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**Building #6  
 Life Skills  
 Alteration**

65 Parrot Road  
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SED# 50-90-00-00-006-004

KEY PLAN



REVISIONS		
No.	Description	Date

ISSUED: CD SET

DATE: 2/17/23

SCALE: AS NOTED

SHEET NAME:  
 SYMBOLS, NOTES &  
 ABBREVIATIONS

SHEET NUMBER:

**P-001**

**PLUMBING GENERAL NOTES:**

- THE DRAWINGS ON THESE PLANS ARE DIAGRAMMATIC. THIS CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING HIS WORK WITH OTHER TRADES AND THE BUILDING STRUCTURE. NO EXTRA PAYMENTS WILL BE AUTHORIZED FOR REROUTING OR REMOVAL OF INSTALLED WORK DUE TO LACK OF COORDINATION WITH OTHER SYSTEMS.
- THIS CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CUTTING AND PATCHING OF WALLS, FLOORS AND CEILINGS AS REQUIRED FOR INSTALLATION OF HIS WORK.
- THIS CONTRACTOR SHALL FURNISH AND INSTALL ACCESS PANELS AS REQUIRED WHERE ACCESSIBILITY TO COMPONENTS (VALVES, TRAPS, CLEANOUTS, ETC.) IS REQUIRED FOR MAINTENANCE AND/OR SYSTEM OPERATION.
- ALL PENETRATIONS THROUGH FIRE RATED PARTITIONS SHALL BE SEALED FIRE AND SMOKE TIGHT WITH AN APPROPRIATE U.L. LISTED FIRESTOPPING MATERIAL AND OR SYSTEM.
- ALL PENETRATIONS THROUGH FOUNDATIONS AND EXTERIOR WALLS SHALL BE SEALED WITH EPDM OR EPDM RUBBER GASKET AND SEALED WITH A WATERPROOF, NON-HARDENING SEALANT.
- FURNISH AND INSTALL UNDER SINK PROTECTIVE PIPE COVER KITS ON EXPOSED PIPING AT ALL ADA ACCESSIBLE SINKS AND LAVATORIES.
- COORDINATE FIXTURE ROUGH-INS AND INSTALLATIONS WITH THE ARCHITECTURAL PLANS.
- ALL DOMESTIC WATER DISTRIBUTION PIPING IS TO BE INSULATED.
- PROVIDE SHUT-OFF VALVES AT ALL BRANCH PIPING TAKE-OFFS (UNO) AND AT ALL CONNECTIONS TO EQUIPMENT. PROVIDE UNIONS AT ALL EQUIPMENT CONNECTIONS.
- PROVIDE DRAINS WITH HOSE ADAPTERS AND CAPS ON PIPING AT ALL LOW POINTS. PROVIDE MANUAL VENTS ON PIPING AT ALL HIGH POINTS.
- PROVIDE SHUT-OFF VALVES AT ALL PIPING BRANCH TAKE-OFFS AND AT ALL CONNECTIONS TO EQUIPMENT.
- ALL REQUIRED CONTROL EQUIPMENT AND WIRING SHALL BE FURNISHED & INSTALLED BY THIS CONTRACTOR.
- WHERE INSTALLATION OR REMOVAL OF BELOW-SLAB PIPING IS INDICATED IN EXISTING CONCRETE SLAB, THIS CONTRACTOR SHALL SAW-CUT AND EXCAVATE THE EXISTING SLAB AS REQUIRED. UPON COMPLETION OF WORK, THIS CONTRACTOR SHALL PATCH THE CONCRETE SLAB. FLOOR FINISH WORK BY G.C.
- THE TERMS "PROVIDE" OR "FURNISH", AS USED ON THESE PLANS, INDICATE THAT THE CONTRACTOR IS TO FURNISH AND INSTALL THE REFERENCED EQUIPMENT OR SYSTEMS IN THEIR ENTIRETY AS REQUIRED FOR A COMPLETE AND OPERABLE SYSTEM.
- CONTRACTOR SHALL PROVIDE ALL COMPONENTS INDICATED ON DETAIL SHEETS, PLANS, SPECIFICATIONS AND ALL PERTINENT EQUIPMENT REQUIRED FOR A COMPLETE AND WORKABLE SYSTEM.
- CONTRACT CLOSE OUT: IN THE PRESENCE OF THE OWNER, ENGINEER OR ARCHITECT; DEMONSTRATING OPERATION OF SYSTEMS AND THAT ALL SPECIFICATIONS HAVE BEEN MET TO THE SATISFACTION OF ALL PARTIES.
- IT IS THE INTENT OF THESE PLANS AND SPECIFICATIONS TO PROVIDE ALTERATIONS AS INDICATED ON THE DRAWINGS AND IN THE SPECIFICATIONS TO PROVIDE COMPLETE NEW SYSTEMS IN EVERY RESPECT, CAPABLE OF OPERATING AS DESIGNED. IT IS NOT INTENDED THAT EVERY FITTING, MINOR DETAIL OR FEATURE BE SHOWN ON DRAWINGS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DETAIL NECESSARY FOR COMPLETION OF THESE SYSTEMS IN ACCORDANCE WITH GOOD PRACTICE.

**PLUMBING DEMOLITION NOTES:**

- COORDINATE WITH ARCHITECTURAL PLANS FOR EXACT AREAS TO BE DEMOLISHED.
- REMOVE ALL EQUIPMENT AND PIPING AS INDICATED ON PLAN. REMOVALS SHALL INCLUDE ALL FITTINGS, SUPPORTS AND HANGERS.
- ANY DISCREPANCIES BETWEEN THE DEMOLITION PLANS AND ACTUAL FIELD CONDITIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT OR ENGINEER. ANY DEMOLITION WORK WHICH MAY BE QUESTIONABLE DUE TO UNFORESEEN FIELD CONDITIONS SHALL NOT BE REMOVED UNTIL REVIEWED BY THE ARCHITECT, ENGINEER OR BUILDING FACILITIES MANAGER.
- DEMOLITION WORK SHALL INCLUDE THE PREPARATION OF EXISTING EQUIPMENT OR PIPING FOR CONNECTION TO NEW WORK. COORDINATE DEMOLITION WORK WITH THE CONSTRUCTION PLANS.
- ALL EQUIPMENT REMOVALS SHALL BECOME THE PROPERTY OF THIS CONTRACTOR. THIS CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROPER REMOVAL AND DISPOSAL OF DEMOLITION ITEMS OFF-SITE, UNLESS OTHERWISE NOTED.
- ALL CUTTING AND PATCHING NECESSARY FOR THE DEMOLITION WORK SHALL BE THE RESPONSIBILITY OF THIS CONTRACTOR.
- IT SHALL BE THE OWNER'S RESPONSIBILITY TO REMOVE ANY LOOSE EQUIPMENT, FURNITURE, SUPPLIES, ETC. THAT MAY BE LOCATED IN THE AREA OF WORK.
- THE PLANS ARE INTENDED TO CONVEY THE EXTENT AND SCOPE OF THE DEMOLITION WORK. EVERY ITEM INTENDED FOR REMOVAL MAY NOT BE SHOWN. THE CONTRACTOR IS ADVISED TO SURVEY THE PROJECT SITE BEFORE SUBMITTING A BID FOR DEMOLITION WORK.

- ALL AREAS SHALL BE SERVED WITH (110°F) HOT WATER. MAXIMUM OUTLET TEMPERATURE FOR ANY FIXTURE (EXCEPT THOSE IN KITCHEN) SHALL BE SET @ 100°F.
- DRAIN PIPING SHOWN ON PLANS SHALL BE INSTALLED BELOW THE FLOOR SHOWN (BELOW SLAB OR ABOVE CEILING OF LOWER FLOOR AS APPROPRIATE) UNLESS OTHERWISE NOTED.
- ALL PLUMBING SUPPLY & VENT PIPING SHOWN SHALL BE INSTALLED IN THE CEILING OF THE FLOOR PLAN SHOWN, UNLESS OTHERWISE NOTED.
- PLUMBING CONTRACTOR IS RESPONSIBLE FOR OWN CUTTING & PATCHING AS REQUIRED. FINISHING SHALL BE BY GENERAL CONTRACTOR.
- INSTALL SECTIONALIZING VALVES AT ALL MAIN "T" ON DOMESTIC HOT & COLD WATER SERVICE.
- VENT PIPING UNDER SLABS SHALL BE A MINIMUM OF 2".
- WASTE PIPING UNDER SLABS SHALL BE A MINIMUM OF 3".
- ALL PLUMBING FIXTURES AND TRIM SHALL BE IN ACCORDANCE WITH ALL APPLICABLE NATIONAL, STATE AND LOCAL CODES, AS WELL AS ALL ADA AND ANSI-A-117.1 REQUIREMENTS.
- INSTALL CONDENSATION CONTROL INSULATION: MINIMUM 1"-INCH THICK FOR ALL PIPE SIZES FOR THE COLD WATER PIPING.
- HOT WATER PIPING SHALL BE INSULATED PER WRITTEN SPECIFICATIONS AND NYS ENERGY CONSERVATION CONSTRUCTION CODE.
- UNLESS OTHERWISE NOTED, ALL VALVES 2"Ø & SMALLER SHALL BE QUARTER-TURN BALL VALVES AND ALL VALVES 2½" & LARGER SHALL BE GATE VALVES. ALL VALVES SHALL BE OF FULL-PORT DESIGN.
- PLUMBING CONTRACTOR SHALL OBTAIN ALL PERMITS REQUIRED & PAY ALL FEES.
- PLUMBING CONTRACTOR SHALL BE RESPONSIBLE FOR TRENCHING BEDDING AND BACK FILLING AS PER SPECIFICATIONS. ALL TRENCH WORK TO BE COORDINATED WITH THE GENERAL CONSTRUCTION CONTRACTOR.
- ALL PENETRATIONS THROUGH FIRE RATED PARTITIONS SHALL BE SEALED FIRE AND SMOKE TIGHT WITH AN APPROPRIATE U.L. LISTED FIRESTOPPING MATERIAL AND OR SYSTEM.

**VALVE SYMBOLS**

	GATE VALVE - THREADED/FLANGED
	GLOBE VALVE - THREADED/FLANGED
	CHECK VALVE
	STRAINER
	WYE STRAINER (WITH BALL VALVE & HOSE CONNECTION)
	STRAINER WITH VALVED DRAIN AND QUICK-COUPLE HOSE CONNECTOR
	FLEXIBLE CONNECTION
	ANGLE GLOBE VALVE
	BUTTERFLY VALVE
	BALL VALVE

**PIPING SYMBOLS**

	PIPE DOWN TURN
	PIPE RISE

**GENERAL SYMBOLS**

	POINT OF CONNECTION BETWEEN NEW AND EXISTING WORK
	INDICATES SECTION LETTER
	INDICATES DRAWING NUMBER WHERE LOCATED
	INDICATES TYPE OF AIR OUTLET
	INDICATES AIR FLOW REQUIREMENTS

**PLUMBING LINE TYPES**

	EXISTING TO BE REMOVED
	EXISTING TO REMAIN
	COLD WATER SUPPLY
	HOT WATER SUPPLY
	SANITARY LINE
	VENT PIPE

**ABBREVIATIONS**

AAV	AIR ADMITTANCE VALVE	HRP	HYDRONIC RADIANT CEILING PANEL
ACT	ACOUSTIC CEILING TILE	HV	HEATING AND VENTILATING UNIT
AD	ACCESS DOOR	HW	DOMESTIC HOT WATER PIPE (120°F)
AF	ABOVE FINISHED FLOOR	HWR	DOMESTIC HOT WATER RETURN PIPE (120°F)
AFM	AIR FLOW MEASURING DEVICE	IV	INLET VANES
AP	ACCESS PANEL	LCD	LINEAR CEILING DIFFUSER
BDD	BACK DRAFT DAMPER	LF	LINEAR FEET
BTUH	BRITISH THERMAL UNITS/HOUR	LP	LP GAS PIPING
CC	COOLING COIL	LPR	LOW PRESSURE STEAM CONDENSATE
CFM	CUBIC FEET PER MINUTE	LPS	LOW PRESSURE STEAM
CG	CEILING GRILLE	LBS/HR	POUNDS PER HOUR
CLG	CEILING	MER	MECHANICAL EQUIPMENT ROOM
CO	CLEAN OUT	MAX.	MAXIMUM
CR	CEILING REGISTER	MBH	ONE THOUSAND BTUH
CW	DOMESTIC COLD WATER	MIN.	MINIMUM
D	DRAIN	NOM.	NOMINAL
Db	DRY BULB TEMPERATURE, °F	OA	OUTSIDE AIR
dB	DECIBELS	P	PUMP
DIA	DIAMETER	P.C.	PLUMBING CONTRACTOR
DN	DOWN	PD	PRESSURE DROP (FEET OF WATER)
DP	DIFFERENTIAL PRESSURE	PRV	PRESSURE REDUCING VALVE
Dp	DEW POINT TEMPERATURE, °F	PSI	POUNDS PER SQUARE IN.
DS	DUCT SMOKE DETECTOR	RHC	REHEAT COIL
DX	DIRECT EXPANSION	Rh	RELATIVE HUMIDITY
EA	EXHAUST AIR	RPZ	REDUCED PRESSURE ZONE
E.C.	ELECTRICAL CONTRACTOR	SA	SUPPLY AIR
ECC	ENGINEERING CONTROL CENTER	SAN	SANITARY DRAINAGE PIPE
EER	ENERGY EFFICIENCY RATIO	SD	SMOKE DAMPER
EF	EXHAUST FAN	SP	STATIC PRESSURE
EMD	END OF MAIN DRIP (STEAM)	SPD	SPLITTER DAMPER
EUH	ELECTRIC UNIT HEATER	S.S.	STAINLESS STEEL
EXIST	EXISTING	ST	STORM DRAINAGE PIPE
F.A.I.	FRESH AIR INTAKE	TWU	THRU WALL UNIT
FC	FLEXIBLE CONNECTION	U.N.O.	UNLESS NOTED OTHERWISE
FCO	FLOOR CLEAN OUT	UV	UNIT VENTILATOR
FD	FLOOR DRAIN	V	VENT PIPE
FLR	FLOOR	VE	VOLUME EXTRACTOR
FPC	FIRE PROTECTION CONTRACTOR	VI	VIBRATION ISOLATOR
F/SD	COMBINATION FIRE/SMOKE DAMPER	VIF	VERIFY IN FIELD
G.C.	GENERAL CONTRACTOR	VTR	VENT THROUGH ROOF
GPH	GALLONS PER HOUR	Wb	WET BULB TEMPERATURE, °F
GPM	GALLONS PER MINUTE	WCO	WALL CLEAN OUT
G.SAN	"GREASE LADEN" SANITARY DRAINAGE PIPE	WFM	WATER FLOW MEASURING DEVICE
H.C.	HVAC CONTRACTOR	WH	WATER HEATER
HF	HEPA FILTER	WMS	WIRE MESH SCREEN
HP	HORSEPOWER		

**2020 ENERGY CONSERVATION CONSTRUCTION CODE OF NYS  
 TABLE C403.11.3  
 MINIMUM PIPE INSULATION THICKNESS (IN INCHES)<sup>a,c</sup>**

FLUID OPERATING TEMPERATURE RANGE AND USAGE (°F)	INSULATION CONDUCTIVITY		NOMINAL PIPE OR TUBE SIZE (INCHES)					
	CONDUCTIVITY (BTUxIN)/(HxFT²x°F) <sup>b</sup>	MEAN RATING TEMPERATURE °F	<1"	1 TO <1½"	1½" TO <4"	4" TO <8"	8"	
> 350	0.32-0.34	250	4.5	5.0	5.0	5.0	5.0	
251-350	0.29-0.32	200	3.0	4.0	4.5	4.5	4.5	
201-250	0.27-0.30	150	2.5	2.5	2.5	3.0	3.0	
141-200	0.25-0.29	125	1.5	1.5	2.0	2.0	2.0	
105-140	0.21-0.28	100	1.0	1.0	1.5	1.5	1.5	
40-60	0.21-0.27	75	0.5	0.5	1.0	1.0	1.0	
< 40	0.20-0.26	50	0.5	1.0	1.0	1.0	1.5	

FOR SI: 1" = 25.4mm, °C = [(°F)-32]/1.8  
 a. FOR PIPING SMALLER THAN 1½" AND LOCATED IN PARTITIONS WITHIN CONDITIONED SPACES, REDUCTION OF THESE THICKNESSES BY 1" SHALL BE PERMITTED (BEFORE THICKNESS ADJUSTMENT REQUIRED IN FOOTNOTE B) BUT NOT TO A THICKNESS LESS THAN 1".  
 b. FOR INSULATION OUTSIDE THE STATED CONDUCTIVITY RANGE, THE MINIMUM THICKNESS (T) SHALL BE DETERMINED AS FOLLOWS:  

$$T = r[(1+t/R)^{k-1}]$$
  
 WHERE:  
 T = MINIMUM INSULATION THICKNESS  
 r = ACTUAL OUTSIDE RADIUS OF PIPE  
 t = INSULATION THICKNESS LISTED IN THE TABLE APPLICABLE FLUID TEMPERATURE AND PIPE SIZE  
 k = CONDUCTIVITY OF ALTERNATE MATERIAL AT MEAN RATING TEMPERATURE INDICATED FOR THE APPLICABLE FLUID TEMPERATURE [(BTUxIN)/(HxFT²x°F)]  
 k = THE UPPER VALUE OF THE CONDUCTIVITY RANGE LISTED IN THE TABLE FOR THE APPLICABLE FLUID TEMPERATURE  
 c. FOR DIRECT-BURIED HEATING AND HOT WATER SYSTEM PIPING, REDUCTION OF THESE THICKNESSES BY 1½" (38mm) SHALL BE PERMITTED (BEFORE THICKNESS ADJUSTMENT REQUIRED IN FOOTNOTE B) BUT NOT TO THICKNESSES LESS THAN 1".

**SCHEDULE OF EQUIPMENT SERVICE PROVISIONS**

FIXTURE DESIGNATION	DRAIN	VENT	WATER SUPPLY	
			CW	HW
WC-1	3"	1½"	½"	--
LV-1	1½"	1½"	½"	½"
KS-1	1½"	1½"	½"	½"
SH-1	2"	1½"	½"	½"

**ENERGY CODE STATEMENT:**  
 TO THE BEST OF THE REGISTERED DESIGN PROFESSIONAL'S KNOWLEDGE, BELIEF AND PROFESSIONAL JUDGMENT, THESE PLANS AND/OR SPECIFICATIONS ARE IN COMPLIANCE WITH THE 2020 ENERGY CODE.

**UNIFORM CODE STATEMENT:**  
 TO THE BEST OF THE REGISTERED DESIGN PROFESSIONAL'S KNOWLEDGE, BELIEF AND PROFESSIONAL JUDGMENT, THESE PLANS AND/OR SPECIFICATIONS ARE IN COMPLIANCE WITH THE 2020 UNIFORM CODE.





