

State of Vermont
Department of Buildings & General Services
VERMONT AGENCY OF TRANSPORTATION
EDEN MAINTENANCE GARAGE
Eden, Vermont

AGENCY OF ADMINISTRATION
DEPT. OF BUILDINGS & GENERAL SERVICES
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MONTPELIER, VERMONT 05633-5801
R. TASHA WALLIS, COMMISSIONER

AGENCY OF TRANSPORTATION
NATIONAL LIFE BUILDING
MONTPELIER, VERMONT 05633-5001
DAWN TERRILL, SECRETARY



James Douglas
Governor

July 2005

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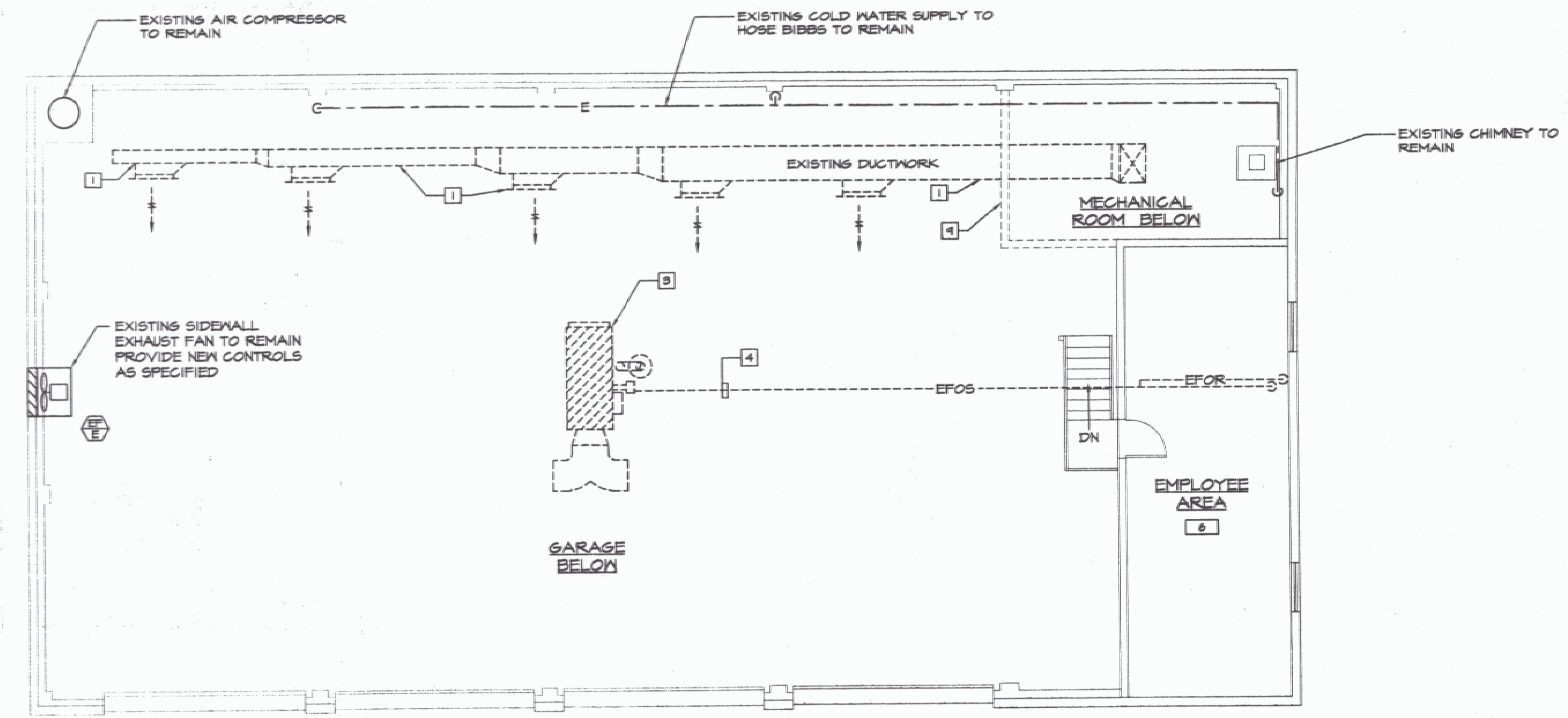
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MECHANICAL LEGEND & ABBREVIATIONS

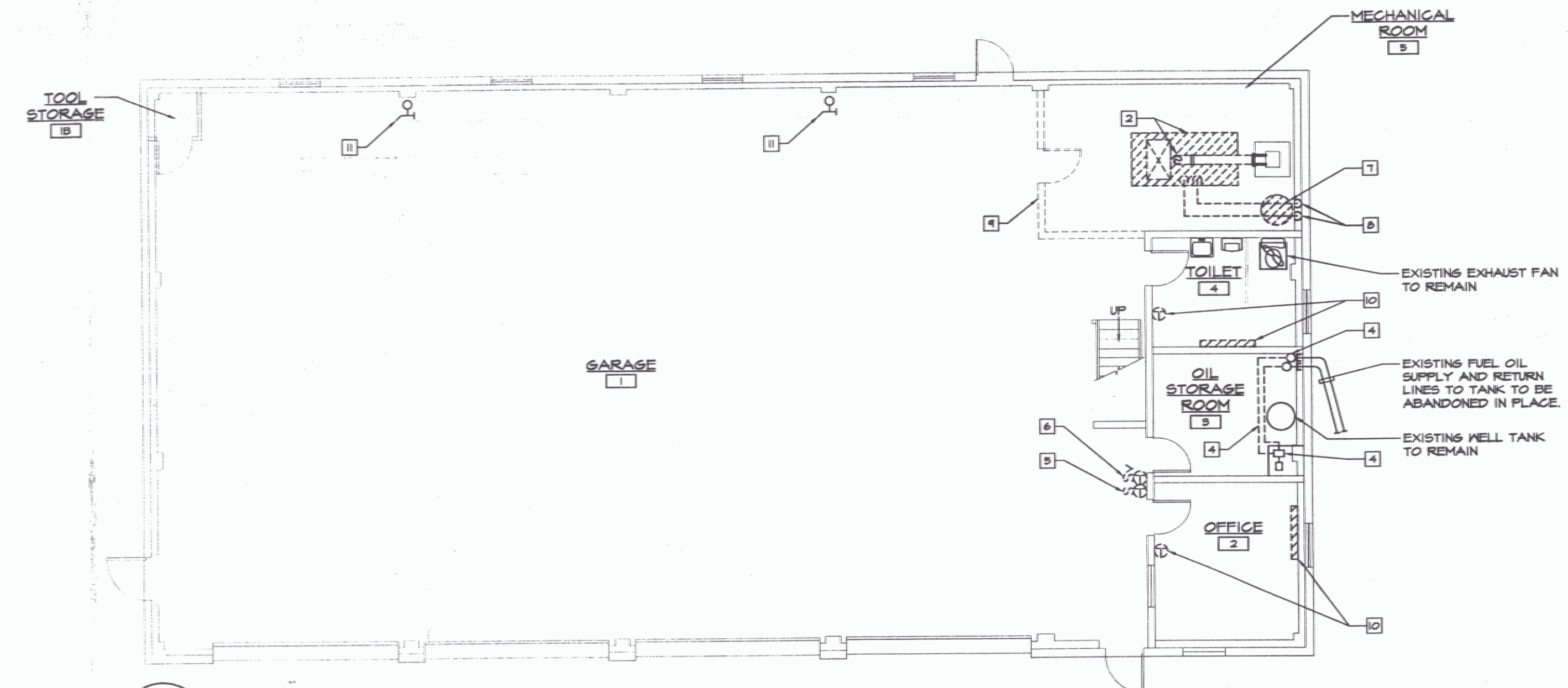
- ⊘ BALL VALVE
- PIPE RISER
- PIPE DROP
- PIPE CAP
- FOS FUEL OIL SUPPLY, E = EXISTING
- FOR FUEL OIL RETURN, E = EXISTING
- G LP GAS PIPING
- E— COLD WATER PIPING, E = EXISTING
- — — — — HOT WATER PIPING (110°F)
- ⊠ LP GAS REGULATOR
- ⊕ THERMOSTAT
- ⊕ EXISTING THERMOSTAT TO BE REMOVED
- St SWITCH, SUBSCRIPT, T = TIMER
- NEW DUCTWORK
- - - - - EXISTING DUCTWORK TO BE REMOVED
- ⊠ SUPPLY DUCT DOWN
- ⊠ SUPPLY DUCT UP
- FLEXIBLE DUCT CONNECTOR
- AIR FLOW INDICATOR
- VOLUME DAMPER
- M.D. MOTORIZED DAMPER
- FD FIRE DAMPER
- E.C. ELECTRICAL CONTRACTOR
- G.C. GENERAL CONTRACTOR
- GUH GAS FIRED UNIT HEATER
- ⊕ CONNECT TO EXISTING
- ⊕ DRAWING NOTE TAG
- ⊕ DEMOLITION NOTE TAG
- ⊕ LOUVER
- ⊕ SUPPLY DIFFUSER
- ⊕ GAS FIRED UNIT HEATER
- ⊕ EQUIPMENT TYPE E=EXISTING
- ⊕ SECTION NUMBER DWS. NUMBER
- HOSE BIBB TO BE REMOVED
- ↓ FIXTURE STOP

DEMOLITION NOTES (APPLY TO THIS DRAWING ONLY)

- 1 OWNER TO REMOVE EXISTING DUCTWORK AND DUCT HANGERS.
- 2 OWNER TO REMOVE EXISTING WOOD FIRED FURNACE AND FLUE. CONTRACTOR TO CAP AND SEAL FLUE CONNECTOR AT CHIMNEY.
- 3 OWNER TO REMOVE EXISTING OIL FIRED FURNACE AND FLUE. OWNER TO PATCH ROOF.
- 4 CONTRACTOR TO REMOVE EXISTING FUEL OIL SUPPLY AND RETURN LINES AND TRANSFER PUMP. CONTRACTOR TO CAP FUEL OIL SUPPLY AND RETURN LINES FROM OIL TANK. UNDERGROUND FOS AND FOR LINES TO TANK TO BE ABANDONED IN PLACE.
- 5 CONTRACTOR TO REMOVE EXISTING THERMOSTAT FOR WOOD FIRED FURNACE, INCLUDING ASSOCIATED WIRING.
- 6 CONTRACTOR TO REMOVE EXISTING THERMOSTAT FOR OIL FIRED FURNACE, INCLUDING ASSOCIATED WIRING.
- 7 CONTRACTOR TO REMOVE EXISTING DOMESTIC HOT WATER HEATER. SALVAGE AND RETURN TO OWNER.
- 8 CONTRACTOR TO REMOVE EXISTING DOMESTIC HOT WATER PIPING, PUMP, VALVES AND ASSOCIATED SPECIALTIES.
- 9 OWNER TO REMOVE EXISTING WALL AND DOOR AS REQUIRED TO REMOVE WOOD FIRED FURNACE. OWNER TO SALVAGE DOOR AND FRAME FOR INSTALLATION IN NEW WALL.
- 10 CONTRACTOR TO REMOVE EXISTING ELECTRIC HEATER, THERMOSTAT AND ASSOCIATED WIRING AND CONDUIT BACK TO JUNCTION BOX.
- 11 CONTRACTOR TO REMOVE EXISTING HOSE BIBBS AS REQUIRED TO INSTALL HOT AND GOLD WATER FAUCETS. SEE NEW WORK PLAN FOR NEW PIPING AND FAUCETS.

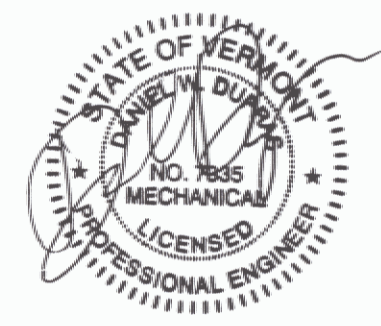


MEZZANINE FLOOR PLAN - MECHANICAL DEMOLITION
SCALE: 1/4"=1'-0"



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

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NO.	ISSUED FOR	DATE
1	BIDDING AND CONSTRUCTION	07/2005



HEATING, VENTILATION, & AIR CONDITIONING,
PLUMBING, FIRE PROTECTION, & ELECTRICAL

CHARLES F. LANE, P.E.
DANIEL W. DUPRAS, P.E.

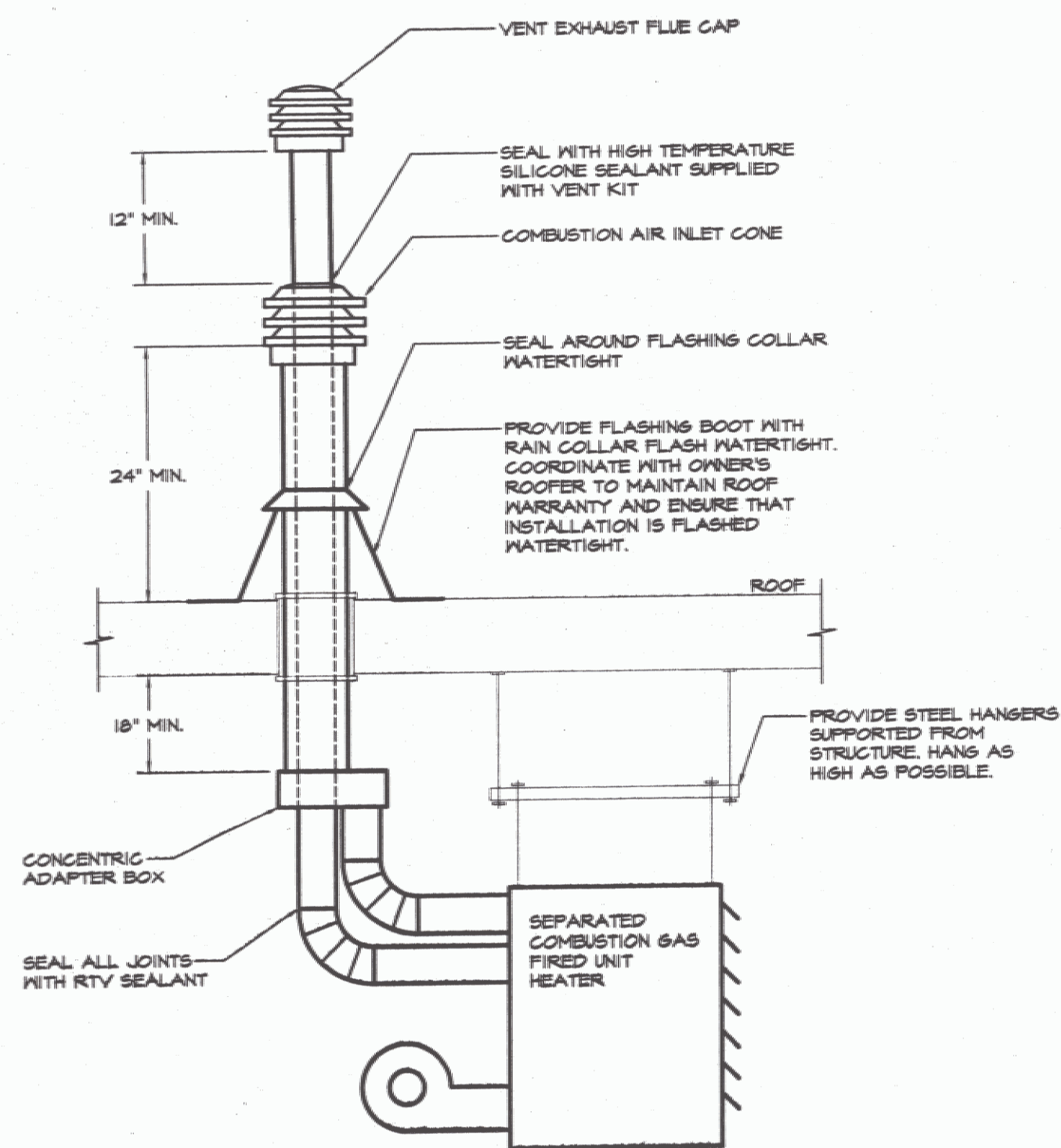
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MECHANICAL DEMOLITION

EDEN AOT GARAGE
VERMONT AGENCY OF TRANSPORTATION
EDEN, VERMONT

M
1

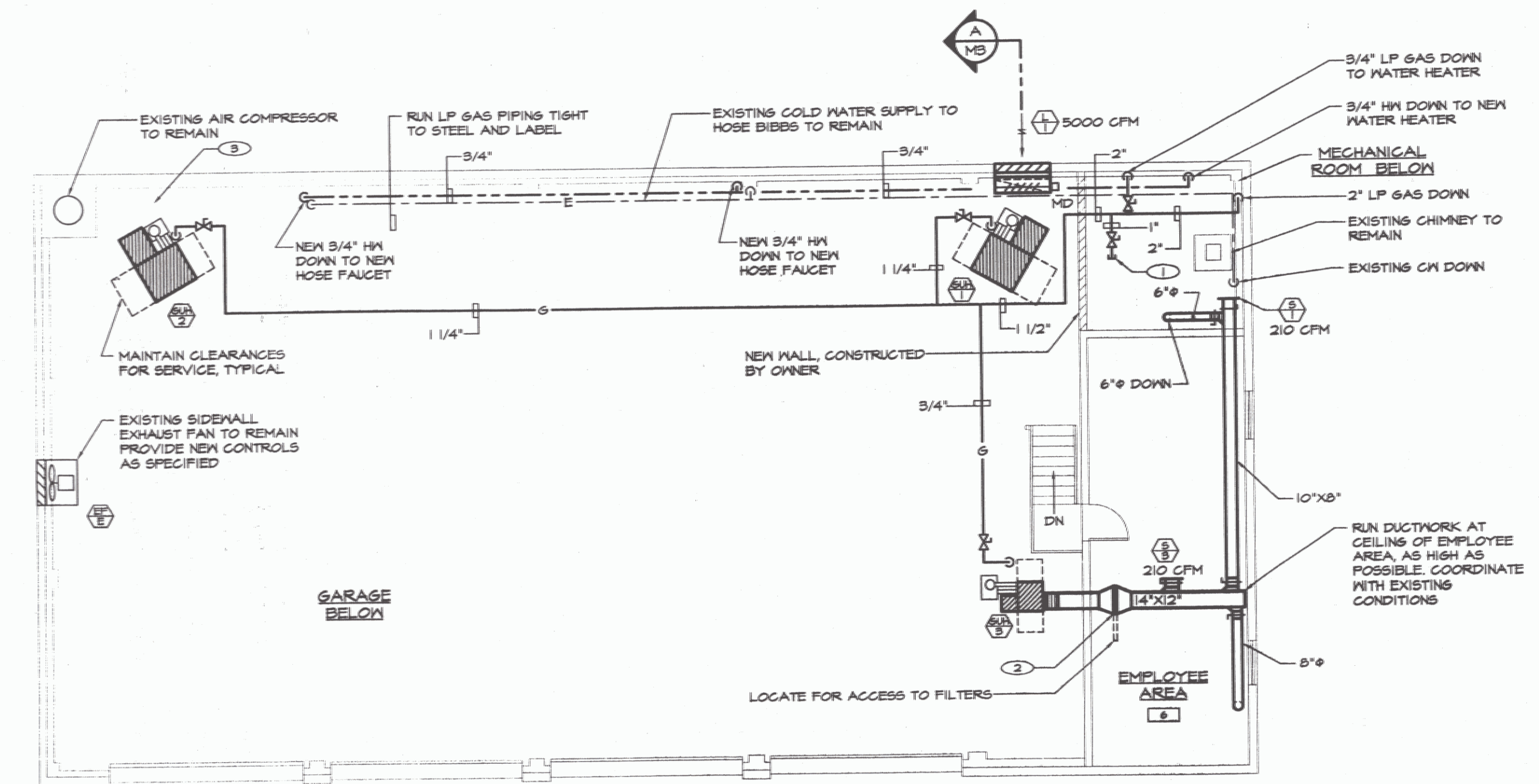
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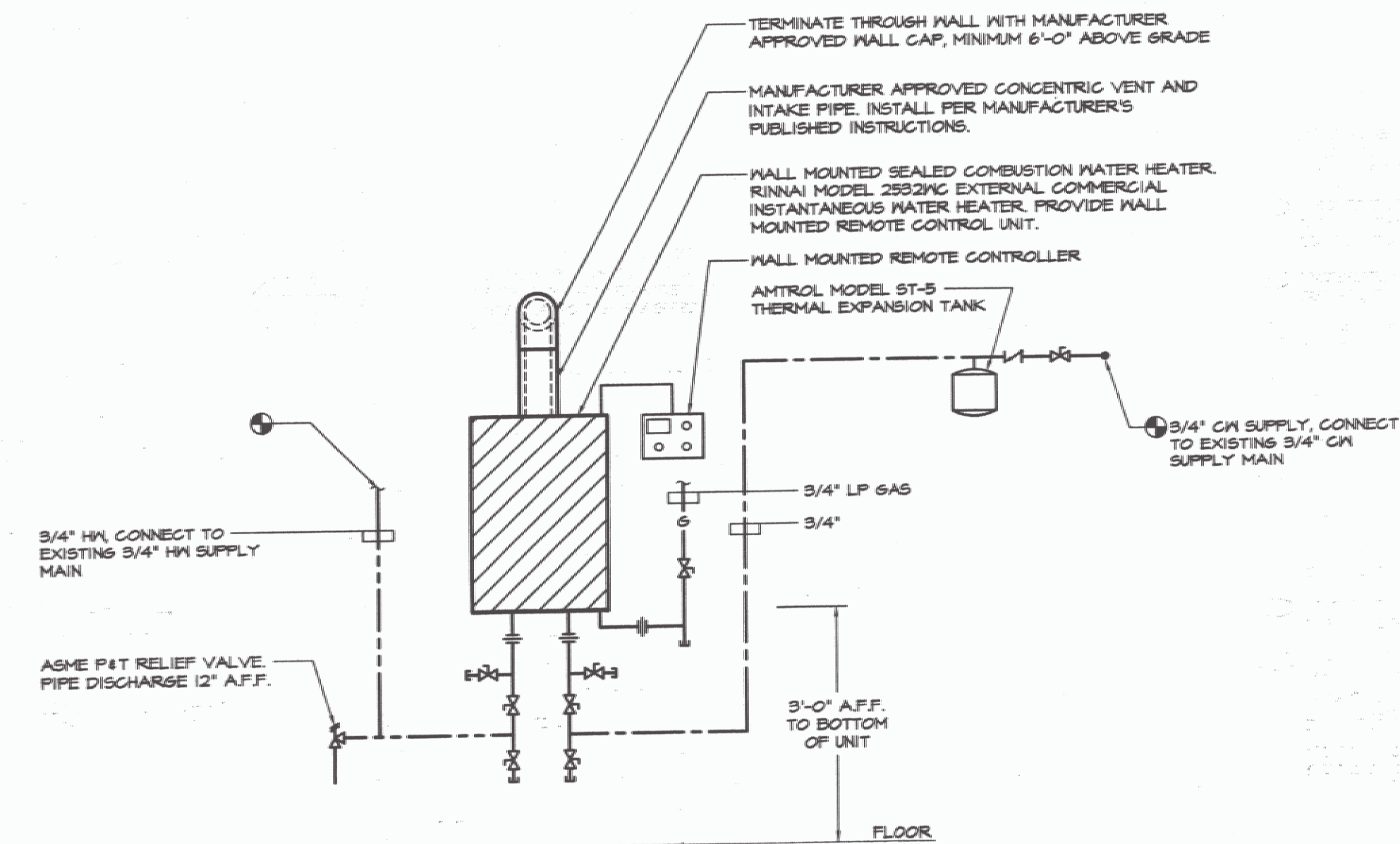
VERTICAL SEPARATED COMBUSTION / VENT DETAIL
NOT TO SCALE

DRAWING NOTES: (APPLY TO THIS DRAWING ONLY)

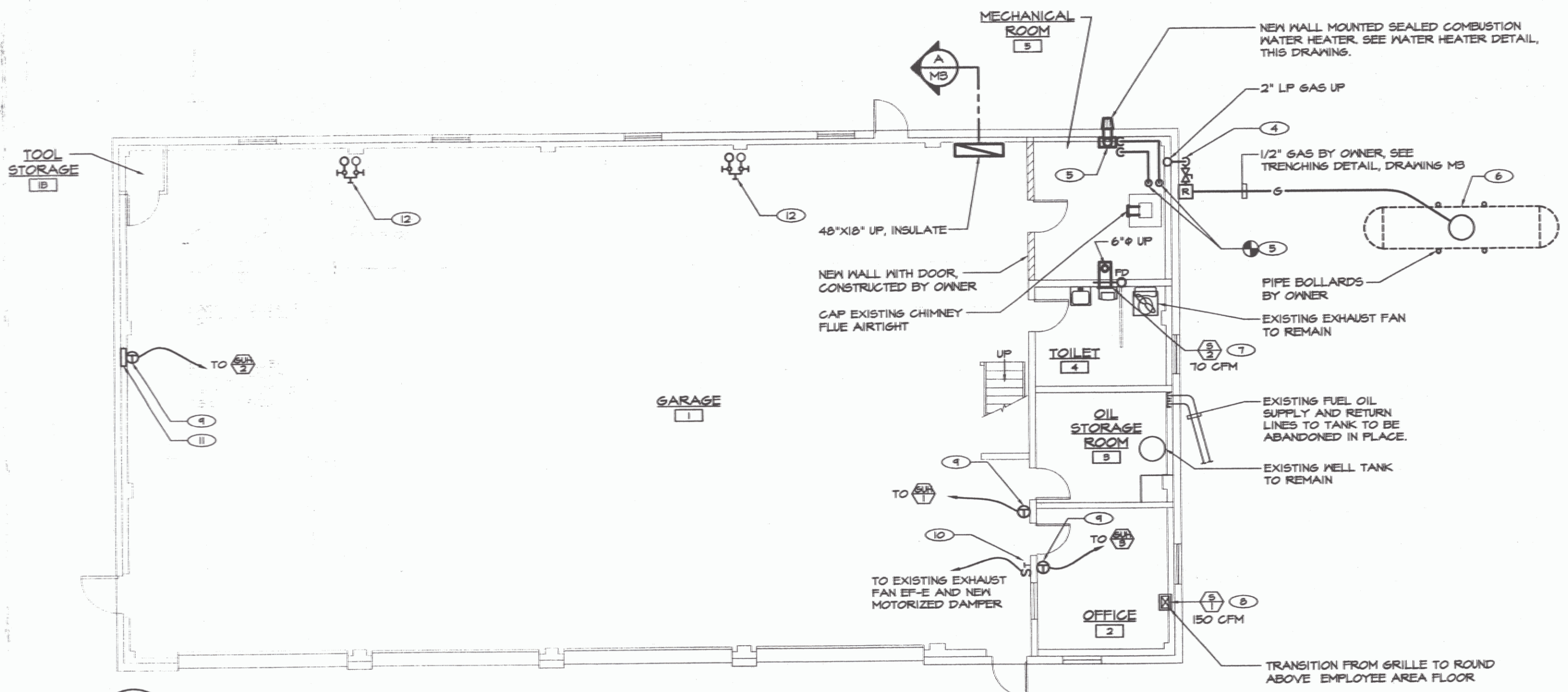
- 1 PROVIDE 1" LP GAS BRANCH, VALVED AND CAPPED FOR FUTURE.
- 2 PROVIDE 24"X24" X 1" THICK FILTER. PROVIDE FILTER RACK WITH GASKETED HINGED ACCESS DOOR.
- 3 PROVIDE VERTICAL SEPARATED COMBUSTION / VENT. SEE DETAIL, THIS DRAWING. TYPICAL EACH GAS FIRED UNIT HEATER.
- 4 2" LP GAS UP. CONNECT TO SECOND STAGE REGULATOR. PROVIDE GAS SHUTOFF IN RISER. SEE LP GAS TANK DETAIL, DRAWING MS.
- 5 PROVIDE LP GAS FIRED WATER HEATER. SEE WATER HEATER DETAIL, THIS DRAWING. CONNECT NEW 3/4" HM SUPPLY & CM SUPPLY TO EXISTING.
- 6 UNDERGROUND 1000 GALLON LP GAS TANK, BY OWNER. SEE DETAIL, DRAWING MS.
- 7 CUT AND PATCH EXISTING WALL MOUNT SUPPLY DIFFUSER, IN TOILET (ROOM 4), 6" FROM CEILING TO TOP.
- 8 CUT AND PATCH EXISTING CEILING FOR NEW REGISTER. TRANSITION TO ROUND ON DUCT RISER.
- 9 MOUNT THERMOSTAT 3/4" A.F.F., TYPICAL.
- 10 FURNISH AND INSTALL NEW 15-MINUTE SPRING-WOUND TIMER. ACTIVATION OF TIMER SWITCH SHALL OPEN MOTORIZED DAMPER FOR INTAKE LOUVER. WHEN DAMPER IS OPEN, END SWITCH SHALL START EXISTING EXHAUST FAN. WHEN TIMER SWITCH IS OFF, DAMPER SHALL CLOSE AND EXHAUST FAN SHALL TURN OFF. COORDINATE WIRING WITH ELECTRICAL CONTRACTOR.
- 11 PROVIDE INSULATED, BACK MOUNTING BLOCK FOR THERMOSTAT.
- 12 FURNISH AND INSTALL LEONARD MODEL 5W-TS-EVD-RF MIXING VALVE WITH 3/4" HOT AND COLD WATER INLETS, STOP AND CHECK VALVES, 3/4" HOSE OUTLET, VACUUM BREAKER, STAINLESS STEEL HOSE RACK, ROUGH BRASS FINISH. CONNECT TO TO EXISTING 3/4" COLD WATER AND NEW 3/4" HOT WATER. MOUNT HOSE STATION 3'-6" ABOVE FINISHED FLOOR TO CENTERLINE.



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

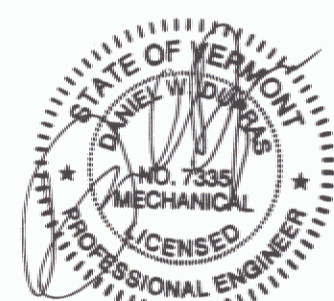


WATER HEATER DETAIL
NOT TO SCALE



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

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NO.	ISSUED FOR	DATE
1	BIDDING AND CONSTRUCTION	07/2005

LANE ASSOCIATES
CONSULTING ENGINEERS, P.C.

HEATING, VENTILATION, & AIR CONDITIONING,
PLUMBING, FIRE PROTECTION, & ELECTRICAL.

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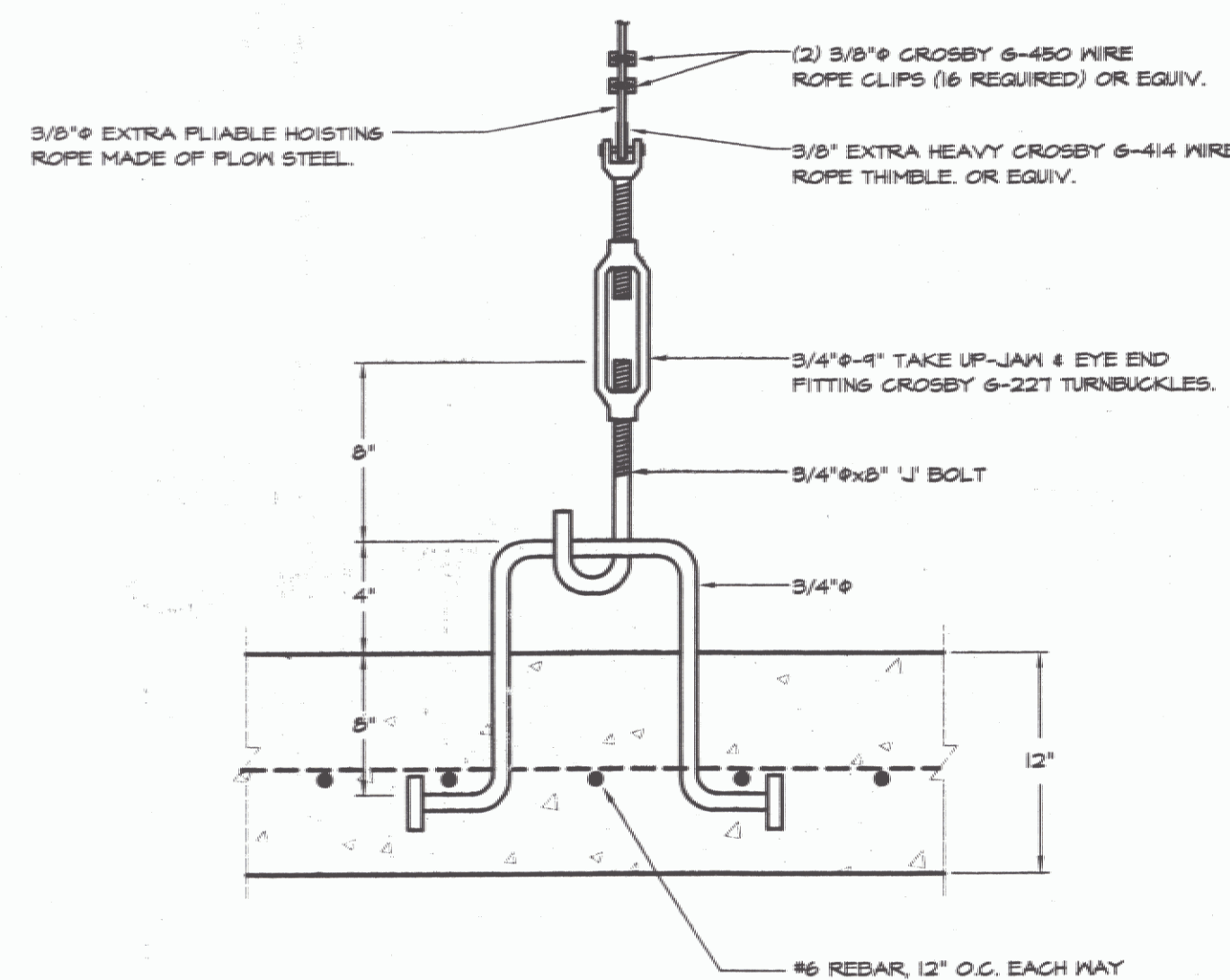
MECHANICAL NEW WORK				M 2
EDEN AOT GARAGE VERMONT AGENCY OF TRANSPORTATION EDEN, VERMONT				
APPR:	DVD	DRAWN:	KPC	SCALE: AS NOTED
PROJ. NO.		0912-21		

DIFFUSER-GRILLE-REGISTER-LOUVER SCHEDULE								L = LOUVER S = SUPPLY	PLAN SYMBOL
No.	MANUFACTURER	SERIES	MODEL	SIZE	AIR PAT	DAMPER	FINISH	REMARKS	
S-1	METAL-AIRE	V4000	V4004	10"x8"	-	-	-		
S-2	METAL-AIRE	V4000	V4004	8"x4"	-	-	-		
S-3	METAL-AIRE	V4000	V4004	12"x8"	-	-	-		
L-1	RUSKIN	ELF	ELFB15DX	48"C48"	-	-	B.E.	NOTE 1	

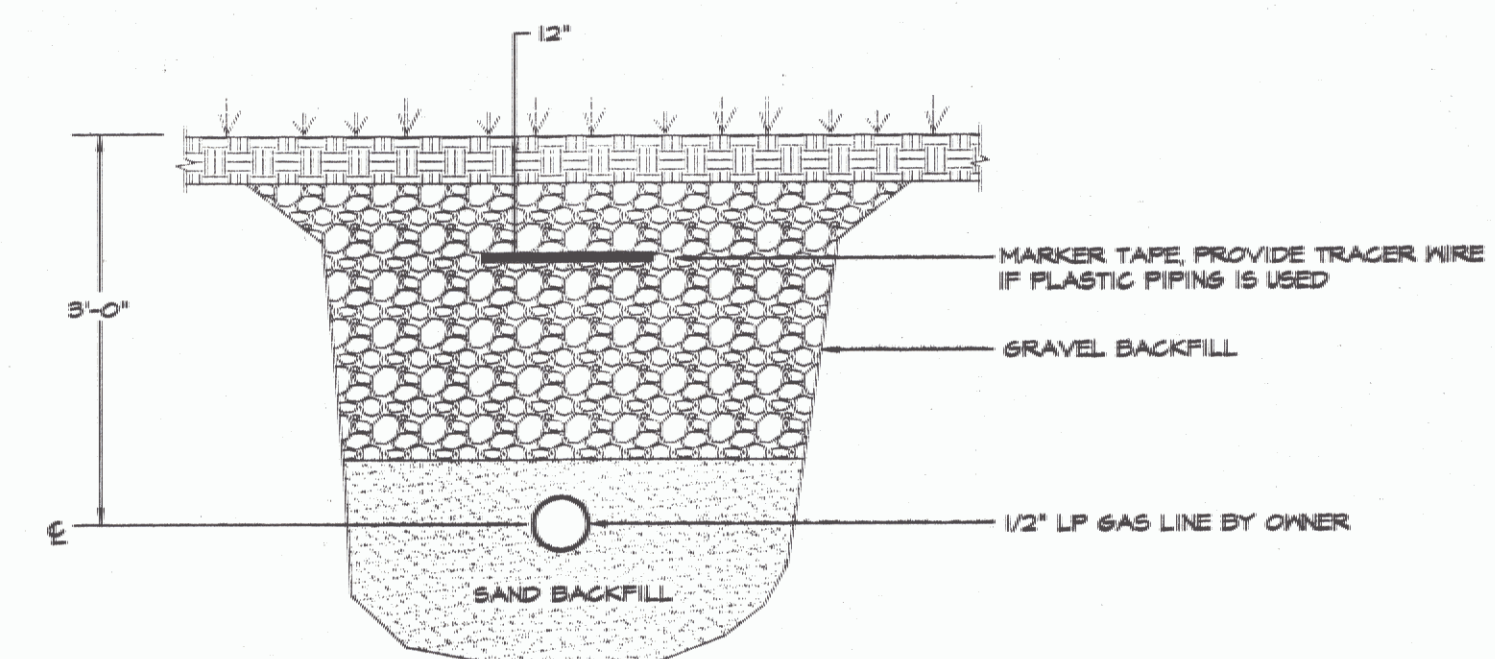
NOTES:
1) PROVIDE GALVANIZED BIRDSCREEN. BAKED ENAMEL FINISH, COLOR TO BE SELECTED BY ENGINEER.

GAS FIRED UNIT HEATER SCHEDULE										PLAN SYMBOL
No.	MANUFACTURER	MODEL	CFM AT 0" E.S.P.	MBH LP GAS INPUT	MBH LP GAS OUTPUT	FAN DRIVE	MODEL			REMARKS
							H.P.	VOLT	PH	
GUH-1	REZTOR	UDBS-400	3500	300	249	BELT	1 1/2	240	1	NOTE 1
GUH-2	REZTOR	UDBS-400	3500	300	249	BELT	1 1/2	240	1	NOTE 1
GUH-3	REZTOR	UDBS-45	456	45	36.9	DIRECT	1/6	115	1	NOTE 2

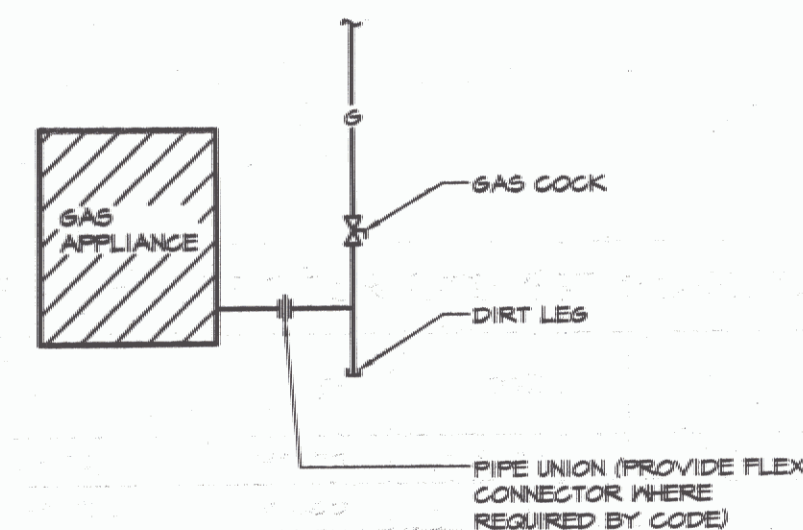
NOTES:
1) PROVIDE ALL STANDARD FEATURES INCLUDING THE FOLLOWING FACTORY INSTALLED OPTIONS: PROPANE CONVERSION KIT, TWO STAGE CONTROL, 401 STAINLESS STEEL HEAT EXCHANGER, ADJUSTABLE BELT DRIVE MOTOR, TOTALLY ENCLOSED MOTOR, BLOWER AND BELT GUARDS. PROVIDE THE FOLLOWING FIELD INSTALLED ACCESSORIES: COMBUSTION AND VENT KIT, TWO STAGE THERMOSTAT.
2) PROVIDE ALL STANDARD FEATURES INCLUDING THE FOLLOWING FACTORY INSTALLED OPTIONS: PROPANE CONVERSION KIT, TWO STAGE CONTROL, 401 STAINLESS STEEL HEAT EXCHANGER, ADJUSTABLE MULTI-TAP DIRECT DRIVE MOTOR, DUCT FLANGE, TOTALLY ENCLOSED MOTOR, BLOWER GUARD. PROVIDE THE FOLLOWING FIELD INSTALLED ACCESSORIES: COMBUSTION AND VENT KIT, TWO STAGE HEATING THERMOSTAT.



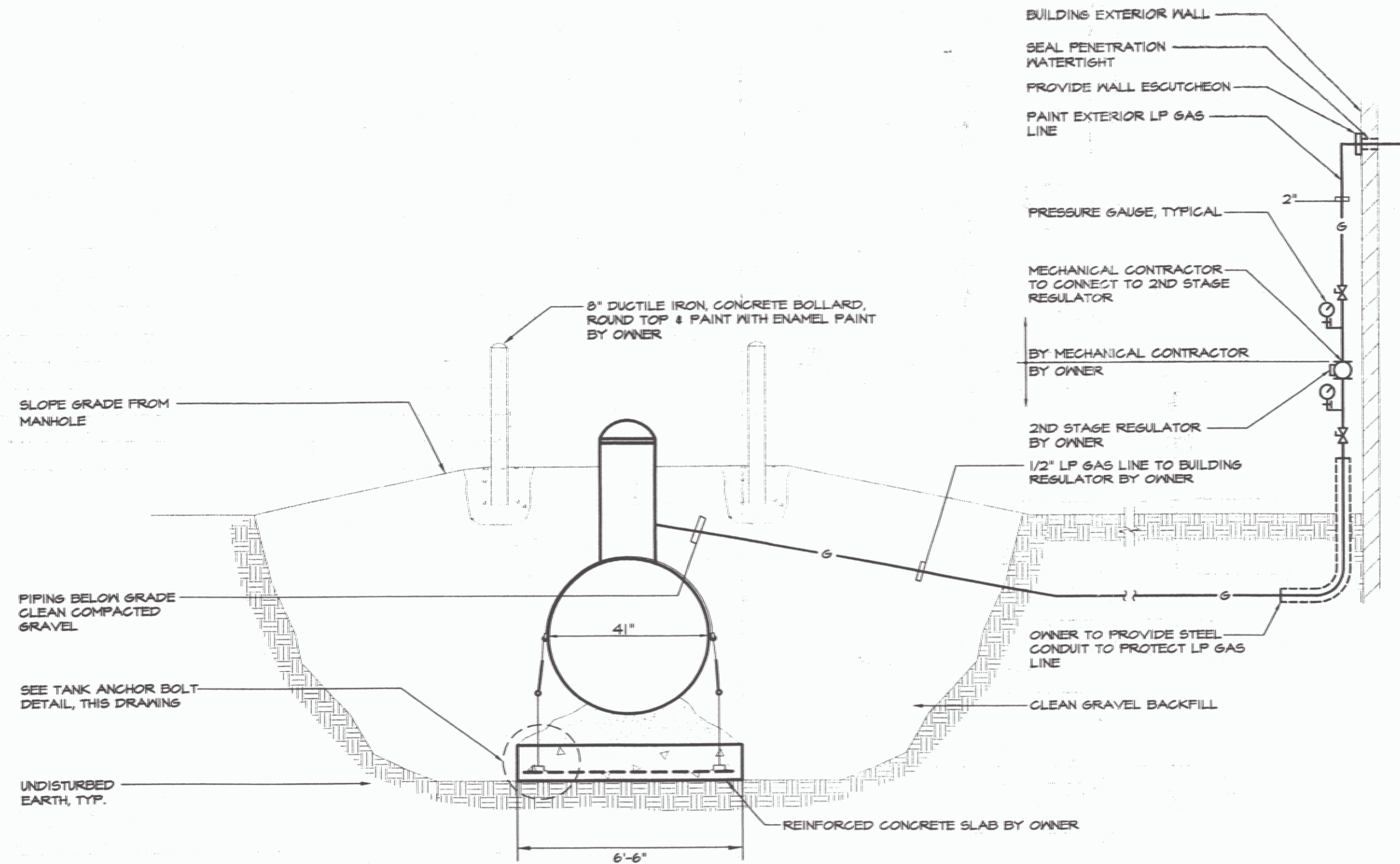
TANK ANCHOR BOLT DETAIL
NOT TO SCALE



LP GAS SUPPLY PIPE TRENCHING DETAIL
NOT TO SCALE

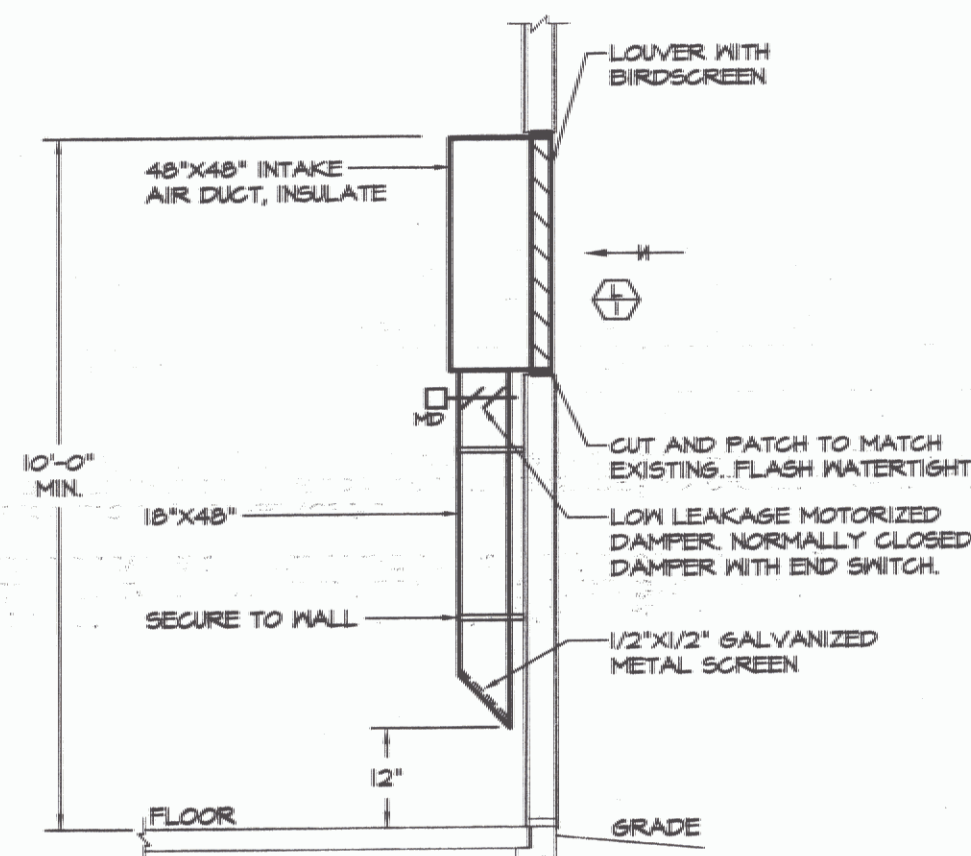
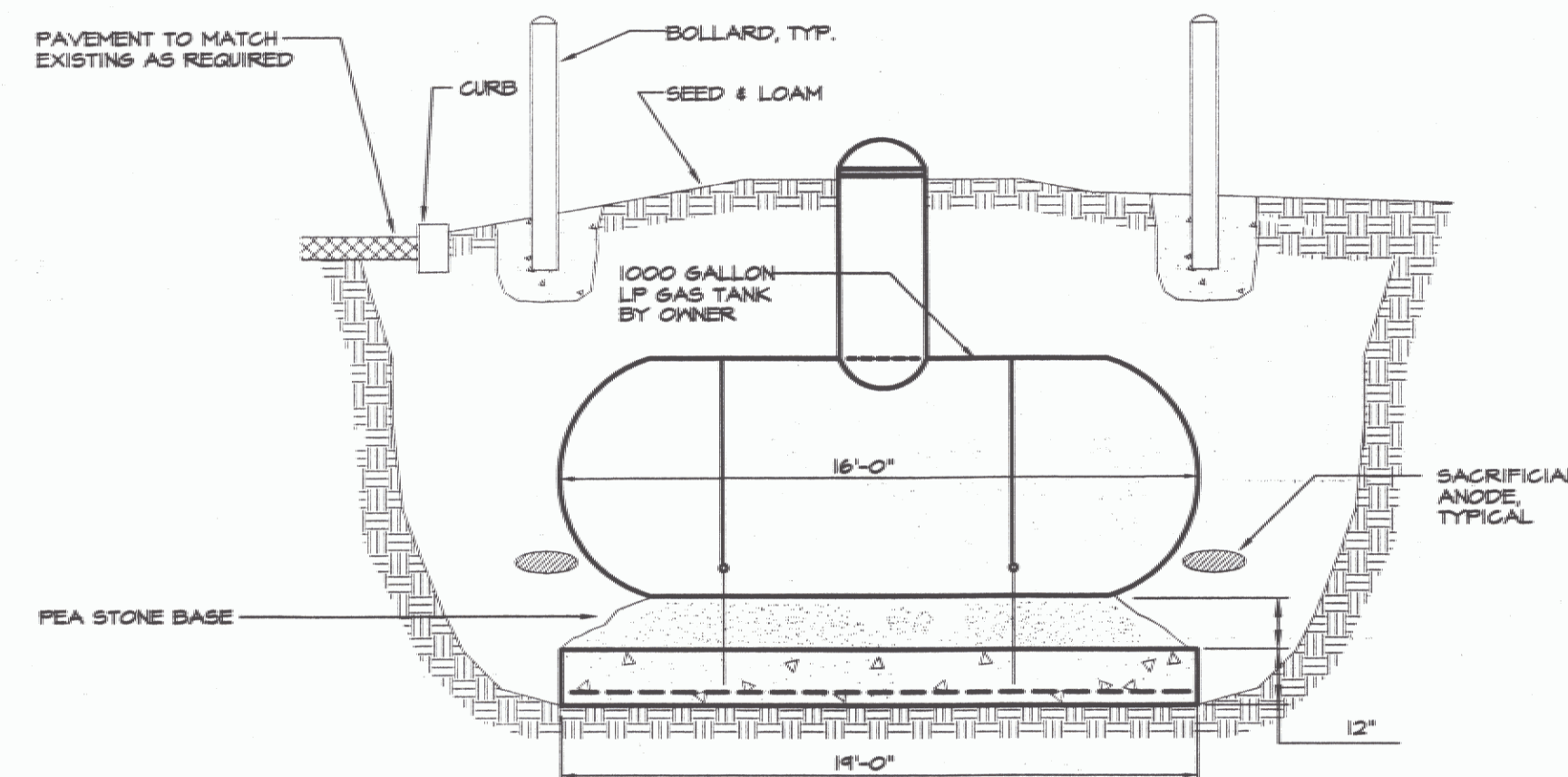


LP GAS APPLIANCE CONNECTION DETAIL
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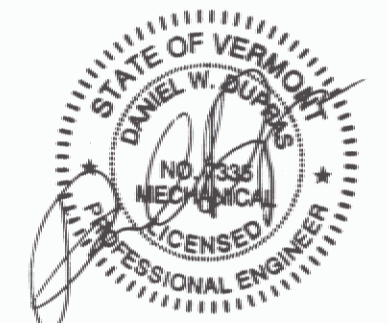


UNDERGROUND LP GAS TANK DETAILS
NOT TO SCALE

NOTE: OWNER TO FURNISH AND INSTALL LP GAS TANK, BOLLARDS, HOLDDOWN PAD, LP GAS LINE FROM TANK TO BUILDING AND 1ST & 2ND STAGE REGULATORS.



INTAKE LOUVER DETAIL
NOT TO SCALE



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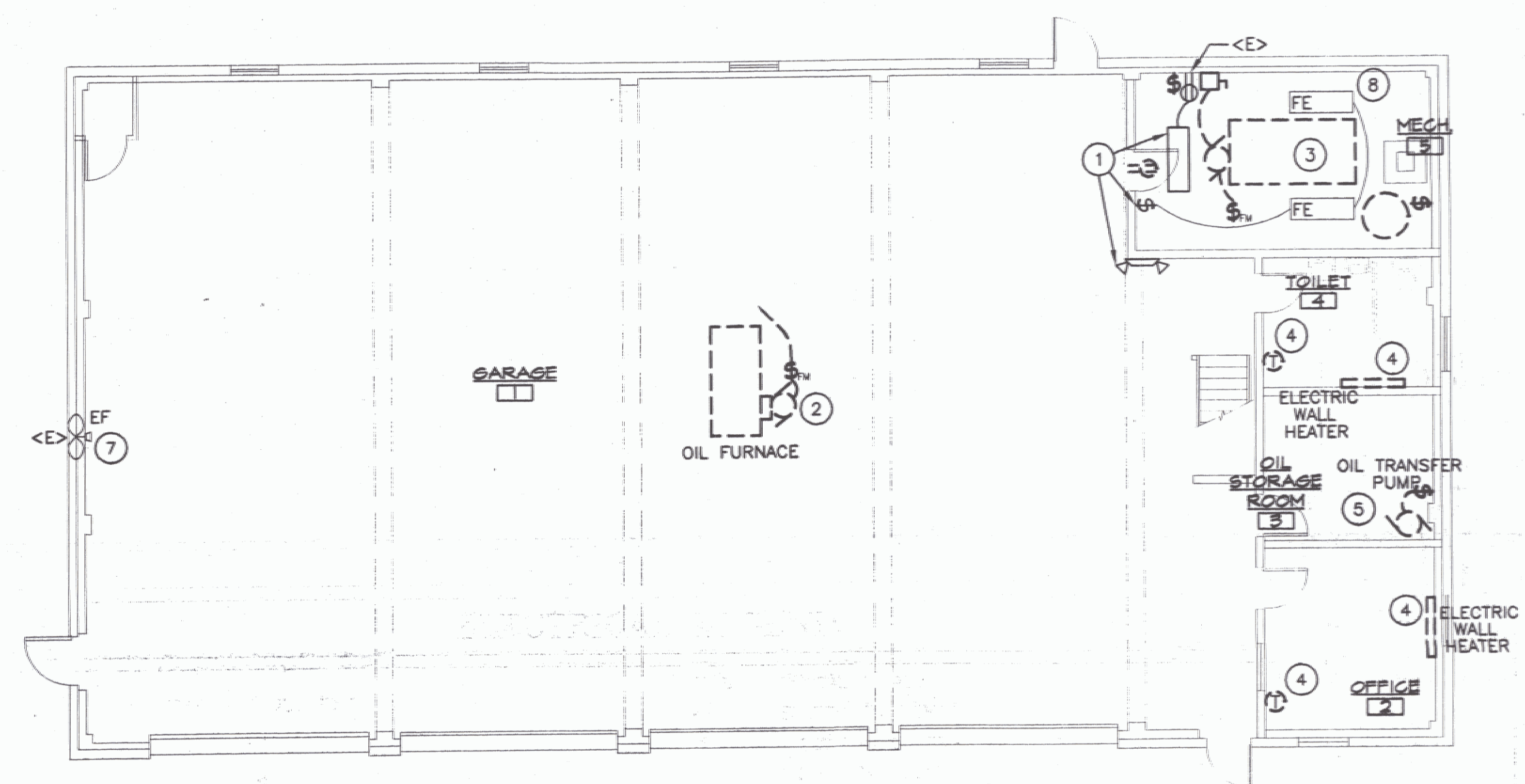
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MECHANICAL SCHEDULES AND DETAILS				M 3
EDEN AOT GARAGE VERMONT AGENCY OF TRANSPORTATION EDEN, VERMONT				
APPR.	DWD	DRAWN:	KPC	SCALE: AS NOTED
PROJ. NO. 0312-21				

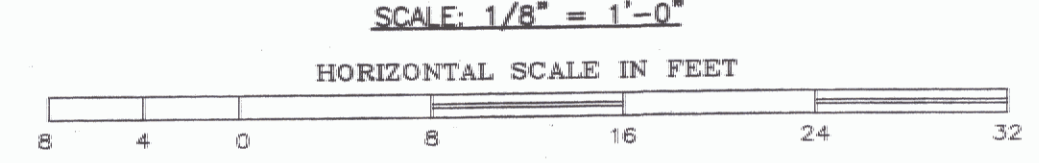
ELECTRICAL LEGEND			
\$	SWITCH - SINGLE POLE	TYP.	TYPICAL OF ALL
\$ _M	SWITCH - FIREMATIC	<E>	EXISTING TO REMAIN
\$ ₀	EMERGENCY SHUT-OFF SWITCH WITH RED PLATE	EC	ELECTRICAL CONTRACTOR (DIVISION 16)
\$ _F	SWITCH - FAN SPEED CONTROLLER	MC	MECHANICAL CONTRACTOR (DIVISION 15)
\$ _T	TIMER SWITCH - PROVIDED BY MC	MOD	MOTOR-OPERATED-DAMPER
☒	MOTOR STARTER PROV. BY MC, INSTALLED BY EC	⊗	MOTOR
☐	SAFETY DISCONNECT PROV. AND INSTALLED BY EC.	⊠	ITEMS TO BE REMOVED
▨	PANEL		
→	BRANCH CIRCUIT		
☐ _B	JUNCTION BOX		
Ⓛ	THERMOSTAT, PROVIDED & WIRED BY MC		

DEMOLITION NOTES:

- EQUIPMENT AND MATERIALS REMOVED OR DEMOLISHED AND NOT TO BE REINSTALLED BY THE EC SHALL BE CLASSIFIED BY THE OWNER AS SALVAGE OR SCRAP. THOSE CLAIMED BY THE OWNER SHALL BE DELIVERED TO THE OWNER BY THE EC WHERE DIRECTED AT THE SITE. THOSE NOT CLAIMED BY THE OWNER SHALL BECOME PROPERTY OF THE EC AND SHALL BE LEGALLY REMOVED FROM THE SITE AND PREMISES.
- ANY PLACE WHERE THE CONTRACTOR PENETRATES, CUTS AND/OR REMOVES WALLS, CONTRACTOR IS TO REPLACE, PATCH AND PAINT WALLS TO ORIGINAL FINISHES.
- FIELD VERIFY ALL DIMENSIONS BEFORE COMMENCEMENT OF WORK. NOTIFY ENGINEER OF ANY ERRORS.
- REFER TO THE MECHANICAL PLANS FOR EXTENT OF DEMOLITION WORK TO BE PERFORMED BY OTHER CONTRACTORS. ALL ITEMS THAT NEED TO BE REMOVED, SHALL HAVE THE POWER DISCONNECTED BY THE EC.
- NOT ALL DEVICES TO BE REMOVED OR DISCONNECTED ARE SHOWN. REFER TO MECH. PLANS FOR TOTAL EXTENT OF DEMOLITION WORK.
- BUILDING IS EXISTING. WIRING IN EXTERIOR WALLS SHALL BE FISHED OR SURFACE-MOUNTED AS NECESSARY. INTERIOR PARTITIONS ARE EXISTING. WIRING IN THESE WALLS MAY NEED TO BE FISHED. VISIT THE SITE FOR FULL EXTENT OF EXISTING CONDITIONS. NO SURFACE RACEWAY TO BE INSTALLED WITHOUT WRITTEN AUTHORIZATION FROM ARCHITECT.

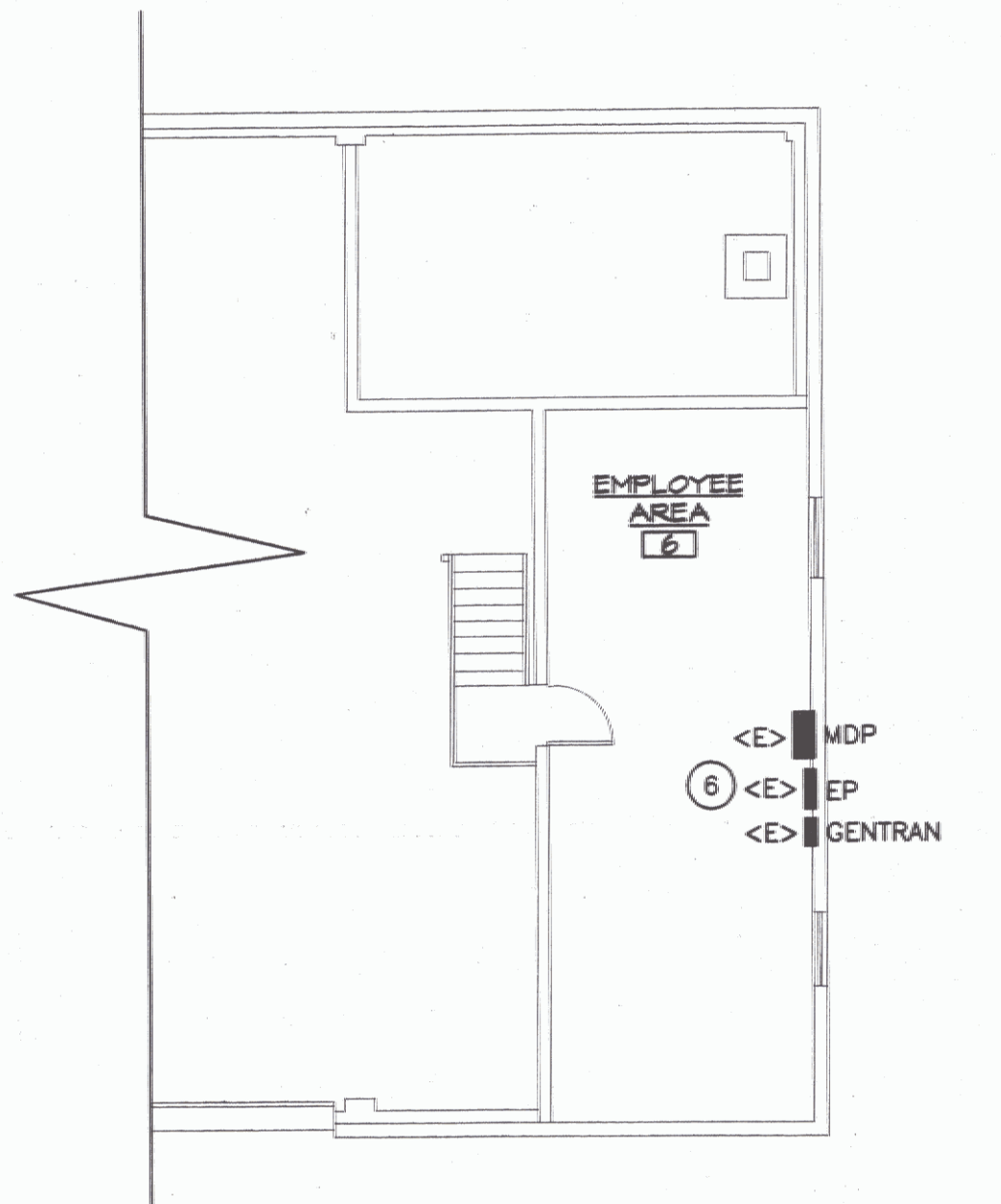


ELECTRICAL DEMOLITION PLAN
SCALE: 1/8" = 1'-0"

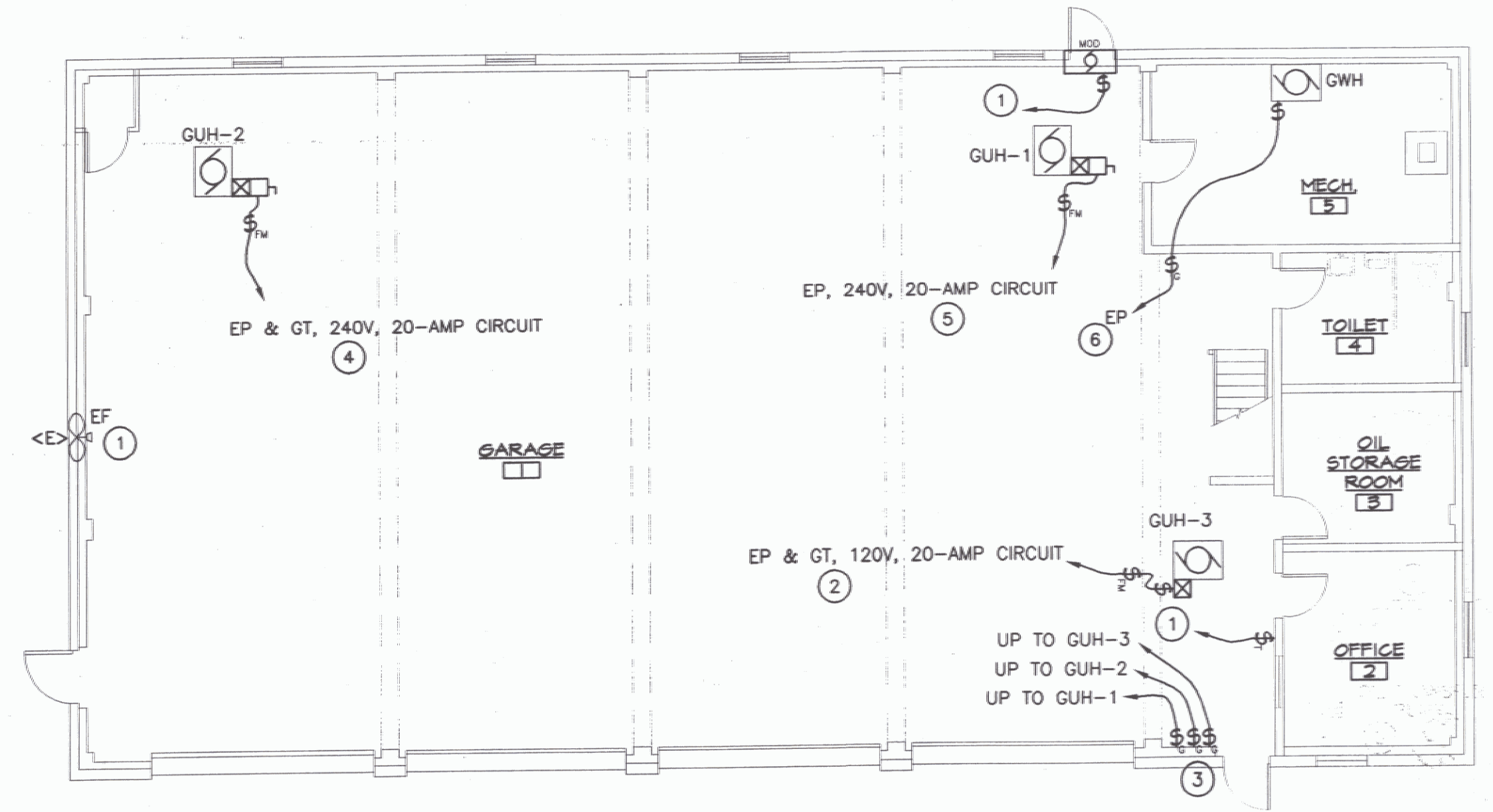
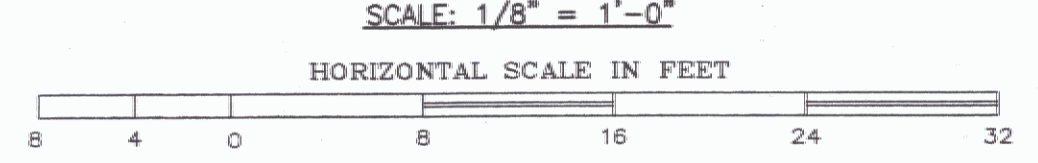


KEYED NOTES:

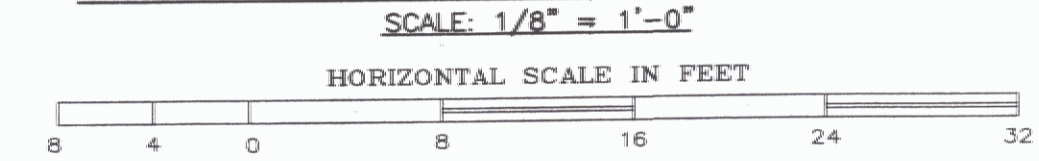
- REMOVE ALL ITEMS ON THIS WALL TO ALLOW FOR DEMOLISHING OF THE WALL SO THAT THE FURNACE CAN BE REMOVED. REPLACE THE LIGHTS & SWITCH AFTER THE WALL HAS BEEN REBUILT.
- REMOVE ALL WIRING & ASSOCIATED CONTROLS FOR EXISTING OIL FURNACE.
- REMOVE ALL WIRING & ASSOCIATED CONTROLS FOR EXISTING WOOD FURNACE, INCLUDING ALL PUMPS & CONTROLS ASSOCIATED WITH THE WATER HEATER.
- REMOVE EXISTING ELECTRIC HEATER, CONDUIT, & J-BOX BACK TO SOURCE.
- REMOVE ALL WIRING & ASSOCIATED CONTROLS FOR OIL TRANSFER PUMPS.
- REMOVE ALL BREAKERS FOR CIRCUITS THAT NO LONGER EXIST. USE SPACES FOR NEW CIRCUITS AS DESCRIBED. REUSE GENTRAN BREAKERS FOR NEW CIRCUITS AS DESCRIBED.
- REWIRE EXISTING EXHAUST FAN, REUSE EXISTING CIRCUIT, REFER TO NEW ELECTRICAL PLAN.
- "FE" FIXTURES ARE TO REMAIN, RECONNECT TO SWITCH & CIRCUIT AFTER FURNACE HAS BEEN REMOVED & WALL HAS BEEN REPAIRED.



MEZZANINE ELECTRICAL PLAN
SCALE: 1/8" = 1'-0"

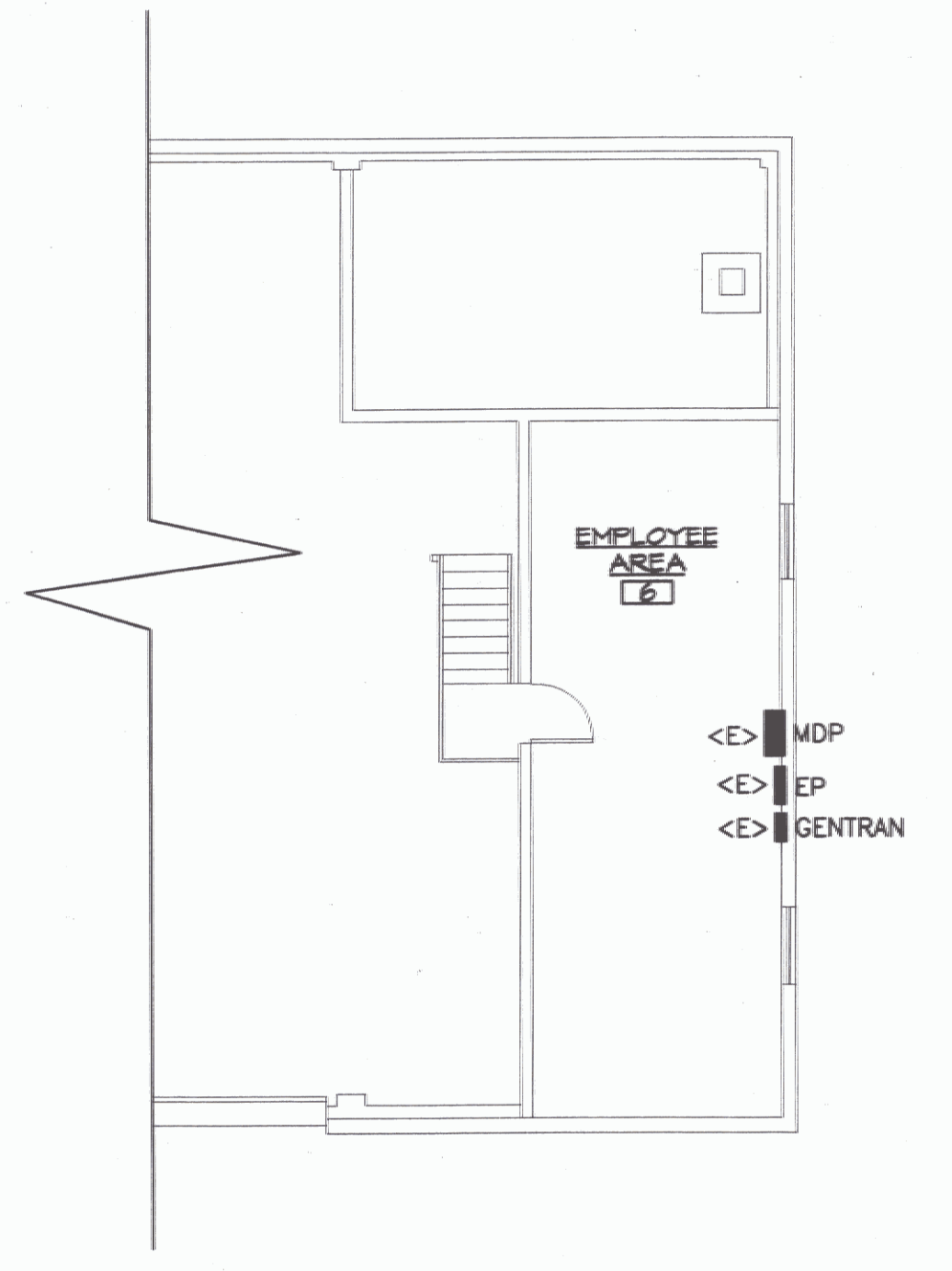


FIRST FLOOR ELECTRICAL PLAN
SCALE: 1/8" = 1'-0"

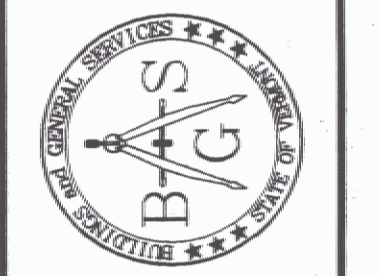
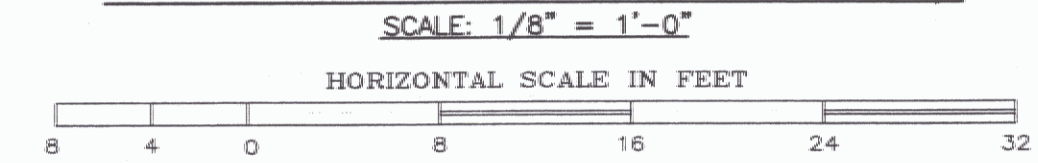


KEYED NOTES:

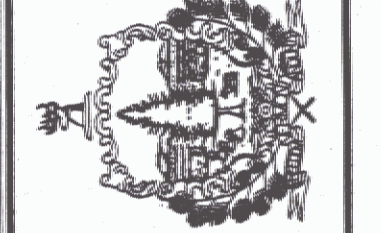
- TIMER SWITCH PROVIDED BY MC, INSTALLED & WIRED BY EC. TIMER SWITCH SHALL OPEN MOTORIZED DAMPER. EXHAUST FAN MOTOR STARTER/CONTACTOR COIL SHALL BE WIRED TO THE END SWITCH ON THE MOTORIZED DAMPER, TO OPERATE ONLY WHEN THE DAMPER IS OPEN. ALL LINE VOLTAGE WIRING BY EC. REUSE SAME EXISTING CIRCUIT.
- PANEL EP IS A CUTLER-HAMMER LOADCENTER. PROVIDE NEW 20A, SINGLE-POLE BREAKER FOR NEW GAS UNIT HEATER #3. USE SPACE LEFT OPEN FROM REMOVED OIL FURNACE. REUSE GENTRAN CIRCUIT FROM REMOVED OIL FURNACE.
- PROVIDE EMERGENCY SHUT-OFF SWITCHES FOR EACH GAS HEATER. SWITCH SHALL HAVE RED "GAS" PLATE. USE 2-POLE SWITCHES FOR 240V UNITS.
- PROVIDE NEW 20A, 2-POLE BREAKER FOR NEW GAS UNIT HEATER #2. USE SPACE LEFT OPEN FROM REMOVED WOOD FURNACE. REUSE GENTRAN CIRCUIT FROM REMOVED WOOD FURNACE.
- PROVIDE NEW 20A, 2-POLE BREAKER FOR NEW GAS UNIT HEATER #1. THIS UNIT WILL NOT BE CONNECTED TO THE GENTRAN.
- PROVIDE NEW 20A, SINGLE-POLE BREAKER FOR NEW GAS WALL-MOUNTED WATER HEATER.



MEZZANINE ELECTRICAL PLAN
SCALE: 1/8" = 1'-0"



STATE OF VERMONT
Department of Buildings
and General Services
Agency of Administration
Montpelier, Vermont



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AGENCY OF TRANSPORTATION
EDEN MAINTENANCE
GARAGE HEATING RENOVATIONS
VERMONT
EDEN

REVISIONS
SCALE: AS SHOWN
DATE: JULY 2005
DRAWN BY: ASG
APPR. BY: EEP

AGENCY OF TRANSPORTATION
GARAGE & OFFICES
ELECTRICAL DEMO PLAN

