

ADDENDUM #3

To: All Bidders

Project Name: New Construction of:
West Whiteland Public Works Facility
121 Valley Creek Blvd.
Exton, PA 19341

Prepared for: West Whiteland Township
101 Commerce Drive
Exton, PA 19341

Date: August 25, 2023

Notice to all Contractors bidding the West Whiteland Public Works Facility. This Addendum is to amend or clarify the Contract documents as follows:

GENERAL:

- A. This Addendum constitutes part of the Project Manual and Contract. Should conflict occur between the Project Manual and items in this Addendum or between Drawings and this Addendum, the Addendum shall govern.
- B. Work described in this Addendum shall be in accordance with Specifications for like items in remainder of building and complete with all labor and materials required.
- C. Bidders are requested to attach a copy of this Addendum to the Project Manual in their possession.
- D. Work affected by items in this Addendum shall be appropriately adjusted to accommodate these changes.
- E. Acknowledge receipt of this Addendum by inserting its number and date in the space provided in the Bid Form. Failure to do so may subject Bidder to disqualification.
- F. Bids shall only be based on the products specified. No pre-bid substitutions shall be considered. Products that meet or exceed the product

specifications will be considered for use during the Shop Drawing Submittal Phase.

- G. STANDARD OF QUALITY: The various materials and products specified in the specifications by name or description are given to establish a standard of quality and of cost for bid purposes. **In general**, it is not the intent to limit the bidder, the bid or the evaluation of the bid to any one material or product specified but rather to describe the minimum standard, **except where listed without the following clause**. When proprietary names are used, they shall generally be followed by the words "or alternatives of the quality necessary to meet the specifications". Where proprietary names are used and are not followed by a clause similar to that listed above, the contractor is limited to providing that specified product to keep a standard product already established by the Township. A bid containing an alternative which does not meet the specifications may not be accepted, but, if an award is made to the bidder, the bidder will be required to replace any alternatives which do not meet the specifications at no additional cost. The intent of the bid documents is based on this STANDARD OF QUALITY and not to be proprietary in nature in any way.
- H. In general, minor changes to Specifications will be listed below under section 1. These changes will be included in Conformed Drawings after bidding. When revised specifications are included with this Addendum, items marked in **bold** indicate additions and items ~~struck through~~ indicate deletions.
- I. An Extended Rock Construction Entrance and Contractor Laydown Area Plan is included in this addendum. The Site Contractor shall be responsible for all site staging work which includes following:
- Construction of a temporary access road. It will be up to the bidder to select the materials for temporary road construction which shall be built to withstand heavy equipment similar to a tri-axle dump truck loaded with stone.
 - The access road and staging area shall be maintained on a daily basis by site contractor and shall remain free of ruts, mud, snow and ice.
 - The site contractor shall maintain a 6 foot wide clear pathways to a minimum of 2 locations into each building for purposes of workers access. These shall be made of crushed stone. These pathways shall be maintained throughout duration of construction free of mud, snow, or ice.

- Site Contractor will remove and dispose of temporary access road materials once permanent road construction can be installed.
- Site Contractor will remove and dispose of staging materials and complete construction at conclusion of project.

J. The Bid date will be extended to September 7, 2023. Question cut off will be extended to August 31st at 1pm.

SPECIFICATIONS

- 1.01 Specification Section TOC – Table of Contents; **REMOVE** Section 096813 - Tile Carpeting under DIVISION - FINISHES.
- 1.02 Specification Section 011200 – Multiple Contract Summary:
- Section 2.1, B., **ADD:** DIVISION 02 – SITE WORK
 - Excavation and backfill for all buildings.
 - Section 2.2, B., **DELETE** Excavation and backfill for all buildings under DIVISION 02 SITE WORK.
 - Section 2.2, B., **REVISE** sentence under DIVISION 31 – EARTHWORK to say Electrical instead of Civil in the following sentence, "All underground conduit and wiring will be furnished and installed by the electrical contractor. Excavation and backfill for the electrical contractor will be addressed by Civil Contractor".
 - Section 2.4, D., **REMOVE** item 31, "Provide wall sleeves, flashing, pipe hangers, supports, blocking, etc. as required for installation of sprinkler system fixtures and equipment." And **RELOCATE** under Section 2.6, D., 13;
 - Section 2.5, D., 30., **REPLACE** 'Civil' with 'Electrical';
 - Section 2.5, D., 29., **ADD** "rough-in, rack, wiring to rack, and labeling" after 'Telecommunication Systems'.
- 1.03 Specification Section 223000 – Plumbing Equipment; **REPLACE** with attached specification Section 223000: See revised/added paragraphs 2.4 & 2.5
- 1.04 Specification Section 221005 – Plumbing Piping; **ADD** Par. 2.9 below:

2.9 LUBE OIL AND GREASE DISTRIBUTION PIPING

- A. Oil distribution Steel Pipe: ASTM A 53 Seamless Sch. 40.
1. Fittings(threaded): Class 300, malleable iron, ASTM A197, UL Listed, ASME B16.3, ASME B1.20.1
 2. Unions: Class 300 malleable iron threaded unions.
- B. Grease distribution Steel Pipe: ASTM A 53 or A106 Grade "B", Seamless, Sch. 160

1. Fittings(Threaded): 6,000 lb. forged steel, ASME B16.11, ASTM A105, ASME B1.20.1
2. Unions: Class 6000lb. threaded unions.

1.05 Specification Section 221006 – Plumbing Piping Specialties; **ADD** Par. 2.13 below:

2.13 (HR-1) HOSE REEL AND ACCESSORIES - WATER

- A. Ceiling or wall mounted hose reel: consists of a spring driven retractable hose reel with maximum 300 psi pressure, complete with 50 foot of 3/4" pressure hose and mounting bracket.
 1. Provide all required support steel for mounting. Coordinate in field with building structural steel supplier.
 2. Hose reel shall be GRACO XD30 Series Model HSLD5B or approved equal.
- B. Accessories
 1. Connecting hose and swivel inlet fitting: GRACO Model 24E248
 2. Fluid hose label: GRACO (WATER)
- C. Reel Mounting Hardware: - Reel mounting bracket
 1. GRACO Model: 204741 I beam channel mounting bracket

1.06 Specification Section 221500 – Compressed Air Systems; **REPLACE** Par. 2.9 with below:

2.9 (HR-2) HOSE REEL AND ACCESSORIES

- A. Ceiling or wall mounted hose reel: consists of a spring driven hose reel with maximum 300 psi pressure, complete with 50 foot of 1/2" pressure hose and mounting bracket.
 1. Provide approved quick disconnect fitting on hose outlet (fittings to match Owner's standards).
 2. Provide all required support steel for mounting. Coordinate in field with building structural steel supplier.
 3. Hose reel shall be GRACO XD Series Model XDL65B or approved equal.
- B. Accessories
 1. Connecting hose: GRACO Model 218549
 2. Air shutoff valve: GRACO Model 107142
 3. Air coupler: GRACO Model 110199
 4. Fluid hose label: GRACO Model 218675(AIR)
- C. Reel Mounting Hardware: - Reel mounting channel and bracket

1. GRACO Model: 24A219(1-reel) / 24A220(2-reel) / 24A221(3-reel) / 24A222(6-reel)
2. GRACO Model: 204741 I beam channel mounting bracket

- 1.07 Specification Section 262100 – Low Voltage Electrical Service Entrance; **REVISE** utility company to PECO. Primary and secondary conductors shall be by electrical contractor.

DRAWINGS**Civil**

- 2.01 Drawing C5 – Utility Plan; **REVISE** the following notes to **REPLACE** (BY OTHERS) with (SEE MEP): 'GRINDER PUMP', 'OIL WATER SEPARATOR' and 'WATER LINE'. **REMOVE** (BY OTHERS) from note 'INSTALL LOW PRESSURE SANITARY SEWER FORCE MAIN TO EX. SEWER MANHOLE (BY OTHERS)'.

Architectural:

- 2.02 Drawing A100 – Site Plan; **REPLACE** sheet in its entirety. ADD the following language for Diesel Tank and Fuel Depot:
"DIESEL TANK - GC TO PROVIDE 2,000 GALLON TANK. DIESEL TANK SHALL BE 2,000 GALLON ABOVE GROUND, INSULATED DOUBLE WALL TANK. PROVIDE REMOTE FILL BOX W/ SPILL CONTAINMENT, FUEL PUMP PACKAGE W/ SECURE ACCESS CONTROL AND REMOTE MANAGEMENT, AND FUEL LEVEL/LEAK DETECTION PANEL. TANK SHALL BE HIGHLAND FIREGUARD TANK OR EQUAL. CONTACT: TJ EQUIPMENT, BROOMALL, PA T: 610-328-3001 FX: 610-544-7515."

"FUEL DEPOT - GC TO FURNISH AND INSTALL SYSTEM TO BE DELEGATED DESIGN WITH FOB OPERATION PROVIDED BY GC. SEE ELEC. DWGS FOR POWER AND LIGHTING."

Electrical:

- 2.03 Drawing E201 FIRST FLOOR PLAN – BUILDING A – POWER; **ADD** electrical connection for waste oil panel adjacent to plymovement control box in room 12. Circuit to 20A/1P breaker in panel 'NA1'. **ADD** electrical circuit for fuel depot leak detection panel adjacent to panel 'NA4'. Circuit to spare 20A/1P breaker in panel 'NA4'. Provide data drop at leak detection panel.
- 2.04 Drawing E301 ENLARGED PLANS – ELECTRICAL; **ADD** electrical circuits for fire alarm, access control, and security panel. Circuit fire alarm panel to 20A/1P breaker in panel LSA1. Circuit access control and security panel to spare 20A/1P breakers in panel NA1.
- 2.05 Drawing E501 DETAILS AND DAIGRAMS – ELECTRICAL; **REVISE** feeder from generator to ATS #2 to type #2. **REVISE** feeder type #1 to 35kV (3) #1/0 AL w/ concentric neutral per PECO's newest guidelines.

- 2.06 Drawing SE101 SITE PLAN – POWER; **ADD** (14) traffic rated bollards at maximum 5ft o.c. to protect exterior electrical equipment. **REVISE** 4" conduits in section 'G' to 3" conduits. **ADD** 208v/3ph circuit for fuel depot pump. Circuit to new 20A/3P breaker in panel 'NA1' with (3) #8, (1) #8 in 1" conduit. Provide 30A/3P nema 3R non-fused disconnect switch. **ADD** exterior rated PoE media converter Axis cat#T8504-E or equal. Provide 2-strand outdoor rated fiber to switch from IDF in 1" conduit. Provide (1) data outlet from switch to fuel depot. **ADD** WP/GFI receptacle at fuel depot adjacent to switch. Circuit to spare 20A/1P receptacle in panel 'NA4'.

Plumbing:

- 2.07 Drawing P201 FIRST FLOOR PLAN - BUILDING A - SUPPLY PIPING; **REPLACE** with attached revised drawing:
- 2.08 Drawing P202 FIRST FLOOR PLAN - BUILDING B - SUPPLY PIPING; **ADD** note to Brine tank as follows:
"P.C. SHALL RELOCATE AND INSTALL EXISTING BRINE TANK (OWNED BY WWT) FROM THE EXISTING TOWNSHIP MUNICIPAL COMPLEX.
CURRENT TANK LOCATION: MILLER WAY, EXTON, PA.
CONCRETE FOUNDATION PAD (BY G.C.)"

BIDDERS QUESTIONS

- 3.01 **Question:** Please clarify Temporary Heating, Cooling & Dehumidification responsibilities? Spec section 011200-2.4D.28 assigns responsibility to the MC, but spec sections 015100-1.2C & -3.2B.1 assign responsibility to the GC.
Response: Specification Section 015100, 1.2., C. states that Temporary heating, dehumidification and ventilating shall be furnished by GC unless otherwise noted in the summary of work. Mechanical Contractor is responsible to provide.
- 3.02 **Question:** Can a meter pit detail be provided? Are there landscaping drawings? Am I correct that the only Contract #2 exterior concrete flat work is the sidewalk at the office? All of the various equipment pads are labeled as "By Others"
Response: See attached sketches to this Addendum: Aqua sketches D-3 and F-3.
- 3.03 **Question:** Would Butler Balancing be considered a viable substitution for TAB work at the project?
Response: Butler Balancing is an acceptable balancer for the project.
- 3.04 **Question:** Is all of the mechanical equipment operated on stand alone controls? If not, please confirm which control company has the front end work if applicable.
Response: All equipment shall utilize manufacturer controls. Refer to specification 230993 for any required interlocks between equipment.

- 3.05 **Question:** Multiple contract summary Mechanical section D 31. states "Provide wall sleeves, flashing, pipe hangers, supports, blocking etc. as required for installation of sprinkler system fixtures and equipment." Please confirm that this work related to the sprinkler system does not apply to the mechanical contract.
Response: *This work shall be undertaken by the Fire Suppression Contractor. See item 1.02 above.*
- 3.06 **Question:** Is PVC pipe acceptable for DWV below and above slab?
Response: *PVC is acceptable for Below slab DWV only. Above slab shall be no-hub cast iron as specified. (Note: Bldg. A above ceiling areas and chases open to above ceiling areas are part of Return Air plenum space. Per IBC, PVC is not permitted within return air plenums unless wrapped with UL listed fireproofing.)*
- 3.07 **Question:** Is Mega press acceptable for gas piping?
Response: *N/A. There is no natural gas piping in this project.*
- 3.08 **Question:** Are the site light fixtures provided by the site contractor?
Response: *Electrical Contractor to provide site light fixtures.*
- 3.09 **Question:** Are the concrete site light bases provided by the site contractor?
Response: *Electrical Contractor to provide concrete site light bases.*
- 3.010 **Question:** Specifications section 262100 states the service is PPL. The Drawing indicate that the service is PECO. Which is correct?
Response: *PECO is the local utility.*
- 3.011 **Question:** What size is the existing sanitary sewer main that the lateral will tie into?
Response: *The existing sanitary sewer main is 8" vitrified clay.*
- 3.012 **Question:** Civil Plans (Sheet 5 of 20) indicates water lines, sanitary line, grinder pump, low pressure force main, oil water separator, are all By Others. Scope of work seems to indicate otherwise. Please confirm what is/is not in the Civil Scope.
Response: *All items identified above are within the Civil Contractor's scope.*
- 3.013 **Question:** Is a HVAC commissioning agent required for the project? And if so, provided by whom?
Response: *Commissioning agent is not required for the project. Equipment start-up and testing, adjusting, and balancing shall be by the mechanical contractor.*
- 3.014 **Question:** Will you require protective bollards around the generator?
Response: *Yes, provide traffic rated bollards spaced at a maximum of 5'-0" on center.*
- 3.015 **Question:** Will you require protective bollards around the transformer?
Response: *Yes, provide traffic rated bollards spaced at a maximum of 5'-0" on center.*

- 3.016 **Question:** Ref. Dwg, A601 (Overhead Door Sch.) Door #OH-12 and OH-18 call out FRP Material. Not Sure if that applies to Garage Doors please confirm.
Response: Designation for FRP for the Garage Doors within the Wash Bay is correct.
- 3.017 **Question:** Reference drawing E501: feeder number 1 calls for 15kv cable. Spec section 260100-2.2-B calls for 33kv. Which is correct?
Response: 15kV.
- 3.018 **Question:** Reference drawing E501: the 3000A feeder from the generator to ATS#2 is listed as #9: 4#4 & 1#10 in a 1-1/4" conduit. Should this be feeder #2?
Response: Yes, feeder #2.
- 3.019 **Question:** Reference drawing E501: feeder #2 calls for 4 #500mcm and 1 #600mcm gr. Is the #600mcm a typo? Please clarify.
Response: 600MCM is correct because it is the equipment grounding conductor after overcurrent protection between ATS #2 and the switchboard. 400MCM copper would also be acceptable. Ground between the utility transformer and ATS#2 may be reduced to a 250MCM AL ground or #3/0 copper ground.
- 3.020 **Question:** Reference drawing E201, column line E-8: There is a detection control panel with interface to the FA system. Who provides these detection control panels? If by the EC, please provide specs.
Response: Detection panel provided by mechanical contractor.
- 3.021 **Question:** Reference drawing 1/E301, Emer Elec 10: There is an access control panel shown. There are no access control devices shown on the plans or in the door hardware schedule. There are no Access Control Specs. Is this Access Control system part of the Security System that is provided by the owner? Please clarify.
Response: Access control/security provided by owner. E.C. is only responsible for powering owner furnished panel.
- 3.022 **Question:** The following is a 3 part question, referencing spec section 011200-2.5-D-9-h: this states "provide equipment and all necessary wiring for installation of the following systems (Interface and coordinate with security systems work)". Sub-section h states "Security systems (rough-in and coordination only, provided by owner)." Question 1: There is no circuiting shown for the Security and Access Control Panel. Is power to these panels provided by the EC or the owner's security subcontractor? Question 2: Please clarify if the EC is responsible for providing wire and conduit for the security cameras or if the EC is only putting in boxes for the cameras. If the EC is providing the wire, are the cameras IP based? Question 3: Is the EC only providing conduit stub-ups or is the EC to provide a continuous conduit system?
Response: Power provided by E.C. to panels. E.C. shall provided backbox and conduit only for cameras. Conduit stub-ups only to above accessible ceiling or space (where no ceiling present).

- 3.023 **Question:** Multiple summary 011200, D-Electrical Contract 5, Line 9.g states Telecom is rough-in only). Line 29 states, the EC shall be responsible for all costs with the Telecommunication system. If this is correct, can you please tell us what the cost is?
Response: EC to provide rough-ins, punchdown rack, land all of wiring in rack and labeling. Phone system and service by WWT Vendor.
- 3.024 **Question:** Multiple summary 011200, D-Electrical Contract 5, Line 13, states we are to provide all cutting, patching, excavation and backfill for the new service. Line 30 states the Civil Contractor will provide trenching. Which is correct?
Response: Electrical Contractor is responsible for their own excavation. Line 30 has been edited per item 1.02 above.
- 3.025 **Question:** Building B has no schedule for mechanical equipment and isn't on the M drawings. Is the Mechanical contractor responsible for the equipment in building B?
Response: Mechanical equipment is scheduled on M601 and M602; equipment within building B includes a 'B' within its tag.
- 3.026 **Question:** Condensate is shown on M drawings and listed in the plumbing spec. Who is responsible for the condensate piping?
Response: Condensate piping shown on the M drawings is the responsibility of the mechanical contractor.
- 3.027 **Question:** Please provide a detail/info for proposed Oil/Water Separator
Response: Refer to drawing P603 and Specification Section 22 3000 for Oil/Water separator details and specifications."
- 3.028 **Question:** Water service information is not given on the Civil Drawings. Please provide the fire and domestic water pipe sizing, connection info to existing main, pipe sizing from connection to meter pit, and meter pit detail.
Response: Aqua will do the tap. See Meter Pit Details D-3 and F-3 from Aqua (attached as part of this addendum). Civil contractor to pick up at the curb. Piping sizes will be shown in plan in Conformed Set. Fire piping size will be 8" line into the hydrant and 6" from there; domestic water piping will be 4" for Building A and 3" for Building B.
- 3.029 **Question:** Add 2, Contractor Responsible form for contractors to complete: There is a major discrepancy between the written RCO ordinance and Page 3, note 12 on the contractor responsibility form. The written ordinance does not require a minimum threshold of workers to have completed or be currently enrolled in an apprenticeship program. Please correct this form and re issue in an addendum to avoid any legal issues with this public bid
Response: Revised Contractor Certification form has been added in this addendum to replace the one provided in Addendum 2. Note 12 has been removed.

- 3.030 **Question:** Do we have to list our subcontractors with our bid? Do they have to complete a contractor responsibility form along with our bid?
Response: *No, list of subcontractors is a form to be used during the construction process. List of subcontractors will be requested from Prime Contractors after project has been awarded.*
- 3.031 **Question:** Can you please confirm that the following documents are required to be uploaded with our bid submission? Bid Form; Non-Collusion; Bid Bond; AIA Qualification Statement (A-D); Contractor Integrity; Non-Discrimination; PW E-Verify; and RCO Form
Response: *That is correct per the Bid Forms and Addendum 2.*
- 3.032 **Question:** It is typical for the water authority to make the tap to the existing water main and bring the connection to the ROW line. Is that the case here? If not, what size is the existing main and what size is the service going to the meter pit?
Response: *AQUA (Wade Horseman) indicated that: the tap (in the street), including excavation and backfill, and paving would be addressed by AQUA. The civil contractor would pick up all excavation/backfill/piping from the curb to the project.*
- 3.033 **Question:** Reference drawing E501: The single line diagram shows the electric service to be PECO. Addendum 1-3.015 lists PECO as the electric utility company. However, spec section 262100-2.1 lists PPL as the utility company. Please clarify which is correct.
Response: *PECO is the electric utility company.*
- 3.034 **Question:** Is there a controls company specified for the project
Response: *There is no specified controls company for the project. Equipment is intended to utilize manufacturer provided controls. Provide all required wiring/interlocks between equipment as required to meet sequences in specification 230993.*
- 3.035 **Question:** Is there a place to leave excavated soils.
Response: *All spoils can be located on the adjacent property where the topsoil is currently located.*
- 3.036 **Question:** Who is responsible for equipment pads.
Response: *All contractors are responsible for their own pads.*
- 3.037 **Question:** Multiple summary 011200, D-Electrical Contract 5, Line 30 states the Civil Contractor will provide trenching. The notes at the trench details on drawing SE101 state the Electrical Contractor will provide trenching, backfilling, and concrete. Which is correct?
Response: *SE101 is correct. The Electrical Contractor will provide trenching, backfilling, and concrete for trenches.*

- 3.038 **Question:** Is the excavation for the site light bases provided by the site contractor?
Response: *Excavation for the site light bases is by the Electrical Contractor.*
- 3.039 **Question:** Which Contractor should provide concrete for electrical trenches?
Response: *The Electrical Contractor shall provide concrete for electrical trenches.*
- 3.040 **Question:** With the amount of information that is missing from the Civil drawings, assuming those items are addressed in an upcoming addendum, there will likely not be sufficient time to solicit pricing and incorporate into our bid. Can the bid date be extended?
Response: *The Bid date will be extended to September 7, 2023. Question cut off will be extended to August 31st at 1pm.*
- 3.041 **Question:** FP Bid Form on page 3, is referring to Electrical can you review, I attached a copy. #004121 Page 3
Response: *Bid Form will be revised to provide the correct prime.*
- 3.042 **Question:** Detail 1 on drawing FP101.2 shows brass upright sprinkler protection being installed up at the roof deck. Please confirm if this sprinkler protection is necessary to protect the void space between the roof deck and the acoustical ceiling system installed below.
Response: *Sprinkler coverage is required since area above ACT ceiling is open to combustible framing in areas below.*
- 3.043 **Question:** Reference spec section 015100-3.1-E-c: Is the EC responsible for paying for the electric power usage of the Owner's project representative trailer or is the EC responsible for paying for the electric power usage of all of the contractors' trailers?
Response: *EC responsible to pay for power usage for contractor's trailers, Owner's Project Rep trailer, and building temporary power.*
- 3.044 **Question:** Reference spec section 015100-1.2-B-3: who is responsible for the monthly cost of the internet access to the Owners Representative's trailer?
Response: *EC is responsible for monthly internet access to Owners Rep trailer. Service shall be 500/500 MBPS.*
- 3.045 **Question:** Reference Addendum 2-3.020: Where is the existing street light being relocated to? Where is this street light being fed from?
Response: *Streetlight to be relocated within 100' along the road frontage and make connection to existing transformer. Electrical feed is believed to be from nearby underground transformer vault, EC to confirm. WWT to field locate final location.*
- 3.046 **Question:** Are there insurance requirements for the project beyond what's in the General Conditions?

Response: Additional insurance requirements were posted in Addendum 2 Bidder question 3.018.

- 3.047 **Question:** Who is responsible for the excavation & backfill of building foundations - Civil or GC?

Response: The General Contractor is responsible for the excavation and backfill of building foundations.

- 3.048 **Question:** Please confirm CMU wall details along column line "3" - Architectural plans show a 12" CMU wall, & structural detail 6/ S-303 shows as 8" CMU wall & foundation.

Response: CMU wall is 12" per Architectural plans and detail 3/S101.1 section tagged through this same wall references "See Arch Dwgs for size". 6/S303 section cut is placed along wall adjacent to grid line "4", not "3".

- 3.049 **Question:** The finish schedule shows exposed concrete flooring throughout, but there is a spec section for carpet tile. Is there any carpet tile required?

Response: There is no carpet tile in the project. There is also no specification section for carpet tile, but there remains a reference to the specification section in the TOC. See item 1.01 above.

- 3.050 **Question:** Regarding Spec. 015100, 1.2.B.4. it refers to the "Temp Service" being 400A, 480/277v, with a 400A, 480v Panel, etc. Section 3.1. G. refers to an Overhead Service, 225A, 208/120v, with a 400A, 1ph Panel, etc. Which Service should be accounted for in our Bid?

Response: Temporary service to buildings requires 208/120 v 200, 1 ph amp panel. Trailers require a 208/120, 400 amp panel 1 ph panel.

- 3.051 **Question:** Regarding Spec. 262100, 2.1. we have the Following 2 Part Question: 1) Per 2.1.C. it refers to the Utility Company as "PPL". Is not the Site in PECO's domain of Utility Services? 2) Per 2.1.D.1.e. 2) If the New Service is in PECO's domain, Conductors ARE NOT FURNISHED by PECO. Please clarify.

Response: PECO is utility company and both primary and secondary conductors shall be provided by the electrical contractor.

- 3.052 **Question:** Regarding Addendum #01, at "Bidder's Questions", Item #3.015, the response was in part, "EC owes Usage Costs for "Temp Electric"This is highly unusual for Electrical Contractors. G.C.'s always have this as a part of their responsibility. Please reconsider this portion of the Job and Specs and take this out of the EC's scope. Also, is West Whiteland Twp. assuming the costs for ALL Utility Fees? If not an "ALLOWANCE" should be established within the Bid Docs so that everyone is Bidding the same thing. There is no way to know what Utility Fees will be before Bid Time.

Response: Electrical Contractor shall pay electrical service and usage costs as stated in Addendum 1. Bidder shall use their own experience and/or research to determine electrical usage costs. Township is paying PECO engineering and

connection fees for Primary service as stated in Addendum 1. The connection fee includes the cost of the primary wire being pulled by PECO.

- 3.053 **Question:** Regarding Drawing E501 we have the Following Questions: 1) At Feeder Legend #1, it shows (4) 15kv, #4/0 Cables to be installed. Please revise this to show (3) Cables. 2) Again, if this is PECO's domain, at all New Services, PECO requires the Contractor to install 34kv, #1/0 Aluminum High Voltage Cable. Please clarify. 3) Per the Base Bid Single Line, from the Generator 3000A Breaker to ATS #2, it shows Feeder Legend #9. Shouldn't this be Feeder #2? 4) Feeder Legend #4 shows 3" Conduits, however, per Drawing SE 101, Duct Bank "G" shows 4" Conduit to Panels NB1 & NB2. Which is correct?
Response: 1&2) Revised to 35kv (3) #1/0 AL cables. 3) Revised to feeder type #2. 4) 3" conduit.
- 3.054 **Question:** Regarding Addendum #01, at "Bidder's Questions", Item #3.015, if this is PECO's domain, PECO does not provide or install Primary Cables. Please clarify.
Response: The project is under PECO's domain.
- 3.055 **Question:** Regarding Drawing E201, at Area 1, a "Knox Box" is shown. Who is responsible for providing this Device? Usually this is provided by the G.C.
Response: Knox box shall be furnished and installed by General Contractor.
- 3.056 **Question:** Regarding Drawing SE 101, Duct Bank "A", if the required clearances are maintained between Electric and Communication Conduits is the "Solid Barrier" still required? If so, please provide Spec. Details for the Barrier.
Response: Barrier per PECO requirements.
- 3.057 **Question:** Regarding Spec. 001113, "Bid Advertisement", it states: "Questions shall be submitted in writing by E-Mail.....attn. Courtney Anspach at publicworksfacility@westwhiteland.org. There are many questions within Addendums #1 and #2 that we do not see on PennBid. Will these be uploaded to PennBid? We submitted questions per the above referenced Spec and we were told to submit Questions to PennBid. Is this correct?
Response: All questions in Addenda are posted on PennBid. PennBid forwards all questions to West Whiteland Township and Courtney Anspach. No questions have been added to the addenda that are not submitted on PennBid. All questions must be submitted to PennBid in order to be addressed via addenda.
- 3.058 **Question:** The specifications contain section 285500 Survey for Emergency Responder Radio System and 275319 ERRCS. Generally, the survey is included under the base bid to determine the system requirements and the ERRCS is provided with a change order once the system requirements are determined. Is that the intent for this project since the system requirements are not known at this time?
Response: Assume system with (10) antennas in building 'A' evenly distributed for bidding purposes.

3.059 **Question:** What size Rip Rap is required for the Sediment Forebay Rip Rap Berms at the Rain Gardens?

Response: R-3 core, faced with AASHTO 57.

ATTACHMENTS**General:**

Revised RCO Contractor Responsibility Certification

Specifications:

011200 – Multiple Contract Summary
004117 - BID FORM for Civil Construction
004121 - BID FORM for Fire Suppression
223000 – PLUMBING EQUIPMENT

Drawings:

Aqua Sketches D-1 and F-1
A100 Site Plan
P201 FIRST FLOOR PLAN - BUILDING A - SUPPLY PIPING

END OF ADDENDUM



(TO BE SUBMITTED WITH BID)

CONTRACTOR RESPONSIBILITY CERTIFICATION

I, _____ as the _____
of _____ [Name of Company submitting bid] submit
this Contractor Responsibility Certification as part of the bid documents for the West Whiteland
Township – Public Works Facility Contract and hereby certify under penalty of perjury that
_____ [Name of Company submitting bid] meets the
requirements of the RCO Ordinance. I certify specifically as follows:

(1) _____ [Name of Company submitting bid] and its employees
have all licenses, registrations, certificates or other credentials required by federal and state law
and the laws of the Township with respect to the contract for the Township's Public Works Facility
that it seeks to self-perform.

(2) _____ [Name of Company submitting bid] meets the bonding
requirements for the contract required by law or contract specifications, as well as applicable
insurance requirements for the contract, including general liability, workers compensation and
unemployment insurance.

(3) _____ [Name of Company submitting bid] has not been debarred
or suspended by any federal, state or local government agency or authority in the past three years.

(4) _____ [Name of Company submitting bid] has not defaulted on
any project in the past three years.

(5) _____ [Name of Company submitting bid] has not had any type of business, contracting or trade license, registration or certification revoked or suspended in the past three years.

(6) _____ [Name of Company submitting bid] and its principals/owners have not been convicted of any crime relating to its contracting business in the past ten years.

(7) Within the past three years, _____ [Name of Company submitting bid] has not been found in violation of any law applicable to its contracting business, including, but not limited, to licensing laws, tax laws, wage and hour laws, prevailing wage laws, environmental laws or others, where the result of such violation was the payment of a fine, back pay damages or any other type of penalty in the amount of \$5,000 or more.

(8) _____ [Name of Company submitting bid] shall employ a sufficient number of craft labor personnel required to successfully perform any project work it self-performs or shall use qualified subcontractors to meet this requirement and shall assign workers to perform only work in their respective craft or trade for which they have sufficient skills and training, or shall use qualified subcontractors to meet this requirement.

(9) _____ [Name of Company submitting bid] will pay all craft employees on the project, at a minimum, the applicable wage and fringe benefit rates, as established for the classification in which the worker is employed, in accordance with the Pennsylvania Prevailing Wage Act, 43 P.S. §§ 165-1 - 165-17 or the Federal Davis Bacon Act, 40 U.S.C. § 276a *et. seq.*, as applicable.

(10) _____ [Name of Company submitting bid] will ensure that all craft labor it employs on the project will have completed, prior to working on the project the OSHA 10-

hour training course for safety established by the U.S. Department of Labor. If the firm is a prime contractor, it shall also ensure that at least one person on the project has completed the OSHA 30-hour construction training course established by the U.S. Department of Labor.

(11) _____ [Name of Company submitting bid] participates in an apprenticeship program for each separate trade or classification it which it employs craft employees and shall continue to participate in such program or programs for the duration of the project.

a. For purposes of this section an apprenticeship program must be currently registered with and approved by the US Department of Labor or a state apprenticeship agency and has graduated apprentices to journey-person status for at least three (3) of the past five (5) years, or every year since the firm's establishment.

b. If a firm is identified as the lowest responsible bidder or otherwise selected as the prospective awardee or as a subcontractor of an awardee, it shall provide appropriate documentation as determined by the Township, to verify it meets the requirements of this section for each trade classification of craft workers it will employ on the project. This verification shall be provided prior to performance of work by the firm.

(12) _____ [Name of Company submitting bid] shall assign craft labor personnel who only work in the craft or trade in which they are employed.

(13) _____ [Name of Company submitting bid] has all other technical qualifications and resources, including equipment, personnel and financial resources, to successfully perform the referenced contract and shall maintain such capabilities throughout the duration of the project, or will obtain same through the use of qualified, responsible subcontractors or vendors.

(14) _____ [Name of Company submitting bid] shall notify the Township within seven days of any material changes in its operation that relate to any matter attested to in this certification.

The Certification is made subject to the Penalties of 18 Pa C.S.A. Section 4904, relating to unsworn falsification to authorities.

By: _____
(Name)

Witness: _____
(Name)

(Title)

(Date)

(Date)

Sworn to and subscribed before me this ____ day of _____, 2023

NOTARY PUBLIC

My Commission Expires:

SECTION 004117 - BID FORM

ADDENDUM 3

BID FORM

FOR

CONTRACT NUMBER: 2

CONTRACT NAME: Civil Construction

FOR

New Construction of West Whiteland Public Works Facility

121 Valley Creek Boulevard, Exton, PA 19341

Proposal of: (Name) _____

(Address) _____

(Telephone) _____

(Contact Person) _____

***West Whiteland Township
101 Commerce Drive
Exton, PA 19341***

In conformity with the Plans and Specifications as prepared by Schrader Group Architecture LLC, 161 Leverington Ave, Ste 105, Philadelphia PA 19127, after an examination of the site and the Bidding and Contract Documents, the undersigned submits this proposal and enclosed herewith a bond in an amount of not less than ten percent (10%) of the total of the hereinafter stated Base Bid, made payable to or indemnifying the "West Whiteland Township, 101 Commerce Drive, Exton, PA 19341", which it is understood will be held by the Owner, as security as provided in the Instructions to Bidders, if this proposal or any part thereof is accepted by the Owner, and the undersigned shall fail to furnish approved bonds and execute the Agreement within ten (10) days from the date of issuance of the award. Should the Owner fail to make an award on this project through no fault or failure on the part of the Bidder, then the Owner shall return said bid security.

It is hereby certified that the undersigned is the only person(s) interested in this proposal as principal, and that the proposal is made without collusion with any person, firm or corporation.

The Bidder submits herewith, as such, a Non-Collusion Affidavit in accordance with the provisions of the Pennsylvania Anti-bid-Rigging Act of October 28, 1983.

Bidder hereby agrees to execute the Agreement and furnish surety company bonds in the amount of one hundred percent (100%) of the Contract Price for the Performance Bond and Labor and Material Payment Bond, within ten (10) days after mailing by the Owner of notice of award, and to begin work with ten (10) days after date of Notice to Proceed.

Bidder guarantees that, if awarded contract, he will furnish and deliver all materials, tools, equipment, tests transportation, secure all permits and licenses, do and perform all labor, supervision and all means of construction, pay all fees and do all incidental work, and to execute, construct and finish, in an expeditious, substantial and workmanlike manner, in accordance with the plans and specifications, to the complete satisfaction and acceptance of the Owner, for the Work of this Contract for the **New Construction of West Whiteland Public Works Facility**.

It is understood that the Owner, reserves the right to reject any or all proposals, or part thereof, or items therein and to waive technicalities required for the best interest of the Owner. It is further understood that competency and responsibility of bidders will receive consideration before the award of the contract. A certified copy of the Contractor's Qualification Statement, AIA Document A-305 will be submitted as part of this bid.

Bidders submit this proposal with the understanding that the work shall be substantially complete by the dates indicated in Supplemental Instruction to Bidders, Item 18, Time for Completion. The time for completion of the work of all contracts shall be considered as of the essence of this Contract. Liquidated Damages do apply to this Project and are further described in Supplemental Instructions to Bidders, Item 18C.

The Contractor understands and agrees the **TIME IS OF THE ESSENCE** and that all schedule dates are minimum performance dates, notwithstanding anything to the contrary contained in the Contract Documents, should the progress of the Project be ahead of schedule dates, the Contractor agrees to coordinate and complete its Work in accordance with the actual Project Progress and the actual pace of the Project without additional compensation.

The bidder agrees that he will not assign his bid or any of his rights or interests thereunder without the written consent of the Owner. In the event of a discrepancy between the verbiage (words) and numbers entered here below, the verbiage shall govern.

Bid Withdrawal

This proposal is submitted with the definite understanding that it will not be withdrawn for a period of sixty (60) days after Bids are due, or any authorized postponement thereof, except as provided by law (73 P.S. §1602, as amended).

THE BID, as called for, is submitted as follows:

Item A. BASE BID:

For all ~~Civil General~~ Construction – Work, complete, for the New Construction of West Whiteland Public Works Facility, as shown and specified in the Contract Documents, for the lump sum of:

Dollars (\$ _____ **)**

ALTERNATES: The Bidder agrees that the Owner shall have the right to accept or reject any or all of the following alternates, which acceptance or rejection shall enter into the determination of the low bidder. The Bidder agrees that the contract time shall not be increased on account of the acceptance of any one or combination of alternates unless specifically stated in such Alternate descriptions. The Bidder agrees that the Owner shall have the right to accept an alternate that is higher in price than the base bid or other alternate. Alternates Prices shall include the cost of furnishing, installing all materials, labor, tools, equipment and other incidentals necessary to complete the work in accordance with the design intent, manufacturers' recommendations, building codes and the project specifications. Indicate whether alternate price is an add or deduct when a choice is provided. Alternates left blank or indicated as "Not Applicable" (N/A) shall be considered the same as "No Change in Cost."

ALTERNATE No. 1: The Bidder shall state the adjustment in price from the base bid to reduce the Emergency Generator scope to include only Emergency Power and Emergency Lighting.

ADD / DEDUCT _____ Dollars.
(Words)
(\$ _____)
(Figures)

ALTERNATE No. 2: The Bidder shall state the adjustment in price from the base bid to delete the Wash Bay of Building A from Grid Line 15 to 16. End wall along Grid Line 16 moves to Grid Line 15 for a reduction in Building A length by 19'- 8".

ADD / DEDUCT _____ Dollars.
(Words)
(\$ _____)
(Figures)

ALTERNATE No. 3: The Bidder shall state the adjustment in price from the base bid to delete canopies on Building A as identified in 2/A101.

ADD / DEDUCT _____ Dollars.
(Words)
(\$ _____)
(Figures)

ALTERNATE No. 4: The Bidder shall state the adjustment in price from the base bid to delete the Kalwall Translucent Panels on the east end of Building A identified as window frame type W4 and shown on 2/A201 and A602..

ADD / DEDUCT _____ Dollars.
(Words)
(\$ _____)
(Figures)

ALTERNATE No. 5: The Bidder shall state the adjustment in price from the base bid to provide power and lighting to the Service Pit in Mechanic's Bay 12 of Building A. See Electrical Drawings and Specifications.

ADD / DEDUCT _____ Dollars.
(Words)
(\$ _____)
(Figures)

ALTERNATE No. 6: The Bidder shall state the adjustment in price from the base bid to delete Building C in its entirety. Area of Building Footprint to be grass.

ADD / DEDUCT _____ Dollars.
(Words)
(\$ _____)
(Figures)

UNIT PRICES: OWNER shall make adjustments to the Contract based on the actual field conditions encountered using the Unit Prices included with the Bid. The BIDDER agrees that OWNER reserves the right to reject or otherwise not agree to use the Unit Prices submitted, if in the Owner's opinion, the nature or quantity of the Work encountered is such that the Unit Price cost no longer applies to the Work. The Owner also reserves the right to solicit independent proposals as required by the Department of Education guidelines, under a separate contract, to perform the services required. **The responsiveness of the Bid, and if the Bid is responsible, may be determined by the Owner on the basis of the Unit Prices proposed by the Bidder. Unit Prices shall be consistent with verifiable average costs for the Work to be performed. Bidders agree that a Bid may be rejected if the Unit Prices submitted are inconsistent with**

the average cost. Under NO circumstances will BIDDER perform Unit Price Work without prior written authorization from OWNER. Unit Prices shall include costs for furnishing and installing all materials, labor, tools, equipment, and other incidental costs necessary to complete the specified operation. Unit Prices will be used to ADD/DEDUCT to the Contract cost where appropriate. The Bidder agrees that in the event of any inconsistency between a Unit Price and the extension of a Unit Price in a Material Allowance, the Unit Price shall control, the Material Allowance extension shall be recalculated

UNIT PRICE 1: N/A

\$ _____ **per panel**

UNIT PRICE 2: N/A

\$ _____ **per panel**

UNIT PRICE 3: BIDDER agrees to provide satisfactory engineered soils with proper compaction.
(ADD/DEDUCT cost):

\$ _____ **per cubic yard**

Name of Contractor

ATTACHMENTS:

The following Documents are attached and are made a condition of this Bid:

- a. Non-collusion Affidavit
- b. Bid Bond
- c. Contractor Qualification Statement
- d. Contractor Integrity
- e. Non-Discrimination Clause
- f. Commonwealth of PA – Public Works Employment Verification Form

ACCEPTANCE OF ADDENDA:

In submitting this proposal, I have received and included in this bid, the instructions and information contained in the following Addenda:

Addendum No.

Dated

SIGNATURES

The Undersigned here certifies that this Proposal is genuine and not a sham, collusive or fraudulent or made in the interest of or in behalf of any person, firm or corporation not herein named; and that the Undersigned has not, directly or indirectly, inducted or solicited any bidder to submit a sham bid, or any other person, firm or corporation from bidding, and that the Undersigned has not, in any manner, sought by collusion to secure for himself any advantage over any other Bidder.

(Individual Bidder)

Seal

WITNESS

Trading and doing business as

Business

Address: _____

** If a fictitious trade name is employed in the conduct of business, insert such name and complete appropriate, by deletion, the following sentence:

The foregoing fictitious trade name (has) (has not) been registered under Pennsylvania Law.

(Partnership Bidder)

_____ **Seal**

WITNESS

_____ **Partner** _____ **Seal**

_____ **Partner** _____ **Seal**

_____ **Partner** _____ **Seal**

Business Address:

** If a fictitious or trade name is employed in the conduct of business, insert such name and complete, as appropriate, by deletion, the following statement:

The foregoing fictitious or trade name (has) (has not) been registered under Pennsylvania law.

Complete, as appropriate, the following statement:

The Partners constituting the Partnership are:

(Corporate Bidder)

(Name of Corporation)

By: _____
(Vice) President

ATTEST:

(Asst.) Secretary

(Corporate Seal)

Business Address: _____

OR (If appropriate)

(Name of Corporation)

WITNESS

***By: _____
Authorized Representative

Business Address: _____

*** Complete, as appropriate, the following statement:

The Corporation has been organized and is existing under the
laws of the _____ of _____
(state/commonwealth) (state)

END OF CC BID FORM 004117

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SECTION 004121 - BID FORM

ADDENDUM 3

BID FORM

FOR

CONTRACT NUMBER: 6

CONTRACT NAME: Fire Suppression Construction

FOR

New Construction of West Whiteland Public Works Facility

121 Valley Creek Boulevard, Exton, PA 19341

Proposal of: (Name) _____

(Address) _____

(Telephone) _____

(Contact Person) _____

***West Whiteland Township
101 Commerce Drive
Exton, PA 19341***

In conformity with the Plans and Specifications as prepared by Schrader Group Architecture LLC, 161 Leverington Ave, Ste 105, Philadelphia PA 19127, after an examination of the site and the Bidding and Contract Documents, the undersigned submits this proposal and enclosed herewith a bond in an amount of not less than ten percent (10%) of the total of the hereinafter stated Base Bid, made payable to or indemnifying the "West Whiteland Township, 101 Commerce Drive, Exton, PA 19341", which it is understood will be held by the Owner, as security as provided in the Instructions to Bidders, if this proposal or any part thereof is accepted by the Owner, and the undersigned shall fail to furnish approved bonds and execute the Agreement within ten (10) days from the date of issuance of the award. Should the Owner fail to make an award on this project through no fault or failure on the part of the Bidder, then the Owner shall return said bid security.

It is hereby certified that the undersigned is the only person(s) interested in this proposal as principal, and that the proposal is made without collusion with any person, firm or corporation. The Bidder submits herewith, as such, a Non-Collusion Affidavit in accordance with the provisions of the Pennsylvania Anti-bid-Rigging Act of October 28, 1983.

Bidder hereby agrees to execute the Agreement and furnish surety company bonds in the amount of one hundred percent (100%) of the Contract Price for the Performance Bond and Labor and Material Payment Bond, within ten (10) days after mailing by the Owner of notice of award, and to begin work with ten (10) days after date of Notice to Proceed.

Bidder guarantees that, if awarded contract, he will furnish and deliver all materials, tools, equipment, tests transportation, secure all permits and licenses, do and perform all labor, supervision and all means of construction, pay all fees and do all incidental work, and to execute, construct and finish, in an expeditious, substantial and workmanlike manner, in accordance with the plans and specifications, to the complete satisfaction and acceptance of the Owner, for the Work of this Contract for the **New Construction of West Whiteland Public Works Facility**.

It is understood that the Owner, reserves the right to reject any or all proposals, or part thereof, or items therein and to waive technicalities required for the best interest of the Owner. It is further understood that competency and responsibility of bidders will receive consideration before the award of the contract. A certified copy of the Contractor's Qualification Statement, AIA Document A-305 will be submitted as part of this bid.

Bidders submit this proposal with the understanding that the work shall be substantially complete by the dates indicated in Supplemental Instruction to Bidders, Item 18, Time for Completion. The time for completion of the work of all contracts shall be considered as of the essence of this Contract. Liquidated Damages do apply to this Project and are further described in Supplemental Instructions to Bidders, Item 18C.

The Contractor understands and agrees the **TIME IS OF THE ESSENCE** and that all schedule dates are minimum performance dates, notwithstanding anything to the contrary contained in the Contract Documents, should the progress of the Project be ahead of schedule dates, the Contractor agrees to coordinate and complete its Work in accordance with the actual Project Progress and the actual pace of the Project without additional compensation.

The bidder agrees that he will not assign his bid or any of his rights or interests thereunder without the written consent of the Owner. In the event of a discrepancy between the verbiage (words) and numbers entered here below, the verbiage shall govern.

Bid Withdrawal

This proposal is submitted with the definite understanding that it will not be withdrawn for a period of sixty (60) days after Bids are due, or any authorized postponement thereof, except as provided by law (73 P.S. §1602, as amended).

THE BID, as called for, is submitted as follows:

Item A. BASE BID:

For all **Fire Suppression Electrical** Construction – Work, complete, for the New Construction of West Whiteland Public Works Facility as shown and specified in the Contract Documents, for the lump sum of:

Dollars (\$ _____)

ALTERNATES: The Bidder agrees that the Owner shall have the right to accept or reject any or all of the following alternates, which acceptance or rejection shall enter into the determination of the low bidder. The Bidder agrees that the contract time shall not be increased on account of the acceptance of any one or combination of alternates unless specifically stated in such Alternate descriptions. The Bidder agrees that the Owner shall have the right to accept an alternate that is higher in price than the base bid or other alternate. Alternates Prices shall include the cost of furnishing, installing all materials, labor, tools, equipment and other incidentals necessary to complete the work in accordance with the design intent, manufacturers' recommendations, building codes and the project specifications. Indicate whether alternate price is an add or deduct when a choice is provided. Alternates left blank or indicated as "Not Applicable" (N/A) shall be considered the same as "No Change in Cost."

ALTERNATE No. 1: The Bidder shall state the adjustment in price from the base bid to reduce the Emergency Generator scope to include only Emergency Power and Emergency Lighting.

ADD / DEDUCT _____ Dollars.

(Words)

(\$ _____)

(Figures)

ALTERNATE No. 2: The Bidder shall state the adjustment in price from the base bid to delete the Wash Bay of Building A from Grid Line 15 to 16. End wall along Grid Line 16 moves to Grid Line 15 for a reduction in Building A length by 19'- 8".

ADD / DEDUCT _____ Dollars.

(Words)

(\$ _____)

(Figures)

ALTERNATE No. 3: The Bidder shall state the adjustment in price from the base bid to delete canopies on Building A as identified in 2/A101.

ADD / DEDUCT _____ Dollars.
(Words)
(\$ _____)
(Figures)

ALTERNATE No. 4: The Bidder shall state the adjustment in price from the base bid to delete the Kalwall Translucent Panels on the east end of Building A identified as window frame type W4 and shown on 2/A201 and A602..

ADD / DEDUCT _____ Dollars.
(Words)
(\$ _____)
(Figures)

ALTERNATE No. 5: The Bidder shall state the adjustment in price from the base bid to provide power and lighting to the Service Pit in Mechanic's Bay 12 of Building A. See Electrical Drawings and Specifications.

ADD / DEDUCT _____ Dollars.
(Words)
(\$ _____)
(Figures)

ALTERNATE No. 6: The Bidder shall state the adjustment in price from the base bid to delete Building C in its entirety. Area of Building Footprint to be grass.

ADD / DEDUCT _____ Dollars.
(Words)
(\$ _____)
(Figures)

ADD / DEDUCT _____ Dollars.
(Words)
(\$ _____)
(Figures)

Name of Contractor

ATTACHMENTS:

The following Documents are attached and are made a condition of this Bid:

- a. Non-collusion Affidavit
- b. Bid Bond
- c. Contractor Qualification Statement
- d. Contractor Integrity
- e. Non-Discrimination Clause
- f. Commonwealth of PA – Public Works Employment Verification Form

ACCEPTANCE OF ADDENDA:

In submitting this proposal, I have received and included in this bid, the instructions and information contained in the following Addenda:

Addendum No.

Dated

SIGNATURES

The Undersigned here certifies that this Proposal is genuine and not a sham, collusive or fraudulent or made in the interest of or in behalf of any person, firm or corporation not herein named; and that the Undersigned has not, directly or indirectly, inducted or solicited any bidder to submit a sham bid, or any other person, firm or corporation from bidding, and that the Undersigned has not, in any manner, sought by collusion to secure for himself any advantage over any other Bidder.

(Individual Bidder)

Seal

WITNESS

Trading and doing business as

Business

Address: _____

** If a fictitious trade name is employed in the conduct of business, insert such name and complete appropriate, by deletion, the following sentence:

The foregoing fictitious trade name (has) (has not) been registered under Pennsylvania Law.

(Partnership Bidder)

_____**Seal**

WITNESS

_____ **Seal**
Partner

_____ **Seal**
Partner

_____ **Seal**
Partner

Business Address:

** If a fictitious or trade name is employed in the conduct of business, insert such name and complete, as appropriate, by deletion, the following statement:

The foregoing fictitious or trade name (has) (has not) been registered under Pennsylvania law.

Complete, as appropriate, the following statement:

The Partners constituting the Partnership are:

(Corporate Bidder)

(Name of Corporation)

By: _____
(Vice) President

ATTEST:

(Asst.) Secretary

(Corporate Seal)

Business Address: _____

OR (If appropriate)

(Name of Corporation)

WITNESS

***By: _____
Authorized Representative

Business Address: _____

*** Complete, as appropriate, the following statement:

The Corporation has been organized and is existing under the
laws of the _____ of _____
(state/commonwealth) (state)

END OF FSC BID FORM 004121

SECTION 011200 - MULTIPLE CONTRACT SUMMARY

ADDENDUM 3

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Description of Contracts.
- B. General Coordination and distribution of work between prime contracts.
- C. Refer to other Sections and Drawings for further descriptions of work and coordination.

1.2 RELATED SECTIONS

- A. Section 011100 - SUMMARY OF WORK
- B. Section 013200 – CONSTRUCTION PROGRESS DOCUMENTATION
- C. Section 015100 - TEMPORARY UTILITIES AND FACILITIES

1.3 SAFETY - LEAD CONTRACTOR DESIGNATION

The ~~Construction Manager~~ **General Contractor** shall be designated as the “Lead Contractor **and Controlling Entity for Jobsite Safety**” with respect to jobsite safety. Responsibilities and authority of the Contractor shall be as follows:

- A. Where the work of one (1) Contractor places another contractor’s workers in jeopardy, the “Lead Contractor” shall direct and coordinate the effort of the Contractors to ensure that jobsite safety is maintained. The lead Contractor will be responsible to inspect and maintain safe working conditions on the jobsite.
- B. The lead contractor will maintain a “competent person” on site at all times designated to make safety inspections and to serve as the designated representative in charge of safety during inspection by OSHA employees.
- C. The lead Contractor may direct another Contractor to make corrections in the event of a safety violation. Failure of another Contractor to take prompt action (within 24 hours following written notice) to correct a safety violation shall empower the lead Contractor to make the necessary corrections and to receive full compensation for such corrections directly from the Owner. The Architect and engineer will verify and provide documentation of time and material expended to make corrections. The Owner in turn will recover the amount of the expense from the offending Contractor through deduct Change Order.
- D. The lead Contractor’s responsibilities and corresponding authority shall be as defined in the General Conditions of the Contract for Construction.
- E. The individual Prime Contractors will maintain primary responsibility for the safety of their workers. The “Lead Contractor” will serve to identify areas of concern

and will endeavor to accomplish required corrections through cooperation of other Prime Contractors. In the event this effort is unsuccessful, the "Lead Contractor" will take action as defined above.

- F. The Owner will support the decisions and action taken by the "Lead Contractor" to maintain jobsite safety. The Owner will promptly make payment to the "Lead Contractor" when corrective action has been taken on behalf of an offending Contractor, and the "Lead Contractor" has provided appropriate documentation.
- G. Lead Safety Contractor shall provide monthly (with Payment Application per payment terms) safety inspections and reports by an independent safety consultant. Periodic inspections and reports shall be performed at least once every three months.
- H. Each contractor shall provide a safety representative who is trained in first aid and CPR.

1.4 DESCRIPTION OF CONTRACTS

- A. The work of this project shall be performed under 6 Prime Contracts as defined in this Section.
- B. The following is a list of the Prime Contracts to be bid for this project:
- C. Contract 1 General Construction
Contract 2 Civil Construction
Contract 3 Plumbing Construction
Contract 4 Mechanical Construction
Contract 5 Electrical Construction
Contract 6..... Fire Suppression Construction
- D. The General Conditions and Division 1 - General Requirements shall apply to all Prime Contracts and Subcontracts for this Project. Each Prime Contract Package Description is to include all Work in accordance with the Contract Documents, except Work covered by other Prime Contract Package Descriptions. Collectively, these Prime Construction Contracts include all materials, labor, supervision, transportation, tools, equipment and services for the Project as shown or implied on the drawings and specified herein, or as may be required or necessary for a complete and satisfactory job.
- E. If there is a conflict on a specific item with regards to assignment of work to a specific contractor between the Contract Documents and the Prime Contract Package Description as stated herein, the Prime Contract Package Description will govern; however, if an item is covered in the Contract Documents, but not reiterated in the Prime Contract Package Description, the Bidder will be responsible for that item of work.

If an item is covered in two or more contract package descriptions, each Contractor shall include the item at the time of bid. After Contract award, a credit will be solicited for work in question.

- F. Each Contractor shall supervise his Work, using his best skills and attention. He shall be solely responsible for construction means, methods, techniques, sequences, dimensions and procedures and/or coordinating all portions of their Work, with all Work to be performed under separate contracts and/or other Bid Packages. Refer to the General Conditions Article 6 on work by Separate Contractors or by owner.
- G. All items of work listed under the Prime Contract Package Descriptions shall be provided by the Prime Contractor unless specifically noted as furnished or installed only.
- H. All Prime Contractors shall maintain site conduct in accordance with the rules and procedures specified under the General Conditions.
- I. All Prime Contractors shall maintain, contribute to and coordinate the schedule as outlined in Specification Section 013200.
- J. Contract Documents include all Drawings, Specifications, Contract Descriptions, etc. for the work of NEW CONSTRUCTION PROJECT FOR WEST WHITELAND PUBLIC WORKS FACILITY. Each Prime Contractor shall review all Documents in their entirety.
- K. The Architect will secure and the Owner will pay for the Building Permit. All other fees and permits are the responsibility of the appropriate Prime Contractors.
- L. The Installing Prime Contractors will provide testing services all work as indicated in the technical specifications. The Owner will provide quality assurance testing as part of Section 014100, unless indicated otherwise.
- M. Each Prime Contractor shall be responsible to return all laydown, storage and work areas to their original condition except areas designated on the site utilization plan, which shall be the responsibility of the General Contractor. Confirmation of completion of this requirement shall be necessary prior to release of final payment.
- N. Definitions:

Coordinate: The term "coordinate" means "to cooperate with related trades to furnish and install all connections between the trades in correct sequence size and location to create a complete system ready for intended use."

Verify: The term "verify" means "to measure, investigate, review, test, check the accuracy or correctness of and prove by demonstration, evidence, or testimony the location, size, dimension and condition of an item."

Furnish: The term "furnish" is used to mean "supply and deliver to the project site, ready for unloading, unpacking, assembly, installation and

similar operations."

Install: The term "install" is used to describe operations at the project site including the actual "unloading, unpacking, assembly, erection, placing, anchoring, applying, working to dimension, finishing, curing, performing, coordinating with other trades, protecting, cleaning, and similar activities".

Provide: The term "provide" means "to furnish and install, complete and ready for the intended use."

O. The following items are to be included in each Prime Contractor's Scope of Work:

1. Coordinate all work with other Prime Contractors.
2. Submit shop drawings, samples, schedules, data, manuals, as-built drawings, etc., required by the Contract Documents. Update, on a weekly basis, a record set of drawings in the field office. A final set of drawings of this Contractors work shall be submitted to the Architect upon the completion of the work.
3. Observe and comply with at all times all Federal and State laws and regulations, and local bylaws, ordinances and regulations in any manner affecting the conduct of the work or applying to employees on the project, as well as all safety precautions and orders or decrees which have been promulgated or enacted, or which may be promulgated or enacted, by legal bodies or tribunals having authority or jurisdiction over the work, materials, equipment, employees, such observance and compliance shall be solely and without qualification the responsibility of this Trades Contractor without reliance on superintendence or direction by the Owner or their Representative. The duty of enforcement of all of said laws, ordinances, regulations, orders or decrees lies with the body of agency promulgating them, not with the Owner or their Representatives.
4. Perform all work in accordance with the project schedule and update as the project progresses.
5. Provide protection of new roofing system, equipment, structure, finishes and landscaping from damage resulting from the work of this contract. Repair any damage promptly to the satisfaction of the Owner.
6. The General Contractor shall provide all engineering and layout for his work. In addition, the General Contractor shall provide and maintain throughout the project all building corners and column centerlines. The General Contractor shall provide floor control lines for the floor consisting of at least two perpendicular control lines per area and finish floor elevations. The General Contractor will provide layout for all walls and partitions. The General Contractor shall provide general layout for site work utilities and all other lay-out for his work. Other Contractors shall coordinate with General Contractor. Each Trade Contractor shall be responsible for all other survey, engineering, layout, etc. required to execute their work. Each Trades Contractor, at his own expense is to provide all stakes, templates and labor required in laying out their work and is responsible for proper execution of the work to the lines and

- grades shown on the drawings or as indicated by the Architect/Engineer.
7. Provide all dewatering required to perform the work of their contract.
 8. Provide safety and protection of persons and property per OSHA, local and state requirements. Provide maintenance of all safety precautions throughout the work of this Contract. Provide protection at floor, wall, and roof penetrations not shown on the drawings, but required for work of this Contract. Provide all safety signage required by OSHA for the work of this Contract. Furnish Company Safety Plan, Hazard Communication Plan, MSDS information and other OSHA required documents to the "Lead Contractor" prior to the start of work.
 9. Promptly address the recommendations made by the "Lead Contractor" for jobsite safety.
 10. If the applicable Contract Documents, laws, ordinances, rules, regulations or orders of any public authority having jurisdiction require any work to specifically be tested, inspected, or approved by someone other than this Trades Contractor, the Contractor will give the Owner and their Representative timely notice of readiness. The Contractor will then furnish the Owner the required certificates of inspection, testing or approval.
 11. Inspection, tests, or approvals by the Owner or their Representative shall not relieve the Trades Contractors from their obligation to perform the work in accordance with the requirements of the Contract Documents.
 12. Provide all fees, Federal, State and Local taxes, special permits, inspections, etc. as required to perform the work of this Contract unless item is specifically identified as being provided by the Owner.
 13. All submittals, shop drawings and product samples must be received no later than ninety (90) days following the date of Notice to Proceed. Those submittals for critical schedule activities must be submitted and approved in time to make required deliveries. Contractors are responsible to make material deliveries to accomplish phase completions. All project submittals, RFI's, and daily field reports will be completed via Procore. Each Prime Contractor must manage their open/required submittals, RFI's, etc. to achieve dates as established in the approved project schedule.
 14. No guns, illegal drugs, tobacco products or alcoholic beverages will be allowed on this project.
 15. The Owner and their Representatives will at all times have access to the work. In addition, authorized representatives and agents of any participating State of Pennsylvania, or local authority having jurisdiction representative(s) shall be permitted to inspect all work, materials, and other relevant data and records. This Trades Contractor will provide proper facilities for such access and observation of the work and also for any inspection or testing thereof.
 16. Verify existing conditions prior to start of work and notify Architect/Engineer of any discrepancies.
 17. The General Contractor shall provide for all temporary enclosures of building openings as required to maintain the schedule of the project. Should any Contractor have materials pertinent to the enclosure of the building, that are delayed on the project, which in turn delays the work of other Contractors, or delays the enclosure of the building, that Contractor

- shall be required to provide and/or maintain the temporary enclosures, or materials required to enclose the missing portions of that Contractor's Work.
18. Each Contractor shall provide holes in structural steel as required for the installation of their work with the approval of the Architect and Engineer. The structural reinforcing must be in accordance with the requirements of Specification Section 051200.
 19. Each Contractor shall provide sealants in accordance with Specification Section 079200 in any and all conditions where materials installed by the Contractor abut dissimilar materials (vertical and horizontal joints). Each contractor is also responsible for sealing penetrations required for the scope of that trade.
 20. All Contractors are responsible to clean Contractor's construction vehicle wheels in order to keep mud off paved surfaces.
 21. Each Prime Contractor is responsible for general clean-up and trash removal resulting from the work or employees of that contract. The Construction Manager shall provide construction dumpster(s) as required for the purpose of trash removal for all Prime Contractors. Removal of demolition debris from site will be by the Contractor performing the demolition. Hazardous materials shall not be placed in the dumpster, but should be removed from site by Prime Contractor responsible for material. Those Contractors on site shall provide labor to assist in this cleanup.
 22. All Contractors are responsible to provide dust, toxic fume and noise control for their own work. Noise and vibration or any other construction related activities which create excessive disturbances must be coordinated with the OwnerC in advance of scheduling these activities.
 23. Cutting and Patching:
 - a. Exposed finished materials, structural elements, watertight assemblies, HVAC and electrical equipment and systems.
 - i. Newly Installed Materials: A Contractor, requiring the cutting of openings in new work shall have such openings cut and patched by the trade which installed the work and such cutting and patching shall be at the expense of the Contractor, requiring the opening, unless specified otherwise.
 - ii. Approval to do such cutting and patching shall be received from the architect prior to proceeding with the work and shall include installation of such reinforcement of the work as the Architect may Direct.
 - b. Other locations: Cutting and sealing of penetrations in other locations including fire-stopping shall be by the Contractor requiring the cutting of such openings.
 - c. All blocking, bracing, reinforcement or structural enhancement required due to cutting and patching shall be provided at no additional cost to the owner. All patching work shall match adjacent existing work unless otherwise noted.
 24. Provide Steel and Aluminum product certifications as required under the Steel Products Procurement and Trade Practice Acts otherwise known collectively as the "Buy American" requirements of all Public Works

- Construction Contracts funded in part by the State of Pennsylvania.
25. Building Coordination Drawings: Coordination drawings among the HVAC, Electrical, Plumbing, Fire Suppression & General Contractors are required with the lead role in the coordination drawing process assigned to the Mechanical Contractor. The Mechanical Contractor shall prepare ¼" scale reproducible drawings with new ductwork & piping layout for review by the other Trade Contractors. The other Trade Contractors shall then prepare and provide reproducible additions/modifications representing their work to the Mechanical Contractor, who will then prepare final layout and coordination drawings illustrating work by all Trades on one set of coordination drawings for the project as a part of his Contract price. The Mechanical Contractor shall conduct coordination meetings with all Trade Contractors to discuss and resolve interference problems. Once each Trade Contractor has initialed with approval the coordination drawings, the Mechanical Contractor shall submit the coordination drawings to the Architect and Engineer for review. The other Trade Contractors should finalize their shop drawings in accordance with the coordination drawings and submit to the Architect and Engineer. Schedule: The Mechanical Contractor shall prepare and distribute ductwork, diffuser and piping drawings within 15 days after start of construction. The other Trade Contractors shall then prepare and distribute to the General Contractor their CADD input within 15 days. Final coordination drawings to be completed and distributed by the Mechanical Contractor within 30 days after start of construction. Investigate existing hidden structural conditions and MEP system locations above ceilings as part of coordination. Verify through field observations that proposed coordination drawings can be implemented as planned without the need to have another prime contractor modify existing conditions.
26. Site Coordination Drawings: Coordination drawings among the Civil Contractor and the General Trades, HVAC, Plumbing, Fire Suppression and Electrical Contractors are required with the lead role assigned to the Civil Contractor. The Civil Contractor shall prepare 1" = 20' scale reproducible drawings with the underground piping layout, with elevations, for review by other Trade Contractors. Drawings shall indicate both horizontal and vertical locations. The other Trade Contractors shall then prepare and provide reproducible additions/modifications representing their work to the Civil Contractor, who will then prepare final layout and coordination drawings illustrating work by all Trades on one set of coordination drawings for the project as a part of his Contract Price. The Civil Contractor shall conduct coordination meetings with all Trade Contractors to discuss and resolve interference problems. Once each Trade Contractor has initialed with approval the coordination drawings, the Civil Contractor shall submit the coordination drawings to the Architect and Engineer for review. The other Trade Contractors should finalize their shop drawings in accordance with the coordination drawings, and submit to the Architect and Engineer. Note: Prime Contractors shall coordinate with Construction Manager to incorporate Owner installed facilities including telecommunications and security.

Schedule: The General Contractor shall prepare and distribute underground piping drawings within 25 days after start of construction. The other Trade Contractors shall then prepare and distribute to the Civil Contractor their input within 15 days. Final coordination drawings to be completed and distributed by the Civil Contractor within 55 days after start of construction.

27. Each contractor shall provide temporary railings and protection at all floor openings, stairs, elevated floor perimeters, roof openings, roof perimeters, etc., as required by OSHA for protection of their work. Protection for excavations shall become the sole responsibility of the Trade Contractor conducting the excavation.
28. Each prime contractor shall provide water-tight thru-wall sleeves to ensure proper seal at penetrations through foundation wall systems associated with their work.
29. Each prime contractor is responsible to ensure that all necessary inspection requirements have been performed and completed by authorities having jurisdiction in order to achieve Substantial Completion.
30. Each week Prime Contractors are to provide to the Owner's Designated Project representative a Daily Log that states the number of employees on site each day, work performed each day completed and distributed electronically in submittal exchange; subcontractors, number of employees and work performed each day; any issues; any resolutions to issues; including any temperature and weather conditions.
31. NO Asbestos-containing materials shall be used in this project. Each prime contractor shall submit a certified letter to the Owner at the end of the project indicating no asbestos-containing building materials were used in the construction of the project.
32. All other duties and requirements identified in the Contract Documents.

PART 2 - SEPARATE CONTRACT DESCRIPTIONS

2.1 CONTRACT No. 1 - GENERAL CONSTRUCTION

- A. The work of this Prime Contract Package Description includes, but is not limited to, the Work detailed by the following Specification Sections and as shown or implied and indicated on the Drawings and as described in the narrative Contract Description. The work is not restricted by division of Drawings or Specification. Unless otherwise specifically noted, all work to be performed shall consist of providing all labor, materials, equipment and whatever is necessary to complete the work in accordance with the Specifications and applicable Codes. The use of the wording "General Contractor" shall mean the same as the "General Construction Contractor".
- B. Furnish and install all general construction scope, including all general requirements of the specifications including:

DIVISION 00 - BIDDING AND CONTRACT REQUIREMENTS
All Sections

DIVISION 01 - GENERAL REQUIREMENTS

All Sections

DIVISION 02 – SITE WORK

- **Excavation and backfill for all buildings.**

DIVISION 03 – CONCRETE

- 031000 – Concrete Forming and Accessories
- 032000 – Concrete Reinforcing
- 033000 – Cast-In-Place Concrete
- 033050 – Cast-In-Place Slabs

DIVISION 04 – MASONRY

- 042200 – Unit Masonry

DIVISION 05 – METALS

- 051200 – Structural Steel
- 055000 – Metal Fabrications
- 055213 – Pipe and Tube Railings

DIVISION 06– WOOD, PLASTICS, COMPOSITES

- 061000 – Rough Carpentry
- 061053 – Miscellaneous Rough Carpentry
- 061760 – Metal-Plate Connected Wood Trusses
- 066000 – PVC Wall Panels
- 066510 – Solid Surface Fabrications

DIVISION 07 - THERMAL AND MOISTURE PROTECTION

- 071113 - Bituminous Dampproofing
- 072100 - Thermal Insulation
- 072500 - Moisture Barriers
- 075433 - Thermoplastic Polyolefin (TPO) Roofing
- 076200 - Sheet Metal Flashing and Trim
- 077100 - Roof Specialties
- 079200 - Joint Sealants

DIVISION 08 – OPENINGS

- 081113 - Hollow Metal Doors and Frames
- 081613 - FRP Flush Doors
- 083113 - Access Doors and Frames
- 083310 - Overhead Coiling Doors
- 083613 - Sectional Overhead Doors
- 084113 - Aluminum-Framed Storefronts
- 084523 - Translucent Fiberglass Panel Unit Wall System
- 085200 - Aluminum Windows
- 087100 - Door Hardware
- 088000 – Glazing

DIVISION 09 – FINISHES

- 092900 – Gypsum Board
- 095113 – Acoustical Panel Ceilings
- 096513 – Resilient Base and Accessories
- 096813 – Tile Carpeting
- 099113 – Exterior Painting
- 099123 – Interior Painting
- ~~099733 – Concrete Floor Sealer~~

DIVISION 10 – SPECIALTIES

- 101100 – Visual Display Units
- 101400 – Interior Signage
- 101419 – Dimensional Letter Signage
- 102800 – Toilet and Bath Accessories
- 104413 – Fire Protection Cabinets
- 104416 – Fire Extinguishers
- 105000 – Metal Lockers

~~DIVISION 11 – Equipment~~

- ~~113100 – Residential Appliances~~

DIVISION 12 – Furnishings

- 123216 – Manufactured Plastic-Laminate-Faced Casework

DIVISION 13 – Special Construction

- 133419 – Metal Building Systems

C. Provide Flagpole, flag, and base indicated on Civil drawings.

D. Coordination with all parties: electrical construction, fire-suppression, plumbing construction, HVAC construction, and civil construction.

DIVISION 31 – EARTHWORK

All Sections

DIVISION 32 – EXTERIOR IMPROVEMENTS

All Sections

DIVISION 33 – UTILITIES

All Sections

DIVISIONS 20-34

All Sections (Coordinate and/or provide where applicable)

E. Clarifications, Qualifications, and Exclusions:

1. No building permits are included within this scope of work. The owner has waived all permitting fees for this project.
2. Sales and use tax are included within this scope of work.

3. Each trade's permitting is required to be obtained through the local jurisdiction. Fees for each trade's permitting will be waived by the owner.
 4. Shop drawings, product data, safety data sheets, and submittals are included within this scope of work.
 5. Heim Construction will utilize Procore's Management System for the following: submittals, RFIs, and additional administrative functions. Each contractor will be responsible to coordinate through the Procore Management System.
 6. Provide all winter construction costs necessary to perform your scope of work.
 7. Layout is the responsibility of each contract and is included within this scope of work.
- F. Narrative Description of Contract No. 1 - GENERAL CONSTRUCTION. The work of this Contract includes, but shall not be limited to the following items:
1. Provide all fees, Federal, State and Local taxes and inspections, as required to perform the work of this contract. This does not include the building permit, which will be provided by the Owner.
 2. Provide temporary railings and protection at all floor openings, stairs, elevated floor perimeters, roof openings, roof perimeters, etc., as required by OSHA. Protection for excavations shall become the sole responsibility of the Trade Contractor conducting the excavation.
 3. Provide temporary toilet facilities as per Specification Section 015100.
 4. General Trades Contractor shall be responsible to remove snow from roof surfaces and roof deck in order to facilitate installation of roofing system.
 5. Perform all final cleaning for the project except cleaning work specified to be by another trade.
 6. Provide construction identification sign per Specification Section 015100, and as indicated in the drawings.
 7. Provide all quality control testing as required by the Contract Documents for the work of this Contractor, exclude testing specifically indicated to be provided by the Owner.
 8. General contractor shall provide downspouts, boots and all underground piping related to downspouts. Civil contractor to provide site storm water work as indicated on all drawings including all inlets, headwalls, endwalls, rip-rap and geotextile fabrics required. Plumbing Contractor shall provide all storm water piping within the building to 5' outside the building. Final connection to building pipe shall be by the Plumbing Contractor.
 9. Provide all building related concrete work including footings, foundation walls, slabs on grade, formed slabs, pads, walls, stairs and miscellaneous concrete. Provide all formwork, reinforcing, expansion control, fine grading, stone base, vapor barrier, rigid insulation, finishing, curing, accessories, etc. necessary for this work.
 10. Make provisions for and/or install all items embedded in concrete supplied by other Prime Contractors.
 11. Provide all housekeeping and equipment pads shown on Architectural, and Structural drawings. Confirm and coordinate sizes prior to installation. All housekeeping and equipment pads required but not shown and dimensions on architectural, and structural drawings shall be by the

- contractor requiring the same.
12. Provide all masonry construction including CMU, mortar, grout, flashings, cavity wall insulation, reinforcing and accessories.
 13. Provide concrete floor slab, concrete for stairs and landings. Slope concrete floor slab to floor and trench drain locations.
 14. Provide all masonry including all accessories.
 15. Provide all masonry anchors and structural anchor straps including field welding to structural steel if required.
 16. Provide temporary enclosures, winter protection and heat as required to install work of this contract in conformance with the project schedule.
 17. Provide dowels, embeds, concrete lintels etc. Install anchor bolts, embeds, loose steel lintels, etc., as furnished under other Prime Contracts, and installed in masonry.
 18. Provide grouting of structural members into masonry.
 19. Provide grouting of hollow metal frames in masonry.
 20. Install any access panels in masonry furnished by other Prime Contractors. Coordinate location and openings with Prime Contractors.
 21. Provide all structural steel, metal bar joist, metal deck and miscellaneous metals indicated on the architectural, civil or structural drawings as part of manufactured metal building construction.
 22. The General Trades Contractor is to provide all reinforcing steel. The General Trades Contractor is to provide all shop drawings and submittals associated with the reinforcing steel. The General Trades Contractor shall provide and maintain safety caps on all rebar dowels.
 23. With respect to OSHA requirements for steel erection, the General Contractor shall be the "controlling contractor" responsible to provide written notification for work of their contract, to the steel erector. Please reference OSHA regulations sections 1926.750 thru 1926.752, etc.
 24. Provide openings and framing in all roof decks for other trades with any dimension larger than 12". Contractor requiring opening shall provide layout to General Contractor for openings. Openings with both dimensions smaller than 12" shall be provided by the contractor requiring the opening.
 25. Provide all loose metal lintels as noted and for openings shown on Architectural or Structural drawings and/or as may be required to install the work of this trade. All loose lintels required, but not clearly shown, scheduled or dimensioned on either Architectural or Structural Drawings shall be furnished by the trade requiring the opening. GC to install loose steel lintels furnished by other trades. The prime contractor requiring the opening shall provide lay out for lintel installations to General Contractor in a timely manner.
 26. Provide all miscellaneous metal, metal railings, and cold formed metal fabrications.
 27. Provide all expansion joints and covers not specifically noted to be provided by other prime contracts.
 28. Provide all light gage metal framing.
 29. Provide all rough carpentry including, but not limited to, interior wood blocking - shown or required, wood blocking at windows and roof blocking.

30. Provide all finish carpentry including, but not limited to, custom millwork, and casework.
31. Provide all under slab and foundation insulation per Section 072100.
32. Provide all roofing systems including roofing membrane, metal panels, roof insulation, metal flashing, roof edge, coping, gravel stop, fascia, soffit, gutters, downspouts, scuppers, and roof accessories as part of manufactured metal building construction.
33. Install roof drains furnished by the Plumbing Contractor. Final connection to piping shall be by the Plumbing Contractor.
34. Mechanical Contractor shall furnish curbs as required for all roof-mounted equipment to General Contractor for installation. Wood blocking at roof openings to be provided by the General Contractor. Coordinate blocking locations and requirements with Mechanical Contractor.
35. Provide all joint sealants not specifically assigned to another Prime Contractor.
36. Provide all hollow metal frames and doors.
37. Provide all access doors as shown on Architectural drawings. All other access panels required, but not shown shall be furnished by the contractor requiring the same and installed by the GC.
38. Provide finish hardware for all doors provided as part of this contract.
39. Provide all drywall, metal studs, insulation, and acoustical ceilings and acoustic treatments.
40. Provide all floor base, wall and ceiling finishes including VCT, ceramic tile, and painting.
41. Should floor moisture emissions exceed manufacturers recommended levels for standard adhesive, Contractor shall provide, at no additional cost, appropriate special adhesives or sealers that will allow floors to be installed without adversely affecting the project schedule in accordance with the manufacturer's recommendations.
42. Provide floor and/or wall preparation prior to installation of the materials of this contract, to include normal flash patching, final scraping and sweeping.
43. Clean and polish floors upon completion of installation.
44. Provide for protection of all finished installations under this contractor until acceptance by the owner.
45. Provide painting of exposed HVAC, plumbing, fire protection and electrical systems and equipment in finished spaces (except factory-finished equipment).
46. Provide all Specialties indicated in Division 10 – Specialties.
47. Provide all equipment in Division 11 - Equipment.
48. Provide all furnishings in Division 12 – Furnishings.
49. Provide all conveying systems in Division 14- Conveying Systems.
50. Plumbing Contractor to provide all sinks, fixtures, traps, etc. in Plastic Laminate Faced Casework. Plumbing Contractor to provide all installation and final connections of sinks, faucets, and fittings. Coordinate this work with the Plumbing Contractor, as provided in the contract documents.
51. Electrical Contractor shall provide devices, wiring within casework and final connections for Casework as provided for in the Contract Documents.

52. Review temporary utilities specification for General Contractor's included work.
53. All other duties and requirements identified in the Contract Documents.

2.2 CONTRACT No. 2 - CIVIL CONSTRUCTION

- A. The work of this Prime Contract Package Description includes, but is not limited to, the Work detailed by the following Specification Sections and as shown or implied and indicated on the Drawings and as described in the narrative Contract Description. The work is not restricted by division of Drawings or Specification. Unless otherwise specifically noted, all work to be performed shall consist of providing all labor, materials, equipment and whatever is necessary to complete the work in accordance with the Specifications and applicable Codes. The use of the wording "Civil Contractor" shall mean the same as the "Civil Construction Contractor".
- B. Furnish and install all civil scope, including all general requirements of the specifications including:

DIVISION 00 - BIDDING AND CONTRACT REQUIREMENTS
All Sections

DIVISION 01 - GENERAL REQUIREMENTS
All Sections

DIVISION 02 – SITE WORK
All items noted on Civil Drawings

Civil plan scope: including but not limited to:

- Clearing and Grubbing
- E&S control
- Temporary controls
- Rock construction entrance maintenance
- Rough grading
- ~~Excavation and backfill for all buildings~~
- Unit pricing for import/export of suitable soil
- Underground utilities
- Coordination with Williams (transcontinental gas line company)
 - Rough-in and installation as reviewed and approved by Williams
- Stone grading for exterior housekeeping pads, curbs, sidewalk, and paving
- Paving
- Site signage
- Pavement markings
- Landscaping
- Finish Grading

DIVISION 31 – EARTHWORK

- 312316 Trenching
- All underground conduit and wiring will be furnished and installed by the electrical contractor. Excavation and backfill for the electrical contractor will be addressed by the Civil **Electrical** Contractor.
- All underground utilities: plumbing, sanitary, water, etc., will be furnished and installed by the civil contractor. All fire-suppression and plumbing rough-in will be furnished and installed from 5' outside of all building and into the buildings by the fire-suppression and plumbing contractors. All utilities from 5' outside of all buildings will be furnished, installed, excavated and backfilled by the civil contractor.

DIVISION 33 – UTILITIES

- 337119 Underground Ducts
- All underground conduit and wiring will be furnished and installed by the electrical contractor. Excavation and backfill for the electrical contractor will be addressed by the Civil Contractor.

Coordination with all parties: general construction, electrical construction, fire suppression, plumbing construction, and HVAC construction

C. Clarifications, Qualifications, and Exclusions:

1. No building permits are included within this scope of work. The owner has waived all permitting fees for this project.
2. Sales and use tax are included within this scope of work.
3. Each trade's permitting is required to be obtained through the local jurisdiction. Fees for each trade's permitting will be waived by the owner.
4. Shop drawings, product data, safety data sheets, and submittals are included within this scope of work.
5. Heim Construction will utilize Procore's Management System for the following: submittals, RFIs, and additional administrative functions. Each contractor will be responsible to coordinate through the Procore Management System.
6. Provide all winter construction costs necessary to perform your scope of work.
7. Layout is the responsibility of each contract and is included within this scope of work.

D. Narrative Description of Contract No. 2 - CIVIL CONSTRUCTION. The work of this Contract includes, but shall not be limited to the following items:

1. Provide all engineering and layout required to perform the work of this contract. Utilize a professional licensed surveyor to lay out all building corners, to provide a proper benchmark elevation (or elevations) for new building location and to establish finished slab on grade elevations from those benchmarks. Benchmark(s) will be protected until after all slab on grade work, sidewalks and concrete curb work is completed.
2. Provide incidental erosion and sedimentation control as required for the work of this Trade Contractor's work. The General Trades Contractor will be

responsible for installing and maintaining the erosion and sedimentation control. The General Trades Contractor is responsible to maintain the erosion and sedimentation control measures. The General Trades Contractor is responsible to schedule his work to satisfy D.E.P./County Conservation District and will be responsible for any violations, fine, etc., issued by D.E.P./County Conservation District or other agencies as a result of the work not being installed, completed or maintained.

3. The NPDES permit is to be obtained and paid for by the Owner and transferred, at no cost, to the Contractors. The Civil Contractor and the HVAC Contractor will be named co-permittee holders.
4. Provide general snow removal through-out the project in order to facilitate construction. General Trades Contractor shall be responsible to remove snow from roof surfaces and roof deck in order to facilitate installation of roofing system. Remove snow as required for Site Construction.
5. The Owner has provided temporary construction access drive, parking and staging areas. Civil Contractor to provide and maintain stoned areas for field offices, laydown areas and temporary construction or access roads and restore to final design condition at completion of the project.
6. Provide all sitework including site demolition, clearing, grubbing, stripping, earthwork, excavation and backfill, site water, fire, sanitary & storm, site concrete, paving, landscaping, seeding, mulch and various site improvements and furnishings.
7. Maintain, and remove construction entrances.
8. Provide for sweeping and cleaning all parking lots and roadways during the entire project. Provide for removal off site of all waste or excess materials generated by this work.
9. Provide site storm water work as indicated on all drawings including all inlets, headwalls, endwalls, rip-rap and geotextile fabrics required. ~~Plumbing Contractor shall provide all storm water piping within the building to 5' outside the building. Final connection to building pipe shall be by the Plumbing Contractor.~~ **General Contractor shall connect downspouts to site storm water system.**
10. Provide site sanitary sewer and manholes as indicated on all drawings to a termination within 5' of the building line including sanitary force mains and gravity lines. Final connection to building pipe shall be by the Plumbing Contractor.
11. Provide complete storm water detention system.
12. Provide all general and select demolition except that specifically indicated to be provided by other contractors.
13. The NPDES permit is to be obtained and paid for by the Owner and transferred, at no cost, to the General Contractor. The General Trades Contractor will be responsible to maintain the erosion and sedimentation control. Schedule this work to satisfy D.E.P./County Conservation District. The General Trades Contractor shall be responsible for any violations, fines, etc., issued by D.E.P./County Conservation District or other agencies as a result of the work not being installed, completed or maintained.
14. Verify all underground utilities prior to excavation. Furnish Architect and Engineer with confirmation. The utility lines shown on the drawings were located by field surveys or from utility companies' maps. These lines are not

guaranteed or represented as being accurate by the Owner or their representative, or to be in the position indicated on the drawings. There is no guarantee or representation that all existing lines and facilities are shown on the Drawings. The contractor shall take whatever measures necessary to provide bracing and shoring to protect all existing utilities from damage. No additional payment will be made for protecting utilities, or for providing bracing and shoring. This work will be considered incidental to the work being performed. If the contractor damages existing utilities, he shall immediately notify the Architect and Engineer, the Owner and said utility company and take such measures as are necessary to insure the safety of the workmen, the public, and the project area. He shall arrange to repair immediately all such damages to restore service and the expense incurred will be the responsibility of the contractor.

15. It shall be the contractor's responsibility to comply with all applicable requirements of Act 287, or as amended, in order to contact all utilities within the project site and to have facilities field located and referenced prior to excavation.
16. Provide all site related concrete. Provide all formwork, reinforcing, expansion control, fine grading, stone base, vapor barrier, rigid insulation, finishing, curing, accessories, etc. necessary for this work.
17. Provide bituminous paving, line striping, handicap markings, concrete bumper blocks, road and parking accessories and signs, lawn and grasses as shown or specified.
18. Provide all temporary signage and traffic control measures required by the work of this Contract.
19. Provide all site fences and gates. Provide temporary protection of trees and shrubs. Provide restoration of disturbed lawn areas at the completion of the project. Provide all landscaping, including trees, shrubs, ground covers, plantings, seed, sod, mulch and edging.
20. Provide all excavation cuts and fills, including imports and exports of spoils as necessary to achieve final grades for all areas. General Contractor to accept spoils created as a result of other trades' excavation. The other trades will stockpile excess spoils at a central location on site as determined by the Construction Manager. The General Contractor shall dispose of these spoils on or off site as site conditions dictate and/or permit.
21. Provide all rock excavation as required for the work of this contract. Contractor assumes all risk associated with potential for rock during excavation. Rock will not be considered an unforeseen condition.
22. Provide site water and fire service lines, water meter pit, tap-in, new fire hydrants and fire hydrant relocations with accessories as required. Provide water line to a termination within 5' of the building line. Final connection to building pipe shall be by the Plumbing Contractor.
23. All site electrical work including site lighting is by Electrical Contractor.
24. The General Trades Contractor shall remove all excess materials resulting from the excavations for his work to an offsite location.
25. Provide all site concrete curbs, paving, sidewalks, ramps, steps, stoops and frost walls including reinforcing steel.
26. Clean binder paving and provide tack coat on temporary lots as required for construction phasing. Schedule for placement of binder and topcoat is to be

determined by Owner's designated project representative. Provide temporary line painting of parking lots to be used during construction by the Owner or public prior to top coat finish paving.

2.3 CONTRACT No. 3 – PLUMBING CONSTRUCTION

- A. The work of this Prime Contract Package Description includes, but is not limited to, the Work detailed by the following Specification Sections and as shown or implied and indicated on the Drawings and as described in the narrative Contract Description. The work is not restricted by the division of Drawings or Specification. Unless otherwise specifically noted, all work to be performed shall consist of providing all labor, materials, equipment and whatever is necessary to complete the work in accordance with the Specifications and applicable Codes
- B. Furnish and install all plumbing scope, including all general requirements of the specifications including:

DIVISION 00 - BIDDING AND CONTRACT REQUIREMENTS

All Sections

DIVISION 01 - GENERAL REQUIREMENTS

All Sections

DIVISION 02 THROUGH DIVISION 14

All Sections (Coordinate as applicable)

DIVISIONS 21 and 23

All Sections (Coordinate)

DIVISION 22 – PLUMBING

- 220100 – General Provisions
- 220502 – Excavation, Backfill & Compaction for Utility Trenches
 - Plumbing scope accounts for all interior scope from inside all buildings to 5' outside of all building footprints. Civil contractor will be responsible for all excavation and piping 5' and beyond the exterior foot print of the exterior of the buildings.
- 220516 – Expansion Fittings and Loops for Plumbing Piping
- 220519 – Meters and Gages for Plumbing Piping
- 220548 – Vibration Isolation & Seismic Mountings
- 220553 – Identification for Plumbing Piping and Equipment
- 220719 – Plumbing Piping Insulation
- 221005 – Plumbing Piping
- 221006 – Plumbing Piping Specialties
- 221500 – Compressed Air Systems
- 223000 – Plumbing Equipment
- 223300 – Electric Water Heaters

▪ 224000 – Plumbing Fixtures

DIVISIONS 26-34
All Sections (Coordinate)

C. Clarifications, Qualifications, and Exclusions:

1. No building permits are included within this scope of work. The owner has waived all permitting fees for this project.
2. Sales and use tax are included within this scope of work.
3. Each trade's permitting is required to be obtained through the local jurisdiction. Fees for each trade's permitting will be waived by the owner.
4. Shop drawings, product data, safety data sheets, and submittals are included within this scope of work.
5. Heim Construction will utilize Procore's Management System for the following: submittals, RFIs, and additional administrative functions. Each contractor will be responsible to coordinate through the Procore Management System.
6. Provide all winter construction costs necessary to perform your scope of work.
7. Layout is the responsibility of each contract and is included within this scope of work.

D. Narrative description of CONTRACT No. 3 – PLUMBING CONSTRUCTION: The work of this contract includes, but shall not be limited to the following items:

1. Participate in the coordination drawing process as defined in this specification section.
2. Provide Operation and Maintenance manuals and instructions to Owner as specified.
3. See Architectural & Civil drawings for additional plumbing related notes.
4. Provide layout for the General Contractor indicating all openings in the new floor, roof decks, and exterior walls that have any dimension larger than 12". Openings required as a result of the work of this contract with both dimensions smaller than 12" shall be provided by the Plumbing Contractor, who shall also provide support steel at these openings as required. All other framing, lintels, miscellaneous supports, etc., required but not specifically shown on the Architectural or Structural drawings shall be by this Contractor.
5. Verify existing services prior to start of work in existing facility and notify the Architect and Engineer of any discrepancies.
6. General Contractor to provide all structural steel, miscellaneous metal, including loose lintels, required for the existing building and new building additions as shown or specified on the architectural or structural Drawings. If not indicated on Architectural or Structural Drawings, the Plumbing Contractor will furnish to the General Contractor for installation.
7. Provide all plumbing work including sanitary sewer and vent piping, waste system, domestic water piping and equipment, ~~gas~~ piping, pipe insulation, ~~roof~~ and floor drains, plumbing fixtures, trim, accessories, supports unless

- shown or specified by others, anchorage, etc., as shown and/or specified.
8. Provide a complete ~~storm water~~, sanitary system and ~~gas system~~ as shown on Plumbing & Civil Drawings, to 5' outside of building. Provide final tie-in (of ~~storm~~ sewer and sanitary). Coordinate with General Contractor.
 9. Provide a complete domestic water and sanitary system as shown on Plumbing & Civil Drawings to 5' outside of building. Provide final tie-in (of domestic water and sanitary system). Coordinate work with General Contractor.
 10. Plumbing Contractor to provide oil interceptor and associated piping.
 - ~~11. Plumbing Contractor is responsible for all gas piping for the entire project.~~
 12. Provide color-coding and identification of valves and lines as indicated.
 13. Provide cleaning, disinfecting and testing of lines and equipment, and final inspection.
 14. Provide wall sleeves, flashing, pipe hangers, supports, blocking, etc. as required for installation of fixtures and equipment.
 15. Provide insulation required for the scope of this Contract.
 16. Provide all excavation, bedding and backfill, etc. as necessary to install the work of this Contract within footprint of structures and extend to 5'-0" outside footprint of those structures.
 17. Provide any housekeeping and equipment pads required for equipment (interior or exterior) that are required for the work of this Contract.
 18. Furnish any embeds required to be cast in concrete or masonry to the appropriate Prime Contractor.
 19. Provide concrete at all services crossing under or near foundations that require excavated area to be filled with concrete.
 20. Coordinate with the General Contractor installation of piping installed inside masonry units, include providing any temporary supports that are necessary.
 21. Furnish any access panels, which are required for access to the work by this Contract. Coordinate opening requirements with the General Contractor for installation by GC.
 22. Provide final plumbing connection of Owner Furnished Equipment, as shown and/or specified.
 23. Provide final cleaning of all fixtures.
 24. Plumbing Contractor to provide all sinks, fixtures, traps, etc. in Plastic Laminate Faced Casework. Plumbing Contractor to provide all installation and final connections of sinks, faucets, and fittings. Coordinate this work with the General Contractor, as provided in the contract documents.
 - ~~25. Furnish roof drains, turn over to the General Contractor for installation. Final connection to the roof drain is to be by the Plumbing Contractor.~~
 26. Electrical starters for Plumbing Equipment shall be furnished under the Plumbing Contract and installed and final connected by Electrical Contractor.
 27. Provide temporary water service for construction purposes.
 28. Work must be complete and tested to meet the requirements of PA L&I and local code inspections.
 29. All other duties and requirements identified in the Contract Documents.

- 30. Provide compressed air system.**
- 31. Provide oil distribution system.**

2.4 CONTRACT No. 4 – HVAC CONSTRUCTION

- A. The work of this Prime Contract Package Description includes, but is not limited to, the Work detailed by the following Specification Sections and as shown or implied and indicated on the Drawings and as described in the narrative Contract Description. The work is not restricted by the division of Drawings or Specification. Unless otherwise specifically noted, all work to be performed shall consist of providing all labor, materials, equipment and whatever is necessary to complete the work in accordance with the Specifications and applicable Codes. The use of the wording “HVAC Contractor” or “Heating Contractor” shall mean the same as the “Mechanical Contractor”.
- B. Coordination with all parties: General construction, Electrical construction, Plumbing construction, Fire Suppression construction and Civil construction.

DIVISION 00 - BIDDING AND CONTRACT REQUIREMENTS
All Sections

DIVISION 01 - GENERAL REQUIREMENTS
All Sections

DIVISION 02 THROUGH DIVISION 14
All Sections (Coordinate as applicable)

DIVISIONS 23 – HEATING, VENTILATING & AIR CONDITIONING (HVAC)

- 230501 – HVAC General Requirements
- 230510 – Common Motor Requirements for HVAC Equipment
- 230549 - Vibration Isolation
- 230593 – Testing, Adjusting and Balancing for HVAC
- 230714 – HVAC Duct Insulation
- 230923 – Direct Digital Control (DDC) System
- 230993 – HVAC Control Sequence
- 232300 – Refrigerant Piping
- 233100 – HVAC Ducts and Casings
- 233300 – Air Duct Accessories
- 233416 – HVAC Fans
- 233700 – Air Outlets and Inlets
- 233750 – Wall Louvers
- 238101 – Terminal Heat Transfer Units
- 238129 – Variable Refrigerant Flow HVAC Systems

DIVISION 21,22, 26-34
All Sections (Coordinate)

- C. Clarifications, Qualifications, and Exclusions:

1. No building permits are included within this scope of work. The owner has waived all permitting fees for this project.
2. Sales and use tax are included within this scope of work.
3. Each trade's permitting is required to be obtained through the local jurisdiction. Fees for each trade's permitting will be waived by the owner.
4. Shop drawings, product data, safety data sheets, and submittals are included within this scope of work.
5. Heim Construction will utilize Procore's Management System for the following: submittals, RFIs, and additional administrative functions. Each contractor will be responsible to coordinate through the Procore Management System.
6. Provide all winter construction costs necessary to perform your scope of work.
7. Layout is the responsibility of each contract and is included within this scope of work.

D. Narrative Description of Contract No. 4 - HVAC Construction: The work of this Contract includes, but shall not be limited to the following items:

1. HVAC Contractor shall be the Lead in the coordination drawing process as defined in this specification section.
2. Provide Operation and Maintenance instruction manuals and specified training to the Owner.
3. The NPDES permit is to be obtained and paid for by the Owner and transferred, at no cost, to the Contractors. The General Trades Contractor and the HVAC Contractor will be named co-permittee holders.
4. Provide layout for the General Contractor indicating all openings in the new floor, roof decks and exterior walls that have any dimension larger than 12". Openings required as a result of the work of this contract with both dimensions smaller than 12" shall be provided by the Mechanical Contractor, who shall also provide support steel at these openings as required. All other framing, lintels, miscellaneous supports, etc., required but not specifically shown on the Architectural or Structural drawings shall be by this Contractor.
5. Provide protection of structure, finishes and landscaping from damage resulting from the work of this Contract. Repair any damage promptly to the satisfaction of the Owner.
6. The General Contractor is to provide all miscellaneous metal, including loose lintels, required for openings as shown or specified on the Architectural or Structural Drawings. The trade requiring a lintel, which is not clearly indicated on either the Architectural or Structural drawings, will provide those lintels required to install his work.
7. Provide painting for "touch up" required to restore "factory finished" equipment and material to its original condition.
8. Provide all Heating, Ventilation, Air Conditioning (HVAC) work as shown or specified including but not limited to vibration isolation, HVAC equipment, ductwork, duct insulation, pipe, piping systems, pipe insulation, air distribution outlets and inlets; instrumentation; test and balance of systems; valving and coil connections; air handlers; fan coil

- units; fire and smoke dampers; inspections; identification; roof ventilators; curbs; fans; unit and cabinet heaters; terminal equipment; pumps; hangers; blocking; support pipe anchors; supports unless designated specifically by the General Contractor, wall sleeves and flashing, etc. as shown and/or specified.
9. HVAC Contractor to provide pumps (including power wiring/conduits to pumps) at locations where condensate lines cannot be gravity drained. The Mechanical Contractor is to provide the condensate drain lines.
 10. Install ductwork in accordance with the latest recommendations of ASHRAE and SMACNA for low and medium pressure ductwork.
 11. Provide testing and cleaning of distribution systems and equipment and final inspection for each project phase.
 12. Coordinate connections of equipment, dampers etc. as required to the fire alarm system with the Electrical Contractor.
 13. Provide identification of equipment, valves, piping and ductwork as required.
 14. Provide all excavation, bedding, backfill, etc., as necessary to install the work of this Contract.
 15. Provide any housekeeping and equipment pads required for equipment (interior or exterior) that are required for the work of this Contract, but not shown or dimensioned on Architectural, Civil, and Structural Drawings. General Contractor is to provide all housekeeping and equipment pads shown and dimensioned on Architectural, Civil, and Structural drawings.
 16. Furnish any embeds required to be cast in concrete or masonry to the appropriate Prime Contractor.
 17. Provide for miscellaneous structural framing and decking as required as result of this Contract, but not clearly shown on Architectural or Structural Drawings.
 18. HVAC Contractor shall furnish curbs as required for all roof-mounted equipment to General Contractor. Wood blocking at roof openings to be by General Contractor. Coordinate blocking locations and requirements with General Contractor.
 19. Provide all insulation required for the scope of this Contract.
 20. Furnish any access panels, which are required for, access to the work by this Contract for installation by the GC.
 21. Furnish and install all exterior louvers and vents.
 22. Provide final HVAC connections of Owner Furnished Equipment, as shown or specified. Provide relocation of existing equipment as shown or specified.
 23. Provide final HVAC connection of Casework and equipment.
 24. Coordinate tie-in of ventilation control system to fire alarm system with Electrical Contractor.
 25. Motor starters VFD's for HVAC equipment shall be furnished by the HVAC Contractor for installation and final connection by the Electrical Contractor. Disconnects ~~furnish and~~ installed by Electrical Contractor.
 26. Install duct smoke detectors furnished by the Electrical Contractor.
 27. See section 015000 – Temporary Facilities and Utilities section for temporary heating, air conditioning and humidity requirements.

28. HVAC Contractor shall provide temporary air conditioning or dehumidification for installation of materials requiring conditioned spaces if permanent system is not operational at the time air conditioning or dehumidification is required for installation of millwork, wood flooring, casework, countertops, ceiling tile, etc.
29. Systems must be complete, operational and tested to meet the requirements of PA L&I and Local codes.
30. Provide identification of valves and lines as indicated.
31. ~~Provide wall sleeves, flashing, pipe hangers, supports, blocking, etc. as required for installation of sprinkler system fixtures and equipment.~~
32. All other duties and requirements identified in the Contract Documents.

2.5 CONTRACT NO. 5 - ELECTRICAL CONSTRUCTION

- A. The work of this Prime Contract Package Description includes, but is not limited to, the Work detailed by the following Specification Sections and as shown or implied and indicated on the Drawings and as described in the narrative Contract Description. The work is not restricted by the division of Drawings or Specification. Unless otherwise specifically noted, all work to be performed shall consist of providing all labor, materials, equipment and whatever is necessary to complete the work in accordance with the Specifications and applicable Codes.
- B. Electrical scope will account for electrical terminations and power requirements for: Division 21 Fire Suppression, Division 21 Plumbing, Division 23 HVAC. Furnish and install all electrical scope, including all general requirements of the specifications including:

DIVISION 00 - BIDDING AND CONTRACT REQUIREMENTS
All Sections

DIVISION 01 - GENERAL REQUIREMENTS
All Sections

DIVISION 02 THROUGH DIVISION 14
All Sections (Coordinate)

DIVISIONS 21-23
All Sections (Coordinate and install where applicable)

DIVISION 26 ELECTRICAL

- 260100 General Requirements
- 260513 Medium Voltage Cable
- 260519 Low Voltage Electrical Power Conductors and Cable
- 260526 Grounding and Bonding for Electrical Systems
- 260529 Hangers and Supports for Electrical Systems
- 260534 Conduit
- 260537 Boxes

- 260533 Identification for Electrical Systems
- 260573 Power System Studies
- 260914 Electrical Power Monitoring
- 260923 Lighting Control Devices
- 262100 Low Voltage Electrical Service Entrance
- 262200 Low Voltage Transformers
- 262413 Switchboards
- 262416 Panelboards
- 262717 Equipment Wiring
- 262726 Wiring Devices
- 262813 Fuses
- 262818 Enclosed Switches
- 263213 Engine Generator (Alternate)
- 263213 Engine Generator
- 263600 Transfer Switches
- 264300 Surge Protective Devices
- 265100 Interior Lighting

DIVISION 27 – COMMUNICATIONS

- 271005 Structured Cabling for Voice and Data
- 275319 Emergency Responder Radio Communication System

DIVISION 28 – ELECTRONIC SAFETY AND SECURITY

- 284600 Fire Detection and Alarm
- 285500 RF Survey for Emergency Responder Radio Antenna

DIVISION 31 – EARTHWORK

- 312316 Trenching (for electrical scope only as well as coordination of electrical scope)
- All underground conduit and wiring will be furnished and installed by the electrical contractor. Excavation and backfill for the electrical contractor will be addressed by the Civil Contractor.

DIVISION 33 – UTILITIES

- 337119 Underground Ducts
- Division 33 applies to the electrical scope only
- All underground conduit and wiring will be furnished and installed by the electrical contractor. Excavation and backfill for the electrical contractor will be addressed by the Civil Contractor.

C. Clarifications, Qualifications, and Exclusions:

1. No building permits are included within this scope of work. The owner has waived all permitting fees for this project.
2. Sales and use tax are included within this scope of work.
3. Each trade's permitting is required to be obtained through the local jurisdiction. Fees for each trade's permitting will be waived by the owner.
4. Shop drawings, product data, safety data sheets, and submittals are included within this scope of work.

5. Heim Construction will utilize Procore's Management System for the following: submittals, RFIs, and additional administrative functions. Each contractor will be responsible to coordinate through the Procore Management System.
 6. Provide all winter construction costs necessary to perform your scope of work.
 7. Layout is the responsibility of each contract and is included within this scope of work.
- D. Narrative Description of Contract No.5 - Electrical Construction: The working of this Contract includes, but shall not be limited to the following items:
1. Participate in the coordination drawing process as defined in this specification section.
 2. Provide Operation and Maintenance instruction manuals and specified training to the Owner.
 3. Provide layout for the General Contractor indicating all openings in the new floor and roof decks that have any dimension larger than 12". Openings required as a result of the work of this contract with both dimensions smaller than 12" shall be provided by the Electrical Contractor, who shall also provide support steel at these openings as required.
 4. Provide start up and training as required by the Contract Documents.
 5. Review temporary facilities and controls and electrical specifications for temporary electric requirements. Temporary electric shall be provided and installed by the Electrical Contractor including site and service electric if applicable.
 6. Provide painting for "touch up" required to restore "factory finished" equipment and material to its original condition.
 7. Provide temporary power and lighting as indicated in specification section 015100 Temporary Utilities and Facilities.
 8. Provide all electrical work including testing, conduit, wiring and cable, boxes, wiring devices, enclosures, equipment final connections, support devices, identification, switchboards, disconnect switches, primary and secondary grounding, panel boards, motor controls, lighting fixtures, emergency power and lighting, fire alarm and smoke detection, final HVAC electrical, fire protection electrical and plumbing electrical connections, hangers, supports unless specifically designated by the General Contractor, blocking, wall sleeves, flashing, etc. as shown and/or specified.
 9. Provide equipment and all necessary wiring for installation of the following systems. (Interface and coordinate with security systems work)
 - a. Fire Alarm System
 - b. Lighting Controls And Devices
 - c. Generator systems
 - d. ~~Integrated communication systems~~
 - e. ~~System~~
 - f. Switchboards / Panel boards
 - g. Telecommunications (rough-in and coordination only, provided by

- Owner)
- h. Security systems (rough-in and coordination only, provided by Owner).
10. It is the intent of the Contract for the Electrical Contractor to provide a complete system for all systems above including conduit, boxes, surfaces, raceway wire, fiber optics, patch panels, connectors, terminations, patch controls, jacks, UTP cabling, testing, equipment, brackets, hardware, layout, check out, training, etc.
 11. Provide equipment and all necessary wiring for interfacing of the following systems:
 - a. HVAC Equipment
 - b. Fire Protection Equipment
 - c. Electrically operated overhead Coiling Doors and grilles
 - d. Door operators
 12. Provide identification of equipment as required.
 13. Provide all cutting, patching, excavation, and backfill, including work for new incoming service, etc. as necessary to install the work of this Contract.
 14. Provide cast-in-place or precast vaults, manholes, handholes, etc. required for electrical and telecom services. Include manhole cable racks, manhole covers, ladders, grounding, sump pit, and gratings for both electric and communication systems. Provide all associated excavation stone bases, tamping and backfill including any shoring that may be required.
 15. Provide fire rated backboards for electrical and telephone equipment as shown or specified. If backboards are to be painted, provide confirmation with delivery receipt included in Operation and Maintenance Manuals.
 16. Provide any housekeeping and equipment pads required for equipment (interior or exterior) that are required for the work of this Contract.
 17. Provide concrete for encasement of conduit, foundation/base for site lighting, etc. as required for work by this contract. Provide warning tape as required. Provide rebar reinforcement as shown on Contract Documents.
 18. Provide fire-safing and fire-stopping at all locations that are required to maintain a fire rating at floor and wall penetrations made as a result of the work of this Contract.
 19. Furnish any access panels, which are required for access to the work of this Contract for installation by GC. Provide under floor boxes as shown or specified.
 20. Provide power wiring to all HVAC, electrical, and plumbing, etc., as required or shown.
 21. Wire loose motor starters furnished by HVAC, Plumbing Contractors, as part of the General Contract and miscellaneous equipment. The Electrical Contractor shall ~~furnish and~~ install the conduit, wire and disconnects for all systems using 120 Volts A.C. and above.
 22. Provide testing and documentation of test results for electrical and telecommunications systems as per the Contract Documents. Provide copies of testing and inspections to Owner and Architect and Engineer.

23. Provide patching of existing roads and lawn areas as a direct result of new underground conduit.
24. Furnish and wire duct smoke detectors, installation shall be by Mechanical Contractor.
25. Electrical Contractor shall provide conduit and back boxes, surface metal raceway, pull strings, sleeves to communication closets, and device boxes as required for installation of all communication systems as per the Contract Documents.
26. Electrical Contractor shall provide fire alarm wiring to fire sprinkler flow and tamper switches as required.
27. Electrical Contractor to provide and install telephone and data cables for connection to the fire alarm panel, security panel, ATC panels, etc. As per the Contract Documents.
28. Coordinate with Mechanical Contractor for electrical hook-up of mechanical equipment.
29. Electrical Contractor shall include in his bid and be responsible for all cost associated with the Telecommunication Systems **rough-in, rack, wiring to rack, and labeling.**
30. Electrical Contractor shall provide all site electrical work. ~~Civil~~ **Electrical** Contractor responsible for trenching and backfill for underground electric, and concrete encasement.
31. All other duties and requirements identified in the Contract Documents.

2.6 CONTRACT No. 6 – FIRE SUPPRESSION CONSTRUCTION

- A. The work of this Prime Contract Package Description includes, but is not limited to, the Work detailed by the following Specification Sections and as shown or implied and indicated on the Drawings and as described in the narrative Contract Description. The work is not restricted by the division of Drawings or Specification. Unless otherwise specifically noted, all work to be performed shall consist of providing all labor, materials, equipment and whatever is necessary to complete the work in accordance with the Specifications and applicable Codes. The use of the wording “FP Contractor” or “Fire Protection Contractor” shall mean the same as the “Fire Suppression Contractor”.
- B. Coordination with all parties: General construction, Electrical construction, Plumbing construction, Mechanical construction and Civil construction. Furnish and install all fire-suppression scope, including all general requirements of the specifications including:

DIVISION 00 - BIDDING AND CONTRACT REQUIREMENTS
All Sections

DIVISION 01 - GENERAL REQUIREMENTS
All Sections

DIVISION 02 THROUGH DIVISION 14

All Sections (Coordinate as applicable)

DIVISION 21 – FIRE SUPPRESSION

- 210100 – General Provisions
- 210500 – Common Work Results for Fire Suppression
- 210553 – Identification for Fire Suppression Piping & Equipment
- 211300 – Fire-Suppression Sprinkler Systems

Fire Suppression scope accounts for all interior scope from inside all buildings to 5' outside of all building footprints. Civil contractor will be responsible for all excavation and piping 5' and beyond the exterior footprint of the exterior of all buildings.

C. Clarifications, Qualifications, and Exclusions:

1. No building permits are included within this scope of work. The owner has waived all permitting fees for this project.
2. Sales and use tax are included within this scope of work.
3. Each trade's permitting is required to be obtained through the local jurisdiction. Fees for each trade's permitting will be waived by the owner.
4. Shop drawings, product data, safety data sheets, and submittals are included within this scope of work.
5. Heim Construction will utilize Procore's Management System for the following: submittals, RFIs, and additional administrative functions. Each contractor will be responsible to coordinate through the Procore Management System.
6. Provide all winter construction costs necessary to perform your scope of work.
7. Layout is the responsibility of each contract and is included within this scope of work.

D. Narrative Description of Contract No.6 – Fire Suppression Construction: The working of this Contract includes, but shall not be limited to the following items:

1. Provide all sprinkler work including sprinkler piping, heads, flow and tamper switches, trim, accessories, supports unless shown or specified by others, anchorage, etc, as shown and/or specified in order to have 100% sprinkler coverage where indicated in the contract drawings.
2. Provide fire pump and jockey pump, final size as required per fire protection criteria indicated on drawings. Coordinate final electrical requirements with Electrical Contractor.
3. Provide all hydraulic calculations to size fire protection piping system. All pipe areas shown on plans, including combined water service to building, are approximate. Actual size shall be determined by this contractor.
4. Perform fire hydrant flow and pressure test.
5. Provide cleaning, disinfecting and testing of lines and equipment and final inspection at each project phase as may be necessary to obtain partial

- occupancies. Provide testing of underground fire protection lines per NFPA 13 requirements.
6. Provide final sprinkler connection to Owner Furnished Equipment, as shown and/or specified.
 7. Coordinate tie in of sprinkler system to fire alarm system with Electrical Contractor. Provide flow and tamper switches for connection to fire alarm system.
 8. Provide all underground sprinkler fire service piping to 5"-0" outside of building, include excavation, backfill and miscellaneous concrete work. Perform final connection to sprinkler service.
 9. Prefabrication of any sprinkler pipe is done at the sole risk of the contractor. Any modifications to prefabricated sprinkler pipe that needs to be done in the field in order to accommodate actual conditions or coordination issues shall be done at the expense of the contractor.
 10. Systems must be complete, operational and tested to meet the requirements of PA L&I and local code.
 11. Provide all control wiring required for the local system controls with power wiring to be provided by the Electrical Contractor.
 12. Loose motor starters and drives for Fire Protection equipment shall be furnished by the Fire Protection Contractor and wired by Electrical Contractor. Disconnect switches and fuses shown on electrical drawings will be furnish and installed by Electrical Contractor.
 13. **Provide wall sleeves, flashing, pipe hangers, supports, blocking, etc. as required for installation of sprinkler system fixtures and equipment.**

NOTE: The above descriptions of the scope of these Contractors' work are not complete descriptions of the Contractors' obligations for this project. The Contractors are reminded to review and familiarize themselves with all relevant Contract Documents.

END OF SECTION 011200

New Construction of:
Public Works Facility
West Whiteland Township

SECTION 22 3000 - PLUMBING EQUIPMENT

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Domestic Hot Water Circulators.
- B. Oil Separators
- C. Instantaneous Point-of-Use Water Heaters
- D. Waste Oil Storage Tank (Addendum#3)
- E. Oil And Grease Distribution Equipment (Addendum#3)

1.2 SUBMITTALS

- A. Product Data:
 - 1. Indicate pump type, capacity, power requirements.
 - 2. Provide certified pump curves showing pump performance characteristics with pump and system operating point plotted. Include NPSH curve when applicable.
 - 3. Provide electrical characteristics and connection requirements.
- B. Operation and Maintenance Data: Include operation, maintenance, and inspection data, replacement part numbers and availability, and service depot location and telephone number.
- C. Warranty: Submit manufacturer warranty and ensure forms have been completed in Owner's name and registered with manufacturer.

1.3 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Company specializing in manufacturing the type of products specified in this section, with minimum three years of documented experience.
- B. Identification: Provide pumps with manufacturer's name, model number, and rating/capacity identified by permanently attached label.
- C. Performance: Ensure pumps operate at specified system fluid temperatures without vapor binding and cavitation, are non-overloading in parallel or individual operation, operate within 25 percent of midpoint of published maximum efficiency curve.

1.4 DELIVERY, STORAGE, AND HANDLING

- A. Provide temporary inlet and outlet caps. Maintain caps in place until installation.

1.5 EXTRA MATERIALS

- A. See Div. 01 specifications, for additional provisions.
- B. Provide all required maintenance parts for up to 1 yr. for all required regular maintenance

1.6 OWNER INSTRUCTION/DEMONSTRATION

- A. Provide owner instruction and demonstration for all pieces of installed equipment. Demonstration shall include: regular operating instructions, required regular maintenance, regular required maintenance schedule for each piece of equipment. P.C. shall employ the service of a manufacturers representative where necessary or where otherwise noted in these specifications.

PART 2 PRODUCTS

2.1 IN LINE CIRCULATOR PUMPS

- A. Manufacturers:
 - 1. Armstrong
 - 2. Grundfos
 - 3. Thrush
 - 4. Other acceptable manufacturers offering equivalent products as approved by Architect/Engineer/Owner. Refer to Division 01 specifications for additional information.
- B. Casing: Lead Free Bronze or Stainless Steel rated for 125 psig working pressure, with stainless steel rotor assembly.
- C. Impeller: 30% glass-filled Noryl or Bronze.
- D. Shaft: Stainless steel w/ permanently lubricated stainless steel bearings
- E. Seal: Silicon-Carbide rotating against a stationary ceramic seat.
- F. Gaskets: EPDM
- G. Controls: Programmable timer and Aquastat(provide programmable timer only as required by local AHJ)
- H. Performance:
 - 1. Refer to Plumbing Detail drawings for pump sizes and requirements

2.2 OIL INTERCEPTORS/SEPARATORS

A. Acceptable Manufacturers

1. Striem (Polypropylene OS Series)

B. Oil Separator:

1. Description: seamless, rotationally-molded Polyethylene with minimum 1" uniform wall thickness, lifetime guaranteed and made in USA, furnished for above or below grade installation, integral baffle, with field adjustable riser system, built-in flow control and vent connections. Cover shall provide water/gas-tight seal and have H2O rated minimum 16,000 lbs load capacity.
2. Capacities and Characteristics:
 - a. Unit Dimensions: 68 in. (dia.) x 132 in. L
 - b. Max. Flow rate: 314 gpm
 - c. Liquid Capacity: 1,500 gal.
 - d. Oil Retention Capacity: 488 gal.
 - e. Solids Retention Capacity: 413 gal.
 - f. Inlet and Outlet Pipe Size: 6 in. (Optional 4", 6", 8" - Coordinate with size as indicated on plans)
 - g. Vent Pipe Size: 3 in. (Optional 2", 3" or 4" - Coordinate with size as indicated on plans)
 - h. Installation Position: Underground with accessway collar risers to grade.
 - i. Options to be provided:
 - 1) SR/LR Teleglide Risers (Verify required length in field prior to order)
 - 2) C24-HP (2) - H2O Rated Pickable Cast Iron Covers
 - 3) CS3 - Clean Sweep Coalescing media
 - 4) HDK-1 - High Water Table Hold Down Kit
 - 5) Alarm for high oil accumulation. Includes alarm probe to be installed in top of tank accessway and alarm panel with buzzer and light for indoor wall mount.
 - 6) Oil level monitoring system oil sensorprobe and UL listed, lockable Nema 4X alarm panel with high oil level alarm light and buzzer, test button, power on light, dry contacts for BAS connection.
3. Basis of Design: Striem Oil Reserve™ oil/sand separator with Slick Stick oil level monitoring system Model No. OS-1500-CS3
4. Contractor shall provide concrete reinforced relieving slab over top of entire unit, refer to details and manufacturer's recommendations for specifics on slab construction.

2.3 INSTANTANEOUS POINT-OF-USE WATER HEATERS

- A. Manufacturers
 - 1. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated in the Work include, but are not limited to, the following:
 - a. Eemax; www.eemax.com.
 - b. Chronomite Laboratories Inc.
- B. Description: Point-of-use, tankless, electric water heater conforming to applicable requirements of UL 499. Refer to plumbing drawings for individual models and specifications.
- C. Construction: Manufacturer's standard
- D. Working-Pressure Rating: 150 psig (1035 kPa).
- E. Electric Heating System: Ni chrome electric-resistance type.
- F. Cover: UL rated 94 Vo.
- G. Mounting: Bracket or device for wall mounting.
- H. Temperature Control: Microprocessor controlled, Factory pre-set, temperature-control thermostat for adjustable, outlet-water temperature (110F maximum setting for Public Lavatories and Conforming to ASSE1070 TR).
- I. Safety Control: Automatic, high-temperature-limit cutoff.
- J. Schedule
 - 1. IWH-1 (Lavatory)
 - a. Basis of Design: Chronomite model: CM-20L/208 (208V/1ph, 4.16 kW), 57F rise@.5gpm
 - 2. IWH-2 (at EEW-2)
 - a. Basis of Design: Chronomite model: ER-120L/208_3ph (208V/3ph, 24.96 kW), 38F rise@4.5gpm

2.4 WASTE OIL TANK (Addendum#3)

A. Tank

1. Description

- a. Aboveground tanks shall be manufactured in accordance with and listed for Underwriters Laboratories UL 2085 "Insulated Secondary Containment Aboveground Tank for Flammable Liquids".
- b. Tanks shall be manufactured in accordance with Steel Tank Institute Fireguard Thermally Insulated Aboveground Storage Tank standards.
- c. Tank shall be double wall and provide integral secondary containment by an impervious steel outer wall.
- d. Integral secondary containment shall provide minimum 110% containment of the primary storage tank.
- e. The tank design must be tested and approved to meet UL 2085 requirements and Uniform Fire Code (UFC) aboveground tank procedure, which requires four tests to be completed. The four tests include, 1) ballistics, 2) impact, 3) two hour furnace and 4) hose stream.
- f. Porous, lightweight thermal insulation material shall be provided between the inner and outer wall within the interstitial space and shall allow liquid to migrate through it to the monitoring point.
- g. The tank design shall be tested in accordance with the procedure established in UL 2085 for insulated secondary containment aboveground storage tanks.
- h. The thermal insulation material shall not be exposed to weathering and shall be protected by the steel secondary containment outer wall. The tank exterior to be factory sandblasted (SP-6) and coated with Plymastic 101 Fireguard white.
- i. Tanks shall have a 30 year warranty.

2. Labelling

- a. Aboveground tanks shall bear Underwriters Laboratories UL 2085 label for "Insulated Secondary Containment Aboveground Tank for Flammable Liquids".
- b. Tanks shall bear the Steel Tank Institute Fireguard label.

3. Basis of Design:

- a. 500 gal. Fireguard lightweight, thermally insulated, double wall aboveground storage tanks Highland Tank & Mfg., licensed member company of Steel Tank Institute and subject to Steel Tank Institute's Quality Assurance program. Contact: TJ EQUIPMENT, Broomall, Pa (610-328-3001 Fx: 610-544-7515)

B. Fuel Gauging and Leak Detection System

1. Contractor shall supply and install Pneumercator TMS 3000 series leak detection system with digital readout and indication for high level and leak detection using MP-450 direct lift transmitter, and ES 825 series leak sensors for both the tank interstice and any piping transition sumps. In addition to the console, a remote mounted overfill alarm must be installed near the fill point to warn the delivery driver of impending overfill. Remove panel to be both audible and visual.

C. Accessories

1. Concrete pad. Provide minimum 6" thick concrete pad. Refer to manufacturers installation recommendations
2. Fill/Spill Container - 3-1/2 gal. capacity, 16 ga. powder coated, hinged cover with padlock, threaded center connection, Morrison Bros, Co. Model 517

2.5 OIL AND GREASE DISTRIBUTION EQUIPMENT (Addendum#3)

A. Manufacturer

1. GRACO: Contact Kevin Cooper, GCG Associates, 2465 McHenry Drive, Mount Airy, MD 21771. Phone # 410-627-8183

B. Oil Pumps (Qty.1 per ea. oil dist. service)

1. Inline, air driven pumps, cast aluminum housing, corrosion resistant construction, 5:1 fluid pressure ratio, 16 scfm @ 2.8 gal./min air use at 100psi, 1/2" fluid outlet, 3/8" air connection.
 - a. GRACO Fire-Ball 300 5:1 - Model 203876
2. Accessories
 - a. Pressure relief valve: GRACO model 237893
 - b. Air Filter Regulator/Lubricator: GRACO model 110150
 - c. Air coupler: GRACO model 208536
 - d. Air connector: GRACO model 169971
 - e. Air shutoff valve: GRACO model 110224
 - f. Oil Shutoff Valve: GRACO model 108458
 - g. Connecting Hose Kit: GRACO model 222063
 - h. Runaway valve: GRACO model 224040
 - i. Low level cut off: GRACO model 203668

C. Grease Pumps storage (Qty.1 per ea. grease dist. service)

1. Topper unit with pneumatic pump elevator, including, support wishbone, Hose set, base elevator, inductor plate, and Inline, air driven grease inductor pump, cast aluminum air housing, corrosion resistant construction, 50:1 fluid pressure ratio, 21 scfm @ 1.7 lb./min air use at 100psi, 1/4" fluid outlet, 3/8" air connection.
 - a. GRACO Model 226013 topper unit with Fire-Ball 300 50:1 pump
2. Accessories
 - a. Air Filter Regulator/Lubricator: GRACO model 110150
 - b. Air coupler: GRACO model 208536
 - c. Air connector: GRACO model 169971
 - d. Air shutoff valve: GRACO model 110224
 - e. High pressure Shutoff Valve: GRACO model 202869
 - f. Runaway valve: GRACO model 224040

- D. (HR-3) Oil Hose Reels (refer to drawings for qty. and locations)
1. Hose reels: hose reel for oil, heavy guage steel frame, factory installed 50 ft. hose, auto retract spring with tension adjustment, swivel inlet fitting
 - a. GRACO XD series - Model XDM65B
 2. Accessories
 - a. Connecting hose: GRACO Model 218549
 - b. Oil shutoff valve: GRACO Model 108458
 - c. Fluid hose label: GRACO Model 218670(OIL)/218673(ATF)/218672(GO) - (Coordinate with owner prior to order)
 3. Dispensing Meter (Qty.1 per hose reel): dispensing meter with preset otions, durable cast body, cartridge design valve, rigid or flexible extension(verify with owner prior to order), ergonomic handle with trigger guard
 - a. GRACO SDP Series - Model 26C384/26C354/26C358
 4. Reel Mounting Hardware: - Reel mounting channel and bracket
 - a. GRACO Model: 24A219(1-reel) / 24A220(2-reel) / 24A221(3-reel) / 24A222(6-reel)
 - b. GRACO Model: 204741 I beam channel mounting bracket
- E. (HR-4) Grease Hose Reels (refer to drawings for qty. and locations)
1. Hose reels: hose reel for grease, heavy guage steel frame, factory installed 50 ft. hose, auto retract spring with tension adjustment, swivel inlet fitting
 - a. GRACO XD series - Model XDH55B
 2. Accessories
 - a. High pressure Connecting hose: GRACO Model 218550
 - b. High pressure grease shutoff valve: GRACO Model 202869
 - c. Fluid hose label: GRACO Model 218670(OIL)/218673(ATF)/218672(GO) - (Coordinate with owner prior to order)
 3. Dispensing valve (Qty.1 per hose reel): cast brass dispensing valve, with coupler and extension, pressure assisted trigger, 8,000 psi pressure rating, 3/8" NPT inlet w/ swivel connector
 - a. GRACO Pro Shot Series - Model 242058 w/224569 swivel Zee connector
 4. Reel Mounting Hardware: - Reel mounting channel and bracket
 - a. GRACO Model: 24A219(1-reel) / 24A220(2-reel) / 24A221(3-reel) / 24A222(6-reel)
 - b. GRACO Model: 204741 I beam channel mounting bracket

PART 3 EXECUTION

3.1 INSTALLATION

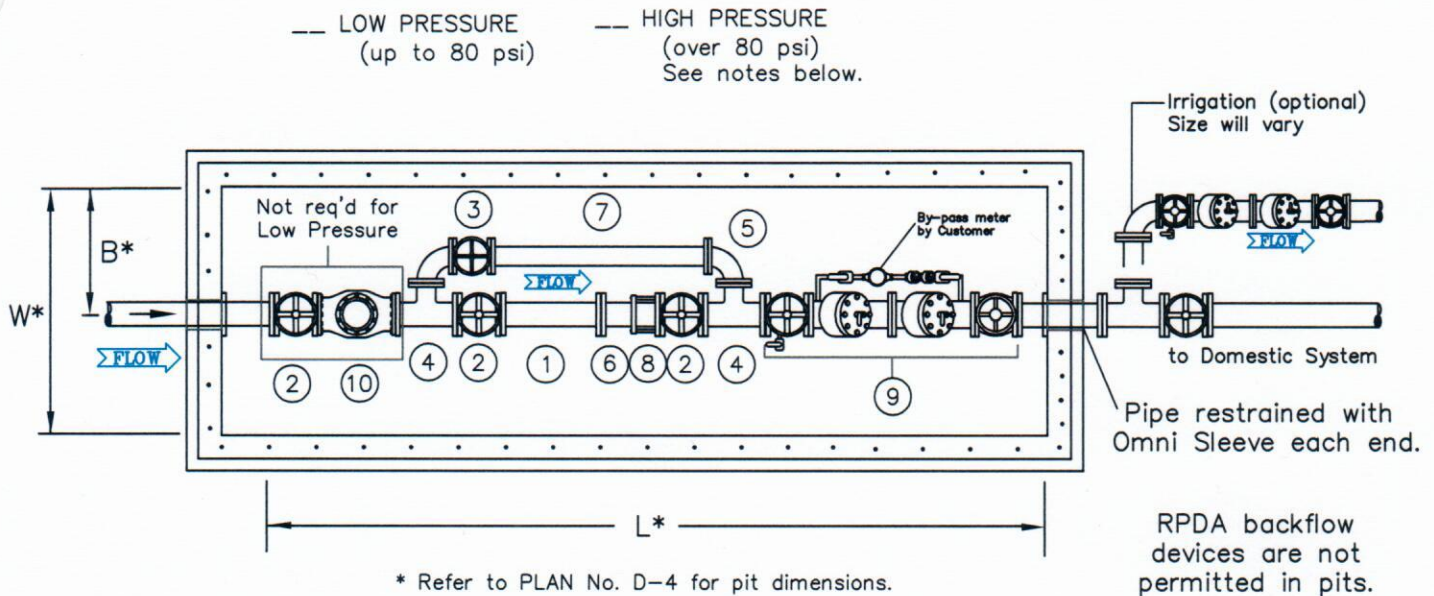
- A. Install plumbing equipment in accordance with manufacturer's instructions, as required by code, and complying with conditions of certification, if any.
- B. Coordinate with plumbing piping and related electrical work/fuel piping for each piece of equipment to achieve operating system
- C. Provide Concrete housekeeping base of sufficient size for all floor mounted equipment. Concrete bases shall be dowelled into floor decking. Coordinate all work with G.C. in field.
- D. Recirculation Pumps
 - 1. Refer to Plumbing details for pump installation information and associated piping accessories.
 - 2. Provide circuit setter valve set to specified flow.
 - 3. Install circulation pumps in orientation as required by manufacturers recommendations.
 - 4. Coordinate power wiring to pump and aquastat controls with E.C. in field.
- E. Pumps:
 - 1. Ensure pumps operate at specified system fluid temperatures without vapor binding and cavitation, are non-overloading in parallel or individual operation, and operate within 25 percent of midpoint of published maximum efficiency curve.
 - 2. Provide vibration isolation/flexible connectors on inlet and outlet piping
- F. Oil Interceptors/Separators
 - 1. Install Oil Interceptor/Separator in accordance with manufacturer's instructions, as required by code, and complying with conditions of certification.
 - 2. Install in accordance with all requirements of local AHJ.
 - 3. Exterior Installations:
 - a. Verify inverts for all below grade/below slab Oil interceptors/separators prior to beginning any work.
 - b. Provide H-20 rated concrete relieving pad and heavy duty rated access covers as noted on plumbing drawings, details, and specifications.
 - c. Provide access covers extended to grade. Verify required height of access cover extensions in field prior to order of oil interceptor/separator unit. Final height of access covers shall allow grade to slope away from access covers and prevent ponding of water at access covers. Coordinate grades and slopes with site contractor to prevent ponding of water prior to beginning any work.
 - d. Provide manufacturers recommended anti-flotation device
 - e. Provide buried detectable green warning tape warning tape directly over piping and at outside edges of underground interceptors.

G. Instantaneous Point-of Use Water Heaters

1. Verify and coordinate electrical requirements including voltage and amperage of unit to be provided with E.C. in field prior to order/installation.
2. Perform the following final checks before startup:
 - a. Verify accessible disconnecting means has been provided and until is wired with GFI protection.
 - b. Fill water heaters with water.
 - c. Check that piping system tests are complete.
 - d. Check for piping connection leaks.
 - e. Test operation of safety controls, relief valves, and devices.
3. Perform the following startup procedures:
 - a. Energize electric circuits.
 - b. Adjust operating controls where required.
 - c. Verify hot water outlet temperature is within max and min. temperature limits for each fixture type.
 - 1) Handwash/Lavatory - 90F min./110F max.
 - 2) Sink - 110F min./120F max.
 - d. Adjust hot-water-outlet temperature settings as necessary

END OF SECTION 22 3000

DOMESTIC SERVICE - 3" through 10" METERS



DESCRIPTION						
1	Meter	3"	4"	6"	8"	10"
	Meter Length (flange to flange)	33.25"	33.25"	36.5"	53"	68"
2	R.S. Gate Valve, OS&Y, Flg (mainline)	3"	4"	6"	8"	10"
3	R.S. Gate Valve, OS&Y, Flg (by-pass)	3"	3"	4"	6"	6"
4	By-pass Tee	3" x 3"	4" x 3"	6" x 4"	8" x 6"	10" x 6"
5	Long Radius 90o Bend	3"	3"	4"	6"	6"
6	Spool Piece, Flg x PE (for exp. cpl'g.) PIT ONLY	1' - 0" MINIMUM w/ 1" traverse gap in exp cpl'g				
7	Spool Piece, Flg x Flg (for by-pass)	LENGTH AS NEEDED				
8	Flanged Coupling Adaptor - PIT ONLY	Ford - Style FFCA or Smith-Blair - Style 912				
9	Backflow device - DCDA or RPDA	3"	4"	6"	8"	10"
	as req'd by the Water Company.					
10	Pressure Reducing Valve (PRV)	SIZED BY CUSTOMER				

Notes:

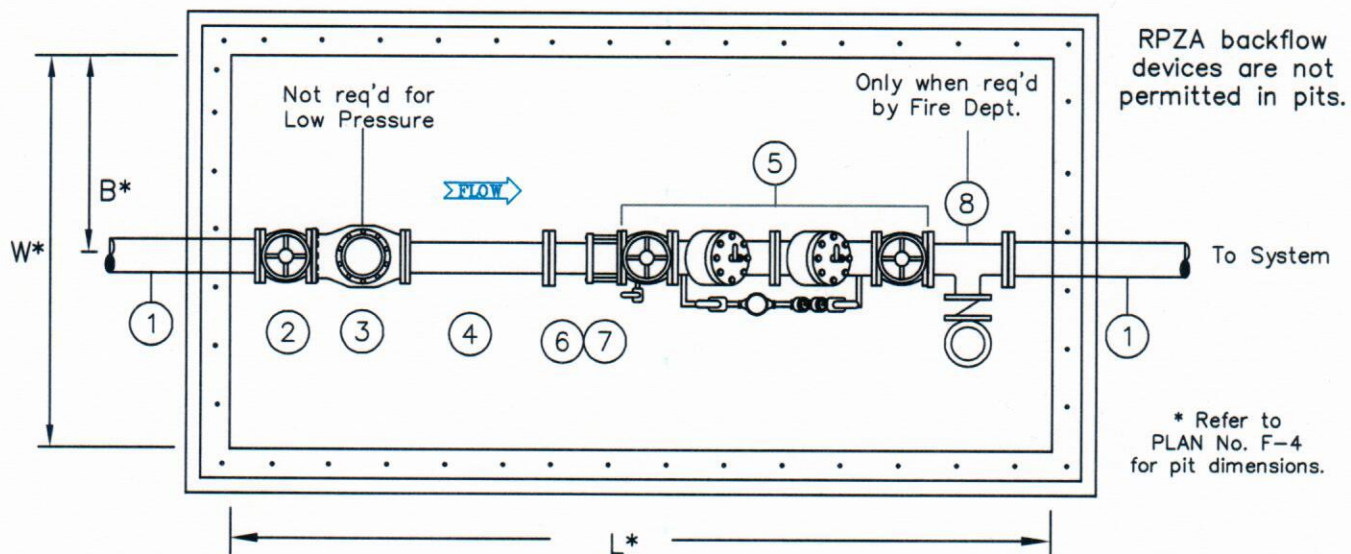
- A. It is the CUSTOMER's responsibility to address THERMAL EXPANSION before the installation of a PRV or backflow device.
- B. A pressure vacuum breaker must be installed on all hose-bib connections.
- C. Water Company Rules & Regulations require that all of the specifications are met and a meter is set before water service is turned on.
- D. It is the CUSTOMER's responsibility to size the pressure reducing valve(s) to fit their flow needs. Two-stage reduction may be needed where there is a wide variation between the initial pressure and the reduced pressure. Parallel installation may be needed where there is a wide variation of reduced pressure requirements, where it is vital to maintain a continuous water supply, or other reasons for improved performance.
- E. Incoming service size should equal meter size. If the meter size is approved to be smaller than the service size, the meter space shall be replaced with a spacer for the approved meter size and concentric reducers on each side of the meter spacer. The length of the meter pit may increase.
- F. Each part must be NSF/ANSI 61 (Annex F & G) compliant.
Entire unit must be NSF/ANSI 372 compliant.

FIRE SERVICE LINES – 6", 8", and 10"

"Open System" has fire hydrants, meter pit is req'd

Non-Residential --- LOW PRESSURE (up to 150 psi) --- HIGH PRESSURE (where pressure may exceed 150 psi)
See note below.

RPZA for systems with chemical additives (anti-freeze systems)
DCVA for systems with no chemical additives



ITEM					
1	Line Size (Cement-lined D.I.P.) as approved by Aqua		6"	8"	10"
2	R.S. Gate Valve, O.S.&Y., Flanged		6"	8"	10"
3	Pressure Reducing Valve (PRV)	SIZED BY CUSTOMER			
4	Meter (by Aqua)		45"	53"	68"
5	Backflow Device Assembly – DCDA or RPDA		6"	8"	10"
6	Spool Piece, Flg x PE – Length = 12 in. (min.)		6"	8"	10"
7	Flanged Coupling Adapter	Ford Style FFCA or Smith-Blair Style 913			
8	Tee for FDC, only if req'd by local Fire Dept.		6"	8"	10"
Branchline sized by local Fire Department if required.			SIZED BY LOCAL FIRE DEPARTMENT		

Notes:

- It is the CUSTOMER's responsibility to address THERMAL EXPANSION before the installation of a PRV or backflow device. All Fire systems should have a Pressure Relief Valve.
- Water Company Rules & Regulations require that all of the specifications are met and a meter is set before water service is turned on.
- It is the CUSTOMER's responsibility to size the pressure reducing valve(s) to fit their flow needs. Two-stage reduction may be needed where there is a wide variation between the initial pressure and the reduced pressure. Parallel installation may be needed where there is a wide variation of reduced pressure requirements, where it is vital to maintain a continuous water supply, or other reasons for improved performance.
- Each part must be NSF/ANSI 61 (Annex F & G) compliant. Entire unit must be NSF/ANSI 372 compliant.
- DCDA & RPDA Assemblies must be UL & FM approved.

AQUA	
'Open' Fire Lines 6" to 10"	
ck'd by: MJF	Plan No. F-3

Civil:

JMR Engineering, LLC
106 Schubert Drive
Downingtown, PA 19335
484-880-7342

Snyder Hoffman
1005 West Lehigh Street
Bethlehem, PA 18018
610-694-8020

SchraderGroup Architecture
153 East King Street, Suite 211-212
Lancaster, PA 17602
717-299-8965

West Whiteland Township

101 Commerce Drive
Exton, PA 19341

New Construction of:
**WEST WHITELAND PUBLIC
WORKS FACILITY**

121 VALLEY CREEK BOULEVARD,
EXTON PA 19341

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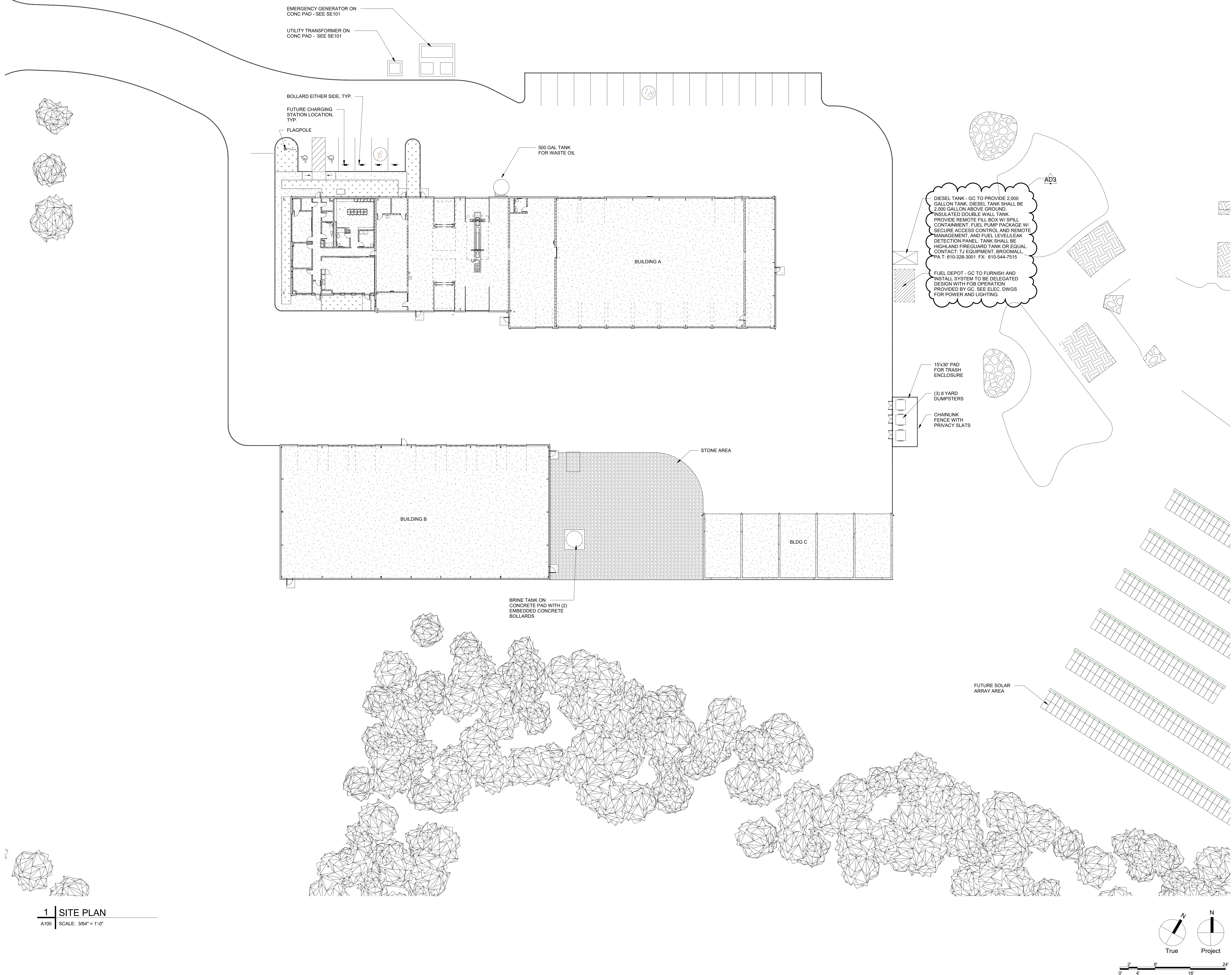
DATE: 07/05/2023

SG PROJECT NUMBER: 21-037

SITE PLAN

Drawing Number:

A100



JMR Engineering, LLC
106 Schubert Drive
Downingtown, PA 19335
484-880-7342

Snyder Hoffman
1005 West Lehigh Street
Bethlehem, PA 18018
610-694-8020

SchraderGroup Architecture
153 East King Street, Suite 211-212
Lancaster, PA 17602
717-299-8965

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL ENGINEER
SHANE E. MILLER
ENGINEER
PE089735

West Whiteland Township

101 Commerce Drive
Exton, PA 19341

New Construction of:

WEST WHITELAND AND PUBLIC
WORKS FACILITY

121 VALLEY CREEK BOULEVARD,
EXTON PA 19341

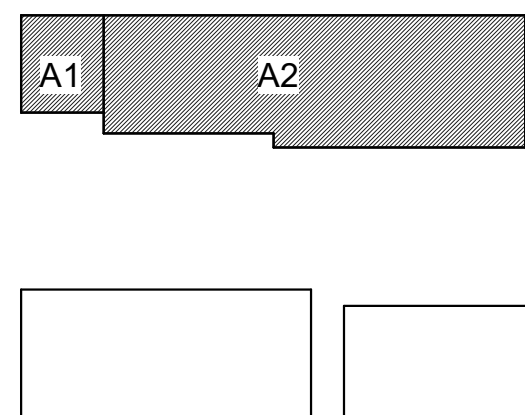
- 1 PROVIDE BALL VALVE, CHECK VALVE, AND CIRCUIT SETTER VALVE. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION. BALANCE RETURN PIPING SYSTEM PRIOR TO TURN OVER TO OWNER.
- 2 PROVIDE BALL VALVE, CHECK VALVE, AND MANUAL BALANCING VALVE. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION. BALANCE RETURN PIPING SYSTEM PRIOR TO TURN OVER TO OWNER.
- 3 PROVIDE INS WATERTIGHT REFRIGERATOR WATER CONNECTION OUTLET BOX WITH CHROMED PLATED QUARTER TURN SHUTOFF VALVE W/1/4" COMPRESSION CONNECTION. EXTEND 12" FROM SUMP. AND MAKE FINAL CONNECTION.

NO.	DESCRIPTION	DATE
	100% CONSTRUCTION DOCUMENTS	05/30/2023
	BID DOCUMENTS	07/05/2023
3	ADDENDUM 3	08/25/2023

DATE: 07/05/2023

SG PROJECT NUMBER: 21-037

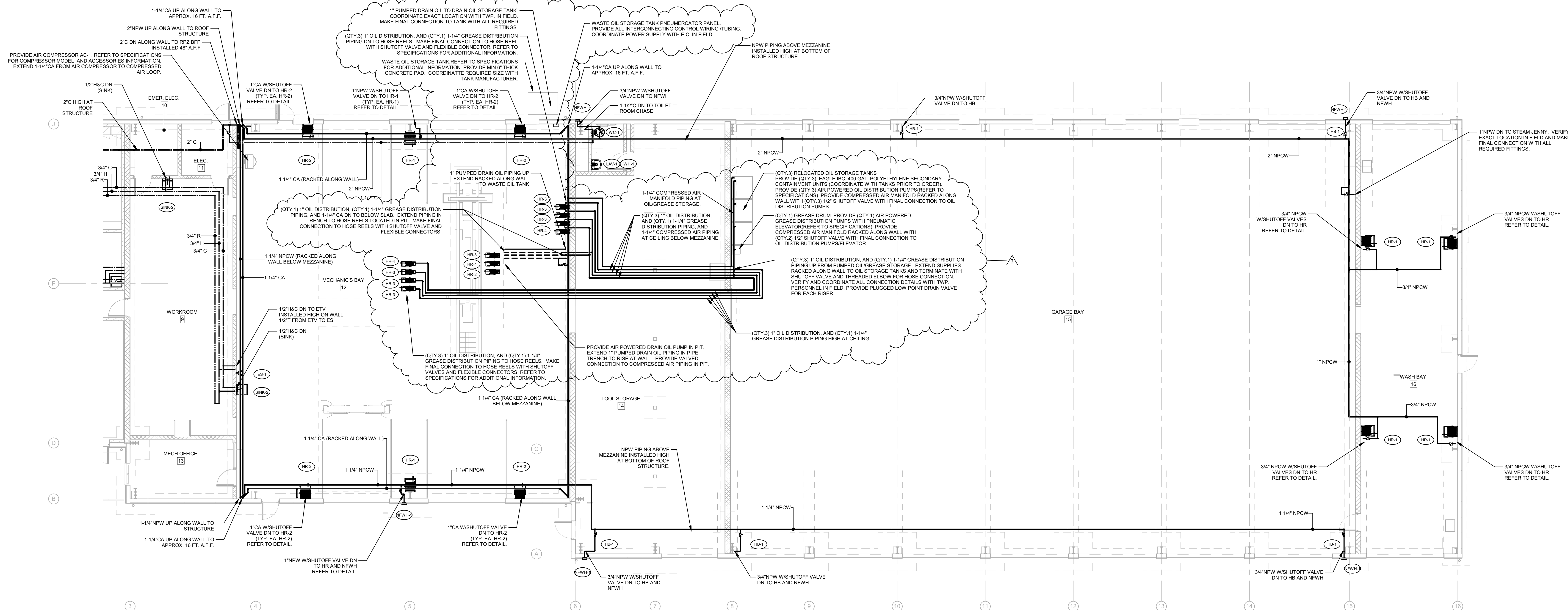
Key Plan



FIRST FLOOR PLAN -
BUILDING A - SUPPLY
PIPING

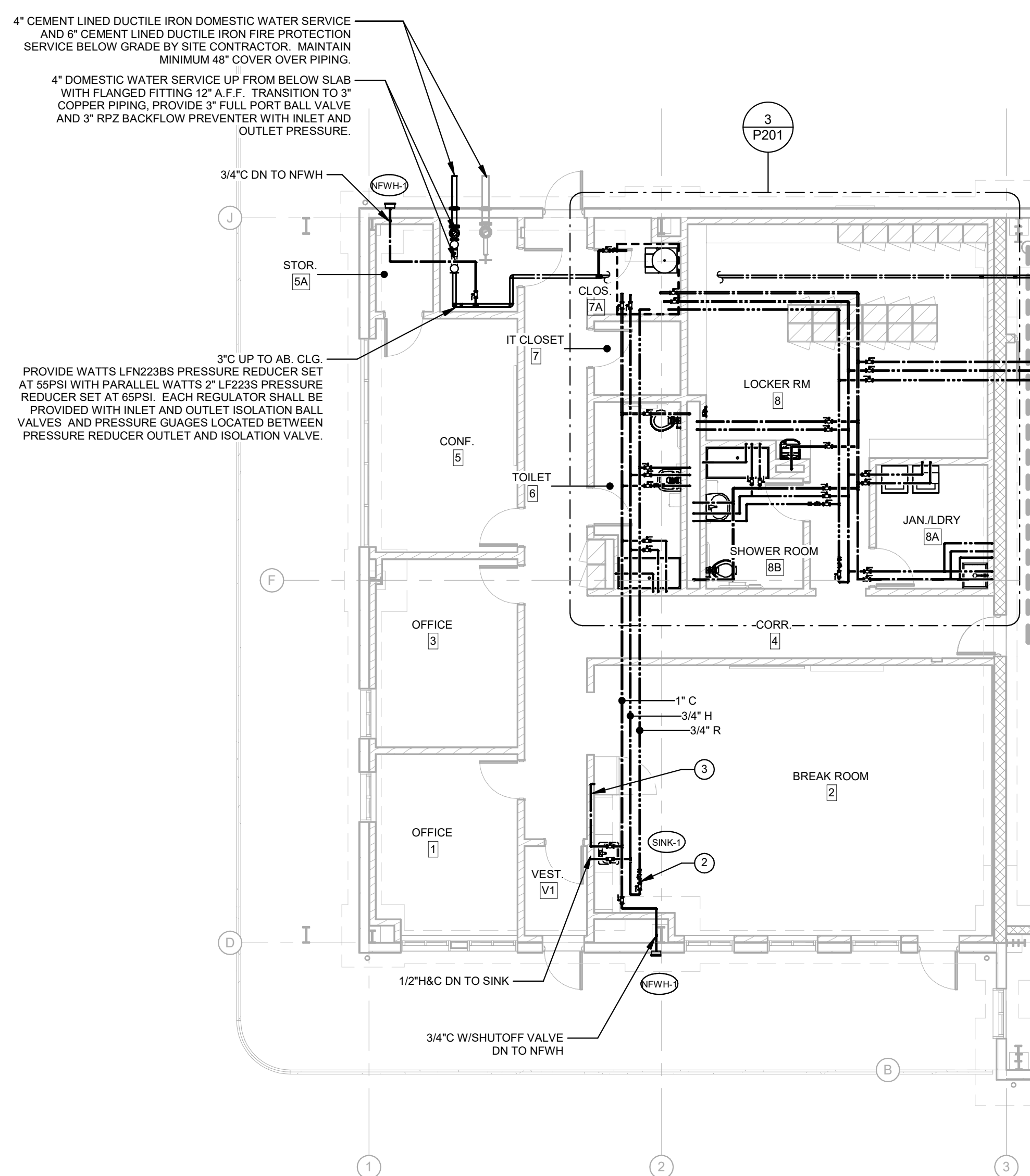
Drawing Number:

P201



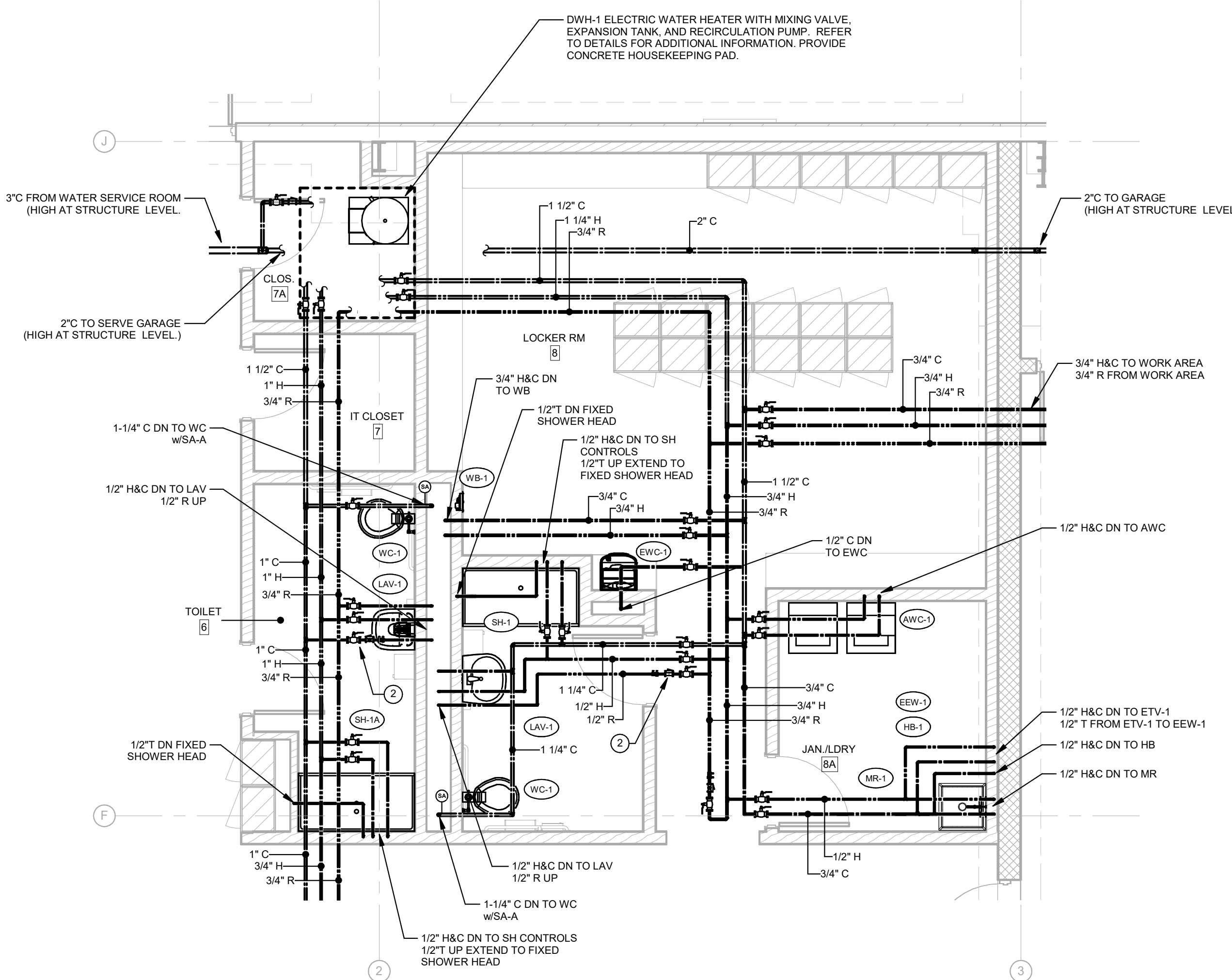
1 | FIRST FLOOR PLAN - BUILDING A2 - SUPPLY PIPING

P201 SCALE: 1/8" = 1'-0"



2 | FIRST FLOOR PLAN - BUILDING A1 - SUPPLY PIPING

P201 SCALE: 1/8" = 1'-0"



3 | ENLARGED PLAN -LOCKER ROOM - SUPPLY PIPING

P201	SCALE: 1/4" = 1'-0"
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