

BIDDING AND CONTRACT DOCUMENTS
Section 00 21 15 – Addendum No. 8

DATE: September 8, 2023

Hurst-Rosche, Inc.
1400 East Tremont Street
Hillsboro, Illinois 62049

TO: PROSPECTIVE BIDDERS

SUBJECT: ADDENDUM NO. 8 TO THE BIDDING DOCUMENTS FOR

Medical Segregation Unit
Jackson County Jail
1001 Mulberry Street
Murphysboro, Jackson County, Illinois 62966
HR: 365-2282

This addendum forms a part of the bidding and contract documents and modifies the bidding documents dated July 21, 2023. Acknowledge receipt of this addendum in space provided on Bid Form. FAILURE TO DO SO MAY SUBJECT BIDDER TO DISQUALIFICATION.

SPECIFICATIONS

1. Section **00 41 13** (Bid Form – Stipulated Sum), previously updated in **Addendum 01**, is updated with space for (8) Addenda, and is attached.
2. Section **12 55 00** (Detention Furniture), Substitution request of either Viking BHW10000, Viking floor mounted bench, or Norix Flor mounted cuff bench – these are REJECTED - (for Bob Barker stainless steel benches, as specified) – and of Viking TP4000 pedestal table – this is REJECTED - (for Norix Master-Max Table 42” stainless round table with (4) seats, as specified).
3. Add Section **22 14 00** (Facility Storm Drainage), included with this Addendum.
4. Section **23 81 06** (Packaged Rooftop Air Conditioning Units), Substitution request of either Carrier or Trane Rooftop Air Conditioning Units – ACCEPTED – (for Aaon Incorporated RN series, as specified) – and of alternate Controls – REJECTED – (for Premium, as specified).

DRAWINGS

1. Subsequent to **Addendum 05** responses on sheet **S-002** Helical Piers, Hurst-Rosche received follow-up questions regarding the boring log (format – each page divided into two columns), the type of hammer used, and the allowable load considering negative friction during liquefaction. Hurst-Rosche response is as follows:
 - a. The hammer used for the standard penetration test was an automatic hammer.
 - b. Presuming the question is in regards to the helical pier system, the following is provided from the geotechnical letter for helical piers: “Based on anticipated soil conditions, a helical pier with a 5-inch diameter grouted shaft, and a lead helix with 3 extensions (6 helices total per pier), an allowable capacity of 15 tons/pier is estimated. As noted above in discussion of H-piles, negative skin friction may be generated during a significant seismic event. It is estimated approximately 5 tons of negative skin friction would develop along each helical shaft during the design seismic event resulting in a capacity of approximately 10 tons/pier during the seismic event. The presented capacities incorporate a factor of safety of 2.”

2. On sheet **A-101**, delete Partition Tag “6” at Vestibule Wall in Alternate 1 area, near column line 6.1. North-south dimension of wall to remain 6’-2” and east-west dimension to be 7’-4”. At Section **3/A-404**, change note at wall from ‘12” CMU Wall’ to ‘12” Brick Wall.’ Vestibule wall brick to match existing red brick color. New walls to be toothed into existing brick and tied to existing wall with masonry anchors at 16” o.c. vertical.
3. On sheet **A-501**, add Roof Drain Detail 11/A-501. See revised sheet attached. Drains to be insulated.

This addendum **DOES NOT** alter the previously published bid due date of **September 14, 2023, 2:00 pm** (as modified by Addendum 07), **at Jackson County Board Office, 1001 Walnut Street, Murphysboro, IL 62966.**

Respectfully submitted,

HURST-ROSCHE, INC.

Karl Tabor, AIA

cc: All known plan-holders (including plan houses and contractors), Hurst-Rosche web site, Jackson County Sheriff’s Department, Project File

RECEIVED BY:

Authorized Representative

Company Name

Date

BID FORM - STIPULATED SUM

To: JACKSON COUNTY BOARD
MURPHYSBORO, ILLINOIS

Project: MEDICAL SEGREGATION UNIT
JACKSON COUNTY JAIL
JACKSON COUNTY BOARD
MURPHYSBORO, JACKSON COUNTY, ILLINOIS
HR# 365-2282

Date: _____

Submitted by: _____
(full name)

(full address) _____

Contact Name: _____

1. OFFER

Having examined the Place of The Work and all matters referred to in the Instructions to Bidders and the Contract Documents prepared by Hurst-Rosche, Inc. for the above-mentioned project, we, the undersigned, hereby offer to enter into a Contract to perform the Work for the Sum of the following:

Base Bid:

All work as described in the Invitation to Bid for Jackson County Courthouse.

\$ _____ dollars, in lawful money of the United States of America.

Alternates:

Alternate No. 1: New brick masonry vestibule and new door at exterior courtyard, metal mesh cover over courtyard and at wall gaps, with associated structural steel supports.

\$ _____ dollars, in lawful money of the United States of America.

We have included the security Bid Bond as required by the Instruction to Bidders.

All applicable federal taxes are excluded, and State of Illinois taxes are excluded from the Bid Sum.

2. REVIEW OF BID DOCUMENTS

The bidder represents that he is skilled and experienced in the use and interpretation of drawings and specifications such as those included in the bid documents for this contract. He has carefully reviewed the drawings, specifications and other bid documents, and has found them free of ambiguities and sufficient for bid purposes. Further, the Bidder has carefully examined the site of the work and, from his own observations, has satisfied himself as to the nature and location of the work; the character, quality and quantity of materials; the difficulties likely to be encountered; and any other items which may affect the performance of the Work. He has based his bid solely on these documents and observations, and has not relied in any way on any explanation or interpretation, oral or written, from any other source.

3. CONTRACTOR’S FEE FOR CHANGES IN WORK

Undersigned herein indicates a single percentage, not to exceed 12% for own forces and not to exceed 8% for subcontractors, for overhead and profit to be added to net extra job cost for changes in the work required to be performed by:

- a) Own Forces ___% b) Subcontractors ___%

Undersigned herein indicates a single percentage, not less than 10% for own forces and not less than 5% for subcontractors, for overhead and profit to be added to net credit for job costs for changes in the work required to be performed by:

- a) Own Forces ___% b) Subcontractors ___%

Percentages named above shall not include any items of insurance, bond or taxes since these are considered job cost items in contractor's quotations for changes in the work.

Any percentages indicated which are higher or lower than the maximum or minimum in the typewritten language herewith, shall be disregarded and typewritten figure used.

4. CONTRACT TIME

Undersigned agrees that, if awarded the Contract for Work bid upon herein, work will start on date designated in a written Notice to Proceed order issued by the Architect and will be completed in accordance with the contract documents, with all phases of work completed and operational and ready for acceptance by the Owner no later than as required by the Contract Agreement.

5. ADDENDA

The following Addenda have been received. The modifications to the Bid Documents noted below have been considered and all costs are included in the Bid Sum.

Addendum # _____ Dated _____; Addendum # _____ Dated _____
Addendum # _____ Dated _____; Addendum # _____ Dated _____
Addendum # _____ Dated _____; Addendum # _____ Dated _____
Addendum # _____ Dated _____; Addendum # _____ Dated _____

6. APPENDICES

The following documents are attached to and made a condition of the Bid:

- Bid Bond in form of
- Bidder's qualifications statement and supporting data.
- Document 00 43 00 - Procurement Form Supplements including:
 - Appendix A - List of Subcontractors.
 - Appendix B – List of Alternates

7. EQUAL EMPLOYMENT OPPORTUNITY

During performance of this contract, Contractor agrees as follows:

- a. The contractor will not discriminate against any employee or applicant for employment because of race, color, religion, sex, or national origin. The contractor will take affirmative action to ensure that applicants are employed, and that employees are treated during employment, without regard to their race, color, religion, sex or national origin. Such action shall include, but not be limited to, the following: Employment, upgrading, demotion, or transfer, recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided by the contracting officer setting forth the provisions of this nondiscrimination clause.
- b. The contractor will in all solicitations or advertisements for employees placed by or on behalf of the contractor, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex or national origin.
- c. The contractor will send to each labor union or representative of workers with which he has a collective bargaining agreement or other contract of understanding, notice advising the labor union or worker's representative of the contractor's commitments under Section 202 of Executive Order 11246 of September 24, 1965, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.
- d. The contractor will comply with all provisions of Executive Order 11246 of September 24, 1965, and by the rules, regulations, and relevant orders of the Secretary of Labor.
- e. The contractor will furnish all information and reports required by Executive Order 11246 of September 24, 1965, and by the rules, regulations, and order of the Secretary of Labor pursuant thereto, and will permit access to his books, records and accounts by the Department of the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations and orders.
- f. In the event of the contractor's non-compliance with the nondiscrimination clauses of this contract or with any such rules, regulations or orders, this contract may be canceled, terminated or suspended in whole or in part and the contractor may be declared ineligible for further Government contracts in accordance with procedures authorized in Executive Order 11246 of September 24, 1965, and such other sanctions may be imposed and

remedies involved as provided in Executive Order 11246 of September 24, 1965, or by rule, regulation or order of the Secretary of Labor, or as otherwise provided by law.

- g. The contractor will include the provisions of paragraphs (1) through (7) in every subcontract or purchase order unless exempted by rules, regulations or orders of the Secretary of Labor issued pursuant to Section 204 of Executive Order 11246 of September 24, 1965, so that such provisions will be binding upon each subcontractor or vendor. The contractor will take such action with respect to any subcontract or purchase order as the Department may direct as a means of enforcing such provisions including sanctions for noncompliance: Provided, however, that in the event the contractor becomes involved in, or is threatened with, litigation with the subcontractor or vendor as a result of such direction by the Department, the contractor may request the United States to enter into such litigation to project the interest of the United States.

8. NOT BARRED

The contractor by submitting its bid certifies that the Contractor is not barred from bidding on the contract as a result of a conviction for either bid-rigging or bid-rotating. 720 ILCS 5/33/E-11.

9. DRUG FREE WORKPLACE

The Contractor by submitting its bid certifies that it will provide a drug free workplace and that it is in compliance with the requirements of the Drug Free Workplace Act 30 ILCS 580.1 et. seq., and the Substance Abuse Prevention on Public Works Projects Act PA095-0635.

10. SEXUAL HARASSMENT POLICY

The Contractor by submitting its bid certifies that it has a written sexual harassment, (ii) a description of sexual harassment, utilizing examples; (iv) an internal complaint process including penalties (v) the legal resource, investigative and compliant process through the Illinois Department of Human Rights; (vi) directions on how to contact the Department and Commission; and (vii) protection against retaliation for exercising rights under the policy in accordance with 775 ILCS 5/2-105(A)(4).

11. BID FORM SIGNATURES

The Corporate Seal of

(Bidder - print the full name of your firm)
was hereunto affixed in the presence of:

(Authorized signing officer Title)

(Seal)

(Authorized signing officer Title)

(Seal)

If the Bid is a joint venture or partnership, add additional forms of execution for each member of the joint venture in the appropriate form or forms as above.

END OF DOCUMENT

SECTION 22 14 00

FACILITY STORM DRAINAGE

PART 1 GENERAL

1.1 SUMMARY

- A. Section Includes:
1. Storm water piping buried within 5 feet of building.
 2. Storm water piping above grade.
 3. Unions and flanges.
 4. Pipe hangers and supports.
 5. Roof drains.
 6. Cleanouts.
 7. Bedding and cover materials.
- B. Related Sections:
1. Section 03 30 00 - Cast-In-Place Concrete: Execution requirements for placement of concrete specified by this section.
 2. Section 07 84 00 - Firestopping: Product requirements for firestopping for placement by this section.
 3. Section 08 31 13 - Access Doors and Frames: Product requirements for access doors for placement by this section.
 4. Section 09 90 00 - Painting and Coating: Execution requirements for painting material specified by this section.
 5. Section 22 05 48 - Vibration and Seismic Controls for Plumbing Piping and Equipment: Product requirements for vibration isolators for placement by this section.
 6. Section 22 05 53 - Identification for Plumbing Piping and Equipment: Product requirements for pipe identification for placement by this section.
 7. Section 22 07 00 - Plumbing Insulation: Product and execution requirements for pipe insulation.
 8. Section 31 05 16 - Soils for Earthwork: Soils for backfill in trenches.
 9. Section 31 23 16 - Excavation: Product and execution requirements for excavation and backfill required by this section.
 10. Section 31 23 17 - Trenching: Execution requirements for trenching required by this section.

1.2 REFERENCES

- A. American Society of Mechanical Engineers:
1. ASME A112.21.1M - Floor Drains.
 2. ASME A112.21.2M - Roof Drains.
 3. ASME B16.23 - Cast Copper Alloy Solder Joint Drainage Fittings (DWV).
 4. ASME B16.29 - Wrought Copper and Wrought Copper Alloy Solder Joint Drainage Fittings - DWV.
 5. ASME B31.9 - Building Services Piping.

- B. ASTM International:
 - 1. ASTM A74 - Standard Specification for Cast Iron Soil Pipe and Fittings.
 - 2. ASTM B32 - Standard Specification for Solder Metal.
 - 3. ASTM B306 - Standard Specification for Copper Drainage Tube (DWV).
 - 4. ASTM C564 - Standard Specification for Rubber Gaskets for Cast Iron Soil Pipe and Fittings.
 - 5. ASTM D1784 - Standard Specification for Rigid Poly (Vinyl Chloride) (PVC) Compounds and Chlorinated Poly (Vinyl Chloride) (CPVC) Compounds.
 - 6. ASTM D2464 - Standard Specification for Threaded Poly (Vinyl Chloride) (PVC) Plastic Pipe Fittings, Schedule 80.
 - 7. ASTM D2564 - Standard Specification for Solvent Cements for Poly (Vinyl Chloride) (PVC) Plastic Piping Systems.
 - 8. ASTM D2665 - Standard Specification for Poly (Vinyl Chloride) (PVC) Plastic Drain, Waste, and Vent Pipe and Fittings.
 - 9. ASTM D2729 - Standard Specification for Poly (Vinyl Chloride) (PVC) Sewer Pipe and Fittings.
 - 10. ASTM D2855 - Standard Practice for Making Solvent-Cemented Joints with Poly (Vinyl Chloride) (PVC) Pipe and Fittings.
 - 11. ASTM D3034 - Standard Specification for Type PSM Poly (Vinyl Chloride) (PVC) Sewer Pipe and Fittings.
 - 12. ASTM F477 - Standard Specification for Elastomeric Seals (Gaskets) for Joining Plastic Pipe.
 - 13. ASTM F679 - Standard Specification for Poly (Vinyl Chloride) (PVC) Large-Diameter Plastic Gravity Sewer Pipe and Fittings.
 - 14. ASTM F708 - Standard Practice for Design and Installation of Rigid Pipe Hangers.

- C. Cast Iron Soil Pipe Institute:
 - 1. CISPI 301 - Standard Specification for Hubless Cast Iron Soil Pipe and Fittings for Sanitary and Storm Drain, Waste, and Vent Piping Applications.
 - 2. CISPI 310 - Specification for Coupling for Use in Connection with Hubless Cast Iron Soil Pipe and Fittings for Sanitary and Storm Drain, Waste, and Vent Piping Applications.

- D. Manufacturers Standardization Society of the Valve and Fittings Industry:
 - 1. MSS SP 58 - Pipe Hangers and Supports - Materials, Design and Manufacturer.
 - 2. MSS SP 69 - Pipe Hangers and Supports - Selection and Application.
 - 3. MSS SP 70 - Cast Iron Gate Valves, Flanged and Threaded Ends.
 - 4. MSS SP 71 - Cast Iron Swing Check Valves, Flanged and Threaded Ends.
 - 5. MSS SP 80 - Bronze Gate, Globe, Angle and Check Valves.
 - 6. MSS SP 89 - Pipe Hangers and Supports - Fabrication and Installation Practices.
 - 7. MSS SP 110 - Ball Valves Threaded, Socket-Welding, Solder Joint, Grooved and Flared Ends.

1.3 SUBMITTALS

- A. Section 01 33 00 - Submittal Procedures: Submittal procedures.
- B. Product Data:

1. Piping: Submit data on pipe materials, fittings, and accessories. Submit manufacturers catalog information.
 2. Hangers and Supports: Submit manufacturers catalog information including load capacity.
 3. Storm Drainage Specialties: Submit manufacturers catalog information, component sizes, rough-in requirements, service sizes, and finishes.
- C. Manufacturer's Installation Instructions: Submit installation instructions for material and equipment.
- D. Manufacturer's Certificate: Certify products meet or exceed specified requirements.
- 1.4 CLOSEOUT SUBMITTALS
- A. Section 01 70 00 - Execution and Closeout Requirements: Closeout procedures.
 - B. Project Record Documents: Record actual locations of equipment and clean-outs.
 - C. Operation and Maintenance Data: Submit spare parts lists, exploded assembly views for pumps and equipment.
- 1.5 QUALITY ASSURANCE
- A. Perform Work in accordance with current editions of Illinois Plumbing Code, (Illinois Department of Public Health) and Standard Specifications for Water and Sewer Main Construction in Illinois.
 - B. Maintain one copy of each document on site.
- 1.6 QUALIFICATIONS
- A. Manufacturer: Company specializing in manufacturing products specified in this section with minimum five years documented experience.
 - B. Installer: Company specializing in performing Work of this section with minimum three years documented experience.
- 1.7 PRE-INSTALLATION MEETINGS
- A. Section 01 30 00 - Administrative Requirements: Pre-installation meeting.
 - B. Convene minimum one week prior to commencing work of this section.
- 1.8 DELIVERY, STORAGE, AND HANDLING
- A. Section 01 60 00 - Product Requirements: Product storage and handling requirements.
 - B. Protect piping systems from entry of foreign materials by temporary covers, completing sections of the Work, and isolating parts of completed system.

1.9 ENVIRONMENTAL REQUIREMENTS

- A. Section 01 60 00 - Product Requirements.
- B. Do not install underground piping when bedding is wet or frozen.

1.10 FIELD MEASUREMENTS

- A. Verify field measurements prior to fabrication.

1.11 WARRANTY

- A. Section 01 70 00 - Execution and Closeout Requirements: Product warranties and product bonds.
- B. Furnish all equipment with manufacturer's standard warranty.

1.12 EXTRA MATERIALS

- A. Section 01 70 00 - Execution and Closeout Requirements: Spare parts and maintenance products.

PART 2 PRODUCTS

2.1 STORM WATER PIPING, BURIED WITHIN 5 FEET OF BUILDING

- A. Cast Iron Pipe: ASTM A74, extra heavy weight, bell and spigot ends.
 - 1. Fittings: Cast iron, ASTM A74.
 - 2. Joints: ASTM C564, rubber gasket joint devices or lead and oakum.
- B. Cast Iron Pipe: CISPI 301, hubless, service weight.
 - 1. Fittings: Cast iron, CISPI 301.
 - 2. Joints: Neoprene gaskets and stainless steel clamp-and-shield assemblies.
- C. Copper Tube: ASTM B306, DWV.
 - 1. Fittings: ASME B16.23, cast bronze, or ASME B16.29 wrought copper.
 - 2. Joints: Solder, lead free, ASTM B32, 95-5 tin-antimony, or tin and silver, with melting range 430 to 535 degrees F.
- D. PVC Pipe: ASTM D2665 or ASTM D3034, polyvinyl chloride (PVC) material.
 - 1. Fittings: PVC, ASTM D2665 or ASTM D3034.
 - 2. Joints: ASTM D2855, solvent weld with ASTM D2564 solvent cement.

2.2 STORM WATER PIPING, ABOVE GRADE

- A. Cast Iron Pipe: ASTM A74 extra heavy weight, bell and spigot or plain ends.
 - 1. Fittings: Cast iron, ASTM A74.
 - 2. Joints: ASTM C564, neoprene gasket system or lead and oakum.
- B. Cast Iron Pipe: CISPI 301, hubless, service weight.

1. Fittings: Cast iron, CISPI 301.
 2. Joints: Neoprene gaskets and stainless steel clamp-and-shield assemblies.
- C. Copper Tube: ASTM B306, DWV.
1. Fittings: ASME B16.23, cast bronze, or ASME B16.29 wrought copper.
 2. Joints: Solder, lead free, ASTM B32, 95-5 tin-antimony, or tin and silver, with melting range 430 to 535 degrees F.
- D. PVC Pipe: ASTM D2665 or ASTM D3034, polyvinyl chloride (PVC) material.
1. Fittings: ASTM D2665 or ASTM D3034, PVC.
 2. Joints: ASTM D2855, solvent weld with ASTM D2564 solvent cement.

2.3 UNIONS AND FLANGES

- A. Unions for Pipe 2 inches and Smaller:
1. Copper Piping: Class 150, bronze unions with soldered.
 2. Dielectric Connections: Union with galvanized or plated steel threaded end, copper solder end, water impervious isolation barrier.
 3. PVC Piping: PVC.
- B. Flanges for Pipe 2-1/2 inches and Larger:
1. Copper Piping: Class 150, slip-on bronze flanges.
 2. PVC Piping: PVC flanges.
 3. Gaskets: 1/16-inch-thick preformed neoprene gaskets.
- C. PVC Pipe Materials: For connections to equipment and valves with threaded connections, furnish solvent-weld socket to screwed joint adapters and unions, or ASTM D2464, Schedule 80, threaded, PVC pipe.

2.4 PIPE HANGERS AND SUPPORTS

- A. Manufacturers:
1. Carpenter & Paterson Inc.
 2. Creative Systems Inc.
 3. Flex-Weld, Inc.
 4. Globe Pipe Hanger Products Inc.
 5. Michigan Hanger Co.
 6. Superior Valve Co.
 7. Substitutions: Section 01 60 00 - Product Requirements.
- B. Drain, Waste, and Vent: Conform to ASME B31.9, ASTM F708, MSS SP 58, MSS SP 69 and MSS SP 89.
- C. Hangers for Pipe Sizes 1/2 to 1-1/2 inch: Malleable iron or Carbon steel, adjustable swivel, split ring.
- D. Hangers for Pipe Sizes 2 inches and Larger: Carbon steel, adjustable, clevis.
- E. Multiple or Trapeze Hangers: Steel channels with welded spacers and hanger rods.

- F. Wall Support for Pipe Sizes 3 inches and Smaller: Cast iron hook.
- G. Wall Support for Pipe Sizes 3 inches and Larger: Welded steel bracket and wrought steel clamp.
- H. Vertical Support: Steel riser clamp.
- I. Floor Support: Cast iron adjustable pipe saddle, lock nut, nipple, floor flange, and concrete pier or steel support.
- J. Copper Pipe Support: Carbon-steel, copper-plated adjustable ring.

2.5 ROOF DRAINS

- A. Manufacturers:
 - 1. Zurn.
 - 2. Watts.
 - 3. Wade.
 - 4. Mifab.
 - 5. Josam.
 - 6. Jay R. Smith.
 - 7. Substitutions: Not Permitted.
- B. Roof Drains:
 - 1. Drain: (RD)
 - a. Assembly: ASME A112.21.2M.
 - b. Body: 15", Lacquered cast iron with sump.
 - c. Strainer: Removable cast iron dome.
 - d. Accessories: Coordinate with roofing type, refer to Division 7:
 - e. Membrane flange and membrane clamp with integral gravel stop.
 - f. Adjustable under deck clamp.
 - g. Roof sump receiver.
 - h. Waterproofing flange.
 - i. Leveling frame.
 - j. Adjustable extension sleeve for roof insulation.

2.6 CLEANOUTS

- A. Manufacturers:
 - 1. Zurn.
 - 2. Wade.
 - 3. Watts.
 - 4. Mifab.
 - 5. Josam.
 - 6. Jay R. Smith.
 - 7. Substitutions: Section 01 60 00 – Product Requirements.
- B. Exterior Surfaced Areas (COTG): Round cast nickel bronze access frame and non-skid cover.

- C. Interior Finished Floor Areas (COTF): Lacquered cast iron body with anchor flange, threaded top assembly, and stainless or nickel bronze round scored cover with gasket and stainless-steel tamper-resistant fasteners.
- D. Interior Finished Wall Areas (COTW): Line type with lacquered cast iron body and round epoxy coated cover with gasket, and round stainless-steel access cover secured with tamper-resistant stainless steel machine screw.
- E. Interior Unfinished Accessible Areas (CO): Caulked or threaded type. Provide bolted stack cleanouts on vertical rainwater leaders.

2.7 BEDDING AND COVER MATERIALS

- A. Bedding: Fill Type as specified in Section 31 05 16.
- B. Cover: Fill Type, as specified in Section 31 05 16.
- C. Soil Backfill from Above Pipe to Finish Grade: Subsoil with no rocks over 4 inches in diameter, no frozen earth or foreign matter.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Section 01 30 00 - Administrative Requirements: Coordination and project conditions.
- B. Verify excavations are to required grade, dry, and not over-excavated.

3.2 PREPARATION

- A. Ream pipe and tube ends. Remove burrs. Bevel plain end ferrous pipe.
- B. Remove scale and dirt, on inside and outside, before assembly.
- C. Prepare piping connections to equipment with flanges or unions.
- D. Keep open ends of pipe free from scale and dirt. Protect open ends with temporary plugs or caps.

3.3 INSTALLATION - HANGERS AND SUPPORTS

- A. Inserts:
 1. Provide inserts for placement in concrete forms.
 2. Provide inserts for suspending hangers from reinforced concrete slabs and sides of reinforced concrete beams.
 3. Provide hooked rod to concrete reinforcement section for inserts carrying pipe 4 inches and larger.
 4. Where concrete slabs form finished ceiling, locate inserts flush with slab surface.

5. Where inserts are omitted, drill through concrete slab from below and provide through-bolt with recessed square steel plate and nut flush with top of slab.
- B. Pipe Hangers and Supports:
1. Install in accordance with ASME B31.9, ASTM F708 and MSS SP 89.
 2. Support horizontal piping as scheduled.
 3. Install hangers to provide minimum 1/2 inch space between finished covering and adjacent work.
 4. Place hangers within 12 inches of each horizontal elbow.
 5. Use hangers with 1-1/2 inch minimum vertical adjustment. Design hangers for pipe movement without disengagement of supported pipe.
 6. Support vertical piping at every floor. Support riser piping independently of connected horizontal piping.
 7. Where installing several pipes in parallel and at same elevation, provide multiple pipe hangers or trapeze hangers.
 8. Provide copper plated hangers and supports for copper piping.
 9. Prime coat exposed steel hangers and supports. Refer to Section 09 90 00. Hangers and supports located in crawl spaces, pipe shafts, and suspended ceiling spaces are not considered exposed.
 10. Provide hangers adjacent to motor driven equipment with vibration isolation; refer to Section 21 05 48.

3.4 INSTALLATION - BURIED PIPING SYSTEMS

- A. Verify connection to existing piping system, size, location, and inverts are as indicated on Drawings.
- B. Establish elevations of buried piping with not less than 3 ft. of cover.
- C. Establish minimum separation of storm sewer piping from water service piping in accordance with current edition of the Illinois Plumbing Code (Illinois Department of Public Health).
- D. Excavate pipe trench in accordance with Section 31 23 16 & 31 23 17.
- E. Install pipe to elevation as indicated on Drawings.
- F. Place bedding material at trench bottom to provide uniform bedding for piping, level bedding materials in one continuous layer not exceeding 6 inches compacted loose depth; compact to 95 percent maximum density.
- G. Install pipe on prepared bedding.
- H. Route pipe in straight line.
- I. Install ribbon tape continuous over top of pipe, buried 6 inches below finish grade, above pipe line; coordinate with Section 31 23 20 & 31 23 17. Refer to Section 22 05 53.
- J. Install trace wire continuous over top of pipe, buried 6 inches below finish grade, above pipe line; coordinate with Section 31 23 20 & 31 23 17. Refer to Section 22 05 53.

- K. Pipe Cover and Backfilling:
 - 1. Backfill trench in accordance with Section 31 23 20.
 - 2. Maintain optimum moisture content of fill material to attain required compaction density.
 - 3. After hydrostatic test, evenly backfill entire trench width by hand placing backfill material and hand tamping in 6 inches compacted layers to 12 inches minimum cover over top of jacket. Compact to 95 percent maximum density.
 - 4. Evenly and continuously backfill remaining trench depth in uniform layers with backfill material.
 - 5. Do not use wheeled or tracked vehicles for tamping.

3.5 INSTALLATION - ABOVE GROUND PIPING

- A. Establish invert elevations, slopes for drainage to 1/8 inch per foot minimum. Maintain gradients.
- B. Extend cleanouts to finished floor or wall surface. Lubricate threaded cleanout plugs with mixture of graphite and linseed oil. Provide clearance at cleanout for snaking drainage system.
- C. Encase exterior cleanouts in concrete flush with grade as indicated on drawings.
- D. Install floor cleanouts at elevation to accommodate finished floor.
- E. Install non-conducting dielectric connections wherever jointing dissimilar metals.
- F. Route piping in orderly manner and maintain gradient. Route parallel and perpendicular to walls.
- G. Install piping to maintain headroom. Group piping to conserve space.
- H. Group piping whenever practical at common elevations.
- I. Support cast iron drainage piping at every joint.
- J. Install piping to allow for expansion and contraction without stressing pipe, joints, or connected equipment.
- K. Provide clearance in hangers and from structure and other equipment for installation of insulation. Refer to Section 22 07 00.
- L. Install piping penetrating roofed areas to maintain integrity of roof assembly.
- M. Where pipe support members are welded to structural building framing, scrape, brush clean, and apply one coat of zinc rich primer to welding.
- N. Prepare exposed, unfinished pipe, fittings, supports, and accessories ready for finish painting. Refer to Section 09 90 00.
- O. Install bell and spigot pipe with bell end upstream.

- P. Sleeve pipes passing through partitions, walls and floors. Refer to Section 22 05 29.
- Q. Install firestopping at fire rated construction perimeters and openings containing penetrating sleeves and piping. Refer to Section 07 84 00.

3.6 FIELD QUALITY CONTROL

- A. Section 01 40 00 - Quality Requirements & 01 70 00 - Execution and Closeout Requirements: Field inspecting, testing, adjusting, and balancing.
- B. Water Test:
 - 1. Apply to drainage and vent system in sections or entirety.
 - 2. If entire system is tested, tightly close all openings in pipes except highest opening, and fill system with water to overflow point.
 - 3. If system is tested in sections, tightly plug each opening except highest opening, fill each section with water, and test each section with minimum 10 foot head of water; test each preceding section until entire system has been tested with minimum 10-foot head of water, except uppermost 10 feet of system.
 - 4. Keep water in system, or in portion under test, for minimum 15 minutes before inspection.
 - 5. System must be tight at all joints.
- C. Testing Requirements:
 - 1. Hydrostatic and pneumatic tests apply to piping indicated in following schedule.
 - 2. Raise pressure gradually to given value; then block off source.
 - 3. Allowable Pressure Drop: Maximum amount scheduled during corresponding minimum time interval.
 - 4. Visually examine all joints during test.
 - 5. Install valves or caps to isolate equipment not rated for test pressure.
 - 6. Upon successful completion and test approval, relieve piping of pressure, drain, put into normal operation except for potable water to be sterilized before placing in service.

Hydrostatic Testing Schedule:

	Service	Normal Work Pres. psig	Hydrostatic Test Pressure psig	Pneumatic Test Pressure psig	Max. Pres. Drop psi	Min. Time Duration
1.	Storm Water:	Gravity	10 ft. w.c.	----	0	30 min.

3.7 SCHEDULES

1. Pipe Hanger Spacing:

Pipe Material	Maximum Spacing (Feet)	Hanger Rod Diameter (Inches)
Cast Iron (All Sizes)	5	5/8
Cast Iron with 10 foot length pipe (All Sizes)	10	5/8
PVC (All Sizes)	4	3/8

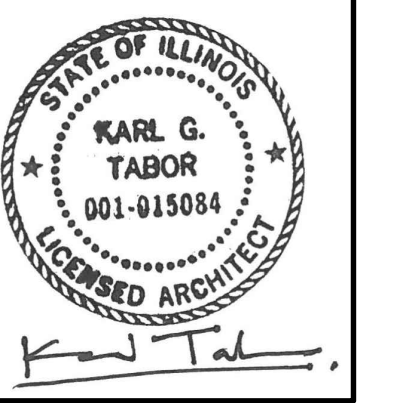
Note for Cast Iron Pipe: Provide close to joint on barrel. Also provide hanger at each change of direction and each branch connection.

END OF SECTION



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SIGNATURE
07-21-2023
DATE
11-30-2024
LICENSE EXPIRES

MEDICAL SEGREGATION UNIT
JACKSON COUNTY JAIL
JACKSON COUNTY SHERIFF'S DEPARTMENT
1001 MULBERRY STREET
MURPHYSBORO, IL 62966

MK.	DATE	DESCRIPTION
	09-08-23	ADDENDUM-08

DATE:
PROJECT NO: 365-2282
DESIGN: KGT
DRAWN: AAP
CHECK: JLS

ROOF DETAILS

A-501

