

LHA No: IFB2024-5

CONCORD RIVER MILL ELDERLY HOUSING GENERATOR UPGRADE

for Lowell Housing Authority
50 Stackpole Street, Lowell, MA 01850

CONSULTANTS



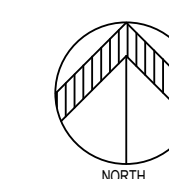
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DRAWING LIST

- P1.0 PLUMBING - LEGEND, DEMO, NEW WORK, DETAILS
- M1.0 MECHANICAL - LEGEND, NOTES AND FLOOR PLANS
- E0.1 ELECTRICAL - SYMBOLS AND SCHEDULES
- E1.0 ELECTRICAL - FLOOR PLANS

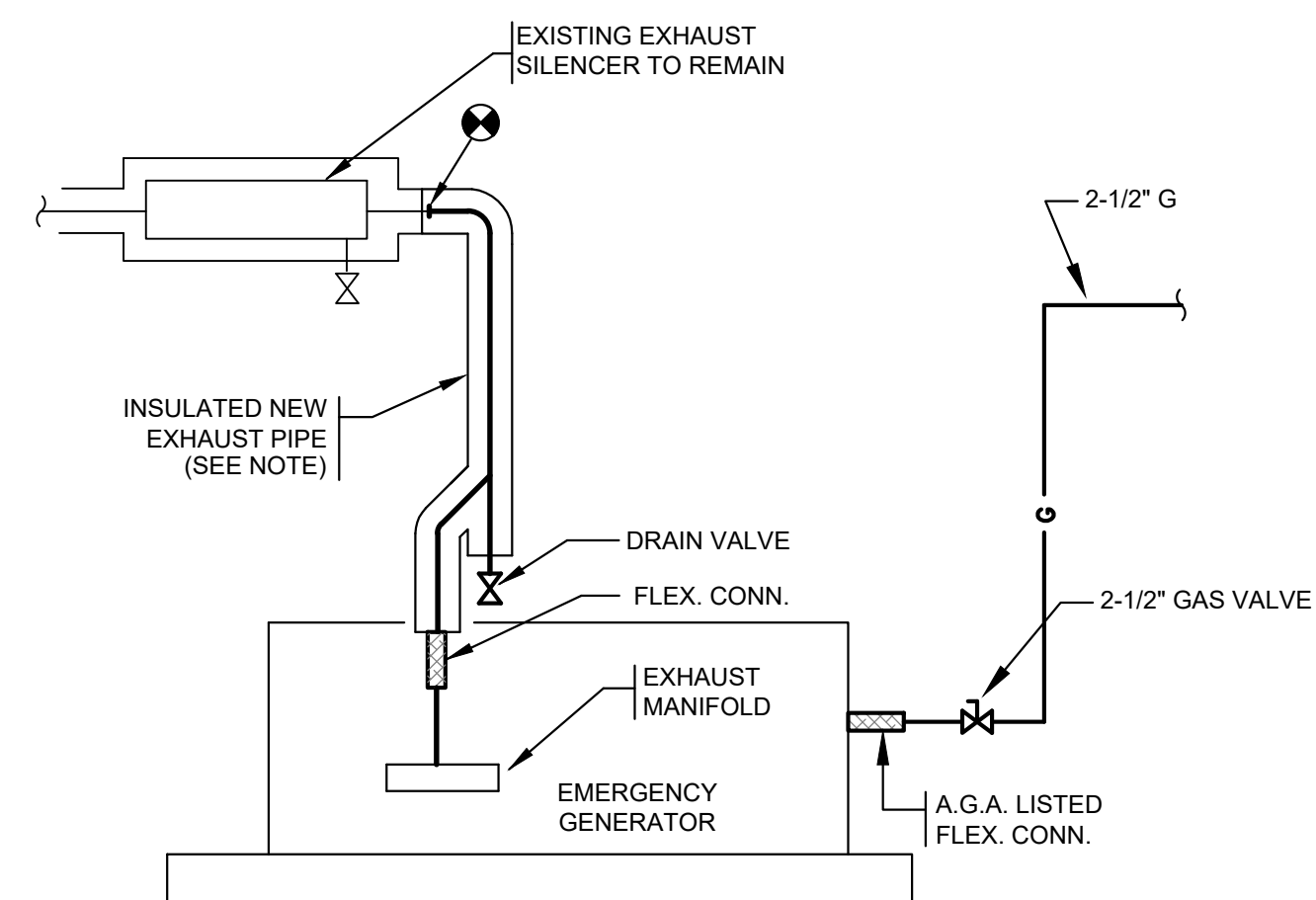


LOCUS PLAN



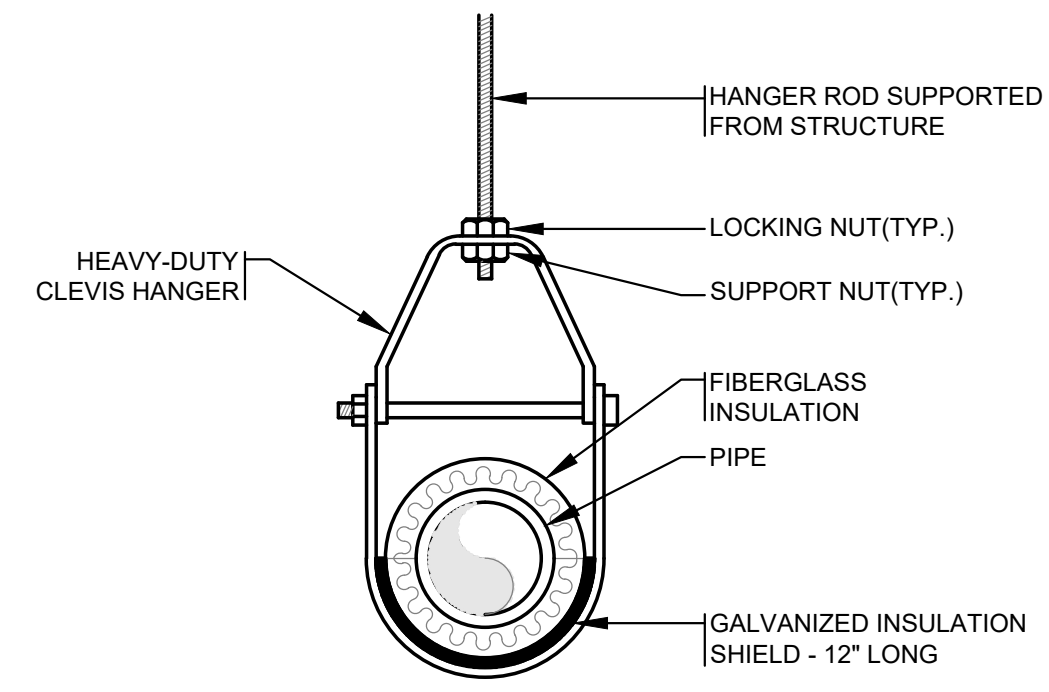
Date: March 27, 2024

NO.	DATE	BY	REVISION
REVISIONS			
GGD Consulting Engineers, Inc. <small>375 Faunce Corner Road, Suite D, Dartmouth, MA 02747-1258 p: 508-998-5700 • f: 508-998-0883 • www.g-g-d.com</small>			
DRAWN BY: MLP		SCALE: AS NOTED	
CHECKED BY: DMP		DATE: MARCH 27, 2024	
TITLE	TITLE SHEET		JOB NO. 567002.00
PROJECT	LHA CONCORD RIVER MILL ELDERLY HOUSING GENERATOR UPGRADE		DWG. NO. T0.1
CLIENT	LOWELL HOUSING AUTHORITY		



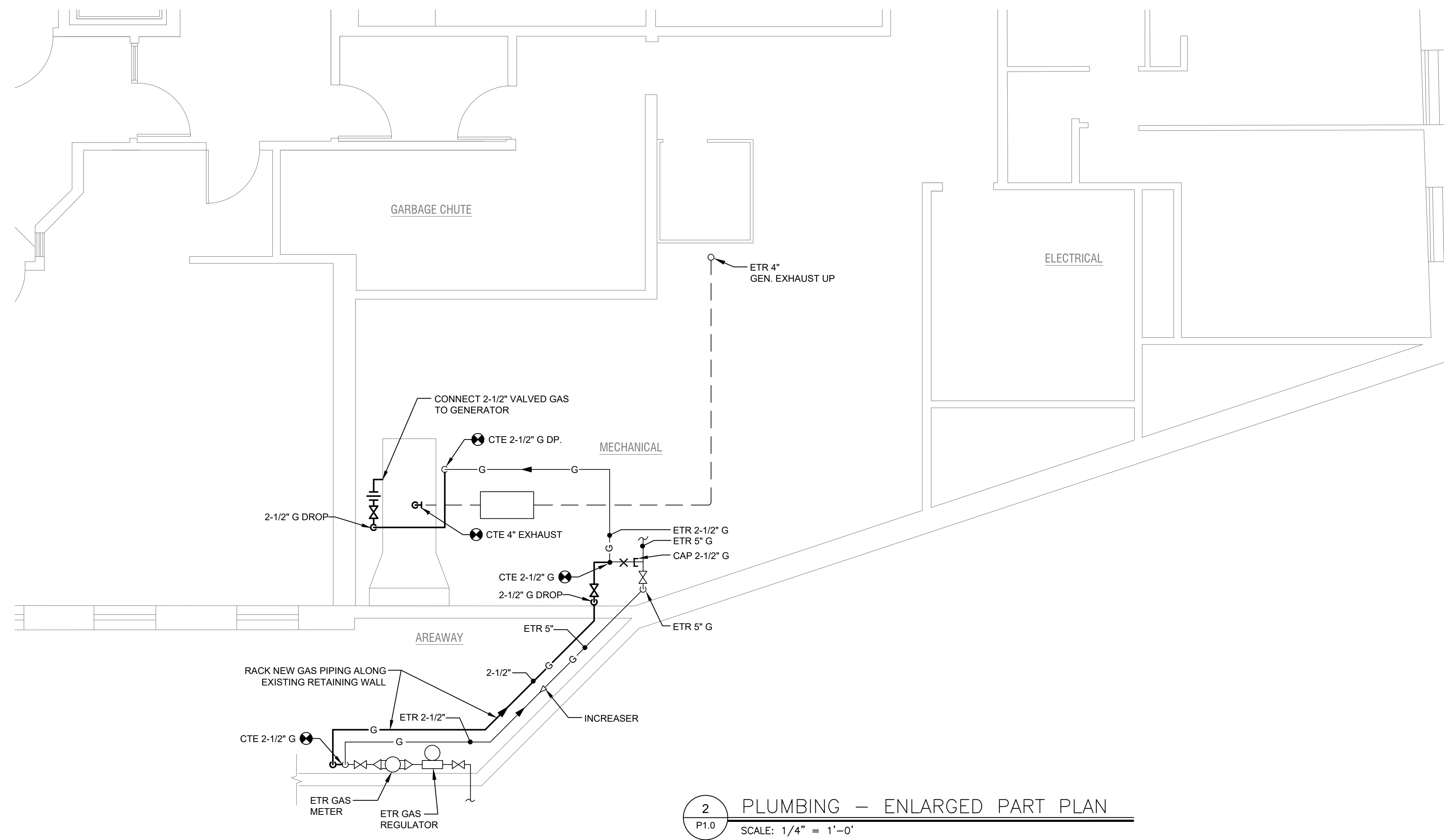
3 EMERGENCY GENERATOR PIPING SCHEMATIC

P1.0 N.T.S.
 NOTE:
 1. GENERATOR EXHAUST SHALL BE SCHED. 40 ANSI A-53 BLACK STEEL PIPING w/BUTT WELDED ENDS, w/ SCHED. 40 BUTT WELDED END FITTINGS. INSULATE w/3 LAYERS OF 2" THICK CALCIUM SILICATE BLOCK (6" TOTAL) WIRED IN PLACE & COVERED w/ 1/2" THICK CEMENT TROWELED SMOOTH & COVERED w/8 oz. CANVAS JACKET.



4 TYPICAL PIPE HANGER DETAIL

P1.0 N.T.S.
 NOTE:
 THIS DETAIL INDICATES HANGING OF INSULATED PIPING WHICH MAY BE EITHER WATER OR STORM DRAIN. CLEVIS HANGER DETAIL APPLIES TO ALL PLUMBING PIPING ON THIS PROJECT.



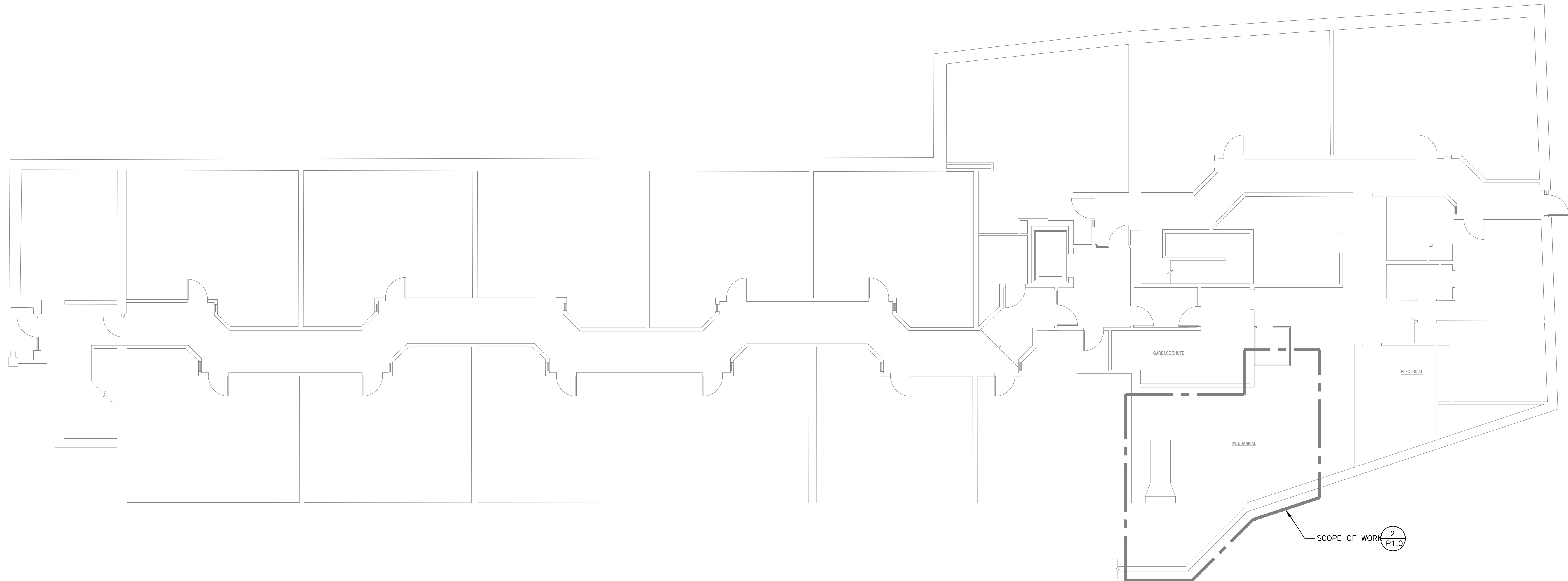
2 PLUMBING - ENLARGED PART PLAN

P1.0 SCALE: 1/4" = 1'-0"

LEGEND		
SYMBOL	ABBREV	DESCRIPTION
—	NEW	NEW WORK (DARK)
---	EX	EXISTING WORK (LIGHT)
G	G	GAS PIPING
X-X-X-X	G	GAS PIPING TO BE REMOVED
⊙		SITE VALVE
∇		GAS VALVE
— —		UNION
— —	DP/DN	PIPE DROPDOWN
— —	UP	PIPE RISE/UP
— —		PIPE CAP
---		SCOPE OF WORK
---	EX	EXISTING
---	TYP.	TYPICAL
---	RE	REMOVE EXISTING
---	ETR	EXISTING TO REMAIN

GENERAL NOTES

1. THE PLUMBING DRAWINGS ARE DIAGRAMMATIC AND ARE TO BE USED FOR THE PURPOSE OF ESTABLISHING GENERAL LOCATIONS OF PIPING RUNS, SIZES OF PIPING, AND QUANTITIES OF FIXTURES AND EQUIPMENT TO BE FURNISHED HEREIN. REFER TO ARCHITECTURAL DRAWINGS FOR DIMENSIONS FOR EXACT LOCATIONS OF ALL PLUMBING FIXTURES, AND EQUIPMENT, INCLUDING FLOOR DRAINS, AND MOUNTING HEIGHTS. IN THE EVENT OF CONFLICT OR IF DIMENSIONS ARE NOT SHOWN, OBTAIN FIELD DIRECTIVE FROM THE ARCHITECT AS TO THE LOCATIONS OF ALL VISIBLE EQUIPMENT.
2. EXISTING CONDITIONS INDICATING PIPING AND EQUIPMENT LOCATIONS ARE TAKEN FROM ENGINEERING FIELD NOTES AND DRAWINGS OF THE ORIGINAL BUILDING CONSTRUCTION ARE TO BE CONSIDERED APPROXIMATE ONLY. FIELD VERIFY POINTS OF CONNECTIONS OF NEW TO EXISTING BEFORE INSTALLING ANY PIPE OR EQUIPMENT. BRING ANY DISCREPANCY TO THE ATTENTION OF THE ARCHITECT.
3. INSTALL ALL NEW VALVES SO AS TO BE EASILY ACCESSIBLE AND OPERABLE.
4. WHERE REMOVAL OF EXISTING FIXTURES, EQUIPMENT AND PIPING IS INDICATED CUT AND CAP ALL EXISTING PIPING TO BEYOND THE NEW FINISHED SURFACE SO NO EVIDENCE OF PREVIOUS INSTALLATION WILL REMAIN.
5. MAINTAIN PLUMBING SYSTEMS IN OTHER BUILDING AREAS AT ALL TIMES DURING THE CONSTRUCTION. REFER TO PHASING PLANS AND SPECIFICATIONS ON THE ARCHITECT'S DRAWINGS & SPECIFICATIONS.



1 PLUMBING - FLOOR PLAN

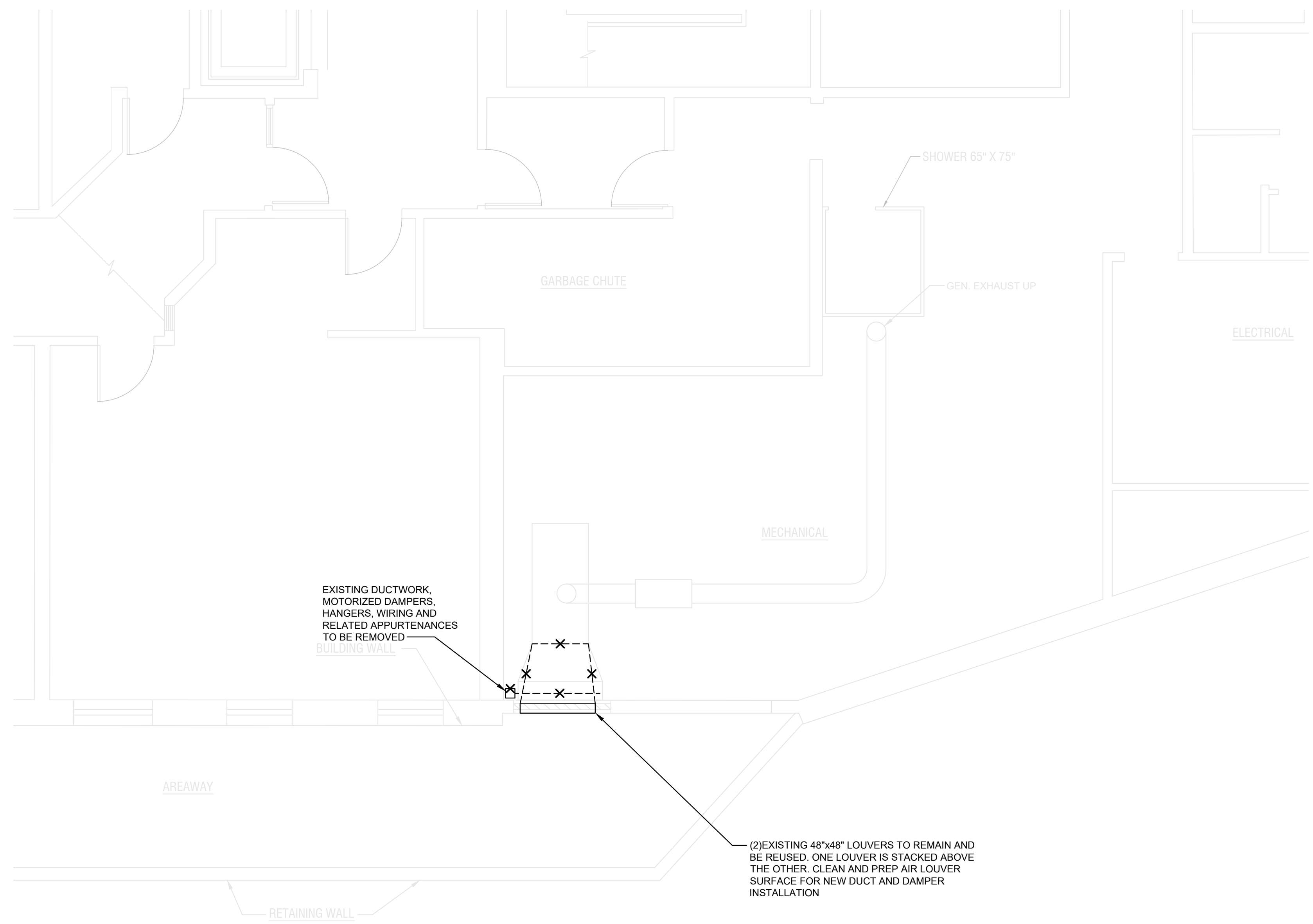
P1.0 SCALE: 1/8" = 1'-0"

REVISIONS			
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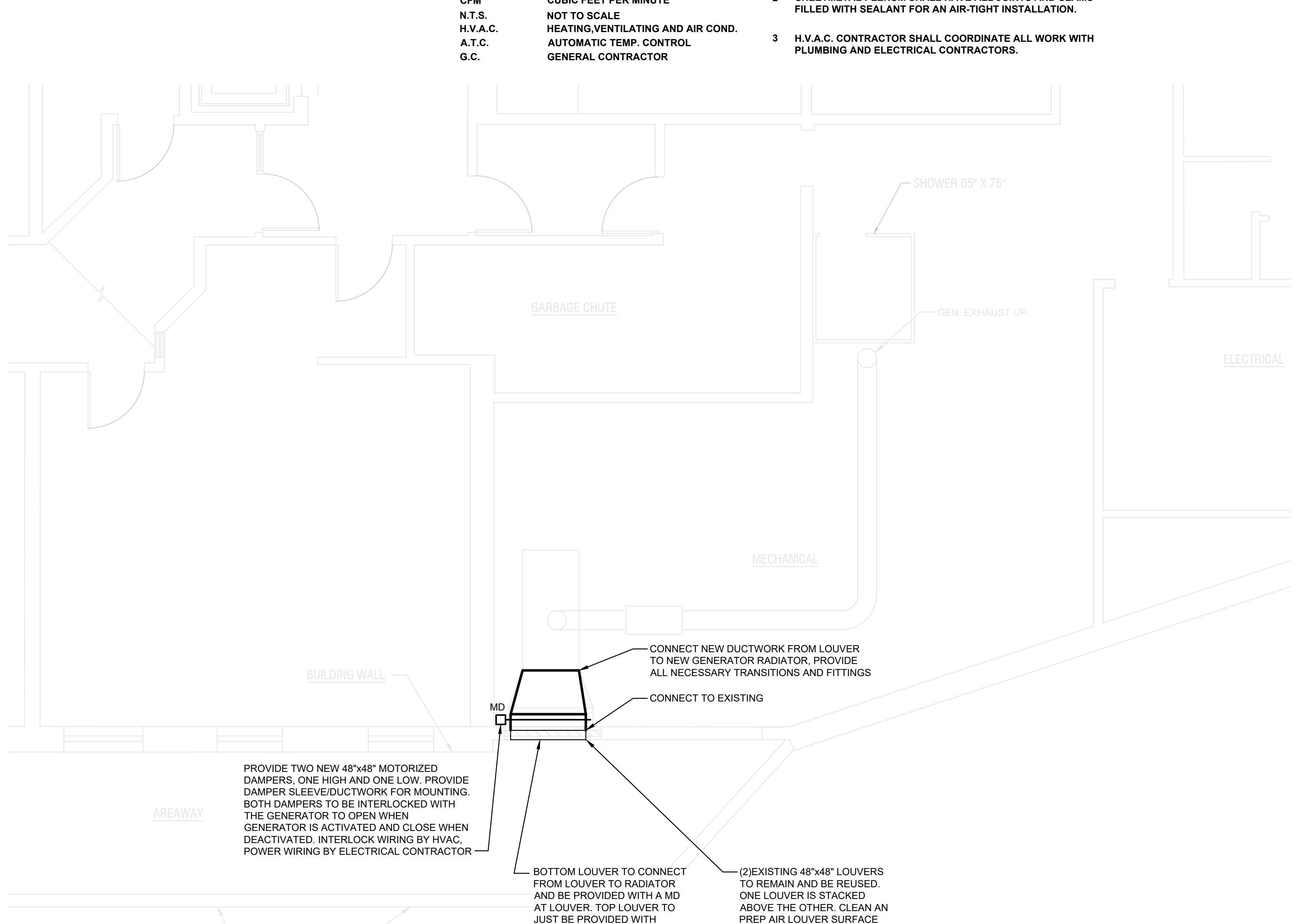
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DRAWN BY: RCD SCALE: AS NOTED
 CHECKED BY: CMG DATE: MARCH 27, 2024

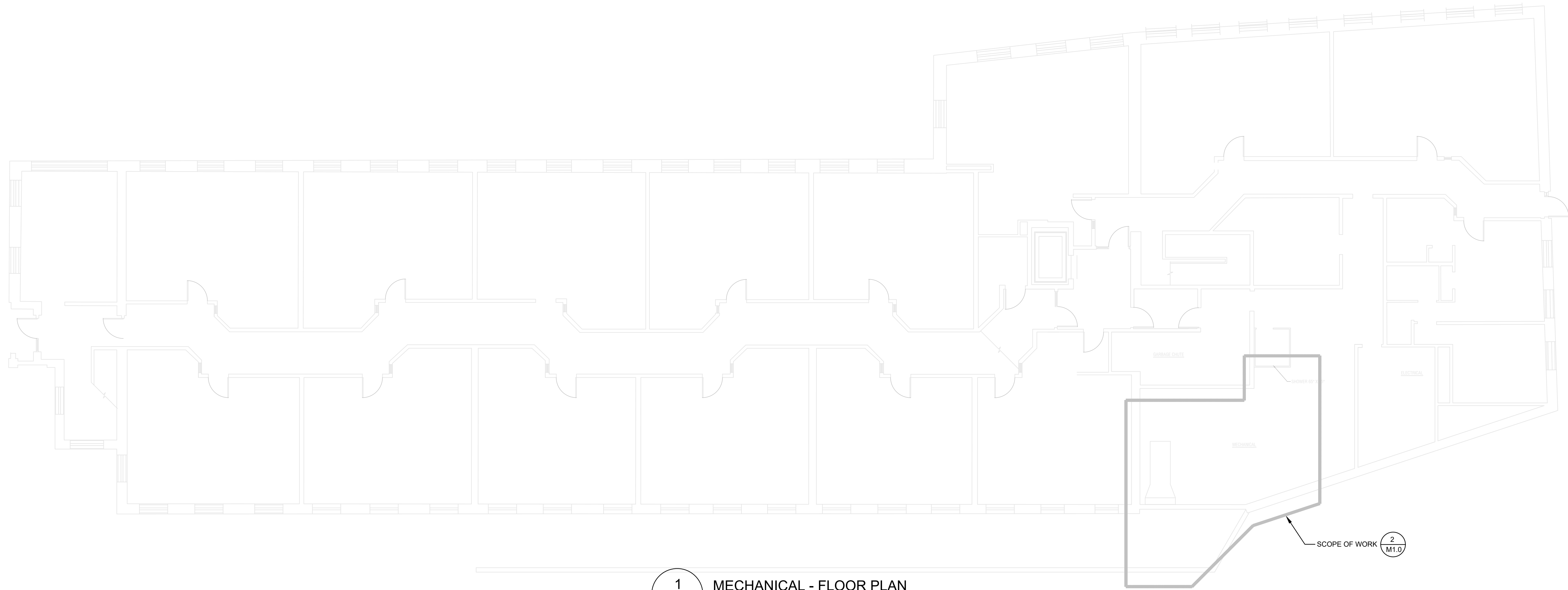
TITLE: PLUMBING - FLOOR PLANS JOB NO. 567002.00
 PROJECT: LHA CONCORD RIVER MILL ELDERLY HOUSING GENERATOR UPGRADE DWG. NO. P1.0
 CLIENT: LOWELL HOUSING AUTHORITY



2
M1.0
MECHANICAL - FLOOR PLAN
SCALE: 1/4" = 1'-0"



2
M1.0
MECHANICAL - FLOOR PLAN
SCALE: 1/4" = 1'-0"



1
M1.0
MECHANICAL - FLOOR PLAN
SCALE: 1/8" = 1'-0"

LEGEND

SYMBOL	ABBREV	DESCRIPTION
—○	MD	MOTORIZED DAMPER
	CFM	CUBIC FEET PER MINUTE
	N.T.S.	NOT TO SCALE
	H.V.A.C.	HEATING, VENTILATING AND AIR COND.
	A.T.C.	AUTOMATIC TEMP. CONTROL
	G.C.	GENERAL CONTRACTOR

- GENERAL NOTES**
- 1 ALL PIPING AND DUCTWORK UNLESS DIMENSIONED IS SHOWN DIAGRAMMATICALLY ONLY, EXACT LOCATION SHALL BE DETERMINED IN FIELD AFTER COORDINATING WITH OTHER WORK.
 - 2 SHEETMETAL PLENUM SHALL HAVE ALL JOINTS AND SEAMS FILLED WITH SEALANT FOR AN AIR-TIGHT INSTALLATION.
 - 3 H.V.A.C. CONTRACTOR SHALL COORDINATE ALL WORK WITH PLUMBING AND ELECTRICAL CONTRACTORS.

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CLIENT	LOWELL HOUSING AUTHORITY	

ELECTRICAL SYMBOL LIST

LEGEND NOTES:

A. THIS SHEET IS A GENERAL LIST OF SYMBOLS AND ABBREVIATIONS AND SHALL BE USED AS A DICTIONARY TO DEFINE ITEMS INDICATED ON DRAWINGS. NOT ALL SYMBOLS OR ABBREVIATIONS ARE NECESSARILY USED ON THIS PROJECT. ALL EQUIPMENT IS TO BE PROVIDED UNDER THIS SECTION UNLESS SPECIFICALLY INDICATED OTHERWISE.

WIRE AND RACEWAYS

WIRING AND RACEWAY - NO. OF DIAGONAL LINES INDICATES NO. #12 AWG CONDUCTORS. ABSENCE OF DIAGONAL LINES INDICATES 2#12 AWG-#12AWG GROUND UNLESS NOTED OTHERWISE. GROUND WIRE IS NOT SHOWN IN COUNT BUT SHALL BE PROVIDED.

HOMERUN TO PANEL - NO. OF ARROWS INDICATES NO. OF 20 AMP/1 POLE CIRCUITS TO PANEL - UNLESS NOTED OTHERWISE.

FLEXIBLE CONNECTION TO EQUIPMENT

POWER

- 120/208 VOLT, 3 PHASE, 4 WIRE PANELBOARD.
- 120/208 VOLT, 3 PHASE, 4 WIRE NORMAL/EMERGENCY SYSTEM PANELBOARD.
- PANELBOARD FLUSH MOUNTED.
- VARIABLE FREQUENCY DRIVE.
- MULTI-POLE CONTACTOR IN NEMA I ENCLOSURE-RATINGS AND NUMBER OF POLES AS REQUIRED.
- EQUIPMENT CONTROL PANEL.
- AUTOMATIC TRANSFER SWITCH.
- PULL BOX-SIZE AS REQUIRED.
- GENERATOR.
- 20 AMP, 120 VOLT DUPLEX RECEPTACLE; '2' INDICATES CIRCUIT NUMBER.
- GENERATOR ANNUNCIATOR PANEL.
- EMERGENCY POWER OFF PUSHBUTTON.

MECHANICAL EQUIPMENT
(REFER TO MECHANICAL EQUIPMENT SCHEDULE)

- HEAT PUMP RECOVERY UNIT - F & I BY HVAC, WIRED BY E.C.
- HEAT PUMP - F&I BY HVAC WIRED BY E.C.
- ROOF TOP UNIT - F&I BY HVAC WIRED BY E.C.
- EXHAUST FAN - F & I BY HVAC, WIRED BY E.C.
- MOTOR - NUMERAL INDICATES HORSEPOWER

SWITCHES (typically mtd 48" AFF to Q.u.n.o.)

S_a SINGLE POLE SWITCH-"a" DESIGNATES SWITCH CONTROL (LOWER CASE).

EXISTING EQUIPMENT

- DOTTED DENOTES EXISTING EQUIPMENT.
- EXISTING EQUIPMENT TO BE REMOVED AND CIRCUIT PULLED BACK TO NEXT ACTIVE OUTLET/BACK TO PANEL.
- EXISTING EQUIPMENT TO REMAIN.
- EXISTING EQUIPMENT TO BE REMOVED AND RELOCATED.
- NEW LOCATION OF RELOCATED EXISTING EQUIPMENT.
- EXISTING EQUIPMENT TO BE REMOVED AND NEW EQUIPMENT INSTALLED IN SAME LOCATION.

ABBREVIATIONS

- | | | | |
|-------|--|----------|---|
| A | AMPERE | IT | INFORMATION TECHNOLOGY SUBCONTRACTOR |
| AL | ALUMINUM | JB | JUNCTION BOX |
| AF | AMP. FRAME | KCMIL | THOUSAND CIRCULAR MILS |
| AFB | ABOVE FINISHED FLOOR | KES | KITCHEN EQUIPMENT SUPPLIER |
| AFG | ABOVE FINISHED GRADE | KVA | KILO-VOLT AMPERE |
| AIC | INTERRUPTING CAPACITY | KW | KILO-WATT |
| ARCH | ARCHITECT | LTG | LIGHTING |
| AT | AMP TRIP | MCB | MAIN CIRCUIT BREAKER |
| ATC | AUTO-TEMP CONTROL SUBCONTRACTOR | MCC | MOTOR CONTROL CENTER |
| ATS | AUTOMATIC TRANSFER SWITCH | MCM | THOUSAND CIRCULAR MILS |
| AWG | AMERICAN WIRE GAUGE | MDP | MAIN DISTRIBUTION PANEL |
| C | CONDUIT (GENERIC TERM FOR RACEWAY, PROVIDE AS SPECIFIED) | MH | MOUNTING HEIGHT |
| CATV | CABLE TELEVISION | MLO | MAIN LUGS ONLY |
| CB | CIRCUIT BREAKER | MTD | MOUNTED |
| CKT | CIRCUIT | MTG | MOUNTING |
| CLG | CEILING | MTS | MANUAL TRANSFER SWITCH |
| CLG | COPPER | NIC | NOT IN CONTRACT |
| CJ | CENTERLINE | NO.# | NUMBER |
| DP | DEEP | NTS | NOT TO SCALE |
| DWG | DRAWING | P | POLE(S) |
| EC | ELECTRICAL SUBCONTRACTOR | PB | PULL BOX |
| EWC | ELECTRIC WATER COOLER | PC | PLUMBING SUBCONTRACTOR |
| EMT | ELECTRIC METALLIC TUBING | PHØ | PHASE |
| FA | FIRE ALARM | PVC | POLY-VINYL CHLORIDE CONDUIT |
| FPC | FIRE PROTECTION SYSTEM SUBCONTRACTOR | PWR | POWER |
| F&I | FURNISHED AND INSTALLED | REF | REFRIGERATOR |
| G.GND | GROUND | RGS | RIGID GALVANIZED STEEL CONDUIT |
| GC | GENERAL CONTRACTOR | SN | SOLID NEUTRAL |
| GFI | GROUND FAULT INTERRUPTER | SWBD | SWITCHBOARD |
| GFPE | GROUND FAULT INTERRUPTER FOR EQUIPMENT | TEL/DATA | TELEPHONE/DATA |
| HVAC | HEATING, VENTILATING, AND AIR CONDITIONING SUBCONTRACTOR | TYP | TYPICAL |
| HP | HORSEPOWER | UNO | UNLESS NOTED OTHERWISE |
| IMC | INTERMEDIATE METALLIC CONDUIT | WG | WIRE GUARD |
| IG | ISOLATED GROUND | WP | WEATHERPROOF |
| | | XFMR | TRANSFORMER |
| | | XP | EXPLOSION PROOF |
| | | @72" | MOUNT 72 INCHES TO CENTERLINE ABOVE FINISHED FLOOR OR GRADE |

WIRING NOTES:

1. WIRING IS INDICATED ON DRAWINGS ONLY FOR SPECIFIC ROUTES OR SPECIAL CONDITIONS.
2. WIRING AND CONDUIT SHALL BE REQUIRED BETWEEN ALL OUTLETS INDICATED WITH CIRCUIT NUMBERS AND PANEL DESIGNATIONS.
3. ALL SWITCH CONTROLS SHALL BE PROVIDED WITH WIRING AND CONDUIT AS REQUIRED.
4. ALTHOUGH ALL BRANCH CIRCUIT WIRE AND CONDUIT IS NOT SHOWN, IT IS THE INTENT OF THESE DOCUMENTS THAT A COMPLETE BRANCH CIRCUIT WIRING SYSTEM BE PROVIDED.
5. RACEWAYS SHALL BE LIMITED TO FOUR CURRENT CARRYING CONDUCTORS AND GROUNDING CONDUCTOR, UNLESS OTHERWISE INDICATED.
6. COORDINATE EXACT LOCATION OF ALL DEVICES AND EQUIPMENT WITH ARCHITECT PRIOR TO INSTALLATION.
7. REFER TO DRAWING M.1.0 FOR ANY CHANGES AND FOR EXACT LOCATION OF ALL HVAC EQUIPMENT.
8. ALL BRANCH CIRCUIT CONDUCTORS SHALL BE 98% CONDUCTIVITY, COPPER MINIMUM #12 AWG SIZE. THWN/THHN INSULATION, 600 VOLTS RATED UNLESS OTHERWISE NOTED.

GENERAL DEMOLITION NOTES:

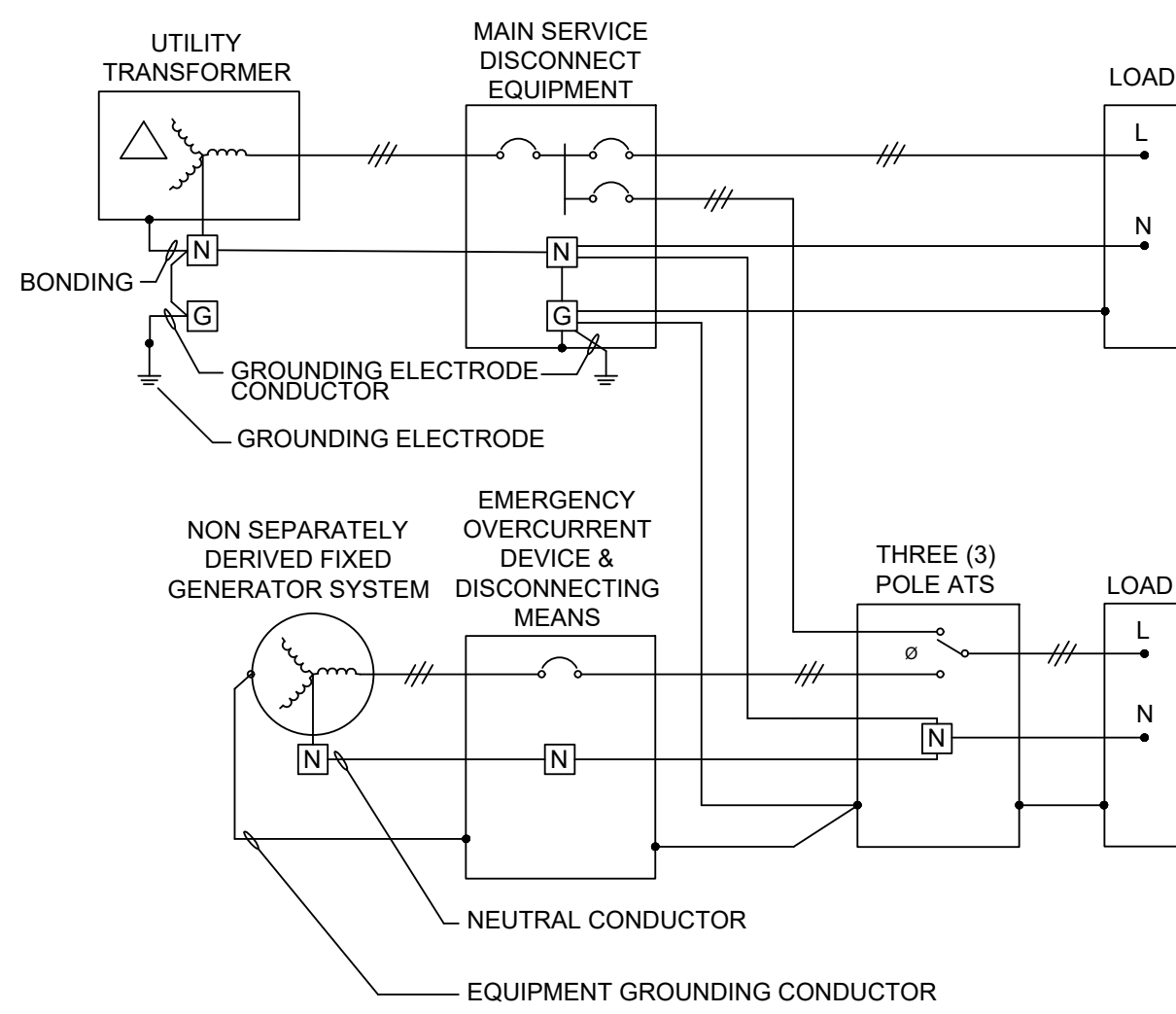
1. REFER TO DEMOLITION SECTION OF SPECIFICATION FOR ADDITIONAL REQUIREMENTS.
2. WHERE DOWNSTREAM DEVICES ARE AFFECTED BY THE DEMOLITION WORK THIS CONTRACTOR SHALL PROVIDE NEW WIRING AS REQUIRED TO MAINTAIN SUCH DOWNSTREAM DEVICES.
3. ALL DEVICES AND/OR EQUIPMENT REMOVED BY THIS CONTRACTOR SHALL BE INSPECTED BY THE OWNER FOR DETERMINATION OF DISPOSAL OR STORAGE AS DIRECTED BY THE OWNER. FOR PURPOSES OF PRICING THIS CONTRACTOR SHALL ASSUME THAT NO DEVICE OR EQUIPMENT WILL BE RE-USED UNLESS SPECIFICALLY NOTED AS SUCH.
4. PARTICULAR CARE SHALL BE TAKEN TO AVOID CREATING HAZARDS ON THE PROJECT OR CAUSING DISRUPTION OF SERVICES REMAINING.
5. ALL EXISTING EQUIPMENT INDICATED TO BE REMOVED SHALL BE DONE IN A NEAT AND WORKMANLIKE MANNER. ALL EXISTING EQUIPMENT INDICATED TO BE TURNED OVER TO THE OWNER SHALL BE PRESENTED TO THE OWNER IN GOOD CONDITION AT A LOCATION DESIGNATED BY THE OWNER. ALL OTHER EQUIPMENT SHALL BE REMOVED FROM THE SITE.
6. REMOVE ALL ABANDONED CONDUCTORS AND EQUIPMENT NOT BUILT INTO THE BUILDING CONSTRUCTION.
7. ABANDONED ELEMENTS BUILT INTO WALLS SHALL BE MARKED "ABANDONED".
8. PROVIDE BLANK COVER PLATES ON ALL ABANDONED JUNCTION BOXES AND BACKBOXES THAT ARE 8"X8" AND SMALLER TO MATCH FINISH OF ALL SURROUNDING COVER PLATES. REMOVE ALL JUNCTION BOXES AND BACKBOXES THAT ARE LARGER THAN 8"X8".
9. TYPICAL DEMOLITION SCOPE IS THAT THE ELECTRICAL CONTRACTOR IS RESPONSIBLE TO CUT, CAP, MAKE SAFE, DROP TO THE FLOOR AND REMOVE FROM THE SITE.

GENERAL NOTES:

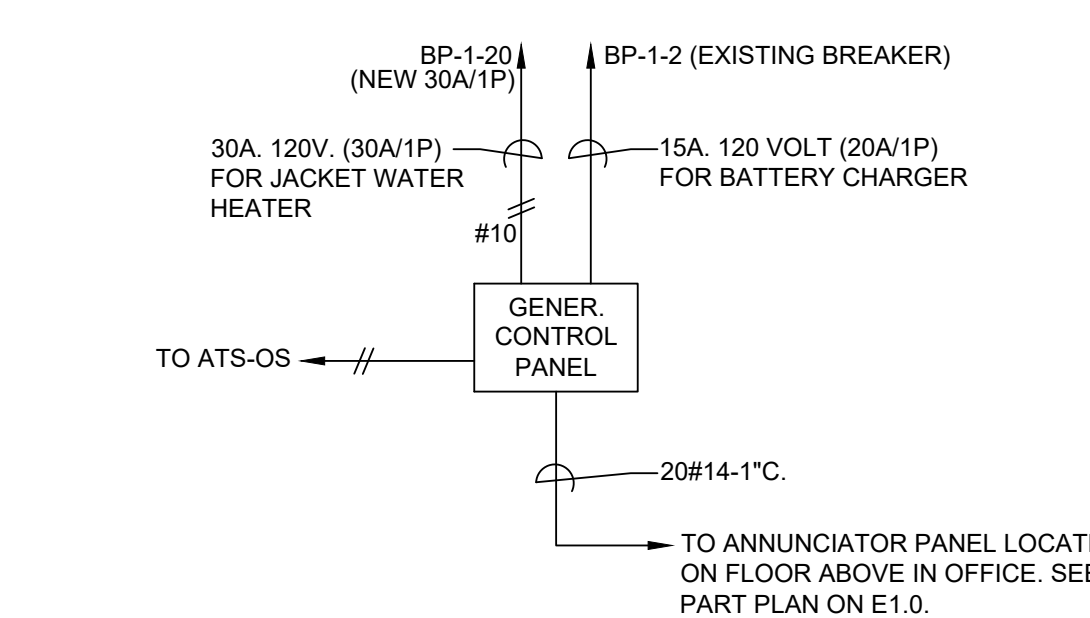
1. ELECTRICAL WORK SHALL BE IN ACCORDANCE WITH OSHA, NFPA STANDARDS, THE ELECTRICAL CODE AND THE LOCAL GOVERNING AUTHORITIES. THE DRAWINGS AND SPECIFICATIONS DO NOT ATTEMPT TO INDICATE ALL WORK REQUIRED BY CODES AND AUTHORITIES.
2. TEST ALL EQUIPMENT AND SYSTEMS INSTALLED TO CERTIFY COMPLIANCE WITH DRAWINGS, SPECIFICATIONS, CODES, LOCAL AUTHORITIES AND REGULATIONS. INCLUDE LABOR AND COSTS FOR TESTING, REVIEWS, APPROVALS AND CERTIFICATIONS.
3. DRAWINGS ARE DIAGRAMMATIC ONLY. EXACT LOCATION, MOUNTING HEIGHTS OF EQUIPMENT AND ROUTING OF RACEWAYS SHALL BE COORDINATED WITH THE EQUIPMENT REQUIREMENTS AND FIELD CONDITIONS.
4. FURNISH AND INSTALL ALL INCIDENTAL ACCESSORIES NECESSARY TO MAKE THE ELECTRICAL WORK COMPLETE AND READY FOR OPERATION.
5. SUPPORT ALL WORK FROM THE BUILDING STRUCTURE.
6. ALL MOUNTING HEIGHTS ARE TO CENTERLINE UNLESS OTHERWISE INDICATED.
7. IF EXACT MOUNTING OR RACEWAY ROUTINGS ARE NOT INDICATED (LOCATION OR HEIGHT) REQUEST CLARIFICATION PRIOR TO ROUGHING, OR INSTALLATION.
8. ELECTRICAL WORK SHALL BE RECESSED INTO WALLS OR INSTALLED ABOVE HUNG CEILINGS UNLESS OTHERWISE INDICATED.
9. DO NOT INSTALL OUTLETS BACK TO BACK. PROVIDE 24 INCH SPACING IN FIRE RATED WALLS.
10. PROVIDE ELECTRICAL OUTLET PLATE GASKET SEALS AT RECEPTACLES, SWITCHES AND OTHER ELECTRICAL BOXES ON EXTERIOR WALLS AND INTERIOR WALLS BETWEEN CONDITIONED AND NON-CONDITIONED SPACES.
11. INSTALL A GREEN GROUNDING CONDUCTOR WITHIN EACH RACEWAY SIZED IN ACCORDANCE WITH THE ELECTRIC CODE.
12. PROVIDE WATERTIGHT AND GAS TIGHT SEALS INSIDE AND OUTSIDE OF CONDUITS THAT PENETRATE THE BUILDING BELOW GRADE. O.Z. GEDNEY OR APPROVED EQUAL. PROVIDE WEATHER TIGHT SEAL AT PENETRATIONS ABOVE GRADE.
13. PROVIDE NRTL LISTED SMOKE AND FIRE SEALS AT ALL PENETRATIONS THROUGH FLOORS OR FULL HEIGHT (SLAB TO SLAB) WALLS.
14. PROVIDE A PULL LINE IN EVERY EMPTY CONDUIT PROVIDED UNDER THIS SECTION.

ELECTRICAL GENERAL NOTES: (FOR ALL DRAWINGS)

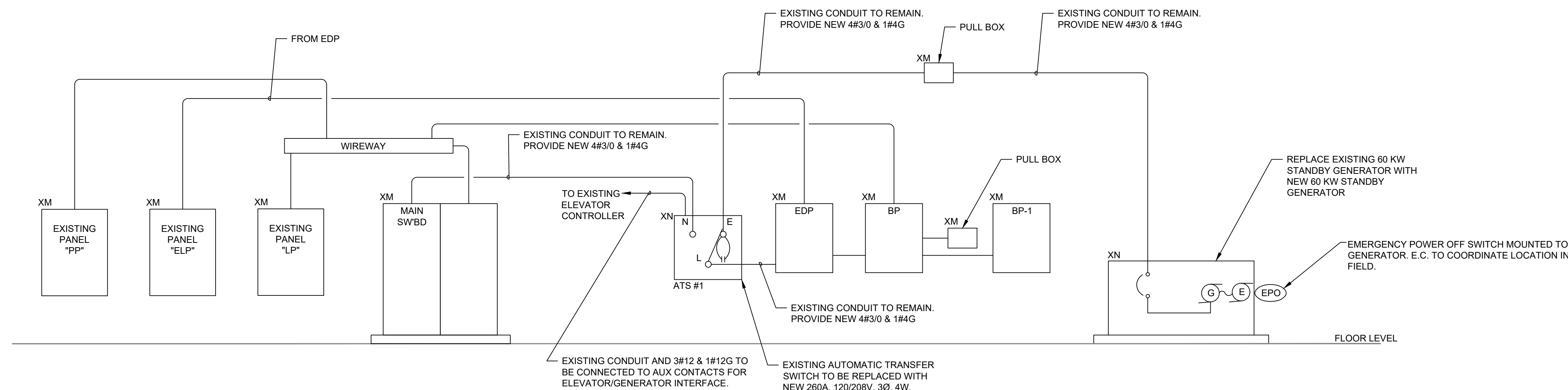
1. THE SCOPE OF WORK SHALL INCLUDE PROVIDING ALL WORK INDICATED, AND COORDINATION WITH ALL TRADES. SCOPE OF WORK IS INDICATED ON THE CONTRACT DOCUMENTS INCLUDING THE DRAWINGS AND THE SPECIFICATIONS, WHICH ARE COMPLIMENTARY. WORK INDICATED IN ANY CONTRACT DOCUMENT SHALL BE CONSIDERED PART OF THE SCOPE OF WORK. IN GENERAL, WORK REQUIREMENTS ARE NOT INDICATED IN BOTH DOCUMENTS. WHERE DOCUMENTS CONFLICT WITHIN THEMSELVES OR WITH CODES AND REGULATIONS, PROVIDE THE HIGHER QUANTITY AND QUALITY AND FOLLOW THE STRICTER REQUIREMENTS.
2. COORDINATE WITH THE GENERAL CONTRACTOR, OTHER TRADES AND OF MANUFACTURERS EQUIPMENT AND MAKE ALL FINAL CONNECTIONS AS REQUIRED, I.E., POWER, CONTROL, INTERLOCK, ETC.
3. ELECTRICAL WORK SHALL BE IN ACCORDANCE WITH OSHA, NFPA STANDARDS, THE ELECTRICAL CODE AND THE LOCAL GOVERNING AUTHORITIES. THE DRAWINGS AND SPECIFICATIONS DO NOT ATTEMPT TO INDICATE ALL WORK REQUIRED BY CODES AND AUTHORITIES.
4. TEST ALL EQUIPMENT AND SYSTEMS INSTALLED TO CERTIFY COMPLIANCE WITH DRAWINGS, SPECIFICATIONS, CODES, LOCAL AUTHORITIES AND REGULATIONS. INCLUDE LABOR AND COSTS FOR TESTING, REVIEWS, APPROVALS AND CERTIFICATIONS.
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6. FURNISH AND INSTALL ALL INCIDENTAL ACCESSORIES NECESSARY TO MAKE THE ELECTRICAL WORK COMPLETE AND READY FOR OPERATION.
7. SUPPORT ALL WORK FROM THE BUILDING STRUCTURE.
8. ALL MOUNTING HEIGHTS ARE TO CENTERLINE UNLESS OTHERWISE INDICATED.
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11. DO NOT INSTALL OUTLETS BACK TO BACK. PROVIDE 24 INCH SPACING IN FIRE RATED WALLS.
12. PROVIDE ELECTRICAL OUTLET PLATE GASKET SEALS AT RECEPTACLES, SWITCHES AND OTHER ELECTRICAL BOXES ON EXTERIOR WALLS AND INTERIOR WALLS BETWEEN CONDITIONED AND NON-CONDITIONED SPACES.
13. WIRE AND CONDUIT SIZES INDICATED ON HOMERUNS SHALL BE CONTINUOUS THROUGHOUT CIRCUIT.
14. FURNISH AND INSTALL CODE REQUIRED DISCONNECTS WHICH ARE NOT FURNISHED BY THE HVAC OR PLUMBING CONTRACTORS.
15. INSTALL A GREEN GROUNDING CONDUCTOR WITHIN EACH RACEWAY SIZED IN ACCORDANCE WITH THE ELECTRIC CODE.
16. PROVIDE NRTL LISTED SMOKE AND FIRE SEALS AT ALL PENETRATIONS THROUGH FLOORS OR FULL HEIGHT (SLAB TO SLAB) WALLS.
17. ALL BRANCH CIRCUIT CONDUCTORS SHALL BE COPPER MINIMUM #12 AWG. SIZE UNLESS OTHERWISE INDICATED.



1 NON-SEPARATELY DERIVED GENERATOR SYSTEM
SCALE: NTS



2 EMERGENCY GENERATOR CONTROL WIRING
SCALE: NTS (NOTE: MAY VARY BY MANUFACTURER)



3 ONE LINE POWER RISER
SCALE: NTS

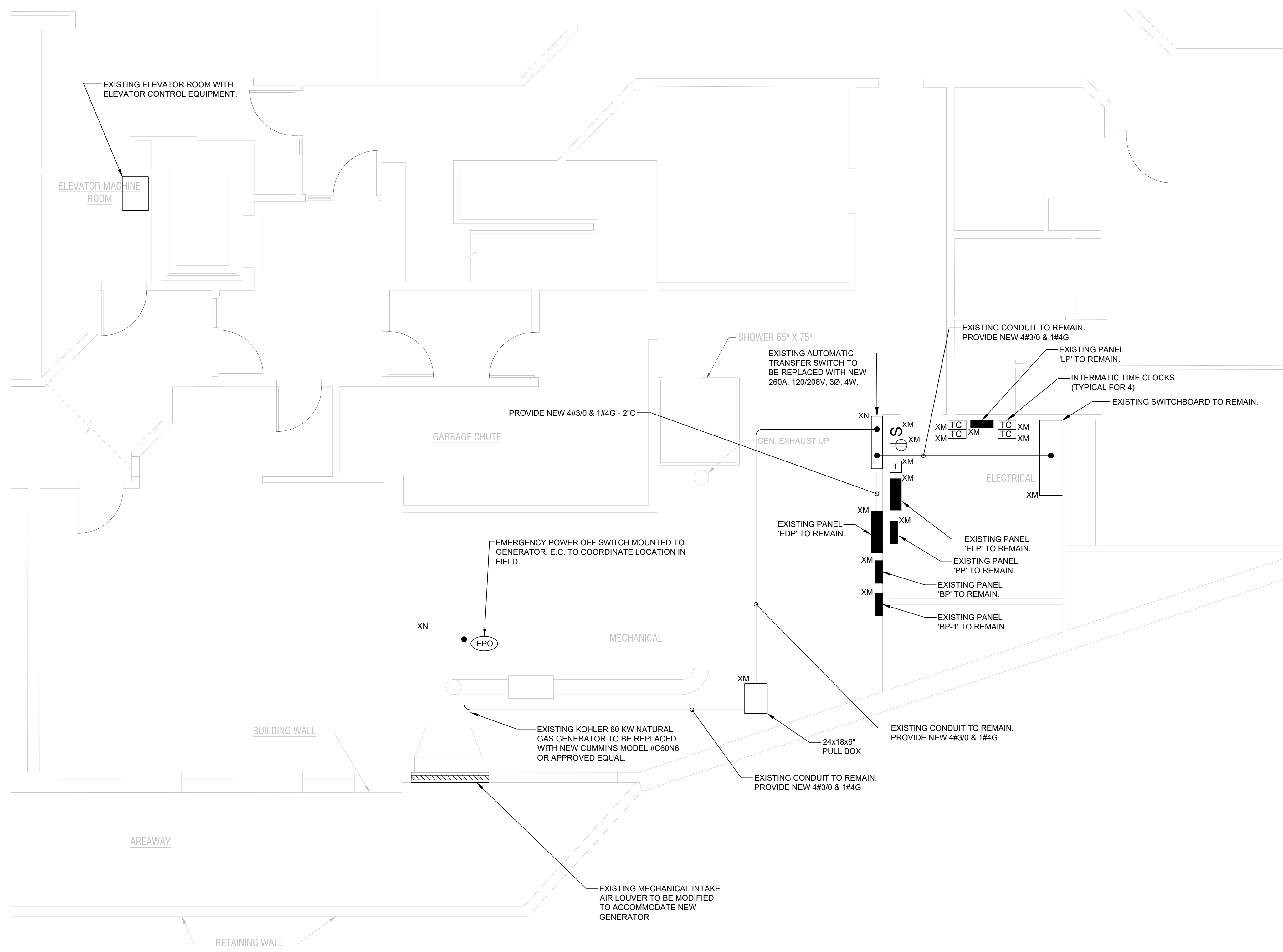
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DRAWN BY: MLP SCALE: AS NOTED
CHECKED BY: DMP DATE: MARCH 27, 2024

TITLE: **ELECTRICAL - SYMBOLS, NOTES AND DETAILS** JOB NO. 567002.00
PROJECT: **LHA CONCORD RIVER MILL ELDERLY HOUSING GENERATOR UPGRADE** DWG. NO. **E.01**
CLIENT: **LOWELL HOUSING AUTHORITY**



1 ELECTRICAL - FLOOR PLAN
E1.0 SCALE: 1/4" = 1'-0"

WIRING NOTES:

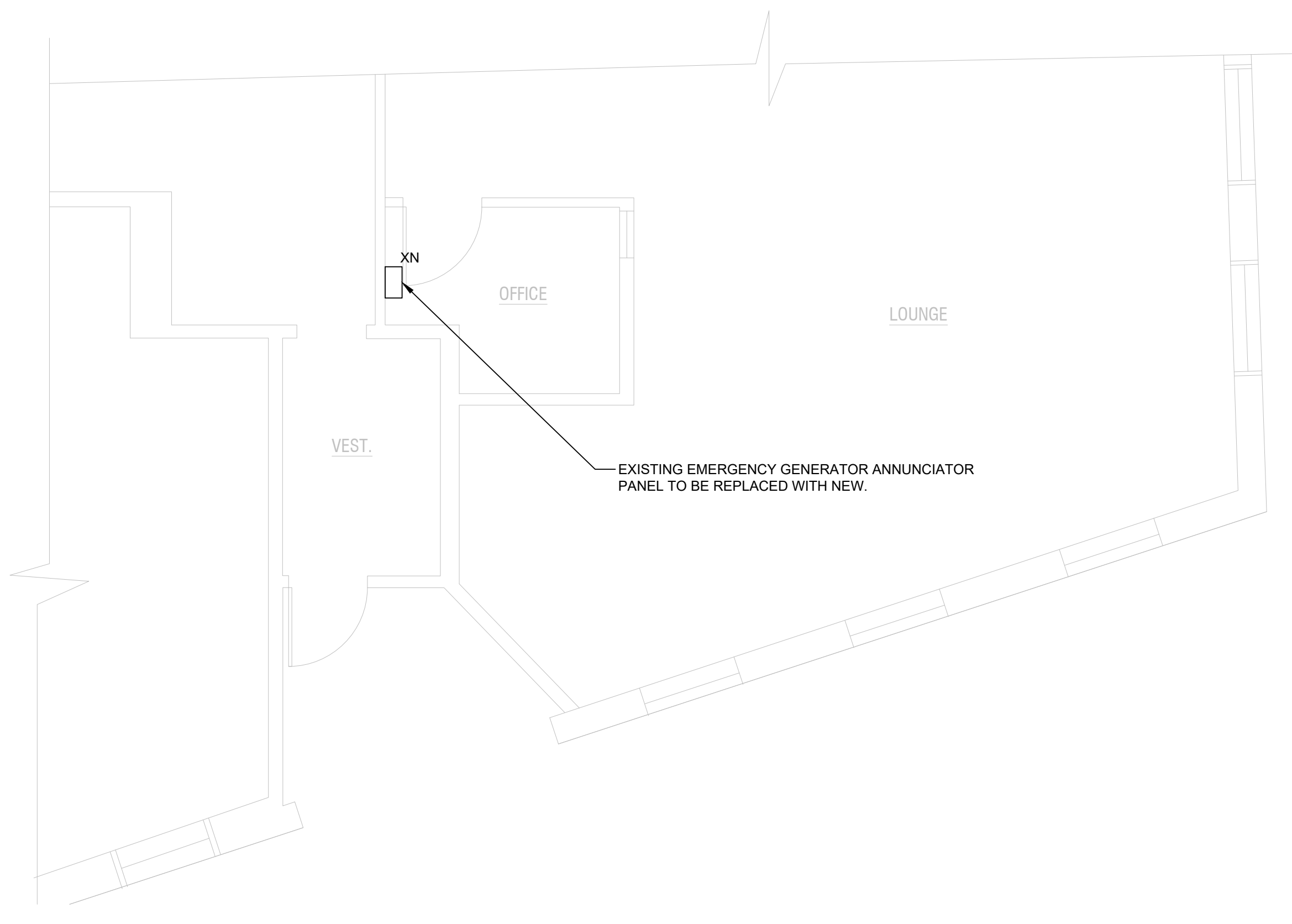
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3. ALL SWITCH CONTROLS SHALL BE PROVIDED WITH WIRING AND CONDUIT AS REQUIRED.
4. ALTHOUGH ALL BRANCH CIRCUIT WIRE AND CONDUIT IS NOT SHOWN, IT IS THE INTENT OF THESE DOCUMENTS THAT A COMPLETE BRANCH CIRCUIT WIRING SYSTEM BE PROVIDED.
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6. COORDINATE EXACT LOCATION OF ALL DEVICES AND EQUIPMENT WITH ARCHITECT PRIOR TO INSTALLATION.
7. REFER TO DRAWING M1.0 FOR ANY CHANGES AND FOR EXACT LOCATION OF ALL HVAC EQUIPMENT.
8. ALL BRANCH CIRCUIT CONDUCTORS SHALL BE 98% CONDUCTIVITY, COPPER MINIMUM #12 AWG SIZE, THWN/THHN INSULATION, 600 VOLTS RATED UNLESS OTHERWISE NOTED.

GENERAL DEMOLITION NOTES:

1. REFER TO DEMOLITION SECTION OF SPECIFICATION FOR ADDITIONAL REQUIREMENTS.
2. WHERE DOWNSTREAM DEVICES ARE AFFECTED BY THE DEMOLITION WORK THIS CONTRACTOR SHALL PROVIDE NEW WIRING AS REQUIRED TO MAINTAIN SUCH DOWNSTREAM DEVICES.
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4. PARTICULAR CARE SHALL BE TAKEN TO AVOID CREATING HAZARDS ON THE PROJECT OR CAUSING DISRUPTION OF SERVICES REMAINING.
5. ALL EXISTING EQUIPMENT INDICATED TO BE REMOVED SHALL BE DONE IN A NEAT AND WORKMANLIKE MANNER. ALL EXISTING EQUIPMENT INDICATED TO BE TURNED OVER TO THE OWNER SHALL BE PRESENTED TO THE OWNER IN GOOD CONDITION AT A LOCATION DESIGNATED BY THE OWNER. ALL OTHER EQUIPMENT SHALL BE REMOVED FROM THE SITE.
6. REMOVE ALL ABANDONED CONDUCTORS AND EQUIPMENT NOT BUILT INTO THE BUILDING CONSTRUCTION.
7. ABANDONED ELEMENTS BUILT INTO WALLS SHALL BE MARKED "ABANDONED".
8. PROVIDE BLANK COVER PLATES ON ALL ABANDONED JUNCTION BOXES AND BACKBOXES THAT ARE 8"X8" AND SMALLER TO MATCH FINISH OF ALL SURROUNDING COVER PLATES. REMOVE ALL JUNCTION BOXES AND BACKBOXES THAT ARE LARGER THAN 8"X8".
9. TYPICAL DEMOLITION SCOPE IS THAT THE ELECTRICAL CONTRACTOR IS RESPONSIBLE TO CUT, CAP, MAKE SAFE, DROP TO THE FLOOR AND REMOVE FROM THE SITE.

GENERAL NOTES:

1. ELECTRICAL WORK SHALL BE IN ACCORDANCE WITH OSHA, NFPA STANDARDS, THE ELECTRICAL CODE AND THE LOCAL GOVERNING AUTHORITIES. THE DRAWINGS AND SPECIFICATIONS DO NOT ATTEMPT TO INDICATE ALL WORK REQUIRED BY CODES AND AUTHORITIES.
2. TEST ALL EQUIPMENT AND SYSTEMS INSTALLED TO CERTIFY COMPLIANCE WITH DRAWINGS, SPECIFICATIONS, CODES, LOCAL AUTHORITIES AND REGULATIONS. INCLUDE LABOR AND COSTS FOR TESTING, REVIEWS, APPROVALS AND CERTIFICATIONS.
3. DRAWINGS ARE DIAGRAMMATIC ONLY. EXACT LOCATION, MOUNTING HEIGHTS OF EQUIPMENT AND ROUTING OF RACEWAYS SHALL BE COORDINATED WITH THE EQUIPMENT REQUIREMENTS AND FIELD CONDITIONS.
4. FURNISH AND INSTALL ALL INCIDENTAL ACCESSORIES NECESSARY TO MAKE THE ELECTRICAL WORK COMPLETE AND READY FOR OPERATION.
5. SUPPORT ALL WORK FROM THE BUILDING STRUCTURE.
6. ALL MOUNTING HEIGHTS ARE TO CENTERLINE UNLESS OTHERWISE INDICATED.
7. IF EXACT MOUNTING OR RACEWAY ROUTINGS ARE NOT INDICATED (LOCATION OR HEIGHT) REQUEST CLARIFICATION PRIOR TO ROUGHING, OR INSTALLATION.
8. ELECTRICAL WORK SHALL BE RECESSED INTO WALLS OR INSTALLED ABOVE HUNG CEILINGS UNLESS OTHERWISE INDICATED.
9. DO NOT INSTALL OUTLETS BACK TO BACK. PROVIDE 24 INCH SPACING IN FIRE RATED WALLS.
10. PROVIDE ELECTRICAL OUTLET PLATE GASKET SEALS AT RECEPTACLES, SWITCHES AND OTHER ELECTRICAL BOXES ON EXTERIOR WALLS AND INTERIOR WALLS BETWEEN CONDITIONED AND NON-CONDITIONED SPACES.
11. INSTALL A GREEN GROUNDING CONDUCTOR WITHIN EACH RACEWAY SIZED IN ACCORDANCE WITH THE ELECTRIC CODE.
12. PROVIDE WATERTIGHT AND GAS TIGHT SEALS INSIDE AND OUTSIDE OF CONDUITS THAT PENETRATE THE BUILDING BELOW GRADE. O.Z. GEDNEY OR APPROVED EQUAL. PROVIDE WEATHER TIGHT SEAL AT PENETRATIONS ABOVE GRADE.
13. PROVIDE NRTL LISTED SMOKE AND FIRE SEALS AT ALL PENETRATIONS THROUGH FLOORS OR FULL HEIGHT (SLAB TO SLAB) WALLS.
14. PROVIDE A PULL LINE IN EVERY EMPTY CONDUIT PROVIDED UNDER THIS SECTION.



2 ELECTRICAL - PART PLAN
E1.0 SCALE: 1/4" = 1'-0"

NO.	DATE	BY	REVISION

REVISIONS

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	DRAWN BY: MLP CHECKED BY: DMP	SCALE: AS NOTED DATE: MARCH 27, 2024
TITLE: ELECTRICAL - FLOOR PLANS	PROJECT: LHA CONCORD RIVER MILL ELDERLY HOUSING GENERATOR UPGRADE	DWG. NO. E1.0
CLIENT: LOWELL HOUSING AUTHORITY		