Salas O'Brien
Houston
10930 W. Sam Houston Pkwy North, Suite 900
Houston, TX 77064
Salas O'Brien Registration: F-4111

Salas O'Brien Project Number: 2022-04653-00

# BEAUMONT INDEPENDENT SCHOOL DISTRICT
# AIR HANDLER UPGRADES
## CSP #23.14

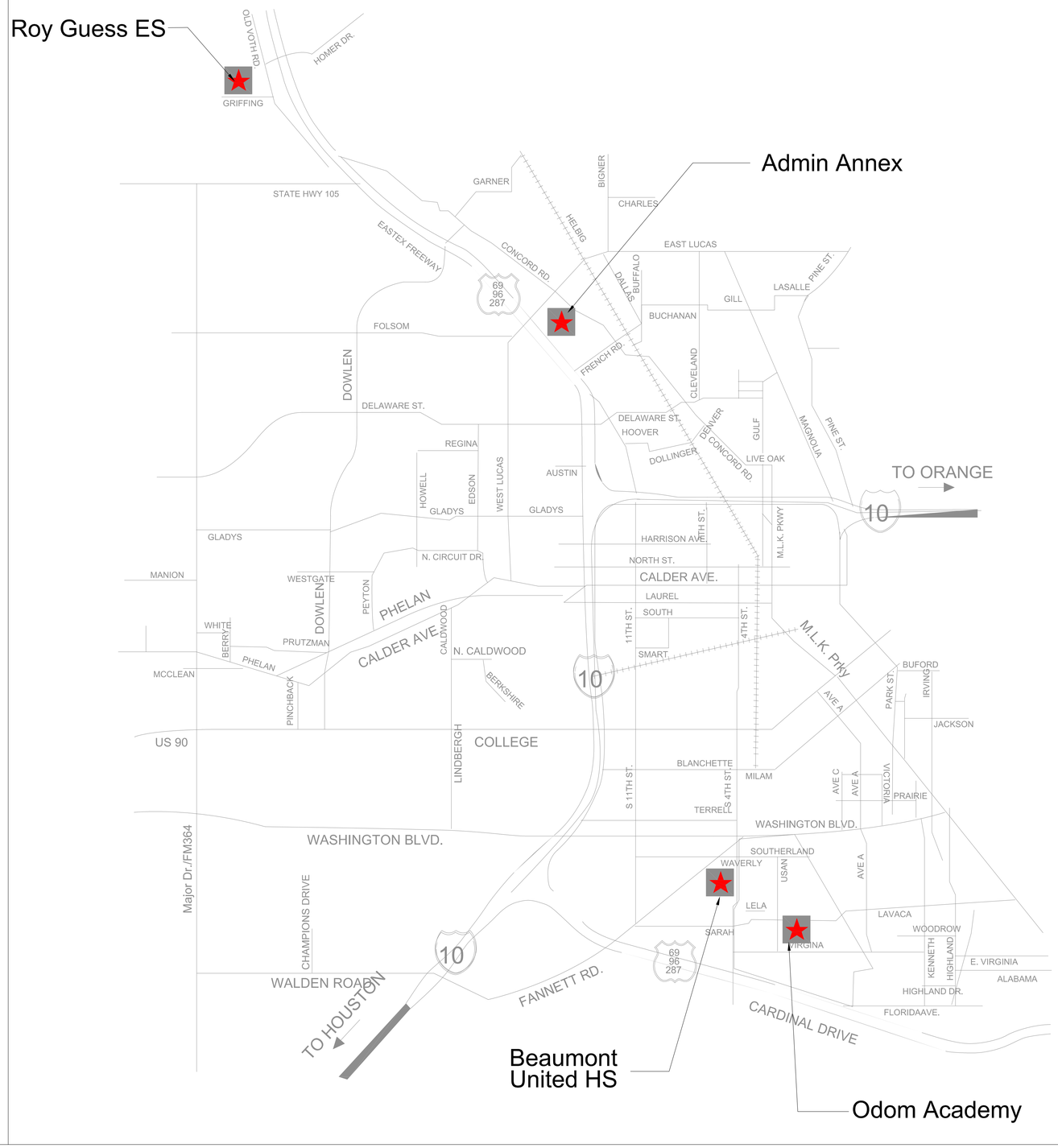
**ADMINISTRATION ANNEX**
**4492 CONCORD RD, BEAUMONT, TX 77703**

**BEAUMONT UNITED HIGH SCHOOL**
**3443 FANNETT RD, BEAUMONT, TX 77705**

**ODOM ACADEMY**
**2550 WEST VIRGINIA ST, BEAUMONT, TX 77705**

**ROY GUESS ELEMENTARY SCHOOL**
**8055 VOTH RD, BEAUMONT, TX 77708**

## SITE LOCATIONS




Beaumont ISD
Preparing Our Next Generation

## LIST OF DRAWINGS:

**CS-1 COVER SHEET - LIST OF DRAWINGS**
**CS-2 COVER SHEET - SITES**

**ADMIN ANNEX**

**M1.1 MECHANICAL DEMOLITION FLOOR PLAN - AREA A - ADMIN ANNEX**
**M1.2 MECHANICAL DEMOLITION FLOOR PLAN - AREA B - ADMIN ANNEX**
**M1.3 MECHANICAL DEMOLITION FLOOR PLAN - AREA C - ADMIN ANNEX**
**M2.1 MECHANICAL FLOOR PLAN - AREA A - ADMIN ANNEX**
**M2.2 MECHANICAL FLOOR PLAN - AREA B - ADMIN ANNEX**
**M2.3 MECHANICAL FLOOR PLAN - AREA C - ADMIN ANNEX**
**M3.1 MECHANICAL VRF PIPING DIAGRAM - ADMIN ANNEX**
**M3.2 MECHANICAL VRF PIPING DIAGRAM - ADMIN ANNEX**
**M4.1 MECHANICAL LEGENDS AND DETAILS - ADMIN ANNEX**
**M5.1 MECHANICAL SCHEDULES AND DETAILS - ADMIN ANNEX**
**E1.1 ELECTRICAL DEMOLITION FLOOR PLAN - AREA A - ADMIN ANNEX**
**E1.2 ELECTRICAL DEMOLITION FLOOR PLAN - AREA B - ADMIN ANNEX**
**E1.3 ELECTRICAL DEMOLITION FLOOR PLAN - AREA C - ADMIN ANNEX**
**E2.1 ELECTRICAL POWER FLOOR PLAN - AREA A - ADMIN ANNEX**
**E2.2 ELECTRICAL POWER FLOOR PLAN - AREA B - ADMIN ANNEX**
**E2.3 ELECTRICAL POWER FLOOR PLAN - AREA C - ADMIN ANNEX**
**E3.1 ELECTRICAL SCHEDULES AND DETAILS - ADMIN ANNEX**
**P1.1 PLUMBING DEMOLITION FLOOR PLAN - AREA A - ADMIN ANNEX**

**BEAUMONT UNITED HIGH SCHOOL**

**M1.1 MECHANICAL COMPOSITE FLOOR PLAN - 6 CLASSROOMS - BEAUMONT UNITED HS**
**M1.2 MECHANICAL DEMOLITION FLOOR PLANS - D HALL - BEAUMONT UNITED HS**
**M1.3 MECHANICAL DEMOLITION FLOOR PLAN - E HALL - BEAUMONT UNITED HS**
**M2.1 MECHANICAL FLOOR PLANS - D HALL - BEAUMONT UNITED HS**
**M2.2 MECHANICAL FLOOR PLAN - E HALL - BEAUMONT UNITED HS**
**M3.1 MECHANICAL ENLARGED FLOOR PLANS- 6 CLASSROOMS - BEAUMONT UNITED HS**
**M4.1 MECHANICAL VRF PIPING DIAGRAM - BEAUMONT UNITED HS**
**M4.2 MECHANICAL VRF PIPING DIAGRAM - BEAUMONT UNITED HS**
**M5.1 MECHANICAL LEGENDS AND DETAILS - BEAUMONT UNITED HS**
**M6.1 MECHANICAL SCHEDULES - BEAUMONT UNITED HS**
**E1.1 ELECTRICAL FLOOR PLANS - C HALL - BEAUMONT UNITED HS**
**E1.2 ELECTRICAL DEMOLITION FLOOR PLANS - D HALL - BEAUMONT UNITED HS**
**E1.3 ELECTRICAL FLOOR PLANS - D HALL - BEAUMONT UNITED HS**
**E1.4 ELECTRICAL FLOOR PLANS - E HALL - BEAUMONT UNITED HS**
**E2.1 ELECTRICAL DETAILS, SCHEDULES, AND LEGENDS - BEAUMONT UNITED HS**

**ODOM ACADEMY**

**M1.0 MECHANICAL COMPOSITE FLOOR PLAN - OLD GYM - ODOM ACADEMY**
**M1.1 MECHANICAL DEMOLITION ENLARGED FLOOR PLAN - OLD GYM - ODOM ACADEMY**
**M1.2 MECHANICAL DEMOLITION ENLARGED FLOOR PLAN - CLASSROOMS - ODOM ACADEMY**
**M2.1 MECHANICAL ENLARGED FLOOR PLAN - OLD GYM - ODOM ACADEMY**
**M2.2 MECHANICAL ENLARGED FLOOR PLAN - CLASSROOMS - ODOM ACADEMY**
**M3.1 MECHANICAL SCHEDULES AND DETAILS - ODOM ACADEMY**
**E1.1 ELECTRICAL FLOOR PLANS - ODOM ACADEMY**
**E2.1 ELECTRICAL DETAILS, SCHEDULES, AND LEGENDS - ODOM ACADEMY**
**P2.1 PLUMBING ENLARGED FLOOR PLAN - OLD GYM - ODOM ACADEMY**
**P3.1 PLUMBING SCHEDULES AND DETAILS - ODOM ACADEMY**

**ROY GUESS ELEMENTARY**

**M1.1 MECHANICAL DEMOLITION FLOOR PLAN - UNIT B - ROY GUESS**
**M1.2 MECHANICAL DEMOLITION FLOOR PLAN - UNIT C - ROY GUESS**
**M1.3 MECHANICAL DEMOLITION ENLARGED FLOOR PLAN - CHILLER YARD - ROY GUESS**
**M2.1 MECHANICAL FLOOR PLAN - HALL B - ROY GUESS**
**M2.2 MECHANICAL FLOOR PLAN - HALL C - ROY GUESS**
**M2.3 MECHANICAL ENLARGED FLOOR PLAN - CHILLER YARD - ROY GUESS**
**M3.1 MECHANICAL VRF PIPING DIAGRAMS - ROY GUESS**
**M4.1 MECHANICAL SCHEDULES AND DETAILS - ROY GUESS**
**M5.1 MECHANICAL SCHEDULES AND DETAILS - ROY GUESS**
**E1.1 ELECTRICAL DEMOLITION FLOOR PLAN - HALL B - ROY GUESS**
**E1.2 ELECTRICAL DEMOLITION FLOOR PLAN - HALL C - ROY GUESS**
**E2.1 ELECTRICAL FLOOR PLAN - HALL B - ROY GUESS**
**E2.2 ELECTRICAL FLOOR PLAN - HALL C - ROY GUESS**
**E3.1 ELECTRICAL DETAILS, SCHEDULES, AND LEGENDS - ROY GUESS**

BRADLEY KALMANG
80219
CENSED
04-20-2023

COVER SHEET – LIST OF DRAWINGS
**CS-1**

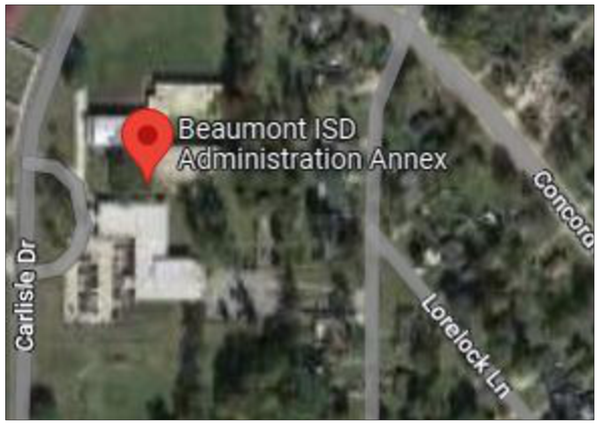
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# AIR HANDLER UPGRADES
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**8055 VOTH RD, BEAUMONT, TX 77708**




BRADLEY KALMANS
80219
LICENSED
PROFESSIONAL ENGINEER
04-20-2023

## MECHANICAL GENERAL NOTES

1. THESE CONSTRUCTION DRAWINGS ARE DIAGRAMMATIC, AND DO NOT NECESSARILY REFLECT ACTUAL DIMENSIONS. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO FIELD-VERIFY ALL DIMENSIONS AND COORDINATE PLACEMENT OF ALL EQUIPMENT AND ROUTING OF ALL PIPING AND/OR DUCT SYSTEMS.
2. ALL MECHANICAL SYSTEMS SHOWN ON THIS PLAN ARE FROM EXISTING PRELIMINARY FIELD WORK. CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFYING ALL LOCATIONS AND SIZES OF MECHANICAL SYSTEMS PRIOR TO THE START OF WORK.
3. REMOVE ALL EXISTING SPACE MOUNTED TEMPERATURE AND HUMIDITY SENSORS NOT BEING REUSED. PROVIDE STAINLESS STEEL COVER PLATES.
4. OWNER SHALL HAVE FIRST RIGHT OF REFUSAL ON ALL HVAC EQUIPMENT BEING REMOVED FROM THIS PROJECT. THIS INCLUDES BUT NOT LIMITED TO CHILLERS, PUMPS, CONDENSING UNITS, AIR HANDLING UNITS, AND CONTROLS.
5. PROJECT SCOPE SHOWN AS A PART OF THE PROJECT ON THIS CAMPUS WILL REQUIRE IDENTICAL ARCHITECTURAL WORK. ALL SUCH WORK SHALL BE INCLUDED IN THE CONTRACTOR'S BID. THIS WORK SHALL BE PERFORMED WITHOUT ANY IMPACT TO THE CONSTRUCTION SCHEDULE AND/OR ADDITIONAL COST.
6. CONTRACTOR SHALL REMOVE AND REPLACE CEILING WHERE REQUIRED TO COMPLETE THE INDICATED SCOPE OF PROJECT SCOPE WORK. EXISTING CEILING SHALL BE RE-INSTALLED IN THE EXACT CONDITION EXISTING PRIOR TO THE BEGINNING OF CONSTRUCTION. IF A MATCH IS NOT POSSIBLE, CONTRACTOR SHALL REPLACE ALL CEILING FROM WALL TO WALL OR BOUNDARY SEPARATION IN CORRIDOR, CLASSROOM, OR ANY OTHER SPACE.
7. PRIOR TO STARTING ANY WORK AND PRIOR TO SUBSTANTIAL COMPLETION, SCHEDULE WITH THE ENGINEER AND OWNER A DEMONSTRATION AND TESTING OF THE EXISTING FIRE ALARM AND CAMERA SYSTEM. THE CONTRACTOR SHALL HAVE ALL SUBCONTRACTORS WORKING ON THE PROJECT BE PRESENT FOR THESE TESTS AND DEMONSTRATIONS.
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## MECHANICAL GENERAL NOTES

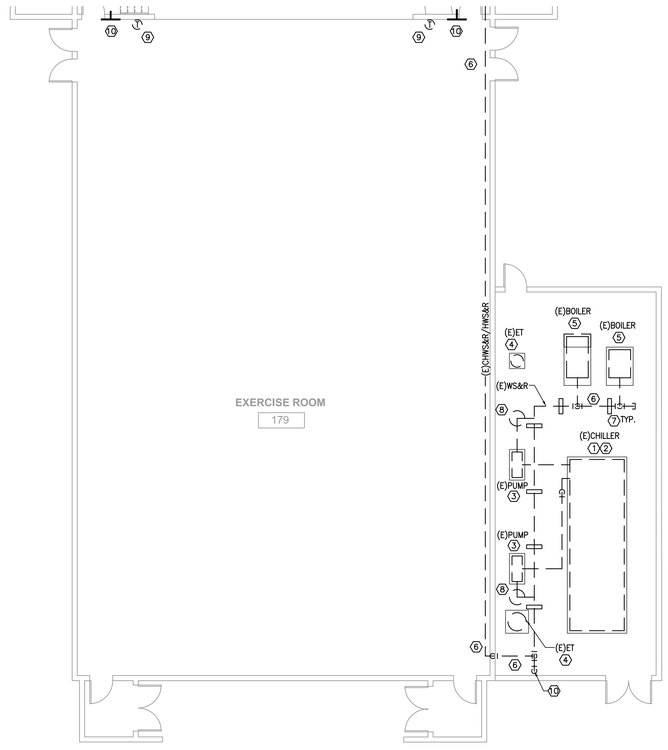
1. REMOVE EXISTING AIR COOLED CHILLER, ASSOCIATED CONTROLS, AND ALL OTHER ASSOCIATED APPURTENANCES. EXISTING CONCRETE PAD SHALL REMAIN.
2. EXISTING AIR COOLED CHILLER SHALL BE REMOVED AND DELIVERED TO OWNER'S MAINTENANCE SHOP. COORDINATE DELIVERY WITH OWNER.
3. REMOVE EXISTING PUMP, ASSOCIATED CONTROLS, AND ALL OTHER ASSOCIATED APPURTENANCES. EXISTING CONCRETE PAD SHALL REMAIN.
4. REMOVE EXISTING EXPANSION TANK AND ALL OTHER ASSOCIATED APPURTENANCES.
5. REMOVE EXISTING BOILER, ASSOCIATED CONTROLS, AND ALL OTHER ASSOCIATED APPURTENANCES. EXISTING CONCRETE PAD SHALL REMAIN.
6. EXISTING CHILLED WATER SUPPLY AND RETURN PIPING AND HOT WATER SUPPLY AND RETURN PIPING SHALL BE REMOVED.
7. REMOVE EXISTING PIPE STAND.
8. REMOVE EXISTING AIR SEPARATOR.
9. REMOVE EXISTING TEMPERATURE SENSOR.
10. REMOVE EXISTING SUPPLY GRILLE.

### DEMO SYMBOL LEGEND

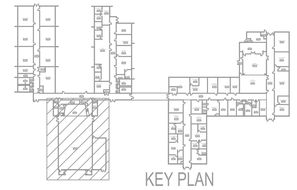
| RENOVATIONS | |
|---|---|
| | ITEM TO REMAIN |
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N 1 **MECHANICAL DEMOLITION FLOOR PLAN - AREA A - ADMIN ANNEX**
SCALE: 1/8" = 1'-0"


KEY PLAN


Salas O'Brien
HOUSTON
10930 W. SAM HOUSTON PKWY NORTH SUITE 900
HOUSTON, TX 77064
Salas O'Brien Registration: F-4111
Salas O'Brien Project Number: 2022-04653-00



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04-20-2023

| ISSUE DATE | DESCRIPTION |
|---|---|
| 04-11-2023 | 100% |

2022-04653-00
Owner

# BEAUMONT ISD AIR HANDLER UPGRADES

Beaumont ISD
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NOTES

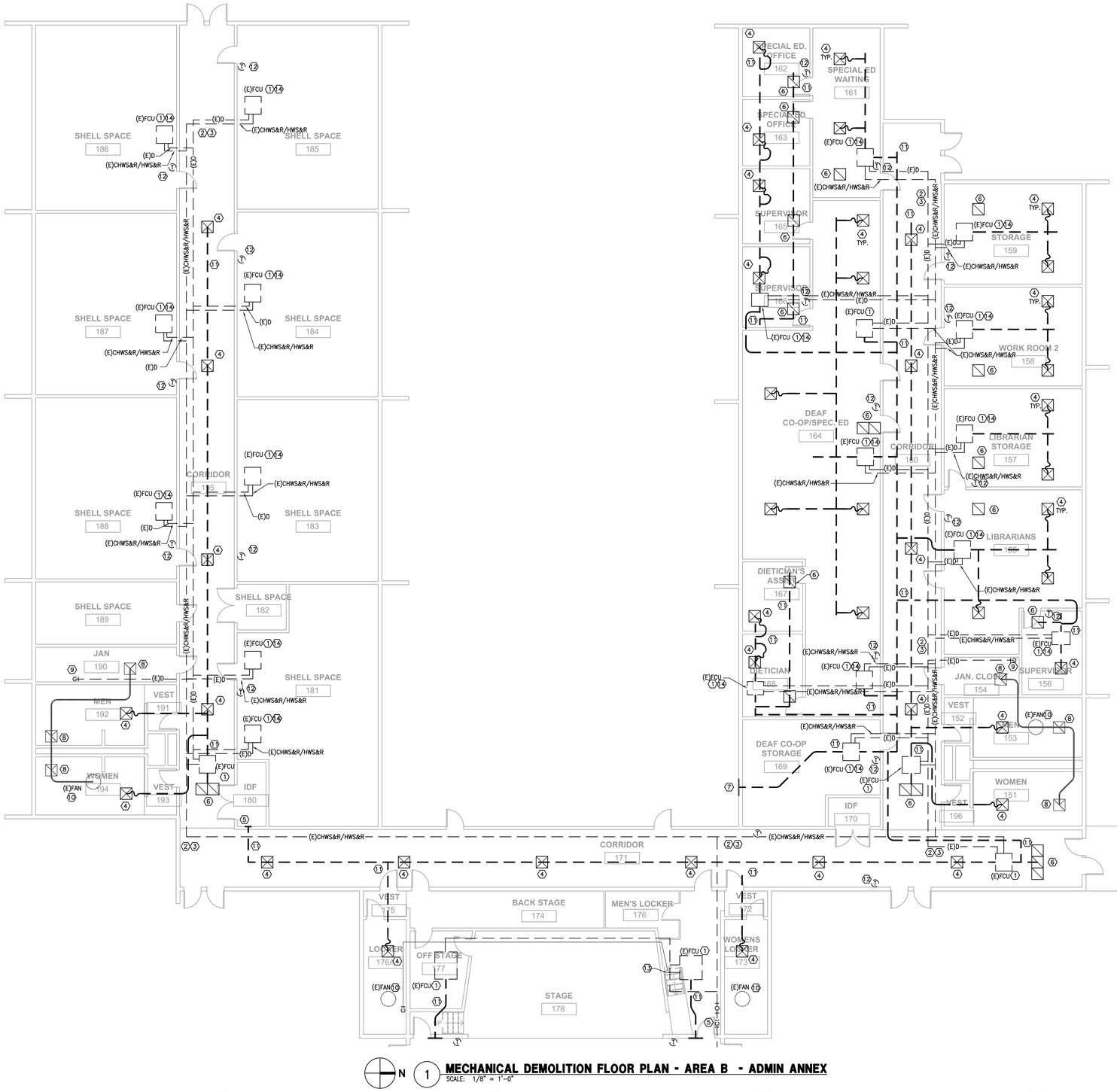
REVISIONS

| NUMBER | DESCRIPTION | DATE | CHECKER |
|---|---|---|---|
| | | | |

CHECKED BY: SH
DRAWN BY: AA

SHEET NAME
MECHANICAL DEMOLITION FLOOR PLAN - AREA A - ADMIN ANNEX

SHEET NUMBER: M1.01
REVISION:




N

1 **MECHANICAL DEMOLITION FLOOR PLAN - AREA B - ADMIN ANNEX**
SCALE: 1/8" = 1'-0"

## MECHANICAL GENERAL NOTES

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3. REMOVE ALL EXISTING SPACE MOUNTED TEMPERATURE AND HUMIDITY SENSORS NOT BEING REUSED. PROVIDE STAINLESS STEEL COVER PLATES.
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## MECHANICAL KEYED NOTES

1. REMOVE EXISTING AIR HANDLING UNIT, ASSOCIATED CONTROLS, TEMPERATURE SENSORS, AND ALL OTHER ASSOCIATED APPURTENANCES. REPLACE EXISTING CEILING TILES DAMAGED OR MISSING AFTER UNIT REMOVED.
2. EXISTING CHILLED WATER SUPPLY AND RETURN PIPING AND HOT WATER SUPPLY AND RETURN PIPING SHALL BE REMOVED.
3. REMOVE EXISTING CONDENSATE DRAIN PIPING.
4. REMOVE EXISTING SUPPLY DIFFUSER.
5. EXISTING SUPPLY AND RETURN PIPING SHALL BE CAPPED AT GROUND.
6. REMOVE EXISTING RETURN DIFFUSER.
7. EXISTING LOUVERS SHALL REMAIN AND BE REUSED.
8. EXISTING EXHAUST DIFFUSER AND ASSOCIATED DUCTWORK TO REMAIN.
9. REMOVE EXISTING CONDENSATE DRAIN LINE TO ABOVE FLOOR SO THAT NEW DRAIN LINE CAN BE RECONNECTED.
10. EXISTING EXHAUST FAN TO REMAIN.
11. REMOVE EXISTING DUCTWORK.
12. REMOVE EXISTING TEMPERATURE SENSOR.
13. REMOVE EXISTING CONDENSATE DRAIN TO POINT INDICATED. EXISTING PORTION OF DRAIN LINE DOWNSTREAM SHALL BE CLEANED AND REUSED.
14. PATCH AN PAINT EXISTING WALL T MATCH EXISTING AT ALL PIPING PENETRATIONS THROUGH WALL.

### DEMO SYMBOL LEGEND

| RENOVATIONS | |
|---|---|
| | ITEM TO REMAIN |
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BRADLEY KALMANS
80219
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| 04-11-2023 | 100% |

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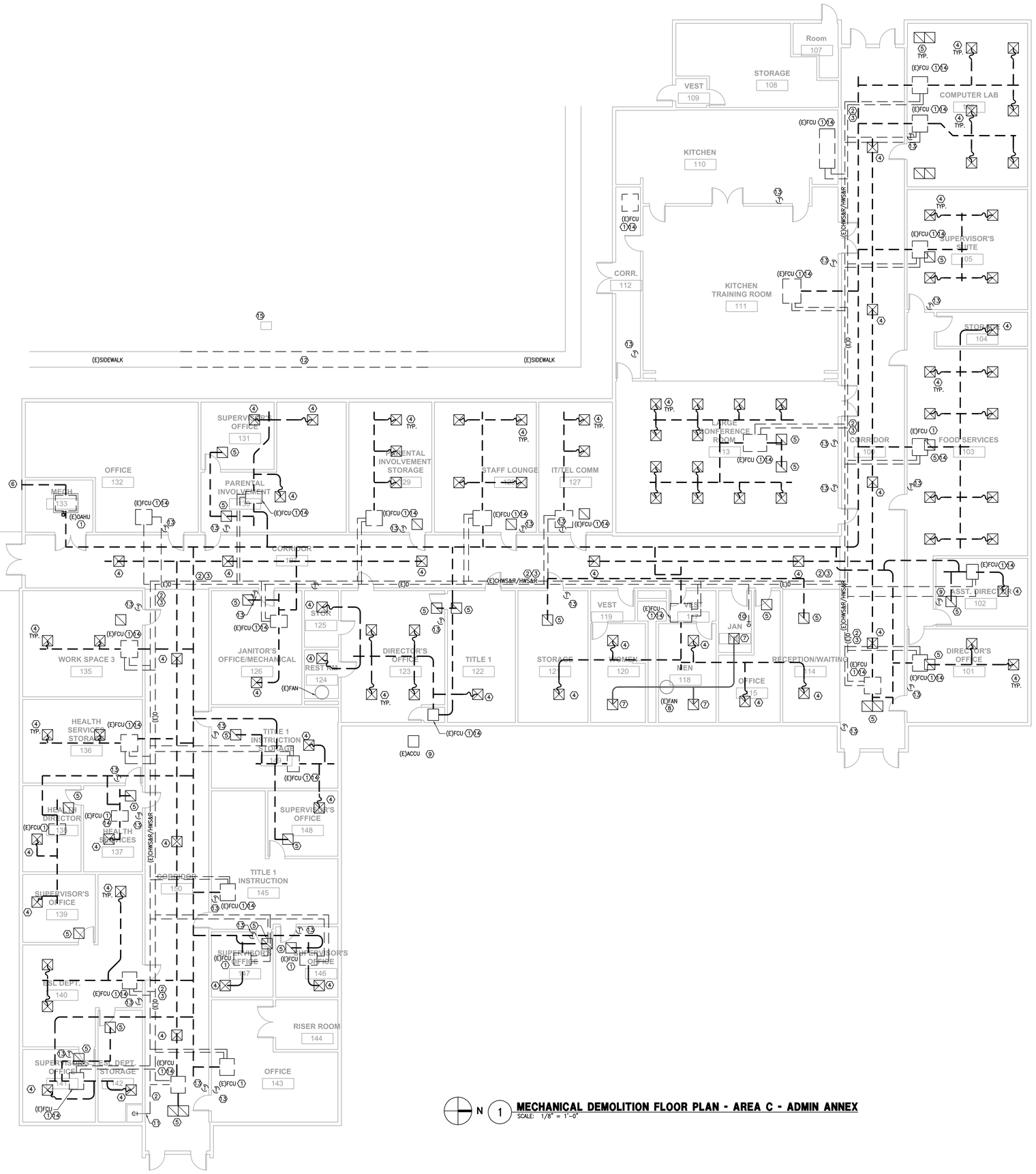
CHECKED BY: SH
DRAWN BY: AA

SHEET NAME

MECHANICAL DEMOLITION FLOOR PLAN - AREA B - ADMIN ANNEX

SHEET NUMBER: M1.2
REVISION:

KEY PLAN




N 1 **MECHANICAL DEMOLITION FLOOR PLAN - AREA C - ADMIN ANNEX**
SCALE: 1/8" = 1'-0"

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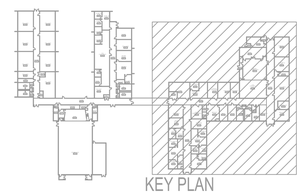
1. REMOVE EXISTING AIR HANDLING UNIT, ASSOCIATED CONTROLS, TEMPERATURE SENSORS, AND ALL OTHER ASSOCIATED APPURTENANCES. EPLACE EXISTING CEILING TILES DAMAGED OR MISSING AFTER UNIT REMOVED.
2. EXISTING CHILLED WATER SUPPLY AND RETURN PIPING AND HOT WATER SUPPLY AND RETURN PIPING SHALL BE REMOVED.
3. REMOVE EXISTING CONDENSATE DRAIN PIPING.
4. REMOVE EXISTING SUPPLY DIFFUSER.
5. REMOVE EXISTING RETURN DIFFUSER.
6. EXISTING LOUVERS SHALL REMAIN AND BE REUSED.
7. EXISTING EXHAUST DIFFUSER AND ASSOCIATED DUCTWORK TO REMAIN. PROVIDE GALVANIZED PIPING COVER AND PAINT TO MATCH EXTERIOR WALL.
8. EXISTING EXHAUST FAN TO REMAIN.
9. REMOVE EXISTING CONDENSING UNIT, REFRIGERANT PIPING, CONCRETE PAD, FENCING AND ALL ASSOCIATED DEVICES. PATCH AND PAINT EXISTING EXTERIOR WALL TO MATCH EXISTING MATERIALS AND COLOR.
10. REMOVE EXISTING CONDENSATE DRAIN LINE TO ABOVE FLOOR SO THAT NEW DRAIN LINE CAN BE RECONNECTED.
11. REMOVE EXISTING CHILLED WATER SUPPLY AND RETURN PIPING AND HOT WATER SUPPLY AND RETURN TO POINT INDICATED AND CAP PIPING.
12. SECTION OF SIDEWALK TO BE REMOVED AND REROUTED IN ORDER TO MAKE ROOM FOR MECHANICAL YARD.
13. REMOVE EXISTING SENSOR TEMPERATURE.
14. PATCH AN PAINT EXISTING WALL T MATCH EXISTING AT ALL PIPING PENETRATIONS THROUGH WALL.
15. COORDINATE LOCATION OF VRF CONDENSING UNIT PAD NOT TO CONFLICT WITH ANY OTHER OBJECT ON THE SITE.

## DEMO SYMBOL LEGEND

| RENOVATIONS | |
|---|---|
| | ITEM TO REMAIN |
| | ITEM TO BE REMOVED |

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| ISSUE DATE | DESCRIPTION |
|---|---|
| 04-11-2023 | 100% |

2022-04653-00
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# BEAUMONT ISD AIR HANDLER UPGRADES

Beaumont ISD
Preparing Our Next Generation

NOTES

REVISIONS

| NUMBER | DESCRIPTION | DATE | CHECKER |
|---|---|---|---|

CHECKED BY: SH
DRAWN BY: AA

SHEET NAME
MECHANICAL DEMOLITION FLOOR PLAN - AREA C - ADMIN ANNEX

SHEET NUMBER: M1.3
REVISION:

## MECHANICAL GENERAL NOTES

1. COORDINATE IN THE FIELD THE EXACT LOCATION OF MECHANICAL EQUIPMENT WITH CONTRACTOR AND ALL TRADES
2. SENSORS SHALL BE MOUNTED AT +48" AFF (ABOVE FINISHED FLOOR), UNLESS OTHERWISE NOTED
3. MECHANICAL CONTRACTOR SHALL COORDINATE WITH THE ELECTRICAL CONTRACTOR FOR ALL ELECTRICAL POWER REQUIREMENTS.
4. THESE CONSTRUCTION DRAWINGS ARE DIAGRAMATIC AND DO NOT NECESSARILY REFLECT ACTUAL DIMENSIONS. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO FIELD-VERIFY ALL DIMENSIONS AND COORDINATE PLACEMENT OF ALL EQUIPMENT AND ROUTING OF ALL PIPING AND/OR HVAC SYSTEMS.
5. PROJECT SCOPE SHOWN AS A PART OF THE PROJECT ON THIS CAMPUS WILL REQUIRE IDENTICAL ARCHITECTURAL WORK. ALL SUCH WORK SHALL BE INCLUDED IN THE CONTRACTOR'S BID. THIS WORK SHALL BE PERFORMED WITHOUT ANY IMPACT TO THE CONSTRUCTION SCHEDULE AND/OR ADDITIONAL COST.
6. CONTRACTOR SHALL REMOVE AND REPLACE CEILING WHERE REQUIRED TO COMPLETE THE INDICATED SCOPE OF PROJECT SCOPE WORK. EXISTING CEILING SHALL BE RE-INSTALLED IN THE EXACT CONDITION EXISTING PRIOR TO THE BEGINNING OF CONSTRUCTION. IF A MATCH IS NOT POSSIBLE, CONTRACTOR SHALL REPLACE ALL CEILING FROM WALL TO WALL OR BOUNDARY SEPARATION IN CORRIDOR, CLASSROOM, OR ANY OTHER SPACE.
7. PRIOR TO STARTING ANY WORK AND PRIOR TO SUBSTANTIAL COMPLETION, SCHEDULE WITH THE ENGINEER AND OWNER A DEMONSTRATION AND TESTING OF THE EXISTING FIRE ALARM AND CAMERA SYSTEM. THE CONTRACTOR SHALL HAVE ALL SUBCONTRACTORS WORKING ON THE PROJECT BE PRESENT FOR THESE TESTS AND DEMONSTRATIONS.

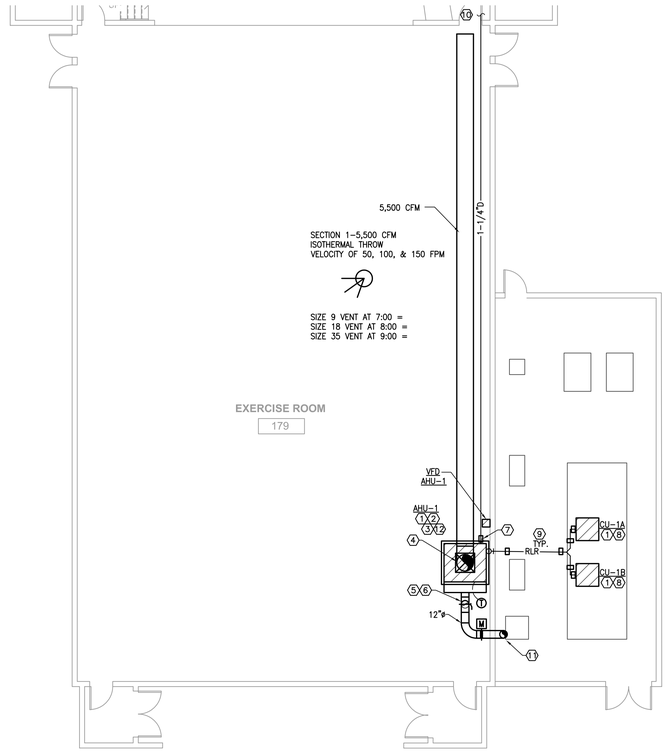
## MECHANICAL KEYED NOTES

1. VERIFY SERVICE CLEARANCE WITH EQUIPMENT MANUFACTURER, COORDINATE WITH ALL TRADES NOT TO OBSTRUCT.
2. ROUTE CONDENSATE PIPE AT SIZE INDICATED TO WYE TAIL PIECE. INSTALL CONDENSATE DRAIN TRAP AT UNIT AS RECOMMENDED BY MANUFACTURER.
3. ROUTE REFRIGERANT LINES TO ASSOCIATED AIR COOLED CONDENSING UNIT. SIZE REFRIGERANT LINES PER MANUFACTURERS RECOMMENDATIONS.
4. GALVANIZED DUCT TO RISE UP TO ROOF. TRANSITION FROM RECTANGULAR DUCT TO ROUND DUCT IN VERTICAL.
5. 12"ø OUTSIDE AIR DUCTWORK DOWN TO AIR HANDLING UNIT.
6. PROVIDE MANUAL BALANCING DAMPER (D-2) IN VERTICAL.
7. PROVIDE FRANKLIN ELECTRIC MODEL VCL-24ULS CONDENSATE PUMP OR APPROVED EQUAL AT LOCATION SHOWN. ROUTE CONDENSATE UP TO STRUCTURE FROM PUMP DISCHARGE.
8. INSTALL AIR COOLED CONDENSING UNIT ON EXISTING CONCRETE HOUSEKEEPING PAD. REFER TO MANUFACTURER FOR REFRIGERANT PIPE SIZES, AIRFLOW CLEARANCES, AND MAINTENANCE CLEARANCES.
9. ROUTE REFRIGERANT PIPING ON PHP PIPE SUPPORT MODEL PP10. SPACE THEM AS PER SPECIFICATION.
10. REFER TO 1/M2.2 FOR CONTINUATION OF CONDENSATE DRAIN PIPE.
11. REUSE OPENING IN WALL IF POSSIBLE. OTHERWISE, INSTALL NEW BRICK VENT IN WALL.
12. MOUNT AIR HANDLING UNIT ON 4" CONCRETE HOUSEKEEPING PAD.

BMCS NOTE:
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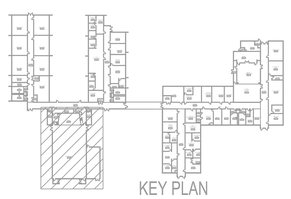
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NOTE:
ALL ROOFING WORK SHALL BE DONE BY APPROVED ROOFING PROVIDER. CONTACT TIM MARSH WITH MARSH WATERPROOFING @ 409-769-0459 FOR PRICING.




N

1 **MECHANICAL FLOOR PLAN - AREA A - ADMIN ANNEX**
SCALE: 1/8" = 1'-0"


KEY PLAN


Salas O'Brien
HOUSTON
10930 W. SAM HOUSTON PKWY NORTH SUITE 900
HOUSTON, TX 77064
Salas O'Brien Registration: F-4111
Salas O'Brien Project Number: 2022-04653-00



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# BEAUMONT ISD AIR HANDLER UPGRADES

Beaumont ISD
Preparing Our Next Generation

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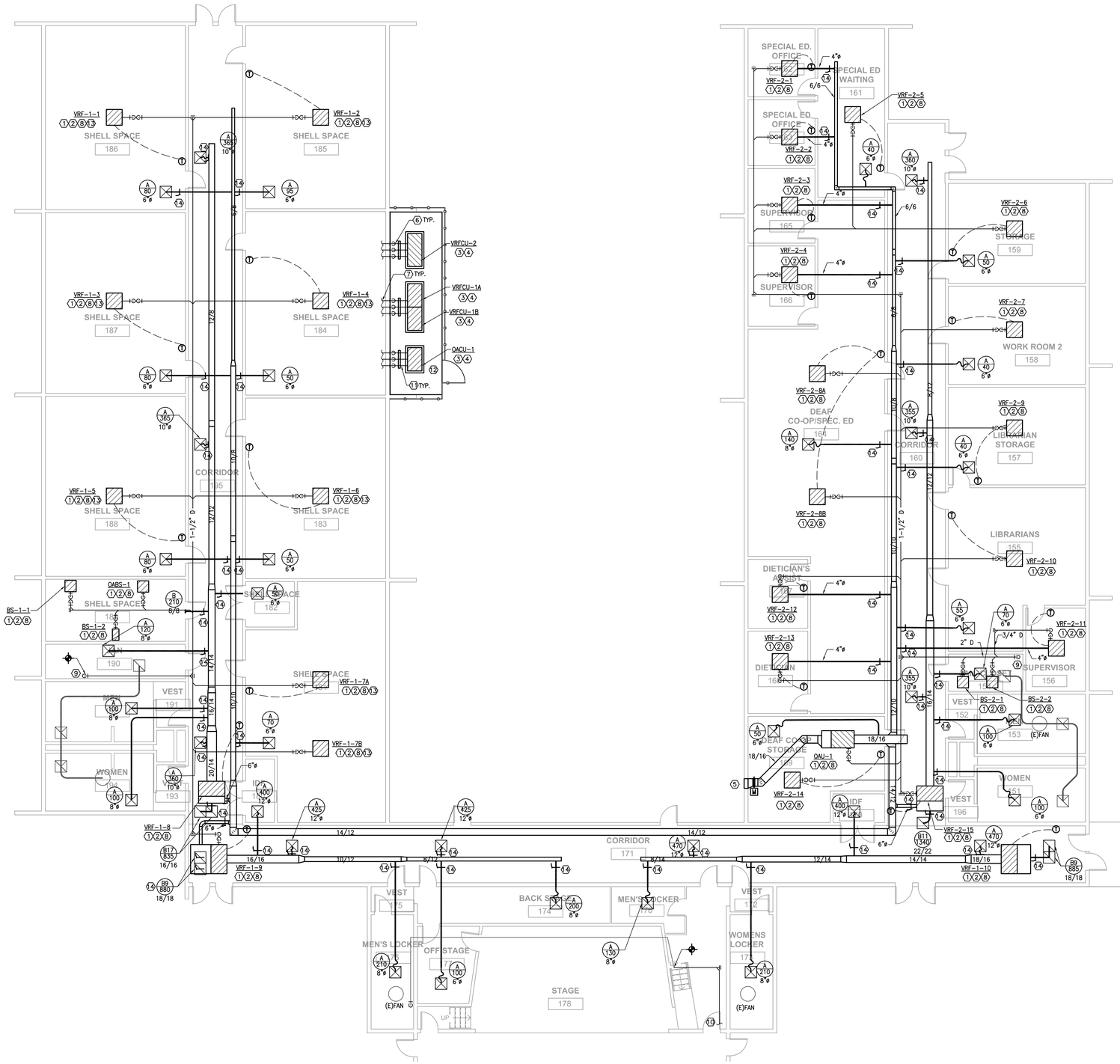
REVISIONS

| NUMBER | DESCRIPTION | DATE | CHECKER |
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CHECKED BY: SH
DRAWN BY: AA

SHEET NAME
MECHANICAL FLOOR PLAN - AREA A - ADMIN ANNEX

SHEET NUMBER: M2.1
REVISION:




N

1 **MECHANICAL FLOOR PLAN - AREA B - ADMIN ANNEX**
SCALE: 1/8" = 1'-0"

## MECHANICAL GENERAL NOTES

1. COORDINATE IN THE FIELD THE EXACT LOCATION OF MECHANICAL EQUIPMENT WITH CONTRACTOR AND ALL TRADES
2. SENSORS SHALL BE MOUNTED AT +48" AFF (ABOVE FINISHED FLOOR), UNLESS OTHERWISE NOTED
3. MECHANICAL CONTRACTOR SHALL COORDINATE WITH THE ELECTRICAL CONTRACTOR FOR ALL ELECTRICAL POWER REQUIREMENTS.
4. THESE CONSTRUCTION DRAWINGS ARE DIAGRAMATIC AND DO NOT NECESSARILY REFLECT ACTUAL DIMENSIONS. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO FIELD-VERIFY ALL DIMENSIONS AND COORDINATE PLACEMENT OF ALL EQUIPMENT AND ROUTING OF ALL PIPING AND/OR HVAC SYSTEMS.
5. PROJECT SCOPE SHOWN AS A PART OF THE PROJECT ON THIS CAMPUS WILL REQUIRE IDENTICAL ARCHITECTURAL WORK. ALL SUCH WORK SHALL BE INCLUDED IN THE CONTRACTOR'S BID. THIS WORK SHALL BE PERFORMED WITHOUT ANY IMPACT TO THE CONSTRUCTION SCHEDULE AND/OR ADDITIONAL COST.
6. CONTRACTOR SHALL REMOVE AND REPLACE CEILING WHERE REQUIRED TO COMPLETE THE INDICATED SCOPE OF PROJECT SCOPE WORK. EXISTING CEILING SHALL BE RE-INSTALLED IN THE EXACT CONDITION EXISTING PRIOR TO THE BEGINNING OF CONSTRUCTION. IF A MATCH IS NOT POSSIBLE, CONTRACTOR SHALL REPLACE ALL CEILING FROM WALL TO WALL OR BOUNDARY SEPARATION IN CORRIDOR, CLASSROOM, OR ANY OTHER SPACE.
7. PRIOR TO STARTING ANY WORK AND PRIOR TO SUBSTANTIAL COMPLETION, SCHEDULE WITH THE ENGINEER AND OWNER A DEMONSTRATION AND TESTING OF THE EXISTING FIRE ALARM AND CAMERA SYSTEM. THE CONTRACTOR SHALL HAVE ALL SUBCONTRACTORS WORKING ON THE PROJECT BE PRESENT FOR THESE TESTS AND DEMONSTRATIONS.

## MECHANICAL KEYED NOTES

1. VERIFY SERVICE CLEARANCE WITH EQUIPMENT MANUFACTURER, COORDINATE WITH ALL TRADES NOT TO OBSTRUCT.
2. ROUTE REFRIGERANT LINES TO ASSOCIATED AIR-COOLED CONDENSING UNIT. SIZE LINES PER MANUFACTURER'S RECOMMENDATION.
3. MOUNT AIR-COOLED CONDENSING UNIT ON 4" THICK HOUSE KEEPING CONCRETE PAD.
4. AIR-COOLED CONDENSING UNIT SHALL MAINTAIN 3'-0" OF UNOBSTRUCTED CLEARANCE ON ALL SIDES FOR SERVICING AND AIR FLOW.
5. RE-INSTALL EXISTING LOUVER.
6. ROUTE REFRIGERANT PIPING ON PHP PIPE SUPPORT MODEL PP10. SPACE THEM AS PER SPECIFICATION. PROVIDE GALVANIZED PIPING COVER TO MATCH EXTERIOR WALL.
7. ROUTE REFRIGERANT PIPE UP WALL. PROVIDE INSULATION PER SPECIFICATIONS
8. INSTALL CONDENSATE TRAP ACCORDING TO MANUFACTURER'S INSTRUCTIONS AND TIE INTO MAIN CONDENSATE DRAIN LINE.
9. FIELD VERIFY EXISTING CONDENSATE PIPE IS CLEAR OF DEBRIS. ROUTE CONDENSATE PIPE AT SIZE INDICATED TO EXISTING CONDENSATE DRAIN PIPE.
10. REFER TO 1/M2.1 FOR CONTINUATION OF CONDENSATE DRAIN.
11. INSULATE, COAT, AND JACKET OUTDOOR REFRIGERANT PIPING PER SPECIFICATIONS.
12. PROVIDE FULL CONCRETE SLAB FOR VRF CONDENSING YARD AS SHOWN WITH A 6'-0 HIGH CHAIN LINK FENCE AND 4'0" WIDE GATE. A MINIMUM OF 3'-6" CLEARANCE SHALL BE MAINTAINED FROM CONDENSING UNIT TO FENCE ON ALL SIDES.
13. NEW VRF CASSETTE SHALL BE SUSPENDED FROM STRUCTURE AT 24" BELOW BOTTOM OF STRUCTURE. THE SPACE CURRENTLY DOES NOT NOT HAVE A SUSPENDED CEILING AND DISTRICT WILL BE ADDING A CEILING IN A SEPARATE PROJECT.
14. REFER TO DAMPER SCHEDULE ON SHEET M/5.1 FOR MANUAL DAMPER INFORMATION.

BMCS NOTE:
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NOTE:
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Salas O'Brien
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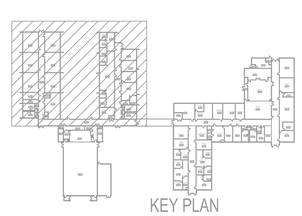
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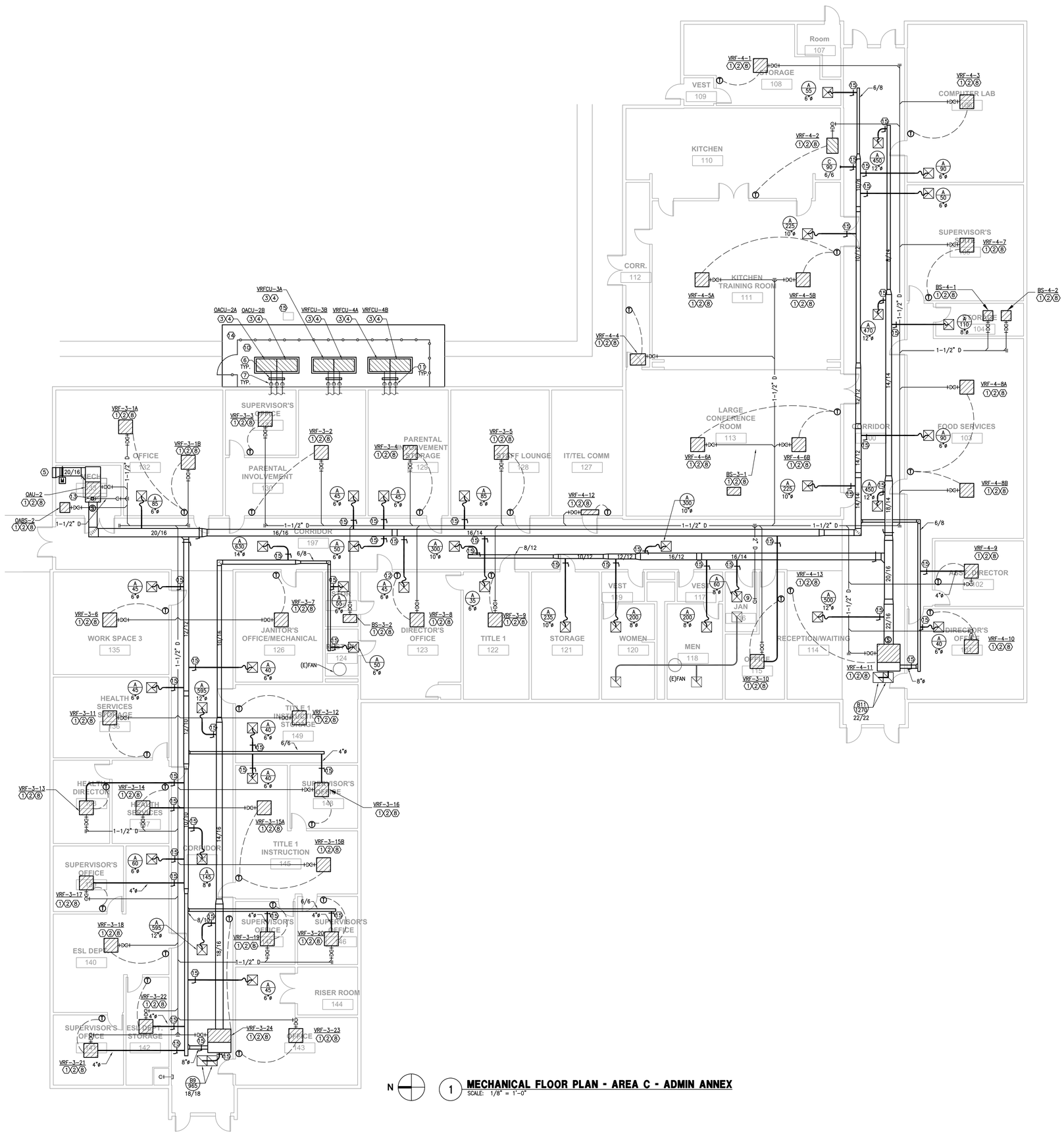
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SHEET NAME
MECHANICAL FLOOR PLAN - AREA B - ADMIN ANNEX

SHEET NUMBER
M2.2

REVISION


KEY PLAN




N

## 1 MECHANICAL FLOOR PLAN - AREA C - ADMIN ANNEX

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

# MECHANICAL GENERAL NOTES

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5. RE-INSTALL EXISTING LOUVER.
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9. FIELD VERIFY EXISTING CONDENSATE PIPE IS CLEAR OF DEBRIS. ROUTE CONDENSATE PIPE AT SIZE INDICATED TO EXISTING CONDENSATE DRAIN PIPE.
10. PROVIDE FULL CONCRETE SLAB FOR VRF CONDENSING YARD AS SHOWN WITH A 6'-0 HIGH CHAIN LINK FENCE AND 4'0" WIDE GATE. A MINIMUM OF 3'-6" CLEARANCE SHALL BE MAINTAINED FROM CONDENSING UNIT TO FENCE ON ALL SIDES.
11. INSULATE, COAT, AND JACKET OUTDOOR REFRIGERANT PIPING PER SPECIFICATIONS.
12. THERMOSTAT SHALL BE CONFIGURED TO ALLOW AFTER HOURS OVERRIDE TO ENABLE SYSTEM.
13. ROUTE CONDENSATE PIPE AT SIZE INDICATED TO EXISTING FLOOR DRAIN.
14. CONCRETE PAD SHALL EXTEND THE WIDTH OF EXISTING SIDEWALK AROUND MECHANICAL YARD.
15. REFER TO DAMPER SCHEDULE ON SHEET M/5.1 FOR MANUAL DAMPER INFORMATION.

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Beaumont ISD
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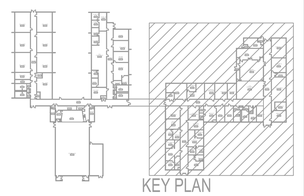
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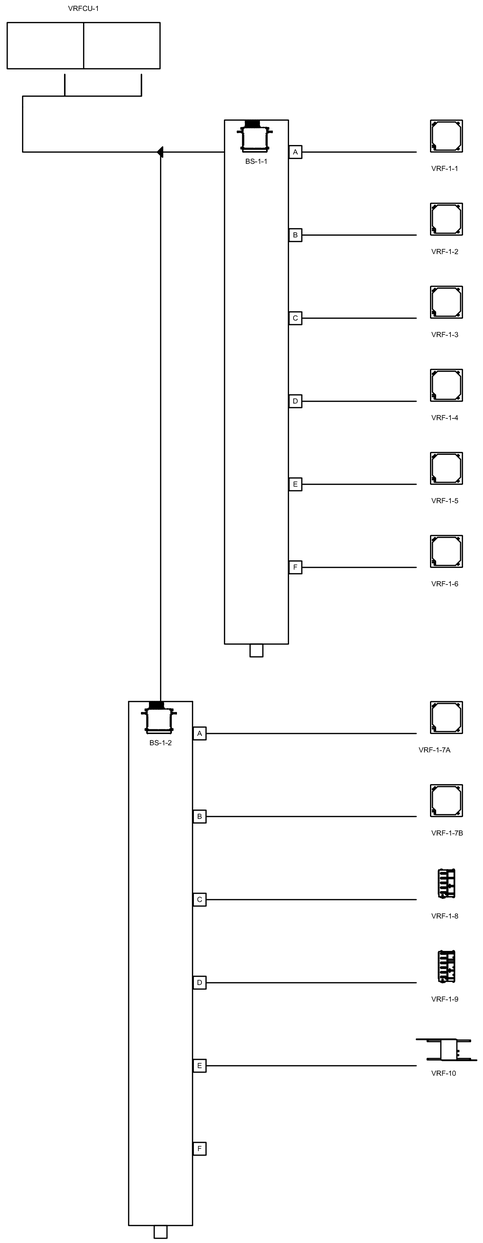
SHEET NAME

MECHANICAL FLOOR PLAN - AREA C - ADMIN ANNEX

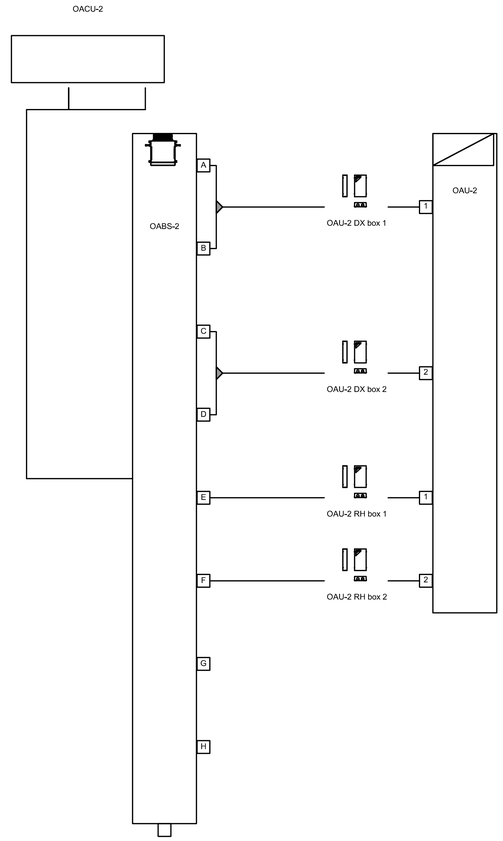
SHEET NUMBER: M2.3
REVISION:


KEY PLAN

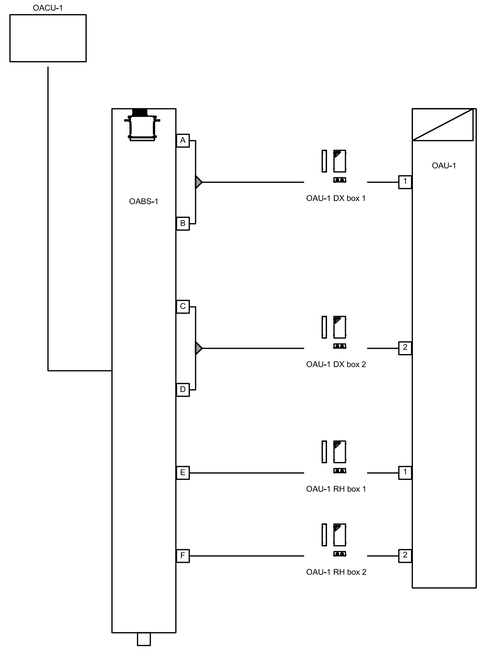
THESE SCHEMATICS ARE FOR INFORMATION PURPOSES ONLY. REFER TO MANUFACTURER FOR FINAL PIPE SIZES, LENGTH AND LAYOUT.




3 **MECHANICALVRF PIPING DIAGRAM - VRF-1**
SCALE: 1/8" = 1'-0"




2 **MECHANICALVRF PIPING DIAGRAM - OAU-2**
SCALE: 1/8" = 1'-0"




1 **MECHANICALVRF PIPING DIAGRAM - OAU-1**
SCALE: 1/8" = 1'-0"


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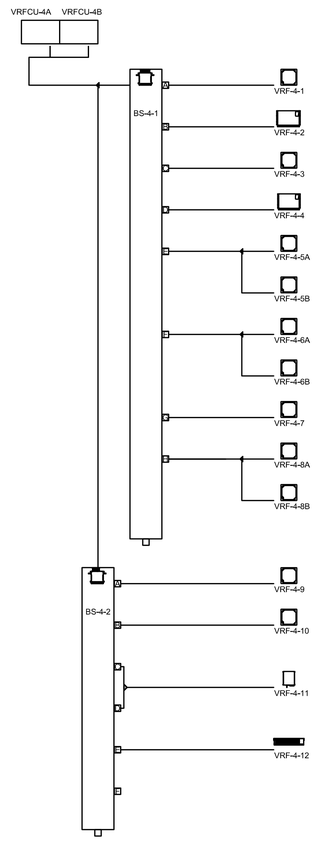
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MECHANICAL VRF PIPING DIAGRAM - ADMIN ANNEX

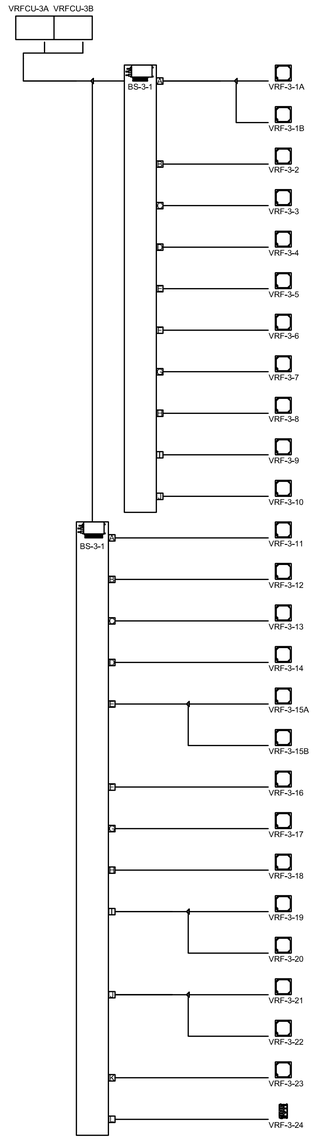
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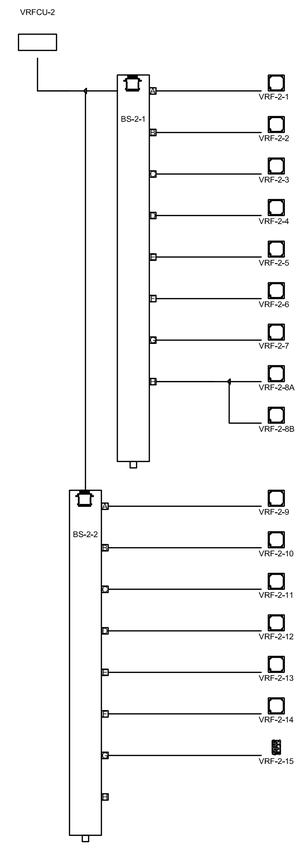
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3 **MECHANICALVRF PIPING DIAGRAM - VRF-4**
SCALE: 1/8" = 1'-0"




2 **MECHANICALVRF PIPING DIAGRAM - VRF-3**
SCALE: 1/8" = 1'-0"




1 **MECHANICALVRF PIPING DIAGRAM - VRF-2**
SCALE: 1/8" = 1'-0"


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SHEET NAME
MECHANICAL VRF PIPING DIAGRAM - ADMIN ANNEX

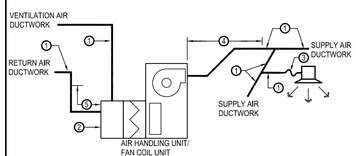
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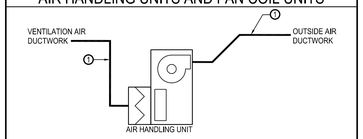
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| **GENERAL** | |
| (#) | KEY NOTE TAG |
| (#) | NOTE SPECIFIC TO DETAIL TAG |
| (#) | REVISION TAG |
| | NEW EQUIPMENT |
| **DUCTWORK** | |
| | SUPPLY AIR DUCTWORK |
| | RETURN AIR AND OUTSIDE AIR DUCTWORK |
| | EXHAUST AIR DUCTWORK |
| | FLEXIBLE DUCTWORK |
| | SUPPLY AIR DUCTWORK THROUGH HORIZONTAL PARTITION |
| | RETURN AIR AND OUTSIDE AIR DUCTWORK THROUGH HORIZONTAL PARTITION |
| | EXHAUST AIR DUCTWORK THROUGH HORIZONTAL PARTITION |
| | FIRE DAMPER (VERTICAL) |
| | FIRE DAMPER (HORIZONTAL) |
| | SMOKE DAMPER (VERTICAL) |
| | SMOKE DAMPER (HORIZONTAL) |
| | COMBINATION FIRE & SMOKE DAMPER (VERTICAL) |
| | COMBINATION FIRE & SMOKE DAMPER (HORIZONTAL) |
| | MANUAL BALANCING DAMPER (SEE DAMPER SCHEDULE) |
| M | MOTORIZED DAMPER (SEE DAMPER SCHEDULE) |
| **SENSORS** | |
| T | THERMOSTAT AND TEMPERATURE SENSOR |
| H | HUMIDISTAT |
| SD | SMOKE DETECTOR |
| HD | HEAT DETECTOR |
| **AIR DEVICES** | |
| (#) | GRILLE SIZE TAG (REFER TO GRILLE SIZE LEGEND) |
| | SUPPLY AIR GRILLE WITH FOUR-WAY THROW |
| | SUPPLY AIR GRILLE WITH THREE-WAY THROW |
| | SUPPLY AIR GRILLE WITH TWO-WAY THROW |
| | SUPPLY AIR GRILLE WITH TWO-WAY CORNER THROW |
| | SUPPLY AIR GRILLE WITH ONE-WAY THROW |
| | RETURN AIR GRILLE |
| | RETURN AIR GRILLE WITH SOUND BOOT |
| | EXHAUST AIR GRILLE |
| | SUPPLY AIR SIDEWALL GRILLE |
| | RETURN AIR SIDEWALL GRILLE |
| 20X12 | RETURN AIR OPENING ABOVE CEILING |
| **SUBSCRIPTS AND ABREVIATIONS** | |
| AFF | ABOVE FINISHED FLOOR |
| BBS | BELOW BOTTOM OF STRUCTURE |
| BOD | BOTTOM OF DUCT |
| BOP | BOTTOM OF PIPE |
| CA | COMBUSTION AIR |
| CFM | CUBIC FEET PER MINUTE |
| EA | EXHAUST AIR |
| FPM | FEET PER MINUTE |
| NC | NORMALLY CLOSED |
| NO | NORMALLY OPEN |
| OA | OUTSIDE AIR |
| RA | RETURN AIR |
| SA | SUPPLY AIR |
| **RENOVATIONS** | |
| | POINT OF CONNECTION FROM NEW TO EXISTING |
| | ITEM TO REMAIN |
| | ITEM TO BE REMOVED |

MS03

# DUCT LINER AND INSULATION




## AIR HANDLING UNITS AND FAN COIL UNITS




## OUTSIDE AIR PRETREATMENT UNIT

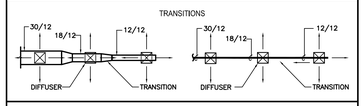
NOTES

1. SHEETMETAL DUCTWORK WITH EXTERNAL DUCTWORK INSULATION AS SPECIFIED.
2. SHEETMETAL DUCTWORK RETURN AIR PLENUM WITH EXTERNAL DUCTWORK INSULATION AS SPECIFIED.
3. FLEXIBLE DUCTWORK WITH EXTERNAL DUCTWORK INSULATION AS SPECIFIED.
4. SHEETMETAL DUCTWORK WITH EXTERNAL DUCTWORK INSULATION AS SPECIFIED AND 1" THICK 1-1/2 LB LINER AS SPECIFIED FROM AIR HANDLING UNIT DISCHARGE TO 10'-0" DOWNSTREAM.
5. SHEETMETAL DUCTWORK WITH EXTERNAL DUCTWORK INSULATION AS SPECIFIED AND 1" THICK 1-1/2 LB LINER AS SPECIFIED FROM AIR HANDLING UNIT INLET TO 10'-0" UPSTREAM.
6. EXHAUST DUCTWORK AS SPECIFIED WITH FIREBOARD INSULATION AS SPECIFIED.
7. SHEETMETAL DUCTWORK ONLY. NO INSULATION REQUIRED.

MS04

# DUCTWORK SYMBOLS LEGEND

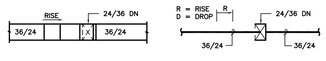
TRANSITIONS



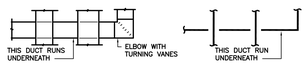

MAIN BRANCH TAKE-OFFS



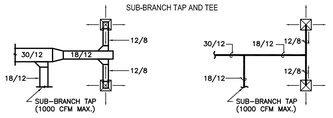

RISERS



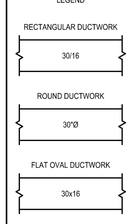

DUCT CROSSOVERS




SUB-BRANCH TAP AND TEE

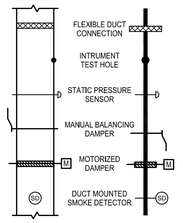



TWO LINE DUCTWORK LEGEND




TWO LINE DUCTWORK SYMBOLS

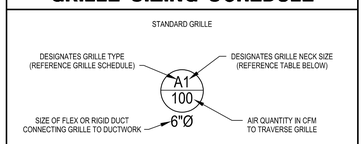
ONE LINE DUCTWORK SYMBOLS




MS02

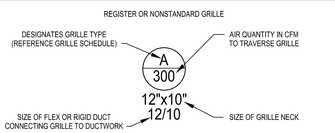
# GRILLE SIZING SCHEDULE

STANDARD GRILLE




ALL GRILLES SHOWN SHALL BE FOUR-WAY THROW UNLESS OTHERWISE SHOWN.

REGISTER OR NONSTANDARD GRILLE

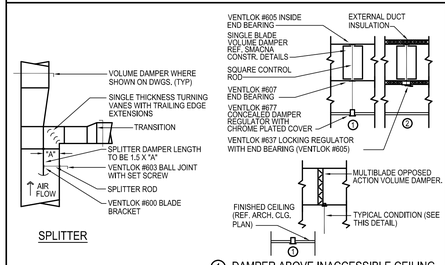



ALL GRILLES SHOWN SHALL BE FOUR-WAY THROW UNLESS OTHERWISE SHOWN.
ALL REGISTERS SHALL HAVE A 45° HORIZONTAL DEFLECTION UNLESS OTHERWISE SHOWN.

| GRILLE SIZE DESIGNATION | GRILLE NECK SIZE | GRILLE SIZE DESIGNATION | GRILLE NECK SIZE |
|---|---|---|---|
| 1 | 6" x 6" | 7 | 15" x 15" |
| 2 | 8" x 8" | 8 | 16" x 16" |
| 3 | 9" x 9" | 9 | 18" x 18" |
| 4 | 10" x 10" | 10 | 20" x 20" |
| 5 | 12" x 12" | 11 | 22" x 22" |
| 6 | 14" x 14" | 12 | 24" x 24" |

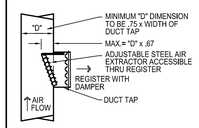
MS01

# DUCTWORK CONSTRUCTION DETAILS



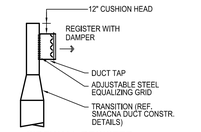

SPLITTER

1 DAMPER ABOVE INACCESSIBLE CEILING
2 DAMPER ABOVE LIFT-OUT CEILING

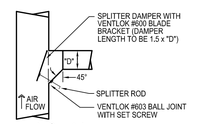



NOTES:
1) MAX. WIDTH OF DUCT TAP SHALL BE 48". PROVIDE BOTTOM BRACKET FOR SUPPORT WHERE EXTRACTOR EXCEEDS 16".
2) MAX. HEIGHT OF DUCT TAP SHALL BE 12" (MIN.= 4")

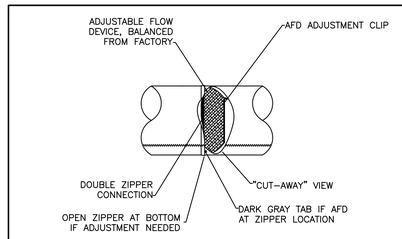
AIR EXTRACTOR AT SIDEWALL REGISTER




SIDEWALL REGISTER AT END OF DUCT

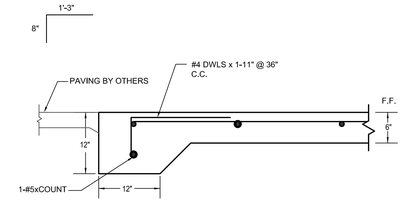



DUCT TAP

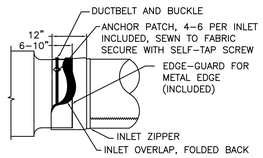



INSTALLED AT ZIPPER LOCATION AT INLET OR AS SPECIFIED IN OTHER LOCATIONS. ZIPPER TO ZIPPER CONNECTION AS SHOWN. EXTERNAL LABEL IDENTIFIES LOCATION

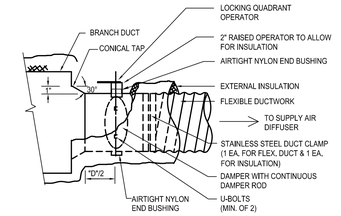
## 10 ADJUSTABLE FLOW DEVICE (AFD)
SCALE: NONE



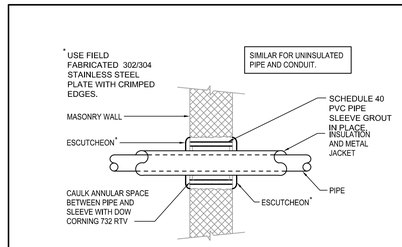

## 5 CONCRETE FOOTING
SCALE: NONE D013



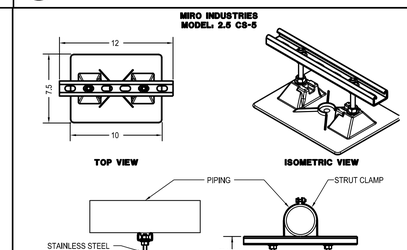

## 9 INLET ATTACHMENT DETAIL
SCALE: NONE



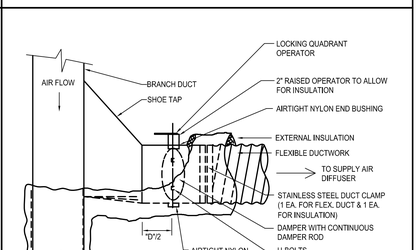

## 4 FLEXIBLE DUCT TAP - CONICAL
SCALE: NONE D009



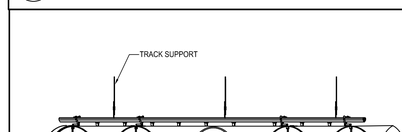

## 13 PIPE THROUGH EXTERIOR WALL
SCALE: NONE PS007



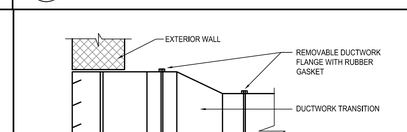

## 8 PIPING SUPPORT DETAIL
SCALE: NONE PS002



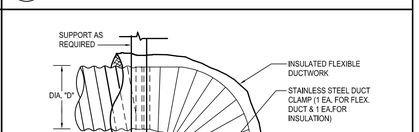

## 3 FLEXIBLE DUCT TAP - SHOE
SCALE: NONE D010



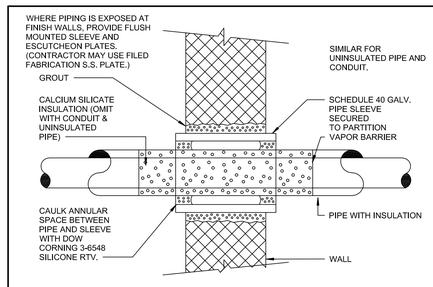

## 12 PULL-TIGHT WITH U-TRACK DETAIL
SCALE: NONE



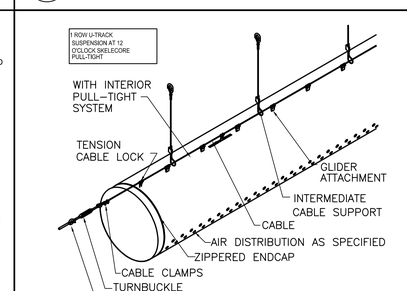

## 7 DUCTWORK AT LOUVER
SCALE: NONE D015



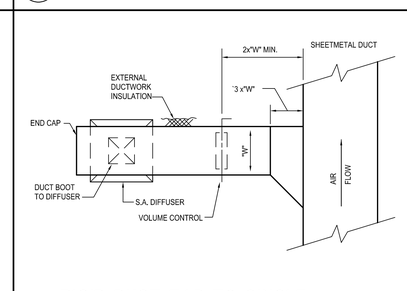

## 2 FLEX DUCT CONNECTION AT SUPPLY AIR DIFFUSER
SCALE: NONE D013



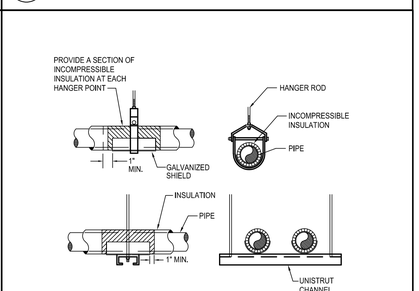

## 14 PIPE THROUGH FIRE RATED WALL
SCALE: NONE




## 10 FABRIC DUCT SUSPENSION DETAIL
SCALE: NONE




## 6 RIGID DUCT TAP TO SINGLE SUPPLY AIR DIFFUSER
SCALE: NONE D007




## 1 PIPE HANGERS
SCALE: NONE PS002


Salas O'Brien
HOUSTON
10930 W. SAM HOUSTON PKWY NORTH SUITE 900
HOUSTON, TX 77064
Salas O'Brien Registration: F-4111
Salas O'Brien Project Number: 2022-04653-00



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PROFESSIONAL SEAL




04-20-2023

| ISSUE DATE | DESCRIPTION |
|---|---|
| 04-11-2023 | 100% |

2022-04653-00
Owner

# BEAUMONT ISD AIR HANDLER UPGRADES

Beaumont ISD
Preparing Our Next Generation

NOTES

REVISIONS

| NUMBER | DESCRIPTION | DATE | CHECKER |
|---|---|---|---|
| | | | |

CHECKED BY: SH
DRAWN BY: AA

SHEET NAME

MECHANICAL LEGENDS AND DETAILS - ADMIN ANNEX

SHEET NUMBER: M4.1
REVISION

# VRF OUTSIDE AIR HANDLING UNIT - ADMINISTRATION ANNEX

| MARK | FAN | | | | | COOLING | | | | HEATING | | MCA | MOCP | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | SUPPLY AIR CFM | OUTSIDE AIR CFM | EXT. STATIC PRESSURE (IN. W.C.) | HORSE POWER | CURRENT CHARAC. | AIR TEMPERATURE (°F) ENTERING DRY BULB | AIR TEMPERATURE (°F) ENTERING WET BULB | MIN. TOTAL CAPACITY (BTUH) | MIN. SENSIBLE CAPACITY (BTUH) | MINIMUM EER/ IEER | ENTERING AIR TEMP. (°F) | MINIMUM CAPACITY (BTUH) | | | |
| OAU-1 | 1,365 | 1,365 | 0.5 | - | 460/3/60 | 98.0 | 80.0 | 143,190 | 64,870 | -/21.6 | 27.0 | 63,690 | 41.0 | 45.0 | 1,2,3 |
| OAU-2 | 2,205 | 2,205 | 0.5 | - | 460/3/60 | 98.0 | 80.0 | 213,350 | 104,800 | -/21.1 | 27.0 | 102,880 | 58.74 | 60.0 | 1,2,3 |

GENERAL NOTES:
1. EXTERNAL STATIC PRESSURE INCLUDES LOSSES DUE TO DUCTWORK, AIR DEVICES, DAMPERS, AND DUCT MOUNTED HOT WATER COILS WHERE APPLICABLE. DIRTY FILTER AND UNIT CASING MUST BE ADDED TO EXTERNAL STATIC PRESSURE TO OBTAIN TOTAL PRESSURE LOSS. INCREASE HORSEPOWER AS REQUIRED TO MEET YOUR TOTAL PRESSURE LOSS. COORDINATE WITH ELECTRICIAN.
2. MAINTAIN MINIMUM CLEARANCE FOR COIL PULL AS RECOMMENDED BY UNIT MANUFACTURER. MAINTAIN MINIMUM CLEARANCE AS REQUIRED TO OPEN ACCESS AND CONTROL DOORS ON UNIT FOR SERVICE, MAINTENANCE, AND INSPECTION. MAINTAIN MINIMUM ELECTRICAL CLEARANCE AS REQUIRED BY NEC.

REMARKS:
1. VELOCITY NOT TO EXCEED 450 FPM ON COOLING COIL.
2. PROVIDE AS SUSPENDED HORIZONTAL UNIT.
3. PROVIDE WITH HOT GAS RE-HEAT.

# AIR COOLED CONDENSING UNIT

| MARK | MIN. TOTAL CAPACITY (MBH) | OUTDOOR AIR TEMP. (°F) | MINIMUM IEER/ SEER | CURRENT CHARAC. | MCA | MOCP | RELATED UNIT MARK | REMARKS |
|---|---|---|---|---|---|---|---|---|
| CU-1A | 95,850 | 95 | 14.8/- | 460/3/60 | 18.5 | 30 | AHU-1 | 1,2,3,4 |
| CU-1B | 95,850 | 95 | 14.8/- | 460/3/60 | 18.5 | 30 | AHU-1 | 1,2,3,4 |

GENERAL NOTES:
1. MINIMUM RECOMMENDED CLEARANCE AROUND ROOFTOP UNIT IS 12 INCHES ON NON-SERVICE SIDES AND 30 INCHES ON SERVICE SIDES. MAINTAIN MINIMUM CLEARANCE FOR CONDENSER AIR FLOW AS RECOMMENDED BY UNIT MANUFACTURER. MAINTAIN MINIMUM CLEARANCE AS REQUIRED TO OPEN ACCESS AND CONTROL DOORS ON UNIT FOR SERVICE, MAINTENANCE, AND INSPECTION. MAINTAIN MINIMUM ELECTRICAL CLEARANCE AS REQUIRED BY NEC.

REMARKS:
1. PROVIDE WITH LOW AMBIENT CONTROL DOWN TO 20°F.
2. PROVIDE WITH DISCONNECT SWITCH.
3. REFRIGERANT LINES TO BE SIZED PER MANUFACTURER'S REQUIREMENTS.
4. PROVIDE AS HEAT PUMP UNIT.

# VRF AIR COOLED CONDENSING UNIT

| MARK | MIN. TOTAL CAPACITY COOLING (BTUH) | MIN. TOTAL CAPACITY HEATING (BTUH) | OUTDOOR AIR TEMP. (°F) | MINIMUM EER/ SEER | CURRENT CHARAC. | MCA | MOCP | RELATED UNIT MARK | REMARKS |
|---|---|---|---|---|---|---|---|---|---|
| OACU-1 | 138,000 | 154,000 | 105.0 | 11.9/- | 460/60/3 | 27.9 | 40.0 | OAU-1 | 1,2,3,4,5 |
| OACU-2A | 184,000 | 206,000 | 105.0 | 13.0/- | 460/60/3 | 21.1 | 25.0 | OAU-2 | 1,2,3,4,5 |
| OACU-2B | | | | | 460/60/3 | 21.1 | 25.0 | | |
| VRFCU-1A | 273,3990 | 182,570 | 105.0 | 11.3/- | 460/60/3 | 21.3 | 25.0 | VRF-1-1,2,3,4,5 6,7A,7B,8,9,10 | 1,2,3,4,5 |
| VRFCU-1B | | | | | 460/60/3 | 24.9 | 25.0 | | |
| VRFCU-2 | 197,100 | 184,970 | 105.0 | 12.3/- | 460/60/3 | 28.3 | 30.0 | VRF-2-1,2,3,4,5,6,7,8A 8B,9,10,11,12,13,14,15 | 1,2,3,4,5 |
| VRFCU-3A | 269,670 | 173,010 | 105.0 | 12.0/- | 460/60/3 | 21.3 | 25.0 | VRF-3-1A,1B,2,3,4,5,6,7 8,9,10,11,12,13,14,15A 15B,16,17,18,19,20,21 22,23,24 | 1,2,3,4,5 |
| VRFCU-3B | | | | | 460/60/3 | 21.3 | 25.0 | | |
| VRFCU-4A | 370,230 | 157,260 | 105.0 | 11.3/- | 460/60/3 | 21.3 | 25.0 | VRF-4-1,2,3,4,5A,5B,6A 6B,7,8A,8B,9,10,11,12 | 1,2,3,4,5 |
| VRFCU-4B | | | | | 460/60/3 | 24.9 | 25.0 | | |

GENERAL NOTES:
1. MINIMUM RECOMMENDED CLEARANCE AROUND ROOFTOP UNIT IS 12 INCHES ON NON-SERVICE SIDES AND 30 INCHES ON SERVICE SIDES. MAINTAIN MINIMUM CLEARANCE FOR CONDENSER AIR FLOW AS RECOMMENDED BY UNIT MANUFACTURER. MAINTAIN MINIMUM CLEARANCE AS REQUIRED TO OPEN ACCESS AND CONTROL DOORS ON UNIT FOR SERVICE, MAINTENANCE, AND INSPECTION. MAINTAIN MINIMUM ELECTRICAL CLEARANCE AS REQUIRED BY NEC.

REMARKS:
1. PROVIDE WITH LOW AMBIENT CONTROL DOWN TO 20°F.
2. PROVIDE WITH DISCONNECT SWITCH.
3. REFRIGERANT LINES TO BE SIZED PER MANUFACTURER'S REQUIREMENTS.
4. CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING DX EXPANSION VALVES. ELECTRICIAN SHALL BE RESPONSIBLE FOR WIRING 208-230V/1PH DX EXPANSION VALVES.
5. PROVIDE HEAT RECOVERY UNIT.

# DX AIR HANDLING UNIT UNIT

| MARK | FAN | | | | | COOLING | | | MCA | MOCP | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | SUPPLY AIR CFM | OUTSIDE AIR CFM | EXT. STATIC PRESSURE (IN. W.C.) | HORSE POWER | CURRENT CHARAC. | AIR TEMPERATURE (°F) ENTERING DRY BULB | AIR TEMPERATURE (°F) ENTERING WET BULB | MIN. TOTAL CAPACITY (MBH) | | | |
| | | | | | | | | MIN. SENS. CAPACITY (MBH) | | | |
| AHU-1 | 5,500 | 550 | 1.00 | 5.0 | 460/3/60 | 78.0 | 65.0 | 190,430 | 136,500 | 8.4 | 15.0 | 1,2,3,4,5,6,7 |

GENERAL NOTES:
1. EXTERNAL STATIC PRESSURE INCLUDES LOSSES DUE TO DUCTWORK, AIR DEVICES, DAMPERS, AND DUCT MOUNTED HOT WATER COILS WHERE APPLICABLE. DIRTY FILTER AND UNIT CASING MUST BE ADDED TO EXTERNAL STATIC PRESSURE TO OBTAIN TOTAL PRESSURE LOSS. INCREASE HORSEPOWER AS REQUIRED TO MEET YOUR TOTAL PRESSURE LOSS. COORDINATE WITH ELECTRICIAN.
2. MAINTAIN MINIMUM CLEARANCE FOR COIL PULL AS RECOMMENDED BY UNIT MANUFACTURER. MAINTAIN MINIMUM CLEARANCE AS REQUIRED TO OPEN ACCESS AND CONTROL DOORS ON UNIT FOR SERVICE, MAINTENANCE, AND INSPECTION. MAINTAIN MINIMUM ELECTRICAL CLEARANCE AS REQUIRED BY NEC.

REMARKS:
1. PROVIDE VERTICAL UNIT.
2. PROVIDE WITH DISCONNECT SWITCH.
3. PROVIDE WITH 2" MERV 8 FILTERS.
4. PROVIDE UNIT WITH CONDENSATE PUMP. CONDENSATE PUMP SHALL BE FRANKLIN ELECTRIC LITTLE GIANT VCL24-ULS OR APPROVED EQUAL.
5. PROVIDE A WATER LEVEL SENSING DEVICE IN THE PRIMARY DRAIN PAN. THIS DEVICE SHALL SHUT OFF THE APPLIANCE IN THE EVENT THE PRIMARY DRAIN LINE BECOMES RESTRICTED.
6. PROVIDE WITH REMOTE HEAT PUMP CONDENSING UNIT. DX COIL SHALL BE PROVIDED WITH DUAL CIRCUIT INTERTWINED COIL.
7. CONTRACTOR SHALL COORDINATE WITH MANUFACTURER TO PROVIDE THE PROPER DISCHARGE PLENUM SECTION HEIGHT.

# VRF BRANCH SELECTOR

| MARK | CURRENT CHARACTERISTIC | MCA | DIMENSION (WXHXL) | WEIGHT (LBS) | REMARKS |
|---|---|---|---|---|---|
| OABS-1 | 208/1/60 | 0.6 | 23.3X9.5X23.7 | 72.8 | 1,2,3 |
| OABS-2 | 208/1/60 | 0.8 | 23.3X9.5X23.7 | 81.6 | 1,2,3 |
| BS-1-1 | 208/1/60 | 0.6 | 23.3X9.5X23.7 | 72.8 | 1,2,3 |
| BS-1-2 | 208/1/60 | 0.4 | 13.7X9.5X23.7 | 48.5 | 1,2,3 |
| BS-2-1 | 208/1/60 | 0.8 | 23.3X9.5X23.7 | 81.6 | 1,2,3 |
| BS-2-2 | 208/1/60 | 0.8 | 23.3X9.5X23.7 | 81.6 | 1,2,3 |
| BS-3-1 | 208/1/60 | 1.0 | 32.3X11.7X23.7 | 101.4 | 1,2,3 |
| BS-3-2 | 208/1/60 | 1.2 | 32.3X11.7X23.7 | 105.8 | 1,2,3 |
| BS-4-1 | 208/1/60 | 0.8 | 23.3X9.5X23.7 | 81.6 | 1,2,3 |
| BS-4-2 | 208/1/60 | 0.6 | 23.3X9.5X23.7 | 72.8 | 1,2,3 |

REMARKS:
1. BRANCH SELECTOR MODULES ARE TYPICAL. SEE DRAWINGS AND PIPING SCHEMATICS FOR QUANTITY AND LOCATION.
2. CONTRACTOR TO INSTALL 'FULL PORT' ISOLATION VALVES AND SCHRADER VALVE UPSTREAM OF EACH BRANCH SELECTOR BOX.
3. BRANCH SELECTORS SHALL HAVE BRAZED CONNECTIONS.

# GRILLE

| MARK | SERVICE | TYPE | DAMPER | CONSTRUCTION MATERIAL | FINISH COLOR | MANUFACTURER | MODEL NUMBER | REMARKS |
|---|---|---|---|---|---|---|---|---|
| A | SUPPLY AIR | DIFFUSER | - | STEEL | - | TITUS | OMNI | EXPOSED T-BAR FRAME STYLE WITH 24"X24" FACE |
| B | RETURN AIR | DIFFUSER | - | STEEL | - | TITUS | PAR | EXPOSED T-BAR CEILING WITH A 24"X24" FACE PERFORATED |
| C | SUPPLY AIR | GRILLE | - | STEEL | - | TITUS | 300RL | DOUBLE DEFLECTION SIDEWALL GRILLE WITH HORIZONTAL FRONT BARS. SURFACE MOUNTED. |

GENERAL NOTES:
1. COORDINATE AIR DEVICE FINISH COLOR WITH ARCHITECT.

REMARKS:
1. N/A

DS02

# DAMPER

| MARK | ACTUATOR | DUTY | BLADE ACTION | MANUFACTURER | MODEL NUMBER | REMARKS |
|---|---|---|---|---|---|---|
| D-1 | MANUAL BALANCING | UNDER 9" WIDE | N/A | N/A | N/A | SEE SMACNA CONSTRUCTION DETAILS REFERENCED "TYPICAL CONSTRUCTION DETAILS FOR LOW VELOCITY DUCTS." |
| D-2 | MANUAL BALANCING | OVER 9" WIDE | OPPOSED | RUSKIN | MD-35 | MANUAL DAMPER WITH STANDARD CONSTRUCTION. FEATURES AND VENTLOCK #639 LOCKING REGULATOR. |
| D-3 | MOTORIZED | OVER 9" WIDE | OPPOSED | RUSKIN | CD-60 | LOW LEAKAGE DAMPER WITH BLADE SEALS |

NOTES:
N/A - NOT APPLICABLE

DS01

# VRF FAN/COIL UNIT - ADMINISTRATION ANNEX

| MARK | FAN | | | | COOLING | | | | ELECTRIC HEATING | | MCA | MOP | ASSOC. CONDENSING UNIT | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | SUPPLY AIR CFM | OUTSIDE AIR CFM | EXT. STATIC PRESSURE (IN. W.C.) | CURRENT CHARAC. | AIR TEMPERATURE (°F) ENTERING DRY BULB | AIR TEMPERATURE (°F) ENTERING WET BULB | MIN. TOTAL CAPACITY (BTUH) | MIN. SENSIBLE CAPACITY (BTUH) | ENTERING AIR TEMP. (°F) | MINIMUM CAPACITY (BTUH) | | | | |
| VRF-1-1 | 1,210 | 0 | - | 208/1/60 | 75.0 | 62.5 | 25,790 | 19,050 | 70.0 | 20,080 | 1.3 | 15.0 | VRFCU-1 | 1,2,3,4,6,9 |
| VRF-1-2 | 1,200 | 0 | - | 208/1/60 | 75.0 | 62.5 | 25,790 | 19,050 | 70.0 | 19,980 | 1.3 | 15.0 | VRFCU-1 | 1,2,3,4,6,9 |
| VRF-1-3 | 1,040 | 0 | - | 208/1/60 | 75.0 | 62.5 | 25,790 | 19,050 | 70.0 | 16,020 | 1.3 | 15.0 | VRFCU-1 | 1,2,3,4,6,9 |
| VRF-1-4 | 1,120 | 0 | - | 208/1/60 | 75.0 | 62.5 | 25,790 | 19,050 | 70.0 | 16,120 | 1.3 | 15.0 | VRFCU-1 | 1,2,3,4,6,9 |
| VRF-1-5 | 1,040 | 0 | - | 208/1/60 | 75.0 | 62.5 | 25,790 | 19,050 | 70.0 | 16,120 | 1.3 | 15.0 | VRFCU-1 | 1,2,3,4,6,9 |
| VRF-1-6 | 1,120 | 0 | - | 208/1/60 | 75.0 | 62.5 | 25,790 | 19,050 | 70.0 | 16,120 | 1.3 | 15.0 | VRFCU-1 | 1,2,3,4,6,9 |
| VRF-1-7A | 705 | 0 | - | 208/1/60 | 75.0 | 62.5 | 15,460 | 13,650 | 70.0 | 10,250 | 0.6 | 15.0 | VRFCU-1 | 1,2,3,4,6,9 |
| VRF-1-7B | 705 | 0 | - | 208/1/60 | 75.0 | 62.5 | 15,460 | 13,650 | 70.0 | 10,250 | 0.6 | 15.0 | VRFCU-1 | 1,2,3,4,6,9 |
| VRF-1-8 | 1,670 | 90 | 0.2 | 208/1/60 | 75.0 | 62.5 | 42,330 | 30,230 | 70.0 | 28,140 | 2.8 | 15.0 | VRFCU-1 | 1,2,3,4,5,9 |
| VRF-1-9 | 1,760 | 80 | 0.2 | 208/1/60 | 75.0 | 62.5 | 47,720 | 34,100 | 70.0 | 26,610 | 3.3 | 15.0 | VRFCU-1 | 1,2,3,4,5,9 |
| VRF-1-10 | 1,770 | 0 | 0.2 | 208/1/60 | 75.0 | 62.5 | 41,280 | 30,450 | 70.0 | 28,880 | 3.4 | 15.0 | VRFCU-1 | 1,2,3,4,5,9 |
| | | | | | | | | | | | | | | |
| VRF-2-1 | 350 | 25 | - | 208/1/60 | 75.0 | 62.5 | 8,160 | 7,250 | 70.0 | 6,940 | 0.3 | 15.0 | VRFCU-2 | 1,2,3,4,6,9 |
| VRF-2-2 | 260 | 25 | - | 208/1/60 | 75.0 | 62.5 | 8,160 | 7,250 | 70.0 | 4,850 | 0.3 | 15.0 | VRFCU-2 | 1,2,3,4,6,9 |
| VRF-2-3 | 270 | 25 | - | 208/1/60 | 75.0 | 62.5 | 6,440 | 5,720 | 70.0 | 4,850 | 0.3 | 15.0 | VRFCU-2 | 1,2,3,4,6,9 |
| VRF-2-4 | 280 | 25 | - | 208/1/60 | 75.0 | 62.5 | 6,440 | 5,720 | 70.0 | 4,850 | 0.3 | 15.0 | VRFCU-2 | 1,2,3,4,6,9 |
| VRF-2-5 | 500 | 0 | - | 208/1/60 | 75.0 | 62.5 | 10,320 | 7,950 | 70.0 | 8,620 | 0.3 | 15.0 | VRFCU-2 | 1,2,3,4,6,9 |
| VRF-2-6 | 590 | 0 | - | 208/1/60 | 75.0 | 62.5 | 12,880 | 9,570 | 70.0 | 11,270 | 0.4 | 15.0 | VRFCU-2 | 1,2,3,4,6,9 |
| VRF-2-7 | 530 | 0 | - | 208/1/60 | 75.0 | 62.5 | 10,320 | 7,950 | 70.0 | 7,390 | 0.3 | 15.0 | VRFCU-2 | 1,2,3,4,6,9 |
| VRF-2-8A | 840 | 0 | - | 208/1/60 | 75.0 | 62.5 | 20,640 | 16,680 | 70.0 | 11,980 | 0.7 | 15.0 | VRFCU-2 | 1,2,3,4,6,9 |
| VRF-2-8B | 840 | 0 | - | 208/1/60 | 75.0 | 62.5 | 20,640 | 16,680 | 70.0 | 11,980 | 0.7 | 15.0 | VRFCU-2 | 1,2,3,4,6,9 |
| VRF-2-9 | 610 | 0 | - | 208/1/60 | 75.0 | 62.5 | 12,880 | 9,570 | 70.0 | 8,480 | 0.4 | 15.0 | VRFCU-2 | 1,2,3,4,6,9 |
| VRF-2-10 | 720 | 0 | - | 208/1/60 | 75.0 | 62.5 | 15,460 | 13,650 | 70.0 | 9,540 | 0.6 | 15.0 | VRFCU-2 | 1,2,3,4,6,9 |
| VRF-2-11 | 350 | 25 | - | 208/1/60 | 75.0 | 62.5 | 8,160 | 7,250 | 70.0 | 5,570 | 0.3 | 15.0 | VRFCU-2 | 1,2,3,4,6,9 |
| VRF-2-12 | 260 | 25 | - | 208/1/60 | 75.0 | 62.5 | 6,440 | 5,720 | 70.0 | 4,870 | 0.3 | 15.0 | VRFCU-2 | 1,2,3,4,6,9 |
| VRF-2-13 | 340 | 25 | - | 208/1/60 | 75.0 | 62.5 | 8,160 | 7,250 | 70.0 | 4,870 | 0.3 | 15.0 | VRFCU-2 | 1,2,3,4,6,9 |
| VRF-2-14 | 470 | 0 | - | 208/1/60 | 75.0 | 62.5 | 10,320 | 7,950 | 70.0 | 8,310 | 0.3 | 15.0 | VRFCU-2 | 1,2,3,4,6,9 |
| VRF-2-15 | 1,340 | 75 | 0.2 | 208/1/60 | 75.0 | 62.5 | 31,680 | 22,730 | 70.0 | 18,090 | 2.5 | 15.0 | VRFCU-2 | 1,2,3,4,5,9 |
| | | | | | | | | | | | | | | |
| VRF-3-1A | 405 | 0 | - | 208/1/60 | 75.0 | 62.5 | 8,160 | 7,250 | 70.0 | 6,870 | 0.3 | 15.0 | VRFCU-3 | 1,2,3,4,6,9 |
| VRF-3-1B | 405 | 0 | - | 208/1/60 | 75.0 | 62.5 | 8,160 | 7,250 | 70.0 | 6,870 | 0.3 | 15.0 | VRFCU-3 | 1,2,3,4,6,9 |
| VRF-3-2 | 510 | 0 | - | 208/1/60 | 75.0 | 62.5 | 10,330 | 7,950 | 70.0 | 4,450 | 0.3 | 15.0 | VRFCU-3 | 1,2,3,4,6,9 |
| VRF-3-3 | 290 | 30 | - | 208/1/60 | 75.0 | 62.5 | 6,800 | 6,170 | 70.0 | 6,100 | 0.3 | 15.0 | VRFCU-3 | 1,2,3,4,6,9 |
| VRF-3-4 | 510 | 0 | - | 208/1/60 | 75.0 | 62.5 | 10,320 | 7,950 | 70.0 | 6,980 | 0.3 | 15.0 | VRFCU-3 | 1,2,3,4,6,9 |
| VRF-3-5 | 830 | 0 | - | 208/1/60 | 75.0 | 62.5 | 20,640 | 16,860 | 70.0 | 10,280 | 0.7 | 15.0 | VRFCU-3 | 1,2,3,4,6,9 |
| VRF-3-6 | 610 | 0 | - | 208/1/60 | 75.0 | 62.5 | 12,880 | 9,570 | 70.0 | 10,400 | 0.4 | 15.0 | VRFCU-3 | 1,2,3,4,6,9 |
| VRF-3-7 | 310 | 0 | - | 208/1/60 | 75.0 | 62.5 | 8,160 | 7,250 | 70.0 | 2,150 | 0.3 | 15.0 | VRFCU-3 | 1,2,3,4,6,9 |
| VRF-3-8 | 760 | 0 | - | 208/1/60 | 75.0 | 62.5 | 15,460 | 13,650 | 70.0 | 8,440 | 0.6 | 15.0 | VRFCU-3 | 1,2,3,4,6,9 |
| VRF-3-9 | 540 | 0 | - | 208/1/60 | 75.0 | 62.5 | 12,880 | 9,570 | 70.0 | 6,310 | 0.4 | 15.0 | VRFCU-3 | 1,2,3,4,6,9 |
| VRF-3-10 | 480 | 30 | - | 208/1/60 | 75.0 | 62.5 | 10,320 | 7,950 | 70.0 | 5,720 | 0.3 | 15.0 | VRFCU-3 | 1,2,3,4,6,9 |
| VRF-3-11 | 410 | 0 | - | 208/1/60 | 75.0 | 62.5 | 8,160 | 7,250 | 70.0 | 6,870 | 0.3 | 15.0 | VRFCU-3 | 1,2,3,4,6,9 |
| VRF-3-12 | 340 | 0 | - | 208/1/60 | 75.0 | 62.5 | 8,160 | 7,250 | 70.0 | 3,990 | 0.3 | 15.0 | VRFCU-3 | 1,2,3,4,6,9 |
| VRF-3-13 | 330 | 30 | - | 208/1/60 | 75.0 | 62.5 | 8,160 | 7,250 | 70.0 | 7,010 | 0.3 | 15.0 | VRFCU-3 | 1,2,3,4,6,9 |
| VRF-3-14 | 170 | 30 | - | 208/1/60 | 75.0 | 62.5 | 4,300 | 3,670 | 70.0 | 1,050 | 0.3 | 15.0 | VRFCU-3 | 1,2,3,4,6,9 |
| VRF-3-15A | 290 | 25 | - | 208/1/60 | 75.0 | 62.5 | 6,490 | 6,175 | 70.0 | 3,760 | 0.3 | 15.0 | VRFCU-3 | 1,2,3,4,6,9 |
| VRF-3-15B | 290 | 25 | - | 208/1/60 | 75.0 | 62.5 | 6,490 | 6,175 | 70.0 | 3,760 | 0.3 | 15.0 | VRFCU-3 | 1,2,3,4,6,9 |
| VRF-3-16 | 350 | 25 | - | 208/1/60 | 75.0 | 62.5 | 8,170 | 5,720 | 70.0 | 5,190 | 0.3 | 15.0 | VRFCU-3 | 1,2,3,4,6,9 |
| VRF-3-17 | 330 | 30 | - | 208/1/60 | 75.0 | 62.5 | 8,170 | 5,720 | 70.0 | 5,970 | 0.3 | 15.0 | VRFCU-3 | 1,2,3,4,6,9 |
| VRF-3-18 | 590 | 0 | - | 208/1/60 | 75.0 | 62.5 | 12,880 | 9,570 | 70.0 | 10,330 | 0.4 | 15.0 | VRFCU-3 | 1,2,3,4,6,9 |
| VRF-3-19 | 150 | 25 | - | 208/1/60 | 75.0 | 62.5 | 6,440 | 5,720 | 70.0 | 820 | 0.3 | 15.0 | VRFCU-3 | 1,2,3,4,6,9 |
| VRF-3-20 | 380 | 25 | - | 208/1/60 | 75.0 | 62.5 | 10,320 | 9,50 | 70.0 | 5,880 | 0.3 | 15.0 | VRFCU-3 | 1,2,3,4,6,9 |
| VRF-3-21 | 390 | 30 | - | 208/1/60 | 75.0 | 62.5 | 8,160 | 7,250 | 70.0 | 8,860 | 0.3 | 15.0 | VRFCU-3 | 1,2,3,4,6,9 |
| VRF-3-22 | 160 | 25 | - | 208/1/60 | 75.0 | 62.5 | 3,450 | 5,720 | 70.0 | 2,340 | 0.3 | 15.0 | VRFCU-3 | 1,2,3,4,6,9 |
| VRF-3-23 | 650 | 0 | - | 208/1/60 | 75.0 | 62.5 | 12,880 | 9,570 | 70.0 | 11,740 | 0.4 | 15.0 | VRFCU-3 | 1,2,3,4,6,9 |
| VRF-3-24 | 1,925 | 210 | 0.2 | 208/1/60 | 75.0 | 62.5 | 42,330 | 30,230 | 70.0 | 20,750 | 2.8 | 15.0 | VRFCU-3 | 1,2,3,4,5,9 |
| | | | | | | | | | | | | | | |
| VRF-4-1 | 470 | 0 | - | 208/1/60 | 75.0 | 62.5 | 10,320 | 7,950 | 70.0 | 8,590 | 0.3 | 15.0 | VRFCU-4 | 1,2,3,4,6,9 |
| VRF-4-2 | 540 | 0 | - | 208/1/60 | 75.0 | 62.5 | 10,290 | 8,040 | 70.0 | 4,090 | 2.8 | 15.0 | VRFCU-4 | 1,2,3,4,7,9 |
| VRF-4-3 | 1,130 | 0 | - | 208/1/60 | 75.0 | 62.5 | 25,790 | 19,055 | 70.0 | 19,480 | 1.3 | 15.0 | VRFCU-4 | 1,2,3,4,6,9 |
| VRF-4-4 | 350 | 0 | - | 208/1/60 | 75.0 | 62.5 | 10,290 | 8,040 | 70.0 | 11,390 | 0.8 | 15.0 | VRFCU-4 | 1,2,3,4,7,9 |
| VRF-4-5A | 560 | 0 | - | 208/1/60 | 75.0 | 62.5 | 15,460 | 13,650 | 70.0 | 3,540 | 0.6 | 15.0 | VRFCU-4 | 1,2,3,4,6,9 |
| VRF-4-5B | 560 | 0 | - | 208/1/60 | 75.0 | 62.5 | 15,460 | 13,650 | 70.0 | 3,540 | 0.6 | 15.0 | VRFCU-4 | 1,2,3,4,6,9 |
| VRF-4-6A | 560 | 0 | - | 208/1/60 | 75.0 | 62.5 | 15,460 | 13,650 | 70.0 | 3,490 | 0.6 | 15.0 | VRFCU-4 | 1,2,3,4,6,9 |
| VRF-4-6B | 560 | 0 | - | 208/1/60 | 75.0 | 62.5 | 15,460 | 13,650 | 70.0 | 3,490 | 0.6 | 15.0 | VRFCU-4 | 1,2,3,4,6,9 |
| VRF-4-7 | 780 | 0 | - | 208/1/60 | 75.0 | 62.5 | 20,640 | 16,860 | 70.0 | 11,010 | 0.7 | 15.0 | VRFCU-4 | 1,2,3,4,6,9 |
| VRF-4-8A | 810 | 0 | - | 208/1/60 | 75.0 | 62.5 | 20,640 | 16,860 | 70.0 | 10,430 | 0.7 | 15.0 | VRFCU-4 | 1,2,3,4,6,9 |
| VRF-4-8B | 810 | 0 | - | 208/1/60 | 75.0 | 62.5 | 20,640 | 16,860 | 70.0 | 10,430 | 0.7 | 15.0 | VRFCU-4 | 1,2,3,4,6,9 |
| VRF-4-9 | 390 | 30 | - | 208/1/60 | 75.0 | 62.5 | 8,160 | 7,250 | 70.0 | 5,610 | 0.3 | 15.0 | VRFCU-4 | 1,2,3,4,6,9 |
| VRF-4-10 | 1,100 | 0 | - | 208/1/60 | 75.0 | 62.5 | 20,640 | 16,860 | 70.0 | 17,940 | 0.7 | 15.0 | VRFCU-4 | 1,2,3,4,6,9 |
| VRF-4-11 | 2,540 | 170 | 0.2 | 208/1/60 | 75.0 | 62.5 | 82,520 | 61,200 | 70.0 | 44,230 | 10.1 | 15.0 | VRFCU-4 | 1,2,3,4,5,9 |
| VRF-4-12 | 370 | 0 | - | 208/1/60 | 75.0 | 62.5 | 15,460 | 11,470 | 70.0 | 19,990 | 0.4 | 15.0 | VRFCU-4 | 1,2,3,4,8,9 |

GENERAL NOTES
1. EXTERNAL STATIC PRESSURE INCLUDES LOSSES DUE TO DUCTWORK, AIR DEVICES, DAMPERS, AND DUCT MOUNTED HOT WATER COILS WHERE APPLICABLE. DIRTY FILTER AND UNIT CASING MUST BE ADDED TO EXTERNAL STATIC PRESSURE TO OBTAIN TOTAL PRESSURE LOSS. INCRESAE HORSEPOWER AS REQUIRED TO MEET YOUR TOTAL PRESSURE LOSS. COORDINATE WITH ELECTRICIAN.
2. MAINTAIN MINIMUM CLEARANCE FOR COIL UPLL AS RECOMMENDED BY UNIT MANUFACTURERE. MAINTAIN MINIMUM CLEARANCE AS REQUIRED TO OPEN ACCESS AND CONTROL DOORS ON UNIT FOR SERVICE, MAINENANCE, AND INSPECTION. MAINAIN MINIMUM ELECTRICAL CELARANCE AS REQUIRED BY NEC.

REMARKS
1. UNIT TO BE INSTALLED PER MANUFACTURER'S INSTALLATION INSTRUCTIONS.
2. CONTROLLED BY PROGRAMMABLE WIRED THERMOSTAT.
3. REFRIGERANT LINES TO BE SIZED PER MANUFACTURER'S REQUIREMENTS.
4. PROVIDE WITH INTEGRAL CONDENSATE PUMP.
5. PROVIDE DUCTED CONCEALED CEILING UNIT.
6. PROVIDE CEILING MOUNTED 4-WAY CASSETTE.
7. PROVIDE SLIM CEILING SUSPENDED UNIT.
8. PROVIDE HIGH WALL FAN COIL UNIT.
9. PROVIDE CONDENSATE OVERFLOW SWITCH.

AS05


Salas O'Brien
HOUSTON
10930 W. SAM HOUSTON PKWY NORTH SUITE 900
HOUSTON, TX 77064
Salas O'Brien Registration: F-4111
Salas O'Brien Project Number: 2022-04653-00



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PROFESSIONAL SEAL




04-20-2023

| ISSUE DATE | DESCRIPTION |
|---|---|
| 04-11-2023 | 100% |

2022-04653-00
Owner
BEAUMONT ISD
AIR HANDLER
UPGRADES

Beaumont ISD
Preparing Our Next Generation

NOTES

REVISIONS

| NUMBER | DESCRIPTION | DATE | CHECKER |
|---|---|---|---|
| | | | |

CHECKED BY SH
DRAWN BY AA

SHEET NAME
MECHANICAL SCHEDULES AND DETAILS - ADMIN ANNEX

SHEET NUMBER
M5.1

REVISION

PROJECT SCOPE SHOWN AS A PART OF THE PROJECT ON THIS CAMPUS WILL REQUIRE IDENTICAL ARCHITECTURAL WORK. ALL SUCH WORK SHALL BE INCLUDED IN THE CONTRACTOR'S BID. THIS WORK SHALL BE PERFORMED WITHOUT ANY IMPACT TO THE CONSTRUCTION SCHEDULE AND/OR ADDITIONAL COST.

CONTRACTOR SHALL REMOVE AND REPLACE CEILING WHERE REQUIRED TO COMPLETE THE INDICATED SCOPE OF PROJECT SCOPE WORK. EXISTING CEILING SHALL BE RE-INSTALLED IN THE EXACT CONDITION EXISTING PRIOR TO THE BEGINNING OF CONSTRUCTION. IF A MATCH IS NOT POSSIBLE, CONTRACTOR SHALL REPLACE ALL CEILING FROM WALL TO WALL OR BOUNDARY SEPARATION IN CORRIDOR, CLASSROOM, OR ANY OTHER SPACE.

PRIOR TO STARTING ANY WORK AND PRIOR TO SUBSTANTIAL COMPLETION, SCHEDULE WITH THE ENGINEER AND OWNER A DEMONSTRATION AND TESTING OF THE EXISTING FIRE ALARM AND CAMERA SYSTEM. THE CONTRACTOR SHALL HAVE ALL SUBCONTRACTORS WORKING ON THE PROJECT BE PRESENT FOR THESE TESTS AND DEMONSTRATIONS.

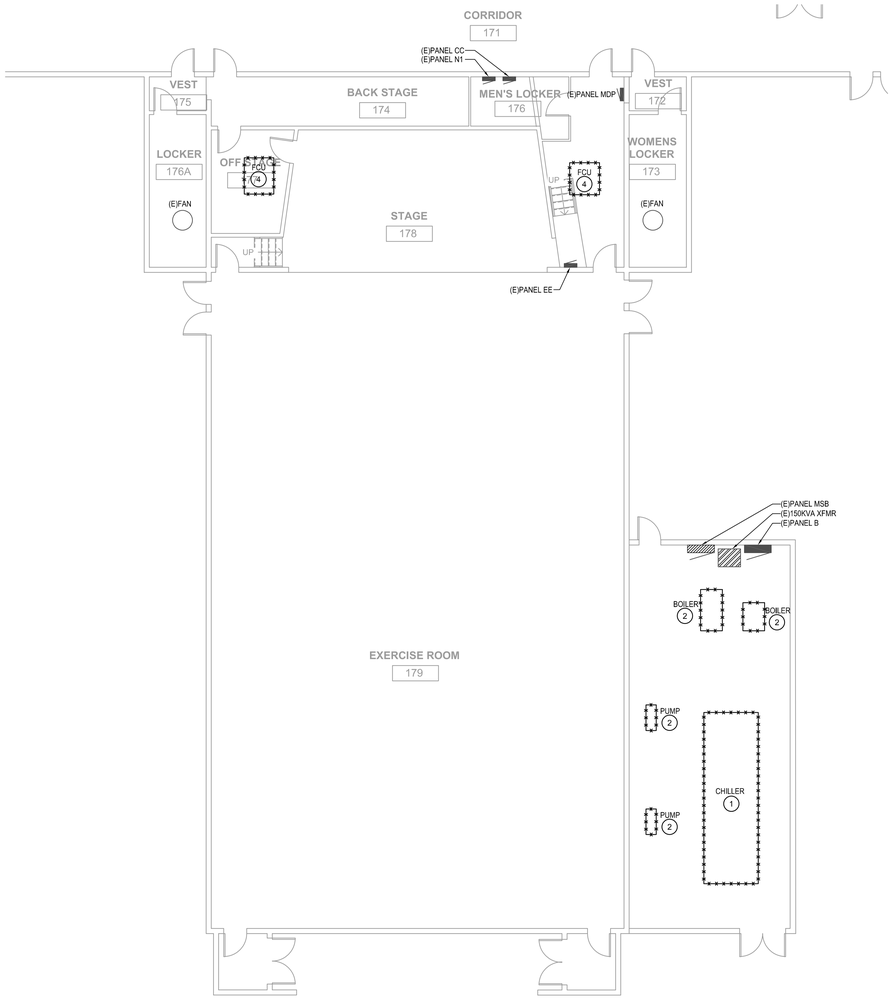
DISCONNECT AND REMOVE
EXISTING TO REMAIN
NEW WORK

## ELECTRICAL GENERAL NOTES:

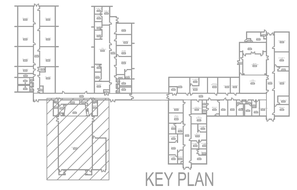
1. DISCONNECT AND REMOVE ALL CONDUIT, WIRE, AND DISCONNECTING MEANS ASSOCIATED WITH HVAC EQUIPMENT BEING REMOVED.
2. UNLESS NOTED OTHERWISE, ALL EXISTING ELECTRICAL PANELBOARDS, TRANSFORMERS, SWITCHBOARDS, ETC...SHALL REMAIN
3. WHERE SCOPE REQUIRES REMOVAL / RE-INSTALLATION OF CEILING GRID, ELECTRICAL CONTRACTOR SHALL DO THE FOLLOWING:
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   2. REINSTALL ALL EXISTING LIGHT FIXTURES AND ALL CEILING MOUNTED ELECTRICAL IN CEILINGS WHERE APPLICABLE. DEVICES INCLUDE BUT ARE NOT LIMITED TO: LIGHT FIXTURES, EXIT SIGNS, FIRE ALARM DEVICES, SECURITY DEVICES, COMMUNICATION SPEAKERS, CAMERAS, OCCUPANCY SENSORS, ETC.

## ELECTRICAL KEYED NOTES:

1. DISCONNECT AND REMOVE ALL ELECTRICAL TO EXISTING CHILLER. REMOVE DISCONNECT SWITCH AND ASSOCIATED CONDUIT/WIRE BACK TO SOURCE.
2. DISCONNECT AND REMOVE ALL ELECTRICAL TO EXISTING PUMP. REMOVE DISCONNECT SWITCH AND ASSOCIATED CONDUIT/WIRE BACK TO SOURCE.
3. DISCONNECT AND REMOVE ALL ELECTRICAL TO EXISTING BOILER. REMOVE DISCONNECT SWITCH AND ASSOCIATED CONDUIT/WIRE BACK TO SOURCE.
4. DISCONNECT AND REMOVE ALL ELECTRICAL TO EXISTING FAN COIL UNIT. REMOVE DISCONNECT SWITCH AND ASSOCIATED CONDUIT/WIRE BACK TO SOURCE.




N 1 **ELECTRICAL DEMOLITION FLOOR PLAN - AREA A - ADMIN ANNEX**
SCALE: 1/8" = 1'-0"


KEY PLAN

Salas O'Brien
HOUSTON
10930 W. SAM HOUSTON PKWY NORTH SUITE 900
HOUSTON, TX 77064
Salas O'Brien Registration: F-4111
Salas O'Brien Project Number: 2022-04653-00

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PROFESSIONAL SEAL

LICENSED PROFESSIONAL ENGINEER
BRADLEY KALMANS
80219
LICENSED
ELECTRICAL
STATE OF TEXAS
04-20-2023

| ISSUE DATE | DESCRIPTION |
|---|---|
| 04-11-2023 | 100% |

2022-04653-00
Owner

# BEAUMONT ISD AIR HANDLER UPGRADES

Beaumont ISD
Preparing Our Next Generation

NOTES

REVISIONS

| NUMBER | DESCRIPTION | DATE | CHECKER |
|---|---|---|---|
| | | | |

CHECKED BY: JZ
DRAWN BY: DES

SHEET NAME
ELECTRICAL DEMOLITION FLOOR PLAN - AREA A - ADMIN ANNEX

SHEET NUMBER: E1.1
REVISION:




N

1 **ELECTRICAL DEMOLITION FLOOR PLAN - AREA B - ADMIN ANNEX**
SCALE: 1/8" = 1'-0"

PROJECT SCOPE SHOWN AS A PART OF THE PROJECT ON THIS CAMPUS WILL REQUIRE IDENTICAL ARCHITECTURAL WORK. ALL SUCH WORK SHALL BE INCLUDED IN THE CONTRACTOR'S BID. THIS WORK SHALL BE PERFORMED WITHOUT ANY IMPACT TO THE CONSTRUCTION SCHEDULE AND/OR ADDITIONAL COST.

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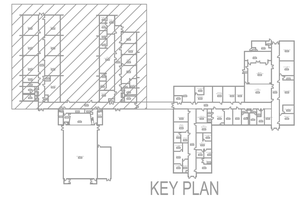
DISCONNECT AND REMOVE
EXISTING TO REMAIN
NEW WORK

## ELECTRICAL GENERAL NOTES:

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PROFESSIONAL SEAL

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BRADLEY KALMANS
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# BEAUMONT ISD AIR HANDLER UPGRADES

Beaumont ISD
Preparing Our Next Generation

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CHECKED BY: JZ
DRAWN BY: DES

SHEET NAME
ELECTRICAL DEMOLITION FLOOR PLAN - AREA B - ADMIN ANNEX

SHEET NUMBER: E1.2
REVISION:




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## 1 ELECTRICAL DEMOLITION FLOOR PLAN - AREA C - ADMIN ANNEX

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

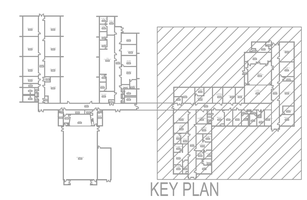
DISCONNECT AND REMOVE
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# BEAUMONT ISD AIR HANDLER UPGRADES

Beaumont ISD
Preparing Our Next Generation

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CHECKED BY: JZ

DRAWN BY: DES

SHEET NAME

ELECTRICAL DEMOLITION FLOOR PLAN - AREA C - ADMIN ANNEX

SHEET NUMBER: E1.3

REVISION

EXISTING TO REMAIN
NEW WORK

## ELECTRICAL GENERAL NOTES:

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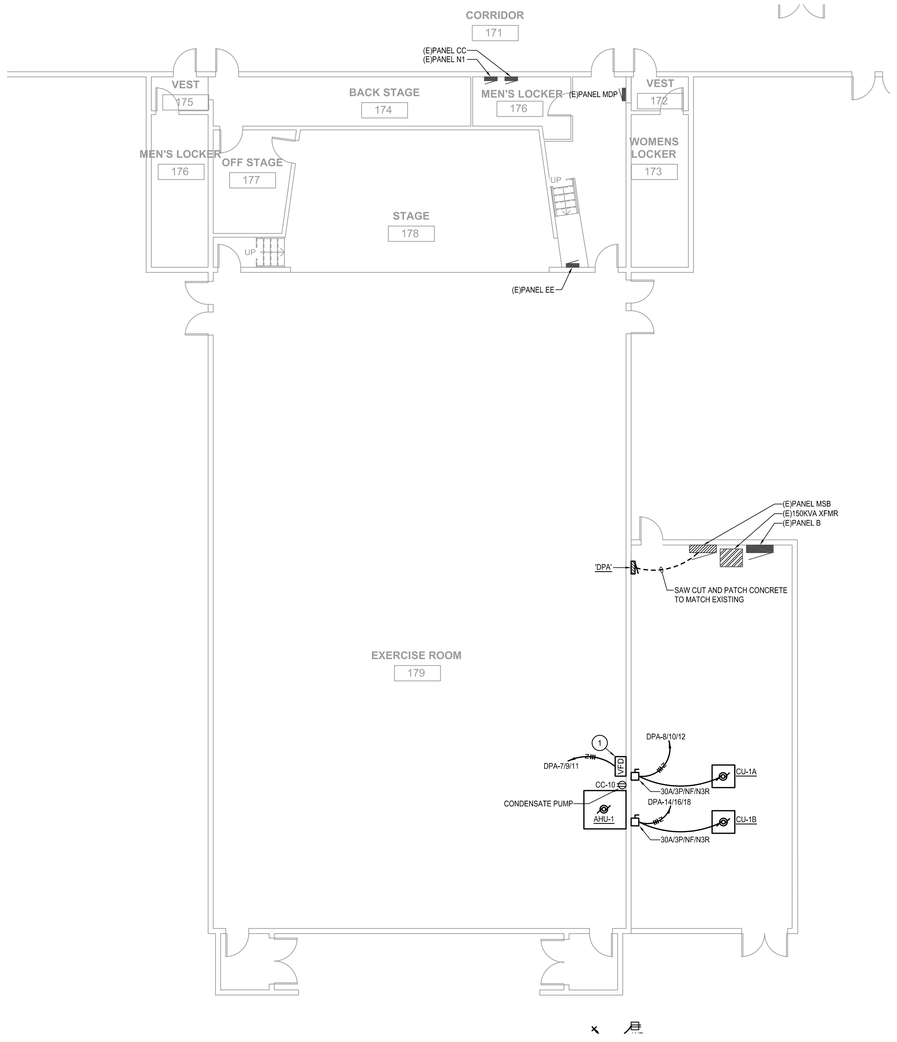
## ELECTRICAL KEYED NOTES:

1. VARIABLE FREQUENCY DRIVE MOTOR CONTROLLER, PROVIDED BY DIVISION 23, INSTALLED BY DIVISION 26.

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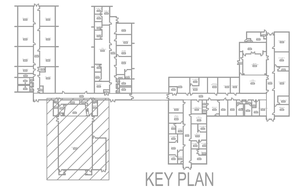
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N

1 **ELECTRICAL POWER FLOOR PLAN - AREA A - ADMIN ANNEX**
SCALE: 1/8" = 1'-0"


KEY PLAN


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PROFESSIONAL SEAL




04-20-2023

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Owner

# BEAUMONT ISD AIR HANDLER UPGRADES

Beaumont ISD
Preparing Our Next Generation

NOTES

REVISIONS

| NUMBER | DESCRIPTION | DATE | CHECKER |
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CHECKED BY: JZ

DRAWN BY: DES

SHEET NAME

ELECTRICAL POWER FLOOR PLAN - AREA A - ADMIN ANNEX

SHEET NUMBER: E2.1

REVISION:

EXISTING TO REMAIN
NEW WORK

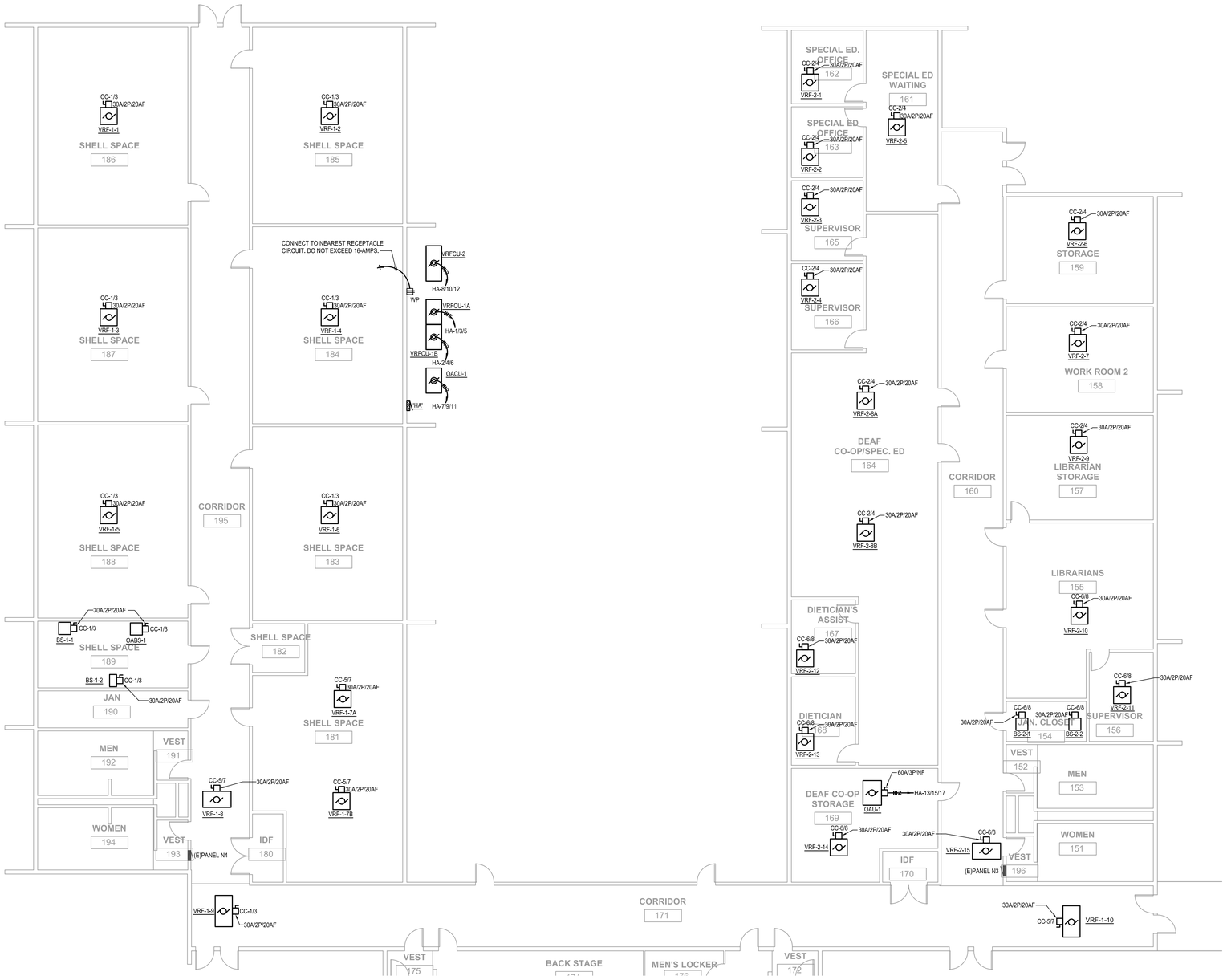
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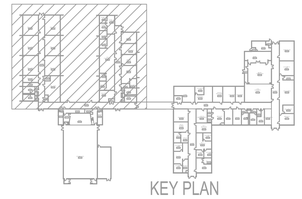
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1 **ELECTRICAL POWER FLOOR PLAN - ADMIN ANNEX**
SCALE: 1/8" = 1'-0"


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Beaumont ISD
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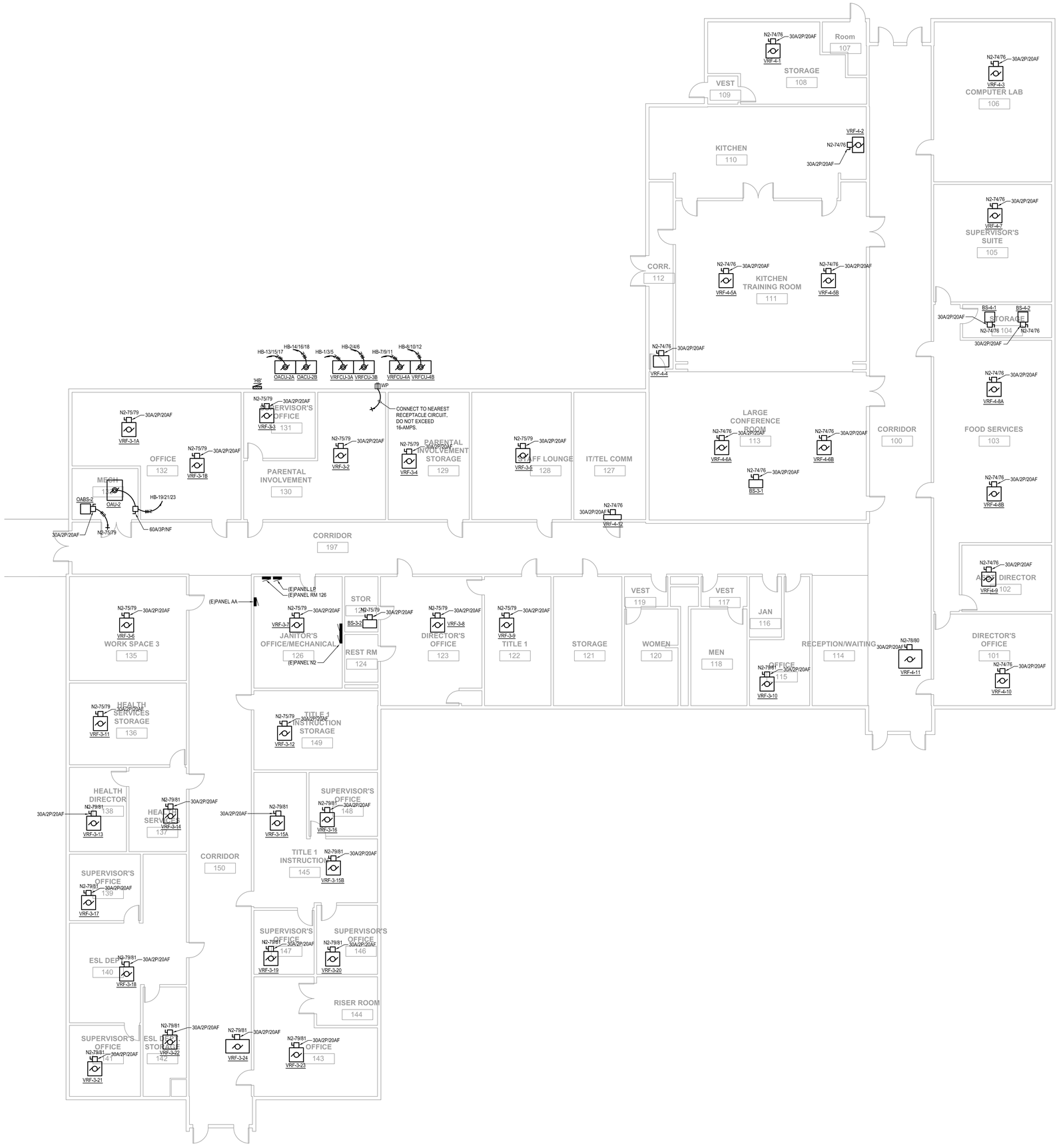
REVISIONS

| NUMBER | DESCRIPTION | DATE | CHECKER |
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CHECKED BY: JZ
DRAWN BY: DES

SHEET NAME
ELECTRICAL POWER FLOOR PLAN - AREA B - ADMIN ANNEX

SHEET NUMBER: E2.2
REVISION:




EXISTING TO REMAIN
NEW WORK

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## 1 ELECTRICAL POWER FLOOR PLAN - AREA C - ADMIN ANNEX

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

N

KEY PLAN


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# BEAUMONT ISD AIR HANDLER UPGRADES

Beaumont ISD
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CHECKED BY: JZ
DRAWN BY: DES

SHEET NAME

ELECTRICAL POWER FLOOR PLAN - AREA C - ADMIN ANNEX

SHEET NUMBER: E2.3
REVISION:

(EXISTING)

## PANEL 'CC'

LOCATION: BACK STAGE 174

120/208V.,3PH.,4W. 200 AMP MLO

MOUNTING: SURFACE NEMA-1 10 K ISCA

| CKT | LOAD | KVA | WIRE | BKR | | BKR | WIRE | KVA | LOAD | CKT |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | VRF & BRANCH SELECT. | 1,1 | #8 | 20/2 | | 20/2 | #8 | 1,0 | VRF & BRANCH SELECT. | 2 |
| 3 | 1-1 - 1-6 & BS | 1,1 | #8 | - | | - | #8 | 1,0 | 2-1 - 2-15 & BS | 4 |
| 5 | VRF UNITS | 0,9 | #8 | 20/2 | | 20/2 | #8 | 0,9 | VRF & BRANCH SELECT. | 6 |
| 7 | 1-7A - 1-10 | 0,9 | #8 | - | | - | #8 | 0,9 | 2-10 - 2-15 & BS | 8 |
| 9 | SPARE | | | 20/1 | | 20/1 | #12 | 0,2 | CONDENSATE PUMP | 10 |
| 11 | SPARE | | | 20/1 | | 20/1 | | | SPARE | 12 |
| 13 | EXISTING CIRCUIT | 0,4 | EX. | 20/1 | | 20/1 | EX. | 0,4 | EXISTING CIRCUIT | 14 |
| 15 | EXISTING CIRCUIT | 0,4 | EX. | 20/1 | | 20/1 | | | SPARE | 16 |
| 17 | EXISTING CIRCUIT | 0,4 | EX. | 20/1 | | 20/1 | | | SPARE | 18 |
| 19 | EXISTING CIRCUIT | 0,4 | EX. | 20/1 | | 20/1 | | | SPARE | 20 |
| 21 | EXISTING CIRCUIT | 0,4 | EX. | 20/1 | | 20/1 | | | SPARE | 22 |
| 23 | EXISTING CIRCUIT | 0,4 | EX. | 20/1 | | 20/1 | | | SPARE | 24 |
| 25 | EXISTING CIRCUIT | 0,4 | EX. | 20/1 | | 20/1 | | | SPARE | 26 |
| 27 | EXISTING CIRCUIT | 0,4 | EX. | 20/1 | | 20/1 | | | SPARE | 28 |
| 29 | EXISTING CIRCUIT | 0,4 | EX. | 20/1 | | 20/1 | | | SPARE | 30 |
| 31 | EXISTING CIRCUIT | 0,4 | EX. | 20/1 | | 20/1 | EX. | 1,0 | (E)LIGHTING CIRCUIT | 32 |
| 33 | SPACE | | | | | 20/1 | EX. | 1,0 | (E)LIGHTING CIRCUIT | 34 |
| 35 | SPACE | | | | | 20/1 | EX. | 1,0 | (E)LIGHTING CIRCUIT | 36 |
| 37 | SPACE | | | | | | | | SPACE | 38 |
| 39 | SPACE | | | | | | | | SPACE | 40 |
| 41 | SPACE | | | | | | | | SPACE | 42 |

EXISTING LOAD x 1.25 = 9,3 KVA
MISC. LOAD x 1,0 = 8,0 KVA
TOTAL KVA = 17.3 KVA

(1) REMOVE EXISTING CIRCUIT BREAKER AND PROVIDE NEW AS INDICATED.

(EXISTING SECTION 2)

## PANEL 'N2'

LOCATION: BACK STAGE 174

120/208V.,3PH.,4W. 150 AMP MLO

MOUNTING: SURFACE NEMA-1 10 K ISCA

| CKT | LOAD | KVA | WIRE | BKR | | BKR | WIRE | KVA | LOAD | CKT |
|---|---|---|---|---|---|---|---|---|---|---|
| 43 | EXISTING CIRCUIT | 0,4 | EX. | 20/1 | | 20/1 | EX. | 0,4 | EXISTING CIRCUIT | 44 |
| 45 | EXISTING CIRCUIT | 0,4 | EX. | 20/1 | | 20/1 | EX. | 0,4 | EXISTING CIRCUIT | 46 |
| 47 | EXISTING CIRCUIT | 0,5 | EX. | 20/2 | | 20/1 | EX. | 0,4 | EXISTING CIRCUIT | 48 |
| 49 | ----- | 0,5 | EX. | - | | 20/1 | EX. | 0,4 | EXISTING CIRCUIT | 50 |
| 51 | EXISTING CIRCUIT | 0,4 | EX. | 20/1 | | 20/1 | EX. | 0,4 | EXISTING CIRCUIT | 52 |
| 53 | EXISTING CIRCUIT | 0,4 | EX. | 20/1 | | 20/1 | EX. | 0,4 | EXISTING CIRCUIT | 54 |
| 55 | EXISTING CIRCUIT | 0,4 | EX. | 20/1 | | 20/1 | EX. | 0,4 | EXISTING CIRCUIT | 56 |
| 57 | EXISTING CIRCUIT | 0,4 | EX. | 20/1 | | 20/1 | EX. | 0,4 | EXISTING CIRCUIT | 58 |
| 59 | EXISTING CIRCUIT | 0,4 | EX. | 20/1 | | 20/1 | EX. | 0,4 | EXISTING CIRCUIT | 60 |
| 61 | EXISTING CIRCUIT | 0,4 | EX. | 20/1 | | 20/1 | EX. | 0,4 | EXISTING CIRCUIT | 62 |
| 63 | EXISTING CIRCUIT | 0,4 | EX. | 20/1 | | 20/1 | EX. | 0,4 | EXISTING CIRCUIT | 64 |
| 65 | EXISTING CIRCUIT | 0,4 | EX. | 20/1 | | 20/1 | EX. | 0,4 | EXISTING CIRCUIT | 66 |
| 67 | EXISTING CIRCUIT | 0,4 | EX. | 20/1 | | 20/1 | EX. | 0,4 | EXISTING CIRCUIT | 68 |
| 69 | EXISTING CIRCUIT | 0,4 | EX. | 20/1 | | 20/1 | EX. | 0,4 | EXISTING CIRCUIT | 70 |
| 71 | EXISTING CIRCUIT | 0,4 | EX. | 20/1 | | 20/1 | EX. | 0,4 | EXISTING CIRCUIT | 72 |
| 73 | EXISTING CIRCUIT | 0,4 | EX. | 20/1 | | 20/2 | #8 | 1,1 | VRF & BRANCH SELECT. | 74 |
| 75 | VRF & BRANCH SELECT. | 0,7 | #12 | 20/2 | | - | #8 | 1,1 | 4-1 - 4-10, 4-12 & BS | 76 |
| 77 | 3-1A - 3-12 & BS | 0,7 | #12 | - | | 20/2 | #8 | 1,0 | VRF-4-11 | 78 |
| 79 | VRF UNITS | 0,7 | #12 | 20/2 | | - | #8 | 1,0 | ---- | 80 |
| 81 | 3-13 - 3-24 | 0,7 | #12 | - | | | | | SPACE | 82 |
| 83 | SPACE | | | | | | | | SPACE | 84 |

EXISTING LOAD x 1.25 = 36,7 KVA
MISC. LOAD x 1,0 = 7,0 KVA
TOTAL KVA = 43.7 KVA

(1) PROVIDE NEW CIRCUIT BREAKER AS INDICATED.

## PANEL 'HA'

LOCATION: OUTSIDE

277/480V.,3PH.,4W. 200 AMP MCB

MOUNTING: SURFACE NEMA-3R 18 K ISCA

| CKT | LOAD | KVA | WIRE | BKR | | BKR | WIRE | KVA | LOAD | CKT |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | VRFCU-1A | 4,7 | #10 | 25/3 | | 25/3 | #10 | 4,7 | VRFCU-1B | 2 |
| 3 | ---- | 4,7 | #10 | - | | - | #10 | 4,7 | ---- | 4 |
| 5 | ---- | 4,7 | #10 | - | | - | #10 | 4,7 | ---- | 6 |
| 7 | OACU-1 | 6,2 | #8 | 40/3 | | 30/3 | #10 | 6,2 | VRFCU-2 | 8 |
| 9 | ---- | 6,2 | #8 | - | | - | #10 | 6,2 | ---- | 10 |
| 11 | ---- | 6,2 | #8 | - | | - | #10 | 6,2 | ---- | 12 |
| 13 | OAU-1 | 9,0 | #8 | 45/3 | | | | | SPACE | 14 |
| 15 | ---- | 9,0 | #8 | - | | | | | SPACE | 16 |
| 17 | ---- | 9,0 | #8 | - | | | | | SPACE | 18 |
| 19 | SPACE | | | | | | | | SPACE | 20 |
| 21 | SPACE | | | | | | | | SPACE | 22 |
| 23 | SPACE | | | | | | | | SPACE | 24 |
| 25 | SPACE | | | | | 30/3 | - | - | SPDL | 26 |
| 27 | SPACE | | | | | - | - | - | ---- | 28 |
| 29 | SPACE | | | | | - | - | - | ---- | 30 |

CONTINUOUS (LTG.) LOAD x 1.25 = 0,0 KVA
MISC. LOAD x 1,0 = 92,4 KVA
TOTAL KVA = 92.4 KVA

## PANEL 'HB'

LOCATION: OUTSIDE

277/480V.,3PH.,4W. 200 AMP MCB

MOUNTING: SURFACE NEMA-3R 18 K ISCA

| CKT | LOAD | KVA | WIRE | BKR | | BKR | WIRE | KVA | LOAD | CKT |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | VRFCU-3A | 4,7 | #10 | 25/3 | | 25/3 | #10 | 4,7 | VRFCU-3B | 2 |
| 3 | ---- | 4,7 | #10 | - | | - | #10 | 4,7 | ---- | 4 |
| 5 | ---- | 4,7 | #10 | - | | - | #10 | 4,7 | ---- | 6 |
| 7 | VRFCU-4A | 4,7 | #10 | 25/3 | | 25/3 | #10 | 4,7 | VRFCU-4B | 8 |
| 9 | ---- | 4,7 | #10 | - | | - | #10 | 4,7 | ---- | 10 |
| 11 | ---- | 4,7 | #10 | - | | - | #10 | 4,7 | ---- | 12 |
| 13 | OACU-2A | 4,7 | #10 | 25/3 | | 25/3 | #10 | 4,7 | OACU-2B | 14 |
| 15 | ---- | 4,7 | #10 | - | | - | #10 | 4,7 | ---- | 16 |
| 17 | ---- | 4,7 | #10 | - | | - | #10 | 4,7 | ---- | 18 |
| 19 | OAU-2 | 13,0 | #6 | 60/3 | | | | | SPACE | 20 |
| 21 | ---- | 13,0 | #6 | - | | | | | SPACE | 22 |
| 23 | ---- | 13,0 | #6 | - | | | | | SPACE | 24 |
| 25 | SPACE | | | | | 30/3 | - | - | SPDL | 26 |
| 27 | SPACE | | | | | - | - | - | ---- | 28 |
| 29 | SPACE | | | | | - | - | - | ---- | 30 |

CONTINUOUS (LTG.) LOAD x 1.25 = 0,0 KVA
MISC. LOAD x 1,0 = 123,6 KVA
TOTAL KVA = 123,6 KVA

## PANEL 'DPA'

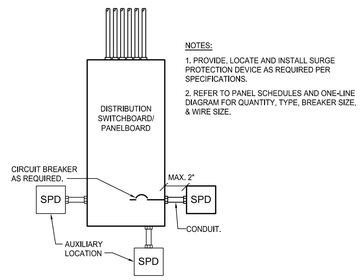
LOCATION: OUTSIDE

277/480V.,3PH.,4W. 600 AMP MLO

MOUNTING: SURFACE NEMA-3R 18 K ISCA

| CKT | LOAD | KVA | WIRE | BKR | | BKR | WIRE | KVA | LOAD | CKT |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | PANEL HA | 30,8 | 1-L | 200/3 | | 200/3 | 1-L | 41,2 | PANEL HB | 2 |
| 3 | ---- | 30,8 | 1-L | - | | - | 1-L | 41,2 | ---- | 4 |
| 5 | ---- | 30,8 | 1-L | - | | - | 1-L | 41,2 | ---- | 6 |
| 7 | ARU-1 | 2,3 | #12 | 20/3 | | 30/3 | #10 | 4,1 | CU-1 | 8 |
| 9 | ---- | 2,3 | #12 | - | | - | #10 | 4,1 | ---- | 10 |
| 11 | ---- | 2,3 | #12 | - | | - | #10 | 4,1 | ---- | 12 |
| 13 | SPACE | | | | | 30/3 | #10 | 4,1 | CU-1 | 14 |
| 15 | SPACE | | | | | - | #10 | 4,1 | ---- | 16 |
| 17 | SPACE | | | | | - | #10 | 4,1 | ---- | 18 |
| 19 | SPACE | | | | | 30/3 | - | - | SPDL | 20 |
| 21 | SPACE | | | | | - | - | - | ---- | 22 |
| 23 | SPACE | | | | | | | - | ---- | 24 |

CONTINUOUS (LTG.) LOAD x 1.25 = 0,0 KVA
MISC. LOAD x 1,0 = 247,5 KVA
TOTAL KVA = 247.5 KVA

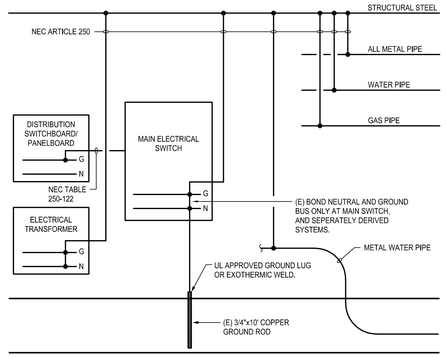



NOTES:

1. PROVIDE, LOCATE AND INSTALL SURGE PROTECTION DEVICE AS REQUIRED PER SPECIFICATIONS.
2. REFER TO PANEL SCHEDULES AND ONE-LINE DIAGRAM FOR QUANTITY, TYPE, BREAKER SIZE, & WIRE SIZE.

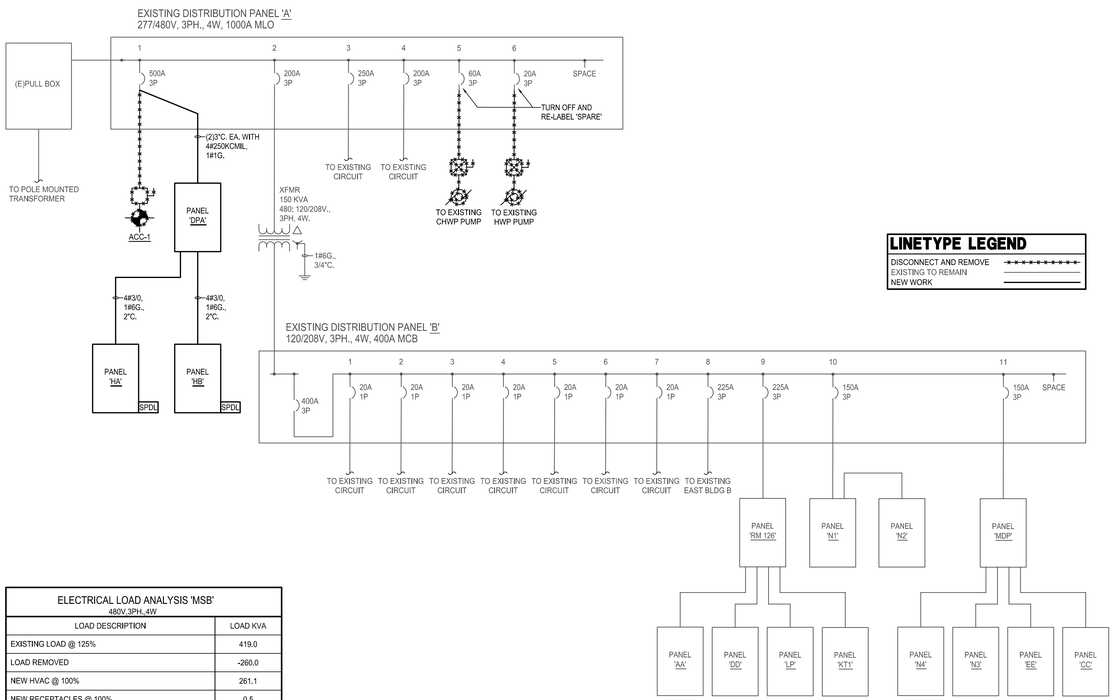
### 3 SURGE PROTECTION DETAIL

SCALE: NONE




### 2 GROUNDING DETAIL

SCALE: NONE




## LINETYPE LEGEND

| | |
|---|---|
| DISCONNECT AND REMOVE EXISTING TO REMAIN | |
| NEW WORK | |

| ELECTRICAL LOAD ANALYSIS 'MSB' 480V,3PH.,4W | |
|---|---|
| LOAD DESCRIPTION | LOAD KVA |
| EXISTING LOAD @ 125% | 419.0 |
| LOAD REMOVED | -260.0 |
| NEW HVAC @ 100% | 261.1 |
| NEW RECEPTACLES @ 100% | 0,5 |
| MISCELLANEOUS | 0.2 |
| TOTAL | 420.8 |

TOTAL / 480 $\sqrt{3}$ = 506.4 AMPS
EXISTING 1000 AMP SERVICE

### 1 ELECTRICAL ONE-LINE DIAGRAM

SCALE: NONE

## SYMBOL SCHEDULE

| SYMBOL | DESCRIPTION (DISREGARD ITEMS NOT SHOWN ON PLANS) |
|---|---|
| LIGHTING (LETTER DENOTES TYPE - SEE LIGHT FIXTURE SCHEDULE) | |
| | FLUORESCENT FIXTURE |
| | FLUORESCENT FIXTURE ON EMERGENCY CIRCUIT |
| | DOWNLIGHT FIXTURE |
| | LIGHT FIXTURE - WALL MOUNTED |
| | DOWNLIGHT FIXTURE ON EMERGENCY CIRCUIT |
| | LIGHT FIXTURE - WALL MOUNTED ON EMERGENCY CIRCUIT |
| | EXIT LIGHT-CEILING MTD WITH DIRECTIONAL ARROWS AS REQUIRED |
| | EXIT LIGHT-WALL MTD WITH DIRECTIONAL ARROWS AS REQUIRED |
| | EMERGENCY LIGHTING UNIT EQUIPMENT |
| SWITCHES | |
| $ | SINGLE POLE SWITCH |
| $2 | 2-POLE SWITCH |
| $3 | 3-WAY SWITCH |
| $K | KEYED SWITCH |
| $D | WALL DIMMER SWITCH, SIZE AND TYPE AS REQUIRED |
| $P | SWITCH WITH PILOT LIGHT |
| $MC | MOMENTARY CONTACT SWITCH |
| | PUSH BUTTON SWITCH |
| TS | TIME SWITCH |
| $S | DUAL LEVEL SWITCHING |
| | CEILING MOUNTED OCCUPANCY SENSOR |
| | WALL MOUNTED OCCUPANCY SENSOR |
| RECEPTACLES AND OUTLETS | |
| | SIMPLEX RECEPTACLE |
| | DUPLEX RECEPTACLE |
| | 125/250 VOLT, 1 PHASE, 3-WIRE, 20 AMPS UNLESS NOTED OTHERWISE |
| | DOUBLE DUPLEX IN 2-GANG BOX WITH SINGLE COVER PLATE |
| | DOUBLE DUPLEX ISOLATED GROUND IN 2-GANG BOX WITH SINGLE COVER PLATE |
| | ISOLATED GROUND DUPLEX RECEPTACLE |
| | ISOLATED GROUND SIMPLEX RECEPTACLE |
| | 250 VOLT, 1 PHASE, SPECIAL PURPOSE OUTLET, 20 AMPS UNLESS NOTED OTHERWISE |
| | JUNCTION BOX |
| | FLUSH FLOOR DUPLEX RECEPTACLE OUTLET |
| | DUPLEX GROUND FAULT CIRCUIT INTERRUPTER RECEPTACLE |
| | DOUBLE DUPLEX GROUND FAULT CIRCUIT INTERRUPTER RECEPTACLE IN 2-GANG BOX WITH SINGLE COVER PLATE |
| | FLUSH FLOOR JUNCTION BOX |
| | TELEVISION OUTLET (RECEPTACLE AND CATV CONNECTIONS) |
| | REMOTE VCR INPUT PATCH CABLE TO TV LOCATION |
| | TWO CHANNEL POWER/COMMUNICATIONS POWER POLE |
| SWITCHES | |
| $ | LINE VOLTAGE SINGLE POLE SWITCH |
| $3 | LINE VOLTAGE 3-WAY SWITCH |
| $4 | LINE VOLTAGE 4-WAY SWITCH |
| $K | LINE VOLTAGE MOMENTARY DPST KEYED SWITCH |
| $D | LINE VOLTAGE DIMMER SWITCH, SIZE AND TYPE AS REQUIRED |
| $P | LINE VOLTAGE SWITCH WITH PILOT LIGHT |
| $T | 6-HOUR ROTARY TIMER SWITCH WITH NO HOLD U.N.O. |
| | PUSH BUTTON EPO SWITCH WITH COVER |
| $MC | LOW VOLTAGE MOMENTARY CONTACT SWITCH |
| $R | LOW VOLTAGE DIGITAL KEYPAD |
| $B | LOW VOLTAGE BUILDING MANAGEMENT (BMCS) LOCAL OVERRIDE SWITCH |
| | OCCUPANCY SENSOR (AUTO ON / AUTO OFF WITHIN 20-MINUTES) |
| | VACANCY SENSOR (MANUAL ON / AUTO OFF WITHIN 20-MINUTES) |
| | PHOTOCELL SENSOR |
| DLT | LIGHTING CONTROL SYSTEM. ( '#' DENOTES TYPE - SEE LIGHTING CONTROLS SCHEDULE) |
| ELR | EMERGENCY LOAD CONTROL RELAY, MINIMUM 16A & 0-10V COMPATIBLE, PROVIDE U.L. 924 U.N.O. |
| MOTOR CONTROLLERS AND EQUIPMENT | |
| | MOTOR, MAKE FINAL MOTOR CONNECTION |
| | 3-PHASE MOTOR, MAKE FINAL MOTOR CONNECTION |
| | DISCONNECT SWITCH AS REQUIRED |
| | COMBINATION MOTOR STARTER/DISCONNECT SWITCH AS REQUIRED |
| | MOTOR STARTER |
| | MOTOR CONTROLLER PUSH BUTTON CONTROL. P=PILOT LIGHT |
| $M | MANUAL MOTOR SWITCH AS REQUIRED |
| | PREWIRED DEVICE, MAKE ELECTRICAL FINAL CONNECTIONS |
| VFD# | VARIABLE FREQUENCY DRIVE MOTOR CONTROLLER FURNISHED BY DIVISION 23 AND INSTALLED BY DIVISION 26 |
| ELECTRICAL EQUIPMENT | |
| | 277/480 VOLT DISTRIBUTION OR PANELBOARD |
| | 120/208 VOLT PANELBOARD |
| | TELEPHONE CABINET |
| | PLYWOOD TELEPHONE BACKBOARD |
| | DRY TYPE TRANSFORMER |
| CIRCUITING | |
| | CONDUIT |
| | CONDUIT BELOW FLOOR, SLAB, OR GRADE |
| #/Z | 3/4"C., UNLESS OTHERWISE NOTED; LONG HATCH, NEUTRAL; SHORT HATCH, PHASE; "Z" HATCH, INSULATED GROUND. NO HATCHES INDICATES 2 CONDUCTORS. ARROW INDICATES HOMERUN. |
| | PARTIAL ELECTRICAL HOME RUN |
| SUBSCRIPTS AND ABBREVIATIONS | |
| WP | INDICATES WEATHERPROOF |
| WG | INDICATES WIREGUARD |
| E | INDICATES EXISTING |
| TL | INDICATES TWIST LOCK TYPE |
| NL | LIGHT FIXTURE ON NIGHT LIGHT CIRCUIT |
| • | NEXT TO ANY SYMBOL INDICATES FINAL ROUGH-IN FIELD COORDINATION BY CONTRACTOR WITH ARCHITECTURAL MILLWORK DRAWINGS AND OTHER TRADES |

GENERAL NOTE:
ALL EXTERIOR BUILDING ELECTRICAL EQUIPMENT TO BE WEATHERPROOF NEMA-3R MINIMUM.

## ELECTRICAL GENERAL NOTES:

1. ALL EMPTY CONDUIT SHALL HAVE PULL STRING.
2. EACH CONDUIT SHALL BE LIMITED TO (3) CIRCUITS MAXIMUM.
3. NO MORE THAN THREE SINGLE PHASE CIRCUITS AND NO MORE THAN SIX CURRENT CARRYING CONDUCTORS SHALL BE INSTALLED IN A SINGLE RACEWAY. WHEN FOUR, FIVE, OR SIX CURRENT CARRYING CONDUCTORS ARE INSTALLED IN A SINGLE RACEWAY, THEIR CURRENT CARRYING AMPACITIES SHALL BE DERATED AS REQUIRED BY THE NEC FOR NON-DIVERSIFIED LOADS. THE INSTALLED WIRE SIZE SHALL HAVE A NOMINAL AMPACITY RATING OF 125% OF THAT REQUIRED OR SPECIFIED WHEN FOUR OR MORE CURRENT CARRYING CONDUCTORS ARE INSTALLED IN A SINGLE RACEWAY. NEUTRAL CONDUCTORS SHALL BE CONSIDERED A CURRENT CARRYING CONDUCTOR IN ALL NON-LINEAR LOADED CIRCUITS AS REQUIRED BY THE NEC.
4. ALL LIGHTING, RECEPTACLE, AND EQUIPMENT BRANCH CIRCUITS CONDUITS SHALL CONTAIN A GROUND WIRE, USING THE CONDUIT SYSTEM AS THE ONLY GROUND PATH IS NOT ACCEPTABLE.
5. REFER TO MECHANICAL DRAWINGS FAN SCHEDULE. DIVISION 26 TO PROVIDE ALL LOCAL SWITCHES AS INDICATED ON MECHANICAL FAN SCHEDULE. LOCATE SWITCH BY DOOR UNLESS INDICATED OTHERWISE FOR ALL LOCALLY SWITCHED FANS.
6. PROVIDE SMOKE DETECTORS AT EACH RETURN AIR INLET INTO EACH MECHANICAL ROOM AS REQUIRED FOR OPENING SIZE.
7. PROVIDE DUCT MOUNTED SMOKE DETECTORS IN SUPPLY AND RETURN DUCTS OF ALL AIR HANDLERS 2000 CFM OR GREATER.


Salas O'Brien
HOUSTON
10930 W. SAM HOUSTON PKWY NORTH SUITE 900
HOUSTON, TX 77064
Salas O'Brien Registration: F-4111
Salas O'Brien Project Number: 2022-04653-00



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2022-04653-00
Owner

# BEAUMONT ISD AIR HANDLER UPGRADES

Beaumont ISD
Preparing Our Next Generation

NOTES

REVISIONS

| NUMBER | DESCRIPTION | DATE | CHECKER |
|---|---|---|---|

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DRAWN BY DES

SHEET NAME

ELECTRICAL SCHEDULES AND DETAILS - ADMIN ANNEX

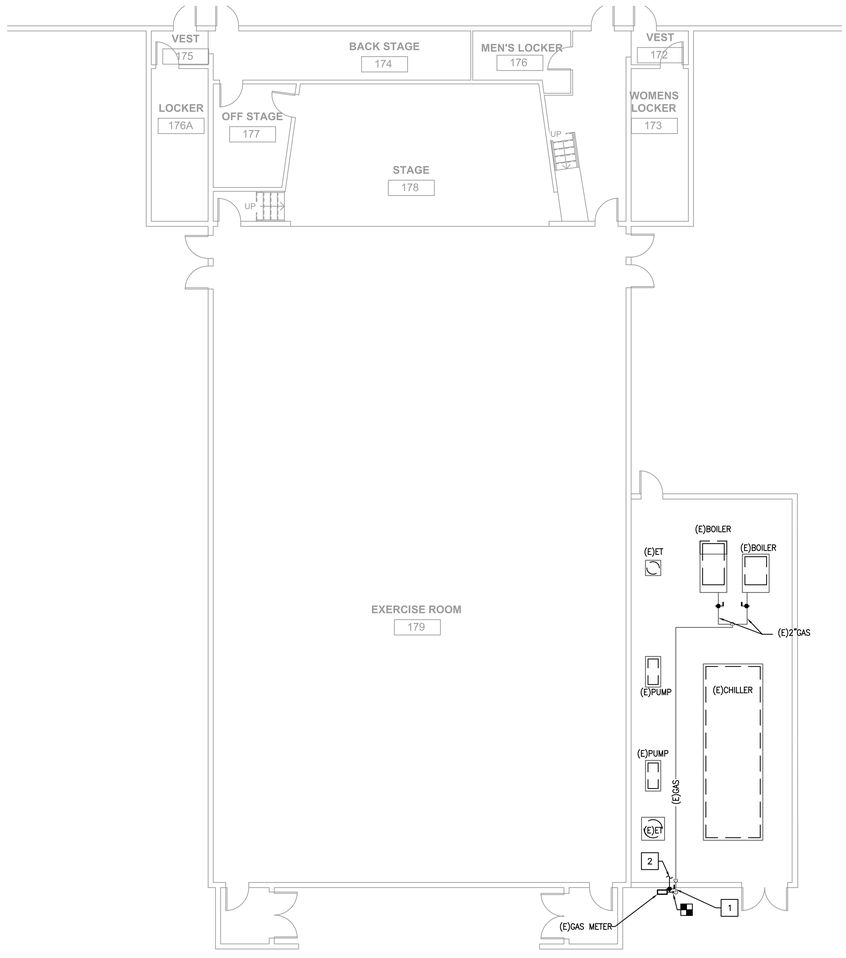
SHEET NUMBER E3.1

REVISION

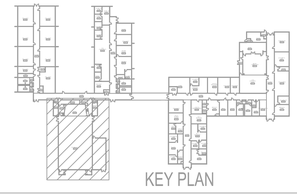
## PLUMBING KEYED NOTES:

1 DISCONNECT GAS PIPE FROM MECHANICAL BOILERS AND REMOVE EXISTING GAS PIPE TO GAS METER AND CAP TO POINT SHOWN.

2 1"GAS PIPE TO REMAIN.




N 1 **PLUMBING DEMOLITION FLOOR PLAN - AREA A - ADMIN ANNEX**
SCALE: 1/8" = 1'-0"


KEY PLAN


Salas O'Brien
HOUSTON
10930 W. SAM HOUSTON PKWY NORTH SUITE 900
HOUSTON, TX 77064
Salas O'Brien Registration: F-4111
Salas O'Brien Project Number: 2022-04653-00



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# BEAUMONT ISD AIR HANDLER UPGRADES

Beaumont ISD
Preparing Our Next Generation

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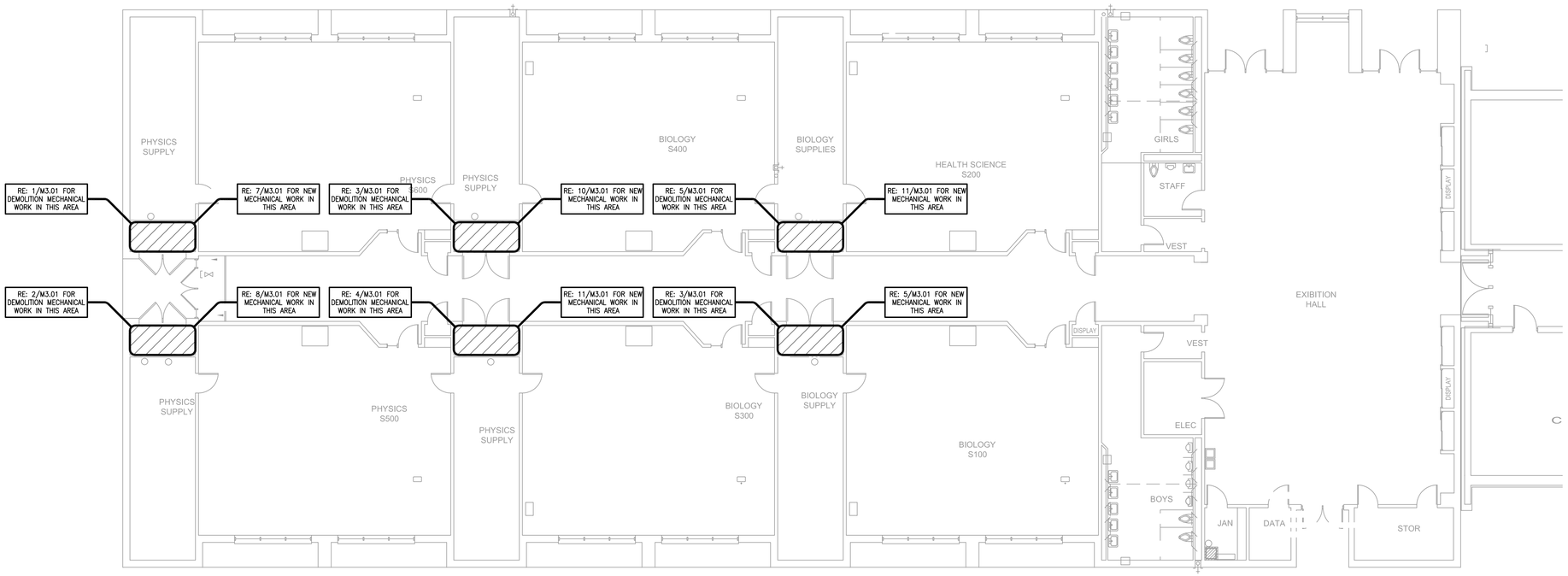
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SHEET NAME

PLUMBING DEMOLITION FLOOR PLAN - AREA A - ADMIN ANNEX

SHEET NUMBER P1.1

REVISION




N

1 **MECHANICAL COMPOSITE FLOOR PLAN - 6 CLASSROOMS - BEAUMONT UNITED H.S.**
SCALE: 1/8" = 1'-0"


Salas O'Brien
HOUSTON
10930 W. SAM HOUSTON PKWY NORTH SUITE 900
HOUSTON, TX 77064
Salas O'Brien Registration: F-4111
Salas O'Brien Project Number: 2022-04653-00



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# BEAUMONT ISD AIR HANDLER UPGRADES

Beaumont ISD
Preparing Our Next Generation

**NOTES**

**REVISIONS**

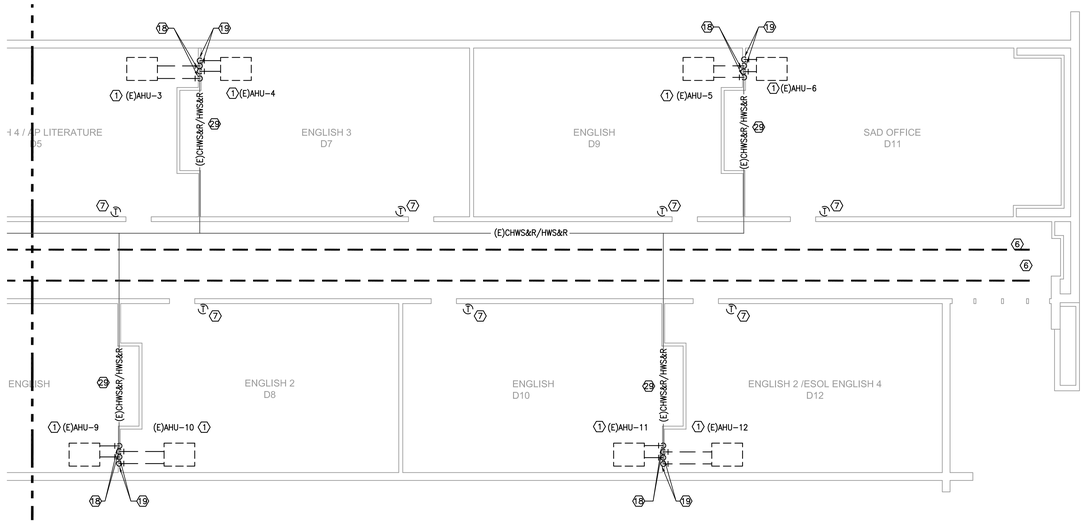
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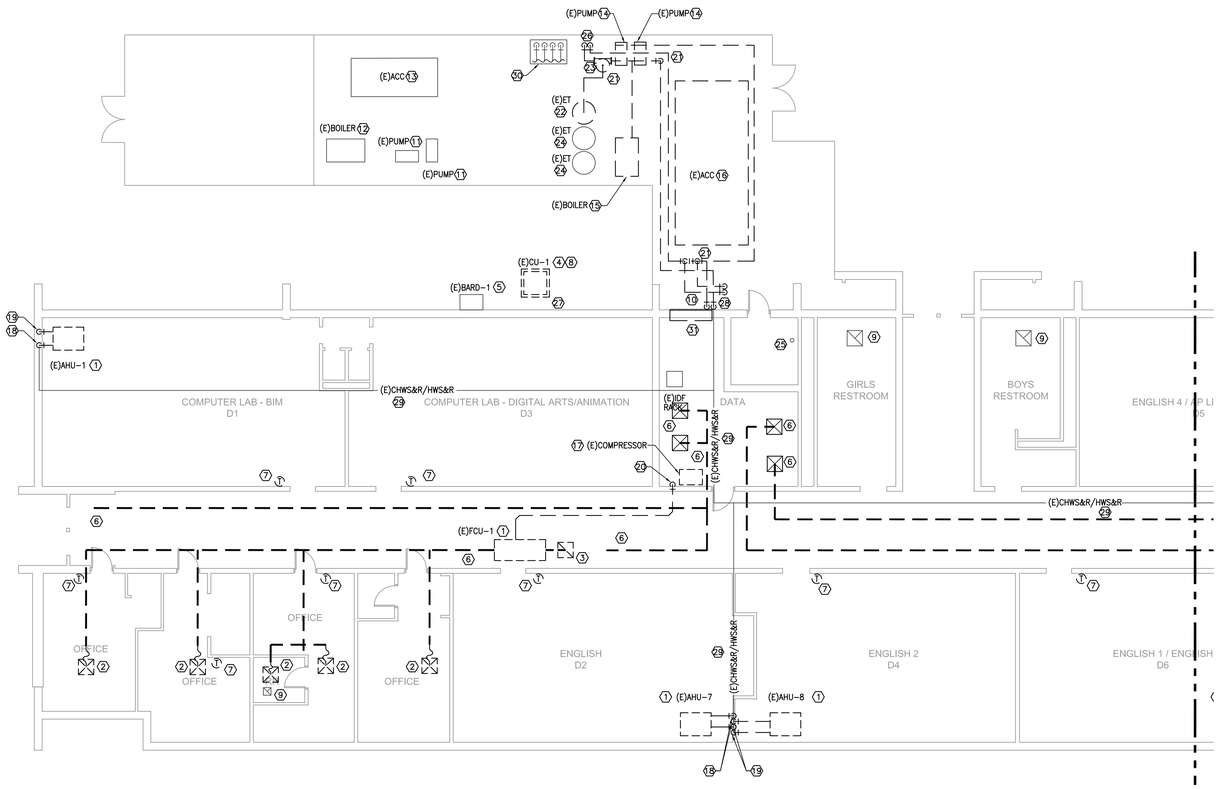
MECHANICAL COMPOSITE FLOOR PLAN - 6 CLASSROOMS - BEAUMONT UNITED H.S

| SHEET NUMBER | REVISION |
|---|---|
| M1.1 | |




## 2 MECHANICAL DEMOLITION FLOOR PLAN - D HALL- BEAUMONT UNITED H.S

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




## 1 MECHANICAL DEMOLITION FLOOR PLAN - D HALL- BEAUMONT UNITED H.S.

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

## MECHANICAL DEMOLITION GENERAL NOTES

1. THESE CONSTRUCTION DRAWINGS ARE DIAGRAMMATIC, AND DO NOT NECESSARILY REFLECT ACTUAL DIMENSIONS. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO FIELD-VERIFY ALL DIMENSIONS AND COORDINATE PLACEMENT OF ALL EQUIPMENT AND ROUTING OF ALL PIPING AND/OR DUCT SYSTEMS.
2. ALL MECHANICAL SYSTEMS SHOWN ON THIS PLAN ARE FROM EXISTING PRELIMINARY FIELD WORK. CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFYING ALL LOCATIONS AND SIZES OF MECHANICAL SYSTEMS PRIOR TO THE START OF WORK.
3. REMOVE ALL EXISTING SPACE MOUNTED TEMPERATURE AND HUMIDITY SENSORS NOT BEING REUSED. PROVIDE STAINLESS STEEL COVER PLATES.
4. OWNER SHALL HAVE FIRST RIGHT OF REFUSAL ON ALL HVAC EQUIPMENT BEING REMOVED FROM THIS PROJECT. THIS INCLUDES BUT NOT LIMITED TO CONDENSING UNITS, AIR HANDLING UNITS, AND CONTROLS.
5. PROJECT SCOPE SHOWN AS A PART OF THE PROJECT ON THIS CAMPUS WILL REQUIRE IDENTICAL ARCHITECTURAL WORK. ALL SUCH WORK SHALL BE INCLUDED IN THE CONTRACTOR'S BID. THIS WORK SHALL BE PERFORMED WITHOUT ANY IMPACT TO THE CONSTRUCTION SCHEDULE AND/OR ADDITIONAL COST.
6. CONTRACTOR SHALL REMOVE AND REPLACE CEILING WHERE REQUIRED TO COMPLETE THE INDICATED SCOPE OF PROJECT SCOPE WORK. EXISTING CEILING SHALL BE RE-INSTALLED IN THE EXACT CONDITION EXISTING PRIOR TO THE BEGINNING OF CONSTRUCTION. IF A MATCH IS NOT POSSIBLE, CONTRACTOR SHALL REPLACE ALL CEILING FROM WALL TO WALL OR BOUNDARY SEPARATION IN CORRIDOR, CLASSROOM, OR ANY OTHER SPACE.
7. PRIOR TO STARTING ANY WORK AND PRIOR TO SUBSTANTIAL COMPLETION, SCHEDULE WITH THE ENGINEER AND OWNER A DEMONSTRATION AND TESTING OF THE EXISTING FIRE ALARM AND CAMERA SYSTEM. THE CONTRACTOR SHALL HAVE ALL SUBCONTRACTORS WORKING ON THE PROJECT BE PRESENT FOR THESE TESTS AND DEMONSTRATIONS.
8. OWNER SHALL HAVE FIRST RIGHT OF REFUSAL ON ALL HVAC EQUIPMENT BEING REMOVED FROM THIS PROJECT. THIS INCLUDES, BUT IS NOT LIMITED TO CONDENSING UNITS, AIR HANDLING UNITS, AND CONTROLS.

## MECHANICAL DEMOLITION KEYED NOTES

1. REMOVE EXISTING AIR HANDLING UNIT OR FAN COIL, ASSOCIATED CONTROLS, AND ALL OTHER ASSOCIATED APPURTENANCES. REPLACE EXISTING CEILING TILES DAMAGED OR MISSING AFTER UNIT REMOVED.
2. REMOVE EXISTING SUPPLY GRILLE.
3. REMOVE EXISTING RETURN GRILLE.
4. REMOVE EXISTING CONDENSING UNIT, ALL ASSOCIATED REFRIGERANT PIPING, AND ALL ASSOCIATED APPURTENANCES.
5. EXISTING BARD UNIT TO REMAIN.
6. REMOVE EXISTING DUCTWORK.
7. REMOVE EXISTING TEMPERATURE SENSOR AND ALL ASSOCIATED CONTROL WIRING. PROVIDE STAINLESS STEEL COVER PLATE.
8. REMOVE EXISTING CONCRETE HOUSEKEEPING PAD.
9. EXISTING EXHAUST GRILLE TO REMAIN.
10. EXISTING LOUVER TO REMAIN.
11. EXISTING PUMP TO REMAIN.
12. EXISTING BOILER TO REMAIN.
13. EXISTING AIR COOLED CHILLER TO REMAIN.
14. REMOVE EXISTING PUMP AND ASSOCIATED CONCRETE HOUSEKEEPING PAD.
15. REMOVE EXISTING BOILER AND ASSOCIATED CONCRETE HOUSEKEEPING PAD.
16. REMOVE EXISTING AIR COOLED CHILLER AND ASSOCIATED CONCRETE HOUSEKEEPING PAD.
17. REMOVE EXISTING AIR COMPRESSOR AND ALL ASSOCIATED DEVICES AND PIPING EXPOSED IN ROOM.
18. REMOVE EXISTING CHILLED WATER SUPPLY AND RETURN AND HOT WATER SUPPLY AND RETURN PIPING UP TO ROOF LINE, CAP, AND ABANDON IN PLACE. PATCH WALL TO MATCH EXISTING
19. REMOVE EXISTING CONDENSATE DRAIN PIPING TO POINT INDICATED IN WALL, CAP, AND ABANDON IN PLACE.
20. REMOVE EXISTING CONDENSATE DRAIN PIPING TO POINT INDICATED.
21. REMOVE EXISTING SUPPLY AND RETURN PIPING.
22. REMOVE EXISTING EXPANSION TANK.
23. REMOVE EXISTING AIR SEPARATOR.
24. EXISTING EXPANSION TANK TO REMAIN.
25. EXISTING FLOOR DRAIN TO REMAIN. CONTRACTOR TO SNAKE OUT DRAIN TO ENSURE PROPER DRAINAGE.
26. REMOVE PIPING ABOVE GRADE AND PROVIDE A BLIND FLANGE.
27. PATCH WALL TO MATCH EXISTING WHERE PIPE ENTERS.
28. REMOVE CHILLED WATER SUPPLY AND RETURN AND HOT WATER SUPPLY AND RETURN PIPING BETWEEN THE TWO ROOF SYSTEMS, DRAIN, CAP, AND ABANDON IN PLACE.
29. EXISTING CHILLED WATER SUPPLY AND RETURN AND HOT WATER SUPPLY AND RETURN PIPING ON ROOF TO BE DRAINED AND ABANDONED IN PLACE. CAP ALL CONNECTIONS TO ABANDONED PIPING.
30. EXISTING CHILLED WATER SUPPLY AND RETURN AND HOT WATER SUPPLY AND RETURN PIPING SHALL REMAIN.
31. EXISTING PLENUM AND FILTERS TO BE REMOVED.

### DEMO SYMBOL LEGEND

| RENOVATIONS | |
|---|---|
| | ITEM TO REMAIN |
| | ITEM TO BE REMOVED |

BMCS NOTE:
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REFER TO BMCS SPECIFICATION FOR MORE INFORMATION.

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Salas O'Brien Registration: F-4111
Salas O'Brien Project Number: 2022-04653-00

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2022-04653-00
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# BEAUMONT ISD AIR HANDLER UPGRADES

Beaumont ISD
Preparing Our Next Generation

NOTES

REVISIONS

| NUMBER | DESCRIPTION | DATE | CHECKER |
|---|---|---|---|
| | | | |

CHECKED BY: SH
DRAWN BY: AA

SHEET NAME

MECHANICAL DEMOLITION FLOOR PLANS - D HALL - BEAUMONT UNITED H.S.

SHEET NUMBER: M1.2
REVISION:

## MECHANICAL GENERAL NOTES

1. THESE CONSTRUCTION DRAWINGS ARE DIAGRAMMATIC, AND DO NOT NECESSARILY REFLECT ACTUAL DIMENSIONS. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO FIELD-VERIFY ALL DIMENSIONS AND COORDINATE PLACEMENT OF ALL EQUIPMENT AND ROUTING OF ALL PIPING AND/OR DUCT SYSTEMS.
2. ALL MECHANICAL SYSTEMS SHOWN ON THIS PLAN ARE FROM EXISTING PRELIMINARY FIELD WORK. CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFYING ALL LOCATIONS AND SIZES OF MECHANICAL SYSTEMS PRIOR TO THE START OF WORK.
3. REMOVE ALL EXISTING SPACE MOUNTED TEMPERATURE AND HUMIDITY SENSORS NOT BEING REUSED. PROVIDE STAINLESS STEEL COVER PLATES.
4. OWNER SHALL HAVE FIRST RIGHT OF REFUSAL ON ALL HVAC EQUIPMENT BEING REMOVED FROM THIS PROJECT. THIS INCLUDES BUT NOT LIMITED TO CONDENSING UNITS, AIR HANDLING UNITS, AND CONTROLS.
5. PROJECT SCOPE SHOWN AS A PART OF THE PROJECT ON THIS CAMPUS WILL REQUIRE IDENTICAL ARCHITECTURAL WORK. ALL SUCH WORK SHALL BE INCLUDED IN THE CONTRACTOR'S BID. THIS WORK SHALL BE PERFORMED WITHOUT ANY IMPACT TO THE CONSTRUCTION SCHEDULE AND/OR ADDITIONAL COST.
6. CONTRACTOR SHALL REMOVE AND REPLACE CEILING WHERE REQUIRED TO COMPLETE THE INDICATED SCOPE OF PROJECT SCOPE WORK. EXISTING CEILING SHALL BE RE-INSTALLED IN THE EXACT CONDITION EXISTING PRIOR TO THE BEGINNING OF CONSTRUCTION. IF A MATCH IS NOT POSSIBLE, CONTRACTOR SHALL REPLACE ALL CEILING FROM WALL TO WALL OR BOUNDARY SEPARATION IN CORRIDOR, CLASSROOM, OR ANY OTHER SPACE.
7. PRIOR TO STARTING ANY WORK AND PRIOR TO SUBSTANTIAL COMPLETION, SCHEDULE WITH THE ENGINEER AND OWNER A DEMONSTRATION AND TESTING OF THE EXISTING FIRE ALARM AND CAMERA SYSTEM. THE CONTRACTOR SHALL HAVE ALL SUBCONTRACTORS WORKING ON THE PROJECT BE PRESENT FOR THESE TESTS AND DEMONSTRATIONS.
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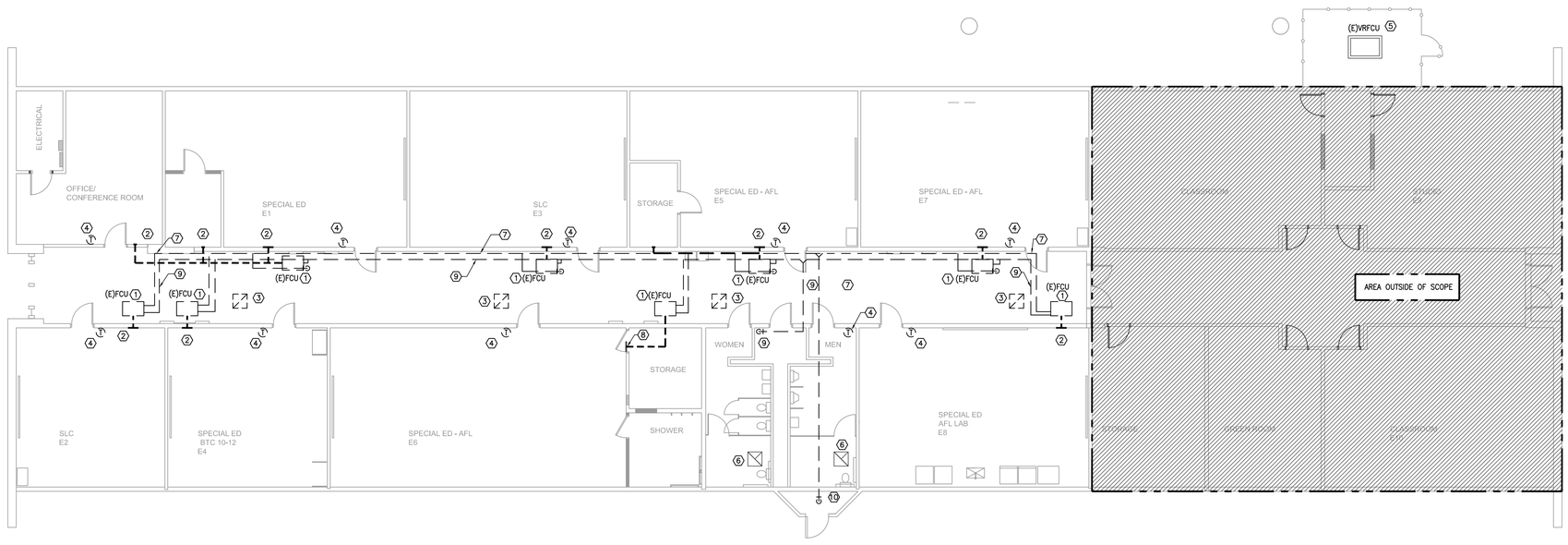
## MECHANICAL GENERAL NOTES

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2. REMOVE EXISTING SUPPLY GRILLE.
3. REMOVE EXISTING RETURN GRILLE.
4. REMOVE EXISTING TEMPERATURE SENSOR AND ALL ASSOCIATED CONTROL WIRING. REUSE EXISTING SENSOR LOCATION FOR NEW TEMPERATURE SENSOR.
5. EXISTING VRF CONDENSER UNIT TO REMAIN.
6. EXISTING EXHAUST GRILLE TO REMAIN.
7. REMOVE EXISTING CHILLED WATER SUPPLY AND RETURN AND HOT WATER SUPPLY AND RETURN PIPE.
8. REMOVE EXISTING DUCTWORK TO POINT INDICATED. ABANDON SUPPLY GRILLE IN PLACE.
9. REMOVE EXISTING CONDENSATE DRAIN PIPE.
10. REMOVE EXISTING AT GRADE, CAP, AND ABANDON IN PLACE.

| DEMO SYMBOL LEGEND | |
|---|---|
| RENOVATIONS | |
| | ITEM TO REMAIN |
| | ITEM TO BE REMOVED |

BMCS NOTE:
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N

1 **MECHANICAL DEMOLITION FLOOR PLAN - E HALL BEAUMONT UNITED H.S.**
SCALE: 1/8" = 1'-0"


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# BEAUMONT ISD AIR HANDLER UPGRADES

Beaumont ISD
Preparing Our Next Generation

NOTES

REVISIONS

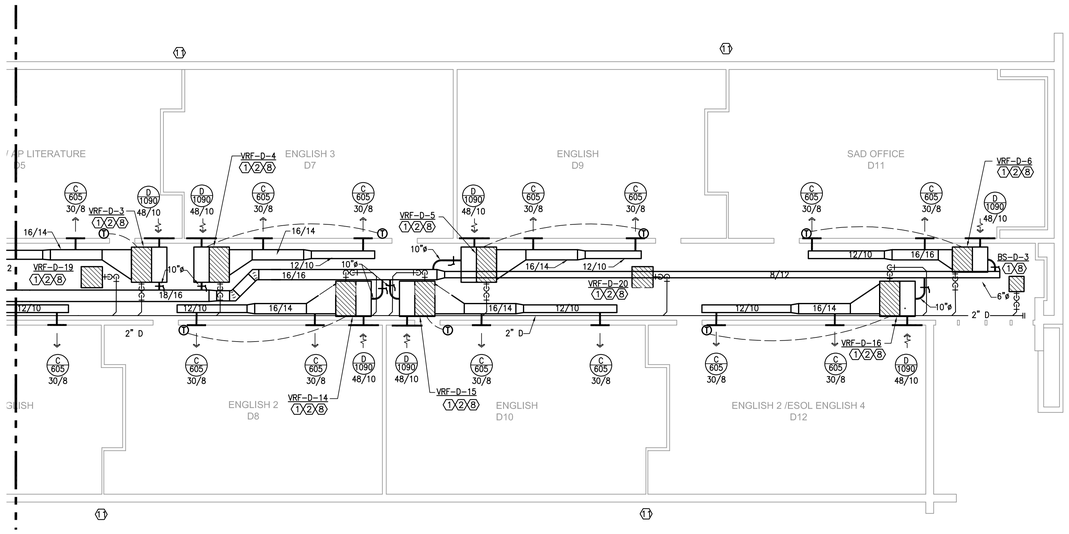
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CHECKED BY: SH
DRAWN BY: AA

SHEET NAME

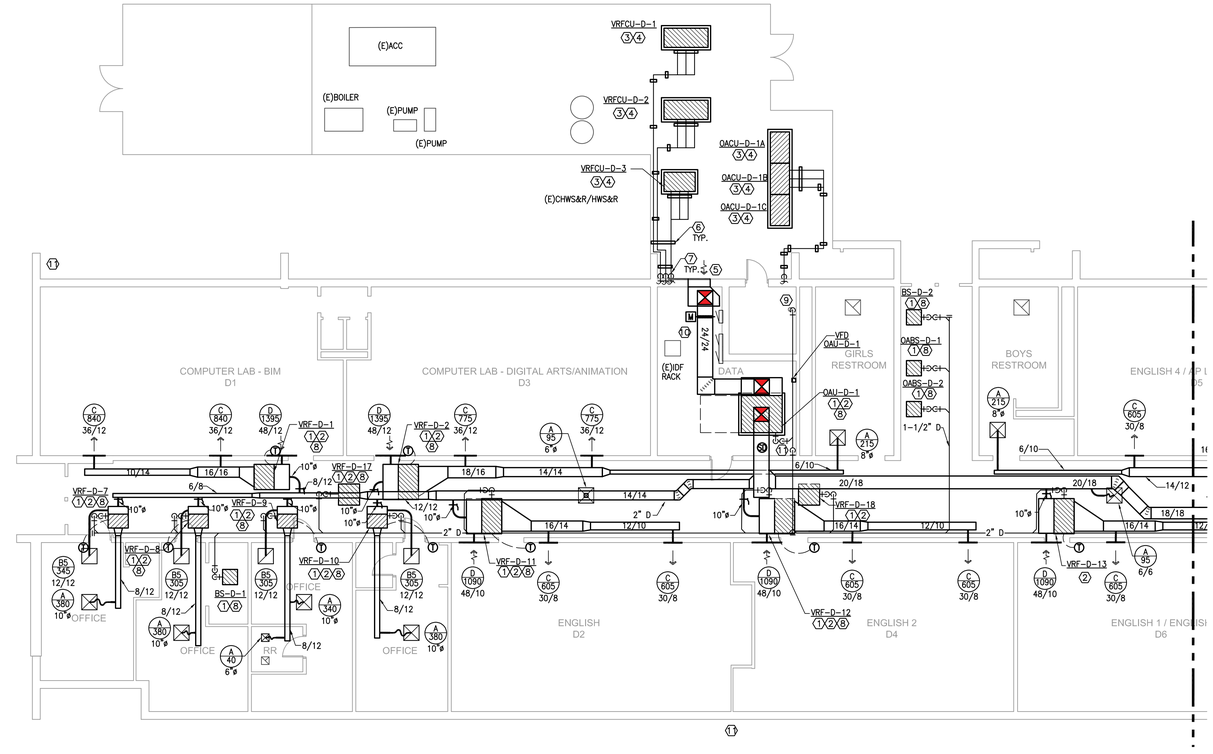
MECHANICAL DEMOLITION FLOOR PLAN - E HALL - BEAUMONT UNITED H.S.

SHEET NUMBER: M1.3
REVISION:




## MECHANICAL FLOOR PLAN - D HALL- BEAUMONT UNITED H.S.

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




## MECHANICAL FLOOR PLAN - D HALL- BEAUMONT UNITED H.S.

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

# MECHANICAL GENERAL NOTES

1. COORDINATE IN THE FIELD THE EXACT LOCATION OF MECHANICAL EQUIPMENT WITH CONTRACTOR AND ALL TRADES
2. SENSORS SHALL BE MOUNTED AT +48" AFF (ABOVE FINISHED FLOOR). UNLESS OTHERWISE NOTED
3. MECHANICAL CONTRACTOR SHALL COORDINATE WITH THE ELECTRICAL CONTRACTOR FOR ALL ELECTRICAL POWER REQUIREMENTS.
4. THESE CONSTRUCTION DRAWINGS ARE DIAGRAMATIC AND DO NOT NECESSARILY REFLECT ACTUAL DIMENSIONS. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO FIELD-VERIFY ALL DIMENSIONS AND COORDINATE PLACEMENT OF ALL EQUIPMENT AND ROUTING OF ALL PIPING AND/OR HVAC SYSTEMS.
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8. ALL WALL PENETRATIONS NOT REUSED SHALL BE PATCHED AND PAINTED TO MATCH EXISTING WALL MATERIALS AND COLOR.

# MECHANICAL KEYED NOTES

1. VERIFY SERVICE CLEARANCE WITH EQUIPMENT MANUFACTURER, COORDINATE WITH ALL TRADES NOT TO OBSTRUCT.
2. ROUTE REFRIGERANT LINES TO ASSOCIATED AIR-COOLED CONDENSING UNIT. SIZE LINES PER MANUFACTURER'S RECOMMENDATION.
3. MOUNT AIR-COOLED CONDENSING UNIT ON 4" THICK HOUSE KEEPING CONCRETE PAD.
4. AIR-COOLED CONDENSING UNIT SHALL MAINTAIN 3'-0" OF UNOBSTRUCTED CLEARANCE ON ALL SIDES FOR SERVICING AND AIR FLOW.
5. CONNECT NEW DUCTWORK TO EXISTING LOUVER WITH A FREE SURFACE AREA OF 6.93 SQ FT, BLANK ANY UNUSED AREA.
6. ROUTE REFRIGERANT PIPING ON PHP PIPE SUPPORT MODEL PP10. SPACE THEM AS PER SPECIFICATION.
7. ROUTE REFRIGERANT PIPE UP ON WALL. PROVIDE GALVANIZED PIPING COVER AND PAINT TO MATCH EXTERIOR WALL.
8. FIELD VERIFY EXISTING CONDENSATE PIPE IS CLEAR OF DEBRIS. ROUTE CONDENSATE PIPE AT SIZE INDICATED TO EXISTING CONDENSATE DRAIN PIPE.
9. ROUTE CONDENSATE PIPE AT SIZE INDICATED TO EXISTING FLOOR DRAIN.
10. ROUTE DUCT TO AVOID EXISTING TECHNOLOGY RACK AND ALL EXISTING ELECTRICAL CONDUITS AND EQUIPMENT. PROVIDE ALL NEC CLEARANCES.
11. REMOVE EXISTING CONDENSATE DRAIN LINES THROUGH WALL, PATCH, AND PAINT WALL TO MATCH EXISTING.

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NOTE:
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# BEAUMONT ISD AIR HANDLER UPGRADES

Beaumont ISD
Preparing Our Next Generation

NOTES

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CHECKED BY: SH

DRAWN BY: AA

SHEET NAME

MECHANICAL FLOOR PLANS - D HALL - BEAUMONT UNITED H.S.

SHEET NUMBER: M2.1

REVISION

## MECHANICAL GENERAL NOTES

1. COORDINATE IN THE FIELD THE EXACT LOCATION OF MECHANICAL EQUIPMENT WITH CONTRACTOR AND ALL TRADES
2. SENSORS SHALL BE MOUNTED AT +48" AFF (ABOVE FINISHED FLOOR), UNLESS OTHERWISE NOTED
3. MECHANICAL CONTRACTOR SHALL COORDINATE WITH THE ELECTRICAL CONTRACTOR FOR ALL ELECTRICAL POWER REQUIREMENTS.
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8. ALL WALL PENETRATIONS NOT REUSED SHALL BE PATCHED AND PAINTED TO MATCH EXISTING WALL MATERIALS AND COLOR.

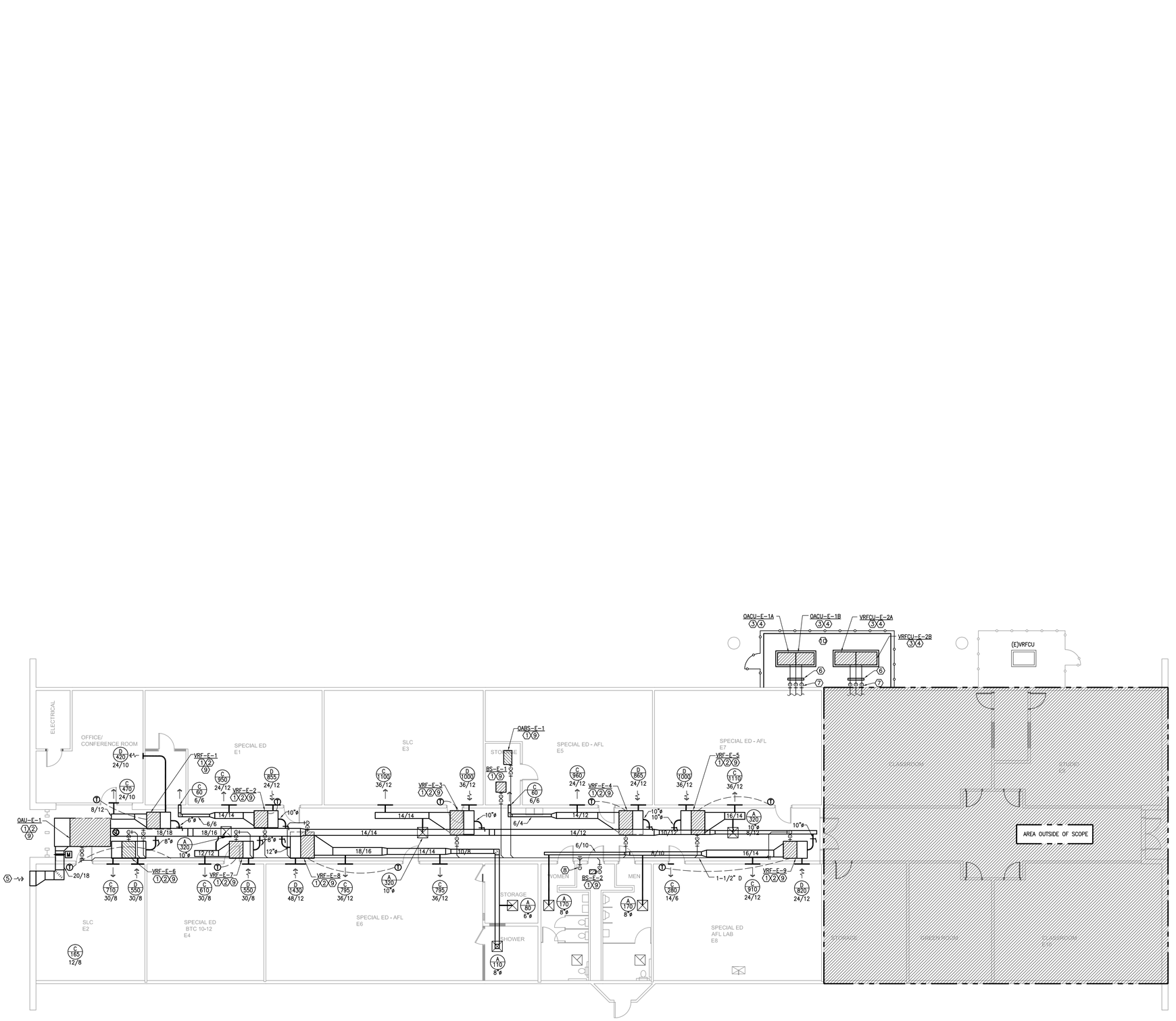
## MECHANICAL KEYED NOTES

1. VERIFY SERVICE CLEARANCE WITH EQUIPMENT MANUFACTURER, COORDINATE WITH ALL TRADES NOT TO OBSTRUCT.
2. ROUTE REFRIGERANT LINES TO ASSOCIATED AIR-COOLED CONDENSING UNIT. SIZE LINES PER MANUFACTURER'S RECOMMENDATION.
3. MOUNT AIR-COOLED CONDENSING UNIT ON 4" THICK HOUSE KEEPING CONCRETE PAD.
4. AIR-COOLED CONDENSING UNIT SHALL MAINTAIN 3'-0" OF UNOBSTRUCTED CLEARANCE ON ALL SIDES FOR SERVICING AND AIR FLOW.
5. CONNECT NEW DUCTWORK TO EXISTING LOUVER WITH A FREE SURFACE AREA OF 3.42 SQ FT, BLANK ANY UNUSED AREA.
6. ROUTE REFRIGERANT PIPING ON PHP PIPE SUPPORT MODEL PP10. SPACE THEM AS PER SPECIFICATION.
7. ROUTE REFRIGERANT PIPE UP ON WALL. PROVIDE GALVANIZED PIPING COVER AND PAINT TO MATCH EXTERIOR WALL.
8. FIELD VERIFY EXISTING CONDENSATE PIPE IS CLEAR OF DEBRIS. ROUTE CONDENSATE PIPE AT SIZE INDICATED TO EXISTING FLOOR SINK.
9. INSTALL CONDENSATE TRAP ACCORDING TO MANUFACTURER'S INSTRUCTIONS AND TIE INTO MAIN CONDENSATE DRAIN LINE.
10. PROVIDE FULL CONCRETE SLAB WITH SLOPE TO MATCH EXISTING SLAB FOR VRF CONDENSING YARD AS SHOWN. PROVIDE THE SLAB WITH WOOD FENCE TO MATCH EXISTING WITH 4'0" WIDE GATE. A MINIMUM OF 3'-6" CLEARANCE SHALL BE MAINTAINED FROM CONDENSING UNIT TO FENCE ON ALL SIDES.

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1 **MECHANICAL FLOOR PLAN - E HALL - BEAUMONT UNITED HS**
SCALE: 1/8" = 1'-0"


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# BEAUMONT ISD AIR HANDLER UPGRADES

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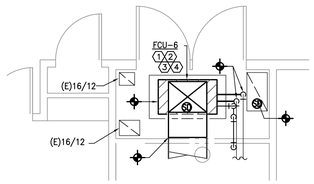
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DRAWN BY: AA

SHEET NAME
MECHANICAL FLOOR PLAN - E HALL - BEAUMONT UNITED HS

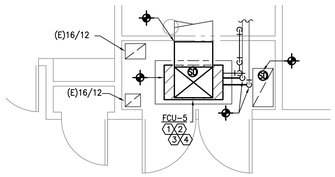
SHEET NUMBER: M2.2
REVISION:

## MECHANICAL KEYED NOTES

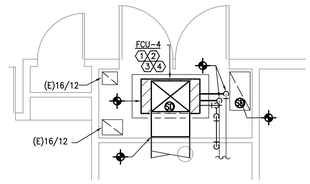
1. INSTALL NEW AIR HANDLING UNIT ON EXISTING CONCRETE PAD.
2. ROUTE FULL SIZE CONDENSATE DRAIN PIPE TO EXISTING FLOOR DRAIN. REFER TO MANUFACTURER FOR TRAP RECOMMENDATIONS.
3. VERIFY SERVICE CLEARANCE FOR AIR FILTER REMOVAL WITH EQUIPMENT MANUFACTURER. COORDINATE WITH ALL TRADES NOT TO OBSTRUCT.
4. VERIFY SERVICE CLEARANCE FOR FAN SHAFT AND COIL REMOVAL WITH EQUIPMENT MANUFACTURER. COORDINATE WITH ALL TRADES NOT TO OBSTRUCT.



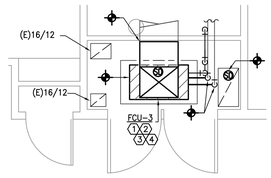

12 **MECHANICAL ENLAGED FLOOR PLAN - FCU-6**
SCALE: 1/4" = 1'-0"



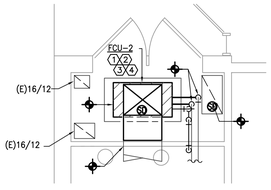

11 **MECHANICAL ENLAGED FLOOR PLAN - FCU-5**
SCALE: 1/4" = 1'-0"



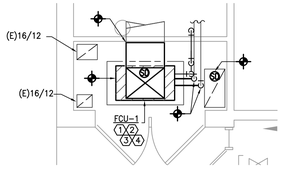

10 **MECHANICAL ENLAGED FLOOR PLAN - FCU-4**
SCALE: 1/4" = 1'-0"




9 **MECHANICAL ENLAGED FLOOR PLAN - FCU-3**
SCALE: 1/4" = 1'-0"




8 **MECHANICAL ENLAGED FLOOR PLAN - FCU-2**
SCALE: 1/4" = 1'-0"

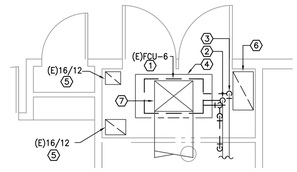



7 **MECHANICAL ENLAGED FLOOR PLAN - FCU-1**
SCALE: 1/4" = 1'-0"

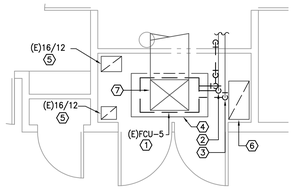
## DEMOLITION KEYED NOTES

1. EXISTING AIR HANDLING UNIT, PIPING, VALVES, INSULATION, CONTROLS, AND ALL OTHER APPURTENANCES SHALL BE REMOVED FOR REPLACEMENT.
2. EXISTING CHILLED WATER PIPING SHALL BE REMOVED BACK TO BEFORE EXISTING ISOLATION VALVES.
3. EXISTING HYDRONIC HOT WATER PIPING SHALL BE REMOVED BACK TO THIS POINT.
4. EXISTING CONCRETE HOUSEKEEPING PAD SHALL REMAIN.
5. EXISTING OUTSIDE AIR DUCTWORK SHALL REMAIN.
6. EXISTING RETURN AIR DUCTWORK SHALL REMAIN.
7. EXISTING SUPPLY AIR DUCT TO SHALL BE REMOVED WITH EXISTING MECHANICAL ROOM.

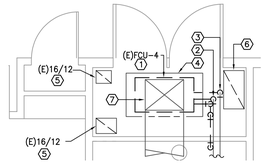
| DEMO SYMBOL LEGEND | |
|---|---|
| **RENOVATIONS** | |
| | ITEM TO REMAIN |
| | ITEM TO BE REMOVED |



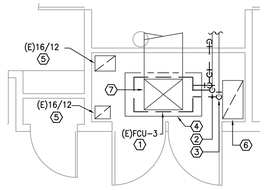

6 **MECHANICAL ENLAGED DEMOLITION FLOOR PLAN - FCU-6**
SCALE: 1/4" = 1'-0"



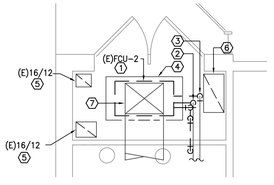

5 **MECHANICAL ENLAGED DEMOLITION FLOOR PLAN - FCU-5**
SCALE: 1/4" = 1'-0"



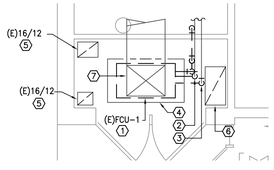

4 **MECHANICAL ENLAGED DEMOLITION FLOOR PLAN - FCU-4**
SCALE: 1/4" = 1'-0"




3 **MECHANICAL ENLAGED DEMOLITION FLOOR PLAN - FCU-3**
SCALE: 1/4" = 1'-0"




2 **MECHANICAL ENLAGED DEMOLITION FLOOR PLAN - FCU-2**
SCALE: 1/4" = 1'-0"




1 **MECHANICAL ENLAGED DEMOLITION FLOOR PLAN - FCU-1**
SCALE: 1/4" = 1'-0"


Salas O'Brien
HOUSTON
10930 W. SAM HOUSTON PKWY NORTH SUITE 900
HOUSTON, TX 77064
Salas O'Brien Registration: F-4111
Salas O'Brien Project Number: 2022-04653-00



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# BEAUMONT ISD AIR HANDLER UPGRADES

Beaumont ISD
Preparing Our Next Generation

NOTES

REVISIONS

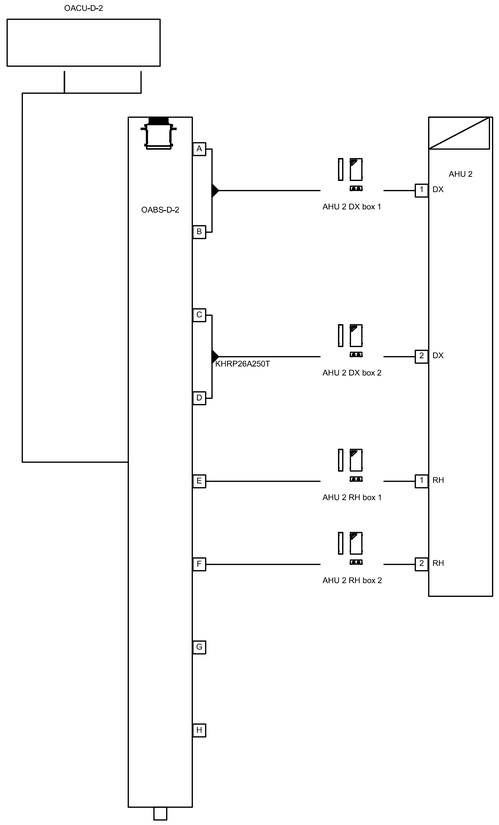
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CHECKED BY: SH
DRAWN BY: AA

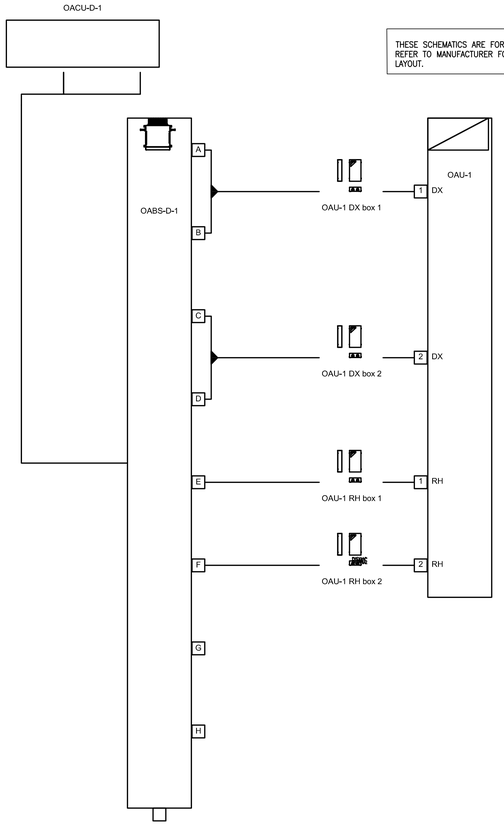
SHEET NAME

MECHANICAL FLOOR ENLARGED PLANS - 6 CLASSROOMS - BEAUMONT UNITED H.S.

SHEET NUMBER: M3.1
REVISION:

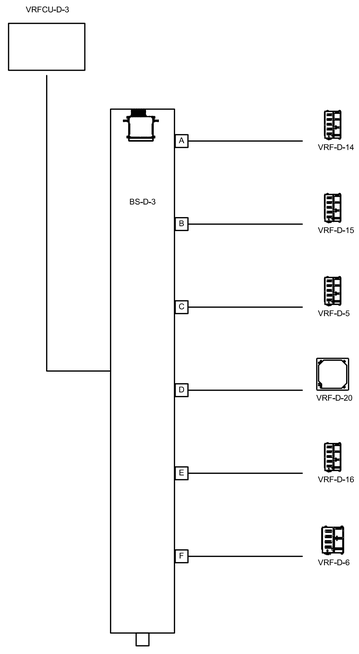



4 **MECHANICAL PIPING DIAGRAM OACU-D-2**
SCALE: NA

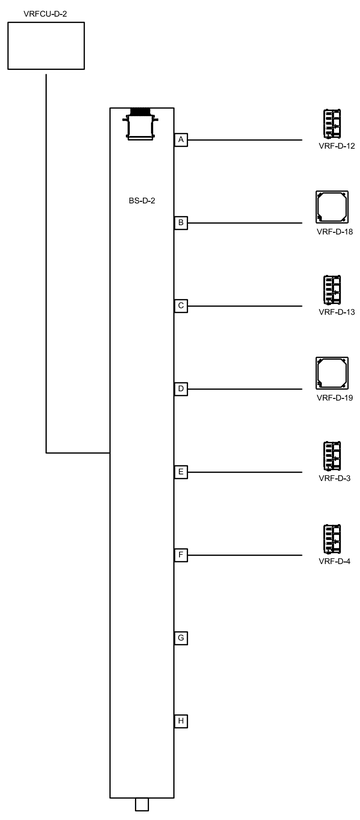



2 **MECHANICAL PIPING DIAGRAM OACU-D-1**
SCALE: NA

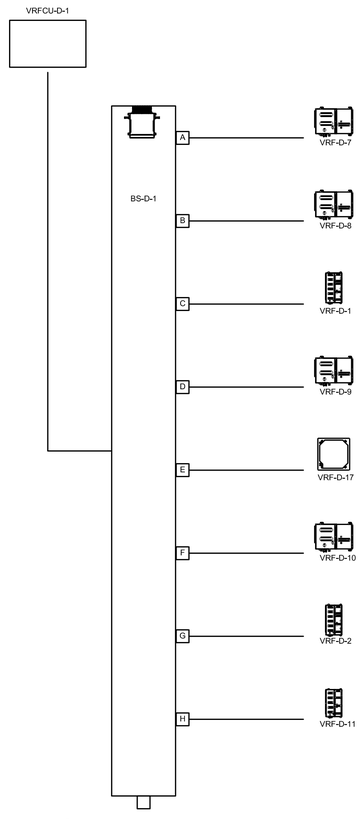
THESE SCHEMATICS ARE FOR INFORMATION PURPOSES ONLY. REFER TO MANUFACTURER FOR FINAL PIPE SIZES, LENGTH AND LAYOUT.




5 **MECHANICAL PIPING DIAGRAM VRF-D-3**
SCALE: NA




3 **MECHANICAL PIPING DIAGRAM VRF-D-2**
SCALE: NA




1 **MECHANICAL PIPING DIAGRAM VRF-D-1**
SCALE: NA

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Beaumont ISD
Preparing Our Next Generation

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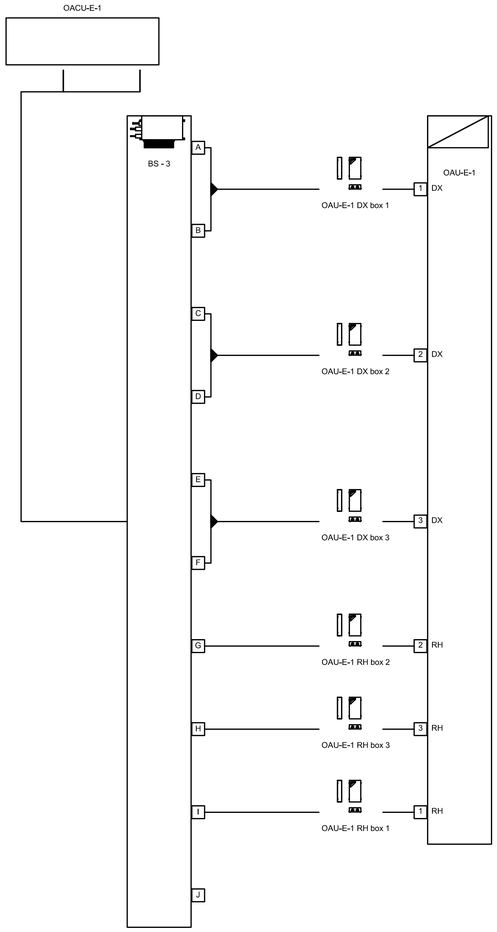
SHEET NAME

MECHANICAL VRF PIPING DIAGRAM - BEAUMONT UNITED

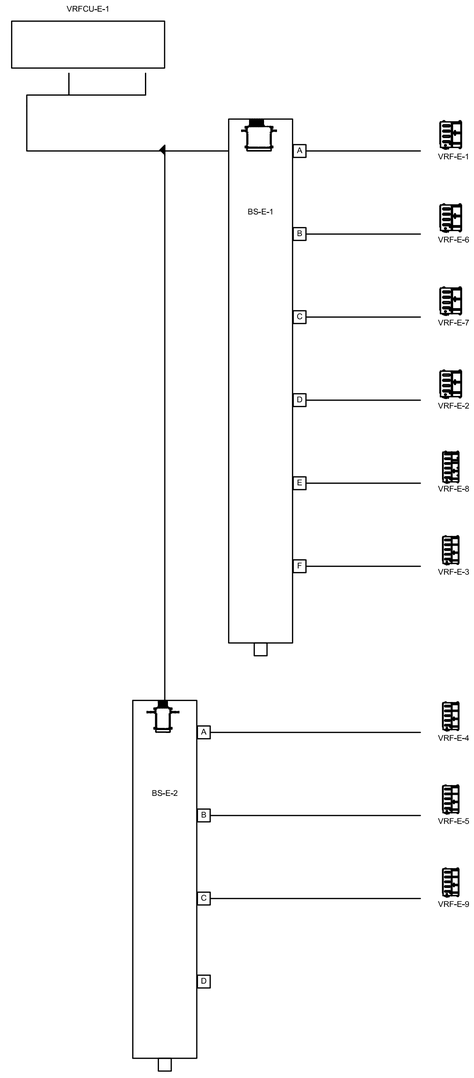
SHEET NUMBER
M4.1

REVISION

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2 **MECHANICAL PIPING DIAGRAM OACU-E-1**
SCALE: NA




1 **MECHANICAL PIPING DIAGRAM VRF-E-1**
SCALE: NA


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# BEAUMONT ISD AIR HANDLER UPGRADES

Beaumont ISD
Preparing Our Next Generation

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| | | | |

CHECKED BY: SH

DRAWN BY: AA

SHEET NAME

MECHANICAL VRF PIPING DIAGRAM - BEAUMONT UNITED

SHEET NUMBER: M4.2

REVISION:

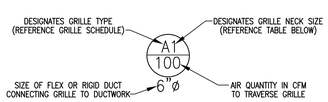
# SYMBOL LEGEND

| SYMBOL | DESCRIPTION (DISREGARD ITEMS NOT SHOWN ON PLANS) |
|---|---|
| **GENERAL** | |
| (F) | KEY NOTE TAG |
| (F) | NOTE SPECIFIC TO DETAIL TAG |
| 1 | REVISION TAG |
| | NEW EQUIPMENT |
| **DUCTWORK** | |
| | SUPPLY AIR DUCTWORK |
| | RETURN AIR AND OUTSIDE AIR DUCTWORK |
| | EXHAUST AIR DUCTWORK |
| | FLEXIBLE DUCTWORK |
| | SUPPLY AIR DUCTWORK THROUGH HORIZONTAL PARTITION |
| | RETURN AIR AND OUTSIDE AIR DUCTWORK THROUGH HORIZONTAL PARTITION |
| | EXHAUST AIR DUCTWORK THROUGH HORIZONTAL PARTITION |
| | FIRE DAMPER (VERTICAL) |
| | FIRE DAMPER (HORIZONTAL) |
| | SMOKE DAMPER (VERTICAL) |
| | SMOKE DAMPER (HORIZONTAL) |
| | COMBINATION FIRE & SMOKE DAMPER (VERTICAL) |
| | COMBINATION FIRE & SMOKE DAMPER (HORIZONTAL) |
| | MANUAL BALANCING DAMPER (SEE DAMPER SCHEDULE) |
| | MOTORIZED DAMPER (SEE DAMPER SCHEDULE) |
| **SENSORS** | |
| T | THERMOSTAT AND TEMPERATURE SENSOR |
| H | HUMIDISTAT |
| SD | SMOKE DETECTOR |
| HD | HEAT DETECTOR |
| **AIR DEVICES** | |
| | GRILLE SIZE TAG (REFER TO GRILLE SIZE LEGEND) |
| | SUPPLY AIR GRILLE WITH FOUR-WAY THROW |
| | SUPPLY AIR GRILLE WITH THREE-WAY THROW |
| | SUPPLY AIR GRILLE WITH TWO-WAY THROW |
| | SUPPLY AIR GRILLE WITH TWO-WAY CORNER THROW |
| | SUPPLY AIR GRILLE WITH ONE-WAY THROW |
| | RETURN AIR GRILLE |
| | RETURN AIR GRILLE WITH SOUND BOOT |
| | EXHAUST AIR GRILLE |
| | SUPPLY AIR SIDEWALL GRILLE |
| | RETURN AIR SIDEWALL GRILLE |
| 20X12 | RETURN AIR OPENING ABOVE CEILING |
| **SUBSCRIPTS AND ABBREVIATIONS** | |
| AFF | ABOVE FINISHED FLOOR |
| BBS | BELOW BOTTOM OF STRUCTURE |
| BOD | BOTTOM OF DUCT |
| BOP | BOTTOM OF PIPE |
| CA | COMBUSTION AIR |
| CFM | CUBIC FEET PER MINUTE |
| EA | EXHAUST AIR |
| FPM | FEET PER MINUTE |
| NC | NORMALLY CLOSED |
| NO | NORMALLY OPEN |
| OA | OUTSIDE AIR |
| RA | RETURN AIR |
| SA | SUPPLY AIR |
| **RENOVATIONS** | |
| | POINT OF CONNECTION FROM NEW TO EXISTING |
| | ITEM TO REMAIN |
| | ITEM TO BE REMOVED |

MS03

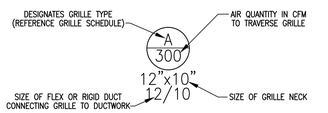
# GRILLE SIZING SCHEDULE

STANDARD GRILLE




ALL GRILLES SHOWN SHALL BE FOUR-WAY THROW UNLESS OTHERWISE SHOWN.

REGISTER OR NONSTANDARD GRILLE



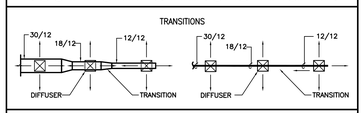

ALL GRILLES SHOWN SHALL BE FOUR-WAY THROW UNLESS OTHERWISE SHOWN.
ALL REGISTERS SHALL HAVE A 45° HORIZONTAL DEFLECTION UNLESS OTHERWISE SHOWN.

| GRILLE SIZE DESIGNATION | GRILLE NECK SIZE | GRILLE SIZE DESIGNATION | GRILLE NECK SIZE |
|---|---|---|---|
| 1 | 6" x 6" | 7 | 15" x 15" |
| 2 | 8" x 8" | 8 | 16" x 16" |
| 3 | 9" x 9" | 9 | 18" x 18" |
| 4 | 10" x 10" | 10 | 20" x 20" |
| 5 | 12" x 12" | 11 | 22" x 22" |
| 6 | 14" x 14" | 12 | 24" x 24" |

MS01

# DUCTWORK SYMBOLS LEGEND

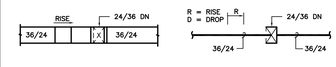
TRANSITIONS



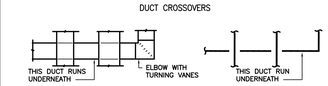

MAIN BRANCH TAKE-OFFS



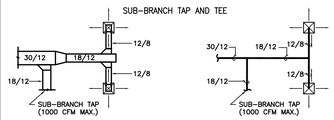

RISERS

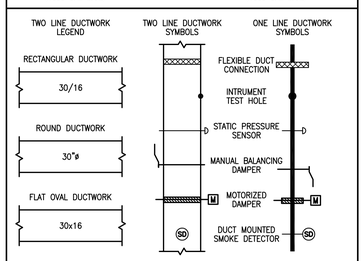



DUCT CROSSOVERS



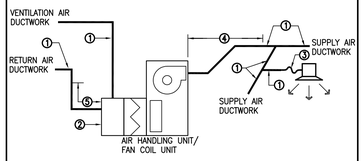

SUB-BRANCH TAP AND TEE



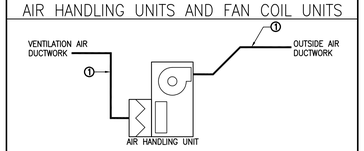




MS02

# DUCT LINER AND INSULATION




AIR HANDLING UNITS AND FAN COIL UNITS



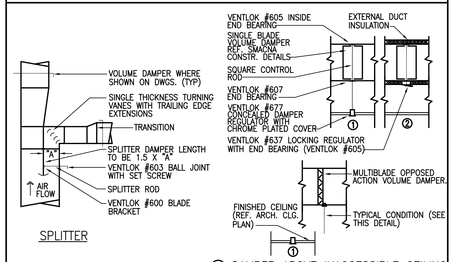

OUTSIDE AIR PRETREATMENT UNIT

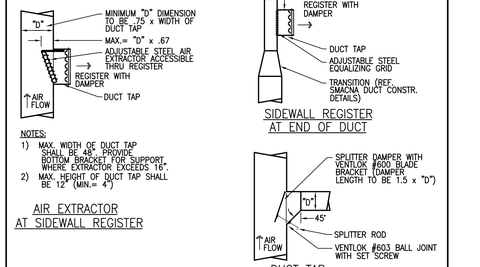
NOTES

1. SHEETMETAL DUCTWORK WITH EXTERNAL DUCTWORK INSULATION AS SPECIFIED.
2. SHEETMETAL DUCTWORK RETURN AIR PLENUM WITH EXTERNAL DUCTWORK INSULATION AS SPECIFIED.
3. FLEXIBLE DUCTWORK WITH EXTERNAL DUCTWORK INSULATION AS SPECIFIED.
4. SHEETMETAL DUCTWORK WITH EXTERNAL DUCTWORK INSULATION AS SPECIFIED AND 1" THICK 1-1/2 LB LINER AS SPECIFIED FROM AIR HANDLING UNIT DISCHARGE TO 10'-0" DOWNSTREAM.
5. SHEETMETAL DUCTWORK WITH EXTERNAL DUCTWORK INSULATION AS SPECIFIED AND 1" THICK 1-1/2 LB LINER AS SPECIFIED FROM AIR HANDLING UNIT INLET TO 10'-0" UPSTREAM.
6. EXHAUST DUCTWORK AS SPECIFIED WITH FIREBOARD INSULATION AS SPECIFIED.
7. SHEETMETAL DUCTWORK ONLY. NO INSULATION REQUIRED.

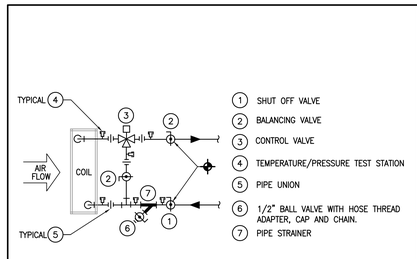
MS04

# DUCTWORK CONSTRUCTION DETAILS

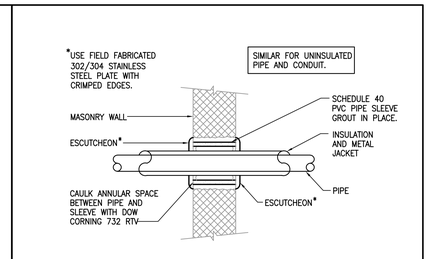


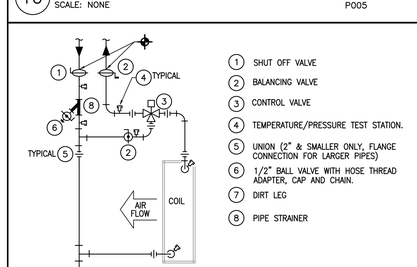

NOTES:
1) MAX. WIDTH OF DUCT TAP SHALL BE 48". PROVIDE BOTTOM BRACKET FOR SUPPORT, WHERE EXTRACTOR EXCEEDS 16".
2) MAX. HEIGHT OF DUCT TAP SHALL BE 12" (MIN.= 4")



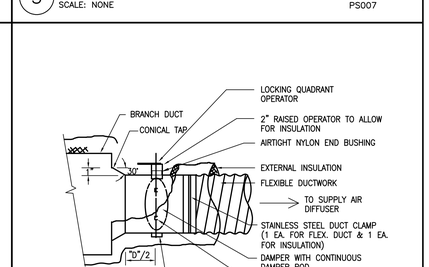

## 10 PIPING AT HOT WATER COIL
SCALE: NONE — P005



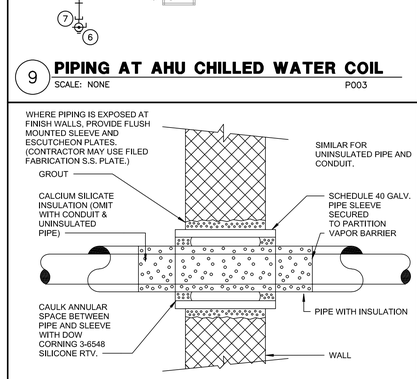

## 5 PIPE THROUGH EXTERIOR WALL
SCALE: NONE — PS007



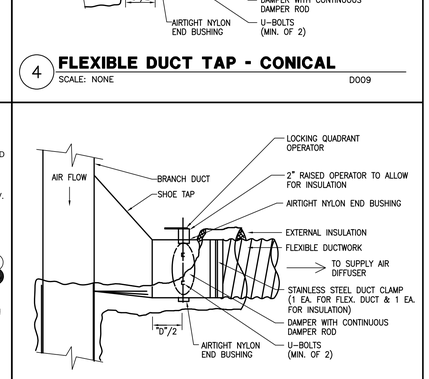

## 9 PIPING AT AHU CHILLED WATER COIL
SCALE: NONE — P003



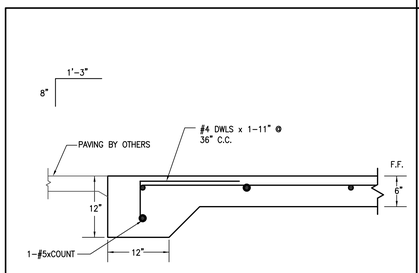

## 4 FLEXIBLE DUCT TAP - CONICAL
SCALE: NONE — DO09



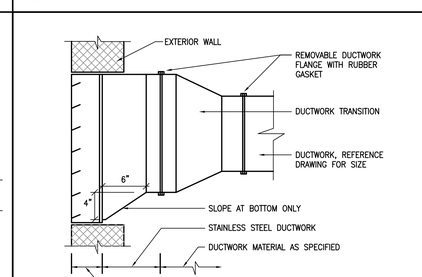

## 8 PIPE THROUGH FIRE RATED WALL
SCALE: NONE



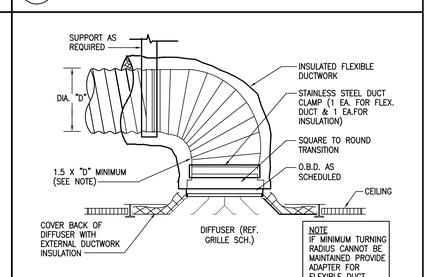

## 3 FLEXIBLE DUCT TAP - SHOE
SCALE: NONE — DO10



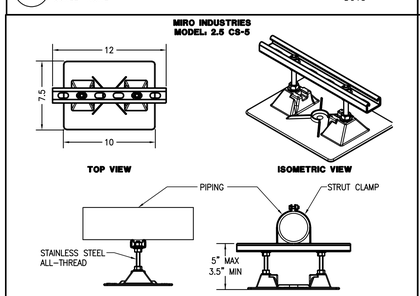

## 12 CONCRETE FOOTING
SCALE: NONE — DO13



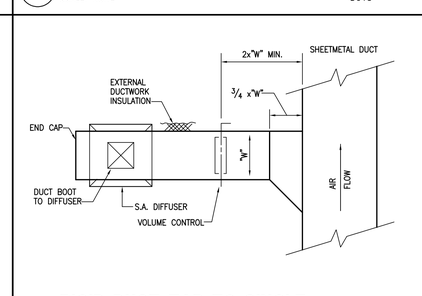

## 7 DUCTWORK AT LOUVER
SCALE: NONE — DO15



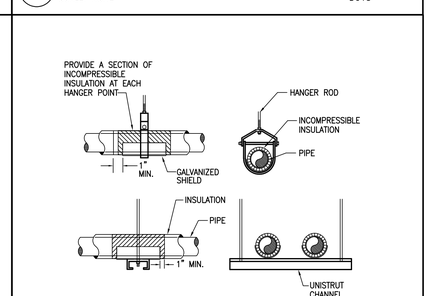

## 2 FLEX DUCT CONNECTION AT SUPPLY AIR DIFFUSER
SCALE: NONE — DO13




## 11 PIPING SUPPORT DETAIL
SCALE: NONE — PS002




## 6 RIGID DUCT TAP TO SINGLE SUPPLY AIR DIFFUSER
SCALE: NONE — DO07




## 1 PIPE HANGERS
SCALE: NONE — PS002


Salas O'Brien
HOUSTON
10930 W. SAM HOUSTON PKWY NORTH SUITE 900
HOUSTON, TX 77064
Salas O'Brien Registration: F-4111
Salas O'Brien Project Number: 2022-04653-00



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| ISSUE DATE | DESCRIPTION |
|---|---|
| 04-11-2023 | 100% |

2022-04653-00
Owner

# BEAUMONT ISD AIR HANDLER UPGRADES

Beaumont ISD
Preparing Our Next Generation

NOTES

REVISIONS

| NUMBER | DESCRIPTION | DATE | CHECKER |
|---|---|---|---|

| CHECKED BY | DRAWN BY |
|---|---|
| SH | AA |

SHEET NAME

MECHANICAL LEGENDS AND DETAILS BEAUMONT UNITED H.S

SHEET NUMBER: M5.1

REVISION

## VRF BRANCH SELECTOR D HALL

| MARK | CURRENT CHARACTERISTIC | MCA | DIMENSION (WXHXL) | WEIGHT (LBS) | REMARKS |
|---|---|---|---|---|---|
| BS-D-1 | 208/1/60 | 0.8 | 23"X9.5"X24" | 81.0 | 1,2,3 |
| BS-D-2 | 208/1/60 | 0.8 | 23"X9.5"X24" | 81.0 | 1,2,3 |
| BS-D-3 | 208/1/60 | 0.6 | 23"X9.5"X24" | 73.0 | 1,2,3 |
| OABS-D-1 | 208/1/60 | 0.8 | 23"X9.5"X24" | 81.0 | 1,2,3 |
| OABS-D-2 | 208/1/60 | 0.8 | 23"X9.5"X24" | 81.0 | 1,2,3 |

REMARKS:
1. BRANCH SELECTOR MODULES ARE TYPICAL. SEE DRAWINGS AND PIPING SCHEMATICS FOR QUANTITY AND LOCATION.
2. CONTRACTOR TO INSTALL "FULL PORT" ISOLATION VALVES AND SCHRADER VALVE UPSTREAM OF EACH BRANCH SELECTOR BOX.
3. BRANCH SELECTORS SHALL HAVE BRAZED CONNECTIONS.

## VRF AIR COOLED CONDENSING UNIT - D HALL

| MARK | MIN. TOTAL CAPACITY COOLING (BTUH) | MIN. TOTAL CAPACITY HEATING (BTUH) | OUTDOOR AIR TEMP (°F) | MINIMUM EER/ SEER | CURRENT CHARAC. | MCA | MOCP | RELATED UNIT MARK | REMARKS |
|---|---|---|---|---|---|---|---|---|---|
| VRFCU-D-1 | 162,530 | 80,040 | 98.0 | 11.5/- | 460/3/60 | 24.9 | 25 | VRF-D-1,2,7,8 9,10,11,17 | 1,2,3,4,5 |
| VRFCU-D-2 | 160,640 | 69,230 | 98.0 | 11.0/- | 460/3/60 | 28.3 | 30 | VRF-D-3,4,12 13,18,19 | 1,2,3,4,5 |
| VRFCU-D-3 | 162,660 | 83,510 | 98.0 | 11.1/- | 460/3/60 | 24.9 | 25 | VRF-D-5,6,14 15,16,20 | 1,2,3,4,5 |
| OAUCU-D-1A | 408,250 | 303,990 | 98.0 | 9.5/- | 460/3/60 | 20.6 | 25.0 | OAU-D-1 | 1,2,3,4,5 |
| OAUCU-D-1B | | | | | 460/3/60 | 25.9 | 30 | | |
| OAUCU-D-1C | | | | | 460/3/60 | 25.9 | 30 | | |

GENERAL NOTES:
1. MINIMUM RECOMMENDED CLEARANCE AROUND ROOFTOP UNIT IS 12 INCHES ON NON-SERVICE SIDES AND 30 INCHES ON SERVICE SIDES. MAINTAIN MINIMUM CLEARANCE FOR CONDENSER AIR FLOW AS RECOMMENDED BY UNIT MANUFACTURER. MAINTAIN MINIMUM CLEARANCE AS REQUIRED TO OPEN ACCESS AND CONTROL DOORS ON UNIT FOR SERVICE, MAINTENANCE, AND INSPECTION. MAINTAIN MINIMUM ELECTRICAL CLEARANCE AS REQUIRED BY NEC.

REMARKS:
1. PROVIDE WITH LOW AMBIENT CONTROL DOWN TO 20°F.
2. PROVIDE WITH DISCONNECT SWITCH.
3. REFRIGERANT LINES TO BE SIZED PER MANUFACTURER'S REQUIREMENTS.
4. CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING DX EXPANSION VALVES. ELECTRICIAN SHALL BE RESPONSIBLE FOR WIRING 208-230V/1PH DX EXPANSION VALVES.
5. PROVIDE HEAT RECOVERY UNIT.

## VRF FAN/COIL UNIT - D HALL

| MARK | FAN: SUPPLY AIR CFM | FAN: OUTSIDE AIR CFM | FAN: EXT. STATIC PRESSURE (IN. W.C.) | FAN: CURRENT CHARAC. | COOLING: AIR TEMPERATURE (°F): ENTERING DRY BULB | COOLING: AIR TEMPERATURE (°F): ENTERING WET BULB | COOLING: MIN. TOTAL CAPACITY (BTUH) | COOLING: MIN. SENSIBLE CAPACITY (BTUH) | HEATING: ENTERING AIR TEMP. (°F) | HEATING: MINIMUM CAPACITY (BTUH) | MCA | MOP | ASSOC. CONDENSING UNIT | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| VRF-D-1 | 1,680 | 265 | 0.2 | 208/1/60 | 75.0 | 62.5 | 43,890 | 38,430 | 70.0 | 18,780 | 3.3 | 15.0 | VRFCU-D-1 | 1,2,3,4,5,7 |
| VRF-D-2 | 1,500 | 265 | 0.2 | 208/1/60 | 75.0 | 62.5 | 39,050 | 35,690 | 70.0 | 16,500 | 3.3 | 15.0 | VRFCU-D-1 | 1,2,3,4,5,7 |
| VRF-D-3 | 1,425 | 355 | 0.2 | 208/1/60 | 75.0 | 62.5 | 37,270 | 31,180 | 70.0 | 14,470 | 2.8 | 15.0 | VRFCU-D-2 | 1,2,3,4,5,7 |
| VRF-D-4 | 1,425 | 360 | 0.2 | 208/1/60 | 75.0 | 62.5 | 32,330 | 28,870 | 70.0 | 14,130 | 2.8 | 15.0 | VRFCU-D-2 | 1,2,3,4,5,7 |
| VRF-D-5 | 1,210 | 355 | 0.2 | 208/1/60 | 75.0 | 62.5 | 31,450 | 25,990 | 70.0 | 13,720 | 2.5 | 15.0 | VRFCU-D-3 | 1,2,3,4,5,7 |
| VRF-D-6 | 1,210 | 70 | 0.2 | 208/1/60 | 75.0 | 62.5 | 25,660 | 25,030 | 70.0 | 20,610 | 1.8 | 15.0 | VRFCU-D-3 | 1,2,3,4,5,7 |
| VRF-D-7 | 380 | 30 | 0.2 | 208/1/60 | 75.0 | 62.5 | 9,210 | 8,580 | 70.0 | 8,070 | 0.8 | 15.0 | VRFCU-D-1 | 1,2,3,4,5,7 |
| VRF-D-8 | 380 | 35 | 0.2 | 208/1/60 | 75.0 | 62.5 | 8,660 | 8,030 | 70.0 | 6,150 | 0.8 | 15.0 | VRFCU-D-1 | 1,2,3,4,5,7 |
| VRF-D-9 | 380 | 35 | 0.2 | 208/1/60 | 75.0 | 62.5 | 7,770 | 7,140 | 70.0 | 5,260 | 0.8 | 15.0 | VRFCU-D-1 | 1,2,3,4,5,7 |
| VRF-D-10 | 380 | 35 | 0.2 | 208/1/60 | 75.0 | 62.5 | 7,350 | 6,720 | 70.0 | 4,290 | 0.8 | 15.0 | VRFCU-D-1 | 1,2,3,4,5,7 |
| VRF-D-11 | 1,210 | 0 | 0.2 | 208/1/60 | 75.0 | 62.5 | 31,140 | 25,680 | 70.0 | 14,970 | 2.5 | 15.0 | VRFCU-D-1 | 1,2,3,4,5,7 |
| VRF-D-12 | 1,210 | 0 | 0.2 | 208/1/60 | 75.0 | 62.5 | 30,300 | 24,840 | 70.0 | 14,730 | 2.5 | 15.0 | VRFCU-D-2 | 1,2,3,4,5,7 |
| VRF-D-13 | 1,210 | 355 | 0.2 | 208/1/60 | 75.0 | 62.5 | 29,820 | 24,360 | 70.0 | 13,860 | 2.5 | 15.0 | VRFCU-D-2 | 1,2,3,4,5,7 |
| VRF-D-14 | 1,210 | 355 | 0.2 | 208/1/60 | 75.0 | 62.5 | 30,180 | 24,720 | 70.0 | 14,650 | 2.5 | 15.0 | VRFCU-D-3 | 1,2,3,4,5,7 |
| VRF-D-15 | 1,210 | 355 | 0.2 | 208/1/60 | 75.0 | 62.5 | 29,730 | 24,270 | 70.0 | 13,830 | 2.5 | 15.0 | VRFCU-D-3 | 1,2,3,4,5,7 |
| VRF-D-16 | 1,210 | 355 | 0.2 | 208/1/60 | 75.0 | 62.5 | 30,180 | 24,720 | 70.0 | 14,680 | 2.5 | 15.0 | VRFCU-D-3 | 1,2,3,4,5,7 |
| VRF-D-17 | 650 | 0 | – | 208/1/60 | 75.0 | 62.5 | 15,460 | 13,650 | 70.0 | 6,020 | 0.6 | 15.0 | VRFCU-D-1 | 1,2,3,4,6,7 |
| VRF-D-18 | 650 | 0 | – | 208/1/60 | 75.0 | 62.5 | 15,460 | 13,650 | 70.0 | 6,020 | 0.6 | 15.0 | VRFCU-D-2 | 1,2,3,4,6,7 |
| VRF-D-19 | 650 | 0 | – | 208/1/60 | 75.0 | 62.5 | 15,460 | 13,650 | 70.0 | 6,020 | 0.6 | 15.0 | VRFCU-D-2 | 1,2,3,4,6,7 |
| VRF-D-20 | 650 | 0 | – | 208/1/60 | 75.0 | 62.5 | 15,460 | 13,650 | 70.0 | 6,020 | 0.6 | 15.0 | VRFCU-D-3 | 1,2,3,4,6,7 |

GENERAL NOTES :
1. EXTERNAL STATIC PRESSURE INCLUDES LOSSES DUE TO DUCTWORK, AIR DEVICES, DAMPERS, AND DUCT MOUNTED HOT WATER COILS WHERE APPLICABLE. DIRTY FILTER AND UNIT CASING MUST BE ADDED TO EXTERNAL STATIC PRESSURE TO OBTAIN TOTAL PRESSURE LOSS. INCREASE HORSEPOWER AS REQUIRED TO MEET YOUR TOTAL PRESSURE LOSS. COORDINATE WITH ELECTRICIAN.
2. MAINTAIN MINIMUM CLEARANCE FOR COIL UPLL AS RECOMMENDED BY UNIT MANUFACTURERE. MAINTAIN MINIMUM CLEARANCE AS REQUIRED TO OPEN ACCESS AND CONTROL DOORS ON UNIT FOR SERVICE, MAINENANCE, AND INSPECTION. MAINAIN MINIMUM ELECTRICAL CELARANCE AS REQUIRED BY NEC.

REMARKS :
1. UNIT TO BE INSTALLED PER MANUFACTURER'S INSTALLATION INSTRUCTIONS.
2. CONTROLLED BY PROGRAMMABLE WIRED THERMOSTAT.
3. REFRIGERANT LINES TO BE SIZED PER MANUFACTURER'S REQUIREMENTS.
4. PROVIDE WITH INTEGRAL CONDENSATE PUMP.
5. PROVIDE CONCEALED DUCTED UNIT.
6. PROVIDE CEILING MOUNTED 4-WAY CASSETTE.
7. PROVIDE CONDENSATE OVERFLOW SWITCH.

AS05

## VRF OUTSIDE AIR HANDLING UNIT - D HALL

| MARK | FAN: SUPPLY AIR CFM | FAN: OUTSIDE AIR CFM | FAN: EXT. STATIC PRESSURE (IN. W.C.) | FAN: HORSE POWER | FAN: CURRENT CHARAC. | COOLING: AIR TEMPERATURE (°F): ENTERING DRY BULB | COOLING: AIR TEMPERATURE (°F): ENTERING WET BULB | COOLING: MIN. TOTAL CAPACITY (BTUH) | COOLING: MIN. SENSIBLE CAPACITY (BTUH) | COOLING: MINIMUM EER/ SEER | HEATING: ENTERING AIR TEMP. (°F) | HEATING: MINIMUM CAPACITY (BTUH) | MCA | MOCP | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| OAU-D-1 | 4,300 | 4,300 | 1.00 | 3.0 | 460/3/60 | 98.0 | 80.0 | 408,250 | 204,790 | 12.3/- | 27.0 | 303,990 | 5.25 | 10 | 1,2,3,4 |

GENERAL NOTES:
1. EXTERNAL STATIC PRESSURE INCLUDES LOSSES DUE TO DUCTWORK, AIR DEVICES, DAMPERS, AND DUCT MOUNTED HOT WATER COILS WHERE APPLICABLE. DIRTY FILTER AND UNIT CASING MUST BE ADDED TO EXTERNAL STATIC PRESSURE TO OBTAIN TOTAL PRESSURE LOSS. INCREASE HORSEPOWER AS REQUIRED TO MEET YOUR TOTAL PRESSURE LOSS. COORDINATE WITH ELECTRICIAN.
2. MAINTAIN MINIMUM CLEARANCE FOR COIL PULL AS RECOMMENDED BY UNIT MANUFACTURER. MAINTAIN MINIMUM CLEARANCE AS REQUIRED TO OPEN ACCESS AND CONTROL DOORS ON UNIT FOR SERVICE, MAINTENANCE, AND INSPECTION. MAINTAIN MINIMUM ELECTRICAL CLEARANCE AS REQUIRED BY NEC.

REMARKS:
1. VELOCITY NOT TO EXCEED 450 FPM ON COOLING COIL.
2. PROVIDE GROUND MOUNTED UNIT.
3. UNIT TO BE INSTALLED PER MANUFACTURER'S INSTALLATION INSTRUCTIONS.
4. REFRIGERANT LINES TO BE SIZED PER MANUFACTURER'S REQUIREMENTS.

## VRF BRANCH SELECTOR E HALL

| MARK | CURRENT CHARACTERISTIC | MCA | DIMENSION (WXHXL) | WEIGHT (LBS) | REMARKS |
|---|---|---|---|---|---|
| BS-E-1 | 208/1/60 | 0.6 | 23"X9.5"X24" | 73.0 | 1,2,3 |
| BS-E-2 | 208/1/60 | 0.4 | 14"X9.5"X24" | 49.0 | 1,2,3 |
| OABS-E-1 | 208/1/60 | 0.4 | 32"X12"X19" | 49.0 | 1,2,3 |

REMARKS:
1. BRANCH SELECTOR MODULES ARE TYPICAL. SEE DRAWINGS AND PIPING SCHEMATICS FOR QUANTITY AND LOCATION.
2. CONTRACTOR TO INSTALL "FULL PORT" ISOLATION VALVES AND SCHRADER VALVE UPSTREAM OF EACH BRANCH SELECTOR BOX.
3. BRANCH SELECTORS SHALL HAVE BRAZED CONNECTIONS.

## VRF AIR COOLED CONDENSING UNIT - E HALL

| MARK | MIN. TOTAL CAPACITY COOLING (BTUH) | MIN. TOTAL CAPACITY HEATING (BTUH) | OUTDOOR AIR TEMP (°F) | MINIMUM EER/ SEER | CURRENT CHARAC. | MCA | MOCP | RELATED UNIT MARK | REMARKS |
|---|---|---|---|---|---|---|---|---|---|
| VRFCU-E-1A | 252,050 | 111,040 | 98.0 | 10.6/- | 460/3/60 | 21.3 | 25.0 | VRF-E-1,2,3,4 5,6,7,8,9 | 1,2,3,4,5 |
| VRFCU-E-1B | | | | | 460/3/60 | 16.6 | 20.0 | | |
| OAUCU-E-1A | 213,820 | 102,600 | 98.0 | 11.7/- | 460/3/60 | 21.1 | 25.0 | OAU-E-1 | 1,2,3,4,5 |
| OAUCU-E-1B | | | | | 460/3/60 | 21.1 | 25.0 | | |

GENERAL NOTES:
1. MINIMUM RECOMMENDED CLEARANCE AROUND ROOFTOP UNIT IS 12 INCHES ON NON-SERVICE SIDES AND 30 INCHES ON SERVICE SIDES. MAINTAIN MINIMUM CLEARANCE FOR CONDENSER AIR FLOW AS RECOMMENDED BY UNIT MANUFACTURER. MAINTAIN MINIMUM CLEARANCE AS REQUIRED TO OPEN ACCESS AND CONTROL DOORS ON UNIT FOR SERVICE, MAINTENANCE, AND INSPECTION. MAINTAIN MINIMUM ELECTRICAL CLEARANCE AS REQUIRED BY NEC.

REMARKS:
1. PROVIDE WITH LOW AMBIENT CONTROL DOWN TO 20°F.
2. PROVIDE WITH DISCONNECT SWITCH.
3. REFRIGERANT LINES TO BE SIZED PER MANUFACTURER'S REQUIREMENTS.
4. CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING DX EXPANSION VALVES. ELECTRICIAN SHALL BE RESPONSIBLE FOR WIRING 208-230V/1PH DX EXPANSION VALVES.
5. PROVIDE HEAT RECOVERY UNIT.

## VRF FAN/COIL UNIT - E HALL

| MARK | FAN: SUPPLY AIR CFM | FAN: OUTSIDE AIR CFM | FAN: EXT. STATIC PRESSURE (IN. W.C.) | FAN: CURRENT CHARAC. | COOLING: AIR TEMPERATURE (°F): ENTERING DRY BULB | COOLING: AIR TEMPERATURE (°F): ENTERING WET BULB | COOLING: MIN. TOTAL CAPACITY (BTUH) | COOLING: MIN. SENSIBLE CAPACITY (BTUH) | HEATING: ENTERING AIR TEMP. (°F) | HEATING: MINIMUM CAPACITY (BTUH) | MCA | MOP | ASSOC. CONDENSING UNIT | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| VRF-E-1 | 470 | 75 | 0.2 | 208/1/60 | 75.0 | 62.5 | 13,250 | 11,150 | 70.0 | 5,790 | 1.6 | 15.0 | VRFCU-E-1 | 1,2,3,4,5,6 |
| VRF-E-2 | 1,010 | 290 | 0.2 | 208/1/60 | 75.0 | 62.5 | 25,200 | 22,470 | 70.0 | 16,640 | 1.8 | 15.0 | VRFCU-E-1 | 1,2,3,4,5,6 |
| VRF-E-3 | 1,010 | 280 | 0.2 | 208/1/60 | 75.0 | 62.5 | 35,860 | 31,870 | 70.0 | 18,700 | 2.8 | 15.0 | VRFCU-E-1 | 1,2,3,4,5,6 |
| VRF-E-4 | 1,020 | 285 | 0.2 | 208/1/60 | 75.0 | 62.5 | 27,370 | 23,380 | 70.0 | 13,040 | 2.5 | 15.0 | VRFCU-E-1 | 1,2,3,4,5,6 |
| VRF-E-5 | 1,330 | 275 | 0.2 | 208/1/60 | 75.0 | 62.5 | 33,940 | 29,950 | 70.0 | 3,490 | 2.8 | 15.0 | VRFCU-E-1 | 1,2,3,4,5,6 |
| VRF-E-6 | 710 | 165 | 0.2 | 208/1/60 | 75.0 | 62.5 | 17,960 | 15,860 | 70.0 | 12,130 | 1.8 | 15.0 | VRFCU-E-1 | 1,2,3,4,5,6 |
| VRF-E-7 | 930 | 165 | 0.2 | 208/1/60 | 75.0 | 62.5 | 22,440 | 20,340 | 70.0 | 8,930 | 1.8 | 15.0 | VRFCU-E-1 | 1,2,3,4,5,6 |
| VRF-E-8 | 1,880 | 430 | 0.2 | 208/1/60 | 75.0 | 62.5 | 42,970 | 38,980 | 70.0 | 19,000 | 3.3 | 15.0 | VRFCU-E-1 | 1,2,3,4,5,6 |
| VRF-E-9 | 1,250 | 280 | 0.2 | 208/1/60 | 75.0 | 62.5 | 33,060 | 30,070 | 70.0 | 13,320 | 2.8 | 15.0 | VRFCU-E-1 | 1,2,3,4,5,6 |

GENERAL NOTES :
1. EXTERNAL STATIC PRESSURE INCLUDES LOSSES DUE TO DUCTWORK, AIR DEVICES, DAMPERS, AND DUCT MOUNTED HOT WATER COILS WHERE APPLICABLE. DIRTY FILTER AND UNIT CASING MUST BE ADDED TO EXTERNAL STATIC PRESSURE TO OBTAIN TOTAL PRESSURE LOSS. INCREASE HORSEPOWER AS REQUIRED TO MEET YOUR TOTAL PRESSURE LOSS. COORDINATE WITH ELECTRICIAN.
2. MAINTAIN MINIMUM CLEARANCE FOR COIL UPLL AS RECOMMENDED BY UNIT MANUFACTURERE. MAINTAIN MINIMUM CLEARANCE AS REQUIRED TO OPEN ACCESS AND CONTROL DOORS ON UNIT FOR SERVICE, MAINENANCE, AND INSPECTION. MAINAIN MINIMUM ELECTRICAL CELARANCE AS REQUIRED BY NEC.

REMARKS :
1. UNIT TO BE INSTALLED PER MANUFACTURER'S INSTALLATION INSTRUCTIONS.
2. CONTROLLED BY PROGRAMMABLE WIRED THERMOSTAT.
3. REFRIGERANT LINES TO BE SIZED PER MANUFACTURER'S REQUIREMENTS.
4. PROVIDE WITH INTEGRAL CONDENSATE PUMP.
5. PROVIDE CEILING MOUNTED 4-WAY CASSETTE.
6. PROVIDE CONDENSATE OVERFLOW SWITCH.

AS05

## GRILLE

| MARK | SERVICE | TYPE | DAMPER | CONSTRUCTION MATERIAL | FINISH COLOR | MANUFACTURER | MODEL NUMBER | REMARKS |
|---|---|---|---|---|---|---|---|---|
| A | SUPPLY AIR | DIFFUSER | – | STEEL | – | TITUS | OMNI | EXPOSED T-BAR FRAME STYLE WITH 24"X24" FACE |
| B | RETURN AIR | DIFFUSER | – | STEEL | – | TITUS | PAR | EXPOSED T-BAR CEILING WITH A 24"X24" FACE PERFORATED |
| C | SUPPLY AIR | GRILLE | – | STEEL | – | TITUS | 300RL | DOUBLE DEFLECTION SIDEWALL GRILLE WITH HORIZONTAL FRONT BARS SURFACE MOUNTED |
| D | RETURN AIR | GRILLE | – | STEEL | – | TITUS | 350RL | DOUBLE DEFLECTION SIDEWALL GRILLE WITH HORIZONTAL FRONT BARS SURFACE MOUNTED |

GENERAL NOTES:
1. COORDINATE AIR DEVICE FINISH COLOR WITH ARCHITECT.

REMARKS:
1. N/A

DS02

## VRF OUTSIDE AIR HANDLING UNIT - E HALL

| MARK | FAN: SUPPLY AIR CFM | FAN: OUTSIDE AIR CFM | FAN: EXT. STATIC PRESSURE (IN. W.C.) | FAN: HORSE POWER | FAN: CURRENT CHARAC. | COOLING: AIR TEMPERATURE (°F): ENTERING DRY BULB | COOLING: AIR TEMPERATURE (°F): ENTERING WET BULB | COOLING: MIN. TOTAL CAPACITY (BTUH) | COOLING: MIN. SENSIBLE CAPACITY (BTUH) | COOLING: MINIMUM EER/ SEER | HEATING: ENTERING AIR TEMP. (°F) | HEATING: MINIMUM CAPACITY (BTUH) | MCA | MOCP | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| OAU-E-1 | 2,210 | 2,210 | 0.5 | – | 460/3/60 | 98.0 | 80.0 | 213,820 | 105,020 | 11.7/- | 27.0 | 102,600 | 5.98 | 15.0 | 1,2,3,4,5 |

GENERAL NOTES:
1. EXTERNAL STATIC PRESSURE INCLUDES LOSSES DUE TO DUCTWORK, AIR DEVICES, DAMPERS, AND DUCT MOUNTED HOT WATER COILS WHERE APPLICABLE. DIRTY FILTER AND UNIT CASING MUST BE ADDED TO EXTERNAL STATIC PRESSURE TO OBTAIN TOTAL PRESSURE LOSS. INCREASE HORSEPOWER AS REQUIRED TO MEET YOUR TOTAL PRESSURE LOSS. COORDINATE WITH ELECTRICIAN.
2. MAINTAIN MINIMUM CLEARANCE FOR COIL PULL AS RECOMMENDED BY UNIT MANUFACTURER. MAINTAIN MINIMUM CLEARANCE AS REQUIRED TO OPEN ACCESS AND CONTROL DOORS ON UNIT FOR SERVICE, MAINTENANCE, AND INSPECTION. MAINTAIN MINIMUM ELECTRICAL CLEARANCE AS REQUIRED BY NEC.

REMARKS:
1. VELOCITY NOT TO EXCEED 450 FPM ON COOLING COIL.
2. PROVIDE CEILING MOUNTED UNIT.
3. UNIT TO BE INSTALLED PER MANUFACTURER'S INSTALLATION INSTRUCTIONS.
4. REFRIGERANT LINES TO BE SIZED PER MANUFACTURER'S REQUIREMENTS.
5. PROVIDE WITH INTEGRAL CONDENSATE PUMP.

## DAMPER

| MARK | ACTUATOR | DUTY | BLADE ACTION | MANUFACTURER | MODEL NUMBER | REMARKS |
|---|---|---|---|---|---|---|
| D-1 | MANUAL BALANCING | UNDER 9" WIDE | N/A | N/A | N/A | SEE SMACNA CONSTRUCTION DETAILS REFERENCED "TYPICAL CONSTRUCTION DETAILS FOR LOW VELOCITY DUCTS." |
| D-2 | MANUAL BALANCING | OVER 9" WIDE | OPPOSED | RUSKIN | MD-35 | MANUAL DAMPER WITH STANDARD CONSTRUCTION FEATURES AND VENTLOCK #639 LOCKING REGULATOR. |
| D-3 | MOTORIZED | OVER 9" WIDE | OPPOSED | RUSKIN | CD-60 | LOW LEAKAGE DAMPER WITH BLADE SEALS |

NOTES:
N/A - NOT APPLICABLE

DS01

## FAN COIL UNIT - 6 CLASSROOMS

| MARK | FAN: SUPPLY AIR CFM | FAN: OUTSIDE AIR CFM | FAN: EXT. STATIC PRESSURE (IN. W.C.) | FAN: HORSE POWER | FAN: CURRENT CHARAC. | COOLING: AIR TEMPERATURE (°F): ENTERING DRY BULB | COOLING: AIR TEMPERATURE (°F): ENTERING WET BULB | COOLING: MIN. TOTAL CAPACITY (BTUH) | COOLING: MIN. SENSIBLE CAPACITY (BTUH) | COOLING: WATER: ENTERING TEMP. (°F) | COOLING: WATER: GPM | COOLING: WATER: MAX. PRESSURE DROP (FT.) | HEATING: ENTERING AIR TEMPERATURE (°F) | HEATING: MINIMUM CAPACITY (BTUH) | HEATING: WATER: ENTERING TEMP. (°F) | HEATING: WATER: GPM | HEATING: WATER: MAX. PRESSURE DROP (FT.) | PIPE SIZE TO COIL (IN.): CHILLED WATER | PIPE SIZE TO COIL (IN.): HOT WATER | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| FCU-01 | 3,000 | 750 | 1.0 | 1-1/2 | 480/3/60 | 80.0 | 67.0 | 132,800 | 90,700 | 45.0 | 26.6 | 12.0 | 70.0 | 222,730 | 180.0 | 11.1 | 8.5 | 2" | 1-1/4" | 1,2,3,4,5,6 |
| FCU-02 | 3,000 | 750 | 1.0 | 1-1/2 | 480/3/60 | 80.0 | 67.0 | 132,800 | 90,700 | 45.0 | 26.6 | 12.0 | 70.0 | 222,730 | 180.0 | 11.1 | 8.5 | 2" | 1-1/4" | 1,2,3,4,5,6 |
| FCU-03 | 3,000 | 750 | 1.0 | 1-1/2 | 480/3/60 | 80.0 | 67.0 | 132,800 | 90,700 | 45.0 | 26.6 | 12.0 | 70.0 | 222,730 | 180.0 | 11.1 | 8.5 | 2" | 1-1/4" | 1,2,3,4,5,6 |
| FCU-04 | 3,000 | 750 | 1.0 | 1-1/2 | 480/3/60 | 80.0 | 67.0 | 132,800 | 90,700 | 45.0 | 26.6 | 12.0 | 70.0 | 222,730 | 180.0 | 11.1 | 8.5 | 2" | 1-1/4" | 1,2,3,4,5,6 |
| FCU-05 | 3,000 | 750 | 1.0 | 1-1/2 | 480/3/60 | 80.0 | 67.0 | 132,800 | 90,700 | 45.0 | 26.6 | 12.0 | 70.0 | 222,730 | 180.0 | 11.1 | 8.5 | 2" | 1-1/4" | 1,2,3,4,5,6 |
| FCU-06 | 3,000 | 750 | 1.0 | 1-1/2 | 480/3/60 | 80.0 | 67.0 | 132,800 | 90,700 | 45.0 | 26.6 | 12.0 | 70.0 | 222,730 | 180.0 | 11.1 | 8.5 | 2" | 1-1/4" | 1,2,3,4,5,6 |

GENERAL NOTES:
1. EXTERNAL STATIC PRESSURE INCLUDES LOSSES DUE TO DUCTWORK, AIR DEVICES, DAMPERS, AND DUCT MOUNTED HOT WATER COILS WHERE APPLICABLE. DIRTY FILTER AND UNIT CASING MUST BE ADDED TO EXTERNAL STATIC PRESSURE TO OBTAIN TOTAL PRESSURE LOSS. INCREASE HORSEPOWER AS REQUIRED TO MEET YOUR TOTAL PRESSURE LOSS. COORDINATE WITH ELECTRICIAN.
2. MINIMUM RECOMMENDED CLEARANCE AROUND FAN COIL UNIT IS 12 INCHES ON NON-SERVICE SIDES AND 30 INCHES ON SERVICE SIDES. MAINTAIN MINIMUM CLEARANCE FOR COIL PULL AS RECOMMENDED BY FAN COIL UNIT MANUFACTURER. MAINTAIN MINIMUM CLEARANCE AS REQUIRED TO OPEN ACCESS AND CONTROL DOORS ON FAN COIL UNIT FOR SERVICE, MAINTENANCE, AND INSPECTION. MAINTAIN MINIMUM ELECTRICAL CLEARANCE AS REQUIRED BY NEC.

REMARKS:
1. PROVIDE WITH VERTICAL CABINET
2. PROVIDE WITH FLOAT SWITCH AUTOMATIC SHUT OFF.
3. PROVIDE WITH UNIT MOUNTED VFD.
4. PROVIDE THREE-WAY COOLING CONTROL VALVES.
5. PROVIDE THREE-WAY HEATING CONTROL VALVES.
6. VELOCITY NOT TO EXCEED 500 FPM ON COOLING COIL.
7. PROVIDE WITH FLAT FILTER SECTION.

AS01


Salas O'Brien
HOUSTON
10930 W. SAM HOUSTON PKWY NORTH SUITE 900
HOUSTON, TX 77064
Salas O'Brien Registration: F-4111
Salas O'Brien Project Number: 2022-04653-00



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BRADLEY KALMANS 80219 LICENSED PROFESSIONAL ENGINEER STATE OF TEXAS

04-20-2023

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2022-04653-00

Owner

# BEAUMONT ISD AIR HANDLER UPGRADES

Beaumont ISD
Preparing Our Next Generation

NOTES

REVISIONS

| NUMBER | DESCRIPTION | DATE | CHECKER |
|---|---|---|---|

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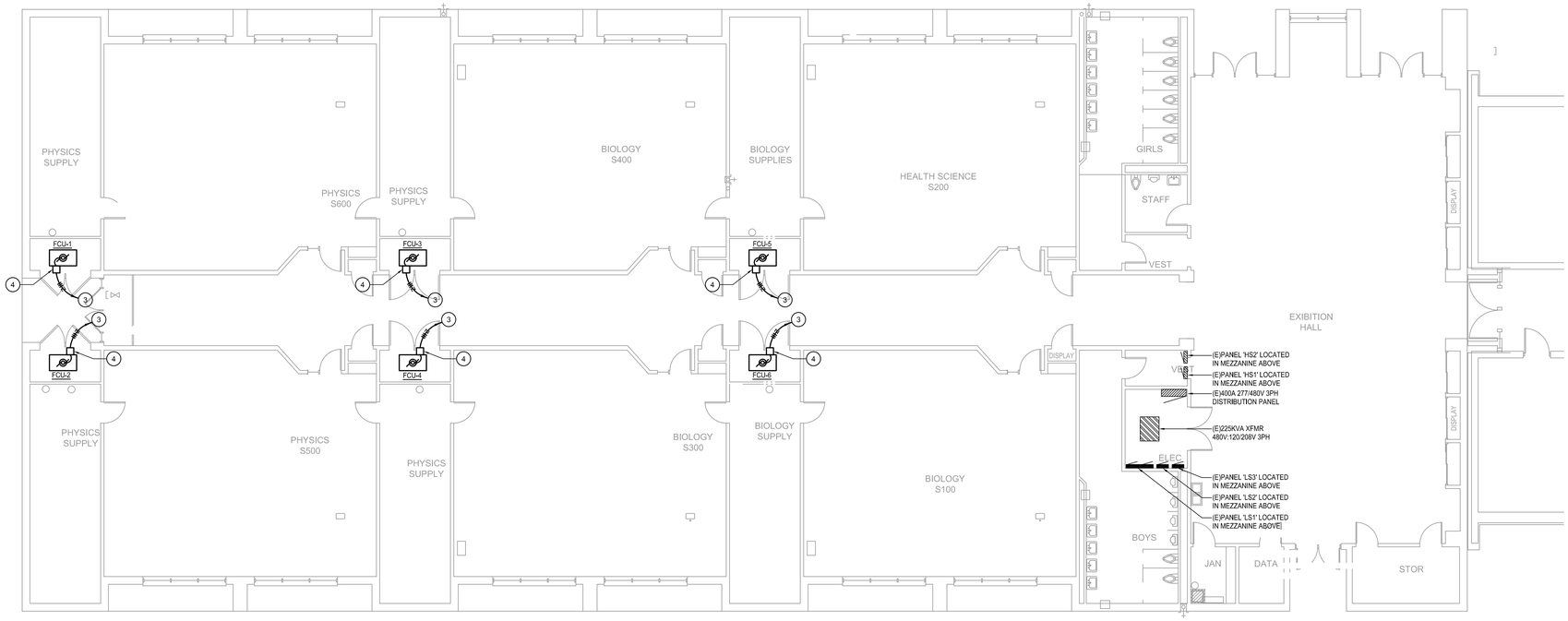
DRAWN BY: AA

SHEET NAME

MECHANICAL SCHEDULES - BEAUMONT UNITED H.S.

SHEET NUMBER: M6.1

REVISION




N

## 2 ELECTRICAL FLOOR PLAN - C HALL - BEAUMONT UNITED HS

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

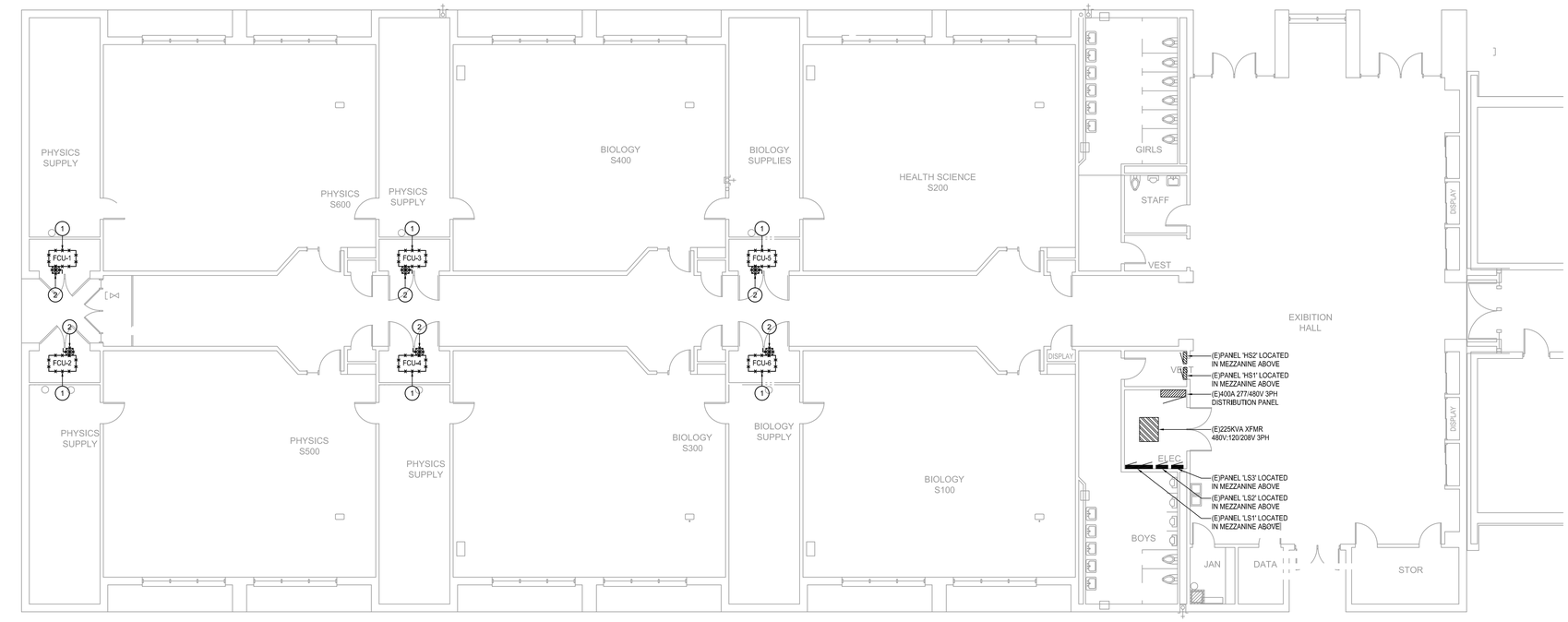
DISCONNECT AND REMOVE
EXISTING TO REMAIN
NEW WORK

## ELECTRICAL GENERAL NOTES:

1. DISCONNECT AND REMOVE ALL CONDUIT, WIRE, AND DISCONNECTING MEANS ASSOCIATED WITH HVAC EQUIPMENT BEING REMOVED.
2. UNLESS NOTED OTHERWISE, ALL EXISTING ELECTRICAL PANELBOARDS, TRANSFORMERS, SWITCHBOARDS, ETC...SHALL REMAIN

## ELECTRICAL KEYED NOTES:

1. DISCONNECT AND REMOVE ALL ELECTRICAL ASSOCIATED WITH HVAC EQUIPMENT BACK TO NEAREST ACTIVE JUNCTION BOX, LEAVE CIRCUIT INTACT FOR CONNECTION OF REPLACEMENT HVAC EQUIPMENT.
2. DISCONNECT AND REMOVE EXISTING DISCONNECT / MOTOR STARTER AND RETURN TO OWNER.
3. CONNECT TO EXISTING CIRCUIT PRESERVED DURING DEMOLITION. EXTEND CONDUIT / WIRE AND MAKE FINAL CONNECTION.
4. VARIABLE FREQUENCY DRIVE MOTOR CONTROLLER PROVIDED BY DIVISION 23, INSTALLED BY DIVISION 26. CONTROLLER SHALL BE UNIT MOUNTED, VERIFY EXACT LOCATION WITH EXISTING CONDITIONS.




N

## 1 ELECTRICAL DEMOLITION FLOOR PLAN - C HALL - BEAUMONT UNITED HS

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

Salas O'Brien
HOUSTON
10930 W. SAM HOUSTON PKWY NORTH SUITE 900
HOUSTON, TX 77064
Salas O'Brien Registration: F-4111
Salas O'Brien Project Number: 2022-04653-00

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# BEAUMONT ISD AIR HANDLER UPGRADES

Beaumont ISD
Preparing Our Next Generation

NOTES

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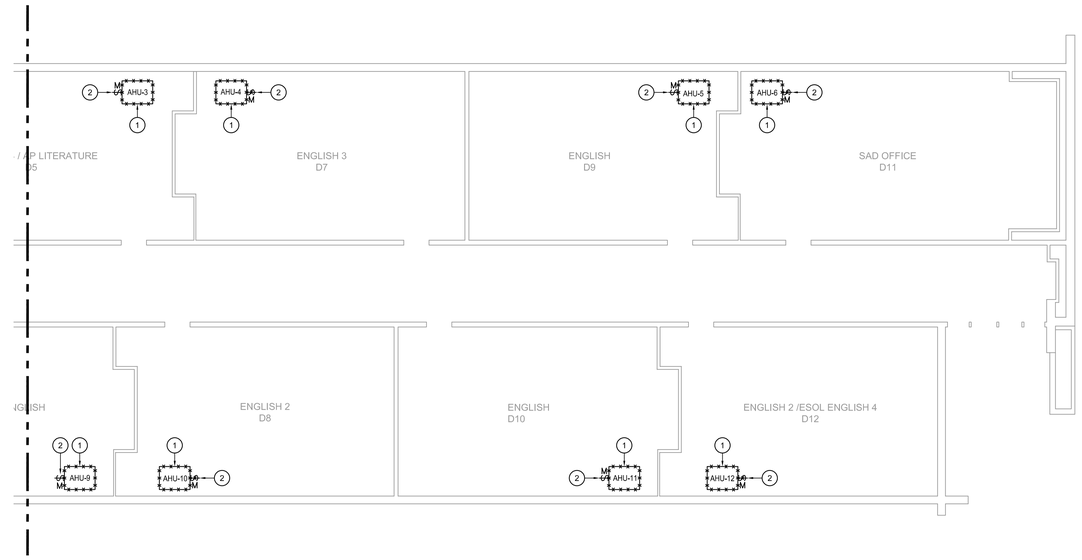
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SHEET NAME

ELECTRICAL FLOOR PLANS - C HALL - BEAUMONT UNITED HS

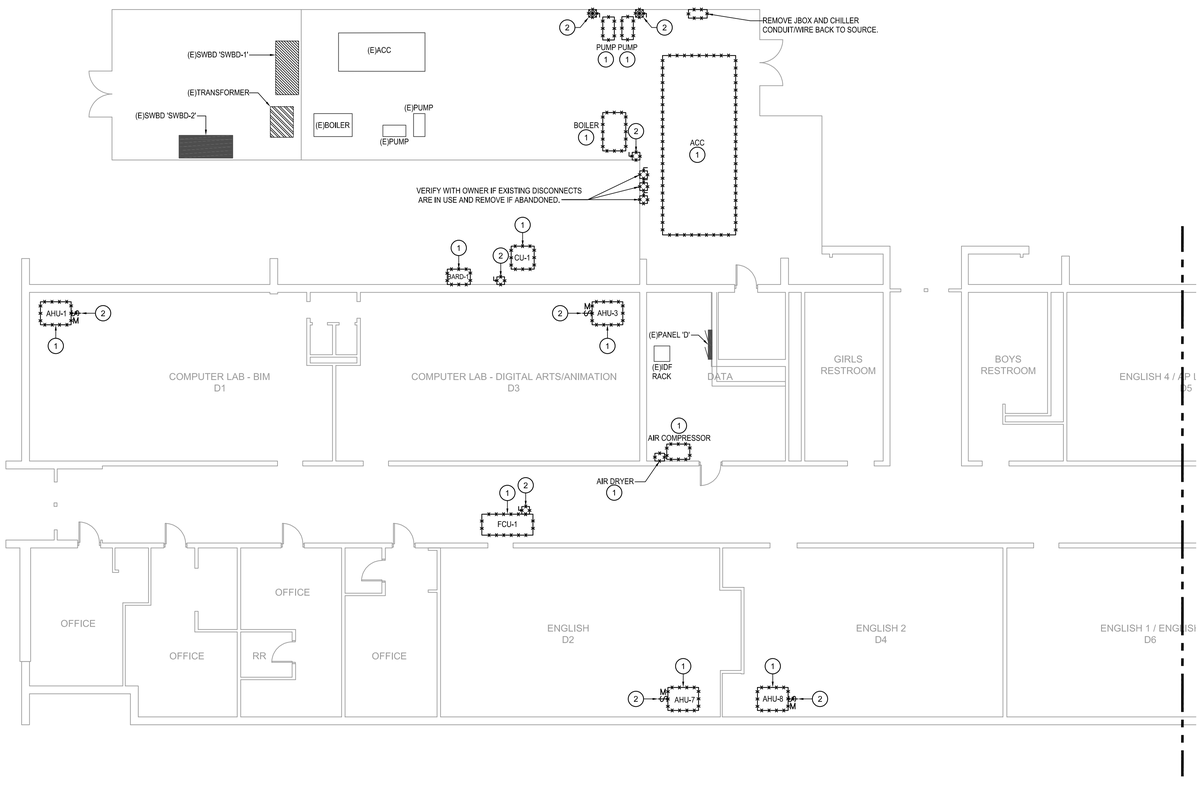
SHEET NUMBER: E1.1

REVISION:




N

1 **ELECTRICAL DEMOLITION FLOOR PLAN - D HALL - BEAUMONT UNITED HS**
SCALE: 1/8" = 1'-0"




N

1 **ELECTRICAL DEMOLITION FLOOR PLAN - D HALL - BEAUMONT UNITED HS**
SCALE: 1/8" = 1'-0"

DISCONNECT AND REMOVE
EXISTING TO REMAIN
NEW WORK

## ELECTRICAL GENERAL NOTES:

1. DISCONNECT AND REMOVE ALL CONDUIT, WIRE, AND DISCONNECTING MEANS ASSOCIATED WITH HVAC EQUIPMENT BEING REMOVED.
2. UNLESS NOTED OTHERWISE, ALL EXISTING ELECTRICAL PANELBOARDS, TRANSFORMERS, SWITCHBOARDS, ETC...SHALL REMAIN
3. WHERE SCOPE REQUIRES REMOVAL / RE-INSTALLATION OF CEILING GRID, ELECTRICAL CONTRACTOR SHALL DO THE FOLLOWING:
   1. SUSPEND OR REMOVE AND STORE ALL CEILING MOUNTED ELECTRICAL DEVICES TO FACILITATE REMOVAL OF CEILING GRID. DEVICES INCLUDE BUT ARE NOT LIMITED TO: LIGHT FIXTURES, EXIT SIGNS, FIRE ALARM DEVICES, SECURITY DEVICES, COMMUNICATION SPEAKERS, CAMERAS, OCCUPANCY SENSORS, ETC.
   2. REINSTALL ALL EXISTING LIGHT FIXTURES AND ALL CEILING MOUNTED ELECTRICAL IN CEILINGS WHERE APPLICABLE. DEVICES INCLUDE BUT ARE NOT LIMITED TO: LIGHT FIXTURES, EXIT SIGNS, FIRE ALARM DEVICES, SECURITY DEVICES, COMMUNICATION SPEAKERS, CAMERAS, OCCUPANCY SENSORS, ETC.

## ELECTRICAL KEYED NOTES:

1. DISCONNECT AND REMOVE ALL ELECTRICAL ASSOCIATED WITH HVAC EQUIPMENT BACK TO SOURCE.
2. DISCONNECT AND REMOVE EXISTING DISCONNECT / MOTOR STARTER AND RETURN TO OWNER.

PROJECT SCOPE SHOWN AS A PART OF THE PROJECT ON THIS CAMPUS WILL REQUIRE IDENTICAL ARCHITECTURAL WORK. ALL SUCH WORK SHALL BE INCLUDED IN THE CONTRACTOR'S BID. THIS WORK SHALL BE PERFORMED WITHOUT ANY IMPACT TO THE CONSTRUCTION SCHEDULE AND/OR ADDITIONAL COST.

CONTRACTOR SHALL REMOVE AND REPLACE CEILING WHERE REQUIRED TO COMPLETE THE INDICATED SCOPE OF PROJECT SCOPE WORK. EXISTING CEILING SHALL BE RE-INSTALLED IN THE EXACT CONDITION EXISTING PRIOR TO THE BEGINNING OF CONSTRUCTION. IF A MATCH IS NOT POSSIBLE, CONTRACTOR SHALL REPLACE ALL CEILING FROM WALL TO WALL OR BOUNDARY SEPARATION IN CORRIDOR, CLASSROOM, OR ANY OTHER SPACE.

PRIOR TO STARTING ANY WORK AND PRIOR TO SUBSTANTIAL COMPLETION, SCHEDULE WITH THE ENGINEER AND OWNER A DEMONSTRATION AND TESTING OF THE EXISTING FIRE ALARM AND CAMERA SYSTEM. THE CONTRACTOR SHALL HAVE ALL SUBCONTRACTORS WORKING ON THE PROJECT BE PRESENT FOR THESE TESTS AND DEMONSTRATIONS.

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2022-04653-00
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# BEAUMONT ISD AIR HANDLER UPGRADES

Beaumont ISD
Preparing Our Next Generation

NOTES

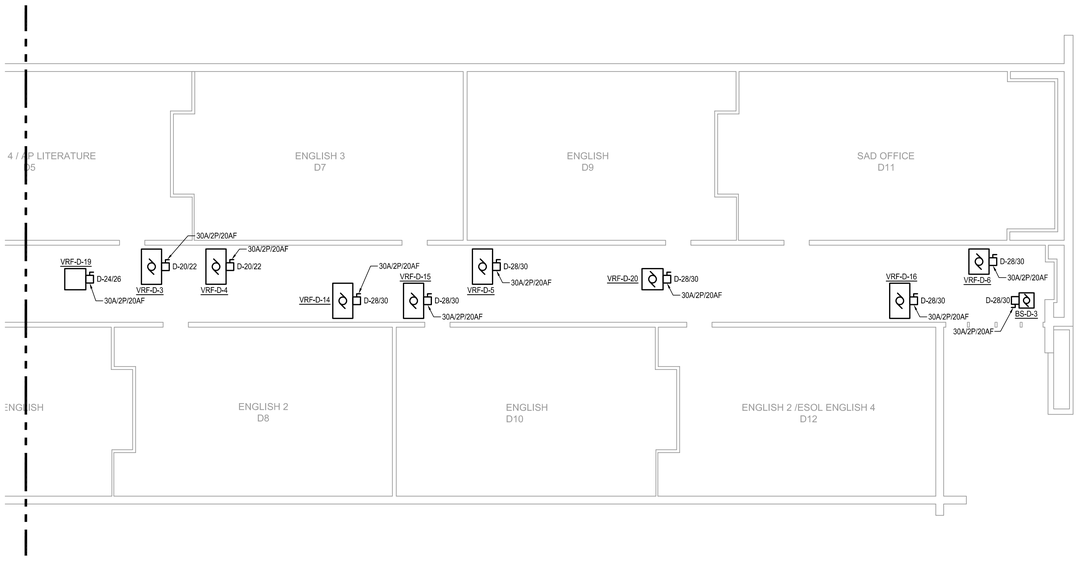
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SHEET NAME
ELECTRICAL DEMOLITION FLOOR PLANS - D HALL - BEAUMONT UNITED HS

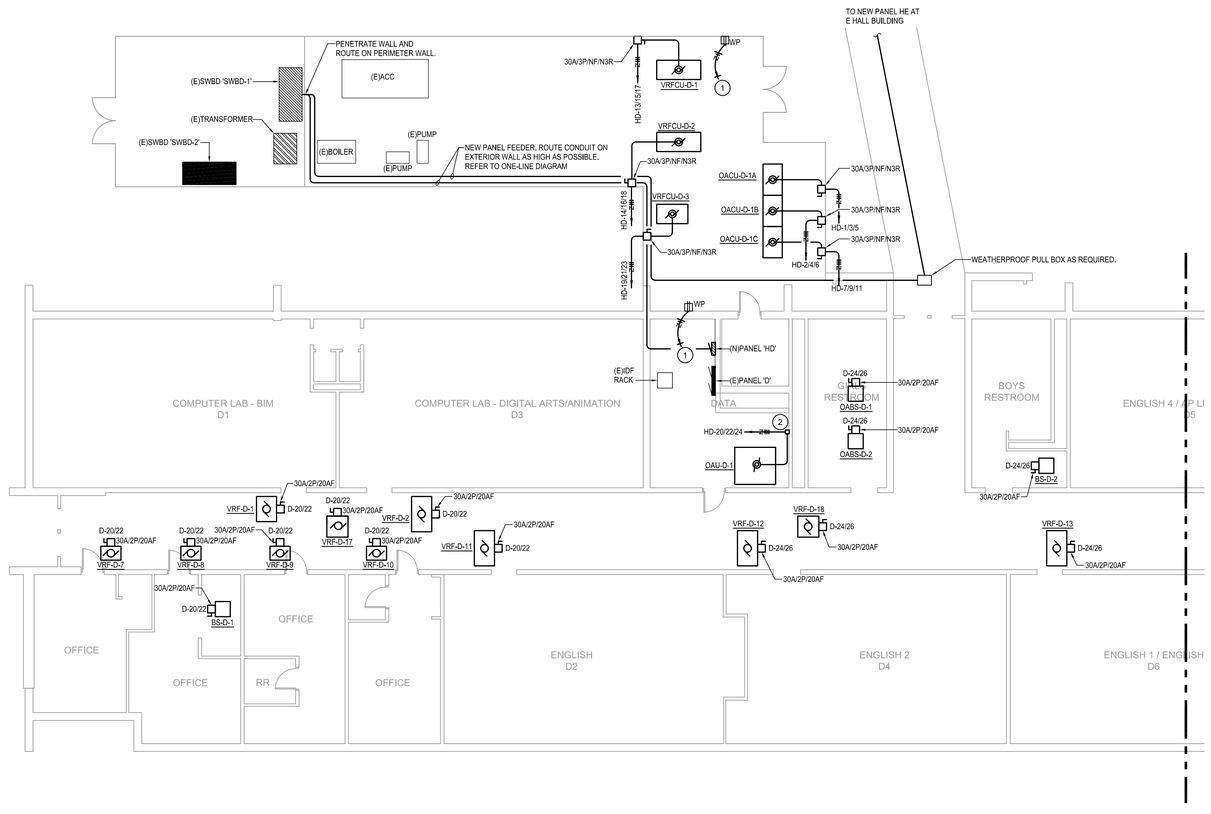
SHEET NUMBER: E1.2
REVISION:




N

## 2 ELECTRICAL FLOOR PLAN - D HALL - BEAUMONT UNITED HS

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




N

## 1 ELECTRICAL FLOOR PLAN - D HALL - BEAUMONT UNITED HS

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

DISCONNECT AND REMOVE
EXISTING TO REMAIN
NEW WORK

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   2. REINSTALL ALL EXISTING LIGHT FIXTURES AND ALL CEILING MOUNTED ELECTRICAL IN CEILINGS WHERE APPLICABLE. DEVICES INCLUDE BUT ARE NOT LIMITED TO; LIGHT FIXTURES, EXIT SIGNS, FIRE ALARM DEVICES, SECURITY DEVICES, COMMUNICATION SPEAKERS, CAMERAS, OCCUPANCY SENSORS, ETC.

## ELECTRICAL KEYED NOTES:

1. ROUTE 2#10, 1#10G, 3/4"C. TO NEAREST EXTERIOR RECEPTACLE CIRCUIT. DO NOT EXCEED 16-AMP LOAD.
2. VARIABLE FREQUENCY DRIVE MOTOR CONTROLLER, PROVIDED BY DIVISION 23, INSTALLED BY DIVISION 26.

PROJECT SCOPE SHOWN AS A PART OF THE PROJECT ON THIS CAMPUS WILL REQUIRE IDENTICAL ARCHITECTURAL WORK. ALL SUCH WORK SHALL BE INCLUDED IN THE CONTRACTOR'S BID. THIS WORK SHALL BE PERFORMED WITHOUT ANY IMPACT TO THE CONSTRUCTION SCHEDULE AND/OR ADDITIONAL COST.

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# BEAUMONT ISD AIR HANDLER UPGRADES

Beaumont ISD
Preparing Our Next Generation

NOTES

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DRAWN BY: DES

SHEET NAME

ELECTRICAL FLOOR PLANS - D HALL - BEAUMONT UNITED HS

SHEET NUMBER: E1.3

REVISION:

DISCONNECT AND REMOVE
EXISTING TO REMAIN
NEW WORK

## ELECTRICAL GENERAL NOTES:

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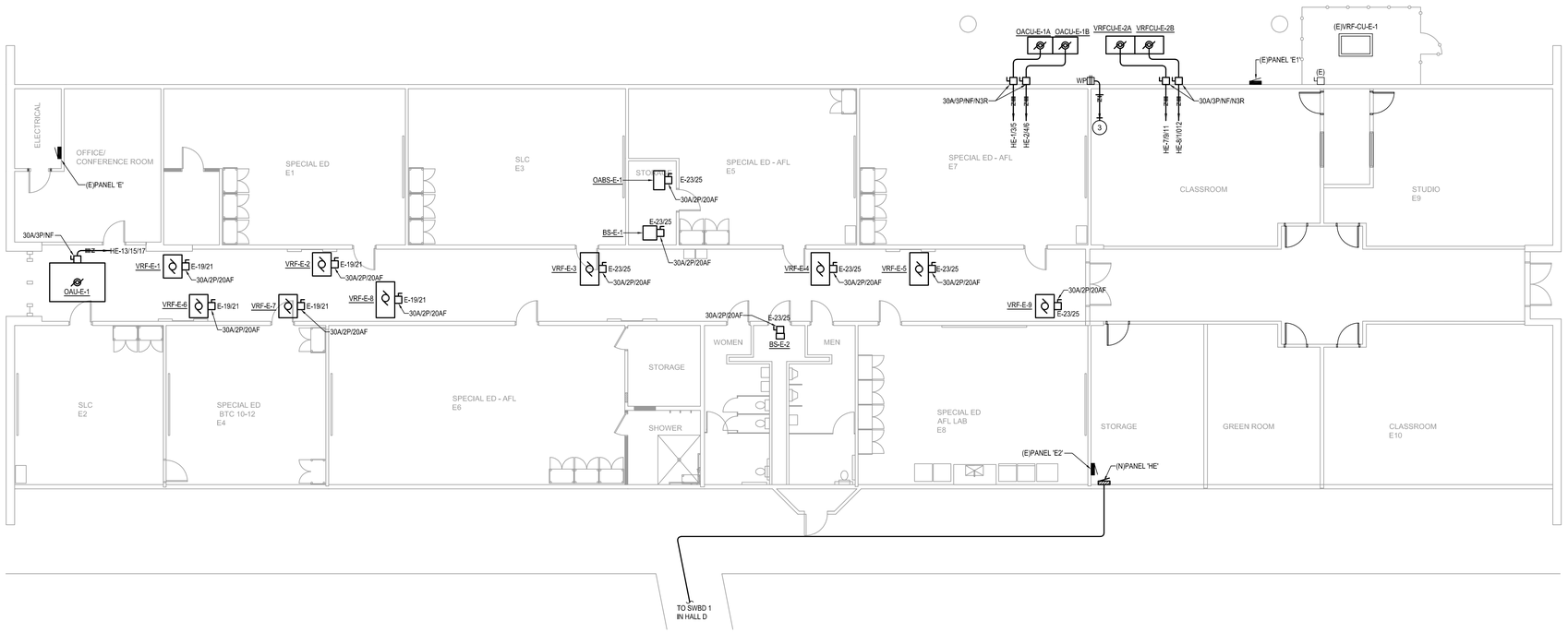
## ELECTRICAL KEYED NOTES:

1. DISCONNECT AND REMOVE ALL ELECTRICAL ASSOCIATED WITH HVAC EQUIPMENT BACK TO SOURCE.
2. DISCONNECT AND REMOVE EXISTING DISCONNECT / MOTOR STARTER AND RETURN TO OWNER.
3. ROUTE 2#10, 1#10G, 3/4"C. TO NEAREST EXTERIOR RECEPTACLE CIRCUIT. DO NOT EXCEED 16-AMP LOAD.
4. VARIABLE FREQUENCY DRIVE MOTOR CONTROLLER PROVIDED BY DIVISION 23, INSTALLED BY DIVISION 26. VERIFY EXACT LOCATION WITH EXISTING CONDITIONS.

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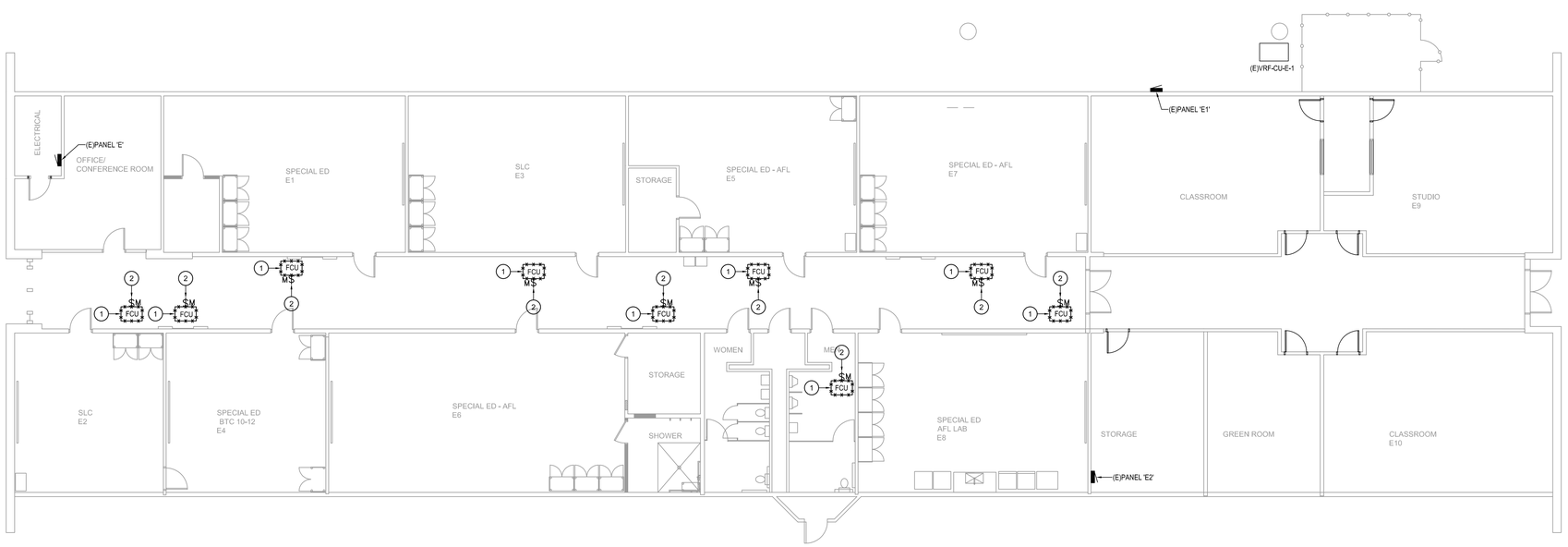
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N

## 2 ELECTRICAL FLOOR PLAN - E HALL - UNITED HS

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




N

## 1 ELECTRICAL DEMOLITION FLOOR PLAN - E HALL - UNITED HS

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


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# BEAUMONT ISD AIR HANDLER UPGRADES

Beaumont ISD
Preparing Our Next Generation

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DRAWN BY: DES

SHEET NAME

ELECTRICAL FLOOR PLANS - E HALL - BEAUMONT UNITED HS

SHEET NUMBER: E1.4
REVISION:

(SECTION-1) EXISTING PANEL

## PANEL 'E'

LOCATION: E HALL

120/208V.,3PH.,4W. 225 AMP MCB

MOUNTING: SURFACE NEMA-1 10 K ISCA

| CKT | LOAD | KVA | WIRE | BKR | BKR | WIRE | KVA | LOAD | CKT |
|---|---|---|---|---|---|---|---|---|---|
| 1 | EXISTING LIGHTING | 0.4 | EX. | 20/1 | 20/1 | EX. | 1.2 | EXISTING LIGHTING | 2 |
| 3 | EXISTING LIGHTING | 1.2 | EX. | 20/1 | 20/1 | EX. | 0.4 | EXISTING LOAD | 4 |
| 5 | EXISTING LIGHTING | 0.4 | EX. | 20/1 | 20/1 | EX. | 0.4 | EXISTING LOAD | 6 |
| 7 | EXISTING LIGHTING | 0.4 | EX. | 20/1 | 20/1 | EX. | 0.4 | EXISTING LOAD | 8 |
| 9 | EXISTING LIGHTING | 0.4 | EX. | 20/1 | 20/1 | EX. | 0.4 | EXISTING LOAD | 10 |
| 11 | EXISTING LIGHTING | 0.4 | EX. | 20/1 | 30/2 | EX. | 1.0 | EXISTING LOAD | 12 |
| 13 | EXISTING LIGHTING | 0.4 | EX. | 20/1 | - | EX. | 1.0 | ---- | 14 |
| 15 | EXISTING LIGHTING | 0.4 | EX. | 20/1 | 20/1 | EX. | 1.2 | EXISTING LIGHTING | 16 |
| 17 | EXISTING LIGHTING | 0.4 | EX. | 20/1 | 20/1 | EX. | 0.4 | EXISTING LOAD | 18 |
| (1) 19 | VRF UNITS | 1.1 | #12 | 20/2 | 20/1 | EX. | 0.4 | EXISTING LOAD | 20 |
| 21 | ---- | 1.1 | #12 | - | 20/1 | EX. | 0.4 | EXISTING LOAD | 22 |
| 23 | VRF UNITS | 1.2 | #12 | 20/2 | 20/1 | EX. | 0.4 | EXISTING LOAD | 24 |
| 25 | ---- | 1.2 | #12 | - | 20/1 | EX. | 0.4 | EXISTING LOAD | 26 |
| 27 | SPARE | | | 20/1 | 20/1 | EX. | 0.4 | EXISTING LOAD | 28 |
| 29 | SPARE | | | 20/1 | 20/1 | EX. | 0.4 | EXISTING LOAD | 30 |
| 31 | SPARE | | | 20/1 | 20/1 | EX. | 0.4 | EXISTING LOAD | 32 |
| 33 | SPARE | | | 20/1 | 20/1 | EX. | 0.4 | EXISTING LOAD | 34 |
| 35 | SPARE | | | 20/1 | 20/1 | EX. | 0.4 | EXISTING LOAD | 36 |
| 37 | SPARE | | | 20/1 | 20/1 | EX. | 0.4 | EXISTING LOAD | 38 |
| 39 | EXISTING LOAD | 0.4 | EX. | 20/1 | 20/1 | EX. | 0.4 | EXISTING LOAD | 40 |
| 41 | EXISTING LOAD | 0.4 | EX. | 20/1 | 20/1 | EX. | 0.4 | EXISTING LOAD | 42 |

EXISTING LOAD = 16.4 KVA
NEW MISC. LOAD x 1.0 = 4.6 KVA
TOTAL KVA = 21.0 KVA

(1) REMOVE EXISTING CIRCUIT BREAKER AND PROVIDE NEW.

NEW PANEL

## PANEL 'HE'

LOCATION: E HALL

277/480V.,3PH.,4W. 200 AMP MCB

MOUNTING: SURFACE NEMA-1 18K ISCA

| CKT | LOAD | KVA | WIRE | BKR | BKR | WIRE | KVA | LOAD | CKT |
|---|---|---|---|---|---|---|---|---|---|
| 1 | OACU-E-1A | 6.8 | #10 | 25/3 | 25/3 | #10 | 6.8 | OACU-E-1B | 2 |
| 3 | ---- | 6.8 | #10 | - | - | #10 | 6.8 | ---- | 4 |
| 5 | ---- | 6.8 | #10 | - | - | #10 | 6.8 | ---- | 6 |
| 7 | VRFCU-E-2A | 6.8 | #10 | 25/3 | 20/3 | #12 | 3.5 | VRFCU-E-2B | 8 |
| 9 | ---- | 6.8 | #10 | - | - | #12 | 3.5 | ---- | 10 |
| 11 | ---- | 6.8 | #10 | - | - | #12 | 3.5 | ---- | 12 |
| 13 | OAU-E-1 | 1.6 | #12 | 20/3 | | | | SPACE | 14 |
| 15 | ---- | 1.6 | #12 | - | | | | SPACE | 16 |
| 17 | ---- | 1.6 | #12 | - | | | | SPACE | 18 |
| 19 | SPACE | | | | | | | SPACE | 20 |
| 21 | SPACE | | | | | | | SPACE | 22 |
| 23 | SPACE | | | | | | | SPACE | 24 |
| 25 | SPACE | | | | | | | SPACE | 26 |
| 27 | SPACE | | | | | | | SPACE | 28 |
| 29 | SPACE | | | | | | | SPACE | 30 |
| 31 | SPACE | | | | | | | SPACE | 32 |
| 33 | SPACE | | | | | | | SPACE | 34 |
| 35 | SPACE | | | | | | | SPACE | 36 |
| 37 | SPACE | | | | 30/3 | #10 | - | SPDL | 38 |
| 39 | SPACE | | | | - | #10 | - | ---- | 40 |
| 41 | SPACE | | | | - | #10 | - | ---- | 42 |

CONTINUOUS (LTG.) LOAD x 1.25 = 0.0 KVA
MISC. LOAD x 1.0 = 76.5 KVA
TOTAL KVA = 76.5 KVA

(SECTION-1) EXISTING PANEL

## PANEL 'D'

LOCATION: D HALL

120/208V.,3PH.,4W. 225 AMP MCB

MOUNTING: SURFACE NEMA-1 10 K ISCA

| CKT | LOAD | KVA | WIRE | BKR | BKR | WIRE | KVA | LOAD | CKT |
|---|---|---|---|---|---|---|---|---|---|
| 1 | EXISTING LIGHTING | 1.2 | EX. | 20/1 | 20/1 | EX. | 0.4 | EXISTING LOAD | 2 |
| 3 | EXISTING LIGHTING | 1.2 | EX. | 20/1 | 20/1 | EX. | 0.4 | EXISTING LOAD | 4 |
| 5 | EXISTING LIGHTING | 1.2 | EX. | 20/1 | 20/1 | EX. | 0.4 | EXISTING LOAD | 6 |
| 7 | SPARE | | | 20/1 | 20/1 | EX. | 0.4 | EXISTING LOAD | 8 |
| 9 | EXISTING LIGHTING | 1.2 | EX. | 20/1 | 20/1 | EX. | 0.4 | EXISTING LOAD | 10 |
| 11 | EXISTING LIGHTING | 1.2 | EX. | 20/1 | 70/2 | EX. | 3.0 | EXISTING LOAD | 12 |
| 13 | EXISTING LIGHTING | 1.2 | EX. | 20/1 | - | EX. | 3.0 | ---- | 14 |
| 15 | SPARE | | | 20/1 | 50/2 | EX. | 2.0 | EXISTING LOAD | 16 |
| 17 | SPARE | | | 20/1 | - | EX. | 2.0 | ---- | 18 |
| 19 | EXISTING LOAD | 0.4 | EX. | 20/1 | 20/2 | #12 | 1.1 | VRF UNITS | (1) 20 |
| 21 | SPARE | | | 20/1 | - | #12 | 1.1 | ---- | 22 |
| 23 | SPARE | | | 20/1 | 20/2 | #12 | 1.0 | VRF UNITS | 24 |
| 25 | SPARE | | | 20/1 | - | #12 | 1.0 | ---- | 26 |
| 27 | SPARE | | | 20/1 | 20/2 | #12 | 1.1 | VRF UNITS | 28 |
| 29 | EXISTING LIGHTING | 1.2 | EX. | 20/1 | - | #12 | 1.1 | ---- | 30 |
| 31 | EXISTING LIGHTING | 1.2 | EX. | 20/1 | 20/1 | | | SPARE | 32 |
| 33 | EXISTING LOAD | 0.4 | EX. | 20/1 | 20/1 | | | SPARE | 34 |
| 35 | EXISTING LOAD | 0.4 | EX. | 20/1 | 20/1 | | | SPARE | 36 |
| 37 | EXISTING LOAD | 0.4 | EX. | 20/1 | 20/1 | | | SPARE | 38 |
| 39 | EXISTING LOAD | 0.4 | EX. | 20/1 | 20/1 | | | SPARE | 40 |
| 41 | EXISTING LOAD | 0.4 | EX. | 20/1 | 20/1 | | | SPARE | 42 |

TOTAL = SEE SECTION 2 — FEED THROUGH LUGS

(1) REMOVE EXISTING CIRCUIT BREAKER AND PROVIDE NEW.

NEW PANEL

## PANEL 'HD'

LOCATION: D HALL

277/480V.,3PH.,4W. 200 AMP MCB

MOUNTING: SURFACE NEMA-1 22 K ISCA

| CKT | LOAD | KVA | WIRE | BKR | BKR | WIRE | KVA | LOAD | CKT |
|---|---|---|---|---|---|---|---|---|---|
| 1 | OACU-D-1A | 4.6 | #10 | 25/3 | 30/3 | #10 | 5.7 | OACU-D-1B | 2 |
| 3 | ---- | 4.6 | #10 | - | - | #10 | 5.7 | ---- | 4 |
| 5 | ---- | 4.6 | #10 | - | - | #10 | 5.7 | ---- | 6 |
| 7 | OACU-D-1C | 5.7 | #10 | 30/3 | 25/3 | - | - | SPARE | 8 |
| 9 | ---- | 5.7 | #10 | - | - | - | - | ---- | 10 |
| 11 | ---- | 5.7 | #10 | - | - | - | - | ---- | 12 |
| 13 | VRFCU-D-1 | 5.5 | #10 | 25/3 | 30/3 | #10 | 6.3 | VRFCU-D-2 | 14 |
| 15 | ---- | 5.5 | #10 | - | - | #10 | 6.3 | ---- | 16 |
| 17 | ---- | 5.5 | #10 | - | - | #10 | 6.3 | ---- | 18 |
| 19 | VRFCU-D-3 | 5.5 | #10 | 25/3 | 20/3 | #12 | 1.5 | OAU-D-1 | 20 |
| 21 | ---- | 5.5 | #10 | - | - | #12 | 1.5 | ---- | 22 |
| 23 | ---- | 5.5 | #10 | - | - | #12 | 1.5 | ---- | 24 |
| 25 | SPACE | | | | | | | SPACE | 26 |
| 27 | SPACE | | | | | | | SPACE | 28 |
| 29 | SPACE | | | | | | | SPACE | 30 |
| 31 | SPACE | | | | | | | SPACE | 32 |
| 33 | SPACE | | | | | | | SPACE | 34 |
| 35 | SPACE | | | | | | | SPACE | 36 |
| 37 | SPACE | | | | 30/3 | #10 | - | SPDL | 38 |
| 39 | SPACE | | | | - | #10 | - | ---- | 40 |
| 41 | SPACE | | | | - | #10 | - | ---- | 42 |

CONTINUOUS (LTG.) LOAD x 1.25 = 116.7 KVA
MISC. LOAD x 1.0 = 116.7 KVA
TOTAL KVA = 116.7 KVA

(SECTION-2) EXISTING PANEL

## PANEL 'D'

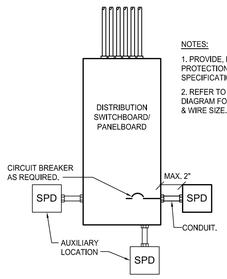
LOCATION: D HALL

120/208V.,3PH.,4W. 225 AMP MCB

MOUNTING: SURFACE NEMA-1 10 K ISCA

| CKT | LOAD | KVA | WIRE | BKR | BKR | WIRE | KVA | LOAD | CKT |
|---|---|---|---|---|---|---|---|---|---|
| 43 | EXISTING LOAD | 0.4 | EX. | 20/1 | 20/1 | EX. | 0.4 | EXISTING LOAD | 44 |
| 45 | EXISTING LOAD | 0.4 | EX. | 20/1 | 20/1 | EX. | 0.4 | EXISTING LOAD | 46 |
| 47 | EXISTING LOAD | 0.4 | EX. | 20/1 | 20/1 | EX. | 0.4 | EXISTING LOAD | 48 |
| 49 | EXISTING LOAD | 0.4 | EX. | 20/1 | 20/1 | EX. | 0.4 | EXISTING LOAD | 50 |
| 51 | EXISTING LOAD | 0.4 | EX. | 20/1 | 20/1 | EX. | 0.4 | EXISTING LOAD | 52 |
| 53 | EXISTING LOAD | 0.4 | EX. | 20/1 | 20/1 | EX. | 0.4 | EXISTING LOAD | 54 |
| 55 | EXISTING LOAD | 0.4 | EX. | 20/1 | 20/1 | EX. | 0.4 | EXISTING LOAD | 56 |
| 57 | EXISTING LOAD | 0.4 | EX. | 20/1 | 20/1 | EX. | 0.4 | EXISTING LOAD | 58 |
| 59 | EXISTING LOAD | 0.4 | EX. | 20/1 | 20/1 | EX. | 0.4 | EXISTING LOAD | 60 |
| 61 | EXISTING LOAD | 0.4 | EX. | 20/1 | 20/1 | EX. | 0.4 | EXISTING LOAD | 62 |
| 63 | EXISTING LOAD | 0.4 | EX. | 20/1 | 20/1 | EX. | 0.4 | EXISTING LOAD | 64 |
| 65 | EXISTING LOAD | 2.5 | EX. | 60/2 | 20/1 | EX. | 0.4 | EXISTING LOAD | 66 |
| 67 | ---- | 2.5 | EX. | - | 20/1 | EX. | 0.4 | EXISTING LOAD | 68 |
| 69 | EXISTING LOAD | 0.4 | EX. | 20/1 | 20/1 | EX. | 0.4 | EXISTING LOAD | 70 |
| 71 | EXISTING LOAD | 0.4 | EX. | 20/1 | 20/1 | EX. | 0.4 | EXISTING LOAD | 72 |
| 73 | EXISTING LOAD | 0.4 | EX. | 20/1 | 20/1 | EX. | 0.4 | EXISTING LOAD | 74 |
| 75 | EXISTING LOAD | 0.4 | EX. | 20/1 | 20/1 | EX. | 0.4 | EXISTING LOAD | 76 |
| 77 | EXISTING LOAD | 0.4 | EX. | 20/1 | 20/1 | EX. | 0.4 | EXISTING LOAD | 78 |
| 79 | EXISTING LOAD | 0.4 | EX. | 20/1 | 20/1 | EX. | 0.4 | EXISTING LOAD | 80 |
| 81 | EXISTING LOAD | 0.4 | EX. | 20/1 | 20/1 | EX. | 0.4 | EXISTING LOAD | 82 |
| 83 | EXISTING LOAD | 0.4 | EX. | 20/1 | 20/1 | EX. | 0.4 | EXISTING LOAD | 84 |

EXISTING LOAD = 45.0 KVA
NEW MISC. LOAD x 1.0 = 6.4 KVA
TOTAL KVA = 51.4 KVA

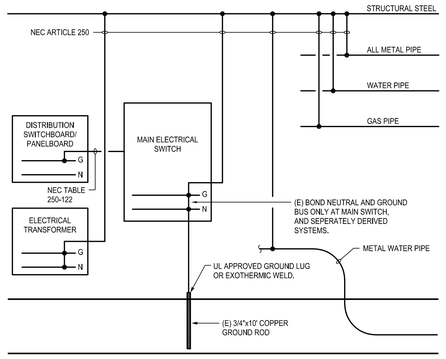



NOTES:

1. PROVIDE, LOCATE AND INSTALL SURGE PROTECTION DEVICE AS REQUIRED PER SPECIFICATIONS.
2. REFER TO PANEL SCHEDULES AND ONE-LINE DIAGRAM FOR QUANTITY, TYPE, BREAKER SIZE, & WIRE SIZE.

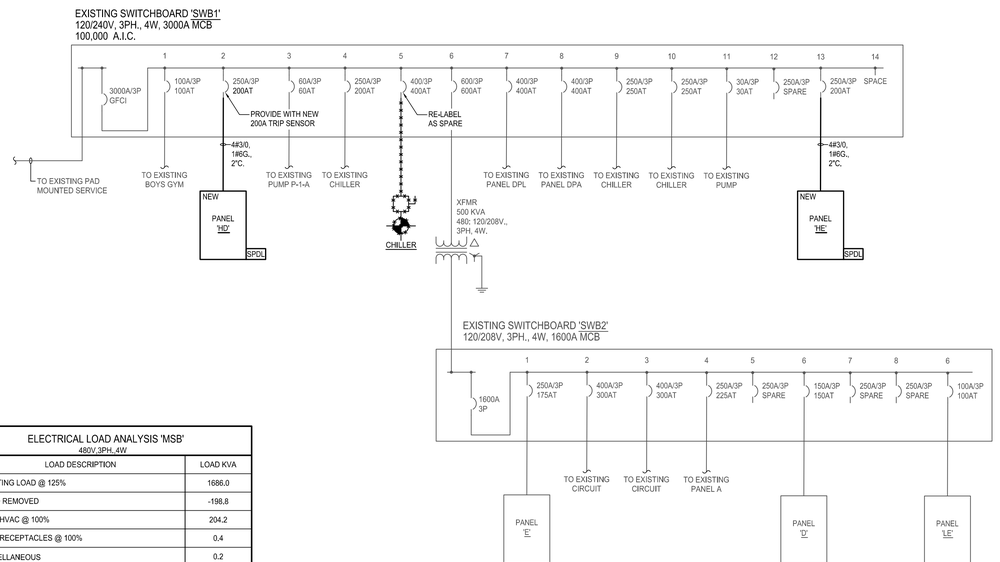
### 3 SURGE PROTECTION DETAIL

SCALE: NONE




### 2 GROUNDING DETAIL

SCALE: NONE




| ELECTRICAL LOAD ANALYSIS 'MSB' 480V.3PH.,4W | |
|---|---|
| LOAD DESCRIPTION | LOAD KVA |
| EXISTING LOAD @ 125% | 1686.0 |
| LOAD REMOVED | -198.8 |
| NEW HVAC @ 100% | 204.2 |
| NEW RECEPTACLES @ 100% | 0.4 |
| MISCELLANEOUS | 0.2 |
| TOTAL | 1692.0 |

TOTAL / 480 /√3 = 2036.1 AMPS
EXISTING 3000 AMP SERVICE

### 1 ELECTRICAL PARTIAL ONE-LINE DIAGRAM

SCALE: NONE

## SYMBOL SCHEDULE

| SYMBOL | DESCRIPTION (DISREGARD ITEMS NOT SHOWN ON PLANS) |
|---|---|
| LIGHTING (LETTER DENOTES TYPE - SEE LIGHT FIXTURE SCHEDULE) | |
| | FLUORESCENT FIXTURE |
| | FLUORESCENT FIXTURE ON EMERGENCY CIRCUIT |
| | DOWNLIGHT FIXTURE |
| | LIGHT FIXTURE - WALL MOUNTED |
| | DOWNLIGHT FIXTURE ON EMERGENCY CIRCUIT |
| | LIGHT FIXTURE - WALL MOUNTED ON EMERGENCY CIRCUIT |
| | EXIT LIGHT-CEILING MTD WITH DIRECTIONAL ARROWS AS REQUIRED |
| | EXIT LIGHT-WALL MTD WITH DIRECTIONAL ARROWS AS REQUIRED |
| | EMERGENCY LIGHTING UNIT EQUIPMENT |
| SWITCHES | |
| $ | SINGLE POLE SWITCH |
| $2 | 2-POLE SWITCH |
| $3 | 3-WAY SWITCH |
| $K | KEYED SWITCH |
| $D | WALL DIMMER SWITCH, SIZE AND TYPE AS REQUIRED |
| $P | SWITCH WITH PILOT LIGHT |
| $MC | MOMENTARY CONTACT SWITCH |
| | PUSH BUTTON SWITCH |
| TS | TIME SWITCH |
| $S | DUAL LEVEL SWITCHING |
| | CEILING MOUNTED OCCUPANCY SENSOR |
| | WALL MOUNTED OCCUPANCY SENSOR |
| RECEPTACLES AND OUTLETS | |
| | SIMPLEX RECEPTACLE |
| | DUPLEX RECEPTACLE |
| | 125/250 VOLT, 1 PHASE, 3-WIRE, 20 AMPS UNLESS NOTED OTHERWISE |
| | DOUBLE DUPLEX IN 2-GANG BOX WITH SINGLE COVER PLATE |
| | DOUBLE DUPLEX ISOLATED GROUND IN 2-GANG BOX WITH SINGLE COVER PLATE |
| | ISOLATED GROUND DUPLEX RECEPTACLE |
| | ISOLATED GROUND SIMPLEX RECEPTACLE |
| | 250 VOLT, 1 PHASE, SPECIAL PURPOSE OUTLET, 20 AMPS UNLESS NOTED OTHERWISE |
| | JUNCTION BOX |
| | FLUSH FLOOR DUPLEX RECEPTACLE OUTLET |
| | DUPLEX GROUND FAULT CIRCUIT INTERRUPTER RECEPTACLE |
| | DOUBLE DUPLEX GROUND FAULT CIRCUIT INTERRUPTER RECEPTACLE IN 2-GANG BOX WITH SINGLE COVER PLATE |
| | FLUSH FLOOR JUNCTION BOX |
| | TELEVISION OUTLET (RECEPTACLE AND CATV CONNECTIONS) |
| | REMOTE VCR INPUT PATCH CABLE TO TV LOCATION |
| | TWO CHANNEL POWER/COMMUNICATIONS POWER POLE |
| SWITCHES | |
| $ | LINE VOLTAGE SINGLE POLE SWITCH |
| $3 | LINE VOLTAGE 3-WAY SWITCH |
| $4 | LINE VOLTAGE 4-WAY SWITCH |
| $K | LINE VOLTAGE MOMENTARY DPST KEYED SWITCH |
| $D | LINE VOLTAGE DIMMER SWITCH, SIZE AND TYPE AS REQUIRED |
| $P | LINE VOLTAGE SWITCH WITH PILOT LIGHT |
| $T | 6-HOUR ROTARY TIMER SWITCH WITH NO HOLD U.N.O. |
| | PUSH BUTTON EPO SWITCH WITH COVER |
| $MC | LOW VOLTAGE MOMENTARY CONTACT SWITCH |
| $R | LOW VOLTAGE DIGITAL KEYPAD |
| $B | LOW VOLTAGE BUILDING MANAGEMENT (BMCS) LOCAL OVERRIDE SWITCH |
| | OCCUPANCY SENSOR (AUTO ON / AUTO OFF WITHIN 20-MINUTES) |
| | VACANCY SENSOR (MANUAL ON / AUTO OFF WITHIN 20-MINUTES) |
| | PHOTOCELL SENSOR |
| LCE | LIGHTING CONTROL SYSTEM. ( 'e' DENOTES TYPE - SEE LIGHTING CONTROLS SCHEDULE) |
| LCR | EMERGENCY LOAD CONTROL RELAY. MINIMUM 16A & 0-10V COMPATIBLE. PROVIDE U.L. 924 U.N.O. |
| MOTOR CONTROLLERS AND EQUIPMENT | |
| | MOTOR, MAKE FINAL MOTOR CONNECTION |
| | 3-PHASE MOTOR, MAKE FINAL MOTOR CONNECTION |
| | DISCONNECT SWITCH AS REQUIRED |
| | COMBINATION MOTOR STARTER/DISCONNECT SWITCH AS REQUIRED |
| | MOTOR STARTER |
| | MOTOR CONTROLLER PUSH BUTTON CONTROL, P=PILOT LIGHT |
| $M | MANUAL MOTOR SWITCH AS REQUIRED |
| | PREWIRED DEVICE, MAKE ELECTRICAL FINAL CONNECTIONS |
| VFD | VARIABLE FREQUENCY DRIVE MOTOR CONTROLLER FURNISHED BY DIVISION 23 AND INSTALLED BY DIVISION 26 |
| ELECTRICAL EQUIPMENT | |
| | 277/480 VOLT DISTRIBUTION OR PANELBOARD |
| | 120/208 VOLT PANELBOARD |
| | TELEPHONE CABINET |
| | PLYWOOD TELEPHONE BACKBOARD |
| | DRY TYPE TRANSFORMER |
| CIRCUITING | |
| | CONDUIT |
| | CONDUIT BELOW FLOOR, SLAB, OR GRADE |
| #12 | 3/4"C. UNLESS OTHERWISE NOTED; LONG HATCH, NEUTRAL; SHORT HATCH, PHASE; "Z" HATCH, INSULATED GROUND. NO HATCHES INDICATES 2 CONDUCTORS. ARROW INDICATES HOMERUN. |
| | PARTIAL ELECTRICAL HOME RUN |
| SUBSCRIPTS AND ABBREVIATIONS | |
| WP | INDICATES WEATHERPROOF |
| WG | INDICATES WIREGUARD |
| E | INDICATES EXISTING |
| TL | INDICATES TWIST LOCK TYPE |
| NL | LIGHT FIXTURE ON NIGHT LIGHT CIRCUIT |
| • | NEXT TO ANY SYMBOL INDICATES FINAL ROUGH-IN FIELD COORDINATION BY CONTRACTOR WITH ARCHITECTURAL MILLWORK DRAWINGS AND OTHER TRADES |

GENERAL NOTE:
ALL EXTERIOR BUILDING ELECTRICAL EQUIPMENT TO BE WEATHERPROOF NEMA-4X MINIMUM.

## ELECTRICAL GENERAL NOTES:

1. ALL EMPTY CONDUIT SHALL HAVE PULL STRING.
2. EACH CONDUIT SHALL BE LIMITED TO (3) CIRCUITS MAXIMUM.
3. NO MORE THAN THREE SINGLE PHASE CIRCUITS AND NO MORE THAN SIX CURRENT CARRYING CONDUCTORS SHALL BE INSTALLED IN A SINGLE RACEWAY. WHEN FOUR, FIVE, OR SIX CURRENT CARRYING CONDUCTORS ARE INSTALLED IN A SINGLE RACEWAY, THEIR CURRENT CARRYING AMPACITIES SHALL BE DERATED AS REQUIRED BY THE NEC FOR NON-DIVERSIFIED LOADS. THE INSTALLED WIRE SIZE SHALL HAVE A NOMINAL AMPACITY RATING OF 125% OF THAT REQUIRED OR SPECIFIED WHEN FOUR OR MORE CURRENT CARRYING CONDUCTORS ARE INSTALLED IN A SINGLE RACEWAY. NEUTRAL CONDUCTORS SHALL BE CONSIDERED A CURRENT CARRYING CONDUCTOR IN ALL NON-LINEAR LOADED CIRCUITS AS REQUIRED BY THE NEC.
4. ALL LIGHTING, RECEPTACLE, AND EQUIPMENT BRANCH CIRCUITS CONDUITS SHALL CONTAIN A GROUND WIRE, USING THE CONDUIT SYSTEM AS THE ONLY GROUND PATH IS NOT ACCEPTABLE.
5. REFER TO MECHANICAL DRAWINGS FAN SCHEDULE. DIVISION 26 TO PROVIDE ALL LOCAL SWITCHES AS INDICATED ON MECHANICAL FAN SCHEDULE. LOCATE SWITCH BY DOOR UNLESS INDICATED OTHERWISE FOR ALL LOCALLY SWITCHED FANS.
6. PROVIDE SMOKE DETECTORS AT EACH RETURN AIR INLET INTO EACH MECHANICAL ROOM AS REQUIRED FOR OPENING SIZE.
7. PROVIDE DUCT MOUNTED SMOKE DETECTORS IN SUPPLY AND RETURN DUCTS OF ALL AIR HANDLERS 2000 CFM OR GREATER.


Salas O'Brien
HOUSTON
10930 W. SAM HOUSTON PKWY NORTH SUITE 900
HOUSTON, TX 77064
Salas O'Brien Registration: F-4111
Salas O'Brien Project Number: 2022-04653-00



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PROFESSIONAL SEAL

BRADLEY KALMANS — 80219 — LICENSED PROFESSIONAL ENGINEER — STATE OF TEXAS

04-20-2023

| ISSUE DATE | DESCRIPTION |
|---|---|
| 04-11-2023 | 100% |

2022-04653-00

Owner

# BEAUMONT ISD AIR HANDLER UPGRADES

Beaumont ISD — Preparing Our Next Generation

NOTES

REVISIONS

| NUMBER | DESCRIPTION | DATE | CHECKER |
|---|---|---|---|

CHECKED BY JZ

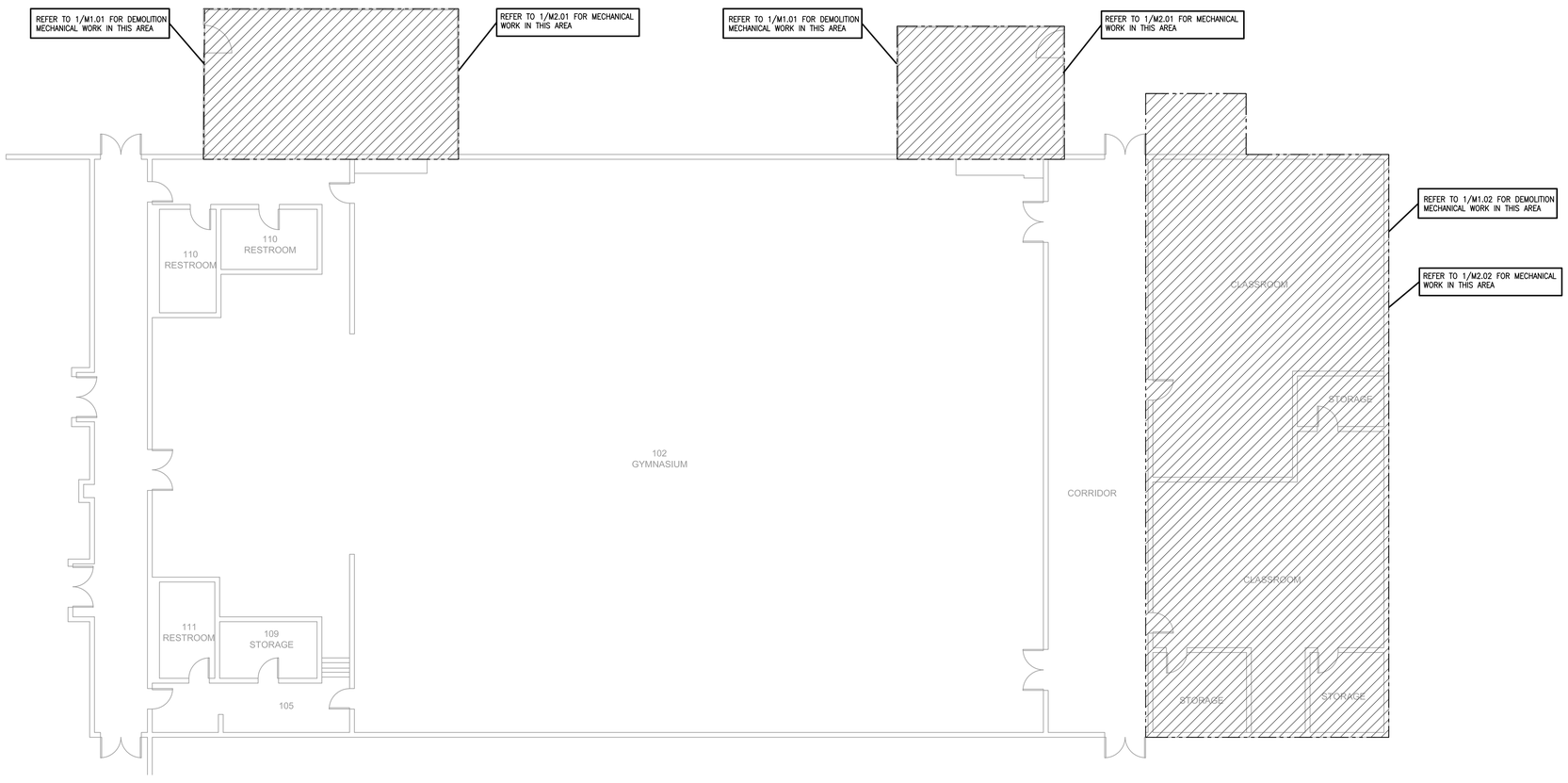
DRAWN BY DES

SHEET NAME

ELECTRICAL DETAILS, SCHEDULES, AND LEGENDS - BEAUMONT UNITED HS

SHEET NUMBER E2.1

REVISION




1 **MECHANICAL COMPOSITE FLOOR PLAN - OLD GYM - ODOM ACADEMY**
SCALE: 1/8" = 1'-0"

Salas O'Brien
HOUSTON
10930 W. SAM HOUSTON PKWY NORTH SUITE 900
HOUSTON, TX 77064
Salas O'Brien Registration: F-4111
Salas O'Brien Project Number: 2022-04653-00

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Owner

# BEAUMONT ISD AIR HANDLER UPGRADES

Beaumont ISD
Preparing Our Next Generation

NOTES

REVISIONS

| NUMBER | DESCRIPTION | DATE | CHECKER |
|---|---|---|---|
| | | | |

CHECKED BY: SH

DRAWN BY: AA

SHEET NAME

MECHANICAL COMPOSITE FLOOR PLAN - OLD GYM - ODOM ACADEMY

SHEET NUMBER: M1.0

REVISION:

## MECHANICAL DEMOLITION GENERAL NOTES

1. THESE CONSTRUCTION DRAWINGS ARE DIAGRAMMATIC, AND DO NOT NECESSARILY REFLECT ACTUAL DIMENSIONS. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO FIELD-VERIFY ALL DIMENSIONS AND COORDINATE PLACEMENT OF ALL EQUIPMENT AND ROUTING OF ALL PIPING AND/OR DUCT SYSTEMS.
2. ALL MECHANICAL SYSTEMS SHOWN ON THIS PLAN ARE FROM EXISTING PRELIMINARY FIELD WORK. CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFYING ALL LOCATIONS AND SIZES OF MECHANICAL SYSTEMS PRIOR TO THE START OF WORK.
3. REMOVE ALL EXISTING SPACE MOUNTED TEMPERATURE AND HUMIDITY SENSORS NOT BEING REUSED. PROVIDE STAINLESS STEEL COVER PLATES.
4. OWNER SHALL HAVE FIRST RIGHT OF REFUSAL ON ALL HVAC EQUIPMENT BEING REMOVED FROM THIS PROJECT. THIS INCLUDES BUT NOT LIMITED TO CONDENSING UNITS, AIR HANDLING UNITS, AND CONTROLS.

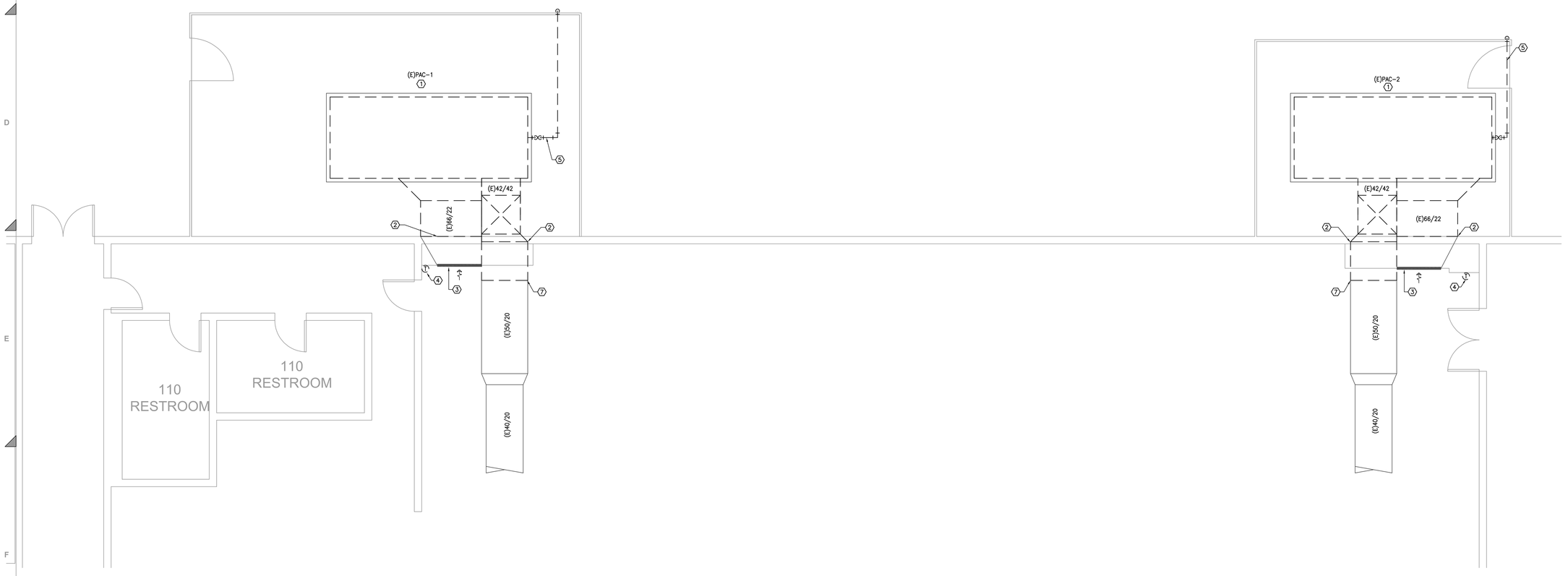
## MECHANICAL DEMOLITION KEYED NOTES

1. REMOVE EXISTING PACKAGED AIR COOLED GROUND MOUNTED UNIT, ASSOCIATED CONTROLS, AND ALL OTHER ASSOCIATED APPURTENANCES. EXISTING CONCRETE PAD SHALL REMAIN.
2. REMOVE EXISTING OUTDOOR DUCTWORK TO POINT INDICATED.
3. EXISTING RETURN AIR GRILLE / LOUVER SHALL REMAIN.
4. EXISTING THERMOSTAT SHALL BE REMOVED.
5. REMOVE EXISTING CONDENSATE PIPE.
6. EXISTING DUCTWORK SHALL REMAIN.
7. REMOVE EXISTING DUCTWORK UP TO THIS UNIT.

| DEMO SYMBOL LEGEND | |
|---|---|
| RENOVATIONS | |
| | ITEM TO REMAIN |
| | ITEM TO BE REMOVED |

BMCS NOTE:
EXISTING CONTROL SYSTEM IS BY AUTOMATED LOGIC.
REFER TO BMCS SPECIFICATION FOR MORE INFORMATION.

THROUGHOUT CONSTRUCTION, THE CONTRACTOR IS RESPONSIBLE FOR ALL TEMPORARY AND RENTAL EQUIPMENT, INCLUDING POWER FOR SUCH EQUIPMENT, AND TO PROVIDE PHASING TO ENSURE SPACE TEMPERATURE AND HUMIDITY IS MAINTAINED. REFER TO SPECIFICATION 23 05 11 MECHANICAL ALTERATIONS PROJECT PROCEDURES, ARTICLE 3.8 FOR ADDITIONAL REQUIREMENTS. CONTRACTOR SHALL REVIEW ALL REQUIREMENTS PRIOR TO BID.




N

1 **MECHANICAL DEMOLITION ENLARGED FLOOR PLAN - OLD GYM- ODOM ACADEMY**
SCALE: 1/4" = 1'-0"


Salas O'Brien
HOUSTON
10930 W. SAM HOUSTON PKWY NORTH SUITE 900
HOUSTON, TX 77064
Salas O'Brien Registration: F-4111
Salas O'Brien Project Number: 2022-04653-00



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2022-04653-00
Owner

# BEAUMONT ISD AIR HANDLER UPGRADES

Beaumont ISD
Preparing Our Next Generation

NOTES

REVISIONS

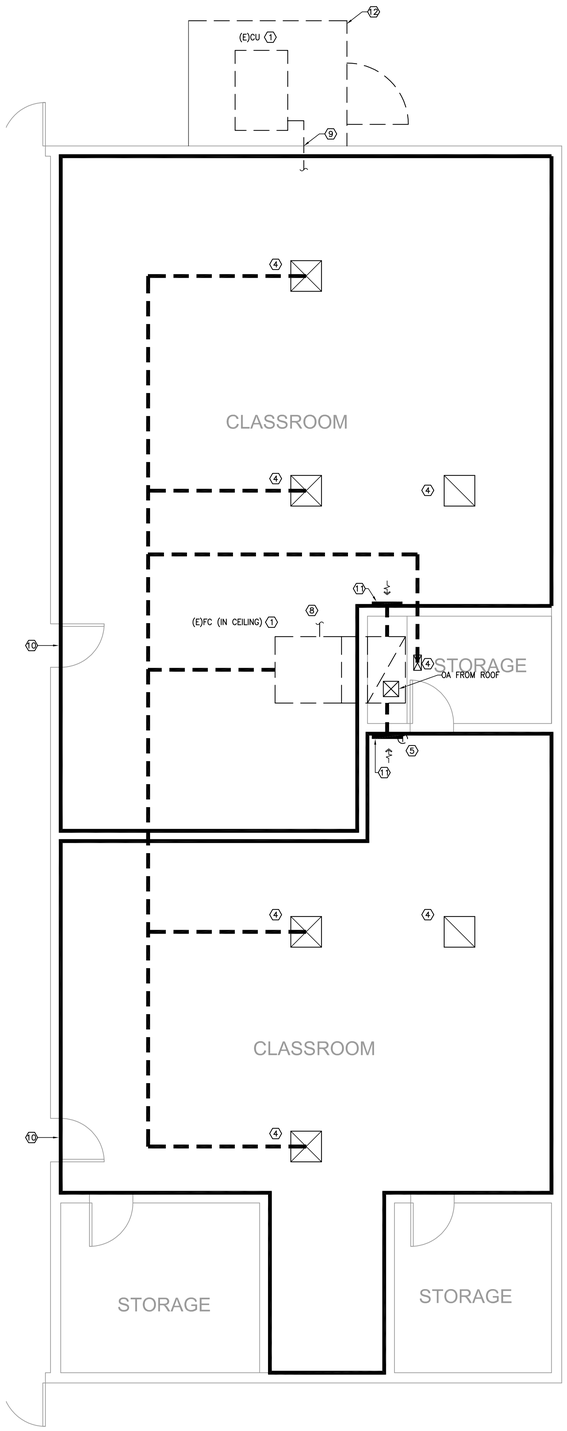
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CHECKED BY: SH
DRAWN BY: AA

SHEET NAME

MECHANICAL DEMOLITION ENLARGED FLOOR PLAN - OLD GYM - ODOM ACADEMY

SHEET NUMBER: M1.1
REVISION:




N

1 **MECHANICAL DEMOLITION ENLARGED FLOOR PLAN - CLASSROOMS - ODOM ACADEMY**
SCALE: 1/4" = 1'-0"

## MECHANICAL DEMOLITION GENERAL NOTES

1. THESE CONSTRUCTION DRAWINGS ARE DIAGRAMMATIC, AND DO NOT NECESSARILY REFLECT ACTUAL DIMENSIONS. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO FIELD-VERIFY ALL DIMENSIONS AND COORDINATE PLACEMENT OF ALL EQUIPMENT AND ROUTING OF ALL PIPING AND/OR DUCT SYSTEMS.
2. ALL MECHANICAL SYSTEMS SHOWN ON THIS PLAN ARE FROM EXISTING PRELIMINARY FIELD WORK. CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFYING ALL LOCATIONS AND SIZES OF MECHANICAL SYSTEMS PRIOR TO THE START OF WORK.
3. REMOVE ALL EXISTING SPACE MOUNTED TEMPERATURE AND HUMIDITY SENSORS NOT BEING REUSED. PROVIDE STAINLESS STEEL COVER PLATES.
4. OWNER SHALL HAVE FIRST RIGHT OF REFUSAL ON ALL HVAC EQUIPMENT BEING REMOVED FROM THIS PROJECT. THIS INCLUDES BUT NOT LIMITED TO CONDENSING UNITS, AIR HANDLING UNITS, AND CONTROLS.

## MECHANICAL DEMOLITION KEYED NOTES

1. REMOVE EXISTING FAN COIL UNIT, ASSOCIATED CONTROLS, AND ALL OTHER ASSOCIATED APPURTENANCES. EXISTING CONCRETE PAD SHALL REMAIN.
2. REMOVE EXISTING CONDENSING UNIT, ASSOCIATED CONTROLS, CONCRETE PAD FENCE, AND ALL OTHER ASSOCIATED APPURTENANCES.
3. REMOVE EXISTING DUCTWORK TO POINT INDICATED.
4. EXISTING AIR DIFFUSER SHALL BE REMOVED.
5. EXISTING THERMOSTAT SHALL BE REMOVED.
6. REMOVE EXISTING CONDENSATE PIPE TO POINT INDICATED.
7. REMOVE EXISTING RETURN GRILLE AND PATCH WALL TO MATCH EXISTING.
8. REMOVE EXITING CONDENSATE DRAIN PIPE.
9. REMOVE EXITING REFRIGERANT PIPING. PATCH WALL AND PAINT TO MATCH EXISTING.
10. REMOVE ALL EXITING CEILING TILE AND GRID WITHIN THE EXTENT OF HATCHED AREA. CONTRACTOR SHALL VERIFY EXISTING CEILING CONFIGURATION. LIGHTING LOCATIONS AND CEILING HEIGHT. EXISTING LIGHT FIXTURES SHALL BE TEMPORARILY SUSPENDED IN PLACE OR REMOVED AND STORED IN SAFE LOCATION. PROTECTION OF LIGHT FIXTURE SHALL BE THE CONTRACTOR RESPONSIBILITY AND SHALL BE RESTORED TO WORKING CONDITION UPON COMPLETION OF THE CEILING REPLACEMENT AND ABOVE CEILING WORK.
11. REMOVE EXITING WALL GRILLE PATCH AND PAINT OPENING TO MATCH EXISTING MATERIAL AND COLOR.
12. EXISTING FENCE SHALL BE EXTENDED FOR NEW EQUIPMENT. SEE NEW FLOOR PLAN M2.02 FOR EXTENDED FENCE, GATE LOCATION. AND NEW CONCRETE PAD.

| DEMO SYMBOL LEGEND | |
|---|---|
| RENOVATIONS | |
| | ITEM TO REMAIN |
| | ITEM TO BE REMOVED |

BMCS NOTE:
EXISTING CONTROL SYSTEM IS BY AUTOMATED LOGIC. REFER TO BMCS SPECIFICATION FOR MORE INFORMATION.

THROUGHOUT CONSTRUCTION, THE CONTRACTOR IS RESPONSIBLE FOR ALL TEMPORARY AND RENTAL EQUIPMENT, INCLUDING POWER FOR SUCH EQUIPMENT, AND TO PROVIDE PHASING TO ENSURE SPACE TEMPERATURE AND HUMIDITY IS MAINTAINED. REFER TO SPECIFICATION 23 05 11 MECHANICAL ALTERATIONS PROJECT PROCEDURES, ARTICLE 3.8 FOR ADDITIONAL REQUIREMENTS. CONTRACTOR SHALL REVIEW ALL REQUIREMENTS PRIOR TO BID.

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2022-04653-00
Owner

# BEAUMONT ISD AIR HANDLER UPGRADES

Beaumont ISD
Preparing Our Next Generation

NOTES

REVISIONS

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| | | | |

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DRAWN BY: AA

SHEET NAME
MECHANICAL DEMOLITION ENLARGED FLOOR PLAN - CLASSROOMS - ODOM ACADEMY

SHEET NUMBER: M1.02
REVISION:

## MECHANICAL GENERAL NOTES

1. COORDINATE IN THE FIELD THE EXACT LOCATION OF MECHANICAL EQUIPMENT WITH CONTRACTOR AND ALL TRADES
2. SENSORS SHALL BE MOUNTED AT +48" AFF (ABOVE FINISHED FLOOR). UNLESS OTHERWISE NOTED
3. MECHANICAL CONTRACTOR SHALL COORDINATE WITH THE ELECTRICAL CONTRACTOR FOR ALL ELECTRICAL POWER REQUIREMENTS.
4. THESE CONSTRUCTION DRAWINGS ARE DIAGRAMATIC AND DO NOT NECESSARILY REFLECT ACTUAL DIMENSIONS. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO FIELD-VERIFY ALL DIMENSIONS AND COORDINATE PLACEMENT OF ALL EQUIPMENT AND ROUTING OF ALL PIPING AND/OR HVAC SYSTEMS.

## MECHANICAL KEYED NOTES

1. VERIFY SERVICE CLEARANCES FOR AIR FILTER, FAN SHAFT AND COIL REMOVAL EQUIPMENT PER MANUFACTURER. COORDINATE WITH ALL TRADES NOT TO OBSTRUCT.
2. MOUNT UNIT ON EXISTING CONCRETE PAD.
3. ROUTE FULL SIZE CONDENSATE DRAIN PIPE TO FLOOR SINK. REFER TO PLUMBING DRAWING FOR EXACT LOCATION.
4. SUPPORT DUCTWORK FROM EXTERIOR WALL BY SECURING GALVANIZED UNISTRUT SUPPORT CHANNELS TO WALL AND ATTACHING DUCTWORK TO UNISTRUT WITH GALVANIZED DUCT STRAPS. ALL FASTENERS SHALL BE STAINLESS STEEL.
5. REFER TO SPECIFICATIONS FOR OUTDOOR DUCTWORK INSULATION.

NOTE:
ALL ROOFING WORK SHALL BE DONE BY APPROVED ROOFING PROVIDER. CONTACT TIM MARSH WITH MARSH WATERPROOFING @ 409-769-0459 FOR PRICING.




1 **MECHANICAL ENLARGED FLOOR PLAN - OLD GYM - ODOM ACADEMY**
SCALE: 1/4" = 1'-0"


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04-20-2023

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# BEAUMONT ISD AIR HANDLER UPGRADES

Beaumont ISD
Preparing Our Next Generation

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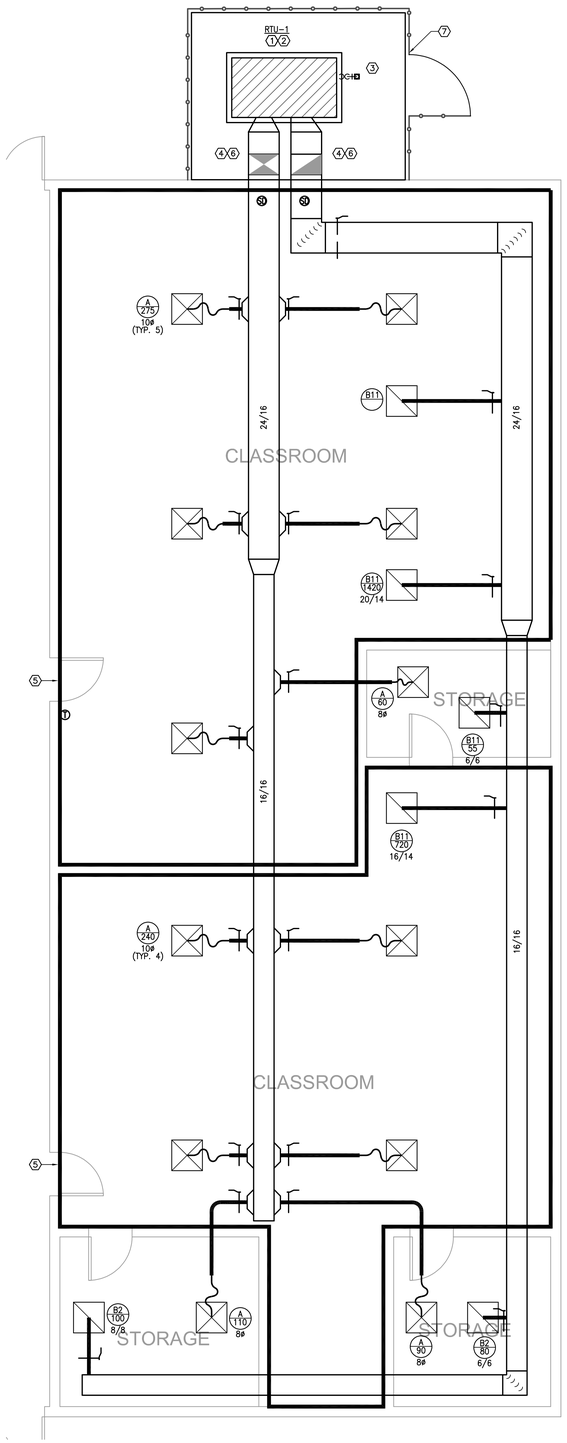
SHEET NAME

MECHANICAL ENLARGED FLOOR PLAN - OLD GYM - ODOM ACADEMY

SHEET NUMBER

M2.1

REVISION




N

1 **MECHANICAL ENLARGED FLOOR PLAN - CLASSROOMS - ODOM ACADEMY**
SCALE: 1/4" = 1'-0"

## MECHANICAL GENERAL NOTES

1. COORDINATE IN THE FIELD THE EXACT LOCATION OF MECHANICAL EQUIPMENT WITH CONTRACTOR AND ALL TRADES
2. SENSORS SHALL BE MOUNTED AT +48" AFF (ABOVE FINISHED FLOOR). UNLESS OTHERWISE NOTED
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## MECHANICAL KEYED NOTES

1. VERIFY SERVICE CLEARANCES FOR AIR FILTER, FAN SHAFT AND COIL REMOVAL EQUIPMENT PER MANUFACTURER. COORDINATE WITH ALL TRADES NOT TO OBSTRUCT.
2. MOUNT UNIT ON HOUSEKEEPING CONCRETE PAD.
3. ROUTE FULL SIZE CONDENSATE DRAIN LINE TO FLOOR DRAIN LINE. REFER TO PLUMBING DRAWINGS FOR EXACT LOCATION. INSTALL TRAP AS RECOMMENDED BY MANUFACTURER.
4. SUPPORT EXTERIOR DOUBLE WALL DUCTWORK FROM EXTERIOR WALL BY SECURING GALVANIZED UNISTRUT SUPPORT CHANNELS TO WALL AND ATTACHING DUCTWORK TO UNISTRUT WITH GALVANIZED DUCT STRAPS. ALL FASTENERS SHALL BE STAINLESS STEEL.
5. INSTALL NEW CEILING GRID AND TILE THROUGHOUT THIS SPACE. THE NEW CEILING SHALL BE INSTALLED TO MATCH THE EXISTING GRID CONFIGURATION AND CEILING HEIGHT. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION FOR CEILING REPLACEMENT.
6. PROVIDE ENCLOSED DUCT SUPPORT MODEL PHP-D.
7. EXTEND EXISTING FENCE, GATE AND POUR NEW CONCRETE HOUSE KEEPING PAD. FOR NEW EQUIPMENT.

NOTE:
ALL ROOFING WORK SHALL BE DONE BY APPROVED ROOFING PROVIDER. CONTACT TIM MARSH WITH MARSH WATERPROOFING @ 409-769-0459 FOR PRICING.

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# BEAUMONT ISD AIR HANDLER UPGRADES

Beaumont ISD
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SHEET NAME
MECHANICAL ENLARGED FLOOR PLAN - CLASSROOMS - ODOM ACADEMY

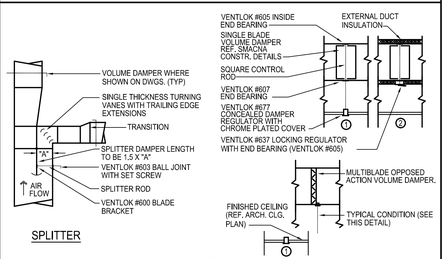
SHEET NUMBER: M2.2
REVISION:

# SYMBOL LEGEND

| SYMBOL | DESCRIPTION (DISREGARD ITEMS NOT SHOWN ON PLANS) |
|---|---|
| **GENERAL** | |
| (#) | KEY NOTE TAG |
| (#) | NOTE SPECIFIC TO DETAIL TAG |
| (#) | REVISION TAG |
| | NEW EQUIPMENT |
| **DUCTWORK** | |
| | SUPPLY AIR DUCTWORK |
| | RETURN AIR AND OUTSIDE AIR DUCTWORK |
| | EXHAUST AIR DUCTWORK |
| | FLEXIBLE DUCTWORK |
| | SUPPLY AIR DUCTWORK THROUGH HORIZONTAL PARTITION |
| | RETURN AIR AND OUTSIDE AIR DUCTWORK THROUGH HORIZONTAL PARTITION |
| | EXHAUST AIR DUCTWORK THROUGH HORIZONTAL PARTITION |
| | FIRE DAMPER (VERTICAL) |
| | FIRE DAMPER (HORIZONTAL) |
| | SMOKE DAMPER (VERTICAL) |
| | SMOKE DAMPER (HORIZONTAL) |
| | COMBINATION FIRE & SMOKE DAMPER (VERTICAL) |
| | COMBINATION FIRE & SMOKE DAMPER (HORIZONTAL) |
| | MANUAL BALANCING DAMPER (SEE DAMPER SCHEDULE) |
| | MOTORIZED DAMPER (SEE DAMPER SCHEDULE) |
| **SENSORS** | |
| (T) | THERMOSTAT AND TEMPERATURE SENSOR |
| (H) | HUMIDISTAT |
| (SD) | SMOKE DETECTOR |
| (HD) | HEAT DETECTOR |
| **PIPING** | |
| | CONDENSATE DRAIN LINE |
| | ELBOW UP |
| | ELBOW DOWN |
| | 90° ELBOW |
| | 45° ELBOW |
| | TEE |
| | TEE DOWN |
| | TEE UP |
| | TOP BRANCH CONNECTION |
| | BOTTOM BRANCH CONNECTION |
| | FLANGE |
| | CAP |
| | CONTINUATION |
| | FLOOR DRAIN (REFER TO PLUMBING DRAWINGS) |
| **SUBSCRIPTS AND ABREVIATIONS** | |
| AFF | ABOVE FINISHED FLOOR |
| BBS | BELOW BOTTOM OF STRUCTURE |
| BOD | BOTTOM OF DUCT |
| BOP | BOTTOM OF PIPE |
| CA | COMBUSTION AIR |
| CFM | CUBIC FEET PER MINUTE |
| EA | EXHAUST AIR |
| FPM | FEET PER MINUTE |
| NC | NORMALLY CLOSED |
| NO | NORMALLY OPEN |
| OA | OUTSIDE AIR |
| RA | RETURN AIR |
| SA | SUPPLY AIR |
| **RENOVATIONS** | |
| | POINT OF CONNECTION FROM NEW TO EXISTING |
| | ITEM TO REMAIN |
| | ITEM TO BE REMOVED |

MS03

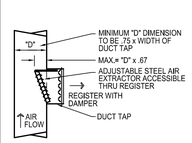
# DUCTWORK CONSTRUCTION DETAILS




SPLITTER

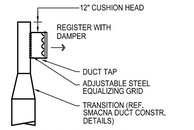



1 DAMPER ABOVE INACCESSIBLE CEILING
2 DAMPER ABOVE LIFT-OUT CEILING

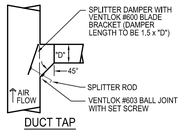



NOTES:
1) MAX. WIDTH OF DUCT TAP SHALL BE 48", PROVIDE BOTTOM BRACKET FOR SUPPORT WHERE EXTRACTOR EXCEEDS 16".
2) MAX. HEIGHT OF DUCT TAP SHALL BE 12" (MIN.= 4")

AIR EXTRACTOR AT SIDEWALL REGISTER

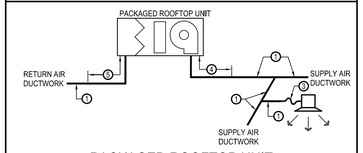



SIDEWALL REGISTER AT END OF DUCT




DUCT TAP

# DUCT LINER AND INSULATION



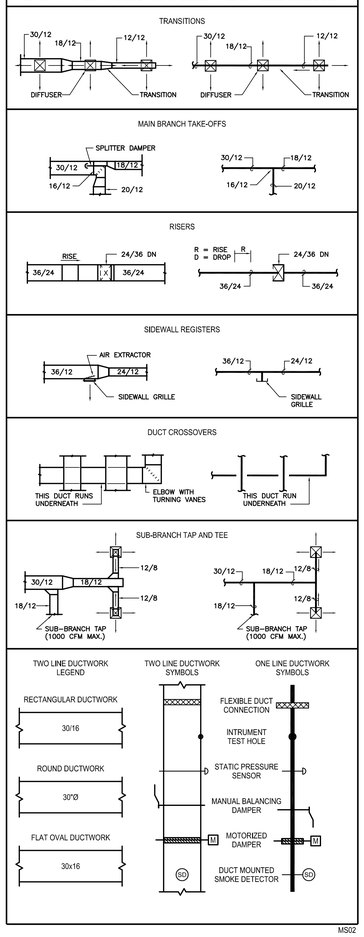

PACKAGED ROOFTOP UNIT

NOTES

1. SHEETMETAL DUCTWORK WITH EXTERNAL DUCTWORK INSULATION AS SPECIFIED.
2. SHEETMETAL DUCTWORK RETURN AIR PLENUM WITH EXTERNAL DUCTWORK INSULATION AS SPECIFIED.
3. FLEXIBLE DUCTWORK WITH EXTERNAL DUCTWORK INSULATION AS SPECIFIED.
4. SHEETMETAL DUCTWORK WITH EXTERNAL DUCTWORK INSULATION AS SPECIFIED AND 1" THICK 1-1/2 LB LINER AS SPECIFIED FROM AIR HANDLING UNIT DISCHARGE TO 10'-0" DOWNSTREAM.
5. SHEETMETAL DUCTWORK WITH EXTERNAL DUCTWORK INSULATION AS SPECIFIED AND 1" THICK 1-1/2 LB LINER AS SPECIFIED FROM AIR HANDLING UNIT INLET TO 10'-0" UPSTREAM.
6. EXHAUST DUCTWORK AS SPECIFIED WITH FIREBOARD INSULATION AS SPECIFIED.
7. SHEETMETAL DUCTWORK ONLY. NO INSULATION REQUIRED.

MS04

# DUCTWORK SYMBOLS LEGEND




MS02

# PACKAGED ROOFTOP UNIT - GAS HEAT

| MARK | INDOOR AIR FAN: SUPPLY AIR CFM | OUTSIDE AIR CFM | EXT. STATIC PRESSURE (IN. W.C.) | HORSE POWER | CURRENT CHARAC. | COOLING: AIR TEMPERATURE (°F) ENTERING DRY BULB | ENTERING WET BULB | OUTDOOR AMBIENT | MIN. TOTAL CAPACITY (BTUH) | MIN. SENSIBLE CAPACITY (BTUH) | MINIMUM EER/ SEER | NUMBER OF STAGES | ENTERING AIR TEMP. (°F) | GAS HEATING: MIN. CAPACITY (BTUH) | AGA EFFICIENCY (%) | MCA | MOCP | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PAC-1 | 13,400 | 1,000 | 1.00 | 15.0 | 480/3/60 | 76.3 | 64.5 | 95.0 | 443,100 | 322,700 | 9.8/14.5 | 2 | 60.0 | 320,000 | 80.0 | 100.4 | 125 | 1,2,3,4,5,6,7,8,9,,10,11,12 |
| PAC-2 | 10,400 | 1,000 | 1.00 | 15.0 | 480/3/60 | 76.3 | 64.5 | 95.0 | 383,100 | 276,340 | 9.8/13.4 | 2 | 60.0 | 260,000 | 80.0 | 88.4 | 110 | 1,2,3,4,5,6,7,8,9,10,11,12 |

GENERAL NOTES:
1. EXTERNAL STATIC PRESSURE INCLUDES LOSSES DUE TO DUCTWORK, AIR DEVICES, DAMPERS, AND DUCT MOUNTED HOT WATER COILS WHERE APPLICABLE. DIRTY FILTER AND UNIT CASING MUST BE ADDED TO EXTERNAL STATIC PRESSURE TO OBTAIN TOTAL PRESSURE LOSS. INCREASE HORSEPOWER AS REQUIRED TO MEET YOUR TOTAL PRESSURE LOSS. COORDINATE WITH ELECTRICIAN.
2. MINIMUM RECOMMENDED CLEARANCE AROUND ROOFTOP UNIT IS 12 INCHES ON NON-SERVICE SIDES AND 30 INCHES ON SERVICE SIDES. MAINTAIN MINIMUM CLEARANCE FOR CONDENSER AIR FLOW AS RECOMMENDED BY ROOFTOP UNIT MANUFACTURER. MAINTAIN MINIMUM CLEARANCE AS REQUIRED TO OPEN ACCESS AND CONTROL DOORS ON ROOFTOP UNIT FOR SERVICE, MAINTENANCE, AND INSPECTION. MAINTAIN MINIMUM ELECTRICAL CLEARANCE AS REQUIRED BY NEC.

REMARKS:
1. PROVIDE UNIT WITH DISCONNECT SWITCH, ROOF CURB AND MOTORIZED OUTSIDE AIR DAMPER.
2. PROVIDE UNIT WITH FACTORY MOUNTED GFCI RECEPTICAL FOR ELECTRICIAN TO WIRE TO SEPERATE CIRCUIT.
3. PROVIDE UNIT WITH LOW AMBIENT CONTROL.
4. PROVIDE UNIT WITH TEMPERATURE AND HUMIDITY SENSOR.
5. PROVIDE A WATER LEVEL SENSING DEVICE (FLOW SWITCH) IN THE PRIMARY DRAIN PAN. THIS DEVICE SHALL SHUT OFF THE APPLIANCE IN THE EVENT THE PRIMARY DRAIN LINE BECOMES RESTRICTED.
6. PROVIDE WITH SIDE DISCHARGE OR TRANSITION PLENUM CURB.
7. PROVIDE SINGLE ZONE VAV UNIT WITH VFD ON SUPPLY FAN
8. PROVIDE WITH EVAPORATOR COIL LEAVING AIR TEMPERATURE SENSOR.
9. PROVIDE WITH VARIABLE CAPACITY COMPRESSOR. REFER TO SPECIFICATION.
10. PROVIDE WITH DEMAND CONTROLLED VENTILATION.
11. PROVIDE UNIT WITH DIFFERENTIAL ENTHAPLY CONTROLLED ECONOMIZER AND POWERED EXHAUST. ECONOMIZER DAMPERS SHALL BE ULTRA LOW LEAK EQUIVALENT TO RUSKIN CD60 OR BETTER.
12. MECHANICAL CONTRACTOR IS RESPONSIBLE FOR ALL ELECTRICAL COSTS IF ALTERNATE UNIT IS PROVIDED WITH GREATER ELECTRICAL CHARACTERISTICS THEN SHOWN.

AS04

# PACKAGED ROOFTOP UNIT - HEAT PUMP

| MARK | INDOOR AIR FAN: SUPPLY AIR CFM | OUTSIDE AIR CFM | EXT. STATIC PRESSURE (IN. W.C.) | HORSE POWER | CURRENT CHARAC. | COOLING: AIR TEMPERATURE (°F) ENTERING DRY BULB | ENTERING WET BULB | OUTDOOR AMBIENT | MIN. TOTAL CAPACITY (BTUH) | MIN. SENSIBLE CAPACITY (BTUH) | MINIMUM EER/ SEER | NUMBER OF STAGES | HEATING: ENTERING AIR TEMP. (°F) | MINIMUM CAPACITY (BTUH) | CURRENT CHARAC. | MCA | MOCP | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| RTU-1 | 2,595 | 310 | 1.5 | 3.7 | 480/3/60 | 77.7 | 64.9 | 98.0 | 91,090 | 66,710 | 13.3/- | VAR | 66.6 | 70,480 | 480/3/60 | 22.0 | 25.0 | 1,2,3,4,5,6,7,8,9 |

GENERAL NOTES:
1. EXTERNAL STATIC PRESSURE INCLUDES LOSSES DUE TO DUCTWORK, AIR DEVICES, DAMPERS, AND DUCT MOUNTED HOT WATER COILS WHERE APPLICABLE. DIRTY FILTER AND UNIT CASING MUST BE ADDED TO EXTERNAL STATIC PRESSURE TO OBTAIN TOTAL PRESSURE LOSS. INCREASE HORSEPOWER AS REQUIRED TO MEET YOUR TOTAL PRESSURE LOSS. COORDINATE WITH ELECTRICIAN.
2. MINIMUM RECOMMENDED CLEARANCE AROUND ROOFTOP UNIT IS 12 INCHES ON NON-SERVICE SIDES AND 30 INCHES ON SERVICE SIDES. MAINTAIN MINIMUM CLEARANCE FOR CONDENSER AIR FLOW AS RECOMMENDED BY ROOFTOP UNIT MANUFACTURER. MAINTAIN MINIMUM CLEARANCE AS REQUIRED TO OPEN ACCESS AND CONTROL DOORS ON ROOFTOP UNIT FOR SERVICE, MAINTENANCE, AND INSPECTION. MAINTAIN MINIMUM ELECTRICAL CLEARANCE AS REQUIRED BY NEC.

REMARKS:
1. PROVIDE UNIT WITH DISCONNECT SWITCH, ROOF CURB AND MOTORIZED OUTSIDE AIR DAMPER.
2. PROVIDE UNIT WITH FACTORY MOUNTED GFCI RECEPTICAL FOR ELECTRICIAN TO WIRE TO SEPERATE CIRCUIT.
3. PROVIDE UNIT WITH LOW AMBIENT CONTROL.
4. PROVIDE A WATER LEVEL SENSING DEVICE (FLOW SWITCH) IN THE PRIMARY DRAIN PAN. THIS DEVICE SHALL SHUT OFF THE APPLIANCE IN THE EVENT THE PRIMARY DRAIN LINE BECOMES RESTRICTED.
5. PROVIDE WITH EVAPORATOR COIL LEAVING AIR TEMPERATURE SENSOR AND CONFIGURED AS SINGLE ZONE OPERATION.
6. PROVIDE UNIT WITH DIFFERENTIAL ENTHAPLY CONTROLLED ECONOMIZER AND POWERED EXHAUST. ECONOMIZER DAMPERS SHALL BE ULTRA LOW LEAK EQUIVALENT TO RUSKIN CD60 OR BETTER.
7. MECHANICAL CONTRACTOR IS RESPONSIBLE FOR ALL ELECTRICAL COSTS IF ALTERNATE UNIT IS PROVIDED WITH GREATER ELECTRICAL CHARACTERISTICS THEN SHOWN.
8. PROVIDE WITH SIDE DISCHARGE OR TRANSITION PLENUM CURB.
9. PROVIDE WITH SIDE DISCHARGE OR TRANSITION PLENUM CURB.

AS05

# GRILLE

| MARK | SERVICE | TYPE | DAMPER | CONSTRUCTION MATERIAL | FINISH COLOR | MANUFACTURER | MODEL NUMBER | REMARKS |
|---|---|---|---|---|---|---|---|---|
| A | SUPPLY AIR | DIFFUSER | - | STEEL | - | TITUS | OMNI | EXPOSED T-BAR FRAME STYLE WITH 24"X24" FACE |
| B | RETURN AIR | DIFFUSER | - | STEEL | - | TITUS | PAR | EXPOSED T-BAR CEILING WITH A 24"X24" FACE PERFORATED |

GENERAL NOTES:
1. COORDINATE AIR DEVICE FINISH COLOR WITH ARCHITECT.

REMARKS:
1. N/A

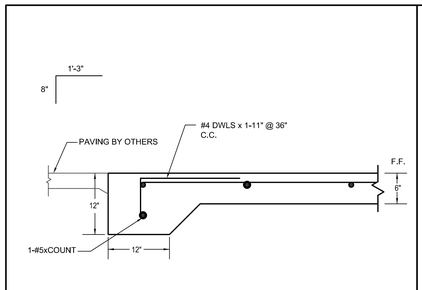
DS02

# DAMPER

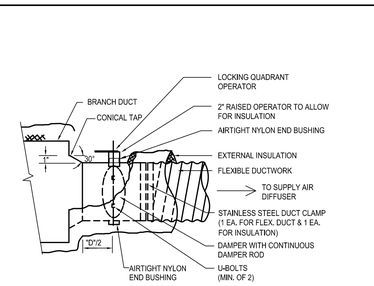
| MARK | ACTUATOR | DUTY | BLADE ACTION | MANUFACTURER | MODEL NUMBER | REMARKS |
|---|---|---|---|---|---|---|
| D-1 | MANUAL BALANCING | UNDER 9" WIDE | N/A | N/A | N/A | SEE SMACNA CONSTRUCTION DETAILS REFERENCED "TYPICAL CONSTRUCTION DETAILS FOR LOW VELOCITY DUCTS." |
| D-2 | MANUAL BALANCING | OVER 9" WIDE | OPPOSED | RUSKIN | MD-35 | MANUAL DAMPER WITH STANDARD CONSTRUCTION FEATURES AND VENTLOCK #639 LOCKING REGULATOR. |
| D-3 | MOTORIZED | OVER 9" WIDE | OPPOSED | RUSKIN | CD-60 | LOW LEAKAGE DAMPER WITH BLADE SEALS |

NOTES:
N/A - NOT APPLICABLE

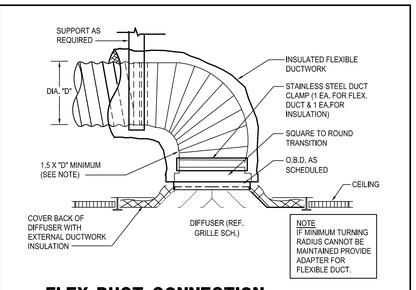
DS01



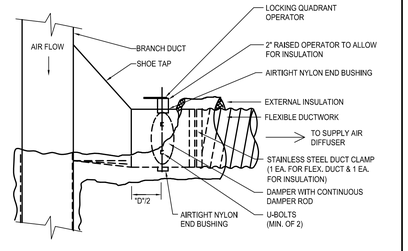

6 CONCRETE FOOTING
SCALE: NONE
D013



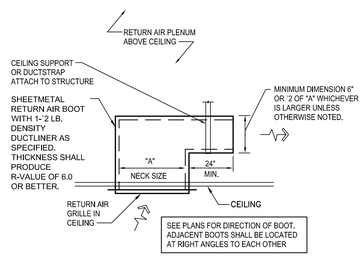

4 FLEXIBLE DUCT TAP - CONICAL
SCALE: NONE
D009



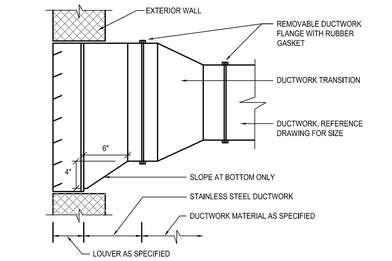

2 FLEX DUCT CONNECTION AT SUPPLY AIR DIFFUSER
SCALE: NONE
D013




5 FLEXIBLE DUCT TAP - SHOE
SCALE: NONE
D010




3 RETURN AIR GRILLE BOOT
SCALE: NONE
D008




1 DUCTWORK AT LOUVER
SCALE: NONE
D015


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# BEAUMONT ISD AIR HANDLER UPGRADES

Beaumont ISD
Preparing Our Next Generation

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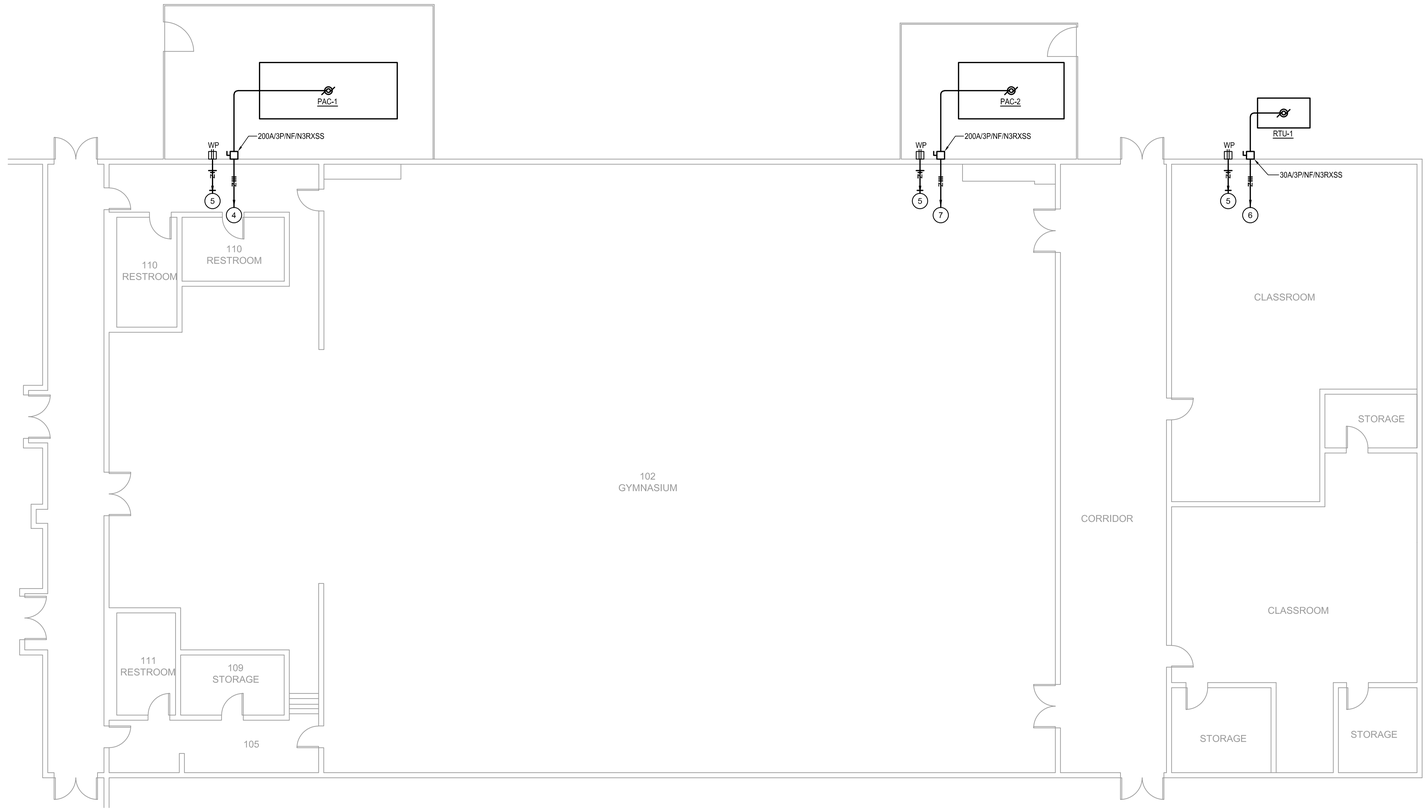
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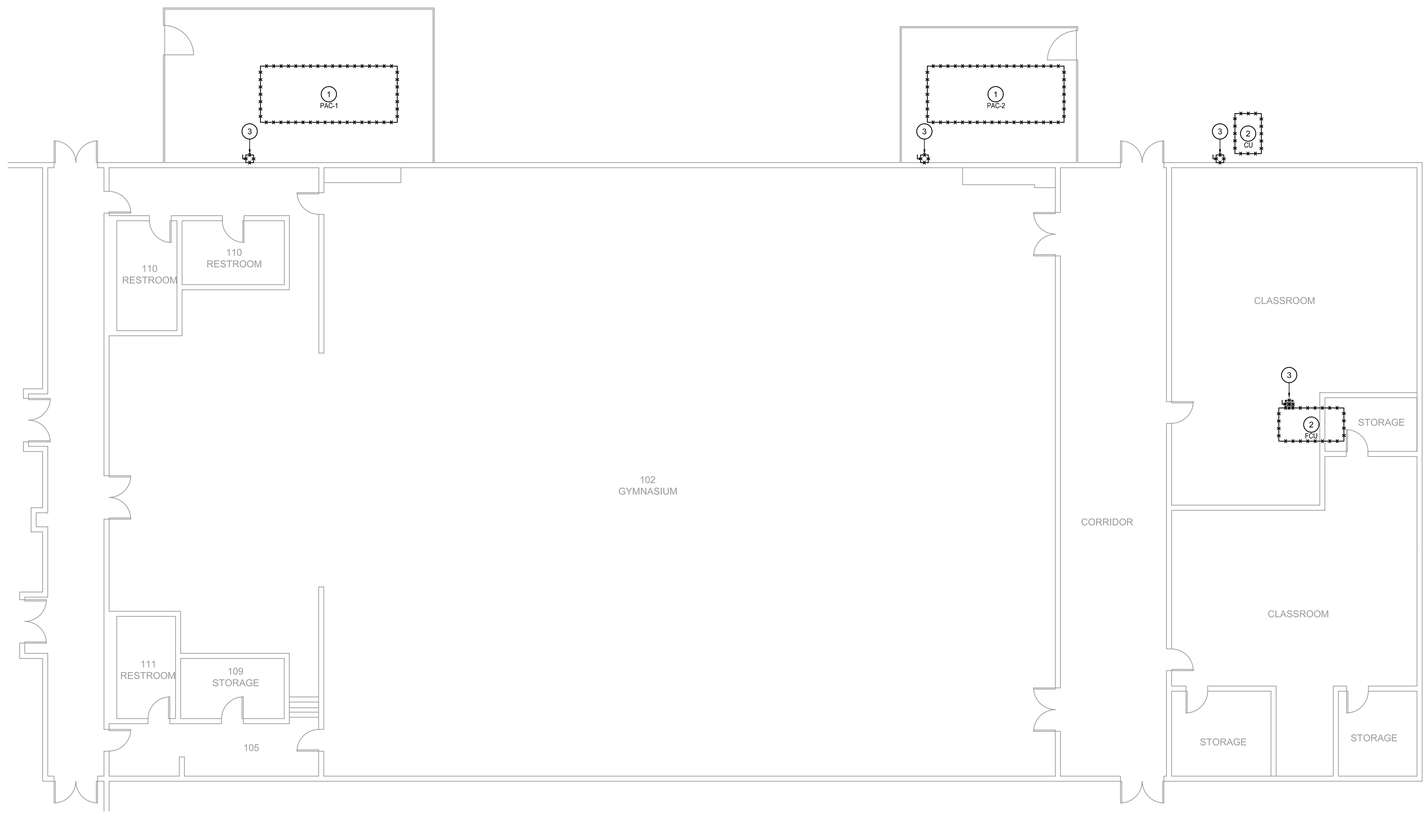
MECHANICAL SCHEDULES AND DETAILS - ODOM ACADEMY

| SHEET NUMBER | REVISION |
|---|---|
| M3.1 | |




N

2 **ELECTRICAL POWER FLOOR PLAN - ODOM ACADEMY**
SCALE: 1/8" = 1'-0"




N

1 **ELECTRICAL DEMOLITION FLOOR PLAN - ODOM ACADEMY**
SCALE: 1/8" = 1'-0"

DISCONNECT AND REMOVE
EXISTING TO REMAIN
NEW WORK

## ELECTRICAL GENERAL NOTES:

1. DISCONNECT AND REMOVE ALL CONDUIT, WIRE, AND DISCONNECTING MEANS ASSOCIATED WITH HVAC EQUIPMENT BEING REMOVED.
2. UNLESS NOTED OTHERWISE, ALL EXISTING ELECTRICAL PANELBOARDS, TRANSFORMERS, SWITCHBOARDS, ETC., SHALL REMAIN
3. WHERE SCOPE REQUIRES REMOVAL / RE-INSTALLATION OF CEILING GRID, ELECTRICAL CONTRACTOR SHALL DO THE FOLLOWING:
   1. SUSPEND OR REMOVE AND STORE ALL CEILING MOUNTED ELECTRICAL DEVICES TO FACILITATE REMOVAL OF CEILING GRID. DEVICES INCLUDE BUT ARE NOT LIMITED TO; LIGHT FIXTURES, EXIT SIGNS, FIRE ALARM DEVICES, SECURITY DEVICES, COMMUNICATION SPEAKERS, CAMERAS, OCCUPANCY SENSORS, ETC.
   2. REINSTALL ALL EXISTING LIGHT FIXTURES AND ALL CEILING MOUNTED ELECTRICAL IN CEILINGS WHERE APPLICABLE. DEVICES INCLUDE BUT ARE NOT LIMITED TO; LIGHT FIXTURES, EXIT SIGNS, FIRE ALARM DEVICES, SECURITY DEVICES, COMMUNICATION SPEAKERS, CAMERAS, OCCUPANCY SENSORS, ETC.

## ELECTRICAL KEYED NOTES:

1. DISCONNECT AND REMOVE ALL ELECTRICAL ASSOCIATED WITH HVAC EQUIPMENT BACK TO NEAREST ACTIVE JUNCTION BOX, LEAVE CIRCUIT INTACT FOR CONNECTION OF REPLACEMENT HVAC EQUIPMENT.
2. DISCONNECT AND REMOVE ALL ELECTRICAL ASSOCIATED WITH HVAC EQUIPMENT BACK TO SOURCE PANEL.
3. DISCONNECT AND REMOVE EXISTING DISCONNECT / MOTOR STARTER AND RETURN TO OWNER.
4. CONNECT TO EXISTING CIRCUIT PRESERVED DURING DEMOLITION. EXTEND CONDUIT / WIRE AND MAKE FINAL CONNECTION.
5. ROUTE 2#10, 1#10G,.3/4"C. TO NEAREST EXTERIOR RECEPTACLE CIRCUIT. DO NOT EXCEED 16-AMP LOAD.
6. ROUTE 3#10, 1#10G,.3/4"C. TO EXISTING PANEL LA-1 LOCATED IN WOOD SHOP. REPLACE EXISTING HOME ECON AHU CIRCUIT BREAKER WITH NEW 25A/3P. APPROXIMATELY 125'-0" DISTANCE.
7. CONNECT TO EXISTING CIRCUIT PRESERVED DURING DEMOLITION. EXTEND CONDUIT / WIRE AND MAKE FINAL CONNECTION. REPLACE EXISTING CIRCUIT BREAKER WITH NEW 110A/3P FOR G.E. A-SERIES PANELBOARD.

PROJECT SCOPE SHOWN AS A PART OF THE PROJECT ON THIS CAMPUS WILL REQUIRE IDENTICAL ARCHITECTURAL WORK. ALL SUCH WORK SHALL BE INCLUDED IN THE CONTRACTOR'S BID. THIS WORK SHALL BE PERFORMED WITHOUT ANY IMPACT TO THE CONSTRUCTION SCHEDULE AND/OR ADDITIONAL COST.

CONTRACTOR SHALL REMOVE AND REPLACE CEILING WHERE REQUIRED TO COMPLETE THE INDICATED SCOPE OF PROJECT SCOPE WORK. EXISTING CEILING SHALL BE RE-INSTALLED IN THE EXACT CONDITION EXISTING PRIOR TO THE BEGINNING OF CONSTRUCTION. IF A MATCH IS NOT POSSIBLE, CONTRACTOR SHALL REPLACE ALL CEILING FROM WALL TO WALL OR BOUNDARY SEPARATION IN CORRIDOR, CLASSROOM, OR ANY OTHER SPACE.

PRIOR TO STARTING ANY WORK AND PRIOR TO SUBSTANTIAL COMPLETION, SCHEDULE WITH THE ENGINEER AND OWNER A DEMONSTRATION AND TESTING OF THE EXISTING FIRE ALARM AND CAMERA SYSTEM. THE CONTRACTOR SHALL HAVE ALL SUBCONTRACTORS WORKING ON THE PROJECT BE PRESENT FOR THESE TESTS AND DEMONSTRATIONS.

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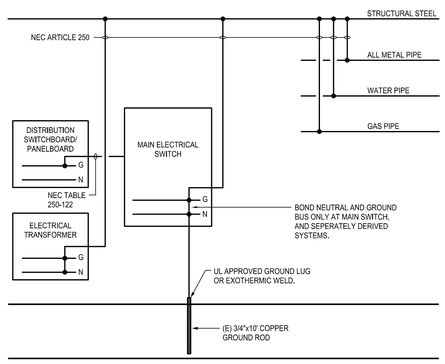
SHEET NAME
ELECTRICAL
FLOOR PLANS - ODOM ACADEMY

SHEET NUMBER: E1.1
REVISION:

# SYMBOL SCHEDULE

| SYMBOL | DESCRIPTION (DISREGARD ITEMS NOT SHOWN ON PLANS) |
|---|---|
| LIGHTING (LETTER DENOTES TYPE - SEE LIGHT FIXTURE SCHEDULE) | |
| | FLUORESCENT FIXTURE |
| | FLUORESCENT FIXTURE ON EMERGENCY CIRCUIT |
| | DOWNLIGHT FIXTURE |
| | LIGHT FIXTURE - WALL MOUNTED |
| | DOWNLIGHT FIXTURE ON EMERGENCY CIRCUIT |
| | LIGHT FIXTURE - WALL MOUNTED ON EMERGENCY CIRCUIT |
| | EXIT LIGHT-CEILING MTD WITH DIRECTIONAL ARROWS AS REQUIRED |
| | EXIT LIGHT-WALL MTD WITH DIRECTIONAL ARROWS AS REQUIRED |
| | EMERGENCY LIGHTING UNIT EQUIPMENT |
| SWITCHES | |
| $ | SINGLE POLE SWITCH |
| $2 | 2-POLE SWITCH |
| $3 | 3-WAY SWITCH |
| $K | KEYED SWITCH |
| $D | WALL DIMMER SWITCH, SIZE AND TYPE AS REQUIRED |
| $P | SWITCH WITH PILOT LIGHT |
| $MC | MOMENTARY CONTACT SWITCH |
| | PUSH BUTTON SWITCH |
| TS | TIME SWITCH |
| $LS | DUAL LEVEL SWITCHING |
| | CEILING MOUNTED OCCUPANCY SENSOR |
| | WALL MOUNTED OCCUPANCY SENSOR |
| RECEPTACLES AND OUTLETS | |
| | SIMPLEX RECEPTACLE |
| | DUPLEX RECEPTACLE |
| | 125/250 VOLT, 1 PHASE, 3-WIRE, 20 AMPS UNLESS NOTED OTHERWISE |
| | DOUBLE DUPLEX IN 2-GANG BOX WITH SINGLE COVER PLATE |
| | DOUBLE DUPLEX ISOLATED GROUND IN 2-GANG BOX WITH SINGLE COVER PLATE |
| | ISOLATED GROUND DUPLEX RECEPTACLE |
| | ISOLATED GROUND SIMPLEX RECEPTACLE |
| | 250 VOLT, 1 PHASE, SPECIAL PURPOSE OUTLET, 20 AMPS UNLESS NOTED OTHERWISE |
| | JUNCTION BOX |
| | FLUSH FLOOR DUPLEX RECEPTACLE OUTLET |
| | DUPLEX GROUND FAULT CIRCUIT INTERRUPTER RECEPTACLE |
| | DOUBLE DUPLEX GROUND FAULT CIRCUIT INTERRUPTER RECEPTACLE IN 2-GANG BOX WITH SINGLE COVER PLATE |
| J | FLUSH FLOOR JUNCTION BOX |
| | TELEVISION OUTLET (RECEPTACLE AND CATV CONNECTIONS) |
| V | REMOTE VCR INPUT PATCH CABLE TO TV LOCATION |
| | TWO CHANNEL POWER/COMMUNICATIONS POWER POLE |
| SWITCHES | |
| $ | LINE VOLTAGE SINGLE POLE SWITCH |
| $3 | LINE VOLTAGE 3-WAY SWITCH |
| $4 | LINE VOLTAGE 4-WAY SWITCH |
| $K | LINE VOLTAGE MOMENTARY DPST KEYED SWITCH |
| $D | LINE VOLTAGE DIMMER SWITCH, SIZE AND TYPE AS REQUIRED |
| $P | LINE VOLTAGE SWITCH WITH PILOT LIGHT |
| $T | 6-HOUR ROTARY TIMER SWITCH WITH NO HOLD U.N.O. |
| | PUSH BUTTON EPO SWITCH WITH COVER |
| $MC | LOW VOLTAGE MOMENTARY CONTACT SWITCH |
| $R | LOW VOLTAGE DIGITAL KEYPAD |
| $B | LOW VOLTAGE BUILDING MANAGEMENT (BMCS) LOCAL OVERRIDE SWITCH |
| | OCCUPANCY SENSOR (AUTO ON / AUTO OFF WITHIN 20-MINUTES) |
| | VACANCY SENSOR (MANUAL ON / AUTO OFF WITHIN 20-MINUTES) |
| | PHOTOCELL SENSOR |
| RF | LIGHTING CONTROL SYSTEM, ( 'if' DENOTES TYPE - SEE LIGHTING CONTROLS SCHEDULE) |
| ER | EMERGENCY LOAD CONTROL RELAY. MINIMUM 16A & 0-10V COMPATIBLE. PROVIDE U.L. 924 U.N.O. |
| MOTOR CONTROLLERS AND EQUIPMENT | |
| | MOTOR, MAKE FINAL MOTOR CONNECTION |
| | 3-PHASE MOTOR, MAKE FINAL MOTOR CONNECTION |
| | DISCONNECT SWITCH AS REQUIRED |
| | COMBINATION MOTOR STARTER/DISCONNECT SWITCH AS REQUIRED |
| | MOTOR STARTER |
| | MOTOR CONTROLLER PUSH BUTTON CONTROL, P=PILOT LIGHT |
| $M | MANUAL MOTOR SWITCH AS REQUIRED |
| | PREWIRED DEVICE, MAKE ELECTRICAL FINAL CONNECTIONS |
| VFD | VARIABLE FREQUENCY DRIVE MOTOR CONTROLLER FURNISHED BY DIVISION 23 AND INSTALLED BY DIVISION 26 |
| ELECTRICAL EQUIPMENT | |
| | 277/480 VOLT DISTRIBUTION OR PANELBOARD |
| | 120/208 VOLT PANELBOARD |
| | TELEPHONE CABINET |
| | PLYWOOD TELEPHONE BACKBOARD |
| | DRY TYPE TRANSFORMER |
| CIRCUITING | |
| | CONDUIT |
| | CONDUIT BELOW FLOOR, SLAB, OR GRADE |
| #2 | 3/4"C, UNLESS OTHERWISE NOTED: LONG HATCH, NEUTRAL; SHORT HATCH, PHASE; "Z" HATCH, INSULATED GROUND. NO HATCHES INDICATES 2 CONDUCTORS. ARROW INDICATES HOMERUN. |
| | PARTIAL ELECTRICAL HOME RUN |
| SUBSCRIPTS AND ABBREVIATIONS | |
| WP | INDICATES WEATHERPROOF |
| WG | INDICATES WIREGUARD |
| E | INDICATES EXISTING |
| TL | INDICATES TWIST LOCK TYPE |
| NL | LIGHT FIXTURE ON NIGHT LIGHT CIRCUIT |
| • | NEXT TO ANY SYMBOL INDICATES FINAL ROUGH-IN FIELD COORDINATION BY CONTRACTOR WITH ARCHITECTURAL MILLWORK DRAWINGS AND OTHER TRADES |

GENERAL NOTE:
ALL EXTERIOR BUILDING ELECTRICAL EQUIPMENT TO BE WEATHERPROOF NEMA-3R MINIMUM.




1 **GROUNDING DETAIL**
SCALE: NONE

## ELECTRICAL GENERAL NOTES:

1. ALL EMPTY CONDUIT SHALL HAVE PULL STRING.
2. EACH CONDUIT SHALL BE LIMITED TO (3) CIRCUITS MAXIMUM.
3. NO MORE THAN THREE SINGLE PHASE CIRCUITS AND NO MORE THAN SIX CURRENT CARRYING CONDUCTORS SHALL BE INSTALLED IN A SINGLE RACEWAY. WHEN FOUR, FIVE, OR SIX CURRENT CARRYING CONDUCTORS ARE INSTALLED IN A SINGLE RACEWAY, THEIR CURRENT CARRYING AMPACITIES SHALL BE DERATED AS REQUIRED BY THE NEC FOR NON-DIVERSIFIED LOADS. THE INSTALLED WIRE SIZE SHALL HAVE A NOMINAL AMPACITY RATING OF 125% OF THAT REQUIRED OR SPECIFIED WHEN FOUR OR MORE CURRENT CARRYING CONDUCTORS ARE INSTALLED IN A SINGLE RACEWAY. NEUTRAL CONDUCTORS SHALL BE CONSIDERED A CURRENT CARRYING CONDUCTOR IN ALL NON-LINEAR LOADED CIRCUITS AS REQUIRED BY THE NEC.
4. ALL LIGHTING, RECEPTACLE, AND EQUIPMENT BRANCH CIRCUITS CONDUITS SHALL CONTAIN A GROUND WIRE, USING THE CONDUIT SYSTEM AS THE ONLY GROUND PATH IS NOT ACCEPTABLE.
5. REFER TO MECHANICAL DRAWINGS FAN SCHEDULE, DIVISION 26 TO PROVIDE ALL LOCAL SWITCHES AS INDICATED ON MECHANICAL FAN SCHEDULE, LOCATE SWITCH BY DOOR UNLESS INDICATED OTHERWISE FOR ALL LOCALLY SWITCHED FANS.
6. PROVIDE SMOKE DETECTORS AT EACH RETURN AIR INLET INTO EACH MECHANICAL ROOM AS REQUIRED FOR OPENING SIZE.
7. PROVIDE DUCT MOUNTED SMOKE DETECTORS IN SUPPLY AND RETURN DUCTS OF ALL AIR HANDLERS 2000 CFM OR GREATER.


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ELECTRICAL DETAILS, SCHEDULES, AND LEGENDS - ODOM ACADEMY

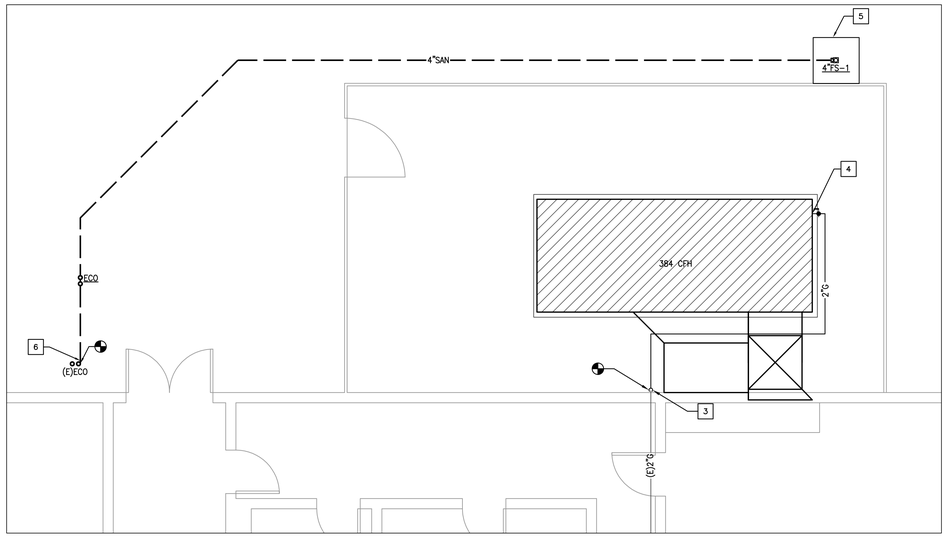
SHEET NUMBER: E2.1
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## PLUMBING GENERAL NOTES:

1. EXISTING GAS REGULATOR PRESSURE IS CURRENTLY AT, 4OZ.=7 IN.WC

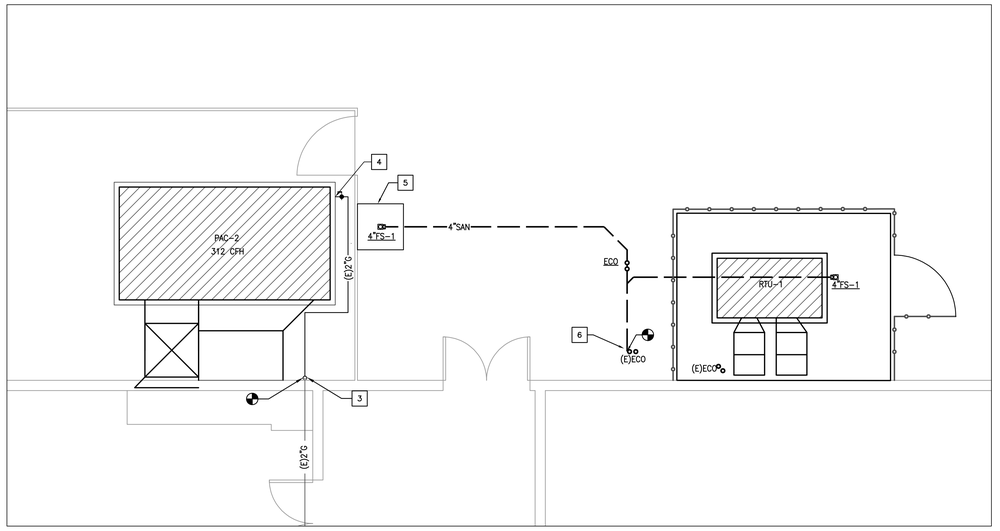
## PLUMBING KEYED NOTES:

1. EXISTING GAS TO REMAIN.
2. REMOVE GAS PIPE FROM EXISTING UNIT AND ELBOW TO POINT SHOWN.
3. MAKE NEW CONNECTION STARTING WITH NEW 2" ELBOW.
4. MAKE FINAL GAS CONNECTION TO UNIT, FIELD VERIFY GAS INLET WITH MECHANICAL CONTRACTOR.
5. PROVIDE A 3' X 3' CONCRETE PAD ATTACHED TO EXISTING PAD FOR NEW FLOOR DRAIN.
6. MAKE NEW SANITARY CONNECTION TO EXISTING SANITARY. FIELD VERIFY EXACT LOCATION OF HORIZONTAL FLOW TO MAKE A SANITARY CONNECTION.



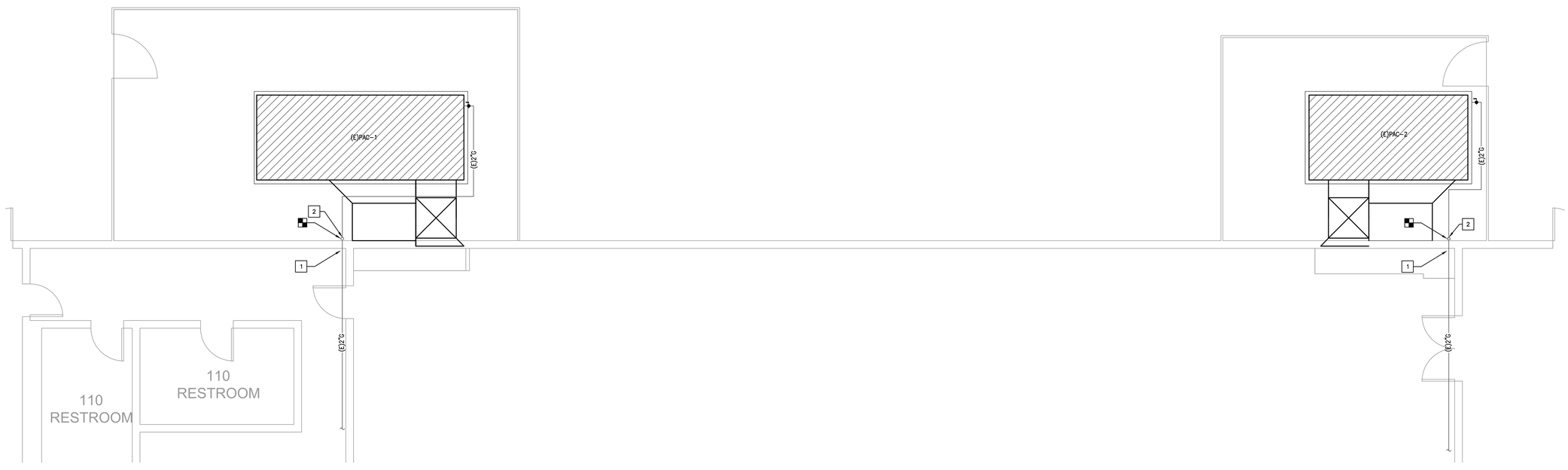

N

2 PLUMBING ENLARGED FLOOR PLAN - OLD GYM - ODOM ACADEMY
SCALE: 1/4" = 1'-0"




N

3 PLUMBING ENLARGED FLOOR PLAN - OLD GYM - ODOM ACADEMY
SCALE: 1/4" = 1'-0"




N

1 PLUMBING ENLARGED DEMOLITION FLOOR PLAN - OLD GYM - ODOM ACADEMY
SCALE: 1/4" = 1'-0"


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PLUMBING ENLARGED FLOOR PLAN - OLD GYM - ODOM ACADEMY

SHEET NUMBER: P2.1

REVISION:

## PLUMBING GENERAL NOTES

1. WITHIN THE EXISTING BUILDING, EXISTING WATER, WASTE AND VENT SERVICES ARE TO BE MODIFIED AS REQUIRED AND REUSED FOR THE INSTALLATION OF NEW AND/OR RELOCATED PLUMBING FIXTURES. REFER TO PLUMBING FLOOR PLANS FOR POINTS OF CONNECTION.
2. WITHIN THE EXISTING BUILDING, SAWCUT AND REMOVE EXISTING FLOOR SLAB AS REQUIRED TO PROVIDE NEW AND/OR RELOCATED PLUMBING FIXTURES, CLEANOUTS, AND UNDERSLAB WASTE AND VENT PIPING. PATCH AND REFINISH FLOOR TO MATCH EXISTING.
3. IN AREAS WHERE THE FLOOR SLAB IS REMOVED, CONTRACTOR SHALL ALSO REMOVE UNDERSLAB WASTE AND VENT PIPING WHICH SERVES FIXTURES DESIGNATED FOR REMOVAL. PRIOR TO ANY REMOVAL, FIELD VERIFY THAT LINES TO BE REMOVED DO NOT SERVE ANY EXISTING FIXTURES TO REMAIN OR NEW FIXTURES TO BE INSTALLED.
4. IN AREAS WHERE THE FLOOR SLAB IS NOT REMOVED, CONTRACTOR SHALL ABANDON IN PLACE ANY UNDERSLAB WASTE AND VENT PIPING NO LONGER NEEDED, UNLESS THE PIPING MUST BE REMOVED TO ACCOMMODATE NEW CONSTRUCTION. IF NEW WORK DOES NOT NECESSITATE THEIR REMOVAL, CUT AND PLUG SUCH LINES BELOW SLAB, AND PATCH FLOOR TO MATCH EXISTING.
5. FIELD VERIFY EXACT LOCATION, SIZE, DEPTH, DIRECTION OF FLOW, CAPACITY, PIPE MATERIAL AND CONDITION OF EXISTING WASTE PIPING PRIOR TO BEGINNING CONSTRUCTION. ENSURE THAT PROPER CONNECTIONS TO AND EXTENSION OF SUCH UTILITIES CAN BE MADE.
6. WASTE LINES TO BE RE-USED OR RECONNECTED TO SHALL BE THOROUGHLY RODDED OUT AND FLUSHED TO ENSURE THEY ARE FREE FROM BLOCKAGES.
7. CONTRACTOR SHALL COORDINATE ROUTING OF PIPING BELOW SLAB WITH COLUMN FOOTINGS, GRADE BEAMS, UNDERGROUND PLUMBING AND ELECTRICAL UTILITIES, AND OTHER SUB-SURFACE BUILDING ELEMENTS.
8. CONTRACTOR SHALL COORDINATE ROUTING OF PIPING IN CEILING SPACES WITH MECHANICAL AND ELECTRICAL EQUIPMENT, DUCTWORK AND CONDUIT. SHOULD A CONFLICT OCCUR THE CONTRACTOR SHALL NOTIFY THE ARCHITECT/ENGINEER PRIOR TO INSTALLING AN ALTERNATE PIPING PLAN.
9. CONTRACTOR TO COORDINATE ALL REMODEL WORK WITH THE WORK OF OTHER TRADES TO AVOID CONFLICTS AND TO MINIMIZE INTERRUPTION OF SERVICES.
10. COORDINATE ALL FIXTURE AND EQUIPMENT LOCATIONS AND CONNECTION REQUIREMENTS WITH LATEST ARCHITECTURAL DRAWINGS AND SPECIFICATIONS PRIOR TO ANY ROUGH-INS.
11. DO NOT ROUGH-IN FROM THESE DRAWINGS. REFER TO LATEST ARCHITECTURAL DRAWINGS FOR DIMENSIONED LOCATIONS.
12. CONTRACTOR TO FIELD VERIFY AS NECESSARY THE EXACT ROUTING AND SIZES OF ALL PIPING.
13. ALL WORK, METHODS AND INSTALLATIONS INVOLVED IN THE PLUMBING DESIGN SHALL BE IN ACCORDANCE WITH THE CITY BUILDING CODE, INSPECTION REGULATIONS AND ALL OTHER OFFICIALS HAVING JURISDICTION.
14. THE PROPER INSTALLATION OF NEW FIXTURES AND THE PROPER CONTINUED OPERATION OF EXISTING FIXTURES TO REMAIN SHALL DETERMINE THE EXTENT AND NATURE OF PLUMBING REMODEL WORK.
15. EACH VENT SHALL TERMINATE VERTICALLY NOT LESS THAN 6" ABOVE ROOF, MAINTAIN MINIMUM 10'-0" DISTANCE BETWEEN VENT TERMINALS THROUGH ROOF AND ALL FRESH AIR INTAKES, AND A MINIMUM 5'-0" FROM ANY EXTERIOR WALL.
16. PRIOR TO BEGINNING CONSTRUCTION, COORDINATE BUILDING BACKFLOW PREVENTION REQUIREMENTS WITH THE LOCAL AUTHORITY HAVING JURISDICTION AND PROVIDE AS DIRECTED.

## PLUMBING FIXTURE SPECIFICATION

| | |
|---|---|
| TYPE: | FS-1 |
| SERVICE: | MECHANICAL ROOM, INDIRECT WASTE. |
| DESCRIPTION: | A.R.E. FLOOR SINK, CAST IRONBODY WITH 8" SQUARE FLOOR SINK WITH 6" DEEP SUMP, BOTTOM OUTLET, A.R.E. DOME STRAINER, STAINLESS STEEL FRAME AND GRATE, ANCHOR FLANGE, CLAMPING COLLAR, AND HALF TOP GRATE. WADE 9140-B5-15-26 |
| TRAP SEAL: | MATCH FLOOR DRAIN BY SIZE.COORDINATE FINAL LOCATION |
| ROUGH-IN: | PROVIDE PRO-SET SYSTEM, INC. TRAP GUARD FACTORY TO FITTED TO REFER TO FLOOR PLAN FOR SIZES. COORDINATE FINAL LOCATION AND INSTALLATION WITH ARCHITECTURAL DRAWINGS AND FLOOR CONSTRUCTION. |
| TYPE: | ECO |
| DESCRIPTION: | EXTERIOR CLEANOUT TO GRADE, BOTTOM OUTLET DUCTILE IRON BODY, ADJUSTABLE 6-1/2" DIAMETER DUCTILE IRON RING AND COVER WITH VANDAL-RESISTANT SCREWS. IF LOCATED IN ASPHALT OR DIRT PROVIDE 18" X 18" X 12" CONCRETE PAD. WADE # 6000-12. |

## PLUMBING PIPING LEGEND

| SYMBOLS | DESCRIPTION |
|---|---|
| SAN | SANITARY OR WASTE PIPING ABOVE GRADE (SAN) |
| SAN | SANITARY OR WASTE PIPING BELOW GRADE (SAN) |
| GW | GREASE WASTE PIPING (GW) |
| GW | GREASE WASTE PIPING BELOW GRADE (GW) |
| SD | STORM DRAIN PIPING (SD) |
| SD | STORM DRAIN PIPING BELOW GRADE (GW) |
| SSD | SUB-SOIL DRAIN OR FOOTING DRAIN (SSD) |
| AW | ACID WASTE PIPING (AW) |
| AW | ACID WASTE PIPING BELOW GRADE (AW) |
| PD | PUMPED DISCHARGE (PD) |
| CD | CONDENSTATE DRAIN PIPING (CD) |
| D | CONDENSTATE – INDIRECT DRAIN PIPING (D) |
| | VENT PIPING (V) |
| CW | COLD WATER PIPING (CW) |
| HW | HOT WATER PIPING (HW) |
| HWR | HOT WATER RETURN PIPING (HWR) |
| SCW | SOFT COLD WATER PIPING (SCW) |
| CDW | CHILLED DRINKING WATER PIPING (CDW) |
| TP | TRAP PRIMER LINE (TP) |
| F | FIRE PROTECTION PIPING (F) |
| AS | AUTOMATIC SPRINKLER PIPING (AS) |
| GAS | NATURAL GAS PIPING (G) |
| GV | GAS VENT PIPING (GV) |
| AIR | COMPRESSED AIR PIPING (A) |
| | FLOW DIRECTIONAL ARROW |
| | SHUT-OFF VALVE |
| BV | BALANCING VALVE (BV) |
| SV | SOLENOID VALVE (SV) |
| | BALL VALVE (BV) |
| | BUTTERFLY VALVE |
| | LUBRICATED PACKED PLUG STOP STOP COCK (PC) |
| | HORIZONTAL SWING CHECK |
| | UNION |
| | HORIZONTAL SWING CHECK |
| | REDUCER OR INCREASER |
| | ECCENTRIC REDUCER |
| | REDUCED PRESSURE BACKFLOW PREVENTER (RPBFP) |
| | PIPING DOWN |
| | RISE OR DROP PIPING |
| | PIPING UP –OR– PIPING UP & DOWN |
| | CAP ON END OF PIPE |
| | CLEANOUT (WALL OR CEILING) (CO) |
| | FLOOR CLEANOUT (FCO) |
| | EXTERIOR CLEANOUT WITH 18"x18"x4" CONCRETE PAD (ECO) |
| | TWO-WAY CLEANOUT (PROVIDE 18"x24"x4" CONCRETE PAD OUTSIDE) |
| | FIRE DEPARTMENT VALVE AT RISER |
| | FIRE HYDRANT |
| | FIRE DEPARTMENT CONNECTION |
| | PRESSURE REDUCING VALVE (PRV) |
| | BRANCH CONNECTION OUT OF TOP |
| | BRANCH CONNECTION OUT OF BOTTOM |
| | BRANCH CONNECTION OUT OF SIDE |
| | WYE & 1/8TH BEND BRANCH CONNECTION |
| | WYE BRANCH CONNECTION |
| | HOSE BIBB |
| | PRESSURE GAUGE WITH COCK |
| | THERMOMETER |
| | GAS PRESSURE REGULATOR |
| 3 | TEST COCK |
| | GAS METER |
| | WALL HYDRANT |
| | VALVE IN RISE |
| | ASME TEMPERATURE & PRESSURE RELIEF VALVE |
| | VACUUM RELIEF VALVE |
| | ANGLE VALVE |
| | OS&Y VALVE |
| | ROOF DRAIN |
| | REFER TO KEYED NOTE |
| FS | FLOW SWITCH |
| | FLOOR SINK (FS) |
| | FLOOR DRAIN (FD) |
| | FLOOR DRAIN WITH P-TRAP (FD) |
| | FLOOR DRAIN WITH P-TRAP AT 45° ANGLE (FD) |
| | HUB DRAIN (HD) |
| | ACCESS PANEL FOR TRAP PRIMER OR SHOCK ABSORBER |
| AP | ACCESS PANEL LOCATION SYMBOL |
| A | SHOCK ABSORBER |
| | AIR CHAMBER |
| (E) | EXISTING |
| (N) | NEW |
| VTR | VENT THRU ROOF |
| B.F.F. | BELOW FINISHED FLOOR |
| A.F.F. | ABOVE FINISHED FLOOR |
| | NEW CONNECTION |
| IE=100.00' | INVERT ELEVATION |
| 1 | DELTA CHANGE SYMBOL |
| P / 1 | 4" VTR RISER FLAG |

## PLUMBING MATERIAL LIST

GAS PIPING SHALL BE

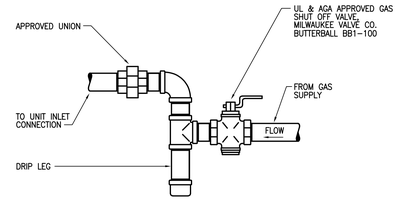
PIPE 2" AND SMALLER. PROVIDE SCHEDULE 40 ASTM A 53 BLACK STEEL WITH FACTORY FABRICATED SOCKET WELD FITTINGS.

PIPE LARGER THAN 2", USE SCHEDULE 40 ASTM A 53 BLACK STEEL PIPE WITH LONG RADIUS WELD FITTINGS.

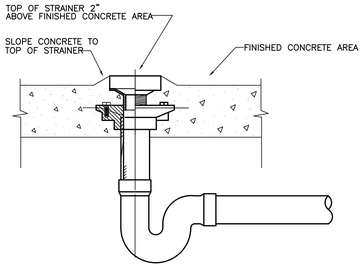
BELOW GRADE, INSIDE BUILDING

SANITARY WASTE AND VENT PIPING SHALL BE

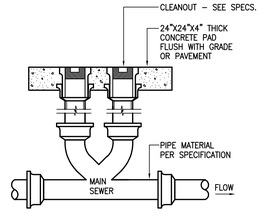
SCHEDULE 40 DWV POLYVINYL CHLORIDE PIPE AND FITTINGS CONFORMING TO ASTM-2665 WITH SOLVENT WELDED JOINTS. DO NOT USE IN AIR SUPPLY OR RETURN PLENUMS, AND OR WHERE FIRE RATED WALLS, PARTITIONS, OR FLOORS ARE PENETRATED.




1 **GAS CONNECTION**
SCALE: NONE GA07-11/12/08




2 **OUTDOOR CONDENSATE DRAIN**
SCALE: NONE CD04-11/12/08




3 **TWO-WAY EXTERIOR CLEANOUT**
SCALE: NONE SA04-11/12/08


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Salas O'Brien Registration: F-4111
Salas O'Brien Project Number: 2022-04653-00



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2022-04653-00
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# BEAUMONT ISD AIR HANDLER UPGRADES

Beaumont ISD
Preparing Our Next Generation

NOTES

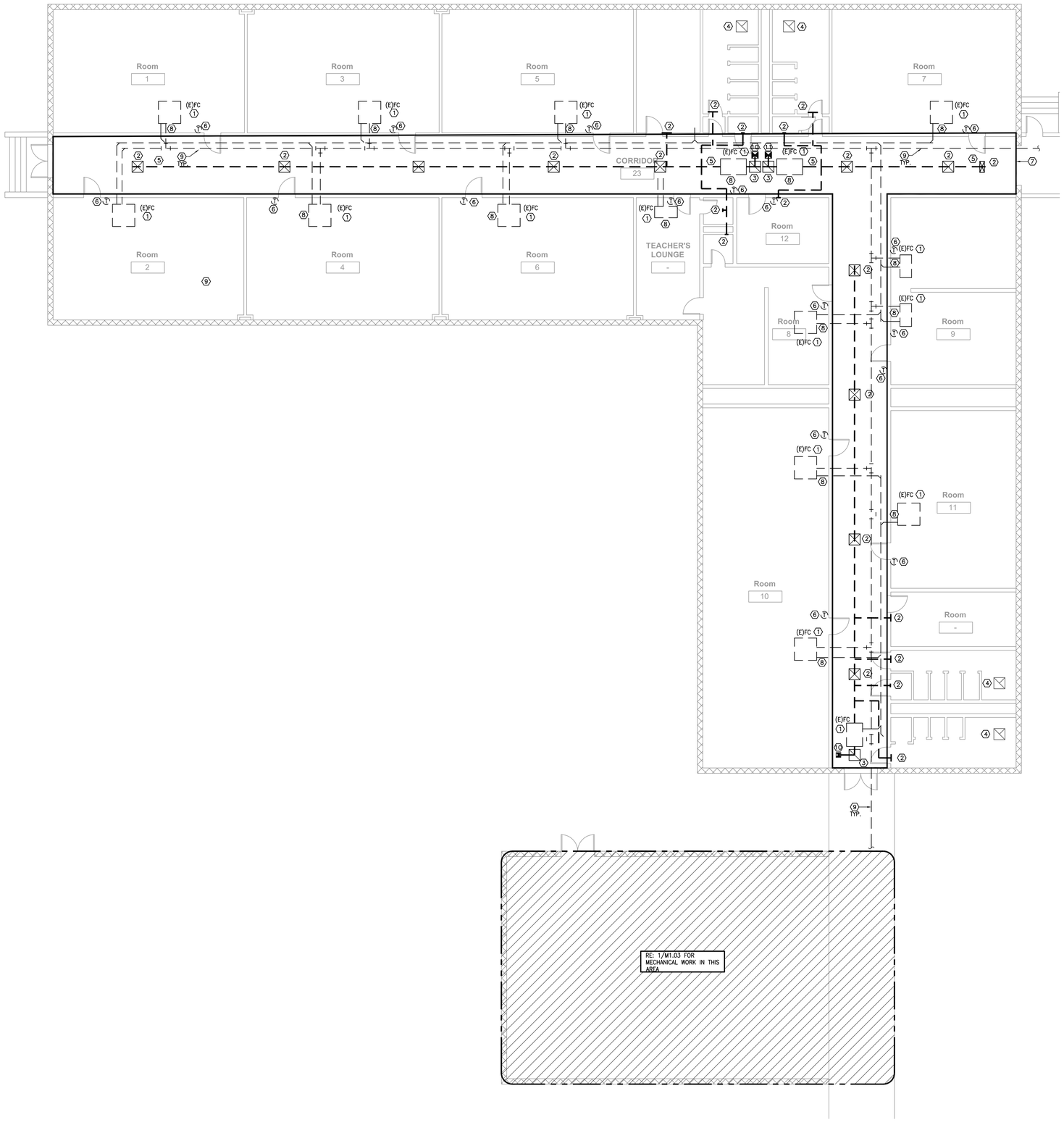
REVISIONS

| NUMBER | DESCRIPTION | DATE | CHECKER |
|---|---|---|---|
| | | | |

CHECKED BY: EH
DRAWN BY: TR

SHEET NAME
PLUMBING SCHEDULES AND DETAILS - ODOM ACADEMY

SHEET NUMBER: P3.1
REVISION:




N

1 **MECHANICAL DEMOLITION FLOOR PLAN - UNIT B - ROY GUESS**
SCALE: 1/8" = 1'-0"

## MECHANICAL DEMOLITION GENERAL NOTES

1. THESE CONSTRUCTION DRAWINGS ARE DIAGRAMMATIC, AND DO NOT NECESSARILY REFLECT ACTUAL DIMENSIONS. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO FIELD-VERIFY ALL DIMENSIONS AND COORDINATE PLACEMENT OF ALL EQUIPMENT AND ROUTING OF ALL PIPING AND/OR DUCT SYSTEMS.
2. ALL MECHANICAL SYSTEMS SHOWN ON THIS PLAN ARE FROM EXISTING PRELIMINARY FIELD WORK. CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFYING ALL LOCATIONS AND SIZES OF MECHANICAL SYSTEMS PRIOR TO THE START OF WORK.
3. REMOVE ALL EXISTING SPACE MOUNTED TEMPERATURE AND HUMIDITY SENSORS NOT BEING REUSED. PROVIDE STAINLESS STEEL COVER PLATES.
4. OWNER SHALL HAVE FIRST RIGHT OF REFUSAL ON ALL HVAC EQUIPMENT BEING REMOVED FROM THIS PROJECT. THIS INCLUDES BUT NOT LIMITED TO CONDENSING UNITS, AIR HANDLING UNITS, AND CONTROLS.

## MECHANICAL DEMOLITION KEYED NOTES

1. REMOVE EXISTING AIR HANDLING UNIT, ASSOCIATED CONTROLS, AND ALL OTHER ASSOCIATED APPURTENANCES.
2. EXISTING SUPPLY GRILLE SHALL BE REMOVED
3. EXISTING RETURN GRILLE SHALL BE REMOVED.
4. EXISTING EXHAUST GRILLE, ASSOCIATED DUCTWORK AND FAN ON ROOF SHALL REMAIN.
5. EXISTING DUCTWORK SHALL BE REMOVED.
6. REMOVE EXISTING TEMPERATURE SENSOR AND ALL ASSOCIATED CONTROL WIRING. PROVIDE STAINLESS STEEL COVER PLATE.
7. REMOVE ALL EXITING CEILING TILE AND GRID WITHIN THE EXTENT OF HATCHED AREA. CONTRACTOR SHALL VERIFY EXISTING CEILING CONFIGURATION, LIGHTING LOCATIONS AND CEILING HEIGHT. EXISTING LIGHT FIXTURES SHALL BE TEMPORARILY SUSPENDED IN PLACE OR REMOVED AND STORED IN SAFE LOCATION. PROTECTION OF LIGHT FIXTURE SHALL BE THE CONTRACTOR RESPONSIBILITY AND SHALL BE RESTORED TO WORKING CONDITION UPON COMPLETION OF THE CEILING REPLACEMENT AND ABOVE CEILING WORK.
8. PATCH AND PAINT EXISTING WALL TO MATCH AT ALL PIPING PENETRATIONS THROUGH WALL.
9. ALL EXISTING HYDRONIC 2 PIPE SYSTEM CHILLED / HOT SUPPLY AND RETURN PIPING SHALL BE REMOVED.
10. EXISTING OUTSIDE AIR INTAKE SHALL BE REMOVED REUSE EXISTING OPENING FOR NEW INTAKE RESIZE OPENING AS REQUIRED.
11. EXISTING OUTSIDE AIR INTAKE SHALL BE REMOVED PATCH ROOF OPENING TO MATCH EXISTING.

| DEMO SYMBOL LEGEND | |
|---|---|
| RENOVATIONS | |
| | ITEM TO REMAIN |
| | ITEM TO BE REMOVED |

BMCS NOTE:
EXISTING CONTROL SYSTEM IS BY AUTOMATED LOGIC.
REFER TO BMCS SPECIFICATION FOR MORE INFORMATION.

THROUGHOUT CONSTRUCTION, THE CONTRACTOR IS RESPONSIBLE FOR ALL TEMPORARY AND RENTAL EQUIPMENT, INCLUDING POWER FOR SUCH EQUIPMENT, AND TO PROVIDE PHASING TO ENSURE SPACE TEMPERATURE AND HUMIDITY IS MAINTAINED. REFER TO SPECIFICATION 23 05 11 MECHANICAL ALTERATIONS PROJECT PROCEDURES, ARTICLE 3.8 FOR ADDITIONAL REQUIREMENTS. CONTRACTOR SHALL REVIEW ALL REQUIREMENTS PRIOR TO BID.

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04-20-2023

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2022-04653-00
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# BEAUMONT ISD AIR HANDLER UPGRADES

Beaumont ISD
Preparing Our Next Generation

NOTES

REVISIONS

| NUMBER | DESCRIPTION | DATE | CHECKER |
|---|---|---|---|

CHECKED BY: SH
DRAWN BY: AA

SHEET NAME

MECHANICAL DEMOLITION FLOOR PLAN - UNIT B - ROY GUESS

SHEET NUMBER: M1.1
REVISION:

## MECHANICAL DEMOLITION GENERAL NOTES

1. THESE CONSTRUCTION DRAWINGS ARE DIAGRAMMATIC, AND DO NOT NECESSARILY REFLECT ACTUAL DIMENSIONS. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO FIELD-VERIFY ALL DIMENSIONS AND COORDINATE PLACEMENT OF ALL EQUIPMENT AND ROUTING OF ALL PIPING AND/OR DUCT SYSTEMS.
2. ALL MECHANICAL SYSTEMS SHOWN ON THIS PLAN ARE FROM EXISTING PRELIMINARY FIELD WORK. CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFYING ALL LOCATIONS AND SIZES OF MECHANICAL SYSTEMS PRIOR TO THE START OF WORK.
3. REMOVE ALL EXISTING SPACE MOUNTED TEMPERATURE AND HUMIDITY SENSORS NOT BEING REUSED. PROVIDE STAINLESS STEEL COVER PLATES.
4. OWNER SHALL HAVE FIRST RIGHT OF REFUSAL ON ALL HVAC EQUIPMENT BEING REMOVED FROM THIS PROJECT. THIS INCLUDES BUT NOT LIMITED TO CONDENSING UNITS, AIR HANDLING UNITS, AND CONTROLS.

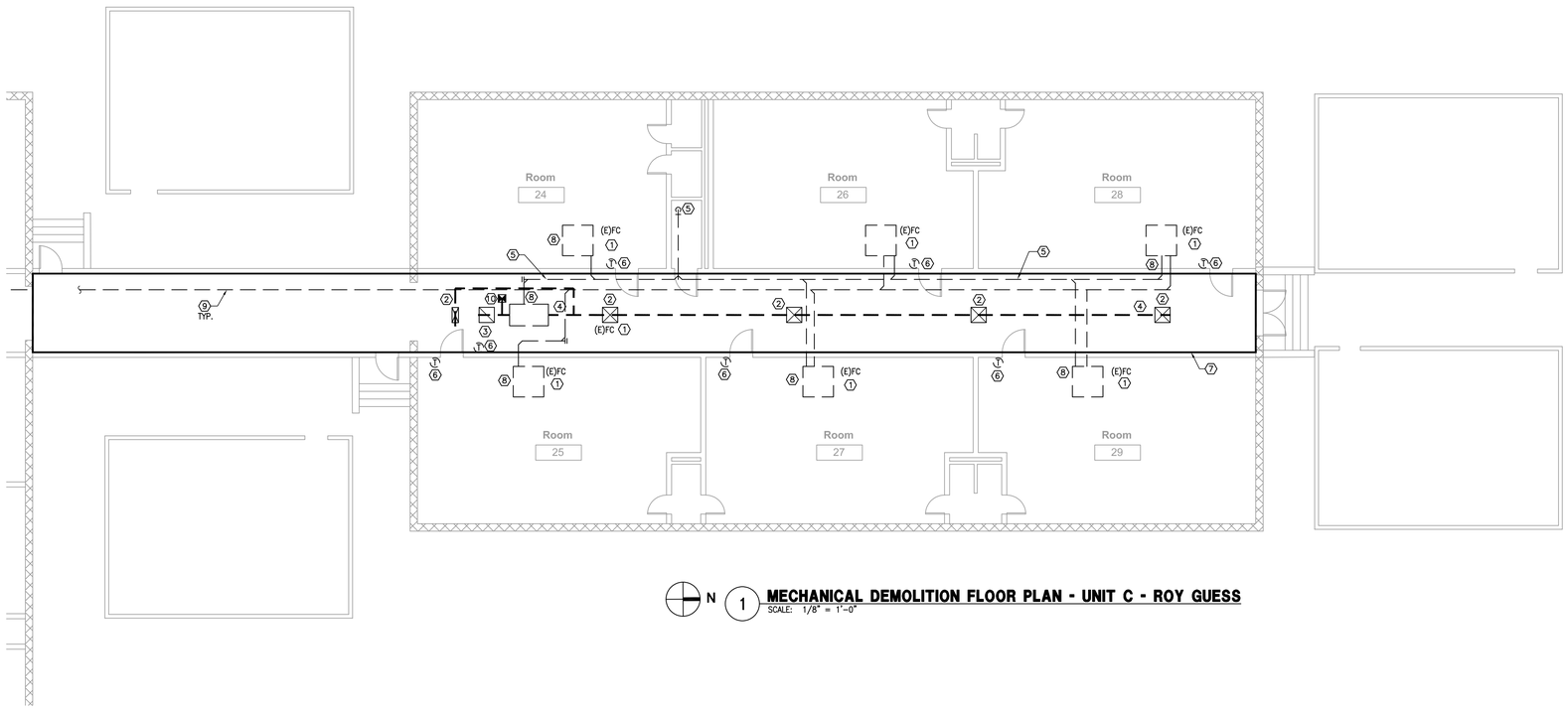
## MECHANICAL DEMOLITION KEYED NOTES

1. REMOVE EXISTING AIR HANDLING UNIT, ASSOCIATED CONTROLS, AND ALL OTHER ASSOCIATED APPURTENANCES.
2. EXISTING SUPPLY GRILLE SHALL BE REMOVED.
3. EXISTING RETURN GRILLE SHALL BE REMOVED.
4. EXISTING DUCTWORK TO REMAIN SHALL BE REMOVED.
5. EXISTING CONDENSATE PIPE SHALL BE REMOVED.
6. REMOVE EXISTING TEMPERATURE SENSOR AND ALL ASSOCIATED CONTROL WIRING. PROVIDE STAINLESS STEEL COVER PLATE.
7. REMOVE ALL EXITING CEILING TILE AND GRID WITHIN THE EXTENT OF HATCHED AREA. CONTRACTOR SHALL VERIFY EXISTING CEILING CONFIGURATION. LIGHTING LOCATIONS AND CEILING HEIGHT. EXISTING LIGHT FIXTURES SHALL BE TEMPORARILY SUSPENDED IN PLACE OR REMOVED AND STORED IN SAFE LOCATION. PROTECTION OF LIGHT FIXTURE SHALL BE THE CONTRACTOR RESPONSIBILITY AND SHALL BE RESTORED TO WORKING CONDITION UPON COMPLETION OF THE CEILING REPLACEMENT AND ABOVE CEILING WORK.
8. PATCH AND PAINT EXISTING WALL TO MATCH AT ALL PIPING PENETRATIONS THROUGH WALL.
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10. EXISTING OUTSIDE AIR INTAKE SHALL BE REMOVED REUSE EXISTING OPENING FOR NEW INTAKE RESIZE OPENING AS REQUIRED.

| DEMO SYMBOL LEGEND | |
|---|---|
| RENOVATIONS | |
| | ITEM TO REMAIN |
| | ITEM TO BE REMOVED |

BMCS NOTE:
EXISTING CONTROL SYSTEM IS BY AUTOMATED LOGIC.
REFER TO BMCS SPECIFICATION FOR MORE INFORMATION.

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N 1 **MECHANICAL DEMOLITION FLOOR PLAN - UNIT C - ROY GUESS**
SCALE: 1/8" = 1'-0"


Salas O'Brien
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# BEAUMONT ISD AIR HANDLER UPGRADES

Beaumont ISD
Preparing Our Next Generation

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SHEET NAME
MECHANICAL DEMOLITION FLOOR PLAN - UNIT C - ROY GUESS

SHEET NUMBER
M1.2

REVISION

## MECHANICAL DEMOLITION GENERAL NOTES

1. THESE CONSTRUCTION DRAWINGS ARE DIAGRAMMATIC, AND DO NOT NECESSARILY REFLECT ACTUAL DIMENSIONS. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO FIELD–VERIFY ALL DIMENSIONS AND COORDINATE PLACEMENT OF ALL EQUIPMENT AND ROUTING OF ALL PIPING AND/OR DUCT SYSTEMS.
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3. OWNER SHALL HAVE FIRST RIGHT OF REFUSAL ON ALL HVAC EQUIPMENT BEING REMOVED FROM THIS PROJECT. THIS INCLUDES BUT NOT LIMITED TO CONDENSING UNITS, AIR HANDLING UNITS, AND CONTROLS.

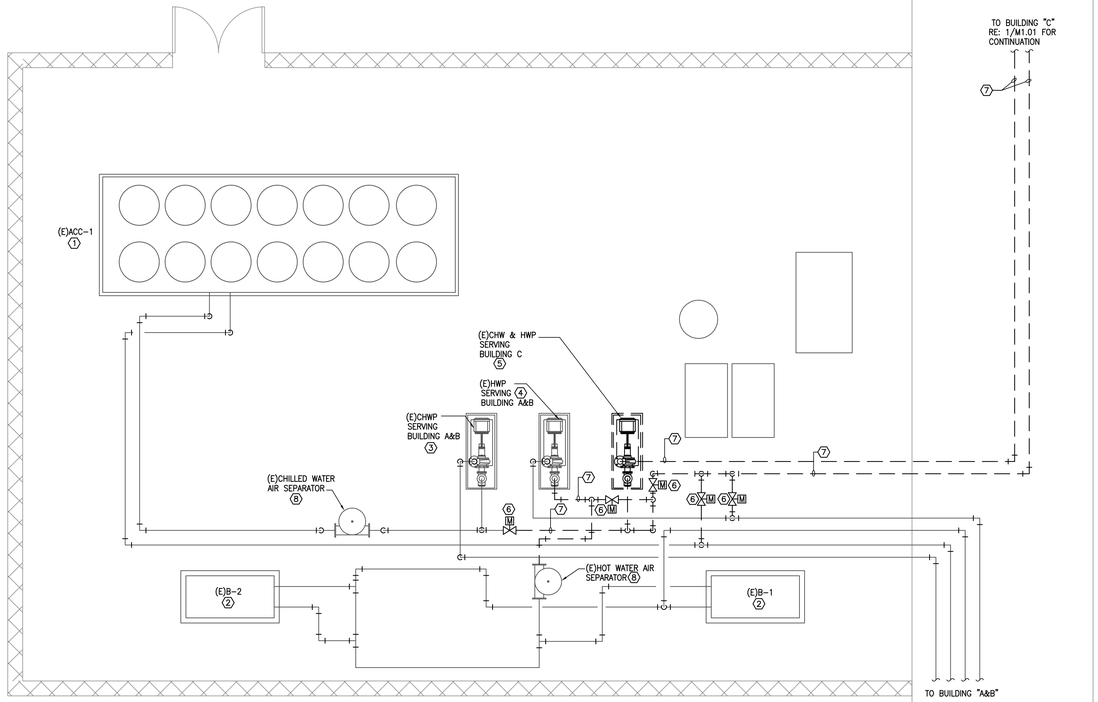
## MECHANICAL DEMOLITION KEYED NOTES

1. EXISTING AIR COOLED CHILLER SHALL REMAIN.
2. EXISTING BOILER SHALL REMAIN.
3. EXISTING CHILLED WATER PUMP SHALL REMAIN.
4. EXISTING HOT WATER PUMP SHALL REMAIN.
5. EXISTING CHILLED/HOT WATER PUMP SERVING BUILDING "C", CONCRETE PAD, CONTROLS, VALVES AND ALL ASSOCIATED APPARATUSES SHALL BE REMOVED.
6. EXISTING AUTOMATIC CONTROL VALVES SHALL BE REMOVED.
7. EXISTING HYDRONIC PIPING SHALL BE REMOVED.
8. EXISTING AIR SEPARATOR SHALL REMAIN.

## DEMO SYMBOL LEGEND

| RENOVATIONS | |
|---|---|
| | ITEM TO REMAIN |
| | ITEM TO BE REMOVED |
| | CONNECT TO EXISITNG |

THROUGHOUT CONSTRUCTION, THE CONTRACTOR IS RESPONSIBLE FOR ALL TEMPORARY AND RENTAL EQUIPMENT, INCLUDING POWER FOR SUCH EQUIPMENT, AND TO PROVIDE PHASING TO ENSURE SPACE TEMPERATURE AND HUMIDITY IS MAINTAINED. REFER TO SPECIFICATION 23 05 11 MECHANICAL ALTERATIONS PROJECT PROCEDURES, ARTICLE 3.8 FOR ADDITIONAL REQUIREMENTS. CONTRACTOR SHALL REVIEW ALL REQUIREMENTS PRIOR TO BID.




N 1 **MECHANICAL DEMOLITION ENLARGED FLOOR PLAN - CHILLER YARD - ROY GUESS**
SCALE: 1/4" = 1'-0"


Salas O'Brien
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10930 W. SAM HOUSTON PKWY NORTH SUITE 900
HOUSTON, TX 77064
Salas O'Brien Registration: F-4111
Salas O'Brien Project Number: 2022-04653-00



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# BEAUMONT ISD AIR HANDLER UPGRADES

Beaumont ISD
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NOTES

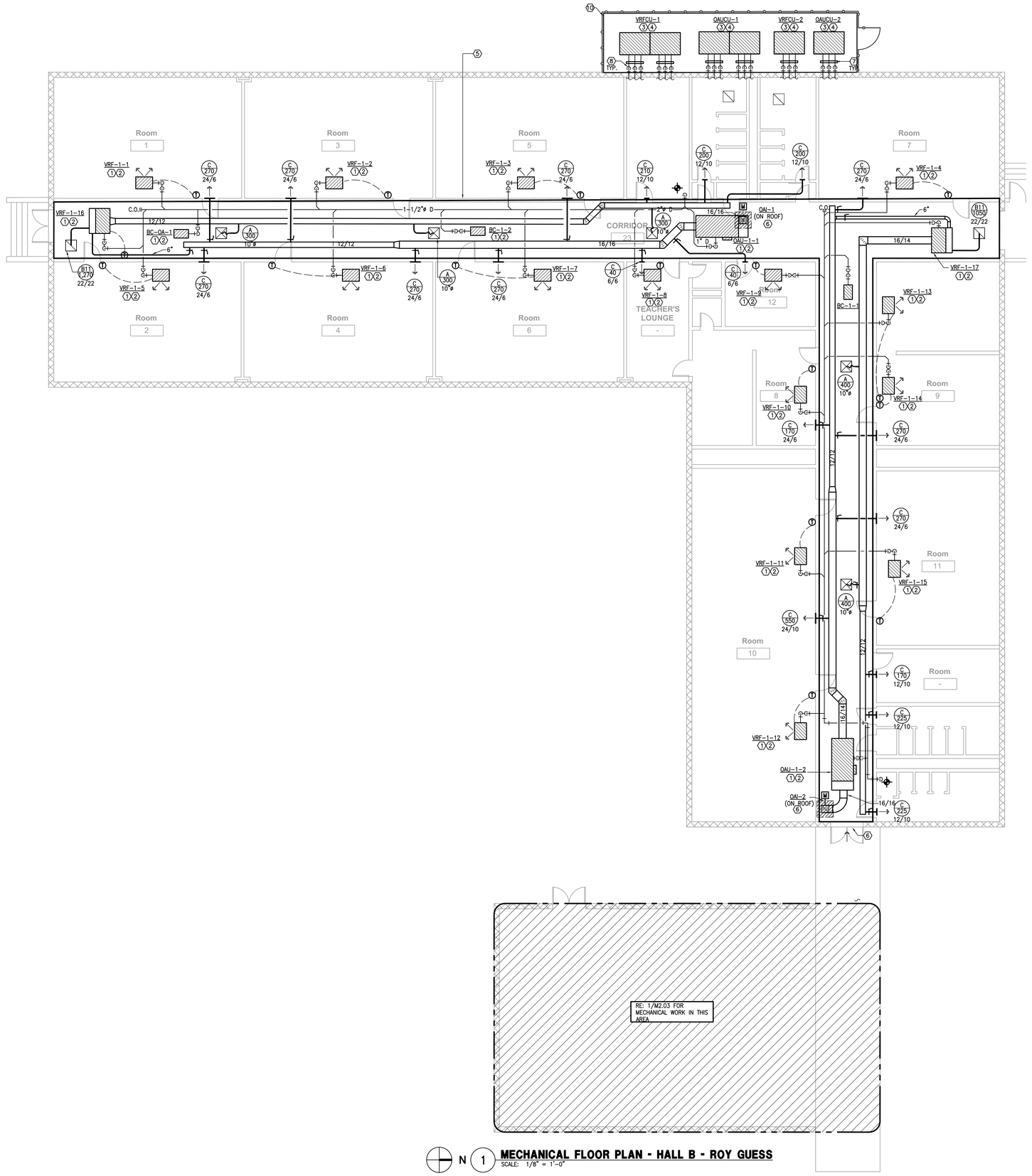
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|---|---|---|---|
| | | | |

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DRAWN BY: AA

SHEET NAME
MECHANICAL DEMOLITION ENLARGED FLOOR PLAN - CHILLER YARD - ROY GUESS

SHEET NUMBER: M1.3
REVISION:




N (1) **MECHANICAL FLOOR PLAN - HALL B - ROY GUESS**
SCALE: 1/8" = 1'-0"

## MECHANICAL GENERAL NOTES

1. COORDINATE IN THE FIELD THE EXACT LOCATION OF MECHANICAL EQUIPMENT WITH CONTRACTOR AND ALL TRADES
2. SENSORS SHALL BE MOUNTED AT +48" AFF (ABOVE FINISHED FLOOR), UNLESS OTHERWISE NOTED
3. MECHANICAL CONTRACTOR SHALL COORDINATE WITH THE ELECTRICAL CONTRACTOR FOR ALL ELECTRICAL POWER REQUIREMENTS.
4. THESE CONSTRUCTION DRAWINGS ARE DIAGRAMATIC AND DO NOT NECESSARILY REFLECT ACTUAL DIMENSIONS. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO FIELD-VERIFY ALL DIMENSIONS AND COORDINATE PLACEMENT OF ALL EQUIPMENT AND ROUTING OF ALL PIPING AND/OR HVAC SYSTEMS.
5. PROJECT SCOPE SHOWN AS A PART OF THE PROJECT ON THIS CAMPUS WILL REQUIRE IDENTICAL ARCHITECTURAL WORK. ALL SUCH WORK SHALL BE INCLUDED IN THE CONTRACTOR'S BID. THIS WORK SHALL BE PERFORMED WITHOUT ANY IMPACT TO THE CONSTRUCTION SCHEDULE AND/OR ADDITIONAL COST.
6. CONTRACTOR SHALL REMOVE AND REPLACE CEILING WHERE REQUIRED TO COMPLETE THE INDICATED SCOPE OF PROJECT SCOPE WORK. EXISTING CEILING SHALL BE RE-INSTALLED IN THE EXACT CONDITION EXISTING PRIOR TO THE BEGINNING OF CONSTRUCTION. IF A MATCH IS NOT POSSIBLE, CONTRACTOR SHALL REPLACE ALL CEILING FROM WALL TO WALL OR BOUNDARY SEPARATION IN CORRIDOR, CLASSROOM, OR ANY OTHER SPACE.
7. PRIOR TO STARTING ANY WORK AND PRIOR TO SUBSTANTIAL COMPLETION, SCHEDULE WITH THE ENGINEER AND OWNER A DEMONSTRATION AND TESTING OF THE EXISTING FIRE ALARM AND CAMERA SYSTEM. THE CONTRACTOR SHALL HAVE ALL SUBCONTRACTORS WORKING ON THE PROJECT BE PRESENT FOR THESE TESTS AND DEMONSTRATIONS.

## MECHANICAL KEYED NOTES

1. VERIFY SERVICE CLEARANCE WITH EQUIPMENT MANUFACTURER, COORDINATE WITH ALL TRADES NOT TO OBSTRUCT.
2. ROUTE REFRIGERANT LINES TO ASSOCIATED AIR-COOLED CONDENSING UNIT. SIZE LINES PER MANUFACTURER'S RECOMMENDATION.
3. MOUNT AIR-COOLED CONDENSING UNIT ON 4" THICK HOUSE KEEPING CONCRETE PAD.
4. AIR-COOLED CONDENSING UNIT SHALL MAINTAIN 3'-0" OF UNOBSTRUCTED CLEARANCE ON ALL SIDES FOR SERVICING AND AIR FLOW.
5. INSTALL NEW CEILING GRID AND TILE THROUGHOUT THIS SPACE. THE NEW CEILING SHALL BE INSTALLED TO MATCH THE EXISTING GRID CONFIGURATION AND CEILING HEIGHT. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION FOR CEILING REPLACEMENT.
6. ROUTE 16/16 OUTSIDE AIR DUCT TO AIR INTAKE IN ROOF. REUSE EXISTING ROOF PENETRATION RESIZE AS REQUIRED. TRANSITION AS REQUIRED.
7. ROUTE REFRIGERANT PIPING ON PHP PIPE SUPPORT MODEL PP10. SPACE THEM AS PER SPECIFICATION.
8. ROUTE REFRIGERANT PIPE UP IN WALL. PROVIDE GALVANIZED PIPING COVER AND PAINT TO MATCH EXTERIOR WALL.
9. ROUTE CONDENSATE PIPE AT SIZE INDICATED AND TIE INTO EXISTING DRAIN SYSTEM.
10. PROVIDE FULL CONCRETE SLAB FOR VRF CONDENSING YARD AS SHOWN WITH A 6'-0 HIGH CHAIN LINK FENCE AND 4'0" WIDE GATE. A MINIMUM OF 3'-6" CLEARANCE SHALL BE MAINTAINED FROM CONDENSING UNIT TO FENCE ON ALL SIDES.

THROUGHOUT CONSTRUCTION, THE CONTRACTOR IS RESPONSIBLE FOR ALL TEMPORARY AND RENTAL EQUIPMENT, INCLUDING POWER FOR SUCH EQUIPMENT, AND TO PROVIDE PHASING TO ENSURE SPACE TEMPERATURE AND HUMIDITY IS MAINTAINED. REFER TO SPECIFICATION 23 05 11 MECHANICAL ALTERATIONS PROJECT PROCEDURES, ARTICLE 3.8 FOR ADDITIONAL REQUIREMENTS. CONTRACTOR SHALL REVIEW ALL REQUIREMENTS PRIOR TO BID.

BMCS NOTE:
EXISTING CONTROL SYSTEM IS BY AUTOMATED LOGIC. REFER TO BMCS SPECIFICATION FOR MORE INFORMATION.

NOTE:
ALL ROOFING WORK SHALL BE DONE BY APPROVED ROOFING PROVIDER. CONTACT TIM MARSH WITH MARSH WATERPROOFING @ 409-769-0459 FOR PRICING.

Salas O'Brien
HOUSTON
10930 W. SAM HOUSTON PKWY NORTH SUITE 900
HOUSTON, TX 77064
Salas O'Brien Registration: F-4111
Salas O'Brien Project Number: 2022-04653-00

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PROFESSIONAL SEAL

BRADLEY KAUMAS
LICENSED PROFESSIONAL ENGINEER
80219
LICENSED
STATE OF TEXAS
04-20-2023

| ISSUE DATE | DESCRIPTION |
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| 04-11-2023 | 100% |

2022-04653-00
Owner

# BEAUMONT ISD AIR HANDLER UPGRADES

Beaumont ISD
Preparing Our Next Generation

NOTES

REVISIONS

| NUMBER | DESCRIPTION | DATE | CHECKER |
|---|---|---|---|
| | | | |

CHECKED BY | DRAWN BY

SHEET NAME

MECHANICAL FLOOR PLAN - HALL B - ROY GUESS

SHEET NUMBER: M2.1
REVISION:

## MECHANICAL GENERAL NOTES

1. COORDINATE IN THE FIELD THE EXACT LOCATION OF MECHANICAL EQUIPMENT WITH CONTRACTOR AND ALL TRADES
2. SENSORS SHALL BE MOUNTED AT +48" AFF (ABOVE FINISHED FLOOR). UNLESS OTHERWISE NOTED
3. MECHANICAL CONTRACTOR SHALL COORDINATE WITH THE ELECTRICAL CONTRACTOR FOR ALL ELECTRICAL POWER REQUIREMENTS.
4. THESE CONSTRUCTION DRAWINGS ARE DIAGRAMATIC AND DO NOT NECESSARILY REFLECT ACTUAL DIMENSIONS. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO FIELD-VERIFY ALL DIMENSIONS AND COORDINATE PLACEMENT OF ALL EQUIPMENT AND ROUTING OF ALL PIPING AND/OR HVAC SYSTEMS.
5. PROJECT SCOPE SHOWN AS A PART OF THE PROJECT ON THIS CAMPUS WILL REQUIRE IDENTICAL ARCHITECTURAL WORK. ALL SUCH WORK SHALL BE INCLUDED IN THE CONTRACTOR'S BID. THIS WORK SHALL BE PERFORMED WITHOUT ANY IMPACT TO THE CONSTRUCTION SCHEDULE AND/OR ADDITIONAL COST.
6. CONTRACTOR SHALL REMOVE AND REPLACE CEILING WHERE REQUIRED TO COMPLETE THE INDICATED SCOPE OF PROJECT SCOPE WORK. EXISTING CEILING SHALL BE RE-INSTALLED IN THE EXACT CONDITION EXISTING PRIOR TO THE BEGINNING OF CONSTRUCTION. IF A MATCH IS NOT POSSIBLE, CONTRACTOR SHALL REPLACE ALL CEILING FROM WALL TO WALL OR BOUNDARY SEPARATION IN CORRIDOR, CLASSROOM, OR ANY OTHER SPACE.
7. PRIOR TO STARTING ANY WORK AND PRIOR TO SUBSTANTIAL COMPLETION, SCHEDULE WITH THE ENGINEER AND OWNER A DEMONSTRATION AND TESTING OF THE EXISTING FIRE ALARM AND CAMERA SYSTEM. THE CONTRACTOR SHALL HAVE ALL SUBCONTRACTORS WORKING ON THE PROJECT BE PRESENT FOR THESE TESTS AND DEMONSTRATIONS.

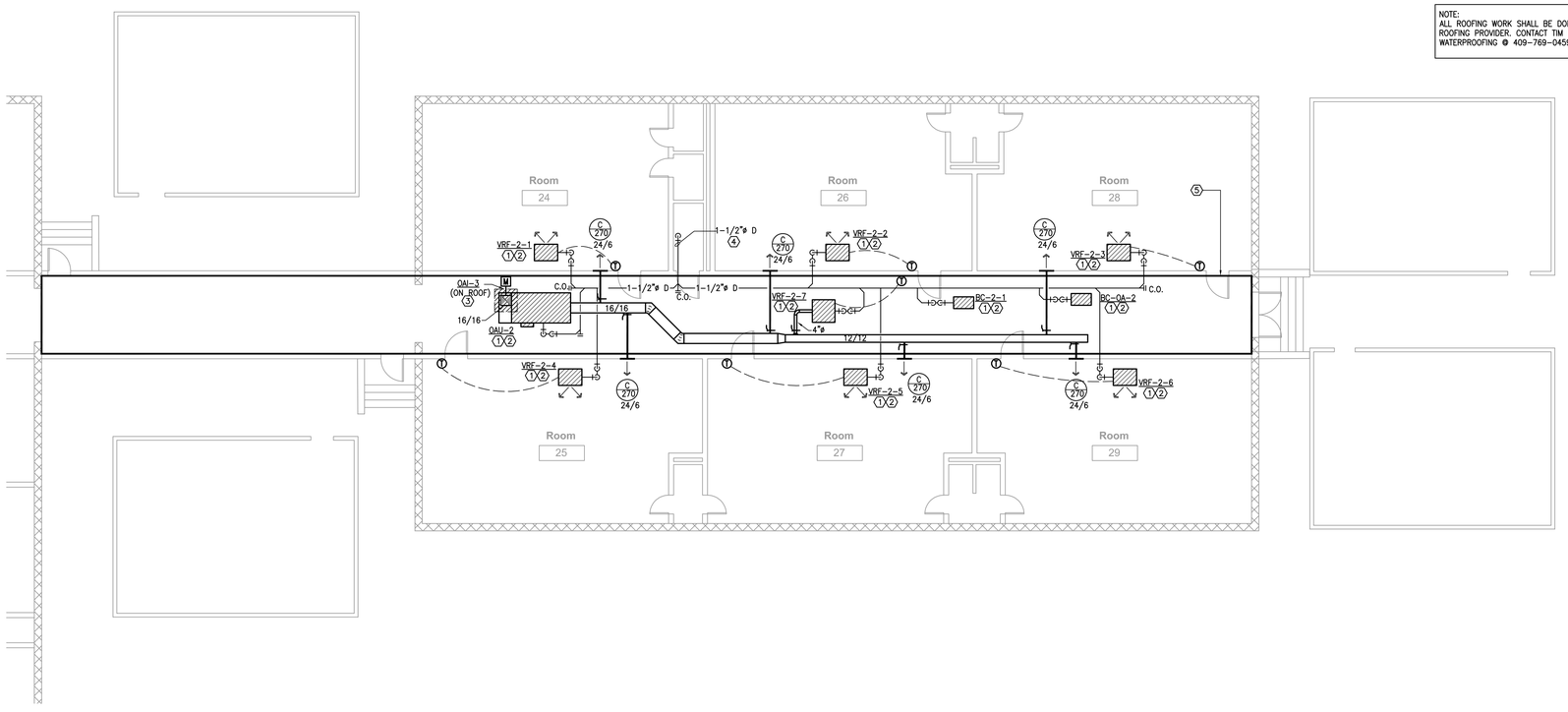
## MECHANICAL KEYED NOTES

1. VERIFY SERVICE CLEARANCE WITH EQUIPMENT MANUFACTURER, COORDINATE WITH ALL TRADES NOT TO OBSTRUCT.
2. ROUTE REFRIGERANT LINES TO ASSOCIATED AIR-COOLED CONDENSING UNIT. SIZE LINES PER MANUFACTURER'S RECOMMENDATION.
3. ROUTE 16/16 OUTSIDE AIR DUCT TO AIR INTAKE IN ROOF. REUSE EXISTING ROOF PENETRATION RESIZE AS REQUIRED. TRANSITION AS REQUIRED.
4. FIELD VERIFY EXISTING CONDENSATE PIPE IS CLEAR OF DEBRIS. ROUTE CONDENSATE PIPE AT SIZE INDICATED TO EXISTING CONDENSATE DRAIN PIPE.
5. INSTALL NEW CEILING GRID AND TILE THROUGHOUT THIS SPACE. THE NEW CEILING SHALL BE INSTALLED TO MATCH THE EXISTING GRID CONFIGURATION AND CEILING HEIGHT. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION FOR CEILING REPLACEMENT.

BMCS NOTE:
EXISTING CONTROL SYSTEM IS BY AUTOMATED LOGIC.
REFER TO BMCS SPECIFICATION FOR MORE INFORMATION.

THROUGHOUT CONSTRUCTION, THE CONTRACTOR IS RESPONSIBLE FOR ALL TEMPORARY AND RENTAL EQUIPMENT, INCLUDING POWER FOR SUCH EQUIPMENT, AND TO PROVIDE PHASING TO ENSURE SPACE TEMPERATURE AND HUMIDITY IS MAINTAINED. REFER TO SPECIFICATION 23 05 11 MECHANICAL ALTERATIONS PROJECT PROCEDURES, ARTICLE 3.8 FOR ADDITIONAL REQUIREMENTS. CONTRACTOR SHALL REVIEW ALL REQUIREMENTS PRIOR TO BID.

NOTE:
ALL ROOFING WORK SHALL BE DONE BY APPROVED ROOFING PROVIDER. CONTACT TIM MARSH WITH MARSH WATERPROOFING @ 409-769-0459 FOR PRICING.




N 1 **MECHANICAL FLOOR PLAN - HALL C - ROY GUESS**
SCALE: 1/8" = 1'-0"


Salas O'Brien
HOUSTON
10930 W. SAM HOUSTON PKWY NORTH SUITE 900
HOUSTON, TX 77064
Salas O'Brien Registration: F-4111
Salas O'Brien Project Number: 2022-04653-00



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PROFESSIONAL SEAL

BRADLEY KAMMAS
80219
LICENSED
PROFESSIONAL ENGINEER
04-20-2023

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2022-04653-00
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# BEAUMONT ISD AIR HANDLER UPGRADES

Beaumont ISD
Preparing Our Next Generation

NOTES

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| | | | |

CHECKED BY: SH
DRAWN BY: AA

SHEET NAME

MECHANICAL FLOOR PLAN - HALL C - ROY GUESS

SHEET NUMBER: M2.2
REVISION:

## MECHANICAL GENERAL NOTES

1. THESE CONSTRUCTION DRAWINGS ARE DIAGRAMMATIC, AND DO NOT NECESSARILY REFLECT ACTUAL DIMENSIONS. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO FIELD-VERIFY ALL DIMENSIONS AND COORDINATE PLACEMENT OF ALL EQUIPMENT AND ROUTING OF ALL PIPING AND/OR DUCT SYSTEMS.
2. ALL MECHANICAL SYSTEMS SHOWN ON THIS PLAN ARE FROM EXISTING PRELIMINARY FIELD WORK. CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFYING ALL LOCATIONS AND SIZES OF MECHANICAL SYSTEMS PRIOR TO THE START OF WORK.

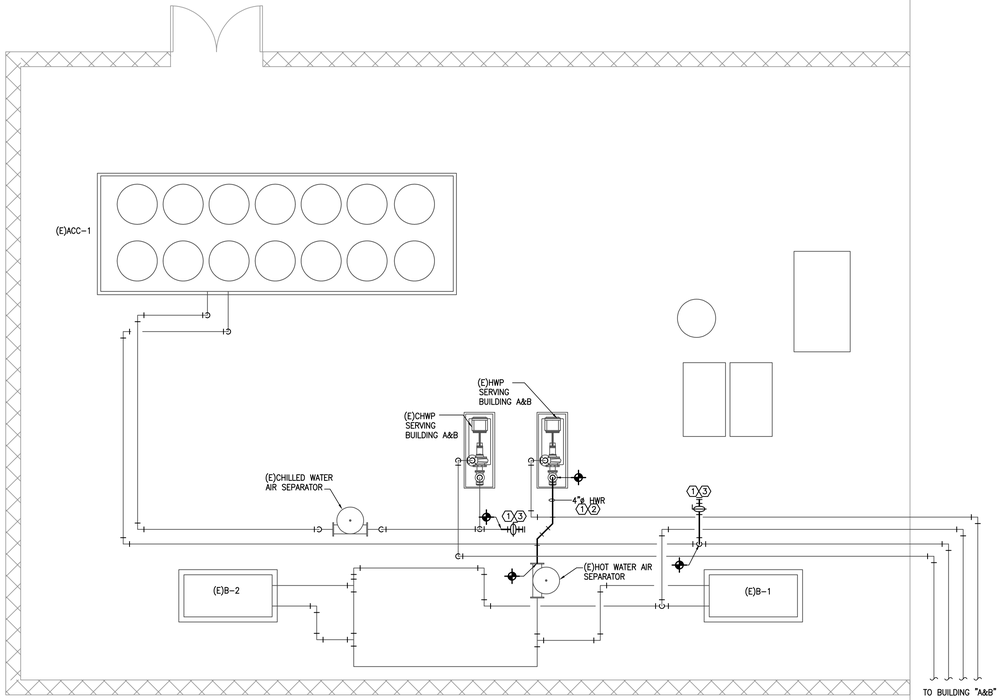
## MECHANICAL KEYED NOTES

(1) PROVIDE OUTDOOR PIPING INSULATION AS SPECIFIED.

(2) PROVIDE NEW HOT WATER PIPING AS SPECIFIED AND CONNECT TO EXISTING PIPING. .

(3) PROVIDE 6" VALVE AND FLANGE FOR TEMPORARY CHILLER CONNECTION.

THROUGHOUT CONSTRUCTION, THE CONTRACTOR IS RESPONSIBLE FOR ALL TEMPORARY AND RENTAL EQUIPMENT, INCLUDING POWER FOR SUCH EQUIPMENT, AND TO PROVIDE PHASING TO ENSURE SPACE TEMPERATURE AND HUMIDITY IS MAINTAINED. REFER TO SPECIFICATION 23 05 11 MECHANICAL ALTERATIONS PROJECT PROCEDURES, ARTICLE 3.8 FOR ADDITIONAL REQUIREMENTS. CONTRACTOR SHALL REVIEW ALL REQUIREMENTS PRIOR TO BID.




N

1 **MECHANICAL ENLARGED FLOOR PLAN - CHILLER YARD - ROY GUESS**
SCALE: 1/4" = 1'-0"


Salas O'Brien
HOUSTON
10930 W. SAM HOUSTON PKWY NORTH SUITE 900
HOUSTON, TX 77064
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# BEAUMONT ISD AIR HANDLER UPGRADES

Beaumont ISD
Preparing Our Next Generation

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CHECKED BY: SH

DRAWN BY: AA

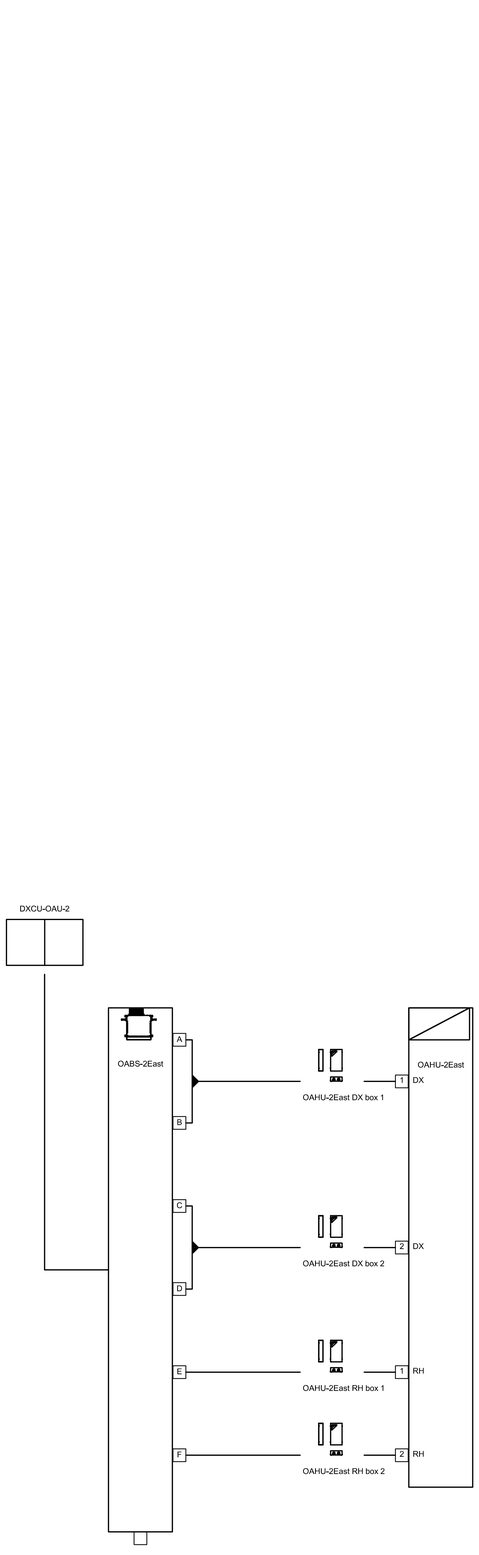
SHEET NAME

MECHANICAL ENLARGED FLOOR PLAN - CHILLER YARD - ROY GUESS

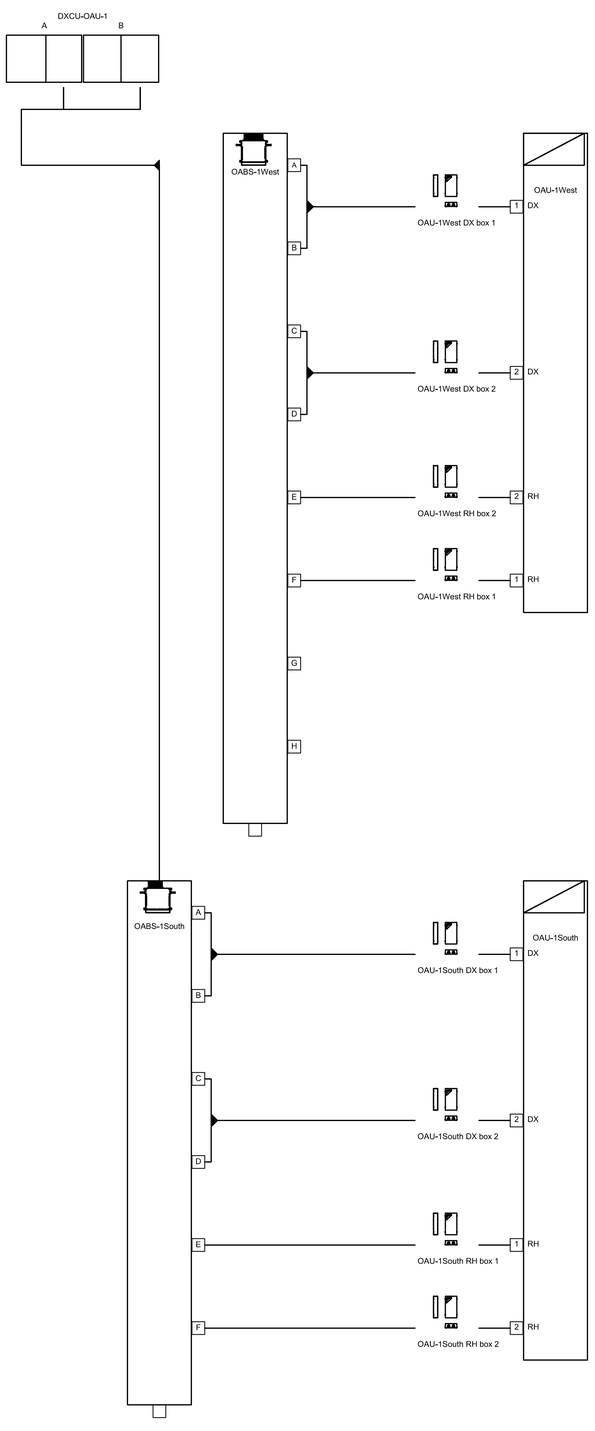
SHEET NUMBER: M2.3

REVISION:

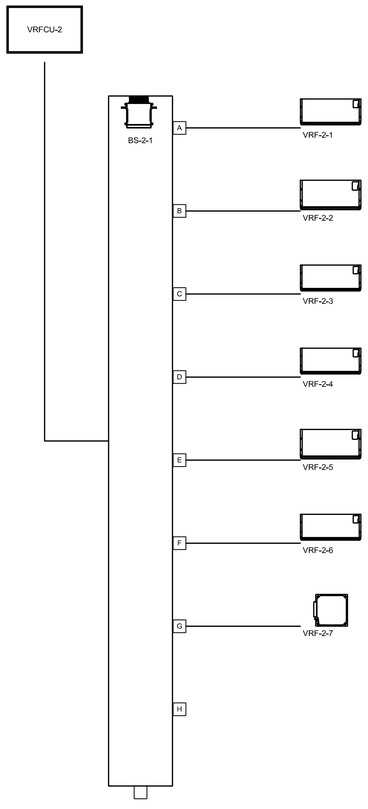
THESE SCHEMATICS ARE FOR INFORMATION PURPOSES ONLY. REFER TO MANUFACTURER FOR FINAL PIPE SIZES, LENGTH AND LAYOUT.



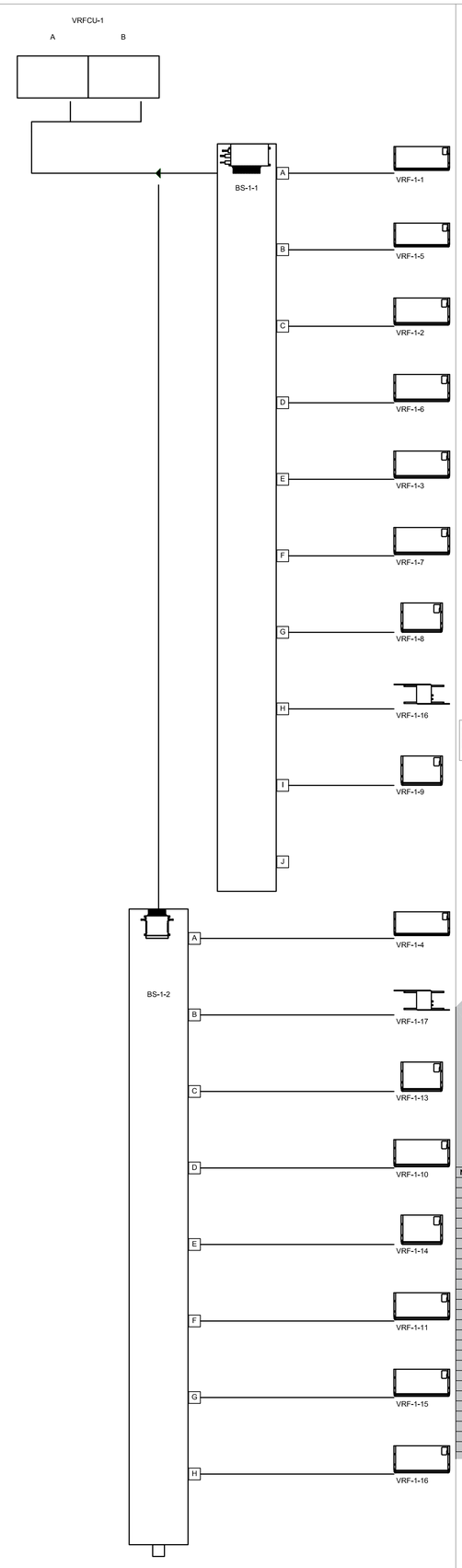

4 **MECHANICALVRF PIPING DIAGRAM - OAU-2**
SCALE: NONE




3 **MECHANICALVRF PIPING DIAGRAM - OAU-1**
SCALE: NONE




2 **MECHANICALVRF PIPING DIAGRAM - VRF-2**
SCALE: NONE




1 **MECHANICALVRF PIPING DIAGRAM - VRF-1**
SCALE: NONE


Salas O'Brien
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# BEAUMONT ISD AIR HANDLER UPGRADES

Beaumont ISD
Preparing Our Next Generation

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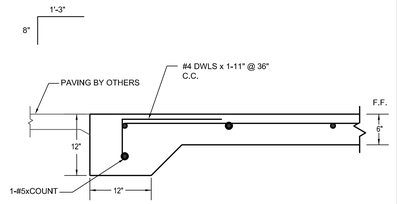
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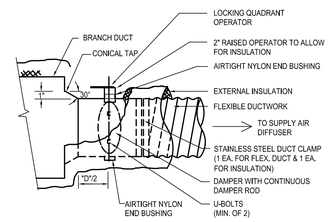
MECHANICAL VRF PIPING DIAGRAMS - ROY GUESS

SHEET NUMBER: M3.1

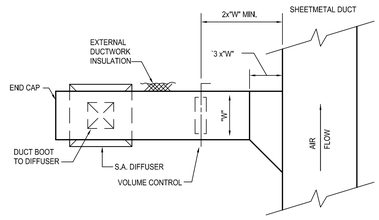
REVISION:



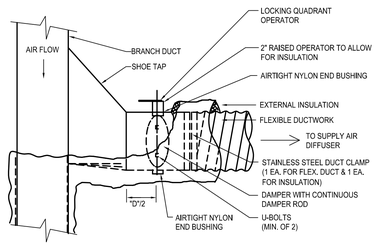

8 **CONCRETE FOOTING**
SCALE: NONE D013



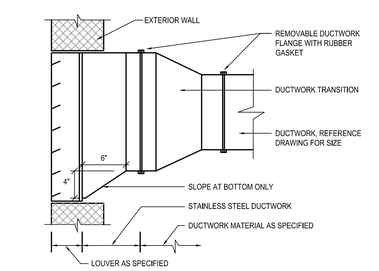

4 **FLEXIBLE DUCT TAP - CONICAL**
SCALE: NONE D009



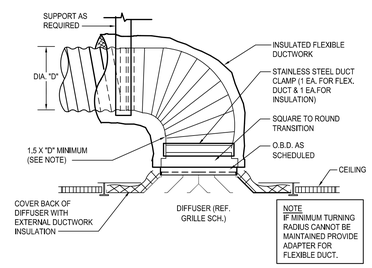

7 **RIGID DUCT TAP TO SINGLE SUPPLY AIR DIFFUSER**
SCALE: NONE D007



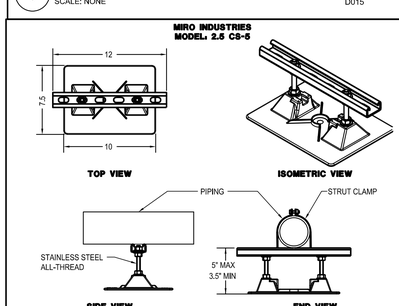

3 **FLEXIBLE DUCT TAP - SHOE**
SCALE: NONE D010



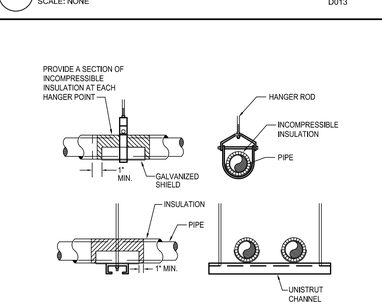

6 **DUCTWORK AT LOUVER**
SCALE: NONE D015




2 **FLEX DUCT CONNECTION AT SUPPLY AIR DIFFUSER**
SCALE: NONE D013

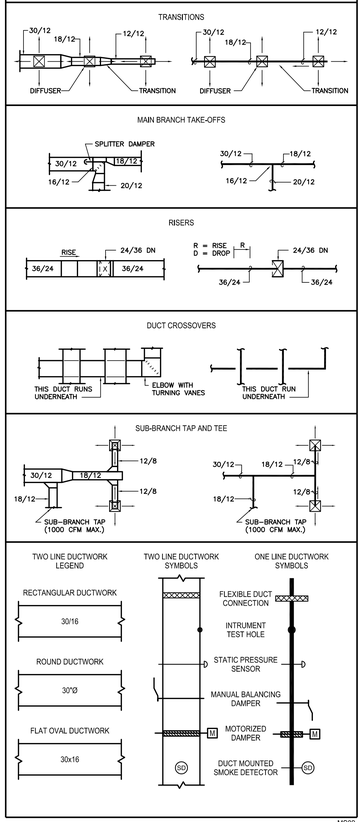



5 **PIPING SUPPORT DETAIL**
SCALE: NONE PS002



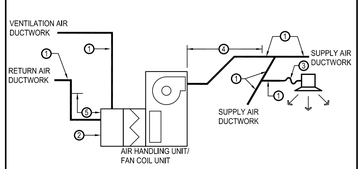

1 **PIPE HANGERS**
SCALE: NONE PS002

## DUCTWORK SYMBOLS LEGEND

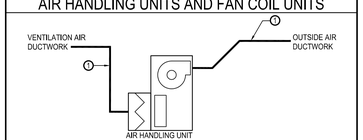



MS02

## DUCT LINER AND INSULATION




AIR HANDLING UNITS AND FAN COIL UNITS




OUTSIDE AIR PRETREATMENT UNIT

NOTES

1. SHEETMETAL DUCTWORK WITH EXTERNAL DUCTWORK INSULATION AS SPECIFIED.
2. SHEETMETAL DUCTWORK RETURN AIR PLENUM WITH EXTERNAL DUCTWORK INSULATION AS SPECIFIED.
3. FLEXIBLE DUCTWORK WITH EXTERNAL DUCTWORK INSULATION AS SPECIFIED.
4. SHEETMETAL DUCTWORK WITH EXTERNAL DUCTWORK INSULATION AS SPECIFIED AND 1" THICK 1-1/2 LB LINER AS SPECIFIED FROM AIR HANDLING UNIT DISCHARGE TO 10'-0" DOWNSTREAM.
5. SHEETMETAL DUCTWORK WITH EXTERNAL DUCTWORK INSULATION AS SPECIFIED AND 1" THICK 1-1/2 LB LINER AS SPECIFIED FROM AIR HANDLING UNIT INLET TO 10'-0" UPSTREAM.
6. EXHAUST DUCTWORK AS SPECIFIED WITH FIREBOARD INSULATION AS SPECIFIED.
7. SHEETMETAL DUCTWORK ONLY. NO INSULATION REQUIRED.

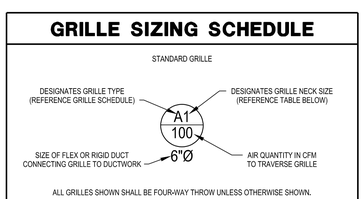
MS04

## SYMBOL LEGEND

| SYMBOL | DESCRIPTION (DISREGARD ITEMS NOT SHOWN ON PLANS) |
|---|---|
| **GENERAL** | |
| (#) | KEY NOTE TAG |
| (#) | NOTE SPECIFIC TO DETAIL TAG |
| | REVISION TAG |
| | NEW EQUIPMENT |
| **DUCTWORK** | |
| | SUPPLY AIR DUCTWORK |
| | RETURN AIR AND OUTSIDE AIR DUCTWORK |
| | EXHAUST AIR DUCTWORK |
| | FLEXIBLE DUCTWORK |
| | SUPPLY AIR DUCTWORK THROUGH HORIZONTAL PARTITION |
| | RETURN AIR AND OUTSIDE AIR DUCTWORK THROUGH HORIZONTAL PARTITION |
| | EXHAUST AIR DUCTWORK THROUGH HORIZONTAL PARTITION |
| | FIRE DAMPER (VERTICAL) |
| | FIRE DAMPER (HORIZONTAL) |
| | SMOKE DAMPER (VERTICAL) |
| | SMOKE DAMPER (HORIZONTAL) |
| | COMBINATION FIRE & SMOKE DAMPER (VERTICAL) |
| | COMBINATION FIRE & SMOKE DAMPER (HORIZONTAL) |
| | MANUAL BALANCING DAMPER (SEE DAMPER SCHEDULE) |
| | MOTORIZED DAMPER (SEE DAMPER SCHEDULE) |
| **SENSORS** | |
| T | THERMOSTAT AND TEMPERATURE SENSOR |
| H | HUMIDISTAT |
| SD | SMOKE DETECTOR |
| HD | HEAT DETECTOR |
| **AIR DEVICES** | |
| | GRILLE SIZE TAG (REFER TO GRILLE SIZE LEGEND) |
| | SUPPLY AIR GRILLE WITH FOUR-WAY THROW |
| | SUPPLY AIR GRILLE WITH THREE-WAY THROW |
| | SUPPLY AIR GRILLE WITH TWO-WAY THROW |
| | SUPPLY AIR GRILLE WITH TWO-WAY CORNER THROW |
| | SUPPLY AIR GRILLE WITH ONE-WAY THROW |
| | RETURN AIR GRILLE |
| | RETURN AIR GRILLE WITH SOUND BOOT |
| | EXHAUST AIR GRILLE |
| | SUPPLY AIR SIDEWALL GRILLE |
| | RETURN AIR SIDEWALL GRILLE |
| 20X12 | RETURN AIR OPENING ABOVE CEILING |
| **SUBSCRIPTS AND ABREVIATIONS** | |
| AFF | ABOVE FINISHED FLOOR |
| BBS | BELOW BOTTOM OF STRUCTURE |
| BOD | BOTTOM OF DUCT |
| BOP | BOTTOM OF PIPE |
| CA | COMBUSTION AIR |
| CFM | CUBIC FEET PER MINUTE |
| EA | EXHAUST AIR |
| FPM | FEET PER MINUTE |
| NC | NORMALLY CLOSED |
| NO | NORMALLY OPEN |
| OA | OUTSIDE AIR |
| RA | RETURN AIR |
| SA | SUPPLY AIR |
| **RENOVATIONS** | |
| | POINT OF CONNECTION FROM NEW TO EXISTING |
| | ITEM TO REMAIN |
| | ITEM TO BE REMOVED |

MS03

## GRILLE SIZING SCHEDULE




| GRILLE SIZE DESIGNATION | GRILLE NECK SIZE | GRILLE SIZE DESIGNATION | GRILLE NECK SIZE |
|---|---|---|---|
| 1 | 6" x 6" | 7 | 15" x 15" |
| 2 | 8" x 8" | 8 | 16" x 16" |
| 3 | 9" x 9" | 9 | 18" x 18" |
| 4 | 10" x 10" | 10 | 20" x 20" |
| 5 | 12" x 12" | 11 | 22" x 22" |
| 6 | 14" x 14" | 12 | 24" x 24" |

MS01


Salas O'Brien
HOUSTON
10930 W. SAM HOUSTON PKWY NORTH SUITE 900
HOUSTON, TX 77064
Salas O'Brien Registration: F-4111
Salas O'Brien Project Number: 2022-04653-00



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PROFESSIONAL SEAL

BRADLEY KAUMANS
60219
LICENSED
PROFESSIONAL ENGINEER
04-20-2023

| ISSUE DATE | DESCRIPTION |
|---|---|
| 04-11-2023 | 100% |

2022-04653-00
Owner

# BEAUMONT ISD AIR HANDLER UPGRADES

Beaumont ISD
Preparing Our Next Generation

NOTES

REVISIONS

| NUMBER | DESCRIPTION | DATE | CHECKER |
|---|---|---|---|
| | | | |

CHECKED BY: SH
DRAWN BY: AA

SHEET NAME

MECHANICAL SCHEDULES AND DETAILS - ROY GUESS

SHEET NUMBER: M4.1
REVISION

## O.A. INTAKE

| MARK | CFM | MAX. S.P. (IN.) | THROAT AREA (SQ. FT.) | COOK MODEL NO. | SERVES | REMARKS |
|---|---|---|---|---|---|---|
| OAI-1 | 1,800 | 0.044 | 4.5 | GI | OAU-1-1 | 1,2 |
| OAI-2 | 1,605 | 0.044 | 4.5 | GI | OAU-1-2 | 1,2 |
| OAI-3 | 1,650 | 0.044 | 4.5 | GI | OAU-2-1 | 1,2 |

REMARKS:
1. PROVIDE WITH ROOF CURB.
2. PROVIDE WITH BIRD SCREEN.

## VRF BRANCH SELECTOR ROY GUESS

| MARK | CURRENT CHARACTERISTIC | MCA / MOCP AMP | DIMENSION (WXHXL) INCH | WEIGHT (LBS) | REMARKS |
|---|---|---|---|---|---|
| BC-1-1 | 208/1/60 | 1.0 / 15 | 32.3X11.7X18.9 | 101.4 | 1,2,3 |
| BC-1-2 | 208/1/60 | 0.8 / 15 | 23.3X9.5X23.7 | 81.6 | 1,2,3 |
| BC-2-1 | 208/1/60 | 0.8 / 15 | 23.3X9.5X23.7 | 81.6 | 1,2,3 |
| BC-OA-1 | 208/1/60 | 0.8 / 15 | 23.3X9.5X23.7 | 81.6 | 1,2,3 |
| BC-OA-2 | 208/1/60 | 0.6 / 15 | 23.3X9.5X23.7 | 72.8 | 1,2,3 |
| BC-OA-3 | 208/1/60 | 0.6 / 15 | 23.3X9.5X23.7 | 72.8 | 1,2,3 |
| | | | | | |

REMARKS:
1. BRANCH SELECTOR MODULES ARE TYPICAL. SEE DRAWINGS AND PIPING SCHEMATICS FOR QUANTITY AND LOCATION.
2. CONTRACTOR TO INSTALL 'FULL PORT' ISOLATION VALVES AND SCHRADER VALVE UPSTEAM OF EACH BRANCH SELECTOR BOX.
3. BRANCH SELECTORS SHALL HAVE BRAZED CONNECTORS.

## VRF FAN/COIL UNIT - ROY GUESS

| MARK | FAN | | | | COOLING | | | | HEATING | | MCA | MOP | ASSOC. CONDENSING UNIT | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | SUPPLY AIR CFM | OUTSIDE AIR CFM | EXT. STATIC PRESSURE (IN. W.C.) | CURRENT CHARAC. | AIR TEMPERATURE (°F) ENTERING DRY BULB | AIR TEMPERATURE (°F) ENTERING WET BULB | MIN. TOTAL CAPACITY (BTUH) | MIN. SENSIBLE CAPACITY (BTUH) | ENTERING AIR TEMP. (°F) | MINIMUM CAPACITY (BTUH) | | | | |
| VRF-1-1 | 830 | 0 | 0.2 | 208/1/60 | 75.0 | 62.5 | 30,931 | 21,670 | 70.0 | 39,990 | 1.4 | 15.0 | VRFCU-1 | 1,2,3,4,5,8 |
| VRF-1-2 | 710 | 0 | 0.2 | 208/1/60 | 75.0 | 62.5 | 20,632 | 15,029 | 70.0 | 26,990 | 1.0 | 15.0 | VRFCU-1 | 1,2,3,4,5,8 |
| VRF-1-3 | 710 | 0 | 0.2 | 208/1/60 | 75.0 | 62.5 | 20,632 | 15,029 | 70.0 | 26,990 | 1.0 | 15.0 | VRFCU-1 | 1,2,3,4,5,8 |
| VRF-1-4 | 830 | 0 | 0.2 | 208/1/60 | 75.0 | 62.5 | 30,931 | 21,670 | 70.0 | 39,990 | 1.4 | 15.0 | VRFCU-1 | 1,2,3,4,5,8 |
| VRF-1-5 | 830 | 0 | 0.2 | 208/1/60 | 75.0 | 62.5 | 30,931 | 21,670 | 70.0 | 39,990 | 1.4 | 15.0 | VRFCU-1 | 1,2,3,4,5,8 |
| VRF-1-6 | 710 | 0 | 0.2 | 208/1/60 | 75.0 | 62.5 | 20,632 | 15,029 | 70.0 | 26,990 | 1.0 | 15.0 | VRFCU-1 | 1,2,3,4,5,8 |
| VRF-1-7 | 710 | 0 | 0.2 | 208/1/60 | 75.0 | 62.5 | 20,632 | 15,029 | 70.0 | 26,990 | 1.0 | 15.0 | VRFCU-1 | 1,2,3,4,5,8 |
| VRF-1-8 | 410 | 0 | 0.2 | 208/1/60 | 75.0 | 62.5 | 10,299 | 8,043 | 70.0 | 13,499 | 0.8 | 15.0 | VRFCU-1 | 1,2,3,4,5,8 |
| VRF-1-9 | 300 | 0 | 0.2 | 208/1/60 | 75.0 | 62.5 | 5,004 | 4,265 | 70.0 | 6,480 | 0.3 | 15.0 | VRFCU-1 | 1,2,3,4,5,8 |
| VRF-1-10 | 710 | 0 | 0.2 | 208/1/60 | 75.0 | 62.5 | 20,632 | 15,029 | 70.0 | 26,990 | 1.0 | 15.0 | VRFCU-1 | 1,2,3,4,5,8 |
| VRF-1-11 | 710 | 0 | 0.2 | 208/1/60 | 75.0 | 62.5 | 20,632 | 15,029 | 70.0 | 26,990 | 1.0 | 15.0 | VRFCU-1 | 1,2,3,4,5,8 |
| VRF-1-12 | 710 | 0 | 0.2 | 208/1/60 | 75.0 | 62.5 | 20,632 | 15,029 | 70.0 | 26,990 | 1.0 | 15.0 | VRFCU-1 | 1,2,3,4,5,8 |
| VRF-1-13 | 410 | 0 | 0.2 | 208/1/60 | 75.0 | 62.5 | 10,299 | 8,043 | 70.0 | 13,499 | 0.8 | 15.0 | VRFCU-1 | 1,2,3,4,5,8 |
| VRF-1-14 | 410 | 0 | 0.2 | 208/1/60 | 75.0 | 62.5 | 10,299 | 8,043 | 70.0 | 13,499 | 0.8 | 15.0 | VRFCU-1 | 1,2,3,4,5,8 |
| VRF-1-15 | 710 | 0 | 0.2 | 208/1/60 | 75.0 | 62.5 | 20,632 | 15,029 | 70.0 | 26,990 | 1.0 | 15.0 | VRFCU-1 | 1,2,3,4,5,8 |
| VRF-1-16 | 1,370 | 100 | 0.5 | 208/1/60 | 75.0 | 62.5 | 41,280 | 30,450 | 70.0 | 54,000 | 3.4 | 15.0 | VRFCU-1 | 1,2,3,4,6,8 |
| VRF-1-17 | 1,130 | 75 | 0.5 | 208/1/60 | 75.0 | 62.5 | 30,946 | 24,240 | 70.0 | 39,960 | 2.9 | 15.0 | VRFCU-1 | 1,2,3,4,6,8 |
| | | | | | | | | | | | | | | |
| VRF-2-1 | 830 | 0 | 0.2 | 208/1/60 | 75.0 | 62.5 | 30,931 | 21,670 | 70.0 | 39,990 | 1.4 | 15.0 | VRFCU-2 | 1,2,3,4,5,8 |
| VRF-2-2 | 710 | 0 | 0.2 | 208/1/60 | 75.0 | 62.5 | 20,632 | 15,029 | 70.0 | 26,990 | 1.0 | 15.0 | VRFCU-2 | 1,2,3,4,5,8 |
| VRF-2-3 | 830 | 0 | 0.2 | 208/1/60 | 75.0 | 62.5 | 30,931 | 21,670 | 70.0 | 39,990 | 1.4 | 15.0 | VRFCU-2 | 1,2,3,4,5,8 |
| VRF-2-4 | 830 | 0 | 0.2 | 208/1/60 | 75.0 | 62.5 | 30,931 | 21,670 | 70.0 | 39,990 | 1.4 | 15.0 | VRFCU-2 | 1,2,3,4,5,8 |
| VRF-2-5 | 710 | 0 | 0.2 | 208/1/60 | 75.0 | 62.5 | 20,632 | 15,029 | 70.0 | 26,990 | 1.0 | 15.0 | VRFCU-2 | 1,2,3,4,5,8 |
| VRF-2-6 | 830 | 0 | 0.2 | 208/1/60 | 75.0 | 62.5 | 30,931 | 21,670 | 70.0 | 39,990 | 1.4 | 15.0 | VRFCU-2 | 1,2,3,4,5,8 |
| VRF-2-7 | 350 | 0 | 0.2 | 208/1/60 | 75.0 | 62.5 | 10,460 | 7,035 | 70.0 | 13,640 | 0.4 | 15.0 | VRFCU-2 | 1,2,3,4,7,8 |
| | | | | | | | | | | | | | | |

GENERAL NOTES :
1. EXTERNAL STATIC PRESSURE INCLUDES LOSSES DUE TO DUCTWORK, AIR DEVICES, DAMPERS, AND DUCT MOUNTED HOT WATER COILS WHERE APPLICABLE. DIRTY FILTER AND UNIT CASING MUST BE ADDED TO EXTERNAL STATIC PRESSURE TO OBTAIN TOTAL PRESSURE LOSS. INCRESAE HORSEPOWER AS REQUIRED TO MEET YOUR TOTAL PRESSURE LOSS. COORDINATE WITH ELECTRICIAN.
2. MAINTAIN MINIMUM CLEARANCE FOR COIL UPLL AS RECOMMENDED BY UNIT MANUFACTURERE. MAINTAIN MINIMUM CLEARANCE AS REQUIRED TO OPEN ACCESS AND CONTROL DOORS ON UNIT FOR SERVICE, MAINENANCE, AND INSPECTION. MAINAIN MINIMUM ELECTRICAL CELARANCE AS REQUIRED BY NEC.

REMARKS:
1. UNIT TO BE INSTALLED PER MANUFACTURER'S INSTALLATION INSTRUCTIONS.
2. CONTROLLED BY PROGRAMMABLE WIRED THERMOSTAT.
3. REFRIGERANT LINES TO BE SIZED PER MANUFACTURER'S REQUIREMENTS.
4. PROVIDE WITH INTEGRAL CONDENSATE PUMP.
5. PROVIDE CEILING MOUNTED EXPOSED DECORATIVE UNIT (SLIM CEILING SUSPENDED UNIT).
6. PROVIDE CEILING MOUNTED DUCTED UNIT.
7. PROVIDE CEILING MOUNTED 4-WAY CASSETTE.
8. PROVIDE CONDENSATE OVERFLOW SWITCH.

## VRF AIR COOLED CONDENSING UNIT ROY GUESS

| MARK | MIN. TOTAL CAPACITY COOLING (BTUH) | MIN. TOTAL CAPACITY HEATING (BTUH) | OUTDOOR AIR TEMP. (°F) | MINIMUM EER/ SEER | CURRENT CHARAC. | MCA | MOCP | REMARKS |
|---|---|---|---|---|---|---|---|---|
| VRFCU-1A | 366,386 | 338,478 | 98.0 | 11.5/- | 208/3/60 | 54.9 | 60 | 1,2,3,4,5 |
| VRFCU-1B | | | | 11.5/- | 208/3/60 | 54.9 | 60 | |
| VRFCU-2 | 175,448 | 156,383 | 98.0 | 11.0/- | 208/3/60 | 54.9 | 60 | 1,2,3,4,5 |
| | | | | | | | | |
| OAUCU-1A | 329,434 | 277,751 | 98.0 | 12.4/- | 208/3/60 | 61.9 | 70 | 1,2,3,4,5 |
| OAUCU-1B | | | | | 208/3/60 | 61.9 | 70 | |
| | | | | | | | | |
| OAUCU-2 | 159,640 | 138,383 | 98.0 | 11.0/- | 208/3/60 | 61.9 | 70 | 1,2,3,4,5 |

GENERAL NOTES:
1. MINIMUM RECOMMENDED CLEARANCE AROUND ROOFTOP UNIT IS 12 INCHES ON NON-SERVICE SIDES AND 30 INCHES ON SERVICE SIDES. MAINTAIN MINIMUM CLEARANCE FOR CONDENSER AIR FLOW AS RECOMMENDED BY UNIT MANUFACTURER. MAINTAIN MINIMUM CLEARANCE AS REQUIRED TO OPEN ACCESS AND CONTROL DOORS ON UNIT FOR SERVICE, MAINTENANCE, AND INSPECTION. MAINTAIN MINIMUM ELECTRICAL CLEARANCE AS REQUIRED BY NEC.

REMARKS:
1. PROVIDE WITH LOW AMBIENT CONTROL DOWN TO 20°F.
2. PROVIDE WITH DISCONNECT SWITCH.
3. REFRIGERANT LINES TO BE SIZED PER MANUFACTURER'S REQUIREMENTS.
4. CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING DX EXPANSION VALVES. ELECTRICIAN SHALL BE RESPONSIBLE FOR WIRING 208-230V/1PH DX EXPANSION VALVES.
5. PROVIDE HEAT RECOVERY UNIT.

## VRF OUTSIDE AIR HANDLING UNIT - ROY GUESS

| MARK | FAN | | | | | COOLING | | | | | HEATING | | MCA | MOCP | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | SUPPLY AIR CFM | OUTSIDE AIR CFM | EXT. STATIC PRESSURE (IN. W.C.) | HORSE POWER | CURRENT CHARAC. | AIR TEMPERATURE (°F) ENTERING DRY BULB | AIR TEMPERATURE (°F) ENTERING WET BULB | MIN. TOTAL CAPACITY (BTUH) | MIN. SENSIBLE CAPACITY (BTUH) | MINIMUM EER/ SEER | ENTERING AIR TEMP. (°F) | MINIMUM CAPACITY (BTUH) | | | |
| OAU-1-1 | 1,800 | 1,800 | 0.6 | - | 230/3/60 | 98.0 | 80.0 | 174,150 | 91,100 | 12.3/- | 27.0 | 83,979 | 8.3 | 15.0 | 1,2,3 |
| OAU-1-2 | 1,605 | 1,605 | 0.6 | - | 230/3/60 | 98.0 | 80.0 | 155,284 | 36,400 | 12.3/- | 27.0 | 74,881 | 8.3 | 15.0 | 1,2,3 |
| OAU-2-1 | 1,650 | 1,650 | 0.6 | - | 230/3/60 | 98.0 | 80.0 | 159,640 | 37,422 | 12.3/- | 27.0 | 76,980 | 8.3 | 15.0 | 1,2,3 |

GENERAL NOTES:
1. EXTERNAL STATIC PRESSURE INCLUDES LOSSES DUE TO DUCTWORK, AIR DEVICES, DAMPERS, AND DUCT MOUNTED HOT WATER COILS WHERE APPLICABLE. DIRTY FILTER AND UNIT CASING MUST BE ADDED TO EXTERNAL STATIC PRESSURE TO OBTAIN TOTAL PRESSURE LOSS. INCREASE HORSEPOWER AS REQUIRED TO MEET YOUR TOTAL PRESSURE LOSS. COORDINATE WITH ELECTRICIAN.
2. MAINTAIN MINIMUM CLEARANCE FOR COIL PULL AS RECOMMENDED BY UNIT MANUFACTURER. MAINTAIN MINIMUM CLEARANCE AS REQUIRED TO OPEN ACCESS AND CONTROL DOORS ON UNIT FOR SERVICE, MAINTENANCE, AND INSPECTION. MAINTAIN MINIMUM ELECTRICAL CLEARANCE AS REQUIRED BY NEC.

REMARKS:
1. VELOCITY NOT TO EXCEED 450 FPM ON COOLING COIL.
2. PROVIDE CEILING MOUNTED UNIT.
3. PROVIDE WITH HOT GAS REHEAT.

## DAMPER

| MARK | ACTUATOR | DUTY | BLADE ACTION | MANUFACTURER | MODEL NUMBER | REMARKS |
|---|---|---|---|---|---|---|
| D-1 | MANUAL BALANCING | UNDER 9" WIDE | N/A | N/A | N/A | SEE SMACNA CONSTRUCTION DETAILS REFERENCED "TYPICAL CONSTRUCTION DETAILS FOR LOW VELOCITY DUCTS." |
| D-2 | MANUAL BALANCING | OVER 9" WIDE | OPPOSED | RUSKIN | MD-35 | MANUAL DAMPER WITH STANDARD CONSTRUCTION FEATURES AND VENTLOCK #639 LOCKING REGULATOR. |
| D-3 | MOTORIZED | OVER 9" WIDE | OPPOSED | RUSKIN | CD-60 | LOW LEAKAGE DAMPER WITH BLADE SEALS |

NOTES:
N/A - NOT APPLICABLE

DS01


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BRADLEY KAMMAS
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2022-04653-00
Owner
# BEAUMONT ISD AIR HANDLER UPGRADES

Beaumont ISD
Preparing Our Next Generation

NOTES

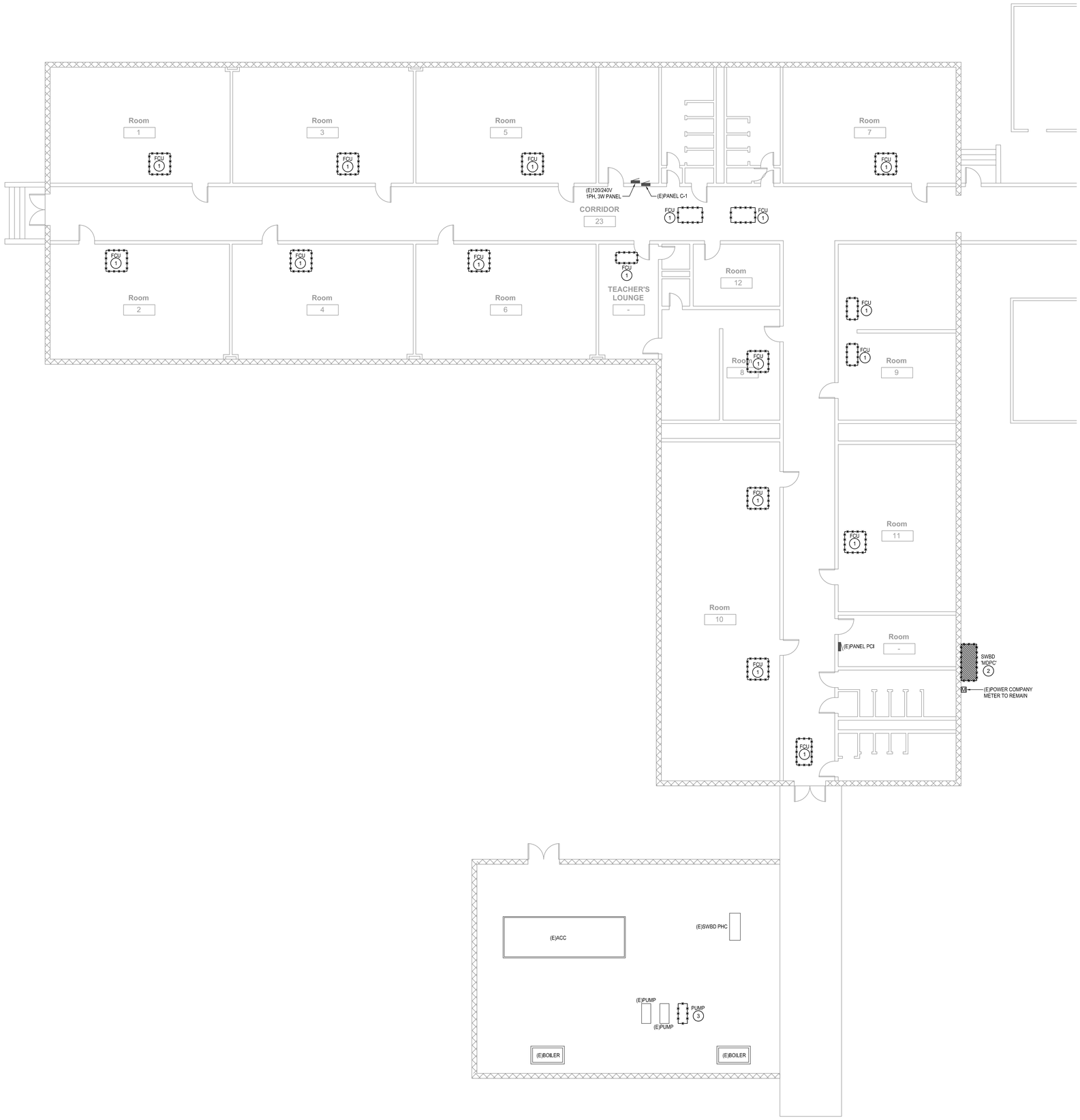
REVISIONS

| NUMBER | DESCRIPTION | DATE | CHECKER |
|---|---|---|---|

CHECKED BY: SH
DRAWN BY: AA

SHEET NAME
MECHANICAL SCHEDULES AND DETAILS - ROY GUESS

SHEET NUMBER: M5.1
REVISION:




DISCONNECT AND REMOVE
EXISTING TO REMAIN
NEW WORK

## ELECTRICAL GENERAL NOTES:

1. DISCONNECT AND REMOVE ALL CONDUIT, WIRE, AND DISCONNECTING MEANS ASSOCIATED WITH HVAC EQUIPMENT BEING REMOVED.
2. UNLESS NOTED OTHERWISE, ALL EXISTING ELECTRICAL PANELBOARDS, TRANSFORMERS, SWITCHBOARDS, ETC...SHALL REMAIN
3. WHERE SCOPE REQUIRES REMOVAL / RE-INSTALLATION OF CEILING GRID, ELECTRICAL CONTRACTOR SHALL DO THE FOLLOWING:
   1. SUSPEND OR REMOVE AND STORE ALL CEILING MOUNTED ELECTRICAL DEVICES TO FACILITATE REMOVAL OF CEILING GRID. DEVICES INCLUDE BUT ARE NOT LIMITED TO: LIGHT FIXTURES, EXIT SIGNS, FIRE ALARM DEVICES, SECURITY DEVICES, COMMUNICATION SPEAKERS, CAMERAS, OCCUPANCY SENSORS, ETC.
   2. REINSTALL ALL EXISTING LIGHT FIXTURES AND ALL CEILING MOUNTED ELECTRICAL IN CEILINGS WHERE APPLICABLE. DEVICES INCLUDE BUT ARE NOT LIMITED TO: LIGHT FIXTURES, EXIT SIGNS, FIRE ALARM DEVICES, SECURITY DEVICES, COMMUNICATION SPEAKERS, CAMERAS, OCCUPANCY SENSORS, ETC.

## ELECTRICAL KEYED NOTES:

1. DISCONNECT AND REMOVE ALL ELECTRICAL TO EXISTING FAN COIL UNIT. REMOVE DISCONNECT SWITCH AND ASSOCIATED CONDUIT/WIRE BACK TO SOURCE.
2. DISCONNECT AND REMOVE EXISTING SWITCHBOARD. FIELD VERIFY EXISTING BRANCH CIRCUITS TO REMAIN AND RECONNECT TO NEW SWITCHBOARD.
3. DISCONNECT AND REMOVE ALL ELECTRICAL TO EXISTING PUMP. REMOVE DISCONNECT SWITCH AND ASSOCIATED CONDUIT/WIRE BACK TO SOURCE.

PROJECT SCOPE SHOWN AS A PART OF THE PROJECT ON THIS CAMPUS WILL REQUIRE IDENTICAL ARCHITECTURAL WORK. ALL SUCH WORK SHALL BE INCLUDED IN THE CONTRACTOR'S BID. THIS WORK SHALL BE PERFORMED WITHOUT ANY IMPACT TO THE CONSTRUCTION SCHEDULE AND/OR ADDITIONAL COST.

CONTRACTOR SHALL REMOVE AND REPLACE CEILING WHERE REQUIRED TO COMPLETE THE INDICATED SCOPE OF PROJECT SCOPE WORK. EXISTING CEILING SHALL BE RE-INSTALLED IN THE EXACT CONDITION EXISTING PRIOR TO THE BEGINNING OF CONSTRUCTION. IF A MATCH IS NOT POSSIBLE, CONTRACTOR SHALL REPLACE ALL CEILING FROM WALL TO WALL OR BOUNDARY SEPARATION IN CORRIDOR, CLASSROOM, OR ANY OTHER SPACE.

PRIOR TO STARTING ANY WORK AND PRIOR TO SUBSTANTIAL COMPLETION, SCHEDULE WITH THE ENGINEER AND OWNER A DEMONSTRATION AND TESTING OF THE EXISTING FIRE ALARM AND CAMERA SYSTEM. THE CONTRACTOR SHALL HAVE ALL SUBCONTRACTORS WORKING ON THE PROJECT BE PRESENT FOR THESE TESTS AND DEMONSTRATIONS.

N 1 **ELECTRICAL DEMOLITION FLOOR PLAN - HALL B - ROY GUESS**
SCALE: 1/8" = 1'-0"

Salas O'Brien
HOUSTON
10930 W. SAM HOUSTON PKWY NORTH SUITE 900
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Beaumont ISD
Preparing Our Next Generation

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| | | | |

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DRAWN BY DES

SHEET NAME
ELECTRICAL DEMOLITION FLOOR PLAN - HALL B - ROY GUESS

SHEET NUMBER E1.1
REVISION

DISCONNECT AND REMOVE
EXISTING TO REMAIN
NEW WORK

## ELECTRICAL GENERAL NOTES:

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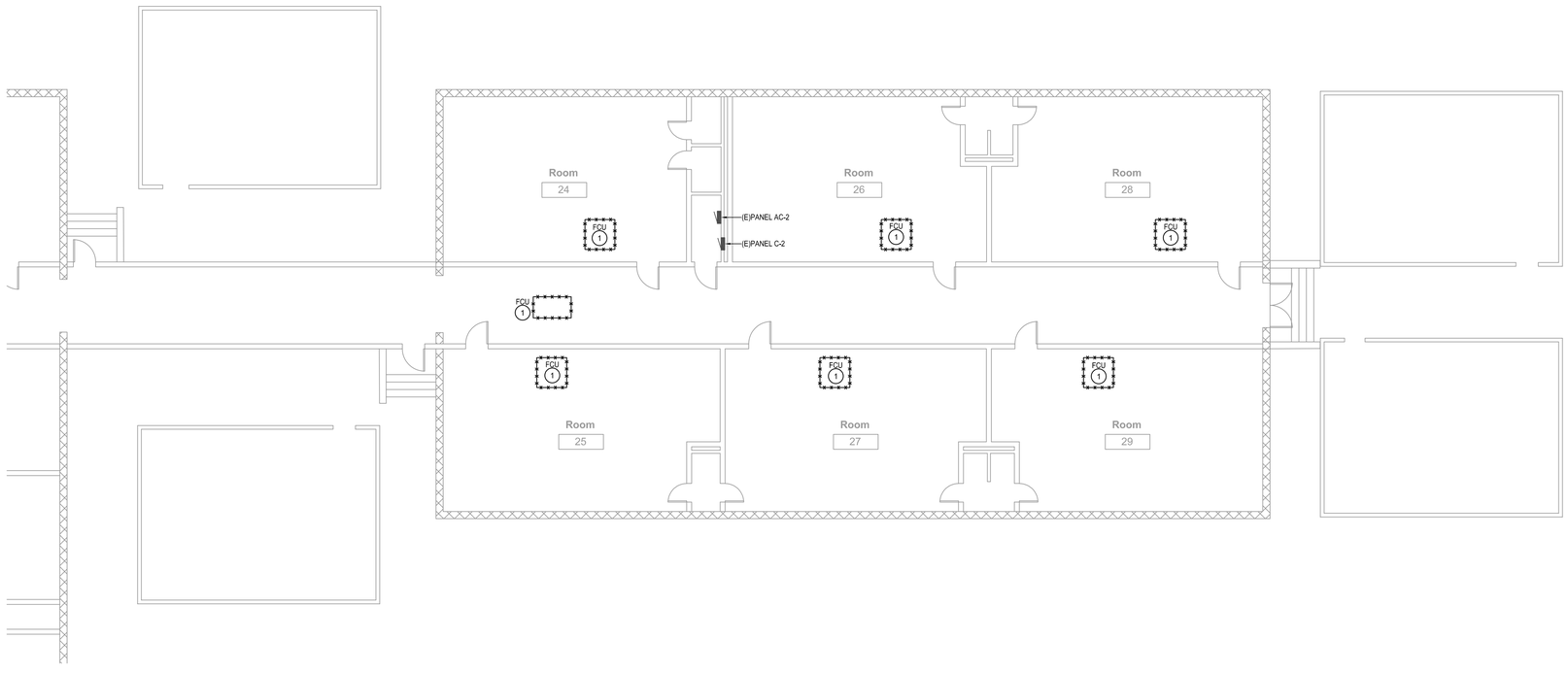
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1 ELECTRICAL DEMOLITION FLOOR PLAN - HALL C - ROY GUESS
SCALE: 1/8" = 1'-0"


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| | | | |

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SHEET NAME
ELECTRICAL DEMOLITION FLOOR PLAN - HALL C - ROY GUESS

SHEET NUMBER
E1.2

REVISION

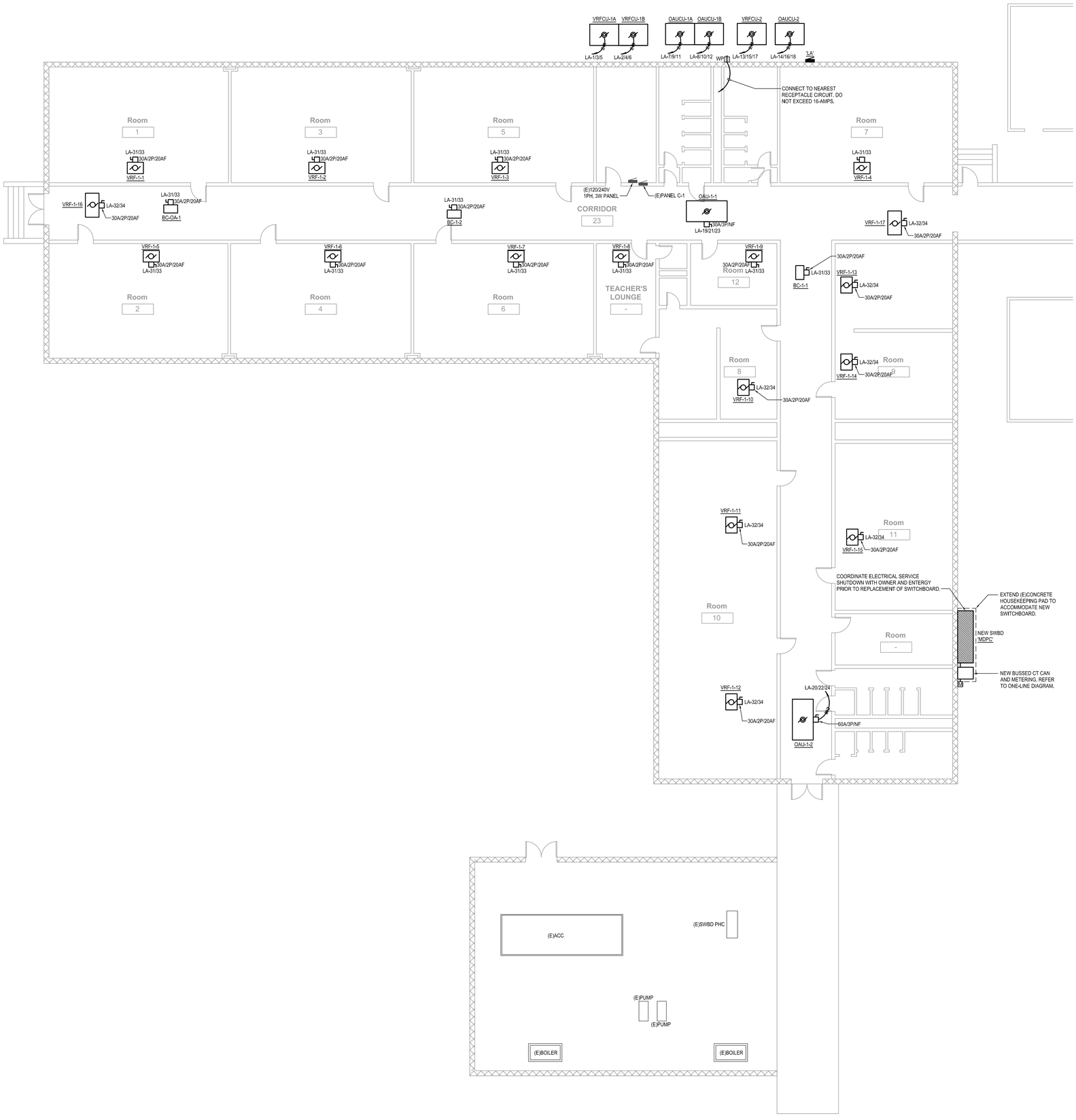
## ELECTRICAL GENERAL NOTES:

1. UNLESS NOTED OTHERWISE, ALL EXISTING ELECTRICAL PANELBOARDS, TRANSFORMERS, SWITCHBOARDS, ETC...SHALL REMAIN
2. WHERE SCOPE REQUIRES REMOVAL / REINSTALLATION OF CEILING GRID, ELECTRICAL CONTRACTOR SHALL DO THE FOLLOWING:
   1. SUSPEND OR REMOVE AND STORE ALL CEILING MOUNTED ELECTRICAL DEVICES TO FACILITATE REMOVAL OF CEILING GRID. DEVICES INCLUDE BUT ARE NOT LIMITED TO: LIGHT FIXTURES, EXIT SIGNS, FIRE ALARM DEVICES, SECURITY DEVICES, COMMUNICATION SPEAKERS, CAMERAS, OCCUPANCY SENSORS, ETC.
   2. REINSTALL ALL EXISTING LIGHT FIXTURES AND ALL CEILING MOUNTED ELECTRICAL IN CEILINGS WHERE APPLICABLE. DEVICES INCLUDE BUT ARE NOT LIMITED TO: LIGHT FIXTURES, EXIT SIGNS, FIRE ALARM DEVICES, SECURITY DEVICES, COMMUNICATION SPEAKERS, CAMERAS, OCCUPANCY SENSORS, ETC.

PROJECT SCOPE SHOWN AS A PART OF THE PROJECT ON THIS CAMPUS WILL REQUIRE IDENTICAL ARCHITECTURAL WORK. ALL SUCH WORK SHALL BE INCLUDED IN THE CONTRACTOR'S BID. THIS WORK SHALL BE PERFORMED WITHOUT ANY IMPACT TO THE CONSTRUCTION SCHEDULE AND/OR ADDITIONAL COST.

CONTRACTOR SHALL REMOVE AND REPLACE CEILING WHERE REQUIRED TO COMPLETE THE INDICATED SCOPE OF PROJECT SCOPE WORK. EXISTING CEILING SHALL BE RE-INSTALLED IN THE EXACT CONDITION EXISTING PRIOR TO THE BEGINNING OF CONSTRUCTION. IF A MATCH IS NOT POSSIBLE, CONTRACTOR SHALL REPLACE ALL CEILING FROM WALL TO WALL OR BOUNDARY SEPARATION IN CORRIDOR, CLASSROOM, OR ANY OTHER SPACE.

PRIOR TO STARTING ANY WORK AND PRIOR TO SUBSTANTIAL COMPLETION, SCHEDULE WITH THE ENGINEER AND OWNER A DEMONSTRATION AND TESTING OF THE EXISTING FIRE ALARM AND CAMERA SYSTEM. THE CONTRACTOR SHALL HAVE ALL SUBCONTRACTORS WORKING ON THE PROJECT BE PRESENT FOR THESE TESTS AND DEMONSTRATIONS.




N 1 **ELECTRICAL FLOOR PLAN - HALL B - ROY GUESS**
SCALE: 1/8" = 1'-0"


Salas O'Brien
HOUSTON
10930 W. SAM HOUSTON PKWY NORTH SUITE 900
HOUSTON, TX 77064
Salas O'Brien Registration: F-4111
Salas O'Brien Project Number: 2022-04653-00



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PROFESSIONAL SEAL

BRADLEY KAMMAS 60219 LICENSED PROFESSIONAL ENGINEER
04-20-2023

| ISSUE DATE | DESCRIPTION |
|---|---|
| 04-11-2023 | 100% |

2022-04653-00
Owner

# BEAUMONT ISD AIR HANDLER UPGRADES

Beaumont ISD
Preparing Our Next Generation

NOTES

REVISIONS

| NUMBER | DESCRIPTION | DATE | CHECKER |
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| | | | |

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SHEET NAME
ELECTRICAL FLOOR PLAN - HALL B - ROY GUESS

SHEET NUMBER E2.1
REVISION

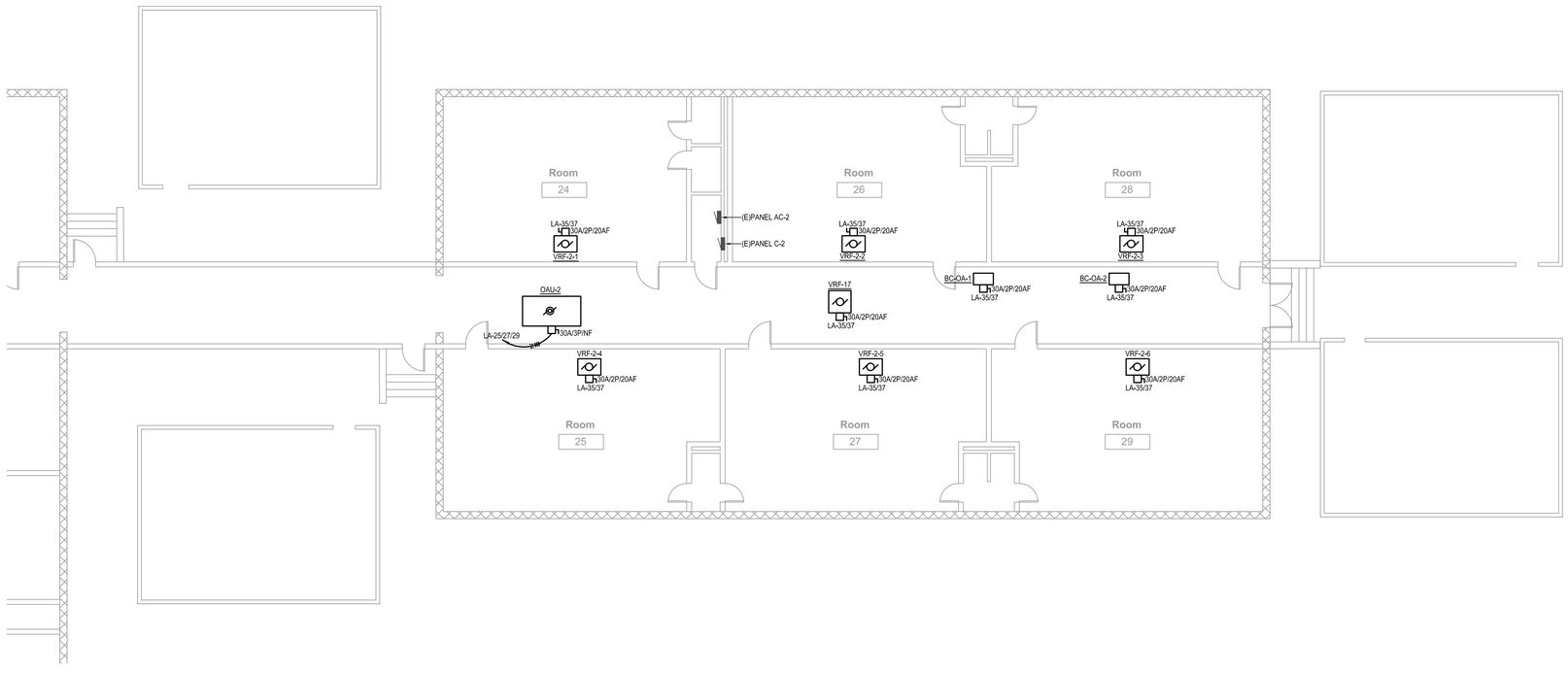
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PROFESSIONAL SEAL




04-20-2023

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| 04-11-2023 | 100% |

2022-04653-00

Owner

# BEAUMONT ISD AIR HANDLER UPGRADES

Beaumont ISD
Preparing Our Next Generation

NOTES

REVISIONS

| NUMBER | DESCRIPTION | DATE | CHECKER |
|---|---|---|---|
| | | | |

CHECKED BY: JZ

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SHEET NAME

ELECTRICAL FLOOR PLAN - HALL C - ROY GUESS

SHEET NUMBER: E2.2

REVISION:

## PANEL 'LA'

LOCATION: EXTERIOR

240V.,3PH.,3W.

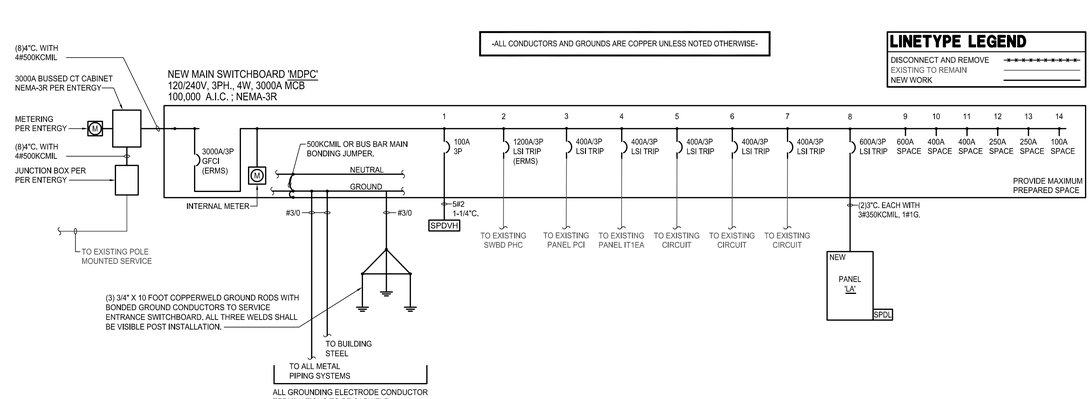
600 AMP MLO

MOUNTING: SURFACE
NEMA-1
22 K ISCA

| CKT | LOAD | KVA | WIRE | BKR | | BKR | WIRE | KVA | LOAD | CKT |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | VRFCU-1A | 5.3 | #6 | 60/3 | | 60/3 | #6 | 5.3 | VRFCU-1B | 2 |
| 3 | ---- | 5.3 | #6 | - | | - | #6 | 5.3 | ---- | 4 |
| 5 | ---- | 5.3 | #6 | - | | - | #6 | 5.3 | ---- | 6 |
| 7 | OAUCU-1A | 5.9 | #4 | 70/3 | | 70/3 | #4 | 5.9 | OAUCU-1B | 8 |
| 9 | ---- | 5.9 | #4 | - | | - | #4 | 5.9 | ---- | 10 |
| 11 | ---- | 5.9 | #4 | - | | - | #4 | 5.9 | ---- | 12 |
| 13 | VRFCU-2 | 5.3 | #6 | 60/3 | | 70/3 | #4 | 5.9 | OAUCU-2 | 14 |
| 15 | ---- | 5.3 | #6 | - | | - | #4 | 5.9 | ---- | 16 |
| 17 | ---- | 5.3 | #6 | - | | - | #4 | 5.9 | ---- | 18 |
| 19 | OAU-1-1 | 1.3 | #12 | 20/3 | | 20/3 | #12 | 1.3 | OAU-1-2 | 20 |
| 21 | ---- | 1.3 | #12 | - | | - | #12 | 1.3 | ---- | 22 |
| 23 | ---- | 1.3 | #12 | - | | - | #12 | 1.3 | ---- | 24 |
| 25 | OAU-2-1 | 1.3 | #12 | 20/3 | | 20/2 | #8 | 1.3 | VRF UNITS | 26 |
| 27 | ---- | 1.3 | #12 | - | | - | #8 | 1.3 | ---- | 28 |
| 29 | ---- | 1.3 | #12 | - | | 20/2 | #8 | 1.0 | VRF UNITS | 30 |
| 31 | SPACE | | | | | - | #8 | 1.0 | ---- | 32 |
| 33 | VRF UNITS | 1.2 | #8 | 20/2 | | | | | SPACE | 34 |
| 35 | ---- | 1.2 | #8 | - | | | | | SPACE | 36 |
| 37 | SPACE | | | | | | | | SPACE | 38 |
| 39 | SPACE | | | | | | | | SPACE | 40 |
| 41 | SPACE | | | | | | | | SPACE | 42 |
| 43 | SPACE | | | | | | | | SPACE | 44 |
| 45 | SPACE | | | | | | | | SPACE | 46 |
| 47 | SPACE | | | | | | | | SPACE | 48 |
| 49 | SPACE | | | | | 30/3 | - | - | SPDL | 50 |
| 51 | SPACE | | | | | - | - | - | ---- | 52 |
| 53 | SPACE | | | | | | - | - | ---- | 54 |

CONTINUOUS (LTG.) LOAD x 1.25 = 0.0 KVA
MISC. LOAD x 1.0 = 119.5 KVA
TOTAL KVA = 119.5 KVA

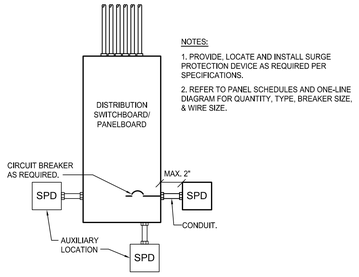
| A | B | C | N |
|---|---|---|---|
| 39.8 | 39.7 | 40.0 | 0.0 |




### 1 ELECTRICAL ONE-LINE DIAGRAM
SCALE: NONE




### 2 GROUNDING DETAIL
SCALE: NONE




NOTES:

1. PROVIDE, LOCATE AND INSTALL SURGE PROTECTION DEVICE AS REQUIRED PER SPECIFICATIONS.
2. REFER TO PANEL SCHEDULES AND ONE-LINE DIAGRAM FOR QUANTITY, TYPE, BREAKER SIZE, & WIRE SIZE.

### 3 SURGE PROTECTION DETAIL
SCALE: NONE

## SYMBOL SCHEDULE

| SYMBOL | DESCRIPTION (DISREGARD ITEMS NOT SHOWN ON PLANS) |
|---|---|
| LIGHTING (LETTER DENOTES TYPE - SEE LIGHT FIXTURE SCHEDULE) | |
| | FLUORESCENT FIXTURE |
| | FLUORESCENT FIXTURE ON EMERGENCY CIRCUIT |
| | DOWNLIGHT FIXTURE |
| | LIGHT FIXTURE - WALL MOUNTED |
| | DOWNLIGHT FIXTURE ON EMERGENCY CIRCUIT |
| | LIGHT FIXTURE - WALL MOUNTED ON EMERGENCY CIRCUIT |
| | EXIT LIGHT-CEILING MTD WITH DIRECTIONAL ARROWS AS REQUIRED |
| | EXIT LIGHT-WALL MTD WITH DIRECTIONAL ARROWS AS REQUIRED |
| | EMERGENCY LIGHTING UNIT EQUIPMENT |
| SWITCHES | |
| $ | SINGLE POLE SWITCH |
| $2 | 2-POLE SWITCH |
| $3 | 3-WAY SWITCH |
| $K | KEYED SWITCH |
| $D | WALL DIMMER SWITCH, SIZE AND TYPE AS REQUIRED |
| $P | SWITCH WITH PILOT LIGHT |
| $MC | MOMENTARY CONTACT SWITCH |
| | PUSH BUTTON SWITCH |
| TS | TIME SWITCH |
| $$ | DUAL LEVEL SWITCHING |
| | CEILING MOUNTED OCCUPANCY SENSOR |
| | WALL MOUNTED OCCUPANCY SENSOR |
| RECEPTACLES AND OUTLETS | |
| | SIMPLEX RECEPTACLE |
| | DUPLEX RECEPTACLE |
| | 125/250 VOLT, 1 PHASE, 3-WIRE, 20 AMPS UNLESS NOTED OTHERWISE |
| | DOUBLE DUPLEX IN 2-GANG BOX WITH SINGLE COVER PLATE |
| | DOUBLE DUPLEX ISOLATED GROUND IN 2-GANG BOX WITH SINGLE COVER PLATE |
| | ISOLATED GROUND DUPLEX RECEPTACLE |
| | ISOLATED GROUND SIMPLEX RECEPTACLE |
| | 250 VOLT, 1 PHASE, SPECIAL PURPOSE OUTLET, 20 AMPS UNLESS NOTED OTHERWISE |
| | JUNCTION BOX |
| | FLUSH FLOOR DUPLEX RECEPTACLE OUTLET |
| | DUPLEX GROUND FAULT CIRCUIT INTERRUPTER RECEPTACLE |
| | DOUBLE DUPLEX GROUND FAULT CIRCUIT INTERRUPTER RECEPTACLE IN 2-GANG BOX WITH SINGLE COVER PLATE |
| | FLUSH FLOOR JUNCTION BOX |
| | TELEVISION OUTLET (RECEPTACLE AND CATV CONNECTIONS) |
| | REMOTE VCR INPUT PATCH CABLE TO TV LOCATION |
| | TWO CHANNEL POWER/COMMUNICATIONS POWER POLE |
| SWITCHES | |
| $ | LINE VOLTAGE SINGLE POLE SWITCH |
| $3 | LINE VOLTAGE 3-WAY SWITCH |
| $4 | LINE VOLTAGE 4-WAY SWITCH |
| $K | LINE VOLTAGE MOMENTARY DPST KEYED SWITCH |
| $D | LINE VOLTAGE DIMMER SWITCH, SIZE AND TYPE AS REQUIRED |
| $P | LINE VOLTAGE SWITCH WITH PILOT LIGHT |
| $T | 6-HOUR ROTARY TIMER SWITCH WITH NO HOLD U.N.O. |
| | PUSH BUTTON EPO SWITCH WITH COVER |
| $MC | LOW VOLTAGE MOMENTARY CONTACT SWITCH |
| $R | LOW VOLTAGE DIGITAL KEYPAD |
| $B | LOW VOLTAGE BUILDING MANAGEMENT (BMCS) LOCAL OVERRIDE SWITCH |
| | OCCUPANCY SENSOR (AUTO ON / AUTO OFF WITHIN 20-MINUTES) |
| | VACANCY SENSOR (MANUAL ON / AUTO OFF WITHIN 20-MINUTES) |
| | PHOTOCELL SENSOR |
| RE | LIGHTING CONTROL SYSTEM. ( 'R' DENOTES TYPE - SEE LIGHTING CONTROLS SCHEDULE) |
| ER | EMERGENCY LOAD CONTROL RELAY, MINIMUM 16A & 0-10V COMPATIBLE, PROVIDE U.L. 924 U.N.O. |
| MOTOR CONTROLLERS AND EQUIPMENT | |
| | MOTOR, MAKE FINAL MOTOR CONNECTION |
| | 3-PHASE MOTOR, MAKE FINAL MOTOR CONNECTION |
| | DISCONNECT SWITCH AS REQUIRED |
| | COMBINATION MOTOR STARTER/DISCONNECT SWITCH AS REQUIRED |
| | MOTOR STARTER |
| | MOTOR CONTROLLER PUSH BUTTON CONTROL, P=PILOT LIGHT |
| M | MANUAL MOTOR SWITCH AS REQUIRED |
| | PREWIRED DEVICE, MAKE ELECTRICAL FINAL CONNECTIONS |
| VFD | VARIABLE FREQUENCY DRIVE MOTOR CONTROLLER FURNISHED BY DIVISION 23 AND INSTALLED BY DIVISION 26 |
| ELECTRICAL EQUIPMENT | |
| | 277/480 VOLT DISTRIBUTION OR PANELBOARD |
| | 120/208 VOLT PANELBOARD |
| | TELEPHONE CABINET |
| | PLYWOOD TELEPHONE BACKBOARD |
| | DRY TYPE TRANSFORMER |
| CIRCUITING | |
| | CONDUIT |
| | CONDUIT BELOW FLOOR, SLAB, OR GRADE |
| #2 | 3/4"C. UNLESS OTHERWISE NOTED; LONG HATCH, NEUTRAL; SHORT HATCH, PHASE; "Z" HATCH, INSULATED GROUND. NO HATCHES INDICATES 2 CONDUCTORS. ARROW INDICATES HOMERUN. |
| | PARTIAL ELECTRICAL HOME RUN |
| SUBSCRIPTS AND ABBREVIATIONS | |
| WP | INDICATES WEATHERPROOF |
| WG | INDICATES WIREGUARD |
| E | INDICATES EXISTING |
| TL | INDICATES TWIST LOCK TYPE |
| NL | LIGHT FIXTURE ON NIGHT LIGHT CIRCUIT |
| • | NEXT TO ANY SYMBOL INDICATES FINAL ROUGH-IN FIELD COORDINATION BY CONTRACTOR WITH ARCHITECTURAL MILLWORK DRAWINGS AND OTHER TRADES |

GENERAL NOTE:
ALL EXTERIOR BUILDING ELECTRICAL EQUIPMENT TO BE WEATHERPROOF NEMA-4X MINIMUM.

## LINETYPE LEGEND

| | |
|---|---|
| DISCONNECT AND REMOVE | |
| EXISTING TO REMAIN | |
| NEW WORK | |

## ELECTRICAL GENERAL NOTES:

1. ALL EMPTY CONDUIT SHALL HAVE PULL STRING.
2. EACH CONDUIT SHALL BE LIMITED TO (3) CIRCUITS MAXIMUM.
3. NO MORE THAN THREE SINGLE PHASE CIRCUITS AND NO MORE THAN SIX CURRENT CARRYING CONDUCTORS SHALL BE INSTALLED IN A SINGLE RACEWAY, WHEN FOUR, FIVE, OR SIX CURRENT CARRYING CONDUCTORS ARE INSTALLED IN A SINGLE RACEWAY, THEIR CURRENT CARRYING AMPACITIES SHALL BE DERATED AS REQUIRED BY THE NEC FOR NON-DIVERSIFIED LOADS. THE INSTALLED WIRE SIZE SHALL HAVE A NOMINAL AMPACITY RATING OF 125% OF THAT REQUIRED OR SPECIFIED WHEN FOUR OR MORE CURRENT CARRYING CONDUCTORS ARE INSTALLED IN A SINGLE RACEWAY. NEUTRAL CONDUCTORS SHALL BE CONSIDERED A CURRENT CARRYING CONDUCTOR IN ALL NON-LINEAR LOADED CIRCUITS AS REQUIRED BY THE NEC.
4. ALL LIGHTING, RECEPTACLE, AND EQUIPMENT BRANCH CIRCUITS CONDUITS SHALL CONTAIN A GROUND WIRE. USING THE CONDUIT SYSTEM AS THE ONLY GROUND PATH IS NOT ACCEPTABLE.
5. REFER TO MECHANICAL DRAWINGS FAN SCHEDULE, DIVISION 26 TO PROVIDE ALL LOCAL SWITCHES AS INDICATED ON MECHANICAL FAN SCHEDULE, LOCATE SWITCH BY DOOR UNLESS INDICATED OTHERWISE FOR ALL LOCALLY SWITCHED FANS.
6. PROVIDE SMOKE DETECTORS AT EACH RETURN AIR INLET INTO EACH MECHANICAL ROOM AS REQUIRED FOR OPENING SIZE.
7. PROVIDE DUCT MOUNTED SMOKE DETECTORS IN SUPPLY AND RETURN DUCTS OF ALL AIR HANDLERS 2000 CFM OR GREATER.


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ELECTRICAL DETAILS, SCHEDULES, AND LEGENDS - ROY GUESS

SHEET NUMBER
E3.1

REVISION