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

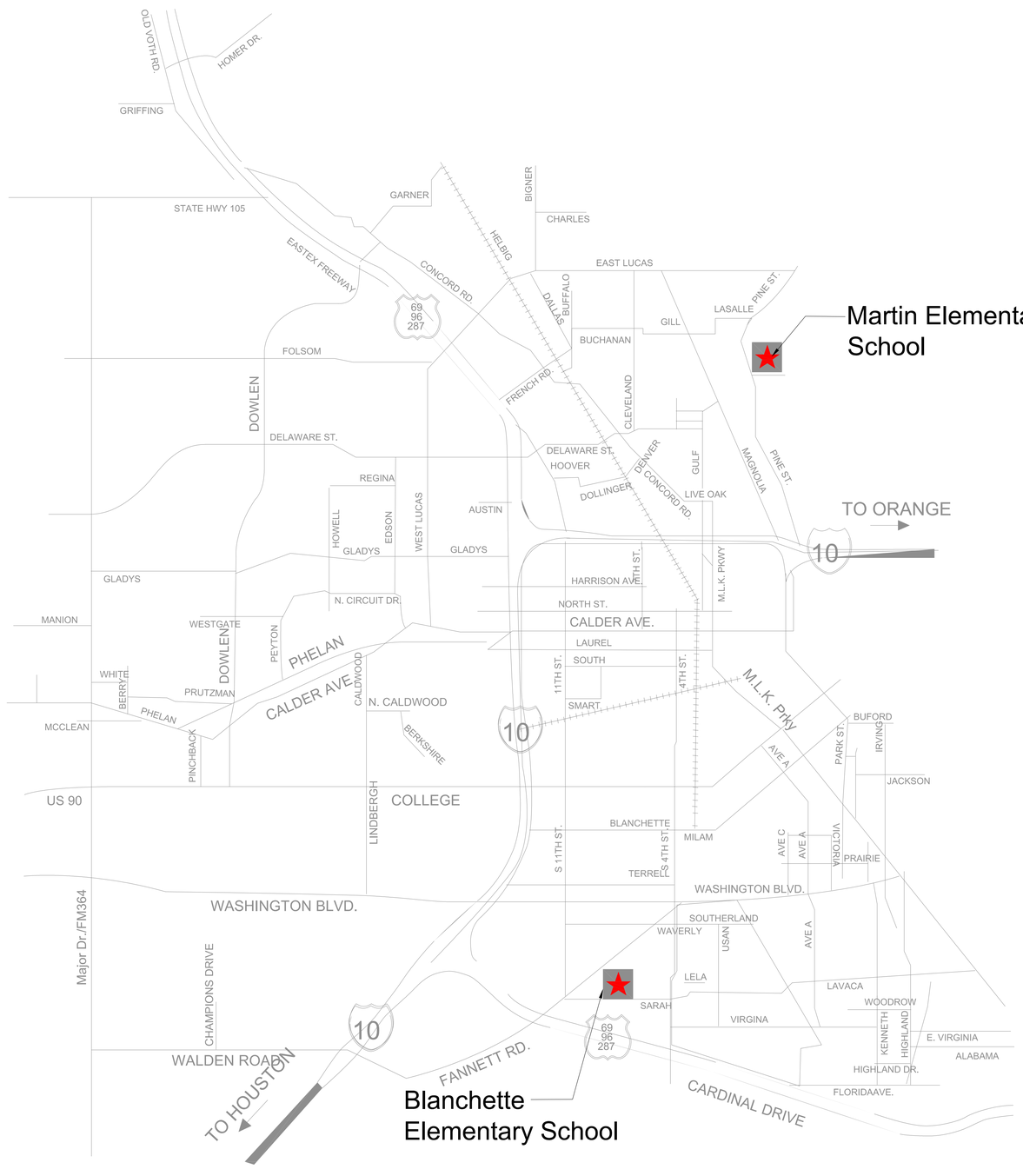
Salas O'Brien Project Number: 2023-04571-00; 2023-04572-00

BLANCHETTE ELEMENTARY SCHOOL
2550 SARAH ST., BEAUMONT, TX 77703

MARTIN ELEMENTARY SCHOOL
3500 PINE, BEAUMONT, TX 77703

BEAUMONT INDEPENDENT SCHOOL DISTRICT
CHILLER REPLACEMENT PROJECT
CSP #24.10

SITE LOCATIONS



Beaumont ISD
Preparing Our Next Generation

LIST OF DRAWINGS:

CS-1 COVER SHEET - LIST OF DRAWINGS

BLANCHETTE ELEMENTARY SCHOOL

M0.1 MECHANICAL DEMOLITION ENLARGED FLOOR PLAN
M0.2 MECHANICAL DEMOLITION ENLARGED FLOOR PLAN
M1.1 MECHANICAL ENLARGED FLOOR PLAN
M2.1 MECHANICAL LEGENDS, SCHEDULE, AND DETAILS
E1.1 ELECTRICAL FLOOR PLANS

MARTIN ELEMENTARY SCHOOL

M0.1 MECHANICAL DEMOLITION FLOOR PLAN
M1.1 MECHANICAL ENLARGED FLOOR PLAN
M2.1 MECHANICAL LEGENDS, SCHEDULES, AND DETAILS
E1.1 ELECTRICAL FLOOR PLANS

BRADLEY KALMANS
92219
LICENSED
PROFESSIONAL ENGINEER
10-16-2023

COVER SHEET – LIST OF DRAWINGS
CS-1

DEMOLITION GENERAL NOTES:

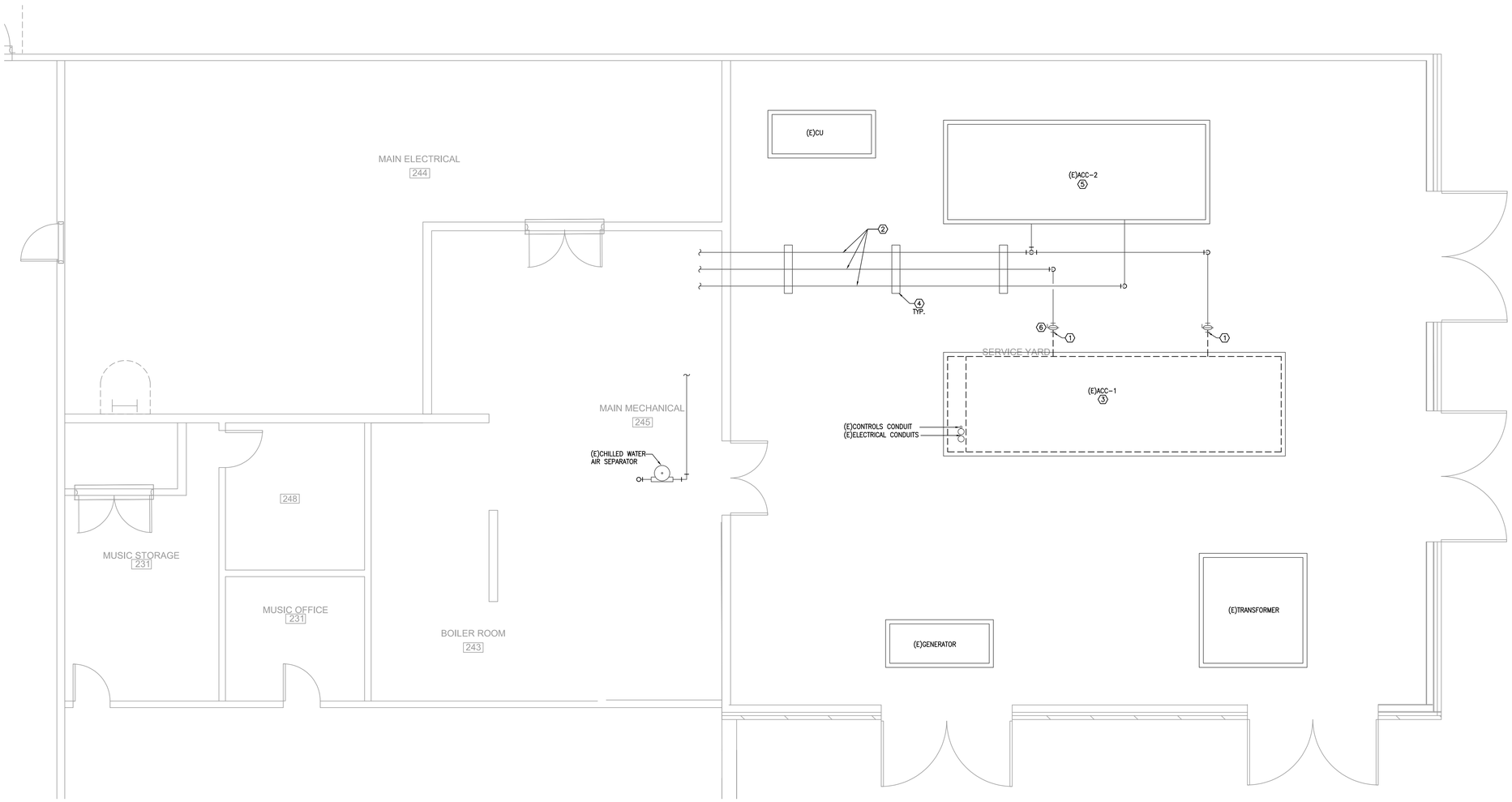
1. THESE CONSTRUCTION DRAWINGS ARE DIAGRAMMATIC, AND DO NOT NECESSARILY REFLECT ACTUAL DIMENSIONS. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO FEILD-VERIFY ALL DIMENSIONS AND COORDINATE PLACEMENT OF ALL EQUIPMENT AND ROUTING OF ALL PIPING AND/OR DUCT SYSTEMS.
2. ALL MECHANICAL SYSTEMS SHOWN ON THIS PLAN ARE FROM EXISTING DRAWINGS AND PRELIMINARY FIELD WORK. CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFYING ALL LOCATIONS AND SIZES OF MECHANICAL SYSTEMS PRIOR TO THE START OF WORK.
3. OWNER SHALL HAVE FIRST RIGHT OF REFUSAL ON ALL HVAC EQUIPMENT BEING REMOVED FROM THIS PROJECT. THIS INCLUDES BUT NOT LIMITED TO INTERNAL COMPONENTS OF CHILLERS, VALVES, AND PIPE STANDS.

DEMOLITION KEYED NOTES:

1. REMOVE EXISTING SUPPLY AND RETURN CHILLED WATER PIPING UP TO POINT INDICATED. CONTRACTOR SHALL VERIFY EXISTING PIPE SIZE BEFORE DEMOLISHING.
2. EXISTING SUPPLY AND RETURN CHILLED WATER PIPING SHALL REMAIN.
3. EXISTING AIR COOLED CHILLER SHALL BE REMOVED. EXISTING CONCRETE PAD SHALL REMAIN.
4. EXISTING PIPING SUPPORTS SHALL REMAIN.
5. EXISTING AIR COOLED CHILLER SHALL REMAIN IN PLACE AND OPERATIONAL.
6. EXISTING ISOLATION VALVE SHALL REMAIN.

DEMO SYMBOL LEGEND

RENOVATIONS	
	ITEM TO REMAIN
	ITEM TO BE REMOVED
	POINT OF CONNECTION FROM NEW TO EXISTING



NORTH

1 **MECHANICAL DEMOLITION ENLARGED FLOOR PLAN - BLANCHETTE ES**
SCALE: 1/4"=1'-0"

Salas O'Brien
salasobrien.com 281-664-1900
HOUSTON TX
10930 W. SAM HOUSTON PKWY
NORTH SUITE 900
HOUSTON, TX 77064
Registration: F-4111
Project No.: 2023-04572-00

CONFIDENTIAL
THIS DRAWING AND ASSOCIATED DESIGN ELEMENTS ARE CONFIDENTIAL AND THE PROPERTY OF SALAS O'BRIEN, WHICH RETAINS ALL COMMON LAW COPYRIGHT, STATUTORY AND OTHER RIGHTS THERETO. ANY UNAUTHORIZED USE, REUSE OR REPRODUCTION IS PROHIBITED WITHOUT EXPRESS WRITTEN AGREEMENT BY SALAS O'BRIEN. THIS DRAWING (AS WELL AS ANY COPIES) SHALL BE RETURNED TO SALAS O'BRIEN UPON REQUEST.

PROFESSIONAL SEAL

BRADLEY KALMANS 80219 LICENSED PROFESSIONAL ENGINEER
10-16-2023

ISSUE DATE	DESCRIPTION
10/16/2023	100%

Beaumont ISD
Preparing Our Next Generation

BEAUMONT ISD CHILLER REPLACEMENT PROJECT CSP# 24.10

Building Name/Location

NOTES

REVISIONS

Δ	DESCRIPTION	DATE

CHECKED BY: SH
DRAWN BY: AA

SHEET NAME

MECHANICAL DEMOLITION ENLARGED FLOOR PLAN - BLANCHETTE ES

SHEET NUMBER: M0.1
REVISION:

File Path
01 January, 2000

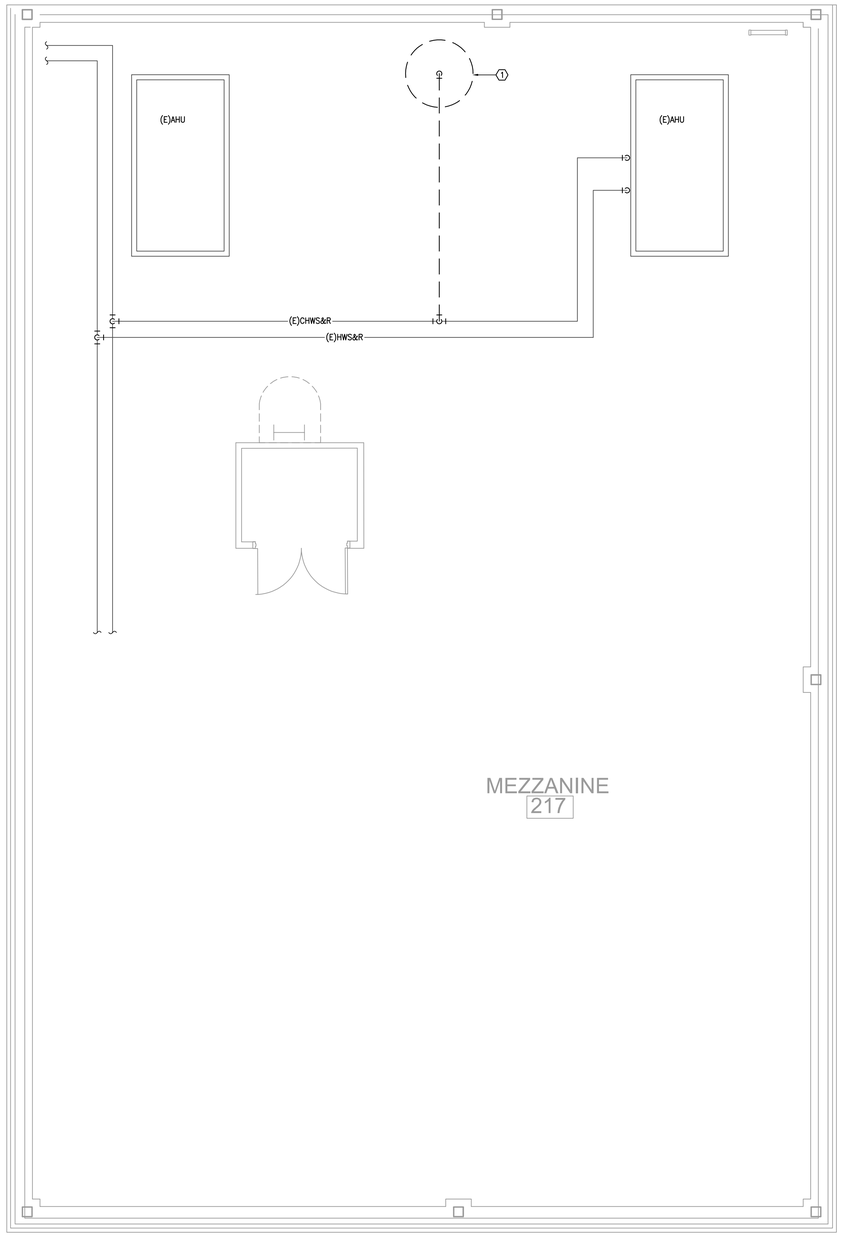
DEMOLITION GENERAL NOTES:

1. THESE CONSTRUCTION DRAWINGS ARE DIAGRAMMATIC, AND DO NOT NECESSARILY REFLECT ACTUAL DIMENSIONS. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO FEILD-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 DRAWINGS AND PRELIMINARY FIELD WORK. CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFYING ALL LOCATIONS AND SIZES OF MECHANICAL SYSTEMS PRIOR TO THE START OF WORK.
3. OWNER SHALL HAVE FIRST RIGHT OF REFUSAL ON ALL HVAC EQUIPMENT BEING REMOVED FROM THIS PROJECT. THIS INCLUDES BUT NOT LIMITED TO INTERNAL COMPONENTS OF CHILLERS, VALVES, AND PIPE STANDS.

DEMOLITION KEYED NOTES:

1. EXISTING CHILLED WATER EXPANSION TANK AND ASSOCIATED PIPING SHALL BE REMOVED.

DEMO SYMBOL LEGEND	
RENOVATIONS	
	ITEM TO REMAIN
	ITEM TO BE REMOVED
	POINT OF CONNECTION FROM NEW TO EXISTING



NORTH

1 **MECHANICAL ENLARGED DEMOLITION MEZZANINE PLAN - BLANCHETTE ES**
SCALE: 1/4" = 1'-0"

Salas O'Brien
MR
salasobrien.com 281-664-1900
VP
HOUSTON TX
10930 W. SAM HOUSTON PKWY
NORTH SUITE 900
HOUSTON, TX 77064
Registration: F-4111
Project No.: 2023-04572-00

CONFIDENTIAL
THIS DRAWING AND ASSOCIATED DESIGN ELEMENTS ARE CONFIDENTIAL AND THE PROPERTY OF SALAS O'BRIEN, WHICH RETAINS ALL COMMON LAW COPYRIGHT, STATUTORY AND OTHER RIGHTS THERETO. ANY UNAUTHORIZED USE, REUSE OR REPRODUCTION IS PROHIBITED, UNLESS OTHERWISE AGREED TO BY SALAS O'BRIEN. THIS DRAWING (AS WELL AS ANY COPIES) SHALL BE RETURNED TO SALAS O'BRIEN UPON REQUEST.

PROFESSIONAL SEAL



10-16-2023

ISSUE DATE	DESCRIPTION
10/16/2023	100%

Beaumont ISD
Preparing Our Next Generation

BEAUMONT ISD CHILLER REPLACEMENT PROJECT CSP# 24.10

Building Name/Location

NOTES

REVISIONS

Δ	DESCRIPTION	DATE

CHECKED BY	DRAWN BY
SH	AA

SHEET NAME

MECHANICAL DEMOLITION FLOOR PLANS - BLANCHETTE ES

SHEET NUMBER	REVISION
M0.2	

File Path
01 January, 2000

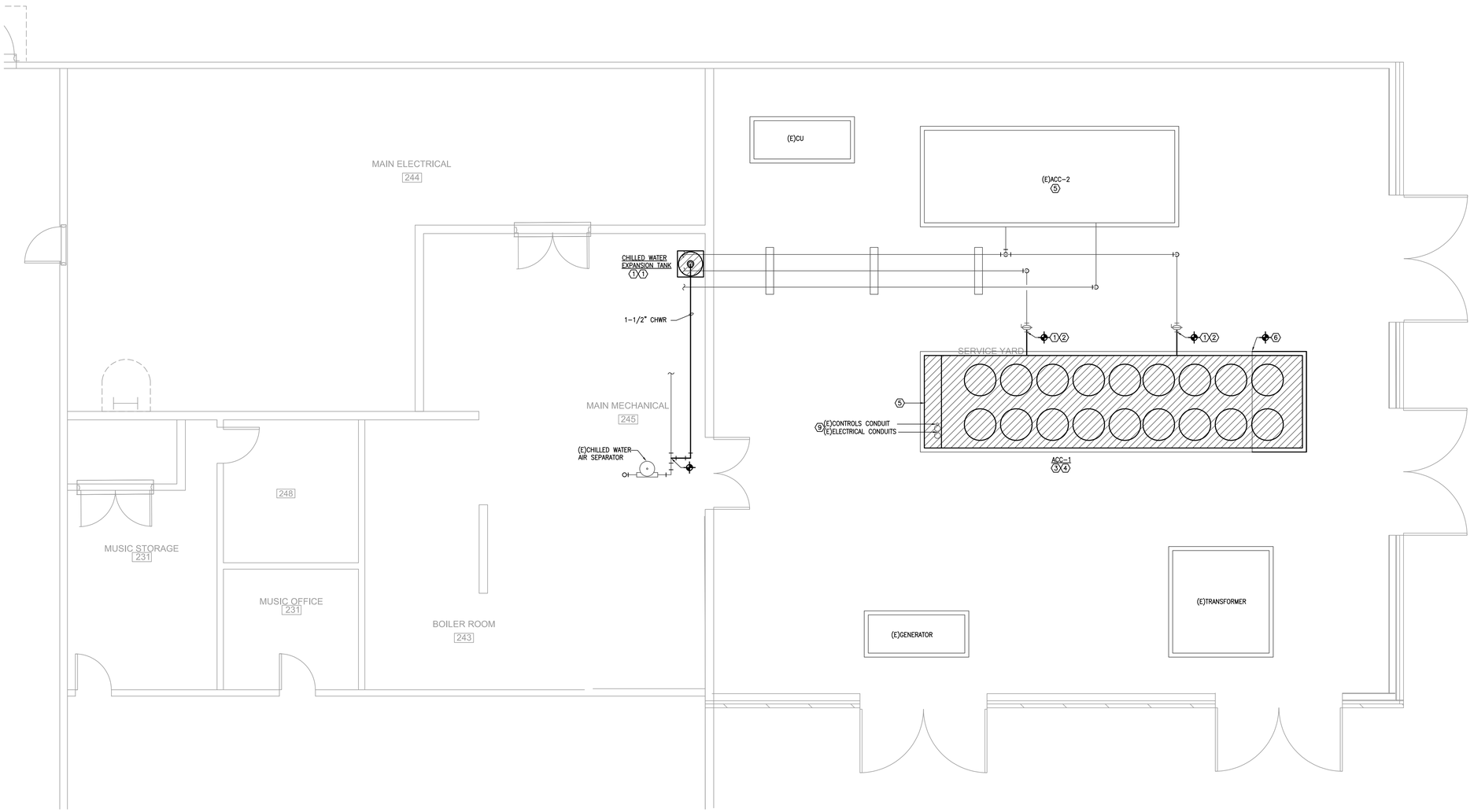
MECHANICAL GENERAL NOTES:

1. MECHANICAL CONTRACTOR SHALL COORDINATE WITH THE ELECTRICAL CONTRACTOR FOR ALL ELECTRICAL POWER REQUIREMENTS.

2. 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.

MECHANICAL KEYED NOTES:

1. PROVIDE OUTDOOR PIPING INSULATION AS SPECIFIED.
2. PROVIDE NEW CHW S/R PIPING AS SPECIFICED AND CONNECT TO EXISTING PIPING. RE:3/M2.1 FOR PARTIAL PIPING DIAGRAM.
3. VERIFY AIR-COOLED CHILLER SERVICE CLEARANCES WITH MANUFACTURER. COORDINATE WITH OTHER TRADES NOT TO OBSTRUCT.
4. INSTALL NEW CHILLER ON EXISTING CONCRETE PAD. EXTEND EXISTING CONCRETE PAD AS REQUIRED TO ACCOMMODATE NEW CHILLER.
5. POWER CONNECTION FOR NEW CHILLER SHALL BE AT THIS END, SAME LOCATION AS DEMOLISHED CHILLER.
6. EXISTING CONCRETE PAD SHALL BE EXTENDED FOR THE NEW CHILLER PLACEMENT.
7. BELL & GOSSETT 120 GALLON CHILLED WATER EXPANSION TANK.
8. 4" HOUSEKEEPING CONCRETE PAD.
9. CONTRACTOR SHALL COORDINATE INSTALLATION OF CHILLER WITH EXISTING POWER AND CONTROL CONDUITS STUBS.



NORTH

1 **MECHANICAL ENLARGED FLOOR PLAN - BLANCHETTE ES**
SCALE: 1/4"=1'-0"

Salas O'Brien
salasobrien.com 281-664-1900
HOUSTON TX
10930 W. SAM HOUSTON PKWY
NORTH SUITE 900
HOUSTON, TX 77064
Registration: F-4111
Project No.: 2023-04572-00

CONFIDENTIAL
THIS DRAWING AND ASSOCIATED DESIGN ELEMENTS ARE CONFIDENTIAL AND THE PROPERTY OF SALAS O'BRIEN, WHICH RETAINS ALL COMMON LAW COPYRIGHT, STATUTORY AND OTHER RIGHTS THERETO. ANY UNAUTHORIZED USE, REUSE OR REPRODUCTION IS PROHIBITED WITHOUT THE EXPRESS AGREEMENT BY SALAS O'BRIEN. THIS DRAWING (AS WELL AS ANY COPIES) SHALL BE RETURNED TO SALAS O'BRIEN UPON REQUEST.

PROFESSIONAL SEAL

BRADLEY KALMANS
80219
LICENSED
PROFESSIONAL ENGINEER
10-16-2023

ISSUE DATE	DESCRIPTION
10/16/2023	100%

Beaumont ISD
Preparing Our Next Generation

BEAUMONT ISD CHILLER REPLACEMENT PROJECT CSP# 24.10

Building Name/Location

NOTES

REVISIONS

Δ	DESCRIPTION	DATE

CHECKED BY SH
DRAWN BY AA

SHEET NAME

MECHANICAL ENLARGED FLOOR PLAN - BLANCHETTE ES

SHEET NUMBER M1.1
REVISION

File Path
01 January, 2000

SYMBOL LEGEND

SYMBOL	DESCRIPTION (DISREGARD ITEMS NOT SHOWN ON PLANS)
GENERAL	
(#)	KEY NOTE TAG
(#)	NOTE SPECIFIC TO DETAIL TAG
1	REVISION TAG
	NEW EQUIPMENT
PIPING	
—CWS&R—	CONDENSER WATER SUPPLY & RETURN (TOTAL OF TWO PIPES, ONLY ONE PIPE SHOWN FOR DRAWING CLARITY)
—CWS—	CONDENSER WATER SUPPLY
—CWR—	CONDENSER WATER RETURN
—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
—AD—	AUXILLARY CONDENSATE DRAIN LINE
—RLR—	REFRIGERANT LIQUID & GAS RECIRCULATION LINE (TOTAL OF TWO PIPES, ONLY ONE PIPE SHOWN FOR DRAWING CLARITY)
—RL—	REFRIGERANT LIQUID LINE
—HG—	REFRIGERANT HOT GAS LINE
—RS—	REFRIGERANT SUCTION 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)
	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
	FLOW MEASURING STATION
	EXPANSION JOINT
	FLEXIBLE CONNECTION
	GAUGE COCK
	SITE GLASS
	DIFFERENTIAL PRESSURE SENSOR
	TURBINE FLOW METER
	ANCHOR
	PIPE GUIDE
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

DEMO SYMBOL LEGEND

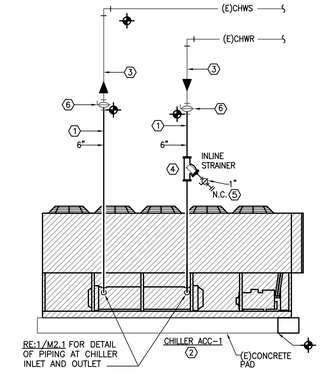
RENOVATIONS	
	ITEM TO REMAIN
	ITEM TO BE REMOVED
	POINT OF CONNECTION FROM NEW TO EXISTING

PACKAGED AIR COOLED SCREW CHILLER

MARK	ACTUAL CAPACITY (TONS)	LEAVING WATER TEMP. (°F)	GPM	MAXIMUM WATER PRESSURE DROP (FT.)	AMBIENT AIR TEMP. (°F)	CURRENT CHARACTERISTIC	REMARKS
ACC-1	278.0	44.0	556.0	20.0	95.0	460/3/60	1,2,3,4

GENERAL NOTES:
1. MAXIMUM FOULING FACTOR FOR THE EVAPORATOR IS 0.0001
2. MAINTAIN MINIMUM CLEARANCES REQUIRED BY CHILLER MANUFACTURER FOR PROPER AIRFLOW TO FANS AND UNIT. MANTAIN MINIMUM CLEARANCE AS REQUIRED TO OPEN ACCESS AND CONTROL DOORS ON EQUIPMENT FOR SERVICE, MAINTENANCE AND INSPECTION. MAINTAIN MINIMUM ELECTRICAL CLEARANCES AS REQUIRED BY NEC.
3. CHILLER SHALL MEET OR EXCEED THE AHRI FULL-LOAD AND PART-LOAD PATH A OR PATH B EFFICIENCIES INDICATED IN THE 2015 IECC.

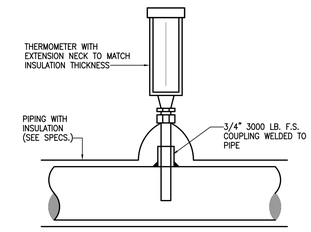
REMARKS:
1. PROVIDE WITH LOW AMBIENT HEAD PRESSURE CONTROL.
2. PROVIDE WITH INTEGRAL MAIN ELECTRICAL DISCONNECT SWITCH.
3. PROVIDE WITH INSULATION ON ALL SUCTION LINES.
4. NEW CHILLER SHALL HAVE A MAX LENGTH OF 372".
5. PROVIDE WITH A MINIMUM FULL LOAD EFFICIENCY OF 9.7 EER AND A MINIMUM IPLV OF 17.83



MECHANICAL KEYED NOTES

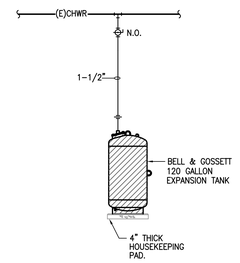
1. CONTRACTOR SHALL FIELD VERIFY EXISTING PIPE SIZES.
2. INSTALL NEW CHILLER ON EXISTING CONCRETE HOUSEKEEPING PAD. EXTEND EXISTING HOUSEKEEPING PAD AS REQUIRED TO ACCOMMODATE NEW CHILLER.
3. PROVIDE ALL OUTDOOR PIPING WITH INSULATION AND ALUMINUM JACKETING AS SPECIFIED.
4. PROVIDE INLINE STRAINER IN VERTICAL PIPE WITH 1" DRAIN LINE.
5. PROVIDE BALL VALVE WITH HOSE THREAD ADAPTER.
6. EXISTING ISOLATION VALVE SHALL REMAIN.

3 CHILLED WATER PIPING DIAGRAM
SCALE: NO SCALE

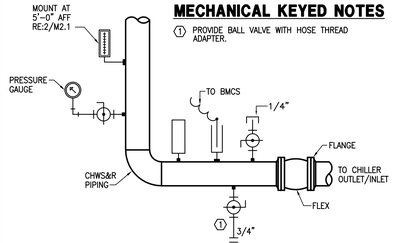


NOTES: 1. SEE TEMPERATURE TEST WELL DETAIL FOR MOUNTING ARRANGEMENTS AND CLEARANCES
2. MOUNT TO BE READABLE FROM FLOOR AT 5'-6" EYE LEVEL (7'-0" MAX.)

2 THERMOMETER INSTALLATION
SCALE NONE CP009



4 EXPANSION TANK PARTIAL PIPING DIAGRAM
SCALE NONE



MECHANICAL KEYED NOTES

1. PROVIDE BALL VALVE WITH HOSE THREAD ADAPTER.

1 TYPICAL PIPING AT INLET AND OUTLET OF CHILLER
SCALE NONE

Salas O'Brien
salasobrien.com 281-664-1900
HOUSTON TX
10930 W. SAM HOUSTON PKWY
NORTH SUITE 900
HOUSTON, TX 77064
Registration: F-4111
Project No.: 2023-04572-00

CONFIDENTIAL
THIS DRAWING AND ASSOCIATED DESIGN ELEMENTS ARE CONFIDENTIAL AND THE PROPERTY OF SALAS O'BRIEN, WHICH RETAINS ALL COMMON LAW, COPYRIGHT, STATUTORY AND OTHER RIGHTS THERETO. ANY UNAUTHORIZED USE, REUSE OR REPRODUCTION IS PROHIBITED WITHOUT EXPRESS WRITTEN AGREEMENT BY SALAS O'BRIEN. THIS DRAWING (OR ELECTRONIC COPY OF ANY COPIES) SHALL BE RETURNED TO SALAS O'BRIEN UPON REQUEST.

PROFESSIONAL SEAL

BRADLEY KALMANS 80219 LICENSED PROFESSIONAL ENGINEER STATE OF TEXAS

10-16-2023

ISSUE DATE	DESCRIPTION
10/16/2023	100%

Beaumont ISD
Preparing Our Next Generation

BEAUMONT ISD CHILLER REPLACEMENT PROJECT CSP# 24.10

Building Name/Location

NOTES

REVISIONS

Δ	DESCRIPTION	DATE

CHECKED BY	DRAWN BY
SH	AA

SHEET NAME

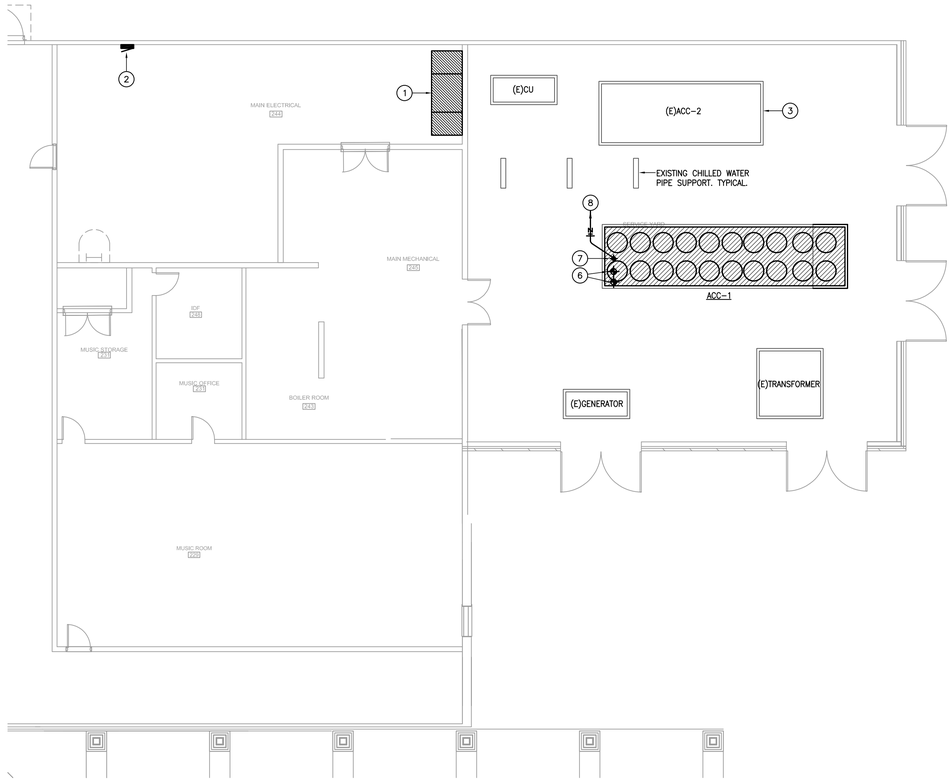
MECHANICAL LEGEND, SCHEDULE, AND DETAILS - BLANCHETTE ES

SHEET NUMBER	REVISION
M2.1	

File Path
01 January, 2000

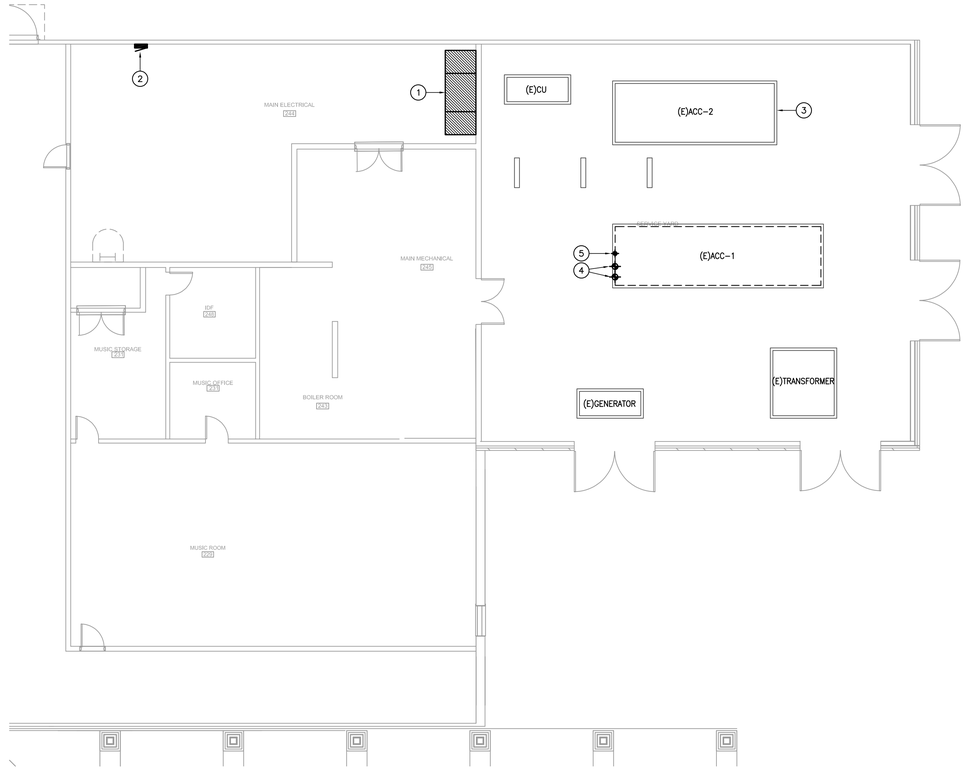
ELECTRICAL KEYED NOTES:

1. EXISTING 277/480V, 3PH, 4W, 3000A SQUARE 'D' MAIN SWITCHBOARD 'BESMDP' TO REMAIN. REMOVE EXISTING 800A/3P CIRCUIT BREAKER SERVING CHILLER ACC-1 AND REPLACE WITH NEW 700A 'MJ' SERIES 65KAIC BREAKER.
2. EXISTING 120/208V, 3PH, 4W, 225A PANEL 'BESLE' TO REMAIN.
3. EXISTING AIR COOLED CHILLER ACC-2 TO REMAIN.
4. DISCONNECT EXISTING CONDUCTORS IN (2) 4" SEALTIGHT CONDUITS FOR REMOVAL OF EXISTING CHILLER. LEAVE CONDUIT AND WIRE IN PLACE FOR CONNECTION OF NEW CHILLER.
5. EXISTING BMCS CONDUIT STUB UP TO REMAIN. DISCONNECT EXISTING BMCS CONDUCTORS FROM CHILLER AND LEAVE IN PLACE FOR CONNECTION OF NEW CHILLER.
6. RECONNECT EXISTING FLEX POWER CONDUITS AND WIRE TO NEW CHILLER. EXTEND AS REQUIRED TO MAKE FINAL CONNECTION.
7. RECONNECT EXISTING BMS CONDUCTORS TO NEW CHILLER. EXTEND AS REQUIRED TO MAKE FINAL CONNECTION.
8. ROUTE 2#10, 1#10G. 3/4"C TO SPARE BREAKER IN EXISTING PANEL 'BESLE', CIRCUIT #6. REMOVE EXISTING 20A/1P CIRCUIT BREAKER AND REPLACE WITH NEW 30I/1P BREAKER. ROUTE NEW CONDUIT ON EXISTING CHILLED WATER PIPE SUPPORTS.



NORTH

2 **ELECTRICAL FLOOR PLAN - BLANCHETTE ES**
SCALE: 1/8"=1'-0"



NORTH

1 **ELECTRICAL DEMOLITION FLOOR PLAN - BLANCHETTE ES**
SCALE: 1/8"=1'-0"

Salas O'Brien
salasobrien.com 281-664-1900
HOUSTON TX
10930 W. SAM HOUSTON PKWY
NORTH SUITE 900
HOUSTON, TX 77064
Registration: F-4111
Project No.: 2023-04572-00

CONFIDENTIAL
THIS DRAWING AND ASSOCIATED DESIGN ELEMENTS ARE CONFIDENTIAL AND THE PROPERTY OF SALAS O'BRIEN, WHICH RETAINS ALL COMMON LAW COPYRIGHT, STATUTORY AND OTHER RIGHTS THERETO. ANY UNAUTHORIZED USE, REUSE OR REPRODUCTION IS PROHIBITED WITHOUT EXPRESS WRITTEN AGREEMENT BY SALAS O'BRIEN. THIS DRAWING (OR ELECTRONIC OR ANY COPIES) SHALL BE RETURNED TO SALAS O'BRIEN UPON REQUEST.

PROFESSIONAL SEAL



10-16-2023

ISSUE DATE	DESCRIPTION
10/16/2023	100%

Beaumont ISD
Preparing Our Next Generation

BEAUMONT ISD CHILLER REPLACEMENT PROJECT CSP# 24.10

Building Name/Location

NOTES

REVISIONS

Δ	DESCRIPTION	DATE

CHECKED BY	DRAWN BY
SH	AA

SHEET NAME

ELECTRICAL FLOOR PLANS - BLANCHETTE ES

SHEET NUMBER	REVISION
E1.1	

File Path
01 January, 2000

DEMOLITION GENERAL NOTES:

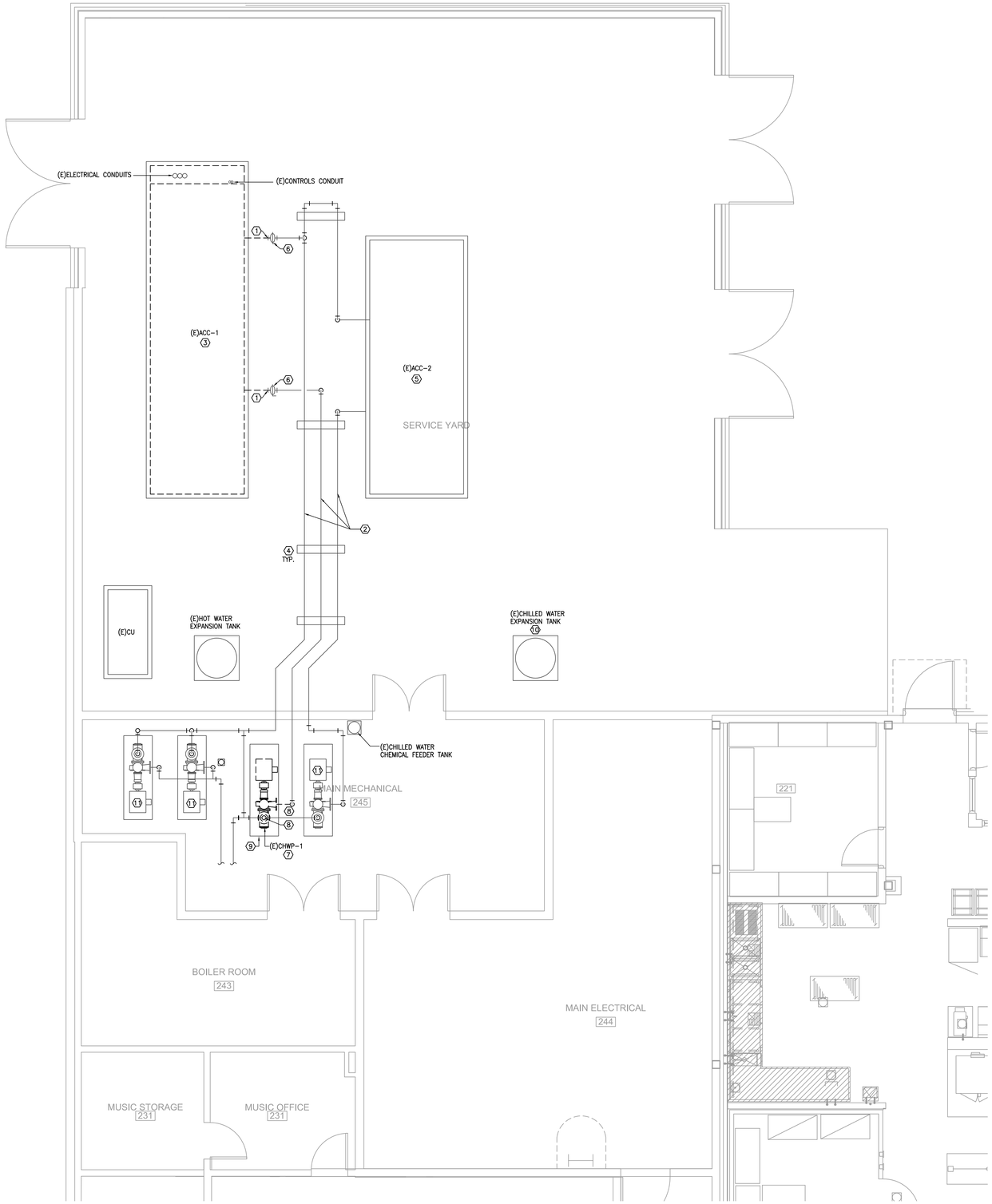
1. THESE CONSTRUCTION DRAWINGS ARE DIAGRAMMATIC, AND DO NOT NECESSARILY REFLECT ACTUAL DIMENSIONS. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO FEILD-VERIFY ALL DIMENSIONS AND COORDINATE PLACEMENT OF ALL EQUIPMENT AND ROUTING OF ALL PIPING AND/OR DUCT SYSTEMS.
2. ALL MECHANICAL SYSTEMS SHOWN ON THIS PLAN ARE FROM EXISTING DRAWINGS AND PRELIMINARY FIELD WORK. CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFYING ALL LOCATIONS AND SIZES OF MECHANICAL SYSTEMS PRIOR TO THE START OF WORK.
3. OWNER SHALL HAVE FIRST RIGHT OF REFUSAL ON ALL HVAC EQUIPMENT BEING REMOVED FROM THIS PROJECT. THIS INCLUDES BUT NOT LIMITED TO INTERNAL COMPONENTS OF CHILLERS, PUMPS, VALVES, AND PIPE STANDS.

DEMOLITION KEYED NOTES:

1. REMOVE EXISTING SUPPLY AND RETURN CHILLED WATER PIPING UP TO POINT INDICATED. CONTRACTOR SHALL VERIFY EXISTING PIPE SIZE BEFORE DEMOLISHING.
2. EXISTING SUPPLY AND RETURN CHILLED WATER PIPING SHALL REMAIN.
3. EXISTING AIR COOLED CHILLER SHALL BE REMOVED. EXISTING CONCRETE PAD SHALL REMAIN.
4. EXISTING PIPING SUPPORTS SHALL REMAIN.
5. EXISTING AIR COOLED CHILLER SHALL REMAIN IN PLACE AND OPERATIONAL.
6. EXISTING ISOLATION VALVE SHALL REMAIN.
7. EXISTING CHILLED WATER PUMP SHALL BE REMOVED.
8. EXISTING CHILLED WATER PIPE SHALL BE REMOVED BACK TO ISOLATION VALVE.
9. EXISTING CONCRETE PAD SHALL REMAIN.
10. REMOVE INSULATION OF EXISTING EXPANSION CHILLED WATER EXPANSION TANK.
11. EXISTING PUMP SHALL REMAIN.

DEMO SYMBOL LEGEND

RENOVATIONS	
	ITEM TO REMAIN
	ITEM TO BE REMOVED
	POINT OF CONNECTION FROM NEW TO EXISTING



NORTH

1 **MECHANICAL DEMOLITION ENLARGED FLOOR PLAN - MARTIN ES**
SCALE: 1/4"=1'-0"

Salas O'Brien
salasobrien.com 281-664-1900
HOUSTON TX
10930 W. SAM HOUSTON PKWY
NORTH SUITE 900
HOUSTON, TX 77064
Registration: F-4111
Project No.: 2023-04571-00

CONFIDENTIAL
THIS DRAWING AND ASSOCIATED DESIGN ELEMENTS ARE CONFIDENTIAL AND THE PROPERTY OF SALAS O'BRIEN, WHICH RETAINS ALL COMMON LAW COPYRIGHT, STATUTORY AND OTHER RIGHTS THERETO. ANY UNAUTHORIZED USE, REUSE OR REPRODUCTION IS PROHIBITED WITHOUT EXPRESS WRITTEN AGREEMENT BY SALAS O'BRIEN. THIS DRAWING (OR ELECTRONIC OR ANY COPIES) SHALL BE RETURNED TO SALAS O'BRIEN UPON REQUEST.

PROFESSIONAL SEAL

BRADLEY KALMANS
REGISTERED
80219
LICENSED
PROFESSIONAL ENGINEER
STATE OF TEXAS
10-16-2023

ISSUE DATE	DESCRIPTION
10/16/2023	100%

Beaumont ISD
Preparing Our Next Generation

BEAUMONT ISD CHILLER REPLACEMENT PROJECT CSP# 24.10

Building Name/Location

NOTES

REVISIONS

Δ	DESCRIPTION	DATE

CHECKED BY: SH
DRAWN BY: AA

SHEET NAME

MECHANICAL DEMOLITION FLOOR PLAN - MARTIN ES

SHEET NUMBER: M0.1
REVISION:

File Path
01 January, 2000

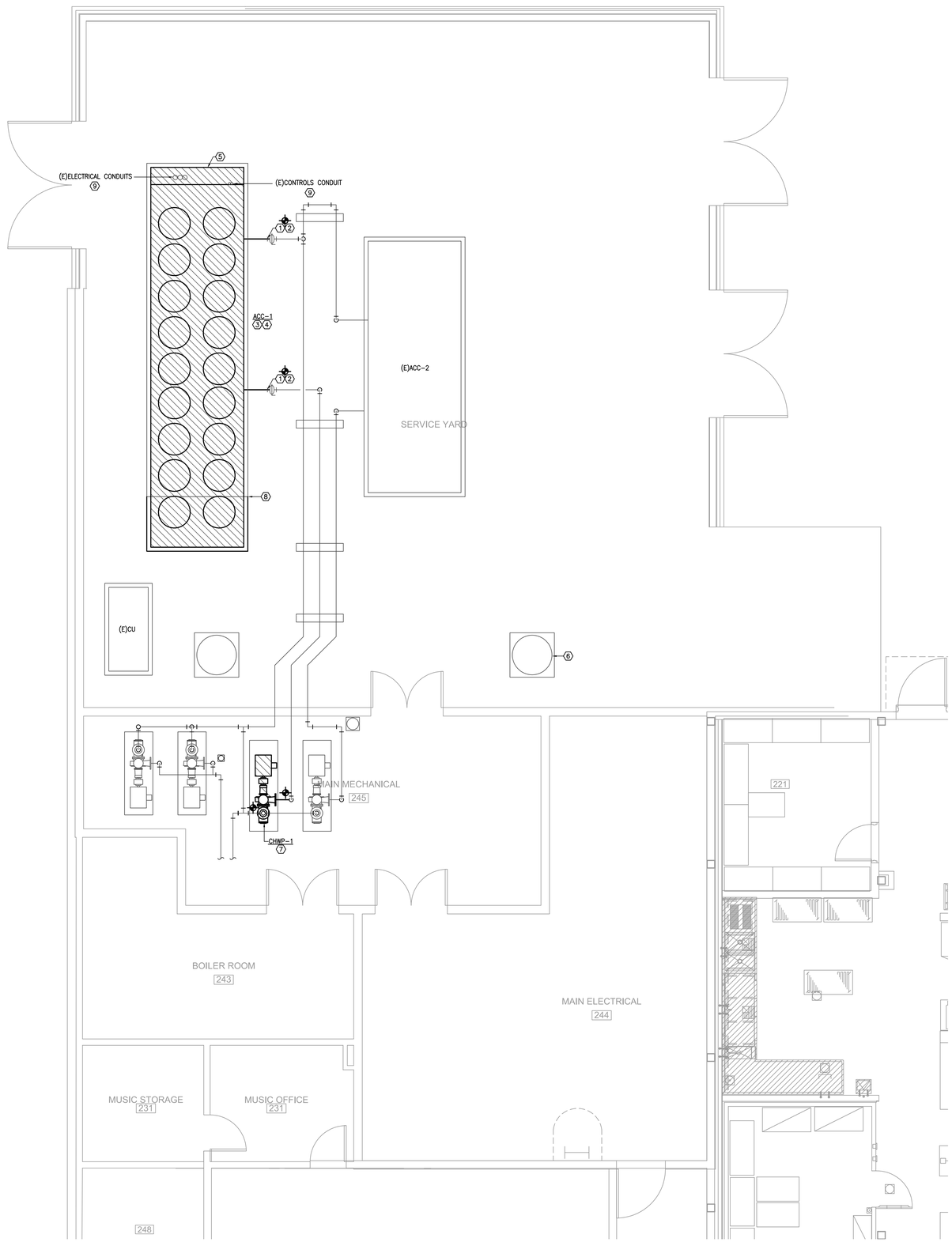
MECHANICAL GENERAL NOTES:

1. MECHANICAL CONTRACTOR SHALL COORDINATE WITH THE ELECTRICAL CONTRACTOR FOR ALL ELECTRICAL POWER REQUIREMENTS.

2. 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.

MECHANICAL KEYED NOTES:

1. PROVIDE OUTDOOR PIPING INSULATION AS SPECIFIED.
2. PROVIDE NEW CHW S/R PIPING AS SPECIFICED AND CONNECT TO EXISTING PIPING. RE:3/M2.1 FOR PARTIAL PIPING DIAGRAM.
3. VERIFY AIR-COOLED CHILLER SERVICE CLEARANCES WITH MANUFACTURER. COORDINATE WITH OTHER TRADES NOT TO OBSTRUCT.
4. INSTALL NEW CHILLER ON EXISTING CONCRETE PAD. EXTEND EXISTING CONCRETE PAD AS REQUIRED TO ACCOMMODATE NEW CHILLER.
5. POWER CONNECTION FOR NEW CHILLER SHALL BE AT THIS END, SAME LOCATION AS DEMOLISHED CHILLER.
6. EXISTING CHILLED WATER EXPANSION TANK SHALL BE REINSULATED REFER TO SPECIFICATION FOR OUTDOOR INSULATION. NAME PLATE SHALL NOT BE LEFT VISIBLE AND NOT INSULATED.
7. REFER TO DETAILS FOR END SUCTION PUMP INSTALLATION.
8. EXISTING CONCRETE PAD SHALL BE EXTENDED FOR THE NEW CHILLER PLACEMENT.
9. CONTRACTOR SHALL COORDINATE INSTALLATION OF CHILLER WITH EXISTING POWER AND CONTROL CONDUITS STUBS.



NORTH

1 **MECHANICAL ENLARGED FLOOR PLAN - MARTIN ES**
SCALE: 1/4"=1'-0"

Salas O'Brien
salasobrien.com 281-664-1900
HOUSTON TX
10930 W. SAM HOUSTON PKWY
NORTH SUITE 900
HOUSTON, TX 77064
Registration: F-4111
Project No.: 2023-04571-00

CONFIDENTIAL
THIS DRAWING AND ASSOCIATED DESIGN ELEMENTS ARE CONFIDENTIAL AND THE PROPERTY OF SALAS O'BRIEN, WHICH RETAINS ALL COMMON LAW COPYRIGHT, STATUTORY AND OTHER RIGHTS THERETO. ANY UNAUTHORIZED USE, REUSE OR REPRODUCTION IS PROHIBITED WITHOUT EXPRESS WRITTEN AGREEMENT BY SALAS O'BRIEN. THIS DRAWING (OR ELECTRONIC ANY COPIES) SHALL BE RETURNED TO SALAS O'BRIEN UPON REQUEST.

PROFESSIONAL SEAL

BRADLEY KALMANS
LICENSE
80219
LICENSED
PROFESSIONAL ENGINEER
10-16-2023

ISSUE DATE	DESCRIPTION
10/16/2023	100%

Beaumont ISD
Preparing Our Next Generation

BEAUMONT ISD CHILLER REPLACEMENT PROJECT CSP# 24.10

Building Name/Location

NOTES

REVISIONS

Δ	DESCRIPTION	DATE

CHECKED BY: SH
DRAWN BY: AA

SHEET NAME

MECHANICAL ENLARGED FLOOR PLAN - MARTIN ES

SHEET NUMBER: M1.1
REVISION:

File Path
01 January, 2000

PUMP

MARK	SERVICE	TYPE	GPM	HEAD (FT.)	MAXIMUM RPM	MOTOR HORSEPOWER	CURRENT	MANUFACTURER	MODEL	REMARKS
CHWP-1	CHILLED WATER	END SUCTION	556.0	50.0	1,750	15	460/3/60	ARMSTRONG	4030	1,2,3,4

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 WITH GAUGE TAPPINGS.
2. PROVIDE WITH SUCTION DIFFUSER.
3. PROVIDE WITH BACK PULL OUT.
4. PROVIDE WITH INERTIA BASE.

PACKAGED AIR COOLED SCREW CHILLER

MARK	ACTUAL CAPACITY (TONS)	LEAVING WATER TEMP. (°F)	GPM	MAXIMUM WATER PRESSURE DROP (FT.)	AMBIENT AIR TEMP. (°F)	CURRENT CHARACTERISTIC	REMARKS
ACC-1	278.0	44	556.0	20.0	95.0	460/3/60	1,2,3,4

GENERAL NOTES:
1. MAXIMUM FOULING FACTOR FOR THE EVAPORATOR IS 0.0001
2. MAINTAIN MINIMUM CLEARANCES REQUIRED BY CHILLER MANUFACTURER FOR PROPER AIRFLOW TO FANS AND UNIT. MAINTAIN MINIMUM CLEARANCE AS REQUIRED TO OPEN ACCESS AND CONTROL DOORS ON EQUIPMENT FOR SERVICE, MAINTENANCE AND INSPECTION. MAINTAIN MINIMUM ELECTRICAL CLEARANCES AS REQUIRED BY NEC.
3. CHILLER SHALL MEET OR EXCEED THE AHRI FULL-LOAD AND PART-LOAD PATH A OR PATH B EFFICIENCIES INDICATED IN THE 2015 IECC.

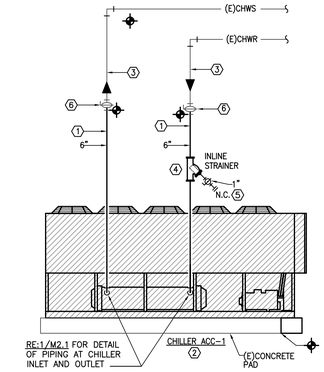
REMARKS:
1. PROVIDE WITH LOW AMBIENT HEAD PRESSURE CONTROL.
2. PROVIDE WITH INTEGRAL MAIN ELECTRICAL DISCONNECT SWITCH.
3. PROVIDE WITH INSULATION ON ALL SUCTION LINES.
4. NEW CHILLER SHALL HAVE A MAX LENGTH OF 372".
5. PROVIDE WITH A MINIMUM FULL LOAD EFFICIENCY OF 9.7 EER AND A MINIMUM IPLV OF 17.83

SYMBOL LEGEND

SYMBOL	DESCRIPTION (DISREGARD ITEMS NOT SHOWN ON PLANS)
GENERAL	
(#)	KEY NOTE TAG
(#)	NOTE SPECIFIC TO DETAIL TAG
(#)	REVISION TAG
	NEW EQUIPMENT
PIPING	
-CWS&R-	CONDENSER WATER SUPPLY & RETURN (TOTAL OF TWO PIPES, ONLY ONE PIPE SHOWN FOR DRAWING CLARITY)
—CWS—	CONDENSER WATER SUPPLY
—CWR—	CONDENSER WATER RETURN
-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
—AD—	AUXILLARY CONDENSATE DRAIN LINE
—RLR—	REFRIGERANT LIQUID & GAS RECIRCULATION LINE (TOTAL OF TWO PIPES, ONLY ONE PIPE SHOWN FOR DRAWING CLARITY)
—RL—	REFRIGERANT LIQUID LINE
—HG—	REFRIGERANT HOT GAS LINE
—RS—	REFRIGERANT SUCTION 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)
	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 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

DEMO SYMBOL LEGEND

RENOVATIONS	
	ITEM TO REMAIN
	ITEM TO BE REMOVED
	POINT OF CONNECTION FROM NEW TO EXISTING



MECHANICAL KEYED NOTES

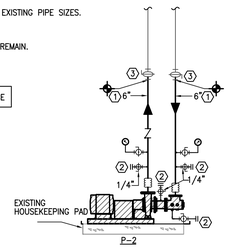
1. CONTRACTOR SHALL FIELD VERIFY EXISTING PIPE SIZES.
2. INSTALL NEW CHILLER ON EXISTING CONCRETE HOUSEKEEPING PAD. EXTEND EXISTING HOUSEKEEPING PAD AS REQUIRED TO ACCOMMODATE NEW CHILLER.
3. PROVIDE ALL OUTDOOR PIPING WITH INSULATION AND ALUMINUM JACKETING AS SPECIFIED.
4. PROVIDE INLINE STRAINER IN VERTICAL PIPE WITH 1" DRAIN LINE.
5. PROVIDE BALL VALVE WITH HOSE THREAD ADAPTER.
6. EXISTING ISOLATION VALVE SHALL REMAIN.

3 **CHILLED WATER PIPING DIAGRAM**
SCALE: NO SCALE

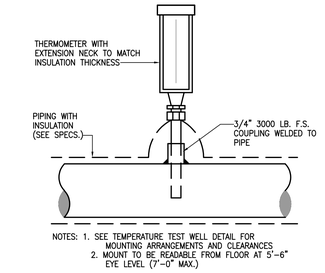
MECHANICAL KEYED NOTES

1. CONTRACTOR SHALL FIELD VERIFY EXISTING PIPE SIZES.
2. 1/4" BALL VALVE.
3. EXISTING ISOLATION VALVE SHALL REMAIN.

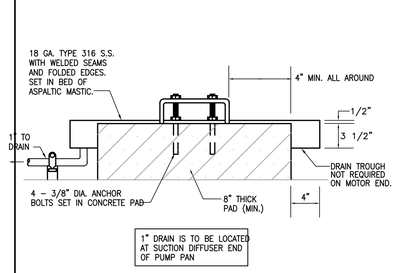
PROVIDE PUMP WITH INERTIA BASE



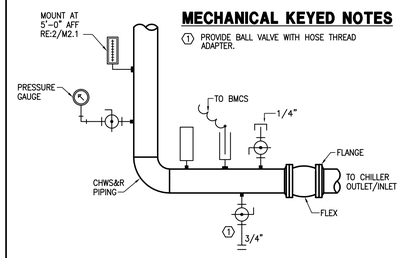
5 **CHILLED WATER PUMP PIPING DIAGRAM**
SCALE: NO SCALE



2 **THERMOMETER INSTALLATION**
SCALE NONE CP009



4 **PUMP PAN**
SCALE NONE



MECHANICAL KEYED NOTES

1. PROVIDE BALL VALVE WITH HOSE THREAD ADAPTER.

1 **TYPICAL PIPING AT INLET AND OUTLET OF CHILLER**
SCALE NONE

Salas O'Brien
salasobrien.com 281-664-1900
HOUSTON TX
10930 W. SAM HOUSTON PKWY
NORTH SUITE 900
HOUSTON, TX 77064
Registration: F-4111
Project No.: 2023-04571-00

CONFIDENTIAL
THIS DRAWING AND ASSOCIATED DESIGN ELEMENTS ARE CONFIDENTIAL AND THE PROPERTY OF SALAS O'BRIEN, WHICH RETAINS ALL COMMON LAW COPYRIGHT, STATUTORY AND OTHER RIGHTS THERETO. ANY UNAUTHORIZED USE, REUSE OR REPRODUCTION IS PROHIBITED WITHOUT EXPRESS WRITTEN AGREEMENT BY SALAS O'BRIEN. THIS DRAWING (CLASS REQUIRED) AND ANY COPIES) SHALL BE RETURNED TO SALAS O'BRIEN UPON REQUEST.

PROFESSIONAL SEAL



ISSUE DATE	DESCRIPTION
10/16/2023	100%

Beaumont ISD
Preparing Our Next Generation

BEAUMONT ISD CHILLER REPLACEMENT PROJECT CSP# 24.10

Building Name/Location

NOTES

REVISIONS

Δ	DESCRIPTION	DATE

CHECKED BY	DRAWN BY
SH	AA

SHEET NAME

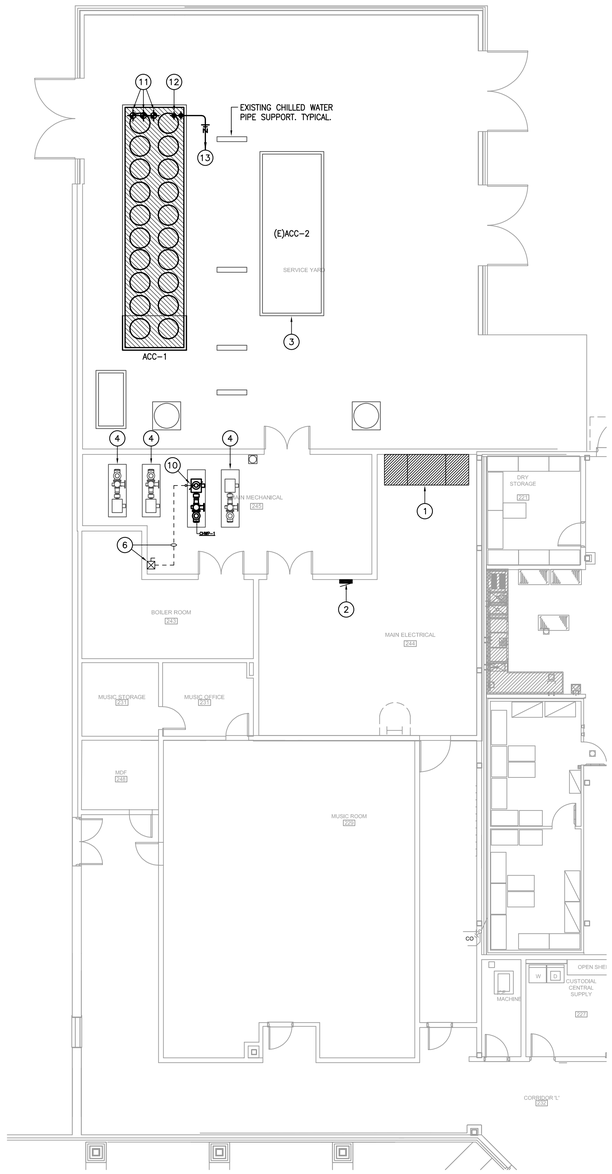
MECHANICAL LEGEND, SCHEDULES, AND DETAILS - MARTIN ES

SHEET NUMBER	REVISION
M2.1	

01 January, 2000 File Path

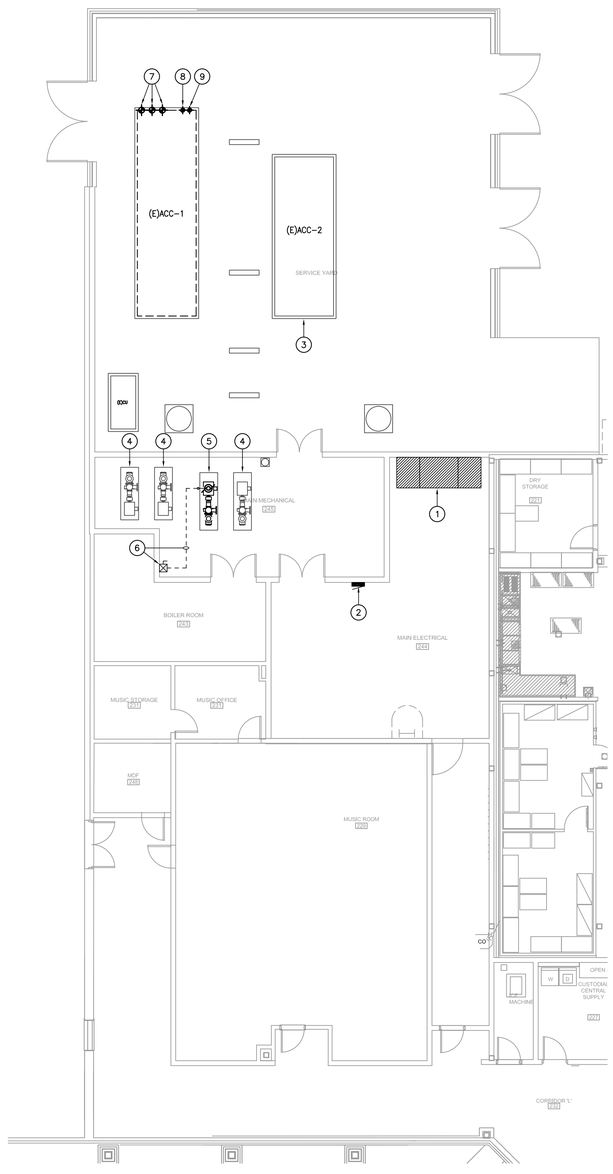
ELECTRICAL KEYED NOTES:

1. EXISTING 277/480V, 3PH, 4W, 3000A SQUARE 'D' MAIN SWITCHBOARD 'MESMDP' TO REMAIN. REMOVE EXISTING 800A/3P CIRCUIT BREAKER SERVING CHILLER ACC-1 AND REPLACE WITH NEW 700A 'MJ' SERIES 65KAIC BREAKER.
2. EXISTING 120/208V, 3PH, 4W, 225A PANEL 'MESLE' TO REMAIN.
3. EXISTING AIR COOLED CHILLER ACC-2 TO REMAIN.
4. EXISTING PUMP TO REMAIN.
5. EXISTING PUMP TCHWP-1 TO BE REPLACED. DISCONNECT FLEX CONDUIT TO PUMP AND LEAVE EXISTING WIRE AND FLEX CONDUIT IN PLACE FOR CONNECTION TO NEW PUMP.
6. EXISTING MOTOR STARTER AND UNDERGROUND BRANCH CIRCUIT TO REMAIN.
7. DISCONNECT EXISTING CONDUCTORS IN (3) 3" SEALTIGHT CONDUITS FOR REMOVAL OF EXISTING CHILLER. LEAVE CONDUIT AND WIRE IN PLACE FOR CONNECTION OF NEW CHILLER.
8. EXISTING BMCS CONDUIT STUB UP TO REMAIN. DISCONNECT EXISTING BMCS CONDUCTORS FROM CHILLER AND LEAVE IN PLACE FOR CONNECTION OF NEW CHILLER.
9. EXISTING BMCS CONDUIT STUB UP TO REMAIN.
10. RECONNECT EXISTING FLEX CONDUIT AND WIRE TO NEW PUMP. EXTEND AS REQUIRED TO MAKE FINAL CONNECTION.
11. RECONNECT EXISTING FLEX POWER CONDUITS AND WIRE TO NEW CHILLER. EXTEND AS REQUIRED TO MAKE FINAL CONNECTION. COORDINATE PLACEMENT OF NEW CHILLER WITH EXISTING CONDUIT STUB-UPS.
12. RECONNECT EXISTING BMS CONDUCTORS TO NEW CHILLER. EXTEND AS REQUIRED TO MAKE FINAL CONNECTION. COORDINATE PLACEMENT OF NEW CHILLER WITH EXISTING CONDUIT STUB-UPS.
13. ROUTE 2#10, 1#10G, 3/4"C TO SPARE BREAKER IN EXISTING PANEL 'MESLE', CIRCUIT #6. REMOVE EXISTING 20A/1P CIRCUIT BREAKER AND REPLACE WITH NEW 30I/1P BREAKER. ROUTE NEW CONDUIT ON EXISTING CHILLED WATER PIPE SUPPORTS.



NORTH

2 **ELECTRICAL FLOOR PLAN - MARTIN ES**
SCALE: 1/8"=1'-0"



NORTH

1 **ELECTRICAL DEMOLITION FLOOR PLAN - MARTIN ES**
SCALE: 1/8"=1'-0"

Salas O'Brien
salasobrien.com 281-664-1900
HOUSTON TX
10930 W. SAM HOUSTON PKWY
NORTH SUITE 900
HOUSTON, TX 77064
Registration: F-4111
Project No.: 2023-04571-00

CONFIDENTIAL
THIS DRAWING AND ASSOCIATED DESIGN ELEMENTS ARE CONFIDENTIAL AND THE PROPERTY OF SALAS O'BRIEN, WHICH RETAINS ALL COMMON LAW COPYRIGHT, STATUTORY AND OTHER RIGHTS THERETO. ANY UNAUTHORIZED USE, REUSE OR REPRODUCTION IS PROHIBITED. UNLESS OTHERWISE AGREED TO BY SALAS O'BRIEN, THIS DRAWING (OR ANY REQ. ANY COPIES) SHALL BE RETURNED TO SALAS O'BRIEN UPON REQUEST.

PROFESSIONAL SEAL

BRADLEY KALMANS 80219 LICENSED PROFESSIONAL ENGINEER STATE OF TEXAS

10-16-2023

ISSUE DATE	DESCRIPTION
10/16/2023	100%

Beaumont ISD
Preparing Our Next Generation

BEAUMONT ISD CHILLER REPLACEMENT PROJECT CSP# 24.10

Building Name/Location

NOTES

REVISIONS

Δ	DESCRIPTION	DATE

CHECKED BY	DRAWN BY
SH	AA

SHEET NAME

ELECTRICAL FLOOR PLANS - MARTIN ES

SHEET NUMBER	REVISION
E1.1	

File Path
01 January, 2000