OCT. 18, 2024

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<u>ADDENDA</u>

ADDENDUM NUMBER 1

DATE: 11/14/2024

PROJECT: Clinton Twp. Fire Station Renovations

PROJECT NUMBER: 0242-0451

OWNER: Clinton Township

ARCHITECT/ENGINEER: Anderson, Eckstein & Westrick, Inc.

TO: Prospective Bidders

This Addendum forms a part of the Contract Documents and modifies the Bidding Documents dated October 18, 2024 with amendments and additions noted below.

This Addendum consists of (9) total pages.

The following changes to and/or clarifications of the Contract Documents will be incorporated in said Contract Documents and such changes shall be allowed for in the price bid by the Contractor, such that the price indicated in the Proposal shall represent the conditions as set forth in the original Contract Documents as modified by this Addendum.

Acknowledgment of receipt of this Addendum and the Bidder's Acceptance of these revised conditions prior to submittal of the bid shall be indicated by adding the Addendum number in the space provided in the Bid Form. Failure to do so may disqualify the Bidder.

A. BIDDER QUESTIONS AND RESPONSE:

- 1. Q: Please confirm that the drawings mirror both fire stations.
 - A: Drawings reflect both fire stations. Contractor may setup a separate visit for Station 3 by contacting Deputy Chief Chuck Champagne at 586-263-8437.
- 2. Q: Please clarify the roof warranty an manufacturer.
 - A: Roofing work will not be required, as any roof top exhaust fans can be placed within the existing curb.
- 3. Q: Per page A032, please clarify notes 9 & 10 in more detail.
 - A: See revised sheet M101 for updated equipment schedules.
- 4. Q: Per page M101 please clarify exhaust fan specifications.
 - A: See revised sheet M101 for updated exhaust fan specifications.
- 5. Q: Please provide a plumbing schedule.
 - A: See revised sheet P101 for plumbing schedule.
- 6. Q: Please clarify note 4 on page P101, detail missing.
 - A: Note 4 should read, "Connect drain lines from new fixtures to existing drain lines."
- 7. Q: Please further clarify the mechanical details on the battalion chief area.
 - A: Battalion Chief area is to be removed from the scope of the project. Delete sheets ED101 and E101.
- 8. Q: Per page AD103 please clarify note B.
 - A: Contractor to coordinate work schedule with Owner so Owner can rent temporary restroom trailer.
- 9. Q: Per pages E101/E102 please clarify the model number per note 3.A: New speakers will be by Owner.
- 10. Q: Per page A412, please clarify the floor tile type to be used regarding the 12x24 sizing.
 - A: For the area within the showers use 2"x2" mosaic version of the same tile.

- 11. Q: Please clarify the alternate regarding the portable facilities.
 - A: Alternate to be removed. Temporary facilities by Owner.
- 12. Q: Where can a dumpster be placed?
 - A: Dumpsters may be placed on the rear of both properties.
- 13. Q: Where can contractors park?
 - A: Contractors may park at the rear of the property. Firefighters will park at the front.
- 14. Q: Are there asbestos reports for the buildings?
 - A: Not at this time. The Township is looking into procuring reports for both buildings.
- 15. Q: Is this a prevailing wage job?
 - A: No.
- 16. Q: What is the deck height?
 - A: Unknown at this time. Contractor to verify in field.

B. DOCUMENT REVISIONS:

ARCHITECTURAL

- 1. SHEET A032: (reissued)
 - a. Revised Mechanical/Pluming specifications.
- 2. SHEET A412: (reissued)
 - a. Revised lavatory dimensions.

MECHANICAL

- 1. SHEET M101: (issued/reissued)
 - a. Added specifications for equipment.

PLUMBING

- 1. SHEET P101: (issued/reissued)
 - a. Added specifications for equipment.
 - b. Added note 4.

ELECTRICAL

- 1. SHEET ED101: Deleted
- 2. SHEET E101: Deleted

OCT. 18, 2024

D. ATTACHMENTS:

- a. SHEET A032
- b. SHEET A412
- c. SHEET M101
- d. SHEET P101
- e. PRE-BID MEETING SIGN-IN SHEET

End of Addenda

ELECTRICAL SPECIFICATIONS

ELECTRICAL TRADES SPECIFICATION:

- THE GENERAL CONDITIONS AND SPECIAL CONDITIONS OF THE SPECIFICATIONS SHALL GOVERN. GENERAL CONDITIONS AND SPECIAL CONDITIONS REQUIREMENTS RELATED, BUT NOT LIMITED TO, RUBBISH REMOVAL CUTTING AND PATCHING, OBTAINING AND PAYING FOR REQUIRED LICENSES AND PERMITS, REPLACEMENT OF DAMAGED OR STOLEN EQUIPMENT AND SYSTEMS, COMPLIANCE WITH ALL NATIONAL, STATE AND LOCAL
- 2. THE GENERAL CONDITIONS AND SPECIAL CONDITIONS OF THE SPECIFICATIONS SHALL GOVERN. GENERAL CONDITIONS AND SPECIAL CONDITIONS REQUIRE- MENTS RELATED, BUT NOT LIMITED TO, RUBBISH REMOVAL, CUTTING AND PATCHING, OBTAINING AND PAYING FOR REQUIRED LICENSES AND PERMITS, REPLACEMENT OF DAMAGED OR STOLEN EQUIPMENT AND SYSTEMS, COMPLIANCE WITH ALL NATIONAL, STATE AND LOCAL
- 3. ENTIRE INSTALLATION SHALL BE PERFORMED IN A FIRST CLASS WORK-MAN-LIKE MANNER. THE COMPLETED SYSTEMS SHALL BE FULLY OPERATIONAL: ACCEPTANCE BY THE OWNER SHALL BE A CONDITION OF THE CONTRACT. ALL WORK SHALL BE COORDINATED WITH EXISTING CONDITIONS IN ORDER TO AVOID INTERFERENCES, PRESERVE MAXIMUM HEADROOM AND AVOID OMISSIONS.
- 4. ALL WIRING SHALL BE IN CONDUIT, RIGID OR THIN WALL AS PERMITTED BY CODE. CONDUIT SHALL BE CONCEALED WHERE POSSIBLE; WHERE EXPOSED, RUN IN STRAIGHT LINES PARALLEL AND/OR PERPENDICULAR TO BUILDING CONSTRUCTION
- 5. ELECTRICAL CONDUITS SHALL BE RIGID GALVANIZED ASA C80.1 FOR SERVICE ENTRANCE, PANEL FEEDERS AND UNDERGROUND OR IN CONCRETE ENCASEMENT. THINWALL ASA C80.3 FOR BRANCH CIRCUITS, OUTDOOR UNDERGROUND SHALL BE PVC, SCHEDULE 40, WITH CONTINUOUS GROUND.
- 6. ALL CONDUIT FITTINGS SHALL BE GALVANIZED. ONLY GLAND TYPE, RAIN AND CONCRETE TIGHT, THREADED CONNECTORS AND COUPLINGS ARE APPROVED FOR USE WITH THIN WALL CONDUIT
- PROVIDE AND INSTALL COMPLETE EMPTY CONDUIT SYSTEM FOR TELEPHONE OUTLETS AS INDICATED ON DRAWINGS. CONDUITS SHALL BE TERMINATED AT TELEPHONE BACKBOARD WITH FIBER BUSHINGS.

SUPPORTS, ANCHORS, EXPANSION MEANS, CONDUIT, WIRE, FITTINGS AND SLEEVES

- 8. CONTRACTOR SHALL INCLUDE ALL MISCELLANEOUS ITEMS REQUIRED TO COMPLETE THE WORK, INCLUDING BUT NOT LIMITED TO. THE FOLLOWING: MOVING AND RIGGING OF MATERIAL AND EQUIPMENT, ALL HANGERS,
- 9. CONTRACTOR SHALL INCLUDE ALL TESTING, ADJUSTING & BALANCING AND COORDINATION BETWEEN TRADES. CIRCUITS SHALL BE PROPERLY BALANCED ACROSS PHASES.
- 10. PRIOR TO ORDERING EQUIPMENT, CONTRACTOR SHALL SUBMIT SHOP DRAWINGS IN QUADRUPLICATE FOR
- 11. ALL MATERIALS USED SHALL BE NEW AND BEAR THE U.L. LABEL, WHERE SUCH SERVICE AND LABEL ARE REGULARLY PROVIDED; AND BE OF THE APPROPRIATE NEMA STANDARD.
- 12. CONTRACTOR SHALL NOT SCALE DRAWINGS FOR DIMENSIONS, BUT SHALL CONTACT PROJECT ARCHITECT FOR ALL DIMENSIONAL DATA. FIELD VERIFY DIMENSIONS AND CONDITIONS PRIOR TO ROUGH - IN.
- 13. ELECTRICAL CONTRACTOR SHALL PROVIDE ALL TESTS AND INSPECTIONS NECESSARY TO DETERMINE THAT ALL WIRING INSTALLED UNDER THIS SPECIFICATION IS IN SATISFACTORY CONDITION AND SHALL BE PERFORMED TO THE SATISFACTION OF THE ELECTRICAL INSPECTOR OF THE LOCAL AUTHORITY AND ALL OTHERS HAVING JURISDICTION OVER THE ELECTRICAL WORK.
- 14. ELECTRICAL CONTRACTOR SHALL DELIVER THE CERTIFICATES OF INSPECTION AND FINAL APPROVAL TO THE ARCHITECT AS A REQUIREMENT FOR FINAL PAYMENT.
- 15. ELECTRICAL CONTRACTOR SHALL GUARANTEE IN WRITING ALL WORK IN CONNECTION WITH HIS ELECTRICAL CONTRACT FOR A PERIOD OF ONE (1) YEAR FROM THE DATE OF COMPLETION OF HIS WORK AT NO COST
- 16. DISCONNECT SWITCHES SHALL BE VISIBLE BLADE, QUICK MAKE, QUICK BREAK UNIT WITH PROVISIONS FOR PADLOCKING. SWITCHES SHALL BE SQUARE D, F.P.E., G.E. OR WESTINGHOUSE, OF THE NEMA CLASS AND MATERIAL REQUIRED. LIGHTING AND RECEPTACLE PANELS SHALL BE CIRCUIT BREAKER TYPE WITH THERMAL MAGNETIC, TRIP - FREE, TRIP - INDICATING, INVERSE TIME COMMON TRIP \ CIRCUIT BREAKERS EQUIPPED WITH SILVER ALLOY CONTACTS AND QUICK - MAKE, QUICK - BREAK MECHANISM, CIRCUIT BREAKERS SHALL BE BOLTED TYPE AND RATED 10,000 A.I.C. MINIMUM (120V) 14,000 A.I.C. (277V). PANELS SHALL BE SQUARE D "NQOD" AND NEHB PANEL BOARDS, G.E. OR WESTINGHOUSE.
- 17. FURNISH AND INSTALL ALL WIRING AND CONNECTIONS TO ALL MOTORS SHOWN ON THE PLANS. FURNISH AND INSTALL DISCONNECT SWITCHES FOR ALL MOTORS. DISCONNECTING MEANS MUST COMPLY WITH THE NATIONAL ELECTRICAL CODE. ALL MANUAL AND MAGNETIC MOTOR STARTERS SHALL BE SQUARE D CLASS 8536/8538 OR EQUAL, WITH 120 VOLT OPERATION COILS WITH AUXILIARY CONTACTS WHEN REQUIRED FOR CONTROL FUNCTIONS. MOTORS 1/4 HP AND SMALLER THAT ARE NOT UNDER AUTOMATIC CONTROL SHALL BE CONTROLLED WITH SQUARE D CLASS 2510 MANUAL STARTERS OR EQUAL.
- 18. DISCONNECT SWITCHES FOR MOTORS RATED 1/3 HP AND LESS MAY BE A GENERAL USE SWITCH. DISCONNECT SWITCHES FOR MOTORS 1/2 HP AND LARGER SHALL BE FUSED HEAVY-DUTY SWITCHES SIMILAR TO SQUARE D TYPE H HEAVY - DUTY LINE OR G.E. TH WITH FRONT - MOUNTED HANDLE OR EQUAL. USE RAIN
- 19. WIRE AND CABLE SHALL BE COPPER WITH 98% CONDUCTIVITY AND SHALL MEET THE TESTS, AND STANDARDS SET FORTH BY NEMA, UL AND IPCEA. WIRE SHALL BE COPPER TYPE THHN OR XHHN.
- NATIONAL ELECTRIC CODE. METAL ENCLOSURES SHALL BE BONDED TOGETHER AND GROUNDED TO THE BUILDING GROUND SYSTEM.
- 21. CONTRACTOR SHALL VERIFY EXACT LOCATION AND MOUNTING HEIGHTS OF ALL OUTLETS WITH ARCHITECT PRIOR TO INSTALLATION.
- 22. ELECTRICAL SERVICE SHALL BE AS INDICATED ON DRAWINGS.
- 23. MANUAL MOTOR STARTERS WITH OVERLOAD PROTECTION SHALL BE USED FOR FRACTIONAL HORSEPOWER MOTORS, ALLEN BRADLEY BULLETIN 600.
- 24. MINIMUM SIZE OF OUTLET BOXES SHALL BE 4" SQUARE, 1 1/2" DEEP, SUITABLY SECURED FOR THEIR
- 25. ALL SWITCH PLATES, RECEPTACLE PLATES, ETC., TO SATIN FINISH, STAINLESS STEEL UNLESS OTHERWISE REQUIRED BY ARCHITECT
- 26. CONTRACTOR SHALL FURNISH AND INSTALL ALL FIXTURES AND LAMPS INCLUDING REPLACEMENTS UNTIL FINAL ACCEPTANCE OF COMPLETED WORK. FLUORESCENT LAMPS SHALL BE COOL WHITE (34 WATT POWER SAVER TYPE). FIXTURES SHALL BEAR THE U.L. LABEL AND BE INSTALLED IN FULL COMPLIANCE WITH APPLICABLE CODES. BALLASTS SHALL BE U/L - ETL - CMB CERTIFIED HIGH POWER FACTOR, SOUND RATED "A", THERMALLY PROTECTED. UPON COMPLETION OF WORK, ALL FIXTURES SHALL BE CLEANED AND LEFT FREE FROM ALL FOREIGN MATERIAL, DUST, ETC., WITH FUNCTIONING LAMPS. ALL PLASTIC COMPONENTS SHALL BE VIRGIN ACRYLIC. FIXTURES SHALL BE SUPPORTED FROM BUILDING STRUCTURE, NOT CEILING. FIXTURES IN FURRED SPACES SHALL BE CONNECTED BY MEANS OF FLEXIBLE CONDUIT AND AF WIRE TO OUTLIET BOX INDEPENDENT OF FIXTURE
- 27. ALL SERVICE WORK MUST CONFORM TO UTILITY COMPANY REQUIREMENTS. CONTACT UTILITY COMPANIES, VERIFY AND CORRELATE SERVICES AND PAY ALL UTILITY COMPANY CHARGES FOR EXTENSIONS, TRANSFORMERS, METERS, ETC.
- 28. PROVIDE GROUND FAULT INTERRUPTERS FOR OUTLETS IN TOILET ROOMS AND AT EXTERIOR OF BUILDING AS REQUIRED BY STATE AND LOCAL CODES.
- 29. FURNISH AND INSTALL WALL PLATES FOR ALL WIRING DEVICES AND TELEPHONE OUTLETS. IN ALL FINISHED AREAS OF THE BUILDING, PLATES SHALL BE STAINLESS STEEL .040 SATIN FINISH US 32D AS MANUFACTURED
- 30. GANG PLATES SHALL BE USED BY ALL GANG MOUNTED DEVICES.
- 31. NO BOXES SHALL BE LEFT UNCOVERED UNLESS SPECIFICALLY INDICATED. DUPLEX RECEPTACLE 20A - 125V
 - FLOOR DUPLEX OUTLET WEATHERPROOF CONVENIENCE OUTLET
 - OUTLET 3 WIRE W/GROUND 20A-208V SINGLE POLE TOGGLE SWITCH 20A-120V DOUBLE POLE TOGGLE SWITCH
 - THREE-WAY TOGGLE SWITCH SINGLE POLE TOGGLE SWITCH WITH PILOT LIGHT

SPECIAL NATIONAL ELECTRIC CODE (NEC) NOTES:

THE BALLAST. NEC 410-73(E).

- 1. PROPER WORKING CLEARANCE MUST BE PROVIDED AND MAINTAINED ABOUT ALL ELECTRICAL EQUIPMENT ESPECIALLY MAIN SERVICE EQUIPMENT, ALL PANELS, DISCONNECTS, TRANSFORMERS, ETC. THEY SHALL BE LOCATED IN DEDICATED SPACES. NO FOREIGN PIPES, DUCTS OR EQUIPMENT PERMITTED IN THESE DEDICATED SPACES. NEC 110-16, TABLE 110-16A AND 384-4.
- 2. STANDARD RECEPTACLES INSTALLED ON 20 AMP BRANCH CIRCUITS SHALL BE OF THE GROUNDING TYPE.
- 3. ASSUME MINIMUM STANDARDS 20 AMP BREAKER CIRCUITS, #12 COPPER 90 DEG. C. TYPE CONDUCTORS, 1/2" CONDUIT, ETC. ANYTHING LARGER OR DIFFERENT SHALL BE SO NOTED. NEC 240-3, 240-6, TABLE 310 -16
- 4. ALL WIRING (ELECTRICAL, TELEPHONE, ETC.) IN DUCTS, PLENUMS OF OTHER SPACE USED FOR ENVIRONMENTAL AIR SHALL BE INSTALLED IN PROPER RACEWAYS OR CABLES SPECIFICALLY LISTED FOR THE USE. NEC 300 - 22(B) AND (C).
- 5. ALL LAMPS FOR TEMPORARY LIGHTING SHALL BE PROTECTED BY A SUITABLE FIXTURE OR LAMPHOLDER WITH A GUARD. NEC 305 - 4(F).
- 6. ALL TEMPORARY 125 VOLT, SINGLE PHASE, 15 AND 20 AMP RECEPTACLE OUTLETS SHALL HAVE GFCI PROTECTION. NEC 305-6.
- 7. FIXTURES IN WET, DAMP OR CORROSIVE LOCATIONS OR IN DUCTS OR HOODS SHALL BE SUITABLE FOR SUCH
- LOCATIONS AND SO MARKED. NEC 410-4(A), (B), AND (C). 8. ALL FLUORESCENT FIXTURES INSTALLED INDOORS SHALL HAVE THERMAL PROTECTION INTEGRAL WITHIN
- 9. PROPER THERMAL OVERLOAD PROTECTION SHALL BE REQUIRED FOR ALL MOTORS. NEC 430-31.
- 10. THE DISCONNECTING MEANS FOR MOTORS SHALL BE A MOTOR-CIRCUIT SWITCH RATED IN HORSEPOWER, A CIRCUIT BREAKER. OR A MOLDED CASE SWITCH (NON-AUTOMATIC CIRCUIT INTERRUPTER) AND FOR A CORD AND PLUG-CONNECTED MOTOR, A HORSE - POWER RATED ATTACHMENT PLUG AND RECEPTACLE. NEC
- 11. PROPER WIRING METHODS SHALL BE REQUIRED IN PLACES OF ASSEMBLY OF 100 OR MORE PERSONS. NON-METALLIC SHEATHED (ROMEX) CABLE SHALL NOT BE PERMITTED. NEC 518-1, 518 - 2 AND 518 - 4.
- 12. ALL BATTERY BACK-UP EXIT AND EMERGENCY LIGHTS SHALL BE FED FROM THE SAME CIRCUIT AS NORMAL LIGHTING IN THEIR RESPECTIVE AREAS AND BE CONNECTED AHEAD OF ANY LOCAL SWITCHES. NEC700-16. 700 - 17 AND 700 - 12(F). BATTERY BACK - UP EXIT AND EMERGENCY LIGHTS CANNOT FEED FROM CIRCUITS OTHER THAN THE NORMAL LIGHTING IN THEIR RESPECTIVE AREAS. INCLUDE LOCK-OPEN DEVICES.
- 13. MAIN SERVICE DISCONNECTING MEANS SHALL BE PERMANENTLY MARKED TO IDENTIFY IT AS A SERVICE DISCONNECTING MEANS. NEC 230 - 70(B).
- 14. ALL SERVICE ENTRANCE AND/OR FEEDER CONDUCTORS NOTED SHALL BE 90 DEG. C. COPPER TYPE MINIMUM FOR PROPER CAPACITY. NEC 230 - 42(A). 215 - 2 AND TABLE 310 - 16.
- 15. PROPER TYPE AND SIZE OF SERVICE GROUNDING CONDUCTOR REQUIRED WITH CONNECTION TO BOTH THE METAL UNDERGROUND WATER PIPING SYSTEM AND A SUPPLEMENTAL ELECTRODE. NEC 250 - 23(A), 250 - 81, 250 - 83 AND TABLE 250 - 94.
- 16. CONTINUOUS LOADS SHALL NOT EXCEED 80% OF THE RATING OF THE BRANCH CIRCUIT. NEC 210 22(C)
- 17. LIGHTING FIXTURE SCHEDULE SEE LIGHTING PLAN FOR SCHEDULE
- 18. SMOKE DETECTORS, HEAT SENSORS AND ALARMS CEILING SMOKE DETECTORS (BY OWNER).
- COMPENSATED / FIXED SENSITIVITY CIRCUITRY TO DETECT BOTH FAST AND SLOW BURNING FIRES. THE DETECTOR SHALL COME COMPLETE WITH SEALED HOUSING AND SAMPLING TUBES. THE DETECTORS SHALL BE 4 - WIRE TYPE WITH AN ISOLATED 24VDC POWER FEED REQUIREMENT TO INSURE RELIABLE OPERATION OF THE AUXILIARY CONTROL RELAY. A POWER SUPERVISORY RELAY SHALL BE PROVIDED FOR EACH ZONE OF DUCT DETECTORS. DETECTORS SHALL BE WIRED TO THE RESPECTIVE FAN CONTROL FOR SHUT - DOWN UPON ALARM. LOCATE DETECTOR IN SUPPLY DUCT NEAR EACH OF THE TWO (2) FURNACES AND WITHIN THE FURNACE ROOM. FURNISH AND INSTALL BY THE ELECTRICAL CONTRACTOR. COORDINATE WITH HVAC CONTRACTOR.

19. DUCT SMOKE DETECTORS THE DUCT DETECTORS SHALL BE SERIES DDP PHOTO - ELECTRIC TYPE WITH RATE

MECHANICAL SPECIFICATIONS

GENERAL REQUIREMENTS:

Read and be bound by the architectural specifications.

These specifications, all other documents attached hereto, all addenda issued and the accompanying plans are intended to provide for the complete furnishing and installing of the entire mechanical

The work shall be done in accordance with best practice so as to contribute to efficiency of operation and minimum maintenance and shall be installed with proper accessibility. The materials and equipment, including all necessary accessories, shall be put into proper adjustment so that the component parts function together as a workable system. The mechanical contractor shall provide all equipment, materials and operations as indicated either on the drawings or contained herein or as may be reasonably implied by either to accomplish complete mechanical systems.

GOVERNING AGENCIES: The contractor shall be fully informed of all laws, ordinances and codes, and shall, in the performance of the contract, comply with all applicable Federal, State and Local aforesaid regulations. Any deviation from the plans or specifications and any additional work necessary to meet code

DAMAGE TO OTHER WORK:

Repair and pay for all damage done to the existing and new work by mechanical trades workmen.

requirements shall be made by the contractor without extra cost to the owner.

CUTTING AND PATCHING:

All cutting and patching required for installation shall be by mechanical trades and included in expense to aforementioned.

Premises shall be cleaned upon completion of mechanical work.

COOPERATION WITH OTHER TRADES: Coordinate work with other trades to avoid interference and present a neat appearance. Interference with result from poor coordination will not be considered as extra work.

INTERFERENCE:

All minor deviations required due to interference with the work of others shall be made by mechanical contractor at no additional cost. Verify locations of existing piping, ducts and building structural beams in the project area for connections to same and to avoid possible interference.

DRAWINGS:

The design drawings show the general arrangement and extent of the work. The drawings are diagrammatic and may not be drawn to scale in certain areas for purposes of clarity and legibility. It is intended that all apparatus be located symmetrical with architectural elements and be installed to avoid obstructions and preserve headroom. The contractor shall review the plans of other trades with his own work to avoid conflicts and interference's; he shall make use of all sources of data, including shop drawings and drawings of equipment furnished by others.

ACCESS TO EQUIPMENT:

All control devices, equipment, dampers, etc., shall be so located so as to provide for each access of operation, repairs and maintenance; if concealed, access panels or extended operators shall be provided.

SUPPORTS:

Provide all supports, framing, etc., for the proper installation of pipe, equipment. etc., fabricated from structural steel shapes and to prevent sagging, vibration and strain, and to provide for expansion and contraction.

The ventilating shall be tested and balanced to demonstrate that specified capacities of the various parts of all systems as indicated in the contract documents can be met and all controls are functioning properly.

All material and workmanship shall be guaranteed for a period of one year from the date of acceptance, and the contractor shall make good any defects within that period at no additional cost to the owner.

SANITARY AND VENT PIPING:

Pipe and Fittings, shall be plastic PVC: Type DWV, per: ASTM D2665. Joints shall be plastic PVC solvent welded, per; ASTM D2665.

CLEANOUTS AND ACCESS COVERS (CO):

Provide cleanouts at the foot or base of each vertical waste or soil stack, in drainage lines at all changes in direction and at 100'-0" intervals having no changes in direction.

FLOOR DRAIN (FD-1) Zurn No. Z-415-B floor drain, sized on drawings, "Dura-Coated" cast iron body, with polished bronze top, with flushing connection. Provide trap primer for all floor drains per code to maintain trap water

CLEANOUTS AND ACCESS COVERS (CO):

Provide cleanouts at the foot or base of each vertical waste or soil stack, in drainage lines at all

changes in direction and at 100'-0" intervals having no changes in direction.

DOMESTIC WATER VALVES: A. Gate valve: Jenkins 901-A bronze ball valve, screwed ends, or approved equal.

B. Balance valve: Dezurik 427S bronze or approved equal.

PIPE INSULATION

Insulation shall be low pressure molded section fibrous glass pipe insulated with factory-applied all service jacket. Fittings and valve bodies shall be insulated with fibrous glass blanket built-up to the thickness of the adjacent insulation and secured with insulating tape and jacketed to match insulation, or with molded fibrous glass fittings installed with both longitudinal and circumferential joints fully buttered with proper adhesive. Laps shall be fastened with outward clinching staples. All joints shall be properly lapped and sealed. Staples, hangers, etc., shall not penetrate vapor barrier. In lieu of built-up insulation on fittings, Zeston fitting covers may be used.

All insulation shall be Class A in accordance with ASTM standard No. E-84 NFPA No. 255, and UL standard No. 723 as follows:

specifications shall govern. All adhesives, binds and other fastening materials and devices shall be

All material shall be manufactured by one of the listed approved manufacturer's instructions, except where these instructions conflict with the specification hereinafter stated, in which case the

supplied as required to properly install the insulation materials being furnished. Approved Manufactures: Armstrong Co., Certain-Teed, Johns-Manville Co., Owens-Corning

Pipe Insulation Schedule:

Pipe insulation thickness shall comply with the minimum requirements of ASHRAE 90-75 and the

1-1/4" - 2" Pipe diameter 1" and less Service Domestic cold water Domestic hot water

HVAC EQUIPMENT

SHEET METAL - GENERAL:

Install ductwork in adherence to ceiling height schedules on architectural drawings. Coordinate and establish necessary space requirements with other trades so as to maintain required headroom

Vary run and shape of ducts and make offsets during progress of work, if required, to meet structural or other interferences without All sheet metal shall be best grade, prime sheets, open hearth galvanized steel, unless otherwise noted. Ducts 19" and over shall be cross broken or beaded.

Duct construction: All ductwork shall be constructed and supported in accordance with the requirements of the latest SMACNA'S issue of "2" W.C. Pressure Construction Standards" Provide joints for rectangular ducts as called for by standards. "Button Punch-Snap Lock" shall not be used. Seal all transverse

joints with 3M EC-800 compound and tape with 3M 474 tape. For round and oval duct, slip joints shall be used on ducts up to 36-inch diameter. Apply 3M EC-800 sealer to fittings and connectors while assembling. Secure joint with sheet metal screws. Apply sealer over outside of joints and screws. Apply 3M 474 tape to wet joint. Alternate method of sealing with slip joints is with thermofit plastic bands. Secure joint with sheet metal screws. Install band a shrink per manufacturer's recommendations. Use on ducts up to 36 inches in diameter.

Flexible Ductwork: All flexible ductwork shall be type 3, insulated, as manufactured by Flexmaster Corporation. The ducts shall be constructed of corrosion-resistant reinforcing wire Helix, permanently bonded and enclosed in Tedlar film and factory pre-insulated with 1 1/2", 3/4 pounds of density fiberglass blanket insulation sheathed in a vapor barrier of aluminum metalized polyester film laminated to glass mech. elastomer back coated. The duct shall comply with the latest NFPA bulletin 90A, and be listed as class 1 air duct material, UL standard 181. Maximum lengths of flexible ductwork shall be 6' - 0" to each connection.

All round take-offs downstream of terminal units shall be made with spin-in collar fitting as manufactured by Flexmaster Corporation. Balancing dampers shall be locking wing-nut for easy readjustment when required. The entire assembly shall be constructed of a minimum 26-gauge galvanized steel.

DUCT HANGERS AND SUPPORTS:

All duct hangers, supports and spacing for round and rectangular ductwork shall conform to the latest SMACNA standards, unless

ANDERSON, ECKSTEIN AND WESTRICK, INC.

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ENGINEERING STRONG COMMUNITIES

www.aewinc.com

Michigan 48315

11/14/2024 ADDENDUM 1 10/18/2024 BID ISSUE

PROJECT NAME:

CLINTON TWP. FIRE STATION RENOVATIONS

SUBMITTALS/REVISIONS

DATE

SPECIFICATIONS

CLINTON TOWNSHIP

PRELIMINARY CONSTRUCTION RECORD CHECKED BY: FEBRUARY 2024 SCALE

AS NOTED



UTILITY INFORMATION, AS SHOWN, INDICATES APPROXIMATE LOCATIONS AND TYPES OF EXISTING FACILITIES ONLY, AS DISCLOSED BY RECORDS PROVIDED TO THIS FIRM FROM THE VARIOUS UTILITY COMPANIES. NO GUARANTEE IS GIVEN OR IMPLIED AS TO THE COMPLETENESS OR ACCURACY THEREOF

PRIOR TO CONSTRUCTION, ALL LOCATIONS AND DEPTHS OF EXISTING OVERHEAD AND UNDERGROUND UTILITIES (IN CONFLICT WITH THE CONSTRUCTION OF THESE PROPOSED IMPROVEMENTS) SHALL BE VERIFIED IN THI FIELD. DURING THE CONSTRUCTION, THE CONTRACTOR SHALL PROTECT AND SUPPORT ALL UTILITIES THAT ARE ENCOUNTERED. (ALL COSTS FOR UTILITY LOCATION VERIFICATION SUPPORT AND PROTECTION SHALL BE INCLUDED IN THE PROPOSED PAY ITEM CONFLICTING WITH

DURING CONSTRUCTION, THE CONTRACTOR SHALL USE EXTREME CAUTION WHEN OPERATING NEAR ANY AND ALL OVERHEAD AND / OR BURIED UTILITIES.

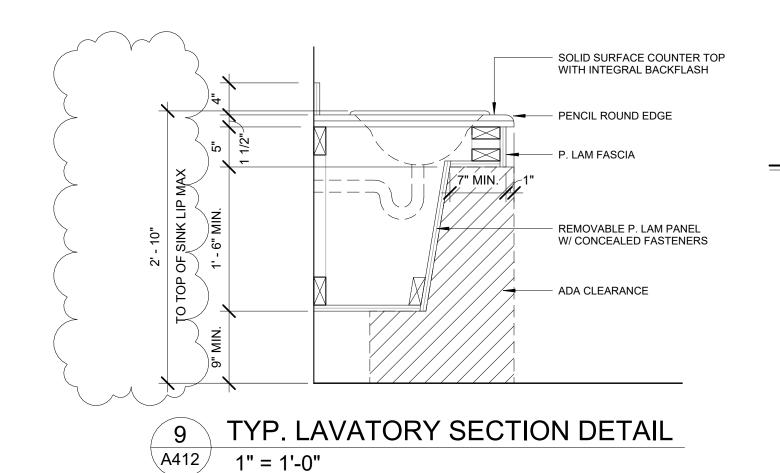
PROJECT NO.

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DOOR SCHEDULE															
					Door			Frame				Detail			
Rm. No.	Location	Width	Height	Thickness	DR. Elev.	DR. Material	Finish	Frame Type	Frame Material	Finish	Head	Jamb	Sill	HW Set	Comments
201A	LOCKER ROOM	3' - 0"	7' - 0"	1 3/4"	В	WOOD	STAIN	ETR	ETR	PAINT	EXIST	EXIST.		3	TRANSOM PANEL TO REMAIN (PAINT)
201B	LOCKER ROOM	3' - 0"	6' - 8"	1 3/4"	В	WOOD	STAIN	ETR	ETR	PAINT	EXIST	EXIST.		3	TRANSOM PANEL TO REMAIN (PAINT)
202A	QUIET ROOM	3' - 0"	7' - 0"	1 3/4"	А	WOOD	STAIN	1	НМ	PAINT	3/A600	3/A600		1	
203A	SHOWER ROOM	3' - 0"	7' - 0"	1 3/4"	А	WOOD	STAIN	1	НМ	PAINT	3/A600	3/A600	5/A611	2	
204A	ADA SHOWER ROOM	3' - 0"	7' - 0"	1 3/4"	Α	WOOD	STAIN	1	НМ	PAINT	3/A600	ETR	5/A611	2	

						ROC	M FINIS	SH SCHI	EDULE					
	WALLS										CEILINGS			
И. NUMBER	LOCATION	FLOOR FIN.	BASE FIN.	N. MATERIAL	N. FINISH	E. MATERIAL	E. FINISH	S. MATERIAL	S. FINISH	W. MATERIAL	W. FINISH	CEILING MATERIAL	CEILING FIN.	COMMENTS
1	LOCKER ROOM	LVT	RB	GYP	PT-1	ETR	PT-1	ETR	PT-1	ETR	PT-1	ACT	-	
2	QUIET ROOM	LVT	RB	ETR	PT-1	GYP	PT-1	GYP	PT-1	ETR	PT-1	ACT	-	
3	SHOWER ROOM	СТ	СТ	ETR	PT-1/CT	GYP	PT-1/CT	GYP	PT	GYP	PT-1/CT	GYP	PT-2	CERAMIC TILE FROM FINISH FLOOR UP TO 5'- 4"
4	ADA SHOWER ROOM	СТ	СТ	ETR	PT-1/CT	GYP	PT-1/CT	GYP	PT	GYP	PT-1/CT	GYP	PT-2	CERAMIC TILE FROM FINISH FLOOR UP TO 5'- 4"



TOILET ACCESSORIES LEGEND:

〈A〉 18" VERTICAL GRAB BAR

⟨B⟩ 42" HORIZONTAL GRAB BAR C 36" HORIZONTAL GRAB BAR

PAPER TOWEL DISPENSER - OWNER PROVIDED, CONTRACTOR INSTALL

SOAP DISPENSER

 $\langle \mathsf{F} \rangle$ MIRROR

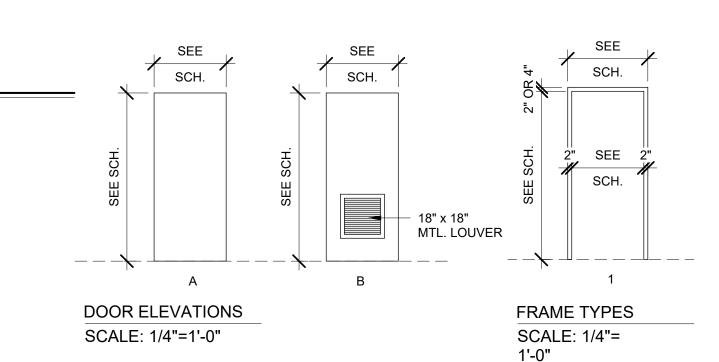
ROOM FINISH ABBREVIATIONS:

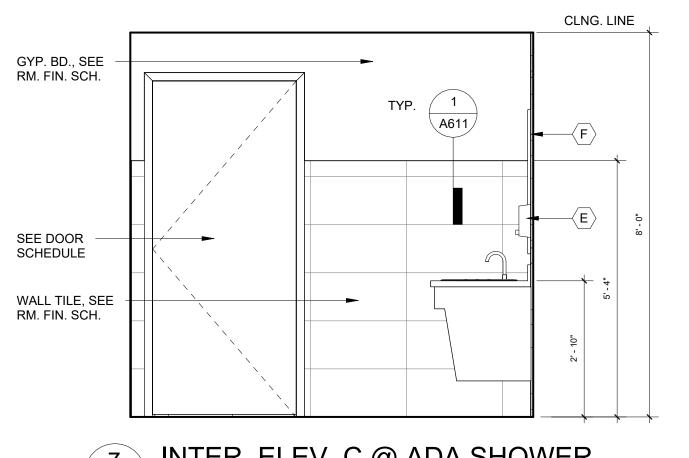
VCT CT RB VINYL TILE FLOOR FINISH - WATERPROOF, SEE SPEC'S CERAMIC TILE, SEE SPEC'S RUBBER BASE, SEE SPEC'S

PT - 1 GYPSUM BOARD PAINT FINISH, SEE SPEC'S PT - 2 GYPSUM BOARD PAINT FINISH - TOILET, SEE SPEC'S PT - 3 MASONRY PAINT FINISH, SEE SPEC'S GB ACT GYPSUM BOARD , SPEC'S

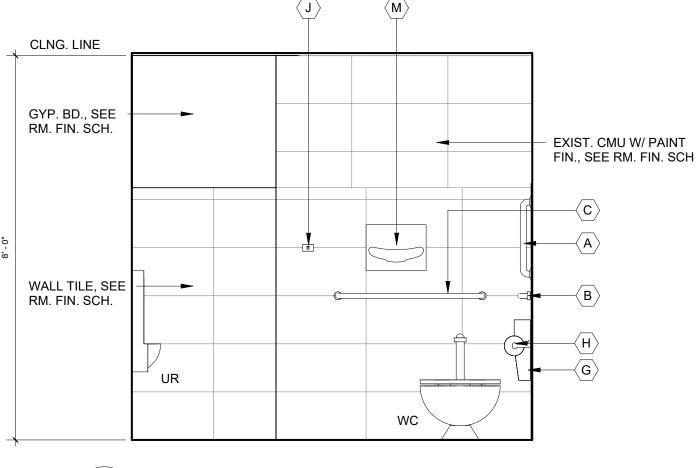
ETR

LAY-IN ACOUSTIC TILE, SEE SPEC'S EXISTING TO REMAIN





INTER. ELEV. C @ ADA SHOWER 1/2" = 1'-0"



 $\langle \mathsf{G}
angle$ SANITARY NAPKIN DISPOSAL

TOILET PAPER HOLDER

TRASH RECEPTACLE- OWNER PROVIDE, OWNER INSTALLED

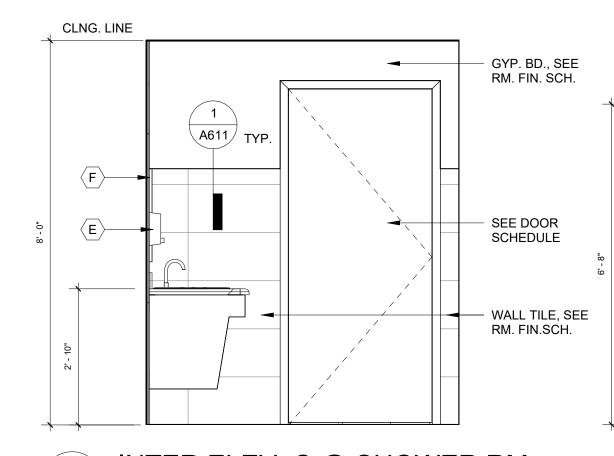
⟨L⟩ SHOWER SOAP HOLDER

M SET COVER DISPENSER

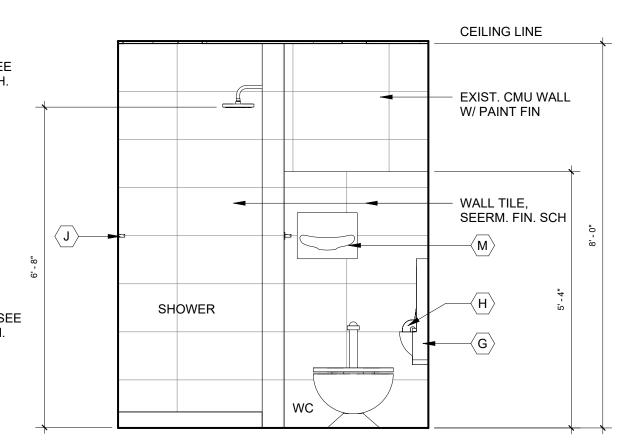
J TOWEL HOOK

⟨K⟩ ROBE HOOK

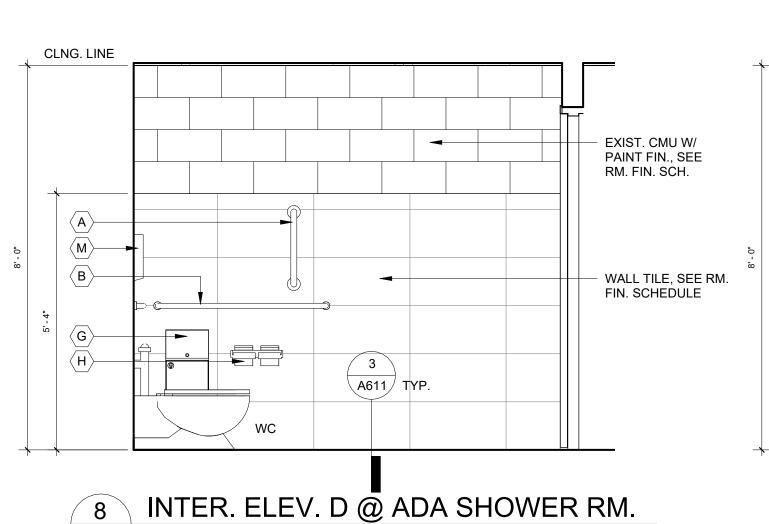
5 INTER. ELEV. A @ ADA SHOWER RM. 1/2" = 1'-0"



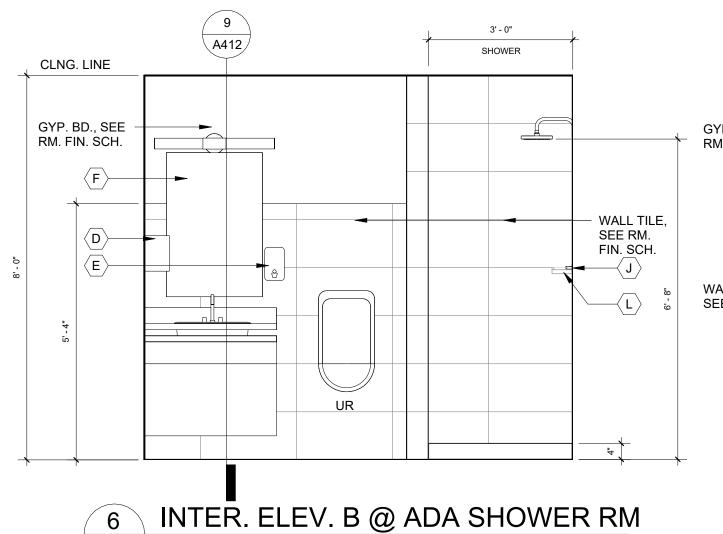
INTER ELEV. C @ SHOWER RM.



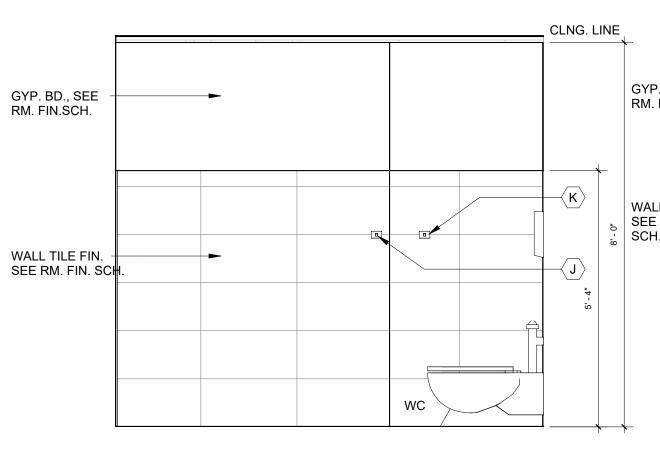
INTER ELEV. A @ SHOWER RM 1/2" = 1'-0"



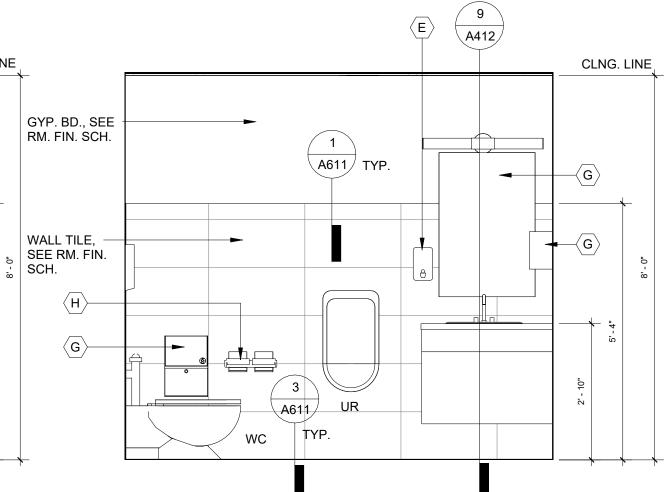
A412 1/2" = 1'-0"



A412 1/2" = 1'-0"



4 INTER. ELEV. D @ SHOWER RM. A412 1/2" = 1'-0"



A412

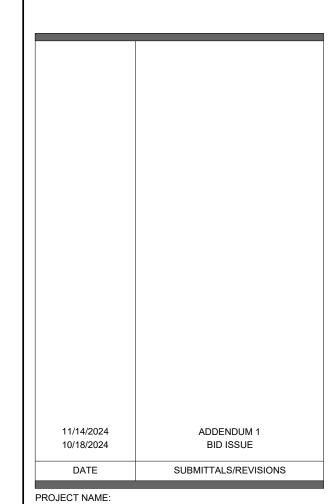
1/2" = 1'-0"

2 INTER ELĒV. B @ SHOWER RM.

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ENGINEERING STRONG COMMUNITIES



CLINTON TWP. FIRE STATION RENOVATIONS

FIRE STATION 2 & 3-**INTERIOR ELEVATIONS AND ROOM FINISH SCHEDULE**

CLINTON TOWNSHIP

PRELIMINARY CONSTRUCTION RECORD

CHECKED BY: OCTOBER 2024 SCALE: AS NOTED



UTILITY INFORMATION, AS SHOWN, INDICATES APPROXIMATE LOCATIONS AND TYPES OF EXISTING FACILITIES ONLY, AS DISCLOSED BY RECORDS PROVIDED TO THIS FIRM FROM THE VARIOUS UTILITY COMPANIES. NO GUARANTEE IS GIVEN OR IMPLIED AS TO THE COMPLETENESS OR ACCURACY THEREOF.

PRIOR TO CONSTRUCTION, ALL LOCATIONS AND DEPTHS OF EXISTING OVERHEAD AND UNDERGROUND UTILITIES (IN CONFLICT WITH THE CONSTRUCTION OF THESE PROPOSED IMPROVEMENTS) SHALL BE VERIFIED IN THE FIGURE OF THE CONSTRUCTION, THE CONTRACTOR SHALL PROTECT AND SUPPORT ALL UTILITIES THAT ARE ENCOUNTERED. (ALL COSTS FOR UTILITY LOCATION VERIFICATION, SUPPORT AND PROTECTION SHALL BE INCLUDED IN THE PROPOSED PAY ITEM CONFLICTING WITH

DURING CONSTRUCTION, THE CONTRACTOR SHALL USE EXTREME CAUTION WHEN OPERATING NEAR ANY AND ALL OVERHEAD AND / OR BURIED UTILITIES.

PROJECT NO. 0242-0451

\$1919/2824 30:47957VAM SHEET NO.

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EQUIPMENT SPECIFICATIONS

DIFFUSERS AND GRILLES (CD) Ceiling Diffuser Price SPD, 24" X 24" module, square plaque steel diffuser, layin, 6" neck size.

(ER) Exhaust Register, Price 10A, perforated face, surface mounted with volume damper.

ROOF EXHAUST FAN EF

Greenheck Model No. G-60-Vari-Green, 140 CFM @ .25 S.P., direct drive, 1,550 RPM, 1/6 H.P., 120 volts, single phase with speed control for air balancing. Provide roof curb adaptor and backdraft damper. Fan to be activated by toilet rooms light switch with run timer.

ROOF EXHAUST FAN EF-2 & 3

Greenheck Model No. G-70-Vari-Green, 280 CFM @ .25 S.P., direct drive, 1,725 RPM, 1/6 H.P., 120 volts, single phase with speed control for air balancing. Provide roof curb adaptor and backdraft damper. Fan to be activated by toilet rooms light switch with run timer.

SC CTM

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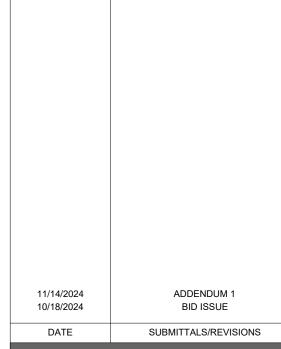
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CIVIL ENGINEERS SURVEYORS ARCHITECTS

51301 Schoenherr Road Phone 586 726 1234
Shelby Township Fax 586 726 8780

Michigan 48315 www.aewinc.com

ENGINEERING STRONG COMMUNITIES



PROJECT NAME:

CLINTON TWP. FIRE STATION RENOVATIONS

SHEET TI

FIRE STATION No. 2 & 3 - HVAC FLOOR PLAN

CLINTON TOWNSHIP

PRELIMINAR	PRELIMINARY CONSTRUCTION RECORD										
DRAWN BY:	CHECKED BY:	DATE:									
AGP	MLB	OCTOBER 2024									
SCALE:											
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PROJECT NO.

0242-0451

M:\0242\0242-0451\CAD\Drawings\Construction\Arch\
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EQUIPMENT SPECIFICATIONS PLUMBING FIXTURES

General

Provide and connect all fixtures shown on the Drawings or herein called for. All fixtures shall be equal in all respects to the figure/model numbers hereinafter listed. Figure/model numbers are used for establishing a standard. All fixture trim shall be by one manufacturer only. No mixing of trim or fixtures will be permitted unless otherwise specified.

FLUSHING AND STERILIZATION:

Upon completion of water distribution piping system and prior to being placed into service, the system, including fittings and pumps, shall be flushed and disinfected as follows:

A. System shall be flushed with water at maximum system pressure.

B. Open all drains and fixture valves in the building, starting with the valve nearest the water service line and permit the water to run clear for ten (10) minutes.

C. Disinfecting shall be accomplished by introducing liquid chlorine into the system.

D. The chlorination agent shall be applied at the beginning of the water main to be disinfected.

WATER CLOSETS- FLUSH VALVE (WC-1)

Zurn Z5655.258 floor mount elongated top spud 1.6 gpm closet with Z6000AV-WS1 exposed manual flush valve and Z5955SS-EL white, open front toilet seat, less cover, with stainless steel check hinge. Exposed top spud connection.

URINAL (UR

Zurn Z5755.198.00 1.0 gpm urinal with reduced splash back and Z6003-WS1-VC-YB-YC-YK manual flush valve with split ring support. Provide Z1222 urinal carrier.

LAVATORIES COLINTER TOR (

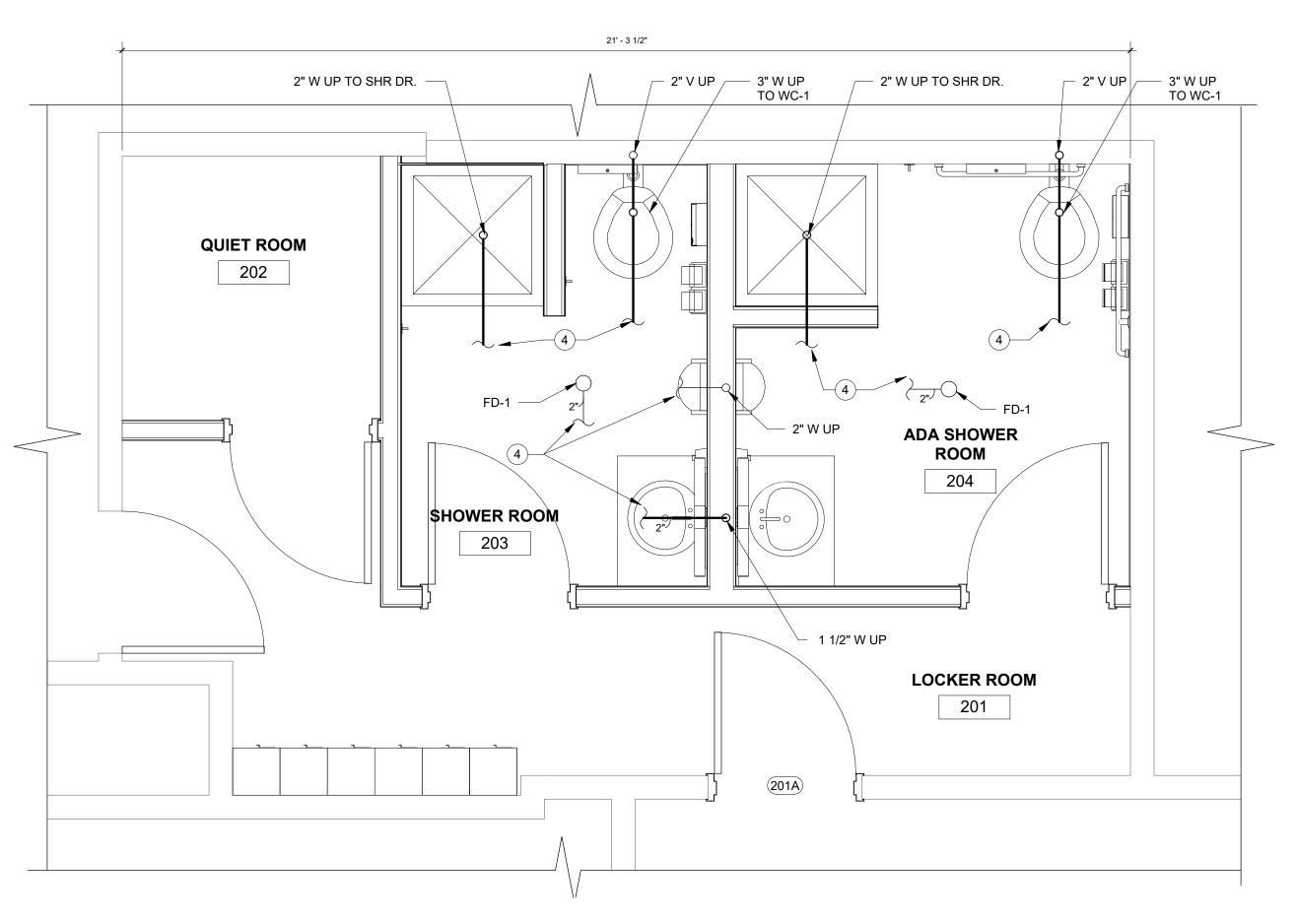
Zurn Z5114.514.3.35.E7.L white vitreous china 20" x 17" drop-in lavatory with Z81000-XL-3M 0.5 gpm single control faucet, Z8743-PC grid drain; ZR361 p-trap, Z8804-XL-LRLK-PC loose key stop lavatory supply kit, trap wrap.

SHOWER (SH

Gerber D990558 Parma, single lever shower only trim kit with G00GS555S valve body, Treysta ceramic disc cartridge, 10" diameter shower head with 72" hose, 30" slide bar, divertor on elbow and supply elbow, piping, pressure-balance valve with stops, soap dish, 60" metal hose, hand shower, 24" slide bar and inline vacuum breaker, chrome finish.

____ 2" V DN/ 1 1/4" CW 1 1/4" CW 1/2" H & CW & CW -1/2" H & CW 3" W ---3" W **QUIET ROOM** 202 1 1/2" V & 2" W DN — FD-1 ADA SHOWER **ROOM** SHOWER ROOM 204 203 1 1/2" V & 1 1/2" W DN 2- LAV 1/2" H & CW **LOCKER ROOM** 201

2 FIRST FLOOR PLAN- PLUMBING NEW WORK P101 1/2" = 1'-0"



1 FIRST FLOOR PLAN- UNDERGROUND PLUMBING
P101 1/2" = 1'-0"



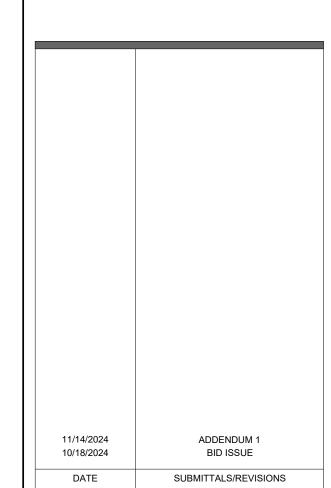
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CLINTON TWP. FIRE STATION RENOVATIONS

EET TITLE

PROJECT NAME:

STATION 2 & 3
PLUMBING FLOOR
PLANS

CLINTON TOWNSHIP

PRELIMINARY CONSTRUCTION RECORD

DRAWN BY: CHECKED BY: DATE:

AGP MLB OCTOBER 2024

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0242-0451

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MECHANICAL NEW WORK KEYNOTES:

- H & CW CONNECT TO EXISTING
- CW CONNECT TO EXISTING
- (3) _ VENT CONNECT TO EXISTING
- 4 CONNECT DRAIN LINES FROM NEW FIXTURES TO EXISTING DRAIN