MOSS
Architectural Studio
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22180

PROJECT TEAM

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DRAWING INDEX

SCOPE OF WORK

INTERIOR ALTERATION OF EXISTING COMMERCIAL BUILDING FOR OWNER-OCCUPIED DESIGN STUDIO AND OFFICE USE. RECONFIGURATION OF NON-STRUCTURAL PARTITIONS AND INTERIOR FINISHES. NO STRUCTURAL MODIFICATIONS PROPOSED

NO NEW PLUMBING, MECHANICAL OR STRUCTURAL, NEW ELECTRICAL

OCCUPANCY / GROUP(S) : EXISTING B/ PROPOSED B

TYPE OF CONSTRUCTION :TYPE V-B

RENDERINGS

3D MODEL RENDERINGS ARE SHOWN FOR ILLUSTRATIVE PURPOSES ONLY. THEY ARE INTENDED TO CONVEY DESIGN CONCEPTS AND ARE NOT INTENDED TO BE NOR ARE THEY TO BE INTERPRETED AS PHOTOS OF THE COMPLETED PROJECT.

ABBREVIATIONS

ADDT'L	ADDITIONAL	DBL	DOUBLE	GEN	GENERATOR	MAS	MASONRY	PSF	POUNDS PER SQUARE FOOT	STE	SIMILAR TO EXISTING
ADJ	ADJACENT	DEMO	DEMOLITION	GFI	GROUND FAULT INTERRUPTER	MAT'L	MATERIAL	PTD	PAINTED	STL	STEEL
AFF	ABOVE FINISHED FLOOR	DIA	DIAMETER	GWB	GYPSUM WALL BOARD	MAX	MAXIMUM	PWR	POWER	STOR	STORAGE
ALT	ALTERNATE	DIM	DIMENSION	GC	GENERAL CONTRACTOR	MEMB	MEMBRANE	PT	PRESSURE TREATED	SS	STAINLESS STEEL
ALUM	ALUMINUM	DN	DOWN			MFG	MANUFACTURER			SAFF	SILL ABOVE FINISH FLOOR
APPRX	APPROXIMATE	D	DOOR	HC	HOLLOW CORE	MICRO	MICROWAVE	QTY	QUANTITY		
ARCH	ARCHITECTURAL	DWG	DRAWING	HDWR	HARDWARE	MIN	MINIMUM			TEL	TELEPHONE
				HDWD	HARD WOOD	MISC	MISCELLANEOUS	RAD	RADIUS	TEMP	TEMPORARY
BD	BOARD	EA	EACH	HORIZ	HORIZONTAL	MO	MASONRY OPENING	REC	RECEPTACLE	T.O.	TOP OF
BLDG	BUILDING	EJ	EXPANSION JOINT	HVAC	HEATING, VENTING, & A/C	MTL	METAL	REF	REFRIGERATOR	TYP	TYPICAL
BLKG	BLOCKING	ELEC	ELECTRIC(AL)	HT	HEIGHT	MECH	MECHANICAL	REINF	REINFORCE(D)		
B.O.	BOTTOM OF	ELEV	ELEVATOR	HWS	HIGH WALL SUPPLY	MEZZ	MEZZANINE	REQ'D	REQUIRED	UNO	UNLESS NOTED OTHERWISE
BTWN	BETWEEN	EQUIP	EQUIPMENT	HWR	HIGH WALL RETURN			REV	REVISION(S), REVISED		
		ETR	EXISTING TO REMAIN			NIC	NOT IN CONTRACT	RH	RIGHT HAND	VERT	VERTICAL
CL	CENTER LINE	EXH	EXHAUST	IN	INCH	NO	NUMBER	RM	ROOM	VIF	VERIFY IN FIELD
CS	CEILING SUPPLY	EXST	EXISTING	INS	INSULATE(D) (ION)	NTS	NOT TO SCALE	RO	ROUGH OPENING		
CLG	CEILING	EXT	EXTERIOR	INT	INTERIOR					WD	WOOD
CLO	CLOSET					OC	ON CENTER(S)	SC	SOLID CORE	WT	WEIGHT
CLR	CLEAR(ANCE)	FC	FLOOR COVERING	J-BOX	JUNCTION BOX	OPNG	OPENING	SD	SMOKE DETECTOR		
CMU	CONCRETE MASONRY UNIT	FF	FINISH FLOOR					SECT	SECTION	YD	YARD
COL	COLUMN	FIN	FINISH	LB	POUND	PROP	PROPOSED	SIM	SIMILAR		
CONC	CONCRETE	FLR	FLOOR(ING)	LF	LINEAR FEET	PLYWD	PLYWOOD	SPECS	SPECIFICATIONS		
CNST	CONSTRUCTION	F.O.	FACE OF	LH	LEFT HAND	PL	PLATE	SF	SQUARE FEET		
CPT	CARPET	FT	FOOT, FEET	LWS	LOW WALL SUPPLY	POL	POLISHED	STD	STANDARD		
CT	CERAMIC TILE			LWR	LOW WALL RETURN			SS	SOFFIT SUPPLY		

FLOOR AREA & OCCUPANT LOAD

MAXIMUM FLOOR AREA ALLOWANCES PER OCCUPANT PER VBC

GRAND TOTAL

FUNCTION OF SPACE	FLOOR AREA IN SQ. FT. PER OCCUPANT		TOTAL SQ. FT.		OCCUPANTS
ASSEMBLY, UNCONCENTRATED	15	net	335	sf	23
BUSINESS	150	gross	1,804	sf	16
MECH/STORAGE	300	gross	222	sf	3
BATHROOM	150	gross	114	sf	0
HALL	150	gross	401	sf	0
	TOTAL		**2,876**	**sf**	**42**

1ST FLOOR

FUNCTION OF SPACE	FLOOR AREA IN SQ. FT. PER OCCUPANT		TOTAL SQ. FT.		OCCUPANTS
ASSEMBLY, UNCONCENTRATED	15	net	335	sf	23
BUSINESS	150	gross	874	sf	6
MECH/STORAGE	300	gross	170	sf	2
BATHROOM	150	gross	52	sf	0
HALL	150	gross	92	sf	0
	TOTAL		**1,523**	**sf**	**31**

2ND FLOOR

FUNCTION OF SPACE	FLOOR AREA IN SQ. FT. PER OCCUPANT		TOTAL SQ. FT.		OCCUPANTS
ASSEMBLY, UNCONCENTRATED	15	net	0	sf	0
BUSINESS	150	gross	930	sf	10
MECH/STORAGE	300	gross	52	sf	1
BATHROOM	150	gross	62	sf	0
HALL	150	gross	309	sf	0
	TOTAL		**1,353**	**sf**	**11**

Attachment 08

ROOM BY ROOM OCCUPANT LOAD

ROOM NO.	ROOM NAME	AREA	OCCUPANTS PER SF (SEE OCCUPANCY LOAD ANALYSIS		TOTAL # OF OCCUPANTS
100	SHOWROOM	874	150	GROSS	6
101	BATH 1	52	150	GROSS	1
102	STORAGE	170	300	gross	2
103	CONFERENCE ROOM	335	15	NET (UNCONCENTRATED)	23
104	HALL	92	150	GROSS	1
				TOTAL 1ST FLOOR	33
200	OFFICE	166	150	GROSS	2
201	OFFICE	166	150	GROSS	2
202	OFFICE	155	150	GROSS	2
203	HALL	309	150	GROSS	2
204	STORAGE	52	300	gross	1
205	BATH 2	62	150	GROSS	1
206	OFFICE	153	150	GROSS	2
207	OFFICE	68	150	GROSS	1
208	OFFICE	114	150	GROSS	1
209	OFFICE	108	150	GROSS	1
				TOTAL 2ND FLOOR	14

PLUMBING FIXTURES

PLUMBING FIXTURE REQUIREMENTS PER VBC Table 2902.1		
CLASSIFICATION		A-3
PROPOSED OCCUPANCY		BUSINESS
TOTAL OCCUPANT LOAD		47
	REQUIRED	PROVIDED
WATER CLOSETS 1 PER 25 (first 50)	2	2
LAVATORIES - 1 PER 40	2	2
SERVICE SINK - 1 REQUIRED	1	1

GENERAL NOTES

THIS PROJECT IS AN OWNER-OCCUPIED COMMERCIAL BUILDING ALTERATION UNDER THE 2021 VIRGINIA EXISTING BUILDING CODE (LEVEL 2). THE BUILDING IS NOT A TENANT SPACE. ALL REFERENCES TO TENANT ALTERATION ARE NOT APPLICABLE.
THIS BUILDING HAS BEEN DESIGNED IN ACCORDANCE WITH THE 2021 VIRGINIA CONSTRUCTION CODE (VCC), BASED ON THE 2021 INTERNATIONAL BUILDING CODE (IBC), INCLUDING ALL APPLICABLE VIRGINIA STATEWIDE AMENDMENTS AND FAIRFAX COUNTY REQUIREMENTS.

DESIGN LOADS (PSF):

LOCATION	LIVE	DEAD	TOTAL
FLOOR (OFFICE / BUSINESS AREAS)	50	10	60
FLOOR (STORAGE – LIGHT)	125	15	140
ROOF	30	15	45
DECKS / BALCONIES (IF APPLICABLE)	60	10	70
STAIRS	100	10	110

UNLESS OTHERWISE NOTED ON STRUCTURAL DRAWINGS.

DESIGN CRITERIA:

WIND SPEED: 115 MPH
SEISMIC DESIGN CATEGORY: B (NO SEISMIC DATA REQUIRED)
WEATHERING: SEVERE
FROST DEPTH: 30 INCHES
TERMITE: MODERATE TO HEAVY
DECAY: SLIGHT TO MODERATE
WINTER DESIGN TEMPERATURE: 17°F
GROUND SNOW LOAD: 30 PSF
FLOOD HAZARD: AS INDICATED ON APPROVED SITE PLANS / FEMA FIRM
SOIL BEARING CAPACITY: 1,500 PSF (ASSUMED IN ABSENCE OF GEOTECHNICAL REPORT)

1 . ALL PLUMBING WORK SHALL COMPLY WITH THE 2021 VIRGINIA PLUMBING CODE (VPC) AND FAIRFAX COUNTY AMENDMENTS.

2 . ALL MECHANICAL WORK SHALL COMPLY WITH THE 2021 VIRGINIA MECHANICAL CODE (VMC).

3 . ALL ELECTRICAL WORK SHALL COMPLY WITH THE 2020 NATIONAL ELECTRICAL CODE (NEC) AS ADOPTED BY VIRGINIA.

4 . FIRE PROTECTION SYSTEMS, WHERE REQUIRED, SHALL COMPLY WITH THE 2021 VIRGINIA CONSTRUCTION CODE AND REFERENCED NFPA STANDARDS. FIRE ALARM AND SPRINKLER SYSTEMS SHALL BE PERMITTED UNDER SEPARATE TRADE PERMITS.

5 . LIFE SAFETY REQUIREMENTS SHALL COMPLY WITH IBC CHAPTER 10 AS ADOPTED BY THE 2021 VIRGINIA CONSTRUCTION CODE.

6 . ACCESSIBILITY SHALL COMPLY WITH:

- 2021 VIRGINIA CONSTRUCTION CODE, CHAPTER 11
- ICC A117.1-2017
- 2010 ADA STANDARDS FOR ACCESSIBLE DESIGN

7 . ENERGY CONSERVATION SHALL COMPLY WITH THE 2021 VIRGINIA ENERGY CONSERVATION CODE (VECC).

8 . THIS PROJECT HAS BEEN DESIGNED FOR THE WEIGHTS OF MATERIALS INDICATED ON THE DRAWINGS AND FOR THE SUPERIMPOSED LOADS SHOWN ABOVE. IT IS THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE PROPER DESIGN AND CONSTRUCTION OF TEMPORARY BRACING, SHORING, FORMWORK, AND OTHER TEMPORARY STRUCTURAL SYSTEMS.

9 . LOADS GREATER THAN THE APPLICABLE DESIGN LOADS NOTED ABOVE SHALL NOT BE PLACED ON THE STRUCTURE WITHOUT WRITTEN APPROVAL FROM THE DESIGN PROFESSIONAL. PROVISIONS SHALL BE MADE FOR ADEQUATE SUPPORT OF ADJACENT CONSTRUCTION AND UTILITIES.

10 . DO NOT BACKFILL AGAINST WALLS UNTIL SUPPORTING FLOORS OR STRUCTURAL ELEMENTS ARE SECURELY IN PLACE. PROVIDE ADEQUATE TEMPORARY BRACING UNTIL THE STRUCTURAL SYSTEM IS FULLY STABILIZED.

11 . LOADS GREATER THAN THE APPLICABLE DESIGN LOADS NOTED ABOVE SHALL NOT BE PLACED ON THE STRUCTURE WITHOUT WRITTEN APPROVAL FROM THE DESIGN PROFESSIONAL. PROVISIONS SHALL BE MADE FOR ADEQUATE SUPPORT OF ADJACENT CONSTRUCTION AND UTILITIES. DO NOT BACKFILL AGAINST WALLS UNTIL SUPPORTING FLOORS OR STRUCTURAL ELEMENTS ARE SECURELY IN PLACE. PROVIDE ADEQUATE TEMPORARY BRACING UNTIL THE STRUCTURAL SYSTEM IS FULLY STABILIZED.

12. GUARDRAILS AND HANDRAILS: GUARDRAILS AND HANDRAILS SHALL BE DESIGNED AND CONSTRUCTED IN ACCORDANCE WITH THE 2021 VIRGINIA CONSTRUCTION CODE (IBC 2021), INCLUDING SECTIONS 1011 AND 1015.
HANDRAILS AND GUARDS SHALL RESIST THE STRUCTURAL LOADS SPECIFIED IN IBC SECTION 1607.8, INCLUDING:
- 50 POUNDS PER LINEAR FOOT APPLIED IN ANY DIRECTION AT THE TOP
- 200-POUND CONCENTRATED LOAD APPLIED IN ANY DIRECTION

GUARDS SHALL BE PROVIDED AT OPEN-SIDED WALKING SURFACES LOCATED MORE THAN 30 INCHES ABOVE THE FLOOR OR GRADE BELOW.

13. EXISTING STRUCTURAL CONDITIONS: THE GENERAL CONTRACTOR AND/OR APPLICABLE FABRICATOR SHALL VERIFY ALL EXISTING STRUCTURAL CONDITIONS PRIOR TO FABRICATION OR CONSTRUCTION.
EXISTING STRUCTURAL CONDITIONS SHALL INCLUDE, BUT ARE NOT LIMITED TO:
- FRAMING DIRECTIONS AND MEMBER SIZES
- BEARING WALL LOCATIONS
- COLUMN LOCATIONS
- FLOOR AND ROOF FRAMING CONDITIONS
- CONNECTION DETAILS

ANY DISCREPANCIES BETWEEN FIELD CONDITIONS AND THE CONSTRUCTION DOCUMENTS SHALL BE REPORTED TO THE DESIGN PROFESSIONAL PRIOR TO PROCEEDING WITH WORK.
NO STRUCTURAL ELEMENT SHALL BE CUT, DRILLED, OR MODIFIED WITHOUT WRITTEN APPROVAL FROM THE DESIGN PROFESSIONAL.

14. FIELD VERIFICATION: "VERIFY IN FIELD" (VIF) INDICATES THAT THE CONTRACTOR SHALL CONFIRM DIMENSIONS AND CONDITIONS PRIOR TO FABRICATION OR INSTALLATION.
IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY ALL DIMENSIONS, ELEVATIONS, AND SITE CONDITIONS PRIOR TO CONSTRUCTION.

SHORING / DEMOLITION

1 THE CONTRACTOR SHALL BE EXPERIENCED IN SHORING AND DEMOLITION WORK AND SHALL EVALUATE EXISTING CONDITIONS PRIOR TO COMMENCEMENT OF WORK.
2 IF CONDITIONS ARE DISCOVERED THAT MAY AFFECT THE STABILITY OF THE STRUCTURE, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE DESIGN PROFESSIONAL.
3 SHORING, BRACING, AND DEMOLITION OPERATIONS SHALL BE PERFORMED IN ACCORDANCE WITH OSHA REQUIREMENTS AND APPLICABLE VIRGINIA REGULATIONS.
4 THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DESIGN, INSTALLATION, MAINTENANCE, AND REMOVAL OF TEMPORARY SHORING AND BRACING SYSTEMS.
5 ADEQUATE LATERAL BRACING AND CONNECTIONS SHALL BE PROVIDED TO ENSURE STRUCTURAL STABILITY DURING CONSTRUCTION.

FIRE AND SMOKE PROTECTION

SMOKE DETECTORS AND FIRE ALARM DEVICES SHALL BE PROVIDED AS REQUIRED BY THE 2021 VIRGINIA CONSTRUCTION CODE AND THE VIRGINIA STATEWIDE FIRE PREVENTION CODE.
FOR GROUP B OCCUPANCIES:
- FIRE ALARM SYSTEMS SHALL BE PROVIDED WHERE REQUIRED BY IBC SECTION 907.
- DEVICES SHALL BE INSTALLED PER NFPA 72.
- ALL FIRE PROTECTION WORK SHALL BE PERMITTED UNDER SEPARATE TRADE PERMITS.

SMOKE DETECTOR REQUIREMENTS FOR ONE- AND TWO-FAMILY DWELLINGS DO NOT APPLY TO THIS COMMERCIAL PROJECT.

MEANS OF EGRESS

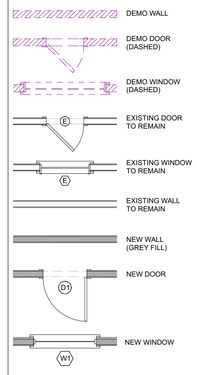
EGRESS SHALL COMPLY WITH IBC CHAPTER 10 (2021 VCC).
- MINIMUM NUMBER OF EXITS SHALL BE PROVIDED PER OCCUPANT LOAD AND TRAVEL DISTANCE.
- EXIT ACCESS TRAVEL DISTANCE SHALL NOT EXCEED ALLOWABLE LIMITS.
- EXIT DOORS SHALL SWING IN THE DIRECTION OF EGRESS TRAVEL WHERE OCCUPANT LOAD SERVED IS 50 OR MORE.
- PANIC OR FIRE EXIT HARDWARE SHALL BE PROVIDED WHERE REQUIRED.
- EXIT SIGNS AND EMERGENCY LIGHTING SHALL BE PROVIDED PER CODE.

BASEMENT LEVEL SHALL HAVE COMPLIANT MEANS OF EGRESS PER IBC REQUIREMENTS.

HANDRAILS AND GUARDRAILS – DIMENSIONAL REQUIREMENTS

1 GUARDS SHALL BE A MINIMUM OF 42 INCHES ABOVE FINISHED FLOOR IN COMMERCIAL OCCUPANCIES.
2 OPENINGS IN GUARDS SHALL NOT ALLOW PASSAGE OF A 4-INCH DIAMETER SPHERE UP TO A HEIGHT OF 34 INCHES.
3 HANDRAILS SHALL BE INSTALLED ON BOTH SIDES OF STAIRS SERVING AN OCCUPANT LOAD OF 50 OR MORE.
4 HANDRAIL HEIGHT SHALL BE BETWEEN 34 AND 38 INCHES ABOVE STAIR NOSINGS.
5 HANDRAILS SHALL BE CONTINUOUS FOR THE FULL LENGTH OF THE STAIR FLIGHT AND SHALL RETURN TO A WALL OR TERMINATE IN A SAFETY END.

CONSTRUCTION LEGEND



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DATE:
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DATE: 08/08/2018
ISSUE RECORD: CONCEPT APPROVAL SET

PLAN DATE
6/8/2026
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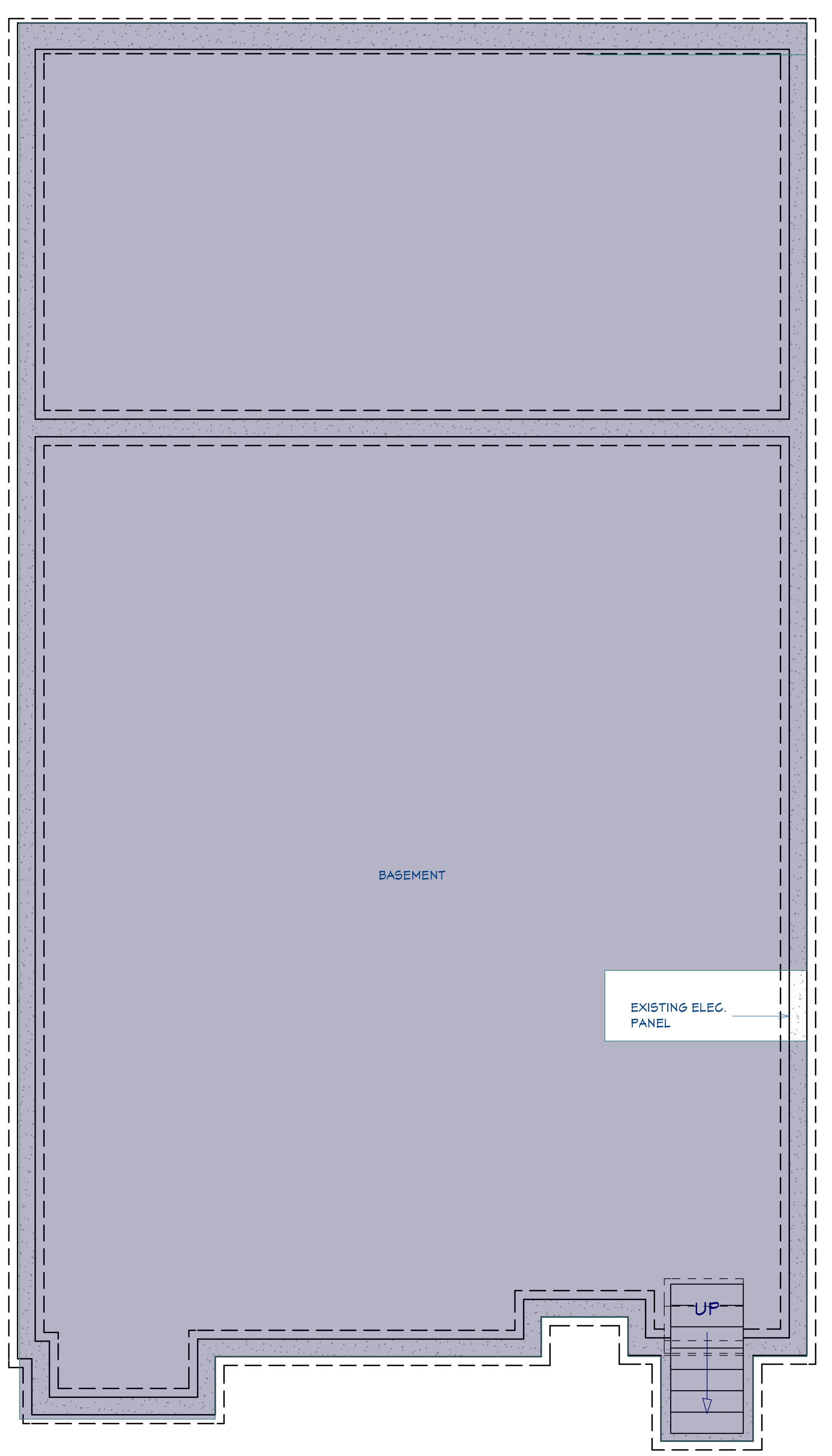
Gray Area not in scope

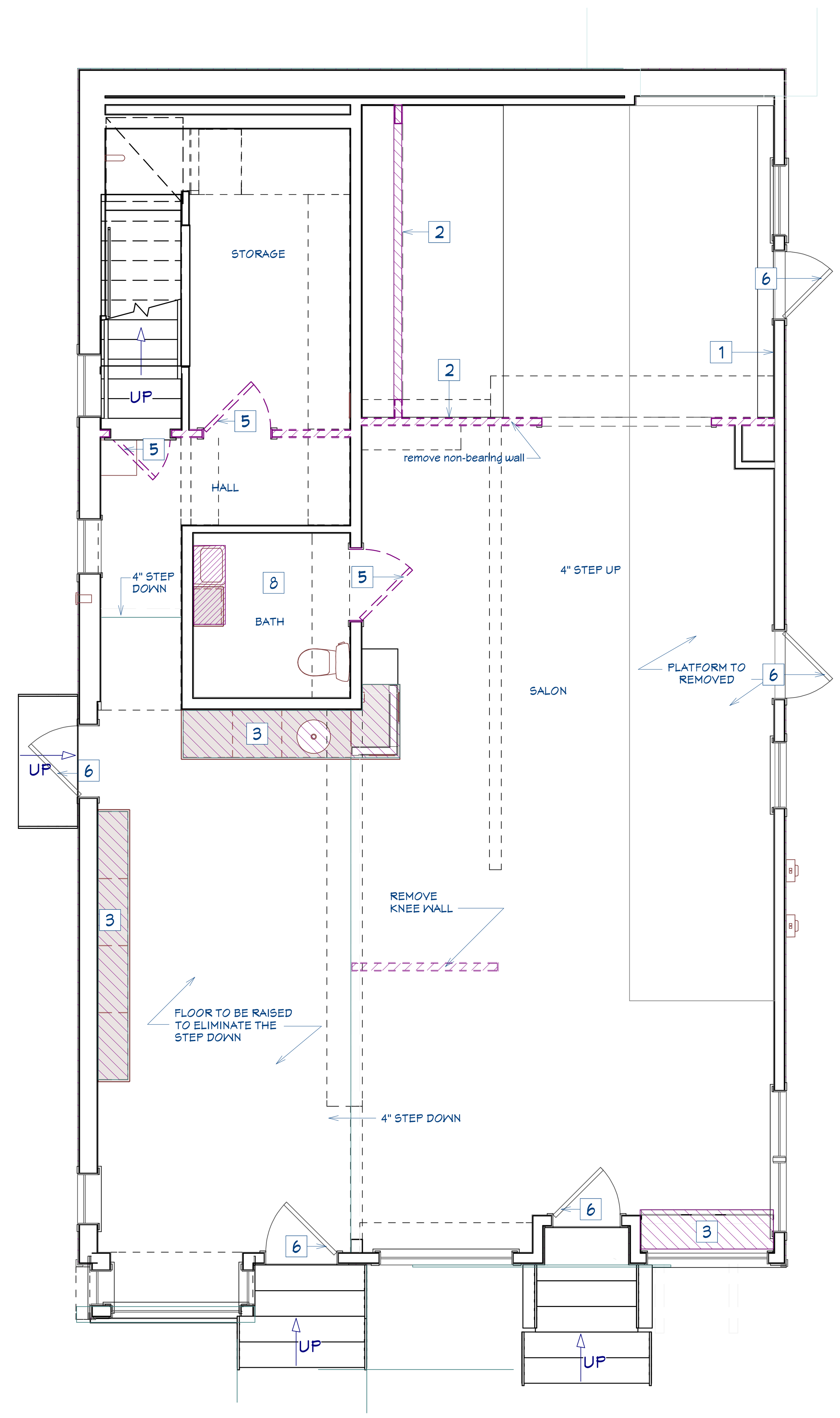
KEY NOTES

1	EXISTING WALL TO REMAIN
2	NON-LOAD BEARING WALL TO BE DEMOLISHED
3	SINK AND CABINET TO DEMOLISHED
4	WASHER/ DRYER TO BE REMOVED
5	INTERIOR DOORS TO BE REMOVED
6	EXISTING EXTERIOR DOORS TO REMAIN
7	BATHROOM TO BE RENOVATED-FIXTURE TO REMAIN
8	EXISTING BATHROOM TO BE RENOVATED



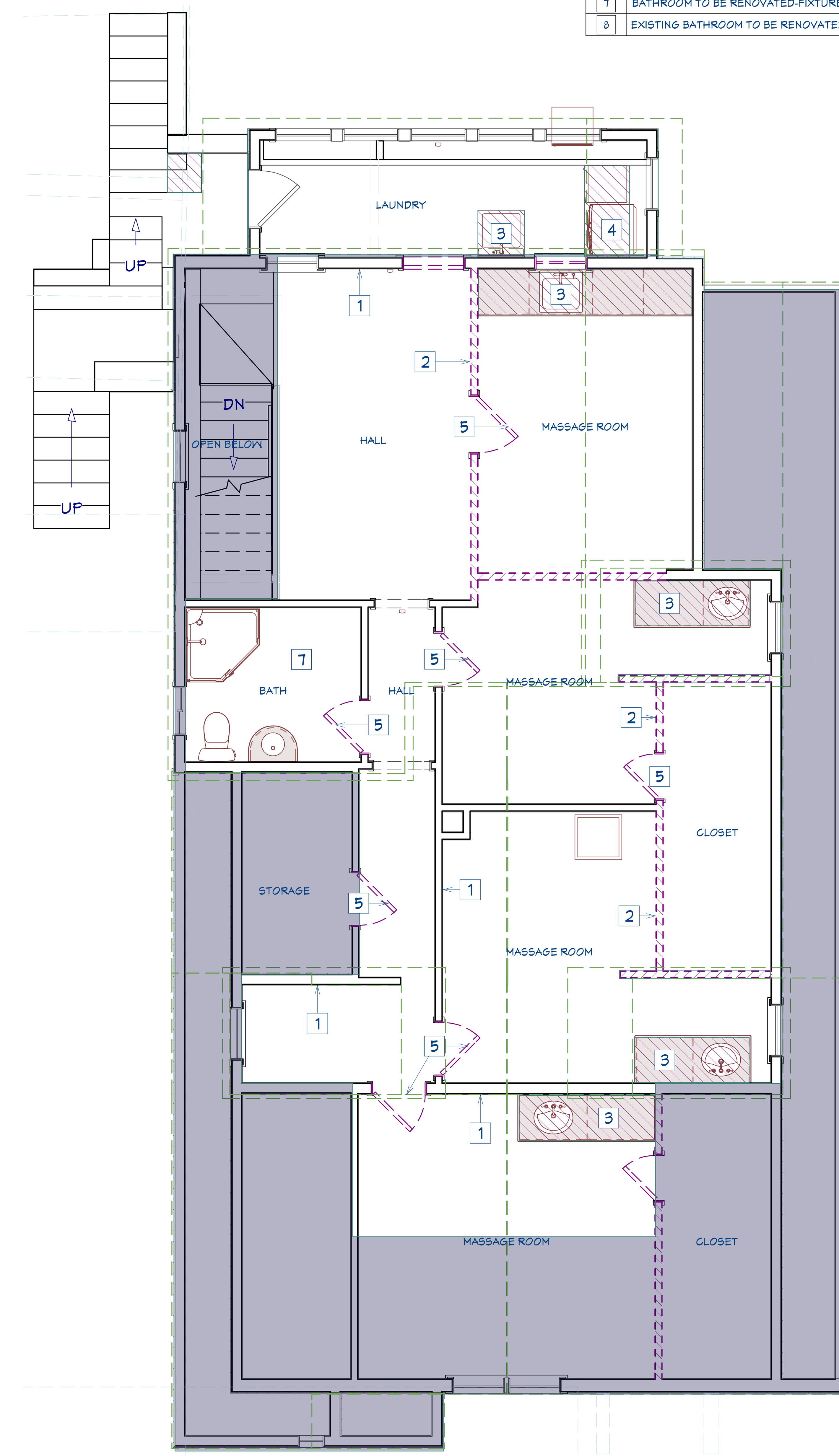
BASEMENT: AS BUILT+DEMO PLANS

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



FIRST FLOOR: AS BUILT+DEMO PLANS

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



SECOND FL: AS BUILT+DEMO PLANS

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

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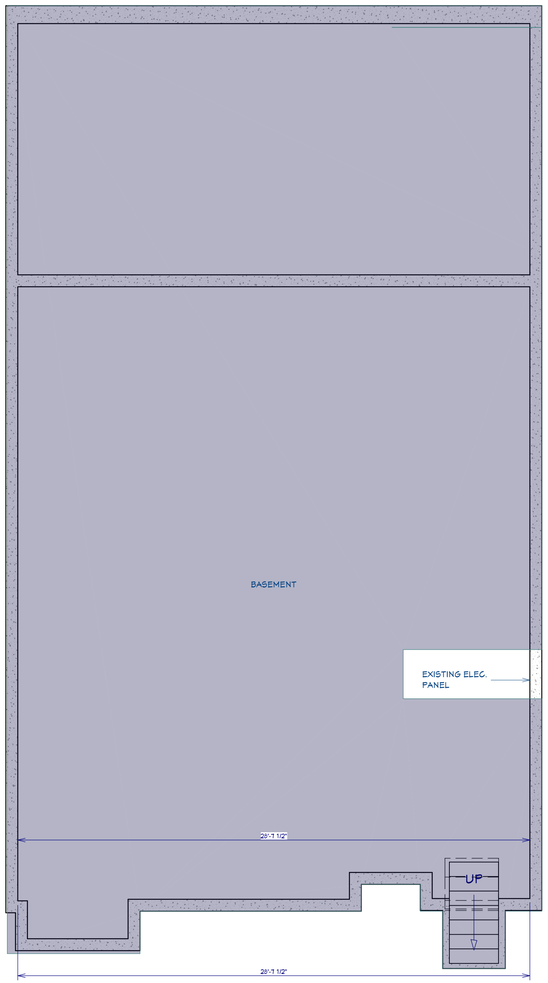
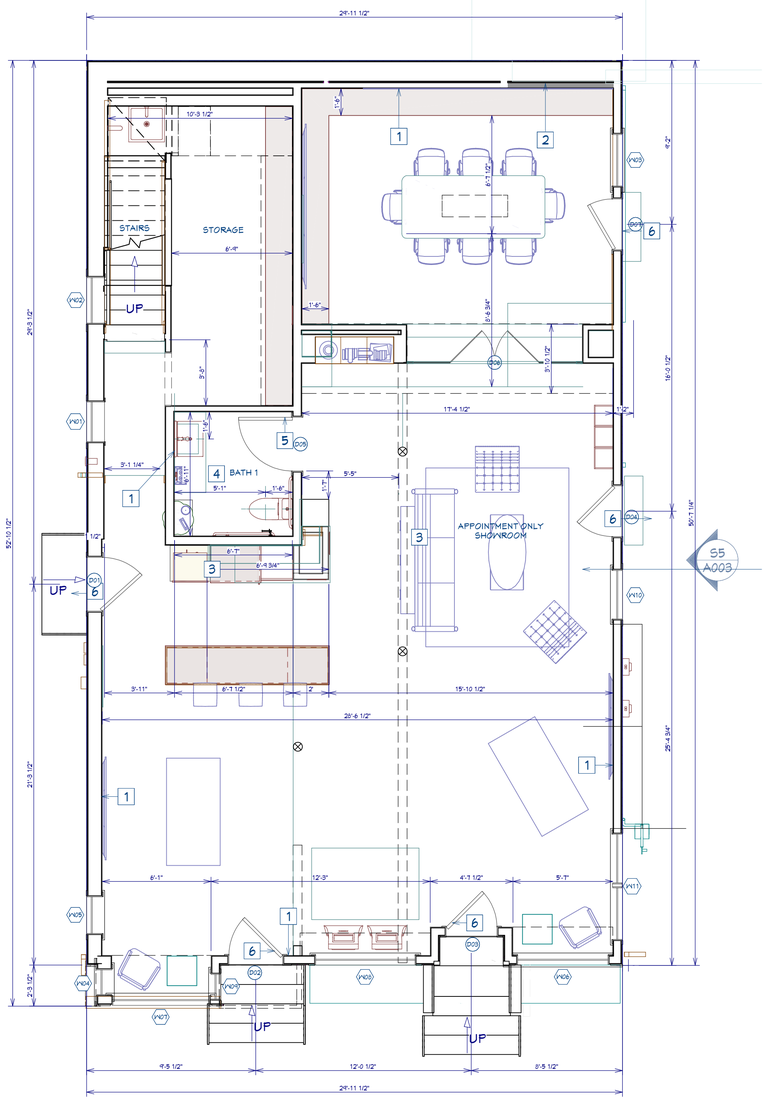
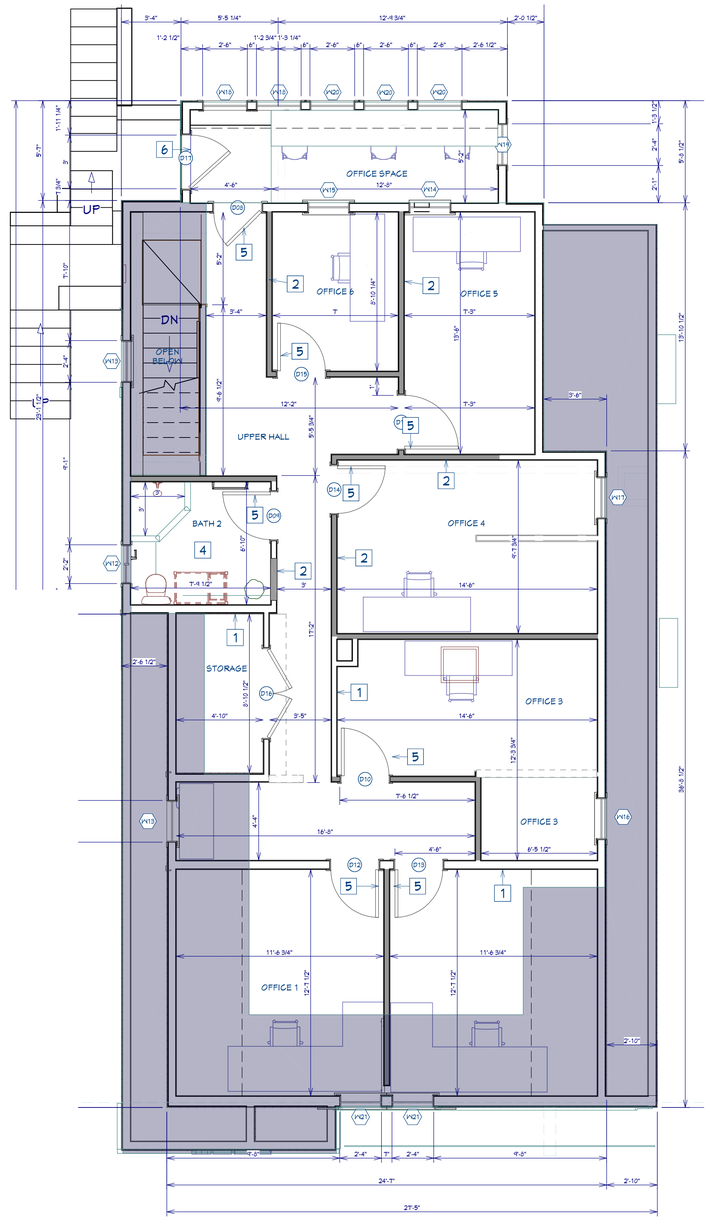


BASEMENT: PROPOSED PLAN
SCALE: 1/4" = 1'-0"



FIRST FLOOR: PROPOSED PLAN
SCALE: 1/4" = 1'-0"

KEY NOTES	
1	EXISTING WALL TO REMAIN
2	NEW STUD WALL
3	NEW CABINET
4	BATHROOM TO BE RENOVATED-FIXTURE TO REMAIN
5	NEW INTERIOR DOORS
6	EXISTING EXTERIOR DOORS TO REMAIN



SECOND FL: PROPOSED PLAN
SCALE: 1/4" = 1'-0"

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EXTERIOR SET

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

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

LANDSCAPING TO REMAIN AS IS - NO CHANGE

MATERIAL LEGEND	
1	ROOF: GAF SLATELINE SHINGLES - ROYAL SLATE
2	ROOF AWNING: STANDING SEAM METAL - COLOR ONYX BLACK 24GA-GMS
3	SIDING: JAMES HARDIE, PLANK LAP SIDING, SMOOTH BASE 7" EXPOSURE - ARCTIC WHITE (STATEMENT COLLECTION)
4	GUTTERS: 5" ALUMINUM GUTTERS IN WHITE
5	WINDOWS: PELLA LIFESTYLE- WOOD INSIDE CLAD OUTSIDE - COLOR BLACK
6	DOORS PELLA: FIBERGLASS -10 LITES- COLOR (PELLA BLACK PR0089)
7	DOORS PELLA: FIBERGLASS - HALF LIGHT-4 LITES ON TOP- COLOR (PELLA BLACK PR0089)
8	EXISTING BRICK STAIRS TO REMAIN
9	EXISTING BRICK STAIR METAL RAILING TO REMAIN
10	SHUTTERS: WOOD WORKING HINGED -SHERWIN WILLIAMS COLOR MATCH TO (PELLA BLACK PR0089)
11	BASEMENT DOOR: PAINTED METAL DOORS - SHERWIN WILLIAMS COLOR MATCH TO (PELLA BLACK PR0089)

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

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

EXTERIOR SET

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DOOR SCHEDULE

3D EXTERIOR ELEVATION	FLOOR	DOOR NO.	ROOM NAME	DOOR SIZE	DOOR TYPE	HDWR SET	SWING	THERSH	REMARKS
	1	D01	APPOINTMENT ONLY SHOWROOM	36"X80"X2" R EX	EX	4	R	ALUM	EXTERIOR DOOR
	1	D02	APPOINTMENT ONLY SHOWROOM	36"X82"X2" R EX	EX	4	R	ALUM	EXTERIOR DOOR
	1	D03	APPOINTMENT ONLY SHOWROOM	34"X82"X2" L EX	EX	4	L	ALUM	EXTERIOR DOOR
	1	D04	APPOINTMENT ONLY SHOWROOM	34"X80"X2" R EX	EX	4	R	ALUM	EXTERIOR DOOR
	1	D05	APPOINTMENT ONLY SHOWROOM/BATH 1	36"X80"X2" R IN	IN	3	R	NONE	SOLID WOOD INTERIOR DOOR
	1	D06		(2) 30"X80"X1/2" L/R	IN		L/R		
	2	D07	UPPER HALL/OFFICE SPACE	32"X80"X2" L IN	IN	1	L	CODE	SOLID WOOD INTERIOR DOOR
	2	D08	UPPER HALL/BATH 2	32"X80"X2" R IN	IN	3	R	NONE	SOLID WOOD INTERIOR DOOR
	2	D09	UPPER HALL/OFFICE 3	32"X80"X2" L IN	IN	1	L	NONE	SOLID WOOD INTERIOR DOOR
	2	D10	UPPER HALL/OFFICE 5	36"X80"X2" R IN	IN	1	R	NONE	SOLID WOOD INTERIOR DOOR
	2	D11	OFFICE 1/UPPER HALL	32"X80"X2" L IN	IN	5	L	NONE	SOLID WOOD INTERIOR DOOR
	2	D12	OFFICE 1/UPPER HALL	32"X80"X2" R IN	IN	5	R	NONE	SOLID WOOD INTERIOR DOOR
	2	D13	UPPER HALL/OFFICE 4	32"X80"X2" L IN	IN	1	L	NONE	SOLID WOOD INTERIOR DOOR
	2	D14	UPPER HALL/OFFICE 6	32"X80"X2" L IN	IN	1	L	NONE	SOLID WOOD INTERIOR DOOR
	2	D15	UPPER HALL/STORAGE	(2) 30"X66"X2" L/R EX	EX	2	L/R	NONE	SOLID WOOD INTERIOR DOOR
	2	D16	OFFICE SPACE	36"X80"X2" R EX	EX	4	R	ALUM	EXTERIOR DOOR

HARDWARE SETS: (ALL HARDWARE FINISHES TO BE SELECTED BY OWNER)	
1	(2) 3.5" HINGES; PASSAGE LATCH
2	(2) 3.5" HINGES EACH DOOR; PLAIN DUMMY LEVEL EACH DOOR
3	(2) 3.5" HINGES; PRIVACY LOCK;ADA ACCESSIBLE HARDWARE
4	(3) 3.5" HINGES; ENTRY LOCK AND DEADBOLT
5	(2) 3.5" HINGES; PRIVACY LOCK

NOTES
1. ALL EGRESS DOORS WITH GLAZING SHALL BE PROVIDED WITH SAFETY GLAZING AND SHALL COMPLY WITH 2021 International Building Code (IBC) SECTION 2406.1, AS ADOPTED BY THE Virginia Uniform Statewide Building Code (VUSBC).

2. ALL DOOR HARDWARE SHALL COMPLY WITH 2017 ICC A117.1, 2010 ADA Standards for Accessible Design, AND APPLICABLE PROVISIONS OF THE Virginia Construction Code (VCC).

3. LEVER HANDLES SHALL BE Schlage AL SERIES, JUPITER DESIGN, SATIN CHROME FINISH, OR APPROVED EQUAL, UNLESS NOTED OTHERWISE.

4. TYPICAL FINISH SHALL BE BRUSHED ALUMINUM FOR HINGES AND CLOSERS, UNLESS NOTED OTHERWISE.

5.PROVIDE DOOR STOPS AND SILENCERS AT ALL DOORS. PROVIDE WALL OR FLOOR-MOUNTED TYPE BASED ON FIELD CONDITIONS, UNLESS NOTED OTHERWISE.

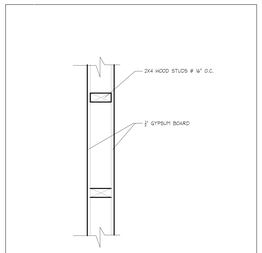
6. ALL DOOR HARDWARE SHALL BE INSTALLED SUCH THAT THE HINGE-SIDE JAMB IS 6" MINIMUM FROM ANY PERPENDICULAR WALL, UNLESS NOTED OTHERWISE. MANEUVERING CLEARANCES AT DOORS SHALL COMPLY WITH 2017 ICC A117.1 AND 2010 ADA Standards for Accessible Design.

7. CONTRACTOR SHALL PROVIDE (3) KEYS PER LOCKSET MINIMUM, UNLESS OTHERWISE DIRECTED BY OWNER. COORDINATE FINAL KEYING SCHEDULE WITH OWNER PRIOR TO INSTALLATION.

8. ALL HINGES SHALL BE HEAVY-DUTY BALL-BEARING TYPE.

WINDOW SCHEDULE

3D EXTERIOR ELEVATION	QTY	NUMBER	FLOOR	ROOM NAME	LABEL	DIMENSIONS	DESCRIPTION	EGRESS	TEMPERED	COMMENTS
	1	W01	1	APPOINTMENT ONLY SHOWROOM	24210DH	28"X34"DH	DOUBLE HUNG			EXISTING TO BE REPLACED- BLACK INSIDE & OUT
	1	W02	1	STAIRS	2836DH	32"X42"DH	DOUBLE HUNG			EXISTING TO BE REPLACED- BLACK INSIDE & OUT
	1	W03	1	APPOINTMENT ONLY SHOWROOM	3030DH	36"X36"DH	DOUBLE HUNG			EXISTING TO BE REPLACED- BLACK INSIDE & OUT
	1	W04	1	APPOINTMENT ONLY SHOWROOM	1658DH	18"X68"DH	DOUBLE HUNG			EXISTING TO BE REPLACED- BLACK INSIDE & OUT
	1	W05	1	APPOINTMENT ONLY SHOWROOM	2242DH	26"X50"DH	DOUBLE HUNG			EXISTING TO BE REPLACED- BLACK INSIDE & OUT
	1	W06	1	APPOINTMENT ONLY SHOWROOM	5246FX	62"X54"FX	FIXED GLASS		YES	EXISTING TO BE REPLACED- BLACK INSIDE & OUT
	1	W07	1	APPOINTMENT ONLY SHOWROOM	5658FX	66"X67 3/4"FX	FIXED GLASS		YES	EXISTING TO BE REPLACED- BLACK INSIDE & OUT
	1	W08	1	APPOINTMENT ONLY SHOWROOM	5846FX	68"X54"FX	FIXED GLASS		YES	EXISTING TO BE REPLACED- BLACK INSIDE & OUT
	1	W09	1	APPOINTMENT ONLY SHOWROOM	1652DH	18"X62"DH	DOUBLE HUNG			EXISTING TO BE REPLACED- BLACK INSIDE & OUT
	1	W10	1	APPOINTMENT ONLY SHOWROOM	21058DH	34"X68"DH	DOUBLE HUNG			EXISTING TO BE REPLACED- BLACK INSIDE & OUT
	1	W11	1	APPOINTMENT ONLY SHOWROOM	6058MU	72"X68"	MULLED UNIT			
	1	W12	2	BATH 2	2220LS	26"X24"LS	LEFT SLIDING			EXISTING TO BE REPLACED- BLACK INSIDE & OUT
	2	W13	2	UPPER HALL	24310DH	28"X46"DH	DOUBLE HUNG			EXISTING TO BE REPLACED- BLACK INSIDE & OUT
	1	W14	2	OFFICE 5/OFFICE SPACE	2436DH	28"X42"DH	DOUBLE HUNG			EXISTING TO BE REPLACED- BLACK INSIDE & OUT
	1	W15	2	OFFICE 6/OFFICE SPACE	24310DH	28"X46"DH	DOUBLE HUNG			EXISTING TO BE REPLACED- BLACK INSIDE & OUT
	1	W16	2	OFFICE 3	24310DH	28"X46"DH	DOUBLE HUNG			EXISTING TO BE REPLACED- BLACK INSIDE & OUT
	1	W17	2	OFFICE 4	24310DH	28"X46"DH	DOUBLE HUNG			EXISTING TO BE REPLACED- BLACK INSIDE & OUT
	2	W18	2	OFFICE SPACE	2640DH	30"X48"DH	DOUBLE HUNG			EXISTING TO BE REPLACED- BLACK INSIDE & OUT
	1	W19	2	OFFICE SPACE	24310DH	28"X46"DH	DOUBLE HUNG			EXISTING TO BE REPLACED- BLACK INSIDE & OUT
	3	W20	2	OFFICE SPACE	2640DH	30"X48"DH	DOUBLE HUNG			EXISTING TO BE REPLACED- BLACK INSIDE & OUT
	2	W21	2	OFFICE 1	2446DH	28"X54"DH	DOUBLE HUNG			EXISTING TO BE REPLACED- BLACK INSIDE & OUT



INTERIOR WALL ASSEMBLY
(TYPICAL ALL NEW WALLS UNLESS NOTED OTHERWISE)

SCALE: 1" = 1'-0"

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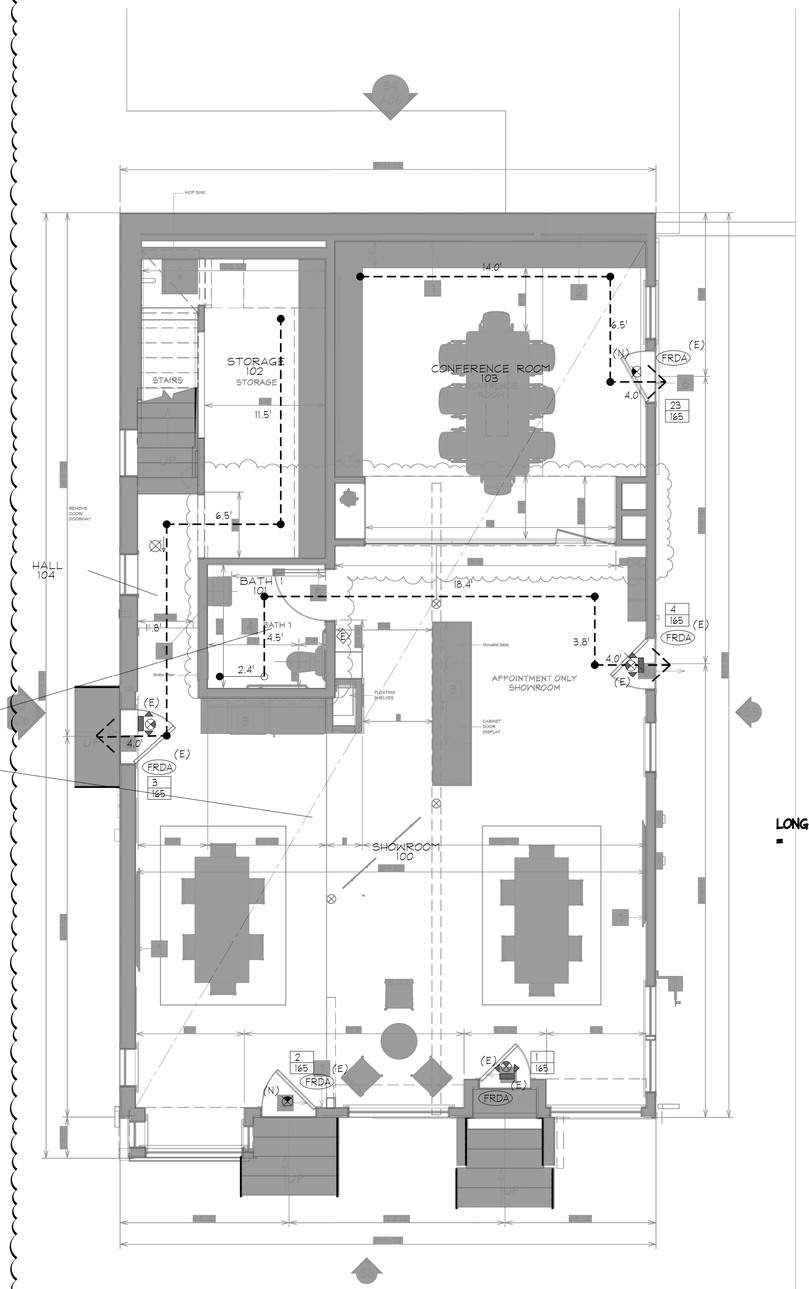
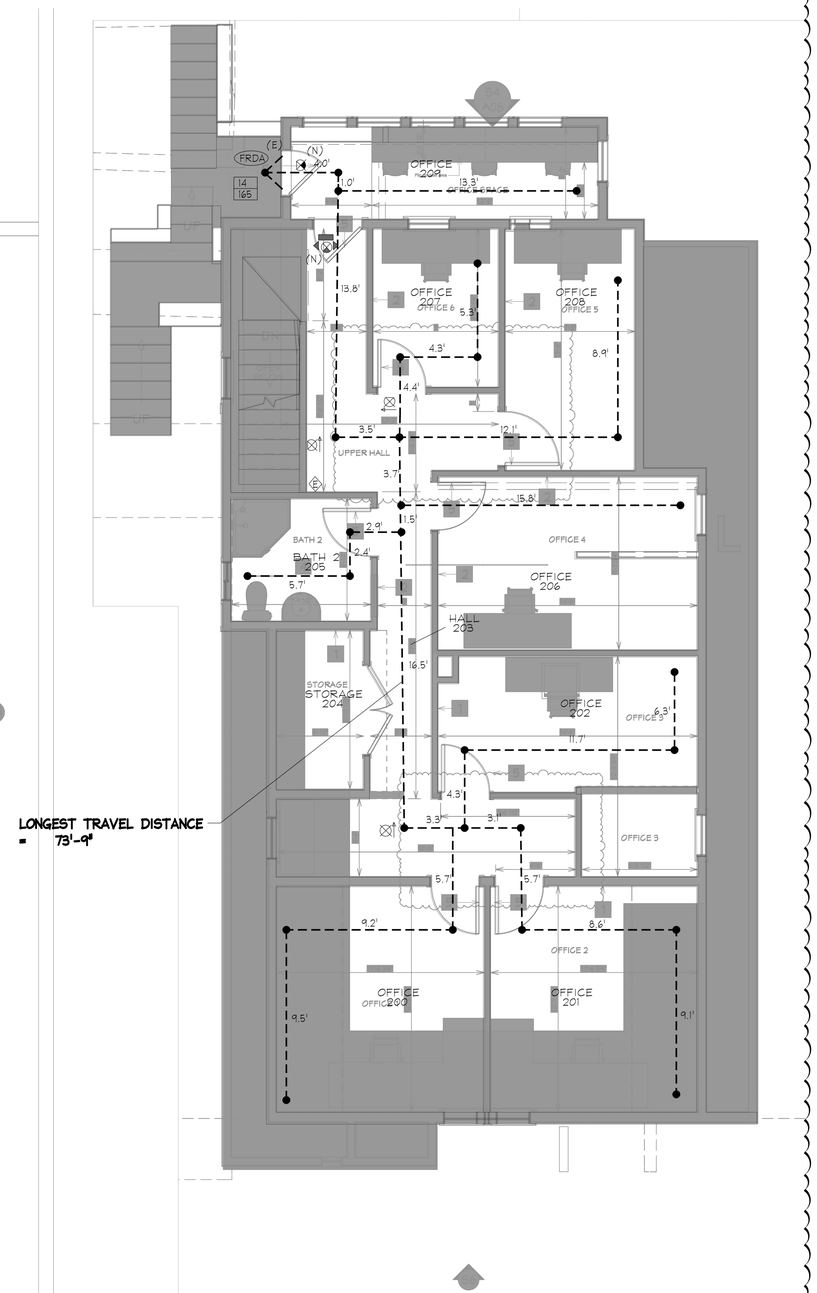


1 LS1 LIFE SAFETY PLAN -1ST FLOOR
1/4" = 1'-0"



2 LS1 LIFE SAFETY PLAN - 2ND FLOOR
1/4" = 1'-0"

SYMBOL LEGEND:

- TWO -HOUR RATED WALL ASSEMBLY, ALL DOORS & PENETRATIONS SHALL BE PROVIDED AS A MINIMUM WITH A 1-1/2 HOUR RATED ASSEMBLY, OR, RATED AS A CLASS 'C' ENCLOSURE.
- ONE-HOUR RATED WALL ASSEMBLY, ALL DOORS & PENETRATIONS SHALL BE PROVIDED AS A MINIMUM WITH A 3/4 HOUR RATED ASSEMBLY, OR, RATED AS A CLASS 'C' ENCLOSURE.
- NON-RATED WALL ASSEMBLY, NON-RATED DOORS & PENETRATIONS AS INDICATED ON THE PLAN DRAWING
- HALF-HEIGHT NON-RATED WALL ASSEMBLY, NON-RATED DOORS & PENETRATIONS AS INDICATED ON THE PLAN DRAWING

PATH OF EGRESS TRAVEL:

DISTANCE TRAVELED IN FEET & INCHES: 0.000 and/or 0.000

- WALL / CEILING EXIT LIGHT
- CEILING EXIT LIGHT W/ ARROW
- WALL EXIT LIGHT W/ ARROW
- EXIT / EMERGENCY COMBO W/ ARROW
- EXIT / EMERGENCY COMBO
- EMERGENCY LIGHT
- NL NIGHT-LIGHT DESIGNATION
- ADA / ACCESSIBILITY AREA
- (E) EXISTING (R) RELOCATED (N) NEW
- (000) OCCUPANT LOAD FOR EGREES CAPACITY
- (E) FIRE EXTINGUISHER (WALL HUNG)
- F FIRE ALARM PULL STATION BOX
- 000 / 000 NUMBER OF PERSONS USING EXIT / CAPACITY OF EXIT COMPONENTS (PERSONS)
- HS HORN / STROBE LIGHT
- (SD) SMOKE DETECTOR
- (HD) HEAT DETECTOR
- S STROBE LIGHT
- T THERMOSTAT / T-STAT
- EF EXHAUST FAN
- (FRDA) FIRE-RATED DOOR ASSEMBLY

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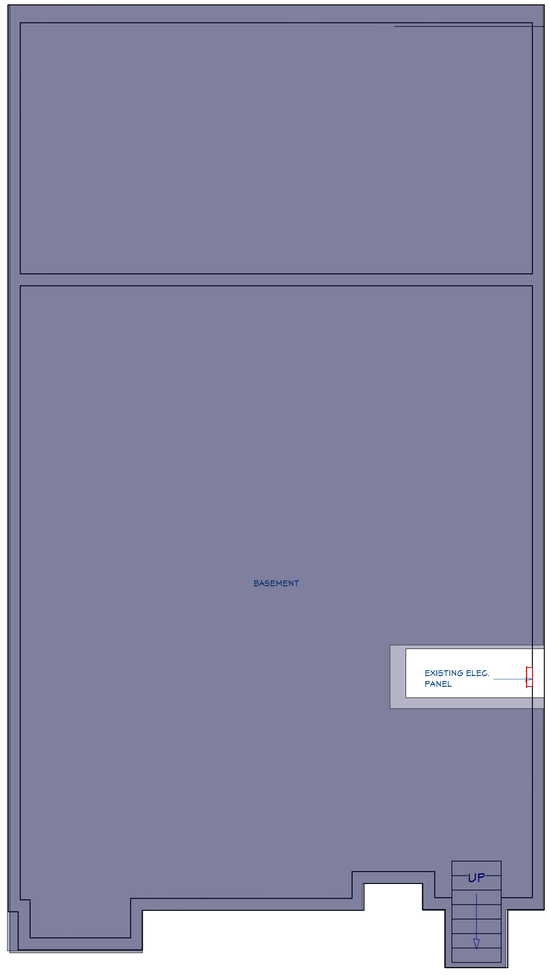
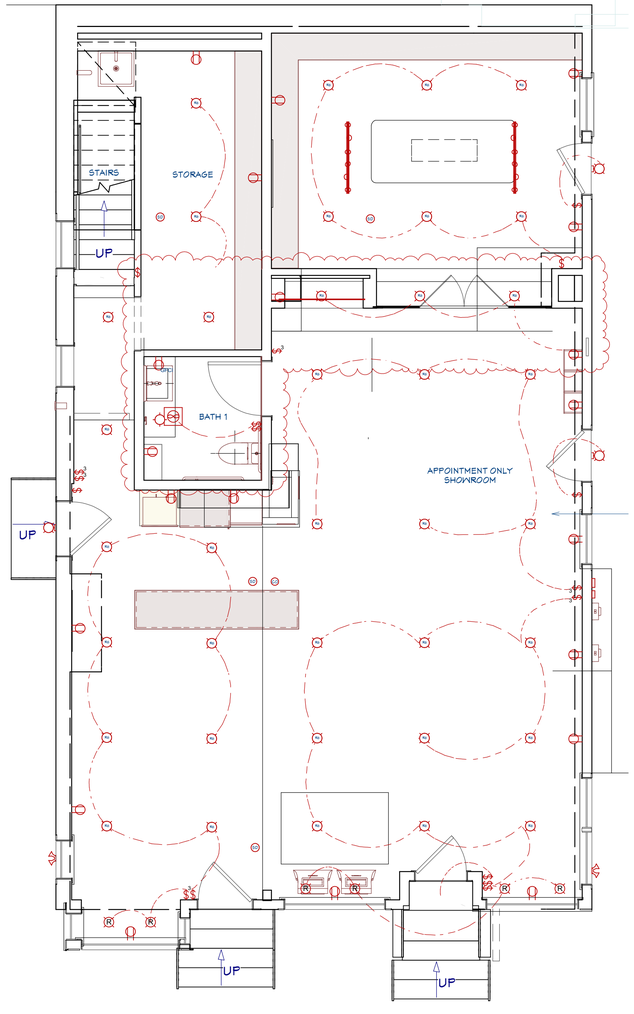
Gray Area not in scope



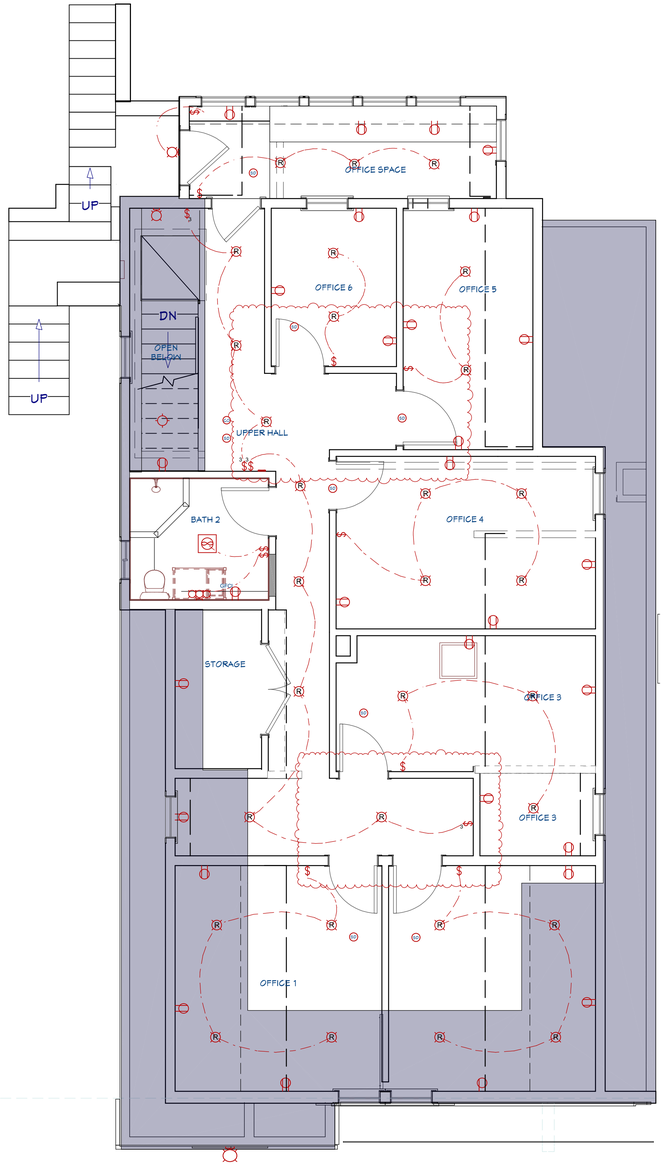
BASEMENT: PROPOSED PLAN

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



FIRST FLOOR: ELECTRICAL PLAN

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



SECOND FL: ELECTRICAL PLAN

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

ELECTRICAL SYMBOLS

- SWITCH
- THREE-WAY SWITCH
- SWITCH IN JAMB ACTIVATED BY DOOR OPENING
- AIR SWITCH FOR GARBAGE DISPOSAL
- SWITCH WITH DIMMER
- THREE WAY SWITCH WITH DIMMER
- DUPLEX RECEPTACLE
- QUADRUPLEX RECEPTACLE
- SWITCHED OUTLET
- GROUND FAULT PROTECTED RECEPTACLE
- WATERPROOF RECEPTACLE
- 220V RECEPTACLE
- FLOOR RECEPTACLE
- TELEPHONE JACK/INTERNET/DATA
- SMOKE DETECTOR
- THERMOSTAT
- CABLE TELEVISION JACK
- SURFACE MOUNTED CEILING FIXTURE
- SURFACE MOUNTED PULL CHAIN FIXTURE
- RECESSED CEILING FIXTURE
- RECESSED CEILING FIXTURE - WET LOCATION RATED
- RECESSED WALL WASH FIXTURE
- WALL MOUNTED FIXTURE
- FLOODLIGHT WITH MOTION DETECTOR
- BATHROOM EXHAUST FAN
- CEILING FAN W/ LIGHT - OSCI
- UNDER CABINET OR OVER DOOR LIGHT
- RECESSED RISER MOUNTED STEP LIGHT

GENERAL ELECTRICAL NOTES:

1. ELECTRICAL LAYOUT TO MEET REQUIREMENTS OF THE CURRENT NATIONAL ELECTRICAL CODE.
2. SMOKE DETECTORS ARE TO BE HARDWIRED TOGETHER SO THAT ACTIVATION OF ONE DETECTOR ACTIVATES ALL. PROVIDE BATTERY BACK-UPS.
3. PROVIDE AT LEAST 1 CARBON MINOXIDE DETECTOR ON EACH FLOOR.
4. PROVIDE MIN. (4) LIGHTS, (2) OUTLETS IN ATTIC

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MECHANICAL NOTES AND SPECIFICATIONS

GENERAL:

1. PROVIDE COMPLETE AND PROPERLY FUNCTIONING HVAC SYSTEMS FOR THIS PROJECT. VISIT THE PROJECT SITE, EXAMINE THESE PLANS AND ALL DRAWINGS RELATING TO THE AREA OF WORK, AND REPORT ANY DISCREPANCIES OR OMISSIONS IN THIS PLAN SET TO THE ENGINEER FOR RESOLUTION AND CLARIFICATION PRIOR TO SUBMISSION OF BIDS. BY SUBMITTING A BID ON THIS PROJECT, THE CONTRACTOR ACCEPTS THESE DOCUMENTS AS AN ADEQUATE DEFINITION OF THE SCOPE OF WORK. CLAIMS FOR ADDITIONAL COSTS TO ACHIEVE THE INTENDED SCOPE OF WORK WILL NOT BE ACCEPTED.

2. SCOPE OF WORK CONSISTS OF FURNISHING LABOR, MATERIALS AND EQUIPMENT FOR THE INSTALLATION. IT ALSO INCLUDES PLACING INTO OPERATION COMPLETE AND OPERABLE HEATING, VENTILATING AND AIR CONDITIONING SYSTEMS AS SPECIFIED AND SHOWN. THIS INCLUDES, BUT IS NOT LIMITED TO: HVAC UNITS, EXHAUST FANS, DUCTLESS SPLIT-SYSTEMS, DUCTWORK, AIR DISTRIBUTION, CONTROLS AND ACCESSORIES.

3. ALL REQUIRED OFFSETS, RISES AND DROPS DUE TO POSSIBLE OBSTRUCTIONS OF DUCT AND PIPE RUNS ARE NOT NECESSARILY SHOWN. MECHANICAL CONTRACTOR SHALL INCLUDE A CONTINGENCY IN HIS BID TO OFFSET ANY COST REQUIRED FOR ADDITIONAL FITTINGS AND LABOR THAT MAY BE REQUIRED.MINOR DEVIATIONS FROM THE DESIGN LAYOUT IN ROUTING OF DUCT AND/OR PIPING ARE ANTICIPATED AND SHALL BE CONSIDERED A PART OF THE WORK INCLUDED. THE CONTRACTOR SHALL VERIFY THE ACTUAL DIMENSIONS OF THE EQUIPMENT PROPOSED TO ENSURE THAT THE EQUIPMENT WILL FIT IN THE AVAILABLE SPACE.

4. HVAC LAYOUT IS BASED ON ARCHITECTURAL DRAWINGS AVAILABLE AT TIME OF DESIGN. AS STRUCTURAL OR OTHER FIELD CHANGES MAY OCCUR, CONTRACTOR IS RESPONSIBLE TO FIELD VERIFY LOCATION OF ALL HVAC EQUIPMENT AND DUCTWORK BEFORE INSTALLATION. MECHANICAL CONTRACTOR SHALL NOTIFY BUILDER OF ANY REQUIRED ALTERATIONS. EITHER CONTRACTOR OR OWNER SHALL TAKE RESPONSIBILITY FOR VERIFYING THE INTEGRITY OF THE CHANGES WITH THE HVAC DESIGN ENGINEER.

5. ALL WORK SHALL BE INSTALLED IN ACCORDANCE WITH THE REQUIREMENTS OF ALL APPLICABLE CODES AND REGULATIONS INCLUDING BUT NOT LIMITED TO NATIONAL, CITY, STATE AND LOCAL ORDINANCES WHICH MAY BE IN EFFECT. ALL HVAC MATERIALS, INSTALLATION PROCEDURES AND SYSTEM LAYOUTS SHALL BE APPROVED BY ALL APPLICABLE CODE ENFORCEMENT AUTHORITIES HAVING JURISDICTION. THE MECHANICAL CONTRACTOR SHALL PROVIDE ALL MATERIALS AND LABOR NECESSARY TO COMPLY WITH THESE RULES, REGULATIONS AND ORDINANCES AT NO ADDITIONAL COST. THESE CODES REPRESENT THE MINIMUM ACCEPTABLE REQUIREMENTS, THEREFORE, WHERE DRAWINGS AND/OR SPECIFICATIONS INDICATE MATERIALS OR CONSTRUCTION IN EXCESS OF THESE CODE REQUIREMENTS, THE DRAWINGS AND/OR SPECIFICATIONS SHALL GOVERN.

6. ANY DISCREPANCIES OR INADEQUACIES WITHIN THESE BID DOCUMENTS OR BETWEEN THESE BID DOCUMENTS AND THE RELATED PLUMBING, FIRE PROTECTION, ELECTRICAL, STRUCTURAL, ARCHITECTURAL, INTERIOR DECOR AND SITE ENGINEERING DRAWINGS, OR BETWEEN THESE BID DOCUMENTS AND FIELD CONDITIONS MUST BE BROUGHT TO THE ATTENTION OF THE OWNER, ARCHITECT AND ENGINEER PRIOR TO BID SUBMISSION.

7. ALL WORK SHOWN ON THESE DOCUMENTS IS NEW UNLESS SPECIFICALLY IDENTIFIED AS EXISTING OR PROVIDED BY OTHERS.

8. INSTALL ALL WORK ON THIS PROJECT IN ACCORDANCE WITH MECHANICAL CODE WITH ALL LOCAL REQUIREMENTS AND AMENDMENTS.

9. OBTAIN AND PAY FOR ALL PERMITS ASSOCIATED WITH THIS PROJECT AND ARRANGE ALL REQUIRED INSPECTIONS BY THE APPROPRIATE LOCAL AUTHORITIES.

10. CONCRETE HOUSEKEEPING PADS TO SUIT MECHANICAL EQUIPMENT SHALL BE SIZED AND LOCATED BY THE MECHANICAL CONTRACTOR. MINIMUM CONCRETE PAD THICKNESS SHALL BE 6 IN. PAD SHALL EXTEND BEYOND THE EQUIPMENT A MINIMUM OF 6 IN. ON EACH SIDE. CONCRETE HOUSEKEEPING PADS SHALL BE PROVIDED BY THE GENERAL CONTRACTOR. IT SHALL BE THE RESPONSIBILITY OF THE MECHANICAL CONTRACTOR TO COORDINATE THE SIZE AND LOCATION OF CONCRETE HOUSEKEEPING PADS WITH THE GENERAL CONTRACTOR.

11. ALL WIRING FOR LESS THAN 110V SHALL BE THE RESPONSIBILITY OF THE MECHANICAL CONTRACTOR. ALL WORK SHALL BE PER NEC AND APPLICABLE LOCAL CODES AND ORDINANCES. ALL WIRING SHALL BE IN CONDUIT.

12. THE CONTRACTOR MUST NOTIFY THE BUILDING OWNER IMMEDIATELY OF ANY DAMAGE OR THE DISCOVERY OF ANY EXISTING DAMAGE. THE PROTECTION OF ALL DRAINS IS REQUIRED TO PREVENT CLOGGING AND THE CONTRACTOR IS RESPONSIBLE FOR THE CLEANING OF ALL DRAINS WHICH HAVE BECOME CLOGGED DURING CONSTRUCTION.

13. HVAC UNITS WITHIN THE CONSTRUCTION AREA SHALL BE PROTECTED TO PREVENT DUST, DEBRIS OR ODORS FROM ENTERING. SEAL ALL DUCT AND EQUIPMENT OPENINGS WITH PLASTIC. PROVIDE NEW FILTERS FOR ALL HVAC EQUIPMENT PRIOR TO COMPLETION OF PROJECT.

14. THOROUGHLY CLEAN THE WORK AREA DAILY OR AS DIRECTED BY THE GENERAL CONTRACTOR OR OWNER. REMOVE ALL TRASH AND DEBRIS FROM THE PROJECT REMOVED FROM THE WORK AREA WHICH IS NOT REUSED BY THE OWNER UNLESS DIRECTED OTHERWISE BY THE OWNER'S REPRESENTATIVE.

15. A PRELIMINARY INSPECTION OF THE HVAC WORK IN PROGRESS SHALL BE SCHEDULED THROUGH THE BUILDING OWNER PRIOR TO THE INSTALLATION OR RE-INSTALLATION OF THE CEILING GRID.

16. SYMBOLS SHOWN ON SCHEDULES INDICATE THE TYPE OF EQUIPMENT ONLY. REVIEW DRAWINGS TO DETERMINE THE EXACT QUANTITIES REQUIRED FOR EACH EQUIPMENT TYPE.

17. THESE DRAWINGS ARE DIAGRAMMATIC AND ARE INTENDED TO DEPICT THE GENERAL LOCATION OF HVAC SYSTEM COMPONENTS. DO NOT SCALE MECHANICAL DRAWINGS. CONSULT ARCHITECTURAL PLANS FOR PROPER DIMENSIONS AND LOCATION OF EQUIPMENT.

18. PROVIDE ALL SUPPORT STEEL, HANGERS, VIBRATION ISOLATION AND ACCESSORIES REQUIRED TO INSTALL EQUIPMENT IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. DO NOT SUPPORT CEILINGS, LIGHTING FIXTURES, OR ANY OTHER DEVICES FROM DUCTWORK OR PIPING. UNLESS OTHERWISE NOTED, DO NOT ALLOW DUCTS, PIPES, OR CONDUITS TO DIRECTLY CONTACT THE BUILDING STRUCTURE.

19. CONNECT ALL MECHANICAL EQUIPMENT TO DUCTWORK USING RUBBERIZED-CANVAS FLEXIBLE CONNECTIONS. INSTALL ALL MECHANICAL EQUIPMENT WITH VIBRATION ISOLATION DEVICES.

20. ANY EQUIPMENT WHICH WILL REQUIRE PERIODIC INSPECTION OR SERVICE, IF LOCATED ABOVE OR BEHIND INACCESSIBLE CONSTRUCTION, SHALL BE PROVIDED WITH AN ACCESS DOOR OF SUFFICIENT SIZE TO PERMIT THE REQUIRED SERVICE. COORDINATE ACCESS PANEL LOCATIONS WITH ASSOCIATED EQUIPMENT LOCATIONS.

21. ALL EQUIPMENT SHALL BE INSTALLED PER MANUFACTURER'S INSTRUCTIONS AND/OR RECOMMENDATIONS.

22. PROVIDE EQUIPMENT SUITABLE FOR THE INTENDED PURPOSE. ALL MANUFACTURERS SHALL HAVE HAD SIMILAR PRODUCTS IN SATISFACTORY SERVICE FOR A MINIMUM OF 3 YEARS.

23. UNOBSTRUCTED ACCESS IS REQUIRED ON ALL SIDES OF ELECTRIC EQUIPMENT. LOCATE ALL SUCH EQUIPMENT WITH ADEQUATE CLEARANCE FOR MAINTENANCE AND TO MEET THE NATIONAL ELECTRICAL CODE'S REQUIRED CLEARANCES.

24. PROVIDE ALL NEW EQUIPMENT/MATERIALS WITH A WARRANTY FOR A MINIMUM OF ONE YEAR FROM THE DATE OF LANDLORD/OWNER ACCEPTANCE.

DUCTWORK:

1. FABRICATE DUCTWORK FROM GALVANIZED SHEET STEEL WITH G90 COATING IN ACCORDANCE WITH SMACNA DUCT CONSTRUCTION STANDARDS PER ASHRAE 90.1, 6.4.4.2.1; SMACNA TABLE, ALL DUCTS ARE REQUIRED TO BE SEALED TO SMACNA CLASS A REGARDLESS OF PRESSURE CLASS.

2. FABRICATE DUCTWORK FROM GALVANIZED SHEET STEEL WITH G90 COATING IN ACCORDANCE WITH SMACNA DUCT CONSTRUCTION STANDARDS AND THE PRESSURE CLASSES SPECIFIED BELOW: PRESSURE CLASS ("W.G.") /SEAL CLASS EXPOSED ROUND SPIRAL DUCT 2.0 B DUCTWORK RESTROOM EXHAUST 2.0 B CONSTANT VOLUME SYSTEM SUPPLY AIR DUCT 2.0 B CONSTANT VOLUME RETURN AIR DUCT 2.0 / B

3. SEAL AND/OR REPAIR ANY DUCTWORK WITH VISUAL OR AUDIBLE SIGNS OF AIR LEAKAGE.

4. DUCTWORK SIZES SHOWN ARE INSIDE CLEAR DIMENSIONS.

5. USE THERMAFLEX G-KM (U.L. 181 CLASS 1) FACTORY-INSULATED TWO PLY BONDED ALUMINUM FLEXIBLE DUCTWORK. THE INSULATION SHALL INCLUDE A VAPOR BARRIER JACKET. LIMIT FLEXIBLE DUCT TO A MAXIMUM LENGTH OF 6 FEET.

a. SIZE FLEXIBLE DUCTWORK TO MATCH THE NECK SIZE OF THE DEVICE IT SUPPLIES UNLESS OTHERWISE SCHEDULED.
b. USE RIGID SPIRAL DUCT TO MAINTAIN FLEXIBLE DUCT LENGTHS UNDER 6 FEET (ROUND DUCT SIZE SHALL MATCH FLEXIBLE DUCT SIZE).
c. CONNECT FLEXIBLE, OR RIGID ROUND DUCTWORK, TO THE LOW PRESSURE DUCT USING SPIN-IN COLLARS OR "AIR-TITE" ADHESIVE BACKED FITTINGS SECURED TO THE MAIN DUCT WITH SHEET METAL SCREWS. AT CONNECTIONS TO AIR DEVICES OR RIGID DUCT WORK, MECHANICALLY FASTEN AND SEAL SEASON. FLEXIBLE DUCT AIRTIGHT.
d. SEAL INSULATION JACKET USING INSULATION TAPE OR CEMENT TO MAINTAIN THE VAPOR BARRIER.
e. DO NOT ROUTE FLEXIBLE DUCT THROUGH SLAB TO SLAB PARTITIONS. PROVIDE ROUND RIGID DUCT WHERE FLEXIBLE DUCTS ARE SHOWN TO PASS THAN 16 GAGE. THROUGH SLAB TO SLAB PARTITIONS.
f. PROVIDE TRANSITIONS AND ACCESSORIES TO CONNECT FLEXIBLE DUCT TO RIGID DUCT.

6. INSTALL DUCTWORK TIGHT TO THE UNDERSIDE OF THE BUILDING STRUCTURE. ADJUST THE DUCT ELEVATION TO MAINTAIN DUCT TIGHT TO BOTTOM OF STRUCTURE WHERE STRUCTURE ELEVATIONS CHANGE.

7. PROVIDE ALL NECESSARY TRANSITIONS IN DUCTWORK FOR CONNECTION TO EQUIPMENT AND ACCESSORIES. REDUCE DUCTWORK SIZES ONLY AT THE CONNECTION POINT TO EQUIPMENT.

8. SUSPEND DUCTWORK FROM THE BUILDING STRUCTURE IN ACCORDANCE WITH THE SMACNA DUCT CONSTRUCTION STANDARDS. SECURELY ATTACH DUCTWORK SUPPORTS TO THE BUILDING STRUCTURE.

9. COORDINATE THE INSTALLATION OF THE DUCTWORK SYSTEM WITH THE BUILDING STRUCTURE AND THE WORK OF ALL OTHER CONTRACTORS. ADJUST DUCTWORK SIZES, LOCATION AND CONFIGURATION, INCLUDING DIFFUSER PLENUMS, AS REQUIRED TO COORDINATE WITH WORK OF THIS AND ALL OTHER TRADES. WHERE NECESSARY TO AVOID OBSTRUCTIONS, RE-SIZE, OFFSET, RAISE, OR LOWER THE DUCTWORK. DO NOT EXCEED THE DESIGN VELOCITIES IN ANY DUCT SECTIONS REQUIRING SIZING REVISIONS. INDICATE ALL COORDINATION ISSUES ON THE SHOP DRAWINGS.

10. PROVIDE TURNING VANES IN ALL 90° RECTANGULAR ELBOWS AND SPLITTER VANES IN ALL 90° RECTANGULAR RADIUS ELBOWS.

11. ELBOWS CONSTRUCTED USING A SHARP 90° ANGLE ON THE INSIDE OF THE ELBOW AND RADIUS BEND ON THE OUTSIDE OF THE ELBOW (HARD RADIUS HEEL OR "SLED-BOOT" FITTING) WILL NOT BE ACCEPTED.

12. INSTALL VOLUME DAMPERS IN ALL BRANCH DUCTWORK CONNECTIONS AT TAKE-OFF FROM MAIN TRUNK DUCT LEADING TO DIFFUSERS. INTAKE SOURCE.

13. PROVIDE THE AIR DISTRIBUTION DEVICES WITH APPROPRIATE FRAMES FOR INSTALLATION IN THE SELECTED CEILING CONSTRUCTION. COORDINATE COLOR SELECTION WITH THE ARCHITECT AND MAINTAIN A NC LEVEL OF 25 OR LESS IN ALL AIR DISTRIBUTION DEVICE SELECTIONS.

INSULATION:

1. INSULATE ALL CONCEALED SUPPLY AND RETURN AIR DUCTS WITH MINIMUM R-6 INSULATION WITH INTEGRAL VAPOR BARRIER WRAP.

2. INSULATE EXPOSED SPIRAL DUCT WITH 1" INTERNAL SOUND LINING.

3. INSTALL ALL INSULATION IN ACCORDANCE WITH ASTM E84. PROVIDE INSULATION WITH A FLAME SPREAD RATING OF LESS THAN 25 AND A SMOKE DEVELOPED RATING OF LESS THAN 50 WHEN TESTED IN ACCORDANCE WITH ASTM E84.

4. MAINTAIN VAPOR BARRIER ON ALL INSULATION APPLIED TO ALL EQUIPMENT, PIPING, OR DUCTWORK WHICH CONVEYS LIQUID OR AIR AT A TEMPERATURE OF LESS THAN 70 DEGREES F.

5. INSULATE ALL REFRIGERANT PIPING WITH 0.75" THICK CLOSED-CELL ELASTOMERIC PIPE INSULATION. AIREX E-FLEX GUARD, EXTERIOR GRADE PVC MATERIAL FOR REFRIGERANT LINESET INSULATION.

6. INCLUDE THE SERVICES OF A CERTIFIED INDEPENDENT BALANCING CONTRACTOR IN THE SCOPE OF THIS CONTRACT TO PERFORM ALL SYSTEM BALANCING PROCEDURES IN ACCORDANCE WITH NEBB AND AABC REQUIREMENTS.

7. PROVIDE ALL NECESSARY ACCESSORIES FOR DUCTWORK TO ALLOW PROPER AIR BALANCING. BALANCE AIR SYSTEMS TO QUANTITIES INDICATED ON THE PLANS UNDER THE SUPERVISION OF A REGISTERED ENGINEER. SUBMIT BALANCING REPORTS ON NEBB OR AABC FORMS APPROVED AND STAMPED BY THE REGISTERED ENGINEER WHO SUPERVISED THE TESTING.

8. PERFORM A PRELIMINARY AIR SYSTEM BALANCE ON ALL DEVICES IN AREAS WHERE FINAL CLOSE-IN WOULD MAKE BALANCING MECHANISMS INACCESSIBLE. PRELIMINARY AIR BALANCING IS REQUIRED TO PREVENT THE GENERATION OF OBJECTIONABLE NOISE AT THE AIR DEVICES. SCHEDULE THE WORK SUCH THAT THE FAN SYSTEMS ARE FULLY OPERATIONAL FOR THE PRELIMINARY AIR BALANCE PRIOR TO APPLICATION OF THE FINAL FINISHES. PERFORM THE FINAL BALANCING AT THE AIR DEVICE WITH AN INTEGRAL OPPOSED BLADE DAMPER OR OTHER APPROVED BALANCING MECHANISM. ELIMINATE ANY OBJECTIONABLE NOISE CREATED BY THE BALANCING MECHANISM.

9. PERFORM A FINAL SYSTEM BALANCE ONLY WHEN THE SYSTEM IS COMPLETE AND CAPABLE OF OPERATING IN ACCORDANCE WITH THE DESIGN CONTROL SEQUENCES. COORDINATE THE SCHEDULE FOR THE SYSTEM BALANCE WITH ALL APPROPRIATE TRADES TO IDENTIFY AND CORRECT ANY DEFICIENCIES WHICH COULD RESULT IN AN INCOMPLETE BALANCE REPORT. INCOMPLETE BALANCE REPORTS WILL NOT BE ACCEPTED FOR REVIEW. BALANCING WILL ONLY BE CONSIDERED TO BE COMPLETE UPON RECEIPT OF AN APPROVED BALANCE REPORT FROM THE ENGINEER.

CONTROLS:

1. FURNISH ALL LABOR, MATERIALS, EQUIPMENT, AND DESIGN SERVICES REQUIRED TO PROVIDE A COMPLETE CONTROL SYSTEM. THIS WORK SHALL INCLUDE WORK REQUIRED BY ELECTRICAL CONTRACTOR AS WELL. PROVIDE INITIAL SETUP AND PROGRAMMING OF ALL CONTROLS.

2. MOTORIZED DAMPERS/FANS SHALL BE CLOSED/OFF DURING UNOCCUPIED HOURS.

INSPECTION:

1. CONTRACTOR SHALL VISIT THE SITE AND BECOME FAMILIAR WITH ALL EXISTING CONDITIONS PRIOR TO SUBMITTING BID. NO EXTRA CHARGE WILL BE ALLOWED FOR FAILURE OF ANY BIDDER TO EXAMINE THE SITE PRIOR TO BID.

2. CONTRACTOR SHALL VERIFY ALL DIMENSIONS IN THE FIELD AND SHALL ADVISE THE ARCHITECT AND THE OWNER OF ANY DISCREPANCIES BEFORE PERFORMING THE WORK.

EXISTING CONDITIONS:

A. BEFORE SUBMITTING BID, THE CONTRACTOR SHALL BECOME THOROUGHLY FAMILIAR WITH ACTUAL EXISTING CONDITIONS AT THE BUILDING OF THE PRESENT INSTALLATIONS TO WHICH CONNECTIONS MUST BE MADE OR WHICH MUST BE CHANGED OR ALTERED. THE INTENT OF THE WORK IS SHOWN ON THE DRAWINGS AND DESCRIBED HEREINAFTER, AND NO CONSIDERATION WILL BE GRANTED BY REASON OF LACK OF FAMILIARITY ON THE PART OF THE CONTRACTOR WITH ACTUAL PHYSICAL CONDITIONS AT THE SITE.

B. WHERE SPECIFICALLY CALLED FOR ON THE DRAWINGS OR WHEN PERMISSION IS SPECIFICALLY GIVEN BY THE OWNER, EXISTING EQUIPMENT AND MATERIAL MAY BE REUSED.

C. THIS CONTRACTOR SHALL REPAIR ANY FIREPROOFING DAMAGED BY THIS CONTRACTOR, TO THE INTEGRITY OF THE ORIGINAL CONSTRUCTION.

PIPING:

1. ALL HYDRONIC PIPING MATERIAL SHALL CONFORM WITH THE LATEST EDITION OF THE INTERNATIONAL MECHANICAL CODE.

2. REFER TO EQUIPMENT SCHEDULES AND DETAILS FOR PIPING SIZES NOT INDICATED ON FLOOR PLANS.

3. CONDENSATE PIPING SHALL BE TYPE "M" COPPER TUBING WITH SWEAT-TYPE FITTINGS.

REFRIGERANT PIPING:

A. SHALL BE TYPE ACR HARD COPPER WITH STREAMLINE FITTINGS JOINTED WITH SPECIAL REFRIGERATION SOLDER SUCH AS SIL-FOS. REFRIGERANT PIPING IN CONCEALED LOCATIONS MAY BE ANNEALED SOFT-TEMPERED ACR TUBING ASSEMBLED WITH "STAYBRITE NO.8" SOLDER.

B. PRECHARGED OR PREFABRICATED LINES BY EQUIPMENT MANUFACTURER MAY BE USED. TUBING USED FOR REFRIGERANT SERVICE SHALL BE CLEANED, SEALED, CAPPED OR PLUGGED PRIOR TO BEING SHIPPED FROM THE MANUFACTURER.

C. PIPE, PIPE FITTINGS AND COMPONENTS SHALL BE CAPABLE OF WITHSTANDING THE PRESSURES AND TEMPERATURES OF THE SERVICE THEY ARE HANDLING.

PIPING SPECIALTIES:

A. FLEXIBLE CONNECTORS: METRAFLEX OR APPROVED EQUAL.

B. BACKFLOW PREVENTORS:

CONDENSATE: WATTS LFWCV OR APPROVED EQUAL

INSTALLATION:

A. ROUTE ALL PIPING MAINS ABOVE CEILING AS HIGH AS POSSIBLE UNLESS OTHERWISE NOTED.

B. RUN, SIZE, AND TRAP REFRIGERANT LINES PER EQUIPMENT MANUFACTURER'S WRITTEN RECOMMENDATIONS.

C. PROVIDE TRAPS FOR CONDENSATE DRAIN LINES AT ALL EQUIPMENT THAT IS NOT INTERNALLY TRAPPED.

D. SLOPE ALL CONDENSATE PIPING TOWARDS DRAIN AT 1/8" PER FOOT.

E. ALL PIPING SHALL BE IDENTIFIED BY NAME AND DIRECTIONAL FLOW IN ACCORDANCE WITH ASME AND ANSI STANDARDS

DEMOLITION:

A. EXISTING ROOF TOP UNITS, PARTIALLY SUPPLY AND RETURN DUCTWORK, REMOVED BY THE CONTRACTOR SHALL BECOME THE PROPERTY OF THE OWNER AND SHALL BE REMOVED, STORED, OR DISPOSED OF BY THE CONTRACTOR AT THE DIRECTION OF THE OWNER.

B. CUTTING AND PATCHING OF NEW OR EXISTING BUILDING FINISHES FOR INSTALLATION OF WORK OF THIS SECTION SHALL BE COORDINATED THROUGH THE GENERAL CONTRACTOR AND APPROVED BY THE ARCHITECT. WHERE CUTTING AND PATCHING IS APPROVED, IT SHALL BE PERFORMED BY THE TRADES WHO NORMALLY INSTALL THE WORK WHICH IS BEING REMOVED AND THE COST OF CUTTING AND PATCHING SHALL BE BORNE BY THIS CONTRACTOR.

C. BLANK-OFF ALL UNUSED DUCT OPENINGS WITH SAME GAUGE METAL AS EXISTING DUCT AND SEAL AIR TIGHT. INSULATED DUCTS SHALL BE INSULATED WITH SAME INSULATION MATERIAL AND THICKNESS AS EXISTING AND SEALED VAPOR TIGHT.

D. OPENINGS IN WALLS, CEILINGS AND FLOORS RESULTING FROM DUCT DEMOLITION SHALL BE CLOSED AND FINISHED TO MATCH THE SURROUNDING AREA. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING LOCATION

COORDINATION

A. COORDINATE THE WORK OF THIS SECTION WITH THE WORK OF OTHER SECTIONS IN AMPLE TIME FOR PROPER INSTALLATION AND CONNECTION, AND FOR THE PROVISION OF ALL OPENINGS REQUIRED IN FLOORS AND WALLS.

B. VERIFY AND BECOME THOROUGHLY FAMILIAR WITH THE BUILDING SYSTEMS IN ORDER TO PROVIDE FOR PROPER DUCTWORK AND CEILING INTERCONNECTIONS WHERE APPLICABLE.

C. VERIFY THE HEIGHT OF NEW DUCTWORK TO ASCERTAIN THAT IT DOES NOT CONFLICT WITH THE INSTALLATION OF LIGHT FIXTURES, CEILING SYSTEMS OR OTHER NEW TENANT CONSTRUCTION. PROMPTLY NOTIFY THE ARCHITECT, IN WRITING, OF ANY POTENTIAL CONFLICTS.

D. CAREFULLY CHECK THE DOCUMENTS OF OTHER SECTIONS TO ASCERTAIN THE REQUIREMENTS OF ANY MATERIALS OR EQUIPMENT BEING FURNISHED OR FURNISHED AND INSTALLED BY THAT SECTION AND PROVIDE THE PROPER INSTALLATION OR CONNECTIONS INCLUDING CONTROLS.

E. REFER TO ARCHITECTURAL DRAWINGS FOR EXACT LOCATIONS OF SUPPLY AND RETURN AIR DEVICES AND THERMOSTATS. REFER TO THE ARCHITECTURAL DRAWINGS FOR EQUIPMENT FINISHES AND MATERIALS NOT SPECIFIED HEREIN.

F. PROVIDE REQUIRED SUPPORTS AND HANGERS FOR DUCTWORK, PIPING AND EQUIPMENT, SUCH THAT LOADING WILL NOT EXCEED ALLOWABLE LOADING OF STRUCTURE. SUBMITTAL OF A BID SHALL BE DEEMED A REPRESENTATION THAT THE CONTRACTOR SUBMITTING SUCH BID HAS ASCERTAINED ALLOWABLE LOADINGS AND HAS INCLUDED IN HIS ESTIMATES, THE COSTS ASSOCIATED IN FURNISHING REQUIRED SUPPORTS. ALL DUCTWORK, PIPING AND EQUIPMENT SUPPORTS SHALL BE INDEPENDENT OF THE CEILING SUPPORT SYSTEM.

G. SCHEDULE ALL WORK CONNECTING WITH EXISTING SYSTEMS TO ENSURE A MINIMUM OF SERVICE INTERRUPTION. ALL INTERRUPTIONS OF SERVICES (POWER, WATER, HVAC, ETC.) AND ALL WORK IN OCCUPIED TENANT SPACES (E.G. PLUMBING OR ELECTRICAL WORK IN AN OCCUPIED TENANT'S SPACE BELOW A SPACE UNDER CONSTRUCTION) MUST BE SCHEDULED THROUGH THE BUILDING MANAGER.

H. FURNISH ACCESS DOORS TO THE GENERAL CONTRACTOR, FOR INSTALLATION BY THE APPROPRIATE TRADES, IN LOCATIONS WHERE ACCESS IS REQUIRED TO MECHANICAL AND PLUMBING EQUIPMENT WHICH WOULD BE OTHERWISE INACCESSIBLE. CARE SHOULD BE TAKEN IN LOCATING MECHANICAL AND PLUMBING SYSTEMS TO MINIMIZE THE NUMBER OF ACCESS DOORS REQUIRED. FINAL LOCATIONS OF ACCESS DOORS IN FINISHED AREAS SHALL BE APPROVED BY THE ARCHITECT. ACCESS DOORS SHALL BE AS SPECIFIED BY THE ARCHITECT. WHERE NO ARCHITECTURAL ACCESS DOOR SPECIFICATIONS EXISTS, THEN ACCESS DOORS SHALL BE AS FOLLOWS: DRYWALL PARTITIONS - INRYCO/MILCON STYLE DW ; DRYWALL CEILINGS - INRYCO/MILCON STYLE DW OR STYLE WB-PL DIRECTED BY ARCHITECT; PLASTER WALLS OR CEILINGS -INRYCO/MILCON STYLE WB-PL.

SUBMITTALS AND APPROVALS

A. APPROVALS FOR EQUIPMENT WILL NOT BE GIVEN UPON SUBMISSION OF MANUFACTURERS' NAMES. APPROVALS FOR EQUIPMENT WILL BE GIVEN ONLY AFTER RECEIPT OF COMPLETE AND SATISFACTORY SUBMITTALS. APPROVALS FOR EQUIPMENT WILL BE GRANTED IF SUCH EQUIPMENT CONFORMS TO THE PERFORMANCE REQUIREMENTS, SPACE CONDITIONS, WEIGHT REQUIREMENTS AND QUALITY REQUIREMENTS.

B. NOTIFY THE ARCHITECT, IN WRITING, WITHIN 5 DAYS OF AWARD OF CONTRACT, OF THE PROPOSED DELIVERY SCHEDULE, FOR ANY EQUIPMENT OR MATERIAL, WHICH WILL PREVENT THE INSTALLATION FROM BEING COMPLETED AT THE TIME OF THE SCHEDULED PROJECT COMPLETION.

C. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR THE FOLLOWING MATERIALS AND EQUIPMENT:

C.1. FLEXIBLE DUCT
C.2. AIR DEVICES
C.3. TEMPERATURE CONTROLS
C.4. TESTING AND BALANCING REPORTS

D. DUCTWORK, PIPING AND EQUIPMENT INSTALLED WITHOUT APPROVAL THEREOF SHALL BE DONE AT THE RISK OF THIS CONTRACTOR AND THE COST OF REMOVAL OF SUCH EQUIPMENT OR RELATED WORK WHICH IS JUDGED UNSATISFACTORY FOR ANY REASON SHALL BE AT THE EXPENSE OF THIS CONTRACTOR.

VIBRATION ISOLATORS

A. PROVIDE DOUBLE DEFLECTION NEOPRENE ISOLATION HANGERS FOR SUSPENDED FANS AND EQUIPMENT LESS THAN 100 LBS.

B. QUANTITY AND LOCATION OF ISOLATORS SHALL BE AS RECOMMENDED BY THE EQUIPMENT MANUFACTURER.

C. AFTER INSTALLATION AND START-UP, CONTRACTOR SHALL THOROUGHLY CHECK EACH ITEM OF EQUIPMENT FOR VIBRATION TRANSMISSION TO THE STRUCTURE OR EXCESSIVE NOISE, AND IF EITHER OCCURS, THE CONTRACTOR SHALL BE RESPONSIBLE FOR CORRECTING THE FAULTY SITUATION IMMEDIATELY.

LEAKAGE

A. ALL DUCT JOINTS SHALL BE SEALED WITH HARD CAST 601.

B. CONTRACTOR SHALL INSPECT ALL DUCTWORK, FITTINGS, INSULATION AND VAPOR BARRIER FOR DEFECTS OR LEAKAGE AND SEAL, CAP, RE-INSULATE, AND TAPE OVER AS REQUIRED TO PROVIDE REASONABLY WELL SEALED DUCT SYSTEM WITH APPROPRIATE INSULATION AND VAPOR BARRIER.

C. ALL PRESSURIZED PIPING SHALL BE LEAK TESTED PRIOR TO ENCLOSURE OR COVER-UP. PIPING SHALL BE LEAK TESTED FOR 24 HOURS UNDER A HYDROSTATIC PRESSURE OF 150% OF THE SYSTEM DESIGN WORKING PRESSURE. CARE SHALL BE TAKEN TO PROTECT ANY EQUIPMENT WHICH MAY BE DAMAGED BY HYDROSTATIC TESTING.

D. LEAKAGE TESTING FOR ALL DUCTWORK SHALL BE BY PHYSICAL SENSATION AND SHALL BE PERFORMED IN THE PRESENCE OF THE OWNER'S REPRESENTATIVE.

E. PERFORM ALL TESTING AFTER THE SEALS HAVE CURED COMPLETELY AND BEFORE COVERING WITH INSULATION OR CONCEALING IN MASONRY.

HANGERS AND SUPPORTS

1. PIPE, DUCT AND EQUIPMENT HANGERS AND SUPPORTS SHALL BE PER THE LOCAL CODE. SUPPORT PIPING AT A MINIMUM EVERY 10' OR LESS FOR 1" AND LARGER PIPE, EVERY 6' ON 3/4" OR SMALLER. WITH COPPER PIPE USE COPPER HANGERS OR TAPE AT CONTACT POINT.
2. SUPPORT FLEX DUCTS PER MANUFACTURER'S INSTALLATION INSTRUCTIONS (PROVIDE INSTRUCTIONS FOR INSPECTOR REVIEW). ALTERNATE ACCEPTABLE FLEX DUCT SUPPORT IS 26 GAGE, 1.5 INCH WIDE GALVANIZED IRON STRAPS ON 4-FOOT MAXIMUM SPACING.
3. ROOF CURBS (REQUIRED FOR ALL ROOF MOUNTED EQUIPMENT): GALVANIZED STEEL SHELL AND BASE, MITERED CANT, INSULATION, WOOD NAILER. ROOF CURBS SHALL MATCH THE ROOF PITCH AND SHALL BE COMPATIBLE WITH THE ROOF TYPE

AIR DEVICES:

A. ALL AIR DEVICES SHALL BE SELECTED TO PROVIDE A NC OF 30 OR LESS AT INDICATED CFM AND SHALL INCLUDE BALANCING DAMPERS AND OTHER TYPICAL ACCESSORIES AS REQUIRED.

B. ALL CEILING AND WALL-MOUNTED AIR DEVICES SHALL BE PAINTED WHITE OR OFF WHITE, UNLESS SPECIFIED OTHERWISE, AND ALL AIR DEVICES SHALL BE THE SAME COLOR.

DRAFTING SYMBOLS

(N) = NEW
(R) = REMOVE
(E) = EXISTING
(ER) = EXISTING RELOCATE
(RR) = REMOVE AND RELOCATE
(SD) = SUPPLY DUCT
(RD)= RETURN DUCT

1 PLAN NAME/DETAIL TITLE
SCALE:
SCALE

DIFFUSER TYP. (SEE SPEC.)
AIR FLOW (CFM)

SHEET INDEX:

SCOPE OF WORK

- NO CHANGES TO THE HVAC SYSTEM EXCEPT REMOVAL OF THREE DIFFUSERS AT THE STEPS.
- NO CHANGES TO THE MAIN HVAC SYSTEM, EXCEPT FOR RELOCATING THE CEILING REGISTERS ON THE SECOND FLOOR.
- PROVIDE A NEW EXHAUST FAN FOR THE SECOND FLOOR BATHROOM.
- NATURAL VENTILATION IS MAINTAINED AS THE PRIMARY VENTILATION SOURCE FOR BOTH THE FIRST AND SECOND FLOORS.

MECHANICAL SYMBOL LEGEND

- EXISTING WORK TO REMAIN
- NEW WORK
- FLOW ARROW
- REMOVE EXISTING WORK
- REMOVE RELOCATE EXISTING WORK
- BULKHEAD/DROP CEILING
- TYPE/CFM — SUPPLY AIR GRILLE
- SUPPLY ROUND DIFFUSER
- TYPE/CFM — RETURN AIR GRILLE
- TYPE/CFM — EXHAUST AIR GRILLE
- T — THERMOSTAT
- SD — SMOKE DETECTOR
- MANUAL DAMPER
- DUCT TAKE-OFF
- WALL CAP
- CO2 — CARBON DIOXIDE SENSOR
- C — CARBON MONOXIDE SENSOR
- MECHANICAL EQUIPMENT WITH CLEARANCES, SEE SCHEDULES
- TRANSITION RECTANGULAR TO ROUND DUCT
- FIRE DAMPER
- RETURN/EXHAUST AIR
- M — MOTORIZED VOLUME DAMPER
- ##/## — SIZE OF RECTANGULAR DUCT WHERE FIRST NUMBER INDICATES WIDTH AND SECOND NUMBER INDICATES VERTICAL DIMENSION
- ##Ø — DIAMETER OF ROUND DUCT
- CD — CONDENSATE PIPING
- S U — UNDER CUT DOOR,'S' DONATE SIZE
- L — LOUVER DOOR
- POINT OF REMOVAL
- CONNECT TO EXISTING
- AIR HANDLER
- CONDENSER UNIT

NOTE:
NOT ALL SYMBOLS ON THIS LIST APPLICABLE TO THIS PROJECT.

MECHANICAL ABBREVIATIONS

AMPERE	A(AMP)
ABOVE FINISHED FLOOR	AFF.
ABOVE FINISHED GRADE	AFG.
ADDENDUM	ADD.
ADJUSTABLE	ADJ.
AIR CONDITIONING	A/C
AIR HANDLER UNIT	AHU
APPROXIMATE(LY)	APPROX.
ARCHITECT(URAL)	ARCH('L).
AUTOMATIC	AUTO
AUXILIARY	AUX.
ACCESS PANEL	AP.
BUILDING	BLDG.
BOTTOM OF DUCT	BOD
BOTTOM OF PIPE	BOP
BRITISH THERMAL UNIT	BTU.
CAPACITY	CAP
CENTER	CTR.
CIRCLE	CIR.
CONDENSATE DRAIN	CD.
CONDENSING UNIT	C.U.
CONSTRUCTION	CONST.
CONTINUATION	CONT.
COOLING	CLG.
CUBIC FOOT PER MINUTE	CFM.
CEILING REGISTER DAMPER	CRD.
CEILING REGISTER	CR.
DAMPER	DMPR.
DEGREE FAHRENHEIT	DegF.
DEMOLISH(ITION)	DEMO.
DIAMETER	DIA.
DIRECT EXPANSION	DX.
DIVISION	DIV.
DOWN	DN.
DOUBLE	DBL.
DRAWING(S)	DWG(S).
DRY BULB	D.B.
DUCTLESS SPLIT	D.S.
DOWN	DN.
EXISTING	(E).
ENTERING AIR TEMPERATURE	EAT.
EFFICIENCY	EFF.
ELECTRIC(AL)	ELEC.
ELEVATION	EL.
ENERGY EFFICIENCY RATIO	EER.
ENGINEER	ENGR.
ENTERING	ENT
EQUAL	EQ.
EQUIPMENT	EQPT.
ETCETERA	ETC.
EXISTING RELOCATED	(ER).
EXISTING	EXIST.
EXPOSED	EXP.
EXHAUST FAN	EF.
EXHAUST AIR	EA.
EXTERNAL	EXT
EXTERNAL STATIC PRESSURE	ESP.
FARENHEIT	F.

FLUE EXHAUST VENT	FEV.
FINISH(ED)	FIN.('D)
FINISH FLOOR	F.F.
FLEXIBLE	FLEX.
FLOOR	FL.
FOOT/FEET	FT.
FLOOR REGISTER	FR.
GALLONS PER MINUTE	GPM
GALVANIZED	GALV.
GAS HEATER	G.H.
GAUGE	GA.
GENERAL CONTRACTOR	G.C.
GROUND	GND.
GYPSUM BOARD	GYP.
HEATER	HTR.
HORSEPOWER	H.P.
HEATING, VENTILATION & AIR CONDITIONING	HVAC
HOT WATER	H.W.
HOT WATER RETURN	H.W.R.
HERTZ	HZ.
INFORMATION	INFO.
INCHES	IN.
INSULATION	INSUL.
INTERIOR	INT.
KILOWATT	KW
LEAVING AIR TEMPERATURE	LAT.
LEAVING	LVG.
LOUVER	L.
LONG RADIUS ELBOW	LRE.
LOUVERED DOOR	LD.
MANUFACTURE(R)	MFR.
MAKEUP AIR	MA.
MAXIMUM	MAX.
1,000 BTU/HR	MBH.
MAXIMUM OVERCURRENT PROTECTION	MOCP
MECHANICAL	MECH.
METAL	MTL.
MINIMUM	MIN.
MIXED AIR TEMPERATURE	MAT.
MISCELLANEOUS	MISC.
MOTORIZED VOLUME DAMPER	MVD
MULTIPLE	MULT.
MIN CIRCUIT AMPS	MCA.
NEW	(N).
NOT APPLICABLE	N/A
NOISE CRITERIA	NC.
NATURAL	NAT.
NOMINAL	NOM.
NORTH	N.
NOT IN CONTRACT	N.I.C.
NOT TO SCALE	N.T.S.
NUMBER	NO./#
OUTSIDE AIR	OA
OPPOSED BLADE DAMPER	OBD.

PARTIAL	PART.
PHASE	PH
POLYVINYL CHLORIDE	PVC
POUND(S)	LBS
POUNDS PER SQUARE INCH	PSI
PRESSURE DROP	PD.
PHASE	PH.
QUANTITY	QTY.
RADIUS	R.
REFRIGERATION	REFRIG.
RECESSED	REC.
REINFORCE(ING)(ED)(MENT)	REINF.
RETURN AIR GRILLE	R.A.G.
RELOCATED	RE.
ROOF TOP UNIT	RTU
ROOM	RM.
REMOVE	(R).
REMOVE RELOCATED	(RR).
RETURN DUCT	RD.
SANITARY SEWER	S.S.
SIDE WALL REGISTER	SWR.
SEASONAL ENERGY EFFICIENCY RATIO	SEER
SECTION	SECT.
SENSIBLE	SENS.
SMOKE DETECTOR	S.D.
SOUTH	S.
SPECIFICATION(S)	SPEC.('S)
SQUARE	SQ.
SQUARE FEET	SF
STAINLESS STEEL	SS.
SQUARE FEET	SF
STATIC PRESSURE	SP.
SUCTION	SUCT.
SUPPLY AIR	SA.
SUPPLY DUCT	SD.
TRANSFER AIR GRILLE	TAG.
TEMPERATURE SENSOR	TS.
TOP OF STEEL	T.O.S.
TYPICAL	TYP.
THERMOSTAT	T'STAT.
UNDERGROUND	U.G.
UNDERWRITER LABORATORIES INC.	U.L.
UNIT HEATER	U.H.
UNLESS NOTED OTHERWISE	U.N.O.
UTILITY	UTIL.
VOLUME DAMPER	VD
VOLTAGE	V.
VOLUME	VOL.
WATER GAUGE	WG.
WEIGHT	WT.
WEST	WEST
WET BULB	W.B.
WITH	W/
WITHOUT	W/O
WIRE MESH SCREEN	WMS.

VIRGINIA CODES:

ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE REQUIREMENTS OF THE APPLICABLE VIRGINIA UNIFORM STATEWIDE BUILDING CODE (VUSBC) AND ALL OTHER CODES IN FORCE BY LOCAL AUTHORITIES HAVING JURISDICTION. ALL CODES SHALL INCLUDE THE CURRENT VIRGINIA AMENDMENTS.

- 2021 VIRGINIA CONSTRUCTION CODE (VBC)
- 2021 VIRGINIA STATEWIDE FIRE PREVENTION CODE (SFPC)
- 2020 NATIONAL ELECTRICAL CODE (NEC)
- 2021 VIRGINIA MECHANICAL CODE (VMC)
- 2021 VIRGINIA ENERGY CONSERVATION CODE (VECC)
- 2021 VIRGINIA PLUMBING CODE (VPC)
- 2021 VIRGINIA FUEL GAS CODE (VFGC)
- 2021 VIRGINIA MAINTENANCE CODE (VMCT)
- 2021 VIRGINIA EXISTING BUILDING CODE (VEBC)
- ICC/ANSI A117.1–2017, ACCESSIBLE AND USABLE BUILDINGS AND FACILITIES

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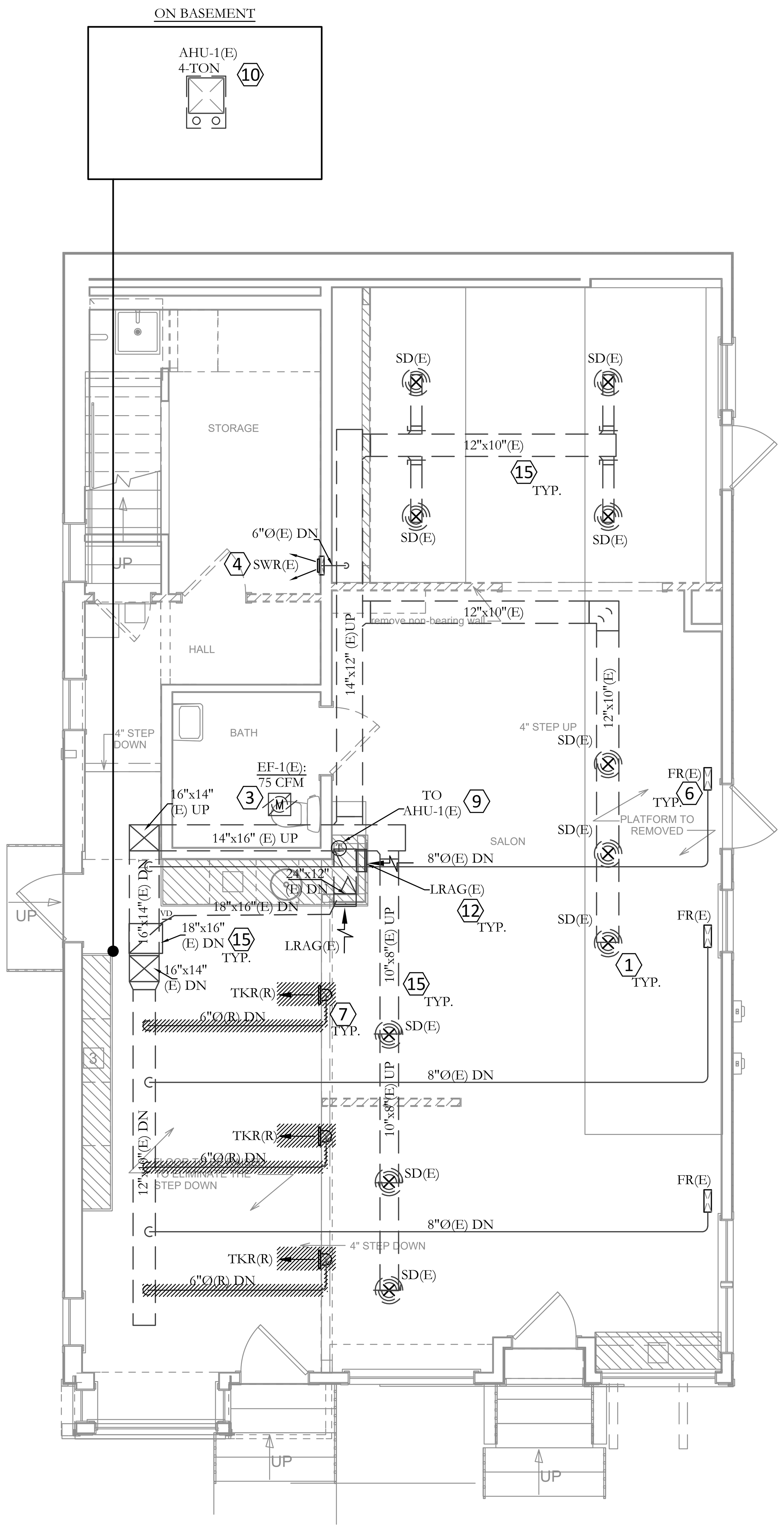
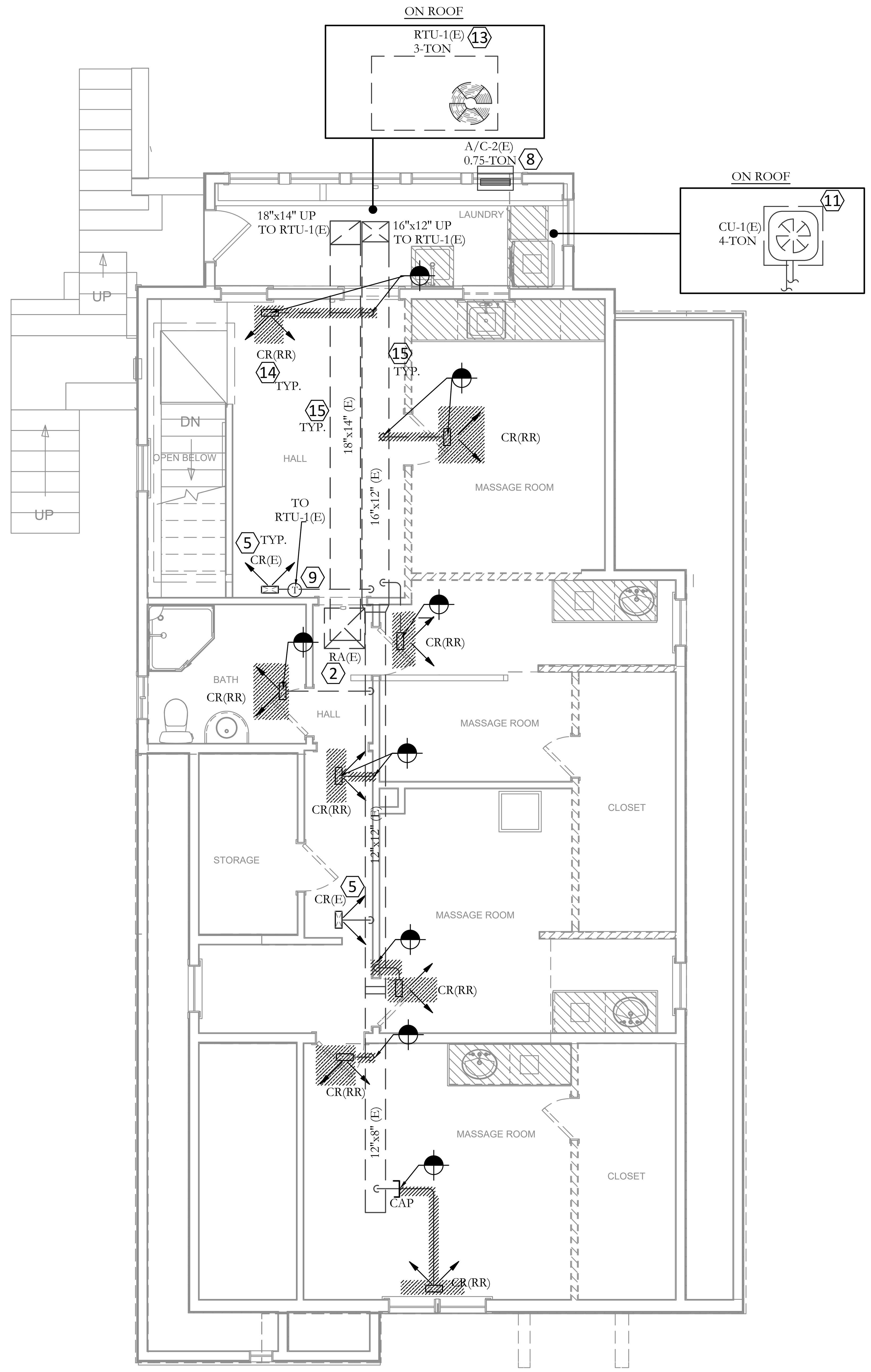


1 FIRST FLOOR – EXISTING MECHANICAL PLAN
SCALE: 1/4"=1'-0"



2 SECOND FLOOR - EXISTING MECHANICAL PLAN
SCALE: 1/4"=1'-0"

MECHANICAL GENERAL NOTES:

A. THESE PLANS ARE BASED ON INFORMATION PROVIDED TO LAMA ENGINEERS AND OTHERS PRIOR TO THE TIME OF PLAN PREPARATION. CONTRACTOR MUST FIELD VERIFY EXISTING CONDITIONS AND NOTIFY LAMA ENGINEERS, IN WRITING, IMMEDIATELY IF ACTUAL SITE CONDITIONS DIFFER FROM THOSE SHOWN ON THE PLAN, OR IF THE PROPOSED WORK CONFLICTS WITH ANY OTHER SITE.

B. THE MECHANICAL DRAWINGS ARE DIAGRAMMATIC AND SHOULD NOT BE SCALED TO ESTABLISH LOCATION OF WORK. THE CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS AND MAKE ADJUSTMENTS AS NECESSARY TO COMPLETE THE WORK.

C. CONTRACTOR SHALL THOROUGHLY EXAMINE PREMISES AND OBSERVE ALL CONDITIONS AND CIRCUMSTANCES UNDER WHICH THE WORK SHALL BE PERFORMED. NO ALLOWANCES WILL BE MADE FOR ERRORS OR NEGLIGENCE IN THIS RESPECT.

MECHANICAL KEYED NOTES:

1. EXISTING SUPPLY AIR DIFFUSER TO REMAIN.
2. EXISTING RETURN AIR DIFFUSER TO REMAIN.
3. EXISTING BATHROOM EXHAUST FAN TO REMAIN.
4. EXISTING SIDE WALL REGISTER (SWR) TO REMAIN. CONTRACTOR SHALL FIELD-VERIFY EXACT LOCATION.
5. EXISTING CEILING REGISTER (CR) TO REMAIN. CONTRACTOR SHALL FIELD-VERIFY EXACT LOCATION.
6. EXISTING FLOOR REGISTER (FR) TO REMAIN. CONTRACTOR SHALL FIELD-VERIFY EXACT LOCATION.
7. REMOVE THE TOE-KICK REGISTER (TKR).
8. EXISTING WINDOW AIR CONDITIONING UNIT (A/C-2) TO REMAIN.
9. EXISTING THERMOSTAT SERVING AHU-1 AND RTU-1 TO REMAIN.
10. EXISTING AHU-1 TO REMAIN.
11. EXISTING CU-1 ALONG WITH ALL ASSOCIATED PIPING, TO REMAIN.
12. EXISTING LOUVERED RETURN AIR GRILLE (LRAG) TO REMAIN.
13. EXISTING RTU-1 ALONG WITH ALL ASSOCIATED PIPING, TO REMAIN.
14. RELOCATED EXISTING CEILING REGISTER (CR) TO A NEW LOCATION.
15. EXISTING SUPPLY AND RETURN DUCTWORK TO REMAIN. THE CONTRACTOR SHALL FIELD VERIFY THE EXACT LOCATIONS AND SIZES OF ALL EXISTING DUCTS PRIOR TO FABRICATION OR INSTALLATION OF NEW WORK.

MECHANICAL ABBREVIATIONS

(SWR)	=	SIDE WALL REGISTER
(CR)	=	CEILING REGISTER
(FR)	=	FLOOR REGISTER
(TKR)	=	TOE-KICK REGISTER
(LRAG)	=	LOUVERED RETURN AIR GRILLE

LEGEND:

- REMOVE (R)
- REMOVE RELOCATE (RR)

CONTRACTOR NOTES:

1. CONTRACTOR SHALL BALANCE EXISTING AIR DEVICES TO MATCH THE AIRFLOW (CFM) SHOWN ON THE PLANS. REPORT ANY DISCREPANCIES TO THE ENGINEER IMMEDIATELY.
2. CONTRACTOR SHALL FIELD-VERIFY ALL EXISTING CONDITIONS AND NOTIFY THE ENGINEER IN WRITING OF ANY DISCREPANCIES BETWEEN FIELD CONDITIONS AND CONTRACT DOCUMENTS PRIOR TO PROCEEDING WITH THE WORK.
3. CONTRACTOR SHALL FIELD-VERIFY THE CONDITION OF THE EXISTING DUCTWORK PRIOR TO THE START OF WORK. ANY DAMAGED, DETERIORATED, OR LEAKING DUCTWORK SHALL BE REPLACED.
4. CONTRACTOR SHALL VERIFY OPERATION OF EXISTING AHU-1, RTU-1, AND CON-1 (CONDENSING UNIT), INCLUDING HEATING AND COOLING PERFORMANCE, AND REPAIR AS REQUIRED TO ENSURE PROPER OPERATION.
5. CONTRACTOR SHALL VERIFY AIRFLOW OF EXISTING AHU-1, RTU-1, AND CON-1 AND PROVIDE A PRE-BALANCING (PRE-TAB) REPORT CONFIRMING COMPLIANCE WITH DESIGN AIRFLOW REQUIREMENTS.

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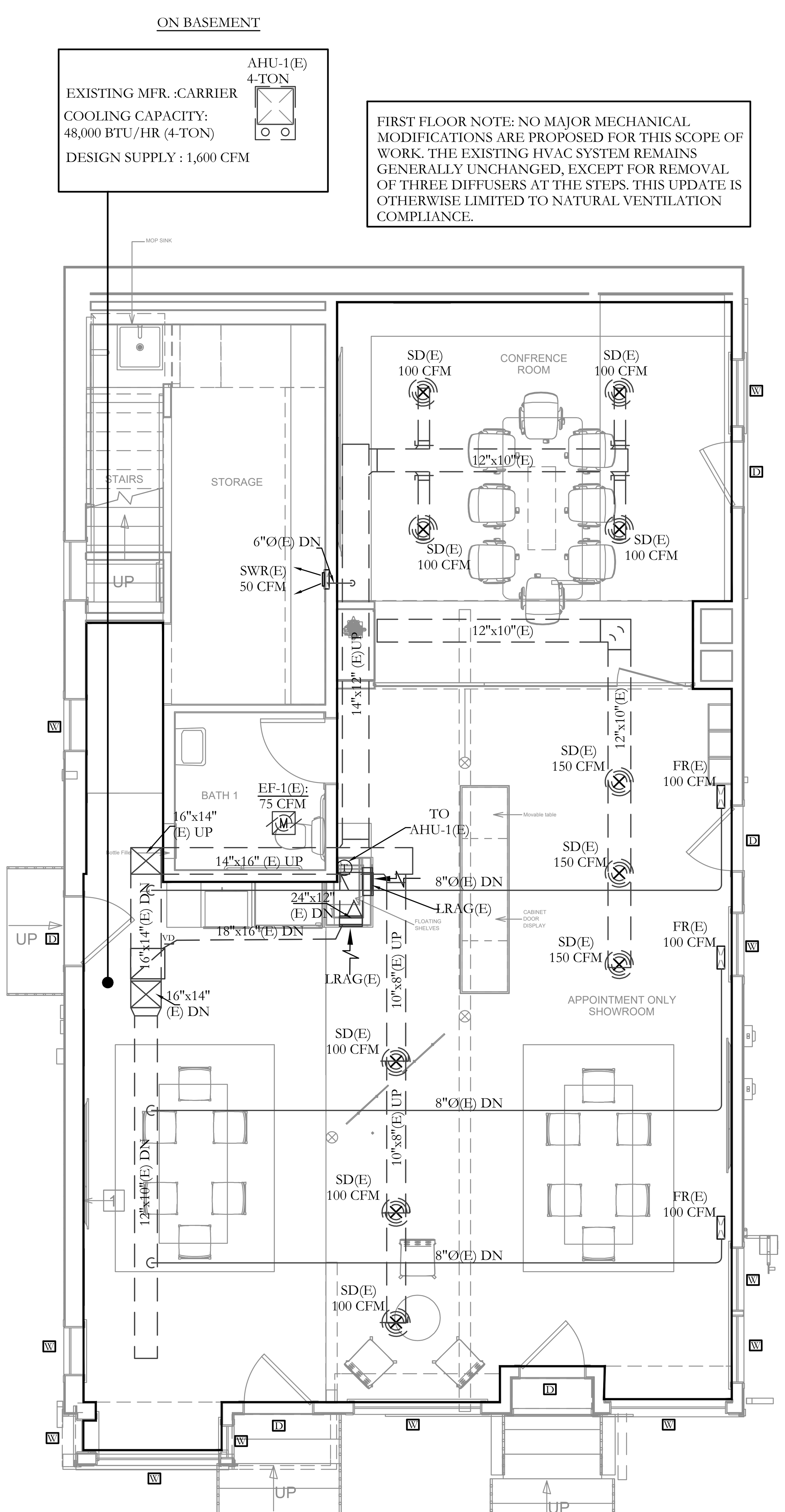
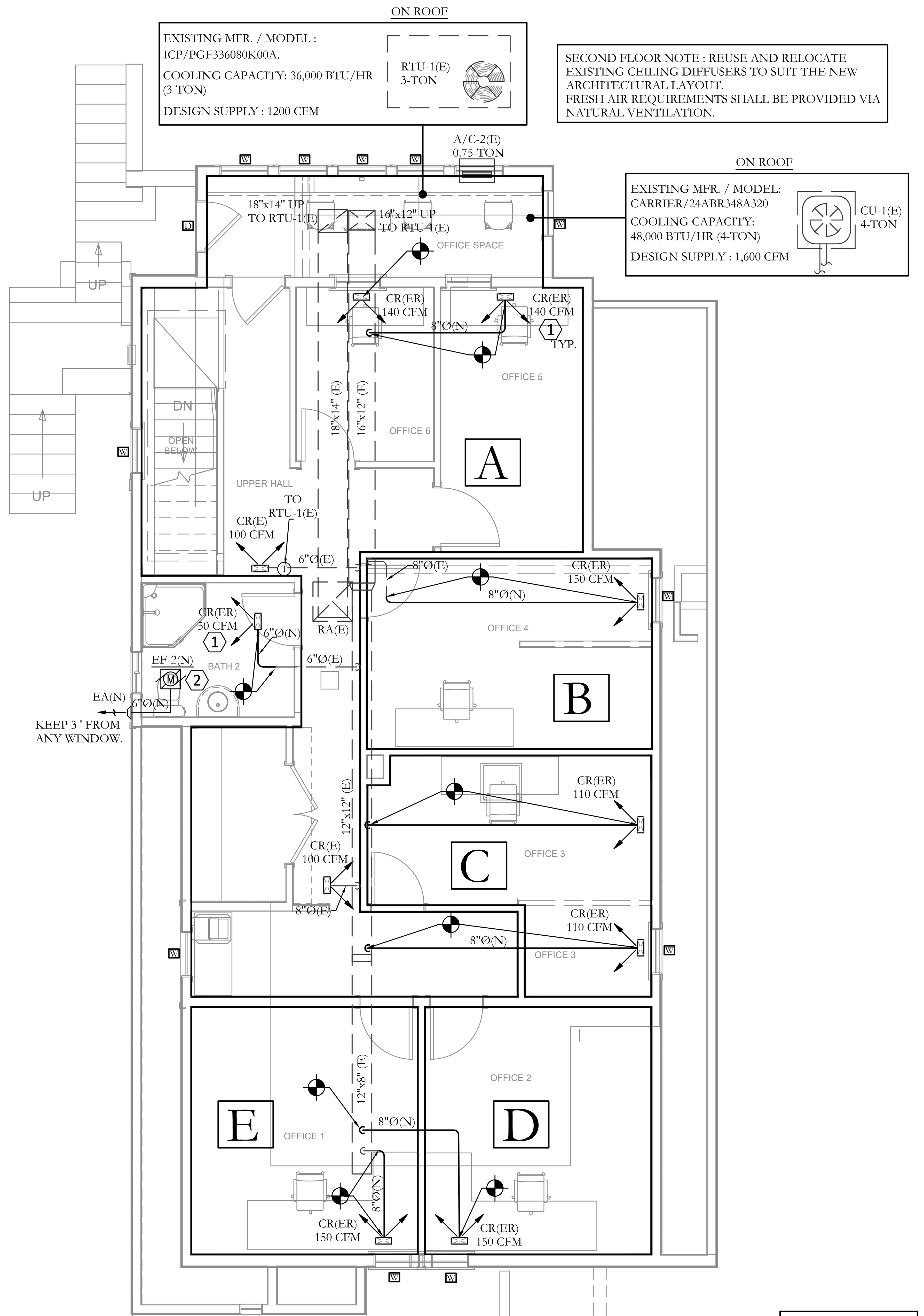
PAGE: EXISTING MECHANICAL PLANS

M02



1 FIRST FLOOR - NEW MECHANICAL PLAN

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



2 SECOND FLOOR - NEW MECHANICAL PLAN

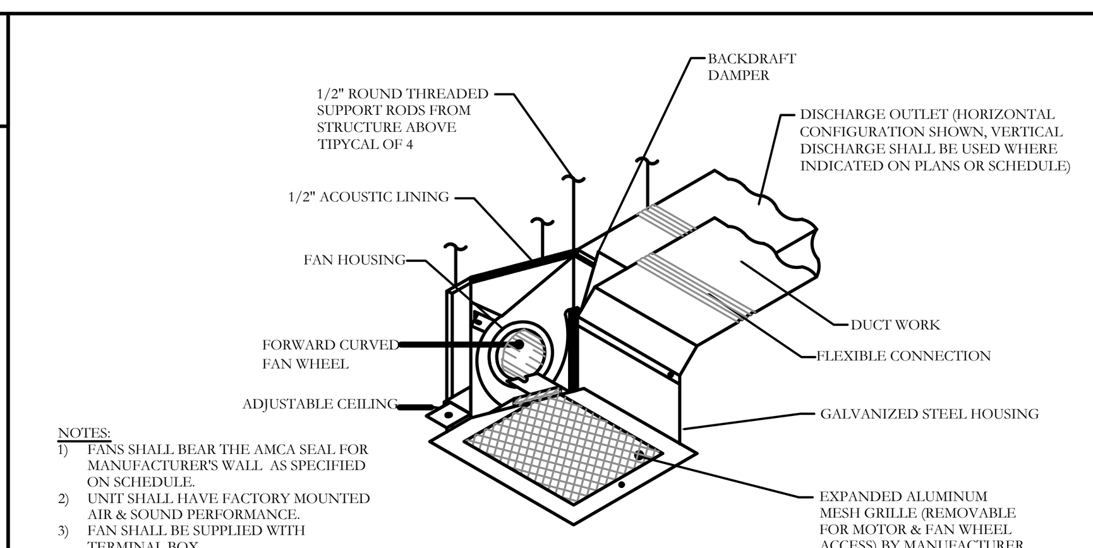
SCALE: 1/4"=1'-0"

LEGEND:

- D DOOR
- W WINDOW

CONTRACTOR NOTES:

1. CONTRACTOR SHALL BALANCE EXISTING AIR DEVICES TO MATCH THE AIRFLOW (CFM) SHOWN ON THE PLANS. REPORT ANY DISCREPANCIES TO THE ENGINEER IMMEDIATELY.
2. CONTRACTOR SHALL FIELD-VERIFY ALL EXISTING CONDITIONS AND NOTIFY THE ENGINEER IN WRITING OF ANY DISCREPANCIES BETWEEN FIELD CONDITIONS AND CONTRACT DOCUMENTS PRIOR TO PROCEEDING WITH THE WORK.
3. CONTRACTOR SHALL FIELD-VERIFY THE CONDITION OF THE EXISTING DUCTWORK PRIOR TO THE START OF WORK. ANY DAMAGED, DETERIORATED, OR LEAKING DUCTWORK SHALL BE REPLACED.
4. CONTRACTOR SHALL VERIFY OPERATION OF EXISTING AHU-1, RTU-1, AND CON-1 (CONDENSING UNIT), INCLUDING HEATING AND COOLING PERFORMANCE, AND REPAIR AS REQUIRED TO ENSURE PROPER OPERATION.
5. CONTRACTOR SHALL VERIFY AIRFLOW OF EXISTING AHU-1, RTU-1, AND CON-1 AND PROVIDE A PRE-BALANCING (PRE-TAB) REPORT CONFIRMING COMPLIANCE WITH DESIGN AIRFLOW REQUIREMENTS.



D.1 CABINET CEILING EXHAUST FAN DETAIL

N.T.S.

MECHANICAL GENERAL NOTES:

A. THESE PLANS ARE BASED ON INFORMATION PROVIDED TO LAMA ENGINEERS AND OTHERS PRIOR TO THE TIME OF PLAN PREPARATION. CONTRACTOR MUST FIELD VERIFY EXISTING CONDITIONS AND NOTIFY LAMA ENGINEERS, IN WRITING, IMMEDIATELY IF ACTUAL SITE CONDITIONS DIFFER FROM THOSE SHOWN ON THE PLAN, OR IF THE PROPOSED WORK CONFLICTS WITH ANY OTHER SITE.

B. THE MECHANICAL DRAWINGS ARE DIAGRAMMATIC AND SHOULD NOT BE SCALED TO ESTABLISH LOCATION OF WORK. THE CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS AND MAKE ADJUSTMENTS AS NECESSARY TO COMPLETE THE WORK.

C. CONTRACTOR SHALL THOROUGHLY EXAMINE PREMISES AND OBSERVE ALL CONDITIONS AND CIRCUMSTANCES UNDER WHICH THE WORK SHALL BE PERFORMED. NO ALLOWANCES WILL BE MADE FOR ERRORS OR NEGLIGENCE IN THIS RESPECT.

D. PRIOR TO STARTING MECHANICAL WORK AND ANY DUCT FABRICATION, CONTRACTOR SHALL COORDINATE WITH OWNER/ARCHITECT FOR CEILING HEIGHT AND ENSURE THERE IS ENOUGH SPACE TO RUN THE DUCTS ABOVE THE CEILING.

E. CONTRACTOR SHALL PROVIDE ACCESS TO ALL DAMPERS.

F. PROVIDE ACCESS PANELS FOR ALL ABOVE-CEILING EQUIPMENT REQUIRING SERVICE. ACCESS PANELS SHALL BE SIZED FOR MAINTENANCE AND INSTALLED IN ACCESSIBLE LOCATIONS. COORDINATE WITH ARCHITECTURAL FINISHES.

G. PROVIDE BALANCING DAMPERS AT ALL BRANCH DUCT TAKEOFFS. BALANCING DAMPERS SHALL BE ACCESSIBLE AND ADJUSTED DURING SYSTEM COMMISSIONING FOR PROPER AIRFLOW.

H. CONTRACTOR SHALL CONFIRM THAT ALL EXISTING EQUIPMENT IS OPERATIONAL PRIOR TO PERFORMING NEW WORK. IF ANY EXISTING EQUIPMENT IS FOUND DEFECTIVE, REPORT THE DEFICIENCIES TO THE BUILDING ENGINEER IN WRITING IMMEDIATELY.

I. PROVIDE RIGID DUCTWORK THROUGH ALL FULL-HEIGHT WALLS. DO NOT INSTALL FLEX DUCT THROUGH FULL-HEIGHT WALLS.

J. COORDINATE ROUTING OF DUCTWORK ABOVE THE CEILING WITH EXISTING CONDITIONS. PROVIDE ALL NECESSARY OFFSETS AND TRANSITIONS AS REQUIRED TO ACHIEVE THE REQUIRED ROUTING.

K. CONTRACTOR SHALL INSTALL A NEW EXHAUST FAN FOR THE BATHROOM. ROUTE EXHAUST DUCT TO THE EXTERIOR AS PER CODE AND COORDINATE VENT TERMINATION WITH ARCHITECTURAL FINISHES.

MECHANICAL KEYED NOTES:

1. EXISTING RELOCATED CEILING REGISTER (CR).
2. PROVIDE AND INSTALL NEW CEILING BATHROOM EXHAUST FAN ABOVE CEILING. REFER TO SCHEDULE AND DETAILS. INSTALL AS PER MANUFACTURER'S INSTRUCTIONS.

NATURAL VENTILATION (SECTION 402):

OA COMPLIANCE WITH 2021 VMC/IMC: FIRST FLOOR

- AREA: = 1127 SF
- WINDOW AREA = 272.31 SF
- DOOR AREA = 97.16 SF
- TOTAL OPENABLE AREA = 369.47 SF
- OPENABLE % OF FLOOR AREA = 32.8% WHICH EXCEEDS MINIMUM OF 4% REQUIRED

OA COMPLIANCE WITH 2021 VMC/IMC: SECOND FLOOR(A)

- AREA: = 589 SF
- WINDOW AREA = 76.54 SF
- DOOR AREA = 17.08 SF
- TOTAL OPENABLE AREA = 93.62 SF
- OPENABLE % OF FLOOR AREA = 15.9% WHICH EXCEEDS MINIMUM OF 4% REQUIRED

OA COMPLIANCE WITH 2021 VMC/IMC: SECOND FLOOR(B)

- AREA: = 141 SF
- WINDOW AREA = 8.31 SF
- DOOR AREA = 0 SF
- TOTAL OPENABLE AREA = 8.31 SF
- OPENABLE % OF FLOOR AREA = 5.9% WHICH EXCEEDS MINIMUM OF 4% REQUIRED

OA COMPLIANCE WITH 2021 VMC/IMC: SECOND FLOOR(C)

- AREA: = 138 SF
- WINDOW AREA = 8.31 SF
- DOOR AREA = 0 SF
- TOTAL OPENABLE AREA = 8.31 SF
- OPENABLE % OF FLOOR AREA = 6.02% WHICH EXCEEDS MINIMUM OF 4% REQUIRED

OA COMPLIANCE WITH 2021 VMC/IMC: SECOND FLOOR(D)

- AREA: = 145 SF
- WINDOW AREA = 8.64 SF
- DOOR AREA = 0 SF
- TOTAL OPENABLE AREA = 8.64 SF
- OPENABLE % OF FLOOR AREA = 5.96% WHICH EXCEEDS MINIMUM OF 4% REQUIRED

OA COMPLIANCE WITH 2021 VMC/IMC: SECOND FLOOR(E)

- AREA: = 145 SF
- WINDOW AREA = 8.64 SF
- DOOR AREA = 0 SF
- TOTAL OPENABLE AREA = 8.64 SF
- OPENABLE % OF FLOOR AREA = 5.96% WHICH EXCEEDS MINIMUM OF 4% REQUIRED

EXHAUST FAN SCHEDULE

UNIT	SERVICE	CFM PROVIDE	SP(IWC)	TYPE	FRPM	VOLTAGE	PHASE	HZ	WATTS	REMARKS	ADDITIONAL NOTES
EF-2(N)	BATHROOM 2	75	0.1	CEILING	790	115	1	60	15.6	SP-A70-QD	1, 2, 3

NOTES:
1. PROVIDE FAN WITH SPEED CONTROLLER MOUNTED ON FAN HOUSING & GRAVITY BACK-DRAFT DAMPER.
2. EF SHALL BE ENERGY START.
3. CONTROLLED WITH LIGHT SWITCH.

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PLAN DATE 4/21/2026

PAGE: NEW MECHANICAL PLANS, CALCULATION, SCHEDULE AND DETAIL

M03

PLUMBING SPECIFICATIONS:

GENERAL NOTES:

A. ALL WORK SHALL CONFORM TO THE REQUIREMENTS OF ALL CODES, ORDINANCES AND STANDARDS OF THE LOCAL JURISDICTION. IN CASE OF A CONFLICT BETWEEN DRAWINGS OR SPECIFICATIONS AND THE REQUIREMENTS OF THE LOCAL JURISDICTION, THE MORE STRINGENT REQUIREMENTS SHALL APPLY.

B. ALL WORK SHALL BE GUARANTEED AGAINST DEFECTS, LEAKS, LACK OF PROPER SYSTEM PERFORMANCE OR NON-OPERATION FOR A PERIOD OF ONE YEAR AFTER DATE OF ACCEPTANCE.

C. ALL WORK SHALL BE COORDINATED WITH ALL TRADES, PRIOR TO INSTALLATION AND SHALL CONFORM WITH ALL APPLICABLE BUILDING CODES, FIRE CODES, AND ALL AUTHORITIES HAVING JURISDICTION.

D. IN GENERAL, DRAWINGS FOR THE WORK ARE DIAGRAMMATIC AND SHOW THE LOCATION, TYPE AND SIZE OF PIPING, EQUIPMENT, AND ACCESSORY EQUIPMENT. THE CONTRACTOR SHALL FURNISH ALL ITEMS NECESSARY FOR THE PROPER INSTALLATION AND OPERATION OF THE WORK, WHETHER CALLED FOR OR NOT. THE CONTRACTOR SHALL VERIFY ALL NECESSARY DIMENSIONS BEFORE INSTALLING ANY OF THE WORK AND SHALL CHECK HIS LAYOUTS TO ALLOW CLEARANCE REQUIRED FOR OTHER WORK. THE SCOPE OF WORK CONSISTS GENERALLY OF PROVIDING AND INSTALLING COMPLETE PLUMBING AND GAS SYSTEMS AND FINAL TESTING OF ALL SYSTEMS AND EQUIPMENTS AS REQUIRED, THE CONTRACTOR SHALL MAKE CHANGES WITHOUT ADDITIONAL COSTS.

E. CONTRACTOR SHALL OBTAIN AND PAY FOR ALL PERMITS AND INSPECTIONS.

PRODUCTS:

A. PLUMBING FIXTURES: ALL FIXTURES SHALL BE SELECTED BY OWNER. PROVIDE ALL FIXTURES WITH TRIM, CARRIER SUPPLIES, AND TRAPS AS REQUIRED FOR COMPLETE INSTALLATION.

B. THE EQUIPMENT SPECIFIED ON THE DRAWINGS HAVE BEEN SELECTED AS THE BASIS OF DESIGN. THE USE OF REVIEWED OR SPECIFIED EQUALS SHALL BE COORDINATED BY THE CONTRACTOR FOR SPACE REQUIREMENTS, EQUIPMENT DIMENSIONS, AND PERFORMANCE.

C. ALL EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATION UNLESS SPECIFICALLY DIRECTED OTHERWISE.

MATERIALS:

A. ALL MATERIALS SHALL BE NEW UNLESS OTHERWISE SHOW OR SPECIFIED.

B. ALL MATERIALS INSTALLED IN RETURN PLENUM ARE TO BE PLENUM RATED.

C. PIPING MATERIALS AND FITTING SHALL BE AS FOLLOWS:
- WASTE & VENT (ABOVE & BELOW SLAB): CPVC PIPE, PVC PIPE OR CAST IRON.
- DOMESTIC WATER (BELOW & ABOVE SLAB): CPVC PIPE (APPROVED FOR PLENUM RETURN) OR COPPER TYPE 'L'.

THREADED FITTINGS MAY BE USED AT VALVES, FIXTURES & SIMILAR.

C. ANY PLUMBING FIXTURES WITH A COMMON SHUT-OFF VALVE (I.E. PRE-RINSE, KITCHEN SINK, MOP SINK) ARE TO INCLUDE A CHECK VALVE ON THE HOT & COLD WATER VALVES TO PREVENT INTERCONNECTION OF HOT & COLD WATER LINES.

INSULATION:

A. DOMESTIC WATER PIPING:
1/2" MINIMUM INSULATION FOR DOMESTIC COLD WATER AND 1" MINIMUM INSULATION FOR DOMESTIC HOT WATER. MIN. R3 THERMAL RESISTANCE.

VALVES:

A. DOMESTIC WATER:
ALL VALVES SHALL BE SWEATED BRONZE GATE VALVE WITH SCREW-IN BONNET, RISING STEM MINIMUM RATING OF 125 PSI. TWO PIECES BALL VALVES WITH EXTENDED HANDLE MAY BE USED IN LIEU OF THE GATE VALVES.

HANGERS:

A. SHALL BE ADJUSTABLE CLEVIS HANGERS, PROPERLY SIZED AND SPACED FOR PIPING, INCLUDING INSULATION.

EXECUTION:

A. SOIL, WASTE & STORM AND VENT:
- ALL SANITARY SEWER PIPING 3" AND LARGER SHALL SLOPE AT 1% OR 1/8" PER FOOT, UNLESS NOTED OTHERWISE. ALL SANITARY SEWER PIPING 2" AND SMALLER SHALL SLOPE AT 2% OR 1/4" PER FOOT.
- ALL STORM DRAIN PIPING SHALL SLOPE AT 1% OR 1/8" PER FOOT, UNLESS NOTED OTHERWISE.

B. INSTALL FIXTURES LEVEL, PLUMB AND PARALLEL TO WALLS. ALL EXPOSED METAL PARTS SHALL BE CHROME PLATED AND SHOW NO TOOL MARKS. GROUT BETWEEN WALL HUNG FIXTURES AND WALL. PROVIDE ACCESS PANELS TO ALL CONCEALED SUPPLY STOPS AND TRAP.

C. FIXTURES DESIGNATED FOR USE B PHYSICALLY HANDICAPPED PEOPLE SHALL BE IN ACCORDANCE WITH ANSI A 117.1.

D. INSTALL DIELECTRIC CONNECTION BETWEEN DISSIMILAR METALS, PIPE TO PIPE, PIPE TO EQUIPMENT, PIPE TO SUPPORT.

E. FURNISH AND INSTALL JOSAM 75000 SERIES SHOCK ARRESTERS AT THE ENDS OF ALL HOT AND COLD WATER BRANCHES TO FIXTURES. SIZES SHALL BE IN ACCORDANCE WITH PLUMBING AND DRAINAGE INSTITUTE STANDARD P.D.1

F. ALL WALL AND FLOOR CLEAN OUTS, SERVING 4" AND SMALLER, SHALL BE THE SAME SIZE AS THE PIPING SYSTEM THEY CLEAN OUTS SERVING 5" AND 6" PIPE SYSTEMS SHALL BE 4". CLEAN-OUTS SERVING 8" PIPING SYSTEMS SHALL BE 6". CLEAN OUTS SERVING, 10" AND LARGER, SHALL BE 8".

G. ALL ROOF WORK SHALL BE PER THE ROOFING MANUFACTURE'S INSTALLATION INSTRUCTIONS TO MAINTAIN THE EXISTING ROOF WARRANTY.

H. PROVIDE TEMPERING VALVES FOR ALL LAVATORIES AND HAND WASHING SINKS. TEMPERING VALVES SHALL CONFORM WITH ASSE 1070 (WATTS MODEL LFMMVM1-US OR EQUIVALENT).

I. PROVIDE WATER HAMMER ARRESTERS AT ALL QUICK CLOSING VALVES WITH ISOLATION VALVE AND WITH ACCESS OR ACCESS PANEL.

J. ALL THREADED HOSE CONNECTIONS TO DOMESTIC WATER SYSTEM SHALL HAVE AN APPROVED VACUUM BREAKER. IE: HOSE BIBS, WALL HYDRANTS, SYSTEM DRAINS, EQUIPMENT DRAINS, ETC.

K. PROVIDE ACCESS PANELS IN HARD CEILINGS AND WALLS FOR ACCESS TO ALL PLUMBING EQUIPMENT, ISOLATION VALVES, ETC. THIS SHALL INCLUDE ALL NEW AND EXISTING PLUMBING ITEMS REQUIRING ACCESS.

L. PROVIDE REDLINE MARKUPS OF ANY FIELD CHANGES OR MODIFICATIONS ON THE CONSTRUCTION DOCUMENTS. REDLINE DRAWINGS SHALL BE REQUIRED WHETHER COORDINATION DRAWINGS ARE REQUIRED OR NOT.

M. THE LOCATION AND CONDITION OF THE EXISTING PROPERTY AND PLUMBING SYSTEMS WERE TAKEN FROM PREVIOUS CONSTRUCTION DRAWINGS, OBSERVED FIELD CONDITIONS, AND ASSUMED FIELD CONDITIONS. CERTAIN ASSUMPTIONS MAY BE MADE REGARDING EXISTING CONDITIONS BECAUSE THE ASSUMPTION MAY NOT BE VERIFIED WITHOUT DESTROYING THE EXISTING SPACE. CONTRACTOR SHALL VERIFY EXISTING SYSTEMS PRIOR TO SUBMITTING FINAL BIDS, FABRICATION, OR SUBMITTALS.

N. ALL PLUMBING FIXTURES AND PLUMBING SYSTEM EQUIPMENT SHALL BE PROVIDED COMPLETE WITH ALL ACCESSORIES, HANGERS, VALVES, STOPS, TAILPIECES, TRAPS, FAUCETS, STRAINERS, ETC REGARDLESS OF PRESENCE ON PLANS. SEE FIXTURE SCHEDULE.

O. ALL QUESTIONS MUST BE SUBMITTED IN RFI FORMAT TO THE ARCHITECT AND MUST BE ADDRESSED BY THE APPROPRIATE DESIGNER OF RECORD PRIOR TO BECOMING A PROPOSED CHANGE ORDER.

P. ALL PIPING IN FINISHED AREAS SHALL BE RUN CONCEALED. EXPOSED PIPING, WHERE NECESSARY, SHALL RUN AS HIGH AS POSSIBLE AND TIGHT TO THE WALLS.

Q. EACH PLUMBING VENT SHALL TERMINATE NOT LESS THAN TEN (10) FEET FROM AIR INTAKE OR VENT SHAFT, OR AT LEAST THREE (3) FEET ABOVE ANY WINDOW AND DOOR.

R. TRAP PRIMERS: PROVIDE AND INSTALL TRAP PRIMERS FOR ALL FLOOR DRAINS. PROVIDE AND INSTALL TRAP PRIMERS FOR ALL FLOOR SINKS NOT RECEIVING CONTINUOUS DISCHARGE OF WASTE WATER. PROVIDE AND INSTALL TRAP PRIMERS IN ACCESSIBLE LOCATIONS WITH ACCESS PANELS IF REQUIRED.

S. WORKMANSHIP: THE WORK SHALL BE ACCOMPLISHED IN A THOROUGH & WORKMANLIKE MANNER SATISFACTORY TO AND MEETING THE APPROVAL OF THE ENGINEER AND ARCHITECT.

T. GUARANTEE: CONTRACTOR SHALL UNCONDITIONALLY GUARANTEE ALL LABOR & MATERIAL ON ALL WORK AGAINST DEFECTS IN WORKMANSHIP & MATERIALS FOR A PERIOD OF ONE YEAR.

U. CUTTING AND PATCHING: ALL CUTTING & PATCHING OF THE EXISTING STRUCTURE SHALL BE PROVIDED. PROVIDE ALL NECESSARY REQUIREMENTS TO THE PROJECT MANAGER. PROTECTION AGAINST DUST AND DEBRIS SHALL BE TO THE SATISFACTION OF THE PROJECT MANAGER.

V. FIRE SPRINKLER SYSTEM TO BE DESIGNED BY FIRE SPRINKLER CONTRACTOR. ALL EQUIPMENT, COMPONENTS & PIPE RUNS SHOWN FOR REFERENCE ONLY.

W. ALL HOSE BIBS SHALL BE EQUIPPED WITH AN APPROVED NON REMOVABLE VACUUM BREAKER.

X. RUN A FULL SIZE DRAIN LINE FROM WATER HEATERS TEMPERATURE AND PRESSURE RELIEF VALVE TO NEAREST FLOOR SINK OR TO AN APPROVED LOCATION.

Y. PROVIDE ACCESS DOORS TO ALL CONCEALED VALVES, STRAINERS, TRAP PRIMERS, ETC. PROVIDE STAINLESS STEEL ACCESS PANELS & FRAMES FOR ALL TILED AREAS.

COORDINATION:

A. PLUMBING CONTRACTOR TO COORDINATE W/ GENERAL CONTRACTOR AND ARCH PLANS TO ENSURE NECESSARY BACKING/SUPPORTS ARE INSTALLED TO ALLOW INSTALLATION OF PLUMBING FIXTURES.

B. PIPING SHOULD BE COORDINATED WITH ALL STRUCTURAL FOOTINGS AND FOUNDATIONS. PIPE SHOULD BE OFFSET TO AVOID CONTACT WITH FOOTINGS AND FOUNDATION WALLS. IF PIPING MUST RUN UNDERNEATH A FOOTING OR THROUGH A FOUNDATION WALL, THE PIPE MUST BE INSTALLED WITH A RELIEVING ARCH OR IN A PIPE SLEEVE.

C. THE LOCATION OF EXISTING UTILITIES IS SHOWN IN AN APPROXIMATE WAY ONLY.

D. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. THE CONTRACTOR SHALL PAY FOR AND REPAIR ALL DAMAGES CAUSED BY FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES UNLESS OTHERWISE INDICATED.

PLUMBING NOTES:

A. CONTRACTOR SHALL VISIT SITE PRIOR TO SUBMISSION OF BID TO BECOME FAMILIAR WITH EXISTING CONDITIONS.

B. ALL HOT AND COLD WATER SUPPLY PIPING SHALL BE INSULATED.

C. PROVIDE AND INSTALL CLEAN-OUTS IN DRAINAGE PIPING AT EACH CHANGE IN DIRECTION OF PIPING GREATER THAN 45 DEGREES, EVERY 50 FEET, AND AS SHOWN.

D. EXPOSED UTILITY SERVICE LINES AND PIPES SHALL BE INSTALLED SO THAT THEY DO NOT OBSTRUCT OR PREVENT CLEANING OF THE FLOORS, WALLS, OR CEILINGS. EXPOSED HORIZONTAL UTILITY SERVICE LINES AND PIPES SHALL NOT BE INSTALLED ON THE FLOOR.

E. CONTRACTOR TO VERIFY SIZE AND LOCATION OF SANITARY, AND COLD/HOT WATER PIPES PRIOR TO STARTING WORK.

F. EXISTING UTILITIES AND EQUIPMENT NOT SHOWN OR NOT SHOWN TO BE REPLACED SHALL REMAIN IN SERVICE DURING CONSTRUCTION.

G. CONTRACTOR SHALL REMOVE AND DISPOSE ALL PLUMBING MATERIAL, FIXTURES AND EQUIPMENT FROM TENANT SPACE AS SHOWN ON DRAWING. COORDINATE DEMOLITION WITH NEW CONSTRUCTION PLAN.

H. CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATION AND INSTALLING SLEEVES, INSERTS AND SUPPORTS AS REQUIRED FOR THIS SCOPE OF WORK AND/OR CORE DRILL REQUIREMENTS. COORDINATE WITH GENERAL CONTRACTOR AND STRUCTURAL ENGINEER AS REQUIRED.

I. CONTRACTOR SHALL VERIFY THE EXACT LOCATION AND INVERT ELEVATIONS OF ALL EXISTING UTILITIES AT THE SITE PRIOR THE INSTALLATION OF ANY PIPING SYSTEMS.

VIRGINIA CODES:

ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE REQUIREMENTS OF THE APPLICABLE VIRGINIA UNIFORM STATEWIDE BUILDING CODE (VUSBC) AND ALL OTHER CODES IN FORCE BY LOCAL AUTHORITIES HAVING JURISDICTION. ALL CODES SHALL INCLUDE THE CURRENT VIRGINIA AMENDMENTS.

-2021 VIRGINIA CONSTRUCTION CODE (VBC)
-2021 VIRGINIA STATEWIDE FIRE PREVENTION CODE (SFPC)
-2020 NATIONAL ELECTRICAL CODE (NEC)
-2021 VIRGINIA MECHANICAL CODE (VMC)
-2021 VIRGINIA ENERGY CONSERVATION CODE (VECC)
-2021 VIRGINIA PLUMBING CODE (VPC)
-2021 VIRGINIA FUEL GAS CODE (VFGC)
-2021 VIRGINIA MAINTENANCE CODE (VMCt)
-2021 VIRGINIA EXISTING BUILDING CODE (VEBC)
ICC/ANSI A117.1–2017, ACCESSIBLE AND USABLE BUILDINGS AND FACILITIES.

PLUMBING FIXTURE UNIT SCHEDULE:

MARK	FIXTURE	DFU PER/FIX	FIXTURES		DIFFERENCE DFU
			DEMO	NEW	
HS	HAND SINK	1	4	0	-4
KS	KITCHEN SINK	2	1	0	-2
MS	MOP SINK	2	1	1	0
–	HAND WASH STATION	1	10	0	-10
				TOTAL DFU =	-16

SCOPE OF WORK:

- REMOVE EXISTING PLUMBING FIXTURES AS SHOWN. THE REST TO REMAIN.

SHEET INDEX:

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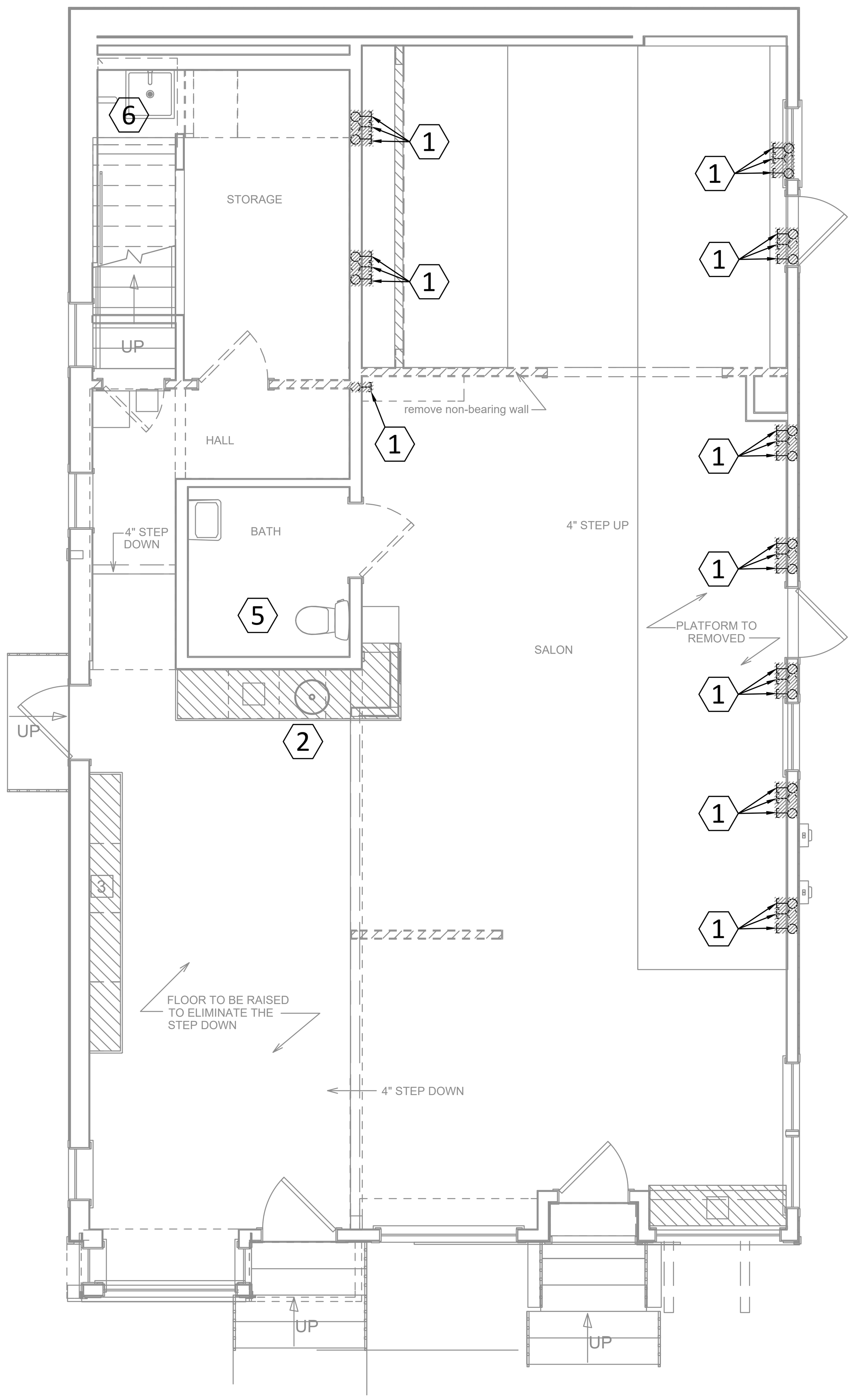
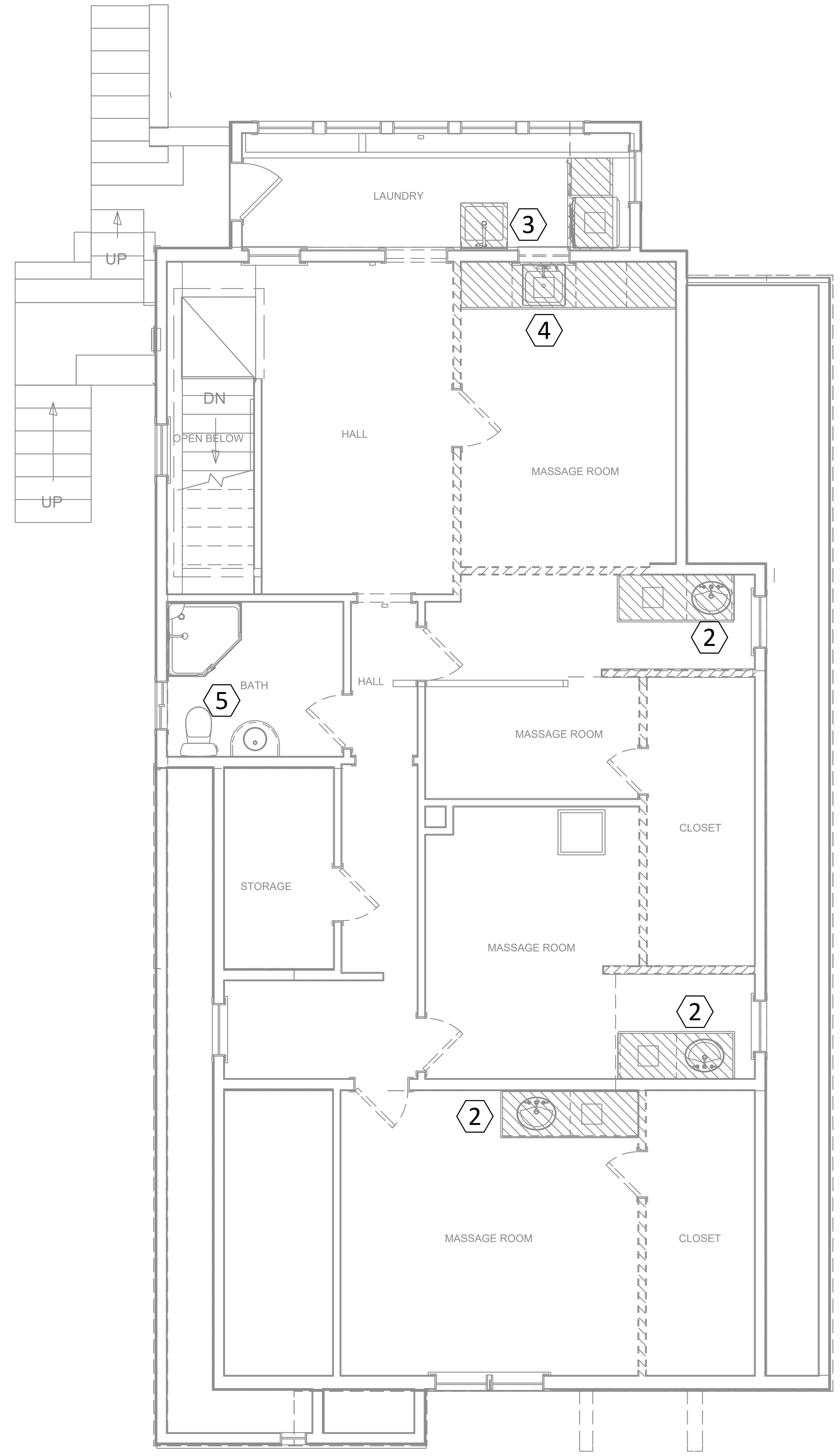


1 FIRST FLOOR- PLUMBING DEMO PLAN
SCALE: 1/4"=1'-0"



2 SECOND FLOOR - PLUMBING DEMO PLAN
SCALE: 1/4"=1'-0"

PLUMBING NUMBERED NOTES:

1. CONTRACTOR SHALL REMOVE EXISTING DRAIN, HOT WATER, COLD WATER AND CAP ALL ASSOCIATED PIPING.
2. REMOVE EXISTING HAND SINK.
3. REMOVE EXISTING MOP SINK.
4. REMOVE EXISTING KITCHEN SINK.
5. EXISTING BATHROOM TO REMAIN.
6. EXISTING MOP SINK TO REMAIN.

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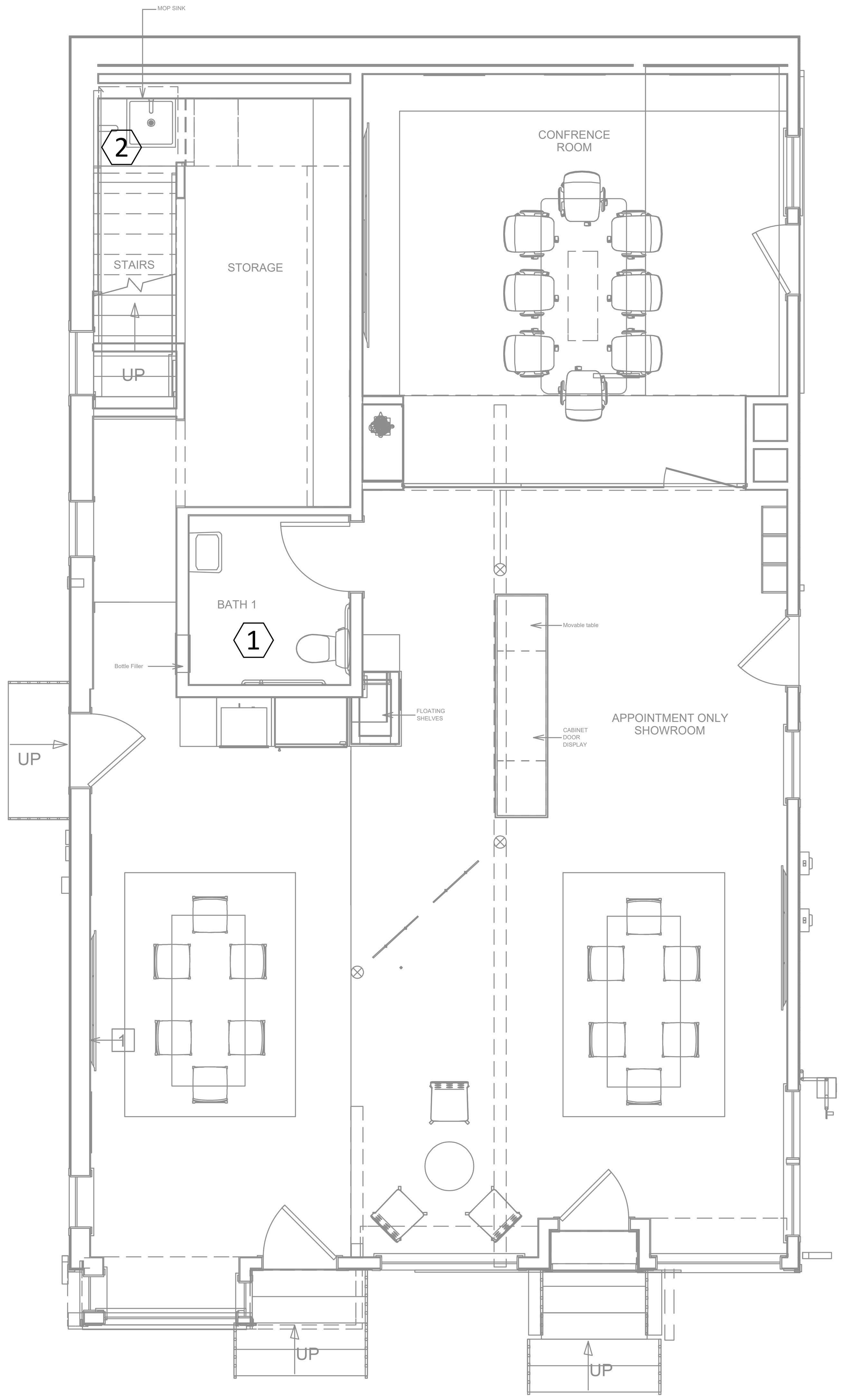
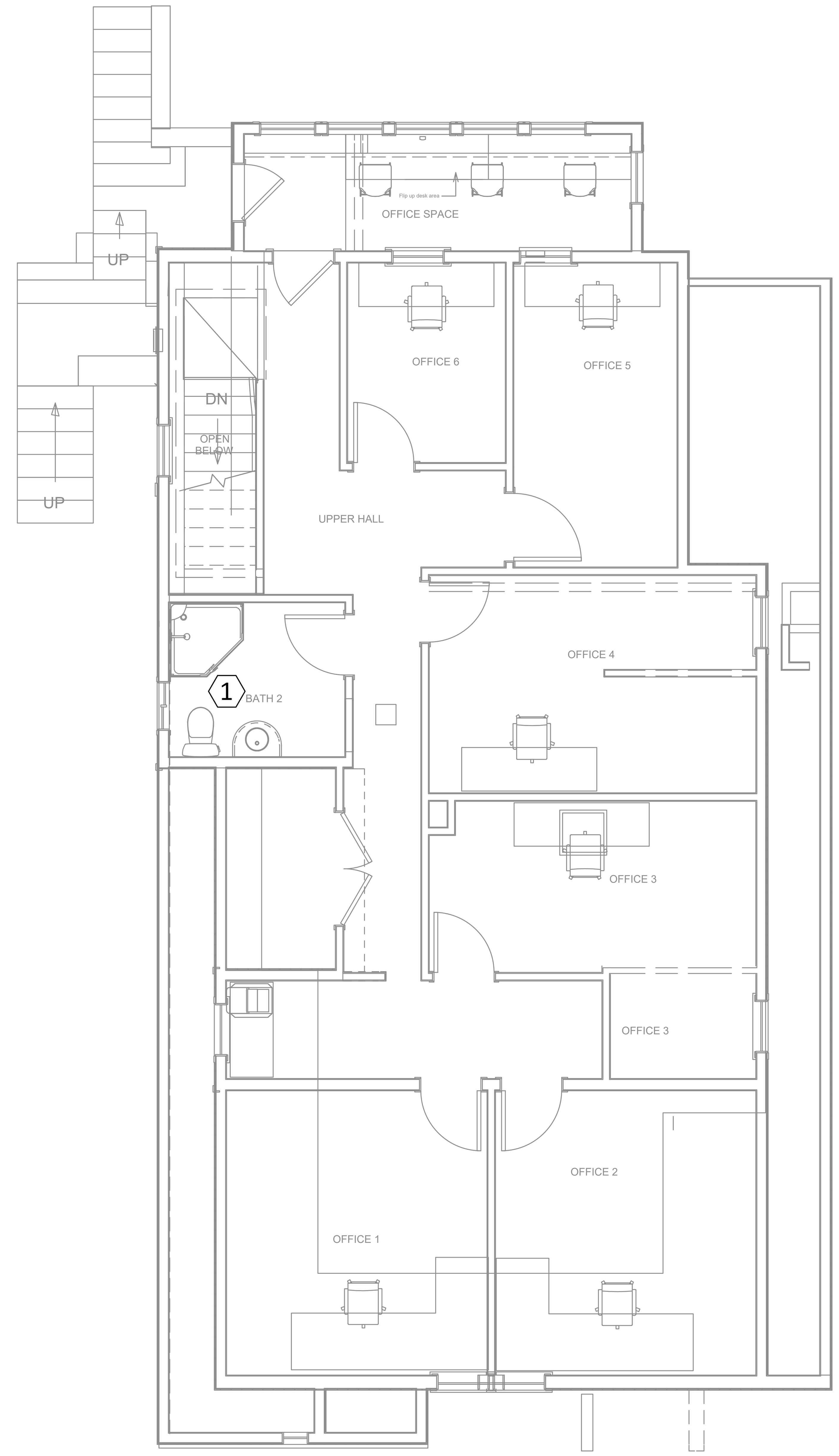
PLUMBING DEMO PLANS

PLUMBING NUMBERED NOTE:
(1) EXISTING BATHROOM TO REMAIN.
(2) EXISTING MOP SINK TO REMAIN.



1 FIRST FLOOR- PLUMBING PROPOSED PLAN
SCALE: 1/4"=1'-0"



2 SECOND FLOOR - PLUMBING PROPOSED PLAN
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