LEGEND/ABBREVIATIONS

MECHANICAL LEGEND

SYMBOL	ABBREV.	DEFINITION
	SA	SUPPLY AIR DUCT UP, DOWN
	RA	RETURN AIR DUCT UP, DOWN
	EA	EXHAUST AIR DUCT UP, DOWN
	OA	OUTSIDE AIR DUCT UP, DOWN
		RECT. TO ROUND TRANSITION
		FLEXIBLE CONNECTION (DUCTWORK)
		FLEXIBLE DUCT
	VD	MANUAL VOLUME DAMPER
	FD	FIRE DAMPER
	MOD	MOTOR OPERATED DAMPER
	SMD	SMOKE DAMPER
	CD	COMBINATION FIRE/SMOKE DAMPER
	AMS	AIR MONITORING STATION
	SA	SOUND ATTENUATOR
DD	DD	DUCT SMOKE DETECTOR
		ELBOW W/ TURNING VANES
		RADIUS ELBOW
	FPTU	FAN POWERED VAV BOX W/ HEAT COIL
	SL	ACOUSTICAL SOUND LINING
		DUCT TRANSITION
R		CHANGE IN ELEVATION RISE(R),DROP(D)
		POWER ROOF VENTILATOR
		GATE VALVE
		GLOBE VALVE
		BALL VALVE
		MULTI-PURPOSE VALVE
		CHECK VALVE
		BUTTERFLY VALVE
		3-WAY MODULATING VALVE (ATC)
		2-WAY MODULATING VALVE (ATC)
	PRV	PRESSURE REDUCING VALVE
		NEEDLE VALVE
		PRESSURE RELIEF OR SAFETY VALVE
	HED	HOSE END DRAIN VALVE
		STRAINER W/HOSE END DRAIN VALVE & CAP
		AUTOMATIC AIR VENT
		FLOW METER FITTING
		COMBINATION SHUT-OFF/BALANCING VALVE
		UNION
		FLANGE
		CONCENTRIC REDUCER
		ECCENTRIC REDUCER
		FLEXIBLE CONNECTION (PIPING)
		MANUAL AIR VENT
		THERMOMETER
		PRESSURE GAUGE W/NEEDLE VALVE
(N)		TEMPERATURE SENSOR (NIGHT SETBACK)
T	T'STAT	THERMOSTAT
		FAN SWITCH
		STATIC PRESSURE GAUGE
DP	DP	DIFFERENTIAL PRESSURE CONTROLLER
DPT	DPT	DIFFERENTIAL PRESSURE TRANSMITTER
	AFC	AUTOMATIC FLOW CONTROL VALVE
FS	FS	FLOW SWITCH
SP		STATIC PRESSURE CONTROLLER
		PIPE ALIGNMENT GUIDE
		PIPE ANCHOR
		EXPANSION LOOP
		UNIT HEATER
x%		PITCH OF PIPE, % SLOPE
		PIPE-TURN DOWN
		PIPE-TURN UP
		SOLENOID VALVE
		END CAP
		BLIND FLANGE
		DIRECTION OF FLOW

SYMBOL	ABBREV.	DEFINITION
Ø	DIA.	DIAMETER
	FOT	FLAT ON TOP
	FOB	FLAT ON BOTTOM
	AFPF	AIRFOIL PLENUM FAN
	DL	DOOR LOUVER
	AP	ACCESS PANEL
HPS	HPS	HIGH PRESSURE STEAM
LPS	LPS	LOW PRESSURE STEAM
SC	SC	STEAM CONDENSATE
HS(P)	HS(P)	HEATING SUPPLY (PRIMARY)
HR(P)	HR(P)	HEATING RETURN (PRIMARY)
HS(S)	HS(S)	HEATING SUPPLY (SECONDARY)
HR(S)	HR(S)	HEATING RETURN (SECONDARY)
HS	HS	HEATING SUPPLY
HR	HR	HEATING RETURN
CS	CS	CONDENSER WATER SUPPLY
CR	CR	CONDENSER WATER RETURN
HPWS	HPWS	HEAT PUMP WATER SUPPLY
HPWR	HPWR	HEAT PUMP WATER RETURN
CW	CW	COLD WATER
COND	CD/COND	CONDENSATE DRAIN LINE
	F&T	FLOAT AND THERMOSTATIC TRAP
	BTU	BRITISH THERMAL UNIT
	MBH	BTU PER HOUR (THOUSAND)
	SENS.	SENSIBLE
	WG	WATER GAUGE
	VEL	VELOCITY
	FPM	FEET PER MINUTE
	LF	LINEAR FOOT
	KW	KILOWATT
	MIN	MINIMUM
	MAX	MAXIMUM
	NC	NOISE CRITERIA
	DB	DECIBEL
	EMS	ENERGY MANAGEMENT SYSTEM
	SAF	SUPPLY AIR FAN
	OAF	OUTSIDE AIR FAN
	RAF	RETURN AIR FAN
	EAF	EXHAUST AIR FAN
	LBS	POUNDS
	TEMP	TEMPERATURE
	EXH	EXHAUST
	OC	ON CENTER
	TONS	TONS OF REFRIGERATION
	SQ	SQUARE
	OAT	OUTSIDE AIR TEMPERATURE
	STD	STANDARD
	ΔT	TEMPERATURE DIFFERENCE
	%	PERCENT
	EFF.	EFFICIENCY
	ELECT. CHAR.	ELECTRICAL CHARACTERISTICS
	CAP	CAPACITY
	SB	STAND-BY
	FT. H_2O	FEET WATER GAUGE
	IN. H_2O	INCHES WATER GAUGE
	ATC	AUTOMATIC TEMPERATURE CONTROL
	EX	EXISTING
	RX	REMOVE EXISTING
		CONNECT TO EXISTING
		DEMOLITION ENDS HERE
	VSD	VARIABLE SPEED DRIVE
	°F	DEGREES FAHRENHEIT
	CFM	CUBIC FEET PER MINUTE
	GPM	GALLONS PER MINUTE
	EAT	ENTERING AIR TEMPERATURE
	LAT	LEAVING AIR TEMPERATURE
	EWT	ENTERING WATER TEMPERATURE
	LWT	LEAVING WATER TEMPERATURE
	DB	DRY BULB
	WB	WET BULB
	PD	PRESSURE DROP
	WPD	WATER PRESSURE DROP
	APD	AIR PRESSURE DROP
	SP	STATIC PRESSURE
	ESP	EXTERNAL STATIC PRESSURE
	PSI	POUNDS PER SQUARE INCH
	HP	HORSEPOWER
	BHP	BRAKE HORSEPOWER
	RPM	REVOLUTIONS PER MINUTE
	FPM	FEET PER MINUTE
	A	AMPS
	V	VOLTS
	Hz	HERTZ
	DIFF	DIFFUSER
	REG	REGISTER
	AFF	ABOVE FINISHED FLOOR
	W/	WITH
∅	FO	FLAT OVAL
	SS	STAINLESS STEEL
	HT.	HEIGHT
	REQ'D	REQUIRED
	DWG	DRAWING
	No.	NUMBER
	VAV	VARIABLE AIR VOLUME
	EF	EXHAUST FAN
	FZ	FREEZE STAT
	SD	SMOKE DAMPER
	SPC	STATIC PRESSURE CONTROLLER
	AHU	AIR HANDLING UNIT
	OAT	OUTSIDE AIR TEMPERATURE
	SWT	SUPPLY WATER TEMPERATURE
	NO	NORMALLY OPEN
	NC	NORMALLY CLOSED
	C	CLOSED

NOTE: NOT ALL SYMBOLS AND ABBREVIATIONS MAY BE USED

PROJECT

OAKLAND TERRACE ELEMENTARY SCHOOL EMERGENCY GENERATOR AND ELECTRICAL UPGRADE

2720 PLYERS MILL RD,
SILVER SPRING, MD 20902

MONTGOMERY COUNTY PUBLIC SCHOOLS

850 HUNGERFORD DRIVE,
ROCKVILLE, MD 20850

MECHANICAL/ELECTRICAL/PLUMBING ENGINEERS

ALBAN ENGINEERING, INC

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HUNT VALLEY, MARYLAND 21030
PH: (410) 842-6411

INDEX

CS COVER SHEET

ELECTRICAL

E001 – ELECTRICAL LEGEND, CONVENTIONS, AND ABBREVIATIONS
ED100 – BASEMENT PLAN – DEMOLITION
E100 – BASEMENT PLAN
E101 – PARTIAL FLOOR PLAN – AREA A
E102 – PARTIAL FLOOR PLAN – AREA B
E103 – PARTIAL FLOOR PLAN – AREA C
E104 – PARTIAL FLOOR PLAN – AREA D
E601 – PANEL SCHEDULES AND PICTURES

MECHANICAL/PLUMBING

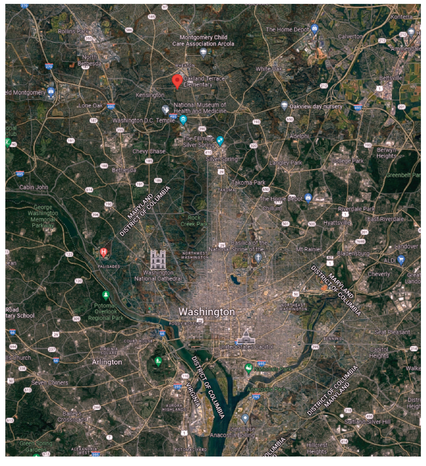
MP001 – MECH/PLUMB LEGEND, CONVENTIONS, RISER, AND ABBREVIATIONS
MPD100 – BASEMENT PLAN – DEMOLITION
MPD101 – PARTIAL ROOF PLAN – AREA A – DEMOLITION
MP100 – BASEMENT PLAN
MP101 – PARTIAL FLOOR PLAN – AREA A
MP102 – PARTIAL ROOF PLAN – AREA A
MP701 – MECHANICAL/PLUMBING ADD ALTERNATE #1 DETAILS

SCOPE OF WORK

THE SCOPE OF WORK INCLUDES THE UPGRADE OF THE CURRENT EMERGENCY ELECTRICAL DISTRIBUTION SYSTEM INCLUDING REPLACING THE EXISTING GENERATOR, ADDING LIFE SAFETY AND NON-LIFE SAFETY PANELS/TRANSFORMERS, AND ADDING DESIRED CIRCUITS TO EMERGENCY POWER.

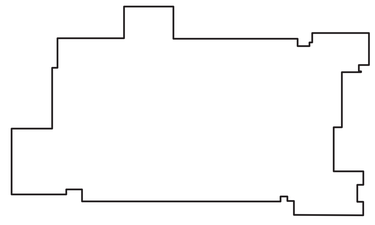
THE EXISTING GENERATOR IS TO REMAIN ACTIVE AND RUN EXISTING EMERGENCY LOADS UNTIL NEW GENERATOR IS INSTALLED.

LOCATION MAP NTS



VICINITY MAP NTS

KEY PLAN NTS



REVISIONS

NO.	DATE	DESCRIPTION

"PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE No. 51986, EXPIRATION DATE: 12-13-2023"

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COVER SHEET

OAKLAND TERRACE ES - EMERGENCY UPGRADE
SILVER SPRING, MD 20902

PN#	22079
PROJECT MANAGER	DRH
DESIGNER	BSF

CS

BID SET
06-09-2023

GENERAL NOTES:

1. THE ELECTRICAL CONTRACTOR SHALL FAMILIARIZE HIMSELF WITH THE DRAWINGS OF ALL OTHER TRADES ON THE PROJECT. ELECTRICAL OR SYSTEMS CONNECTIONS INDICATED ON ARCHITECTURAL, MECHANICAL, CIVIL, STRUCTURAL, KITCHEN AND ALL OTHER DRAWINGS WHICH ARE PART OF THIS PROJECT, SHALL BE CONSIDERED A PART OF THIS CONTRACT AND SHALL BE PROVIDED BY THE ELECTRICAL CONTRACTOR AT NO EXTRA COST TO THE OWNER.

2. THE ELECTRICAL DRAWINGS ARE DIAGRAMMATIC IN NATURE AND AS SUCH SHALL NOT BE SCALED. REFER TO THE ARCHITECTURAL DRAWINGS FOR EXACT LOCATIONS OF DEVICES AND EQUIPMENT AND DIMENSIONAL INFORMATION PRIOR TO ROUGH-IN. COORDINATE LOCATIONS OF MECHANICAL EQUIPMENT WITH MECHANICAL CONTRACTOR PRIOR TO ROUGH-IN OF SERVICE EQUIPMENT AND WIRING.

3. COORDINATE MOUNTING HEIGHTS OF ALL DEVICES WITH ARCHITECTURAL PLANS, SECTIONS, ELEVATIONS AND CASEWORK DRAWINGS.

4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING THE EXACT ROUTING OF WIRING AND CONDUITS AND SHALL BE RESPONSIBLE FOR SIZING ALL BRANCH CIRCUIT WIRING TO LIMIT VOLTAGE DROP TO 3%. CONTRACTOR SHALL SIZE CONDUIT TO ACCOMMODATE WIRING PER NEC. 20 AMPERE CIRCUITS SHALL BE SIZED AS FOLLOWS:

20 AMPERE CIRCUITS				
120 VOLT		277 VOLT		MINIMUM CONDUIT SIZE
WIRING LENGTH	WIRE SIZE	WIRING LENGTH	WIRE SIZE	
0' – 101'	#12	0' – 130'	#12	3/4"
101' – 200'	#10	130' – 210'	#10	3/4"
201' – 250'	#8	210' – 340'	#8	3/4"
251' – 300'	#6	340' – 540'	#6	3/4"
OVER 300'	#4	OVER 540'	#4	1"

NOTES:
BRANCH CIRCUITS IN PANELBOARDS WITH 200% RATED NEUTRAL BUS AND ALL DIMMED LIGHTING CIRCUITS & ECM MOTORS SHALL HAVE DEDICATED NEUTRAL CONDUCTORS.

WIRING AND CONDUIT SIZES INDICATED IN PANEL SCHEDULES ARE MINIMUM ONLY. CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING EXACT WIRING AND CONDUIT SIZES. CONTRACTOR SHALL PROVIDE SPLICE BLOCKS AND REDUCING PINS AS REQUIRED TO TERMINATE WIRING AND MAKE FINAL CONNECTIONS.

5. ELECTRICAL BOXES IN FIRE RATED PARTITIONS SHALL NOT EXCEED 16 SQUARE INCHES IN AREA (IF 4"x4"), SHALL BE MADE OF STEEL, AND SHALL BE SUCH THAT THE CUMULATIVE AREA OF BOX "CUTOUTS" IN THE FIREWALL DOES NOT EXCEED 100 SQUARE INCHES PER 100 SQUARE FEET OF WALL AREA. ELECTRICAL BOXES ON OPPOSITE SIDES OF THE SAME FIREWALL SHALL BE SEPARATED BY A HORIZONTAL AND VERTICAL DISTANCE OF NOT LESS THAN 24 INCHES. THE ELECTRICAL CONTRACTOR SHALL MAKE MINOR ADJUSTMENTS, AS NECESSARY, TO ELECTRICAL BOX LOCATIONS TO ENSURE COMPLIANCE WITH THIS REQUIREMENT SINCE BOX LOCATIONS ARE TYPICALLY NOT DIMENSIONED ON THE DRAWINGS. CONSULT ARCHITECT IF CLARIFICATION IS REQUIRED.

6. NEW WALLS ARE SHADED ON THE FLOOR PLANS, EXISTING WALLS ARE NOT SHADED. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING MOUNTING OF DEVICES WITH WALL TYPE.

DEMOLITION NOTES:

1. DEMOLITION DRAWINGS ARE DIAGRAMMATIC IN NATURE; NO ATTEMPT HAS BEEN MADE TO SHOW ALL EXISTING ELECTRICAL WORK IN AREAS INDICATED TO BE RENOVATED. ALL EXISTING ELECTRICAL WORK IS TO REMOVED UNLESS OTHERWISE NOTED. WHEN AN ITEM TO BE REMOVED, REMOVE ALL ASSOCIATED ELECTRICAL WORK BACK TO POINT-OF-SOURCE.

2. WHERE WORK PASSES THROUGH THE RENOVATION AREA TO SERVE OTHER PORTIONS OF THE BUILDING, OR WORK IN THE RENOVATION AREA INDICATED TO BE REMAIN, IT SHALL BE SUITABLY RELOCATED AND THE SYSTEMS RESTORED TO NORMAL. COORDINATE ANY OUTAGES WITH OWNER 7 DAYS IN ADVANCE.

3. WORK INDICATED TO REMAIN SHALL BE SUITABLY PROTECTED AGAINST DAMAGE.

4. TURN OVER ALL CIRCUIT BREAKERS, LIGHTING AND APPLIANCE PANELBOARD COVERS, CONTACTORS, MOTOR STARTERS, TIME CLOCKS, BATTERY PACKS, CLOCKS, SPEAKERS, ETC THAT ARE IN GOOD CONDITION TO OWNER. CONTACT OWNER FOR VERIFICATION IF ITEMS ARE IN QUESTIONABLE CONDITION.

5. COORDINATE ALL DEMOLITION AND CONSTRUCTION ACTIVITIES WITH THE OWNER TO MINIMIZE DISRUPTION OF THE NORMAL DAILY FUNCTIONING OF THE OWNERS OCCUPIED AREAS.

6. REMOVE AND REINSTALL ALL EXISTING CEILING MOUNTED DEVICES INDICATED TO REMAIN AS REQUIRED TO SUIT NEW CEILING INSTALLATION.

7. ALL REMOVED DEVICE WALL PENETRATIONS SHALL BE PATCHED AND PAINTED TO MATCH EXISTING WALL COLOR OR WALL COLOR PER ARCHITECT'S DIRECTION.

ELECTRICAL LEGEND:

(MOUNTING HEIGHTS ARE TO CENTERLINE OF DEVICE UON)

CONDUIT

HOMERUN TO PANELBOARD; REFER TO PANEL SCHEDULES FOR MINIMUM WIRE AND CONDUIT SIZES

BRANCH CIRCUIT CONDUIT AND WIRING CONCEALED IN CEILING OR WALL SPACE, OR SURFACE MOUNTED WHERE NO CEILING OR WALL SPACE EXISTS; REFER TO PANEL SCHEDULES FOR MINIMUM WIRE AND CONDUIT SIZES

BRANCH CIRCUIT CONDUIT AND WIRING IN SLAB, UNDER FLOOR OR UNDERGROUND; REFER TO PANEL SCHEDULES FOR MINIMUM WIRE AND CONDUIT SIZES

POWER

DISTRIBUTION PANELBOARD, SURFACE MOUNTED AT 6'-6" AFF TO TOP OF PANEL.

PANELBOARD; RECESSED, SURFACE MOUNTED; MOUNT AT 6'-6" AFF TO TOP OF PANEL.

PANELBOARD; RECESSED, SURFACE MOUNTED; MOUNT AT 5-6" AFF TO TOP OF PANEL.

PANELBOARD; RECESSED, SURFACE MOUNTED; MOUNT AT 5-6" AFF TO TOP OF PANEL.

SINGLE POLE MANUAL MOTOR STARTING SWITCH WITH HOA SWITCH; MOUNT AT 48" AFF IN NEMA 1 ENCLOSURE UON

MOTOR; AS NOTED

UNIT HEATER

SAFETY DISCONNECT SWITCH; FUSED, NONFUSED IN NEMA 1 ENCLOSURE UON; MOUNT AT 48" AFF UON; RATING AND FUSING AS NOTED

ENCLOSED CIRCUIT BREAKER IN NEMA 1 ENCLOSURE UON; MOUNT AT 5'-6" TO TOP AFF UON; SIZE AS NOTED

COMBINATION TYPE MOTOR STARTER; FVNR WITH CONTROL XFMR, RED AND GREEN INDICATING LIGHTS, HOA SELECTOR SWITCH AND CIRCUIT BREAKER DISCONNECT SWITCH IN NEMA 1 ENCLOSURE UON; MOUNT AT 5'-6" TO TOP AFF UON

JUNCTION BOX; CEILING, WALL MOUNTED

TO GROUND

EPO PUSHBUTTON, UON; MOUNT 48" AFF AS INDICATED

ELECTRICAL METER

SPD SURGE PROTECTION DEVICE

VSD VARIABLE FREQUENCY DRIVE FURNISHED UNDER DIVISION 15, INSTALLED UNDER DIVISION 16

TRANSFORMER

MISCELLANEOUS

1 REFERENCE TO DRAWING NOTE

#/E#.# DETAIL REFERENCE: DETAIL NUMBER/DRAWING NUMBER

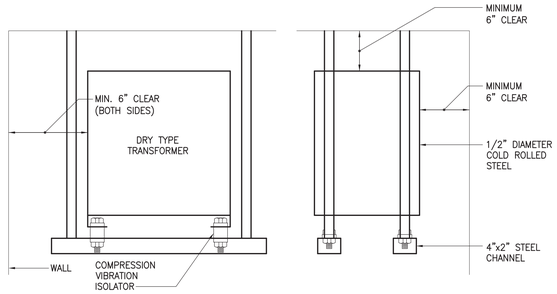
ITEMS SHOWN DASHED/HEAVY ARE TO BE REMOVED

ITEMS SHOWN SOLID/LIGHT ARE EXISTING TO REMAIN

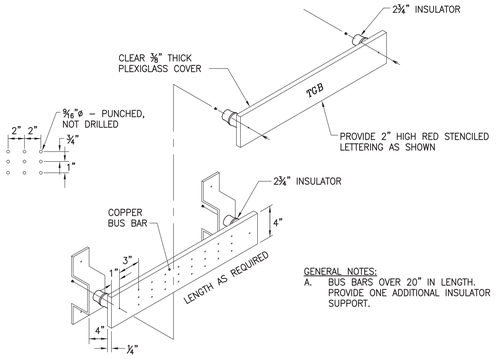
ITEMS SHOWN DASHED-DOTTED/LIGHT ARE TO OCCUR IN FUTURE PHASES

ABBREVIATIONS:

A	AMPERE, AMPERES
AFF	ABOVE FINISHED FLOOR
AHU	AIR HANDLING UNIT
AIC	AMPERE INTERRUPTING CAPACITY
ATS	AUTOMATIC TRANSFER SWITCH
AWG	AMERICAN WIRE GAUGE
CATV	CABLE TELEVISION
CCTV	CLOSED CIRCUIT TELEVISION
C	CONDUIT
CB	CIRCUIT BREAKER
DWG	DRAWING
ECB	ENCLOSED CIRCUIT BREAKER
EF	EXHAUST FAN
EPO	EMERGENCY POWER OFF
ETR	EXISTING TO REMAIN
EWC	ELECTRIC WATER COOLER
EX	EXISTING
FAAP	FIRE ALARM ANNUNCIATOR PANEL
FACP	FIRE ALARM CONTROL PANEL
FLA	FULL LOAD AMPERES
FSS	FUSED SAFETY SWITCH
G	GROUND
GFEP	GROUND FAULT EQUIPMENT PROTECTION
GFI	GROUND FAULT INTERRUPTING
HOA	HAND-OFF-AUTOMATIC
HP	HORSEPOWER
HWH	HOT WATER HEATER GENERATOR
IDF	INTERMEDIATE DISTRIBUTION FRAME
IMC	INTERMEDIATE METAL CONDUIT
KCMIL	THOUSAND CIRCULAR MILS
KVA	KILOVOLT-AMPERES
KW	KILOWATT
LRA	LOCKED ROTOR AMPERES
MCA	MINIMUM CIRCUIT AMPERES
MCB	MAIN CIRCUIT BREAKER
MDF	MAIN DISTRIBUTION FRAME
MLO	MAIN LUGS ONLY
MPOP	MAIN POINT OF PRESENCE
MSB	MAIN SWITCHBOARD
MTD	MOUNTED
MH	MOUNTING HEIGHT/MANHOLE
NEC	NATIONAL ELECTRICAL CODE
NEMA	NATIONAL ELECTRICAL MANUFACTURER'S ASSOCIATION
NF/SS	NONFUSED SAFETY SWITCH
NO	NUMBER
OC	ON CENTERS
P	POLE, POLES
ø	PHASE
PNL	PANEL
PVC	POLYVINYL CHLORIDE
RAF	RETURN AIR FAN
RGS	RIGID GALVANIZED STEEL
RX	REMOVE EXISTING
TYP	TYPICAL
TVSS	TRANSIENT VOLTAGE SURGE SUPPRESSOR
UH	UNIT HEATER
V	VOLT, VOLTS
VR	VANDALL RESISTANT
WP	WEATHERPROOF
W	WATTS, WIRE, WIRES
XFMR	TRANSFORMER
TTB	TELEPHONE TERMINAL BOARD
UTP	UNSHIELDED TWISTED PAIR
UON	UNLESS OTHERWISE NOTED

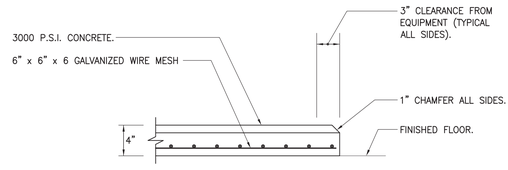


1 / E001 DETAIL – SUSPENDED MOUNTING OF DRY TYPE TRANSFORMER

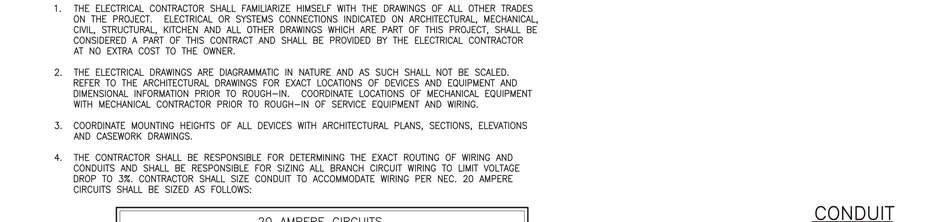


GENERAL NOTES:
A. BUS BARS OVER 20" IN LENGTH. PROVIDE ONE ADDITIONAL INSULATOR SUPPORT.

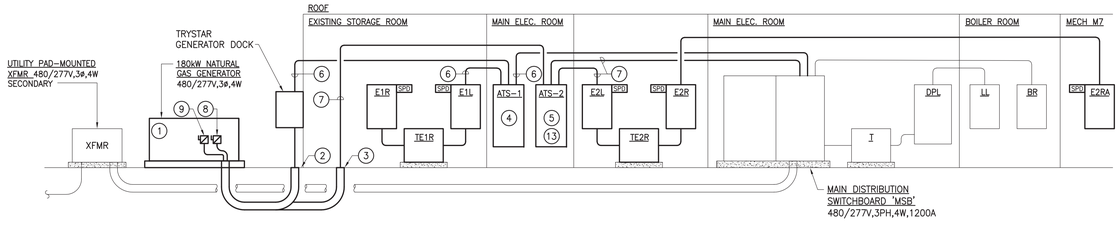
2 / E001 DETAIL–GROUNDING BUS BAR



3 / E001 DETAIL – CONCRETE HOUSEKEEPING PAD



PARTIAL SCHEMATIC POWER RISER DIAGRAM – DEMOLITION



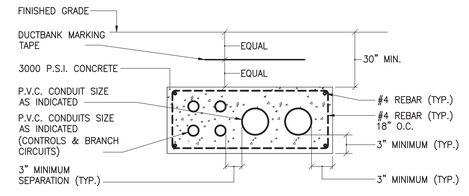
PARTIAL SCHEMATIC POWER RISER DIAGRAM – NEW WORK

GENERAL NOTES:

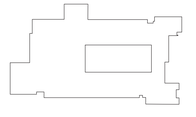
1. REFER TO PANEL SCHEDULES FOR ADDITIONAL INFORMATION.
2. PROVIDE TRANSFORMER PRIMARY DISCONNECTS, WHERE INDICATED, SIZED TO MATCH (OR EXCEED) THE RATING OF THE PRIMARY CB INDICATED ON THE DRY TYPE TRANSFORMER SCHEDULE.
3. CONTRACTOR SHALL REDUCE FEEDER SIZE (IF REQUIRED) WITHIN 5'-0 OF EQUIPMENT TO ACCOMMODATE LUG SIZES.
4. PROVIDE PLACARD POSTING THE AVAILABLE FAULT CURRENT AT THE MAIN SERVICE.
5. PROVIDE POWER RISER DIAGRAM, LAMINATED AND FRAMED 30" x 42" ON MYLAR AND COORDINATE LOCATION WITH OWNER IN MAIN ELECTRICAL ROOM.
6. ALL PANELBOARDS WITH 84-POLES OR LESS SHALL BE IN A SINGLE INTERIOR BACKBOX.
7. PROVIDE LABEL ON ALL TRANSFORMERS INDICATING WHERE IT IS SERVED FROM. LABEL SHALL COMPLY WITH NEC.
8. PANEL CIRCUIT BREAKER KNOCKOUTS SHALL NOT BE REMOVED UNLESS NEEDED FOR USED CIRCUITS.

RISER NOTES:

1. MOUNT GENERATOR OUTPUT CIRCUIT BREAKERS WITHIN GENERATOR ENCLOSURE.
2. GENERATOR DUCTBANK #1.
3. GENERATOR DUCTBANK #2.
4. 4P-100A, 42kA WITHSTAND RATING.
5. 4P-150A, 42kA WITHSTAND RATING.
6. (4) #3 + #8GW – 1-1/2"C.
7. (4) #1/0 + #6GW – 1-1/2"C
8. 3P-100A ELECTRONIC TRIP LSI-TYPE CIRCUIT BREAKER (LIFE SAFETY LOADS).
9. 3P-150A ELECTRONIC TRIP LSI-TYPE CIRCUIT BREAKER (STANDBY LOADS).
10. TEMPORARILY FEED ALL EXISTING LOADS ON THESE PANELS FROM CORRESPONDING E2 PANELS AND REMOVE EQUIPMENT. ONCE NEW GENERATOR AND ELECTRICAL INFRASTRUCTURE IS FULLY INSTALLED AND ACTIVE, RELOCATE CIRCUITS AS INDICATED ON PANEL SCHEDULES.
11. REMOVE EQUIPMENT ONCE NEW EMERGENCY INFRASTRUCTURE IS FULLY INSTALLED AND ACTIVE
12. MAINTAIN FEEDER/ FOR TEMPORARY CONNECTION TO ATS-2. MODIFY/EXTEND FEEDER AS REQUIRED.
13. TEMPORARILY CONNECT MAINTAINED FEEDER TO ATS-2 TO SERVE EXISTING EMERGENCY LOADS UNTIL NEW EMERGENCY ELECTRICAL SYSTEM IS FULLY INSTALLED AND ACTIVE.



4 / E001 DETAIL – GENERATOR DUCTBANK #1 & #2



KEY PLAN

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

8 0 8 16

REVISIONS

NO.	DATE	DESCRIPTION

"PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 37,988, EXPIRATION DATE: 12-13-2023."

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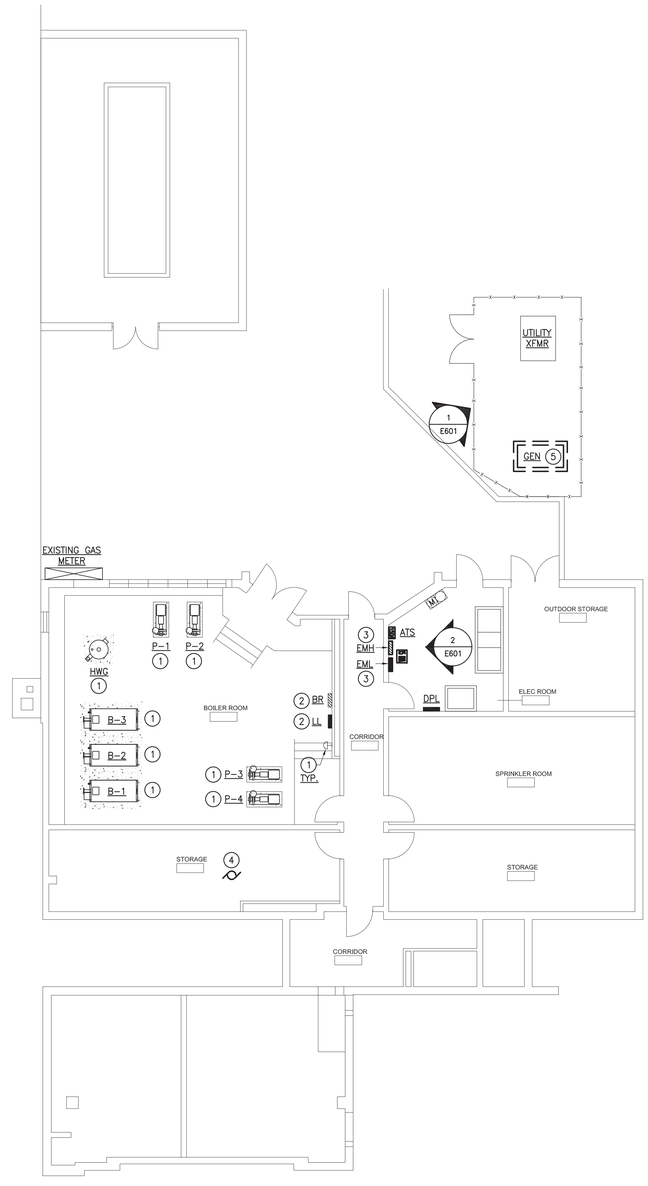
SILVER SPRING, MD 20902

PN#	22079
PROJECT MANAGER	DRH
DESIGNER	BSF

E001

BID SET
06-09-2023



BASEMENT PLAN – DEMOLITION

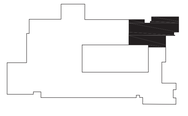
SCALE: 1/8" = 1'-0"

GENERAL NOTES:

1. REFER TO PANEL SCHEDULES FOR ADDITIONAL INFORMATION.
2. CONTRACTOR SHALL REDUCE FEEDER SIZE (IF REQUIRED) WITHIN 5'-0 OF EQUIPMENT TO ACCOMMODATE LUG SIZES.
3. ALL PANELBOARDS WITH 84-POLES OR LESS SHALL BE IN A SINGLE INTERIOR BACKBOX.
4. VERIFY APPROPRIATE BREAKERS ASSOCIATED WITH MECHANICAL EQUIPMENT TO BE ON EMERGENCY POWER ARE BEING RELOCATED TO EMERGENCY PANELS.

DRAWING NOTES:

1. RECIRCUIT DEVICE/EQUIPMENT AND ASSOCIATED ELECTRICAL APPURTENANCES TO INDICATED EMERGENCY PANEL. REFER TO PANEL SCHEDULES FOR MORE INFORMATION. MODIFY/EXTEND CIRCUIT AS REQUIRED.
2. PANEL WITH CIRCUITS TO BE RELOCATED TO EMERGENCY PANELS. REFER TO PANEL SCHEDULES FOR MORE INFORMATION.
3. RECIRCUIT ALL LIFE SAFETY BRANCH CIRCUITS (LIGHTING/FA) ON THIS PANEL TO NEW EMERGENCY E1 PANELS AND RECIRCUIT ALL NON-LIFE SAFETY BRANCH CIRCUITS ON THIS PANEL TO NEW EMERGENCY E2 PANELS. REFER TO PANEL SCHEDULES FOR MORE INFORMATION. MODIFY/EXTEND CIRCUIT AS REQUIRED.
4. UNDER ADD ALTERNATE #1, RX. FAN ON ROOF. MAINTAIN CIRCUIT FOR RECONNECTION OF NEW FAN. MODIFY/EXTEND CIRCUIT AS REQUIRED.
5. GENERATOR TO REMAIN ACTIVE AND RUNNING CURRENT EMERGENCY LOADS UNTIL NEW GENERATOR IS INSTALLED. ONCE NEW GENERATOR IS INSTALLED, RELOCATE REMAINING CIRCUITS TO NEW EMERGENCY PANELS AND REMOVE EXISTING GENERATOR, REMOVE EXISTING GAS IN ITS ENTIRETY TO GENERATOR, AND EXISTING EMERGENCY EQUIPMENT.



KEY PLAN

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

8 0 8 16

REVISIONS

NO.	DATE	DESCRIPTION

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ALBAN ENGINEERING, INC
303 INTERNATIONAL CIRCLE, SUITE 400
HUNT VALLEY, MD 21030
410.842.6411
www.albanengineering.com

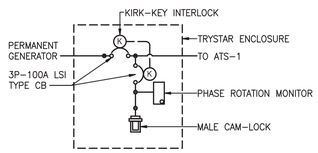
BASEMENT PLAN - DEMOLITION

OAKLAND TERRACE ES - EMERGENCY UPGRADE
SILVER SPRING, MD 20902

PN#	22079
PROJECT MANAGER	DRH
DESIGNER	BSF

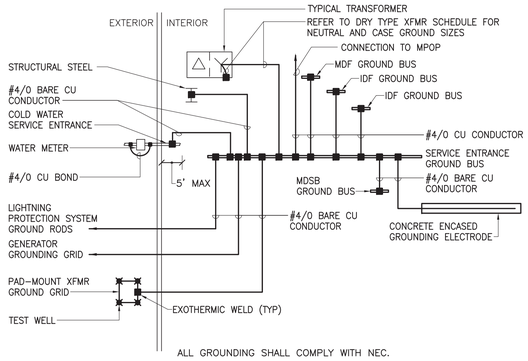
ED100

BID SET
06-09-2023



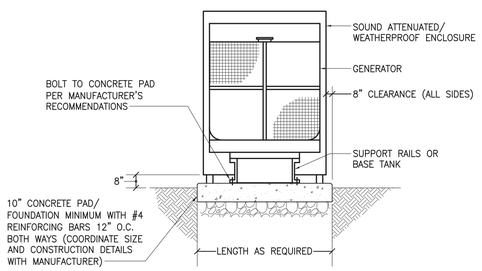
GENERATOR DOCKING STATION

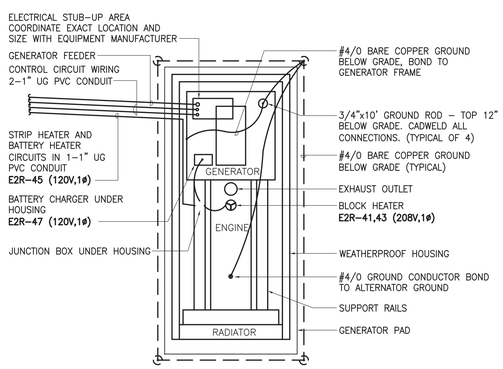
SCALE: NONE



PARTIAL GROUNDING SINGLE LINE SCHEMATIC DIAGRAM

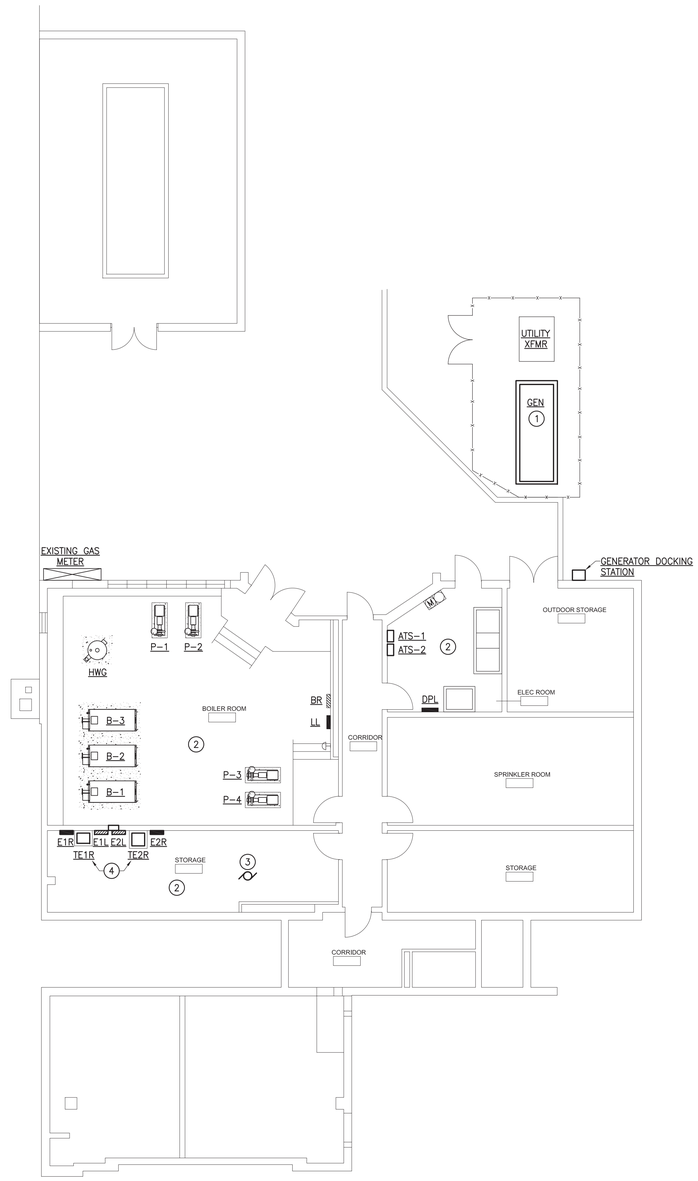
SCALE: NONE





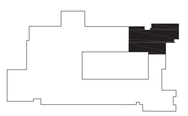
GENERATOR CONNECTION AND PAD DIAGRAMS

SCALE: NONE



BASEMENT PLAN

SCALE: 1/8" = 1'–0"



KEY PLAN

SCALE: 1/8" = 1'–0"

8 0 8 16

GENERAL NOTES:

1. REFER TO PANEL SCHEDULES FOR ADDITIONAL INFORMATION.
2. CONTRACTOR SHALL REDUCE FEEDER SIZE (IF REQUIRED) WITHIN 5'–0 OF EQUIPMENT TO ACCOMMODATE LUG SIZES.
3. ALL PANELBOARDS WITH 84–POLES OR LESS SHALL BE IN A SINGLE INTERIOR BACKBOX.
4. VERIFY APPROPRIATE BREAKERS ASSOCIATED WITH MECHANICAL EQUIPMENT TO BE ON EMERGENCY POWER ARE BEING RELOCATED TO EMERGENCY PANELS.
5. ALL NEW EMERGENCY RECEPTACLES SHALL BE TAMPER–PROOF AND RED IN COLOR.
6. RECIRCUIT ALL RESTROOM LIGHTING FIXTURES AND CONTROLS TO BE SERVED FROM ASSOCIATED E1 PANEL. MODIFY/EXTEND CIRCUIT AS REQUIRED
7. RECIRCUIT ALL FIRE ALARM BRANCH CIRCUITS ON NORMAL PANELS TO BE SERVED FROM ASSOCIATED E1 PANEL. MODIFY/EXTEND CIRCUIT AS REQUIRED.

DRAWING NOTES:

(1) NEW CONCRETE PAD TO BE POURED TO ACCOMODATE NEW GENERATOR.

(2) RECIRCUIT ALL LIGHITNG FIXTURES AND CONTROLS IN THIS ROOM TO BE SERVED FROM ASSOCIATED E1 PANEL. MODIFY/EXTEND CIRCUIT AS REQUIRED.

(3) UNDER ADD ALTERNATE #1, NEW FAN ON ROOF. RECONNECT TO CIRCUIT MAINTAINED DURING DEMOLITION. MAKE ALL CONNECTIONS TO DISCONNECT PROVIDED WITH UNIT.

(4) TRANSFORMERS MAY BE STACKED IF SPACE REQUIREMENTS CANNOT BE MET WITH PROPOSED LOCATIONS. REFER TO DETAIL ON E001.

REVISIONS

NO.	DATE	DESCRIPTION

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ALBAN ENGINEERING, INC
303 INTERNATIONAL CIRCLE, SUITE 450
HUNT VALLEY, MD 21030
410.842.6411
www.albanengineering.com

BASEMENT PLAN

OAKLAND TERRACE ES – EMERGENCY UPGRADE
SILVER SPRING, MD 20902

PN#	22079
PROJECT MANAGER	DRH
DESIGNER	BSF

E100

BID SET
06–09–2023

GENERAL NOTES:

1. REFER TO PANEL SCHEDULES FOR ADDITIONAL INFORMATION.
2. CONTRACTOR SHALL REDUCE FEEDER SIZE (IF REQUIRED) WITHIN 5'-0 OF EQUIPMENT TO ACCOMMODATE LUG SIZES.
3. ALL PANELBOARDS WITH 84-POLES OR LESS SHALL BE IN A SINGLE INTERIOR BACKBOX.
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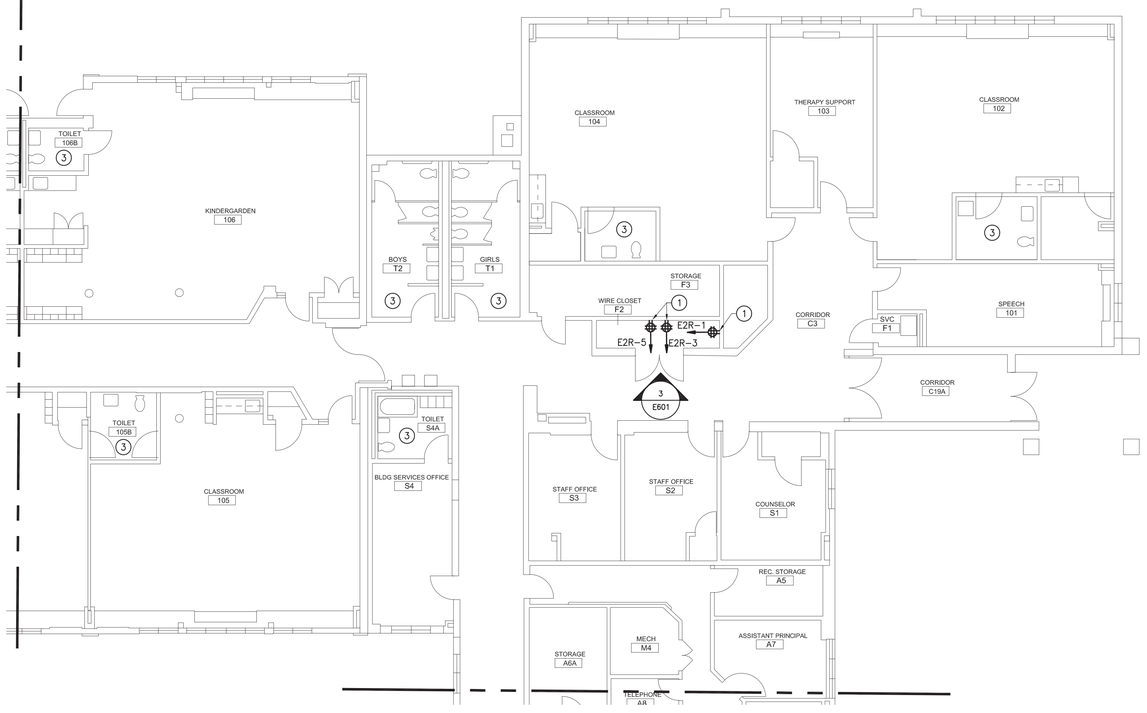
5. ALL NEW EMERGENCY RECEPTACLES SHALL BE TAMPER-PROOF AND RED IN COLOR.
6. RECIRCUIT ALL RESTROOM LIGHTING FIXTURES AND CONTROLS TO BE SERVED FROM ASSOCIATED E1 PANEL. MODIFY/EXTEND CIRCUIT AS REQUIRED
7. RECIRCUIT ALL FIRE ALARM BRANCH CIRCUITS ON NORMAL PANELS TO BE SERVED FROM ASSOCIATED E1 PANEL. MODIFY/EXTEND CIRCUIT AS REQUIRED.

DRAWING NOTES:

(1) MOUNT TO SUIT DATA RACKS.

(2) NOT USED.

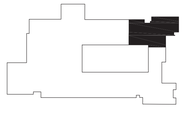
(3) RECIRCUIT ALL LIGHITNG FIXTURES AND CONTROLS IN THIS ROOM TO BE SERVED FROM ASSOCIATED E1 PANEL. MODIFY/EXTEND CIRCUIT AS REQUIRED.



MATCHLINE – AREA B

PARTIAL FLOOR PLAN – AREA A

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



KEY PLAN

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

8 0 8 16

REVISIONS		
NO.	DATE	DESCRIPTION

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ALBAN ENGINEERING, INC
303 INTERNATIONAL CIRCLE, SUITE 400
HUNT VALLEY, MD 21030
410.842.6411
www.albanengineering.com

PARTIAL FLOOR PLAN – AREA A

OAKLAND TERRACE ES – EMERGENCY UPGRADE
SILVER SPRING, MD 20902

PN#	22079
PROJECT MANAGER	DRH
DESIGNER	BSF

E101

BID SET
06-09-2023

GENERAL NOTES:

1. REFER TO PANEL SCHEDULES FOR ADDITIONAL INFORMATION.
2. CONTRACTOR SHALL REDUCE FEEDER SIZE (IF REQUIRED) WITHIN 5'-0 OF EQUIPMENT TO ACCOMMODATE LUG SIZES.
3. ALL PANELBOARDS WITH 84-POLES OR LESS SHALL BE IN A SINGLE INTERIOR BACKBOX.
4. VERIFY APPROPRIATE BREAKERS ASSOCIATED WITH MECHANICAL EQUIPMENT TO BE ON EMERGENCY POWER ARE BEING RELOCATED TO EMERGENCY PANELS.
5. ALL NEW EMERGENCY RECEPTACLES SHALL BE TAMPER-PROOF AND RED IN COLOR.
6. RECIRCUIT ALL RESTROOM LIGHTING FIXTURES AND CONTROLS TO BE SERVED FROM ASSOCIATED E1 PANEL. MODIFY/EXTEND CIRCUIT AS REQUIRED
7. RECIRCUIT ALL FIRE ALARM BRANCH CIRCUITS ON NORMAL PANELS TO BE SERVED FROM ASSOCIATED E1 PANEL. MODIFY/EXTEND CIRCUIT AS REQUIRED.

DRAWING NOTES:

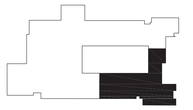
1. MOUNT TO SUIT HEALTH REFRIGERATOR.
2. IF NO EXISTING FIXTURE IS ON EMERGENCY POWER IN THE ADMIN RECEPTION, CIRCUIT (1) FIXTURE TO NEAREST EMERGENCY CIRCUIT WITH (2)#12 + #12GW - 3/4"C.
3. RECIRCUIT ALL LIGHITNG FIXTURES AND CONTROLS IN THIS ROOM TO BE SERVED FROM ASSOCIATED E1 PANEL. MODIFY/EXTEND CIRCUIT AS REQUIRED.
4. PANEL WITH CIRCUITS TO BE RELOCATED TO EMERGENCY PANELS. REFER TO PANEL SCHEDULES FOR MORE INFORMATION.
5. MOUNT TO SUIT EXISTING PA SYSTEM. COORDINATE EXACT LOCATION IN FIELD.
6. WALK-IN COOLER.
7. WALK-IN FREEZER.

MATCHLINE - AREA A

MATCHLINE - AREA C

PARTIAL FLOOR PLAN - AREA B

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



KEY PLAN

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

8 0 8 16

REVISIONS

NO.	DATE	DESCRIPTION

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HUNT VALLEY, MD 21030
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www.albanengineering.com

PARTIAL FLOOR PLAN - AREA B

OAKLAND TERRACE ES - EMERGENCY UPGRADE
SILVER SPRING, MD 20902

PN#	22079
PROJECT MANAGER	DRH
DESIGNER	BSF

E102

BID SET
06-09-2023

GENERAL NOTES:

1. REFER TO PANEL SCHEDULES FOR ADDITIONAL INFORMATION.
2. CONTRACTOR SHALL REDUCE FEEDER SIZE (IF REQUIRED) WITHIN 5'-0 OF EQUIPMENT TO ACCOMMODATE LUG SIZES.
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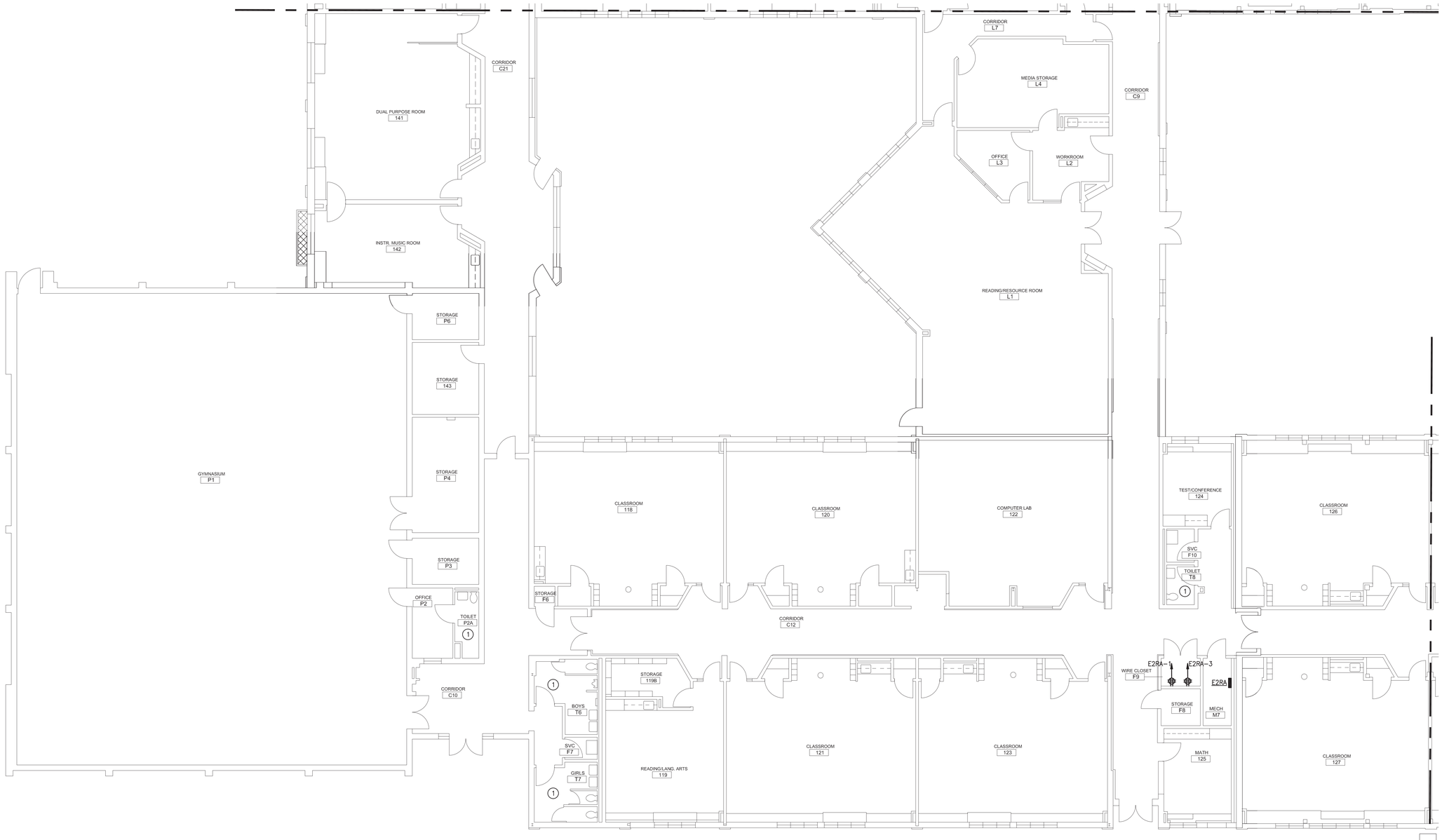
7. RECIRCUIT ALL FIRE ALARM BRANCH CIRCUITS ON NORMAL PANELS TO BE SERVED FROM ASSOCIATED E1 PANEL. MODIFY/EXTEND CIRCUIT AS REQUIRED.

DRAWING NOTES:

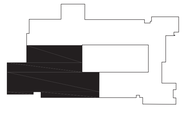
(1) RECIRCUIT ALL LIGHITNG FIXTURES AND CONTROLS IN THIS ROOM TO BE SERVED FROM ASSOCIATED E1 PANEL. MODIFY/EXTEND CIRCUIT AS REQUIRED.

MATCHLINE - AREA D



PARTIAL FLOOR PLAN - AREA C

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



KEY PLAN

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

8 0 8 16

REVISIONS		
NO.	DATE	DESCRIPTION

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303 INTERNATIONAL CIRCLE, SUITE 150
HUNT VALLEY, MD 21030
410.842.6411
www.albanengineering.com

PARTIAL FLOOR PLAN - AREA C

OAKLAND TERRACE ES - EMERGENCY UPGRADE
SILVER SPRING, MD 20902

PN#	22079
PROJECT MANAGER	DRH
DESIGNER	BSF

E103

BID SET
06-09-2023

GENERAL NOTES:

1. REFER TO PANEL SCHEDULES FOR ADDITIONAL INFORMATION.
2. CONTRACTOR SHALL REDUCE FEEDER SIZE (IF REQUIRED) WITHIN 5'-0 OF EQUIPMENT TO ACCOMMODATE LUG SIZES.
3. ALL PANELBOARDS WITH 84-POLES OR LESS SHALL BE IN A SINGLE INTERIOR BACKBOX.
4. VERIFY APPROPRIATE BREAKERS ASSOCIATED WITH MECHANICAL EQUIPMENT TO BE ON EMERGENCY POWER ARE BEING RELOCATED TO EMERGENCY PANELS.
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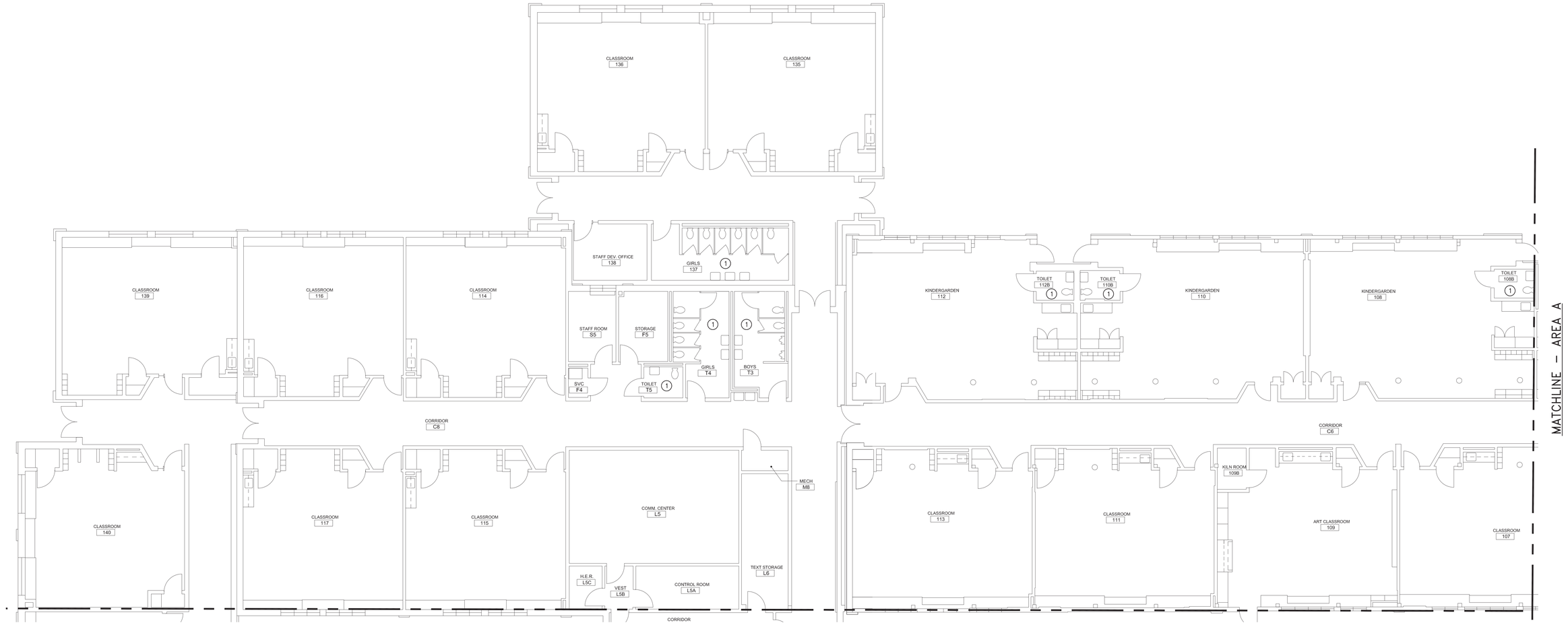
6. RECIRCUIT ALL RESTROOM LIGHTING FIXTURES AND CONTROLS TO BE SERVED FROM ASSOCIATED E1 PANEL. MODIFY/EXTEND CIRCUIT AS REQUIRED
7. RECIRCUIT ALL FIRE ALARM BRANCH CIRCUITS ON NORMAL PANELS TO BE SERVED FROM ASSOCIATED E1 PANEL. MODIFY/EXTEND CIRCUIT AS REQUIRED.

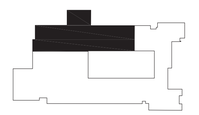
DRAWING NOTES:

(1) RECIRCUIT ALL LIGHITNG FIXTURES AND CONTROLS IN THIS ROOM TO BE SERVED FROM ASSOCIATED E1 PANEL. MODIFY/EXTEND CIRCUIT AS REQUIRED.



PARTIAL FLOOR PLAN – AREA D

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



KEY PLAN

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

8 0 8 16

REVISIONS			
NO.	DATE	DESCRIPTION	

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PARTIAL FLOOR PLAN – AREA D

OAKLAND TERRACE ES – EMERGENCY UPGRADE
SILVER SPRING, MD 20902

PN#	22079
PROJECT MANAGER	DRH
DESIGNER	BSF

E104

BID SET
06-09-2023

1 / E601 GENERATOR & UTILITY TRANSFORMER

2 / E601 NEW EMERGENCY PANEL LOCATION

MAIN SWITCHBOARD

3 / E601 MDF ROOM

MSB

MOUNTING: FREE STANDING	A.I.C. RATING: 65,000	LOCATION: MAIN ELEC RM
VOLTAGE: 480/277V, 3ø, 4 WIRE	1200 AMPERE MAIN BUS	1600 AMPERE MAIN CIRCUIT BREAKER

DISTRIBUTION SECTION

FDR NO	SERVES	CIRCUIT BREAKER P	FRAME	TRIP	WIRING SETS	NO	SIZE	GND	C	REMARKS	CONN KVA
1	SPACE	3									
2	TRANSFORMER 1	3	300								
3	PANEL HD	3	400								
4	CHILLER	3	500								
5	BLANK										
6	BLANK										
7	EXISTING CIRCUIT	3	250								
8	PANEL BR	3	225								
9	PANEL HC	3	225								
10	PANEL HA	3	125								
11	PANEL HB	3	125								
12	**PANEL E1L (VIA ATS-1)**	**3**	**100**	**100**	**1**	**4**	**3**	**8**	**1-1/2**		**11.4**
13	**PANEL E2L (VIA ATS-2)**	**3**	**150**	**150**	**1**	**4**	**1/0**	**6**	**1-1/2**		**76.7**
14	SPACE	3									
15	SPACE	3									
16	SPACE	3									
17	SPACE	3									
18	PANEL EMH	3	40								
19	EXISTING CIRCUIT	3	80								
20											
21											
22											

PROVIDE GROUND FAULT PROTECTION AT MAIN CIRCUIT BREAKER — TOTAL CONNECTED LOAD: 88.1 KVA

DRY TYPE TRANSFORMER SCHEDULE

XFMR	KVA	PRIMARY VOLTAGE	PRIMARY ø	PRIMARY CB	PRIMARY WIRING	SECONDARY WIRING	SECONDARY VOLTAGE	SECONDARY ø	SECONDARY CB	NEUTRAL/CASE GND	REMARKS	MOUNTING DISCRIPTION
TE1R	15	480	3	30	3#10+#10GW-3/4"C	4#6+#10GW-1 1/4"C	208/120	3	60	#8		SUSPENDED
TE2R	45	480	3	90	3#3+#8GW-1 1/4"C	4#1/0+#6GW-2"C	208/120	3	150	#6		FLOOR

FUSED PANEL E1L

MOUNTING: SURFACE
VOLTAGE: 480/277V,3ø,4W — **RELOCATED CIRCUIT FROM PANEL EMH — LOCATION: ELECTRICAL ROOM
100 AMPERE BUS — 100 A MCB — 100% RATED NEUTRAL BUS — 42,000 A.I.C.

CONN KVA	CKT	DESCRIPTION	BREAKER P	AMPS	NO	WIRING SIZE	GND	C	CKT	DESCRIPTION	BREAKER P	AMPS	NO	WIRING SIZE	GND	C	CONN KVA
1.8	1	E. LTG - 1ST FLOOR**	1	20	2	12	12	3/4	2	PANEL E1R (VIA XFMR TE1R)	3	30	REFER TO XFMR SCHEDULE				1.5
1.8	3	E. LTG - BASEMENT**	1	20	2	12	12	3/4	4								1.1
1.8	5	E. LTG - NEW A/B SECT**	1	20	2	12	12	3/4	6								1.1
	7								8	LTG - ADMIN	1	20	2	12	12	3/4	1.0
	9								10	LTG - ADMIN	1	20	2	12	12	3/4	1.0
	11								12								
	13								14								
	15								16								
	17								18								
	19								20								
	21								22								
	23								24								
	25								26								
	27								28								
	29								30								
	31								32								
	33								34								
	35								36								
	37								38								0.1
	39								40	SPD	3	30	4	10	10	3/4	0.1
	41								42								0.1

TOTAL CONNECTED LOAD: 11.4 KVA — KVA PER PHASE: A 4.4 B 4.0 C 3.0

PANEL E2L

*RELOCATED CIRCUIT FROM PANEL EMH — **RELOCATED CIRCUIT FROM PANEL BR — MOUNTING: SURFACE
VOLTAGE: 480/277V,3ø,4W — LOCATION: ELECTRICAL ROOM
150 AMPERE BUS — 150 A MCB — 100% RATED NEUTRAL BUS — 42,000 A.I.C.

CONN KVA	CKT	DESCRIPTION	BREAKER P	AMPS	NO	WIRING SIZE	GND	C	CKT	DESCRIPTION	BREAKER P	AMPS	NO	WIRING SIZE	GND	C	CONN KVA
9.0	1								2								0.0
9.0	3	P-1**	3	70	3	4	8	1-1/4	4	P-2**	3	70	3	4	8	1-1/4	0.0
9.0	5								6								0.0
3.8	7								8								0.0
3.8	9	P-3**	3	30	3	10	10	3/4	10	P-4**	3	30	3	10	10	3/4	0.0
3.8	11								12								0.0
1.0	13	POWER METER*	1	20	2	12	12	3/4	14								
1.0	15	POWER METER*	1	20	2	12	12	3/4	16								
1.0	17	POWER METER*	1	20	2	12	12	3/4	18								
	19								20								
	21								22								
	23								24								
	25								26								
	27								28								
	29								30								
	31								32								
	33								34								
	35								36								
12.3	37	PANEL E2R (VIA XFMR TE2R)	3	90	REFER TO XFMR SCHEDULE				38								0.1
13.0	39								40	SPD	3	30	4	10	10	3/4	0.1
9.7	41								42								0.1

TOTAL CONNECTED LOAD: 76.7 KVA — KVA PER PHASE: A 26.2 B 26.9 C 23.6

FUSED PANEL E1R

MOUNTING: SURFACE
VOLTAGE: 208/120V,3ø,4W — **RELOCATED CIRCUIT FROM PANEL EML — LOCATION: ELECTRICAL ROOM
100 AMPERE BUS — 60 A MCB — 100% RATED NEUTRAL BUS — 42,000 A.I.C.

CONN KVA	CKT	DESCRIPTION	BREAKER P	AMPS	NO	WIRING SIZE	GND	C	CKT	DESCRIPTION	BREAKER P	AMPS	NO	WIRING SIZE	GND	C	CONN KVA
1.4	1	FA SYSTEM**	1	20	2	12	12	3/4	2								
1.0	3	LTG - ADMIN	1	20	2	12	12	3/4	4								
1.0	5	LTG - ADMIN	1	20	2	12	12	3/4	6								
	7								8								
	9								10								
	11								12								
	13								14								
	15								16								
	17								18								
	19								20								
	21								22								
	23								24								
	25								26								
	27								28								
	29								30								
	31								32								
	33								34								
	35								36								
	37								38								0.1
	39								40	SPD	3	30	4	10	10	3/4	0.1
	41								42								0.1

TOTAL CONNECTED LOAD: 3.7 KVA — KVA PER PHASE: A 1.5 B 1.1 C 1.1

PANEL E2R

*RELOCATED CIRCUIT FROM PANEL EML — **RELOCATED FROM PANEL LL — ***RELOCATED FROM PANEL K — MOUNTING: SURFACE
VOLTAGE: 208/120V,3ø,4W — LOCATION: ELECTRICAL ROOM
150 AMPERE BUS — 150 A MCB — 100% RATED NEUTRAL BUS — 42,000 A.I.C.

CONN KVA	CKT	DESCRIPTION	BREAKER P	AMPS	NO	WIRING SIZE	GND	C	CKT	DESCRIPTION	BREAKER P	AMPS	NO	WIRING SIZE	GND	C	CONN KVA
1.2	1	QUAD - IT ROOM	1	20	2	12	12	3/4	2	REC - HEALTH FRIDGE	1	20	2	12	12	3/4	1.0
1.2	3	QUAD - IT ROOM	1	20	2	12	12	3/4	4	BOILER-1**	1	25	2	10	10	3/4	2.0
1.2	5	QUAD - IT ROOM	1	20	2	12	12	3/4	6	BOILER-2**	1	25	2	10	10	3/4	2.0
0.5	7	EPO - BOILER ROOM**	1	20	2	12	12	3/4	8	BOILER-3**	1	25	2	10	10	3/4	2.0
0.6	9	HWG**	1	20	2	12	12	3/4	10	WATER CIRC PUMP***	1	20	2	12	12	3/4	0.8
0.8	11	HEAT TRACE DOAS-1*	1	20	2	12	12	3/4	12	SECURITY REC 1ST FLR*	1	20	2	12	12	3/4	0.4
0.8	13	HEAT TRACE DOAS-2*	1	20	2	12	12	3/4	14	SECURITY REC 1ST FLR*	1	20	2	12	12	3/4	0.4
0.5	15	HEAT TAPE COOLER***	1	20	2	12	12	3/4	16	SOUND RACK*	1	20	2	12	12	3/4	0.8
0.5	17	HEAT TAPE FREEZER***	1	20	2	12	12	3/4	18	SECURITY REC BSMT*	1	20	2	12	12	3/4	0.4
0.5	19	FREEZER LIGHTS***	1	20	2	12	12	3/4	20	REC - TELE EQUIP*	1	20	2	12	12	3/4	0.8
1.0	21	WALK-IN COOLER***	1	20	2	12	12	3/4	22								1.0
0.5	23	COOLER LIGHTS***	1	20	2	12	12	3/4	24	COOLER COMPRESSOR***	3	20	3	12	12	3/4	1.0
0.5	25	FREEZER FAN***	2	20	2	12	12	3/4	26								1.0
0.5	27								28								1.0
0.8	29	FREEZER HEAT TAPE***	3	20	3	12	12	3/4	30	COOLER COMPRESSOR***	3	20	3	12	12	3/4	1.0
0.8	31								32								1.0
0.8	33								34	PA SYSTEM	1	20	2	12	12	3/4	1.0
	35								36								
	37								38								
	39								40								
0.5	41	GEN BLOCK HEATER	2	20	2	12	12	3/4	42								
0.5	43								44								
0.5	45	STIP/BATTERY HEATER	1	20	2	12	12	3/4	46								
0.5	47	GEN BATTERY CHARGER	1	20	2	12	12	3/4	48								
1.2	49								50								0.1
1.2	51	PANEL E2RA	3	50	4	6	10	1	52	SPD	3	30	4	10	10	3/4	0.1
0.0	53								54								0.1

TOTAL CONNECTED LOAD: 35.0 KVA — KVA PER PHASE: A 12.3 B 13.0 C 9.7

PANEL E2RA

MOUNTING: SURFACE
VOLTAGE: 208/120V,3ø,4W — LOCATION: ELECTRICAL ROOM
100 AMPERE BUS — 50 A MCB — 100% RATED NEUTRAL BUS — 42,000 A.I.C.

CONN KVA	CKT	DESCRIPTION	BREAKER P	AMPS	NO	WIRING SIZE	GND	C	CKT	DESCRIPTION	BREAKER P	AMPS	NO	WIRING SIZE	GND	C	CONN KVA
1.2	1	QUAD - IT ROOM	1	20	2	12	12	3/4	2								
1.2	3	QUAD - IT ROOM	1	20	2	10	10	3/4	4								
	5								6								
	7								8								
	9								10								
	11								12								
	13								14								
	15								16								
	17								18								
	19								20								
	21								22	SPD	3	30	4	10	10	3/4	
	23								24								

TOTAL CONNECTED LOAD: 2.4 KVA — KVA PER PHASE: A 1.2 B 1.2 C 0.0

REVISIONS

NO.	DATE	DESCRIPTION

"PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 37411, EXPIRATION DATE: 12-13-2023."

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PANEL SCHEDULES AND PICTURES

OAKLAND TERRACE ES - EMERGENCY UPGRADE
SILVER SPRING, MD 20902

PN# 22079
PROJECT MANAGER: DRH
DESIGNER: BSF

E601

BID SET
06-09-2023

PLUMBING GENERAL NOTES:

A. COORDINATE NEW WORK BETWEEN ALL DISCIPLINES.

B. REFER TO SECTIONS ON ARCHITECTURAL AND MECHANICAL DRAWINGS FOR PIPE ROUTING THROUGH THE FACILITY.

C. COORDINATE PLUMBING PIPING ENCLOSURES WITH ARCHITECTURAL DRAWINGS PRIOR TO SETTING PIPING BELOW SLABS.

D. FIELD VERIFY PIPING MATERIALS AND SIZES PRIOR TO CONNECTION THERETO.

E. INSTALL PIPING TO ALLOW ACCESS TO VALVES.

J. WHERE HOT AND COLD WATER PIPING DROPS INTO PIPE CHASE, THE SIZE SHOWN FOR THE PIPE DROPS SHALL BE USED TO THE LAST FIXTURE.

K. ITEMS SUCH AS ACCESS DOORS, RISE AND DROPS IN PIPING, ETC., ARE INDICATED ON THE DRAWINGS FOR CLARITY OR A SPECIFIC LOCATION REQUIREMENT AND SHALL NOT BE INTERPRETED AS THE EXTENT OF THE REQUIREMENTS FOR THESE ITEMS. THE CONTRACTOR IS RESPONSIBLE FOR THESE ITEMS AS REQUIRED ELSEWHERE IN THE CONTRACT DOCUMENTS.

L. FIXTURES SUBJECT TO INTERMITTENT OR CONTINUOUS PRESSURE BACK-SIPHONAGE SHALL BE PROVIDED WITH A BACKFLOW PREVENTION DEVICE.

M. COORDINATE SETTING OF KITCHEN FLOOR SINKS AND FLOOR DRAINS WITH LOCAL PLUMBING INSPECTOR.

N. ALL PIPING NOT INDICATED IN CHASES SHALL BE LOCATED ABOVE CEILING AS HIGH AS POSSIBLE. COORDINATE ROUTING OF PIPING WITH OTHER DISCIPLINES.

O. REFER TO ALL ARCHITECTURAL DRAWINGS FOR RATED WALL ASSEMBLY LOCATIONS.

MISCELLANEOUS

(1) REFERENCE TO DRAWING NOTE

#/P#.# DETAIL REFERENCE: DETAIL NUMBER/DRAWING NUMBER

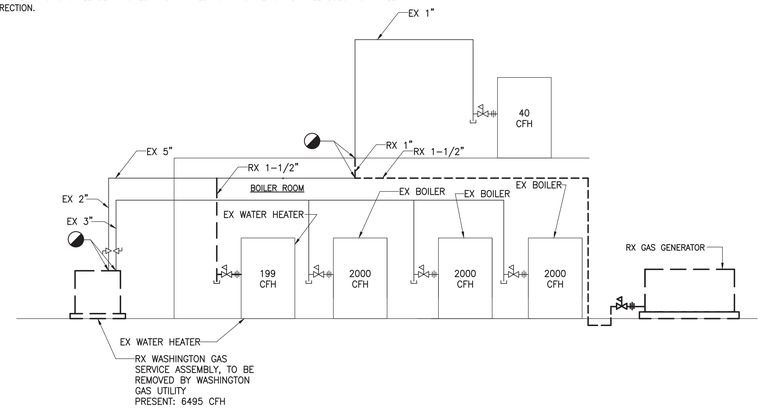
ITEMS SHOWN DASHED/HEAVY ARE TO BE REMOVED

ITEMS SHOWN SOLID/LIGHT ARE EXISTING TO REMAIN

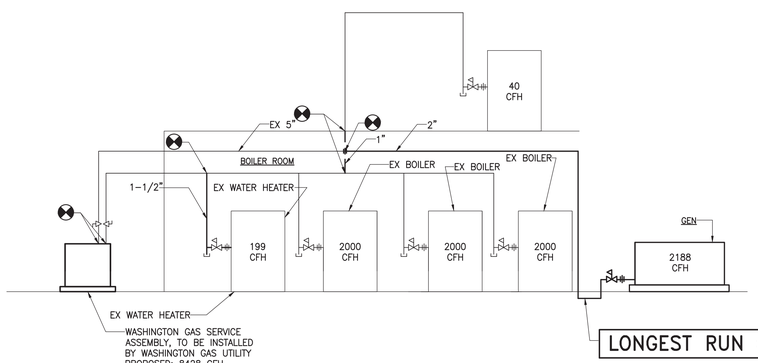
ITEMS SHOWN DASHED-DOTTED/LIGHT ARE TO OCCUR IN FUTURE PHASES

DEMOLITION NOTES:

1. DEMOLITION DRAWINGS ARE DIAGRAMMATIC IN NATURE; NO ATTEMPT HAS BEEN MADE TO SHOW ALL EXISTING MECHANICAL/PLUMBING WORK IN AREAS INDICATED TO BE RENOVATED. ALL EXISTING MECHANICAL/PLUMBING WORK IS TO REMOVED UNLESS OTHERWISE NOTED. WHEN AN ITEM TO BE REMOVED, REMOVE ALL ASSOCIATED MECHANICAL/PLUMBING WORK BACK TO POINT-OF-SOURCE.
2. WHERE WORK PASSES THROUGH THE RENOVATION AREA TO SERVE OTHER PORTIONS OF THE BUILDING, OR WORK IN THE RENOVATION AREA INDICATED TO BE REMAIN, IT SHALL BE SUITABLY RELOCATED AND THE SYSTEMS RESTORED TO NORMAL. COORDINATE ANY OUTAGES WITH OWNER 7 DAYS IN ADVANCE.
3. WORK INDICATED TO REMAIN SHALL BE SUITABLY PROTECTED AGAINST DAMAGE.
4. COORDINATE ALL DEMOLITION AND CONSTRUCTION ACTIVITIES WITH THE OWNER TO MINIMIZE DISRUPTION OF THE NORMAL DAILY FUNCTIONING OF THE OWNERS OCCUPIED AREAS.
5. REMOVE AND REINSTALL ALL EXISTING CEILING MOUNTED DEVICES INDICATED TO REMAIN AS REQUIRED TO SUIT NEW CEILING INSTALLATION.
6. ALL REMOVED DEVICE WALL PENETRATIONS SHALL BE PATCHED AND PAINTED TO MATCH EXISTING WALL COLOR OR WALL COLOR PER ARCHITECT'S DIRECTION.



PARTIAL SCHEMATIC NATURAL GAS PIPING RISER DIAGRAM – DEMOLITION



1. THE CONTRACTOR SHALL VERIFY ALL CAPACITIES AND PIPE SIZES.
2. PAINT ALL GAS PIPING YELLOW.
3. GAS PIPING SIZED PER 2018 IFGC TABLE 402.4(5).

PARTIAL SCHEMATIC NATURAL GAS PIPING RISER DIAGRAM – NEW WORK

LEGEND

SYMBOLS

SYMBOL	DEFINITION
	COLD WATER
	TEMPERED WATER (110°)
	TEMPERED WATER RETURN (110°)
	140° DOMESTIC HOT WATER
	140° DOMESTIC HOT WATER RETURN
T	TEMPERED WATER
F	FIRE LINE
SP	SPRINKLER LINE
	SANITARY
	VENT
	STORM WATER
PD	PUMPED DISCHARGE
COND	CONDENSATE DRAIN
	FOUNDATION DRAIN
AW	ACID RESISTANT WASTE
AV	ACID RESISTANT VENT
C	COMPRESSED AIR
	BALL VALVE
	PIPING BELOW GRADE OR SLAB
	BUTTERFLY VALVE
	UNION
	GATE VALVE
	GLOBE VALVE
	BALANCING VALVE
	PLUG VALVE
	REDUCED PRESS. BACKFLOW PREVENTER
	PRESSURE REDUCING VALVE
	CHECK VALVE
	DOUBLE DETECTOR CHECK VALVE
	BACKWATER VALVE
	FLOOR CLEANOUT
	WALL CLEANOUT
	PIPE UP
	PIPE UP & DOWN
	PIPE DOWN
	SIGHT GLASS
	FLOAT VALVE
	FLOOR DRAIN
	FLOOR DRAIN WITH TRAP PRIMER
	PRESSURE GAUGE W/ NEEDLE VALVE
Ø	DIAMETER (OR ELECTRICAL PHASE)
	BACK WATER VALVE W/ ACCESS COVER
	SOLENOID VALVE
-%	SLOPE OF PIPE (WITH % OF SLOPE SHOWN)
	DIRECTION OF FLOW
	FUNNEL CONNECTION @ FLOOR DRAIN
S-A-1	SANITARY/WATER RISER DESIGNATION

SYMBOLS

SYMBOL	DEFINITION
	FLOOR SINK
(#)	ROOF DRAIN (W/ SQ.FT INDICATED)
	TRAP (ELEVATION)
	VENT THROUGH ROOF (ELEVATION)
	VENT THROUGH ROOF (PLAN)
	MIXING VALVE
	METER (FLUID OR GAS)
"	INCHES
'	FEET
	HOSE BIBB (PLAN)
	NON-FREEZE WALL HYDRANT
	HOSE BIBB (ELEV.)
	HOSE END DRAIN
TS	OUTSIDE STEM & YOKE VALVE
TS	NON-RISING STEM & YOKE
FS	FLOW SWITCH
TS	TAMPER SWITCH
PS	PRESSURE SWITCH
	FIRE DEPT HOSE CONNECTION
FS	FLOOR CONTROL VALVE ASSEMBLY
	'Y' STRAINER
	WATER HAMMER ARRESTOR
	ACCESS PANEL
	POINT OF CONN. TO SITE UTILITIES
	SQUARE FOOTAGE
	DUPLEX GAS OUTLET
	ECCENTRIC REDUCER
	CONCENTRIC REDUCER
	FLEXIBLE CONNECTION
	CAPPED PIPE
	BLIND FLANGE
	MANUAL AIR VENT
	AUTOMATIC AIR VENT
	BLOW DOWN VALVE (W/HOSE END)
	PRESSURE/TEMP. RELIEF VALVE
ΔP	PRESSURE DIFFERENCE
ΔT	TEMPERATURE DIFFERENCE
	CENTER LINE
	THERMOMETER

NOTE: NOT ALL SYMBOLS MAY BE USED.

ABBREVIATIONS

ABBREV.	DEFINITION
140°	140° DOMESTIC HOT WATER
140°R	140° DOMESTIC HOT WATER RETURN
AAV	AUTOMATIC AIR VENT
ABV	ABOVE
AD	AREA DRAIN
AFF	ABOVE FINISHED FLOOR
ANC	ANCHOR
AP	ACCESS PANEL
APPROX	APPROXIMATE
AQ	AQUASTAT
AV	ACID VENT
AW	ACID WASTE
BDV	BLOW DOWN VALVE
BF	BLIND FLANGE
BFP	BACKFLOW PREVENTER
BHP	BRAKE HORSEPOWER
BOP	BOTTOM OF PIPE
BOTT	BOTTOM
BTU	BRITISH THERMAL UNIT
BTUH	BRITISH THERMAL UNIT PER HOUR
BWV	BACK WATER VALVE W/ ACCESS COVER
CAP	CAPACITY
CD, COND	CONDENSATE DRAIN
CI	CAST IRON
CLG	CEILING
CO	CLEANOUT
CONN	CONNECT
CONC	CONCRETE
CU FT	CUBIC FEET
CW	COLD WATER
CX	CONNECT TO EXISTING
DDC	DOUBLE DETECTOR CHECK VALVE
DFU	DRAINAGE FIXTURE UNITS
DIA	DIAMETER
DISH	DISCHARGE
DN	PIPE DOWN
DS	DOWN SPOUT W/BOOT
DST	DEEP SEAL TRAP
DWG	DRAWING
ELEC	ELECTRIC
ELEV	ELEVATION
EWT	ENTERING WATER TEMPERATURE
EX	EXISTING
F	FIRE LINE
FC	FUNNEL CONNECTION @ FD
FCO	FLOOR CLEANOUT
FCVA	FLOOR CONTROL VALVE ASSEMBLY
FD	FLOOR DRAIN
FDV	FIRE DEPT. HOSE CONNECTION
FS	FLOW SWITCH
FT	FEET
FT.HD	FEET OF HEAD
G	GAS
GA	GAUGE
GALV	GALVANIZED
GPM	GALLONS PER MINUTE
HB	HOSE BIBB
HED	HOSE END DRAIN
HOR	HORIZONTAL
HP	HORSEPOWER
HT	HEAT TRAP
HW	HOT WATER (140°F)
HWR	HOT WATER RETURN (140°F)

ABBREVIATIONS

ABBREV.	DEFINITION
HYD	HYDRAULIC
IN	INCHES
I.E.	INVERT ELEVATION
IW	INDIRECT WASTE
LOC	LIMIT OF CONTRACT
MAV	MANUAL AIR VENT
NFGH	NON-FREEZE GROUND HYDRANT
NFWH	NON-FREEZE WALL HYDRANT
NRS	NON-RISING STEM & YOKE
OHD	OPEN HUB DRAIN
O,S,&Y	OUTSIDE STEM & YOKE VALVE
P	PRESSURE
PCOND	PUMPED CONDENSATE
PD	PUMPED DISCHARGE
PH	PIPE HANGER
PRV	PRESSURE REDUCING VALVE
PS	PRESSURE SWITCH
PSAN	PUMPED SANITARY
PSC	PUMPED STEAM CONDENSATE
RD	ROOF DRAIN
RL	RAIN LEADER
SAN, S	SANITARY
SC	STEAM CONDENSATE
SCH	SCHEDULE
SP	SPRINKLER LINE
STD	STANDARD
SW	STORM WATER
T	TEMPERATURE
TD	TRENCH DRAIN
TS	TAMPER SWITCH
TW	TEMPERED WATER
TWR	TEMPERED WATER RETURN
UP	PIPE UP
UP&DN	PIPE UP & DN
V	VENT
VB	VACUUM BREAKER
VTR	VENT THROUGH ROOF
WCO	WALL CLEANOUT
WHA	WATER HAMMER ARRESTOR
WSFU	WATER SUPPLY FIXTURE UNITS
TD	TRENCH DRAIN

NOTE:
NOT ALL ABBREVIATIONS MAY BE USED.

KEY PLAN

REVISIONS

NO.	DATE	DESCRIPTION

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MECH/PLUMB LEGEND, CONVENTIONS, RISER, AND ABBREVIATIONS

OAKLAND TERRACE ES – EMERGENCY UPGRADE
SILVER SPRING, MD 20902

PN#	22079
PROJECT MANAGER	DRH
DESIGNER	GAD

MP001

BID SET
06-09-2023

GENERAL NOTES:

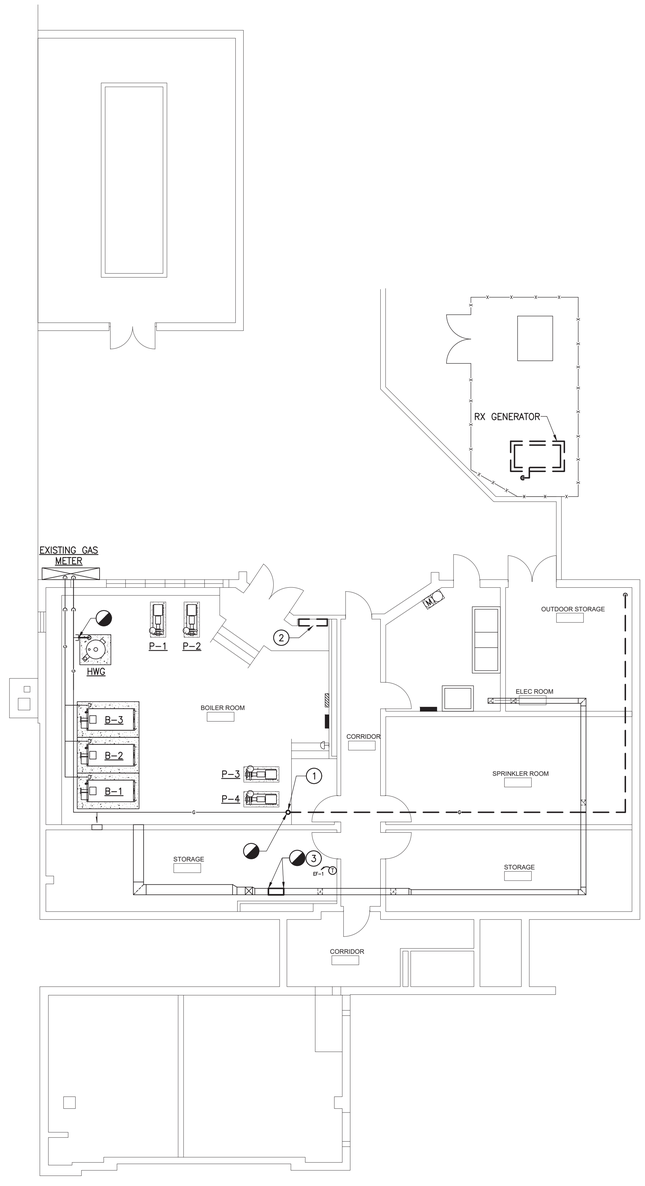
1. PATCH ALL HOLES, PENETRATIONS, ETC. TO MATCH EXISTING MATERIALS (WALLS, FLOORS, ROOF, ETC), FINISHES ETC. AND PAINT TO MATCH EXISTING FINISHES.
2. REMOVE EXISTING ACOUSTIC CEILING TILES AS REQUIRED FOR DEMOLITION. REPLACE ALL DEMOLISHED CEILING COMPONENTS IN KIND TO MATCH EXISTING CONDITIONS.

DRAWING NOTES:

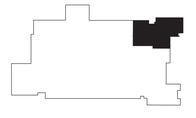
(1) REMOVE EXISTING PIPING ON FIRST FLOOR UP TO NATURAL GAS PIPING TO EXISTING HVAC UNITS.

(2) CUT AND MODIFY BOTTOM OF EXISTING BOILER PLENUM TO ALLOW FOR 30"x12" FREE AREA. PERFORM WORK UNDER ADD ALTERNATE #1.

(3) PERFORM DEMOLITION WORK UNDER ADD ALTERNATE #1.



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



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

8 0 8 16

REVISIONS

NO.	DATE	DESCRIPTION

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BASEMENT PLAN - DEMOLITION

OAKLAND TERRACE ES - EMERGENCY UPGRADE
SILVER SPRING, MD 20902

PN#	22079
PROJECT MANAGER	DRH
DESIGNER	GAD

MPD100

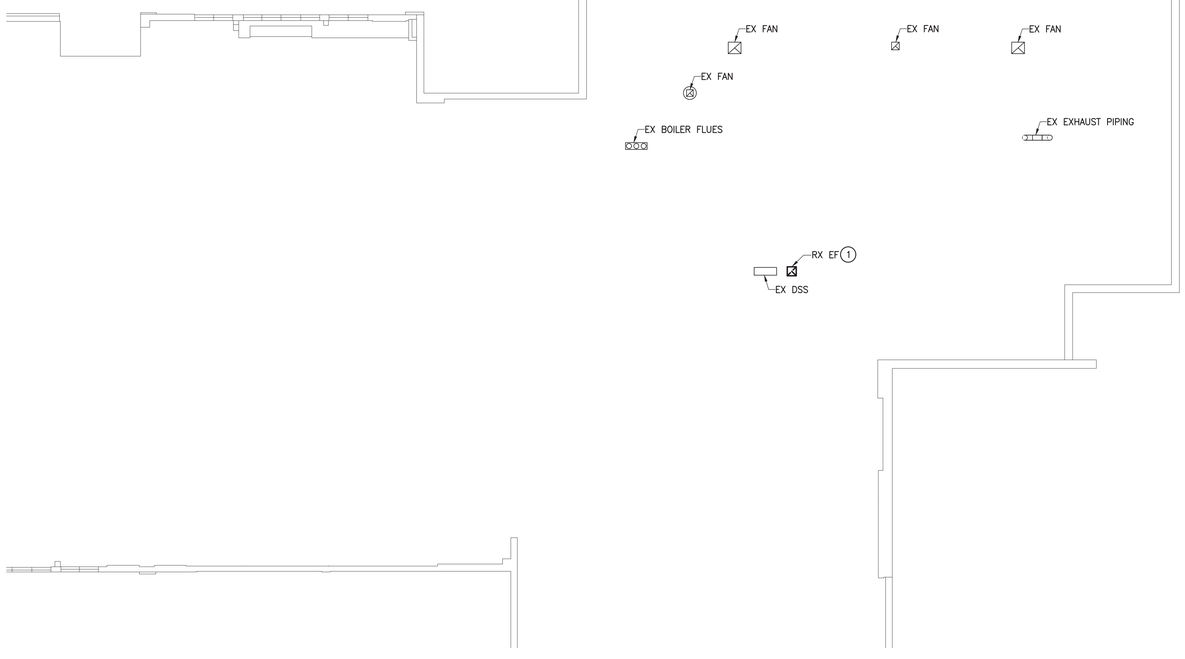
BID SET
06-09-2023

GENERAL NOTES:

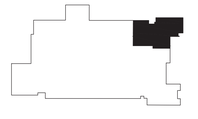
1. PATCH ALL HOLES, PENETRATIONS, ETC. TO MATCH EXISTING MATERIALS (WALLS, FLOORS, ROOF, ETC), FINISHES ETC. AND PAINT TO MATCH EXISTING FINISHES. ALL ROOFING WORK SHALL BE PERFORMED BY AN MCPS APPROVED ROOFING VENDOR TO MAINTAIN THE EXISTING WARRANTY IN THE AREAS OF WORK.

DRAWING NOTES:

(1) PERFORM DEMOLITION WORK UNDER ADD ALTERNATE #1.



PARTIAL ROOF PLAN – AREA A – DEMOLITION
SCALE: 1/8" = 1'-0"



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

8 0 8 16

REVISIONS		
NO.	DATE	DESCRIPTION

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PARTIAL ROOF PLAN – AREA A – DEMOLITION
OAKLAND TERRACE ES – EMERGENCY UPGRADE
SILVER SPRING, MD 20902

PN#	22079
PROJECT MANAGER	DRH
DESIGNER	GAD

MPD101

BID SET
06-09-2023

GENERAL NOTES:

1. PATCH ALL HOLES, PENETRATIONS, ETC. TO MATCH EXISTING MATERIALS (WALLS, FLOORS, ROOF, ETC), FINISHES ETC. AND PAINT TO MATCH EXISTING FINISHES.
2. REMOVE EXISTING ACOUSTIC TILE CEILINGS AS REQUIRED FOR DEMOLITION. REPLACE ALL DEMOLISHED CEILING COMPONENTS IN KIND TO MATCH EXISTING CONDITIONS.

DRAWING NOTES:

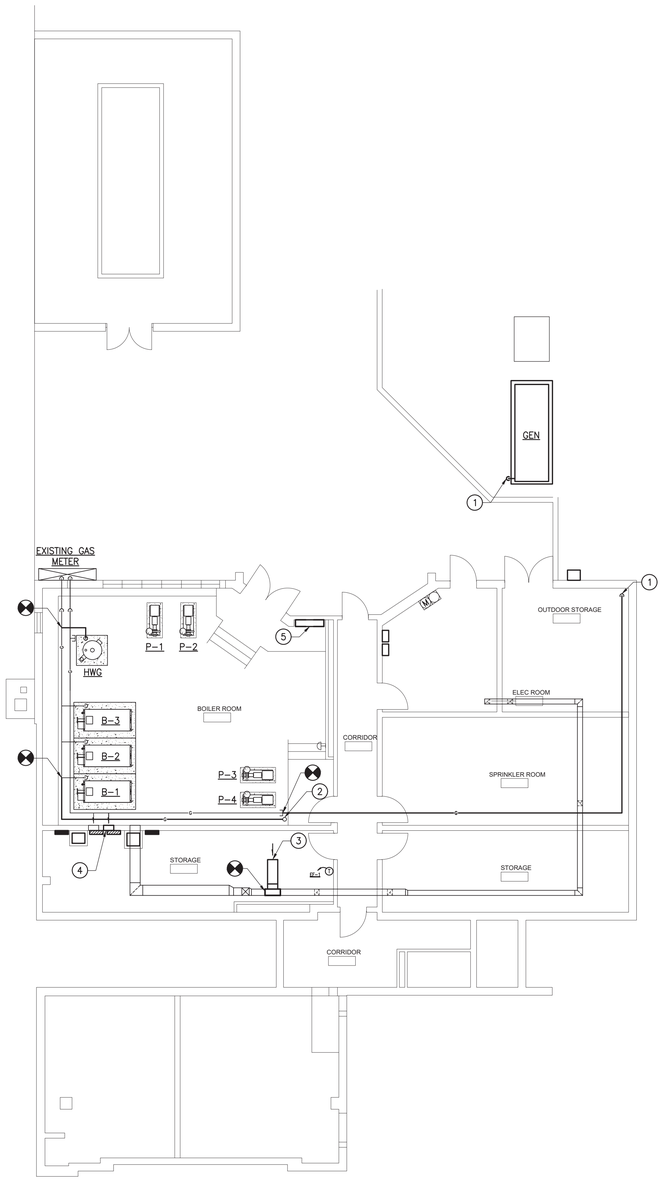
(1) RUN NEW GAS PIPING ALONG EXISTING PATH TO GENERATOR FROM BUILDING.

(2) RECONNECT TO EXISTING GAS PIPING OUT TO EXISTING HVAC EQUIPMENT.

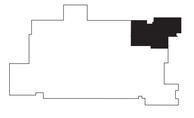
(3) 14"x14" OPEN END EXHAUST DUCT, SIZED FOR 500 CFM. PROVIDE STAINLESS STEEL BIRD SCREEN AT OPEN END TERMINATION. PROVIDE UNDER ADD ALTERNATE #1.

(4) 16"x8" TRANSFER AIR GRILLE, SIZE FOR 350 CFM AIR TRANSFER. PROVIDE UNDER ADD ALTERNATE #1

(5) MODIFY BOILER PLENUM TO PROVIDE LOUVER WITH 30"x12" FREE SPACE. PROVIDE MOTOR OPERATED DAMPER AT OPENING FOR LOUVER CONTROL. PROVIDE UNDER ADD ALTERNATE #1



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



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

8 0 8 16

REVISIONS		
NO.	DATE	DESCRIPTION

"PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 31985, EXPIRATION DATE: 12-13-2023"

ALBAN ENGINEERING, INC
303 INTERNATIONAL CIRCLE, SUITE 400
HUNT VALLEY, MD 21030
410.842.6411
www.albanengineering.com

BASEMENT PLAN

OAKLAND TERRACE ES - EMERGENCY UPGRADE
SILVER SPRING, MD 20902

PN#	22079
PROJECT MANAGER	DRH
DESIGNER	GAD

MP100

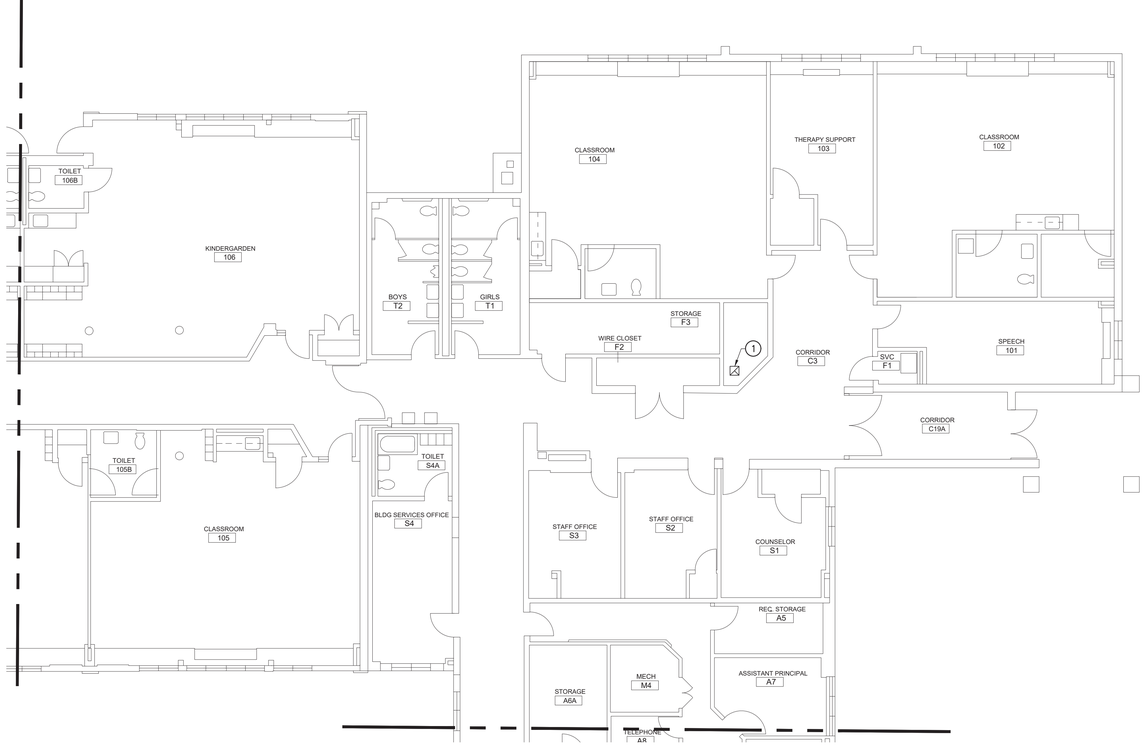
BID SET
06-09-2023

GENERAL NOTES:

1. PATCH ALL HOLES, PENETRATIONS, ETC. TO MATCH EXISTING MATERIALS (WALLS, FLOORS, ROOF, ETC), FINISHES ETC. AND PAINT TO MATCH EXISTING FINISHES.
2. REMOVE EXISTING ACOUSTIC TILE CEILINGS AS REQUIRED FOR DEMOLITION. REPLACE ALL DEMOLISHED CEILING COMPONENTS IN KIND TO MATCH EXISTING CONDITIONS.

DRAWING NOTES:

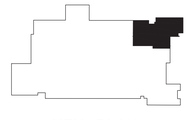
(1) ETR 12"x12" EA DUCT UP TO EF-1, PROVIDED UNDER ADD ALTERNATE #1.



MATCHLINE – AREA B

PARTIAL FLOOR PLAN – AREA A

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



KEY PLAN

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

8 0 8 16

REVISIONS		
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PARTIAL FLOOR PLAN – AREA A

OAKLAND TERRACE ES – EMERGENCY UPGRADE
SILVER SPRING, MD 20902

PN#	22079
PROJECT MANAGER	DRH
DESIGNER	GAD

MP101

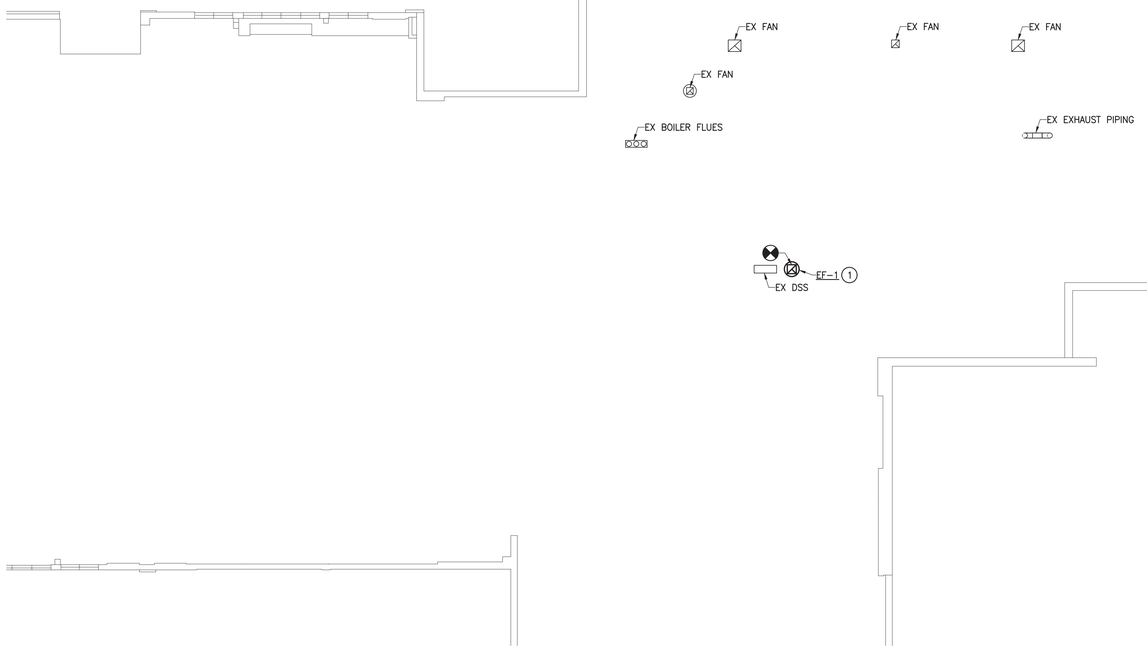
BID SET
06-09-2023

GENERAL NOTES:

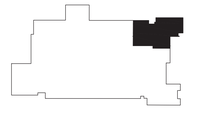
1. PATCH ALL HOLES, PENETRATIONS, ETC. TO MATCH EXISTING MATERIALS (WALLS, FLOORS, ROOF, ETC), FINISHES ETC. AND PAINT TO MATCH EXISTING FINISHES.
2. REMOVE EXISTING ACOUSTIC TILE CEILINGS AS REQUIRED FOR DEMOLITION. REPLACE ALL DEMOLISHED CEILING COMPONENTS IN KIND TO MATCH EXISTING CONDITIONS.

DRAWING NOTES:

(1) MOUNT EXHAUST FAN ON ADAPTER CURB, PROVIDE UNDER ADD ALTERNATE #1.



PARTIAL ROOF PLAN – AREA A
SCALE: 1/8" = 1'-0"



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

8 0 8 16

REVISIONS

NO.	DATE	DESCRIPTION

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PARTIAL ROOF PLAN – AREA A

OAKLAND TERRACE ES – EMERGENCY UPGRADE
SILVER SPRING, MD 20902

PN#	22079
PROJECT MANAGER	DRH
DESIGNER	BSF

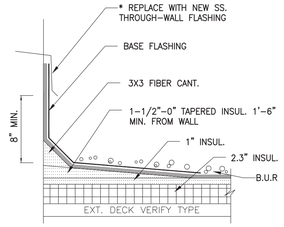
MP102

BID SET
06-09-2023

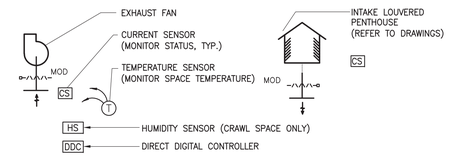
FAN SCHEDULE

UNIT F-X	AREA SERVED	INTERLOCK	LOCATION	CHARACTERISTICS								TYPE	BASED ON (GREENHECK)
				MAX CFM	ESP (IN H2O)	FRPM	DRIVE TYPE	MOTOR HP	MOTOR TYPE	ELECTRICAL V/ø/Hz	ELECTRICAL EMERGENCY POWER		
1	NEW ELECTRICAL ROOM	TSTAT	ROOF	1000	0.65	1565	DIRECT	1/4	ECM	115/1/60	YES	POWER ROOF VENTILATOR	G-100-VG

NOTES: 1. TSTAT=THERMOSTAT; SW=SWITCH; SP=STATIC PRESSURE, TD=WITH 15 MINUTE TIME DELAY
2. PROVIDE FACTORY MOUNTED DISCONNECT SWITCH FOR ALL EXHAUST FANS, COORDINATING REQUIREMENTS AND INTERLOCKS
3. REFER TO CONTROL DIAGRAMS FOR SPECIFIC SEQUENCES OF OPERATION AND INTERLOCK ARRANGEMENTS
4. INSTALL FAN UNDER ADD ALTERNATE #1



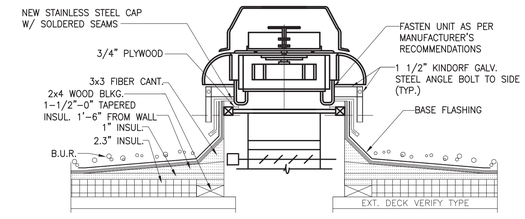
TYPICAL COUNTER FLASHING
SCALE: NONE



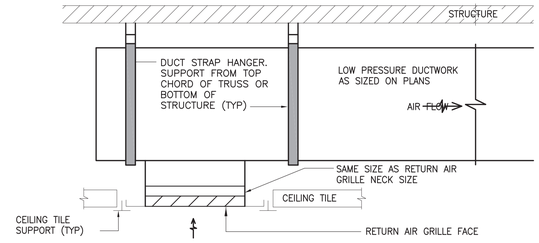
SEQUENCE OF OPERATION

1. VENTILATION: SPACE TEMPERATURE SENSOR SHALL ON A RISE IN TEMPERATURE TO 90°F (ADJ), ENERGIZE EXHAUST FAN. IN A FALL IN TEMPERATURE TO 85°F (ADJ), THE EXHAUST FAN SHALL DE-ENERGIZE. PROVIDE A 5°F DEADBAND BETWEEN ENERGIZING/DE-ENERGIZING FAN TO PREVENT SHORT CYCLING.
2. EMS: HIGH (105°F) AND LOW (40°F) TEMPERATURE ALARMS SHALL BE ANNUNCIATED AT THE CENTRAL ENERGY MANAGEMENT SYSTEM COMPUTER. EMS SHALL MONITOR FAN STATUS.
3. THE ENERGY MANAGEMENT SYSTEM (EMS) SHALL BE MANUFACTURED BY HI SOLUTIONS, RELIABLE CONTROL, OR SCHNEIDER ELECTRIC STRUXUREWARE/CONTINUUM; APPROVED MANUFACTURERS OF AUTOMATIC TEMPERATURE CONTROLS (ATC) COMPONENTS ARE INVENSYS, SIEMENS, JOHNSON, HONEYWELL, KELE, KREUTER, BELIMO, FUNCTIONAL DEVICES (RIB), ACI, BAPI, SERTA AND SCHNEIDER ELECTRIC. CONTROLS SYSTEMS SHALL BE INSTALLED BY PERFORMANCE CONTROLS, BUILDING AUTOMATION SERVICES, ENGINEERED SERVICES, CONTROL SOURCES, OR PRITCHETT CONTROLS.

TYPICAL ELECTRICAL EQUIPMENT ROOM CONTROL DIAGRAM
SCALE: NONE



TYPICAL CENTRIFUGAL POWER ROOF VENTILATOR DETAIL
SCALE: NONE



TYPICAL CEILING AIR DEVICE DETAIL
SCALE: NONE

REVISIONS

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MECHANICAL/PLUMBING
ADD ALTERNATE #1 DETAILS
OAKLAND TERRACE ES - EMERGENCY UPGRADE
SILVER SPRING, MD 20902

PN#	22079
PROJECT MANAGER	DRH
DESIGNER	GAD

MP701

BID SET
06-09-2023