

ADDENDUM NUMBER 3
for
ADVANCED TREATMENT PROJECT
MEMORIAL PARKWAY TREATMENT PLANT
NORTHERN KENTUCKY WATER DISTRICT

FROM: CH2M HILL

TO: Plan Holders of Record

The following changes, additions, and deletions are hereby made a part of the project Bidding Documents as fully and completely, as if the same were set forth therein. Acknowledge receipt and acceptance of this Addendum in the space provided on the BID FORM.

SPECIFICATIONS

Item No. AD3-1: Instructions to Bidders (Section 00 21 13)

Delete Article 23.2.1, Item F and replace with the following:

- F. Certification of Costs, Warranties and Guarantees and Other Requested Information from Ultraviolet (UV) Disinfection Vendor.

Item No. AD3-2: Bid Form (Section 00 41 13)

Bid Form has been re-issued as part of this Addendum. Bidders must use this document to submit the Bid.

Item No. AD3-3: Supplements to Bid Form (Section 00 41 13)

The Supplements to the Bid Form section has been revised and is being re-issued as part of this Addendum. Bidders must use this document as part the Bid submission. Items that have been revised include:

1. On Page 1, Delete Item F. from Paragraph 2 and replace with the following:
 - F. Certification of Costs, Warranties and Guarantees and Other Requested Information from Ultraviolet (UV) Disinfection Vendor.
2. Attachment 6A and 6B shall be deleted and replaced with the revised Attachments 6A and 6B which are attached to this addendum. This change adds instructions to these attachments regarding the timing of certification signature and submittal of UV supplier certified cost, warranty and guarantee information. Certification by both of the UV suppliers of the cost, warranty and guarantee information is not required with the bid but is required to be submitted to the Owner within seven days following the bid.

Item No. AD3-4: Supplements to the Bid Form (Section 00 41 13.1)

As a clarification, Attachments 1 and 2 signed by the Bidder must accompany the Bid. These Attachments will also need to be signed by subcontractors and must be filed within 7 days of bid opening.

Item No. AD3-5: Supplemental Conditions (Section 00 73 00)

As a clarification to Amendment SC 6.08, the KDOW permit for the project is included. This permit includes any related stream crossing requirements. No KDOT Highway Encroachment permit was required.

Item No. AD3-6: Construction Progress Documentation (Section 01 32 00)

Revise the following Articles as detailed below:

1. Article 1.01, A by changing the words "Portfolio Management P6" to "Professional Project Management P6."
2. Article 1.01, B by replacing the entire sentence with the following new sentence: "The document tracking and control system will physically reside on a host server at a location to be determined by the Owner. All users of the system shall be given access to the system."
3. Article 1.01 (E), Item 1(a) by changing the words "Portfolio Management P6" to "Professional Project Management P6."
4. Article 1.07, B by changing the words "within 60 days" to "within 14 days."
5. Article 1.09, H by changing the words "with 14 days" to "within 14 days."
6. Article 1.09, L by adding the following new item "19. Training."
7. Article 1.09, N, 7 by adding the following words at the end "and added or deleted activities, changes in anticipated activity durations, etc."
8. Article 1.09, P by adding the following new sentence after the first sentence "The CCA may require a revised schedule showing recovery from the delay along with the written statement."

Item No. AD3-7: Concrete Finishes (Section 03 35 00)

Delete Article 3.02 (A.)

Item No. AD3-8: Concrete Curing (Section 03 39 00)

Delete Article 3.02

Item No. AD3-9: Metal Railings (Section 05 52 00)

As a clarification from Addendum 2, Article 2.02 B, Item 3 is the appropriate paragraph to delete.

Item No. AD3-10: Fluid Applied Waterproofing (Section 07 14 00)

As a clarification, fluid applied waterproofing has two products. One is membrane waterproofing and second is waterproofing coating. Waterproofing membrane shall be applied on the exterior of the building including pump room walls and 4' insulation shall be carried around perimeter as shown on the drawings (including Pump Well) . See section 07 14 00 item 3.08 for Application Schedule.

Item No. AD3-11: Aluminum Framed Entrances and Storefronts (Section 08 41 13)

Revise Article 2.02 (B.) by changing "4-1/2" to "5 1/2 inches"

Delete Article 2.02 (C.), Item 2 (a) and replace with the following:

- a. Wide (over 4- inch) stiles, 6-inch top rails and 10-inch bottom rail.

Item No. AD3-12: Raceways and Boxes (Section 26 05 33)

Delete Article 3.04 (B.), Items 3. and 4.

Delete Article 3.04 (C.), Items 3. and 4.

Delete Article 3.04 (D.), Item 4

Item No. AD3-13: Air and Vacuum Release Valve Assemblies (Section 33 12 16)

Delete the Valve Schedule and replace it with the attached revised Valve Schedule for Air Valves.

Revise Article 2.01 by adding the following items:

- "E. Air and Vacuum Valve 1/2 Inch to 16 Inches For Vertical Turbine Service:
1. 1/2 inch through 3 inches equipped with stainless steel diffuser screen to break up solid water column before coming in contact with float, manufacturer's standard double acting throttling device in outlet for throttling, NPT threaded inlet and outlet.
 2. 4 inches and larger equipped with anti-slam device to throttle flow of water into air valve. Design anti-slam device to permit full, unrestricted flow of air into and out of air valve, but reduce flow area for water to approximately 10 percent. ASME B16.1 Class 125 flanged inlet and NPT threaded outlet.
 3. Rated 150 psi working pressure, cast-iron or ductile iron body and cover, stainless steel float and trim, built and tested to AWWA C512.
 4. Manufacturers and Products:
 - a. APCO Valve and Primer Corp.; Series 141DAT to 146DAT or Series 1904 to 1916.
 - b. Val-Matic Valve; Series 100WS to 116WS.

Item No. AD3-14: Process Piping - General (Section 40 27 00)

As a clarification, all process and pressure yard piping shall be restrained joint. The use of American Cast Iron Pipe's "Fast Grip" or US Pipe's "Field Lok" gaskets are acceptable for pipe restraint. Mechanical joint fittings with wedge action restraint are required on all restrained lines. Drain and waste yard piping shall be push-on joint.

Add Article 2.05 D. as follows:

- D. Ductile Iron sanitary sewers to be lined with Protecto 401 Ceramic Epoxy as manufactured by Vulcan Painters, Inc. or equal.

Item No. AD3-15: Process Valves and Operators (Section 40 27 02)

Revise Article 2.04 by adding the following new items:

- "G. Type V135 Resilient Seated Ductile Iron Gate Valve 3 Inches to 36 Inches:
1. Ductile iron body, resilient seat, bronze stem and stem nut, mechanical joint ends, non rising stem, in accordance with AWWA C515, minimum design working water pressure 200 psig, full port, fusion epoxy coated inside and outside per AWWA C550, NSF 61 certified.
 2. Manufacturers and Products:
 - a. American Flow Control; Series 2500.
 - b. M&H; Style 7000 and C515 Large RW Valves.
 - c. Clow.
 - d. US Pipe.
- H. Type V200 Globe Valve 3 Inches and Smaller:
1. All-bronze, union bonnet, packed gland, inside screw, rising stem, TFE disc, Class 150 rated 150 psi SWP/300 psi CWP, complies with MSS SP-80 Type 2.
 2. Manufacturers and Products:
 - a. Stockham; Figure B-22T, NPT threaded end.
 - b. Crane Co.; Figure 7TF, NPT threaded end.
 - c. Milwaukee; Model 1590T, soldered ends.
 - d. NIBCO; Figure S-235-Y, soldered ends.
- I. Type V306 Stainless Steel Ball Valve 2 Inches and Smaller:
1. Two-piece, full port, ASTM A276 GR 316 or ASTM A351/A351M GR CF8M stainless steel body and end piece, NPT threaded ends, ASTM A276 Type 316 stainless steel ball, reinforced PTFE seats, seals, and packing, adjustable packing gland, blowout proof stainless steel stem, stainless steel lever operator with vinyl grip, rated 1,000 psig CWP, complies with MSS SP-110.
 2. Manufacturers and Products:
 - a. Conbraco Apollo; 76F-100 Series.
 - b. Nibco; T-585-S6-R-66-LL.

- J. Type V600 Check Valve 2 Inches and Smaller:
1. All bronze, threaded cap, threaded or soldered ends, swing type replaceable bronze disc, rated 125-pound SWP, 200-pound WOG.
 2. Manufacturers and Products:
 - a. Stockham; Figure B-319, threaded ends.
 - b. Milwaukee; Figure 509, threaded ends.
 - c. Stockham; Figure B-309, soldered ends.
 - d. Milwaukee; Figure 1509, soldered ends.
- K. Type V624 Silent Check Valve 2 Inches to 10 Inches:
1. Wafer style, iron body, center guided valve, bronze trim, [A: Buna-N seat,] stainless steel springs, rated 150-pound WOG.
 2. Manufacturers and Products:
 - a. Mueller; Steam Specialty 91AP.
 - b. APCO; Series 300.

Item No. AD3-16: Process Valves and Motor Actuator Schedule (Section 40 27 02 Supplement 1)

The Schedule issued in Addendum No. 2 is deleted and replaced with the attachment to this Addendum.

Item No. AD3-17: Horizontal Split-Case Centrifugal Pumps (Section 44 42 56.02)

Revise Article 1.03.A, Item 6 (a) by changing 1600 psf to 1400 psf.

Revise Article 2.01 B., Item 6 (f) by adding the following at the end of the paragraph:

The design and details of the anchors and all appurtenances shall be submitted as a part of the structural design calculations as required by this specification.

Item No. AD3-18: Horizontal Split-Case Centrifugal Pumps (Section 44 42 56.02)

Revise Article 2.05 by adding the following new Item:

- D. Air Release Valve: an air release valve of the type and size as determined by the pump manufacturer for this specific application shall be provided and installed on the top of each pump volute or other appropriate location as determined by the pump manufacturer."

PLANS**Item No. AD3-19 Plumbing Symbols, Equipment and Fixture Identification (Sheet MP-G-014)**

Revise Item S-2 in Plumbing Fixture Schedule to be vented with a size of 3".

As a clarification, refer to Soil, Waste & Vent Riser on sheet MP-P-901 for correct size of vent piping.

Item No. AD3-20: Site Layout, Grading and Paving Plan (Sheet MP-C-103)

As a clarification, the planting bed adjacent to the south wall of the UV building will be created by forming a 4" wide and 18" deep concrete curb. The curb will extend 6" above the finished pavement elevation.

Item No. AD3-21: Site Piping and Utilities Plan (Sheet MP-C-104)

Revise the sanitary sewer line leaving the west side of the GAC contactor area to reflect ductile iron as the correct material.

As a clarification, the record drawings from 1962 indicate that all piping labeled as concrete is actually referring to PCCP.

Item No. AD3-22: Civil Construction Details (Sheet MP-C-601)

Revise the Drawing by deleting the Bedding and Backfill Details and replacing it with the sketch attached to this Addendum.

Item No. AD3-23: Legends, General Notes, and IBC Code Matrix (Sheet MP-A-001)

Add the following details to this sheet which are attached to this Addendum:

- SK A-1 Typical Pipe Penetration at Exterior walls
- SK A-2 Typical Pipe Penetration Through Floor assemblies
- SK A-3 Typical Pipe Penetration Through Fire separations

Item No. AD3-24: Second Floor Plan - North (Sheet MP-A-151)

Delete the note attributed to aluminum access ladders (Type B) at all GAC contactors and replace with the following:

Rung ladder See Detail 0551-146

Item No. AD3-25: Door and Hardware Schedule (Sheet MP-A-601)

Change General Notes Items No. 7 by replacing "MP-120C" with "MP 102C"

Item No. AD3-26: AT Building Sections (Sheet MP-S-309)

As a clarification from Addendum No. 2, the sketch referred to in Item 15 is the same one issued as an Attachment to that Addendum and is the same sketch referenced in Item 14.

Item No. AD3-27: First Floor Plan (Sheet MP-D-141)

Revise the Drawing as follows:

1. Key note number 18 - delete original note and replace with following note:
"4-inch air vacuum valve for vertical turbine service for pumps 1 & 2; 3-inch air vacuum valve for vertical turbine service for pumps 3 & 4."
2. Add the following additional process mechanical scope of work that is not currently shown on this drawing:
 - a. The outlet from the AVV valve on each of the 4 GAC pump discharges shall be individually piped back to the GAC pump well as follows:
 - 1) Install a ductile iron floor pipe in the pump room floor under the pump discharge pipe centerline for each pump, approximately 18 inches away from the pump base.
 - 2) The DI floor pipes shall be flanged x plain end with the flange four inches above the floor.
 - 3) The DI floor pipe diameter shall be same diameter as the outlet diameter of the corresponding AVV valve.
 - 4) Schedule 80 PVC pipe and fittings of the same diameter as the AVV outlet shall be used to connect the AVV outlet with the corresponding floor pipe.
 - 5) The PVC pipe and fittings shall be installed close to the pump discharge pipe to avoid blocking the passageway between individual pumps.

Item No. AD3-28: Pipe Gallery Section (Sheet MP-D-301)

Revise the Drawing as follows:

1. Where the 10-inch ductile iron vent pipe penetrates the new masonry wall at the upper right side of this section, add the following additional standard detail notation: "4027-607 with modular mechanical seal at both ends of the wall sleeve"

Item No. AD3-29: AT Building Sections (Sheet MP-D-302)

Revise the Drawing as follows:

2. Key note number 13 - delete the original note and replace it with the following note:
 13. One-inch air vacuum valve for vertical turbine service.

3. Add the following additional process mechanical scope of work that is not currently shown on this drawing:
 - a. The outlet from the AVV valve on each of the 2 slurry water pump discharges shall be individually piped back to the GAC pump well as follows:
 - 1) Install a single 4-inch ductile iron floor pipe between the pump bases.
 - 2) The DI floor pipe shall be flanged x plain end with the flange four inches above the floor.
 - 3) Schedule 80 PVC pipe and fittings of the same diameter as the AVV outlet shall be used to connect the AVV outlets of both valves with the single 4-inch floor pipe.
 - 4) The PVC pipe and fittings shall be installed in a manner that avoids conflict with normal operation and maintenance of the individual pumps.

Item No. AD3-30: AT Building, Contactor Section (Sheet MP-D-303)

Revise the Drawing as follows:

1. Key note number 22 - delete the original note and replace it with the following note:
 22. One-inch air vacuum valve

Item No. AD3-31: AT Building Section (Sheet MP-D-304)

Revise the Drawing as follows:

1. Key note number 3 - delete the original note and replace it with the following note:

"Vertical actuator stem with stem support brackets, floor stand, wall mounted floor stand bracket and accessories as required by valve and actuator manufacturers and as shown in mounting detail."
2. The attached butterfly valve/actuator mounting detail relating to the GAC contactor influent valves and the contactor backwash outlet valves is made a part of the project scope.

Item No. AD3-32: AT Building Section (Sheet MP-D-304)

Add the Butterfly Valve/Actuator Mounting Detail attached to this Addendum.

Item No. AD3-33: Existing Backwash Pump Station (Sheet MP-D-309)

Revise the Drawing as follows:

1. Key note number 6 - delete this note.

Item No. AD3-34: UV Upper Floor Plan (Sheet MP-M-142)

Revise Note 6 to change the mounting elevation of the intake louvers L-2A and L-2B to 755.98 in-lieu-of 756.00 as indicated.

Item No. AD3-35: HVAC Schedules and General Notes (Sheet MP-M-601)

Revise the Electric Unit Heater Schedule by deleting the letter "T" from the end of the model numbers.

Item No. AD3-36: Plumbing Basement Level Plan (Sheet MP-P-131)

Revise the Drawing as identified below:

1. Sample sink to right of tunnel shall be tagged S-2.
2. Keyed Note #9, should be "HV-2" and not "HV-1" as indicated.
3. Add required non-sloping pieces on trench drains system to raise elevation of bottom of trench drain system, to meet the indicated inverts and provide the minimum 4" concrete thickness below trench drains.
4. Trench drain supplier shall furnish detailed shop drawing indicating and demonstrating compliance with indicated invert and coverage requirements, for approval prior to installation.

Item No. AD3-37: UV Plumbing UV Lower Floor Plan (Sheet MP-P-132)

Revise the Drawing by changing the sump size to 24" X 24"

Item No. AD3-38: First Floor Plan (Sheet MP-P-141)

Revise the Drawing as identified below:

1. Add required non-sloping pieces on trench drain system to meet requirement of Key Note #5.
2. Revised part of Key Note #5 to read as follows: "...Bottom of trench has a minimum concrete thickness of 4" below trench."
3. Trench drain supplier shall furnish detailed shop drawing indicating and demonstrating compliance with indicated invert and coverage requirements, for approval prior to installation.

Item No. AD3-39: Second Floor Plan (Sheet MP-P-151)

Revise the Drawing as identified below:

1. Add required non-sloping pieces on trench drain system to meet requirements of Key Note #7.
2. Revise part of Key Note #7 to read as follows: "...Bottom of trench has minimum concrete thickness of 4" below trench."
3. Trench drain supplier shall furnish detailed shop drawing indicating and demonstrating compliance with indicated invert and coverage requirements, for approval prior to installation.

Item No. AD3-40: Plumbing General Notes (Sheet MP-P-601)

Revise the Drawing as identified below:

1. Electric Water Cooler: Provide Elkay Model DFC-13 barrier-free electric water cooler, Hawes, Western or approved equivalent.
2. Floor drain (FD.1): Provide J.R. Smith Model 2005 - B-D, cast-iron body, polished bronze top with trap primer connection, Wade, Zurn or approved equivalent.
3. Sand Trap: Provide ABT 24" x 24" 604 ST pre-cast polymer concrete with a 24" x 24" clear opening and stackable risers, units shall have attachable legs, Zurn, J.R. Smith or approved equivalent. Note: Provide 36" X 36" where indicated on plans and HDPE is an acceptable alternate material, for sump construction.

Item No. AD3-41: Electrical Site Demolition Plan (Sheet MP-E-101)

As a clarification, the existing generator may be removed from service and demolished early in the project schedule in accordance with Note 10.

Item No. AD1-42: Devicenet Riser Diagrams (Sheet MP-E-104)

For each valve Devicenet riser diagram, delete the A/B 20-COMM-D communication adapter that is shown typical for each valve. The adapter shall only be provided for each VFD as called for on the VFD riser diagrams. The valve controllers are specified with a Devicenet communication module integral to each unit.

Item No. AD3-43: Standard Drawing 0315-153

The starter wall is not required. Bidder should utilize detail 0315-154, but slab thickness must accommodate 3 1/2" clear from top of slab to top mat of steel.

Item No. AD3-44: Geotechnical Report

As a clarification, the boring plan sheet is attached to this Addendum.

END ADDENDUM 3

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NOTE TO BIDDER: Use typewriter or BLACK ink for completing this Bid Form.

**BID FORM
(STIPULATED PRICE BASIS)**

1. BID RECIPIENT

1.1. This Bid is submitted to:

Owner: Northern Kentucky Water District
Address: P.O. Box 18640, 2835 Crescent Springs Road, Erlanger, KY
41018
Project Identification: Memorial Parkway Treatment Plant Advanced Treatment
Contract No.: 184-456

1.2. The undersigned Bidder proposes and agrees, if this Bid is accepted, to enter into an Agreement with Owner in the form included in the Bidding Documents to perform all Work as specified or indicated in the Bidding Documents for the prices and within the times indicated in this Bid and in accordance with the other terms and conditions of the Bidding Documents.

2. BIDDER'S ACKNOWLEDGEMENTS

2.1. Bidder accepts all of the terms and conditions of the Instructions to Bidders, including without limitation those dealing with the disposition of Bid security. This Bid will remain subject to acceptance for 100 days after the Bid opening, or for such longer period of time that Bidder may agree to in writing upon request of Owner.

3. BIDDER'S REPRESENTATIONS

3.1. In submitting this Bid, Bidder represents that:

3.1.1. Bidder has examined and carefully studied the Bidding Documents, the other related data identified in the Bidding Documents, and the following Addenda, receipt of which is hereby acknowledged.

<u>Addendum No.</u>	<u>Addendum Date</u>
_____	_____
_____	_____
_____	_____
_____	_____

(Bidder shall insert number of each Addendum received.)

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3.1.2. Bidder has visited the Site and become familiar with and is satisfied as to the general, local, and Site conditions that may affect cost, progress, and performance of the Work.

3.1.3. Bidder is familiar with and is satisfied as to all federal, state and local Laws and Regulations that may affect cost, progress, and performance of the Work.

3.1.4. Bidder has carefully studied all: i) reports of explorations and tests of subsurface conditions at or contiguous to the Site and all drawings of physical conditions in or relating to existing surface or subsurface structures at or contiguous to the Site (except Underground Facilities) which have been identified in Paragraph 4.02 of the Supplementary Conditions; and ii) reports and drawings of Hazardous Environmental Conditions that have been identified in Paragraph 4.06 of the Supplementary Conditions.

3.1.5. Bidder has obtained and carefully studied (or accepts the consequences for not doing so) all additional or supplementary examinations, investigations, explorations, tests, studies and data concerning conditions (surface, subsurface and Underground Facilities) at or contiguous to the Site which may affect cost, progress, or performance of the Work or which relate to any aspect of the means, methods, techniques, sequences, and procedures of construction to be employed by Bidder, including applying the specific means, methods, techniques, sequences, and procedures of construction expressly required by the Bidding Documents to be employed by Bidder, and safety precautions and programs incident thereto.

3.1.6. Bidder does not consider that any further examinations, investigations, explorations, tests, studies, or data are necessary for the determination of this Bid for performance of the Work at the price(s) Bid and within the times and in accordance with the other terms and conditions of the Bidding Documents.

3.1.7. Bidder is aware of the general nature of work to be performed by Owner and others at the Site that relates to the Work as indicated in the Bidding Documents.

3.1.8. Bidder has correlated the information known to Bidder, information and observations obtained from visits to the Site, reports and drawings identified in the Bidding Documents, and all additional examinations, investigations, explorations, tests, studies, and data with the Bidding Documents.

3.1.9. Bidder has given Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Bidder has discovered in the Bidding Documents, and the written resolution thereof by Engineer is acceptable to Bidder.

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3.1.10. The Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for the performance of the Work for which this Bid is submitted.

3.1.11. Bidder will submit written evidence of its authority to do business in the state where the Project is located not later than the date of its execution of the Agreement.

4. FURTHER REPRESENTATIONS

4.1. Bidder further represents that:

4.1.1. This Bid is genuine and not made in the interest of or on behalf of any undisclosed individual or entity and is not submitted in conformity with any agreement or rules of any group, association, organization or corporation;

4.1.2. Bidder has not directly or indirectly induced or solicited any other Bidder to submit a false or sham Bid;

4.1.3. Bidder has not solicited or induced any individual or entity to refrain from bidding;

4.1.4. Bidder has not sought by collusion to obtain for itself any advantage over any other Bidder or over Owner; and

4.1.5. All required sales and use taxes are included in the stated Bid prices for the Work unless provision is made herein for the Bidder to separately itemize the estimated amount of sales tax.

5. BASIS OF BIDS

5.1. Bidder will complete the Work in accordance with the Contract Documents for the following price(s). Amounts will be shown in both words and figures. In case of discrepancy, the amount shown in words will govern.

5.2. CONTINGENCY ALLOWANCE

5.2.1. The contingency allowance that has been identified for inclusion with the Base Bid of the project is the following:

5.2.1.1. Unanticipated changes in the Work: \$100,000.

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5.3. LUMP SUM BID PRICE SCHEDULE

ITEM NO. 1 – ULTRAVIOLET (UV) DISINFECTION SYSTEM **

For furnishing all labor, equipment and materials necessary for the installation of the medium pressure UV system to include the reactors, controls, sensors and other components identified in the Specifications or shown on the Drawings, the lump sum amount of:

_____ Dollars \$ _____
(words) (numerals)

** Note - This amount is the lowest of the capital cost amounts provided for different equipment vendors on the Guaranteed Present Worth Table which is included as a Supplement to this Bid Form.

ITEM NO. 2 – ADVANCED TREATMENT FACILITY

For furnishing all materials, equipment and labor necessary to complete and put into operation a new Advanced Treatment Facility , including all work shown on the Drawings or as specified herein but not included in Item 1 of the Base Bid Schedule as well as the allowances identified in Section 5.2 of this section, the lump sum amount of:

_____ Dollars \$ _____
(words) (numerals)

BASE BID (TOTAL OF ITEM NO.1 AND ITEM NO. 2 - ABOVE):

_____ Dollars \$ _____
(words) (numerals)

6. ALTERNATE BID SCHEDULE

The following is included for the Bidder to provide a lump sum amount for the addition or deletion of certain work, if so desired by the Owner. All Bidders are required to complete this portion of the Bid Form. Failure to complete this portion shall cause the Owner to declare the Bid non-responsive and give it no further consideration.

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Please note that the Bidder needs to identify whether the price for each alternate bid item is an addition or deduction from the Total Base Bid Amount.

ALTERNATIVE BID NO.1 – STAINLESS STEEL UNDERDRAIN

Delete all materials, equipment and labor associated with the installation of the plastic underdrains/ HDPE media support cap in the six contactors and replace it with all labor, material and equipment needed to install stainless steel underdrains in conformance with the specification section 44 43 34 and as shown on Drawings MP-D-131.

Add or Deduct (circle one) the following lump sum:

_____ Dollars (\$) _____)
(words) (numerals)

ALTERNATE NO. 2 - UV SYSTEM ALTERNATE MANUFACTURER

Delete all materials, equipment and labor associated with the installation of the UV system indicated in Item 1 of the LUMP SUM BID PRICE in Article 5.2 above and replace it with all labor, material and equipment needed to install the UV system provided by the alternate UV manufacturer in conformance with the specification section 44 44 73.

Add the following lump sum:

_____ Dollars (\$) _____)
(words) (numerals)

ALTERNATIVE BID NO. 3 – DEDUCT UV EQUIPMENT

Delete all materials, equipment and labor associated with the installation of the medium pressure UV system as specified in section 44 44 73 including the reactors, controls, sensors and other components. Replace the two reactors with ductile iron spool pieces of appropriate length and diameter to serve as a placeholder for future installation of the UV equipment. Electrical and controls deletions associated with the UV system include: the cables from the UV module to the control panel, the power wiring from the UV control panel back to the MDP, the UV breaker in the MDP and label space as "Future", and the UV UPS system complete. The conduits with a pull-wire are to remain. Stub-up conduits at the UV module and control panel. Cap off for future use. Delete any cooling water piping, fittings, controls and valves

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to UV reactor and any drain piping, fittings, controls and valves from the UV reactors to a location 6 inches above the floor. Cap connections of the cooling water and drain piping with blind flange.

(words)	Dollars \$	(numerals)
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7. TIME OF COMPLETION

7.1. Bidder agrees that the Work, and any Milestones specified in Section 01 31 13, Project Coordination, will be substantially complete and will be completed and ready for final payment in accordance with Paragraph 14.07.B of the General Conditions on or before the dates or within the number of calendar days indicated in the Agreement.

7.2. Bidder accepts the provisions of the Agreement as to liquidated damages in the event of failure to complete the Work, and any specified Milestones, within the Contract Times.

8. ATTACHMENTS TO THIS BID

8.1. The following documents are attached to and made a condition of this Bid:

8.1.1. Required Bid security in the form of Bid bond.

8.1.2. Certification Regarding Debarment, Suspension and Other Responsibilities (EPA Form 5700-49)

8.1.3. Certification Regarding Lobbying, Certification for Contracts, Grants, Loans and Cooperative Agreements

8.1.4. Non-Collusion Affidavit

8.1.5. Bidder's Experience Record

8.1.6. Statement of Bidder's Qualifications

8.1.7. UV Procurement Evaluation

8.1.7.1 Guaranteed Present Worth Table – Option 1 Trojan Technologies

8.1.7.2 Guaranteed Present Worth Table – Option 2 Calgon Corporation

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8.1.8. Proposed Subcontractors

8.1.9. Proposed Major Equipment Manufacturers

9. DEFINED TERMS

9.1. The terms used in this Bid with initial capital letters have the meanings stated in the Instructions to Bidders, the General Conditions, and the Supplementary Conditions.

10. BID SUBMITTAL

10.1. This Bid submitted by:

If Bidder is:

An Individual

Name (*typed or printed*): _____

By (*signature*): _____

Doing business as: _____

A Partnership

Partnership Name: _____ (SEAL)

By: _____
(*Signature of general partner – attach evidence of authority to sign*)

Name (*typed or printed*): _____

A Corporation

Corporation Name: _____ (SEAL)

State of Incorporation: _____

Type (For Profit, Professional Service): _____

By: _____
(*Signature of President, Vice President or other officer – attach evidence of authority to sign*)

Name (*typed or printed*): _____

Title: _____ (CORPORATE SEAL)

MEMORIAL PARKWAY WTP ADVANCED TREATMENT

Attest: _____
(Signature of Corporate Secretary)

Original Date of Qualification to do business in Kentucky is: _____

A Joint Venture

Joint Venturer Name: _____ (SEAL)

By: _____
(Signature of joint venture partner – attach evidence of authority to sign)

Name (typed or printed): _____

Title: _____

(Each joint venturer must sign. The manner of signing for each individual, partnership, and corporation that is a party to the joint venture should be in the manner indicated above.)

Bidder's Business Address: _____

Phone No.: _____ FAX No.: _____

BID SUBMITTED on _____, 20____

(State) Contractor's License No.: _____

Contractor's License Class (where applicable): _____

A Limited Liability Company

LLC Name: _____ (SEAL)

State of Organization: _____

By: _____
(Signature of Member or Manager – attach evidence of authority to sign)

Name (typed or printed): _____

Title: _____ (CORPORATE SEAL)

Original Date of Qualification to do business in Kentucky is: _____

END OF SECTION

SECTION 00 41 13.1 – SUPPLEMENTS TO BID FORM

1. FORMS TO BE SUBMITTED WITH BID

- A. Certification Regarding Debarment, Suspension and Other Matters – EPA Form 5700-49 (Attachment No. 1)
- B. Certification Regarding Lobbying (Attachment No. 2)
- C. Non-Collusion Affidavit from Bidder (Attachment No. 3)
- D. Bidder's Qualifications (Attachment No. 4)
- E. Bidder's Experience Record (Attachment No. 5)
- F. UV Procurement Evaluation (Attachment 6) and Guaranteed Present Worth Table (Attachments 6A and 6B)
- G. Proposed List of Subcontractors (Attachment No. 7)
- H. Proposed Major Equipment Manufacturers (Attachment No. 8)
- I. Bid Security (Specification Section 00 43 13L)

2. FORMS TO BE SUBMITTED WITHIN 7 DAYS OF BID OPENING

Certain information and documentation is required by the funding agencies and other governing bodies prior to awarding a necessary approval for this project. The BIDDER acknowledges, through the act of submitting a Bid, a commitment to submit the following documentation or information within 7 days of Bid Opening or within 5 days of the formal request to do so, whichever is greater. Failure to produce any of this documentation or information within the prescribed period will serve as grounds for rejection of the Bid. If the information is required from a subcontractor or vendor and is not produced within the prescribed, it will serve as grounds to replace the subcontractor or vendor with another company or product.

Specific items to be submitted within 7 days of the Bid opening include:

- A. EPA Form 6100-2 DBE Participation (Attachment 12 – Section 00 74 00)
- B. EPA Form 6100-3 DBE Subcontractor Performance (Attachment 12 – Section 00 74 00)
- C. EPA Form 6100-4 DBE Subcontractor Utilization (Attachment 12 – Section 00 74 00)
- D. Disadvantage Enterprise Participation Policy (Attachment 12 – Section 00 74 00)
- E. List of DBE Bidders of Subcontracts (Attachment 12 – Section 00 74 00)
- F. Certification of Costs, Warranties, Guarantees and Other Requested Information from Ultraviolet Disinfection (UV) Vendor

CERTIFICATION REGARDING LOBBYING
Certification for Contracts, Grants,
Loans, and Cooperative Agreements

The undersigned certifies, to the best of his or her knowledge and belief, that:

(1) No Federal appropriate funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of an agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

(2) If any funds other than Federal appropriate funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

(3) The undersigned shall require that the language of this certification be included in the award documents for all sub-awards at all tiers (including subcontracts, sub-grants, and contracts under grants, loans, and cooperative agreements) and that all sub-recipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by section 1352, title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

TYPED NAME & TITLE OF AUTHORIZED REPRESENTATIVE

SIGNATURE OF AUTHORIZED REPRESENTATIVE DATE

_____ I am unable to certify to the above statements. My explanation is attached.

NON-COLLUSION AFFIDAVIT OF PRIME BIDDER

STATE OF _____)

COUNTY OF _____)

_____, being first duly sworn, deposes and says that:

(1) He/She is _____
(OWNER, PARTNER, REPRESENTATIVE OR AGENT)

of _____, the Bidder that has submitted the attached bid;

(2) He/She is fully informed respecting the preparation and contents of the attached Bid and of all pertinent circumstances respecting such Bid;

(3) Such Bid is genuine and is not a collusive or sham Bid;

(4) Neither the said Bidder nor any of its officers, partners, owners, agents or representatives, employees or parties in interest, including the affinity has in any way colluded, conspired, connived or agree, directly or indirectly with any other bidder, firm or person to submit a collusive or sham Bid in connection with the Contract for which the attached Bid has been submitted or to refrain from bidding in connection with such Contract, or has in any manner, directly or indirectly, sought by agreement or collusion or communication or conference with any other bidder, firm or person to fix the price or prices in the attached Bid or of any other Bidder, or to fix any overhead, profit or cost element of the Bid price or the Bid price of any other bidder, or to secure through any collusion, conspiracy, connivance or unlawful agreement any advantage against the _Owner of the Project or any person interested in the proposed Contract; and

(5) The price or prices quoted in the attached Bid are fair and proper and are not tainted by any collusion, conspiracy, connivance or unlawful agreement on the part of the Bidder or any of its agents, representatives, owners, employees or parties, including this affiant.

SIGNED _____

TITLE _____

Subscribed and sworn to before me this _____ day of _____, of this year _____.

(NAME)

(TITLE)

MY COMMISSION EXPIRES: _____.

STATEMENT OF BIDDER'S QUALIFICATIONS

All questions shall be answered or the bid document will be incomplete. All data given shall be clear and comprehensive. This statement shall be notarized. If necessary, questions may be answered on separate sheets. The bidder may submit any additional information it desires. If bidder is a joint venture, submit previous joint venture projects. If joint venture has not completed prior projects of this magnitude then submit projects completed by joint venture partners.

1. Name of Bidder:
2. Permanent main office address:
3. When organized:
4. If a corporation, where incorporated:
5. How many years have you been engaged in operation of your business under your present firm or trade name?
6. Contracts on hand. (Schedule these, showing amount of each contract and the appropriate anticipated dates of completion.)
7. General character of work performed by your company (general contractor, electrical contractor, etc.).
8. Have you ever failed to complete any job awarded to you? If so, where and why?
9. Have you ever defaulted on a contract? If so, where and why?
10. List the more important projects completed by your firm, stating the approximate cost for each, and the month and year completed on attached sheet.
11. List your major equipment available for this work.
12. Experience in work similar in complexity, size and/or dollar value to this project. List and describe at least four on the table "Project References."
13. Background and experience of the principal members of your organization, including the officers in this type work. (Attach.)
14. Credit available: \$ _____.
15. Give bank reference: _____.
16. Will you, upon request, fill out a detailed financial statement and furnish any other information that may be required by the Owner? Yes No

BIDDERS EXPERIENCE RECORD
 (PROJECTS NEED TO BE OF SIMILAR SIZE AND NATURE)

Project Name, Owner, Address, Telephone #	Architect/Engineer, Contact Name, Telephone #	Project Type, Year of Completion	Size of Project (Capacity, Contract Duration)	Contract Value	Change Order Value

UV PROCUREMENT EVALUATION

ARTICLE 1 – CALCULATION OF LIFE CYCLE COST

- 1.01 In the preparation and submission of a Bid, the Bidder will provide information required by the Owner in the Bid and Bid Evaluation Forms. This information will be used by the Bidder to calculate Life Cycle Cost using the Present Worth method of analysis. This form shall be completed by each Bidder and shall be submitted with the Bid.
- 1.02 The Bidder acknowledges that the calculation of Life Cycle Cost shall only include those items as identified in this Section. The Owner will not consider or include any item not listed herein. The Owner will not consider any other method of calculation other than what has been provided.
- 1.03 The Bidder acknowledges that the Owner shall be the sole judge of the values used to calculate the Present Worth. The Bidder acknowledges that the design and operational parameters of the Proposed UV System shall be evaluated by the Owner to justify the proposed cost criteria. Inaccurate or unjustifiable data shall be subject to disqualification which shall render the Bidder unresponsive.
- 1.04 The Bidder acknowledges review and acceptance of the performance warranty, component life warranty, price guarantee, and liquidated damage requirements of the bidding document including the Agreement and, in particular, UV System specifications.
- 1.05 The Bidder shall submit life cycle cost information for each UV system proposed. Bidder recognizes that Owner reserves the right to select the UV system based on either the lowest capital cost or the lowest lifecycle cost or based on other financial and non-financial considerations as the Owner determines to be in the best interest of the project.

ARTICLE 2 -- CALCULATION OF COSTS

2.01 Basis of Calculation

A. Cost Factors

1.	Present Worth Factor (PWF)	13.41 (25 yrs @ 5.5%)
2.	Cost of Energy (EC)	\$0.08/kW-hr
3.	Hours per Year	8,766
4.	BHP / kW Conversion	0.7457

B. Ultraviolet Disinfection System

1. UV System equipment design parameters shall be as specified in Section 44 44 73. For the purposes of calculating life-cycle costs, the following information shall be used:
 - a. Average Daily Flow (ADF)
 - b. Design UV Transmittance
 - c. Minimum Reduction Equivalent Dose

GUARANTEED PRESENT WORTH TABLE - OPTION 1 TROJAN TECHNOLOGIES

LINE	ITEM	UNITS	AMOUNT
LUMP SUM BID PRICE FOR TROJAN EQUIPMENT			
A	For furnishing all materials, equipment and labor needed to install the complete UV disinfection system as shown on the Drawings or specified herein– Lump Sum Amount of:	\$	
B	UV Reactor Model		
C	UV Reactor Flange Diameter (inches)		
D	Number of lamps installed per UV reactor		
E	Number of duty reactors (excluding standby reactor)		
SYSTEM OPERATING PERFORMANCE INFORMATION AT ADF			
1	Number of Reactors operating at ADF	EA	
2	Total number of Lamps in service at ADF	EA	
3	Total number of Ballasts in service at ADF Size = _____ kW	EA	
4	Total number of Sensors in service at ADF	EA	
5	Warranted Lamp Life (Not to Exceed 12,000 Hours)	Hours	
6	Warranted Ballast Life (Not to Exceed 10 Years)	Years	
7	Warranted Sensor Life (Not to Exceed 10 Years)	Years	
8	Warranted Lamp Sleeve Life	Years	
9	Guaranteed Lamp Replacement Cost	\$	
10	Guaranteed Ballast Replacement Cost	\$	
11	Guaranteed UV Sensor Replacement Cost	\$	
12	Guaranteed Lamp Sleeve Replacement Cost	\$	
13	Guaranteed Maximum Total UV System Power Consumption at ADF	kW	
LIFECYCLE COST EVALUATIONS			
14	Annual Power Consumption (Line 13 x 8,766 hrs/yr)	kW-h/yr	
15	Annual Power Cost (Line 14 x \$.08/kw-H)	\$/yr	
16	POWER -PRESENT WORTH VALUE (LINE 15 X 13.41)	\$	
17	Lamps Replaced Annually [(8,766/Line 5) x Line 2]	Lamps/Yr	
18	Annual Lamp Replacement Cost (Line 17 x Line 9)	\$	

19	LAMP REPLACEMENT PRESENT WORTH (Ln 18 x 13.41)	\$	
20	Ballasts Replaced Annually(Line 3 /Line 6)	Blst/yr	
21	Annual Ballast Replacement Cost (Line 20 x Line 10)	\$	
22	BALLAST REPLACEMENT PRES WORTH (Ln 21 x 13.41)	\$	
23	Sensors Replaced Annually (Line 4 /Line 7)	Snst/yr	
24	Annual Sensor Replacement Cost (Line 23 x Line 11)	\$	
25	SENSOR REPLACEMENT PRES WORTH (Ln 24 x 13.41)	\$	
TOTAL LIFECYCLE COST			
26	Trojan Present Worth (Ln A+ Ln16+ Ln19+ Ln 22+ Ln25)	\$	

CERTIFICATION INSTRUCTIONS

This Attachment shall be filled in by the Bidder using information supplied by the UV supplier and shall be submitted with the Bid. Certification signature on this attachment is not required at the time of the Bid.

Within 7 days following the Bid opening the apparent low bidder and any other bidders requested by the Owner shall submit to the Owner a duplicate copy of this Attachment as attached to the original Bid with a signature by an officer of the UV supplier to provide the certification below:

CERTIFICATION

“With the exception of Line A which includes Installing Contractor cost over which we have no control, we certify that all of the cost information, warranties and guarantees are true and valid.

_____ (signature)

_____ (printed name and officer position)

_____ (date signed)

GUARANTEED PRESENT WORTH TABLE - OPTION 2 CALGON CORPORATION

LINE	ITEM	UNITS	AMOUNT
LUMP SUM BID PRICE FOR CALGON EQUIPMENT			
A	For furnishing all materials, equipment and labor needed to install the complete UV disinfection system as shown on the Drawings or specified herein– Lump Sum Amount of:	\$	
B	UV Reactor Model		
C	UV Reactor Flange Diameter (inches)		
D	Number of lamps installed per UV reactor		
E	Number of duty reactors (excluding standby reactor)		
SYSTEM OPERATING PERFORMANCE INFORMATION AT ADF			
1	Number of Reactors operating at ADF	EA	
2	Total number of Lamps in service at ADF	EA	
3	Total number of Ballasts Size 1 in service at ADF Size = _____ kW	EA	
4	Total number of Ballasts Size 2 in service at ADF Size = _____ kW	EA	
5	Total number of Sensors in service at ADF	EA	
6	Warranted Lamp Life (Not to Exceed 12,000 Hours)	Hours	
7	Warranted Ballast Life (Not to Exceed 10 Years)	Years	
8	Warranted Sensor Life (Not to Exceed 10 Years)	Years	
9	Warranted Lamp Sleeve Life	Years	
10	Guaranteed Lamp Replacement Cost	\$	
11	Guaranteed Ballast Size 1 Replacement Cost	\$	
12	Guaranteed Ballast Size 2 Replacement Cost	\$	
13	Guaranteed UV Sensor Replacement Cost	\$	
14	Guaranteed Lamp Sleeve Replacement Cost	\$	
15	Guaranteed Maximum Total UV System Power Consumption at ADF	kW	
LIFECYCLE COST EVALUATIONS			
16	Annual Power Consumption (Line 15 x 8,766 hrs/yr)	kW-h/yr	
17	Annual Power Cost (Line 16 x \$.08/kw-H)	\$/yr	
18	POWER -PRESENT WORTH VALUE (LINE 17 X 13.41)	\$	

19	Lamps Replaced Annually [(8,766/Line 6) x Line 2]	Lamps/Yr	
20	Annual Lamp Replacement Cost (Line 19 x Line 10)	\$	
21	LAMP REPLACEMENT PRESENT WORTH (Ln 20 x 13.41)	\$	
22	Ballasts Size 1 Replaced Annually(Line 3 /Line 7)	Blst1/yr	
23	Annual Ballast Size 1 Replacement Cost (Line 22 x Line 11)	\$	
24	BALLAST Size 1 REPLACEMENT PRES WORTH (Ln 23 x 13.41)	\$	
25	Ballasts Size 2 Replaced Annually(Line 4 /Line 7)	Blst2/yr	
26	Annual Ballast Size 2 Replacement Cost (Line 25 x Line 12)	\$	
27	BALLAST Size 2 REPLACEMENT PRES WORTH (Ln 26 x 13.41)	\$	
28	Sensors Replaced Annually (Line 5 /Line 8)	Snsr/yr	
29	Annual Sensor Replacement Cost (Line 28 x Line 13)	\$	
30	SENSOR REPLACEMENT PRES WORTH (Ln 29 x 13.41)	\$	
TOTAL LIFECYCLE COST			
31	Calgon Present Worth (Ln A+ Ln18+ Ln21+ Ln 24+ Ln27+Ln30)	\$	

CERTIFICATION INSTRUCTIONS

This Attachment shall be filled in by the Bidder using information supplied by the UV supplier and shall be submitted with the Bid. Certification signature on this attachment is not required at the time of the Bid.

Within 7 days following the Bid opening the apparent low bidder and any other bidders requested by the Owner shall submit to the Owner a duplicate copy of this Attachment as attached to the original Bid with a signature by an officer of the UV supplier to provide the certification below:

CERTIFICATION

“With the exception of Line A which includes Installing Contractor cost over which we have no control, we certify that all of the cost information, warranties and guarantees are true and valid.

_____ (signature)

_____ (printed name and officer position) _____ (date signed)

ARTICLE 3 – NOTES ON TABLE ENTRIES

- 3.01 For determining Guaranteed Maximum Total UV System Power Consumption at ADF, include power use in the lamps, power transformers, ballasts and other miscellaneous power consuming components.
- 3.02 Owner will use the Guaranteed Maximum Total UV System Power Consumption at ADF for determination of Excess power consumption penalties as specified in Section 44 44 73 paragraph 3.06.
- 3.03 This analysis will be based on average daily flow. Assume lamps are at end-of-life.
- 3.04 End of Lamp life shall be defined as 80 percent of initial 100-hour output for the purposes of this analysis.
- 3.05 Guaranteed Replacement Price per lamp shall include disposal of used lamps.

END OF ATTACHMENT NO. 6

PROPOSED SUBCONTRACTORS

The BIDDER'S proposed subcontractors shall be listed below for the various branches of work included in the proposed contract. All subcontractors are subject to the approval of the OWNER. **Unless rejected by the OWNER, no substitutions or changes to the listing of the entities proposed to perform that branch of the work will be allowed following opening of the Bids.**

Where the BIDDER proposes to perform the work with its own forces, the phrase "Prime Contractor" shall be entered in the box provided.

Failure to submit a completed list shall be cause for rejection of the Bid.

Branch of Work	Name of Subcontractor
1. Excavation & Grading	
2. Concrete Work	
3. Masonry	
4. Electrical	
5. Panel Fabricator	
6. Instrumentation & Controls	
7. Mechanical	

PROPOSED MAJOR EQUIPMENT MANUFACTURERS

The BIDDER'S proposed major equipment manufacturers included in their Base Bid price shall be listed below for the requested items. **For the purposes of determining low Bidder, the Bidder shall include only manufacturers named in the specifications. Substitute or "or equal" manufacturer's will be considered after the Bid.** The OWNER reserves the right to reject any equipment manufacturers not listed in the Specifications. **Unless rejected by the OWNER, no substitutions or changes to this list of the major equipment manufacturers will be allowed after opening of the Bids.**

Failure to submit a completed list shall be cause for rejection of the Bid.

Major Equipment Item	Name of Manufacturer
1. Filter Underdrain System	
2. Vertical Turbine Pumps-GAC Feed Pumps	
3. Horizontal Split Case Pumps-GAC and Filter Backwash Pumps	
4. Granular Activated Carbon Filter Media	
5. Generator Set Diesel Engine	

End of Section

STEVEN L. BESHEAR
GOVERNOR



LEONARD K. PETERS
SECRETARY

ENERGY AND ENVIRONMENT CABINET
DEPARTMENT FOR ENVIRONMENTAL PROTECTION
DIVISION OF WATER
200 FAIR OAKS LANE, 4TH FLOOR
FRANKFORT, KENTUCKY 40601
www.kentucky.gov

November 9, 2009

Ms. Amy Kramer, PE
Northern KY Water District
700 Alexandria Pike
Fort Thomas, KY 41075

RE: Northern KY Water District
AI # 2485, APE20090010
PWSID # 0590220-09-010
Advanced Treatment Project- MPWTP
Kenton County, KY

Dear Ms. Kramer:

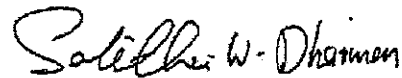
We have previously reviewed and approved the plans and specifications for the above referenced project with respect to sanitary features of design. At this time the project may proceed. Please note that this is only applicable to the **Memorial Parkway Water Treatment Plant (MPWTP) portion**. The following information and requirements relate to the Drinking Water State Revolving Loan Fund (SRF) process:

1. You are hereby authorized to advertise for bids to construct this project. In addition to other notices, you shall advertise the bid for seven (7) to twenty-one (21) days prior to the Bid Opening date in the newspaper with the largest circulation in your area. Please provide the bid opening date to Cathy Arnett, at the Division of Water. Cathy Arnett may be reached at (502) 564-3410, extension 4594 or cathy.arnett@ky.gov.
2. You have received one (1) set of approved plans and specifications. An identical set should be made available at the project site at all times. If modifications are made to the plans and specifications prior to bidding, then four (4) complete sets of revised plans and specifications shall be submitted to the Division of Water for approval. Our notice of approval will be issued at a later date by separate correspondence.
3. Clear site certificates of all involved properties must be submitted to the Division of Water prior to construction.
4. A set of AS-BID plans and specifications (with any APPROVAL conditions addressed) and a copy of the Advertisement shall be submitted to the Division of Water when the project is advertised. These items will be reviewed as part of the Authority to Award process.
5. The attached Project Review and Cost Summary form is to be completed and signed after bids have been received and then submitted along with the supporting documents indicated on the form. Your signature on this form will certify that all the information to be retained by the recipient has been secured and is available for review by the Division at the pre-construction conference. The complete bid package should be submitted to the Division of Water within fourteen (14) days after the bid opening.
6. Upon approval of the bid documents, the Division of Water will authorize you to award the construction contract, and arrange for a pre-construction conference. Division of Water staff **must** be present at this pre-construction conference.
7. You are cautioned that the advertisement and award of this contract will be subject to the laws and regulations that govern the DWSRF process and the conditions of your KIA loan agreement.

8. Please be advised that the construction contract is subject to the Equal Employment Opportunity requirements contained in Executive Order 11246. Equal Employment opportunity affirmative action by the prime contractor and all subcontractors is mandated throughout the duration of the contract. Documentation of efforts to comply with Executive Order 11246, Equal Employment Opportunity in accordance with the EPA Special Notice to Bidders is required.
9. Documentation of compliance with the DBE Fair Share Policy in accordance with 40 CFR 31.36(e) is required and must be submitted to the Division of Water within fourteen (14) days of the bid opening.
10. If sanitary features of the approved plans are to be changed during construction, the engineer shall submit the revision to the Division of Water for approval prior to implementation of the modification. Written approval from the Division of Water must be granted prior to on-site work dedicated to the adjustment.
11. When this project is completed, the owner shall submit a written certification to the Division of Water that the above referenced water facilities have been constructed and tested in accordance with the approved plans. Such certification shall be signed by a licensed professional engineer.
12. When this project is completed, the engineer shall submit as-built drawings to the Division of Water.

If you have any questions concerning this project, please contact Sarah Tucker at (502) 564-3410 ext. 4836.

Sincerely,



Solitha Dharman, PE
Supervisor, Engineering Section
Drinking Water Branch
Division of Water

SWD:SAT

Enclosures

C: HDR/Quest Engineering, Inc.
Brent Tippy, P.E., CH2MHill
Kenton County Health Department
Kentucky Infrastructure Authority
Public Service Commission
Cathy Arnett, SRF & SPAP Section

STEVEN L. BESHEAR
GOVERNOR



LEONARD K. PETERS
SECRETARY

ENERGY AND ENVIRONMENT CABINET
DEPARTMENT FOR ENVIRONMENTAL PROTECTION
DIVISION OF WATER
200 FAIR OAKS LANE, 4TH FLOOR
FRANKFORT, KENTUCKY 40601
www.kentucky.gov

October 6, 2009

Ms. Amy Kramer, PE
Northern KY Water District
700 Alexandria Pike
Fort Thomas, KY 41075

RE: Northern KY Water District
AI # 2485, APE20090010
PWSID # 0590220-09-010
Advanced Treatment Project- FTWTP & MPWTP
Kenton County, KY

Dear Ms. Kramer:

We have reviewed the plans and specifications for the **Memorial Parkway Water Treatment Plant (MPWTP)** portion of the above referenced project. The plans for MPWTP include the construction of a Granular Activated Carbon (GAC) contactor facility and an Ultraviolet Light Treatment facility. These facilities shall include 6 GAC contactor beds (5 functional and 1 empty for future expansion); 4 GAC variable speed feed pumps rated at 7,000 gpm @ 43 ft of TDH; 2 variable speed backwash pumps rated at 11,000 gpm @ 45 ft of TDH, to serve both the GAC and existing sand filters; 2 GAC slurry pumps rated at 120 gpm @ 266.5 ft of TDH; an air blower rated at 1760 scfm for air scour backwash of the GAC contactors; and 2 Medium Pressure High Output UV reactors capable of producing a Validated Dose equal to or greater than 8.5 mJ/cm² at 95% UVT. This is to advise that plans and specifications for the MPTWTP portion of the above referenced project are APPROVED with respect to sanitary features of design, as of this date with the requirements and stipulations below. A separate approval will be issued for the Fort Thomas Water Treatment Plant (FTWTP) portion of the project.

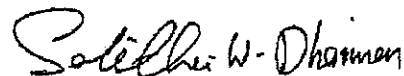
1. Following this project, the rated potable water production and plant classification for MPWTP shall not change.
2. GAC contactors shall comply with all applicable portions of Recommended Standards for Water Works Section 4.2.1.
3. Validation of the UV system is required to receive LT2 credit for Cryptosporidium inactivation. See the US EPA UV Disinfection Guidance Manual, Chapter 5 for details or contact the Division of Water's Compliance and Technical Assistance Branch for further information regarding LT2 credit.
4. Flow rate, UV intensity and lamp status must be routinely monitored.
 - a. Flow to each reactor must be measured either by active flow control with dedicated flow meters and control valves for each reactor or by passive flow distribution where equal flow split is monitored with flow meters (US EPA UV Disinfection Guidance Manual Section 4.1.2).
5. As stated in the DOW letter dated October 30, 2008:
 - a. An SOP regarding the decision to bypass the GAC and UV processes must be developed and implemented;

- b. The Drinking Water Compliance and Technical Assistance Branch (CTAB) must be notified in writing or via e-mail to the DOW Florence Regional office and the CTAB supervisor in Frankfort when these processes are bypassed; and
 - c. The percent of water that bypasses the UV system must be reported monthly. Should this exceed 5%, the UV credit for Cryptosporidium inactivation will not apply.
6. If sanitary features of the approved plans are to be changed during construction, the engineer shall submit the revision to the Division of Water for approval prior to implementation of the modification. Written approval from the Division of Water must be granted prior to on-site work dedicated to the adjustment.
 7. When this project is completed, the owner shall submit a written certification to the Division of Water that the above referenced water facilities have been constructed and tested in accordance with the approved plans.
 8. When this project is completed, the engineer shall submit as-built drawings to the Division of Water which reflect the above construction stipulations as well as any additional changes made during construction.
 9. Unless construction of this project is begun within 1 year from the issuance date of this permit, the permit shall expire. If requested prior to the permit expiration, an official extension from the Division of Water may be granted. If this permit expires, the original plans and specifications may be resubmitted for a new comprehensive review.

Additionally, your application indicates that the MPWTP portion of the project is funded by a Drinking Water State Revolving Fund (SRF) loan. Therefore, this approval is for the technical aspects of this project only. Your application for the SRF loan is currently under review. When it is approved, you will be notified in writing to advertise for bids for construction. Therefore, **you are NOT authorized to advertise for bids at this time.** Should you choose to proceed with the bidding and award a contract prior to DOW approval, this will be at your own risk and payment from the SRF loan is not guaranteed.

If you have any questions concerning this project, please contact Sarah Tucker at (502) 564-3410 ext. 4836.

Sincerely,



Solitha Dharman, PE
Supervisor, Engineering Section
Drinking Water Branch
Division of Water

SWD:SAT

C: HDR/Quest Engineering, Inc.
CH2MHill
Kenton County Health Department
Kentucky Infrastructure Authority
Public Service Commission
Cathy Arnett, SRF & SPAP Section

VALVE SCHEDULE

Tag No.	Location	Valve Type	Size (inches)	Flowstream	Inlet Pressure (psi)	Outlet Pressure (psi)	Max. Oper. Press. (psi)	Max. Oper. Flow (gpm)	Notes
MP-GBS-ARV-001	GAC contactor backwash supply header	ARV	2	GBS	20	0	25	7,500	24" mainline size
MP-GBS-ARV-002	GAC contactor backwash supply header	ARV	2	GBS	20	0	25	7,500	24" mainline size
MP-GI-ARV-001	GAC pump no. 1 discharge	AVT	4	GI	25	0	25	7,000	18" mainline size
MP-GI-ARV-002	GAC pump no. 2 discharge	AVT	4	GI	25	0	25	7,000	18" mainline size
MP-GI-ARV-003	GAC pump no. 3 discharge	AVT	3	GI	22	0	22	3,500	14" mainline size
MP-GI-ARV-004	GAC pump no. 4 discharge	AVT	3	GI	22	0	22	3,500	14" mainline size
MP-SWS-ARV-001	slurry water supply pump no. 1 discharge	AVT	1	SWS	125	0	125	100	4" mainline size
MP-SWS-ARV-002	slurry water supply pump no. 2 discharge	AVT	1	SWS	125	0	125	100	4" mainline size
MP-UE-AVV-001	UV reactor train no. 1 gooseneck	AVV	2	UE	2	0	5	14,000	36" mainline size
MP-UE-AVV-002	UV reactor train no. 2 gooseneck	AVV	2	UE	2	0	5	14,000	36" mainline size

VALVE TAG LEGEND FOR AIR VALVE SCHEDULE

VALVE TAG FORMAT:

#1 MP #2 GI #3 ARV #4 001

#1 - PLANT CODE

FT FORT THOMAS
MP MEMORIAL PARKWAY

#2 - FLOWSTREAM CODE

AS AIR SCOUR
ASV AIR SCOUR VENT
BWW BACKWASH WASTE
BYP BYPASS
BS BACKWASH SUPPLY
CTW CONTACTOR WASTE
CW COOLING WATER
DR DRAIN
FW FINISHED WATER
FBS FILTER BACKWASH SUPPLY
FE FILTER EFFLUENT
SF SLURRY FEED
GBS GAC BACKWASH SUPPLY
GE GAC EFFLUENT
GI GAC INFLUENT
OF OVERFLOW
SPD SUMP PUMP DISCHARGE
SWS SLURRY WATER SUPPLY
UE UV EFFLUENT
WS WASTE

#3 - VALVE TYPE

ARV AIR RELEASE VALVE
AVV AIR/VACUUM VALVE
CAV COMBINATION AIR VALVE
AVT AIR VALVE FOR VERTICAL TURBINE SERVICE

#4 - UNIQUE VALVE NUMBER

-001, -002, ETC

PROCESS VALVE AND MOTOR ACTUATOR SCHEDULE												
Tag No.	Location	Valve Type	Size (inches)	Flowstream	Max. Oper. Flow (gpm)	Max. Oper. Press. (psi)	Motor Actuated	Travel Time (sec)	Voltage (V)	Phase	Service	Notes
MP-FHBFV-004-006	Ex. Filter bldg - Influent	V500	24	CL	14,000	15	YES	60	460	3	O/C	Replace ex. valves on filters 4 through 6 and their stands/operators, Actuator Stems - Stainless Steel, Submerged Duty, Food Grade Lubrication.
MP-FE-BFV-004-008	Ex. Filter bldg - Filter Effluent	V500	12	FE	2,800	30	YES					
MP-BW-BFV-004-006	Ex. Filter bldg - Backwash Supply	V500	20	FW	12,500	35	YES					Replace ex. valves on filters 4 through 6 and their operators
MP-BS-BFV-004-006	Ex. Filter bldg - Backwash Waste	V500	24	BW	12,500	15	YES					Replace ex. valves on filters 4 through 6 and their operators
MP-WS-BFV-004-006	Ex. Filter bldg - Filter to Waste	V500	6	WS	200	15	YES					Replace ex. valves on filters 4 through 6 and their operators
MP-AS-BFV-004-006	Ex. Filter bldg - Air Scour	V500	8	AS	NA	NA	YES					Replace ex. valves on filters 4 through 6 and their operators
MP-SW-BFV-002-003	Raw Water Tunnel-Service Water System	V500	4	SW	200	120	No					2- New Service Water Valves

Note: see Legend for Tag No. format and codes.

* USE STAINLESS
STEEL PIPE SLEEVE
FOR STAINLESS
STEEL PIPES

AIR SEAL

ESCUTCHEON
PLATE *

GALVANIZED *
PIPE SLEEVE

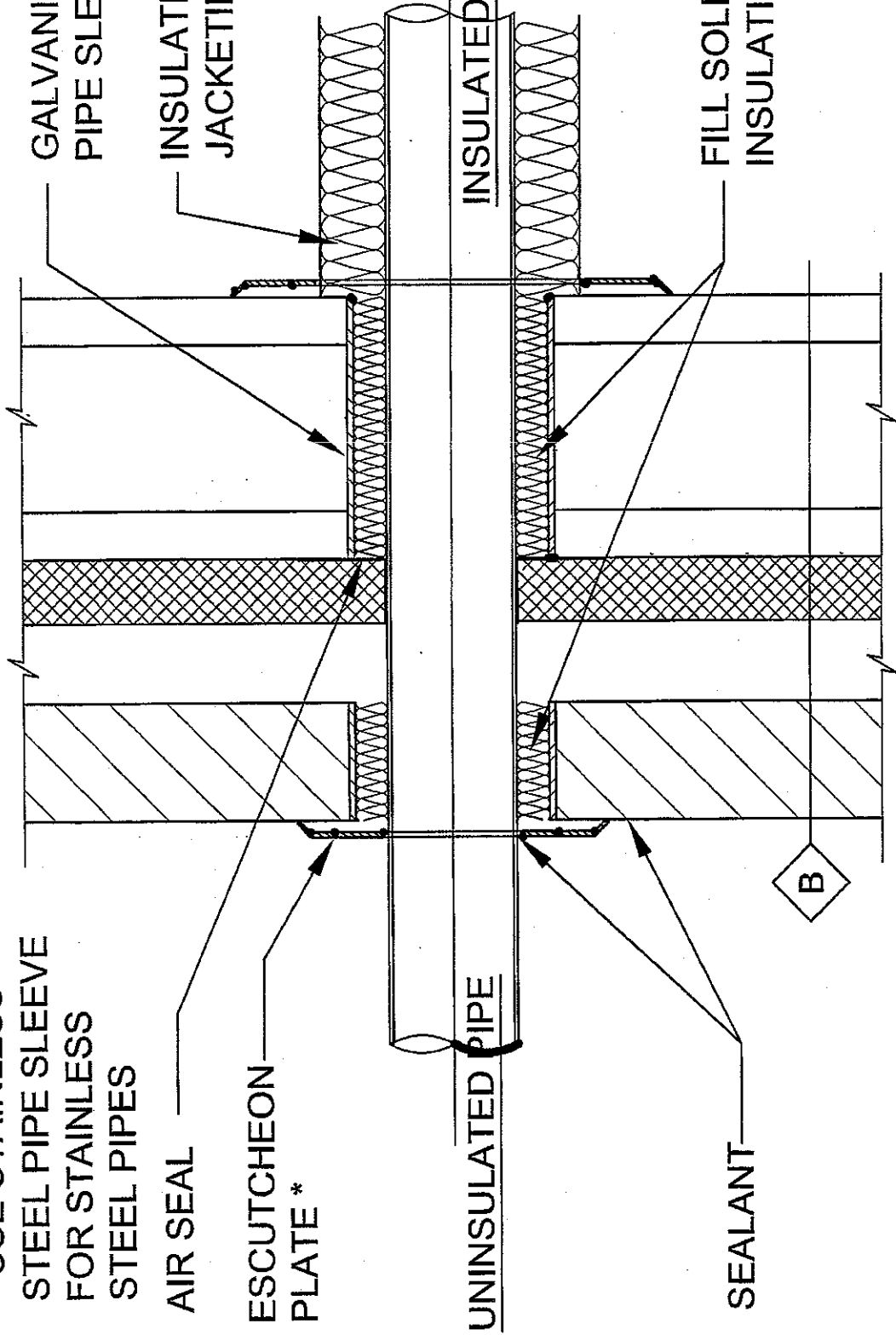
INSULATION AND
JACKETING

UNINSULATED PIPE

INSULATED PIPE

SEALANT

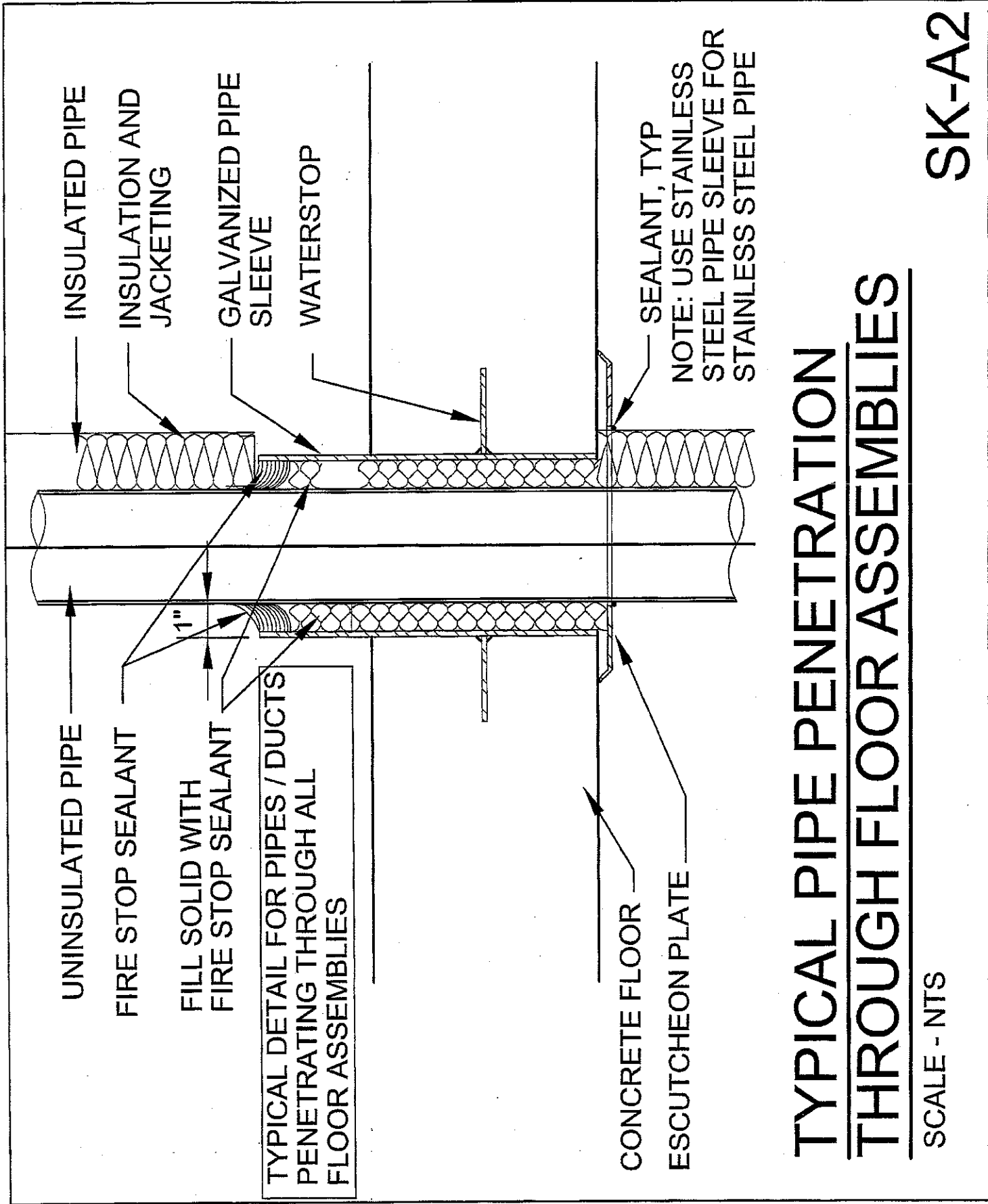
FILL SOLID WITH
INSULATION



SECTION (PIPE PENETRATION AT EXTERIOR WALLS)

SCALE - NTS

SK-A1



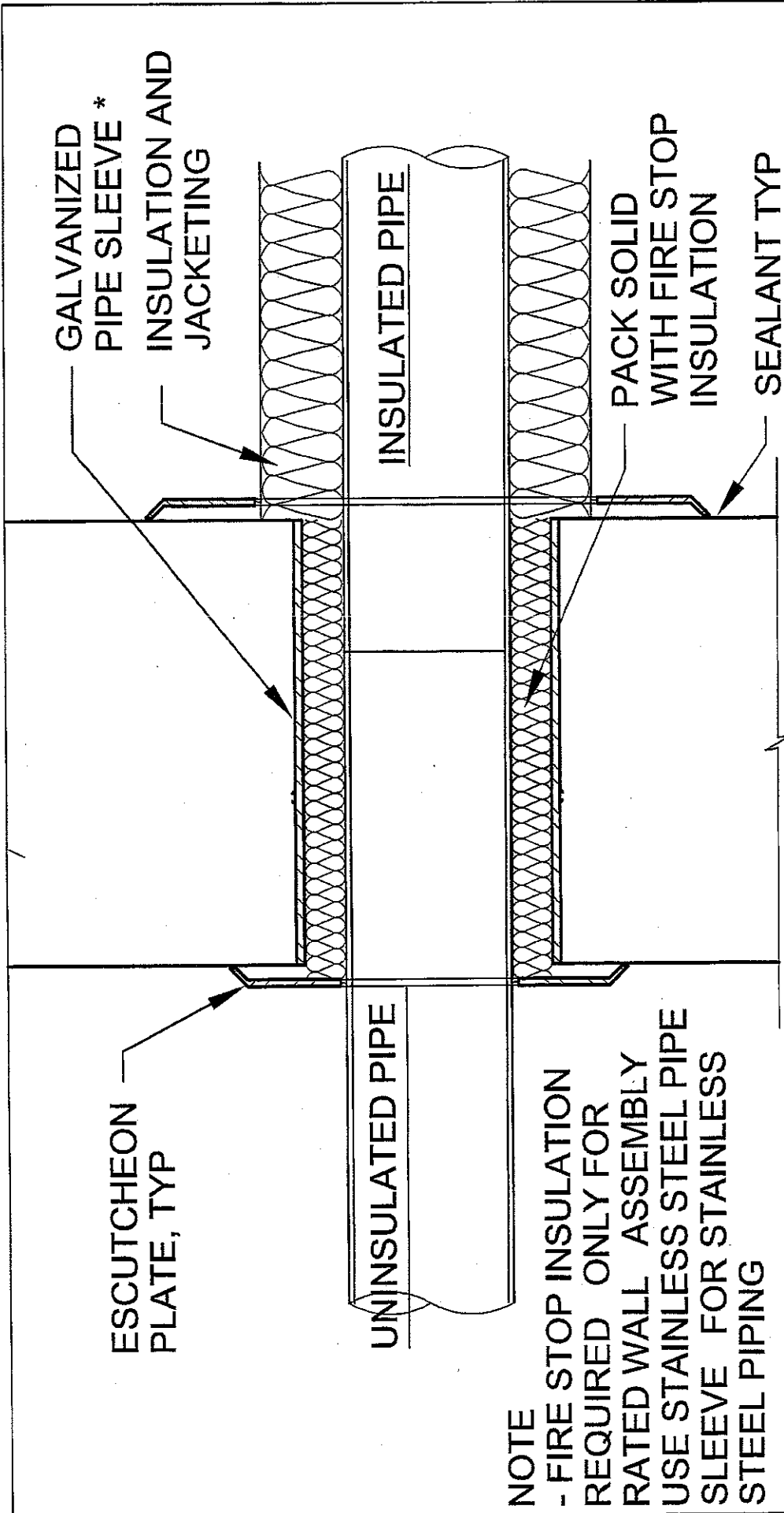
TYPICAL DETAIL FOR PIPES / DUCTS
PENETRATING THROUGH ALL
FLOOR ASSEMBLIES

NOTE: USE STAINLESS
STEEL PIPE SLEEVE FOR
STAINLESS STEEL PIPE

TYPICAL PIPE PENETRATION THROUGH FLOOR ASSEMBLIES

SCALE - NTS

SK-A2



GALVANIZED
PIPE SLEEVE *
INSULATION AND
JACKETING

INSULATED PIPE

PACK SOLID
WITH FIRE STOP
INSULATION

SEALANT TYP

ESCUTCHEON
PLATE, TYP

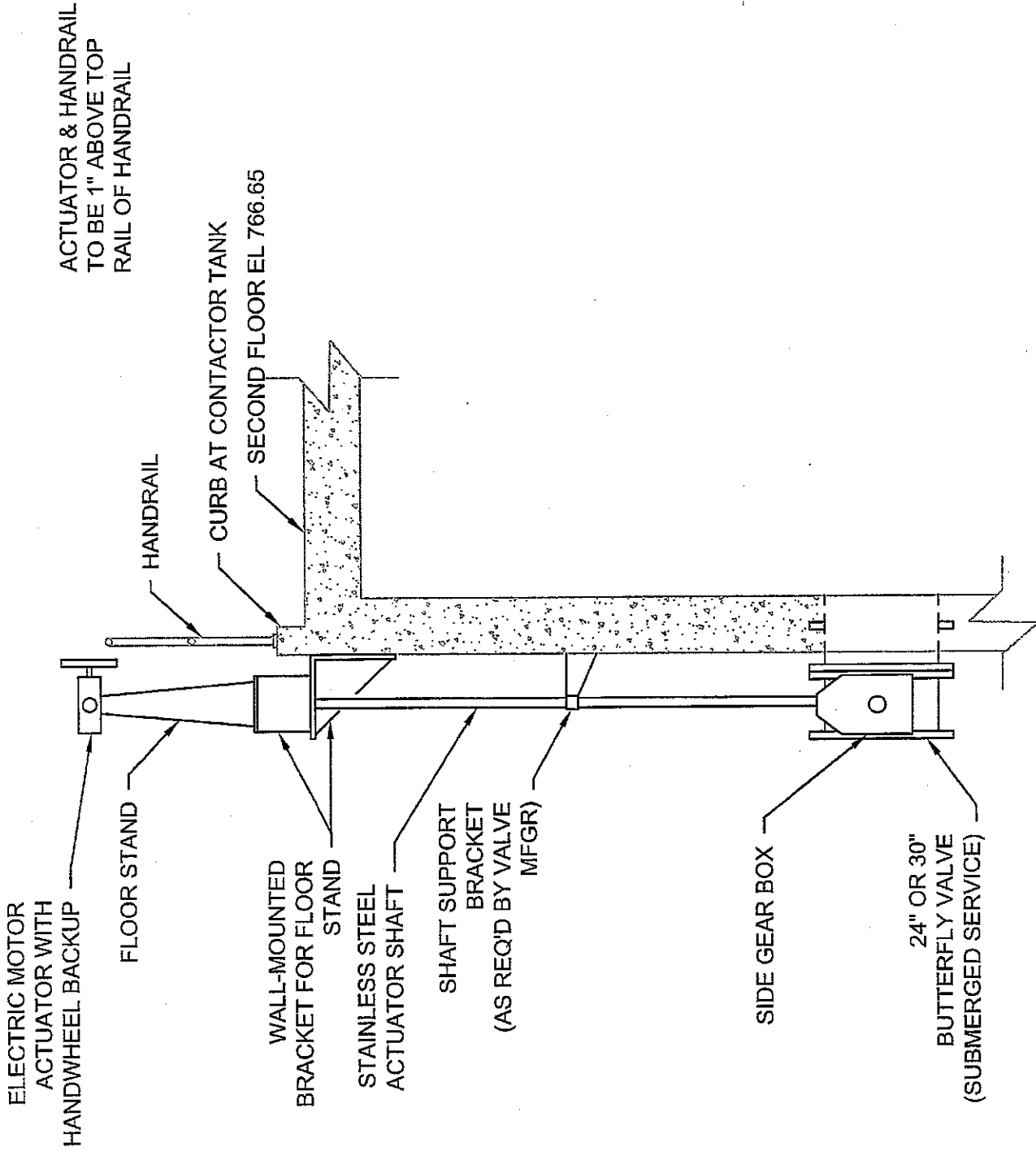
UNINSULATED PIPE

NOTE
- FIRE STOP INSULATION
REQUIRED ONLY FOR
RATED WALL ASSEMBLY
USE STAINLESS STEEL PIPE
SLEEVE FOR STAINLESS
STEEL PIPING

TYPICAL PIPE PENETRATING THROUGH FIRE SEPARATIONS

SCALE - NTS

SK-A3



BUTTERFLY VALVE/ACTUATOR MOUNTING DETAIL
MPTP - GAC CONTACTORS

TYPICAL FOR 6 INFLUENT VALVES AND 6 BACKWASH VALVES