



CORGAN
 20 East Greenway Plaza Suite 410
 Houston, TX 77046
 T: 214.749.2000 F: 214.653.8281

ISSUES	
1	4.02.18 100% DESIGN DEVELOPMENT
2	5.15.18 50% CD SET
3	6.13.18 90% CD SET
4	7.16.18 ISSUE FOR GMP & PERMIT
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8	
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REVISIONS	
1	08.10.2018 ADDENDUM 1



COMcheck Software Version 4.0.8.1
Mechanical Compliance Certificate

Project Information

Energy Code:	2015 IECC	Owner/Agent:		Designer/Contractor:	Estes, McClure & Associates, Inc.
Project Title:	Waller Civic Center	Location:	Waller, Texas	3608 West Way	Tyler, TX 75703
Location:		Climate Zone:	2a	903.581.2677	www.estesmcclure.com
Climate Zone:		Project Type:	Addition		
Construction Site:	3007 Waller Street Waller, TX 77484				

Mechanical Systems List

Quantity	System Type & Description
1	RTU 15.0 tons (Single Zone): Heating: 1 each - Central Furnace, Gas, Capacity = 250 kBtu/h Proposed Efficiency = 80.00% EI, Required Efficiency = 80.00% EI Cooling: 1 each - Single Package DX Unit, Capacity = 170 kBtu/h, Air-Cooled Condenser, Air Economizer Proposed Efficiency = 10.80 EER, Required Efficiency: 10.80 EER + 12.2 IEER Fan System: None
1	Mini Split System (Single Zone): Split System Heat Pump Heating Mode: Capacity = 38 kBtu/h Proposed Efficiency = 8.20 HSPF, Required Efficiency = 8.20 HSPF Cooling Mode: Capacity = 38 kBtu/h Proposed Efficiency = 17.90 SEER, Required Efficiency: 14.00 SEER Fan System: None
1	NEW Water Heater: Electric Storage Water Heater, Capacity: 40 gallons w/ Circulation Pump Proposed Efficiency: 0.88 EF, Required Efficiency: 0.88 EF

Mechanical Compliance Statement

Compliance Statement: The proposed mechanical design represented in this document is consistent with the building plans, specifications, and other calculations submitted with this permit application. The proposed mechanical systems have been designed to meet the 2015 IECC requirements in COMcheck Version 4.0.8.1 and to comply with any applicable mandatory requirements listed in the Inspection Checklist.

Joyce McDade - Designer		06/28/2018
Name - Title	Signature	Date

Project Title: Waller Civic Center Report date: 06/28/18
 Data filename: Z:\Corgan - Houston\PRIVATE\3 082 1666 001 NEW CITY HALL\06 COMcheck 3 082 1666 Page 1 of 10
 001\MECHANICAL\3 082 1666 001 CIVIC CENTER MECH.cck

WALLER CIVIC CENTER

3007 Waller Street
Waller, TX 77484

KEYPLAN

MECHANICAL COMCHECK

JOB 17075.0000
DATE 7/16/2018
SHEET

MH01-00

EMA Engineering and Consulting
 Tyler • Austin • Houston
 Phone • 1-800-933-0538
 TBPE Firm Registration No. F-893
 www.estesmcclure.com

SUBMISSION OF BID WILL BE CONSIDERED ACKNOWLEDGMENT THAT THE CONTRACTOR HAS VISITED THE SITE AND HAS VERIFIED ALL EXISTING JOB CONDITIONS AND INCLUDED ANY NECESSARY MODIFICATION TO EXISTING AND NEW WORK REQUIRED FOR INSTALLATION OF A COMPLETE AND WORKING SYSTEM.

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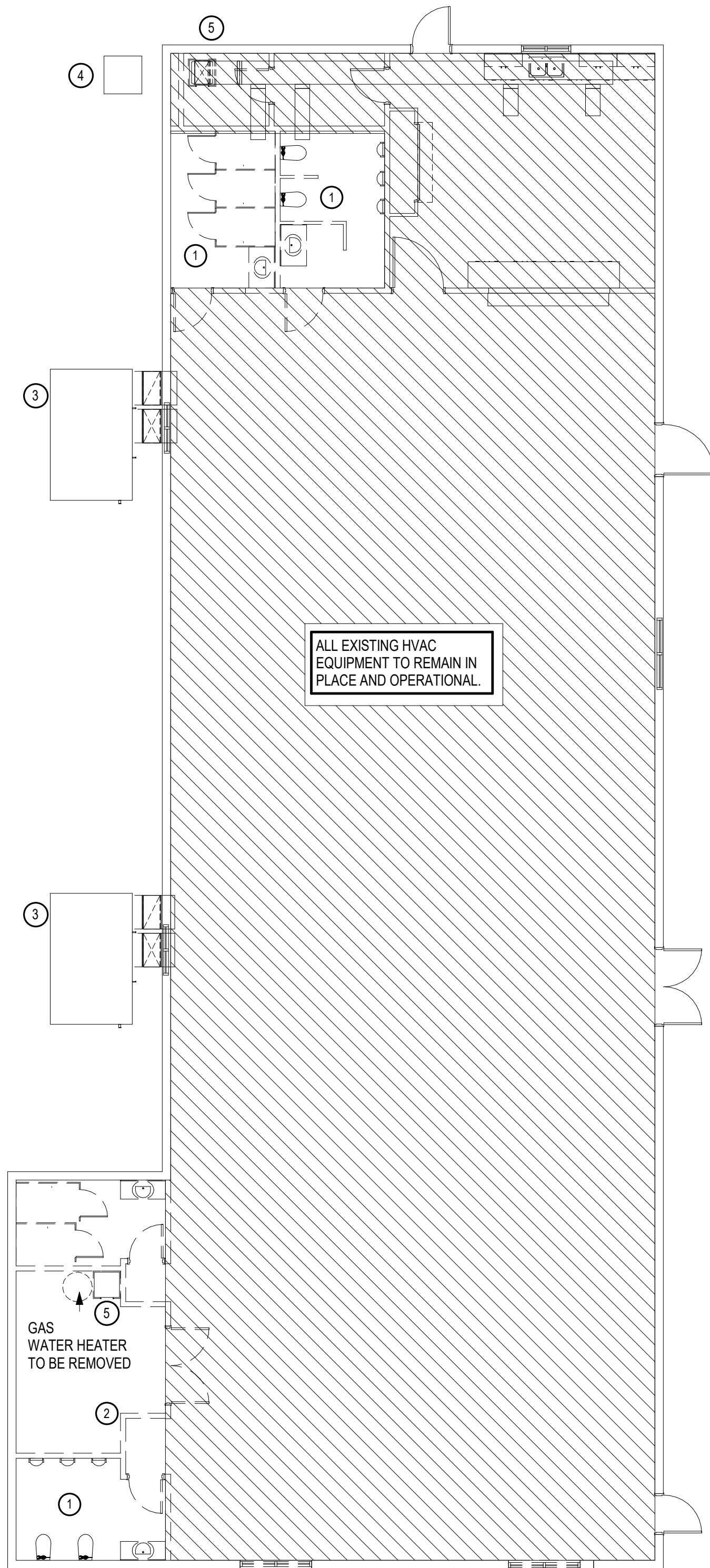
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MECHANICAL DEMOLITION GENERAL NOTES:

1. CONTRACTOR TO VISIT SITE AND BE FAMILIAR WITH BUILDING MECHANICAL AND ELECTRICAL LAYOUTS.
2. IF ASBESTOS IS FOUND CONTACT OWNER IMMEDIATELY. DO NOT WORK IN ANY AREA SUSPECTED TO CONTAIN ASBESTOS.
3. ALL EXISTING EQUIPMENT SHOWN IN APPROXIMATE LOCATION. FIELD VERIFY.
4. DO NOT RELEASE ANY REFRIGERANT TO ATMOSPHERE. DISPOSE OF IN A LAWFUL MANNER.
5. ALL REUSED EXISTING MECHANICAL EQUIPMENT SHALL BE INSPECTED AND CLEANED FOR PROPER OPERATION. CHANGE ALL BELTS.
6. PROVIDE AND INSTALL A FIRE DAMPER WHERE NEW DUCTWORK CROSSES AN EXISTING FIRE RATED WALL. IF ANY EXISTING DUCTWORK CROSSES A NEW FIRE RATED WALL A FIRE DAMPER IS TO BE PROVIDED AND INSTALLED.
7. ALL MATERIAL, EQUIPMENT, DUCTS, PIPE, ETC. TO BE REMOVED SHALL BE DISPOSED OF OFF SITE IN A LEGAL AND LAWFUL MANNER.
8. ALL EXISTING FIRE DAMPERS OR SMOKE DAMPERS BEING REUSED SHALL REMAIN IN PLACE AND OPERATIONAL.
9. REMOVE ONLY CEILING TILE NECESSARY TO ACCOMPLISH DEMOLITION AND NEW WORK, DUCT, ELECTRICAL, ETC. REPLACE ALL BROKEN TILES WITH NEW TILES TO MATCH EXISTING WHERE REQUIRED. REUSE EXISTING TILES.

MECHANICAL DEMOLITION PLAN NOTES:

- ① REMOVE AND DISCARD EXISTING EXHAUST FAN, AND INCLUDING BUT NOT LIMITED TO: DUCTWORK, GRILLES, SUPPORTS, ETC. CAP AND SEAL WATER AND AIR TIGHT ANY OPENING WHERE THE EXISTING EXHAUST FANS EXIT THE BUILDING.
- ② REMOVE ANY FLUE OR COMBUSTION AIR DUCTWORK FOR EXISTING GAS WATER HEATER BEING REMOVED. CAP AND SEAL WATER AND AIR TIGHT ANY OPENING WHERE THE EXISTING FLUE OR COMBUSTION AIR DUCTWORK EXIT / ENTER THE BUILDING.
- ③ EXISTING PACKAGED HVAC EQUIPMENT ON THE GROUND TO REMAIN IN PLACE AND OPERATIONAL.
- ④ EXISTING SPLIT CONDENSER UNIT ON THE GROUND TO REMAIN IN PLACE AND OPERATIONAL.
- ⑤ EXISTING SPLIT AIR HANDLING UNIT TO REMAIN IN PLACE AND OPERATIONAL.

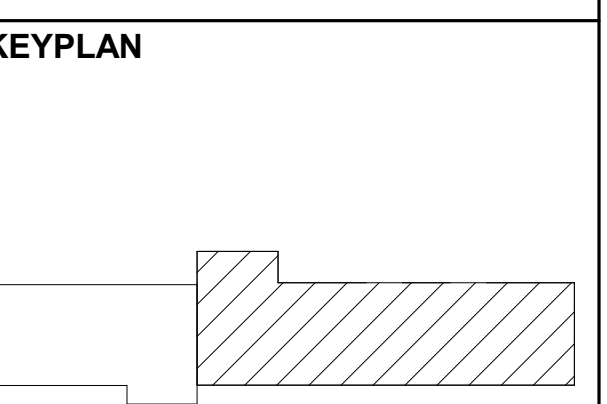


① MECHANICAL DEMOLITION FLOOR PLAN-LEVEL 1
1/8" = 1'-0"



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MECHANICAL DEMOLITION FLOOR PLAN - LEVEL 1

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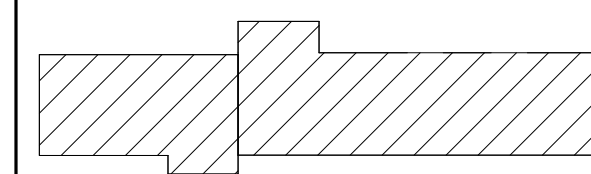
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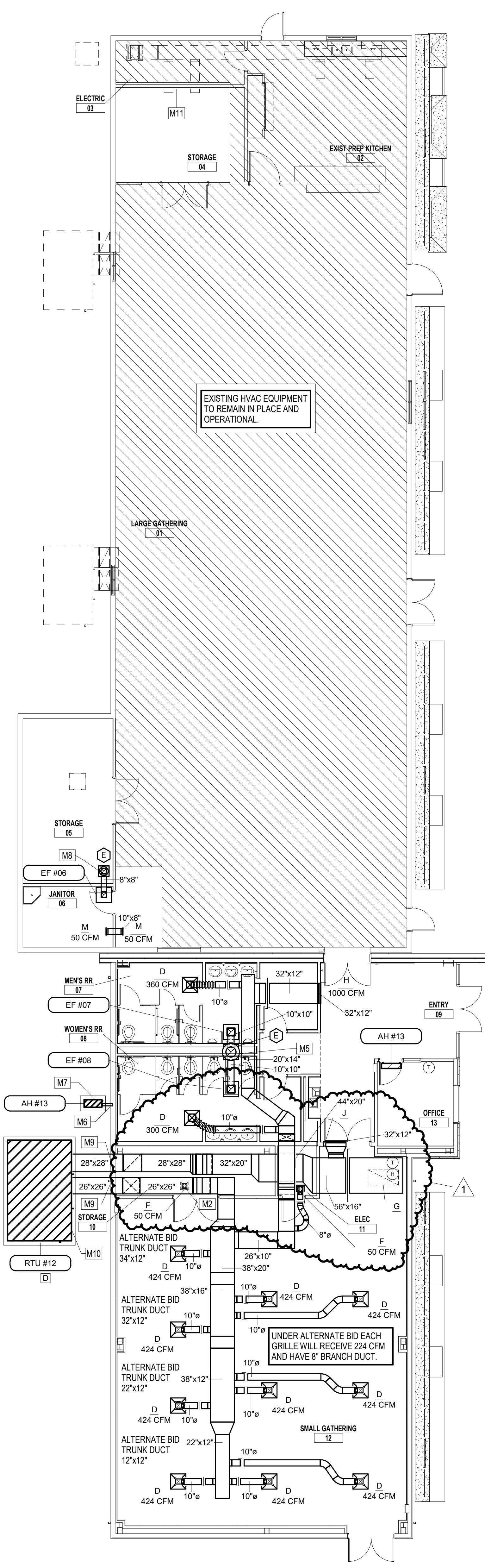
KEYPLAN



MECHANICAL FLOOR PLAN - LEVEL 1

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MH01-01



MECHANICAL PLAN NOTES

- M1 8"Ø DOWN WITH MANUAL DAMPER.
- M2 14" x 14" UP TO EXHAUST RELIEF ON ROOF.
- M5 ROUTE REFRIGERANT LINES NEATLY UP WALL.
- M7 PROVIDE 4" CONCRETE PAD. POUR IN PLACE LEVEL.
- M8 8"Ø UP TO EXHAUST RELIEF ON ROOF.
- M9 ALL EXTERIOR DUCTWORK TO BE "DUCTMATE" OR EQUAL.
- M10 PROVIDE 6" CONCRETE PAD. POUR IN PLACE LEVEL.
- M11 EXTEND FLUE AND COMBUSTION AIR DUCTWORK TO NEW LOCATION OF GAS WATER HEATER.

MECHANICAL GENERAL NOTES:

1. MECHANICAL CONTRACTOR TO PROVIDE TO THE PLUMBING CONTRACTOR THE RECOMMENDED AC MANUFACTURER'S DATA FOR CONDENSATE TRAPS PER EACH TYPE OF UNIT.
2. THE MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVAL OR ADJUSTMENT OF ALL HOLD DOWN BOLTS ON COMPRESSORS AT HVAC EQUIPMENT TO ALLOW FOR PROPER VIBRATION ISOLATION.
3. THE MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVAL OF ALL ABANDONED SCREWS, PIPING, TAPE, PAPERS, PACKING PRODUCTS, ETC.
4. ALL EQUIPMENT SHALL BE PROPERLY LABELED PER SPECIFICATIONS.
5. CLOSE ALL OUTSIDE AIR DAMPERS UPON INSTALLATION AND KEEP ALL OUTSIDE AIR DAMPERS CLOSED UNTIL THE "TEST AND BALANCE" IS PERFORMED.
6. PROVIDE AND INSTALL MANUAL VOLUME CONTROL DAMPERS ON SUPPLY AND RETURN BRANCH DUCT SERVING A DIFFUSER OR REGISTER.
7. ALL MANUAL DAMPERS INSTALLED ABOVE HARD CEILINGS OR AT OTHER INACCESSIBLE AREAS SHALL BE SUPPLIED WITH A CABLE OPERATED DAMPER EQUAL TO YOUNG REGULATOR MODEL 830A-CC.
8. DUCT MOUNTED SMOKE DETECTORS SHALL BE FURNISHED BY THE FIRE ALARM CONTRACTOR. INSTALLED BY THE MECHANICAL CONTRACTOR, AND FINAL TIE-IN BY THE FIRE ALARM CONTRACTOR.
9. SEAL WITH FIRE RETARDING SEALANT AROUND PIPE THROUGH ANY PENETRATION OF FIRE WALLS. REFER TO ARCHITECTURAL SHEETS FOR FIRE WALLS.
10. ALL GRILLES ARE SHOWN IN APPROXIMATE LOCATION. FIELD VERIFY PLACEMENT WITH CEILING GRID.
11. ALL DIFFUSERS/FLEX CONNECTIONS SHALL HAVE A RIGID METAL ELBOW UNLESS COMING DIRECTLY DOWN FROM A UNIT OR HEIGHT OF CEILING IS EXTREME. ALL FLEX DUCT TO HAVE AT LEAST ONE SUPPORT STRAP.
12. THE SPACE AROUND DUCTS AND PENETRATING ITEMS OF SMOKE PARTITION WALLS SHALL BE FILLED WITH AN IBC APPROVED MATERIAL LIMITING THE FREE PASSAGE OF SMOKE.
13. ALL FAN CURBS TO BE INSTALLED LEVEL. PROVIDE SEAL BETWEEN CURB AND ROOF.
14. COORDINATE WITH THE PLUMBING CONTRACTOR LOCATION OF ALL SUPPLY FANS WITH PLUMBING VENTS. MAINTAIN 10'-0" MINIMUM SEPARATION.
15. NO MECHANICAL EQUIPMENT THAT REQUIRES SERVICE (i.e. FANS, ROOFTOP UNITS, ETC.) ON ROOF SHALL BE CLOSER THAN 10'-6" TO EDGE OF BUILDING.
16. THE MECHANICAL CONTRACTOR SHALL NOT INSTALL ANY ROOF EQUIPMENT CLOSER THAN 5'-0" TO ANY ADJACENT WALLS, EXPANSION JOINTS, AND/OR PARAPETS.
17. COORDINATE WITH THE PLUMBING CONTRACTOR LOCATION OF ALL ROOFTOP UNITS WITH ALL PLUMBING VENTS. MAINTAIN 10'-0" MINIMUM SEPARATION.
18. COORDINATE ALL ROOFTOP UNITS, DUCTWORK, AND GRILLES WITH ALL TRADES BEFORE INSTALLING.
19. MECHANICAL CONTRACTOR SHALL COORDINATE WITH THE ROOFING CONTRACTOR ALL COUNTER FLASHING REQUIRED AT ROOF CURBS.
20. MECHANICAL CONTRACTOR SHALL COORDINATE WITH THE STEEL ERECTOR AND ROOFING CONTRACTOR THE INSTALLATION OF ALL ROOF MOUNTED EQUIPMENT.
21. MECHANICAL CONTRACTOR IS RESPONSIBLE FOR COORDINATING SLOPE OF STRUCTURAL STEEL TO ALLOW ROOF CURBS TO BE INSTALLED LEVEL.
22. ALL ROOFTOP UNITS AND CURBS TO BE INSTALLED LEVEL. ROOFTOP UNIT MFG. TO PROVIDE SEAL BETWEEN UNIT AND CURB.
23. NO MECHANICAL EQUIPMENT THAT REQUIRES SERVICE (i.e. FANS, CONDENSING UNITS, ETC.) ON ROOF SHALL BE CLOSER THAN 10'-0" TO EDGE OF BUILDING.
24. INSTALL CONDENSERS PER MANUFACTURER CLEARANCES.
25. MECHANICAL CONTRACTOR SHALL SUBMIT TO ARCHITECT/ENGINEER REFRIGERANT LINE SET DESIGN AND ROUTING PER MANUFACTURER FOR REVIEW BEFORE INSTALLATION BEGINS.
26. THE MECHANICAL CONTRACTOR SHALL APPLY ULTRA-VIOLET PROTECTIVE COATING OVER REFRIGERANT INSULATION PER MANUFACTURER.
27. COORDINATE ALL AIR HANDLERS, DUCTWORK, GRILLES, CONDENSING UNITS, AND NEW REFRIGERANT LINES WITH ALL TRADES BEFORE INSTALLING.
28. ALL HORIZONTAL AIR HANDLERS ABOVE CORRIDOR CEILINGS SHALL BE LOCATED TO POSITION SERVICE ACCESS PANEL TO FACE TOWARD CENTER OF CORRIDOR.
29. ALL AIR HANDLERS: NO PIPING, CONDUITS, DUCTS, WIRING, DISCONNECTS, ETC. WILL BE ALLOWED TO BE INSTALLED CLOSER THAN 3'-0" (THREE FEET) IN FRONT OF THE SERVICE ACCESS PANEL.
30. PROVIDE AND INSTALL 18 GAUGE 2" DEEP GALVANIZED DRAIN PAN UNDER EACH AIR HANDLER (PER DETAIL).
31. ALL THERMOSTAT WIRING TO A/C UNITS SHALL BE SECURED TO REFRIGERANT LINES UTILIZING TEFLON TY-WRAPS.
32. ALL VARIABLE FREQUENCY DRIVES (VFD'S) ARE TO BE PROVIDED BY THE MECHANICAL CONTRACTOR. INSTALLED AND POWERED BY THE ELECTRICAL CONTRACTOR, AND CONTROLLED BY THE CONTROLS CONTRACTOR.

1 MECHANICAL FLOOR PLAN-LEVEL 1
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WALLER CIVIC CENTER

KEYPLAN

MECHANICAL SCHEDULES

A/C SCHEDULE		(ROOFTOP - GAS / ELEC.)														
MARK	NOM. TONS	LOW SPEED CFM	HIGH SPEED CFM	O/A CFM MAX	O/A CFM MIN	MFG. USED IN DESIGN	ELECTRICAL DATA	MOCF AMPS	SEER/EER	HEAT INPUT (MBTUH)	COOLING CAPACITY (MBTUH) TOTAL SENS.	E.S.P. AFTER COIL	UNIT WEIGHTS (LB.) ROOFTOP	REMARKS: PROVIDE	HEAT RECLAIM	
A	15.0	4000	6000	800	300	DPS015A	208 V, 3 ph.	100.0	- / 10.8	250.0	169.7	142.9	5	2800	1, 2, 3, 4, 5, 6, 7, 9, 10, 11, 12	HOT GAS REHEAT
B	10.0	2700	4000	1000	400	DPS010A	208V, 3PH.	70	- / 12.1	130.0	118.1	88.6	5	1600	1, 2, 3, 4, 5, 6, 7, 9, 10, 11, 12, 13	

BASE BID: RTU # 12
ALTERNATE BID #2: RTU # 12
REMARKS: ALL REMARKS MAY NOT BE USED PER EACH UNIT. VERIFY WITH REMARKS COLUMN.
5. CRANKCASE HEATER
6. FREEZE THERMOSTAT
7. R410-A
8. TWO STAGE COMPRESSOR
9. MULTI COMPRESSORS
10. ECONOMIZER WITH FDD
11. POWER EXHAUSTER
12. ECM OR VFD ON SUPPLY FAN
13. BI-POLAR IONIZER

AIR IONIZER SCHEDULE		REMARKS
RTU TONS	MANUFACTURER MODEL #	
7.5, 10.0, 17.5, & 20.0	PLASMA AIR 7300	BULB-LESS DESIGN, 24V POWER, 20.0 REQUIRE 2 IONIZERS
12.5, 15.0, & 25.0	PLASMA AIR 7400	BULB-LESS DESIGN, 24V POWER, 25.0 REQUIRE 2 IONIZERS

NOTE: UNITS RECEIVING IONIZER SHALL HAVE 2 POSITION DAMPERS (OPEN AND CLOSED)

A/C SCHEDULE - HEAT PUMP											
MARK	CFM	MFG. USED IN DESIGN	SEER	ELECTRICAL DATA	MOP (MOCF)	MBTUH	UNIT WEIGHT (LB.)	REMARKS: PROVIDE			
W	790	FTXS 36 LVJU-AIR HANDLER RXS 36 LVJU-CONDENSER	17.9	208 V, 1 ph. 208 V, 1 ph.	25 30	90 38.0	36.0	COIL HAIL GUARD, CONDENSATE PUMP MODEL: HDACA-CR-1 MAX. REFRIGERANT LINE LENGTH OF 25.0'			

FAN SCHEDULE								
MARK	CFM @ E.S.P.	MOTOR H.P./W	MANUFACTURER MODEL	ELECTRICAL DATA	SONES	CONTROL	ACCESSORIES: PROVIDE	
A	100	25	67 W	COOK GC-162	120 V, 1 ph.	1.7	SWITCH	FACTORY INSTALLED SPEED CONTROLLER, GEMINI DELUXE ALUMINUM GRILLE - WHITE
B	375	268 W	COOK GC-640	120 V, 1 ph.	3.2	EMCS	FACTORY INSTALLED SPEED CONTROLLER, GEMINI DELUXE ALUMINUM GRILLE - WHITE	
C	450	296 W	COOK GC-640	120 V, 1 ph.	3.8	EMCS	FACTORY INSTALLED SPEED CONTROLLER, GEMINI DELUXE ALUMINUM GRILLE - WHITE	

GRILLE SCHEDULE					
MARK	DESCRIPTION	MODEL	FINISH	NECK	REMARKS: PROVIDE
A	CEILING SUPPLY DIFFUSER	PRICE SQD	WHITE	12" dia.	MODULE SIZE 24x24, (FLUSH MOUNT ADD TRIM FRAME AND ADJUSTABLE DAMPER)
B	CEILING RETURN GRILLE	PRICE 80	WHITE	22" x 22"	MODULE SIZE 24x24, (FLUSH MOUNT ADD TRIM FRAME AND ADJUSTABLE DAMPER)
C	CEILING SUPPLY DIFFUSER	PRICE SCD	WHITE	8" dia.	MODULE SIZE 24x24, (FLUSH MOUNT ADD TRIM FRAME AND ADJUSTABLE DAMPER)
D	CEILING SUPPLY DIFFUSER	PRICE SCD	WHITE	10" dia.	MODULE SIZE 24x24, (FLUSH MOUNT ADD TRIM FRAME AND ADJUSTABLE DAMPER)
E	EXHAUST RELIEF	COOK PR12	ALUM.	PER PLANS	ROOF CURB, BACKDRAFT DAMPER, MIN. SIZE 12"x12"
F	CEILING SUPPLY REGISTER	PRICE SCVD	WHITE	10" x 10"	ONE-WAY THROW, CONCEALED FASTENERS, (FLUSH MOUNT ADD TRIM FRAME AND ADJUSTABLE DAMPER)
G	CEILING RETURN GRILLE	PRICE 60	WHITE	46" x 22"	MODULE SIZE 48"x24" PAINT 2-0" INSIDE DUCT PAST GRILLE FLAT BLACK, (FLUSH MOUNT ADD FRAME & ADJUSTABLE DAMPER)
H	SIDEWALL SUPPLY REGISTER	PRICE S20L	WHITE	32" x 12"	OPPOSED BLADE DAMPER, HORIZONTAL FRONT BLADE, PLENUM AS REQUIRED, CONCEALED FASTENERS
J	SIDEWALL RETURN GRILLE	PRICE S30L	WHITE	32" x 12"	LONG HORIZONTAL FRONT BLADE, PLENUM, CONCEALED FASTENERS
K	SIDEWALL SUPPLY REGISTER	PRICE S20L	WHITE	10" x 10"	OPPOSED BLADE DAMPER, HORIZONTAL FRONT BLADE, PLENUM AS REQUIRED, CONCEALED FASTENERS
L	SIDEWALL RETURN GRILLE	PRICE S30L	WHITE	10" x 10"	LONG HORIZONTAL FRONT BLADE, PLENUM, CONCEALED FASTENERS
M	SIDEWALL SUPPLY REGISTER	PRICE S20L	WHITE	10" x 8"	OPPOSED BLADE DAMPER, HORIZONTAL FRONT BLADE, PLENUM AS REQUIRED, CONCEALED FASTENERS

NOTE: ALL SIDEWALL GRILLES/LOUVERS SHALL HAVE EXACT LOCATION AND HEIGHT VERIFIED WITH ARCHITECT BEFORE INSTALLING.

OUTSIDE AIR TABLE					
SQ FT	ROOM	CFM per SQ FT	CFM per PERSON	OCCUPATION DENSITY	TOTAL
1788	MULTI-USE ASSEMBLY	.06	7.5	100	1007 @ 120 people
1788	MULTI-USE ASSEMBLY	.06	5	100	707 @ 120 people

NOTE: WHEN USING BI-POLAR IONIZERS THE OUTSIDE AIR CFM DROPS TO 5 CFM PER PERSON.

