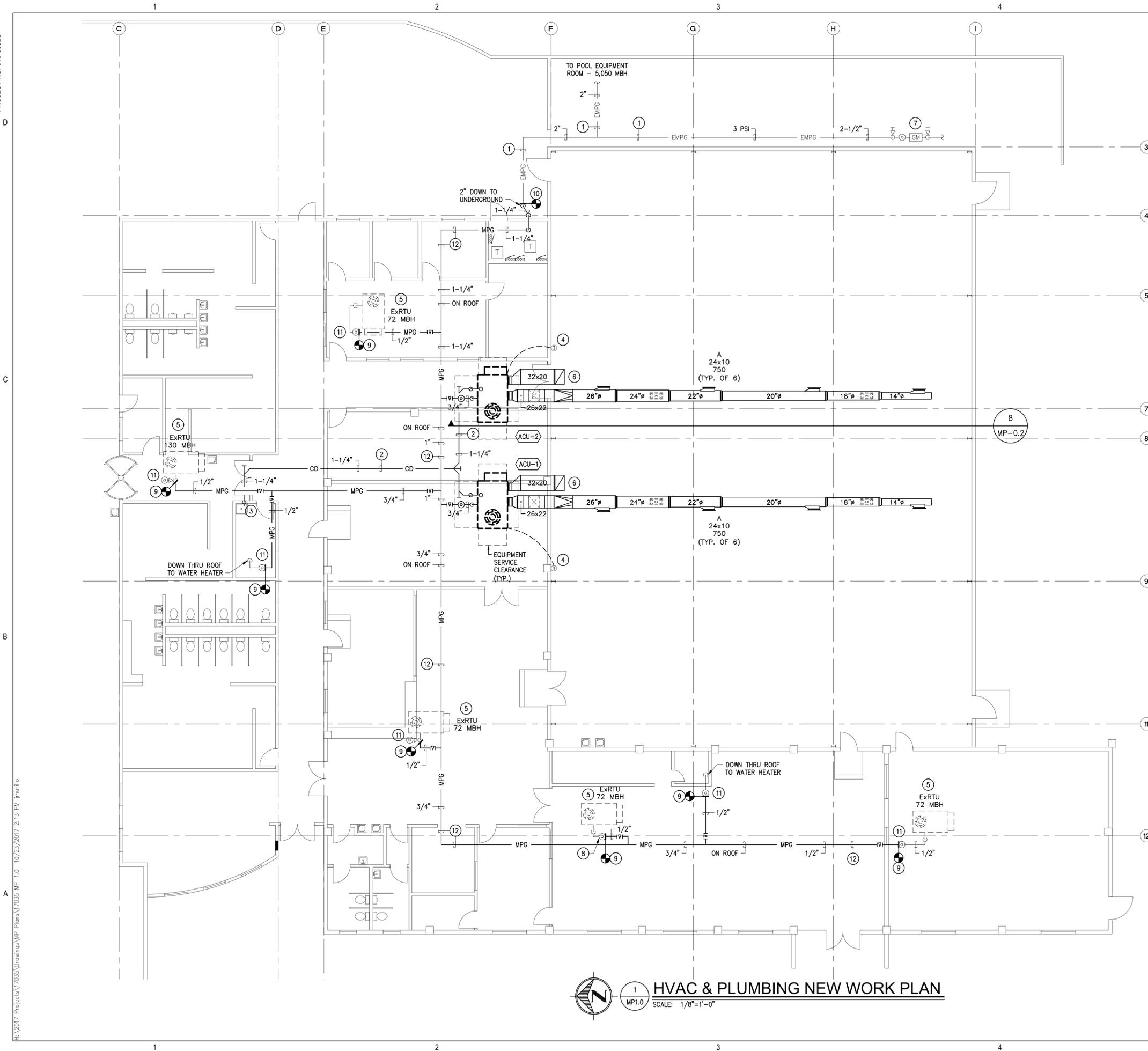
5 PIPE SUPPORT ON ROOF
MP-0.2 SCALE: NONE



3 ROOF GAS PIPE SUPPORT & CONNECTION SCHEMATIC
MP-0.2 SCALE: NONE



| |
|------------------------|
| date: OCTOBER 20, 2017 |
| drawn by: RBM |
| checked by: RBM |
| revisions: |
| |
| |
| |



KEYED NOTES

- 1 EXISTING 3 PSI UNDERGROUND NATURAL GAS LINE TO REMAIN.
- 2 CONDENSATE DRAIN PIPING IN CEILING SPACE, SUPPORT PER SCHEMATIC. SLOPE CONDENSATE DRAIN PIPING AT 1/8" PER FOOT TOWARDS SERVICE SINK. OFFSET PIPING AS REQUIRED SO NOT TO INTERFERE WITH ANY EXISTING PIPING OR EQUIPMENT.
- 3 CONDENSATE DRAIN LINE TO DRAIN INDIRECTLY INTO EXISTING SERVICE SINK. FIELD COORDINATE EXACT LOCATION OF EXISTING SERVICE SINK. FOR SUPPORT SEE 5/MP-0.2.
- 4 NEW PROGRAMMABLE THERMOSTAT WITH LOCKING COVER.
- 5 EXISTING ROOFTOP UNIT TO REMAIN UNDISTURBED.
- 6 32"x20"x3" LONG OPEN END RETURN DUCT WITH 1" ACOUSTICAL LINING. PROVIDE WIRE MESH AT OPENING, SEE SCHEMATIC.
- 7 EXISTING GAS METER AND ASSOCIATED PIPING TO REMAIN, SEE NATURAL GAS LOAD SUMMARY FOR ADDITIONAL INFORMATION.
- 8 EXISTING NATURAL GAS PRESSURE REGULATOR TO BE RELOCATED TO NEW LOCATION INDICATED, CONNECT TO EXISTING NATURAL GAS PIPING AS REQUIRED.
- 9 CONNECT NEW NATURAL GAS PIPING TO EXISTING NATURAL GAS PRESSURE REGULATOR AS REQUIRED. FIELD COORDINATE EXACT LOCATION OF EXISTING NATURAL GAS PRESSURE REGULATOR.
- 10 CONNECT NEW 1-1/4" NATURAL GAS RISER TO EXISTING NATURAL GAS PIPING AFTER MAIN SHUT-OFF VALVE AT RISER.
- 11 EXISTING NATURAL GAS PRESSURE REGULATOR AND EXISTING NATURAL GAS PIPING UPSTREAM OF PRESSURE REGULATOR CONNECTING TO EQUIPMENT TO REMAIN.
- 12 EXTEND NEW NATURAL GAS PIPING ON ROOF. INSTALL ON NEW PIPE SUPPORTS. SEE SCHEMATIC 5/MP-0.2. PAINT GAS LINE AS NOTED IN GENERAL NOTES, SHEET. MP-0.1.

NATURAL GAS LOAD SUMMARY

| EXISTING LOAD | MBH |
|-------------------------|-------|
| ROOFTOP UNIT | 72 |
| ROOFTOP UNIT | 130 |
| WATER HEATER | 199 |
| WATER HEATER | 199 |
| POOL EQUIPMENT ROOM | 5050 |
| MAKE-UP AIR UNIT | 400 |
| MAKE-UP AIR UNIT | 400 |
| TOTAL EXISTING LOAD | 6,666 |
| | |
| EXISTING LOAD REMOVED | MBH |
| MAKE-UP AIR UNIT | 400 |
| MAKE-UP AIR UNIT | 400 |
| EXISTING LOAD REMAINING | 5,866 |
| | |
| NEW LOAD | MBH |
| ACU-1 | 168 |
| ACU-2 | 168 |
| TOTAL NEW LOAD | 336 |
| | |
| EXISTING LOAD REMAINING | 5,866 |
| TOTAL NEW LOAD | 336 |
| TOTAL LOAD | 6,202 |

NEW NATURAL GAS LOAD REQUIRED FOR NEW WORK IS LESS THAN EXISTING NATURAL GAS LOAD, THEREFORE EXISTING NATURAL GAS METER HAS SUFFICIENT CAPACITY FOR NEW WORK.

GYMNASIUM HVAC UPGRADE (BID No. 2017-016)
ALAMOGORDO FAMILY RECREATION CENTER
 1100 OREGON AVENUE ALAMOGORDO, NEW MEXICO
 HVAC & PLUMBING NEW WORK PLAN

| |
|------------------------|
| date: OCTOBER 20, 2017 |
| drawn by: RBM |
| checked by: RBM |
| revisions: |
| |
| |
| |

MP-1.0

RBM ENGINEERING INC.
 1065 S. MAIN ST. BLDG D STE. A
 LAS CRUCES, NM 88005
 (575) 647-1554
 FAX (575) 647-1563
 rbm@rbm.cc



ELECTRICAL SYMBOL LEGEND

CONDUIT, RACEWAYS, AND WIRING

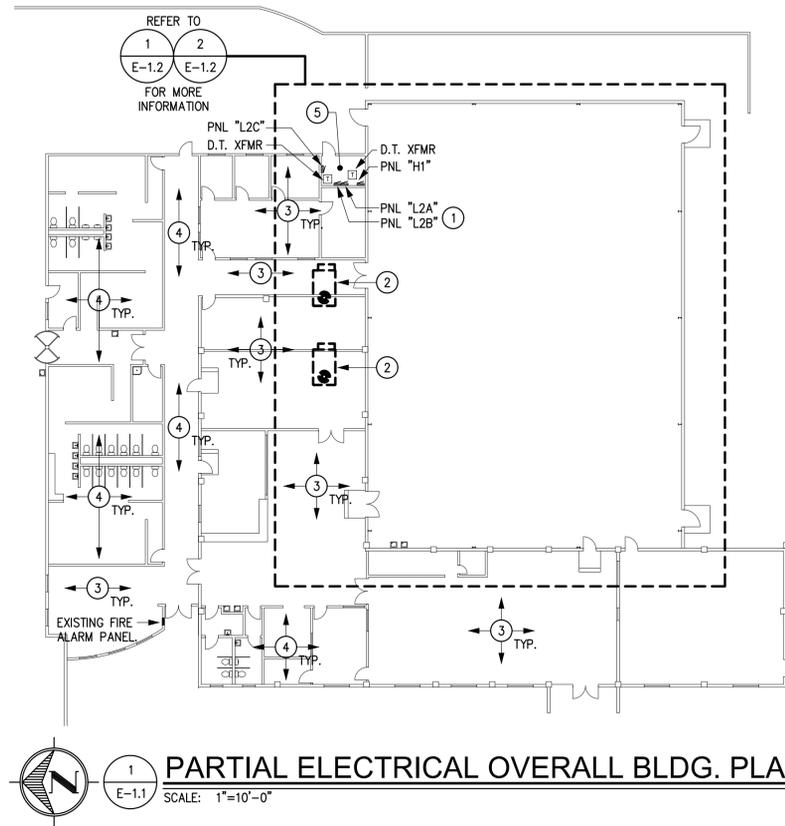
- CONDUIT EXPOSED. RIGID, IMC, EMT OR PVC SCH 80. SEE SPECS.
- _____ CONDUIT CONCEALED IN WALLS OR CEILING CONSTRUCTION RIGID, IMC OR EMT. SEE SPECS.
- ← HOME RUN TO PANELBOARD—NUMBER OF ARROWS INDICATES NUMBER OF BREAKER HANDLES.
- SWITCH LEG
- WHITE NEUTRAL PHASE (HOT) GREEN GRD. WIRE
- DASHES ACROSS CONDUIT OR CABLE INDICATE THREE (3) OR MORE WIRES #12 AWG SOLID COPPER UNLESS NOTED OTHERWISE.
- PE_{UG} PRIMARY VOLTAGE UNDERGROUND ELECTRICAL. 2'-0" MIN. BELOW GRADE. RIGID, IMC, PVC SCH 40 OR PVC SCH 80. SEE SPECS.
- UG UNDERGROUND ELECTRICAL. 2'-0" MIN. BELOW GRADE. RIGID, IMC, PVC SCH 40 OR PVC SCH 80. SEE SPECS.
- ||| GROUND

EQUIPMENT

- MOTOR OUTLET AND CONNECTION. EQUIPMENT TYPE AS NOTED.
- SAFETY SWITCH, PROVIDED AND INSTALLED UNDER DIV. 16. TO HAVE POLES AND RATING REQUIRED. NEMA 3R IF INSTALLED OUTDOORS.
- MOTOR CONTROLLER INTEGRAL WITH EQUIPMENT.
- EXISTING PANELBOARD SURFACE MOUNTED.
- SPECIAL CABINET OR EQUIPMENT AS NOTED, SURFACE MOUNTED.
- SPECIAL CABINET OR EQUIPMENT AS NOTED, FLUSH MOUNTED.
- TRANSFORMER.
- THERMOSTAT OR TEMPERATURE SENSOR OUTLET FLUSH IN WALL. 1 GANG HANDY BOX WITH 1/2" STUBBED TO ABOVE ACCESSIBLE CEILING. UP 44" OR AS NOTED. CONTROL WIRING BY CONTROLS CONTRACTOR.
- REMOTE TEST STATION OUTLET FLUSH IN WALL. 1 GANG HANDY BOX WITH 1/2" STUBBED TO ABOVE ACCESSIBLE CEILING. UP 44" OR AS NOTED. CONTROL WIRING BY CONTROLS CONTRACTOR.

MISCELLANEOUS

- MECHANICAL EQUIPMENT DESIGNATION— SEE MECHANICAL EQUIPMENT SCHEDULE.
- KEYED NOTE
- WP WEATHERPROOF
- AFF ABOVE FINISH FLOOR
- UNO UNLESS NOTED OTHERWISE
- GFCI GROUND FAULT CIRCUIT INTERRUPTER



1 PARTIAL ELECTRICAL OVERALL BLDG. PLAN

LOAD SUMMARY CALC.:

EXISTING AND NEW LOAD ON PNL "H1" (120/208V, 3ø, 4W, 250A, MLO)

| | |
|-----------------------------------------|----------|
| EXISTING: | |
| * LOAD ON PNL "H1" (BY PREVIOUS DESIGN) | 96 AMPS |
| REMOVED: | |
| * LOAD ON PNL "H1" (BY THIS DESIGN) | -6 AMPS |
| NEW: | |
| * LOAD ON PNL "H1" (BY THIS DESIGN) | +50 AMPS |
| TOTAL: | 140 AMPS |

THEREFORE, EXISTING PANEL "H1" AND ITS ASSOCIATED FEEDER ARE OF ADEQUATE CAPACITY TO ACCOMMODATE THE EXISTING AND NEW LOADS FOR THIS PORTION OF THE BLDG. HVAC UPGRADE..

KEYED NOTES

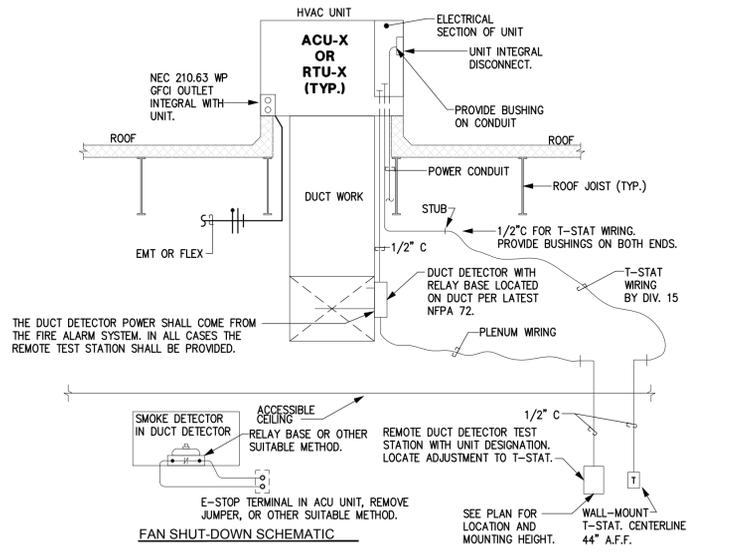
- 1 EXISTING PANEL "H1" LOCATION. CONTRACTOR SHALL REFER TO THE POWER RISER DIAGRAM FOR MORE INFORMATION AND MODIFICATIONS REQUIRED TO THE EXISTING PANEL.
- 2 APPROXIMATE LOCATION OF NEW HVAC UNITS SCHEDULED. CONTRACTOR SHALL ROUTE NEW BRANCH CIRCUITS SCHEDULED TO POWER HVAC UNITS ABOVE CEILING SPACE, BELOW ROOF. NO EXPOSED CONDUIT SYSTEM(S) WILL BE PERMITTED.
- 3 EXISTING LAY-IN CEILING IN THIS ROOM/AREA. CONTRACTOR SHALL SUPPORT AND SECURE CONDUIT SYSTEM(S), IF Routed THRU THIS AREA, ABOVE THE CEILING FROM THE STRUCTURE ABOVE. NO EXPOSED CONDUITS WILL BE PERMITTED.
- 4 EXISTING HARD CEILING IN THIS ROOM/AREA. CONTRACTOR SHALL SUPPORT AND SECURE CONDUIT SYSTEM(S), IF Routed THRU THIS AREA, ABOVE THE HARD CEILING FROM THE STRUCTURE. CUT, PATCH, PAINT, AND REPAIR HARD CEILING AS REQUIRED WHEN COMPLETED. PAINT NEW HARD CEILING TO MATCH HARD CEILING FOR THIS AREA.
- 5 EXPOSED TO STRUCTURE IN THIS ROOM/AREA. CONTRACTOR SHALL SUPPORT AND SECURE CONDUIT SYSTEM(S), IF Routed THRU THIS AREA, EXPOSED, UP HIGH, FROM THE STRUCTURE ABOVE. PAINT CONDUIT SYSTEM(S) TO MATCH SURFACES THEY ARE MOUNTED TO.

GENERAL NOTES:

- A. THESE PLANS ARE SCHEMATIC AND DO NOT SHOW EXACT LOCATIONS OF EQUIPMENT, CONDUIT ROUTING, OBSTRUCTIONS, ETC. PLANS ARE TO BE USED AS A GENERAL GUIDELINE AND ARE NOT INTENDED TO BE SPECIFIC INSTALLATION INSTRUCTIONS. CONTRACTOR SHALL CONSTRUCT ACCORDING TO CODE AND/OR MANUFACTURER'S INSTALLATION.
- B. DRAWINGS ARE BASED UPON ARCHITECTURAL PLANS AND/OR FIELD OBSERVATIONS. CONTRACTOR SHALL FIELD VERIFY EXACT LOCATIONS AND ROUTINGS PRIOR TO BIDDING.
- C. CONTRACTOR SHALL EXPECT TO MAKE SOME ROUTING ADJUSTMENTS DURING THE COURSE OF CONSTRUCTION. COORDINATE CHANGES WITH ENGINEER AND KEEP RECORD OF CHANGES FOR AS-BUILTS.
- D. NO TYPE NM CABLE, ROMEX, AND/OR AC CABLE MAY BE USED IN THIS BUILDING. 1/2" OR LARGER EMT, AND IMC CONDUITS ARE APPROVED WIRING METHODS FOR THIS BUILDING. MC CABLE MAY ONLY BE USED FOR FIXTURE WHIPS AT LENGTHS NO GREATER THAN SIX FEET.
- E. CONTRACTOR IS RESPONSIBLE FOR PROVIDING TYPED DIRECTORIES FOR ALL EXISTING PANELS SHOWN TO BE MODIFIED DURING THE PROCESS OF CONSTRUCTION. ANY CHANGES SHALL BE APPROVED BY THE ENGINEER AND NOTED ON AS-BUILTS. CONSULT ENGINEER IF NECESSARY.
- F. CONTRACTOR IS RESPONSIBLE FOR ALL PERMIT AND INSPECTION FEES REQUIRED BY THE GOVERNING BODIES.
- G. CONTRACTOR SHALL PROVIDE PROPER FIRE SEALANT FOR ALL CONDUITS PENETRATIONS THRU FIRE RATED WALLS AND SMOKE WALLS.
- H. CONTRACTOR SHALL ROUTE AND RUN ALL POWER SEPARATE FROM ANY AND ALL SPECIAL SYSTEMS CONDUIT AND WIRING. ALL SPECIAL SYSTEMS UTILIZING CONDUIT SHALL BE PROVIDED WITH PULL STRING AND STUBBED/ROUTED TO AN ACCESSIBLE CEILING.
- I. ALL CONDUIT SHALL BE CONCEALED AS MUCH AS POSSIBLE, EXCEPT WHERE NOTED OTHERWISE. IF SHOWN OR NOTED TO BE EXPOSED, CONDUIT RUNS SHALL BE NEATLY GROUPED TOGETHER AND BE SQUARE AND TRUE TO THE BUILDING LINES. ALL CONDUIT SHALL BE SUPPORTED FROM THE STRUCTURE. PAINT ALL EXPOSED CONDUIT TO MATCH SURFACES THEY ARE MOUNTED ON.
- J. CONTRACTOR SHALL LABEL ALL HVAC DISCONNECTS WITH CIRCUIT NUMBER(S) AND PANEL(S) BEING FED FROM.
- K. CONTRACTOR IS EXPECTED TO REMOVE PORTIONS OF EXISTING HARD CEILING, LAY-IN CEILING, TILES, AND/OR GRID FOR INSTALLATION OF NEW ELECTRICAL CONDUIT AND WIRE FOR NEW WORK SHOWN AND SCHEDULED. CONTRACTOR SHALL BE RESPONSIBLE FOR STORING AND PROTECTING ITEMS MENTIONED ABOVE DURING CONSTRUCTION AND REPLACE IF NECESSARY. REPLACE CEILING TYPES DAMAGED DURING CONSTRUCTION TO MATCH EXISTING.

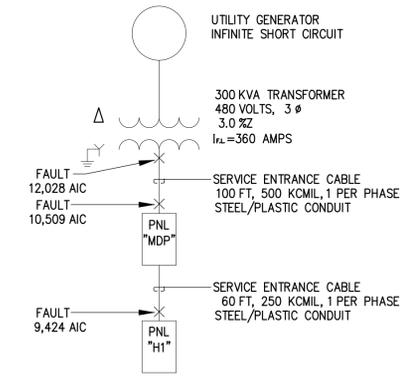
STATE OF NEW MEXICO:

- A. THE MOUNTING HEIGHT OF WIRING OR CONTROL DEVICES (SWITCHES, OUTLETS, CONTROLS, DATA JACKS, PHONE JACKS, THERMOSTATS, FIRE ALARM, ELECTRIC DOOR PUSH BUTTONS, ETC.) MUST BE MOUNTED TO COMPLY WITH THE STATE OF NEW MEXICO STANDARDS FOR ACCESSIBILITY. SPECIFICALLY, OUTLETS MUST BE MOUNTED AT MINIMUM 18" A.F.F. TO THE BOTTOM OF THE BOX, AND SWITCHES AND OTHER CONTROLS AT 44" A.F.F. TO THE BOTTOM OF THE BOX UNLESS NOTED OTHERWISE. DEVICES ABOVE COUNTER TOPS AND OBSTRUCTIONS SHALL COMPLY WITH ANSI 117.1.
- B. THE DESIGN OF THE PROJECT IS BASED ON COPPER WIRE, #12 AWG AS THE MINIMUM SIZE. THE BRANCH CIRCUIT WIRING SYSTEM SHALL LIMIT VOLTAGE DROP TO 5% AT THE FURTHEST OUTLET. THE CONTRACTOR SHALL UTILIZE LARGER WIRE SIZES AS NEEDED TO MAINTAIN THIS LIMIT. IT WILL NOT BE UNCOMMON FOR #10 AWG TO BE REQUIRED. AS A RULE OF THUMB, BRANCH CIRCUIT CONDUCTOR LENGTHS LONGER THAN 80' MAY REQUIRE #10 AWG WIRING. CONTRACTOR SHALL UPGRADE WIRING AS NEEDED WHETHER SHOWN ON THE PLANS OR NOT TO COMPLY WITH THE STATE OF NEW MEXICO STANDARDS FOR VOLTAGE DROP.
- C. THE CONTRACTOR MAY INSTALL UP TO 6 CURRENT CARRYING CONDUCTORS IN A CONDUIT. LOADINGS ARE BASED ON DERATINGS FOR UP TO 6 CONDUCTORS AND AN AMBIENT TEMPERATURE OF 122 DEGREES F. THE CONTRACTOR MUST REVISE AMPACITIES FOR OTHER CONDITIONS. CONTACT THE ENGINEER IF NECESSARY.
- D. EMERGENCY INTERIOR LIGHTING IS NOT REQUIRED ON THE PROJECT BECAUSE OF THE NATURE OF THE PROJECT.



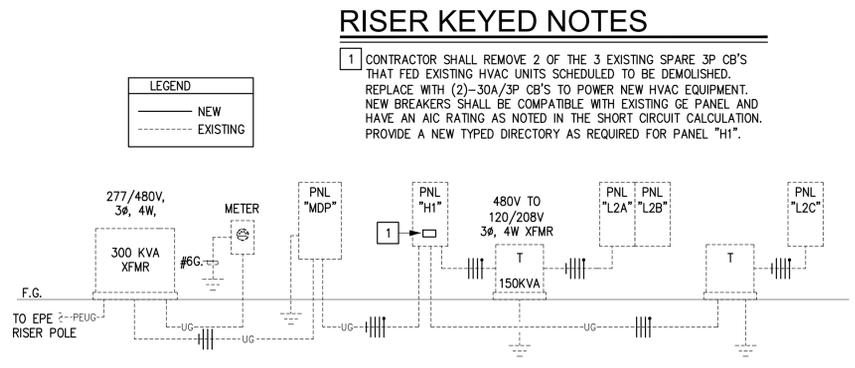
3 TYPICAL ACU POWER CONNECTION

SCALE: NONE



4 SHORT CIRCUIT CALC.

SCALE: NONE



2 PARTIAL EXISTING POWER RISER DIAGRAM

SCALE: NONE

RISER KEYED NOTES

- 1 CONTRACTOR SHALL REMOVE 2 OF THE 3 EXISTING SPARE 3ø CB'S THAT FED EXISTING HVAC UNITS SCHEDULED TO BE DEMOLISHED. REPLACE WITH (2)-30A/3ø CB'S TO POWER NEW HVAC EQUIPMENT. NEW BREAKERS SHALL BE COMPATIBLE WITH EXISTING CP PANEL AND HAVE AN AIC RATING AS NOTED IN THE SHORT CIRCUIT CALCULATION. PROVIDE A NEW TYPED DIRECTORY AS REQUIRED FOR PANEL "H1".

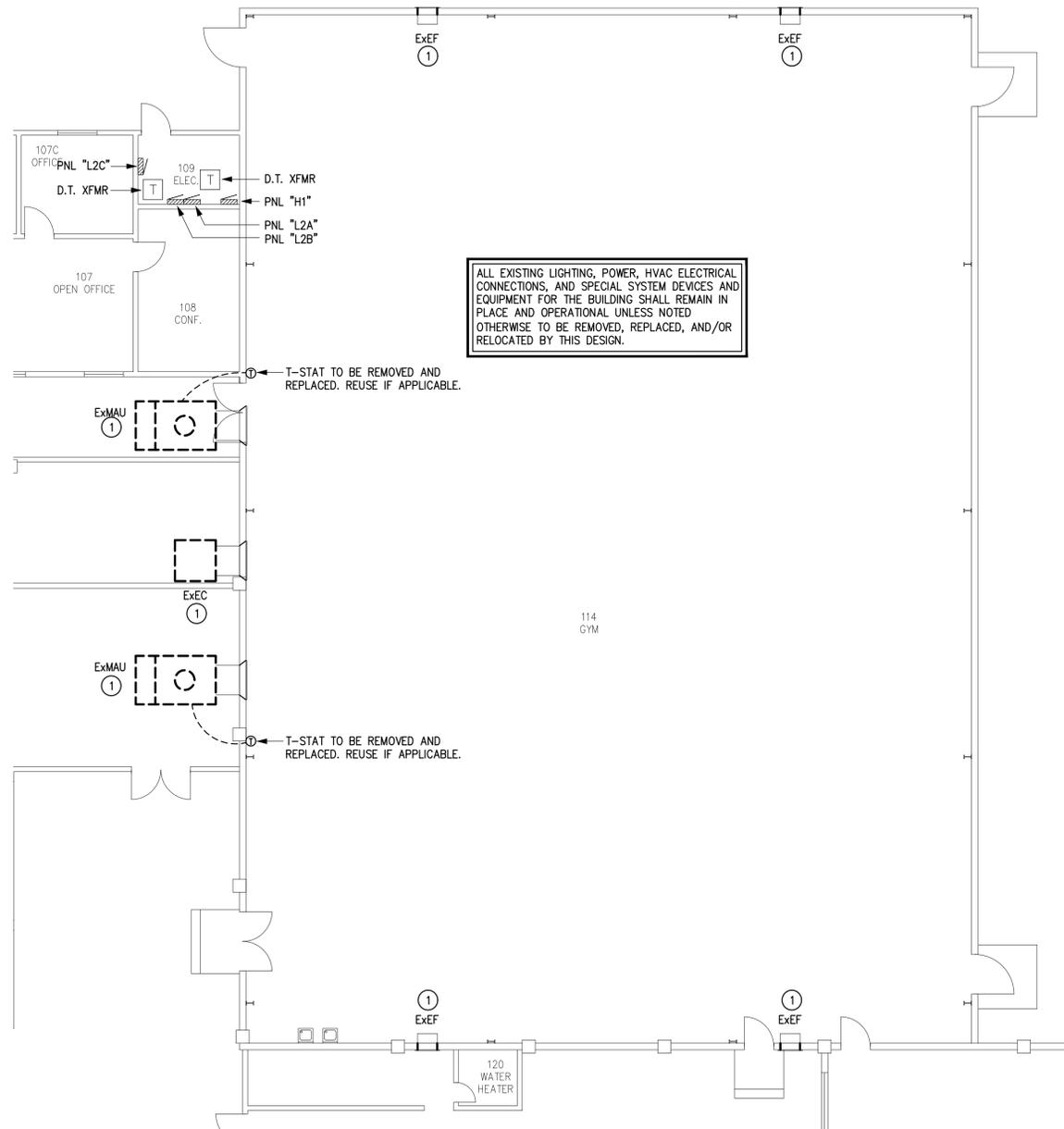
RBM ENGINEERING INC.
 1066 S. MAIN ST. BLDG D STE. A
 LAS CRUCES, NM 88005
 (575) 647-1554
 FAX (575) 647-1563
 rbm@om.cc



GYMNASIUM HVAC UPGRADE (BID No. 2017-016)
ALAMOGORDO FAMILY RECREATION CENTER
 1100 OREGON AVENUE
 ALAMOGORDO, NEW MEXICO
 ELECTRICAL OVERALL BUILDING PLAN

| |
|------------------------|
| date: OCTOBER 20, 2017 |
| drawn by: RBM |
| checked by: RBM |
| revisions: |
| |
| |
| |

E-1.1



1
E-1.2
SCALE: 1/8"=1'-0"

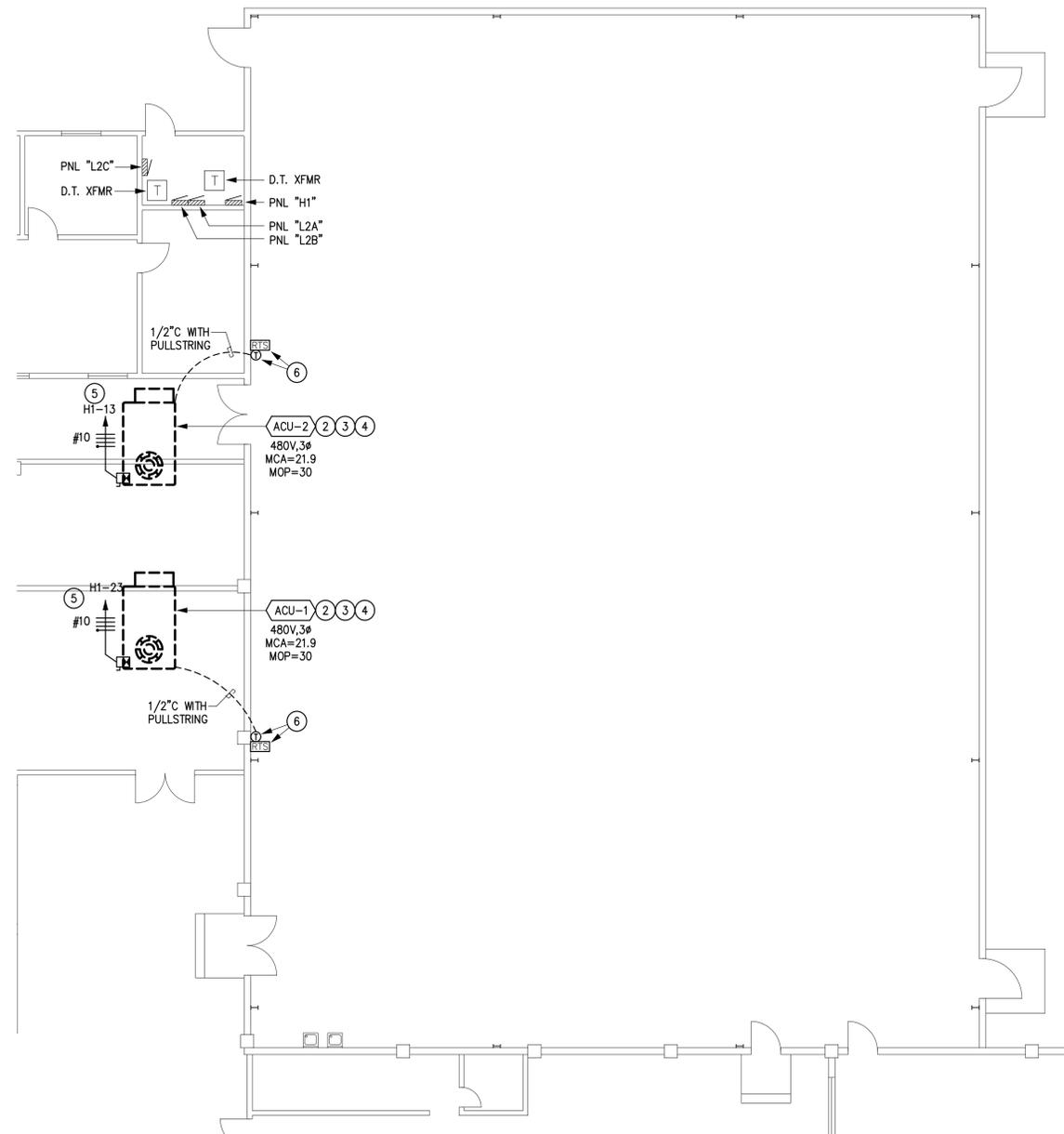
ELECTRICAL EXIST/DEMO HVAC POWER PLAN

GENERAL DEMO NOTES:

- A. CONTRACTOR SHALL TEMPORARILY SUPPORT AND PROTECT ALL CEILING MOUNTED DEVICES AFFECTED BY DEMOLITION WORK AND INSTALLMENT OF NEW CEILING AND HVAC WORK. ANY UN-USED WIRING AND/OR CONDUIT SHALL BE REMOVED BACK TO THE POINT OF SOURCE OR WHERE EXISTING EQUIPMENT WILL REMAIN. SALVAGE ALL REMOVED EQUIPMENT TO THE OWNER U.N.O.
- B. ANY EQUIPMENT TAGGED TO BE REMOVED THAT IS CONNECTED TO EQUIPMENT, LIGHTING, AND/OR OUTLETS TO REMAIN, SHALL BE PROVIDED WITH SPLICE BOXES ABOVE AN ACCESSIBLE CEILING TO MAINTAIN CIRCUITRY AND FUNCTIONALITY OF THOSE ITEMS MENTIONED.
- C. DEMOLITION OF WIRING, DISCONNECTS, AND/OR EQUIPMENT THAT IS SUBJECT TO REMAIN OR BE RE-LOCATED, CONTRACTOR IS RESPONSIBLE FOR RE-CONNECTION OF THAT EQUIPMENT IMMEDIATELY AND MAKE OPERATIONAL.
- D. ALL UN-USED LOW VOLTAGE CONDUIT AND CABLING SHALL BE REMOVED IN ITS ENTIRETY U.N.O. ANY EXISTING LOW VOLTAGE CONDUIT AND CABLING TAGGED TO REMAIN SHALL BE PROPERLY SUPPORTED FROM THE STRUCTURE WITH J-HOOKS. COORDINATE WITH ALAMOGORDO IT AND SPECIAL SYSTEMS REPRESENTATIVE PRIOR TO ANY WORK.
- E. CONTRACTOR MAY RE-USE EXISTING CONDUIT PENETRATIONS AND/OR CONDUIT SYSTEMS WHERE APPLICABLE. IF NOT RE-USED, PATCH, PAINT, AND REPAIR AS REQUIRED. IN ALL CASES, CUT, PATCH, PAINT, AND REPAIR TO MATCH EXISTING CONDITIONS AND/OR AS SHOWN IN THE ARCHITECTURAL PLANS.

GENERAL HVAC POWER NOTES:

- A. CONTRACTOR SHALL PROVIDE ROUGH-IN BOXES AND 1/2" C STUBBED TO AN ACCESSIBLE CEILING FOR ALL T-STAT/REMOTE TEST STATION LOCATIONS SHOWN. IF EXPOSED TO STRUCTURE, CONTRACTOR SHALL ROUTE T-STAT CONDUIT TO AN ACCESSIBLE CEILING AND/OR THE UNIT, WHICHEVER COMES FIRST. REFER TO MECHANICAL PLANS FOR LOCATIONS PRIOR TO ANY ROUGH-IN. PAINT EXPOSED CONDUIT AND BOXES TO MATCH SURFACES MOUNTED TO.
- B. CONTRACTOR SHALL ROUTE ALL POWER AND CONTROL CONDUITS FROM UNITS SHOWN CONCEALED IN UNIT AS SHOWN IN THE TYPICAL ACU POWER CONNECTION DETAIL. NO EXPOSED CONDUIT ON THE ROOF WILL BE PERMITTED.



2
E-1.2
SCALE: 1/8"=1'-0"

ELECTRICAL NEW WORK HVAC POWER PLAN

KEYED NOTES:

- 1 EXISTING HVAC EQUIPMENT AND CONTROLS ARE SCHEDULED TO BE REMOVED IN ITS ENTIRETY. CONTRACTOR SHALL REMOVE ALL ASSOCIATED BOXES, CONDUIT, WIRING, AND ELECTRICAL CONNECTIONS TO AND FROM UNIT BACK TO THE POINT OF SOURCE AND LABEL BREAKER AS SPARE. REMOVE CONDUIT THAT IS ON OR ABOVE THE ROOF FROM UNIT AND ANY UNUSED CONDUIT ABOVE THE CEILING. PATCH AND REPAIR ROOF AS NECESSARY TO MATCH PRE-CONSTRUCTION CONDITIONS. REFER TO THE NEW WORK PLAN FOR MORE INFORMATION AND INSTALLATION.
- 2 NEW ACU IS SCHEDULED TO BE PROVIDED WITH AN INTEGRAL DISCONNECT. CONTRACTOR SHALL PROVIDE ALL CONNECTIONS TO AND FROM UNIT AS REQUIRED PER THE MANUFACTURER'S RECOMMENDATION. CONNECT HOMERUN TO INTEGRAL DISCONNECT AND PANEL NOTED. REFER TO TYPICAL ACU POWER CONNECTION DETAIL FOR MORE INFORMATION.
- 3 NEW ACU IS SCHEDULED TO BE PROVIDED WITH AN INTEGRAL, 120V, NON CIRCUITED, CONVENIENCE OUTLET. CONTRACTOR SHALL PROVIDE A 120V CONNECTION REQUIRED TO THE INTEGRAL CONVENIENCE OUTLET FOR PROPER OPERATION PER ARTICLE 210.63 OF THE NEC. CONNECT OUTLET TO THE CLOSEST, NON-SWITCHED, CONVENIENCE OUTLET INSIDE THE BUILDING. REFER TO TYPICAL ACU POWER CONNECTION DETAIL FOR MORE INFORMATION.
- 4 CONTRACTOR SHALL PROVIDE AND INSTALL A SMOKE DUCT DETECTOR FOR RESPECTIVE UNIT SHOWN. DUCT DETECTOR SHALL NOT BE MOUNTED ON UNIT. MOUNT DEVICE IN SUPPLY OR RETURN SIDE DUCTWORK AS REQUIRED PER CODE. REFER TO TYPICAL ACU POWER CONNECTION DETAIL FOR INSTALLATION AND INFORMATION. PROGRAM AND CONNECT TO EXISTING FIRE ALARM PANEL IN THE BUILDING.
- 5 CONTRACTOR SHALL PROVIDE A 30A/3P CB IN EXISTING PANEL NOTED ON HOMERUN TO POWER NEW UNIT SHOWN. REMOVE EXISTING 20A/3P BREAKER IN PANEL ALLOCATED ON HOMERUN FOR NEW BREAKER TO BE IMPLEMENTED. BREAKER SHALL BE COMPATIBLE WITH GE PANEL AND HAVE AN AIC RATING AS NOTED ON THE SHORT CIRCUIT CALCULATION.
- 6 CONTRACTOR SHALL INSTALL NEW REMOTE TEST STATION ADJACENT TO RESPECTIVE ACU T-STAT SHOWN OR IN ENTRANCE GYM CORRIDOR FLUSH WITH THE LAY-IN CEILING. CONTRACTOR'S OPTION. IF PROVIDED AND INSTALLED ADJACENT TO T-STAT IN GYM, CONTRACTOR SHALL PROVIDE A WIRE GUARD COVER OVER REMOTE TEST STATION FOR PROTECTION. REFER TO TYPICAL ACU POWER CONNECTION DETAIL FOR MORE INFORMATION AND INSTALLATION. COORDINATE WITH MECHANICAL PRIOR TO ROUGH-IN.

GYMNASIUM HVAC UPGRADE (BID No. 2017-016)

ALAMOGORDO FAMILY RECREATION CENTER
ALAMOGORDO, NEW MEXICO

1100 OREGON AVENUE

ELECTRICAL HVAC POWER PLANS

| |
|------------------------|
| date: OCTOBER 20, 2017 |
| drawn by: RBM |
| checked by: RBM |
| revisions: |
| |
| |
| |

E-1.2

project no. 17035

RBM ENGINEERING INC.
 1065 S. MAIN ST. BLDG D STE. A
 LAS CRUCES, NM 88005
 (575) 647-1554
 FAX (575) 647-1563
 rbm@rbm.cc

