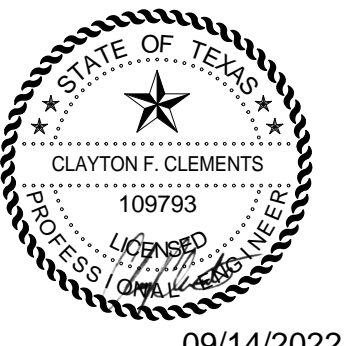


KEYED NOTES	
1	DEMO EXISTING SUPPLY DUCT UP TO ASSOCIATED UNIT ON ROOF.
2	DEMO EXISTING RETURN AIR DUCT UP TO ASSOCIATED UNIT ON ROOF.
3	DEMO EXISTING EXHAUST DUCTWORK AND ASSOCIATED EXHAUST FAN ON ROOF.
4	DEMO EXISTING SIDE WALL GRILLE AND ASSOCIATED DUCTWORK.
5	DEMO EXISTING SIDE WALL SUPPLY DIFFUSER.
6	DEMO EXISTING RETURN AIR TRANSFER DUCT.
7	DEMO EXISTING VAV AND ASSOCIATED CONTROLS.
8	DEMO DUCT PENETRATION INTO 2 HOUR FIRE AND SMOKE BARRIER IN PREPARATION FOR INSTALLATION OF NEW FIRE SMOKE DAMPER.
9	DEMO EXISTING RETURN AIR GRILLE.
10	DEMO CHILLED WATER SUPPLY/RETURN PIPING TO MAIN AS INDICATED.
11	DEMO EXISTING SUPPLY DIFFUSER AND ASSOCIATED DUCTWORK.
12	DEMO EXISTING EXHAUST GRILLE AND ASSOCIATED DUCTWORK.
13	DEMO EXISTING SUPPLY DUCTWORK AS SHOWN. EXISTING DUCTWORK AND ASSOCIATED DUCT MOUNTED AIR DEVICES SHALL REMAIN FOR FUTURE CONNECTION. SEE MECHANICAL PLAN FOR FUTHER INSTRUCTION.



21750 HARDY OAK BLVD. STE 102
SAN ANTONIO TX, 78258
P: 210.964.0132 M: 512.773.3070



09/14/2022

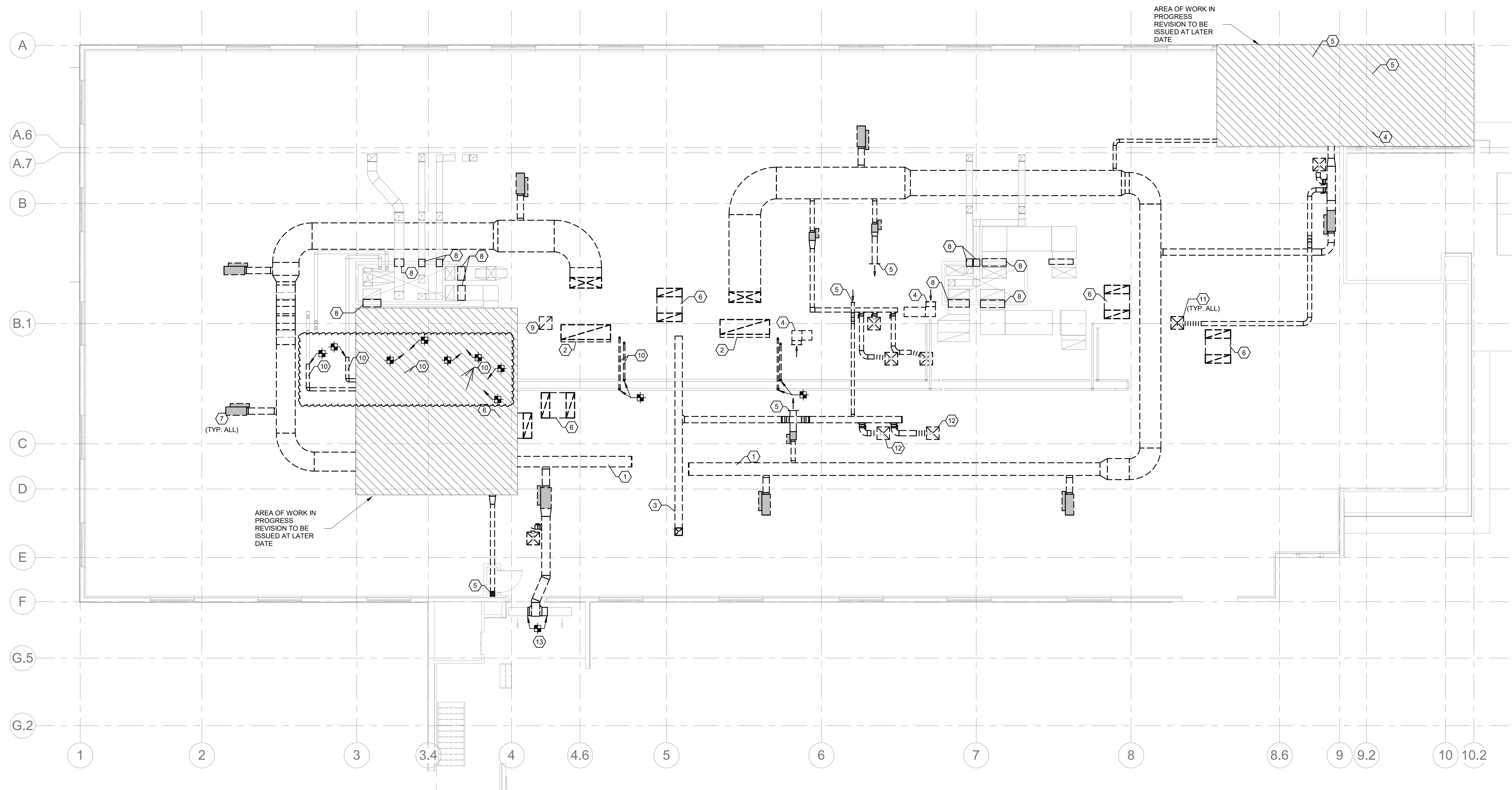
ENGINEERS
PLANNERS
SCIENTISTS
CONSTRUCTION MANAGERS
KCI
13750 SAN PEDRO AVE. #640
SAN ANTONIO, TX 78232
PHONE: 210-544-5751
FAX: 713-237-9801
Texas Registered Engineering Firm F-10573

**LEGENT NORTH HOUSTON
SURGICAL HOSPITAL**
24429 TOMBALL PKWY, SUITE 100
TOMBALL, TX 77375

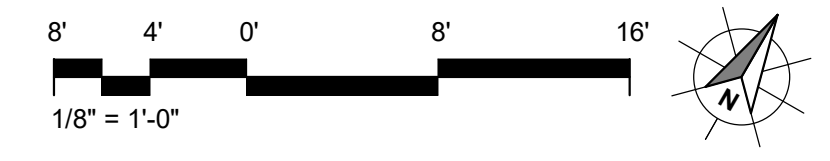
Drawn	BAR
Checked	SSM
Date	06/30/22
PROJECT No.	
Revisions	
2	06/30/22 ISSUE FOR CONSTRUCTION PR 5

SHEET TITLE
**MECHANICAL
SECOND FLOOR
DEMO PLAN**

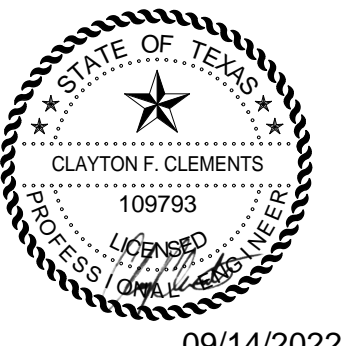
SHEET NO.
M102



1 MECHANICAL SECOND FLOOR DEMOLITION PLAN
1/8" = 1'-0"



© 2022 XA COLLECTIVE, LLC. Unauthorized reproduction is prohibited.

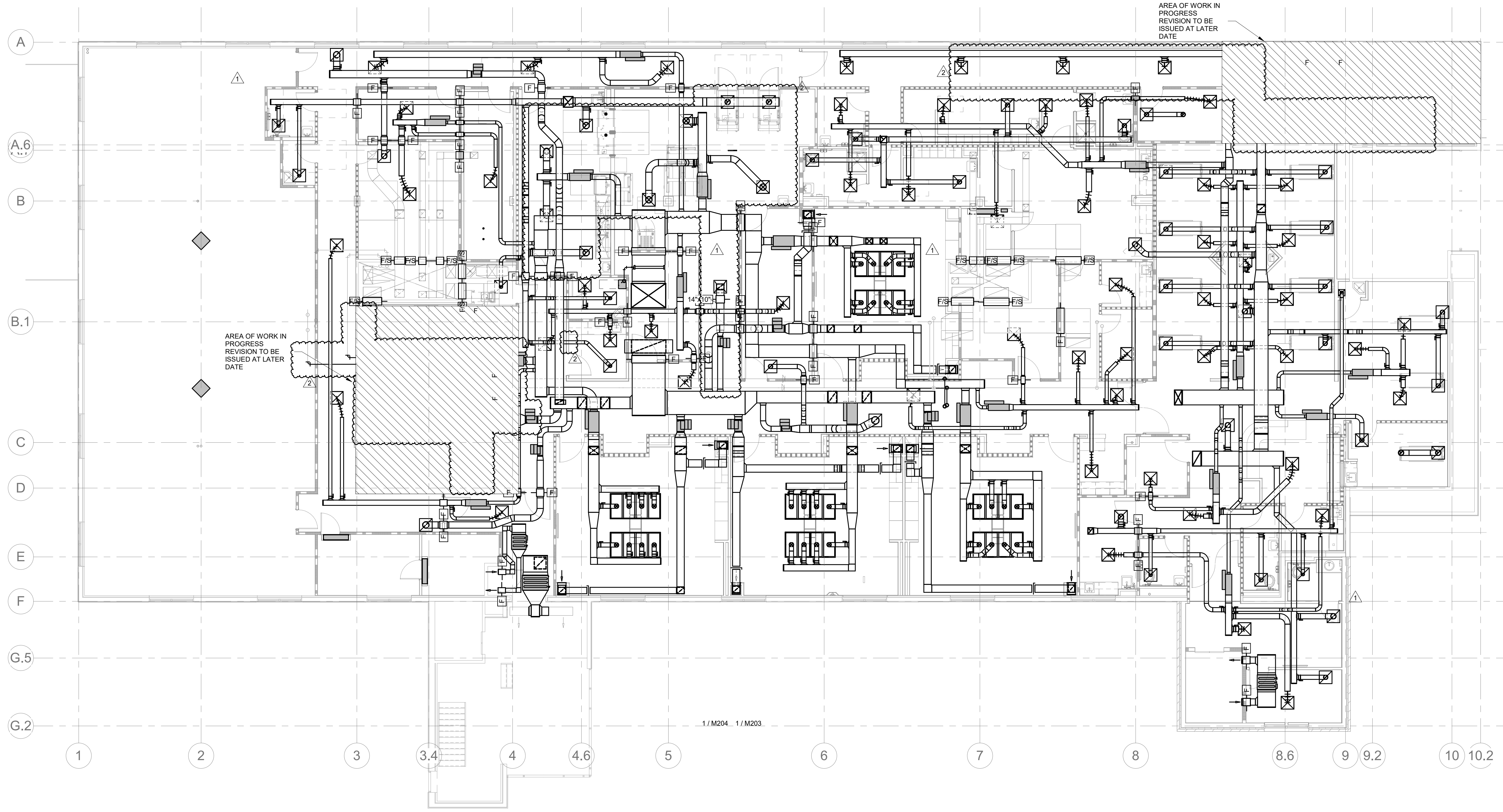


**LEGENT NORTH HOUSTON
 SURGICAL HOSPITAL**
 24429 TOMBALL PKWY, SUITE 100
 TOMBALL, TX 77375

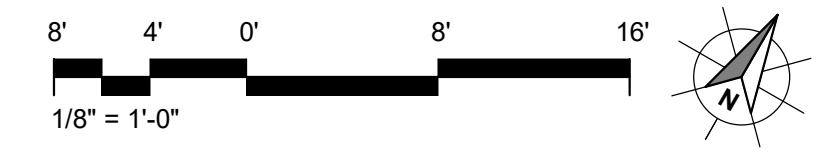
Drawn	BAR
Checked	SSM
Date	06/30/22
PROJECT No.	
Revisions	
06/30/22	ISSUE FOR CONSTRUCTION
1 07/25/22	PR 3
2 09/09/22	PR 5

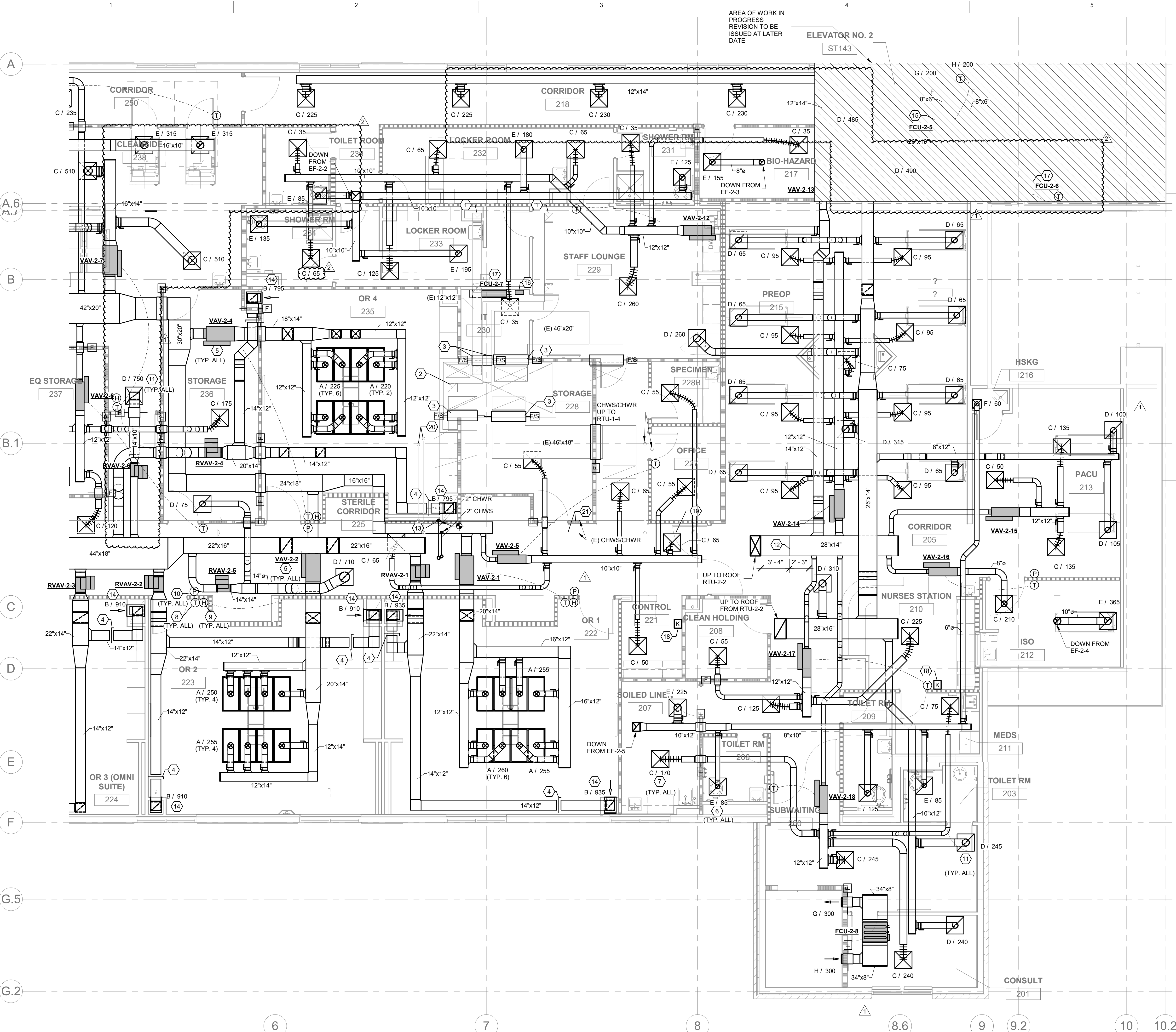
SHEET TITLE
**MECHANICAL
 SECOND FLOOR
 PLAN - OVERALL**

SHEET NO.
M202



1 MECHANICAL SECOND FLOOR PLAN - OVERALL
 1/8" = 1'-0"





AREA OF WORK IN
PROGRESS
REVISION TO BE
ISSUED AT LATER
DATE

ELEVATOR NO. 2
ST143

KEYED NOTES

- 1 EXHAUST DUCT DOWN FROM EXISTING EXHAUST FAN SERVING LEVEL
- 2 EXISTING EXHAUST DUCT DOWN IN CHASE TO SERVE FIRST FLOOR TO REMAIN.
- 3 PROVIDE NEW 1-1/2 HOUR FIRE/SMOKE DAMPER IN EXISTING DUCT AT EXISTING 2 HOUR FIRE AND SMOKE BARRIER. PROVIDE DAMPER WITH REMOTE TESTING CAPABILITY.
- 4 INSTALL REMOTE OPERATED BALANCING DAMPER SIMILAR TO ROTOTWIST MODEL RT-200 IN EXHAUST/RETURN DUCT AND BALANCE TO CFM INDICATED. ROUTE ADJUSTMENT CABLE TO ROTOTWIST ROUND MINIATURE CEILING CUP MODEL RT-CCM IN CEILING ADJACENT TO DAMPER.
- 5 NEW VAV BOX SHALL BE LOCATED AS SHOWN. BALANCE TO CFM INDICATED. MAINTAIN MANUFACTURER'S RECOMMENDED CLEARANCES AND ENSURE BOX IS READILY ACCESSIBLE FROM LAY-IN CEILING OR ACCESS PANEL. BALANCE TO CFM INDICATED ON DRAWINGS. SEE DETAILS AND SCHEDULE.
- 6 NEW EXHAUST GRILLE SHALL BE LOCATED AS SHOWN. BALANCE TO INDICATED CFM. SEE SCHEDULE.
- 7 NEW SUPPLY AIR DIFFUSER SHALL BE LOCATED AS SHOWN. BALANCE TO CFM INDICATED. PROVIDE NEW SPIN-INS, SPIRAL DUCTWORK, AND GUARD DUCT. SEE SCHEDULE AND DETAILS.
- 8 NEW DDC ZONE THERMOSTAT/CONTROL. PROVIDE NEW CONTROL WIRING AS REQUIRED.
- 9 NEW HUMIDITY SENSOR. PROVIDE NEW CONTROL WIRING AS REQUIRED.
- 10 CONTRACTOR SHALL PROVIDE ANTEC PMT (OR APPROVED EQUAL) AT NOTED LOCATION. PROVIDE ALL REQUIRED WIRING AND ACCESSORIES. CONNECT BACK TO BAS. ROOM DIFFERENTIAL PRESSURE SET POINT SHALL BE SET TO 0.01 IN WG (ADJUSTABLE). THE CONTROL SYSTEM SHALL ANNUNCIATE AN ALARM AT THE NURSE STATION IF THE DOOR IS HELD OPEN FOR LONGER THAN 30 SECONDS (ADJUSTABLE) OR IF THE DOOR IS CLOSED AND ROOM DIFFERENTIAL PRESSURE DROPS BELOW SETPOINT FOR 30 SECONDS (ADJUSTABLE).
- 11 NEW RETURN GRILLE SHALL BE LOCATED AS SHOWN. BALANCE TO INDICATED CFM. SEE SCHEDULE.
- 12 AHU PRESSURE SENSOR SHALL BE PLACED IN APPROXIMATE LOCATION SHOWN. NOTED DIMENSIONS ARE THE MINIMUM SEPARATION DISTANCE REQUIRED BEFORE TRANSITIONS AND FITTINGS. PROVIDE ALL REQUIRED ACCESSORIES FOR COMPLETE OPERATION. CONNECT BACK TO AHU AND BAS. PRIMARY SENSOR SHALL BE USED TO CONTROL VFD ON FAN. SEE SEQUENCE OF OPERATIONS IN SPECIFICATIONS FOR FURTHER DETAILS.
- 13 PROVIDE BTU/H METER READOUT IN APPROXIMATE LOCATION. COORDINATE WITH ARCHITECT AND OWNER FOR EXACT LOCATION.
- 14 MOUNT LOW EXHAUST GRILLE AT 10" AFF. BALANCE TO CFM INDICATED.
- 15 NEW HORIZONTAL DX FAN COIL UNIT SHALL BE SUPPORTED FROM STRUCTURE IN APPROXIMATE LOCATION SHOWN. ROUTE UNIT'S REFRIGERANT PIPING TO ASSOCIATED CONDENSING UNIT. FIELD VERIFY EXACT LOCATION BEFORE INSTALLATION. PROVIDE S/R DUCTWORK AS SHOWN. PROVIDE UNIT WITH FACTORY PROVIDED FILTER RACK. ROUTE UNIT'S 3/4" PRIMARY CONDENSATE LINE TO LAY TAIL PIECE (NOT SHOWN). PROVIDE UNIT WITH FACTORY (OR EQUAL) 7 DAY PROGRAMMABLE THERMOSTAT AND LOCATE AS SHOWN. PROVIDE HIGH LEVEL SWITCH IN PRIMARY DRAIN PAN. PROVIDE ALL REQUIRED ACCESSORIES AND TRANSITIONS. MAINTAIN MANUFACTURER'S RECOMMENDED CLEARANCES. SEE SCHEDULE AND DETAILS.
- 16 NEW DDC CENTRAL CONTROLLER SHALL BE LOCATED IN AREA SHOWN. CONTROLLER SHALL COMMAND ALL MECHANICAL EQUIPMENT AND THEIR ASSOCIATED TERMINALS. COORDINATE FINAL LOCATION WITH ARCHITECT AND OWNER. PROVIDE NEW CONTROL WIRING AS REQUIRED. SEE SPECS.
- 17 NEW WALL MOUNTED DX MINI SPLIT SYSTEM SHALL BE LOCATED AS SHOWN. FIELD VERIFY EXACT LOCATION BEFORE INSTALLATION. PROVIDE CONCEALED CONDENSATE PUMP. ROUTE 3/4" CONDENSATE TO LAY TAIL PIECE / FUNNEL DRAIN AS INDICATED. ROUTE UNIT'S REFRIGERANT PIPING TO ASSOCIATED CONDENSING UNIT.
- 18 NEW MANUAL SHUTDOWN SWITCHES SHALL BE LOCATED IN APPROXIMATE AREA PER NFPA 90A. ONE MANUAL SHUTDOWN SWITCH SHALL COMMAND RTU-2-1 AND EF-2-1. ANOTHER MANUAL SHUTDOWN SWITCH SHALL CONTROL RTU-2-2, EF-2-2, 3, 4, 5. MANUAL SHUTDOWN SWITCHES SHALL BE 48" A.F. COORDINATE FINAL LOCATION WITH ARCHITECT AND OWNER. SEE SPECS. PROVIDE ALL REQUIRED ACCESSORIES, CONTROLS, AND WIRING.
- 19 EXISTING MOTORIZED PRESSURE INDEPENDENT BYPASS VALVE AND VENTURI FLOW METER TO REMAIN.
- 20 CHWS/CHWR UP TO RTU-1-3.
- 21 EXISTING CHILLED WATER SUPPLY/RETURN LOCATED ABOVE CEILING. CONTRACTOR TO FIELD VERIFY EXACT LOCATION OF EXISTING AND RE-ROUTE AS REQUIRED TO MAINTAIN EQUIPMENT CLEARANCES AND CEILING HEIGHTS.



21750 HARDY OAK BLVD. STE 102
SAN ANTONIO TX, 78258
P: 210.964.0132 M: 512.773.3070



KCI
TECHNOLOGIES
ENGINEERS
PLANNERS
SCIENTISTS
CONSTRUCTION MANAGERS
13750 SAN PEDRO AVE. #640
SAN ANTONIO, TX 78232
PHONE: 210-544-5751
FAX: 713-237-98011
Texas Registered Engineering Firm F-10573

**LEGENT NORTH HOUSTON
SURGICAL HOSPITAL**
24429 TOMBALL PKWY, SUITE 100
TOMBALL, TX 77375

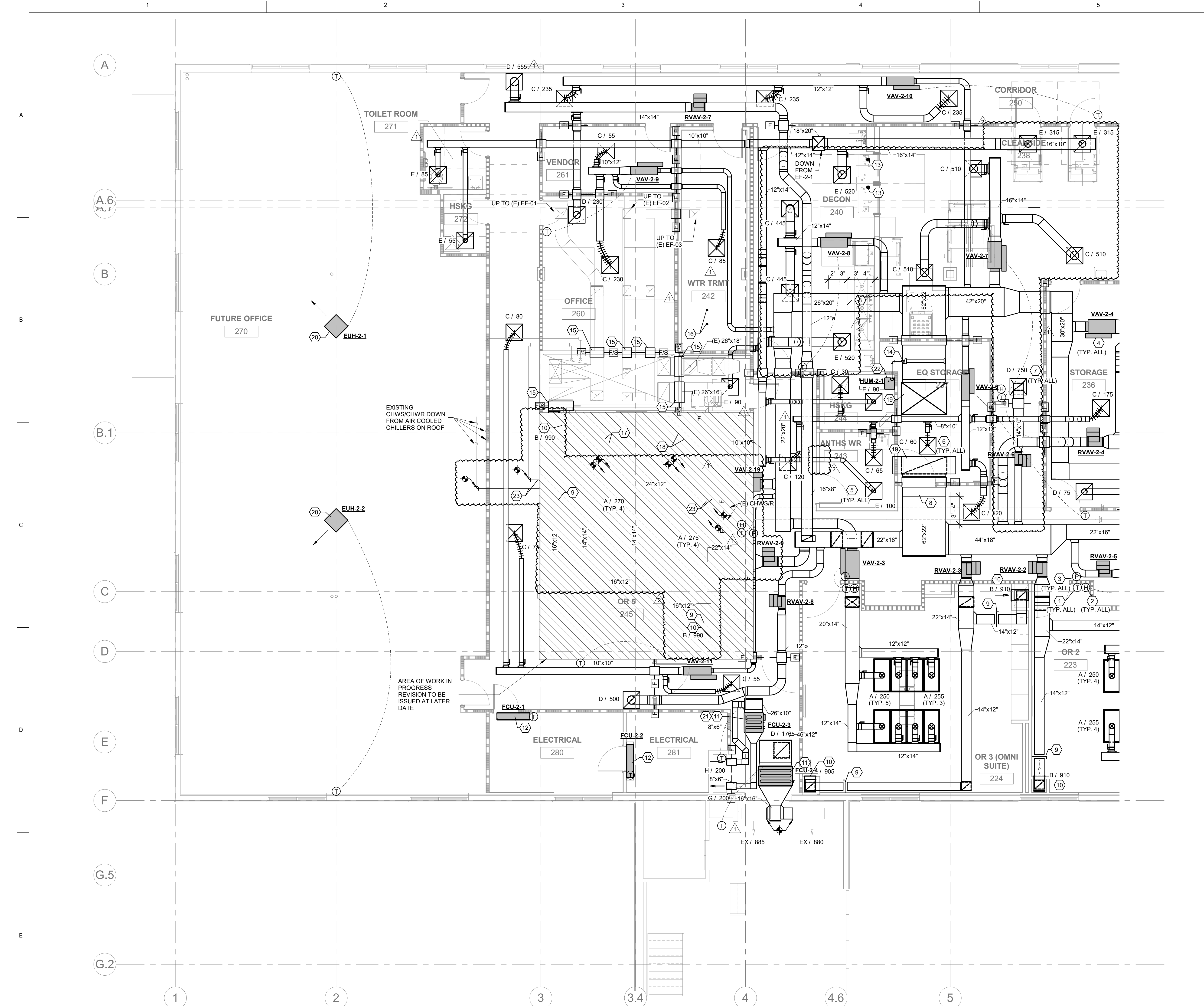
Drawn	BAR
Checked	SSM
Date	06/30/22
PROJECT No.	
Revisions	
06/30/22	ISSUE FOR CONSTRUCTION
1 07/25/22	PR 3
2 09/09/22	PR 5

SHEET TITLE
MECHANICAL SECOND FLOOR PLAN - ENLARGED PLAN EAST

SHEET NO.
M203

1 MECHANICAL SECOND FLOOR PLAN - PLAN EAST
3/16" = 1'-0"

© 2022 XA COLLECTIVE, LLC. Unauthorized reproduction is prohibited.



- ### KEYED NOTES
- 1 NEW DDC ZONE THERMOSTAT/CONTROL. PROVIDE NEW CONTROL WIRING AS REQUIRED.
 - 2 NEW HUMIDITY SENSOR. PROVIDE NEW CONTROL WIRING AS REQUIRED.
 - 3 CONTRACTOR SHALL PROVIDE ANTEC PMT (OR APPROVED EQUAL) AT NOTED LOCATION. PROVIDE ALL REQUIRED WIRING AND ACCESSORIES. CONNECT BACK TO BAS. ROOM DIFFERENTIAL PRESSURE SET POINT SHALL BE SET TO 0.01 IN WG (ADJUSTABLE). THE CONTROL SYSTEM SHALL ANNUNCIATE AN ALARM AT THE NURSE STATION IF THE DOOR IS HELD OPEN FOR LONGER THAN 30 SECONDS (ADJUSTABLE) OR IF THE DOOR IS CLOSED AND ROOM DIFFERENTIAL PRESSURE DROPS BELOW SETPOINT FOR 30 SECONDS (ADJUSTABLE).
 - 4 NEW VAV BOX SHALL BE LOCATED AS SHOWN. BALANCE TO CFM INDICATED. MAINTAIN MANUFACTURER'S RECOMMENDED CLEARANCES AND ENSURE IT IS READILY ACCESSIBLE FROM LAY-IN CEILING OR ACCESS PANEL. BALANCE TO CFM INDICATED ON DRAWINGS. SEE DETAILS AND SCHEDULE.
 - 5 NEW EXHAUST GRILLE SHALL BE LOCATED AS SHOWN. BALANCE TO INDICATED CFM. SEE SCHEDULE.
 - 6 NEW SUPPLY AIR DIFFUSER SHALL BE LOCATED AS SHOWN. BALANCE TO CFM INDICATED. PROVIDE NEW SPIN-INS, SPIRAL DUCTWORK, AND FLEX DUCT. SEE SCHEDULE AND DETAILS.
 - 7 NEW RETURN GRILLE SHALL BE LOCATED AS SHOWN. BALANCE TO INDICATED CFM. SEE SCHEDULE.
 - 8 AHU PRESSURE SENSOR SHALL BE PLACED IN APPROXIMATE LOCATION SHOWN. NOTED DIMENSIONS ARE THE MINIMUM SEPARATION DISTANCE REQUIRED BEFORE TRANSITIONS AND FITTINGS. PROVIDE ALL REQUIRED ACCESSORIES FOR COMPLETE OPERATION. CONNECT BACK TO AHU AND BAS. PRIMARY SENSOR SHALL BE USED TO CONTROL VFD ON FAN. SEE SEQUENCE OF OPERATIONS IN SPECIFICATIONS FOR FURTHER DETAILS.
 - 9 INSTALL REMOTE CABLE OPERATED BALANCING DAMPER SIMILAR TO ROTOTWIST MODEL RT-200 IN EXHAUST/RETURN DUCT AND BALANCE TO CFM INDICATED. ROUTE ADJUSTMENT CABLE TO ROTOTWIST ROUND MINIATURE CEILING CUP MODEL RT-CCM IN CEILING ADJACENT TO DAMPER.
 - 10 MOUNT LOW EXHAUST GRILLE AT 10" AFF. BALANCE TO CFM INDICATED.
 - 11 NEW HORIZONTAL DX FAN COIL UNIT SHALL BE SUPPORTED FROM STRUCTURE IN APPROXIMATE LOCATION SHOWN. ROUTE UNITS' REFRIGERANT PIPING TO ASSOCIATED CONDENSING UNIT. FIELD VERIFY EXACT LOCATION BEFORE INSTALLATION. PROVIDE S/R DUCTWORK AS SHOWN. PROVIDE UNIT WITH FACTORY PROVIDED FILTER RACK. ROUTE UNITS' 3/4" PRIMARY CONDENSATE LINE TO LAV TAIL PIECE (NOT SHOWN). PROVIDE UNIT WITH FACTORY (OR EQUAL) 7 DAY PROGRAMMABLE THERMOSTAT AND LOCATE AS SHOWN. PROVIDE HIGH LEVEL SWITCH IN PRIMARY DRAIN PAN. PROVIDE ALL REQUIRED ACCESSORIES AND TRANSITIONS. MAINTAIN MANUFACTURER'S RECOMMENDED CLEARANCES. SEE SCHEDULE AND DETAILS.
 - 12 NEW WALL MOUNTED DX MINI SPLIT SYSTEM SHALL BE LOCATED AS SHOWN. FIELD VERIFY EXACT LOCATION BEFORE INSTALLATION. PROVIDE CONDENSATE PUMP. ROUTE 3/4" CONDENSATE TO LAV TAIL PIECE / FUNNEL DRAIN AS INDICATED. ROUTE UNITS' REFRIGERANT PIPING TO ASSOCIATED CONDENSING UNIT.
 - 13 ROUTE 5" DIAMETER STAINLESS STEEL EXHAUST DUCT FROM STERILIZER UP THRU ROOF. COORDINATE EXACT LOCATION WITH ARCHITECT.
 - 14 STEAM DISTRIBUTOR SHALL BE PLACED IN APPROXIMATE LOCATION SHOWN. NOTED DIMENSIONS ARE THE MINIMUM SEPARATION DISTANCE REQUIRED BEFORE TRANSITIONS, FITTINGS, AND ACCESSORIES. PROVIDE ALL REQUIRED ACCESSORIES FOR COMPLETE OPERATION. CONNECT BACK TO HUMIDIFIER. ROUTE CONDENSATE TO LOCATION SHOWN. AIR PROVING SWITCH AND HIGH LIMIT SENSOR (NOT SHOWN) SHALL ALSO BE PLACED IN RESPECTIVE SUPPLY DUCT. FOLLOW MANUFACTURER RECOMMENDED LOCATIONS FOR INSTALLATION.
 - 15 PROVIDE NEW 1-1/2 HOUR FIRE/SMOKE DAMPER IN EXISTING DUCT AT EXISTING 2 HOUR FIRE AND SMOKE BARRIER. PROVIDE DAMPER WITH REMOTE TESTING CAPABILITY.
 - 16 ROUTE INTAKE EXHAUST DUCT UP THRU ROOF FROM VACUUM PUMP SIZED PER MANUFACTURER'S RECOMMENDATIONS. TERMINATE DUCT PER MANUFACTURER'S INSTALLATION INSTRUCTIONS.
 - 17 CHWS/CHWR UP TO RTU-1-1.
 - 18 CHWS/CHWR UP TO RTU-1-2.
 - 19 SUPPLY/RETURN DUCT DOWN FROM RTU-2-1.
 - 20 NEW ELECTRIC UNIT HEATER SUPPORTED FROM STRUCTURE ABOVE. PROVIDE REMOTE THERMOSTAT.
 - 21 UNIT SHALL BE MOUNTED TIGHT TO STRUCTURE. MAINTAIN MANUFACTURER RECOMMENDED CLEARANCES.
 - 22 CONTRACTOR SHALL PROVIDE WALL HUNG HUMIDIFIER AS SHOWN. COORDINATE FINAL LOCATION WITH ARCHITECT. MAINTAIN MANUFACTURER'S RECOMMENDED CLEARANCES. ROUTE STEAM SUPPLY/RETURN PIPING FROM HUMIDIFIER TO ASSOCIATED MANIFOLD IN SUPPLY DUCT. PROVIDE ALL REQUIRED PIPE FITTINGS, TRANSITIONS, AND ACCESSORIES. ROUTE DRAIN WITH AIR GAP FROM HUMIDIFIER TO FLOOR DRAIN IN ROOM.
 - 23 REROUTE EXISTING CHWS/CHWR PIPING AS SHOWN. VERIFY EXACT ROUTING WITH EXISTING CONDITIONS AND NEW DUCTWORK. RECONNECT TO EXISTING PIPING AT POINTS INDICATED. PROVIDE ALL TRANSITIONS AND FITTINGS AS REQUIRED.



LEGENT NORTH HOUSTON SURGICAL HOSPITAL
24429 TOMBALL PKWY, SUITE 100
TOMBALL, TX 77375

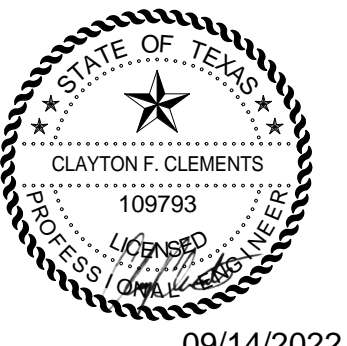
Drawn	BAR
Checked	SSM
Date	06/30/22
PROJECT No.	
Revisions	
06/30/22	ISSUE FOR CONSTRUCTION
1 07/25/22	PR 3
2 09/09/22	PR 5

SHEET TITLE
MECHANICAL SECOND FLOOR PLAN - ENLARGED PLAN WEST

SHEET NO.
M204

1 MECHANICAL SECOND FLOOR PLAN - PLAN WEST
3/16" = 1'-0"

© 2022 XA COLLECTIVE, LLC. Unauthorized reproduction is prohibited.



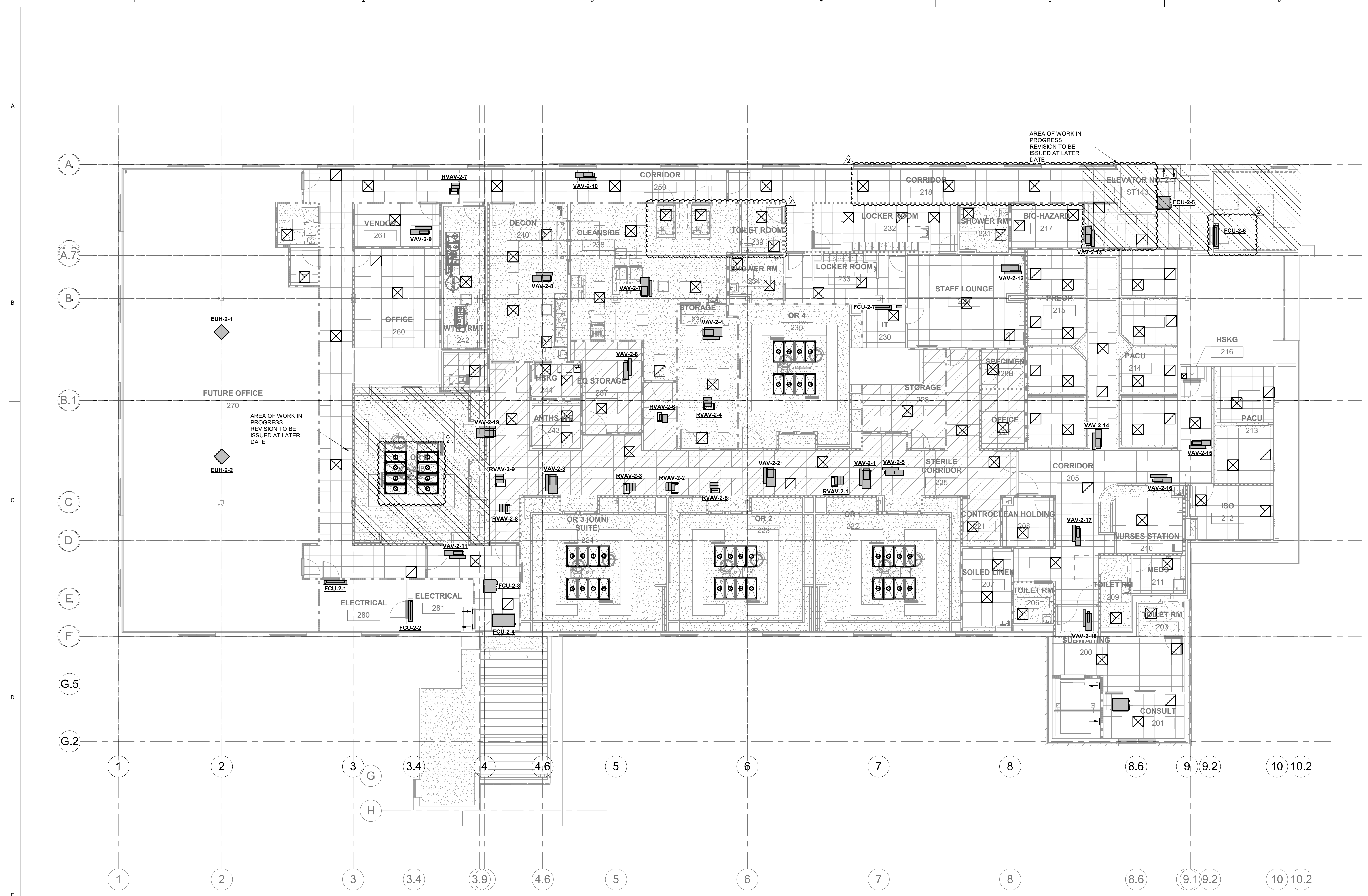
09/14/2022

**LEGENT NORTH HOUSTON
 SURGICAL HOSPITAL**
 24429 TOMBALL PKWY, SUITE 100
 TOMBALL, TX 77375

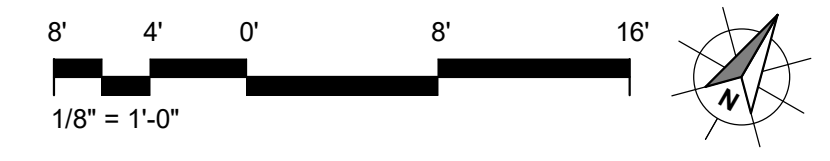
Drawn	BAR
Checked	SSM
Date	06/30/22
PROJECT No.	
Revisions	
2	06/30/22 ISSUE FOR CONSTRUCTION
	09/09/22 PR 5

SHEET TITLE
**MECHANICAL
 SECOND FLOOR
 CEILING
 COORDINATION
 PLAN**
 SHEET NO.

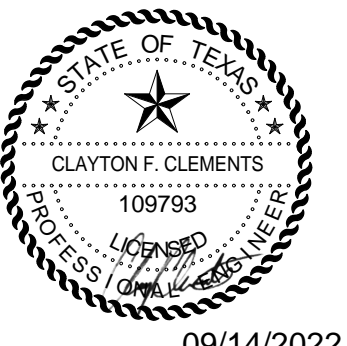
M205



1 MECHANICAL SECOND FLOOR CEILING PLAN
 1/8" = 1'-0"



© 2022 XA COLLECTIVE, LLC. Unauthorized reproduction is prohibited.



09/14/2022

DX RTU SCHEDULE

TAG	AREA SERVED	MANUFACTURER/MODEL	DISCHARGE CONFIGURATION	INTAKE CONFIGURATION	SUPPLY FANS			RETURN FANS			COOLING COIL				HOT GAS REHEAT COIL		COMPRESSORS			PRIMARY FILTER	SECONDARY FILTER	ELECTRICAL		OPERATING WEIGHT (LBS)	NOTES	
					QUANTITY	TOTAL AIRFLOW (CFM)	OUTSIDE AIRFLOW (CFM)	ESP	QUANTITY	TOTAL AIRFLOW (CFM)	ESP	TOTAL COOLING (MBH)	SENSIBLE COOLING (MBH)	AIR ENT. COIL, DB/WB (°F)	AIR LVG COIL, DB/WB (°F)	MINIMUM HEATING (MBH)	AIR LVG, DB/WB (°F)	QUANTITY	TYPE	REFRIGERANT	MERV	MERV	VOLTS/PH/HZ			FLA/MCA/MOCP (A)
RTU-2-1	HOSPITAL OR	AAON - RNA-070-D-0-3	VERTICAL	VERTICAL	2	14650	2500	3.5	2	14650	1.0	740.2	400.0	73/62	47/45	123.0	55	4	FULLY MODULATING	R410A	8, 2" THICK	17	460/3/60	186/193/200	6190	ALL

- NOTES:
- ALL COMPRESSORS SHALL BE FULLY MODULATING.
 - PROVIDE THERMALLY BROKEN PANELS WITH EXPANDED FOAM INSULATION (R-13).
 - PROVIDE STAINLESS STEEL DRAIN PANS.
 - PROVIDE QTY.(2) DIRECT DRIVE MODULATING (VFD/ECM) PLENUM SUPPLY FANS.
 - PROVIDE QTY.(2) DIRECT DRIVE MODULATING (VFD/ECM) RETURN FANS.
 - PROVIDE MINIMUM 6 ROW EVAPORATOR COIL.
 - PROVIDE FULL MODULATING HOT GAS REHEAT.
 - PROVIDE VFD CONDENSER FANS WITH HEAD PRESSURE CONTROL.
 - PROVIDE FACTORY INSTALLED UV LIGHTS (SEE SPECIFICATIONS) DOWNSTREAM OF THE EVAPORATOR COIL.
 - PROVIDE FACTORY INSTALLED BACNET NATIVE CONTROLLER.
 - PROVIDE OUTSIDE AIR MONITOR OAM II AIRFLOW STATION (OR EQUAL). FACTORY PROVIDE UNIT WITH MOUNTING SCREEN (AMCA STANDARD 610 CERTIFICATION). IF UNABLE TO PROVIDE FROM FACTORY, CONTROLS CONTRACTOR PROVIDE AND COORDINATE INSTALLATION FOR STATED ASSEMBLY (OR EQUAL).
 - IF UNABLE TO PLACE FINAL FILTER IN UNIT, PROVIDE FINAL FILTER CURB WITH HEPA FILTER RACK.
 - PROVIDE WITH KIP-RT ROOFTOP EQUIPMENT PAD BETWEEN UNIT AND CURB.
 - REQUIRED BTU/H ARE NET; FAN HEAT HAS NOT BEEN SUBTRACTED.
 - EXTERNAL STATIC INCLUDES DUCTWORK, DIFFUSERS, & DIRT ACCUMULATION ON FILTERS.
 - EVAPORATOR SHALL BE PROVIDED WITH INTERNAL FLOAT SWITCH AND SHALL SHUT UNIT OFF IF PRIMARY DRAIN BECOMES RESTRICTED.
 - PROVIDE ALL MANUFACTURER'S RECOMMENDED CLEARANCES.
 - IF PROVIDED WITH FILTERED CURB, CONTRACTOR SHALL PROVIDE LEVEL EQUIPMENT PLATFORM. PLATFORM SHALL BE A MINIMUM OF 30" WIDE FROM EQUIPMENT WITH GUARDS A MINIMUM OF 42" HIGH WITH HORIZONTAL AND VERTICAL MEMBERS SPACED TO PREVENT A 21" SPHERE FROM PASSING THROUGH. OBTAIN STAMPED DRAWINGS AND PLATFORM FROM STEEL SOLUTIONS INC (OR EQUIVALENT MANUFACTURER). CONTRACTOR SHALL FIELD VERIFY EXISTING FIELD CONDITIONS AND EQUIPMENT BEFORE PURCHASE AND CONSTRUCTION. THE PLATFORM IS INTENDED TO BE A "DELEGATED DESIGN" ITEM.
 - MOTOR(S) SHALL BE PREMIUM EFFICIENCY.
 - COORDINATE FINAL CONTROLS REQUIREMENTS WITH OWNER'S VENDOR.
 - UNIT SHALL BE CONNECTED TO EMERGENCY GENERATOR.
 - PROVIDE WITH HAIL GUARDS.
 - PROVIDE ROOF CURB WITH SUFFICIENT HEIGHT SUCH THAT THE OUTSIDE AIR INTAKE IS A MINIMUM OF 36" ABOVE THE ROOF.
 - PROVIDE WITH SMOKE DETECTOR IN THE SUPPLY AND RETURN DUCTWORK. PROVIDE SUPPLY SIDE SMOKE DETECTOR DOWNSTREAM OF FINAL FILTER IN THE MAIN SUPPLY DUCT. UNIT OPERATION SHALL CEASE WHEN A SMOKE DETECTOR IS ENERGIZED.
 - PROVIDE WITH DIFFERENTIAL PRESSURE MEASURING DEVICE THAT IS READILY ACCESSIBLE AND PROVIDES READING OF DIFFERENTIAL STATIC PRESSURE ACROSS EACH FILTER BED TO INDICATE WHEN FILTER NEEDS CHANGED. CONNECT TO BAS. SEE SPECIFICATIONS.

CHILLED WATER RTU WITH ELECTRIC HEAT SCHEDULE

TAG	AREA SERVED	MANUFACTURER/MODEL	DISCHARGE CONFIGURATION	INTAKE CONFIGURATION	SUPPLY FAN			HEATING COIL - AIR SIDE					COOLING COIL - AIR SIDE					COOLING COIL - WATER SIDE		PRIMARY FILTER	DOWNSTREAM FILTER	ELECTRICAL		OPERATING WEIGHT (LBS)	NOTES
					TOTAL AIRFLOW (CFM)	OUTSIDE AIRFLOW (CFM)	ESP	AIRFLOW (CFM)	AIR ENT. COIL, DB (°F)	AIR LVG COIL, DB (°F)	KW REQUIRED	CONTROL	TOTAL COOLING (MBH)	SENSIBLE COOLING (MBH)	AIR ENT. COIL, DB/WB (°F)	AIR LVG COIL, DB/WB (°F)	FLOW RATE (GPM)	EWL-LWT (°F)	MERV	MERV	VOLTS/PH/HZ	FLA/MCA/MOCP(A)			
RTU-2-2	NON-CRITICAL	TEMTRON	HORIZONTAL	HORIZONTAL	4125	1480	3.0	2060	45	55	8	SCR	196.7	122.5	82.5 / 69	55/53	39.3	44-54	8, 2" DEPTH	14, 12" DEPTH	460/3/60	17/22/25	3,722	ALL	

- NOTES:
- PROVIDE WITH KIP-RT ROOFTOP EQUIPMENT PAD BETWEEN UNIT AND CURB.
 - PROVIDE WITH MERV 14 FILTER BED DOWNSTREAM OF THE SUPPLY FAN, COOLING COIL, AND HEATING COIL.
 - REQUIRED BTU/H ARE NET; FAN HEAT HAS NOT BEEN SUBTRACTED.
 - EXTERNAL STATIC INCLUDES DUCTWORK, DIFFUSERS, & DIRT ACCUMULATION ON FILTERS.
 - MOTOR(S) SHALL BE PREMIUM EFFICIENCY.
 - IF MODEL NUMBER & SCHEDULE CONFLICT; MOST STRINGENT REQUIREMENTS APPLY.
 - EVAPORATOR SHALL BE PROVIDED WITH INTERNAL FLOAT SWITCH AND SHALL SHUT UNIT OFF IF PRIMARY DRAIN BECOMES RESTRICTED.
 - PROVIDE ALL MANUFACTURER'S RECOMMENDED CLEARANCES.
 - CONTROLS (CONTROLLERS, SENSORS, VALVES, ETC.) SHALL BE PROVIDED BY B.A.S. CONTRACTOR.
 - PROVIDE ROOF CURB WITH SUFFICIENT HEIGHT SUCH THAT THE OUTSIDE AIR INTAKE IS A MINIMUM OF 36" ABOVE THE ROOF.
 - PROVIDE WITH OUTSIDE AIR MONITOR OAM II AIRFLOW STATION (OR EQUAL). MONITOR TO BE FACTORY MOUNTED.
 - PROVIDE WITH SMOKE DETECTOR IN THE SUPPLY AND RETURN DUCTWORK. PROVIDE SMOKE DETECTOR DOWNSTREAM OF FINAL FILTER IN THE MAIN SUPPLY DUCT. UNIT OPERATION SHALL CEASE WHEN A SMOKE DETECTOR IS ENERGIZED.
 - PROVIDE WITH HAIL GUARDS.
 - PROVIDE WITH FACTORY INSTALLED VFD'S FOR SUPPLY FAN INSIDE UNIT ENCLOSURE.
 - PROVIDE WITH DIFFERENTIAL PRESSURE MEASURING DEVICE THAT IS READILY ACCESSIBLE AND PROVIDES READING OF DIFFERENTIAL STATIC PRESSURE ACROSS EACH FILTER BED TO INDICATE WHEN FILTER NEEDS CHANGED. CONNECT TO BAS. SEE SPECIFICATIONS.

AIR DEVICE SCHEDULE

TAG	SERVICE	MANUFACTURER AND MODEL	DESCRIPTION	FACE SIZE	NECK SIZE	CFM	MATERIAL	NOTES
A	SUPPLY	TITUS TLF-AA	LAMINAR FLOW DIFFUSER W/ INSULATED PLENUM	24" x 48"	10" Ø	0-275	ALUMINUM	1,2,3,4,5,7
B	RETURN	TITUS 30R	SIDE WALL RETURN GRILLE	16" x 24"	-	0-950	ALUMINUM	3,4,7
C	SUPPLY	TITUS OMNI	SQUARE PLAQUE DIFFUSER	24" x 24"	6" Ø	0-100	ALUMINUM	1,2,4,7
					8" Ø	101-200		
					10" Ø	201-400		
					12" Ø	401-600		
D	RETURN	TITUS PAR	PERFORATED RETURN GRILLE	24" x 24"	6" Ø	0-100	ALUMINUM	1,4,7
					8" Ø	101-200		
					10" Ø	201-400		
					12" Ø	401-600		
					14" Ø	601-750		
E	EXHAUST	TITUS PAR	PERFORATED EXHAUST GRILLE	24" x 24"	6" Ø	0-100	ALUMINUM	1,4,7
					8" Ø	101-200		
					10" Ø	201-400		
					12" Ø	401-600		
F	EXHAUST	TITUS PAR	PERFORATED EXHAUST GRILLE	12" x 12"	6" Ø	0-60	ALUMINUM	1,4,7
G	SUPPLY	TITUS 300FL	SIDE WALL SUPPLY DIFFUSER	8" x 6"	-	0-200	ALUMINUM	2,4
H	RETURN	TITUS 350R	SIDE WALL RETURN GRILLE	8" x 6"	-	0-200	ALUMINUM	2,4

- NOTES:
- 4-WAY UNLESS SHOWN DIFFERENT.
 - PROVIDE BALANCING DAMPER AT RUNOUT TAKEOFF UNLESS DAMPER IS LOCATED OVER AN INACCESSIBLE CEILING. IF OVER INACCESSIBLE PROVIDE REMOTE CABLE DRIVEN DAMPER.
 - SUPPLY DIFFUSER SHALL BE INSTALLED TO ALLOW FOR INTERNAL CLEANING.
 - PROVIDE APPROPRIATE INSTALLATION TRIM KIT BASED ON THE CEILING/WALL TYPE THAT THE AIR DEVICE IS BEING INSTALLED ON.
 - PROVIDE WITH EQUALIZATION BAFFLE
 - EXTERNALLY INSULATE SLOT DIFFUSER PLENUMS.
 - FACTORY EXTERNALLY INSULATE ALL DIFFUSERS. NO LINERS.

FAN SCHEDULE									
TAG	SERVICE	FAN TYPE	AIRFLOW (CFM)	ESP	DRIVE	MOTOR HP	VOLTAGE/PH/HZ	MANUFACTURER/MODEL	NOTES
EF-2-1	EXHAUST	ROOF UPBLAST	2090	1.0	DIRECT	3/4	115/1/60	GREENHECK CUE-140-VG	1,3,4,5,6
EF-2-2	EXHAUST	ROOF DOWNBLAST	730	0.6	DIRECT	1/4	115/1/60	GREENHECK G-100-VG	1,3,4,5,6
EF-2-3	EXHAUST	ROOF UPBLAST	155	0.3	DIRECT	1/10	115/1/60	GREENHECK CUE-080-VG	1,3,4,5,6
EF-2-4	EXHAUST	CENTRIFUGAL FUME EXHAUST FAN	365	0.5	DIRECT	1	460/3/60	GREENHECK FJI-10-BI-100	1-4,7-12
EF-2-5	EXHAUST	ROOF DOWNBLAST	520	0.5	DIRECT	1/10	115/1/60	GREENHECK G-090-VG	1,3,4,5,6

- NOTES:
- PROVIDE WITH FACTORY DISCONNECT.
 - FAN SHALL BE CONTROLLED BY ROOM PRESSURE MONITOR.
 - FAN SHALL RUN CONTINUOUSLY (24/7/365).
 - CONNECT FAN BACK TO B.A.S.
 - PROVIDE WITH GREENHECK VARI-GREEN (HAND/OFF/AUTO) CONTROLLER.
 - PROVIDE WITH MOTORIZED DAMPER.
 - PROVIDE WITH RESTRAINED ISOLATORS AND GESS EQUIPMENT SUPPORTS.
 - PROVIDE WITH FACTORY VFD WITH MOUNTING BRACKET AND DISCONNECT HOUSED IN NEMA TYPE 3R RATED ENCLOSURE SUITABLE FOR MOUNTING ON ROOF.
 - PROVIDE WITH FIXED NOZZLE DISCHARGE.
 - PROVIDE WITH 10 FOOT VERTICAL STACK.
 - PROVIDE WITH HORIZONTAL CONNECTION TO FAN INLET.
 - FAN SHALL BE CIRCUITED TO EMERGENCY POWER.

DX SPLIT SYSTEM (HEAT PUMP) SCHEDULE

TAG	MANUFACTURER/MODEL	TYPE	AREA SERVED	FAN COIL						CONDENSING UNIT						
				FAN		COOLING COIL		TAG	MANUFACTURER/MODEL	AMBIENT TEMP. (°F)	VOLTS/PH/HZ	MOP/MCA/FLA	OPERATING WEIGHT (LBS)	NOTES		
				TOTAL AIRFLOW (CFM)	OUTSIDE AIRFLOW (CFM)	TOTAL COOLING (MBH)	SENSIBLE COOLING (MBH)								AIR ENT. COIL, DB/WB (°F)	AIR LVG COIL, DB/WB (°F)
FCU-2-1	LG - LSN180HSV5	WALL MOUNTED	ELECTRICAL - 280	700	0	21.4	16.7	77/64	55/54	CU-2-1	LG - LSU180HSV5	100	208/1/60	20/13/9.9	120	1,2,3,4
FCU-2-2	LG - LSN180HSV5	WALL MOUNTED	ELECTRICAL - 281	700	0	21.4	16.7	77/64	55/54	CU-2-2	LG - LSU180HSV5	100	208/1/60	20/13/9.9	120	1,2,3,4
FCU-2-3	LG - LDN097HV4	HORIZONTAL DUCTED	ELEVATOR MACHINE ROOM	200	0	7.7	5.4	80/67	55/54	CU-2-3	LG - LUU097HV	100	208/1/60	15/12/9.6	90	1,2,3,4
FCU-2-4	LG - LHN488HV	HORIZONTAL DUCTED	STAIR - ST1	1765	0	40.5	38.3	75/62	55/54	CU-2-4	LG - LUU480HHV	100	208/1/60	40/32/25.6	210	1,2,3,4
FCU-2-5	LG - LDN097HV4	HORIZONTAL DUCTED	ELEVATOR MACHINE ROOM	200	0	7.7	5.4	80/67	55/54	CU-2-5	LG - LUU097HV	100	208/1/60	15/12/9.6	90	1,2,3,4
FCU-2-6	LG - LSN180HSV5	WALL MOUNTED	STAIR - ST2	700	0	16.1	15.2	75/62	55/54	CU-2-6	LG - LSU180HSV5	100	208/1/60	20/13/9.9	120	1,2,3,4
FCU-2-7	LG - LSN180HSV5	WALL MOUNTED	IT - 230	700	0	16.1	15.2	75/62	55/54	CU-2-7	LG - LSU180HSV5	100	208/1/60	20/13/9.9	120	1,2,3,4
FCU-2-8	LG - LDN127HV4	HORIZONTAL DUCTED	ELEVATOR NO. 3	300	0	11.5	9.6	80/67	55/54	CU-2-8	LG - LUU127HV	100	208/1/60	15/12.3/10.1	90	1,2,3,4,5

- NOTES:
- PROVIDE WITH SINGLE POINT ELEC CONNECTION THAT INCLUDES INTERNAL FUSING AND CONTACTORS FOR STARTERS FOR MOTORS.
 - PROVIDE WITH CONCEALED CONDENSATE PUMP.
 - PROVIDE WITH FACTORY DISCONNECT.
 - CONNECT BACK TO B.A.S.
 - PROVIDE TEMPERATURE SENSOR IN RETURN AIR DUCT.

HUMIDIFIER SCHEDULE

TAG	MANUFACTURER/MODEL	UNIT SERVED	TYPE	DUCT SIZE	SUPPLY AIRFLOW RATE (CFM)	HUMIDIFICATION RATE (LB/HR)	WATER TYPE	CYLINDER QUANTITY	ELECTRICAL		NOTES
									TOTAL INPUT POWER (KW)	VOLTS/PH/HZ	
HUM-2-1	CONDAIR EL 100	RTU-2-1	ELECTRODE STEAM	62" x 22"	14180	75.7	TAP	1	37.4	480/3/60	ALL

- NOTES:
- PROVIDE DUCT MOUNTED STEAM DISTRIBUTOR, STEAM AND CONDENSATE PIPING, MOUNTING ACCESSORIES INCLUDING MOUNTED PLATES FOR RIGID SUPPORT OF DUCT MOUNTED DISTRIBUTOR.
 - PROVIDE WITH CONDENSATE RETURN PUMP AS REQUIRED.
 - PROVIDE ELECTRIC CONTROLS - ON/OFF AIR FLOW PROVING SWITCH, DUCT MOUNTED HIGH LIMIT SENSOR, & ROOM HUMIDITY SENSOR. B.A.S. SHALL CONTROL WHEN UNIT TURNS ON. COORDINATE WORK WITH B.A.S. CONTRACTOR.
 - INSTALL IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATION.
 - VERIFY ABSORPTION DISTANCE TO BE WITHIN MANUFACTURER'S RECOMMENDATION BEFORE INSTALLING HUMIDIFIER AND DISTRIBUTOR.

SINGLE DUCT AIR TERMINAL UNIT SCHEDULE

TAG	SYSTEM	INLET SIZE	AIRFLOW		ELECTRIC HEATING COIL				MANUFACTURER AND MODEL	NOTES	
			MAX CFM	MIN CFM	EAT (°F)	LAT (°F)	KW	STAGES			VOLTAGE/PHASE
VAV-2-1	RTU-2-1	14" Ø	2070	2070	55	75	13.5	SCR	460/3	TITUS DESV	1,2,3
VAV-2-2	RTU-2-1	14" Ø	2020	2020	55	75	13	SCR	460/3	TITUS DESV	1,2,3
VAV-2-3	RTU-2-1	14" Ø	2015	2015	55	75	13	SCR	460/3	TITUS DESV	1,2,3
VAV-2-4	RTU-2-1	14" Ø	1790	1790	55	75	11.5	SCR	460/3	TITUS DESV	1,2,3
VAV-2-5	RTU-2-1	8" Ø	410	325	55	75	3	SCR	277/1	TITUS DESV	1,2,3
VAV-2-6	RTU-2-1	8" Ø	570	525	55	75	4	SCR	277/1	TITUS DESV	1,2,3
VAV-2-7	RTU-2-1	14" Ø	1530	1530	55	75	9.5	SCR	460/3	TITUS DESV	1,2,3
VAV-2-8	RTU-2-1	10" Ø	890	890	55	75	5.5	SCR	460/3	TITUS DESV	1,2,3
VAV-2-9	RTU-2-1	6" Ø	370	195	55	75	2.5	SCR	277/1	TITUS DESV	1,2,3
VAV-2-10	RTU-2-1	10" Ø	705	140	55	85	7	SCR	460/3	TITUS DESV	1,2,3
VAV-2-11	RTU-2-1	6" Ø	210	210	55	75	1.5	SCR	277/1	TITUS DESV	1,2,3
VAV-2-12	RTU-2-2	10" Ø	720	500	55	75	5	SCR	277/1	TITUS DESV	1,2,3
VAV-2-13	RTU-2-2	10" Ø	910	220	55	85	9	SCR	460/3	TITUS DESV	1,2,3
VAV-2-14	RTU-2-2	10" Ø	835	735	55	75	5.5	SCR	460/3	TITUS DESV	1,2,3
VAV-2-15	RTU-2-2	6" Ø	320	250	55	85	3.5	SCR	277/1	TITUS DESV	1,2,3
VAV-2-16	RTU-2-2	6" Ø	210	210	55	85	2.5	SCR	277/1	TITUS DESV	1,2,3
VAV-2-17	RTU-2-2	8" Ø	405	250	55	75	3	SCR	277/1	TITUS DESV	1,2,3
VAV-2-18	RTU-2-2	10" Ø	720	420	55	85	7	SCR	460/3	TITUS DESV	1,2,3
RVAV-2-1	RTU-2-1	14" Ø	1870	1870	-	-	-	-	-	TITUS DECV	1,2,3
RVAV-2-2	RTU-2-1	14" Ø	1820	1820	-	-	-	-	-	TITUS DECV	1,2,3
RVAV-2-3	RTU-2-1	14" Ø	1815	1815	-	-	-	-	-	TITUS DECV	1,2,3
RVAV-2-4	RTU-2-1	14" Ø	1590	1590	-	-	-	-	-	TITUS DECV	1,2,3
RVAV-2-5	RTU-2-1	10" Ø	785	785	-	-	-	-	-	TITUS DECV	1,2,3
RVAV-2-6	RTU-2-1	10" Ø	750	750	-	-	-	-	-	TITUS DECV	1,2,3
RVAV-2-7	RTU-2-1	10" Ø	790	790	-	-	-	-	-	TITUS DECV	1,2,3
RVAV-2-8	RTU-2-1	10" Ø	500	500	-	-	-	-	-	TITUS DECV	1,2,3
RVAV-2-9	RTU-2-1	14" Ø	1980	440	-	-	-	-	-	TITUS DECV	1,2,3
VAV-2-19	RTU-2-1	14" Ø	2180	440	55	75	14	SCR	460/3	TITUS DESV	1,2,3

- NOTES:
- PROVIDE INTEGRAL DISCONNECT SWITCH (DOOR INTERLOCK TYPE). COORDINATE WITH ELECTRICAL CONTRACTOR.
 - PROVIDE 24 VOLT CONTROL TRANSFORMER. COORDINATE DDC CONTROLS WITH CONTROLS CONTRACTOR PRIOR TO PURCHASE.
 - UNIT SHALL BE DOUBLE-WALLED.

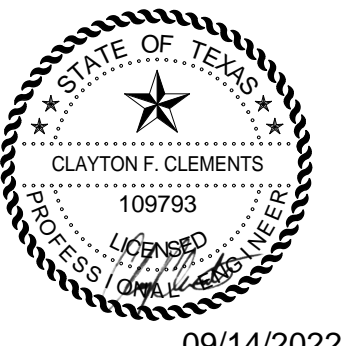
ELECTRIC UNIT HEATER SCHEDULE

TAG	AREA SERVED	AIRFLOW (CFM)	HEATING OUTPUT (KW)	VOLTS/PH/HZ	MANUFACTURER/MODEL	NOTES
EUH-2-1	FUTURE OFFICE	310	5.0	480/3/60	REZ NOR EGEB	1,2,3
EUH-2-2	FUTURE OFFICE	310	5.0	480/3/60	REZ NOR EGEB	1,2,3

- NOTES:
- PROVIDE WITH SINGLE STAGE WALL THERMOSTAT.
 - PROVIDE CEILING BRACKET FOR HORIZONTAL DISCHARGE.
 - PROVIDE WITH FACTORY DISCONNECT.



21750 HARDY OAK BLVD. STE 102
SAN ANTONIO TX, 78258
P: 210.964.0132 M: 512.773.3070



09/14/2022



LEGENT NORTH HOUSTON SURGICAL HOSPITAL
 24429 TOMBALL PKWY, SUITE 100
 TOMBALL, TX 77375

Drawn: BAR
Checked: SSM
Date: 06/30/22
PROJECT No.
Revisions:
06/30/22 ISSUE FOR CONSTRUCTION
07/25/22 PR 3
09/09/22 PR 5

SHEET TITLE
MECHANICAL SCHEDULES

SHEET NO.
M602