

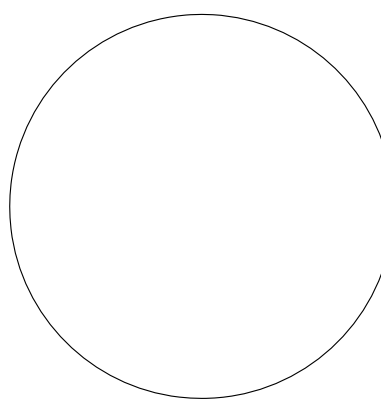


SPRINGFIELD TOWNSHIP Recreation Center

ADA TOILET ROOM RENOVATIONS Wyndmoor Pennsylvania



MEP ENGINEERING HPE GROUP 905 Castle Hill Lane Devon, PA 19333 215.370.6975



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Table with columns: No. Issue, Date, Issued For, Job Number, Proj. Mgr., Proj. Arch., Drawn By, Checked By.

Scale: NOTED COVER SHEET Drawing Title: CS Drawing no.:

PROJECT CONTACTS

CONTACTS BUILDING/OWNER REPRESENTATIVE MICHAEL TAYLOR, ASSIST. TOWNSHIP MANAGER SPRINGFIELD TOWNSHIP 215.636.7600 ARCHITECT & PROJECT MANAGER DAVE KRATZER, PROJECT PRINCIPAL BAU ARCHITECTURE 215.206.0962

MULTIPLE PRIME CONTRACT BIDS

- THIS PROJECT IS A MULTIPLE PRIME CONTRACT PROJECT WITH THE FOLLOWING BIDS: 1. GENERAL CONSTRUCTION BASE BID 2. MECHANICAL CONSTRUCTION BASE BID 3. ELECTRICAL CONSTRUCTION BASE BID 4. PLUMBING CONSTRUCTION BASE BID

ALTERNATES

BASE BID: AS INDICATED ON CONSTRUCTION DOCUMENTS ADD ALTERNATE NO. 1: GENERAL CONTRACTOR TO PROVIDE ENTIRE MECHANICAL WORK SCOPE IF SEPARATE PRIME MECHANICAL BID IS NOT RECEIVED OR IS REJECTED. ADD ALTERNATE NO. 2: GENERAL CONTRACTOR TO PROVIDE ENTIRE ELECTRICAL WORK SCOPE IF SEPARATE PRIME ELECTRICAL BID IS NOT RECEIVED OR IS REJECTED. ADD ALTERNATE NO. 3: GENERAL CONTRACTOR TO PROVIDE ENTIRE PLUMBING WORK SCOPE IF SEPARATE PRIME PLUMBING BID IS NOT RECEIVED OR IS REJECTED. ADD ALTERNATE NO. 4: ADD GUARD MESH PANELS & LOWER RAIL TO EXTERIOR RAMP, ELEVATED WALKWAY & STAIRS, RAILS NEW LOWER RAIL & HANDRAILS ON ADA RAMP ARE INCLUDED AS PART OF BASE BID.

PROJECT SCOPE & ALTERNATES

WORK INVOLVES THE CONSTRUCTION OF A NEW ADA ACCESSIBLE TOILET ROOMS WITHIN AN EXISTING GYMNASIUM BUILDING. WORK INCLUDES INSTALLATION OF NEW WATER SUPPLY AND WASTE LINES TO BE TIED INTO EXISTING SYSTEMS, CONSTRUCTION OF WALLS, INSTALLATION OFF NEW FINISHES.

LIST OF DRAWINGS AND SPECIFICATIONS

Table with columns: SHEET, DESCRIPTION, ISSUE (1-6). Includes rows for ARCHITECTURAL (COVER SHEET, DEMOLITION PLANS, NEW WORK PLANS, ELEVATIONS, DETAILS & SCHEDULES), MECHANICAL (MECHANICAL COVER SHEET, PLANS), ELECTRICAL (ELECTRICAL COVER SHEET, PLANS), and PLUMBING (PLUMBING COVER SHEET, PLANS, SPECIFICATIONS).

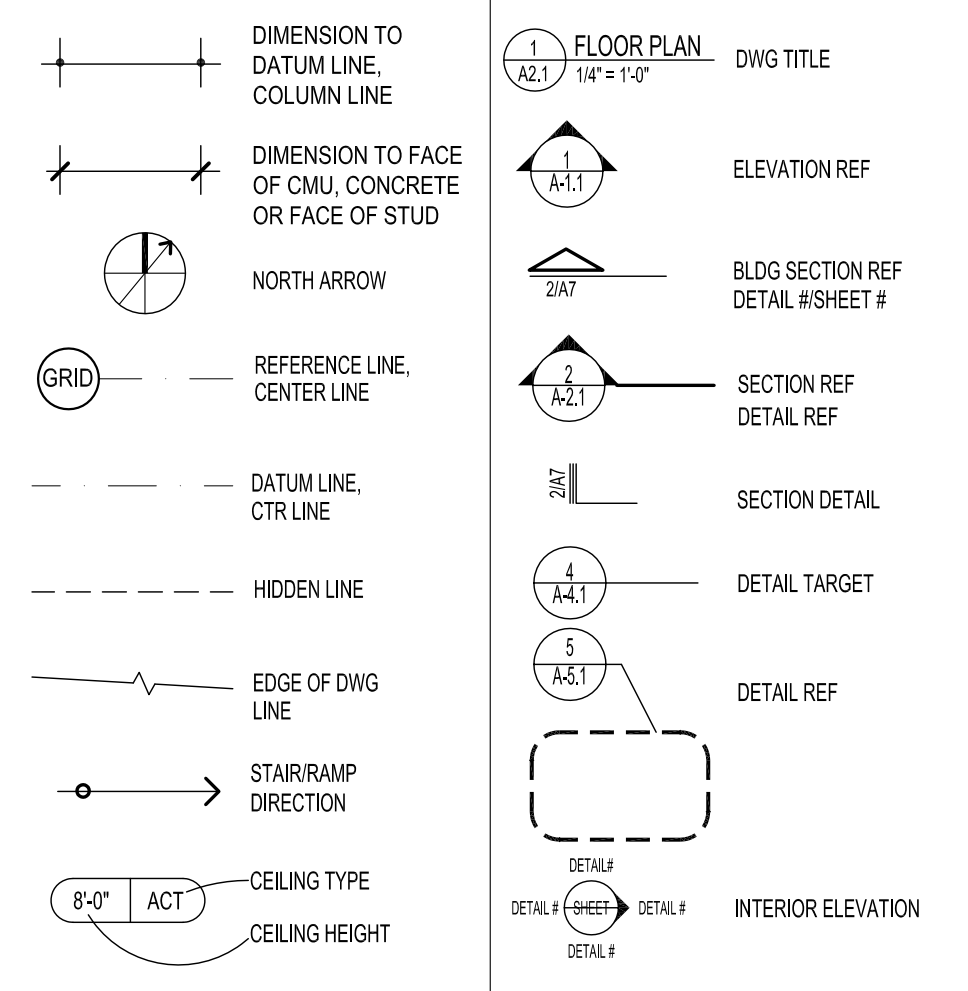
GENERAL PROJECT NOTES CONTINUED

- 18. ALL DIMENSIONS OF EXISTING CONSTRUCTION ARE SHOWN FOR PLANNING PURPOSES. CONTRACTOR SHALL VERIFY ALL EXISTING DIMENSIONS PRIOR TO ORDERING OR COMMENCING ANY WORK. AND DURING BID AS POSSIBLE. 19. ALL INSULATION FACING EXPOSED TO OPEN SPACES SHALL HAVE FS FACING PER BUILDING CODE. 20. NOT USED 22. IF PORTIONS OF THIS PROJECT ARE TO BE COMPLETED THROUGH DESIGN-BUILD CONTRACTS... 23. REFER TO ARCHITECTURAL DRAWINGS FOR THE LAYOUT AND LOCATION OF ALL LIGHTING, UTILITIES, ACCESSORIES, AND EQUIPMENT... 24. JOINTS BETWEEN NEW WALLS AND EXISTING WALLS... 25. ALL LIGHT FIXTURES SHALL BE SUPPORTED FROM THE STRUCTURE ABOVE CEILINGS... 26. NEW FLOORS TRANSITIONING INTO EXISTING FLOORS... 27. IF THE INTENT OF THE OWNER IS TO CONTINUE USE OF THE BUILDING DURING CONSTRUCTION... 28. STANDARD ABBREVIATIONS USED: N.I.C. - NOT IN CONTRACT V.I.F. - VERIFY IN FIELD U.N.D. - UNLESS NOTED OTHERWISE C.L.R. - CLEAR T.Y.P. - TYPICAL O.A.E. - OR APPROVED EQUAL EQ. - EQUAL C.L. - CENTERLINE W. - WITH

DEMOLITION GENERAL NOTES

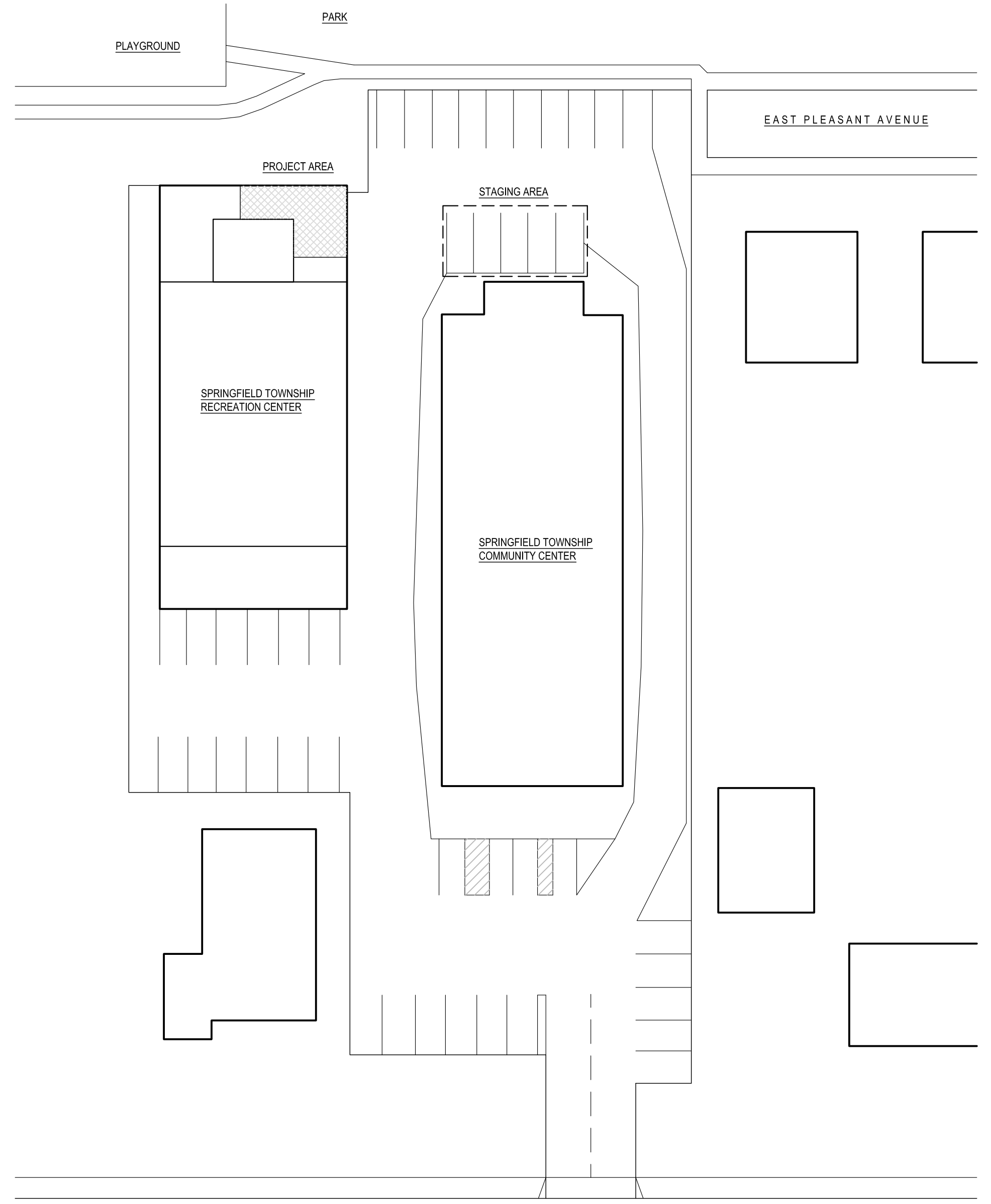
- 1. ALL DEMOLITION WORK SHALL BE PERFORMED WITH "DUE CARE AND DILIGENCE" SO AS TO PREVENT THE ARBITRARY DESTRUCTION OR INTERRUPTION OF CONCEALED UTILITIES WHICH COULD NOT BE PREDETERMINED UNTIL DEMOLITION WAS STARTED. 2. REMOVE ALL CONSTRUCTION DESIGNATED TO BE REMOVED & CLEAR TO RECEIVE NEW WORK AS HEREIN INDICATED. 3. WHERE EXISTING EQUIPMENT, PIPING, DUCTS, ETC., ARE REQUIRED TO BE REMOVED, SUCH REMOVAL SHALL INCLUDE ALL ANCHORS, HANGARS, FOUNDATIONS, ETC. 4. ALL EQUIPMENT SUCH AS SHELVING, CABINETS, PLUMBING FIXTURES, ELECTRICAL FIXTURES & EQUIPMENT, MECHANICAL EQUIPMENT, AIR CONDITIONER UNITS, ETC., REMOVED SHALL BE TURNED OVER TO THE OWNER, STORED OR REMOVED FROM THE SITE AS DIRECTED BY THE OWNER & TOWNSHIP. 5. CONTRACTOR IS RESPONSIBLE TO COORDINATE PRE-DEMOLITION WALK THROUGH W/ OWNER & TOWNSHIP TO COORDINATE DEMOLITION WORK & ITEMS TO BE TURNED OVER TO OWNER. 6. DEMOLITION WORK SCOPE IS DENOTED THROUGHOUT THIS SET OF DRAWINGS. 7. CONTRACTOR IS RESPONSIBLE TO MAINTAIN ALL EXITING AND SAFETY FEATURES DURING CONSTRUCTION. 8. LOCATION OF DUMPSTERS MUST BE COORDINATED WITH OWNER & TOWNSHIP AND MUST BE MONITORED DURING THE DAY AND MAY BE REQUESTED TO BE REMOVED AT END OF THE DAY. 9. ALL EQUIPMENT, MATERIALS, TOOLS, AND ACCESSORIES SHALL BE MONITORED DURING THE DAY AND SECURED AFTER HOURS. 10. IF THE PROJECT INVOLVES ALTERNATES, THE CONTRACTORS ARE RESPONSIBLE TO COORDINATE DEMOLITION WORK REQUIRED AS PART OF THE ALTERNATES AND INCLUDE IN THE COST OF THE ALTERNATES. 11. GENERAL CONTRACTOR IS LIABLE FOR ANY DAMAGE TO EXISTING PARKING LOT AND IS TO PROVIDE DOCUMENTATION OF EXISTING CONDITIONS.

DRAWING SYMBOLS



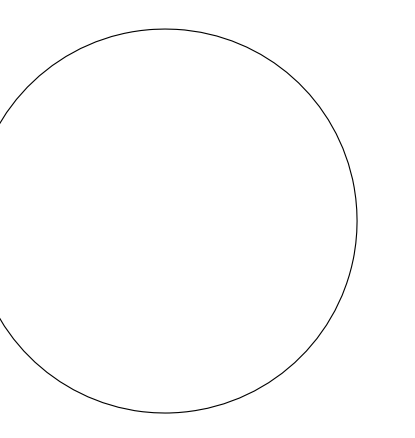
GENERAL PROJECT NOTES

- 1. UNLESS OTHERWISE NOTED, DIMENSIONS ARE TO COLUMN CENTERLINE, FACE OF STUD AND FACE OF MASONRY AND CONCRETE WALLS. 2. ALL CMU WALLS, SOUND RATED PARTITIONS, FIRE RATED AND/OR SMOKE PARTITIONS SHALL EXTEND FROM FINISHED FLOOR TO WHERE IT MAY BE SEALED. 3. 20 GA. METAL STUDS SHALL BE USED FOR ALL PARTITIONS. 4. NOTIFY ARCHITECT OF ANY QUESTIONS OR DISCREPANCIES IN THE DOCUMENTS WITH RESPECT TO INTENT OR SCOPE OF THE WORK. 5. ADA COMPLIANT SINKS WITH TRAP PROTECTION SKIRT PANELS SHALL MEET ANSI 117.1KNEE AND TOE CLEARANCES. 6. BIDDERS ARE REQUIRED TO VISIT THE BUILDING AND REVIEW THE SPECIFIC AREAS OF WORK. 7. UPON AWARD OF CONTRACT, THE CONTRACTOR SHALL VERIFY EXISTING SITE CONDITIONS AND PLAN OUT/LAY OUT THE WORK INCLUDING VERIFYING THE EXISTING DIMENSIONS. 8. GENERAL CONTRACTOR IS RESPONSIBLE TO COORDINATE THE WORK OF ALL TRADES. 9. CONTRACTOR IS RESPONSIBLE FOR ALL MEANS AND METHODS OF CONSTRUCTION, SAFETY, SHORING AND BRACING. 10. ALL WORK TO BE IN ACCORDANCE WITH APPLICABLE CODES. 11. DO NOT SCALE DRAWINGS. 12. PERMITS MAY BE REQUIRED FROM MULTIPLE AGENCIES INCLUDING LOCAL MUNICIPALITY. 13. CONTRACTOR SHALL MAINTAIN GENERAL AND PROFESSIONAL INSURANCE AS LIMITS AGREED TO BY THE OWNER AND SHALL LIST THE OWNER, AND BAU ARCHITECTURE, AS ADDITIONAL INSURED PARTIES. 14. NOT USED 15. FINAL FINISHES SHALL BE COORDINATED AND REVIEWED WITH OWNER PRIOR TO ORDERING. 16. HARDWARE SHALL BE REVIEWED AND COORDINATED WITH OWNER PRIOR TO SHOP DRAWINGS. 17. CONTRACTOR SHALL MAINTAIN SAFETY BARRIERS AND PROCEDURES DURING WORK AND BE MINDFUL THAT THE PUBLIC, CHILDREN AND OTHER PERSONS MAY BE IN THE AREA.



1 Overall Site Plan & Roof Plan Scale: 1" = 30'

OWNER REVIEW SET - ARCHITECTURE 9.10.2019



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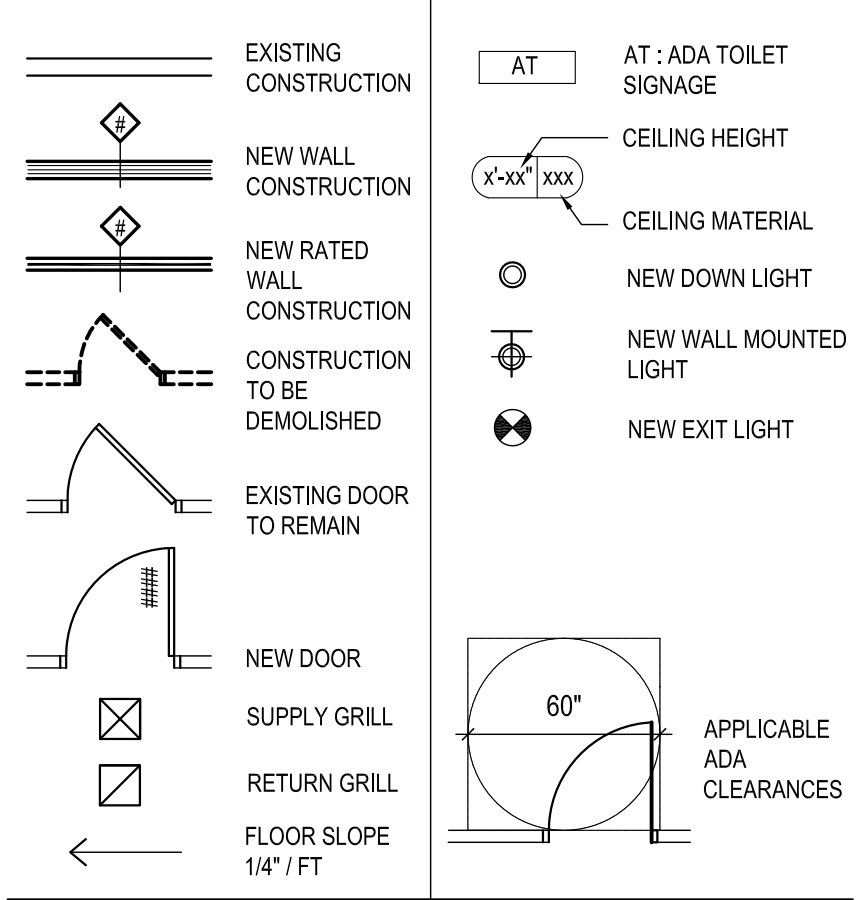
No. Issue	Issue Date	Issued For
2	9.21.19	OWNER REVIEW ARCH 2
1	9.10.19	OWNER REVIEW ARCH

Job Number: 1903
Proj. Mgr: DK Proj. Arch: DK
Drawn By: DK/MVS Checked By: DK

Scale: NOTED
DEMOLITION PLANS
Drawing Title:

D1
Drawing no.:

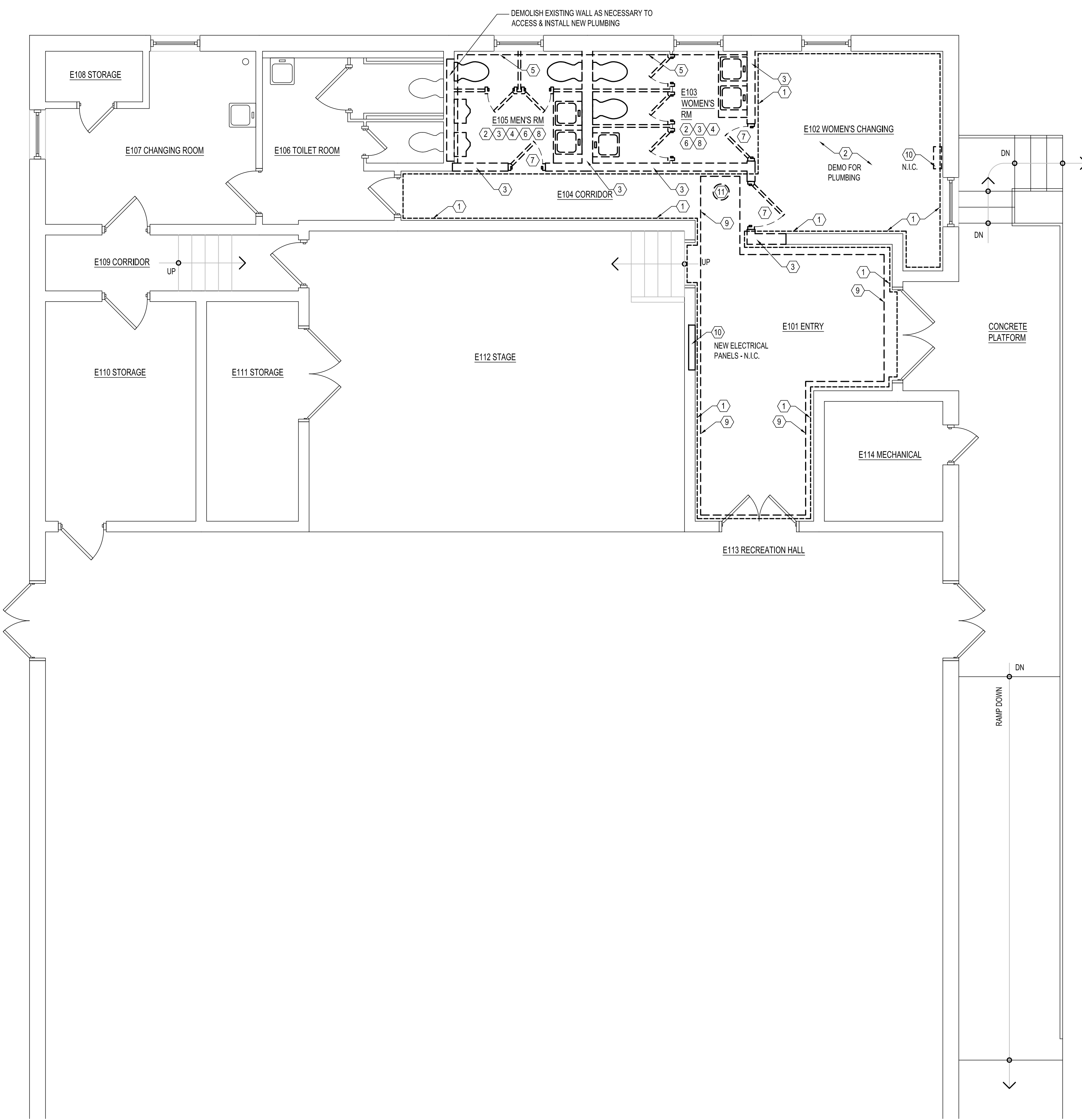
PLAN LEGEND



REFLECTED CEILING PLAN GENERAL NOTES
1. ALL LIGHTS, EQUIPMENT, DEVICES AND CONSTRUCTION SHALL BE LOCATED PER THE ARCHITECTURAL PLANS AND NOT THE MEP-FP DRAWINGS. FAILURE TO FOLLOW THE ARCHITECTURAL PLANS FOR LAYOUT WILL RESULT IN CONTRACTOR MOVING CONSTRUCTION TO THAT DESCRIBED IN ARCHITECTURAL PLANS AT NO ADDITIONAL COST TO OWNER OR EXTENSION OF SCHEDULE. IF DISCREPANCIES EXIST, CONTACT ARCHITECT FOR CLARIFICATION.
2. CENTER ALL LIGHTS IN CEILING TILES UNLESS DENOTED OTHERWISE.
3. LIGHTING LOCATIONS IN EXISTING OPENINGS IS ASSUMED. CONTRACTOR TO LAYOUT LIGHTS AND REVIEW WITH ARCHITECT PRIOR TO INSTALLATION - TYPICAL FOR PROJECT.

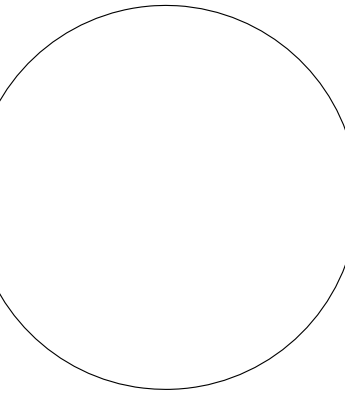
DEMOLITION NOTES

- 1 EXISTING TILE FLOORING THIS AREA TO BE REMOVED BY CLIENT. CONTRACTOR TO PREPARE SUBFLOOR FOR NEW FLOORING INSTALLATION. AREA OF REMEDIATED TILE SHOWN IS APPROXIMATELY 375 SF.
- 2 DEMOLISH EXISTING TILE FLOOR THIS ROOM & PREPARE TO ACCEPT NEW SCHEDULED TILE FLOOR FINISH. CUT EXISTING CONCRETE SLAB AS NECESSARY TO RUN NEW SANITARY & PLUMBING LINES TO NEW SCHEDULED FIXTURES. COMPACT SOIL & INSTALL CRUSHED STONE AND MINIMUM 4" NEW CONCRETE SLAB. PREPARE TO RECEIVE NEW FINISH. SEE PLUMBING DRAWINGS FOR EXTENT OF SLAB DEMOLITION.
- 3 DEMOLISH EXISTING CONSTRUCTION & PREPARE FOR NEW CONSTRUCTION INCLUDING WALLS & FLOORS & SUSPENDED ACT CEILINGS. EXISTING PLASTER CEILING IS TO REMAIN. WALL DEMO INCLUDES WALL TILE & ANY SETTING BED. TILE, TOILET PARTITIONS AND PREPARE FOR NEW PARTITIONS. DEMOLISH ALL ELECTRICAL & PLUMBING NOT SCHEDULED TO REMAIN.
- 4 DEMOLISH EXISTING PLUMBING FIXTURES THIS ROOM & TEMPORARILY CAP PLUMBING LINES AS NECESSARY DURING CONSTRUCTION.
- 5 DEMOLISH WALL TILE BACK TO CMU AND PREPARE FOR NEW WALL TILE - TYPICAL FOR WORK AREA.
- 6 REMOVE EXISTING TOILET PARTITIONS, TOILET ACCESSORIES, WALL MOUNTED MIRRORS, SHELVES, TOILET PAPER DISPENSERS AND SANITARY NAPKIN DISPENSERS THIS ROOM. HOLD HAND DRYERS FOR OWNER. COORDINATE WHICH ITEMS ARE TO BE TURNED OVER TO THE OWNER & WHAT WILL BE DISPOSED OF.
- 7 REMOVE DOORS, FRAMES & TRIM
- 8 REMOVE EXISTING LIGHTING IN TOILET ROOMS & PREPARE FOR NEW LIGHT INSTALLATION. EXISTING WIRING MAY BE REUSED.
- 9 REMOVE EXISTING SUSPENDED ACT CEILING TILES & GWB THIS AREA AS NECESSARY TO INSTALL NEW CEILING. EXISTING LIGHTS ARE TO REMAIN U.N.O. INSTALL NEW CEILING TILES IN EXISTING GRID IN E101 ENTRY.
- 10 EXISTING ELECTRICAL SERVICE FEED & JUNCTION BOX TO BE DEMOLISHED & REROUTED TO NEW PANELS BY OWNER - N.I.C.
- 11 DEMOLISH EXISTING LIGHT FIXTURE



1 Existing Conditions & Demolition Floor Plan
Scale: 1/4" = 1' North

OWNER REVIEW SET - ARCHITECTURE 9.10.2019



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No. Issue	Issue Date	Issued For
2	9.21.19	OWNER REVIEW ARCH 2
1	9.10.19	OWNER REVIEW ARCH

Job Number: 1903
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Drawn By: DK/MVS Checked By: DK

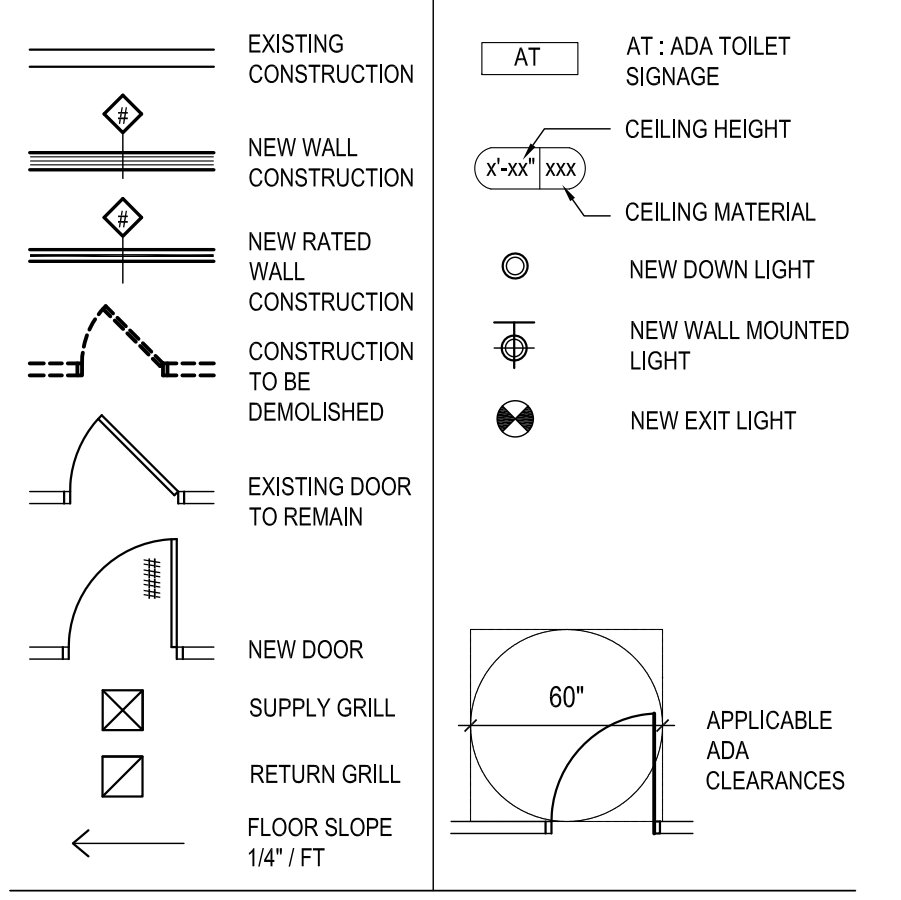
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NEW WORK PLANS
Drawing Title:

A1

Drawing no.:

PLAN LEGEND



REFLECTED CEILING PLAN GENERAL NOTES

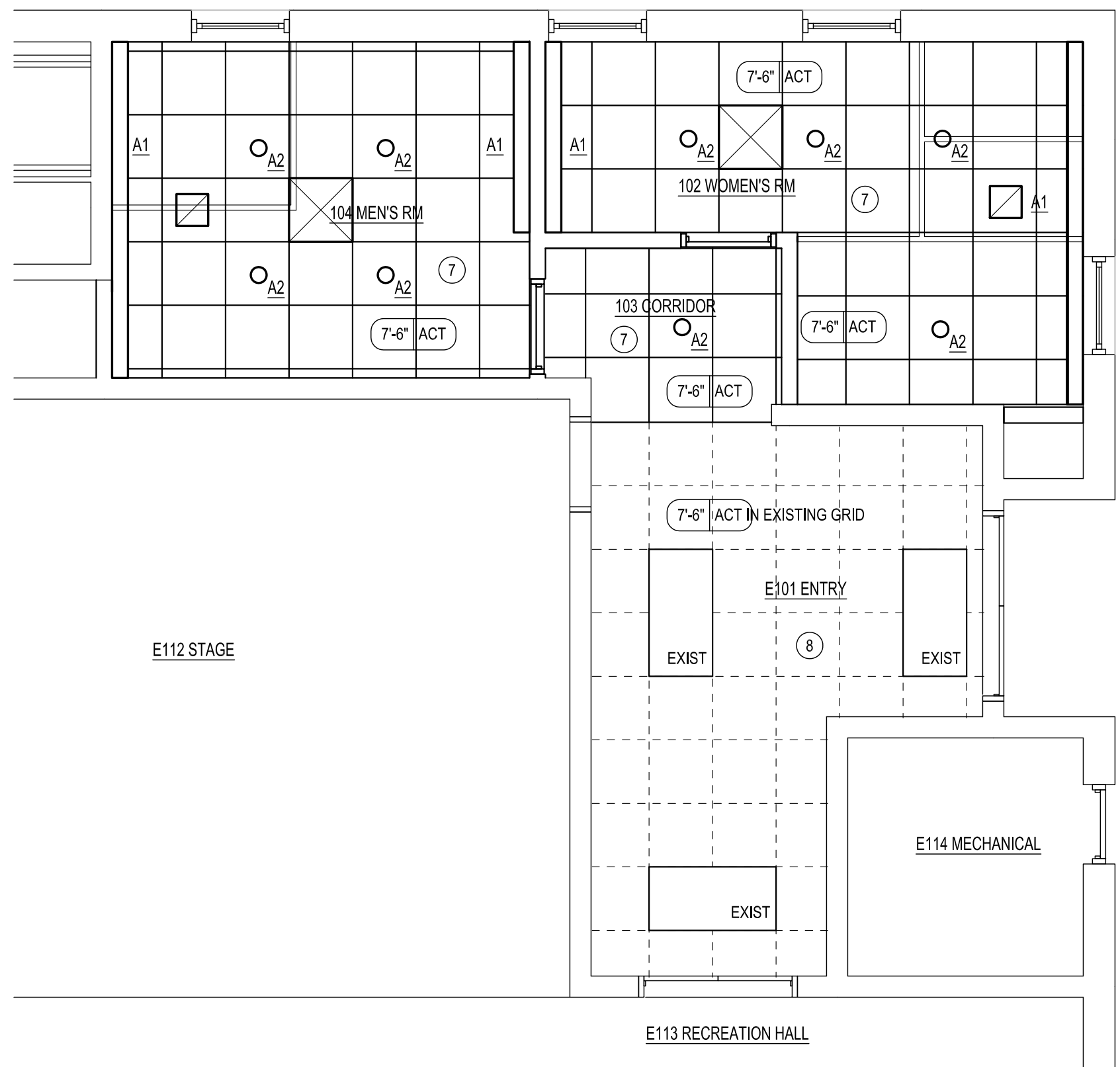
- ALL LIGHTS, EQUIPMENT, DEVICES AND CONSTRUCTION SHALL BE LOCATED PER THE ARCHITECTURAL PLANS AND NOT THE MEP-FP DRAWINGS. FAILURE TO FOLLOW THE ARCHITECTURAL PLANS FOR LAYOUT WILL RESULT IN CONTRACTOR MOVING CONSTRUCTION TO THAT DESCRIBED IN ARCHITECTURAL PLANS AT NO ADDITIONAL COST TO OWNER OR EXTENSION OF SCHEDULE. IF DISCREPANCIES EXIST, CONTACT ARCHITECT FOR CLARIFICATION.
- CENTER ALL LIGHTS IN CEILING TILES UNLESS DENOTED OTHERWISE.
- LIGHTING LOCATIONS IN EXISTING OPENINGS IS ASSUMED. CONTRACTOR TO LAYOUT LIGHTS AND REVIEW WITH ARCHITECT PRIOR TO INSTALLATION - TYPICAL FOR PROJECT.

NEW WORK GENERAL NOTES

- CONTRACTOR TO FIELD MEASURE FOR ALL DIMENSIONS NOT EXPLICITLY GIVEN IN THE CONTRACT DOCUMENTS. CONTRACTOR IS NOT TO SCALE DRAWINGS TO OBTAIN DIMENSIONS NOT PROVIDED. CONTRACTOR TO NOTIFY ARCHITECT IMMEDIATELY IF CRITICAL DIMENSION IS REQUIRED AND NOT PROVIDED PRIOR TO COMMENCING WITH ANY FURTHER WORK. ARCHITECT AND OWNER WILL NOT BE HELD RESPONSIBLE FOR ANY ADDITIONAL COSTS OR DELAYS INCURRED BY FAILURE TO COMPLY WITH THIS DIRECTIVE.
- GIVEN THE COMPLEXITY OF THE EXISTING CONDITIONS, CONTRACTOR IS TO LAYOUT ALL WALLS & WORK FOR REVIEW BY ARCHITECT PRIOR TO INSTALLATION TO CONFIRM COORDINATION.
- FACILITY SHALL REMAIN IN USE DURING CONSTRUCTION. CONTRACTOR IS TO COORDINATE SCHEDULE WITH OWNER AND ARCHITECT TO MINIMIZE DOWNTIME FOR FACILITY.
- WORK SCOPE IS SHOWN THROUGHOUT THE SET OF DRAWINGS - PRIMARILY THE PLANS AND INTERIOR ELEVATIONS. CONTRACTOR IS TO COORDINATE WORK THROUGH ALL DRAWINGS.
- CONTRACTOR IS TO INSTALL SOLID BLOCKING FOR ALL GRAB BARS, TOILET ACCESSORIES, AND ALL WALL MOUNTED EQUIPMENT AND DEVICES - TYPICAL FOR PROJECT.

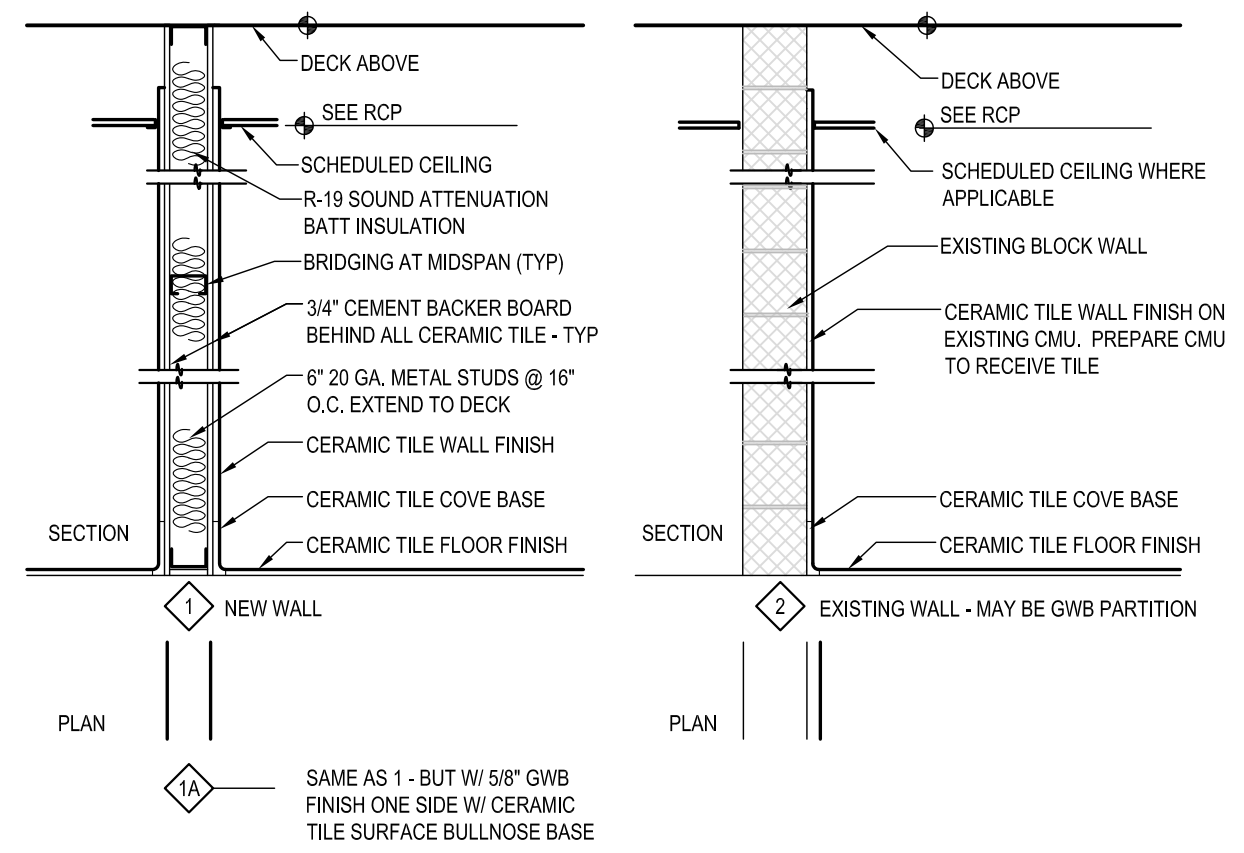
NEW WORK NOTES

- RUN NEW PLUMBING IN EXISTING GWB FURRING WALL
- MARBLE THRESHOLD WITH MAX 1/2" RISE.
- INSTALL NEW OVERHEAD BRACED TOILET PARTITIONS.
- INSTALL NEW WALL TILE INTO WINDOW RETURNS & PROVIDE SYNTHETIC WINDOWS SILLS SAME AS LAV COUNTERS.
- NEW SYNTHETIC COUNTER TOP AND UNDER MOUNT LAVATORY SINKS.
- INSTALL CONDUIT FOR ELECTRIC HAND DRYER IN CMU BLOCK - NOT SURFACE MOUNTED
- INSTALL NEW ACT CEILING BELOW EXISTING PLASTER CEILING IN NEW TOILET ROOMS & 103 CORRIDOR. COORDINATE DISTRIBUTION OF SERVICES.
- INSTALL NEW ACT CEILING TILES IN EXISTING GRID IN E101 ENTRY
- FURR OUT WALL WITH 3-5/8" METAL STUDS & CEMENT BACKERBOARD TO HOUSE RECESSED ELECTRIC HEATER. INSTALL CERAMIC TILE & STAINLESS STEEL CORNER GUARDS. INSTALL SYNTHETIC TOP SAME AS SINK COUNTER. ELECTRICAL SERVICE FOR EMERGENCY LIGHTING, HANDDRYER & ELECTRIC HEATER SHALL RUN CONCEALED IN BLOCK WALL.

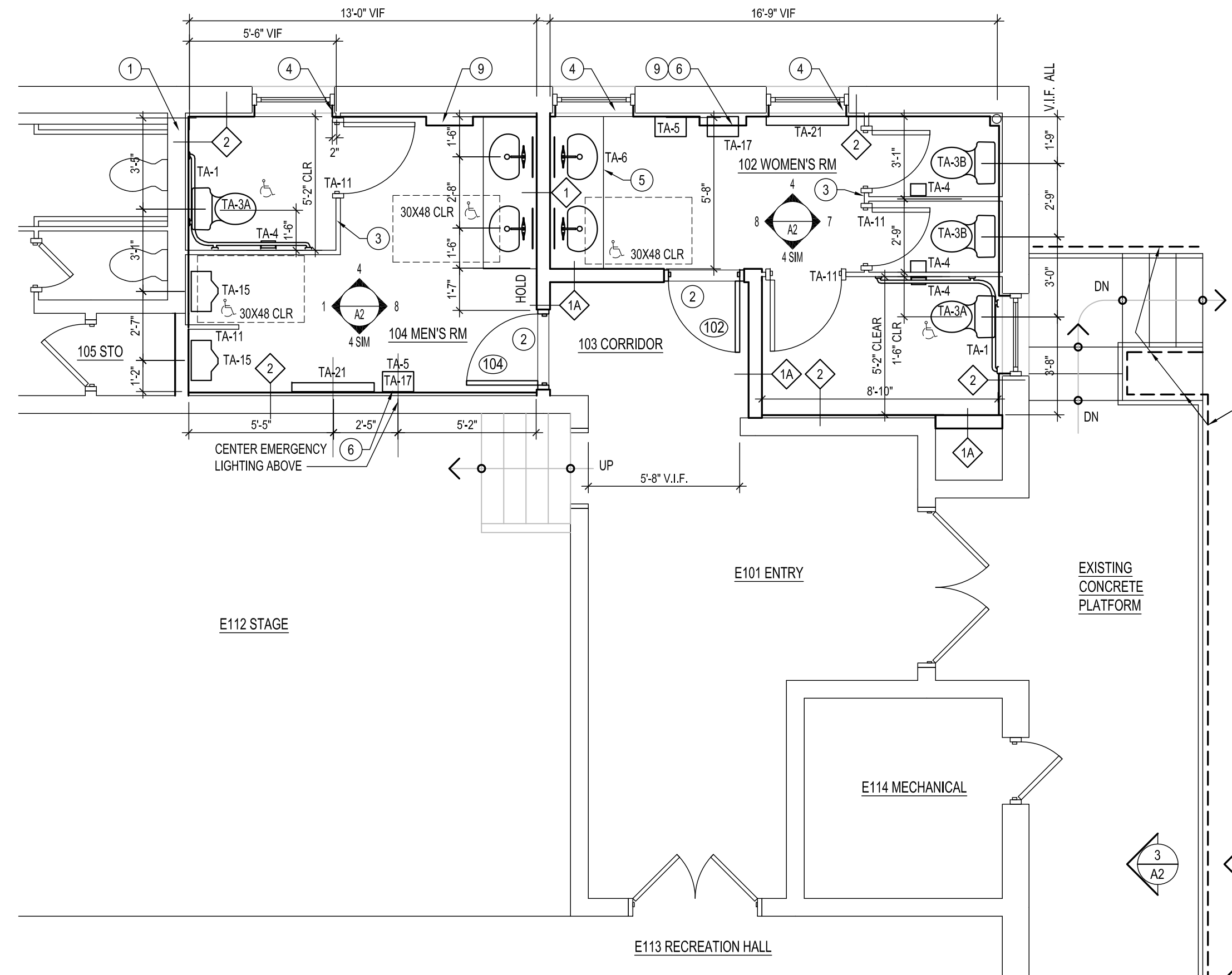


2 New Work Reflected Ceiling Plan
Scale: 1/4" = 1'-0"

USE ARCHITECTURAL DRAWINGS FOR LOCATIONS OF ALL EQUIPMENT & ACCESSORIES - TYPICAL



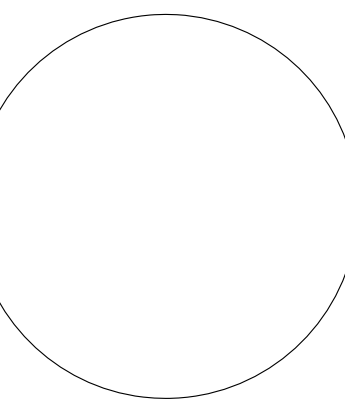
3 Partition Types
Scale: 1/2" = 1'



1 New Work Floor Plan
Scale: 1/4" = 1'-0"

USE ARCHITECTURAL DRAWINGS FOR LOCATIONS OF ALL EQUIPMENT & ACCESSORIES - TYPICAL

OWNER REVIEW SET - ARCHITECTURE 9.10.2019



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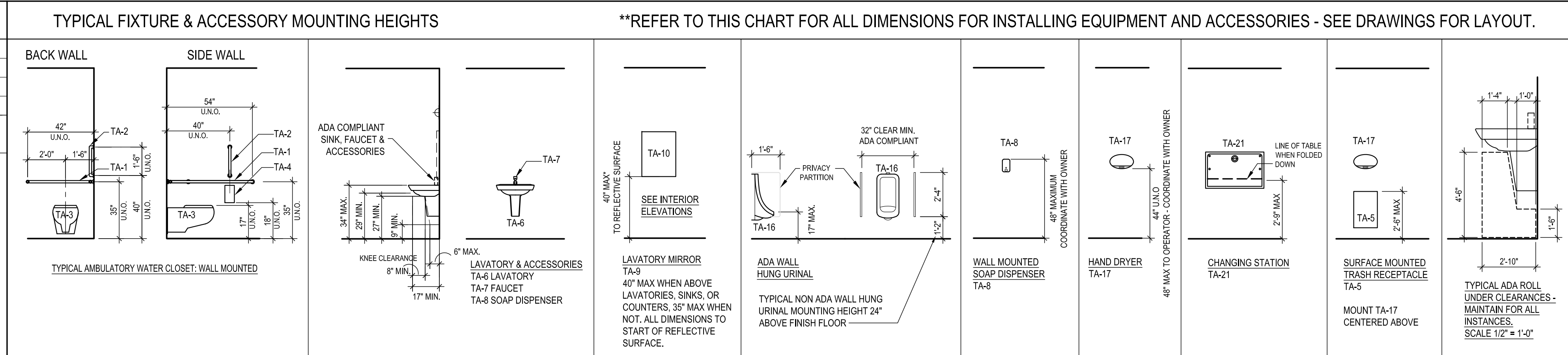
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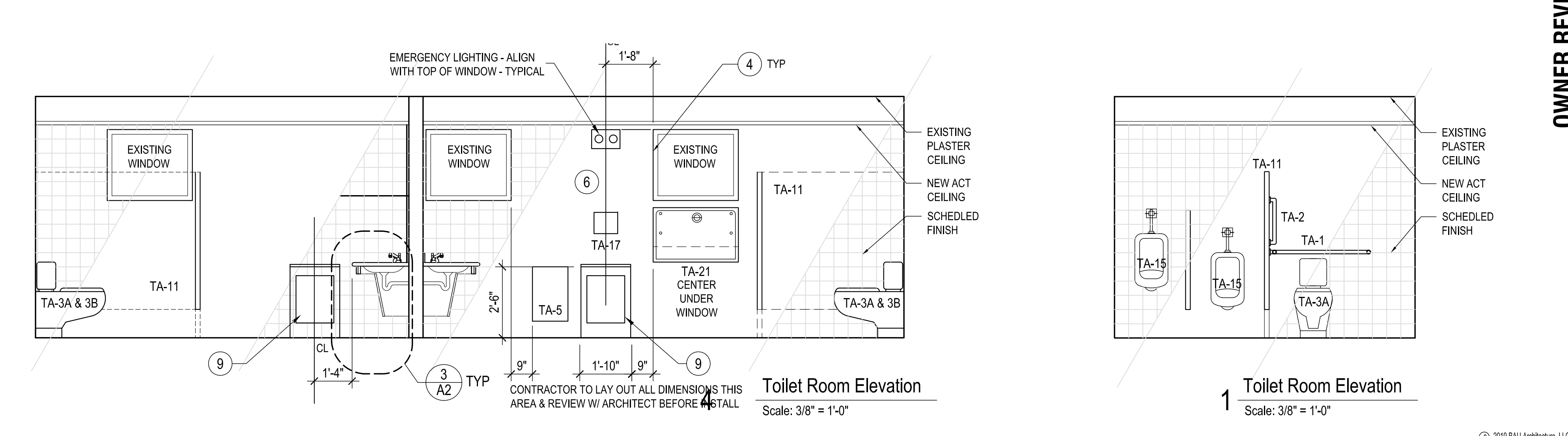
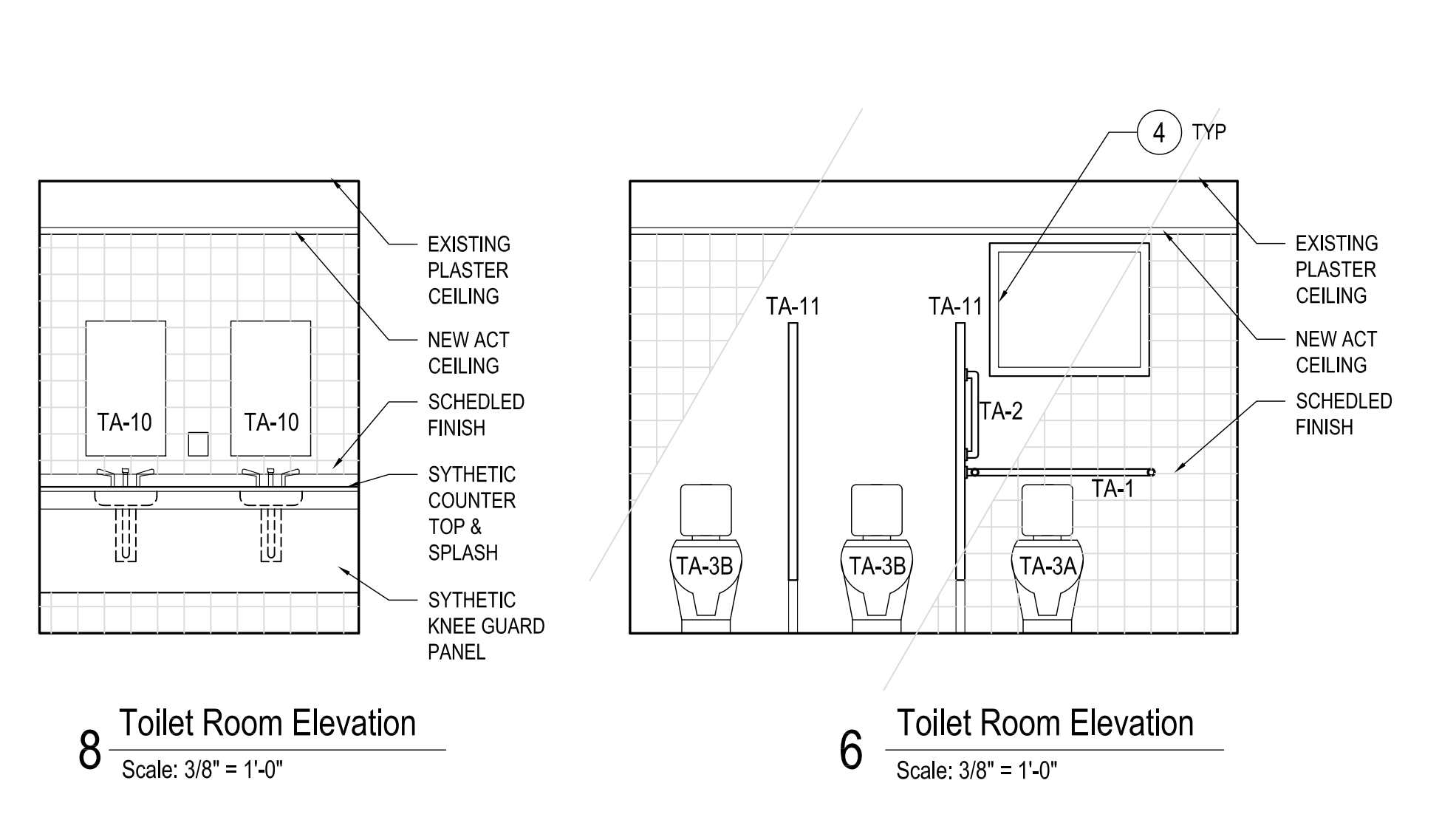
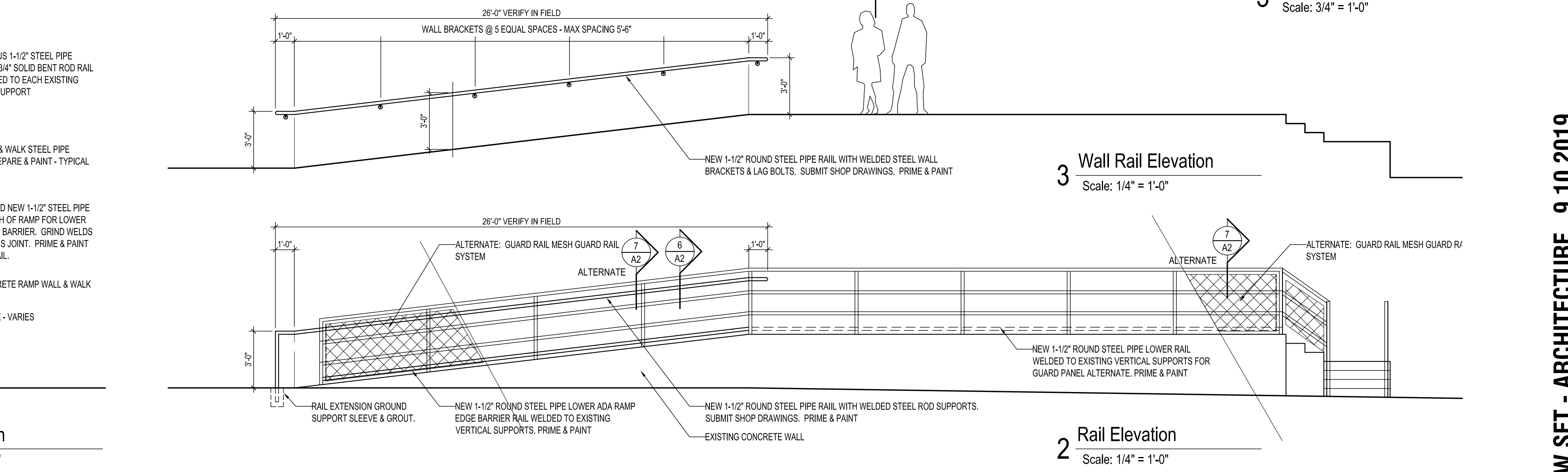
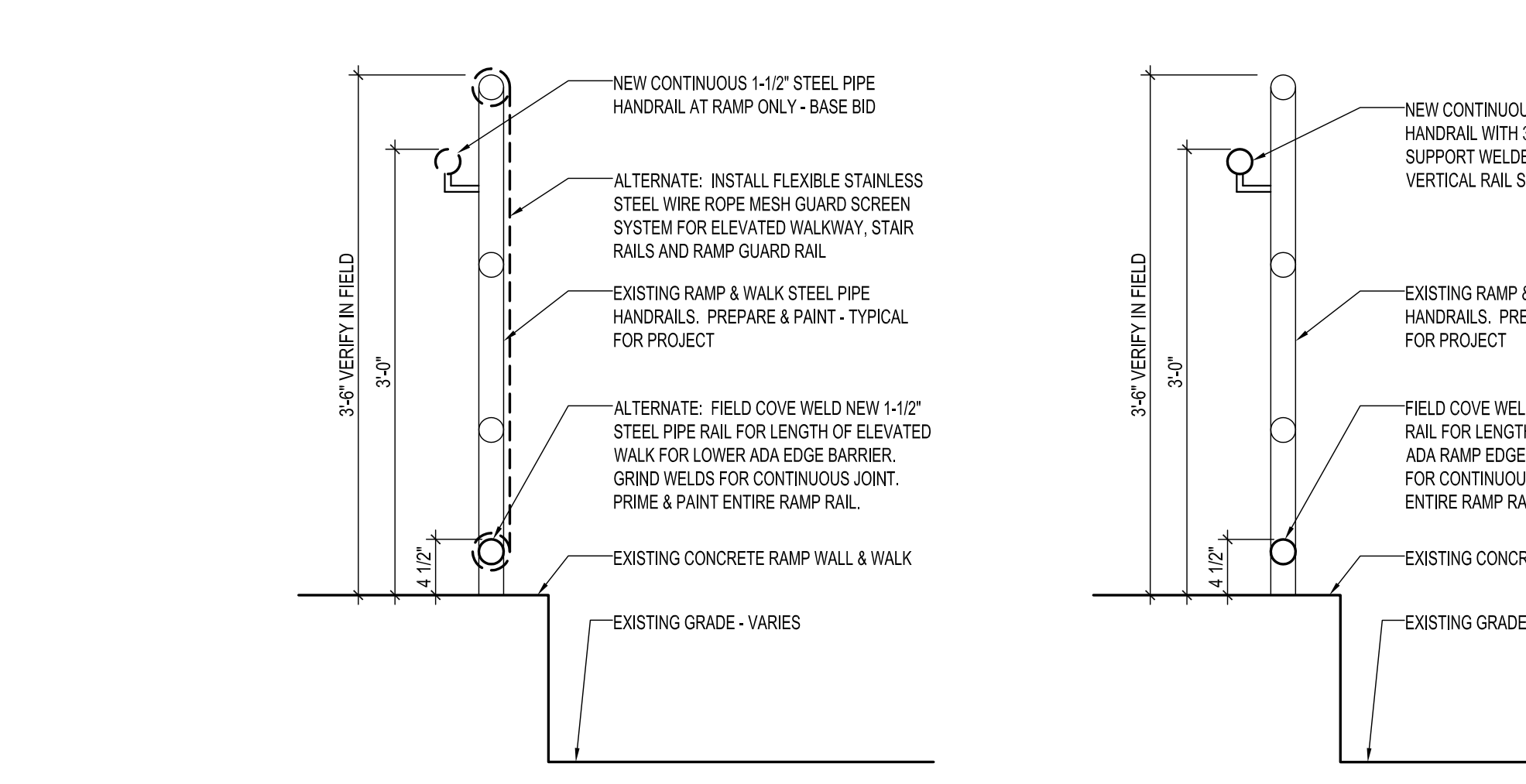
Drawing no.:

TOILET ACCESSORY SCHEDULE		GENERAL NOTES			
TA-1	BOBRICK B-6897.99 SATIN FINISH ONE-PIECE GRABBAR	TA-18	NOT USED		
TA-2	BOBRICK B-6806 X 18 SATIN FINISH ONE-PIECE GRABBAR	TA-19	NOT USED		
TA-3A	ADA COMPLIANT WATER CLOSET: ZURN Z5551	TA-20	NOT USED		
TA-3B	NON ADA TOILET: ZURN Z5552	TA-21	BOBRICK KOALA KARE CHANGING STATION - KB200 - 05		
TA-4	TOILET TISSUE HOLDER: BOBRICK: B-2888: CLASSIC SERIES	GENERAL NOTES 1. "TA" REFERS TO TOILET ACCESSORY NUMBER. REFER TO FIXTURE & ACCESSORY SCHEDULE AND SPECIFICATIONS 2. G.C. IS TO PROVIDE AND COORDINATE ALL BLOCKING FOR ALL ACCESSORIES AND EQUIPMENT AS REQUIRED INCLUDING FUTURE SHOWER ACCESSORIES 3. COORDINATE SOAP DISPENSERS & PAPER TOWEL DISPENSERS WITH OWNER 4. REFER TO PLUMBING DRAWINGS FOR ACTUAL TOILET AND LAVATORY FIXTURE TYPES 5. PROVIDE SOLID BLOCKING AT ALL GRAB BARS, SEATS & WALL HUNG FIXTURES, TYP. 6. ALL DIMENSIONS ARE TO DEVICE OPERATIONS FOR ADA USE, TYPICAL 7. INSTALL ALL PLUMBING TO CODE INCLUDING ALL REQUIRED SHUT OFF VALVES.			
TA-5	SURFACE MOUNTED WASTE RECEPTACLE W/ LINERMATE TRASH LINER				
TA-6	ADA COMPLIANT UNDERMOUNT LAVATORY: ZURN Z5220				
TA-7	ADA COMPLIANT FAUCET - DELTA 541-WF SINGLE HANDLE COMMERCIAL TYPE FAUCET BELOW DECK THERMOSTATIC MIXING VALVE (110F MAX SET PT.) -LEONARD 170 SERIES				
TA-8	WALL MOUNTED SOAP DISPENSER - COORDINATE W/ OWNER			TA-9	NOT USED
TA-10	18" x 36" STAINLESS STEEL MIRROR W/ CHANNEL FRAME - BOBRICK 165 1836				
TA-11	STAINLESS STEEL TOILET PARTITIONS & DOORS- FP 500 CORINTHIAN OVERHEAD-BRACED				
TA-12	BOBRICK B-6806X24 STRAIGHT GRAB BAR				
TA-13	BOBRICK B-6808X48 STRAIGHT GRAB BAR				
TA-14	BOBRICK B-6806 X 12 SATIN FINISH ONE-PIECE GRABBAR				
TA-15	ADA COMPLIANT URINAL: ZURN 5755-U	TA-16	NOT USED		
TA-17	XLERATOR.ECO MODEL XL-BW-110-120V/4.3-4.5AMP				



GENERAL NOTES

- "TA" REFERS TO TOILET ACCESSORY NUMBER. REFER TO FIXTURE & ACCESSORY SCHEDULE AND SPECIFICATIONS
- G.C. IS TO PROVIDE AND COORDINATE ALL BLOCKING FOR ALL ACCESSORIES AND EQUIPMENT AS REQUIRED INCLUDING FUTURE SHOWER ACCESSORIES
- COORDINATE SOAP DISPENSERS & PAPER TOWEL DISPENSERS WITH OWNER
- REFER TO PLUMBING DRAWINGS FOR ACTUAL TOILET AND LAVATORY FIXTURE TYPES
- PROVIDE SOLID BLOCKING AT ALL GRAB BARS, SEATS & WALL HUNG FIXTURES, TYP.
- ALL DIMENSIONS ARE TO DEVICE OPERATIONS FOR ADA USE, TYPICAL
- INSTALL ALL PLUMBING TO CODE INCLUDING ALL REQUIRED SHUT OFF VALVES.



DOOR SCHEDULE

DOOR NO.	SIZE (W x H x THK)	TYPE	FRAME					GENERAL REQUIREMENTS			
			MATL	TYPE	MATL	HEAD	JAMB	THRESHOLD	RATING	HDW SET	DS NOTES
102	3'-0"x7'-0"x1 3/4"	D1	SCWD	F1	HM	2/A3	2/A3	1/A3		2	
103	3'-0"x7'-0"x1 3/4"	D1	SCWD	F1	HM	3/A3	3/A3	1/A3		3	

DS NOTES:
 SCWD = SOLID CORE WOOD, HCW = HOLLOW CORE WOOD, HM = HOLLOW METAL, ALUM = ALUMINUM, FO = FRAMED OPENING WFG= FIBERGLASS WRAPPED WOOD, FG=FIBERGLASS.

GENERAL NOTES
 1. FLASH VCT UP TO VINYL PLANK
 2. FIBERGLASS DOORS TO BE THERMA TRU PULSE SERIES OR APPROVED EQUAL.

DOOR HARDWARE SCHEDULE FOR BIDDING

HDW SET NO.	QTY.	EA.	DESCRIPTION	MFG.	EACH DOOR TO HAVE PART NO.	NOTES
1	3		BUTT HINGE	IVES	5BB1 4.5x4.5 NRP	PUSH PULL PLATES
	2		PUSH / PULL PLATES WITH CONTINUOUS PULL	SCHLAGE	ND SPA 626	BOTH SIDES OF DOOR
	1		SURFACE CLOSER	LCN	4010 SERIES	
	3		SILENCER	IVES	SR64	
	2		SS 18" KICKPLATES BOTH SIDES OF DOOR	IVES	8400 18 X 34	
	1		DBL CYLINDER MECHANICAL DEADBOLT	SCHLAGE	B60R6 505	REMOVABLE CORES

GENERAL NOTES:
 1. HARDWARE SETS ARE SHOWN FOR DESIGN INTENT & TO SET LEVEL OF QUALITY FOR BIDDING PURPOSES. FINAL HARDWARE SELECTIONS ARE TO BE COORDINATED WITH OWNER PRIOR TO ORDERING INCLUDING CONFIRMATION OF SET ACTIONS - BIDDER SHALL INCLUDE IN BID COORDINATION TIME NECESSARY TO REVIEW HARDWARE, MEET WITH OWNER TO FINALIZE NEEDS, AND SUBMIT A COORDINATED HARDWARE SUBMITTAL WITH SCHEDULE OF HARDWARE FOR REVIEW.
 2. ALL LOCKSETS SHALL HAVE REMOVABLE CORES. CONTRACTOR WILL PROVIDE CORES AND KEYING. MEET WITH OWNER AND ARCHITECT OR OWNER REPRESENTATIVE PRIOR TO ORDERING TO COORDINATE KEYING FOR THE BUILDING.
 3. ALL HARDWARE BIDS SHALL INCLUDE ALL MISCELLANEOUS ACCESSORIES NECESSARY FOR COMPLETE, FULLY OPERATIONAL & PROPER INSTALLATION AND USE OF HARDWARE INCLUDING ALL FASTENERS, DOOR DROPS, TRANSITION PLATES, SILENCERS, LABELS, FINISH, ETC.
 4. ALL HARDWARE SHALL CONFORM TO THE AMERICANS WITH DISABILITIES ACT (ADA) INCLUDING LEVER HARDWARE AND ADJUSTABLE CLOSERS, CLEARANCES AND HEIGHTS.
 5. NOT USED
 6. ALL HARDWARE SHALL BE 626 FINISH TYPICAL.
 7. NOT USED
 8. IF CLOSER IS NOT REQUIRED FOR SPECIFIC DOOR, AN OVERHEAD STOP 454S BY GLYNN JOHNSON SHALL BE PROVIDED.
 9. FOR HOLLOW METAL FRAMES, PROVIDE SILENCERS AND COORDINATE HARDWARE ROUGH OUTS WITH FRAME ORDER.

FINISH SCHEDULE

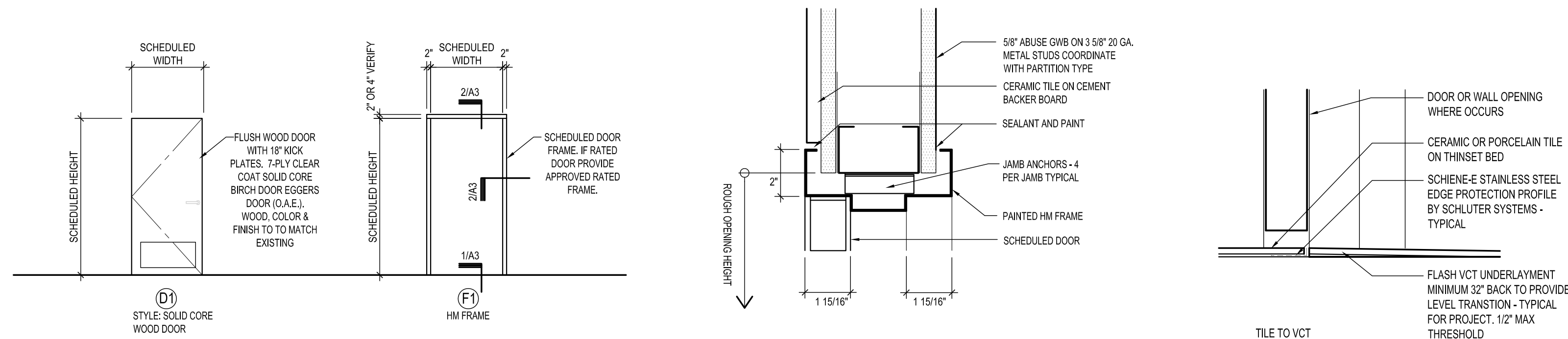
ROOM NO.	NAME	FLOOR MATERIAL	BASE MATERIAL	WALLS				CEILING		REMARKS
				NORTH	EAST	SOUTH	WEST	MATERIAL	HEIGHT	
E101	ENTRY	VCT1	RB1	PT1	PT1	PT1	PT1	ACT1	7'-6"	EXIST CEILING GRID TO REMAIN IN AREAS SEE RCP
102	WOMEN'S ROOM	CT1	CB1	CT2	CT2	CT2	CT2	ACT1	7'-6"	
103	CORRIDOR	VCT1	RB1	PT1	PT1	PT1	PT1	ACT1	7'-6"	EXIST CEILING GRID TO REMAIN IN AREAS SEE RCP
104	MEN'S ROOM	CT1	CB1	CT2	CT2	CT2	CT2	ACT1	7'-6"	

GENERAL NOTES:
 1. GC IS RESPONSIBLE FOR SUBMITTING SAMPLES OF ALL MATERIALS TO OWNER FOR REVIEW AND APPROVAL FOR QUALITY AND COLOR PRIOR TO ORDERING OR INSTALLING ANY PRODUCTS.
 2. "CT/PT" DENOTES A CERAMIC TILE WAINSCOT WITH PAINT ABOVE, REFER TO 15/A4 FOR TYPICAL FIELD AND ACCENT TILE PATTERN.
 3. GC IS RESPONSIBLE TO COORDINATE ACCENT WALL COLORS, LOCATIONS, AND QUANTITIES WITH OWNER AND ARCHITECT PRIOR TO ORDERING PAINT.
 4. GC TO PROVIDE KV HEAVY DUTY BRACKETS AND ADJUSTABLE SHELVES.

FINISH LEGEND

TYPE	MATERIAL	MANUFACTURER	SIZE	SERIES/PATTERN	COLOR	REMARKS
FLOOR						
VCT1	VINYL COMPOSITION TILE	ARMSTRONG	12" X 12"	STANDARD EXCELON	51804 EARTHSTONE GREIGE	FOR BIDDING ONLY
CT1	CERAMIC TILE	CROSSVILLE	12" X 12"	CROSS-COLORS	MINGLES W/ 39 IVORY GROUT	FOR BIDDING ONLY, GEN NOTE 6.
BASE						
RB1	RUBBER BASE	JOHNSONITE	4" x 1/8"		48 GREY WG	FOR BIDDING ONLY
CB1	CERAMIC COVE BASE	AMERICAN OLEAN	4 1/4" x 4 1/4"	MATT FIELD TILE	0087 MATTE ALMOND	FOR BIDDING ONLY, GEN NOTE 6
WALL TILE						
CT2	CERAMIC TILE	DALTILE	6" X 6"		X735 MATTE ALMOND	FOR BIDDING ONLY, GEN NOTE 6.
					48 ALMOND - MAPEI GROUT	
WALLS & WALLS ABOVE WAINSCOT						
PT1	PAINT	SHERWIN WILLIAMS	--	EGGSHELL	TBD	GENERAL NOTE 7
DOOR & WINDOW TRIM						
PT3	PAINT	SHERWIN WILLIAMS	--	SEMI-GLOSS	TBD	GENERAL NOTE 7
CEILING						
ACT	ACOUSTIC CEILING TILE	CERTAINTEEED	24"x48"	SYMPHONY	WHITE OVERTONE	
EXIST	EXISTING CEILING PAINT	USG/SHERWIN WILLIAMS	5/8" NA	NA-WATER-RESISTANT	SW 7007 CEILING BRIGHT WHITE	GENERAL NOTE 7

GENERAL NOTES:
 1. GC IS RESPONSIBLE FOR SUBMITTING SAMPLES OF ALL MATERIALS TO OWNER FOR REVIEW AND APPROVAL FOR QUALITY AND COLOR PRIOR TO ORDERING OR INSTALLING ANY PRODUCTS. SELECTIONS ABOVE ARE FOR BIDDING PURPOSES ONLY AND WILL BE VERIFIED AFTER BID AWARD.
 2. ACCENT COLOR TO RUN SECOND COURSE FROM TOP OF WAINSCOT, TYPICAL.
 3. TOP COURSE @ WAINSCOT TO BE BULLNOSE FIELD TILES THE SAME SIZE AS WAINSCOT FIELD TILES, TYPICAL.
 4. FINAL COLOR TBD BY OWNER PRIOR TO ORDERING OR INSTALLATION.
 5. NOT USED
 6. INSTALL PER TILE PATTERN DETAILS IN CONTRACT DOCUMENTS.
 7. FOR ALL CERAMIC TILE FLOORS AND WAINSCOT, ASSUME TWO COLORS WILL BE USED TO CREATE FINAL PATTERNS. FIELD TILE 75% AND ACCENT TILE 25%. FOR PAINTING, ASSUME TWO COLORS WILL BE USED FOR WALLS. WALL FIELD COLOR 75% AND ACCENT WALL COLOR 25%. ASSUME EACH ROOM WILL HAVE INDIVIDUAL DOOR TRIM PAINT COLOR.



4 Door Types
 Scale: 1/4" = 1'-0"

3 Frame Types
 Scale: 1/4" = 1'-0"

2 Typical Head/Jamb Section Detail
 Scale: 3" = 1'

1 Typical Threshold Section
 Scale: 3" = 1'-0"

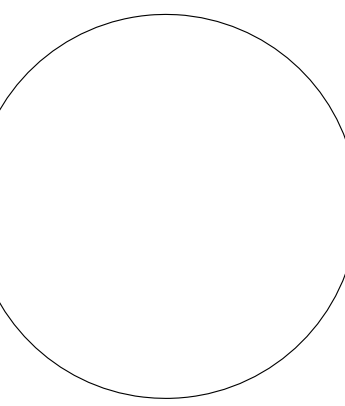


SPRINGFIELD TOWNSHIP
 Recreation Center

ADA TOILET ROOM RENOVATIONS
 Wyndmoor Pennsylvania



HVAC • Plumbing • Electrical
 MEP ENGINEERING
 HPE GROUP
 905 Castle Hill Lane
 Devon, PA 19333 215.370.6975



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OWNER REVIEW SET - ARCHITECTURE 9.10.2019

No. Issue	Date	Issued For
2	9.21.19	OWNER REVIEW ARCH 2
1	9.10.19	OWNER REVIEW ARCH

Job Number: 1903
 Proj. Mgr: DK Proj. Arch: DK
 Drawn By: DK/MVS Checked By: DK

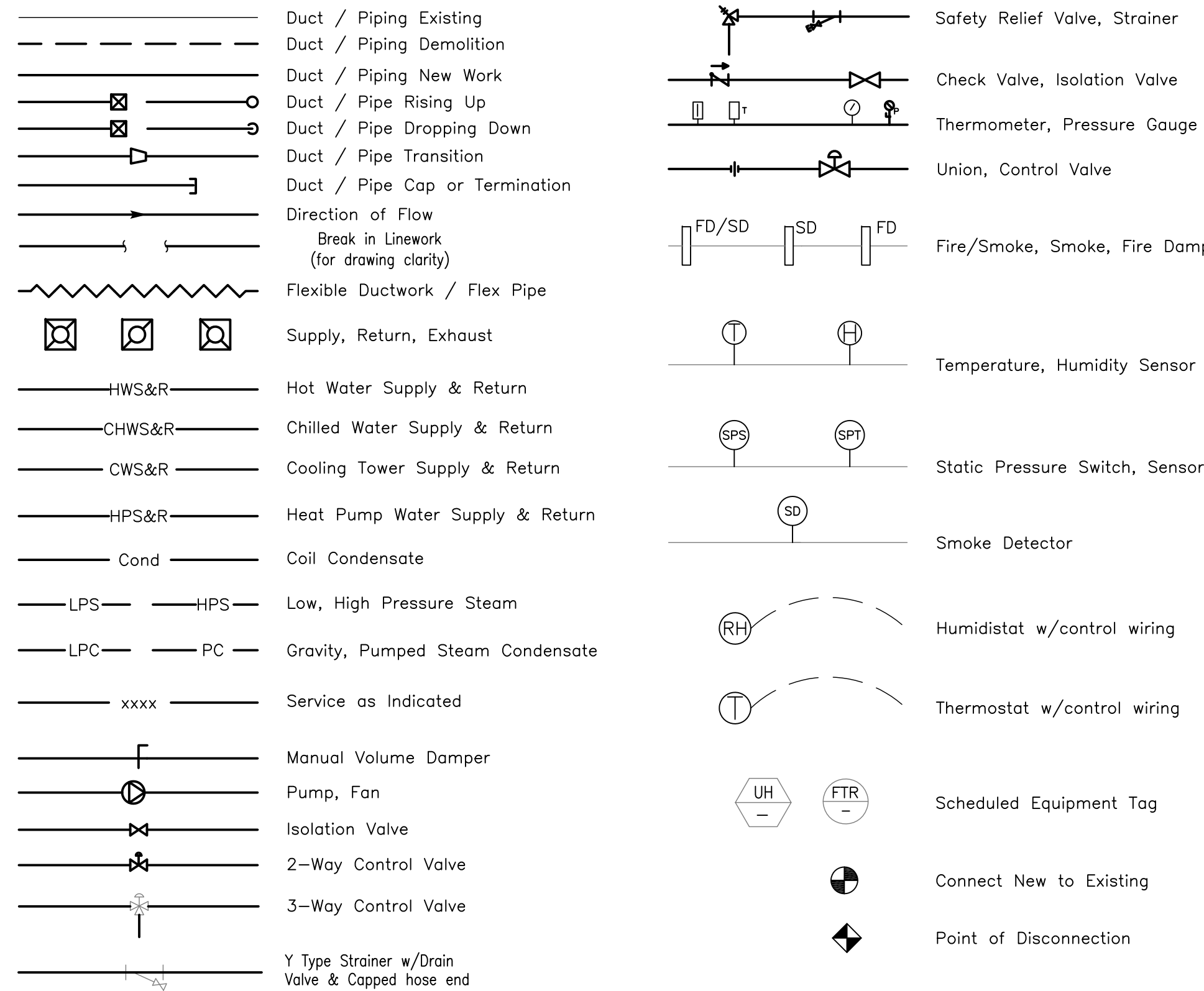
Scale: NOTED

DETAILS & SCHEDULES
 Drawing Title:

A3

Drawing no.:

Mechanical Symbols



Mechanical Abbreviations

AD	Access Door	LAT	Leaving Air Temperature
AF	Above Finish Floor	LF	Linear Feet
AHU	Air Handling Unit	LPC	Low Pressure Condensate
APD	Air Pressure Drop	LWT	Leaving Water Temperature
BDD	Back Draft Damper	MAT	Mixed Air Temperature
BOD	Bottom of Duct	MBH	Thousand BTUs/hr
BOP	Bottom of Pipe	MCA	Maximum Current Amps
CA	Combustion Air	MOD	Motor Operated Damper
CFM	Cubic Feet per Minute	MVD	Manual Volume Damper
CHWR	Chilled Water Return	(N)	New
CHWS	Chilled Water Supply	NC	Normally Closed
CWR	Condenser Water Return	NG	Natural Gas
CWS	Condenser Water Supply	NIC	Not In Contract
Cond	Condensate (steam or coil)	NO	Normally Open
Dia./ø	Diameter	NTS	Not to Scale
DB	Dry Bulb (deg F)	OA	Outside Air
DN	Down	OPD	Opposed Blade Damper
(E)	Existing	PRV	Pressure Reducing Valve
EA	Exhaust Air	RA	Return Air
EAT	Entering Air Temperature	RE	Relocate Existing
Ef	Efficiency	RHC	Reheat Coil
ER	Existing Relocated	RTU	Roof Top Unit
ESP	External Static Pressure	SA	Supply Air
ETR	Existing to Remain	SD	Smoke Damper
EWT	Entering Water Temperature	Sd	Smoke Detector
FD	Fire Damper	SP	Static Pressure
FDS	Combination Fire/Smoke Damper	T	Thermostat
FO	Flat Oval	TA	Transfer Air
FFM	Feet per Minute	TU	Terminal Unit
GPM	Gallons per Minute	typ	Typical
GRD	Grille, Register or Diffuser	VFD	Variable Frequency Drive
HP	Horsepower	WB	Wet Bulb (deg F)
HWR	Hot Water Return	WMSO	Wire Mesh Screen Opening
HWS	Hot Water Supply	WPD	Water Pressure Drop
		WTR	Water Temperature Rise

Mechanical Specifications

Execution of Work

- Contractor shall be responsible for all materials, labor and equipment to comply with local, state and national codes, regulations and laws in conjunction with any other regulatory bodies having jurisdiction. All equipment shall bear a UL label. Installation shall be in accordance with the 2015 International Mechanical Code.
- Ductwork and piping layout on drawing is schematic in nature. For drawing and layout clarity ductwork may be shown in single or double line format. Provide allowance in bid for duct/pipe transitions / offsets to avoid interferences with other trades. By submission of bid contractor accepts existing conditions in terms of access and installation means and methods. Final routing coordination is the responsibility of the Contractor. Install equipment in strict accordance with manufacturers' instructions, which shall be considered part of these specifications, and provide all appurtenances necessary for a complete and functional system. Provide Owner with one year guarantee on labor, materials and equipment unless otherwise specified. Follow all OSHA standards during installation. All equipment shall be provided with a nameplate or other means of identification. Review ID numbering with Owner and provide nameplate with ID on each piece of equipment. Contractor shall procure all Permits, Inspections and associated fees.
- Provide hangers, supports and miscellaneous metals as required to support ductwork, piping and equipment. Coordinate support requirements for air handling equipment with structural engineer. Vibrating equipment shall be isolated via neoprene or spring isolation hangers/supports unless otherwise indicated. Provide coring, saw cutting and selective demolition of concrete floors, walls & decks as required to accommodate new duct / piping penetrations. Review penetrations with structural engineer and landlord. Provide UL listed sealant materials at each penetration of a fire-rated wall or floor, equal to the fire resistance rating of the penetrated assembly. Mark on wall the UL listing of the penetration. Provide lintels, frames & seals for all openings as required.
- Submit sheetmetal shop drawings at 3/8" = 1'-0" scale to Engineer for review prior to fabrication. Allow for 10 business days in construction schedule for each submittal review. Submit for review all equipment specified and scheduled. Provide copies of submittals to other Trades as affected or required for coordination in a timely manner. Provide NEBB/MABC certified air and hydronic balancing to +/- 10% of values shown on drawings. Submit certified T&B report to Engineer for Review. Provide (1) set of marked up Plans to Owner at completion of Project indicating as-built conditions. Provide (2) sets of O&M manuals to Owner for all equipment. O&M manuals shall indicate model # of installed equipment on the cover of the O&M manual for Owner reference.

Sheetmetal Items

- Sheetmetal: Galvanized, G90, steel ductwork and hangers per current SMACNA & ACCA standards. Seal all joints. No 26 ga. ductwork allowed for rectangular and round ducts larger than 12". Slip & drive (1" pressure class) for all ductwork.
- Flex Duct: where permitted. Flex ducts shall be double wall insulated type (Flex Duct Supply and Return Insulation R-Value shall be same as listed in Insulation Specifications). All duct runs to be straight runs, parallel to the building structure. Flex duct runs (not connectors) are unlimited for Class 0 & 1 Flex duct. Flex duct sections shall be cut to length. Flex connectors are limited to 10 feet. Flex ducts shall not have excessive bends, u-turns or be deformed beyond 90% diameter to clear openings. No vertical offsets greater than 1 foot for every 6 feet of duct length. Flex duct shall be insulated as listed below.
- No transitions greater than 30 degrees unless approved by engineer. Provide transition fittings from one duct size to the next. Ductwork sizing shown may be modified by sheetmetal contractor to make for more efficient use of fittings as long as equivalent area is maintained, size is coordinated with field conditions and the aspect ratio of the duct work does not exceed 4 to 1 length to width (unless otherwise noted). All duct runs shall be as short as possible to minimize pressure loss.
- Provide volume damper at all diffuser outlet locations.
- All duct sizes shown are inner dimensions.

Insulation

- All insulation and adhesive shall have a flame spread classification not more than 25 and a smoke developed rating not more than 50. All insulation joints shall be taped & sealed.
- All supply air ductwork in concealed conditioned spaces (e.g. above ceilings) shall be provided with 2" foil back duct wrap 3/4 LB density with a minimum installed R-value of 5.
- Environmental exhaust ductwork (e.g. toilet exhaust) shall NOT be required to be insulated.

EXHAUST FAN SCHEDULE							
Tag	FAN CFM	ESP W.G.	Manuf / Model	Motor V/Ph/Hz	Motor HP	RPM	Remarks
EF-1	300	0.5	Penn Vent / DX06B	120/1/60	1/4	-	Provide w/ BDD & Roof Curb Provide w/ disc. and timer.

INSERT HEATER SCHEDULE - ELECTRIC					
Tag	Unit KW	Manufacturer	Model	V/Ph	Remarks
IH-1	1.5	QMARK	AH4407	240/1	Provide integral t-stat, local disconnect, high temp cut-out

AIR DEVICE SCHEDULE						
TAG	DEVICE SIZE	MANUFACTURER	MODEL	Max NC	CFM RANGE	ACCESSORIES
SD-1	12x12	Price	SCD	16	0 - 150	Square cone, steel, white, 6" neck
EG-1	12x12	Price	530	19	0 - 150	Steel, white, louvered grille, 3/4" blade, 45' deflection, SRA, 6" neck

All GRDs shall be paintable surface type (coord w/ project architect) Coordinate frame types with ceiling type where GRDs are to be installed (e.g., fineline grid, GWB, exposed, etc.) Provide SDs with integral volume damper.

OWNER REVIEW SET - MEP 09.16.2019



SPRINGFIELD TOWNSHIP
Recreation Center

ADA TOILET ROOM RENOVATIONS
Wyndmoor Pennsylvania

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No. Issue	Issue Date	Issued For
1	09.16.19	OWNER REVIEW SET

Job Number: 19-035
 Drawn By: CAD Checked By: THP
 Scale: AS NOTED

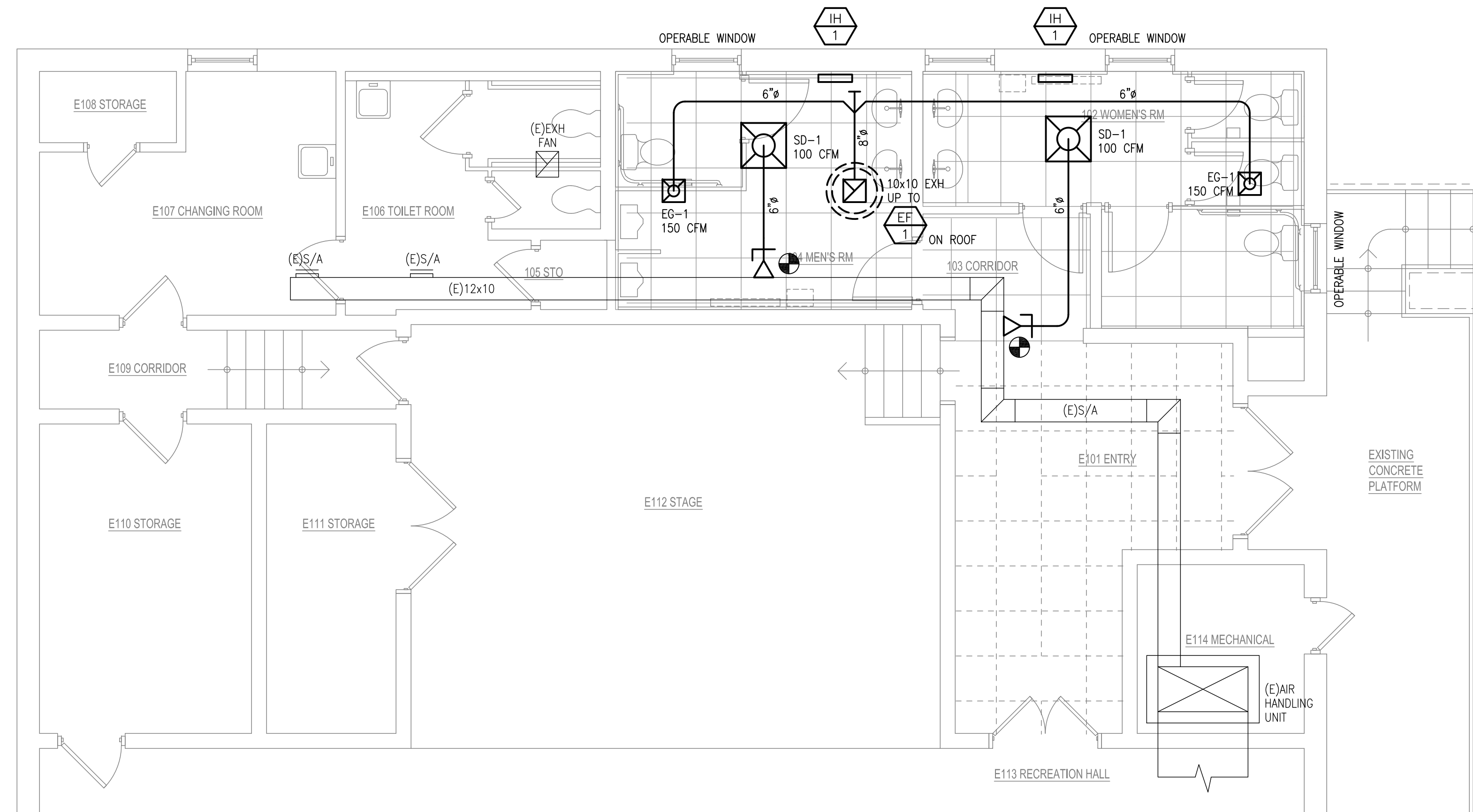
MECHANICAL COVER SHEET

Drawing Title:

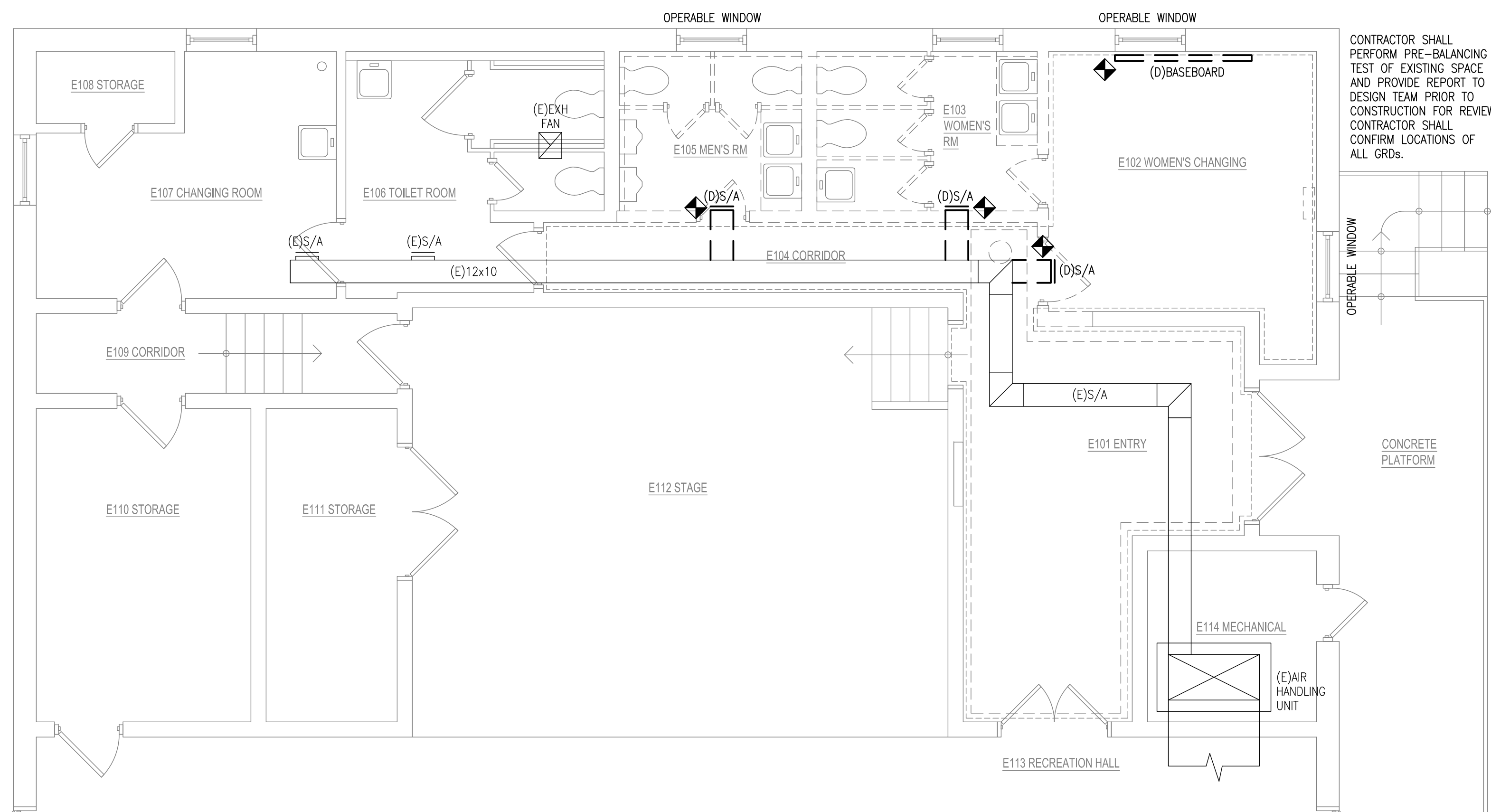
M-0

Drawing no.:

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2
M-1 Partial Ground Floor – NEW WORK PLAN
1/4" = 1' - 0"



1
M-1 Partial Ground Floor – DEMOLITION PLAN
1/4" = 1' - 0"

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1	09.16.19	OWNER REVIEW SET

Job Number: 19-035
Drawn By: CAD Checked By: THP

Scale: AS NOTED

MECHANICAL PARTIAL GROUND FLOOR PLAN

Drawing Title:

M-1

Drawing no.:

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ELECTRICAL SPECIFICATIONS

PART 1 GENERAL

1.01 SUMMARY

- A. Section Includes:
- The work shall include materials, equipment, and labor for systems as shown on contract documents and work for other Divisions required to complete the work ready for operation.
 - Contractor shall provide labor, material, equipment, and services for the proper installation and operation of the electrical work as indicated on the Drawings and as specified.
 - Labor, material, equipment, and service obviously necessary for the proper installation and operation of electrical systems, although not specifically mentioned or shown, shall be provided.
 - No consideration or allowance shall be granted for alleged misunderstanding of the Contract Documents and the work to be performed.

B. Related Documents and Sections:

- Coordinate this specification with Manufacturer's Instructions.

1.02 REFERENCE, CODE AND SPECIFICATIONS

- A. Electrical work shall conform with the latest edition of the National Electrical Code and applicable laws, codes and regulations of municipal, county, state, federal authorities, utility companies, insurance agencies and other authority having jurisdiction over the work.

1.03 PERMITS AND FEES

- A. Obtain, pay for and deliver permits and certificates of inspection as required by the authorities having jurisdiction. Deliver certificates to the Owner prior to Final Acceptance of the work. An electrical inspection certificate for each class of work requiring inspection, must be submitted prior to or with the final payment invoice. Contractor must make application for the inspection, coordinate same, and pay the required inspection fee.

1.04 FIELD CONDITIONS

- A. Before submitting his bid, Trade Contractor shall verify existing conditions in the field. Failure to do so shall not relieve Trade Contractor of his obligation to pay for costs that may be incurred due to conditions that may affect the cost of installing his work.

1.05 WARRANTIES

- A. Work furnished under the Contract shall be warranted against defects in workmanship and materials for a period of not less than one (1) year, or as otherwise specified, from the date of Final Acceptance of the installation. Defects of workmanship developing during this period shall be remedied, and defective material replaced, without additional cost.

PART 2 PRODUCTS

2.01 GENERAL

- A. Material and equipment in the work shall be new, first grade, the best of their respective kinds, and appropriate for the application and environment.
- B. Material or equipment specified by manufacturer, brand name, type, or catalog number, are designed to establish standards of desired quality, style, performance, electrical, mechanical and physical characteristics, and dimensions.

2.02 WIRE AND CABLE

- A. Wire and cable for site distribution, power, lighting, control, signal circuits, etc., shall have copper conductors of not less than 98 percent conductivity and shall have THHN insulation to 600V, rated at 90°C. All conductors #6 AWG and greater shall be stranded; all conductors below #6 AWG shall be solid. Equivalent aluminum conductors are acceptable.
- B. Color-code wires for service of 600 volts and less. This identification shall be continuous throughout all termination points, and shall include all feeders and branch circuit wiring. Where cables are not available in these colors (No. 6 AWG and larger), provide colored tape corresponding to the colors below around each cable at each termination and splice. Note that contractor shall follow an existing building color-coding system already in use in the facility.

2.03 RACEWAY

- A. Electric Metallic Tubing (EMT)
- Electrical metallic tubing shall be standard galvanized or sherardized thin wall steel conduit conforming to the latest edition of FS WW-C-563. Manufacturers: Republic, National, Triangle, Allied.
 - Fittings for electrical metallic tubing shall be rain-tight and concrete-tight compression type or steel set screw type, if approved, same material as EMT. Manufacturers: O-Z Gedney Company, Appleton, Raco
- B. Rigid Galvanized Steel Conduit (RGS)
- RGS shall be galvanized and conform to latest edition of FS WW-C-581. Fittings shall be malleable iron, cadmium or zinc coated, NEMA F81, U.L. 5148. Manufacturers: Allied, Republic, Wheatland.
- C. Metal-clad (MC) cable

- Metal clad cables may be used for branch circuit wiring in all areas as defined in NEC Article 330 and subject to acceptance by State and Local Codes, and authority having jurisdiction.
- Cable shall be manufactured by AFC, or equal.
- Cable assemblies shall be constructed in strict accordance with U.L. Standard for Metal Clad Cables, #1569 and/or U.L. Standard for Armor Clad Cables, #4. Cable assemblies shall bear the U.L. Label and the manufacturer's "E" number.
- Cable assemblies shall have passed U.L. 1479, Through Penetration Fire Rating, and meet NEC Article 330.22(c) Environmental Air Handling Spaces.

PART 3 EXECUTION

3.01 INSTALLATION OF CONDUCTORS

- A. Great care shall be exercised in pulling wires into raceways so as not to injure the insulation. Only UL approved pulling compounds, such as Thomas and Betts Type "SWP", shall be used to assist in the pulling of wires.
- B. Vertical cables shall be supported at intervals not greater than those listed in the NEC, Paragraph No. 300-19.
- C. Splicing shall be within outlet boxes or junction boxes. No splicing shall be permitted in mains or feeders.
- D. Conductors No. 10 AWG and smaller shall be made electrically and mechanically secure with mechanical "twist" type connectors.
- E. Wires within equipment, such as panelboards, shall be neatly arranged and tied with cables ties.
- F. Where cable passes through fire rated structures provide fireproof fittings.

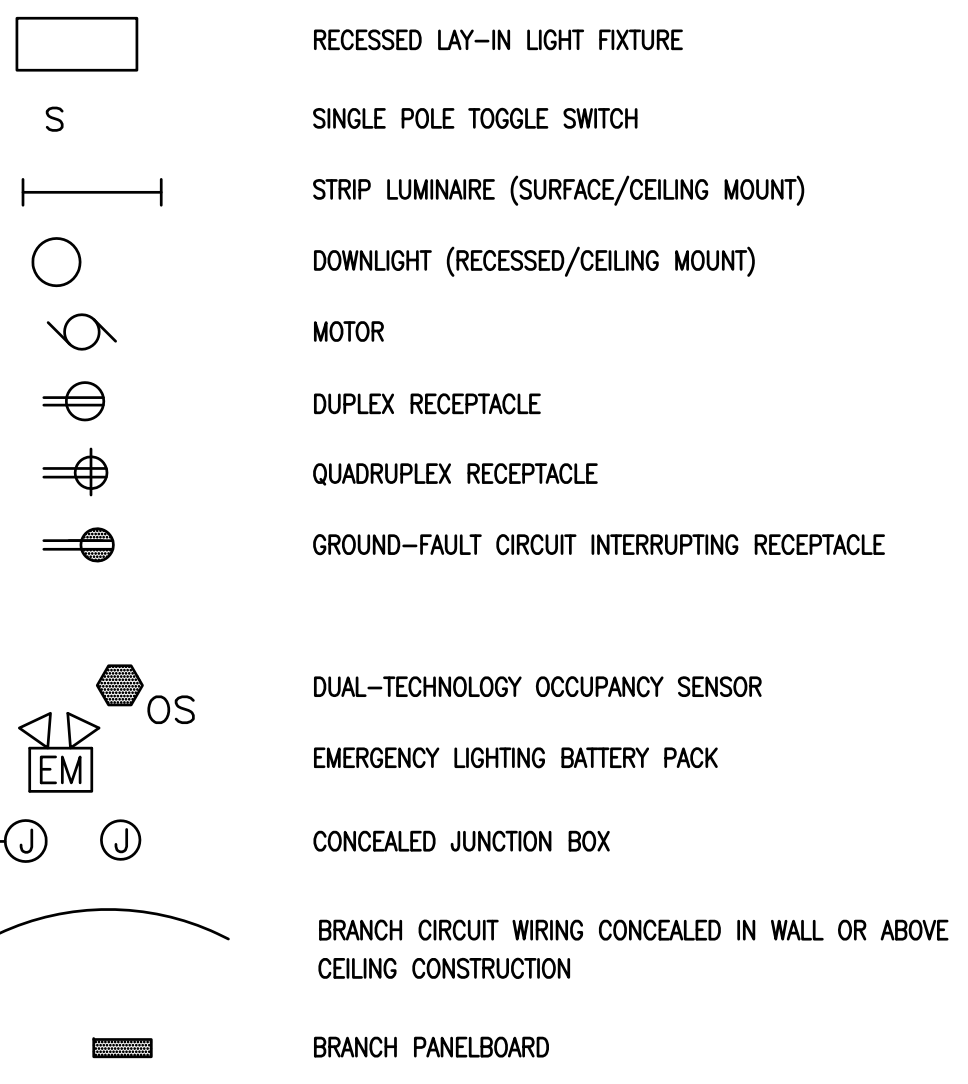
3.02 RACEWAYS AND FITTINGS

- A. Raceways shall be concealed in the construction except as otherwise specified or shown.
- Raceways installed exposed or in accessible spaces shall be placed at right angles to or parallel with the building walls and ceilings.
 - Conduit runs installed in slabs or below grade shall be rigid steel conduit wherever the conduit exits to another space above grade.
- B. Conduit bends shall be the long radius type. When sufficient area is not available for turning conduits without exposing them, adjust the conduit routing or provide compound bends so as to keep the conduit from being exposed.

3.03 WIRING METHODS

- A. Generally wiring shall be done with insulated conductors and ground wire in a metallic cable assembly. All wiring shall be installed concealed in the construction.
- B. Install methods are as follows:
- Use MC cable for all lighting, appliance, and receptacle branch circuits in concealed areas only.
 - Use flexible metal conduit for connections to motors and transformers. Use liquidtight flexible metal conduit where such equipment is outside.
 - Use EMT for all branch circuits in exposed areas.
- C. Raceways shall be supported to comply with the NEC.

SYMBOLS



ABBREVIATIONS

⊙	AT
A OR AMP	AMPERE
AF	AMP FRAME
A.I.C.	AMPERE INTERRUPTING CAPACITY
AL	ALUMINUM
AT	AMP TRIP
C. OR CDT.	CONDUIT
C/B	CIRCUIT BREAKER
CKT	CIRCUIT
CU.	COPPER
EMT	ELECTRICAL METALLIC TUBING
EX.	EXISTING TO REMAIN
FL.	FLOOR
G	EQUIPMENT GROUND CONDUCTOR
HVAC	HEATING, VENTILATING, AIR CONDITIONING
KVA	KILOVOLT-AMPERE
KW	KILOWATT
KWH	KILOWATT-HOUR
LTG.	LIGHTING
MCB	MAIN CIRCUIT BREAKER
MIN.	MINIMUM
M.L.O.	MAIN LUGS ONLY
N	NEUTRAL
N.T.S.	NOT TO SCALE
P	POLE
SW.	SWITCH
TYP.	TYPICAL
U.L.	UNDERWRITERS' LABORATORY
V	VOLT
W	WIRE
WP	WEATHERPROOF

GENERAL NOTES:

- ALL DEVICE SYMBOLS AND ABBREVIATIONS ON THIS DRAWING MAY NOT NECESSARILY APPEAR ON THE FLOOR PLANS AND DETAIL SHEETS. ONLY THOSE SYMBOLS INDICATED ON THE FLOOR PLANS ARE USED FOR THIS PROJECT. ALL OTHERS ARE TO BE CONSIDERED "NOT USED" AND SHOULD BE IGNORED.
- MOUNTING HEIGHTS SHALL MATCH EXISTING DEVICES AT THIS FACILITY AND/OR AS INDICATED ON THE ARCHITECTURAL PLANS, ELEVATIONS AND DETAILS.

Panel Name:		Panel EP		200A MCB		40 pole		10 KAC		240/120V-1PH-3W	
Cir. No.	Cir. Bkr.	Wire Size	Description	Load (VA)		Load (VA)		Description	Wire Size	Cir. Bkr.	Cir. No.
				A	B	A	B				
1	20/2	2#12	Insert Heater - Mens	750		350		Ltg.- Restrooms	2#12	20/1	2
3		#12G			750	180		Rec.- Womens	2#12	20/1	4
5	20/1	2#12	Restroom Exhaust Fan	500		1500		Hand Dryer - Womens	2#12	20/1	6
7	20/1	2#12	Hand Dryer - Mens		1500	750		Insert Heater - Womens	2#12	20/2	8
9	20/1	2#12	Rec.- Mens	180		750			#12G		10
11			Space		0	0		Space			12
13			Space	0		0		Space			14
15			Space		0	0		Space			16
17			Space	0		0		Space			18
19			Space		0	0		Space			20
21			Space	0		0		Space			22
23			Space		0	0		Space			24
25			Space	0		0		Space			26
27			Space		0	0		Space			28
29			Space	0		0		Space			30
31			Space		0	0		Space			32
33			Space	0		0		Space			34
35			Space		0	0		Space			36
37			Space	0		0		Space			38
39			Space		0	0		Space			40

Load Summary (by phase):

A	4030
B	3180
Total	7210

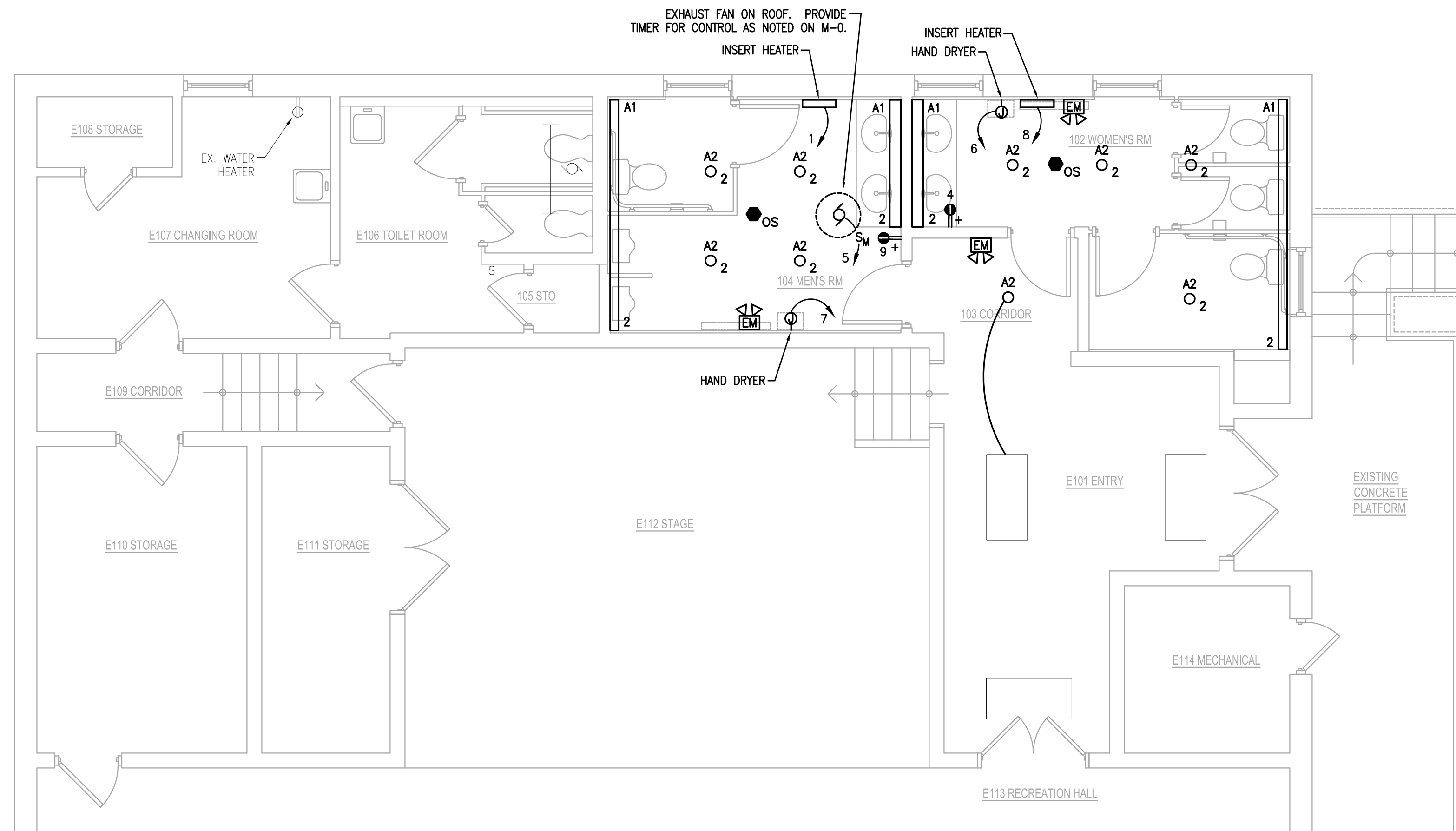
Notes: Circuiting shown is for information only. Coordinate the circuiting needs of this project with the panelboard replacement project (by others under separate contract).

30.0 Connect Amps at 240V/1PH

LUMINAIRE SCHEDULE

Type	Description	Manufacturer	Catalog Number	Lamps		Watts per Fixture	Voltage	Mounting	Alternate Manufacturers	Remarks
				No.	Type					
A1	4" wide perimeter LED wall slot, 4" regressed lens, 750 lumens per foot, extruded aluminum housing, 0-10V dimmable driver.	Ledelite	490-8-L-C-E-Q-S-N-LENGTH-7-D-E-4-S-1	-	LED 3000K	7 PER FT	120	Recessed	Approved Equal	Provide lengths as shown on plan.
A2	4" diameter recessed LED downlight, clear reflector, white flange, 0-10V dimmable driver, 1,500 lumens	Lightolier	4RN / P4RDL158300C210U	-	LED 3000K	15	120	Recessed	Approved Equal	
EM	Emergency lighting unit with twin LED lamp heads, white thermoplastic housing, ni-cad battery.	Dual Lite	LZ-series	2	3W LED	6	120	Wall	Approved Equal	

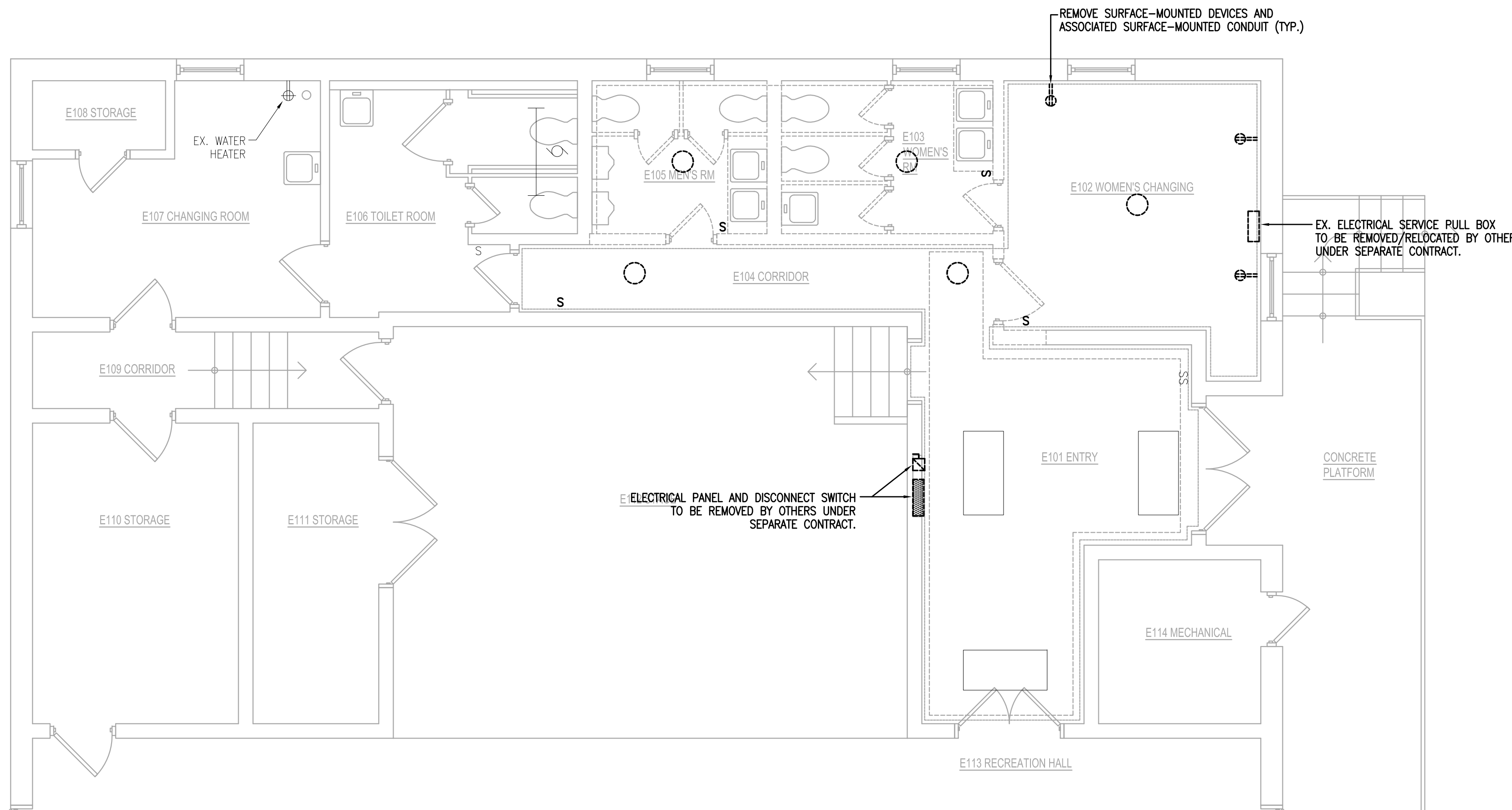
Note: Field-verify voltage prior to ordering.



2
E-1
PARTIAL GROUND FLOOR – NEW WORK PLAN
1/4" = 1' - 0"

NEW WORK NOTES:

1. FOR SYMBOLS AND ABBREVIATIONS, REFER TO DRAWING E-0.
2. COORDINATE MOUNTING HEIGHTS WITH ARCHITECTURAL DRAWINGS AND DETAILS. IN THE EVENT OF A DISCREPANCY, THE ARCHITECTURAL DRAWINGS TAKE PRECEDENT.
3. CENTER DEVICES VERTICALLY WHERE POSSIBLE. COORDINATE WITH ARCHITECTURAL ELEVATIONS, SECTIONS AND DETAILS.
4. SEE LUMINAIRE SCHEDULE ON DRAWING E-0 FOR LIGHT FIXTURE SPECIFICATION.
5. FIRE ALARM SYSTEM IS NOT IN CONTRACT.



1
E-1
PARTIAL GROUND FLOOR – DEMOLITION PLAN
1/4" = 1' - 0"

DEMOLITION NOTES:

1. FOR SYMBOLS AND ABBREVIATIONS, REFER TO DRAWING E-0.
2. UNLESS OTHERWISE NOTED, ALL ELECTRICAL EQUIPMENT AND WIRING SHOWN IN A LIGHT LINE WEIGHT IS EXISTING TO REMAIN.
3. UNLESS OTHERWISE NOTED, ALL ELECTRICAL EQUIPMENT AND WIRING SHOWN IN A DARK, DASHED LINE WEIGHT IS TO BE REMOVED UNDER THIS CONTRACT.
4. DISCONNECT AND REMOVE ALL LIGHT FIXTURES, WIRING DEVICES, LINE- AND LOW-VOLTAGE WIRING, CONDUIT, AND ELECTRICAL ACCESSORIES FROM WALLS AND CEILINGS SCHEDULED FOR DEMOLITION.
5. REFER TO ADDITIONAL NOTES ON ARCHITECTURAL DRAWINGS.
6. REMOVE ALL EXISTING ABANDONED VOICE/DATA AND BRANCH CIRCUIT CABLING FROM THE PROJECT AREA.

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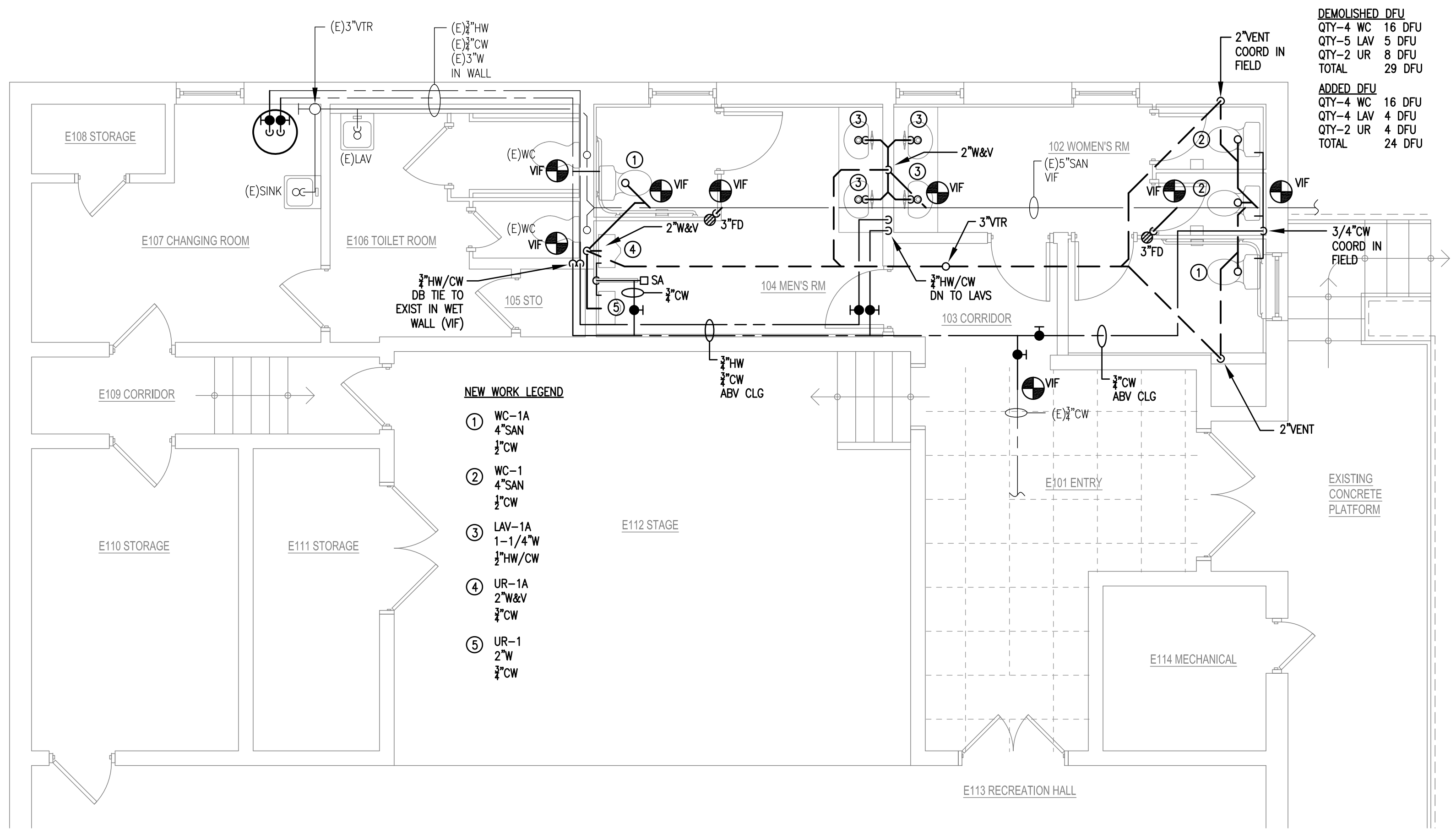
No.	Issue Date	Issued For
1	09.16.19	OWNER REVIEW SET

Job Number: 19-035
Drawn By: CAD Checked By: THP
Scale: AS NOTED

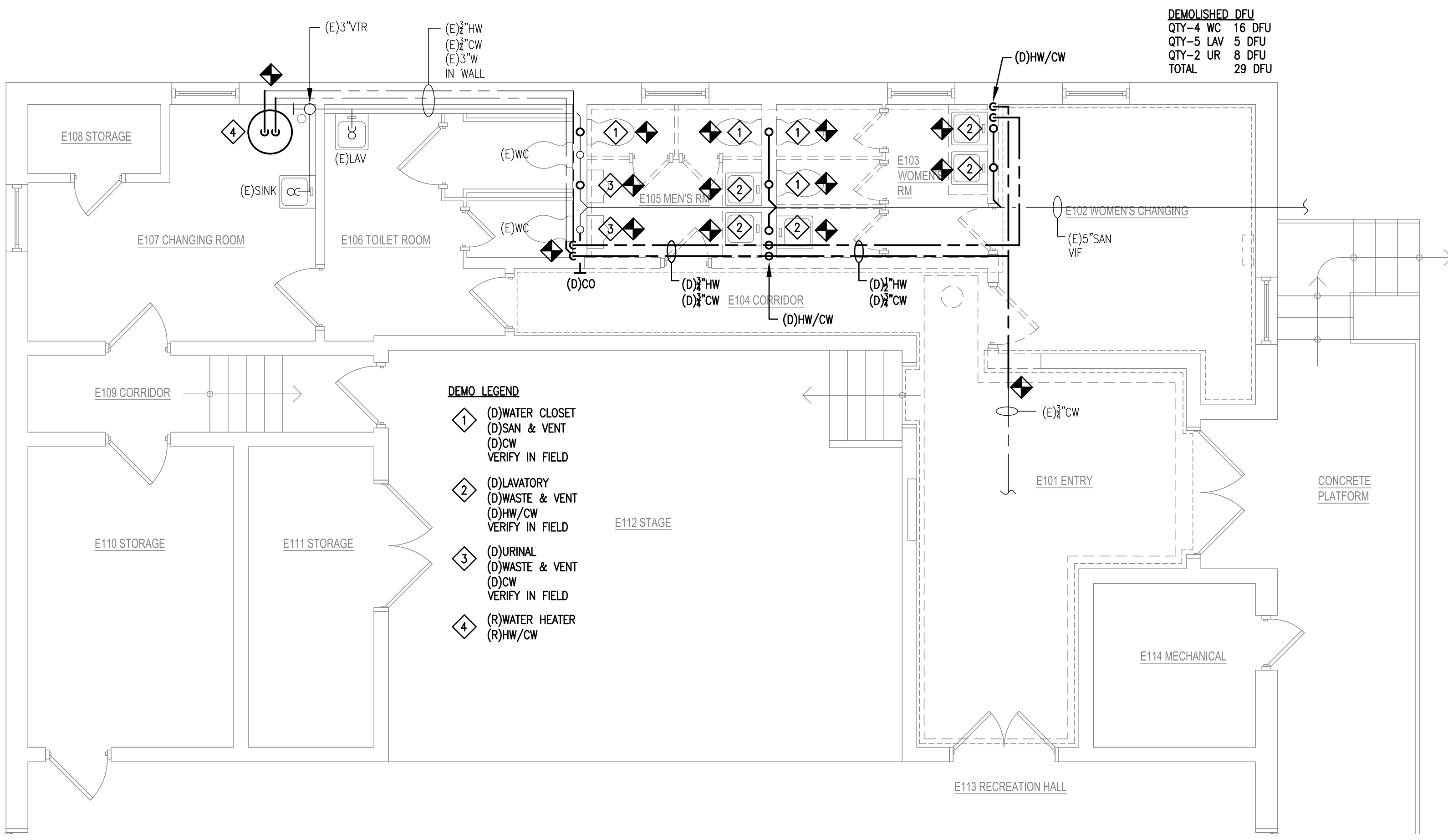
ELECTRICAL PARTIAL GROUND FLOOR PLANS

Drawing Title:

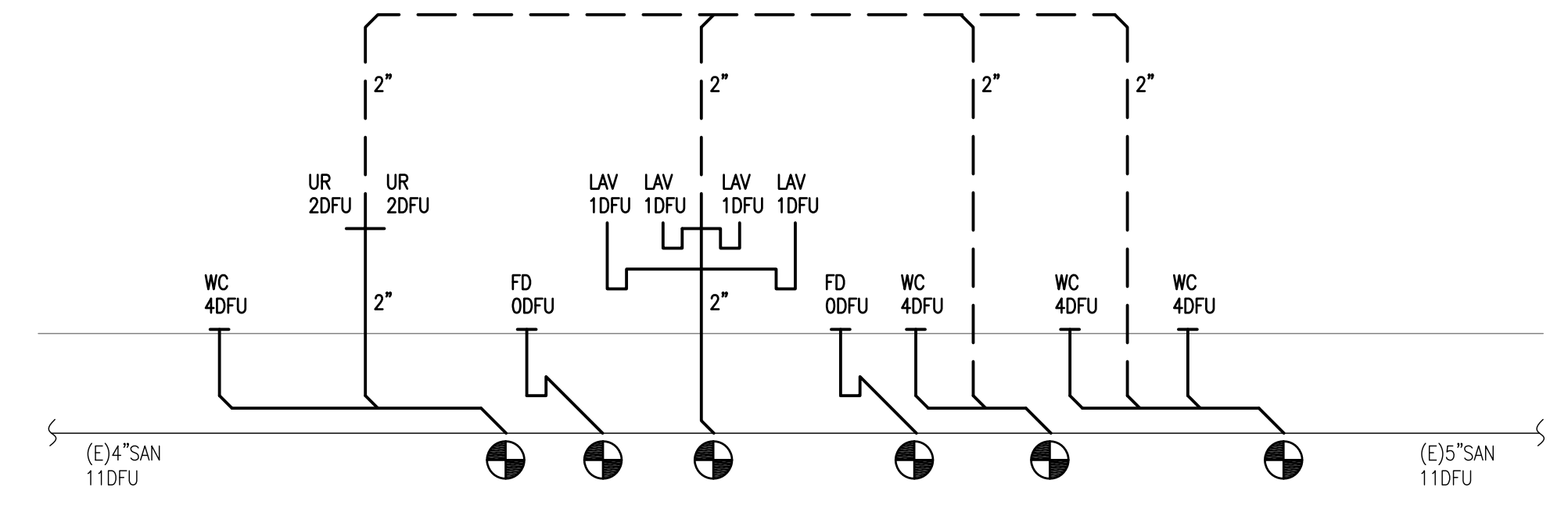
E-1



2 Partial Ground Floor - NEW WORK PLAN
1/4" = 1' - 0"



1 Partial Ground Floor - DEMOLITION PLAN
1/4" = 1' - 0"

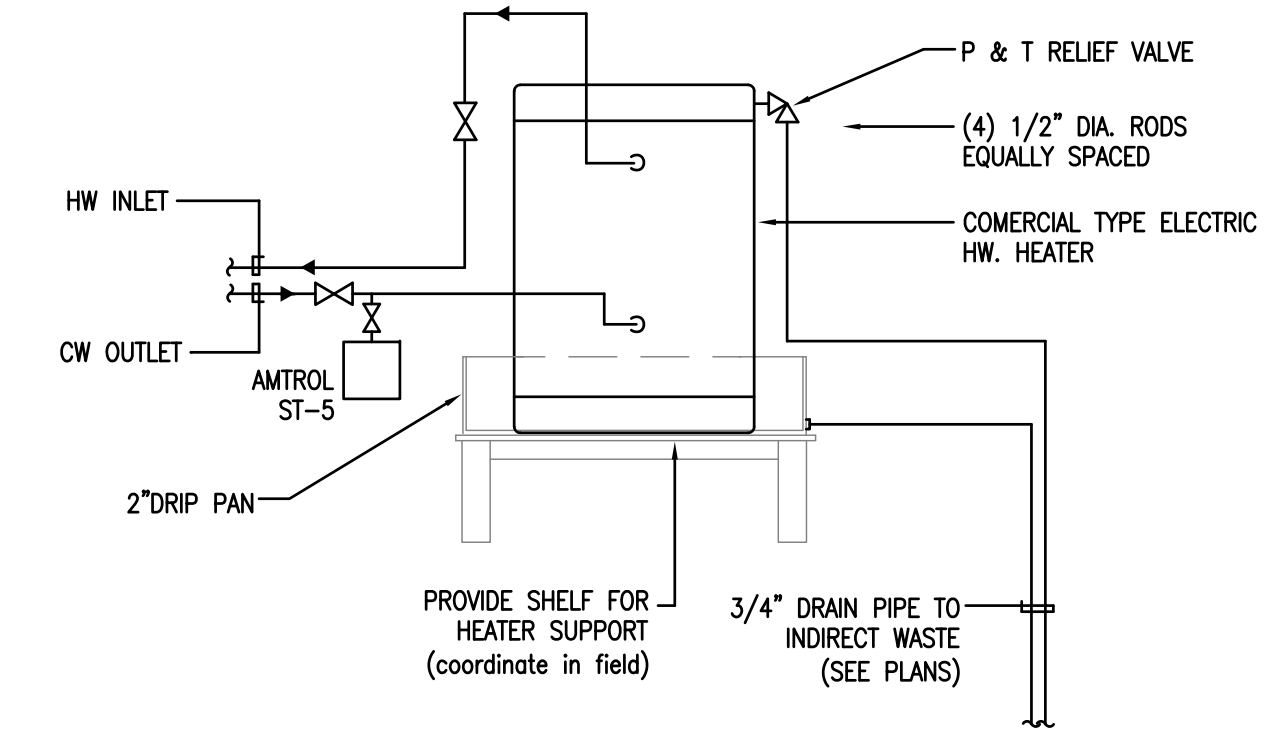


6 DRAINAGE RISER DIAGRAM
N.T.S. P-1

WATER SERVICE SIZING: 2015 IPC

LOADS ASSIGNED TO FIXTURES	OCCUPANCY	CONTROL	QUANTITY	COLD	HOT	TOTAL
LAVATORY	PUBLIC	METERED FAUCET	5.0	2.5	2.5	3.5
URINAL	PUBLIC	LOW FLOW	2.0	2.0	0.0	2.0
WATER CLOSET	PUBLIC	FLUSH TANK	6.0	13.2	0.0	13.2
TOTALS				17.7	2.5	18.7

FLUSH TANK METHOD GPM: 18.8 (COLD), 6.5 (HOT), 19.2 (TOTAL)
PIPE SIZE (10FPS): 3/4" (COLD), 3/4" (HOT), 3/4" (TOTAL)

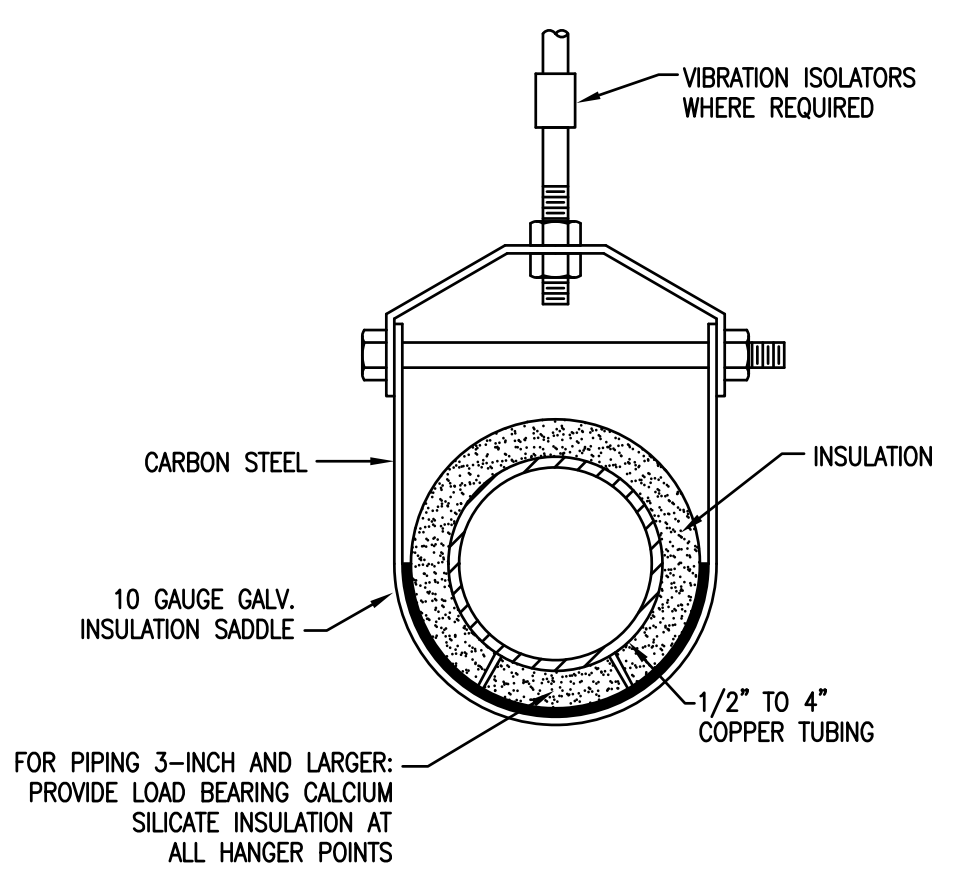


5 WATER HEATER DETAIL
N.T.S. P-1

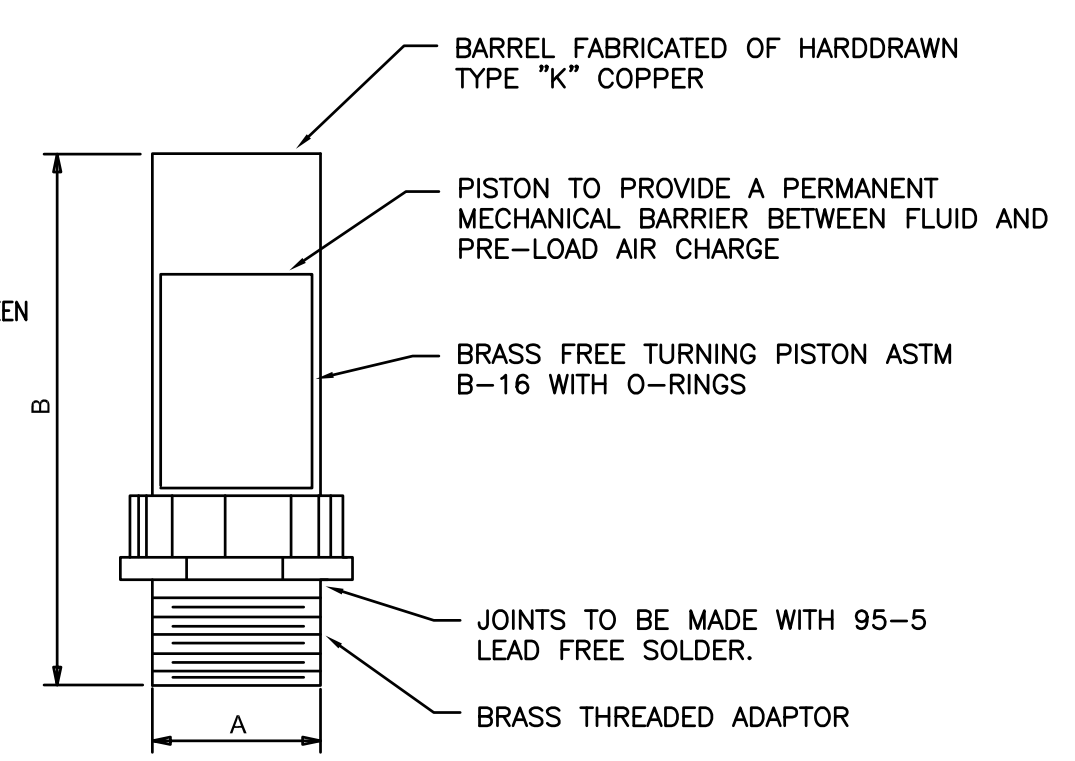
PIPE HANGER CHART

PIPE DIA	COPPER		ROD SIZE
	WATER SERVICE	WATER VAPOR	
1/2"	6	6	3/8"
3/4"	6	6	3/8"
1"	6	6	3/8"
1-1/4"	6	6	3/8"
1-1/2"	10	10	3/8"
2"	10	10	3/8"
2-1/2"	10	10	1/2"
3"	10	10	1/2"
3-1/2"	10	10	1/2"
4"	10	10	5/8"

ALL SANITARY & VENT PIPING ABOVE GRADE SHALL BE SUPPORTED AT EACH PIPE LENGTH OR EVERY 10 FEET AND AT ALL TURNS.



3 PIPE HANGER DETAIL
N.T.S. P-1



P.D.I. SYMBOL	FIXTURE UNIT RATINGS	A SIZE	B SIZE
A	1 - 11	3/4"	-
B	12 - 32	1"	-
C	33 - 60	1"	-
D	61 - 113	1"	-
E	114 - 154	1"	-
F	155 - 330	1"	-

NOTE: SEE WATER RISER DIAGRAMS FOR LOCATIONS OF SHOCK ABSORBERS.

4 WATER HAMMER ARRESTOR DETAIL
N.T.S. P-1

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No.	Issue Date	Issue For
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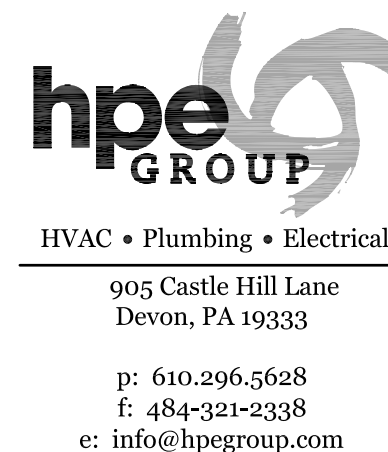
Job Number: 19-035
Drawn By: CAD Checked By: THP
Scale: AS NOTED

PLUMBING PARTIAL GROUND FLOOR PLAN
Drawing Title:

P-1

SPRINGFIELD
TOWNSHIP
Recreation Center

ADA TOILET ROOM
RENOVATIONS
Wyndmoor
Pennsylvania



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No. Issue	Issue Date	Issued For
1	08.16.19	OWNER REVIEW SET

Job Number: 19-035
 Drawn By: CAD Checked By: THP
 Scale: AS NOTED

PLUMBING
XXXXXX

Drawing Title:

P-2

Drawing no.:

PLUMBING SPECIFICATION

Codes and Standards

The following codes and standards shall be followed for all work and intent in this project:

- 2015 International Plumbing Code

General Requirements

- Consider drawings and specifications as supplementing each other. Perform or furnish work specified but not shown, or shown but not specified, as though mentioned in both specifications and drawings.
- Provide minor items, accessories or devices as necessary for completion and proper operation of systems whether or not they are specifically called for by specifications or drawings.
- Work includes providing all labor, material, equipment and service necessary and reasonably incidental to proper completion of all systems as shown on drawings and as specified. Provide-means to furnish and install complete and in place; word "Furnish" means to furnish at site of work unless otherwise stated.
- Coordinate work and equipment of mechanical trades with work and equipment specified elsewhere to assure complete and satisfactory installation. Perform work such as excavation, backfill, concrete, flashing, etc., required under Division 15 in accordance with requirements of applicable division of specifications.
- Repair damage to work installed under Division 15 or to work of others, caused by neglect on the part of the Division 15 Contractor at own expense and to satisfaction of Engineer.
- Drawings are diagrammatic and indicate arrangements and approximate sizes and relative locations of principle apparatus, equipment, devices and services to be provided.
- Layout of equipment indicated on drawings shall be checked and compared against all drawings and specifications of all trades and exact locations determined using approved shop drawings of such equipment. Where physical interference occur, consult with Engineer and prepare dated, dimensioned drawings correcting such interferences. Submit to engineer for review of such drawings and distribute same as required.
- Work shall be guaranteed to be free from leaks or defects. Defective materials, workmanship and damage to work of all Divisions resulting from same shall be replaced or repaired as directed for duration of stipulated guaranteed periods. Duration of guarantee following date of beneficial use of systems shall be one year, unless specified otherwise.
- Except when otherwise shown on the contract drawings or specified, terminate vents passing through roof 24 inches above roof.
- Where devices, such as valves, dampers, traps, junction boxes, etc., are concealed in construction or behind wall or ceiling surface, and where access panels are not indicated on drawings, furnish access panel of adequate size to permit service or adjustment of such concealed device, but in no case shall panel be less than 12"x12".
- After completion of work, check record drawings maintained at construction site for completeness and accuracy. Transfer information on record drawings to original of project drawing, recheck information and sign drawings, certifying that drawings accurately reflect "as-built" condition. Deliver complete set of as-built drawings to the Owner
- Prepare complete maintenance manuals outlining recommended maintenance, together with, for example, type oil, frequency of inspection, belt tension adjustment, belt part numbers, as recommended by manufacturer of equipment.
- Instruct Owner's representatives during regular workday in operation of each mechanical system for total of 8 hours.
- Contractor shall notify and obtain approval from Engineer regarding any deviations from drawings and/or specifications prior to commencement of work.
- Any product designed for dispensing potable water shall meet both the NSF 61 and NSF 372 test standards for Lead Free via third-party testing and submittal provided with certification listing. (Includes ALL products attached to domestic water systems).

Submittals

- Submit fixture, piping, valve, insulation, and equipment cuts for all items included in specification and that apply to project to engineer.
 - All lead free product submittals shall include third-party testing certification.
- Engineer will not review submittals that do not bear Contractor's approval stamp and will return them without action.
- Allow for 10 business days in construction schedule for each submittal review.
- Substitution of non-compliant or non-equal products is not permitted.

General Plumbing

- All work shall meet or exceed the latest requirements of all national, state, county, municipal and other authorities exercising jurisdiction over construction work at the project.
- Installation procedures, methods, and conditions shall comply with the latest requirements of the Federal Occupational Safety and Health Act (OSHA).
- The Contractor shall be responsible for the installation and filing until the installation has been approved by the authorities having such jurisdiction.
- Certification shall be submitted attesting that specified performance criteria have been met by all sections of the plumbing systems and equipment.

Piping

- Delivery, Storage, and Handling:
 - Factory apply plastic end-caps for all piping, except for hub-and-spigot and clay pipes. Maintain end-caps in place until pipe is installed.
 - Store pipe and fittings inside for protection from moisture and dirt, or with weatherproof packaging.
- Domestic Hot and Cold Water Piping:
 - Above Ground Pipe: Copper tubing, Type L, drawn temper, conforming to ASTM B 88.
 - Fittings: Wrought copper, solder joint (using only lead free compliant solder), conforming to ANSI B16.22.
- Sanitary Drain and Vent Pipe:
 - Polyvinyl chloride (PVC) Schedule 40 DWV solid wall type pipe and fittings conforming to ASTM D 2665 suitable for solvent cement joints. (Approved for non-plenum areas). Cellular core is not allowed.
- Installation:
 - Unless shown otherwise, route piping in the most direct manner, parallel to building lines.
 - Locate piping to maintain clearance around equipment, and minimum piping headroom of 7 feet, except where otherwise shown.
 - Close open ends of piping and equipment, when not being worked on, with flange covers, caps or plugs.
 - Do not use pipes smaller than 1/2 inch, unless otherwise documented.
 - Provide valved vents at all high points of water piping, and valved drains at all low points of water piping for draining and flushing. Locations shall be determined by the Contractor.
 - Provide escutcheons at all locations where piping, installed exposed to view, penetrates walls, partitions, floors and ceilings.
 - Pipes shall not be installed in transformer vaults, electrical equipment rooms, elevator machine rooms or similar areas containing electrical equipment. Pipes shall not be installed over, around, in front of, in back of, or directly below, electrical controls, panels, terminals, boxes, or similar equipment. Provide drip pans over electrical equipment (at no cost to the Owner) only after approval by the Owner.
- Testing and Cleaning of Systems:
 - Before testing, complete the installation of each pipe line, including final supports, hangers and anchors, insulation and painting. Clean piping and equipment of metal cuttings and foreign matter as they are and in accordance with all applicable codes and standards.

- Test: Domestic Water Systems; 165 psi; 30 minutes
- Test: Sanitary and Storm Water System; Static Fill – No Leakage; 30 minutes
- Flushing: Flush clean with new potable water and drained at all low points. Connected equipment (coils, etc.) shall be isolated and flushed individually with a hose.
- Sterilization: Fill piping system inside building, beginning at point of main shutoff valve, with solution 100 ppm of available chlorine. Retain solution in systems for not less than 4 hours, during which time all valves and faucets shall be opened for flushing, until chlorine is no longer detected. Drain system.
- After sterilization, flush solution from system with clean drinking water until residual chlorine content is not greater than 1.0 ppm at extreme end of system.

Valves

- Domestic Water Valves (Nibco, Milwaukee, Watts, Apollo):
 - Shut-Off Valves – 2 inches and Smaller: Lead free ball valves Class 600, two piece design, bronze body, chrome plated ball, reinforced Teflon seats, blowout proof stem, threaded ends.
- General:
 - Do not install valves with stem down.
 - Discharge lines from relief valves shall be piped to within 4" of floor and extend to floor drains wherever floors are not pitched to drains.

Hangers

- General:
 - Provide hangers and supports manufactured by B-Line, Eichen Metal Products or Grinnell, unless otherwise specified.
 - Except as otherwise indicated, provide factory-fabricated piping hangers, supports, riser clamps, rod attachments, building attachments, shields and saddles, of the following MSS types listed, to suit piping systems.
 - Select and apply supports in accordance with MSS SP-89 and manufacturer's published product information.
 - Select size of hangers and supports to fit pipe size for bare piping, and to fit around piping insulation with saddle or shield for insulated piping.
 - Provide plastic coated or copper-plated hangers and supports for copper-piping systems.
- Equipment:
 - Horizontal Pipe Hangers: Adjustable Steel Clevis Hangers: MSS Type 1; Adjustable Steel Band Hangers: MSS Type 7;
- Installation:
 - Install pipe hangers, supports, clamps, and attachments to support piping properly from building structure, and complying with MSS SP-69, SP-89, and enforced plumbing code. Do not use wire or perforated metal to support piping, and do not support piping from other piping.
 - Arrange for grouping of parallel runs of horizontal piping to be supported together on trapeze type hangers where possible.
 - Install additional building attachments where support is required for additional concentrated loads, including valves, flanges, guides, strainers, expansion joints, and at changes in direction of piping.
 - Install hangers and supports complete with necessary inserts, bolts, rods, nuts, washers and other accessories.
 - Install hangers and supports to allow controlled movement of piping systems and to permit freedom of movement between pipe anchors, and to facilitate action of expansion joints, expansion loops, expansion bends and similar units, if provided.
 - Provide a support not over one foot from each change in direction pipe fitting joint and not over five feet from a valve.

Pipe Identification

- Letter and number all mechanical equipment shown on the Contract Drawings identifying the equipment number and service. Nameplates shall be .020" thick aluminum with permanent 1/2-inch high white letters on a black background, mechanically affixed or pressure-sensitive adhered and installed in a readily visible location on the equipment. Coordinate the final equipment designations with the Owner.
- Identify all piping, exposed and accessible, after piping has been tested, insulated or painted.
- Identify all valves with a tag. Permanently stamp and mark valve tags with a service designation, normal valve position, and an identifying number as large as possible. Each valve shall have a unique number coordinated with the service designations shown on the contract drawings.

Pipe Penetrations and Sleeves

- General:
 - For all penetrations, provide pipe sleeve 2 pipe diameters larger than passing pipe.
 - Hiliti, 3M, approved manufacturers.
- Non-Fire Rated Construction:
 - Provide mineral fireproofing filler material in thicknesses required for each pipe sleeve.
 - Provide closed-cell polyethylene foam or open-cell polyurethane foam backup strip for filler material.
 - Provide butyl elastomer or epoxidized polyurethane terpolymer flexible vapor barrier sealant for sealing both ends of pipe sleeve.
- Fire Rated Construction:
 - All pipe penetration seal systems shall be UL approved and approved by the local authority having jurisdiction for the application.
 - Provide smoke-tight and fire-tight seal using an intumescent elastomeric material in putty or caulk form.
 - Remove insulation from piping at the portion of the pipe passing through the sleeve.

Insulation

- Approved Manufacturers:
 - Elastomeric Insulation: Armstrong, Rubatex.
- Elastomeric Insulation: Flexible, tubular, self-seal, conforming to ASTM C 177 or C 518 with thermal conductivity of 0.27 at 75°F. Manufacturer: Armstrong, Armflex 2000 – for piping up to 2" dia. Installed inside the building.
- Execution:
 - Apply insulation on clean, dry surfaces after leakage and other tests have been completed.
 - For Domestic Cold and Hot Water Systems provide 1/2-inch elastomeric insulation.
 - Seal and tape all joints and valve bodies.

Plumbing Specialties

- Shock Absorbers – Mark S.A.: J. R. Smith No. 5000 Series all stainless steel designed to last life of piping. Type A – No. 5005, Type B – No. 5010, Type C – No. 5020, Type D – No. 5030; or Precision Plumbing Products Inc., "SC" series, piston operated, Type K copper barrel with brass threaded adaptor designed to last life of piping. – Type A – SC-500, Type B – SC-750, Type C – SC-100, Type D – SC-1200.
 - Provide manufactured compression units, of stainless steel, on both domestic cold and hot water lines install in upright position at all quick-closing valves and solenoids. Locate and size in accordance with Plumbing and Drainage Institute Standards. Product shall carry NSF-61 certification for Lead Free.

Drains: J.R. Smith models as indicated below.

- Floor Drain – Mark FD: (At public toilet rooms) J. R. Smith 2005-AP, duco cast iron body and flashing collar and nickel bronze adjustable strainer head strainer head with secured 6" diameter strainer. Bottom

outlet and mechanical trap guard (Sure Seal or equal).

Cleanouts and Plates: J. R. Smith models as indicated below.

- Approved installation types:
 - Finished Floor: J. R. Smith 4028, duco cast iron body and frame, with round adjustable scoriated secured nickel bronze top, taper thread bronze plug.
 - Finished Floor: (Composition or Ceramic Tile and Terrazzo): J. R. Smith 4188, cast iron body and frame, with round adjustable recessed (for floor material), nickel bronze top, taper thread bronze plug.
 - Concrete Floor: J. R. Smith 4228, duco cast iron body and frame, with round adjustable scoriated secured cast iron top, taper thread bronze plug.
 - Finished Walls: J. R. Smith 4533 or 4558 cast iron cleanout tee with taper thread bronze plug, and square chrome plate frame and cover.
- Execution:
 - Provide cleanouts on all drainage piping at 50 ft. intervals on lines up to 4" and 100" apart on lines over 4" in diameter at each change in direction of 45 degrees or more, at each additional location shown on the drawings; cleanouts shall be full size for pipes up to 4" and not less than 4" for larger pipes.

Water Heaters

- General: Provide water heaters as indicated on the schedules:
- Acceptable Manufacturers: A.O. Smith Corp., State Water Heaters, Bradford White
- Execution:
 - Install water heaters in accordance with manufacturer's installation instructions. Install units plumb and level, firmly anchored in locations indicated, and maintain manufacturer's recommended clearances.
 - Place units on drain pan where shown on drawings, orient so controls and devices needing service and maintenance have adequate access.
 - Electrical Wiring: Install electrical devices furnished by manufacturer but not specified to be factory-mounted.
 - Drains: Provide water heater drains per manufacturer requirements and route to approved location.

Fixtures

- General:
 - All fixtures shall be White unless noted otherwise. Exposed metal shall be chromium-plated over nickel plating on copper or brass. White metal trim will not be accepted.
 - Vitreous China: American Standard, Kohler, Zurn or as approved equal.
 - Faucets: Delta, Chicago, Sloan, Kohler or as approved equal.
 - Fixtures shall be free from imperfections, true as to line, angles, curves, and color; smooth, watertight, and practically noiseless in operation.
 - All fittings, escutcheons, faucets, traps, exposed piping, etc., shall be brass, chrome plated over nickel plate with satin finish. Any hanger nuts visible shall likewise be chrome plated over nickel plate.
 - Before roughing work is started, submit to the Architect complete figured drawings and cuts of each and all of the plumbing fixtures, fittings, trimmings, etc., and secure approval before proceeding with the installation of any work.
 - Provide all hangers, supports, brackets, etc., for the proper installation of all fixtures requiring support. Such supports shall be in accordance with the recommendations of the manufacturers of the fixtures, and if built into partitions or wall shall be set as the wall progresses.
 - All fixtures shall have the standard recommended mounting heights indicated by the fixture manufacturer or as required by the Architectural plans and details.
 - All fixtures shall carry NSF-372 certification for Lead Free.

End of Specifications

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