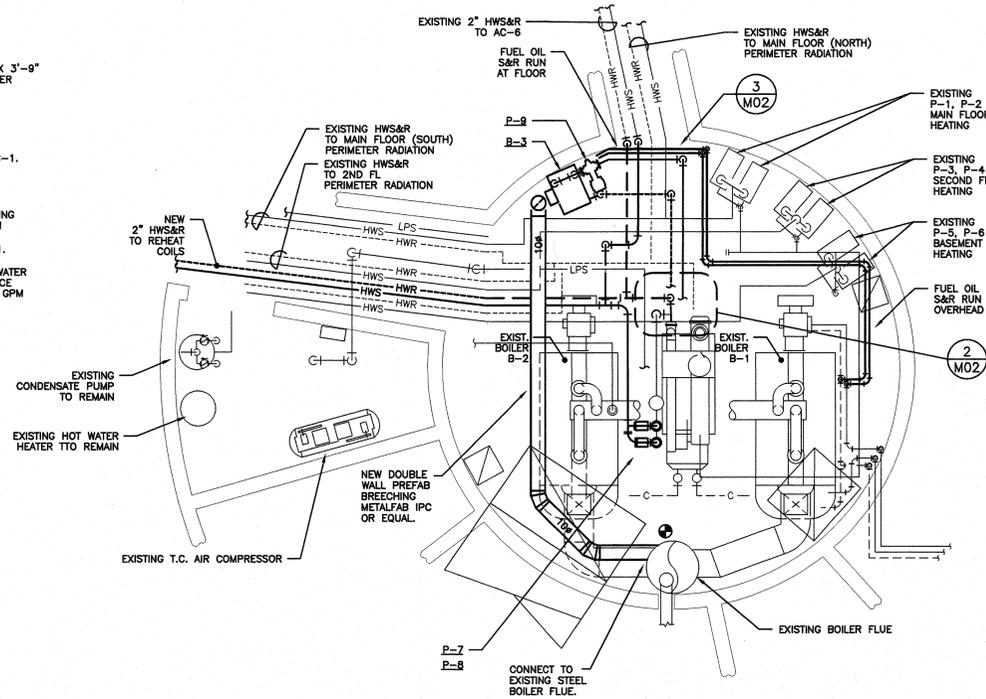
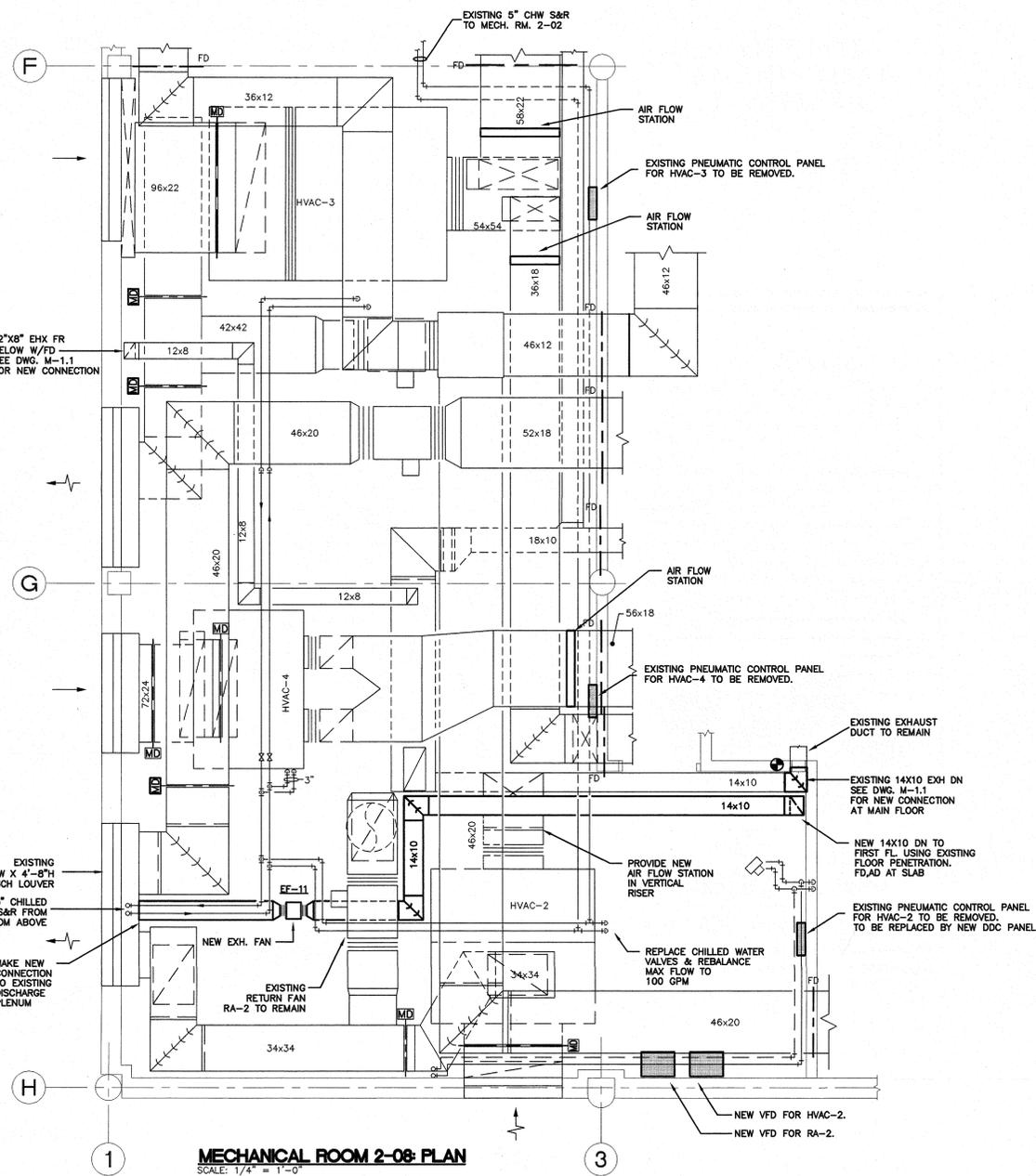


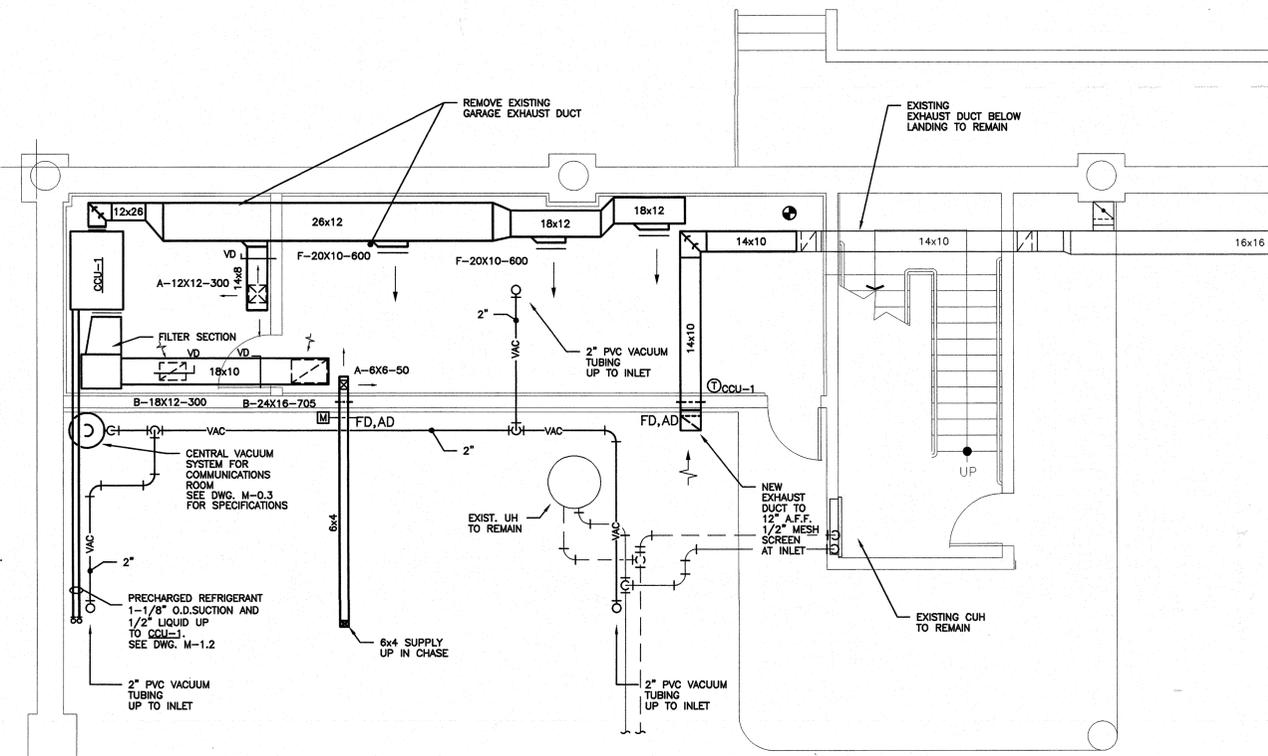
MECHANICAL ROOM 2-02
SCALE: 1/4" = 1'-0"



PART PLAN BOILER ROOM
SCALE: 1/4" = 1'-0"



MECHANICAL ROOM 2-08 PLAN
SCALE: 1/4" = 1'-0"



PART PLAN BASEMENT LEVEL
SCALE: 1/4" = 1'-0"

KEY PLAN

REVISIONS

DATE	MARK	DESCRIPTION

BRISTOL MUNICIPAL FACILITY

BRISTOL, CONNECTICUT

Legnos & Cramer, Inc.

74 Forest Street, Hartford, Ct. 06105-3598
Tel. (860)246-8875, Fax (860)525-2544
E-Mail office@legnosandcramer.com



KAESTLE BOOS ASSOCIATES, INC.
ARCHITECTS

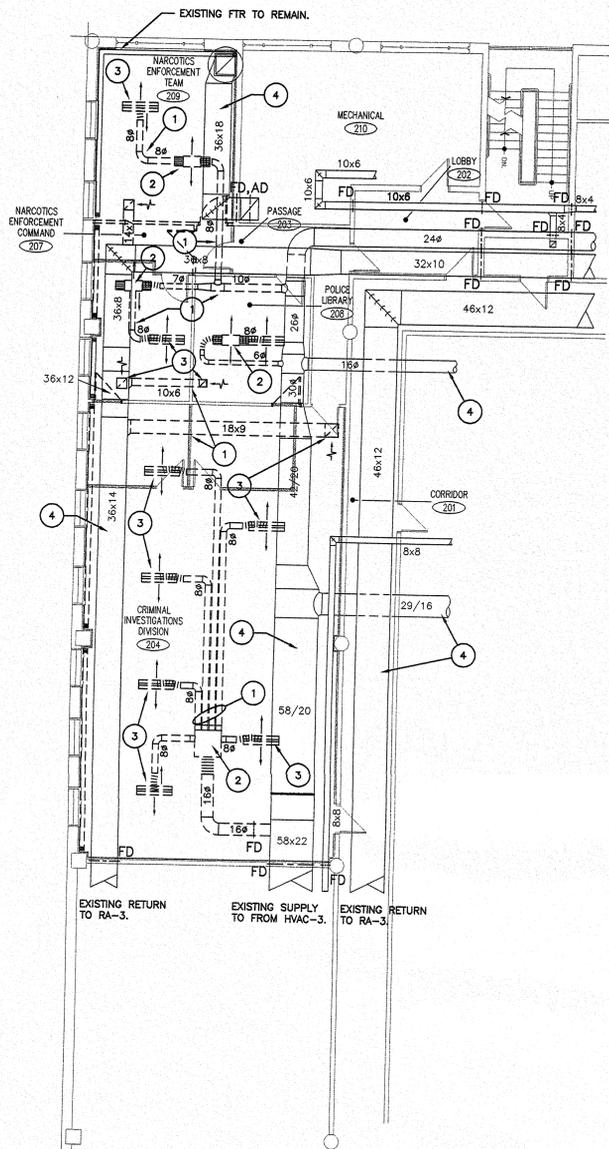
DRAWN BY: W.F.M. SCALE: 1/4" = 1'-0"

MECHANICAL PART PLANS

M2-1.dwg 8-4-99 10:43:15 am EST

DEMOLITION NOTES:

- 1 REMOVE EXISTING DUCT.
- 2 REMOVE EXISTING VAV BOX.
- 3 REMOVE EXISTING GRILLES AND DIFFUSERS.
- 4 EXISTING DUCT TO REMAIN.

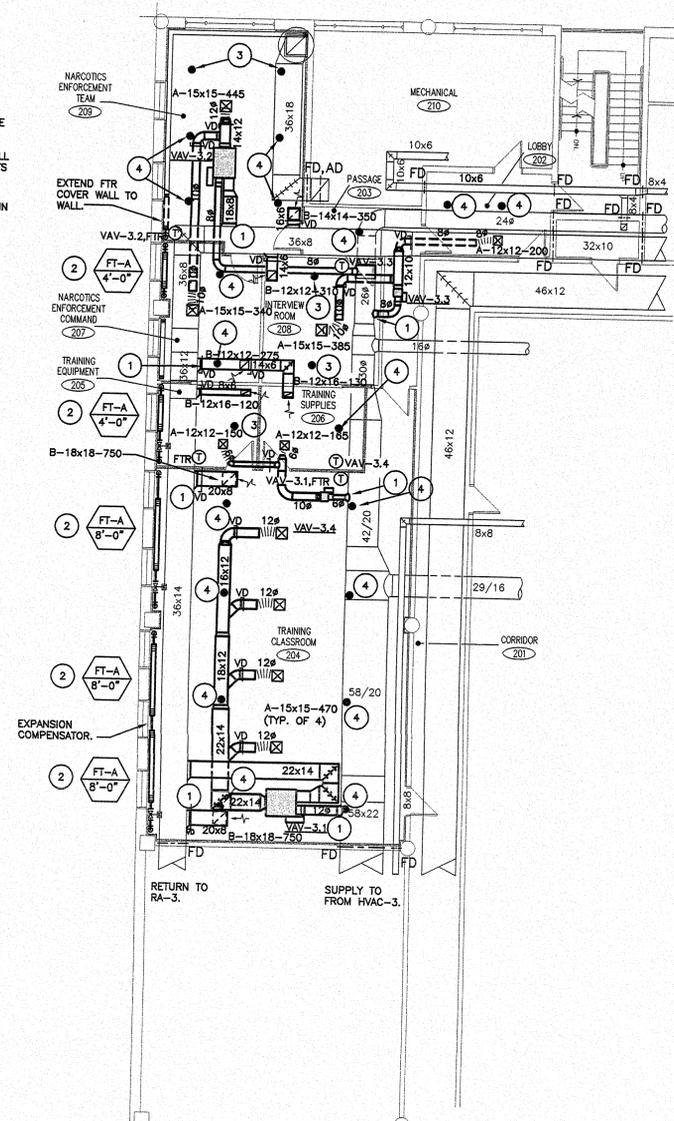


MECHANICAL DEMOLITION PLAN

SCALE : 1/8" = 1'-0"

NEW WORK NOTES:

- 1 NEW CONNECTION TO EXISTING DUCT.
- 2 PROVIDE NEW FIN-TUBE RADIATION AND COVER WHERE SHOWN. CONNECT PIPING TO EXISTING HEATING MAINS ON FLOOR BELOW. PROVIDE AUTOMATIC BALANCING VALVES, CONTROL VALVES, STRAINER AND MANUAL BALL VALVES AT EACH SECTION. PROVIDE MANUAL AIR VENTS AT EACH RETURN ELBOW.
- 3 NEW RECESSED SPRINKLER HEAD. REPLACE EXISTING IN SAME LOCATION.
- 4 NEW RECESSED SPRINKLER HEAD. CONNECT TO EXISTING MAINS.



MECHANICAL NEW PLAN

SCALE : 1/8" = 1'-0"

FOR ALL ABBREVIATIONS, SYMBOL LEGENDS, GENERAL NOTES AND WALL TYPES SEE SHEETS RD-01 & RD-02

DATE	MARK	DESCRIPTION
AUG. 1, 1999		DRAWINGS TO BE ISSUED FOR BIDDING AND CONSTRUCTION PURPOSES
08/04/00	△	REVISED RECEPTACLES AND DATA OUTLETS
08/23/00	△	REVISED ROOM 209

ALTERATIONS TO THE BRISTOL MUNICIPAL FACILITY

131 NORTH MAIN STREET
BRISTOL, CT 06010

Legnos & Cramer, Inc.

74 Forest Street, Hartford, Ct. 06105-3598
Tel.(860)246-8875, Fax(860)525-2544
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VAV BOX SCHEDULE "ETI" AS STANDARD

TAG NO.	MODEL	TYPE	VALVE CFM		FAN CFM	HEATING COIL						ELECTRICAL			NOTES		
			MAX	MIN		EAT	LAT	ROWS	MBH	EWT	GPM	INLET	OUTLET	HP		VOLTS	AMPS
VAV-3.1	CFR-1221	SERIES FAN POWERED	1880	565	1880	-	-	-	-	-	-	12"	18"x14"	1/2	277	3.4	2
VAV-3.2	CFR-0818	SERIES FAN POWERED	785	235	235	-	-	-	-	-	-	8"	15"x14"	1/3	277	2.7	2
VAV-3.3	SDR-08	SHUTOFF COOLING	585	175	-	-	-	-	-	-	-	8"	11"x9"	-	-	-	1
VAV-3.4	SDR-06	SHUTOFF COOLING	315	95	-	-	-	-	-	-	-	8"	11"x9"	-	-	-	1

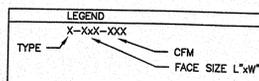
NOTES

- 1. ELECTRONIC CONTROLS BY EMS CONTRACTOR. PROVIDE 120V/24V CONTROL POWER TRANSFORMER AT EACH VAV BOX EXCEPT AS NOTED.
- 2. ELECTRONIC CONTROLS BY EMS CONTRACTOR. PROVIDE 277V/24V CONTROL POWER TRANSFORMER.

REGISTERS, GRILLES, AND DIFFUSERS

FURNISH AND INSTALL REGISTERS, GRILLES, AND DIFFUSERS AS MANUFACTURED BY TITUS OR EQUAL BY METALAIR AND TUTTLE & BAILEY.

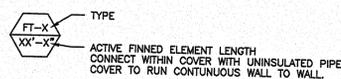
- A - MODEL TDC, SQUARE, LOUVERED FACE, FIXED DISCHARGE DIFFUSER WITH OPPOSED BLADE DAMPER, THROW AND CFM INDICATED ON DWGS.
- B - MODEL 35ORL, 35° FIXED DEFLECTION, 3/4" BLADE SPACING - BLADES PARALLEL TO THE LONG DIMENSION, STEEL, RETURN GRILLE
- C - MODEL 50R, STEEL BORDER, EGGCRATE, 1/2" x 1/2" x 1/2" ALUMINUM CORE, RETURN GRILLE.



FIN-TUBE RADIATION (FT'S)

CONTRACTOR SHALL FURNISH AND INSTALL FIN TUBE ELEMENT AS MANUFACTURED BY SLANT FIN OR EQUAL.

FT-A STYLE RL-10 SINGLE ROW ELEMENT, 14" H SLOPED TOP COVER C-340 ELEMENT TYPE, 3/4" COPPER WITH ALUMINUM FIN, 3/4" COPPER TUBE 975 BTU/AIR.FT. 160°F AVG. WATER TEMPERATURE. FURNISH W/ ADJUSTABLE DAMPER.



KAESTLE BOOS ASSOCIATES, INC. ARCHITECTS

DRAWN BY: KHL CHECKED BY: WFM SCALE: 1/8"=1'-0"

MECHANICAL PART PLAN

PROJECT NO.: 00-41 DRAWING NO.:

DATE: JUNE 23, 2000

M2.2

M2-2.dwg 8-29-00 10:39:31 am EST

KEY PLAN

REVISIONS

DATE MARK DESCRIPTION

BRISTOL MUNICIPAL FACILITY

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DRAWN BY: W.F.M. SCALE: 1/8"=1'-0"

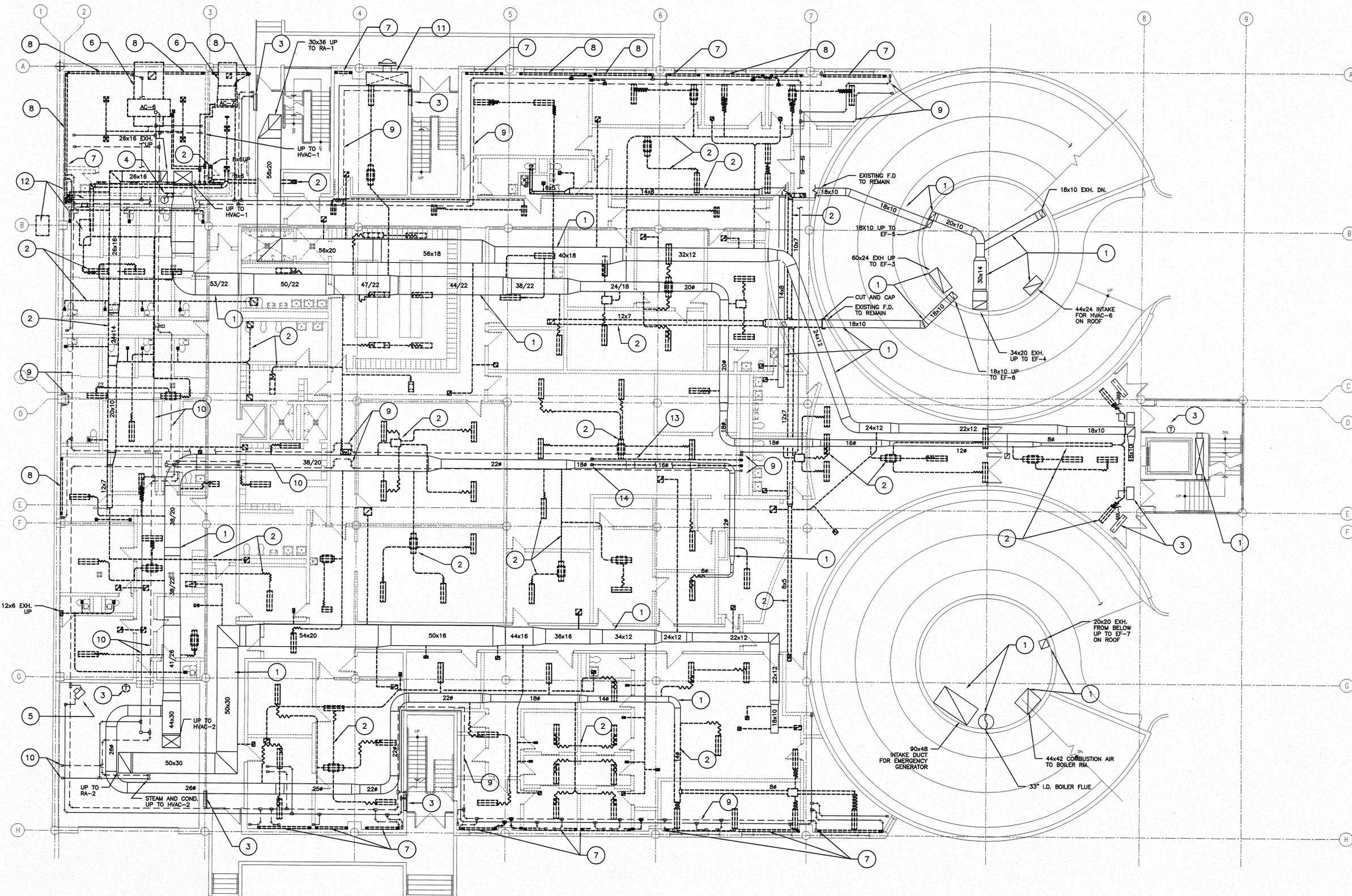
MAIN LEVEL MECHANICAL DEMOLITION FLOOR PLAN

PROJECT NO.: 98/17

DRAWING NO.:

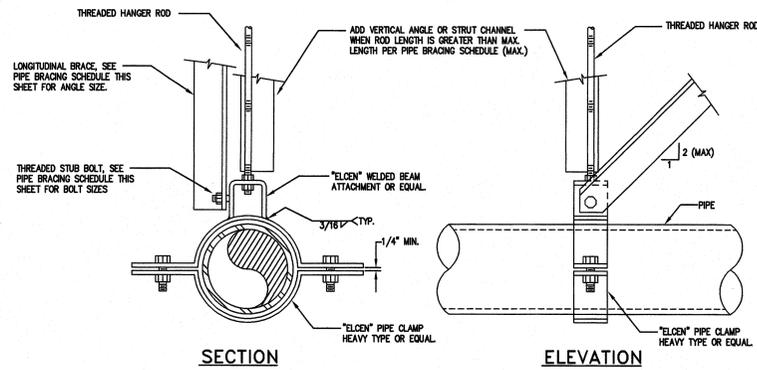
DATE: 8/1/99

MD-1

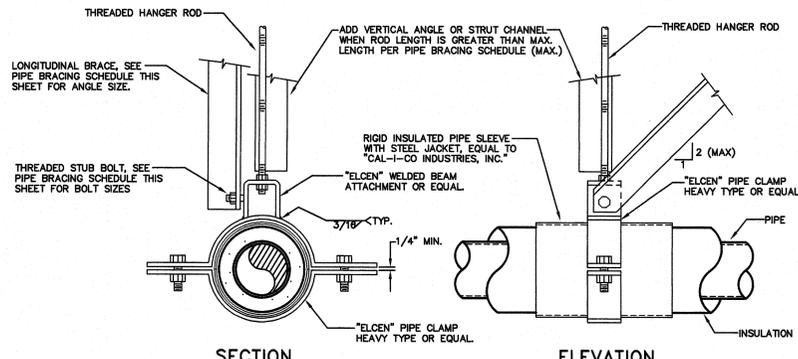


MECHANICAL DEMOLITION NOTES

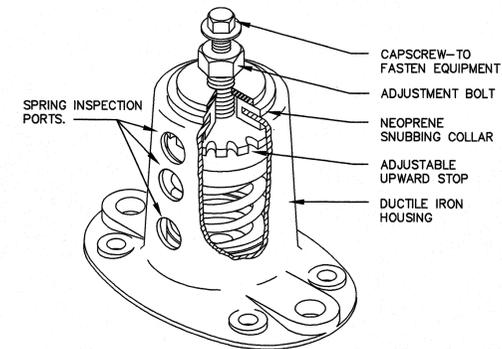
- | | | | | | | | | | |
|---|--|---|---|---|--|----|---|----|--|
| 1 | EXISTING DUCTS SHOWN AS CONTINUOUS LIGHT LINE SHALL REMAIN. | 4 | EXISTING PNEUMATIC THERMOSTATS TO BE REMOVED. SEE NEW WORK PLAN FOR NEW THERMOSTAT LOCATIONS. | 7 | EXISTING FIN-TUBE RADIATION AND COVER TO BE REMOVED. RUNOUTS TO REMAIN FOR RECONNECTION. | 10 | EXISTING 3" STEAM AND 2" CONDENSATE PIPING TO REMAIN. | 13 | EXISTING 1-1/2" HOT WATER S&R TO BE REMOVED. |
| 2 | EXISTING DUCTS, GRILLES, DIFFUSERS, VAV BOXES, ETC SHOWN WITH HEAVY DASHED LINE TO BE REMOVED. | 5 | EXISTING UNIT HEATER TO BE REMOVED. | 8 | EXISTING FIN-TUBE RADIATION AND COVER TO BE REMOVED. REMOVE RUNOUTS AND CAP AT MAINS. | 11 | EXISTING STAINLESS STEEL HOOD AND WALL EXHAUST FAN TO REMAIN. | 14 | 1-1/2" HWS&R RISERS TO 2ND FL. REHEAT COILS TO REMAIN. |
| 3 | EXISTING CABINET UNIT HEATER TO REMAIN. | 6 | EXISTING FAN COIL AIR CONDITIONING UNITS TO BE REMOVED. | 9 | EXISTING 2-1/2" AND 1-1/2" HOT WATER SUPPLY AND RETURN RISERS TO BE RELOCATED. | 12 | EXISTING 10 TON COMPUTER ROOM AIR CONDITIONING UNIT, TRANSFER DUCT, AND OUTDOOR DRY-COOLER TO BE REMOVED. | | |



TYPICAL LONGITUDINAL PIPE BRACING - DETAIL
N.T.S.



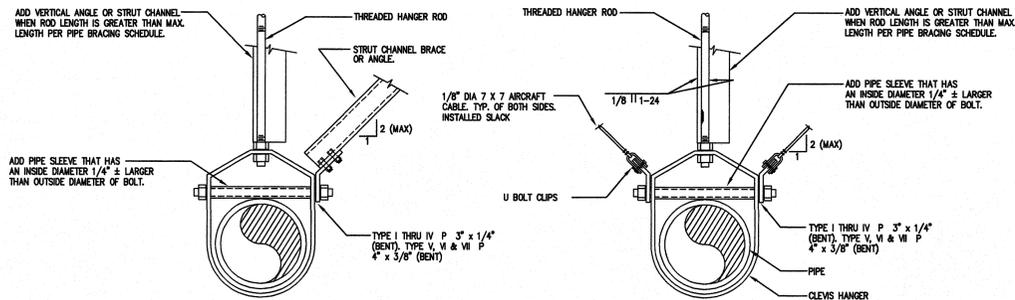
TYPICAL LONGITUDINAL PIPE BRACING - DETAIL
N.T.S.



TYPICAL SEISMIC SPRING ISOLATOR
N.T.S.

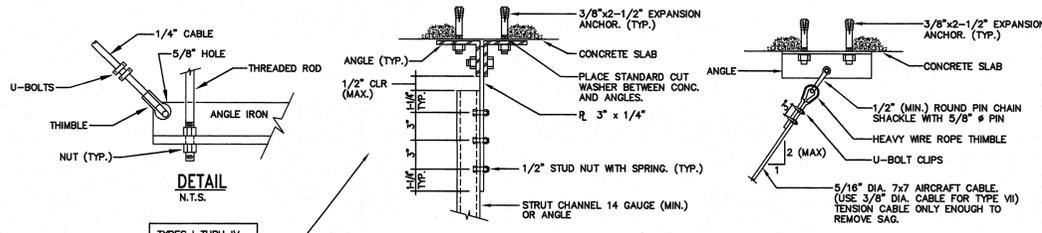
KEY PLAN

DATE	MARK	REVISIONS	DESCRIPTION



STRUT CHANNEL BRACING

CABLE BRACING

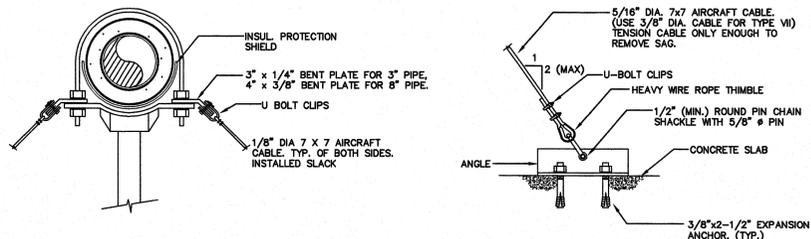


TYP. TOP CONNECTION FOR
DIAGONAL BRACE DETAIL
N.T.S.

TYP. TOP CONNECTION FOR
AIRCRAFT CABLE BRACING
N.T.S.

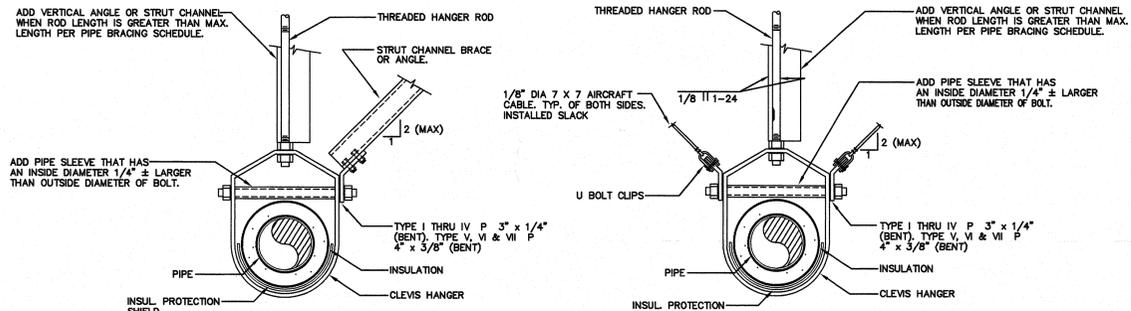
TYPICAL TRANSVERSE PIPE BRACING - DETAIL
N.T.S.

SEISMIC RESTRAINT DETAILS
N.T.S.



CABLE BRACING

TYP. CONNECTION FOR
AIRCRAFT CABLE BRACING
N.T.S.



STRUT CHANNEL BRACING

CABLE BRACING

TYPICAL PIPE BRACING DETAIL
N.T.S.

TYPICAL TRANSVERSE PIPE BRACING - DETAIL
N.T.S.

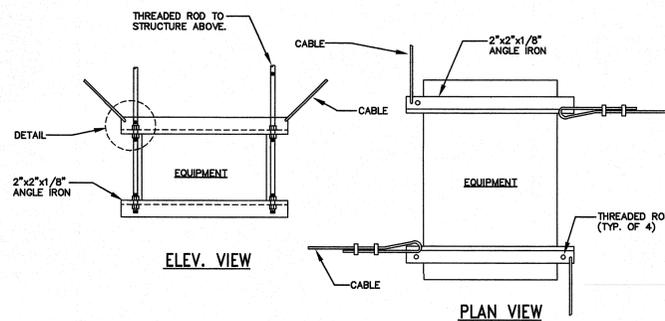
NOTES: 1. PIPING SHALL BE TRANSVERSELY BRACED AT 40 FOOT INTERVALS AND AT TURNS OF MORE THAN 4 FEET. LONGITUDINAL BRACING AT 80 FOOT INTERVALS.

PIPE BRACING SCHEDULE								
PIPE SIZE (INCHES)	'Eloen' (OR EQUAL) HANGER TYPE	BOLTS TO 'L' (2)	VERTICAL ANGLE (3)	DIAGONAL	LONGITUDINAL DIAGONAL ANGLE (4)	TOP CONNECTION OF DIAGONAL & LONGITUDINAL 2' S (1)	ROD SIZE (INCHES)	MAXIMUM LENGTH FOR RODS
2 1/2	CLEVIS TYPE	3/8"	2 x 2 x 16GA	2 x 2 x 16GA	2-1/2x2-1/2x16GA	TYPE II	1/2"	25'
3	DO	DO	3/8"	2 x 2 x 16GA	2 x 2 x 16GA	2-1/2x2-1/2x16GA	TYPE II	25'
4	DO	DO	3/8"	2 x 2 x 16GA	2 x 2 x 16GA	2-1/2x2-1/2x16GA	TYPE IV	31"
5	DO	DO	1/2"	2 x 2 x 16GA	2 x 2 x 16GA	2-1/2x2-1/2x16GA	TYPE IV	31"
6	DO	DO	1/2"	2-1/2x2-1/2x16GA	2-1/2x2-1/2x16GA	2-1/2x2-1/2x16GA	TYPE V	37"

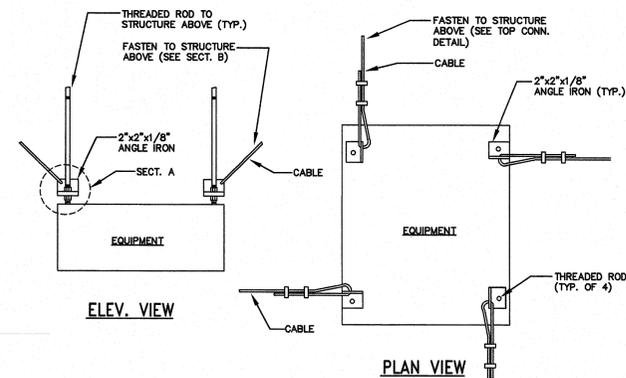
- 1/2" DENOTES ANGLE
- (1) SEE DETAILS ABOVE FOR TYPICAL CONNECTION TO STRUCTURAL SUPPORTING MEMBERS.
- (2) PLACE STANDARD CUT WASHERS BETWEEN SHEET METAL 'L'S & NUT.
- (3) "VERTICAL ANGLE" IN THE SCHEDULE IS REQUIRED IN ADDITION TO HANGER ROD ONLY WHEN "MAXIMUM LENGTH FOR RODS" IS EXCEEDED.
- (4) SEE GENERAL NOTE 1 THIS SHEET FOR LONGITUDINAL DIAGONAL BRACE REQUIREMENTS.

GENERAL NOTES

1. PIPING SHALL BE TRANSVERSELY BRACED AT 40 FOOT INTERVALS AND AT TURNS OF MORE THAN 4 FEET. LONGITUDINAL BRACING AT 80 FOOT INTERVALS.
2. PIPE RISERS THROUGH CORED OPENINGS REQUIRE NO FURTHER SEISMIC BRACING. (CORE DIAMETER TO BE A MAXIMUM OF 2" LARGER THAN PIPE O.D.)
3. ALL PIPING 2-1/2" OR LARGER SHALL BE SEISMICALLY BRACED.
4. ALL PIPING 1-1/4" OR LARGER IN BOILER AND MECHANICAL ROOMS SHALL BE SEISMICALLY BRACED.
5. ALL GAS PIPING 1" OR LARGER SHALL BE SEISMICALLY BRACED. SEE PLUMBING DWGS.
6. ALL RECTANGULAR DUCTWORK 6 SQ. FT. OR LARGER IN CROSS-SECTIONAL AREA AND ROUND DUCTWORK 26" OR LARGER IN DIAMETER SHALL BE SEISMICALLY BRACED.
7. ALL PIPING SUSPENDED BY INDIVIDUAL HANGERS 12" OR LESS IN LENGTH FROM THE TOP OF THE PIPE TO THE BOTTOM OF THE SUPPORT FOR THE HANGER SHALL NOT REQUIRE SEISMIC RESTRAINT.
8. ALL DUCTS SUSPENDED BY HANGERS 12" INCHES OR LESS IN LENGTH FROM THE TOP OF THE DUCT TO THE BOTTOM OF THE SUPPORT FOR THE HANGER SHALL NOT REQUIRE SEISMIC RESTRAINT.
9. ALL SEISMICALLY BRACED PIPING, AND PIPING THAT IS EXEMPT FROM BRACING BECAUSE OF NOTE 6, PASSING THROUGH A BUILDING SEISMIC JOINT SHALL BE INSTALLED WITH A FLEXIBLE EXPANSION LOOP.



EQUIPMENT SEISMIC RESTRAINT DETAIL #1
N.T.S.



EQUIPMENT SEISMIC RESTRAINT DETAIL #2
N.T.S.

BRISTOL MUNICIPAL FACILITY

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KAESTLE BOOS ASSOCIATES, INC. ARCHITECTS

DRAWN BY: W.F.M. SCALE: 1/8" = 1'-0"

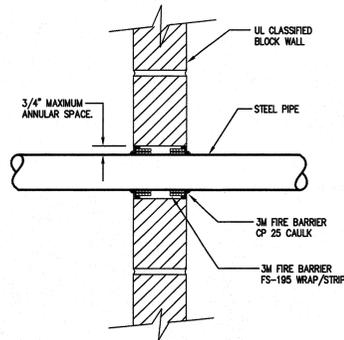
MECHANICAL SEISMIC DETAILS

PROJECT NO.: 08207

DRAWING NO.:

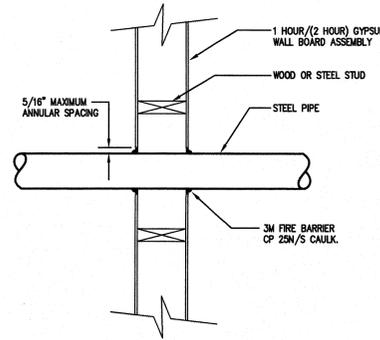
DATE: 8/1/99

MP-1.1



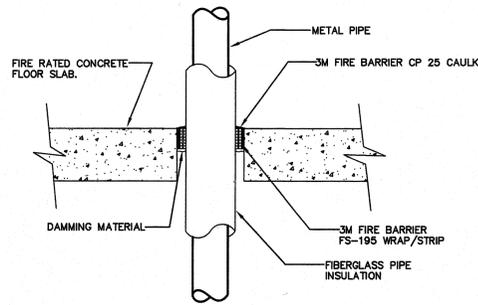
BLOCK WALL PENETRATION FIRESTOP
NOT TO SCALE

NOTE: FIRE STOPPING TO CONFORM TO UL SYSTEM #95 ASSEMBLY



GYPSUM WALL PENETRATION FIRESTOP
NOT TO SCALE

NOTE: 1. FIRE STOPPING TO CONFORM TO UL SYSTEM #147 (A) ASSEMBLY
2. 2 HOUR GYPSUM WALL BOARD ASSEMBLY IDENTICAL

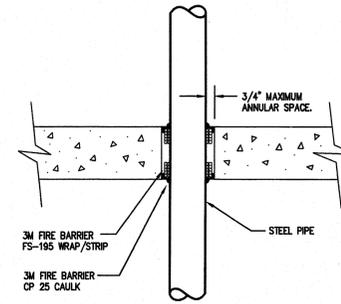


CONCRETE FLOOR PENETRATION FIRESTOP
NOT TO SCALE

NOTES:
1. FIRE STOPPING TO CONFORM TO UL SYSTEM #91 ASSEMBLY.
2. NUMBER OF WRAPS OF 3M FIRE BARRIER FS-195 WRAP/STRIP AND BARRIER CP 25 CAULK DEPTH AS FOLLOWS:

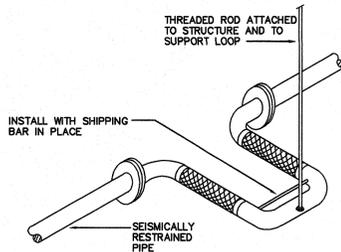
WRAP	CAULK	INSULATION
1 WRAP	1" DEPTH	1" THICK
2 WRAPS	2" DEPTH	2" THICK
3 WRAPS	3" DEPTH	3" THICK

3. THE MINIMUM ANNULAR SPACE TO BE FILLED SHALL BE 3/4" AND THE MAXIMUM ANNULAR SPACE SHALL BE 3".
4. PENETRATION FIRESTOP FOR 12" (MAX.) DIAMETER INSULATED METAL PIPE THROUGH CONCRETE FLOOR.



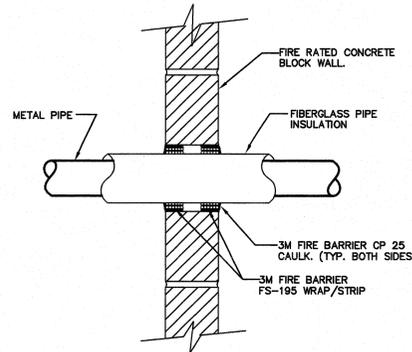
CONCRETE FLOOR PENETRATION FIRESTOP
NOT TO SCALE

NOTE: FIRE STOPPING TO CONFORM TO UL SYSTEM #95 ASSEMBLY



SEISMIC SEPARATION DETAIL
N.T.S.

LOOP SHALL BE EQUAL TO "METRAFLEX" MLS SERIES BRONZE FLEXIBLE EXPANSION LOOPS, FOR DOMESTIC WATER LINES AND ML SERIES FOR OTHER PIPING. PROVIDE SAME SIZE AS PIPE, +/- 3" MOVEMENT. PROVIDE SEISMIC JOINT AT ALL PIPE PENETRATIONS THRU BUILDING. SEISMIC JOINT, SEE STRUCTURAL DRAWINGS FOR SEISMIC JOINT LOCATION.

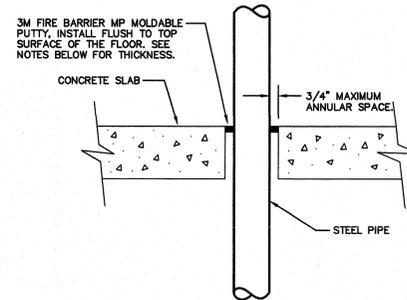


BLOCK WALL PENETRATION FIRESTOP
NOT TO SCALE

NOTES:
1. FIRE STOPPING TO CONFORM TO UL SYSTEM #91 ASSEMBLY.
2. NUMBER OF WRAPS OF 3M FIRE BARRIER FS-195 WRAP/STRIP AND BARRIER CP 25 CAULK DEPTH AS FOLLOWS:

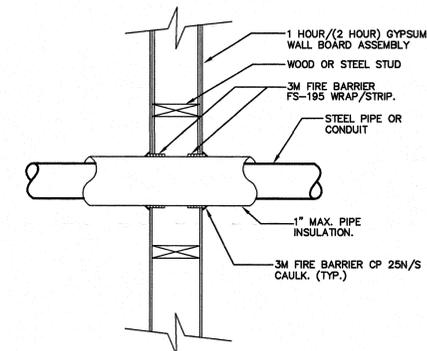
WRAP	CAULK	INSULATION
1 WRAP	1" DEPTH	1" THICK
2 WRAPS	2" DEPTH	2" THICK
3 WRAPS	3" DEPTH	3" THICK

3. THE MINIMUM ANNULAR SPACE TO BE FILLED SHALL BE 3/4" AND THE MAXIMUM ANNULAR SPACE SHALL BE 3".
4. THE WALL PENETRATION FIRESTOPS MUST BE INSTALLED ON



CONCRETE FLOOR PENETRATION 2&3-HR
N.T.S.

NOTES:
1. FIRE STOPPING TO CONFORM TO UL SYSTEM #202 ASSEMBLY.
2. PIPE SIZES UP TO 5" MAXIMUM OPENING SHALL BE 6-1/4", MINIMUM PUTTY THICKNESS SHALL BE 1/2". (2-HR)
3. PIPE SIZES BETWEEN 5" AND 10" SHALL HAVE A MAXIMUM OPENING OF 12-1/4", MINIMUM PUTTY THICKNESS 1". (3-HR)



GYPSUM WALL PENETRATION FIRESTOP
NOT TO SCALE

NOTES:
1. FIRE STOPPING TO CONFORM TO UL SYSTEM #147 ASSEMBLY
2. THE SPACE BETWEEN THE PENETRATING ITEM AND WALL BOARD MUST ACCOMMODATE AT LEAST ONE WRAP OF 3M BARRIER FS-195 WRAP/STRIP.
3. FILL ANNULAR SPACE WITH FS-195 WRAP/STRIP UNTILL THE SPACE IS LESS THAN 1/4".
4. THE WALL PENETRATION FIRESTOPS MUST BE INSTALLED ON BOTH SIDES OF THE WALL.

KEY PLAN

REVISIONS

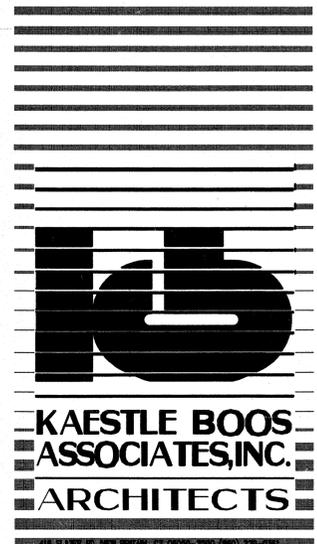
DATE MARK DESCRIPTION

BRISTOL MUNICIPAL FACILITY

BRISTOL, CONNECTICUT

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DRAWN BY: W.F.M. SCALE: 1/8" = 1'-0"

MECHANICAL SEISMIC DETAILS

PROJECT NO: 28017

DRAWING NO:

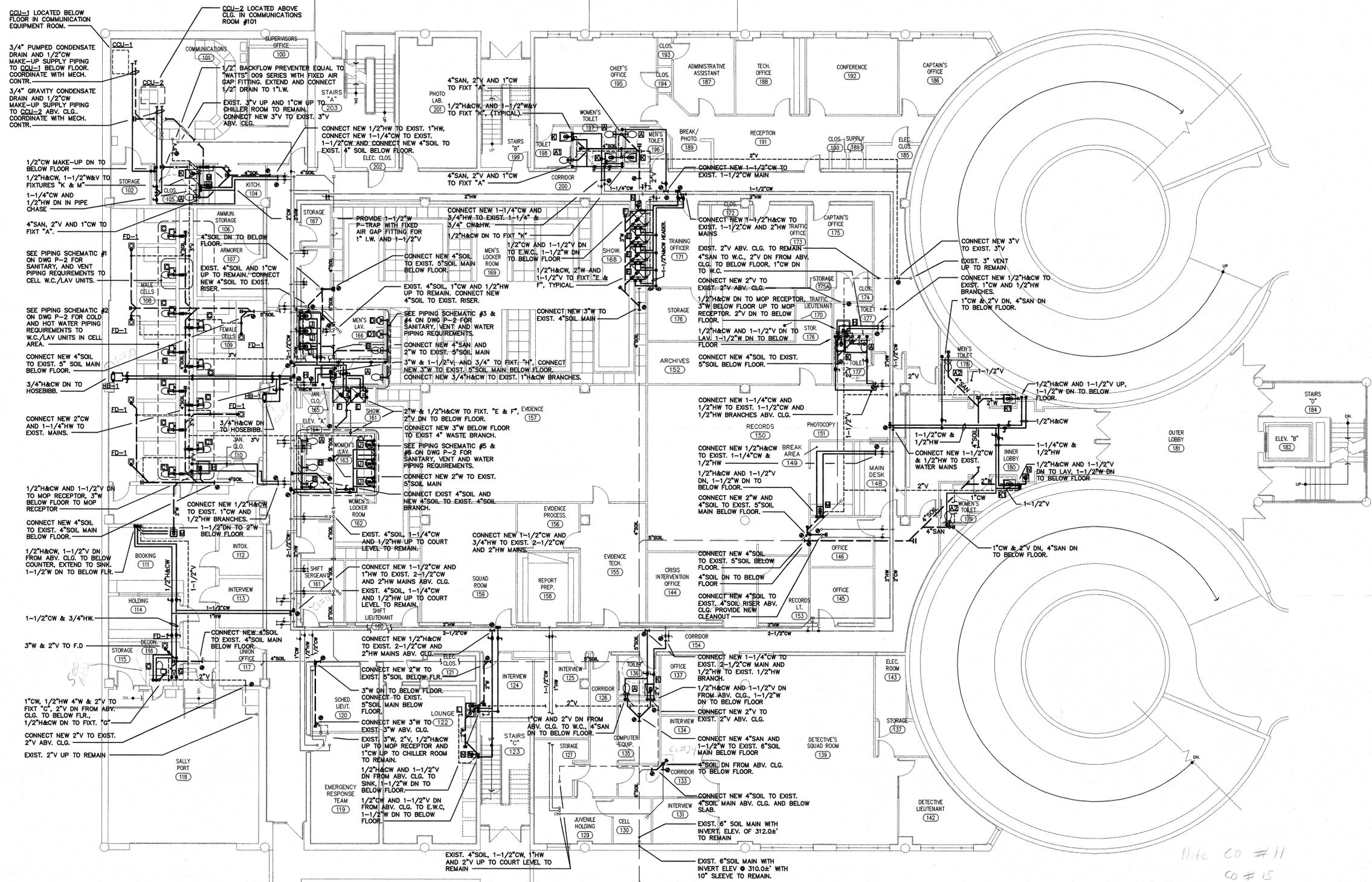
DATE: 8/1/99

MP-1.2

KEY PLAN

REVISIONS

DATE MARK DESCRIPTION



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KAESTLE BOOS ASSOCIATES, INC. ARCHITECTS

MAIN LEVEL FLOOR PLAN
SCALE: 1/8"=1'-0"

GENERAL NOTES:

- (1) DRAWINGS ARE DIAGRAMMATIC ONLY. CONTRACTOR SHALL VERIFY IN FIELD ALL STORM, WASTE, SANITARY, VENT, AND DOMESTIC WATER PIPING. IF FIELD CONDITIONS DIFFER FROM WHAT IS SHOWN ON THE DRAWINGS THE CONTRACTOR SHALL DOCUMENT AND CONTACT THE ENGINEER FOR VERIFICATION AND DIRECTION.
- (2) CONTRACTOR SHALL BE RESPONSIBLE FOR REPLACING ALL EXISTING DOMESTIC WATER SHUT-OFF VALVES AS REQUIRED.
- (3) SEE DRAWINGS P-2 FOR PLUMBING FIXTURE SCHEDULE AND PIPING SCHEMATICS. SEE DRAWING PD-1 FOR ALL PLUMBING DEMOLITION WORK.

DRAWN BY: SCALE: 1/8"=1'-0"

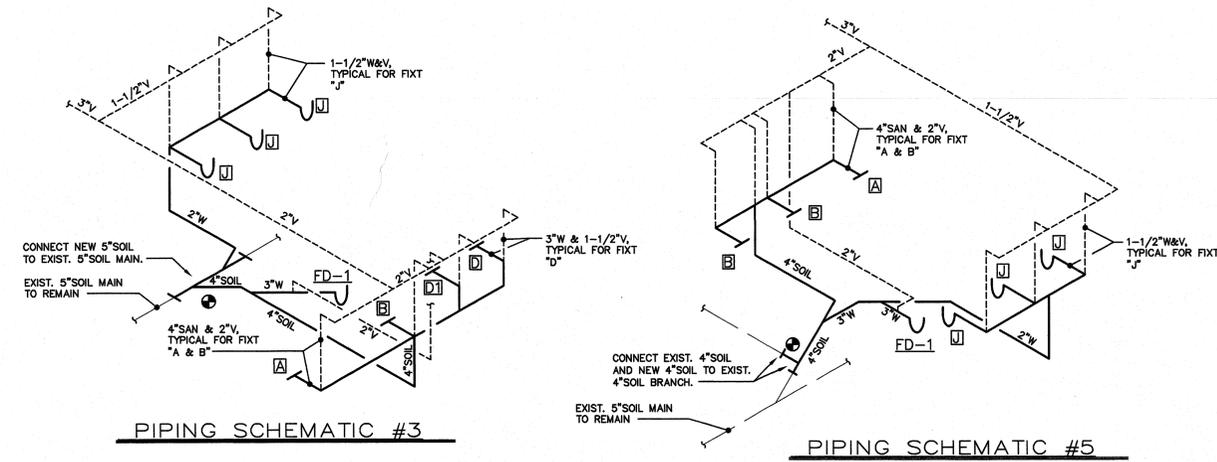
MAIN LEVEL PLUMBING FLOOR PLAN

PROJECT NO: 28217 DRAWING NO:

DATE: 8/1/98 P-1

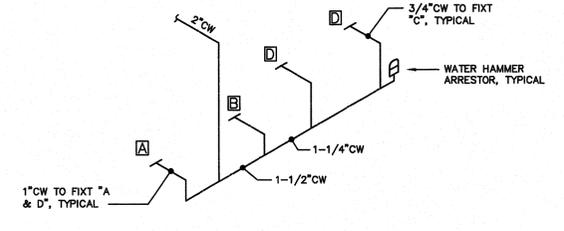
PLUMBING FIXTURE SCHEDULE

W.C. A	"AMERICAN STANDARD", "ELJER" EQUAL TO "KOHLER" KINGSTON MODEL K-4330 WALL MOUNTED, WALL OUTLET, VITREOUS CHINA, 1.6 GALLON SIPHON JET FLUSHING TOILET WITH ELONGATED BOWL DESIGN, 1-1/2" TOP SPUD, AND 2-1/4" PASSAGEWAY. FURNISH COMPLETE WITH "SLOAN" ROYAL FLUSHOMETER MODEL 111-YB 1.6 GPH FLUSH VALVE AND "KOHLER" LUSTRA MODEL K-4670-C SOLID PLASTIC, OPEN FRONT, CHECK HINGED SEAT LESS COVER. REFER TO ADA MOUNTING HEIGHTS. 4"W, 2"V, 1"CW
W.C. A1	"AMERICAN STANDARD", "ELJER" EQUAL TO "KOHLER" HIGHCLIFF MODEL K-4368 FLOOR MOUNTED, FLOOR OUTLET, VITREOUS CHINA, 17-1/2" HIGH, 1.6 GALLON SIPHON JET FLUSHING TOILET WITH ELONGATED BOWL DESIGN, 1-1/2" TOP SPUD, AND 2-1/4" PASSAGEWAY. FURNISH COMPLETE WITH "SLOAN" ROYAL FLUSHOMETER MODEL 111-YB 1.6 GPH FLUSH VALVE AND "KOHLER" LUSTRA MODEL K-4670-C SOLID PLASTIC, OPEN FRONT, CHECK HINGED SEAT LESS COVER. 4"W, 2"V, 1"CW
W.C. A2	"AMERICAN STANDARD", "ELJER" EQUAL TO "KOHLER" KINGSTON MODEL K-4330 WALL MOUNTED, WALL OUTLET, VITREOUS CHINA, 1.6 GALLON SIPHON JET FLUSHING TOILET WITH ELONGATED BOWL DESIGN, 1-1/2" TOP SPUD, AND 2-1/4" PASSAGEWAY. FURNISH COMPLETE WITH "SLOAN" ROYAL FLUSHOMETER MODEL 111-ES-S 1.6 GPH OPTIMA EL-1500-L SELF ADAPTIVE INFRARED SENSOR OPERATED FLUSH VALVE WITH EL-154 120VAC/24VAC, BOX MOUNTED, TRANSFORMER AND NON-HOLD-OPEN INTEGRAL SOLENOID OPERATOR, AND "KOHLER" LUSTRA MODEL K-4670-C SOLID PLASTIC, OPEN FRONT, CHECK HINGED SEAT LESS COVER. REFER TO ADA MOUNTING HEIGHTS. 4"W, 2"V, 1"CW, 120VAC/24VAC
W.C. B	"AMERICAN STANDARD", "ELJER" EQUAL TO "KOHLER" KINGSTON MODEL K-4330 WALL MOUNTED, WALL OUTLET, VITREOUS CHINA, 1.6 GALLON SIPHON JET FLUSHING TOILET WITH ELONGATED BOWL DESIGN, 1-1/2" TOP SPUD, AND 2-1/4" PASSAGEWAY. FURNISH COMPLETE WITH "SLOAN" ROYAL FLUSHOMETER MODEL 111-YB 1.6 GPH FLUSH VALVE AND "KOHLER" LUSTRA MODEL K-4670-C SOLID PLASTIC, OPEN FRONT, CHECK HINGED SEAT LESS COVER. REFER TO ADA MOUNTING HEIGHTS. 4"W, 2"V, 1"CW
CELL W.C. C	"METRORAFT (SERIES 3000)", "ACORN" EQUAL TO "BRADLEY" MODEL 920-5590-LC WALL MOUNTED, WALL OUTLET, STAINLESS STEEL COMBINATION LAVATORY/TOILET WITH TYPE 3304 STAINLESS STEEL, CABINET IS 12 GAUGE, LAV BOWL, COUNTERTOP, BACKSPASH PANEL, TOILET BOWL, FLUSHING RIM, INTEGRAL SEAT, AND TRAP ARE 14 GAUGE, RECESS TOILET TISSUE HOLDER IS 16 GAUGE, 5000.0 POUND LOAD CAPACITY, INTERIOR OF CABINET HAS FIRE-RESISTANT, SOUND DEADENING MATERIAL, SELF-DRAINING SOAP DISHES, 13-1/4"x10"x5" DEEP LAV BOWL, 1-1/4" NO-HUB ELBOW WASTE, 1-1/4" NO-HUB P-TRAP, 4" NO-HUB SAN COUPLING, 1.6 GPF ELONGATED BOWL WITH BLOWOUT JET ACTION. UNIT IS POLISHED TO A #4 FINISH AND HAS INTEGRAL SEAT. FURNISH COMPLETE WITH "SLOAN" ROYAL PRISON FLUSHOMETER MODEL 603-1.6-ES WITH 24VAC SOLENOID VALVE, "BRADLEY" MODEL 1020 H&CW SELF-CLOSING METERING FILLER VALVE WITH "BRADLEY" MICRO-TOUCH ELECTRONIC METERING VALVES WITH OPTIONAL MSP-3000 PROGRAMMABLE STATUS PANEL WITH "BRADLINK" OPTION AND "MICRO-TOUCH" ELECTRIC FLOODBUSTER. 4"SAN, 2"V, 1"CW, 1/2"H&CW, 24VAC PER SOLENOID VALVE
CELL W.C. C1	"METRORAFT (SERIES 3000)", "ACORN" EQUAL TO "BRADLEY" MODEL 920-5190-LC WALL MOUNTED, WALL OUTLET, STAINLESS STEEL COMBINATION LAVATORY/TOILET WITH TYPE 3304 STAINLESS STEEL, CABINET IS 12 GAUGE, LAV BOWL, COUNTERTOP, BACKSPASH PANEL, TOILET BOWL, FLUSHING RIM, INTEGRAL SEAT, AND TRAP ARE 14 GAUGE, RECESS TOILET TISSUE HOLDER IS 16 GAUGE, 5000.0 POUND LOAD CAPACITY, INTERIOR OF CABINET HAS FIRE-RESISTANT, SOUND DEADENING MATERIAL, SELF-DRAINING SOAP DISHES, 13-1/4"x10"x5" DEEP LAV BOWL, 1-1/4" NO-HUB ELBOW WASTE, 1-1/4" NO-HUB P-TRAP, 4" NO-HUB SAN COUPLING, 1.6 GPF ELONGATED BOWL WITH BLOWOUT JET ACTION. UNIT IS POLISHED TO A #4 FINISH AND HAS INTEGRAL SEAT. FURNISH COMPLETE WITH "SLOAN" ROYAL PRISON FLUSHOMETER MODEL 603-1.6-ES WITH 24VAC SOLENOID VALVE, "BRADLEY" MODEL 1020 H&CW SELF-CLOSING METERING FILLER VALVE WITH "BRADLEY" MICRO-TOUCH ELECTRONIC METERING VALVES WITH OPTIONAL MSP-3000 PROGRAMMABLE STATUS PANEL WITH "BRADLINK" OPTION AND "MICRO-TOUCH" ELECTRIC FLOODBUSTER. 4"SAN, 2"V, 1"CW, 1/2"H&CW, 24VAC PER SOLENOID VALVE
URN D	"AMERICAN STANDARD", "ELJER", EQUAL TO "KOHLER" BARDON MODEL K-4960-ET VITREOUS CHINA, WASHOUT DESIGN, ELONGATED RIM, 3/4" NPT TOP SPUD INLET, 2" P.S. OUTLET, AND REMOVEABLE BEEHIVE STRAINER AND 1.6 GPF. FURNISH COMPLETE WITH "SLOAN" ROYAL MODEL 186-1-YB FLUSHOMETER FLUSH VALVE AND ARM CHAIR CHARRIER. REFER TO ARCH. DRAWINGS FOR MOUNTING HEIGHT. 3"W, 1-1/2"V, 3/4"CW
URN D1	"AMERICAN STANDARD", "ELJER", EQUAL TO "KOHLER" BARDON MODEL K-4960-ET VITREOUS CHINA, WASHOUT DESIGN, ELONGATED RIM, 3/4" NPT TOP SPUD INLET, 2" P.S. OUTLET, AND REMOVEABLE BEEHIVE STRAINER AND 1.6 GPF. FURNISH COMPLETE WITH "SLOAN" ROYAL MODEL 186-1-YB FLUSHOMETER FLUSH VALVE AND ARM CHAIR CHARRIER. REFER TO ARCH. DRAWINGS FOR MOUNTING HEIGHT. 3"W, 1-1/2"V, 3/4"CW
SHWR E	EQUAL "SYMMONS" TEMPTRON MODEL S-500-B30-X-FG-L PRESSURE-BALANCING MIXING VALVE WITH ADJUSTABLE STOP SCREW TO LIMIT HANDLE TURN, INTEGRAL SERVICE STOPS, WALL MOUNTING FLANGE FOR PANEL WALL INSTALLATION, SINGLE LEVER HANDLE, LEVERTRON 4-458 DIVERTER WITH INTEGRAL VOLUME CONTROL, CLEAR FLO SHOWER HEAD WITH ARM AND FLANGE, WALL/HAND SHOWER WITH FLEXIBLE METAL HOSE, WALL CONNECTION AND FLANGE, AND 30" SLIDE BAR FOR HAND SHOWER MOUNTING. "McGUIRE" SHOWER DRAIN MODEL 1266A 2" FIP STRAINER WITH HEAVY CAST BRASS BODY AND STAINLESS STEEL C.P. GRID WITH VANDAL RESISTANT SCREWS. SEE ARCHITECTURAL DRAWINGS FOR MOUNTING HEIGHT. 2"W, 1-1/2"V, 1/2"H&CW
SHWR F	EQUAL TO "SYMMONS" TEMPTRON MODEL S-96-1-X PRESSURE-BALANCING MIXING VALVE WITH INTEGRAL VOLUME CONTROL AND ADJUSTABLE STOP SCREW TO LIMIT HANDLE TURN, 2.5 GPM CLEAR-FLO SHOWER HEAD WITH ARM AND FLANGE INTEGRAL SERVICE STOPS, AND "McGUIRE" MODEL 1266A 2" FIP SHOWER DRAIN WITH HEAVY CAST BRASS STRAINER AND STAINLESS STEEL GRID WITH VANDAL RESISTANT SCREWS. SEE ARCHITECTURAL DRAWINGS FOR MOUNTING HEIGHT. 2"W, 1-1/2"V, 1/2"H&CW
SHWR VLV G	DECON. ROOM SHOWER SHALL BE EQUAL TO "BRADLEY" BRADEX MODEL 925-9557 FRONT MOUNTED, FRONT ACCESS SECURITY WALL SHOWER WITH TYPE 304 STAINLESS STEEL 14 GAUGE SHOWER PANEL AND 20 GAUGE SOAP DISH, "BRADLEY" SX, 2.5 GPM, CHROME PLATED BRASS SHOWER HEAD, VANDAL RESISTANT SCREWS, "BRADLEY" MODEL 925-9557MT MICRO-TOUCH ELECTRONIC METERING WITH MSP-3000 STATUS PANEL. SEE ARCHITECTURAL DRAWINGS FOR MOUNTING HEIGHT. 1/2"H&CW
MOP RECEPTOR H	EQUAL TO "FIAT" MODEL MSB-2424 MOP SERVICE BASIN, FURNISH COMPLETE WITH: 830-AA, SERVICE FAUCET. 832-AA 30" LONG HOSE AND BRACKET 889-CC MOP HANGER, QDC-3-2 DRAIN CONNECTOR 833-AA SILICONE SEALANT. 3"W, 1-1/2"V, 1/2"H&CW.
LAV J	"AMERICAN STANDARD", "ELJER", EQUAL TO "KOHLER" FARMINGTON MODEL K-2905-4 COUNTER TOP, ENAMELED CAST IRON LAVATORY WITH 4" FAUCET CENTERS. FURNISH COMPLETE WITH "KOHLER" MODEL K-13885 OFFSET DRAIN WITH CHROME PLATED, OPEN GRID STRAINER WITH 1-1/4" TAILPIECE, 1-1/4" CAST BRASS P-TRAP, 1-1/4" CHROME PLATED TUBING, "SYMMONS" SYMMETRIX MODEL S-90-2-FR-VP-W SINGLE LEVER FAUCET WITH 6" LONG HANDLE, 0.5 GPM VANDAL RESISTANT FLOW RESTRICTOR AND VANDAL RESISTANT AERATOR, 3/8" SUPPLY TUBING AND RISERS, (VERIFY LENGTH IN FIELD), AND "TRUBRO" INSULATION KIT FOR P-TRAP AND SUPPLIES. SEE ARCHITECTURAL DRAWINGS FOR MOUNTING HEIGHT. 1-1/2"W, 1-1/2"V, 1/2"H&CW
LAV K	"AMERICAN STANDARD", "ELJER", EQUAL TO "KOHLER" JAMESTOWN MODEL K-2054 WALL MOUNTED, VITREOUS CHINA LAVATORY WITH 4" FAUCET CENTERS AND DRILLED FOR CONCEAL ARM CARRIER. FURNISH COMPLETE WITH "KOHLER" MODEL K-13885 OFFSET DRAIN WITH CHROME PLATED, OPEN GRID STRAINER WITH 1-1/4" TAILPIECE, 1-1/4" CAST BRASS P-TRAP, 1-1/4" CHROME PLATED TUBING, "SLOAN" MODEL ETP-600-A-P ADA COMPLIANT, SENSOR ACTIVATED, 24VAC, CHROME PLATED 4" CENTER SET BRASS FAUCET WITH 0.5 GPM VANDAL RESISTANT SPRAY HEAD, FILTERED SOLENOID VALVE WITH SERVICABLE "Y" STRAINER FILTER, 120VAC/24VAC, PLUG-IN TRANSFORMER AND MODEL MIX-60-2 MECHANICAL MIXING VALVE, AND 3/8" SUPPLY TUBING AND "TRUBRO" INSULATION KIT FOR P-TRAP AND SUPPLIES. CONTR. SHALL MOUNT LAV FLUSH AGAINST WALL, SEE ARCHITECTURAL DRAWINGS FOR MOUNTING HEIGHT. 1-1/2"W, 1-1/2"V, 1/2"H&CW, 120VAC/24VAC
LAV K1	"AMERICAN STANDARD", "ELJER", EQUAL TO "KOHLER" JAMESTOWN MODEL K-2054 WALL MOUNTED, VITREOUS CHINA LAVATORY WITH 4" FAUCET CENTERS AND DRILLED FOR CONCEAL ARM CARRIER. FURNISH COMPLETE WITH "KOHLER" MODEL K-13885 OFFSET DRAIN WITH CHROME PLATED, OPEN GRID STRAINER WITH 1-1/4" TAILPIECE, 1-1/4" CAST BRASS P-TRAP, 1-1/4" CHROME PLATED TUBING, "SLOAN" MODEL ETP-600-A-P ADA COMPLIANT, SENSOR ACTIVATED, 24VAC, CHROME PLATED 4" CENTER SET BRASS FAUCET WITH 0.5 GPM VANDAL RESISTANT SPRAY HEAD, FILTERED SOLENOID VALVE WITH SERVICABLE "Y" STRAINER FILTER, 120VAC/24VAC, PLUG-IN TRANSFORMER AND MODEL MIX-60-2 MECHANICAL MIXING VALVE, AND 3/8" SUPPLY TUBING AND "TRUBRO" INSULATION KIT FOR P-TRAP AND SUPPLIES. CONTR. SHALL MOUNT LAV FLUSH AGAINST WALL, SEE ARCHITECTURAL DRAWINGS FOR MOUNTING HEIGHT. 1-1/2"W, 1-1/2"V, 1/2"H&CW, 120VAC/24VAC
SINK L	"ACORN", "JUST", EQUAL TO "ELKAY" LUSTERTONE MODEL LRAD-3321-65-1 DOUBLE BOWL, SELF-RIMMING STAINLESS STEEL SINK WITH FABRICATED WITH 18 GAUGE, TYPE 302 (18-8) NICKEL BEARING STAINLESS STEEL. 6-1/2" DEEP BOWLS, EXPOSED SURFACES TO HAVE A SATIN FINISH. FURNISH COMPLETE WITH "ELKAY" MODEL LK-35L 3-1/2" STAINLESS STEEL CONICAL STRAINER WITH FLEX STEM, RUBBER STOPPER, AND 1-1/2" ELBOW, 1-1/2" CAST BRASS TAILPIECE, 1-1/2" CAST BRASS P-TRAP, "ELKAY" MODEL LK-4121 SINGLE LEVER POST MOUNT, 10" HIGH, 8" REACH SWING SPOUT, AERATOR, 3/8" O.D. COPPER TUBE INLETS, TWO HOLE INSTALLATION, "ELKAY" MODEL LK-180 HOT WATER MACHINE WITH CHROME PLATED SPOUT, 1.6"GPM FLOW RATE, 0.65 GAL. CAPACITY, ADJUSTABLE THERMOSTAT (SET THERMOSTAT TO DISCHARGE 140.0°F WATER), AND 3.0" 3 PRONG PLUG. MOUNT FAUCET CONTROL LEVER ON COUNTER 13.0 INCH MAXIMUM FROM FRONT EDGE OF COUNTER, MOUNT SPOUT AND HOT WATER DISPENSER SPOUT ON SINK DECK. FURNISH 1/2"x3/8" ANGLE VALVE SERVICE STOPS WITH LOOSE KEY, 3/8" O.D. RISERS (VERIFY LENGTH IN FIELD), AND TRU-BRO INSULATION KIT FOR P-TRAP AND SUPPLIES. 1-1/2"W, 1-1/2"V, 1/2"H&CW, 1/2"HW TO HOT WATER DISPENSER, (120V, 775WATT)HOT WATER DISPENSER, (1/2HP, 115V, 6.7AMPS) DISPOSER

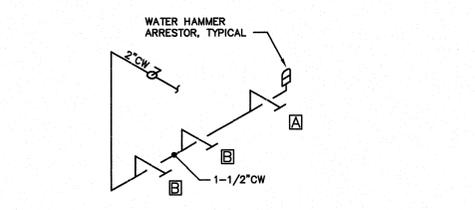


PIPING SCHEMATIC #3

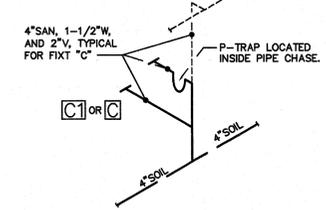
PIPING SCHEMATIC #5



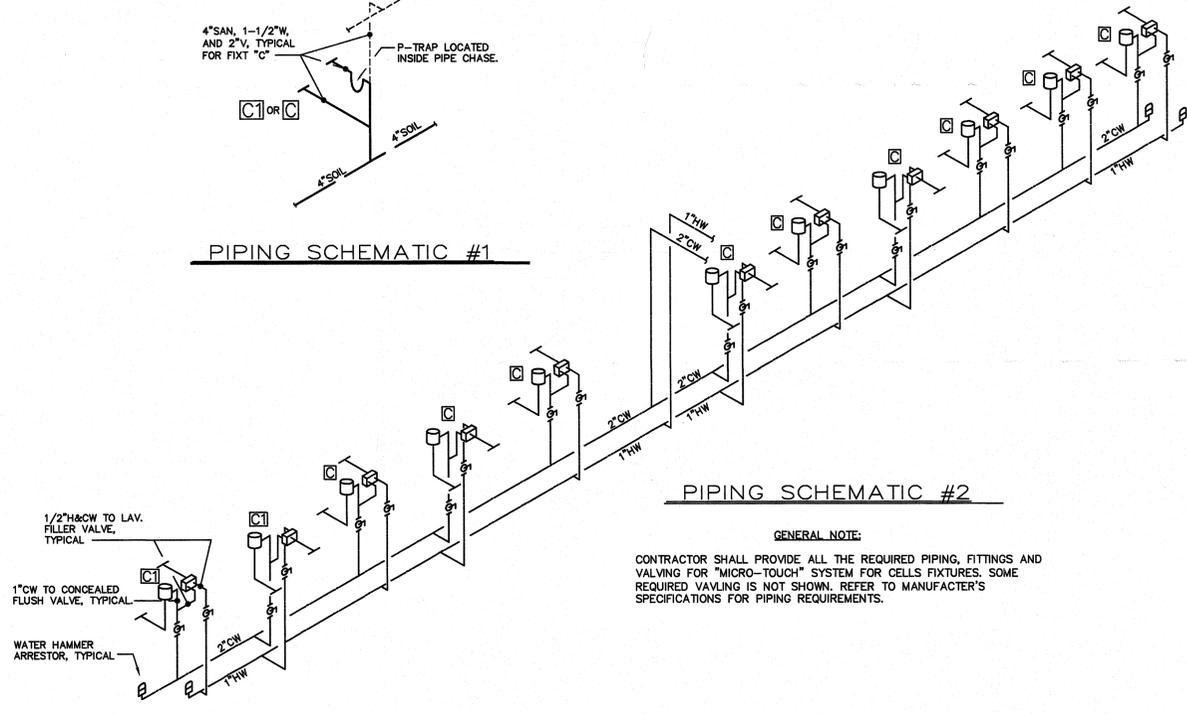
PIPING SCHEMATIC #4



PIPING SCHEMATIC #6



PIPING SCHEMATIC #1



PIPING SCHEMATIC #2

GENERAL NOTE:
CONTRACTOR SHALL PROVIDE ALL THE REQUIRED PIPING, FITTINGS AND VALVING FOR "MICRO-TOUCH" SYSTEM FOR CELLS FIXTURES. SOME REQUIRED VALVING IS NOT SHOWN. REFER TO MANUFACTURER'S SPECIFICATIONS FOR PIPING REQUIREMENTS.

SINK
M

"ACORN", "JUST", EQUAL TO "ELKAY" LUSTERTONE MODEL LRAD-1716-65-2 SINGLE BOWL, SELF-RIMMING STAINLESS STEEL SINK WITH FABRICATED WITH 18 GAUGE, TYPE 302 (18-8) NICKEL BEARING STAINLESS STEEL. 6-1/2" DEEP BOWL, EXPOSED SURFACES TO HAVE A SATIN FINISH. FURNISH COMPLETE WITH "ELKAY" MODEL LK-35L 3-1/2" STAINLESS STEEL CONICAL STRAINER WITH FLEX STEM, RUBBER STOPPER, AND 1-1/2" ELBOW, 1-1/2" CAST BRASS TAILPIECE, 1-1/2" CAST BRASS P-TRAP, "ELKAY" MODEL LK-4121 SINGLE LEVER POST MOUNT, 10" HIGH, 8" REACH SWING SPOUT, AERATOR, 3/8" O.D. COPPER TUBE INLETS, TWO HOLE INSTALLATION. PROVIDE "ELKAY" MODEL LK-180 HOT WATER MACHINE WITH CHROME PLATED SPOUT, 1.6"GPM FLOW RATE, 0.65 GAL. CAPACITY, ADJUSTABLE THERMOSTAT (SET THERMOSTAT TO DISCHARGE 140.0°F WATER), AND 3.0" 3 PRONG PLUG. MOUNT FAUCET CONTROL LEVER ON COUNTER 13.0 INCH MAXIMUM FROM FRONT EDGE OF COUNTER, MOUNT SPOUT AND HOT WATER DISPENSER SPOUT ON SINK DECK. FURNISH 1/2"x3/8" ANGLE VALVE SERVICE STOPS WITH LOOSE KEY, 3/8" O.D. RISERS (VERIFY LENGTH IN FIELD), AND TRU-BRO INSULATION KIT FOR P-TRAP AND SUPPLIES. 1-1/2"W, 1-1/2"V, 1/2"H&CW, 1/2"HW TO HOT WATER DISPENSER.

E.W.C.
M

"HAWS", "HALSEY TAYLOR" EQUAL TO "ELKAY" MODEL LISEA-8-G, BARRIER-FREE ELECTRIC, STAINLESS STEEL, WATER COOLER, 8.1 GPH CAPACITY, SIDE & FRONT TOUCH BARS, WATERSENTRY FILTER AND FILTER MONITOR, LEAD FREE. FURNISH COMPLETE WITH FLEXIGUARD SAFETY BUBBLER, P-TRAP, AND 1/2"x3/8" ANGLE STOP AND SUPPLY, 120V, 1Ø. SEE ARCHITECTURAL DRAWINGS FOR MOUNTING HEIGHT.
1-1/2"W, 1-1/2"V, 1/2"CW.

FD-1

EQUAL TO "WADE" MODEL SERIES 1100 CAST IRON FLOOR DRAIN WITH FLANGE, INTEGRAL REVERSIBLE CLAMPING COLLAR, SEEPAGE OPENINGS, SECURITY SCREWS, AND SATIN NICKEL BRONZE STRAINER; (6" STRAINER FOR 2" DRAIN, 8" STRAINER FOR 3" & 4" DRAINS). SEE PLUMBING PLANS FOR DRAIN SIZES.

KEY PLAN

REVISIONS	DATE	MARK	DESCRIPTION

BRISTOL MUNICIPAL FACILITY

BRISTOL, CONNECTICUT

Legnos & Cramer, Inc.

74 Forest Street, Hartford, Ct. 06105-3598
Tel.(860)246-8875, Fax(860)525-2544
E-Mail office@legnosandcramer.com



KAESTLE BOOS ASSOCIATES, INC. ARCHITECTS

DRAWN BY: DAS SCALE: AS NOTED

PLUMBING SCHEMATICS, SCHEDULES, AND DETAILS

PROJECT NO.: 2607 DRAWING NO.:

DATE: 8/1/99

KEY PLAN

REVISIONS		
DATE	MARK	DESCRIPTION

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BRISTOL, CONNECTICUT

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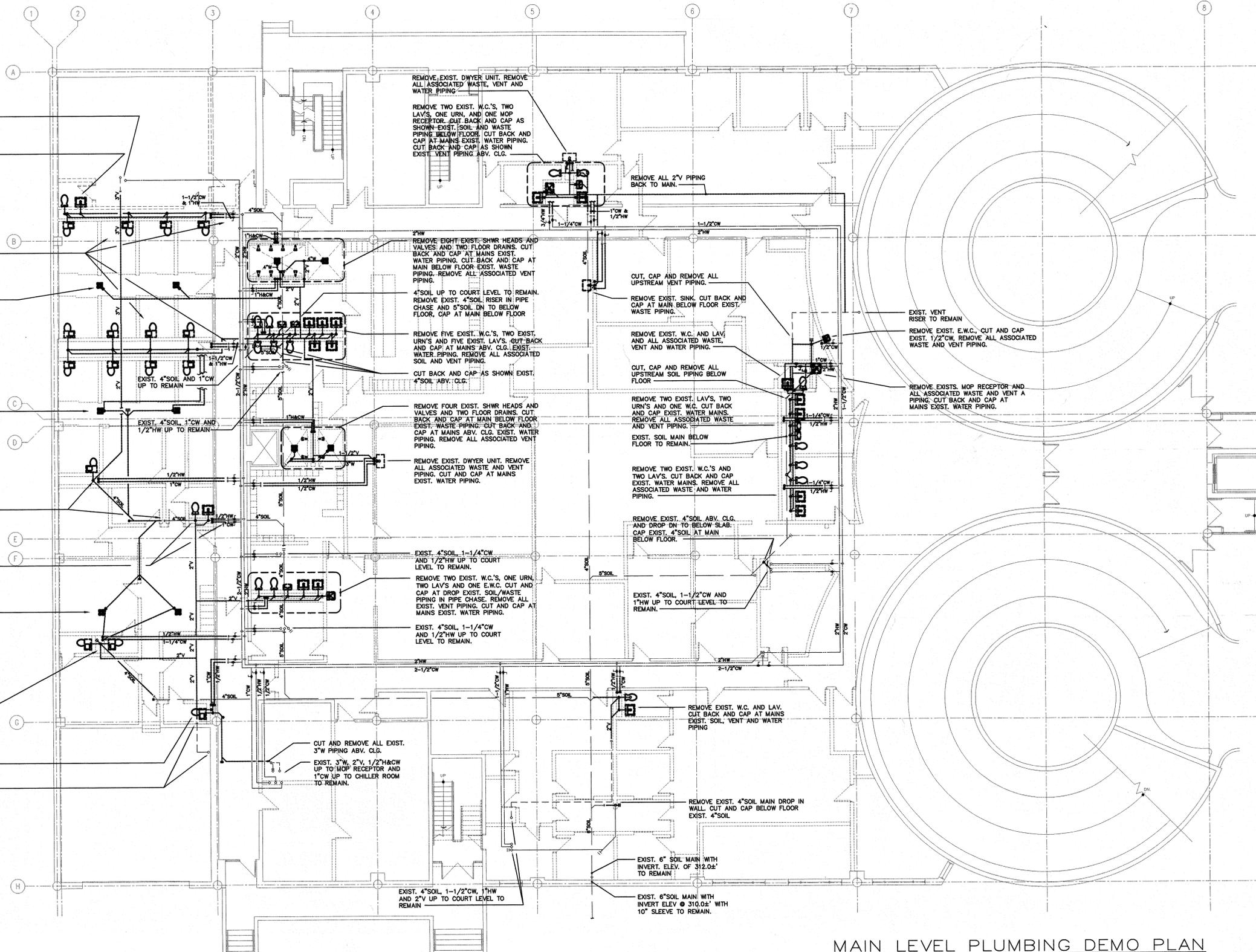
KAESTLE BOOS ASSOCIATES, INC.
ARCHITECTS

SCALE: 1/8"=1'-0"

MAIN LEVEL PLUMBING DEMOLITION FLOOR PLAN

PROJECT NO: 98/07 DRAWING NO: PD-1

DATE: 8/1/99



MAIN LEVEL PLUMBING DEMO PLAN
SCALE: 1/8"=1'-0"

GENERAL NOTES.

(1) DRAWINGS ARE DIAGRAMMATIC ONLY. CONTRACTOR SHALL VERIFY IN FIELD ALL STORM, WASTE, SANITARY, VENT, AND DOMESTIC WATER PIPING. IF FIELD CONDITIONS DIFFER FROM WHAT IS SHOWN ON THE DRAWINGS THE CONTRACTOR SHALL DOCUMENT AND CONTACT THE ENGINEER FOR VERIFICATION AND DIRECTION.

KEY PLAN

REVISIONS

DATE	WORK	DESCRIPTION
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BRISTOL MUNICIPAL FACILITY
BRISTOL, CONNECTICUT

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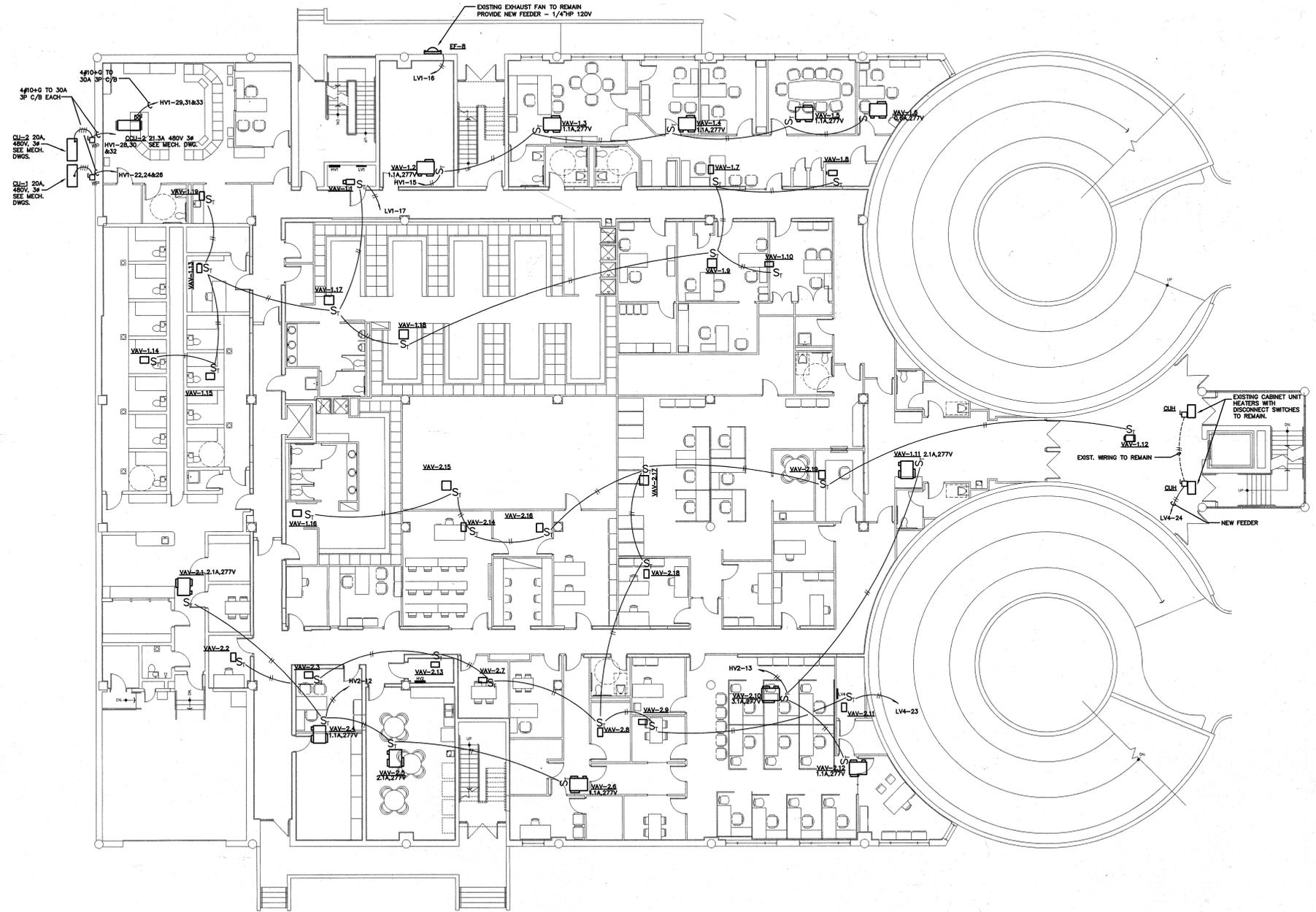


KAESTLE BOOS ASSOCIATES, INC.
ARCHITECTS

DRAWN BY: YOU SCALE: 1/8"=1'-0"

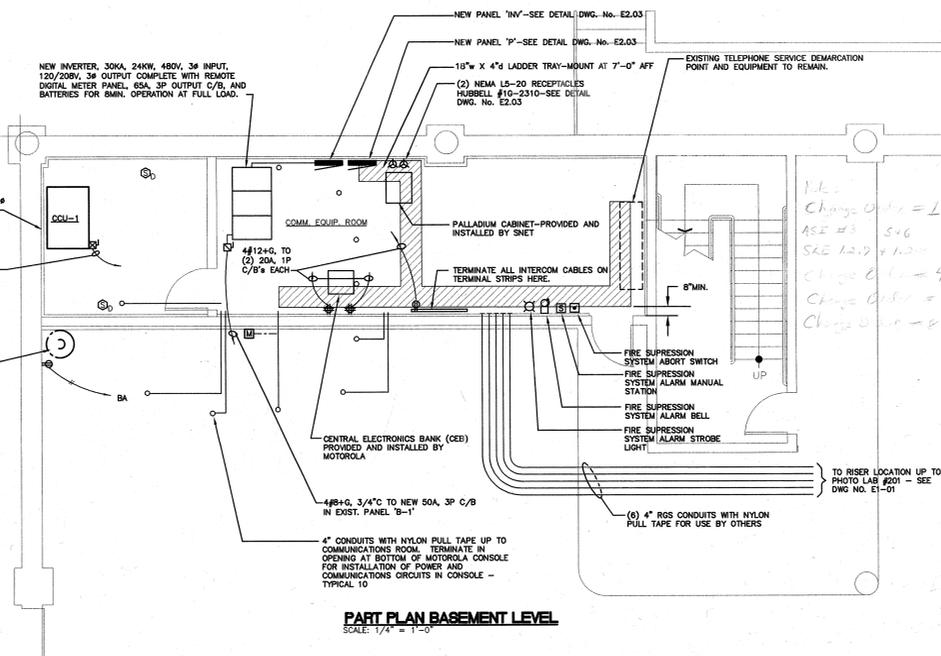
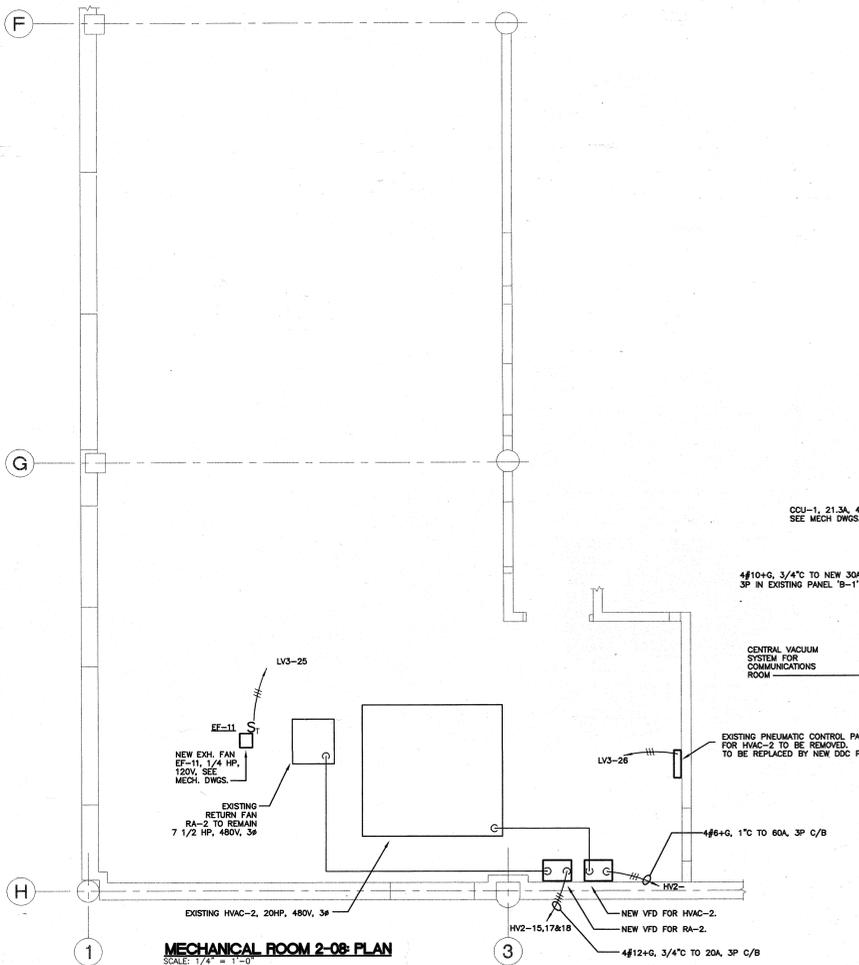
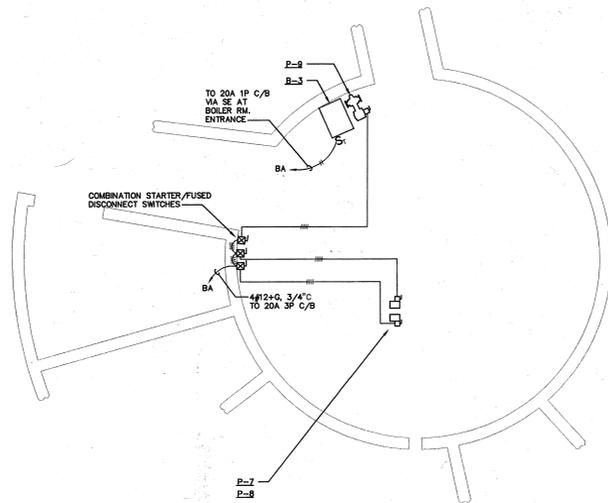
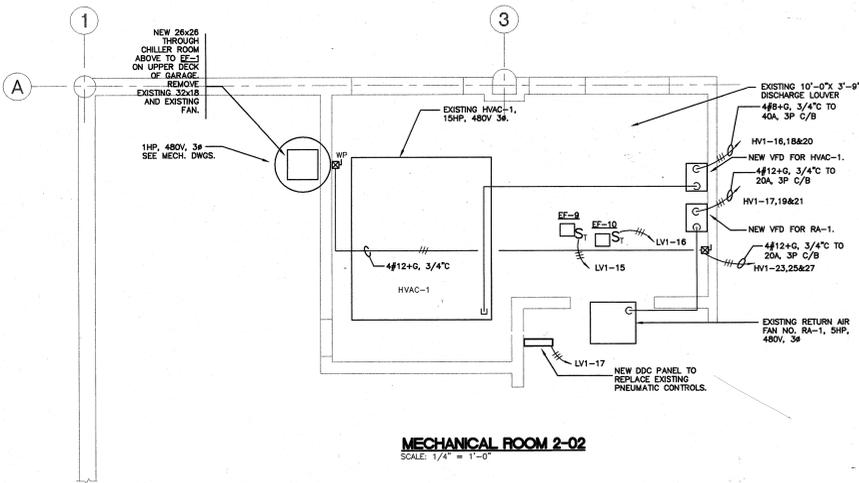
FIRST FLOOR MECHANICAL EQUIPMENT WIRING

PROJECT NO.: 28077 DRAWING NO.:
DATE: 8/1/99 **E1.04**



FIRST FLOOR PLAN -- MECHANICAL EQUIPMENT WIRING
SCALE: 1/8"=1'-0"

E1.04.dwg 8-4-99 4:05:22 pm EST



KEY PLAN

REVISIONS

DATE	MARK	DESCRIPTION

BRISTOL MUNICIPAL FACILITY
BRISTOL, CONNECTICUT

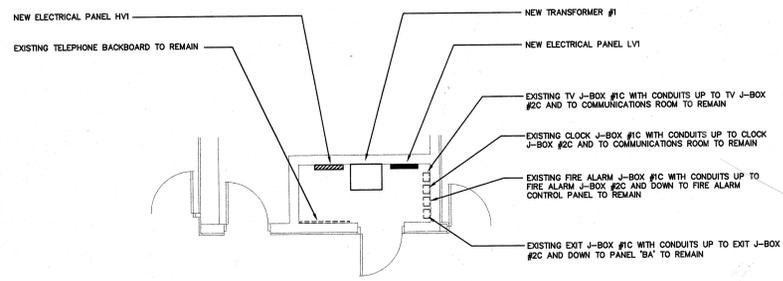
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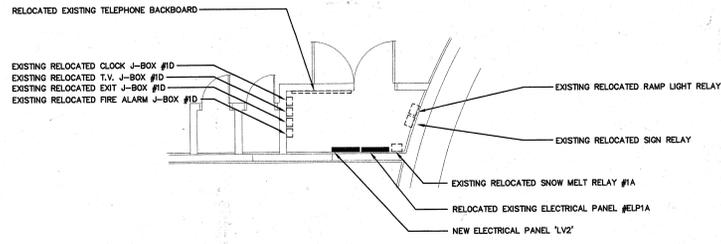
ELECTRICAL PART PLANS

PROJECT NO.: 08071 DRAWING NO.: E2.01
DATE: 8/1/99

E201.dwg 8-4-99 3:42:56 pm EST



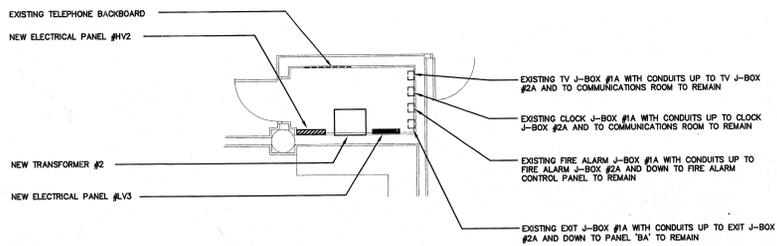
DETAIL #1
ELECTRIC ROOM #202
NEW WORK
SCALE: 1/4" = 1' - 0"



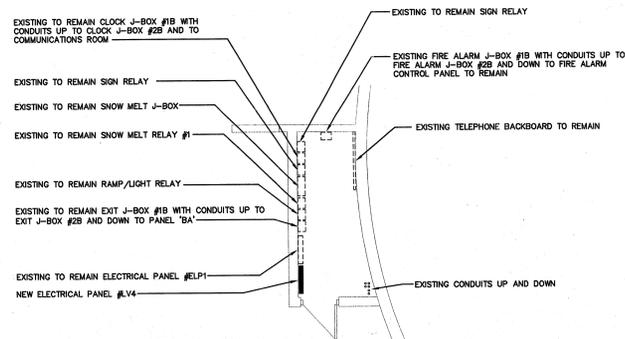
DETAIL #3
ELECTRIC ROOM #185
NEW WORK
SCALE: 1/4" = 1' - 0"

KEY PLAN

REVISIONS		
DATE	MARK	DESCRIPTION



DETAIL #2
ELECTRIC ROOM #121
NEW WORK
SCALE: 1/4" = 1' - 0"



DETAIL #4
ELECTRIC ROOM #143
NEW WORK
SCALE: 1/4" = 1' - 0"

**BRISTOL
MUNICIPAL
FACILITY**
BRISTOL, CONNECTICUT

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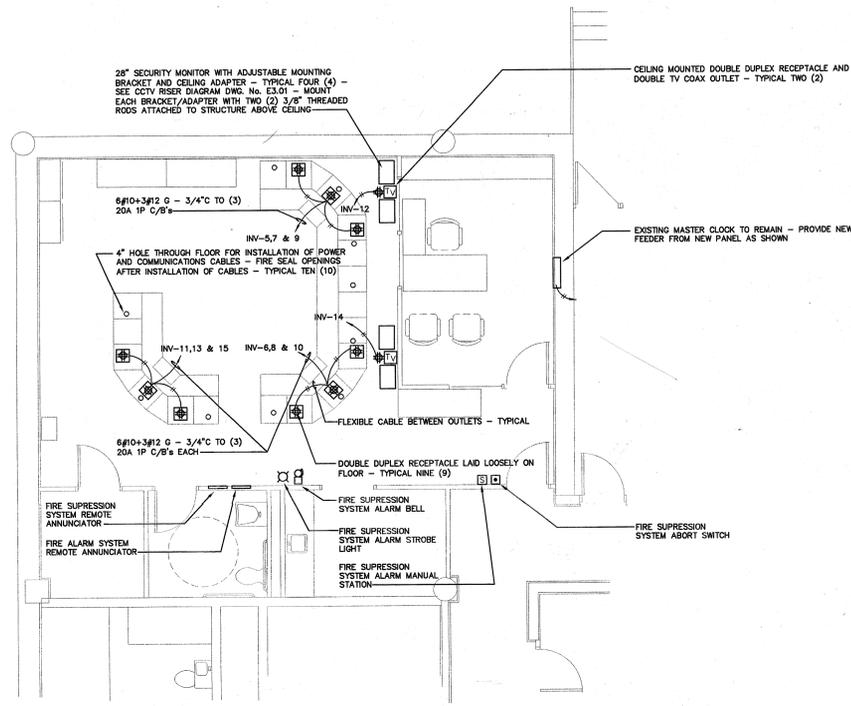


**KAESTLE BOOS
ASSOCIATES, INC.**
ARCHITECTS

DESIGNED BY: WT SCALE: 1/4" = 1' - 0"

**ELECTRICAL
ROOM
PART PLANS
NEW WORK**

PROJECT NO: 98-07 DRAWING NO:
DATE: 8/1/99 **E2.02**



COMMUNICATIONS ROOM PART PLAN

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

PANEL 'INV' SCHEDULE

VOLTAGE 120/208		MAIN RATING 100		MOUNTING SURFACE								
PHASE 3Ø		MIDRANGE MEO		LOCATION COMM. EQUIP.								
WIRE 4		FEEDER 4#8+0		LOAD 24								
OUT. #	AREA SERVED	C/R	WIRE	CONNECTED LOAD IN KW	PHASE	AREA SERVED	C/R	WIRE	CONNECTED LOAD IN KW	PHASE	OUT. #	
1	COMMUNICATIONS	20/1	#12	0	1	A	COMMUNICATIONS	20/1	#12	0	1	2
3	COMMUNICATIONS	20/1	#12	0	1	B	COMMUNICATIONS	20/1	#12	0	1	4
5	COMMUNICATIONS	20/1	#12	0	1	C	COMMUNICATIONS	20/1	#12	0	1	6
7	COMMUNICATIONS	20/1	#12	0	1	A	COMMUNICATIONS	20/1	#12	0	1	8
9	COMMUNICATIONS	20/1	#12	0	1	B	COMMUNICATIONS	20/1	#12	0	1	10
11	COMMUNICATIONS	20/1	#12	0	1	C	SECURITY MONITORS	20/1	#12	0	2	12
13	COMMUNICATIONS	20/1	#12	0	1	A	SECURITY MONITORS	20/1	#12	0	2	14
15	COMMUNICATIONS	20/1	#12	0	1	B	COMMUNICATIONS	20/2	#12	0	3	16
17												18
19												20
21												22
23												24
25												26
27												28
29												30
31												32
33												34
35												36
37												38
39												40
41												42

KEY PLAN

REVISIONS

DATE MARK DESCRIPTION

BRISTOL MUNICIPAL FACILITY

BRISTOL, CONNECTICUT

Legnos & Cramer, Inc.

74 Forest Street, Hartford, Ct. 06105-3508
Tel.(860)246-8875, Fax(860)525-2544
E-Mail office@legnosandcramer.com

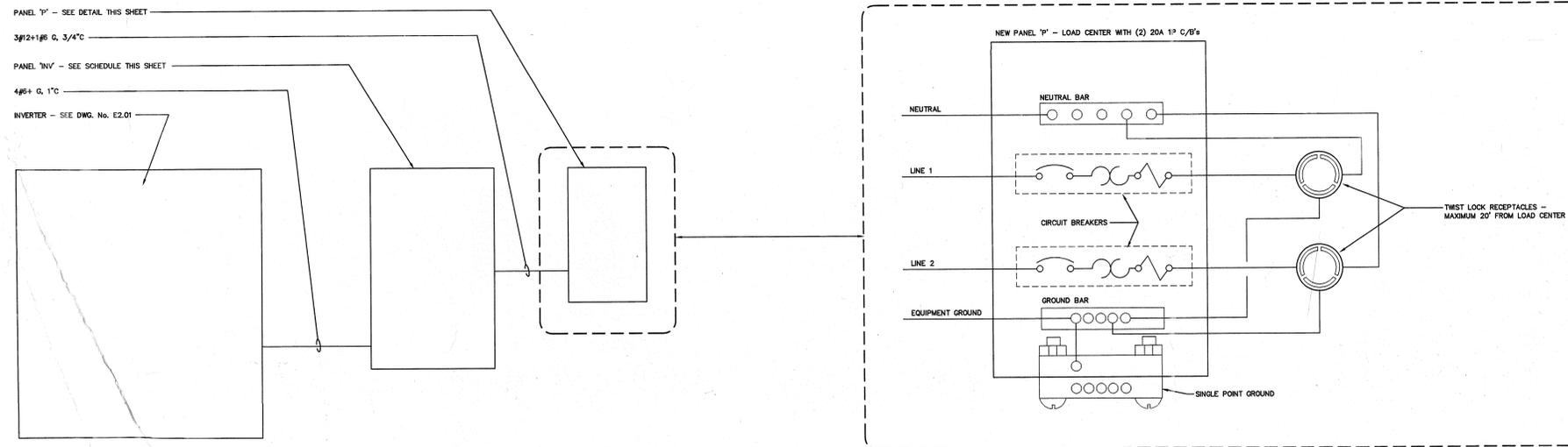


KAESTLE BOOS ASSOCIATES, INC. ARCHITECTS

COMMUNICATIONS ROOM PART PLAN AND DETAILS

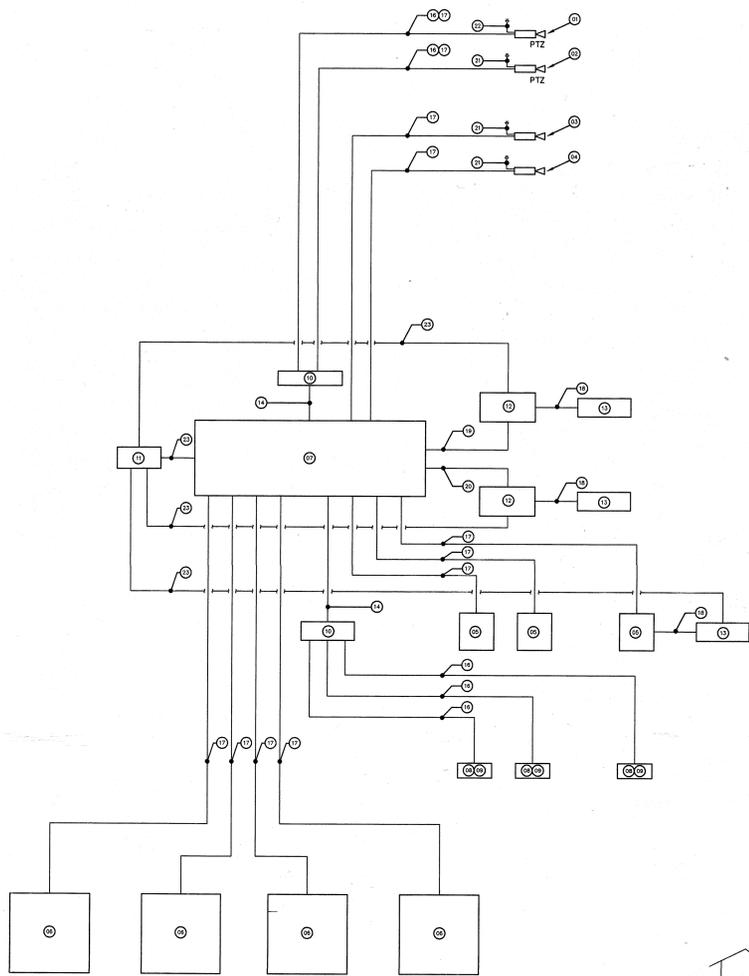
PROJECT NO.: 99-07 DRAWING NO.:

DATE: 8/1/99 **E2.03**



COMMUNICATIONS EQUIPMENT ROOM RISER DIAGRAM

NTS



CCTV RISER DIAGRAM
NTS

CCTV EQUIPMENT:

- ⊙ EXTERIOR PAN-TILT-ZOOM COLOR CAMERA WITH AUTO IRIS LENS IN SMOKE DOMED HOUSING WITH WALL MOUNTING BRACKET AND OUTDOOR POWER SUPPLY - TYPICAL TWO (2)
- ⊙ INTERIOR PAN-TILT-ZOOM COLOR CAMERA WITH AUTO IRIS LENS IN RECESSED SMOKE DOMED HOUSING WITH ALL MOUNTING HARDWARE AND POWER SUPPLY - TYPICAL TWO (2)
- ⊙ INTERIOR FIXED COLOR CAMERA WITH AUTO IRIS LENS IN CORNER MOUNTED MAXIMUM SECURITY HOUSING AND POWER SUPPLY - TYPICAL FOURTEEN (14)
- ⊙ INTERIOR FIXED LENS COLOR CAMERA WITH AUTO IRIS LENS IN CEILING MOUNTED MAXIMUM SECURITY HOUSING AND POWER SUPPLY - TYPICAL SEVEN (7)
- ⊙ 9" RACK MOUNTED COLOR MONITOR - TYPICAL THREE (3)
- ⊙ 28" CEILING MOUNTED COLOR MONITOR WITH ADJUSTABLE MOUNTING BRACKET - TYPICAL FOUR (4)
- ⊙ RACK MOUNTED 32x8 MATRIX SWITCH
- ⊙ RACK MOUNTED SYSTEM CONSOLE
- ⊙ RACK MOUNTED SYSTEM JOYSTICK
- ⊙ DISTRIBUTION LINE CONTROLLER
- ⊙ MULTI-OUTPUT INTERFACE UNIT
- ⊙ RACK MOUNTED DIGITAL VIDEO MULTIPLEXER
- ⊙ RACK MOUNTED TIME LAPSED VIDEO CASSETTE RECORDER
- ⊙ TWISTED SHIELDED PAIR (TSP) #18
- ⊙ (2) TWISTED SHIELDED PAIRS (TSP) #18 - 3/4"C.
- ⊙ (4) TWISTED SHIELDED PAIRS (TSP) #18 - 3/4"C.
- ⊙ COAXIAL CABLE (RG59U) - 3/4"C.
- ⊙ (2) COAXIAL CABLE (RG59U)
- ⊙ (14) COAXIAL CABLE (RG59U)
- ⊙ (13) COAXIAL CABLE (RG59U)
- ⊙ 2#12+6, FOR POWER SUPPLY - PLUG INTO DUPLEX RECEPTACLE ABOVE CEILING
- ⊙ 2#12+6, FOR POWER SUPPLY - PLUG INTO GFI/MP DUPLEX RECEPTACLE ADJACENT TO MOUNTING BRACKET
- ⊙ #14/8 CABLE - CCTV EQUIPMENT SUPPLIER WILL PROVIDE CABLE CONNECTORS FOR TERMINATION BY DIV. 16 CONTRACTOR

KEY PLAN

REVISIONS		
DATE	MARK	DESCRIPTION

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BRISTOL, CONNECTICUT

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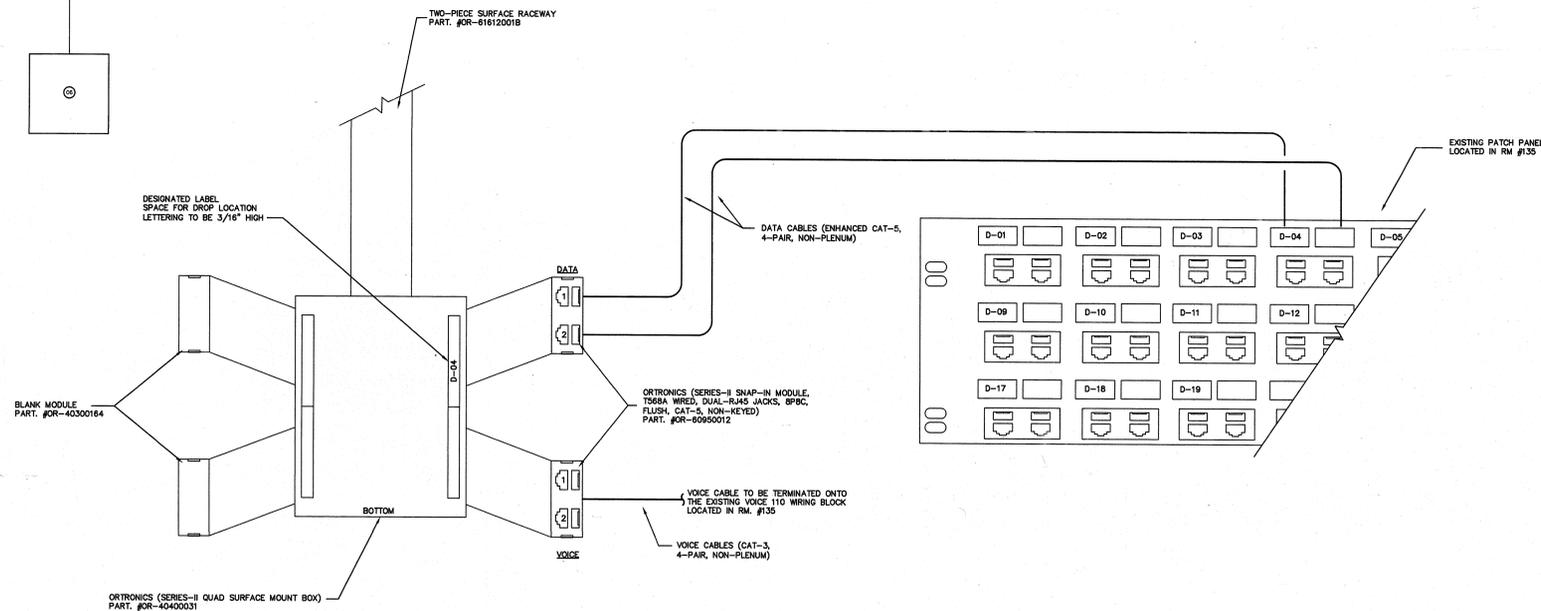


KAESTLE BOOS ASSOCIATES, INC.
ARCHITECTS

DRAWN BY: WT SCALE: NONE

CCTV RISER DIAGRAM

PROJECT NO.: 95-07 DRAWING NO.:
DATE: 8/1/99 **E3.01**



TYPICAL DATA/VOICE DROP DETAIL
FRONT VIEW OF SURFACE BOX

KEY PLAN

REVISIONS		
DATE	MARK	DESCRIPTION

BRISTOL MUNICIPAL FACILITY
BRISTOL, CONNECTICUT

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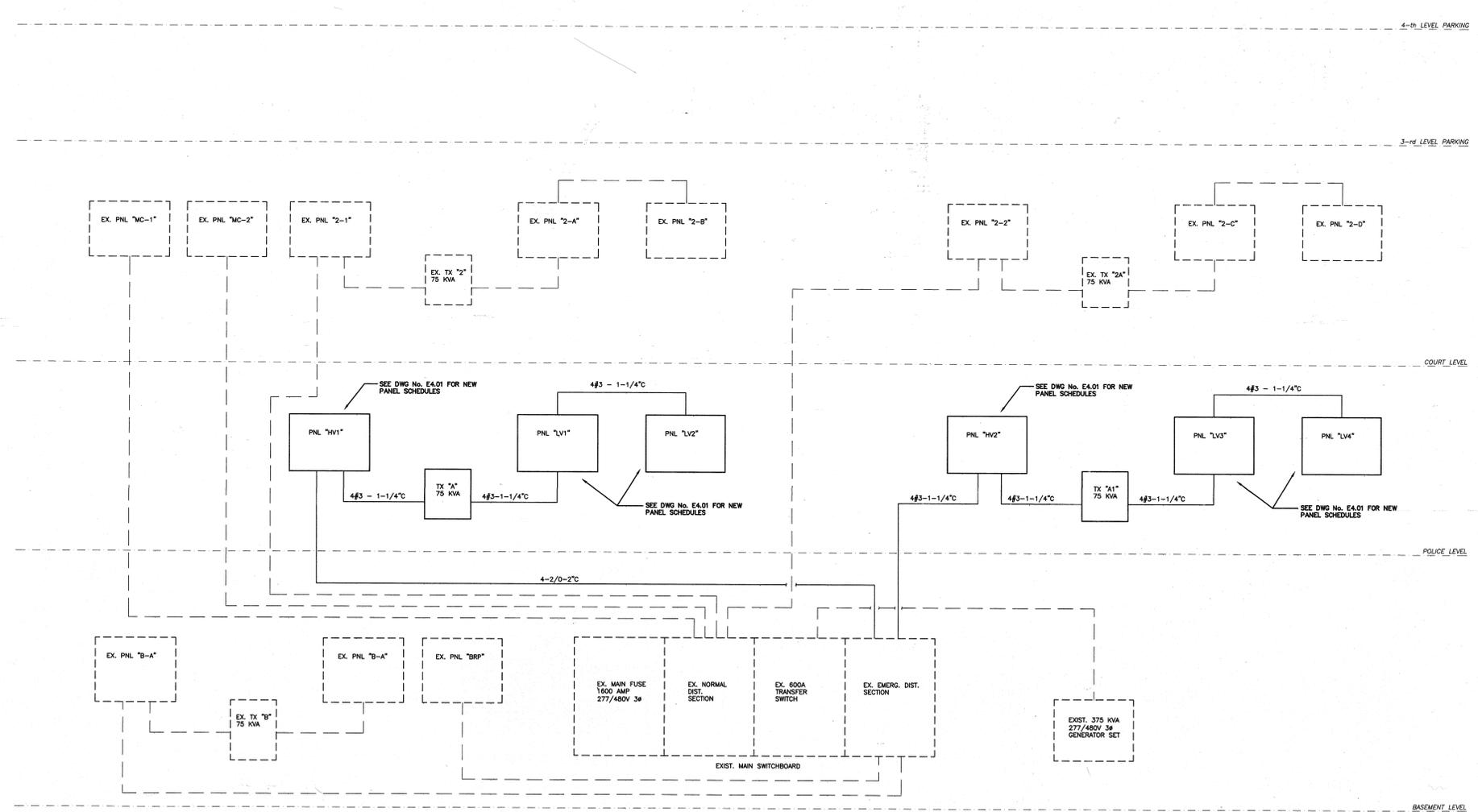


DRAWN BY: WT SCALE: NONE

ELECTRICAL RISER DIAGRAM

PROJECT NO.: 28-077 DRAWING NO.:

DATE: 8/1/99 **E3.03**



ELECTRICAL RISER DIAGRAM
NTS

E303.dwg 8-4-99 4:02:49 pm EST

PANEL HV1 SCHEDULE													
VOLTAGE		277/480		MAIN RATING		225		MOUNTING		SURFACE			
PHASE		3Ø		MLO/MCB		MCB		LOCATION		ELECTRICAL ROOM 202			
WIRE		4		FEEDER		4-2/0+G-2"		LOAD		93.12			
OKT. #	AREA SERVED	C/B	WIRE	CONNECTED LOAD IN KW	PHASE	AREA SERVED	C/B	WIRE	CONNECTED LOAD IN KW	PHASE	AREA SERVED	C/B	WIRE
1	100/101/102/103/104/105	20/1	#12	1.85	A	202/195-196/191/194/187	20/1	#12	1.30				
3	185/186/188/189-192	20/1	#12	1.36	B	167/168/169	20/1	#12	2.18				
5	152/170/171/171A/173-177	20/1	#12	0.52	C	IN. LOBBY 180	20/1	#12	0.49				
7	IN. LOBBY 178-180	20/1	#12	0.72	A	IN. LOBBY 180	20/1	#12	0.62				
9	OUT LOBBY 181	20/1	#12	0.54	B	OUT LOBBY 181	20/1	#12	0.64				
11	144-146/148-150/153/155	20/1	#12	3.28	C	SPARE	20/1	#12					
13	SPARE	20/1	#12		A	SPARE	20/1	#12					
15	VAV-1.2,1.3,1.4,1.5,1.6	20/1	#12	1.38	B		20/1	#12					
17	RA-1	20/3	#12	6.3	A	NEW VFD, HVAC-1	40/3	#8	17.5				
19					B								
21					C								
23	MECH. ROOM 2-02	20/3	#12	1.5	A	CU-1	30/3	#10	16.62				
25					B								
27					C								
29					A	CU-12	30/3	#10	16.62				
31	CCU-2	30/3	#120	17.7	A								
33					B								
35	SPARE	20/1	#12		C	SPARE	20/1	#12					
37					A								
39					B								
41					C								

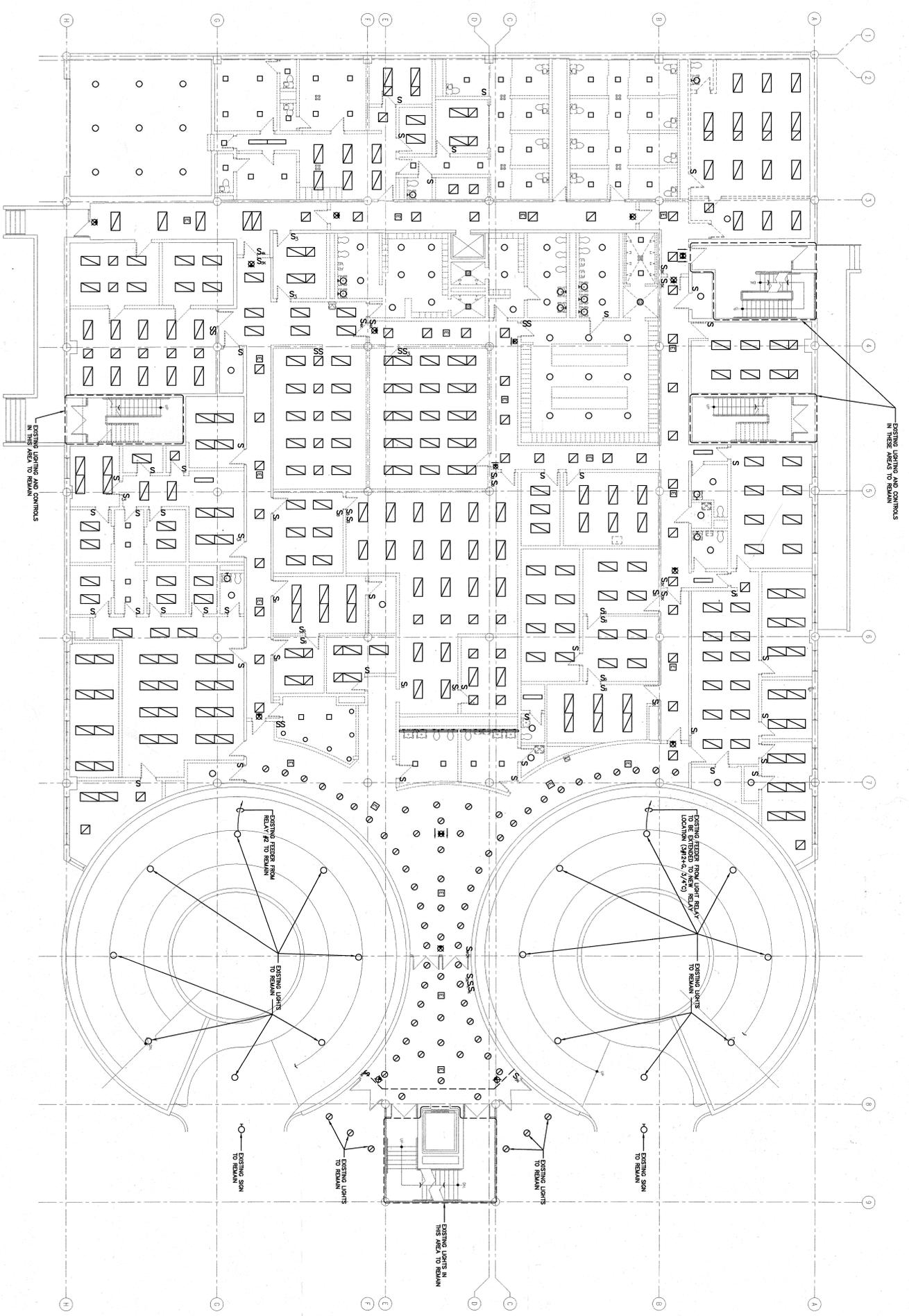
PANEL HV2 SCHEDULE													
VOLTAGE		277/480		MAIN RATING		100		MOUNTING		SURFACE			
PHASE		3Ø		MLO/MCB		MCB		LOCATION		ELECTRICAL ROOM 121			
WIRE		4		FEEDER		4#3+G-1 1/4"		LOAD		36.33			
OKT. #	AREA SERVED	C/B	WIRE	CONNECTED LOAD IN KW	PHASE	AREA SERVED	C/B	WIRE	CONNECTED LOAD IN KW	PHASE	AREA SERVED	C/B	WIRE
1	MALE CELLS 108	20/1	#12	0.97	A	FEMALE CELLS 109/106/107	20/1	#12	0.94				
3	CORR. 126/133/154/200	20/1	#12	3.90	B	CORR. 126/133/154/200	20/1	#12	3.40				
5	111-117	20/1	#12	1.58	C	118	20/1	#12	0.60				
7	119/120/122	20/1	#12	1.46	A	121/124/125/127/129-31	20/1	#12	1.10				
9	132/135-139/142	20/1	#12	2.51	B	162-166/162A	20/1	#12	0.88				
11	156-161	20/1	#12	2.37	C	VAV-2.1,2.4,2.6	20/1	#12	0.2				
13	VAV-2.10,2.12,1.11	20/1	#12	0.1	A	SPARE	20/1	#12					
15					B	SPARE	20/1	#12					
17	RA-2	20/3	#12	16.62	A	SPARE	20/1	#12					
19					B	SPARE	20/1	#12					
21					C								
23					A								
25					B								
27					C								
29					A								
31					B								
33					C								
35					A								
37					B								
39					C								
41													

PANEL LV1 SCHEDULE													
VOLTAGE		120/208		MAIN RATING		100		MOUNTING		SURFACE			
PHASE		3Ø		MLO/MCB		MCB		LOCATION		ELECTRICAL ROOM 202			
WIRE		4		FEEDER		4#3+G-1 1/4"		LOAD		17.43 DEMAND			
OKT. #	AREA SERVED	C/B	WIRE	CONNECTED LOAD IN KW	PHASE	AREA SERVED	C/B	WIRE	CONNECTED LOAD IN KW	PHASE	AREA SERVED	C/B	WIRE
1	LV2	100/3	#3	14-39	A	100	20/1	#12	0.36				
3					B	100	20/1	#12	0.36				
5					C	100/101	20/1	#12	0.72				
7	201/202	20/1	#12	1.08	A	195/98/199/201	20/1	#12	1.08				
9	165/166/167/169	20/1	#12	0.90	B	106/107	20/1	#12	0.90				
11	109/110/111	20/1	#12	1.08	C	189	20/1	#12	0.5				
13	157/159	20/1	#12	0.72	A	189	20/1	#12	0.5				
15	OUTDOOR	20/1	#12	0.18	B	EF-B	20/1	#12					
17	VAV-1.1, 1.3, 1.5,1.7, 1.9, 1.10	20/1	#12	0.10	C	SPARE	20/1	#12					
19	CCTV	20/1	#12	0.2	A	CCTV	20/1	#12	0.2				
21	CCTV	20/1	#12	0.2	B	SPARE	20/1	#12					
23	SPARE	20/1	#12		C	SPARE	20/1	#12					
25	SPARE	20/1	#12		A	SPARE	20/1	#12					
27					B								
29					C								
31					A								
33					B								
35					C								
37					A								
39					B								
41					C								

PANEL LV3 SCHEDULE													
VOLTAGE		120/208		MAIN RATING		100		MOUNTING		SURFACE			
PHASE		3Ø		MLO/MCB		MCB		LOCATION		ELECTRICAL ROOM 121			
WIRE		4		FEEDER		4#3+G-1 1/4"		LOAD		23.09 DEMAND			
OKT. #	AREA SERVED	C/B	WIRE	CONNECTED LOAD IN KW	PHASE	AREA SERVED	C/B	WIRE	CONNECTED LOAD IN KW	PHASE	AREA SERVED	C/B	WIRE
1	LV4	100/3	#3	17.83	A	163	20/1	#12	0.50				
3					B	102/163/110/112	20/1	#12	0.50				
5					C	102/163/110/112	20/1	#12	1.08				
7	111/113	20/1	#12	0.90	A	113/117	20/1	#12	0.90				
9	118	20/1	#12	0.67	B	CORR./118	20/1	#12	0.72				
11	166/CORR.	20/1	#12	0.72	C	160/161	20/1	#12	1.26				
13		20/1	#12	0.50	A	158/159	20/1	#12	1.26				
15	159	20/1	#12	0.50	B	155/158	20/1	#12	1.26				
17	122/124	20/1	#12	0.90	C	MICROWAVE	20/1	#12	0.50				
19	120/122/CORR	20/1	#12	1.08	A	MICROWAVE	20/1	#12	0.50				
21	119/122	20/1	#12	1.26	B	EWV	20/1	#12	0.50				
23	122	20/1	#12	0.50	C	122	20/1	#12	0.50				
25	122	20/1	#12	0.50	A	OUTDOOR	20/1	#12	0.18				
27	156/159	20/1	#12	0.72	B	122	20/1	#12	0.18				
29	DISPOSAL	20/1	#12	0.8	C	SPARE	20/1	#12					
31	SPARE	20/1	#12		A	SPARE	20/1	#12					
33	SPARE	20/1	#12		B	SPARE	20/1	#12					
35					C								
37					A								
39					B								
41					C								

PANEL LV2 SCHEDULE													
VOLTAGE		120/208		MAIN RATING		100		MOUNTING		SURFACE			
PHASE		3Ø		MLO/MCB		MLO		LOCATION		ELECTRICAL ROOM 185			
WIRE		4		FEEDER		4#3+G-1 1/4"		LOAD		14.39			
OKT. #	AREA SERVED	C/B	WIRE	CONNECTED LOAD IN KW	PHASE	AREA SERVED	C/B	WIRE	CONNECTED LOAD IN KW	PHASE	AREA SERVED	C/B	WIRE
1	194/187	20/1	#12	1.08	A	191/187/188	20/1	#12	1.08				
3	186/192	20/1	#12	1.08	B	192/188	20/1	#12	1.08				
5	185/189/190	20/1	#12	0.54	C	191/196/197/200	20/1	#12	1.11				
7	173/174/175/175A	20/1	#12	1.26	A	EWV-200	20/1	#12	0.5				
9	171/171A	20/1	#12	0.72	B	170/171/173	20/1	#12	0.72				
11	171/170	20/1	#12	1.08	C	157	20/1	#12	0.72				
13	176/176A/177	20/1	#12	0.73	A	178/179/180	20/1	#12	1.11				
15	148/150/151	20/1	#12	1.08	B	EWV-180	20/1	#12	0.5				
17	SPARE	20/1	#12		C	SPARE	20/1	#12					
19	SPARE	20/1	#12		A	SPARE	20/1	#12					
21					B								
23					C								
25					A								
27					B								
29					C								
31					A								
33					B								
35					C								
37					A								
39					B								
41					C								

PANEL LV4 SCHEDULE													
VOLTAGE		120/208		MAIN RATING		100		MOUNTING		SURFACE			
PHASE		3Ø		MLO/MCB		MLO		LOCATION		ELECTRICAL ROOM 143			
WIRE		4		FEEDER		4#3+G-1 1/4"		LOAD		17.83			
OKT. #	AREA SERVED	C/B	WIRE	CONNECTED LOAD IN KW	PHASE	AREA SERVED	C/B	WIRE	CONNECTED LOAD IN KW	PHASE	AREA SERVED	C/B	WIRE
1	124/125	20/1	#12	0.90	A	144/155	20/1	#12	1.08				
3		20/1	#12	0.54	B	149	20/1	#12	0.50				
5	150	20/1	#12	0.54	C	149	20/1	#12	0.50				
7		20/1	#12	0.54	A	149	20/1	#12					



MAIN LEVEL FLOOR PLAN — ELECTRICAL DEMOLITION

SCALE: 1/8"=1'-0"

NOTE:
 1. ALL EXISTING LIGHTING, SWITCHING, WIRING, AND CONNECTIONS TO BE REMOVED UNLESS NOTED OTHERWISE.

KEY PLAN

DATE	BY	REVISIONS	DESCRIPTION

BRISTOL MUNICIPAL FACILITY
 BRISTOL, CONNECTICUT

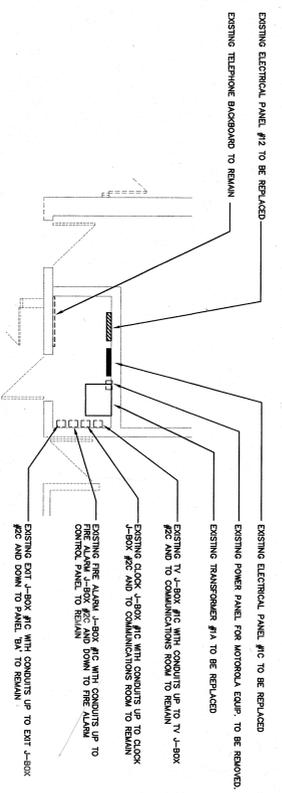
Legnos & Cramer, Inc.
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 E-Mail: office@legnosandcramer.com

KAESTLE BOOS ASSOCIATES, INC.
 ARCHITECTS

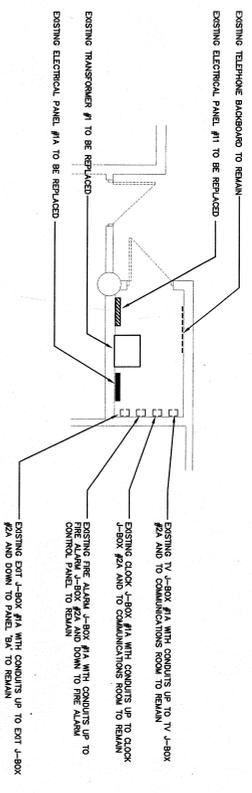


MAIN LEVEL FLOOR PLAN
 ELECTRICAL DEMOLITION

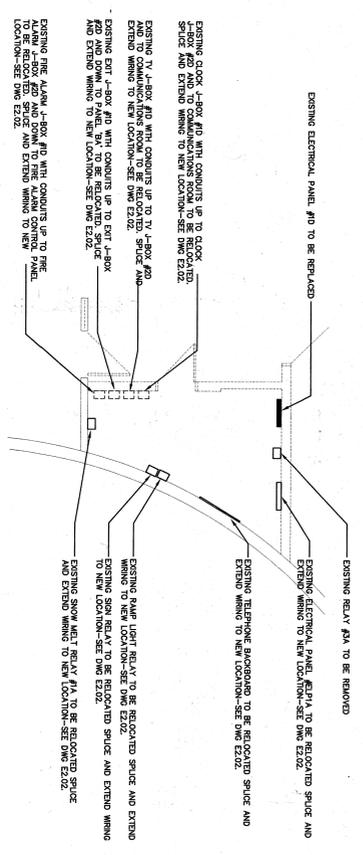
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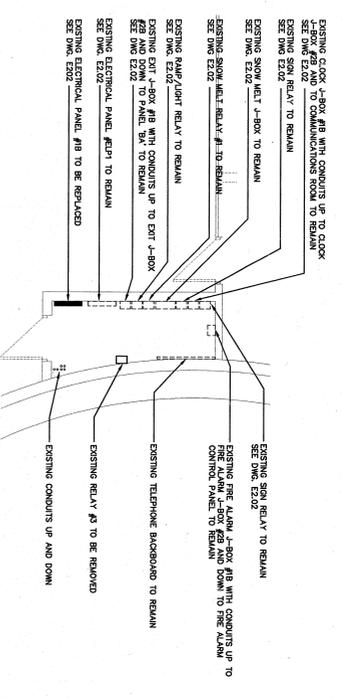
DETAIL #1
ELECTRIC ROOM #202
DEMOLITION
SCALE: 1/4" = 1' - 0"



DETAIL #2
ELECTRIC ROOM #121
DEMOLITION
SCALE: 1/4" = 1' - 0"



DETAIL #3
ELECTRIC ROOM #185
DEMOLITION
SCALE: 1/4" = 1' - 0"



DETAIL #4
ELECTRIC ROOM #143
DEMOLITION
SCALE: 1/4" = 1' - 0"

KEY PLAN

DATE: _____

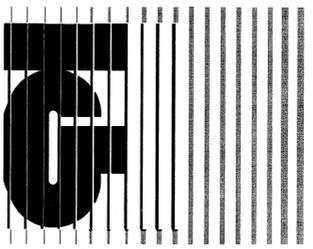
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REVISIONS

DESCRIPTION

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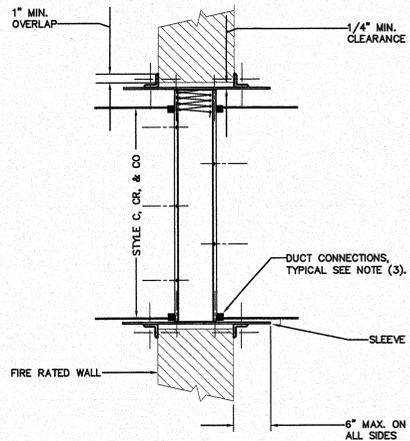


KASTLE BOOS ASSOCIATES, INC. ARCHITECTS
ELECTRICAL ROOM PART PLANS DEMOLITION
SCALE: 1/4"=1'-0"

PROJECT NO.: 98A17
DATE: 8/1/99
DRAWING NO.: **ED103**

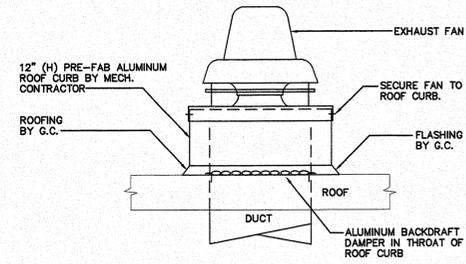
MECHANICAL LEGEND

	DUCTWORK
	CEILING SUPPLY DIFFUSER
	CEILING RETURN REGISTER
	VOLUME DAMPER
	EXTRACTOR
	TYPE-SIZE-CFM
	SQUARE TO ROUND TRANSITION DUCTWORK
	RETURN DUCT UP/DN
	SUPPLY DUCT UP/DN
	BACKDRAFT DAMPER
	MOTORIZED DAMPER
	2-WAY CONTROL VALVE
	ROOFTOP EXHAUST FAN
	RISER #
	PIPE UP
	PIPE DOWN
	HOT/CHILLED WATER SUPPLY PIPING
	HOT/CHILLED WATER RETURN PIPING
	CONDENSATE DRAIN PIPING
	GATE VALVE
	3-WAY CONTROL VALVE
	AUTOMATIC BALANCING VALVE
	BALL VALVE
	UNION
	3/4" HOSE END DRAIN VALVE
	STRAINER WITH BLOWDOWN VALVE
	PRESSURE GAUGE
	MANUAL AIR VENT
	THERMOMETER
	INDICATES CONNECTION BETWEEN NEW AND EXISTING
	SMOKE DAMPER, FIRE DAMPER AND ACCESS DOOR
	TEMPERATURE SENSOR
	SELF CONTAINED THERMOSTAT
	THERMOSTAT
	ANCHOR
	PIPE GUIDE
	CHECK VALVE
	CAP (PIPE)
	SQUARE ELBOW WITH TURNING VANES
	DOOR UNDERCUT

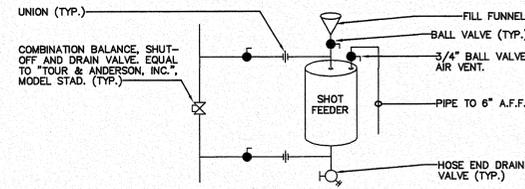


**PRIMARY TYPE "B" FIRE DAMPER DETAIL
VERTICAL INSTALLATION**
N.T.S.

- NOTE:**
- (1) INSTALL ALL FIRE DAMPERS IN STRICT ACCORDANCE WITH UL 555 STANDARDS.
 - (2) MOUNTING ANGLES SHALL BE A MIN. OF 1-1/2" X 1-1/2" X 14 GAGE AND BOLT WITH 1/4"-20 BOLT, 1/2" LONG WELDS, OR NO. 10 SCREWS TO SLEEVE AT A MAX. SPACING OF 6" FOR STAINLESS STEEL & GALVANIZED, WITH A MIN. OF TWO CONNECTIONS IN EACH SIDE, TOP, AND BOTTOM.
 - (3) PROVIDE BREAK-AWAY CONNECTION FOR ALL DUCTWORK CONNECTIONS TO FIRE DAMPER.
 - (4) HORIZONTAL INSTALLATION OF FIRE DAMPER SIMILAR.

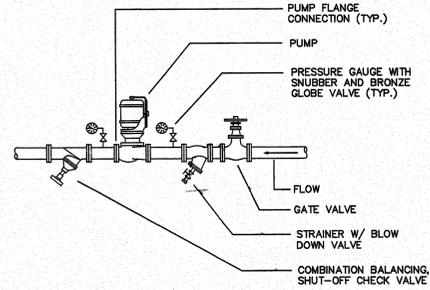


ROOF MOUNTED FAN DETAIL
N.T.S.

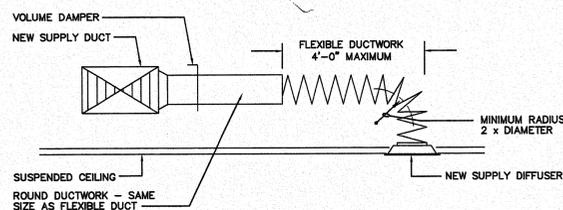


SHOT FEEDER PIPING DIAGRAM
N.T.S.

- NOTES:**
- (1) FLUSH HYDRONIC SYSTEM WITH CLEAR WATER, THEN FLUSH WITH CHEMICALS FOR 24 HOURS, DRAIN AND FLUSH WITH CLEAR WATER.
 - (2) ON FINAL FILL STABILIZE WATER PH AND INSTALL RUST INHIBITORS AS REQUIRED.
 - (3) PROVIDE CHEMICAL ANALYSIS OF TREATED WATER AT PROJECT COMPLETION.

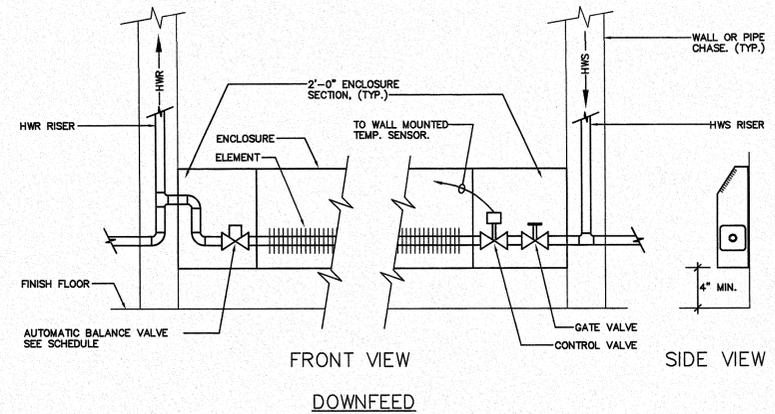


HORIZONTAL IN-LINE PUMP PIPING DETAIL
N.T.S.

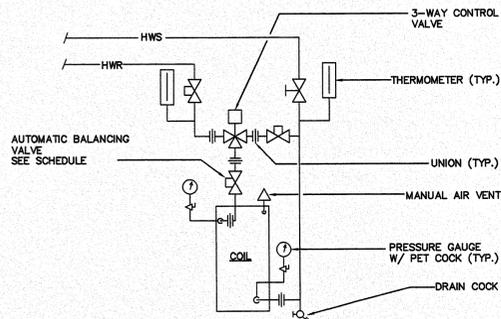


TYPICAL CEILING MOUNTED SUPPLY DIFFUSER DETAIL
N.T.S.

- NOTES:**
1. USE INSULATION WRAPPED FLEX DUCT.
 2. SEPARATELY SUPPORT FLEX DUCT FROM STRUCTURE.



TYPICAL RADIATION PIPING DIAGRAMS
N.T.S.



HEATING COIL PIPING DIAGRAM
N.T.S.

KEY PLAN

REVISIONS		
DATE	MARK	DESCRIPTION

BRISTOL MUNICIPAL FACILITY

BRISTOL, CONNECTICUT

Legnos & Cramer, Inc.

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KAESTLE BOOS ASSOCIATES, INC.
ARCHITECTS

DRAWN BY: W.F.M. SCALE: 1/8" = 1'-0"

MECHANICAL LEGENDS AND DETAILS

PROJECT NO.: 9807

DRAWING NO.:

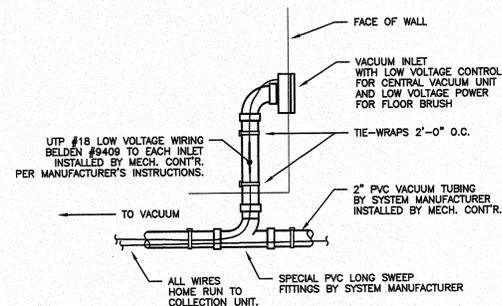
DATE: 8/1/99

M-0.1

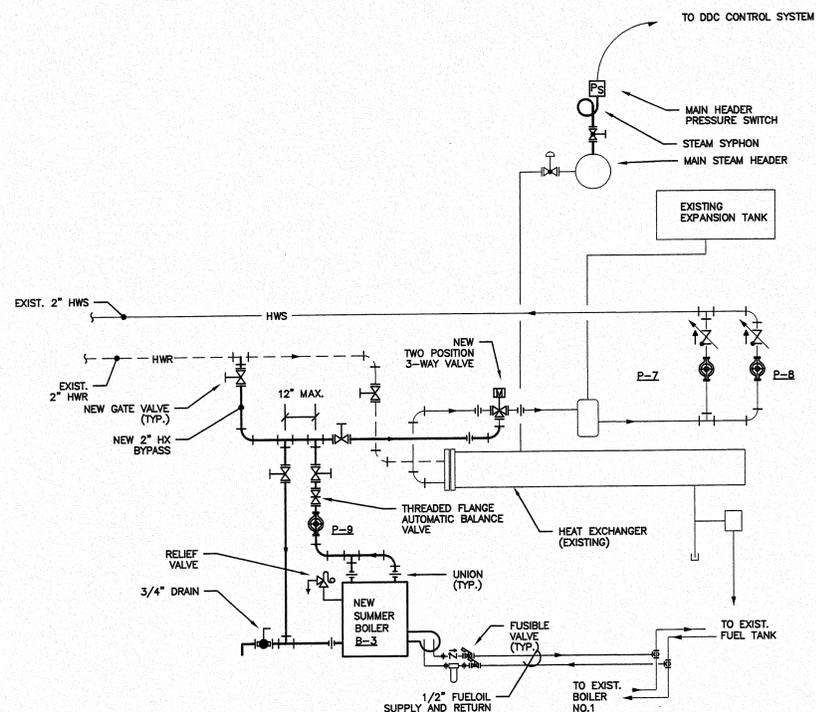
KEY PLAN

REVISIONS

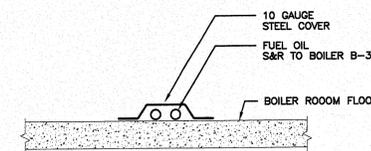
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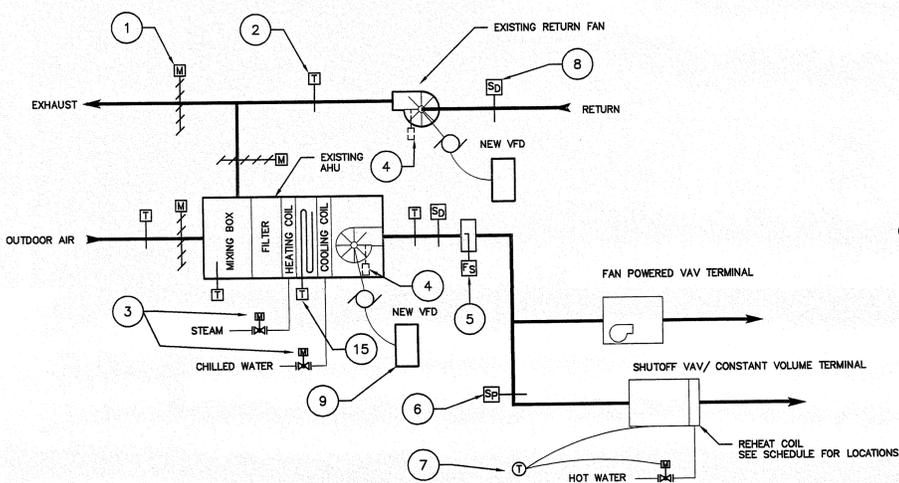
1 CENTRAL VACUUM SYSTEM INLET DETAIL
NTS



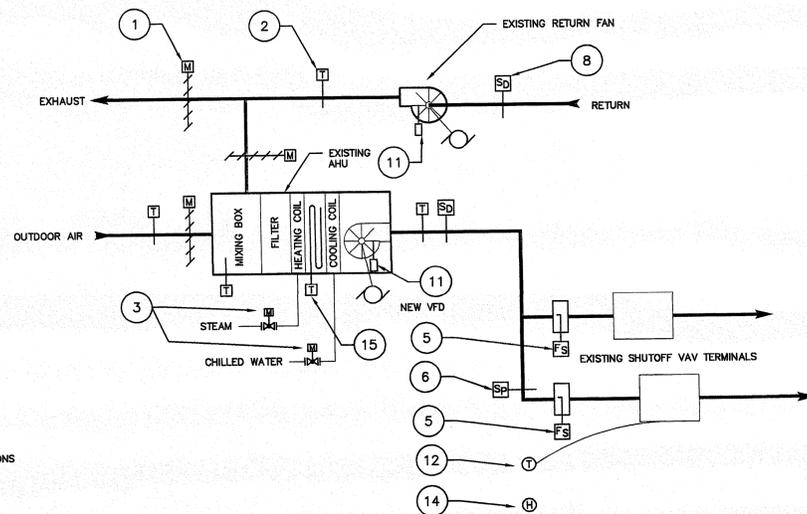
2 SUMMER BOILER PIPING SCHEMATIC
NTS



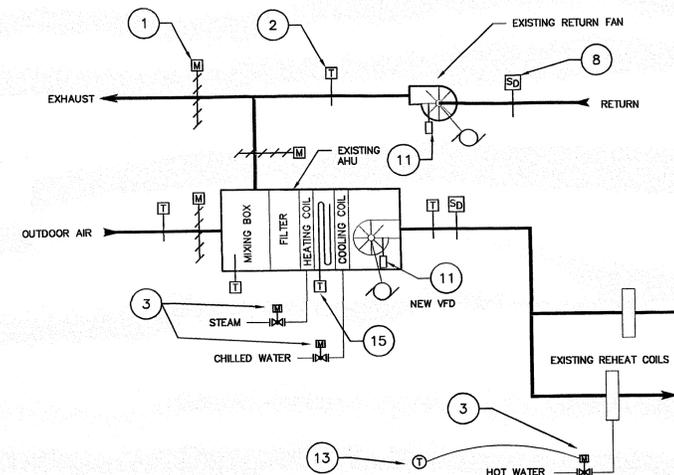
3 FUEL OIL PIPING - DETAIL
NTS



4 TEMPERATURE CONTROL SCHEMATIC - TYPICAL FOR HVAC-1, & HVAC-2
NTS



5 HVAC-3 TEMPERATURE CONTROL SCHEMATIC
NTS



6 HVAC-4 TEMPERATURE CONTROL SCHEMATIC
NTS

TEMPERATURE CONTROL NOTES

- 1 EXISTING AUTOMATIC CONTROL DAMPERS TO REMAIN. PROVIDE NEW ELECTRONIC MODULATING ACTUATORS.
- 2 NEW ELECTRONIC DUCT TEMPERATURE SENSOR.
- 3 PROVIDE NEW MODULATING ELECTRONIC ACTUATORS ON EXISTING CONTROL VALVES.
- 4 REMOVE EXISTING INLET VANE ACTUATORS, AND LOCK DAMPERS IN FULL OPEN POSITION.
- 5 AIR FLOW MEASURING STATION, WITH MULTIPLE SENSING PROBES AND PRESSURE AVERAGING MANIFOLD, BY BRANT, CAMBRIDGE, OR EQUAL.
- 6 DUCT STATIC PRESSURE SENSOR. LOCATE AT MOST DISTANT BRANCH.
- 7 ELECTRONIC ROOM TEMPERATURE SENSOR. TO PROVIDE CONTROL TO AIR TERMINAL UNITS, REHEAT VALVES AND WHERE SHOWN, TO PERIMETER HEATING VALVES.
- 8 DUCT SMOKE DETECTOR, BY DIV. 16.
- 9 VFD PROVIDED BY MECH. CONTRACTOR. POWER WIRING BY DIV. 16. TEMPERATURE CONTROLS CONTRACTOR TO PROVIDE INTERFACE WIRING FOR START-STOP, SPEED CONTROL, AND FAN OPERATING STATUS INDICATION TO DDC SYSTEM.
- 10 ALL EXISTING PNEUMATIC CONTROLS TO BE REMOVED. ALL DEVICES SHOWN TO BE WIRED TO NEW DDC PANELS, UNLESS OTHERWISE NOTED. REFER TO SEQUENCE OF OPERATIONS, AND SPECIFICATIONS FOR ADDITIONAL INFORMATION.
- 11 PROVIDE NEW ELECTRONIC MODULATING ACTUATOR FOR EXISTING INLET VANE DAMPER.
- 12 EXISTING VAV TERMINAL CONTROLS TO REMAIN.
- 13 NEW ELECTRONIC ROOM TEMPERATURE SENSOR TO REPLACE EXISTING PNEUMATIC THERMOSTAT.
- 14 NEW ELECTRONIC ROOM HUMIDITY SENSOR. TO BE LOCATED IN COURTROOM. (TYP. FOR 2) WIRE TO DDC PANEL.
- 15 LOW TEMPERATURE LIMIT THERMOSTAT (FREEZESTAT) SET @ 33° F.

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ARCHITECTS

DRAWN BY: W.F.M.

SCALE: 1/8" = 1'-0"

MECHANICAL DETAILS

PROJECT NO.: 2807

DRAWING NO.:

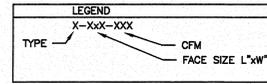
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M-0.2

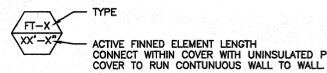
VAV BOX SCHEDULE "TRANE" AS STANDARD																	
TAG NO.	MODEL	TYPE	VALVE CFM		FAN CFM	HEATING COIL						INLET	OUTLET	ELECTRICAL			NOTES
			MAX	MIN		EAT	LAT	ROWS	MBH	EWT	GPM			HP	VOLTS	AMPS	
VAV-1.1	VCCE-06	SHUTOFF COOLING	600	90	-	-	-	-	-	-	-	6"	12X10	-	-	-	1
VAV-1.2	VFPE-06-07	SERIES FAN POWERED	600	110	600	-	-	-	-	-	-	8"	20x11	1/8	277	-	2
VAV-1.3	VFPE-06-07	SERIES FAN POWERED	580	115	580	-	-	-	-	-	-	8"	20x11	1/8	277	1.1	2
VAV-1.4	VFPE-06-07	SERIES FAN POWERED	405	80	405	-	-	-	-	-	-	8"	20x11	1/8	277	1.1	2
VAV-1.5	VFPE-06-07	SERIES FAN POWERED	400	80	400	-	-	-	-	-	-	8"	20x11	1/8	277	1.1	2
VAV-1.6	VFPE-03-04	SERIES FAN POWERED	275	60	275	-	-	-	-	-	-	5"	20x11	1/15	277	0.6	2
VAV-1.7	VCCE-06	SHUTOFF COOLING	580	120	-	-	-	-	-	-	-	6"	12X10	-	-	-	1
VAV-1.8	VCCE-06	SHUTOFF COOLING	600	120	-	-	-	-	-	-	-	6"	12X10	-	-	-	1
VAV-1.9	VCCE-17	SHUTOFF COOLING	1455	300	-	-	-	-	-	-	-	10"	21X16	-	-	-	1
VAV-1.10	VCCE-03	SHUTOFF COOLING	300	60	-	-	-	-	-	-	-	5"	12X10	-	-	-	1
VAV-1.11	VFPE-11-11	SERIES FAN POWERED	1050	210	-	-	-	-	-	-	-	8"	20x11	1/3	277	2.1	2
VAV-1.12	VCCE-11	SHUTOFF COOLING	930	400	-	55	85	1	12.9	180	0.9	8"	15X12	-	-	-	1
VAV-1.13	VCCE-03	SHUTOFF COOLING	270	50	-	-	-	-	-	-	-	5"	12X10	-	-	-	1
VAV-1.14	VCWE-11	CONSTANT VOLUME	690	690	-	55	85	1	22.7	180	1.5	8"	15X12	-	-	-	1
VAV-1.15	VCWE-11	CONSTANT VOLUME	860	860	-	55	85	1	27.9	180	1.5	8"	15X12	-	-	-	1
VAV-1.16	VCWE-11	CONSTANT VOLUME	800	800	-	55	85	1	26.0	180	1.5	8"	15X12	-	-	-	1
VAV-1.17	VCWE-24	CONSTANT VOLUME	1600	1600	-	55	85	1	51.0	180	3.4	10"	21X16	-	-	-	1
VAV-1.18	VCWE-24	CONSTANT VOLUME	1545	1545	-	55	85	1	51.0	180	3.4	10"	21X16	-	-	-	1
VAV-1.19	VCCE-06	CONSTANT VOLUME	320	320	-	-	-	-	-	-	-	6"	12X10	-	-	-	1,3
VAV-2.1	VFPE-11-11	SERIES FAN POWERED	785	160	785	67	85.7	1	15.8	180	1.0	8"	20x11	1/3	277	2.1	2,4
VAV-2.2	VCCE-06	SHUTOFF COOLING	405	90	-	-	-	-	-	-	-	6"	12X10	-	-	-	1
VAV-2.3	VCCE-11	SHUTOFF COOLING	680	130	-	-	-	-	-	-	-	8"	15X12	-	-	-	1
VAV-2.4	VCCE-06-07	SERIES FAN POWERED	550	110	550	-	-	-	-	-	-	8"	20x11	1/8	277	1.1	2
VAV-2.5	VFPE-11-11	SERIES FAN POWERED	780	150	780	-	-	-	-	-	-	8"	20x11	1/3	277	2.1	2
VAV-2.6	VFPE-06-07	SERIES FAN POWERED	415	85	415	-	-	-	-	-	-	8"	20x11	1/8	277	1.1	2
VAV-2.7	VCCE-06	SHUTOFF COOLING	530	110	470	-	-	-	-	-	-	6"	12X10	-	-	-	1
VAV-2.8	VCCE-03	SHUTOFF COOLING	300	60	-	-	-	-	-	-	-	5"	12X10	-	-	-	1
VAV-2.9	VCCE-06	SHUTOFF COOLING	360	75	-	-	-	-	-	-	-	6"	12X10	-	-	-	1
VAV-2.10	VFPE-17-20	SERIES FAN POWERED	1660	332	1660	-	-	-	-	-	-	10"	27X15	1/2	277	3.1	2
VAV-2.11	VCCE-06	SHUTOFF COOLING	600	120	-	-	-	-	-	-	-	6"	12X10	-	-	-	1
VAV-2.12	VFPE-06-07	SERIES FAN POWERED	300	60	300	-	-	-	-	-	-	8"	20x11	1/8	277	1.1	2
VAV-2.13	VCCE-06	SHUTOFF COOLING	600	120	-	-	-	-	-	-	-	6"	12X10	-	-	-	1
VAV-2.14	VCCE-06	SHUTOFF COOLING	590	120	-	-	-	-	-	-	-	6"	12X10	-	-	-	1
VAV-2.15	VCCE-17	SHUTOFF COOLING	1290	260	-	-	-	-	-	-	-	10"	21X16	-	-	-	1
VAV-2.16	VCCE-11	SHUTOFF COOLING	780	160	-	-	-	-	-	-	-	8"	15X12	-	-	-	1
VAV-2.17	VCCE-17	SHUTOFF COOLING	1620	325	-	-	-	-	-	-	-	10"	21X16	-	-	-	1

- NOTES
- ELECTRONIC CONTROLS BY EMS CONTRACTOR. PROVIDE 120V/24V CONTROL POWER TRANSFORMER. AT EACH VAV BOX EXCEPT AS NOTED.
 - ELECTRONIC CONTROLS BY EMS CONTRACTOR. PROVIDE 277V/24V CONTROL POWER TRANSFORMER.
 - TEMPERED AIR TO COMM. ROOM
 - SERVES HOLDING AND BOOKING AREA

REGISTERS, GRILLES, AND DIFFUSERS													
FURNISH AND INSTALL REGISTERS, GRILLES, AND DIFFUSERS AS MANUFACTURED BY TITUS OR EQUAL BY METALAIR AND TUTTLE & BAILEY.													
A - MODEL TDC, SQUARE, LOUVERED FACE, FIXED DISCHARGE DIFFUSER WITH OPPOSED BLADE DAMPER, THROW AND CFM INDICATED ON DWGS.													
B - MODEL 350RL 35" FIXED DEFLECTION, 3/4" BLADE SPACING - BLADES PARALLEL TO THE LONG DIMENSION, STEEL, RETURN GRILLE													
C - MODEL 50R, STEEL BORDER, EGGRATE, 1/2" x 1/2" x 1/2" ALUMINUM CORE, RETURN GRILLE.													
D - MODEL 50-PR MAXIMUM SECURITY WALL EXHAUST GRILLE. FACE PLATE SHALL BE 3/16" STEEL WITH 5/16" HOLES ON 7/16" STAGGERED CENTERS. FURNISH W/ 3/16" X 8" WELDED STEEL SLEEVE WITH ANGLE FRAME.													
E - MODEL 50-SS-2H MAXIMUM SECURITY SLOT DIFFUSER. 10 GAUGE STEEL CONSTRUCTION, TWO WAY HORIZONTAL DISCHARGE SIZE: E-LENGTH X SLOTS - CFM PROVIDE STANDARD WHITE FINISH. FURNISH WITH SUPPLY PLENUM AND ANGLE MOUNTING FRAME.													
F - MODEL DL DRUM LOUVER ALUMINUM DRUM, STEEL FRAME, ALUMINUM COLORED PAINT FINISH. HIGH CAPACITY ADJUSTABLE SUPPLY OUTLET. FURNISH WITH OPPOSED BLADE DAMPER.													



FIN-TUBE RADIATION (FT'S)													
CONTRACTOR SHALL FURNISH AND INSTALL FIN TUBE ELEMENT AS MANUFACTURED BY SLANT FIN OR EQUAL.													
FT-A STYLE RL-10 SINGLE ROW ELEMENT, 14" H SLOPED TOP COVER C-340 ELEMENT TYPE, 3/4" COPPER WITH ALUMINUM FIN, 3/4" COPPER TUBE 975 BTU/HR/FT, 160°F AVG. WATER TEMPERATURE. FURNISH W/ ADJUSTABLE DAMPER.													
FT-B STYLE EM-5 SINGLE ROW WITH EXPANDED METAL COVER C-340 ELEMENT TYPE, 3/4" COPPER WITH ALUMINUM FIN, 3/4" COPPER TUBE 878 BTU/HR/FT, 160°F AVG. WATER TEMPERATURE.													



CENTRAL VACUUM SYSTEM													
PROVIDE A CENTRAL VACUUM SYSTEM, "NUTONE" MODEL "CV-350" OR EQUAL, FOR THE COMMUNICATIONS AREA AS SHOWN ON DRAWINGS M-1.1, AND M-1.2. SYSTEM SHALL INCLUDE THE CENTRAL POWER UNIT WITH COLLECTION CANISTER, FILTER, MOTOR AND DISCHARGE MUFFLER. THE POWER AND COLLECTION UNIT SHALL OPERATE ON 120 VOLT, 60 HZ AC. POWER AND SHALL BE FURNISHED WITH PLUG AND CORD FOR CONNECTION TO A STANDARD NEMA 5-20R RECEPTACLE.													
MOTOR SHALL BE RATED 2 HP, 19,000 RPM, 11 AMPS, 107 CFM @ 2" OPENING, 113" W.G. STATIC LIFT.													
SYSTEM TUBING SHALL BE 2" O.D. PVC, THIN WALL VACUUM SYSTEM TUBING, WITH SOLVENT WELD FITTINGS. PIPE AND FITTINGS MUST BE APPROVED BY THE UNIT MANUFACTURER, FOR THIS USE.													
INLETS SHALL BE LOCATED AS SHOWN, 18" A.F.F., AND SHALL BE SELF CLOSING TYPE WITH INTEGRAL LOW VOLTAGE SWITCH TO CONTROL POWER UNIT, AND LOW VOLTAGE CONNECTION FOR POWERED FLOOR BRUSH.													
PROVIDE A 32' HOSE WITH INTEGRAL LOW VOLTAGE WIRE FOR POWER FLOOR BRUSH. PROVIDE STANDARD ACCESSORIES KIT, WITH CREVICE TOOL, DUSTING BRUSHES, EXTENSION WANDS, AND UPHOLSTERY BRUSH. PROVIDE OPTIONAL LOW VOLTAGE POWERED FLOOR BRUSH.													

EXHAUST FAN SCHEDULE "LOREN COOK" AS STANDARD (ACME, GREENHECK EQUALS)											
TAG	FAN TYPE	MODEL No.	CFM	ESP	RPM	DRIVE	MOTOR HP	VOLTAGE & PHASE	CONTROLS	REMARKS	NOTES
EF-1	ROOF FAN	ACE 245 C	5,910	0.75	646	BELT	1	480 3φ	MANUAL - 24 HR OP.	HOLDING CELLS LCKR RM EXH.	1,3,5
EF-2	ROOF FAN	EXISTING	4,660	0.375	---	---	1/2	480 3φ	OCC. - UNOCC.	TOILET EXH.	7
EF-3	ROOF FAN	EXISTING	18,000	0.625	---	---	5	480 3φ	OCC. - UNOCC.	GARAGE EXH.	7
EF-4	ROOF FAN	EXISTING	4,000	0.625	---	---	3/4	480 3φ	OCC. - UNOCC.	GENERAL EXH.	7
EF-5	ROOF FAN	EXISTING	1,750	0.5	---	---	1/4	120 1φ	OCC. - UNOCC.	TOILET EXH.	7
EF-6	ROOF FAN	EXISTING	1,100	0.5	---	---	1/6	120 1φ	OCC. - UNOCC.	GENERAL EXH.	7
EF-7	ROOF FAN	EXISTING	2,800	0.5	---	---	1/3	120 1φ	OCC. - UNOCC.	S. CORE BASEMENT EXH.	7
EF-8	WALL EXHAUST	EXISTING	---	---	---	---	1/4	120 1φ	MANUAL	DARKROOM HOOD EXH.	7
EF-9	IN-LINE	GN-320	130	0.30	1360	DIRECT	1/16	120 1φ	OCC. - UNOCC.	KITCHEN RM. 104	4
EF-10	IN-LINE	GN-320	150	0.25	1360	DIRECT	1/16	120 1φ	OCC. - UNOCC.	2ND FL. STORAGE RM.	4
EF-11	IN-LINE	GN-740	660	0.375	1325	DIRECT	1/4	120 1φ	OCC. - UNOCC.	LOUNGE RM. 122	4

- GENERAL NOTES:
- PROVIDE FAN COMPLETE WITH 12" (H) PRE-FAB ALUMINUM ROOF CURB AND MOTORIZED DAMPER.
 - PROVIDE FAN WITH MOTORIZED DAMPER.
 - PROVIDE FAN WITH NEMA 3-R, FUSED, WEATHERPROOF DISCONNECT SWITCH.
 - PROVIDE FAN WITH BACKDRAFT DAMPER.
 - REPLACES EXISTING FAN
 - EXISTING FAN TO REMAIN, REBALANCE TO SPECIFIED CONDITIONS AS REQUIRED.
 - EXISTING FAN TO REMAIN, INFORMATION PROVIDED FOR REFERENCE ONLY.

AUTOMATIC FLOW BALANCING VALVES													
CONTRACTOR SHALL FURNISH AND INSTALL AUTOMATIC FLOW BALANCING VALVES AS MANUFACTURED BY GRISWOLD OR EQUAL.													
CPP-2IRIS COIL PIPING PACKAGE:													
SUPPLY SIDE - ISOLATOR S: FORGED BRASS VALVE BODY WITH A 20 MESH STAINLESS STRAINER. BODY HAS AN INTEGRAL HANDLE BALL VALVE AND ONE UNION END WITH INTERCHANGEABLE END PIECES FOR THE OUTLET OF THE VALVE BODY. THE ISOLATOR S IS PROVIDED WITH ONE PRESSURE/TEMPERATURE TEST VALVE AND A DRAIN VALVE WITH A HOSE BIB ADAPTER AND CAP.													
RETURN SIDE - UNION: FORGED BRASS BODY WITH A CHOICE OF UNION END PIECE. UNION IS PROVIDED WITH A MANUAL AIR VENT IN THE TOP PORT. ATC IS SUPPLIED BY OTHERS. ISOLATOR R IS A FORGED BRASS VALVE BODY WITH A STAINLESS STEEL FLOW CONTROL CARTRIDGE ASSEMBLY. BODY HAS AN INTEGRAL HANDLE BALL VALVE AND ONE UNION END WITH INTERCHANGEABLE END PIECES FOR THE INLET OF THE VALVE BODY. THE ISOLATOR R IS PROVIDED WITH TWO PRESSURE/TEMPERATURE TEST VALVES.													
THREADED FLANGED AUTOMATIC FLOW VALVES													
GRAY IRON BODY WITH STAINLESS STEEL ELEMENT WITH TWO PRESSURE/TEMPERATURE TEST VALVES.													

FIN TUBE RADIATION					
TAG	MODEL	SIZE	FLOW RATE	PSID RANGE	
FT-A	IY12B	3/4"	3 GPM	2 TO 32	
FT-B	IY12B	3/4"	5 GPM	2 TO 32	

UNIT HEATERS					
TAG	MODEL	SIZE	FLOW RATE	PSID RANGE	
UH-A	CPP-2IRIS	3/4"	1.0 GPM	2 TO 32	

VAV BOXES					
TAG	MODEL	SIZE	FLOW RATE	PSID RANGE	
VAV-1.12	CPP-21RIS	3/4"	0.9 GPM	2 TO 32	
VAV-1.14	CPP-21RIS	3/4"	1.5 GPM	2 TO 32	
VAV-1.15	CPP-21RIS	3/4"	1.5 GPM	2 TO 32	
VAV-1.16	CPP-21RIS	3/4"	1.5 GPM	2 TO 32	
VAV-1.17	CPP-21RIS	3/4"	3.4 GPM	2 TO 32	
VAV-1.18	CPP-21RIS	3/4"	3.4 GPM	2 TO 32	
VAV-2.1	CPP-21RIS	3/4"	1.0 GPM	2 TO 32	

HOT WATER BOILER					
TAG	MODEL	SIZE	FLOW RATE	PSID RANGE	
B-3	3542	2"	50.0 GPM	2 TO 32	

KEY PLAN

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MECHANICAL SCHEDULES

PUMP SCHEDULE "BELL & GOSSETT" AS STANDARD (TACO, ARMSTRONG EQUALS)													
TAG	MODEL No.	PUMP TYPE	SIZE	TOTAL HEAD (FT.)	GPM	MOTOR HP	IMPELL. SIZE (IN.)	EFF. (MIN)	RPM	VOLTAGE	PUMP & STAND-BY	PARALLEL PUMP ARRANG.	REMARKS
P-7	SERIES 80	IN-LINE	1.5x1.5x7B	32	42	3/4	6"	53.22	1750	208-1#	X		REHEAT COILS
P-8	SERIES 80	IN-LINE	1.5x1.5x7B	32	42	3/4	6"	53.22	1750	208-1#	X		REHEAT COILS
P-8	SERIES 80	IN-LINE	1.5x1.5x7B	20	50	3/4	5.375"	43.13	1750	208-1#			SUMMER BOILER

AIR CONDITIONING UNIT SCHEDULE															
TAG	TYPE	MFR. MODEL	INDOOR UNIT					COOLING COIL		HEATER		HUMIDIFIER	OUTDOOR UNIT		NOTES
			FAN CFM	ESP	RPM	HP	VOLTS	TOTAL MBH	SENSIBLE MBH	MBH	KW		LB/HR	VOLTS	
CCU-1/CU-1	SPLIT SYSTEM	LIEBERT MME060E	2150	.05	-	1	480 3#	60.6	46.8	38.9	11.4	10.0	480 3#	20.0	1,3,4,5
CCU-2/CU-2	SPLIT SYSTEM	LIEBERT MME080E	2350	0.5"	-	1	480 3#	61.0	48.9	38.9	11.4	10.0	480 3#	20.0	2,3,4,5

NOTES:

1. OUTDOOR PROPELLER FAN TYPE CONDENSING UNIT, MODEL PFC-067A-ALQ.
2. OUTDOOR PROPELLER FAN TYPE CONDENSING UNIT, MODEL PFC-067A-ALO.
3. PROVIDE REMOTE TEMPERATURE AND HUMIDITY SENSORS.
4. PROVIDE COMMON UNIT FAILURE ALARM TO EMS SYSTEM.
5. PROVIDE WITH OPTIONAL CONDENSATE DRAIN PUMP.

BOILER													
<p>PROVIDE CAST IRON, SECTIONAL BOILERS WEIL MCLAIN MODEL 478 OR EQUAL BY H.B. SMITH. CAPACITY AND FIRING RATE SHALL BE AS SCHEDULED.</p> <p>BOILER SECTIONS SHALL BE ASSEMBLED WITH INDIVIDUAL DRAW RODS THAT DISTRIBUTE FORCES EVENLY ON EACH SECTION. THE BOILER SECTIONS SHALL BE SUPPLIED WITH SEALING GROOVES IN MATING SURFACES INTO WHICH A SEALING ROPE SHALL BE INSTALLED TO PREVENT GAS LEAKAGE. THE SEAL ROPE SHALL BE NON-ASBESTOS, AND SHALL BE IMPERVIOUS TO HEAT AND MOISTURE. SECTIONS SHALL BE ASSEMBLED WITH ELASTOMERIC SEALING RINGS FOR EACH WATER AND STEAM PORT OPENING, TO ASSURE A PERMANENT WATER TIGHT SEAL BETWEEN EACH SECTION.</p> <p>BOILERS SHALL BE DESIGNED WITH COMBUSTION AREA COMPLETELY ENCLOSED BY WATER WALL SECTIONS.</p> <p>PROVIDE REFRACTORY INSULATED BURNER MOUNTING PLATE, WITH NECESSARY HOLES AND TAPPINGS TO MOUNT THE BURNER.</p> <p>PROVIDE OBSERVATION PORTS ON FRONT AND REAR OF BOILER TO ALLOW VIEWING BURNER FLAME.</p> <p>PROVIDE HEAVY GAUGE ALUMINIZED STEEL CLEAN OUT COVERS WITH HIGH TEMPERATURE GASKETS FOR THE CLEAN OUT OPENINGS ON THE LEFT SIDE OF EACH BOILER.</p> <p>PROVIDE OPERATING AND SAFETY CONTROLS AS FOLLOWS:</p> <ol style="list-style-type: none"> 1. EACH BOILER TO HAVE A LOW LIMIT (OPERATING) TEMPERATURE CONTROL SET @ 180°F. 2. EACH BOILER TO HAVE A HIGH LIMIT (SAFETY) TEMPERATURE CONTROL SET @ 200°F. 3. LOW WATER CUTOFF. <p>PROVIDE THE FOLLOWING BOILER TRIM ITEMS WITH EACH BOILER:</p> <ol style="list-style-type: none"> 1. COMPOUND PRESSURE VACUUM GAUGE 2. ASME CERTIFIED SAFETY VALVE RATED FOR THE FULL OUTPUT OF THE BOILER, SET @ TO RELIEVE AT ASME MAXIMUM WORKING PRESSURE (30 PSI). <p>PROVIDE A LIGHT OIL POWER BURNER: CARLIN MODEL 201 CRD-W FLAME RETENTION BURNER OR EQUAL BY WEBSTER OR BECKETT. BURNER SHALL HAVE THE FOLLOWING CONTROLS AND OPTIONS:</p> <ol style="list-style-type: none"> 1. UL AND FM APPROVALS. 2. ON-OFF FIRING. 3. COMBUSTION CONTROLS PACKAGE R-8184G. 													
TAG	I-B-R BURNER CAPACITY NO. 2 OIL NAT. GAS.	I-B-R STEAM OUTPUT GROSS MBH NET MBH	BOILER HP.	FIREBOX VOL.	WATER CONTENT	GAS INLET PRESS. MIN. MAX.	BURNER MOTOR H.P. VOLTS PHASE						
B-3	3.40 GPH	400 MBH 348 MBH	11.9	3.97 CU. FT.	49.0 GAL.	---	1/4	120	1				

VARIABLE FREQUENCY DRIVES (VFDs)

A. Where shown on the drawings, adjustable frequency drives shall have the following features:

1. The AFD shall be rated 480V (as shown on the drawings). The AFD shall provide a microprocessor-based adjustment of three-phase motors. AFDs shall utilize a vector torque control strategy to regulate motor flux to optimize motor torque without the need for encoders. AFDs requiring voltage, dwell and current adjustments to achieve improved torque control are not acceptable. The controllers shall be rated as shown in the drawings. As a minimum the full load output current of the drive shall be equal to the equivalent motor horsepower as listed by National Electric Code Table 430-150.
2. The AFDs shall be of the Pulse Width Modulated (PWM) design converting the utility input voltage and frequency to a variable voltage and frequency output via a two-step operation. Adjustable Current Source AFDs are not acceptable. Insulated Gate Bipolar Transistors shall be used in the inverted section. Bipolar transistors, GTOs and SCRs are not acceptable.
3. The AFDs shall have an efficiency that exceeds 97% at 100% speed and load. The efficiency shall exceed 80% at 50% speed and load.
4. The AFDs shall maintain the line side displacement power factor no less than 0.95 regardless of speed and load.
5. The AFDs shall have a one (1) minute overload current rating of 150%.
6. The AFDs shall be capable of operating any NEMA B squirrel cage induction motor, regardless of manufacturer, with a load rating within the capacity of the AFDs.
7. The AFDs shall be Cutler-Hammer type IS903 or approved equal.
8. The AFDs shall limit harmonic distortion reflected onto the installation distribution system to a voltage and current distortion level as defined by IEEE 519 for general system applications. Harmonic attenuation shall be provided by the addition of drive line reactance or multi-converter phase shifting arrangement. Harmonic calculations shall be provided upon request.

9. Any harmonic calculations shall be done based on the kVA capacity, X/R and impedance of the transformer supplying the AFDs as shown on the drawings.

10. The AFDs shall be able to start into a spinning motor. The AFDs shall be able to determine the motor speed in any direction and resume operation without tripping. If the motor is spinning in the reverse direction, the AFDs shall start into the motor in the reverse direction, bring the motor to a controlled stop, and then accelerate the motor in the preset method of starting.

11. Starting operating conditions shall be:

- A. Incoming Power: Three-phase, 480V (+ 10% to - 10%) and 60 hertz (+/- 2 hertz) power to a fixed potential DC bus level.
- B. Frequency stability of +/- 0.5% for 24 hours with voltage regulation of +/- 2% of maximum rated output voltage.
- C. Motor slip dependent speed regulation of 1%.
- D. Five cycle carry-over during utility loss.
- E. Insensitive to input line rotation.
- F. Humidity: 0 to 95% (noncondensing and noncorrosive).
- G. Altitude: 0 to 3,300 feet above sea level.
- H. Ambient Temperature: 0 to 50 degrees C (NEMA 1) : 0 to 40 degrees C (NEMA 4)
- I. Storage Temperature: -20 to 70 degrees C.

12. The AFDs shall have the following system interfaces:

- A. Inputs
 1. Process control speed reference interface to receive either a 0-10 Vdc, 4-20 mAdc or speed potentiometer signal.
 2. Remote mode start and stop contacts.
 3. Remote forward/reverse contacts.
 4. Remote preset speed contacts.
 5. Remote external trip contact.
 6. Remote reset contact.
 7. Remote jog contact.
- B. Outputs
 1. Programmable digital relays (2) N.O. contact.
 2. Form C contact to indicate protective function trip.
 3. Two (2) programmable analog output signals.

13. Monitoring and Displays

A. The AFDs shall have a 2 line, 16 character each display indicating monitored functions as described in the following:

1. Output current
2. Output frequency
3. Motor rpm
4. Output Voltage
5. Power
6. Load
7. Elapsed time
8. Trip cause

14. Protection Functions

A. The AFD shall include the following protective features:

1. Overcurrent protection
2. Overvoltage protection
3. Undervoltage protection
4. Overfrequency protection
5. Phase loss protection
6. Overtemperature protection
7. Ground fault protection
8. Adjustable current limit
9. Line-to-line and line-to-ground output short circuit protection.
10. Overload capability shall be 150% of the motor FLA based on the NEC ratings for 60 seconds.
11. DC injection braking
12. Dynamic braking to decelerate the motor faster than the internal losses can absorb.

Dynamic braking shall cause a resistor bank to be switched onto the DC link as required to absorb the regenerative energy. This shall allow the fastest controlled deceleration and/or stop without an overvoltage condition. Resistor bank (optional feature) shall be located external to the drive enclosure to prevent overheating of the drive.

13. The AFD manufacturer shall maintain, as part of a national network, engineering service facilities within 250 miles of project to provide start-up service, emergency service calls, repair work, service contracts, maintenance and training of customer personnel.

KEY PLAN

REVISIONS

DATE MARK DESCRIPTION

BRISTOL MUNICIPAL FACILITY

BRISTOL, CONNECTICUT

Legnos & Cramer, Inc.

74 Forest Street, Hartford, Ct. 06105-3598
Tel. (860) 246-8875, Fax (860) 525-2544
E-Mail office@legnosandcramer.com



KAESTLE BOOS ASSOCIATES, INC. ARCHITECTS

SCALE: 1/8" = 1'-0"

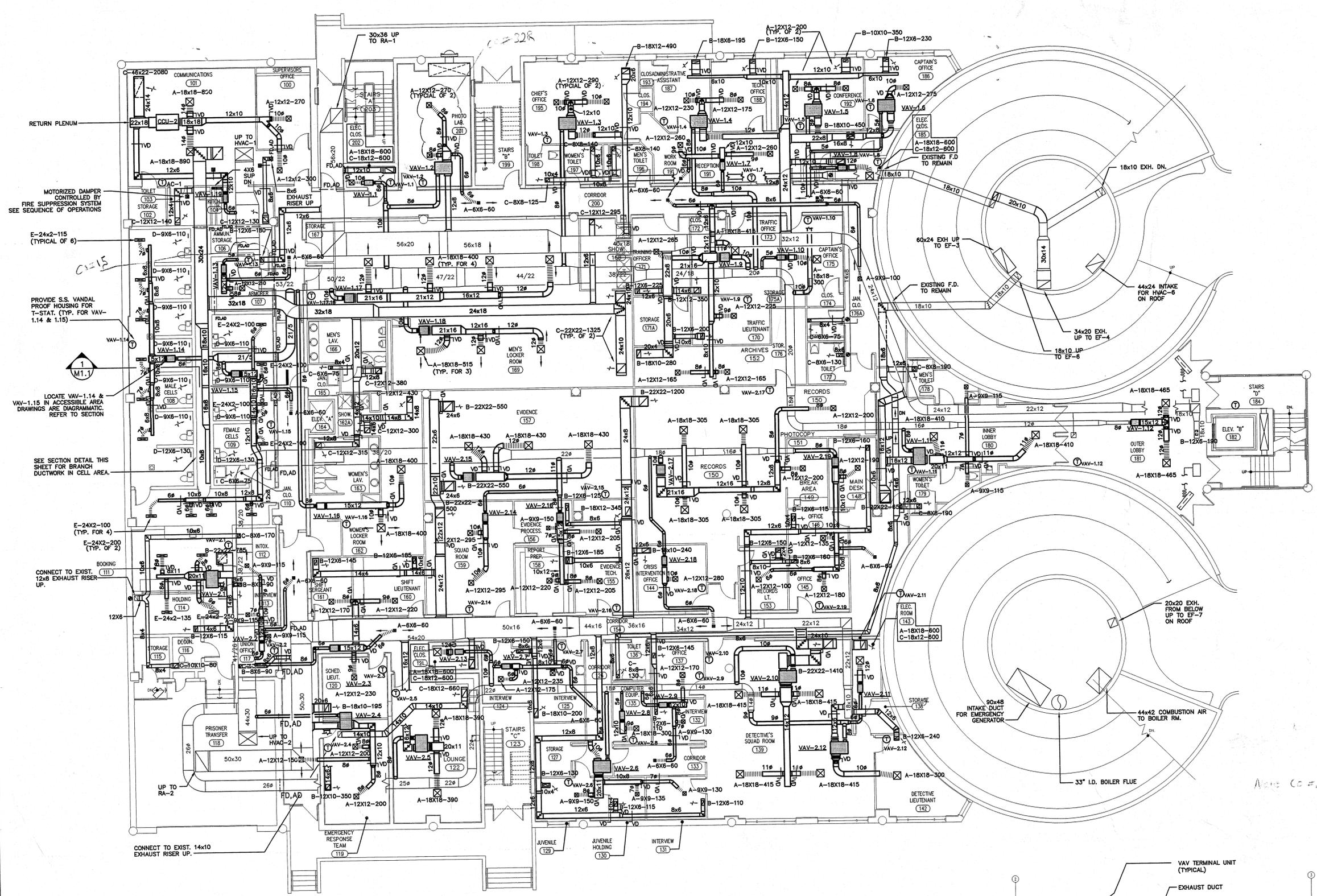
MECHANICAL SCHEDULES

PROJECT NO: 9807

DRAWING NO:

DATE: 8/1/99

M-0.4



KEY PLAN

REVISIONS

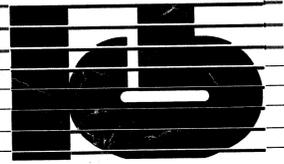
DATE	MARK	DESCRIPTION

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KAESTLE BOOS ASSOCIATES, INC.
ARCHITECTS

DRAWN BY: W.F.M. SCALE: 1/8"=1'-0"

MAIN LEVEL MECHANICAL PLAN

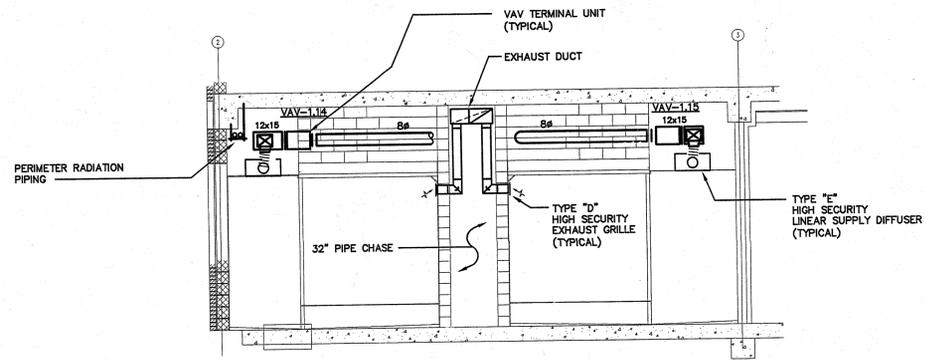
PROJECT NO.: 98-07

DATE: 8/1/99

DRAWING NO.: M-1.1

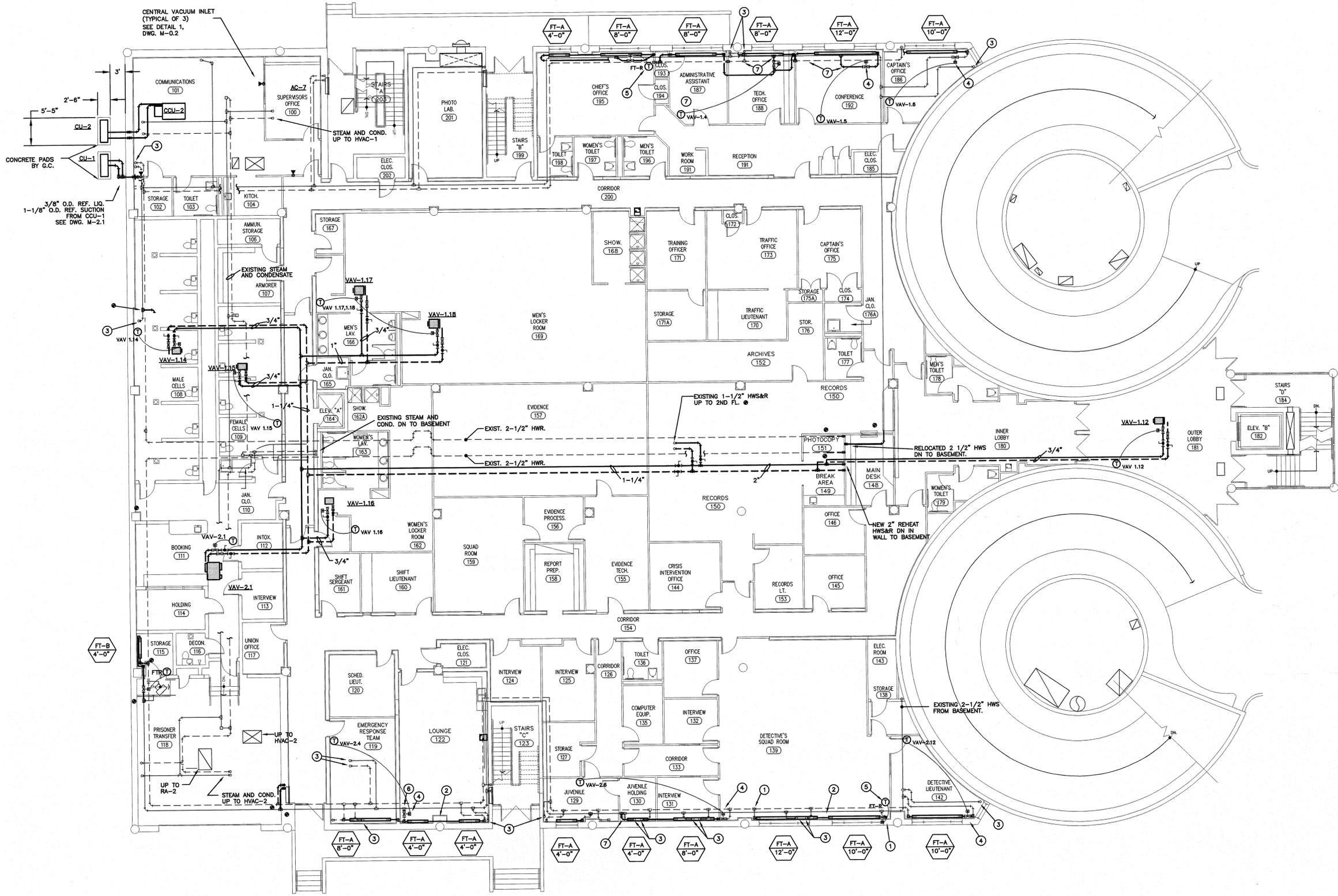
MAIN LEVEL MECHANICAL PLAN

SCALE: 1/8"=1'-0"



SECTION - TYPICAL CELL DUCTWORK

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



KEY PLAN

REVISIONS

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KAESTLE BOOS ASSOCIATES, INC. ARCHITECTS

MAIN LEVEL MECHANICAL PIPING PLAN
SCALE: 1/8"=1'-0"

● DENOTES CONNECTION TO EXISTING PIPING.

- NOTES**
- CONNECT TO EXISTING 3/4" HWS&R RUNOUTS, SEE PIPING DETAIL.
 - 3/4" EXPANSION COMPENSATOR
 - EXISTING HWS&R PERIMETER HEATING RUN OUT TO 2ND FL.
 - NEW ELECTRIC MODULATING CONTROL VALVE TO BE CONTROLLED BY THERMOSTAT SHOWN SEQUENCE HEATING WITH VAV SYSTEM CONTROL.
 - THERMOSTAT DEDICATED TO CONTROL OF PERIMETER HEAT.
 - NEW 1" HWS RUNOUT
 - NEW 3/4" HWS RUNOUT

PROJECT NO: 98-017 DRAWING NO: M-1.2
DATE: 8/1/99