

SIGN TYPE STX - STAIR EXIT INFO SIGN

SIGN TYPE RR - RESTROOM SIGN

DEVICED DEVICE ON 03/04/300

SIGN TYPE ST - STAIR ID SIGN

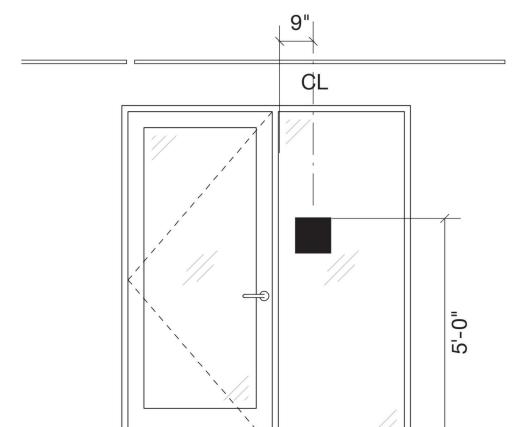
SHEET ID

AG501



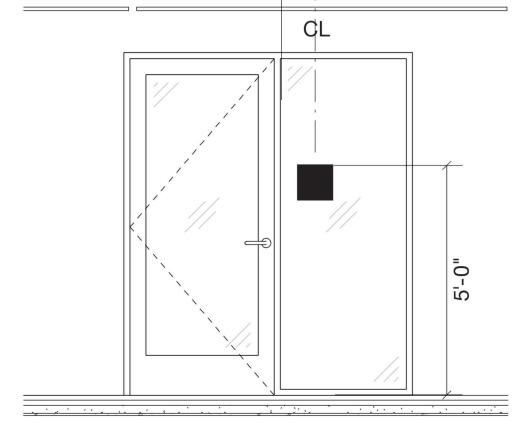
SIGN TYPE SS - STUDIO SIGN

GENERAL NOTE: INTERIOR SIGNAGE MUST FOLLOW UFC 3-120-1 (SIGN STANDARDS) AND ACADEMIC BUILDING PLANNING STANDARDS (ABPS)

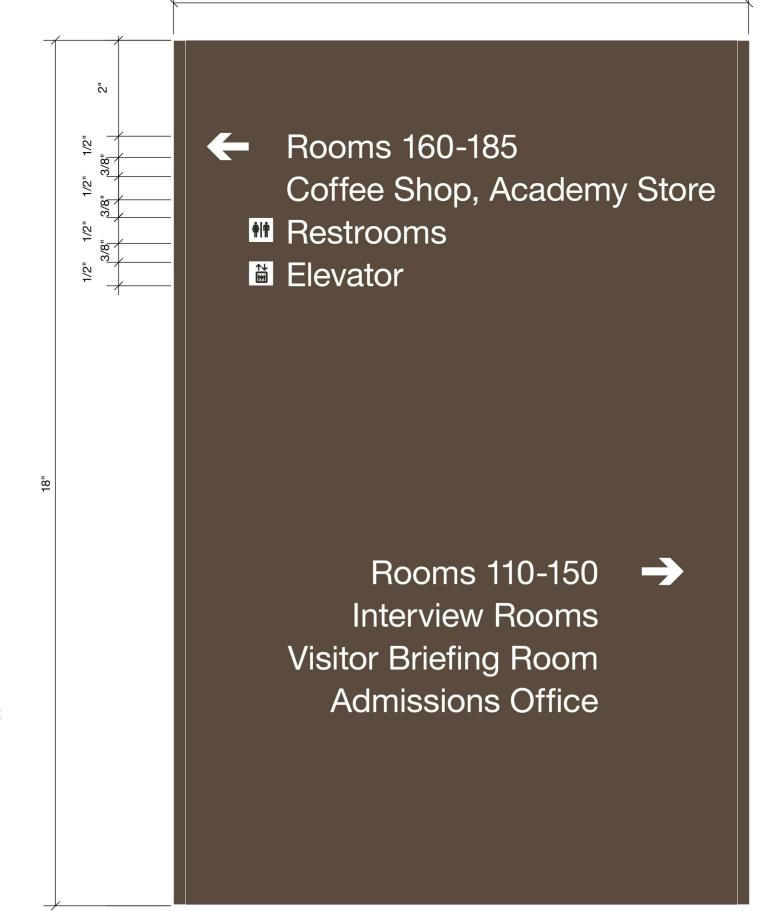


MOUNTING NOTES

- A. TO LATCH SIDE OF DOORS AS SHOWN OR ON THE RIGHT OF DOUBLE DOORS WITH VHB TAPE AND SILICONE ADHESIVE AS DETERMINED BEST BY FABRICATOR.
- B. IF LATCH SIDE OF DOOR IS NOT POSSIBLE, PLEASE REFERENCE **CURRENT ABAAS REQUIREMENTS** FOR AN ACCEPTABLE MOUNTING LOCATION.
- C. LOCATION, PERMANENT IDENTIFICATION AND BRAILLE TO MEET CURRENT ABBAS REQUIREMENTS. D. ON GLASS, USE VINYL BACKER
- (WHITE VINYL ON SAME SIDE OF SIGN) TO BE 1/8" SMALLER ON ALL SIDES OF SIGN TO OBSCURE ADHESIVES.



TYPICAL OFFICE DOOR ELEVATION



SIGN TYPE HR - OFFICE HOUR SIGN HALF SCALE

9" (229mm)

8 1/2" (216mm)

ACADEMY STORE HOURS:

0600 - 2200

1000 - 2200

1200 - 2000

- PRINTED PAPER INSERT

— 1/2" (17mm) PRINTED MESSAGE HELVETICA NEUE 55 ROMAN

_ REMOVABLE

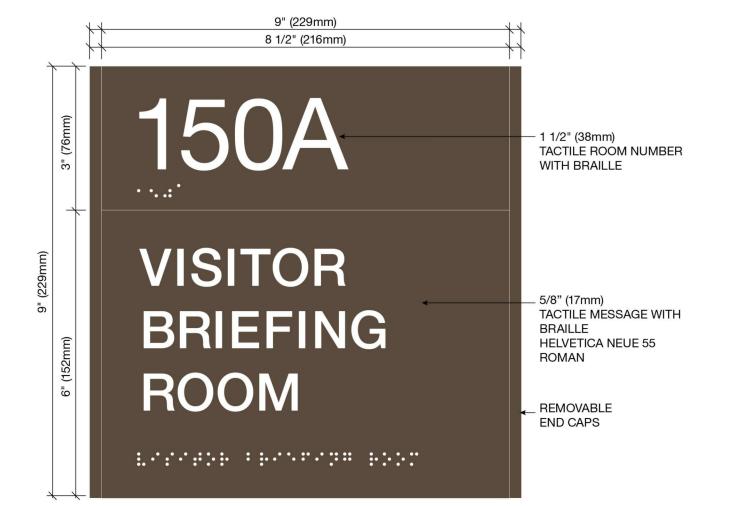
END CAPS





SIGN TYPE SE - OFFICE SUITE ENTRY SIGN

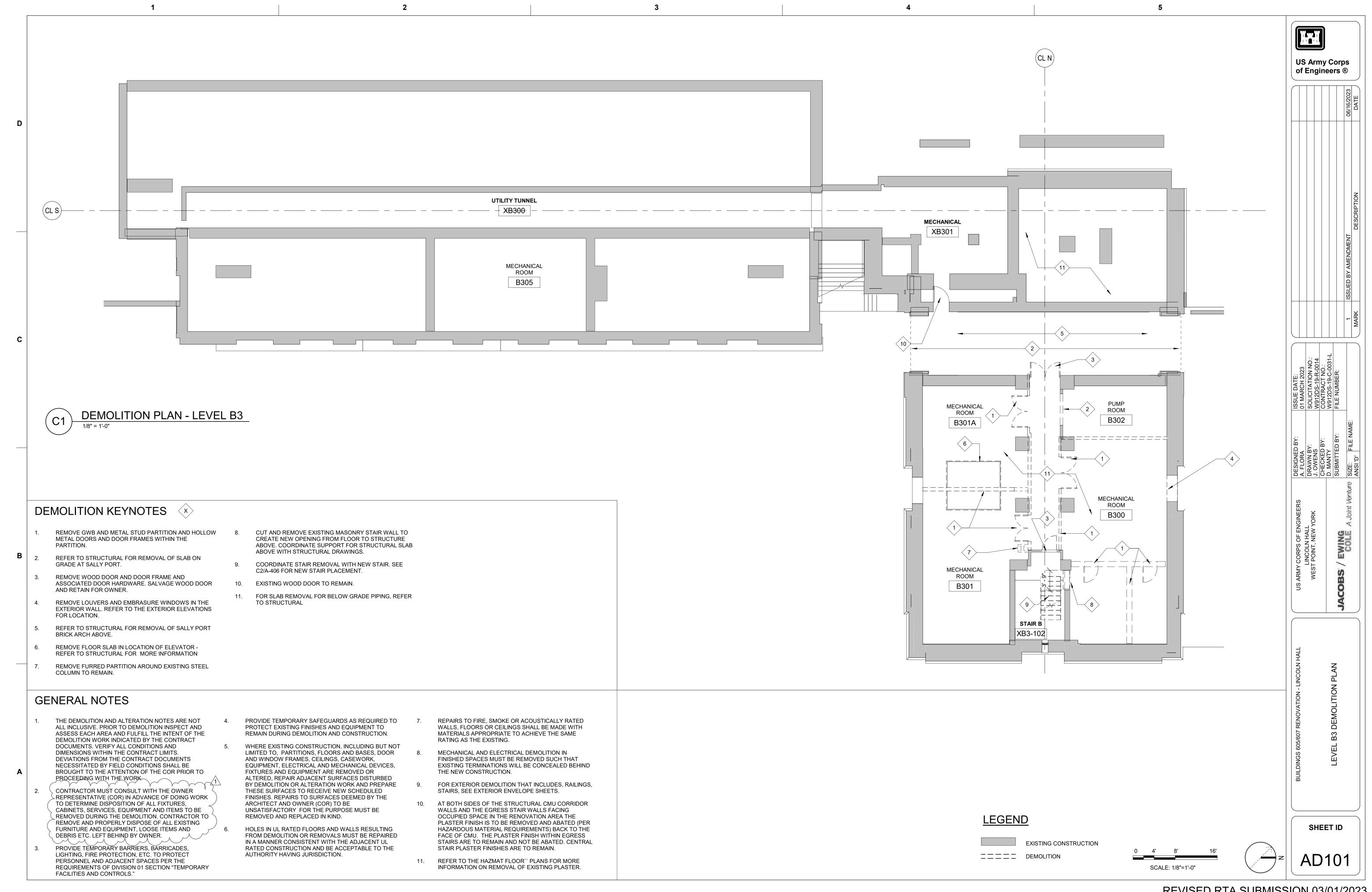
SIGN TYPE CD - CORRIDOR DIRECTION SIGN

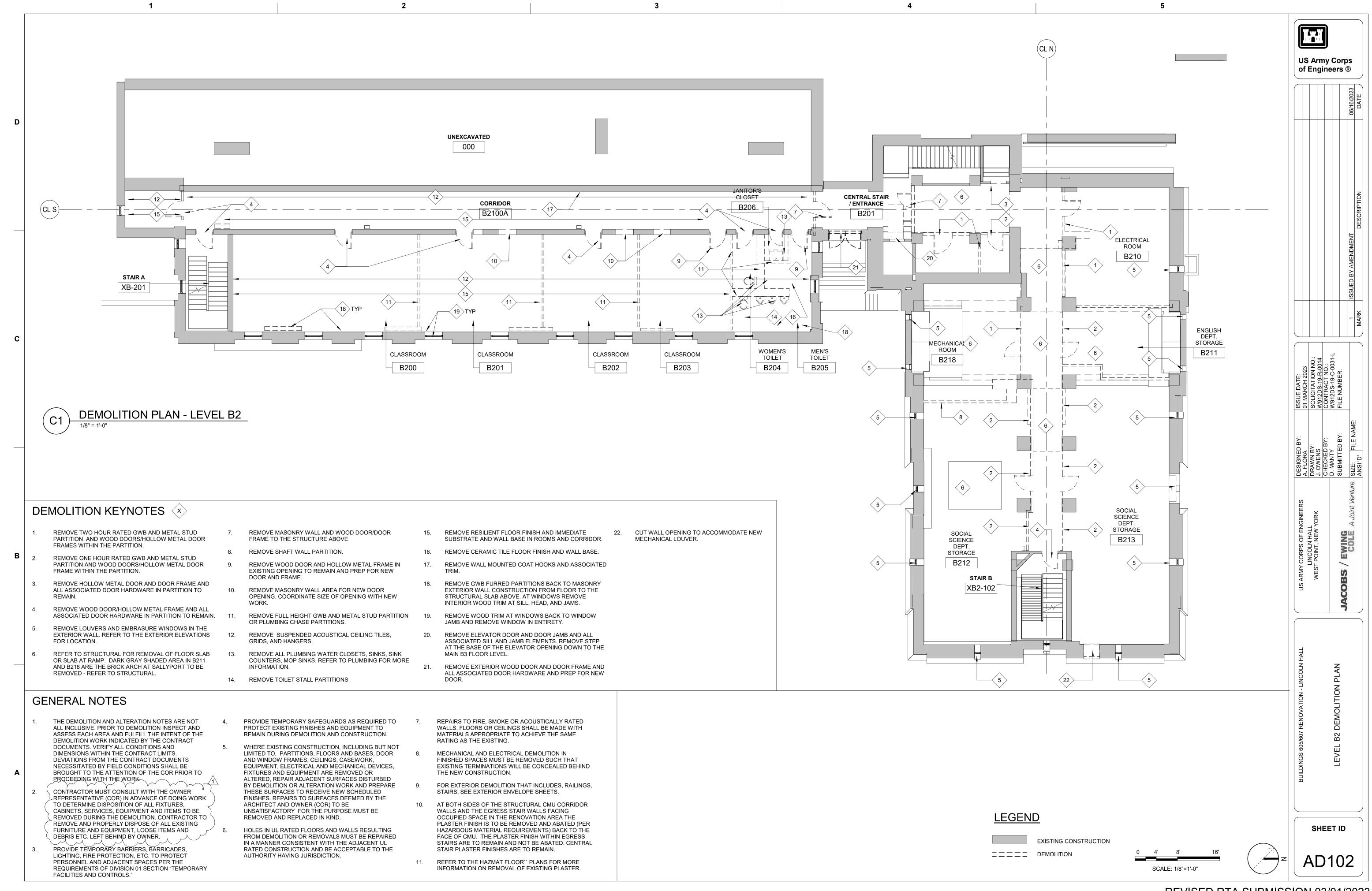


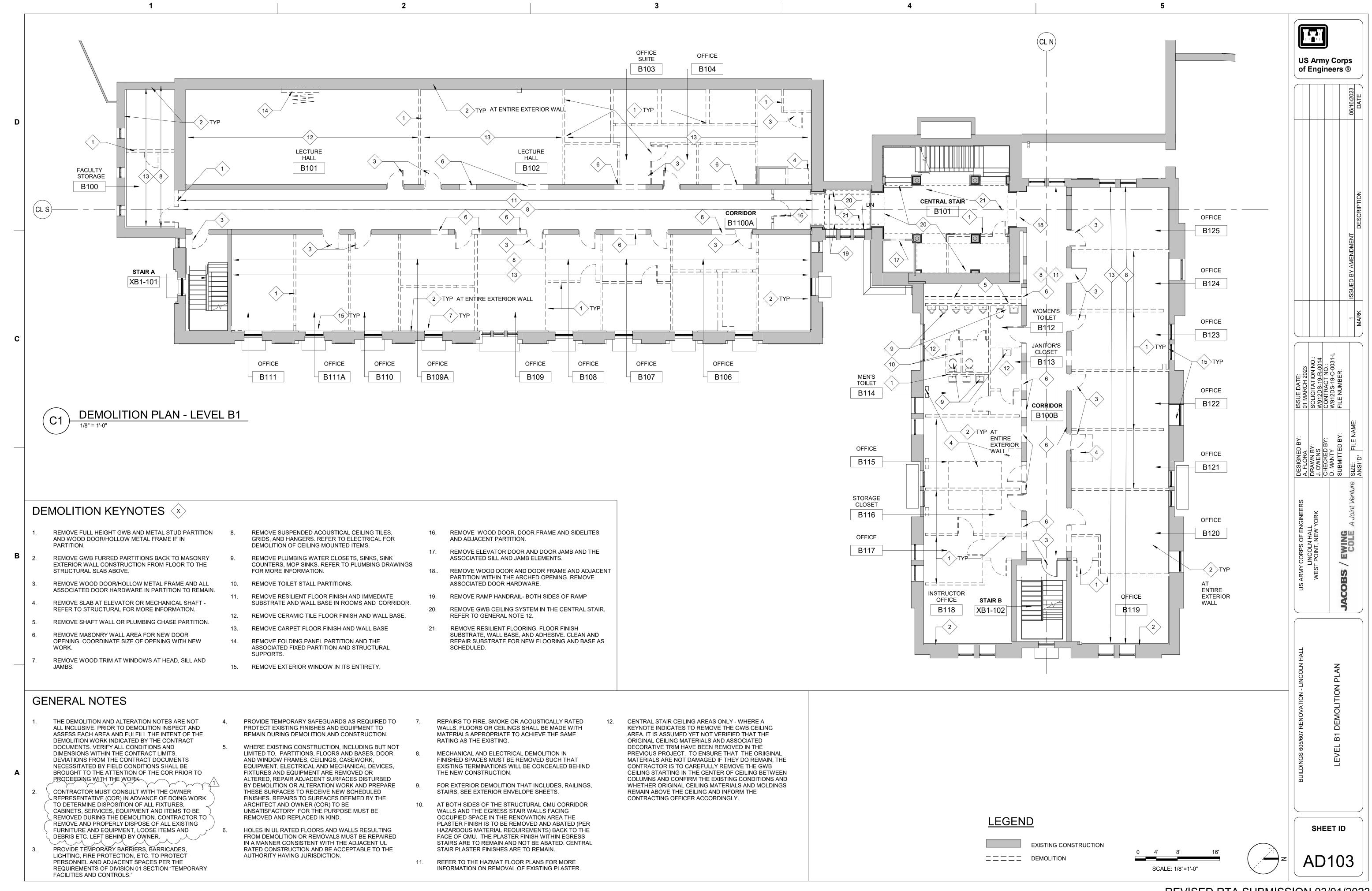
SIGN TYPE CR - CONFERENCE ROOM SIGN

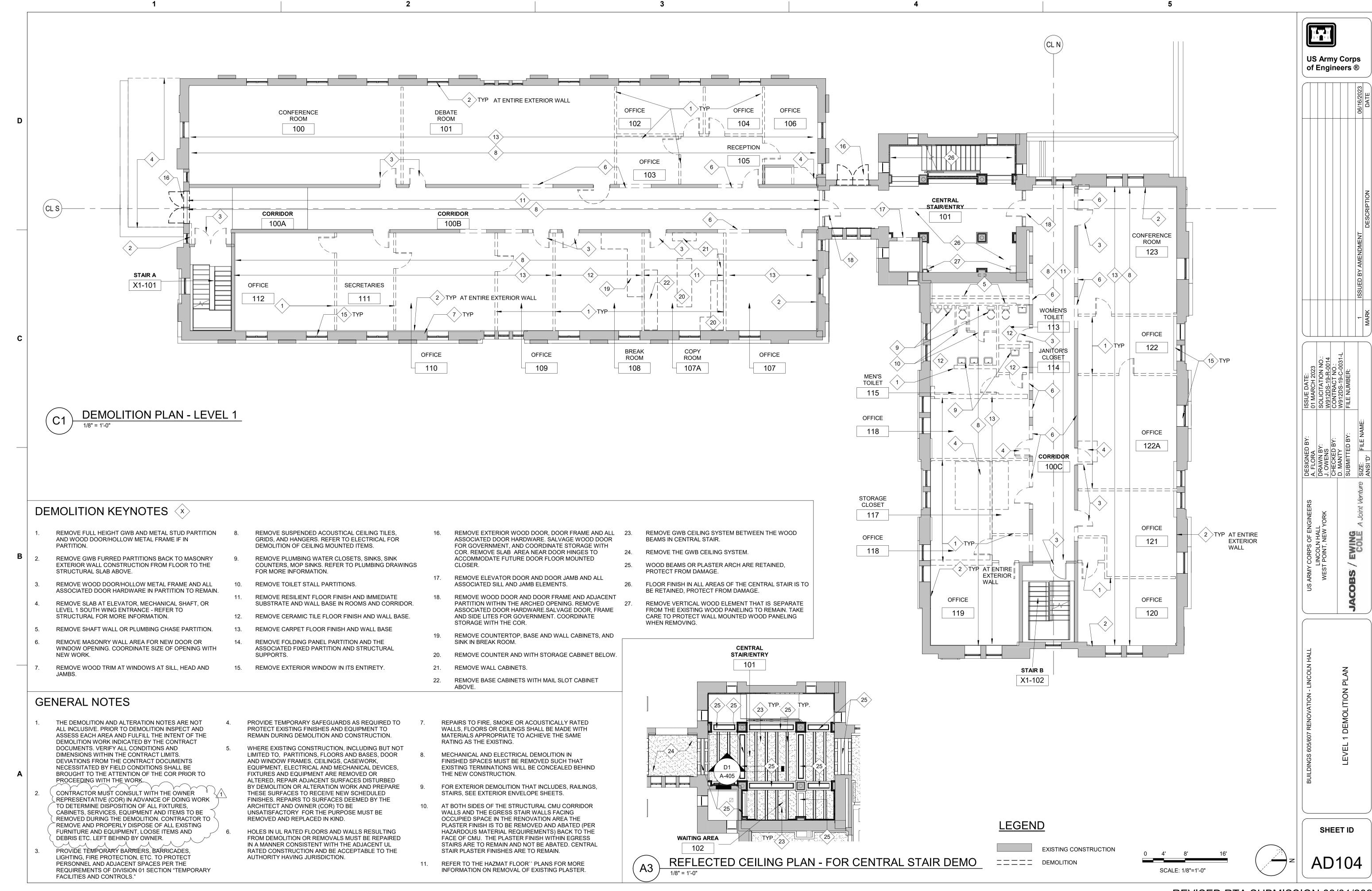
US Army Corps

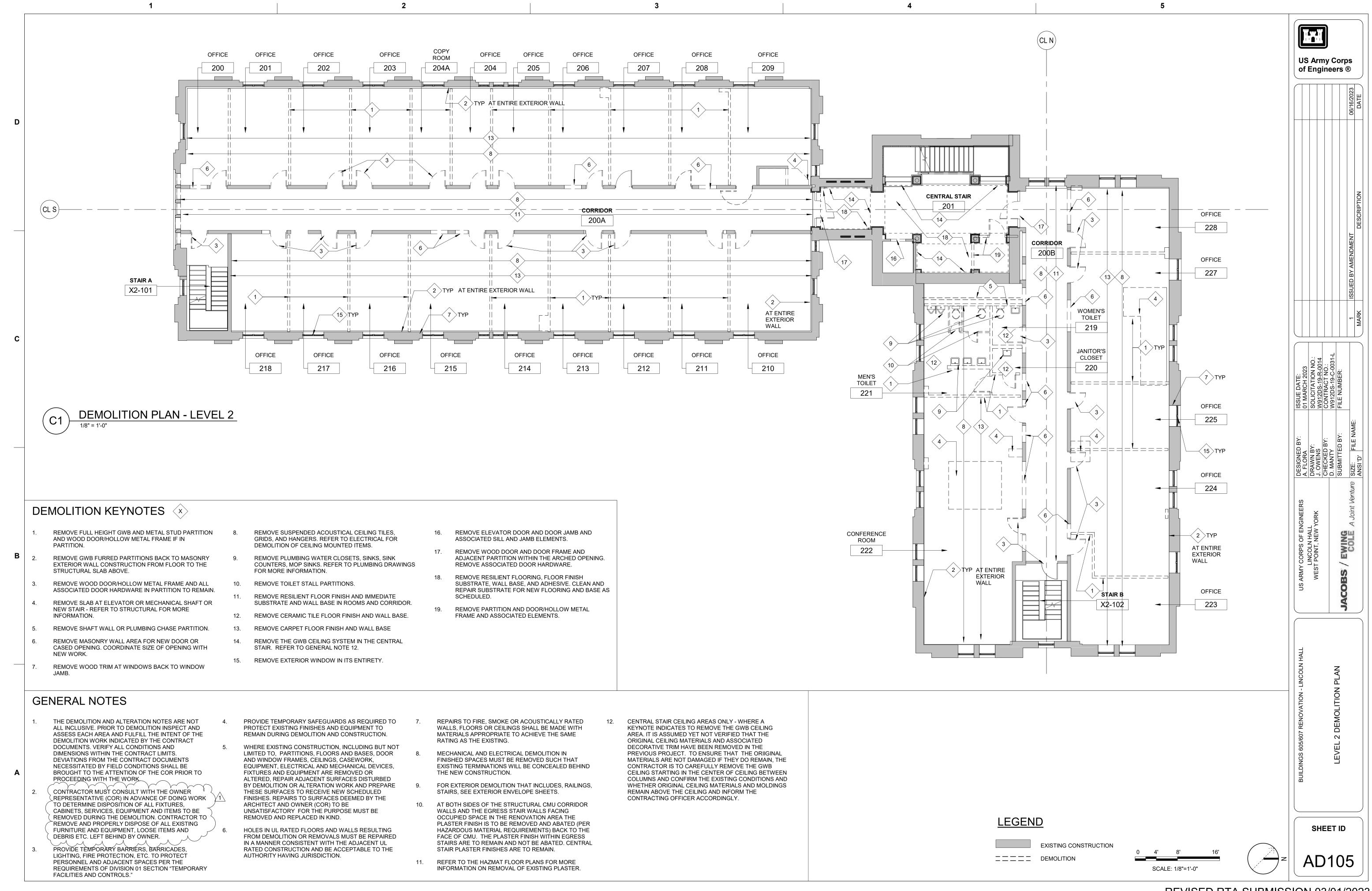
of Engineers ®

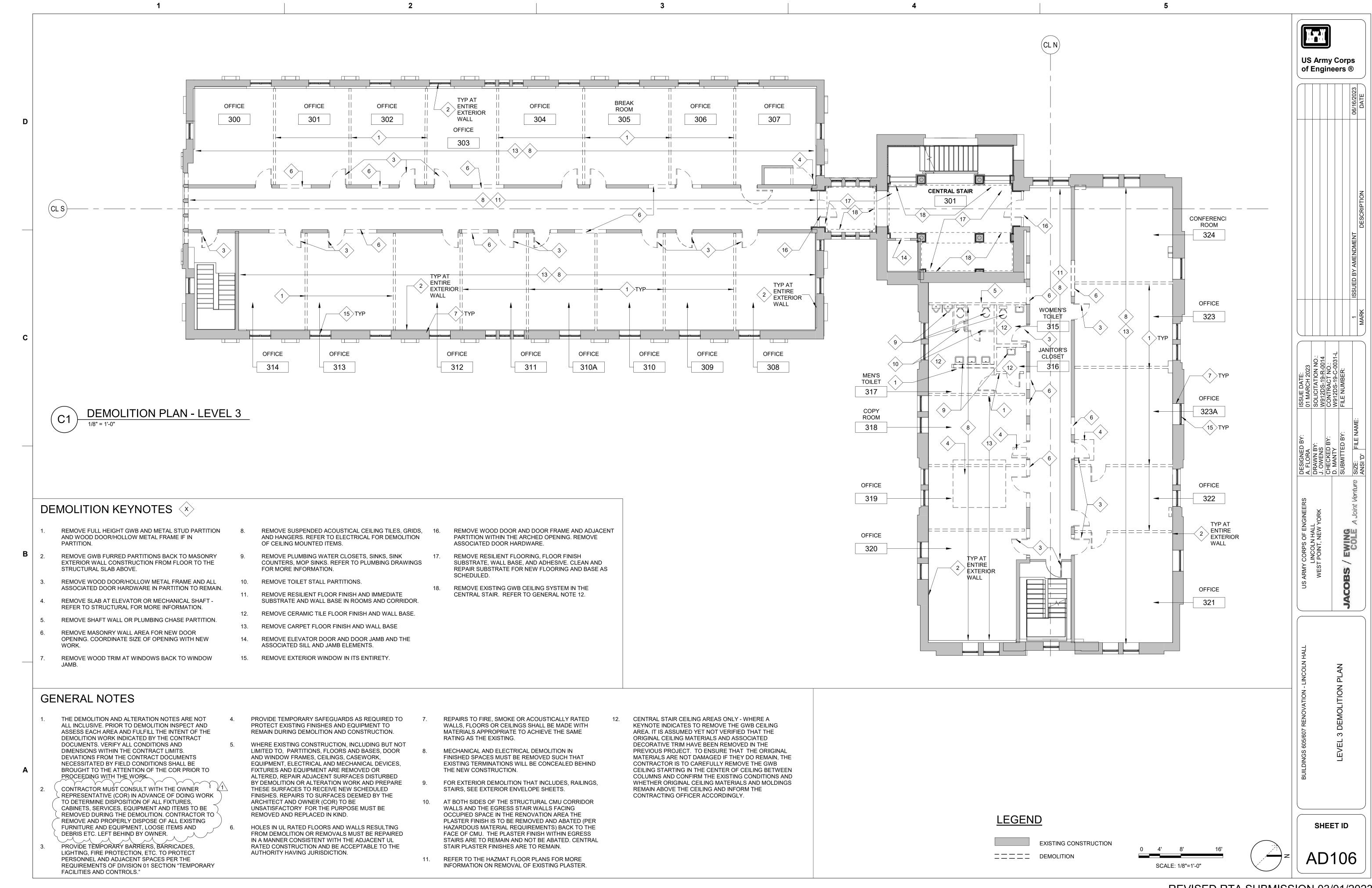


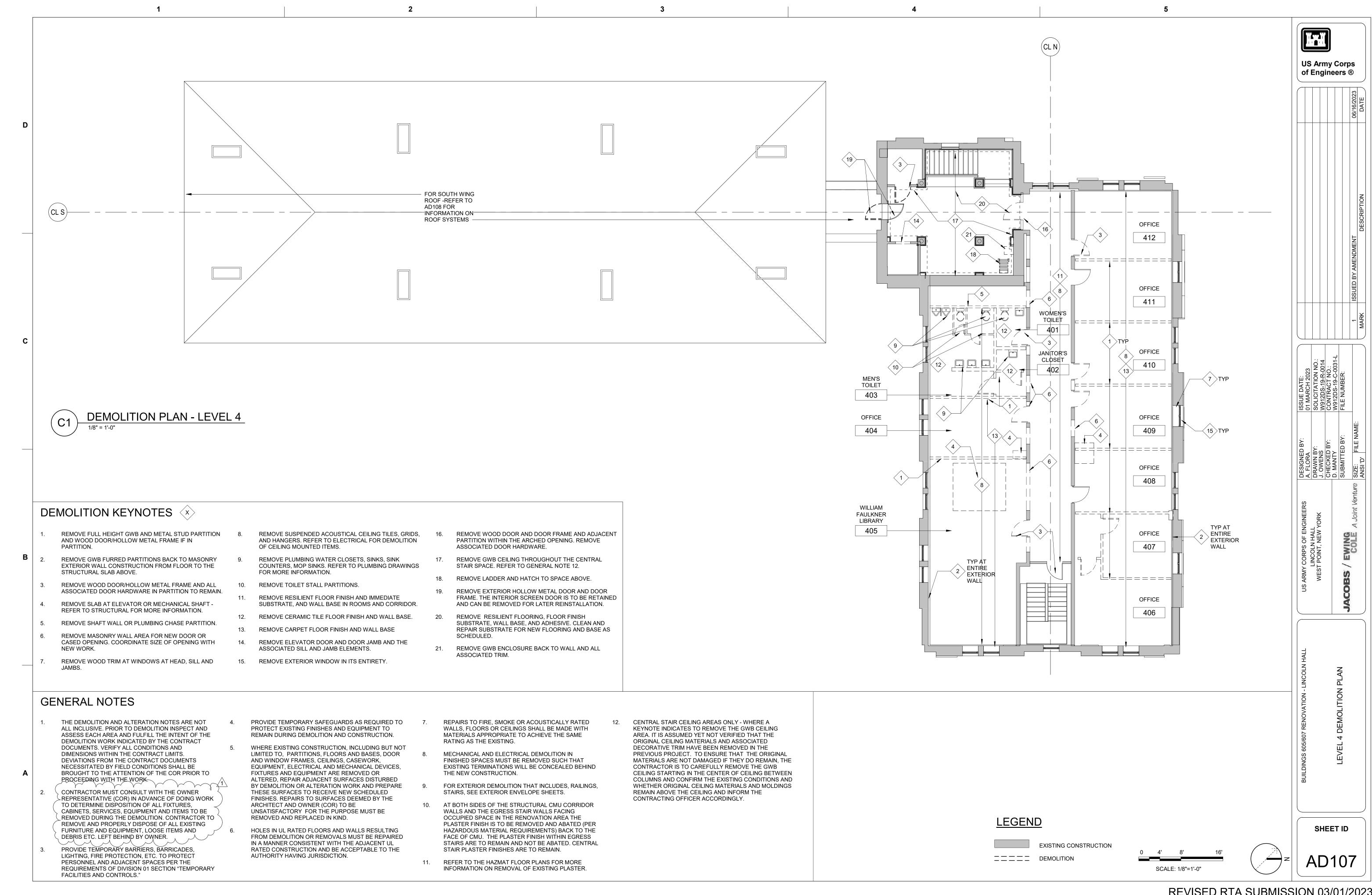


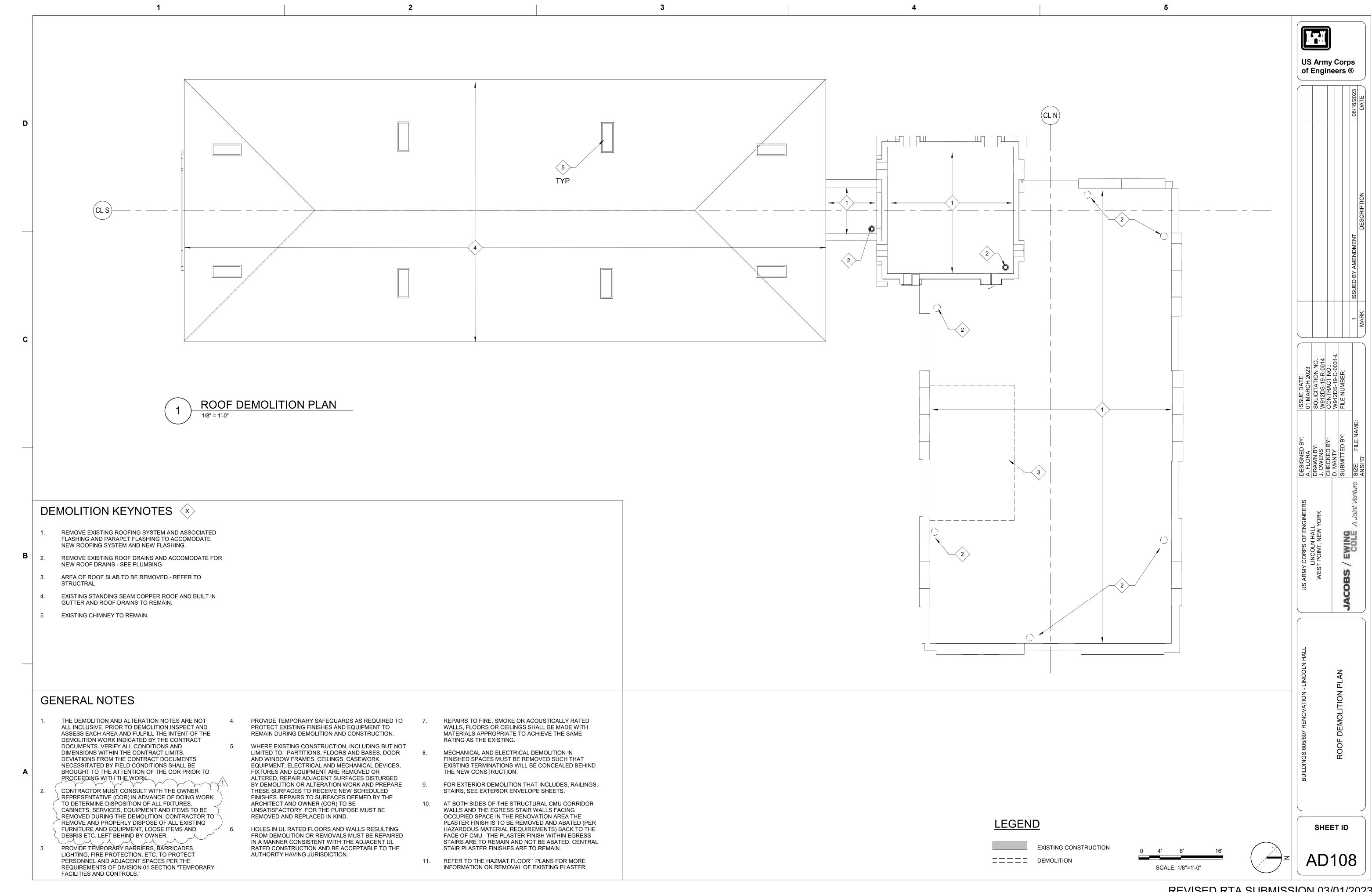


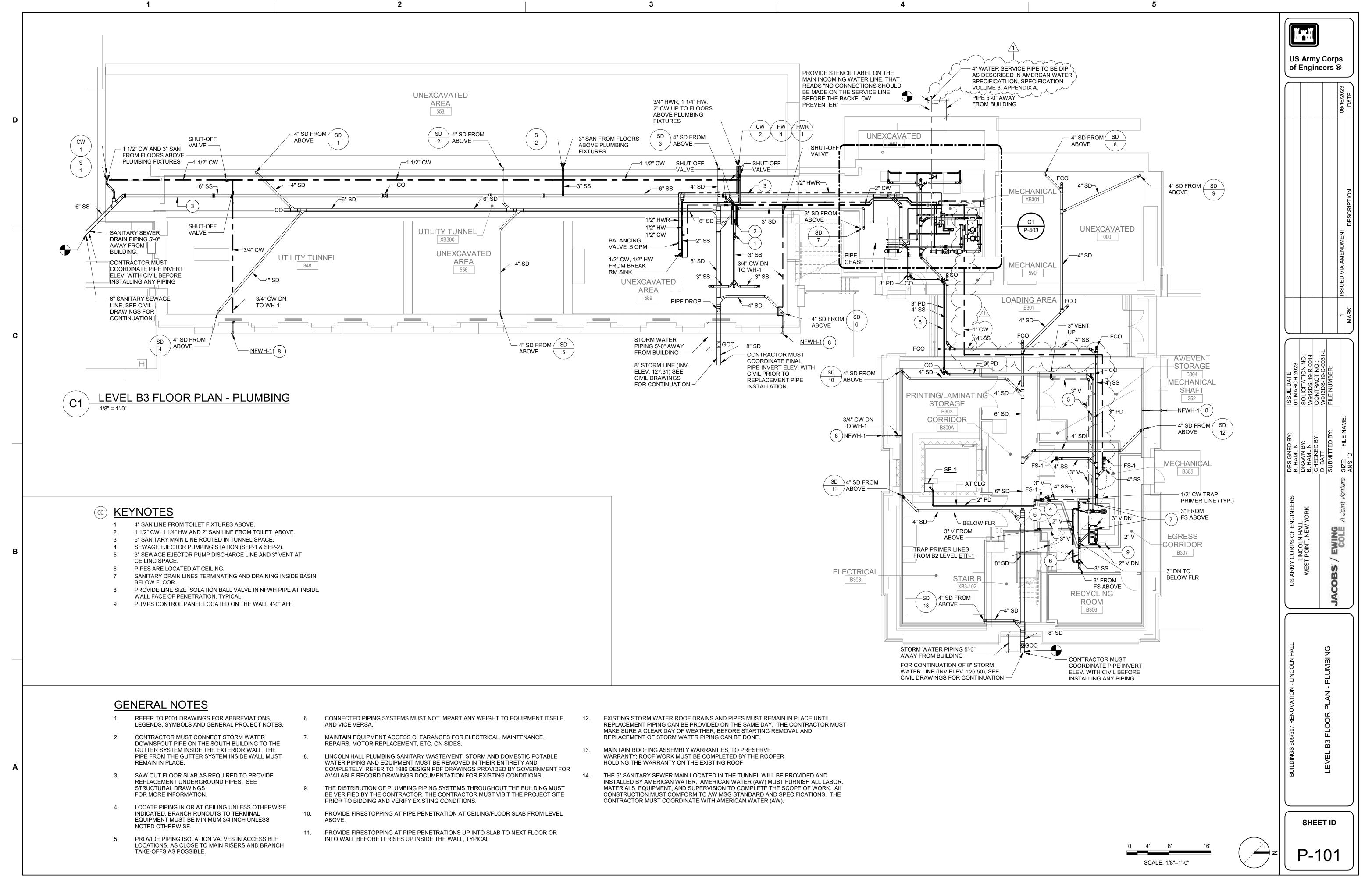


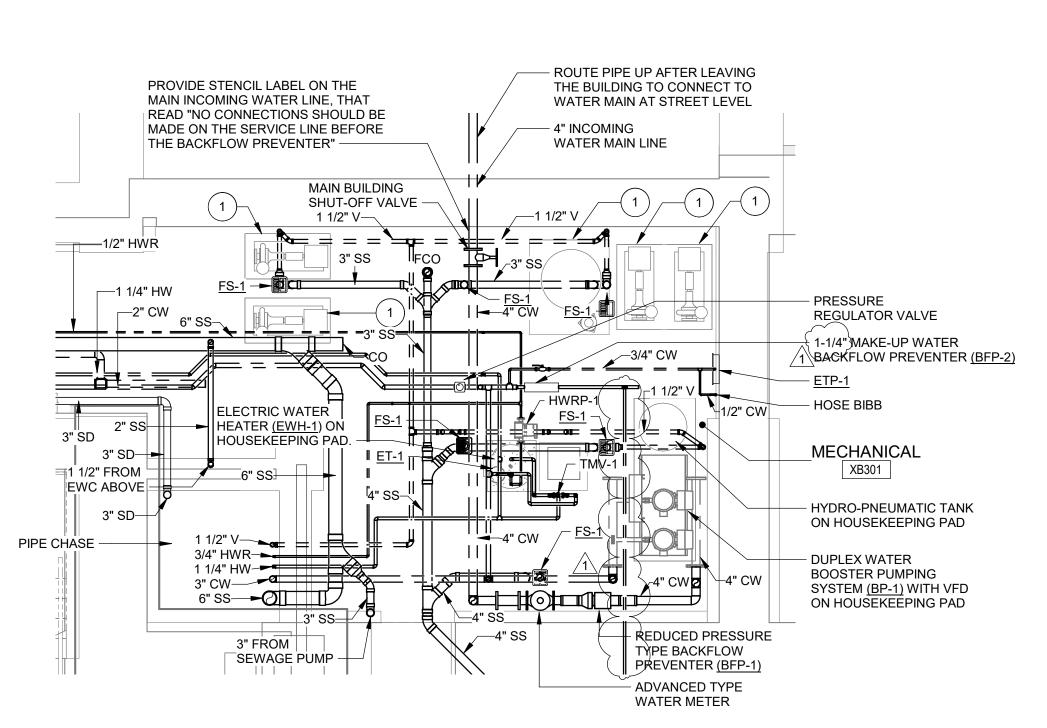












C1 ENLARGEMENT MECHANICAL ROOM PLAN

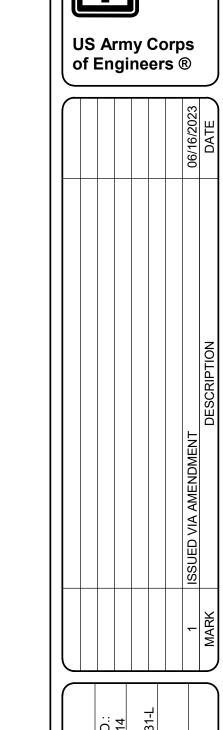
KEYNOTES

MECHANICAL EQUIPMENT LOCATION. SEE MECHANICAL DRAWINGS FOR MORE INFORMATION.

GENERAL NOTES

- I. REFER TO P001 DRAWINGS FOR ABBREVIATIONS, LEGENDS, SYMBOLS AND GENERAL PROJECT NOTES.
- 2. CONTRACTOR MUST CONNECT STORM WATER DOWNSPOUT PIPE ON THE SOUTH BUILDING TO THE GUTTER SYSTEM INSIDE THE EXTERIOR WALL. THE PIPE FROM THE GUTTER SYSTEM INSIDE WALL MUST REMAIN IN PLACE.
- 3. SAW CUT FLOOR SLAB AS REQUIRED TO PROVIDE REPLACEMENT UNDERGROUND PIPES. SEE STRUCTURAL DRAWINGS FOR MORE INFORMATION.
- 4. LOCATE PIPING IN OR AT CEILING UNLESS OTHERWISE INDICATED. BRANCH RUNOUTS TO TERMINAL EQUIPMENT MUST BE MINIMUM 3/4 INCH UNLESS NOTED OTHERWISE.
- 5. PROVIDE PIPING ISOLATION VALVES IN ACCESSIBLE LOCATIONS, AS CLOSE TO MAIN RISERS AND BRANCH TAKE-OFFS AS POSSIBLE.

- CONNECTED PIPING SYSTEMS MUST NOT IMPART ANY WEIGHT TO EQUIPMENT ITSELF, AND VICE VERSA.
- MAINTAIN EQUIPMENT ACCESS CLEARANCES FOR ELECTRICAL, MAINTENANCE, REPAIRS, MOTOR REPLACEMENT, ETC. ON SIDES.
- LINCOLN HALL PLUMBING SANITARY WASTE/VENT, STORM AND DOMESTIC POTABLE WATER PIPING AND EQUIPMENT MUST BE REMOVED IN THEIR ENTIRETY AND COMPLETELY. REFER TO 1986 DESIGN PDF DRAWINGS PROVIDED BY GOVERNMENT FOR AVAILABLE RECORD DRAWINGS DOCUMENTATION FOR EXISTING CONDITIONS.
- THE DISTRIBUTION OF PLUMBING PIPING SYSTEMS THROUGHOUT THE BUILDING MUST BE VERIFIED BY THE CONTRACTOR. THE CONTRACTOR MUST VISIT THE PROJECT SITE PRIOR TO BIDDING AND VERIFY EXISTING CONDITIONS.
- 10. PROVIDE FIRESTOPPING AT PIPE PENETRATION AT CEILING/FLOOR SLAB FROM LEVEL ABOVE
- PROVIDE FIRESTOPPING AT PIPE PENETRATIONS UP INTO SLAB TO NEXT FLOOR OR INTO WALL BEFORE IT RISES UP INSIDE THE WALL, TYPICAL
- EXISTING STORM WATER ROOF DRAINS AND PIPES MUST REMAIN IN PLACE UNTIL REPLACEMENT PIPING CAN BE PROVIDED ON THE SAME DAY. THE CONTRACTOR MUST MAKE SURE A CLEAR DAY OF WEATHER, BEFORE STARTING REMOVAL AND REPLACEMENT OF STORM WATER PIPING CAN BE DONE.
- MAINTAIN ROOFING ASSEMBLY WARRANTIES, TO PRESERVE WARRANTY; ROOF WORK MUST BE COMPLETED BY THE ROOFER HOLDING THE WARRANTY ON THE EXISTING ROOF
- 14. THE 6" SANITARY SEWER MAIN LOCATED IN THE TUNNEL WILL BE PROVIDED AND INSTALLED BY AMERICAN WATER. AMERICAN WATER (AW) MUST FURNISH ALL LABOR, MATERIALS, EQUIPMENT, AND SUPERVISION TO COMPLETE THE SCOPE OF WORK. AII CONSTRUCTION MUST COMFORM TO AW MSG STANDARD AND SPECIFICATIONS. THE CONTRACTOR MUST COORDINATE WITH AMERICAN WATER (AW).



US ARMY CORPS OF ENGINEERS

LINCOLN HALL

WEST POINT, NEW YORK

LINCOLN HALL

DRAWN BY:

B. HAMLIN

CHECKED BY:

D. BATT

SUBMITTED BY:

SUBMITTED BY:

LINCOLN HALL

W912DS-19-R-0014

CONTRACT NO.:

W912DS-19-C-0031-L

SUBMITTED BY:

HILE NUMBER:

ANSI 'D'

ANSI 'D'

RICE NAME:

ENLARGED PLANS

P-403

		WATER HAMMER	SCHEDULE	
TAG	ARRESTOR SIZE	WATER SUPPLY FIXTURE UNITS	PDI STD WH 201	NOTES
WHA-A	1/2"	1-11	PDI-A	
WHA-B	3/4"	12-32	PDI-B	1,2,3,4,5
WHA-C	1"	33-60	PDI-C	

1. ALL ARRESTORS SHALL BE INSTALLED PER PDI (PLUMBING AND DRAINAGE INSTITUTE) STANDARD PDI-WH201 (2006)

FOR SIZING AND PLACEMENT. 2. ARRESTORS MUST BE PROVIDED PER PDI (PLUMBING AND DRAINAGE INSTITUTE) STANDARD PDI-WH201 (2006) FOR SIZING AND PLACEMENT.

3. PROVIDE PISTON OPERATED, COPPER BODY, LEAD FREE WATER HAMMER ARRESTOR.
4. WATER HAMMER ARRESTOR SIZING MUST BE BASED ON SPECIFIC MANUFACTURER'S FIXTURE UNIT CAPACITY

5. WATER HAMMER ARRESTORS MUST BE CERTIFIED BY THE PLUMBING AND DRAINAGE INSTITUTE.

			IVIINIIV		NNECTION	SIZE	
	FIXTURE	MOUNTING		(INC	HES)		DESCRIPTION
TAG			SS	V	CW	HW	
ETP-1	ELECTRONIC TRAP PRIMER	WALL MOUNTED	0"	0"	1/2"	0"	GALVANNEALED STEEL FLUSH MOUNT ENCLOSURE, WITH SOLENOID VALVE, VACUUM BREAKER, TIMER AND MULTIPLE OUTLETS
FS-1	FLOOR SINK	FLOOR MOUNTED	0"	0"	0"	0"	SEE PLANS FOR SIZES
NFWH-1	NON-FREEZE WALL HYDRANT	WALL MOUNTED	0"	0"	3/4"	0"	LEAD FREE, AUTOMATIC DRAINING, INTERGRAL BACKFLOW PREVENTER WITH ANTI-SIPHON TECHNOLOGY.
TP-1	AUTOMATIC TRAP PRIMER	PIPE HUNG	0"	0"	1/2"	0"	PRESSURE DROP ACTIVATED, WITH DISTRIBUTION UNIT
P-1	WATER CLOSET	WALL MOUNTED	4"	2"	1"	0"	WALL MOUNTED ELONGATED TOILET FLUSHOMETER VALVE, VITREOUS CHINA, HARDWIRED SENSOR FLUSHOMETER, 1.1 GPF
P-1A	WATER CLOSET - ADA	WALL MOUNTED	4"	2"	1"	0"	WALL MOUNTED ELONGATED TOILET FLUSHOMETER VALVE, VITREOUS CHINA, HARDWIRED SENSOR FLUSHOMETER, 1.1 GPF, ADA COMPLIANT
P-2A	URINAL	WALL MOUNTED	2"	1 1/2"	3/4"	3/4"	SENSOR OPERATED FLUSH VALVE, HARD WIRED AC TRANSFORMER, 0.125 GPF
P-3	LAVATORY - ADA	UNDERCOUNTER MOUNTED SINK	1 1/2"	1 1/2"	1/2"	1/2"	SENSOR OPERATED FAUCET, HARD WIRED AC TRANSFORMER, 0.5 GPM RESTRICTOR
P-3A	LAVATORY - ADA	UNDERCOUNTER MOUNTED SINK	1 1/2"	1 1/2"	1/2"	1/2"	SENSOR OPERATED FAUCET, HARD WIRED AC TRANSFORMER, 0.5 GPM RESTRICTOR
EWC-1	ELECTRIC WATER COOLER	WALL MOUNTED	1 1/2"	1 1/2"	1/2"	0"	BI-LEVEL UNIT WITH BOTTLE FILLER, REFRIGERATED ADA 8 GPH CHILLER, 115V/60HZ POWER
FCO	FLOOR CLEANOUT	FLOOR MOUNTED	0"	0"	0"	0"	SEE PLANS FOR SIZES
FD-1	FLOOR DRAIN	FLOOR MOUNTED	0"	0"	0"	0"	SEE PLANS FOR SIZES
KS-1	BREAK ROOM SINK	COUNTERTOP MOUNTED SINK	2"	1 1/2"	1/2"	1/2"	18 GAUGE 300 SERIES STAINLESS STEEL, 27"X22"X8, SINGLE BOWL WITH 1/2 HP GARBAGE DISPOSER, ADA
MS-1	MOP SINK	FLOOR MOUNTED	3"	1 1/2"	3/4"	3/4"	PRECAST TERRAZZO, 28"X28"X2 CORNER TYPE
RD-1	ROOF DRAIN	ROOF MOUNTED	0"	0"	0"	0"	SEE PLANS FOR SIZES
RD-1 & OFD-1	COMBINATION ROOF/OVERFLOW DRAIN	ROOF MOUNTED	0"	0"	0"	0"	SEE PLANS FOR SIZES
S-1	WELLNESS ROOM & CAFE SINK	COUNTERTOP MOUNTED SINK	2"	1 1/2"	1/2"	1/2"	18 GAUGE 300 SERIES STAINLESS STEEL, 18"X18"X8, SINGLE BOWL

ELECTRIC WATER HEATER SCHEDULE

							TEMP SET		ELE	CTRICA	L DATA	4	
						MAX TEMP RISE IN			INPUT				
TAG	CW CONNECTION	HW CONNECTION	LOCATION	ACTIVATION GPM	RATE (GPH)	°F AT 0.5 GPM	DEGREES F	GALLON	(kW)	V	PH	Hz	NOTES
EWH-1	1 1/2"	1 1/2"	MECHANICAL RM XB301	N/A	166	100	140	120 GALLON STORAGE TANK.	30	480	3	60	1,2,3,4
EWH-2	1/2"	1/2"	BREAK ROOM SINK B135	0.3	0	60	110	POINT OF USE INSTANTANEOUS	1.4	115	1	60	1,2,3,4
EWH-3	3/4"	3/4"	JANITOR CLOSETS	0.5	0	100	110	POINT OF USE INSTANTANEOUS	6.7	208	1	60	1,2,3,4
					-								

1. PROVIDE ASME RATED ELECTRIC WATER HEATER.

2. KW INDICATED IS THE TOTAL OF TWO 6.0 KW ELEMENTS OPERATING SIMULTANEOUSLY.
3. SET STORAGE TEMPERATURE TO 140°F AND PROVIDE WITH ASSE 1017 THERMOSTATIC MASTER MIXING VALVE SET TO 110°F. 4. PROVIDE SINGLE POWER POINT CONNECTION WITH LOCAL DISCONNECT SWITCH.

		HOT WATER CIRC	ULAT	TING PUM	1P SC	HED	ULE	=		
				PUMP HEAD		ELEC.	TRIC	AL D	ATA	
TAG	LOCATION	SYSTEM	GPM	(FT WC)	RPM	HP	V	PH	Hz	NOTES
HWRP-1	MECHANICAL RM XB301	DOMESTIC HOT WATER SYSTEM	15	17	1,725	0.300	120	1	60	IRON & LEAD FREE, BRONZE, SEE NOTE 1,

NOTES

1. PROVIDE LEAD FREE STAINLESS STEEL BODY WITH STAINLESS STEEL IMPELLER. 2. PROVIDE IMMERSION AQUASTAT WITH PROGRAMMABLE TIMER.

					BACKFLOW PRE	VENTER SCHEDULE
-	TAG	FLOW	SERVICE	CW CONNECTION	LOCATION	NOTES
В	BFP-1	177 GPM	MAIN WATER SERVICE	4"	MECHANICAL ROOM XB301	REDUCED PRESSURE ZONE ASSEMBLY, BRONZE, LEAD FREE, ASSE LISTED 1013, SEE NOTE 1,2
В	BFP-2		MAKE-UP WATER	1 1/4"}	MECHANICAL ROOM XB301	REDUCED PRESSURE ZONE ASSEMBLY, BRONZE, LEAD FREE, ASSE LISTED 1013, SEE NOTE 1,2

1. PROVIDE LEAD FREE ASSE 1013 REDUCED PRESSURE ZONE BACKFLOW PREVENTER WITH INLET STRAINER.
2. ROUTE RELIEF DRAIN THROUGH AIR GAP TO FLOOR DRAIN.

			D	OMES	STIC WATE	R BO	OSTE	R PUMP S	SCHE	DULE			
TAC	TVDE	LOCATION	SYSTEM CAPACITY	SYSTEM BOOST	PUMP CAPACITY	PUMP HEAD	MOTOR	PUMP SIZE		ELECTR	RICAL		NOTES
TAG	TYPE	LOCATION	(GPM)	(PSI)	(GPM) EACH	(FEET)	(RPM)	(L"XW"XH")	MOTOR (HP)	VOLTS	PHASE	HZ	NOTES
BP-1	DUPLEX	B3 MECHANICAL ROOM	177	54	110	92	3,500	29 x 36 x 42	5.0	480	3	60	1,2,3

TAG

ET-1

VARIABLE CONTROL SYSTEMS DUPLEX BOOSTER PUMPING SYSTEM.

PROVIDE LEAD FREE PACKAGED DUPLEX SKID MOUNTED DOMESTIC WATER BOOSTER PUMP SYSTEM WITH STAINLESS STEEL HEADERS, SINGLE POINT POWER

CONNECTION, INLET/DISCHARGE PRESSURE GAUGES AND VARIABLE SPEED DRIVES.

PROVIDE COMMUNICATION TO THE DDC SYSTEM. PROVIDE PNEUMATIC PRESSURE TANK WITH BLADDER.

LOCATION

MECHANICAL RM XB301

PLUME	BING EXPANSION TA	NK SCH	EDULE					
		TANK				PRESSUF	RE (PSI)	
		VOLUME	ACCEPTANCE				MAX	
SYSTEM	TYPE	(GAL)	VOLUME (GAL)	DIAMETER	HEIGHT	PRE-CHARGE	OPERATING	NOTES
DOMESTIC HOT WATER SYSTEM	INLINE	14.00	0.00	10 1/2"	13 1/2"	20	150	

					SUMF	PUM	P SCI	HEDL	JLE	
			PUMP	PUMP	MOTOR	E	ELECTRICA	AL		
TAG	TYPE	LOCATION	CAPACITY (GPM)	FT WC	(RPM)	MOTOR (HP)	VOLTS	PHASE	HZ	NOTES
SP-1	SIMPLEX	ELEVATOR PIT	50	21	3,600	1.0	208	3	60	1,2,3

1. PROVIDE PACKAGED SINGLE ELEVATOR SUMP PUMP AND CONTROL SYSTEM WITH OIL DETECTION; PUMP SYSTEM MUST BE CAPABLE OF PUMPING DISCHARGE WATER WITHOUT THE POTENTIAL OF DISCHARGING AN OIL-WATER MIXTURE. LOCATE CONTROL

PANEL INSIDE ELEVATOR MACHINE ROOM. PROVIDE DRY CONTACT CONNECTION FOR REMOTE MONITORING OF HIGH LEVEL ALARM TO BAS. 2. INDICATED 0.5 HP PUMPS.

3. PROVIDE TURNKEY SUMP PUMP SYSTEM PER MANUFACTURER'S REQUIREMENTS AND SPECIFICATIONS.

				SEW	AGE EJ	ECTO	R PUN	MP SC	CHE	DULE
			PUMP	PUMP	MOTOR		ELECTR	ICAL		
TAG	TYPE	LOCATION	CAPACITY (GPM)	HEAD (FT WC)	(RPM)	MOTOR (HP)	VOLTS	PHASE	HZ	NOTES
SEP-1 & 2	DUPLEX	B3 LEVEL	50	27	1,750	1 1/2	460	3	60	1,2,3,4,5

NOTES

1. PROVIDE A DUPLEX PACKAGE SYSTEM, INCLUDING, DUPLEX CONTROLLER, RAILS, FLOAT SWITCHES, ALARMS, VALVES, PIPING, STARTER AND ACCESSORIES TO HAVE A

COMPLETELY AUTOMATIC OPERATIONAL SYSTEM.

2. PROVIDE SEWAGE EJECTOR PUMPS WITH FLOW AND HEAD PRESSURE CAPACITY TO MATCH EXISTING SEP.

3. PACKAGED SUMP PUMP ASSEMBLY MUST BE LOCATED IN EXISTING CONCRETE VAULT BELOW GRADE.

4. PUMPS MUST BE PVDF OR 316 STAINLESS STEEL CONSTRUCTION SUITABLE FOR PROVENTING CORROSION.
5. EACH UNIT MUST BE PROVIDED WITH A FACTORY CONFIGURED PACKAGE CONSISTING OF PUMPS, SUMPS, COVERS FLOATS, WIRED AND CONFIGURED CONTROLS, LEVEL SENSORS/ALARMS AND LEAD-LAG OPERATION CONFIGURATION FOR REDUNDANCY.

		MIXING VALVE S	SCHE	EDULE					
					TER RATURE	F	PIPE SIZE		
TAG	LOCATION	SYSTEM	GPM	IN	OUT	CW IN	HW IN	TW OUT	NOTES
TMV-1	MECHANICAL ROOM XB301	DOMESTIC HOT WATER SYSTEM	1.23	140 °F	120 °F	1 1/4"	1 1/4"	0"	1,2,3

NOTES

1. PROVIDE ADJUSTABLE HIGH TEMPERATURE LIMIT STOP.

2. PROVIDE INLET CHECKSTOPS, OUTLET BALL VALVE.

3. PROVIDE WITH 0.5 GPM MINIMUM FLOW CAPABILITY, 10 PSI PRESSURE DROP AT 40 GPM

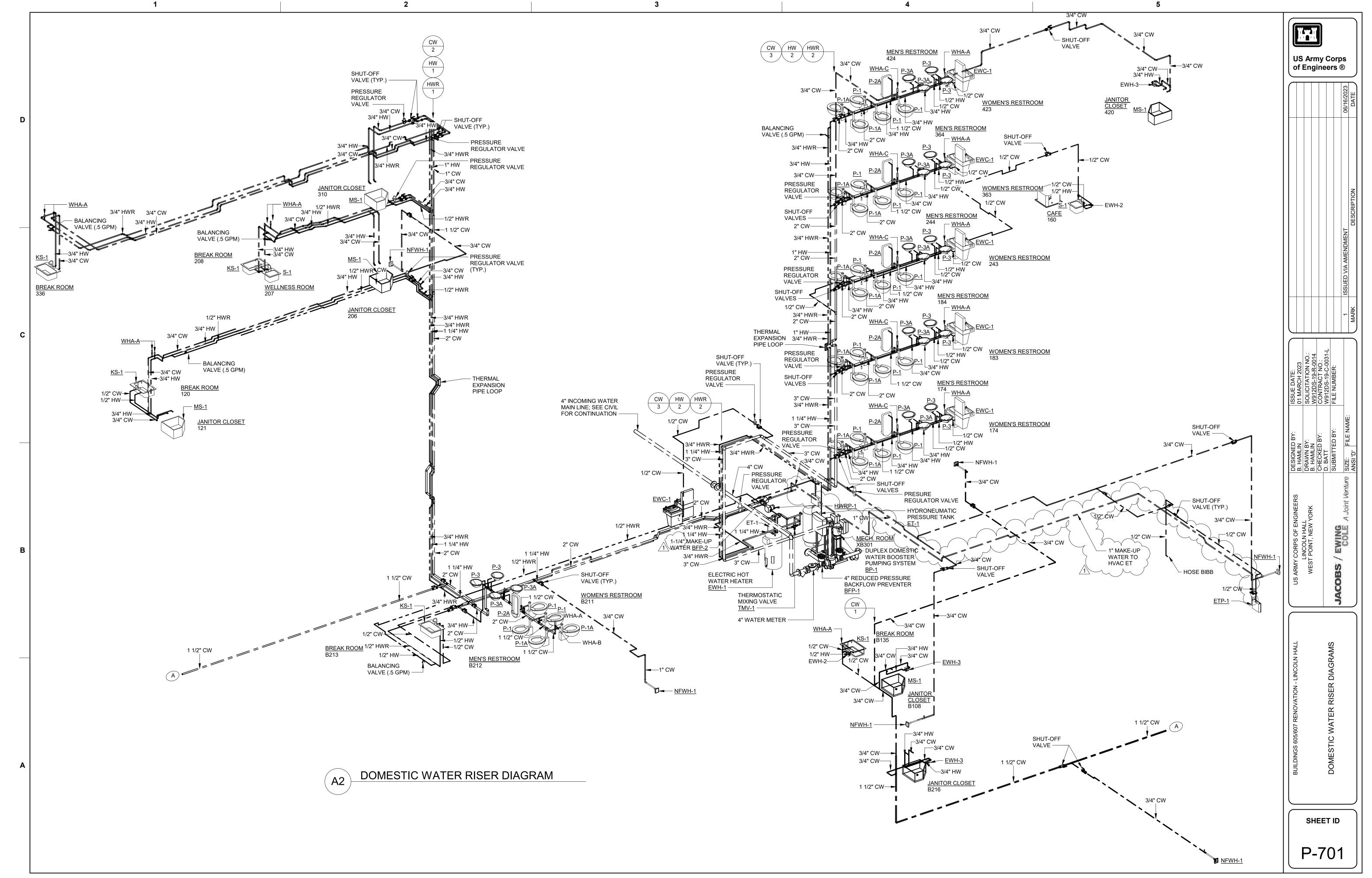
US Army Corps of Engineers ®

of Engineers	
	06/16/2023 DATE
	ISSUED VIA AMENDMENT DESCRIPTION

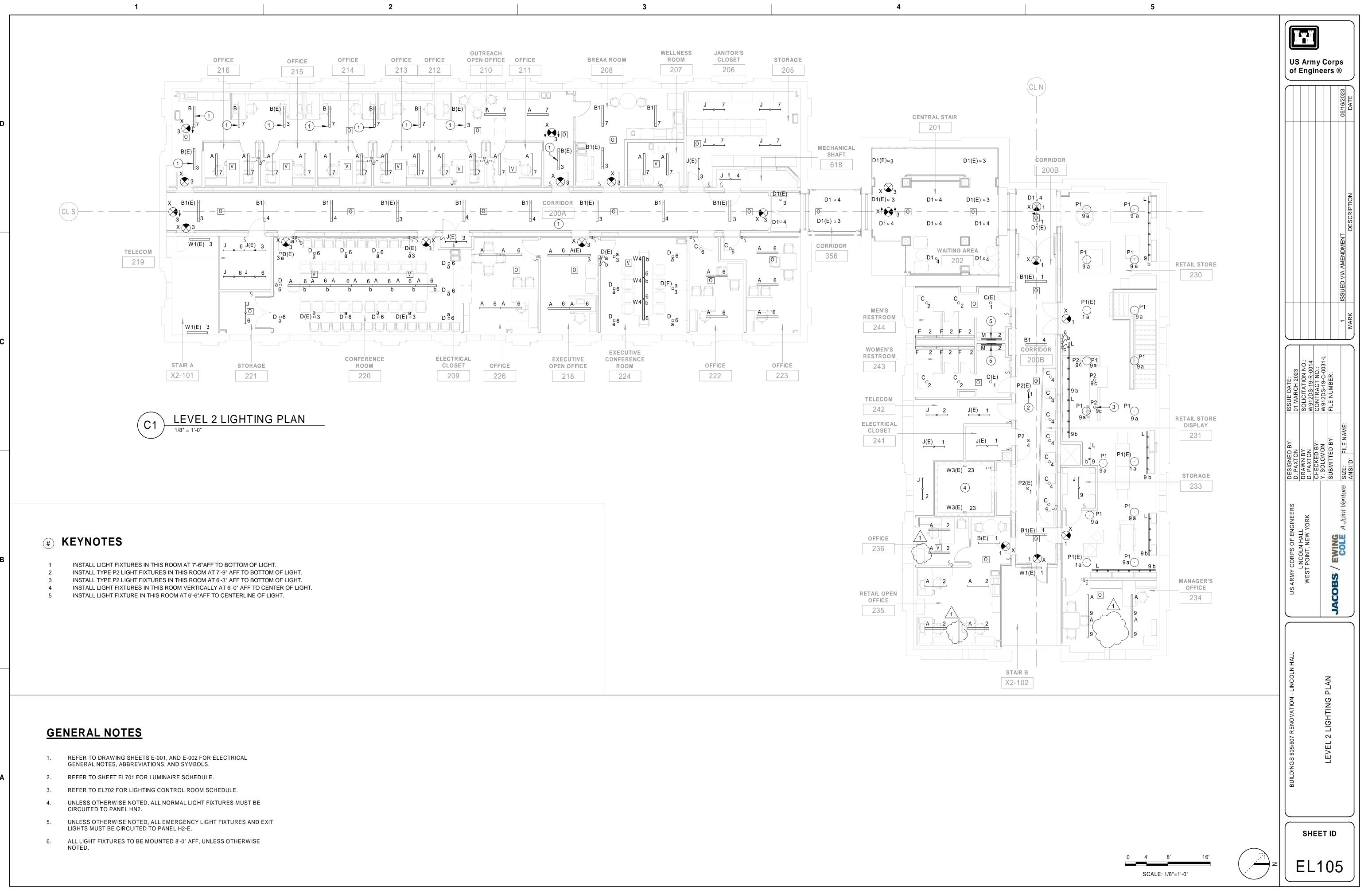
OGL	DESIGNED BY:	ISSUE DATE:
2	B. HAMLIN	01 MARCH 2023
	DRAWN BY:	SOLICITATION NO.:
	B. HAMLIN	W912DS-19-R-0014
	CHECKED BY:	CONTRACT NO.:
	D. BATT	W912DS-19-C-0031-L
	SUBMITTED BY:	FILE NUMBER:
int Venture SIZE:	SIZE: FILE NAME: ANSI 'D'	

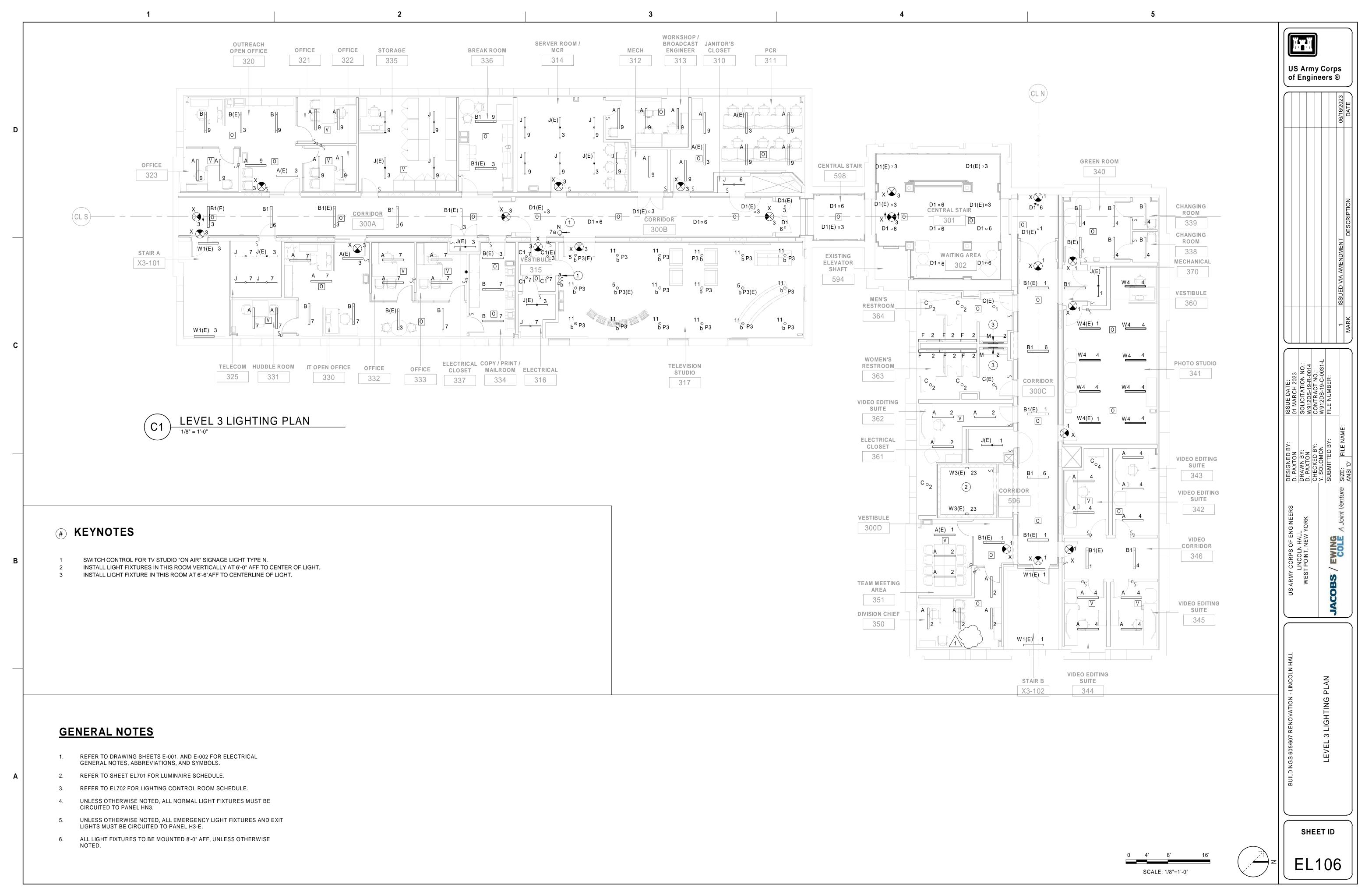
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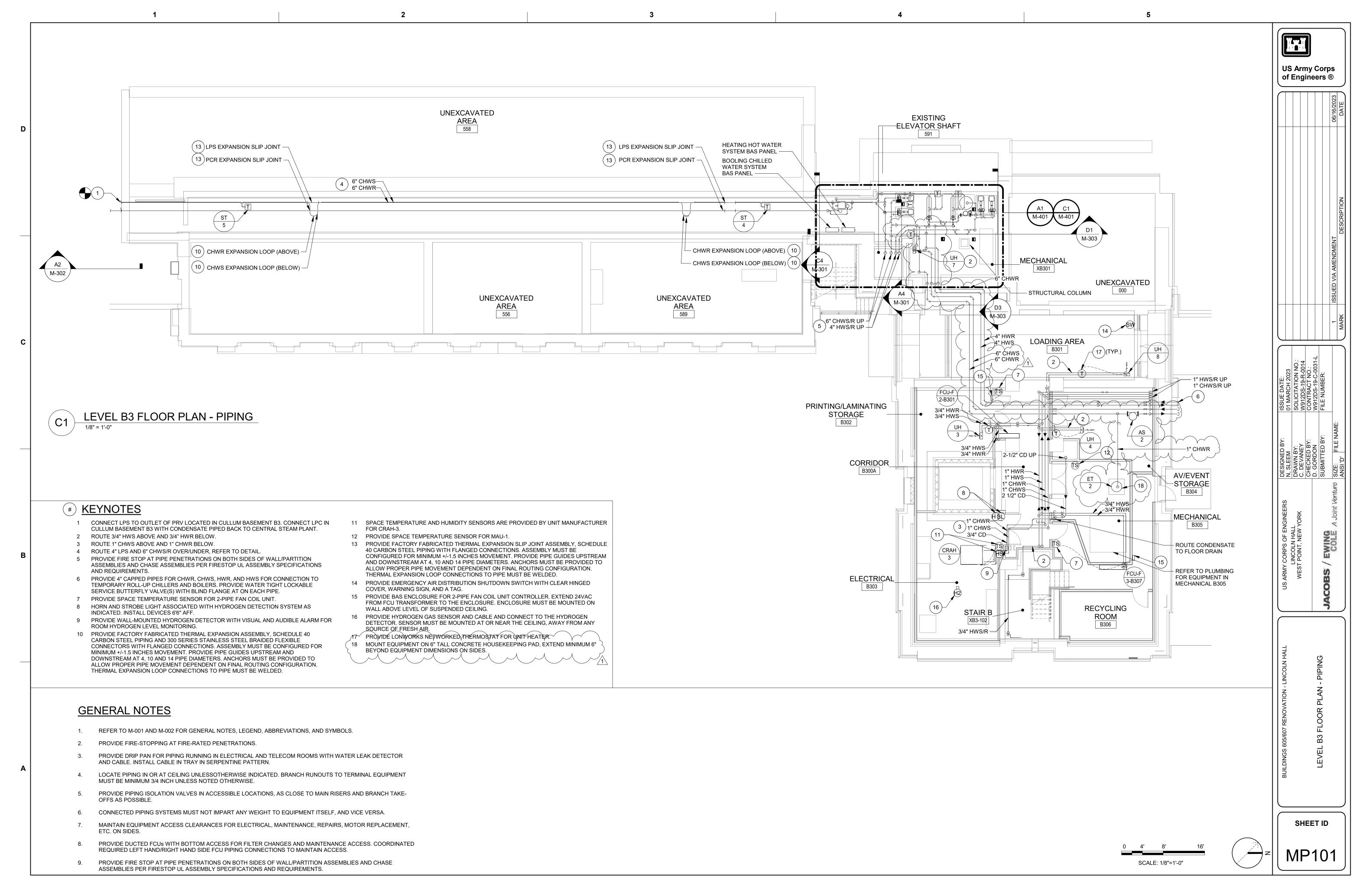
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	PUMP SCHEDULE															
	WATER GPM PUMP HEAD SUCTION SIZE DISCHARGE ELECTRICAL DATA															NOTES
TAG	LOCATION	SERVICE	CONFIGURATION	FLUID TYPE	TEMPERATURE	GFIVI	(FT WC)	EFF (%)	(INCH)	SIZE (INCH)	HP	BHP	V	PH	Hz	NOTES
HHWP-1	XB301 MECHANICAL	HEATING HOT WATER SYSTEM	BASE MOUNTED END SECTION	WATER	140 °F	200	105	71.1	2"	1 1/2"	10.0	7.23	480	3	60	1, 3, 4, 5
HHWP-2	XB301 MECHANICAL	HEATING HOT WATER SYSTEM	BASE MOUNTED END SECTION	WATER	140 °F	200	105	71.1	2"	1 1/2"	10.0	7.23	480	3	60	1, 3, 4, 5
CHWP-1	XB301 MECHANICAL	CHILLED WATER SYSTEM	BASE MOUNTED END SECTION	WATER	43 °F	380	75	73.6	3"	2 1/2"	15.0	9.73	480	3	60	1, 3, 4, 5
CHWP-2	XB301 MECHANICAL	CHILLED WATER SYSTEM	BASE MOUNTED END SECTION	WATER	43 °F	380	75	73.6	3"	2 1/2"	15.0	9.73	480	3	60	1, 3, 4, 5
CBP-1	315 VESTIBULE	CHILLED BEAM LOOP - CHW - TELEVISION STUDIO, MOTHER'S ROOM	INLINE	WATER	57 °F	12	20	67.5	1"	1"	1/2	0.40	120	1	60	3, 4, 5, 6
CBP-2	346 VIDEO CORRIDOR	CHILLED BEAM LOOP - CHW - VIDEO EDITING SUITES	INLINE	WATER	57 °F	12	20	67.5	1"	1"	1/2	0.40	120	1	60	3, 4, 5, 6
CBP-3	346 VIDEO CORRIDOR	CHILLED BEAM LOOP - HW - VIDEO EDITING SUITES	INLINE	WATER	57 °F	12	20	67.5	1"	1"	1/2	0.40	120	1	60	3, 4, 5, 6
CP-1	DOAS-1 INTERIOR VESTIBULE	DOAS-1 HOT WATER COIL	INLINE	WATER	140 °F	50	20	61.2	2"	2"	3/4	0.40	120	1	60	2, 3, 4, 5
CP-2	B233 MECHANICAL	DOAS-2 HOT WATER COIL	INLINE	WATER	140 °F	50	20	61.2	2"	2"	3/4	0.40	120	1	60	2, 3, 4, 5
CP-3	B236 STORAGE	MAU-1 HOT WATER COIL	INLINE	WATER	140 °F	50	20	61.2	2"	2"	3/4	0.40	120	1	60	2, 3, 4, 5

- PROVIDE PREMIUM EFFICIENCY MOTORS WITH THERMAL OVERLOAD PROTECTION
- PROVIDE STANDARD EFFICIENCY MOTORS WITH THERMAL OVERLOAD PROTECTION. MOTORS MUST BE NON-OVERLOADING THROUGHOUT ENTIRE PUMP CURVE
- PROVIDE VFD WITH INVERTER DUTY RATED MOTOR. VFDs AND MOTOR STARTERS MUST BE PROVIDED BY ELECTRICAL. PROVIDE VFDs IN LINE-OF-SIGHT TO CONNECTED PUMP
- PROVIDE SHAFT GROUNDING RINGS.
 - PROVIDE EC MOTORS WITH THERMAL OVERLOAD PROTECTION.

HORIZONTAL SHELL & TUBE STEAM TO HOT WATER HEAT EXCHANGER SCHEDULE														
		SHELL SIDE TUBE SIDE												
			CAPACITY	STEAM PRESSURE	STEAM MASS FLOW	MAX	EWT		WATER FLOW RATE	MAX PRESSURE DROP	FOULING			
TAG	LOCATION	SERVICE	(MBH)	(PSIG)	(LBS/HR)	TEMP	(°F)	LWT (°F)	(GPM)	(FT WC)	FACTOR	NOTES		
HX-1	XB301 MECHANICAL	HEATING HOT WATER SYSTEM	1,975	10.0	2,060	375 °F	120 °F	140 °F	200	15	0.0005	1, 2, 3, 4, 5, 6		
HX-2	1X-2 XB301 MECHANICAL HEATING HOT WATER SYSTEM 1,975 10.0 2,060 375 °F 120 °F 140 °F 200 15 0.0005 1, 2, 3, 4,													

- PROVIDE SHELL AND TUBE HEAT EXCHANGER DESIGNED, CONSTRUCTED, TESTED, AND STAMPED IN ACCORDANCE WITH SECTION VIII, DIVISION 1 OF THE ASME PRESSURE CODE.
- PROVIDE WITH FABRICATED CARBON STEEL SHELL; CAST IRON BONNET; STEEL TIE-RODS AND SPACERS; CAST IRON/CARBON STEEL FEET AND BOLTING; COPPER TUBE BUNDLE.
- COPPER TUBE BUNDLE MUST BE REMOVABLE FOR CLEANING, MAINTENANCE AND REPLACEMENT. PROVIDE ISOLATION BUTTERFLY VALVES ON ALL INLET AND OUTLET WATER CONNECTIONS AND STEAM CONNECTIONS.
- PROVIDE GASKETS MADE FROM MATERIAL SUITABLE FOR OPERATING TEMPERATURES AND FLUIDS/STEAM USED.
- FIELD INSULATION FOR ALL HEAT EXCHANGER SURFACES AND PIPING PER MANUFACTURER'S REQUIREMENTS AND SPECIFICATIONS.

	CONDENSATE RETURN UNIT SCHEDULE															
					DISCHARGE			ONNECTION	1	ELECTRICAL DATA						
					PRESSURE		INLET	OUTLET	VENT	MOTOR	HP				CAPACITY	
TAG	LOCATION	SERVICE	CONFIGURATION	GPM	(PSIG)	RATED TEMP	(INCHES)	(INCHES)	(INCHES)	QTY	EACH	V	PH	Hz	(GAL)	NOTES
CRU-1	XB301 MECHANICAL	HEAT EXCHANGER CONDENSATE	DUPLEX, FLOOR MOUNTED	22	20.0	245 °F	1.5"	2.0"	2.0"	2	0.5	208	1	60	23.0	1, 2, 3, 4, 5, 6, 7

- PROVIDE DUPLEX STEAM RETURN PUMPING PACKAGED UNIT WITH INTEGRAL PUMPS, RECEIVER TANK AND MECHANICAL ALTERNATOR PANEL.
- PROVIDE FABRICATED CAST IRON CONDENSATE RECEIVER TANK DESIGNED. CONSTRUCTION, TESTED, AND STAMPED IN ACCORDANCE WITH SECTION VIII, DIVISION 1 OF THE ASME PRESSURE CODE. PROVIDE INTEGRAL CENTRIFUGAL PUMPS WITH OPEN DRIP PROOF MOTORS.
- PROVIDE FACTORY MECHANICAL ALTERNATOR WITH NEMA 3 PANEL CAPABLE OF SEQUENCING OF DUPLEX PUMPS AND STAND-BY OF SECOND PUMP ON HIGH LEVEL CONTROLLER FULLY FACTORY WIRED AND CONFIGURED. PROVIDE HEAVY DUTY MECHANICAL FLOAT SWITCHES THAT EXTERNALLY ADJUSTABLE.
- PROVIDE INTEGRAL WATER LEVEL GAUGE, SHUTOFF VALVE, DIAL THERMOMETER, INLET BASKET STRAINER, DISCHARGE PRESSURE GAUGES AND ISOLATION BUTTERFLY VALVES ON ALL INLET AND OUTLET WATER CONNECTIONS AND STEAM CONNECTIONS.
- PROVIDE GASKETS MADE FROM MATERIAL SUITABLE FOR OPERATING TEMPERATURES AND FLUID/STEAM USED.

	EXHAUST FAN SCHEDULE													
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	TAG	SERVICE	CONFIGURATION	AIRFLOW (CFM)	ESP (IN WG)	MOTOR RPM	BHP	HP	V	PH	HZ	WEIGHT (LBS)	NOTES	
	EF-1	410 PRINTING/LAMINATING	DIRECT DRIVE CENTRIFUGAL UPBLAST	450	0.55	1725	0.09	1/15	115	1	60	67	1, 2, 3, 5, 7, 8	
	EF-2A	B303 ELECTRICAL ROOM	BELT DRIVE CENTRIFUGAL UPBLAST	400	0.35	1725	0.07	1/4	115	1	60	75	1-3, 5, 6, 8	
	EF-2B	B303 ELECTRICAL ROOM	BELT DRIVE CENTRIFUGAL UPBLAST	400	0.35	1725	0.07	1/4	115	1	60	75	1-3, 5, 6, 8	
	EF-4	B306 RECYCLING ROOM	DIRECT DRIVE AXIAL INLINE	160	0.35	1725	0.04	1/15	115	1	60	51	1, 2, 3, 4, 7, 8	
	EF-5	XB301 MECHANICAL	DIRECT DRIVE CENTRIFUGAL UPBLAST	165	0.25	1725	0.01	1/15	115	1	60	57	1-3, 5, 7, 8	

- PROVIDE WITH FACTORY MOUNTED AND WIRED NON-FUSED DISCONNECT.
- PROVIDE PREMIUM EFFICIENCY MOTOR, WITH THERMAL OVERLOAD PROTECTION. PROVIDE FACTORY MOUNTED AND WIRED LOW-LEAKAGE MOTORIZED ISOLATION DAMPERS, 120 VAC WITH POSITION INDICATION.
- PROVIDE HOUSED SPRING VIBRATION ISOLATORS TO SUPPORT FAN FROM BUILDING STRUCTURE.
- PROVIDE MANUFACTURER'S 18" HIGH ROOF CURB WITH HINGED CURB CAP, CURB SEAL AND DAMPER TRAY. PROVIDE BELT DRIVEN EXPLOSION PROOF MOTOR OUTSIDE OF AIRSTREAM WITH SPARK-PROOF FAN IMPELLER.
- PROVIDE EC MOTOR WITH HAND-OFF-AUTO (HOA) CONTROLLER.
- PROVIDE MANUFACTURER'S FACTORY APPLIED COATING SUITABLE FOR A CORROSIVE BRACKISH ENVIRONMENT ON EQUIPMENT CASING AND COILS.

		AIR SEPARATOR SCHEDULE														
	JAG			SERVICE		LO	CATION	DESIGN FLOW (GPM)	MAX FLOW (GPM)	/ CONNEC		PRESSURE DI (FT WC)	ROP	FLOODED WEIGHT (LBS)		NOTES
	AS-1	$\overline{}$	HEATING H	OTWATER SY	\$TEM	XB301 N	MECHANICAL V	V205	300	4"		0.7		263	$\overline{}$	1 THRU 6
{	AS-2		CHILLED	WATER SYST	ĖΜ	B304 AV/E\	/ENT STORAGE	380	850	6"	1	0.42		564		1 THRU 6
Ţ																

PROVIDE CENTRIFUGAL AIR SEPARATOR WITH CONNECTIONS TO MATCH PIPING SYSTEM.

- PROVIDE WITHOUT STRAINER.
- PROVIDE ISOLATION BUTTERFLY VALVES ON INLET AND OUTLET.
- PROVIDE AUTOMATIC AIR VENT.
- PROVIDE BLOW DOWN VALVE ON BOTTOM WITH CAP SECURED WITH CHAIN. MAINTAIN MANUFACTURER'S CLEARANCES FOR MAINTENANCE ACCESS.

	EXPANSION TANK SCHEDULE													
					TANK		RELIEF VALVE							
TAG	SERVICE	TYPE	FLUID	ACCEPTANCE VOLUME (GAL)	VOLUME (GAL)	PRESSURE (PSIG)	SETTING (PSIG)	DIAMETER (INCHES)	HEIGHT (INCHES)	NOTES				
ET-1	HEATING HOT WATER SYSTEM	PRE-CHARGED BLADDER	WATER	132.0	132	45	125	30"	57"	THRU 7				
ET-2	CHILLED WATER SYSTEM	PRE-CHARGED BLADDER	WATER	132.0	132	45	125	30"	57"	1 THRU 7				
NOTES:		1 1	$\overline{}$	\sim					7					

PROVIDE VERTICAL EXPANSION TANK, WITH HEAVY DUTY BUTYL/EPDM DIAPHRAGM/PRE-CHARGED BLADDER, STEEL CONSTRUCTION MEETING ASME STANDARDS. PROVIDE LINE SIZE ISOLATION BALL VALVES ON CONNECTIONS.

PROVIDE AUTOMATIC AIR VENT. PROVIDE SYSTEM PRESSURE RELIEF VALVE FOR INSTALLATION IN SYSTEM PIPING.

RROVIDE BLOW DOWN VALVE ON BOTTOM WITH CAP SECURED WITH CHAIN MÁINŤAIN MÁNUFACTURER'S CLEÁRANCES POR MAINTENANCE ACCESS. Y

ADJUST FILL PRESSURE DURING STARTUP FOR FINAL PIPING SYSTEM CONFIGURATION.

	STEAM TRAP SCHEDULE													
MADIC	LOCATION	055)//05	TDAD TVDE	DESIGN CAPACITY	STEAM PRESSURE	DESIGN FLOW	RATED FLOW	INLET SIZE	NOTEO					
MARK ST-1	LOCATION XB301 MECHANICAL ROOM	SERVICE HX-1	TRAP TYPE FLOAT & THERMOSTATIC	(MBH) 1,975	(PSI) 10	(LBS/HR) 4.145	(LBS/HR) 9,000	(IN) 2"	1, 2, 3					
ST-2	XB301 MECHANICAL ROOM	HX-2	FLOAT & THERMOSTATIC	·	10	4,145	9,000	2"	1, 2, 3					
ST-3	XB301 MECHANICAL ROOM	LOW PRESSURE DRIP LEG	FLOAT & THERMOSTATIC	•	10	4,786	9,000	2"	1, 2, 3					
ST-4	XB301 MECHANICAL ROOM	UTILITY TUNNEL DRIP LEG	FLOAT & THERMOSTATIC	2,280	10	4,786	9,000	4"	1, 2, 3					
ST-5	XB301 MECHANICAL ROOM	UTILITY TUNNEL DRIPLEG	FLOAT & THERMOSTATIC	2.280	10	4.786	9.000	4"	1, 2, 3					

- PROVIDE NPT THREADED CONNECTIONS.
- SELECT WITH A MINIMUM 2.0 SAFETY SIZING FACTORY. SELECT WITH LINE SIZE CONNECTION. PROVIDE CAST IRON H-PATTERN FLOAT AND THERMOSTATIC STEAM TRAP WITH STAINLESS STEEL INTERNAL CONSTRUCTION.

	STEAM SAFETY RELIEF VALVE SCHEDULE														
MARK	LOCATION	SERVING	CAPACITY (LBS/HR)	PRESSURE SETTING (PSIG)	INLET SIZE (IN)	OUTLET SIZE (IN)	NOTES								
SRV-1	XB301 MECHANICAL ROOM	LOW PRESSURE STEAM	18.4	20	6"	8"									

- PROVIDE NPT THREADED CONNECTIONS.
- SELECT WITH A MINIMUM 2.0 SAFETY SIZING FACTORY. SELECT WITH LINE SIZE CONNECTION. PROVIDE CAST IRON STEAM SAFETY RELIEF VALVE WITH STAINLESS STEEL INTERNAL CONSTRUCTION.

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