

Worcester Library Boiler Replacement

Project Location:

3 Salem Street
Worcester, MA 01608

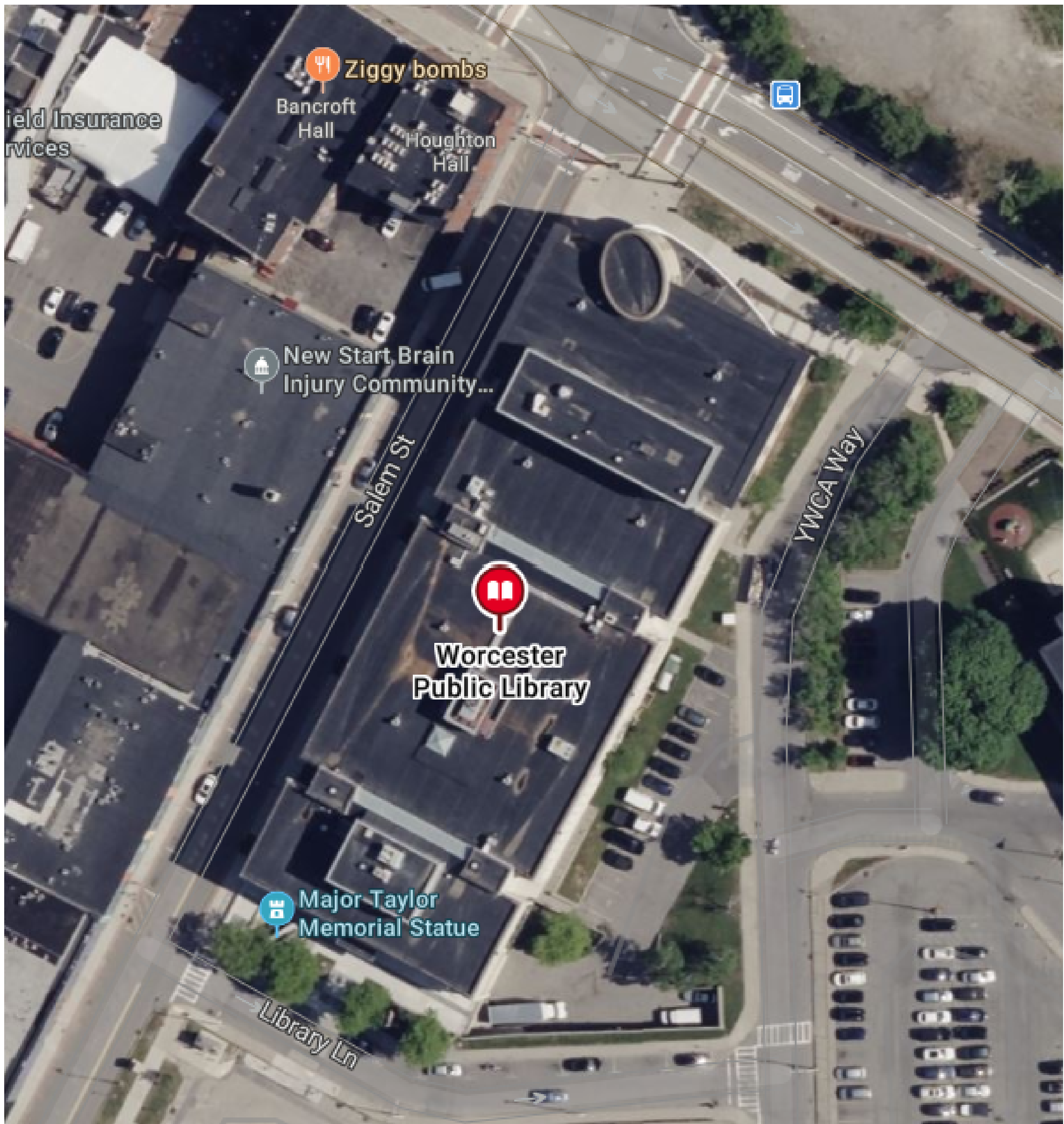
Clients Names:

The City of
Worcester

F&T# - 210538.17 Bid Documents

NOT FOR CONSTRUCTION

Location Maps:



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Project Manager

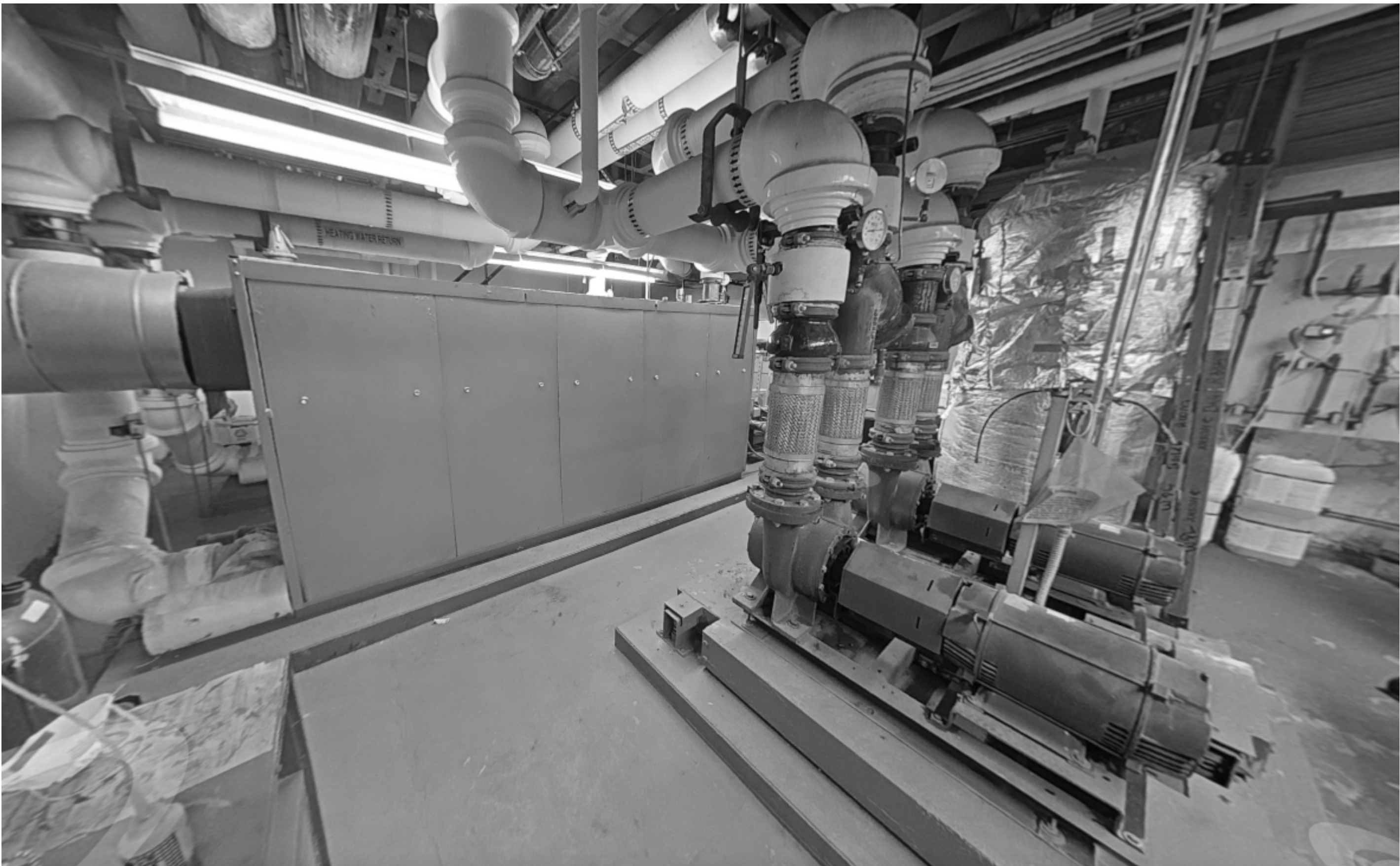
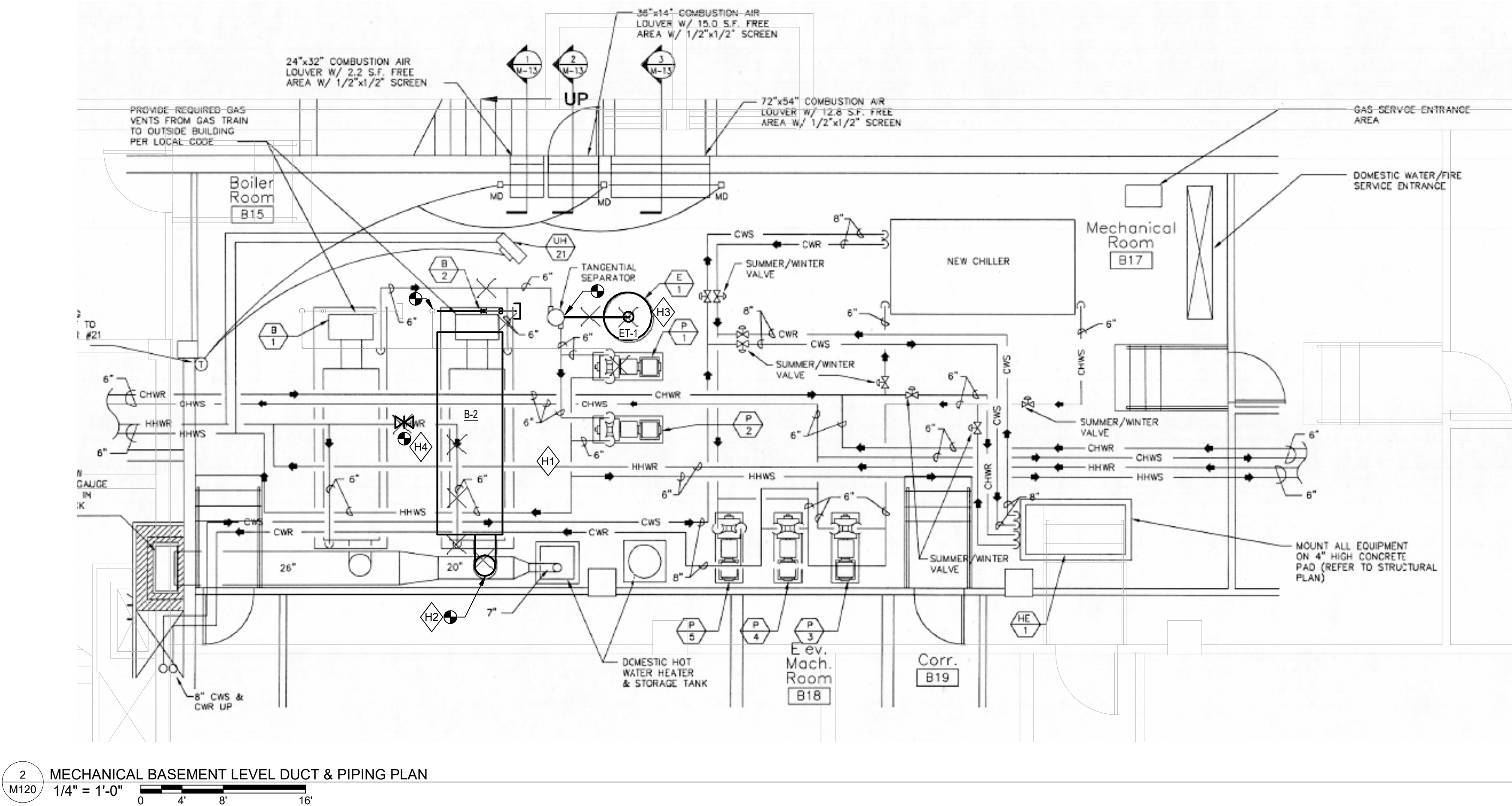
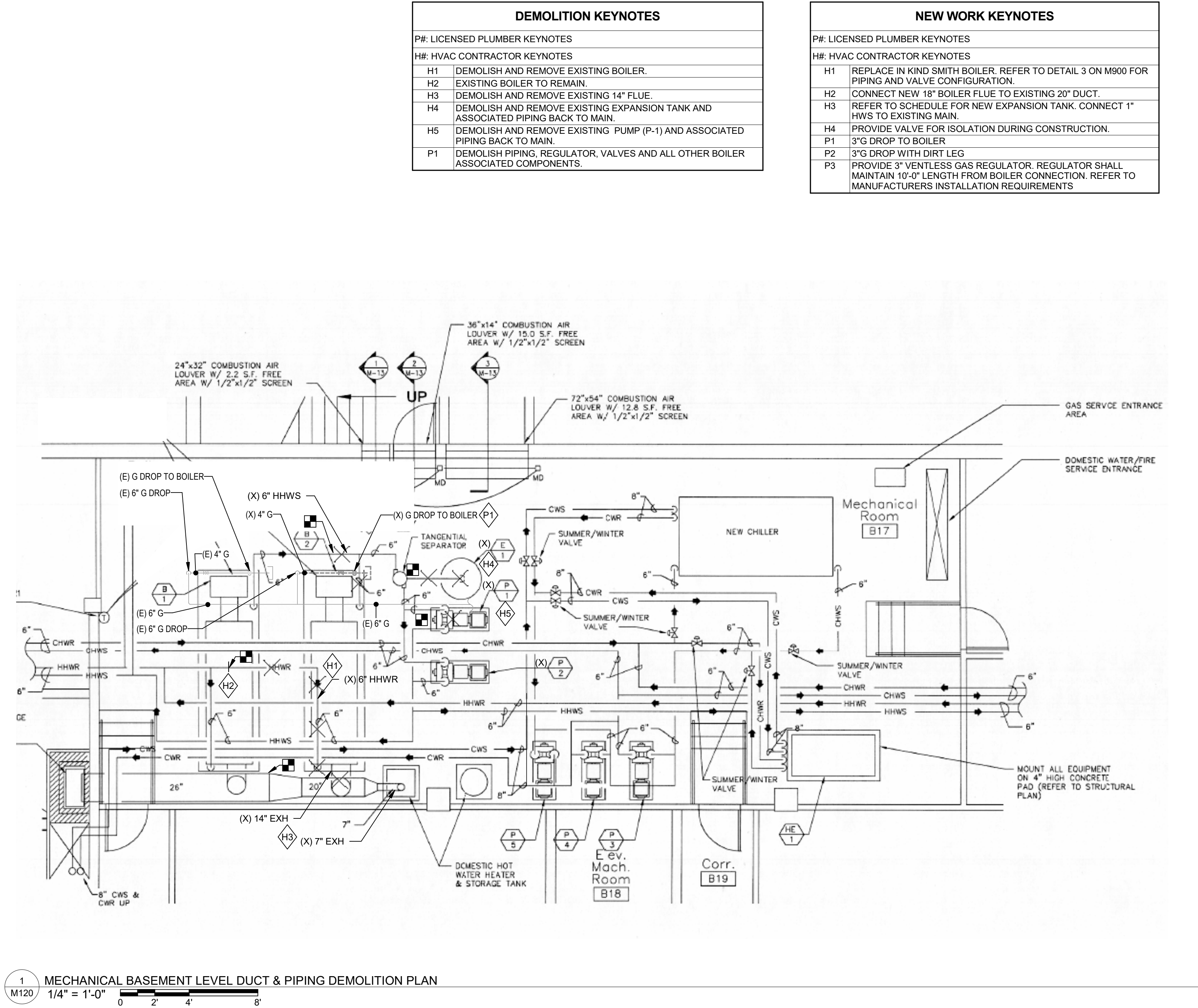


IMAGE 1: EXISTING BOILERS AND PUMPS.



IMAGE 2: EXISTING BOILERS AND WATER HEATER FLUE.



100% CD BID

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Key Plan:

Owner:

CITY OF WORCESTER

Project Name:

**WORCESTER - MA -
LIBRARY - BOILER
REPLACEMENT**
3 Salem Sq.
Worcester MA

North Arrow

Stamp:

Rev.	Description	Date

Scale Bar:

Drawing Title:

**MECHANICAL BASEMENT
LEVEL DUCT & PIPING
PLANS**

Date	03/27/2026
Scale	1/4" = 1'-0"
Drawn By	DBD
Checked By	PD
Project Number	210538.17

Drawing No.

M120

CONDENSING BOILER SCHEDULE																									
NOTES 1. PROVIDE DRAIN KIT. 2. PROVIDE WITH POWER FLAME BURNER.																									
ID	MANUFACTURER	MODEL NO.	TYPE	GAS-FIRED HEAT EXCHANGER												VENT SIZE	WATER INLET & OUTLET CONN.	GAS CONN.	THERMAL EFF.	OPER WEIGHT LBS	ELECTRICAL DATA				
				GAS BURNER						WATERSIDE											MOCP	VOLT	PH	FREQUENCY	NOTES
				INPUT MBH	INPUT @ MIN FIRE MBH	CAP MBH	TURNDOWN	FUEL	PRESS. AVAIL.	DESIGN GPM	MIN GPM	EWI "F	LWT "F	PD PSI	VOL. GAL.										
B-2	SMITH	RTS/28HE-18	WET BASE	5553	1100	4622	5:1	GAS	5	460	100	140	160	5	500	18"			83.2	16,100	5	480	3	60	NOTES 1-2

PUMP SCHEDULE									
NOTES:									
ID	MANUFACTURER	MODEL NO.	SERVICE	GPM	TOTAL HEAD FT.	MOTOR			NOTES
						HP	VOLT	PH	
P-1	ARMSTRONG		HHW	460	70	20	480	3	

EXPANSION TANK SCHEDULE											
NOTES:											
ID	MANUFACTURER	MODEL NO.	SERVICE	VOL GAL	MAX ACCEPT. FACTOR	PRESS RELIEF PSI	MAX WORKING PRESSURE PSI	DIMENSIONS		SHIP WEIGHT LBS	NOTES
								DIAMETER IN	HEIGHT IN		
ET-1	AMTROL	ST-120VC	HHW	68	0.51	15	150	24	44	266	

GAS EQUIPMENT CONNECTION SCHEDULE					
WORK TO BE COMPLETED BY A LICENSED PLUMBER.					
ID	EQUIPMENT CONNECTION SIZE	GAS		PRESSURE (IN. OF WC)	
		INPUT (CFH)	6000	MIN	MAX
				4	14
B-2	3"	6000			
TOTAL GAS DEMAND (CFH)		6000			

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WORCESTER - MA -
LIBRARY - BOILER
REPLACEMENT
3 Salem Sq.
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North ArrowStamp:

Rev.	Description	Date

Scale Bar:

Drawing Title:

MECHANICAL SCHEDULES

Date	03/27/2026
Scale	NTS
Drawn By	DBD
Checked By	PD
Project Number	210538.17

Drawing No.

M700

RACEWAY SUPPORT LEGEND			
TELEDATA TAGS			
DEVOICE INDICATOR LETTER "X" COMMUNICATES CONNECTION TYPE			
OPTIONAL TYPE DESIGNATOR "BLANK" - TELEDATA DEVICE WITH NO OPTION "C" - MOUNTED 8" ABOVE WORK SURFACE OR COUNTERTOP "H" - MOUNTED HIGH ON WALL "W" - WALL MOUNTED PHONE "TV" - MOUNTED HIGH ON WALL BEHIND TELEVISION "WAP" - MOUNTED FOR WIRELESS ACCESS POINT ▽ →			
WALL	CLG	FLR	TELEDATA SYMBOL DESCRIPTION
			DATA ONLY OUTLET DEVICE
			VOICE / DATA COMBINATION OUTLET DEVICE
			VOICE ONLY OUTLET DEVICE
TELEDATA NOTES			
1. ALL WALL MOUNTED DEVICES ARE TO BE MOUNTED 18" AFF UNLESS OTHERWISE NOTED			
2. COORDINATE MOUNTING HEIGHTS WITH THE ARCHITECT PRIOR TO INSTALLATION.			
3. BACK BOX AND TO BE PROVIDED WITH 1" (WITH 1 PULL STRING) RUN CTERMINATING WITHIN 5' TO ABOVE FINISHED CEILING AND TERMINATING WITHIN 5' OF CABLE TRAY. WIRING AND DEVICES BY OTHERS.			
DEVICE SYMBOLS		DEVICE SYMBOL DESCRIPTION	
		3/4" THICK X 8" HIGH X LENGTH AS INDICATED ON THE DRAWINGS FLYWOOD PLYWOOD SHALL BE PAINTED GRAY AND MOUNTED TO WALL.	
		2-GANG BACKBOX WITH SINGLE GANG PLASTER RING AND COVERPLATE	
COMMUNICATION DEVICE NOTES			
1. COORDINATE EXACT LOCATION OF SECURITY CAMERAS AND CCTVS WITH OWNER AND SECURITY VENDOR PRIOR TO INSTALLATION.			

SECURITY SYSTEMS LEGEND	
	CLOSED CIRCUIT TELEVISION MONITOR JUNCTION BOX
	CARD READER OUTLET BOX
	ELECTRO-MAGNETIC DOOR LOCK CONNECTION/ LOCATION
	ELECTRIC DOOR STRIKE CONNECTION/ LOCATION
	DURESS BUTTON LOCATION
	DOOR SWITCH/ CONTACT CONNECTION/ LOCATION
	DOOR RELEASE PUSHBUTTON LOCATION
	KEY PAD LOCATION
	MOTION DETECTOR LOCATION
	CCTV CAMERA
	GLASS BREAK DETECTOR CONNECTION/LOCATION
	WINDOW CONTACTS CONNECTION/ LOCATION
	SECURITY INTERCOM LOCATION
NOTE: ALL DOOR CONTROL LOCATIONS SHALL BE COORDINATED WITH FACILITY REPRESENTATIVE PRIOR TO INSTALLATION.	
TYPICAL SECURITY DEVICE NOTE: MINIMUM REQUIREMENTS FOR EACH DEVICE SHALL BE A BACKBOX AND 3/4" C EMPTY WITH PULLSTRIP RUN CONCEALED IN WALL INTO CEILING SPACE ABOVE AND TERMINATING ABOVE ACCESSIBLE CEILING. TERMINATE WITH BELL END BUSHING. REFER TO FLOOR PLANS AND DETAILS FOR ADDITIONAL REQUIREMENTS. COORDINATE EXACT REQUIREMENTS WITH SECURITY AND HARDWARE VENDORS.	

WIRING LEGEND	
	J-HOOK CABLE MANAGEMENT TYPICALLY MOUNTED 6" ABOVE FINISHED CEILING
	CABLE TRAY (WITH FITTING)
	FITTING CONDUIT TURNING UP
	CONDUIT TURNING DOWN
	CONDUIT STUBBED 6" ABOVE ACCESSIBLE CEILING AT 90° ANGLE WITH BUSHED END
	FLEXIBLE RACEWAY
	PP123 5 HOMERUN TO PANELBOARD "PP123", BRANCH CIRCUIT No. 5, 2#12 & 1#12G, 34°C, UNLESS OTHERWISE NOTED.

WIRING METHODS	
REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION	
NOTE: SIZE AND INSTALL BRANCH CIRCUIT CONDUCTORS FOR A MAXIMUM BRANCH CIRCUIT VOLTAGE DROP OF 3% FROM PANELBOARDS. TOTAL VOLTAGE DROP FROM SERVICE ENTRY TO LAST DEVICE ON THE CIRCUIT TO NOT EXCEED 5%. REFER TO SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS AND OPTIONS.	
NORMAL SYSTEM FEEDERS	THHN/THWN/XXHH CONDUCTORS IN EMT
EMERGENCY SYSTEM FEEDERS	MI CABLE
EQUIPMENT SYSTEM FEEDERS	THHN/THWN/XXHH CONDUCTORS IN EMT
NORMAL BRANCH CIRCUITS	THHN/THWN/XXHH CONDUCTORS IN EMT OR HOSPITAL GRADE AC CABLE
EMERGENCY SYSTEM (LIFE SAFETY AND CRITICAL) BRANCH CIRCUITS	THHN/THWN/XXHH CONDUCTORS IN EMT
NURSE CALL SYSTEM WIRING	CONDUCTORS IN EMT
TELEDATA WIRING	CAT6 WIRING IN EMT (REFER TO COMMUNICATIONS LEGEND FOR ADDITIONAL INFORMATION)

POWER LEGEND	
PANEL TAGS	
"BUILDING NUMBER"	"CR" - CRITICAL "LS" - LIFE SAFETY "EO" - EQUIPMENT BRANCH "E" - EMERGENCY "LK" - LEGAL STANDBY "OX" - OPTIONAL STANDBY
FLOOR	
SEQUENTIAL PANEL NUMBER PER FLOOR	
NOTE: PANEL NAMES MAY NOT USE ALL TAG LANGUAGE.	
PANEL MOUNTING SYMBOL DESCRIPTION	
	FLUSH MOUNTED PANELBOARD
	SURFACE MOUNTED PANELBOARD
PANEL HATCH SYMBOL DESCRIPTION	
	240/ 208/ 120V PANELBOARD
	600/ 480/ 277V PANELBOARD
	240/ 208/ 120V DISTRIBUTION BOARD
	600/ 480/ 277V DISTRIBUTION BOARD
POWER SYMBOL DESCRIPTION	
 60AS 3p 40AF 1M	DISCONNECT SWITCH - NEMA 1 ENCLOSURE - UNFUSED 3POLE UNFUSED OTHERWISE NOTED 60AS - DENOTES SWITCH AMPERAGE RATING 3p - DENOTES 3-POLE 40AF - DENOTES FUSE AMPERAGE RATING 1M - MANUAL MOTOR STARTER - INTEGRAL THERMAL PROTECTION VARIABLE FREQUENCY DRIVE
 1T	DRY TYPE TRANSFORMER (- SIZE, REFER TO TRANSFORMER SCHEDULE
 	GENERATOR ANNUNCIATOR PANEL ATS ANNUNCIATOR PANEL

NURSE CALL SYSTEM LEGEND	
 1B	NURSE CALL
"1B"	DENOTES SINGLE BED STATION WITH WALL SPEAKER AND PATIENT CONTROL UNIT.
"T"	DENOTES TOILET/ DRESSING ROOM STATION, WALL MOUNTED WITH PULLCORD.
"S"	DENOTES SHOWER STATION, WALL MOUNTED WITH PULLCORD.
"PB"	DENOTES PULL CORD TYPE PATIENT BED STATION
"SD"	DENOTES STAFF/DUTY STATION
"SA"	DENOTES NURSE CALL STAFF ASSIST STATION
"PH"	DENOTES PUSH FOR HELP STATION
"CB"	DENOTES CODE BLUE STATION
"EC"	DENOTES NURSE CALL EQUIPMENT CABINET
"MS"	DENOTES NURSE CALL MASTER STATION
"A"	DENOTES NURSE CALL ANNUNCIATOR STATION
"CBA"	DENOTES CODE BLUE ANNUNCIATOR
"P"	DENOTES PSYCHIATRIC PATIENT STATION
"PA"	DENOTES PSYCHIATRIC SPEAKER/MICROPHONE, CEILING MOUNTED
"PS"	DENOTES PSYCHIATRIC BATH/ SHOWER STATION
"PT"	DENOTES PSYCHIATRIC TOILET/ DRESSING STATION
 CB	DOMIE LIGHT - CEILING OR WALL MOUNTED RESPECTIVELY
"CB"	DENOTES CODE BLUE DOMIE LIGHT
"Z"	DENOTES ZONE DOMIE LIGHT

SITE LEGEND	
	HANDHOLE
	ELECTRIC MANHOLE
	TELEPHONE / DATA MANHOLE
	ELECTRIC HANDHOLE
	TELEPHONE / DATA HANDHOLE
	UTILITY SERVICE METER
	UTILITY POLE
	LIGHTING CONTACTOR
	TIME CLOCK

EMERGENCY CALL SYSTEM LEGEND	
	EMERGENCY CALL
"T".	DENOTES TOILET/ DRESSING ROOM STATION LOCATION, WALL, MOUNTED DEVICE WITH PULLCORD.
"S".	DENOTES SHOWER STATION LOCATION, WALL, MOUNTED DEVICE WITH PULLCORD.
"MS".	DENOTES EMERGENCY CALL SYSTEM MASTER STATION
"A".	DENOTES EMERGENCY CALL SYSTEM ANNUNCIATOR STATION
	DOME LIGHT LOCATION - CEILING OR WALL AS DIRECTED BY ARCHITECT OR HOSPITAL PERSONNEL.

DEVICE LEGEND		
RECEPTACLE TAGS		
OPTIONAL TYPE DESIGNATOR "BLANK" - RECEPTACLE WITH NO OPTION "GFI" - GROUND FAULT INTERRUPTER "C" - MOUNTED 9" ABOVE WORK SURFACE OR COUNTERTOP "REF" - MOUNTED AT 48" FOR FULL HEIGHT REFRIGERATOR "M" - MOUNTED UNDER CABINET "WP" - WEATHERPROOF TYPE, NEMA 3R MINIMUM "WR" - WEATHER RESISTANT DEVICE AND IN-USE COVER "TR" - TAMPER RESISTANT "USB" - COMBINATION USB DEVICE "C" - RECEPTACLE MOUNTED IN CEILING FOR PROJECTOR "P" - 2 HOUR FIRE RATED POKE-THROUGH "TH" - MOUNTED HIGH ON WALL BEHIND TELEVISION. "TV" - MOUNTED HIGH ON WALL "HS" - HALF SWITCHED "USB" - COMBINATION USB/RECEPTACLE		
X # 		
PANELBOARD BRANCH CIRCUIT NUMBER		
REC SYMBOL	RECEPTACLE SYMBOL DESCRIPTION	
WALL C C-15		
		DUPLEX RECEPTACLE
		DOUBLE DUPLEX RECEPTACLE
		SINGLE RECEPTACLE
		DUPLEX RECEPTACLE, ON GENERATOR
		DOUBLE DUPLEX RECEPTACLE, ON GENERATOR
		SINGLE RECEPTACLE, ON GENERATOR
		HOSPITAL GRADE, DUPLEX RECEPTACLE
		HOSPITAL GRADE, DOUBLE DUPLEX RECEPTACLE
		HOSPITAL GRADE, DUPLEX RECEPTACLE, ON GENERATOR
		HOSPITAL GRADE, DOUBLE DUPLEX RECEPTACLE, ON GENERATOR
S ¹ S ²		
		SPECIAL PURPOSE RECEPTACLE NEMA TYPE AS INDICATED ON THE PLANS
RECEPTACLE NOTES		

1. ALL RECEPTACLES ARE MOUNTED 18" AFF UNLESS OTHERWISE NOTED
2. COORDINATE MOUNTING HEIGHTS WITH THE ARCHITECT PRIOR TO INSTALLATION.
3. ALL RECEPTACLES SHALL BE NEMA 5-20R UNLESS OTHERWISE NOTED.
4. PROVIDE ALL RECEPTACLES WITHIN 6'-0" OF A SINK WITH GFI PROTECTION.
5. ALL RECEPTACLES WITHIN PATIENT ACCESSIBLE AREAS SHALL BE TAMPERPROOF TYPE DEVICE.
6. PROVIDE TAMPERPROOF RECEPTACLES IN ALL CHILD CARE FACILITIES, PRESCHOOLS AND EDUCATION FACILITIES, DORMITORY UNITS, 20' WITHIN BATHS, 20' OF CORRIDORS/ WAITING ROOMS ETC. WITHIN CLINICS / MEDICAL OFFICES / OUTPATIENT FACILITIES.

GROUNDING LEGEND	
	GROUNDING COUNTERPOISE - (3) COPPER GROUND RODS AT 10'-0" ON CENTER
	GROUNDING CONDUCTOR; 1/0 CU GND MINIMUM - UNLESS NOTED OTHERWISE
	GROUND ROD
	GROUND BAR - 2"H x 1/4" THICK x 18", MOUNTED 24" AFF WITH 2" SPACE BETWEEN GROUND BUS AND WALL
	GROUNDING ELECTRODE CONDUCTOR OF SEPARATELY DERIVED SYSTEM.

MECHANICAL EQUIPMENT COORDINATION	
ELECTRICAL CONTRACTOR SHALL REFER TO THE MECHANICAL, PLUMBING, AND FIRE PROTECTION DRAWINGS AND SPECIFICATIONS FOR LOCATIONS AND QUANTITIES OF EQUIPMENT RELEASED TO EACH TRADE.	
\$^M ☒ PROVIDED BY ELECTRICAL CONTRACTOR	
\$^M ☒ PROVIDED BY MECHANICAL CONTRACTOR	

LIGHTING LEGEND

LIGHTING TAGS

"LP" - LIGHTING PENDANT
 "LD" - LIGHTING DOWNLIGHT
 "LS" - LIGHTING SURFACE MOUNTED
 "LR" - LIGHTING RECESSED
 "SL" - SITE LIGHTING
 "NL" - NIGHT LIGHT

1,2,3 ETC. - NUMERICAL TYPE DESIGNATOR

OPTIONAL TYPE DESIGNATOR
 "BLANK" - NORMAL POWER
 "E" - PROVIDED WITH EMERGENCY BATTERY

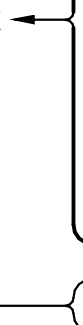
PANELBOARD BRANCH CIRCUIT NUMBER

LOWER CASE LETTER DENOTES LOCAL SWITCH

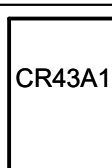
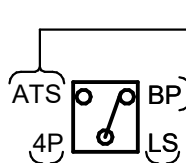
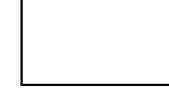
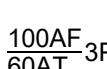
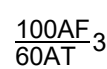
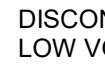
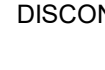
REFER TO LIGHTING FIXTURE SCHEDULE FOR ADDITIONAL INFORMATION
 PERTAINING TO EACH FIXTURE TYPE LISTED ON PLAN DRAWINGS

LIGHTING SYMBOLS	LIGHTING SYMBOL DESCRIPTION
	SURFACE OR RECESSED MOUNTED LIGHTING FIXTURE
	RECESSED LINEAR WALL WASH
	STRIP LIGHTING FIXTURE
	COMMERCIAL STRIP LIGHTING FIXTURE
	WALL MOUNTED LIGHTING FIXTURE
	TRACK MOUNTED LIGHTING FIXTURE
	REMOTE EMERGENCY LIGHTING, SINGLE HEAD MOUNT 7'-6" AFF
	REMOTE EMERGENCY LIGHTING, DUAL HEAD MOUNT 7'-6" AFF
	EMERGENCY BATTERY UNIT, MOUNT 7'-6" AFF: NO. OF EMERGENCY LIGHTING HEADS AS INDICATED.
	SITE LIGHTING FIXTURE
	STRIP LIGHTING BOLLARD
WALL	C/S
	CIRCULAR LIGHTING FIXTURE
	EXIT SIGN - SHADED AREA INDICATES LOCATION AND QUANTITY OF FACES; DIRECTIONAL ARROWS AS INDICATED

LIGHT FIXTURE CONNECTED TO:							
NORMAL BRANCH CIRCUITRY				EMERGENCY BRANCH CIRCUITRY			
CRITICAL BRANCH CIRCUITRY				LIFE SAFETY BRANCH CIRCUITRY			
LEGALLY REQUIRED STANDBY				OPTIONAL STANDBY BRANCH CIRCUITRY			

SWITCHES LEGEND	
<u>DEVICE INDICATOR LETTER "X" EQUALS DESIGNATION BELOW</u> <u>WALL MOUNTED SWITCHES TO BE AT 48" AFF UNO</u>	
	"EMPTY" - SINGLE POLE SWITCH "2" - TWO POLE, SINGLE THROW SWITCH "3" - 3-WAY, SINGLE POLE, DOUBLE THROW "4" - 4-WAY, DOUBLE POLE, DOUBLE THROW "D" - DIMMER SWITCH, SINGLE POLE "LV" - LOW VOLTAGE "MS" - MASTER STATION OVERRIDE "WP" - WEATHERPROOF "OS" - OCCUPANCY SENSOR - WALL MOUNTED, INTEGRAL DUAL TECHNOLOGY, SINGLE POLE SWITCH "s" - SMALL CASE LETTER DENOTES LIGHT FIXTURE CONTROL
	OCCUPANCY SENSOR - WALL MOUNTED, INTEGRAL DUAL TECHNOLOGY, DUAL RELAY SWITCH.
	OCCUPANCY SENSOR - CEILING MOUNTED, INTEGRAL DUAL TECHNOLOGY, DUAL RELAY SWITCH.
	VACANCY SENSOR - WALL MOUNTED, INTEGRAL DUAL TECHNOLOGY.
	VACANCY SENSOR - CEILING MOUNTED, INTEGRAL DUAL TECHNOLOGY.
	PHOTOCELL - CEILING MOUNTED
	PHOTOCELL - WALL MOUNTED

MASTER CLOCK SYSTEM LEGEND	
 A	CLOCK - CEILING MOUNTED, WALL MOUNTED RESPECTIVELY
	"A" - DENOTES ANALOG SYNCHRONOUS CLOCK
	"D" - DENOTES DIGITAL CLOCK
	"E" - DENOTES DIGITAL CLOCK/ ELAPSED TIMER COMBINATION
	ELAPSED TIMER CONTROL UNIT
 CU	MASTER CLOCK SYSTEM CONTROL UNIT

ONE LINE DIAGRAM LEGEND	
	PANELBOARD "CR43A1"
	TRANSFER SWITCH
	"ATS" = AUTOMATIC TRANSFER SWITCH "MIS" = MANUAL TRANSFER SWITCH "BP" = BYPASS ISOLATION SWITCH "LS" = LIFE SAFETY BRANCH "CR" = CRITICAL BRANCH "EQ" = EQUIPMENT BRANCH "ELEV" = ELEVATOR BRANCH "XRAY" = X-RAY EQUIPMENT BRANCH "EM" = EMERGENCY "LR" = LEGALLY REQUIRED "OS" = OPTIONAL STANDBY
	GROUND CONNECTION
	SURGE PROTECTIVE DEVICE
	CIRCUIT BREAKER DRAW OUT 100AF - DENOTES CIRCUIT BREAKER FRAME 60AT - DENOTES CIRCUIT BREAKER TRIP
	CIRCUIT BREAKER FIXED 100AF - DENOTES CIRCUIT BREAKER FRAME 60AT - DENOTES CIRCUIT BREAKER TRIP
	TRANSFORMER - BOX REPRESENTS PAD MOUNTED
	CURRENT TRANSFORMER
	POTENTIAL TRANSFORMER
	DISCONNECT SWITCH FUSED / LOW VOLTAGE FUSIBLE SWITCH
	DISCONNECT SWITCH UNFUSED
	MEDIUM VOLTAGE FUSIBLE SWITCH
	FUSE
	KIRK KEY INTERLOCK
	VOLTMETER
	SHUNT TRIP DEVICE
REFERENCE NOTE 1. REFER TO DEMOLITION / RELOCATION LEGEND FOR LINETYPE AND LINEWEIGHT TO DETERMINE EXISTING CONDITIONS AND DEMOLISHED EQUIPMENT.	

DRAWING LIST	
SHEET NUMBER	SHEET NAME
E000	ELECTRICAL LEGEND
E001	ELECTRICAL LEGEND, NOTES, AND ABBREVIATIONS
E120	ELECTRICAL BASEMENT LEVEL POWER PLAN
E700	ELECTRICAL SCHEDULES AND DETAILS

[illegible]

DEMOLITION / RELOCATION LEGEND	
	E EXISTING ELECTRICAL EQUIPMENT, DEVICE AND/OR FIXTURE TO REMAIN
	X EXISTING ELECTRICAL EQUIPMENT, DEVICE AND/OR FIXTURE TO BE SELECTIVELY DEMOLISHED
	XT EXISTING ELECTRICAL EQUIPMENT, DEVICE AND/OR FIXTURE TO BE REMOVED AND TURNED OVER TO OWNER FOR RE-USE
	XR EXISTING ELECTRICAL EQUIPMENT, DEVICE AND/OR FIXTURE TO BE REMOVED, STORED AND RE-LOCATED.
	XL EXISTING ELECTRICAL EQUIPMENT, DEVICE AND/OR FIXTURE INDICATED IN NEW LOCATION
	XX EXISTING ELECTRICAL DEVICE AND COVER PLATE ONLY SHALL BE REMOVED AND REPLACED WITH NEW; MAINTAIN EXISTING BOX, REWIRING AND WIRING.
PHASE, LOCATION, RELOCATION NOTES	
PHASE LABELS SHOWN ABOVE ARE APPLIED IN SELECT AREAS AND MAY NOT ALWAYS BE PRESENT. REFER TO LAYOUT AND LINEWEIGHT TO DETERMINE EXISTING CONDITIONS AND DEMOLISHED EQUIPMENT.	

KEYNOTE SYMBOLS LEGEND	
	DEMOLITION KEYNOTE SYMBOL
	NEW WORK KEYNOTE SYMBOL
KEYNOTE SYMBOLS NOTES	
"NM" - 1, 2, 3 ETC. - NUMERIC TYPE DESIGNATOR	

THIS IS A STANDARD SYMBOL LIST. ALL DEVICE SYMBOLS AND ABBREVIATIONS MAY NOT NECESSARILY APPEAR ON THE DESIGN PLANS OR DETAIL SHEETS. ONLY THOSE SYMBOLS INDICATED ON THE DESIGN PLANS ARE USED AND OTHERS SHOULD BE DISREGARDED.

1. PROVIDE SUB-FEED LUGS FOR FULLY-SECTION PANELS.
2. FURNISH ALL PANELBOARDS MULTI-POPULATED WITH WHATEVER CIRCUIT BREAKERS, THAT IS, ALL SPACES SHALL HAVE A 20AMP, 1 POLE CIRCUIT BREAKER INSTALLED.
3. PANEL FACE PLATES SHALL BE ATTACHED TO WACKS & WITH FULL LENGTH PIANO HINGE AND PROVIDED WITH LOCKING DOOR IN DOOR.
4. PANELBOARDS CONTAINING MAIN SERVICE DISCONNECT MUST BE LISTED FOR THE USE. SHORTCUT INTERRUPTING CAPACITY IS NOT ALLOWED.
5. ALL CIRCUIT BREAKERS SHALL BE BOLT-ON TYPE AND HACR RATED.
6. CIRCUIT BREAKERS SHALL BE INSTALLED IN EXISTING PANELBOARDS SHALL MATCH EXISTING PANELBOARD IN ALL RESPECTS INCLUDING SHORT CIRCUIT RATING (KAC).
7. SOLD CIRCUITS IN EXISTING NEW CIRCUIT WITHIN EXISTING PANELBOARD.

(E)Branch Panel: EHP (SEC1)

Location: BASEMENT ELECTRICAL...

Supply From: EDP-OS

Mounting: SURFACE

Enclosure: NEMA 1

Volts: 480Y/277

Phases: 3

Wires: 4

A/C Rating: ETR

Main Type: MLO

Mains Rating: 400 A

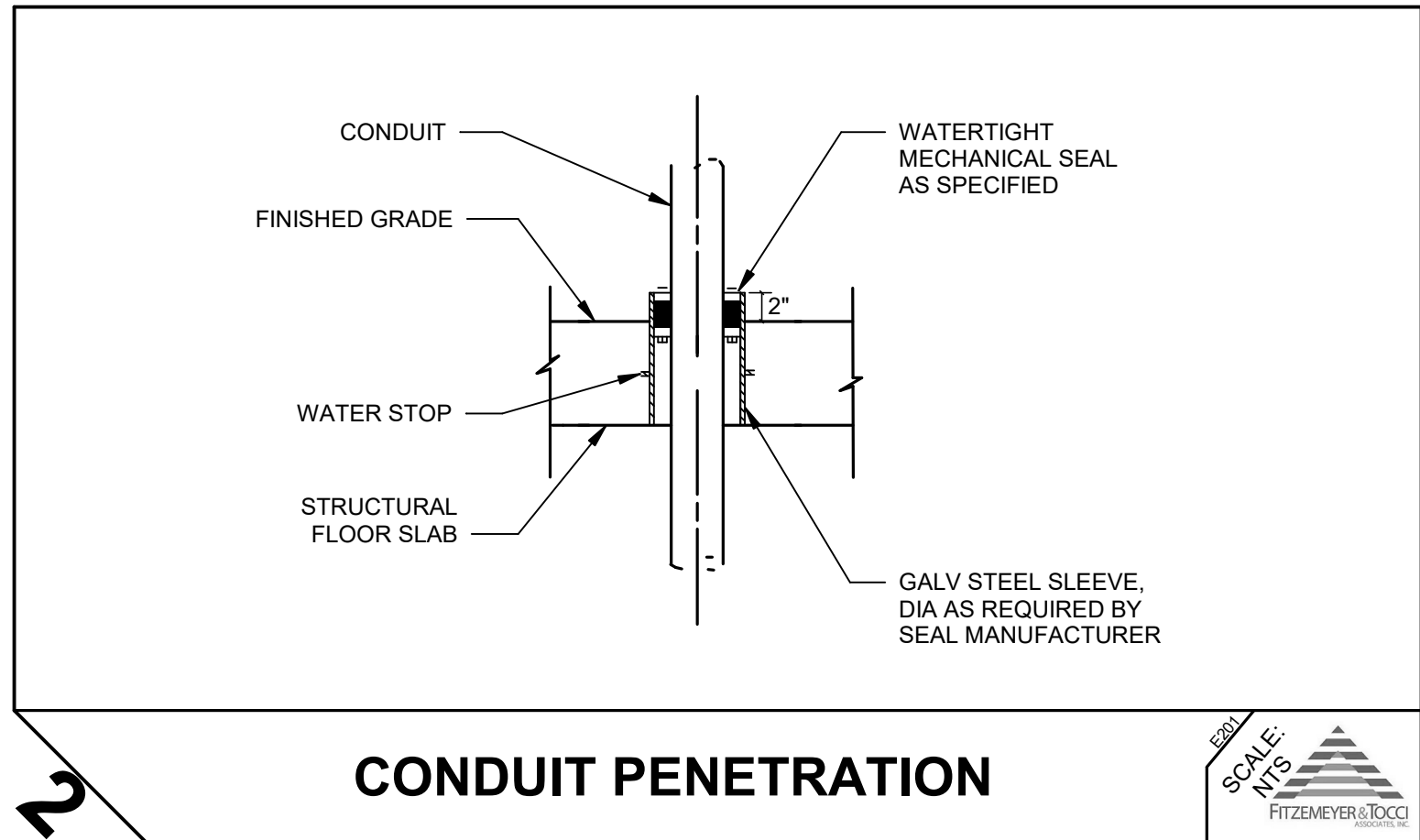
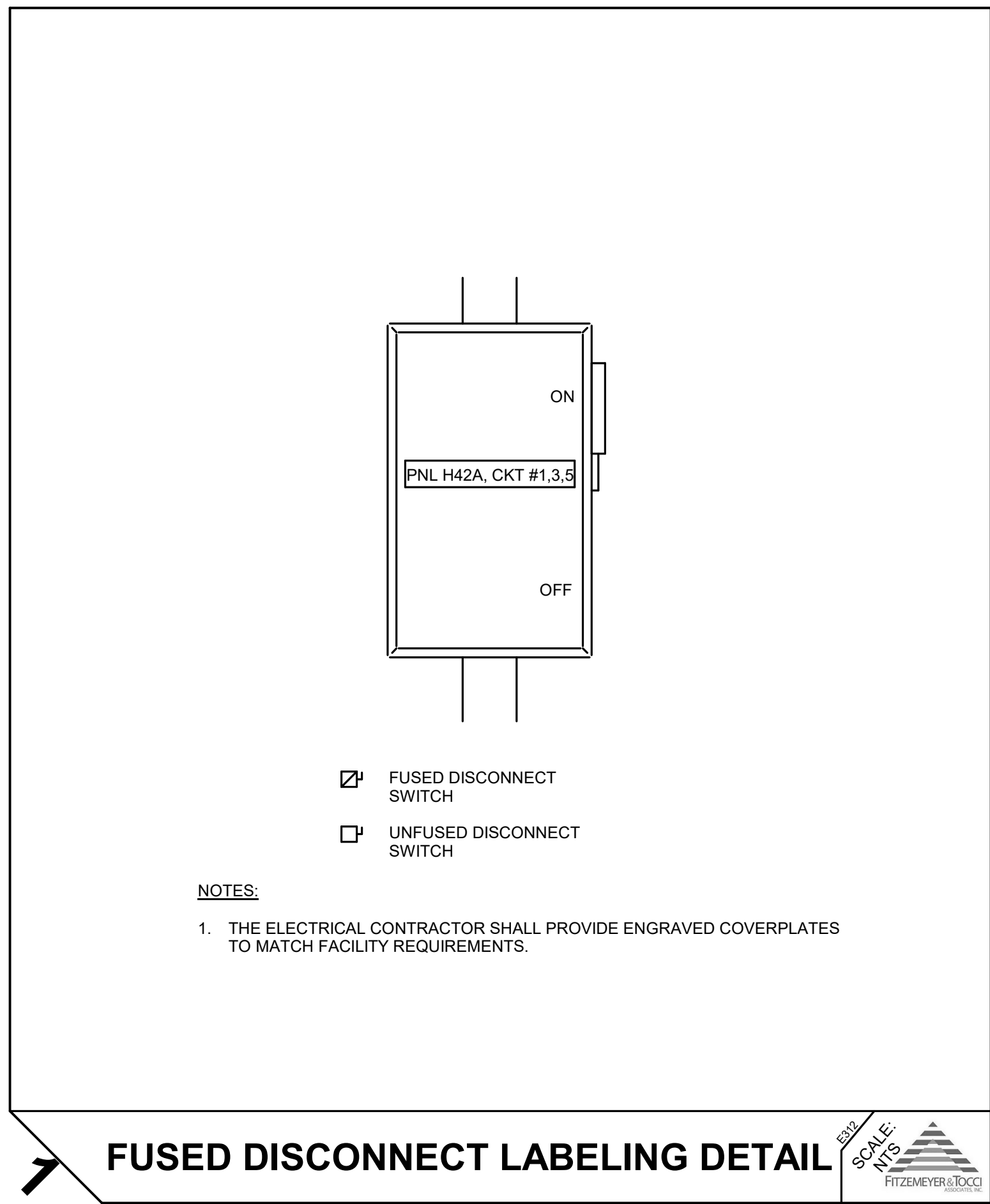
Notes:

TOTAL AMPERAGE SHOWN IN THIS PANEL SCHEDULE INDICATES SUMMATION OF ANTICIPATED NEW LOADS ADDED TO THE PANELBOARD AND DOES NOT REPRESENT ANY LOADS REMOVED OR ANY EXISTING LOADS ON THE PANELBOARD.

CKT	Circuit Description	Trip	Poles	A	B	C	Poles	Trip	Circuit Description	CKT
1				0.00... 0.00...						2
3	TRANSFORMER VAULT UNIT HEATER	20 A	3		0.00... 0.00...		3	20 A	AHU-4	4
5						0.00... 0.00...				6
7				0.00... 0.00...						8
9	ELECTRICAL ROOM UNIT HEATER	20 A	3		0.00... 0.00...		3	30 A	AHU-1	10
11						0.00... 0.00...				12
13										14
15	ELEVATOR 3	100 A	3	0.00... 0.00...	0.00... 0.00...		3	50 A	EPP TRANSFORMER	16
17						0.00... 0.00...				18
19				0.00... 0.00...						20
21	SPARE	15 A	3		0.00... 0.00...		3	30 A	BOILER ROOM NORTH SUMP PUMPS	22
23						0.00... 0.00...				24
25				0.00... 7.48...						26
27	LOADING DOCK SUMP PUMP	30 A	3		0.00... 7.48...		3	45 A	P-1 (20HP)	28
29						0.00... 7.48...				30
31				7.48... 0.00...						32
33	P-2 (20HP)	45 A	3		7.48... 0.00...		3	20 A	BOILER ROOM SOUTH SUMP PUMPS	34
35						7.48... 0.00...				36
37				1.94... 1.94...						38
39	B-2 (7FLA, 8.8MCA, 15MOCP)	15 A	3		1.94... 1.94...		3	15 A	B-1 (7FLA, 8.8MCA, 15MOCP)	40
41					1.94... 1.94...					42
Total Load:				18.84 kVA	18.84 kVA	1.94... 1.94...				
Total Amps:				68 A	68 A	68 A				

Legend:

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals
Other	56.53 kVA	100.00%	56.53 kVA	
				Total Conn. Load: 56.53 kVA
				Total Est. Demand: 56.53 kVA
				Total Conn.: 68 A
				Total Est. Demand: 68 A



BRANCH CIRCUIT WIRING LEGEND		
NOTES:		
1. ALL CONDUCTOR SIZES ARE FOR COPPER CONDUCTORS PER NEC TABLE 310.16 (2023) ALL FEEDERS RATED 100A AND BELOW ARE TO COMPLY WITH THE 60-DEGREE RATINGS OF TABLE 310.16 AND FEEDERS RATED ABOVE 100A ARE TO COMPLY WITH THE 75-DEGREE RATINGS.		
2. CONDUIT SIZES ARE FOR COPPER CONDUCTORS WITH/THWN INSULATION IN RMC.		
3. CONDUIT AND CABLE SIZES SHALL BE PER TABLE BELOW UNLESS NOTED OTHERWISE ON THE FLOOR PLANS AND DRAWINGS.		
4. SEE SPECIFICATIONS FOR ACCEPTABLE CONDUCTOR TYPES.		
CIRCUIT SYMBOL	CONDUCTORS	CIRCUIT BREAKER
	120 & 277V 1PH, 2W CKTS	
(151)	2#12 & 1#12G - 3/4"	15/1
(201)	2#12 & 1#12G - 3/4"	20/1
(251)	2#10 & 1#10G - 3/4"	25/1
(301)	2#10 & 1#10G - 3/4"	30/1
(351)	2#8 & 1#10G - 3/4"	35/1
(401)	2#8 & 1#10G - 3/4"	40/1
(451)	2#6 & 1#10G - 3/4"	45/1
(501)	2#6 & 1#10G - 3/4"	50/1
(601)	2#4 & 1#10G - 3/4"	60/1
	208 & 480V 1PH, 2W CKTS	
(152)	2#12 & 1#12G - 3/4"	15/2
(202)	2#12 & 1#12G - 3/4"	20/2
(252)	2#10 & 1#10G - 3/4"	25/2
(302)	2#10 & 1#10G - 3/4"	30/2
(352)	2#8 & 1#10G - 3/4"	35/2
(402)	2#8 & 1#10G - 3/4"	40/2
(452)	2#6 & 1#10G - 3/4"	45/2
(502)	2#6 & 1#10G - 3/4"	50/2
(602)	2#4 & 1#10G - 3/4"	60/2
	208 & 480V 3PH, 3W CKTS	
(153)	3#12 & 1#12G - 3/4"	15/3
(203)	3#12 & 1#12G - 3/4"	20/3
(253)	3#10 & 1#10G - 3/4"	25/3
(303)	3#10 & 1#10G - 3/4"	30/3
(353)	3#8 & 1#10G - 3/4"	35/3
(403)	3#8 & 1#10G - 3/4"	40/3
(453)	3#6 & 1#10G - 3/4"	45/3
(503)	3#6 & 1#10G - 3/4"	50/3
(603)	3#4 & 1#10G - 3/4"	60/3

LEGEND OF FEEDER SIZES					
COPPER CONDUCTORS					
NOTES: 1. ALL CONDUCTOR SIZES ARE FOR COPPER CONDUCTORS PER NEC TABLE 310.16(2023). ALL FEEDERS RATED 100A AND BELOW ARE TO COMPLY WITH THE 60-DEGREE RATINGS OF TABLE 310.16 AND FEEDERS RATED ABOVE 100A ARE TO COMPLY WITH THE 75-DEGREE RATINGS. 2. CONDUIT SIZES ARE FOR COPPER CONDUCTORS WITH THHN/THWN INSULATION IN RMC PER NEC TABLE C.9 IN ANNEX C. 3. 600 KCMIL FEEDERS SHALL BE PROVIDED WITH MAC ADAPTERS AS REQUIRED TO COORDINATE WITH BREAKER LUG SIZES. 4. SEE SPECIFICATIONS FOR ACCEPTABLE CONDUCTOR TYPES. 5. CONTRACTOR SHALL PROVIDE PRICING INFORMATION FOR USE OF ALUMINUM FEEDERS AS ADD ALTERNATE #.					
FEEDER SYMBOL	CONDUCTORS (3PH, 3W) WITH GROUND	RAWEAY SIZE	CONDUCTORS (3PH, 4W) WITH GROUND	RAWEAY SIZE	NOMINAL AMPERE
(TX	REFER TO DRY TYPE TRANSFORMER SCHEDULE				
(0703	3#4 & 1#8G	1"			70
(0704			4#4 & 1#8G	1 1/4"	
(0803	3#3 & 1#8G	1"			80
(0804			4#3 & 1#8G	1 1/4"	
(0903	3#2 & 1#8G	1 1/4"			90
(0904			4#2 & 1#8G	1 1/4"	
(1003	3#1 & 1#8G	1 1/4"			100
(1004			4#1 & 1#8G	1 1/4"	
(1103	3#2 & 1#6G	1 1/4"			110
(1104			4#2 & 1#6G	1 1/4"	
(1253	3#1 & 1#6G	1 1/4"			125
(1254			4#1 & 1#6G	1 1/2"	
(1503	3#1/0 & 1#6G	1 1/2"			150
(1504			4#1/0 & 1#6G	2"	
(1753	3#2/0 & 1#6G	2"			175
(1754			4#2/0 & 1#6G	2"	
(2003	3#3/0 & 1#6G	2"			200
(2004			4#3/0 & 1#6G	2"	
(2253	3#4/0 & 1#4G	2"			225
(2254			4#4/0 & 1#4G	2 1/2"	
(2503	3#250 KCMIL & 1#4G	2 1/2"			250
(2504			4#250 KCMIL & 1#4G	2 1/2"	
(3003	3#350 KCMIL & 1#4G	3"			300
(3004			4#350 KCMIL & 1#4G	3"	
(3503	3#500 KCMIL & 1#3G	3"			350
(3504			4#500 KCMIL & 1#3G	3 1/2"	
(4003	3#500 KCMIL & 1#3G	3"			400
(4004			4#500 KCMIL & 1#3G	3 1/2"	
(4503	6#4/0 & 2#2G	(2) 2"			450
(4504			8#4/0 & 2#2G	(2) 2 1/2"	
(5003	6#250KCMIL & 2#2G	(2) 2 1/2"			500
(5004			8#250 KCMIL & 2#2G	(2) 2 1/2"	
(6003	6#350KCMIL & 2#1G	(2) 3"			600
(6004			8#350 KCMIL & 2#1G	(2) 3"	
(8003	6#500KCMIL & 2#1/0G	(2) 3"			800
(8004			8#500 KCMIL & 2#1/0G	(2) 3 1/2"	
(10003	9#400KCMIL & 3#2/0G	(3) 3"			1000
(10004			12#400 KCMIL & 3#2/0G	(3) 3"	
(12003	9#600KCMIL & 3#3/0G	(3) 3 1/2"			1200
(12004			12#600 KCMIL & 3#3/0G	(3) 4"	
(16003	12#600KCMIL & 4#4/0G	(4) 3 1/2"			1600
(16004			16#600 KCMIL & 4#4/0G	(4) 4"	

[illegible]