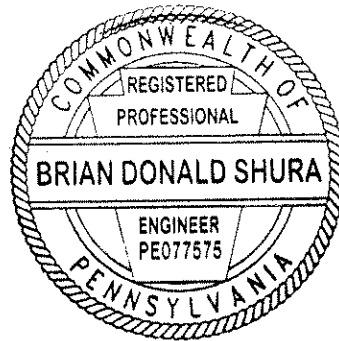


ADDENDUM NO. 1 TO THE
SPECIFICATIONS
AND
CONTRACT DOCUMENTS
FOR THE
TOWANDA MUNICIPAL AUTHORITY WASTEWATER TREATMENT
PLANT UPGRADES
PROJECT NO. 22-6006
TOWANDA MUNICIPAL AUTHORITY
TOWANDA BOROUGH, BRADFORD COUNTY, PENNSYLVANIA



A handwritten signature in black ink, appearing to read "B. Shura", written over a horizontal line.

BRIAN D. SHURA, P.E.

APRIL 4, 2025

ADDENDUM NO. 1

TOWANDA MUNICIPAL AUTHORITY WASTEWATER TREATMENT PLANT UPGRADES APRIL 4, 2025

A. GENERAL

1. Acknowledge receipt of this Addendum in the space provided on the Bid Form. Failure to do so may subject Bidder to disqualification.
2. The following clarifications, additions and/or revisions shall be made to the Contract Documents

B. CONTRACT DOCUMENTS & SPECIFICATIONS

1. Specification Section C-111 "Advertisement for Bids"

Replace this section in its entirety with the revised version of the section which has been attached to this addendum. The revised advertisement includes the new bid opening date of **May 5, 2025**.

2. Specification Section C-410 "Bid Form"

Replace the "Contract Procurement Breakdown" of the "Prime Contractor DBE Solicitation Effort Help Guide" with the revised form effective from October of 2024. The revised breakdown form is attached to this addendum.

3. Specification Section C-520 "Agreement"

Replace Paragraph 4.02(B) for **Contract 2025-1** with the following:

- B. The General Construction Contractor shall complete the following activities within **30 calendar days** from the date on which the first of these activities commences. Contractor shall also be limited to completing all activities no later than **120 calendar days** from the date on which a Notice to Proceed becomes effective and Contract Times commence to run.
 - 1.) Complete the removal, processing, and disposal of wasted solid material in the Autothermal Thermophilic Aerobic Digester (ATAD) and Storage Nitrification-Denitrification Reactor (SNDR) Tanks.
 - 2.) Schedule an inspection of the components installed in the two tanks. Inspection shall be conducted in the presence of the system manufacturer, Owner, and Engineer.
 - 3.) All work within the base bid which requires the interruption of the ATAD and/or SNDR tank to be completed (except for components which are identified for repair or replacement during the inspection). This work shall include the replacement of any pumps, blowers, process piping, and appurtenances which could not otherwise be completed without the removal of waste material from either or both tanks.

Replace Paragraph 4.02(C) for **Contract 2025-1** with the following:

- C. The General Construction Contractor shall complete all work identified for repair or replacement during the inspection of the ATAD and SNDR tanks as referenced in Paragraph 4.02(B) within 30 calendar days from the date upon which the activities commence. This portion of the Work shall include, at minimum, that work which is associated with Bid Schedule Items 3.c and 3.d.

Add the following as Paragraph 4.02(D) for **Contract 2025-1**:

- D. This provision shall apply to any work completed in accordance with the intermediate milestones outlined in Paragraphs 4.02(B) and 4.02(C). Contractor shall notify Owner no less than **14 calendar days** in advance of the commencement of work under the 30-day milestone periods such that the Owner may properly prepare the facility for the Contractor's work. In return, Owner shall notify Contractor no less than **three (3) business days** in advance of when Contractor's operations may begin.

4. Specification Section 024119 "Selective Demolition"

This specification section has been added to the Contract Documents and is attached to this addendum.

5. Specification Section 467322 "Autothermal Thermophilic Aerobic Digestion Equipment"

A revised copy of this specification section has been attached to this addendum.

C. PLANS

1. Plan Sheet MP201

A revised copy of this plan sheet has been attached to this addendum. The plan sheet now depicts the configuration of the ATAD jet header in a manner which is consistent with the revised Specification Section 467322.

2. Plan Sheet MP202

A revised copy of this plan sheet has been attached to this addendum. The plan sheet now depicts the configuration of the air piping above the ATAD tank in a manner which is consistent with the revised Specification Section 467322.

3. Plan Sheet MP203

A revised copy of this plan sheet has been attached to this addendum. The plan sheet now depicts the configuration of the ATAD jet header and air piping above the ATAD tank in a manner which is consistent with the revised Specification Section 467322.

D. GENERAL CLARIFICATION

1. The date of bid opening and the date on which bids are due is now **May 5, 2025**. Bids remain due by 1:00 PM local time and the clock in the Borough Office will continue to serve as the official timepiece.

E. RFIs

1. Question: May bidders use the Contract Procurement Breakdown form for DBE solicitation which went into effect in October of 2024?

Response: The revised form should be used by all prospective bidders and has been attached to this addendum.

F. ATTACHMENTS

- Minutes to the Pre-Bid Conference.
- The following specification sections:
 - Section C-111 “Advertisement for Bids”
 - Section 024119 “Selective Demolition”
 - Section 467322 “Autothermal Thermophilic Aerobic Digestion Equipment”
- Revised plan sheets MP201, MP202, and MP203
- Updated “Contract Procurement Breakdown” form for the “Prime Contractor DBE Solicitation Effort Help Guide.”

END OF ADDENDUM NO. 1

AGENDA OF THE PRE-BID CONFERENCE
TOWANDA MUNICIPAL AUTHORITY
WASTEWATER TREATMENT PLANT UPGRADES
April 2, 2025
Towanda Borough Office

All in attendance were requested to sign in. A copy of the sign-in sheet was passed around.

Brian Shura, P.E. of Stiffler, McGraw & Associates, Inc. presided over the meeting.

Mr. Shura provided the following project information:

Bidding Items:

1. This meeting is being held to discuss the bid requirements and answer questions for the Towanda Municipal Authority Wastewater Treatment Plant Upgrades project for the following construction contracts:
 - a. 2025-1: General Construction Work
 - b. 2025-2: HVAC Work
 - c. 2025-3: Electrical Work
2. According to the bid advertisement, bids are due at the Towanda Borough Office on Wednesday, April 16, 2025 at 1:00 PM (prevailing time). However, the bid due date will be extended as part of Addendum 1. The new bid date and time will be Monday, May 5, 2025 at 1:00 PM (prevailing time). The clock in the Borough Office will serve as the official timepiece.
3. A bid bond in the amount of 10% of the amount of each bid submitted is required at the time of bid submission. Bonds are required for each contract submitted.
4. All bids will be publicly opened and read aloud immediately after 1:00 PM on Monday, May 5, 2025.
5. Contract times and associated liquidated damages are listed in the Bid. It is anticipated that all work will begin on or around the end of January 2025. Substantial Completion is listed as 300 calendar days from the Notice to Proceed with Completion listed as 360 calendar days from the Notice to Proceed.
6. Intermediate milestones will limit the General Construction Contract (2025-1) as follows:
 - a. The General Construction Contractor shall complete the following activities within 30 calendar days from the day the activity commences. The General Construction Contractor shall also be limited to completing these same activities no later than 120 calendar days from notice to proceed.

- 1.) Complete the removal, processing, and disposal of wasted solid material in the Autothermal Thermophilic Aerobic Digester (ATAD) and Storage Nitrification-Denitrification Reactor (SNDR) tanks.
 - 2.) Schedule an inspection of the components installed within the two tanks with the system manufacturer, Owner, and Engineer present for all inspection activities.
 - 3.) All work within the base bid that requires interruption of operation of the ATAD and SNDR tanks with the exception of components identified for repair/replacement during the inspection.
- b. The General Construction Contractor shall complete all work identified for repair/replacement during the inspection of the ATAD and SNDR tanks within 30 calendar days from the day the activity commences. This work includes the work associated with Bid Schedule Items 3.c and 3.d. The language in the agreement associated with these milestones will be revised in Addendum 1.
 - c. Contractor is required to notify Owner no less than 14 calendar days in advance of the commencement of the work to be performed during both 30-day intermediate milestones such that Owner may properly prepare the facility for Contractor's work. In return, Owner shall notify Contractor no less than three (3) business days in advance of when Contractor's operations may begin.
7. Liquidated Damages are \$1000 per calendar day and apply to both substantial completion and final completion. Additionally, liquidated damages are \$500 for each calendar day that expires after each intermediate milestone.
 8. Payment for stored materials will be allowed for all contracts. To be eligible for stored materials payment, the materials must either be on site or stored in a secure facility off-site with appropriate insurance. Proof of insurance and pictures must be submitted for materials stored off site. Proof of payment to the supplier must also be submitted before payment for stored materials will be approved. The 10% retainage also applies to stored materials.

Project Funding:

This project is being funded by PENNVEST. The project does require Davis Bacon wage rates. All bids must comply with the solicitation requirements for Small Businesses, Minority Business Enterprises, and Women's Business Enterprises. All contracts must also comply with the Steel Products Procurement Act (PA Steel), the American Iron and Steel (AIS) requirements of the Federal Consolidated Appropriations Act, and the Build America, Buy America (BABA) requirements of the Infrastructure Investment and Jobs Act. The appropriate certification forms must be submitted with shop drawing submittals for all materials used in construction. It is the responsibility of each general contractor to determine whether products meet the exemption requirements for PA Steel, AIS, and BABA.

PENNVEST closing is anticipated on June 16, 2025. Construction is anticipated to begin directly thereafter.

Project Overviews:

The purpose of this project is to replace and upgrade aging and/or obsolete equipment; complete architectural, mechanical, and electrical repairs and/or upgrades at various facilities throughout the plant; and construct a new headworks facility due to age and condition. Specifically, the project includes, but is not limited to, the following work:

- Construction of a new headworks facility with dual channel centerflow band fine screens, a grit chamber and classifier, associated piping modifications, and demolition of the existing headworks facility.
- Cleaning out the existing ATAD and SNDR tanks
- Replacement of the SNDR Jet Motive Pump and both ATAD Feed Pumps
- Supplying one of each of the following pumps to be used as a spare: ATAD Jet Motive Pump, ATAD Foam Control Pump, and ATAD Transfer Pump.
- Replacement of the polymer feed systems
- Replacement of the ATAD and SNDR Tank Headers
- Replacement of one ATAD/SNDR blower
- Replacement of the Biofilter Fan
- Replacement of the ATAD sludge holding tank access hatch
- HVAC improvements in the ATAD building electrical room, UV room, and Control building
- Various architectural improvements throughout the plant, including replacement of the control building roof, façade repairs to the ATAD and chemical feed buildings, and replacement of chemical feed building exterior door
- Installation of two new emergency generators
- Installation of a new SCADA system at the plant and new SCADA equipment at the offsite pump stations throughout the collection and conveyance system
- Replacement of lighting throughout all plant buildings
- All demolition work, site work, piping, electrical work, and appurtenances associated with the improvements listed above

All work will be separated into four prime construction contracts as follows:

- Contract 2025-1: General/Mechanical Work
 - The General / Mechanical Contractor (GC) is responsible for all architectural and structural work, all civil site work, and supplying and installing all process mechanical equipment and piping, plumbing work, and appurtenances. The GC is also to furnish electrical and controls equipment supplied by the mechanical equipment manufacturer where noted in the Contract Documents.

- Contract 2025-2: HVAC Work
 - The HVAC Contractor (HC or MC) is responsible for supplying and installing all HVAC equipment and supplying all HVAC equipment manufacturer supplied electrical and controls equipment including, but not limited to, duct work, louvers, roof ventilators, heating units, air conditioner units, dehumidifiers, and all ancillary items associated with this work.
- Contract 2025-3: Electrical Work
 - The Electrical Contractor (EC) is responsible for installing all electrical and controls equipment supplied by the General Construction Contractor and HVAC Contractor and supplying and installing all other electrical and controls equipment necessary for the project, including but not limited to all conduit, conductors, power supply, lighting, flow meters, and control wiring and connections.

A detailed breakdown of the responsibilities of each contract is provided in the Contract Specifications and Contract Drawings

Other Items:

1. Addenda:
 - a. Addendum No. 1 will be issued on or around April 4, 2025. Addendum No. 1 will address the following items:
 - Extension of the bid due date to May 5, 2025 at 1:00 PM.
 - Revisions to the language for the milestones in the agreement.
 - These meeting minutes will be included in the addendum.
 - A revised ATAD Equipment spec (Section 467322) will be provided to address concerns from the ATAD manufacturer.
 - The manifolds in the ATAD tank requires a total of six air drops. A revised plan sheet will be provided showing the additional air drops.
2. All RFI's should be faxed or emailed to the Engineer\Designer.
 SMA Fax No. 814-696-6240
 Brian Shura, P.E. - e-mail address: bshura@stiffler-mcgraw.com
 No RFI's will be considered beyond 12:00 PM on Monday, April 28, 2025.
3. The Authority is responsible for obtaining and paying for the building permits. Other permits, such as demolition permits, are the responsibility of the General Construction Contractor.
4. The attachment to bid items relating to subcontractors, specifically the List of Subcontractors, Non-Discrimination/Sexual Harassment Clause from Subcontractors, Certification of Subcontractor Regarding Equal Employment Opportunity, and Subcontractor Public Works Employment Verification Form, will not be required as part

of the initial bid package. However, these items will be required of the contractors to whom the bids are awarded.

5. Provisions in the Contract Specifications requiring a submittal to be sealed by a professional engineer in the state of Pennsylvania (e.g. shop drawings for formwork and precast plank) will be strictly enforced. Shop drawings requiring a professional engineer's seal that are submitted without a seal will be rejected. The extent of formwork drawings requiring a PE seal is denoted in Specification Section 033100 "Structural Concrete."
6. Where manufacturers and / or model numbers are provided in the specifications, the product named first is the basis-of-design. The other manufacturers listed are known to make a similar product or are capable of making a product that meets the specification; however, standard product offerings from that manufacturer/supplier may require modifications to meet the requirements of the specification. Contractors may submit an "equal" product for approval. However, if the use of an "equal" product requires alterations or adjustments to the contract documents, it is the responsibility of the contractor to pay for all re-design, permitting, and construction costs. Substitutions shall only be considered after the effective date of agreement and no "pre-approval" process shall be observed.
7. Temporary electrical service for construction and contractor field offices shall be provided in accordance with Specification Section 011200.
8. The excavation is unclassified. Refer to the geotechnical report prepared by Centre Consulting Services, located in the Contract Documents (Specification Section C-6000) for bore logs on the site. The limit of excavation identified on the Contract Drawings accounts for unsuitable material encountered in the geotechnical borings and identified in the geotechnical report. Due to the depth of excavation required and the proximity to adjacent facilities, shoring systems shall be designed and sealed by a professional engineer licensed to practice in Pennsylvania. The shoring design is to be submitted to the Engineer for approval prior to excavation occurring. No additional information is available regarding subsurface conditions in areas to be excavated. The site can be made available if a contractor would like to perform additional borings at his/her cost.
9. Foundation work cannot begin until equipment layout plans / coordination drawings have been submitted and approved. The layout drawings are to include all major pieces of equipment with dimensions, clearance dimensions around equipment, electrical connections to equipment, etc. CAD drawings can be provided if requested, but a CAD release must be executed first.
10. Soil testing will be performed by the Engineer's geotechnical consultant. Fees associated with this work will be paid by the Authority. The Contractors are responsible for selecting and compensating consultants for all other required materials testing within each respective contract.

11. The aggregate material to be used in the concrete specified for liquid containing tanks, including the headworks channels and grit chamber, is limited to quartz, feldspar, limestone, dolomite, and granite. Other aggregates, including sandstone, will not be acceptable due to potential for excessive shrinkage cracking. Refer to Specification Section 033100 "Structural Concrete."
12. Payment for the SCADA system will only be made for progress on site. Any progress made at the manufacturer's or integrator's facility will not be considered for payment until the system is on site or otherwise eligible for payment for stored materials in accordance with provisions of the Contract Documents.
13. The Towanda Municipal Authority Wastewater Treatment Plant must remain in operation for the entire duration of construction activities. Contractors are to coordinate with the Towanda Municipal Authority regarding any disruptions to specific subsystems of the plant. Specific instances where disruption to the operation of one or more plant subsystem will be required are outlined in the Sequence of Construction contained within the Contract Drawings.
14. Site address is 3 South River Street, Towanda, PA 18848.

Questions:

(Q) Is the existing generator to be demolished as part of the project.

(A) Yes, the existing generator is to be demolished.

(Q) Is the existing automatic transfer switch to be demolished as part of the project.

(A) Yes, it is expected that the new transfer switch for the control building and the process is to be installed in the same location as the existing transfer switch located in the control building electrical room.

TOWANDA MUNICIPAL AUTHORITY
WASTEWATER TREATMENT PLANT UPGRADES
April 2, 2025

<u>NAME (Please Print)</u>	<u>REPRESENTING</u>	<u>PHONE NUMBER</u>
Brian Shura	Stiffler, McGraw & Associates	814-696-6280
Matt Aikey	Towanda Municipal Authority	570-220-1106
Dennis Charles	Lobar, Inc.	717-903-4997
Mike Bolsor	Rain for Rent	570-250-8080
Rob O'Malley	Control Tech	570-702-4493
Mike Flickner	Sherwin-Williams	570-534-7166
Brian Paul	Streeter Associates	607-734-4151
Lewis Jackson	Jones Specialty Services	607-760-1156
Ralph Defrain	MDI Construction	570-394-0397

ADVERTISEMENT FOR BIDS

The Towanda Municipal Authority is requesting Bids for the construction of the following Project:

Wastewater Treatment Plant Upgrades

Bids for the construction of the Project will be received at the Towanda Borough Building located at 724 Main Street, Towanda, PA 18848 until **Monday, May 5, 2025 at 1:00 pm** local time at which time all bids will be publicly opened and read aloud.

The Project includes the following Work: Construction of a new Headworks Building, installation of various improvements to the plant's existing digester system, and miscellaneous plant site improvements. Also included is the demolition of the existing Headworks Building and all other appurtenances necessary for the completion of the Work.

Bids are requested for the following Contracts: Contract 2025-1: General/Mechanical Work, Contract 2025-2: HVAC Work & Contract 2025-3: Electrical Work

Faxed bids will not be accepted. A pre-bid conference for the Project will be held on **Wednesday, April 2, 2025 at 10:00 am** at the Towanda Borough Building. Attendance at the pre-bid conference is encouraged but not required.

Copies of the Contract Documents may be viewed or obtained at the office of Stiffler, McGraw & Associates, Inc., 1731 North Juniata Street, Hollidaysburg, PA 16648. Payment for the Contract Documents will be \$212.00, which price includes 6% Pennsylvania Sales Tax. Digital Copies are available in PDF format at a 50% discount of the paper copies cost. All checks should be made payable to Stiffler, McGraw & Associates, Inc. Payment is non-refundable. A \$20.00 (\$10.00 for Digital) fee for postage and handling will be required for Contract Documents that are mailed to bidders.

A certified check or bank draft, payable to the order of the Owner or negotiable U.S. Government Bonds (at par value), or a satisfactory Bid Bond on the form provided, executed by the Bidder and an acceptable surety (Surety companies must appear on the Treasury Department's most current list (Circular 570 as amended) and be authorized to transact business in the State of Pennsylvania), in an amount equal to ten percent (10%) of the total of the Bid shall be submitted with each bid to guarantee the Bidder's entrance into a contract if given the award. No bid bond shall be waived or returned because the Bidder has failed to or cannot comply with any requirements set forth in the plans, specifications or any applicable statutes of the Commonwealth of Pennsylvania, or any applicable municipal ordinances.

The successful bidder will be required to furnish and pay for satisfactory Performance and Payment Bonds, each in the amount of one hundred percent (100%) of the Contract Price on the forms provided, with a surety company listed on the Treasury Department's most current list (Circular 570 as amended) and be authorized to transact business in the State of Pennsylvania.

The project will be funded through PENNVEST and therefore bidders must comply with Disadvantaged Business Enterprises (DBE) and Build America, Buy America (BABA) requirements of the funding agency. Davis-Bacon wage rates will apply to this Contract. The Contract Documents contain requirements addressing prevailing labor wage rates, labor standards, nondiscrimination in hiring practices and related matters. The "Steel Products Procurement Act" and "American Iron and Steel" requirements apply to this project for all steel products used in construction.

All contractors and subcontractors shall comply with the Public Works Employment Verifications Act. The Act requires the contractor to verify employment eligibility through the e-verify program operated by the

United States Department of Homeland Security as a precondition of being awarded a contract for this project. The contract documents contain information and verification Form regarding the Act.

The Owner shall award the contract to the lowest responsible bidder or shall reject all bids within 60 days of the date of the bid opening, and no bidder may withdraw his bid before the expiration of such 60-day period. Should the award of the contract be delayed by a required approval of another governmental agency or other similar cause outlined in the Contract Documents, the Owner shall instead award the contract or reject all bids within 120 days of the date of the bid opening and no bidder may withdraw his bid before the expiration of this period. Thirty (30) day extensions of the date of award may be made by mutual written consent of the Owner and the lowest responsible bidder(s).

Bidders for this contract shall have completed projects similar in character and scope and will be required to provide with their Bid a Qualifications Statement for prime contractor and all subcontractors.

Addenda, if any, will be issued to only those persons whose names and address are on record with Stiffler, McGraw & Associates, Inc. as having obtained a copy of the Contract Documents.

The Owner reserves the right to reject any or all bids or to waive any informalities in the bidding.

Towanda Municipal Authority
Michael Walsh, Chairman

SECTION 024119 – SELECTIVE DEMOLITION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section includes the following:
 - 1. Demolishing designated equipment and features.
 - 2. Removing designated items for reuse and Owner's retention.
 - 3. Protecting items designated to remain.
 - 4. Removing demolished materials.
- B. Related Requirements:
 - 1. Section 011000 "Summary" for restrictions on use of the premises and Owner-occupancy requirements.

1.3 DEFINITIONS

- A. Remove: Detach items from existing construction and dispose of them off-site unless indicated to be salvaged or reinstalled.
- B. Remove and Salvage: Detach items from existing construction, in a manner to prevent damage, and store.
- C. Remove and Reinstall: Detach items from existing construction, in a manner to prevent damage, prepare for reuse, and reinstall where indicated.
- D. Existing to Remain: Leave existing items that are not to be removed and that are not otherwise indicated to be salvaged or reinstalled.
- E. Dismantle: To remove by disassembling or detaching an item from a surface, using gentle methods and equipment to prevent damage to the item and surfaces; disposing of items unless indicated to be salvaged or reinstalled.

1.4 MATERIAL OWNERSHIP

- A. Unless otherwise indicated, demolition waste becomes property of the Contractor.

1.5 QUALITY ASSURANCE

- A. Regulatory Requirements:
 - 1. Comply with governing DEP and EPA notification regulations before beginning demolition.

2. Comply with applicable OSHA laws and regulations.
3. Comply with hauling and disposal regulations of authorities having jurisdiction.

B. Codes and Standards:

1. ANSI/ASSP A10.6-2006, "Safety & Health Program Requirements for Demolition Operations-American National Standard for Construction and Demolition Operations".
2. NFPA 241-2019, "Standard for Safeguarding Construction, Alteration, and Demolition Operations".
3. 2018 International Building Code, Chapter 33, "Safeguards During Construction".

1.6 FIELD CONDITIONS

- A. Owner will occupy portions of building immediately adjacent to selective demolition area. Conduct selective demolition so Owner's operations will not be disrupted.
- B. The information shown on the Drawings is based on visual field examination and existing record documents. While the information provided is believed to be correct, no assurance is implied relative to its completeness or accuracy. Contractors shall perform their own site evaluations and investigations as necessary to enter into contract for this work.
 1. The Drawings are intended to indicate the general nature of the demolition work required. Every facility appurtenant to those items designated for removal may not be indicated. Contractors shall field verify dimensions, quantity, type, material, location, means of anchorages and support, interconnection with other facilities, and other pertinent characteristics of facilities which must be removed or demolished to accommodate new facilities.
 2. Contractor hereby agrees that neither the Owner nor the Engineer is responsible for the accuracy or completeness of the information given.
 - a. Contractor shall have no claim for delay, extra compensation, or damage against the Owner or the Engineer on account of the information given.
 - b. Contractor shall have no claim for relief from any obligation or responsibility under the Contract with respect to the above stated stipulations.
- C. Conditions existing at time of inspection for bidding purpose will be maintained by Owner as far as practical.
- D. Notify Engineer of discrepancies between existing conditions and Drawings before proceeding with selective demolition.
- E. Hazardous Materials: It is not expected that hazardous materials will be encountered in the Work.
 1. If suspected hazardous materials are encountered, do not disturb; immediately notify Engineer and Owner. Hazardous materials will be removed by Owner under a separate contract.
- F. Storage or sale of removed items or materials on-site is not permitted.

- G. The use of explosives for demolition work is prohibited.
- H. Exterior Dust Control: To prevent unnecessary spread of dust during performance of exterior demolition work, thoroughly moisten surfaces and debris as required to prevent dust from being a nuisance to the public, neighbors and concurrent performance of other work on the site. Water for use in dust control shall be obtained from Contractor's own source.
- I. Utility Service: Maintain existing utilities indicated to remain in service and protect them against damage during selective demolition operations.

1.7 SEQUENCING/SCHEDULING

- A. Demolition shall be completed in accordance with the Sequence of Construction as outlined in the Contract Drawings.
- B. Coordinate with Owner in scheduling any demolition activities with a high probability of noise pollution and waste removal to minimize impact to Owner's operations.
- C. Coordinate any utility and building service interruptions with the Owner.
 - 1. Do not initiate any service disruptions without written notice to the owner at least seven (7) days prior.
 - 2. Schedule any tie-ins to existing systems or services to minimize disruptions.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

- A. Equipment: Equipment, machinery, and apparatus, motorized or otherwise, used to perform the demolition work shall be as chosen at the Contractor's discretion and as necessary to perform the work within the limits of the Contract requirements.
- B. Temporary Barricades: Materials needed or required for temporary protection in the form of barricades, fences, enclosures, etc., may be pre-used construction materials of sound condition and reasonably clean. The condition of these materials shall meet or exceed the requirements of authorities having jurisdiction.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine conditions of proposed demolition areas and locate structures and objects designated to be demolished and removed. Verify the extent of demolition work with the Engineer.
 - 1. Available documents of existing construction may be obtained from the Engineer upon written request.

2. Neither the Owner nor the Engineer guarantees that existing conditions are the same as those indicated in record documents.

- B. Verify that utilities have been disconnected and capped before starting demolition operations as required.

3.2 PREPARATION

- A. Existing Services/Systems to Be Removed, Relocated, or Abandoned: Locate, identify, disconnect, and seal or cap off utility services and mechanical/electrical systems serving areas to be selectively demolished.
 1. If services/systems are required to be removed, relocated, or abandoned, provide temporary services/systems that bypass area of selective demolition and that maintain continuity of services/systems to other parts of building.
- B. Refer to Division 26 electrical sections for shutting off, disconnecting, sealing, or capping electrical utilities. Do not begin demolition work until electrical utilities have been disconnected and verified in writing.

3.3 PROTECTION

- A. Maintain utility services to remain and protect from damage during demolition operations.
 1. Do not interrupt existing utilities serving adjacent occupied or operating facilities unless authorized in writing by Owner and authorities having jurisdiction.
 2. Provide temporary services during interruptions to existing utilities, as acceptable to Owner and authorities having jurisdiction.
- B. Protect adjacent buildings and facilities from damage due to demolition activities.
- C. Protect existing site improvements, appurtenances, and landscaping to remain.
- D. Provide temporary barricades and other protection required to prevent injury to people and damage to facilities to remain.
- E. Remove temporary barriers and protections where hazards no longer exist. Where open excavations or other hazardous conditions remain, leave temporary barriers and protections in place.

3.4 GENERAL PROCEDURES/REQUIREMENTS

- A. General Requirements: The means and methods of performing demolition and removal operations are the sole responsibility of the Contractor. However, equipment used and the methods of demolition and removal are subject to the approval of the Engineer.
- B. Demolish indicated structures and site improvements completely, unless noted otherwise. Use methods required to complete the Work within limitations of governing regulations and as follows:

1. Do not use cutting torches until work area is cleared of flammable materials. Maintain portable fire-suppression devices during flame-cutting operations.
 2. Maintain adequate ventilation when using cutting torches.
 3. Locate building demolition equipment and remove debris and materials so as not to impose excessive loads on supporting walls, floors, or framing.
- C. During demolition, perform surveys to detect hazards that may result from building demolition activities.
- D. Exercise care during demolition work to confine demolition operations to the areas as indicated on the Drawings. Means and methods used for protection of adjacent facilities to remain are the Contractor's responsibility.
1. Contractor shall be responsible for replacement or repair of existing facilities that are damaged but not scheduled for demolition, with no additional compensation.
- E. Use water mist and other suitable methods to limit spread of dust and dirt. Comply with governing environmental-protection regulations. Do not use water when it may damage adjacent construction or create hazardous or objectionable conditions, such as ice, flooding, and pollution.

3.5 DISPOSAL

- A. Remove demolition waste materials from Project site and legally dispose of them off site.
1. Do not allow demolished materials to accumulate on-site.
 2. Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas.
- B. Do not burn demolished materials.

3.6 CLEANING

- A. Clean adjacent structures and improvements of dust, dirt, and debris caused by building demolition operations. Return adjacent areas to condition existing before building demolition operations began.
- B. Clean roadways of debris caused by debris transport.

3.7 SALVAGE

- A. Tag components and equipment designated for salvage.
- B. Protect designated salvage items from demolition operations until items may be safely removed.
- C. Components and equipment designated for salvage shall be disassembled only if necessary to facilitate the removal of that equipment.
1. Disassembly is not permitted for any equipment which is to be removed and reinstalled as part of the Work. Disassembly of the screening unit is permitted.

- D. Components and equipment to be salvaged shall be packaged on and restrained to wooden pallets. Any components which are too large to be packaged on pallet shall be restrained by wood blocking to facilitate transport.
- E. Package small and loose parts to avoid loss. Mark packaged parts and other equipment to permit identification and consolidation of components of each salvaged items.
- F. Obtain a signed receipt of delivery from Owner for each item to be salvaged.

G. Salvage Schedule: Equipment and components designated for salvage, shall be maintained in accordance with the following schedule:

SALVAGE SCHEDULE			
EQUIPMENT/SYSTEM	EXISTING LOCATION	METHOD	NEW LOCATION
Screening Unit	Existing Headworks Building	Remove and Salvage	On-Site Location Designated by Owner
Vortex Grit Removal Collector and Drive	Existing Headworks Building	Remove and Salvage	On-Site Location Designated by Owner
Grit Pump	Existing Headworks Building	Remove and Salvage	On-Site Location Designated by Owner
Jib Crane	Existing Headworks Building	Remove and Salvage	On-Site Location Designated by Owner
Automatic Composite Sampler	Existing Headworks Building	Remove and Salvage	On-Site Location Designated by Owner
SNDR Jet Motive Pump	ATAD Building	Remove and Salvage	On-Site Location Designated by Owner
ATAD Feed Pumps (Qty: 2)	ATAD Building	Remove and Salvage	On-Site Location Designated by Owner
ATAD System Blower	Second Level of UV Disinfection Building	Remove and Salvage	On-Site Location Designated by Owner
Emergency Generator	Garage Space of Plant Control Building	Remove and Salvage	On-Site Location Designated by Owner
Automatic Transfer Switch and Enclosure	Electrical Room of Plant Control Building	Remove and Salvage	On-Site Location Designated by Owner

END OF SECTION 024119

SECTION 467322 – AUTOTHERMAL THERMOPHILIC AEROBIC DIGESTER EQUIPMENT

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section includes the provision and installation of equipment associated with the existing Autothermal Thermophilic Aerobic Digestion (ATAD) system.
- B. Related Requirements:
 - 1. Section 400510 "Process Piping, Valves and Appurtenances" for piping requirements outside the scope of this specification section.
 - 2. Section 432306 "Miscellaneous Centrifugal Pumps" for installed and shelf spare pumps to be provided under this contract.

1.3 ACTION SUBMITTALS

- A. All submittals shall be provided in accordance with Section 013300 "Submittal Procedures." Refer to and understand that section for requirements and procedures regarding submittals.
- B. Product data for each component and subsystem specified in this section shall be provided as a single submittal. At minimum, the product data shall include the following information with an adequate level of detail to confirm compliance with the specifications of this section.
 - 1. Equipment Technical Data
 - 2. Design Calculations
 - 3. Hydraulic Calculations
 - 4. Performance Data
 - 5. Motor Data
 - 6. Descriptive Brochures
 - 7. Materials of Construction
 - 8. Electrical Interconnect Details and Drawings
 - 9. Spare Parts List
- C. Submit for review shop drawings of the specified components which illustrate the following at minimum. All shop drawings shall be provided as a single submittal.
 - 1. Overall Dimensions of Piping and Other Features
 - 2. Pipe Supports and Anchoring Locations and Details
 - 3. Piping and Wiring Interface Points
 - 4. Location of Components Relative to Existing Structures

1.4 INFORMATIONAL SUBMITTALS

- A. Submit an Operation and Maintenance Manual in accordance with Specification Section 017823 "Operation and Maintenance Data."
- B. Installation Certificate: Submit a certificate from the manufacturer, or from the manufacturer's qualified, factory-authorized representative, stating that the installed equipment has been inspected, adjusted, approved, and certified to be satisfactory prior to the performance of start-up activities.

1.5 QUALITY ASSURANCE

- A. The execution of any work specified in this section must be completed by an authorized representative or installer of the system manufacturer. Self-performance of the work by the Contractor is not acceptable.
- B. All equipment and components specified herein shall be supplied by the system manufacturer unless approved in writing by the manufacturer.

1.6 FIELD CONDITIONS

- A. Work specified in other specification sections is to be completed prior to the completion of work specified in this section. Refer to the Contract Drawings for a description of the delineation of work between the Contractor and the manufacturer's installer. Contractor is to coordinate with the installer prior to the commencement of work under this section to ensure that the work of other sections is completed adequately for the installer to begin work specified in this section.
- B. A portion of the work specified in this section is to be completed within the existing ATAD and SNDR tanks as depicted on the Contract Drawings. It is the Contractor's responsibility to prepare the interior of each tank for entry by the manufacturer's designated installer. Contractor is to coordinate with both the Owner and installer as required prior to the completion of any work in the tanks.
 - 1. It is the Contractor's responsibility to ensure compliance with requirements pertaining to confined spaces and other applicable OSHA standards.
 - 2. Contractor shall coordinate with the Owner to ensure that no accidental discharge of waste material to the tank may occur while the tank is offline during the time where the manufacturer's installer is completing the work of this section.

1.7 WARRANTY

- A. The equipment shall be warranted for a period of 18 months from the date of delivery or 12 months from the date of substantial completion, whichever results in a later warranty-ending date.
- B. The warranty shall protect against defects in workmanship and materials under normal use, operation, and service. Should the equipment fail during the warranty period due to a defective part, it shall be replaced and the units restored at no expense to the Owner.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. All equipment and components specified in this section must be provided by Thermal Process Systems of Crown Point Indiana to ensure compatibility with the existing system components which are not to be replaced. Provision of specified components from an alternative manufacturer when not approved in writing by the manufacturer is prohibited.

2.2 ATAD/SNDR SYSTEM DESCRIPTION

- A. The work to be completed under this section shall be completed on an existing system consisting of adjacent Autothermal Thermophilic Aerobic Digester (ATAD) and Storage Nitrification/Denitrification Reactor (SNDR) tanks and associated piping, equipment, and appurtenances. Also included in the system is an appurtenant Biofiltration Odor Control system.
- B. All equipment associated with the system described in Article 2.2(A) above which is not specified herein will remain in place or will be replaced under the work of another specification section. All components and work under this section shall be compatible with those features to remain or be replaced by the Contractor under another specification section.

2.3 SYSTEM DESIGN CRITERIA

- A. The existing system has been designed based on the table of values below. All equipment and components specified herein shall be suitable for use with waste activated sludge with the following characteristics:

Solids Type	Thickened Waste Activated Sludge
Total Solids Percentage	5% (Average)
Total Volatile Solids Percentage	Greater Than 3.5% (Average)
Volume of Thickened Sludge	8,400 gpd (Average)
Dry Solids Processed per Day	3,500 ppd
Maximum Influent Solids Temperature	65°F (Summer)
Surrounding Environment Minimum Temperature	-20°F (Winter)
Surrounding Environment Maximum Temperature	90°F (Summer)
Site Elevation (Above Sea Level)	Approx. 720 ft

- B. The design criteria above have been provided for general illustrative purposes of the existing system. To ensure complete compatibility with the existing system, materials and design requirements specified herein and as recommended by the system manufacturer shall be utilized.
- C. The design oxygen supply and jet pump mixing intensity to the oxygen demand have been determined to maintain the optimal range of temperatures and oxidation-reduction potential (ORP) in the bioreactors. Values were provided by Thermal Process Systems and the methods of determination and calculation are patent protected. Use of alternative means of determining these values, whether specified under this section or another specification section, is prohibited.
 - 1. The ATAD and SNDR aeration systems shall be adequate to transfer oxygen to the contents of the tank such that the following total average actual oxygen requirement (AOR) is achieved in each tank in the specified stage of the process.
 - a. ATAD
 - 1) Initial Feed: 226 lb/hr
 - 2) React Mode: 48 lb/hr
 - b. SNDR
 - 1) Typical: 19 lb/hr
 - 2) Maximum Capacity: 48 lb/hr
 - 2. The specified oxygen transfer requirements must be accomplished using the existing blowers which are currently in use for the system.

2.4 SCOPE OF SUPPLY AND DELINEATION OF WORK

- A. The following materials, equipment, and system components shall be supplied by the system manufacturer under the General Contract. All items to be installed by the General Contractor in coordination with the system manufacturer.
 - 1. ATAD In-Basin Piping and Supports
 - 2. SNDR In-Basin Piping and Supports
 - 3. Biofilter Fan
- B. Any other components required to ensure a complete, adequate installation shall be supplied and installed by the Contractor.
- C. Attention is brought to the fact that the existing system will not be replaced entirely "in-kind," as the in-basin piping within the ATAD tank is to be modified as depicted on the Contract Drawings. Any modifications which must be made to the tank(s) or adjacent structures to facilitate those modifications shall be completed by the Contractor as denoted in other specification sections and as illustrated on the Contract Drawings.

2.5 MATERIALS

- A. All piping in the scope of supply of the system manufacturer shall be constructed of machine filament wound, fiberglass reinforced thermosetting resin pipe (FRP) conforming to ASTM D-2996 and rated to a 75 psi operating pressure.
- B. Metallic components and appurtenances shall be Type 304 Stainless Steel.

2.6 ATAD IN-BASIN PIPING AND SUPPORTS

- A. The ATAD system manufacturer shall supply FRP piping and stainless-steel supports within the ATAD Tank as depicted on the Contract Drawings and specified herein. Installation shall be by G.C.
- B. Jet Aeration Manifold
1. The ATAD aeration manifold shall be comprised of a singular liquid header equipped with eight (8) jet nozzles equally spaced longitudinally along the length of the liquid header.
 - a. Liquid header shall be cylindrical, internally smooth, and free from protrusions that may accumulate foreign material.
 - b. Header shall have a nominal diameter of 14 inches.
 2. Air will be distributed to each nozzle via air drop pipes specified herein and a 6" stainless-steel air header installed by the Contractor atop the ATAD Tank.
 3. Recirculated liquid shall enter the liquid header through an existing 14-inch flanged connection as depicted on the Contract Drawings.
- C. Air Drop Pipes
1. Contractor is to supply a 6" stainless-steel air header atop the ATAD Tank with six (6) drop pipe connections of 2-1/2" nominal diameter. A terminal flanged connection shall be provided by the Contractor. Any hardware required to join the FRP drop pipe provided by the system manufacturer to the stainless-steel flange shall be furnished by the Contractor.
 2. The ATAD system manufacturer shall furnish six (6) FRP air drop pipes joined to each of the jet nozzles of the jet aeration manifold. All installation to be completed by G.C. in coordination with system manufacturer.
 3. Air drop pipes are to be cylindrical and 2-1/2" nominal diameter.
- D. Jet Nozzles
1. Each aeration nozzle shall be TPS Model TP4 and shall consist of an inner liquid nozzle and outer air/liquid discharge nozzle fabricated from fiberglass reinforced plastic using silicon carbide.
 2. Each nozzle shall be lined with integral 10-20 mil nexus veil and silica carbide for added abrasion resistance.
 3. The nozzles shall be of constantly decreasing cross-sectional area to increase the velocity of the air/liquid mixture.
 4. The outlets of both nozzles shall be circular and shall be capable of passing a 2.2-inch spherical solid.
 5. Outside air/liquid nozzle shall have a circular orifice with a diameter that is at least 1.7 times greater than the outside diameter of the liquid nozzle. The diameter ratio of these values shall not exceed 1.9.
- E. Pipe Supports and Hardware
1. The ATAD system manufacturer's scope of supply shall include all necessary supports for the in-basin aeration and liquid handling piping. Installation of pipe supports shall be by G.C.

2. Supports shall be placed with no greater than 10-foot spacing on center. Utilization of lesser spacing is acceptable and should be used if required to adequately support any component.
3. Supports for the liquid header and air drop piping shall consist of a contoured pipe saddle and leg assembly welded to a supporting base.
4. All support bases shall be anchored with 4-anchor bolts grouted in place.
5. A contoured clamp shall hold the piping to the saddle using four threaded cap screws with lock washers. The saddle and clamp shall be provided with rubber pads to prevent abrasion.

2.7 SNDR IN-BASIN PIPING AND SUPPORTS

- A. The ATAD system manufacturer shall supply FRP piping and stainless-steel supports within the SNDR Tank as depicted on the Contract Drawings and specified herein. Installation of piping and supports shall be by G.C.
- B. Jet Aeration Manifold
 1. The SNDR aeration manifold shall be comprised of integrally fabricated air and liquid headers equipped with six (6) jet nozzles on the header. Jet nozzles shall be equally spaced longitudinally along the length of the manifold.
 2. Air enters the air header through a 6-inch flanged connection in the SNDR Tank cover.
 - a. The in-basin air header shall be cylindrical and run above and parallel to the liquid header.
 - b. Air header shall have a nominal diameter of 6 inches.
 3. Recirculated liquid shall enter the liquid header through an existing 14-inch flanged connection as depicted on the Contract Drawings.
 - a. The in-basin liquid header shall be cylindrical, internally smooth, and free from protrusions that may accumulate foreign material.
 - b. Liquid header shall have a nominal diameter of 14 inches.
- C. Jet nozzles are specified under Article 2.6(D) of this specification section.
- D. Pipe supports and hardware are specified under Article 2.6(E) of this specification section.

2.8 BIOFILTER FAN

- A. One fiberglass radial blower shall be supplied by the ATAD system manufacturer. Installation shall be by G.C. The fan shall be capable of both clockwise or counter-clockwise as determined by the drive side of the fan. The fan housing shall be field rotatable and the discharge shall be any of the eight AMCA standard positions. The fan shall be completely assembled, packaged, and ready to install upon delivery to the project site.
- B. The solid fiberglass wheel shall be constructed of a vinylester resin. The radial bladed wheel shall have a totally encapsulated aluminum core insert for secure attachment to the shaft. The fan shall be suitable for temperatures up to 250°F.

- C. Fan housings shall be constructed of a polyester resin and glass fiber with 3% antimony trioxide added to achieve Class I flame spread below 25. Fan construction shall conform to ASTM Standard D4167 for fiber reinforced plastic fans and blowers. All fiberglass surfaces shall be protected with a minimum 10-mil thickness of chemical, flame, and ultra-violet resistant resin. The inlet adapter shall be solid fiberglass. All airstream hardware shall be Type 304 stainless steel. Fan drive base shall be epoxy-coated steel.
- D. Fan shaft shall be ground and polished carbon steel with an FRP sleeve in the airstream. Bearings shall be heavy duty, self-aligning with extended lube tubes for continuous service with a minimum of 50,000 hours L10 life. A neoprene labyrinth shaft seal shall be located where the shaft enters the housing with a neoprene shaft slinger between the seal and wheel. V-belt drives shall be sized for continuous service.
- E. The fan assembly shall be dynamically balanced prior to shipping. Fans shall be balanced in accordance with AMCA Standard 204, fan application category BV-3. Fans shall be manufactured in accordance with industry standard quality assurance procedures. Fans shall be licensed to bear the AMCA Certified Air Performance Rating Seal.
- F. Fan shall be provided with a 10-HP, 1800-rpm TEFC motor with a service factor of 1.15. Motor shall be dual rated for use with 230/460 VAC, 3-phase, 60-Hz power.
- G. Fan shall be capable of delivering 3,100 CFM at 9 inches water gauge pressure. Performance shall be determined based on 100°F air temperature and 100% saturation.

PART 3 - EXECUTION

3.1 PREPARATION

- A. The Contractor and Installer shall verify that field conditions are acceptable and the facilities are prepared for the completion of the work. This inspection of field conditions shall include both existing conditions and the status of work to be completed by the Contractor prior to the commencement of the work specified in this section. Any modifications which must be made to facilitate the completion of the work by the Installer shall be completed by the Contractor at no additional cost to the Owner unless that work is not included in the Contractor's scope of work per the Contract Documents.
- B. Contractor shall remove any and all construction debris from the interior of the reactor(s) prior to the commencement of work specified in this section.
- C. Contractor shall not perform any work inside either reactor, except the scope of work which is depicted on the Contract Drawings, without written approval of the system manufacturer and Engineer.
- D. The commencement of any work specified in this section on the part of any representative of the ATAD system manufacturer, including the Installer, shall be construed as acceptance of the condition of the reactor(s) and work completed by the Contractor whether notification of acceptance has been provided by the system

manufacturer or one of its representatives or not. Should additional work be required outside the scope of this specification section following the commencement of work by the Installer, the work will be completed at no additional cost to the Owner.

3.2 FIELD QUALITY CONTROL

- A. The Installer is to hydrostatically test all piping and valves installed in this section and repair any leaks or indications of leaks. Piping should be retested following repairs and the process repeated until a successful test is conducted.
- B. Prepare test and inspection reports shall be prepared and submitted to the Engineer.

3.3 STARTUP SERVICE

- A. Both the Contractor and a designated representative of the system manufacturer shall perform preliminary field testing, inspection, and checkout of the installed components following installation.
- B. Tests shall be completed by and at the discretion of the system manufacturer to ensure that the complete system is fully operational, properly calibrated/adjusted, and ready for continuous, safe operation following completion of the work.
- C. When all preceding tests have been satisfactorily performed, the system shall be started and thickened sludge shall be reintroduced. Transfer of thickened sludge to the tanks shall be conducted in coordination with and in the presence of the Owner.
 - 1. The system manufacturer shall supply the services of a designated representative for one (1) trip of three (3) days to assist with the resumption of the system.
 - 2. Start-up operations shall be continued until it is satisfactorily demonstrated that the equipment is suitable for continuous service of equal or greater quality than that which occurred prior to commencement of the work.

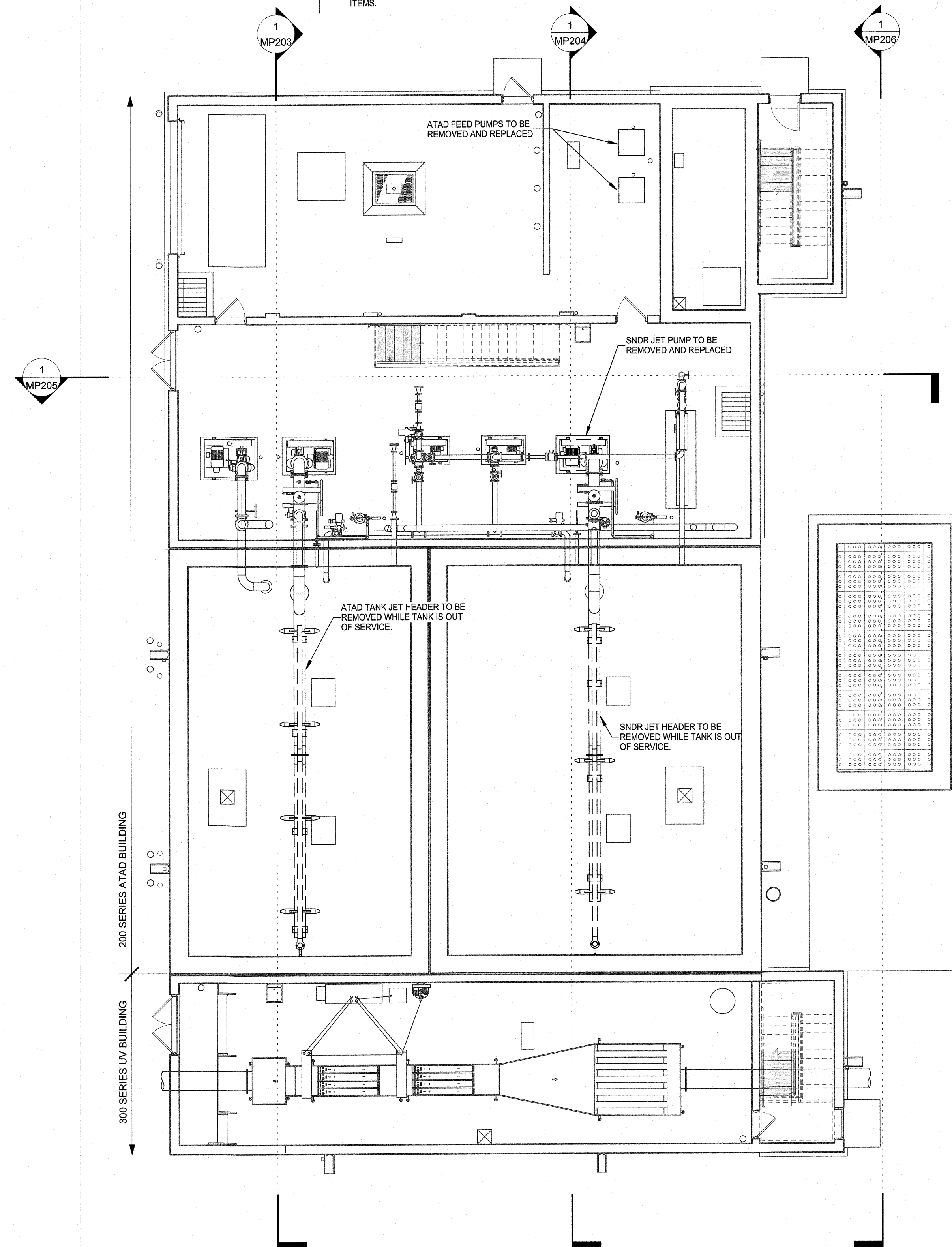
END OF SECTION 467322

GROUND LEVEL DEMOLITION NOTES

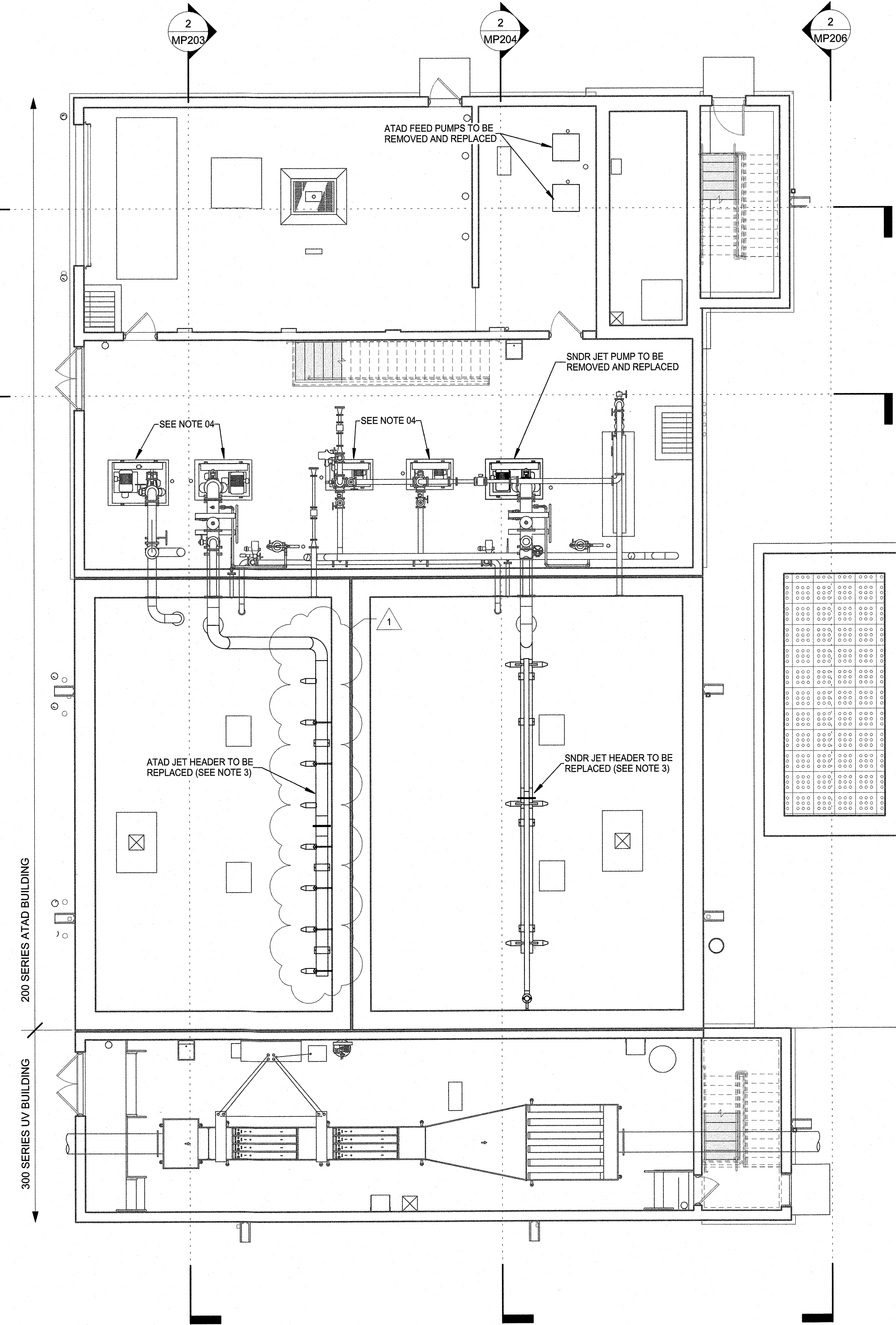
- 01 EXISTING FEATURES TO REMAIN ARE DEPICTED WITH SOLID GRAY LINES AND FEATURES PROPOSED FOR DEMOLITION ARE DEPICTED WITH DASHED BLACK LINES.
- 02 THE LOCATION OF EXISTING EQUIPMENT AND PIPING IS BASED UPON THE BEST AVAILABLE AS-BUILT INFORMATION.
- 03 THE PLAN SHOWS ONLY THE LOCATION OF MAJOR PIECES OF EQUIPMENT AND PIPING. MOST MINOR FEATURES ARE OMITTED FOR CLARITY.
- 04 ALL DEMOLITION WORK SHOWN ON THIS PLAN IS TO BE PERFORMED BY THE GENERAL CONTRACTOR.
- 05 ELECTRICAL CONTRACTOR IS RESPONSIBLE TO DE-ENERGIZE ANY EQUIPMENT PRIOR TO REMOVAL BY THE GENERAL CONTRACTOR.
- 06 G.C. IS TO COMPLETE CLEANING OF ATAD AND SNDR TANKS AS AN INTERMEDIATE MILESTONE PER THE CONTRACT DOCUMENTS. CONTRACTOR TO COORDINATE WITH THE ATAD SYSTEM MANUFACTURER AND OWNER FOLLOWING CLEANING TO DETERMINE IF REPLACEMENT OF VARIOUS IN-TANK COMPONENTS IS TO BE COMPLETED IN ACCORDANCE WITH THE CORRESPONDING BID SCHEDULE LINE ITEMS.

GROUND LEVEL PROPOSED NOTES

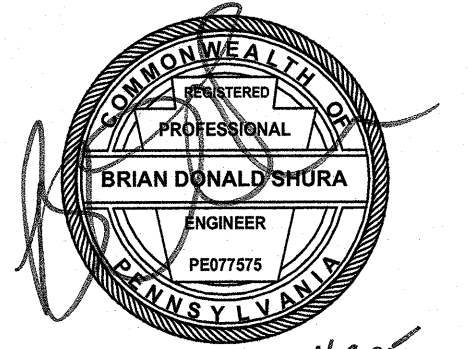
- 01 ALL EXISTING FEATURES ARE DEPICTED WITH SOLID GRAY LINES AND ALL PROPOSED FEATURES ARE DEPICTED WITH SOLID BLACK LINES.
- 02 PLAN SHOWS THE EXTENT OF PROPOSED WORK TO BE COMPLETED. REFER TO THE DEMOLITION PLAN FOR THE EXTENT OF DEMOLITION REQUIRED.
- 03 A PORTION OF THE WORK DEPICTED ON THESE PLANS IS TO BE PERFORMED BY A DESIGNATED INSTALLER OF THE ATAD SYSTEM MANUFACTURER UNDER THE GENERAL CONSTRUCTION CONTRACT. CONTRACTOR IS TO COORDINATE WITH THE INSTALLER AS REQUIRED TO ENSURE COMPATIBILITY OF THE WORK INSIDE AND OUTSIDE THE MANUFACTURER'S SCOPE. THE EXTENT OF THE MANUFACTURER'S SCOPE IS DENOTED THROUGHOUT THESE SHEETS.
- 04 SHELF SPARE PUMPS ARE TO BE PROVIDED, THOUGH NOT INSTALLED, AS DEPICTED. REFER TO SPECIFICATION SECTION 432306.



1 GROUND FLOOR DEMOLITION PLAN
1/8" = 1'-0"



2 GROUND FLOOR PROPOSED PLAN
1/8" = 1'-0"



4.3.25

Stiffler, McGraw & Associates, Inc.

Owner:

TOWANDA MUNICIPAL
AUTHORITY
724 MAIN STREET
TOWANDA, PA 18848

Project Name:

WASTEWATER TREATMENT
PLANT UPGRADES

TOWANDA BOROUGH
BRADFORD COUNTY, PA

AS-BID

ATAD BUILDING

Revisions:

No.	Date	Description
1	4/3/2025	ADDENDUM 1

Sheet Title:

GROUND LEVEL PROCESS
FLOOR PLANS

PROJECT NO. 22-6006

DRAWN BY: JMW

DESIGNED BY: JMW

CHECKED BY: BDS

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

Drawing:

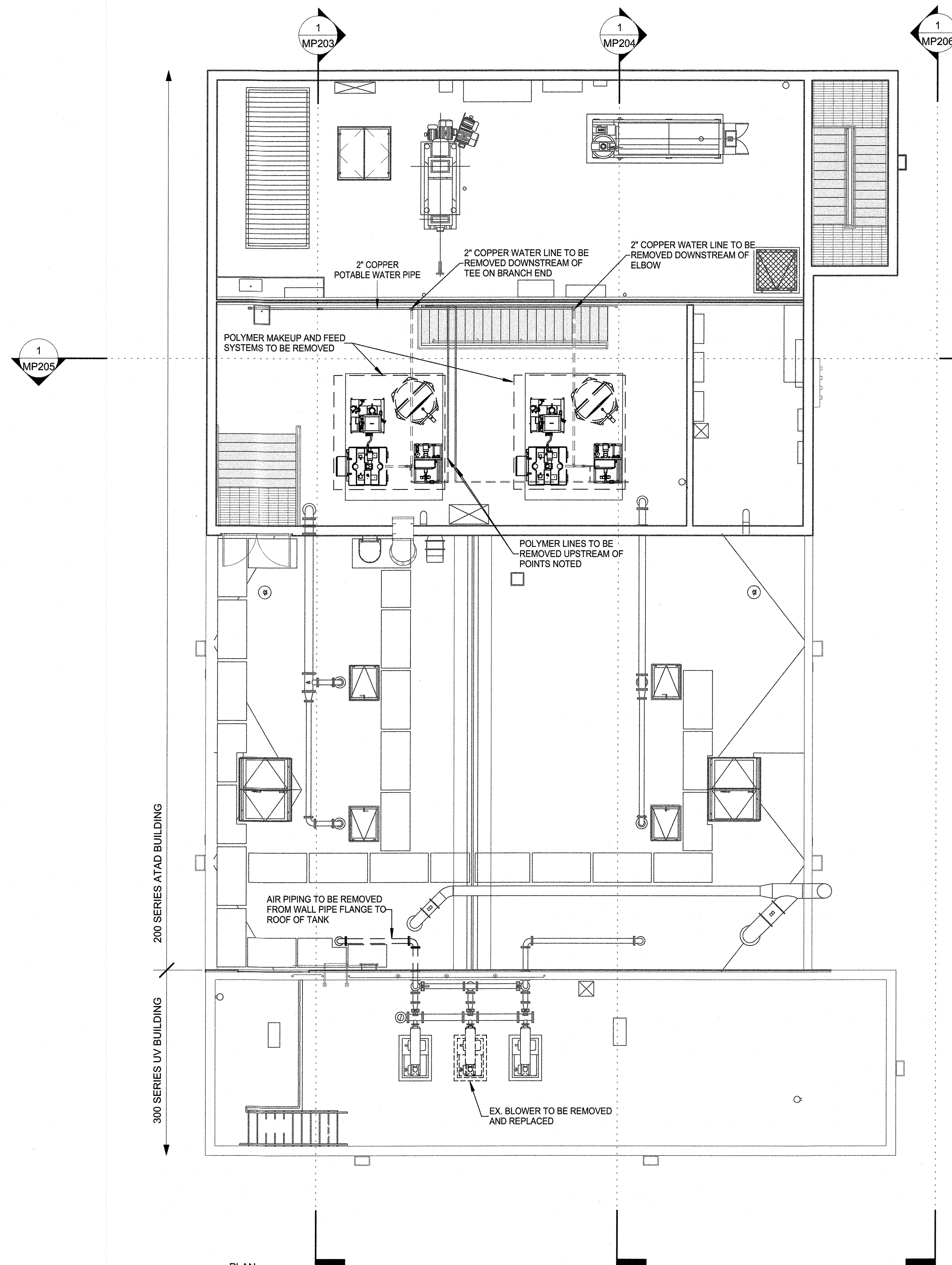
MP201

SECOND LEVEL DEMOLITION NOTES

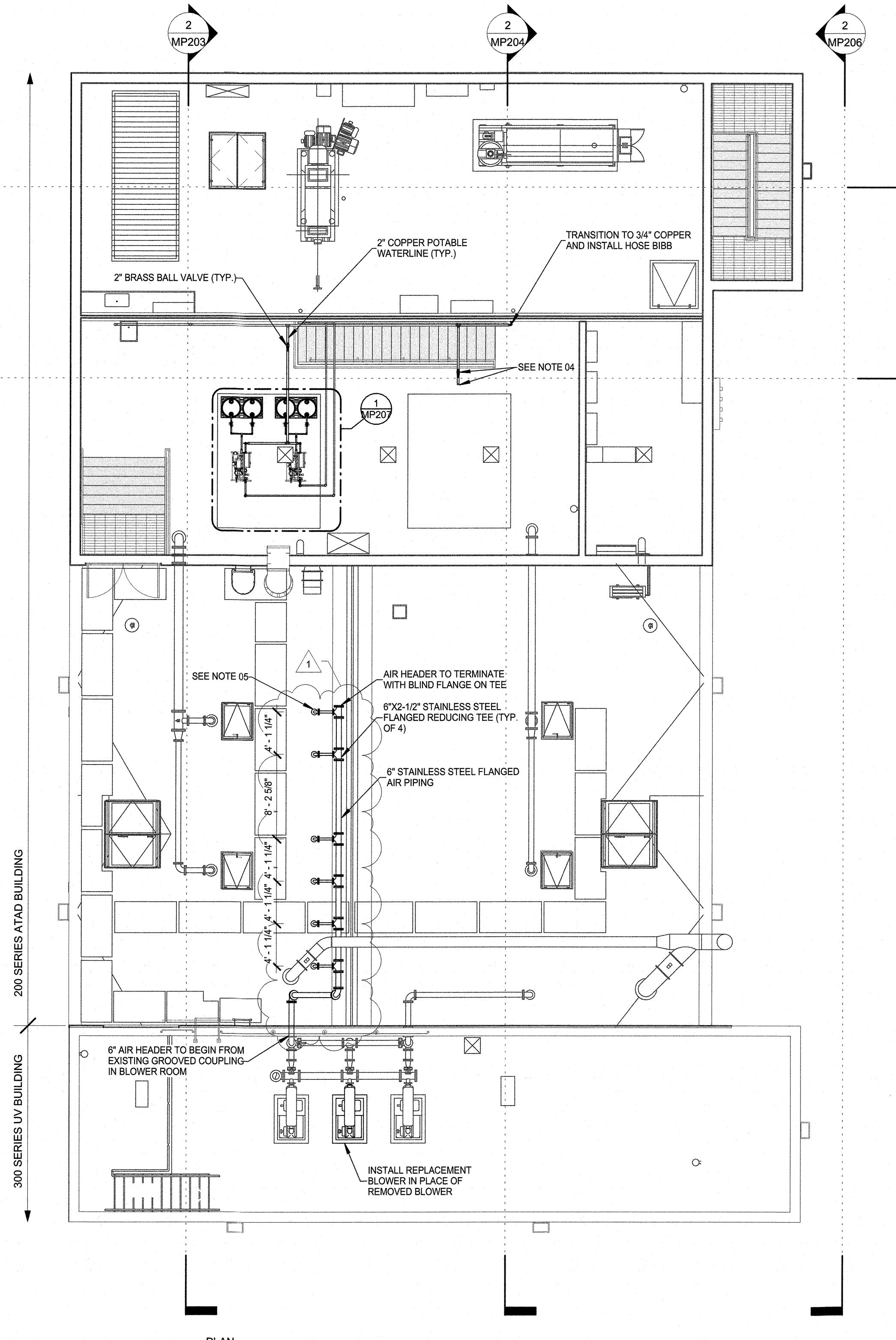
- 01 EXISTING FEATURES TO REMAIN ARE DEPICTED WITH SOLID GRAY LINES AND FEATURES PROPOSED FOR DEMOLITION ARE DEPICTED WITH DASHED BLACK LINES.
- 02 THE LOCATION OF EXISTING EQUIPMENT AND PIPING IS BASED UPON THE BEST AVAILABLE AS-BUILT INFORMATION.
- 03 THE PLAN SHOWS ONLY THE LOCATION OF MAJOR PIECES OF EQUIPMENT AND PIPING. MOST MINOR FEATURES ARE OMITTED FOR CLARITY.
- 04 ALL DEMOLITION WORK SHOWN ON THIS PLAN IS TO BE PERFORMED BY THE GENERAL CONTRACTOR.
- 05 ELECTRICAL CONTRACTOR IS RESPONSIBLE TO DE-ENERGIZE ANY EQUIPMENT PRIOR TO REMOVAL BY THE GENERAL CONTRACTOR.
- 06 SOME CONNECTIONS TO EXISTING PROCESS EQUIPMENT ARE NOT DEPICTED PICTORALLY FOR CLARITY. DISCONNECTIONS ARE NOT REQUIRED AND ALL EQUIPMENT WITHIN THE EXTENT OF DEMOLITION MAY BE REMOVED AS ONE ASSEMBLY OR AS REQUIRED BY THE CONTRACTOR.
- 07 DEMOLITION/REMOVAL ACTIVITIES ARE TO TERMINATE WHERE SHOWN. ALL DEMOLITION ACTIVITIES ARE TO BE COMPLETED UNDER THE 200 WORK SERIES.

SECOND LEVEL PROPOSED NOTES

- 01 ALL EXISTING FEATURES ARE DEPICTED WITH SOLID GRAY LINES AND ALL PROPOSED FEATURES ARE DEPICTED WITH SOLID BLACK LINES.
- 02 PLAN SHOWS THE EXTENT OF PROPOSED WORK TO BE COMPLETED. REFER TO THE DEMOLITION PLAN FOR THE EXTENT OF DEMOLITION REQUIRED.
- 03 ALL WORK DEPICTED ON THE PLAN IS TO BE PERFORMED BY THE GENERAL CONTRACTOR. NO WORK IS IN THE SCOPE OF THE ATAD SYSTEM MANUFACTURER. ALL WORK DEPICTED ON THIS PLAN SHEET, REGARDLESS OF LOCATION, IS TO BE COMPLETED UNDER THE 200 WORK SERIES.
- 04 EXISTING 2" COPPER WATER LINE TO BE PREPARED FOR FUTURE CONNECTION. CONTRACTOR TO TERMINATE LINE WITH BRASS ISOLATION BALL VALVE AND THREADED CAP AS SHOWN.
- 05 CONTRACTOR TO PROVIDE 2-1/2" S.S. PIPE THROUGH ROOF OF TANK. CONTRACTOR'S SCOPE OF SUPPLY ENDS AT TERMINAL FLANGE BELOW TANK ROOF AT WHICH POINT ALL MATERIALS ARE TO BE PROVIDED BY ATAD SYSTEM MANUFACTURER. ALL WORK TO BE COMPLETED UNDER THE GENERAL CONSTRUCTION CONTRACT.



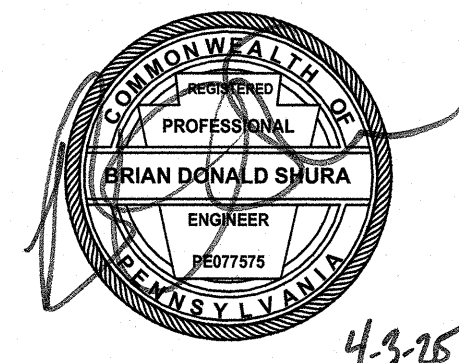
1 SECOND LEVEL PROCESS DEMOLITION PLAN
1/8" = 1'-0"



2 SECOND LEVEL PROCESS PIPING PLAN
1/8" = 1'-0"



1731 N. Juniata Street
Hollidaysburg, PA 16648
Phone: 814.696.6280 Fax: 814.696.6240



Stiffler, McGraw & Associates, Inc.

Owner:
TOWANDA MUNICIPAL AUTHORITY
724 MAIN STREET
TOWANDA, PA 18848

Project Name:
WASTEWATER TREATMENT PLANT UPGRADES

TOWANDA BOROUGH
BRADFORD COUNTY, PA

AS-BID

ATAD BUILDING

Revisions:

No.	Date	Description
1	4/3/2025	ADDENDUM 1

Sheet Title:

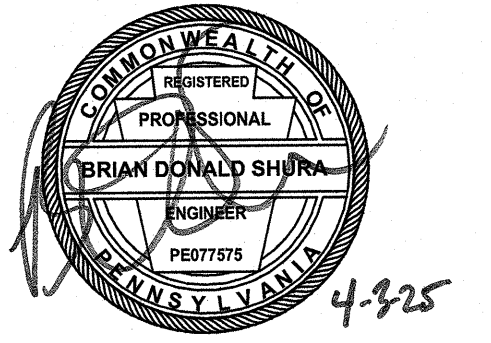
SECOND LEVEL/LOW ROOF PROCESS FLOOR PLANS

PROJECT NO. 22-6006
DRAWN BY: JMW
DESIGNED BY: JMW
CHECKED BY: BDS
SCALE: 1/8" = 1'-0"

Drawing:

MP202

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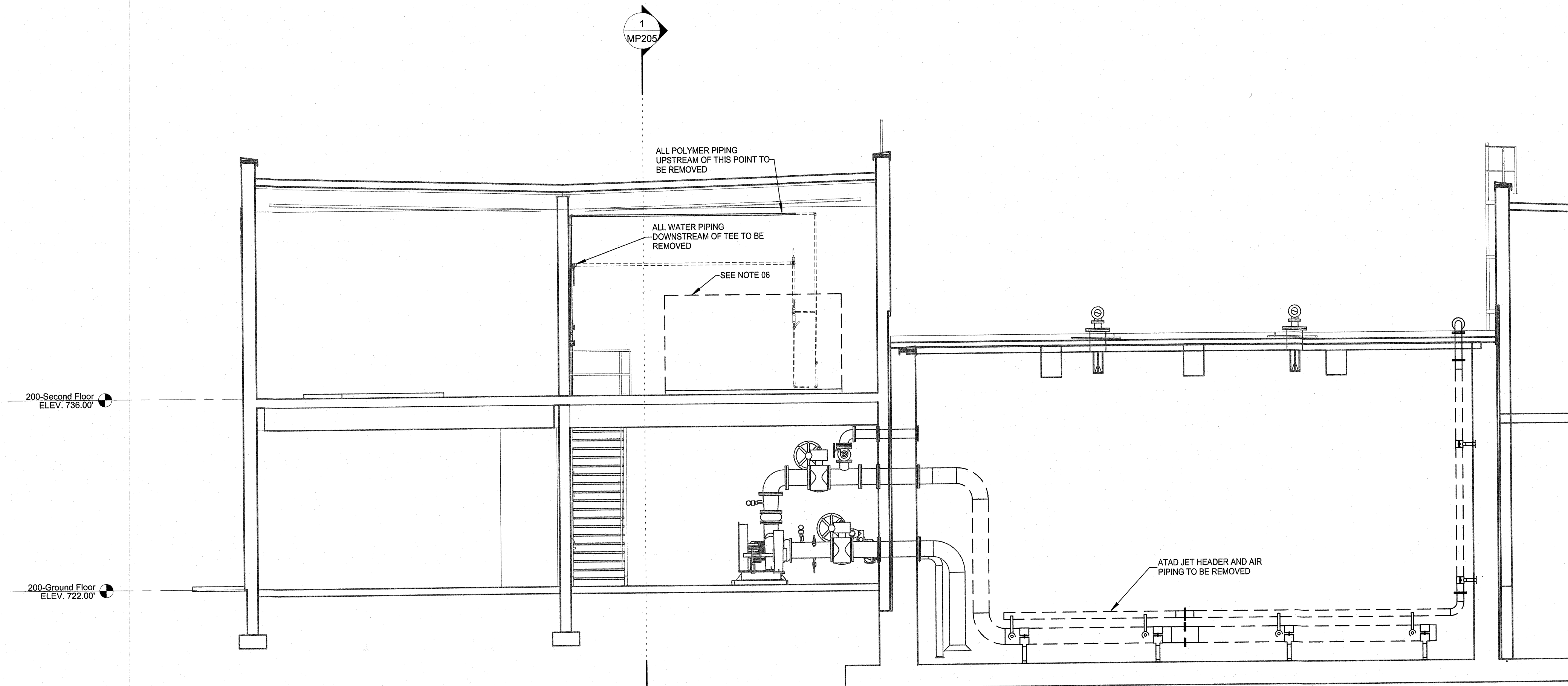
Owner:
**TOWANDA MUNICIPAL
AUTHORITY**
724 MAIN STREET
TOWANDA, PA 18848

Project Name:
**WASTEWATER TREATMENT
PLANT UPGRADES**

TOWANDA BOROUGH
BRADFORD COUNTY, PA

ATAD TANK DEMOLITION NOTES

- 01 EXISTING FEATURES TO REMAIN ARE DEPICTED WITH SOLID GRAY LINES AND FEATURES PROPOSED FOR DEMOLITION ARE DEPICTED WITH DASHED BLACK LINES.
- 02 THE LOCATION OF EXISTING EQUIPMENT AND PIPING IS BASED UPON THE BEST AVAILABLE AS-BUILT INFORMATION.
- 03 THE PLAN SHOWS ONLY THE LOCATION OF MAJOR PIECES OF EQUIPMENT AND PIPING. MOST MINOR FEATURES ARE OMITTED FOR CLARITY.
- 04 ALL DEMOLITION WORK SHOWN ON THIS PLAN IS TO BE PERFORMED BY THE GENERAL CONTRACTOR.
- 05 ELECTRICAL CONTRACTOR IS RESPONSIBLE TO DE-ENERGIZE ANY EQUIPMENT PRIOR TO REMOVAL BY THE GENERAL CONTRACTOR.
- 06 EXISTING POLYMER FEED EQUIPMENT HAS BEEN OMITTED FOR CLARITY. PIPING AND CONNECTIONS TO THE SYSTEM ARE DEPICTED. ALL EQUIPMENT AND PIPING FROM POINTS NOTED ON THIS PLAN SHEET ARE TO BE REMOVED BY THE CONTRACTOR.



1 PROCESS PIPING DEMOLITION TANK SECTION
3/16" = 1'-0"

AS-BID

ATAD BUILDING

ATAD TANK PROPOSED NOTES

- 01 ALL EXISTING FEATURES ARE DEPICTED WITH SOLID GRAY LINES AND ALL PROPOSED FEATURES ARE DEPICTED WITH SOLID BLACK LINES.
- 02 CONTRACTOR TO SUPPLY AND INSTALL S.S. PIPE DOWN TO TERMINAL FLANGE. ATAD SYSTEM MANUFACTURER TO PROVIDE PIPING AND FLANGED CONNECTION BEYOND THIS POINT. INSTALLATION OF PIPING WITHIN TANK TO BE COMPLETED BY CONTRACTOR IN COORDINATION WITH ATAD SYSTEM MANUFACTURER.
- 03 ATAD SYSTEM MANUFACTURER TO BEGIN INSTALLATION OF TANK HEADER FROM EXISTING WALL PIPE FLANGE.
- 04 CONTRACTOR TO SUPPLY, BUT NOT INSTALL, SHELF SPARE PUMPS AS DEPICTED ON THE GROUND FLOOR PLAN AND AS SPECIFIED IN SECTION 462323 OF THE SPECIFICATIONS.
- 05 CONTRACTOR TO INSTALL ORIFICE PLATE (TO BE SUPPLIED BY ATAD SYSTEM MANUFACTURER) BETWEEN 2-1/2" FLANGES AND HARDWARE ABOVE THE ROOF OF THE TANK.

Revisions:

No.	Date	Description
1	4/3/2025	ADDENDUM 1

Sheet Title:

ATAD TANK SECTIONS

PROJECT NO. 22-6006
DRAWN BY: JMW
DESIGNED BY: JMW
CHECKED BY: BDS
SCALE: 3/16" = 1'-0"

Drawing:

MP203

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2 PROCESS PIPING TANK SECTION
3/16" = 1'-0"

