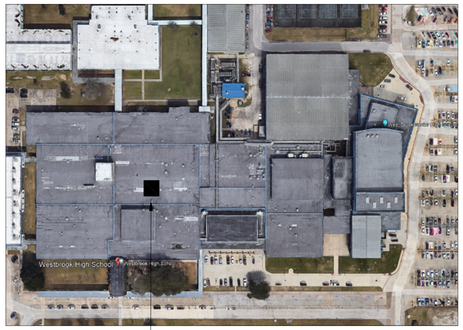
Salas O'Brien

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

Salas O'Brien Project Number: 2024-01571-00

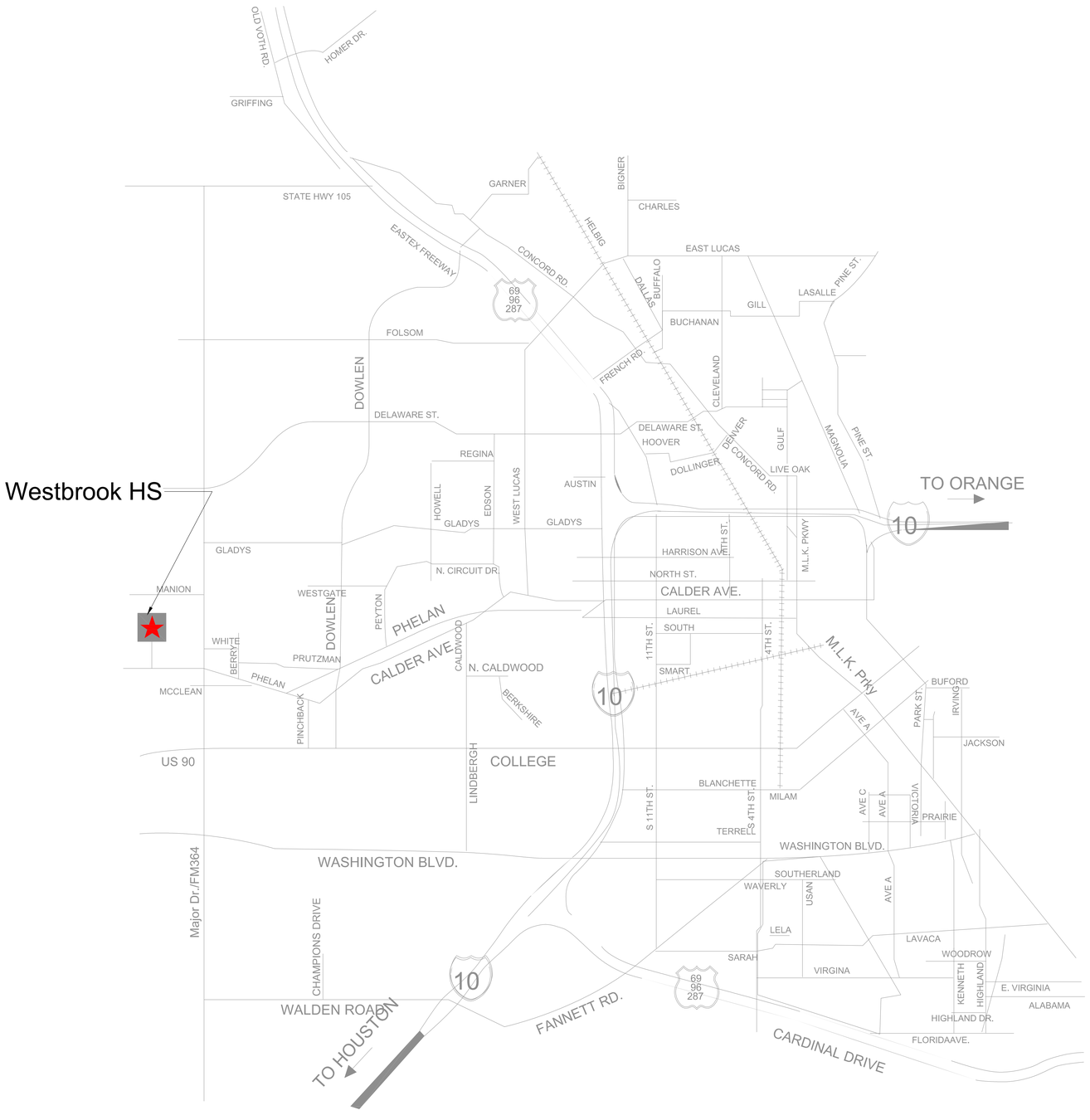
BEAUMONT INDEPENDENT SCHOOL DISTRICT
WESTBROOK HIGH SCHOOL
AIR HANDLER REPLACEMENT

WESTBROOK HIGH SCHOOL
8750 PHELAN BLVD, BEAUMONT, TX 77706



AREA OF WORK

SITE LOCATIONS



Beaumont ISD
Preparing Our Next Generation

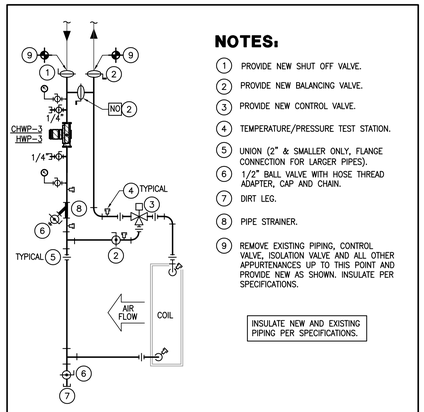
LIST OF DRAWINGS:

CS-1 COVER SHEET - LIST OF DRAWINGS

WESTBROOK HIGH SCHOOL
M1.00 MECHANICAL FLOOR PLAN, SCHEDULES, LEGENDS, AND DETAILS
E1.00 ELECTRICAL FLOOR PLAN, SCHEDULES, LEGENDS, AND DETAILS

BRADLEY KALMANS
80219
LICENSED PROFESSIONAL ENGINEER
03-29-2024

COVER SHEET – LIST OF DRAWINGS
CS-1



NOTES:

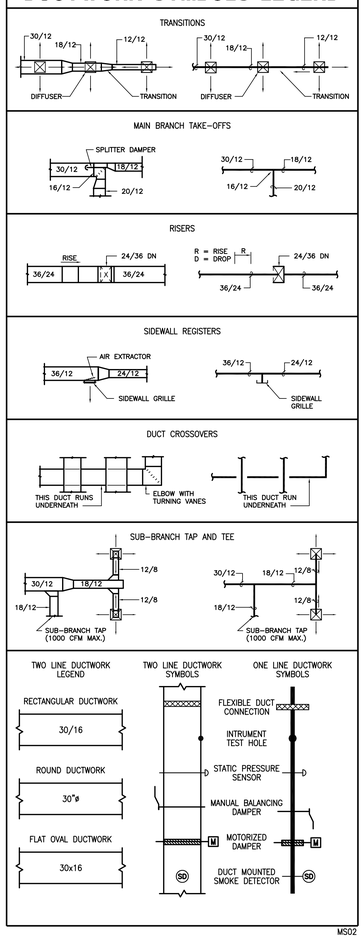
1. PROVIDE NEW SHUT OFF VALVE.
2. PROVIDE NEW BALANCING VALVE.
3. PROVIDE NEW CONTROL VALVE.
4. TEMPERATURE/PRESSURE TEST STATION.
5. UNION (2" & SMALLER ONLY, FLANGE CONNECTION FOR LARGER PIPES).
6. 1/2" BALL VALVE WITH HOSE THREAD ADAPTER, CAP AND CHAIN.
7. DIRT LEG.
8. PIPE STRAINER.
9. REMOVE EXISTING PIPING, CONTROL VALVE, ISOLATION VALVE AND ALL OTHER APPURTENANCES UP TO THIS POINT AND PROVIDE NEW AS SHOWN. INSULATE PER SPECIFICATIONS.

INSULATE NEW AND EXISTING PIPING PER SPECIFICATIONS.

3 PIPING AT AHU CHILLED WATER AND HOT WATER COIL

SCALE: NONE

DUCTWORK SYMBOLS LEGEND

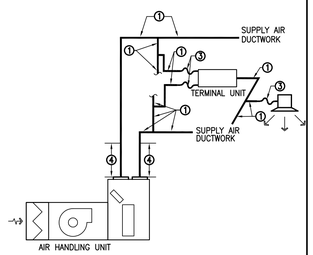


MS02

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	
-CHWS&R-	CHILLED WATER SUPPLY & RETURN (TOTAL OF TWO PIPES, ONLY ONE PIPE SHOWN FOR DRAWING CLARITY)
—CHWS—	CHILLED WATER SUPPLY
—CHWR—	CHILLED WATER RETURN
-HWS&R-	HOT WATER FOR HYDRONIC HEATING SUPPLY & RETURN (TOTAL OF TWO PIPES, ONLY ONE PIPE SHOWN FOR DRAWING CLARITY)
—HWS—	HOT WATER FOR HYDRONIC HEATING SUPPLY
—HWR—	HOT WATER FOR HYDRONIC HEATING RETURN
—D—	CONDENSATE DRAIN LINE
—IO	ELBOW UP
—CI	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)
	GATE VALVE
	GLOBE VALVE
	CHECK VALVE
	BUTTERFLY VALVE
	BUTTERFLY VALVE WITH OPERATOR
	PLUG VALVE
	TWO-WAY CONTROL VALVE
	THREE-WAY CONTROL VALVE
	PRESSURE REDUCING VALVE
	PRESSURE RELIEF VALVE
	BALL VALVE
	STRAINER
	UNION
	THERMOMETER WELL
	PETE'S PLUG
	PRESSURE GAUGE
	TEMPERATURE SENSOR IN PIPE
	VENTURI FLOW METER
	FLOW SWITCH
(FM)	FLOW MEASURING STATION
	EXPANSION JOINT
	FLEXIBLE CONNECTION
	GAUGE COCK
	SITE GLASS
	DIFFERENTIAL PRESSURE SENSOR
	TURBINE FLOW METER
	ANCHOR
	PIPE GUIDE
SUBSCRIPTS AND ABBREVATIONS	
AFF	ABOVE FINISHED FLOOR
BOP	BOTTOM OF PIPE
CFM	CUBIC 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

DUCT LINER AND INSULATION

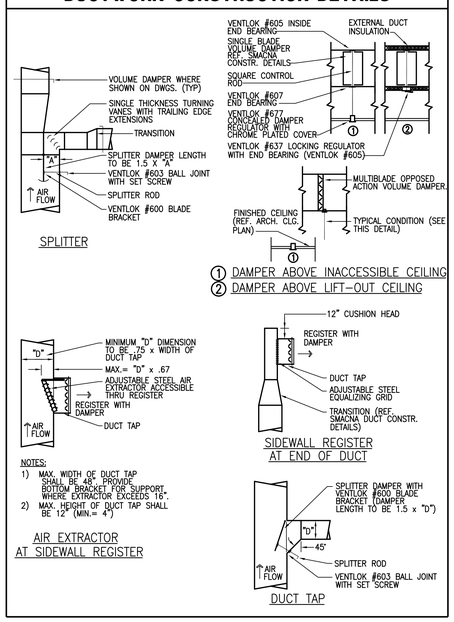


DUAL DUCT VARIABLE AIR VOLUME AIR HANDLING UNITS

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.

DUCTWORK CONSTRUCTION DETAILS



DOUBLE DUCT VARIABLE AIR VOLUME AIR HANDLING UNIT

MARK	FAN						COOLING							HEATING						PIPE SIZE TO COIL (IN.)		REMARKS
	SUPPLY AIR CFM	OUTSIDE AIR CFM	EXT. STATIC PRESSURE (IN. W.C.)	TOTAL HORSE POWER	FAN QTY.	CURRENT CHARAC.	AIR TEMPERATURE (°F) ENTERING DRY BULB	AIR TEMPERATURE (°F) ENTERING WET BULB	AIR TEMPERATURE (°F) LEAVING DRY BULB	AIR TEMPERATURE (°F) LEAVING WET BULB	WATER ENTERING TEMP. (°F)	WATER GPM	WATER MAX. PRESSSURE DROP (FT.)	HEATING AIR CFM	ENTERING AIR TEMPERATURE (°F)	MINIMUM CAPACITY (BTUH)	WATER ENTERING TEMP. (°F)	WATER GPM	WATER MAX. PRESSSURE DROP (FT.)	CHILLED WATER	HOT WATER	
AHU-3	16,800	3,000	1.5	20	2	480/3/60	79.4	65.8	50.0	49.6	42.0	139.0	15.0	8,150	62.7	376,205	160.0	37.6	10.0	4	2	1,2,3,4,5,6,7,8
AHU-3	16,800	3,000	1.5	20	8	480/3/60	79.4	65.8	50.0	49.6	42.0	139.0	15.0	8,150	62.7	376,205	160.0	37.6	10.0	4	2	1,2,3,4,5,6,7,9

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. 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. HORIZONTAL DRAW THROUGH UNIT.
2. VELOCITY NOT TO EXCEED 500 FPM ON COOLING COIL.
3. PROVIDE ANGLE FILTER SECTION.
4. PROVIDE WITH VARIABLE FREQUENCY DRIVE. VFD SHALL BE PROVIDED WITH MOTOR OVERLOAD PANEL AND VFD SHALL BE SIZED BASED ON THE TOTAL OF ALL FANS HP.
5. PROVIDE THREE-WAY VALVE AT AIR HANDLING UNIT HOT WATER COIL.
6. PROVIDE THREE-WAY VALVE AT AIR HANDLING UNIT CHILLED WATER COIL.
7. UNIT DIMENSIONS LXWLXH SHALL NOT EXCEED 110"X118"X91"
8. BASIS OF DESIGN PETRA.
9. BASIS OF DESIGN CARRIER.

PUMP

MARK	SERVICE	TYPE	GPM	HEAD (FT.)	MAXIMUM RPM	MOTOR HORSEPOWER	CURRENT	MANUFACTURER	MODEL	REMARKS
CHWP-3	CHILLED WATER	VERTICAL INLINE	139	40	1,800	3	480/3/60	ARMSTRONG	4380	1,2,3
HWP-3	CHILLED WATER	VERTICAL INLINE	37.6	41.5	1,800	2	480/3/60	ARMSTRONG	4380	1,2,3

GENERAL NOTES:
1. PUMP IS TO HAVE A NON-OVERLOADING MOTOR.
2. MINIMUM RECOMMENDED CLEARANCE AROUND A PUMP IS 24 INCHES. MAINTAIN MINIMUM CLEARANCES AS REQUIRED FOR SERVICE, MAINTENANCE, AND INSPECTION.

REMARKS:
1. PROVIDE CLOSED COUPLE VERTICAL INLINE PUMP.
2. PROVIDE WITH VARIABLE FREQUENCY DRIVE.
3. PROVIDE PUMP WITH GAUGE TAPS.

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

DSO1

MECHANICAL KEYED NOTES:

1. REFER TO DETAIL 3/M1.01 FOR COIL PIPING AT AHU COILS.
2. VERIFY SERVICE CLEARANCE FOR AIR FILTER, FAN SHAFT AND COIL REMOVAL WITH EQUIPMENT MANUFACTURER. COORDINATE WITH ALL TRADES NOT TO OBSTRUCT.
3. ROUTE NEW PRIMARY CONDENSATE DRAIN PIPING AT SIZE INDICATED TO TO EXISTING FLOOR DRAIN.
4. INSTALL NEW AHU-3 IN SECTIONS AS REQUIRED TO FIT WITHIN AND/OR THROUGH EXISTING DOORWAYS AND CORRIDORS. (AHU FIELD BREAK DOWN AND RE-ASSEMBLY WILL BE REQUIRED.)
5. PROVIDE ISOLATION VALVE.
6. MOUNT NEW DOUBLE DUCT AIR HANDLING UNIT ON EXISTING CONCRETE HOUSEKEEPING PAD.
7. CLEAN EXTERIOR AND INTERIOR SURFACES AND ALL ASSOCIATED INTERNAL APPURTENANCES OF EXISTING DUCT SOUND ATTENUATORS TO LIKE NEW CONDITION.
8. MAINTAIN CLEARANCE UNDER PIPE TO ACCESS PUMP.
9. PIPE SHALL STAY UP HIGH.
10. PIPE SHALL ELBOW DOWN TO CONNECT TO AHU COIL AT THIS POINT.
11. REFER TO 3/M1.0 FOR PIPING CONNECTION TO CHW / HW COILS.

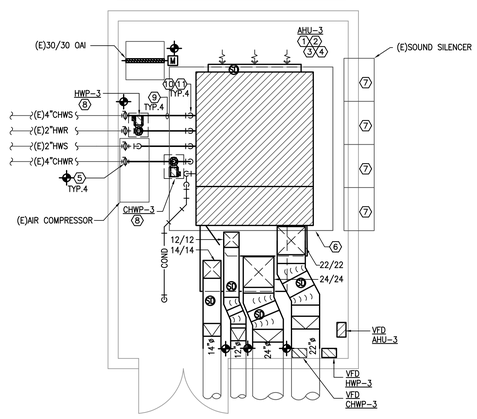
DEMOLITION KEYED NOTES:

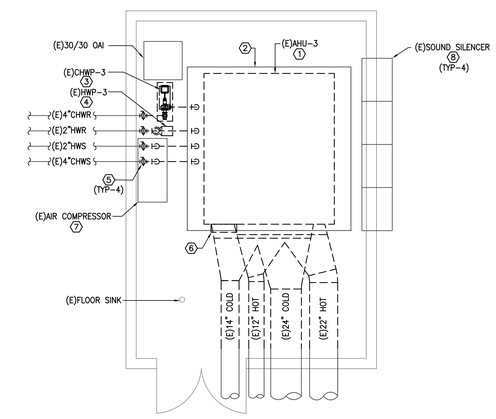
1. REMOVE EXISTING DOUBLE DUCT AIR HANDLING UNIT AND ASSOCIATED CONDENSATE DRAIN PIPING, CONTROLS, AND OTHER APPURTENANCES.
2. EXISTING HOUSE KEEPING CONCRETE PAD SHALL REMAIN.
3. EXISTING CHILLED WATER PUMP SHALL BE REMOVED.
4. EXISTING HOT WATER PUMP SHALL BE REMOVED.
5. REMOVE EXISTING PIPING, INSULATION, ISOLATION VALVES, CONTROL VALVES, AND ALL OTHER APPURTENANCES UP TO THIS POINT.
6. EXISTING BI-POLAR IONIZATION UNIT MOUNTED TO FRONT OF THE UNIT SHALL BE REMOVED AND RETURNED TO OWNER.
7. EXISTING AIR COMPRESSOR SHALL REMAIN.
8. EXISTING DUCT SOUND SILENCER SHALL REMAIN.

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.





NORTH

2 DEMOMECHANICAL FLOOR PLAN

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

NORTH

1 MECHANICAL DEMOLITION FLOOR PLAN - MECHANICNICAL ROOM

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

Project No:	2024-01571-00
Drawn By:	AA
Checked By:	SH
Date:	03/29/2024
Revision Dates:	

Sala O'Brien
1090 W. Sam Houston Pkwy North, Suite 900
Houston, Tx 77064
Sala O'Brien Registration: F-4111
Sala O'Brien Project Number: 2024-01571-00

BEAUMONT INDEPENDENT SCHOOL DISTRICT
WESTBROOK HIGH SCHOOL
AIR HANDLER REPLACEMENT

BRADLEY KALMANS
REGISTERED
80219
CENSED
03-29-24

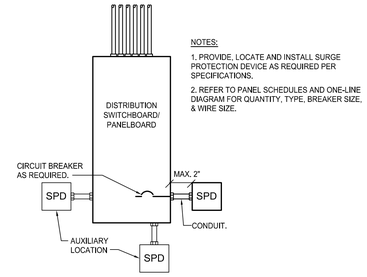
MECHANICAL FLOOR PLAN, SCHEDULES, LEGENDS AND DETAILS

M1.00

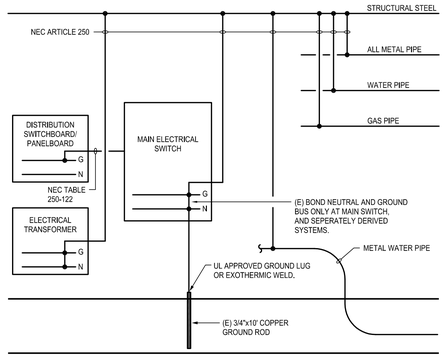
SYMBOL SCHEDULE

SYMBOL	DESCRIPTION (DISREGARD ITEMS NOT SHOWN ON PLANS)
LIGHTING (LETTER DENOTES TYPE - SEE LIGHT FIXTURE SCHEDULE)	
	LED LIGHT FIXTURE - RECESSED, SURFACE, PENDANT
	LED LIGHT FIXTURE - RECESSED, SURFACE, PENDANT ON EMERGENCY CIRCUIT
	DOWNLIGHT FIXTURE
H	DOWNLIGHT FIXTURE ON EMERGENCY CIRCUIT
	LIGHT FIXTURE - WALL MOUNTED
H	LIGHT FIXTURE - WALL MOUNTED ON EMERGENCY CIRCUIT
	EXIT LIGHT-CEILING MTD WITH DIRECTIONAL ARROWS AS REQUIRED.
H	EXIT LIGHT-WALL MTD WITH DIRECTIONAL ARROWS AS REQUIRED
LIGHTING CONTROLS & DEVICES	
$	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
$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
	OCCUPANCY SENSOR (AUTO ON / AUTO OFF WITHIN 20-MINUTES)
	VACANCY SENSOR (MANUAL ON / AUTO OFF WITHIN 20-MINUTES)
	PHOTOCELL SENSOR
LRF	LIGHTING CONTROL SYSTEM. ('#' DENOTES TYPE - SEE LIGHTING CONTROLS SCHEDULE)
LER	EMERGENCY LOAD CONTROL RELAY, MINIMUM 16A AND 0-10V COMPATIBLE, PROVIDE U.L. 924 U.N.O.
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 GROUND FAULT CIRCUIT INTERRUPTER RECEPTACLE IN 2-GANG BOX WITH SINGLE COVER PLATE
	DUPLEX GROUND FAULT CIRCUIT INTERRUPTER RECEPTACLE
	CONCEALED SERVICE MULTI-ACCESS FLOOR BOX WITH DOUBLE DUPLEX RECEPTACLE AND DATA OUTLET. REFER TO TECHNOLOGY SERIES DRAWINGS FOR DATA CABLE QUANTIES.
	CONCEALED SERVICE MULTI-ACCESS FLOOR BOX WITH DOUBLE DUPLEX RECEPTACLE.
	JUNCTION BOX
	FLUSH FLOOR JUNCTION BOX
	FLUSH REMOTE GFCI DEVICE (LOCATE IN READILY ACCESSIBLE LOCATION)
C C	'C' WHEN INDICATED NEXT TO ANY RECEPTACLE, INDICATES 'AUTOMATIC CONTROLLED RECEPTACLE'. PROVIDE 20-AMP MINIMUM PLUG-LOAD TYPE RECEPTACLE. SEE SPECIFICATIONS.
U U	'U' WHEN INDICATED NEXT TO ANY RECEPTACLE, INDICATES 'RECEPACLE WITH USB CHARGING PORT'. PROVIDE 20-AMP MINIMUM USB TYPE RECEPTACLE. SEE SPECIFICATIONS.
MOTOR CONTROLLERS AND EQUIPMENT	
OR	MOTOR, MAKE FINAL MOTOR CONNECTION
$M	MOTOR-RATED SWITCH. 20A UNLESS INDICATED OTHERWISE.
J	DISCONNECT SWITCH AS REQUIRED
J	COMBINATION MOTOR STARTER/DISCONNECT SWITCH AS REQUIRED
	MOTOR STARTER
	PREWIRED DEVICE, MAKE ELECTRICAL FINAL CONNECTIONS
VFD	VARIABLE FREQUENCY DRIVE MOTOR CONTROLLER FURNISHED BY MECHANICAL CONTRACTOR AND INSTALLED BY ELECTRICAL CONTRACTOR.
T	LOW VOLTAGE TRANSFORMER, SIZE AND TYPE AS REQUIRED.
Y	CHIME/BUZZER
SPDA	SURGE PROTECTION DEVICE. 'X' EXPOSURE TYPE, VH - VERY HIGH, H - HIGH, M - MEDIUM, L - LOW
ELECTRICAL EQUIPMENT	
	277/480 VOLT DISTRIBUTION OR PANELBOARD
	120/208 VOLT PANELBOARD
	DRY TYPE TRANSFORMER
	PLYWOOD TELEPHONE BACKBOARD
CIRCUITING	
	CONDUIT
	CONDUIT BELOW FLOOR, SLAB, OR GRADE
#/Z	3/4"C, UNLESS OTHERWISE NOTED; LONG HATCH, NEUTRAL; SHORT HATCH, PHASE; LONG HATCH & HOOK, INSULATED GROUND, NO HATCHES INDICATES 2 CONDUCTORS. ARROW INDICATES HOMERUN.
	PARTIAL ELECTRICAL HOME RUN
SUBSCRIPTS AND ABBREVIATIONS	
WP	INDICATES 'WEATHERPROOF'
NL	INDICATES 'NIGHT LIGHT'.
(KS)	INDICATES 'KNEE SPACE'. LOCATE WIRING DEVICE CENTERED WITHIN KNEESPACE
U.N.O.	INDICATES 'UNLESS NOTED OTHERWISE'
•	NEXT TO ANY SYMBOL INDICATES FINAL ROUGH-IN FIELD COORDINATION BY CONTRACTOR WITH ARCHITECTURAL MILLWORK DRAWINGS AND OTHER TRADES

NOTES:
- ALL EXTERIOR BUILDING ELECTRICAL EQUIPMENT TO BE WEATHERPROOF NEMA-3RX MINIMUM.
- ALL EXTERIOR RECEPTACLES SHALL BE WATER RESISTANT TYPE.



4 SURGE PROTECTION DETAIL
SCALE: NONE



3 GROUNDING DETAIL
SCALE: NONE

LIGHTING FIXTURE SCHEDULE

MARK	MANUFACTURER AND CATALOG NUMBER	MOUNTING	TYPE/LUMENS	KELVIN COLOR	CRI	VOLTS	INPUT WATTAGE	REMARKS
A1	METALUX# 4SLSTP5535DD-UNV	SURFACE / CHAIN HANG	LED / 4,000 LU	4000K	80+	UNV	38W	4-FOOT STRIP LIGHT, 0-10V DRIVER, FROSTED LENS, DLC LISTED, CHAIN HANG KIT.
A1E	METALUX# 4SLSTP4040DD-UNV-EL14	SURFACE / CHAIN HANG	LED / 4,000 LU	4000K	80+	UNV	38W	4-FOOT STRIP LIGHT, 0-10V DRIVER, FROSTED LENS, DLC LISTED, CHAIN HANG KIT, PROVIDE WITH 90-MIN EMERGENCY BATTERY.

APPROVED MANUFACTURERS:
PRODUCTS BY COOPER, ACUITY, PHILIPS (SIGNIFY), HE WILLIAMS, LSI

NOTES:

EMERGENCY BATTERY BACK-UP. WHEN SPECIFIED, SHALL ENERGIZE FIXTURE FOR A MINIMUM OF 90-MINUTES, REFER TO SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS NOT INDICATED IN THE LIGHT FIXTURE SCHEDULE. WHERE THERE IS AN INCONSISTENCY BETWEEN THE LIGHT SCHEDULE AND THE SPECIFICATIONS, THE BETTER QUALITY OF WORK SHALL BE INCLUDED IN THE PROPOSAL.

LIGHT FIXTURE APPROVAL WILL BE DETERMINED AFTER REVIEW OF SHOP DRAWING TO DETERMINE IF THE FIXTURE OR POLE SUBMITTED MEETS OR EXCEEDS THE DESIGN STANDARDS AND PERFORMANCE REQUIRED OF THE FIXTURE SPECIFIED IN THE LIGHT FIXTURE SCHEDULE OR SPECIFICATIONS. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO PROVIDE THE SPECIFIED LIGHT FIXTURE IF A SUBSTITUTION IS NOT APPROVED WITHOUT ANY ADDITIONAL COST TO THE OWNER. WHERE SPECIFIC OPTIONS/ACCESSORIES ARE SPECIFIED OR REQUIRED, THEY SHALL BE PROVIDED WITHOUT ANY ADDITIONAL COST TO THE OWNER.

DUE TO THE WIDE RANGE OF FIXTURE QUALITIES OFFERED BY EACH MANUFACTURER, THE APPROVED LIGHTING MANUFACTURERS SUBSTITUTION LIST IS NOT INTENDED TO INDICATE THAT ANY OR ALL MANUFACTURERS LISTED WILL HAVE SUITABLE SUBSTITUTIONS FOR THE LIGHT FIXTURES OR POLES SPECIFIED IN THE LIGHT FIXTURE SCHEDULE. SHOP DRAWING AND CONSTRUCTION DELAYS AS A RESULT OF INAPPROPRIATE SUBSTITUTIONS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL NOT RESULT IN ANY ADDITIONAL COST TO THE OWNER.

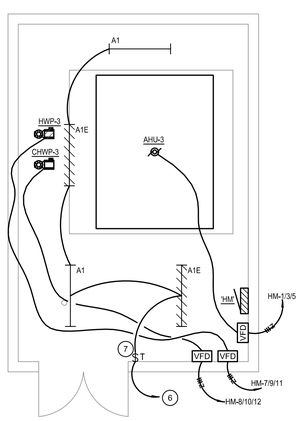
PANEL 'HM'

277/480V.,3PH.,4W.
100 AMP MLO
MOUNTING: SURFACE
NEMA-1
18 K ISCA
LOCATION: MECHANICAL ROOM

CKT	LOAD	KVA	WIRE	BKR		BKR	WIRE	KVA	LOAD	CKT
1	AHU-3	7.5	#8	50/3		20/3	EX.	3.0	EXISTING AIR COMP.	2
3	----	7.5	#8	-		-	EX.	3.0	----	4
5	----	7.5	#8	-		-	EX.	3.0	----	6
7	HWP-3	0.9	#12	20/3		20/3	#12	1.3	CHWP-3	8
9	----	0.9	#12	-		-	#12	1.3	----	10
11	----	0.9	#12	-		-	#12	1.3	----	12
13	SPACE								SPACE	14
15	SPACE								SPACE	16
17	SPACE								SPACE	18
19	SPACE					30/3	#10	-	SPDL	20
21	SPACE					-	#10	-	----	22
23	SPACE					-	#10	-	----	24

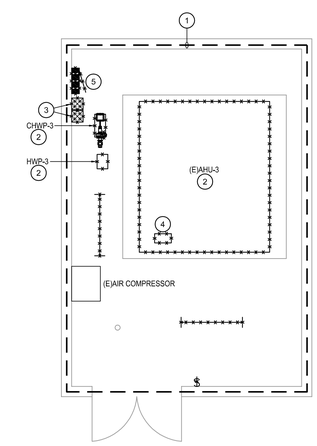
8

CONTINUOUS (LTG.) LOAD x 1.25 = 0.0 KVA
MISC. LOAD x 1.0 = 38.1 KVA
TOTAL KVA = 38.1 KVA



NORTH

2 ELECTRICAL FLOOR PLAN
SCALE: 1/4" = 1'-0"



NORTH

1 ELECTRICAL DEMOLITION FLOOR PLAN
SCALE: 1/4" = 1'-0"

ELECTRICAL GENERAL NOTES:

1. ALL LIGHT FIXTURES IN MECHANICAL AREAS SHALL BE COORDINATED WITH MECHANICAL AND PLUMBING EQUIPMENT TO AVOID CONFLICTS. LOCATE LIGHT FIXTURES ON PERIMETER WALLS OF MECHANICAL AREAS WHERE PRACTICAL.
2. 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.
3. ALL FIRE ALARM DEVICES, RECEPTACLES, SWITCHES, AND WIRING DEVICES IN MECHANICAL AND ELECTRICAL ROOMS ARE TO BE RECESSED IN WALLS.
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. PROVIDE SMOKE DETECTORS AT EACH RETURN AIR INLET INTO EACH MECHANICAL ROOM AS REQUIRED FOR OPENING SIZE. REFER TO MECHANICAL DRAWINGS FOR PROPOSED LOCATION AND QUANTITIES.
6. PROVIDE DUCT MOUNTED SMOKE DETECTORS IN SUPPLY AND RETURN DUCTS OF ALL AIR HANDLERS 2000 CFM OR GREATER. REFER TO MECHANICAL DRAWINGS FOR PROPOSED LOCATION AND QUANTITIES.

ELECTRICAL KEYED NOTES:

1. DISCONNECT AND REMOVE EXISTING LIGHTING FIXTURES AND ASSOCIATE CONDUIT/WIRE BACK TO NEAREST ACTIVE JUNCTION BOX FOR RE-USE, EXISTING LIGHT SWITCH BOX SHALL REMAIN AND BE RE-USED AS PRACTICAL FOR NEW WIRING DEVICES.
2. DISCONNECT AND REMOVE ALL ELECTRICAL TO EXISTING MECHANICAL EQUIPMENT AND ASSOCIATED CONDUIT/WIRE BACK TO SOURCE PANEL.
3. DISCONNECT AND REMOVE EXISTING MOTOR STARTER / DISCONNECT.
4. DISCONNECT AND REMOVE ALL ELECTRICAL TO EXISTING BI-POLAR IONIZATION SYSTEM, LEAVE CIRCUITRY INTACT FOR RE-INSTALLATION BY OWNER.
5. DISCONNECT AND REMOVE EXISTING PANELBOARD. FIELD VERIFY EXISTING BRANCH CIRCUITS TO REMAIN ACTIVE AND EXTEND CONDUIT/WIRE TO NEW PANEL 'HM'.
6. CONNECT TO EXISTING CIRCUIT PRESERVED DURING DEMOLITION. EXTEND CONDUIT/WIRE AND MAKE FINAL CONNECTION.
7. PROVIDE DIGITAL TIMER SWITCH, WATTSTOPPER #TS400 OR APPROVED EQUAL.
8. CONTRACTOR SHALL FIELD VERIFY CIRCUIT BREAKER FEEDING EXISTING AIR COMPRESSOR AND MATCH OVERCURRENT DEVICE.

A LICENSED FIRE ALARM PLANNING SUPERINDENDENT CERTIFIED TO A MINIMUM LEVEL 3, IN THE SUBFIELD OF FIRE ALARM SYSTEMS THROUGH THE NATIONAL INSTITUTE FOR CERTIFICATION IN ENGINEERING TECHNOLOGIES (NICET), SHALL PROVIDE PLANS AND CALCULATIONS FOR A MANUAL AND AUTOMATIC FIRE DETECTION AND ALARM SYSTEM TO COMPLY WITH THE BUILDING SPACE LAYOUT, BUILDING OCCUPANCY, NFPA 72, LOCAL AND STATE CODE REQUIREMENTS.

Project No:	2024-01571-00
Drawn By:	DES
Checked By:	DKS
Date:	03/29/2024
Revision Dates:	

Salas O'Brien
1030 W. Sam Houston Pkwy North, Suite 900
Houston, Tx 77064
Salas O'Brien Registration: F-4111
Salas O'Brien Project Number: 2024-01571-00

BEAUMONT INDEPENDENT SCHOOL DISTRICT
WESTBROOK HIGH SCHOOL
AIR HANDLER REPLACEMENT

BRADLEY KALMANS
80219
LICENSED
PROFESSIONAL ENGINEER
03-29-24

ELECTRICAL
FLOOR PLAN,
SCHEDULES,
LEGENDS AND
DETAILS

E1.00