

YARLEY BOROUGH BUILDING CODES
PA UNIFORM CONSTRUCTION CODE (PA UCC 34 PA CODE CHAPTERS 401-405)
2018 INTERNATIONAL BUILDING CODE (IBC)
2018 INTERNATIONAL ENERGY CONSERVATION CODE (IECC)
2018 INTERNATIONAL FIRE CODE (IFC)
(ADOPTED ONLY TO EXTENT REFERENCED IN CHAPTER 35 OF THE 2015 IBC)
2018 INTERNATIONAL FUEL GAS CODE
2018 INTERNATIONAL MECHANICAL CODE (IMC)
2018 INTERNATIONAL PLUMBING CODE (IPC)
NFPA 70-2014 NEC (NATIONAL ELECTRIC CODE)
2018 INTERNATIONAL BUILDING CODE (IBC)
(CHAPTER 11 ACCESSIBILITY PROVISIONS ONLY)
ICC/ANSI A117.1-2017 (BARRIER FREE CODE)

PROJECT DESCRIPTION:
LEVEL 2 - TENANT IMPROVEMENT
SCOPE OF WORK AREA: ±2,600 S.F.
OCCUPANT LOAD: 13 PERSONS (1 PER 200 GROSS S.F.)
USE: 'B' - BUSINESS
EXISTING CONSTRUCTION TYPE: EXISTING CONSTRUCTION TO REMAIN
HEIGHT: EXISTING 1-STORY BUILDING
FIRE PROTECTION: NON-SPRINKLERED

CODE SUMMARY

DRAWING ENUMERATION

ARCHITECTURAL

RHJ ASSOCIATES, P.C.

CONTACT: MICHAEL HENRETTY (302.528.4406)

- CS - COVER SHEET
- A.01 - EGRESS & OCCUPANCY PLAN / ADA SIGNAGE DIAGRAMS
- AD.1 - DEMOLITION FLOOR PLAN
- AD.2 - DEMOLITION REFLECTED CEILING PLAN
- A.1 - FLOOR PLAN
- A.2 - REFLECTED CEILING PLAN
- A.3 - DOOR SCHEDULE / MILLWORK ELEVATION / MILLWORK SECTIONS
- A.4 - TOILET ROOM ELEVATIONS / NOTES
- A.5 - FINISH EXTENTS PLAN / FINISH LEGEND

MECHANICAL, PLUMBING, ELECTRICAL

MARTARANO ENGINEERING INC.

CONTACT: MATTHEW PAGE (484.706.9770 X215)

- M.1 - MECHANICAL DEMOLITION PLAN / MECHANICAL NOTES & LEGEND
- M.2 - MECHANICAL NEW WORK PLAN / SCHEDULES / DETAILS
- M.3 - MECHANICAL SPECIFICATIONS
- P.1 - PLUMBING DEMOLITION PLAN / PLUMBING NOTES & LEGEND
- P.2 - PLUMBING NEW WORK PLANS / DIAGRAMS / NOTES
- P.3 - PLUMBING SCHEDULES
- P.4 - PLUMBING SPECIFICATIONS
- E.0 - ELECTRICAL NOTES / LEGEND
- E.1 - ELECTRICAL DEMOLITION PLAN / ELECTRICAL NOTES & LEGENDS
- E.2 - ELECTRICAL NEW WORK PLAN / DIAGRAMS / NOTES
- E.3 - ELECTRICAL LIGHTING FIXTURE SCHEDULE / PANEL SCHEDULE

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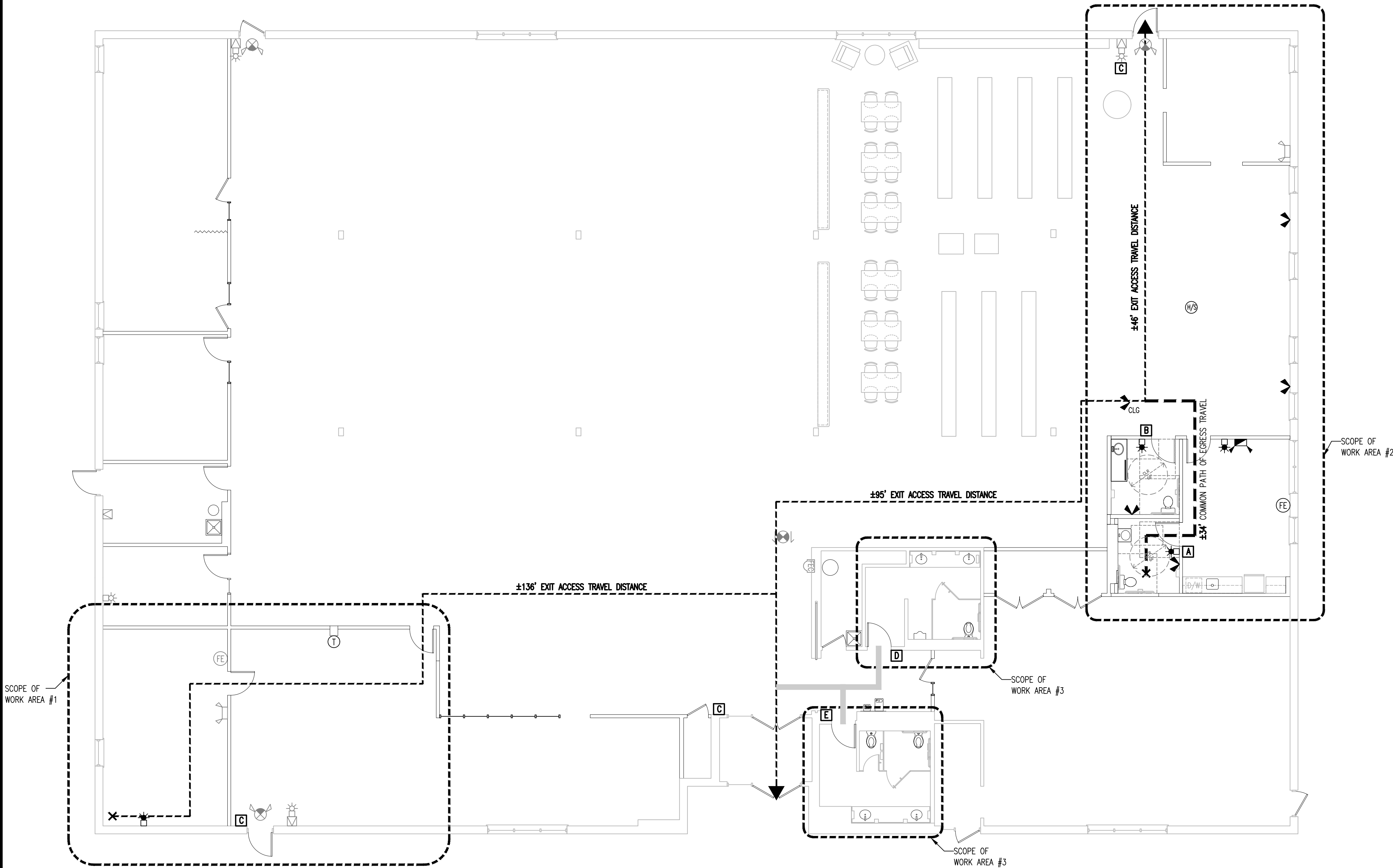
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CS
2024-0583

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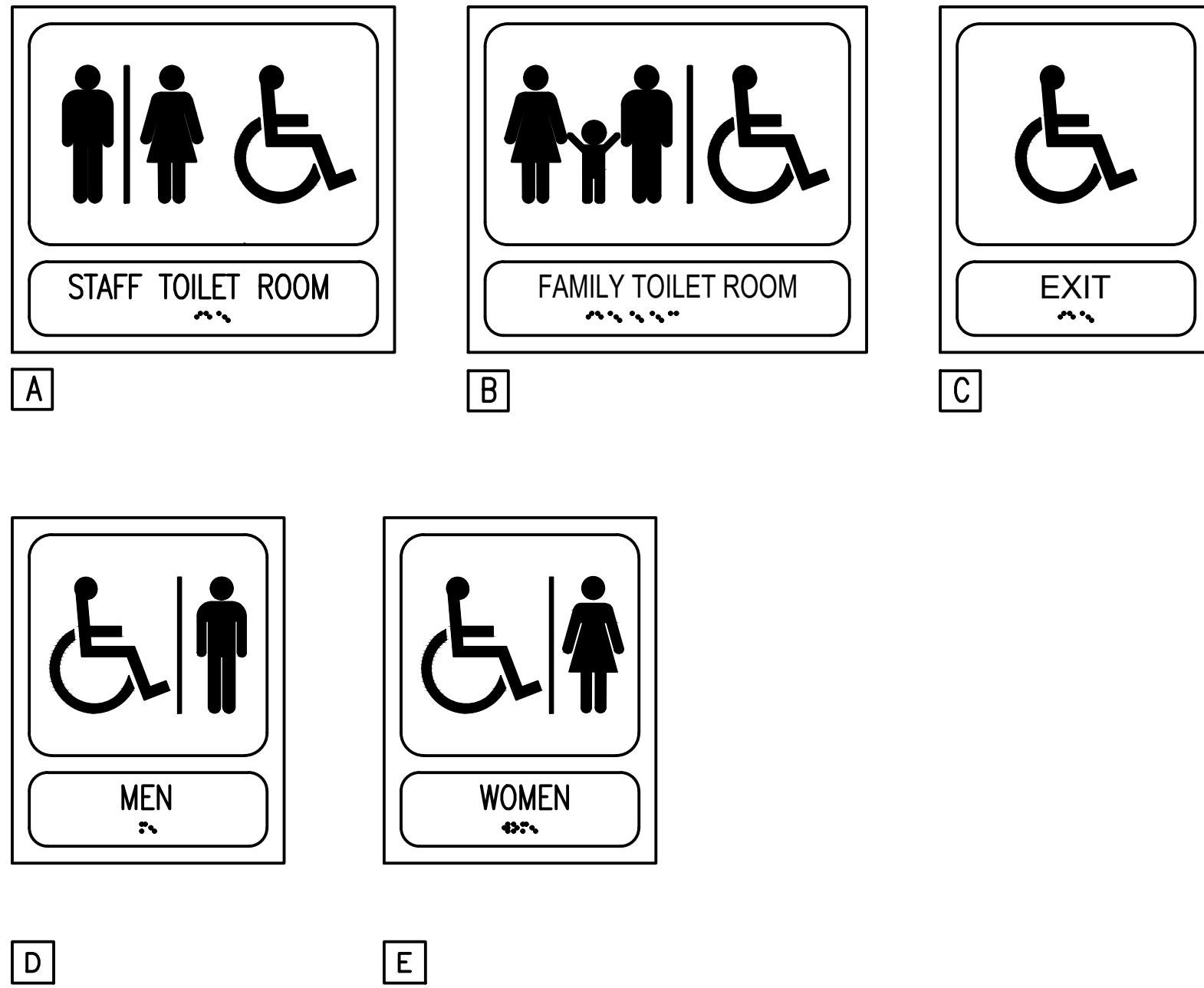
- EGRESS & OCCUPANCY LEGEND:**
- EXISTING EXIT SIGN. ARROW DENOTES DIRECTION.
 - EXISTING EXIT SIGN W/ BATTERY PACK W/ (2) EMERGENCY HEADS.
 - EXISTING BATTERY PACK W/ (2) EMERGENCY HEADS.
 - NEW BATTERY PACK W/ (2) EMERGENCY HEADS.
 - NEW DUAL REMOTE EMERGENCY HEADS.
 - EXISTING HORN/STROBE.
 - NEW HORN/STROBE. CONNECT BACK TO EXISTING BUILDING FIRE ALARM SPRINKLER SYSTEM FOR AUTOMATIC NOTIFICATION UPON SPRINKLER WATER FLOW AS REQUIRED.
 - NEW CEILING MOUNTED HORN/STROBE. CONNECT BACK TO EXISTING BUILDING FIRE ALARM SPRINKLER SYSTEM FOR AUTOMATIC NOTIFICATION UPON SPRINKLER WATER FLOW AS REQUIRED.
 - EXISTING WALL MOUNTED FIRE EXTINGUISHER CABINET.
 - EXISTING WALL MOUNTED FIRE EXTINGUISHER.
 - EXISTING FIRE PULL.
 - INDICATES COMMON PATH OF EGRESS TRAVEL (100' MAX ALLOWED)
 - INDICATES EGRESS ROUTE (300' MAX ALLOWED)
 - INDICATES ACCESSIBLE ROUTE.

- NEW ADA SIGNAGE LEGEND:**
- NEW ADA SIGNAGE - SEE ADA SIGNAGE DIAGRAM



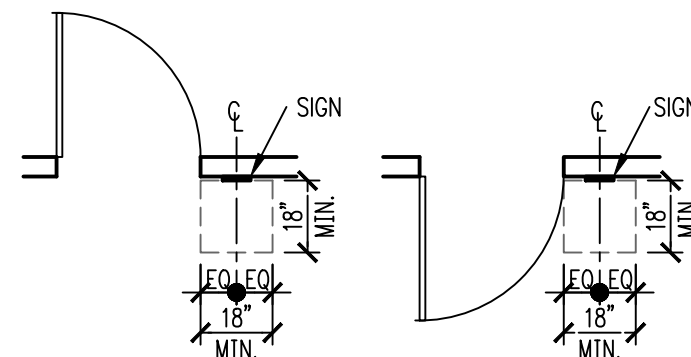
1) EGRESS AND OCCUPANCY PLAN

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



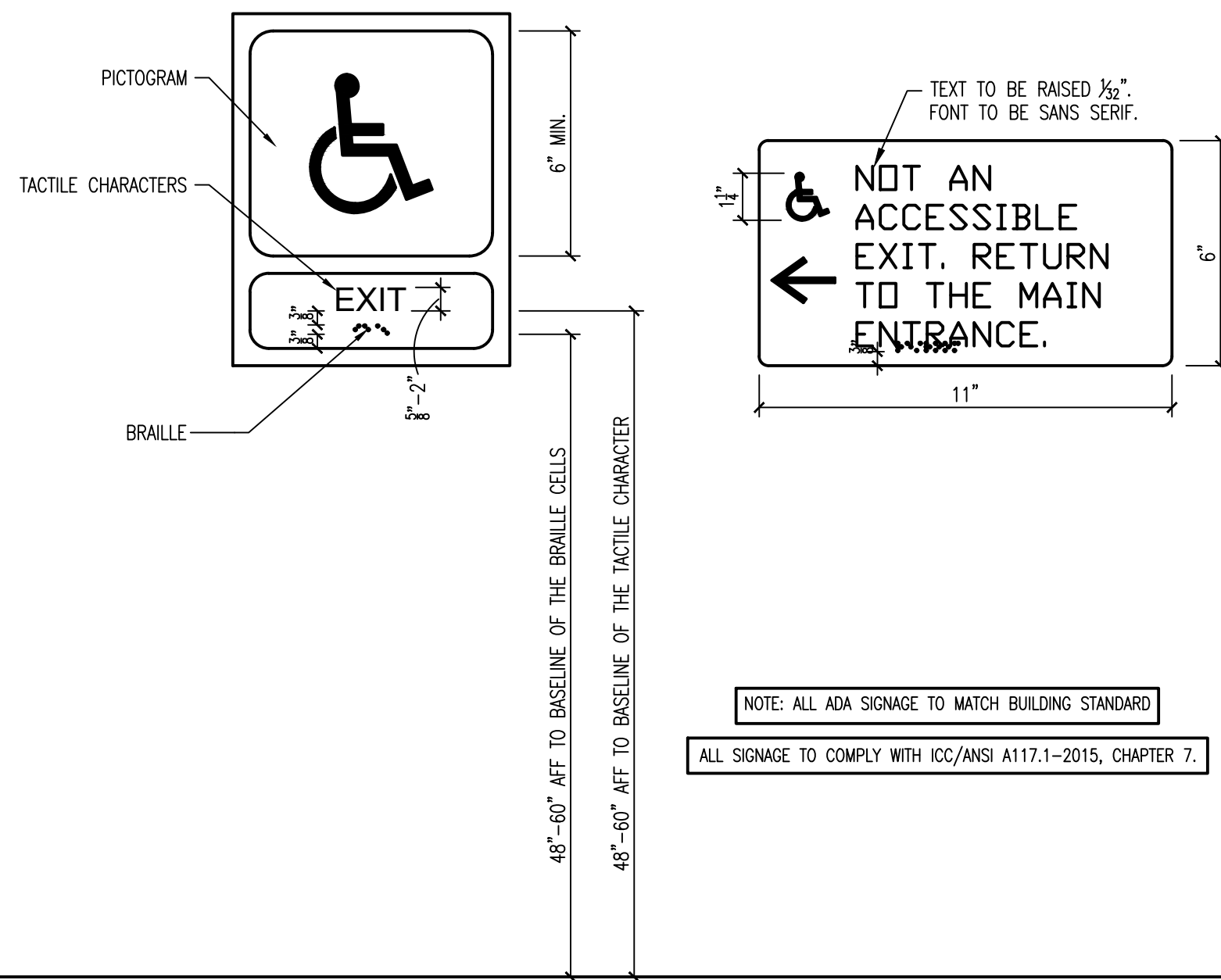
4) INTERIOR TACTILE SIGN DIAGRAMS

SCALE: 3"=1'-0"



3) INTERIOR TACTILE SIGN DIAGRAMS-PLAN

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



2) INTERIOR TACTILE SIGN DETAILS

SCALE: 3"=1'-0"

PROPOSED IMPROVEMENTS FOR:
BUCKS COUNTY LIBRARY
YARDLEY BRANCH
1080 EDGEWOOD RD
LOWER MAKEFIELD, BUCKS COUNTY, PENNSYLVANIA

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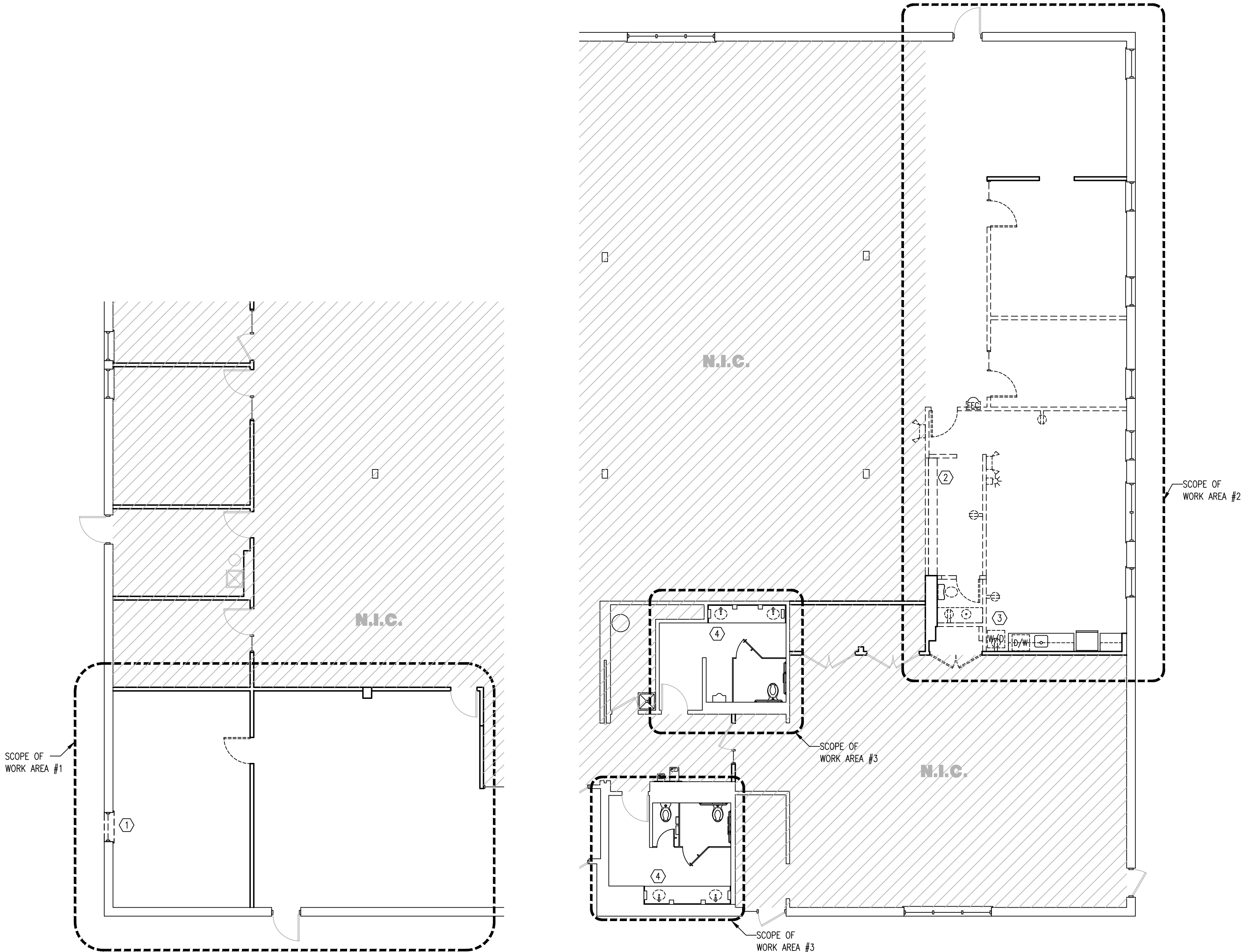
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- DEMOLITION NOTES:**
1. REMOVED EQUIPMENT SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE PROMPTLY REMOVED FROM THE SITE U.N.O. ALL DEMOLITION DEBRIS IS TO BE REMOVED FROM THE SITE ON A DAILY BASIS. CONTRACTOR TO COORDINATE WITH BUILDING MANAGEMENT FOR DUMPSTER LOCATION.
 2. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO TAKE ALL NECESSARY PRECAUTIONS TO ENSURE THE SAFETY OF ALL EXISTING ELEMENTS DURING ALL PHASES OF WORK. FOLLOW ALL APPLICABLE FEDERAL, OSHA, STATE AND LOCAL REGULATIONS.
 3. THE GENERAL CONTRACTOR IS TO PROVIDE TEMPORARY TOILET FACILITIES AND IS TO COORDINATE LOCATION WITH BUILDING MANAGEMENT. PROVIDE TEMPORARY LIGHTING AS NEEDED.
 4. REMOVE EXISTING COUNTERTOP, FAUCETS AND SUPPORTING CASEWORK. PLUMBING DRAINS AND LINES ARE TO BE CAPPED FOR REUSE IN SAME LOCATION.
 5. REMOVE ALL FLOOR FINISHES, WALL BASE, CEILING GRID, ACT, LIGHTING, & HVAC DEVICES AS INDICATED BY DEMO DRAWINGS.
 6. SAW-CUT SLAB AS REQUIRED TO EXTEND SANITARY PIPING TO NEW TOILET ROOMS. PATCH TRENCH WITH NEW CONCRETE TO BE LEVEL AND ALIGN WITH ADJACENT SLAB HEIGHT.
 7. ALL EXISTING SURFACES DAMAGED AS A RESULT OF DEMOLITION SHALL BE PATCHED AND REPAIRED TO ACHIEVE A SMOOTH SURFACE FOR FINISH INSTALLATION.
 8. REMOVE ANY ABANDONED WIRING & CONDUIT AS A RESULT OF DEMOLITION.
 9. REMOVE ANY ABANDONED DUCT WORK OR FLEX DUCTS AS A RESULT OF DEMOLITION.
 10. DEMO AND REMOVE ANY ABANDONED TOMBSTONES AND FLOOR-MOUNTED CONNECTIONS THAT CANNOT BE REUSED. FILL, PATCH AND REPAIR FLOORING IN ACCORDANCE WITH STATE AND LOCAL REGULATIONS, AND WITH BUILDING STANDARD REQUIREMENTS.
 11. CONTRACTOR TO PROVIDE FIRE EXTINGUISHER THROUGHOUT DURATION OF DEMOLITION AND CONSTRUCTION.

LEGEND:

	EXISTING WALL TO REMAIN.
	EXISTING WALL OR CONSTRUCTION TO BE REMOVED.
	EXISTING DOOR, FRAME, AND HARDWARE TO REMAIN.
	EXISTING DOOR, FRAME, AND HARDWARE TO BE REMOVED. SEE DEMOLITION NOTES.
	EXISTING FIRE EXTINGUISHER CABINET TO BE REMOVED.
	EXISTING EMERGENCY BATTERY PACK TO BE REMOVED AND SAVED FOR RELOCATION. SEE ELECTRICAL DRAWINGS.
	EXISTING POWER TO BE REMOVED. SEE ELECTRICAL DRAWINGS.
	EXISTING HORN/STROBE TO BE REMOVED AND SAVED FOR RELOCATION. SEE ELECTRICAL DRAWINGS.

KEY NOTES - DEMOLITION PLAN:

①	REMOVE EXISTING WINDOW FRAME AND GLAZING.
②	REMOVE EXISTING LOCKERS & SOFFIT ABOVE. SAVE LOCKERS FOR RE-USE.
③	REMOVE EXISTING WASHER AND DRYER. CAP ALL PLUMBING CONNECTING AS REQUIRED BY NEW LAYOUT.
④	REMOVE EXISTING SINKS. CAP ALL PLUMBING CONNECTING AS REQUIRED BY NEW LAYOUT.

1 DEMOLITION FLOOR PLAN

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

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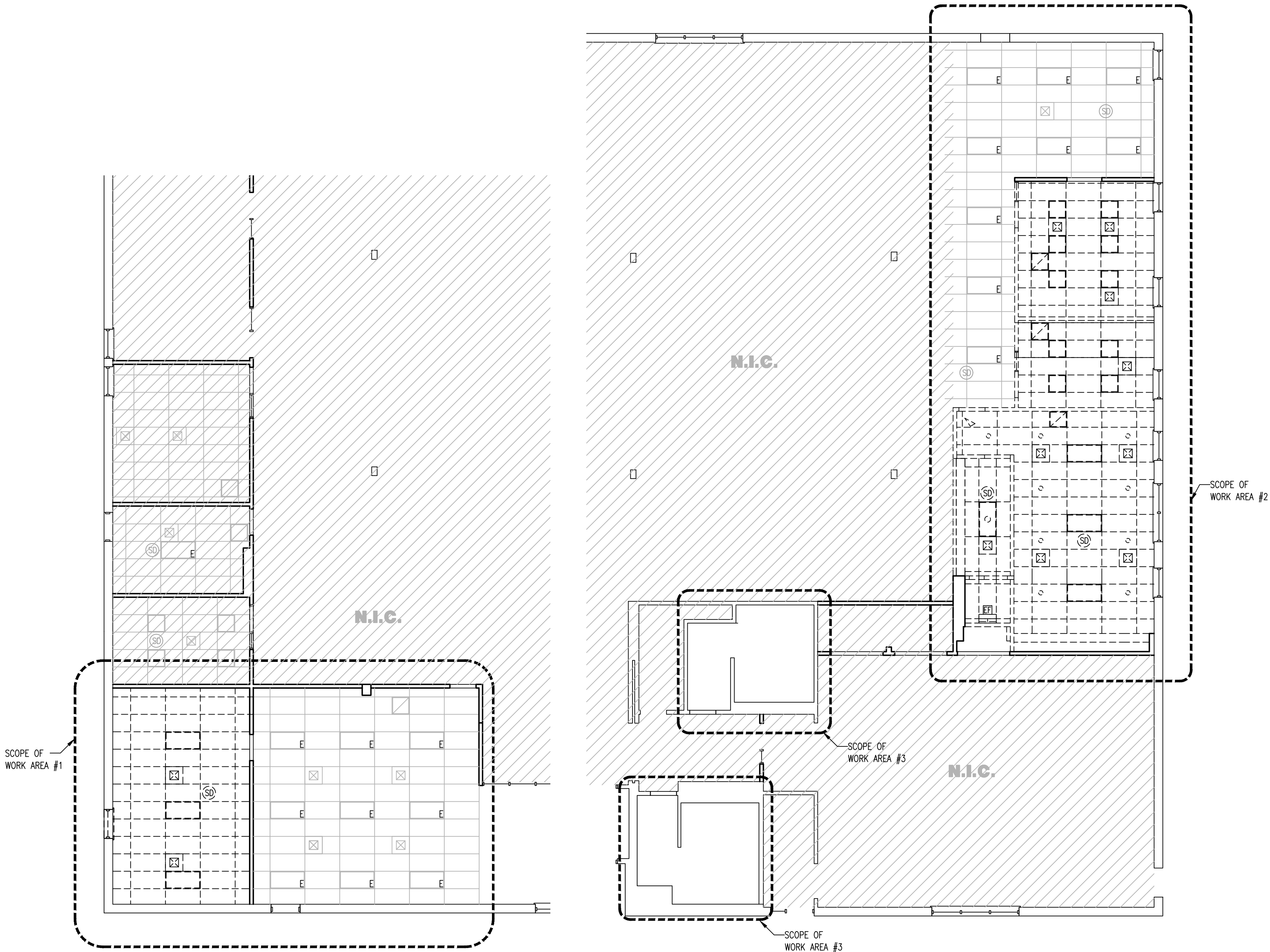
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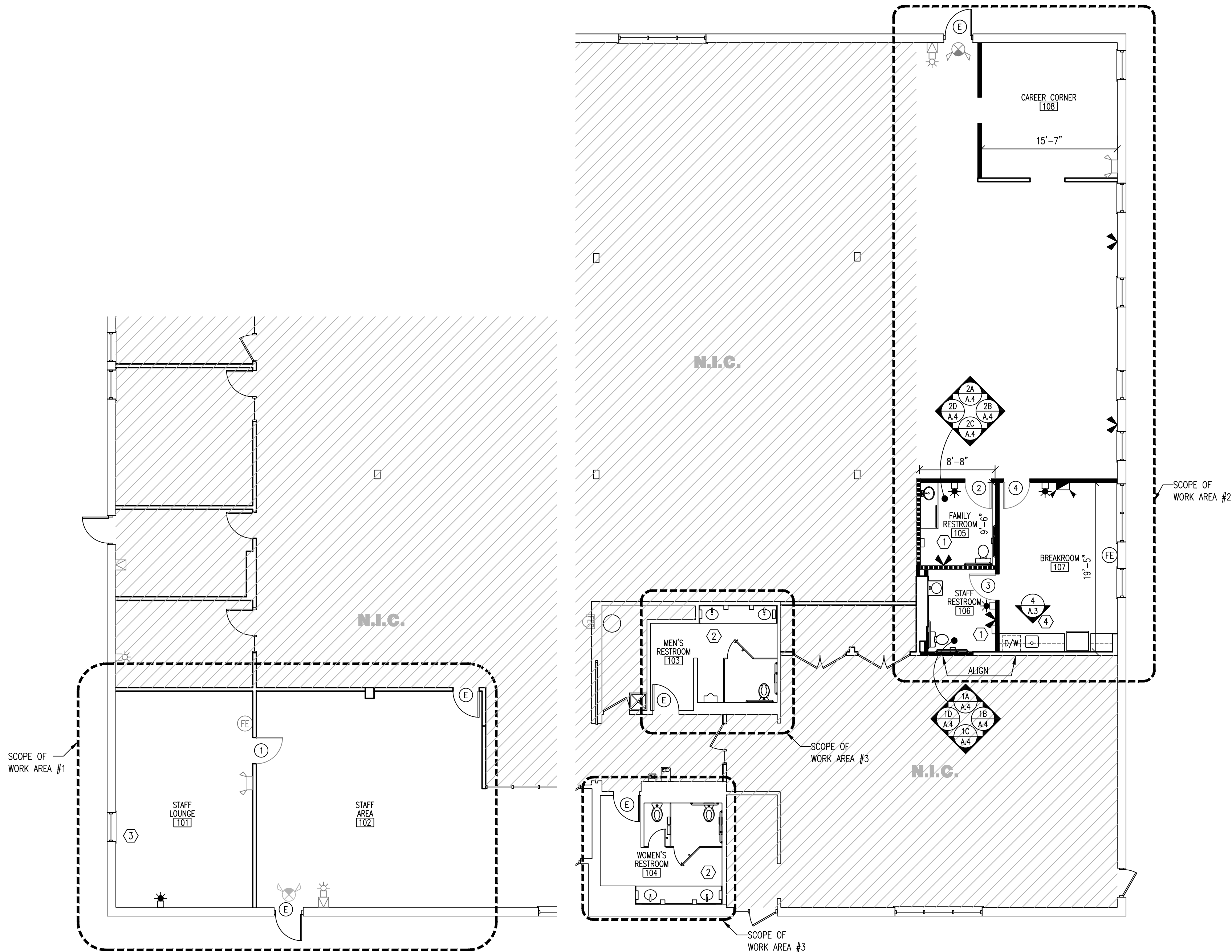
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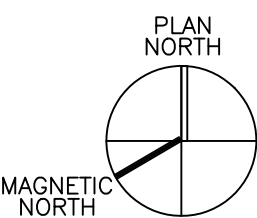


- LEGEND:**
- EXISTING CEILING GRID TO REMAIN. REMOVE EXISTING CEILING TILES.
 - EXISTING CEILING GRID TO BE DEMOLISHED. REMOVE EXISTING CEILING TILES.
 - EXISTING FLUORESCENT LIGHT FIXTURES TO REMAIN. SEE ELECTRICAL DRAWINGS.
 - EXISTING 2X4 LED LIGHT FIXTURE TO BE REMOVED. SAVE FOR RELOCATION. SEE ELECTRICAL DRAWINGS.
 - EXISTING 2X2 LED LIGHT FIXTURE TO BE REMOVED. SAVE FOR RELOCATION. SEE ELECTRICAL DRAWINGS.
 - EXISTING HI-HAT LIGHT FIXTURE TO BE REMOVED. SEE ELECTRICAL DRAWINGS.
 - EXISTING WALL MOUNTED LIGHT FIXTURE TO BE REMOVED. SEE ELECTRICAL DRAWINGS.
 - EXISTING HVAC 2X2 SUPPLY DIFFUSER TO REMAIN. SEE MECHANICAL DRAWINGS.
 - EXISTING HVAC RETURN GRILLE TO REMAIN. SEE MECHANICAL DRAWINGS.
 - EXISTING HVAC 2X2 SUPPLY DIFFUSER TO BE REMOVED & SAVED FOR RELOCATION. SEE MECHANICAL DRAWINGS.
 - EXISTING HVAC RETURN GRILLE TO BE REMOVED. SEE MECHANICAL DRAWINGS.
 - EXISTING EXHAUST FAN TO BE REMOVED. SEE MECHANICAL DRAWINGS.
 - EXISTING EMERGENCY HEAD TO BE REMOVED. SEE ELECTRICAL DRAWINGS.
 - EXISTING SMOKE DETECTOR TO BE REMOVED. SEE ELECTRICAL DRAWINGS.

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1 FLOOR PLAN



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

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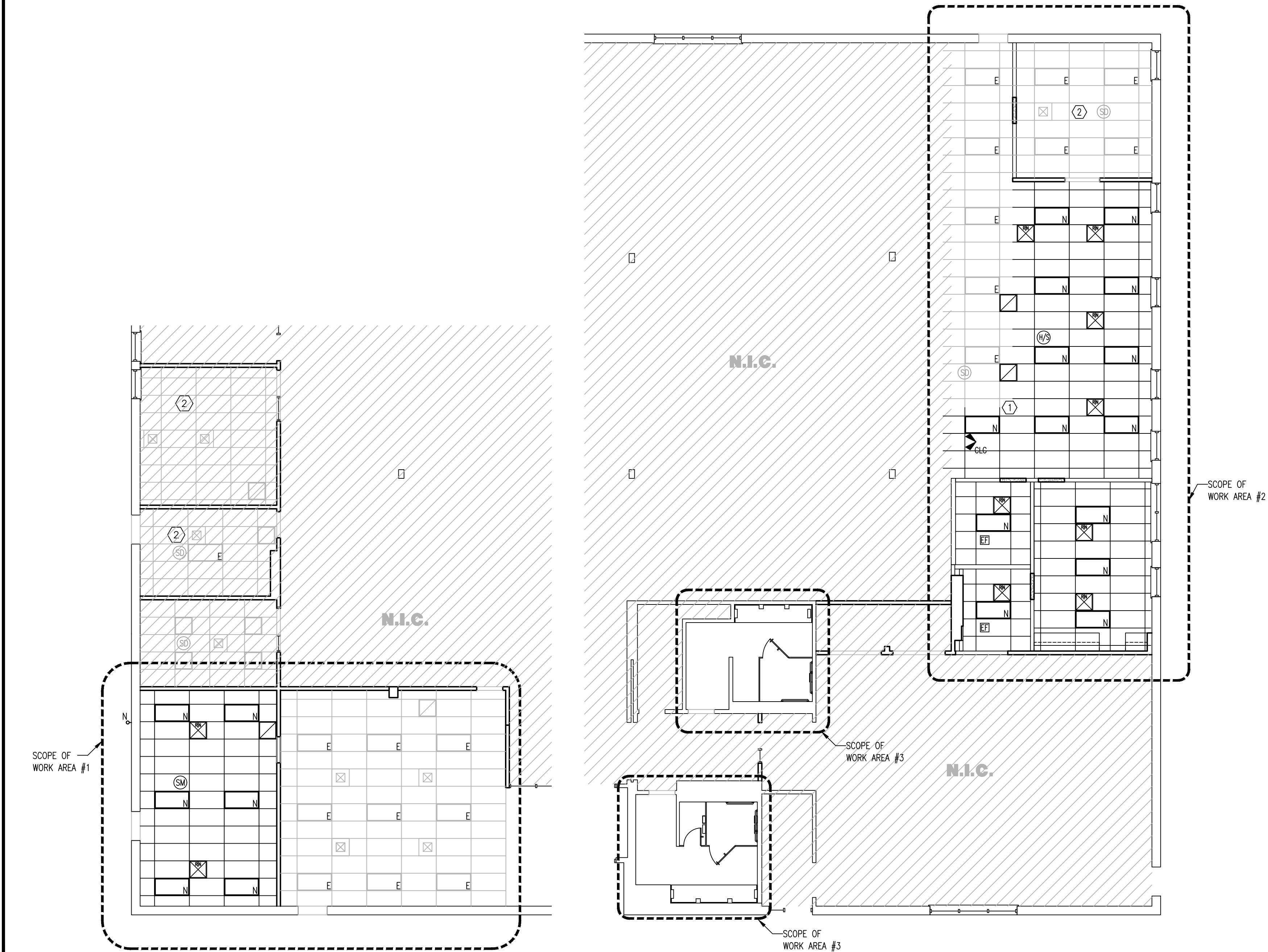
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1 REFLECTED CEILING PLAN

SYMBOL LEGEND:

- EXISTING 2'x4' ACOUSTIC CEILING TILE & GRID.
- NEW 2'x4' ACOUSTIC CEILING TILE & GRID.
- NEW GWB HEADER TO MATCH LOWEST EXISTING ACT CEILING HEIGHT.
- EXISTING 2x4 LED PANEL LIGHT FIXTURE. SEE ELECTRICAL DRAWINGS.
- NEW 2x4 LED PANEL LIGHT FIXTURE. SEE ELECTRICAL DRAWINGS.
- NEW 2x2 LED PANEL LIGHT FIXTURE. SEE ELECTRICAL DRAWINGS.
- NEW WALL PACK LIGHT FIXTURE. SEE ELECTRICAL DRAWINGS.
- (E) INDICATES EXISTING FIXTURE TO REMAIN.
- (N) INDICATES NEW FIXTURE TO BE INSTALLED.
- NEW/RELOCATED 2X2 LAY-IN SUPPLY, U.N.O. FOR REFERENCE ONLY. REFER TO MECHANICAL/SUBCONTRACTOR'S DRAWINGS FOR EXACT LOCATION.
- NEW/RELOCATED 2X2 LAY-IN RETURN AIR GRILLE, U.N.O. FOR REFERENCE ONLY. REFER TO MECHANICAL/SUBCONTRACTOR'S DRAWINGS FOR EXACT LOCATION.
- NEW EXHAUST FAN, U.N.O. FOR REFERENCE ONLY. REFER TO MECHANICAL/SUBCONTRACTOR'S DRAWINGS FOR EXACT LOCATION.
- EXISTING 2X2 LAY-IN SUPPLY, U.N.O. FOR REFERENCE ONLY. REFER TO MECHANICAL/SUBCONTRACTOR'S DRAWINGS FOR EXACT LOCATION.
- EXISTING 2X2 LAY-IN RETURN AIR GRILLE, U.N.O. FOR REFERENCE ONLY. REFER TO MECHANICAL/SUBCONTRACTOR'S DRAWINGS FOR EXACT LOCATION.
- EXISTING SMOKE DETECTOR TO REMAIN.
- NEW/RELOCATED SMOKE DETECTOR. SEE ELECTRICAL DRAWINGS.
- NEW CEILING MOUNTED DUAL REMOTE EMERGENCY HEADS. SEE ELECTRICAL DRAWINGS.
- NEW CEILING-MOUNTED EMERGENCY HORN/STROBE DEVICE. SEE ELECTRICAL DRAWINGS.

REFLECTED CEILING NOTES:

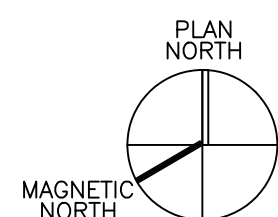
- CONTRACTOR TO PROVIDE SUPPLEMENTAL LIGHTING SUFFICIENT FOR SAFE WORKING CONDITIONS THROUGHOUT COURSE OF DEMOLITION/NEW CONSTRUCTION.
- CONTRACTOR TO MAINTAIN EXISTING CEILING SYSTEMS THROUGHOUT (U.N.O.) GRID TO REMAIN (U.N.O.) REPLACE ALL TILES WITH NEW. CLEAN/REPAIR/REPLACE EXISTING GRID TO REMAIN IF REQ'D. BY NEW LAYOUT. REPLACE ANY STAINED, DAMAGED, OR MISSING TILES WITH NEW TO MATCH EXISTING. DEMO AND REMOVE EXISTING CEILING SYSTEMS AS REQUIRED AND EXTEND ADJACENT CEILING SYSTEMS AS INDICATED BY PLAN.
- CONTRACTOR TO PROVIDE AND INSTALL NEW SUSPENDED CEILING SYSTEMS. INSTALL GRID AT HEIGHT TO MATCH EXISTING OR AS INDICATED. CENTER GRID WITHIN ROOMS AND OPEN AREAS (U.N.O.). PROVIDE HOLD DOWN CLIPS AT ALL EXTERIOR DOORS.
- CONTRACTOR TO PROVIDE AND INSTALL NEW LIGHT FIXTURES WHERE INDICATED ON PLAN 2/A.1. PROVIDE WIRING TO REFLECT LAYOUT OF EMERGENCY BACKUP LIGHTING. PROVIDE AND INSTALL SUFFICIENT LIFE/SAFETY FIXTURES TO MEET ALL STATE AND LOCAL REGULATIONS.
- CONTRACTOR TO PROVIDE AND INSTALL CEILING OR WALL-MOUNTED EXIT SIGNS OF SUFFICIENT QUANTITY AS INDICATED ON PLAN 2/A.1 TO MEET ALL LIFE SAFETY REQUIREMENTS. REFER TO ENGINEERING/SUBCONTRACTOR'S DRAWINGS FOR ADDITIONAL INFORMATION.

KEY NOTES - RCP:

- MATCH EXISTING CEILING GRID AND LIGHTING LAYOUT FOR CONTINUOUS CEILING GRID IN OPEN LIBRARY AREA.
- EXISTING CEILING LAYOUT TO REMAIN IN THIS ROOM.

LIGHTING LAYOUT NOTE:

FINAL LIGHTING LAYOUT TO BE DETERMINED IN ACCORDANCE WITH ENERGY CODE & ELECTRICAL CODE REGULATIONS. SEE DESIGN/BUILD DRAWINGS FOR FINAL FIXTURE LOCATIONS, WATTAGES AND CIRCUITING. ARCHITECTURAL DRAWINGS TO BE USED TO CONVEY INTENT OF GENERAL LIGHTING LAYOUT AND FOR TENANT REVIEW & APPROVAL PURPOSES ONLY.



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

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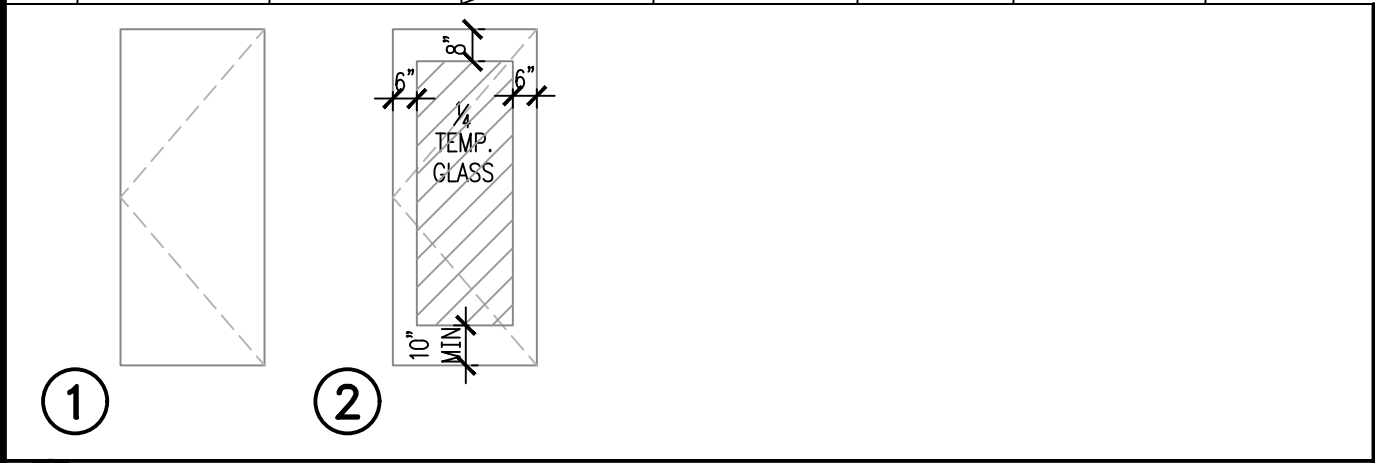
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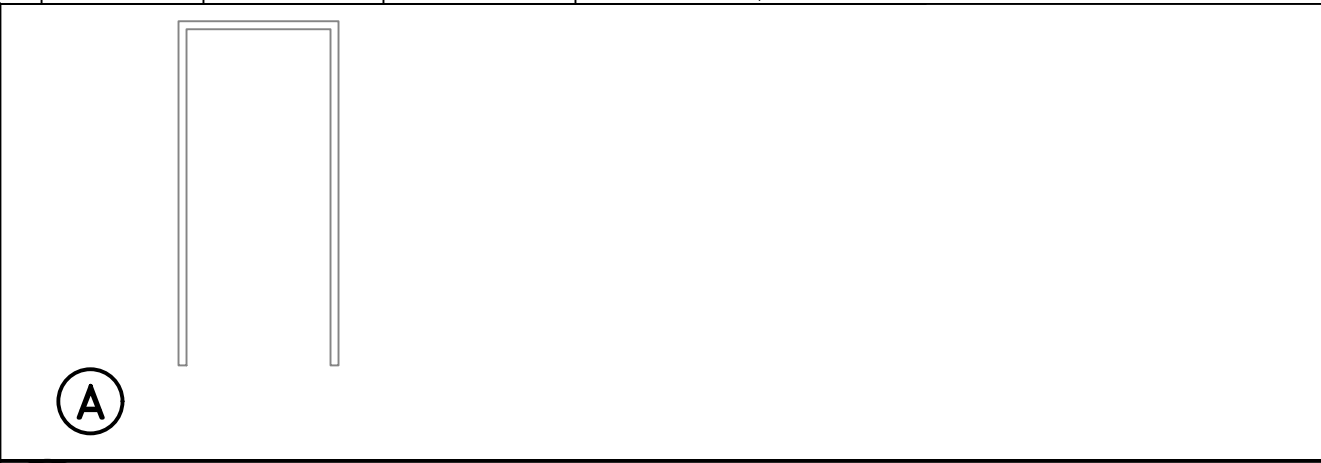
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NO.	SIZE	LOC.	DOOR			FRAME			HARDWARE	LABEL	REMARKS
			MTRL.	CORE	FINISH TYPE	MTRL.	FINISH	TYPE			
1	3'0"x7'0"x1 1⁄2"	STAFF LOUNGE	WOOD	SOLID	PAINT	1	H.M.	PAINT	A	1	MATCH BUILDING STANDARD PAINT INTERIOR FACE OF DOORS/FRAMES P-2.
2	3'0"x7'0"x1 1⁄2"	FAMILY RESTROOM	WOOD	SOLID	PAINT	1	H.M.	PAINT	A	2	MATCH BUILDING STANDARD PAINT DOORS/FRAMES P-2.
3	3'0"x7'0"x1 1⁄2"	STAFF RESTROOM	WOOD	SOLID	PAINT	1	H.M.	PAINT	A	2	MATCH BUILDING STANDARD PAINT DOORS/FRAMES P-2.
4	3'0"x7'0"x1 1⁄2"	BREAKROOM	WOOD	GLAZ	PAINT	2	H.M.	PAINT	A	1	MATCH BUILDING STANDARD PAINT DOORS/FRAMES P-2.





1 DOOR TYPESNO SCALE

2 FRAME TYPESNO SCALE

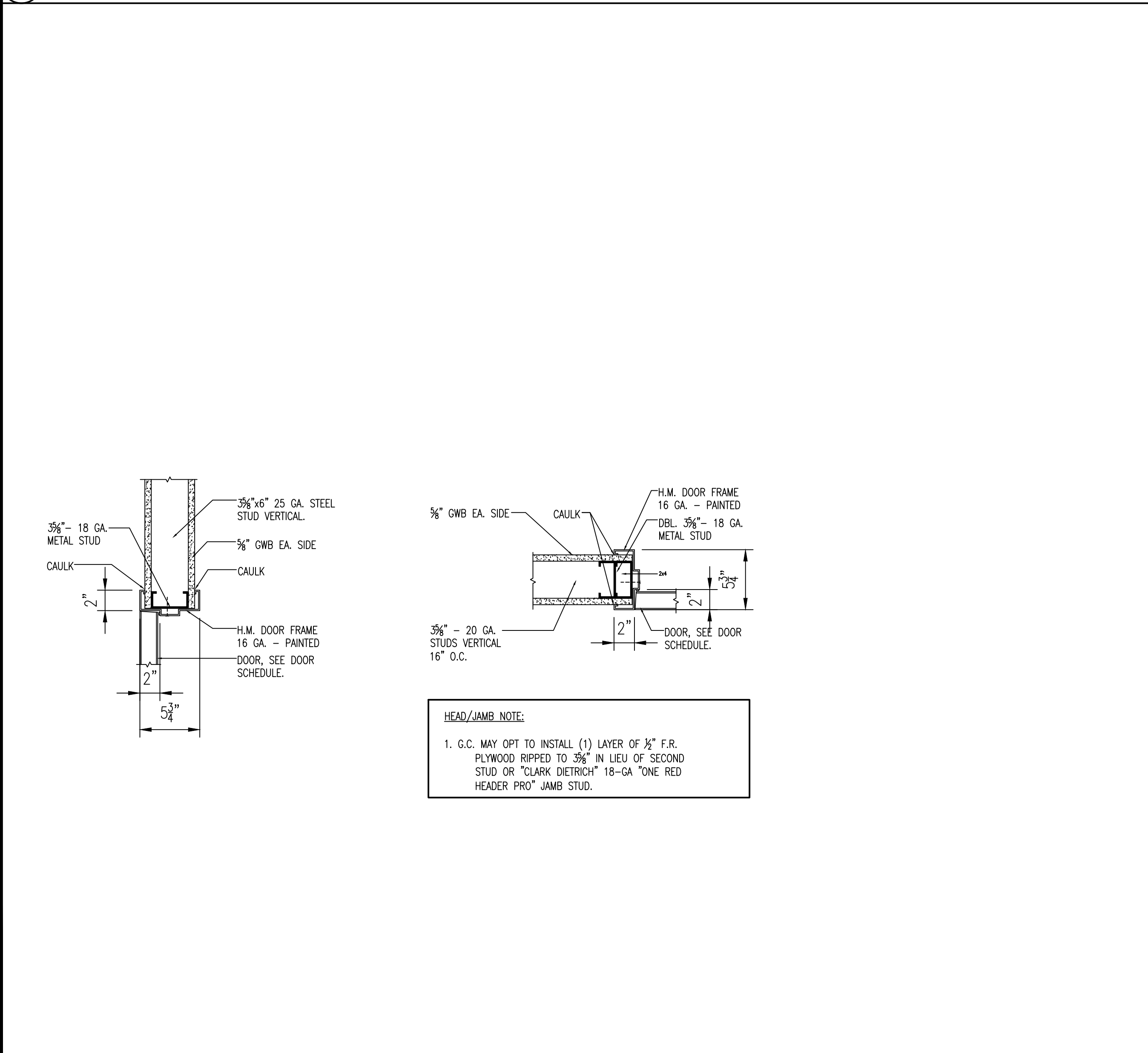
SET #1:
3 HINGES
1 LEVERSET (PASSAGE FUNC)
3 SILENCERS
1 DOORSTOP

SET #2:
3 HINGES
1 LEVERSET (PRIVACY FUNC)
3 NEW SILENCERS
1 NEW DOORSTOP

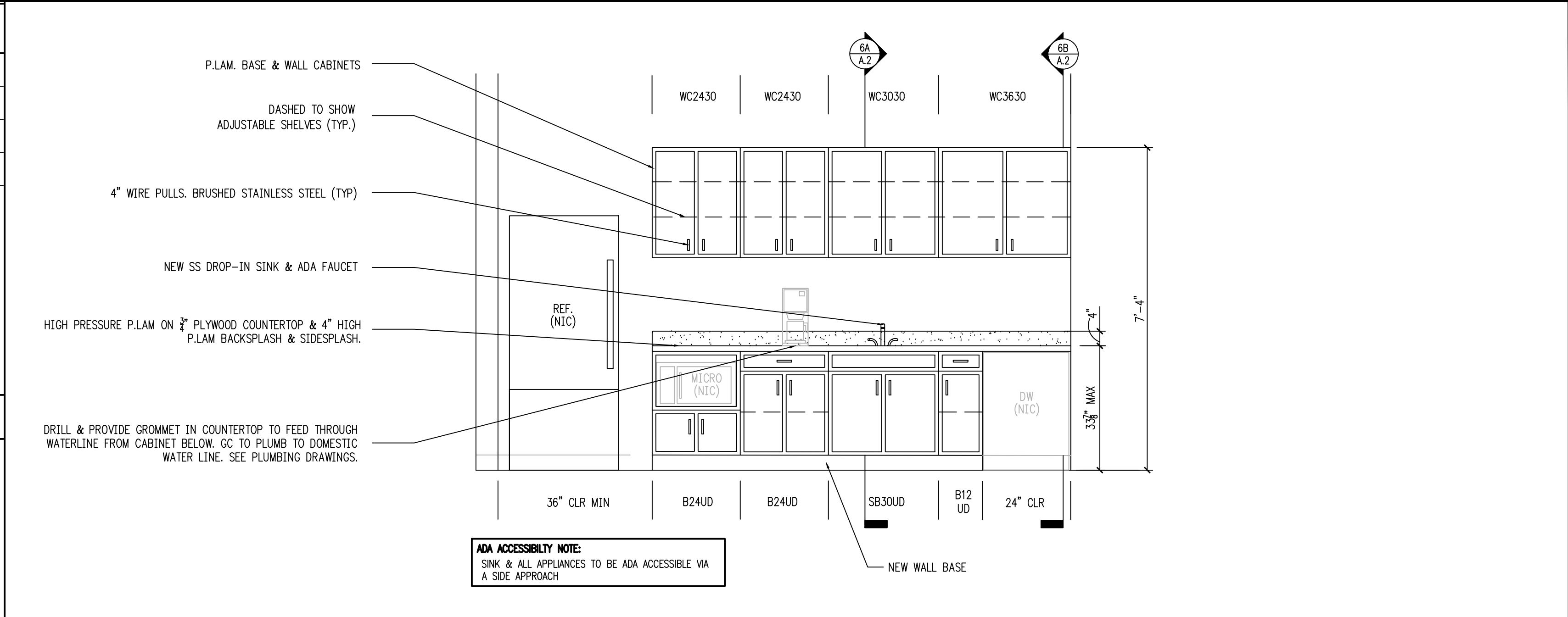
DOOR NOTES:

- ALL NEW LEVERSETS TO MATCH EXISTING HARDWARE OR APPROVED EQUAL AND ADA COMPLIANT. ALL REMAINING HARDWARE TO MATCH EXISTING AND EXISTING FINISH.
- ALL NEW INTERIOR DOOR FRAMES SHALL BE 16GA. HOLLOW METAL KNOCK DOWN FRAMES. FIELD PAINTED PAINT. SEE FINISH SELECTIONS.
- ALL LOCKABLE HARDWARE TO BE SUPPLIED WITH REMOVEABLE CONSTRUCTION CORES CAPABLE OF ACCEPTING A "BEST" CORE.
- KEY & FINAL HARDWARE SCHEDULE TO BE COORDINATED BETWEEN OWNER & G.C.
- ALL EXISTING HARDWARE & DOORS SHALL BE IN GOOD CONDITION W/ MATCHING FINISH AND FREE OF BLEMISHES, SCRATCHES OR GOUGES.
- SET ALL DOOR 6" FROM CORNER U.O.N. ALL DOUBLE DOORS TO BE CENTERED U.N.O.

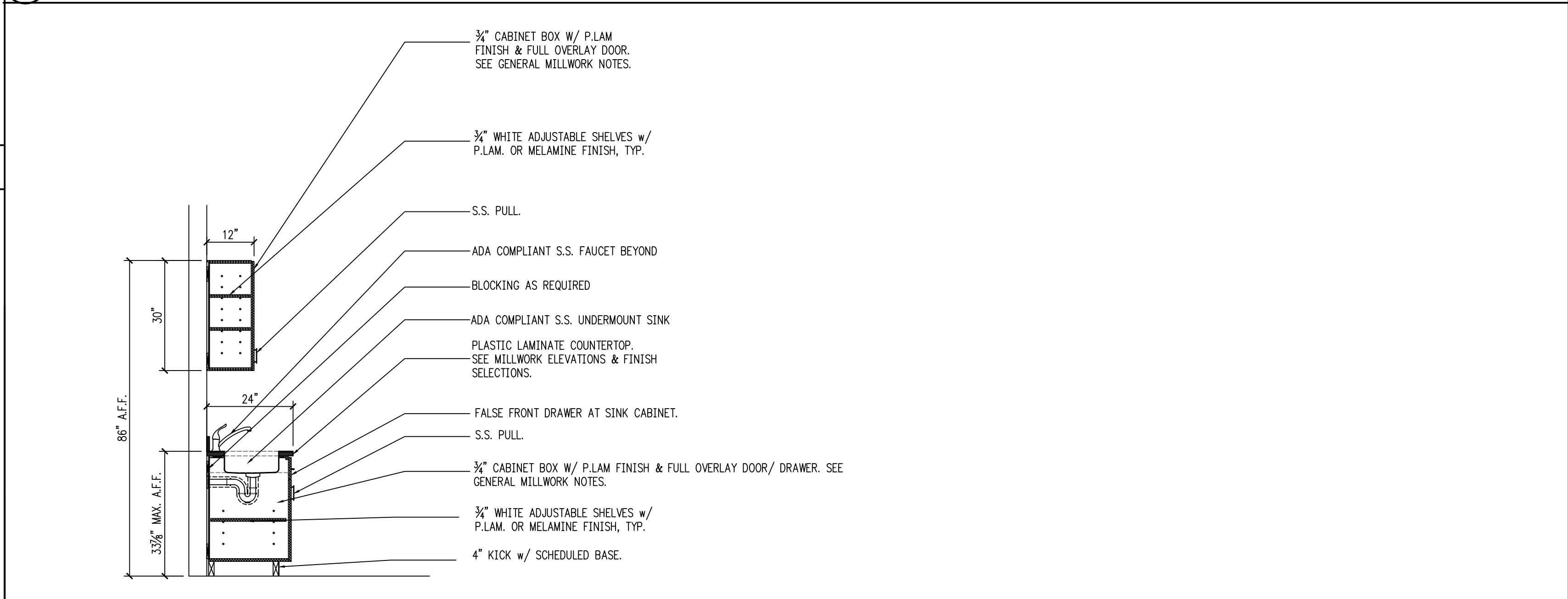
3 DOOR HARDWARE



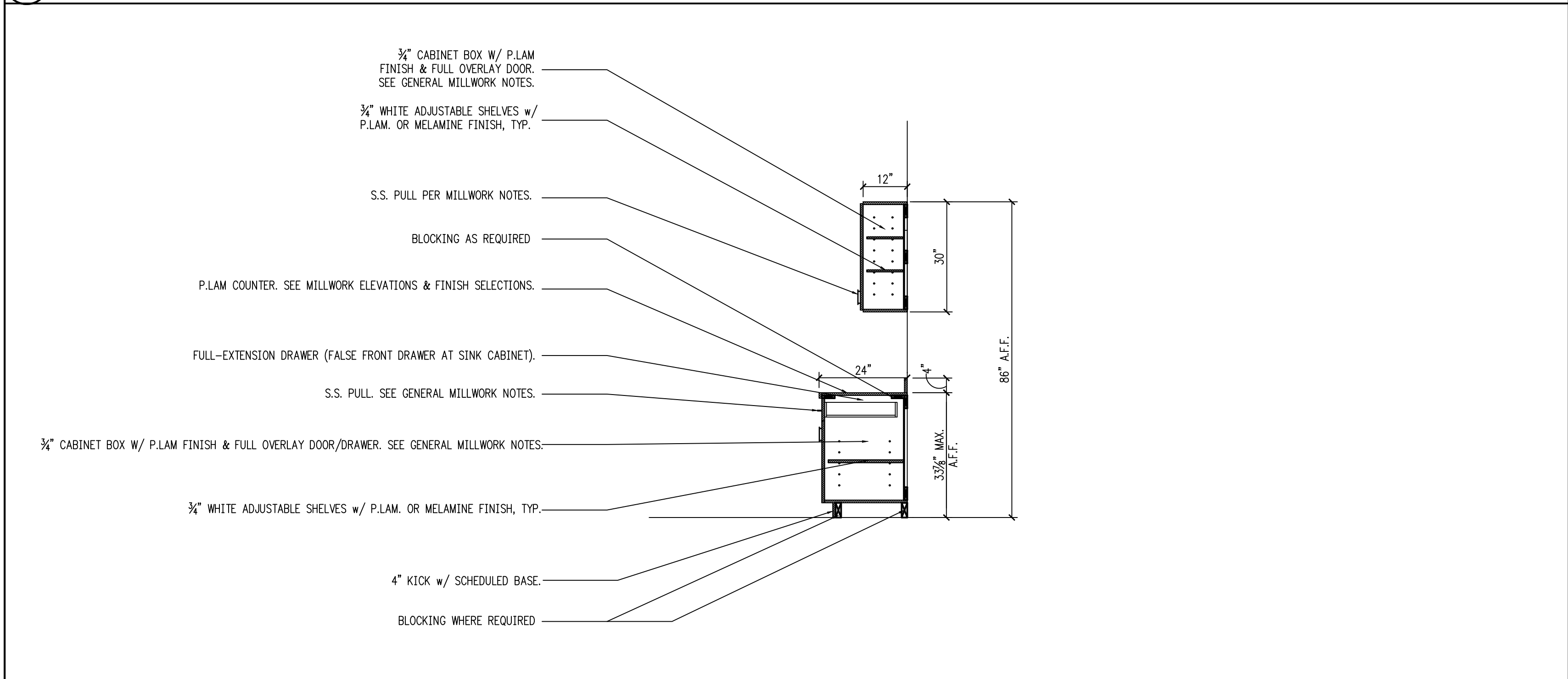
3A DETAILS – HOLLOW METAL – DOOR HEAD / JAMBSCALE: 1-1/2" = 1'-0"



4 MILLWORK ELEVATIONSCALE: 1/4" = 1'-0"



4A MILLWORK SECTION – SINKSCALE: 1/4" = 1'-0"



4B MILLWORK SECTION – CABINETSSCALE: 1/4" = 1'-0"

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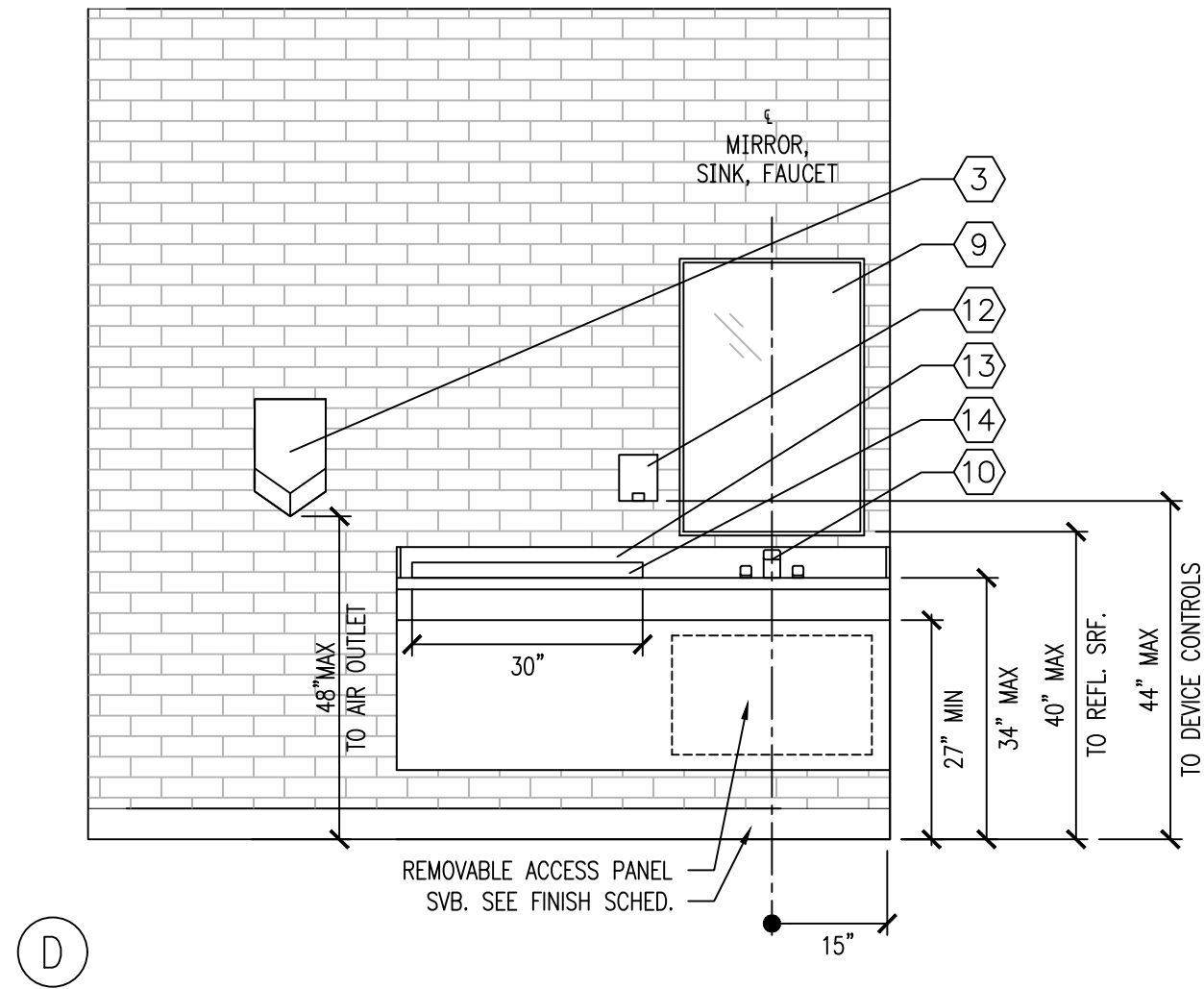
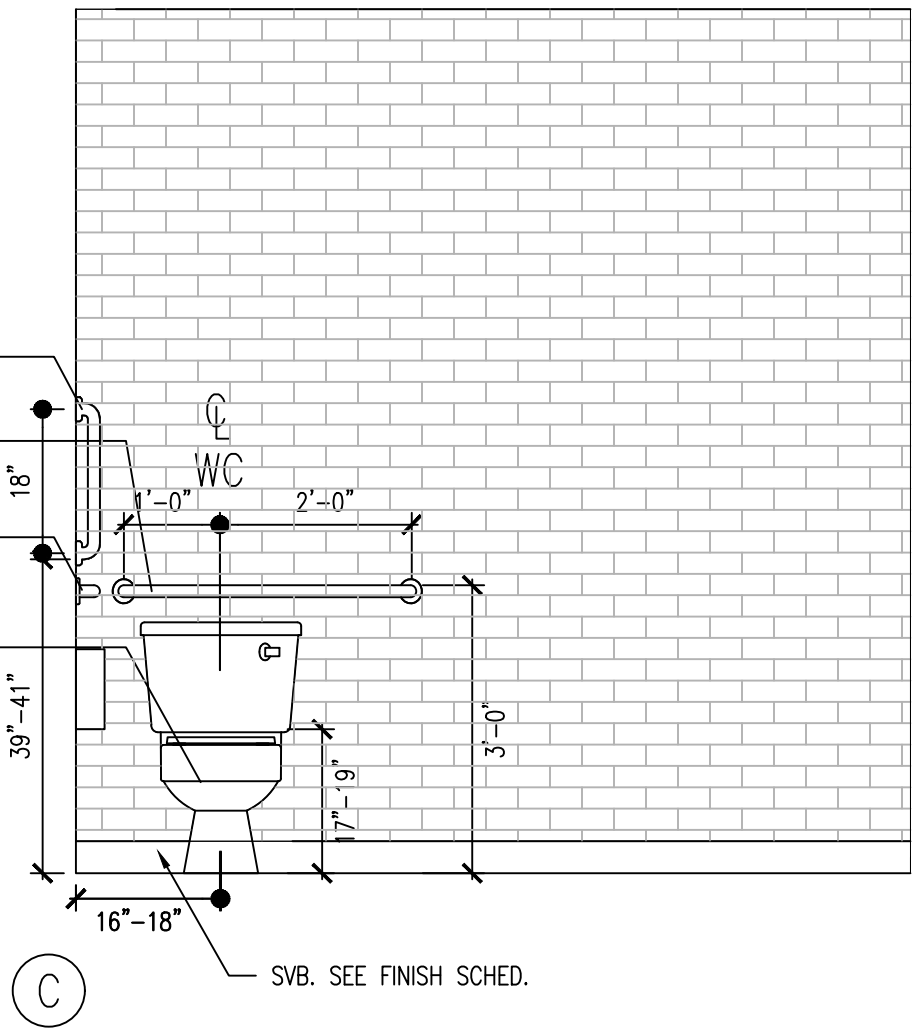
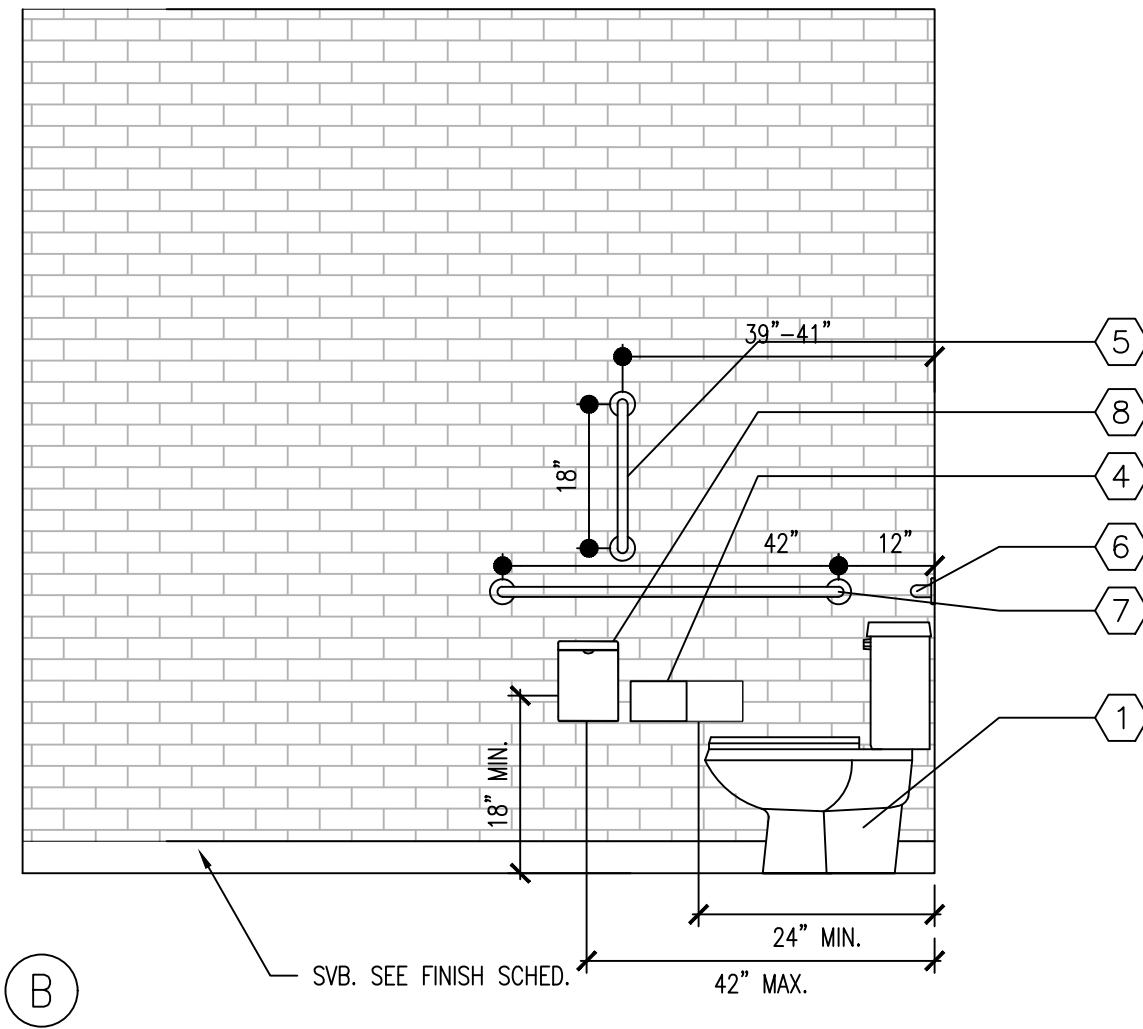
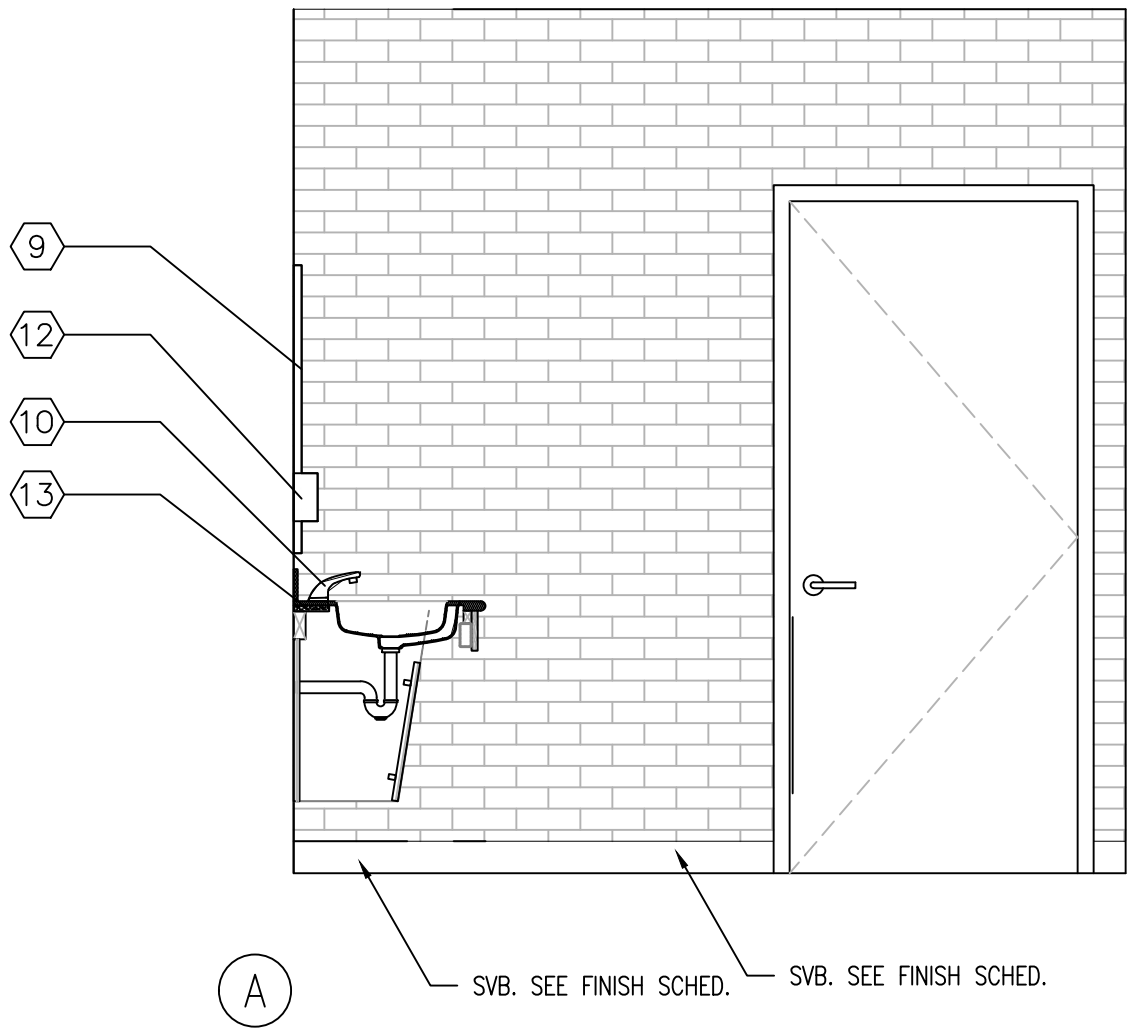
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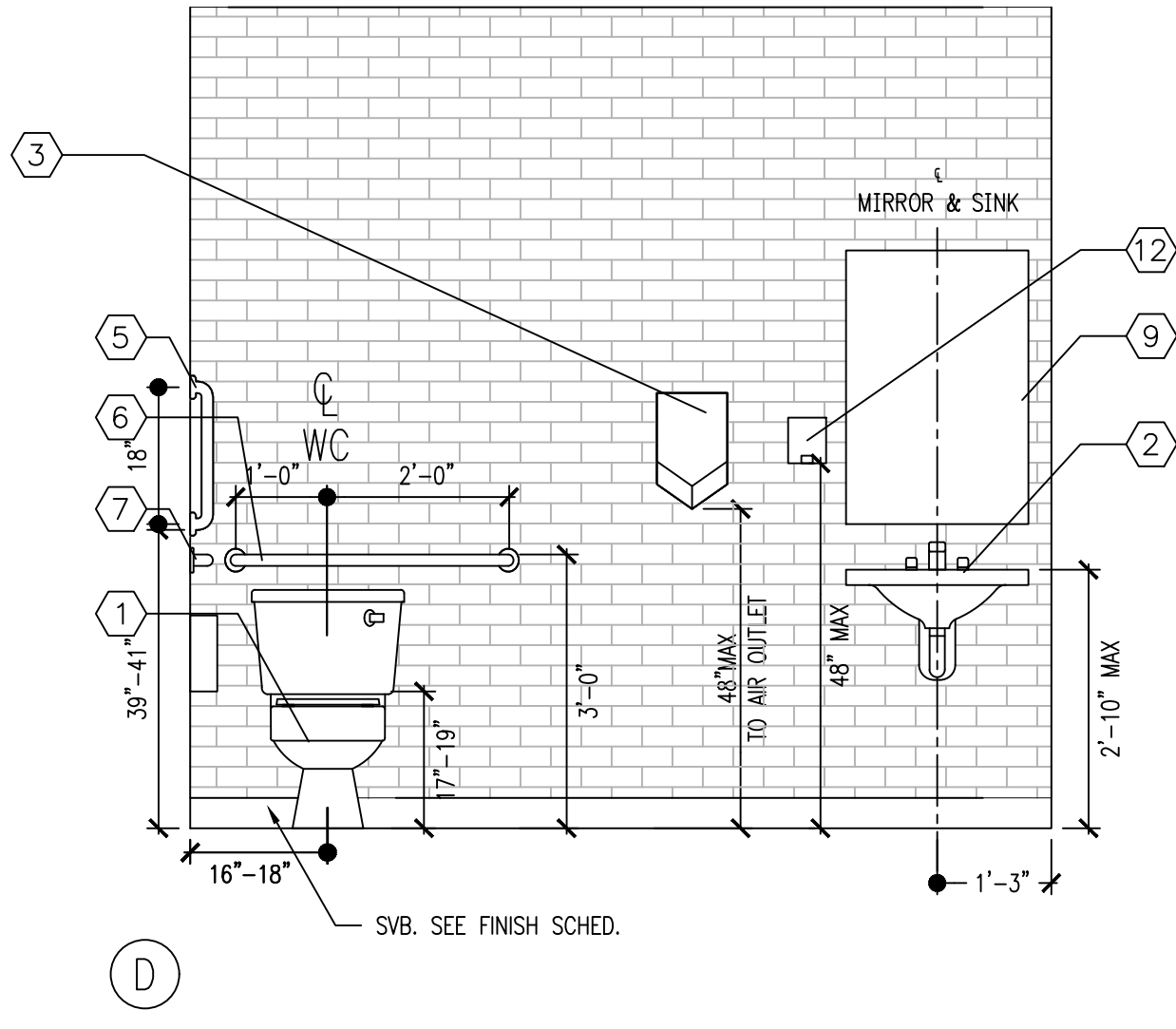
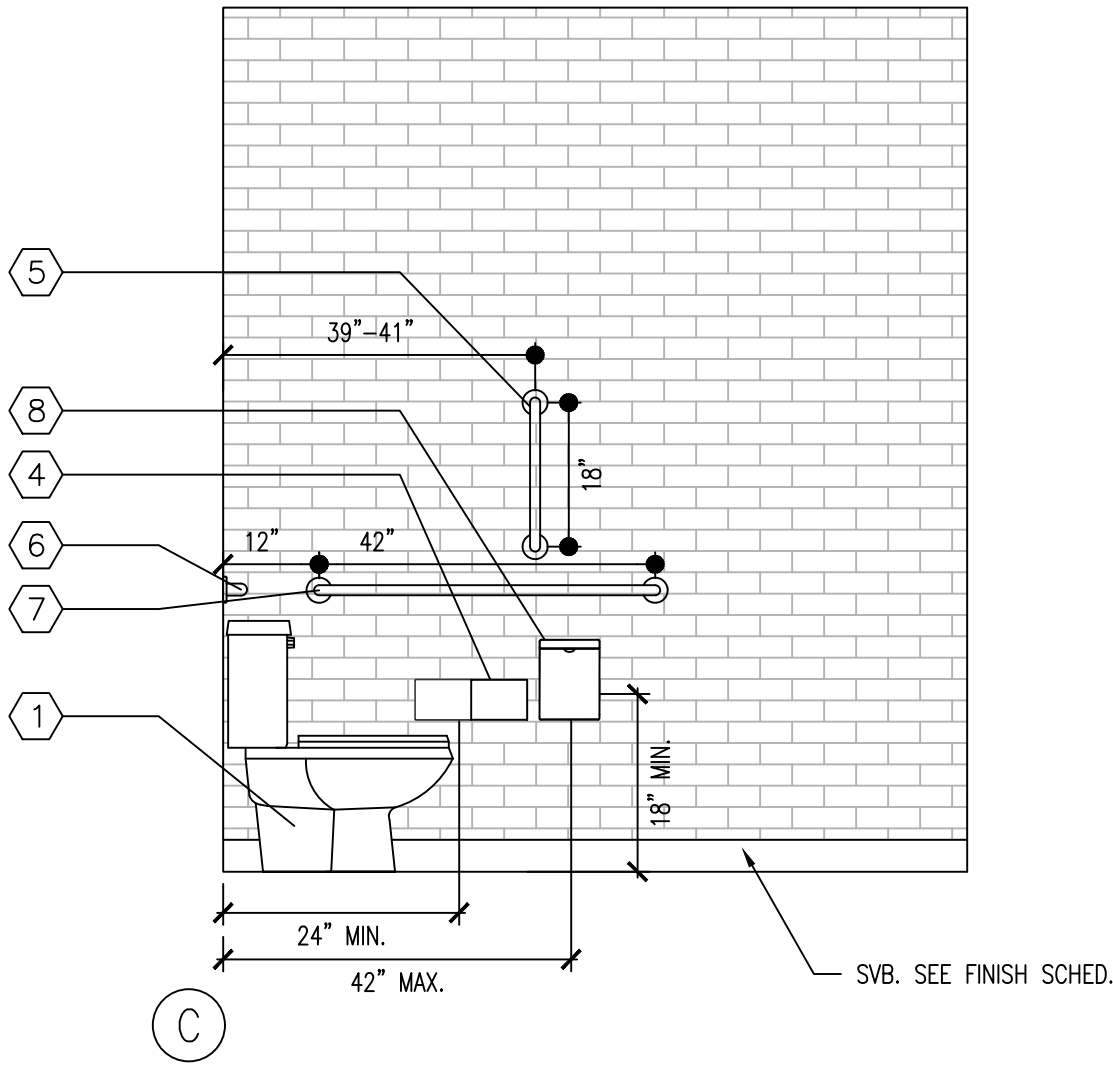
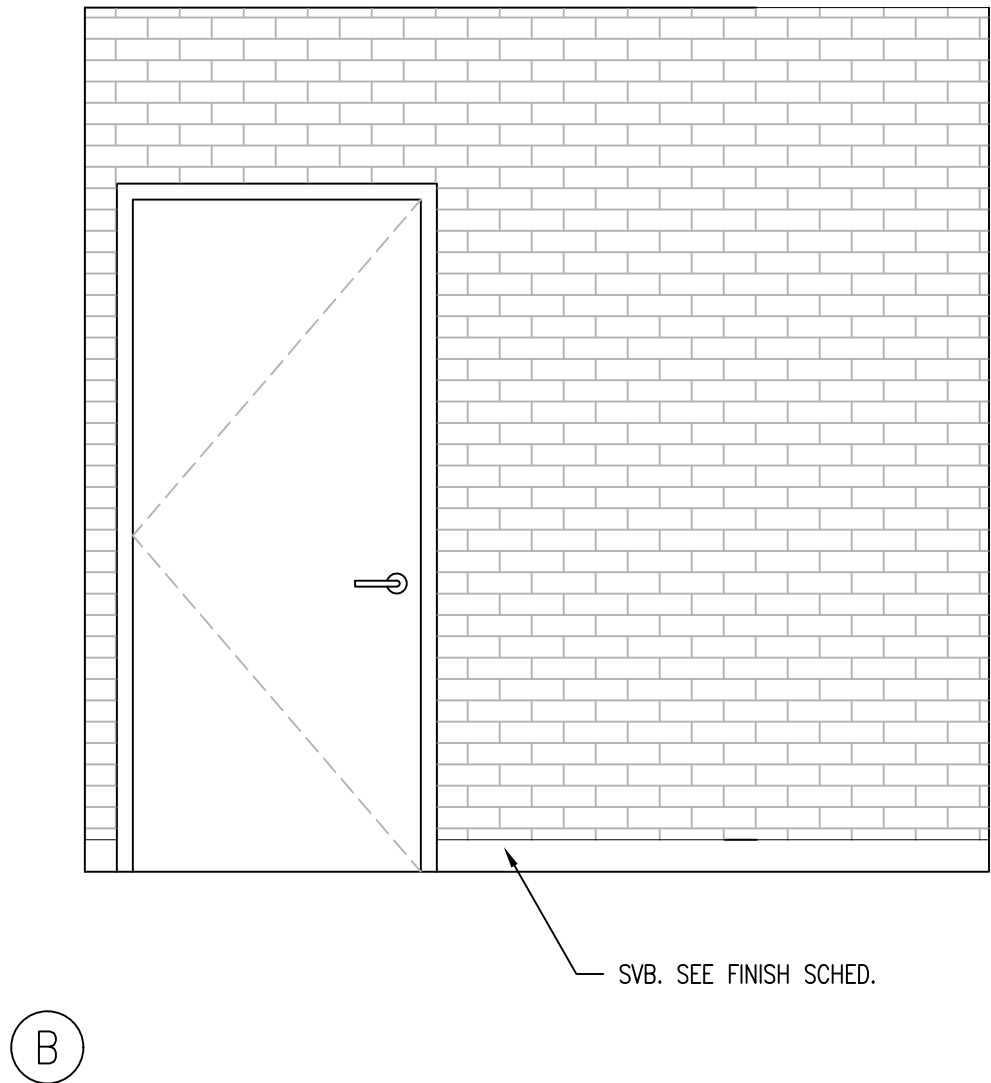
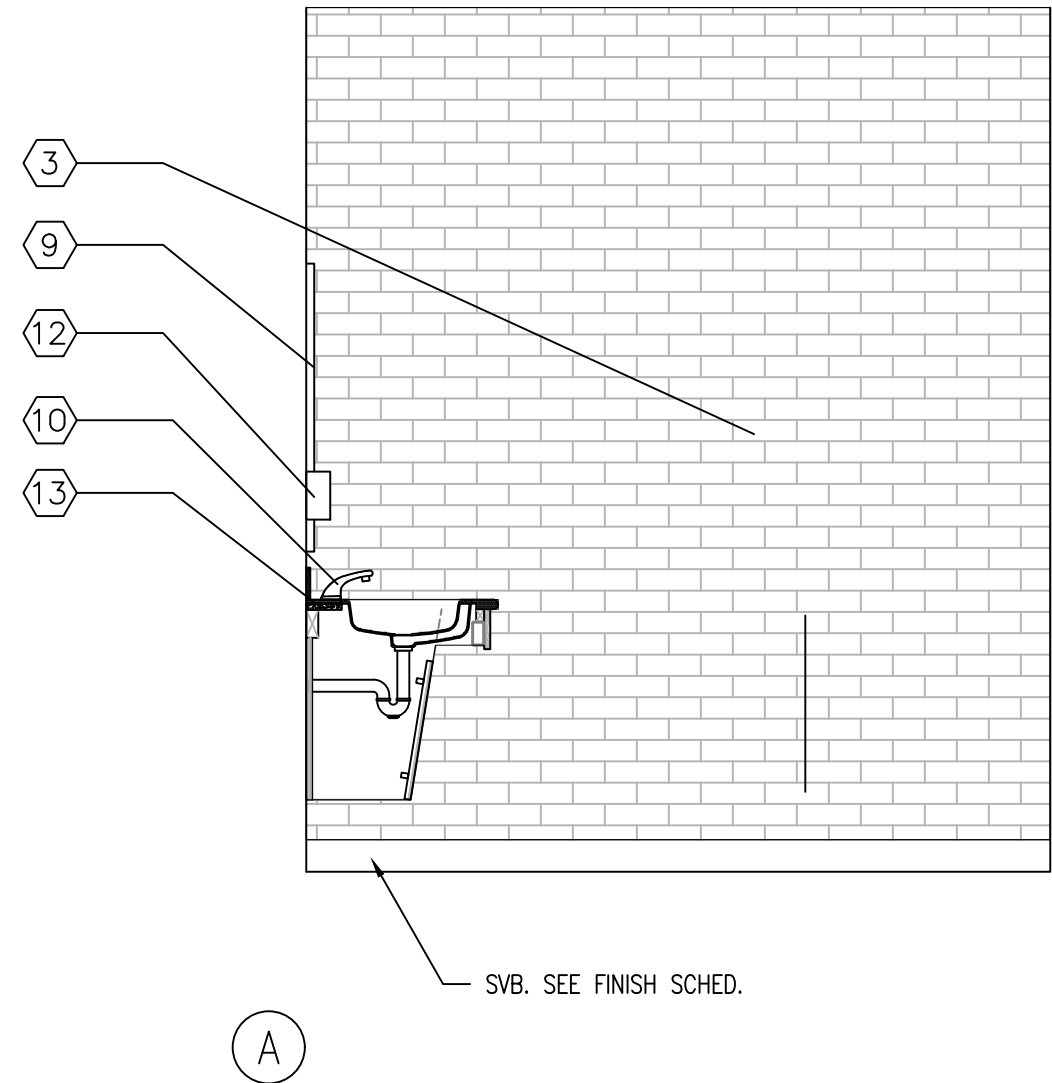
PLUMBING FIXTURES & ACCESSORIES SCHEDULE

KEY	FIXTURE	MFR.	MODEL	MODEL #	FINISH	SUPPLIED & INSTALLED BY	NOTES
①	FLOOR MOUNTED, ADA-COMPLIANT TOILET W/ MANUAL FLUSH VALVE SYSTEM	REFER TO PLUMBING DRAWINGS				GENERAL CONTRACTOR	
	TOILET SEAT	REFER TO PLUMBING DRAWINGS				GENERAL CONTRACTOR	
②	WALL-MOUNTED LAVATORY & FAUCET	REFER TO PLUMBING DRAWINGS				GENERAL CONTRACTOR	
③	ELECTRIC HAND DRYER - 1400W	DYSON	SURFACE-MOUNTED, SENSOR ACTIVATED	AIRBLADE V	AB12 - SPRAYED NICKEL	GENERAL CONTRACTOR	
④	TOILET PAPER DISPENSER	AMERICAN SPECIALTIES, INC.	ROVAL SURFACE MOUNTED TWIN TOILET PAPER DISPENSER	20030	STAINLESS STEEL	GENERAL CONTRACTOR	
⑤	ADA-COMPLIANT GRAB BARS W/ FIRE-RATED WALL BLOCKING	AMERICAN SPECIALTIES, INC.	18" 1-1/2" DIA. GRAB BAR	#3800 SERIES	STAINLESS STEEL	GENERAL CONTRACTOR	
⑥	ADA-COMPLIANT GRAB BARS W/ FIRE-RATED WALL BLOCKING	AMERICAN SPECIALTIES, INC.	36" 1-1/2" DIA. GRAB BAR	#3800 SERIES	STAINLESS STEEL	GENERAL CONTRACTOR	
⑦	ADA-COMPLIANT GRAB BARS W/ FIRE-RATED WALL BLOCKING	AMERICAN SPECIALTIES, INC.	42" 1-1/2" DIA. GRAB BAR	#3800 SERIES	STAINLESS STEEL	GENERAL CONTRACTOR	
⑧	SANITARY NAPKIN DISPOSAL (@ WOMEN'S TOILET ROOMS ONLY)	AMERICAN SPECIALTIES, INC.	SURFACE MOUNTED SANITARY NAPKIN DISPOSAL	0852	STAINLESS STEEL	GENERAL CONTRACTOR	
⑨	CHANNEL FRAMED WALL MIRROR	BOBRICK	24"x36" MIRROR	B-165 2436	STAINLESS STEEL	GENERAL CONTRACTOR	
⑩	INTEGRATED SOLID SURFACE LAVATORY	DUPONT CORIAN SOLID SURFACE	ACCESSIBLE	8258	CREMA	GENERAL CONTRACTOR	REFER TO PLUMBING DRAWINGS FOR FAUCET
⑪	WALL-HUNG, ADA-COMPLIANT URINAL MANUAL FLUSH VALVE SYSTEM	REFER TO PLUMBING DRAWINGS				GENERAL CONTRACTOR	
⑫	WALL-MOUNTED SOAP DISPENSER	BOBRICK	SURFACE-MOUNTED DISPENSER	B-2111	STAINLESS STEEL	OWNER	
⑬	P.LAM VANITY WITH SOLID SURFACE TOP, 4" BACK/SIDE SPLASH	DUPONT CORIAN SOLID SURFACE	1/2" SHEET		SEE FINISH SCHED.	GENERAL CONTRACTOR	
⑭	2"Hx30"W SOLID SURFACE GUARD FOR CHANGING TABLE	DUPONT CORIAN SOLID SURFACE	1/2" SHEET		SEE FINISH SCHED.	GENERAL CONTRACTOR	BOND TO COUNTER SURFACE



2 FAMILY T.R. ELEVATIONS

SCALE: 1/2" = 1'-0"



1 STAFF T.R. ELEVATIONS

SCALE: 1/2" = 1'-0"

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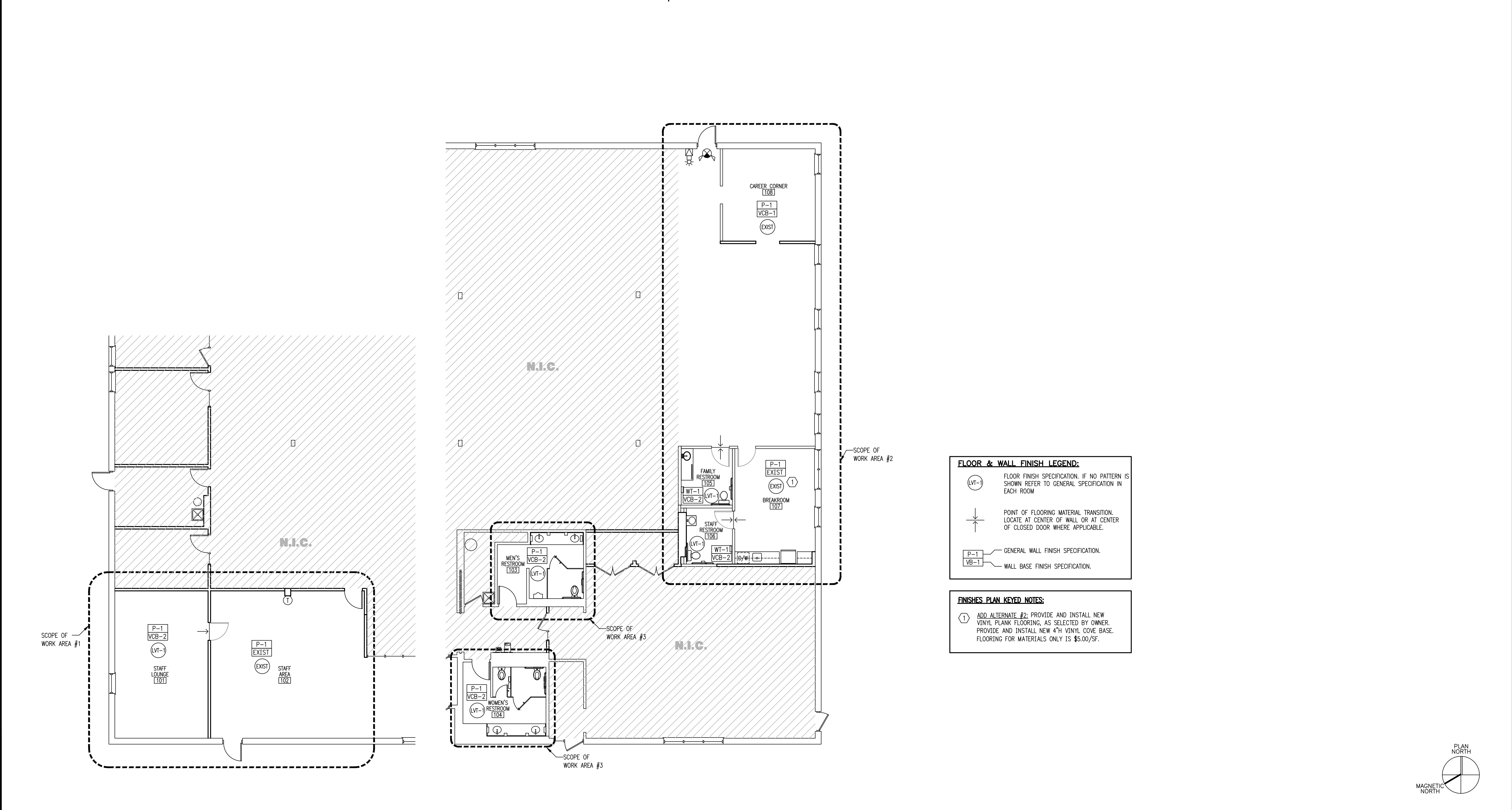
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FINISH SCHEDULE																							
NO.	ROOM	FLOOR		BASE			NORTH WALL		EAST WALL		SOUTH WALL		WEST WALL		CEILING								
		MTRL	SPECIAL FINISHES	MTRL	MTRL	SPECIAL FINISHES	P	MTRL	SPECIAL FINISHES	P	MTRL	SPECIAL FINISHES	P	MTRL	SPECIAL FINISHES	P	MTRL	P	HGT				
101	STAFF LOUNGE	LVT-1		VCB-2	GWB	P-1	●	EXIST		GWB	P-1	●	EXIST	P-1	●	EXIST	P-1	●	ACT-1	EXIST			
102	STAFF AREA	EXIST		EXIST	EXIST	P-1	●	EXIST		P-1	●	EXIST	P-1	●	GWB	P-1	●	EXIST		EXIST			
103	MEN'S RESTROOM	LVT-1		VCB-2	EXIST	P-1	●	EXIST		P-1	●	EXIST	P-1	●	EXIST	P-1	●	EXIST		EXIST			
104	WOMEN'S RESTROOM	LVT-1		VCB-2	EXIST	P-1	●	EXIST		P-1	●	EXIST	P-1	●	EXIST	P-1	●	EXIST		EXIST			
105	FAMILY TOILET ROOM	LVT-1		VCB-2	GWB	WT-1	●	GWB		WT-1	●	GWB	WT-1	●	GWB	WT-1	●	ACT-1		EXIST			
106	STAFF TOILET ROOM	LVT-1		VCB-2	GWB	WT-1	●	GWB		WT-1	●	EXIST		GWB	WT-1	●	GWB	WT-1	●	ACT-1	EXIST		
107	BREAK ROOM	EXIST		VCB-1	GWB	P-1	●	EXIST		P-1	●	EXIST		P-1	●	EXIST		GWB	P-1	●	ACT-1	EXIST	
108	CAREER CORNER	EXIST		VCB-1	EXIST	P-1	●	EXIST		P-1	●	EXIST		EXIST		GWB	EXIST		GWB	P-1	●	ACT-1	EXIST
LEGEND:																							
EXIST = EXISTING				LVT = LUXURY VINYL TILE																			
GWB = GYPSUM WALLBOARD				ACT = ACOUSTICAL CEILING TILE																			
VCB = VINYL COVE BASE				RBR = RUBBER BUMP FLOOR																			
'P' COLUMNS = WALLS TO RECEIVE NEW PAINT.				WT = WALL TILE																			

FINISH LEGEND								
TYPE	LABEL	DESCRIPTION	MANFR	STYLE	COLOR	FIN/SIZE	NOTES	
LUXURY VINYL TILE	LVT-1	LUXURY VINYL TILE	TBD	TBD	TBD	—	—	
RUBBER FLOOR	RBR-1	RUBBER BUMP FLOOR	TBD	TBD	TBD	—	—	
CARPET	CPT-1	CARPET	MATCH EXISTING	MATCH EXISTING	MATCH EXISTING	—	AS NEEDED PER DEMO	
VCB	VCB-1	MATCH EXISTING	ROPPE	MATCH EXISTING	MATCH EXISTING	—	—	
VCB	VCB-2	VINYL COVE BASE	ROPPE	TBD	TBD	—	—	
PAINT	P-1	GENERAL PAINT	SHERWIN WILLIAMS	INT'R LATEX	TBD	EGGSHELL	—	
PAINT	P-2	DOORS, FRAMES & TRIM	SHERWIN WILLIAMS	INT'R LATEX	TBD	SEMI GLOSS	—	
PLASTIC LAMINATE	PL-1	MILLWORK DOOR/PANEL	WILSONART	TBD	TBD			
PLASTIC LAMINATE	PL-2	WILSONART/BACKSPLASH	WILSONART	TBD	TBD	EASED EDGE	—	
CEILING TILE	ACT-1	ACOUSTIC CEILING TILE	ARMSTRONG	TBD	TBD	24x48x3/4"	AS NEEDED	
WALL TILE	WT-1	CERAMIC TILE	CROSSVILLE	COLOR BY NUMBERS	WTO3 THREE HOUR TOUR	4X12 SATIN	EXPOXY GROUT COLOR TBD	



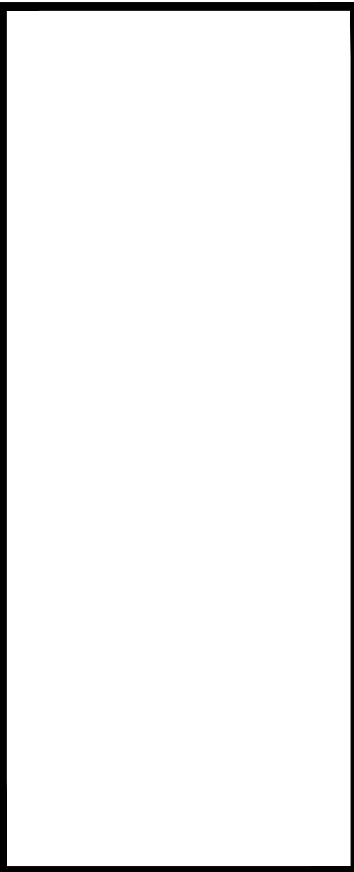
1 FINISH EXTENTS PLAN

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

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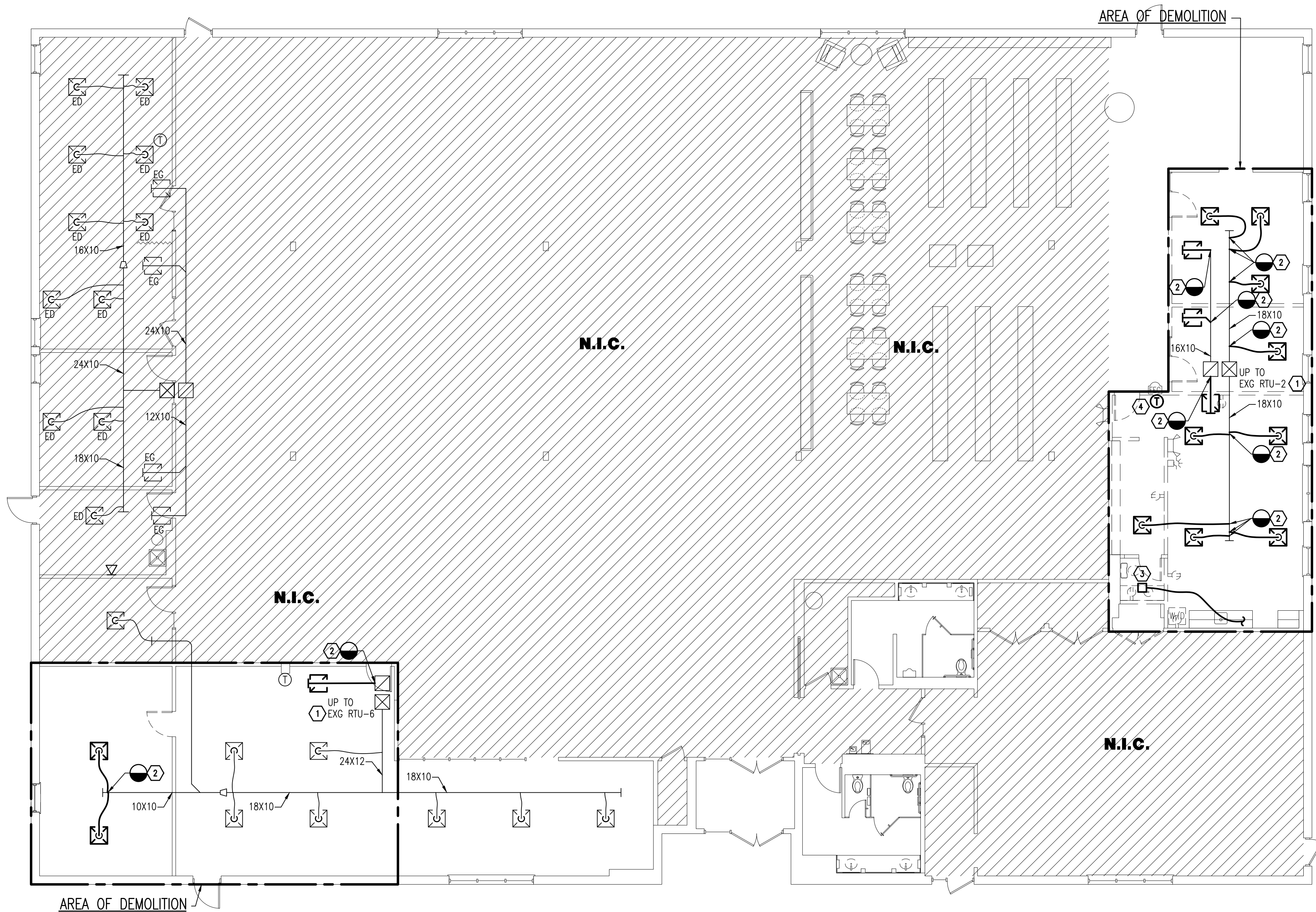
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MECHANICAL – GROUND FLOOR PLAN – DEMOLITION
SCALE: 1/8" = 1'-0"

DEMOLITION NOTES:

- CONTRACTOR SHALL PERFORM A PRE-AUDIT OF THE HVAC SYSTEM TO VERIFY OPERATION & CONDITION PRIOR TO START OF CONSTRUCTION. CONTRACTOR SHALL SUBMIT A REPORT WITH MANUFACTURER MODEL NUMBERS AND SERIAL NUMBER OF RTU AND LIST ALL ACCESSORIES. MEASURE AND DOCUMENT EXISTING SUPPLY AIR, RETURN AIR AND OUTSIDE AIR QUANTITIES; MEASURE LEAVING AIR TEMPERATURE; GAS HEAT CAPACITY; SUPPLY AND RETURN STATIC PRESSURE; INCLUDE SHEAVE POSITION AND FAN RPM. PROVIDE REPORT TO ARCHITECT.
- DISCONNECT AND REMOVE EXISTING DIFFUSERS/REGISTERS/GRILLES AND ALL ASSOCIATED DUCTWORK BACK TO MAIN, PATCH AND INSULATE. RETAIN AIR DEVICES FOR RELOCATION. COORDINATE WITH NEW WORK PLAN.
- DISCONNECT AND REMOVE EXHAUST FAN AND ASSOCIATED DUCTWORK IN ITS ENTIRETY.

MECHANICAL GENERAL NOTES:

- ALL MECHANICAL WORK SHALL BE DONE IN ACCORDANCE WITH ALL STATE AND LOCAL LAWS AND ORDINANCES AND IN A MANNER SATISFACTORY TO THE OWNER AND AUTHORITY HAVING JURISDICTION. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO OBTAIN ALL REQUIRED PERMITS, INSPECTIONS AND PAY ALL APPLICABLE FEES. COMPLY WITH LATEST, APPLICABLE EDITIONS OF THE INTERNATIONAL BUILDING CODE, INTERNATIONAL MECHANICAL CODE, INTERNATIONAL PLUMBING CODE, AND INTERNATIONAL ENERGY CONSERVATION CODE.
- DUCTWORK, PIPING AND EQUIPMENT LAYOUTS ARE SCHEMATIC. DO NOT SCALE THE DRAWINGS. ALL DROPS, RISES, OR OFFSETS REQUIRED BUT NOT SHOWN SHALL BE PROVIDED AT NO ADDITIONAL COST TO THE OWNER.
- CONTRACTOR SHALL COORDINATE ALL WORK WITH OTHER TRADES. CONTRACTOR GENERATED COORDINATION DRAWINGS ARE REQUIRED AND SHOULD INDICATE STRUCTURE, CEILING FEATURES, LIGHT FIXTURES, PLUMBING AND FIRE SERVICE PIPING AND ALL MECHANICAL EQUIPMENT, PIPING AND DUCTWORK.
- FIELD VERIFY EXISTING CONDITIONS AND COORDINATE ALL WORK. THE SITE SURVEY WAS PERFORMED BY VISUAL EVALUATION OF EXISTING EQUIPMENT; SOME MANUFACTURE SPECIFICATION PLATES WERE WEATHER WORN OR NON EXISTENT.
- MECHANICAL CONTRACTOR SHALL VERIFY THAT ALL EXISTING HVAC EQUIPMENT SERVING THIS SPACE INCLUDING AIR HANDLERS AND CONDENSING UNITS ARE OPERATIONAL AND PERFORM TO MANUFACTURE SPECIFICATIONS, BEFORE INSTALLATION OF ALL NEW SUPPLY AND RETURN DUCTS. IF ANY OF THE MENTIONED EQUIPMENT HAS FAILED, COORDINATE WITH OWNER.
- ALL MATERIALS NOT REUSED OR CLAIMED BY THE OWNER SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND BE REMOVED PROMPTLY FROM THE PREMISES BY THE CONTRACTOR.
- CONTRACTOR SHALL LOCATE ALL NEW PIPING AND DUCTWORK AS HIGH AS POSSIBLE (UNLESS NOTED OTHERWISE). COORDINATE ALL WORK WITH EXISTING CONDITIONS, OTHER TRADES, AND CONFORM WITH ALL LOCAL CODES.
- ALL HVAC EQUIPMENT SHALL BE INSTALLED IN STRICT ACCORDANCE WITH MANUFACTURERS WRITTEN INSTALLATION GUIDE.
- ALL DUCTWORK SHALL BE CONSTRUCTED OF GALVANIZED SHEET METAL (UNLESS SPECIFIED OTHERWISE) AND BE FABRICATED ACCORDING TO THE LATEST EDITION OF THE SMACNA HVAC DUCT CONSTRUCTION STANDARDS FOR METAL AND FLEXIBLE DUCTWORK. ALL DUCTWORK SHALL BE SEALED WITH HARD CAST IN ACCORDANCE WITH SMACNA SEAL CLASS B.
- DO NOT LOCATE VALVES, DAMPERS, ACTUATORS, CONTROL COMPONENTS, ANY EQUIPMENT WITH MOVING PARTS OR ANY EQUIPMENT NEEDING ACCESS OR REGULAR MAINTENANCE ABOVE INACCESSIBLE CEILINGS. PROVIDE AN ACCESS PANEL THAT WILL ALLOW SAFE AND PRACTICAL ACCESS. COORDINATE ACCESS PANEL LOCATION WITH ARCHITECT PRIOR TO INSTALLATION.
- DUCT CONNECTIONS TO ALL AIR HANDLING UNITS, INCLUDING FAN COIL UNITS, ETC. SHALL BE MADE USING FLEXIBLE DUCT CONNECTION. ALSO, PROVIDE FLEXIBLE DUCT CONNECTIONS WHERE DUCTWORK CROSSES BUILDING EXPANSION JOINTS.
- DUCT DIMENSIONS INDICATED ARE CLEAR INSIDE DIMENSIONS. WHERE ACOUSTIC LINING IS SPECIFIED, THE DUCT SIZES SHALL BE INCREASED AS REQUIRED TO COMPENSATE FOR THE LINING.
- LOCATE CEILING AIR DIFFUSERS, REGISTERS AND GRILLES IN THE CENTER OF 2'x2' AND AT THE QUARTER POINT OF 2'x4' ACOUSTICAL TILE CEILING MODULES UNLESS SPECIFICALLY INDICATED OTHERWISE ON THE ARCHITECTURAL REFLECTED CEILING PLANS.
- ALL THERMOSTATS, SENSORS OR OTHER CONTROL DEVICES SHALL BE INSTALLED AT 48" MAXIMUM IN ACCORDANCE WITH ADA REQUIREMENTS. COORDINATE LOCATIONS WITH CABINETRY, ELECTRICAL SWITCHES, ETC. DO NOT MOUNT THEM ABOVE ELECTRICAL DEVICES. PROVIDE AN INSULATED SUB-BASE FOR ANY DEVICES MOUNTED ON A WALL ADJOINING TO AN UNCONDITIONED SPACE.
- TESTING OF HVAC UNITS, AIR DISTRIBUTION DUCTWORK AND AIR OUTLETS SHALL BE PERFORMED TO VERIFY THAT THE FAN, HEAT AND COOL STAGES CYCLE ON AND OFF. PROVIDE AIR BALANCE TESTING IN ACCORDANCE WITH THE SPECIFICATIONS FOR ALL NEW SYSTEMS AND ALL SYSTEMS THAT ARE ALTERED TO DOCUMENT AIR FLOW QUANTITIES AND SUBMIT REPORTS ON NEW AND EXISTING SYSTEMS.
- SEE ARCHITECTURAL FIRE PROTECTION DRAWINGS FOR DETAILS OF FIRE AND SMOKE SEALING REQUIREMENTS AT PENETRATIONS OF ALL UL LISTED FIRE AND SMOKE RATED WALL, FLOOR AND ROOF/CEILING ASSEMBLIES.
- CONTRACTOR SHALL NOT INSTALL DUCTWORK, EQUIPMENT, ETC. ABOVE ANY ELECTRICAL PANEL. CONTRACTOR SHALL COORDINATE DEDICATED ELECTRICAL SPACE WITH ELECTRICAL CONTRACTOR.

DUCTWORK AND ACCESSORIES

	WORK BY THIS CONTRACTOR
	EXISTING WORK OR WORK DONE BY OTHERS
	DUCT SMOKE DETECTOR
	SUPPLY DUCTWORK
	EXHAUST OR RETURN DUCTWORK
	BALANCING DAMPER (BD)
	DIFFUSER
	GRILLE OR REGISTER
	SLOT DIFFUSER
	SLOT REGISTER
	ELBOW DOWN
	DUCT TURNING UP
	TRANSITION - RECTANGULAR TO RECTANGULAR
	TRANSITION - RECTANGULAR TO ROUND
	FLEXIBLE DUCTWORK
	AUTOMATIC AIR DAMPER (AAD)
	LOUVER OR BACKDRAFT DAMPER
	FIRE DAMPER (FD)
	VAV

GENERAL

	THERMOSTAT
	SENSOR
	HUMIDISTAT
	REFER TO INDICATED NEW WORK NOTE
	CONNECT NEW TO EXISTING
	REFER TO INDICATED DEMOLITION NOTE
	EXTENT OF DEMOLITION

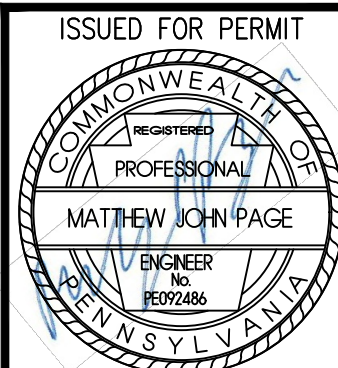
ABBREVIATIONS

ABV	ABOVE
AFF	ABOVE FINISHED FLOOR
AFR	ABOVE FINISHED ROOF
BD	BALANCING DAMPER
BHP	BRAKE HORSEPOWER
BTU	BRITISH THERMAL UNIT
CFM	CUBIC FEET PER MINUTE
CLG	CEILING
D	DIFFUSER
DB	DRY BULB
DN	DOWN
EAT	ENTERING AIR TEMPERATURE
EC	ELECTRICAL CONTRACTOR
EER	ENERGY EFFICIENCY RATIO
EF	EXHAUST FAN
EFF	EFFICIENCY
ESP	EXTERNAL STATIC PRESSURE
EXG	EXISTING
EWI	ELECTRIC WALL HEATER
F	FAN
FLA	FULL LOAD AMPS
G	GRILLE
HP	HORSEPOWER
KW	KILOWATT
MAX	MAXIMUM
MBH	THOUSAND BRITISH THERMAL UNITS
MC	MECHANICAL CONTRACTOR
MCA	MINIMUM CURRENT AMPACITY
MIN	MINIMUM
MOCP	MAXIMUM OVERCURRENT PROTECTION DEVICE
O.A.	OUTDOOR AIR
PC	PLUMBING CONTRACTOR
PL	PLACES
R	REGISTER
RLA	RATED LOAD AMPS
RPM	REVOLUTIONS PER MINUTE
RTU	ROOFTOP AIR CONDITIONING UNIT
TYP	TYPICAL
W/	WITH

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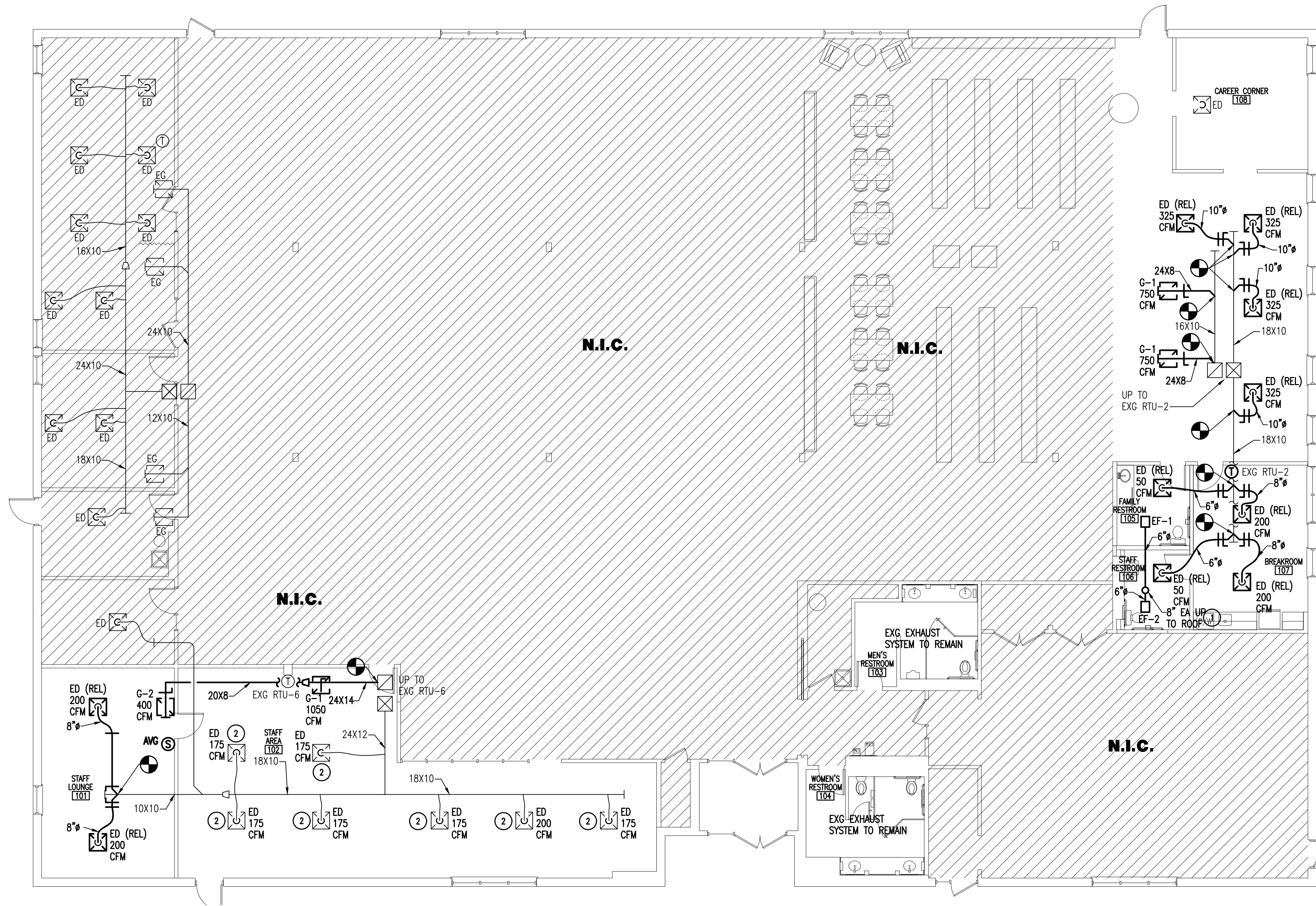
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MECHANICAL - GROUND FLOOR PLAN - NEW WORK PLAN
SCALE: 1/8" = 1'-0"

GRILLE SCHEDULE				
REF NO	MANUFACTURER/ MODEL NO	DUCT SIZE (L" X W")	FACE BARS	REMARKS
G-1	KRUEGER / S80	22 X 22	35"	COORDINATE CEILING TYPE WITH ARCHITECT
G-2	KRUEGER / S80	18 X 18	35"	COORDINATE CEILING TYPE WITH ARCHITECT

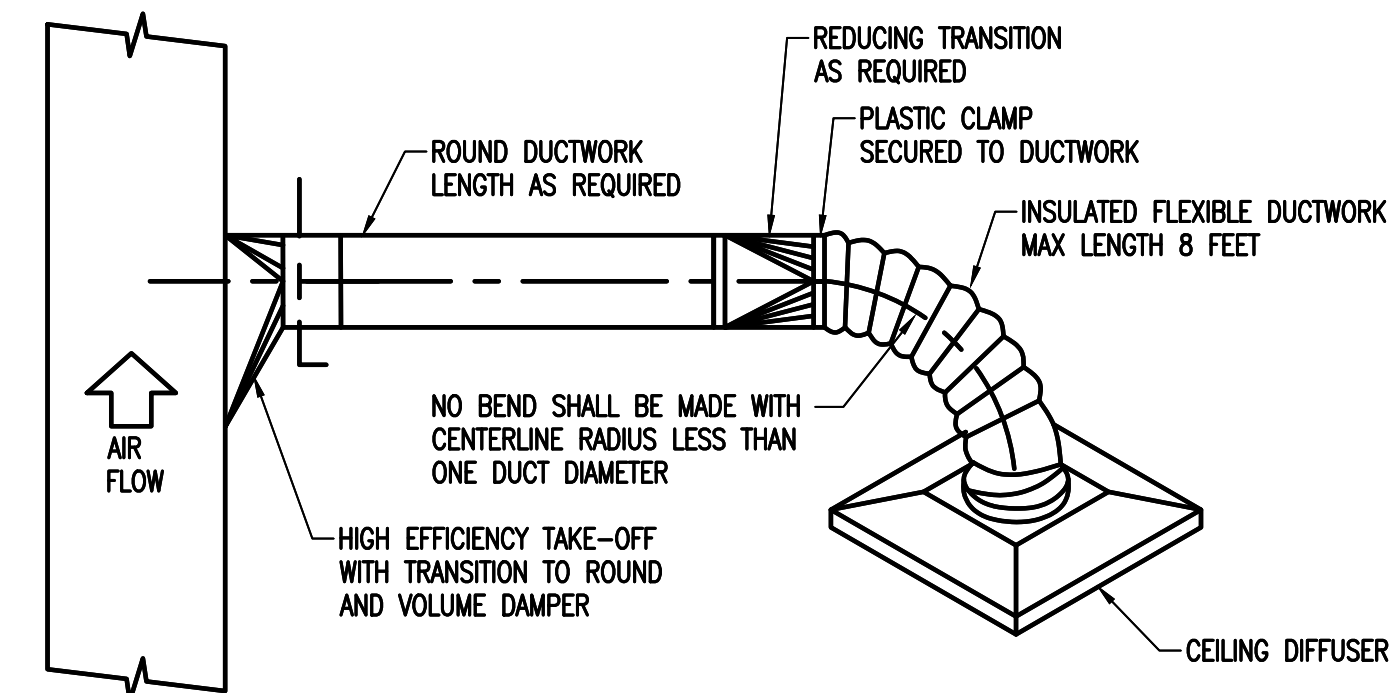
PACKAGED ROOFTOP AIR CONDITIONING UNIT SCHEDULE						
REF NO	MANUFACTURER/ MODEL NO	NOMINAL TONNAGE	AIR FLOW (CFM)	OUTSIDE AIR		REMARKS
				MIN (CFM)	MAX (CFM)	
EXG RTU-2	YORK / ZR061S1	5	1,800	300	1,800	[1]
EXG RTU-6	TRANE / YSC060	5	1,750	300	1,750	[1]
NOTES:						
[1] - ROOFTOP EXISTING TO REMAIN. REBALANCE TO AIRFLOWS INDICATED.						

FAN SCHEDULE															
REF NO	MANUFACTURER/ MODEL NO	LOCATION	FAN SECTION								REMARKS				
			FLOW (CFM)	SPEED (RPM)	SONES	STATIC EXT PRESS ("WG)	BHP OR WATTS	MOTOR (HP)	DRIVE TYPE	ELECTRICAL CHARACTERISTICS					
										VOLTS				PHASE	HERTZ
EF-1	LOREN COOK / GC-148	TOILET ROOM	75	855	1.5	0.375	34 W	-	DIRECT	115	1	60	PROVIDE WITH ISOLATOR KIT, FAN SPEED CONTROLLER, BACKDRAFT DAMPER; INTEGRAL DISCONNECT		
EF-2	LOREN COOK / GC-148	TOILET ROOM	75	855	1.5	0.375	34 W	-	DIRECT	115	1	60	PROVIDE WITH ISOLATOR KIT, FAN SPEED CONTROLLER, BACKDRAFT DAMPER; INTEGRAL DISCONNECT		

MEI
MARTARANO
ENGINEERING INC
1105 Berkshire Blvd, Suite 140
Wyomissing, PA 19610
t(484)-706-9779
Project #23-077

NEW WORK NOTES:

- ROUTE 8" EA DUCT UP TO EXHAUST HOOD ON ROOF. EXHAUST HOOD SHALL BE LOREN COOK PR-8, OR EQUAL. MAINTAIN A MINIMUM OF 10' FROM ALL OA INTAKES.
- PROVIDE NEW BALANCING DAMPERS AS REQUIRED TO BALANCE AIR DEVICES TO NEW AIRFLOWS.
- DRYER VENT WALL CAP SHALL BE INOVATE MODEL DWH4, OR EQUAL. CAP SHALL BE PAINTED TO MATCH ADJACENT FINISHES. COORDINATE FINAL LOCATION IN FIELD. MAINTAIN A MINIMUM OF 10' TO ALL OUTSIDE AIR INTAKES AND 3' TO ALL OPERABLE BUILDING OPENINGS.



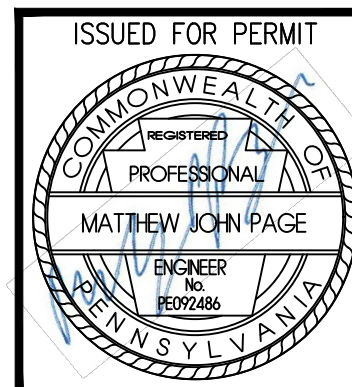
- NOTES:
- FLEXIBLE DUCT BENDS SHALL NOT HAVE A RADIUS GREATER THAN 90°.
 - MAXIMUM LENGTH OF FLEXIBLE DUCT SHALL BE 8'-0.

FLEXIBLE DUCT CONNECTION DETAIL
NO SCALE

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HEATING, VENTILATION, AND AIR CONDITIONING SPECIFICATIONS

1.

THE ARCHITECTURAL GENERAL CONDITIONS SHALL APPLY TO AND FORM A PART OF THIS SECTION OF THESE SPECIFICATIONS.
2.

PROVIDE ALL MATERIALS, LABOR, EQUIPMENT AND TOOLS NECESSARY FOR COMPLETE AND WORKABLE SYSTEMS AS INDICATED ON THE DRAWINGS.
3.

ALL WORK SHALL BE IN ACCORDANCE WITH
- 3.1

ALL APPLICABLE SECTIONS OF THE NATIONAL FIRE PROTECTION ASSOCIATION
- 3.2

LATEST EDITION OF THE NATIONAL ELECTRIC CODE
- 3.3

OSHA
- 3.4

2018 PENNSYLVANIA MECHANICAL CODE (MC 2018 AMENDED)
- 3.5

2018 PENNSYLVANIA BUILDING CODE (IBC 2018 AMENDED)
- 3.6

2018 PENNSYLVANIA ENERGY CONSERVATION CODE (IECC 2018 AMENDED)
- 3.7

2018 PENNSYLVANIA PLUMBING CODE (IPC 2018 AMENDED)
- 3.8

2018 PENNSYLVANIA FUEL GAS CODE (IFGC 2018 AMENDED)
- 3.9

ALL OTHER STATE AND LOCAL AUTHORITIES HAVING JURISDICTION
- 3.10

APPLICABLE MANUFACTURER'S REQUIREMENTS AND RECOMMENDATIONS.
4.

THE CONTRACTOR SHALL VISIT THE SITE, EXAMINE ALL CONDITIONS AND MAKE ALLOWANCES FOR DIFFICULTIES AND CONTINGENCIES AFFECTING THE PROPER EXECUTION OF THIS CONTRACT PRIOR TO SUBMITTING A PROPOSAL.
5.

THE CONTRACTOR AND ALL SUB-CONTRACTORS SHALL HAVE A MINIMUM OF FIVE YEARS OF PROVEN EXPERIENCE ON PROJECTS WITH SIMILAR LEVELS OF COMPLEXITY AND MAGNITUDE. EXPERIENCE SHALL BE BASED ON THE EXPERIENCE AS A COMPANY AND NOT ON THE EXPERIENCE AS INDIVIDUALS.
6.

THE CONTRACTOR SHALL OBTAIN AND PAY ALL FEES NECESSARY FOR PERMITS AND INSPECTIONS REQUIRED WITH HIS WORK.
7.

THE CONTRACTOR SHALL VERIFY ALL UTILITY SERVICE INFORMATION SHOWN ON THE DRAWINGS WITH THE LOCAL UTILITY COMPANY PRIOR TO SUBMITTING A BID. ANY CHANGES OR SERVICE CHARGES IMPOSED BY THE UTILITY COMPANY SHALL BE QUALIFIED AND INCLUDED IN THE BID.
8.

ALL EQUIPMENT SHALL BE TESTED, LISTED AND LABELED BY AN APPROVED AUTHORITY (UL, AGA, ETL) AND SHALL BE INSTALLED IN ACCORDANCE WITH ITS LISTING.
9.

ALL EQUIPMENT, MATERIALS AND WORKMANSHIP SHALL BE GUARANTEED FOR A MINIMUM OF ONE YEAR (FIVE YEARS FOR ALL COMPRESSORS) FROM THE DATE OF ACCEPTANCE BY THE OWNER. SPECIFIC MANUFACTURER MATERIAL OR EQUIPMENT WARRANTIES SHALL SUPERSEDE THIS REQUIREMENT.
10.

WHERE PRODUCTS ARE SPECIFIED BY BRAND NAME, CATALOG NUMBERS OR BY NAMES OF MANUFACTURERS, THE REFERENCE IS INTENDED TO BE DESCRIPTIVE AND NOT RESTRICTIVE AND IS SOLELY FOR THE PURPOSE OF INDICATING THE TYPE OF QUALITY OF ITEM THAT WILL BE ACCEPTABLE. AN APPROVED EQUAL WILL BE ACCEPTED UNLESS INDICATED OTHERWISE. NOTE: THE TERM "APPROVED EQUAL" SHALL MEAN A PRODUCT/ITEM THAT HAS BEEN SUBMITTED TO THE OWNER'S REPRESENTATIVE FOR REVIEW PRIOR TO SUBMITTING A BID AND THE CONTRACTOR HAS RECEIVED WRITTEN NOTIFICATION THAT THE SUBSTITUTED PRODUCT WILL BE CONSIDERED AN EQUIVALENT ALTERNATE TO THE SPECIFIED PRODUCT/ITEM. IN THE EVENT A BRAND IS APPROVED AND SUBSTITUTED, IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE HIS SUBSTITUTED MATERIAL INTO THE ORIGINAL WORK AT NO EXTRA COST TO THE OWNER OR ANY OTHER CONTRACTOR
11.

THE CONTRACTOR RESPONSIBLE FOR WORK COVERED BY THESE SPECIFICATIONS SHALL COORDINATE AND COOPERATE WITH ALL OTHER TRADES.
12.

SHOP DRAWINGS SHALL BE SUBMITTED AND REVIEWED BY THE OWNER'S REPRESENTATIVE BEFORE ORDERING EQUIPMENT.
13.

THE CONTRACTOR SHALL UTILIZE ALL APPLICABLE CONSTRUCTION METHODS TO PROVIDE A PROPER AND COMPLETE INSTALLATION AS REQUIRED TO MAINTAIN THE INTEGRITY OF ANY AND ALL FIRE RATED WALLS, FLOORS, BARRIERS, AND ASSEMBLIES THAT ARE PENETRATED BY DUCTWORK, PIPING, WIRING, CONDUITS, DIFFUSERS, REGISTERS, GRILLES, ETC. ALL FIRE STOPPING METHODS AND PRODUCTS SHALL BE UL LISTED AND SHALL BE AS MANUFACTURED BY 3M, HILTI OR APPROVED EQUAL. THE CONTRACTOR SHALL BE REQUIRED TO REVIEW ALL DESIGN DRAWINGS AND SPECIFICATIONS AND REVIEW WITH THE OWNER, ARCHITECT AND/OR GENERAL CONTRACTOR TO DETERMINE WHERE ALL FIRE RATED ASSEMBLIES ARE/WILL BE LOCATED.
14.

THE CONTRACTOR SHALL FURNISH AND INSTALL ALL NECESSARY HANGERS, INSERTS, SUPPORTS SUPPLEMENTARY STEEL, ETC., TO PROPERLY SUPPORT ALL EQUIPMENT, DUCTWORK AND PIPING IN AN APPROVED MANNER AND IN FULL ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
15.

THE CONTRACTOR SHALL CUT AND PATCH AS REQUIRED TO PERFORM THE DEMOLITION WORK. ALL OPENINGS CREATED MUST BE REPAIRED TO MATCH EXISTING CONSTRUCTION. ALL CUTTING AND PATCHING SHALL BE PERFORMED BY MECHANICS EXPERIENCED IN THEIR RESPECTIVE LINE OF WORK. IF THE OWNER'S REPRESENTATIVE IS NOT SATISFIED WITH QUALITY OF WORK, THE CONTRACTOR SHALL BE REQUIRED, AT HIS OWN EXPENSE, TO ENGAGE THE GENERAL CONTRACTOR TO REPLACE DAMAGED MATERIALS WITH NEW MATERIALS. DISPOSAL SHALL BE IN ACCORDANCE WITH THE REGULATIONS OF THE AUTHORITIES AT THE DISPOSAL SITE. IF THE CONTRACTOR ENCOUNTERS OR SUSPECTS HAZARDOUS OR TOXIC MATERIAL, THE CONTRACTOR SHALL ADVISE THE OWNER IMMEDIATELY. THE WORK IN THE AFFECTED AREA SHALL NOT BE RESUMED BY THE CONTRACTOR UNTIL THE HAZARDOUS MATERIAL HAS BEEN REMOVED OR RENDERED HARMLESS BY THE OWNER
16.

THE HVAC CONTRACTOR SHALL CONFER WITH ALL OTHER CONTRACTORS AND SHALL APPLY FOR DETAILED AND SPECIFIC INFORMATION REGARDING THE LOCATION OF ALL EQUIPMENT AS THE FINAL LOCATION MAY DIFFER FROM THAT INDICATED ON THE DRAWINGS. DUCTWORK, PIPING OR EQUIPMENT IMPROPERLY PLACED BECAUSE OF THE HVAC CONTRACTOR'S FAILURE TO OBTAIN THIS INFORMATION SHALL BE RELOCATED AND REINSTALLED BY THE HVAC CONTRACTOR WITHOUT ADDITIONAL EXPENSE TO THE OWNER.
- 16.1

COORDINATION DRAWINGS ARE REQUIRED. MECHANICAL CONTRACTOR SHALL LEAD THE COORDINATION EFFORT AND PREPARE THE COORDINATION DRAWINGS. CONTRACTOR SHALL COORDINATE HIS WORK WITH THAT OF OTHER TRADES SO THAT ALL WORK MAY BE INSTALLED IN THE MOST DIRECT MANNER AND SO THAT INTERFERENCE BETWEEN PIPING, DUCTS, EQUIPMENT, ARCHITECTURAL OR STRUCTURAL FEATURES WILL BE AVOIDED. IN THE CASE INTERFERENCE RESULTS, THE OWNER'S REPRESENTATIVE SHALL DECIDE WHICH WORK IS TO BE RELOCATED, REGARDLESS OF WHICH IS FIRST INSTALLED. SUCH RELOCATION SHALL BE AT NO ADDITIONAL COST TO THE OWNER.
17.

VIBRATION ISOLATORS FOR THE HVAC EQUIPMENT SHALL BE INSTALLED TO PROPERLY ISOLATE THE TRANSMISSION OF VIBRATION OR NOISE TO ANY PART OF THE BUILDING. VIBRATION ISOLATION AND BALANCE QUALITY SHALL BE PER AMCA 204, BV-3 AND ASHRAE HANDBOOK TABLE 47 "SELECTION GUIDE FOR VIBRATION ISOLATION". TYPE OF ISOLATION, BASE AND MINIMUM STATIC DEFLECTION SHALL BE AS REQUIRED FOR EACH SPECIFIC EQUIPMENT APPLICATION AS RECOMMENDED BY ISOLATOR OR EQUIPMENT MANUFACTURER.
18.

DUCTWORK
- 18.1

DUCTWORK SHALL BE GALVANIZED STEEL DESIGNED FOR 2-INCH PRESSURES IN ACCORDANCE WITH SMACNA. ALL ELBOWS SHALL BE PROVIDED WITH TURNING VANES OR RECTANGULAR RADIUS ELBOWS MAY BE USED. ALL DUCTWORK SHALL BE SEALED WITH HARD CAST DUCT SEALER 321 AND IN ACCORDANCE WITH SMACNA SEAL CLASS B.
- 18.2

FLEXIBLE DUCTWORK SHALL BE UL 181 CLASS 1 COMPLETE WITH AN INSULATING FIBERGLASS BLANKET, FOIL FACED VAPOR BARRIER AND DESIGNED TO WITHSTAND PRESSURES UP TO SIX INCHES POSITIVE PRESSURE W.G. FLEXIBLE DUCT RUNS SHALL BE A MAXIMUM OF FIVE FEET IN LENGTH AND SHALL BE TYPE 5M-INSULATED AS MANUFACTURED BY FLEXMASTER USA, INC. WITH A MINIMUM R-VALUE OF SIX (6) IN UNCONDITIONED SPACES OR AN R-VALUE OF TWELVE (12) WHEN INSTALLED OUTSIDE THE BUILDING THERMAL ENVELOPE.
- 18.3

ALL ROUND BRANCH TAKEOFFS SHALL BE "HIGH EFFICIENCY" TYPE WITH BALANCING DAMPERS. PROVIDE STANDOFFS FOR DAMPER OPERATORS AS REQUIRED FOR INSULATED DUCTWORK.
19.

DUCTWORK INSULATION
- 19.1

ALL SUPPLY, RETURN AND OUTSIDE AIR DUCTWORK SHALL BE INSULATED WITH FIBERGLASS DUCT WRAP INSULATION. INSULATION SHALL BE JOHNS MANVILLE MICROLITE FSK DUCT-WRAP (OR APPROVED EQUAL.) INSULATION SHALL BE SECURED WITH CHILDERS CP-85 ADHESIVE OR MECHANICAL FASTENERS. JOINTS SHALL BE SEALED WITH SEALING TAPE AND ADHESIVE.

- 19.2

INSULATION SHALL HAVE AN INSTALLED R-VALUE AS FOLLOWS:
- 1

DUCTWORK INSTALLED IN UNCONDITIONED SPACES (INCLUDING DUCTWORK WITHIN CEILING CAVATIES AND SOFFITS) – R-6 MINIMUM
- 19.3

INSULATE THE FIRST TEN FEET OF EXHAUST DUCT ADJACENT TO EXHAUST LOUVERS AND HOODS WITH FIBERGLASS DUCT WRAP INSULATION AS SPECIFIED FOR SUPPLY DUCTWORK.
- 19.3.1

THE DUCT SIZES ON THE DRAWINGS SHALL REPRESENT THE INSIDE CLEAR DIMENSIONS. INCREASE SHEETMETAL DIMENSIONS AS REQUIRED TO ACCOMMODATE DUCT LINER.
- 19.4

DUCTWORK ACCESSORIES
- 19.5

BALANCING DAMPERS SHALL BE FABRICATED IN ACCORDANCE WITH SMACNA. IN INSULATED DUCTWORK, PROVIDE STANDOFFS FOR DAMPER OPERATORS. ALL DAMPERS SHALL HAVE LOCKING QUADRANTS. BALANCING DAMPERS LOCATED ABOVE A HARD CEILING OR INACCESSIBLE AREA SHALL BE PROVIDED WITH A CABLE OPERATOR WITH ADJUSTMENT LOOP MOUNTED IN CEILING OR WALL BOX.
- 19.5.1

DUCT ACCESS DOORS SHALL BE PROVIDED AT ALL COILS, FIRE DAMPERS, FIRE/SMOKE DAMPERS, BALANCING DAMPERS, AUTOMATIC DAMPERS, SMOKE DETECTORS AND OTHER APPARATUS REQUIRING SERVICE OR INSPECTION. DOORS SHALL BE CONSTRUCTED FOR THE SAME STATIC PRESSURE CLASS AS THE DUCT IN WHICH IT IS INSTALLED. DOORS SHALL BE 18 X 18 INCHES UNLESS DUCT SIZE WILL NOT ACCOMMODATE THIS SIZE. THEN, THE DOORS SHALL BE MADE AS LARGE AS PRACTICAL. DOORS IN INSULATED DUCTS SHALL BE OF THE INSULATED TYPE WITH A MINIMUM OF ONE-INCH OF FIBERGLASS INSULATION. DOORS SHALL BE RIGID WITH NEOPRENE GASKETS FOR FRAME-TO-DUCT AND FRAME-TO-DOOR, CONTINUOUS PIANO HINGES AND CAM LOCKS. DOORS SHALL BE AS MANUFACTURED BY RUSKIN. LABEL ALL ACCESS DOORS ASSOCIATED WITH SMOKE DAMPERS OR FIRE DAMPERS OR COMBINED SMOKE/FIRE DAMPERS WITH LETTERS NOT LESS THAN 0.5-INCHES IN HEIGHT READING: "SMOKE DAMPER," OR "FIRE DAMPER," OR "FIRE/SMOKE DAMPER" RESPECTIVELY.
20.

FANS
- 20.1

CABINET FANS SHALL BE AS MANUFACTURED BY LOREN COOK OR APPROVED EQUAL. FANS SHALL BE CABINET TYPE EQUIPPED INTEGRAL SPEED CONTROL, GRILLE, DISCONNECT SWITCH AND BACKDRAFT DAMPER. FANS SHALL HAVE MODEL NUMBER AND CAPACITIES INDICATED ON THE DRAWINGS.
- 20.2

RELIEF/INTAKE HOODS
- 20.3

ROOF MOUNTED RELIEF/INTAKE HOODS SHALL BE OF ALUMINUM CONSTRUCTION AND HAVE CONTINUOUSLY WELDED VERTICAL SEAMS. HOODS SHALL BE COMPLETE WITH BIRDSCREEN, AUTOMATIC DAMPER AND A MATCHING 18 INCH HIGH PREFABRICATED CURB. HOODS PROVIDED SHALL BE SIZED FOR THE CAPACITIES AND ROOF OPENING AS INDICATED ON THE DRAWINGS. HOODS SHALL BE AS MANUFACTURED BY LOREN COOK.
21.

DIFFUSERS, REGISTERS AND GRILLES
- 21.1

CEILING DIFFUSERS SHALL BE COMPLETE WITH BALANCING DAMPERS AND WHITE ENAMEL FINISH OR APPROVED EQUAL. DIFFUSERS SHALL BE AS MANUFACTURED BY KRUEGER WITH SIZES AND MODEL NUMBERS AS SCHEDULED.
- 21.2

LINEAR SLOT DIFFUSERS SHALL BE COMPLETE WITH INTERNALLY INSULATED PLENUM WITH END CAPS. SLOT DIFFUSER APPEARANCE SHALL BE CONTINUOUS WHERE INDICATED ON DRAWINGS. PROVIDE BLANK OFF PANELS ON INACTIVE SECTIONS. FINISH COLOR TO BE SELECTED BY ARCHITECT. SLOT DIFFUSERS SHALL BE AS MANUFACTURED BY KRUEGER WITH SIZES AND MODEL NUMBERS AS SCHEDULED.
- 21.3

GRILLES SHALL BE COMPLETE WITH A WHITE ENAMEL FINISH. GRILLES SHALL BE AS MANUFACTURED BY KRUEGER WITH SIZES AND MODEL NUMBERS AS SCHEDULED.
22.

CONTROLS
- 22.1

THE CONTRACTOR SHALL PROVIDE AND INSTALL ALL NECESSARY CONTROL COMPONENTS INCLUDING, BUT NOT LIMITED TO, RELAYS, AUTOMATIC DAMPERS, DAMPER OPERATORS, THERMOSTATS, SENSORS, CONTROLLERS, ETC. AND WIRING AS REQUIRED TO PROVIDE AUTOMATIC TEMPERATURE CONTROL THAT CAN COMPLETE THE SEQUENCE OF OPERATIONS LISTED BELOW. ALL CONTROL COMPONENTS SHALL BE AS MANUFACTURED BY HONEYWELL, JOHNSON CONTROLS, SIEMENS, TRANE OR APPROVED EQUAL. ALL WIRING SHALL BE DONE IN ACCORDANCE WITH THE LOCAL AND STATE CODES AND THE LATEST APPROVED EDITION OF THE NATIONAL ELECTRIC CODE.
- 22.2

THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION OF BUILDING OCCUPIED PERIODS AND DESIRED TEMPERATURE SETPOINTS WITH THE OWNER'S REPRESENTATIVE.
- 22.3

MECHANICAL CONTRACTOR SHALL INCLUDE THE COST FOR ALL TIME REQUIRED BY THE BUILDING CONTRACTOR'S CONTROL CONTRACTOR TO SUPPORT BALANCING AND SCHEDULING IN THE MECHANICAL CONTRACTOR'S PROPOSAL.
- 22.4

CONTRACTOR SHALL SUBCONTRACT THE OWNERS BUILDING CONTROLS CONTRACTOR TO COMPLETE ALL CONTROLS WORK. COORDINATE WITH OWNER FOR CONTACT INFORMATION.
- 22.5

SEQUENCE OF OPERATIONS
- 22.5.1

EXG RTU-2.6 : IN A SCHEDULED OCCUPIED MODE, THE OUTSIDE AIR DAMPER SHALL OPEN TO ITS MINIMUM POSITION AND THE EVAPORATOR FAN SHALL RUN CONTINUOUSLY. THE HEATING AND COOLING PORTIONS OF THE UNIT SHALL CYCLE AS REQUIRED TO MAINTAIN THE SPACE TEMPERATURE SETPOINT. THE ECONOMIZER SHALL ACT AS THE PRIMARY SOURCE OF COOLING IF OUTDOOR AIR CONDITIONS PERMIT.
- 22.5.2

EF-1.2 SHALL BE INTERLOCKED WITH THE LIGHTING CIRCUIT OF THE ROOM IT SERVES. WIRING BY E.C.
23.

THE REFRIGERATION SYSTEM SHALL BE TESTED AND PROVEN TIGHT PRIOR TO PLACING IN OPERATION. UNITS SHALL BE CHECKED FOR PROPER REFRIGERANT CHARGE AND OPERATION AND ADJUSTED AS PER THE MANUFACTURER'S RECOMMENDATIONS.
24.

THE EQUIPMENT AND MATERIALS SHALL BE COMPLETELY CLEANED PRIOR TO TESTING, INSULATING AND PLACING THE SYSTEM IN OPERATION.
25.

TESTING ADJUSTING AND BALANCING
26.

TEST, BALANCE & ADJUST FLOWS IN ALL SUPPLY, RETURN, OUTSIDE AIR, AND EXHAUST AIR DUCT SYSTEMS, INCLUDING FANS, DAMPERS, OUTLETS AND APPURTENANCES. SYSTEMS SHALL BE PROPERLY BALANCED TO DELIVER AIR VOLUMES WITHIN PLUS/-10% OF THE VALUES INDICATED. THE TOTAL SYSTEM LEAKAGE THROUGH DUCT JOINTS AND CONNECTIONS SHALL NOT EXCEED 3%. TEMPERATURE, AMPERE AND RPM READINGS SHALL ALSO BE PROVIDED TO VERIFY SYSTEM PERFORMANCE.
- 26.1.1

TEST, ADJUST AND RECORD AIRFLOW READINGS AND TEMPERATURES FOR ALL EQUIPMENT BEING INSTALLED OR MODIFIED UNDER THIS PROJECT AS REQUIRED TO VERIFY CAPACITIES AND PERFORMANCE.
- 26.1.2

TESTING REPORT SHALL INCLUDE ALL ENTERING AND LEAVING AIR TEMPERATURES TO VERIFY PERFORMANCE AND MEASURE SPACE PRESSURES TO VERIFY PROPER AIR BALANCE OF EXHAUST AND OUTDOOR AIR SUPPLY.
- 26.1.3

THE TESTING AND BALANCING CONTRACTOR SHALL BE A THIRD-PARTY, NEBB OR AABC CERTIFIED BALANCING COMPANY.
- 26.1.4

ALL TEST EQUIPMENT SHALL BE FURNISHED BY THE BALANCING CONTRACTOR AND WILL REMAIN HIS PROPERTY. ALL INSTRUMENTS WILL HAVE BEEN CALIBRATED RECENTLY AND VERIFICATION OF CALIBRATION PROVIDED WITH SUBMITTAL DATA.
- 26.1.5

TESTING AND BALANCING SHALL NOT BEGIN UNTIL THE SYSTEM HAS BEEN COMPLETED AND IS IN FULL WORKING ORDER WITH ALL FILTERS INSTALLED. THE CONTRACTOR SHALL PUT ALL HEATING, VENTILATING AND AIR-CONDITIONING SYSTEMS AND EQUIPMENT INTO FULL OPERATION. THE CORRECT OPERATION OF EQUIPMENT AND SYSTEM COMPONENTS AND CLEANLINESS OF PIPING AND DUCTWORK SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
- 26.1.6

THE CONTRACTOR SHALL MAKE ANY CHANGES REQUIRED FOR CORRECT BALANCE, AS RECOMMENDED BY THE BALANCING CONTRACTOR, AT NO ADDITIONAL COST TO THE OWNER. SUCH CHANGES MAY ENCOMPASS BUT ARE NOT LIMITED OR RESTRICTED TO PULLEYS, BELTS, DUCTWORK, DAMPERS OR THE ADDITION OF DAMPERS AND ACCESS DOORS.
- 26.1.7

SUBMIT 3 COPIES OF THE BALANCING REPORTS AT COMPLETION OF THE BALANCING.
27.

EQUIPMENT STARTUP:
- 27.1

PROVIDE EQUIPMENT STARTUP REPORT, INCLUDING CHECKLIST CONFIRMING MANUFACTURERS STARTUP PROCEDURE HAS BEEN FOLLOWED IN ITS ENTIRETY.

28.

OWNER TRAINING
- 28.1

CONTRACTOR SHALL PROVIDE OWNER OR OWNER'S REPRESENTATIVE WITH TRAINING ON THE OPERATION AND MAINTENANCE OF ALL NEW EQUIPMENT, ACCESSORIES AND CONTROLS. TRAINING SHALL BE AS RECOMMENDED BY THE MANUFACTURER FOR GENERAL OPERATION, MAINTENANCE AND SERVICE OF SYSTEMS.
29.

COMPLETION
- 29.1

UPON COMPLETION OF THE WORK THE CONTRACTOR SHALL REMOVE ALL HIS EXCESS MATERIALS, MACHINERY AND EQUIPMENT FROM THE PREMISES AND REPLACE ALL FILTERS.
- 29.2

DURING CONSTRUCTION, THE CONTRACTOR SHALL MAINTAIN A RECORD SET OF INSTALLATION PRINTS. RECORD ON THESE PRINTS, ALL DEVIATIONS FROM THE CONTRACT DRAWINGS, INCLUDING BUT NOT LIMITED TO, DUCT/PIPE ROUTING, SYSTEM CONNECTION POINTS, DUCT/PIPE SIZES AND EQUIPMENT LOCATION CHANGES. AT THE COMPLETION OF THE WORK, THE CONTRACTOR SHALL TRANSFER THIS INFORMATION NEATLY ONTO 3 SETS OF PRINTS AND FORWARD THESE PRINTS AND THE "AS BUILT PRINTS" TO THE OWNER OR OWNERS REPRESENTATIVE.
- 29.3

THE CONTRACTOR SHALL FURNISH THREE SETS OF OPERATION AND MAINTENANCE INSTRUCTION MANUALS TO THE OWNER AT THE COMPLETION OF CONSTRUCTION.

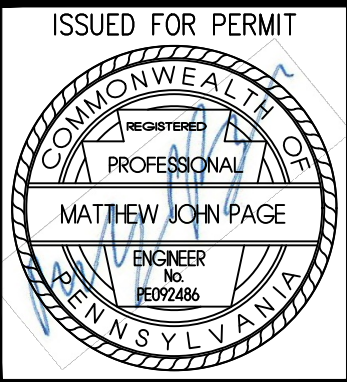
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MARTARANO
ENGINEERING INC
1105 Berkshire Blvd. Suite 140
Wyomissing, PA 19610
t(484)-706-9779
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PLUMBING — GROUND FLOOR PLAN — DEMOLITION
SCALE: 1/8" = 1'-0"

DEMOLITION NOTES:

- DISCONNECT AND REMOVE EXISTING FIXTURE AND ACCESSORIES. REMOVE ALL DOMESTIC WATER PIPING BACK TO BRANCH ABOVE CEILING AND CAP. CAP AND ABANDON EXISTING SANITARY PIPING BELOW FLOOR. REMOVE ALL VENT TO BRANCH ABOVE THE CEILING AND CAP. RETAIN BRANCH PIPING ABOVE CEILING FOR CONNECTION TO NEW FIXTURES.
- DISCONNECT AND REMOVE EXISTING FIXTURE AND ACCESSORIES. KEEP ALL DOMESTIC, SANITARY AND VENT PIPING TO BE USED BY NEW FIXTURE.

PLUMBING GENERAL NOTES:

- ALL PLUMBING WORK SHALL CONFORM TO THE LATEST PENNSYLVANIA UNIFORM CONSTRUCTION CODE AND PLUMBING CODE (2018 INTERNATIONAL PLUMBING CODE) AND SUBSEQUENT CODE ORDINANCE AMENDMENTS THERETO.
- DRAWINGS ARE DIAGRAMMATIC. COORDINATE ALL EQUIPMENT LOCATIONS AND PIPE ROUTING WITH OTHER TRADES AND ARCHITECTURAL DETAILS PRIOR TO INSTALLATION.
- VERIFY LOCATIONS, MOUNTING HEIGHTS, TRIM LOCATIONS, ETC. FOR ALL PLUMBING FIXTURES WITH THE ARCHITECT PRIOR TO INSTALLATION. P- DESIGNATES FIXTURE AND FIXTURE TRIM. MOUNTING OF ALL ADA FIXTURES AND RELATED TRIM TO MEET THE AMERICAN DISABILITIES ACT GUIDELINES AND ANSI REQUIREMENTS FOR PEOPLE WITH DISABILITIES.
- CONCEAL ALL PIPING IN WALLS/CHASE SPACE, BELOW FLOORS, AND ABOVE CEILINGS UNLESS OTHERWISE NOTED. INSTALL ALL WATER SUPPLY PIPING IN EXTERIOR WALLS ON THE INSIDE (WARM SIDE) OF THE BUILDING INSULATION. SEAL ALL PIPING PENETRATIONS THROUGH RATED ASSEMBLIES ACCORDINGLY. REFER TO ARCHITECTURAL DRAWINGS FOR FIRE AND SOUND RATED PARTITIONS, CEILINGS, AND FLOORS.
- SEE PLUMBING FIXTURE PIPING SCHEDULE FOR FIXTURE BRANCH COLD WATER, HOT WATER, SOIL, WASTE, AND VENT PIPE SIZES.
- LOCATION AND SIZE OF EXISTING SANITARY MAIN HAS NOT BEEN VERIFIED. PRIOR TO INSTALLATION OF NEW SANITARY PIPING CONTRACTOR SHALL SCOPE AND DOCUMENT LOCATION AND CONDITION OF EXISTING SANITARY MAIN.
- THE PLUMBING CONTRACTORS UTILITIES WORK SHALL INCLUDE, BUT NOT BE LIMITED TO THE FOLLOWING:
WATER SERVICE — EXISTING DOMESTIC WATER SERVICE TO REMAIN. CONNECTIONS AND MODIFICATIONS TO DOMESTIC WATER PIPING.
DRAINAGE SYSTEMS — EXISTING SANITARY BUILDING DRAIN TO REMAIN. CONNECTIONS AND MODIFICATIONS TO SANITARY BUILDING DRAIN PIPING.
(NOTE: PRIOR TO INSTALLATION OF ANY BUILDING DRAINAGE PIPING VERIFY BUILDING DRAIN INVERT.)
- CONTRACTOR SHALL NOT INSTALL PIPING, EQUIPMENT, ETC. ABOVE ANY ELECTRICAL PANEL. CONTRACTOR SHALL COORDINATE DEDICATED ELECTRICAL SPACE WITH ELECTRICAL CONTRACTOR.

PIPING AND ACCESSORIES

	WORK BY THIS CONTRACTOR
	EXISTING WORK OR WORK DONE BY OTHERS
	SANITARY PIPING (SAN)
	SANITARY VENT PIPING (SV)
	COLD WATER PIPING (CW)
	HOT WATER PIPING (HW)
	HOT WATER RECIRCULATING PIPING (HWR)
	GAS PIPING (G)
	PIPE TURNING UP
	PIPE TURNING DOWN
	WATER HAMMER ARRESTOR (WHA)
	BALL VALVE
	CHECK VALVE
	CIRCUIT SETTER
	TEMPERATURE & PRESSURE VALVE
	THERMOMETER
	GAUGE
	PUMP
	METER
	GAS METER
	CONNECT TO EXISTING
	NEW WORK NOTE
	REFER TO INDICATED DEMOLITION NOTE
	EXTENT OF DEMOLITION

ABBREVIATIONS

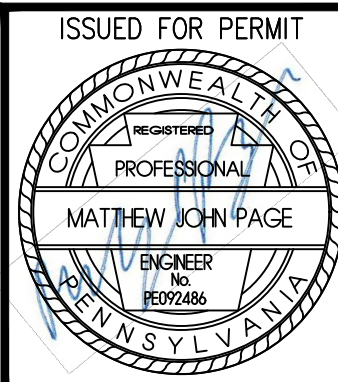
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
APPROX	APPROXIMATELY
A/W	AUTOMATIC CLOTHES WASHER
CO	CLEANOUT
CONT	CONTINUATION
CW	COLD WATER
DF	DRINKING FOUNTAIN
DN	DOWN
DWG	DRAWING
E.C.	ELECTRICAL CONTRACTOR
EW	ELECTRIC WATER COOLER
EXG	EXISTING
FCO	FLOOR CLEANOUT
FD	FLOOR DRAIN
FF. EL.	FINISHED FLOOR ELEVATION
FS	FLOOR SINK
GPM	GALLONS PER MINUTE
HB	HOSE BIBB
HD	HEAD
HP	HORSEPOWER
HW	HOT WATER
ID.	INTERIOR DIMENSION
INV. EL.	INVERT ELEVATION
JS	JANITOR'S SINK
LAV	LAVATORY
M.C.	MECHANICAL CONTRACTOR
MS	MOP SINK
P-	FIXTURE REFERENCE NUMBER
P.C.	PLUMBING CONTRACTOR
PRESS.	PRESSURE
RD	ROOF DRAIN
SAN	SANITARY
SF	SQUARE FEET
T&P	TEMPERATURE AND PRESSURE
TYP	TYPICAL
URI	URINAL
VTR	VENT THRU ROOF
W/	WITH
WC	WATER CLOSET
WH	WATER HEATER
WHA	WATER HAMMER ARRESTOR

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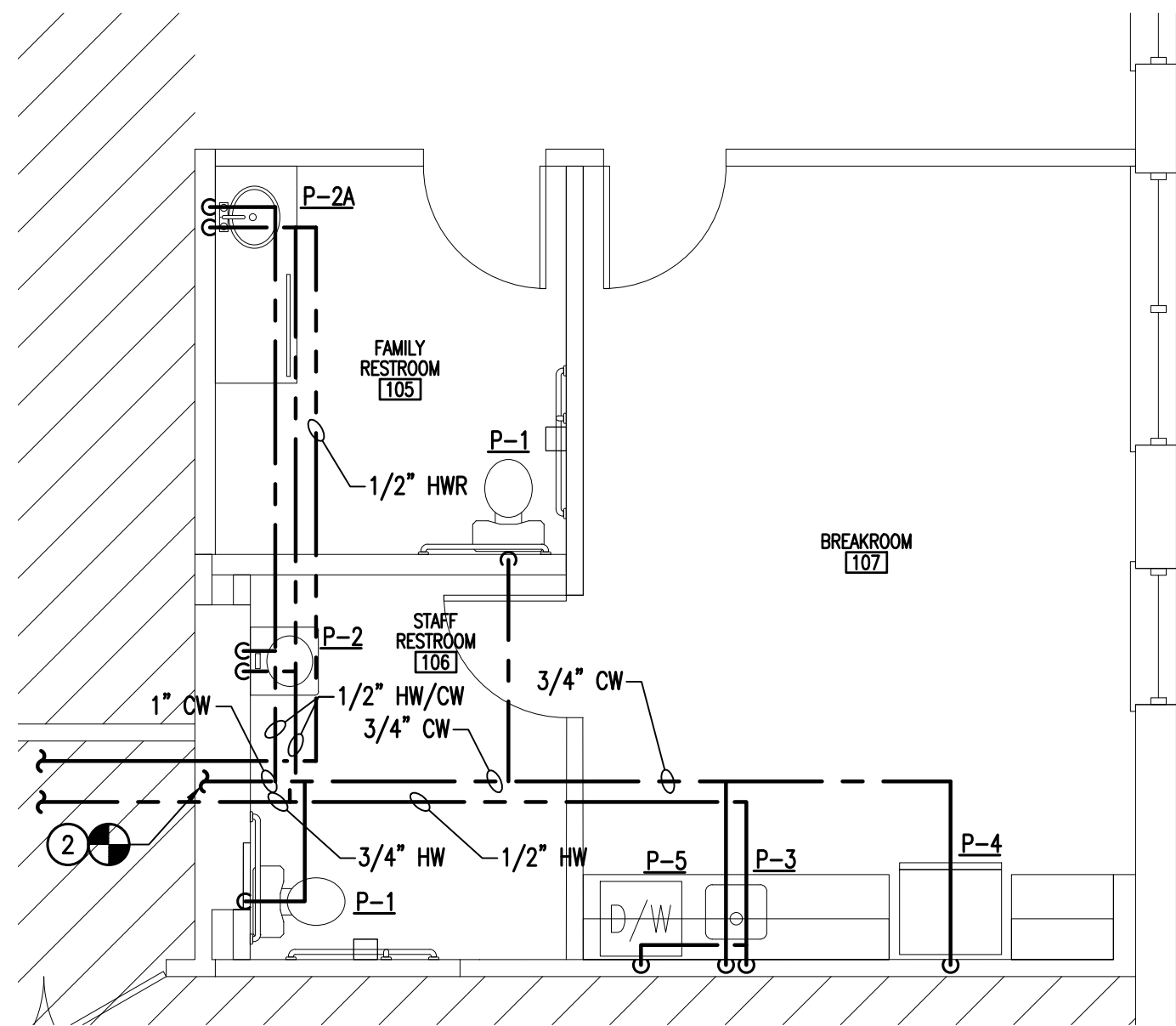
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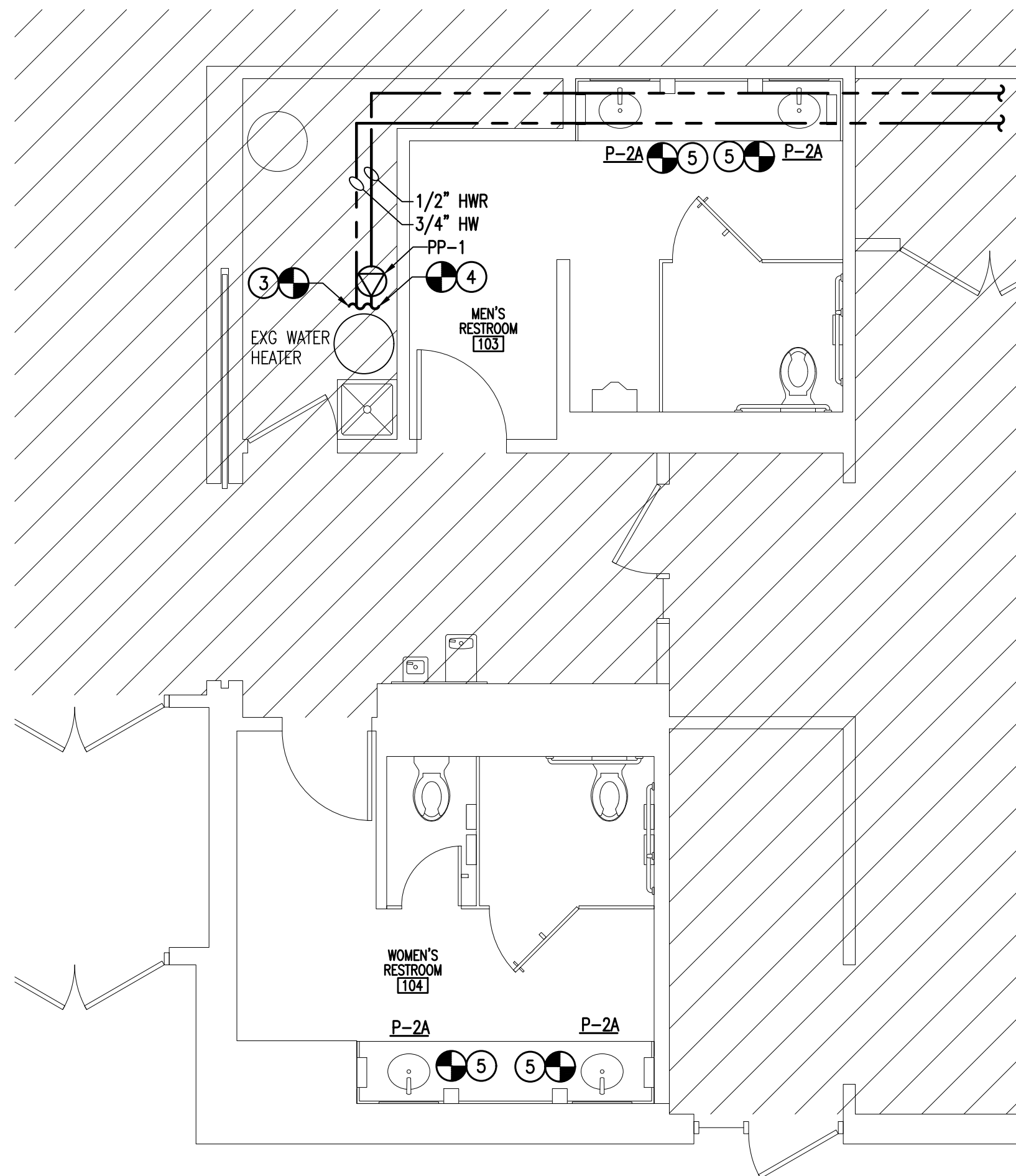
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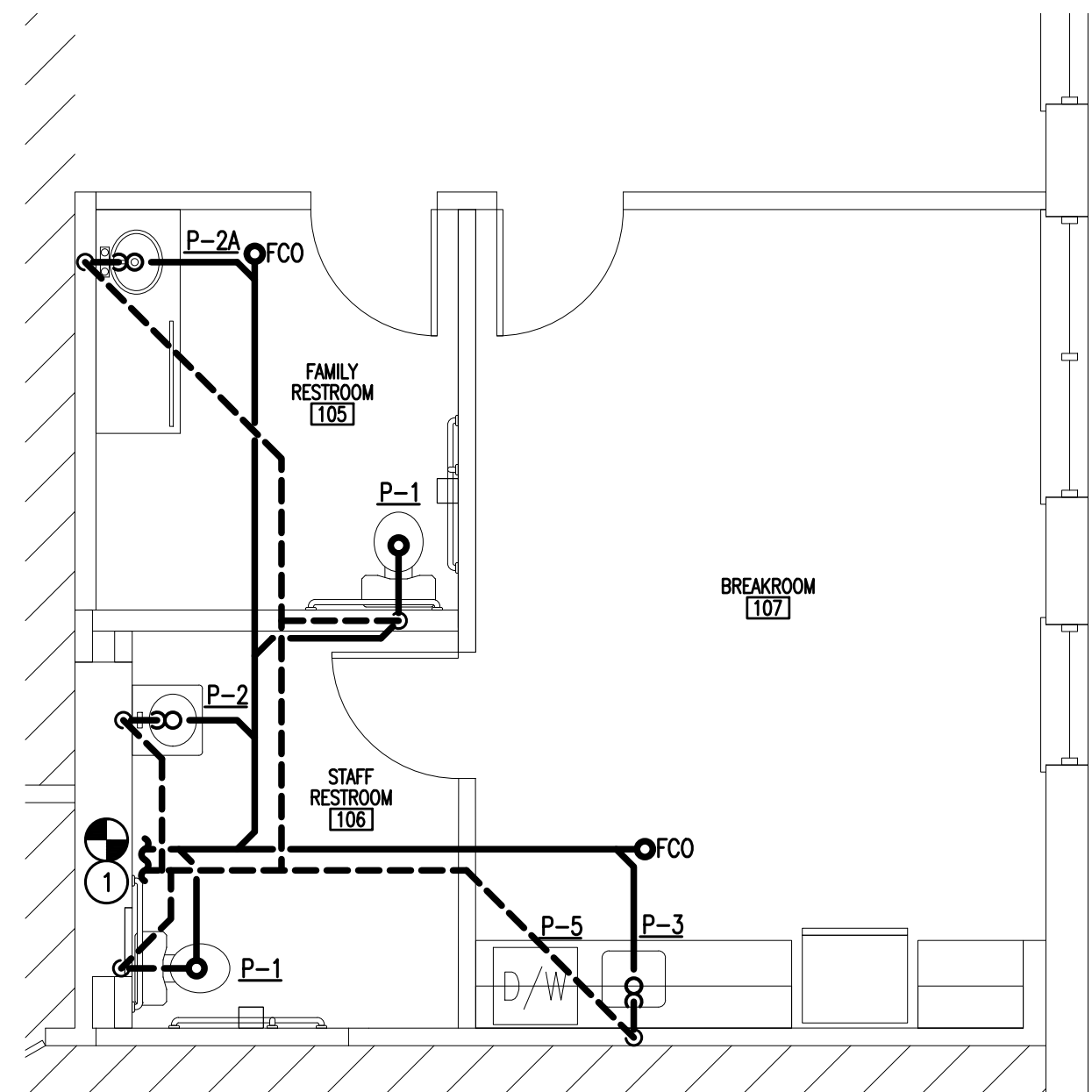
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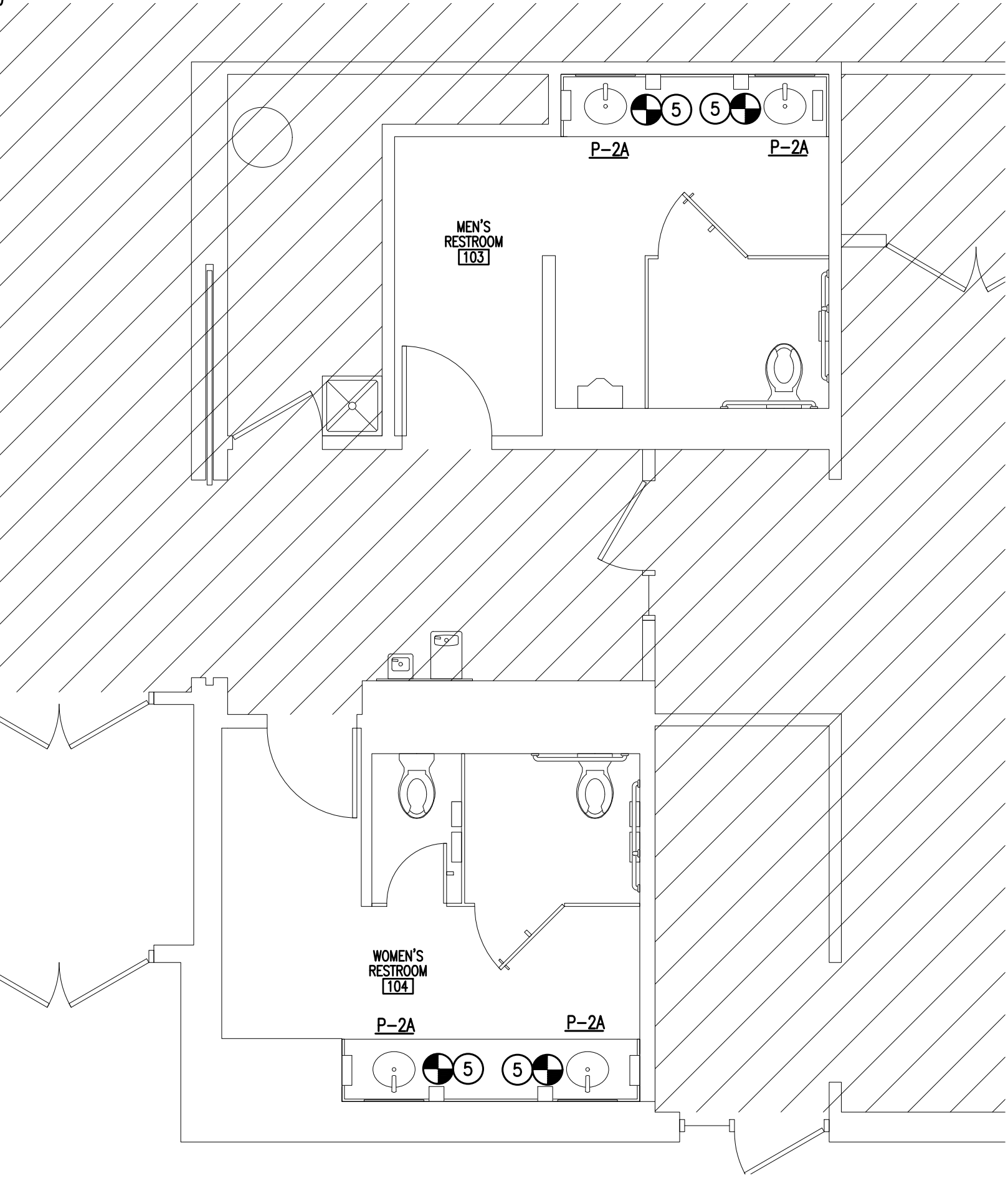
PLUMBING – GROUND FLOOR PLAN – PARTIAL NEW WORK PLAN – DOMESTIC WATER
SCALE: 1/4" = 1'-0"



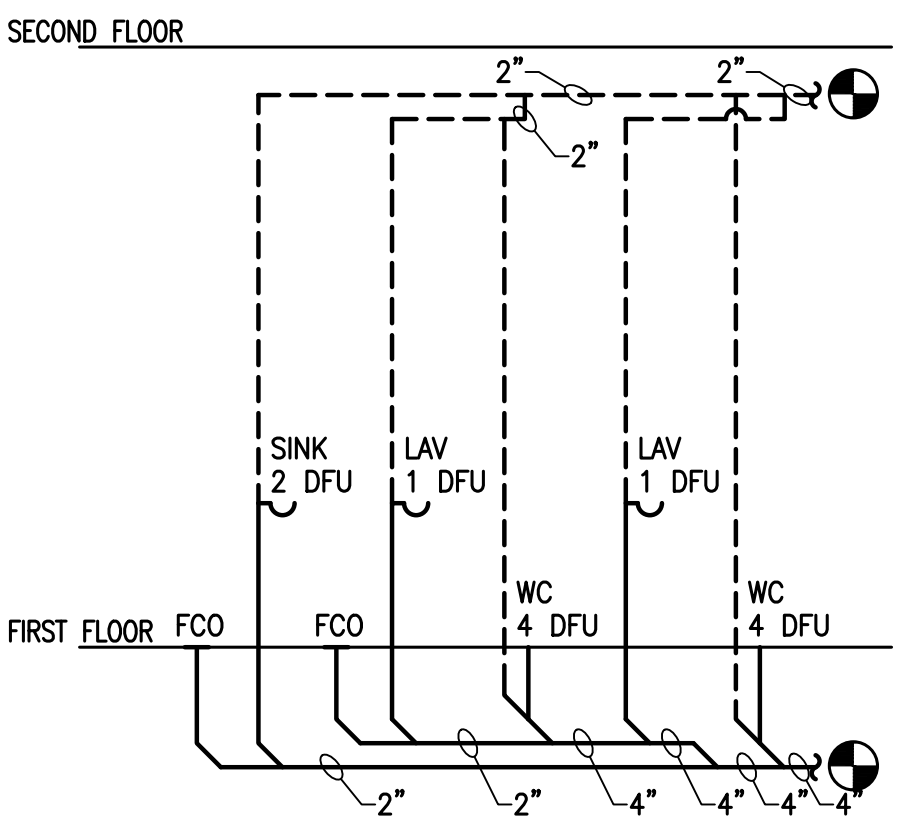
PLUMBING – GROUND FLOOR PLAN – PARTIAL NEW WORK PLAN – DOMESTIC WATER
SCALE: 1/4" = 1'-0"



PLUMBING – GROUND FLOOR PLAN – PARTIAL NEW WORK PLAN – SANITARY & VENT
SCALE: 1/4" = 1'-0"



PLUMBING – GROUND FLOOR PLAN – PARTIAL NEW WORK PLAN – SANITARY & VENT
SCALE: 1/4" = 1'-0"

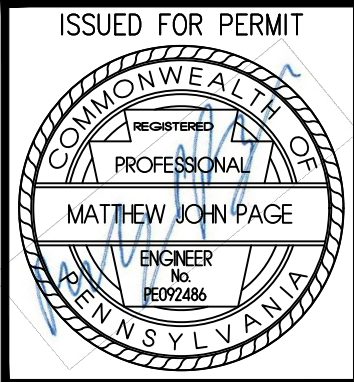


SANITARY RISER DIAGRAM
NO SCALE

- NOTES:
1. ALL SANITARY PIPING LESS THAN 3" SHALL BE SLOPED AT 1/4"/1'-0". ALL SANITARY PIPING 3" OR LARGER SHALL BE SLOPED AT 1/8"/1'-0" (IN ACCORDANCE WITH THE PLUMBING CODE AND ALL LOCAL REQUIREMENTS).
 2. ALL SANITARY PIPING LOCATED BELOW THE FLOOR SLAB SHALL BE NO LESS THAN 2".
 3. ALL VENT THROUGH ROOF PENETRATIONS (VTR'S) SHALL BE LOCATED NO LESS THAN 10'-0" FROM ALL EXISTING OR NEW OUTSIDE AIR INTAKES. COORDINATE WITH MECHANICAL CONTRACTOR IN THE FIELD.

NEW WORK NOTE:

1. CONNECT INTO EXISTING SANITARY AND VENT PIPING RETAINED DURING DEMOLITION. COORDINATE EXACT TIE IN POINT IN FIELD.
2. CONNECT INTO EXISTING BRANCH DOMESTIC COLD WATER PIPING (MIN 1" CW). COORDINATE EXACT TIE IN POINT IN FIELD.
3. CONNECT INTO EXISTING DOMESTIC HOT WATER PIPING EXITING EXISTING WATER HEATER (MIN 3/4" HW). COORDINATE EXACT TIE IN POINT IN FIELD.
4. CONNECT RECIRCULATION PIPING INTO EXISTING DOMESTIC COLD WATER PIPING ENTERING EXISTING WATER HEATER. COORDINATE EXACT TIE IN POINT IN FIELD.



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EXG ELECTRIC WATER HEATER SCHEDULE											
REF NO	MANUFACTURER	MODEL NO.	TANK CAPACITY GALLON	KW	TEMP RISE	GALLONS PER HR RECOVERY	ELECTRICAL				REMARKS
							VOLTS	PHASE	HERTZ		
EXG WH	BRADFORD WHITE	M240S6DS	40	4.5	-	-	208	1	60	[1]	

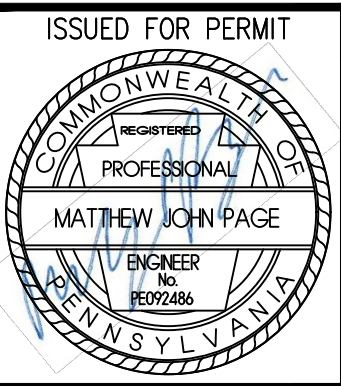
NOTES:
1. EXISTING TO REMAIN

PUMP SCHEDULE											
REF NO	MANUFACTURER/ MODEL NO	SYSTEM SERVED	LOCATION	FLOW (GPM)	TDH FEET	MOTOR		ELECTRICAL CHARACTERISTICS			REMARKS
						(WATT)	(RPM)	VOLTS	PHASE	HERTZ	
PP-1	BELL & GOSSETT / NBF-18S	WH-1	UTILITY	2	16	90	3000	115	1	60	SEE NOTE

NOTES: PROVIDE AQUASTAT AND SEVEN DAY TIME CLOCK.

PLUMBING FIXTURE SCHEDULE											
TAG	FIXTURE	MANUFACTURER	MODEL NO.	GPF/GPM	CW (IN)	HW (IN)	SAN (IN)	VENT (IN)	FINISH	COMMENTS	
P-1	WATER CLOSET	AMERICAN STANDARD CHAMPION	211AA.004/5	1.6 GPF	0.5	-	3	2	WHITE	FLOOR MOUNTED, GRAVITY FLUSH TANK TYPE, MANUAL FLUSH, ADA COMPLIANT, SEE NOTE 1,2; WITH EVERCLEAN SURFACE	
	TOILET SEAT	AMERICAN STANDARD	5901.100SS	-	-	-	-	-	WHITE	ELONGATED, OPEN FRONT WITH SELF SUSTAINING HINGE; WITH EVERCLEAN SURFACE	
P-2	LAVATORY	AMERICAN STANDARD LUCERNE	0355.012	-	-	-	1.5	1.5	WHITE	WALL MOUNTED; 20-1/2" X 18-1/4"; PROVIDE WITH FLOOR ANCHORED CONCEALED ARMS SUPPORT; SEE NOTE 2,3	
	LAV FAUCET	ELKAY	LK422L4	0.5 GPM	0.5	0.5	-	-	POLISHED CHROME	CENTER SET SINGLE CONTROL PROVIDE WITH CHROME PLATED BRASS GRID DRAIN	
	MIXING VALVE	POWERS	LFG480	-	-	-	-	-	-	UNDER LAVATORY; ASSE 1070 LISTED VALVE SET TO 110 DEGREES	
P-2A	LAVATORY	AMERICAN STANDARD AQUALYN	0476.028	-	-	-	1.5	1.5	WHITE	DROP-IN COUNTERTOP MOUNT;OVAL 20-3/8" X 17-3/8"; VITREOUS CHINA; SEE NOTE 2,3	
	LAV FAUCET	SLOAN	EBF-650	0.5 GPM	0.5	0.5	-	-	POLISHED CHROME	CENTER SET SENSOR OPERATED FAUCET; BATTERY POWERED PROVIDE WITH CHROME PLATED BRASS GRID DRAIN	
	MIXING VALVE	POWERS	LFG480	-	-	-	-	-	-	UNDER LAVATORY; ASSE 1070 LISTED VALVE SET TO 110 DEGREES	
P-3	SINK	ELKAY	LRAD191965PD	-	-	-	1.5	1.5	STAINLESS STEEL	SINGLE BOWL DROP IN; 19" X 19" X 6-1/2" 304 STAINLESS STEEL; WITH PERFECT DRAIN SEE NOTE 2,3,4	
	FAUCET	DELTA	21996LF	1.5 GPM	0.5	0.5	-	-	STAINLESS STEEL	DECK MOUNT, GOOSENECK, TWO HANDLES W/ 1.5 GPM AERATOR	
	MIXING VALVE	POWERS	LFe480	-	-	-	-	-	-	UNDER CABINET; ASSE 1070 LISTED VALVE SET TO 110 DEGREES	
P-4	WATER OUTLET BOX	IPS CORP	AB9700HA	-	0.5	-	-	-	-	COLD WATER OUTLET BOX, 1/4 TURN VALVE WITH HAMMER ARRESTER. COORDINATE FINAL LOCATION WITH OWNER PRIOR TO INSTALLATION	
P-5	DISHWASHER BOX	IPS CORP	AB9300HA	-	-	0.5	-	-	-	DISHWASHER OUTLET BOX, 1/4 TURN VALVE WITH HAMMER ARRESTER	

NOTE
1. COORDINATE FLUSHING HANDLE TO BE INSTALLED ON WIDE SIDE OF STALL/ROOM
2. COORDINATE ADA REQUIREMENTS WITH ARCHITECTURAL PLANS; IF REQUIRED, INSTALL FIXTURE IN ACCORDANCE WITH ALL ADA REQUIREMENTS.
3. WHEN REQUIRED TO BE ADA COVER ANY EXPOSED PIPING WITH ADA COMPLIANT FIXTURE WRAPS, COVERS, INSULATION, AND ALL OTHER ITEMS REQUIRED BY CODE.
4. IF THERE IS A RESIDENTIAL DISHWASHER ADJACENT TO SINK, PROVIDE TAILPIECE WITH DISHWASHER CONNECTION; COORDINATE WITH ARCHITECTURAL PLANS



RHJ ASSOCIATES, P.C.
ARCHITECTS • PLANNERS • DESIGNERS

960 1ST AVE. SUITE 9A
KING OF PRUSSIA, PA 19406
610 337 4655
www.rhjasoc.com

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PLUMBING SPECIFICATIONS

1. THE ARCHITECTURAL GENERAL CONDITIONS SHALL APPLY TO AND FORM A PART OF THIS SPECIFICATION.
2. PROVIDE ALL MATERIALS, LABOR, EQUIPMENT, TOOLS AND SUPERVISION AND PERFORM ALL OPERATIONS NECESSARY FOR THE PROPER AND COMPLETE EXECUTION OF ALL PLUMBING WORK IN STRICT ACCORDANCE WITH THE SPECIFICATIONS AND DRAWINGS.
3. THE INSTALLATION OF ALL PLUMBING WORK SHALL BE UNDER THE SUPERVISION OF AND BY A LICENSED AND QUALIFIED PLUMBING CONTRACTOR. ALL WORK SHALL BE IN ACCORDANCE WITH:
- 3.1 ALL APPLICABLE SECTIONS OF THE NATIONAL FIRE PROTECTION ASSOCIATION
- 3.2 LATEST EDITION OF THE NATIONAL ELECTRIC CODE
- 3.3 OSHA
- 3.4 2018 PENNSYLVANIA PLUMBING CODE (IPC 2018 AMENDED)
- 3.5 2018 PENNSYLVANIA BUILDING CODE (IBC 2018 AMENDED)
- 3.6 2018 PENNSYLVANIA ENERGY CONSERVATION CODE (IECC 2018 AMENDED)
- 3.7 2018 PENNSYLVANIA FUEL GAS CODE (FGC 2018 AMENDED)
- 3.8 ALL OTHER STATE AND LOCAL AUTHORITIES HAVING JURISDICTION
- 3.9 APPLICABLE MANUFACTURER'S REQUIREMENTS AND RECOMMENDATIONS.
4. THE CONTRACTOR SHALL VISIT THE SITE, EXAMINE ALL CONDITIONS AND MAKE ALLOWANCES FOR DIFFICULTIES AND CONTINGENCIES AFFECTING THE PROPER EXECUTION OF THIS CONTRACT.
5. THE CONTRACTOR SHALL OBTAIN AND PAY ALL FEES NECESSARY FOR PERMITS AND INSPECTIONS REQUIRED WITH THEIR WORK.
6. THE CONTRACTOR SHALL VERIFY ALL UTILITY SERVICE INFORMATION SHOWN ON THE DRAWINGS WITH THE LOCAL UTILITY COMPANY PRIOR TO SUBMITTING A BID. ANY CHANGES OR SERVICE CHARGES IMPOSED BY THE UTILITY COMPANY SHALL BE QUALIFIED AND INCLUDED IN THE BID.
7. SUBMISSION OF A BID OR PROPOSAL SHALL BE CONSTRUED AS EVIDENCE THAT THE CONTRACTORS HAVE FAMILIARIZED THEMSELVES WITH THE PLANS, SPECIFICATIONS AND BUILDING SITE. CLAIMS MADE SUBSEQUENT TO BIDS FOR MATERIAL AND/OR LABOR DUE TO DIFFICULTIES ENCOUNTERED WILL NOT BE RECOGNIZED, UNLESS IT IS DETERMINED BY THE OWNER'S REPRESENTATIVE THAT SUCH DIFFICULTIES COULD NOT HAVE BEEN FORESEEN EVEN THOUGH PROPER EXAMINATION HAD BEEN MADE.
8. ALL EQUIPMENT SHALL BE TESTED, LISTED AND LABELED BY AN APPROVED AUTHORITY (UL, AGA, ETL) AND SHALL BE INSTALLED IN ACCORDANCE WITH ITS LISTING.
9. ALL EQUIPMENT, MATERIALS AND WORKMANSHIP SHALL BE GUARANTEED FOR A MINIMUM OF ONE YEAR FROM THE DATE OF ACCEPTANCE BY THE OWNER.
10. WHERE PRODUCTS ARE SPECIFIED BY BRAND NAME, CATALOG NUMBERS OR BY NAMES OF MANUFACTURERS, THE REFERENCE IS INTENDED TO BE DESCRIPTIVE AND NOT RESTRICTIVE AND IS SOLELY FOR THE PURPOSE OF INDICATING THE TYPE OF QUALITY OF ITEM THAT WILL BE ACCEPTABLE. AN APPROVED EQUAL WILL BE ACCEPTED UNLESS INDICATED OTHERWISE. NOTE: THE TERM 'APPROVED EQUAL' SHALL MEAN A PRODUCT/ITEM THAT HAS BEEN SUBMITTED TO THE OWNER'S REPRESENTATIVE FOR REVIEW PRIOR TO SUBMITTING A BID AND THE CONTRACTOR HAS RECEIVED WRITTEN NOTIFICATION THAT THE SUBSTITUTED PRODUCT WILL BE CONSIDERED AN EQUIVALENT ALTERNATE TO THE SPECIFIED PRODUCT/ITEM.
11. THE CONTRACTOR RESPONSIBLE FOR WORK COVERED BY THESE SPECIFICATIONS SHALL COORDINATE AND COOPERATE WITH ALL OTHER TRADES. TRADES THAT HAVE WORK CONNECTED WITH THE PLUMBING WORK SHALL BE NOTIFIED FOR INSTALLATION REQUIREMENTS AND SCHEDULING. THE CONTRACTOR SHALL SCHEDULE THEIR WORK TO AVOID INTERRUPTION OF ANY UTILITY SERVICES TO THE OPERATION AREAS OF THE BUILDING DURING NORMAL WORKING HOURS. INTERRUPTION OF SERVICES SHALL BE DONE DURING OFF HOURS AT NO ADDITIONAL COST TO THE OWNER.
12. THE PLUMBING CONTRACTOR SHALL CONFER WITH ALL OTHER CONTRACTORS AND SHALL APPLY FOR DETAILED AND SPECIFIC INFORMATION REGARDING THE LOCATION OF ALL EQUIPMENT AS THE FINAL LOCATION MAY DIFFER FROM THAT INDICATED ON THE DRAWINGS. PIPING OR EQUIPMENT IMPROPERLY PLACED BECAUSE OF THE PLUMBING CONTRACTOR'S FAILURE TO OBTAIN THIS INFORMATION SHALL BE RELOCATED AND REINSTALLED BY THE PLUMBING CONTRACTOR WITHOUT ADDITIONAL EXPENSE TO THE OWNER.
- 12.1 COORDINATION DRAWINGS ARE REQUIRED. MECHANICAL CONTRACOR SHALL LEAD THE COORDINATION EFFORT AND PREPARE THE COORDINATION DRAWINGS. CONTRACTOR SHALL COORDINATE HIS WORK WITH THAT OF OTHER TRADES SO THAT ALL WORK MAY BE INSTALLED IN THE MOST DIRECT MANNER AND SO THAT INTERFERENCE BETWEEN PIPING, DUCTS, EQUIPMENT, ARCHITECTURAL OR STRUCTURAL FEATURES WILL BE AVOIDED. IN THE CASE INTERFERENCE RESULTS, THE OWNER'S REPRESENTATIVE SHALL DECIDE WHICH WORK IS TO BE RELOCATED, REGARDLESS OF WHICH IS FIRST INSTALLED. SUCH RELOCATION SHALL BE AT NO ADDITIONAL COST TO THE OWNER.
13. THE CONTRACTOR SHALL UTILIZE ALL APPLICABLE CONSTRUCTION METHODS TO PROVIDE A PROPER AND COMPLETE INSTALLATION AS REQUIRED TO MAINTAIN THE INTEGRITY OF ANY AND ALL FIRE RATED WALLS, FLOORS, BARRIERS, AND ASSEMBLIES THAT ARE PENETRATED BY PIPING, WIRING, CONDUITS, ETC. ALL FIRE STOPPING METHODS AND PRODUCTS SHALL BE UL LISTED AND SHALL BE AS MANUFACTURED BY 3M, HILTI OR APPROVED EQUAL. THE CONTRACTOR SHALL BE REQUIRED TO REVIEW ALL DESIGN DRAWINGS AND SPECIFICATIONS AND REVIEW WITH THE OWNER, ARCHITECT AND/OR GENERAL CONTRACTOR TO DETERMINE WHERE ALL FIRE RATED ASSEMBLIES ARE/WILL BE LOCATED.
14. ALL CUTTING AND PATCHING OF EVERY NATURE REQUIRED IN CONNECTION WITH THIS CONTRACT SHALL BE DONE BY THIS CONTRACTOR WITH MECHANICS EXPERIENCED IN THEIR RESPECTIVE TRADES. ALL PATCHING SHALL MATCH ADJACENT FINISHES. ALL WORK SHALL BE COORDINATED TO AVOID CUTTING OF WORK IN PLACE AND INTERFERING WITH OTHER OPERATIONS.
- 14.1 ALL EXCAVATIONS REQUIRED FOR INSTALLATION OF PIPE SHALL HAVE SOLID, UNDISTURBED BOTTOMS, AND SHALL BE SUBJECT TO APPROVAL BY THE OWNER'S REPRESENTATIVE AS WELL AS THE LOCAL PLUMBING INSPECTOR PRIOR TO PIPING PLACEMENT. SHOULD ANY PIPE TRENCH BOTTOMS BECOME SOFT OR WET BEFORE PIPING IS PLACED, ALL SUCH UNSUITABLE BOTTOMS SHALL BE REMOVED AT NO COST TO THE OWNER AND FILLED WITH CONCRETE AND PROPER PIPE BEDDING MATERIALS (SAND, SCREENINGS, ETC.) SHALL BE USED.
15. BACKFILL ALL EXCAVATIONS PERFORMED UNDER THIS CONTRACT AND COMPACT AS REQUIRED TO SATISFY FINISHED GRADE REQUIREMENTS.
16. THE CONTRACTOR SHALL CUT AND PATCH AS REQUIRED TO PERFORM THE DEMOLITION WORK. ALL OPENINGS CREATED MUST BE REPAIRED TO MATCH EXISTING CONSTRUCTION. ALL CUTTING AND PATCHING SHALL BE PERFORMED BY MECHANICS EXPERIENCED IN THEIR RESPECTIVE LINE OF WORK. IF THE OWNER'S REPRESENTATIVE IS NOT SATISFIED WITH QUALITY OF WORK, THE CONTRACTOR SHALL BE REQUIRED, AT HIS OWN EXPENSE, TO ENGAGE THE GENERAL CONTRACTOR TO REPLACE DAMAGED MATERIALS WITH NEW MATERIALS. DISPOSAL SHALL BE IN ACCORDANCE WITH THE REGULATIONS OF THE AUTHORITIES AT THE DISPOSAL SITE. IF THE CONTRACTOR ENCOUNTERS OR SUSPECTS HAZARDOUS OR TOXIC MATERIAL, THE CONTRACTOR SHALL ADVISE THE OWNER IMMEDIATELY. THE WORK IN THE AFFECTED AREA SHALL NOT BE RESUMED BY THE CONTRACTOR UNTIL THE HAZARDOUS MATERIAL HAS BEEN REMOVED OR RENDERED HARMLESS BY THE OWNER
17. FURNISH AND INSTALL ALL NECESSARY HANGERS, INSERTS, SUPPORTS SUPPLEMENTARY STEEL, ETC., TO PROPERLY SUPPORT ALL EQUIPMENT AND PIPING IN AN APPROVED MANNER AND IN FULL ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. HANGERS FOR SUPPORTING COPPER TUBING SHALL BE COPPERIZED.
18. DOMESTIC WATER
- 18.1 ALL HOT AND COLD WATER PIPING WITHIN THE BUILDING SHALL BE HARD DRAWN TYPE "L" COPPER TUBING IN ACCORDANCE WITH ASTM-B88. FITTINGS SHALL BE WROUGHT COPPER OR CAST BRASS. VALVES SHALL BE CAST BRASS UNLESS NOTED OTHERWISE. HANGERS FOR SUPPORTING COPPER TUBING SHALL BE COPPERIZED. ALL WATER SERVICE PIPING OUTSIDE OF THE BUILDING SHALL BE TYPE "K" COPPER ASTM B-88. FITTINGS SHALL BE WROUGHT COPPER. ALL JOINTS SHALL BE MADE WITH SOLDER AND FLUX HAVING A LEAD CONTENT OF NOT MORE THAN 0.2 PERCENT.
19. SANITARY AND VENT PIPING
- 19.1 PIPING SHALL BE NO--HUB SERVICE WEIGHT CAST IRON IN ACCORDANCE WITH ASTM A74; JOINT SYSTEM SHALL CONFORM TO THE CAST IRON SOIL PIPE INSTITUTE STANDARDS 301-78. ASTM A888-98 COUPLINGS SHALL BE 24 GAUGE, TYPE 304 STAINLESS STEEL HIGH TORQUE CLAMPS WITH DUAL CLAMPING SYSTEM AND NEOPRENE SEALING SLEEVES/GASKETS. INSTALL IN ACCORDANCE WITH THE MANUFACTURERS RECOMMENDATIONS. SANITARY AND VENT PIPING LOCATED BELOW THE FLOOR SHALL BE

- SERVICE WEIGHT CAST IRON WITH HUB AND SPIGOT ENDS. JOINTS SHALL BE CONNECTED WITH NEOPRENE PUSH--ON COMPRESSION GASKETS, INSTALL IN ACCORDANCE WITH THE MANUFACTURERS RECOMMENDATIONS.
- 19.2 ALTERNATE BID: WHERE PERMITTED BY THE LOCAL AUTHORITY: ALL SANITARY AND VENT PIPING MAY BE SCHEDULE 40 PVC, ASTM D2665, D2949, WITH PVC FITTINGS (DWV TYPE) AND SOLVENT WELD JOINTS. PVC PIPING SHALL NOT BE USED IN RETURN AIR PLENUM TYPE CEILINGS OR IN FIRE-RATED CEILING ASSEMBLIES (CONTRACTOR TO VERIFY THESE AREAS WITH ARCHITECT). PVC SHALL NOT BE UTILIZED FOR FIXTURES CAPABLE OF DISCHARGING GREATER THAN 140 DEGREES. NOTE: PVC PIPING SHALL NOT BE USED WITHOUT AUTHORIZATION FROM THE LOCAL AUTHORITY HAVING JURISDICTION.
- 19.3 WHERE SANITARY AND VENT PIPING PENETRATES FIRE-RATED ASSEMBLIES PROPER UL LISTED FIRE-STOPPING MATERIALS AND METHODS SHALL BE USED.
20. WHERE PIPING PASSES THROUGH FIRE RESISTING PORTIONS OF THE STRUCTURE, AN APPROVED FIRE--STOPPING DEVICE SHALL BE INSTALLED TO MAINTAIN THE FIRE RATING OF THAT PORTION OF THE STRUCTURE. THIS CONTRACTOR SHALL ENGAGE THE SERVICES OF A FIRE PROTECTION CONTRACTOR TO REVIEW THE DRAWINGS AND INSTALL FIRE PROTECTION PRODUCTS TO MAINTAIN THE INTEGRITY OF ALL PIPE, WIRE, CONDUIT, ETC. PENETRATIONS THROUGH ANY AND ALL FIRE RATED WALLS, FLOORS, BARRIERS, AND ASSEMBLIES. ALL FIRE STOPPING DEVICES USED SHALL BE LISTED INTUMESCENT MATERIALS SUCH AS A CAULK, SEALANT, PUTTY, WRAP STRIPS, ETC. AS REQUIRED TO PROPERLY FIRE STOP ALL VOIDS. FIRE STOP TRAINING AND PRODUCTS SHALL BE 3M, HILTI, PRO--SET SYSTEMS OR EQUAL.
21. ALL SHUTOFF VALVES SHALL BE STANDARD FULL PORT BALL VALVES. ALL BALL, GATE, GLOBE AND CHECK VALVES SHALL BE BRONZE AND CERTIFIED FOR USE IN POTABLE WATER SYSTEMS (WHERE APPLICABLE), SWEATED PATTERN SUITABLE FOR 125 PSI WORKING PRESSURE. FOR NEW WATER SERVICES PROVIDE A CURB STOP WIH EXTENDED ACTUATOR, SLEEVE ASSEMBLY AND BOLTED COVER INSTALLED FLUSH WITH FINISHED GRADE AS REQUIRED BY THE LOCAL AUTHORITY. PROVIDE BACKFLOW PREVENTERS AS REQUIRED BY THE LOCAL AUTHORITY. ALL VALVES AND PIPING EXPOSED TO VIEW SHALL BE CHROME PLATED. ALL PIPING THAT PENETRATES WALLS WHERE IT IS EXPOSED TO VIEW SHALL HAVE CHROME-PLATED ESCUTCHEONS.
22. HW RECIRC BALANCING VALVE SHALL BE AN IN-LINE BALANCING VALVE WITH FLOW MEASUREMENT PORTS FOR SYSTEM FLOW CALIBRATION; MODEL CB SERIES AS MANUFACTURED BY BELL & GOSSETT. INSTALL IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS. CALIBRATE TO GPM INDICATED ON THE DRAWINGS. PROVIDE WITH AN AQUASTAT FOR CONTROL. SET CONTROL TO RUN THE PUMP WHEN THE HOT WATER TEMPERATURE IN THE RETURN LINE FALLS TO BELOW 113 DEGREES F.
23. INSULATION
- 23.1 THE FOLLOWING SYSTEMS SHALL BE INSULATED WITH MATERIALS HAVING A K-FACTOR OF 0.27 AT 75 DEGREES F. MEAN TEMPERATURE, A FLAME SPREAD RATING OF 25 OR LESS AND A SMOKE DEVELOPED RATING OF 50 OR LESS. INSULATION SHALL HAVE AN ALL SERVICE JACKET, SEALED JOINTS, FITTING COVERS AND SHALL BE AS MANUFACTURED BY CERTANTEED, KNAUF, JOHNS MANSVILLE, OWENS CORNING OR APPROVED EQUAL.
- 23.1.1 COLD WATER PIPE AND FITTINGS
- 23.1.2 HOT WATER PIPE AND FITTINGS
- 23.1.3 HOT WATER RECIRCULATION PIPE AND FITTINGS
- 23.1.4 BACKFLOW PREVENTERS
- 23.1.5 VALVES
- 23.1.6 STRAINERS
- 23.2 INSULATION THICKNESSES SHALL BE AS FOLLOWS:
- COLD WATER PIPING:
- UP TO AND INCLUDING 1-1/4 INCH = 1/2" THICK.
- 1-1/2 TO 2--INCHES = 1" THICK.
- HOT WATER AND HOT WATER RECIRCULATION PIPING:
- 1/2" UP TO AND INCLUDING 1-1/4" = 1" THICK
- 1-1/2" TO 2" = 1-1/2" THICK
24. CLEANOUT FITTINGS SHALL BE INSTALLED WHERE INDICATED AND AS REQUIRED. CLEANOUT SHALL BE MADE BY MEANS OF LONG SWEEP ELL OR Y FITTINGS AND BEND. CLEANOUT SHALL BE THE SAME SIZE PIPING UP TO AND INCLUDING 4 INCH SIZE. CLEANOUT SHALL BE PROVIDED IN HORIZONTAL RUNS AT NOT OVER 50 FOOT INTERVALS. CLEANOUTS AND FLOORS FOR CONCEALED PIPING SHALL BE ADJUSTABLE COATED CAST--IRON BODY, TAPERED THREADED BRONZE PLUG, HEAVY--DUTY NICKEL ALLOY DECK TYPE, SCARIATED COVER WITH VANDAL PROOF SCREWS. CLEANOUTS IN WALLS FOR CONCEALED PIPING SHALL BE CAST IRON T BRANCH CLEANOUT WITH BRONZE RAISED HEAD PLUG, LEAD SEAL AND VANDAL PROOF POLISHED STAINLESS STEEL ROUND ACCESS COVER.
25. FIXTURES AND FIXTURE TRIMMINGS SHALL BE FURNISHED AND INSTALLED AS SPECIFIED HEREIN WITH MODEL NUMBERS AS NOTED ON THE PLUMBING FIXTURE SCHEDULE.
- 25.1 FIXTURES SHALL BE COMPLETE WITH ALL NECESSARY WALL HANGERS AND SUPPORTS, SUPPLY VALVES, DRAINAGE FITTINGS AND ESCUTCHEONS.
- 25.2 ALL FIXTURES SHALL BE PROVIDED WITH A MEANS FOR SHUTOFF AND ISOLATION FROM THE DOMESTIC WATER SYSTEM. SHUTOFF VALVES SHALL BE LOCATED IN AN ACCESSIBLE LOCATION
- A. WATER CLOSET [TANK TYPE]-- ANSI A112.19.2, SHALL BE TWO--PIECE TYPE WHITE VITREOUS CHINA, ELONGATED BOWL, GRAVITY FLUSH, FLOOR--MOUNTED TANK TYPE, BOLT CAPS, CHROME PLATED BRASS STOP VALVE, WITH 3/8 INCH BRAIDED STAINLESS STEEL SUPPLY HOSE AND CHROME--PLATED BRASS WALL SUPPLY AND ESCUTCHEON, WITH OPEN FRONT PLASTIC SEAT.
- FOR ADA FIXTURES: INSTALL IN ACCORDANCE WITH ADA REQUIREMENTS (NOTE: FLUSHING MECHANISM HANDLE SHALL BE INSTALLED ON THE WIDE SIDE OF THE TOILET STALL).
- B. WATER CLOSET [FLUSH VALVE TYPE]-- SHALL BE ONE--PIECE TYPE WHITE VITREOUS CHINA, ELONGATED BOWL, FLOOR--MOUNTED TYPE, TWO BOLT CAPS, FLUSH VALVE: ANSI A112.18.1; EXPOSED CHROME PLATED, DIAPHRAGM TYPE, ESCUTCHEON, INTEGRAL SCREWDRIVER STOP AND VACUUM BREAKER, WITH OPEN FRONT PLASTIC SEAT.
- FOR ADA FIXTURES: INSTALL IN ACCORDANCE WITH ADA REQUIREMENTS (NOTE: FLUSHING MECHANISM HANDLE SHALL BE INSTALLED ON THE WIDE SIDE OF THE TOILET STALL).
- C. LAVATORY [WALL HUNG] -- BASIN: ANSI A112.19.1; WHITE VITREOUS CHINA WALL HUNG LAVATORY, DRILLINGS ON FOUR INCH CENTERS, RECTANGULAR BASIN WITH SPLASH LIP AND OVERFLOW. TRIM: ANSI A112.18.1; CHROME PLATED SUPPLY FITTING WITH 0.5 GPM AERATOR, AND CHROME--PLATED GRID STRAINER. PROVIDE A 17--GAUGE CHROME PLATED TRAP AND WASTE PIPING WITH ESCUTCHEON. PROVIDE CHROME PLATED HOT AND COLD WATER SUPPLIES, STOP VALVES AND ESCUTCHEONS.
- INSULATE TRAP, WASTE PIPING AND WATER SUPPLIES BELOW FIXTURE WITH TRUBRO "HANDI-LAV--GUARD" (OR APPROVED EQUAL) IN ACCORDANCE WITH ADA REQUIREMENTS.
- PROVIDE WITH CONCEALED CARRIER: ANSI A112.6.1; CAST IRON AND STEEL FRAME WITH TUBULAR LEGS, LUGS FOR FLOOR AND WALL ATTACHMENT, CONCEALED ARM SUPPORTS.
- D. LAVATORY [COUNTERTOP MOUNT] -- BASIN: ANSI A112.19.1; WHITE VITREOUS CHINA COUNTER--MOUNT, SELF--RIMMING LAVATORY, DRILLINGS ON FOUR INCH CENTERS, OVAL BASIN WITH SPLASH LIP AND OVERFLOW. TRIM: ANSI A112.18.1; CHROME PLATED SUPPLY FITTING WITH 0.5 GPM AERATOR, AND CHROME--PLATED GRID STRAINER. PROVIDE A 17--GAUGE CHROME PLATED TRAP AND WASTE PIPING WITH ESCUTCHEON. PROVIDE CHROME PLATED HOT AND COLD WATER SUPPLIES, STOP VALVES AND ESCUTCHEONS.
- INSULATE TRAP, WASTE PIPING AND WATER SUPPLIES BELOW FIXTURE WITH TRUBRO "HANDI-LAV--GUARD" (OR APPROVED EQUAL) IN ACCORDANCE WITH ADA REQUIREMENTS.
- E. URINAL -- ANSI A112.19.2; VITREOUS CHINA, WALL HUNG URINAL WITH SHIELDS, INTEGRAL TRAP, REMOVABLE STAINLESS STEEL STRAINER, 3/4 INCH TOP SPUD, STEEL SUPPORTING HANGER. FLUSH VALVE: ANSI A112.18.1; EXPOSED CHROME PLATED, DIAPHRAGM TYPE, ESCUTCHEON, INTEGRAL SCREWDRIVER STOP, VACUUM BREAKER. FIXTURE SUPPORT CARRIER: FIXTURE SUPPORT SHALL BE CONSTRUCTED OF CAST IRON AND/OR STEEL AND SHALL BE COMPLETELY CONCEALED BEHIND THE FINISHED WALL SURFACE. SUPPORT SHALL BE COMPLETE WITH A FACEPLATE AND FLOOR ANCHORS. FIXTURE LOADING SHALL NOT BE ON THE WALL.
- F. KITCHEN SINK -- ADA BARRIER FREE STAINLESS STEEL SINK, DROP-IN TYPE, WITH CHROME--PLATED GOOSENECK FAUCET WITH LEVER HANDLES. INSULATE PIPE UNDER SINK WITH "LAV GUARD 2" E-Z SERIES UNDERSINK

PROTECTIVE PIPE COVER, MANUFACTURED BY TRUEBRO.

26. HOT WATER RECIRCULATION PUMP -- IN-LINE CIRCULATING PUMP WITH BRONZE BODY, GLASS FILLED POLYPROPYLENE IMPELLER, STAINLESS STEEL SHAFT AND CARBON SLEEVE BEARINGS, MANUFACTURED BY BELL & GOSSETT. PUMP SHALL HAVE A MINIMUM CAPACITY AS SPECIFIED. HW PUMP SHALL BE CONTROLLED BY AN AQUASTAT. AQUASTAT SHALL BE LINE VOLTAGE AND SHALL BE ADJUSTABLE FROM 100 DEGREES F TO 150 DEGREES F. COORDINATE WIRING WITH THE ELECTRICAL CONTRACTOR. HW PUMP SHALL BE CONTROLLED BY AN ADJUSTABLE SEVEN DAY LINE VOLTAGE TIME CLOCK. COORDINATE WIRING WITH ELECTRICAL CONTRACTOR.
27. THERMOSTATIC MIXING VALVES
- 27.1 MASTER MIXING VALVE (AT WATER HEATER) SHALL BE THERMOSTATIC TYPE WITH UNION INLET STRAINERS, CHECK STOPS, THERMOMETER, SHUTOFF VALVES AND ROUGH BRONZE FINISH; HYDROGUARD® SERIES LFLM490, 0.5 GPM ASSE 1017 LISTED MINIMUM FLOW, 15 GPM AT 20 PSI DIFFERENTIAL AND SHALL BE CSA B125 CERTIFIED AS MANUFACTURED BY POWERS. INSTALL AND SET UP SYSTEM IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. SET MIXING VALVE TO SUPPLY DOMESTIC HOT WATER A 140 DEGREES F.
- 27.2 EACH LAVATORY SHALL BE INSTALLED WITH A MIXING VALVE TO LIMIT THE HOT WATER SUPPLY TO 105 DEGREE F SHALL BE THERMOSTATIC TYPE WITH ROUGH CHROME FINISH; HYDROGUARD® SERIES LFG480, 0.25 GPM ASSE 1070 LISTED MINIMUM FLOW AND CSA B125 CERTIFIED AS MANUFACTURED BY POWERS. INSTALL AND SET UP SYSTEM IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. SET MIXING VALVE TO SUPPLY DOMESTIC HOT WATER A 105 DEGREES F.
- 27.3 EACH SINK SHALL BE INSTALLED WITH A MIXING VALVE TO LIMIT THE HOT WATER SUPPLY TO 110 DEGREE F SHALL BE THERMOSTATIC TYPE WITH ROUGH CHROME FINISH; HYDROGUARD® SERIES LFE480, 0.5 GPM ASSE 1070 LISTED MINIMUM FLOW AND CSA B125 CERTIFIED AS MANUFACTURED BY POWERS. INSTALL AND SET UP SYSTEM IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. SET MIXING VALVE TO SUPPLY DOMESTIC HOT WATER A 110 DEGREES F.
28. GENERAL PIPE INSTALLATION -- IN GENERAL, INSTALL PIPING SO AS TO PRESERVE ACCESS TO ALL VALVES, TRAPS, EQUIPMENT, ETC. ALL PIPING, VALVES AND FITTINGS ETC. SHALL BE KEPT A SUFFICIENT DISTANCE FROM OTHER WORK TO PERMIT A CLEARANCE OF NOT LESS THAN 1 INCH BETWEEN THE FINISHED COVERING ON SUCH PIPING AND THE ADJACENT WORK, WHETHER INSTALLED UNDER THIS OR OTHER TRADES. ALL PIPING SHALL BE INSTALLED AS CLOSE AS POSSIBLE TO WALLS, CEILINGS COLUMNS (CONSISTENT WITH PROPER SPACE FOR COVERING, REMOVAL PIPE, ETC. SO AS TO OCCUPY THE MINIMUM OF SPACE). HORIZONTAL RUNS A PIPING SHALL BE SUBSTANTIALLY SUPPORTED FROM THE BUILDING STRUCTURE TO MAINTAIN THE REQUIRED PITCH AND GRADE OF THE PIPELINES. HANGER RODS SHALL BE CONNECTED TO THE BEAM CLAMPS, INSERTS OR HANGER CLIPS WELDED TO THE STRUCTURAL STEEL. THE HANGING OF ONE PIPE FROM ANOTHER SHALL NOT BE PERMITTED. PROPER CARE SHALL BE EXERCISED IN THE ERECTION OF ALL PIPING TO ENSURE PROPER DRAINAGE AND CIRCULATION, INCLUDING PROPER PROVISIONS FOR EXPANSION AND CONTRACTION OF PIPING. POCKETS OR TRAPS WHERE IN AIR CAN COLLECT SHALL NOT BE PERMITTED. ALL PIPING SHALL BE REAMED TO REMOVE CUTTING BURS AND SHARP EDGES. ALL COPPER TUBING SHALL BE CUT WITH SQUARE ENDS AND ALL BURS AND FINS REMOVED. TUBING SHALL BE CAREFULLY HANDLED AND PROTECTED TO AVOID DAMAGE. REDUCING FITTING SHALL BE USED WHEREVER POSSIBLE. THE USE OF BUSHINGS SHALL BE PROHIBITED. ECCENTRIC REDUCERS SHALL BE USED. THREADS FOR SCREW FITTINGS SHALL BE AMERICAN STANDARD TAPER PIPE THREADS. ALL OPEN ENDS OF PIPING SHALL BE TEMPORARILY COVERED DURING INSTALLATION TO KEEP THE SYSTEM CLEAN. LOCATE ALL WATER PIPING WITHIN HEATED SPACES WITH PROVISIONS FOR DRAINING ALL LINES. ALL PIPING THAT IS INSTALLED WITHIN A FIRE-RATED ASSEMBLY (WALLS, CEILINGS, ETC) SHALL BE CAST IRON (SANITARY AND VENT), COPPER (DOMESTIC WATER) OR STEEL (PROPANE/NATURAL GAS); PLASTIC PIPING SHALL NOT BE PERMITTED. ALL PIPING THAT PENETRATES FIRE-RATED ASSEMBLIES SHALL BE PROPERLY FIRE--STOPPED WITH A UL LISTED METHOD AN MATERIAL(S).
29. EQUIPMENT STARTUP:
- 29.1 PROVIDE EQUIPMENT STARTUP REPORT, INCLUDING CHECKLIST CONFIRMING MANUFACTURERS STARTUP PROCEDURE HAS BEEN FOLLOWED IN ITS ENTIRETY.
30. OWNER TRAINING
- 30.1 CONTRACTOR SHALL PROVIDE OWNER OR OWNER'S REPRESENTATIVE WITH TRAINING ON THE OPERATION AND MAINTENANCE OF ALL NEW EQUIPMENT, ACCESSORIES AND CONTROLS. TRAINING SHALL BE AS RECOMMENDED BY MANUFACTURER FOR GENERAL OPERATION, MAINTENANCE AND SERVICE OF SYSTEMS.
31. COMPLETION
- 31.1 UPON COMPLETION OF THE WORK THE CONTRACTOR SHALL REMOVE ALL HIS EXCESS MATERIALS, MACHINERY AND EQUIPMENT FROM THE PREMISES AND REPLACE ALL FILTERS.
- 31.2 DURING CONSTRUCTION, THE CONTRACTOR SHALL MAINTAIN A RECORD SET OF INSTALLATION PRINTS. RECORD ON THESE PRINTS, ALL DEVIATIONS FROM THE CONTRACT DRAWINGS, INCLUDING BUT NOT LIMITED TO, PIPE ROUTING, SYSTEM CONNECTION POINTS, PIPE SIZES AND EQUIPMENT LOCATION CHANGES. AT THE COMPLETION OF THE WORK, THE CONTRACTOR SHALL TRANSFER THIS INFORMATION NEATLY ONTO 3 SETS OF PRINTS AND FORWARD THESE PRINTS AND THE "AS BUILT PRINTS" TO THE OWNER AND TENANT.
- 31.3 THE CONTRACTOR SHALL FURNISH THREE SETS OF INSTRUCTION MANUALS TO THE OWNER AT COMPLETION OF CONSTRUCTION.
32. STERILIZATION OF DOMESTIC WATER SYSTEM
- 32.1 BEFORE BEING PLACED IN SERVICE, ALL DOMESTIC WATER LINES SHALL BE CHLORINATED USING A METHOD THAT IS SATISFACTORY TO THE WATER AUTHORITY OR THE AUTHORITY HAVING JURISDICTION. IN THE ABSENCE OF A PRESCRIBED METHOD, THE PROCEDURE LISTED IN AWWA C651 OR AWWA C652 OR AS DESCRIBED BELOW SHALL BE USED.
- 32.2 PRIOR TO CHLORINATION, ALL DIRT AND FOREIGN MATTER SHALL BE REMOVED BY A THOROUGH FLUSHING. THIS SHALL BE DONE AFTER THE PRESSURE TEST AND LEAKAGE TEST.
- 32.3 A CHLORINE HYPOCHLORITE SOLUTION SHALL BE APPLIED BY MEANS OF A SOLUTION FEED DEVICE OR THE GAS SHALL BE FED DIRECTLY FROM A CHLORINE CYLINDER EQUIPPED WITH PROPER DEVICES FOR REGULATING THE RATE OF FLOW AND THE EFFECTIVE DIFFUSE OF GAS WITHIN THE PIPE.
- 32.4 THE SYSTEM OR PART THEREOF SHALL BE FILLED WITH A WATER/CHLORINE SOLUTION CONTAINING NOT LESS THAN 50 PARTS PER MILLION (50 MG/L) OF CHLORINE, AND THE SYSTEM OR PART THEREOF SHALL BE VALVED OFF AND ALLOWED TO STAND FOR 24 HOURS; OR THE SYSTEM OR PART THEREOF SHALL BE FILLED WITH A WATER/CHLORINE SOLUTION CONTAINING NOT LESS THAN 200 PARTS PER MILLION (200 MG/L) OF CHLORINE AND ALLOWED TO STAND FOR 3 HOURS.
- 32.5 A LONGER CHLORINE CONTACT TIME MAY BE REQUESTED BY THE OWNER'S REPRESENTATIVE AT NO ADDITIONAL COST TO THE OWNER.
- 32.8 AFTER THE CHLORINE TREATED WATER HAS BEEN RETAINED FOR THE REQUIRED TIME, THE CHLORINE RESIDUAL AT THE PIPE EXTREMITIES AND AT OTHER REPRESENTATIVE POINTS SHALL BE AT LEAST FIVE PARTS PER MILLIONS.
- 32.7 FOLLOWING CHLORINATION, ALL TREATED WATER SHALL BE THOROUGHLY FLUSHED FROM THE SYSTEM AT ITS EXTREMITIES UNTIL THE REPLACEMENT WATER THROUGHOUT ITS LENGTH SHALL, UPON TEST, BE EQUAL TO THE WATER QUALITY SERVED FROM THE WATER SUPPLY SYSTEM.
- 32.8 SHOULD THE INITIAL TREATMENT IN THE OPINION OF THE OWNER'S REPRESENTATIVE PROVE INEFFECTIVE, THE CHLORINATION PROCEDURE SHALL BE REPEATED UNTIL CONFIRMED TESTS SHOW THAT WATER SAMPLED FROM THE SYSTEM CONFORMS TO THE REQUIREMENTS.
- 32.9 THE "START--UP" OF THE WATER HEATER SYSTEM SHALL BE CARRIED OUT BY THE CONTRACTOR.
- 32.10 IN ADDITION TO THE ABOVE WORK, THE CONTRACTOR SHALL CHECK THE OPERATION OF ALL WATER HEATER THERMOSTAT SETPOINTS AND OPERATIONS.
33. TEST OF DRAINAGE SYSTEM
- 33.1 ALL PLUMBING AND DRAINAGE PIPING SHALL BE TESTED BY PLUGGING ALL OPENINGS AND FILL SYSTEM WITH WATER TO THE TOP OF ALL VENT PIPES. THE WATER SHALL STAND FOR 30 MINUTES FOR INSPECTION. ALL TESTS MUST COMPLY WITH LOCAL AUTHORITY REQUIREMENTS.
34. TEST OF DOMESTIC WATER PIPING
- 34.1 ALL WATER LINES SHALL BE TESTED TO A HYDROSTATIC PRESSURE EQUAL TO 1-1/2 TIMES THE MAXIMUM OPERATING PRESSURE. THE SYSTEM SHALL BE LEAK--FREE FOR 24 HOURS AT THIS PRESSURE.

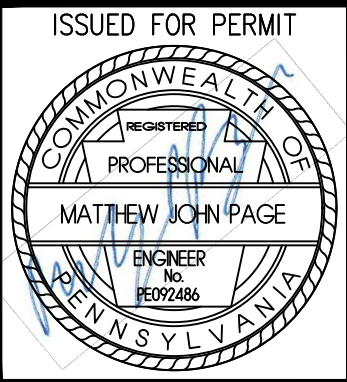
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MEI
MARTARANO
ENGINEERING INC
1105 Berkshire Blvd, Suite 140
Wyomissing, PA 19610
t(484)-706-9779
Project #23-077

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KING OF PRUSSIA, PA 19406
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2023--0105

GENERAL NOTES

- ELECTRICAL CONTRACTOR SHALL COORDINATE WORK WITH ALL OTHER TRADES AND PROVIDE ALL MATERIALS, DEVICES, CONNECTIONS, ETC. FOR A COMPLETE AND FUNCTIONAL INSTALLATION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING THE WORK WITH SUPPLIERS, SUBCONTRACTORS, EMPLOYEES, ETC. SHOULD CLARIFICATION OF ANY PORTION OF THE WORK BE REQUIRED, CONTACT THE ARCHITECT/ENGINEER PRIOR TO SUBMITTING BID.
- SYMBOLS, ABBREVIATIONS, DETAILS, SCHEDULES, AND DRAWINGS NOTES ARE PROVIDED FOR INFORMATIONAL PURPOSES. NOT ALL SYMBOLS, ABBREVIATIONS, DETAILS, SCHEDULES, AND DRAWING NOTES MAY APPLY. COORDINATE ANY DISCREPANCIES WITH ENGINEER.
- WORK SHALL COMPLY WITH CODE AS REQUIRED BY LOCAL AUTHORITY. THIS WOULD INCLUDE, BUT IS NOT LIMITED TO THE INTERNATIONAL BUILDING CODE (IBC) AND THE NATIONAL ELECTRICAL CODE (NEC). AMENDMENTS, NFPA, ANSI, OSHA, AND ALL OTHER LOCAL OR MUNICIPAL BUREAUS AND DEPARTMENTS WHICH HAVE AUTHORITY OVER THE PROJECT; ANYTHING IN THESE CONTRACT DOCUMENTS NOT WITHSTANDING. THIS SHALL NOT BE CONSTRUED AS WAIVING COMPLIANCE WITH ANY REQUIREMENTS OF THE PLANS AND SPECIFICATIONS WHICH MAY BE IN EXCESS OF ANY REQUIREMENTS OF THESE CODES.
- THE CONTRACTOR SHALL COMPARE THE DRAWINGS AND SPECIFICATIONS, CHECKING THE MEASUREMENTS AND CONDITIONS UNDER WHICH CONSTRUCTION IS TO BE IMPLEMENTED. FOR CLARIFICATION BETWEEN VARIOUS DRAWINGS AND/OR SPECIFICATIONS, THE DISPUTED ISSUE SHALL BE REFERRED TO THE ENGINEER PRIOR TO ANY WORK. THE CONTRACTOR SHALL STATE IN THEIR PROPOSAL ANY EXCEPTIONS NECESSARY TO MAKE THIS WORK A COMPLETE AND READY-TO-USE INSTALLATION. IF NOT SO-STATED IN THE CONTRACTOR'S PROPOSAL, ANY SUCH WORK WILL NOT BE CONSIDERED ADDITIONAL.
- THE CONTRACTOR SHALL COORDINATE THE EXACT LOCATION OF ALL REQUIRED WORK AND EQUIPMENT WITH THAT OF THE OTHER TRADES. WHERE THERE ARE POTENTIAL CONFLICTS, THE CONTRACTOR SHALL OBTAIN AND VERIFY EXACT LOCATIONS, MEASUREMENTS, LEVELS, SPACE REQUIREMENTS, ETC. AT THE SITE AND SHALL ADAPT HIS WORK TO ACTUAL FIELD CONDITIONS. REFER TO ARCHITECTURAL/MECHANICAL DRAWINGS FOR PLANS, ELEVATIONS AND DETAILS INDICATING THE LOCATIONS OF CEILING ELEMENTS (E.G., LIGHTS, SPRINKLERS, DIFFUSERS, ETC.) AND WALL ELEMENTS. CEILING MOUNTED ITEMS SHALL BE INSTALLED IN ACCORDANCE WITH THE ARCHITECTURAL REFLECTED CEILING PLANS. IF LOCATION FOR AN ITEM IS NOT SHOWN ON THE ARCHITECTURAL DRAWINGS, VERIFY THE EXACT LOCATION OF THE ITEM WITH THE ARCHITECT PRIOR TO INSTALLATION. THESE REQUIREMENTS APPLY TO ALL CEILING TYPES IN ALL AREAS.
- THE CONTRACTOR SHALL CAREFULLY EXAMINE THE CONTRACT DOCUMENTS, VISIT THE SITE, EXAMINE THE PREMISES, AND MAKE A THOROUGH SURVEY OF THE CONDITIONS UNDER WHICH CONSTRUCTION WILL BE IMPLEMENTED. THE SUBMISSION OF A PROPOSAL WILL BE CONSTRUED AS EVIDENCE THAT SUCH AN EXAMINATION HAS BEEN MADE. FAILURE TO DO SO SHALL NOT RELIEVE THE CONTRACTOR OF THE OBLIGATIONS OF THE CONTRACT. ANY LATER CLAIMS FOR LABOR, EQUIPMENT, OR MATERIALS REQUIRED FOR DIFFICULTIES ENCOUNTERED WHICH COULD HAVE BEEN FORESEEN HAD SUCH AN EXAMINATION BEEN MADE, WILL NOT BE RECOGNIZED.
- THE CONTRACTOR SHALL SECURE, OBTAIN AND PAY FOR ALL PERMITS, INSPECTIONS, TAXES, LICENCE, AND FEES TO ALL GOVERNMENT AGENCIES REQUIRED FOR THE EXECUTION AND COMPLETION OF THE ELECTRICAL WORK. SCHEDULING OF ALL REQUIRED INSPECTIONS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. CONTRACTOR SHALL PREPARE AND SUBMIT ALL SHOP DRAWINGS AS REQUIRED TO THE GOVERNMENTAL AGENCIES AND UTILITY COMPANIES FOR THEIR APPROVAL.
- THE CONTRACTOR SHALL TAKE ALL STEPS NECESSARY TO ENSURE THE SAFETY OF THE CLIENT'S EMPLOYEES, BUILDING EMPLOYEES AND GUESTS AS WELL AS THEIR OWN FORCES, BY ADEQUATELY PROTECTING ANY EXPOSED LIVE CABLE, EQUIPMENT, OR DEVICES THROUGHOUT THE COURSE OF THIS WORK.
- ALL CONTRACTORS/BIDDERS SHALL HAVE RECEIVED A COMPLETE SET OF CONSTRUCTION DOCUMENTS FOR REVIEW AND REFERENCE TO WORK INDICATED. CONDUIT LOCATE SERVICES SHALL BE REQUESTED AND COMPLETED BEFORE DISTURBANCE OF ANY EXISTING GRADE OR ON-GRADE CONSTRUCTION, SLAB DEMOLITION, OR OTHER ACTIVITIES THAT MAY IMPACT BURIED UTILITIES OR COMMUNICATION CONDUITS. THE CONTRACTOR SHALL CONFIRM THAT CONDUIT LOCATE SERVICES HAVE BEEN COMPLETED AND THAT NO POTENTIAL CONFLICTS EXIST BEFORE EXISTING GRADE IS EXCAVATED OR EXISTING FLOORING DEMOLISHED, REGARDLESS OF THE LOCATION ON THE PROPERTY. THIS SHALL BE REVIEWED WITH THE OWNER'S PROJECT REPRESENTATIVE.
- THE CONTRACTOR SHALL PROVIDE THE COMPLETE ELECTRICAL INSTALLATION OF WORK AS INDICATED IN THE CONSTRUCTION DOCUMENTS. PRIOR TO COMMENCEMENT, THE CONTRACTOR SHALL SUBMIT FOR REVIEW AND APPROVAL, ANY SEQUENCE OF WORK, MOP'S (METHOD OF PROCEDURE) AND/OR COORDINATION SHOP DRAWINGS FOR THE INTENDED WORK. THE CONTRACTOR SHALL NOTIFY THE ARCHITECT/ENGINEER OF ANY MATERIALS OR APPARATUS BELIEVED TO BE INADEQUATE, UNSUITABLE, VIOLATION OF LAWS, ORDINANCES, RULES OR REGULATIONS OF AUTHORITIES HAVING JURISDICTION.
- THE CONTRACTOR SHALL PROVIDE ALL "AS-BUILT" DRAWINGS SCALED 1/4" MINIMUM AND SUBMIT FOR APPROVAL TO THE ARCHITECT/ENGINEER.
- THE CONTRACTOR SHALL PROVIDE TEMPORARY POWER AND LIGHTING FOR THIS WORK DURING CONSTRUCTION. TEMPORARY LIGHTING SHALL AT LEAST BE THE EQUAL OF (1)100-WATT FIXTURE EVERY 100 SQUARE FEET, WITH A MINIMUM ONE FIXTURE PER ROOM. TEMPORARY LIGHTING SHALL BE LEFT IN PLACE UNTIL PERMANENT LIGHTING IS COMPLETELY OPERATIONAL. COORDINATE TEMPORARY POWER REQUIREMENTS WITH THE OTHER TRADES AND PROVIDE ADEQUATE PROVISIONS. THE CONTRACTOR SHALL PERFORM ALL COORDINATION WITH THE OWNER AND/OR LANDLORD AND UTILITY COMPANY.
- ALL MATERIALS AND EQUIPMENT PROVIDED IN THIS WORK SHALL BE NEW AND SHALL HAVE THE APPROPRIATE UL LISTING AND/OR FM APPROVAL.

RECEPTACLES

	SINGLE RECEPTACLE - 2 POLE, 3 WIRE GROUNDING, 20 AMP, 125 VOLT, NEMA 5-20R MOUNT @ 1'-8" AFF UNLESS OTHERWISE NOTED
	DUPLEX RECEPTACLE - 2 POLE, 3 WIRE GROUNDING, 20 AMP, 125 VOLT, NEMA 5-20R MOUNT @ 1'-8" AFF UNLESS OTHERWISE NOTED
	QUAD RECEPTACLE (2 DUPLEX RECEPTACLES IN SAME BOX) MOUNT @ 1'-8" AFF UNLESS OTHERWISE NOTED
	FLOOR BOX WITH DUPLEX RECEPTACLE
	GROUND FAULT CIRCUIT INTERRUPTING DUPLEX RECEPTACLE 2 POLE, 3 WIRE GROUNDING, 20 AMP, 125 VOLT, NEMA 5-20R MOUNT @ 1'-8" AFF UNLESS OTHERWISE NOTED
	DUPLEX RECEPTACLE - 2 POLE, 3 WIRE GROUNDING, 20 AMP, 125 VOLT, NEMA 5-20R. PROVIDE WITH SEPARATE ACCESSIBLE DEAD FRONT GFCI DEVICE. MOUNT @ 1'-8" AFF UNLESS OTHERWISE NOTED
	UL LISTED WEATHERPROOF ENCLOSURE WITH GROUND FAULT CIRCUIT INTERRUPTING WEATHER RESISTANT TYPE DUPLEX RECEPTACLE MOUNT 2'-0" AFF/AFG, UNLESS OTHERWISE NOTED
	TAMPER RESISTANT DUPLEX RECEPTACLE 2 POLE, 3 WIRE GROUNDING, 20 AMP, 125 VOLT, NEMA 5-20R MOUNT @ 1'-6" AFF, UNLESS OTHERWISE NOTED
	SPECIALTY RECEPTACLE - NEMA TYPE AS INDICATED ON DRAWING RECEPTACLE SHALL MATCH PLUG TYPE OF EQUIPMENT SERVED

LIGHTING

	LIGHTING FIXTURE, LETTER SUBSCRIPT INDICATES SCHEDULED FIXTURE TYPE. LOWERCASE LETTER INDICATES SWITCH CIRCUIT.
	EMERGENCY LIGHTING FIXTURE, LETTER SUBSCRIPT INDICATES SCHEDULED FIXTURE TYPE.
	NORMAL EXIT SIGN. ARROWS INDICATE DIRECTION OF EXIT. SOLID FILL INDICATES NUMBER OF FACES, LETTER SUBSCRIPT INDICATES SCHEDULED FIXTURE TYPE.
	EMERGENCY LIGHTING BATTERY UNIT TO PROVIDE 1 1/2 HOURS OF EMERGENCY LIGHT. LETTER SUBSCRIPT INDICATES SCHEDULED FIXTURE TYPE.
	LOW VOLTAGE REMOTE EMERGENCY LIGHTS. LETTER SUBSCRIPT INDICATES SCHEDULED FIXTURE TYPE.
	COMBINATION EXIT SIGN/EMERGENCY LIGHT. SOLID FILL INDICATES NUMBER OF FACES, LETTER SUBSCRIPT INDICATES SCHEDULED FIXTURE TYPE.
	SINGLE POLE TOGGLE TYPE A/C SWITCH 20 AMP, 120/277 VOLT MOUNT @ 3'-10" AFF, UNLESS OTHERWISE NOTED
	THREE WAY TOGGLE TYPE A/C SWITCH 20 AMP, 120/277 VOLT MOUNT @ 3'-10" AFF, UNLESS OTHERWISE NOTED
	FOUR WAY TOGGLE TYPE A/C SWITCH 20 AMP, 120/277 VOLT MOUNT @ 3'-10" AFF, UNLESS OTHERWISE NOTED
	SINGLE POLE KEY SWITCH 20 AMP, 120/277 VOL MOUNT @ 3'-10" AFF, UNLESS OTHERWISE NOTED
	OCCUPANCY SENSOR WALL SWITCH. WATT STOPPER DW-100 OR APPROVED EQUAL MOUNT @ 3'-10" AFF, UNLESS OTHERWISE NOTED
	COMBINATION OCCUPANCY SENSOR/ 0-10V DIMMER WATT STOPPER DW-311 OR APPROVED EQUAL MOUNT @ 3'-10" AFF, UNLESS OTHERWISE NOTED
	ROOM LIGHTING CONTROLLER NXRCFX2 SERIES OR APPROVED EQUAL. * - DENOTES SYSTEM/AREA OF CONTROLLER AND CONNECTED DEVICES.
	WALL STATION ON/OFF/RAISE/LOWER NXSWR-ORLO SERIES OR APPROVED EQUAL. * - DENOTES SYSTEM/AREA OF CONTROLLER AND CONNECTED DEVICES.
	OCCUPANCY SENSOR NXOS SERIES OR APPROVED EQUAL. * - DENOTES SYSTEM/AREA OF CONTROLLER AND CONNECTED DEVICES.
	LIGHTING CONTACTOR
	TIMECLOCK

POWER

	1 CIRCUIT HOME RUN TO PANEL 2 #12 & 1 #12G, 3/4" CND, UNLESS OTHERWISE NOTED
	2 CIRCUIT HOME RUN TO PANEL 4 #12 & 1 #12G, 3/4" CND, UNLESS OTHERWISE NOTED
	3 CIRCUIT HOME RUN TO PANEL 6 #12 & 1 #12G, 3/4" CND, UNLESS OTHERWISE NOTED
	DIRECT CURRENT CIRCUIT RUN CONCEALED 2#10, 3/4" CND, UNLESS OTHERWISE NOTED
	BRANCH CIRCUIT RUN BELOW GRADE MINIMUM COVER, DEPTH AS PER NEC
	BRANCH CIRCUIT RUN CONCEALED - 2 #12 & 1 #12G, 3/4" CND, UNLESS OTHERWISE NOTED PROVIDE ADDITIONAL SWITCHED CONDUCTORS AS REQUIRED
	MOTOR STARTER RELAY
	TELEPOWER POLE
	JUNCTION BOX
	PANELBOARD - SURFACE MOUNTED MOUNT 6'-0" TO TOP OF HIGHEST BREAKER RATINGS AS INDICATED ON DRAWINGS
	PANELBOARD - FLUSH MOUNTED MOUNT 6'-0" TO TOP OF HIGHEST BREAKER RATINGS AS INDICATED ON DRAWINGS
	MOTOR OR MOTORIZED EQUIPMENT SIZE AS INDICATED ON DRAWINGS
	DISCONNECT SWITCH. NUMBER OF POLES, AMPERE RATING, VOLTAGE, NEMA TYPE ENCLOSURE AS INDICATED. MOUNT 4'-0" AFF TO CENTERLINE OF HANDLE.
	FUSED DISCONNECT SWITCH. NUMBER OF POLES, AMPERE RATING, FUSE SIZE AND NEMA TYPE ENCLOSURE AS INDICATED. MOUNT 4'-0" AFF TO CENTERLINE OF HANDLE.
	ENCLOSED MOLDED CASE CIRCUIT BREAKER. NUMBER OF POLES, AMPERE RATING AND NEMA TYPE ENCLOSURE AS INDICATED. MOUNT 4'-0" AFF TO CENTERLINE OF HANDLE.

SIGNAL

	COMBINATION DATA/COMMUNICATIONS DEVICE BOX MOUNT 1'-8" AFF, UNLESS OTHERWISE NOTED
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GENERAL

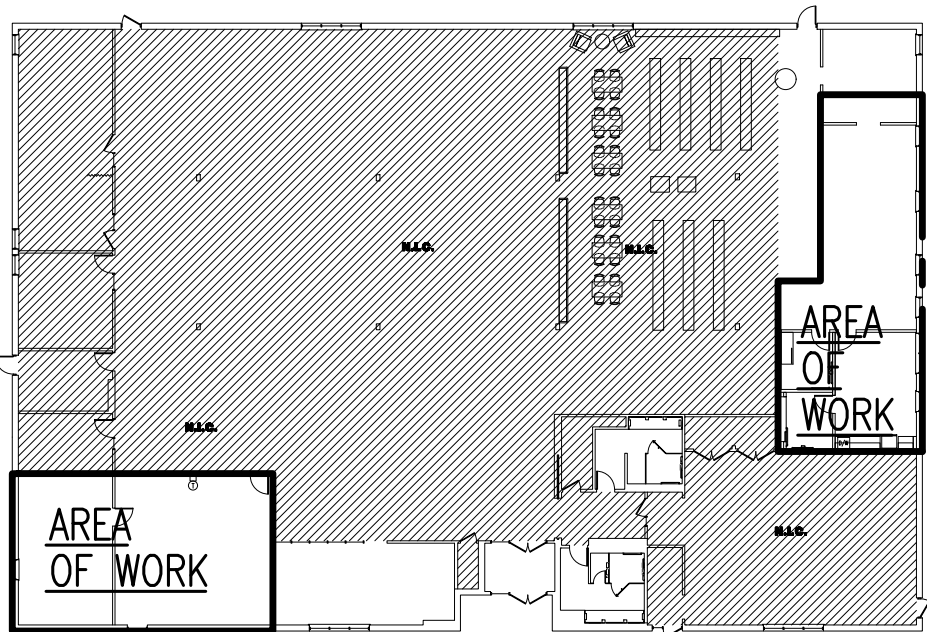
	CONNECT NEW TO EXISTING
	REFER TO INDICATED DEMOLITION NOTE
	REFER TO INDICATED NEW WORK LIGHTING NOTE
	REFER TO INDICATED NEW WORK POWER NOTE

FIRE ALARM

	COMBINATION FIXED TEMPERATURE RATE-OF-RISE THERMAL DETECTOR - CEILING MOUNT
	PHOTOELECTRIC SMOKE DETECTOR - CEILING MOUNT
	MANUAL FIRE ALARM PULL STATION MOUNT @ 3'-8" AFF, UNLESS OTHERWISE NOTED
	FIRE ALARM HORN WITH VISUAL INDICATING LIGHT MOUNT @ 7'-6" AFF # = CANDELA RATING WHEN HIGHER THAN 15
	FIRE ALARM VISUAL INDICATING LIGHT ONLY (ADA APPROVED) MOUNT @ 7'-6" AFF # = CANDELA RATING WHEN HIGHER THAN 15
	FIRE ALARM HORN WITH VISUAL INDICATING LIGHT CEILING MOUNTED # = CANDELA RATING WHEN HIGHER THAN 15

ABBREVIATIONS

	AT AND NUMBER
	AMPERE
	ALTERNATING CURRENT
	AMP FRAME
	ABOVE FINISHED FLOOR
	ABOVE FINISHED GRADE
	AMP TRIP
	AMERICAN WIRE GAUGE
	BREAKER
	CIRCUIT BREAKER
	CIRCUIT
	CEILING
	CONDUIT
	MOUNT 8" ABOVE COUNTERTOP
	DISCONNECT
	DRAWING
	DEMOLISH EXISTING
	ELECTRICAL CONTRACTOR
	EXHAUST FAN
	ELECTRIC, ELECTRICAL
	EXISTING RELOCATED
	ELECTRIC WATER COOLER
	EXISTING
	FIRE ALARM ANNUNCIATOR PANEL
	FIRE ALARM CONTROL PANEL
	FLOOR
	FULL LOAD AMPS
	GROUND
	GENERAL CONTRACTOR
	GROUND FAULT
	HORSEPOWER
	HEIGHT
	HERTZ
	INCH
	JUNCTION BOX
	THOUSAND AMPS INTERRUPTING CURRENT
	KILOVOLT-AMPERE
	KILOWATT
	LIGHTING
	MECHANICAL CONTRACTOR
	MAIN CIRCUIT BREAKER
	MECHANICAL
	MAIN LUGS ONLY
	MOUNTED
	NATIONAL ELECTRICAL CODE
	NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION
	POLE
	PHASE
	PANEL
	RECEPTACLE
	REVISION
	RATED LOAD AMPS
	REVOLUTIONS PER MINUTE
	SPECIFICATION
	TYPICAL
	UNIT HEATER
	VOLTAGE, VOLTS
	WATT
	WITH
	WITHOUT
	WATER HEATER
	WEATHERPROOF
	BY (BETWEEN DIMENSIONS)



KEY PLAN
SCALE: 1/32" = 1'-0"

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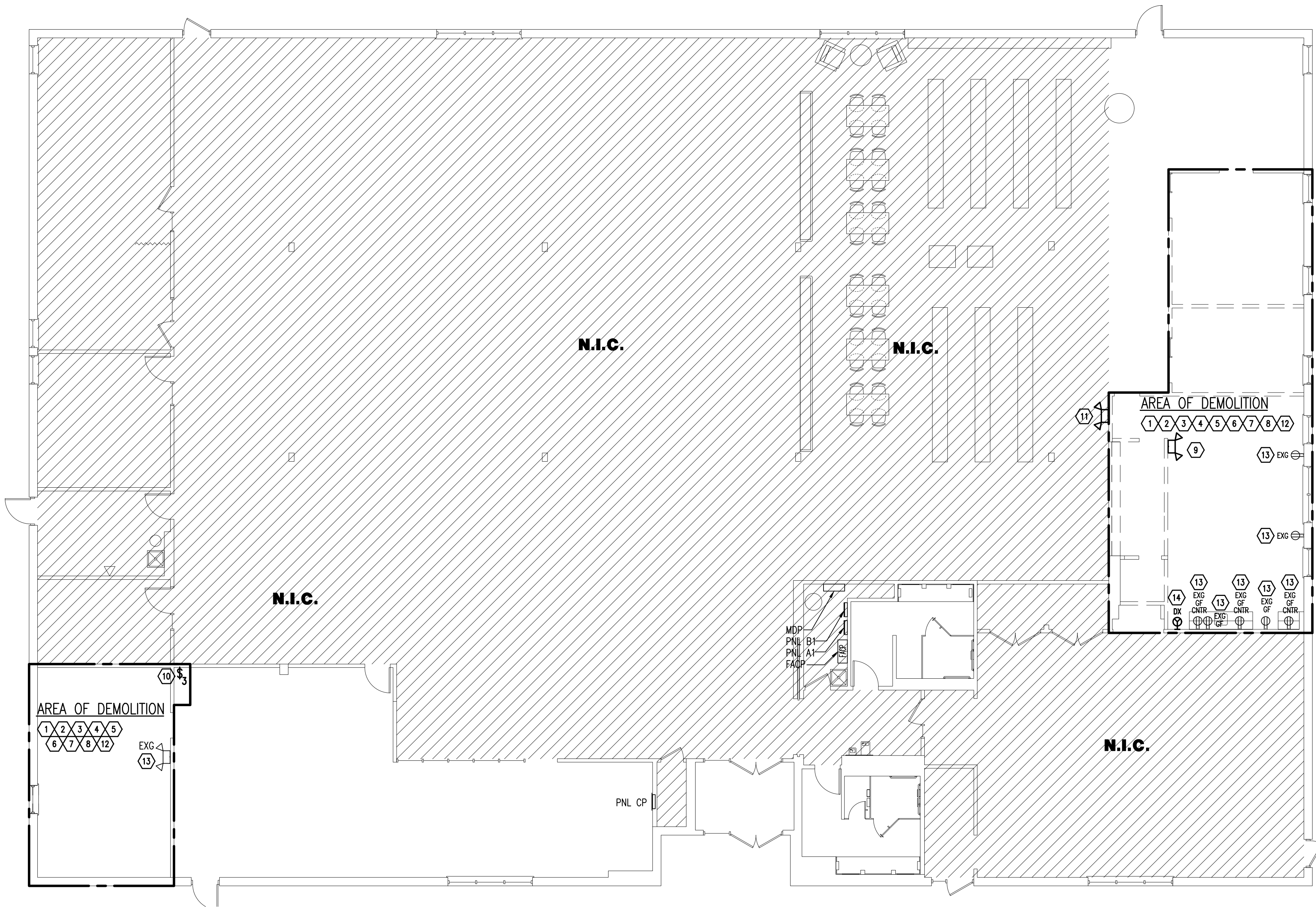
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960 1ST AVE. SUITE 9A
KING OF PRUSSIA, PA 19406
610 337 4855
www.rhjasoc.com

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E.O

2023-0105



ELECTRICAL — GROUND FLOOR PLAN — DEMOLITION
SCALE: 1/8" = 1'-0"

GENERAL DEMOLITION NOTES:

- WHERE IT IS INDICATED THAT A CIRCUIT, CONDUIT OR WIRING IS TO BE REMOVED IN ITS ENTIRETY, THIS SHALL MEAN THAT THE WIRE, CONDUIT, HANGERS, CONNECTORS, COUPLINGS, CONTROLS, DISCONNECT SWITCHES, ETC. SHALL BE REMOVED FROM THE DEVICE TO THE SOURCE, EXCEPT THAT CONDUIT EMBEDDED IN WALLS OR FLOORS NOT BEING DEMOLISHED MAY BE ABANDONED IN PLACE AS LONG AS THE WIRE IS REMOVED AND THE CONDUIT ENDS ARE SATISFACTORILY CLOSED.
- CIRCUITS TO EQUIPMENT OR DEVICES INDICATED TO BE REMOVED SHALL BE REMOVED IN THEIR ENTIRETY EVEN IF THE CIRCUIT OR SOURCE IS OUTSIDE THE DEFINED AREA OF DEMOLITION.
- CIRCUITS WHICH ORIGINATE IN OR PASS THROUGH THE AREA OF DEMOLITION BUT WHICH SUPPLY LOADS OUTSIDE OF THE AREA OF DEMOLITION OR WHICH FEED EQUIPMENT IN THE AREA OF DEMOLITION WHICH IS TO REMAIN, SHALL BE RETAINED, UNLESS OTHERWISE NOTED. PORTIONS OF SUCH CIRCUITS WHICH CONFLICT WITH CLEARANCES FOR NEW CONSTRUCTION SHALL BE REMOVED AND WIRE AND CONDUIT (MATCH EXISTING TYPE AND SIZE) SHALL BE PROVIDED TO EXTEND THE CIRCUIT TO ITS ORIGINAL SOURCE AND TO MAINTAIN THE FUNCTIONALITY OF THE CIRCUIT.
- CIRCUITS WHICH SUPPLY DEVICES BOTH INSIDE AND OUTSIDE OF THE AREA OF DEMOLITION SHALL BE REMOVED ONLY WITHIN THE AREA OF DEMOLITION. REMOVE THE CIRCUITS TO THE NEAREST JUNCTION BOX OR DEVICE OUTSIDE THE AREA OF DEMOLITION. PORTIONS OF THE CIRCUITS WHICH SUPPLY DEVICES OUTSIDE THE AREA OF DEMOLITION OR DEVICES TO REMAIN INSIDE THE AREA OF DEMOLITION SHALL REMAIN AND WIRE AND CONDUIT (MATCH EXISTING TYPE AND SIZE) SHALL BE PROVIDED TO EXTEND THE CIRCUIT TO ITS ORIGINAL SOURCE AND TO MAINTAIN THE FUNCTIONALITY OF THE CIRCUIT, UNLESS OTHERWISE NOTED.
- EXISTING PANELBOARDS AND THEIR FEEDER CIRCUITS SHALL BE RETAINED, UNLESS OTHERWISE NOTED.
- DRAWING DEMOLITION NOTES LISTED UNDER THE DEMOLITION AREA IDENTIFICATION SHALL APPLY TO ALL ROOMS/AREAS WITHIN THE AREA OF DEMOLITION. OTHER INDIVIDUAL DRAWING DEMOLITION NOTES ARE IN ADDITION TO THOSE UNDER THE AREA IDENTIFICATION AND APPLY ONLY TO INDIVIDUAL ROOMS OR EQUIPMENT.
- ABANDONED WIRE, CONDUIT, DEVICES AND CIRCUITS IN THE AREA OF DEMOLITION OR INDIVIDUALLY IDENTIFIED SHALL BE REMOVED IN THEIR ENTIRETY.
- OWNER EQUIPMENT SHALL BE RETURNED TO OWNER, UNLESS OTHERWISE DIRECTED.
- CONTRACTOR SHALL FIELD VERIFY QUANTITY AND LOCATION OF ALL WIRING DEVICES PRIOR TO BID. ANY ADDITIONAL DEVICES LOCATED SHALL BE TREATED THE SAME AS OTHER DEVICES IN THE SAME AREA.
- NON-POWER WIRING IN GOOD CONDITION MAY BE PULLED BACK FROM DEVICES BEING REMOVED AND WIRING MAY BE REUSED FOR NEW DEVICES WHERE WIRING LENGTH IS NO LONGER THAN THE ORIGINAL LENGTH. WIRING SHALL NOT BE SPLICED. WIRING WHICH CANNOT BE REUSED SHALL BE REMOVED IN ITS ENTIRETY.
- DEVICE BOXES WITH USABLE CONDUIT TO ACCESSIBLE SPACES LOCATED IN THE SAME LOCATION AS NEW DEVICES MAY BE REUSED WITH NEW WIRING AND DEVICES. DEVICE BOXES NOT BEING USED AND LOCATED IN WALLS NOT BEING REMOVED MAY REMAIN BUT MUST BE CLOSED WITH A BLANK COVERPLATE.

DRAWING DEMOLITION NOTES:

- REMOVE ALL LIGHT FIXTURES, LIGHT SWITCHES, LIGHT CONTROLS AND LIGHTING CIRCUITS IN THEIR ENTIRETY, UNLESS OTHERWISE NOTED.
- REMOVE ALL RECEPTACLES, DEVICE BOXES AND RECEPTACLE CIRCUITS IN WALLS BEING DEMOLISHED BACK TO THE LAST DEVICE IN CIRCUIT, UNLESS OTHERWISE NOTED. CONTRACTOR SHALL MAINTAIN FUNCTIONALITY OF ANY EXISTING TO REMAIN DEVICES ON CIRCUITS AFFECTED BY DEMOLITION BY REWORKING THE CIRCUIT AS NECESSARY.
- REMOVE ALL FIRE ALARM SYSTEM DEVICES, DEVICE BOXES AND FIRE ALARM CIRCUITS IN WALLS AND CEILINGS BEING DEMOLISHED IN THEIR ENTIRETY, UNLESS OTHERWISE NOTED.
- REMOVE ALL SECURITY DEVICES, DEVICE BOXES AND SECURITY CIRCUITS IN THEIR ENTIRETY, UNLESS OTHERWISE NOTED.
- REMOVE ALL TELE/DATA OUTLETS, DEVICE BOXES AND TELE/DATA CIRCUITS IN WALLS BEING DEMOLISHED IN THEIR ENTIRETY, UNLESS OTHERWISE NOTED.
- REMOVE ALL LOCAL AREA NETWORK DEVICES, DEVICE BOXES AND LOCAL AREA NETWORK CIRCUITS IN WALLS BEING DEMOLISHED IN THEIR ENTIRETY, UNLESS OTHERWISE NOTED.
- REMOVE ALL CATV OUTLETS, DEVICE BOXES AND CATV CIRCUITS IN WALLS BEING DEMOLISHED IN THEIR ENTIRETY, UNLESS OTHERWISE NOTED.
- REMOVE IN THEIR ENTIRETY ALL CIRCUITS TO MECHANICAL AND/OR PLUMBING EQUIPMENT WHICH IS BEING REMOVED. SEE MECHANICAL AND PLUMBING DRAWINGS FOR LOCATION AND DEFINITION OF EQUIPMENT TO BE REMOVED.
- CONTRACTOR TO REMOVE EMERGENCY BATTERY AND CONFIRM IF EMERGENCY BATTERY SERVES EMERGENCY LIGHTING OUTSIDE SCOPE OF WORK.
- EXISTING SWITCH TO BE RELOCATED TO LOCATION AS SHOWN IN NEW WORK. REWORK CONTROL WIRING AS REQUIRED.
- CONTRACTOR TO REMOVE EMERGENCY BATTERY. CONFIRM EMERGENCY BATTERY PERFORMANCE, FUNCTIONALITY, AND ALL WIRING CONNECTIONS IF ANY REMOTE HEADS SERVE EMERGENCY LIGHTING OUTSIDE SCOPE OF WORK.
- REPLACE ANY EXISTING OUTLETS WITH NEW COVER PLATES TO MATCH THE NEW OUTLET OR TO MATCH EXISTING COLOR.
- DEVICES LABELED 'EXG' ARE EXISTING TO REMAIN.
- REMOVE DEVICES LABELED 'DX' AND THEIR ASSOCIATED DEVICE BOXES AND CIRCUIT IN ITS ENTIRETY.

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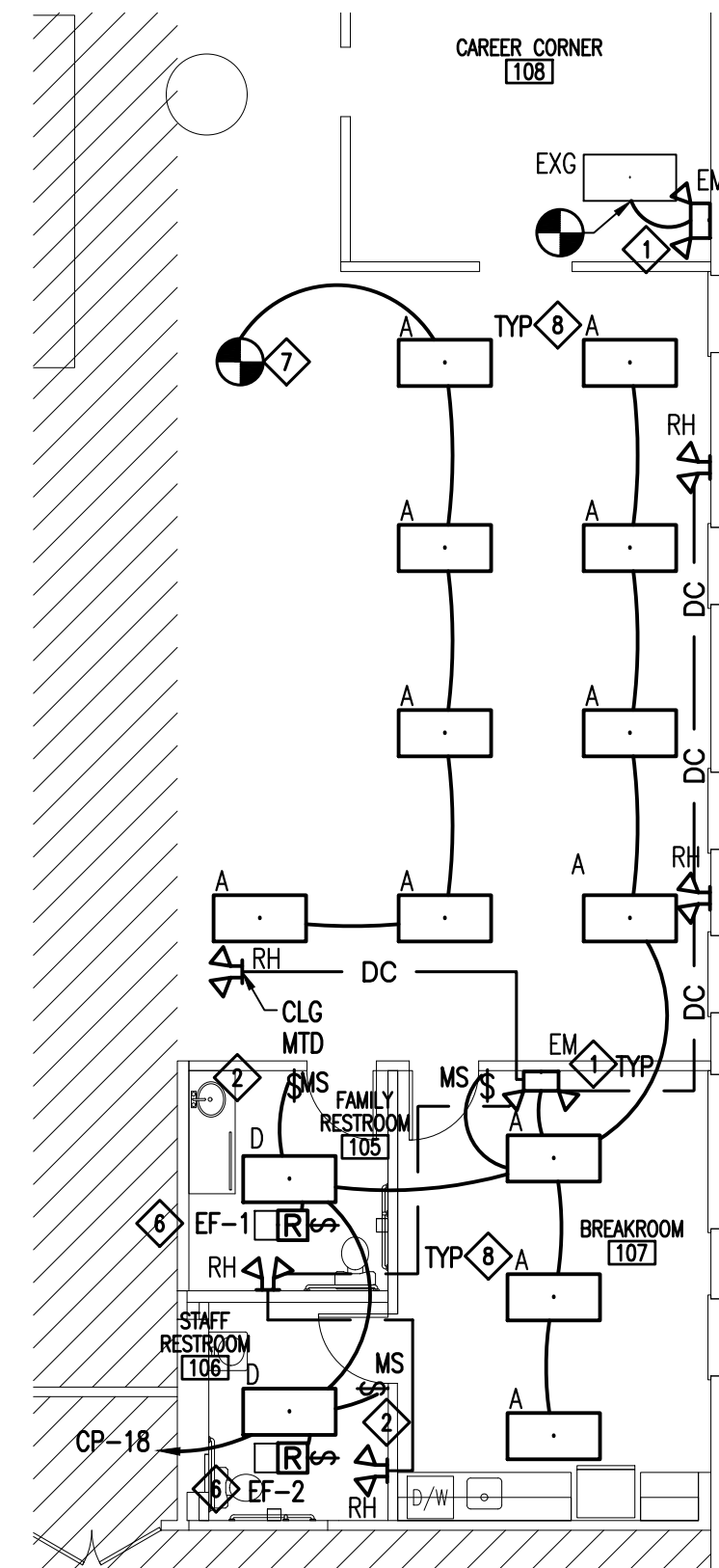
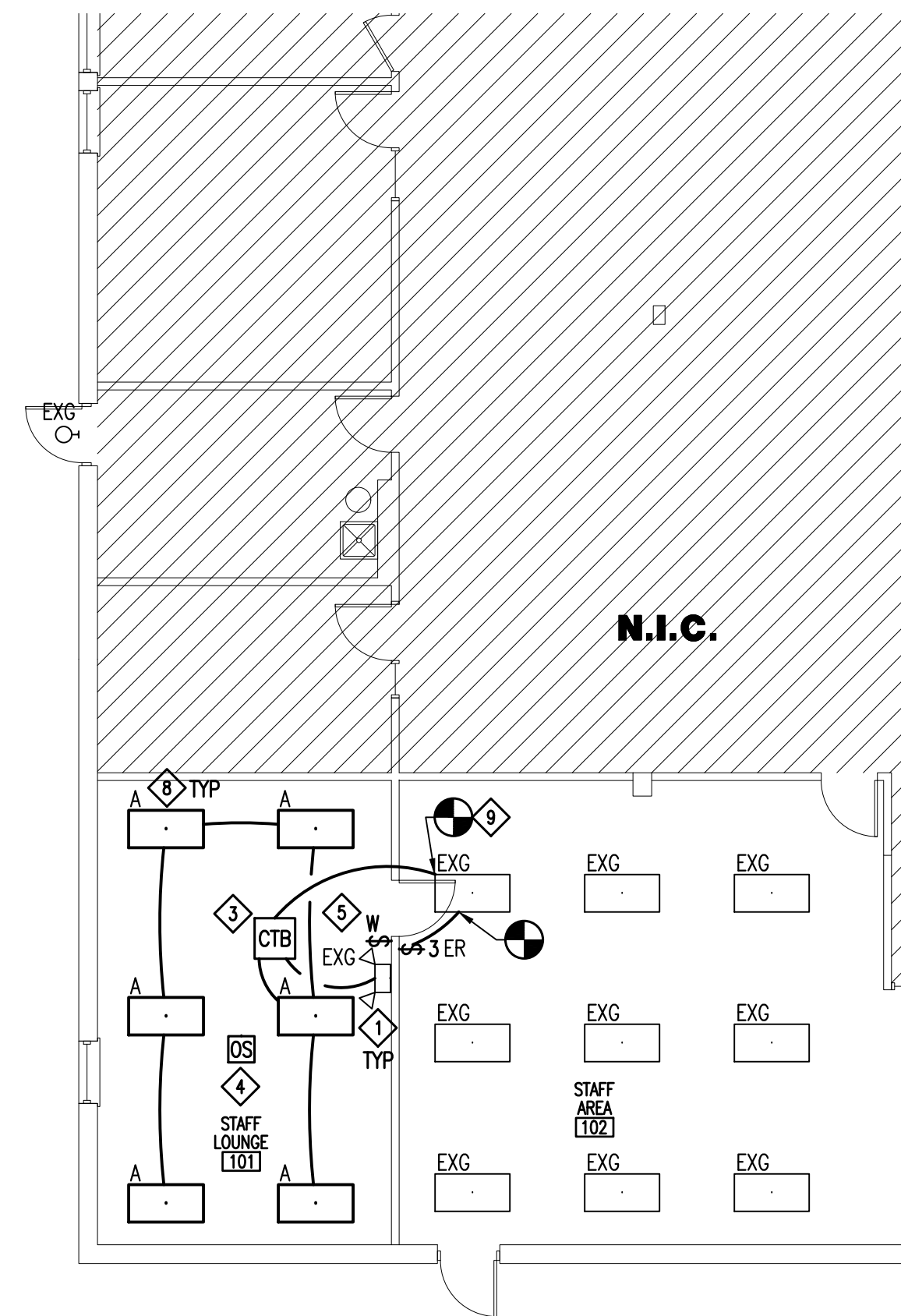
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610 337 4655
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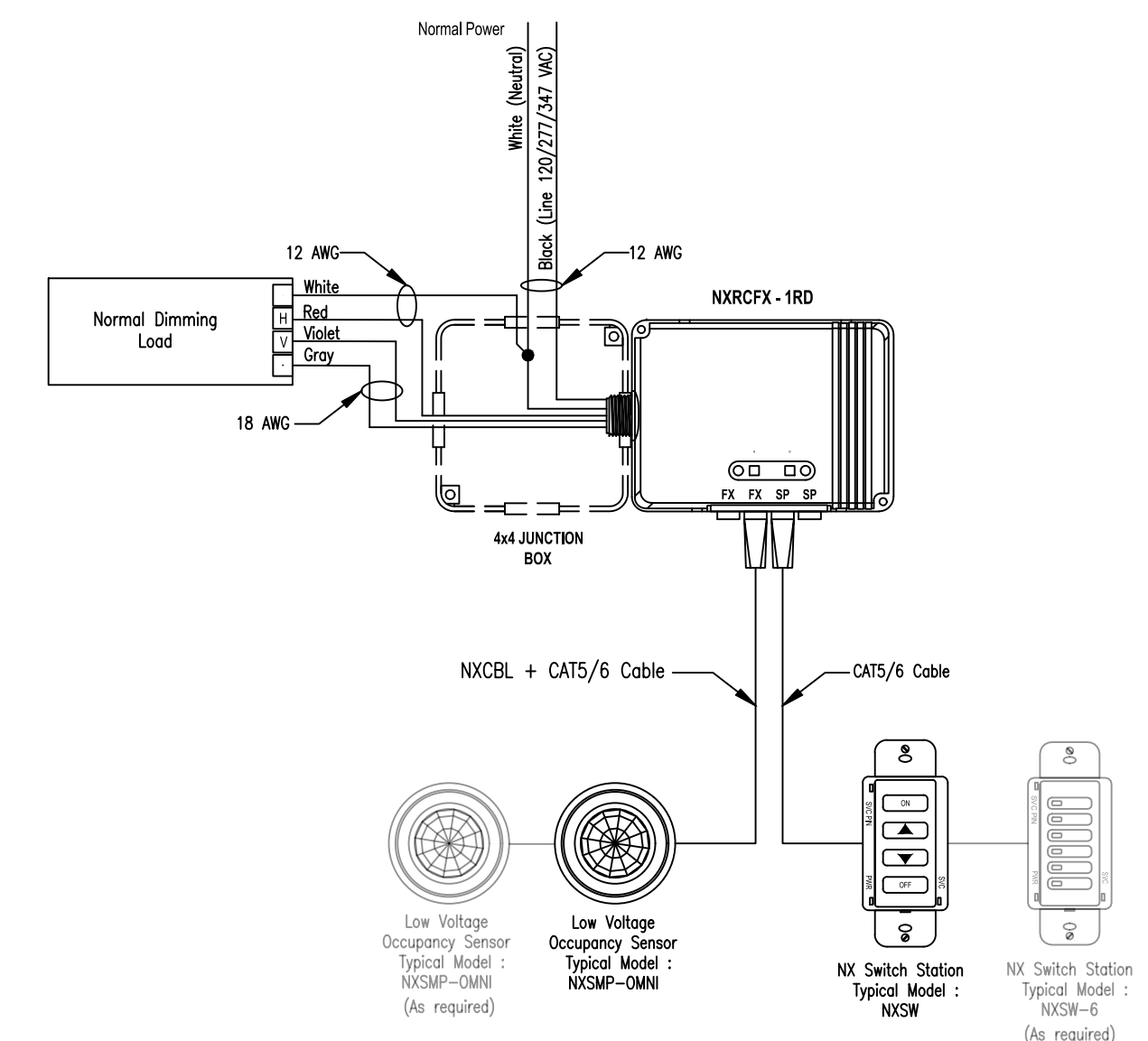
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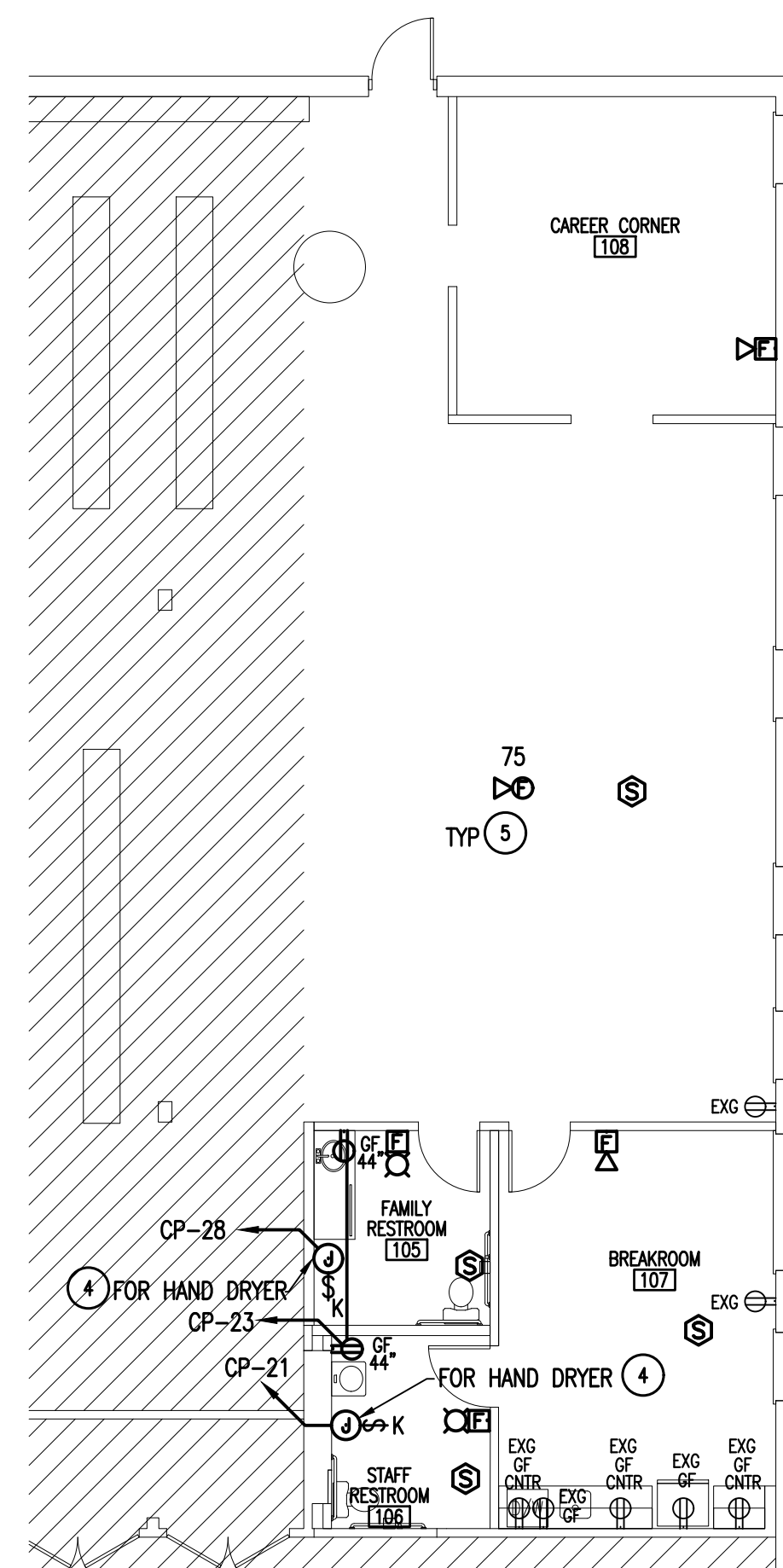
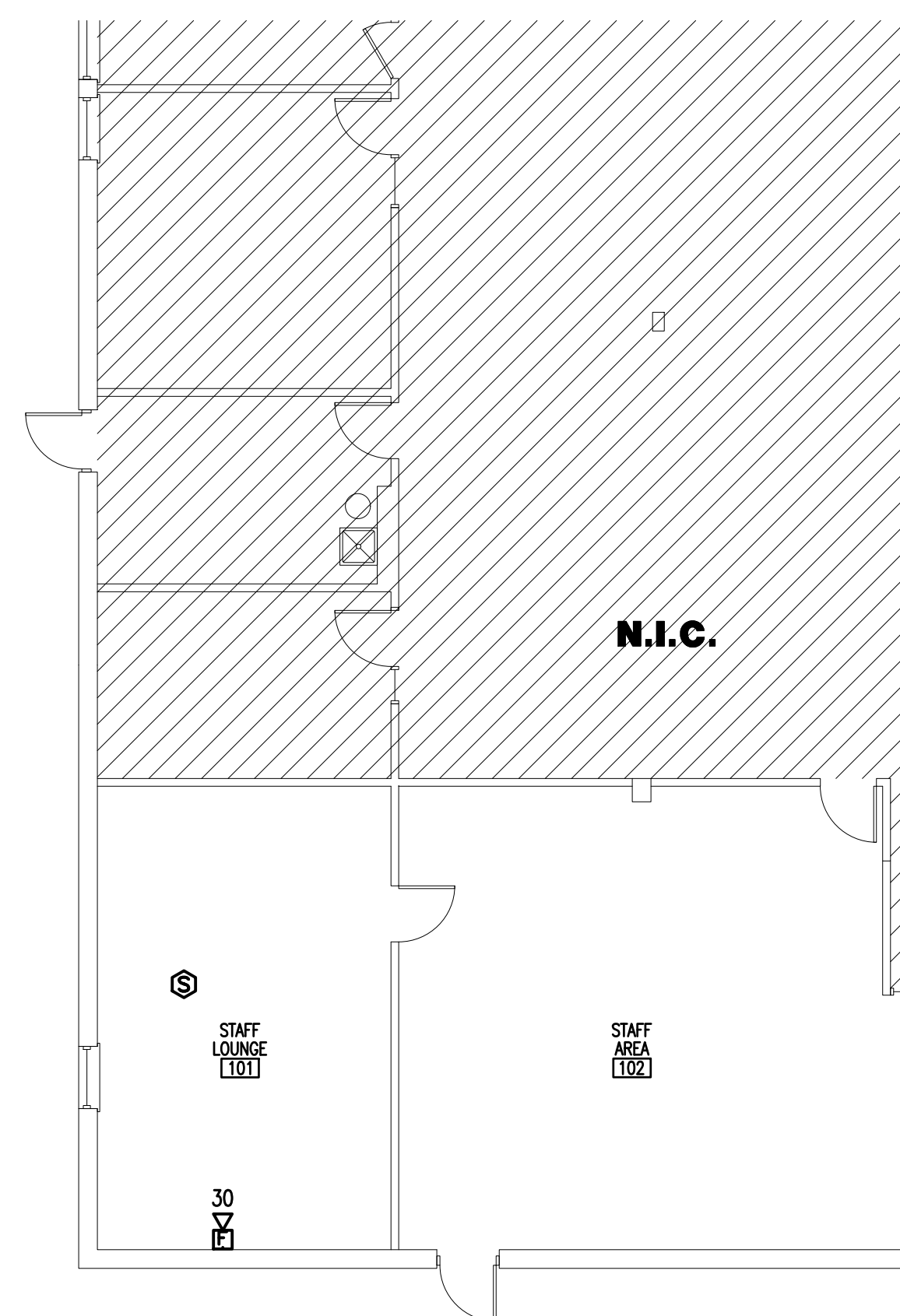
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- ## NEW WORK LIGHTING NOTES:
- ① CONNECT ALL WALL BATTERY PACKS AND EXIT SIGNS TO AN UNSWITCHED HOT LEG OF THE AREA LIGHTING CIRCUIT.
 - ② WALL OCCUPANCY SENSOR SHALL BE PROGRAMMED TO MANUALLY TURN ON THE LIGHT FIXTURES UPON ENTRANCE OF THE ROOM AND BE SET TO TURN LIGHTS OFF NO MORE THAN 20 MINUTES AFTER OCCUPANT HAS LEFT THE SPACE. CEILING SENSORS SHALL BE SET TO TURN LIGHTS OFF NO MORE THAN 20 MINUTES AFTER OCCUPANT HAS LEFT THE SPACE.
 - ③ PROVIDE NX LIGHTING CONTROLS ROOM CONTROLLER MODEL NXRCFX2-xRD-UNV FOR OCCUPANCY, DAYLIGHT AND MANUAL CONTROL OF LIGHT FIXTURES. PROVIDE 1 SPST OR 2 SPST AS REQUIRED FOR CONTROL OF ROOM. CONNECT OTHER DEVICES AS SHOWN AND PER MANUFACTURER'S INSTALLATION INSTRUCTIONS. CONNECT TO AN UNSWITCHED HOT LEG OF LOCAL CIRCUIT.
 - ④ PROVIDE NX LIGHTING CONTROLS DUAL TECHNOLOGY OCCUPANCY SENSOR MODEL NXOS-OM-DT2. CONTRACTOR SHALL COORDINATE ROOM SIZE WITH ARCHITECTURAL DRAWINGS AND PROVIDE OCCUPANCY SENSOR WITH ADEQUATE COVERAGE. CONNECT TO ROOM CONTROLLER PER MANUFACTURER'S INSTALLATION INSTRUCTIONS.
 - ⑤ PROVIDE NX LIGHTING CONTROLS LOW VOLTAGE WALL SWITCH MODEL NYSWR-ORLO-x. COORDINATE COLOR WITH ARCHITECT. CONNECT TO ROOM CONTROLLER PER MANUFACTURER'S INSTALLATION INSTRUCTIONS. SWITCH SHALL CONTROL ALL LIGHTS IN ROOM; ON, OFF AND DIM.
 - ⑥ CONNECT EXHAUST FAN TO LIGHTING CIRCUIT SO THAT EXHAUST WILL TURN ON WITH LIGHTS/OCCUPANCY SENSOR. PROVIDE TIME DOWN RELAY SO THAT EXHAUST FAN WILL RUN FOR 15 MINUTES AFTER LIGHTS ARE SHUT OFF.
 - ⑦ CONNECT FIXTURES TO EXISTING LIGHTING CONTROLS IN OPEN AREA. PROVIDE ADDITIONAL CONTROLS AS REQUIRED. MATCH EXISTING LUMEN PACKAGE SETTING AS IN OPEN AREA.
 - ⑧ ALL 2X4 FIXTURES TO BE FURNISHED BY THE LIBRARY.
 - ⑨ ELECTRICAL CONTRACTOR TO VERIFY EXISTING CIRCUIT HAS SPARE CAPACITY. IF CIRCUIT IS ELECTRICAL NOT TO HAVE SPARE CAPACITY, CONNECT TO SPARE 20A-1P CIRCUIT BREAKER IN PANEL CP AND PROVIDE 2/12 and 1/12 and 3/4" CONDUIT.



- ## NEW WORK NOTES:
1. VERIFY EXACT LOCATION AND/OR MOUNTING HEIGHT WITH OWNER PRIOR TO ROUGH-IN.
 2. VERIFY RECEPTACLE CONFIGURATION WITH EQUIPMENT VENDOR AND OWNER PRIOR TO INSTALLATION.
 3. DID NOT USE.
 4. JUNCTION BOX FOR CONNECTION OF HAND DRYER. COORDINATE FINAL CONNECTIONS IN THE FIELD. PROVIDE KEY OPERATED DISCONNECT SWITCH MOUNTED AT 7'9" AFF.
 5. PROVIDE FIRE ALARM DEVICES TO MATCH BASE BUILDING MANUFACTURER. CONNECT TO EXISTING SYSTEM MATCHING BASE BUILDING WIRING METHODS. PROVIDE ADDITIONAL BATTERIES, TERMINAL CABINETS, ETC FOR A FULLY FUNCTIONAL FIRE ALARM SYSTEM. CONTRACTOR SHALL PROVIDE UPDATED BUILDING RISER DIAGRAM, PLANS, BATTERY CALCULATIONS, VOLTAGE DROP CALCULATIONS, ETC. AS REQUIRED BY LOCAL AND STATE CODES.



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LIGHT FIXTURE SCHEDULE											
MOUNTING LOCATION: CEILING – CLG; FLOOR – FLR; GROUND – GND; POLE – PL; SUSPENDED – SUS; WALL – WL											
MOUNTING TYPE: FLUSH – FLS; PENDANT – PEN; PEDESTAL – PED; SURFACE – SUR; TRACK – TRK; CH-CHAIN HUNG; ACA-AIRCRAFT CABLE; CEILING HEIGHT – CLG-HT											
TYPE	MANUFACTURER	CAT NO	DESCRIPTION	VOLTS	LOAD WATTS	LAMPS		LOCATION	MOUNTING		REMARKS
						NO	TYPE		TYPE	HEIGHT	
A	RAB LIGHTING	BY OWNER	2X4 PANEL	120	50	–	LED	CLG	FLS	CLG HT	NOTE 1 & 3
D	RAB LIGHTING	BY OWNER	2X4 PANEL	120	30	–	LED	CLG	FLS	CLG HT	NOTE 1 & 4
EM	EMERGI-LITE	PR60M2LA-DA	EMERGENCY WALLPACK	120	60	2	LA	WL	SUR	7’-6”	
EMM	EMERGI-LITE	MPR10M2LA-DA	EMERGENCY WALLPACK	120	10	2	LA	WL	SUR	7’-6”	
RH	EMERGI-LITE	EF100(LA)	REMOTE HEAD	6	8	–	LED	WL	SUR	7’-6”	
*See REMARKS section.											
NOTES: 1. MATCH SELECTABLE COLOR TEMPERATURE SETTING WITH EXISTING LIGHTING COLOR TEMPERATURE. 2. VERIFY MOUNTING HEIGHT WITH THE ARCHITECT. 3. SET FIELD ADJUSTABLE LIGHT OUTPUT TO HIGH SETTING 4. SET FIELD ADJUSTABLE LIGHT OUTPUT TO LOW SETTING											

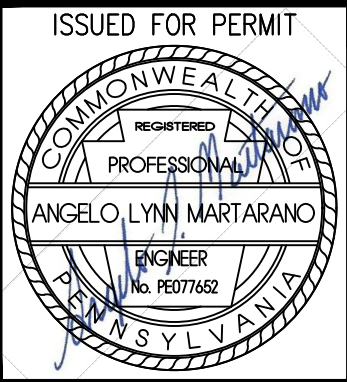
PANEL						CP							
VOLTAGE (L–N):				120		ENCLOSURE TYPE:				RECESSED			
VOLTAGE (L–L):				208		MOUNTING:				SURFACE			
PHASES, WIRES:				3 ϕ 4 W		AIC RATING (A):				EXISTING			
MINIMUM BUS CAPACITY (A):				100 A		NOTES:							
MAIN O.C. DEVICE (A):				100 A									
CKT NO	DESCRIPTION	TRIP AMPS	POLE	PHASE LOADS (VA)						POLE	TRIP AMPS	DESCRIPTION	CKT NO
				A		B		C					
1	EXISTING	20	1	720	720					1	20	EXISTING	2
3	EXISTING	20	1			720	720			1	20	EXISTING	4
5	EXISTING	20	1					720	720	1	20	EXISTING	6
7	EXISTING	20	1	720	720					1	20	EXISTING	8
9	EXISTING	20	1			720	720			1	20	EXISTING	10
11	EXISTING	20	1					720	720	1	20	EXISTING	12
13	EXISTING	20	1	720	720					1	20	EXISTING	14
15	EXISTING	20	1			720	0			1	20	SPARE	16
17	EXISTING	20	1					720	760	1	20	LTG – OPEN AREA	18
19	SPARE	20	1	0	0					1	20	SPARE	20
21	HAND DRYER	20	1			1400	0			1	20	SPARE	22
23	RECP – FAMILY TOILET	20	1					360	0	1	20	SPARE	24
25	SPARE	20	1	0	0					1	20	SPARE	26
27	SPARE	20	1			0	1400			1	20	HAND DRYER	28
29	SPARE	20	1					0	0	1	20	SPARE	30
				CONNECTED LOAD PHASE TOTALS (VA)									
				4320		6400		4720					
				CONNECTED LOAD (KVA)		DEMAND FACTOR		DEMAND LOAD (KVA)				DEMAND LOAD 14.7 KVA	
Equipment				2.9		1.00		2.9				SPARE CAPACITY 21.4 KVA	
Receptacles (0 – 10 KVA)				10.0		1.00		10.0				SPARE CAPACITY 59.3 AMPS	
Receptacles (Over 10 KVA)				1.9		0.50		0.9				SPARE CAPACITY 59 %	
Lighting				0.7		1.25		0.8				PHASE BALANCE	
												A TO B 68 %	
												B TO C 74 %	
												C TO A 92 %	
TOTAL:				15.4				14.7					
LOAD (AMPS):				42.9				40.7					

N – PROVIDE NEW BREAKER MATCHING EXISTING
GF – NEW GFCI BREAKER

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