EXHIBIT A-5

SPECIFICATIONS

SPECIFICATIONS

NORTHERN KENTUCKY WATER DISTRICT

Sub-District O Water Main Extension
Kenton County, Kentucky

June 2025

COMPILED BY:
Northern Kentucky Water District (Owner)
2835 Crescent Springs Road
Erlanger, Kentucky 41018



S P E C I F I C A T I O N S

FOR

NORTHERN KENTUCKY WATER DISTRICT

Sub-District O Water Main Extension
Kenton County, Kentucky

June 2025

GOVERNING BODY

COMMISSIONERS:

JODY R. LANGE, CPA, CGMA – CHAIR
DOUG WAGNER – VICE CHAIR
NICHOLAS WINNIKE – SECRETARY
GARY E. HOLLAND – TREASURER
JOSEPH J. KOESTER – COMMISSIONER
FRED MACKE, JR – COMMISSIONER

LINDSEY RECHTIN, PRESIDENT/CEO

COMPILED BY:
Northern Kentucky Water District (Owner)
2835 Crescent Springs Road
Erlanger, Kentucky 41018

TABLE OF CONTENTS

Subject		Pages
PROCUREMENT AND CONTRACTING REQUIREMENTS		
00 01 11	Notice of Advertisement	1
00 11 13	Invitation to Bid	1 – 3
00 21 13	Instructions to Bidders	1 - 7
00 41 13	Bid Disclosure Form	1 - 4
00 41 33	Non-Collusion Affidavit	1
00 43 13	Bid Bond	1 - 2
00 47 00	Kentucky Resident Affidavit	1
00 48 00	Certification Regarding Debarment, Suspension, and Other Responsibility Matters	1
00 49 00	Certification Regarding Lobbying	1
00 52 13	Agreement	1 - 9
00 55 00	Uniform Guidance - ARPA	1 - 2
00 61 00	Performance Bond	1 - 4
00 62 00	Payment Bond	1 - 4
00 65 00	Certificate of Insurance	1
00 65 20	Certificate of Property Insurance	1
00 70 00	General Conditions	1 – 70
00 73 01	Supplementary Conditions	1 - 28
GENERAL REQUIREMENTS		
01 11 00	Summary of Work	1
01 25 00	Measurement and Payment	1 - 11
01 30 70	Abbreviations of Terms and Organizations	1 - 2
01 31 13	Project Requirements	1 – 7
01 32 00	Submittals	1 – 3
01 40 00	Quality Control	1 - 2
01 50 00	Temporary Facilities	1 – 14

TABLE OF CONTENTS (Continued)

Subject		Pages
TECHNICAL SPECIFICATIONS		
02 16 00	Technical Provisions	1 – 25
	Permits	1 - 253

KRS 424.145 NOTICE OF ADVERTISEMENT

Northern Kentucky Water District Invitation to Bid – Sub-District O Water Main Extension, Kenton County, Kentucky – includes construction of approximately 370 feet of 8" ductile iron water main along Highwater Road (from River Heights Lane to #1873), 1,525 feet of 8" PVC water main along Scenic Ridge Drive, 465 feet of 8" ductile iron water main along Decoursey Pike (from Ryland Lakes Drive to Steep Creek Road), 5,370 feet of 8" ductile iron water main along Steep Creek Road (from Decoursey Pike to #3704 at the bridge), 590 feet of 8" ductile iron water main along Mann Road (from Steep Creek Road to #11290), 1,265 feet of 8" ductile iron and PVC water main along Gene Street, 4,200 feet of 8" ductile iron water main along Fiskburg Road (Goshorn Road to Alexander Road), 2,635 feet of 8" ductile iron and PVC water main along Alexander Road (Fiskburg Road to St. Marys Road), and 4,885 feet of 8" ductile iron and PVC water main along Elliot Road (from KY 17 to the Pendleton County Line), together with the appurtenances and related work in Kenton County, Kentucky. Owner reserves the right to make partial awards.

Access to the Invitation to Bid can be found on the Northern Kentucky Water District website (https://nkywater.org/procurement) by clicking the section labeled "NKWD's QuestCDN webpage or at https://tinyurl.com/NKWDbids.

Alternatively potential bidders may contact Cassandra Zoda at czoda@nkywater.org, 859-578-5455, or by visiting 2835 Crescent Springs Rd., Erlanger, KY 41018 for delivery of the Invitation to Bid.

Section 00 11 13

INVITATION TO BID

Date: June 3, 2025 & June 16, 2025

The Northern Kentucky Water District (Owner) is requesting Bids for the construction of the following Project:

PROJECT: Sub-District O Water Main Extension, Kenton County, Kentucky

BID SUBMISSION: SEALED BIDS WILL BE RECEIVED BY THE NORTHERN KENTUCKY WATER DISTRICT (OWNER) ONLY THROUGH THE ONLINE QUEST CDN WEBSITE (www.questcdn.com)

UNTIL: Date: July 3, 2025
Time: 2:00 pm (Local Time)

At said place and time, and promptly thereafter, all Bids that have been duly received will be opened via Microsoft Teams meeting. Entities on the registered list of plan holders will be sent a link to attend the virtual bid opening. The public may access the virtual bid opening by emailing Cassandra Zoda at czoda@nkywater.org to get the meeting number and password.

BRIEF PROJECT DESCRIPTION: The proposed Work is generally described as follows: Construction of approximately 370 feet of 8" ductile iron water main along Highwater Road (from River Heights Lane to #1873), 1,525 feet of 8" PVC water main along Scenic Ridge Drive, 465 feet of 8" ductile iron water main along Decoursey Pike (from Ryland Lakes Drive to Steep Creek Road), 5,370 feet of 8" ductile iron water main along Steep Creek Road (from Decoursey Pike to #3704 at the bridge), 590 feet of 8" ductile iron water main along Mann Road (from Steep Creek Road to #11290), 1,265 feet of 8" ductile iron and PVC water main along Gene Street, 4,200 feet of 8" ductile iron water main along Fiskburg Road (Goshorn Road to Alexander Road), 2,635 feet of 8" ductile iron and PVC water main along Alexander Road (Fiskburg Road to St. Marys Road), and 4,885 feet of 8" ductile iron and PVC water main along Elliot Road (from KY 17 to the Pendleton County Line), together with the appurtenances and related work in Kenton County, Kentucky. Owner reserves the right to make partial awards.

PROJECT DOCUMENTS: To view the bid documents, go to Northern Kentucky Water District (nkywater.org/procurement) and click the link labeled "NKWD's Quest CDN webpage" to be click the link titled "Quest CDN Online Interface" redirected to the Quest CDN Electronic Bid Online Interface.

This bid is listed as Quest eBid Doc **# 9714744**.

The project documents may be downloaded by registering with Quest CDN online at www.questcdn.com or by calling 952-233-1632. After registration is complete, an On-Line Bid ID code must be created by clicking on "My Account", then the "User Info" tab. A prospective bidder will create this code in the designated field per requirements noted. To be considered a Plan-holder, a bidder must complete registration and download the

Proposal Documents in digital form for a $22.00 charge. There will be a charge of $42.00 to submit a bid. Plan-holders will receive addenda and other proposal document updates via Quest CDN. Prospective bidders must be on the plan holders list through Quest CDN for a bid to be accepted.

BIDDER QUALIFICATIONS & AWARD: All Bids must be in accordance with the Bidding and Contract Documents. Bids will be received on a unit price and/or lump sum basis as described in the Contract Documents.

Bid security, in the form of an electronic Bid Bond (insuring/bonding company shall be rated "A" by AM Best) in the amount of ten percent (10%) of the maximum total bid price, must accompany each Bid.

The Successful Bidder will be required to furnish a Construction Payment Bond and a Construction Performance Bond (insuring/bonding company shall be rated "A" by AM Best) as security for the faithful performance of the contract and the payment of all bills and obligations arising from the performance of the Contract.

Evaluation of Bids and the awarding of a final contract are subject to the reciprocal preference for Kentucky resident bidders pursuant to KRS 45A490 to 45A.494 and (KAR 200 5:400).

Owner reserves the right to reject any or all Bids, including without limitation the right to reject any or all nonconforming, non-responsive, incomplete, unbalanced, or conditional Bids, to waive informalities, and to reject the Bid of any Bidder if Owner believes that it would not be in the best interest of Owner to make an award to that Bidder. Owner also reserves the right to negotiate with the apparent successful Bidder(s) to such an extent as may be determined by Owner, and/or to make multiple or partial awards.

Small, Minority, and Disadvantaged Business Enterprises are encouraged to bid on this project.

Bids shall remain subject to acceptance for 90 days after the day of bid opening or for such longer period of time to which a Bidder may agree in writing upon request of the Owner. If a Contract is to be awarded, the Owner will give the successful Bidder a Notice of Award during the period of time during which the successful Bidder's bid remains subject to acceptance.

INSTRUCTIONS TO BIDDERS: For all further requirements regarding bid submittal, qualifications, procedures, and contract award, refer to the Instructions to Bidders that are included in the Bidding Documents.

FUNDING: This project is funded by Kentucky Infrastructure Authority – Cleaner Water Program funds. The Successful Bidder and all Subcontractors will be required to conform to the Uniform Guidance Contract Requirements set forth in the Contract Documents.

Bidders must comply with Title VI of the Civil Rights Act of 1964, the Anti-Kickback Act, and the Contract Work Hours and Safety Standard Act. Bidders must comply with the President's Executive Order No. 11246 as amended, which prohibits discrimination in employment regarding race, creed, color, sex or national origin. Bidders must comply

with 41 CFR 60-4, in regard to affirmative action. Bidders will make positive efforts to use small, minority, women owned, disadvantaged businesses.

The Northern Kentucky Water District is an Equal Opportunity Employer.

End of Section

Section 00 21 13

INSTRUCTIONS TO BIDDERS

1. DEFINED TERMS. Terms used in these Instructions to Bidders will have the meanings indicated in the General Conditions and Supplementary Conditions. Additional terms used in these Instructions to Bidders have the meanings indicated below which are applicable to both the singular and plural thereof:

   a. *Bidder* - The individual or entity who submits a Bid directly to Owner.

   b. *Successful Bidder* - The lowest responsible Bidder submitting a responsive Bid to whom Owner (on the basis of Owner's evaluation as hereinafter provided) makes an award.

2. COPIES OF CONTRACT DOCUMENTS. Complete sets of Contract Documents must be used in preparing Bids; Bidder shall have sole responsibility for errors or misrepresentations resulting from the use of incomplete sets of Bidding Documents.

Owner and Engineer, in making copies of Bidding Documents available on the above terms, do so only for the purpose of obtaining Bids for the Work and do not confer a license or grant for any other use.

Contract Documents are available electronically via QuestCDN. In accordance with NKWD Open Record Policy, planholders may request larger plan drawings in paper form by submitting an open records request form.

3. QUALIFICATIONS OF BIDDERS. Owner may conduct such investigations as Owner deems necessary to establish the responsibility, qualifications, and financial ability of Bidders to perform the services in accordance with the Contract Documents. To demonstrate Bidder's qualifications to perform the Work, within five days of Owner's request Bidder shall submit written evidence such as financial data, previous experience, present commitments, and such other data as may be requested by Owner. Bidders who have not, in the Owner's opinion, had sufficient experience in the size and type of work involved may not be considered.

Each Bid must contain evidence of Bidder's qualifications to transact business in the State of Kentucky or covenant to obtain such qualifications prior to award of the Contract. The Bidder's Organization Number from the Kentucky's Secretary of State and principal place of business as filed with Kentucky's Secretary of State must be included where applicable.

Each Bidder must be registered as a plan holder with the Owner via QuestCDN. There shall be no substitution of bidders without proper registration with the Owner.

4. EXAMINATION OF CONTRACT DOCUMENTS AND SITE. It is the responsibility of each Bidder, before submitting a Bid, to:

   a. thoroughly examine and study the Instructions to Bidders and the Contract Documents, including any Addenda;

b. visit the Site and become familiar with and satisfy Bidder as to the general, local, and site conditions that may affect cost, progress, performance, or furnishing of the Work;

c. become familiar with and satisfy Bidder as to all federal, state, and local Laws and Regulations that may affect cost, progress, performance, or furnishing of the Work;

d. agree at the time of submitting its Bid that no further examinations, investigations, explorations, tests, studies, or data are necessary for the determination of its Bid for performance of the Work at the price bid and within the times and in accordance with the other terms and conditions of the Contract Documents;

e. correlate the information known to Bidder, information and observations obtained from visits to the Site, and all additional examinations, investigations, explorations, tests, studies, and data with the Contract Documents;

f. promptly give Owner written notice of all conflicts, errors, ambiguities, or discrepancies that Bidder discovers in the Contract Documents and confirm that the written resolution thereof by Owner is acceptable to Bidder; and

g. determine that the Contract Documents are generally sufficient to indicate and convey understanding of all terms and conditions for the performance of the Work.

4.01. Underground Facilities. Information and data shown or indicated in the Contract Documents with respect to existing Underground Facilities at or contiguous to the Site is based upon information and data furnished to Owner and Engineer by owners of such Underground Facilities, including Owner or others, and Owner and Engineer disclaim responsibility for the accuracy or completeness thereof, unless it is expressly provided otherwise in the Supplementary Conditions.

4.02. Additional Information. Before submitting a Bid, each Bidder may, at Bidder's own expense, make or obtain any additional examinations, investigations, explorations, tests, and studies and obtain any additional information and data which pertain to subsurface or physical conditions at or contiguous to the Site or otherwise, which may affect cost, progress, performance, or furnishing of the Work and which Bidder deems necessary to determine its Bid for performing and furnishing the Work in accordance with the time, price, and other terms and conditions of the Contract Documents. Each Bidder shall be responsible for any claims for personal injury, death or damage to property caused by Bidder's entry on public or private property and shall defend and indemnify Owner and all other parties against any such claims.

4.03. Bidder's Representation. The submission of a Bid will constitute an incontrovertible representation and covenant by Bidder that Bidder has complied with every requirement of this Article 4, that without exception the Bid is premised upon performing and furnishing the Work required by the Contract Documents and applying any specific means, methods, techniques, sequences, and procedures of construction that may be shown or indicated or expressly required by the Contract Documents, that Bidder has given Owner written notice of all conflicts, errors, ambiguities, and discrepancies that Bidder has discovered in the Contract Documents and the written resolutions thereof are acceptable to Bidder, and that the Contract Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performing and furnishing the Work.

5. SITE AND OTHER AREAS. The Site is identified in the Contract Documents. All additional lands and access thereto required for temporary construction facilities, construction equipment, or storage of materials and equipment to be incorporated in the Work are to be obtained and paid for by Contractor. Easements for permanent structures or permanent changes in existing facilities are to be obtained and paid for by Owner unless otherwise provided in the Contract Documents.

6. INTERPRETATIONS AND ADDENDA. All questions about the meaning or intent of the Bidding Documents are to be submitted to Owner in writing. Any interpretations or clarifications that are considered necessary by Owner in response to such questions will be issued by Addenda mailed or delivered to all parties recorded by Owner as having received the Bidding Documents. Questions received less than 72 hours prior to the date for opening of Bids may not be answered. The person submitting questions shall be responsible for their prompt delivery. Only questions answered by Addenda will be binding. Oral and other interpretations or clarifications will be without legal effect.

Addenda may be issued to clarify, correct, or change the Bidding Documents as deemed advisable by Owner or Engineer.

Owner will not be responsible for explanations or interpretations of the Bidding Documents or Contract Documents except as issued in accordance herewith.

7. BID SECURITY. Each Bid must be accompanied by Bid security made payable to Owner in an amount of 10 percent of Bidder's maximum Bid price and in the form of a Bid Bond (on the form attached) issued by a surety meeting the requirements of paragraphs 6.01 and 6.02 of the General Conditions and shall be rated “A” by AM BEST.

Bid security of the Successful Bidder will be retained until such Bidder has executed the Contract Documents, furnished the required contract security, and met the other conditions of the Notice of Award, whereupon the Bid security will be returned. If the Successful Bidder fails to execute and deliver the Contract Documents and furnish the required contract security within 15 days after the Notice of Award, Owner may annul the Notice of Award and Bid security of that Bidder will be forfeited. Bid security of other Bidders whom Owner believes to have a reasonable chance of receiving the award may be retained by Owner until the earlier of seven days after the Effective Date of the Agreement or one day after the last day the Bids remain subject to acceptance, whereupon Bid security furnished by such Bidders will be returned.

8. CONTRACT TIMES. The numbers of days within which, or the dates by which, the Work is to be (a) Substantially Completed and (b) also completed and ready for final payment are set forth in the Agreement.

9. LIQUIDATED DAMAGES. Provisions for liquidated damages, if any, are set forth in the Agreement.

10. SUBSTITUTE OR "OR-EQUAL" ITEMS. The Contract, if awarded, will be on the basis of materials and equipment specified or described in the Bidding Documents without consideration of possible substitute or "or-equal" items. Whenever it is specified or described in the Bidding Documents that a substitute or "or-equal" item of material or equipment may be

furnished or used by Contractor if acceptable to Owner, application for such acceptance will not be considered by Owner until after the Effective Date of the Agreement. The procedure for submission of any such application by Contractor and consideration by Owner is set forth in the General Conditions and may be supplemented in the General Requirements.

11. SUBMITTING AN ONLINE BID. Proceed to the QuestCDN website at www.questcdn.com. You will be asked to sign into your account or create a free QUESTCDN account by clicking the 'join' link. Contact QUESTCDN at 952-233-1632 or info@questcdn.com for assistance in membership registration, downloading the project and vbid online bid submittal.

To access the bid form, click the online bidding button at the top of bid advertisement. The on-line bid button will be available when the project is published and open for bidding. There is a fee of $42.00 to submit your bid.

12. PREPARATION OF BID. In addition to the Bid Worksheet in QuestCDN, a Bid Disclosure Form is included with the Bidding Documents. The Bid Disclosure Form must be submitted via Quest CDN.

All blanks on the Bid Disclosure Form shall be completed by printing in ink or by typewriter and the Bid signed. A Bid price shall be indicated for each lump sum bid item and/or unit price item listed therein, or the words "No Bid", "No Change", or "Not Applicable" entered.

A Bid by a corporation shall be executed in the corporate name by the president or a vice-president or other corporate officer accompanied by evidence of authority to sign. The corporate seal shall be affixed and attested by the secretary or an assistant secretary. The corporate address and state of incorporation shall be shown below the signature.

A Bid by a partnership shall be executed in the partnership name and signed by a partner (whose title must appear under the signature), accompanied by evidence of authority to sign. The official address of the partnership shall be shown below the signature.

A Bid by a limited liability company shall be executed in the name of the firm by a member (if member-managed) or manager (if manager-managed) and accompanied by evidence of authority to sign. The state of formation of the firm and the official address of the firm must be shown below the signature.

A Bid by an individual shall show the Bidder's name and official address.

A Bid by a joint venture shall be executed by each joint venturer in the manner indicated on the Bid Disclosure Form. The official address of the joint venture must be shown below the signature.

All names shall be typed or printed in ink below the signatures.

The Quest CDN system will require Bidders to download and acknowledge all addenda prior to submitting a Bid.

The address, email, and telephone number for communications regarding the Bid shall be shown on the Bid Disclosure Form.

The Bid shall identify whether the Bidder is a resident or nonresident bidder for purposes of Kentucky's reciprocal preference statute (KRS 45A.490 to 45A.494 and 200 KAR 5:400). If the Bidder is claiming a "resident bidder" status as defined in KRS 45A.494(2), the Bid shall include a properly executed and notarized affidavit affirming that it meets the criteria to be considered such a resident bidder. If requested by Owner, Bidder shall also provide documentation proving such resident bidder status; failure to do so shall result in disqualification of the Bidder or contract termination.

While the Bidder should consult the applicable statutes and regulation, generally speaking, a "resident bidder" is an individual or business entity that, on the date the contract is first advertised or announced as available for bidding: (a) is authorized to transact business in the Commonwealth; AND (b) has for one (1) year prior to and through the date of the advertisement, (i) filed Kentucky corporate income taxes, (ii) made payments to the Kentucky unemployment insurance fund established in KRS 341.490, and (iii) maintained a Kentucky workers' compensation policy in effect. A "nonresident bidder" is any other individual or business entity.

13. BASIS OF BID. Bidders shall submit a Bid on the specified unit price and/or lump sum basis (as specified) for each item of Work listed in the Bid schedule. The total of all estimated prices will be determined as the sum of the products of the estimated quantity of each item and the unit and/or lump sum price Bid for the item. The final quantities and Contract Price will be determined in accordance with Article 13 of the General Conditions and as amended in the Supplemental Conditions.

Discrepancies between the multiplication of units of Work and unit prices will be resolved in favor of the unit prices. Discrepancies between the indicated sum of any column of figures and the correct sum thereof will be resolved in favor of the correct sum. Discrepancies between words and figures will be resolved in favor of the words. Discrepancies between the Quest CDN bid worksheet and the Bid Disclosure Form shall be resolved in favor of the Quest CDN bid worksheet.

14. SUBMITTAL OF BID. A Bid shall be submitted via Quest CDN no later than the date and time prescribed and at the place indicated in the advertisement or invitation to Bid. Bidder shall assume full responsibility for timely submission of Bids. Bids will not be accepted after the time and date for receipt of Bids. Paper, oral, telephone, facsimile, email, or telegraph Bids are invalid and will not receive consideration.

15. MODIFICATION AND WITHDRAWAL OF BIDS. Prior to the bid opening, a Bid may be modified or withdrawn via the Quest CDN electronic bid service only. For a period ending 72 hours after Bids are opened, any Bidder may request the withdrawal of its Bid by filing with Owner a duly signed written notice and otherwise demonstrating by clear and convincing evidence to the reasonable satisfaction of Owner that the Bid was submitted in good faith but there was a material and/or substantial mistake in the preparation of its Bid. If the withdrawal of the Bid is approved by the Owner in its sole discretion, the Bid security will be returned. Without the advanced full disclosure by the withdrawing Bidder to and written consent of the Owner, (a) no Bid shall be withdrawn under this section when the result would be the awarding of the contract on another Bid of the same Bidder or of another Bidder in which the withdrawing Bidder has a direct or indirect equitable interest and (b) no Bidder who is permitted to withdraw a Bid shall, for compensation, supply any material or labor to or perform

any subcontract or other work agreement for the Bidder to whom the contract is awarded or otherwise benefit, directly or indirectly, from the performance of the Project.

16. OPENING OF BIDS. Bids will be opened electronically via Microsoft Teams meeting at the time indicated in the advertisement or Invitation to Bid and. An abstract of the amounts of the base Bids and major alternates, if any, will be made available to Bidders after the opening of Bids.

17. BIDS TO REMAIN SUBJECT TO ACCEPTANCE. All Bids will remain subject to acceptance for the period of time stated in the Bid Disclosure Form, but Owner may, in its sole discretion, release any Bid and return the Bid security prior to the end of this period.

18. AWARD OF CONTRACT. Owner reserves the right to reject any or all Bids, including without limitation, nonconforming, non-responsive, incomplete, unbalanced, or conditional Bids. Owner further reserves the right to reject the Bid of any Bidder which it finds, after reasonable inquiry and evaluation, to be non-responsive. Owner may also reject the Bid of any Bidder if Owner believes that it would not be in the best interest of the Owner to make an award to that Bidder. Owner also reserves the right to waive all and to negotiate with the apparent Successful Bidder(s) to such an extent as may be determined by Owner. The Owner also reserves the right to increase or decrease the quantities of work per the General Conditions.

Owner reserves the right to make partial awards, meaning that based on factors such as the bid prices and available budget, Owner may elect to make award for only part of the nine base bid streets listed in sections A through I.

In evaluating Bids, Owner will consider, among other lawful considerations, the following:

a. Whether or not the Bid complies with the prescribed requirements, and provides such alternates, unit prices and other information or data as may be requested in the Bid Form or prior to the Notice of Award.

b. The qualifications of the Bidder.

c. If the Bidder maintains a permanent place of business.

d. If the Bidder has adequate personnel and equipment to perform the Work properly and expeditiously.

e. Bidder's financial status to meet all obligations and incidentals to the Work.

f. Whether the Bidder has appropriate technical expertise and experience.

g. Bidder's performance record.

h. The amount of the TOTAL BASE BID, exclusive of any additive alternates, if applicable. Any additive alternates will be considered after selection of the lowest Total Base Bid. Each additive alternate will be considered and selected or not selected individually, at Owner's discretion, for inclusion in the work.

In addition, the evaluation of Bids will be subject to the reciprocal preference for Kentucky resident bidders pursuant to KRS 45A.490 to 45A.494 and KAR 200 5:400. These statutes

and regulation provide in part as follows: (a) a resident bidder of the Commonwealth shall be given a preference against a nonresident bidder registered in any state that gives or requires a preference to bidders from that state; (b) the preference shall be equal to the preference given or required by the state of the nonresident bidder; (c) this preference shall not be applied against nonresident bidders residing in states that do not give preference against Kentucky bidders; (d) if a procurement determination results in a tie between a resident bidder and a nonresident bidder, preference shall be given to the resident bidder; and (e) the preference shall not result in a nonresident bidder receiving a preference over another nonresident bidder.

Owner may conduct such investigations as Owner deems necessary to establish the responsibility, qualifications, and financial ability of Bidders to perform the Work in accordance with the Contract Documents, including, without limitation, a Bidder's claim that it is a resident bidder for purposes of Kentucky's preference statute.

19. CONTRACT SECURITY AND INSURANCE. Article 6 of the General Conditions, as may be modified by the Supplementary Conditions, sets forth Owner's requirements as to performance and payment Bonds and insurance. When the Successful Bidder delivers the executed Agreement to Owner, it must be accompanied by such Bonds.

20. SIGNING OF AGREEMENT. When Owner gives a Notice of Award to the Successful Bidder, it will be accompanied by the required number of unsigned counterparts of the Agreement with the other Contract Documents identified in the Agreement as attached thereto. Within **15 days** thereafter, the Successful Bidder shall sign, leaving the dates blank, and deliver the required number of counterparts of the Agreement and attached documents to Owner. Within **15 days** thereafter, Owner shall deliver one fully signed counterpart to Successful Bidder with a complete set of the Drawings with appropriate identification.

21. SALES TAX EXEMPTION. The Contract Price shall not include sales tax for building materials, fixtures, or supplies purchased by the Successful Bidder which will be permanently incorporated into a structure or improvement to real property, or will be completely consumed, in fulfilling a construction contract for the purpose of furnishing water or sewer services to the general public under KRS 139.480. The Successful Bidder agrees to utilize Kentucky Department of Revenue Form 51A383 when making sales tax exempt purchases for the Work.

22. RETAINAGE. Provisions concerning retainage are set forth on the Agreement.

End of Section

Section 00 41 13

BID FORM

PROJECT IDENTIFICATION: **Sub-District O Water Main Extension, Kenton Co., Kentucky**

THIS BID IS SUBMITTED ELECTRONICALLY VIA QUEST CDN TO THE NORTHERN KENTUCKY WATER DISTRICT

THIS BID IS SUBMITTED BY: _____
(Bidder's Company Name)

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

2. Bidder accepts all of the terms and conditions of the Invitation to Bid and the Instructions to Bidders, including without limitation those dealing with the disposition of Bid security. This Bid will remain subject to acceptance for 90 calendar days after the Bid opening, or for such longer period of time to which the Bidder may agree in writing upon request of Owner. Bidder understands that certain extensions to the time for acceptance of this Bid may require the consent of the surety for the Bid Bond.

3. In submitting this Bid, Bidder represents and covenants, as set forth in the Agreement, that:

    a. Bidder has examined and carefully studied the Contract Documents, the other related data identified in the Contract Documents, and all Addenda, receipt of all of which is hereby acknowledged.

    b. 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.

    c. 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.

    d. Bidder has obtained and carefully studied (or assumes responsibility for having done so) all additional or supplementary explorations, 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.

    e. 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.

f. 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.

g. 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.

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

i. 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.

j. Bidder's Organization Number from Kentucky's Secretary of State is #_____ [if applicable] and Bidder is qualified to transact business in the State of Kentucky or hereby covenants to obtain such qualifications prior to award of the Contract.

4. Bidder further represents that 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; Bidder has not directly or indirectly induced or solicited any other Bidder to submit a false or sham Bid; Bidder has not solicited or induced any individual or entity to refrain from bidding; and Bidder has not sought by collusion to obtain for itself any advantage over any other Bidder or over Owner.

5. The Bidder understands and agrees that during the performance of the Contract, it shall maintain a presence within such proximity of the Site which will allow it to respond to an emergency at the Site within one hour of receiving notice of an emergency, including emergencies occurring during non-working hours. The Bidder shall provide a list of emergency phone numbers for such purposes. If the Bidder does not have such a presence, it may satisfy this requirement by sub-contracting with a sub-contractor that does have such a presence, provided that any such sub-contractor must be approved by the Owner, in its sole discretion, prior to the project pre-construction meeting.

6. Bidder will complete the Work for Bidder's prices entered in the QuestCDN Bid Worksheet. Unit prices will be computed in accordance with paragraph of the General Conditions. Bidder acknowledges that estimated quantities are not guaranteed, and are solely for the purpose of comparison of Bids, and final payment for all Unit Price Bid items will be based on actual quantities provided, determined as provided in the Contract Documents. Bidder agrees to perform all the work described in the specifications and shown on the plans, for the Bidder's prices entered in the QuestCDN Bid Worksheet.

7. Bidder agrees that the Work will be substantially complete within 240 calendar days after the date when the Contract Times commence to run as provided in paragraph 4.01 of the

General Conditions, and completed and ready for final payment in accordance with paragraph 15.06.B of the General Conditions within 270 calendar days after the date when the Contract Times commence to run.

Note: The contract times listed above assume all 9 streets are awarded. If partial award is made, the contract times will decrease by the length of pipe removed divided by 150. Example: If a street totaling 5,000' of pipe is removed from the project (not part of the award), the contract times would be decreased by 33 days (5,000 / 150).

8. References

Contact Person	Company Name	Phone No.	Project Name
1.			
2.			
3.			
4.			

SUBMITTED on _____, 202__.

9. Communications concerning this Bid shall be sent to Bidder at the following address:

_____

_____

_____

_____

__Phone:_____

__Email:_____

10. The terms in this Bid, which are defined in the General Conditions included as part of the Contract Documents, have the meanings assigned to them in the General Conditions.

[Signature page follows.]

AUTHORIZED SIGNATURE OF BIDDER

(see signature instructions below)

Individual/Entity Name/DBA _____(print)

By:_____(sign)
(Attach evidence of authority to sign if a corporation, LLC, joint venture, or partnership)

Title:_____

Business address _____

_____

Phone No.: _____Fax No.: _____

Email Address for Electronic Signatures: _____

Date _____

Signatures should meet the following requirements:

- Signatures for partnerships must be made by a general partner.
- Signatures for LLCs must be made by a manager or member, as dictated by the entity's Articles of incorporation/bylaws.
- If a joint venture, each venturer must complete the above complete the above authorized signature of bidder form and attach a copy to the Bid Disclosure Form.

Section 00 41 33

NON-COLLUSION AFFIDAVIT

STATE OF: _____)

COUNTY OF: _____) SS

_____, being first duly sworn, deposes

and says that he/she is the _____ of
(sole owner, a partner, president, secretary, etc.)

_____, the party making the foregoing bid; that such bid is genuine and not collusive or sham; that said bidder is not financially interested in, or otherwise affiliated in a business way with any other bidder on the same contract; that said bidder has not colluded, conspired, connived, or agreed, directly or indirectly, with any bidder or person, to put in a sham bid, or that such other person shall refrain from bidding, and has not in any manner directly or indirectly sought by agreement or collusion, or communication or conference, with any person, to fix the price or affidavit of any other bidder, or that of any other bidder, or to secure any advantage against Owner, or any person or persons interested in the proposed Contract; and that all statements contained in said bid are true; and further, that such bidder has not, directly or indirectly submitted this bid, or the contents thereof, or divulged information of data relative thereto to any association or to any member or agent thereof.

_____
AFFIANT

Sworn to and subscribed before me, a Notary Public in and for the above named

State and County, this _____ day of _____, 20 ____.

_____
Notary Public

Notary ID Number:_____

My Commission Expires:_____

End of Section

Section 00 43 13

BID BOND (PENAL SUM FORM)

Bidder Name: Address *(principal place of business)*:	**Surety** Name: Address *(principal place of business)*:
Owner Name: **Northern Kentucky Water District** Address *(principal place of business)*: **2835 Crescent Springs Rd.** **Erlanger, KY 41018**	**Bid** Project *(name and location)*: Bid Due Date:
Bond Penal Sum: Date of Bond:	

Surety and Bidder, intending to be legally bound hereby, subject to the terms set forth in this Bid Bond, do each cause this Bid Bond to be duly executed by an authorized officer, agent, or representative.

Bidder	Surety
_____ *(Full formal name of Bidder)*	_____ *(Full formal name of Surety) (corporate seal)*
By: _____ *(Signature)*	By: _____ *(Signature) (Attach Power of Attorney)*
Name: _____ *(Printed or typed)*	Name: _____ *(Printed or typed)*
Title: _____	Title: _____
Attest: _____ *(Signature)*	Attest: _____ *(Signature)*
Name: _____ *(Printed or typed)*	Name: _____ *(Printed or typed)*
Title:	Title:

Notes: (1) Note: Addresses are to be used for giving any required notice. (2) Provide execution by any additional parties, such as joint venturers, if necessary.

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

1. Bidder and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors, and assigns to pay to Owner upon default of Bidder the penal sum set forth on the face of this Bond. Payment of the penal sum is the extent of Bidder's and Surety's liability. Recovery of such penal sum under the terms of this Bond will be Owner's sole and exclusive remedy upon default of Bidder.
2. Default of Bidder occurs upon the failure of Bidder to deliver within the time required by the Bidding Documents (or any extension thereof agreed to in writing by Owner) the executed Agreement required by the Bidding Documents and any performance and payment bonds required by the Bidding Documents.
3. This obligation will be null and void if:
    3.1. Owner accepts Bidder's Bid and Bidder delivers within the time required by the Bidding Documents (or any extension thereof agreed to in writing by Owner) the executed Agreement required by the Bidding Documents and any performance and payment bonds required by the Bidding Documents, or
    3.2. All Bids are rejected by Owner, or
    3.3. Owner fails to issue a Notice of Award to Bidder within the time specified in the Bidding Documents (or any extension thereof agreed to in writing by Bidder and, if applicable, consented to by Surety when required by Paragraph 5 hereof).
4. Payment under this Bond will be due and payable upon default of Bidder and within 30 calendar days after receipt by Bidder and Surety of written notice of default from Owner, which notice will be given with reasonable promptness, identifying this Bond and the Project and including a statement of the amount due.
5. Surety waives notice of any and all defenses based on or arising out of any time extension to issue Notice of Award agreed to in writing by Owner and Bidder, provided that the total time for issuing Notice of Award including extensions does not in the aggregate exceed 120 days from the Bid due date without Surety's written consent.
6. No suit or action will be commenced under this Bond prior to 30 calendar days after the notice of default required in Paragraph 4 above is received by Bidder and Surety, and in no case later than one year after the Bid due date.
7. Any suit or action under this Bond will be commenced only in a court of competent jurisdiction located in the state in which the Project is located.
8. Notices required hereunder must be in writing and sent to Bidder and Surety at their respective addresses shown on the face of this Bond. Such notices may be sent by personal delivery, commercial courier, or by United States Postal Service registered or certified mail, return receipt requested, postage pre-paid, and will be deemed to be effective upon receipt by the party concerned.
9. Surety shall cause to be attached to this Bond a current and effective Power of Attorney evidencing the authority of the officer, agent, or representative who executed this Bond on behalf of Surety to execute, seal, and deliver such Bond and bind the Surety thereby.
10. This Bond is intended to conform to all applicable statutory requirements. Any applicable requirement of any applicable statute that has been omitted from this Bond will be deemed to be included herein as if set forth at length. If any provision of this Bond conflicts with any applicable statute, then the provision of said statute governs and the remainder of this Bond that is not in conflict therewith continues in full force and effect.
11. The term "Bid" as used herein includes a Bid, offer, or proposal as applicable.

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

REQUIRED NOTARIZED AFFIDAVIT FOR BIDDERS, OFFERORS AND CONTRACTORS CLAIMING KENTUCKY RESIDENT BIDDER STATUS

A. IS THE BIDDER OR OFFER CLAIMING KENTUCKY RESIDENT BIDDER STATUS? CHECK YES OR NO.

YES _____ NO _____

If yes, please proceed to complete Section B, a signed and notarized resident bidder affidavit is required.
If no, do not complete Section B, no resident bidder affidavit is required.

B. FOR BIDS AND CONTRACTS IN GENERAL:

The bidder or offeror hereby swears and affirms under penalty of perjury that, in accordance with KRS 45A.494(2), the entity bidding is an individual, partnership, association, corporation, or other business entity that, on the date the contract was first advertised or announced as available for bidding:

Is authorized to transact business in the Commonwealth of Kentucky; AND
Has for one year prior to and through the date this contract was first advertised or announced as available for bidding:
Filed Kentucky corporate income taxes;
Made payments to the Kentucky unemployment insurance fund established in KRS 341.490; and
Maintained a Kentucky workers' compensation policy in effect.

The undersigned acknowledges that the District reserves the right to request documentation supporting a bidder's claim of resident bidder status. Failure to provide such documentation upon request shall result in disqualification of the bidder or contract termination.

_____ _____
Signature Printed Name

_____ _____
Title (if signing on behalf of an entity) Date

State of _____)
)ss.
County of _____)

Sworn to and subscribed before me, a Notary Public in and for the above named State and County, this _____ day of _____, 20 ____.

_____
Notary Public
Notary ID Number:_____
My Commission Expires:_____

Section 00 48 00

CERTIFICATION REGARDING DEBARMENT,
SUSPENSION AND OTHER RESPONSIBILITY MATTERS

The prospective participant certifies to the best of its knowledge and belief that it and its principals:

(a) Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any Federal department or agency;

(b) Have not within a three year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State, or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;

(c) Are not presently indicted for or otherwise criminally or civilly charged by a government entity (Federal, State, or Local) with commission of any of the offenses enumerated in paragraph (1)(b) of this certification; and

(d) Have not within a three-year period preceding this application/proposal had one or more public transactions (Federal, State, or local) terminated for cause or default.

I understand that a false statement on this certification may be grounds for rejection of this proposal or termination of the award. In addition, under 18 USC Sec. 1001, a false statement may result in a fine of up to $10,000 or imprisonment for up to 5 years, or both.

_____
Typed Name of Authorized Representative

_____
Title of Authorized Representative

_____ _____
Signature of Authorized Representative Date

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

Section 00 49 00

CERTIFICATION REGARDING LOBBYING

The undersigned certifies, by signing and submitting this bid or proposal, to the best of his or her knowledge and belief, that:

1. No Federal appropriated 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 the Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any Federal 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 of Authorized Representative

_____

Title of Authorized Representative

_____ _____

Signature of Authorized Representative Date

(Note: The following standard form will be used for
Preparation of the agreement, after award of contract.)

Section 00 52 13

AGREEMENT
Sub-District O Water Main Extension
Kenton County, Kentucky
184-0927

THIS AGREEMENT is by and between the Northern Kentucky Water District (herein called Owner) and_____(herein called Contractor).

Owner and Contractor, in consideration of the mutual covenants herein set forth, agree as follows:

Article 1. WORK.

Contractor shall complete all Work as specified or indicated in the Contract Documents. The Work is generally described as follows: Construction of approximately 370 feet of 8" ductile iron water main along Highwater Road (from River Heights Lane to #1873), 1,525 feet of 8" PVC water main along Scenic Ridge Drive, 465 feet of 8" ductile iron water main along Decoursey Pike (from Ryland Lakes Drive to Steep Creek Road), 5,370 feet of 8" ductile iron water main along Steep Creek Road (from Decoursey Pike to #3704 at the bridge), 590 feet of 8" ductile iron water main along Mann Road (from Steep Creek Road to #11290), 1,265 feet of 8" ductile iron and PVC water main along Gene Street, 4,200 feet of 8" ductile iron water main along Fiskburg Road (Goshorn Road to Alexander Road), 2,635 feet of 8" ductile iron and PVC water main along Alexander Road (Fiskburg Road to St. Marys Road), and 4,885 feet of 8" ductile iron and PVC water main along Elliot Road (from KY 17 to the Pendleton County Line), together with the appurtenances and related work in Kenton County, Kentucky.

Article 2. ENGINEER.

The Project has been designed by Verdantas LLC who is referred to in the Contract Documents as Engineer.

Article 3. CONTRACT TIMES, LIQUIDATED DAMAGES, DELAYS, AND DAMAGES.

All time limits for Milestones, if any, Substantial Completion, and completion and readiness for final payment as stated in the Contract Documents are of the essence of the Contract.

3.1. Contract Times. Bidder agrees that the Work will be substantially complete within 240 calendar days after the date when the Contract Times commence to run as provided in paragraph 4.01 of the General Conditions, and completed and ready for final payment in accordance with paragraph 15.06.B of the General Conditions within 270 calendar days after the date when the Contract Times commence to run.

3.2. Liquidated Damages. Owner and Contractor recognize that time is of the essence of this

Agreement and that Owner will suffer financial loss if the Work is not completed within the times specified in paragraph 3.1 above, plus any extensions thereof allowed in accordance with Article 12 of the General Conditions. The parties also recognize the delays, expenses, and difficulties involved in proving in a legal proceeding the actual loss suffered by Owner if the Work is not completed on time. Accordingly, instead of requiring any such proof, Owner and Contractor agree that as liquidated damages for delay (but not as a penalty), Contractor shall pay Owner $500.00 for each day that expires after the time specified in paragraph 3.1 for Substantial Completion until the Work is substantially complete. After Substantial Completion, if Contractor shall neglect, refuse, or fail to complete the remaining Work within the Contract Times or any proper extension thereof granted by Owner, Contractor shall pay Owner as liquidated damages (but not as a penalty) $500.00 for each day that expires after the time specified in paragraph 3.1 for completion and readiness for final payment until the Work is completed and ready for final payment.

Owner shall have the right to deduct the liquidated damages from any money in its hands, otherwise due, or to become due, to Contractor, or to initiate action to recover liquidated damages for nonperformance of this Contract within the time stipulated.

3.3. Delays and Damages. In the event Contractor is delayed in the prosecution and completion of the Work because of any delays caused by Owner or Engineer, Contractor shall have no claim against Owner or Engineer for damages (including but not limited to acceleration costs or damages) or contract adjustment other than an extension of the Contract Times and the waiving of liquidated damages during the period occasioned by the delay.

Contractor shall provide advance written notice to Owner and Engineer of Contractor's intention to accelerate the Work prior to commencing any acceleration. Such written notice shall include a detailed explanation of the nature and scope of the acceleration, the reason for the acceleration, the anticipated duration of the acceleration, and the estimated additional costs to Contractor, if any, related to the acceleration. This requirement shall not in any way affect or alter the agreement of Owner and Contractor with respect to delays and damages as set forth above and in Article 7 of the General Conditions.

Article 4. CONTRACT PRICE.

Owner shall pay Contractor for completion of the Work in accordance with the Contract Documents funds a total amount of:

_____(words)_____ ($_____(figures)_____)

as indicated in Contractor’s bid.

Contractor acknowledges that the Contract Price shall not include sales tax for building materials, fixtures, or supplies purchased by Contractor which will be permanently incorporated into a structure or improvement to real property, or will be completely consumed, in fulfilling a construction contract for the purpose of furnishing water or sewer services to the general public under KRS 139.480. Contractor agrees to utilize Kentucky Department of Revenue Form 51A383 when making sales tax exempt purchases under this Agreement.

Article 5. PAYMENT PROCEDURES.

Contractor shall submit Applications for Payment in accordance with Article 15 of the General Conditions. Applications for Payment will be processed by Owner as provided in the General Conditions and as modified by the Supplementary Conditions. Contractor shall send a copy of all Applications for Payment to invoice@nkywater.org.

5.1. Progress Payments. Owner shall make progress payments on account of the Contract Price on the basis of Contractor's Applications for Payment on or about the 25th day of each month during performance of the Work. All such payments will be measured by the schedule of values or, in the event there is no schedule of values, as provided in the General Requirements.

5.2. Retainage. In addition to any amounts withheld from payment in accordance with Paragraph 15.01 of the General Conditions, Owner shall retain from progress payments amounts equal to the following percentages:

a. Ten percent (10%) of the amount of the Work completed. This amount may be reduced by the Owner in its sole and absolute discretion, if the project is substantially completed; and

b. Ten percent (10%) of the value of materials and equipment that are not incorporated in the Work but are delivered, suitably stored, and accompanied by documentation satisfactory to Owner as provided in paragraph 15.01 of the General Conditions. Retainage for stored materials and equipment will be released when the materials and equipment are incorporated in the Work.

All retainage will be paid to Contractor when the Work is completed and ready for final payment in accordance with paragraph 15.06 of the General Conditions. Consent of the Surety shall be obtained before retainage is paid by Owner. Consent of the Surety, signed by an agent, must be accompanied by a certified copy of such agent's authority to act for the Surety.

5.3. Final Payment. Upon final completion and acceptance of the Work in accordance with paragraph 15.06 of the General Conditions, Owner shall pay the remainder of the Contract Price as provided in said paragraph 15.06.

Article 6. CONTRACTOR'S REPRESENTATION

In order to induce Owner to enter into this Agreement Contractor makes the following representations:

a. Contractor has examined and carefully studied the Contract Documents and the other related data identified in the Bidding Documents

b. Contractor 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.

c. Contractor 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.

d. Contractor has obtained and carefully studied (or assumes responsibility for having done so) all additional or supplementary explorations, 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 Contractor, including applying the specific means, methods, techniques, sequences, and procedures of construction, if any, expressly required by the Contract Documents to be employed by Contractor, and safety precautions and programs incident thereto.

e. Contractor does not consider that any further examinations, investigations, explorations, tests, studies, or data are necessary for the performance of the Work at the Contract Price, within the Contract Times, and in accordance with the other terms and conditions of the Contract Documents.

f. Contractor 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 Contract Documents.

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

h. Contractor has given Owner written notice of all conflicts, errors, ambiguities, or discrepancies that Contractor has discovered in the Contract Documents, and the written resolution thereof by Owner is acceptable to Contractor.

i. The Contract Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performance and furnishing of the Work.

Article 7. CONTRACT DOCUMENTS.

The Contract Documents, which are incorporated as part of the Agreement, consist of the following:

A. This Agreement;
B. Performance Bond;
C. Payment Bond;
D. General Conditions;
E. Supplementary Conditions;
F. Specifications as listed in the table of contents of the Project Manual;
G. Drawings consisting of a cover sheet and sheets numbered 1 through 28 inclusive, with each sheet bearing the following general title; “Sub-District ‘O’ Water Main Extension | Kenton County Kentucky”;

H. Addenda (numbers ___ to ___, inclusive);
I. Exhibits to this Agreement (enumerated as follows):
    1. Notice to Proceed;
    2. Contractor's Bid;
    3. Documentation submitted by Contractor prior to Notice of Award;
J. The following which may be delivered or issued on or after the Effective Date of the Agreement and are not attached hereto:
    1. Written Amendments;
    2. Work Change Directives;
    3. Change Orders.
K. Uniform Guidance 2 CFR 200 Contract Requirements

There are no Contract Documents other than those listed above in this Article 7. The Contract Documents may only be amended, modified, or supplemented as provided in Article 11 of the General Conditions.

Article 8. CONTRACT CORRECTION PERIOD

Notwithstanding the reference to "one year after the date of Substantial Completion" at the beginning of paragraph 15.08.A of the General Conditions, the Contractor's Correction Period with respect to the obligations set forth in paragraph 15.08.A of the General Conditions shall be twenty-four (24) months after the issuance of "Certificate of Substantial Completion" for all machinery, piping, materials, equipment, fittings, roadway pavement work, general restoration, shoulder & ditch restoration furnished under the Contract Documents. The correction period referenced in paragraph 15.08.D of the General Conditions shall be twenty-four (24) months for all machinery, piping, materials, equipment, fittings and all roadway pavement work.

Article 9. COMPLIANCE WITH KENTUCKY LAW

Contractor represents and warrants that it has revealed to Owner any and all final determinations of a violation of KRS Chapters 136, 139, 141, 337, 338, 341, and 342 by Contractor or any subcontractor within the past five years. Contractor further represents and warrants that it and each of its subcontractors will remain in continuous compliance with the provisions of KRS Chapters 136, 139, 141, 337, 338, 341 and 342 for the duration of this Agreement. Contractor understands that its failure to reveal a final determination of a violation or to comply with the above statutory requirements constitutes grounds for cancellation of the Agreement and for disqualification of Contractor from eligibility for any contracts for a period of two years.

Article 10. EQUAL OPPORTUNITY

Unless exempted under KRS 45.590, during the performance of the Agreement, the Contractor agrees as follows:

a. Contractor will not discriminate against any employee or applicant for employment because of race, color, religion, sex, age forty (40) and over, disability, veteran status, or national origin;

b. Contractor will take affirmative action in regard to employment, upgrading, demotion, transfer, recruitment, recruitment advertising, layoff, termination, rates of pay or other forms of compensation, and selection for training, so as to ensure that applicants are employed and that employees during employment are treated without regard to their race, color, religion, sex, age forty (40) and over, disability, veteran status, or national origin;

c. Contractor will state in all solicitations or advertisements for employees placed by or on behalf of Contractor that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, age forty (40) or over, disability, veteran status, or national origin;

d. Contractor will post notices in conspicuous places, available to employees and applicants for employment, setting forth the provisions of the nondiscrimination clauses required by this section; and

e. Contractor will send a notice to each labor union or representative of workers with which he has a collective bargaining agreement or other contract or understanding advising the labor union or workers' representative of Contractor's commitments under the nondiscrimination clauses.

Article 11. MISCELLANEOUS.

a. Terms used in this Agreement will have the meanings indicated in the General Conditions.

b. No assignment by a party hereto of any rights under or interests in the Contract will be binding on another party hereto without the written consent of the party sought to be bound; and, specifically but without limitation, moneys that may become due and moneys that are due may not be assigned without such consent (except to the extent that the effect of this restriction may be limited by law), and unless specifically stated to the contrary in any written consent to an assignment, no assignment will release or discharge the assignor from any duty or responsibility under the Contract Documents.

c. Owner and Contractor each binds itself, its partners, successors, assigns, and legal representatives to the other party hereto, its partners, successors, assigns, and legal representatives in respect of all covenants, agreements, and obligations contained in the Contract Documents.

d. Any provision or part of the Contract Documents held to be void or unenforceable under any Law or Regulation shall be deemed stricken, and all remaining provisions shall continue to be valid and binding upon Owner and Contractor, who agree that the Contract Documents shall be reformed to replace such stricken provision or part thereof with a valid and enforceable provision that comes as close as possible to expressing the intention of the stricken provision.

[Signature page follows.]

IN WITNESS WHEREOF, Owner and Contractor have signed this Agreement. One counterpart each has been delivered to Owner, Contractor, Surety, and Engineer.

This Agreement will be effective on _____ (which is the Effective Date of the Agreement).

OWNER: **Northern Kentucky Water District**

_____
Richard Harrison
Vice President of Engineering and Distribution

Address for giving notices

2835 Crescent Springs Road
PO Box 18640
Erlanger, Kentucky 41018

CONTRACTOR:_____

Form agreement provided for reference only.
Do not submit signed agreement with bid.

By:_____
Signature

_____
Printed Name

_____
Title

(Corporate Seal)

Address for giving notices

_____

_____

_____

Joint Venture

CONTRACTOR:_____

By:_____
(Corporate Seal)

Address for giving notices

_____

_____

Uniform Guidance Contract Requirements

2 CFR 200 - ARPA Funded Projects

This Agreement, Contract, or Purchase Order ("contract") involves the use of funds from a Federal government grant. Due to the contract funding source, the following clauses from the Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards ("Uniform Guidance"), Appendix II are incorporated into and form a part of the terms and conditions of the contract. The full text of the Uniform Guidance may be found at 2 CFR Part 200. Contractor agrees to comply with all applicable clauses and to flow down all applicable clauses to lower-tier subcontractors. Undefined terms herein shall have the same definitions as used in the contract, or if undefined there, in 2 CFR 200.

1. **Equal Employment Opportunity. (2 CFR 200, Appendix II (C)).** *This Section applies if the contract is a "federally assisted construction contract."* Except as otherwise provided under 41 CFR Part 60, for all contracts that qualify as "federally assisted construction contracts" as defined in 41 CFR Part 60–1.3, contractor agrees to comply with the equal opportunity clause under 41 CFR 60-1.4(b), incorporated herein by reference, and E.O. 11246, "Equal Employment Opportunity," as amended by E.O. 11375, "Amending Executive Order 11246 Relating to Equal Employment Opportunity," and as supplemented by regulations at 41 CFR Part 60, "Office of Federal Contract Compliance Programs, Equal Employment Opportunity, Department of Labor.

   During the performance of this contract, the contractor agrees as follows:

   (1) The contractor will not discriminate against any employee or applicant for employment because of race, color, religion, sex, sexual orientation, gender identity, or national origin. The contractor will take affirmative action to ensure that applicants are employed, and that employees are treated during employment without regard to their race, color, religion, sex, sexual orientation, gender identity, or national origin. Such action shall include, but not be limited to the following: Employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided setting forth the provisions of this nondiscrimination clause.

   (2) The contractor will, in all solicitations or advertisements for employees placed by or on behalf of the contractor, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, sexual orientation, gender identity, or national origin.

   (3) The contractor will not discharge or in any other manner discriminate against any employee or applicant for employment because such employee or applicant has inquired about, discussed, or disclosed the compensation of the employee or applicant or another employee or applicant. This provision shall not apply to instances in which an employee who has access to the compensation information of other employees or applicants as a part of such employee's essential job functions discloses the compensation of such other employees or applicants to individuals who do not otherwise have access to such information, unless such disclosure is in response to a formal complaint or charge, in furtherance of an investigation, proceeding, hearing, or action, including an investigation conducted by the employer, or is consistent with the contractor's legal duty to furnish information.

   (4) The contractor will send to each labor union or representative of workers with which he has a collective bargaining agreement or other contract or understanding, a notice to be provided advising the said labor union or workers' representatives of the contractor's commitments under this section, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.

   (5) The contractor will comply with all provisions of Executive Order 11246 of September 24, 1965, and of the rules, regulations, and relevant orders of the Secretary of Labor.

   (6) The contractor will furnish all information and reports required by Executive Order 11246 of September 24, 1965, and by rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to his books, records, and accounts by the administering agency and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.

   (7) In the event of the contractor's noncompliance with the nondiscrimination clauses of this contract or with any of the said rules, regulations, or orders, this contract may be canceled, terminated, or suspended in whole or in part and the contractor may be declared ineligible for further Government contracts or federally assisted construction contracts in accordance with procedures authorized in Executive Order 11246 of September 24, 1965, and such other sanctions may be imposed and remedies invoked as provided in Executive Order 11246 of September 24, 1965, or by rule, regulation, or order of the Secretary of Labor, or as otherwise provided by law.

   (8) The contractor will include the portion of the sentence immediately preceding paragraph (1) and the provisions of paragraphs (1) through (8) in every subcontract or purchase order unless exempted by rules, regulations, or orders of the Secretary of Labor issued pursuant to section 204 of Executive Order 11246 of September 24, 1965, so that such provisions will be binding upon each subcontractor or vendor. The contractor will take such action with respect to any subcontract or purchase order as the administering agency may direct as a means of enforcing such provisions, including sanctions for noncompliance; provided, however, that in the event a contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction by the administering agency, the contractor may request the United States to enter into such litigation to protect the interests of the United States

2. **Contract Work Hours and Safety Standards Act (2 CFR 200, Appendix II (E); 40 U.S.C. 3701-3708).** *This section applies if the contract is in excess of $100,000 and involves the employment of mechanics or laborers*. contractor shall comply with 40 U.S.C. 3702 and 3704, as supplemented by Department of Labor regulations (29 CFR Part 5). Under 40 U.S.C. 3702 of the Act, contractor shall be required to compute the wages of every mechanic and laborer on the basis of a standard work week of 40 hours. Work in excess of the standard work week is permissible provided that the worker is compensated at a rate of not less than 1½ times the basic rate of pay for all hours worked in excess of 40 hours in the work week. The requirements of 40 U.S.C. 3704 are applicable to construction work and provide that no laborer or mechanic shall be required to work in surroundings or under working conditions which are unsanitary, hazardous or dangerous. These requirements do

not apply to the purchases of supplies or materials or articles ordinarily available on the open market, or contracts for transportation or transmission of intelligence.

3. **Clean Air Act (42 U.S.C. 7401—7671q) and the Federal Water Pollution Control Act (33 U.S.C. 1251— 1387), as amended (2 CFR 200, Appendix II (G)).** *This section applies if the contract is in excess of $150,000.* The contractor shall comply with all applicable standards, orders or regulations issued pursuant to the Clean Air Act (42 U.S.C. 7401—7671q) and the Federal Water Pollution Control Act as amended (33 U.S.C. 1251—1387). Violations shall be reported to the Federal awarding agency and the Regional Office of the Environmental Protection Agency(EPA). The contractor agrees to: i) comply with all applicable standards, orders, or regulations issued pursuant to the Clean Air Act, as amended, 42 U.S.C. § 7401 et seq. and the Federal Water Pollution Control Act, as amended, 33 U.S.C. 1251 et seq.; ii) report each violation to the Owner and understands and agrees that the Owner will, in turn, report each violation as required to assure notification to the Treasury Department and the appropriate Environmental Protection Agency Regional Office; and iii) include these requirements in each subcontract exceeding $100,000.

4. **Debarment and Suspension (2 CFR 200, Appendix II (H); E.O.s 12549 and 12689).** *This section applies to all federally funded contracts.* The project related to the procurement notice and/or contract is a federally funded project. In order to respond to this procurement notice, all non-federal entities, contractors, sub-recipients and sub-grantees are required to register in the System for Award Management (SAM) database. SAM is the official free, government operated website. There is NO charge to register or maintain your entity registration record in SAM. All contractors must be registered in SAM prior to receiving an award of contract from the Owner. In SAM, your company/business/organization is referred to as an "Entity". You must register your entity to do business with the U.S. Federal government by completing the registration process in SAM. Detailed instructions for how to register your company/business/organization can be found at https://sam.gov/content/entity-registration.Non-federal entities are subject to the non-procurement debarment and suspension regulations implementing Executive Orders 12549 and 12689, 2 CFR part 180. These regulations restrict awards, sub-awards, and contracts with certain parties that are debarred, suspended, or otherwise Contractor must comply with 2 CFR Part 180, Subpart C and must include a requirement to comply with this regulation in any lower tier covered transaction it enters into. Contractor shall have an ongoing duty during the term of this Contract to disclose to Owner on an ongoing basis any occurrence that would prevent contractor from making the certifications contained in this section. Such disclosure shall be made in writing to Owner within five (5) business days of when contractor discovers or reasonably believes there is a likelihood of such occurrence. This certification is a material representation of fact relied upon by Owner. If it is later determined that contractor did not comply with 2 CFR Part 180, Subpart C, in addition to remedies available to Owner, the Federal government may pursue available remedies, including but not limited to suspension and/or debarment.

5. **Byrd Anti-Lobbying Amendment (2 CFR 200, Appendix II (I); 31 U.S.C. 1352).** *This section applies if the contract is for $100,000 or more.* Contractor and its subcontractors shall file the certification required by this statute and associated regulations. Each tier certifies to the tier above that it will not and has not used Federal appropriated funds to pay any person or organization for influencing or attempting to influence an officer or employee of any agency, a member of Congress, officer or employee of Congress, or an employee of a member of Congress in connection with obtaining any Federal contract, grant or any other award covered by 31 U.S.C. 1352. Each tier shall also disclose any lobbying with non-Federal funds that takes place in connection with obtaining any Federal award. Such disclosures are forwarded from tier to tier up to Owner.

6. **Procurement of recovered materials (2 CFR 200.323).** *This section applies where the purchase price of the item exceeds $10,000 or the value of the quantity acquired during the preceding fiscal year exceeded $10,000.* The contractor shall comply with the requirements of Section 6002 of the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act. The requirements of Section 6002 include procuring only items designated in guidelines of the Environmental Protection Agency (EPA) at 40 CFR Part 247 that contain the highest percentage of recovered materials practicable, consistent with maintaining a satisfactory level of competition.

7. **Domestic preferences for procurements (2 CFR 200.322).** *This section applies to all contracts covered by 2 CFR 200.* As appropriate and to the extent consistent with law, the contractor should, to the greatest extent practicable, provide a preference for the purchase, acquisition, or use of products, or materials produced in the United States (including but not limited to iron, aluminum, steel, cement, and other manufactured products). The requirements of this Section must be included in all subawards including all contracts and purchase orders for work or products under this contract. For purposes of this section: i) "Produced in the United States" means, for iron and steel products, that all manufacturing processes from the initial melting stage through the application of coatings, occurred in the United States; ii) "Manufactured products" means items and construction materials composed in whole or in part of non-ferrous metals such as aluminum; plastics and polymer-based products such as polyvinyl chloride pipe; aggregates such as concrete; glass, including optical fiber; and lumber.

8. **Contracting with Small and Minority Businesses, Women's Business Enterprises, and Labor Surplus Area Firms (2 CFR 200.321).** *This section applies to all contracts covered by 2 CFR 200.* The contractor shall take affirmative steps to include minority businesses, women's business enterprises, and labor surplus area firms when possible by: i) placing qualified small and minority businesses and women's business enterprises on solicitation lists; ii) assuring that small and minority businesses, and women's business enterprises are solicited whenever they are potential sources; iii) dividing total requirements, when economically feasible, into smaller tasks or quantities to permit maximum participation by small and minority businesses, and women's business enterprises; iv) establishing delivery schedules, where the requirement permits, which encourage participation by small and minority businesses, and women's businessenterprises; v) using the services and assistance, as appropriate, of such organizations as the Small Business Administration and the Minority Business Development Agency of the Department of Commerce; vi) and requiring subcontractors, if subcontracts are to be let, to take the affirmative steps listed in in this Section.

CONFLICTS AMONG CLAUSES APPLICABLE TO THE CONTRACT

In the event of any conflict among the requirements of clauses applicable to contract, the most stringent requirements of the clauses will apply.

Section 00 61 00

PERFORMANCE BOND

Contractor Name: Address *(principal place of business)*:	**Surety** Name: Address *(principal place of business)*:
Owner Name: **Northern Kentucky Water District** Mailing address *(principal place of business)*: **2835 Crescent Springs Rd.** **Erlanger, KY 41018**	**Contract** Description *(name and location)*: Contract Price: Effective Date of Contract:

Bond

Bond Amount:

Date of Bond:

(Date of Bond cannot be earlier than Effective Date of Contract)

Modifications to this Bond form:

☐ None ☐ See Paragraph 16

Surety and Contractor, intending to be legally bound hereby, subject to the terms set forth in this Performance Bond, do each cause this Performance Bond to be duly executed by an authorized officer, agent, or representative.

Contractor as Principal	Surety
_____ *(Full formal name of Contractor)*	_____ *(Full formal name of Surety) (corporate seal)*
By: _____ *(Signature)*	By: _____ *(Signature)(Attach Power of Attorney)*
Name: _____ *(Printed or typed)*	Name: _____ *(Printed or typed)*
Title: _____	Title: _____
Attest: _____ *(Signature)*	Attest: _____ *(Signature)*
Name: _____ *(Printed or typed)*	Name: _____ *(Printed or typed)*
Title: _____	Title: _____

Notes: (1) Provide supplemental execution by any additional parties, such as joint venturers. (2) Any singular reference to Contractor, Surety, Owner, or other party is considered plural where applicable.

The Contractor and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors, and assigns to the Owner for the performance of the Construction Contract, which is incorporated herein by reference.

1. If the Contractor performs the Construction Contract, the Surety and the Contractor shall have no obligation under this Bond, except when applicable to participate in a conference as provided in Paragraph 3.

2. If there is no Owner Default under the Construction Contract, the Surety's obligation under this Bond will arise after:

    2.1. The Owner first provides notice to the Contractor and the Surety that the Owner is considering declaring a Contractor Default. Such notice may indicate whether the Owner is requesting a conference among the Owner, Contractor, and Surety to discuss the Contractor's performance. If the Owner does not request a conference, the Surety may, within five (5) business days after receipt of the Owner's notice, request such a conference. If the Surety timely requests a conference, the Owner shall attend. Unless the Owner agrees otherwise, any conference requested under this Paragraph 3.1 will be held within ten (10) business days of the Surety's receipt of the Owner's notice. If the Owner, the Contractor, and the Surety agree, the Contractor shall be allowed a reasonable time to perform the Construction Contract, but such an agreement does not waive the Owner's right, if any, subsequently to declare a Contractor Default;

    2.2. The Owner declares a Contractor Default, terminates the Construction Contract and notifies the Surety; and

    2.3. The Owner has agreed to pay the Balance of the Contract Price in accordance with the terms of the Construction Contract to the Surety or to a contractor selected to perform the Construction Contract.

3. Failure on the part of the Owner to comply with the notice requirement in Paragraph 3.1 does not constitute a failure to comply with a condition precedent to the Surety's obligations, or release the Surety from its obligations, except to the extent the Surety demonstrates actual prejudice.

4. When the Owner has satisfied the conditions of Paragraph 3, the Surety shall promptly and at the Surety's expense take one of the following actions:

    4.1. Arrange for the Contractor, with the consent of the Owner, to perform and complete the Construction Contract;

    4.2. Undertake to perform and complete the Construction Contract itself, through its agents or independent contractors;

    4.3. Obtain bids or negotiated proposals from qualified contractors acceptable to the Owner for a contract for performance and completion of the Construction Contract, arrange for a contract to be prepared for execution by the Owner and a contractor selected with the Owners concurrence, to be secured with performance and payment bonds executed by a qualified surety equivalent to the bonds issued on the Construction Contract, and pay to the Owner the amount of damages as described in Paragraph 7 in excess of the Balance of the Contract Price incurred by the Owner as a result of the Contractor Default; or

    4.4. Waive its right to perform and complete, arrange for completion, or obtain a new contractor, and with reasonable promptness under the circumstances:

5.4.1 After investigation, determine the amount for which it may be liable to the Owner and, as soon as practicable after the amount is determined, make payment to the Owner; or

5.4.2 Deny liability in whole or in part and notify the Owner, citing the reasons for denial.

5. If the Surety does not proceed as provided in Paragraph 5 with reasonable promptness, the Surety shall be deemed to be in default on this Bond seven days after receipt of an additional written notice from the Owner to the Surety demanding that the Surety perform its obligations under this Bond, and the Owner shall be entitled to enforce any remedy available to the Owner. If the Surety proceeds as provided in Paragraph 5.4, and the Owner refuses the payment, or the Surety has denied liability, in whole or in part, without further notice, the Owner shall be entitled to enforce any remedy available to the Owner.

6. If the Surety elects to act under Paragraph 5.1, 5.2, or 5.3, then the responsibilities of the Surety to the Owner will not be greater than those of the Contractor under the Construction Contract, and the responsibilities of the Owner to the Surety will not be greater than those of the Owner under the Construction Contract. Subject to the commitment by the Owner to pay the Balance of the Contract Price, the Surety is obligated, without duplication for:

   6.1. the responsibilities of the Contractor for correction of defective work and completion of the Construction Contract;

   6.2. additional legal, design professional, and delay costs resulting from the Contractor's Default, and resulting from the actions or failure to act of the Surety under Paragraph 5; and

   6.3. liquidated damages, or if no liquidated damages are specified in the Construction Contract, actual damages caused by delayed performance or non-performance of the Contractor.

7. If the Surety elects to act under Paragraph 5.1, 5.3, or 5.4, the Surety's liability is limited to the amount of this Bond.

8. The Surety shall not be liable to the Owner or others for obligations of the Contractor that are unrelated to the Construction Contract, and the Balance of the Contract Price will not be reduced or set off on account of any such unrelated obligations. No right of action will accrue on this Bond to any person or entity other than the Owner or its heirs, executors, administrators, successors, and assigns.

9. The Surety hereby waives notice of any change, including changes of time, to the Construction Contract or to related subcontracts, purchase orders, and other obligations.

10. Any proceeding, legal or equitable, under this Bond must be instituted in any court of competent jurisdiction in the location in which the work or part of the work is located and must be instituted within two years after a declaration of Contractor Default or within two years after the Contractor ceased working or within two years after the Surety refuses or fails to perform its obligations under this Bond, whichever occurs first. If the provisions of this paragraph are void or prohibited by law, the minimum periods of limitations available to sureties as a defense in the jurisdiction of the suit will be applicable.

11. Notice to the Surety, the Owner, or the Contractor must be mailed or delivered to the address shown on the page on which their signature appears.

12. When this Bond has been furnished to comply with a statutory or other legal requirement in the location where the construction was to be performed, any provision in this Bond conflicting with said statutory or legal requirement will be deemed deleted therefrom and provisions conforming to such

statutory or other legal requirement will be deemed incorporated herein. When so furnished, the intent is that this Bond will be construed as a statutory bond and not as a common law bond.

13. Definitions

    13.1. *Balance of the Contract Price*—The total amount payable by the Owner to the Contractor under the Construction Contract after all proper adjustments have been made including allowance for the Contractor for any amounts received or to be received by the Owner in settlement of insurance or other claims for damages to which the Contractor is entitled, reduced by all valid and proper payments made to or on behalf of the Contractor under the Construction Contract.

    13.2. *Construction Contract*—The agreement between the Owner and Contractor identified on the cover page, including all Contract Documents and changes made to the agreement and the Contract Documents.

    13.3. *Contractor Default*—Failure of the Contractor, which has not been remedied or waived, to perform or otherwise to comply with a material term of the Construction Contract.

    13.4. *Owner Default*—Failure of the Owner, which has not been remedied or waived, to pay the Contractor as required under the Construction Contract or to perform and complete or comply with the other material terms of the Construction Contract.

    13.5. *Contract Documents*—All the documents that comprise the agreement between the Owner and Contractor.

14. If this Bond is issued for an agreement between a contractor and subcontractor, the term Contractor in this Bond will be deemed to be Subcontractor and the term Owner will be deemed to be Contractor.

15. Modifications to this Bond are as follows: None.

Section 00 62 00

PAYMENT BOND

Contractor Name: Address *(principal place of business)*:	**Surety** Name: Address *(principal place of business)*:
Owner Name: **Northern Kentucky Water District** Mailing address *(principal place of business)*: **2835 Crescent Springs Rd.** **Erlanger, KY 41018**	**Contract** Description *(name and location)*: Contract Price: Effective Date of Contract:

Bond

Bond Amount: **[Amount]**

Date of Bond: **[Date]**

(Date of Bond cannot be earlier than Effective Date of Contract)

Modifications to this Bond form:

☐ None ☐ See Paragraph 18

Surety and Contractor, intending to be legally bound hereby, subject to the terms set forth in this Payment Bond, do each cause this Payment Bond to be duly executed by an authorized officer, agent, or representative.

Contractor as Principal	Surety
_____ *(Full formal name of Contractor)*	_____ *(Full formal name of Surety) (corporate seal)*
By: _____ *(Signature)*	By: _____ *(Signature)(Attach Power of Attorney)*
Name: _____ *(Printed or typed)*	Name: _____ *(Printed or typed)*
Title: _____	Title: _____
Attest: _____ *(Signature)*	Attest: _____ *(Signature)*
Name: _____ *(Printed or typed)*	Name: _____ *(Printed or typed)*
Title: _____	Title: _____

Notes: (1) Provide supplemental execution by any additional parties, such as joint venturers. (2) Any singular reference to Contractor, Surety, Owner, or other party is considered plural where applicable.

The Contractor and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors, and assigns to the Owner to pay for labor, materials, and equipment furnished for use in the performance of the Construction Contract, which is incorporated herein by reference, subject to the following terms.

1. If the Contractor promptly makes payment of all sums due to Claimants, and defends, indemnifies, and holds harmless the Owner from claims, demands, liens, or suits by any person or entity seeking payment for labor, materials, or equipment furnished for use in the performance of the Construction Contract, then the Surety and the Contractor shall have no obligation under this Bond.
2. If there is no Owner Default under the Construction Contract, the Surety's obligation to the Owner under this Bond will arise after the Owner has promptly notified the Contractor and the Surety (at the address described in Paragraph 13) of claims, demands, liens, or suits against the Owner or the Owner's property by any person or entity seeking payment for labor, materials, or equipment furnished for use in the performance of the Construction Contract, and tendered defense of such claims, demands, liens, or suits to the Contractor and the Surety.
3. When the Owner has satisfied the conditions in Paragraph 3, the Surety shall promptly and at the Surety's expense defend, indemnify, and hold harmless the Owner against a duly tendered claim, demand, lien, or suit.
4. The Surety's obligations to a Claimant under this Bond will arise after the following:
    4.1. Claimants who do not have a direct contract with the Contractor
        4.1.1. have furnished a written notice of non-payment to the Contractor, stating with substantial accuracy the amount claimed and the name of the party to whom the materials were, or equipment was, furnished or supplied or for whom the labor was done or performed, within ninety (90) days after having last performed labor or last furnished materials or equipment included in the Claim; and
        4.1.2. have sent a Claim to the Surety (at the address described in Paragraph 13).
    4.2. Claimants who are employed by or have a direct contract with the Contractor have sent a Claim to the Surety (at the address described in Paragraph 13).
5. If a notice of non-payment required by Paragraph 5.1.1 is given by the Owner to the Contractor, that is sufficient to satisfy a Claimant's obligation to furnish a written notice of non-payment under Paragraph 5.1.1.
6. When a Claimant has satisfied the conditions of Paragraph 5.1 or 5.2, whichever is applicable, the Surety shall promptly and at the Surety's expense take the following actions:
    6.1. Send an answer to the Claimant, with a copy to the Owner, within sixty (60) days after receipt of the Claim, stating the amounts that are undisputed and the basis for challenging any amounts that are disputed; and
    6.2. Pay or arrange for payment of any undisputed amounts.
    6.3. The Surety's failure to discharge its obligations under Paragraph 7.1 or 7.2 will not be deemed to constitute a waiver of defenses the Surety or Contractor may have or acquire as to a Claim, except as to undisputed amounts for which the Surety and Claimant have reached agreement. If, however, the Surety fails to discharge its obligations under Paragraph 7.1 or 7.2, the Surety

shall indemnify the Claimant for the reasonable attorney's fees the Claimant incurs thereafter to recover any sums found to be due and owing to the Claimant.

7. The Surety's total obligation will not exceed the amount of this Bond, plus the amount of reasonable attorney's fees provided under Paragraph 7.3, and the amount of this Bond will be credited for any payments made in good faith by the Surety.

8. Amounts owed by the Owner to the Contractor under the Construction Contract will be used for the performance of the Construction Contract and to satisfy claims, if any, under any construction performance bond. By the Contractor furnishing and the Owner accepting this Bond, they agree that all funds earned by the Contractor in the performance of the Construction Contract are dedicated to satisfying obligations of the Contractor and Surety under this Bond, subject to the Owner's priority to use the funds for the completion of the work.

9. The Surety shall not be liable to the Owner, Claimants, or others for obligations of the Contractor that are unrelated to the Construction Contract. The Owner shall not be liable for the payment of any costs or expenses of any Claimant under this Bond, and shall have under this Bond no obligation to make payments to or give notice on behalf of Claimants, or otherwise have any obligations to Claimants under this Bond.

10. The Surety hereby waives notice of any change, including changes of time, to the Construction Contract or to related subcontracts, purchase orders, and other obligations.

11. No suit or action will be commenced by a Claimant under this Bond other than in a court of competent jurisdiction in the state in which the project that is the subject of the Construction Contract is located or after the expiration of one year from the date (1) on which the Claimant sent a Claim to the Surety pursuant to Paragraph 5.1.2 or 5.2, or (2) on which the last labor or service was performed by anyone or the last materials or equipment were furnished by anyone under the Construction Contract, whichever of (1) or (2) first occurs. If the provisions of this paragraph are void or prohibited by law, the minimum period of limitation available to sureties as a defense in the jurisdiction of the suit will be applicable.

12. Notice and Claims to the Surety, the Owner, or the Contractor must be mailed or delivered to the address shown on the page on which their signature appears. Actual receipt of notice or Claims, however accomplished, will be sufficient compliance as of the date received.

13. When this Bond has been furnished to comply with a statutory or other legal requirement in the location where the construction was to be performed, any provision in this Bond conflicting with said statutory or legal requirement will be deemed deleted here from and provisions conforming to such statutory or other legal requirement will be deemed incorporated herein. When so furnished, the intent is that this Bond will be construed as a statutory bond and not as a common law bond.

14. Upon requests by any person or entity appearing to be a potential beneficiary of this Bond, the Contractor and Owner shall promptly furnish a copy of this Bond or shall permit a copy to be made.

15. Definitions

    15.1. *Claim*—A written statement by the Claimant including at a minimum:

        15.1.1. The name of the Claimant;

        15.1.2. The name of the person for whom the labor was done, or materials or equipment furnished;

15.1.3. A copy of the agreement or purchase order pursuant to which labor, materials, or equipment was furnished for use in the performance of the Construction Contract;

15.1.4. A brief description of the labor, materials, or equipment furnished;

15.1.5. The date on which the Claimant last performed labor or last furnished materials or equipment for use in the performance of the Construction Contract;

15.1.6. The total amount earned by the Claimant for labor, materials, or equipment furnished as of the date of the Claim;

15.1.7. The total amount of previous payments received by the Claimant; and

15.1.8. The total amount due and unpaid to the Claimant for labor, materials, or equipment furnished as of the date of the Claim.

15.2. *Claimant*—An individual or entity having a direct contract with the Contractor or with a subcontractor of the Contractor to furnish labor, materials, or equipment for use in the performance of the Construction Contract. The term Claimant also includes any individual or entity that has rightfully asserted a claim under an applicable mechanic's lien or similar statute against the real property upon which the Project is located. The intent of this Bond is to include without limitation in the terms of "labor, materials, or equipment" that part of the water, gas, power, light, heat, oil, gasoline, telephone service, or rental equipment used in the Construction Contract, architectural and engineering services required for performance of the work of the Contractor and the Contractor's subcontractors, and all other items for which a mechanic's lien may be asserted in the jurisdiction where the labor, materials, or equipment were furnished.

15.3. *Construction Contract*—The agreement between the Owner and Contractor identified on the cover page, including all Contract Documents and all changes made to the agreement and the Contract Documents.

15.4. *Owner Default*—Failure of the Owner, which has not been remedied or waived, to pay the Contractor as required under the Construction Contract or to perform and complete or comply with the other material terms of the Construction Contract.

15.5. *Contract Documents*—All the documents that comprise the agreement between the Owner and Contractor.

16. If this Bond is issued for an agreement between a contractor and subcontractor, the term Contractor in this Bond will be deemed to be Subcontractor and the term Owner will be deemed to be Contractor.

17. Modifications to this Bond are as follows: None.

CERTIFICATE OF INSURANCE

Issue Date:

PRODUCER:

Code Sub-Code

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW.

COMPANIES AFFORDING COVERAGE

INSURED:

COMPANY LETTER A	
COMPANY LETTER B	
COMPANY LETTER C	
COMPANY LETTER D	
COMPANY LETTER E	

COVERAGES

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES.

CO LTR	TYPE OF INSURANCE	POLICY NUMBER	POLICY EFFECTIVE DATE	POLICY EXPIRATION DATE	ALL LIMITS IN THOUSANDS	
	GENERAL LIABILITY				GENERAL AGGREGATE	$1,000,
	[X] COMMERCIAL GENERAL LIABILITY				PRODUCTS-COMP/OPS AGGREGATE	$1,000,
	[X] OCCURRENCE	(Completed Operations & Products Liability remains			PERSONAL & ADVERTISING INJURY	$1,000,
	[X] BLANKET CONTRACTUAL	in force for 2 years after final payment)			EACH OCCURRENCE	$1,000,
	[ ] _____					
	AUTOMOBILE LIABILITY					
	[X] ANY AUTO				COMBINED SINGLE LIMIT EACH OCCURRENCE Bodily Injury & Property Damage	$1,000,
	[X] HIRED AUTOS					
	[X] NON-OWNED AUTOS					
	EXCESS LIABILITY				EACH OCCURRENCE	$4,000,
	[X] UMBRELLA FORM	(Follows Form of the Primary)			AGGREGATE	$4,000,
	WORKERS' COMPENSATION AND EMPLOYERS' LIABILITY				STATUTORY	
					EACH ACCIDENT	$1,000,
		(Includes US Longshoremen and Harbor Workers Act and Maritime Coverage Where Applicable and All States Endorsement)			DISEASE-POLICY LIMIT	$1,000,
					DISEASE-EACH EMPLOYEE	$1,000,
	OTHER				EACH OCCURRENCE	
	[ ] _____				AGGREGATE	

DESCRIPTION OF OPERATIONS/LOCATIONS/VEHICLES/SPECIAL ITEMS:

1. Certificate Holder(s) & their Officers, Directors, Partners, Employees, & Agents Named as Additional Insured (all policies except WC). The coverage afforded the Additional Insured under these policies shall be primary insurance. If the Additional Insured has other insurance which is applicable to the loss, such other insurance shall be on an excess or contingent basis. (Copy of Additional Insured Endorsement attached.)
2. Blanket Coverage for XCU Hazards (General Liability & Excess Liability).
3. Waiver of Subrogation Against Certificate Holder(s), Their Officers, Directors, Partners, Employees, & Agents (all policies).
4. Contractual Coverage covers liability assumed in the Indemnification Clause of the Contract between Certificate Holder and Insured (General Liability & Excess Liability).
5. General and Products/Completed Operations aggregates apply for each Certificate Holder contract(s) or amendments (General Liability & Excess Liability).
6. Contractual Liability Limitation Endorsement CG2139 or its equivalent is not included in either General or Excess Liability policies.
7. Severability of Interest or Cross Liability clause or endorsement included (General Liability & Excess Liability).

CERTIFICATE HOLDERS	CANCELLATION
1.	SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELED, TERMINATED, OR MATERIALLY CHANGED BEFORE THE EXPIRATION DATE THEREOF, THE ISSUING COMPANY WILL MAIL 30 DAYS' WRITTEN NOTICE TO THE CERTIFICATE HOLDERS NAMED TO THE LEFT. ANY IMPAIRMENT OR EXHAUSTION OF AGGREGATES WILL BE THE SUBJECT OF IMMEDIATE NOTICE TO THE CERTIFICATE HOLDERS.
2.	AUTHORIZED REPRESENTATIVE

CERTIFICATE OF PROPERTY INSURANCE

ISSUE DATE _____ (mm/dd/yy)

THIS IS EVIDENCE THAT INSURANCE AS IDENTIFIED BELOW HAS BEEN ISSUED IS IN FORCE AND CONVEYS ALL THE RIGHTS AND PRIVILEGES AFFORDED UNDER THE POLICY

PRODUCER	COMPANY
Code Sub-Code	
INSURED	POLICY NUMBER
	EFFECTIVE DATE (mm/dd/yy) / EXPIRATION DATE (mm/dd/yy)

PROPERTY INFORMATION

LOCATION/DESCRIPTION

COVERAGE INFORMATION

COVERAGES/PERILS/FORMS	AMOUNT OF INSURANCE	DEDUCTIBLE
BUILDERS RISK/INSTALLATION FLOATER All Risk of Physical Damage or Loss to Equipment and Materials at or Incidental to the Jobsite on Completed Value Form	Insurable value of completed work.	

REMARKS (Including Special Conditions)

1 Certificate Holder and others identified in the property insurance paragraph of the Contract Documents are Named Insureds
2 Waiver of Subrogation against Named Insureds
3 Any similar insurance carried by Named Insureds is excess of coverage described hereon
4 Losses are payable to Owner as fiduciary for the Named Insureds

CANCELLATION

THIS POLICY IS SUBJECT TO THE PREMIUMS FORMS AND RULES IN EFFECT FOR EACH POLICY PERIOD SHOULD THE POLICY BE TERMINATED OR MATERIALLY CHANGED THE COMPANY WILL GIVE THE CERTIFICATE HOLDERS IDENTIFIED BELOW 30 DAYS' WRITTEN NOTICE AND WILL SEND NOTIFICATION OF ANY CHANGES TO THE POLICY THAT WOULD AFFECT THAT INTEREST IN ACCORDANCE WITH THE POLICY PROVISIONS OR AS REQUIRED BY LAW

CERTIFICATE HOLDERS

Name and Address	Nature of Interest
1	X Additional Named Insured
2	SIGNATURE OF AUTHORIZED AGENT OF THE COMPANY

This document has important legal consequences; consultation with an attorney is encouraged with respect to its use or modification. This document should be adapted to the particular circumstances of the contemplated Project and the controlling Laws and Regulations.

STANDARD GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT

Prepared By

EJCDC®
ENGINEERS JOINT CONTRACT DOCUMENTS COMMITTEE

ACEC
AMERICAN COUNCIL OF ENGINEERING COMPANIES

ASCE
AMERICAN SOCIETY OF CIVIL ENGINEERS

NSPE®
NATIONAL SOCIETY OF PROFESSIONAL ENGINEERS

Endorsed By

CSI®
Building Knowledge
Improving Project Delivery

NUCA
We Dig America

EJCDC® C-700, Standard General Conditions of the Construction Contract.
Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

Copyright© 2018

National Society of Professional Engineers

1420 King Street, Alexandria, VA 22314-2794

(703) 684-2882

www.nspe.org

American Council of Engineering Companies

1015 15th Street N.W., Washington, DC 20005

(202) 347-7474

www.acec.org

American Society of Civil Engineers

1801 Alexander Bell Drive, Reston, VA 20191-4400

(800) 548-2723

www.asce.org

The copyright for this EJCDC document is owned jointly by the three sponsoring organizations listed above. The National Society of Professional Engineers is the Copyright Administrator for the EJCDC documents; please direct all inquiries regarding EJCDC copyrights to NSPE.

NOTE: EJCDC publications may be purchased at www.ejcdc.org, or from any of the sponsoring organizations above.

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

STANDARD GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT

TABLE OF CONTENTS

Page

Article 1—Definitions and Terminology 1
1.01 Defined Terms 1
1.02 Terminology 6
Article 2—Preliminary Matters 7
2.01 Delivery of Performance and Payment Bonds; Evidence of Insurance 7
2.02 Copies of Documents 7
2.03 Before Starting Construction 7
2.04 Preconstruction Conference; Designation of Authorized Representatives 8
2.05 Acceptance of Schedules 8
2.06 Electronic Transmittals 8
Article 3—Contract Documents: Intent, Requirements, Reuse 9
3.01 Intent 9
3.02 Reference Standards 9
3.03 Reporting and Resolving Discrepancies 10
3.04 Requirements of the Contract Documents 10
3.05 Reuse of Documents 11
Article 4—Commencement and Progress of the Work 11
4.01 Commencement of Contract Times; Notice to Proceed 11
4.02 Starting the Work 11
4.03 Reference Points 11
4.04 Progress Schedule 12
4.05 Delays in Contractor's Progress 12
Article 5—Site; Subsurface and Physical Conditions; Hazardous Environmental Conditions 13
5.01 Availability of Lands 13
5.02 Use of Site and Other Areas 14
5.03 Subsurface and Physical Conditions 15
5.04 Differing Subsurface or Physical Conditions 16

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

5.05 Underground Facilities 17
5.06 Hazardous Environmental Conditions at Site 19
Article 6—Bonds and Insurance 21
6.01 Performance, Payment, and Other Bonds 21
6.02 Insurance—General Provisions 22
6.03 Contractor's Insurance 24
6.04 Builder's Risk and Other Property Insurance 25
6.05 Property Losses; Subrogation 25
6.06 Receipt and Application of Property Insurance Proceeds 27
Article 7—Contractor's Responsibilities 27
7.01 Contractor's Means and Methods of Construction 27
7.02 Supervision and Superintendence 27
7.03 Labor; Working Hours 27
7.04 Services, Materials, and Equipment 28
7.05 "Or Equals" 28
7.06 Substitutes 29
7.07 Concerning Subcontractors and Suppliers 31
7.08 Patent Fees and Royalties 32
7.09 Permits 33
7.10 Taxes 33
7.11 Laws and Regulations 33
7.12 Record Documents 33
7.13 Safety and Protection 34
7.14 Hazard Communication Programs 35
7.15 Emergencies 35
7.16 Submittals 35
7.17 Contractor's General Warranty and Guarantee 38
7.18 Indemnification 39
7.19 Delegation of Professional Design Services 39
Article 8—Other Work at the Site 40
8.01 Other Work 40
8.02 Coordination 41
8.03 Legal Relationships 41

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

Article 9—Owner's Responsibilities 42
9.01 Communications to Contractor 42
9.02 Replacement of Engineer 42
9.03 Furnish Data 42
9.04 Pay When Due 42
9.05 Lands and Easements; Reports, Tests, and Drawings 43
9.06 Insurance 43
9.07 Change Orders 43
9.08 Inspections, Tests, and Approvals 43
9.09 Limitations on Owner's Responsibilities 43
9.10 Undisclosed Hazardous Environmental Condition 43
9.11 Evidence of Financial Arrangements 43
9.12 Safety Programs 43
Article 10—Engineer's Status During Construction 44
10.01 Owner's Representative 44
10.02 Visits to Site 44
10.03 Resident Project Representative 44
10.04 Engineer's Authority 44
10.05 Determinations for Unit Price Work 45
10.06 Decisions on Requirements of Contract Documents and Acceptability of Work 45
10.07 Limitations on Engineer's Authority and Responsibilities 45
10.08 Compliance with Safety Program 45
Article 11—Changes to the Contract 46
11.01 Amending and Supplementing the Contract 46
11.02 Change Orders 46
11.03 Work Change Directives 46
11.04 Field Orders 47
11.05 Owner-Authorized Changes in the Work 47
11.06 Unauthorized Changes in the Work 47
11.07 Change of Contract Price 47
11.08 Change of Contract Times 49
11.09 Change Proposals 49
11.10 Notification to Surety 50

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

Article 12—Claims 50
12.01 Claims 50
Article 13—Cost of the Work; Allowances; Unit Price Work 51
13.01 Cost of the Work 51
13.02 Allowances 55
13.03 Unit Price Work 55
Article 14—Tests and Inspections; Correction, Removal, or Acceptance of Defective Work 56
14.01 Access to Work 56
14.02 Tests, Inspections, and Approvals 56
14.03 Defective Work 57
14.04 Acceptance of Defective Work 58
14.05 Uncovering Work 58
14.06 Owner May Stop the Worknit 58
14.07 Owner May Correct Defective Work 59
Article 15—Payments to Contractor; Set-Offs; Completion; Correction Period 59
15.01 Progress Payments 59
15.02 Contractor's Warranty of Title 62
15.03 Substantial Completion 62
15.04 Partial Use or Occupancy 63
15.05 Final Inspection 64
15.06 Final Payment 64
15.07 Waiver of Claims 65
15.08 Correction Period 66
Article 16—Suspension of Work and Termination 67
16.01 Owner May Suspend Work 67
16.02 Owner May Terminate for Cause 67
16.03 Owner May Terminate for Convenience 68
16.04 Contractor May Stop Work or Terminate 68
Article 17—Final Resolution of Disputes 69
17.01 Methods and Procedures 69
Article 18—Miscellaneous 69
18.01 Giving Notice 69
18.02 Computation of Times 69

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

18.03 Cumulative Remedies 70
18.04 Limitation of Damages 70
18.05 No Waiver 70
18.06 Survival of Obligations 70
18.07 Controlling Law 70
18.08 Assignment of Contract 70
18.09 Successors and Assigns 70
18.10 Headings 70

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

STANDARD GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT

ARTICLE 1—DEFINITIONS AND TERMINOLOGY

1.01 *Defined Terms*

A. Wherever used in the Bidding Requirements or Contract Documents, a term printed with initial capital letters, including the term's singular and plural forms, will have the meaning indicated in the definitions below. In addition to terms specifically defined, terms with initial capital letters in the Contract Documents include references to identified articles and paragraphs, and the titles of other documents or forms.

1. *Addenda*—Written or graphic instruments issued prior to the opening of Bids which clarify, correct, or change the Bidding Requirements or the proposed Contract Documents.

2. *Agreement*—The written instrument, executed by Owner and Contractor, that sets forth the Contract Price and Contract Times, identifies the parties and the Engineer, and designates the specific items that are Contract Documents.

3. *Application for Payment*—The document prepared by Contractor, in a form acceptable to Engineer, to request progress or final payments, and which is to be accompanied by such supporting documentation as is required by the Contract Documents.

4. *Bid*—The offer of a Bidder submitted on the prescribed form setting forth the prices for the Work to be performed.

5. *Bidder*—An individual or entity that submits a Bid to Owner.

6. *Bidding Documents*—The Bidding Requirements, the proposed Contract Documents, and all Addenda.

7. *Bidding Requirements*—The Advertisement or invitation to bid, Instructions to Bidders, Bid Bond or other Bid security, if any, the Bid Form, and the Bid with any attachments.

8. *Change Order*—A document which is signed by Contractor and Owner and authorizes an addition, deletion, or revision in the Work or an adjustment in the Contract Price or the Contract Times, or other revision to the Contract, issued on or after the Effective Date of the Contract.

9. *Change Proposal*—A written request by Contractor, duly submitted in compliance with the procedural requirements set forth herein, seeking an adjustment in Contract Price or Contract Times; contesting an initial decision by Engineer concerning the requirements of the Contract Documents or the acceptability of Work under the Contract Documents; challenging a set-off against payments due; or seeking other relief with respect to the terms of the Contract.

10. *Claim*

a. A demand or assertion by Owner directly to Contractor, duly submitted in compliance with the procedural requirements set forth herein, seeking an adjustment of Contract Price or Contract Times; contesting an initial decision by Engineer concerning the

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

requirements of the Contract Documents or the acceptability of Work under the Contract Documents; contesting Engineer's decision regarding a Change Proposal; seeking resolution of a contractual issue that Engineer has declined to address; or seeking other relief with respect to the terms of the Contract.

b. A demand or assertion by Contractor directly to Owner, duly submitted in compliance with the procedural requirements set forth herein, contesting Engineer's decision regarding a Change Proposal, or seeking resolution of a contractual issue that Engineer has declined to address.

c. A demand or assertion by Owner or Contractor, duly submitted in compliance with the procedural requirements set forth herein, made pursuant to Paragraph 12.01.A.4, concerning disputes arising after Engineer has issued a recommendation of final payment.

d. A demand for money or services by a third party is not a Claim.

11. *Constituent of Concern*—Asbestos, petroleum, radioactive materials, polychlorinated biphenyls (PCBs), lead-based paint (as defined by the HUD/EPA standard), hazardous waste, and any substance, product, waste, or other material of any nature whatsoever that is or becomes listed, regulated, or addressed pursuant to Laws and Regulations regulating, relating to, or imposing liability or standards of conduct concerning, any hazardous, toxic, or dangerous waste, substance, or material.

12. *Contract*—The entire and integrated written contract between Owner and Contractor concerning the Work.

13. *Contract Documents*—Those items so designated in the Agreement, and which together comprise the Contract.

14. *Contract Price*—The money that Owner has agreed to pay Contractor for completion of the Work in accordance with the Contract Documents.

15. *Contract Times*—The number of days or the dates by which Contractor shall: (a) achieve Milestones, if any; (b) achieve Substantial Completion; and (c) complete the Work.

16. *Contractor*—The individual or entity with which Owner has contracted for performance of the Work.

17. *Cost of the Work*—See Paragraph 13.01 for definition.

18. *Drawings*—The part of the Contract that graphically shows the scope, extent, and character of the Work to be performed by Contractor.

19. *Effective Date of the Contract*—The date, indicated in the Agreement, on which the Contract becomes effective.

20. *Electronic Document*—Any Project-related correspondence, attachments to correspondence, data, documents, drawings, information, or graphics, including but not limited to Shop Drawings and other Submittals, that are in an electronic or digital format.

21. *Electronic Means*—Electronic mail (email), upload/download from a secure Project website, or other communications methods that allow: (a) the transmission or communication of Electronic Documents; (b) the documentation of transmissions, including sending and receipt; (c) printing of the transmitted Electronic Document by the

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

recipient; (d) the storage and archiving of the Electronic Document by sender and recipient; and (e) the use by recipient of the Electronic Document for purposes permitted by this Contract. Electronic Means does not include the use of text messaging, or of Facebook, Twitter, Instagram, or similar social media services for transmission of Electronic Documents.

22. *Engineer*—The individual or entity named as such in the Agreement.

23. *Field Order*—A written order issued by Engineer which requires minor changes in the Work but does not change the Contract Price or the Contract Times.

24. *Hazardous Environmental Condition*—The presence at the Site of Constituents of Concern in such quantities or circumstances that may present a danger to persons or property exposed thereto.

    a. The presence at the Site of materials that are necessary for the execution of the Work, or that are to be incorporated into the Work, and that are controlled and contained pursuant to industry practices, Laws and Regulations, and the requirements of the Contract, is not a Hazardous Environmental Condition.

    b. The presence of Constituents of Concern that are to be removed or remediated as part of the Work is not a Hazardous Environmental Condition.

    c. The presence of Constituents of Concern as part of the routine, anticipated, and obvious working conditions at the Site, is not a Hazardous Environmental Condition.

25. *Laws and Regulations; Laws or Regulations*—Any and all applicable laws, statutes, rules, regulations, ordinances, codes, and binding decrees, resolutions, and orders of any and all governmental bodies, agencies, authorities, and courts having jurisdiction.

26. *Liens*—Charges, security interests, or encumbrances upon Contract-related funds, real property, or personal property.

27. *Milestone*—A principal event in the performance of the Work that the Contract requires Contractor to achieve by an intermediate completion date, or by a time prior to Substantial Completion of all the Work.

28. *Notice of Award*—The written notice by Owner to a Bidder of Owner's acceptance of the Bid.

29. *Notice to Proceed*—A written notice by Owner to Contractor fixing the date on which the Contract Times will commence to run and on which Contractor shall start to perform the Work.

30. *Owner*—The individual or entity with which Contractor has contracted regarding the Work, and which has agreed to pay Contractor for the performance of the Work, pursuant to the terms of the Contract.

31. *Progress Schedule*—A schedule, prepared and maintained by Contractor, describing the sequence and duration of the activities comprising Contractor's plan to accomplish the Work within the Contract Times.

32. *Project*—The total undertaking to be accomplished for Owner by engineers, contractors, and others, including planning, study, design, construction, testing, commissioning, and start-up, and of which the Work to be performed under the Contract Documents is a part.

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

33. *Resident Project Representative*—The authorized representative of Engineer assigned to assist Engineer at the Site. As used herein, the term Resident Project Representative (RPR) includes any assistants or field staff of Resident Project Representative.

34. *Samples*—Physical examples of materials, equipment, or workmanship that are representative of some portion of the Work and that establish the standards by which such portion of the Work will be judged.

35. *Schedule of Submittals*—A schedule, prepared and maintained by Contractor, of required submittals and the time requirements for Engineer's review of the submittals.

36. *Schedule of Values*—A schedule, prepared and maintained by Contractor, allocating portions of the Contract Price to various portions of the Work and used as the basis for reviewing Contractor's Applications for Payment.

37. *Shop Drawings*—All drawings, diagrams, illustrations, schedules, and other data or information that are specifically prepared or assembled by or for Contractor and submitted by Contractor to illustrate some portion of the Work. Shop Drawings, whether approved or not, are not Drawings and are not Contract Documents.

38. *Site*—Lands or areas indicated in the Contract Documents as being furnished by Owner upon which the Work is to be performed, including rights-of-way and easements, and such other lands or areas furnished by Owner which are designated for the use of Contractor.

39. *Specifications*—The part of the Contract that consists of written requirements for materials, equipment, systems, standards, and workmanship as applied to the Work, and certain administrative requirements and procedural matters applicable to the Work.

40. *Subcontractor*—An individual or entity having a direct contract with Contractor or with any other Subcontractor for the performance of a part of the Work.

41. *Submittal*—A written or graphic document, prepared by or for Contractor, which the Contract Documents require Contractor to submit to Engineer, or that is indicated as a Submittal in the Schedule of Submittals accepted by Engineer. Submittals may include Shop Drawings and Samples; schedules; product data; Owner-delegated designs; sustainable design information; information on special procedures; testing plans; results of tests and evaluations, source quality-control testing and inspections, and field or Site quality-control testing and inspections; warranties and certifications; Suppliers' instructions and reports; records of delivery of spare parts and tools; operations and maintenance data; Project photographic documentation; record documents; and other such documents required by the Contract Documents. Submittals, whether or not approved or accepted by Engineer, are not Contract Documents. Change Proposals, Change Orders, Claims, notices, Applications for Payment, and requests for interpretation or clarification are not Submittals.

42. *Substantial Completion*—The time at which the Work (or a specified part thereof) has progressed to the point where, in the opinion of Engineer, the Work (or a specified part thereof) is sufficiently complete, in accordance with the Contract Documents, so that the Work (or a specified part thereof) can be utilized for the purposes for which it is intended. The terms "substantially complete" and "substantially completed" as applied to all or part of the Work refer to Substantial Completion of such Work.

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

43. *Successful Bidder*—The Bidder to which the Owner makes an award of contract.

44. *Supplementary Conditions*—The part of the Contract that amends or supplements these General Conditions.

45. *Supplier*—A manufacturer, fabricator, supplier, distributor, or vendor having a direct contract with Contractor or with any Subcontractor to furnish materials or equipment to be incorporated in the Work by Contractor or a Subcontractor.

46. *Technical Data*

    a. Those items expressly identified as Technical Data in the Supplementary Conditions, with respect to either (1) existing subsurface conditions at or adjacent to the Site, or existing physical conditions at or adjacent to the Site including existing surface or subsurface structures (except Underground Facilities) or (2) Hazardous Environmental Conditions at the Site.

    b. If no such express identifications of Technical Data have been made with respect to conditions at the Site, then Technical Data is defined, with respect to conditions at the Site under Paragraphs 5.03, 5.04, and 5.06, as the data contained in boring logs, recorded measurements of subsurface water levels, assessments of the condition of subsurface facilities, laboratory test results, and other factual, objective information regarding conditions at the Site that are set forth in any geotechnical, environmental, or other Site or facilities conditions report prepared for the Project and made available to Contractor.

    c. Information and data regarding the presence or location of Underground Facilities are not intended to be categorized, identified, or defined as Technical Data, and instead Underground Facilities are shown or indicated on the Drawings.

47. *Underground Facilities*—All active or not-in-service underground lines, pipelines, conduits, ducts, encasements, cables, wires, manholes, vaults, tanks, tunnels, or other such facilities or systems at the Site, including but not limited to those facilities or systems that produce, transmit, distribute, or convey telephone or other communications, cable television, fiber optic transmissions, power, electricity, light, heat, gases, oil, crude oil products, liquid petroleum products, water, steam, waste, wastewater, storm water, other liquids or chemicals, or traffic or other control systems. An abandoned facility or system is not an Underground Facility.

48. *Unit Price Work*—Work to be paid for on the basis of unit prices.

49. *Work*—The entire construction or the various separately identifiable parts thereof required to be provided under the Contract Documents. Work includes and is the result of performing or providing all labor, services, and documentation necessary to produce such construction; furnishing, installing, and incorporating all materials and equipment into such construction; and may include related services such as testing, start-up, and commissioning, all as required by the Contract Documents.

50. *Work Change Directive*—A written directive to Contractor issued on or after the Effective Date of the Contract, signed by Owner and recommended by Engineer, ordering an addition, deletion, or revision in the Work.

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

1.02 *Terminology*

A. The words and terms discussed in Paragraphs 1.02.B, C, D, and E are not defined terms that require initial capital letters, but, when used in the Bidding Requirements or Contract Documents, have the indicated meaning.

B. *Intent of Certain Terms or Adjectives*: The Contract Documents include the terms "as allowed," "as approved," "as ordered," "as directed" or terms of like effect or import to authorize an exercise of professional judgment by Engineer. In addition, the adjectives "reasonable," "suitable," "acceptable," "proper," "satisfactory," or adjectives of like effect or import are used to describe an action or determination of Engineer as to the Work. It is intended that such exercise of professional judgment, action, or determination will be solely to evaluate, in general, the Work for compliance with the information in the Contract Documents and with the design concept of the Project as a functioning whole as shown or indicated in the Contract Documents (unless there is a specific statement indicating otherwise). The use of any such term or adjective is not intended to and shall not be effective to assign to Engineer any duty or authority to supervise or direct the performance of the Work, or any duty or authority to undertake responsibility contrary to the provisions of Article 10 or any other provision of the Contract Documents.

C. *Day*: The word "day" means a calendar day of 24 hours measured from midnight to the next midnight.

D. *Defective*: The word "defective," when modifying the word "Work," refers to Work that is unsatisfactory, faulty, or deficient in that it:

1. does not conform to the Contract Documents;

2. does not meet the requirements of any applicable inspection, reference standard, test, or approval referred to in the Contract Documents; or

3. has been damaged prior to Engineer's recommendation of final payment (unless responsibility for the protection thereof has been assumed by Owner at Substantial Completion in accordance with Paragraph 15.03 or Paragraph 15.04).

E. *Furnish, Install, Perform, Provide*

1. The word "furnish," when used in connection with services, materials, or equipment, means to supply and deliver said services, materials, or equipment to the Site (or some other specified location) ready for use or installation and in usable or operable condition.

2. The word "install," when used in connection with services, materials, or equipment, means to put into use or place in final position said services, materials, or equipment complete and ready for intended use.

3. The words "perform" or "provide," when used in connection with services, materials, or equipment, means to furnish and install said services, materials, or equipment complete and ready for intended use.

4. If the Contract Documents establish an obligation of Contractor with respect to specific services, materials, or equipment, but do not expressly use any of the four words "furnish," "install," "perform," or "provide," then Contractor shall furnish and install said services, materials, or equipment complete and ready for intended use.

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

F. *Contract Price or Contract Times*: References to a change in "Contract Price or Contract Times" or "Contract Times or Contract Price" or similar, indicate that such change applies to (1) Contract Price, (2) Contract Times, or (3) both Contract Price and Contract Times, as warranted, even if the term "or both" is not expressed.

G. Unless stated otherwise in the Contract Documents, words or phrases that have a well-known technical or construction industry or trade meaning are used in the Contract Documents in accordance with such recognized meaning.

ARTICLE 2—PRELIMINARY MATTERS

2.01 *Delivery of Performance and Payment Bonds; Evidence of Insurance*

A. *Performance and Payment Bonds*: When Contractor delivers the signed counterparts of the Agreement to Owner, Contractor shall also deliver to Owner the performance bond and payment bond (if the Contract requires Contractor to furnish such bonds).

B. *Evidence of Contractor's Insurance*: When Contractor delivers the signed counterparts of the Agreement to Owner, Contractor shall also deliver to Owner, with copies to each additional insured (as identified in the Contract), the certificates, endorsements, and other evidence of insurance required to be provided by Contractor in accordance with Article 6, except to the extent the Supplementary Conditions expressly establish other dates for delivery of specific insurance policies.

C. *Evidence of Owner's Insurance*: After receipt of the signed counterparts of the Agreement and all required bonds and insurance documentation, Owner shall promptly deliver to Contractor, with copies to each additional insured (as identified in the Contract), the certificates and other evidence of insurance required to be provided by Owner under Article 6.

2.02 *Copies of Documents*

A. Owner shall furnish to Contractor four printed copies of the Contract (including one fully signed counterpart of the Agreement), and one copy in electronic portable document format (PDF). Additional printed copies will be furnished upon request at the cost of reproduction.

B. Owner shall maintain and safeguard at least one original printed record version of the Contract, including Drawings and Specifications signed and sealed by Engineer and other design professionals. Owner shall make such original printed record version of the Contract available to Contractor for review. Owner may delegate the responsibilities under this provision to Engineer.

2.03 *Before Starting Construction*

A. *Preliminary Schedules*: Within 10 days after the Effective Date of the Contract (or as otherwise required by the Contract Documents), Contractor shall submit to Engineer for timely review:

1. a preliminary Progress Schedule indicating the times (numbers of days or dates) for starting and completing the various stages of the Work, including any Milestones specified in the Contract;

2. a preliminary Schedule of Submittals; and

3. a preliminary Schedule of Values for all of the Work which includes quantities and prices of items which when added together equal the Contract Price and subdivides the Work

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

into component parts in sufficient detail to serve as the basis for progress payments during performance of the Work. Such prices will include an appropriate amount of overhead and profit applicable to each item of Work.

2.04 *Preconstruction Conference; Designation of Authorized Representatives*

A. Before any Work at the Site is started, a conference attended by Owner, Contractor, Engineer, and others as appropriate will be held to establish a working understanding among the parties as to the Work, and to discuss the schedules referred to in Paragraph 2.03.A, procedures for handling Shop Drawings, Samples, and other Submittals, processing Applications for Payment, electronic or digital transmittals, and maintaining required records.

B. At this conference Owner and Contractor each shall designate, in writing, a specific individual to act as its authorized representative with respect to the services and responsibilities under the Contract. Such individuals shall have the authority to transmit and receive information, render decisions relative to the Contract, and otherwise act on behalf of each respective party.

2.05 *Acceptance of Schedules*

A. At least 10 days before submission of the first Application for Payment a conference, attended by Contractor, Engineer, and others as appropriate, will be held to review the schedules submitted in accordance with Paragraph 2.03.A. No progress payment will be made to Contractor until acceptable schedules are submitted to Engineer.

1. The Progress Schedule will be acceptable to Engineer if it provides an orderly progression of the Work to completion within the Contract Times. Such acceptance will not impose on Engineer responsibility for the Progress Schedule, for sequencing, scheduling, or progress of the Work, nor interfere with or relieve Contractor from Contractor's full responsibility therefor.

2. Contractor's Schedule of Submittals will be acceptable to Engineer if it provides a workable arrangement for reviewing and processing the required submittals.

3. Contractor's Schedule of Values will be acceptable to Engineer as to form and substance if it provides a reasonable allocation of the Contract Price to the component parts of the Work.

4. If a schedule is not acceptable, Contractor will have an additional 10 days to revise and resubmit the schedule.

2.06 *Electronic Transmittals*

A. Except as otherwise stated elsewhere in the Contract, the Owner, Engineer, and Contractor may send, and shall accept, Electronic Documents transmitted by Electronic Means.

B. If the Contract does not establish protocols for Electronic Means, then Owner, Engineer, and Contractor shall jointly develop such protocols.

C. Subject to any governing protocols for Electronic Means, when transmitting Electronic Documents by Electronic Means, the transmitting party makes no representations as to long-term compatibility, usability, or readability of the Electronic Documents resulting from the recipient's use of software application packages, operating systems, or computer hardware differing from those used in the drafting or transmittal of the Electronic Documents.

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

ARTICLE 3—CONTRACT DOCUMENTS: INTENT, REQUIREMENTS, REUSE

3.01 *Intent*

A. The Contract Documents are complementary; what is required by one Contract Document is as binding as if required by all.

B. It is the intent of the Contract Documents to describe a functionally complete Project (or part thereof) to be constructed in accordance with the Contract Documents.

C. Unless otherwise stated in the Contract Documents, if there is a discrepancy between the electronic versions of the Contract Documents (including any printed copies derived from such electronic versions) and the printed record version, the printed record version will govern.

D. The Contract supersedes prior negotiations, representations, and agreements, whether written or oral.

E. Engineer will issue clarifications and interpretations of the Contract Documents as provided herein.

F. Any provision or part of the Contract Documents held to be void or unenforceable under any Law or Regulation will be deemed stricken, and all remaining provisions will continue to be valid and binding upon Owner and Contractor, which agree that the Contract Documents will be reformed to replace such stricken provision or part thereof with a valid and enforceable provision that comes as close as possible to expressing the intention of the stricken provision.

G. Nothing in the Contract Documents creates:

1. any contractual relationship between Owner or Engineer and any Subcontractor, Supplier, or other individual or entity performing or furnishing any of the Work, for the benefit of such Subcontractor, Supplier, or other individual or entity; or

2. any obligation on the part of Owner or Engineer to pay or to see to the payment of any money due any such Subcontractor, Supplier, or other individual or entity, except as may otherwise be required by Laws and Regulations.

3.02 *Reference Standards*

A. *Standards Specifications, Codes, Laws and Regulations*

1. Reference in the Contract Documents to standard specifications, manuals, reference standards, or codes of any technical society, organization, or association, or to Laws or Regulations, whether such reference be specific or by implication, means the standard specification, manual, reference standard, code, or Laws or Regulations in effect at the time of opening of Bids (or on the Effective Date of the Contract if there were no Bids), except as may be otherwise specifically stated in the Contract Documents.

2. No provision of any such standard specification, manual, reference standard, or code, and no instruction of a Supplier, will be effective to change the duties or responsibilities of Owner, Contractor, or Engineer from those set forth in the part of the Contract Documents prepared by or for Engineer. No such provision or instruction shall be effective to assign to Owner or Engineer any duty or authority to supervise or direct the performance of the Work, or any duty or authority to undertake responsibility

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

inconsistent with the provisions of the part of the Contract Documents prepared by or for Engineer.

3.03 *Reporting and Resolving Discrepancies*

A. *Reporting Discrepancies*

1. *Contractor's Verification of Figures and Field Measurements*: Before undertaking each part of the Work, Contractor shall carefully study the Contract Documents, and check and verify pertinent figures and dimensions therein, particularly with respect to applicable field measurements. Contractor shall promptly report in writing to Engineer any conflict, error, ambiguity, or discrepancy that Contractor discovers, or has actual knowledge of, and shall not proceed with any Work affected thereby until the conflict, error, ambiguity, or discrepancy is resolved by a clarification or interpretation by Engineer, or by an amendment or supplement to the Contract issued pursuant to Paragraph 11.01.

2. *Contractor's Review of Contract Documents*: If, before or during the performance of the Work, Contractor discovers any conflict, error, ambiguity, or discrepancy within the Contract Documents, or between the Contract Documents and (a) any applicable Law or Regulation, (b) actual field conditions, (c) any standard specification, manual, reference standard, or code, or (d) any instruction of any Supplier, then Contractor shall promptly report it to Engineer in writing. Contractor shall not proceed with the Work affected thereby (except in an emergency as required by Paragraph 7.15) until the conflict, error, ambiguity, or discrepancy is resolved, by a clarification or interpretation by Engineer, or by an amendment or supplement to the Contract issued pursuant to Paragraph 11.01.

3. Contractor shall not be liable to Owner or Engineer for failure to report any conflict, error, ambiguity, or discrepancy in the Contract Documents unless Contractor had actual knowledge thereof.

B. *Resolving Discrepancies*

1. Except as may be otherwise specifically stated in the Contract Documents, the provisions of the part of the Contract Documents prepared by or for Engineer take precedence in resolving any conflict, error, ambiguity, or discrepancy between such provisions of the Contract Documents and:

a. the provisions of any standard specification, manual, reference standard, or code, or the instruction of any Supplier (whether or not specifically incorporated by reference as a Contract Document); or

b. the provisions of any Laws or Regulations applicable to the performance of the Work (unless such an interpretation of the provisions of the Contract Documents would result in violation of such Law or Regulation).

3.04 *Requirements of the Contract Documents*

A. During the performance of the Work and until final payment, Contractor and Owner shall submit to the Engineer in writing all matters in question concerning the requirements of the Contract Documents (sometimes referred to as requests for information or interpretation—RFIs), or relating to the acceptability of the Work under the Contract Documents, as soon as possible after such matters arise. Engineer will be the initial interpreter of the requirements of the Contract Documents, and judge of the acceptability of the Work.

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

B. Engineer will, with reasonable promptness, render a written clarification, interpretation, or decision on the issue submitted, or initiate an amendment or supplement to the Contract Documents. Engineer's written clarification, interpretation, or decision will be final and binding on Contractor, unless it appeals by submitting a Change Proposal, and on Owner, unless it appeals by filing a Claim.

C. If a submitted matter in question concerns terms and conditions of the Contract Documents that do not involve (1) the performance or acceptability of the Work under the Contract Documents, (2) the design (as set forth in the Drawings, Specifications, or otherwise), or (3) other engineering or technical matters, then Engineer will promptly notify Owner and Contractor in writing that Engineer is unable to provide a decision or interpretation. If Owner and Contractor are unable to agree on resolution of such a matter in question, either party may pursue resolution as provided in Article 12.

3.05 *Reuse of Documents*

A. Contractor and its Subcontractors and Suppliers shall not:

1. have or acquire any title to or ownership rights in any of the Drawings, Specifications, or other documents (or copies of any thereof) prepared by or bearing the seal of Engineer or its consultants, including electronic media versions, or reuse any such Drawings, Specifications, other documents, or copies thereof on extensions of the Project or any other project without written consent of Owner and Engineer and specific written verification or adaptation by Engineer; or

2. have or acquire any title or ownership rights in any other Contract Documents, reuse any such Contract Documents for any purpose without Owner's express written consent, or violate any copyrights pertaining to such Contract Documents.

B. The prohibitions of this Paragraph 3.05 will survive final payment, or termination of the Contract. Nothing herein precludes Contractor from retaining copies of the Contract Documents for record purposes.

ARTICLE 4—COMMENCEMENT AND PROGRESS OF THE WORK

4.01 *Commencement of Contract Times; Notice to Proceed*

A. The Contract Times will commence to run on the 30th day after the Effective Date of the Contract or, if a Notice to Proceed is given, on the day indicated in the Notice to Proceed. A Notice to Proceed may be given at any time within 30 days after the Effective Date of the Contract. In no event will the Contract Times commence to run later than the 60th day after the day of Bid opening or the 30th day after the Effective Date of the Contract, whichever date is earlier.

4.02 *Starting the Work*

A. Contractor shall start to perform the Work on the date when the Contract Times commence to run. No Work may be done at the Site prior to such date.

4.03 *Reference Points*

A. Owner shall provide engineering surveys to establish reference points for construction which in Engineer's judgment are necessary to enable Contractor to proceed with the Work. Contractor shall be responsible for laying out the Work, shall protect and preserve the

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

established reference points and property monuments, and shall make no changes or relocations without the prior written approval of Owner. Contractor shall report to Engineer whenever any reference point or property monument is lost or destroyed or requires relocation because of necessary changes in grades or locations, and shall be responsible for the accurate replacement or relocation of such reference points or property monuments by professionally qualified personnel.

4.04 *Progress Schedule*

A. Contractor shall adhere to the Progress Schedule established in accordance with Paragraph 2.05 as it may be adjusted from time to time as provided below.

1. Contractor shall submit to Engineer for acceptance (to the extent indicated in Paragraph 2.05) proposed adjustments in the Progress Schedule that will not result in changing the Contract Times.

2. Proposed adjustments in the Progress Schedule that will change the Contract Times must be submitted in accordance with the requirements of Article 11.

B. Contractor shall carry on the Work and adhere to the Progress Schedule during all disputes or disagreements with Owner. No Work will be delayed or postponed pending resolution of any disputes or disagreements, or during any appeal process, except as permitted by Paragraph 16.04, or as Owner and Contractor may otherwise agree in writing.

4.05 *Delays in Contractor's Progress*

A. If Owner, Engineer, or anyone for whom Owner is responsible, delays, disrupts, or interferes with the performance or progress of the Work, then Contractor shall be entitled to an equitable adjustment in Contract Price or Contract Times.

B. Contractor shall not be entitled to an adjustment in Contract Price or Contract Times for delay, disruption, or interference caused by or within the control of Contractor. Delay, disruption, and interference attributable to and within the control of a Subcontractor or Supplier shall be deemed to be within the control of Contractor.

C. If Contractor's performance or progress is delayed, disrupted, or interfered with by unanticipated causes not the fault of and beyond the control of Owner, Contractor, and those for which they are responsible, then Contractor shall be entitled to an equitable adjustment in Contract Times. Such an adjustment will be Contractor's sole and exclusive remedy for the delays, disruption, and interference described in this paragraph. Causes of delay, disruption, or interference that may give rise to an adjustment in Contract Times under this paragraph include but are not limited to the following:

1. Severe and unavoidable natural catastrophes such as fires, floods, epidemics, and earthquakes;

2. Abnormal weather conditions;

3. Acts or failures to act of third-party utility owners or other third-party entities (other than those third-party utility owners or other third-party entities performing other work at or adjacent to the Site as arranged by or under contract with Owner, as contemplated in Article 8); and

4. Acts of war or terrorism.

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

D. Contractor's entitlement to an adjustment of Contract Times or Contract Price is limited as follows:

1. Contractor's entitlement to an adjustment of the Contract Times is conditioned on the delay, disruption, or interference adversely affecting an activity on the critical path to completion of the Work, as of the time of the delay, disruption, or interference.

2. Contractor shall not be entitled to an adjustment in Contract Price for any delay, disruption, or interference if such delay is concurrent with a delay, disruption, or interference caused by or within the control of Contractor. Such a concurrent delay by Contractor shall not preclude an adjustment of Contract Times to which Contractor is otherwise entitled.

3. Adjustments of Contract Times or Contract Price are subject to the provisions of Article 11.

E. Each Contractor request or Change Proposal seeking an increase in Contract Times or Contract Price must be supplemented by supporting data that sets forth in detail the following:

1. The circumstances that form the basis for the requested adjustment;

2. The date upon which each cause of delay, disruption, or interference began to affect the progress of the Work;

3. The date upon which each cause of delay, disruption, or interference ceased to affect the progress of the Work;

4. The number of days' increase in Contract Times claimed as a consequence of each such cause of delay, disruption, or interference; and

5. The impact on Contract Price, in accordance with the provisions of Paragraph 11.07.

Contractor shall also furnish such additional supporting documentation as Owner or Engineer may require including, where appropriate, a revised progress schedule indicating all the activities affected by the delay, disruption, or interference, and an explanation of the effect of the delay, disruption, or interference on the critical path to completion of the Work.

F. Delays, disruption, and interference to the performance or progress of the Work resulting from the existence of a differing subsurface or physical condition, an Underground Facility that was not shown or indicated by the Contract Documents, or not shown or indicated with reasonable accuracy, and those resulting from Hazardous Environmental Conditions, are governed by Article 5, together with the provisions of Paragraphs 4.05.D and 4.05.E.

G. Paragraph 8.03 addresses delays, disruption, and interference to the performance or progress of the Work resulting from the performance of certain other work at or adjacent to the Site.

ARTICLE 5—SITE; SUBSURFACE AND PHYSICAL CONDITIONS; HAZARDOUS ENVIRONMENTAL CONDITIONS

5.01 *Availability of Lands*

A. Owner shall furnish the Site. Owner shall notify Contractor in writing of any encumbrances or restrictions not of general application but specifically related to use of the Site with which Contractor must comply in performing the Work.

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

B. Upon reasonable written request, Owner shall furnish Contractor with a current statement of record legal title and legal description of the lands upon which permanent improvements are to be made and Owner's interest therein as necessary for giving notice of or filing a mechanic's or construction lien against such lands in accordance with applicable Laws and Regulations.

C. Contractor shall provide for all additional lands and access thereto that may be required for temporary construction facilities or storage of materials and equipment.

5.02 *Use of Site and Other Areas*

A. *Limitation on Use of Site and Other Areas*

1. Contractor shall confine construction equipment, temporary construction facilities, the storage of materials and equipment, and the operations of workers to the Site, adjacent areas that Contractor has arranged to use through construction easements or otherwise, and other adjacent areas permitted by Laws and Regulations, and shall not unreasonably encumber the Site and such other adjacent areas with construction equipment or other materials or equipment. Contractor shall assume full responsibility for (a) damage to the Site; (b) damage to any such other adjacent areas used for Contractor's operations; (c) damage to any other adjacent land or areas, or to improvements, structures, utilities, or similar facilities located at such adjacent lands or areas; and (d) for injuries and losses sustained by the owners or occupants of any such land or areas; provided that such damage or injuries result from the performance of the Work or from other actions or conduct of the Contractor or those for which Contractor is responsible.

2. If a damage or injury claim is made by the owner or occupant of any such land or area because of the performance of the Work, or because of other actions or conduct of the Contractor or those for which Contractor is responsible, Contractor shall (a) take immediate corrective or remedial action as required by Paragraph 7.13, or otherwise; (b) promptly attempt to settle the claim as to all parties through negotiations with such owner or occupant, or otherwise resolve the claim by arbitration or other dispute resolution proceeding, or in a court of competent jurisdiction; and (c) to the fullest extent permitted by Laws and Regulations, indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them, from and against any such claim, and against all costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to any claim or action, legal or equitable, brought by any such owner or occupant against Owner, Engineer, or any other party indemnified hereunder to the extent caused directly or indirectly, in whole or in part by, or based upon, Contractor's performance of the Work, or because of other actions or conduct of the Contractor or those for which Contractor is responsible.

B. *Removal of Debris During Performance of the Work*: During the progress of the Work the Contractor shall keep the Site and other adjacent areas free from accumulations of waste materials, rubbish, and other debris. Removal and disposal of such waste materials, rubbish, and other debris will conform to applicable Laws and Regulations.

C. *Cleaning*: Prior to Substantial Completion of the Work Contractor shall clean the Site and the Work and make it ready for utilization by Owner. At the completion of the Work Contractor shall remove from the Site and adjacent areas all tools, appliances, construction equipment

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

and machinery, and surplus materials and shall restore to original condition all property not designated for alteration by the Contract Documents.

D. *Loading of Structures*: Contractor shall not load nor permit any part of any structure to be loaded in any manner that will endanger the structure, nor shall Contractor subject any part of the Work or adjacent structures or land to stresses or pressures that will endanger them.

5.03 *Subsurface and Physical Conditions*

A. *Reports and Drawings*: The Supplementary Conditions identify:

1. Those reports of explorations and tests of subsurface conditions at or adjacent to the Site that contain Technical Data;

2. Those drawings of existing physical conditions at or adjacent to the Site, including those drawings depicting existing surface or subsurface structures at or adjacent to the Site (except Underground Facilities), that contain Technical Data; and

3. Technical Data contained in such reports and drawings.

B. *Underground Facilities*: Underground Facilities are shown or indicated on the Drawings, pursuant to Paragraph 5.05, and not in the drawings referred to in Paragraph 5.03.A. Information and data regarding the presence or location of Underground Facilities are not intended to be categorized, identified, or defined as Technical Data.

C. *Reliance by Contractor on Technical Data*: Contractor may rely upon the accuracy of the Technical Data expressly identified in the Supplementary Conditions with respect to such reports and drawings, but such reports and drawings are not Contract Documents. If no such express identification has been made, then Contractor may rely upon the accuracy of the Technical Data as defined in Paragraph 1.01.A.46.b.

D. *Limitations of Other Data and Documents*: Except for such reliance on Technical Data, Contractor may not rely upon or make any claim against Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, with respect to:

1. the completeness of such reports and drawings for Contractor's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences, and procedures of construction to be employed by Contractor, and safety precautions and programs incident thereto;

2. other data, interpretations, opinions, and information contained in such reports or shown or indicated in such drawings;

3. the contents of other Site-related documents made available to Contractor, such as record drawings from other projects at or adjacent to the Site, or Owner's archival documents concerning the Site; or

4. any Contractor interpretation of or conclusion drawn from any Technical Data or any such other data, interpretations, opinions, or information.

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

5.04 *Differing Subsurface or Physical Conditions*

A. *Notice by Contractor*: If Contractor believes that any subsurface or physical condition that is uncovered or revealed at the Site:

1. is of such a nature as to establish that any Technical Data on which Contractor is entitled to rely as provided in Paragraph 5.03 is materially inaccurate;

2. is of such a nature as to require a change in the Drawings or Specifications;

3. differs materially from that shown or indicated in the Contract Documents; or

4. is of an unusual nature, and differs materially from conditions ordinarily encountered and generally recognized as inherent in work of the character provided for in the Contract Documents;

then Contractor shall, promptly after becoming aware thereof and before further disturbing the subsurface or physical conditions or performing any Work in connection therewith (except in an emergency as required by Paragraph 7.15), notify Owner and Engineer in writing about such condition. Contractor shall not further disturb such condition or perform any Work in connection therewith (except with respect to an emergency) until receipt of a written statement permitting Contractor to do so.

B. *Engineer's Review*: After receipt of written notice as required by the preceding paragraph, Engineer will promptly review the subsurface or physical condition in question; determine whether it is necessary for Owner to obtain additional exploration or tests with respect to the condition; conclude whether the condition falls within any one or more of the differing site condition categories in Paragraph 5.04.A; obtain any pertinent cost or schedule information from Contractor; prepare recommendations to Owner regarding the Contractor's resumption of Work in connection with the subsurface or physical condition in question and the need for any change in the Drawings or Specifications; and advise Owner in writing of Engineer's findings, conclusions, and recommendations.

C. *Owner's Statement to Contractor Regarding Site Condition*: After receipt of Engineer's written findings, conclusions, and recommendations, Owner shall issue a written statement to Contractor (with a copy to Engineer) regarding the subsurface or physical condition in question, addressing the resumption of Work in connection with such condition, indicating whether any change in the Drawings or Specifications will be made, and adopting or rejecting Engineer's written findings, conclusions, and recommendations, in whole or in part.

D. *Early Resumption of Work*: If at any time Engineer determines that Work in connection with the subsurface or physical condition in question may resume prior to completion of Engineer's review or Owner's issuance of its statement to Contractor, because the condition in question has been adequately documented, and analyzed on a preliminary basis, then the Engineer may at its discretion instruct Contractor to resume such Work.

E. *Possible Price and Times Adjustments*

1. Contractor shall be entitled to an equitable adjustment in Contract Price or Contract Times, to the extent that the existence of a differing subsurface or physical condition, or any related delay, disruption, or interference, causes an increase or decrease in

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

Contractor's cost of, or time required for, performance of the Work; subject, however, to the following:

a. Such condition must fall within any one or more of the categories described in Paragraph 5.04.A;

b. With respect to Work that is paid for on a unit price basis, any adjustment in Contract Price will be subject to the provisions of Paragraph 13.03; and,

c. Contractor's entitlement to an adjustment of the Contract Times is subject to the provisions of Paragraphs 4.05.D and 4.05.E.

2. Contractor shall not be entitled to any adjustment in the Contract Price or Contract Times with respect to a subsurface or physical condition if:

a. Contractor knew of the existence of such condition at the time Contractor made a commitment to Owner with respect to Contract Price and Contract Times by the submission of a Bid or becoming bound under a negotiated contract, or otherwise;

b. The existence of such condition reasonably could have been discovered or revealed as a result of any examination, investigation, exploration, test, or study of the Site and contiguous areas expressly required by the Bidding Requirements or Contract Documents to be conducted by or for Contractor prior to Contractor's making such commitment; or

c. Contractor failed to give the written notice required by Paragraph 5.04.A.

3. If Owner and Contractor agree regarding Contractor's entitlement to and the amount or extent of any adjustment in the Contract Price or Contract Times, then any such adjustment will be set forth in a Change Order.

4. Contractor may submit a Change Proposal regarding its entitlement to or the amount or extent of any adjustment in the Contract Price or Contract Times, no later than 30 days after Owner's issuance of the Owner's written statement to Contractor regarding the subsurface or physical condition in question.

F. *Underground Facilities; Hazardous Environmental Conditions*: Paragraph 5.05 governs rights and responsibilities regarding the presence or location of Underground Facilities. Paragraph 5.06 governs rights and responsibilities regarding Hazardous Environmental Conditions. The provisions of Paragraphs 5.03 and 5.04 are not applicable to the presence or location of Underground Facilities, or to Hazardous Environmental Conditions.

5.05 *Underground Facilities*

A. *Contractor's Responsibilities*: Unless it is otherwise expressly provided in the Supplementary Conditions, the cost of all of the following are included in the Contract Price, and Contractor shall have full responsibility for:

1. reviewing and checking all information and data regarding existing Underground Facilities at the Site;

2. complying with applicable state and local utility damage prevention Laws and Regulations;

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

3. verifying the actual location of those Underground Facilities shown or indicated in the Contract Documents as being within the area affected by the Work, by exposing such Underground Facilities during the course of construction;

4. coordination of the Work with the owners (including Owner) of such Underground Facilities, during construction; and

5. the safety and protection of all existing Underground Facilities at the Site, and repairing any damage thereto resulting from the Work.

B. *Notice by Contractor*: If Contractor believes that an Underground Facility that is uncovered or revealed at the Site was not shown or indicated on the Drawings, or was not shown or indicated on the Drawings with reasonable accuracy, then Contractor shall, promptly after becoming aware thereof and before further disturbing conditions affected thereby or performing any Work in connection therewith (except in an emergency as required by Paragraph 7.15), notify Owner and Engineer in writing regarding such Underground Facility.

C. *Engineer's Review*: Engineer will:

1. promptly review the Underground Facility and conclude whether such Underground Facility was not shown or indicated on the Drawings, or was not shown or indicated with reasonable accuracy;

2. identify and communicate with the owner of the Underground Facility; prepare recommendations to Owner (and if necessary issue any preliminary instructions to Contractor) regarding the Contractor's resumption of Work in connection with the Underground Facility in question;

3. obtain any pertinent cost or schedule information from Contractor; determine the extent, if any, to which a change is required in the Drawings or Specifications to reflect and document the consequences of the existence or location of the Underground Facility; and

4. advise Owner in writing of Engineer's findings, conclusions, and recommendations.

During such time, Contractor shall be responsible for the safety and protection of such Underground Facility.

D. *Owner's Statement to Contractor Regarding Underground Facility*: After receipt of Engineer's written findings, conclusions, and recommendations, Owner shall issue a written statement to Contractor (with a copy to Engineer) regarding the Underground Facility in question addressing the resumption of Work in connection with such Underground Facility, indicating whether any change in the Drawings or Specifications will be made, and adopting or rejecting Engineer's written findings, conclusions, and recommendations in whole or in part.

E. *Early Resumption of Work*: If at any time Engineer determines that Work in connection with the Underground Facility may resume prior to completion of Engineer's review or Owner's issuance of its statement to Contractor, because the Underground Facility in question and conditions affected by its presence have been adequately documented, and analyzed on a preliminary basis, then the Engineer may at its discretion instruct Contractor to resume such Work.

F. *Possible Price and Times Adjustments*

1. Contractor shall be entitled to an equitable adjustment in the Contract Price or Contract Times, to the extent that any existing Underground Facility at the Site that was not shown

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

or indicated on the Drawings, or was not shown or indicated with reasonable accuracy, or any related delay, disruption, or interference, causes an increase or decrease in Contractor's cost of, or time required for, performance of the Work; subject, however, to the following:

a. With respect to Work that is paid for on a unit price basis, any adjustment in Contract Price will be subject to the provisions of Paragraph 13.03;

b. Contractor's entitlement to an adjustment of the Contract Times is subject to the provisions of Paragraphs 4.05.D and 4.05.E; and

c. Contractor gave the notice required in Paragraph 5.05.B.

2. If Owner and Contractor agree regarding Contractor's entitlement to and the amount or extent of any adjustment in the Contract Price or Contract Times, then any such adjustment will be set forth in a Change Order.

3. Contractor may submit a Change Proposal regarding its entitlement to or the amount or extent of any adjustment in the Contract Price or Contract Times, no later than 30 days after Owner's issuance of the Owner's written statement to Contractor regarding the Underground Facility in question.

4. The information and data shown or indicated on the Drawings with respect to existing Underground Facilities at the Site is based on information and data (a) furnished by the owners of such Underground Facilities, or by others, (b) obtained from available records, or (c) gathered in an investigation conducted in accordance with the current edition of ASCE 38, Standard Guideline for the Collection and Depiction of Existing Subsurface Utility Data, by the American Society of Civil Engineers. If such information or data is incorrect or incomplete, Contractor's remedies are limited to those set forth in this Paragraph 5.05.F.

5.06 *Hazardous Environmental Conditions at Site*

A. *Reports and Drawings*: The Supplementary Conditions identify:

1. those reports known to Owner relating to Hazardous Environmental Conditions that have been identified at or adjacent to the Site;

2. drawings known to Owner relating to Hazardous Environmental Conditions that have been identified at or adjacent to the Site; and

3. Technical Data contained in such reports and drawings.

B. *Reliance by Contractor on Technical Data Authorized*: Contractor may rely upon the accuracy of the Technical Data expressly identified in the Supplementary Conditions with respect to such reports and drawings, but such reports and drawings are not Contract Documents. If no such express identification has been made, then Contractor may rely on the accuracy of the Technical Data as defined in Paragraph 1.01.A.46.b. Except for such reliance on Technical Data, Contractor may not rely upon or make any claim against Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, with respect to:

1. the completeness of such reports and drawings for Contractor's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences and procedures

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

of construction to be employed by Contractor, and safety precautions and programs incident thereto;

2. other data, interpretations, opinions, and information contained in such reports or shown or indicated in such drawings; or

3. any Contractor interpretation of or conclusion drawn from any Technical Data or any such other data, interpretations, opinions or information.

C. Contractor shall not be responsible for removing or remediating any Hazardous Environmental Condition encountered, uncovered, or revealed at the Site unless such removal or remediation is expressly identified in the Contract Documents to be within the scope of the Work.

D. Contractor shall be responsible for controlling, containing, and duly removing all Constituents of Concern brought to the Site by Contractor, Subcontractors, Suppliers, or anyone else for whom Contractor is responsible, and for any associated costs; and for the costs of removing and remediating any Hazardous Environmental Condition created by the presence of any such Constituents of Concern.

E. If Contractor encounters, uncovers, or reveals a Hazardous Environmental Condition whose removal or remediation is not expressly identified in the Contract Documents as being within the scope of the Work, or if Contractor or anyone for whom Contractor is responsible creates a Hazardous Environmental Condition, then Contractor shall immediately: (1) secure or otherwise isolate such condition; (2) stop all Work in connection with such condition and in any area affected thereby (except in an emergency as required by Paragraph 7.15); and (3) notify Owner and Engineer (and promptly thereafter confirm such notice in writing). Owner shall promptly consult with Engineer concerning the necessity for Owner to retain a qualified expert to evaluate such condition or take corrective action, if any. Promptly after consulting with Engineer, Owner shall take such actions as are necessary to permit Owner to timely obtain required permits and provide Contractor the written notice required by Paragraph 5.06.F. If Contractor or anyone for whom Contractor is responsible created the Hazardous Environmental Condition in question, then Owner may remove and remediate the Hazardous Environmental Condition, and impose a set-off against payments to account for the associated costs.

F. Contractor shall not resume Work in connection with such Hazardous Environmental Condition or in any affected area until after Owner has obtained any required permits related thereto, and delivered written notice to Contractor either (1) specifying that such condition and any affected area is or has been rendered safe for the resumption of Work, or (2) specifying any special conditions under which such Work may be resumed safely.

G. If Owner and Contractor cannot agree as to entitlement to or on the amount or extent, if any, of any adjustment in Contract Price or Contract Times, as a result of such Work stoppage, such special conditions under which Work is agreed to be resumed by Contractor, or any costs or expenses incurred in response to the Hazardous Environmental Condition, then within 30 days of Owner's written notice regarding the resumption of Work, Contractor may submit a Change Proposal, or Owner may impose a set-off. Entitlement to any such adjustment is subject to the provisions of Paragraphs 4.05.D, 4.05.E, 11.07, and 11.08.

H. If, after receipt of such written notice, Contractor does not agree to resume such Work based on a reasonable belief it is unsafe, or does not agree to resume such Work under such special

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

conditions, then Owner may order the portion of the Work that is in the area affected by such condition to be deleted from the Work, following the contractual change procedures in Article 11. Owner may have such deleted portion of the Work performed by Owner's own forces or others in accordance with Article 8.

I. To the fullest extent permitted by Laws and Regulations, Owner shall indemnify and hold harmless Contractor, Subcontractors, and Engineer, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals, and all court, arbitration, or other dispute resolution costs) arising out of or relating to a Hazardous Environmental Condition, provided that such Hazardous Environmental Condition (1) was not shown or indicated in the Drawings, Specifications, or other Contract Documents, identified as Technical Data entitled to limited reliance pursuant to Paragraph 5.06.B, or identified in the Contract Documents to be included within the scope of the Work, and (2) was not created by Contractor or by anyone for whom Contractor is responsible. Nothing in this Paragraph 5.06.I obligates Owner to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.

J. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to the failure to control, contain, or remove a Constituent of Concern brought to the Site by Contractor or by anyone for whom Contractor is responsible, or to a Hazardous Environmental Condition created by Contractor or by anyone for whom Contractor is responsible. Nothing in this Paragraph 5.06.J obligates Contractor to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.

K. The provisions of Paragraphs 5.03, 5.04, and 5.05 do not apply to the presence of Constituents of Concern or to a Hazardous Environmental Condition uncovered or revealed at the Site.

ARTICLE 6—BONDS AND INSURANCE

6.01 *Performance, Payment, and Other Bonds*

A. Contractor shall furnish a performance bond and a payment bond, each in an amount at least equal to the Contract Price, as security for the faithful performance and payment of Contractor's obligations under the Contract. These bonds must remain in effect until one year after the date when final payment becomes due or until completion of the correction period specified in Paragraph 15.08, whichever is later, except as provided otherwise by Laws or Regulations, the terms of a prescribed bond form, the Supplementary Conditions, or other provisions of the Contract.

B. Contractor shall also furnish such other bonds (if any) as are required by the Supplementary Conditions or other provisions of the Contract.

C. All bonds must be in the form included in the Bidding Documents or otherwise specified by Owner prior to execution of the Contract, except as provided otherwise by Laws or

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

Regulations, and must be issued and signed by a surety named in "Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies" as published in Department Circular 570 (as amended and supplemented) by the Bureau of the Fiscal Service, U.S. Department of the Treasury. A bond signed by an agent or attorney-in-fact must be accompanied by a certified copy of that individual's authority to bind the surety. The evidence of authority must show that it is effective on the date the agent or attorney-in-fact signed the accompanying bond.

D. Contractor shall obtain the required bonds from surety companies that are duly licensed or authorized, in the state or jurisdiction in which the Project is located, to issue bonds in the required amounts.

E. If the surety on a bond furnished by Contractor is declared bankrupt or becomes insolvent, or the surety ceases to meet the requirements above, then Contractor shall promptly notify Owner and Engineer in writing and shall, within 20 days after the event giving rise to such notification, provide another bond and surety, both of which must comply with the bond and surety requirements above.

F. If Contractor has failed to obtain a required bond, Owner may exclude the Contractor from the Site and exercise Owner's termination rights under Article 16.

G. Upon request to Owner from any Subcontractor, Supplier, or other person or entity claiming to have furnished labor, services, materials, or equipment used in the performance of the Work, Owner shall provide a copy of the payment bond to such person or entity.

H. Upon request to Contractor from any Subcontractor, Supplier, or other person or entity claiming to have furnished labor, services, materials, or equipment used in the performance of the Work, Contractor shall provide a copy of the payment bond to such person or entity.

6.02 *Insurance—General Provisions*

A. Owner and Contractor shall obtain and maintain insurance as required in this article and in the Supplementary Conditions.

B. All insurance required by the Contract to be purchased and maintained by Owner or Contractor shall be obtained from insurance companies that are duly licensed or authorized in the state or jurisdiction in which the Project is located to issue insurance policies for the required limits and coverages. Unless a different standard is indicated in the Supplementary Conditions, all companies that provide insurance policies required under this Contract shall have an A.M. Best rating of A-VII or better.

C. Alternative forms of insurance coverage, including but not limited to self-insurance and "Occupational Accident and Excess Employer's Indemnity Policies," are not sufficient to meet the insurance requirements of this Contract, unless expressly allowed in the Supplementary Conditions.

D. Contractor shall deliver to Owner, with copies to each additional insured identified in the Contract, certificates of insurance and endorsements establishing that Contractor has obtained and is maintaining the policies and coverages required by the Contract. Upon request by Owner or any other insured, Contractor shall also furnish other evidence of such required insurance, including but not limited to copies of policies, documentation of applicable self-insured retentions (if allowed) and deductibles, full disclosure of all relevant exclusions, and evidence of insurance required to be purchased and maintained by

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

Subcontractors or Suppliers. In any documentation furnished under this provision, Contractor, Subcontractors, and Suppliers may block out (redact) (1) any confidential premium or pricing information and (2) any wording specific to a project or jurisdiction other than those applicable to this Contract.

E. Owner shall deliver to Contractor, with copies to each additional insured identified in the Contract, certificates of insurance and endorsements establishing that Owner has obtained and is maintaining the policies and coverages required of Owner by the Contract (if any). Upon request by Contractor or any other insured, Owner shall also provide other evidence of such required insurance (if any), including but not limited to copies of policies, documentation of applicable self-insured retentions (if allowed) and deductibles, and full disclosure of all relevant exclusions. In any documentation furnished under this provision, Owner may block out (redact) (1) any confidential premium or pricing information and (2) any wording specific to a project or jurisdiction other than those relevant to this Contract.

F. Failure of Owner or Contractor to demand such certificates or other evidence of the other party's full compliance with these insurance requirements, or failure of Owner or Contractor to identify a deficiency in compliance from the evidence provided, will not be construed as a waiver of the other party's obligation to obtain and maintain such insurance.

G. In addition to the liability insurance required to be provided by Contractor, the Owner, at Owner's option, may purchase and maintain Owner's own liability insurance. Owner's liability policies, if any, operate separately and independently from policies required to be provided by Contractor, and Contractor cannot rely upon Owner's liability policies for any of Contractor's obligations to the Owner, Engineer, or third parties.

H. Contractor shall require:

1. Subcontractors to purchase and maintain worker's compensation, commercial general liability, and other insurance that is appropriate for their participation in the Project, and to name as additional insureds Owner and Engineer (and any other individuals or entities identified in the Supplementary Conditions as additional insureds on Contractor's liability policies) on each Subcontractor's commercial general liability insurance policy; and

2. Suppliers to purchase and maintain insurance that is appropriate for their participation in the Project.

I. If either party does not purchase or maintain the insurance required of such party by the Contract, such party shall notify the other party in writing of such failure to purchase prior to the start of the Work, or of such failure to maintain prior to any change in the required coverage.

J. If Contractor has failed to obtain and maintain required insurance, Contractor's entitlement to enter or remain at the Site will end immediately, and Owner may impose an appropriate set-off against payment for any associated costs (including but not limited to the cost of purchasing necessary insurance coverage), and exercise Owner's termination rights under Article 16.

K. Without prejudice to any other right or remedy, if a party has failed to obtain required insurance, the other party may elect (but is in no way obligated) to obtain equivalent insurance to protect such other party's interests at the expense of the party who was required to provide such coverage, and the Contract Price will be adjusted accordingly.

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

L. Owner does not represent that insurance coverage and limits established in this Contract necessarily will be adequate to protect Contractor or Contractor's interests. Contractor is responsible for determining whether such coverage and limits are adequate to protect its interests, and for obtaining and maintaining any additional insurance that Contractor deems necessary.

M. The insurance and insurance limits required herein will not be deemed as a limitation on Contractor's liability, or that of its Subcontractors or Suppliers, under the indemnities granted to Owner and other individuals and entities in the Contract or otherwise.

N. All the policies of insurance required to be purchased and maintained under this Contract will contain a provision or endorsement that the coverage afforded will not be canceled, or renewal refused, until at least 10 days prior written notice has been given to the purchasing policyholder. Within three days of receipt of any such written notice, the purchasing policyholder shall provide a copy of the notice to each other insured and Engineer.

6.03 *Contractor's Insurance*

A. *Required Insurance*: Contractor shall purchase and maintain Worker's Compensation, Commercial General Liability, and other insurance pursuant to the specific requirements of the Supplementary Conditions.

B. *General Provisions*: The policies of insurance required by this Paragraph 6.03 as supplemented must:

1. include at least the specific coverages required;

2. be written for not less than the limits provided, or those required by Laws or Regulations, whichever is greater;

3. remain in effect at least until the Work is complete (as set forth in Paragraph 15.06.D), and longer if expressly required elsewhere in this Contract, and at all times thereafter when Contractor may be correcting, removing, or replacing defective Work as a warranty or correction obligation, or otherwise, or returning to the Site to conduct other tasks arising from the Contract;

4. apply with respect to the performance of the Work, whether such performance is by Contractor, any Subcontractor or Supplier, or by anyone directly or indirectly employed by any of them to perform any of the Work, or by anyone for whose acts any of them may be liable; and

5. include all necessary endorsements to support the stated requirements.

C. *Additional Insureds*: The Contractor's commercial general liability, automobile liability, employer's liability, umbrella or excess, pollution liability, and unmanned aerial vehicle liability policies, if required by this Contract, must:

1. include and list as additional insureds Owner and Engineer, and any individuals or entities identified as additional insureds in the Supplementary Conditions;

2. include coverage for the respective officers, directors, members, partners, employees, and consultants of all such additional insureds;

3. afford primary coverage to these additional insureds for all claims covered thereby (including as applicable those arising from both ongoing and completed operations);

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

4. not seek contribution from insurance maintained by the additional insured; and

5. as to commercial general liability insurance, apply to additional insureds with respect to liability caused in whole or in part by Contractor's acts or omissions, or the acts and omissions of those working on Contractor's behalf, in the performance of Contractor's operations.

6.04 *Builder's Risk and Other Property Insurance*

A. *Builder's Risk*: Unless otherwise provided in the Supplementary Conditions, Contractor shall purchase and maintain builder's risk insurance upon the Work on a completed value basis, in the amount of the Work's full insurable replacement cost (subject to such deductible amounts as may be provided in the Supplementary Conditions or required by Laws and Regulations). The specific requirements applicable to the builder's risk insurance are set forth in the Supplementary Conditions.

B. *Property Insurance for Facilities of Owner Where Work Will Occur*: Owner is responsible for obtaining and maintaining property insurance covering each existing structure, building, or facility in which any part of the Work will occur, or to which any part of the Work will attach or be adjoined. Such property insurance will be written on a special perils (all-risk) form, on a replacement cost basis, providing coverage consistent with that required for the builder's risk insurance, and will be maintained until the Work is complete, as set forth in Paragraph 15.06.D.

C. *Property Insurance for Substantially Complete Facilities*: Promptly after Substantial Completion, and before actual occupancy or use of the substantially completed Work, Owner will obtain property insurance for such substantially completed Work, and maintain such property insurance at least until the Work is complete, as set forth in Paragraph 15.06.D. Such property insurance will be written on a special perils (all-risk) form, on a replacement cost basis, and provide coverage consistent with that required for the builder's risk insurance. The builder's risk insurance may terminate upon written confirmation of Owner's procurement of such property insurance.

D. *Partial Occupancy or Use by Owner*: If Owner will occupy or use a portion or portions of the Work prior to Substantial Completion of all the Work, as provided in Paragraph 15.04, then Owner (directly, if it is the purchaser of the builder's risk policy, or through Contractor) will provide advance notice of such occupancy or use to the builder's risk insurer, and obtain an endorsement consenting to the continuation of coverage prior to commencing such partial occupancy or use.

E. *Insurance of Other Property; Additional Insurance*: If the express insurance provisions of the Contract do not require or address the insurance of a property item or interest, then the entity or individual owning such property item will be responsible for insuring it. If Contractor elects to obtain other special insurance to be included in or supplement the builder's risk or property insurance policies provided under this Paragraph 6.04, it may do so at Contractor's expense.

6.05 *Property Losses; Subrogation*

A. The builder's risk insurance policy purchased and maintained in accordance with Paragraph 6.04 (or an installation floater policy if authorized by the Supplementary Conditions), will contain provisions to the effect that in the event of payment of any loss or damage the insurer will have no rights of recovery against any insureds thereunder, or against

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

Engineer or its consultants, or their officers, directors, members, partners, employees, agents, consultants, or subcontractors.

1. Owner and Contractor waive all rights against each other and the respective officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, for all losses and damages caused by, arising out of, or resulting from any of the perils, risks, or causes of loss covered by such policies and any other property insurance applicable to the Work; and, in addition, waive all such rights against Engineer, its consultants, all individuals or entities identified in the Supplementary Conditions as builder's risk or installation floater insureds, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, under such policies for losses and damages so caused.
2. None of the above waivers extends to the rights that any party making such waiver may have to the proceeds of insurance held by Owner or Contractor as trustee or fiduciary, or otherwise payable under any policy so issued.

B. Any property insurance policy maintained by Owner covering any loss, damage, or consequential loss to Owner's existing structures, buildings, or facilities in which any part of the Work will occur, or to which any part of the Work will attach or adjoin; to adjacent structures, buildings, or facilities of Owner; or to part or all of the completed or substantially completed Work, during partial occupancy or use pursuant to Paragraph 15.04, after Substantial Completion pursuant to Paragraph 15.03, or after final payment pursuant to Paragraph 15.06, will contain provisions to the effect that in the event of payment of any loss or damage the insurer will have no rights of recovery against any insureds thereunder, or against Contractor, Subcontractors, or Engineer, or the officers, directors, members, partners, employees, agents, consultants, or subcontractors of each and any of them, and that the insured is allowed to waive the insurer's rights of subrogation in a written contract executed prior to the loss, damage, or consequential loss.

1. Owner waives all rights against Contractor, Subcontractors, and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them, for all losses and damages caused by, arising out of, or resulting from fire or any of the perils, risks, or causes of loss covered by such policies.

C. The waivers in this Paragraph 6.05 include the waiver of rights due to business interruption, loss of use, or other consequential loss extending beyond direct physical loss or damage to Owner's property or the Work caused by, arising out of, or resulting from fire or other insured peril, risk, or cause of loss.

D. Contractor shall be responsible for assuring that each Subcontract contains provisions whereby the Subcontractor waives all rights against Owner, Contractor, all individuals or entities identified in the Supplementary Conditions as insureds, the Engineer and its consultants, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, for all losses and damages caused by, arising out of, relating to, or resulting from fire or other peril, risk, or cause of loss covered by builder's risk insurance, installation floater, and any other property insurance applicable to the Work.

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

6.06 *Receipt and Application of Property Insurance Proceeds*

A. Any insured loss under the builder's risk and other policies of property insurance required by Paragraph 6.04 will be adjusted and settled with the named insured that purchased the policy. Such named insured shall act as fiduciary for the other insureds, and give notice to such other insureds that adjustment and settlement of a claim is in progress. Any other insured may state its position regarding a claim for insured loss in writing within 15 days after notice of such claim.

B. Proceeds for such insured losses may be made payable by the insurer either jointly to multiple insureds, or to the named insured that purchased the policy in its own right and as fiduciary for other insureds, subject to the requirements of any applicable mortgage clause. A named insured receiving insurance proceeds under the builder's risk and other policies of insurance required by Paragraph 6.04 shall maintain such proceeds in a segregated account, and distribute such proceeds in accordance with such agreement as the parties in interest may reach, or as otherwise required under the dispute resolution provisions of this Contract or applicable Laws and Regulations.

C. If no other special agreement is reached, Contractor shall repair or replace the damaged Work, using allocated insurance proceeds.

ARTICLE 7—CONTRACTOR'S RESPONSIBILITIES

7.01 *Contractor's Means and Methods of Construction*

A. Contractor shall be solely responsible for the means, methods, techniques, sequences, and procedures of construction.

B. If the Contract Documents note, or Contractor determines, that professional engineering or other design services are needed to carry out Contractor's responsibilities for construction means, methods, techniques, sequences, and procedures, or for Site safety, then Contractor shall cause such services to be provided by a properly licensed design professional, at Contractor's expense. Such services are not Owner-delegated professional design services under this Contract, and neither Owner nor Engineer has any responsibility with respect to (1) Contractor's determination of the need for such services, (2) the qualifications or licensing of the design professionals retained or employed by Contractor, (3) the performance of such services, or (4) any errors, omissions, or defects in such services.

7.02 *Supervision and Superintendence*

A. Contractor shall supervise, inspect, and direct the Work competently and efficiently, devoting such attention thereto and applying such skills and expertise as may be necessary to perform the Work in accordance with the Contract Documents.

B. At all times during the progress of the Work, Contractor shall assign a competent resident superintendent who will not be replaced without written notice to Owner and Engineer except under extraordinary circumstances.

7.03 *Labor; Working Hours*

A. Contractor shall provide competent, suitably qualified personnel to survey and lay out the Work and perform construction as required by the Contract Documents. Contractor shall maintain good discipline and order at the Site.

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

B. Contractor shall be fully responsible to Owner and Engineer for all acts and omissions of Contractor's employees; of Suppliers and Subcontractors, and their employees; and of any other individuals or entities performing or furnishing any of the Work, just as Contractor is responsible for Contractor's own acts and omissions.

C. Except as otherwise required for the safety or protection of persons or the Work or property at the Site or adjacent thereto, and except as otherwise stated in the Contract Documents, all Work at the Site will be performed during regular working hours, Monday through Friday. Contractor will not perform Work on a Saturday, Sunday, or any legal holiday. Contractor may perform Work outside regular working hours or on Saturdays, Sundays, or legal holidays only with Owner's written consent, which will not be unreasonably withheld.

7.04 *Services, Materials, and Equipment*

A. Unless otherwise specified in the Contract Documents, Contractor shall provide and assume full responsibility for all services, materials, equipment, labor, transportation, construction equipment and machinery, tools, appliances, fuel, power, light, heat, telephone, water, sanitary facilities, temporary facilities, and all other facilities and incidentals necessary for the performance, testing, start up, and completion of the Work, whether or not such items are specifically called for in the Contract Documents.

B. All materials and equipment incorporated into the Work must be new and of good quality, except as otherwise provided in the Contract Documents. All special warranties and guarantees required by the Specifications will expressly run to the benefit of Owner. If required by Engineer, Contractor shall furnish satisfactory evidence (including reports of required tests) as to the source, kind, and quality of materials and equipment.

C. All materials and equipment must be stored, applied, installed, connected, erected, protected, used, cleaned, and conditioned in accordance with instructions of the applicable Supplier, except as otherwise may be provided in the Contract Documents.

7.05 *"Or Equals"*

A. *Contractor's Request; Governing Criteria*: Whenever an item of equipment or material is specified or described in the Contract Documents by using the names of one or more proprietary items or specific Suppliers, the Contract Price has been based upon Contractor furnishing such item as specified. The specification or description of such an item is intended to establish the type, function, appearance, and quality required. Unless the specification or description contains or is followed by words reading that no like, equivalent, or "or equal" item is permitted, Contractor may request that Engineer authorize the use of other items of equipment or material, or items from other proposed Suppliers, under the circumstances described below.

1. If Engineer in its sole discretion determines that an item of equipment or material proposed by Contractor is functionally equal to that named and sufficiently similar so that no change in related Work will be required, Engineer will deem it an "or equal" item. For the purposes of this paragraph, a proposed item of equipment or material will be considered functionally equal to an item so named if:

a. in the exercise of reasonable judgment Engineer determines that the proposed item:

1) is at least equal in materials of construction, quality, durability, appearance, strength, and design characteristics;

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

2) will reliably perform at least equally well the function and achieve the results imposed by the design concept of the completed Project as a functioning whole;

3) has a proven record of performance and availability of responsive service; and

4) is not objectionable to Owner.

b. Contractor certifies that, if the proposed item is approved and incorporated into the Work:

1) there will be no increase in cost to the Owner or increase in Contract Times; and

2) the item will conform substantially to the detailed requirements of the item named in the Contract Documents.

B. *Contractor's Expense*: Contractor shall provide all data in support of any proposed "or equal" item at Contractor's expense.

C. *Engineer's Evaluation and Determination*: Engineer will be allowed a reasonable time to evaluate each "or-equal" request. Engineer may require Contractor to furnish additional data about the proposed "or-equal" item. Engineer will be the sole judge of acceptability. No "or-equal" item will be ordered, furnished, installed, or utilized until Engineer's review is complete and Engineer determines that the proposed item is an "or-equal," which will be evidenced by an approved Shop Drawing or other written communication. Engineer will advise Contractor in writing of any negative determination.

D. *Effect of Engineer's Determination*: Neither approval nor denial of an "or-equal" request will result in any change in Contract Price. The Engineer's denial of an "or-equal" request will be final and binding, and may not be reversed through an appeal under any provision of the Contract.

E. *Treatment as a Substitution Request*: If Engineer determines that an item of equipment or material proposed by Contractor does not qualify as an "or-equal" item, Contractor may request that Engineer consider the item a proposed substitute pursuant to Paragraph 7.06.

7.06 *Substitutes*

A. *Contractor's Request; Governing Criteria*: Unless the specification or description of an item of equipment or material required to be furnished under the Contract Documents contains or is followed by words reading that no substitution is permitted, Contractor may request that Engineer authorize the use of other items of equipment or material under the circumstances described below. To the extent possible such requests must be made before commencement of related construction at the Site.

1. Contractor shall submit sufficient information as provided below to allow Engineer to determine if the item of material or equipment proposed is functionally equivalent to that named and an acceptable substitute therefor. Engineer will not accept requests for review of proposed substitute items of equipment or material from anyone other than Contractor.

2. The requirements for review by Engineer will be as set forth in Paragraph 7.06.B, as supplemented by the Specifications, and as Engineer may decide is appropriate under the circumstances.

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

3. Contractor shall make written application to Engineer for review of a proposed substitute item of equipment or material that Contractor seeks to furnish or use. The application:

    a. will certify that the proposed substitute item will:

        1) perform adequately the functions and achieve the results called for by the general design;

        2) be similar in substance to the item specified; and

        3) be suited to the same use as the item specified.

    b. will state:

        1) the extent, if any, to which the use of the proposed substitute item will necessitate a change in Contract Times;

        2) whether use of the proposed substitute item in the Work will require a change in any of the Contract Documents (or in the provisions of any other direct contract with Owner for other work on the Project) to adapt the design to the proposed substitute item; and

        3) whether incorporation or use of the proposed substitute item in connection with the Work is subject to payment of any license fee or royalty.

    c. will identify:

        1) all variations of the proposed substitute item from the item specified; and

        2) available engineering, sales, maintenance, repair, and replacement services.

    d. will contain an itemized estimate of all costs or credits that will result directly or indirectly from use of such substitute item, including but not limited to changes in Contract Price, shared savings, costs of redesign, and claims of other contractors affected by any resulting change.

B. *Engineer's Evaluation and Determination*: Engineer will be allowed a reasonable time to evaluate each substitute request, and to obtain comments and direction from Owner. Engineer may require Contractor to furnish additional data about the proposed substitute item. Engineer will be the sole judge of acceptability. No substitute will be ordered, furnished, installed, or utilized until Engineer's review is complete and Engineer determines that the proposed item is an acceptable substitute. Engineer's determination will be evidenced by a Field Order or a proposed Change Order accounting for the substitution itself and all related impacts, including changes in Contract Price or Contract Times. Engineer will advise Contractor in writing of any negative determination.

C. *Special Guarantee*: Owner may require Contractor to furnish at Contractor's expense a special performance guarantee or other surety with respect to any substitute.

D. *Reimbursement of Engineer's Cost*: Engineer will record Engineer's costs in evaluating a substitute proposed or submitted by Contractor. Whether or not Engineer approves a substitute so proposed or submitted by Contractor, Contractor shall reimburse Owner for the reasonable charges of Engineer for evaluating each such proposed substitute. Contractor shall also reimburse Owner for the reasonable charges of Engineer for making changes in the Contract Documents (or in the provisions of any other direct contract with Owner) resulting from the acceptance of each proposed substitute.

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

E. *Contractor's Expense*: Contractor shall provide all data in support of any proposed substitute at Contractor's expense.

F. *Effect of Engineer's Determination*: If Engineer approves the substitution request, Contractor shall execute the proposed Change Order and proceed with the substitution. The Engineer's denial of a substitution request will be final and binding, and may not be reversed through an appeal under any provision of the Contract. Contractor may challenge the scope of reimbursement costs imposed under Paragraph 7.06.D, by timely submittal of a Change Proposal.

7.07 *Concerning Subcontractors and Suppliers*

A. Contractor may retain Subcontractors and Suppliers for the performance of parts of the Work. Such Subcontractors and Suppliers must be acceptable to Owner. The Contractor's retention of a Subcontractor or Supplier for the performance of parts of the Work will not relieve Contractor's obligation to Owner to perform and complete the Work in accordance with the Contract Documents.

B. Contractor shall retain specific Subcontractors and Suppliers for the performance of designated parts of the Work if required by the Contract to do so.

C. Subsequent to the submittal of Contractor's Bid or final negotiation of the terms of the Contract, Owner may not require Contractor to retain any Subcontractor or Supplier to furnish or perform any of the Work against which Contractor has reasonable objection.

D. Prior to entry into any binding subcontract or purchase order, Contractor shall submit to Owner the identity of the proposed Subcontractor or Supplier (unless Owner has already deemed such proposed Subcontractor or Supplier acceptable during the bidding process or otherwise). Such proposed Subcontractor or Supplier shall be deemed acceptable to Owner unless Owner raises a substantive, reasonable objection within 5 days.

E. Owner may require the replacement of any Subcontractor or Supplier. Owner also may require Contractor to retain specific replacements; provided, however, that Owner may not require a replacement to which Contractor has a reasonable objection. If Contractor has submitted the identity of certain Subcontractors or Suppliers for acceptance by Owner, and Owner has accepted it (either in writing or by failing to make written objection thereto), then Owner may subsequently revoke the acceptance of any such Subcontractor or Supplier so identified solely on the basis of substantive, reasonable objection after due investigation. Contractor shall submit an acceptable replacement for the rejected Subcontractor or Supplier.

F. If Owner requires the replacement of any Subcontractor or Supplier retained by Contractor to perform any part of the Work, then Contractor shall be entitled to an adjustment in Contract Price or Contract Times, with respect to the replacement; and Contractor shall initiate a Change Proposal for such adjustment within 30 days of Owner's requirement of replacement.

G. No acceptance by Owner of any such Subcontractor or Supplier, whether initially or as a replacement, will constitute a waiver of the right of Owner to the completion of the Work in accordance with the Contract Documents.

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

H. On a monthly basis, Contractor shall submit to Engineer a complete list of all Subcontractors and Suppliers having a direct contract with Contractor, and of all other Subcontractors and Suppliers known to Contractor at the time of submittal.

I. Contractor shall be solely responsible for scheduling and coordinating the work of Subcontractors and Suppliers.

J. The divisions and sections of the Specifications and the identifications of any Drawings do not control Contractor in dividing the Work among Subcontractors or Suppliers, or in delineating the Work to be performed by any specific trade.

K. All Work performed for Contractor by a Subcontractor or Supplier must be pursuant to an appropriate contractual agreement that specifically binds the Subcontractor or Supplier to the applicable terms and conditions of the Contract for the benefit of Owner and Engineer.

L. Owner may furnish to any Subcontractor or Supplier, to the extent practicable, information about amounts paid to Contractor for Work performed for Contractor by the Subcontractor or Supplier.

M. Contractor shall restrict all Subcontractors and Suppliers from communicating with Engineer or Owner, except through Contractor or in case of an emergency, or as otherwise expressly allowed in this Contract.

7.08 *Patent Fees and Royalties*

A. Contractor shall pay all license fees and royalties and assume all costs incident to the use in the performance of the Work or the incorporation in the Work of any invention, design, process, product, or device which is the subject of patent rights or copyrights held by others. If an invention, design, process, product, or device is specified in the Contract Documents for use in the performance of the Work and if, to the actual knowledge of Owner or Engineer, its use is subject to patent rights or copyrights calling for the payment of any license fee or royalty to others, the existence of such rights will be disclosed in the Contract Documents.

B. To the fullest extent permitted by Laws and Regulations, Owner shall indemnify and hold harmless Contractor, and its officers, directors, members, partners, employees, agents, consultants, and subcontractors, from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals, and all court or arbitration or other dispute resolution costs) arising out of or relating to any infringement of patent rights or copyrights incident to the use in the performance of the Work or resulting from the incorporation in the Work of any invention, design, process, product, or device specified in the Contract Documents, but not identified as being subject to payment of any license fee or royalty to others required by patent rights or copyrights.

C. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them, from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to any infringement of patent rights or copyrights incident to the use in the performance of the Work or resulting from the incorporation in the Work of any invention, design, process, product, or device not specified in the Contract Documents.

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

7.09 *Permits*

A. Unless otherwise provided in the Contract Documents, Contractor shall obtain and pay for all construction permits, licenses, and certificates of occupancy. Owner shall assist Contractor, when necessary, in obtaining such permits and licenses. Contractor shall pay all governmental charges and inspection fees necessary for the prosecution of the Work which are applicable at the time of the submission of Contractor's Bid (or when Contractor became bound under a negotiated contract). Owner shall pay all charges of utility owners for connections for providing permanent service to the Work.

7.10 *Taxes*

A. Contractor shall pay all sales, consumer, use, and other similar taxes required to be paid by Contractor in accordance with the Laws and Regulations of the place of the Project which are applicable during the performance of the Work.

7.11 *Laws and Regulations*

A. Contractor shall give all notices required by and shall comply with all Laws and Regulations applicable to the performance of the Work. Neither Owner nor Engineer shall be responsible for monitoring Contractor's compliance with any Laws or Regulations.

B. If Contractor performs any Work or takes any other action knowing or having reason to know that it is contrary to Laws or Regulations, Contractor shall bear all resulting costs and losses, and shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such Work or other action. It is not Contractor's responsibility to make certain that the Work described in the Contract Documents is in accordance with Laws and Regulations, but this does not relieve Contractor of its obligations under Paragraph 3.03.

C. Owner or Contractor may give written notice to the other party of any changes after the submission of Contractor's Bid (or after the date when Contractor became bound under a negotiated contract) in Laws or Regulations having an effect on the cost or time of performance of the Work, including but not limited to changes in Laws or Regulations having an effect on procuring permits and on sales, use, value-added, consumption, and other similar taxes. If Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in Contract Price or Contract Times resulting from such changes, then within 30 days of such written notice Contractor may submit a Change Proposal, or Owner may initiate a Claim.

7.12 *Record Documents*

A. Contractor shall maintain in a safe place at the Site one printed record copy of all Drawings, Specifications, Addenda, Change Orders, Work Change Directives, Field Orders, written interpretations and clarifications, and approved Shop Drawings. Contractor shall keep such record documents in good order and annotate them to show changes made during construction. These record documents, together with all approved Samples, will be available to Engineer for reference. Upon completion of the Work, Contractor shall deliver these record documents to Engineer.

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

7.13 *Safety and Protection*

A. Contractor shall be solely responsible for initiating, maintaining, and supervising all safety precautions and programs in connection with the Work. Such responsibility does not relieve Subcontractors of their responsibility for the safety of persons or property in the performance of their work, nor for compliance with applicable safety Laws and Regulations.

B. Contractor shall designate a qualified and experienced safety representative whose duties and responsibilities are the prevention of Work-related accidents and the maintenance and supervision of safety precautions and programs.

C. Contractor shall take all necessary precautions for the safety of, and shall provide the necessary protection to prevent damage, injury, or loss to:

1. all persons on the Site or who may be affected by the Work;

2. all the Work and materials and equipment to be incorporated therein, whether in storage on or off the Site; and

3. other property at the Site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures, other work in progress, utilities, and Underground Facilities not designated for removal, relocation, or replacement in the course of construction.

D. All damage, injury, or loss to any property referred to in Paragraph 7.13.C.2 or 7.13.C.3 caused, directly or indirectly, in whole or in part, by Contractor, any Subcontractor, Supplier, or any other individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, shall be remedied by Contractor at its expense (except damage or loss attributable to the fault of Drawings or Specifications or to the acts or omissions of Owner or Engineer or anyone employed by any of them, or anyone for whose acts any of them may be liable, and not attributable, directly or indirectly, in whole or in part, to the fault or negligence of Contractor or any Subcontractor, Supplier, or other individual or entity directly or indirectly employed by any of them).

E. Contractor shall comply with all applicable Laws and Regulations relating to the safety of persons or property, or to the protection of persons or property from damage, injury, or loss; and shall erect and maintain all necessary safeguards for such safety and protection.

F. Contractor shall notify Owner; the owners of adjacent property; the owners of Underground Facilities and other utilities (if the identity of such owners is known to Contractor); and other contractors and utility owners performing work at or adjacent to the Site, in writing, when Contractor knows that prosecution of the Work may affect them, and shall cooperate with them in the protection, removal, relocation, and replacement of their property or work in progress.

G. Contractor shall comply with the applicable requirements of Owner's safety programs, if any. Any Owner's safety programs that are applicable to the Work are identified or included in the Supplementary Conditions or Specifications.

H. Contractor shall inform Owner and Engineer of the specific requirements of Contractor's safety program with which Owner's and Engineer's employees and representatives must comply while at the Site.

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

I. Contractor's duties and responsibilities for safety and protection will continue until all the Work is completed, Engineer has issued a written notice to Owner and Contractor in accordance with Paragraph 15.06.C that the Work is acceptable, and Contractor has left the Site (except as otherwise expressly provided in connection with Substantial Completion).

J. Contractor's duties and responsibilities for safety and protection will resume whenever Contractor or any Subcontractor or Supplier returns to the Site to fulfill warranty or correction obligations, or to conduct other tasks arising from the Contract Documents.

7.14 *Hazard Communication Programs*

A. Contractor shall be responsible for coordinating any exchange of safety data sheets (formerly known as material safety data sheets) or other hazard communication information required to be made available to or exchanged between or among employers at the Site in accordance with Laws or Regulations.

7.15 *Emergencies*

A. In emergencies affecting the safety or protection of persons or the Work or property at the Site or adjacent thereto, Contractor is obligated to act to prevent damage, injury, or loss. Contractor shall give Engineer prompt written notice if Contractor believes that any significant changes in the Work or variations from the Contract Documents have been caused by an emergency, or are required as a result of Contractor's response to an emergency. If Engineer determines that a change in the Contract Documents is required because of an emergency or Contractor's response, a Work Change Directive or Change Order will be issued.

7.16 *Submittals*

A. *Shop Drawing and Sample Requirements*

1. Before submitting a Shop Drawing or Sample, Contractor shall:

a. review and coordinate the Shop Drawing or Sample with other Shop Drawings and Samples and with the requirements of the Work and the Contract Documents;

b. determine and verify:

1) all field measurements, quantities, dimensions, specified performance and design criteria, installation requirements, materials, catalog numbers, and similar information with respect to the Submittal;

2) the suitability of all materials and equipment offered with respect to the indicated application, fabrication, shipping, handling, storage, assembly, and installation pertaining to the performance of the Work; and

3) all information relative to Contractor's responsibilities for means, methods, techniques, sequences, and procedures of construction, and safety precautions and programs incident thereto;

c. confirm that the Submittal is complete with respect to all related data included in the Submittal.

2. Each Shop Drawing or Sample must bear a stamp or specific written certification that Contractor has satisfied Contractor's obligations under the Contract Documents with respect to Contractor's review of that Submittal, and that Contractor approves the Submittal.

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

3. With each Shop Drawing or Sample, Contractor shall give Engineer specific written notice of any variations that the Submittal may have from the requirements of the Contract Documents. This notice must be set forth in a written communication separate from the Submittal; and, in addition, in the case of a Shop Drawing by a specific notation made on the Shop Drawing itself.

B. *Submittal Procedures for Shop Drawings and Samples*: Contractor shall label and submit Shop Drawings and Samples to Engineer for review and approval in accordance with the accepted Schedule of Submittals.

1. *Shop Drawings*

a. Contractor shall submit the number of copies required in the Specifications.

b. Data shown on the Shop Drawings must be complete with respect to quantities, dimensions, specified performance and design criteria, materials, and similar data to show Engineer the services, materials, and equipment Contractor proposes to provide, and to enable Engineer to review the information for the limited purposes required by Paragraph 7.16.C.

2. *Samples*

a. Contractor shall submit the number of Samples required in the Specifications.

b. Contractor shall clearly identify each Sample as to material, Supplier, pertinent data such as catalog numbers, the use for which intended and other data as Engineer may require to enable Engineer to review the Submittal for the limited purposes required by Paragraph 7.16.C.

3. Where a Shop Drawing or Sample is required by the Contract Documents or the Schedule of Submittals, any related Work performed prior to Engineer's review and approval of the pertinent submittal will be at the sole expense and responsibility of Contractor.

C. *Engineer's Review of Shop Drawings and Samples*

1. Engineer will provide timely review of Shop Drawings and Samples in accordance with the accepted Schedule of Submittals. Engineer's review and approval will be only to determine if the items covered by the Submittals will, after installation or incorporation in the Work, comply with the requirements of the Contract Documents, and be compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents.

2. Engineer's review and approval will not extend to means, methods, techniques, sequences, or procedures of construction, or to safety precautions or programs incident thereto.

3. Engineer's review and approval of a separate item as such will not indicate approval of the assembly in which the item functions.

4. Engineer's review and approval of a Shop Drawing or Sample will not relieve Contractor from responsibility for any variation from the requirements of the Contract Documents unless Contractor has complied with the requirements of Paragraph 7.16.A.3 and Engineer has given written approval of each such variation by specific written notation thereof incorporated in or accompanying the Shop Drawing or Sample. Engineer will

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

document any such approved variation from the requirements of the Contract Documents in a Field Order or other appropriate Contract modification.

5. Engineer's review and approval of a Shop Drawing or Sample will not relieve Contractor from responsibility for complying with the requirements of Paragraphs 7.16.A and B.

6. Engineer's review and approval of a Shop Drawing or Sample, or of a variation from the requirements of the Contract Documents, will not, under any circumstances, change the Contract Times or Contract Price, unless such changes are included in a Change Order.

7. Neither Engineer's receipt, review, acceptance, or approval of a Shop Drawing or Sample will result in such item becoming a Contract Document.

8. Contractor shall perform the Work in compliance with the requirements and commitments set forth in approved Shop Drawings and Samples, subject to the provisions of Paragraph 7.16.C.4.

D. *Resubmittal Procedures for Shop Drawings and Samples*

1. Contractor shall make corrections required by Engineer and shall return the required number of corrected copies of Shop Drawings and submit, as required, new Samples for review and approval. Contractor shall direct specific attention in writing to revisions other than the corrections called for by Engineer on previous Submittals.

2. Contractor shall furnish required Shop Drawing and Sample submittals with sufficient information and accuracy to obtain required approval of an item with no more than two resubmittals. Engineer will record Engineer's time for reviewing a third or subsequent resubmittal of a Shop Drawing or Sample, and Contractor shall be responsible for Engineer's charges to Owner for such time. Owner may impose a set-off against payments due Contractor to secure reimbursement for such charges.

3. If Contractor requests a change of a previously approved Shop Drawing or Sample, Contractor shall be responsible for Engineer's charges to Owner for its review time, and Owner may impose a set-off against payments due Contractor to secure reimbursement for such charges, unless the need for such change is beyond the control of Contractor.

E. *Submittals Other than Shop Drawings, Samples, and Owner-Delegated Designs*

1. The following provisions apply to all Submittals other than Shop Drawings, Samples, and Owner-delegated designs:

   a. Contractor shall submit all such Submittals to the Engineer in accordance with the Schedule of Submittals and pursuant to the applicable terms of the Contract Documents.

   b. Engineer will provide timely review of all such Submittals in accordance with the Schedule of Submittals and return such Submittals with a notation of either Accepted or Not Accepted. Any such Submittal that is not returned within the time established in the Schedule of Submittals will be deemed accepted.

   c. Engineer's review will be only to determine if the Submittal is acceptable under the requirements of the Contract Documents as to general form and content of the Submittal.

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

d. If any such Submittal is not accepted, Contractor shall confer with Engineer regarding the reason for the non-acceptance, and resubmit an acceptable document.

2. Procedures for the submittal and acceptance of the Progress Schedule, the Schedule of Submittals, and the Schedule of Values are set forth in Paragraphs 2.03. 2.04, and 2.05.

F. Owner-delegated Designs: Submittals pursuant to Owner-delegated designs are governed by the provisions of Paragraph 7.19.

7.17 *Contractor's General Warranty and Guarantee*

A. Contractor warrants and guarantees to Owner that all Work will be in accordance with the Contract Documents and will not be defective. Engineer is entitled to rely on Contractor's warranty and guarantee.

B. Owner's rights under this warranty and guarantee are in addition to, and are not limited by, Owner's rights under the correction period provisions of Paragraph 15.08. The time in which Owner may enforce its warranty and guarantee rights under this Paragraph 7.17 is limited only by applicable Laws and Regulations restricting actions to enforce such rights; provided, however, that after the end of the correction period under Paragraph 15.08:

1. Owner shall give Contractor written notice of any defective Work within 60 days of the discovery that such Work is defective; and

2. Such notice will be deemed the start of an event giving rise to a Claim under Paragraph 12.01.B, such that any related Claim must be brought within 30 days of the notice.

C. Contractor's warranty and guarantee hereunder excludes defects or damage caused by:

1. abuse, or improper modification, maintenance, or operation, by persons other than Contractor, Subcontractors, Suppliers, or any other individual or entity for whom Contractor is responsible; or

2. normal wear and tear under normal usage.

D. Contractor's obligation to perform and complete the Work in accordance with the Contract Documents is absolute. None of the following will constitute an acceptance of Work that is not in accordance with the Contract Documents, a release of Contractor's obligation to perform the Work in accordance with the Contract Documents, or a release of Owner's warranty and guarantee rights under this Paragraph 7.17:

1. Observations by Engineer;

2. Recommendation by Engineer or payment by Owner of any progress or final payment;

3. The issuance of a certificate of Substantial Completion by Engineer or any payment related thereto by Owner;

4. Use or occupancy of the Work or any part thereof by Owner;

5. Any review and approval of a Shop Drawing or Sample submittal;

6. The issuance of a notice of acceptability by Engineer;

7. The end of the correction period established in Paragraph 15.08;

8. Any inspection, test, or approval by others; or

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

9. Any correction of defective Work by Owner.

E. If the Contract requires the Contractor to accept the assignment of a contract entered into by Owner, then the specific warranties, guarantees, and correction obligations contained in the assigned contract will govern with respect to Contractor's performance obligations to Owner for the Work described in the assigned contract.

7.18 *Indemnification*

A. To the fullest extent permitted by Laws and Regulations, and in addition to any other obligations of Contractor under the Contract or otherwise, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them, from losses, damages, costs, and judgments (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals, and all court or arbitration or other dispute resolution costs) arising from third-party claims or actions relating to or resulting from the performance or furnishing of the Work, provided that any such claim, action, loss, cost, judgment or damage is attributable to bodily injury, sickness, disease, or death, or to damage to or destruction of tangible property (other than the Work itself), including the loss of use resulting therefrom, but only to the extent caused by any negligent act or omission of Contractor, any Subcontractor, any Supplier, or any individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable.

B. In any and all claims against Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, by any employee (or the survivor or personal representative of such employee) of Contractor, any Subcontractor, any Supplier, or any individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, the indemnification obligation under Paragraph 7.18.A will not be limited in any way by any limitation on the amount or type of damages, compensation, or benefits payable by or for Contractor or any such Subcontractor, Supplier, or other individual or entity under workers' compensation acts, disability benefit acts, or other employee benefit acts.

7.19 *Delegation of Professional Design Services*

A. Owner may require Contractor to provide professional design services for a portion of the Work by express delegation in the Contract Documents. Such delegation will specify the performance and design criteria that such services must satisfy, and the Submittals that Contractor must furnish to Engineer with respect to the Owner-delegated design.

B. Contractor shall cause such Owner-delegated professional design services to be provided pursuant to the professional standard of care by a properly licensed design professional, whose signature and seal must appear on all drawings, calculations, specifications, certifications, and Submittals prepared by such design professional. Such design professional must issue all certifications of design required by Laws and Regulations.

C. If a Shop Drawing or other Submittal related to the Owner-delegated design is prepared by Contractor, a Subcontractor, or others for submittal to Engineer, then such Shop Drawing or other Submittal must bear the written approval of Contractor's design professional when submitted by Contractor to Engineer.

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

D. Owner and Engineer shall be entitled to rely upon the adequacy, accuracy, and completeness of the services, certifications, and approvals performed or provided by the design professionals retained or employed by Contractor under an Owner-delegated design, subject to the professional standard of care and the performance and design criteria stated in the Contract Documents.

E. Pursuant to this Paragraph 7.19, Engineer's review, approval, and other determinations regarding design drawings, calculations, specifications, certifications, and other Submittals furnished by Contractor pursuant to an Owner-delegated design will be only for the following limited purposes:

1. Checking for conformance with the requirements of this Paragraph 7.19;

2. Confirming that Contractor (through its design professionals) has used the performance and design criteria specified in the Contract Documents; and

3. Establishing that the design furnished by Contractor is consistent with the design concept expressed in the Contract Documents.

F. Contractor shall not be responsible for the adequacy of performance or design criteria specified by Owner or Engineer.

G. Contractor is not required to provide professional services in violation of applicable Laws and Regulations.

ARTICLE 8—OTHER WORK AT THE SITE

8.01 *Other Work*

A. In addition to and apart from the Work under the Contract Documents, the Owner may perform other work at or adjacent to the Site. Such other work may be performed by Owner's employees, or through contracts between the Owner and third parties. Owner may also arrange to have third-party utility owners perform work on their utilities and facilities at or adjacent to the Site.

B. If Owner performs other work at or adjacent to the Site with Owner's employees, or through contracts for such other work, then Owner shall give Contractor written notice thereof prior to starting any such other work. If Owner has advance information regarding the start of any third-party utility work that Owner has arranged to take place at or adjacent to the Site, Owner shall provide such information to Contractor.

C. Contractor shall afford proper and safe access to the Site to each contractor that performs such other work, each utility owner performing other work, and Owner, if Owner is performing other work with Owner's employees, and provide a reasonable opportunity for the introduction and storage of materials and equipment and the execution of such other work.

D. Contractor shall do all cutting, fitting, and patching of the Work that may be required to properly connect or otherwise make its several parts come together and properly integrate with such other work. Contractor shall not endanger any work of others by cutting, excavating, or otherwise altering such work; provided, however, that Contractor may cut or alter others' work with the written consent of Engineer and the others whose work will be affected.

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

E. If the proper execution or results of any part of Contractor's Work depends upon work performed by others, Contractor shall inspect such other work and promptly report to Engineer in writing any delays, defects, or deficiencies in such other work that render it unavailable or unsuitable for the proper execution and results of Contractor's Work. Contractor's failure to so report will constitute an acceptance of such other work as fit and proper for integration with Contractor's Work except for latent defects and deficiencies in such other work.

F. The provisions of this article are not applicable to work that is performed by third-party utilities or other third-party entities without a contract with Owner, or that is performed without having been arranged by Owner. If such work occurs, then any related delay, disruption, or interference incurred by Contractor is governed by the provisions of Paragraph 4.05.C.3.

8.02 *Coordination*

A. If Owner intends to contract with others for the performance of other work at or adjacent to the Site, to perform other work at or adjacent to the Site with Owner's employees, or to arrange to have utility owners perform work at or adjacent to the Site, the following will be set forth in the Supplementary Conditions or provided to Contractor prior to the start of any such other work:

1. The identity of the individual or entity that will have authority and responsibility for coordination of the activities among the various contractors;

2. An itemization of the specific matters to be covered by such authority and responsibility; and

3. The extent of such authority and responsibilities.

B. Unless otherwise provided in the Supplementary Conditions, Owner shall have sole authority and responsibility for such coordination.

8.03 *Legal Relationships*

A. If, in the course of performing other work for Owner at or adjacent to the Site, the Owner's employees, any other contractor working for Owner, or any utility owner that Owner has arranged to perform work, causes damage to the Work or to the property of Contractor or its Subcontractors, or delays, disrupts, interferes with, or increases the scope or cost of the performance of the Work, through actions or inaction, then Contractor shall be entitled to an equitable adjustment in the Contract Price or the Contract Times. Contractor must submit any Change Proposal seeking an equitable adjustment in the Contract Price or the Contract Times under this paragraph within 30 days of the damaging, delaying, disrupting, or interfering event. The entitlement to, and extent of, any such equitable adjustment will take into account information (if any) regarding such other work that was provided to Contractor in the Contract Documents prior to the submittal of the Bid or the final negotiation of the terms of the Contract, and any remedies available to Contractor under Laws or Regulations concerning utility action or inaction. When applicable, any such equitable adjustment in Contract Price will be conditioned on Contractor assigning to Owner all Contractor's rights against such other contractor or utility owner with respect to the damage, delay, disruption, or interference that is the subject of the adjustment. Contractor's entitlement to an adjustment of the Contract Times or Contract Price is subject to the provisions of Paragraphs 4.05.D and 4.05.E.

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

B. Contractor shall take reasonable and customary measures to avoid damaging, delaying, disrupting, or interfering with the work of Owner, any other contractor, or any utility owner performing other work at or adjacent to the Site.

1. If Contractor fails to take such measures and as a result damages, delays, disrupts, or interferes with the work of any such other contractor or utility owner, then Owner may impose a set-off against payments due Contractor, and assign to such other contractor or utility owner the Owner's contractual rights against Contractor with respect to the breach of the obligations set forth in this Paragraph 8.03.B.

2. When Owner is performing other work at or adjacent to the Site with Owner's employees, Contractor shall be liable to Owner for damage to such other work, and for the reasonable direct delay, disruption, and interference costs incurred by Owner as a result of Contractor's failure to take reasonable and customary measures with respect to Owner's other work. In response to such damage, delay, disruption, or interference, Owner may impose a set-off against payments due Contractor.

C. If Contractor damages, delays, disrupts, or interferes with the work of any other contractor, or any utility owner performing other work at or adjacent to the Site, through Contractor's failure to take reasonable and customary measures to avoid such impacts, or if any claim arising out of Contractor's actions, inactions, or negligence in performance of the Work at or adjacent to the Site is made by any such other contractor or utility owner against Contractor, Owner, or Engineer, then Contractor shall (1) promptly attempt to settle the claim as to all parties through negotiations with such other contractor or utility owner, or otherwise resolve the claim by arbitration or other dispute resolution proceeding or at law, and (2) indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them from and against any such claims, and against all costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such damage, delay, disruption, or interference.

ARTICLE 9—OWNER'S RESPONSIBILITIES

9.01 *Communications to Contractor*

A. Except as otherwise provided in these General Conditions, Owner shall issue all communications to Contractor through Engineer.

9.02 *Replacement of Engineer*

A. Owner may at its discretion appoint an engineer to replace Engineer, provided Contractor makes no reasonable objection to the replacement engineer. The replacement engineer's status under the Contract Documents will be that of the former Engineer.

9.03 *Furnish Data*

A. Owner shall promptly furnish the data required of Owner under the Contract Documents.

9.04 *Pay When Due*

A. Owner shall make payments to Contractor when they are due as provided in the Agreement.

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

9.05 *Lands and Easements; Reports, Tests, and Drawings*

A. Owner's duties with respect to providing lands and easements are set forth in Paragraph 5.01.

B. Owner's duties with respect to providing engineering surveys to establish reference points are set forth in Paragraph 4.03.

C. Article 5 refers to Owner's identifying and making available to Contractor copies of reports of explorations and tests of conditions at the Site, and drawings of physical conditions relating to existing surface or subsurface structures at the Site.

9.06 *Insurance*

A. Owner's responsibilities, if any, with respect to purchasing and maintaining liability and property insurance are set forth in Article 6.

9.07 *Change Orders*

A. Owner's responsibilities with respect to Change Orders are set forth in Article 11.

9.08 *Inspections, Tests, and Approvals*

A. Owner's responsibility with respect to certain inspections, tests, and approvals is set forth in Paragraph 14.02.B.

9.09 *Limitations on Owner's Responsibilities*

A. The Owner shall not supervise, direct, or have control or authority over, nor be responsible for, Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work. Owner will not be responsible for Contractor's failure to perform the Work in accordance with the Contract Documents.

9.10 *Undisclosed Hazardous Environmental Condition*

A. Owner's responsibility in respect to an undisclosed Hazardous Environmental Condition is set forth in Paragraph 5.06.

9.11 *Evidence of Financial Arrangements*

A. Upon request of Contractor, Owner shall furnish Contractor reasonable evidence that financial arrangements have been made to satisfy Owner's obligations under the Contract (including obligations under proposed changes in the Work).

9.12 *Safety Programs*

A. While at the Site, Owner's employees and representatives shall comply with the specific applicable requirements of Contractor's safety programs of which Owner has been informed.

B. Owner shall furnish copies of any applicable Owner safety programs to Contractor.

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

ARTICLE 10—ENGINEER'S STATUS DURING CONSTRUCTION

10.01 *Owner's Representative*

A. Engineer will be Owner's representative during the construction period. The duties and responsibilities and the limitations of authority of Engineer as Owner's representative during construction are set forth in the Contract.

10.02 *Visits to Site*

A. Engineer will make visits to the Site at intervals appropriate to the various stages of construction as Engineer deems necessary in order to observe, as an experienced and qualified design professional, the progress that has been made and the quality of the various aspects of Contractor's executed Work. Based on information obtained during such visits and observations, Engineer, for the benefit of Owner, will determine, in general, if the Work is proceeding in accordance with the Contract Documents. Engineer will not be required to make exhaustive or continuous inspections on the Site to check the quality or quantity of the Work. Engineer's efforts will be directed toward providing for Owner a greater degree of confidence that the completed Work will conform generally to the Contract Documents. On the basis of such visits and observations, Engineer will keep Owner informed of the progress of the Work and will endeavor to guard Owner against defective Work.

B. Engineer's visits and observations are subject to all the limitations on Engineer's authority and responsibility set forth in Paragraph 10.07. Particularly, but without limitation, during or as a result of Engineer's visits or observations of Contractor's Work, Engineer will not supervise, direct, control, or have authority over or be responsible for Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work.

10.03 *Resident Project Representative*

A. If Owner and Engineer have agreed that Engineer will furnish a Resident Project Representative to represent Engineer at the Site and assist Engineer in observing the progress and quality of the Work, then the authority and responsibilities of any such Resident Project Representative will be as provided in the Supplementary Conditions, and limitations on the responsibilities thereof will be as provided in the Supplementary Conditions and in Paragraph 10.07.

B. If Owner designates an individual or entity who is not Engineer's consultant, agent, or employee to represent Owner at the Site, then the responsibilities and authority of such individual or entity will be as provided in the Supplementary Conditions.

10.04 *Engineer's Authority*

A. Engineer has the authority to reject Work in accordance with Article 14.

B. Engineer's authority as to Submittals is set forth in Paragraph 7.16.

C. Engineer's authority as to design drawings, calculations, specifications, certifications and other Submittals from Contractor in response to Owner's delegation (if any) to Contractor of professional design services, is set forth in Paragraph 7.19.

D. Engineer's authority as to changes in the Work is set forth in Article 11.

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

E. Engineer's authority as to Applications for Payment is set forth in Article 15.

10.05 *Determinations for Unit Price Work*

A. Engineer will determine the actual quantities and classifications of Unit Price Work performed by Contractor as set forth in Paragraph 13.03.

10.06 *Decisions on Requirements of Contract Documents and Acceptability of Work*

A. Engineer will render decisions regarding the requirements of the Contract Documents, and judge the acceptability of the Work, pursuant to the specific procedures set forth herein for initial interpretations, Change Proposals, and acceptance of the Work. In rendering such decisions and judgments, Engineer will not show partiality to Owner or Contractor, and will not be liable to Owner, Contractor, or others in connection with any proceedings, interpretations, decisions, or judgments conducted or rendered in good faith.

10.07 *Limitations on Engineer's Authority and Responsibilities*

A. Neither Engineer's authority or responsibility under this Article 10 or under any other provision of the Contract, nor any decision made by Engineer in good faith either to exercise or not exercise such authority or responsibility or the undertaking, exercise, or performance of any authority or responsibility by Engineer, will create, impose, or give rise to any duty in contract, tort, or otherwise owed by Engineer to Contractor, any Subcontractor, any Supplier, any other individual or entity, or to any surety for or employee or agent of any of them.

B. Engineer will not supervise, direct, control, or have authority over or be responsible for Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work. Engineer will not be responsible for Contractor's failure to perform the Work in accordance with the Contract Documents.

C. Engineer will not be responsible for the acts or omissions of Contractor or of any Subcontractor, any Supplier, or of any other individual or entity performing any of the Work.

D. Engineer's review of the final Application for Payment and accompanying documentation, and all maintenance and operating instructions, schedules, guarantees, bonds, certificates of inspection, tests and approvals, and other documentation required to be delivered by Contractor under Paragraph 15.06.A, will only be to determine generally that their content complies with the requirements of, and in the case of certificates of inspections, tests, and approvals, that the results certified indicate compliance with the Contract Documents.

E. The limitations upon authority and responsibility set forth in this Paragraph 10.07 also apply to the Resident Project Representative, if any.

10.08 *Compliance with Safety Program*

A. While at the Site, Engineer's employees and representatives will comply with the specific applicable requirements of Owner's and Contractor's safety programs of which Engineer has been informed.

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

ARTICLE 11—CHANGES TO THE CONTRACT

11.01 *Amending and Supplementing the Contract*

A. The Contract may be amended or supplemented by a Change Order, a Work Change Directive, or a Field Order.

B. If an amendment or supplement to the Contract includes a change in the Contract Price or the Contract Times, such amendment or supplement must be set forth in a Change Order.

C. All changes to the Contract that involve (1) the performance or acceptability of the Work, (2) the design (as set forth in the Drawings, Specifications, or otherwise), or (3) other engineering or technical matters, must be supported by Engineer's recommendation. Owner and Contractor may amend other terms and conditions of the Contract without the recommendation of the Engineer.

11.02 *Change Orders*

A. Owner and Contractor shall execute appropriate Change Orders covering:

1. Changes in Contract Price or Contract Times which are agreed to by the parties, including any undisputed sum or amount of time for Work actually performed in accordance with a Work Change Directive;

2. Changes in Contract Price resulting from an Owner set-off, unless Contractor has duly contested such set-off;

3. Changes in the Work which are: (a) ordered by Owner pursuant to Paragraph 11.05, (b) required because of Owner's acceptance of defective Work under Paragraph 14.04 or Owner's correction of defective Work under Paragraph 14.07, or (c) agreed to by the parties, subject to the need for Engineer's recommendation if the change in the Work involves the design (as set forth in the Drawings, Specifications, or otherwise) or other engineering or technical matters; and

4. Changes that embody the substance of any final and binding results under: Paragraph 11.03.B, resolving the impact of a Work Change Directive; Paragraph 11.09, concerning Change Proposals; Article 12, Claims; Paragraph 13.02.D, final adjustments resulting from allowances; Paragraph 13.03.D, final adjustments relating to determination of quantities for Unit Price Work; and similar provisions.

B. If Owner or Contractor refuses to execute a Change Order that is required to be executed under the terms of Paragraph 11.02.A, it will be deemed to be of full force and effect, as if fully executed.

11.03 *Work Change Directives*

A. A Work Change Directive will not change the Contract Price or the Contract Times but is evidence that the parties expect that the modification ordered or documented by a Work Change Directive will be incorporated in a subsequently issued Change Order, following negotiations by the parties as to the Work Change Directive's effect, if any, on the Contract Price and Contract Times; or, if negotiations are unsuccessful, by a determination under the terms of the Contract Documents governing adjustments, expressly including Paragraph 11.07 regarding change of Contract Price.

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

B. If Owner has issued a Work Change Directive and:

1. Contractor believes that an adjustment in Contract Times or Contract Price is necessary, then Contractor shall submit any Change Proposal seeking such an adjustment no later than 30 days after the completion of the Work set out in the Work Change Directive.

2. Owner believes that an adjustment in Contract Times or Contract Price is necessary, then Owner shall submit any Claim seeking such an adjustment no later than 60 days after issuance of the Work Change Directive.

11.04 *Field Orders*

A. Engineer may authorize minor changes in the Work if the changes do not involve an adjustment in the Contract Price or the Contract Times and are compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents. Such changes will be accomplished by a Field Order and will be binding on Owner and also on Contractor, which shall perform the Work involved promptly.

B. If Contractor believes that a Field Order justifies an adjustment in the Contract Price or Contract Times, then before proceeding with the Work at issue, Contractor shall submit a Change Proposal as provided herein.

11.05 *Owner-Authorized Changes in the Work*

A. Without invalidating the Contract and without notice to any surety, Owner may, at any time or from time to time, order additions, deletions, or revisions in the Work. Changes involving the design (as set forth in the Drawings, Specifications, or otherwise) or other engineering or technical matters will be supported by Engineer's recommendation.

B. Such changes in the Work may be accomplished by a Change Order, if Owner and Contractor have agreed as to the effect, if any, of the changes on Contract Times or Contract Price; or by a Work Change Directive. Upon receipt of any such document, Contractor shall promptly proceed with the Work involved; or, in the case of a deletion in the Work, promptly cease construction activities with respect to such deleted Work. Added or revised Work must be performed under the applicable conditions of the Contract Documents.

C. Nothing in this Paragraph 11.05 obligates Contractor to undertake work that Contractor reasonably concludes cannot be performed in a manner consistent with Contractor's safety obligations under the Contract Documents or Laws and Regulations.

11.06 *Unauthorized Changes in the Work*

A. Contractor shall not be entitled to an increase in the Contract Price or an extension of the Contract Times with respect to any work performed that is not required by the Contract Documents, as amended, modified, or supplemented, except in the case of an emergency as provided in Paragraph 7.15 or in the case of uncovering Work as provided in Paragraph 14.05.C.2.

11.07 *Change of Contract Price*

A. The Contract Price may only be changed by a Change Order. Any Change Proposal for an adjustment in the Contract Price must comply with the provisions of Paragraph 11.09. Any Claim for an adjustment of Contract Price must comply with the provisions of Article 12.

B. An adjustment in the Contract Price will be determined as follows:

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

1. Where the Work involved is covered by unit prices contained in the Contract Documents, then by application of such unit prices to the quantities of the items involved (subject to the provisions of Paragraph 13.03);

2. Where the Work involved is not covered by unit prices contained in the Contract Documents, then by a mutually agreed lump sum (which may include an allowance for overhead and profit not necessarily in accordance with Paragraph 11.07.C.2); or

3. Where the Work involved is not covered by unit prices contained in the Contract Documents and the parties do not reach mutual agreement to a lump sum, then on the basis of the Cost of the Work (determined as provided in Paragraph 13.01) plus a Contractor's fee for overhead and profit (determined as provided in Paragraph 11.07.C).

C. *Contractor's Fee*: When applicable, the Contractor's fee for overhead and profit will be determined as follows:

1. A mutually acceptable fixed fee; or

2. If a fixed fee is not agreed upon, then a fee based on the following percentages of the various portions of the Cost of the Work:

a. For costs incurred under Paragraphs 13.01.B.1 and 13.01.B.2, the Contractor's fee will be 15 percent;

b. For costs incurred under Paragraph 13.01.B.3, the Contractor's fee will be 5 percent;

c. Where one or more tiers of subcontracts are on the basis of Cost of the Work plus a fee and no fixed fee is agreed upon, the intent of Paragraphs 11.07.C.2.a and 11.07.C.2.b is that the Contractor's fee will be based on: (1) a fee of 15 percent of the costs incurred under Paragraphs 13.01.B.1 and 13.01.B.2 by the Subcontractor that actually performs the Work, at whatever tier, and (2) with respect to Contractor itself and to any Subcontractors of a tier higher than that of the Subcontractor that actually performs the Work, a fee of 5 percent of the amount (fee plus underlying costs incurred) attributable to the next lower tier Subcontractor; provided, however, that for any such subcontracted Work the maximum total fee to be paid by Owner will be no greater than 27 percent of the costs incurred by the Subcontractor that actually performs the Work;

d. No fee will be payable on the basis of costs itemized under Paragraphs 13.01.B.4, 13.01.B.5, and 13.01.C;

e. The amount of credit to be allowed by Contractor to Owner for any change which results in a net decrease in Cost of the Work will be the amount of the actual net decrease in Cost of the Work and a deduction of an additional amount equal to 5 percent of such actual net decrease in Cost of the Work; and

f. When both additions and credits are involved in any one change or Change Proposal, the adjustment in Contractor's fee will be computed by determining the sum of the costs in each of the cost categories in Paragraph 13.01.B (specifically, payroll costs, Paragraph 13.01.B.1; incorporated materials and equipment costs, Paragraph 13.01.B.2; Subcontract costs, Paragraph 13.01.B.3; special consultants costs, Paragraph 13.01.B.4; and other costs, Paragraph 13.01.B.5) and applying to each such cost category sum the appropriate fee from Paragraphs 11.07.C.2.a through 11.07.C.2.e, inclusive.

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

11.08 *Change of Contract Times*

A. The Contract Times may only be changed by a Change Order. Any Change Proposal for an adjustment in the Contract Times must comply with the provisions of Paragraph 11.09. Any Claim for an adjustment in the Contract Times must comply with the provisions of Article 12.

B. Delay, disruption, and interference in the Work, and any related changes in Contract Times, are addressed in and governed by Paragraph 4.05.

11.09 *Change Proposals*

A. *Purpose and Content*: Contractor shall submit a Change Proposal to Engineer to request an adjustment in the Contract Times or Contract Price; contest an initial decision by Engineer concerning the requirements of the Contract Documents or relating to the acceptability of the Work under the Contract Documents; challenge a set-off against payment due; or seek other relief under the Contract. The Change Proposal will specify any proposed change in Contract Times or Contract Price, or other proposed relief, and explain the reason for the proposed change, with citations to any governing or applicable provisions of the Contract Documents. Each Change Proposal will address only one issue, or a set of closely related issues.

B. *Change Proposal Procedures*

1. *Submittal*: Contractor shall submit each Change Proposal to Engineer within 30 days after the start of the event giving rise thereto, or after such initial decision.

2. *Supporting Data*: The Contractor shall submit supporting data, including the proposed change in Contract Price or Contract Time (if any), to the Engineer and Owner within 15 days after the submittal of the Change Proposal.

    a. Change Proposals based on or related to delay, interruption, or interference must comply with the provisions of Paragraphs 4.05.D and 4.05.E.

    b. Change proposals related to a change of Contract Price must include full and detailed accounts of materials incorporated into the Work and labor and equipment used for the subject Work.

    The supporting data must be accompanied by a written statement that the supporting data are accurate and complete, and that any requested time or price adjustment is the entire adjustment to which Contractor believes it is entitled as a result of said event.

3. *Engineer's Initial Review*: Engineer will advise Owner regarding the Change Proposal, and consider any comments or response from Owner regarding the Change Proposal. If in its discretion Engineer concludes that additional supporting data is needed before conducting a full review and making a decision regarding the Change Proposal, then Engineer may request that Contractor submit such additional supporting data by a date specified by Engineer, prior to Engineer beginning its full review of the Change Proposal.

4. *Engineer's Full Review and Action on the Change Proposal*: Upon receipt of Contractor's supporting data (including any additional data requested by Engineer), Engineer will conduct a full review of each Change Proposal and, within 30 days after such receipt of the Contractor's supporting data, either approve the Change Proposal in whole, deny it in whole, or approve it in part and deny it in part. Such actions must be in writing, with a copy provided to Owner and Contractor. If Engineer does not take action on the Change

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

Proposal within 30 days, then either Owner or Contractor may at any time thereafter submit a letter to the other party indicating that as a result of Engineer's inaction the Change Proposal is deemed denied, thereby commencing the time for appeal of the denial under Article 12.

5. *Binding Decision*: Engineer's decision is final and binding upon Owner and Contractor, unless Owner or Contractor appeals the decision by filing a Claim under Article 12.

C. *Resolution of Certain Change Proposals*: If the Change Proposal does not involve the design (as set forth in the Drawings, Specifications, or otherwise), the acceptability of the Work, or other engineering or technical matters, then Engineer will notify the parties in writing that the Engineer is unable to resolve the Change Proposal. For purposes of further resolution of such a Change Proposal, such notice will be deemed a denial, and Contractor may choose to seek resolution under the terms of Article 12.

D. *Post-Completion*: Contractor shall not submit any Change Proposals after Engineer issues a written recommendation of final payment pursuant to Paragraph 15.06.B.

11.10 *Notification to Surety*

A. If the provisions of any bond require notice to be given to a surety of any change affecting the general scope of the Work or the provisions of the Contract Documents (including, but not limited to, Contract Price or Contract Times), the giving of any such notice will be Contractor's responsibility. The amount of each applicable bond will be adjusted to reflect the effect of any such change.

ARTICLE 12—CLAIMS

12.01 *Claims*

A. *Claims Process*: The following disputes between Owner and Contractor are subject to the Claims process set forth in this article:

1. Appeals by Owner or Contractor of Engineer's decisions regarding Change Proposals;

2. Owner demands for adjustments in the Contract Price or Contract Times, or other relief under the Contract Documents;

3. Disputes that Engineer has been unable to address because they do not involve the design (as set forth in the Drawings, Specifications, or otherwise), the acceptability of the Work, or other engineering or technical matters; and

4. Subject to the waiver provisions of Paragraph 15.07, any dispute arising after Engineer has issued a written recommendation of final payment pursuant to Paragraph 15.06.B.

B. *Submittal of Claim*: The party submitting a Claim shall deliver it directly to the other party to the Contract promptly (but in no event later than 30 days) after the start of the event giving rise thereto; in the case of appeals regarding Change Proposals within 30 days of the decision under appeal. The party submitting the Claim shall also furnish a copy to the Engineer, for its information only. The responsibility to substantiate a Claim rests with the party making the Claim. In the case of a Claim by Contractor seeking an increase in the Contract Times or Contract Price, Contractor shall certify that the Claim is made in good faith, that the supporting data are accurate and complete, and that to the best of Contractor's knowledge

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

and belief the amount of time or money requested accurately reflects the full amount to which Contractor is entitled.

C. *Review and Resolution*: The party receiving a Claim shall review it thoroughly, giving full consideration to its merits. The two parties shall seek to resolve the Claim through the exchange of information and direct negotiations. The parties may extend the time for resolving the Claim by mutual agreement. All actions taken on a Claim will be stated in writing and submitted to the other party, with a copy to Engineer.

D. *Mediation*

1. At any time after initiation of a Claim, Owner and Contractor may mutually agree to mediation of the underlying dispute. The agreement to mediate will stay the Claim submittal and response process.

2. If Owner and Contractor agree to mediation, then after 60 days from such agreement, either Owner or Contractor may unilaterally terminate the mediation process, and the Claim submittal and decision process will resume as of the date of the termination. If the mediation proceeds but is unsuccessful in resolving the dispute, the Claim submittal and decision process will resume as of the date of the conclusion of the mediation, as determined by the mediator.

3. Owner and Contractor shall each pay one-half of the mediator's fees and costs.

E. *Partial Approval*: If the party receiving a Claim approves the Claim in part and denies it in part, such action will be final and binding unless within 30 days of such action the other party invokes the procedure set forth in Article 17 for final resolution of disputes.

F. *Denial of Claim*: If efforts to resolve a Claim are not successful, the party receiving the Claim may deny it by giving written notice of denial to the other party. If the receiving party does not take action on the Claim within 90 days, then either Owner or Contractor may at any time thereafter submit a letter to the other party indicating that as a result of the inaction, the Claim is deemed denied, thereby commencing the time for appeal of the denial. A denial of the Claim will be final and binding unless within 30 days of the denial the other party invokes the procedure set forth in Article 17 for the final resolution of disputes.

G. *Final and Binding Results*: If the parties reach a mutual agreement regarding a Claim, whether through approval of the Claim, direct negotiations, mediation, or otherwise; or if a Claim is approved in part and denied in part, or denied in full, and such actions become final and binding; then the results of the agreement or action on the Claim will be incorporated in a Change Order or other written document to the extent they affect the Contract, including the Work, the Contract Times, or the Contract Price.

ARTICLE 13—COST OF THE WORK; ALLOWANCES; UNIT PRICE WORK

13.01 *Cost of the Work*

A. *Purposes for Determination of Cost of the Work*: The term Cost of the Work means the sum of all costs necessary for the proper performance of the Work at issue, as further defined below. The provisions of this Paragraph 13.01 are used for two distinct purposes:

1. To determine Cost of the Work when Cost of the Work is a component of the Contract Price, under cost-plus-fee, time-and-materials, or other cost-based terms; or

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

2. When needed to determine the value of a Change Order, Change Proposal, Claim, set-off, or other adjustment in Contract Price. When the value of any such adjustment is determined on the basis of Cost of the Work, Contractor is entitled only to those additional or incremental costs required because of the change in the Work or because of the event giving rise to the adjustment.

B. *Costs Included*: Except as otherwise may be agreed to in writing by Owner, costs included in the Cost of the Work will be in amounts no higher than those commonly incurred in the locality of the Project, will not include any of the costs itemized in Paragraph 13.01.C, and will include only the following items:

1. Payroll costs for employees in the direct employ of Contractor in the performance of the Work under schedules of job classifications agreed upon by Owner and Contractor in advance of the subject Work. Such employees include, without limitation, superintendents, foremen, safety managers, safety representatives, and other personnel employed full time on the Work. Payroll costs for employees not employed full time on the Work will be apportioned on the basis of their time spent on the Work. Payroll costs include, but are not limited to, salaries and wages plus the cost of fringe benefits, which include social security contributions, unemployment, excise, and payroll taxes, workers' compensation, health and retirement benefits, sick leave, and vacation and holiday pay applicable thereto. The expenses of performing Work outside of regular working hours, on Saturday, Sunday, or legal holidays, will be included in the above to the extent authorized by Owner.

2. Cost of all materials and equipment furnished and incorporated in the Work, including costs of transportation and storage thereof, and Suppliers' field services required in connection therewith. All cash discounts accrue to Contractor unless Owner deposits funds with Contractor with which to make payments, in which case the cash discounts will accrue to Owner. All trade discounts, rebates, and refunds and returns from sale of surplus materials and equipment will accrue to Owner, and Contractor shall make provisions so that they may be obtained.

3. Payments made by Contractor to Subcontractors for Work performed by Subcontractors. If required by Owner, Contractor shall obtain competitive bids from subcontractors acceptable to Owner and Contractor and shall deliver such bids to Owner, which will then determine, with the advice of Engineer, which bids, if any, will be acceptable. If any subcontract provides that the Subcontractor is to be paid on the basis of Cost of the Work plus a fee, the Subcontractor's Cost of the Work and fee will be determined in the same manner as Contractor's Cost of the Work and fee as provided in this Paragraph 13.01.

4. Costs of special consultants (including but not limited to engineers, architects, testing laboratories, surveyors, attorneys, and accountants) employed or retained for services specifically related to the Work.

5. Other costs consisting of the following:

a. The proportion of necessary transportation, travel, and subsistence expenses of Contractor's employees incurred in discharge of duties connected with the Work.

b. Cost, including transportation and maintenance, of all materials, supplies, equipment, machinery, appliances, office, and temporary facilities at the Site, which are

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

consumed in the performance of the Work, and cost, less market value, of such items used but not consumed which remain the property of Contractor.

1) In establishing included costs for materials such as scaffolding, plating, or sheeting, consideration will be given to the actual or the estimated life of the material for use on other projects; or rental rates may be established on the basis of purchase or salvage value of such items, whichever is less. Contractor will not be eligible for compensation for such items in an amount that exceeds the purchase cost of such item.

c. *Construction Equipment Rental*

1) Rentals of all construction equipment and machinery, and the parts thereof, in accordance with rental agreements approved by Owner as to price (including any surcharge or special rates applicable to overtime use of the construction equipment or machinery), and the costs of transportation, loading, unloading, assembly, dismantling, and removal thereof. All such costs will be in accordance with the terms of said rental agreements. The rental of any such equipment, machinery, or parts must cease when the use thereof is no longer necessary for the Work.

2) Costs for equipment and machinery owned by Contractor or a Contractor-related entity will be paid at a rate shown for such equipment in the equipment rental rate book specified in the Supplementary Conditions. An hourly rate will be computed by dividing the monthly rates by 176. These computed rates will include all operating costs.

3) With respect to Work that is the result of a Change Order, Change Proposal, Claim, set-off, or other adjustment in Contract Price ("changed Work"), included costs will be based on the time the equipment or machinery is in use on the changed Work and the costs of transportation, loading, unloading, assembly, dismantling, and removal when directly attributable to the changed Work. The cost of any such equipment or machinery, or parts thereof, must cease to accrue when the use thereof is no longer necessary for the changed Work.

d. Sales, consumer, use, and other similar taxes related to the Work, and for which Contractor is liable, as imposed by Laws and Regulations.

e. Deposits lost for causes other than negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, and royalty payments and fees for permits and licenses.

f. Losses and damages (and related expenses) caused by damage to the Work, not compensated by insurance or otherwise, sustained by Contractor in connection with the performance of the Work (except losses and damages within the deductible amounts of builder's risk or other property insurance established in accordance with Paragraph 6.04), provided such losses and damages have resulted from causes other than the negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable. Such losses include settlements made with the written consent and approval of Owner. No such losses, damages, and expenses will be included in the Cost of the Work for the purpose of determining Contractor's fee.

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

g. The cost of utilities, fuel, and sanitary facilities at the Site.

h. Minor expenses such as communication service at the Site, express and courier services, and similar petty cash items in connection with the Work.

i. The costs of premiums for all bonds and insurance that Contractor is required by the Contract Documents to purchase and maintain.

C. *Costs Excluded*: The term Cost of the Work does not include any of the following items:

1. Payroll costs and other compensation of Contractor's officers, executives, principals, general managers, engineers, architects, estimators, attorneys, auditors, accountants, purchasing and contracting agents, expediters, timekeepers, clerks, and other personnel employed by Contractor, whether at the Site or in Contractor's principal or branch office for general administration of the Work and not specifically included in the agreed upon schedule of job classifications referred to in Paragraph 13.01.B.1 or specifically covered by Paragraph 13.01.B.4. The payroll costs and other compensation excluded here are to be considered administrative costs covered by the Contractor's fee.

2. The cost of purchasing, renting, or furnishing small tools and hand tools.

3. Expenses of Contractor's principal and branch offices other than Contractor's office at the Site.

4. Any part of Contractor's capital expenses, including interest on Contractor's capital employed for the Work and charges against Contractor for delinquent payments.

5. Costs due to the negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, including but not limited to, the correction of defective Work, disposal of materials or equipment wrongly supplied, and making good any damage to property.

6. Expenses incurred in preparing and advancing Claims.

7. Other overhead or general expense costs of any kind and the costs of any item not specifically and expressly included in Paragraph 13.01.B.

D. *Contractor's Fee*

1. When the Work as a whole is performed on the basis of cost-plus-a-fee, then:

a. Contractor's fee for the Work set forth in the Contract Documents as of the Effective Date of the Contract will be determined as set forth in the Agreement.

b. for any Work covered by a Change Order, Change Proposal, Claim, set-off, or other adjustment in Contract Price on the basis of Cost of the Work, Contractor's fee will be determined as follows:

1) When the fee for the Work as a whole is a percentage of the Cost of the Work, the fee will automatically adjust as the Cost of the Work changes.

2) When the fee for the Work as a whole is a fixed fee, the fee for any additions or deletions will be determined in accordance with Paragraph 11.07.C.2.

2. When the Work as a whole is performed on the basis of a stipulated sum, or any other basis other than cost-plus-a-fee, then Contractor's fee for any Work covered by a Change

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

Order, Change Proposal, Claim, set-off, or other adjustment in Contract Price on the basis of Cost of the Work will be determined in accordance with Paragraph 11.07.C.2.

E. *Documentation and Audit*: Whenever the Cost of the Work for any purpose is to be determined pursuant to this Article 13, Contractor and pertinent Subcontractors will establish and maintain records of the costs in accordance with generally accepted accounting practices. Subject to prior written notice, Owner will be afforded reasonable access, during normal business hours, to all Contractor's accounts, records, books, correspondence, instructions, drawings, receipts, vouchers, memoranda, and similar data relating to the Cost of the Work and Contractor's fee. Contractor shall preserve all such documents for a period of three years after the final payment by Owner. Pertinent Subcontractors will afford such access to Owner, and preserve such documents, to the same extent required of Contractor.

13.02 *Allowances*

A. It is understood that Contractor has included in the Contract Price all allowances so named in the Contract Documents and shall cause the Work so covered to be performed for such sums and by such persons or entities as may be acceptable to Owner and Engineer.

B. *Cash Allowances*: Contractor agrees that:

1. the cash allowances include the cost to Contractor (less any applicable trade discounts) of materials and equipment required by the allowances to be delivered at the Site, and all applicable taxes; and

2. Contractor's costs for unloading and handling on the Site, labor, installation, overhead, profit, and other expenses contemplated for the cash allowances have been included in the Contract Price and not in the allowances, and no demand for additional payment for any of the foregoing will be valid.

C. *Owner's Contingency Allowance*: Contractor agrees that an Owner's contingency allowance, if any, is for the sole use of Owner to cover unanticipated costs.

D. Prior to final payment, an appropriate Change Order will be issued as recommended by Engineer to reflect actual amounts due Contractor for Work covered by allowances, and the Contract Price will be correspondingly adjusted.

13.03 *Unit Price Work*

A. Where the Contract Documents provide that all or part of the Work is to be Unit Price Work, initially the Contract Price will be deemed to include for all Unit Price Work an amount equal to the sum of the unit price for each separately identified item of Unit Price Work times the estimated quantity of each item as indicated in the Agreement.

B. The estimated quantities of items of Unit Price Work are not guaranteed and are solely for the purpose of comparison of Bids and determining an initial Contract Price. Payments to Contractor for Unit Price Work will be based on actual quantities.

C. Each unit price will be deemed to include an amount considered by Contractor to be adequate to cover Contractor's overhead and profit for each separately identified item.

D. Engineer will determine the actual quantities and classifications of Unit Price Work performed by Contractor. Engineer will review with Contractor the Engineer's preliminary determinations on such matters before rendering a written decision thereon (by recommendation of an Application for Payment or otherwise). Engineer's written decision

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

thereon will be final and binding (except as modified by Engineer to reflect changed factual conditions or more accurate data) upon Owner and Contractor, and the final adjustment of Contract Price will be set forth in a Change Order, subject to the provisions of the following paragraph.

E. *Adjustments in Unit Price*

1. Contractor or Owner shall be entitled to an adjustment in the unit price with respect to an item of Unit Price Work if:

a. the quantity of the item of Unit Price Work performed by Contractor differs materially and significantly from the estimated quantity of such item indicated in the Agreement; and

b. Contractor's unit costs to perform the item of Unit Price Work have changed materially and significantly as a result of the quantity change.

2. The adjustment in unit price will account for and be coordinated with any related changes in quantities of other items of Work, and in Contractor's costs to perform such other Work, such that the resulting overall change in Contract Price is equitable to Owner and Contractor.

3. Adjusted unit prices will apply to all units of that item.

ARTICLE 14—TESTS AND INSPECTIONS; CORRECTION, REMOVAL, OR ACCEPTANCE OF DEFECTIVE WORK

14.01 *Access to Work*

A. Owner, Engineer, their consultants and other representatives and personnel of Owner, independent testing laboratories, and authorities having jurisdiction have access to the Site and the Work at reasonable times for their observation, inspection, and testing. Contractor shall provide them proper and safe conditions for such access and advise them of Contractor's safety procedures and programs so that they may comply with such procedures and programs as applicable.

14.02 *Tests, Inspections, and Approvals*

A. Contractor shall give Engineer timely notice of readiness of the Work (or specific parts thereof) for all required inspections and tests, and shall cooperate with inspection and testing personnel to facilitate required inspections and tests.

B. Owner shall retain and pay for the services of an independent inspector, testing laboratory, or other qualified individual or entity to perform all inspections and tests expressly required by the Contract Documents to be furnished and paid for by Owner, except that costs incurred in connection with tests or inspections of covered Work will be governed by the provisions of Paragraph 14.05.

C. If Laws or Regulations of any public body having jurisdiction require any Work (or part thereof) specifically to be inspected, tested, or approved by an employee or other representative of such public body, Contractor shall assume full responsibility for arranging and obtaining such inspections, tests, or approvals, pay all costs in connection therewith, and furnish Engineer the required certificates of inspection or approval.

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

D. Contractor shall be responsible for arranging, obtaining, and paying for all inspections and tests required:

1. by the Contract Documents, unless the Contract Documents expressly allocate responsibility for a specific inspection or test to Owner;

2. to attain Owner's and Engineer's acceptance of materials or equipment to be incorporated in the Work;

3. by manufacturers of equipment furnished under the Contract Documents;

4. for testing, adjusting, and balancing of mechanical, electrical, and other equipment to be incorporated into the Work; and

5. for acceptance of materials, mix designs, or equipment submitted for approval prior to Contractor's purchase thereof for incorporation in the Work.

Such inspections and tests will be performed by independent inspectors, testing laboratories, or other qualified individuals or entities acceptable to Owner and Engineer.

E. If the Contract Documents require the Work (or part thereof) to be approved by Owner, Engineer, or another designated individual or entity, then Contractor shall assume full responsibility for arranging and obtaining such approvals.

F. If any Work (or the work of others) that is to be inspected, tested, or approved is covered by Contractor without written concurrence of Engineer, Contractor shall, if requested by Engineer, uncover such Work for observation. Such uncovering will be at Contractor's expense unless Contractor had given Engineer timely notice of Contractor's intention to cover the same and Engineer had not acted with reasonable promptness in response to such notice.

14.03 *Defective Work*

A. *Contractor's Obligation*: It is Contractor's obligation to assure that the Work is not defective.

B. *Engineer's Authority*: Engineer has the authority to determine whether Work is defective, and to reject defective Work.

C. *Notice of Defects*: Prompt written notice of all defective Work of which Owner or Engineer has actual knowledge will be given to Contractor.

D. *Correction, or Removal and Replacement*: Promptly after receipt of written notice of defective Work, Contractor shall correct all such defective Work, whether or not fabricated, installed, or completed, or, if Engineer has rejected the defective Work, remove it from the Project and replace it with Work that is not defective.

E. *Preservation of Warranties*: When correcting defective Work, Contractor shall take no action that would void or otherwise impair Owner's special warranty and guarantee, if any, on said Work.

F. *Costs and Damages*: In addition to its correction, removal, and replacement obligations with respect to defective Work, Contractor shall pay all claims, costs, losses, and damages arising out of or relating to defective Work, including but not limited to the cost of the inspection, testing, correction, removal, replacement, or reconstruction of such defective Work, fines levied against Owner by governmental authorities because the Work is defective, and the costs of repair or replacement of work of others resulting from defective Work. Prior to final payment, if Owner and Contractor are unable to agree as to the measure of such claims, costs,

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

losses, and damages resulting from defective Work, then Owner may impose a reasonable set-off against payments due under Article 15.

14.04 *Acceptance of Defective Work*

A. If, instead of requiring correction or removal and replacement of defective Work, Owner prefers to accept it, Owner may do so (subject, if such acceptance occurs prior to final payment, to Engineer's confirmation that such acceptance is in general accord with the design intent and applicable engineering principles, and will not endanger public safety). Contractor shall pay all claims, costs, losses, and damages attributable to Owner's evaluation of and determination to accept such defective Work (such costs to be approved by Engineer as to reasonableness), and for the diminished value of the Work to the extent not otherwise paid by Contractor. If any such acceptance occurs prior to final payment, the necessary revisions in the Contract Documents with respect to the Work will be incorporated in a Change Order. If the parties are unable to agree as to the decrease in the Contract Price, reflecting the diminished value of Work so accepted, then Owner may impose a reasonable set-off against payments due under Article 15. If the acceptance of defective Work occurs after final payment, Contractor shall pay an appropriate amount to Owner.

14.05 *Uncovering Work*

A. Engineer has the authority to require additional inspection or testing of the Work, whether or not the Work is fabricated, installed, or completed.

B. If any Work is covered contrary to the written request of Engineer, then Contractor shall, if requested by Engineer, uncover such Work for Engineer's observation, and then replace the covering, all at Contractor's expense.

C. If Engineer considers it necessary or advisable that covered Work be observed by Engineer or inspected or tested by others, then Contractor, at Engineer's request, shall uncover, expose, or otherwise make available for observation, inspection, or testing as Engineer may require, that portion of the Work in question, and provide all necessary labor, material, and equipment.

1. If it is found that the uncovered Work is defective, Contractor shall be responsible for all claims, costs, losses, and damages arising out of or relating to such uncovering, exposure, observation, inspection, and testing, and of satisfactory replacement or reconstruction (including but not limited to all costs of repair or replacement of work of others); and pending Contractor's full discharge of this responsibility the Owner shall be entitled to impose a reasonable set-off against payments due under Article 15.

2. If the uncovered Work is not found to be defective, Contractor shall be allowed an increase in the Contract Price or an extension of the Contract Times, directly attributable to such uncovering, exposure, observation, inspection, testing, replacement, and reconstruction. If the parties are unable to agree as to the amount or extent thereof, then Contractor may submit a Change Proposal within 30 days of the determination that the Work is not defective.

14.06 *Owner May Stop the Work*

A. If the Work is defective, or Contractor fails to supply sufficient skilled workers or suitable materials or equipment, or fails to perform the Work in such a way that the completed Work will conform to the Contract Documents, then Owner may order Contractor to stop the Work,

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

or any portion thereof, until the cause for such order has been eliminated; however, this right of Owner to stop the Work will not give rise to any duty on the part of Owner to exercise this right for the benefit of Contractor, any Subcontractor, any Supplier, any other individual or entity, or any surety for, or employee or agent of any of them.

14.07 *Owner May Correct Defective Work*

A. If Contractor fails within a reasonable time after written notice from Engineer to correct defective Work, or to remove and replace defective Work as required by Engineer, then Owner may, after 7 days' written notice to Contractor, correct or remedy any such deficiency.

B. In exercising the rights and remedies under this Paragraph 14.07, Owner shall proceed expeditiously. In connection with such corrective or remedial action, Owner may exclude Contractor from all or part of the Site, take possession of all or part of the Work and suspend Contractor's services related thereto, and incorporate in the Work all materials and equipment stored at the Site or for which Owner has paid Contractor but which are stored elsewhere. Contractor shall allow Owner, Owner's representatives, agents and employees, Owner's other contractors, and Engineer and Engineer's consultants access to the Site to enable Owner to exercise the rights and remedies under this paragraph.

C. All claims, costs, losses, and damages incurred or sustained by Owner in exercising the rights and remedies under this Paragraph 14.07 will be charged against Contractor as set-offs against payments due under Article 15. Such claims, costs, losses and damages will include but not be limited to all costs of repair, or replacement of work of others destroyed or damaged by correction, removal, or replacement of Contractor's defective Work.

D. Contractor shall not be allowed an extension of the Contract Times because of any delay in the performance of the Work attributable to the exercise by Owner of Owner's rights and remedies under this Paragraph 14.07.

ARTICLE 15—PAYMENTS TO CONTRACTOR; SET-OFFS; COMPLETION; CORRECTION PERIOD

15.01 *Progress Payments*

A. *Basis for Progress Payments*: The Schedule of Values established as provided in Article 2 will serve as the basis for progress payments and will be incorporated into a form of Application for Payment acceptable to Engineer. Progress payments for Unit Price Work will be based on the number of units completed during the pay period, as determined under the provisions of Paragraph 13.03. Progress payments for cost-based Work will be based on Cost of the Work completed by Contractor during the pay period.

B. *Applications for Payments*

1. At least 20 days before the date established in the Agreement for each progress payment (but not more often than once a month), Contractor shall submit to Engineer for review an Application for Payment filled out and signed by Contractor covering the Work completed as of the date of the Application and accompanied by such supporting documentation as is required by the Contract Documents.

2. If payment is requested on the basis of materials and equipment not incorporated in the Work but delivered and suitably stored at the Site or at another location agreed to in writing, the Application for Payment must also be accompanied by: (a) a bill of sale, invoice, copies of subcontract or purchase order payments, or other documentation

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

establishing full payment by Contractor for the materials and equipment; (b) at Owner's request, documentation warranting that Owner has received the materials and equipment free and clear of all Liens; and (c) evidence that the materials and equipment are covered by appropriate property insurance, a warehouse bond, or other arrangements to protect Owner's interest therein, all of which must be satisfactory to Owner.

3. Beginning with the second Application for Payment, each Application must include an affidavit of Contractor stating that all previous progress payments received by Contractor have been applied to discharge Contractor's legitimate obligations associated with prior Applications for Payment.

4. The amount of retainage with respect to progress payments will be as stipulated in the Agreement.

C. *Review of Applications*

1. Engineer will, within 10 days after receipt of each Application for Payment, including each resubmittal, either indicate in writing a recommendation of payment and present the Application to Owner, or return the Application to Contractor indicating in writing Engineer's reasons for refusing to recommend payment. In the latter case, Contractor may make the necessary corrections and resubmit the Application.

2. Engineer's recommendation of any payment requested in an Application for Payment will constitute a representation by Engineer to Owner, based on Engineer's observations of the executed Work as an experienced and qualified design professional, and on Engineer's review of the Application for Payment and the accompanying data and schedules, that to the best of Engineer's knowledge, information and belief:

   a. the Work has progressed to the point indicated;

   b. the quality of the Work is generally in accordance with the Contract Documents (subject to an evaluation of the Work as a functioning whole prior to or upon Substantial Completion, the results of any subsequent tests called for in the Contract Documents, a final determination of quantities and classifications for Unit Price Work under Paragraph 13.03, and any other qualifications stated in the recommendation); and

   c. the conditions precedent to Contractor's being entitled to such payment appear to have been fulfilled in so far as it is Engineer's responsibility to observe the Work.

3. By recommending any such payment Engineer will not thereby be deemed to have represented that:

   a. inspections made to check the quality or the quantity of the Work as it has been performed have been exhaustive, extended to every aspect of the Work in progress, or involved detailed inspections of the Work beyond the responsibilities specifically assigned to Engineer in the Contract; or

   b. there may not be other matters or issues between the parties that might entitle Contractor to be paid additionally by Owner or entitle Owner to withhold payment to Contractor.

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

4. Neither Engineer's review of Contractor's Work for the purposes of recommending payments nor Engineer's recommendation of any payment, including final payment, will impose responsibility on Engineer:

    a. to supervise, direct, or control the Work;

    b. for the means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto;

    c. for Contractor's failure to comply with Laws and Regulations applicable to Contractor's performance of the Work;

    d. to make any examination to ascertain how or for what purposes Contractor has used the money paid by Owner; or

    e. to determine that title to any of the Work, materials, or equipment has passed to Owner free and clear of any Liens.

5. Engineer may refuse to recommend the whole or any part of any payment if, in Engineer's opinion, it would be incorrect to make the representations to Owner stated in Paragraph 15.01.C.2.

6. Engineer will recommend reductions in payment (set-offs) necessary in Engineer's opinion to protect Owner from loss because:

    a. the Work is defective, requiring correction or replacement;

    b. the Contract Price has been reduced by Change Orders;

    c. Owner has been required to correct defective Work in accordance with Paragraph 14.07, or has accepted defective Work pursuant to Paragraph 14.04;

    d. Owner has been required to remove or remediate a Hazardous Environmental Condition for which Contractor is responsible; or

    e. Engineer has actual knowledge of the occurrence of any of the events that would constitute a default by Contractor and therefore justify termination for cause under the Contract Documents.

D. *Payment Becomes Due*

1. Ten days after presentation of the Application for Payment to Owner with Engineer's recommendation, the amount recommended (subject to any Owner set-offs) will become due, and when due will be paid by Owner to Contractor.

E. *Reductions in Payment by Owner*

1. In addition to any reductions in payment (set-offs) recommended by Engineer, Owner is entitled to impose a set-off against payment based on any of the following:

    a. Claims have been made against Owner based on Contractor's conduct in the performance or furnishing of the Work, or Owner has incurred costs, losses, or damages resulting from Contractor's conduct in the performance or furnishing of the Work, including but not limited to claims, costs, losses, or damages from workplace injuries, adjacent property damage, non-compliance with Laws and Regulations, and patent infringement;

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

b. Contractor has failed to take reasonable and customary measures to avoid damage, delay, disruption, and interference with other work at or adjacent to the Site;

c. Contractor has failed to provide and maintain required bonds or insurance;

d. Owner has been required to remove or remediate a Hazardous Environmental Condition for which Contractor is responsible;

e. Owner has incurred extra charges or engineering costs related to submittal reviews, evaluations of proposed substitutes, tests and inspections, or return visits to manufacturing or assembly facilities;

f. The Work is defective, requiring correction or replacement;

g. Owner has been required to correct defective Work in accordance with Paragraph 14.07, or has accepted defective Work pursuant to Paragraph 14.04;

h. The Contract Price has been reduced by Change Orders;

i. An event has occurred that would constitute a default by Contractor and therefore justify a termination for cause;

j. Liquidated or other damages have accrued as a result of Contractor's failure to achieve Milestones, Substantial Completion, or final completion of the Work;

k. Liens have been filed in connection with the Work, except where Contractor has delivered a specific bond satisfactory to Owner to secure the satisfaction and discharge of such Liens; or

l. Other items entitle Owner to a set-off against the amount recommended.

2. If Owner imposes any set-off against payment, whether based on its own knowledge or on the written recommendations of Engineer, Owner will give Contractor immediate written notice (with a copy to Engineer) stating the reasons for such action and the specific amount of the reduction, and promptly pay Contractor any amount remaining after deduction of the amount so withheld. Owner shall promptly pay Contractor the amount so withheld, or any adjustment thereto agreed to by Owner and Contractor, if Contractor remedies the reasons for such action. The reduction imposed will be binding on Contractor unless it duly submits a Change Proposal contesting the reduction.

3. Upon a subsequent determination that Owner's refusal of payment was not justified, the amount wrongfully withheld will be treated as an amount due as determined by Paragraph 15.01.D.1 and subject to interest as provided in the Agreement.

15.02 *Contractor's Warranty of Title*

A. Contractor warrants and guarantees that title to all Work, materials, and equipment furnished under the Contract will pass to Owner free and clear of (1) all Liens and other title defects, and (2) all patent, licensing, copyright, or royalty obligations, no later than 7 days after the time of payment by Owner.

15.03 *Substantial Completion*

A. When Contractor considers the entire Work ready for its intended use Contractor shall notify Owner and Engineer in writing that the entire Work is substantially complete and request that Engineer issue a certificate of Substantial Completion. Contractor shall at the same time

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

submit to Owner and Engineer an initial draft of punch list items to be completed or corrected before final payment.

B. Promptly after Contractor's notification, Owner, Contractor, and Engineer shall make an inspection of the Work to determine the status of completion. If Engineer does not consider the Work substantially complete, Engineer will notify Contractor in writing giving the reasons therefor.

C. If Engineer considers the Work substantially complete, Engineer will deliver to Owner a preliminary certificate of Substantial Completion which will fix the date of Substantial Completion. Engineer shall attach to the certificate a punch list of items to be completed or corrected before final payment. Owner shall have 7 days after receipt of the preliminary certificate during which to make written objection to Engineer as to any provisions of the certificate or attached punch list. If, after considering the objections to the provisions of the preliminary certificate, Engineer concludes that the Work is not substantially complete, Engineer will, within 14 days after submission of the preliminary certificate to Owner, notify Contractor in writing that the Work is not substantially complete, stating the reasons therefor. If Owner does not object to the provisions of the certificate, or if despite consideration of Owner's objections Engineer concludes that the Work is substantially complete, then Engineer will, within said 14 days, execute and deliver to Owner and Contractor a final certificate of Substantial Completion (with a revised punch list of items to be completed or corrected) reflecting such changes from the preliminary certificate as Engineer believes justified after consideration of any objections from Owner.

D. At the time of receipt of the preliminary certificate of Substantial Completion, Owner and Contractor will confer regarding Owner's use or occupancy of the Work following Substantial Completion, review the builder's risk insurance policy with respect to the end of the builder's risk coverage, and confirm the transition to coverage of the Work under a permanent property insurance policy held by Owner. Unless Owner and Contractor agree otherwise in writing, Owner shall bear responsibility for security, operation, protection of the Work, property insurance, maintenance, heat, and utilities upon Owner's use or occupancy of the Work.

E. After Substantial Completion the Contractor shall promptly begin work on the punch list of items to be completed or corrected prior to final payment. In appropriate cases Contractor may submit monthly Applications for Payment for completed punch list items, following the progress payment procedures set forth above.

F. Owner shall have the right to exclude Contractor from the Site after the date of Substantial Completion subject to allowing Contractor reasonable access to remove its property and complete or correct items on the punch list.

15.04 *Partial Use or Occupancy*

A. Prior to Substantial Completion of all the Work, Owner may use or occupy any substantially completed part of the Work which has specifically been identified in the Contract Documents, or which Owner, Engineer, and Contractor agree constitutes a separately functioning and usable part of the Work that can be used by Owner for its intended purpose without

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

significant interference with Contractor's performance of the remainder of the Work, subject to the following conditions:

1. At any time, Owner may request in writing that Contractor permit Owner to use or occupy any such part of the Work that Owner believes to be substantially complete. If and when Contractor agrees that such part of the Work is substantially complete, Contractor, Owner, and Engineer will follow the procedures of Paragraph 15.03.A through 15.03.E for that part of the Work.

2. At any time, Contractor may notify Owner and Engineer in writing that Contractor considers any such part of the Work substantially complete and request Engineer to issue a certificate of Substantial Completion for that part of the Work.

3. Within a reasonable time after either such request, Owner, Contractor, and Engineer shall make an inspection of that part of the Work to determine its status of completion. If Engineer does not consider that part of the Work to be substantially complete, Engineer will notify Owner and Contractor in writing giving the reasons therefor. If Engineer considers that part of the Work to be substantially complete, the provisions of Paragraph 15.03 will apply with respect to certification of Substantial Completion of that part of the Work and the division of responsibility in respect thereof and access thereto.

4. No use or occupancy or separate operation of part of the Work may occur prior to compliance with the requirements of Paragraph 6.04 regarding builder's risk or other property insurance.

15.05 *Final Inspection*

A. Upon written notice from Contractor that the entire Work or an agreed portion thereof is complete, Engineer will promptly make a final inspection with Owner and Contractor and will notify Contractor in writing of all particulars in which this inspection reveals that the Work, or agreed portion thereof, is incomplete or defective. Contractor shall immediately take such measures as are necessary to complete such Work or remedy such deficiencies.

15.06 *Final Payment*

A. *Application for Payment*

1. After Contractor has, in the opinion of Engineer, satisfactorily completed all corrections identified during the final inspection and has delivered, in accordance with the Contract Documents, all maintenance and operating instructions, schedules, guarantees, bonds, certificates or other evidence of insurance, certificates of inspection, annotated record documents (as provided in Paragraph 7.12), and other documents, Contractor may make application for final payment.

2. The final Application for Payment must be accompanied (except as previously delivered) by:

   a. all documentation called for in the Contract Documents;

   b. consent of the surety, if any, to final payment;

   c. satisfactory evidence that all title issues have been resolved such that title to all Work, materials, and equipment has passed to Owner free and clear of any Liens or other title defects, or will so pass upon final payment.

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

d. a list of all duly pending Change Proposals and Claims; and

e. complete and legally effective releases or waivers (satisfactory to Owner) of all Lien rights arising out of the Work, and of Liens filed in connection with the Work.

3. In lieu of the releases or waivers of Liens specified in Paragraph 15.06.A.2 and as approved by Owner, Contractor may furnish receipts or releases in full and an affidavit of Contractor that: (a) the releases and receipts include all labor, services, material, and equipment for which a Lien could be filed; and (b) all payrolls, material and equipment bills, and other indebtedness connected with the Work for which Owner might in any way be responsible, or which might in any way result in liens or other burdens on Owner's property, have been paid or otherwise satisfied. If any Subcontractor or Supplier fails to furnish such a release or receipt in full, Contractor may furnish a bond or other collateral satisfactory to Owner to indemnify Owner against any Lien, or Owner at its option may issue joint checks payable to Contractor and specified Subcontractors and Suppliers.

B. *Engineer's Review of Final Application and Recommendation of Payment*: If, on the basis of Engineer's observation of the Work during construction and final inspection, and Engineer's review of the final Application for Payment and accompanying documentation as required by the Contract Documents, Engineer is satisfied that the Work has been completed and Contractor's other obligations under the Contract have been fulfilled, Engineer will, within 10 days after receipt of the final Application for Payment, indicate in writing Engineer's recommendation of final payment and present the final Application for Payment to Owner for payment. Such recommendation will account for any set-offs against payment that are necessary in Engineer's opinion to protect Owner from loss for the reasons stated above with respect to progress payments. Otherwise, Engineer will return the Application for Payment to Contractor, indicating in writing the reasons for refusing to recommend final payment, in which case Contractor shall make the necessary corrections and resubmit the Application for Payment.

C. *Notice of Acceptability*: In support of its recommendation of payment of the final Application for Payment, Engineer will also give written notice to Owner and Contractor that the Work is acceptable, subject to stated limitations in the notice and to the provisions of Paragraph 15.07.

D. *Completion of Work*: The Work is complete (subject to surviving obligations) when it is ready for final payment as established by the Engineer's written recommendation of final payment and issuance of notice of the acceptability of the Work.

E. *Final Payment Becomes Due*: Upon receipt from Engineer of the final Application for Payment and accompanying documentation, Owner shall set off against the amount recommended by Engineer for final payment any further sum to which Owner is entitled, including but not limited to set-offs for liquidated damages and set-offs allowed under the provisions of this Contract with respect to progress payments. Owner shall pay the resulting balance due to Contractor within 30 days of Owner's receipt of the final Application for Payment from Engineer.

15.07 *Waiver of Claims*

A. By making final payment, Owner waives its claim or right to liquidated damages or other damages for late completion by Contractor, except as set forth in an outstanding Claim,

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

appeal under the provisions of Article 17, set-off, or express reservation of rights by Owner. Owner reserves all other claims or rights after final payment.

B. The acceptance of final payment by Contractor will constitute a waiver by Contractor of all claims and rights against Owner other than those pending matters that have been duly submitted as a Claim, or appealed under the provisions of Article 17.

15.08 *Correction Period*

A. If within one year after the date of Substantial Completion (or such longer period of time as may be prescribed by the Supplementary Conditions or the terms of any applicable special guarantee required by the Contract Documents), Owner gives Contractor written notice that any Work has been found to be defective, or that Contractor's repair of any damages to the Site or adjacent areas has been found to be defective, then after receipt of such notice of defect Contractor shall promptly, without cost to Owner and in accordance with Owner's written instructions:

1. correct the defective repairs to the Site or such adjacent areas;
2. correct such defective Work;
3. remove the defective Work from the Project and replace it with Work that is not defective, if the defective Work has been rejected by Owner, and
4. satisfactorily correct or repair or remove and replace any damage to other Work, to the work of others, or to other land or areas resulting from the corrective measures.

B. Owner shall give any such notice of defect within 60 days of the discovery that such Work or repairs is defective. If such notice is given within such 60 days but after the end of the correction period, the notice will be deemed a notice of defective Work under Paragraph 7.17.B.

C. If, after receipt of a notice of defect within 60 days and within the correction period, Contractor does not promptly comply with the terms of Owner's written instructions, or in an emergency where delay would cause serious risk of loss or damage, Owner may have the defective Work corrected or repaired or may have the rejected Work removed and replaced. Contractor shall pay all costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such correction or repair or such removal and replacement (including but not limited to all costs of repair or replacement of work of others). Contractor's failure to pay such costs, losses, and damages within 10 days of invoice from Owner will be deemed the start of an event giving rise to a Claim under Paragraph 12.01.B, such that any related Claim must be brought within 30 days of the failure to pay.

D. In special circumstances where a particular item of equipment is placed in continuous service before Substantial Completion of all the Work, the correction period for that item may start to run from an earlier date if so provided in the Specifications.

E. Where defective Work (and damage to other Work resulting therefrom) has been corrected or removed and replaced under this paragraph, the correction period hereunder with respect to such Work will be extended for an additional period of one year after such correction or removal and replacement has been satisfactorily completed.

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

F. Contractor's obligations under this paragraph are in addition to all other obligations and warranties. The provisions of this paragraph are not to be construed as a substitute for, or a waiver of, the provisions of any applicable statute of limitation or repose.

ARTICLE 16—SUSPENSION OF WORK AND TERMINATION

16.01 *Owner May Suspend Work*

A. At any time and without cause, Owner may suspend the Work or any portion thereof for a period of not more than 90 consecutive days by written notice to Contractor and Engineer. Such notice will fix the date on which Work will be resumed. Contractor shall resume the Work on the date so fixed. Contractor shall be entitled to an adjustment in the Contract Price or an extension of the Contract Times directly attributable to any such suspension. Any Change Proposal seeking such adjustments must be submitted no later than 30 days after the date fixed for resumption of Work.

16.02 *Owner May Terminate for Cause*

A. The occurrence of any one or more of the following events will constitute a default by Contractor and justify termination for cause:

1. Contractor's persistent failure to perform the Work in accordance with the Contract Documents (including, but not limited to, failure to supply sufficient skilled workers or suitable materials or equipment, or failure to adhere to the Progress Schedule);

2. Failure of Contractor to perform or otherwise to comply with a material term of the Contract Documents;

3. Contractor's disregard of Laws or Regulations of any public body having jurisdiction; or

4. Contractor's repeated disregard of the authority of Owner or Engineer.

B. If one or more of the events identified in Paragraph 16.02.A occurs, then after giving Contractor (and any surety) 10 days' written notice that Owner is considering a declaration that Contractor is in default and termination of the Contract, Owner may proceed to:

1. declare Contractor to be in default, and give Contractor (and any surety) written notice that the Contract is terminated; and

2. enforce the rights available to Owner under any applicable performance bond.

C. Subject to the terms and operation of any applicable performance bond, if Owner has terminated the Contract for cause, Owner may exclude Contractor from the Site, take possession of the Work, incorporate in the Work all materials and equipment stored at the Site or for which Owner has paid Contractor but which are stored elsewhere, and complete the Work as Owner may deem expedient.

D. Owner may not proceed with termination of the Contract under Paragraph 16.02.B if Contractor within 7 days of receipt of notice of intent to terminate begins to correct its failure to perform and proceeds diligently to cure such failure.

E. If Owner proceeds as provided in Paragraph 16.02.B, Contractor shall not be entitled to receive any further payment until the Work is completed. If the unpaid balance of the Contract Price exceeds the cost to complete the Work, including all related claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects,

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

attorneys, and other professionals) sustained by Owner, such excess will be paid to Contractor. If the cost to complete the Work including such related claims, costs, losses, and damages exceeds such unpaid balance, Contractor shall pay the difference to Owner. Such claims, costs, losses, and damages incurred by Owner will be reviewed by Engineer as to their reasonableness and, when so approved by Engineer, incorporated in a Change Order. When exercising any rights or remedies under this paragraph, Owner shall not be required to obtain the lowest price for the Work performed.

F. Where Contractor's services have been so terminated by Owner, the termination will not affect any rights or remedies of Owner against Contractor then existing or which may thereafter accrue, or any rights or remedies of Owner against Contractor or any surety under any payment bond or performance bond. Any retention or payment of money due Contractor by Owner will not release Contractor from liability.

G. If and to the extent that Contractor has provided a performance bond under the provisions of Paragraph 6.01.A, the provisions of that bond will govern over any inconsistent provisions of Paragraphs 16.02.B and 16.02.D.

16.03 *Owner May Terminate for Convenience*

A. Upon 7 days' written notice to Contractor and Engineer, Owner may, without cause and without prejudice to any other right or remedy of Owner, terminate the Contract. In such case, Contractor shall be paid for (without duplication of any items):

1. completed and acceptable Work executed in accordance with the Contract Documents prior to the effective date of termination, including fair and reasonable sums for overhead and profit on such Work;

2. expenses sustained prior to the effective date of termination in performing services and furnishing labor, materials, or equipment as required by the Contract Documents in connection with uncompleted Work, plus fair and reasonable sums for overhead and profit on such expenses; and

3. other reasonable expenses directly attributable to termination, including costs incurred to prepare a termination for convenience cost proposal.

B. Contractor shall not be paid for any loss of anticipated profits or revenue, post-termination overhead costs, or other economic loss arising out of or resulting from such termination.

16.04 *Contractor May Stop Work or Terminate*

A. If, through no act or fault of Contractor, (1) the Work is suspended for more than 90 consecutive days by Owner or under an order of court or other public authority, or (2) Engineer fails to act on any Application for Payment within 30 days after it is submitted, or (3) Owner fails for 30 days to pay Contractor any sum finally determined to be due, then Contractor may, upon 7 days' written notice to Owner and Engineer, and provided Owner or Engineer do not remedy such suspension or failure within that time, terminate the contract and recover from Owner payment on the same terms as provided in Paragraph 16.03.

B. In lieu of terminating the Contract and without prejudice to any other right or remedy, if Engineer has failed to act on an Application for Payment within 30 days after it is submitted, or Owner has failed for 30 days to pay Contractor any sum finally determined to be due, Contractor may, 7 days after written notice to Owner and Engineer, stop the Work until payment is made of all such amounts due Contractor, including interest thereon. The

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

provisions of this paragraph are not intended to preclude Contractor from submitting a Change Proposal for an adjustment in Contract Price or Contract Times or otherwise for expenses or damage directly attributable to Contractor's stopping the Work as permitted by this paragraph.

ARTICLE 17—FINAL RESOLUTION OF DISPUTES

17.01 *Methods and Procedures*

A. *Disputes Subject to Final Resolution*: The following disputed matters are subject to final resolution under the provisions of this article:

1. A timely appeal of an approval in part and denial in part of a Claim, or of a denial in full, pursuant to Article 12; and

2. Disputes between Owner and Contractor concerning the Work, or obligations under the Contract Documents, that arise after final payment has been made.

B. *Final Resolution of Disputes*: For any dispute subject to resolution under this article, Owner or Contractor may:

1. elect in writing to invoke the dispute resolution process provided for in the Supplementary Conditions;

2. agree with the other party to submit the dispute to another dispute resolution process; or

3. if no dispute resolution process is provided for in the Supplementary Conditions or mutually agreed to, give written notice to the other party of the intent to submit the dispute to a court of competent jurisdiction.

ARTICLE 18—MISCELLANEOUS

18.01 *Giving Notice*

A. Whenever any provision of the Contract requires the giving of written notice to Owner, Engineer, or Contractor, it will be deemed to have been validly given only if delivered:

1. in person, by a commercial courier service or otherwise, to the recipient's place of business;

2. by registered or certified mail, postage prepaid, to the recipient's place of business; or

3. by e-mail to the recipient, with the words "Formal Notice" or similar in the e-mail's subject line.

18.02 *Computation of Times*

A. When any period of time is referred to in the Contract by days, it will be computed to exclude the first and include the last day of such period. If the last day of any such period falls on a Saturday or Sunday or on a day made a legal holiday by the law of the applicable jurisdiction, such day will be omitted from the computation.

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

18.03 *Cumulative Remedies*

A. The duties and obligations imposed by these General Conditions and the rights and remedies available hereunder to the parties hereto are in addition to, and are not to be construed in any way as a limitation of, any rights and remedies available to any or all of them which are otherwise imposed or available by Laws or Regulations, by special warranty or guarantee, or by other provisions of the Contract. The provisions of this paragraph will be as effective as if repeated specifically in the Contract Documents in connection with each particular duty, obligation, right, and remedy to which they apply.

18.04 *Limitation of Damages*

A. With respect to any and all Change Proposals, Claims, disputes subject to final resolution, and other matters at issue, neither Owner nor Engineer, nor any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, shall be liable to Contractor for any claims, costs, losses, or damages sustained by Contractor on or in connection with any other project or anticipated project.

18.05 *No Waiver*

A. A party's non-enforcement of any provision will not constitute a waiver of that provision, nor will it affect the enforceability of that provision or of the remainder of this Contract.

18.06 *Survival of Obligations*

A. All representations, indemnifications, warranties, and guarantees made in, required by, or given in accordance with the Contract, as well as all continuing obligations indicated in the Contract, will survive final payment, completion, and acceptance of the Work or termination of the Contract or of the services of Contractor.

18.07 *Controlling Law*

A. This Contract is to be governed by the law of the state in which the Project is located.

18.08 *Assignment of Contract*

A. Unless expressly agreed to elsewhere in the Contract, no assignment by a party to this Contract of any rights under or interests in the Contract will be binding on the other party without the written consent of the party sought to be bound; and, specifically but without limitation, money that may become due and money that is due may not be assigned without such consent (except to the extent that the effect of this restriction may be limited by law), and unless specifically stated to the contrary in any written consent to an assignment, no assignment will release or discharge the assignor from any duty or responsibility under the Contract.

18.09 *Successors and Assigns*

A. Owner and Contractor each binds itself, its successors, assigns, and legal representatives to the other party hereto, its successors, assigns, and legal representatives in respect to all covenants, agreements, and obligations contained in the Contract Documents.

18.10 *Headings*

A. Article and paragraph headings are inserted for convenience only and do not constitute parts of these General Conditions.

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

This document has important legal consequences; consultation with an attorney is encouraged with respect to its use or modification. This document should be adapted to the particular circumstances of the contemplated Project and the controlling Laws and Regulations.

SUPPLEMENTARY CONDITIONS OF THE CONSTRUCTION CONTRACT

Prepared By

EJCDC®
ENGINEERS JOINT CONTRACT DOCUMENTS COMMITTEE

ACEC
AMERICAN COUNCIL OF ENGINEERING COMPANIES

ASCE
AMERICAN SOCIETY OF CIVIL ENGINEERS

NSPE®
NATIONAL SOCIETY OF PROFESSIONAL ENGINEERS

Endorsed By

CSI®
Building Knowledge
Improving Project Delivery

NUCA
We Dig America

EJCDC® C-800, Supplementary Conditions of the Construction Contract.
Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

Copyright© 2018

National Society of Professional Engineers

1420 King Street, Alexandria, VA 22314-2794

(703) 684-2882

www.nspe.org

American Council of Engineering Companies

1015 15th Street N.W., Washington, DC 20005

(202) 347-7474

www.acec.org

American Society of Civil Engineers

1801 Alexander Bell Drive, Reston, VA 20191-4400

(800) 548-2723

www.asce.org

The copyright for this EJCDC document is owned jointly by the three sponsoring organizations listed above. The National Society of Professional Engineers is the Copyright Administrator for the EJCDC documents; please direct all inquiries regarding EJCDC copyrights to NSPE.

NOTE: EJCDC publications may be purchased at www.ejcdc.org, or from any of the sponsoring organizations above.

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

SUPPLEMENTARY CONDITIONS OF THE CONSTRUCTION CONTRACT

TABLE OF CONTENTS

Page

Article 1— Definitions and Terminology 1

Article 2— Preliminary Matters 1

Article 3— Contract Documents: Intent, Requirements, Reuse 4

Article 4— Commencement and Progress of the Work 4

Article 5— Site, Subsurface and Physical Conditions, Hazardoud Environmental Conditions 6

Article 6— Bonds and Insurance 9

Article 7— Contractor's Responsibilities 16

Article 8— Other Work at the Site 18

Article 9— Owner's Responsibilities ..... **Error! Bookmark not defined.**

Article 10— Engineer's Status During Construction 18

Article 11— Changes to the Contract 19

Article 12— Claims 20

Article 13— Cost of Work; Allowances, Unit Price Work 20

Article 14— Tests and Inspections; Correction, Removal, or Accceptance of Defective Work 21

Article 15— Payments to Contractor, Set Offs; Completions; Correction Period 22

Article 16— Suspension of Work and Termination 27

Article 17— Final Resolutions of Disputes 27

Article 18— Miscellaneous 27

Exhibit A— Software Requirements for Electronic Document Exchange ..... **Error! Bookmark not defined.**

Exhibit B— Foreseeable Bad Weather Days ..... **Error! Bookmark not defined.**

Exhibit C— Geotechnical Baseline Report Supplement to the Supplementary Conditions **Error! Bookmark not defined.**

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

SUPPLEMENTARY CONDITIONS OF THE CONSTRUCTION CONTRACT

These Supplementary Conditions amend or supplement EJCDC® C-700, Standard General Conditions of the Construction Contract (2018). The General Conditions remain in full force and effect except as amended.

The terms used in these Supplementary Conditions have the meanings stated in the General Conditions. Additional terms used in these Supplementary Conditions have the meanings stated below, which are applicable to both the singular and plural thereof.

The address system used in these Supplementary Conditions is the same as the address system used in the General Conditions, with the prefix "SC" added—for example, “Paragraph SC-4.05.”

ARTICLE 1—DEFINITIONS AND TERMINOLOGY

1.01 *Defined Terms*

SC-1.01 Amend the following definitions in paragraph 1.01.A:

3. Application for Payment: Strike out the word “Engineer” and insert the word “Owner” in its place.

9. Change Proposal: Strike out the following language: “contesting an initial decision by Engineer concerning the requirements of the Contract Documents or the acceptability of Work under the Contract Documents;”

10. Claim: Delete paragraph 1.10 in its entirety and insert the following in its place:

“10. *Claim*

a. demand or assertion by Owner directly to Contractor, duly submitted in compliance with the procedural requirements set forth herein, seeking an adjustment of Contract Price or Contract Times; seeking resolution of a contractual issue that Owner has declined to address; or seeking other relief with respect to the terms of the Contract.

b. A demand or assertion by Contractor directly to Owner, duly submitted in compliance with the procedural requirements set forth herein, c or seeking resolution of a contractual issue that Owner has declined to address.

c. A demand or assertion by Owner or Contractor, duly submitted in compliance with the procedural requirements set forth herein, made pursuant to Paragraph 12.01.A.4, concerning disputes on final payment.

d. A demand for money or services by a third party is not a Claim.

11. Constituent of Concern: Insert the words “pollutants, contaminants,” before the words “and any substance”.

16. Contractor: Strike out the word “Contractor” and insert the words “Contractor or Prime Contractor” in its place.

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

18. Drawings: Add the following new sentence to the end of the definition: “Drawings may also be described as Plans.”

23. Field Order: Strike out the word “Engineer” and insert the word “Owner” in its place.

35. Schedule of Submittals: Strike out the word “Engineer” and insert the word “Owner” in its place.

41. Submittal: Strike out the word “Engineer” in all locations where it appears in the paragraph and insert the word “Owner” in its place.

42. Substantial Completion: Strike out the word “Engineer” in all locations where it appears in the paragraph and insert the word “Owner” in its place.

    Add the following language to the end of the first sentence: "and a Certificate of Substantial Completion has been completed."

46. Technical Data: Delete Paragraph 46.b in its entirety and insert the language “[Deleted]” in its place.

50. Work Change Directive: In the first sentence strike out the words “and recommended by Engineer”.

Add the following new definitions to the end of paragraph 1.01.A:

“51. *Final Completion* – The time when all work is complete, including all punch list items, and all documents required for occupancy of the facility are completed and submitted to the Owner. These documents include, but are not limited to, Certificate of Occupancy, Letters of Approval from various regulatory agencies, inspection certificates, and all other items as required in paragraph 15.06."

“52. *General Contractor* – The person, firm, or corporation with whom Owner has entered into an Agreement for work, general trades, or complete work less a part of the work."

“53. *Without exception* – The term ‘without exception’, when used in the Contract Documents following the name of a Supplier or a proprietary item of equipment, product, or material, shall mean that the sources of the product are limited to the listed Suppliers or products and that no like, equivalent, or ‘or-equal’ item and no substitution will be considered.”

“54. *Written Notice* – Notice to any party which is in writing and which shall be considered delivered and the service thereof completed once posted by certified or registered mail to the party to whom the notice is sent at its last given address or delivered in person to said party or its authorized representative on the work."

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

1.02 *Terminology*

SC-1.02 Amend paragraph 1.02.B by inserting the language “and/or Owner” after each use of the word “Engineer” in the first and second sentence.

SC-1.02 Amend paragraph 1.02.D by striking the word “Engineer’s” and inserting the word “Owner’s” in its place.

SC-1.02 Add the following new paragraph immediately after Paragraph G:

H. Imperative Mood. These specifications are written to the Bidder before the award of the Contract and to the Contractor after award of the Contract. The sentences that direct the Contractor to perform work are mostly written as commands. For example, a requirement to provide cold-weather protection would be expressed as, 'Provide cold-weather protection for concrete,' rather than 'The Contractor shall provide cold-weather protection for concrete.' In the imperative mood, the subject "the Bidder" or "the Contractor" is understood.

I. Shown. When this term is used in the specifications, it means “shown on the drawings” unless stated otherwise.

ARTICLE 2—PRELIMINARY MATTERS

2.02 *Copies of Documents*

SC-2.02 Delete Paragraphs 2.02.A. and 2.02.B. in their entirety and insert the following in their place:

A. Owner shall furnish to Contractor up to ten printed or hard copies of the Drawings and Project Manual. Two (2) sets of contract drawings and specifications will be furnished the Contractor without charge. Additional sets will be furnished upon request at the cost of reproduction. The Contractor shall keep one (1) set of approved plans and specifications on the site of the work. This set shall be kept current by addition of all approved changes, addenda and amendments thereto. One set of as-built plans shall be returned to the Owner after the project is complete.

The plans and specifications are intended to be complementary; but should any discrepancy appear or any misunderstanding arise as to the import of anything contained in either, the decision of the District shall be final and binding on the Contractor. The District may make any corrections of errors or omissions in the drawings and specifications when such corrections are necessary for the proper fulfillment of their intention as construed by the District.

All work or materials shown on the plans and not mentioned in the specifications or any work specified and not shown on the plans, shall be furnished, performed and done by the Contractor as if the same were both mentioned in the specifications and shown on the plans.

Should the Contractor in preparing its bid find anything necessary for the work that is not mentioned in the specifications or shown on the plans, or any discrepancy, it shall notify the District so that such items may be included. Should the Contractor fail to notify the District of such items, it will be assumed that its bid included everything necessary for the complete construction in the spirit and intent of the designs shown.

In case of discrepancy, figure dimensions shall govern over scale dimensions, large-scale details shall govern over small-scale drawings, plans shall govern over specifications, detailed

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

technical specifications shall govern over general specifications, and the more restrictive specifications shall prevail.

Owner shall furnish to Contractor and one copy of the Contract in electronic portable document format (PDF). Additional printed copies will be furnished upon request at the cost of reproduction.

2.03 *Before Starting Construction*

SC-2.03 Amend Paragraph 2.03.A by striking out the word "Engineer" and inserting the word "Owner" in its place.

2.04 *Preconstruction Conference; Designation of Authorized Representatives*

SC-2.04 Delete Paragraph 2.04.A in its entirety and insert the following in its place:

A. If requested by Owner, within 20 days after the Contract Times start to run, but before any work at the Site is started, a conference attended by Contractor, Owner, and others as appropriate will be held to establish a working understanding among the parties as to the Work and to discuss the schedules referred to in paragraph 2.03.A, procedures for handling Shop Drawings and other submittals, processing Applications for Payment, and maintaining required records.

2.05 *Acceptance of Schedules*

SC-2.05 Amend Paragraph 2.05.A, including Paragraphs 2.05.A.1 through 2.05.A.3, by striking out the word "Engineer" in all locations where it appears in the paragraphs and inserting the word "Owner" in its place.

ARTICLE 3—CONTRACT DOCUMENTS: INTENT, REQUIREMENTS, REUSE

3.01 *Intent*

SC-3.01 Delete Paragraph 3.01.C in its entirety and insert the language "[Deleted]" in its place.

SC-3.01 Amend Paragraph 3.01.E by striking out the word "Engineer" in all locations where it appears in the paragraph and inserting the word "Owner" in its place.

3.02 *Reference Standards*

SC-3.02 Delete Paragraph 3.02A.2 in its entirety and insert the following in its place:

2. No provision of any such standard specification, manual, reference standard, or code, and no instruction of a Supplier, will be effective to change the duties or responsibilities of Owner, Contractor, or Engineer from those set forth in the Contract Documents. No such provision or instruction shall be effective to assign to Owner or Engineer any duty or authority to supervise or direct the performance of the Work, or any duty or authority to undertake responsibility inconsistent with the Contract Documents.

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

3.03 *Reporting and Resolving Discrepancies*

SC-3.03 Amend Paragraphs 3.03.A through 3.03A.2 by striking out the word "Engineer" in all locations where it appears in the paragraph and insert the word "Owner" in its place.

SC-3.03 Amend Paragraphs 3.03.B by striking out the word "Engineer" in all locations where it appears in the paragraph and insert the word "Owner" in its place.

3.04 *Requirements of the Contract Documents*

SC-3.04 Delete Paragraphs 3.04.A through 3.04.C in their entirety and insert the following in their place:

A. During the performance of the Work and until final payment, Contractor shall submit to the Owner in writing all matters in question concerning the requirements of the Contract Documents (sometimes referred to as requests for information or interpretation—RFIs), or relating to the acceptability of the Work under the Contract Documents, as soon as possible after such matters arise. Owner will be the interpreter of the requirements and the judge of the acceptability of the Work.

B. Owner will, with reasonable promptness, render a written clarification, interpretation, or decision on the issue submitted, or initiate an amendment or supplement to the Contract Documents. Owner's written clarification, interpretation, or decision will be final and binding on Contractor, unless it appeals by submitting a Change Proposal, and on Owner, unless it appeals by filing a Claim.

C. If Owner and Contractor are unable to agree on resolution of such a matter in question, either party may pursue resolution as provided in Article 12.

ARTICLE 4—COMMENCEMENT AND PROGRESS OF THE WORK

4.01 *Commencement of Contract Times; Notice to Proceed*

SC-4.01 Delete Paragraphs 4.01.A in its entirety and insert the following in its place:

A. The Contract Times will commence to run on the day indicated in the Notice to Proceed. The date for the Contract Times may be extended by mutual agreement between the Owner and the Contractor.

4.04 *Progress Schedule*

SC-4.04 Amend Paragraph 4.04.A.1 by striking the word "Engineer" and inserting the word "Owner" in its place.

4.05 *Delays in Contractor's Progress*

SC 4.05 Add the following new paragraph immediately after Paragraph 4.05.G:

H. In no event shall Owner be liable to Contractor, any Subcontractor, any Supplier, or any other person or organization, or to any surety for or employee or agent of any of them, for damages (including acceleration costs) arising out of or resulting from any delay.

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

ARTICLE 5—SITE, SUBSURFACE AND PHYSICAL CONDITIONS, HAZARDOUS ENVIRONMENTAL CONDITIONS

5.03 *Subsurface and Physical Conditions*

SC 5.03 Delete Paragraphs 5.03.A through 5.03.D in their entirety and insert the following in their place:

A. *Reports and Drawings*: *No reports of explorations and tests of subsurface conditions at or contiguous to the Site have been prepared, and no drawings of physical conditions in or relating to existing surface or subsurface structures at or contiguous to the Site are available.*

B. [Deleted]

C. *Reliance by Contractor on Technical Data*: Contractor may rely upon the accuracy of the Technical Data expressly identified in the Supplementary Conditions with respect to such reports and drawings, but such reports and drawings are not Contract Documents.

D. *Limitations of Other Data and Documents*: Except for such reliance on Technical Data, Contractor may not rely upon or make any claim against Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, with respect to:

1. the completeness of such reports and drawings for Contractor's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences, and procedures of construction to be employed by Contractor, and safety precautions and programs incident thereto;

2. other data, interpretations, opinions, and information contained in such reports or shown or indicated in such drawings; or

3. the contents of other Site-related documents made available to Contractor, such as record drawings from other projects at or adjacent to the Site, or Owner's archival documents concerning the Site.

5.04 *Differing Subsurface or Physical Conditions*

SC-5.04 Delete Paragraphs 5.04.B, 5.04.C, and 5.04.D in their entirety and replace them with the following:

B. Owner's Review: After receipt of written notice as required by the preceding paragraph, Owner will promptly review the subsurface or physical condition in question; determine the necessity of obtaining additional exploration or tests with respect to the condition; conclude whether the condition falls within any one or more of the differing site condition categories in Paragraph 5.04.A; obtain any pertinent cost or schedule information from Contractor; consider the Contractor's resumption of Work in connection with the subsurface or physical condition in question and the need for any change in the Drawings or Specifications; and advise Contractor in writing of its findings and conclusions.

C. [Deleted]

D. [Deleted]

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

5.05 *Underground Facilities*

SC-5.05 Delete Paragraphs 5.05.B through 5.05.F in their entirety and replace them with the following:

B. *Subsurface Utilities:*

1. Location of Subsurface Utilities. Generally, service connections are not indicated on the Drawings. Contractor shall be responsible for discovery of existing underground installations, in advance of excavating or trenching, by contacting all local utilities and by prospecting.
2. Unless it is otherwise expressly provided in the Supplementary Conditions:
    a. The location of subsurface utilities is shown on the plans from information furnished by the utility owners.
    b. The Contractor shall, no later than 2 working days, excluding Saturdays, Sundays, and legal holidays, prior to construction in the area of the subsurface utility, notify the subsurface utility Owner in writing, by telephone, or in person. The marking or locating shall be coordinated to stay approximately 2 days ahead of the planned construction.
    c. The Contractor shall alert immediately the occupants of nearby premises as to any emergency that it may create or discover at or near such premises.
    d. The Contractor shall have full responsibility for coordination of the work with owners of such underground facilities during construction, for the safety and protection thereof as provided in paragraph 7.13 and repairing any damage thereto resulting from the work, the cost of all of which will be considered as having been included in the Contract Price.
3. Where existing utilities and structures are indicated as being in the line of the proposed improvement, the Contractor shall expose them sufficiently in advance of the construction operations to permit adjustments in line or grade, if required, to eliminate interferences
4. Existing pipes or conduits crossing a trench, or otherwise exposed, shall be adequately braced and supported to prevent movement during construction.
5. Broken Utility Services
    a. Utility services broken or damaged shall be repaired at once to avoid inconvenience to customers and utility owners.
    b. Temporary arrangements, as approved by the Engineer, may be used until any damaged items can be permanently repaired.
    c. All items damaged or destroyed by construction and subsequently repaired must be properly maintained by the Contractor.
    d. Contractor must work 24 hours a day until service is restored to a damaged utility.
6. Existing Utility Relocation

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

a. Where it is necessary to relocate an existing utility or structure, the work shall be done in such manner as is necessary to restore it to a condition equal to that of the original utility or structure.

b. No such relocation shall be done until approval is received from the authority responsible for the utility or structure being changed.

C. *Notice by Contractor*: If Contractor believes that an Underground Facility that is uncovered or revealed at the Site was not shown or indicated on the Drawings, or was not shown or indicated on the Drawings with reasonable accuracy, then Contractor shall, promptly after becoming aware thereof and before further disturbing conditions affected thereby or performing any Work in connection therewith (except in an emergency as required by Paragraph 7.15), notify Owner in writing regarding such Underground Facility.

D. *Owner's Review*: Owner will:

1. promptly review the Underground Facility and conclude whether such Underground Facility was not shown or indicated on the Drawings, or was not shown or indicated with reasonable accuracy;

2. identify and communicate with the owner of the Underground Facility; if necessary issue any preliminary instructions to Contractor regarding the Contractor's resumption of Work in connection with the Underground Facility in question; and

3. obtain any pertinent cost or schedule information from Contractor; determine the extent, if any, to which a change is required in the Drawings or Specifications to reflect and document the consequences of the existence or location of the Underground Facility.

During such time, Contractor shall be responsible for the safety and protection of such Underground Facility.

E. *Owner's Statement to Contractor Regarding Underground Facility*: Owner shall issue a written statement to Contractor regarding the Underground Facility in question addressing the resumption of Work in connection with such Underground Facility, indicating whether any change in the Drawings or Specifications will be made.

F. *Early Resumption of Work*: If at any time Owner determines that Work in connection with the Underground Facility may resume prior to completion of Owner's review or Owner's issuance of its statement to Contractor, because the Underground Facility in question and conditions affected by its presence have been adequately documented, and analyzed on a preliminary basis, then the Owner may at its discretion instruct Contractor to resume such Work.

G. *Possible Price and Times Adjustments*

1. Contractor shall be entitled to an equitable adjustment in the Contract Price or Contract Times, to the extent that any existing Underground Facility at the Site that was not shown or indicated on the Drawings, or was not shown or indicated with reasonable accuracy, or any related delay, disruption, or interference, causes an increase or

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

decrease in Contractor's cost of, or time required for, performance of the Work; subject, however, to the following:

a. With respect to Work that is paid for on a unit price basis, any adjustment in Contract Price will be subject to the provisions of Paragraph 13.03;

b. Contractor's entitlement to an adjustment of the Contract Times is subject to the provisions of Paragraphs 4.05.D and 4.05.E; and

c. Contractor gave the notice required in Paragraph 5.05.C.

2. If Owner and Contractor agree regarding Contractor's entitlement to and the amount or extent of any adjustment in the Contract Price or Contract Times, then any such adjustment will be set forth in a Change Order.

3. Contractor may submit a Change Proposal regarding its entitlement to or the amount or extent of any adjustment in the Contract Price or Contract Times, no later than 30 days after Owner's issuance of the Owner's written statement to Contractor regarding the Underground Facility in question.

4. The information and data shown or indicated on the Drawings with respect to existing Underground Facilities at the Site is based on information and data (a) furnished by the owners of such Underground Facilities, or by others, (b) obtained from available records, or (c) gathered in an investigation conducted in accordance with the current edition of ASCE 38, Standard Guideline for the Collection and Depiction of Existing Subsurface Utility Data, by the American Society of Civil Engineers. If such information or data is incorrect or incomplete, Contractor's remedies are limited to those set forth in this Paragraph 5.05.G.

5.06 *Hazardous Environmental Conditions at Site*

SC-5.06 Delete Paragraph 5.06.A including subitems 5.06.A.1 through 5.06.A.3, in their entirety and replace with the following:

A. *Reports and Drawings*: The following reports and drawings related to Hazardous Environmental Conditions identified at the Site are known to Owner: (None).

SC-5.06 Amend Paragraph 5.06.B by striking the following sentence:

If no such express identification has been made, then Contractor may rely on the accuracy of the Technical Data as defined in Paragraph 1.01.A.46.b.

SC-5.06 Amend Paragraph 5.06.I by striking all words following the words "Hazardous Environmental Condition" in the first sentence and inserting the following language in its place at the end of the first sentence:

created by Owner or by anyone for whom Owner is responsible, other than Contractor and all persons, subcontractors and entities for which Contractor is responsible.

ARTICLE 6—BONDS AND INSURANCE

6.01 *Performance, Payment, and Other Bonds*

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

SC-6.01 *Performance, Payment, and Other Bonds.* Add the following paragraphs immediately after Paragraph 6.01.A:

1. *Required Performance Bond Form:* The performance bond that Contractor furnishes will be in the form of EJCDC® C-610, Performance Bond (2018 edition).
2. *Required Payment Bond Form:* The payment bond that Contractor furnishes will be in the form of EJCDC® C-615, Payment Bond (2018 edition).

Amend Paragraph 6.01D by adding the following sentence at the end of the paragraph:

The surety company shall be rated "A" by AM BEST.

6.02 *Insurance—General Provisions*

SC 6.02 Amend Paragraph 6.02.D by inserting the following language after the first sentence: Contractor shall deliver to Owner properly completed certificates of insurance prior to the start of any Work at the Site, on the forms included in the Contract Documents or such form as may be deemed acceptable by Owner.

6.03 *Contractor's Insurance*

SC 6.03 Add the following new Paragraphs immediately after 6.03.B.5:

6. cover claims arising out of pollution and excluded from the Contractor's general liability and comprehensive automobile liability policies. This insurance shall be coordinated with the Contractor's general liability policy and shall provide bodily injury and property damage coverage similar to the Contractor's general liability policy. Coverage shall include contractual liability;

7. contain a cross liability or severability of interest clause or endorsement. Insurance covering the specified additional insureds shall be primary insurance, and all other insurance carried by the additional insureds shall be excess insurance; and

8. with respect to workers' compensation and employers' liability, comprehensive automobile liability, commercial general liability, and umbrella liability insurance, and all other liability insurance specified herein to be provided by Contractor, Contractor shall require its insurance carriers to waive all rights of subrogation against Owner, Engineer, and their respective officers, directors, partners, employees, and agents.

SC-6.03 Add the following new Paragraph immediately after Paragraph 6.03.C:

D. *Other Additional Insureds:* As a supplement to the provisions of Paragraph 6.03.C of the General Conditions, the commercial general liability, automobile liability, umbrella or excess, pollution liability, and unmanned aerial vehicle liability policies must include as additional insureds (in addition to Owner and Engineer) the following: None.

E. *Workers' Compensation and Employer's Liability:* Contractor shall purchase and maintain workers' compensation and employer's liability insurance, including, as applicable, United States Longshoreman and Harbor Workers' Compensation Act, Jones Act, stop-gap employer's liability coverage for monopolistic states, and foreign voluntary workers'

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

compensation (from available sources, notwithstanding the jurisdictional requirement of Paragraph 6.02.B of the General Conditions).

Workers' Compensation and Related Policies	Policy limits of not less than:
Workers' Compensation	
State	Statutory
Applicable Federal (e.g., Longshoreman's)	Statutory
Foreign voluntary workers' compensation (employer's responsibility coverage), if applicable	Statutory
Jones Act (if applicable)	
Bodily injury by accident—each accident	$1,000,000
Bodily injury by disease—aggregate	$1,000,000
Employer's Liability	
Each accident	$1,000,000
Each employee	$1,000,000
Policy limit	$1,000,000

F. *Commercial General Liability—Claims Covered:* Contractor shall purchase and maintain commercial general liability insurance, covering all operations by or on behalf of Contractor, on an occurrence basis, against claims for:

1. damages because of bodily injury, sickness or disease, or death of any person other than Contractor's employees,
2. damages insured by reasonably available personal injury liability coverage, and
3. damages because of injury to or destruction of tangible property wherever located, including loss of use resulting therefrom.

G. *Commercial General Liability—Form and Content:* Contractor's commercial liability policy must be written on a 1996 (or later) Insurance Services Organization, Inc. (ISO) commercial general liability form (occurrence form) and include the following coverages and endorsements:

1. Products and completed operations coverage.
    a. Such insurance must be maintained for three years after final payment.
    b. Contractor shall furnish Owner and each other additional insured (as identified in the Supplementary Conditions or elsewhere in the Contract) evidence of continuation of such insurance at final payment and three years thereafter.
2. Blanket contractual liability coverage, including but not limited to coverage of Contractor's contractual indemnity obligations in Paragraph 7.18.
3. Severability of interests and no insured-versus-insured or cross-liability exclusions.
4. Underground, explosion, and collapse coverage.
5. Personal injury coverage.

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

6. Additional insured endorsements that include both ongoing operations and products and completed operations coverage through ISO Endorsements CG 20 10 10 01 and CG 20 37 10 01 (together). If Contractor demonstrates to Owner that the specified ISO endorsements are not commercially available, then Contractor may satisfy this requirement by providing equivalent endorsements.

7. For design professional additional insureds, ISO Endorsement CG 20 32 07 04 "Additional Insured—Engineers, Architects or Surveyors Not Engaged by the Named Insured" or its equivalent.

H. *Commercial General Liability—Excluded Content:* The commercial general liability insurance policy, including its coverages, endorsements, and incorporated provisions, must not include any of the following:

1. Any modification of the standard definition of "insured contract" (except to delete the railroad protective liability exclusion if Contractor is required to indemnify a railroad or others with respect to Work within 50 feet of railroad property).

2. Any exclusion for water intrusion or water damage.

3. Any provisions resulting in the erosion of insurance limits by defense costs other than those already incorporated in ISO form CG 00 01.

4. Any exclusion of coverage relating to earth subsidence or movement.

5. Any exclusion for the insured's vicarious liability, strict liability, or statutory liability (other than worker's compensation).

6. Any limitation or exclusion based on the nature of Contractor's work.

7. Any professional liability exclusion broader in effect than the most recent edition of ISO form CG 22 79.

I. *Commercial General Liability—Minimum Policy Limits*

Commercial General Liability	**Policy limits of not less than:**
General Aggregate	$1,000,000
Products—Completed Operations Aggregate	$1,000,000
Personal and Advertising Injury	$1,000,000
Bodily Injury and Property Damage—Each Occurrence	$1,000,000

J. *Automobile Liability:* Contractor shall purchase and maintain automobile liability insurance for damages because of bodily injury or death of any person or property damage arising out of the ownership, maintenance, or use of any motor vehicle. The automobile liability policy must be written on an occurrence basis.

Automobile Liability	**Policy limits of not less than:**
Bodily Injury	
Each Person	$1,000,000
Each Accident	$1,000,000

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

Automobile Liability	Policy limits of not less than:
Property Damage	
Each Accident	$1,000,000
[or]	
Combined Single Limit	
Combined Single Limit (Bodily Injury and Property Damage)	$1,000,000

K. *Umbrella or Excess Liability:* Contractor shall purchase and maintain umbrella or excess liability insurance written over the underlying employer's liability, commercial general liability, and automobile liability insurance described in the Paragraphs above. The coverage afforded must be at least as broad as that of each and every one of the underlying policies.

Excess or Umbrella Liability	Policy limits of not less than:
Each Occurrence	$4,000,000
General Aggregate	$4,000,000

L. *Railroad Protective Liability Insurance:* Prior to commencing any Work within 50 feet of railroad-owned and controlled property, Contractor shall (1) endorse its commercial general liability policy with ISO CG 24 17, removing the contractual liability exclusion for work within 50 feet of a railroad, (2) purchase and maintain railroad protective liability insurance meeting the following requirements, (3) furnish a copy of the endorsement to Owner, and (4) submit a copy of the railroad protective policy and other railroad-required documentation to the railroad, and notify Owner of such submittal.

Railroad Protective Liability Insurance	Policy limits of not less than:
Each Claim	$1,000,000
Aggregate	$1,000,000

M. *Unmanned Aerial Vehicle Liability Insurance:* If Contractor uses unmanned aerial vehicles (UAV—commonly *referred* to as drones) at the Site or in support of any aspect of the Work, Contractor shall obtain UAV liability insurance in the amounts stated; name Owner, Engineer, and all individuals and entities identified in the Supplementary Conditions as additional insureds; and provide a certificate to Owner confirming Contractor's compliance with this requirement. Such insurance will provide coverage for property damage, bodily injury or death, and invasion of privacy.

Unmanned Aerial Vehicle Liability Insurance	Policy limits of not less than:
Each Claim	$1,000,000
General Aggregate	$1,000,000

N. *Other Required Insurance:* None.

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

6.04 *Builder's Risk and Other Property Insurance*

SC-6.04 Delete Paragraphs 6.04.B through 6.04.D in their entirety and insert the following in their place:

B. *Property Insurance for Facilities of Owner Where Work Will Occur*: Contractor shall purchase and maintain property insurance coverage upon the Work at the Site in the amount of the full replacement cost thereof. This insurance shall:

1. include the interests of Owner, Contractor, Subcontractors, Engineer, Engineer's Consultants, and any other individuals or entities identified in the Supplementary Conditions, and the officers, directors, partners, employees, agents, and other consultants and subcontractors of each and any of them, each of whom is deemed to have an insurable interest and shall be listed as an additional insured;

2. be written on a Builder's Risk "all-risk" or open peril or special causes of loss policy form that shall at least include insurance for physical loss or damage to the Work, temporary buildings, false work, and materials and equipment, and shall insure against at least the following perils or causes of loss: fire, lightning, extended coverage, theft, vandalism and malicious mischief, earthquake, collapse, debris removal, demolition occasioned by enforcement of Laws and Regulations, water damage, flood, damage caused by frost and freezing, and such other perils or causes of loss as may be specifically required by the Supplementary Conditions;

3. cover materials and equipment stored at the Site or at another location that was agreed to in writing by Owner prior to being incorporated in the Work, provided that such materials and equipment have been included in an Application for Payment accepted by Owner;

4. include expenses incurred in the repair or replacement of any insured property (including, but not limited to, fees and charges of engineers and architects);

5. allow for partial utilization of the Work by Owner;

6. include testing and startup; and

7. be maintained in effect until final payment is made unless otherwise agreed to in writing by Owner, Contractor, and Engineer, with 30 days' written notice to each other additional insured to whom a certificate of insurance has been issued.

C. Contractor shall be responsible for any deductible or self-insured retention.

D. All the policies of insurance (and the certificates or other evidence thereof) required to be purchased and maintained in accordance with paragraph 6.04 shall contain a provision or endorsement that the coverage afforded will not be canceled or materially changed or renewal refused until at least 30 days prior written notice has been given to Owner and Contractor and to each other additional insured to whom a certificate of insurance has been issued and will contain waiver provisions in accordance with paragraph 6.05.

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

SC-6.04 Add the following new paragraphs immediately after 6.04.E:

F. *Builder's Risk Requirements:* The builder's risk insurance must:

1. be written on a builder's risk "all risk" policy form that at a minimum includes insurance for physical loss or damage to the Work, temporary buildings, falsework, and materials and equipment stored and in transit, and must not exclude the coverage of the following risks: fire; windstorm; hail; flood; earthquake, volcanic activity, and other earth movement; lightning; riot; civil commotion; terrorism; vehicle impact; aircraft; smoke; theft; vandalism and malicious mischief; mechanical breakdown, boiler explosion, and artificially generated electric current; collapse; explosion; debris removal; demolition occasioned by enforcement of Laws and Regulations; and water damage (other than that caused by flood).

    a. Such policy will include an exception that results in coverage for ensuing losses from physical damage or loss with respect to any defective workmanship, methods, design, or materials exclusions.

    b. If insurance against mechanical breakdown, boiler explosion, and artificially generated electric current; earthquake, volcanic activity, and other earth movement; or flood, are not commercially available under builder's risk policies, by endorsement or otherwise, such insurance will be provided through other insurance policies acceptable to Owner and Contractor.

2. cover, as insured property, at least the following: (a) the Work and all materials, supplies, machinery, apparatus, equipment, fixtures, and other property of a similar nature that are to be incorporated into or used in the preparation, fabrication, construction, erection, or completion of the Work, including Owner-furnished or assigned property; (b) spare parts inventory required within the scope of the Contract; and (c) temporary works which are not intended to form part of the permanent constructed Work but which are intended to provide working access to the Site, or to the Work under construction, or which are intended to provide temporary support for the Work under construction, including scaffolding, form work, fences, shoring, falsework, and temporary structures.

3. cover expenses incurred in the repair or replacement of any insured property (including but not limited to fees and charges of contractors, engineers, and architects).

4. extend to cover damage or loss to insured property while in temporary storage at the Site or in a storage location outside the Site (but not including property stored at the premises of a manufacturer or Supplier).

5. extend to cover damage or loss to insured property while in transit.

6. allow for the waiver of the insurer's subrogation rights, as set forth in this Contract.

7. allow for partial occupancy or use by Owner by endorsement, and without cancellation or lapse of coverage.

8. include performance/hot testing and start-up, if applicable.

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

9. be maintained in effect until the Work is complete, as set forth in Paragraph 15.06.D of the General Conditions, or until written confirmation of Owner's procurement of property insurance following Substantial Completion, whichever occurs first.

10 include as named insureds the Owner, Contractor, Subcontractors (of every tier), and any other individuals or entities required by this Contract to be insured under such builder's risk policy. For purposes of Paragraphs 6.04, 6.05, and 6.06 of the General Conditions, and this and all other corresponding Supplementary Conditions, the parties required to be insured will be referred to collectively as "insureds." In addition to Owner, Contractor, and Subcontractors of every tier, include as insureds the following: None.

11. include, in addition to the Contract Price amount, the value of the following equipment and materials to be installed by the Contractor but furnished by the Owner or third parties: None.

G. *Builder's Risk and Other Property Insurance Deductibles:* The purchaser of any required builder's risk, installation floater, or other property insurance will be responsible for costs not covered because of the application of a policy deductible.

ARTICLE 7—CONTRACTOR'S RESPONSIBILITIES

7.03 *Labor; Working Hours*

SC-7.03 Add the following new paragraphs immediately after Paragraph 7.03.C:

D. No Work shall be done between 6:00 p.m. and 7:00 a.m. without permission of Owner. However, emergency work may be done without prior permission.

E. Night Work may be undertaken as a regular procedure with the permission of Owner; such permission, however, may be revoked at any time by Owner if Contractor fails to maintain adequate equipment and supervision for the proper prosecution and control of the Work at night.

F. Contractor shall be responsible for the cost of any overtime pay or other expense incurred by the Owner for Engineer's services (including those of the Resident Project Representative, if any), Owner's representative, and construction observation services, occasioned by the performance of Work on Saturday, Sunday, any legal holiday, or as overtime on any regular work day. If Contractor is responsible but does not pay, or if the parties are unable to agree as to the amount owed, then Owner may impose a reasonable set-off against payments due under Article 15.

7.04 *Services, Materials, and Equipment*

SC 7.04 Amend Paragraph 7.04.B by striking the word "Engineer" and inserting the word "Owner" in its place.

7.05 *"Or Equals"*

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

SC-7.05 Amend Paragraphs 7.06.A, 7.06.C, 7.06.D, and 7.06.E by striking the word "Engineer" in all locations where it appears and inserting the word "Owner" in its place.

7.06 *Substitutes*

SC 7.06 Amend Paragraph 7.06. by striking out the word "Engineer" in all locations where it appears in the paragraph and inserting the word "Owner" in its place.

SC 7.06 Amend Paragraph 7.06.B by striking out the following language at the end of the first sentence:

", and to obtain comments and direction from Owner"

SC-7.06 Add the following new paragraph after paragraph 7.06.A.3.d:

4. If a proposed substitute item is accepted, all incidental costs associated with the use of the substitute including, but not limited to, redesign, claims of other Contractors, changes to electrical supply equipment, additional equipment or material required for the installation, etc., shall be at the expense of the Contractor proposing the substitute unless otherwise agreed to by the Owner.

SC 7.06 Amend Paragraph 7.06.B by striking out the word "Engineer" in all remaining locations where it appears in the paragraph and inserting the word "Owner" in its place.

7.09 *Permits*

SC 7.09 Add the following new paragraph immediately after Paragraph 7.09.A:

B. Owner will obtain and pay for the following permits: Road & Highway Encroachment Permits, Kentucky Division of Water, and Stream Crossing Permits.

7.10 *Taxes*

SC-7.10 Add the following new paragraphs immediately after Paragraph 7.10.A:

B. Owner is exempt from payment of sales and compensating use taxes. The Contract Price shall not include sales tax for building materials, fixtures, or supplies purchased by Contractor which will be permanently incorporated into a structure or improvement to real property, or will be completely consumed, in fulfilling a construction contract for the purpose of furnishing water or sewer services to the general public under KRS 139.480. Contractor agrees to utilize Kentucky Department of Revenue Form 51A383 when making sales tax exempt purchases under this Agreement.

C. It is the Contractor's responsibility to determine any applicable tax exemptions.

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

7.12 *Record Documents*

SC-7.12 Amend Paragraph 7.12.A by striking out the word "Engineer" in all locations where it appears in the paragraph and inserting the word "Owner" in its place.

7.15 *Emergencies*

SC-7.15 Amend Paragraph 7.15.A by striking out the word "Engineer" in all locations where it appears in the paragraph and inserting the word "Owner" in its place.

SC-7.15 Add the following new paragraph immediately after Paragraph 7.15.A:

B. The Contractor understands and agrees that during the performance of the Contract, it shall maintain a presence within such proximity of the Work Site which will allow it to respond to an emergency at the Work Site within one hour of receiving notice of an emergency, including emergencies occurring during non-working hours. The Contractor shall provide a list of emergency phone numbers for such purposes. If the Contractor does not have such a presence, it may satisfy this requirement by sub-contracting with a sub-contractor that does have such a presence, provided that any such sub-contractor must be approved by the Owner, in tits sole discretion, prior to the project pre-construction meeting.

7.16 *Submittals*

SC-7.16 Amend Paragraph 7.16 by striking out the word "Engineer" in all locations where it appears in the paragraph and inserting the word "Owner" in its place.

SC-7.16 Amend Paragraph 7.16.D.2 by deleting the second sentence of the paragraph.

7.17 *Contractor's General Warranty and Guarantee*

SC-7.17 Amend Paragraph 7.17 by striking out the word "Engineer" in all locations where it appears in the paragraph and inserting the word "Owner" in its place.

ARTICLE 8—OTHER WORK AT THE SITE

8.01 *Other Work*

SC-8.01 Amend Paragraph 8.01 by striking out the word "Engineer" in all locations where it appears in the paragraph and inserting the word "Owner" in its place.

ARTICLE 9 – OWNER'S RESPONSIBILITIES

9.02 *Replacement of Engineer*

SC-9.02 Delete Paragraph 9.02 in its entirety and insert the language "[Deleted]" in its place.

ARTICLE 10 - ENGINEER'S STATUS DURING CONSTRUCTION

10.01 *Owner's Representative*

SC-10.01 Delete Paragraph 10.01 in its entirety and insert the language [Deleted] in its place.

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

10.02 *Visits to Site*

SC-10.02 Amend Paragraphs 10.02.A and 10.02.B by striking out the word "Engineer" in all locations where it appears in the paragraph and inserting the word "Owner" in its place.

SC-10.02 Add the following new paragraph immediately after Paragraph 10.02.B

C. Engineer may make visits to the Site as Owner deems necessary in order to observe as an experienced and qualified design professional the progress that has been made and the quality of the various aspects of Contractor's executed Work. Based on information obtained during such visits and observations, Engineer, at the request and benefit of Owner, may determine, in general, if the Work is proceeding in accordance with the Contract Documents. Engineer will not be required to make exhaustive or continuous inspections on the Site to check the quality or quantity of the Work. Engineer's efforts will be directed toward providing for Owner a greater degree of confidence that the completed Work will conform generally to the Contract Documents. On the basis of such visits and observations, Engineer will advise Owner of the progress of the Work and will endeavor to guard Owner against defective Work.

10.04 *Engineer's Authority*

SC-10.04 Delete Paragraph 10.04 in its entirety and insert the language "[Deleted]" in its place.

10.05 *Determination for Unit Price Work*

SC-10.05 Delete Paragraph 10.05 in its entirety and inset the language "[Deleted]" in its place.

10.06 *Decision on Requirements of Contract Documents and Acceptability of Work*

SC-10.06 Delete Paragraph 10.06 in its entirety and inset the language "[Deleted]" in its place.

10.07 *Limitations on Engineer's Authority and Responsibilities*

SC-10.07 Delete Paragraph 10.07 in its entirety and inset the language "[Deleted]" in its place.

ARTICLE 11 - CHANGES TO THE CONTRACT

11.01 *Amending and Supplementing the Contract*

SC-11.01 Delete Paragraph 11.01.C in its entirety.

11.02 *Change Orders*

SC-11.02 Amend paragraph 11.02.A.3 by deleting the following language from subsection (c):

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

subject to the need for Engineer's recommendation if the change in the Work involves the design (as set forth in the Drawings, Specifications, or otherwise) or other engineering or technical matters

11.04 *Field Orders*

SC-11.04 Amend Paragraph 11.04.A by striking out the word "Engineer" and inserting the word "Owner" in its place.

11.05 *Owner-Authorized Changes in the Work*

SC-11.05 Amend Paragraph 11.05.A by deleting the last sentence of the Paragraph in its entirety.

11.08 *Change of Contract Times*

SC-11.08 Amend Paragraph 11.08.A by inserting the language "(or Milestones)" immediately following each instance of the term "Contract Times".

SC-11.08 Insert the following new sentence following the first sentence of paragraph 11.08.A:

This extension shall be the Contractor's sole and exclusive remedy for such delay.

11.09 *Change Proposals*

SC-11.09 Amend Paragraph 11.09.A by striking out the word "Engineer" in all locations where it appears in the paragraph and inserting the word "Owner" in its place.

SC-11.09 Amend Paragraph 11.09.B.3 by striking out the following language:

Engineer will advise Owner regarding the Change Proposal, and consider any comments or response from Owner regarding the Change Proposal.

SC-11.09 Amend Paragraph 11.09.B by striking out the word "Engineer" in all remaining locations where it appears in the paragraph and inserting the word "Owner" in its place.

SC-11.09 Delete Paragraph 11.09.C in its entirety and insert the language "[Deleted]" in its place.

ARTICLE 12 - CLAIMS

12.01 *Claims*

SC-12.01 Delete Paragraph 12.01.A.3 in its entirety and insert the language "[Deleted]; and" in its place.

ARTICLE 13 - COST OF WORK; ALLOWANCES, UNIT PRICE WORK

13.02 *Allowances*

SC-13.02 Amend Paragraph 13.02.A by deleting the words "and Engineer" at the end of the sentence.

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

13.03 *Unit Price Work*

SC-13.03 Amend Paragraph 13.03.E.1.a by inserting the language "(more than 25%)" immediately after the language "materially and significantly".

ARTICLE 14 - TESTS AND INSPECTIONS; CORRECTION, REMOVAL, OR ACCCEPTANCE OF DEFECTIVE WORK

14.02 *Tests, Inspections, and Approvals*

SC-14.02 Amend Paragraph 14.02.D by striking out all instances of the language "and Engineer".

SC-14.02 Amend Paragraph 14.02 by striking out the word "Engineer" in all remaining locations where it appears and inserting the word "Owner" in its place.

SC-14.02 Amend Paragraph 14.02.C by adding the following language at the end of the paragraph:

> Authorized representatives of the U.S. Environmental Protection Agency and the Kentucky Division of Water shall have access to the Work whenever it is in preparation or progress. Contractor shall provide proper facilities for such access and inspection.

14.03 *Defective Work*

SC-14.03 Amend Paragraph 14.03 by striking out the word "Engineer" in all locations where it appears in the paragraph and inserting the word "Owner" in its place.

14.04 *Acceptance of Defective Work*

SC-14.04 Amend Paragraph 14.04.A deleting the paragraph in its entirety and inserting the following in its place:

A. If, instead of requiring correction or removal and replacement of defective Work, Owner prefers to accept it, Owner may do so prior to making final payment. Contractor shall pay all claims, costs, losses, and damages attributable to Owner's evaluation of and determination to accept such defective Work, and for the diminished value of the Work to the extent not otherwise paid by Contractor. If any such acceptance occurs prior to final payment, the necessary revisions in the Contract Documents with respect to the Work will be incorporated in a Change Order, and Owner shall be entitled to an appropriate decrease in contract price, reflecting the diminished value of the work so accepted. If the acceptance of defective Work occurs after final payment, Contractor shall pay an appropriate amount to Owner.

14.05 *Uncovering Work*

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

SC-14.05 Amend Paragraph 14.05 by striking out the word “Engineer” in all locations where it appears and inserting the word “Owner” in its place.

14.07 *Owner May Correct Defective Work*

SC-14.07 Amend Paragraph 14.07.A by striking out the word “Engineer” in all locations where it appears in the paragraph and inserting the word “Owner” in its place.

ARTICLE 15 - PAYMENTS TO CONTRACTOR, SET OFFS; COMPLETIONS; CORRECTION PERIOD

15.01 *Progress Payments*

SC-15.01 Amend Paragraphs 15.01.A and 15.01.B by striking out the word “Engineer” and inserting the word “Owner” in its place.

SC-15.01 Add the following new paragraphs immediately after paragraph 15.01.B.4:

5. Contractor's Applications for Payment shall be accompanied by the documentation specified herein.

6. Payments for stored materials and equipment shall be based only upon the actual cost to Contractor of the materials and equipment and shall not include any overhead or profit to Contractor. Partial payments will not be made for undelivered materials or equipment.

7. During the progress of the Work, each Application for Payment shall be accompanied by Contractor's updated schedule of operations, or progress report, with such shop drawings schedules, procurement schedules, value of material on hand included in application, and other data specified in Contract Documents or reasonably required by Owner.

SC-15.01 Delete Paragraphs 15.01.C and 15.01.D in their entirety and insert the following in their place:

C. *Review of Applications*

1. Owner will, within 10 days after receipt of each Application for Payment, either begin processing the Application for Payment to Contractor or return the Application to Contractor indicating in writing Owner’s reasons for refusing payment. In the latter case, Contractor may make the necessary corrections and resubmit the Application.

2. Owner’s review of Contractor's Application for Payment will consider whether the following have been achieved:

a. the Work has progressed to the point indicated;

b. the quality of the Work is generally in accordance with the Contract Documents (subject to an evaluation of the Work as a functioning whole prior to or upon Substantial Completion, to the results of any subsequent tests called for in the Contract Documents, to a final determination of quantities and classifications for Unit

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

Price Work under paragraph 10.05 and 10.06, and to any other qualifications as reasonably applied by Owner); and

c. the conditions precedent to Contractor's being entitled to such payment appear to have been fulfilled in so far as Owner or Engineer has observed the Work.

3. By processing and making such payment Owner will not thereby be deemed to have represented that:

   a. inspections made to check the quality or the quantity of the Work as it has been performed have been exhaustive, extended to every aspect of the Work in progress, or involved detailed inspections of the Work; or

   b. that there may not be other matters or issues between the parties that might entitle Contractor to be paid additionally by Owner or entitle Owner to withhold payment to Contractor.

4. Neither Owner's review of Contractor's Work for the purposes of processing payments nor Owner's making any such payments, including final payment, will impose responsibility on Owner:

   a. to supervise, direct, or control the Work, or

   b. for the means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or

   c. for Contractor's performance of the Work.

   d. to make any examination to ascertain how or for what purposes Contractor has used the moneys paid on account of the Contract Price, or

   e. to determine that title to any of the Work, materials, or equipment has passed to Owner free and clear of any Liens.

5. Owner may refuse to process or make the whole or any part of any payment if, in Owner's opinion, the criteria referred to in paragraph 15.01.C.2 has not been met. Owner may also refuse to process or make any such payment or, because of subsequently discovered evidence or the results of subsequent inspections or tests, revise or revoke any such payment previously made, to such extent as may be necessary in Owner's opinion to protect Owner from loss because:

   a. the Work is defective, or completed Work has been damaged, requiring correction or replacement;

   b. the Contract Price has been reduced by Written Amendment or Change Orders;

   c. Owner has been required to correct defective Work or complete Work in accordance with paragraph 14.07; or

   d. Owner has actual knowledge of the occurrence of any of the events enumerated in paragraph 16.02.A.

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

D. Payment Becomes Due

1. Twenty-five days after presentation of the Application for Payment to Owner, the amount recommended will (subject to any Owner set-offs) become due, and when due will be paid by Owner to Contractor.

SC-15.01 Delete Paragraph 15.01.E.1 in its entirety and insert the following in its place:

Owner is entitled to impose a reduction in payment (set-off) against payment based on any of the following:

SC-15.01 Amended Paragraph 15.01.E.2 by striking out the language "(with a copy to Engineer)".

15.03 *Substantial Completion*

SC-15.03 Delete Paragraphs 15.03.A through 15.03.F in their entirety and insert the following in their place:

A. When Contractor considers the entire Work ready for its intended use Contractor shall notify Owner in writing that the entire Work is substantially complete (except for items specifically listed by Contractor as incomplete) and request that Owner issue a certificate of Substantial Completion.

B. Promptly thereafter, Owner and Contractor shall make an inspection of the Work to determine the status of completion. If Owner does not consider the Work substantially complete, Owner will notify Contractor in writing giving the reasons therefor.

1. If some or all of the Work has been determined not to be at a point of Substantial Completion and will require re-inspection or re-testing, the cost of such re-inspection or re-testing, including the cost of time, travel and living expenses, will be paid by Contractor to Owner. If Contractor does not pay, or the parties are unable to agree as to the amount owed, then Owner may impose a reasonable set-off against payments due under this Article 15.

C. If Owner considers the Work substantially complete, Owner will within 14 days after the inspection of the Work execute and deliver to Contractor a statement of Substantial Completion.

D. At the time of delivery of the certificate of Substantial Completion, Owner will deliver to Contractor a statement as to division of responsibilities pending final payment between Owner and Contractor with respect to security, operation, safety, and protection of the Work, maintenance, heat, utilities, insurance, and warranties and guarantees. Unless Owner and Contractor subsequently agree otherwise in writing, Owner's aforesaid statement will be binding on Owner and Contractor until final payment.

E. To be considered substantially complete, the following portions of the Work must be operational and ready for Owner's continuous use as intended: Water main is tested and placed into service, services are connected to the new main if applicable to the project, and rough restoration is complete.

Portions of the Work not essential to operation, which can be completed without interruption of the Owner's operation, may be completed after the Work is accepted as

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

substantially complete, and may include the following items: final restoration such as seeding and sodding.

15.04 *Partial Use or Occupancy*

SC-15.04 Delete Paragraphs 15.04.A in its entirety and replace it with the following:

A. Prior to Substantial Completion of all the Work, Owner may use or occupy any substantially completed part of the Work which has specifically been identified in the Contract Documents, or which Owner and Contractor agree constitutes a separately functioning and usable part of the Work that can be used by Owner for its intended purpose without significant interference with Contractor's performance of the remainder of the Work, subject to the following conditions:

1. At any time, Owner may request in writing that Contractor permit Owner to use or occupy any such part of the Work that Owner believes to be substantially complete. If and when Contractor agrees that such part of the Work is substantially complete, Contractor, Owner, and Engineer will follow the procedures of Paragraph 15.03.A through 15.03.E for that part of the Work.

2. At any time, Contractor may notify Owner in writing that Contractor considers any such part of the Work substantially complete and request Owner to issue a certificate of Substantial Completion for that part of the Work.

3. Within a reasonable time after either such request Owner and Contractor shall make an inspection of that part of the Work to determine its status of completion. If Owner does not consider that part of the Work to be substantially complete, Owner will notify Contractor in writing giving the reasons therefor. If Owner considers that part of the Work to be substantially complete, the provisions of Paragraph 15.03 will apply with respect to certification of Substantial Completion of that part of the Work and the division of responsibility in respect thereof and access thereto.

4. No use or occupancy or separate operation of part of the Work may occur prior to compliance with the requirements of Paragraph 6.04 regarding builder's risk or other property insurance.

15.05 *Final Inspection*

SC 15.05 Delete Paragraph 15.05.A in its entirety and replace it with the following:

A. Upon written notice from Contractor that the entire Work or an agreed portion thereof is complete, Owner and Contractor shall promptly make a final inspection of the Work. Owner will notify Contractor in writing of all particulars in which this inspection reveals that the Work is incomplete or defective. Contractor shall immediately take such measures as are necessary to complete such Work or remedy such deficiencies.

15.06 *Final Payment*

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

SC 15.06 Amend Paragraph 15.06.A.1 by striking the word “Engineer” and inserting the word “Owner” in its place.

SC 15.06 Delete Paragraph 15.06.A.2.b: in its entirety and insert the following in its place:

b. Consent of the surety, signed by an agent, must be accompanied by a certified copy of such agent's authority to act for the surety. The Contractor shall be responsible for providing all of the documents identified in this paragraph;

SC 15.06 Delete Paragraphs 15.06.B through 15.06.E and insert in their place:

B. *Owner’s Review of Final Application and Recommendation of Payment*: If, on the basis of Owner’s observation of the Work during construction and final inspection, and Owner’s review of the final Application for Payment and accompanying documentation as required by the Contract Documents, Owner is satisfied that the Work has been completed and Contractor’s other obligations under the Contract Documents have been fulfilled, Owner will process the final Application for Payment. Otherwise, Owner will return the Application for Payment to Contractor, indicating in writing the reasons for refusing to process final payment, in which case Contractor shall make the necessary corrections and resubmit the Application for Payment.

C. [Deleted.]

D. *Completion of Work*: The Work is complete (subject to surviving obligations) when it is ready for final payment as established by the Owner’s determination of final payment and issuance of notice of the acceptability of the Work.

E. *Final Payment Becomes Due*: Thirty days after the presentation to Owner of the Application for Payment and accompanying documentation, the amount requested by Contractor, less any sum Owner is entitled to set off against the amount requested by Contractor, including but not limited to liquidated damages, will become due and will be paid by Owner to Contractor.

15.08 *Correction Period*

SC-15.08 *Correction Period.* Add the following new Paragraph 15.08.G:

G. Nothing in Article 13 concerning the correction period shall establish a period of limitation with respect to any other obligation which Contractor has under the Contract Documents. The establishment of time periods relates only to the specific obligations of Contractor to correct the Work, and has no relationship to the time within which Contractor's obligations under the Contract Documents may be sought to be enforced, nor to the time within which proceedings may be commenced to establish Contractor's liability with respect to Contractor's obligations other than to specifically correct the Work.

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

ARTICLE 16 - SUSPENSION OF WORK AND TERMINATION

16.01 *Owner May Suspend Work*

SC 16.01 Amend Paragraph 16.01 by striking out the words "and Engineer".

16.02 *Owner May Terminate for Cause*

SC 16.02 Amend Paragraph 16.02.E by striking out the following sentence:

Such claims, costs, losses, and damages incurred by Owner will be reviewed by Engineer as to their reasonableness and, when so approved by Engineer, incorporated in a Change Order.

16.04 *Contractor May Stop Work or Terminate*

SC 16.04 Delete Paragraphs 16.04.A and 16.04.B in their entirety and insert the following in their place:

E. If, through no act or fault of Contractor, the Work is suspended for more than 90 consecutive days by Owner or under an order of court or other public authority, or Owner fails to act on any Application for Payment within 30 days after it is submitted, or Owner fails for 30 days to pay Contractor any sum finally determined to be due, then Contractor may, upon seven days written notice to Owner, and provided Owner does not remedy such suspension or failure within that time, terminate the Contract and recover from Owner payment on the same terms as provided in paragraph 15.03.

F. In lieu of terminating the Contract and without prejudice to any other right or remedy, if Owner has failed for 30 days to pay Contractor any sum finally determined to be due, Contractor may, seven days after written notice to Owner, stop the Work until payment is made of all such amounts dues Contractor, including interest thereon. The provisions of this paragraph 15.04 are not intended to preclude Contractor from making a Claim under paragraph 10.05 for an adjustment in Contract Price or Contract Times or otherwise for expenses or damage directly attributable to Contractor's stopping the Work as permitted by this Paragraph.

ARTICLE 17 - FINAL RESOLUTIONS OF DISPUTES

Add the following new paragraph immediately following paragraph 17.01.

SC-17.02 *Arbitration*

"Arbitration will not be acceptable as a means for settling claims, disputes, or other matters."

ARTICLE 18 - MISCELLANEOUS

18.06 *Survival of Obligations*

SC-18.06 *Survival of Obligations.* Add the following new paragraph immediately after paragraph 18.06.A:

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

B. Contractor shall obtain from all Suppliers and manufacturers any and all warranties and guarantees of such Suppliers and manufacturers, whether or not specifically required by the Specifications, and shall assign such warranties and guarantees to Owner. With respect thereto, Contractor shall render reasonable assistance to Owner when requested, in order to enable Owner to enforce such warranties and guarantees. The assignment of any warranties or guarantees shall not affect the Correction Period or any other provisions of these Contract Documents.

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

SECTION 01 11 00

SUMMARY OF WORK

1. LOCATION AND DESCRIPTION OF WORK

A. The Work is located in various locations throughout Kenton County Kentucky.

B. The Work to be performed under this Contract consists of providing all equipment, materials, supplies, tools, and supervision necessary to complete the [insert project name], as specified herein, and required for a fully operational and complete facility. The scope of work includes, but is not limited to, the following major items:

1. Construction of approximately 370 feet of 8" ductile iron water main along Highwater Road (from River Heights Lane to #1873), 1,525 feet of 8" PVC water main along Scenic Ridge Drive, 465 feet of 8" ductile iron water main along Decoursey Pike (from Ryland Lakes Drive to Steep Creek Road), 5,370 feet of 8" ductile iron water main along Steep Creek Road (from Decoursey Pike to #3704 at the bridge), 590 feet of 8" ductile iron water main along Mann Road (from Steep Creek Road to #11290), 1,265 feet of 8" ductile iron and PVC water main along Gene Street, 4,200 feet of 8" ductile iron water main along Fiskburg Road (Goshorn Road to Alexander Road), 2,635 feet of 8" ductile iron and PVC water main along Alexander Road (Fiskburg Road to St. Marys Road), and 4,885 feet of 8" ductile iron and PVC water main along Elliot Road (from KY 17 to the Pendleton County Line), together with the appurtenances and related work. The Owner reserves the right to make partial awards.
2. Adhering to all applicable permits including but not limited to: Kentucky Division of Water, Kentucky Transportation Cabinet, Kenton County, Villa Hills, and U.S. Army Corps of Engineers.
4. General restoration; and
5. Other miscellaneous work as indicated in the specifications.

C. The project will require approval from the Public Service Commission (PSC) which can take up to 90 days after the bid opening. Pending PSC approval, it is anticipated that this project will be awarded by October 1, 2025.

+ + END OF SECTION + +

Section 01 25 00

MEASUREMENT AND PAYMENT

1. SCOPE. This section covers methods of measurement and payment for items of Work under this Contract.

2. GENERAL. The total Contract Price shall cover all Work required by the Contract Documents. All costs in connection with the proper and successful completion of the Work, including furnishing all materials, equipment, supplies, and appurtenances; providing all construction plant, equipment, and tools; and performing all necessary labor and supervision to fully complete the Work, shall be included in the unit and lump sum prices bid. All Work not specifically set forth as a pay item in the Bid Form shall be considered a subsidiary obligation of Contractor and all costs in connection therewith shall be included in the prices bid. The Contractor shall be responsible for supplying all project materials, except for items supplied by the Owner as indicated in the Bid Item Descriptions below and on the bid form.

3. ESTIMATED QUANTITIES. All estimated quantities stipulated in the Bid Form or other Contract Documents are approximate and are to be used only (a) as a basis for estimating the probable cost of the Work and (b) for the purpose of comparing the bids submitted for the Work. The actual amounts of work done and materials furnished under unit price items may differ from the estimated quantities. The basis of payment for work and materials will be the actual amount of work done and materials furnished. Contractor agrees that it will make no claim for damages, anticipated profits, or otherwise on account of any difference between the amounts of work actually performed and materials actually furnished and the estimated amounts therefor.

4. EXCAVATION AND TRENCHING. Except where otherwise specified, the unit or lump sum price bid for each item of Work, which involves excavation, or trenching shall include all costs for such Work. No direct payment shall be made for excavation or trenching. All excavation and trenching shall be unclassified as to materials, which may be encountered; in addition, trenches shall be unclassified as to depth.

5. BID PRICES TO INCLUDE INCIDENTAL WORK. The bid prices will cover and include the cost and expense of all contingents, accessories and incidental work and material required to complete the improvement. This includes replacement of services, pavement, fences and any other objects which are affected in the process of construction on this work. It shall also include where necessary, watchmen, flagmen, barricades, red lights, all backfill material such as gravel, flowable fill and any temporary restoration, construction joints, finishing and curing concrete, dust control, maintenance of traffic, maintenance of existing sewage flow, provision for access to property, and many other incidents which occur on a normal construction job.

DESCRIPTION OF BID ITEMS

NOTE: Descriptions of each material can be found in Section 01 16 00 Technical Provisions

6. PIPELINES. Pipelines which are to be paid for on a unit price basis shall be measured for payment on a horizontal plane after installation of the pipe. Where lines are laid to conform

to stationed profiles, payment shall be made on linear quantities based on the pipeline stationing as determined by surveys made after installation.

The measurement of the length of each line or run of pipe of each size will begin and end at:

a. The end of the pipe where connected to an existing pipe, fitting, or valve; or at the end of a dead-end run.

b. The center lines intersection of the run and branch on tees, crosses, or laterals where a branch line connecting therewith is constructed under this Contract. Where a branch fitting is installed under this Contract, and the branch or connecting line is to be constructed by others at some future date or under another contract, the pay measurement will include the entire laying length of the branch or branches of such fitting.

c. The measurement of each line of pipe of each size which is to be paid for on a unit price basis will be continuous through, and shall include the full laying lengths of, all fittings and valves installed between the ends of each line; except that the laying lengths of reducers and increasers will be divided equally between the connected pipe sizes. Connecting piping for fire hydrants will be paid under the unit price for fire hydrants.

6.01 CLASS 50 or 52 DUCTILE IRON PIPE (ALL SIZES). (Detail 103, 103a, 104, 104a, 110). Includes the specified pipe, polyethylene wrap, fittings, bends, tracing wire, excavation, labor, equipment, bedding, backfill disinfection, dechlorination, pressure testing, restoration of non-paved areas, etc. required to install the specified pipe at the location shown on the plans, or as directed, in accordance with the specifications and standard drawings complete and ready for use. Paid LINEAR FEET (LF).

6.02.A CLASS 50 or 52 DUCTILE IRON PIPE (ALL SIZES) – INTERNAL RESTRAINED JOINT. (Detail 103, 103a, 104, 104a, 110). Includes the specified pipe, polyethylene wrap, fittings, bends, tracing wire, excavation, labor, equipment, bedding, backfill, disinfection, dechlorination, pressure testing, restoration of non-paved areas, etc. required to install the specified pipe at the location shown on the plans, or as directed, in accordance with the specifications and standard drawings complete and ready for use. Paid LINEAR FEET (LF).

6.02.B CLASS 50 or 52 DUCTILE IRON PIPE (ALL SIZES) –RESTRAINED JOINT. (Detail 103, 103a, 104, 104a, 110). Includes the specified pipe, polyethylene wrap, fittings, bends, tracing wire, excavation, labor, equipment, bedding, backfill, disinfection, dechlorination, pressure testing, restoration of non-paved areas, etc. required to install the specified pipe at the location shown on the plans, or as directed, in accordance with the specifications and standard drawings complete and ready for use. Pipe gaskets shall develop a wedging action between pairs of high-strength stainless steel stainless steel elements spaced around the gasket (Field Lok®, Fast-Grip® or approved equal gaskets). The bend shall be restrained using mechanical joint restraint devices consisting of multiple gripping wedges incorporated into a follower gland compatible with all mechanical joints (Megalug Series 1100®, MJ Field Lok® or approved equal) Paid LINEAR FEET (LF).

6.03 C-900, C-909 Poly Vinyl Chloride (PVC) (ALL SIZES). (Detail 103, 103a, 104, 104a, 111). Includes the specified pipe, polyethylene wrap, fittings, bends, excavation, labor, equipment, bedding, backfill, disinfection, pressure testing, restoration of non-paved areas, tracing wire etc. required to install the specified pipe at the location shown on the plans, or as directed, in accordance with the specifications and standard drawings complete and ready for use. Paid LINEAR FEET (LF).

6.03B C-900, C-909 Poly Vinyl Chloride (PVC) (ALL SIZES) **– RESTRAINED JOINT**. (Detail 103, 103a, 104, 104a, 111). Includes the specified pipe, polyethylene wrap, fittings, bends, tracing wire, excavation, labor, equipment, bedding, backfill, disinfection, pressure testing, restoration of non-paved areas, etc. required to install the specified pipe at the location shown on the plans, or as directed, in accordance with the specifications and standard drawings complete and ready for use. Pipe push on joints shall be restrained using devices designed and approved by the AWWA for C900 or C909 PVC pipe (Megalug Series 1600®, Eagle Loc 900® or approved equal restraint systems). Transitional joints shall be restrained using mechanical joint restraint devices designed for PVC pipe and consisting of multiple gripping wedges incorporated into a follower gland compatible with all mechanical joints (Megalug Series 2000®, MJ Field Lok® PV Series or approved equal) Paid LINEAR FEET (LF).

6.04 CASING PIPE. Includes the casing pipe (K.D.O.T. or Railroad Spec.), labor, equipment, excavation, backfill, restoration, etc. required to install the casing pipe at the location shown on the plans, or as directed, in accordance with the specifications and standard drawings complete and ready for use. Paid LINEAR FEET (LF).

a. Crossings. Where tunneling is required in connection with railroad, highway, or primary road crossings, each crossing shall be measured for payment horizontally along the longitudinal center line of the enclosing conduit or pipe installed therein, from end to end of the enclosing conduit, or from end to end of the tunnel excavation where an enclosing conduit is not required. Each designated type of crossing shall include the following:

b. Crossings in Earth Backfill Tunnel. The unit price bid for each crossing in earth backfill tunnel shall include all costs in connection with excavation and backfilling, the excess cost of installing pipe in tunnel above the amount bid for the pipe laid in open trench, all skids, jointing materials, stabilized sand backfill, and all other work for and in connection with the crossing, not paid for separately. Separate payment shall not be made for tunnel liner or supports which may be needed for Contractor's convenience; all such items shall be considered a subsidiary obligation of Contractor.

c. Crossings in Conduit. The unit price bid for each crossing in pipe conduit or tunnel liner shall include all costs in connection with excavation and backfilling, pipe conduit or tunnel liner, the excess cost of installing pipe in pipe conduit or tunnel liner above the amount bid for the pipe laid in open trench, all skids, jointing materials, jacking pipe, jacking pits, sand backfill, end closures, and all other work for and in connection with the crossing, not paid for separately.

6.05 CLASS 200 S.D.R. 9 HDPE (HIGH DENSITY POLY-ETHYLENE) PIPE (2"). (Detail 115). Includes the specified pipe, preparation of the host pipe, insertion of HDPE pipe into host pipe, fittings, bends, excavation, labor, equipment, bedding, backfill, disinfection, pressure testing, restoration of non-paved areas, tracing wire etc. District shall supply

service line tees, saddle, curb stop and straight coupling. Contractor is required to install the specified pipe at the location shown on the plans, or as directed, in accordance with the specifications and standard drawings complete and ready for use. Paid LINEAR FEET (LF).

6.06 PREFORMED PIPE INSULATION.
Includes all labor and material necessary to install preformed pipe insulation, wrapped with a double layer of polyvinyl tape on specified pipe. The preformed pipe insulation shall be Foam Glas (manufactured by Pittsburg Corning) or approved equal. Paid LINEAR FEET (LF).

Water Main Size	Insulation Thickness
4 inches to 8 inches	2 – ½ inches
10 inches to 16 inches	3 – ½ inches

7. Connections to Existing Water Mains. Connections to existing water mains will be paid for at the lump sum prices bid. Each lump sum price named for a connection shall include all costs incurred for making the connection over and above the price of the connecting piping in place. Each lump sum price shall include furnishing and installing the tapping sleeve and valve, fittings; all excavation, blocking and backfilling work; tapping of existing main; and all other costs not included under other bid items.

7.01 CONNECT TO EXISTING MAIN/TIE-IN (ALL SIZES). Includes all labor, equipment, excavation, specified pipe, fittings, sleeves, couplings, blocking, anchoring, polyethylene wrap, disinfection, pressure testing, backfill and restoration, and any pipe required to make the connection as shown on the plans, and in accordance with the specifications. Paid EACH (EA).

7.02 TAPPING SLEEVE & VALVE (ALL SIZES) Includes the District approved tapping sleeve and valve, polyethylene wrap, labor, equipment, excavation, blocking, anchoring, disinfection, backfill, restoration, etc. to install the specified fitting at the locations shown on the plans in accordance with the specifications and standard drawing complete and ready for use. Paid EACH (EA) when complete.

8. Fire Hydrants. Fire hydrants will be paid for at the unit price bid. The unit price named for each fire hydrant installation shall include all costs incurred in furnishing and installing the fire hydrant; auxiliary gate valve, all connecting piping to the adjacent water main, accessories, and appurtenances, concrete blocking behind and under the fire hydrant, drainage facilities, yard restoration and all other costs not included under other bid items.

8.01 INSTALL FIRE HYDRANT ASSEMBLY. (Detail 109). Includes all labor, equipment, excavation, concrete blocking, 6” Ductile Iron Resilient Seated Gate Valve, Valve box, 6” Ductile Iron Anchor Coupling, 6” ductile iron leads (restrained) Fire Hydrant, extensions, granular drainage material, backfill and yard restoration to install fire hydrant complete and in accordance with the specifications and standard drawings. Paid EACH (EA).

8.02 INSTALL FUTURE FIRE HYDRANT VALVE. (Detail 109). Includes all labor, equipment, excavation, 6” Ductile Iron Resilient Seated Gate Valve, Valve box, Plug,

backfill and yard restoration to install future fire hydrant assembly complete and in accordance with the specifications and standard drawings. Paid EACH (EA).

8.03 REMOVE FIRE HYDRANT. Includes all labor, equipment, excavation, backfill and yard restoration to remove an existing fire hydrant, cap hydrant lead if necessary and return to the Northern Kentucky Water District warehouse. Paid EACH (EA).

8.04 RELOCATE FIRE HYDRANT. Includes allowing for Northern Kentucky Water District's Inspector to inspect the existing fire hydrant prior to reuse, returning unusable fire hydrants to the Northern Kentucky Water District Warehouse and picking up a replacement hydrant for use. Includes the labor, equipment, excavation, bedding, backfill, testing, disinfection, and yard restoration to relocate existing fire hydrant to valve, pipe, and anchoring tee as indicated on plans and on standard drawings contained in the plans. The pipe, valve and anchoring tee shall be paid under separate bid items when required. The Contractor to supply and install all anchoring devices, fire hydrant extensions, 6" ductile iron leads (restrained), concrete blocking, yard restoration, granular drainage material, etc, needed to install the fire hydrant complete and ready for use as shown on the plans, and in accordance with the specifications and standard drawings. Paid EACH (EA).

8.05 ADJUST FIRE HYDRANT TO GRADE. Includes the labor, equipment, excavation, bedding, backfill, testing, disinfection, and yard restoration to adjust the existing fire hydrant using the fire hydrant manufacturer's extension kit for adjustments of 18" or less. Adjustments greater than 18" require anchoring couplings and vertical bends to adjust to grade. The Contractor will supply and install all anchor couplings, bends, fire hydrant extension, concrete blocking, yard restoration, granular drainage material, etc, needed to adjust the fire hydrant complete and ready for use as shown on the plans, and in accordance with the specifications and standard drawings. Paid EACH (EA).

9. Valves. Sectionalizing valves in water mains will be paid for at the unit price bid for each size. The unit price shall include all costs incurred in completing the sectionalizing valve installation over and above the amount paid for piping in place. The unit price shall include furnishing and installing the sectionalizing valve, valve box, and appurtenances; excavation and backfill not included under piping; and all other costs not included under other bid items.

No separate payment will be made for fire hydrant auxiliary gate valves or tapping valves.

9.01 DUCTILE IRON RESILIENT SEATED GATE VALVE (4", 6", 8", 12"). (Detail 105). Includes the specified valve, labor, equipment, excavation, polyethylene wrap, bedding, backfill, disinfection, pressure testing, restoration, etc. (contractor must supply mechanical joint restraints on restrained joint applications), required to install the specified valve at the location shown on the plans, or as directed, in accordance with the specifications and standard drawings complete and ready for use. All External Dome and Packing Bolts Shall be Stainless Steel. Paid EACH (EA).

9.02 BUTTERFLY VALVE (16" AND LARGER). Includes the labor, equipment, valve and appurtenances, material, excavation, polyethylene wrap, bedding, backfill, disinfection, pressure testing, restoration, etc. (contractor must supply mechanical joint restraints on restrained joint applications), required to install the specified valve at the location shown on the plans, or as directed, in accordance with the specifications and standard drawings complete and ready for use. Paid EACH (EA).

9.03 DUCTILE IRON RESILIENT WEDGE GATE VALVE WITH BEVELED GEARING. Ductile iron body, non-rising stem, open left, 2" square operating nut, epoxy coated, mechanical joint, inlet and outlet connections, O-ring type packing, resilient wedge, 250 PSI working pressure, and conforming in all other ways to AWWA Standard C515 American Flow Control 2500 Resilient Wedge Gate Valve or approved equal. Valve body to be assembled with stainless steel bolts grade 304 or better. Accessory package (glands, gaskets and bolts) shall not be included. Includes the specified valve, labor, equipment, excavation, polyethylene wrap, bedding, backfill, disinfection, pressure testing, restoration, etc. (contractor must supply mechanical joint restraints on restrained joint applications), required to install the specified valve at the location shown on the plans, or as directed, in accordance with the specifications and standard drawings complete and ready for use. All External Dome and Packing Bolts Shall be Stainless Steel. Paid EACH (EA).

10. SERVICES

10.01 REPLACE and RECONNECT SERVICE LINE (3/4" THRU 2"). Includes the labor, equipment, excavation, bedding, backfill, and asphalt, concrete and yard restoration to install the service line at the locations shown on the plans or as directed, in accordance with the specifications and standard drawings, complete and ready for use. Lead service lines encountered by the excavation shall be replaced from the main to and including the meter vault and meter setting. All service line material will be supplied by NKWD. Paid EACH (EA).

10.02 REPLACE SERVICE LINE AND INSTALL WATER METER SETTING (3/4" THRU 2"). Includes the labor, equipment, excavation, bedding, backfill, and asphalt, concrete and yard restoration to install the service line, new meter vault and yoke setting at the locations shown on the plans or as directed, in accordance with the specifications and standard drawings, complete and ready for use. All service line material will be supplied by NKWD. Paid EACH (EA).

10.03 RECONNECT COPPER SERVICE (3/4" THRU 2"). Includes the labor, equipment, excavation, bedding, backfill and asphalt, concrete and yard restoration to reconnect the service line at the locations shown on the plans or as directed, in accordance with the specifications and standard drawings, complete and ready for use. Lead service lines encountered by the excavation shall be replaced from the main to and including the meter vault and meter setting. All service line material will be supplied by NKWD. Paid EACH (EA).

10.04 RELOCATE WATER METER SETTING. Includes the labor, equipment, excavation, bedding, backfill and asphalt, concrete and yard restoration to install a new meter vault and yoke setting to the location shown on the plans or as directed, in accordance with the specifications and standard drawings complete and ready for use. All service line material will be supplied by NKWD. Paid EACH (EA).

10.05 INSTALL WATER METER SETTING. Includes the labor, equipment, excavation, bedding, backfill, testing, disinfection and asphalt, concrete and yard restoration to install a new meter vault and yoke setting to the location shown on the plans or as directed, in accordance with the specifications and standard drawings complete and ready for use. All service line material will be supplied by NKWD. Paid EACH (EA).

10.06 ADJUST EXISTING WATER VALVE BOX TO GRADE. Includes all labor, equipment, excavation, bedding, 2'x2'x4" concrete pad, backfill, testing, disinfection, and asphalt, concrete and yard restoration to install the valve box and valve toggle extensions (if required) and adjust the top of the box to finished grade complete and ready for use. Valve toggle extensions will be supplied by NKWD. Paid EACH (EA).

10.07 ADJUST WATER METER TO GRADE. Includes all labor, equipment, excavation, bedding, backfill, testing, disinfection, and asphalt, concrete and yard restoration to adjust the top of the box to finished grade complete and ready for use. Paid EACH (EA).

10.08 REMOVE EXISTING CURB STOP/METER CROCK. Includes the labor, equipment, excavation, backfill and asphalt, concrete or yard restoration to remove the existing curb stop or meter crock at the location shown on the plans or as directed, in accordance with the specifications and standard drawings. Paid EACH (EA).

10.09 INSTALL TEMPORARY WATER SERVICE. Includes the labor, equipment and materials for the installation and disinfection of temporary piping, flushing of temporary piping, removal of the existing meter and returning meter to the Owner, hooking up temporary water to meter setting, maintaining an uninterrupted water supply, repairs to any damaged or broken piping, installation of meter and removal of all piping and fittings upon completion of the work, Paid LUMP SUM (LS).

11. MISCELLANEOUS

11.01 CONCRETE ENCASEMENT. Includes the labor, equipment, excavation, backfill, concrete, restoration, etc. to construct the concrete encasement of the water main stream crossing as shown on the plans, and in accordance with the specifications and standard drawings. Paid LINEAR FEET (LF).

11.02 4" UNDERDRAIN. Includes the labor, equipment, excavation, bedding, materials, backfill, and restoration, etc. required to install the underdrain at the location shown on the plans in accordance with the specifications and standard drawings complete and ready for use. Paid EACH (EA).

11.03 PRESSURE REDUCING VALVE PIT. Includes the labor, equipment, excavation, concrete pit construction, materials, pipe work, electrical work, backfill, restoration, etc. required to install the specified pressure reducing valve pit at the location shown on the plans in accordance with the plans, specifications and standard drawings complete and ready for use. Paid EACH (EA).

11.04 PLUG AND BLOCK (ALL SIZES). This item shall include the specified plug, polyethylene wrap, labor, equipment, excavation, concrete, backfill and restoration required to install the plug and blocking at the location shown on the plans or as directed in accordance with the specifications. Paid EACH (EA).

11.05 AIR RELEASE VALVE. (Detail 106). This item shall include labor, equipment, excavation, polyethylene wrap, bedding, backfill, disinfection, pressure testing, restoration, etc. required to install the air release valve at the location shown on the plans

or as directed in accordance with the specifications. All materials will be supplied by NKWD. Paid EACH (EA).

11.06 ANCHORING TEE AND BLOCK (ALL SIZES). Includes the specified anchoring tee, labor, equipment, excavation, polyethylene wrap, bedding, backfill, disinfection, pressure testing, restoration, etc. required to install the specified anchoring tee at the location shown on the plans, or as directed, in accordance with the specifications and standard drawings complete and ready for use. Paid EACH (EA).

11.07 DUCTILE IRON TEE AND BLOCK (ALL SIZES). Includes the specified ductile iron tee, labor, equipment, excavation, polyethylene wrap, bedding, backfill, disinfection, pressure testing, restoration, etc. required to install the specified tee at the location shown on the plans, or as directed, in accordance with the specifications and standard drawings complete and ready for use. Paid EACH (EA).

11.08 DUCTILE IRON CROSS (ALL SIZES). Includes the specified ductile iron cross, labor, equipment, excavation, polyethylene wrap, bedding, backfill, disinfection, pressure testing, restoration, etc. required to install the specified ductile iron cross at the location shown on the plans, or as directed, in accordance with the specifications and standard drawings complete and ready for use. Paid EACH (EA).

11.09 REDUCER (ALL SIZES). Includes the reducer, labor, equipment, excavation, polyethylene wrap, bedding, backfill, disinfection, pressure testing, restoration, etc. required to install the specified reducer at the location shown on the plans, or as directed, in accordance with the specifications and standard drawings complete and ready for use. Paid EACH (EA).

11.10 FLUSHING DEVICE. (Detail 113) Includes the labor, equipment, excavation, polyethylene wrap, bedding, backfill, disinfection, pressure testing, restoration, etc. required to install the specified flushing device at the location shown on the plans in accordance with the specifications and standard drawings complete and ready for use. Flushing device materials will be supplied by NKWD. Paid EACH (EA).

11.11 TEST TAP. Includes the labor, equipment, excavation, polyethylene wrap, bedding, backfill, disinfection, pressure testing, restoration, etc.-required to install the specified test tap at the location shown on the plans in accordance with the specifications and standard drawings complete and ready for use. Test Tap materials will be supplied by NKWD. Paid EACH (EA).

11.12 STORM SEWER CONNECTION. Includes all labor, equipment, excavation, bedding, backfill and materials required to make the connection to the existing combination manhole as shown on the plans and in accordance with the specifications of K.T.C.and Sanitation District No. 1. Paid EACH (EA).

11.13 REMOVE EXISTING CATCH BASIN & RECONSTRUCT NEW DOUBLE CURB BOX INLET. Includes all labor, equipment, excavation, backfill and materials to remove an existing catch basin, dispose of existing catch basin in a proper manner in accordance will all applicable local, state, or federal regulations and installation of a Standard Double Curb Box Inlet as per the detail in the construction drawings. All work shall also be in accordance with the specifications of K.T.C. and Sanitation District No. 1. Paid EACH (EA)

11.14 REMOVE EXISTING STORM PIPE & CONSTRUCT HDPE STORM PIPE. Includes all labor, equipment, excavation, bedding, backfill and materials to remove the existing storm sewer pipe and install new HDPE storm pipe as per plan. All debris materials shall be disposed of in a proper manner and shall be as directed by all applicable local, state or federal regulations. Installation of new HDPE storm pipe shall be in accordance with the Storm Sewer Pipe Bedding – Flexible Pipe (Plastic) detail on the construction drawings. All work shall also be in accordance with the specifications of K.T.C. and Sanitation District No. 1. Paid LINEAR FOOT (LF)

11.15 SLEEVE OUT EXISTING TEE/CROSS/VALVE. Includes all labor, equipment, excavation, specified pipe, fittings, couplings, polyethylene wrap, bedding, backfill, disinfection, pressure testing, restoration, etc. required to remove the existing tee/cross/valve and install a straight pipe at the location shown on the plans or as directed in accordance with the specifications. Paid EACH (EA).

11.16 CORROSION TEST STATION. Includes the labor, equipment and materials required to place test stations, and electrodes, in accordance with specifications and details. Paid EACH (EA).

11.17 MAGNESIUM ANODES. Includes the labor, equipment and materials required to place mangnesium anodes and associated wiring, in accordance with specifications and details. Paid EACH (EA).

12. RESTORATION

12.01. Pavement Removal and Replacement. The unit prices per square yard for pavement removal and replacement shall be measured for (length x width) payment horizontally along the center line of the pipe, through manholes, and to the edge of the existing pavement; or, where the edge of the existing pavement is not clearly defined, to the edge of the pavement replacement. The unit prices bid for pavement removal and replacement shall include all costs in connection therewith, including cutting, removal, and disposal of old pavement; construction of new pavement; and all extra compaction effort required for backfill beneath pavement.

12.02 Miscellaneous Asphaltic Concrete Paving. Existing valve boxes shall be abandoned by removal or filling with concrete at the discretion of the District. This cost shall be incidental to any bid item associated with asphaltic concrete paving.

12.03. Sidewalk or Driveway Removal and Replacement. The unit prices per square yard bid for sidewalk or driveway removal and replacement shall include all costs involved in cutting and removing sidewalk or driveway, and all labor and materials required to replace the sidewalks.

Measurement for payment for sidewalk or driveway removal and replacement shall be on a square yard basis and shall include only the area actually removed and replaced, between joints, over the pipeline trench.

All costs involved in repairing or removal and replacement of existing sidewalk or driveway outside the specified pay limits, where damaged during the construction operations, shall be considered a subsidiary obligation of Contractor and shall be borne by Contractor.

12.04. MISCELLANEOUS CONCRETE. Concrete for encasement or blocking of pipe and fittings not included as parts of pipelines will be measured for payment as the actual volume of concrete placed within the limits as indicated or specified.

Concrete for total encasement shall be computed using the maximum allowable trench width (or pipe OD plus 24 inches where no maximum is specified), the minimum clear depth below the pipe, and the minimum cover over the pipe, less the volume occupied by the pipe itself.

Unless otherwise authorized by Owner, all additional concrete for encasement or blocking required outside the specified pay limits will be considered a subsidiary obligation of Contractor and no direct payment shall be made therefore.

All concrete which is required in connection with manholes or structures, pavement or sidewalk replacement, and other pay items shall be included in the lump sum or unit price bid for the pay item.

The unit price bid for miscellaneous concrete shall include concrete, reinforcing steel, forms, finishing, curing, and all other work or materials required to complete the concrete work.

Existing valve boxes shall be abandoned by removal or filling with concrete at the discretion of the District. This cost shall be incidental to any bid item associated with concrete paving or other concrete work.

12.05 ASPHALTIC CONCRETE MILLING AND PAVING. Includes the labor, equipment and materials required to perform any necessary milling, placing of asphalt to a depth of 1.5 inches, replacement of any pavement markings / striping, and edge sealing in accordance with specifications and standard drawing #103A. Paid SQUARE YARD (SY).

12.06 ASPHALTIC CONCRETE. Includes the labor, equipment and materials required to perform any necessary removal and replacement of asphalt to a minimum depth of 8 inches or match existing depth (whichever is greater) and abandoning of valve boxes in accordance with specifications and standard drawing #103A. Paid SQUARE YARD (SY).

12.07 ASPHALTIC CONCRETE - DRIVEWAY. Includes the labor, equipment and materials required to perform any necessary removal and replacement of asphalt to a minimum depth of 6 inches or match existing depth (whichever is greater) in accordance with specifications and standard drawing #103A. Culvert repair or replacement shall be considered incidental to driveway restoration. Paid SQUARE YARD (SY).

12.08 ASPHALTIC CONCRETE. – WINTER CHARGE In effect when a sole asphalt plant is operating within a 50 mile radius of the project. Includes the labor, equipment and materials required to perform any necessary removal and replacement of asphalt to a minimum depth of 6 inches or match existing (whichever is greater) and abandoning of valve boxes in accordance with specifications and standard drawing #103A. Paid SQUARE YARD (SY).

12.09 CONCRETE PAVEMENT. Includes the labor, equipment and materials required to remove and replace a minimum of 8" KDOT class A Concrete or to match existing depth (whichever is greater), and abandoning of valve boxes in accordance with specifications and standard drawing #103A. Paid SQUARE YARD (SY).

12.10 CONCRETE DRIVEWAY. Includes the labor, equipment and materials required to remove and replace the driveway concrete to a minimum depth of 6 inches or match existing depth (whichever is greater). Culvert repair or replacement shall be considered incidental to driveway restoration. Paid SQUARE YARD (SY).

12.11 CONCRETE CURBING. Includes the labor, equipment and materials required to place KDOT class A Concrete to match existing in accordance with specifications and standard drawings. Paid LINEAR FEET (LF).

12.12 CONCRETE SIDEWALK. Includes the labor, equipment and materials required to remove and replace the sidewalk concrete to match existing depth. This item also includes any requirements to install sidewalk ramps per ADA standards. Paid SQUARE YARD (SY).

12.13 GRAVEL DRIVEWAY/PARKING AREA. Includes the labor, equipment and materials required to replace and grade gravel driveway to match existing depth. Paid SQUARE YARD (SY).

12.14 BEST MANAGEMENT PRACTICE. Includes the labor, equipment and materials required to conform and comply with the best management practices to control soil erosion as shown on the plans and specifications. Paid LUMP SUM (LS).

12.15 ROCK CHANNEL PROTECTION. Includes the labor, equipment and materials required to replace 18" of KYTC CLASS II Channel Lining over non-woven geotextile filter fabric in accordance with the specifications and standard drawing "ROCK CHANNEL PROTECTION" on sheet 6 of the plans. Paid SQUARE YARD (SY).

End of Section

SECTION 01 30 70

ABBREVIATIONS OF TERMS AND ORGANIZATIONS

1. LIST OF ABBREVIATIONS. Reference to standards and organizations in the Specifications shall be by the following abbreviated letter designations:

AA	Aluminum Association
AASHTO	American Association of State Highway and Transportation Officials
ACI	American Concrete Institute
ACPA	American Concrete Pipe Association
AFBMA	Antifriction Bearing Manufacturers Association
AGA	American Gas Association
AGMA	American Gear Manufacturers Association
AISC	American Institute of Steel Construction
AISI	American Iron and Steel Institute
ANSI	American National Standards Institute
APA	American Plywood Association
ASCE	American Society of Civil Engineers
ASME	American Society of Mechanical Engineers
ASSE	American Society of Sanitary Engineers
ASTM	American Society for Testing and Materials
AWG	American Wire Gage
AWPA	American Wood-Preservers' Association
AWPB	American Wood Preservers Bureau
AWS	American Welding Society
AWWA	American Water Works Association
BHMA	Builders Hardware Manufacturers Association
CDA	Copper Development Association
CISPI	Cast Iron Soil Pipe Institute
CRSI	Concrete Reinforcing Steel Institute
CS	Commercial Standard (U.S. Department of Commerce)
DIPRA	Ductile Iron Pipe Research Association
EEI	Edison Electric Institute
EJCDC	Engineers' Joint Contract Documents Committee
EPA	Environmental Protection Agency
Fed Spec	Federal Specification
FHWA	Federal Highway Administration

FIA	Factory Insurance Association
FM	Factory Mutual
IEEE	Institute of Electrical and Electronics Engineers
IFI	Industrial Fasteners Institute
IRI	Industrial Risk Insurers
MIL	Military Specification
MSS	Manufacturers Standardization Society of Valve and Fitting Industry
NBS	National Bureau of Standards
NCSPA	National Corrugated Steel Pipe Association
NEC	National Electrical Code
NECA	National Electrical Contractors Association
NEMA	National Electrical Manufacturers Association
NFPA	National Fire Protection Association
NIST	National Institute of Standards and Technology
NPC	National Plumbing Code
NPT	National Pipe Thread
NRMCA	National Ready Mixed Concrete Association
NSC	National Safety Council
NSF	National Sanitation Foundation
OSHA	Occupational Safety and Health Administration
PCA	Portland Cement Association
PCI	Prestressed Concrete Institute
PS	Product Standard
SAE	Society of Automotive Engineers
SI	Système International des Unitès (International System of Units)
SPFA	Steel Plate Fabricators Association
SSI	Scaffolding and Shoring Institute
SSPC	Steel Structures Painting Council
UL	Underwriters' Laboratories

End of Section

Section 01 31 13

PROJECT REQUIREMENTS

1. GENERAL DESCRIPTION OF WORK. The Work to be performed under these Contract Documents is generally described as follows: Furnishing all plant, materials, equipment, supplies, labor and transportation, including fuel, power, water, (except any materials, equipment, utility, or service, if any, specified herein to be furnished by the District), and performing all work required in the scope of work in the Contract, in strict accordance with the specifications, schedules, and drawings, all of which are made a part hereof and including such detail drawings as may be furnished by the District from time to time during the prosecution of the work in explanation of said drawings.

2. COORDINATION. Contractor shall plan, schedule, and coordinate its operations in a manner which will facilitate the simultaneous progress of the work included under other contracts outside the scope of these Contract Documents if applicable.

3. MATERIALS TO BE FURNISHED BY OWNER. If the Owner is supplying some of the materials for this project (eg. air release valves, meter materials) it shall be indicated in the Technical Specification.

4. RESPONSIBILITY FOR MATERIALS AND EQUIPMENT.

4.01. Items Furnished by Owner. Contractor's responsibility for materials and equipment furnished by Owner shall begin at the point of delivery on acceptance by Contractor. Contractor shall carefully examine each shipment prior to acceptance and shall reject all defective items. Owner reserves the right, however, to accept items rejected by Contractor and to authorize their installation in the Work.

Defective materials and equipment discovered after installation and prior to final acceptance of the Work, where the defect is of a nature not detectable by visual examination and other appropriate field inspection methods, shall be replaced by Owner, together with such additional materials and supplies as may be necessary for their replacement. Contractor shall furnish all necessary tools, equipment, and appliances, and perform all necessary labor, for the removal and replacement of such defective items in a manner acceptable to Owner; adjustment to the Contract Price for the costs of the removal and replacement shall be made in accordance with Article 11 of the General Conditions.

All materials and equipment furnished by Owner which disappear or are damaged after their acceptance by Contractor shall be replaced by and at the expense of Contractor. Replacements shall conform to the original procurement specifications.

Contractor shall be responsible for all unloading, reloading, transporting to the site, storage if necessary, re-handling, and installation.

All items shall be unloaded promptly after arrival. All charges for demurrage due to negligence or delay by Contractor shall be paid by Contractor. Equipment and materials shall be handled by methods which will prevent damage.

Equipment and materials shall be protected from exposure to the elements. All equipment shall be stored in accordance with the General Equipment Stipulations.

Contractor shall accept the risk of any delay in delivery of equipment or materials furnished by Owner, and if the Work is delayed, Contractor shall have no claim for damages or contract adjustment other than an extension of time and the waiving of liquidated damages occasioned by the delay.

All equipment shall be arranged and installed as indicated on the Drawings, and in conformity with installation drawings and instructions furnished to Owner by the manufacturer of the equipment.

4.02. Items Furnished by Contractor. Contractor shall be fully responsible for all materials and equipment which it has furnished.

5. OFFSITE STORAGE. Offsite storage arrangement shall be approved by Owner for all materials and equipment not incorporated into the Work but included in Applications for Payment. Such offsite storage arrangement shall be presented in writing and shall afford adequate and satisfactory security and protection. Offsite storage facilities shall be accessible to Owner.

6. SUBSTITUTES AND "OR-EQUAL" ITEMS. Provisions for evaluation of substitutes and "or-equal" items of materials and equipment are covered in Paragraph 7.05 of the General Conditions. Requests for review of equivalency will not be accepted by Owner from anyone except Contractor, and such requests will not be considered until after the Contract has been awarded.

7. PREPARATION FOR SHIPMENT. All materials shall be suitably packaged to facilitate handling and protect against damage during transit and storage. Painted surfaces shall be protected against impact, abrasion, discoloration, and other damage. All painted surfaces which are damaged prior to acceptance of equipment shall be repainted to the satisfaction of Owner.

Each item, package, or bundle of material shall be tagged or marked as identified in the delivery schedule or on the Shop Drawings. Complete packing lists and bills of material shall be included with each shipment.

8. SALVAGE OF MATERIALS AND EQUIPMENT. Existing materials and equipment removed, and not reused as a part of the Work, shall become Contractor's property, except the following items which shall remain Owner's property: any unused materials supplied by the Owner.

Contractor shall carefully remove, in a manner to prevent damage, all materials and equipment specified or indicated to be salvaged and reused or to remain the property of Owner. Contractor shall store and protect salvaged items specified or indicated to be reused in the Work.

Salvaged items not to be reused in the Work, but to remain Owner's property, shall be delivered by Contractor in good condition to Owner’s storage yard.

Any items damaged in removal, storage, or handling through carelessness or improper procedures shall be replaced by Contractor in kind or with new items.

Contractor may furnish and install new items instead of those specified or indicated to be salvaged and reused, in which case such removed items will become Contractor's property.

Existing materials and equipment removed by Contractor shall not be reused in the Work except where so specified or indicated.

9. EASEMENTS AND RIGHTS-OF-WAY. The easements and rights-of-way for the pipelines will be provided by Owner. Contractor shall confine its construction operations within the limits indicated on the Drawings. Contractor shall use due care in placing construction tools, equipment, excavated materials, and pipeline materials and supplies in order to avoid damage to property and interference with traffic.

9.01. On Private Property. Easements across private property are indicated on the Drawings. Contractor shall set stakes to mark the boundaries of construction easements across private property. The stakes shall be protected and maintained until completion of construction and cleanup.

Contractor shall not enter any private property outside the designated construction easement boundaries without written permission from the owner of the property.

Whenever the easement is occupied by crops which will be damaged by construction operations, Contractor shall notify the owner sufficiently in advance so that the crops may be removed before excavation or trenching is started. Contractor shall be responsible for all damage to crops outside the easement and shall make satisfactory settlement for the damage directly with the owner.

Where the line crosses fields which are leveled for irrigation or terraced, Contractor shall relevel irrigated fields and replace all terraces to their original or better condition, and to the satisfaction of the owner.

9.02. Work Within Highway and Railroad Rights-of-Way. Permits shall be obtained by Owner. All Work performed and all operations of Contractor, its employees, or Subcontractors within the limits of railroad and highway rights-of-way shall be in conformity with the requirements and be under the control (through Owner) of the railroad or highway authority owning, or having jurisdiction over and control of, the right-of-way in each case.

10. OPERATION OF EXISTING FACILITIES. The existing water treatment, storage, and distribution facilities must be kept in continuous operation throughout the construction period. No interruption will be permitted which adversely affects the degree of service provided. Provided permission is obtained from Owner in advance, portions of the existing facilities may be taken out of service for short periods corresponding with periods of minimum service demands. This may facilitate work at night or weekends which is considered incidental to the project.

Contractor shall provide temporary facilities and make temporary modifications as necessary to keep the existing facilities in operation during the construction period.

11. NOTICES TO OWNERS AND AUTHORITIES. Contractor shall, as provided in the General Conditions, notify owners of adjacent property and utilities when prosecution of the Work may affect them.

When it is necessary to temporarily deny access to property, or when any utility service connection must be interrupted, Contractor shall give notices sufficiently in advance to enable the affected persons to provide for their needs. Notices shall conform to any applicable local ordinance and, whether delivered orally or in writing, shall include appropriate information concerning the interruption and instructions on how to limit inconvenience caused thereby.

Utilities and other concerned agencies shall be notified at least 24 hours prior to cutting or closing streets or other traffic areas or excavating near underground utilities or pole lines.

12. LINES AND GRADES. All Work shall be done to the lines, grades, and elevations indicated on the Drawings.

Basic horizontal and vertical control points will be established or designated by Owner to be used as datums for the Work. All additional survey, layout, and measurement work shall be performed by Contractor as a part of the Work.

Contractor shall provide an experienced instrument person, competent assistants, and such instruments, tools, stakes, and other materials required to complete the survey, layout, and measurement work. In addition, Contractor shall furnish, without charge, competent persons and such tools, stakes, and other materials as Owner may require in establishing or designating control points, or in checking survey, layout, and measurement work performed by Contractor.

Contractor shall keep Owner informed, a reasonable time in advance, of the times and places at which it wishes to do Work, so that horizontal and vertical control points may be established and any checking deemed necessary by Owner may be done with minimum inconvenience to Owner and minimum delay to Contractor.

Contractor shall remove and reconstruct work which is improperly located.

13. CONNECTIONS TO EXISTING FACILITIES. Unless otherwise specified or indicated, Contractor shall make all necessary connections to existing facilities, including structures, drain lines, and utilities such as water, sewer, gas, telephone, and electric. In each case, Contractor shall receive permission from Owner or the owning utility prior to undertaking connections. Contractor shall protect facilities against deleterious substances and damage.

Connections to existing facilities which are in service shall be thoroughly planned in advance, and all required equipment, materials, and labor shall be on hand at the time of undertaking the connections. Work shall proceed continuously (around the clock) if necessary to complete connections in the minimum time. Operation of valves or other

appurtenances on existing utilities, when required, shall be by or under the direct supervision of the owning utility.

14. UNFAVORABLE CONSTRUCTION CONDITIONS. During unfavorable weather, wet ground, or other unsuitable construction conditions, Contractor shall confine its operations to work which will not be affected adversely by such conditions. No portion of the Work shall be constructed under conditions which would affect adversely the quality or efficiency thereof, unless special means or precautions are taken by Contractor to perform the Work in a proper and satisfactory manner.

15. CUTTING AND PATCHING. As provided in General Conditions, Contractor shall perform all cutting and patching required for the Work and as may be necessary in connection with uncovering Work for inspection or for the correction of defective Work.

Contractor shall perform all cutting and patching required for and in connection with the Work, including but not limited to the following:

Removal of improperly timed Work.
Removal of samples of installed materials for testing.
Alteration of existing facilities.
Installation of new Work in existing facilities.

Contractor shall provide all shoring, bracing, supports, and protective devices necessary to safeguard all Work and existing facilities during cutting and patching operations. Contractor shall not undertake any cutting or demolition which may affect the structural stability of the Work or existing facilities without Owner's concurrence.

Materials shall be cut and removed to the extent indicated on the Drawings or as required to complete the Work. Materials shall be removed in a careful manner, with no damage to adjacent facilities or materials. Materials which are not salvable shall be removed from the site by Contractor.

All Work and existing facilities affected by cutting operations shall be restored with new materials, or with salvaged materials acceptable to Owner, to obtain a finished installation with the strength, appearance, and functional capacity required. If necessary, entire surfaces shall be patched and refinished.

16. ASBESTOS REMOVAL. If, during the progress of the Work, suspected asbestos-containing products are identified, Contractor shall stop work in the affected area and engage an asbestos removal Subcontractor to verify the materials and, if necessary, encapsulate, enclose, or remove and dispose of all asbestos in accordance with current regulations of the Environmental Protection Agency and the U. S. Department of Labor - Occupational Safety and Health Administration, the state asbestos regulating agency, and any local government agency. Payment for such work will be made by Change Order.

16.01. Subcontractor's Qualifications. The Subcontractor for asbestos removal shall be regularly engaged in this type of activity and shall be familiar with the regulations which govern this work. The Subcontractor shall demonstrate to the satisfaction of Owner that it has successfully completed at least three asbestos removal projects, that it has the

necessary staff and equipment to perform the work, and that it has an approved site for disposal of the asbestos. The Subcontractor shall carry insurance as specified in the Supplementary Conditions.

16.02. Removal Methods. The asbestos removal Subcontractor shall submit a work plan of its proposed removal procedure to Owner before beginning work and shall certify that the methods are in full compliance with the governing regulations. The work plan shall cover all aspects of the removal, including health and safety of employees and building occupants, hygiene facilities, employee certification, clearance criteria, transportation and disposal, enclosure techniques, and other techniques appropriate for the proposed work.

17. CLEANING UP. Contractor shall keep the premises free at all times from accumulations of waste materials and rubbish. Contractor shall provide adequate trash receptacles about the site and shall promptly empty the containers when filled.

Construction materials, such as concrete forms and scaffolding, shall be neatly stacked by Contractor when not in use. Contractor shall promptly remove splattered concrete, asphalt, oil, paint, corrosive liquids, and cleaning solutions from surfaces to prevent marring or other damage.

Volatile wastes shall be properly stored in covered metal containers and removed daily.

Wastes shall not be buried or burned on the site or disposed of into storm drains, sanitary sewers, streams, or waterways. All wastes shall be removed from the site and disposed of in a manner complying with local ordinances and anti-pollution laws.

Adequate cleanup will be a condition for processing of progress payment applications.

18. APPLICABLE CODES. References in the Contract Documents to local codes mean the following:

Kentucky Building Code
Kentucky Plumbing Code
National Electric Code
BOCA Mechanical Code

Other standard codes which apply to the Work are designated in the Specifications.

19. PRECONSTRUCTION CONFERENCE. Prior to the commencement of Work at the site, a pre-construction conference will be held at a mutually agreed time and place. The conference shall be attended by:

Contractor and its superintendent.
Principal Subcontractors.
Representatives of principal Suppliers and manufacturers as appropriate.
Representatives of Owner.
Government representatives as appropriate.
Others as requested by Contractor or Owner.

Unless previously submitted to Owner, Contractor shall bring to the conference a preliminary schedule for each of the following:

Progress.
Procurement.
Values for progress payment purposes.
Shop Drawings and other submittals.

The purpose of the conference is to designate responsible personnel and establish a working relationship. Matters requiring coordination will be discussed and procedures for handling such matters established. The agenda will include:

Contractor's preliminary schedules.
Transmittal, review, and distribution of Contractor's submittals.
Processing Applications for Payment.
Maintaining record documents.
Critical Work sequencing.
Field decisions and Change Orders.
Use of premises, office and storage areas, security, housekeeping, and Owner's needs.
Contractor's assignments for safety and first aid.

Owner will preside at the conference and will arrange for keeping the minutes and distributing the minutes to all persons in attendance.

20. PROGRESS MEETINGS. Contractor shall schedule and hold regular progress meetings at least monthly and at other times as requested by Owner or required by progress of the Work. Contractor, Owner, and all Subcontractors active on the site shall be represented at each meeting. Contractor may at its discretion request attendance by representatives of its Suppliers, manufacturers, and other Subcontractors.

Contractor shall preside at the meetings. Meeting minutes will be prepared and distributed by Contractor. The purpose of the meetings will be to review the progress of the Work, maintain coordination of efforts, discuss changes in scheduling, and resolve other problems which may develop.

End of Section

Section 01 32 00

SUBMITTALS

1. PROGRESS SCHEDULE. After the preconstruction conference and before Work is started, Contractor shall submit to Owner for review a schedule of the proposed construction operations. Owner shall cooperate with Contractor in arrangements for continuity of service and operation of valves and other control facilities. The progress schedule shall indicate the sequence of the Work, the time of starting and completion of each part, and the time for making connections to existing piping, structures, or facilities.

2. PROGRESS REPORTS. A progress report shall be furnished to Owner with each Application for Payment. If the Work falls behind schedule, Contractor shall submit additional progress reports at such intervals as Owner may request.

Each progress report shall include sufficient narrative to describe current and anticipated delaying factors, their effect on the progress schedule, and proposed corrective actions. Any Work reported complete, but which is not readily apparent to Owner, must be substantiated with satisfactory evidence.

3. SURVEY DATA. All field books, notes, and other data developed by Contractor in performing surveys required as part of the Work shall be available to Owner for examination throughout the construction period. All such data shall be submitted to Owner with the other documentation required for final acceptance of the Work.

4. SHOP DRAWINGS AND ENGINEERING DATA.

4.01. General. Shop Drawings and engineering data (submittals) covering all equipment and fabricated and building materials which will become a permanent part of the Work under this Contract shall be submitted to Owner, at the Owner's address given in the Agreement. Submittals shall verify compliance with the Contract Documents, and shall include drawings and descriptive information in sufficient detail to show the kind, size, arrangement, and operation of component materials and devices; the external connections, anchorages, and supports required; performance characteristics; and dimensions needed for installation and correlation with other materials and equipment. When an item consists of components from several sources, Contractor shall submit a complete initial submittal including all components.

All submittals, regardless of origin, shall be stamped with the approval of Contractor and identified with the name and number of this Contract, Contractor's name, and references to applicable specification paragraphs and Contract Drawings. Each submittal shall indicate the intended use of the item in the Work. When catalog pages are submitted, applicable items shall be clearly identified and inapplicable data crossed out. The current revision, issue number, and date shall be indicated on all drawings and other descriptive data.

Contractor shall be solely responsible for the completeness of each submission. Contractor's stamp of approval is a representation to Owner that Contractor accepts sole responsibility for determining and verifying all quantities, dimensions, field construction

criteria, materials, catalog numbers, and similar data, and that Contractor has reviewed and coordinated each submittal with the requirements of the Work and the Contract Documents.

All deviations from the Contract Documents shall be identified as deviations on each submittal and shall be tabulated in Contractor's letter of transmittal. Such submittals shall, as pertinent to the deviation, indicate essential details of all changes proposed by Contractor.

One copy of each drawing and necessary data shall be submitted to Owner for its record. The Owner intends to use this for information only. If requested by Contractor, up to three additional copies may be submitted for review and approval by Owner. Owner will return marked copies (or one marked reproducible copy) to Contractor. Owner will not accept submittals from anyone but Contractor. Submittals shall be consecutively numbered in direct sequence of submittal and without division by subcontracts or trades.

4.02. Owner's Review of Submittals. Owner's review of submittals will cover only general conformity to the Drawings and Specifications, external connections, and dimensions which affect the layout. Owner's review does not indicate a thorough review of all dimensions, quantities, and details of the material, equipment, device, or item shown. Owner's review shall not relieve Contractor of Contractor's sole responsibility for errors, omissions, or deviations in the drawings and data, nor of Contractor's sole responsibility for compliance with the Contract Documents.

If Contractor requests a review and response, Owner's submittal review period shall be 14 consecutive calendar days in length and shall commence on the first calendar day immediately following the date of arrival of the submittal or resubmittal in Owner's office. The time required to mail the submittal or resubmittal back to Contractor shall not be considered a part of the submittal review period.

When the drawings and data are returned marked "NOT ACCEPTABLE" or "RETURNED FOR CORRECTION", the corrections shall be made as noted thereon and as instructed by Owner and corrected copies (or one corrected reproducible copy) resubmitted.

When the drawings and data are returned marked "EXCEPTIONS NOTED", "NO EXCEPTIONS NOTED", or "RECORD COPY", no additional copies need be furnished unless requested by Owner at time of review.

4.03. Resubmittal of Drawings and Data. Contractor shall accept full responsibility for the completeness of each resubmittal. Contractor shall verify that all corrected data and additional information previously requested by Owner are provided on the resubmittal.

When corrected copies are resubmitted, Contractor shall in writing direct specific attention to all revisions and shall list separately any revisions made other than those called for by Owner on previous submissions.

Requirements specified for initial submittals shall also apply to resubmittals. Resubmittals shall bear the number of the first submittal followed by a letter (A, B, etc.) to indicate the sequence of the resubmittal.

Re-submittals shall be made within 30 days of the date of the letter returning the material to be modified or corrected, unless within 14 days Contractor submits an acceptable request for an extension of the stipulated time period, listing the reasons the resubmittal cannot be completed within that time.

Any need for more than one resubmission, or any other delay in obtaining Owner's review of submittals, will not entitle Contractor to extension of the Contract Times unless delay of the Work is directly caused by a change in the Work authorized by a Change Order.

End of Section

Section 01 40 00

QUALITY CONTROL

1. TESTING SERVICES. All tests to determine compliance with the Contract Documents shall be performed by an independent commercial testing firm acceptable to Owner. The testing firm's laboratory shall be staffed with experienced technicians, properly equipped and fully qualified to perform the tests in accordance with the specified standards.

Testing services provided by Owner are for the sole benefit of Owner; however, test results shall be available to Contractor. Testing necessary to satisfy Contractor's internal quality control procedures shall be the sole responsibility of Contractor.

1.01. Testing Services Furnished by Contractor. Unless otherwise specified, Contractor shall provide all testing services in connection with the following:

Concrete materials and mix designs.
Asphaltic concrete materials and mix designs.
Embedment, fill and backfill materials.
All other tests and engineering data required for Owner's review of materials and equipment proposed to be used in the Work.

Contractor shall obtain Owner's acceptance of the testing firm before having services performed, and shall pay all costs for these testing services.

1.02. Testing Services Furnished by Owner. Unless otherwise specified, Owner shall provide for tests made on the following materials and equipment:

Concrete.
Asphaltic concrete.
Moisture-density and relative density tests on embedment, fill, and backfill materials.
In-place field density tests on embedments, fills, and backfill.
Other materials and equipment at the discretion of Owner.

Testing, including sampling, will be performed by Owner or the testing firm's laboratory personnel, in the general manner indicated in the Specifications. Owner shall determine the exact time, location, and number of tests, including samples.

Arrangements for delivery of samples and test specimens to the testing firm's laboratory will be made by Owner. The testing firm's laboratory shall perform all laboratory tests within a reasonable time consistent with the specified standards and shall furnish a written report of each test.

Contractor shall furnish all sample materials and cooperate in the testing activities, including sampling. Contractor shall interrupt the Work when necessary to allow testing, including sampling, to be performed. Contractor shall have no claim for an increase in Contract Price or Contract Times due to such interruption. When testing activities,

including sampling, are performed in the field by Owner or the testing firm's laboratory personnel, Contractor shall furnish personnel and facilities to assist in the activities.

If testing shows workmanship and/or materials does not meet established requirements, the Contractor shall be responsible for all additional testing cost to ensure compliance.

1.03. Transmittal of Test Reports. Written reports of tests and engineering data furnished by Contractor for Owner's review of materials and equipment proposed to be used in the Work shall be submitted as specified for Shop Drawings.

End of Section

Section 01 50 00

TEMPORARY FACILITIES

1. PRESENCE IN THE AREA. The Contractor understands and agrees that during the performance of the Contract, it shall maintain a presence within such proximity of the Work Site which will allow it to respond to an emergency at the Work Site within one hour of receiving notice of an emergency, including emergencies occurring during non-working hours. The Contractor shall provide a list of emergency phone numbers for such purposes. If the Contractor does not have such a presence, it may satisfy this requirement by sub-contracting with a sub-contractor that does have such a presence, provided that any such sub-contractor must be approved by the Owner, in its sole discretion, prior to the project pre-construction meeting.

2. WATER. Water in reasonable amounts required for and in connection with the Work to be performed will be furnished at existing fire hydrants by Owner without charge to Contractor. All water used in testing and disinfection of mains will be furnished by the Owner for the first test only. Contractor shall furnish necessary pipe, hose, nozzles, and tools and shall perform all necessary labor. Contractor shall make arrangements with Owner (who will fix the time, rate, and duration of each withdrawal from the distribution system) as to the amount of water required and the time when the water will be needed. Unnecessary waste of water will not be tolerated. Special hydrant wrenches shall be used for opening and closing fire hydrants. In no case shall pipe wrenches be used for this purpose.

3. POWER. Contractor shall provide all power for heating, lighting, operation of Contractor's plant or equipment, or for any other use by Contractor.

4. TELEPHONE SERVICE. Contractor shall make all necessary arrangements and pay all installation charges for telephone lines in its offices at the Site and shall provide all telephone instruments.

5. SANITARY FACILITIES. Contractor shall furnish temporary sanitary facilities at the Site, as provided herein, for the needs of all construction workers and others performing work or furnishing services on the Project.

Sanitary facilities shall be of reasonable capacity, properly maintained throughout the construction period, and obscured from public view to the greatest practical extent. If toilets of the chemically treated type are used, at least one toilet will be furnished for each 20 persons. Contractor shall enforce the use of such sanitary facilities by all personnel at the Site.

6. MAINTENANCE OF TRAFFIC. Contractor shall conduct his work to interfere as little as possible with public travel, whether vehicular or pedestrian. Whenever it is necessary to cross, obstruct, or close roads, driveways, and walks, whether public or private, Contractor shall provide and maintain suitable and safe bridges, detours, or other temporary expedients for the accommodation of public and private travel, and shall give reasonable notice to owners of private drives before interfering with them. Such maintenance of traffic will not be required when Contractor has obtained permission from the owner and tenant of

private property, or from the authority having jurisdiction over public property involved, to obstruct traffic at the designated point.

In making open cut street crossings, Contractor shall not block more than one-half of the street at a time. Whenever possible, Contractor shall widen the shoulder on the opposite side to facilitate traffic flow. Temporary surfacing shall be provided as necessary on shoulders.

The Contractor shall wherever necessary or as required by the Owner or the authority having jurisdiction provide, erect and maintain proper lights, signs, barricades, temporary guardrail, other traffic control devices, and furnish watchmen and flagmen as may be necessary to maintain safe traffic conditions in accordance with the Manual of Uniform Traffic Control Devices. Contractor shall use standard signage found in the latest edition of the Federal Highway Administration's "Standard Highway Signs and Markings" manual.

The Contractor shall be liable for and hold the Owner free and harmless from all damages occasioned in any way by its actions or neglect or those of its agents, employees, or workmen.

Work that requires the Contractor to shut down the road on weekends or at nights is considered an incidental to the project.

The Contractor at all times shall conduct the work in such manner as to cause as little interference as possible with private business or with private and public travel on the public highway. All damage (other than that resulting from normal wear and tear) to existing roads or pavements shall be repaired to withstand traffic in a safe condition.

Where the Contractor finds it necessary to remove excavated material to some other location, care should be taken not to overload trucks, which would in turn spill material out upon highways. Any such material spilled upon highways shall be immediately cleaned up from the location and properly disposed of per applicable regulation.

Where it is necessary and is agreeable with public and private property owners, excavated materials may be temporarily piled in the streets or roadways, however, one lane of traffic must be maintained at all times.

After excavated materials have been removed, all hard surface streets or roadways shall be thoroughly cleaned and left free of dirt, gravel and dust. Streets or roadways, which do not have hard surfaces, must be restored to their original condition at the expense of the Contractor. Streets and roadways shall be kept in a safe and passable condition at all times.

6.01. Temporary Bridges. Contractor shall construct substantial bridges at all points where it is necessary to maintain traffic across pipeline construction. Bridges in public streets, roads, and highways shall be acceptable to the authority having jurisdiction thereover. Bridges erected in private roads and driveways shall be adequate for the service to which they will be subjected. Bridges shall be provided with substantial guardrails and with suitably protected approaches. Footbridges shall be at least 4 feet wide, provided with handrails and uprights of dressed lumber. Bridges shall be maintained in place as long as the conditions of the Work require their use for safety of the public. When necessary for

the proper prosecution of the Work in the immediate vicinity of a bridge, the bridge may be relocated or temporarily removed for such period as Owner may permit.

6.02. Detours. Where required by the authority having jurisdiction thereover that traffic be maintained over any construction work in a public street, road, or highway, and the traffic cannot be maintained on the alignment of the original roadbed or pavement, Contractor shall, at its own expense, construct and maintain a detour around the construction work. Each detour shall include a bridge across the pipe trench and all necessary barricades, guardrails, approaches, lights, signals, signs, and other devices and precautions necessary for protection of the Work and safety of the public.

7. BARRICADES AND LIGHTS. All streets, roads, highways, and other public thoroughfares, which are closed to traffic, shall be protected by effective barricades on which shall be placed acceptable warning signs. Barricades shall be located at the nearest intersecting public highway or street on each side of the blocked section.

All open trenches and other excavations shall have suitable barricades, signs, and lights to provide adequate protection to the public. Obstructions, such as material piles and equipment, shall be provided with similar warning signs and lights.

All barricades and obstructions shall be illuminated with warning lights from sunset to sunrise. Material storage and conduct of the Work on or alongside public streets and highways shall cause the minimum obstruction and inconvenience to the traveling public.

All barricades, signs, lights, and other protective devices shall be installed and maintained in conformity with applicable statutory requirements and, where within railroad and highway rights-of-way, as required by the authority having jurisdiction thereover.

8. TRAFFIC CONTROL. In addition to the requirements of the maintenance of traffic and barricades and lights paragraphs in this section, traffic control shall be as set forth herein.

During periods of inclement weather, rush-hour traffic, or during periods of unusually heavy traffic, the Owner may require the Contractor to cease operations in order to adequately handle the traffic. The Owner reserves the right to require the suspension or delay of certain operations, or the expediting of other operations, at no additional cost to the Owner, to provide a proper sequence of operations which will promote the satisfactory movement of traffic. The Owner may require additional barricades, lights, or flagmen at any time or at any place necessary for proper protection of traffic, but approval by the Owner of the Contractor's method of operation shall not relieve the Contractor of his responsibility to protect traffic.

The use and duration of using heavy steel plates to convey traffic across open excavations shall be kept to a minimum. Steel plates shall be secured in an appropriate manner to prevent them from moving. The purpose of this requirement is to minimize the sound to the residents, institutions, commercial establishments, etc. The Owner reserves the right, at no additional cost to the Owner, to require the Contractor to complete certain operations and street re-paving so steel plates are not required.

The use of heavy steel plates during should be keep to a minimum. The Contractor shall place traffic cones behind the curb or other visible location to help identify the beginning and termination of the steel plates. Special precautions shall be taken by the Contractor if steel

plates are used during inclement weather. The Contractor shall be responsible for notifying the authority having jurisdiction over the roadway maintenance (snow removal) with the locations of the steel plates prior to each inclement weather event. The Contractor shall maintain the traffic cones and steel plates.

Contractor shall take extra precautions to provide and maintain emergency access on all streets and roads and to all residential, commercial, and other properties for police and fire departments and emergency medical service throughout the construction operations.

Contractor shall maintain the use of existing walks for pedestrians at all times. Additional requirements are specified in the temporary bridge subparagraph in this section.

9. TRAFFIC CONTROL PLAN. To obtain a permit to work within public rights-of-way, Contractor may be required to prepare and submit to the appropriate agencies, a traffic control plan in conformance with the requirements of the authority having jurisdiction thereover.

10. FENCES. All existing fences affected by the Work shall be maintained by Contractor until completion of the Work. Fences which interfere with construction operations shall not be relocated or dismantled until written permission is obtained from the owner of the fence, and the period the fence may be left relocated or dismantled has been agreed upon. A copy of all written permissions shall be submitted to Owner. Where fences must be maintained across the construction easement, adequate gates shall be installed. Gates shall be kept closed and locked at all times when not in use.

On completion of the Work across any tract of land, Contractor shall restore all fences to their original or to a better condition and to their original location.

11. PROTECTION OF PUBLIC AND PRIVATE PROPERTY, DAMAGE TO EXISTING PROPERTY. Contractor shall protect, shore, brace, support, and maintain all underground pipes, conduits, drains, and other underground construction uncovered or otherwise affected by his construction operations. All pavement, surfacing, driveways, curbs, walks, buildings, utility poles, guy wires, fences, and other surface structures affected by construction operations, together with all sod, shrubs, trees in yards, parkways, and medians shall be restored to their original or better condition, whether within or outside the easement. Unless otherwise specified, all replacements shall be made with new materials.

Sodded and landscaped areas on improved property (yards) shall be disturbed only to the extent required to permit construction. Such areas shall not be used as storage sites for construction supplies and, insofar as practicable, shall be kept free from stockpiles or excavated materials.

No trees shall be removed outside the permanent easement, except where authorized by Owner. Hand excavation shall be employed as necessary to prevent injury to trees. Trees left standing shall be adequately protected against damage from construction operations.

Contractor shall be responsible for all damage to streets, curbs/gutters, roads, sidewalks, shoulders, ditches, embankments, culverts, bridges, traffic loops and other public or private property, regardless of location or character, which may be caused by transporting equipment, materials, or workers to or from the Work or any part or site thereof, whether by him or his Subcontractors. Contractor shall make satisfactory and acceptable arrangements with the

owner of, or the agency or authority having jurisdiction over, the damaged property concerning its repair or replacement or payment of costs incurred in connection with the damage and shall furnish a written verification of all agreements.

Should the Contractor's operations damage any existing underground or aboveground utility, installation, structure, or other construction, Contractor shall immediately notify the authority owning or having jurisdiction over and control of the utility, installation, structure, or other construction, and make a report of such damage. A copy of the report shall be submitted to the Owner. The damaged item shall be repaired immediately by and at the expense of the Contractor unless otherwise specified or acceptable to the authority or owner having jurisdiction over, or to the Owner.

The utility, installation, structure, or other structures damaged by Contractor's operations shall be repaired, replaced, or otherwise restored in accordance with the local ordinances, standards, and requirements of the applicable authority or owner having jurisdiction thereover and shall be subject to acceptance by the Owner.
Special precaution shall be taken by the Contractor to avoid damage to existing overhead and underground utilities owned and operated by the Owner or other public or private utility companies.

With particular respect to existing underground utilities, all available information concerning their location has been shown on the drawings. While it is believed that the locations shown are reasonably correct, the Owner cannot guarantee the accuracy or adequacy of this information.

Before proceeding with the work, the Contractor shall confer with all public or private companies, agencies, property owners, or departments that own and operate utilities in the vicinity of the construction work. The purpose of this conference or conferences shall be to notify said companies, agencies or departments of the proposed construction schedule, verify the location of and possible interference with the existing utilities, fire protection systems, lawn irrigation systems, etc., that are shown on the plans, arrange for necessary suspensions of service, and make arrangements to locate and avoid interference with all other utilities (including house connections) that are not shown on the plans. The Owner has no objection to the Contractor arranging for said utility companies, agencies, or departments to locate and uncover their own utilities, however, insofar as the Owner is concerned, the Contractor shall bear entire responsibility for locating and avoiding or repairing damage to said existing utilities.

Where existing utilities or other underground structures are encountered, they shall not be displaced or molested unless necessary, and in such case they shall be replaced in as good or better condition than found as quickly as possible. All such utilities that are so damaged or molested shall be replaced at the Contractor's expense unless in the opinion of the Owner such damage was caused through no fault or action of the Contractor.

It is expected that the Contractor will be diligent in its efforts and use every possible means to locate existing utilities. Any claims for unavoidable damage based on improper or unknown locations will be thoroughly examined in the light of the Contractor's efforts to locate the said utilities or obstructions prior to beginning.

When construction is completed, the private property owner's facilities and grounds shall be restored to as good or better condition than found and as quickly as possible at the Contractor's expense.

All water mains and water service connections damaged by Contract's operations will be repaired by the Owner at the expense of the Contractor unless other arrangements are made. Customer irrigation piping damaged by Contractor's operations shall be repaired by and at the cost of the Contractor.

All fire hydrants and water control valves shall be kept free from obstruction and available for use at all times.

12. TREE AND PLANT PROTECTION. Tree and plant protection is of prime importance. Except where otherwise authorized, indicated, or specified, no trees or plants shall be removed. Activities near trees that are to be protected shall be kept to a minimum. Tree protection shall also include trimming, when necessary, to prevent damage by construction equipment.

Trees and plants to be removed shall be removed in such a manner as to avoid injury to surrounding trees and plants. Contractor shall be responsible for disposal of all trees and plants removed or damaged.

13. HAUL ROUTES. Contractor shall obtain and pay for all necessary permits from the applicable authority having jurisdiction thereover to allow use of public streets to transport equipment and material to and from the Site. At such time the Contractor shall request the agency having jurisdiction to establish the haul routes. A copy of the permit and designated haul routes shall be provided to the Owner prior to commencement of Work in that area.

14. PARKING. Contractor shall provide and maintain suitable parking areas for the use of all construction workers and others performing work or furnishing services in connection with the Project, as required to avoid any need for parking personal vehicles where they may interfere with public traffic, Owner's operations, or construction activities.

Contractor shall clean up all parking areas used and return them to their original state.

The location of the Contractor's parking areas shall be acceptable to Owner, and the owner and tenant of private property or to the authority having jurisdiction over public property upon which the parking area will be located.

15. RESIDENTIAL PARKING. Contractor shall provide appropriate areas for residents to park their vehicles during the construction operations adjacent to their properties, if required. This shall include making the appropriate areas available to the residents by not storing construction materials or equipment in these areas and providing signs and other notification methods acceptable to the Owner for instructing the residents on the location of the temporary parking and its intended use.

Additional requirements for notifying property owners and tenants of available temporary parking are covered in the project requirements section.

16. ACCESS ROADS. Contractor shall establish and maintain temporary access roads to various parts of the Site as required to complete the Project. Such roads shall be available for the use of all others performing work or furnishing services in connection with the Project.

17. NOISE CONTROL. Contractor shall take reasonable measures to avoid unnecessary noise. Such measures shall be appropriate for the normal ambient sound levels in the area during working hours. All construction machinery and vehicles shall be equipped with practical sound-muffling devices, and operated in a manner to cause the least noise consistent with efficient performance of the Work.

During construction activities on or adjacent to occupied buildings, and when appropriate, Contractor shall erect screens or barriers effective in reducing noise in the building and shall conduct his operations to avoid unnecessary noise which might interfere with the activities of building occupants.

18. DUST CONTROL. Contractor shall take reasonable measures to prevent unnecessary dust. Earth surfaces subject to dusting shall be kept moist with water or by application of a chemical dust suppressant. When practicable, dusty materials in piles or in transit shall be covered to prevent blowing dust.

Buildings or operating facilities, which may be affected adversely by dust, shall be adequately protected from dust. Existing or new machinery, motors, instrument panels, or similar equipment shall be protected by suitable dust screens. Proper ventilation shall be included with dust screens.

19. STORM WATER EROSION AND PREVENTION. The following is to be used as a guideline in conjunction with the plans for temporary drainage provisions, erosion control and pollution control as required by a Sanitation District #1 Permit and Kentucky Pollution Discharge Elimination System (KPDES). Reference “Kentucky Best Management Practices for Controlling Erosion, Sediment, and Pollutant Runoff from Construction Sites” and the “Northern Kentucky Sanitation District No. 1 Storm Water Permitting Guide”.

19.01. GRADING PERMIT, NOTICE of INTENT and NOTICE of TERMINATION. The owner will be responsible for acquiring a Grading Permit from Sanitation District #1 and filing a Notice of Intent/Notice of Termination with the KPDES. A Grading Permit is necessary when the square footage of the pervious and impervious areas are equal to or greater than one acre.

A. Projects less than one acre:
    - Best Management Practices that are shown on the plans and specifications are a minimum. Contractors are responsible for providing the minimum, and, if necessary will provide additional BMP’s to satisfy the situation and the regulating authority.

B. Projects greater than one acre:
    - Best Management Practices that are shown on the plans and specifications are a minimum. Contractors are responsible for providing the minimum, and, if necessary will provide additional BMP’s to satisfy the situation and the regulating authority.

- Sanitation District #1 must be contacted at least 72 hours prior to any construction activity. (Andy Amen @ 859-578-6880)
- Site stabilization shall begin within 14 days where construction activity has permanently ceased.
- Site stabilization shall begin within 21 days where construction activity has temporarily ceased.
- BMP'S shall be checked a minimum of every 7 days and within 24 hours after a 0.5" rainfall. Contractor shall keep a maintenance log book that records the date, weather event, reason for inspection and signature. The maintenance log book shall be turned over to the Owner at the end of the project.

19.02. TEMPORARY DRAINAGE PROVISIONS. Contractor shall provide for the drainage of storm water and such water as may be applied or discharged on the Site in performance of the Work. Drainage facilities shall be adequate to prevent damage to the Work, the Site, and adjacent property.

Existing drainage channels and conduits shall be cleaned, enlarged, or supplemented as necessary to carry all increased runoff attributable to Contractor's operations. Dikes shall be constructed as necessary to divert increased runoff from entering adjacent property (except in natural channels), to protect Owner's facilities and the Work, and to direct water to drainage channels or conduits. Ponding shall be provided as necessary to prevent downstream flooding.

19.03. EROSION CONTROL. Contractor shall prevent erosion of soil on the Site and adjacent property resulting from it's construction activities. Effective measures shall be initiated prior to the commencement of clearing, grading, excavation, or other operation that will disturb the natural protection.

Work shall be scheduled to expose areas subject to erosion for the shortest possible time, and natural vegetation shall be preserved to the greatest extent practicable. Temporary storage and construction buildings shall be located, and construction traffic routed, to minimize erosion. Temporary fast-growing vegetation or other suitable ground cover shall be provided as necessary to control runoff.

20. POLLUTION CONTROL. Contractor shall prevent the pollution of drains and watercourses by sanitary wastes, sediment, debris, and other substances resulting from construction activities. No sanitary wastes will be permitted to enter any drain or watercourse other than sanitary sewers. No sediment, debris, or other substance will be permitted to enter sanitary sewers, and reasonable measures shall be taken to prevent such materials from entering any drain or watercourse.

21. CUSTOMER NOTIFICATION. The Contractor after approval by the Owner's representative shall notify all affected Owner customers a minimum of 48 hours prior to interrupting water service. Notification shall be made by the Contractor using the Northern Kentucky Water District "Interruption of Service Notice". All Owner customers shall be notified prior to having their water turned-off to have ample time to draw water for use until service is restored. Under no circumstance shall a customer of the Owner be without water service overnight. If water service or existing water system cannot be interrupted during normal daytime hours due to water needs or high demands, the contractor may be required

to conduct the work at night or on the weekend. This work is considered an incidental to the project.

It is the Contractor's responsibility to post "No Parking" signs twenty-four (24) hours in advance of starting work in designated parking zones. Said signs shall be removed upon completion of work. Signs shall not be left posted over weekends or holidays.

22. UNSAFE CONDITIONS. The Owner reserves the right to take whatever action necessary to correct an unsafe condition created by the Contractor at the Contractor's expense.

23. SECURITY. CONTRACTOR shall be responsible for protection of the Site, and all the Work, materials, equipment, and existing facilities thereon, against vandals and other unauthorized persons.

No Claim shall be made against OWNER by reason of any act of an employee or trespasser, and CONTRACTOR shall make good all damage to OWNER's property resulting from CONTRACTOR's failure to provide security measures as specified.
Security measures shall be at least equal to those usually provided by OWNER to protect OWNER's existing facilities during normal operation, but shall also include such additional security fencing, barricades, lighting, and other measures as required to protect the Site.

24. STREAM CROSSINGS. The following is reprint of the requirements and conditions for blue line stream crossings which shall be followed:

SECTION 401 WATER QUALITY CERTIFICATION
CONDITIONS FOR NATIONWIDE PERMIT NO. 12
WITHIN THE COMMONWEALTH OF KENTUCKY

General Certification -Nationwide Permit #12 - Utility Line Backfill and Bedding

This General Certification is issued January 6, 2017, in conformity with the requirements of Section 401 of the Clean Water Act of 1977, as amended (33USC 1314), as well as Kentucky Statute KRS 224.16-070.

The Commonwealth of Kentucky hereby certifies under Section 401 of the Clean Water Act (CWA) that it has reasonable assurances that applicable water quality standards under Kentucky Administrative Regulations Title 401, Chapter 5, established pursuant to Sections 301, 302, 304, 306 and 307 of the CWA, will not be violated for the activity covered under 33 CFR Part 330 Appendix A(B) (12), namely utility line backfill and bedding provided that the following conditions are met:

1. This general Water Quality Certification is limited to the crossing of streams by utility lines. The length of a single utility crossing shall not exceed twice the width of the stream. This document does not authorize the installation of utility lines in a linear manner within the stream channel or below the top of the stream bank.

2. The provisions of 401 KAR 5:005 Section 8 are hereby incorporated into this General Water Quality Certification. Namely, "Sewer lines shall be located at least 50 feet away from a stream which appears as a blue line on a USGS 7 ½ minute topographic map except where the sewer alignment crosses the stream. The distance shall be measured from the top of the stream bank. The cabinet may allow construction within the 50' buffer if adequate methods are used to prevent soil from entering the stream.

   Gravity sewer lines and force mains that cross streams shall be constructed by methods that maintain normal stream flow and allow for a dry excavation. Water pumped from the excavation shall be contained and allowed to settle prior to re-entering the stream. Excavation equipment and vehicles shall operate outside of the flowing portion of the stream. Spoil material from the sewer line excavation shall not be allowed to enter the flowing portion of the stream." The provisions of this condition shall apply to all types of utility line stream crossings.

3. Removal of riparian vegetation in the utility line right-of-way shall be limited to that necessary for equipment access. Effective erosion and sedimentation control measures must be employed at all times during the project to prevent degradation of waters of the Commonwealth. Site regarding and reseeding will be accomplished within 14 days after disturbance.

4. Utility line construction projects through jurisdictional wetlands shall not result in conversion of the area to non-wetland status.

5. This General Certification shall not apply to those waters of the Commonwealth identified as Outstanding Resource Waters, Exceptional Waters or Cold Water Aquatic Habitat Waters, as designated by the Division of Water. An individual Water Quality Certification will be required for projects in these waters.

Non-compliance with the conditions of this general certification or violation of Kentucky state water quality standards may result in civil penalties.

This General Certification is issued January 6, 2017, (expires 5 years from this date) in conformity with the requirements of Section 401 of the Clean Water Act of 1977, as amended (33USC 1314), as well as Kentucky Statute KRS 224.16-070.

For additional information contact: Kentucky Division of Water, Water Quality Branch, 14 Reilly Road, Frankfort, Ky 40601 Phone (502)564-3410 Fax (502)564-4245

NATIONWIDE PERMIT CONDITIONS

GENERAL CONDITIONS: The Following general conditions must be followed in order for any authorization by a NWP to be valid:

1. **Navigation**. No activity may cause more than a minimal adverse effect on navigation.

2. Proper maintenance. Any structure of fill authorized shall be properly maintained, including maintenance to ensure public safety.

3. Erosion and siltation controls. Appropriate erosion and siltation controls must be used and maintained in effective operating condition during construction, and all exposed soil and other fills, as well as any work below the ordinary high water mark or high tide line, must be permanently stabilized at the earliest practicable date.

4. Aquatic life movements. No activity may substantially disrupt the movement of those species of aquatic life indigenous to the water body, including those species which normally migrate through the area, unless the activity s primary purpose is to impound water.

5. Equipment. Heavy equipment working in wetlands must be placed on mats, or other measures must be taken to minimize soil disturbance.

6. Regional and case-by-case conditions. The activity must comply with any regional conditions which may have been added by the Division Engineer (see 33 CFR 330.4(e)) and with any case specific conditions added by the Corps or by the state or tribe in its section 401 water quality certification.

7. Wild and Scenic rivers. No activity may occur in a component of the National Wild and Scenic River System; or in a river officially designed by Congress as a "study river" for possible inclusion in the system, while the river is in an official study status; unless the appropriate Federal agency, with direct management responsibility for such river, has determined in writing that the proposed activity will not adversely effect the Wild and Scenic River designation, or study status. Information on Wild and Scenic Rivers may be obtained from the appropriate Federal land management agency in the area (e.g., National Park Service, U.S. Forest Service, Bureau of Land Management, U.S. Fish and Wildlife Service.)

8. Tribal rights. No activity or its operation may impair reserved tribal rights, including, but not limited to, reserved water rights and treaty fishing and hunting rights.

9. Water quality certification. In certain states, an individual Section 401 water quality certification must be obtained or waived (see CFR 330.4(c)).

10. Endangered Species.

a. No activity is authorized under any NWP which is likely to jeopardize the continued existence of a threatened or endangered species or a species proposed for such designation, as identified under the Federal Endangered Species Act, or which is likely to destroy or adversely modify the critical habitat of such species. Non-federal permittees shall notify the District Engineer if any listed species or critical habitat might be affected or is in the vicinity of the project, and shall not begin work on the activity until notified by the District Engineer that the requirements of the Endangered Species Act have been satisfied and that the activity is authorized.

b. Authorization of an activity by a nationwide permit does not authorize the take of a threatened or endangered species as defined under the Federal Endangered Species Act. In the absence of separate authorization (e.g., an ESA Section 10 Permit, a Biological Opinion with incidental take provisions, etc.) from the U.S. Fish and Wildlife Service or the National Marine Fisheries Service, both lethal and non-lethal takes of protected species are in violation of the Endangered Species Act. Information on the location of threatened and

endangered species and their critical habitat can be obtained directly from the offices of the U.S. Fish and Wildlife Service and National Marine Fisheries Service or their world web pages at http://www.fws.gov

11. Historic properties. No activity which may affect historic properties listed, or eligible for listing, in the National Register of Historic Places in authorized, until the DE has complied with the provisions of 33 CFR Part 325, Appendix C. The prospective permittee must notify the District Engineer if the authorized activity may affect historic properties listed, determined to be eligible, or which the prospective permittee has reason to believe may be eligible for listing on the National Register of Historic Places, and shall not begin the activity until notified by the District Engineer that the requirements of the National Historic Preservation Act have been satisfied and that the activity is authorized. Information on the location and existence of historic resources can be obtained from the State Historic Preservation Office and the National Register of Historic Places (see 33 CFR 330.4(g)).

12. Compliance certification. Every permittee who has received a Nationwide permit verification from the Corps will submit a signed certification regarding the completed work and any required mitigation. The certification will be forwarded by the Corps with the authorization letter and will include: a.) A statement that the authorized work was done in accordance with the Corps authorization, including any general or specific conditions; b.) A statement that any required mitigation was completed in accordance with the permit conditions; c.) The signature of the permittee certifying the completion of the work and mitigation.

13. Multiple use of Nationwide permits. In any case where any NWP number 12 through 40 is combined with any other NWP number 12 through 40, as part of a single and complete project, the permittee must notify the District Engineer in accordance with paragraphs a, b, and c on the Notification General Condition number 13. Any NWP number 1 through 11 may be combined with any other NWP without notification to the Corps, unless notification is otherwise required by the terms of the NWPs. As provided at 33 CFR 330.6 © two or more different NWPs can be combined to authorize a single and complete project. However, the same NWP cannot be used more than once for a single and complete project.

SECTION 404 ONLY CONDITIONS:

In addition to the General Conditions, the following conditions apply only to activities that involve the discharge of dredged or fill material into waters of the U.S., and must be followed in order for authorization by the NWPs to be valid:

1. Water supply intakes. No discharge of dredged or fill material may occur in the proximity of a public water supply intake except where the discharge is for repair of the public water supply intake structures or adjacent bank stabilization.

2. Shellfish production. No discharge or dredged or fill material may occur in areas of concentrated shellfish production shellfish production, unless the discharge is directly related to a shellfish harvesting activity authorized by NWP 4.

3. Suitable material. No discharge of dredged or fill material may consist of unsuitable material (e.g., trash, debris, car bodies, asphalt, etc.,) and material discharged

must be free from toxic pollutants in toxic amounts (see Section 307 of the Clean Water Act).

4. Mitigation. Discharges of dredged or fill material into waters of the United States must be minimized or avoided to the maximum extent practicable at the project site (i.e., on-site), unless the District Engineer approves a compensation plan that the District Engineer determines is more beneficial to the environment than on-site minimization or avoidance measures.

5. Spawning areas. Discharge in spawning areas during spawning seasons must be avoided to the maximum extent practicable.

6. Obstruction of high flows. To the maximum extent practicable, discharges must not permanently restrict or impede the passage of normal or expected high flows or cause the relocation of the water (unless the primary purpose of the fill is to Impound waters).

7. Adverse effects from impoundments. If the discharge creates an impoundment of water, adverse effects on the aquatic system caused by the accelerated passage of water and /or the restriction of its flow shall be minimized to the maximum extent practicable.

8. Waterfowl breeding areas. Discharges into breeding areas for migratory waterfowl must be avoided to the maximum extent practicable.

9. Removal of temporary fills. Any temporary fills must be removed in their entirety and the affected areas returned to their preexisting elevation.

TERMS FOR NATIONWIDE PERMIT NO. 12

Utility Line Discharges. Discharges of dredged or fill material associated with excavation, backfill or bedding for utility lines, including outfall and intake structures, provided there is no change in pre-construction contours. A “utility line” is defined as any pipe or pipeline for the transportation of any gaseous, liquid, liquefiable, or slurry substance, for any purpose, and any cable, line, or wire for the transmission for any purpose of electrical energy, telephone and telegraph messages, and rapid and television communication. The term “utility line” does not include activities which drain water of the United States, such as drainage tile, however, it does apply to pipes conveying drainage from another area. This NWP authorizes mechanized landclearing necessary for the installation of utility lines, including overhead utility lines, provided the cleared area is kept to the minimum necessary and pre-construction contours are maintained. However, access roads, temporary or permanent, or foundations associated with overhead utility lines are not authorized by this NWP. Material resulting from trench excavation may be temporarily sidecast (up to three months) into waters of the United States, provided that the material is not placed in such a manner that it is dispersed by currents or other forces. The DE may extend the period of temporary side-casting not to exceed a total of 180 days, where appropriate. The area of waters of the United States that is disturbed must be limited to the minimum necessary to construct the utility line. In wetlands, the top 6” to 12” of the trench should generally be backfilled with topsoil from the trench. Excess material must be removed to upland areas

immediately upon completion of construction. Any exposed slopes and stream banks must be stabilized immediately upon completion of the utility line. (See 33 CFR Part 322).

Notification: The permittee must notify the district engineer in accordance with the "Notification" general condition, if any of the following criteria are met:

a. Mechanized land clearing in a forested wetland;
b. A Section 10 permit is required for the utility line;
c. The utility line in waters of the United States exceeds 500 feet; or,
d. The utility line is placed within a jurisdictional area (i.e., a water of the United States), and it runs parallel to a streambed that is within that jurisdictional area. (Sections 10 and 404)

End of Section

Section 02 16 00

TECHNICAL PROVISIONS

1. WATER LINES

A. General

The Contractor shall furnish all labor, materials, and equipment to install the water lines and appurtenances as shown on the plans and specifications. Construction shall be in accordance with the District's Standard Specifications & Drawings for the Installation of Water Mains. The Contractor is responsible for obtaining a current copy of the Standards from the District which may be obtained from the website at www.nkywater.org or by contacting Denise Manning at (859) 426-2718.

The Contractor shall be responsible for videotaping the entire project prior to the start of construction. The video shall show driveway crossings, drainage ditches, problem areas, lay of the land, etc. One copy shall be forwarded to the District. Pictures of specific areas are recommended.

All private residents shall be notified no less than 48 hours and all businesses**,** industrial and commercial customers shall be notified no less that 1 week prior to the interruption of service. All shutdowns shall be coordinated with the affected residents, with priority given to any special needs customers such as hospitals, schools, and customers with special medical needs

The water lines shall be Class 50 or 52 Ductile Iron Pipe, C900 or C909 P.V.C. Pipe as specified on the Work Order.

The District will secure right-of-way permits as needed.

Unless otherwise specified all pipe fittings, valves, fire hydrants and accessories shall be rated for a minimum of 250 psi working pressure and material as specified herein or shown on the proposal. The pipe and accessories shall be new and unused. The interior of the pipe shall be thoroughly cleaned of foreign matter before being lowered into the trench and shall be kept clean during laying operations by plugging. The full length of each section of pipe shall rest upon the pipe bed with recessed excavation to accommodate bells and joints. Any pipe that has the grade or joint disturbed after laying, shall be taken up and re-laid.

Trench backfill shall be rough graded with ditch lines established and maintained within 500 feet for rural areas and 250 feet for urban areas for actual installation of main unless otherwise directed by the District. Individual roadways shall be completed (final grade established, preparation of the seed bed, and all concrete and asphalt restoration completed) prior to the start of additional roadways unless otherwise approved by the District. Temporary roadway and driveway access shall be maintained during construction.

Pipe shall not be laid in water or when trench or weather conditions are unsuitable for the work, except by permission from the District. When work is not in progress, open ends of pipe and fittings shall be plugged with a watertight plug. Any section of pipe found to be defective before and after laying shall be replaced with sound pipe without additional expense to the District. Fittings at bends in the pipe shall be firmly wedged with concrete block as indicated on the plans against the vertical face of the trench to prevent the fittings from being blown off the lines when under pressure.

SEWER MAIN SEPARATION. A 10' minimum lateral separation between water mains and sewers (defined as any sanitary/combined sewer, septic tank or subsoil treatment system) and sewer manholes, measured from the outside diameter to outside diameter, must be maintained. When a 10' separation is not practical then a variance may be obtained from DOW to maintain an 18" vertical and 18" lateral separation. No variances will be permitted for force mains.

SEWER MAIN CROSSING. Waterlines crossing under or over sewers lines (defined as any sanitary/combined sewer, septic tank or subsoil treatment system) must maintain a minimum vertical clearance of 18" and one full length of pipe shall be located so both joints are as far from the sewer as possible. Special Structural support for the water and sewer pipes may be required.

SEWER LATERALS. Sewer laterals (sewer lines that run between the sewer main and the house or other structure) are owned and maintained by the property owner. Since the sewer lateral is privately owned, locating these lines is very difficult. The Contractor is responsible for locating sewer laterals and shall use care when working near them. The Contractor shall be responsible for any and all damage to a sewer lateral in the area of their work. In the event of a sewer lateral is damaged, the contractor shall immediately notify Sanitation District #1and follow all of their procedures for repair and inspection of the repair.

ORGANIC CONTAMINATION. Mains installed within 200 feet of petroleum tanks and other areas of organic contamination must be ductile iron pipe.

REDUCTION OF LEAD IN DRINKING WATER ACT. All material supplied and installed by the contractor after January 4, 2014 shall meet the applicable requirements of the Reduction of Lead in Drinking Water Act.

B. **Hauling and Storage**

The Contractor shall notify the District when pipe will be received on the job so that proper arrangements may be made for inspecting the unloading and stringing, as well as inspecting and examining the pipe materials.

The Contractor shall be required to deliver all equipment and other materials and place same as and where required for installation. Care must be exercised in the handling of all materials and equipment. The Contractor will be held responsible for all breakage or

damage to same caused by his workman, agents, or appliances for handling and moving. Pipes and other castings shall in no case be thrown or dropped from cars, trucks, or wagons to the ground, but same shall be lowered gently and not allowed to roll against or strike other castings and unyielding objects violently. Pipe and other castings may be unloaded, yarded, and distributed at places that will not interfere with other building operations as the Contractor may elect.

Valves, castings, and other materials shall be yarded or housed in same convenient location by the Contractor. The cost of all hauling, handling, and storage shall be included in the bid prices for this project. The District takes no risk or responsibility for fire, flood, theft, or damage until after final acceptance of work.

2. **WATER MAIN PIPE**

A. **Ductile Iron Pipe**. Ductile iron pipe shall meet the requirements of ANSI A21.51 (AWWA C151)

1. Material. The chemical constituents shall meet the physical property recommendations of ASTM A536 to ensure that the iron is suitable for satisfactory drilling and cutting.

2. Minimum Thickness. Unless otherwise shown on the plans, the minimum thickness of the barrel of the pipe shall be Class 50. All pipe shall be clearly marked as to class by the manufacturer.

3. Coating and Lining. The pipe shall be coated outside with a bituminous coating in accordance with ANSI A 21.51 (AWWA C151) and lined inside with cement mortar and seal coated in accordance with ANSI A21.4 (AWWA- C104).

4. Fittings & Glands. Fittings and glands shall be ductile iron as specified in Section 3A, "Ductile Iron Fittings".

5. Polyethylene Encasement. Ductile Iron Pipe shall be encased with Polyethylene film conforming to ANSI A21.5 (AWWA C105)

6. Tracing Wire. All pipe shall be installed with a 12 gauge solid copper (P.V.C coated) tracing wire taped to the top of the pipe every 5'. Maximum tracing wire length shall be 500' without terminating in a curb stop box. Water main installations that stop short of the permanent fire hydrant tee, the tracing wire shall be terminated in a curb stop box. Splices in the tracing wire shall be kept to minimum and approved by the District. If splices are required, they shall be made with copper split bolt (Ilsco #IK-8 or approved equal) and taped with electrical tape. Should the new pipe be fitted to an existing pipe without a tracing wire, the tracing wire shall be terminated in a curb stop box at the point where the transition is made. Curb stop boxes shall not be located in pavement.

B. **Polyvinyl Chloride Pipe** (P.V.C.). P.V.C. Pipe shall meet the requirements of AWWA C900 and as specified in the Work Order.

1. Material. P.V.C. pipe shall be made from class 12454-A or class 1245-B virgin compounds as defined in ASTM D1784. All compounds shall qualify for a rating of 4000 psi for water at 73.4 degree F. per the requirements of PPI TR3.

2. Minimum Pressure Class. Unless otherwise shown, the minimum pressure class of 150 psi, D.R. 18 shall be used. All pipe shall be clearly marked as to class by the manufacturer.

3. Beveled Spigot. Beveled spigot ends must have a minimum bevel of 8 degrees to a maximum bevel of 15 degrees. The vertical face of the spigot end may not exceed 75% of pipe wall thickness and the horizontal length of the bevel shall not exceed 1.25 inches. Field beveled spigot end shall be made per manufacturers recommendation and as approved by the District. The degree of bevel shall be approved for the type of pipe being installed.

4. P.V.C. Tracing Wire. All P.V.C. pipe shall be installed with a 12 gauge solid copper (P.V.C coated) tracing wire taped to the top of the pipe every 5'. Maximum tracing wire length shall be 500' without terminating in a curb stop box. Water main installations that stop short of the permanent fire hydrant tee, the tracing wire shall be terminated in a curb stop box. Splices in the tracing wire shall be kept to minimum and approved by the District. If splices are required, they shall be made with copper split bolt (Ilsco #IK-8 or approved equal) and taped with electrical tape. Curb stop boxes shall not be located in pavement.

5. Transition between D.I.P. and P.V.C. pipe shall be made with some type of ductile iron fitting.

6. P.V.C. Pipe Shipping, Handling & Storage. The front end of all pipe delivered by truck shall be covered for protection against exhaust fumes. P.V.C. pipe shall be protected from exposure to sunlight according to manufacturer's recommendations. Pipe will not be accepted for installation if discoloration is evident due to sunlight or other exposure. Pipe shall be stored in such a manner to prevent beaming the pipe.

7. Fittings & Glands. Fittings and glands shall be ductile iron as specified in Section 3A, "Ductile Iron Fittings". Ductile Iron Fittings shall be encased with Polyethylene film conforming to ANSI A21.5 (AWWA C105)

C. **Pipe Joints**

1. Push on and Mechanical. Push-on and mechanical joints including accessories shall conform to ANSI A21.11 (AWWA-C111). Bolts shall be high strength COR-10 tee head with hex nuts. The maximum deflection at push-on joints and/or mechanical joints shall be 5 degrees or as recommended by the Manufacturer. Spigot bell and joints shall conform to current AWWA Standards.

2. Flanged. Flanged joints shall meet the requirements of ANSI A21.15 (AWWA C115) or ANSI B16.1

a. *Gaskets* - All flanged joints shall be furnished with 1/16 inch thick full face red rubber.

b. *Bolts* - Bolts shall have American Standard heavy unfinished hexagonal head and nut dimensions all a specified in ANSI B18.2. For bolts of 1-3/4 inches in diameter and larger, bolt studs with a nut on each end are recommended. Material for bolts and nuts shall conform to ASTM A307, Grade B.

3. Internal Restrained. If an internal restrained joint system is required on the plans, all pipes, bends, tees, etc. shall be restrained push-on joint pipe and fittings utilizing ductile iron components. Restrained joint pipe shall be ductile iron manufactured in accordance with the requirements of ANSI/AWWA C151/A21.51. Push-on joints for pipe shall be in accordance with ANSI/AWWA C111/A21.11 "Rubber-Gasket Joints for Ductile-Iron Pipe and Fittings." Pipe thickness shall be designed in accordance with ANSI/AWWA C150/A21.50 "Thickness Design of Ductile-Iron Pressure Pipe," and shall be based on laying conditions and internal pressures as stated in the project plans and specifications. All restrained joint pipe and fittings shall be boltless, flexible and capable of deflection after installation. Restrained joint pipe and fittings shall be U.S. Pipe's TR FLEX restrained joint system, American's Flex-Ring or pre-approved equal. Restraint of field cut pipe shall be provided with U.S. Pipe's TR FLEX GRIPPER® Ring, TR FLEX Pipe field weldments or pre-approved equal. Method of restraining and laying schedule shall be approved by the District prior to the start of the project. Manufacturer installation instructions shall be followed. Restrained joints shall be capable of withstanding a maximum joint pressure of 250 psi. unless otherwise noted.

   Mechanical joints with retainer gland and Field Lok® gaskets are not acceptable unless otherwise specified (note: exception for valves).

4. Restrained. If a restrained joint system is required on the plans, all pipes, bends, tees, etc. shall be restrained with an approved system.

   a. The Field Lok®, Field Lok 350®, Fast-Grip®, or approved equal pipe gaskets shall develop a wedging action between pairs of high-strength stainless steel elements spaced around the gasket and shall meet the material requirements of ANSI/AWWA C111/A21.11. Restrained joints shall be capable of withstanding a maximum joint pressure of 250 psi. unless otherwise noted.

   b. The Megalug Series 1100®, MJ Field Lok® or approved equal restraint devices shall consist of multiple gripping wedges incorporated into a follower gland meeting the applicable requirements of ANSI/AWWA C110/A21.10. Gland body, wedges and wedge actuating components shall be cast from 65-45-12 ductile iron. The restraining system shall be rated in accordance with the performance requirements of ANSI/AWWA C111/A21.11 Rubber Gasket Joints for Ductile Iron Pressure Pipe and Fittings. Restrained joints shall be capable of withstanding a maximum joint pressure of 250 psi. unless otherwise noted.

5. Bonded Joints. Ductile Iron Joints and pipe fittings joints shall have approved type bonded joints. All joints shall be electrically bonded to provide electrical continuity across all joints of pipe: all fittings and specials, except where “insulated” flange joints are required or ordered.

   a. On pipe sizes up to and including 16-inch in diameter, one (1) “set” of bonding connectors shall be installed at the top of each pipe/fitting. On pipe sizes 24-inch and larger, two (2) “sets” of bonding connectors shall be installed, one (1) set each at twelve (12) inches clockwise and counterclockwise from the top of each pipe/fitting joint.

3. FITTINGS

A. **Ductile Iron Fittings**. Ductile Iron Compact Fittings and accessories shall conform to AWWA C153 and Full Body Fittings - and accessories to AWWA C110. Bolts and nuts shall be high strength, corrosion resistant alloy, such as "Cor-Ten" or approved equal.

1. Working Pressures. All fittings and accessories shall be Ductile Iron, rated for a minimum of 250 psi working pressure or as specified herein. The fittings and accessories shall be new and unused. (NOTE: Certain areas of the District’s service area require materials used, to be of a higher working pressure than 200 psi.)

2. Coating and Lining. The fittings shall be coated outside with a bituminous coating in accordance with ANSI A21.10 (AWWA C110) and lined inside with cement mortar and seal coated in accordance with ANSI A21.4 (AWWA C104).

3. Fittings and Glands. All pipe fittings shall be mechanical joint fittings unless specified elsewhere. Mechanical joints shall conform to AWWA C111.

4. Polyethylene Encasement. Ductile Iron Fittings shall be encased with polyethylene film conforming to ANSI A21.5 (AWWA C105)

B. **Joints**

1. Mechanical. Mechanical joints including accessories shall conform to ANSI A21.11 (AWWA C111). Glands shall be ductile iron. Bolts shall be high strength COR-10 tee head with hex nuts.

4. POLYETHYLENE WRAP

All ductile iron pipe, fittings, valves, and fire hydrant leads shall be polyethylene wrapped, installed according to the current edition of AWWA C105. Ductile iron fittings, valves, and fire hydrant leads used in the installation of P.V.C. pipe shall be included.

A. **Material**. Polyethylene wrap shall be 8-mil thickness low-density film or 4-mil thickness high-density cross-laminated polyethylene tube or polyethylene encasement per AWWA C105 and shall be blue or white in color. V-Bio® Enhanced polywrap is acceptable.

B. **Color.** Standard polyethylene wrap shall be blue in color. The wrap may be white if using V-Bio® Enhanced polywrap.

C. **Installation.** The contractor shall cut the roll in tubes 2 feet longer than a standard length of pipe. Each tube shall be slipped over the length of pipe, centering to allow a one foot overlap on each adjacent pipe section. After the lap is made, slack in the tubing shall be taken up for a snug fit and the overlay shall be secured with polyethylene tape.

Pipe shall not be wrapped and stored on site for any period of time, but wrapped and immediately placed in the trench, fittings shall be wrapped prior to installing blocking or pads. (see Standard Drawing #104) Polyvinyl chloride pipe requires no wrap. Odd shaped appurtenances such as valves, tees, fittings, and other ferrous metal pipeline appurtenances shall be wrapped by using a flat sheet of polyethylene. Wrapping shall be done by placing the sheet under the appliances and bringing the edges together, folding twice, and taping down.

5. FIRE HYDRANTS

A. **Description**. The Contractor shall provide all labor, materials, tools, and equipment required to furnish and install in good workmanlike manner all fire hydrants complete and ready for service where shown on the plans or where directed by the District and as specified herein.

B. **Fire Hydrants**. Fire hydrants shall conform to AWWA C502. Hydrants shall conform to the Standards of the Northern Kentucky Water District and as shown on the plans. All fire hydrants shall have auxiliary valves for isolating water flow to the hydrant. All fire hydrants and auxiliary valves shall be positively locked to the water main by restrained joints, hydrant adapters, or other approved method. Hydrants shall be designed to 200 psi working pressure and shall be shop tested to 300 psi hydrostatic pressure with the main valve both open and closed. The barrel shall have a breakable safety section and/or base bolts just above the ground line.

Hydrants shall have a main valve opening of 5 1/4 inches, a 6 inch mechanical joint inlet to be suitable for setting in a trench 3' 6" deep minimum, and shall be the traffic style hydrant so that the main valve remains closed when the barrel is broken off. Hydrants shall have a dry top and shall be self draining, when the main valve is closed. Self draining hydrants shall drain to dry wells provided exclusively for that purpose. Hydrant drains shall not be connected to storm or sanitary sewers. Hydrants located generally in the Covington System and other areas determined by the District (flood zones) shall have all drain holes plugged prior to installation. Hydrants shall be rotatable in a minimum of eight (8) position in 360 degrees. All hydrants shall have two (2)- two and one half (2 1/2) inch hose nozzles and one (1) steamer or pumper connection threaded to conform to Northern Kentucky Water District Standards: steamer nozzle shall be National Standard Thread and 2 1/2" outlets shall be Northern Kentucky Water District Standard Thread (Old Cincinnati Thread). The operating nut and the nuts of the nozzle caps shall be square in shape, measuring one (1) inch from side to side. Hydrant body shall be painted yellow for

areas designed for 150 psi working pressure and red for areas in excess of 150 psi.

All hydrants shall be right hand open, clockwise, except in certain areas of Campbell Co. as specified in Standard Drawings and shall have a direction arrow of operation cast into the dome of the hydrant. Installation per Standard Drawing #109.

C. **Installation**. The installation of fire hydrants shall be in conformance with "Mains Installation" section, paragraph "Setting Hydrants".

D. **Polyethylene Encasement.** Fire hydrant tee, anchoring pipe and part of the fire hydrant shoe shall be encased with Polyethylene film conforming to ANSI A21.5 (AWWA C105). (See Standard Drawing #109)

6. **VALVES**

A. **Description.** The Contractor shall provide all labor, materials, tools, and equipment required to furnish and install in good workmanlike manner all valves and accessories complete and ready for service where shown on the plans or where directed by the District and as specified herein.

B. **Gate Valves.** Gate valves shall conform to AWWA C509 or C515 and shall be ductile body, resilient wedge, non-rising stem with rubber "O" ring packing seals. All external dome and packing bolts shall be stainless steel. The valves shall open by turning counter-clockwise. All valves shall have openings through the body of the same circular area as that of the pipe to which they are attached. Valves shall have mechanical joint ends unless otherwise shown on the plans or directed by the District. All valves shall be designed for a working pressure of 250 pounds per square inch (PSI) unless otherwise noted on the plans or in the "Supplemental Specifications". An extension stem shall be furnished if required, to bring the operating nut within 3-1/2 feet of finished grade. Extension stems shall be securely fastened to the valve stem. The Contractor shall make all valves tight under their working pressures after they have been placed and before the main is placed in operation.

C. **Tapping Sleeves and Valves.** Tapping sleeves and valves shall be designed for a working pressure of 250 psi. The tapping sleeve together with the tapping valve shall be tested at 250 psi for visible leakage and pressure drop before the main is tapped. Tapping sleeve and valve used in high pressure areas shall be tested at 350 psi.

1. Tapping Sleeves. Tapping sleeves shall be two piece with mechanical joint type ends, and be so designed as to assure uniform gasket pressure and permit centering of the sleeve on the pipe.

2. Tapping Valves. Tapping valves shall have a flange on one end for bolting to the tapping sleeve and a mechanical joint type end connection on the outlet with slotted standard flange or other adapters for connection to the tapping machine. All external dome, flange and packing bolts shall be stainless steel. The valves shall open by turning counterclockwise. Tapping valves shall conform to AWWA C509.

D. **Valve Boxes.** All valves shall be provided with valve boxes. Valve boxes shall be of standard, adjustable, heavy duty cast iron extension type, two piece, 5 1/4 inch shaft, screw type, and of such length as necessary to extend from valve to finished grade, Tyler #562-S, Tyler #564-S or approved equal. Valve box cover shall be stamped "Water". Tops shall be set at final established grade.

E. **Butterfly Valves.** Unless otherwise specified valves 16 inches and larger shall be butterfly valves rated at 250 psi working pressure and conform to the applicable portions of AWWA Standard C504, latest edition.

1. Body. The valves shall be AWWA Class 250B designed for tight shut-off against a differential pressure of 250 psi. Valve bodies shall be constructed of ductile iron. Two trunnions for shaft bearing shall be integral with the valve body. The valves and appurtenances shall be suitable for buried service.

2. Ends. Valves shall have mechanical joint ends and shall be furnished with high strength COR-10 tee head with hex nuts, ductile iron glands, and rubber gaskets for each mechanical joint end.

3. Discs. Valve discs of cast steel, fabricated steel, or cast bronze are not acceptable.

4. Seats. Seats bonded on the discs are not acceptable.

5. Shaft Seals. If stuffing boxes are utilized for shaft seals they shall be constructed of cast iron, ASTM A126. Gland assemblies shall be of cast bronze, ASTM B132. The packing gland shall be housed in a solid walled cast iron, ASTM A48, Class 40 one piece structure or equal.

6. Operators. The valve operating mechanism shall be for counterclockwise opening. There shall be no external moving parts on valve or operator except the operator input shaft. Input shaft is to be operated by a 2 inch square operating nut. Maximum required input force on the operator shaft to open and close the valve shall be 40 pounds. The total number of turns applied to the operating nut required to completely open the valve from a completely closed position shall not be less than twice the normal valve diameter. An extension stem shall be furnished to bring the operating nut within 3 1/2 feet of the finished grade. Extension stems shall be securely fastened to the valve stem.

F. **Air Release and Vacuum Valves.** Air release valves shall be constructed at high points in the water line as indicated on the plans. These valves shall permit the air in the pipeline to escape as the pipeline fills and allows the air to re-enter as the line empties. The air relief vent of automatic air release valves, where practical, may be extended to a distance of at least 1 foot above the grade and installed with a screened, downward facing elbow. Manually operated air release valves shall include a camlock-type coupling and waste valve. These valves shall be APCO Air Release Valves Model #200-A or approved equal, 250 psi working pressure. 8” and smaller water mains, tap size and

piping shall be ¾", 12" water main - 1", & 16" and larger water main - 2". Temporary taps of suitable size may be required at certain points on the water main for the release of air for filling and/or flushing purposes. Temporary taps will be removed and plugged after use. Refer to Standard Drawing #106 for reference. Materials for air release valves will be supplied by the District.

7. **STEEL CASING PIPE**

Casing pipe shall be steel pipe with a minimum yield strength of 35,000 psi with a minimum wall thickness as listed below:

Nominal Diameter Casing Pipe	Normal Wall Thickness	Nominal Diameter Casing Pipe	Normal Wall Thickness
Under 14'	0.251"	26"	0.438"
14" & 16"	0.282"	28" & 30"	0.469"
18"	0.313"	32"	0.501"
20"	0.344"	34" & 36"	0.532"
22"	0.375"	38", 40", & 42"	0.563"
24"	0.407"	48"	0.626"

The inside diameter of the casing pipe shall be at least four (4) inches greater than the outside diameter of the carrier pipe joints. Steel casing sections shall be connected by welding, conforming to AWWA C206.

Adequate manufactured pipe spacers shall be installed to ensure that the carrier pipe is adequately supported in the center of the casing pipe throughout it's length, particularly at the ends. There shall not be any metallic contact between the casing and carrier pipe. Manufactured pipe spacers shall be installed per manufacture's installation requirements. Casings shall have both ends sealed up in such a way as to prevent the entrance of foreign material. See Standard Drawing #114 for installation details.

8. **PIPE, VALVE, HYDRANT PRESSURE REGULATOR PIT AND METER SETTING INSTALLATION**

A. **Pipe Laying.** Pipe shall be laid with bell ends facing in the direction of laying, unless otherwise directed by the District. After placing a length of pipe in the trench the spigot end shall be centered in the bell and the pipe forced home. All pipe shall be laid with ends abutting and true to line and grade. Deflection of pipe joints in excess of the manufacturer's recommendations will not be permitted. A watertight pipe plug or bulkhead shall be provided and used to prevent the entrance of foreign material whenever pipe laying operations are not in progress.

B. **Pipe Cutting.** The cutting of pipe for installing valves, fittings, or hydrants shall be done in a neat and workmanlike manner without damage to the pipe or lining. The end shall be

smooth and at right angles to the axis of the pipe. Flame cutting of metal pipe by means of an oxyacetylene torch shall not be permitted. All pipe cutting shall be at the Contractor's expense.

C. **Push-On Joints.** The surfaces with which the rubber gasket comes in contact shall be thoroughly cleaned just prior to assembly. The gasket shall then be inserted into the groove in the bell. Before starting joint assembly, a liberal coating of special lubricant shall be applied to the spigot end. (Special lubricant shall be suitable for use in potable water) With the spigot end centered in the bell, the spigot end is pushed home. Insertion of spigot into PCV type pipe bell should be inserted until the reference mark is flush with the end of the bell. Over insertion of the pipe is not recommended per the manufacturer.

D. **Mechanical Joints.** Mechanical joints for pipe require that the spigot be centrally located in the bell. The surfaces with which the rubber gasket comes in contact shall be thoroughly cleaned just prior to assembly. The clean surfaces shall be brushed with a special lubricant just prior to slipping the gasket over the spigot end and into the bell. (Special lubricant shall be suitable for use in potable water) The lubricant shall also be brushed over the gasket prior to installation to remove the loose dirt and lubricate the gasket as it is forced into its retaining space. P.V.C. pipe spigot ends shall be field cut smooth and at right angles to the axis of the pipe for installation in mechanical joint fittings. Bolt torque shall be per the manufacturer's recommendations.

E. **Setting Valves.** Valves shall be set on a firm solid concrete block foundation so that no load will be transferred to the connecting pipe. Valves in water mains shall, where possible, be located on the street property lines extended, unless otherwise shown on the plans. A valve box shall be provided for every valve. The valve box shall not transmit shock or stress to the valve and shall be centered and plumb over the operating nut of the valve. The box cover shall be set flush with the surface of the finished pavement unless otherwise shown. All valves boxes with the exception of isolating valves for fire hydrants that are located in non-paved areas shall have a minimum of 2' by 2' by 4" concrete pad as shown in Standard Drawing No. 105, unless a smaller pad is approved by the District.

F. **Setting Hydrants.** Hydrants shall be located as shown on the plans or as directed by the District. The location shall provide complete accessibility and minimize the possibility of damage from vehicles or injury to pedestrians. All hydrants shall stand plumb with the pumper nozzle facing the curb. Hydrant shall be set to the established grade, with the traffic flange within 4" above final grade in accordance to Standard Drawing No. 109. Each hydrant shall be controlled by an independent gate valve with valve box. All valves used for hydrant control shall be anchored to the branch tee.

G. **Thrust Blocking.** All bends over five (5) degrees, plugs, caps, and tees shall be securely blocked against movement with concrete thrust blocks placed against undisturbed earth in accordance with Standard Drawing No. 104. All thrust blocks shall be inspected and approved by the District prior to backfilling. Water mains shall have concrete thrust block at all pipe intersections and changes of direction to resist forces acting on the pipeline. All concrete thrust blocks shall be poured in such a manner that the bolts can be replaced without disturbing the blocking.

All caps or plugs used in mains to undergo hydrostatic test shall be properly installed and blocked in advance of testing mains. All caps or plug installations shall be approved by the District representative before the main is subjected to the pressure test.

1. Concrete Blocking. Concrete blocking shall be K.D.O.T. Class A concrete as specified in Section "Concrete". Blocking shall be placed between undisturbed ground and the fitting to be anchored. The area of bearing on the fitting and on the ground in each instance shall be that shown herein. The blocking shall, unless otherwise shown, be so placed that the pipe and fitting joints will be accessible for repair.

2. Tie Rods. If shown or specified, movement shall be prevented by attaching suitable metal rods, clamps or restrained fittings. Steel tie rods or clamps, where permitted, shall be of adequate strength to prevent movement. Steel tie rods or clamps shall be painted with three coats of approved bituminous paint or coal tar enamel. A minimum of 3/4" welded eyebolts @ a 90 degree bend and 3/4" threaded rods may only be used with the approval of the District for temporary restraint only. Duc-Lucs are prohibited for use.

3. Restrained Fittings. Restrained fittings, where permitted, shall be subject to the approval of the District.

H. **Meter Setting Installation**

The Contractor shall furnish all labor, equipment, excavation, backfill, testing, disinfection, and restoration to install the pipe at the locations shown on the plans or as directed, in accordance with the District's Standard Specifications & Drawings, complete and ready for use. No additional payment will be made for rock excavation or for bedding required in rock excavation. It will be the Contractors responsibility to remove and reset the service at his own expense if he fails to notify and receive the approval from the District. Contractors work shall be warranted for a period of one year of the date of activation of each service (meter set date).

1. Inspection & Notification. The Contractor shall notify all affected District customers prior to interrupting water service. The Contractor shall make 48 hours notification. Routine service inspection and final inspections will be made by the District upon request by the Contractor and in a timely manner. The Contractor shall provide the District 24 hours notification for inspection by the District. It is the Contractors responsibility to post "No Parking" signs and safety devices.

2. Materials. The District shall furnish to the Contractor the materials necessary to install the meter setting and water service lines. This shall include: Lid & ring, meter vault, piping, yoke bar, double yoke bar, angle valve, yoke ell, couplings, corporation, tapping saddle, extension ring.

   The Contractor shall be responsible for pickup of materials at the District's designated location. The Contractor will be responsible to the District for materials lost, stolen, or

damaged while in his possession. The Contractor shall return all unused materials, which includes scrap copper and fittings to the District. Salvaged materials are the property of the District and shall be returned to the District. The materials necessary to do restoration will not be provided under this contract item but shall be obtained from a pre-approved source.

3. Installation of Service Lines. The Contractor shall be familiar with copper piping, fittings and connections, and have available equipment to work with said materials. No sweat type fittings shall be permitted. Service line shall be installed as shown on the plans or as directed by the District. The Contractor shall excavate whatever material encountered. The service lines shall be installed using boring and jacking or open cut (as specified on the plans) at the depth required to clear existing and proposed sewers, but in no case shall the line be installed with less than 36 inches cover from final grade. The trench width shall be as excavated to a maximum of 2 feet. The line shall be laid on firm soil. In rock, sufficient extra depth shall be excavated and refilled with acceptable compacted soil or bedding sand to provide a cushion for the elimination of the possibility of crushing or perforating the pipe. Connections shall be made using normal practices for water line installation and in accordance with the standards in the plans or contained herein.

   a. *Water Service Taps* – The Contractor shall maintain a minimum of 36" cover over any tap. Tapping Saddles shall not be used with ductile iron or cast iron pipe. The corporation installed into the main shall have no more than 4 threads showing between the top of the water and the bottom of the corporation unless a tapping saddle is used.

   b. *Service Lines* - The Contractor shall maintain a constant cover of 36"over any water line. Methods of pushing or jacking under the existing street must avoid bending or kinking the pipe. No open cuts of the pavement will be permitted unless pre-approved by the District. All copper shall be cut using a copper-tubing cutter. All connections shall be flared connections. No oil base or other contaminating materials will be used in lubricants, caulking and sealers. The Contractor shall be responsible for making all joints watertight.

   c. *Meter Vaults* - All meter vaults shall be located inside existing right-of-ways or water main easements of record or as directed by the District. Typically the meter vault shall sit 5' behind the back edge of curb or edge of pavement. The Contractor shall contact the customer and determine a suitable location of the setting within the above guidelines. It is the Contractors responsibility to notify the District's Inspector if these conditions cannot be met. The District's Inspector will inspect any questionable meter setting location prior to the Contractor installing.

      Meter vaults shall be set to allow the meter cover to be level with the back edge of the existing curb or the back edge of paving along roadways without curbs. It is the Contractor's responsibility to ensure that the meter vault does not settle due to poor compaction or any other reason within the Contractor's control. The

Contractor at no additional expense to the District shall adjust any meter vault that sinks below grade due to poor workmanship by the Contractor to grade.

9. **TRENCH BACKFILL**

All trench backfill shall be free from cinders, refuse, organic material, boulders, rocks or other material which in the opinion of the District is unsuitable. No backfill shall be made with frozen material. Lime sand shall not be used for any backfill.

A. **Backfill in Non-Pavement Areas.** Trench backfill in areas not directly beneath or near pavements and driveways shall be as specified in this section unless the local authority having jurisdiction or the District stipulates additional requirements.

1. Trench Bottom Preparation. The pipe shall be bedded on sand to achieve full pipe barrel support. In any event not less than 3" of sand bedding shall be used.

2. Backfill to 12" Over Pipe Barrel. All trench excavations shall be backfilled immediately after pipe is laid with the exception of thrust blocks. Compacted sand or bankrun material shall be used to backfill the trench from the bottom of the pipe barrel to the 12" over the pipe barrel. Backfill material shall be free from cinders, refuse, organic material, boulders, top soil, frozen material, material with a high void content, rocks **1 1/2"** or larger measured in any direction, sharp stones and crushed rocks larger than **3/4"**, or other materials which in the opinion of the District is unsuitable. No flushing of backfill shall be permitted to achieve compaction. Clay bulkheads shall be installed as specified in Section B-5 of Trench Backfill.

3. Remaining Trench Backfill. From 12" above the pipe barrel to the surface, excavated trench material may be used as backfill material or as required by local or county authorities. No material shall be used for backfill that contains frozen earth, vegetable or organic material, debris, rocks **8"** or larger measured in any direction, or earth with an exceptionally high void content.

4. Compaction. All backfill shall be placed in uniform loose layers, not to exceed 12" layers, and each layer shall be compacted to a density not less than 95 percent of the standard Proctor maximum dry density (ASTM D698) unless additional requirements are required by the local authority having jurisdiction. The backfill shall be compacted in such a manner and with appropriate equipment so that there is no pipe damage, pipe misalignment or damage to joints. No flushing of backfill shall be permitted to achieve compaction.

B. **Backfill Beneath Driveways.** Trench backfill beneath and within five (5) feet of driveways shall be as specified in this section.

1. Trench Bottom Preparation. The pipe shall be bedded on sand to achieve full pipe barrel support. In any event not less than 3" of sand bedding shall be used.

2. Backfill to 12" Over Pipe Barrel. All trench excavations shall be backfilled immediately

after pipe is laid with the exception of thrust blocks. Compacted sand or bankrun material shall be used to backfill the trench from the bottom of the pipe barrel to the 12" over the pipe barrel. Backfill material shall be free from cinders, refuse, organic material, boulders, top soil, frozen material, material with a high void content, rocks **1 1/2"** or larger measured in any direction, sharp stones and crushed rocks larger than **3/4"**, or other materials which in the opinion of the District is unsuitable. No flushing of backfill shall be permitted to achieve compaction. Clay bulkheads shall be installed as specified in Section B-5 of Trench Backfill.

3. Granular Backfill. When backfilling under pavements, driveways, or as directed by the District, granular material as specified shall be used in place of the excavated material. The granular backfill shall be placed from 12 inches from the top of pipe to 6 inches below pavement subgrade level in uniform 6 inch loose layers and each layer shall be compacted to a density not less than 95 percent of the standard Proctor maximum dry density (ASTM D698). The backfill shall be compacted in such a manner and with appropriate equipment so that there is no pipe damage, pipe misalignment or damage to joints. No flushing of backfill shall be permitted to achieve compaction.

4. Trench Backfill to Subgrade. The top 6 inches of the trench backfill, immediately below pavement subgrade level, shall be crushed limestone or dense grade aggregate compacted in the same manner and to the same density at the granular backfill.

5. Remaining Trench Backfill to Final Grade. From subgrade to final grade, asphalt, concrete or other paving/surface shall be placed to match the existing pavement/surface conditions.

6. Bulkheads. When a granular bedding is provided in rock or when granular backfill is required, the Contractor shall place bulkheads of clay soil across the trench at 100 foot intervals to resist the movement of groundwater through the granular material. Such bulkheads shall be carefully compacted and shall extend approximately 3 feet in a direction parallel to the pipe and shall extend from the bottom of the trench to a point 4" below final grade level.

7. Surface Conditions. The trench surface shall be periodically attended to during the course of the contract. The trench surface shall be maintained in a safe condition and shall not interfere with natural drainage.

C. **Backfill Beneath Pavement**. Trench backfill beneath roadway pavements, or as directed by the District shall include flowable fill as specified in this section.

1. Backfill to 12 Inches Over pipe Barrel. The pipe shall be bedded on sand so that the pipe barrel has full and continuous support. All trench excavations shall be backfilled immediately after pipe is laid. Compacted sand or bankrun shall be used to backfill the trench from the bottom of the pipe barrel to 12 inches above the top of the pipe barrel. The sand or bankrun shall be placed in uniform 6 inch loose layers and each layer compacted to a density not less than 95 percent of the standard Proctor maximum dry density (ASTM D698) in such a manner and with appropriate equipment so that there is

no pipe damage, pipe misalignment or damage to joints so as to eliminate the possibility of settlement, pipe misalignment, or damage to joints. The sand or bankrun shall be free from cinders, refuse, organic material, boulders, rocks, or other material which in the opinion of the District is unsuitable. No backfill shall be made with frozen material.

2. Trench Backfill to Subgrade. From 12 inches above the pipe barrel to subgrade, **"Low Strength Mortar Backfill Material"** (Flowable Fill, K-Crete) shall be used as backfill material. The Low Strength Mortar Mix shall meet the current Ky. Dept. of Highways's "Standard Specifications for Road & Bridge Construction". The Low Strength Mortar Mix shall have sufficient drying time (per manufacturer's recommendation) before the final layer of backfill is applied.

3. Remaining Trench Backfill to Final Grade. From subgrade to final grade, asphalt, concrete or other paving/surface shall be placed to match the existing pavement/surface conditions. All joints shall be properly seal with an approved material.

4. Testing of Trench Backfill. Testing of backfill shall be at the request of the District and to the specifications of the District and at the cost of the Contractor.

10. **TEMPORARY STREET & ROADWAY RESTORATION**

A. **Traffic-Bound Base Course.** For all trenches where replacing streets and/or driveways is required, the Contractor shall maintain at his own expense a traffic- bound course of a minimum of 6" traffic-bound gravel and 4" of temporary hot asphalt or cold patch asphalt when hot mix is not available in a safe and passable condition until the trenches are ready for final resurfacing. The traffic-bound base course shall be compacted to a density not less than 95 percent of the standard Proctor maximum dry density (ASTM D698).

B. **Maintenance of Temporary Street Restoration** Temporary street restoration areas shall be maintained in a safe condition at all times. There shall be no loose materials, depressions, drop-offs or any other deficiencies in the temporary pavement. If said deficiencies exist they shall be immediately corrected by the Contractor.

11. **FINAL RESTORATION OF STREET & ROADWAYS**

A. **Scope.** This section covers the restoration of concrete and asphaltic concrete pavement, driveways, sidewalks and other surface construction removed or damaged during the progress of the work.

B. **General.** Except as otherwise specified, indicated on the drawings, or covered with other surface treatments, all pavement, driveways, curbs/gutters, and sidewalks which are removed or damaged during the progress of the work shall be restored to its original or better condition by the Contractor. All restoration work shall be subject to acceptance by the property owner, agency having jurisdiction thereof, and the District. Unless otherwise specified, all material used for restoration work shall be new.

At least five days in advance of pavement and curbs/gutter replacement, the Contractor shall notify the District and the authority having jurisdiction thereof of the proposed work. All street work shall be subject to acceptance by the authority having jurisdiction thereof.

Crushed limestone, bituminous materials or other materials used in the resurfacing of streets, shall meet the current requirements of the Standard Specifications of the Kentucky Department of Highways.

Sub-grades shall be thoroughly compacted to at least 95 percent of maximum density at optimum moisture content as determined by ASTM D698. In addition, the stability of sub-grades shall be such that when materials for construction are deposited on the sub-grade no rutting or displacement of the subgrade by material hauling vehicles will occur.

Governing Standards. Except as otherwise specified or indicated, materials, equipment, details, and construction methods shall comply with the applicable provisions of the local, county and state ordinances and regulations. Requirements for surface restoration and materials specified herein are the minimum requirements for compliance with the Contract Documents. If requirements of the authority having jurisdiction over surface restoration are greater than those presented herein, Contractor shall comply with those requirements at no additional cost to the District.

Weather Limitations. Minimum temperature under which asphaltic concrete pavements may be constructed shall be as stipulated in the governing standards.

If weather conditions do not permit replacement of permanent surfacing, a temporary cold mix asphaltic concrete surfacing shall be provided and maintained in a smooth and driveable condition. Cold mix material shall be replaced with the specified hot mix asphaltic concrete when weather conditions permit. No materials shall be placed when the underlying surface is muddy, frozen, or has frost or water thereon.

Equipment and facilities for measuring, mixing, heating, transporting, spreading, compacting, and other operations shall be in accordance with the applicable requirements of the governing standards. Improved or modernized equipment which will produce results equal in quality to those which would result from the specified equipment will be considered for use. All equipment and facilities shall be acceptable to the District.

C. **Materials**. The sources of materials shall be submitted for review by the District. Except as modified herein, materials shall conform to the requirements of the Kentucky Department of Transportation standards.

Contractor shall submit to District for approval documentation certifying materials to be used for surface restoration are in compliance with the requirements herein.

D. **Asphaltic Concrete Pavement.** Except as modified herein, existing asphaltic concrete pavement which is removed or damaged during the progress of the work shall be replaced with new pavement to match, as closely as possible, the adjacent existing

pavement.

Asphaltic concrete pavements shall be constructed as specified, and in accordance with the Kentucky Department of Transportation standards.

Finished surfaces shall match existing surfaces as appropriate.

Bituminous mixtures shall be spread and finished by hand methods only where machine methods are impractical as determined by the District. Hand placed mixtures shall not be cast or otherwise manipulated in such manner that segregation occurs.

Each lift of the base course shall be uniformly compacted to a density of not less than 94 percent as determined by ASTM D2950. The surface course shall be uniformly compacted to a density of not less than 96 percent as determined by ASTM D2950.

Where asphaltic concrete pavement is to be replaced, the subgrade shall be prepared as herein before specified and this subgrade shall comprise the base courase upon which the concrete sub-slab and/or bituminous pavement shall be laid.

Where no concrete sub-slab is required, the subgrade or base shall be thoroughly cleaned and broomed and a prime coat of medium tar (RC-3) shall be uniformly applied at a rate of 0.20 to 0.25 gallons per square yard. Where Portland cement concrete sub-slab is required the prime shall be applied at the rate of approximately .05 gallons per square yard. The prime shall be applied by a pressure distributor or other approved pressure spray method.

When the prime coat has become tacky but not dry and hard, a bituminous surfacing consisting of class "I" asphaltic concrete shall be placed, spread, finished and compacted in accordance with the current Standard Specifications of the Kentucky Department of Highways. Compacted thickness of asphaltic concrete pavement shall be as directed or as shown on the plans. All asphaltic concrete joints shall be properly seal with an approved material in accordance with the current Standard Specifications of the Kentucky Department of Highways (hot-poured elastic joint sealer).

E. **Concrete Pavement.** Existing concrete pavements which are removed or damaged during the progress of the work shall be replaced to match, as closely as possible, the adjacent existing concrete pavement. Concrete, materials, and workmanship shall conform to the applicable requirements of the concrete section.

Where concrete pavement is to be replaced or is required under bituminous pavement replacement, it shall conform to the existing pavement and/or the District's instructions , (not less than 6' (six inches) thick) and accomplished with K.D.O.T. Class "A" concrete. Concrete curbs shall conform to existing concrete curbs. All joints shall be properly sealed with an approved material.

If concrete is removed to within 2 feet or less of an existing construction joint, the additional pavement to the joint shall be removed and replaced with new concrete.

F. **Aggregate Base Course.** Aggregate base course shall be used as a base, where required by the governing regulations. The base course shall be constructed in accordance with the governing standards. Mixing of the base course shall be by the central plant method or the road mix method.

G. **Protection.** The Contractor shall protect all adjacent concrete and masonry so that no damage will occur as the result of subsequent construction operations. All damage or discoloration shall be repaired to the satisfaction of the District.

Special care shall be taken to prevent bituminous materials from spraying or splashing. Adjacent construction shall be protected by covering with suitable fabric or paper.

H. **Miscellaneous Repair Work.** All existing items and construction, whether or not indicated by the drawings but which are removed or damaged as a result of construction operations under this contract, whether within or outside of public right-of-way, shall be repaired or replaced unless otherwise required by the drawings.

Repair or replacement shall be with material similar to those existing and shall, in each case, restore the item to its original or better condition as acceptable to the District and the District thereof.

Mailboxes repaired or replaced as part of the project shall be installed at a height of 41 to 42 inches measured from the pavement surface to the bottom of the box. The front face of the mailbox shall be 6 to 8 inches behind the edge of the pavement.

I. **Untreated Surface.** Where the existing surface is untreated gravel or stone, the Contractor shall replace the surfacing that is disturbed or removed with crushed limestone to at least the thickness of the existing pavement. The crushed limestone shall be placed and compacted in the same manner as traffic-bound base course. Prior to the final acceptance, the Contractor shall fill all depressions with compacted crushed limestone, and shall thoroughly compact and grade to match existing surface.

12. CLEAN UP

After a section of main is tested and accepted, the ground surface shall be cleaned of all surplus material including stone, broken pipe, construction material, and all other debris, to the satisfaction of the District.

13. STORAGE AND DISPOSAL OF EXCAVATED MATERIAL

Where the Contractor finds it necessary to remove excavated material to some other location, care should be taken not to overload trucks, which would in turn spill material out upon highways. Any such material spilled upon highways shall be immediately cleaned up from the location and disposed of.

Where it is necessary and is agreeable with public and private property owners,

excavated materials may be temporarily piled in the streets or roadways, however, one lane of traffic must be maintained at all times. By no means will the Contractor be permitted to store excavated materials in streets or roadways over night.

All excavated material and all construction materials used in prosecution of the work shall be deposited so as not to endanger the Work, create unnecessary annoyance to the public, or interfere with natural drainage courses. During the progress of the work, all material piles shall be kept trimmed up and maintained in a neat, workmanlike manner.

After excavated materials have been removed, all hard surface streets or roadways shall be thoroughly cleaned and left free of dirt and dust. Streets or roadways which do not have hard surfaces must be restored to their original condition at the expense of the Contractor.

Disposal of excess excavated material from trench excavations or site restoration shall be disposed from the site at the Contractor's expense. Broken concrete and other debris resulting from pavement or sidewalk removal, excavated rock in excess of the amount permitted to be installed in trench backfill, debris encountered in excavation work, and other similar waste materials shall be disposed from the site at the Contractor's expense. The Contractor shall be responsible for procurement of its own dump sites, and maintaining that site at its own expense.

Confirm and comply with all applicable environmental, labor, health and safety, and all other Laws and Regulations related to demolition, removal, hauling, disposal and all other handling of unsalvageable equipment, supplies, waste, debris and other material.

14. **TRENCH MAINTENANCE**

The Contractor shall be responsible for the condition of the trenches for a period of two years from the date of the "Certificate of Substantial Completion" issuance.

15. **RESTORATION, GRADING AND SEEDING**

The Contractor shall provide all labor, materials, tools, and equipment required to grade, fertilize, seed, and mulch in good, workmanlike manner the areas where shown on the plans or where directed by the District and as specified herein.

A. **Materials**

1. Topsoil. Topsoil shall not contain more than 40% clay in that portion passing a No.10 sieve and shall contain not less than 5% or more than 20% organic matter as determined by loss on ignition of samples oven dried to constant weight at 212 degrees Fahrenheit.

2. Fertilizer. Fertilizer shall be lawn or turf grade 12-12-12.

3. Seed

a. *Urban Areas* - All areas to be seeded which are considered to be urban in character, and any area in front of a residence, business or commercial, shall be seeded with the following mixture: (% are by weight)

40% Fine Lawn Turf-Type Fescue
40% Creeping Red Fescue (Festuca rubra)
20% Annual Ryegrass (Lolium multifform)

b. *Right-of-way and Easements* - All areas in right-of way or in easements adjacent to right-of-away other than urban areas, shall be seeded with the following mixture: (% are by weight)

30% Fine Lawn Turf-Type Fescue
50% Kentucky 31 Fescue (Festuca arundinaces Var. Ky.31.)
20% Annual Ryegrass (Lolium multiflorum)

c. *All Other Areas* - All other areas shall be seeded with the following mixture: (% are by weight)

90% Perennial Ryegrass (Lolium perenne)
10% Alsike Clover (Trifolium hybridum)

4. Mulch. Mulch shall be straw reasonably free of weed seed and any foreign materials which may affect plant growth. Other materials may be used if approved by the District.

5. Asphalt Emulsion. Emulsion shall be nontoxic to plants and shall conform to AASHTO M140 or AASHTO M208.

B. **Installation**

1. Preparation of Seed Bed

a. *Topsoil* - If suitable topsoil is available as part of the excavated material it shall be removed, stored and used to backfill the top 4 inches of the excavation. All grass, weeds, roots, sticks, stones, and other debris are to be removed and the topsoil carefully brought to the finish grade by **hand raking.**

b. *Non-topsoil* - If there is no suitable topsoil available on any part of the work or if there is a deficiency of suitable topsoil, the trench backfill, except in urban areas shall be used as a seed bed. After the backfill has been given a reasonable time to settle, it shall be graded off to the finish grade and harrowed to a depth of 3 inches. All grass, weeds, roots, sticks, stones, and other debris are to be removed and the soil carefully brought to the finish grade by **hand raking.**

c. *Urban Areas* - If there is no topsoil available on any part of the work or is there is a deficiency of suitable topsoil, the Contractor shall furnish 4 inches of topsoil to be used as a seed bed in all urban areas and any area in front of a residence.

2. Fertilizing. Fertilizing shall be uniformly applied to all areas to be seeded at the rate of 1 pound per 100 square feet in topsoil or 2 pounds per 100 square feet in non-topsoil. The fertilizer shall be thoroughly disked, harrowed or raked into the soil to a depth of not less than 2 inches. Immediately before sowing the seed, the Contractor shall rework the surface until it is a fine, pulverized, smooth seed bed, varying not more than 1 inch in 10 feet.

3. Seeding. Immediately after the preparation and fertilization of the seed bed the District shall inspect and approve the site prior to seeding. The seed shall be thoroughly mixed and then evenly sown over the prepared areas at the rate of 3 pounds per 1000 square feet for urban, right-of-way and easement areas and a rate of 2 pounds per 1000 square feet for all other areas. Seed shall be sown dry or hydraulically. After sowing, the area shall be raked, dragged, or otherwise treated to cover the seed to a depth of approximately 1/4 inch.

4. Mulching. Within 48 hours after any given area is seeded, mulching material shall be evenly placed over all seeded areas at the rate of approximately 2 tons per acre, when seeding is performed between the dates of March 15 and October 15, and at the approximate rate of 3 tons per acre when seeding is performed between the dates of October 15 and March 15 of the succeeding year.

    a. *Emulsion* - Mulching materials shall be kept in place with asphalt emulsion applied at a minimum rate of 60 gallons per ton of mulch or by methods as approved or may be otherwise required to prevent displacement of material. Mulching which is displaced shall be replaced at once but only after the seeding or other work which preceded the mulching and which work was damaged as a result of displacement of mulching material has been acceptably repaired.

5. Maintenance. All seeded areas shall be carefully maintained and tended by the Contractor, watering as necessary to secure a good turf. Settled areas shall be filled, graded, and re-seeded. Seeded areas shall be free of weeds and other debris. The Contractor shall be responsible for the condition of the seeded areas for a period of 1 year from the date of "Final Certificate" issuance.

C. **Payment**. Seeding is not a pay item and all cost related thereto shall be included in the unit price of the applicable bid item.

16. DISINFECTION AND LEAKAGE TEST

A. **Scope**. This section covers the disinfection of the new water mains, fittings, temporary services and associated appurtenances. The Contractor shall provide all labor, materials, tools, equipment, and incidentals required to test the mains for watertightness and disinfect the mains as directed by the District and as specified herein. Gauges for the test shall be furnished by the Contractor.

B. **Test Section**. After the main has been installed and backfilled all newly installed pipe or any valved section thereof shall be considered a test section.

C. **Witness.** All tests performed for each test section shall be witnessed and approved by the District before acceptance. In the event the Contractor performs any test without witness by the District, the Contractor will be required to test the section again in conformance with this specification at no cost to the District.

D. **General.** All disinfection work shall conform to the requirements of the latest revision of ANSI/AWWA C651 and the requirements of the Kentucky Division of Water. If any State requirements conflict with the provisions of this section, the State requirements shall govern.

Water required for flushing and disinfection work will be provided as stipulated in the temporary facilities.

When it is necessary to interrupt service to water customers, each customer affected shall be notified in advance of the proposed service interruption and its probable duration in accordance with the project requirements.

E. **Disinfection Procedure.**. During construction or after the installation of the pipe and fittings is complete, an approved disinfection method, according to governing standards, shall be used. The disinfection solution shall be allowed to stand in the main and associated appurtenances for a period of at least twenty-four (24) hours.

During disinfection, all valves, hydrants, and service line connections shall be operated to ensure that all appurtenances are disinfected. Valves shall be manipulated in such a manner that the strong disinfection solution in the main from flowing back into the supply line. Check valves shall be used if required.

All non-disinfected fittings used for tie-ins or repairs shall be cleaned and swabbed with a liquid sodium hypochlorite disinfecting solution prior to installation.

F. **Final Flushing**. Upon completion of chlorination but before sampling and bacteriological testing, Contractor shall remove all heavily chlorinated water from the main and temporary services by flushing with potable water at the maximum velocity which can be developed under the direction and control of the District.

The Contractor shall properly neutralize and dispose of the chlorinated water and flushing water in accordance with all applicable regulations. Contractor shall obtain all special waste disposal permits necessary.

G. **Disposal of Heavily Chlorinated Water.** Disposal of chlorinated water will be in accordance with 401 KAR5:031. Coliform samples must be taken at connection points to existing mains, 1 mile intervals along new mains, and at all dead ends. Contractor shall apply a de-chlorinating agent to the water to be wasted to neutralize thoroughly the chlorine residual remaining in the water. (See the following table for neutralizing

chemicals.) Federal, state, and local regulatory agencies should be contacted to determine special provisions for disposal of heavily chlorinated water.

Chlorine residual of water being disposed of shall be de-chlorinated by treating with one of the chemicals listed in the following table:

Pounds of Chemicals Required to De-chlorinate Various Residual Chlorine Concentrations in 100,000 Gallons of Water*

Residual Chlorine Concentration *mg/L*	Sulfur Dioxide (SO_2)	Sodium Bisulfate (NaHSO3)	Sodium Sulfite (Na_2SO_3)	Sodium Thiosulfate ($Na_2S_2O_3@5H_2O$)
1	0.8	1.2	1.4	1.2
2	1.7	2.5	2.9	2.4
10	8.3	12.5	14.6	12.0
50	41.7	62.6	73.0	60.0

* Except for residual chlorine concentration, all amounts are in pounds.

The Contractor shall provide all necessary materials, equipment and labor for applying the de-chlorinating chemical in a manner such that proper mixing and contact time of the chemical and the heavily chlorinated water is obtained for complete removal of chlorine being flushed. The Contractor shall periodically test the flush water to verify that the chlorine residual is zero.

H. **Chlorine Residual Tests.** Upon completion of final flushing, the District will perform chlorine residual tests to ensure the chlorine residual in the main and temporary services is not higher than that generally prevailing in the remainder of the water distribution system and is acceptable to the District.

I. **Bacteriological Tests.** Sampling and testing of water in the main and temporary services will be performed by the District after final flushing. A standard plate count will be made by the District for each sample.

J. **Redisinfection.** Should the bacteriological tests indicate the presence of coliform organisms at any sampling point, the main and temporary services shall be re-flushed, re-sampled, and re-tested. If check samples show the presence of coliform organisms, the main and temporary services shall be re-chlorinated at no additional cost to the District until results acceptable to the District are obtained.

Re-disinfection shall be completed by the continuous feed or by the slug method. Unless otherwise permitted, the chlorination agent shall be injected into the main and temporary services at the supply end through a corporation cock installed in the top of the pipe. All materials, equipment and labor necessary for the re-disinfection shall be supplied by

Contractor at no additional cost to the District.

K. **Hydrostatic Testing.** Hydrostatic Testing will be in accordance with AWWA C600. The water main being tested shall have all air expelled by additional flushing or installation of taps on high points in the line. The pressure of the water main shall be gradually increased to obtain a minimum pressure of 100 psi over the design pressure (250 psi minimum) at the lowest elevation point of the water main or as directed by the District. The test will be for a two (2) hour duration and will not vary by more than 5 psi. All tests performed for each test section shall be witnessed and approved by a representative of the District, in the event any test is performed without a representative of the District, the Contractor shall be required to test the section again. Leakage is defined as the amount of water used to maintain the test pressure.

17. APPLICABLE SPECIFICATIONS & STANDARDS

The following current specifications and standards form a part of these Specifications:

A. **American Water Works Association** (AWWA) Standards
B. **Northern Kentucky Water District** Standard Specifications & Drawing for the Installation of Water Mains current edition located at www.nkywater.org
C. "Manual of Accident Prevention in Construction" published by the **Associated General contractors of America**
D. **Kentucky Occupational Safety and Health Administration's** "Kentucky Occupational Safety and Health Standards for General Industry" current edition.
E. **American National Standards Institute** (ANSI)
F. **American Society for Testing & Materials** (ASTM)
G. **Kentucky Division of Water Quality**
H. **"Recommended Standards for Water Works"** current edition

End of Section

Kentucky Division of Water Construction Permit

Andy Beshear
GOVERNOR

ENERGY AND ENVIRONMENT CABINET
DEPARTMENT FOR ENVIRONMENTAL PROTECTION
300 Sower Boulevard
Frankfort, Kentucky 40601
Phone: (502) 564-2150
Fax: 502-564-4245

Rebecca W. Goodman
SECRETARY

Anthony R. Hatton
COMMISSIONER

September 7, 2024

Kyle Ryan, P.E.
Northern KY Water District
2835 Crescent Springs Rd
Erlanger, KY 41018

RE: Sub-District O Water Main Extension
Campbell County, KY
Northern KY Water District
AI #: 2485, APE20240011
PWSID #: 0590220-24-011

Dear Mr. Ryan:

We have reviewed the plans and specifications for the above referenced project. The plans include the construction of approximately 24,166 linear feet (LF) of 8-inch PVC and 16,973 LF of 8-inch DI waterline. This is to advise that plans and specifications for the above referenced project are APPROVED with respect to sanitary features of design, as of this date with the requirements contained in the attached construction permit.

If you have any questions concerning this project, please contact Cassie Campbell at 502-782-6909.

Sincerely,

Terry Humphries, P.E.
Supervisor, Engineering Section
Water Infrastructure Branch
Division of Water

TH:CC
Enclosures
c: CT Consultants Inc
Campbell County Health Department
Division of Plumbing

Distribution-Major Construction

Northern KY Water District

Facility Requirements

Activity ID No.:APE20240011

GACT0000000297 (Sub-District O Water Main Extension) 24,166 linear feet (LF) of 8-inch PVC, and 16,973 LF of 8-inch DI waterline:

Narrative Requirements:

Condition No.	Condition
T-1	Construction of this project shall not result in the water system's inability to supply consistent water service in compliance with 401 KAR 8:010 through 8:600. [401 KAR 8:100 Section 5]
T-2	The public water system shall not implement a change to the approved plans without the prior written approval of the cabinet. [401 KAR 8:100 Section 4(3)]
T-3	A proposed change to the approved plans affecting sanitary features of design shall be submitted to the cabinet for approval in accordance with Section 2 of this administrative regulation. [401 KAR 8:100 Section 4(2)]
T-4	During construction, a set of approved plans and specifications shall be available at the job site. Construction shall be performed in accordance with the approved plans and specifications. [401 KAR 8:100 Section 3(1)]
T-5	Unless construction begins within two (2) years from the date of approval of the final plans and specifications, the approval shall expire. [401 KAR 8:100 Section 3(3)]
T-6	Upon completion of construction, a professional engineer shall certify in writing that the project has been completed in accordance with the approved plans and specifications. [401 KAR 8:100 Section 4(1)]
T-7	The system shall be designed to maintain a minimum pressure of 20 psi at ground level at all points in the distribution system under all conditions of flow. [Recommended Standards for Water Works 8.2.1, Drinking Water General Design Criteria IV.1.a]
T-8	Water lines should be hydraulically capable of a flow velocity of 2.5 ft/s while maintaining a pressure of at least 20 psi. [Drinking Water General Design Criteria IV.1.b]
T-9	The normal working pressure in the distribution system at the service connection shall not be less than 30 psi under peak demand flow conditions. Peak demand is defined as the maximum customer water usage rate, expressed in gallons per minute (gpm), in the pressure zone of interest during a 24 hour (diurnal) time period. [Drinking Water General Design Criteria IV.1.d]
T-10	When static pressure exceeds 150 psi, pressure reducing devices shall be provided on mains or as part of the meter setting on individual service lines in the distribution system. [Drinking Water General Design Criteria IV.1.c]
T-11	The minimum size of water main in the distribution system where fire protection is not to be provided should be a minimum of three (3) inch diameter. Any departure from minimum requirements shall be justified by hydraulic analysis and future water use, and can be considered only in special circumstances. [Recommended Standards for Water Works 8.2.2, Drinking Water General Design Criteria IV.2.b]

GACT0000000297 (Sub-District O Water Main Extension) 24,166 linear feet (LF) of 8-inch PVC, and 16,973 LF of 8-inch DI waterline:

Narrative Requirements:

Condition No.	Condition
T-12	Water mains not designed to carry fire-flows shall not have fire hydrants connected to them. [Recommended Standards for Water Works 8.4.1.b]
T-13	Flushing devices should be sized to provide flows which will give a velocity of at least 2.5 feet per second in the water main being flushed. [Recommended Standards for Water Works 8.2.4.b, Recommended Standards for Water Works 8.4.1.b]
T-14	No flushing device shall be directly connected to any sewer. [Recommended Standards for Water Works 8.2.4.b, Recommended Standards for Water Works 8.4.1.b]
T-15	Pipe shall be constructed to a depth providing a minimum cover of 30 inches to top of pipe. [Drinking Water General Design Criteria IV.3.a]
T-16	Water mains shall be covered with sufficient earth or other insulation to prevent freezing. [Recommended Standards for Water Works 8.7]
T-17	A continuous and uniform bedding shall be provided in the trench for all buried pipe. Backfill material shall be tamped in layers around the pipe and to a sufficient height above the pipe to adequately support and protect the pipe. Stones found in the trench shall be removed for a depth of at least six inches below the bottom of the pipe. [Recommended Standards for Water Works 8.7]
T-18	Water line installation shall incorporate the provisions of the AWWA standards and/or manufacturer's recommended installation procedures. [Recommended Standards for Water Works 8.7]
T-19	All materials used for the rehabilitation of water mains shall meet ANSI/NSF standards. [Recommended Standards for Water Works 8.1]
T-20	Packing and jointing materials used in the joints of pipe shall meet the standards of AWWA and the reviewing authority. [Recommended Standards for Water Works 8.1]
T-21	All tees, bends, plugs and hydrants shall be provided with reaction blocking, tie rods or joints designed to prevent movement. [Recommended Standards for Water Works 8.7]
T-22	All materials including pipe, fittings, valves and fire hydrants shall conform to the latest standards issued by the ASTM, AWWA and ANSI/NSF, where such standards exist, and be acceptable to the Division of Water. [Recommended Standards for Water Works 8.1]
T-23	Water mains which have been used previously for conveying potable water may be reused provided they meet the above standards and have been restored practically to their original condition. [Recommended Standards for Water Works 8.1]

GACT0000000297 (Sub-District O Water Main Extension) 24,166 linear feet (LF) of 8-inch PVC, and 16,973 LF of 8-inch DI waterline:

Narrative Requirements:

Condition No.	Condition
T-24	Manufacturer approved transition joints shall be used between dissimilar piping materials. [Recommended Standards for Water Works 8.1]
T-25	The minimum size of water main which provides for fire protection and serving fire hydrants shall be six?inch diameter. [Recommended Standards for Water Works 8.2, Drinking Water General Design Criteria IV.2.a]
T-26	Pipes and pipe fittings containing more than 8% lead shall not be used. All products shall comply with ANSI/NSF standards. [Recommended Standards for Water Works 8.1]
T-27	Gaskets containing lead shall not be used. Repairs to lead?joint pipe shall be made using alternative methods. [Recommended Standards for Water Works 8.1]
T-28	Pipe materials shall be selected to protect against both internal and external pipe corrosion. [Recommended Standards for Water Works 8.1]
T-29	Dead end mains shall be equipped with a means to provide adequate flushing. [Recommended Standards for Water Works 8.2]
T-30	The hydrant lead shall be a minimum of six inches in diameter. Auxiliary valves shall be installed on all hydrant leads. [Recommended Standards for Water Works 8.4.3]
T-31	A sufficient number of valves shall be provided on water mains to minimize inconvenience and sanitary hazards during repairs. [Recommended Standards for Water Works 8.3]
T-32	Wherever possible, chambers, pits or manholes containing valves, blow?offs, meters, or other such appurtenances to a distribution system, shall not be located in areas subject to flooding or in areas of high groundwater. Such chambers or pits should drain to the ground surface, or to absorption pits underground. The chambers, pits and manholes shall not connect directly to any storm drain or sanitary sewer. Blow?offs shall not connect directly to any storm drain or sanitary sewer. [Recommended Standards for Water Works 8.6]
T-33	At high points in water mains where air can accumulate provisions shall be made to remove the air by means of air relief valves. [Recommended Standards for Water Works 8.5.1]
T-34	Automatic air relief valves shall not be used in situations where flooding of the manhole or chamber may occur. [Recommended Standards for Water Works 8.5.1]
T-35	The open end of an air relief pipe from automatic valves shall be extended to at least one foot above grade and provided with a screened, downward?facing elbow. [Recommended Standards for Water Works 8.5.2.c]

GACT0000000297 (Sub-District O Water Main Extension) 24,166 linear feet (LF) of 8-inch PVC, and 16,973 LF of 8-inch DI waterline:

Narrative Requirements:

Condition No.	Condition
T-36	Discharge piping from air relief valves shall not connect directly to any storm drain, storm sewer, or sanitary sewer. [Recommended Standards for Water Works 8.5.2.d]
T-37	Water pipe shall be constructed with a lateral separation of 10 feet or more from any gravity sanitary or combined sewer measured edge to edge where practical. If not practical a variance may be requested to allow the water pipe to be installed closer to the gravity sanitary or combined sewer provided the water pipe is laid in a separate trench or undisturbed shelf located on one side of the sewer with the bottom of the pipe at least 18 inches above the top of the gravity sanitary or combined sewer pipe. [Drinking Water General Design Criteria IV.3.b]
T-38	Water lines crossing sanitary, combined or storm sewers shall be laid to provide a minimum vertical distance of 18 inches between the outside of the water main and the outside of the sanitary, combined or storm sewer with preference to the water main located above the sanitary, combined or storm sewer. [Drinking Water General Design Criteria IV.3.c]
T-39	At crossings, one full length of water pipe shall be located so both joints will be as far from the sewer as possible. [Recommended Standards for Water Works 8.8.3.b]
T-40	There shall be no connection between the distribution system and any pipes, pumps, hydrants, or tanks whereby unsafe water or other contaminating materials may be discharged or drawn into the system. [Recommended Standards for Water Works 8.10.1]
T-41	Water utilities shall have a cross connection program conforming to 401 KAR 8. [Recommended Standards for Water Works 8.10.1]
T-42	Installed pipe shall be pressure tested and leakage tested in accordance with the appropriate AWWA Standards. [Recommended Standards for Water Works 8.7.6]
T-43	New, cleaned and repaired water mains shall be disinfected in accordance with AWWA Standard C651. The specifications shall include detailed procedures for the adequate flushing, disinfection, and microbiological testing of all water mains. In an emergency or unusual situation, the disinfection procedure shall be discussed with the Division of Water. [Recommended Standards for Water Works 8.7.7]
T-44	A minimum cover of five feet shall be provided over pipe crossing underwater. [Recommended Standards for Water Works 8.9.2]
T-45	Valves shall be provided at both ends of water crossings so that the section can be isolated for testing or repair; the valves shall be easily accessible, and not subject to flooding for pipes crossing underwater. [Recommended Standards for Water Works 8.9.2.b]
T-46	Permanent taps or other provisions to allow insertion of a small meter to determine leakage and obtain water samples on each side of the valve closest to the supply source for pipes crossing. [Recommended Standards for Water Works 8.9.2.c]

Kentucky Division of Water Stream Construction Permit

Andy Beshear
GOVERNOR

ENERGY AND ENVIRONMENT CABINET
DEPARTMENT FOR ENVIRONMENTAL PROTECTION
300 Sower Boulevard
Frankfort, Kentucky 40601
Phone: (502) 564-2150
Fax: 502-564-4245

Rebecca W. Goodman
SECRETARY

Anthony R. Hatton
COMMISSIONER

STREAM CONSTRUCTION PERMIT
For Construction In Or Along A Stream

Issued to: **Northern KY Water District**
Address: **2835 Cresent Springs Rd**
Erlanger, KY 41018
Permit No.: **34828**

Permit effective date: **April 30, 2024**
Permit expires on: **April 30, 2025**

Agency Interest: **2485**
Activity ID: **APE20240007**

In accordance with KRS 151.250 and KRS 151.260, the Energy and Environment Cabinet approves the application dated **April 30, 2024** for **Approximately 43,920 feet of Water Line Extensions, including temporary crossings through two perennial streams and twenty-one ephemeral streams, in the floodplain of Ohio River, with general coordinates 38.978423, -84.559544, in Kenton County.**

There shall be no deviation from the plans and specifications submitted and hereby approved unless the proposed change shall first have been submitted to and approved in writing by the Cabinet. This approval is subject to the attached limitations. **Please read these limitations carefully!** If you are unable to adhere to these limitations for any reason, please contact this office prior to construction.

This permit is valid from the standpoint of stream obstruction only. Issuance of this permit does not relieve the permittee from the responsibility of obtaining any other permits or licenses required by this Cabinet and other state, federal and local agencies. Specifically if the project involves work in a stream, such as bank stabilization, dredging, relocation, or in designated wetlands, a 401 Water Quality Certification from the Division of Water will be required.

This permit is nontransferable and all construction must be completed by the expiration date noted above. Year by year extensions may be requested subject to the requirements of 401KAR 4:060 Section 3 (5) (a) and (b) by submitting the attached Final Development Report, Permit Extension, Modification or Termination Form **prior** to your current permit expiration date. When your project is completed, you are required to notify the Division by submitting the same form and any required documents per your permit. The form may be emailed to: DOWFloodplain@ky.gov.

Any violation of the Water Resources Act of 1966 as amended is subject to penalties as set forth in KRS 151.990.

If you have any questions concerning this letter or other floodplain management requirements, please contact the Division of Water's Floodplain Management Section at (502) 564-3410 or by email at DOWFloodplain@ky.gov.

Sincerely,

David Ray Coe

David Coe, P.E., Supervisor
Floodplain Management Section
Water Resources Branch
Division of Water

Florence Regional Office
Lindsey Jakovljevic, agent, CT Consultants, LJakovljevic@ctconsultants.com
James Shumate, PE, Engineer, JShumate@ctconsultants.com
Rob Himes, Kenton County Floodplain Coordinator, rhimes@pdskc.org
Brett Price, Pendleton County Floodplain Coordinator, planningzoning@pendletoncountyky.gov

Permitted Site List

1) 4700 Webster Road Independence, KY 41051 to 4914 Webster Road Independence, KY 41051 (LAT: 38.978423, LON: -84.559544), Kenton County

2) 172 Pelly Road Independence, KY 41051 to 4909 Scenic Ridge Lane Independence, KY 41051 (LAT:38.961712, LON: -84.531536), Kenton County

3) 420 Independence Station Road Independence, KY 41051 to 4856 Justice Lane Independence, KY 41051(LAT: 38.963487 LON: -84.560793), Kenton County

4) 11201 Mann Road Lotonia, KY 41015 to 11290 Mann Road Covington, KY 41015 (LAT: 38.925638 LON: -84.470236), Kenton County

5) 10754 Decoursey Pike Ryland Heights, KY 41015 (Start LAT: 38.924638, LON: -84.477834 End LAT: 38.933810, LON: -84.471890), Kenton County

6) 16172 Elliott Road Demossville, KY 41033 to 15748 Madison Pike Demossville, KY 41033 (LAT: 38.794466 LON: -84.470929), Pendleton County

7) Goshorn Road (Start LAT: 38.819822, LON: -84.483576 End LAT: 38.830316, LON -84.484673), Kenton County

8) Fisksburg Road (Start LAT:38.819794 LON: -84.483478 End LAT: 38.819342 LON: -84.469851), Kenton County

9) Alexander Road (Start LAT:38.8192939 LON: -84.469754 End LAT: 38.815906 LON: - 84.462428), Kenton County

10) 15414 Pfanstiehl Road Demossville, KY 41033 to 16059 Pfanstiehl Road Demossville, KY, Kenton County

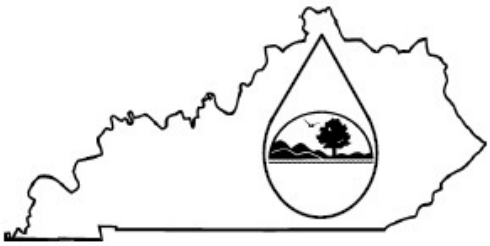
11) 2586 Moffett Road Independence, KY 41051 to 13669 Trace Run Road Independence, KY 41051 (LAT: 38.881409, LON: -84.511409), Kenton County

12) Start LAT: 38.899162, LON: -84.559796 to 12116 Gene Street Walton, KY 41094 (LAT: 38.897585 LON: -84.556243), Kenton County

13) 54 Wilson Road Taylor Mill, KY 41015 to 498 Mason Road Taylor Mill, KY 41015 (LAT: 39.030189, LON: -84.492750), Kenton County

14) 1902 Highwater Road Villa Hills, KY 41017 (LAT: 39.075725, LON: 84.571679 to LAT: 39.075726, LON: -84.572178), Kenton County

Email this completed form to DOWFloodplain@ky.gov
or mail to DOW Floodplain Management, 300 Sower Blvd, Frankfort KY 40601



Commonwealth of Kentucky
Energy and Environment Cabinet
Division of Water

Final Development Report, Permit Extension, Modification or Termination Form

Name/Corporation Name: **Northern KY Water District**

Email Address: _____

Agency Interest #: **2485**

Permit #: **34828**

SELECT THE APPROPRIATE PERMITTING ACTION REQUIRED BELOW

FINAL DEVELOPMENT REPORT FORM
Submit within 90 days after completion of construction

☐ All work on this project has been completed according to the plans and specifications as permitted by the Division of Water.

- ☒ Photographs of completed development (required)
- ☐ As Built drawings, if required by permit conditions
- ☐ Elevation Certificate, if required by permit conditions
- ☐ Floodproofing Certificate, if required by permit conditions
- ☐ Fill Compaction Tests, if required by permit conditions

PERMIT EXTENSION REQUEST FORM
Submit at least 30 days prior to permit expiration

☐ Permit Extension is requested, the project plans have not changed

- ☐ Construction began on (date) _____
- ☐ Construction has not started, will begin on (date) _____

PERMIT TERMINATION FORM

☐ The permitted project was not started and will not be completed

PERMIT MODIFICATION FORM

Provide detailed description of changes to the project on the following page, include maps and drawings as required.

Signature (Required): _____

Email this completed form to DOWFloodplain@ky.gov
or mail to DOW Floodplain Management, 300 Sower Blvd, Frankfort KY 40601

Modification Notes, permit Number: 34828

Email this completed form to DOWFloodplain@ky.gov
or mail to DOW Floodplain Management, 300 Sower Blvd, Frankfort KY 40601

Stream Construction Permit

Northern KY Water District

Facility Requirements

Permit Number: 34828

Activity ID No.:APE20240007

STRC0000000019 (AI: 2485 - Northern KY Water Dist) Approximately 43,920 feet of Water Line Extensions, including temporary crossings through two perennial streams and twenty-one ephemeral streams, in the floodplain of Ohio River, with general coordinates 38.978423, -84.559544, in Kenton County:

Submittal/Action Requirements:

Condition No.	Condition
S-1	The Permittee or project engineer shall submit final construction report within 90 days after completion of construction. The Permittee or project engineer shall certify in writing that the project was completed in accordance with the approved plans and specifications. A Final Construction Report Form is enclosed. [401 KAR 4:060 Section 3(6)]

Narrative Requirements:

Condition No.	Condition
T-1	The Permittee, Northern KY Water District, is responsible for compliance with the following permit conditions and all Federal, State and Local regulations applicable to this project. [KRS 151.250]
T-2	The issuance of this permit by the cabinet does not convey any property rights of any kind or any exclusive privilege. [KRS 151.250 & 401 KAR 4:060]
T-3	This permit is issued from the standpoint of stream obstruction only and does not constitute certification of any other aspect of the proposed construction. The Permittee is liable for any damage resulting from the construction, operation, or maintenance of this project. This permit was issued under the provisions of KRS Chapter 151.250 and regulations promulgated pursuant thereto. Issuance of this permit does not relieve the Permittee from the responsibility of obtaining any other permits or licenses required by this Cabinet and other state, federal and local agencies. [KRS 151.250]
T-4	A copy of this permit shall be available at the construction site. [KRS 151.250]. [KRS 151.250]
T-5	Any work performed by or for the Permittee that does not fully conform to the submitted application or drawings and the limitations set forth in this permit, is subject to partial or total removal and enforcement actions pursuant to KRS 151.280 as directed by the Kentucky Department for Environmental Protection. [KRS 151.280]
T-6	Any design changes or amendments to the approved plans shall be submitted to the Division of Water and approved in writing prior to implementation. [KRS 151.250]

STRC0000000019 (AI: 2485 - Northern KY Water Dist) Approximately 43,920 feet of Water Line Extensions, including temporary crossings through two perennial streams and twenty-one ephemeral streams, in the floodplain of Ohio River, with general coordinates 38.978423, -84.559544, in Kenton County:

Narrative Requirements:

Condition No.	Condition
T-7	Since your community participates in the National Flood Insurance Program, a local floodplain permit shall be obtained prior to beginning of construction. Upon completion of construction the Permittee shall contact the local permitting agency for final approval of the construction for compliance with the requirements of the local floodplain ordinance. [401 KAR 4:060 Section 9(c)]
T-8	Areas disturbed by the boring equipment in the regulatory floodplain, on both banks shall be restored to its approximate original ground surface level. [401 KAR 4:060]
T-9	To prevent collapse of the stream bed, sufficient cover shall be maintained between the channel bottom and the bore hole tunnel. [401 KAR 4:060]
T-10	Erosion prevention measures, sediment control measures, and other site management practices shall be designed, installed, and maintained in an effective operating condition to prevent migration of sediment off site. [KRS 224.70-110]
T-11	To avoid secondary adverse impacts, all materials used shall be stable and inert, free from pollutants and floatable objects, and shall meet all appropriate engineering standards. (Inert here means materials that are not chemically reactive and that will not rot or decompose, such as soil, rock, broken concrete or similar materials.). [401 KAR 4:060 Section 7]
T-12	All debris and excess material shall be removed for disposal outside of the base floodplain. [401 KAR 4:060]
T-13	Upon completion of construction all disturbed areas shall be seeded and mulched or otherwise stabilized to prevent erosion. [401 KAR 4:060]
T-14	The entry of mobile equipment into the stream channel shall be limited as much as reasonably possible to minimize degradation of the waters of the Commonwealth. [401 KAR 4:060]
T-15	Construction other than as authorized by this permit shall require written approval from the Division of Water. [401 KAR 4:060]
T-16	The existing stream flow shall be maintained at all times during construction using standard flow diversion or pump around methods. Cofferdams or other structures placed in the stream shall be removed immediately if adverse flooding conditions result or if a flooding event is imminent. [401 KAR 4:060 Section 4]

STRC0000000019 (AI: 2485 - Northern KY Water Dist) Approximately 43,920 feet of Water Line Extensions, including temporary crossings through two perennial streams and twenty-one ephemeral streams, in the floodplain of Ohio River, with general coordinates 38.978423, -84.559544, in Kenton County:

Narrative Requirements:

Condition No.	Condition
T-17	The Sub-fluvial crossing shall meet the following criteria whichever is applicable: (1) During the construction of the crossing, no material may be placed in the stream or in the flood plain of the stream to form construction pads, coffer dams, access roads, etc., unless prior approval has been obtained from the cabinet. (2) The trench shall be backfilled as closely as possible to the original contour. All excess material from construction of the trench shall be disposed of outside of the flood plain unless the Permittee has received prior approval from the cabinet to fill within the flood plain. (3) For subfluvial crossings of erodible channels, there shall be at least thirty (30) inches clear to the top of the pipe or conduit at all points. (4) For subfluvial crossings of nonerodible channels, there shall be at least six (6) inches of clear cover above the top of the pipe or conduit at all points, and the pipe or conduit shall be encased on all sides by at least six (6) inches of concrete. (5) The weight of a pipe and its contents during normal operating conditions at all points shall exceed that of an equal volume of water, or the Permittee shall provide the division with sufficient information to show that the pipe and joints have sufficient strength. [401 KAR 4:050 Section 2]
T-18	The Permittee shall obtain a Water Quality Certification or a determination that none is required through the Division of Water, Water Quality Section prior to commencement of construction. Contact the Water Quality Certification Supervisor at 401WQC@ky.gov or (502) 564-3410. [KRS 224.16-050 & Clean Water Act Section 401]

U.S. Army Corps of Engineers Nationwide Permit &

401 Water Quality Certification

DEPARTMENT OF THE ARMY
U.S. ARMY CORPS OF ENGINEERS, LOUISVILLE DISTRICT
REGULATORY DIVISION ROOM 183 P.O. BOX 59
LOUISVILLE KENTUCKY 40202-0059

September 23, 2024

Regulatory Division
North Branch
ID#: LRL-2024-00350-cds

Mr. Steve Broering
Northern Kentucky Water District
2835 Crescent Springs Rd
P.O. Box 18640
Erlanger, KY 41018
Via Email: sbroering@nkywater.org

Dear Mr. Broering:

This letter is in response to the Pre-Construction Notification (PCN) you submitted to the Louisville District, North Branch on April 26, 2024, for a Department of the Army Nationwide permit (NWP) verification. This project has been assigned the file number LRL-2024-00350-cds and is known as Mann Road, Decoursey Pike, and Steep Creek Road (Sub-District O Water Main Extension). This file number should be referenced in all correspondence concerning this project.

A review of the information provided indicates that the proposed work would include the temporary trenching of 0.271 acre of wetlands and 1,321 linear feet (0.0122 acre) of stream to facilitate the installation of 460 linear feet, 5,425 linear feet, and 580 linear feet of eight-inch water main along Decoursey Pike, Steep Creek Road, and Mann Road, respectively. The impacted wetlands and streams will be restored to pre-existing contours post-installation. The project area for this determination includes a 14.93 acre(s) area which is illustrated on the enclosed site plans/maps. The proposed project corridor is located from 11201 Mann Road Lotonia, KY 41015 to 11290 Mann Road, Covington, KY 41015 (lat.: 38.925638; long.: -84.470236) and 10754 Decoursey Pike and Steep Creek Road, Ryland Heights, KY 41015 (Start – lat.: 38.924638, long.: -84.477834; End: lat.: 38.935021, long.: -84.471890).

We have determined that the proposed work is authorized by Nationwide Permit 58: Utility Line Activities for Water and Other Substances pursuant to authorities under Section 404 of the Clean Water Act (33 U.S.C. § 1344). The proposed work must be accomplished in strict accordance with the general permit conditions, any regional conditions, the application materials, and the enclosed plan set (sheets 13 through 19) and Figures 6.27 through 6.34. If the extent of the project area and/or nature of the authorized impacts to waters are modified, a revised PCN must be submitted to this office for written approval before work is initiated. Any violation of permit conditions or deviation from your submitted plans may subject the permittee to enforcement action.

This verification is valid until March 14, 2026, unless prior to this date the subject NWP(s) is suspended, revoked, or is modified such that the activity no longer complies with the terms and conditions of this NWP. If you commence or are under contract to commence this activity before the date that the relevant NWP is modified or revoked, you will have 12 months from the date of the modification or revocation of the NWP to complete the activity under the present terms and conditions of this NWP.

Project Specific Special Conditions:

1. The Permittee shall comply with all conditions of the Section 401 Water Quality Certification No. WQC2024-128-7M1, dated July 30, 2024, issued by Kentucky Division of Water (KDOW), which are incorporated herein by reference.

2. Tree clearing shall not occur during the occupied timeframe (April 1st to October 14th) to minimize adverse effects to the federally-listed Northern Long-eared Bat and the Indiana bat. To mitigate for the loss of 1.285 acres of potential suitable roost trees, the permittee shall follow the process outlined in the Kentucky Field Office's (KFO) 2016 Revised Conservation Strategy for Forest-Dwelling Bats (Conservation Strategy) and provide receipt of an appropriate contribution to the Imperiled Bat Conservation Fund (IBCF). The Permittee shall contact the KFO of the U.S. Fish and Wildlife Service (USFWS) by calling (502) 695-0468 to determine the appropriate mitigation in accordance with the Conservation Strategy. The Permittee shall provide the Corps with a receipt of payment prior to any tree removal. If additional forested areas not previously considered in the DA permit application are to be cleared, the Permittee shall notify the Corps and the USFWS in advance of any additional tree clearing to determine if re-initiation of Endangered Species Act consultation is required.

This NWP verification does not preclude the necessity to obtain any other Federal, State, or local permits, licenses, and/or certifications, which may be required.

If you have any questions related to this verification or have issues accessing documents referenced in this letter, please contact Cory Shumate, Regulatory Specialist of the North Branch at 502-315-6669, by mail at the above address, or by email at cory.d.shumate@usace.army.mil. Please take a moment to complete our customer satisfaction survey located at https://regulatory.ops.usace.army.mil/customer-service-survey/.

Sincerely,

Cory Shumate
Regulatory Specialist, North Branch

Enclosures

Cc (w/enclosures)
Lindsey Jakovljevic, CT Consultants (via Ljakovljevic@ctconsultants.com)
Flora Conner, Kentucky Division of Water (via Conner.Flora@ky.gov)

Compliance Certification Form

Action ID Number: LRL-2024-00350-cds **County, State: Kenton, Kentucky**

Permittee: Northern Kentucky Water District, Steve Broering

Project Name: Mann Road, Decoursey Pike, and Steep Creek Road (Sub-District O Water Main Extension)

Date Verification Issued: 9/23/2024

Project Manager: Cory Shumate

Upon completion of the activity authorized by this permit and any mitigation required by the permit, sign this certification and return it to the following address:

US ARMY CORPS OF ENGINEERS
Louisville District
Attn: Cory Shumate
North Branch
600 Dr. Martin Luther King Jr. Place
Louisville, Kentucky 40202
or
cory.d.shumate@usace.army.mil

Please note that your permitted activity is subject to a compliance inspection by a U. S. Army Corps of Engineers representative. Failure to comply with any terms or conditions of this authorization may result in the Corps suspending, modifying or revoking the authorization and/or issuing a Class I administrative penalty, or initiating other appropriate legal action.

I hereby certify that the work, and mitigation (if applicable), authorized by the above referenced permit has been completed in accordance with the terms and conditions of the said permit including any general or specific conditions.

Date Authorized Work Started: _____ **Completed: _____**

Describe any deviations from permit (attach drawing(s) depicting the deviations):

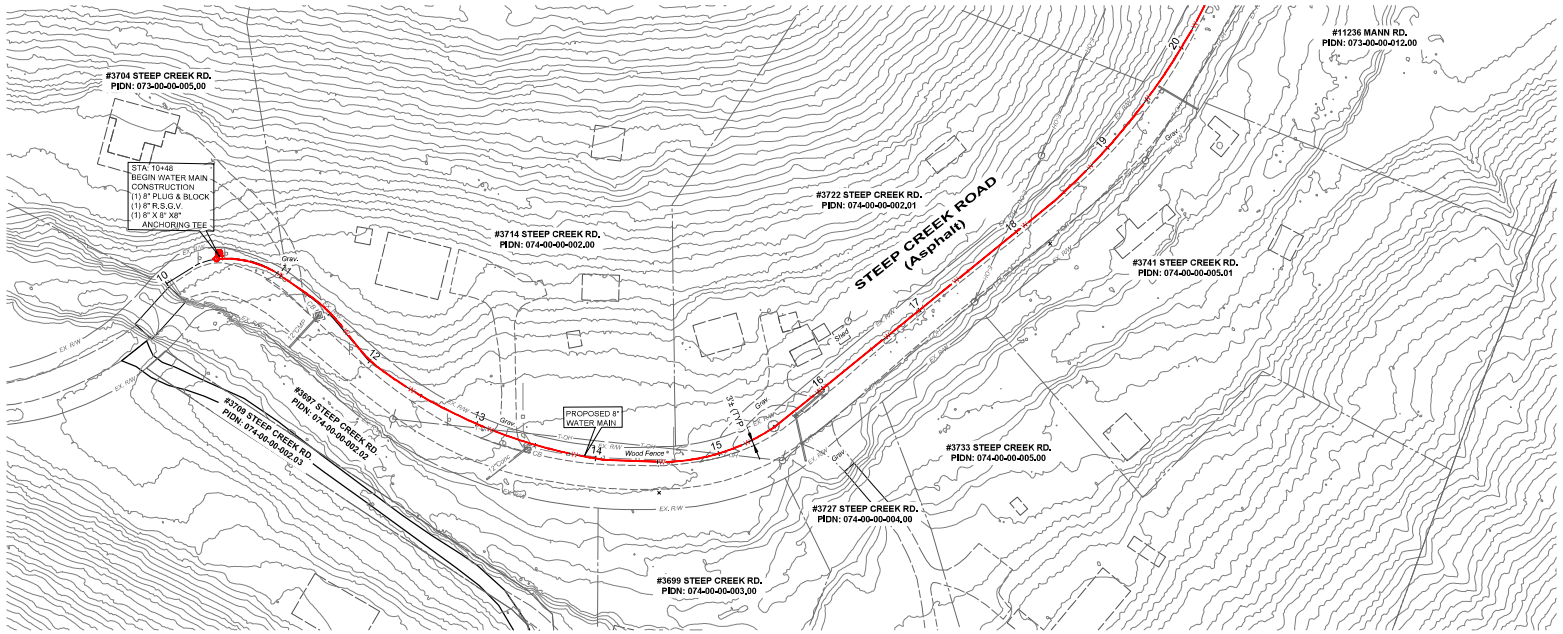
_____

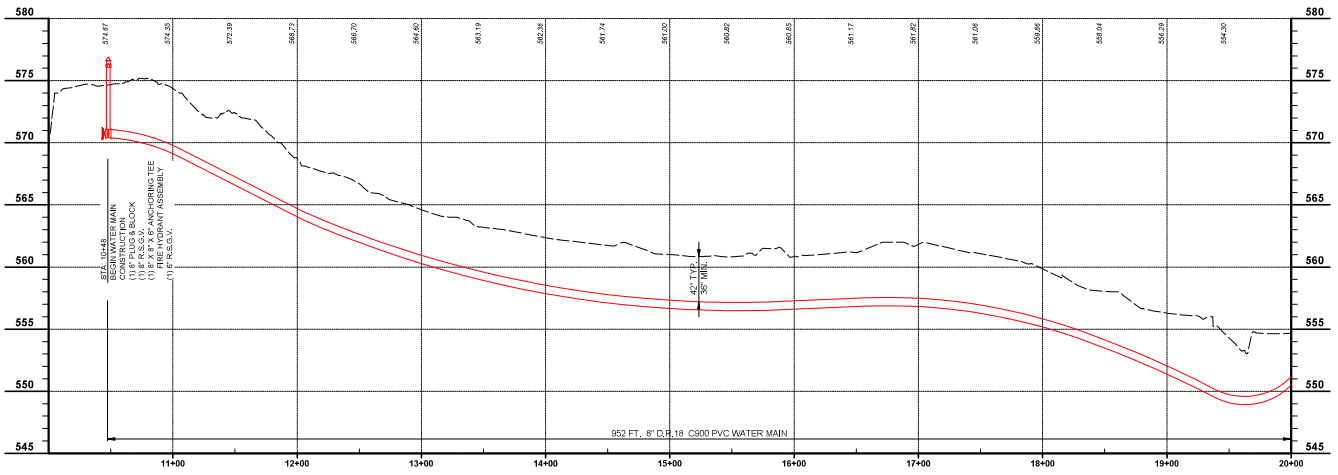
_____

***Note: The description of any deviations on this form does not constitute approval by the Corps.**

_____ _____

Signature of Permittee **Date**





SCALE:
H: 1" = 50'
V: 1" = 5'

0' 50' 100'
SCALE: 1" = 50'

50% REVIEW

your trusted advisor
consultants
engineers
architects
planners

NO	REVISION	DATE
-	-	-

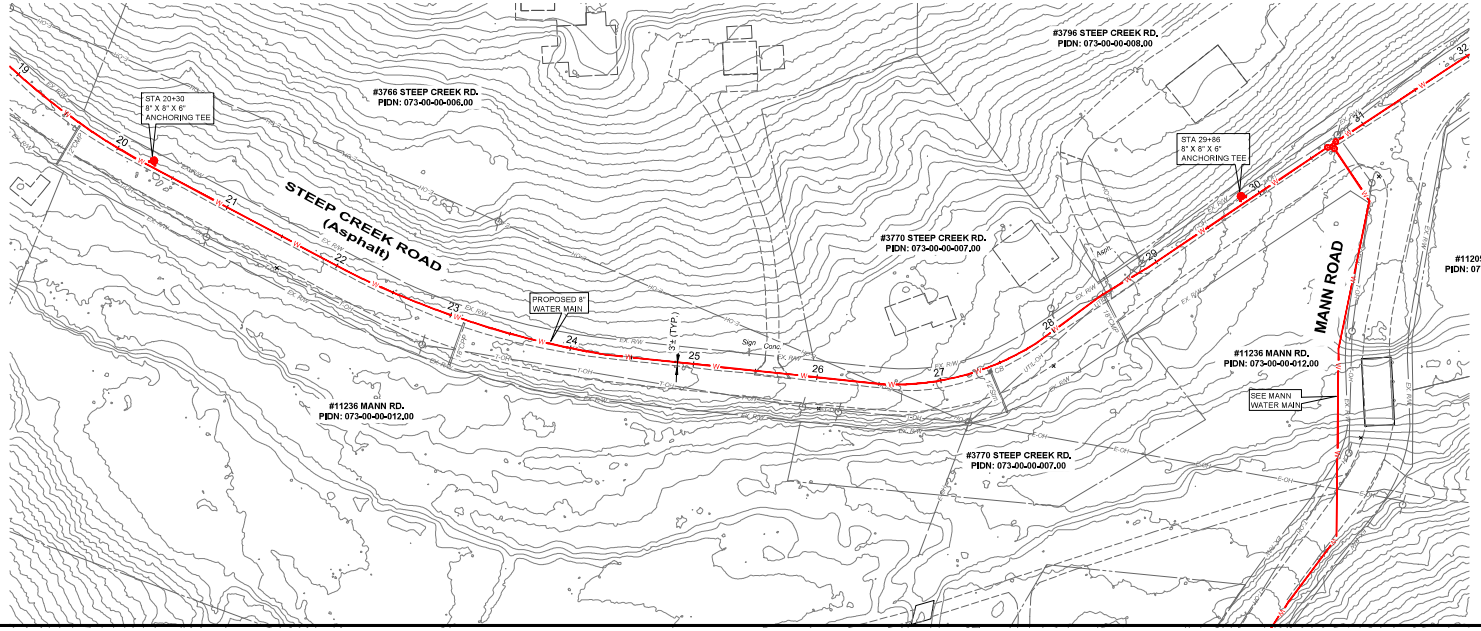
ISSUED FOR:	30% DESIGN
ISSUE DATE:	FEB 2026
SCALE:	AS SHOWN
DESIGNED BY:	JCOR
DRAWN BY:	JCOR
CHECKED BY:	JSHU

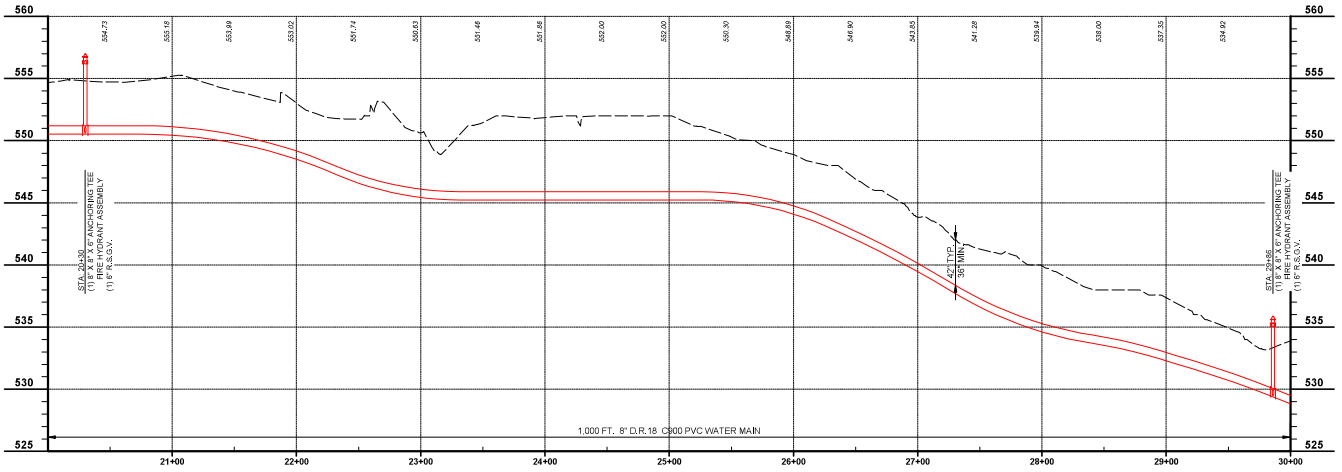
NORTHERN KENTUCKY WATER DISTRICT
SUBDISTRICT 'O'
-KENTON COUNTY -

STEEP CREEK ROAD
STA. 10+48 TO STA. 20+00

PROJECT NO.	231591
DISCIPLINE	CIVIL
SHEET NAME	C-12
SHEET	13
OF	44

C:\TCHCAD_DATA\KY_PROJECTS\2023\231591\DWG\SHEETS\C_CIVIL\SW PWP_PLAN\C_STEEP CREEK ROAD\C_STEEP CREEK_1.DWG 2/25/2026 5:25:11 PM - JAMES CORNELL





SCALE:
H: 1" = 50'
V: 1" = 5'

0' 50' 100'
SCALE: 1" = 50'

50% REVIEW

your trusted advisor
consultants
engineers
architects
planners

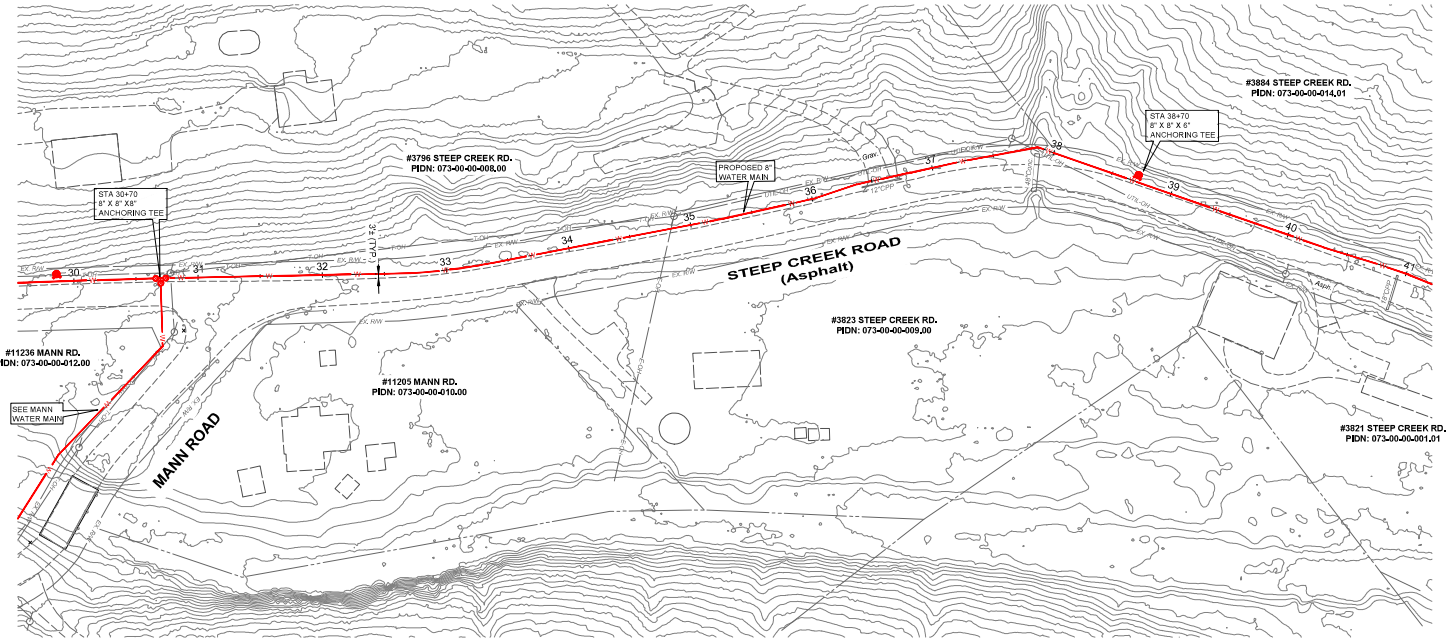
NO	REVISION	DATE
-	-	-

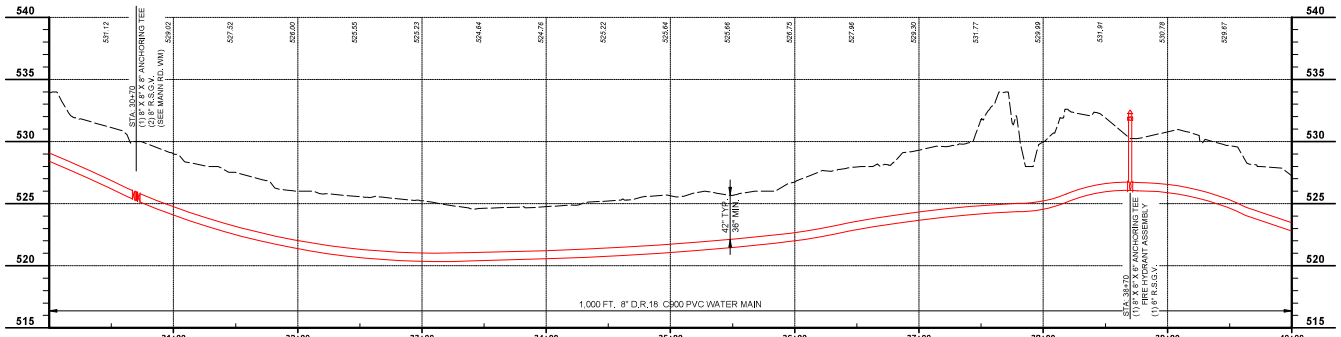
ISSUED FOR:	30% DESIGN
ISSUE DATE:	FEB 2026
SCALE:	AS SHOWN
DESIGNED BY:	JCOR
DRAWN BY:	JCOR
CHECKED BY:	JSHU

NORTHERN KENTUCKY WATER DISTRICT
SUBDISTRICT 'O'
-KENTON COUNTY -

STEEP CREEK ROAD
STA. 20+00 TO STA. 30+00

PROJECT NO.
231591
DISCIPLINE
CIVIL
SHEET NAME
C-13
SHEET 14 OF 44





SCALE:
H: 1" = 50'
V: 1" = 5'

0' 50' 100'
SCALE: 1" = 50'

50% REVIEW

your trusted advisor
consultants
engineers
architects
planners

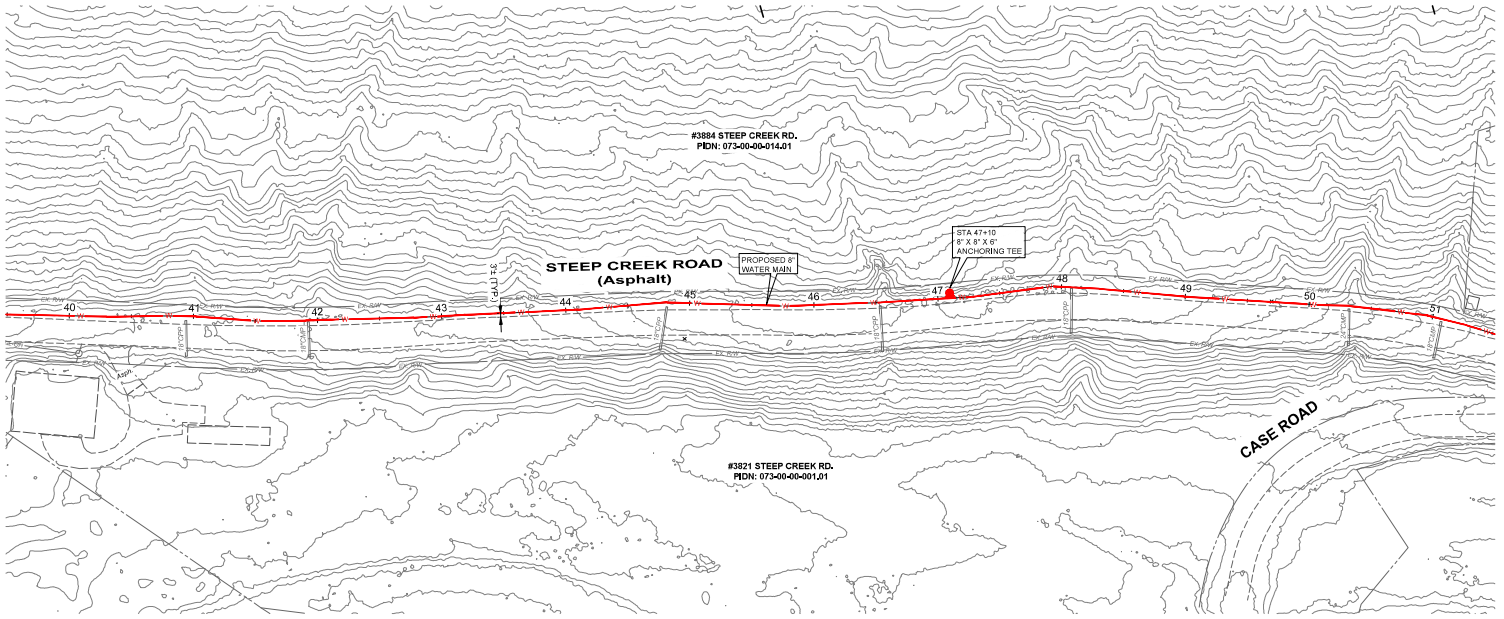
NO	REVISION	DATE
-	-	-

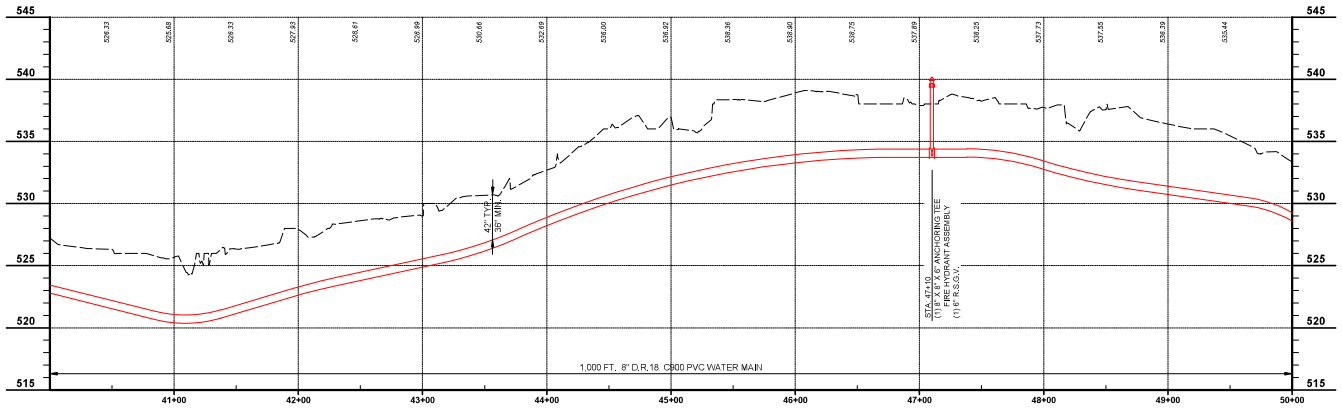
ISSUED FOR: 30% DESIGN
ISSUE DATE: FEB 2026
SCALE: AS SHOWN
DESIGNED BY: JCOR
DRAWN BY: JCOR
CHECKED BY: JSHU

NORTHERN KENTUCKY WATER DISTRICT
SUBDISTRICT 'O'
-KENTON COUNTY -

STEEP CREEK ROAD
STA. 30+00 TO STa. 40+00

PROJECT NO.
231591
DISCIPLINE
CIVIL
SHEET NAME
C-14
SHEET 15 OF 44





SCALE:
H: 1" = 50'
V: 1" = 5'



50% REVIEW

your trusted advisor
consultants — engineers
architects
planners

NO	REVISION	DATE
-	-	-

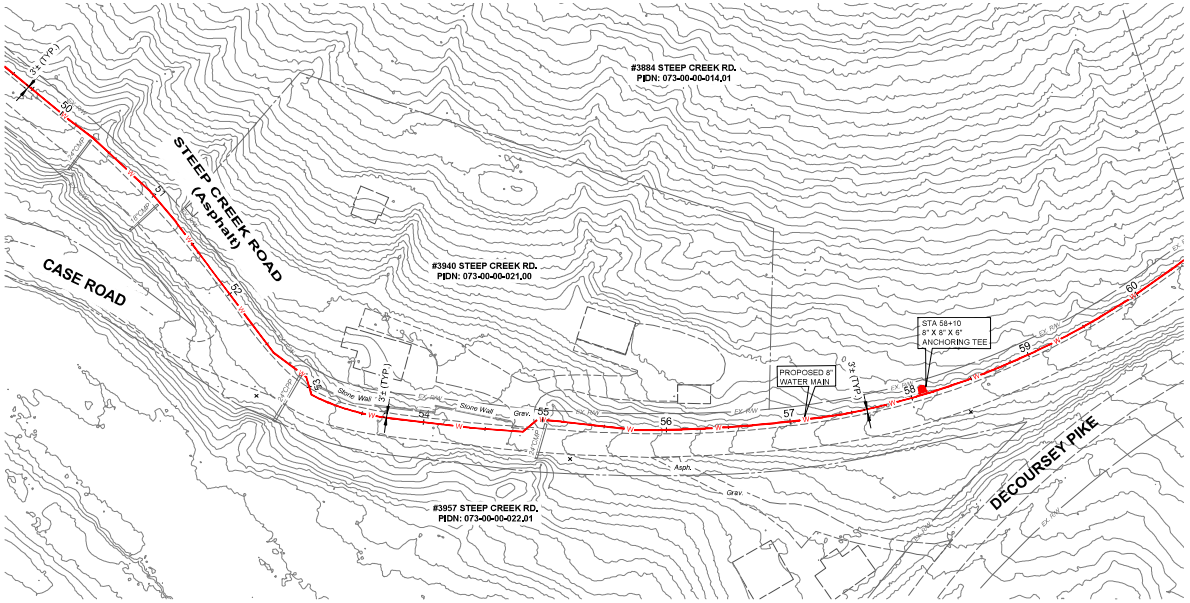
ISSUED FOR:	30% DESIGN
ISSUE DATE:	FEB 2026
SCALE:	AS SHOWN
DESIGNED BY:	JCOR
DRAWN BY:	JCOR
CHECKED BY:	JSHU

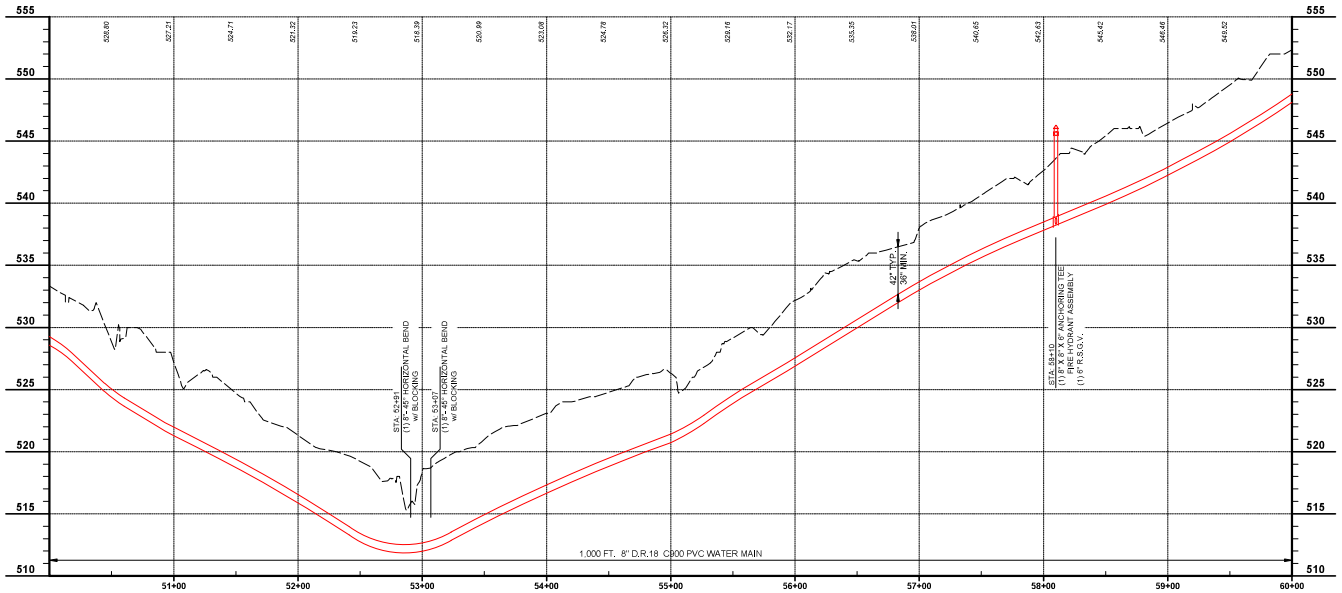
NORTHERN KENTUCKY WATER DISTRICT
SUBDISTRICT 'O'
-KENTON COUNTY -

STEEP CREEK ROAD
sta. 40+00 to sta. 50+00

PROJECT NO.	231591
DISCIPLINE	CIVIL
SHEET NAME	C-15
SHEET	16
OF	44

C:\TCHCAD_DATA\KY_PROJECTS\231591\ENGINEERING\SHEETS\C_CIVIL\PWP_PLOT_STEEP CREEK CIVIL • STEEP CREEK_C • 2/6/2026 5:25:11 PM • JAMES CORNELL





SCALE:
H: 1" = 50'
V: 1" = 5'

SCALE: 1" = 50'

50% REVIEW

your trusted advisor
consultants
engineers
architects
planners

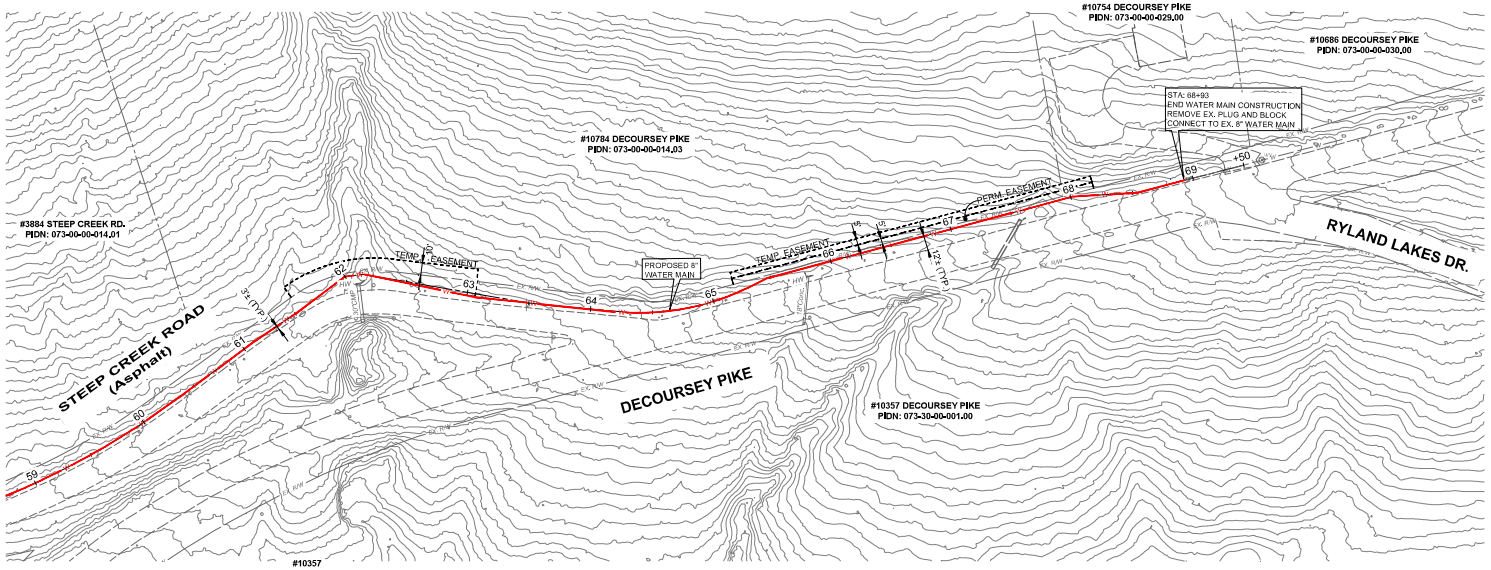
NO	REVISION	DATE
-	-	-

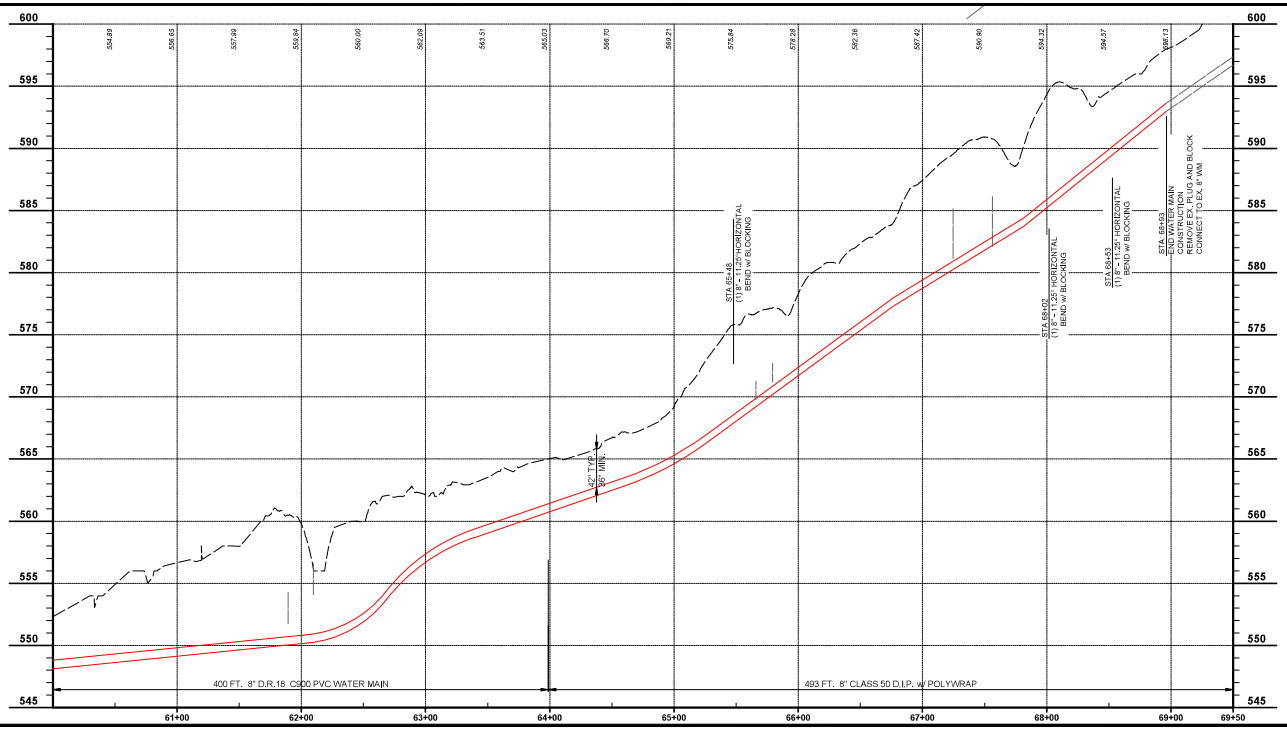
ISSUED FOR: 30% DESIGN
ISSUE DATE: FEB 2024
SCALE: AS SHOWN
DESIGNED BY: JCOR
DRAWN BY: JCOR
CHECKED BY: JSHU

NORTHERN KENTUCKY WATER DISTRICT
SUBDISTRICT 'O'
-KENTON COUNTY -

STEEP CREEK ROAD
STA. 50+00 TO STA. 60+00

PROJECT NO.
231591
DISCIPLINE
CIVIL
SHEET NAME
C-16
SHEET 17 OF 44





SCALE:
H: 1" = 50'
V: 1" = 5'

0' 50' 100'
SCALE: 1" = 50'

50% REVIEW

your trusted advisor
consultants
engineers
architects
planners

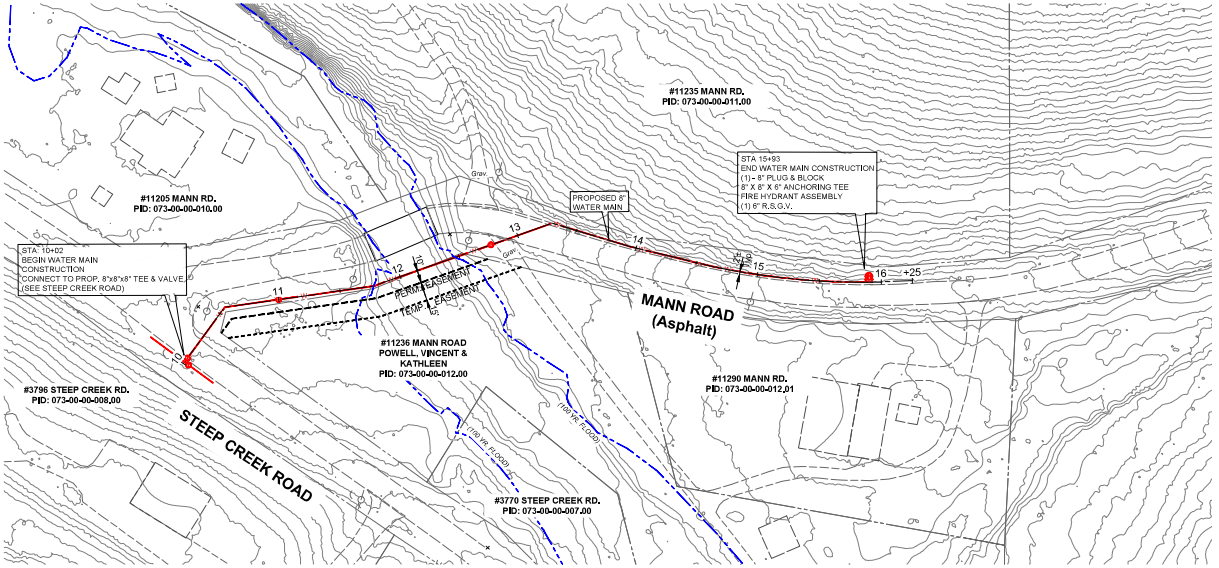
NO	REVISION	DATE
-	-	-

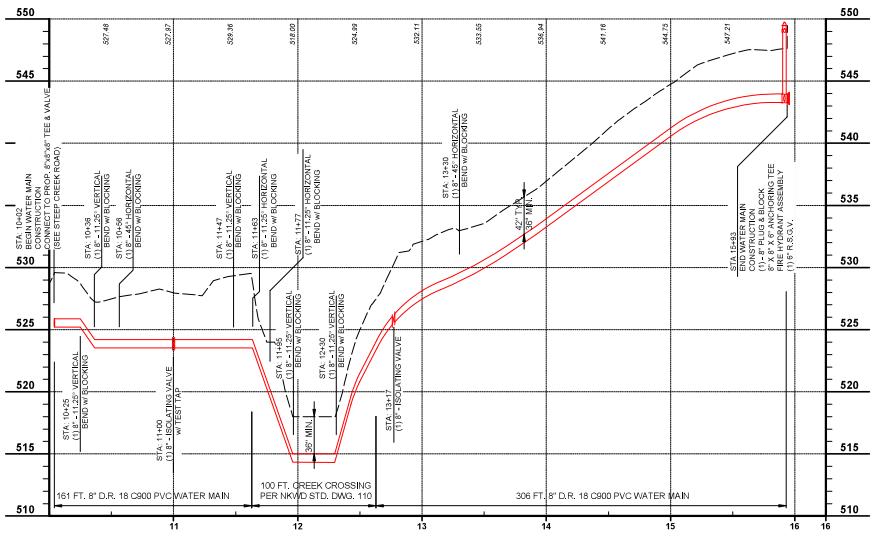
ISSUED FOR:	30% DESIGN
ISSUE DATE:	FEB 2026
SCALE:	AS SHOWN
DESIGNED BY:	JCOR
DRAWN BY:	JCOR
CHECKED BY:	JSHU

NORTHERN KENTUCKY WATER DISTRICT
SUBDISTRICT 'O'
-KENTON COUNTY -

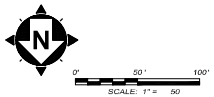
STEEP CREEK ROAD / DECOURSEY PIKE
STA. 60+00 TO STA. 68+80

PROJECT NO.	231591
DISCIPLINE	CIVIL
SHEET NAME	C-17
SHEET	18
OF	43





SCALE:
H: 1" = 50'
V: 1" = 5'



50% REVIEW

your trusted advisor
consultants - engineers
architects
planners

NO	REVISION	DATE
-	-	-

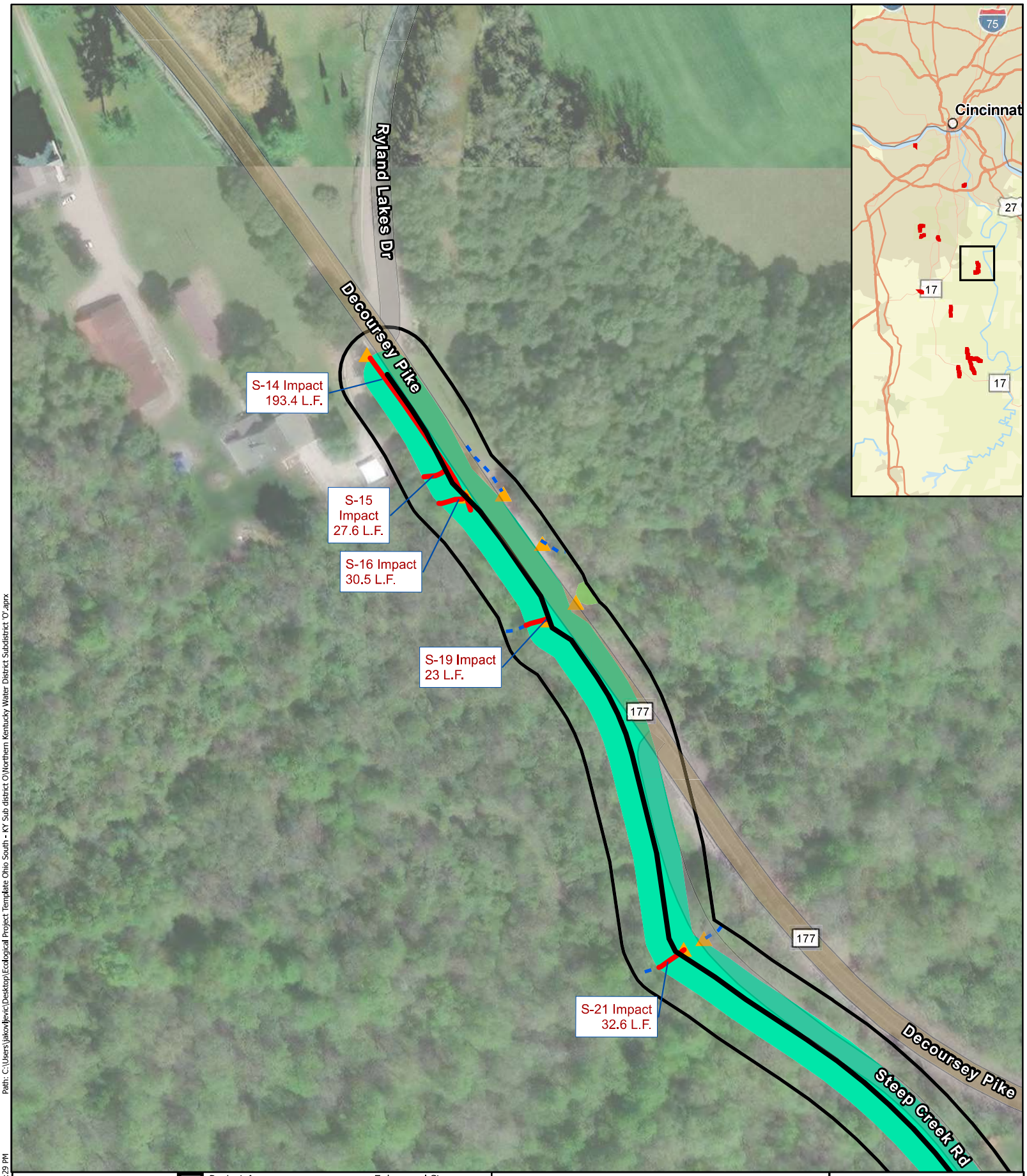
ISSUED FOR:	30% DESIGN
ISSUE DATE:	FEB 2025
SCALE:	AS SHOWN
DESIGNED BY:	JCOR
DRAWN BY:	JCOR
CHECKED BY:	JSHU

NORTHERN KENTUCKY WATER DISTRICT
SUBDISTRICT 'O'
-KENTON COUNTY -

MANN ROAD

PROJECT NO.	231591
DISCIPLINE	CIVIL
SHEET NAME	C-18
SHEET	19
OF	44

H:\2023\231591\DWG\SHEETS_231591 PW_01_MANN.DWG - MANN_PLT - 2/23/2024 11:15:16 AM - JAMES CORNELL



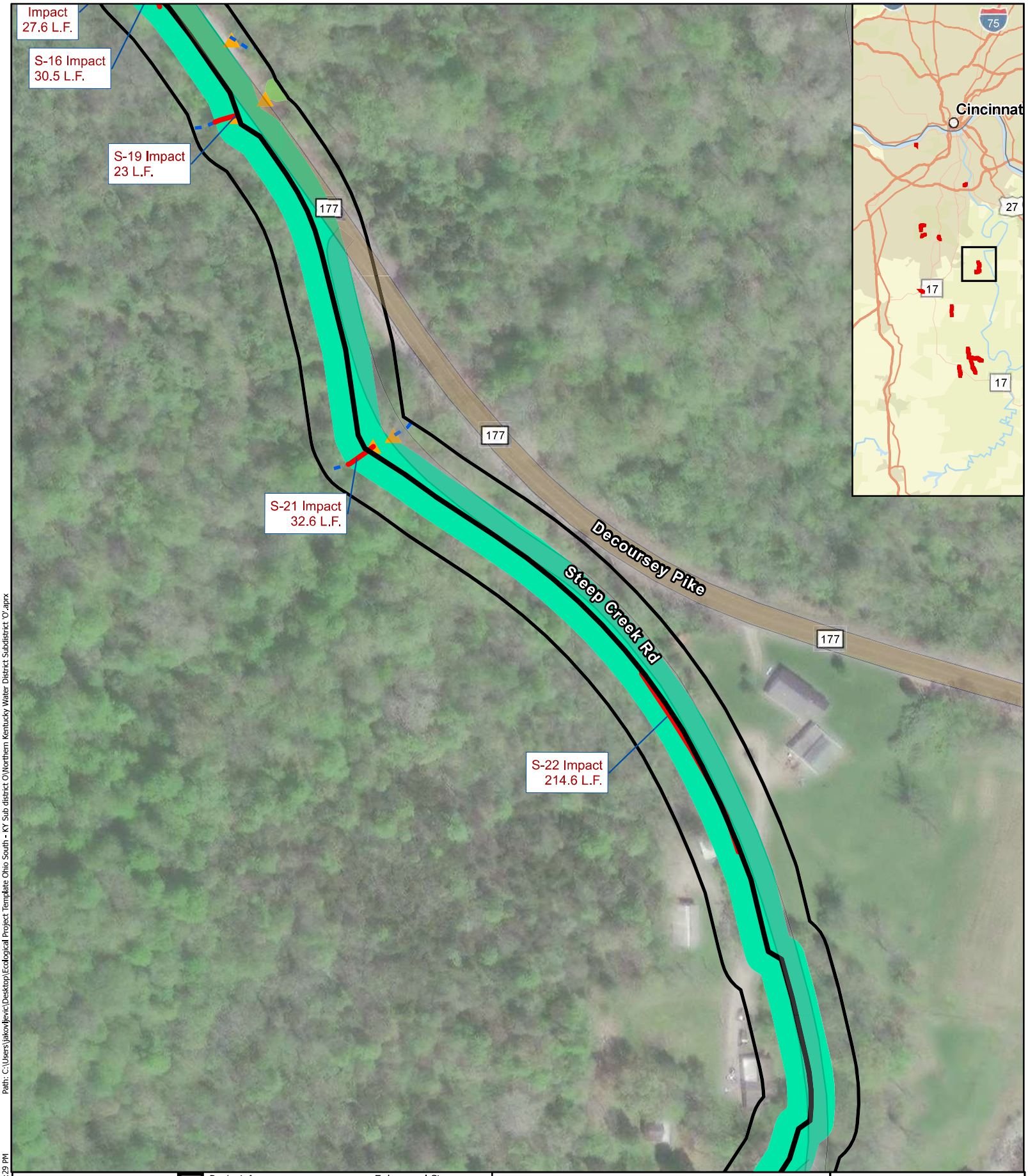
Project Area
Alignment
Temporary Easement
50 ft
Ephemeral Stream
Forested Wetland
Stream Impact

Figure 6.27 Impact Map
Northern Kentucky Water District Subdistrict 'O'

N
0 50 100 Feet
1 inch = 129 feet

Basemap courtesy of Nearmap

Path: C:\Users\jakov.ljevic\Desktop\Ecological Project Template Ohio South - KY Sub district O\Northern Kentucky Water District Subdistrict 'O'.aprx
Date Exported: 6/4/2024 4:29 PM



Project Area
Alignment
Temporary Easement
50 ft
Ephemeral Stream
Forested Wetland
Stream Impact

Figure 6.28 Impact Map
Northern Kentucky Water District Subdistrict 'O'

N

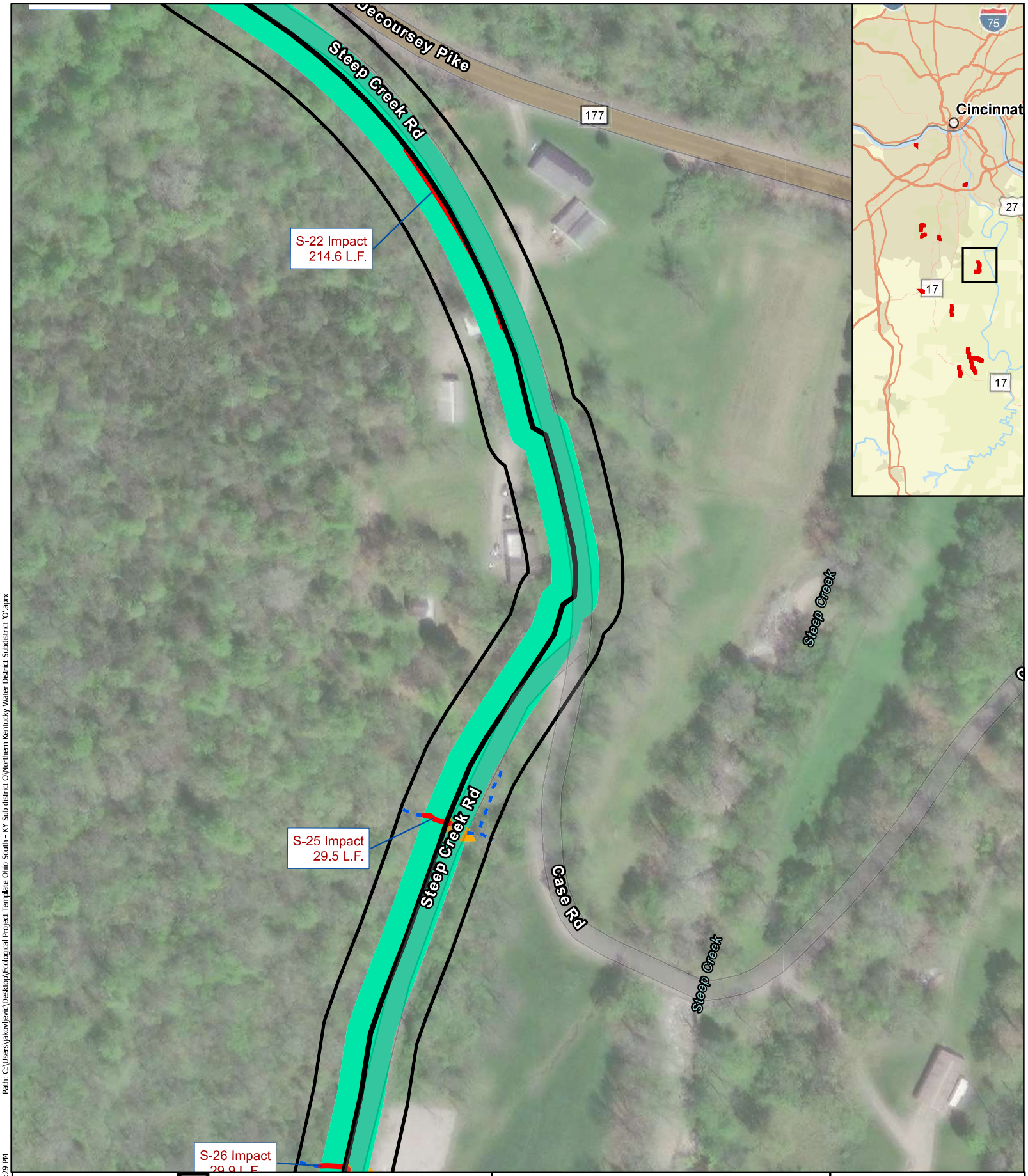
0 50 100 Feet

1 inch = 129 feet

Basemap courtesy of Nearmap

Path: C:\Users\jakovljevic\Desktop\Ecological Project Template Ohio South - KY Sub district O\Northern Kentucky Water District Subdistrict 'O'.aprx

Date Exported: 6/4/2024 4:29 PM



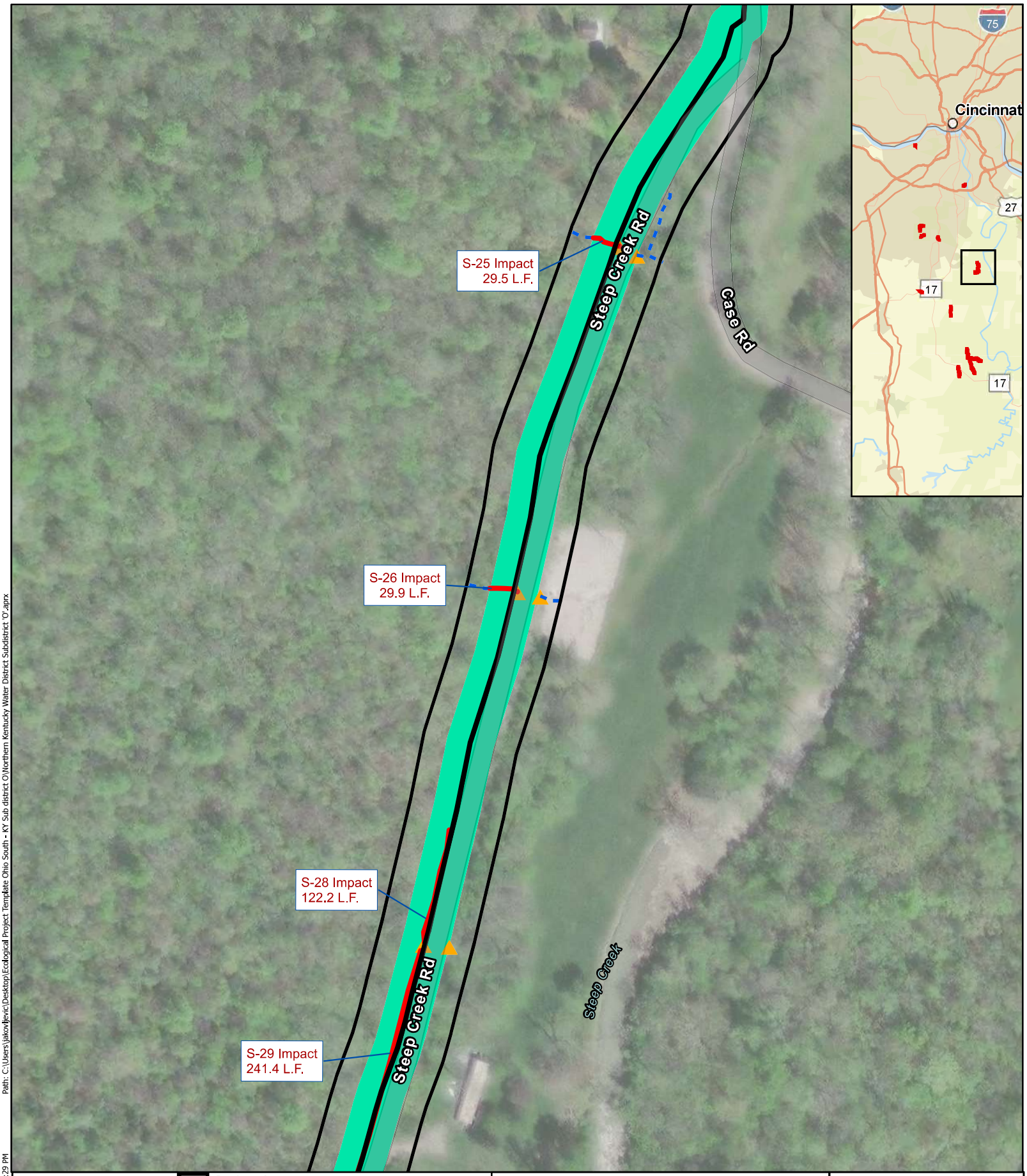
Project Area
Alignment
Temporary Easement
50 ft
Ephemeral Stream
Stream Impact

Figure 6.29 Impact Map
Northern Kentucky Water District Subdistrict 'O'

N
0 50 100 Feet
1 inch = 129 feet

Path: C:\Users\jakovljevic\Desktop\Ecological Project Template Ohio South - KY Sub district O\Northern Kentucky Water District Subdistrict 'O'.aprx
Date Exported: 6/4/2024 4:29 PM

Basemap courtesy of Nearmap



Project Area
Alignment
Temporary Easement
50 ft
Ephemeral Stream
Stream Impact

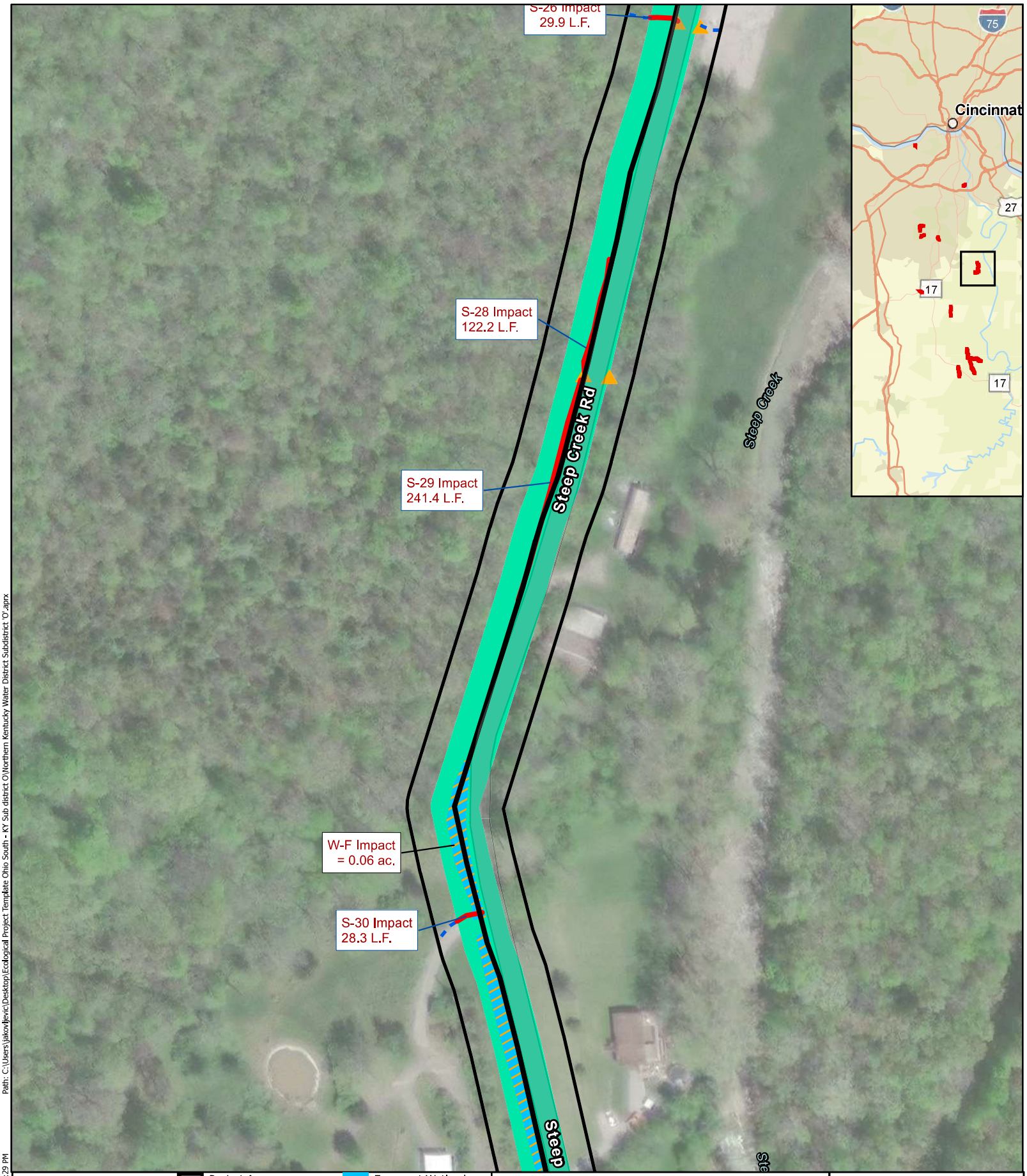
Figure 6.30 Impact Map
Northern Kentucky Water District Subdistrict 'O'

N
0 50 100 Feet
1 inch = 129 feet

Basemap courtesy of Nearmap

Path: C:\Users\jakovljevic\Desktop\Ecological Project Template Ohio South - KY Sub district O\Northern Kentucky Water District Subdistrict 'O'.aprx

Date Exported: 6/4/2024 4:29 PM



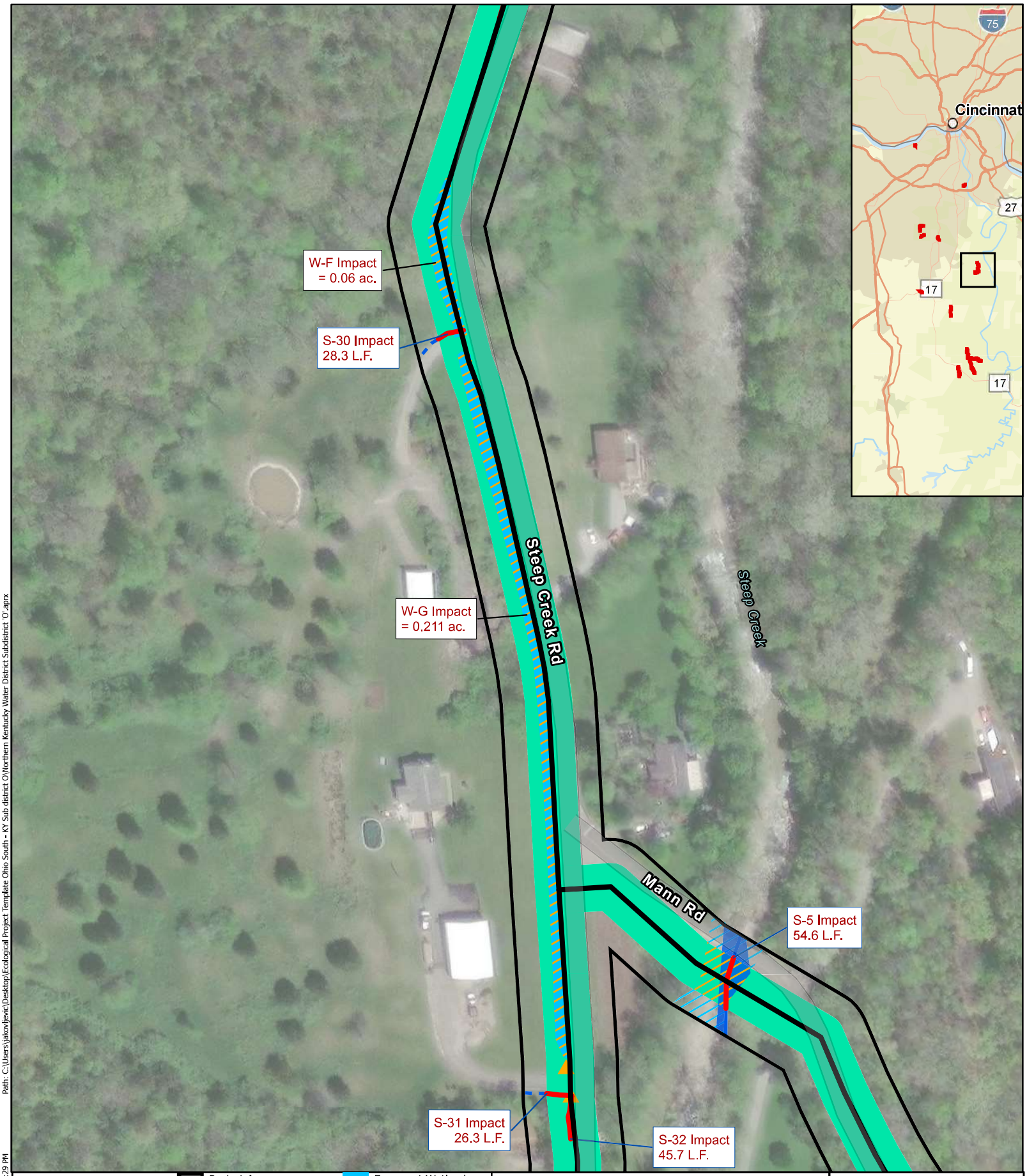
Project Area
Alignment
Temporary Easement 50 ft
Emergent Wetland
Ephemeral Stream
Emergent Wetland
Wetland Impact
Wetland Impact
Stream Impact

Figure 6.31 Impact Map
Northern Kentucky Water District Subdistrict 'O'

N
0 50 100 Feet
1 inch = 129 feet

Basemap courtesy of Nearmap

Path: C:\Users\jakovljevic\Desktop\Ecological Project Template Ohio South - KY Sub district O\Northern Kentucky Water District Subdistrict 'O'.aprx
Date Exported: 6/4/2024 4:29 PM



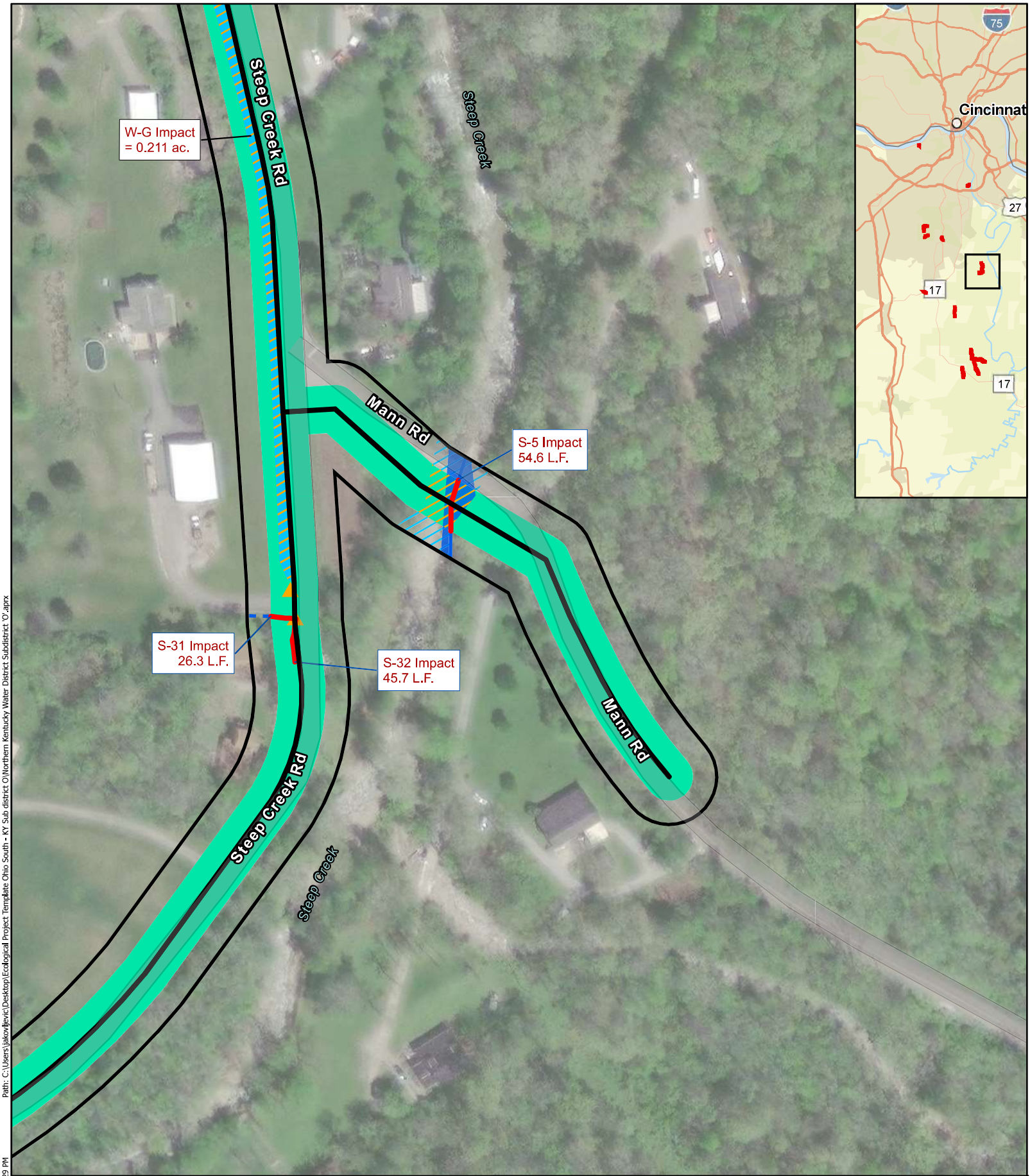
Project Area
Alignment
Temporary Easement 50 ft
Emergent Wetland
Ephemeral Stream
Perennial Stream
Emergent Wetland
Full Stream Bank
Wetland Impact
Wetland Impact
Stream Impact

Figure 6.32 Impact Map
Northern Kentucky Water District Subdistrict 'O'

N
0 50 100 Feet
1 inch = 129 feet

Basemap courtesy of Nearmap

Path: C:\Users\jakov\Jevic\Desktop\Ecological Project Template Ohio South - KY Sub district O\Northern Kentucky Water District Subdistrict 'O'.aprx
Date Exported: 6/4/2024 4:29 PM



Project Area
Alignment
Temporary Easement 50 ft
Emergent Wetland
Ephemeral Stream
Perennial Stream

Emergent Wetland
Full Stream Bank
Wetland Impact
Wetland Impact
Stream Impact

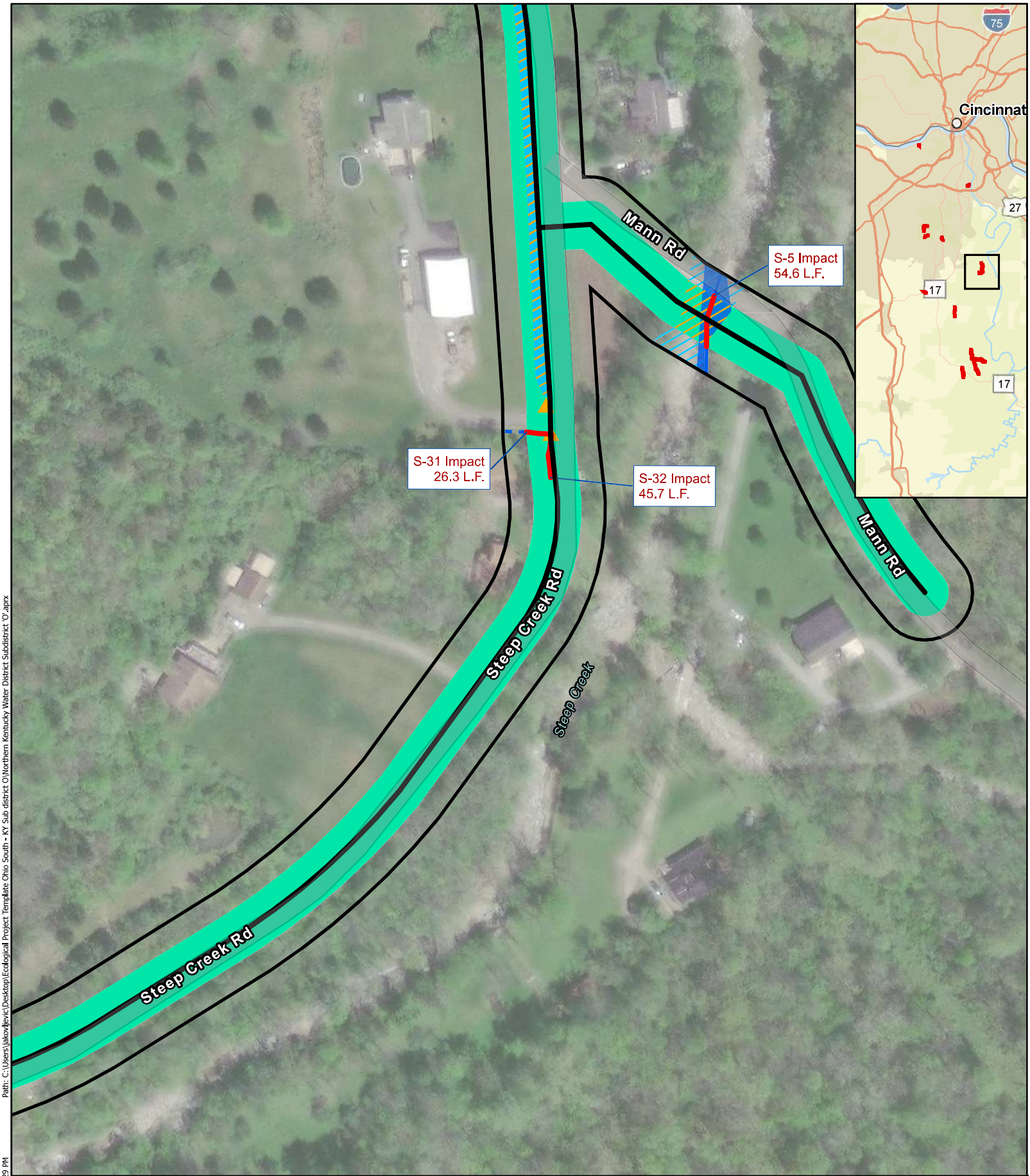
Figure 6.33 Impact Map
Northern Kentucky Water District Subdistrict 'O'

N
0 50 100 Feet
1 inch = 129 feet

Date Exported: 6/4/2024 4:29 PM

Path: C:\Users\jakov\Jevic\Desktop\Ecological Project Template Ohio South - KY Sub district O\Northern Kentucky Water District Subdistrict 'O'.aprx

Basemap courtesy of Nearmap



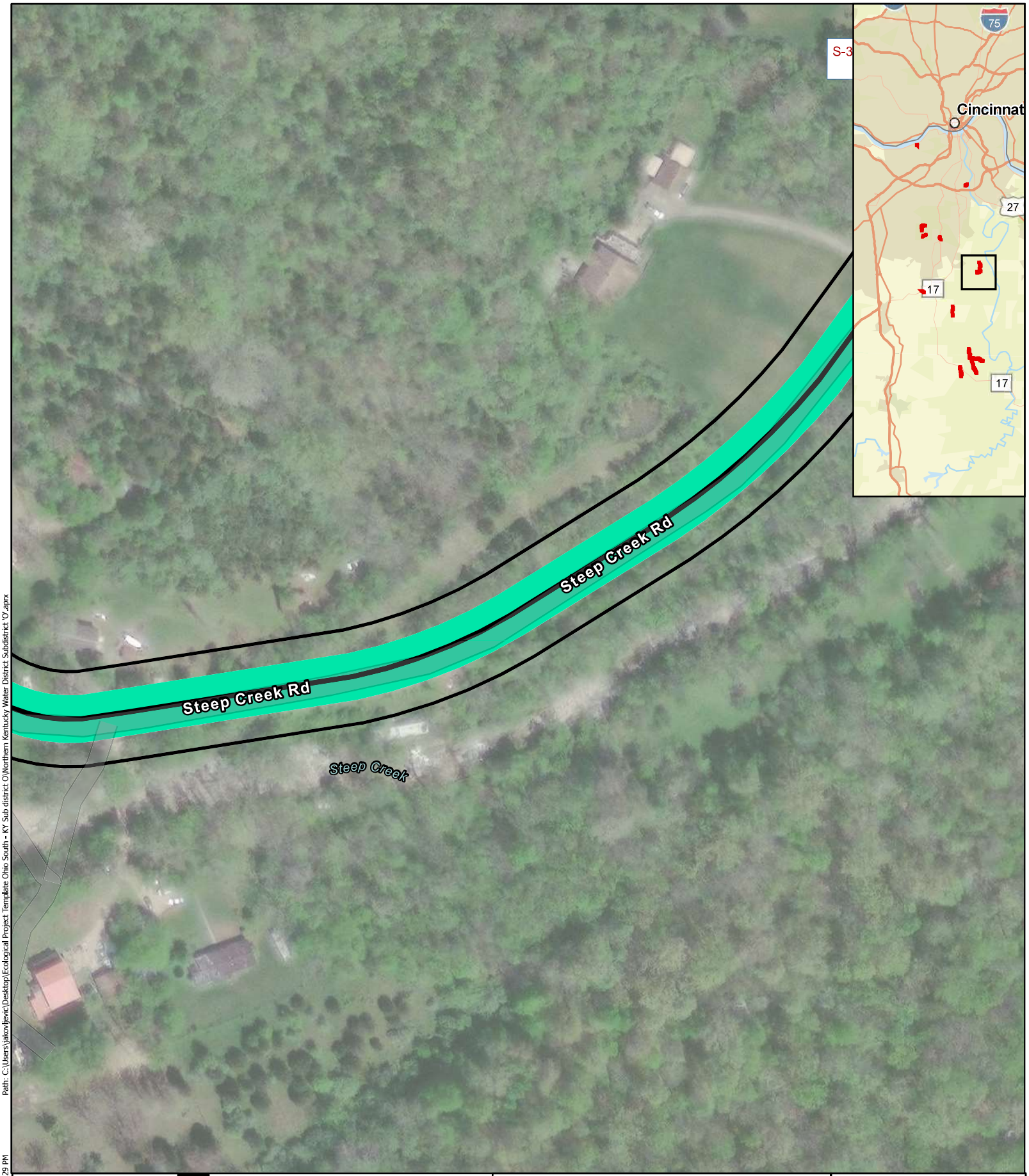
Project Area
Alignment
Temporary Easement 50 ft
Emergent Wetland
Ephemeral Stream
Perennial Stream
Emergent Wetland
Full Stream Bank
Wetland Impact
Wetland Impact
Stream Impact

Figure 6.36 Impact Map
Northern Kentucky Water District Subdistrict 'O'

N
0 50 100 Feet
1 inch = 129 feet

Basemap courtesy of Nearmap

Path: C:\Users\jakov\Jevic\Desktop\Ecological Project Template Ohio South - KY Sub district O\Northern Kentucky Water District Subdistrict 'O'.aprx
Date Exported: 6/4/2024 4:29 PM



Project Area
Alignment
Temporary Easement
50 ft
Ephemeral Stream
Stream Impact

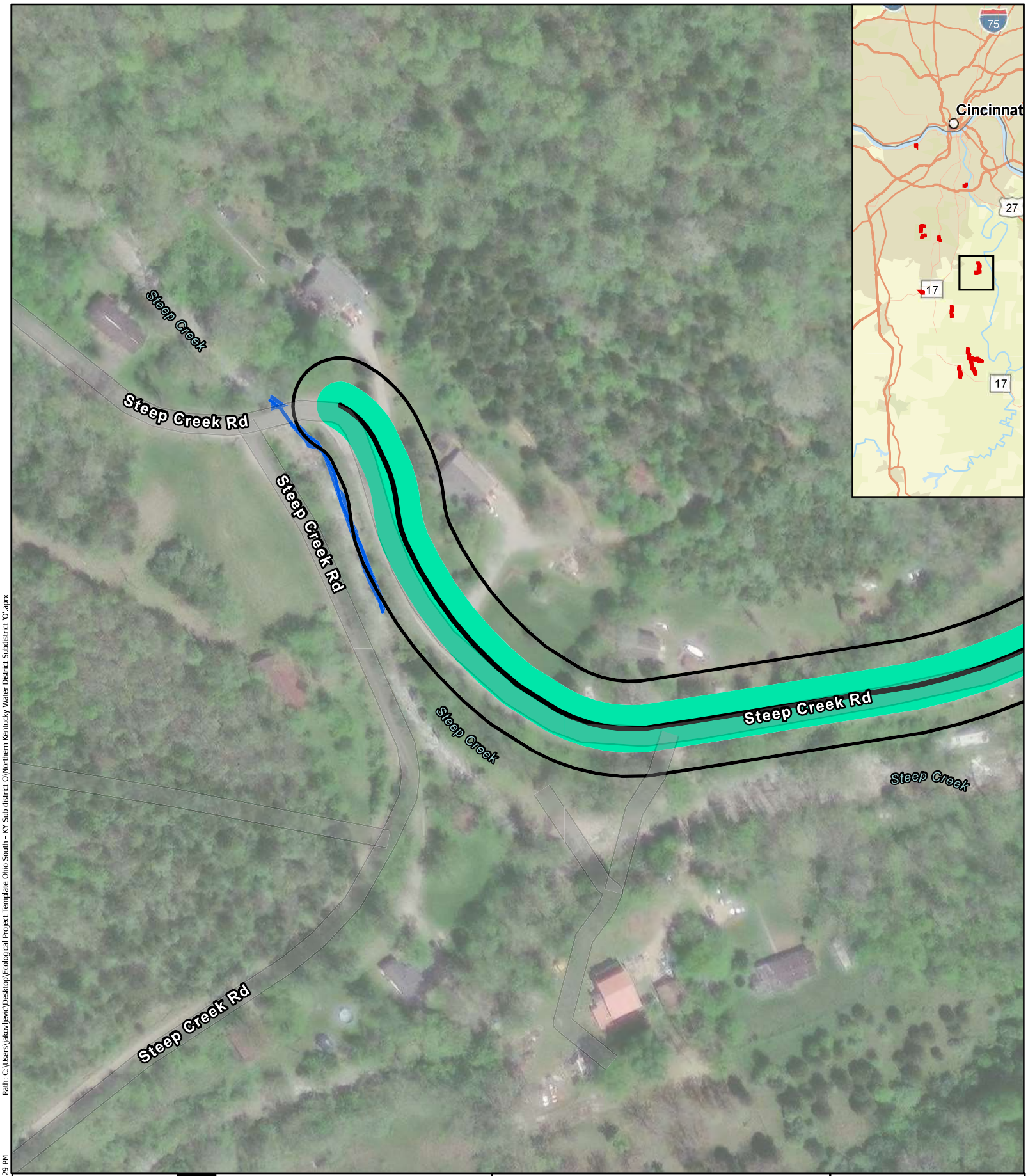
Figure 6.35 Impact Map
Northern Kentucky Water District Subdistrict 'O'

N
0 50 100 Feet
1 inch = 129 feet

Basemap courtesy of Nearmap

Path: C:\Users\jakovljevic\Desktop\Ecological Project Template Ohio South - KY Sub district O\Northern Kentucky Water District Subdistrict 'O'.aprx

Date Exported: 6/4/2024 4:29 PM



Project Area
Alignment
Temporary Easement
50 ft
Perennial Stream

Figure 6.34 Impact Map
Northern Kentucky Water District Subdistrict 'O'

N
0 50 100 Feet
1 inch = 129 feet

Path: C:\Users\jakov.ljevic\Desktop\Ecological Project Template Ohio South - KY Sub district O\Northern Kentucky Water District Subdistrict 'O'.aprx

Date Exported: 6/4/2024 4:29 PM

Basemap courtesy of Nearmap

2021 Nationwide Permit Summary

US Army Corps of Engineers
Louisville District ®

Issued: **March 15, 2021**
Expires: **March 14, 2026**

No. 58. Utility Line Activities for Water and Other Substances

(NWP Final Rule, 86 FR 2744)

Activities required for the construction, maintenance, repair, and removal of utility lines for water and other substances, excluding oil, natural gas, products derived from oil or natural gas, and electricity. Oil or natural gas pipeline activities or electric utility line and telecommunications activities may be authorized by NWPs 12 or 57, respectively. This NWP also authorizes associated utility line facilities in waters of the United States, provided the activity does not result in the loss of greater than 1/2-acre of waters of the United States for each single and complete project.

Utility lines: This NWP authorizes discharges of dredged or fill material into waters of the United States and structures or work in navigable waters for crossings of those waters associated with the construction, maintenance, or repair of utility lines for water and other substances, including outfall and intake structures. There must be no change in pre-construction contours of waters of the United States. A "utility line" is defined as any pipe or pipeline for the transportation of any gaseous, liquid, liquescent, or slurry substance, for any purpose that is not oil, natural gas, or petrochemicals. Examples of activities authorized by this NWP include utility lines that convey water, sewage, stormwater, wastewater, brine, irrigation water, and industrial products that are not petrochemicals. The term "utility line" does not include activities that drain a water of the United States, such as drainage tile or french drains, but it does apply to pipes conveying drainage from another area.

Material resulting from trench excavation may be temporarily sidecast into waters of the United States for no more than three months, provided the material is not placed in such a manner that it is dispersed by currents or other forces. The district engineer may extend the period of temporary side casting for no more than a total of 180 days, where appropriate. In wetlands, the top 6 to 12 inches of the trench should normally be backfilled with topsoil from the trench. The trench cannot be constructed or backfilled in such a manner as to drain waters of the United States (e.g., backfilling with extensive gravel layers, creating a french drain effect). Any exposed slopes and stream banks must be stabilized immediately upon completion of the utility line crossing of each waterbody.

Utility line substations: This NWP authorizes the construction, maintenance, or expansion of substation facilities associated with a utility line in non-tidal waters of the United States, provided the activity, in combination with all other activities included in one single and complete project, does not result in the loss of greater than 1/2-acre of waters of the United States. This NWP does not authorize discharges of dredged or fill material into non-tidal wetlands adjacent to tidal waters of the United States to construct, maintain, or expand substation facilities.

Foundations for above-ground utility lines: This NWP authorizes the construction or maintenance of foundations for above-ground utility lines in all waters of the United States, provided the foundations are the minimum size necessary.

Access roads: This NWP authorizes the construction of access roads for the construction and maintenance of utility lines, including utility line substations, in non-tidal waters of the United States, provided the activity, in combination with all other activities included in one single and complete project, does not cause the loss of greater than 1/2-acre of non-tidal waters of the United States. This NWP does not authorize discharges of dredged or fill material into non-tidal wetlands adjacent to tidal waters for access roads. Access roads must be the minimum width necessary (see Note 2, below). Access roads must be constructed so that the length of the road minimizes any adverse effects on waters of the United States and must be as near as possible to pre-construction contours and elevations (e.g., at grade corduroy roads or geotextile/gravel roads). Access roads constructed above pre-construction contours and elevations in waters of the United States must be properly bridged or culverted to maintain surface flows.

This NWP may authorize utility lines in or affecting navigable waters of the United States even if there is no associated discharge of dredged or fill material (see 33 CFR part 322). Overhead utility lines constructed over section 10 waters and utility lines that are routed in or under section 10 waters without a discharge of dredged or fill material require a section 10 permit.

This NWP authorizes, to the extent that Department of the Army authorization is required, temporary structures, fills, and work necessary for the remediation of inadvertent returns of drilling fluids to waters of the United States through sub-soil fissures or fractures that might occur during horizontal directional drilling activities conducted for the purpose of installing or replacing utility lines. These remediation activities must be done as soon as practicable, to restore the affected waterbody. District engineers may add special conditions to this NWP to require a remediation plan for addressing inadvertent returns of drilling fluids to waters of the United States during horizontal directional drilling activities conducted for the purpose of installing or replacing utility lines.

This NWP also authorizes temporary structures, fills, and work, including the use of temporary mats, necessary to conduct the utility line activity. Appropriate measures must be taken to maintain normal downstream flows and minimize flooding to the maximum extent practicable, when temporary structures, work, and discharges of dredged or fill material, including cofferdams, are necessary for construction activities, access fills, or dewatering of construction sites. Temporary fills must consist of materials, and be placed in a manner, that will not be eroded by expected high flows. After construction, temporary fills must be removed in their entirety and the affected areas returned to pre-construction elevations. The areas affected by temporary fills must be revegetated, as appropriate.

Notification: The permittee must submit a pre-construction notification to the district engineer prior to commencing the activity if: (1) a section 10 permit is required; or (2) the discharge will result in the loss of greater than 1/10-acre of waters of the United States. (See general condition 32.) (Authorities: Sections 10 and 404)

Note 1: Where the utility line is constructed, installed, or maintained in navigable waters of the United States (i.e., section 10 waters) within the coastal United States, the Great Lakes, and United States territories, a copy of the NWP verification will be sent by the Corps to the National Oceanic and Atmospheric Administration (NOAA), National Ocean Service (NOS), for charting the utility line to protect navigation.

Note 2: For utility line activities crossing a single waterbody more than one time at separate and distant locations, or multiple waterbodies at separate and distant locations, each crossing is considered a single and complete project for purposes of NWP authorization. Utility line activities must comply with 33 CFR 330.6(d).

Note 3: Access roads used for both construction and maintenance may be authorized, provided they meet the terms and conditions of this NWP. Access roads used solely for construction of the utility line must be removed upon completion of the work, in accordance with the requirements for temporary fills.

Note 4: Pipes or pipelines used to transport gaseous, liquid, liquescent, or slurry substances over navigable waters of the United States are considered to be bridges, not utility lines, and may require a permit from the U.S. Coast Guard pursuant to the General Bridge Act of 1946. However, any discharges of dredged or fill material into waters of the United States associated with such pipelines will require a section 404 permit (see NWP 15).

Note 5: This NWP authorizes utility line maintenance and repair activities that do not qualify for the Clean Water Act section 404(f) exemption for maintenance of currently serviceable fills or fill structures.

Note 6: For activities that require pre-construction notification, the PCN must include any other NWP(s), regional general permit(s), or individual permit(s) used or intended to be used to authorize any part of the proposed project or any related activity, including other separate and distant crossings that require Department of the Army authorization but do not require pre-construction notification (see paragraph (b)(4) of general condition 32). The district engineer will evaluate the PCN in accordance with Section D, "District Engineer's Decision." The district engineer may require mitigation to ensure that the authorized activity results in no more than minimal individual and cumulative adverse environmental effects (see general condition 23).

Nationwide Permit General Conditions

Note: To qualify for NWP authorization, the prospective permittee must comply with the following general conditions, as applicable, in addition to any regional or case-specific conditions imposed by the division engineer or district engineer. Prospective permittees should contact the appropriate Corps district office to determine if regional conditions have been imposed on an NWP. Prospective permittees should also contact the appropriate Corps district office to determine the status of Clean Water Act Section 401 water quality certification and/or Coastal Zone Management Act consistency for an NWP. Every person who may wish to obtain permit authorization under one or more NWPs, or who is currently relying on an existing or prior permit authorization under one or more NWPs, has been and is on notice that all of the provisions of 33 CFR 330.1 through 330.6 apply to every NWP authorization. Note especially 33 CFR 330.5 relating to the modification, suspension, or revocation of any NWP authorization.

1. Navigation. (a) No activity may cause more than a minimal adverse effect on navigation.

(b) Any safety lights and signals prescribed by the U.S. Coast Guard, through regulations or otherwise, must be installed and maintained at the permittee's expense on authorized facilities in navigable waters of the United States.

(c) The permittee understands and agrees that, if future operations by the United States require the removal, relocation, or other alteration, of the structure or work herein authorized, or if, in the opinion of the Secretary of the Army or his or her authorized representative, said structure or work shall cause unreasonable obstruction to the free navigation of the navigable waters, the permittee will be required, upon due notice from the Corps of Engineers, to remove, relocate, or alter the structural work or obstructions caused thereby, without expense to the United States. No claim shall be made against the United States on account of any such removal or alteration.

2. Aquatic Life Movements. No activity may substantially disrupt the necessary life cycle movements of those species of aquatic life indigenous to the waterbody, including those species that normally migrate through the area, unless the activity's primary purpose is to impound water. All permanent and temporary crossings of waterbodies shall be suitably culverted, bridged, or otherwise designed and constructed to maintain low flows to sustain the movement of those aquatic species. If a bottomless culvert cannot be used, then the crossing should be designed

and constructed to minimize adverse effects to aquatic life movements.

3. Spawning Areas. Activities in spawning areas during spawning seasons must be avoided to the maximum extent practicable. Activities that result in the physical destruction (e.g., through excavation, fill, or downstream smothering by substantial turbidity) of an important spawning area are not authorized.

4. Migratory Bird Breeding Areas. Activities in waters of the United States that serve as breeding areas for migratory birds must be avoided to the maximum extent practicable.

5. Shellfish Beds. No activity may occur in areas of concentrated shellfish populations, unless the activity is directly related to a shellfish harvesting activity authorized by NWPs 4 and 48, or is a shellfish seeding or habitat restoration activity authorized by NWP 27.

6. Suitable Material. No activity may use unsuitable material (e.g., trash, debris, car bodies, asphalt, etc.). Material used for construction or discharged must be free from toxic pollutants in toxic amounts (see section 307 of the Clean Water Act).

7. Water Supply Intakes. No activity may occur in the proximity of a public water supply intake, except where the activity is for the repair or improvement of public water supply intake structures or adjacent bank stabilization.

8. Adverse Effects From Impoundments. If the activity creates an impoundment of water, adverse effects to the aquatic system due to accelerating the passage of water, and/or restricting its flow must be minimized to the maximum extent practicable.

9. Management of Water Flows. To the maximum extent practicable, the pre-construction course, condition, capacity, and location of open waters must be maintained for each activity, including stream channelization, storm water management activities, and temporary and permanent road crossings, except as provided below. The activity must be constructed to withstand expected high flows. The activity must not restrict or impede the passage of normal or high flows, unless the primary purpose of the activity is to impound water or manage high flows. The activity may alter the pre-construction course, condition, capacity, and location of open waters if it benefits the aquatic environment (e.g., stream restoration or relocation activities).

10. Fills Within 100-Year Floodplains. The activity must comply with applicable FEMA-approved state or local floodplain management requirements.

11. Equipment. Heavy equipment working in wetlands or mudflats must be placed on mats, or other measures must be taken to minimize soil disturbance.

12. Soil Erosion and Sediment Controls. Appropriate soil erosion and sediment controls must be used and maintained in effective operating condition during construction, and all exposed soil and other fills, as well as any work below the ordinary high water mark or high tide line, must be permanently stabilized at the earliest practicable date. Permittees are encouraged to perform work within waters of the United States during periods of low-flow or no-flow, or during low tides.

13. Removal of Temporary Structures and Fills. Temporary structures must be removed, to the maximum extent practicable, after their use has been discontinued. Temporary fills must be removed in their entirety and the affected areas returned to pre-construction elevations. The affected areas must be revegetated, as appropriate.

14. Proper Maintenance. Any authorized structure or fill shall be properly maintained, including maintenance to ensure public safety and compliance with applicable NWP general conditions, as well as any activity-specific conditions added by the district engineer to an NWP authorization.

15. Single and Complete Project. The activity must be a single and complete project. The same NWP cannot be used more than once for the same single and complete project.

16. Wild and Scenic Rivers. (a) No NWP activity may occur in a component of the National Wild and Scenic River System, or in a river officially designated by Congress as a "study river" for possible inclusion in the system while the river is in an official study status, unless the appropriate Federal agency with direct management responsibility for such river, has determined in writing that the proposed activity will not adversely affect the Wild and Scenic River designation or study status.

(b) If a proposed NWP activity will occur in a component of the National Wild and Scenic River System, or in a river officially designated by Congress as a "study river" for possible inclusion in the system while the river is in an official study status, the permittee must submit a pre-construction notification (see general condition 32). The district engineer will coordinate the PCN with the Federal agency with direct management responsibility for that river. Permittees shall not begin the NWP activity until notified by the district engineer that the Federal agency with direct management responsibility for that river has determined in writing that the proposed NWP activity will not adversely affect the Wild and Scenic River designation or study status.

(c) Information on Wild and Scenic Rivers may be obtained from the appropriate Federal land management agency responsible for the designated Wild and Scenic River or study river (e.g., National Park Service, U.S. Forest Service, Bureau of Land Management, U.S. Fish and Wildlife Service). Information on these rivers is also available at: http://www.rivers.gov/.

17. Tribal Rights. No activity or its operation may impair reserved tribal rights, including, but not limited to, reserved water rights and treaty fishing and hunting rights.

18. Endangered Species. (a) No activity is authorized under any NWP which is likely to directly or indirectly jeopardize the continued existence of a threatened or endangered species or a species proposed

for such designation, as identified under the Federal Endangered Species Act (ESA), or which will directly or indirectly destroy or adversely modify designated critical habitat or critical habitat proposed for such designation. No activity is authorized under any NWP which "may affect" a listed species or critical habitat, unless ESA section 7 consultation addressing the consequences of the proposed activity on listed species or critical habitat has been completed. See 50 CFR 402.02 for the definition of "effects of the action" for the purposes of ESA section 7 consultation, as well as 50 CFR 402.17, which provides further explanation under ESA section 7 regarding "activities that are reasonably certain to occur" and "consequences caused by the proposed action."

(b) Federal agencies should follow their own procedures for complying with the requirements of the ESA (see 33 CFR 330.4(f)(1)). If pre-construction notification is required for the proposed activity, the Federal permittee must provide the district engineer with the appropriate documentation to demonstrate compliance with those requirements. The district engineer will verify that the appropriate documentation has been submitted. If the appropriate documentation has not been submitted, additional ESA section 7 consultation may be necessary for the activity and the respective federal agency would be responsible for fulfilling its obligation under section 7 of the ESA.

(c) Non-federal permittees must submit a pre-construction notification to the district engineer if any listed species (or species proposed for listing) or designated critical habitat (or critical habitat proposed such designation) might be affected or is in the vicinity of the activity, or if the activity is located in designated critical habitat or critical habitat proposed for such designation, and shall not begin work on the activity until notified by the district engineer that the requirements of the ESA have been satisfied and that the activity is authorized. For activities that might affect Federally-listed endangered or threatened species (or species proposed for listing) or designated critical habitat (or critical habitat proposed for such designation), the pre-construction notification must include the name(s) of the endangered or threatened species (or species proposed for listing) that might be affected by the proposed activity or that utilize the designated critical habitat (or critical habitat proposed for such designation) that might be affected by the proposed activity. The district engineer will determine whether the proposed activity "may affect" or will have "no effect" to listed species and designated critical habitat and will notify the non-Federal applicant of the Corps' determination within 45 days of receipt of a complete pre-construction notification. For activities where the non-Federal applicant has identified listed species (or species proposed for listing) or designated critical habitat (or critical habitat proposed for such designation) that might be affected or is in the vicinity of the activity, and has so notified the Corps, the applicant shall not begin work until the Corps has provided notification that the proposed activity will have "no effect" on listed species (or species proposed for listing or designated critical habitat (or critical habitat proposed for such designation), or until ESA section 7 consultation or conference has been completed. If the non-Federal applicant has not heard back from the Corps within 45 days, the applicant must still wait for notification from the Corps.

(d) As a result of formal or informal consultation or conference with the FWS or NMFS the district engineer may add species-specific permit conditions to the NWPs.

(e) Authorization of an activity by an NWP does not authorize the "take" of a threatened or endangered species as defined under the ESA. In the absence of separate authorization (e.g., an ESA Section 10 Permit, a Biological Opinion with "incidental take" provisions, etc.) from the FWS or the NMFS, the Endangered Species Act prohibits any person subject to the jurisdiction of the United States to take a listed species, where "take" means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct. The word "harm" in the definition of "take" means an act which actually kills or injures wildlife. Such an act may include significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding or sheltering.

(f) If the non-federal permittee has a valid ESA section 10(a)(1)(B) incidental take permit with an approved Habitat Conservation Plan for a project or a group of projects that includes the proposed NWP activity, the non-federal applicant should provide a copy of that ESA section 10(a)(1)(B) permit with the PCN required by paragraph (c) of this general condition. The district engineer will coordinate with the agency that issued the ESA section 10(a)(1)(B) permit to determine whether the proposed NWP activity and the associated incidental take were considered in the internal ESA section 7 consultation conducted for the ESA section 10(a)(1)(B) permit. If that coordination results in concurrence from the agency that the proposed NWP activity and the associated incidental take were considered in the internal ESA section 7 consultation for the ESA section 10(a)(1)(B) permit, the district engineer does not need to conduct a separate ESA section 7 consultation for the proposed NWP activity. The district engineer will notify the non-federal applicant within 45 days of receipt of a complete pre-construction notification whether the ESA section 10(a)(1)(B) permit covers the proposed NWP activity or whether additional ESA section 7 consultation is required.

(g) Information on the location of threatened and endangered species and their critical habitat can be obtained directly from the offices of the FWS and NMFS or their world wide web pages at http://www.fws.gov/ or http://www.fws.gov/ipac and http://www.nmfs.noaa.gov/pr/species/esa/ respectively.

19. Migratory Birds and Bald and Golden Eagles. The permittee is responsible for ensuring that an action authorized by an NWP complies with the Migratory Bird Treaty Act and the Bald and Golden Eagle Protection Act. The permittee is responsible for contacting the appropriate local office of the U.S. Fish and Wildlife Service to determine what measures, if any, are

necessary or appropriate to reduce adverse effects to migratory birds or eagles, including whether "incidental take" permits are necessary and available under the Migratory Bird Treaty Act or Bald and Golden Eagle Protection Act for a particular activity.

20. Historic Properties. (a) No activity is authorized under any NWP which may have the potential to cause effects to properties listed, or eligible for listing, in the National Register of Historic Places until the requirements of Section 106 of the National Historic Preservation Act (NHPA) have been satisfied.

(b) Federal permittees should follow their own procedures for complying with the requirements of section 106 of the National Historic Preservation Act (see 33 CFR 330.4(g)(1)). If pre-construction notification is required for the proposed NWP activity, the Federal permittee must provide the district engineer with the appropriate documentation to demonstrate compliance with those requirements. The district engineer will verify that the appropriate documentation has been submitted. If the appropriate documentation is not submitted, then additional consultation under section 106 may be necessary. The respective federal agency is responsible for fulfilling its obligation to comply with section 106.

(c) Non-federal permittees must submit a pre-construction notification to the district engineer if the NWP activity might have the potential to cause effects to any historic properties listed on, determined to be eligible for listing on, or potentially eligible for listing on the National Register of Historic Places, including previously unidentified properties. For such activities, the pre-construction notification must state which historic properties might have the potential to be affected by the proposed NWP activity or include a vicinity map indicating the location of the historic properties or the potential for the presence of historic properties. Assistance regarding information on the location of, or potential for, the presence of historic properties can be sought from the State Historic Preservation Officer, Tribal Historic Preservation Officer, or designated tribal representative, as appropriate, and the National Register of Historic Places (see 33 CFR 330.4(g)). When reviewing pre-construction notifications, district engineers will comply with the current procedures for addressing the requirements of section 106 of the National Historic Preservation Act. The district engineer shall make a reasonable and good faith effort to carry out appropriate identification efforts commensurate with potential impacts, which may include background research, consultation, oral history interviews, sample field investigation, and/or field survey. Based on the information submitted in the PCN and these identification efforts, the district engineer shall determine whether the proposed NWP activity has the potential to cause effects on the historic properties. Section 106 consultation is not required when the district engineer determines that the activity does not have the potential to cause effects on historic properties (see 36 CFR 800.3(a)). Section 106 consultation is required when the district engineer determines that the activity has the potential to cause effects on historic properties. The district engineer will conduct consultation with consulting parties identified under 36 CFR 800.2(c) when he or she makes any of the following effect determinations for the purposes of section 106 of the NHPA: no historic properties affected, no adverse effect, or adverse effect.

(d) Where the non-Federal applicant has identified historic properties on which the proposed NWP activity might have the potential to cause effects and has so notified the Corps, the non-Federal applicant shall not begin the activity until notified by the district engineer either that the activity has no potential to cause effects to historic properties or that NHPA section 106 consultation has been completed. For non-federal permittees, the district engineer will notify the prospective permittee within 45 days of receipt of a complete pre-construction notification whether NHPA section 106 consultation is required. If NHPA section 106 consultation is required, the district engineer will notify the non-Federal applicant that he or she cannot begin the activity until section 106 consultation is completed. If the non-Federal applicant has not heard back from the Corps within 45 days, the applicant must still wait for notification from the Corps.

(e) Prospective permittees should be aware that section 110k of the NHPA (54 U.S.C. 306113) prevents the Corps from granting a permit or other assistance to an applicant who, with intent to avoid the requirements of section 106 of the NHPA, has intentionally significantly adversely affected a historic property to which the permit would relate, or having legal power to prevent it, allowed such significant adverse effect to occur, unless the Corps, after consultation with the Advisory Council on Historic Preservation (ACHP), determines that circumstances justify granting such assistance despite the adverse effect created or permitted by the applicant. If circumstances justify granting the assistance, the Corps is required to notify the ACHP and provide documentation specifying the circumstances, the degree of damage to the integrity of any historic properties affected, and proposed mitigation. This documentation must include any views obtained from the applicant, SHPO/THPO, appropriate Indian tribes if the undertaking occurs on or affects historic properties on tribal lands or affects properties of interest to those tribes, and other parties known to have a legitimate interest in the impacts to the permitted activity on historic properties.

21. Discovery of Previously Unknown Remains and Artifacts. Permittees that discover any previously unknown historic, cultural or archeological remains and artifacts while accomplishing the activity authorized by an NWP, they must immediately notify the district engineer of what they have found, and to the maximum extent practicable, avoid construction activities that may affect the remains and artifacts until the required coordination has been completed. The district engineer will initiate the Federal, Tribal, and state coordination required to determine if the items or remains warrant a recovery effort or if the site is eligible for listing in the National Register of Historic Places.

22. Designated Critical Resource Waters. Critical resource waters include, NOAA-managed marine sanctuaries and marine

monuments, and National Estuarine Research Reserves. The district engineer may designate, after notice and opportunity for public comment, additional waters officially designated by a state as having particular environmental or ecological significance, such as outstanding national resource waters or state natural heritage sites. The district engineer may also designate additional critical resource waters after notice and opportunity for public comment.

(a) Discharges of dredged or fill material into waters of the United States are not authorized by NWPs 7, 12, 14, 16, 17, 21, 29, 31, 35, 39, 40, 42, 43, 44, 49, 50, 51, 52, 57 and 58 for any activity within, or directly affecting, critical resource waters, including wetlands adjacent to such waters.

(b) For NWPs 3, 8, 10, 13, 15, 18, 19, 22, 23, 25, 27, 28, 30, 33, 34, 36, 37, 38, and 54, notification is required in accordance with general condition 32, for any activity proposed by permittees in the designated critical resource waters including wetlands adjacent to those waters. The district engineer may authorize activities under these NWPs only after she or he determines that the impacts to the critical resource waters will be no more than minimal.

23. Mitigation. The district engineer will consider the following factors when determining appropriate and practicable mitigation necessary to ensure that the individual and cumulative adverse environmental effects are no more than minimal:

(a) The activity must be designed and constructed to avoid and minimize adverse effects, both temporary and permanent, to waters of the United States to the maximum extent practicable at the project site (i.e., on site).

(b) Mitigation in all its forms (avoiding, minimizing, rectifying, reducing, or compensating for resource losses) will be required to the extent necessary to ensure that the individual and cumulative adverse environmental effects are no more than minimal.

(c) Compensatory mitigation at a minimum one-for-one ratio will be required for all wetland losses that exceed 1/10-acre and require pre-construction notification, unless the district engineer determines in writing that either some other form of mitigation would be more environmentally appropriate or the adverse environmental effects of the proposed activity are no more than minimal, and provides an activity-specific waiver of this requirement. For wetland losses of 1/10-acre or less that require pre-construction notification, the district engineer may determine on a case-by-case basis that compensatory mitigation is required to ensure that the activity results in only minimal adverse environmental effects.

(d) Compensatory mitigation at a minimum one-for-one ratio will be required for all losses of stream bed that exceed 3/100-acre and require pre-construction notification, unless the district engineer determines in writing that either some other form of mitigation would be more environmentally appropriate or the adverse environmental effects of the proposed activity are no more than minimal, and provides an activity-specific waiver of this requirement. This compensatory mitigation requirement may be satisfied through the restoration or enhancement of riparian areas next to streams in accordance with paragraph (e) of this general condition. For losses of stream bed of 3/100-acre or less that require pre-construction notification, the district engineer may determine on a case-by-case basis that compensatory mitigation is required to ensure that the activity results in only minimal adverse environmental effects. Compensatory mitigation for losses of streams should be provided, if practicable, through stream rehabilitation, enhancement, or preservation, since streams are difficult-to-replace resources (see 33 CFR 332.3(e)(3)).

(e) Compensatory mitigation plans for NWP activities in or near streams or other open waters will normally include a requirement for the restoration or enhancement, maintenance, and legal protection (e.g., conservation easements) of riparian areas next to open waters. In some cases, the restoration or maintenance/protection of riparian areas may be the only compensatory mitigation required. If restoring riparian areas involves planting vegetation, only native species should be planted. The width of the required riparian area will address documented water quality or aquatic habitat loss concerns. Normally, the riparian area will be 25 to 50 feet wide on each side of the stream, but the district engineer may require slightly wider riparian areas to address documented water quality or habitat loss concerns. If it is not possible to restore or maintain/protect a riparian area on both sides of a stream, or if the waterbody is a lake or coastal waters, then restoring or maintaining/protecting a riparian area along a single bank or shoreline may be sufficient. Where both wetlands and open waters exist on the project site, the district engineer will determine the appropriate compensatory mitigation (e.g., riparian areas and/or wetlands compensation) based on what is best for the aquatic environment on a watershed basis. In cases where riparian areas are determined to be the most appropriate form of minimization or compensatory mitigation, the district engineer may waive or reduce the requirement to provide wetland compensatory mitigation for wetland losses.

(f) Compensatory mitigation projects provided to offset losses of aquatic resources must comply with the applicable provisions of 33 CFR part 332.

(1) The prospective permittee is responsible for proposing an appropriate compensatory mitigation option if compensatory mitigation is necessary to ensure that the activity results in no more than minimal adverse environmental effects. For the NWPs, the preferred mechanism for providing compensatory mitigation is mitigation bank credits or in-lieu fee program credits (see 33 CFR 332.3(b)(2) and (3)). However, if an appropriate number and type of mitigation bank or in-lieu credits are not available at the time the PCN is submitted to the district engineer, the district engineer may approve the use of permittee-responsible mitigation.

(2) The amount of compensatory mitigation required by the district engineer must be

sufficient to ensure that the authorized activity results in no more than minimal individual and cumulative adverse environmental effects (see 33 CFR 330.1(e)(3)). (See also 33 CFR 332.3(f).)

(3) Since the likelihood of success is greater and the impacts to potentially valuable uplands are reduced, aquatic resource restoration should be the first compensatory mitigation option considered for permittee-responsible mitigation.

(4) If permittee-responsible mitigation is the proposed option, the prospective permittee is responsible for submitting a mitigation plan. A conceptual or detailed mitigation plan may be used by the district engineer to make the decision on the NWP verification request, but a final mitigation plan that addresses the applicable requirements of 33 CFR 332.4(c)(2) through (14) must be approved by the district engineer before the permittee begins work in waters of the United States, unless the district engineer determines that prior approval of the final mitigation plan is not practicable or not necessary to ensure timely completion of the required compensatory mitigation (see 33 CFR 332.3(k)(3)). If permittee-responsible mitigation is the proposed option, and the proposed compensatory mitigation site is located on land in which another federal agency holds an easement, the district engineer will coordinate with that federal agency to determine if proposed compensatory mitigation project is compatible with the terms of the easement.

(5) If mitigation bank or in-lieu fee program credits are the proposed option, the mitigation plan needs to address only the baseline conditions at the impact site and the number of credits to be provided (see 33 CFR 332.4(c)(1)(ii)).

(6) Compensatory mitigation requirements (e.g., resource type and amount to be provided as compensatory mitigation, site protection, ecological performance standards, monitoring requirements) may be addressed through conditions added to the NWP authorization, instead of components of a compensatory mitigation plan (see 33 CFR 332.4(c)(1)(ii)).

(g) Compensatory mitigation will not be used to increase the acreage losses allowed by the acreage limits of the NWPs. For example, if an NWP has an acreage limit of 1/2-acre, it cannot be used to authorize any NWP activity resulting in the loss of greater than 1/2-acre of waters of the United States, even if compensatory mitigation is provided that replaces or restores some of the lost waters. However, compensatory mitigation can and should be used, as necessary, to ensure that an NWP activity already meeting the established acreage limits also satisfies the no more than minimal impact requirement for the NWPs.

(h) Permittees may propose the use of mitigation banks, in-lieu fee programs, or permittee-responsible mitigation. When developing a compensatory mitigation proposal, the permittee must consider appropriate and practicable options consistent with the framework at 33 CFR 332.3(b). For activities resulting in the loss of marine or estuarine resources, permittee-responsible mitigation may be environmentally preferable if there are no mitigation banks or in-lieu fee programs in the area that have marine or estuarine credits available for sale or transfer to the permittee. For permittee-responsible mitigation, the special conditions of the NWP verification must clearly indicate the party or parties responsible for the implementation and performance of the compensatory mitigation project, and, if required, its long-term management.

(i) Where certain functions and services of waters of the United States are permanently adversely affected by a regulated activity, such as discharges of dredged or fill material into waters of the United States that will convert a forested or scrub-shrub wetland to a herbaceous wetland in a permanently maintained utility line right-of-way, mitigation may be required to reduce the adverse environmental effects of the activity to the no more than minimal level.

24. Safety of Impoundment Structures. To ensure that all impoundment structures are safely designed, the district engineer may require non-Federal applicants to demonstrate that the structures comply with established state or federal, dam safety criteria or have been designed by qualified persons. The district engineer may also require documentation that the design has been independently reviewed by similarly qualified persons, and appropriate modifications made to ensure safety.

25. Water Quality. (a) Where the certifying authority (state, authorized tribe, or EPA, as appropriate) has not previously certified compliance of an NWP with CWA section 401, a CWA section 401 water quality certification for the proposed discharge must be obtained or waived (see 33 CFR 330.4(c)). If the permittee cannot comply with all of the conditions of a water quality certification previously issued by certifying authority for the issuance of the NWP, then the permittee must obtain a water quality certification or waiver for the proposed discharge in order for the activity to be authorized by an NWP.

(b) If the NWP activity requires pre-construction notification and the certifying authority has not previously certified compliance of an NWP with CWA section 401, the proposed discharge is not authorized by an NWP until water quality certification is obtained or waived. If the certifying authority issues a water quality certification for the proposed discharge, the permittee must submit a copy of the certification to the district engineer. The discharge is not authorized by an NWP until the district engineer has notified the permittee that the water quality certification requirement has been satisfied by the issuance of a water quality certification or a waiver.

(c) The district engineer or certifying authority may require additional water quality management measures to ensure that the authorized activity does not result in more than minimal degradation of water quality.

26. Coastal Zone Management. In coastal states where an NWP has not previously received a state coastal zone management consistency concurrence, an individual state coastal zone management consistency concurrence must be obtained, or a presumption of concurrence must occur (see 33 CFR 330.4(d)). If the permittee cannot comply with all of the conditions of

a coastal zone management consistency concurrence previously issued by the state, then the permittee must obtain an individual coastal zone management consistency concurrence or presumption of concurrence in order for the activity to be authorized by an NWP. The district engineer or a state may require additional measures to ensure that the authorized activity is consistent with state coastal zone management requirements.

27. Regional and Case-By-Case Conditions. The activity must comply with any regional conditions that may have been added by the Division Engineer (see 33 CFR 330.4(e)) and with any case specific conditions added by the Corps or by the state, Indian Tribe, or U.S. EPA in its CWA section 401 Water Quality Certification, or by the state in its Coastal Zone Management Act consistency determination.

28. Use of Multiple Nationwide Permits. The use of more than one NWP for a single and complete project is authorized, subject to the following restrictions:

(a) If only one of the NWPs used to authorize the single and complete project has a specified acreage limit, the acreage loss of waters of the United States cannot exceed the acreage limit of the NWP with the highest specified acreage limit. For example, if a road crossing over tidal waters is constructed under NWP 14, with associated bank stabilization authorized by NWP 13, the maximum acreage loss of waters of the United States for the total project cannot exceed 1/3-acre.

(b) If one or more of the NWPs used to authorize the single and complete project has specified acreage limits, the acreage loss of waters of the United States authorized by those NWPs cannot exceed their respective specified acreage limits. For example, if a commercial development is constructed under NWP 39, and the single and complete project includes the filling of an upland ditch authorized by NWP 46, the maximum acreage loss of waters of the United States for the commercial development under NWP 39 cannot exceed 1/2-acre, and the total acreage loss of waters of United States due to the NWP 39 and 46 activities cannot exceed 1 acre.

29. Transfer of Nationwide Permit Verifications. If the permittee sells the property associated with a nationwide permit verification, the permittee may transfer the nationwide permit verification to the new owner by submitting a letter to the appropriate Corps district office to validate the transfer. A copy of the nationwide permit verification must be attached to the letter, and the letter must contain the following statement and signature:

"When the structures or work authorized by this nationwide permit are still in existence at the time the property is transferred, the terms and conditions of this nationwide permit, including any special conditions, will continue to be binding on the new owner(s) of the property. To validate the transfer of this nationwide permit and the associated liabilities associated with compliance with its terms and conditions, have the transferee sign and date below."

_____
(Transferee)

_____
(Date)

30. Compliance Certification. Each permittee who receives an NWP verification letter from the Corps must provide a signed certification documenting completion of the authorized activity and implementation of any required compensatory mitigation. The success of any required permittee-responsible mitigation, including the achievement of ecological performance standards, will be addressed separately by the district engineer. The Corps will provide the permittee the certification document with the NWP verification letter. The certification document will include:

(a) A statement that the authorized activity was done in accordance with the NWP authorization, including any general, regional, or activity-specific conditions;

(b) A statement that the implementation of any required compensatory mitigation was completed in accordance with the permit conditions. If credits from a mitigation bank or in-lieu fee program are used to satisfy the compensatory mitigation requirements, the certification must include the documentation required by 33 CFR 332.3(l)(3) to confirm that the permittee secured the appropriate number and resource type of credits; and

(c) The signature of the permittee certifying the completion of the activity and mitigation.

The completed certification document must be submitted to the district engineer within 30 days of completion of the authorized activity or the implementation of any required compensatory mitigation, whichever occurs later.

31. Activities Affecting Structures or Works Built by the United States. If an NWP activity also requires review by, or permission from, the Corps pursuant to 33 U.S.C. 408 because it will alter or temporarily or permanently occupy or use a U.S. Army Corps of Engineers (USACE) federally authorized Civil Works project (a "USACE project"), the prospective permittee must submit a pre-construction notification. See paragraph (b)(10) of general condition 32. An activity that requires section 408 permission and/or review is not authorized by an NWP until the appropriate Corps office issues the section 408 permission or completes its review to alter, occupy, or use the USACE project, and the district engineer issues a written NWP verification.

32. Pre-Construction Notification. (a) *Timing*. Where required by the terms of the NWP, the prospective permittee must notify the district engineer by submitting a pre-construction notification (PCN) as early as possible. The district engineer must determine if the PCN is complete within 30 calendar days of the date of receipt and, if the PCN is determined to be incomplete, notify the prospective permittee within that 30 day period to request the additional information necessary to make the PCN complete. The request must specify the

information needed to make the PCN complete. As a general rule, district engineers will request additional information necessary to make the PCN complete only once. However, if the prospective permittee does not provide all of the requested information, then the district engineer will notify the prospective permittee that the PCN is still incomplete and the PCN review process will not commence until all of the requested information has been received by the district engineer. The prospective permittee shall not begin the activity until either:

(1) He or she is notified in writing by the district engineer that the activity may proceed under the NWP with any special conditions imposed by the district or division engineer; or

(2) 45 calendar days have passed from the district engineer's receipt of the complete PCN and the prospective permittee has not received written notice from the district or division engineer. However, if the permittee was required to notify the Corps pursuant to general condition 18 that listed species or critical habitat might be affected or are in the vicinity of the activity, or to notify the Corps pursuant to general condition 20 that the activity might have the potential to cause effects to historic properties, the permittee cannot begin the activity until receiving written notification from the Corps that there is "no effect" on listed species or "no potential to cause effects" on historic properties, or that any consultation required under Section 7 of the Endangered Species Act (see 33 CFR 330.4(f)) and/or section 106 of the National Historic Preservation Act (see 33 CFR 330.4(g)) has been completed. If the proposed activity requires a written waiver to exceed specified limits of an NWP, the permittee may not begin the activity until the district engineer issues the waiver. If the district or division engineer notifies the permittee in writing that an individual permit is required within 45 calendar days of receipt of a complete PCN, the permittee cannot begin the activity until an individual permit has been obtained. Subsequently, the permittee's right to proceed under the NWP may be modified, suspended, or revoked only in accordance with the procedure set forth in 33 CFR 330.5(d)(2).

(b) *Contents of Pre-Construction Notification*: The PCN must be in writing and include the following information:

(1) Name, address and telephone numbers of the prospective permittee;

(2) Location of the proposed activity;

(3) Identify the specific NWP or NWP(s) the prospective permittee wants to use to authorize the proposed activity;

(4) (i) A description of the proposed activity; the activity's purpose; direct and indirect adverse environmental effects the activity would cause, including the anticipated amount of loss of wetlands, other special aquatic sites, and other waters expected to result from the NWP activity, in acres, linear feet, or other appropriate unit of measure; a description of any proposed mitigation measures intended to reduce the adverse environmental effects caused by the proposed activity; and any other NWP(s), regional general permit(s), or individual permit(s) used or intended to be used to authorize any part of the proposed project or any related activity, including other separate and distant crossings for linear projects that require Department of the Army authorization but do not require pre-construction notification. The description of the proposed activity and any proposed mitigation measures should be sufficiently detailed to allow the district engineer to determine that the adverse environmental effects of the activity will be no more than minimal and to determine the need for compensatory mitigation or other mitigation measures.

(ii) For linear projects where one or more single and complete crossings require pre-construction notification, the PCN must include the quantity of anticipated losses of wetlands, other special aquatic sites, and other waters for each single and complete crossing of those wetlands, other special aquatic sites, and other waters (including those single and complete crossings authorized by an NWP but do not require PCNs). This information will be used by the district engineer to evaluate the cumulative adverse environmental effects of the proposed linear project, and does not change those non-PCN NWP activities into NWP PCNs.

(iii) Sketches should be provided when necessary to show that the activity complies with the terms of the NWP. (Sketches usually clarify the activity and when provided results in a quicker decision. Sketches should contain sufficient detail to provide an illustrative description of the proposed activity (e.g., a conceptual plan), but do not need to be detailed engineering plans);

(5) The PCN must include a delineation of wetlands, other special aquatic sites, and other waters, such as lakes and ponds, and perennial and intermittent streams, on the project site. Wetland delineations must be prepared in accordance with the current method required by the Corps. The permittee may ask the Corps to delineate the special aquatic sites and other waters on the project site, but there may be a delay if the Corps does the delineation, especially if the project site is large or contains many wetlands, other special aquatic sites, and other waters. Furthermore, the 45-day period will not start until the delineation has been submitted to or completed by the Corps, as appropriate;

(6) If the proposed activity will result in the loss of greater than 1/10-acre of wetlands or 3/100-acre of stream bed and a PCN is required, the prospective permittee must submit a statement describing how the mitigation requirement will be satisfied, or explaining why the adverse environmental effects are no more than minimal and why compensatory mitigation should not be required. As an alternative, the prospective permittee may submit a conceptual or detailed mitigation plan.

(7) For non-federal permittees, if any listed species (or species proposed for listing) or designated critical habitat (or critical habitat proposed for such designation) might be affected or is in the vicinity of the activity, or if the activity is located in designated critical habitat (or critical habitat proposed for such designation), the PCN must include the name(s) of those endangered or threatened species (or species proposed for listing) that might be affected by the proposed activity or utilize

the designated critical habitat (or critical habitat proposed for such designation) that might be affected by the proposed activity. For NWP activities that require pre-construction notification, Federal permittees must provide documentation demonstrating compliance with the Endangered Species Act;

(8) For non-federal permittees, if the NWP activity might have the potential to cause effects to a historic property listed on, determined to be eligible for listing on, or potentially eligible for listing on, the National Register of Historic Places, the PCN must state which historic property might have the potential to be affected by the proposed activity or include a vicinity map indicating the location of the historic property. For NWP activities that require pre-construction notification, Federal permittees must provide documentation demonstrating compliance with section 106 of the National Historic Preservation Act;

(9) For an activity that will occur in a component of the National Wild and Scenic River System, or in a river officially designated by Congress as a "study river" for possible inclusion in the system while the river is in an official study status, the PCN must identify the Wild and Scenic River or the "study river" (see general condition 16); and

(10) For an NWP activity that requires permission from, or review by, the Corps pursuant to 33 U.S.C. 408 because it will alter or temporarily or permanently occupy or use a U.S. Army Corps of Engineers federally authorized civil works project, the pre-construction notification must include a statement confirming that the project proponent has submitted a written request for section 408 permission from, or review by, the Corps office having jurisdiction over that USACE project.

(c) *Form of Pre-Construction Notification*: The nationwide permit pre-construction notification form (Form ENG 6082) should be used for NWP PCNs. A letter containing the required information may also be used. Applicants may provide electronic files of PCNs and supporting materials if the district engineer has established tools and procedures for electronic submittals.

(d) *Agency Coordination*: (1) The district engineer will consider any comments from Federal and state agencies concerning the proposed activity's compliance with the terms and conditions of the NWPs and the need for mitigation to reduce the activity's adverse environmental effects so that they are no more than minimal.

(2) Agency coordination is required for: (i) all NWP activities that require pre-construction notification and result in the loss of greater than 1/2-acre of waters of the United States; (ii) NWP 13 activities in excess of 500 linear feet, fills greater than one cubic yard per running foot, or involve discharges of dredged or fill material into special aquatic sites; and (iii) NWP 54 activities in excess of 500 linear feet, or that extend into the waterbody more than 30 feet from the mean low water line in tidal waters or the ordinary high water mark in the Great Lakes.

(3) When agency coordination is required, the district engineer will immediately provide (e.g., via e-mail, facsimile transmission, overnight mail, or other expeditious manner) a copy of the complete PCN to the appropriate Federal or state offices (FWS, state natural resource or water quality agency, EPA, and, if appropriate, the NMFS). With the exception of NWP 37, these agencies will have 10 calendar days from the date the material is transmitted to notify the district engineer via telephone, facsimile transmission, or e-mail that they intend to provide substantive, site-specific comments. The comments must explain why the agency believes the adverse environmental effects will be more than minimal. If so contacted by an agency, the district engineer will wait an additional 15 calendar days before making a decision on the pre-construction notification. The district engineer will fully consider agency comments received within the specified time frame concerning the proposed activity's compliance with the terms and conditions of the NWPs, including the need for mitigation to ensure that the net adverse environmental effects of the proposed activity are no more than minimal. The district engineer will provide no response to the resource agency, except as provided below. The district engineer will indicate in the administrative record associated with each pre-construction notification that the resource agencies' concerns were considered. For NWP 37, the emergency watershed protection and rehabilitation activity may proceed immediately in cases where there is an unacceptable hazard to life or a significant loss of property or economic hardship will occur. The district engineer will consider any comments received to decide whether the NWP 37 authorization should be modified, suspended, or revoked in accordance with the procedures at 33 CFR 330.5.

(4) In cases of where the prospective permittee is not a Federal agency, the district engineer will provide a response to NMFS within 30 calendar days of receipt of any Essential Fish Habitat conservation recommendations, as required by section 305(b)(4)(B) of the Magnuson-Stevens Fishery Conservation and Management Act.

(5) Applicants are encouraged to provide the Corps with either electronic files or multiple copies of pre-construction notifications to expedite agency coordination.

2021 District Engineer's Decision

1. In reviewing the PCN for the proposed activity, the district engineer will determine whether the activity authorized by the NWP will result in more than minimal individual or cumulative adverse environmental effects or may be contrary to the public interest. If a project proponent requests authorization by a specific NWP, the district engineer should issue the NWP verification for that activity if it meets the terms and conditions of that NWP, unless he or she determines, after considering mitigation, that the proposed activity will result in more than minimal individual and cumulative adverse effects on the aquatic environment and other aspects of the public interest and exercises discretionary authority to require an individual permit for the proposed activity. For a linear project, this determination will include an evaluation of the single and complete crossings of waters of the United States that require PCNs to determine whether they

individually satisfy the terms and conditions of the NWP(s), as well as the cumulative effects caused by all of the crossings of waters of the United States authorized by an NWP. If an applicant requests a waiver of an applicable limit, as provided for in NWPs 13, 36, or 54, the district engineer will only grant the waiver upon a written determination that the NWP activity will result in only minimal individual and cumulative adverse environmental effects.

2. When making minimal adverse environmental effects determinations the district engineer will consider the direct and indirect effects caused by the NWP activity. He or she will also consider the cumulative adverse environmental effects caused by activities authorized by an NWP and whether those cumulative adverse environmental effects are no more than minimal. The district engineer will also consider site specific factors, such as the environmental setting in the vicinity of the NWP activity, the type of resource that will be affected by the NWP activity, the functions provided by the aquatic resources that will be affected by the NWP activity, the degree or magnitude to which the aquatic resources perform those functions, the extent that aquatic resource functions will be lost as a result of the NWP activity (e.g., partial or complete loss), the duration of the adverse effects (temporary or permanent), the importance of the aquatic resource functions to the region (e.g., watershed or ecoregion), and mitigation required by the district engineer. If an appropriate functional or condition assessment method is available and practicable to use, that assessment method may be used by the district engineer to assist in the minimal adverse environmental effects determination. The district engineer may add case-specific special conditions to the NWP authorization to address site-specific environmental concerns.

3. If the proposed activity requires a PCN and will result in a loss of greater than 1/10-acre of wetlands or 3/100-acre of stream bed, the prospective permittee should submit a mitigation proposal with the PCN. Applicants may also propose compensatory mitigation for NWP activities with smaller impacts, or for impacts to other types of waters. The district engineer will consider any proposed compensatory mitigation or other mitigation measures the applicant has included in the proposal in determining whether the net adverse environmental effects of the proposed activity are no more than minimal. The compensatory mitigation proposal may be either conceptual or detailed. If the district engineer determines that the activity complies with the terms and conditions of the NWP and that the adverse environmental effects are no more than minimal, after considering mitigation, the district engineer will notify the permittee and include any activity-specific conditions in the NWP verification the district engineer deems necessary. Conditions for compensatory mitigation requirements must comply with the appropriate provisions at 33 CFR 332.3(k). The district engineer must approve the final mitigation plan before the permittee commences work in waters of the United States, unless the district engineer determines that prior approval of the final mitigation plan is not practicable or not necessary to ensure timely completion of the required compensatory mitigation. If the prospective permittee elects to submit a compensatory mitigation plan with the PCN, the district engineer will expeditiously review the proposed compensatory mitigation plan. The district engineer must review the proposed compensatory mitigation plan within 45 calendar days of receiving a complete PCN and determine whether the proposed mitigation would ensure that the NWP activity results in no more than minimal adverse environmental effects. If the net adverse environmental effects of the NWP activity (after consideration of the mitigation proposal) are determined by the district engineer to be no more than minimal, the district engineer will provide a timely written response to the applicant. The response will state that the NWP activity can proceed under the terms and conditions of the NWP, including any activity-specific conditions added to the NWP authorization by the district engineer.

4. If the district engineer determines that the adverse environmental effects of the proposed activity are more than minimal, then the district engineer will notify the applicant either: (a) that the activity does not qualify for authorization under the NWP and instruct the applicant on the procedures to seek authorization under an individual permit; (b) that the activity is authorized under the NWP subject to the applicant's submission of a mitigation plan that would reduce the adverse environmental effects so that they are no more than minimal; or (c) that the activity is authorized under the NWP with specific modifications or conditions. Where the district engineer determines that mitigation is required to ensure no more than minimal adverse environmental effects, the activity will be authorized within the 45-day PCN period (unless additional time is required to comply with general conditions 18, 20, and/or 31), with activity-specific conditions that state the mitigation requirements. The authorization will include the necessary conceptual or detailed mitigation plan or a requirement that the applicant submit a mitigation plan that would reduce the adverse environmental effects so that they are no more than minimal. When compensatory mitigation is required, no work in waters of the United States may occur until the district engineer has approved a specific mitigation plan or has determined that prior approval of a final mitigation plan is not practicable or not necessary to ensure timely completion of the required compensatory mitigation.

2021 Further Information

1. District engineers have authority to determine if an activity complies with the terms and conditions of an NWP.

2. NWPs do not obviate the need to obtain other federal, state, or local permits, approvals, or authorizations required by law.

3. NWPs do not grant any property rights or exclusive privileges.

4. NWPs do not authorize any injury to the property or rights of others.

5. NWPs do not authorize interference with any existing or proposed Federal project (see general condition 31).

2021 Nationwide Permit Definitions

Best management practices (BMPs): Policies, practices, procedures, or structures implemented to mitigate the adverse environmental effects on surface water quality resulting from development. BMPs are categorized as structural or non-structural.

Compensatory mitigation: The restoration (re-establishment or rehabilitation), establishment (creation), enhancement, and/or in certain circumstances preservation of aquatic resources for the purposes of offsetting unavoidable adverse impacts which remain after all appropriate and practicable avoidance and minimization has been achieved.

Currently serviceable: Useable as is or with some maintenance, but not so degraded as to essentially require reconstruction.

Direct effects: Effects that are caused by the activity and occur at the same time and place.

Discharge: The term "discharge" means any discharge of dredged or fill material into waters of the United States.

Ecological reference: A model used to plan and design an aquatic habitat and riparian area restoration, enhancement, or establishment activity under NWP 27. An ecological reference may be based on the structure, functions, and dynamics of an aquatic habitat type or a riparian area type that currently exists in the region where the proposed NWP 27 activity is located. Alternatively, an ecological reference may be based on a conceptual model for the aquatic habitat type or riparian area type to be restored, enhanced, or established as a result of the proposed NWP 27 activity. An ecological reference takes into account the range of variation of the aquatic habitat type or riparian area type in the region.

Enhancement: The manipulation of the physical, chemical, or biological characteristics of an aquatic resource to heighten, intensify, or improve a specific aquatic resource function(s). Enhancement results in the gain of selected aquatic resource function(s), but may also lead to a decline in other aquatic resource function(s). Enhancement does not result in a gain in aquatic resource area.

Establishment (creation): The manipulation of the physical, chemical, or biological characteristics present to develop an aquatic resource that did not previously exist at an upland site. Establishment results in a gain in aquatic resource area.

High Tide Line: The line of intersection of the land with the water's surface at the maximum height reached by a rising tide. The high tide line may be determined, in the absence of actual data, by a line of oil or scum along shore objects, a more or less continuous deposit of fine shell or debris on the foreshore or berm, other physical markings or characteristics, vegetation lines, tidal gages, or other suitable means that delineate the general height reached by a rising tide. The line encompasses spring high tides and other high tides that occur with periodic frequency but does not include storm surges in which there is a departure from the normal or predicted reach of the tide due to the piling up of water against a coast by strong winds such as those accompanying a hurricane or other intense storm.

Historic Property: Any prehistoric or historic district, site (including archaeological site), building, structure, or other object included in, or eligible for inclusion in, the National Register of Historic Places maintained by the Secretary of the Interior. This term includes artifacts, records, and remains that are related to and located within such properties. The term includes properties of traditional religious and cultural importance to an Indian tribe or Native Hawaiian organization and that meet the National Register criteria (36 CFR part 60).

Independent utility: A test to determine what constitutes a single and complete non-linear project in the Corps Regulatory Program. A project is considered to have independent utility if it would be constructed absent the construction of other projects in the project area. Portions of a multi-phase project that depend upon other phases of the project do not have independent utility. Phases of a project that would be constructed even if the other phases were not built can be considered as separate single and complete projects with independent utility.

Indirect effects: Effects that are caused by the activity and are later in time or farther removed in distance, but are still reasonably foreseeable.

Loss of waters of the United States: Waters of the United States that are permanently adversely affected by filling, flooding, excavation, or drainage because of the regulated activity. The loss of stream bed includes the acres of stream bed that are permanently adversely affected by filling or excavation because of the regulated activity. Permanent adverse effects include permanent discharges of dredged or fill material that change an aquatic area to dry land, increase the bottom elevation of a waterbody, or change the use of a waterbody. The acreage of loss of waters of the United States is a threshold measurement of the impact to jurisdictional waters or wetlands for determining whether a project may qualify for an NWP; it is not a net threshold that is calculated after considering compensatory mitigation that may be used to offset losses of aquatic functions and services. Waters of the United States temporarily filled, flooded, excavated, or drained, but restored to pre-construction contours and elevations after construction, are not included in the measurement of loss of waters of the United States. Impacts resulting from activities that do not require Department of the Army authorization, such as activities eligible for exemptions under section 404(f) of the Clean Water Act, are not considered when calculating the loss of waters of the United States.

Navigable waters: Waters subject to section 10 of the Rivers and Harbors Act of 1899. These waters are defined at 33 CFR part 329.

Non-tidal wetland: A non-tidal wetland is a wetland that is not subject to the ebb and flow of tidal waters. Non-tidal wetlands contiguous to tidal waters are located landward of the high tide line (i.e., spring high tide line).

Open water: For purposes of the NWPs, an open water is any area that in a year with normal patterns of precipitation has water flowing or standing above ground to the extent that an ordinary high water mark can be determined. Aquatic vegetation within the area of flowing or standing water is either non-emergent, sparse, or absent. Vegetated shallows are considered to be open waters. Examples of "open waters" include rivers, streams, lakes, and ponds.

Ordinary High Water Mark: The term ordinary high water mark means that line on the shore established by the fluctuations of water and indicated by physical characteristics such as a clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas.

Perennial stream: A perennial stream has surface water flowing continuously year-round during a typical year.

Practicable: Available and capable of being done after taking into consideration cost, existing technology, and logistics in light of overall project purposes.

Pre-construction notification: A request submitted by the project proponent to the Corps for confirmation that a particular activity is authorized by nationwide permit. The request may be a permit application, letter, or similar document that includes information about the proposed work and its anticipated environmental effects. Pre-construction notification may be required by the terms and conditions of a nationwide permit, or by regional conditions. A pre-construction notification may be voluntarily submitted in cases where pre-construction notification is not required and the project proponent wants confirmation that the activity is authorized by nationwide permit.

Preservation: The removal of a threat to, or preventing the decline of, aquatic resources by an action in or near those aquatic resources. This term includes activities commonly associated with the protection and maintenance of aquatic resources through the implementation of appropriate legal and physical mechanisms. Preservation does not result in a gain of aquatic resource area or functions.

Re-establishment: The manipulation of the physical, chemical, or biological characteristics of a site with the goal of returning natural/historic functions to a former aquatic resource. Re-establishment results in rebuilding a former aquatic resource and results in a gain in aquatic resource area and functions.

Rehabilitation: The manipulation of the physical, chemical, or biological characteristics of a site with the goal of repairing natural/historic functions to a degraded aquatic resource. Rehabilitation results in a gain in aquatic resource function, but does not result in a gain in aquatic resource area.

Restoration: The manipulation of the physical, chemical, or biological characteristics of a site with the goal of returning natural/historic functions to a former or degraded aquatic resource. For the purpose of tracking net gains in aquatic resource area, restoration is divided into two categories: re-establishment and rehabilitation.

Riffle and pool complex: Riffle and pool complexes are special aquatic sites under the 404(b)(1) Guidelines. Riffle and pool complexes sometimes characterize steep gradient sections of streams. Such stream sections are recognizable by their hydraulic characteristics. The rapid movement of water over a course substrate in riffles results in a rough flow, a turbulent surface, and high dissolved oxygen levels in the water. Pools are deeper areas associated with riffles. A slower stream velocity, a streaming flow, a smooth surface, and a finer substrate characterize pools.

Riparian areas: Riparian areas are lands next to streams, lakes, and estuarine-marine shorelines. Riparian areas are transitional between terrestrial and aquatic ecosystems, through which surface and subsurface hydrology connects riverine, lacustrine, estuarine, and marine waters with their adjacent wetlands, non-wetland waters, or uplands. Riparian areas provide a variety of ecological functions and services and help improve or maintain local water quality. (See general condition 23.)

Shellfish seeding: The placement of shellfish seed and/or suitable substrate to increase shellfish production. Shellfish seed consists of immature individual shellfish or individual shellfish attached to shells or shell fragments (i.e., spat on shell). Suitable substrate may consist of shellfish shells, shell fragments, or other appropriate materials placed into waters for shellfish habitat.

Single and complete linear project: A linear project is a project constructed for the purpose of getting people, goods, or services from a point of origin to a terminal point, which often involves multiple crossings of one or more waterbodies at separate and distant locations. The term "single and complete project" is defined as that portion of the total linear project proposed or accomplished by one owner/developer or partnership or other association of owners/developers that includes all crossings of a single water of the United States (i.e., a single waterbody) at a specific location. For linear projects crossing a single or multiple waterbodies several times at separate and distant locations, each crossing is considered a single and complete project for purposes of NWP authorization. However, individual channels in a braided stream or river, or individual arms of a large, irregularly shaped wetland or lake, etc., are not separate waterbodies, and crossings of such features cannot be considered separately.

Single and complete non-linear project: For non-linear projects, the term "single and complete project" is defined at 33 CFR 330.2(i) as the total project proposed or accomplished by one owner/developer or partnership or other association of owners/developers. A single and complete non-linear project must have independent utility (see definition of "independent utility"). Single and complete non-linear projects may not be "piecemealed" to avoid the limits in an NWP authorization.

Stormwater management: Stormwater management is the mechanism for controlling stormwater runoff for the

purposes of reducing downstream erosion, water quality degradation, and flooding and mitigating the adverse effects of changes in land use on the aquatic environment.

Stormwater management facilities: Stormwater management facilities are those facilities, including but not limited to, stormwater retention and detention ponds and best management practices, which retain water for a period of time to control runoff and/or improve the quality (i.e., by reducing the concentration of nutrients, sediments, hazardous substances and other pollutants) of stormwater runoff.

Stream bed: The substrate of the stream channel between the ordinary high water marks. The substrate may be bedrock or inorganic particles that range in size from clay to boulders. Wetlands contiguous to the stream bed, but outside of the ordinary high water marks, are not considered part of the stream bed.

Stream channelization: The manipulation of a stream's course, condition, capacity, or location that causes more than minimal interruption of normal stream processes. A channelized jurisdictional stream remains a water of the United States.

Structure: An object that is arranged in a definite pattern of organization. Examples of structures include, without limitation, any pier, boat dock, boat ramp, wharf, dolphin, weir, boom, breakwater, bulkhead, revetment, riprap, jetty, artificial island, artificial reef, permanent mooring structure, power transmission line, permanently moored floating vessel, piling, aid to navigation, or any other manmade obstacle or obstruction.

Tidal wetland: A tidal wetland is a jurisdictional wetland that is inundated by tidal waters. Tidal waters rise and fall in a predictable and measurable rhythm or cycle due to the gravitational pulls of the moon and sun. Tidal waters end where the rise and fall of the water surface can no longer be practically measured in a predictable rhythm due to masking by other waters, wind, or other effects. Tidal wetlands are located channelward of the high tide line.

Tribal lands: Any lands title to which is either: 1) held in trust by the United States for the benefit of any Indian tribe or individual; or 2) held by any Indian tribe or individual subject to restrictions by the United States against alienation.

Tribal rights: Those rights legally accruing to a tribe or tribes by virtue of inherent sovereign authority, unextinguished aboriginal title, treaty, statute, judicial decisions, executive order or agreement, and that give rise to legally enforceable remedies.

Vegetated shallows: Vegetated shallows are special aquatic sites under the 404(b)(1) Guidelines. They are areas that are permanently inundated and under normal circumstances have rooted aquatic vegetation, such as seagrasses in marine and estuarine systems and a variety of vascular rooted plants in freshwater systems.

Waterbody: For purposes of the NWPs, a waterbody is a "water of the United States." If a wetland is adjacent to a waterbody determined to be a water of the United States, that waterbody and any adjacent wetlands are considered together as a single aquatic unit (see 33 CFR 328.4(c)(2)).

Andy Beshear
GOVERNOR

ENERGY AND ENVIRONMENT CABINET
DEPARTMENT FOR ENVIRONMENTAL PROTECTION
300 Sower Boulevard
Frankfort, Kentucky 40601
Phone: (502) 564-2150
Fax: 502-564-4245

Rebecca W. Goodman
SECRETARY

Anthony R. Hatton
COMMISSIONER

July 30, 2024

Northern Kentucky Water District
c/o: Steve Broering
2835 Crescent Springs Road, P.O. Box 18640
Erlanger, Kentucky 41018

Re: §401 Water Quality Certification
Northern KY Water District
AI No.: 2485; Activity ID: APE20240006
WQC No: WQC2024-128-7M1
USACE ID No.: LRL-2024-00350, LRL-2024-00452, LRL-2024-00453, LRL-2024-00454, LRL-2024-00457, LRL-2024-00458, LRL-2024-00456
Multiple Streams
Campbell County, Kentucky

Dear Steve Broering:

Pursuant to Section 401 of the Clean Water Act (CWA) and 40 CFR 121.7(c), the Commonwealth of Kentucky certifies it has reasonable assurances that applicable water quality standards under Kentucky Administrative Regulations Title 401, Chapter 10, established pursuant to Sections 301, 302, 303, 304, 306, and 307 of the CWA, will not be violated by the above referenced project provided that the U.S. Army Corps of Engineers authorizes the activity under a federal license or permit, and the attached conditions are met.

Other permits from the Division of Water may be required for this activity. Activities within a floodplain may require a Permit to Construct Across or Along a Stream; contact the Floodplain Management Section (502-564-3410). Projects that disturb one acre or more of land or is part of a larger common plan of development or sale that will ultimately disturb one acre or more of land require a Kentucky Pollution Discharge Elimination System (KPDES) Stormwater Permit; contact the Surface Water Permits Branch (502-564-3410 or SWPBSupport@ky.gov). A Groundwater Protection Plan is required if activities listed in Section 2(2) of 401 KAR 5:037 are conducted. A Water Withdrawal Application is required for activities proposing raw water withdrawals of 10,000 gallons per day or more; contact the Watershed Management Branch (502-564-3410).

All future correspondence on this project must reference AI No. **2485**. **The attached document is your official Water Quality Certification; please read it carefully**. Please contact Conner Flora by phone at 502-782-3531 or email at conner.flora@ky.gov if you have any questions.

Sincerely,

Samantha Vogeler

Samantha Vogeler, Supervisor
Water Quality Certification Section
Kentucky Division of Water

SV:CF
Attachment

cc: Cory Shumate, USACE: Louisville (via email: Cory.D.Shumate@usace.army.mil)
Lindsey Jakovljevic, Consultant: CT Consultants (via email: LJakovjevic.ctconsultants.com)
Lee Andrews, USFWS: Frankfort (via email: kentuckyes@fws.gov)
Brian Storz, Licking River Basin Coordinator (via email: brian.storz@ky.gov)
Matthew Gross, Florence Regional Field Office (via email: matthew.gross@ky.gov)

Water Quality Certification

Northern KY Water District

Facility Requirements

Permit Number: WQC2024-128-7M1

Activity ID No.:APE20240006

ACTV0000000066 (AI: 2485 APE20240006) Northern KY Water District:

Submittal/Action Requirements:

Condition No.	Condition
S-1	Northern Kentucky Water District shall notify the Water Quality Certification Project Manager or Supervisor of the scheduled start of construction activities at least two weeks before the start of construction. This condition is necessary for the Division of Water to be informed of the ongoing activity for the purposes of site visits to ensure implementation of Kentucky Regulatory Statutes and Administrative Regulations; the Division will monitor the environment, minimize impact to aquatic resources, protect the use and designation of resources, allow more effective and efficient control practices, identify changes and conditions in ecological systems as a result of activities, and to warn of emergency conditions. [401 KAR 10:030 Section 1, 401 KAR 10:031 Section 2(1)(a), KRS 224.10-100, KRS 224.70-110]
S-2	Northern Kentucky Water District shall notify the Water Quality Certification Project Manager or Supervisor of substantial completion of construction no later than two weeks post-construction. This condition is necessary for the Division of Water to be informed of the ongoing activity for the purposes of site visits to ensure implementation of Kentucky Regulatory Statutes and Administrative Regulations; the Division will monitor the environment, minimize impact to aquatic resources, protect the use and designation of resources, allow more effective and efficient control practices, identify changes and conditions in ecological systems as a result of activities, and to warn of emergency conditions. [401 KAR 10:030 Section 1, 401 KAR 10:031 Section 2(1)(a), KRS 224.10-100, KRS 224.70-110]
S-3	Northern Kentucky Water District shall submit as-built drawings within 90 days after substantial completion of construction to the Water Quality Certification Section Project Manager or Supervisor. This condition is necessary to monitor the aquatic resources, minimize impact to aquatic resources, protect the use and designation of resources, allow more effective and efficient control practices, identify changes and conditions in ecological systems as a result of activities, and to warn of emergency conditions. [401 KAR 10:030 Section 1, 401 KAR 10:031 Section 2(1)(a), KRS 224.10-100, KRS 224.70-110]

Narrative Requirements:

Condition No.	Condition
T-1	The work approved by this certification shall be limited to 38.794466, -84.493575: The proposed project will construct 43,920 feet of new 8" water main extensions at 15 separate un-served roads within Kenton County, Kentucky. For the construction of The Project, temporary crossings through two (2) perennial streams, twenty-one (21) ephemeral streams, and nine (9) wetlands are unavoidable. Total temporary impacts are proposed to 0.394 acres of wetlands and 105 linear feet of perennial stream and 2,142 linear feet of ephemeral stream. The applicant is required to return the streams and wetlands to pre-construction contours, wetlands that were temporarily impacted must remain wetlands post-construction this includes the conversion of forested wetlands to emergent wetlands. This condition is necessary to confirm activities approved by this certification. [401 KAR 10:030 Section 1, 401 KAR 9:010 Section 1(a)(2), KRS 224.10-100, KRS 224.70-110]

ACTV0000000066 (AI: 2485 APE20240006) Northern KY Water District:

Narrative Requirements:

Condition No.	Condition
T-2	All work performed under this certification shall adhere to the design and specifications set forth in the following document(s): Application for Permit to Construct Across or Along a Stream and/or Water Quality Certification received on 4/19/2024, a Pre-Filling Meeting Request on 1/19/2024, and a Certification Request on 6/26/2024. Project Area.zip Sub District O- PCN Application Form - signed.pdf Sub District O- PCN.pdf Utility Line Construction WQC Table.pdf affidavit_Sub District O EEC.pdf Application Form - Sub O - signed P.pdf eTearsheet_KY Enquirer_NKWD 04.23.24_ SubDistrictO-EEC.pdf NOD#1 Northern Kentucky Water District (AI_ 2485).pdf This condition is necessary to confirm activities approved by this certification. [401 KAR 10:030 Section 1, 401 KAR 9:010 Section 1(a)(2), KRS 224.10-100, KRS 224.70-110]
T-3	Northern Kentucky Water District is responsible for preventing degradation of waters of the Commonwealth from soil erosion. An erosion and sediment control plan must be designed, implemented, and maintained in effective operating condition at all times during construction. This condition is necessary to prevent and minimize objectionable deposits and pollution and protect the use of the stream. [401 KAR 10:030 Section 1, 401 KAR 10:031 Section 2(1)(a), KRS 224.10-100, KRS 224.70-110]

ACTV0000000066 (AI: 2485 APE20240006) Northern KY Water District:

Narrative Requirements:

Condition No.	Condition
T-4	No in-stream operations or activities shall be conducted during fish spawning season (April 1 through June 30), due to the potential impacts of increased sediment load and associated water quality and designated aquatic habitat impacts. This condition is necessary to monitor the aquatic resources, minimize impact to aquatic resources, protect the use and designation of resources, allow more effective and efficient control practices, identify changes and conditions in ecological systems as a result of activities, and to warn of emergency conditions. [401 KAR 10:030 Section 1, 401 KAR 10:031 Section 4(1)(c,h), KRS 224.10-100, KRS 224.70-110]
T-5	Heavy equipment (e.g. bulldozers, backhoes, draglines, etc.), if required for this project, should not be used or operated within the stream channel. In those instances where such instream work is unavoidable, then it shall be performed in such a manner and duration as to minimize re-suspension of sediments and disturbance to the channel, banks, or riparian vegetation. This condition is necessary to prevent and minimize objectionable deposits and pollution and protect the use of the stream. [401 KAR 10:030 Section 1, 401 KAR 10:031 Section 2(1)(a), KRS 224.10-100, KRS 224.70-110]
T-6	Erosion and sediment pollution control plans and Best Management Practices must be designed, installed, and maintained in effective operating condition at all times during construction activities so that violations of state water quality standards do not occur. This condition is necessary to prevent and minimize objectionable deposits and pollution and protect the use of the stream. [401 KAR 10:030 Section 1, 401 KAR 10:031 Section 2(1)(a), KRS 224.10-100, KRS 224.70-110]
T-7	Remove all sediment and erosion control measures after re-vegetation has become well-established. This condition is necessary to prevent and minimize objectionable deposits and pollution and protect the use of the stream. [401 KAR 10:030 Section 1, 401 KAR 10:031 Section 2(1)(a), KRS 224.10-100, KRS 224.70-110]
T-8	Any fill or riprap shall be of a composition that shall not cause violations of water quality standards by adversely affecting the biological, chemical, or physical properties of waters of the Commonwealth. If riprap is used, it shall be of a weight and size that bank stress or slump conditions shall not occur. This condition is necessary to prevent and minimize objectionable deposits and pollution and protect the use of the stream. [401 KAR 10:030 Section 1, 401 KAR 10:031 Section 2(1)(a), KRS 224.10-100, KRS 224.70-110]
T-9	Sediment and erosion control measures (e.g., check-dams, silt fencing, or hay bales) shall not be placed within surface waters of the Commonwealth, either temporarily or permanently, without prior approval by the Kentucky Division of Water's Water Quality Certification Section. If placement of sediment and erosion control measures in surface waters is unavoidable, placement shall not be conducted in such a manner that may cause instability of streams that are adjacent to, upstream, or downstream of the structures. All sediment and erosion control measures shall be removed and the natural grade restored prior to withdrawal from the site. This condition is necessary to prevent and minimize objectionable deposits and pollution and protect the use of the stream. [401 KAR 10:030 Section 1, 401 KAR 10:031 Section 2(1)(a), KRS 224.10-100, KRS 224.70-110]
T-10	Measures shall be taken to prevent or control spills of fuels, lubricants, or other toxic materials used in construction from entering the watercourse. This condition is necessary to prevent water pollution as prohibited by statute. [401 KAR 10:030 Section 1, 401 KAR 10:031 Section 2(1)(a), KRS 224.10-100, KRS 224.70-110]

ACTV0000000066 (AI: 2485 APE20240006) Northern KY Water District:

Narrative Requirements:

Condition No.	Condition
T-11	To the maximum extent practicable, all in-stream work under this certification shall be performed during low flow. This condition is necessary to prevent and minimize objectionable deposits and pollution and protect the use of the stream. [401 KAR 10:030 Section 1, 401 KAR 10:031 Section 2(1)(a), KRS 224.10-100, KRS 224.70-110]
T-12	Removal of existing riparian vegetation shall be restricted to the minimum necessary for project construction. This condition is necessary to minimize negative effects to the environment, protect the use of the stream, and protect aquatic resources. [401 KAR 10:030 Section 1, 401 KAR 10:031 Section 2(1)(a), KRS 224.10-100, KRS 224.70-110]
T-13	Should stream pollution, wetland impairment, and/or violations of water quality standards occur as a result of this activity (either from a spill or other forms of water pollution), the Kentucky Division of Water shall be notified immediately by calling 800/564-2380. This condition is necessary to monitor the aquatic resources, minimize impact to aquatic resources, protect the use and designation of resources, allow more effective and efficient control practices, identify changes and conditions in ecological systems as a result of activities, and to warn of emergency conditions. [401 KAR 10:030 Section 1, 401 KAR 10:031 Section 2(1)(a), KRS 224.10-100, KRS 224.70-110]
T-14	This Water Quality Certification expires on July 29, 2024. This condition is necessary for the issuance of the certification. [KRS 224.10-100, KRS 224.16-050(2), KRS 224.70-110]
T-15	Other permits from the Division of Water may be required for this activity. If this activity occurs within a floodplain, a Permit to Construct Across or Along a Stream may be required. Please contact the Floodplain Management Section Supervisor (502-564-3410) for more information prior to construction. If the project will disturb one acre or more of land, or is part of a larger common plan of development or sale that will ultimately disturb one acre or more of land, a Kentucky Pollution Discharge Elimination System (KPDES) Stormwater Permit shall be required. Please contact the Surface Water Permits Branch (502-564-3410 or SWPBSupport@ky.gov) for more information. A Groundwater Protection Plan is required if any of the activities listed in Section 2(2) of 401 KAR 5:037 are conducted. A Water Withdrawal Application is required for any activities proposing raw water withdrawals of 10,000 gallons per day or more. For technical assistance contact the Watershed Management Branch at 502-564-3410 or visit eec.ky.gov. This condition is necessary for confirm authorized impacts, the appropriate responsible party, monitor the aquatic resources, minimize impact to aquatic resources, protect the use and designation of resources, allow more effective and efficient control practices, identify changes and conditions in ecological systems as a result of activities, and to warn of emergency conditions. [KRS 224.10-100, KRS 224.16-050(2), KRS 224.70-110]

ACTV0000000066 (AI: 2485 APE20240006) Northern KY Water District:

Narrative Requirements:

Condition No.	Condition
T-16	If there is a transfer or conveyance of the project site during the issued WQC term for the approved activity, the Northern Kentucky Water District shall submit written notice to the Water Quality Certification Section Project Manager or Supervisor of the transfer or conveyance of the project site or any part of the project site at least 60 days prior to the transfer or conveyance of the project site. The notification shall include the WQC number; the Agency Interest (AI) No.; the name, mailing address, email address, and telephone number of the current owner; the name, mailing address, email address, and telephone number of the prospective transferee; the proposed effective date of transfer/conveyance; and a copy of the documentation evidencing the transfer/conveyance. Failure to comply with this condition does not negate the validity or enforceability of this certification. This condition is necessary for confirm authorized impacts, the appropriate responsible party, monitor the aquatic resources, minimize impact to aquatic resources, protect the use and designation of resources, allow more effective and efficient control practices, identify changes and conditions in ecological systems as a result of activities, and to warn of emergency conditions. [401 KAR 10:030 Section 1, 401 KAR 9:010 Section 1(a)(2), KRS 224.10-100, KRS 224.70-110]

DEPARTMENT OF THE ARMY
U.S. ARMY CORPS OF ENGINEERS, LOUISVILLE DISTRICT
REGULATORY DIVISION ROOM 183 P.O. BOX 59
LOUISVILLE KENTUCKY 40202-0059

August 23, 2024

Regulatory Division
North Branch
ID#: LRL-2024-00452-cds

Mr. Steve Broering
Northern Kentucky Water District
2835 Crescent Springs Rd
P.O. Box 18640
Erlanger , KY 41018
Via Email: sbroering@nkywater.org

Dear Mr. Broering:

This letter is in response to the Pre-Construction Notification (PCN) you submitted to the Louisville District, North Branch on April 26, 2024, for a Department of the Army Nationwide permit (NWP) verification. This project has been assigned the file number LRL-2024-00452-cds and is known as Highwater Road – Subdistrict O Water Main Extension. This file number should be referenced in all correspondence concerning this project.

A review of the information provided indicates that the proposed work would include the temporary trenching of approximately 35 linear feet (0.003 acre) of an unnamed tributary to Pleasant Run Creek (S-34) for the installation of 425 linear feet of eight-inch water main along Highwater Road. The stream will be restored to pre-existing contours post-construction. . The project area for this determination includes a 1.25 acre(s) area which is illustrated on the enclosed site plans/maps. The project/review area is located at 1902 Highwater Road (LAT: 39.075725 N, LON: 84.571679 W to LAT: 39.075726 N, LON: -84.572178 W) within the city of Villa Hills, Kenton County, Kentucky.

We have determined that the proposed work is authorized by Nationwide Permit 58 - pursuant to authorities under Section 404 of the Clean Water Act (33 U.S.C. § 1344). The proposed work must be accomplished in strict accordance with the general permit conditions, any regional conditions, the special conditions listed in this letter, the application materials, and the enclosed plans and Figure 6.1 Impact Map. If the extent of the project area and/or nature of the authorized impacts to waters are modified, a revised PCN must be submitted to this office for written approval before work is initiated. Any violation of permit conditions or deviation from your submitted plans may subject the permittee to enforcement action.

This verification is valid until March 14, 2026, unless prior to this date the subject NWP(s) is suspended, revoked, or is modified such that the activity no longer complies with the terms and conditions of this NWP. If you commence or are under contract to

commence this activity before the date that the relevant NWP is modified or revoked, you will have 12 months from the date of the modification or revocation of the NWP to complete the activity under the present terms and conditions of this NWP.

Project Specific Special Conditions:

1. The Permittee shall comply with all conditions of the Section 401 Water Quality Certification No. WQC2024-128-7M1, dated July 30, 2024, issued by Kentucky Division of Water (KDOW), which are incorporated herein by reference.

2. Tree clearing shall only occur during the unoccupied timeframe (October 15th to March 31st) to minimize adverse effects to the federally-listed northern long-eared bat and the Indiana bat. To mitigate for the loss of 0.07 acres of potential suitable roost trees, the permittee shall follow the process outlined in the Kentucky Field Office's (KFO) 2016 Revised Conservation Strategy for Forest-Dwelling Bats (Conservation Strategy) and provide receipt of an appropriate contribution to the Imperiled Bat Conservation Fund (IBCF). The Permittee shall contact the KFO of the U.S. Fish and Wildlife Service (USFWS) by calling (502) 695-0468 to determine the appropriate mitigation in accordance with the Conservation Strategy. The Permittee shall provide the Corps with a receipt of payment prior to any tree removal. If additional forested areas not previously considered in the DA permit application are to be cleared, the Permittee shall notify the Corps and the USFWS in advance of any additional tree clearing to determine if re-initiation of Endangered Species Act consultation is required.

This NWP verification does not preclude the necessity to obtain any other Federal, State, or local permits, licenses, and/or certifications, which may be required.

If you have any questions related to this verification or have issues accessing documents referenced in this letter, please contact Cory Shumate, Regulatory Specialist of the North Branch at 502-315-6669, by mail at the above address, or by email at cory.d.shumate@usace.army.mil. Please take a moment to complete our customer satisfaction survey located at https://regulatory.ops.usace.army.mil/customer-service-survey/.

Sincerely,

Cory D. Shumate
Regulatory Specialist, North Branch

Enclosures
Cc (w/enclosures)
Lindsey Jakovljevic, CT Consultants (via Ljakovljevic@ctconsultants.com)
Flora Conner, Kentucky Division of Water (via Conner.Flora@ky.gov)

Compliance Certification Form

Action ID Number: LRL-2024-00452-cds **County: Kenton**
State: Kentucky

Permittee: Northern Kentucky Water District, Steve Broering

Project Name: Highwater Road – Subdistrict O Water Main Extension

Date Verification Issued: 8/23/2024

Project Manager: Cory Shumate

Upon completion of the activity authorized by this permit and any mitigation required by the permit, sign this certification and return it to the following address:

US ARMY CORPS OF ENGINEERS
Louisville District
Attn: Cory Shumate
North Branch
600 Dr. Martin Luther King Jr. Place
Louisville, Kentucky 40202
or
cory.d.shumate@usace.army.mil

Please note that your permitted activity is subject to a compliance inspection by a U. S. Army Corps of Engineers representative. Failure to comply with any terms or conditions of this authorization may result in the Corps suspending, modifying or revoking the authorization and/or issuing a Class I administrative penalty, or initiating other appropriate legal action.

I hereby certify that the work, and mitigation (if applicable), authorized by the above referenced permit has been completed in accordance with the terms and conditions of the said permit including any general or specific conditions.

Date Authorized Work Started: _____ **Completed: _____**

Describe any deviations from permit (attach drawing(s) depicting the deviations):

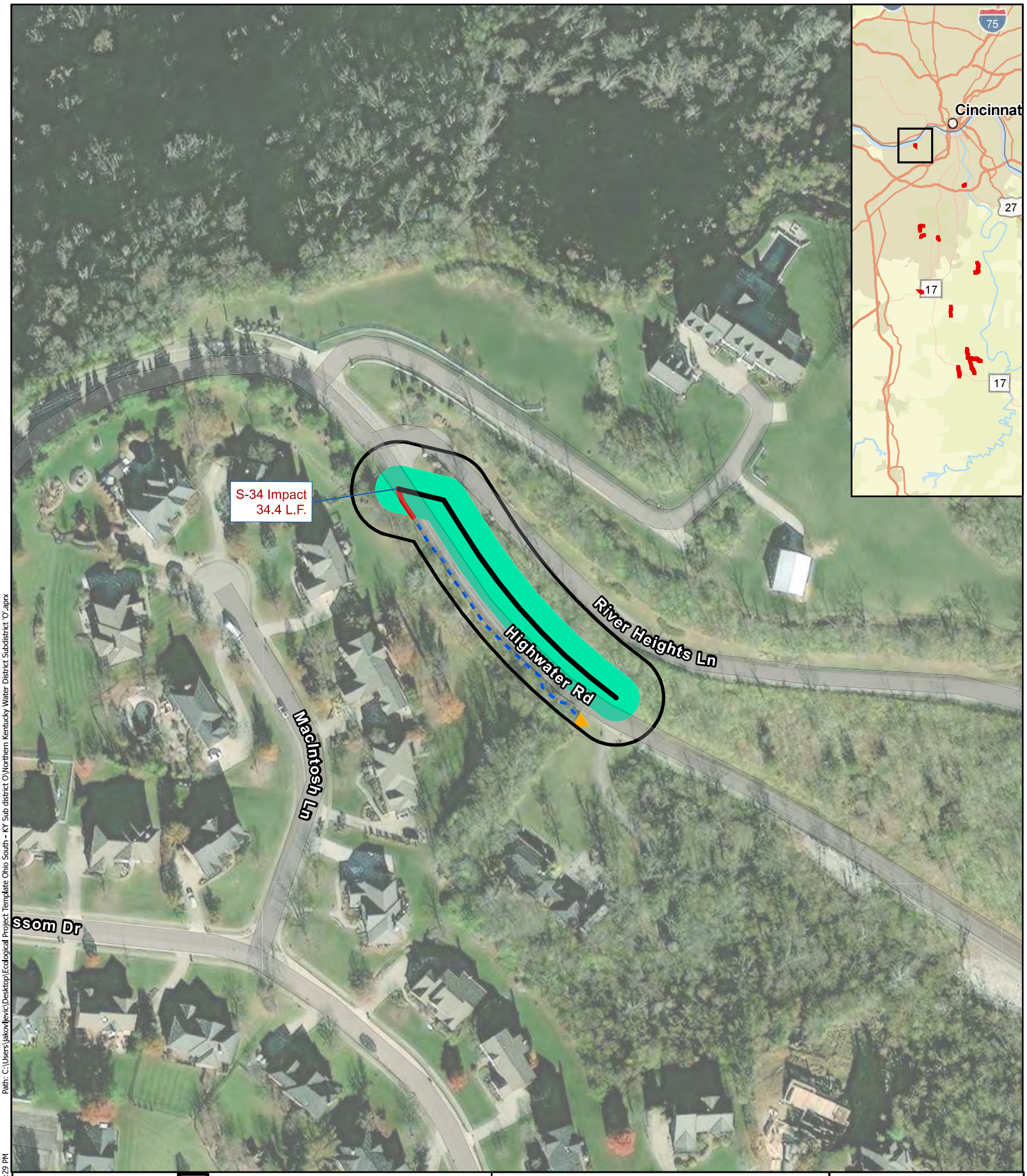
_____

_____

***Note: The description of any deviations on this form does not constitute approval by the Corps.**

_____ _____

Signature of Permittee **Date**



Project Area
Alignment
Temporary Easement
50 ft
Ephemeral Stream
Stream Impact

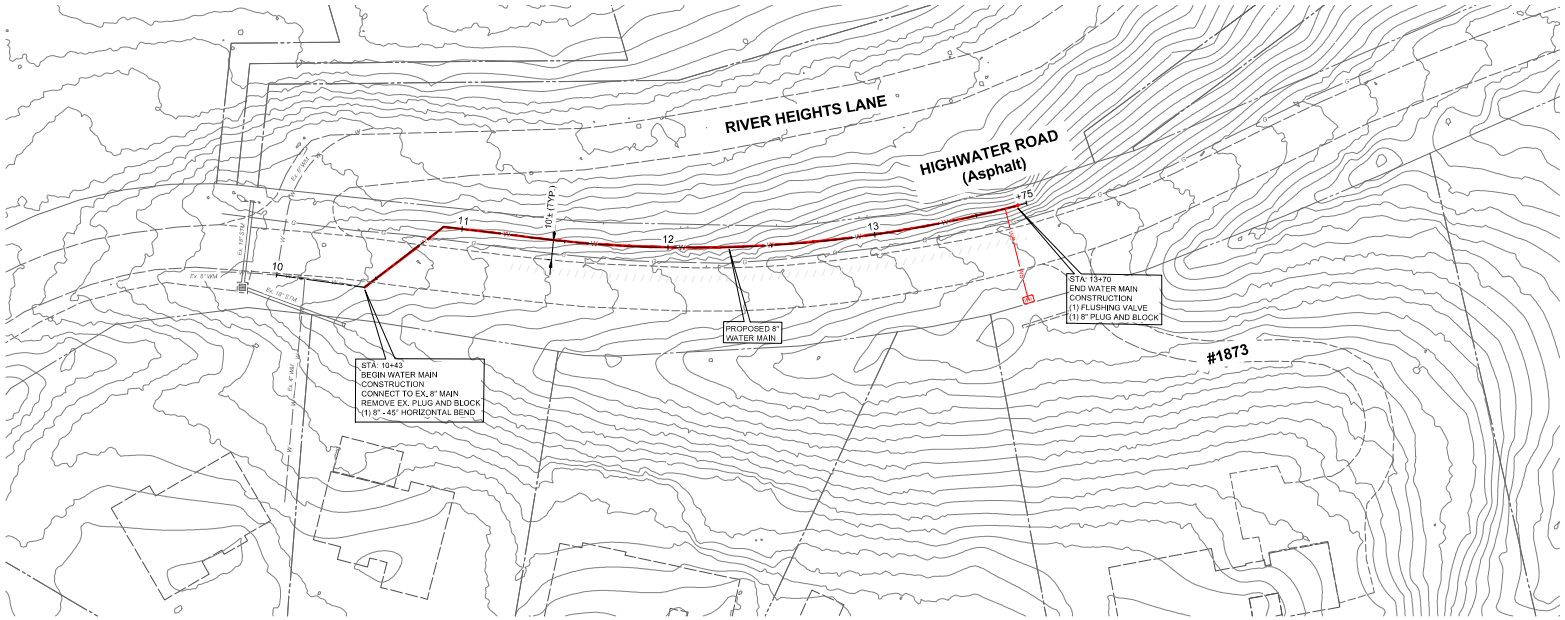
Figure 6.1 Impact Map
Northern Kentucky Water District Subdistrict 'O'

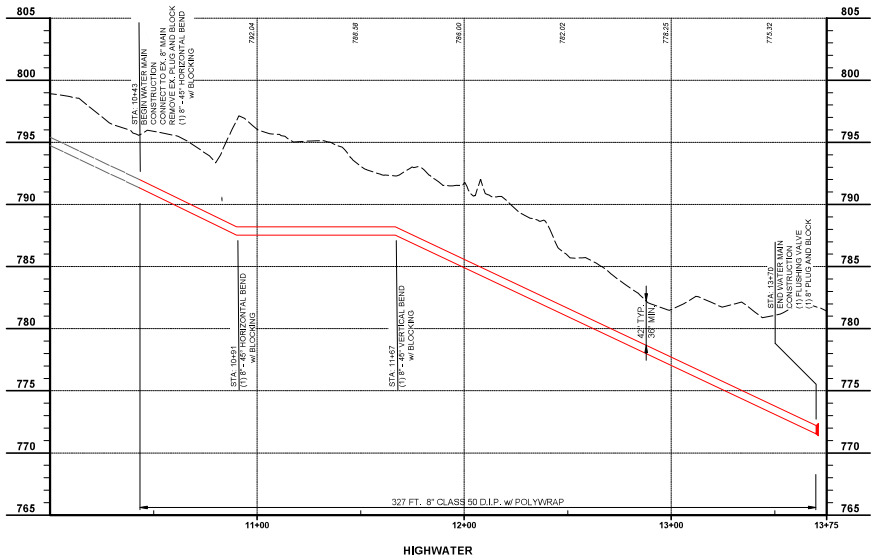
N
0 50 100 Feet
1 inch = 129 feet

Path: C:\Users\jakovljevic\Desktop\Ecological Project Template Ohio South - KY Sub district O\Northern Kentucky Water District Subdistrict 'O'.aprx

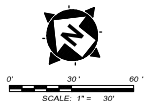
Date Exported: 6/4/2024 4:29 PM

Basemap courtesy of Nearmap





SCALE:
H: 1" = 30'
V: 1" = 5'



50% REVIEW

your trusted advisor
consultants — engineers architects planners

NO	REVISION	DATE
-	-	-

ISSUED FOR:	50% DESIGN
ISSUE DATE:	FEB 2024
SCALE:	AS SHOWN
DESIGNED BY:	JCOX
DRAWN BY:	JCOR
CHECKED BY:	ABHJ

NORTHERN KENTUCKY WATER DISTRICT
SUBDISTRICT 'O'
-KENTON COUNTY -

HIGHWATER ROAD

PROJECT NO.	231591
DISCIPLINE	CIVIL
SHEET NAME	C-01
SHEET	2
OF	44

2021 Nationwide Permit Summary

US Army Corps of Engineers
Louisville District ®

Issued: **March 15, 2021**
Expires: **March 14, 2026**

No. 58. Utility Line Activities for Water and Other Substances

(NWP Final Rule, 86 FR 2744)

Activities required for the construction, maintenance, repair, and removal of utility lines for water and other substances, excluding oil, natural gas, products derived from oil or natural gas, and electricity. Oil or natural gas pipeline activities or electric utility line and telecommunications activities may be authorized by NWPs 12 or 57, respectively. This NWP also authorizes associated utility line facilities in waters of the United States, provided the activity does not result in the loss of greater than 1/2-acre of waters of the United States for each single and complete project.

Utility lines: This NWP authorizes discharges of dredged or fill material into waters of the United States and structures or work in navigable waters for crossings of those waters associated with the construction, maintenance, or repair of utility lines for water and other substances, including outfall and intake structures. There must be no change in pre-construction contours of waters of the United States. A "utility line" is defined as any pipe or pipeline for the transportation of any gaseous, liquid, liquescent, or slurry substance, for any purpose that is not oil, natural gas, or petrochemicals. Examples of activities authorized by this NWP include utility lines that convey water, sewage, stormwater, wastewater, brine, irrigation water, and industrial products that are not petrochemicals. The term "utility line" does not include activities that drain a water of the United States, such as drainage tile or french drains, but it does apply to pipes conveying drainage from another area.

Material resulting from trench excavation may be temporarily sidecast into waters of the United States for no more than three months, provided the material is not placed in such a manner that it is dispersed by currents or other forces. The district engineer may extend the period of temporary side casting for no more than a total of 180 days, where appropriate. In wetlands, the top 6 to 12 inches of the trench should normally be backfilled with topsoil from the trench. The trench cannot be constructed or backfilled in such a manner as to drain waters of the United States (e.g., backfilling with extensive gravel layers, creating a french drain effect). Any exposed slopes and stream banks must be stabilized immediately upon completion of the utility line crossing of each waterbody.

Utility line substations: This NWP authorizes the construction, maintenance, or expansion of substation facilities associated with a utility line in non-tidal waters of the United States, provided the activity, in combination with all other activities included in one single and complete project, does not result in the loss of greater than 1/2-acre of waters of the United States. This NWP does not authorize discharges of dredged or fill material into non-tidal wetlands adjacent to tidal waters of the United States to construct, maintain, or expand substation facilities.

Foundations for above-ground utility lines: This NWP authorizes the construction or maintenance of foundations for above-ground utility lines in all waters of the United States, provided the foundations are the minimum size necessary.

Access roads: This NWP authorizes the construction of access roads for the construction and maintenance of utility lines, including utility line substations, in non-tidal waters of the United States, provided the activity, in combination with all other activities included in one single and complete project, does not cause the loss of greater than 1/2-acre of non-tidal waters of the United States. This NWP does not authorize discharges of dredged or fill material into non-tidal wetlands adjacent to tidal waters for access roads. Access roads must be the minimum width necessary (see Note 2, below). Access roads must be constructed so that the length of the road minimizes any adverse effects on waters of the United States and must be as near as possible to pre-construction contours and elevations (e.g., at grade corduroy roads or geotextile/gravel roads). Access roads constructed above pre-construction contours and elevations in waters of the United States must be properly bridged or culverted to maintain surface flows.

This NWP may authorize utility lines in or affecting navigable waters of the United States even if there is no associated discharge of dredged or fill material (see 33 CFR part 322). Overhead utility lines constructed over section 10 waters and utility lines that are routed in or under section 10 waters without a discharge of dredged or fill material require a section 10 permit.

This NWP authorizes, to the extent that Department of the Army authorization is required, temporary structures, fills, and work necessary for the remediation of inadvertent returns of drilling fluids to waters of the United States through sub-soil fissures or fractures that might occur during horizontal directional drilling activities conducted for the purpose of installing or replacing utility lines. These remediation activities must be done as soon as practicable, to restore the affected waterbody. District engineers may add special conditions to this NWP to require a remediation plan for addressing inadvertent returns of drilling fluids to waters of the United States during horizontal directional drilling activities conducted for the purpose of installing or replacing utility lines.

This NWP also authorizes temporary structures, fills, and work, including the use of temporary mats, necessary to conduct the utility line activity. Appropriate measures must be taken to maintain normal downstream flows and minimize flooding to the maximum extent practicable, when temporary structures, work, and discharges of dredged or fill material, including cofferdams, are necessary for construction activities, access fills, or dewatering of construction sites. Temporary fills must consist of materials, and be placed in a manner, that will not be eroded by expected high flows. After construction, temporary fills must be removed in their entirety and the affected areas returned to pre-construction elevations. The areas affected by temporary fills must be revegetated, as appropriate.

Notification: The permittee must submit a pre-construction notification to the district engineer prior to commencing the activity if: (1) a section 10 permit is required; or (2) the discharge will result in the loss of greater than 1/10-acre of waters of the United States. (See general condition 32.) (Authorities: Sections 10 and 404)

Note 1: Where the utility line is constructed, installed, or maintained in navigable waters of the United States (i.e., section 10 waters) within the coastal United States, the Great Lakes, and United States territories, a copy of the NWP verification will be sent by the Corps to the National Oceanic and Atmospheric Administration (NOAA), National Ocean Service (NOS), for charting the utility line to protect navigation.

Note 2: For utility line activities crossing a single waterbody more than one time at separate and distant locations, or multiple waterbodies at separate and distant locations, each crossing is considered a single and complete project for purposes of NWP authorization. Utility line activities must comply with 33 CFR 330.6(d).

Note 3: Access roads used for both construction and maintenance may be authorized, provided they meet the terms and conditions of this NWP. Access roads used solely for construction of the utility line must be removed upon completion of the work, in accordance with the requirements for temporary fills.

Note 4: Pipes or pipelines used to transport gaseous, liquid, liquescent, or slurry substances over navigable waters of the United States are considered to be bridges, not utility lines, and may require a permit from the U.S. Coast Guard pursuant to the General Bridge Act of 1946. However, any discharges of dredged or fill material into waters of the United States associated with such pipelines will require a section 404 permit (see NWP 15).

Note 5: This NWP authorizes utility line maintenance and repair activities that do not qualify for the Clean Water Act section 404(f) exemption for maintenance of currently serviceable fills or fill structures.

Note 6: For activities that require pre-construction notification, the PCN must include any other NWP(s), regional general permit(s), or individual permit(s) used or intended to be used to authorize any part of the proposed project or any related activity, including other separate and distant crossings that require Department of the Army authorization but do not require pre-construction notification (see paragraph (b)(4) of general condition 32). The district engineer will evaluate the PCN in accordance with Section D, "District Engineer's Decision." The district engineer may require mitigation to ensure that the authorized activity results in no more than minimal individual and cumulative adverse environmental effects (see general condition 23).

Nationwide Permit General Conditions

Note: To qualify for NWP authorization, the prospective permittee must comply with the following general conditions, as applicable, in addition to any regional or case-specific conditions imposed by the division engineer or district engineer. Prospective permittees should contact the appropriate Corps district office to determine if regional conditions have been imposed on an NWP. Prospective permittees should also contact the appropriate Corps district office to determine the status of Clean Water Act Section 401 water quality certification and/or Coastal Zone Management Act consistency for an NWP. Every person who may wish to obtain permit authorization under one or more NWPs, or who is currently relying on an existing or prior permit authorization under one or more NWPs, has been and is on notice that all of the provisions of 33 CFR 330.1 through 330.6 apply to every NWP authorization. Note especially 33 CFR 330.5 relating to the modification, suspension, or revocation of any NWP authorization.

1. Navigation. (a) No activity may cause more than a minimal adverse effect on navigation.

(b) Any safety lights and signals prescribed by the U.S. Coast Guard, through regulations or otherwise, must be installed and maintained at the permittee's expense on authorized facilities in navigable waters of the United States.

(c) The permittee understands and agrees that, if future operations by the United States require the removal, relocation, or other alteration, of the structure or work herein authorized, or if, in the opinion of the Secretary of the Army or his or her authorized representative, said structure or work shall cause unreasonable obstruction to the free navigation of the navigable waters, the permittee will be required, upon due notice from the Corps of Engineers, to remove, relocate, or alter the structural work or obstructions caused thereby, without expense to the United States. No claim shall be made against the United States on account of any such removal or alteration.

2. Aquatic Life Movements. No activity may substantially disrupt the necessary life cycle movements of those species of aquatic life indigenous to the waterbody, including those species that normally migrate through the area, unless the activity's primary purpose is to impound water. All permanent and temporary crossings of waterbodies shall be suitably culverted, bridged, or otherwise designed and constructed to maintain low flows to sustain the movement of those aquatic species. If a bottomless culvert cannot be used, then the crossing should be designed

and constructed to minimize adverse effects to aquatic life movements.

3. Spawning Areas. Activities in spawning areas during spawning seasons must be avoided to the maximum extent practicable. Activities that result in the physical destruction (e.g., through excavation, fill, or downstream smothering by substantial turbidity) of an important spawning area are not authorized.

4. Migratory Bird Breeding Areas. Activities in waters of the United States that serve as breeding areas for migratory birds must be avoided to the maximum extent practicable.

5. Shellfish Beds. No activity may occur in areas of concentrated shellfish populations, unless the activity is directly related to a shellfish harvesting activity authorized by NWPs 4 and 48, or is a shellfish seeding or habitat restoration activity authorized by NWP 27.

6. Suitable Material. No activity may use unsuitable material (e.g., trash, debris, car bodies, asphalt, etc.). Material used for construction or discharged must be free from toxic pollutants in toxic amounts (see section 307 of the Clean Water Act).

7. Water Supply Intakes. No activity may occur in the proximity of a public water supply intake, except where the activity is for the repair or improvement of public water supply intake structures or adjacent bank stabilization.

8. Adverse Effects From Impoundments. If the activity creates an impoundment of water, adverse effects to the aquatic system due to accelerating the passage of water, and/or restricting its flow must be minimized to the maximum extent practicable.

9. Management of Water Flows. To the maximum extent practicable, the pre-construction course, condition, capacity, and location of open waters must be maintained for each activity, including stream channelization, storm water management activities, and temporary and permanent road crossings, except as provided below. The activity must be constructed to withstand expected high flows. The activity must not restrict or impede the passage of normal or high flows, unless the primary purpose of the activity is to impound water or manage high flows. The activity may alter the pre-construction course, condition, capacity, and location of open waters if it benefits the aquatic environment (e.g., stream restoration or relocation activities).

10. Fills Within 100-Year Floodplains. The activity must comply with applicable FEMA-approved state or local floodplain management requirements.

11. Equipment. Heavy equipment working in wetlands or mudflats must be placed on mats, or other measures must be taken to minimize soil disturbance.

12. Soil Erosion and Sediment Controls. Appropriate soil erosion and sediment controls must be used and maintained in effective operating condition during construction, and all exposed soil and other fills, as well as any work below the ordinary high water mark or high tide line, must be permanently stabilized at the earliest practicable date. Permittees are encouraged to perform work within waters of the United States during periods of low-flow or no-flow, or during low tides.

13. Removal of Temporary Structures and Fills. Temporary structures must be removed, to the maximum extent practicable, after their use has been discontinued. Temporary fills must be removed in their entirety and the affected areas returned to pre-construction elevations. The affected areas must be revegetated, as appropriate.

14. Proper Maintenance. Any authorized structure or fill shall be properly maintained, including maintenance to ensure public safety and compliance with applicable NWP general conditions, as well as any activity-specific conditions added by the district engineer to an NWP authorization.

15. Single and Complete Project. The activity must be a single and complete project. The same NWP cannot be used more than once for the same single and complete project.

16. Wild and Scenic Rivers. (a) No NWP activity may occur in a component of the National Wild and Scenic River System, or in a river officially designated by Congress as a "study river" for possible inclusion in the system while the river is in an official study status, unless the appropriate Federal agency with direct management responsibility for such river, has determined in writing that the proposed activity will not adversely affect the Wild and Scenic River designation or study status.

(b) If a proposed NWP activity will occur in a component of the National Wild and Scenic River System, or in a river officially designated by Congress as a "study river" for possible inclusion in the system while the river is in an official study status, the permittee must submit a pre-construction notification (see general condition 32). The district engineer will coordinate the PCN with the Federal agency with direct management responsibility for that river. Permittees shall not begin the NWP activity until notified by the district engineer that the Federal agency with direct management responsibility for that river has determined in writing that the proposed NWP activity will not adversely affect the Wild and Scenic River designation or study status.

(c) Information on Wild and Scenic Rivers may be obtained from the appropriate Federal land management agency responsible for the designated Wild and Scenic River or study river (e.g., National Park Service, U.S. Forest Service, Bureau of Land Management, U.S. Fish and Wildlife Service). Information on these rivers is also available at: http://www.rivers.gov/.

17. Tribal Rights. No activity or its operation may impair reserved tribal rights, including, but not limited to, reserved water rights and treaty fishing and hunting rights.

18. Endangered Species. (a) No activity is authorized under any NWP which is likely to directly or indirectly jeopardize the continued existence of a threatened or endangered species or a species proposed

for such designation, as identified under the Federal Endangered Species Act (ESA), or which will directly or indirectly destroy or adversely modify designated critical habitat or critical habitat proposed for such designation. No activity is authorized under any NWP which "may affect" a listed species or critical habitat, unless ESA section 7 consultation addressing the consequences of the proposed activity on listed species or critical habitat has been completed. See 50 CFR 402.02 for the definition of "effects of the action" for the purposes of ESA section 7 consultation, as well as 50 CFR 402.17, which provides further explanation under ESA section 7 regarding "activities that are reasonably certain to occur" and "consequences caused by the proposed action."

(b) Federal agencies should follow their own procedures for complying with the requirements of the ESA (see 33 CFR 330.4(f)(1)). If pre-construction notification is required for the proposed activity, the Federal permittee must provide the district engineer with the appropriate documentation to demonstrate compliance with those requirements. The district engineer will verify that the appropriate documentation has been submitted. If the appropriate documentation has not been submitted, additional ESA section 7 consultation may be necessary for the activity and the respective federal agency would be responsible for fulfilling its obligation under section 7 of the ESA.

(c) Non-federal permittees must submit a pre-construction notification to the district engineer if any listed species (or species proposed for listing) or designated critical habitat (or critical habitat proposed such designation) might be affected or is in the vicinity of the activity, or if the activity is located in designated critical habitat or critical habitat proposed for such designation, and shall not begin work on the activity until notified by the district engineer that the requirements of the ESA have been satisfied and that the activity is authorized. For activities that might affect Federally-listed endangered or threatened species (or species proposed for listing) or designated critical habitat (or critical habitat proposed for such designation), the pre-construction notification must include the name(s) of the endangered or threatened species (or species proposed for listing) that might be affected by the proposed activity or that utilize the designated critical habitat (or critical habitat proposed for such designation) that might be affected by the proposed activity. The district engineer will determine whether the proposed activity "may affect" or will have "no effect" to listed species and designated critical habitat and will notify the non-Federal applicant of the Corps' determination within 45 days of receipt of a complete pre-construction notification. For activities where the non-Federal applicant has identified listed species (or species proposed for listing) or designated critical habitat (or critical habitat proposed for such designation) that might be affected or is in the vicinity of the activity, and has so notified the Corps, the applicant shall not begin work until the Corps has provided notification that the proposed activity will have "no effect" on listed species (or species proposed for listing or designated critical habitat (or critical habitat proposed for such designation), or until ESA section 7 consultation or conference has been completed. If the non-Federal applicant has not heard back from the Corps within 45 days, the applicant must still wait for notification from the Corps.

(d) As a result of formal or informal consultation or conference with the FWS or NMFS the district engineer may add species-specific permit conditions to the NWPs.

(e) Authorization of an activity by an NWP does not authorize the "take" of a threatened or endangered species as defined under the ESA. In the absence of separate authorization (e.g., an ESA Section 10 Permit, a Biological Opinion with "incidental take" provisions, etc.) from the FWS or the NMFS, the Endangered Species Act prohibits any person subject to the jurisdiction of the United States to take a listed species, where "take" means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct. The word "harm" in the definition of "take" means an act which actually kills or injures wildlife. Such an act may include significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding or sheltering.

(f) If the non-federal permittee has a valid ESA section 10(a)(1)(B) incidental take permit with an approved Habitat Conservation Plan for a project or a group of projects that includes the proposed NWP activity, the non-federal applicant should provide a copy of that ESA section 10(a)(1)(B) permit with the PCN required by paragraph (c) of this general condition. The district engineer will coordinate with the agency that issued the ESA section 10(a)(1)(B) permit to determine whether the proposed NWP activity and the associated incidental take were considered in the internal ESA section 7 consultation conducted for the ESA section 10(a)(1)(B) permit. If that coordination results in concurrence from the agency that the proposed NWP activity and the associated incidental take were considered in the internal ESA section 7 consultation for the ESA section 10(a)(1)(B) permit, the district engineer does not need to conduct a separate ESA section 7 consultation for the proposed NWP activity. The district engineer will notify the non-federal applicant within 45 days of receipt of a complete pre-construction notification whether the ESA section 10(a)(1)(B) permit covers the proposed NWP activity or whether additional ESA section 7 consultation is required.

(g) Information on the location of threatened and endangered species and their critical habitat can be obtained directly from the offices of the FWS and NMFS or their world wide web pages at http://www.fws.gov/ or http://www.fws.gov/ipac and http://www.nmfs.noaa.gov/pr/species/esa/ respectively.

19. Migratory Birds and Bald and Golden Eagles. The permittee is responsible for ensuring that an action authorized by an NWP complies with the Migratory Bird Treaty Act and the Bald and Golden Eagle Protection Act. The permittee is responsible for contacting the appropriate local office of the U.S. Fish and Wildlife Service to determine what measures, if any, are

necessary or appropriate to reduce adverse effects to migratory birds or eagles, including whether "incidental take" permits are necessary and available under the Migratory Bird Treaty Act or Bald and Golden Eagle Protection Act for a particular activity.

20. Historic Properties. (a) No activity is authorized under any NWP which may have the potential to cause effects to properties listed, or eligible for listing, in the National Register of Historic Places until the requirements of Section 106 of the National Historic Preservation Act (NHPA) have been satisfied.

(b) Federal permittees should follow their own procedures for complying with the requirements of section 106 of the National Historic Preservation Act (see 33 CFR 330.4(g)(1)). If pre-construction notification is required for the proposed NWP activity, the Federal permittee must provide the district engineer with the appropriate documentation to demonstrate compliance with those requirements. The district engineer will verify that the appropriate documentation has been submitted. If the appropriate documentation is not submitted, then additional consultation under section 106 may be necessary. The respective federal agency is responsible for fulfilling its obligation to comply with section 106.

(c) Non-federal permittees must submit a pre-construction notification to the district engineer if the NWP activity might have the potential to cause effects to any historic properties listed on, determined to be eligible for listing on, or potentially eligible for listing on the National Register of Historic Places, including previously unidentified properties. For such activities, the pre-construction notification must state which historic properties might have the potential to be affected by the proposed NWP activity or include a vicinity map indicating the location of the historic properties or the potential for the presence of historic properties. Assistance regarding information on the location of, or potential for, the presence of historic properties can be sought from the State Historic Preservation Officer, Tribal Historic Preservation Officer, or designated tribal representative, as appropriate, and the National Register of Historic Places (see 33 CFR 330.4(g)). When reviewing pre-construction notifications, district engineers will comply with the current procedures for addressing the requirements of section 106 of the National Historic Preservation Act. The district engineer shall make a reasonable and good faith effort to carry out appropriate identification efforts commensurate with potential impacts, which may include background research, consultation, oral history interviews, sample field investigation, and/or field survey. Based on the information submitted in the PCN and these identification efforts, the district engineer shall determine whether the proposed NWP activity has the potential to cause effects on the historic properties. Section 106 consultation is not required when the district engineer determines that the activity does not have the potential to cause effects on historic properties (see 36 CFR 800.3(a)). Section 106 consultation is required when the district engineer determines that the activity has the potential to cause effects on historic properties. The district engineer will conduct consultation with consulting parties identified under 36 CFR 800.2(c) when he or she makes any of the following effect determinations for the purposes of section 106 of the NHPA: no historic properties affected, no adverse effect, or adverse effect.

(d) Where the non-Federal applicant has identified historic properties on which the proposed NWP activity might have the potential to cause effects and has so notified the Corps, the non-Federal applicant shall not begin the activity until notified by the district engineer either that the activity has no potential to cause effects to historic properties or that NHPA section 106 consultation has been completed. For non-federal permittees, the district engineer will notify the prospective permittee within 45 days of receipt of a complete pre-construction notification whether NHPA section 106 consultation is required. If NHPA section 106 consultation is required, the district engineer will notify the non-Federal applicant that he or she cannot begin the activity until section 106 consultation is completed. If the non-Federal applicant has not heard back from the Corps within 45 days, the applicant must still wait for notification from the Corps.

(e) Prospective permittees should be aware that section 110k of the NHPA (54 U.S.C. 306113) prevents the Corps from granting a permit or other assistance to an applicant who, with intent to avoid the requirements of section 106 of the NHPA, has intentionally significantly adversely affected a historic property to which the permit would relate, or having legal power to prevent it, allowed such significant adverse effect to occur, unless the Corps, after consultation with the Advisory Council on Historic Preservation (ACHP), determines that circumstances justify granting such assistance despite the adverse effect created or permitted by the applicant. If circumstances justify granting the assistance, the Corps is required to notify the ACHP and provide documentation specifying the circumstances, the degree of damage to the integrity of any historic properties affected, and proposed mitigation. This documentation must include any views obtained from the applicant, SHPO/THPO, appropriate Indian tribes if the undertaking occurs on or affects historic properties on tribal lands or affects properties of interest to those tribes, and other parties known to have a legitimate interest in the impacts to the permitted activity on historic properties.

21. Discovery of Previously Unknown Remains and Artifacts. Permittees that discover any previously unknown historic, cultural or archeological remains and artifacts while accomplishing the activity authorized by an NWP, they must immediately notify the district engineer of what they have found, and to the maximum extent practicable, avoid construction activities that may affect the remains and artifacts until the required coordination has been completed. The district engineer will initiate the Federal, Tribal, and state coordination required to determine if the items or remains warrant a recovery effort or if the site is eligible for listing in the National Register of Historic Places.

22. Designated Critical Resource Waters. Critical resource waters include, NOAA-managed marine sanctuaries and marine

monuments, and National Estuarine Research Reserves. The district engineer may designate, after notice and opportunity for public comment, additional waters officially designated by a state as having particular environmental or ecological significance, such as outstanding national resource waters or state natural heritage sites. The district engineer may also designate additional critical resource waters after notice and opportunity for public comment.

(a) Discharges of dredged or fill material into waters of the United States are not authorized by NWPs 7, 12, 14, 16, 17, 21, 29, 31, 35, 39, 40, 42, 43, 44, 49, 50, 51, 52, 57 and 58 for any activity within, or directly affecting, critical resource waters, including wetlands adjacent to such waters.

(b) For NWPs 3, 8, 10, 13, 15, 18, 19, 22, 23, 25, 27, 28, 30, 33, 34, 36, 37, 38, and 54, notification is required in accordance with general condition 32, for any activity proposed by permittees in the designated critical resource waters including wetlands adjacent to those waters. The district engineer may authorize activities under these NWPs only after she or he determines that the impacts to the critical resource waters will be no more than minimal.

23. Mitigation. The district engineer will consider the following factors when determining appropriate and practicable mitigation necessary to ensure that the individual and cumulative adverse environmental effects are no more than minimal:

(a) The activity must be designed and constructed to avoid and minimize adverse effects, both temporary and permanent, to waters of the United States to the maximum extent practicable at the project site (i.e., on site).

(b) Mitigation in all its forms (avoiding, minimizing, rectifying, reducing, or compensating for resource losses) will be required to the extent necessary to ensure that the individual and cumulative adverse environmental effects are no more than minimal.

(c) Compensatory mitigation at a minimum one-for-one ratio will be required for all wetland losses that exceed 1/10-acre and require pre-construction notification, unless the district engineer determines in writing that either some other form of mitigation would be more environmentally appropriate or the adverse environmental effects of the proposed activity are no more than minimal, and provides an activity-specific waiver of this requirement. For wetland losses of 1/10-acre or less that require pre-construction notification, the district engineer may determine on a case-by-case basis that compensatory mitigation is required to ensure that the activity results in only minimal adverse environmental effects.

(d) Compensatory mitigation at a minimum one-for-one ratio will be required for all losses of stream bed that exceed 3/100-acre and require pre-construction notification, unless the district engineer determines in writing that either some other form of mitigation would be more environmentally appropriate or the adverse environmental effects of the proposed activity are no more than minimal, and provides an activity-specific waiver of this requirement. This compensatory mitigation requirement may be satisfied through the restoration or enhancement of riparian areas next to streams in accordance with paragraph (e) of this general condition. For losses of stream bed of 3/100-acre or less that require pre-construction notification, the district engineer may determine on a case-by-case basis that compensatory mitigation is required to ensure that the activity results in only minimal adverse environmental effects. Compensatory mitigation for losses of streams should be provided, if practicable, through stream rehabilitation, enhancement, or preservation, since streams are difficult-to-replace resources (see 33 CFR 332.3(e)(3)).

(e) Compensatory mitigation plans for NWP activities in or near streams or other open waters will normally include a requirement for the restoration or enhancement, maintenance, and legal protection (e.g., conservation easements) of riparian areas next to open waters. In some cases, the restoration or maintenance/protection of riparian areas may be the only compensatory mitigation required. If restoring riparian areas involves planting vegetation, only native species should be planted. The width of the required riparian area will address documented water quality or aquatic habitat loss concerns. Normally, the riparian area will be 25 to 50 feet wide on each side of the stream, but the district engineer may require slightly wider riparian areas to address documented water quality or habitat loss concerns. If it is not possible to restore or maintain/protect a riparian area on both sides of a stream, or if the waterbody is a lake or coastal waters, then restoring or maintaining/protecting a riparian area along a single bank or shoreline may be sufficient. Where both wetlands and open waters exist on the project site, the district engineer will determine the appropriate compensatory mitigation (e.g., riparian areas and/or wetlands compensation) based on what is best for the aquatic environment on a watershed basis. In cases where riparian areas are determined to be the most appropriate form of minimization or compensatory mitigation, the district engineer may waive or reduce the requirement to provide wetland compensatory mitigation for wetland losses.

(f) Compensatory mitigation projects provided to offset losses of aquatic resources must comply with the applicable provisions of 33 CFR part 332.

(1) The prospective permittee is responsible for proposing an appropriate compensatory mitigation option if compensatory mitigation is necessary to ensure that the activity results in no more than minimal adverse environmental effects. For the NWPs, the preferred mechanism for providing compensatory mitigation is mitigation bank credits or in-lieu fee program credits (see 33 CFR 332.3(b)(2) and (3)). However, if an appropriate number and type of mitigation bank or in-lieu credits are not available at the time the PCN is submitted to the district engineer, the district engineer may approve the use of permittee-responsible mitigation.

(2) The amount of compensatory mitigation required by the district engineer must be

sufficient to ensure that the authorized activity results in no more than minimal individual and cumulative adverse environmental effects (see 33 CFR 330.1(e)(3)). (See also 33 CFR 332.3(f).)

(3) Since the likelihood of success is greater and the impacts to potentially valuable uplands are reduced, aquatic resource restoration should be the first compensatory mitigation option considered for permittee-responsible mitigation.

(4) If permittee-responsible mitigation is the proposed option, the prospective permittee is responsible for submitting a mitigation plan. A conceptual or detailed mitigation plan may be used by the district engineer to make the decision on the NWP verification request, but a final mitigation plan that addresses the applicable requirements of 33 CFR 332.4(c)(2) through (14) must be approved by the district engineer before the permittee begins work in waters of the United States, unless the district engineer determines that prior approval of the final mitigation plan is not practicable or not necessary to ensure timely completion of the required compensatory mitigation (see 33 CFR 332.3(k)(3)). If permittee-responsible mitigation is the proposed option, and the proposed compensatory mitigation site is located on land in which another federal agency holds an easement, the district engineer will coordinate with that federal agency to determine if proposed compensatory mitigation project is compatible with the terms of the easement.

(5) If mitigation bank or in-lieu fee program credits are the proposed option, the mitigation plan needs to address only the baseline conditions at the impact site and the number of credits to be provided (see 33 CFR 332.4(c)(1)(ii)).

(6) Compensatory mitigation requirements (e.g., resource type and amount to be provided as compensatory mitigation, site protection, ecological performance standards, monitoring requirements) may be addressed through conditions added to the NWP authorization, instead of components of a compensatory mitigation plan (see 33 CFR 332.4(c)(1)(ii)).

(g) Compensatory mitigation will not be used to increase the acreage losses allowed by the acreage limits of the NWPs. For example, if an NWP has an acreage limit of 1/2-acre, it cannot be used to authorize any NWP activity resulting in the loss of greater than 1/2-acre of waters of the United States, even if compensatory mitigation is provided that replaces or restores some of the lost waters. However, compensatory mitigation can and should be used, as necessary, to ensure that an NWP activity already meeting the established acreage limits also satisfies the no more than minimal impact requirement for the NWPs.

(h) Permittees may propose the use of mitigation banks, in-lieu fee programs, or permittee-responsible mitigation. When developing a compensatory mitigation proposal, the permittee must consider appropriate and practicable options consistent with the framework at 33 CFR 332.3(b). For activities resulting in the loss of marine or estuarine resources, permittee-responsible mitigation may be environmentally preferable if there are no mitigation banks or in-lieu fee programs in the area that have marine or estuarine credits available for sale or transfer to the permittee. For permittee-responsible mitigation, the special conditions of the NWP verification must clearly indicate the party or parties responsible for the implementation and performance of the compensatory mitigation project, and, if required, its long-term management.

(i) Where certain functions and services of waters of the United States are permanently adversely affected by a regulated activity, such as discharges of dredged or fill material into waters of the United States that will convert a forested or scrub-shrub wetland to a herbaceous wetland in a permanently maintained utility line right-of-way, mitigation may be required to reduce the adverse environmental effects of the activity to the no more than minimal level.

24. Safety of Impoundment Structures. To ensure that all impoundment structures are safely designed, the district engineer may require non-Federal applicants to demonstrate that the structures comply with established state or federal, dam safety criteria or have been designed by qualified persons. The district engineer may also require documentation that the design has been independently reviewed by similarly qualified persons, and appropriate modifications made to ensure safety.

25. Water Quality. (a) Where the certifying authority (state, authorized tribe, or EPA, as appropriate) has not previously certified compliance of an NWP with CWA section 401, a CWA section 401 water quality certification for the proposed discharge must be obtained or waived (see 33 CFR 330.4(c)). If the permittee cannot comply with all of the conditions of a water quality certification previously issued by certifying authority for the issuance of the NWP, then the permittee must obtain a water quality certification or waiver for the proposed discharge in order for the activity to be authorized by an NWP.

(b) If the NWP activity requires pre-construction notification and the certifying authority has not previously certified compliance of an NWP with CWA section 401, the proposed discharge is not authorized by an NWP until water quality certification is obtained or waived. If the certifying authority issues a water quality certification for the proposed discharge, the permittee must submit a copy of the certification to the district engineer. The discharge is not authorized by an NWP until the district engineer has notified the permittee that the water quality certification requirement has been satisfied by the issuance of a water quality certification or a waiver.

(c) The district engineer or certifying authority may require additional water quality management measures to ensure that the authorized activity does not result in more than minimal degradation of water quality.

26. Coastal Zone Management. In coastal states where an NWP has not previously received a state coastal zone management consistency concurrence, an individual state coastal zone management consistency concurrence must be obtained, or a presumption of concurrence must occur (see 33 CFR 330.4(d)). If the permittee cannot comply with all of the conditions of

a coastal zone management consistency concurrence previously issued by the state, then the permittee must obtain an individual coastal zone management consistency concurrence or presumption of concurrence in order for the activity to be authorized by an NWP. The district engineer or a state may require additional measures to ensure that the authorized activity is consistent with state coastal zone management requirements.

27. Regional and Case-By-Case Conditions. The activity must comply with any regional conditions that may have been added by the Division Engineer (see 33 CFR 330.4(e)) and with any case specific conditions added by the Corps or by the state, Indian Tribe, or U.S. EPA in its CWA section 401 Water Quality Certification, or by the state in its Coastal Zone Management Act consistency determination.

28. Use of Multiple Nationwide Permits. The use of more than one NWP for a single and complete project is authorized, subject to the following restrictions:

(a) If only one of the NWPs used to authorize the single and complete project has a specified acreage limit, the acreage loss of waters of the United States cannot exceed the acreage limit of the NWP with the highest specified acreage limit. For example, if a road crossing over tidal waters is constructed under NWP 14, with associated bank stabilization authorized by NWP 13, the maximum acreage loss of waters of the United States for the total project cannot exceed 1/3-acre.

(b) If one or more of the NWPs used to authorize the single and complete project has specified acreage limits, the acreage loss of waters of the United States authorized by those NWPs cannot exceed their respective specified acreage limits. For example, if a commercial development is constructed under NWP 39, and the single and complete project includes the filling of an upland ditch authorized by NWP 46, the maximum acreage loss of waters of the United States for the commercial development under NWP 39 cannot exceed 1/2-acre, and the total acreage loss of waters of United States due to the NWP 39 and 46 activities cannot exceed 1 acre.

29. Transfer of Nationwide Permit Verifications. If the permittee sells the property associated with a nationwide permit verification, the permittee may transfer the nationwide permit verification to the new owner by submitting a letter to the appropriate Corps district office to validate the transfer. A copy of the nationwide permit verification must be attached to the letter, and the letter must contain the following statement and signature:

"When the structures or work authorized by this nationwide permit are still in existence at the time the property is transferred, the terms and conditions of this nationwide permit, including any special conditions, will continue to be binding on the new owner(s) of the property. To validate the transfer of this nationwide permit and the associated liabilities associated with compliance with its terms and conditions, have the transferee sign and date below."

_____
(Transferee)

_____
(Date)

30. Compliance Certification. Each permittee who receives an NWP verification letter from the Corps must provide a signed certification documenting completion of the authorized activity and implementation of any required compensatory mitigation. The success of any required permittee-responsible mitigation, including the achievement of ecological performance standards, will be addressed separately by the district engineer. The Corps will provide the permittee the certification document with the NWP verification letter. The certification document will include:

(a) A statement that the authorized activity was done in accordance with the NWP authorization, including any general, regional, or activity-specific conditions;

(b) A statement that the implementation of any required compensatory mitigation was completed in accordance with the permit conditions. If credits from a mitigation bank or in-lieu fee program are used to satisfy the compensatory mitigation requirements, the certification must include the documentation required by 33 CFR 332.3(l)(3) to confirm that the permittee secured the appropriate number and resource type of credits; and

(c) The signature of the permittee certifying the completion of the activity and mitigation.

The completed certification document must be submitted to the district engineer within 30 days of completion of the authorized activity or the implementation of any required compensatory mitigation, whichever occurs later.

31. Activities Affecting Structures or Works Built by the United States. If an NWP activity also requires review by, or permission from, the Corps pursuant to 33 U.S.C. 408 because it will alter or temporarily or permanently occupy or use a U.S. Army Corps of Engineers (USACE) federally authorized Civil Works project (a "USACE project"), the prospective permittee must submit a pre-construction notification. See paragraph (b)(10) of general condition 32. An activity that requires section 408 permission and/or review is not authorized by an NWP until the appropriate Corps office issues the section 408 permission or completes its review to alter, occupy, or use the USACE project, and the district engineer issues a written NWP verification.

32. Pre-Construction Notification. (a) *Timing*. Where required by the terms of the NWP, the prospective permittee must notify the district engineer by submitting a pre-construction notification (PCN) as early as possible. The district engineer must determine if the PCN is complete within 30 calendar days of the date of receipt and, if the PCN is determined to be incomplete, notify the prospective permittee within that 30 day period to request the additional information necessary to make the PCN complete. The request must specify the

information needed to make the PCN complete. As a general rule, district engineers will request additional information necessary to make the PCN complete only once. However, if the prospective permittee does not provide all of the requested information, then the district engineer will notify the prospective permittee that the PCN is still incomplete and the PCN review process will not commence until all of the requested information has been received by the district engineer. The prospective permittee shall not begin the activity until either:

(1) He or she is notified in writing by the district engineer that the activity may proceed under the NWP with any special conditions imposed by the district or division engineer; or

(2) 45 calendar days have passed from the district engineer's receipt of the complete PCN and the prospective permittee has not received written notice from the district or division engineer. However, if the permittee was required to notify the Corps pursuant to general condition 18 that listed species or critical habitat might be affected or are in the vicinity of the activity, or to notify the Corps pursuant to general condition 20 that the activity might have the potential to cause effects to historic properties, the permittee cannot begin the activity until receiving written notification from the Corps that there is "no effect" on listed species or "no potential to cause effects" on historic properties, or that any consultation required under Section 7 of the Endangered Species Act (see 33 CFR 330.4(f)) and/or section 106 of the National Historic Preservation Act (see 33 CFR 330.4(g)) has been completed. If the proposed activity requires a written waiver to exceed specified limits of an NWP, the permittee may not begin the activity until the district engineer issues the waiver. If the district or division engineer notifies the permittee in writing that an individual permit is required within 45 calendar days of receipt of a complete PCN, the permittee cannot begin the activity until an individual permit has been obtained. Subsequently, the permittee's right to proceed under the NWP may be modified, suspended, or revoked only in accordance with the procedure set forth in 33 CFR 330.5(d)(2).

(b) *Contents of Pre-Construction Notification*: The PCN must be in writing and include the following information:

(1) Name, address and telephone numbers of the prospective permittee;

(2) Location of the proposed activity;

(3) Identify the specific NWP or NWP(s) the prospective permittee wants to use to authorize the proposed activity;

(4) (i) A description of the proposed activity; the activity's purpose; direct and indirect adverse environmental effects the activity would cause, including the anticipated amount of loss of wetlands, other special aquatic sites, and other waters expected to result from the NWP activity, in acres, linear feet, or other appropriate unit of measure; a description of any proposed mitigation measures intended to reduce the adverse environmental effects caused by the proposed activity; and any other NWP(s), regional general permit(s), or individual permit(s) used or intended to be used to authorize any part of the proposed project or any related activity, including other separate and distant crossings for linear projects that require Department of the Army authorization but do not require pre-construction notification. The description of the proposed activity and any proposed mitigation measures should be sufficiently detailed to allow the district engineer to determine that the adverse environmental effects of the activity will be no more than minimal and to determine the need for compensatory mitigation or other mitigation measures.

(ii) For linear projects where one or more single and complete crossings require pre-construction notification, the PCN must include the quantity of anticipated losses of wetlands, other special aquatic sites, and other waters for each single and complete crossing of those wetlands, other special aquatic sites, and other waters (including those single and complete crossings authorized by an NWP but do not require PCNs). This information will be used by the district engineer to evaluate the cumulative adverse environmental effects of the proposed linear project, and does not change those non-PCN NWP activities into NWP PCNs.

(iii) Sketches should be provided when necessary to show that the activity complies with the terms of the NWP. (Sketches usually clarify the activity and when provided results in a quicker decision. Sketches should contain sufficient detail to provide an illustrative description of the proposed activity (e.g., a conceptual plan), but do not need to be detailed engineering plans);

(5) The PCN must include a delineation of wetlands, other special aquatic sites, and other waters, such as lakes and ponds, and perennial and intermittent streams, on the project site. Wetland delineations must be prepared in accordance with the current method required by the Corps. The permittee may ask the Corps to delineate the special aquatic sites and other waters on the project site, but there may be a delay if the Corps does the delineation, especially if the project site is large or contains many wetlands, other special aquatic sites, and other waters. Furthermore, the 45-day period will not start until the delineation has been submitted to or completed by the Corps, as appropriate;

(6) If the proposed activity will result in the loss of greater than 1/10-acre of wetlands or 3/100-acre of stream bed and a PCN is required, the prospective permittee must submit a statement describing how the mitigation requirement will be satisfied, or explaining why the adverse environmental effects are no more than minimal and why compensatory mitigation should not be required. As an alternative, the prospective permittee may submit a conceptual or detailed mitigation plan.

(7) For non-federal permittees, if any listed species (or species proposed for listing) or designated critical habitat (or critical habitat proposed for such designation) might be affected or is in the vicinity of the activity, or if the activity is located in designated critical habitat (or critical habitat proposed for such designation), the PCN must include the name(s) of those endangered or threatened species (or species proposed for listing) that might be affected by the proposed activity or utilize

the designated critical habitat (or critical habitat proposed for such designation) that might be affected by the proposed activity. For NWP activities that require pre-construction notification, Federal permittees must provide documentation demonstrating compliance with the Endangered Species Act;

(8) For non-federal permittees, if the NWP activity might have the potential to cause effects to a historic property listed on, determined to be eligible for listing on, or potentially eligible for listing on, the National Register of Historic Places, the PCN must state which historic property might have the potential to be affected by the proposed activity or include a vicinity map indicating the location of the historic property. For NWP activities that require pre-construction notification, Federal permittees must provide documentation demonstrating compliance with section 106 of the National Historic Preservation Act;

(9) For an activity that will occur in a component of the National Wild and Scenic River System, or in a river officially designated by Congress as a "study river" for possible inclusion in the system while the river is in an official study status, the PCN must identify the Wild and Scenic River or the "study river" (see general condition 16); and

(10) For an NWP activity that requires permission from, or review by, the Corps pursuant to 33 U.S.C. 408 because it will alter or temporarily or permanently occupy or use a U.S. Army Corps of Engineers federally authorized civil works project, the pre-construction notification must include a statement confirming that the project proponent has submitted a written request for section 408 permission from, or review by, the Corps office having jurisdiction over that USACE project.

(c) *Form of Pre-Construction Notification*: The nationwide permit pre-construction notification form (Form ENG 6082) should be used for NWP PCNs. A letter containing the required information may also be used. Applicants may provide electronic files of PCNs and supporting materials if the district engineer has established tools and procedures for electronic submittals.

(d) *Agency Coordination*: (1) The district engineer will consider any comments from Federal and state agencies concerning the proposed activity's compliance with the terms and conditions of the NWPs and the need for mitigation to reduce the activity's adverse environmental effects so that they are no more than minimal.

(2) Agency coordination is required for: (i) all NWP activities that require pre-construction notification and result in the loss of greater than 1/2-acre of waters of the United States; (ii) NWP 13 activities in excess of 500 linear feet, fills greater than one cubic yard per running foot, or involve discharges of dredged or fill material into special aquatic sites; and (iii) NWP 54 activities in excess of 500 linear feet, or that extend into the waterbody more than 30 feet from the mean low water line in tidal waters or the ordinary high water mark in the Great Lakes.

(3) When agency coordination is required, the district engineer will immediately provide (e.g., via e-mail, facsimile transmission, overnight mail, or other expeditious manner) a copy of the complete PCN to the appropriate Federal or state offices (FWS, state natural resource or water quality agency, EPA, and, if appropriate, the NMFS). With the exception of NWP 37, these agencies will have 10 calendar days from the date the material is transmitted to notify the district engineer via telephone, facsimile transmission, or e-mail that they intend to provide substantive, site-specific comments. The comments must explain why the agency believes the adverse environmental effects will be more than minimal. If so contacted by an agency, the district engineer will wait an additional 15 calendar days before making a decision on the pre-construction notification. The district engineer will fully consider agency comments received within the specified time frame concerning the proposed activity's compliance with the terms and conditions of the NWPs, including the need for mitigation to ensure that the net adverse environmental effects of the proposed activity are no more than minimal. The district engineer will provide no response to the resource agency, except as provided below. The district engineer will indicate in the administrative record associated with each pre-construction notification that the resource agencies' concerns were considered. For NWP 37, the emergency watershed protection and rehabilitation activity may proceed immediately in cases where there is an unacceptable hazard to life or a significant loss of property or economic hardship will occur. The district engineer will consider any comments received to decide whether the NWP 37 authorization should be modified, suspended, or revoked in accordance with the procedures at 33 CFR 330.5.

(4) In cases of where the prospective permittee is not a Federal agency, the district engineer will provide a response to NMFS within 30 calendar days of receipt of any Essential Fish Habitat conservation recommendations, as required by section 305(b)(4)(B) of the Magnuson-Stevens Fishery Conservation and Management Act.

(5) Applicants are encouraged to provide the Corps with either electronic files or multiple copies of pre-construction notifications to expedite agency coordination.

2021 District Engineer's Decision

1. In reviewing the PCN for the proposed activity, the district engineer will determine whether the activity authorized by the NWP will result in more than minimal individual or cumulative adverse environmental effects or may be contrary to the public interest. If a project proponent requests authorization by a specific NWP, the district engineer should issue the NWP verification for that activity if it meets the terms and conditions of that NWP, unless he or she determines, after considering mitigation, that the proposed activity will result in more than minimal individual and cumulative adverse effects on the aquatic environment and other aspects of the public interest and exercises discretionary authority to require an individual permit for the proposed activity. For a linear project, this determination will include an evaluation of the single and complete crossings of waters of the United States that require PCNs to determine whether they

individually satisfy the terms and conditions of the NWP(s), as well as the cumulative effects caused by all of the crossings of waters of the United States authorized by an NWP. If an applicant requests a waiver of an applicable limit, as provided for in NWPs 13, 36, or 54, the district engineer will only grant the waiver upon a written determination that the NWP activity will result in only minimal individual and cumulative adverse environmental effects.

2. When making minimal adverse environmental effects determinations the district engineer will consider the direct and indirect effects caused by the NWP activity. He or she will also consider the cumulative adverse environmental effects caused by activities authorized by an NWP and whether those cumulative adverse environmental effects are no more than minimal. The district engineer will also consider site specific factors, such as the environmental setting in the vicinity of the NWP activity, the type of resource that will be affected by the NWP activity, the functions provided by the aquatic resources that will be affected by the NWP activity, the degree or magnitude to which the aquatic resources perform those functions, the extent that aquatic resource functions will be lost as a result of the NWP activity (e.g., partial or complete loss), the duration of the adverse effects (temporary or permanent), the importance of the aquatic resource functions to the region (e.g., watershed or ecoregion), and mitigation required by the district engineer. If an appropriate functional or condition assessment method is available and practicable to use, that assessment method may be used by the district engineer to assist in the minimal adverse environmental effects determination. The district engineer may add case-specific special conditions to the NWP authorization to address site-specific environmental concerns.

3. If the proposed activity requires a PCN and will result in a loss of greater than 1/10-acre of wetlands or 3/100-acre of stream bed, the prospective permittee should submit a mitigation proposal with the PCN. Applicants may also propose compensatory mitigation for NWP activities with smaller impacts, or for impacts to other types of waters. The district engineer will consider any proposed compensatory mitigation or other mitigation measures the applicant has included in the proposal in determining whether the net adverse environmental effects of the proposed activity are no more than minimal. The compensatory mitigation proposal may be either conceptual or detailed. If the district engineer determines that the activity complies with the terms and conditions of the NWP and that the adverse environmental effects are no more than minimal, after considering mitigation, the district engineer will notify the permittee and include any activity-specific conditions in the NWP verification the district engineer deems necessary. Conditions for compensatory mitigation requirements must comply with the appropriate provisions at 33 CFR 332.3(k). The district engineer must approve the final mitigation plan before the permittee commences work in waters of the United States, unless the district engineer determines that prior approval of the final mitigation plan is not practicable or not necessary to ensure timely completion of the required compensatory mitigation. If the prospective permittee elects to submit a compensatory mitigation plan with the PCN, the district engineer will expeditiously review the proposed compensatory mitigation plan. The district engineer must review the proposed compensatory mitigation plan within 45 calendar days of receiving a complete PCN and determine whether the proposed mitigation would ensure that the NWP activity results in no more than minimal adverse environmental effects. If the net adverse environmental effects of the NWP activity (after consideration of the mitigation proposal) are determined by the district engineer to be no more than minimal, the district engineer will provide a timely written response to the applicant. The response will state that the NWP activity can proceed under the terms and conditions of the NWP, including any activity-specific conditions added to the NWP authorization by the district engineer.

4. If the district engineer determines that the adverse environmental effects of the proposed activity are more than minimal, then the district engineer will notify the applicant either: (a) that the activity does not qualify for authorization under the NWP and instruct the applicant on the procedures to seek authorization under an individual permit; (b) that the activity is authorized under the NWP subject to the applicant's submission of a mitigation plan that would reduce the adverse environmental effects so that they are no more than minimal; or (c) that the activity is authorized under the NWP with specific modifications or conditions. Where the district engineer determines that mitigation is required to ensure no more than minimal adverse environmental effects, the activity will be authorized within the 45-day PCN period (unless additional time is required to comply with general conditions 18, 20, and/or 31), with activity-specific conditions that state the mitigation requirements. The authorization will include the necessary conceptual or detailed mitigation plan or a requirement that the applicant submit a mitigation plan that would reduce the adverse environmental effects so that they are no more than minimal. When compensatory mitigation is required, no work in waters of the United States may occur until the district engineer has approved a specific mitigation plan or has determined that prior approval of a final mitigation plan is not practicable or not necessary to ensure timely completion of the required compensatory mitigation.

2021 Further Information

1. District engineers have authority to determine if an activity complies with the terms and conditions of an NWP.

2. NWPs do not obviate the need to obtain other federal, state, or local permits, approvals, or authorizations required by law.

3. NWPs do not grant any property rights or exclusive privileges.

4. NWPs do not authorize any injury to the property or rights of others.

5. NWPs do not authorize interference with any existing or proposed Federal project (see general condition 31).

2021 Nationwide Permit Definitions

Best management practices (BMPs): Policies, practices, procedures, or structures implemented to mitigate the adverse environmental effects on surface water quality resulting from development. BMPs are categorized as structural or non-structural.

Compensatory mitigation: The restoration (re-establishment or rehabilitation), establishment (creation), enhancement, and/or in certain circumstances preservation of aquatic resources for the purposes of offsetting unavoidable adverse impacts which remain after all appropriate and practicable avoidance and minimization has been achieved.

Currently serviceable: Useable as is or with some maintenance, but not so degraded as to essentially require reconstruction.

Direct effects: Effects that are caused by the activity and occur at the same time and place.

Discharge: The term "discharge" means any discharge of dredged or fill material into waters of the United States.

Ecological reference: A model used to plan and design an aquatic habitat and riparian area restoration, enhancement, or establishment activity under NWP 27. An ecological reference may be based on the structure, functions, and dynamics of an aquatic habitat type or a riparian area type that currently exists in the region where the proposed NWP 27 activity is located. Alternatively, an ecological reference may be based on a conceptual model for the aquatic habitat type or riparian area type to be restored, enhanced, or established as a result of the proposed NWP 27 activity. An ecological reference takes into account the range of variation of the aquatic habitat type or riparian area type in the region.

Enhancement: The manipulation of the physical, chemical, or biological characteristics of an aquatic resource to heighten, intensify, or improve a specific aquatic resource function(s). Enhancement results in the gain of selected aquatic resource function(s), but may also lead to a decline in other aquatic resource function(s). Enhancement does not result in a gain in aquatic resource area.

Establishment (creation): The manipulation of the physical, chemical, or biological characteristics present to develop an aquatic resource that did not previously exist at an upland site. Establishment results in a gain in aquatic resource area.

High Tide Line: The line of intersection of the land with the water's surface at the maximum height reached by a rising tide. The high tide line may be determined, in the absence of actual data, by a line of oil or scum along shore objects, a more or less continuous deposit of fine shell or debris on the foreshore or berm, other physical markings or characteristics, vegetation lines, tidal gages, or other suitable means that delineate the general height reached by a rising tide. The line encompasses spring high tides and other high tides that occur with periodic frequency but does not include storm surges in which there is a departure from the normal or predicted reach of the tide due to the piling up of water against a coast by strong winds such as those accompanying a hurricane or other intense storm.

Historic Property: Any prehistoric or historic district, site (including archaeological site), building, structure, or other object included in, or eligible for inclusion in, the National Register of Historic Places maintained by the Secretary of the Interior. This term includes artifacts, records, and remains that are related to and located within such properties. The term includes properties of traditional religious and cultural importance to an Indian tribe or Native Hawaiian organization and that meet the National Register criteria (36 CFR part 60).

Independent utility: A test to determine what constitutes a single and complete non-linear project in the Corps Regulatory Program. A project is considered to have independent utility if it would be constructed absent the construction of other projects in the project area. Portions of a multi-phase project that depend upon other phases of the project do not have independent utility. Phases of a project that would be constructed even if the other phases were not built can be considered as separate single and complete projects with independent utility.

Indirect effects: Effects that are caused by the activity and are later in time or farther removed in distance, but are still reasonably foreseeable.

Loss of waters of the United States: Waters of the United States that are permanently adversely affected by filling, flooding, excavation, or drainage because of the regulated activity. The loss of stream bed includes the acres of stream bed that are permanently adversely affected by filling or excavation because of the regulated activity. Permanent adverse effects include permanent discharges of dredged or fill material that change an aquatic area to dry land, increase the bottom elevation of a waterbody, or change the use of a waterbody. The acreage of loss of waters of the United States is a threshold measurement of the impact to jurisdictional waters or wetlands for determining whether a project may qualify for an NWP; it is not a net threshold that is calculated after considering compensatory mitigation that may be used to offset losses of aquatic functions and services. Waters of the United States temporarily filled, flooded, excavated, or drained, but restored to pre-construction contours and elevations after construction, are not included in the measurement of loss of waters of the United States. Impacts resulting from activities that do not require Department of the Army authorization, such as activities eligible for exemptions under section 404(f) of the Clean Water Act, are not considered when calculating the loss of waters of the United States.

Navigable waters: Waters subject to section 10 of the Rivers and Harbors Act of 1899. These waters are defined at 33 CFR part 329.

Non-tidal wetland: A non-tidal wetland is a wetland that is not subject to the ebb and flow of tidal waters. Non-tidal wetlands contiguous to tidal waters are located landward of the high tide line (i.e., spring high tide line).

Open water: For purposes of the NWPs, an open water is any area that in a year with normal patterns of precipitation has water flowing or standing above ground to the extent that an ordinary high water mark can be determined. Aquatic vegetation within the area of flowing or standing water is either non-emergent, sparse, or absent. Vegetated shallows are considered to be open waters. Examples of "open waters" include rivers, streams, lakes, and ponds.

Ordinary High Water Mark: The term ordinary high water mark means that line on the shore established by the fluctuations of water and indicated by physical characteristics such as a clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas.

Perennial stream: A perennial stream has surface water flowing continuously year-round during a typical year.

Practicable: Available and capable of being done after taking into consideration cost, existing technology, and logistics in light of overall project purposes.

Pre-construction notification: A request submitted by the project proponent to the Corps for confirmation that a particular activity is authorized by nationwide permit. The request may be a permit application, letter, or similar document that includes information about the proposed work and its anticipated environmental effects. Pre-construction notification may be required by the terms and conditions of a nationwide permit, or by regional conditions. A pre-construction notification may be voluntarily submitted in cases where pre-construction notification is not required and the project proponent wants confirmation that the activity is authorized by nationwide permit.

Preservation: The removal of a threat to, or preventing the decline of, aquatic resources by an action in or near those aquatic resources. This term includes activities commonly associated with the protection and maintenance of aquatic resources through the implementation of appropriate legal and physical mechanisms. Preservation does not result in a gain of aquatic resource area or functions.

Re-establishment: The manipulation of the physical, chemical, or biological characteristics of a site with the goal of returning natural/historic functions to a former aquatic resource. Re-establishment results in rebuilding a former aquatic resource and results in a gain in aquatic resource area and functions.

Rehabilitation: The manipulation of the physical, chemical, or biological characteristics of a site with the goal of repairing natural/historic functions to a degraded aquatic resource. Rehabilitation results in a gain in aquatic resource function, but does not result in a gain in aquatic resource area.

Restoration: The manipulation of the physical, chemical, or biological characteristics of a site with the goal of returning natural/historic functions to a former or degraded aquatic resource. For the purpose of tracking net gains in aquatic resource area, restoration is divided into two categories: re-establishment and rehabilitation.

Riffle and pool complex: Riffle and pool complexes are special aquatic sites under the 404(b)(1) Guidelines. Riffle and pool complexes sometimes characterize steep gradient sections of streams. Such stream sections are recognizable by their hydraulic characteristics. The rapid movement of water over a course substrate in riffles results in a rough flow, a turbulent surface, and high dissolved oxygen levels in the water. Pools are deeper areas associated with riffles. A slower stream velocity, a streaming flow, a smooth surface, and a finer substrate characterize pools.

Riparian areas: Riparian areas are lands next to streams, lakes, and estuarine-marine shorelines. Riparian areas are transitional between terrestrial and aquatic ecosystems, through which surface and subsurface hydrology connects riverine, lacustrine, estuarine, and marine waters with their adjacent wetlands, non-wetland waters, or uplands. Riparian areas provide a variety of ecological functions and services and help improve or maintain local water quality. (See general condition 23.)

Shellfish seeding: The placement of shellfish seed and/or suitable substrate to increase shellfish production. Shellfish seed consists of immature individual shellfish or individual shellfish attached to shells or shell fragments (i.e., spat on shell). Suitable substrate may consist of shellfish shells, shell fragments, or other appropriate materials placed into waters for shellfish habitat.

Single and complete linear project: A linear project is a project constructed for the purpose of getting people, goods, or services from a point of origin to a terminal point, which often involves multiple crossings of one or more waterbodies at separate and distant locations. The term "single and complete project" is defined as that portion of the total linear project proposed or accomplished by one owner/developer or partnership or other association of owners/developers that includes all crossings of a single water of the United States (i.e., a single waterbody) at a specific location. For linear projects crossing a single or multiple waterbodies several times at separate and distant locations, each crossing is considered a single and complete project for purposes of NWP authorization. However, individual channels in a braided stream or river, or individual arms of a large, irregularly shaped wetland or lake, etc., are not separate waterbodies, and crossings of such features cannot be considered separately.

Single and complete non-linear project: For non-linear projects, the term "single and complete project" is defined at 33 CFR 330.2(i) as the total project proposed or accomplished by one owner/developer or partnership or other association of owners/developers. A single and complete non-linear project must have independent utility (see definition of "independent utility"). Single and complete non-linear projects may not be "piecemealed" to avoid the limits in an NWP authorization.

Stormwater management: Stormwater management is the mechanism for controlling stormwater runoff for the

purposes of reducing downstream erosion, water quality degradation, and flooding and mitigating the adverse effects of changes in land use on the aquatic environment.

Stormwater management facilities: Stormwater management facilities are those facilities, including but not limited to, stormwater retention and detention ponds and best management practices, which retain water for a period of time to control runoff and/or improve the quality (i.e., by reducing the concentration of nutrients, sediments, hazardous substances and other pollutants) of stormwater runoff.

Stream bed: The substrate of the stream channel between the ordinary high water marks. The substrate may be bedrock or inorganic particles that range in size from clay to boulders. Wetlands contiguous to the stream bed, but outside of the ordinary high water marks, are not considered part of the stream bed.

Stream channelization: The manipulation of a stream's course, condition, capacity, or location that causes more than minimal interruption of normal stream processes. A channelized jurisdictional stream remains a water of the United States.

Structure: An object that is arranged in a definite pattern of organization. Examples of structures include, without limitation, any pier, boat dock, boat ramp, wharf, dolphin, weir, boom, breakwater, bulkhead, revetment, riprap, jetty, artificial island, artificial reef, permanent mooring structure, power transmission line, permanently moored floating vessel, piling, aid to navigation, or any other manmade obstacle or obstruction.

Tidal wetland: A tidal wetland is a jurisdictional wetland that is inundated by tidal waters. Tidal waters rise and fall in a predictable and measurable rhythm or cycle due to the gravitational pulls of the moon and sun. Tidal waters end where the rise and fall of the water surface can no longer be practically measured in a predictable rhythm due to masking by other waters, wind, or other effects. Tidal wetlands are located channelward of the high tide line.

Tribal lands: Any lands title to which is either: 1) held in trust by the United States for the benefit of any Indian tribe or individual; or 2) held by any Indian tribe or individual subject to restrictions by the United States against alienation.

Tribal rights: Those rights legally accruing to a tribe or tribes by virtue of inherent sovereign authority, unextinguished aboriginal title, treaty, statute, judicial decisions, executive order or agreement, and that give rise to legally enforceable remedies.

Vegetated shallows: Vegetated shallows are special aquatic sites under the 404(b)(1) Guidelines. They are areas that are permanently inundated and under normal circumstances have rooted aquatic vegetation, such as seagrasses in marine and estuarine systems and a variety of vascular rooted plants in freshwater systems.

Waterbody: For purposes of the NWPs, a waterbody is a "water of the United States." If a wetland is adjacent to a waterbody determined to be a water of the United States, that waterbody and any adjacent wetlands are considered together as a single aquatic unit (see 33 CFR 328.4(c)(2)).

Andy Beshear
GOVERNOR

ENERGY AND ENVIRONMENT CABINET
DEPARTMENT FOR ENVIRONMENTAL PROTECTION
300 Sower Boulevard
Frankfort, Kentucky 40601
Phone: (502) 564-2150
Fax: 502-564-4245

Rebecca W. Goodman
SECRETARY

Anthony R. Hatton
COMMISSIONER

July 30, 2024

Northern Kentucky Water District
c/o: Steve Broering
2835 Crescent Springs Road, P.O. Box 18640
Erlanger, Kentucky 41018

Re: §401 Water Quality Certification
Northern KY Water District
AI No.: 2485; Activity ID: APE20240006
WQC No: WQC2024-128-7M1
USACE ID No.: LRL-2024-00350, LRL-2024-00452, LRL-2024-00453, LRL-2024-00454, LRL-2024-00457, LRL-2024-00458, LRL-2024-00456
Multiple Streams
Campbell County, Kentucky

Dear Steve Broering:

Pursuant to Section 401 of the Clean Water Act (CWA) and 40 CFR 121.7(c), the Commonwealth of Kentucky certifies it has reasonable assurances that applicable water quality standards under Kentucky Administrative Regulations Title 401, Chapter 10, established pursuant to Sections 301, 302, 303, 304, 306, and 307 of the CWA, will not be violated by the above referenced project provided that the U.S. Army Corps of Engineers authorizes the activity under a federal license or permit, and the attached conditions are met.

Other permits from the Division of Water may be required for this activity. Activities within a floodplain may require a Permit to Construct Across or Along a Stream; contact the Floodplain Management Section (502-564-3410). Projects that disturb one acre or more of land or is part of a larger common plan of development or sale that will ultimately disturb one acre or more of land require a Kentucky Pollution Discharge Elimination System (KPDES) Stormwater Permit; contact the Surface Water Permits Branch (502-564-3410 or SWPBSupport@ky.gov). A Groundwater Protection Plan is required if activities listed in Section 2(2) of 401 KAR 5:037 are conducted. A Water Withdrawal Application is required for activities proposing raw water withdrawals of 10,000 gallons per day or more; contact the Watershed Management Branch (502-564-3410).

All future correspondence on this project must reference AI No. **2485**. **The attached document is your official Water Quality Certification; please read it carefully**. Please contact Conner Flora by phone at 502-782-3531 or email at conner.flora@ky.gov if you have any questions.

Sincerely,

Samantha Vogeler

Samantha Vogeler, Supervisor
Water Quality Certification Section
Kentucky Division of Water

SV:CF
Attachment

cc: Cory Shumate, USACE: Louisville (via email: Cory.D.Shumate@usace.army.mil)
Lindsey Jakovljevic, Consultant: CT Consultants (via email: LJakovjevic.ctconsultants.com)
Lee Andrews, USFWS: Frankfort (via email: kentuckyes@fws.gov)
Brian Storz, Licking River Basin Coordinator (via email: brian.storz@ky.gov)
Matthew Gross, Florence Regional Field Office (via email: matthew.gross@ky.gov)

Water Quality Certification

Northern KY Water District

Facility Requirements

Permit Number: WQC2024-128-7M1

Activity ID No.:APE20240006

ACTV0000000066 (AI: 2485 APE20240006) Northern KY Water District:

Submittal/Action Requirements:

Condition No.	Condition
S-1	Northern Kentucky Water District shall notify the Water Quality Certification Project Manager or Supervisor of the scheduled start of construction activities at least two weeks before the start of construction. This condition is necessary for the Division of Water to be informed of the ongoing activity for the purposes of site visits to ensure implementation of Kentucky Regulatory Statutes and Administrative Regulations; the Division will monitor the environment, minimize impact to aquatic resources, protect the use and designation of resources, allow more effective and efficient control practices, identify changes and conditions in ecological systems as a result of activities, and to warn of emergency conditions. [401 KAR 10:030 Section 1, 401 KAR 10:031 Section 2(1)(a), KRS 224.10-100, KRS 224.70-110]
S-2	Northern Kentucky Water District shall notify the Water Quality Certification Project Manager or Supervisor of substantial completion of construction no later than two weeks post-construction. This condition is necessary for the Division of Water to be informed of the ongoing activity for the purposes of site visits to ensure implementation of Kentucky Regulatory Statutes and Administrative Regulations; the Division will monitor the environment, minimize impact to aquatic resources, protect the use and designation of resources, allow more effective and efficient control practices, identify changes and conditions in ecological systems as a result of activities, and to warn of emergency conditions. [401 KAR 10:030 Section 1, 401 KAR 10:031 Section 2(1)(a), KRS 224.10-100, KRS 224.70-110]
S-3	Northern Kentucky Water District shall submit as-built drawings within 90 days after substantial completion of construction to the Water Quality Certification Section Project Manager or Supervisor. This condition is necessary to monitor the aquatic resources, minimize impact to aquatic resources, protect the use and designation of resources, allow more effective and efficient control practices, identify changes and conditions in ecological systems as a result of activities, and to warn of emergency conditions. [401 KAR 10:030 Section 1, 401 KAR 10:031 Section 2(1)(a), KRS 224.10-100, KRS 224.70-110]

Narrative Requirements:

Condition No.	Condition
T-1	The work approved by this certification shall be limited to 38.794466, -84.493575: The proposed project will construct 43,920 feet of new 8" water main extensions at 15 separate un-served roads within Kenton County, Kentucky. For the construction of The Project, temporary crossings through two (2) perennial streams, twenty-one (21) ephemeral streams, and nine (9) wetlands are unavoidable. Total temporary impacts are proposed to 0.394 acres of wetlands and 105 linear feet of perennial stream and 2,142 linear feet of ephemeral stream. The applicant is required to return the streams and wetlands to pre-construction contours, wetlands that were temporarily impacted must remain wetlands post-construction this includes the conversion of forested wetlands to emergent wetlands. This condition is necessary to confirm activities approved by this certification. [401 KAR 10:030 Section 1, 401 KAR 9:010 Section 1(a)(2), KRS 224.10-100, KRS 224.70-110]

ACTV0000000066 (AI: 2485 APE20240006) Northern KY Water District:

Narrative Requirements:

Condition No.	Condition
T-2	All work performed under this certification shall adhere to the design and specifications set forth in the following document(s): Application for Permit to Construct Across or Along a Stream and/or Water Quality Certification received on 4/19/2024, a Pre-Filling Meeting Request on 1/19/2024, and a Certification Request on 6/26/2024. Project Area.zip Sub District O- PCN Application Form - signed.pdf Sub District O- PCN.pdf Utility Line Construction WQC Table.pdf affidavit_Sub District O EEC.pdf Application Form - Sub O - signed P.pdf eTearsheet_KY Enquirer_NKWD 04.23.24_ SubDistrictO-EEC.pdf NOD#1 Northern Kentucky Water District (AI_ 2485).pdf This condition is necessary to confirm activities approved by this certification. [401 KAR 10:030 Section 1, 401 KAR 9:010 Section 1(a)(2), KRS 224.10-100, KRS 224.70-110]
T-3	Northern Kentucky Water District is responsible for preventing degradation of waters of the Commonwealth from soil erosion. An erosion and sediment control plan must be designed, implemented, and maintained in effective operating condition at all times during construction. This condition is necessary to prevent and minimize objectionable deposits and pollution and protect the use of the stream. [401 KAR 10:030 Section 1, 401 KAR 10:031 Section 2(1)(a), KRS 224.10-100, KRS 224.70-110]

ACTV0000000066 (AI: 2485 APE20240006) Northern KY Water District:

Narrative Requirements:

Condition No.	Condition
T-4	No in-stream operations or activities shall be conducted during fish spawning season (April 1 through June 30), due to the potential impacts of increased sediment load and associated water quality and designated aquatic habitat impacts. This condition is necessary to monitor the aquatic resources, minimize impact to aquatic resources, protect the use and designation of resources, allow more effective and efficient control practices, identify changes and conditions in ecological systems as a result of activities, and to warn of emergency conditions. [401 KAR 10:030 Section 1, 401 KAR 10:031 Section 4(1)(c,h), KRS 224.10-100, KRS 224.70-110]
T-5	Heavy equipment (e.g. bulldozers, backhoes, draglines, etc.), if required for this project, should not be used or operated within the stream channel. In those instances where such instream work is unavoidable, then it shall be performed in such a manner and duration as to minimize re-suspension of sediments and disturbance to the channel, banks, or riparian vegetation. This condition is necessary to prevent and minimize objectionable deposits and pollution and protect the use of the stream. [401 KAR 10:030 Section 1, 401 KAR 10:031 Section 2(1)(a), KRS 224.10-100, KRS 224.70-110]
T-6	Erosion and sediment pollution control plans and Best Management Practices must be designed, installed, and maintained in effective operating condition at all times during construction activities so that violations of state water quality standards do not occur. This condition is necessary to prevent and minimize objectionable deposits and pollution and protect the use of the stream. [401 KAR 10:030 Section 1, 401 KAR 10:031 Section 2(1)(a), KRS 224.10-100, KRS 224.70-110]
T-7	Remove all sediment and erosion control measures after re-vegetation has become well-established. This condition is necessary to prevent and minimize objectionable deposits and pollution and protect the use of the stream. [401 KAR 10:030 Section 1, 401 KAR 10:031 Section 2(1)(a), KRS 224.10-100, KRS 224.70-110]
T-8	Any fill or riprap shall be of a composition that shall not cause violations of water quality standards by adversely affecting the biological, chemical, or physical properties of waters of the Commonwealth. If riprap is used, it shall be of a weight and size that bank stress or slump conditions shall not occur. This condition is necessary to prevent and minimize objectionable deposits and pollution and protect the use of the stream. [401 KAR 10:030 Section 1, 401 KAR 10:031 Section 2(1)(a), KRS 224.10-100, KRS 224.70-110]
T-9	Sediment and erosion control measures (e.g., check-dams, silt fencing, or hay bales) shall not be placed within surface waters of the Commonwealth, either temporarily or permanently, without prior approval by the Kentucky Division of Water's Water Quality Certification Section. If placement of sediment and erosion control measures in surface waters is unavoidable, placement shall not be conducted in such a manner that may cause instability of streams that are adjacent to, upstream, or downstream of the structures. All sediment and erosion control measures shall be removed and the natural grade restored prior to withdrawal from the site. This condition is necessary to prevent and minimize objectionable deposits and pollution and protect the use of the stream. [401 KAR 10:030 Section 1, 401 KAR 10:031 Section 2(1)(a), KRS 224.10-100, KRS 224.70-110]
T-10	Measures shall be taken to prevent or control spills of fuels, lubricants, or other toxic materials used in construction from entering the watercourse. This condition is necessary to prevent water pollution as prohibited by statute. [401 KAR 10:030 Section 1, 401 KAR 10:031 Section 2(1)(a), KRS 224.10-100, KRS 224.70-110]

ACTV0000000066 (AI: 2485 APE20240006) Northern KY Water District:

Narrative Requirements:

Condition No.	Condition
T-11	To the maximum extent practicable, all in-stream work under this certification shall be performed during low flow. This condition is necessary to prevent and minimize objectionable deposits and pollution and protect the use of the stream. [401 KAR 10:030 Section 1, 401 KAR 10:031 Section 2(1)(a), KRS 224.10-100, KRS 224.70-110]
T-12	Removal of existing riparian vegetation shall be restricted to the minimum necessary for project construction. This condition is necessary to minimize negative effects to the environment, protect the use of the stream, and protect aquatic resources. [401 KAR 10:030 Section 1, 401 KAR 10:031 Section 2(1)(a), KRS 224.10-100, KRS 224.70-110]
T-13	Should stream pollution, wetland impairment, and/or violations of water quality standards occur as a result of this activity (either from a spill or other forms of water pollution), the Kentucky Division of Water shall be notified immediately by calling 800/564-2380. This condition is necessary to monitor the aquatic resources, minimize impact to aquatic resources, protect the use and designation of resources, allow more effective and efficient control practices, identify changes and conditions in ecological systems as a result of activities, and to warn of emergency conditions. [401 KAR 10:030 Section 1, 401 KAR 10:031 Section 2(1)(a), KRS 224.10-100, KRS 224.70-110]
T-14	This Water Quality Certification expires on July 29, 2024. This condition is necessary for the issuance of the certification. [KRS 224.10-100, KRS 224.16-050(2), KRS 224.70-110]
T-15	Other permits from the Division of Water may be required for this activity. If this activity occurs within a floodplain, a Permit to Construct Across or Along a Stream may be required. Please contact the Floodplain Management Section Supervisor (502-564-3410) for more information prior to construction. If the project will disturb one acre or more of land, or is part of a larger common plan of development or sale that will ultimately disturb one acre or more of land, a Kentucky Pollution Discharge Elimination System (KPDES) Stormwater Permit shall be required. Please contact the Surface Water Permits Branch (502-564-3410 or SWPBSupport@ky.gov) for more information. A Groundwater Protection Plan is required if any of the activities listed in Section 2(2) of 401 KAR 5:037 are conducted. A Water Withdrawal Application is required for any activities proposing raw water withdrawals of 10,000 gallons per day or more. For technical assistance contact the Watershed Management Branch at 502-564-3410 or visit eec.ky.gov. This condition is necessary for confirm authorized impacts, the appropriate responsible party, monitor the aquatic resources, minimize impact to aquatic resources, protect the use and designation of resources, allow more effective and efficient control practices, identify changes and conditions in ecological systems as a result of activities, and to warn of emergency conditions. [KRS 224.10-100, KRS 224.16-050(2), KRS 224.70-110]

ACTV0000000066 (AI: 2485 APE20240006) Northern KY Water District:

Narrative Requirements:

Condition No.	Condition
T-16	If there is a transfer or conveyance of the project site during the issued WQC term for the approved activity, the Northern Kentucky Water District shall submit written notice to the Water Quality Certification Section Project Manager or Supervisor of the transfer or conveyance of the project site or any part of the project site at least 60 days prior to the transfer or conveyance of the project site. The notification shall include the WQC number; the Agency Interest (AI) No.; the name, mailing address, email address, and telephone number of the current owner; the name, mailing address, email address, and telephone number of the prospective transferee; the proposed effective date of transfer/conveyance; and a copy of the documentation evidencing the transfer/conveyance. Failure to comply with this condition does not negate the validity or enforceability of this certification. This condition is necessary for confirm authorized impacts, the appropriate responsible party, monitor the aquatic resources, minimize impact to aquatic resources, protect the use and designation of resources, allow more effective and efficient control practices, identify changes and conditions in ecological systems as a result of activities, and to warn of emergency conditions. [401 KAR 10:030 Section 1, 401 KAR 9:010 Section 1(a)(2), KRS 224.10-100, KRS 224.70-110]

DEPARTMENT OF THE ARMY
U.S. ARMY CORPS OF ENGINEERS, LOUISVILLE DISTRICT
REGULATORY DIVISION ROOM 183 P.O. BOX 59
LOUISVILLE KENTUCKY 40202-0059

August 23, 2024

Regulatory Division
North Branch
ID#: LRL-2024-00458-cds

Steve Broering
Northern Kentucky Water District
2835 Crescent Springs Rd
P.O. Box 18640
Erlanger, KY 41018
Via Email: sbroering@nkywater.org

Dear Mr. Broering:

This letter is in response to the Pre-Construction Notification (PCN) you submitted to the Louisville District, North Branch on April 26, 2024, for a Department of the Army Nationwide permit (NWP) verification. This project has been assigned the file number LRL-2024-00458-cds and is known as Fiskburg Road, Goshorn Road, Alexander Road, and Pfanstiehl Road – Subdistrict O Water Main Extension. This file number should be referenced in all correspondence concerning this project.

A review of the information provided indicates that the proposed work would include the temporary trenching of 0.048 acre of wetlands (W-H, W-I, and W-J) and 0.006 acre of the open water pond in association with the installation of 18,400 linear feet of eight-inch water main along Goshorn, Fiskburg, Pfanstiel, and Alexander Roads. The wetlands will be restored to pre-existing contours post-construction and revegetated. The project/review area is approximately 42.15 acres and is located at the following: Goshorn Road (Start LAT: 38.819822 N, LON: -84.483576 W End LAT: 38.830316 N, -84.484673 W); Fisksburg Road (Start LAT:38.819794 N LON: -84.483478 W End LAT: 38.819342 N LON: -84.469851 W); Alexander Road (Start LAT:38.8192939 N LON: -84.469754 W End LAT: 38.815906 N LON: - 84.462428 W); and 15414 Pfanstiehl Road Demossville, KY 41033 to 16059 Pfanstiehl Road. The project area is located Demossville and Morning View, Kenton County, Kentucky.

We have determined that the proposed work is authorized by Nationwide Permit 58: Utility Line Activities for Water and Other Substances pursuant to authorities under Section 404 of the Clean Water Act (33 U.S.C. § 1344). The proposed work must be accomplished in strict accordance with the general permit conditions, any regional conditions, the special conditions listed in this letter, the application materials, and the enclosed plans sheets 25 through 40 and Impact Figure(s) . If the extent of the project area and/or nature of the authorized impacts to waters are modified, a revised PCN must be submitted to this office for written approval before work is initiated. Any

violation of permit conditions or deviation from your submitted plans may subject the permittee to enforcement action.

This verification is valid until March 14, 2026, unless prior to this date the subject NWP(s) is suspended, revoked, or is modified such that the activity no longer complies with the terms and conditions of this NWP. If you commence or are under contract to commence this activity before the date that the relevant NWP is modified or revoked, you will have 12 months from the date of the modification or revocation of the NWP to complete the activity under the present terms and conditions of this NWP.

Project Specific Special Conditions:

1. The Permittee shall comply with all conditions of the Section 401 Water Quality Certification No. WQC2024-128-7M1, dated July 30, 2024, issued by Kentucky Division of Water (KDOW), which are incorporated herein by reference.

This NWP verification does not preclude the necessity to obtain any other Federal, State, or local permits, licenses, and/or certifications, which may be required.

If you have any questions related to this verification or have issues accessing documents referenced in this letter, please contact Cory Shumate, Regulatory Specialist of the North Branch at 502-315-6669, by mail at the above address, or by email at cory.d.shumate@usace.army.mil. Please take a moment to complete our customer satisfaction survey located at https://regulatory.ops.usace.army.mil/customer-service-survey/.

Sincerely,

Cory Shumate
Regulatory Specialist, North Branch
Regulatory Division

Enclosures

Cc (w/enclosures)
Lindsey Jakovljevic, CT Consultants (via Ljakovljevic@ctconsultants.com)
Flora Conner, Kentucky Division of Water (via Conner.Flora@ky.gov)

Compliance Certification Form

Action ID Number: LRL-2024-00458-cds **County, State: Kenton, Kentucky**

Permittee: Northern Kentucky Water District, Steve Broering

Project Name: Fiskburg Road, Goshorn Road, Alexander Road, and Pfanstiehl Road – Subdistrict O Water Main Extension

Date Verification Issued: 8/23/2024

Project Manager: Cory Shumate

Upon completion of the activity authorized by this permit and any mitigation required by the permit, sign this certification and return it to the following address:

US ARMY CORPS OF ENGINEERS
Louisville District
Attn: Cory Shumate
North Branch
600 Dr. Martin Luther King Jr. Place
Louisville, Kentucky 40202
or
cory.d.shumate@usace.army.mil

Please note that your permitted activity is subject to a compliance inspection by a U. S. Army Corps of Engineers representative. Failure to comply with any terms or conditions of this authorization may result in the Corps suspending, modifying or revoking the authorization and/or issuing a Class I administrative penalty, or initiating other appropriate legal action.

I hereby certify that the work, and mitigation (if applicable), authorized by the above referenced permit has been completed in accordance with the terms and conditions of the said permit including any general or specific conditions.

Date Authorized Work Started: _____ **Completed: _____**

Describe any deviations from permit (attach drawing(s) depicting the deviations):

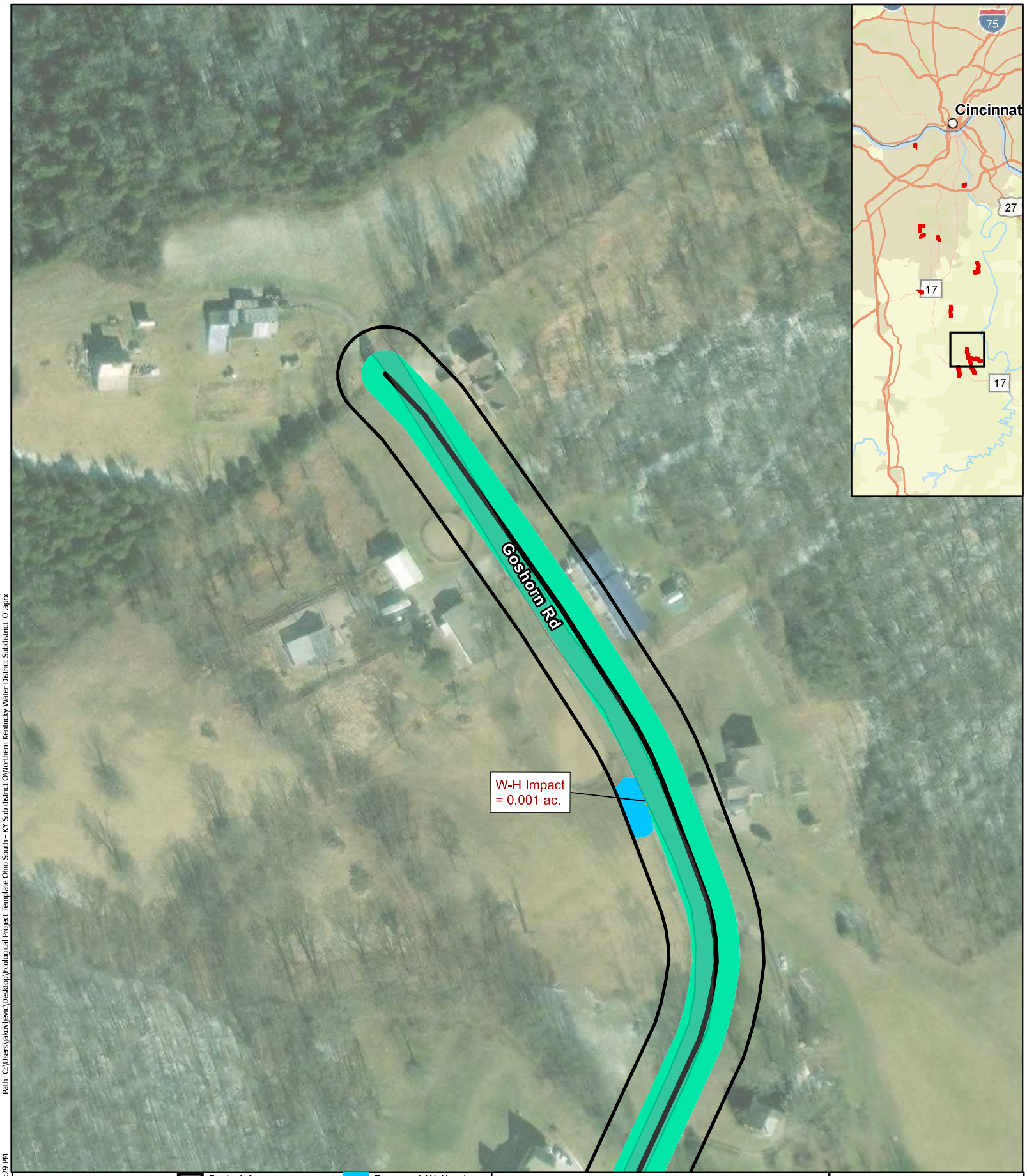
_____

_____

***Note: The description of any deviations on this form does not constitute approval by the Corps.**

_____ _____

Signature of Permittee **Date**



Project Area
Alignment
Temporary Easement 50 ft
Emergent Wetland
Emergent Wetland
Wetland Impact
Wetland Impact

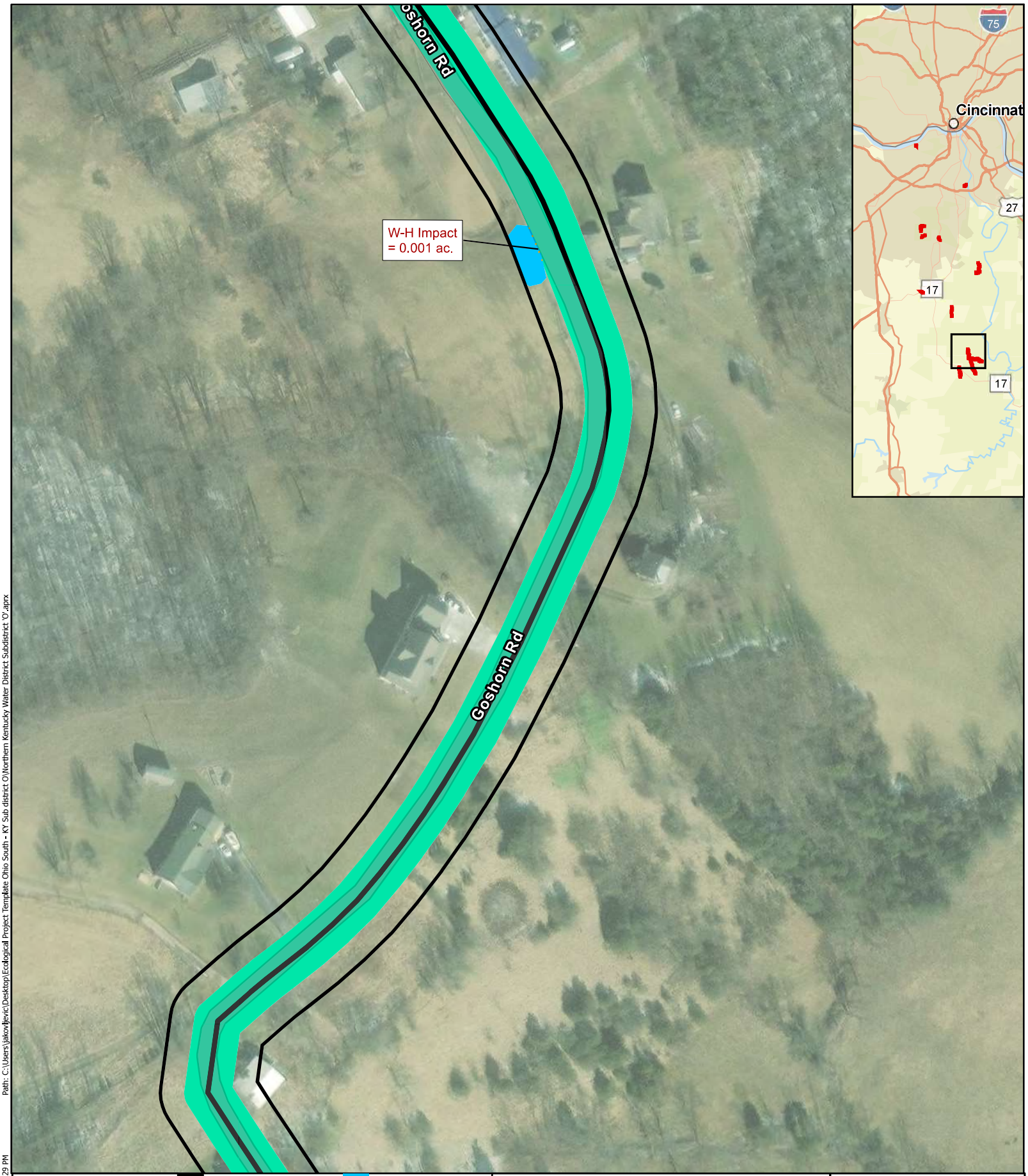
Figure 6.37 Impact Map
Northern Kentucky Water District Subdistrict 'O'

N
0 50 100 Feet
1 inch = 129 feet

Basemap courtesy of Nearmap

Path: C:\Users\jakov.ljevic\Desktop\Ecological Project Template Ohio South - KY Sub district O\Northern Kentucky Water District Subdistrict 'O'.aprx

Date Exported: 6/4/2024 4:29 PM



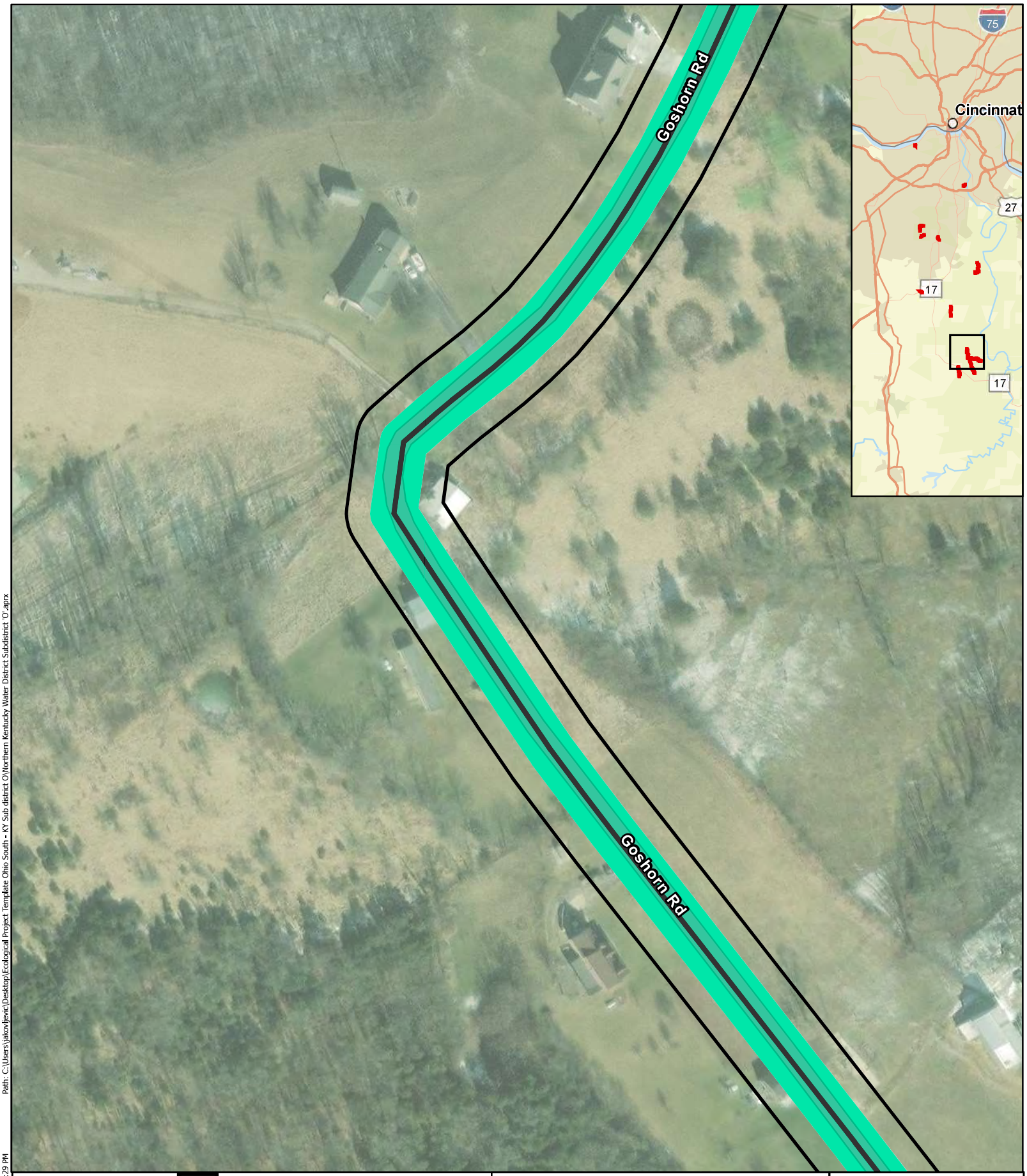
Project Area
Alignment
Temporary Easement 50 ft
Emergent Wetland
Emergent Wetland
Wetland Impact
Wetland Impact

Figure 6.38 Impact Map
Northern Kentucky Water District Subdistrict 'O'

N
0 50 100 Feet
1 inch = 129 feet

Date Exported: 6/4/2024 4:29 PM
Path: C:\Users\jakov.ljevic\Desktop\Ecological Project Template Ohio South - KY Sub district O\Northern Kentucky Water District Subdistrict 'O'.aprx

Basemap courtesy of Nearmap



Project Area

Alignment

Temporary Easement
50 ft

Figure 6.39 Impact Map
Northern Kentucky Water District Subdistrict 'O'

N

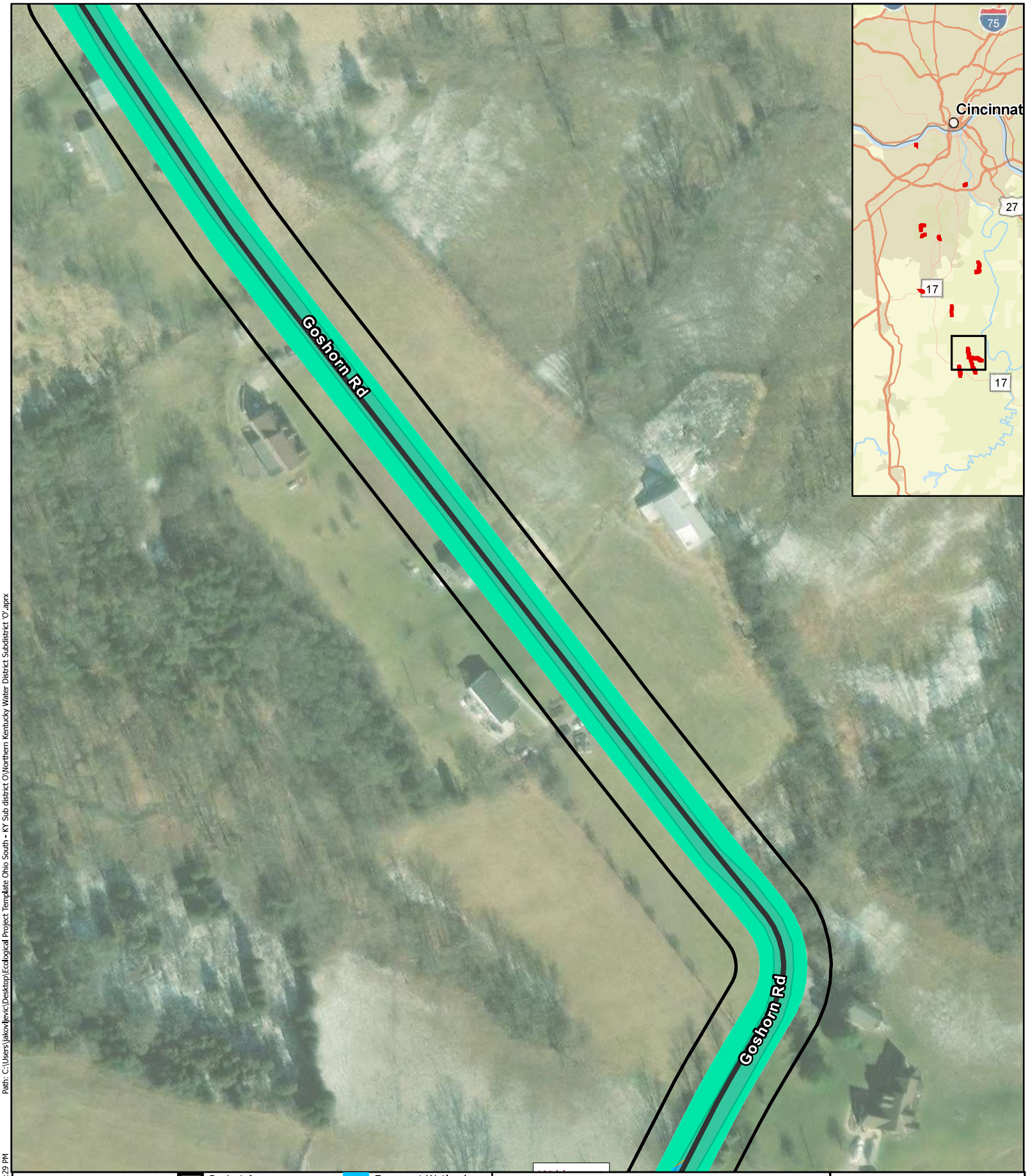
0 50 100 Feet

1 inch = 129 feet

Date Exported: 6/4/2024 4:29 PM

Path: C:\Users\jakov.ljevic\Desktop\Ecological Project Template Ohio South - KY Sub district O\Northern Kentucky Water District Subdistrict 'O'.aprx

Basemap courtesy of Nearmap



Project Area
Alignment
Temporary Easement 50 ft
Emergent Wetland
Emergent Wetland
Wetland Impact
Wetland Impact

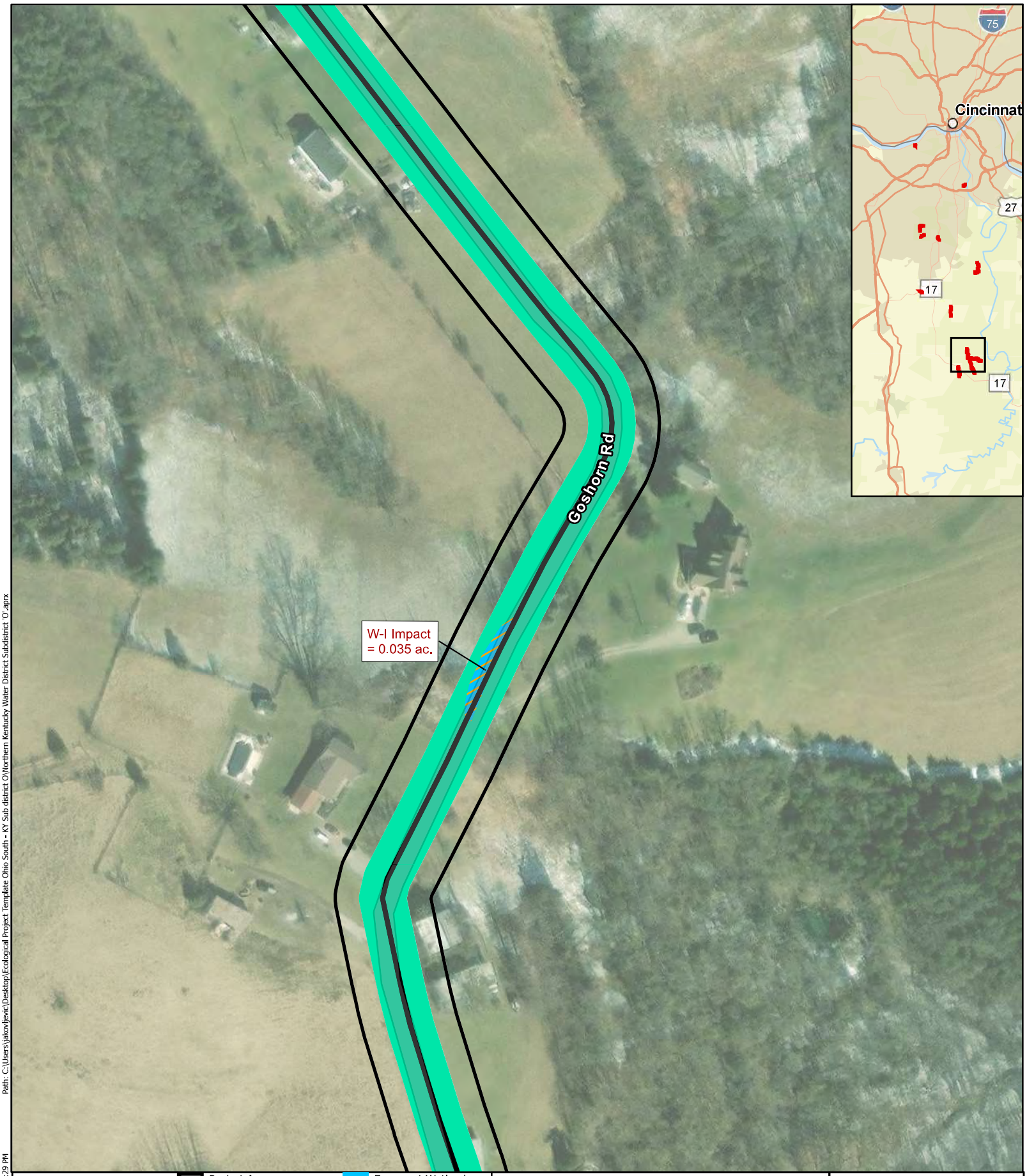
Figure 6.40 Impact Map
Northern Kentucky Water District Subdistrict 'O'

N
0 50 100 Feet
1 inch = 129 feet

Path: C:\Users\jakov\Jevic\Desktop\Ecological Project Template Ohio South - KY Sub district O\Northern Kentucky Water District Subdistrict 'O'.aprx

Date Exported: 6/4/2024 4:29 PM

Basemap courtesy of Nearmap



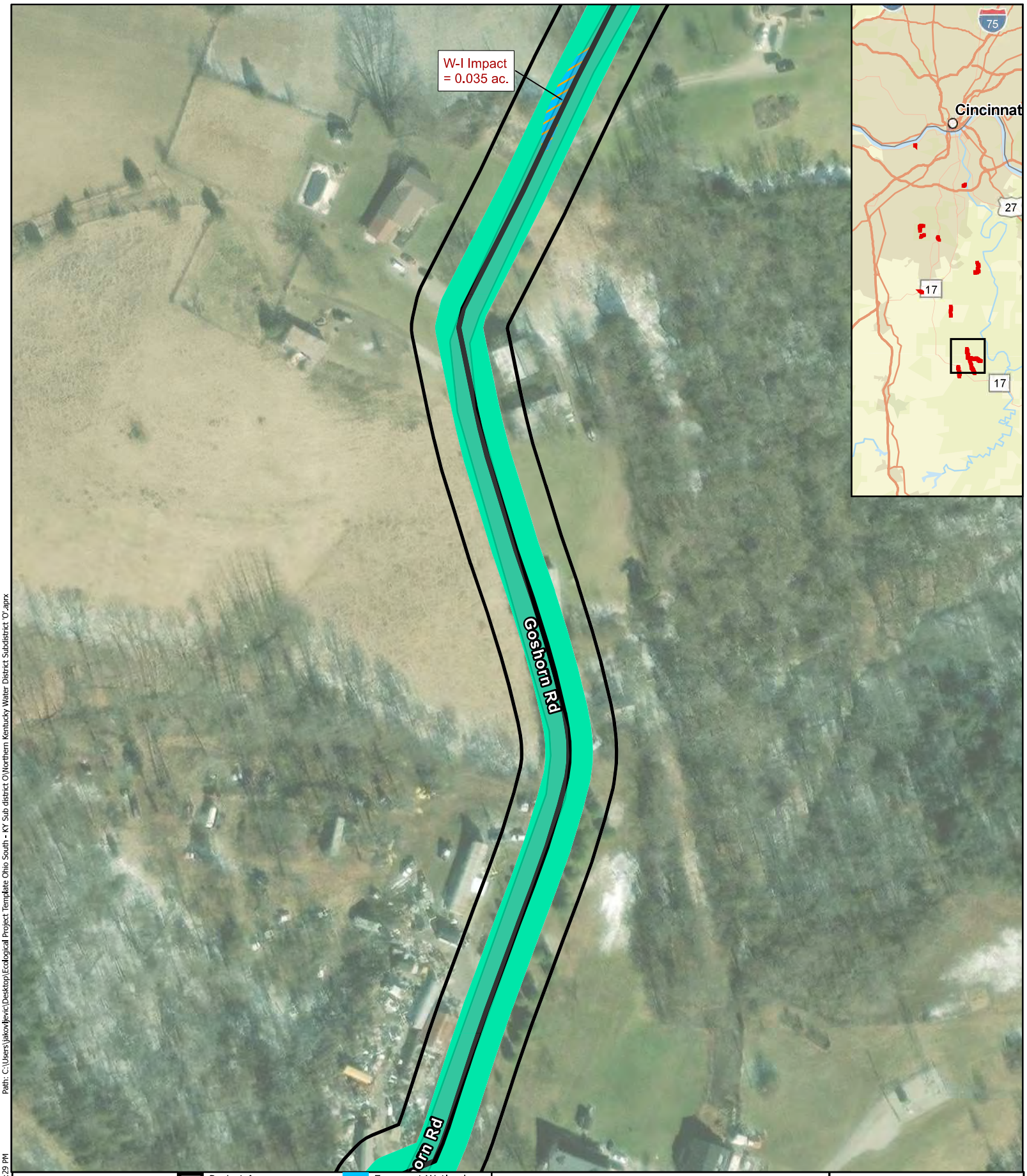
Project Area
Alignment
Temporary Easement
50 ft
Emergent Wetland
Emergent Wetland
Wetland Impact
Wetland Impact

Figure 6.41 Impact Map
Northern Kentucky Water District Subdistrict 'O'

N
0 50 100 Feet
1 inch = 129 feet

Basemap courtesy of Nearmap

Path: C:\Users\jakovljevic\Desktop\Ecological Project Template Ohio South - KY Sub district O\Northern Kentucky Water District Subdistrict 'O'.aprx
Date Exported: 6/4/2024 4:29 PM



Project Area
Alignment
Temporary Easement 50 ft
Emergent Wetland
Emergent Wetland
Wetland Impact
Wetland Impact

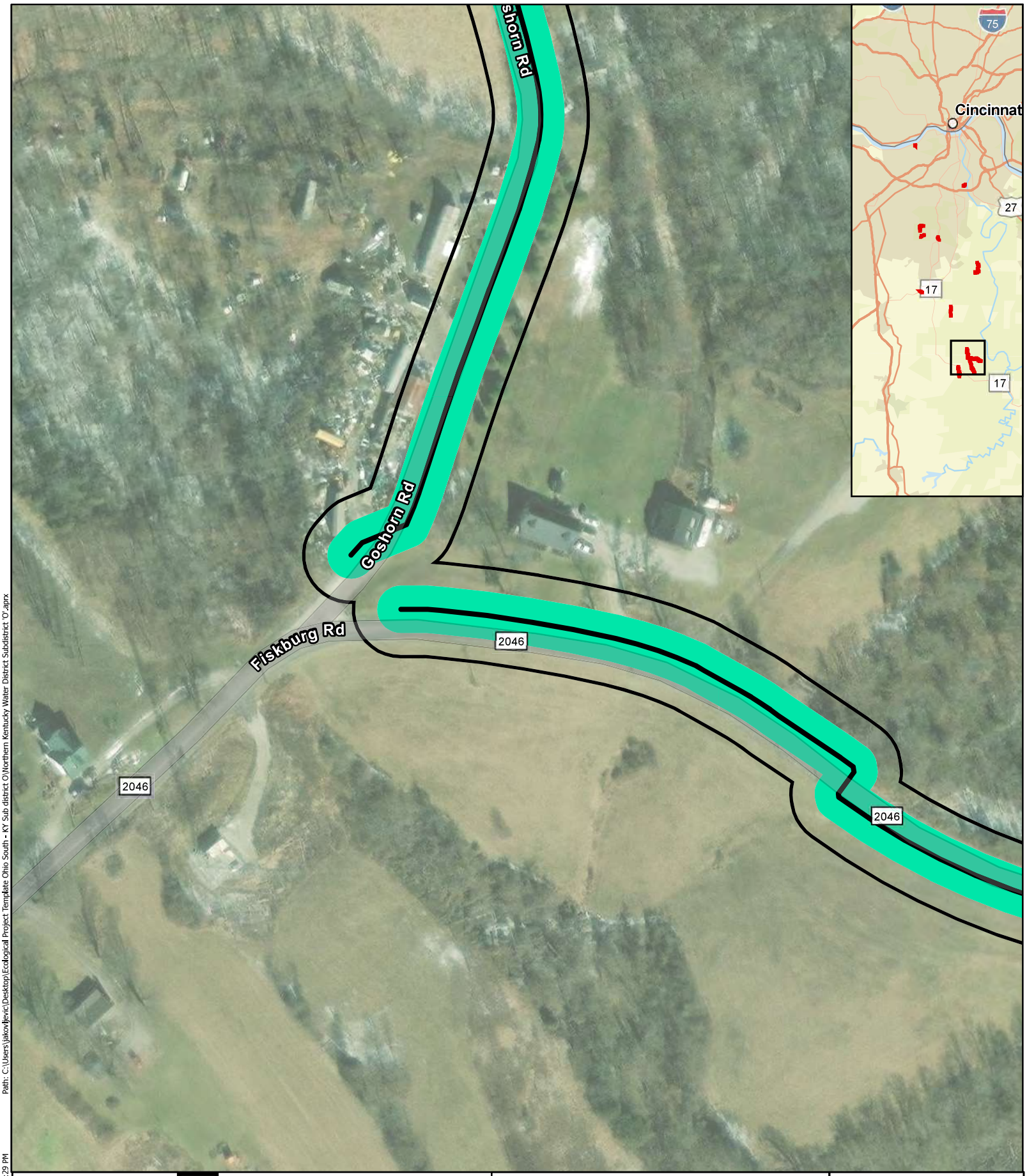
Figure 6.42 Impact Map
Northern Kentucky Water District Subdistrict 'O'

N
0 50 100 Feet
1 inch = 129 feet

Date Exported: 6/4/2024 4:29 PM

Path: C:\Users\jakov.ljevic\Desktop\Ecological Project Template Ohio South - KY Sub district O\Northern Kentucky Water District Subdistrict 'O'.aprx

Basemap courtesy of Nearmap



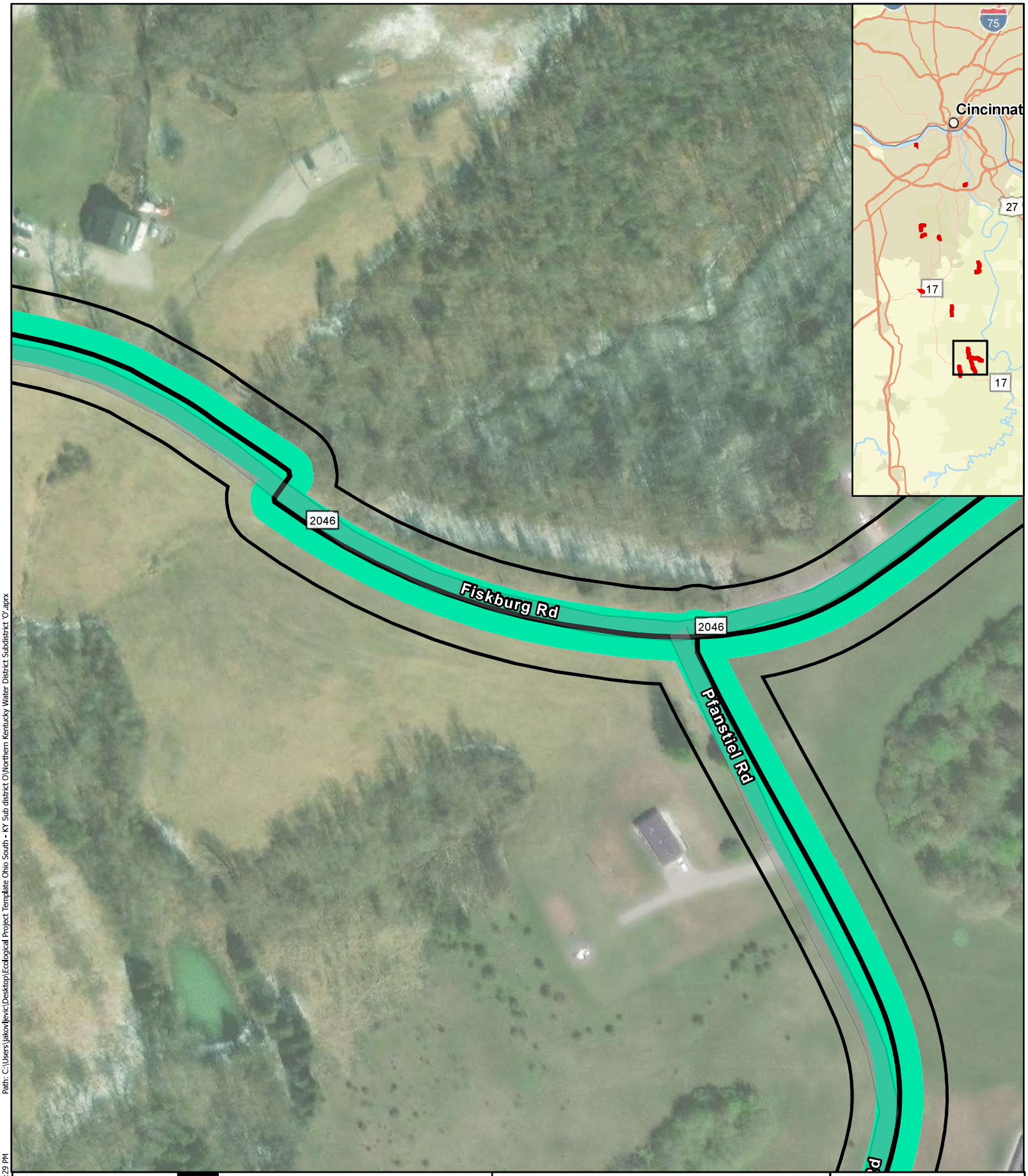
Project Area
Alignment
Temporary Easement
50 ft

Figure 6.43 Impact Map
Northern Kentucky Water District Subdistrict 'O'

N
0 50 100 Feet
1 inch = 129 feet

Basemap courtesy of Nearmap

Path: C:\Users\jakovljevic\Desktop\Ecological Project Template Ohio South - KY Sub district O\Northern Kentucky Water District Subdistrict 'O'.aprx
Date Exported: 6/4/2024 4:29 PM



Project Area

Alignment

Temporary Easement
50 ft

Figure 6.44 Impact Map
Northern Kentucky Water District Subdistrict 'O'

N

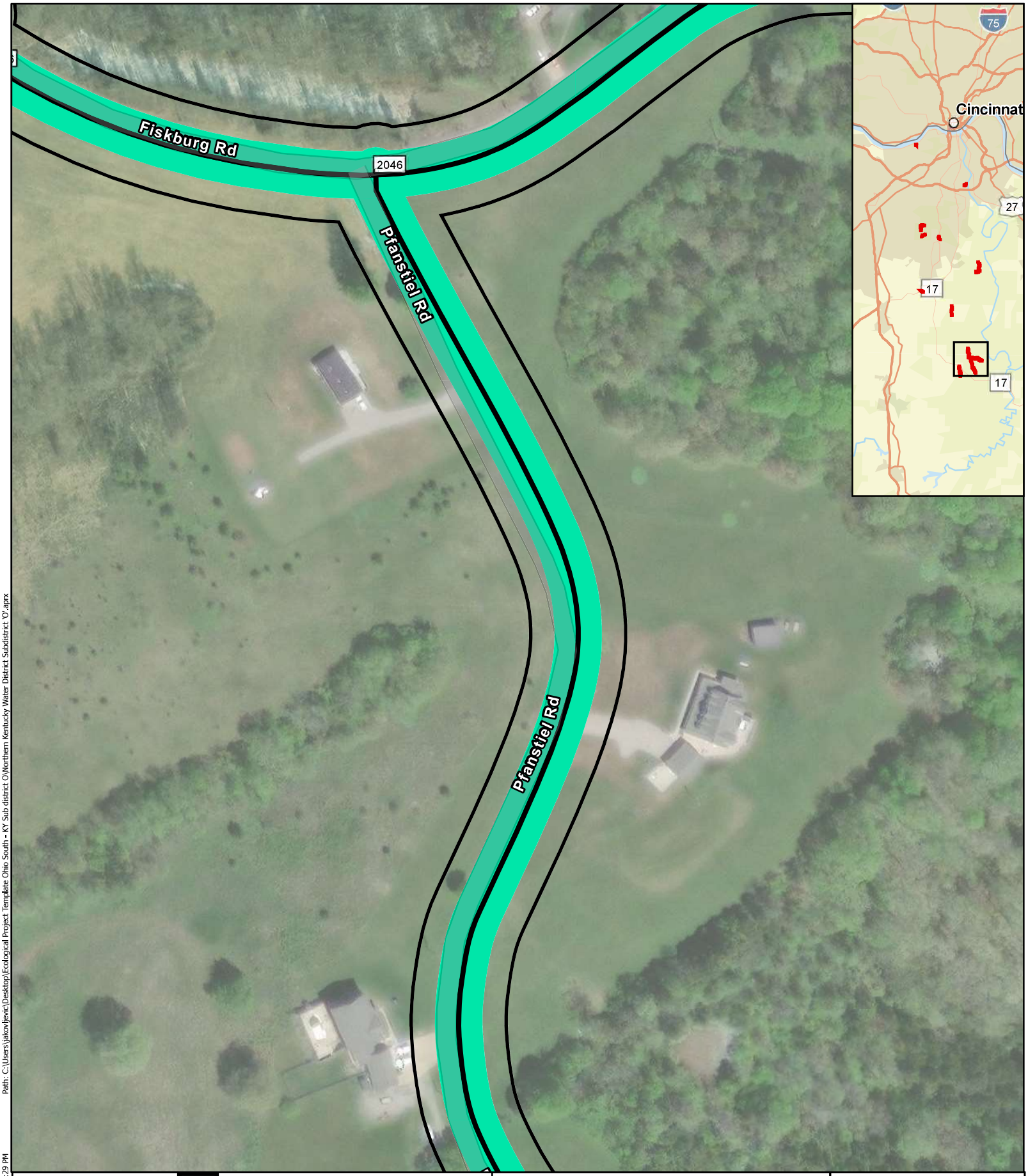
0 50 100 Feet

1 inch = 129 feet

Date Exported: 6/4/2024 4:29 PM

Path: C:\Users\jakov.ljevic\Desktop\Ecological Project Template Ohio South - KY Sub district O\Northern Kentucky Water District Subdistrict 'O'.aprx

Basemap courtesy of Nearmap



Project Area

Alignment

Temporary Easement
50 ft

Figure 6.45 Impact Map
Northern Kentucky Water District Subdistrict 'O'

N

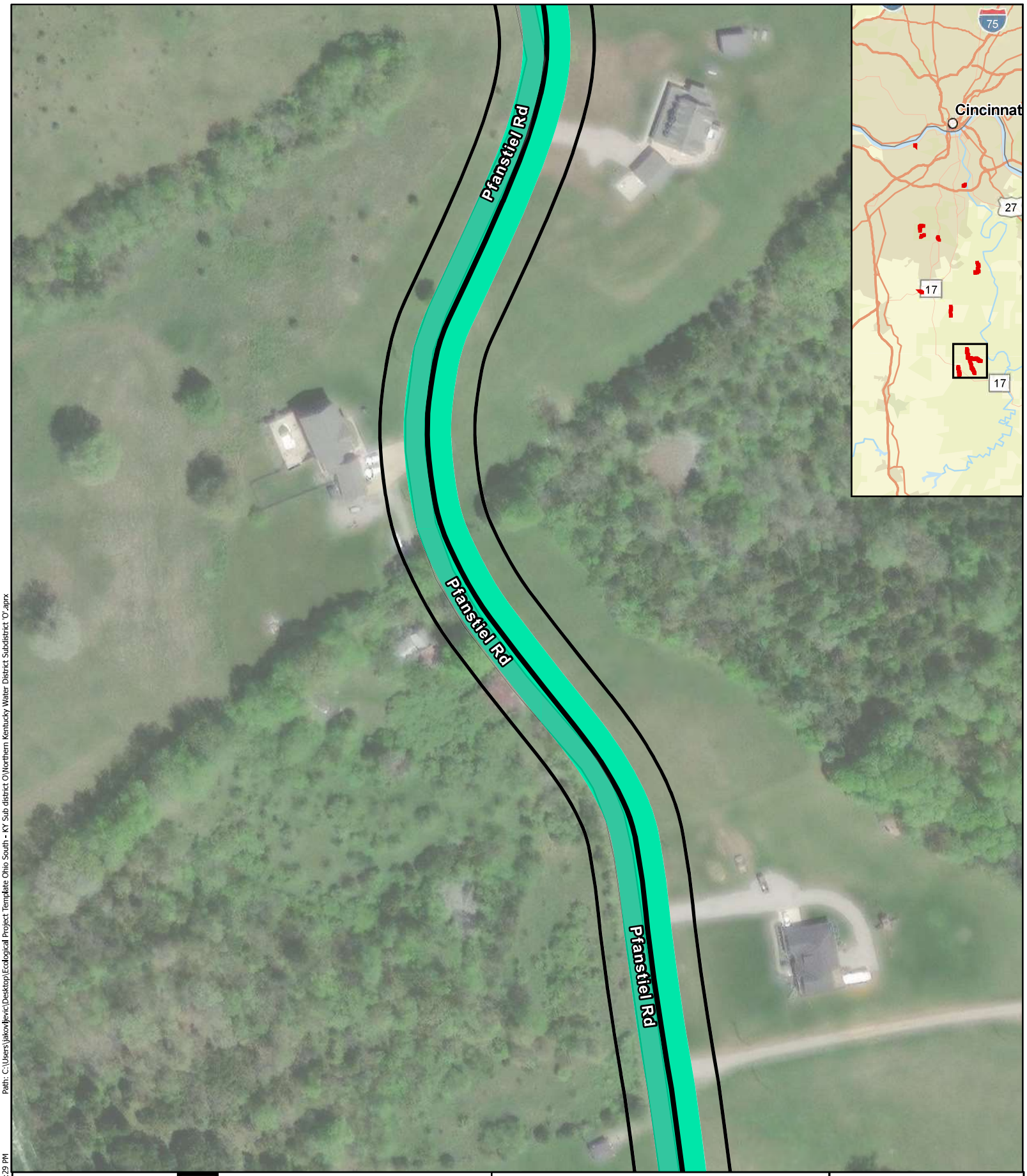
0 50 100 Feet

1 inch = 129 feet

Basemap courtesy of Nearmap

Path: C:\Users\jakovljevic\Desktop\Ecological Project Template Ohio South - KY Sub district O\Northern Kentucky Water District Subdistrict 'O'.aprx

Date Exported: 6/4/2024 4:29 PM



Project Area

Alignment

Temporary Easement
50 ft

Figure 6.46 Impact Map
Northern Kentucky Water District Subdistrict 'O'

N

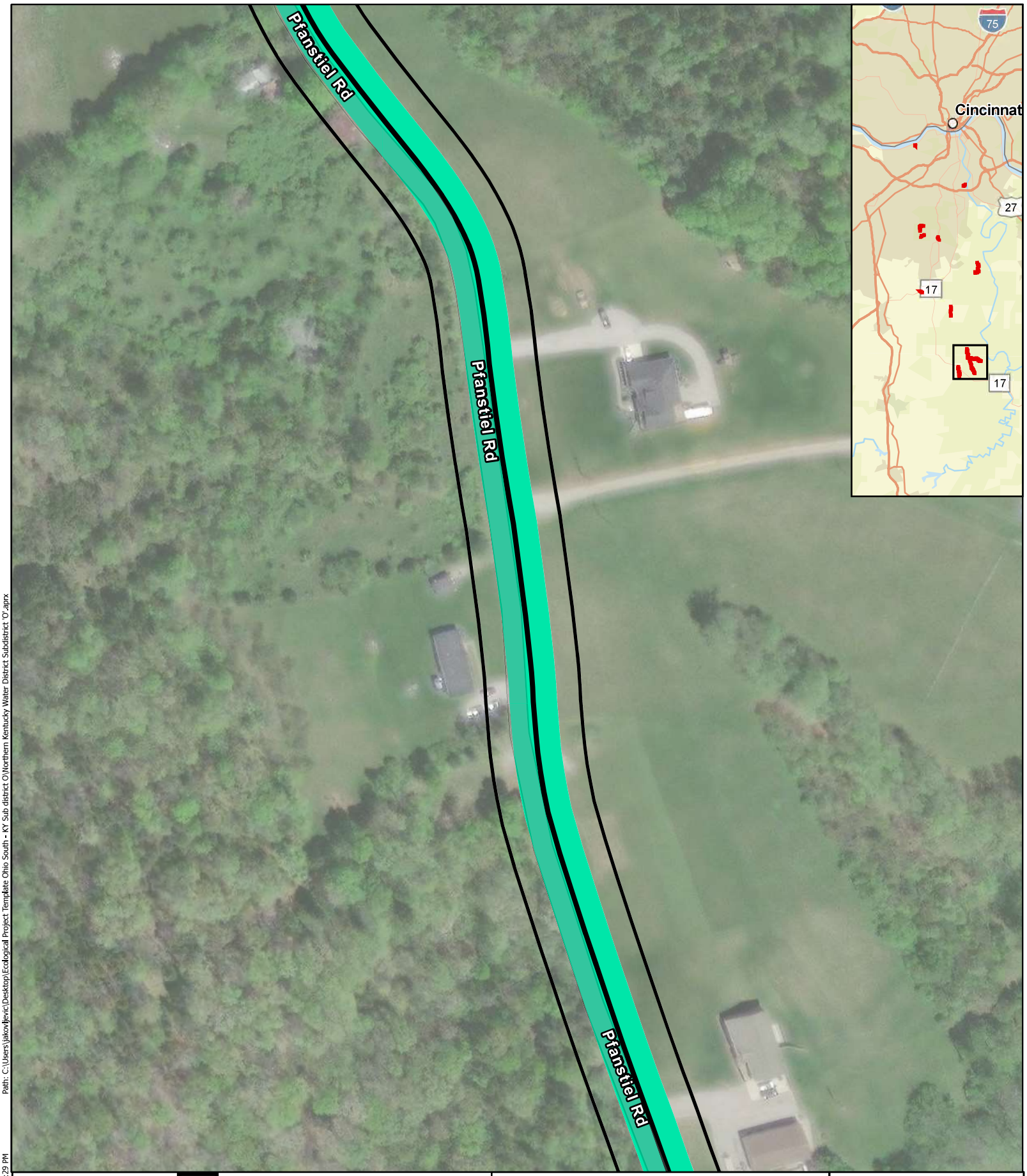
0 50 100 Feet

1 inch = 129 feet

Basemap courtesy of Nearmap

Path: C:\Users\jakovljevic\Desktop\Ecological Project Template Ohio South - KY Sub district O\Northern Kentucky Water District Subdistrict 'O'.aprx

Date Exported: 6/4/2024 4:29 PM



Project Area
Alignment
Temporary Easement
50 ft

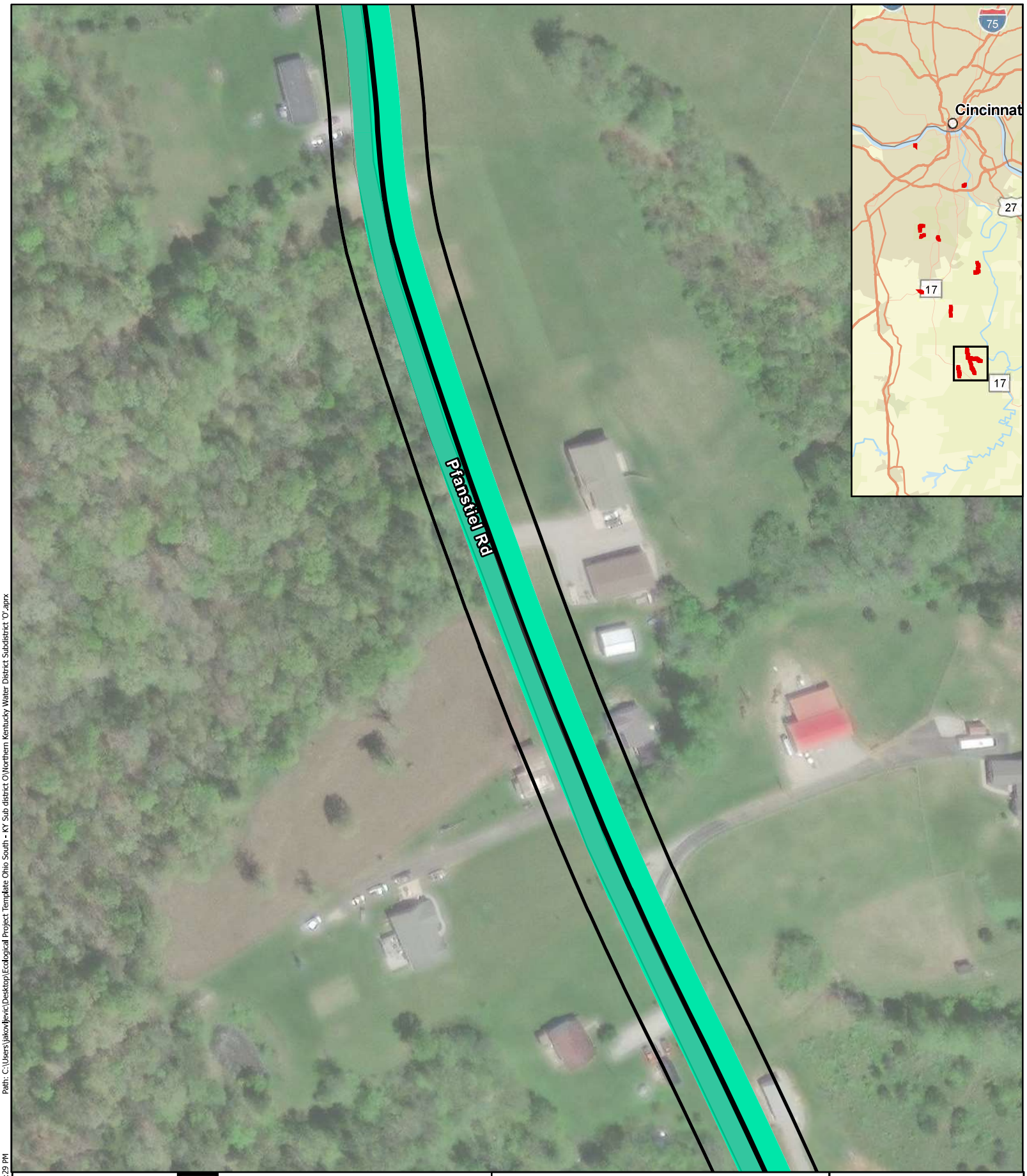
Figure 6.47 Impact Map
Northern Kentucky Water District Subdistrict 'O'

N
0 50 100 Feet
1 inch = 129 feet

Basemap courtesy of Nearmap

Path: C:\Users\jakovljevic\Desktop\Ecological Project Template Ohio South - KY Sub district O\Northern Kentucky Water District Subdistrict 'O'.aprx

Date Exported: 6/4/2024 4:29 PM



Project Area

Alignment

Temporary Easement
50 ft

Figure 6.48 Impact Map
Northern Kentucky Water District Subdistrict 'O'

N

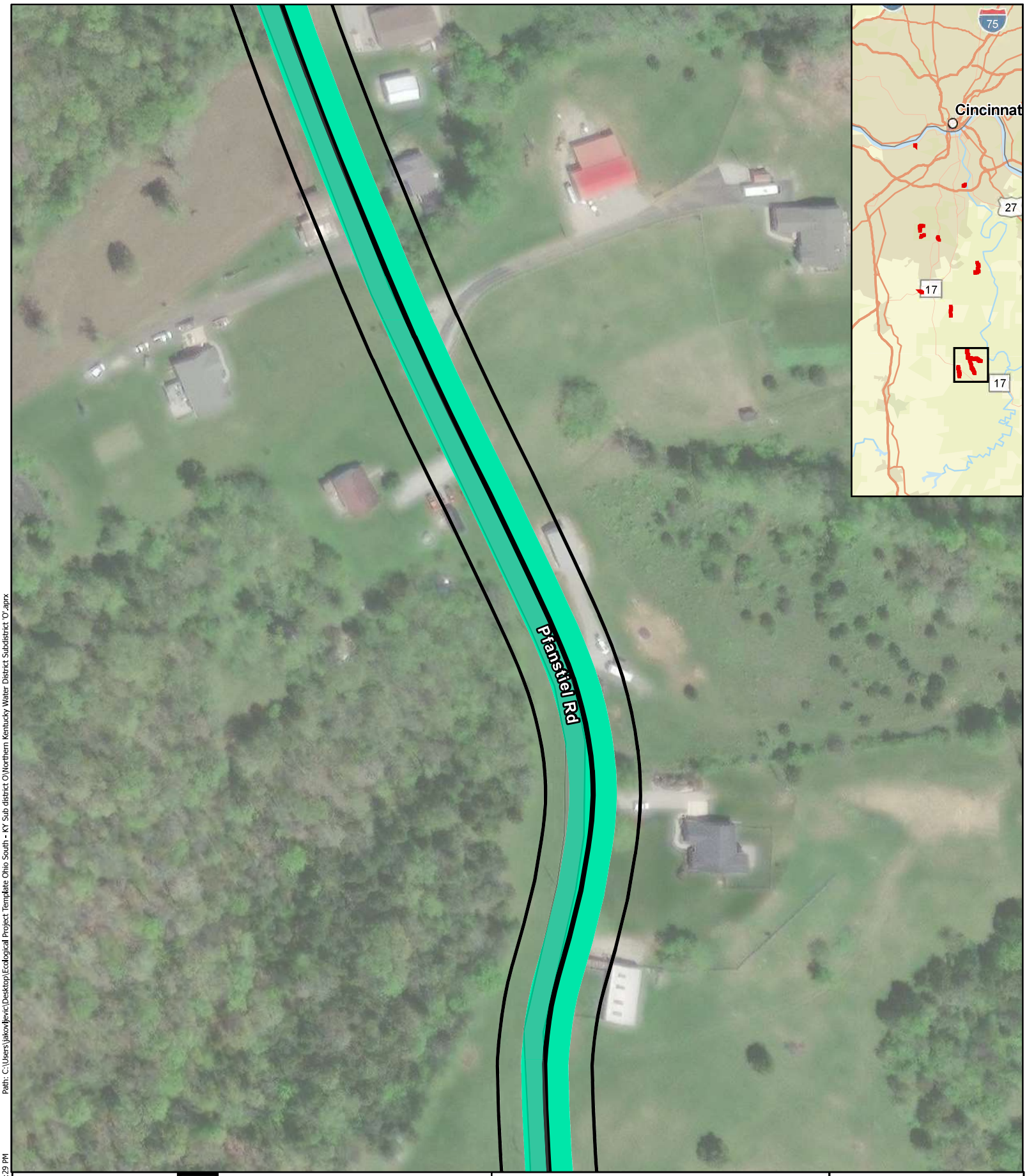
0 50 100 Feet

1 inch = 129 feet

Basemap courtesy of Nearmap

Path: C:\Users\jakovljevic\Desktop\Ecological Project Template Ohio South - KY Sub district O\Northern Kentucky Water District Subdistrict 'O'.aprx

Date Exported: 6/4/2024 4:29 PM



Project Area

Alignment

Temporary Easement
50 ft

Figure 6.49 Impact Map
Northern Kentucky Water District Subdistrict 'O'

N

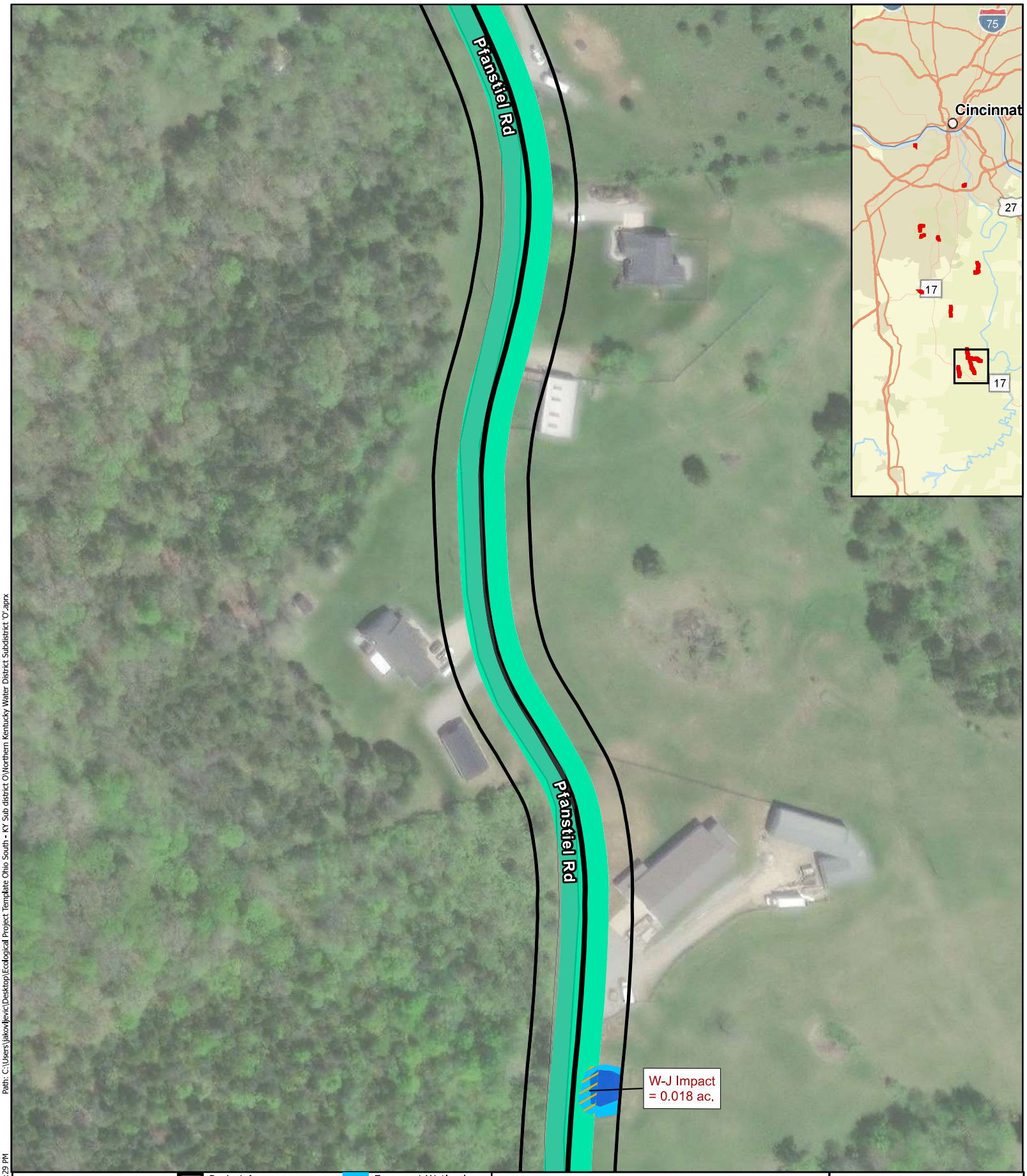
0 50 100 Feet

1 inch = 129 feet

Basemap courtesy of Nearmap

Path: C:\Users\jakovljevic\Desktop\Ecological Project Template Ohio South - KY Sub district O\Northern Kentucky Water District Subdistrict 'O'.aprx

Date Exported: 6/4/2024 4:29 PM



Project Area
Alignment
Temporary Easement 50 ft
Emergent Wetland
Emergent Wetland
Wetland Impact
Wetland Impact

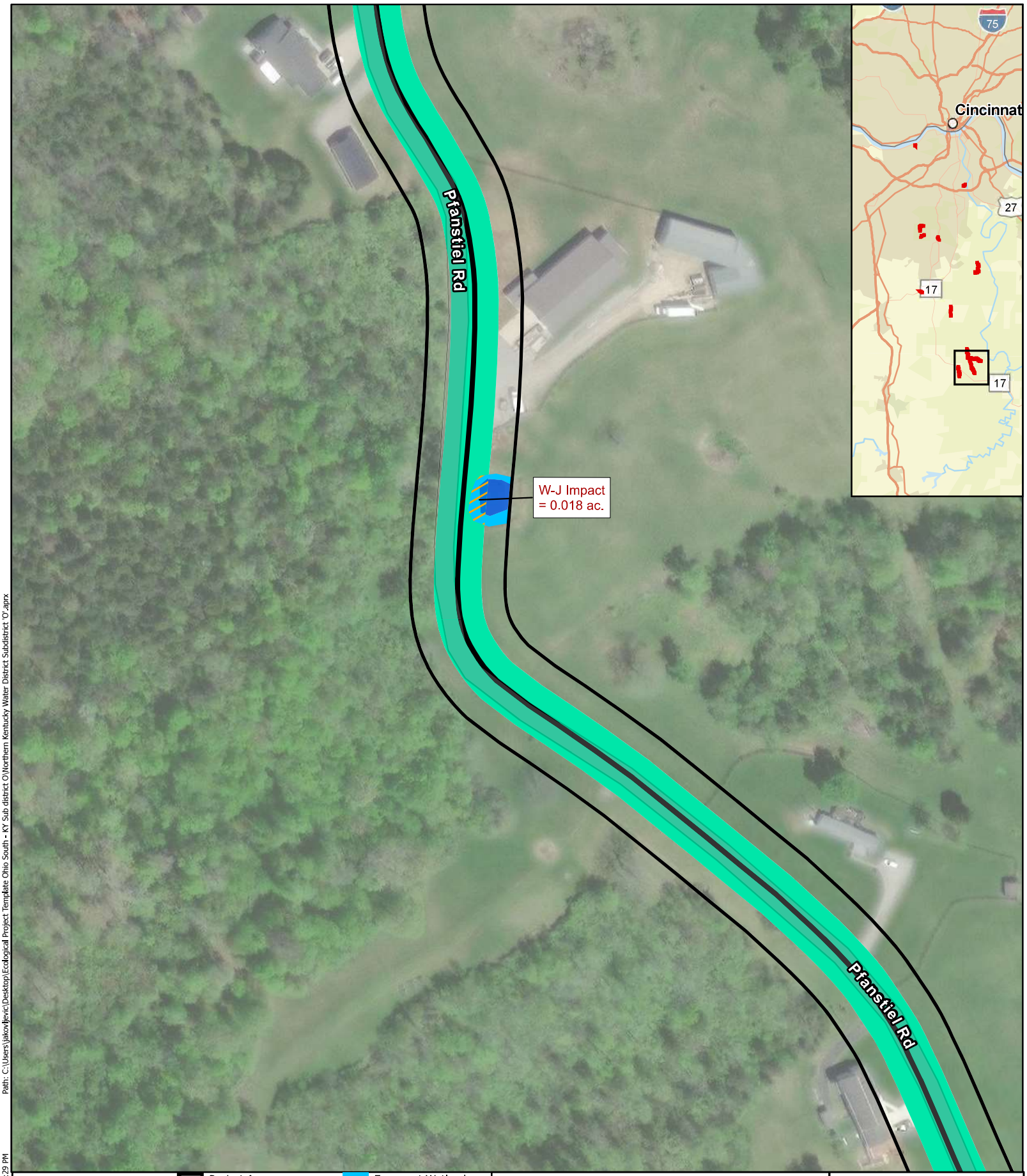
Figure 6.50 Impact Map
Northern Kentucky Water District Subdistrict 'O'

N
0 50 100 Feet
1 inch = 129 feet

Basemap courtesy of Nearmap

Path: C:\Users\jakov.ljevic\Desktop\Ecological Project Template Ohio South - KY Sub district O\Northern Kentucky Water District Subdistrict 'O'.aprx

Date Exported: 6/4/2024 4:29 PM



Project Area
Alignment
Temporary Easement 50 ft
Emergent Wetland
Emergent Wetland
Wetland Impact
Wetland Impact

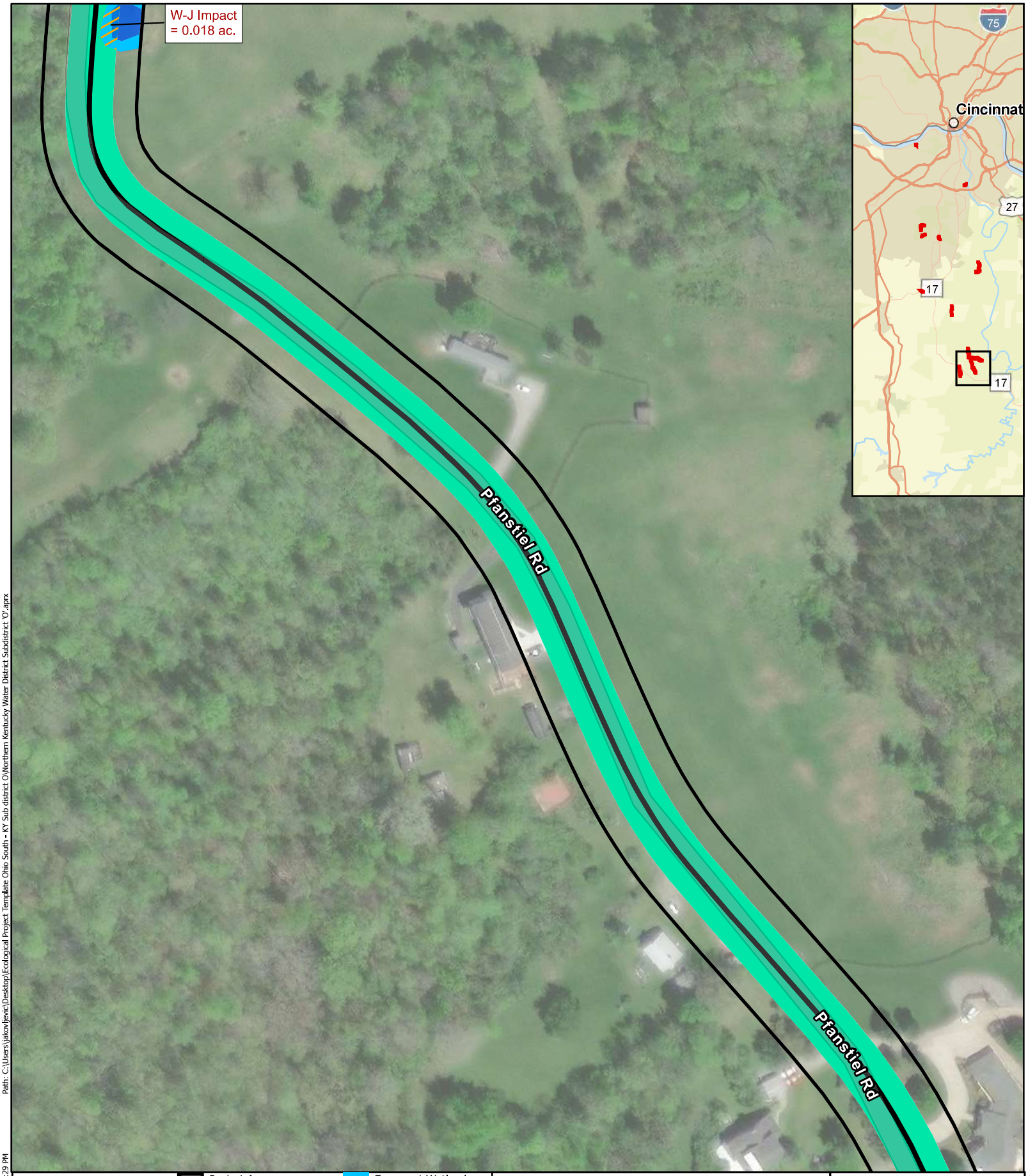
Figure 6.51 Impact Map
Northern Kentucky Water District Subdistrict 'O'

N
0 50 100 Feet
1 inch = 129 feet

Path: C:\Users\jakovljevic\Desktop\Ecological Project Template Ohio South - KY Sub district O\Northern Kentucky Water District Subdistrict 'O'.aprx

Date Exported: 6/4/2024 4:29 PM

Basemap courtesy of Nearmap



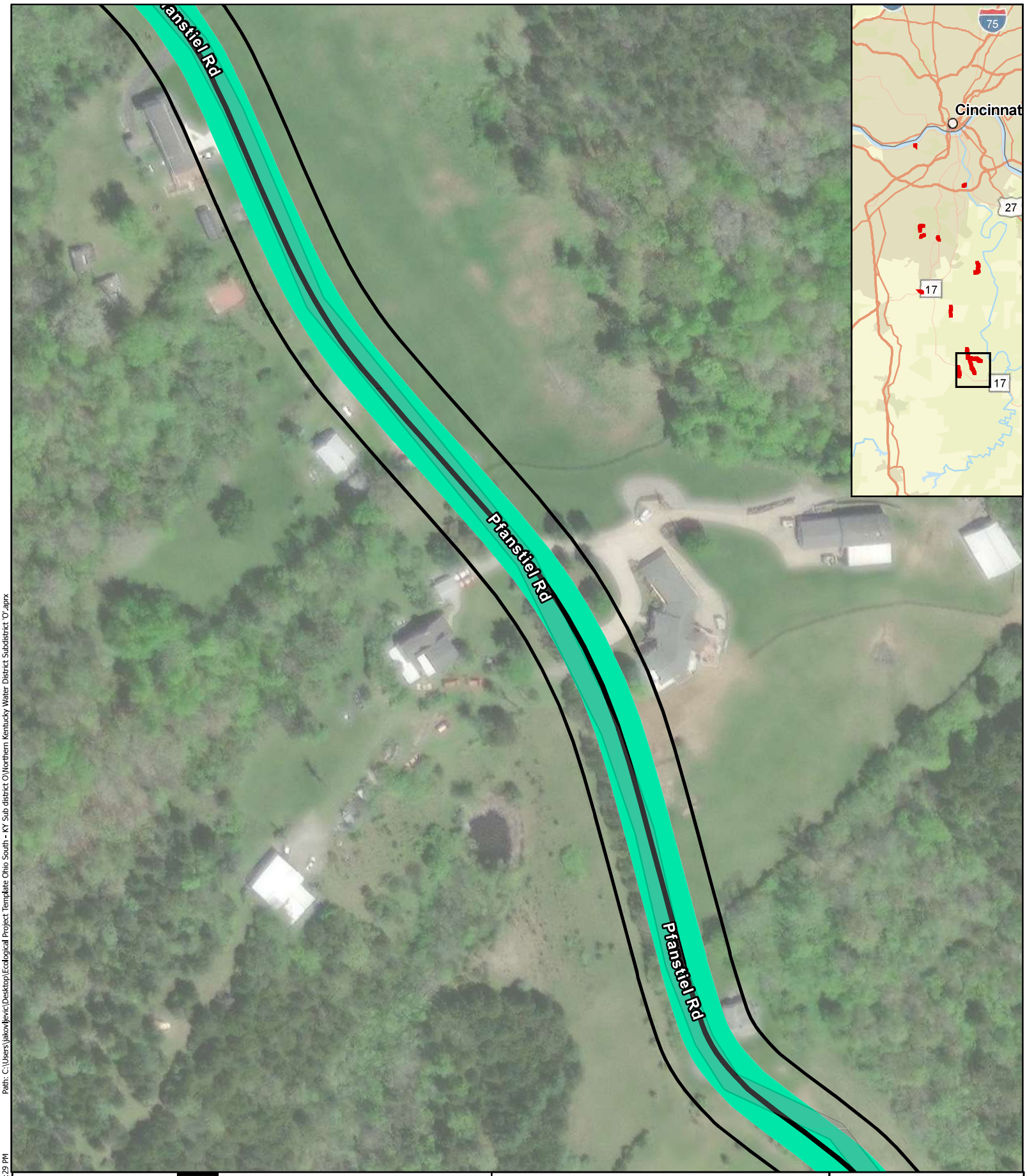
Project Area
Alignment
Temporary Easement 50 ft
Emergent Wetland
Emergent Wetland
Wetland Impact
Wetland Impact

Figure 6.52 Impact Map
Northern Kentucky Water District Subdistrict 'O'

N
0 50 100 Feet
1 inch = 129 feet

Path: C:\Users\jakovljevic\Desktop\Ecological Project Template Ohio South - KY Sub district O\Northern Kentucky Water District Subdistrict 'O'.aprx
Date Exported: 6/4/2024 4:29 PM

Basemap courtesy of Nearmap



Project Area

Alignment

Temporary Easement
50 ft

Figure 6.53 Impact Map
Northern Kentucky Water District Subdistrict 'O'

N

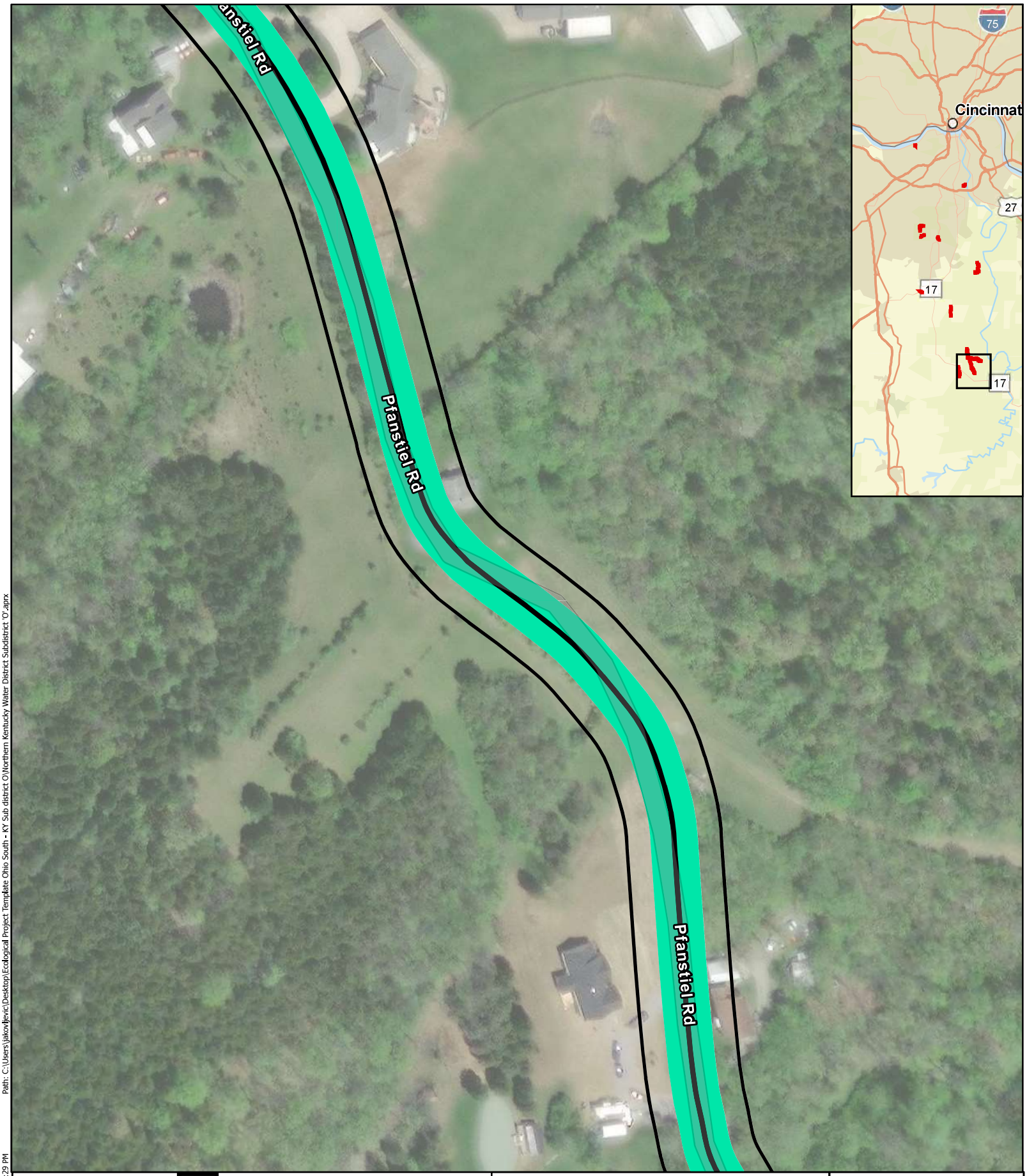
0 50 100 Feet

1 inch = 129 feet

Basemap courtesy of Nearmap

Path: C:\Users\jakov\Jlevic\Desktop\Ecological Project Template Ohio South - KY Sub district O\Northern Kentucky Water District Subdistrict 'O'.aprx

Date Exported: 6/4/2024 4:29 PM



Project Area
Alignment
Temporary Easement
50 ft

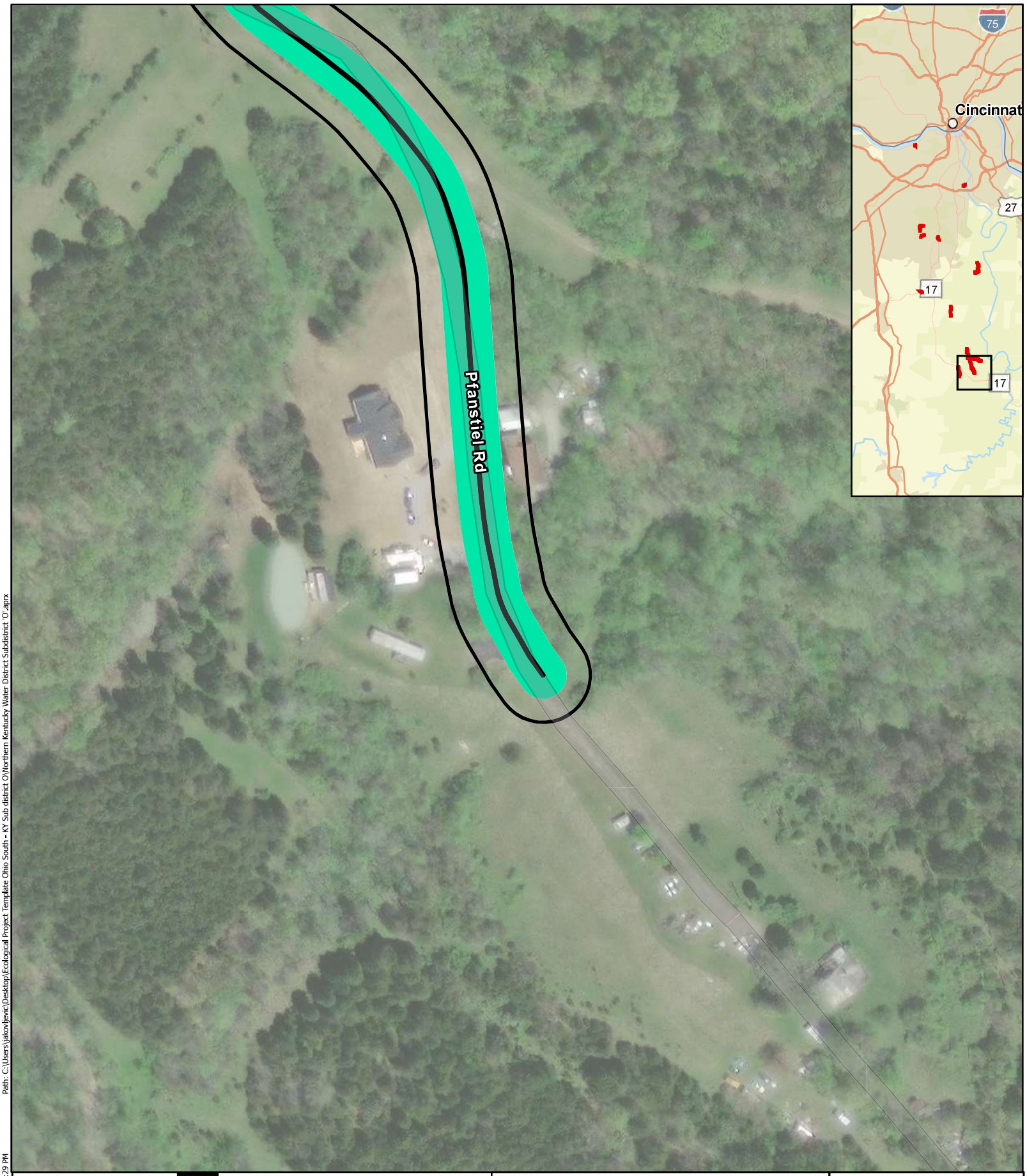
Figure 6.54 Impact Map
Northern Kentucky Water District Subdistrict 'O'

N
0 50 100 Feet
1 inch = 129 feet

Basemap courtesy of Nearmap

Path: C:\Users\jakov.ljevic\Desktop\Ecological Project Template Ohio South - KY Sub district O\Northern Kentucky Water District Subdistrict 'O'.aprx

Date Exported: 6/4/2024 4:29 PM



Project Area

Alignment

Temporary Easement
50 ft

Figure 6.55 Impact Map
Northern Kentucky Water District Subdistrict 'O'

N

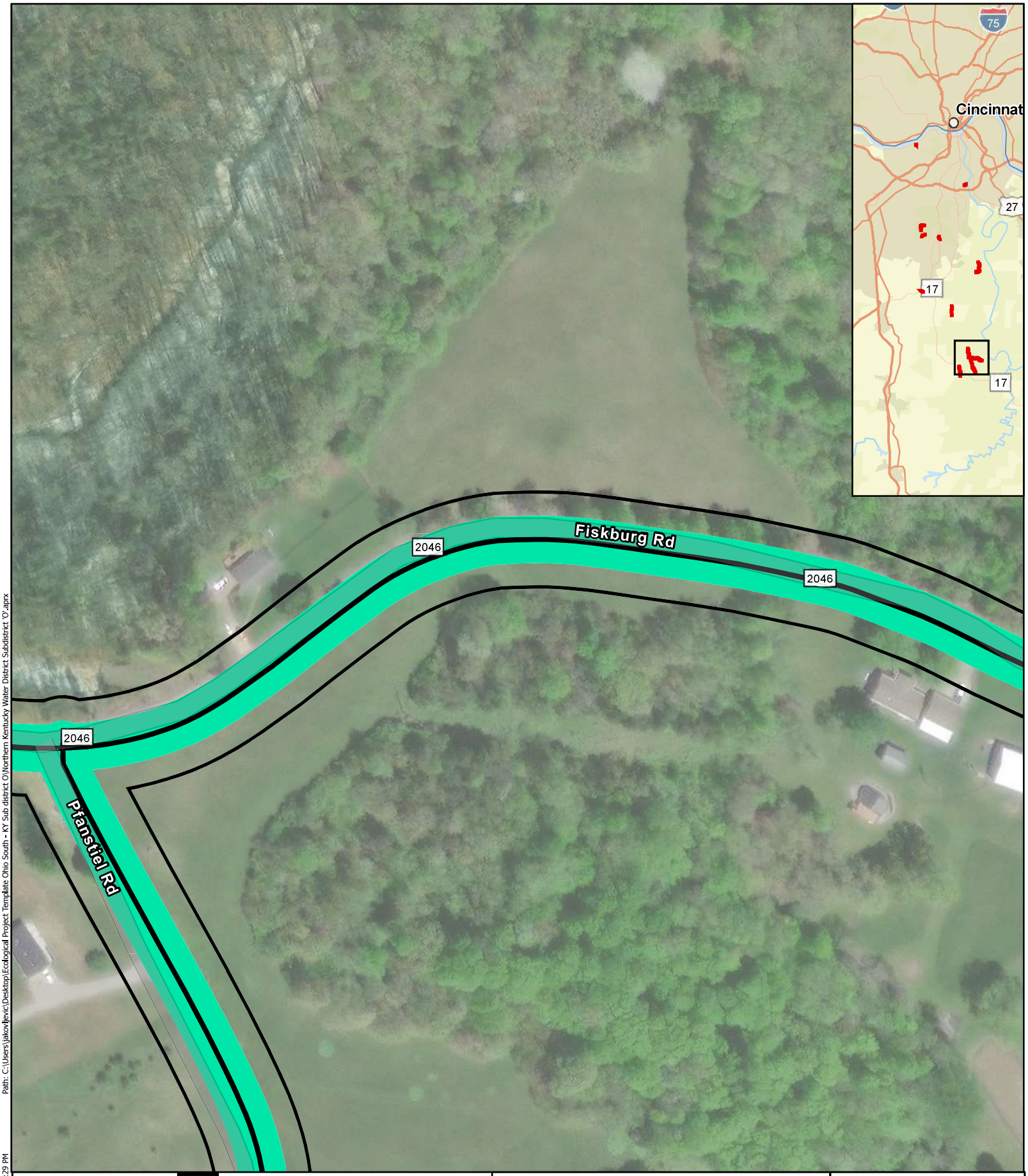
0 50 100 Feet

1 inch = 129 feet

Basemap courtesy of Nearmap

Path: C:\Users\jakov.ljevic\Desktop\Ecological Project Template Ohio South - KY Sub district O\Northern Kentucky Water District Subdistrict 'O'.aprx

Date Exported: 6/4/2024 4:29 PM



Project Area
Alignment
Temporary Easement
50 ft

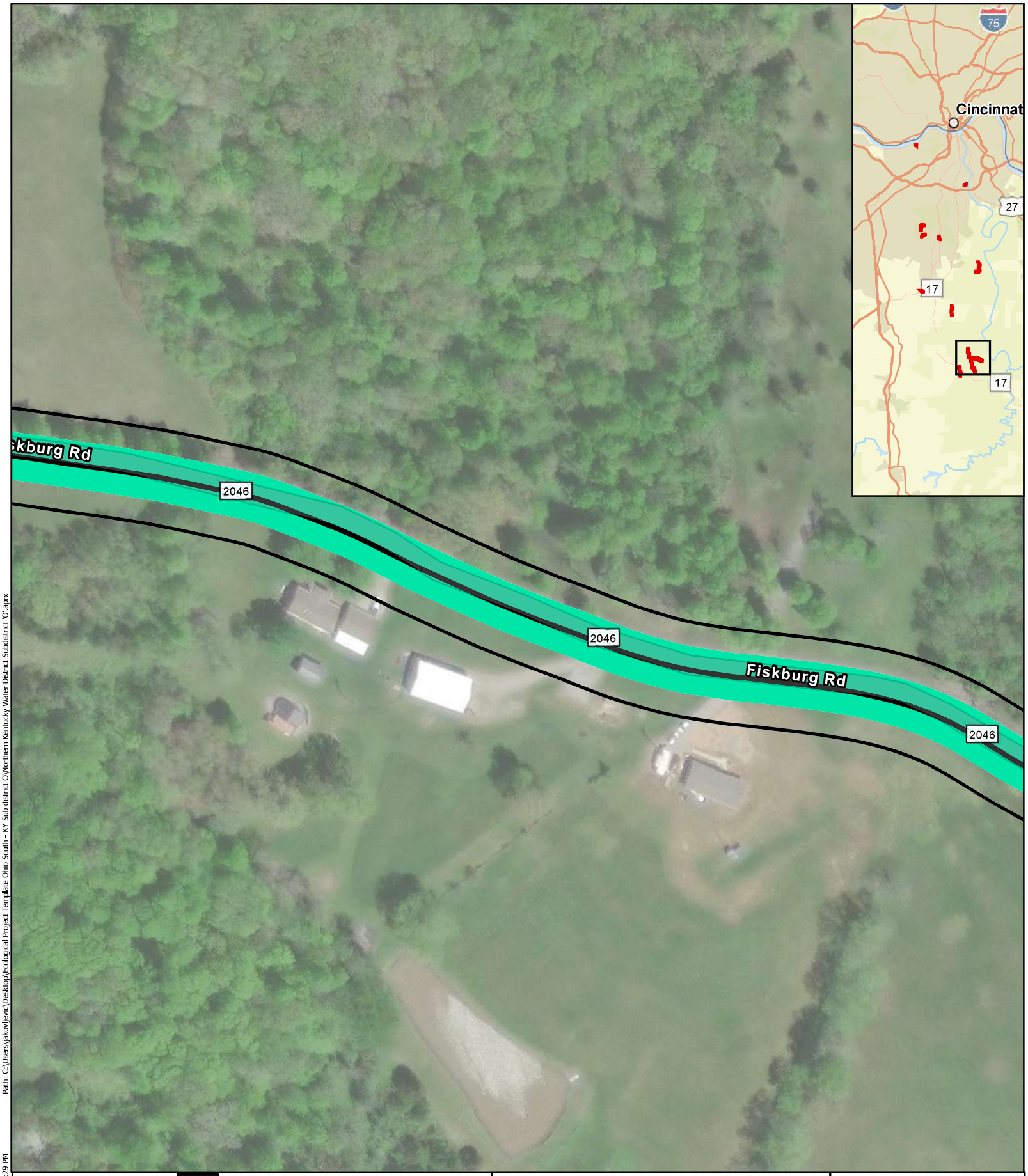
Figure 6.56 Impact Map
Northern Kentucky Water District Subdistrict 'O'

N
0 50 100 Feet
1 inch = 129 feet

Basemap courtesy of Nearmap

Path: C:\Users\jakovljevic\Desktop\Ecological Project Template Ohio South - KY Sub district O\Northern Kentucky Water District Subdistrict 'O'.aprx

Date Exported: 6/4/2024 4:29 PM



Project Area

Alignment

Temporary Easement
50 ft

Figure 6.57 Impact Map
Northern Kentucky Water District Subdistrict 'O'

N

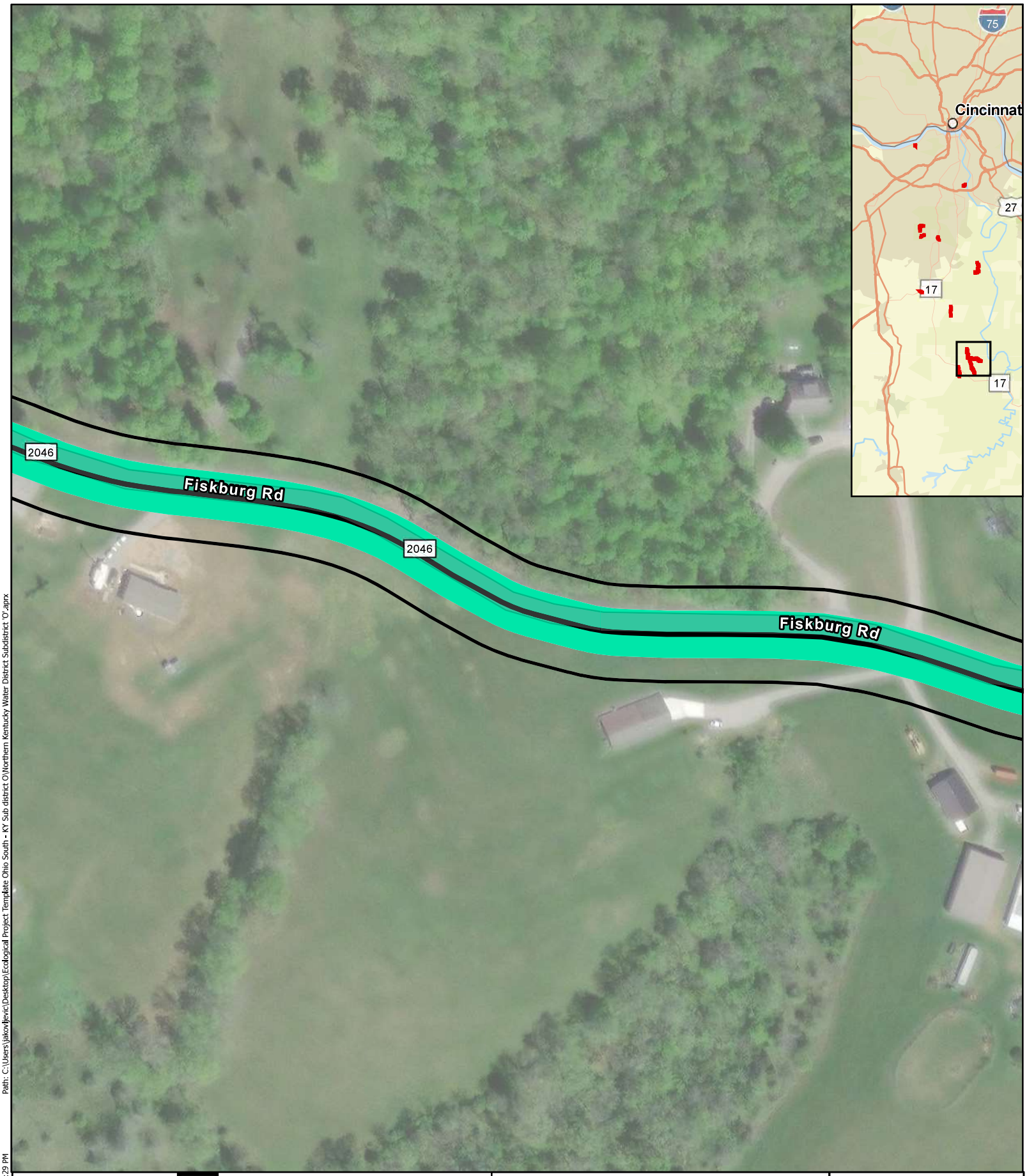
0 50 100 Feet

1 inch = 129 feet

Basemap courtesy of Nearmap

Path: C:\Users\jakov.ljevic\Desktop\Ecological Project Template Ohio South - KY Sub district O\Northern Kentucky Water District Subdistrict 'O'.aprx

Date Exported: 6/4/2024 4:29 PM



Project Area

Alignment

Temporary Easement
50 ft

Figure 6.58 Impact Map
Northern Kentucky Water District Subdistrict 'O'

N

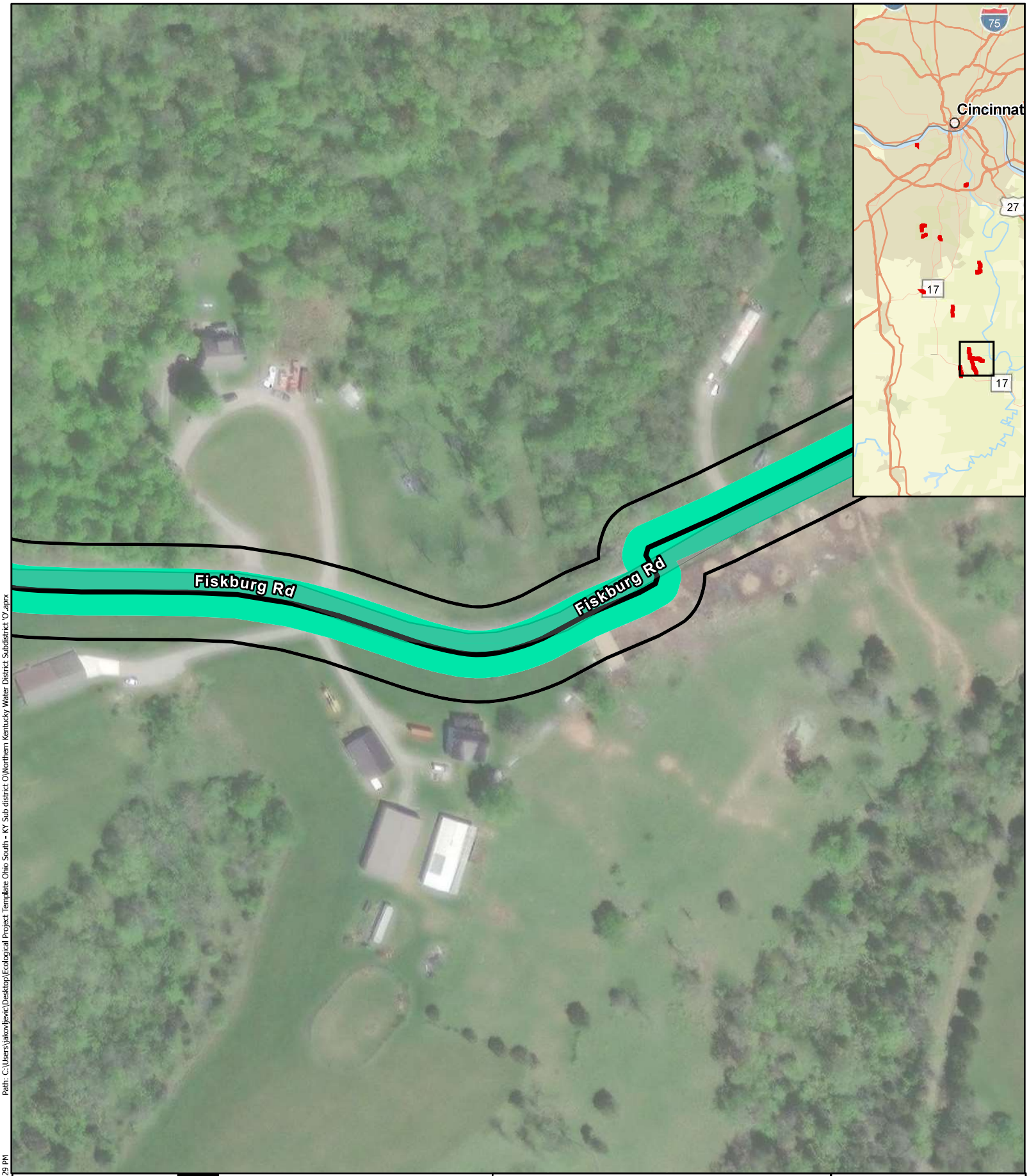
0 50 100 Feet

1 inch = 129 feet

Date Exported: 6/4/2024 4:29 PM

Path: C:\Users\jakov.ljevic\Desktop\Ecological Project Template Ohio South - KY Sub district O\Northern Kentucky Water District Subdistrict 'O'.aprx

Basemap courtesy of Nearmap



Project Area

Alignment

Temporary Easement
50 ft

Figure 6.59 Impact Map
Northern Kentucky Water District Subdistrict 'O'

N

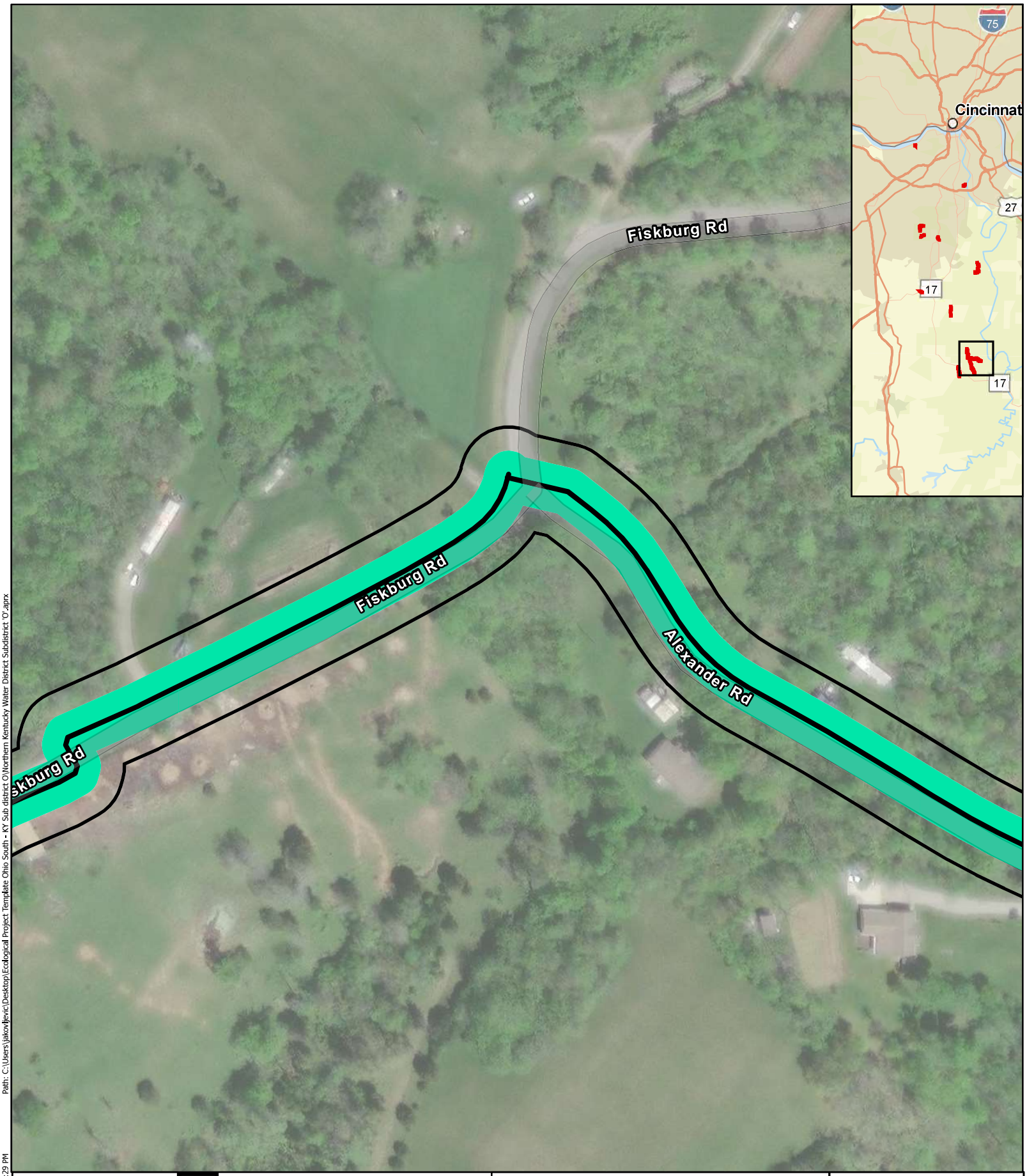
0 50 100 Feet

1 inch = 129 feet

Path: C:\Users\jakovljevic\Desktop\Ecological Project Template Ohio South - KY Sub district O\Northern Kentucky Water District Subdistrict 'O'.aprx

Date Exported: 6/4/2024 4:29 PM

Basemap courtesy of Nearmap



Project Area
Alignment
Temporary Easement
50 ft

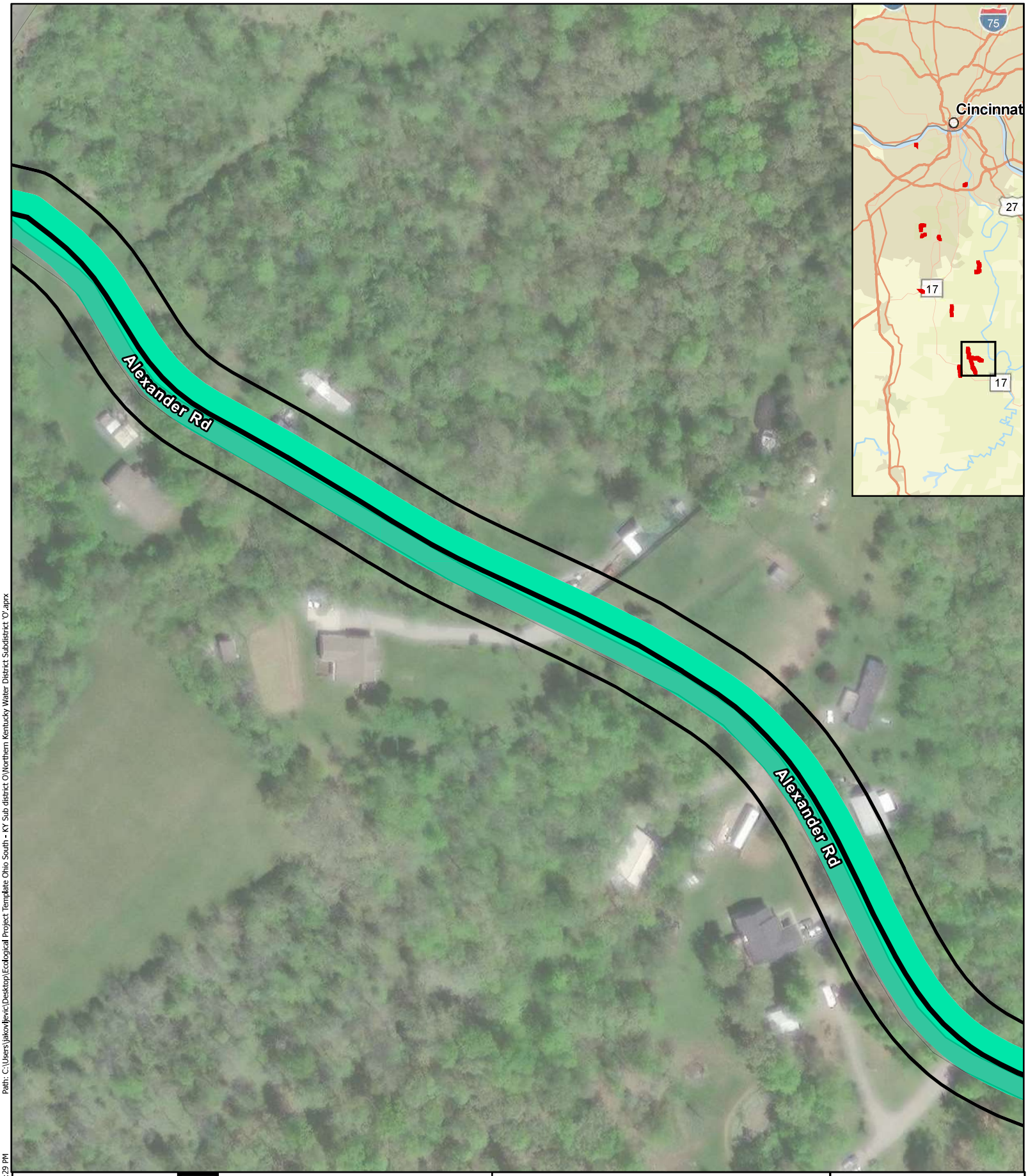
Figure 6.60 Impact Map
Northern Kentucky Water District Subdistrict 'O'

N
0 50 100 Feet
1 inch = 129 feet

Basemap courtesy of Nearmap

Path: C:\Users\jakov.ljevic\Desktop\Ecological Project Template Ohio South - KY Sub district O\Northern Kentucky Water District Subdistrict 'O'.aprx

Date Exported: 6/4/2024 4:29 PM



Project Area
Alignment
Temporary Easement
50 ft

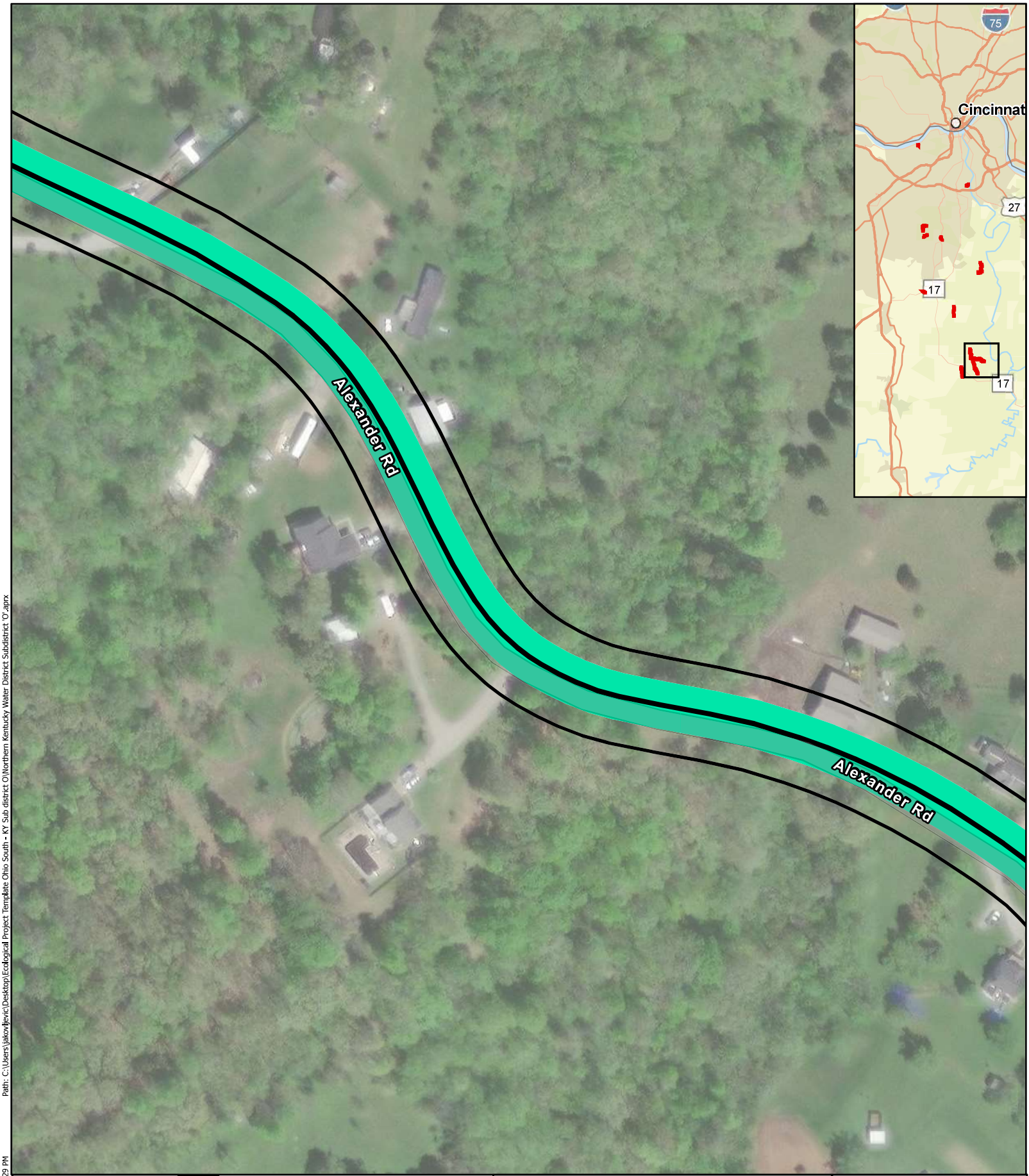
Figure 6.61 Impact Map
Northern Kentucky Water District Subdistrict 'O'

N
0 50 100 Feet
1 inch = 129 feet

Basemap courtesy of Nearmap

Path: C:\Users\jakovljevic\Desktop\Ecological Project Template Ohio South - KY Sub district O\Northern Kentucky Water District Subdistrict 'O'.aprx

Date Exported: 6/4/2024 4:29 PM



Project Area
Alignment
Temporary Easement
50 ft

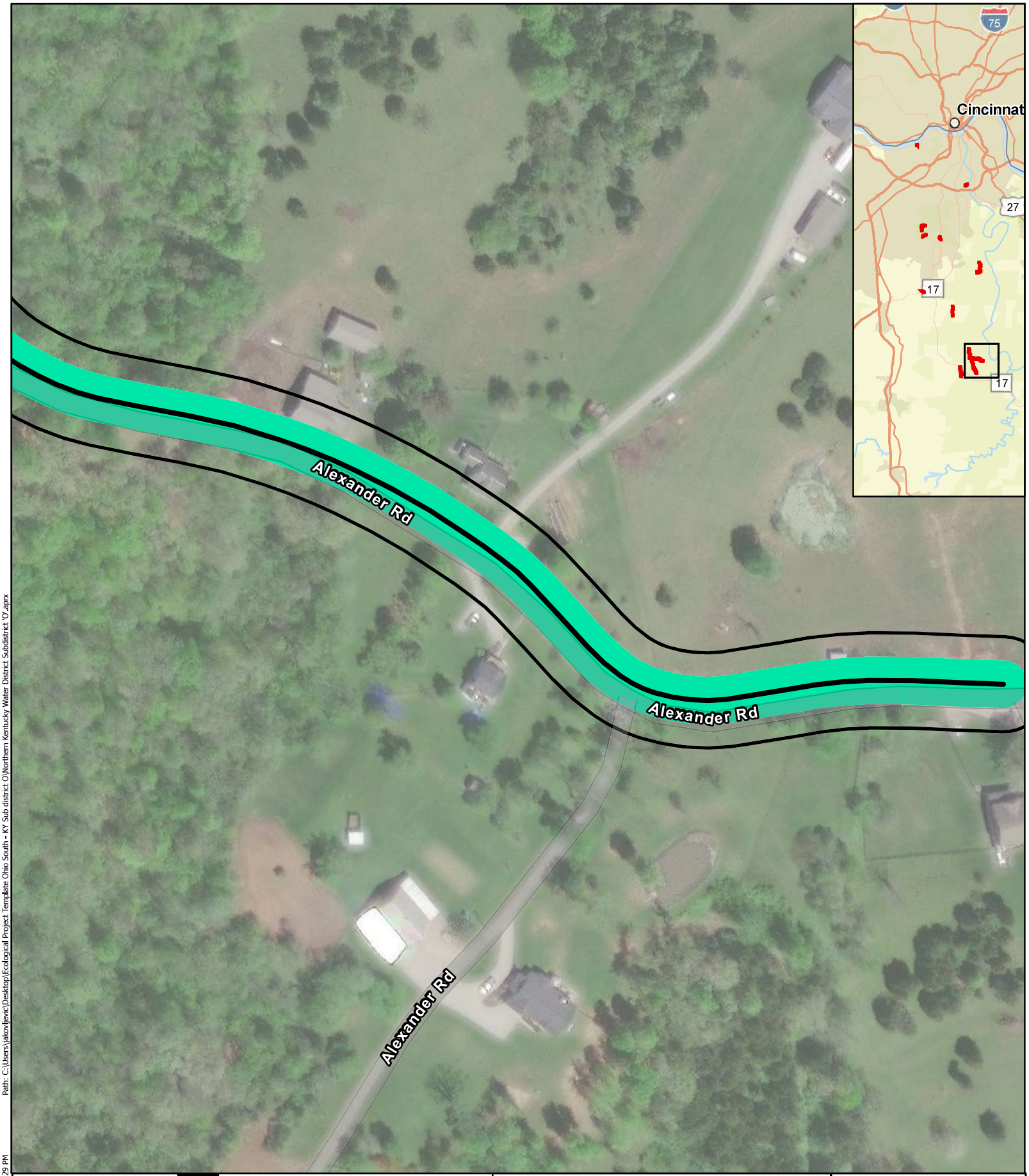
Figure 6.62 Impact Map
Northern Kentucky Water District Subdistrict 'O'

N
0 50 100 Feet
1 inch = 129 feet

Basemap courtesy of Nearmap

Path: C:\Users\jakov.ljevic\Desktop\Ecological Project Template Ohio South - KY Sub district O\Northern Kentucky Water District Subdistrict 'O'.aprx

Date Exported: 6/4/2024 4:29 PM



Project Area

Alignment

Temporary Easement
50 ft

Figure 6.63 Impact Map
Northern Kentucky Water District Subdistrict 'O'

N

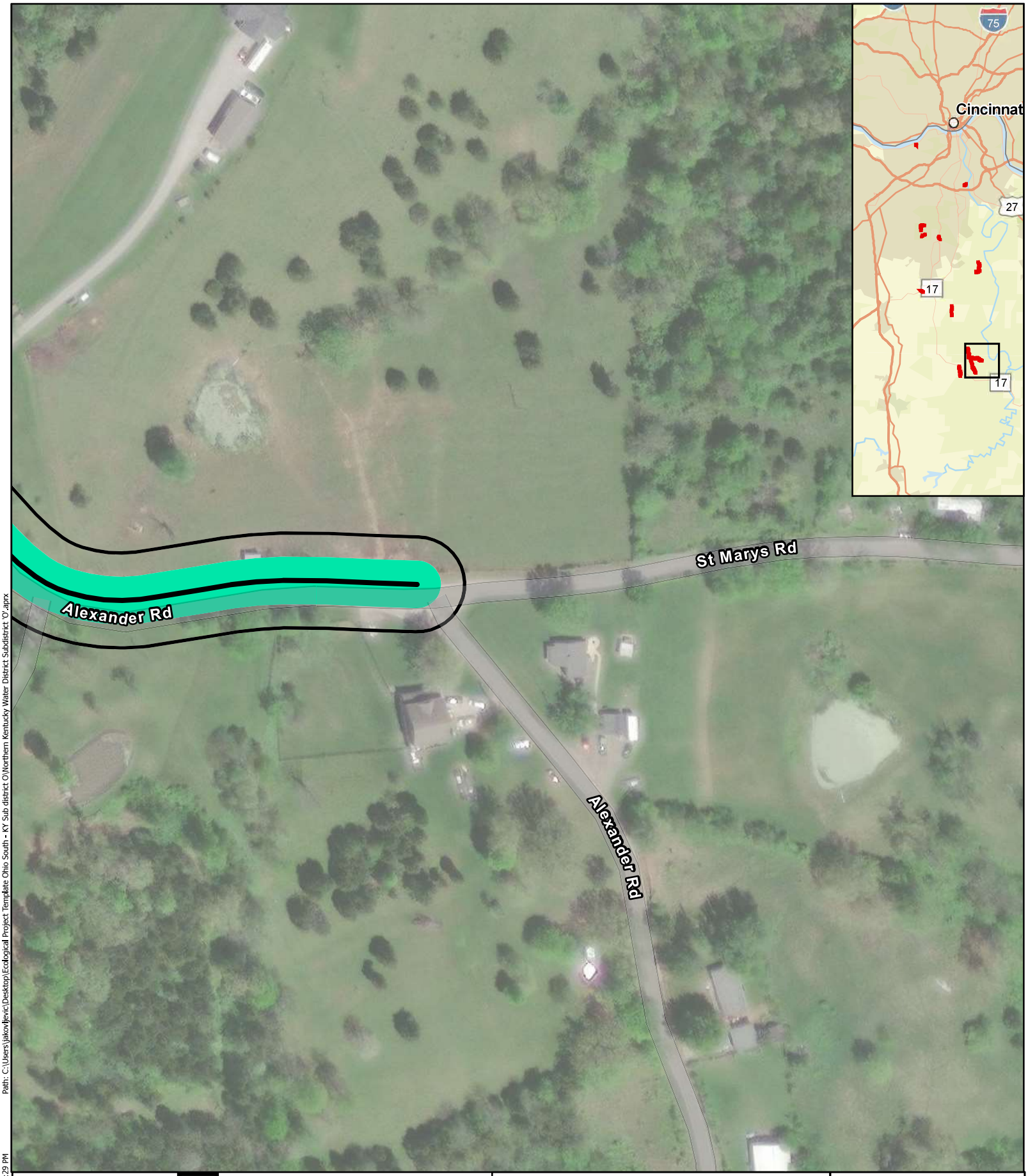
0 50 100 Feet

1 inch = 129 feet

Basemap courtesy of Nearmap

Path: C:\Users\jakov.ljevic\Desktop\Ecological Project Template Ohio South - KY Sub district O\Northern Kentucky Water District Subdistrict 'O'.aprx

Date Exported: 6/4/2024 4:29 PM



Project Area
Alignment
Temporary Easement
50 ft

Figure 6.64 Impact Map
Northern Kentucky Water District Subdistrict 'O'

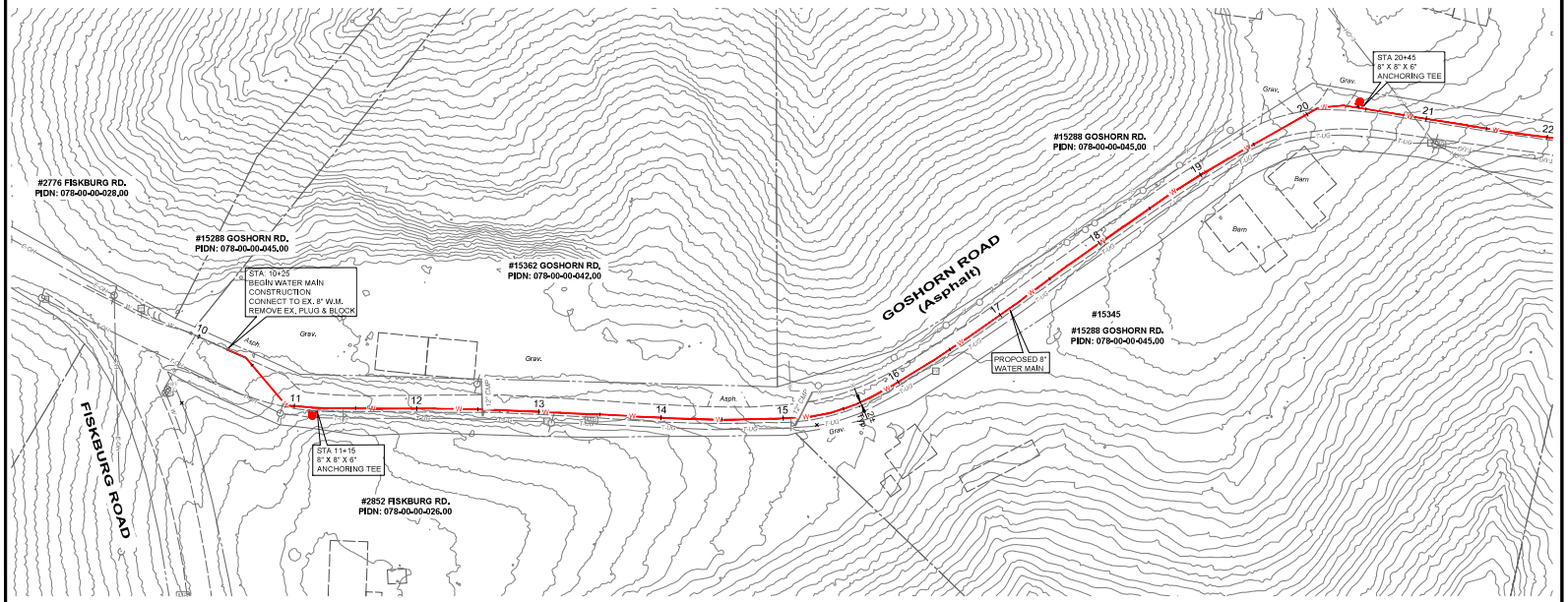
0 50 100 Feet
1 inch = 129 feet

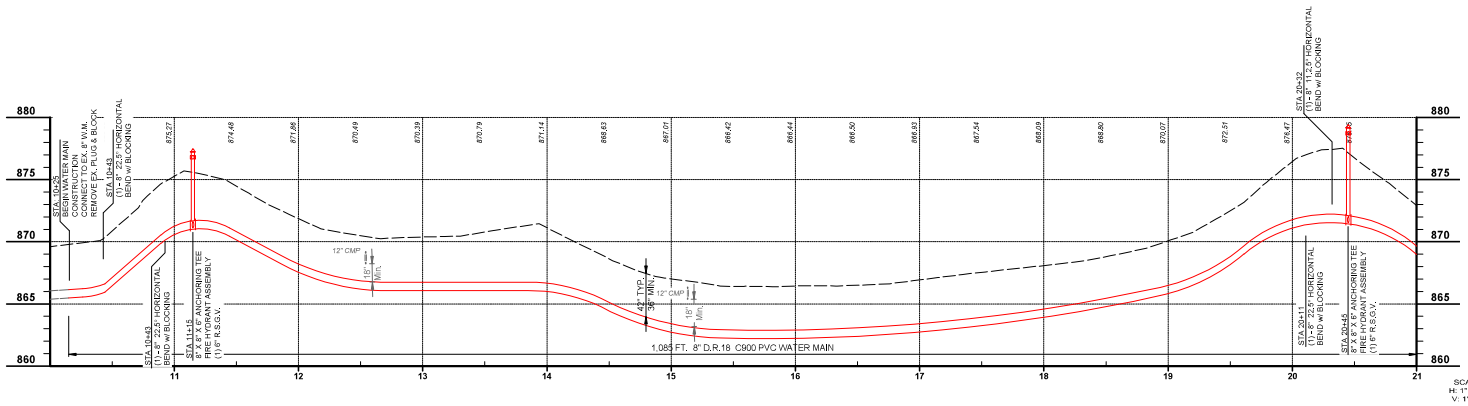
N

Path: C:\Users\jakovljevic\Desktop\Ecological Project Template Ohio South - KY Sub district O\Northern Kentucky Water District Subdistrict 'O'.aprx

Date Exported: 6/4/2024 4:29 PM

Basemap courtesy of Nearmap







50%
REVIEW

your trusted advisor
consultants
engineers
architects
planners

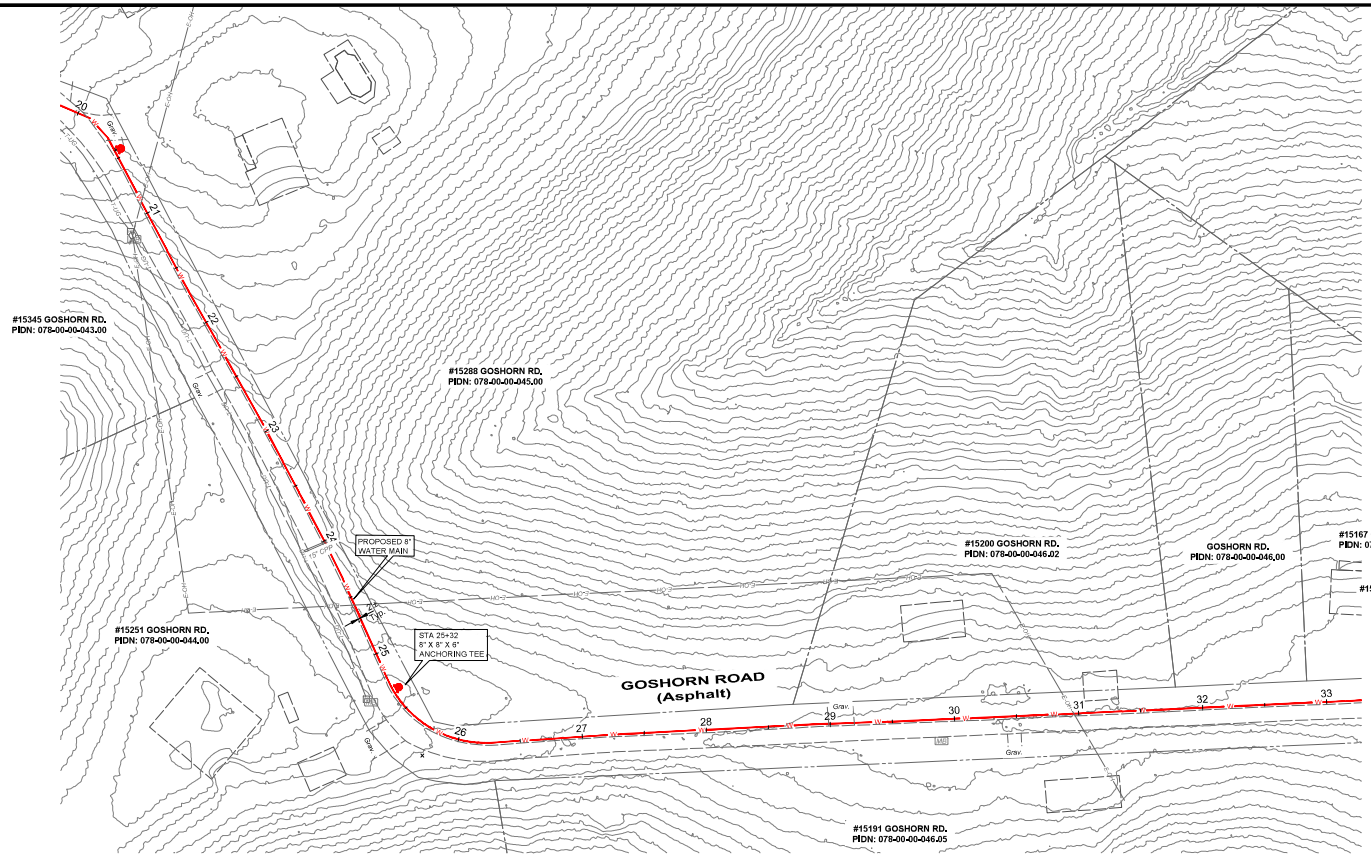
NO.	REVISION	DATE
-	-	-

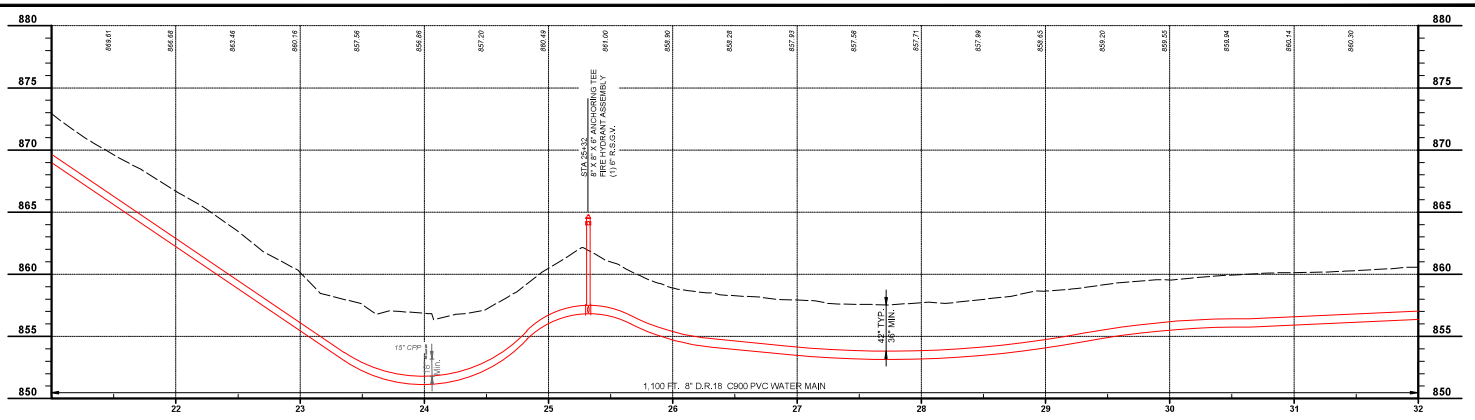
ISSUED FOR:	30% DESIGN
ISSUE DATE:	FEB 2026
SCALE:	AS SHOWN
DESIGNED BY:	JCOR
DRAWN BY:	JCOR
CHECKED BY:	JSHU

NORTHERN KENTUCKY WATER DISTRICT
SUBDISTRICT 'O'
-KENTON COUNTY-

GOSHORN ROAD
STA. 10+00 TO STA. 21+00

PROJECT NO.	231591
DISCIPLINE	CIVIL
SHEET NAME	C-24
SHEET	25
OF	44





0' 50' 100'
SCALE: 1" = 50'

50%
REVIEW

your trusted advisor
consultants
engineers
architects
planners

NO	REVISION	DATE
-	-	-

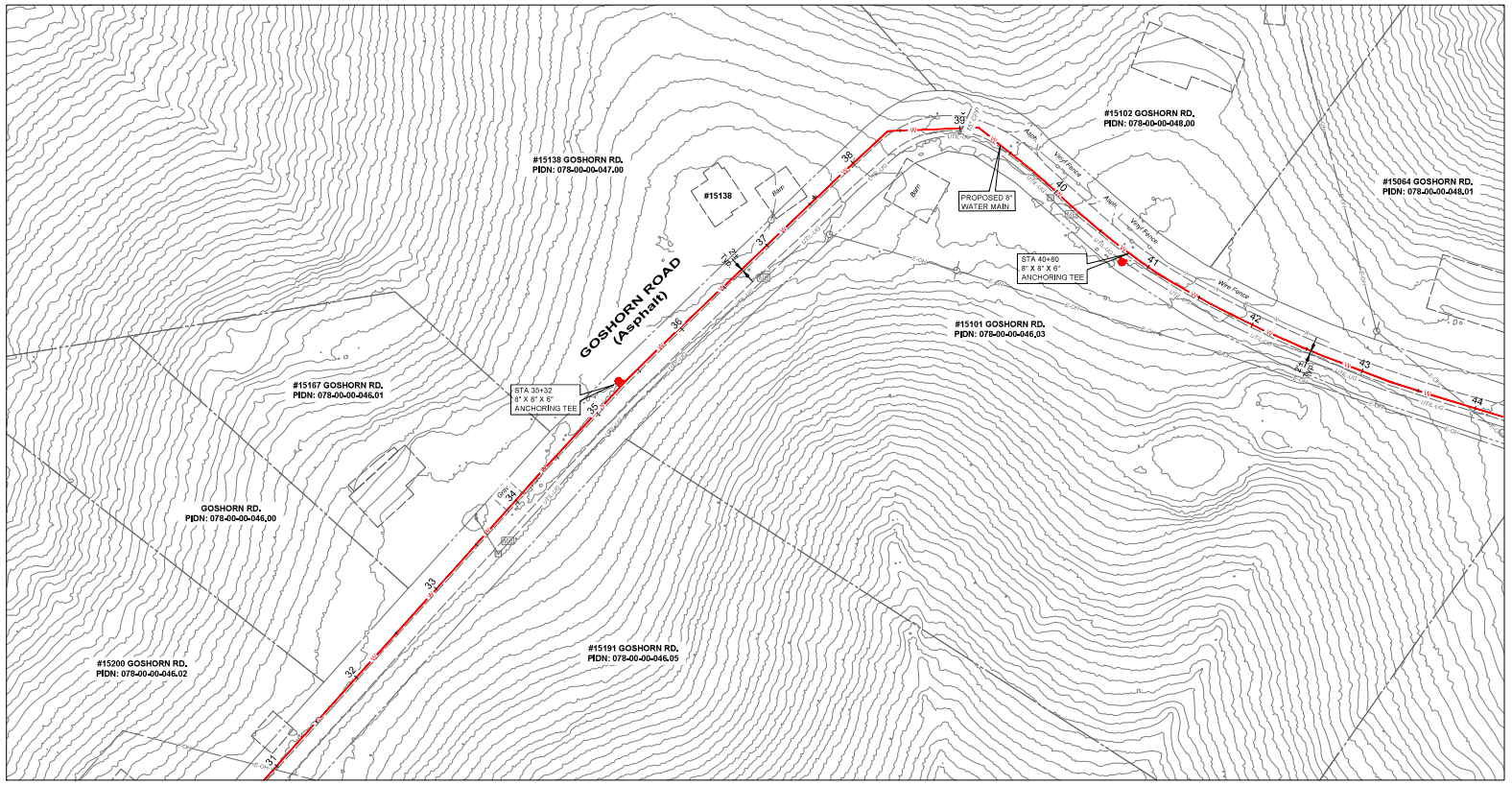
ISSUED FOR:	30% DESIGN
ISSUE DATE:	FEB 2026
SCALE:	AS SHOWN
DESIGNED BY:	JCOR
DRAWN BY:	JCOR
CHECKED BY:	JSHU

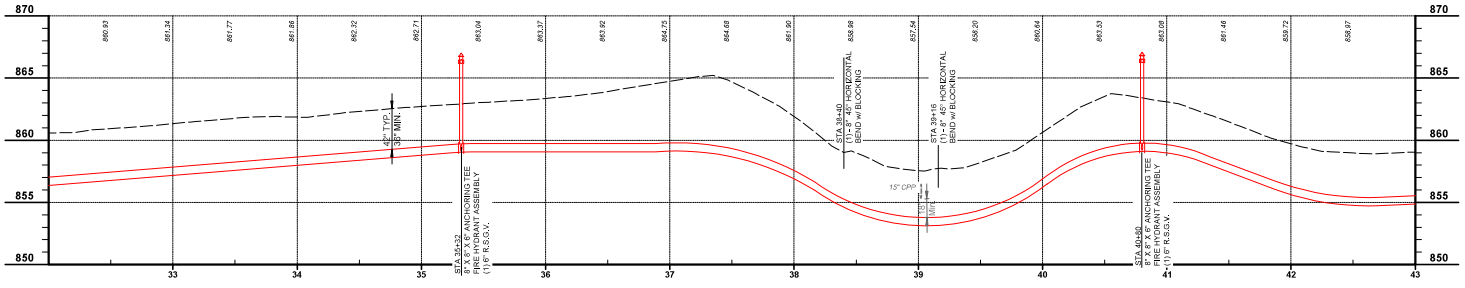
NORTHERN KENTUCKY WATER DISTRICT
SUBDISTRICT 'O'
-KENTON COUNTY -

GOSHORN ROAD
STA. 21+00 TO STA. 32+00

PROJECT NO.	231591
DISCIPLINE	CIVIL
SHEET NAME	C-25
SHEET	26
OF	44

H:\2023\231591\DWG\SHEETS_231591.PWP ▪ C:\JOSH.CARLOVE\ ▪ GOSHORN ▪ 2/5/2026 5:53:19 PM ▪ JAMES CORNELL





SCALES:
H: 1" = 50'
V: 1" = 5'

0' 50' 100'
SCALE: 1" = 50

50%
REVIEW

your trusted advisor
consultants
engineers
architects
planners

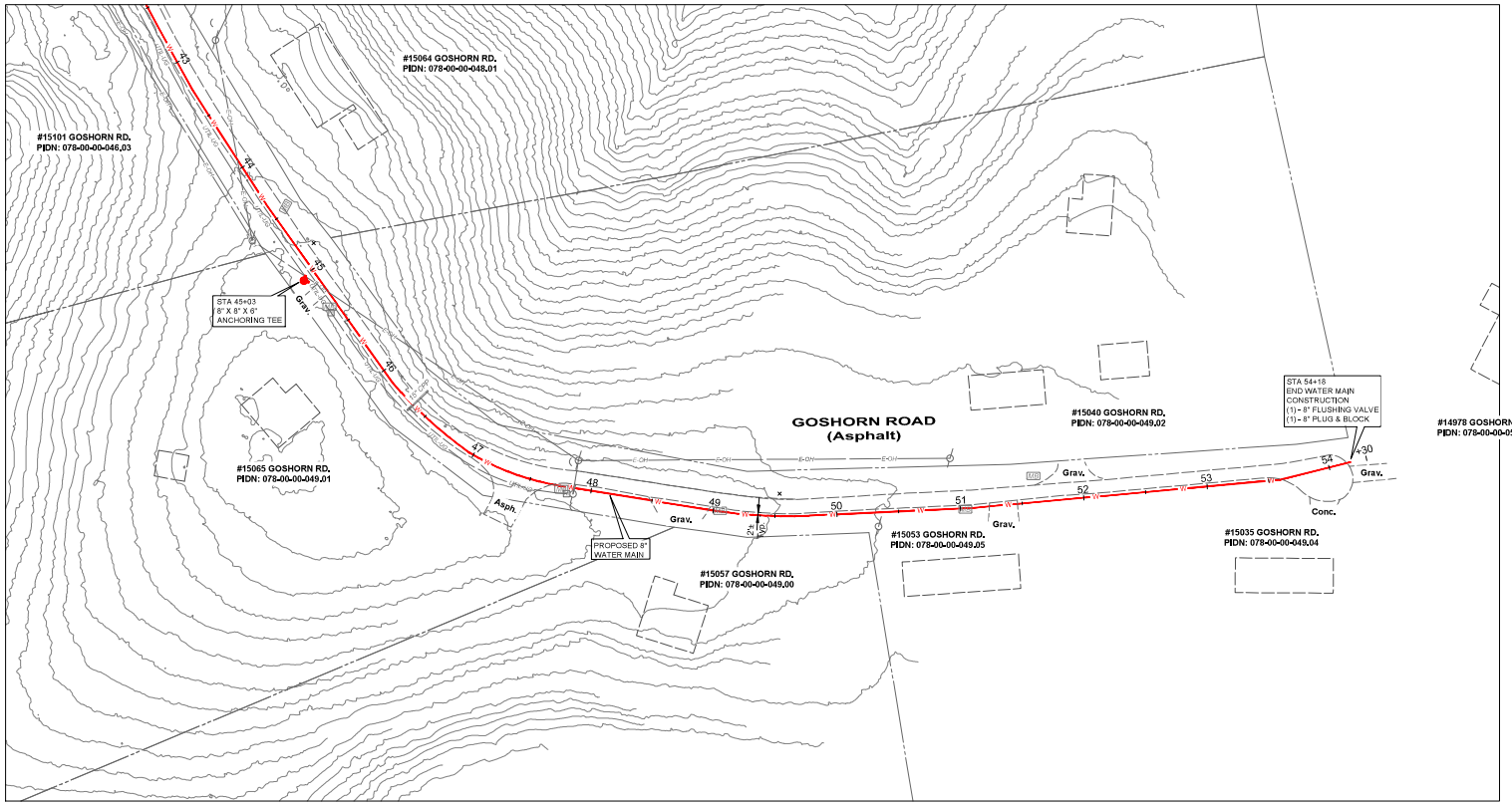
NO	REVISION	DATE
-	-	-

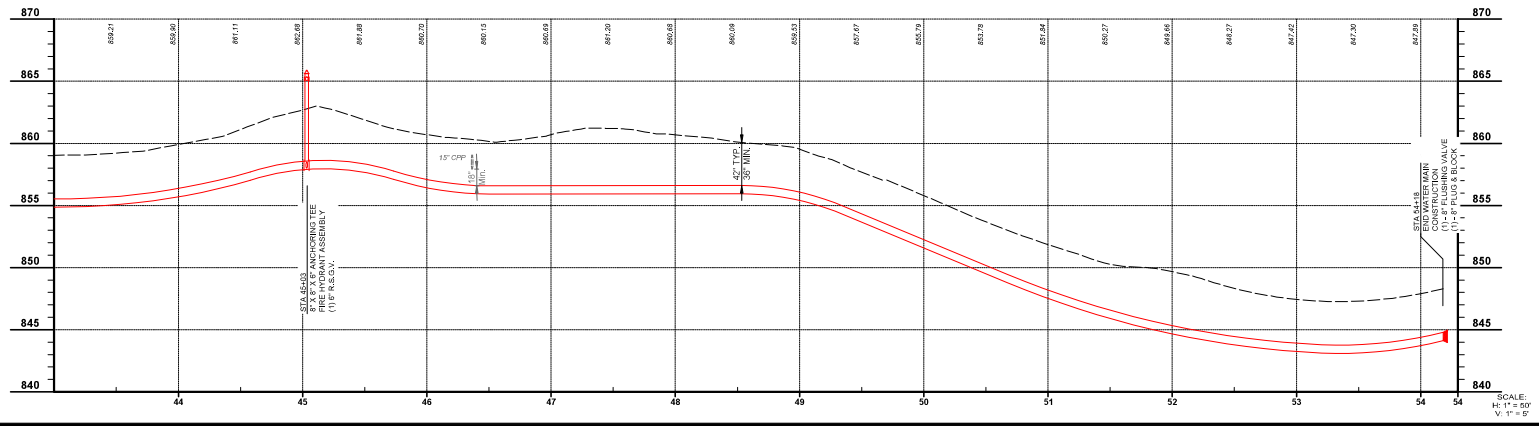
ISSUED FOR:	30% DESIGN
ISSUE DATE:	FEB 2026
SCALE:	AS SHOWN
DESIGNED BY:	JCOR
DRAWN BY:	JCOR
CHECKED BY:	JSHU

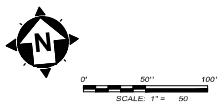
NORTHERN KENTUCKY WATER DISTRICT
SUBDISTRICT 'O'
-KENTON COUNTY -

GOSHORN ROAD
STA. 32+00 TO STA. 43+00

PROJECT NO.	231591
DISCIPLINE	CIVIL
SHEET NAME	C-26
SHEET	27
OF	44







50% REVIEW

your trusted advisor
consultants
engineers
architects
planners

NO	REVISION	DATE
-	-	-

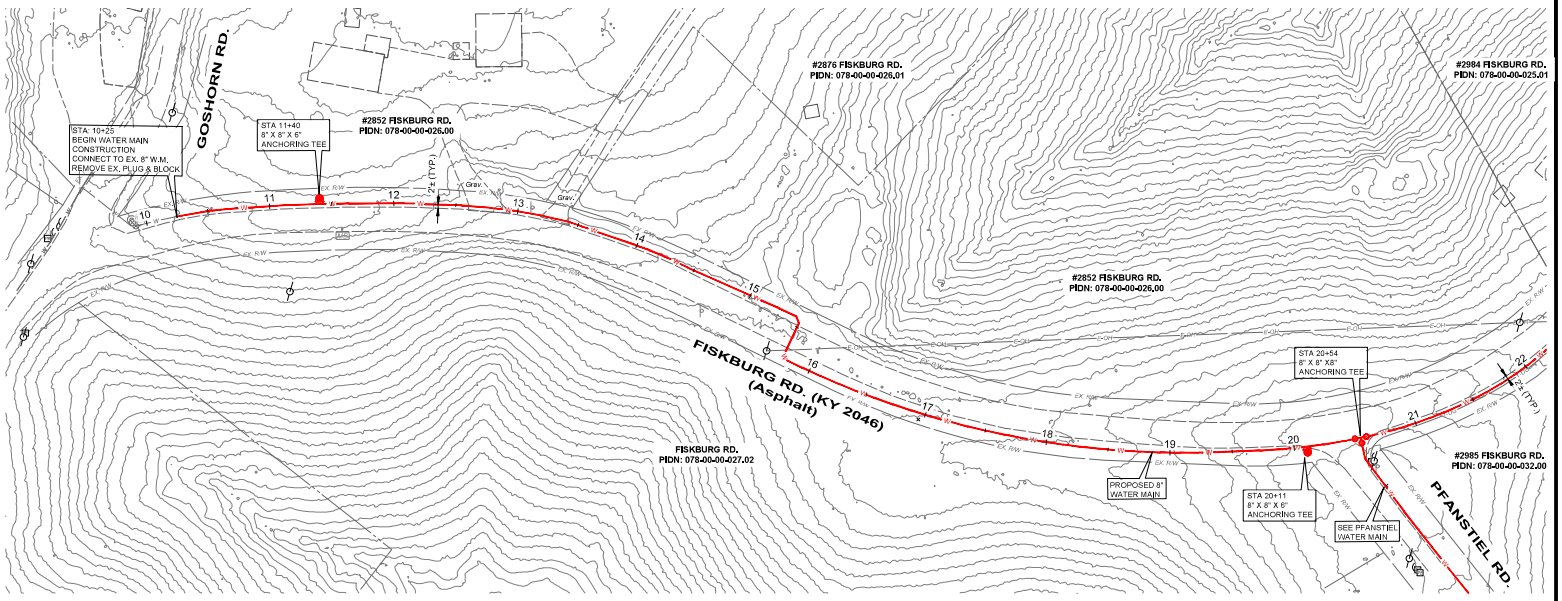
ISSUED FOR:	30% DESIGN
ISSUE DATE:	FEB 2026
SCALE:	AS SHOWN
DESIGNED BY:	JCOR
DRAWN BY:	JCOR
CHECKED BY:	JSHU

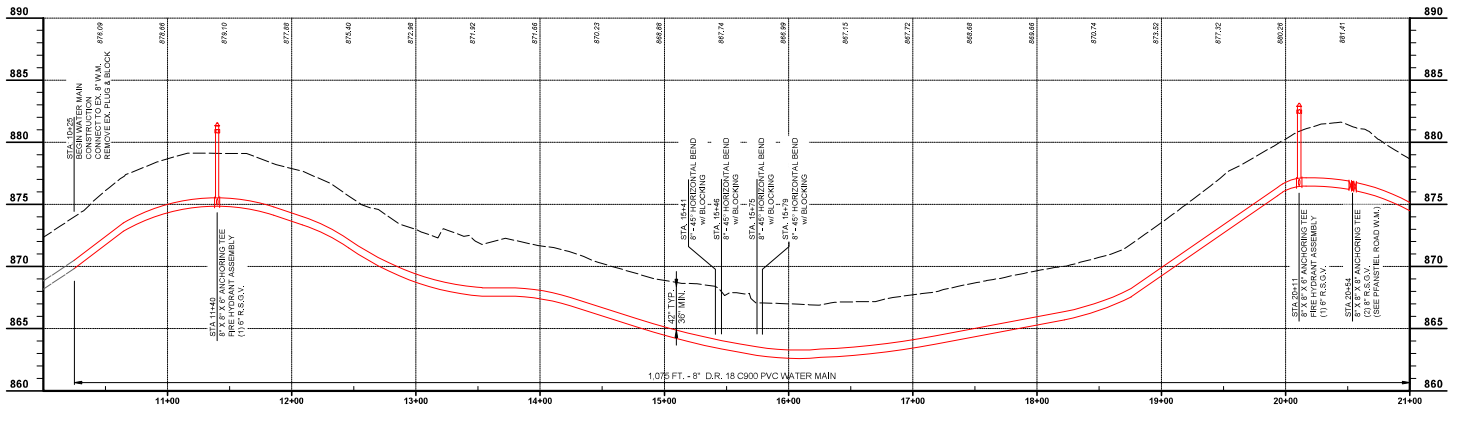
NORTHERN KENTUCKY WATER DISTRICT
SUBDISTRICT 'O'
-KENTON COUNTY -

GOSHORN ROAD
STA. 43+00 TO STA. 54+35

PROJECT NO.	231591
DISCIPLINE	CIVIL
SHEET NAME	C-27
SHEET	28
OF	44

H:\2023\231591\DWG\SHEETS_231591 PW1_C_GOSHORN.DWG - GOSHORN_C - 2/19/2026 5:53:19 PM - JAMES CORNELL





SCALE:
H: 1" = 50'
V: 1" = 5'

0' 50' 100'
SCALE: 1" = 50'

50% REVIEW

your trusted advisor
consultants — engineers architects planners

NO	REVISION	DATE
-	-	-

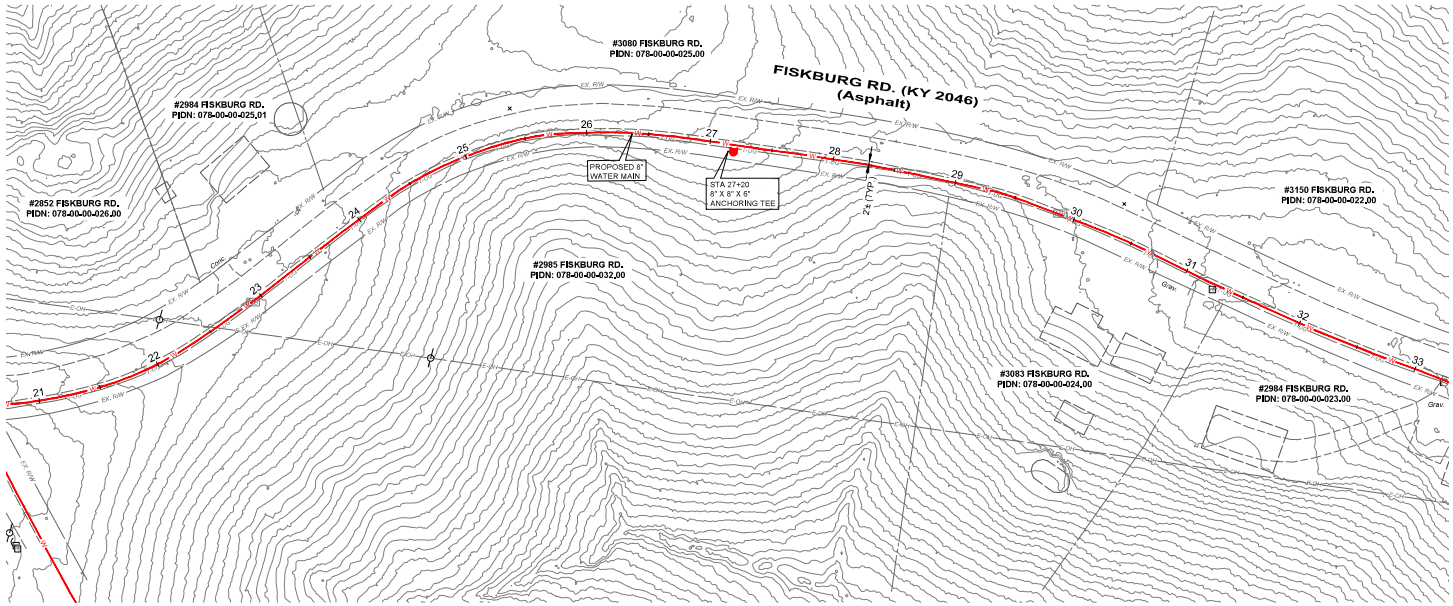
ISSUED FOR:	50% DESIGN
ISSUE DATE:	FEB 2024
SCALE:	AS SHOWN
DESIGNED BY:	JCOX
DRAWN BY:	JCOR
CHECKED BY:	JBHJ

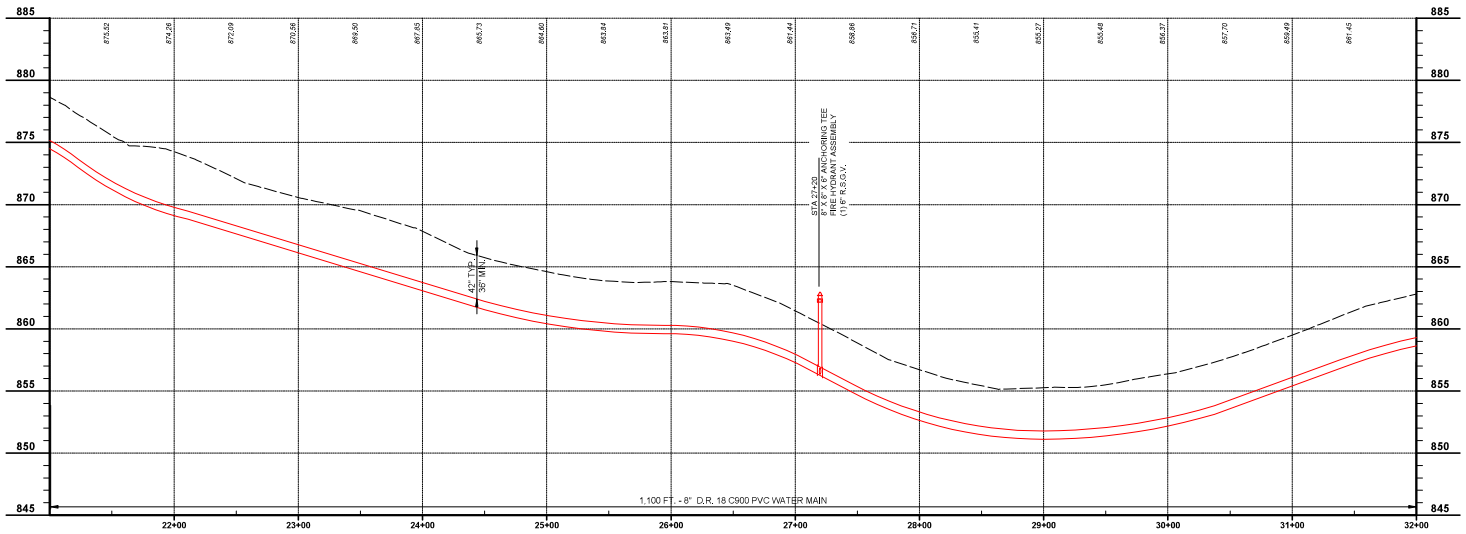
NORTHERN KENTUCKY WATER DISTRICT
SUBDISTRICT 'O'
-KENTON COUNTY -

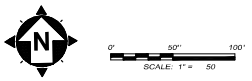
FISKBURG ROAD
STA. 10+00 TO STA. 21+00

PROJECT NO.	231591
DISCIPLINE	CIVIL
SHEET NAME	C-28
SHEET	29
OF	44

C:\TCAD_DATA\...\C28_FISKBURG.DWG - FISKBURG - 3/5/2024 9:54:11 PM - JAMES CORNELL







50% REVIEW

your trusted advisor
consultants — engineers
architects
planners

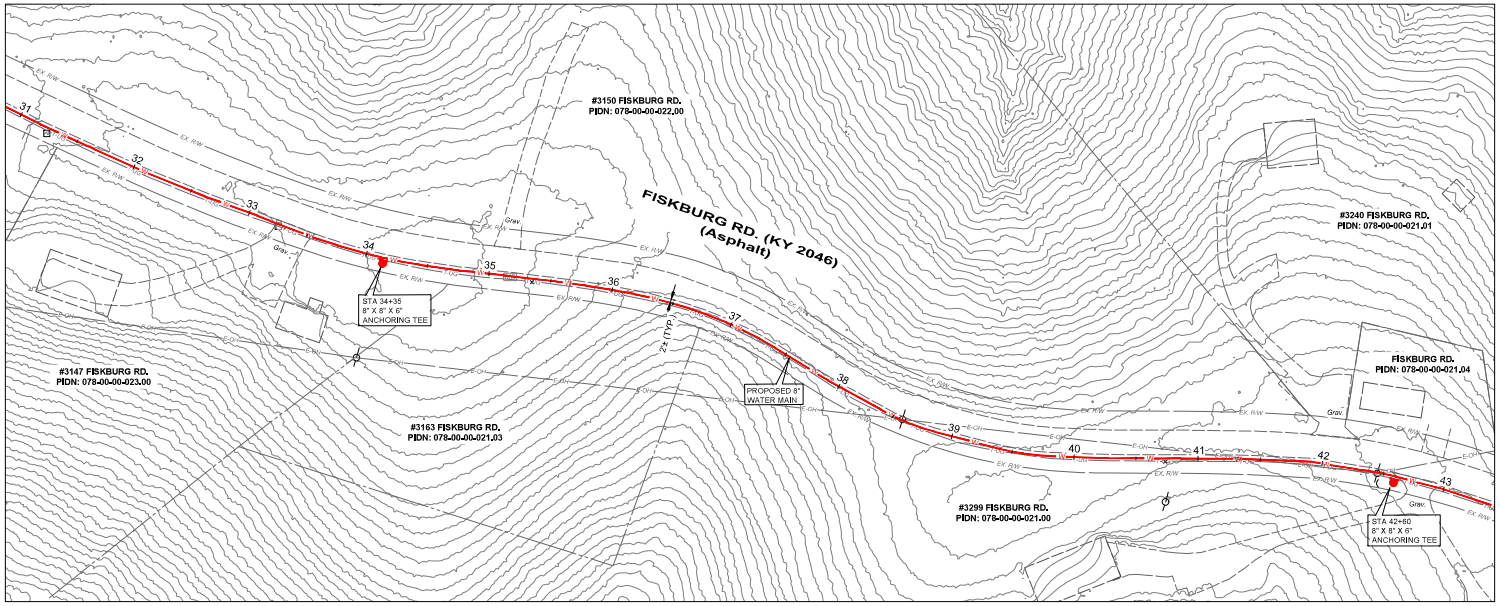
NO	REVISION	DATE
-	-	-

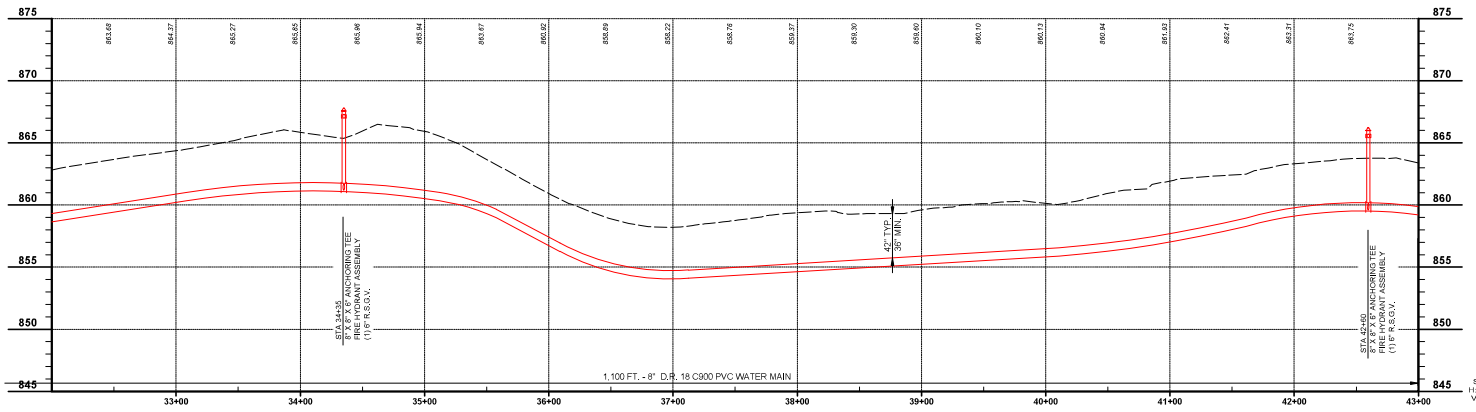
ISSUED FOR: 50% DESIGN
ISSUE DATE: FEB 2024
SCALE: AS SHOWN
DESIGNED BY: JCOR
DRAWN BY: JCOR
CHECKED BY: JBHJ

NORTHERN KENTUCKY WATER DISTRICT
SUBDISTRICT 'O'
-KENTON COUNTY -

FISKBURG ROAD
STA. 21+00 TO STA. 32+00

PROJECT NO.
231591
DISCIPLINE
CIVIL
SHEET NAME
C-29
SHEET 30 OF 44





0' 50' 100'
SCALE: 1" = 50'

50% REVIEW

your trusted advisor
consultants — engineers, architects, planners

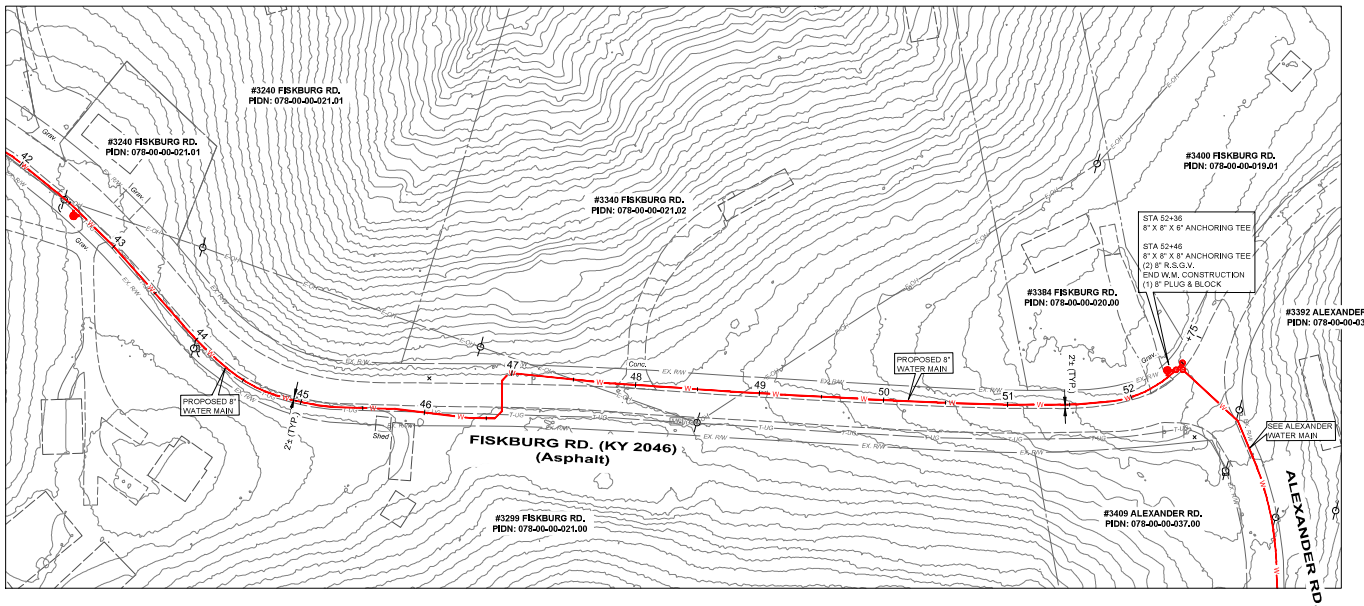
NO	REVISION	DATE
-	-	-

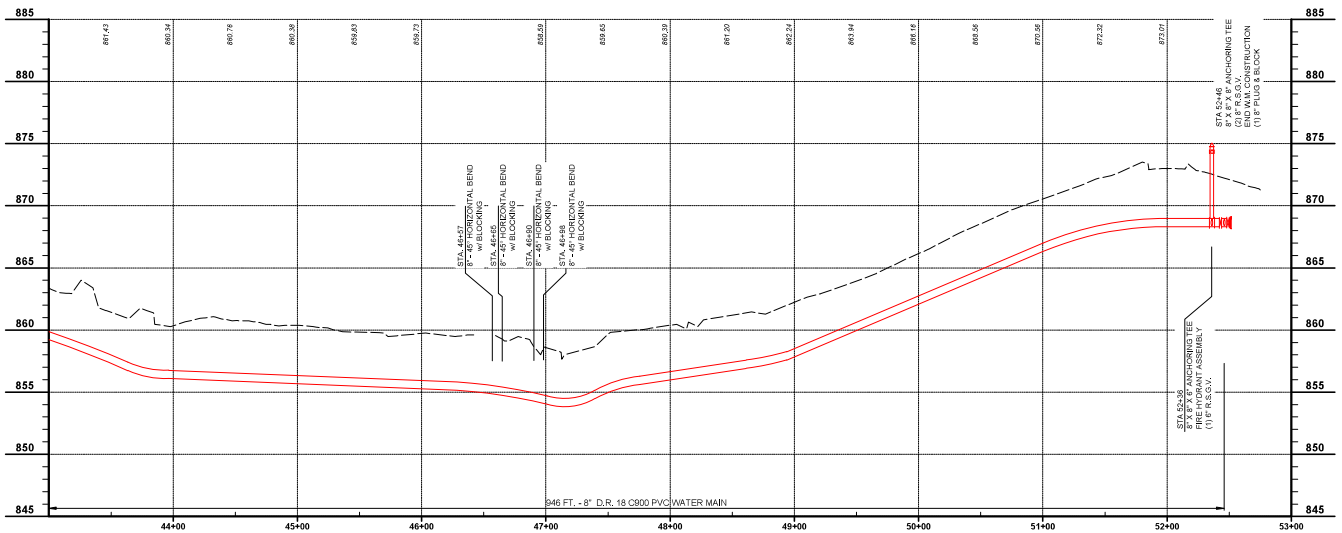
ISSUED FOR: 50% DESIGN
ISSUE DATE: FEB 2024
SCALE: AS SHOWN
DESIGNED BY: JCOR
DRAWN BY: JCOR
CHECKED BY: ABHJ

NORTHERN KENTUCKY WATER DISTRICT
SUBDISTRICT 'O'
-KENTON COUNTY -

FISKBURG ROAD
STA. 32+00 TO STA. 43+00

PROJECT NO.
231591
DISCIPLINE
CIVIL
SHEET NAME
C-30
SHEET 31 OF 44





SCALE:
H: 1" = 50'
V: 1" = 5'

0' 50' 100'
SCALE: 1" = 50

50% REVIEW

your trusted advisor
consultants
engineers
architects
planners

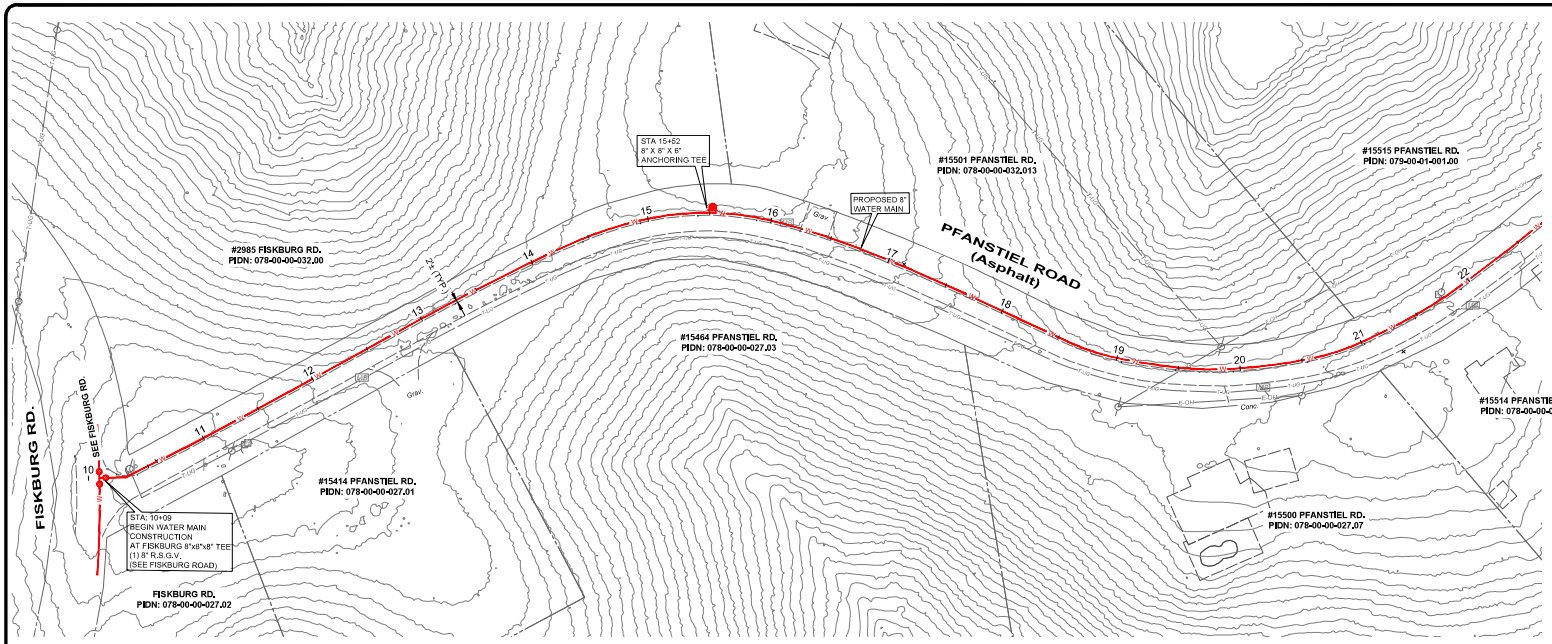
NO	REVISION	DATE
-	-	-

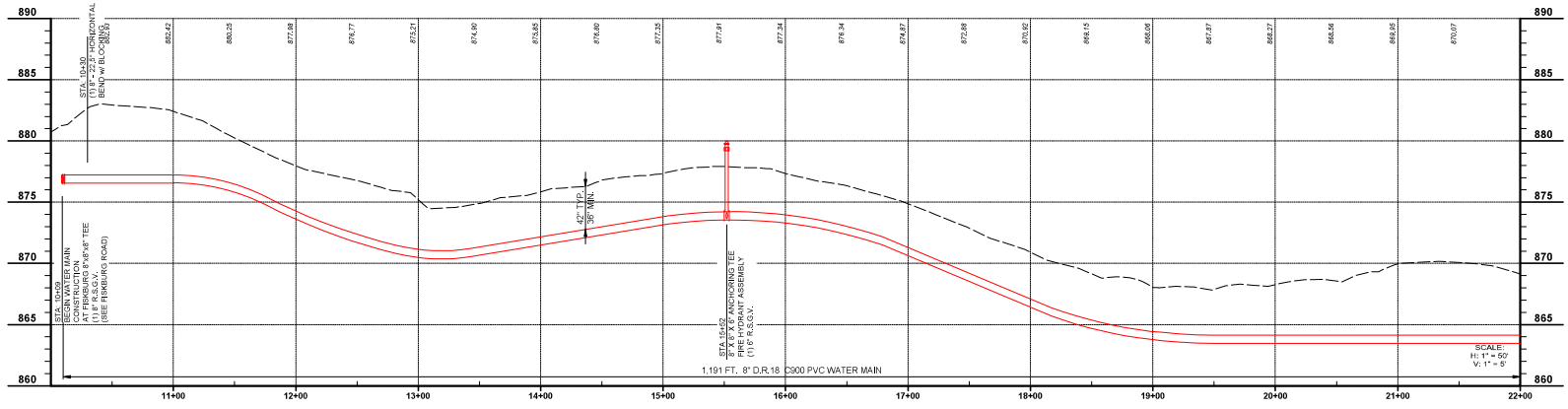
ISSUED FOR:	50% DESIGN
ISSUE DATE:	FEB 2024
SCALE:	AS SHOWN
DESIGNED BY:	JCOR
DRAWN BY:	JCOR
CHECKED BY:	JSHU

NORTHERN KENTUCKY WATER DISTRICT
SUBDISTRICT 'O'
-KENTON COUNTY -

FISKBURG ROAD
STA. 43+00 TO STA. 53+50

PROJECT NO.	231591
DISCIPLINE	CIVIL
SHEET NAME	C-31
SHEET	32
OF	44





0' 50' 100'
SCALE: 1" = 50

50% REVIEW

your trusted advisor
consultants
engineers
architects
planners

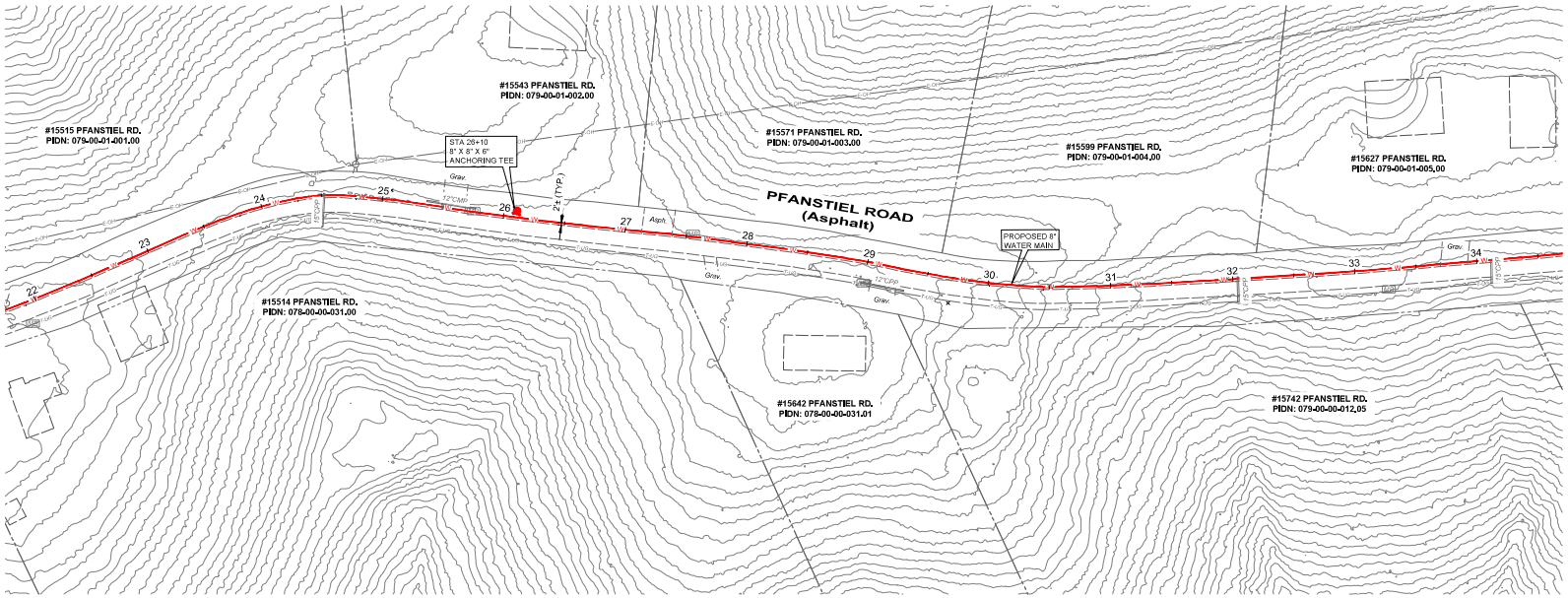
NO	REVISION	DATE
-	-	-

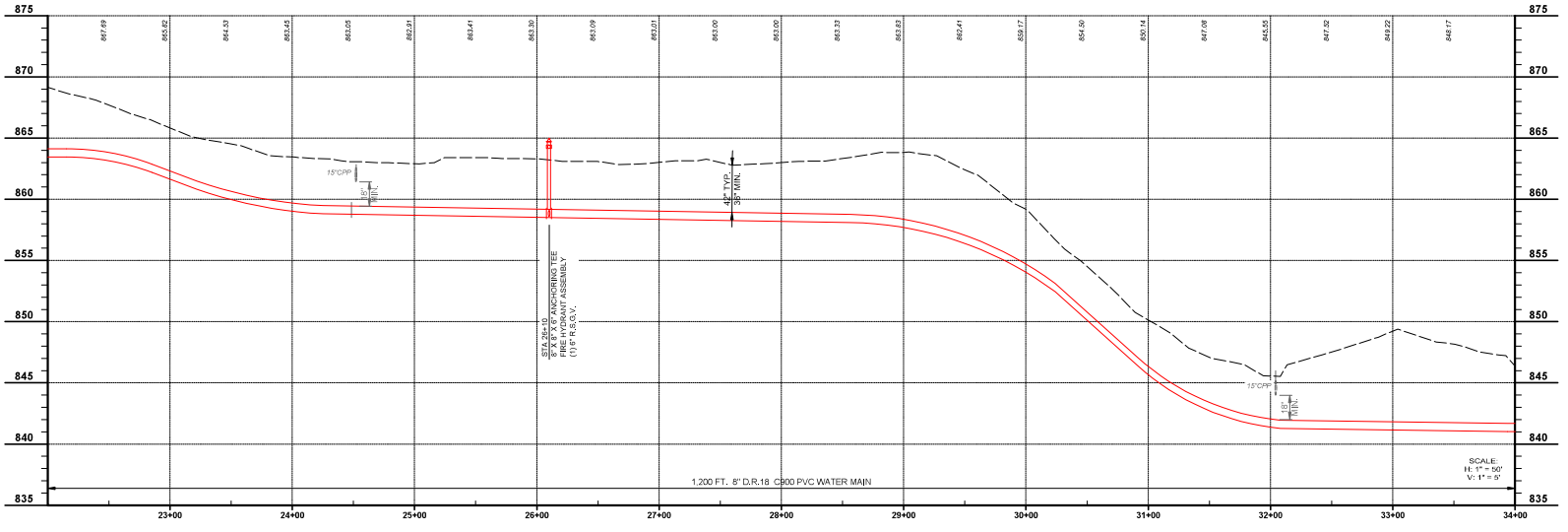
ISSUED FOR: 50% DESIGN
ISSUE DATE: FEB 2024
SCALE: AS SHOWN
DESIGNED BY: JCOR
DRAWN BY: JCOR
CHECKED BY: JSHU

NORTHERN KENTUCKY WATER DISTRICT
SUBDISTRICT 'O'
-KENTON COUNTY -

PFANSTIEL ROAD
STA. 10+00 TO STA. 22+00

PROJECT NO.
231591
DISCIPLINE
CIVIL
SHEET NAME
C-32
SHEET 33 OF 43





0' 50' 100'
SCALE: 1" = 50'

50% REVIEW

your trusted advisor
consultants — engineers architects planners

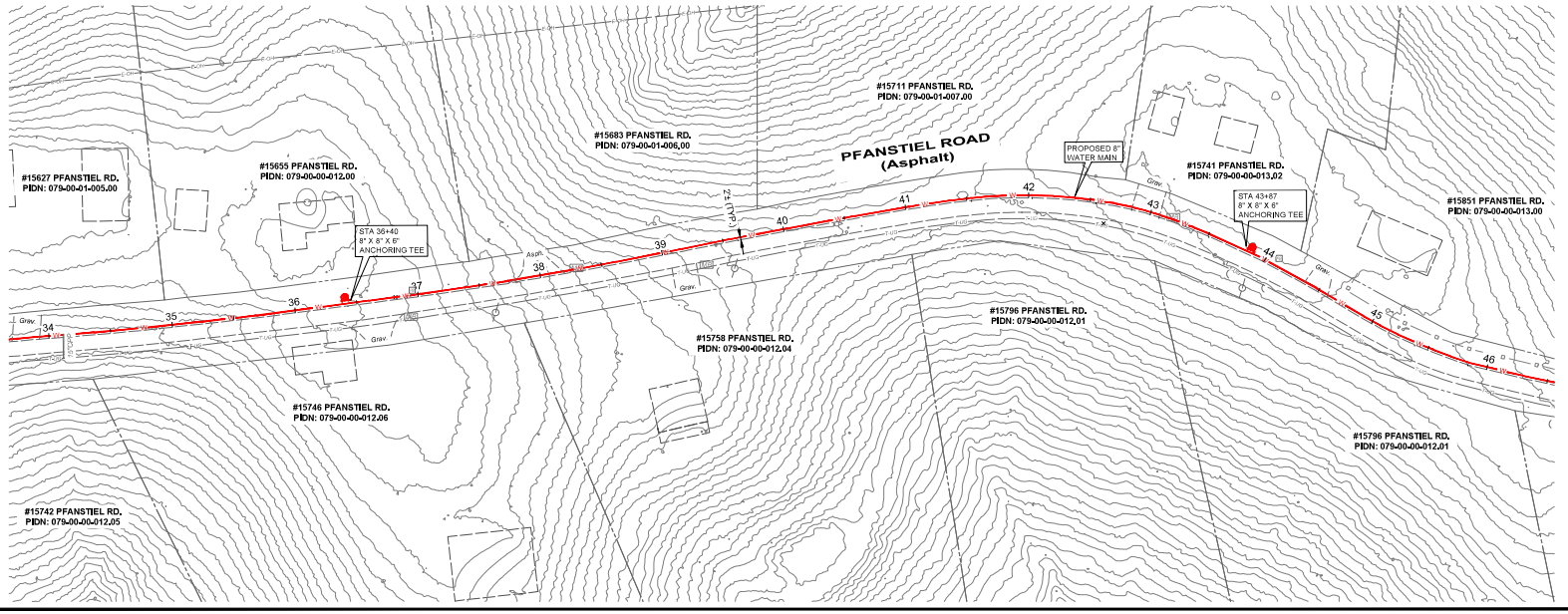
NO	REVISION	DATE
-	-	-

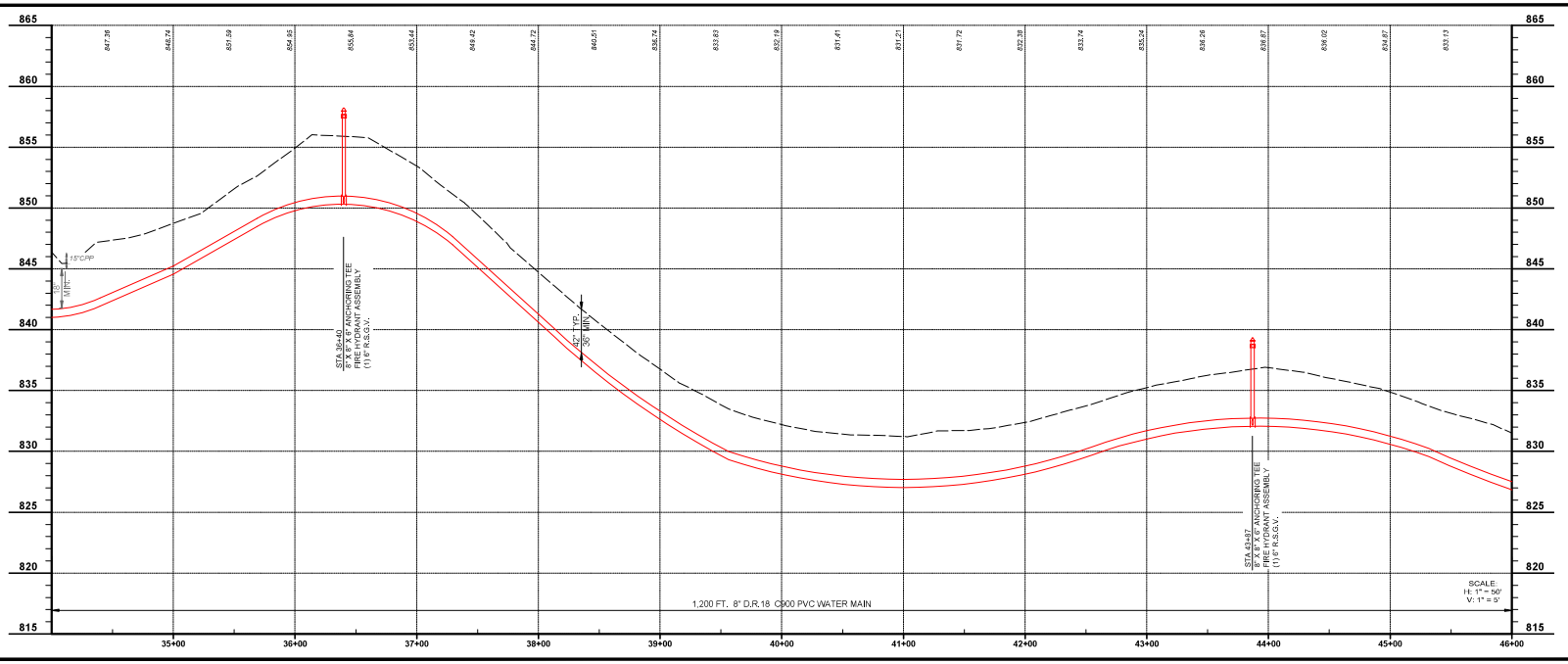
ISSUED FOR:	50% DESIGN
ISSUE DATE:	FEB 2024
SCALE:	AS SHOWN
DESIGNED BY:	JCOR
DRAWN BY:	JCOR
CHECKED BY:	JSHU

NORTHERN KENTUCKY WATER DISTRICT
SUBDISTRICT 'O'
-KENTON COUNTY -

PFANSTIEL ROAD
STA. 22+00 TO STA. 34+00

PROJECT NO.
231591
DISCIPLINE
CIVIL
SHEET NAME
C-33
SHEET 34 OF 43





50% REVIEW

your trusted advisor
consultants — engineers architects planners

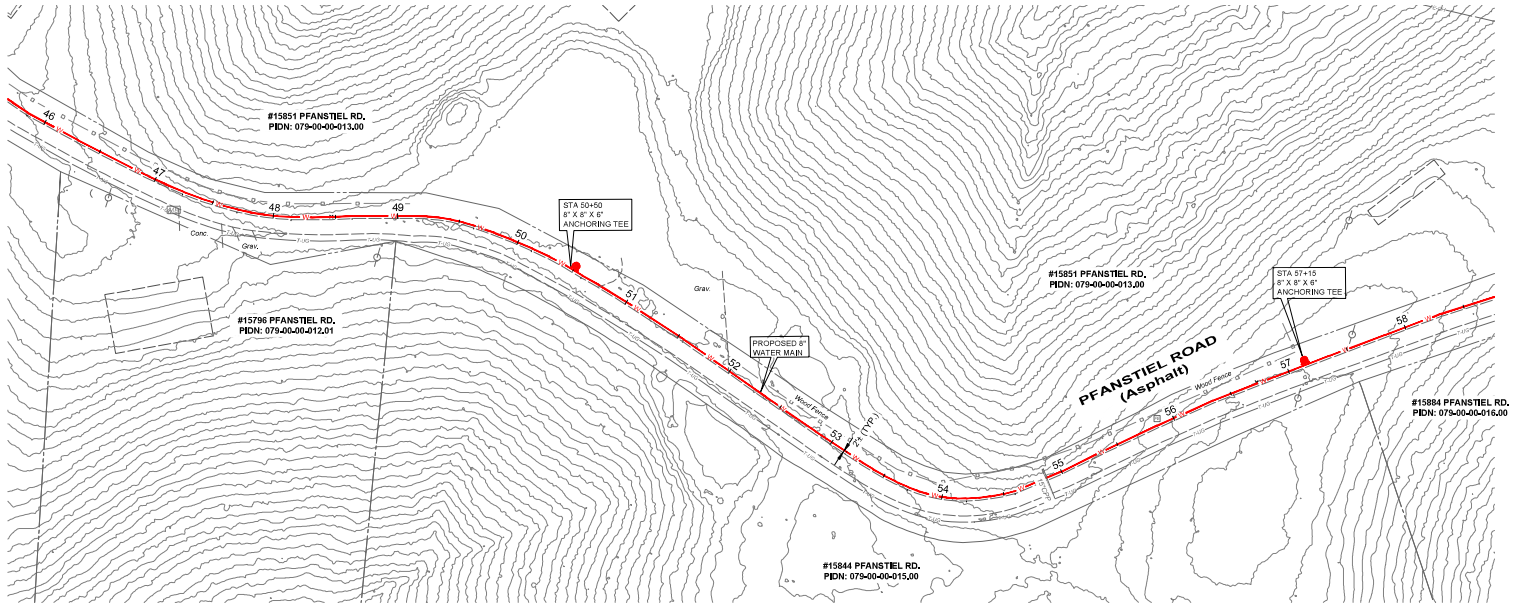
NO	REVISION	DATE
-	-	-

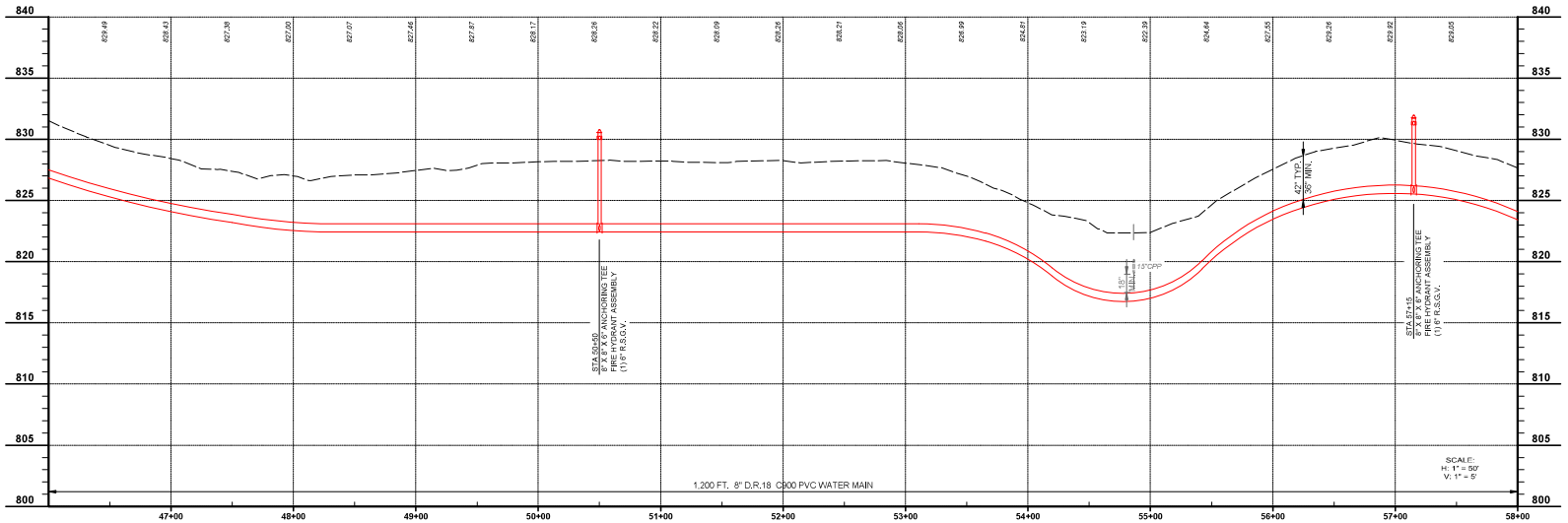
ISSUED FOR:	50% DESIGN
ISSUE DATE:	FEB 2024
SCALE:	AS SHOWN
DESIGNED BY:	JCOR
DRAWN BY:	JCOR
CHECKED BY:	ARHU

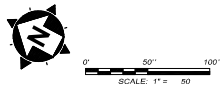
NORTHERN KENTUCKY WATER DISTRICT
SUBDISTRICT 'O'
-KENTON COUNTY -

PFANSTIEL ROAD
STA. 34+00 TO STA. 46+00

PROJECT NO.	231591
DISCIPLINE	CIVIL
SHEET NAME	C-34
SHEET	35
OF	43







50% REVIEW

your trusted advisor
consultants — engineers architects planners

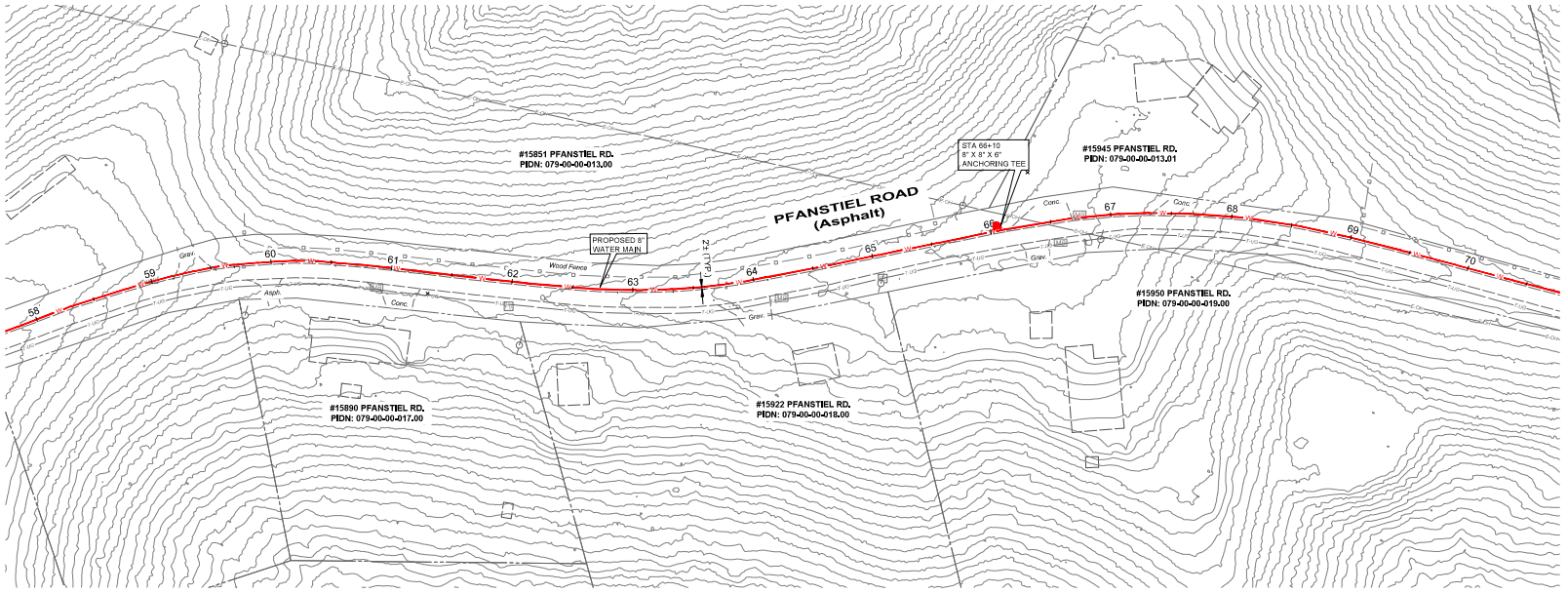
NO	REVISION	DATE
-	-	-

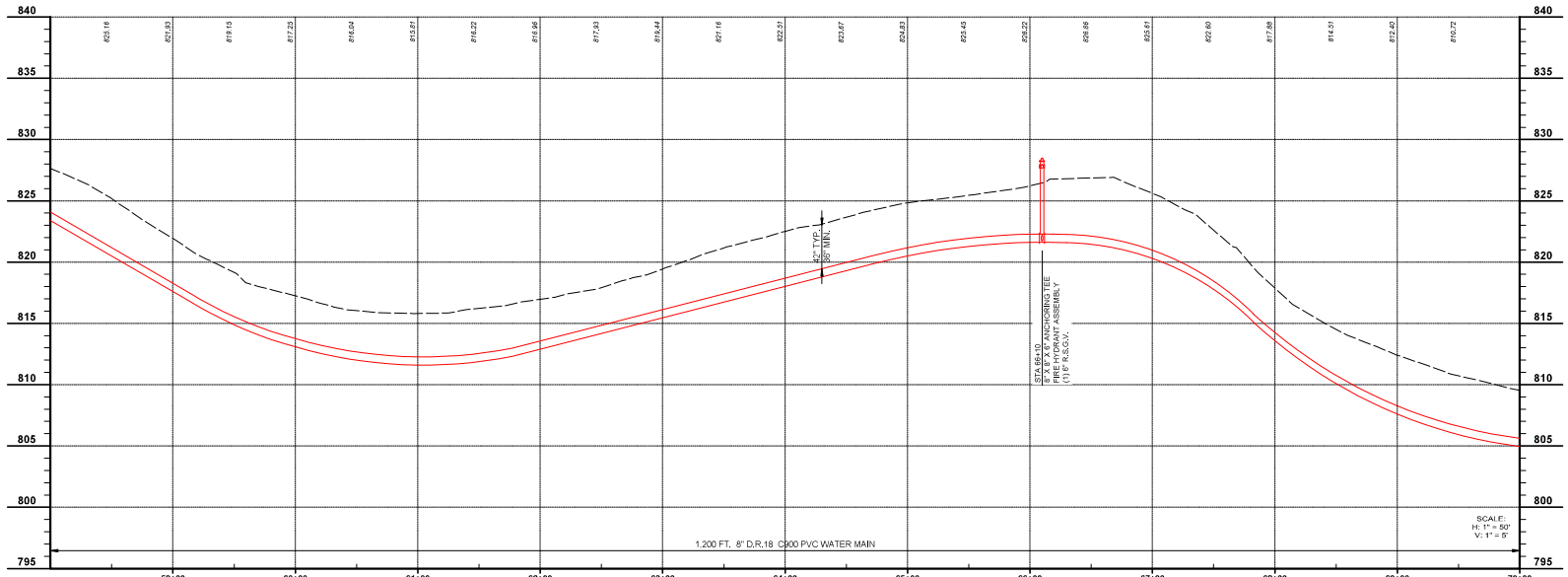
ISSUED FOR:	50% DESIGN
ISSUE DATE:	FEB 2024
SCALE:	AS SHOWN
DESIGNED BY:	JCOR
DRAWN BY:	JCOR
CHECKED BY:	JSHU

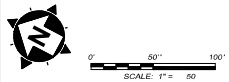
NORTHERN KENTUCKY WATER DISTRICT
SUBDISTRICT 'O'
-KENTON COUNTY -

PFANSTIEL ROAD
STA. 46+00 TO STA.58+00

PROJECT NO.	231591
DISCIPLINE	CIVIL
SHEET NAME	C-35
SHEET	36
OF	43







50%
REVIEW

your trusted advisor
consultants
engineers
architects
planners

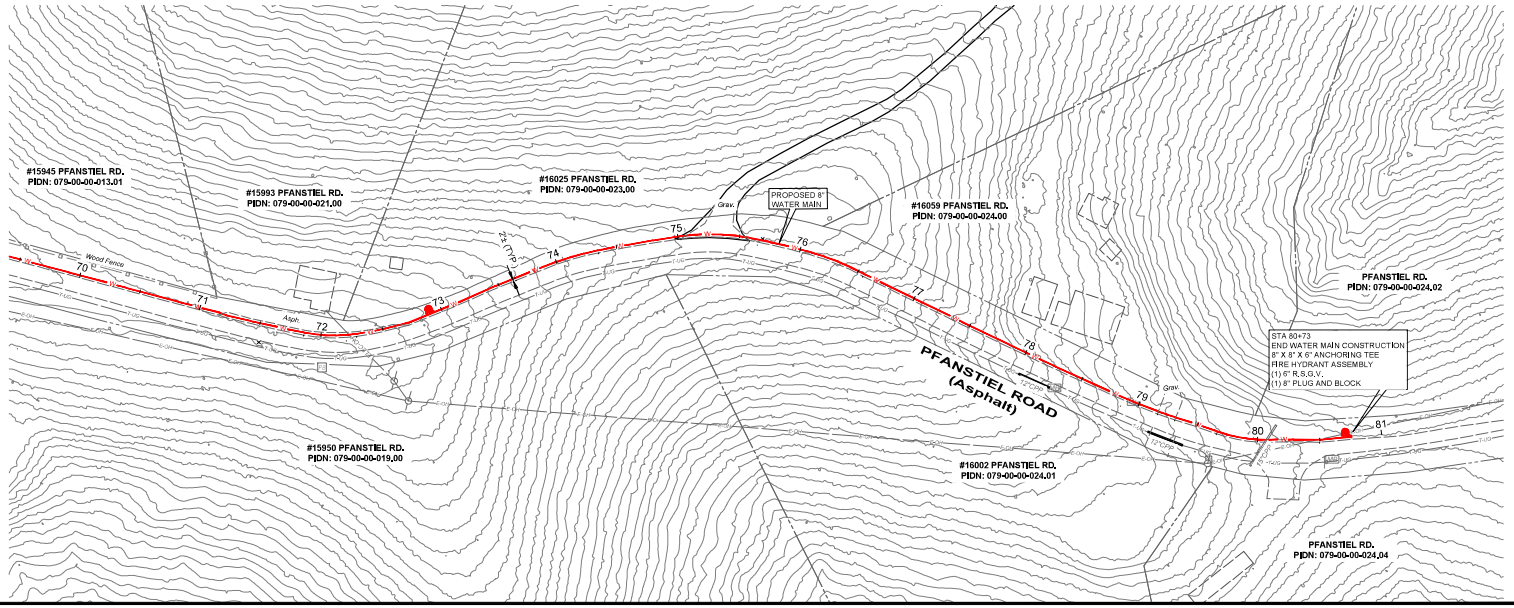
NO	REVISION	DATE
-	-	-

ISSUED FOR:	50% DESIGN
ISSUE DATE:	FEB 2024
SCALE:	AS SHOWN
DESIGNED BY:	JCOR
DRAWN BY:	JCOR
CHECKED BY:	JSHU

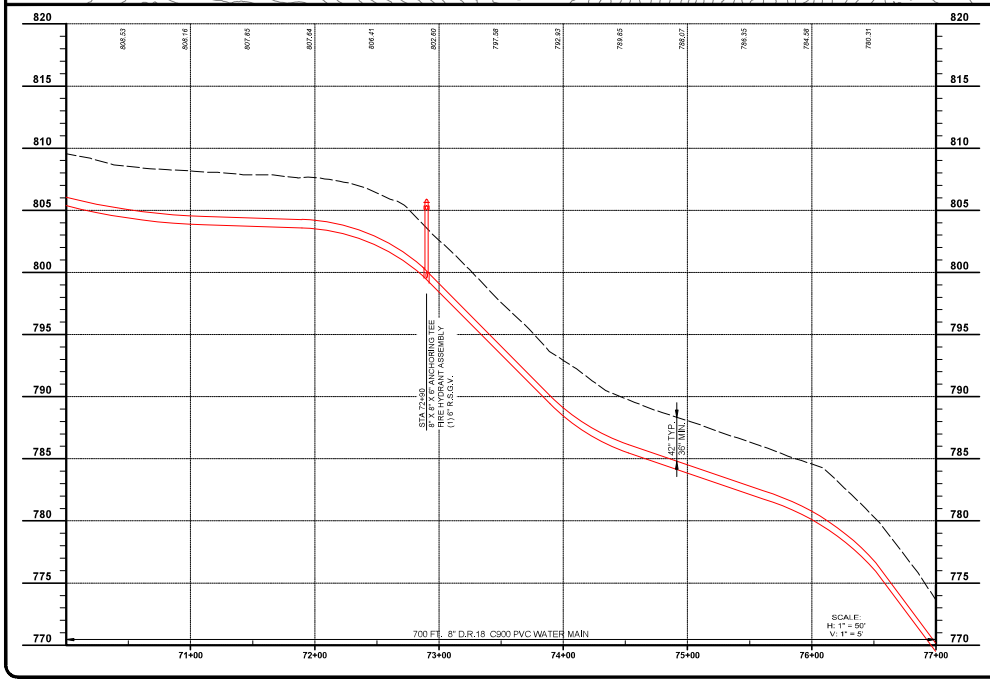
NORTHERN KENTUCKY WATER DISTRICT
SUBDISTRICT 'O'
-KENTON COUNTY -

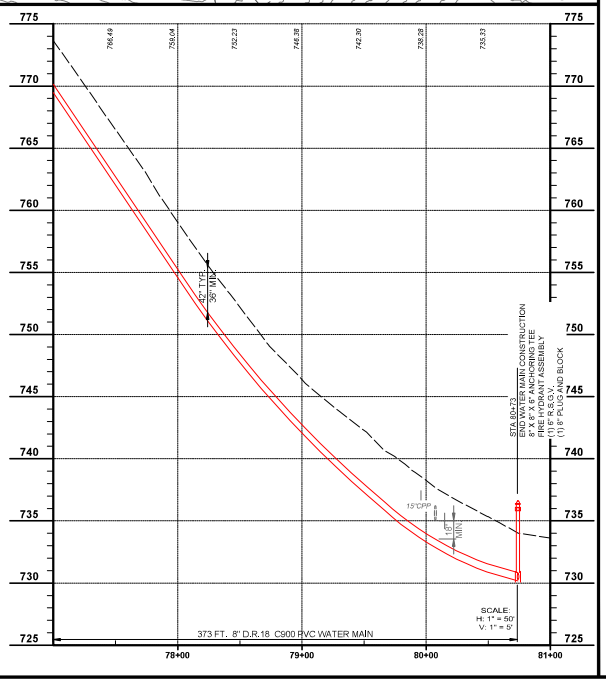
PFANSTIEL ROAD
STA. 58+00 TO STA. 70+50

PROJECT NO.	231591
DISCIPLINE	CIVIL
SHEET NAME	C-36
SHEET	37
OF	43



0' 50' 100'
SCALE: 1" = 50'





50% REVIEW

your trusted advisor
consultants — engineers architects planners

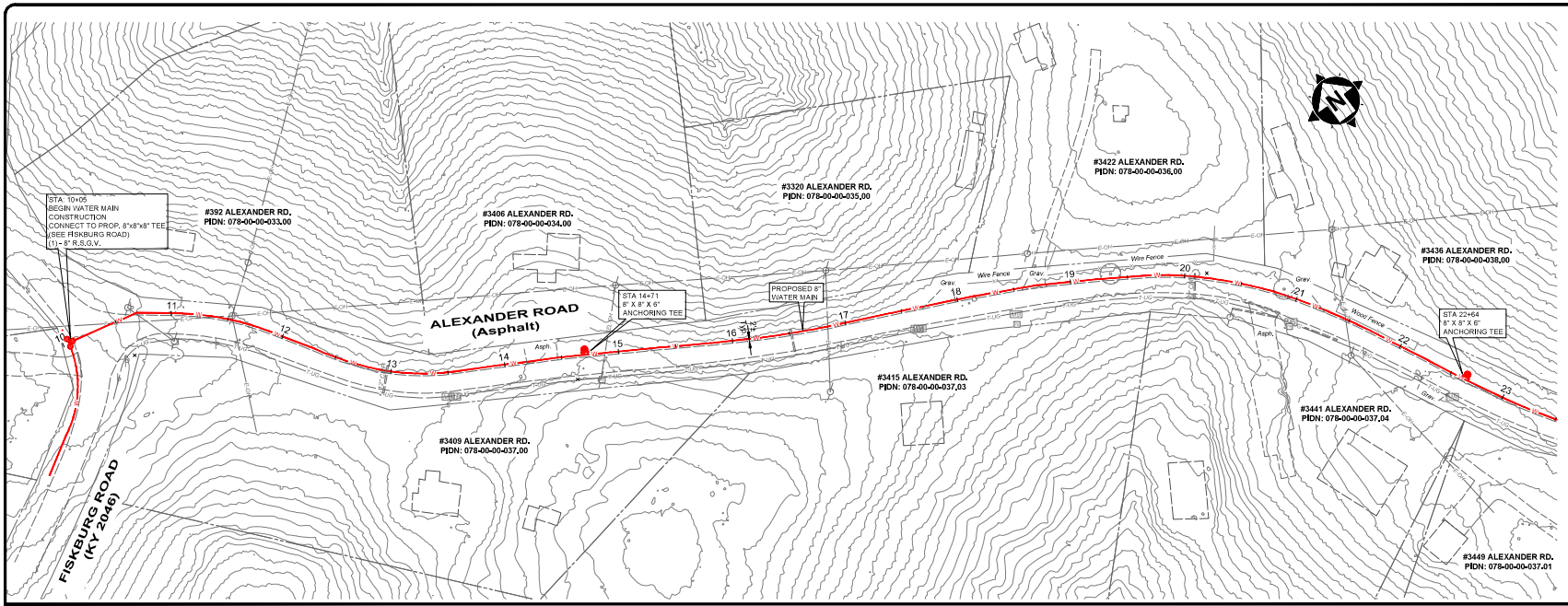
NO	REVISION	DATE
-	-	-

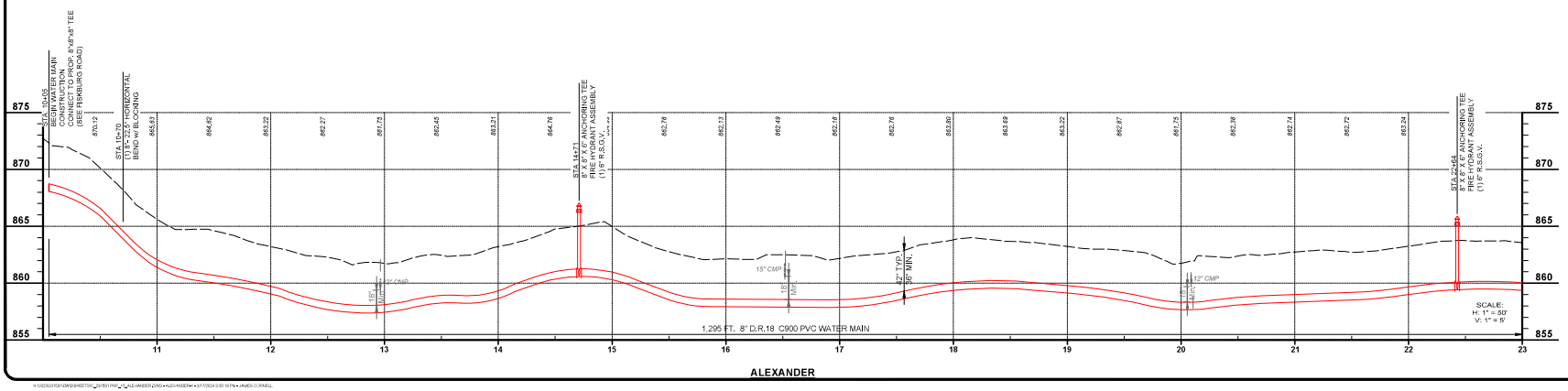
ISSUED FOR:	50% DESIGN
ISSUE DATE:	FEB 2024
SCALE:	AS SHOWN
DESIGNED BY:	JCOR
DRAWN BY:	JCOR
CHECKED BY:	JBHU

NORTHERN KENTUCKY WATER DISTRICT
SUBDISTRICT 'O'
-KENTON COUNTY -

PFANSTIEL ROAD
STA. 70+00 TO 81+00

PROJECT NO.
231591
DISCIPLINE
CIVIL
SHEET NAME
C-37
SHEET 38 OF 43





50%
REVIEW

your trusted advisor
consultants
engineers
architects
planners

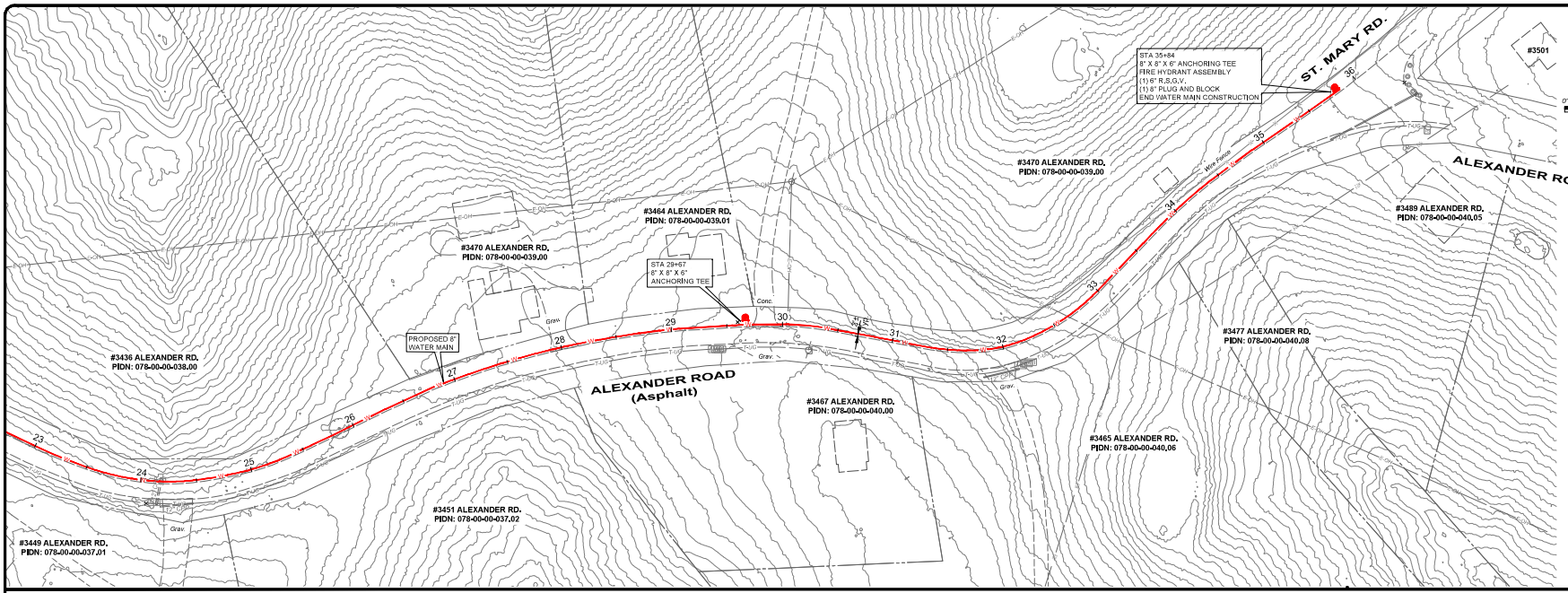
NO	REVISION	DATE
-	-	-

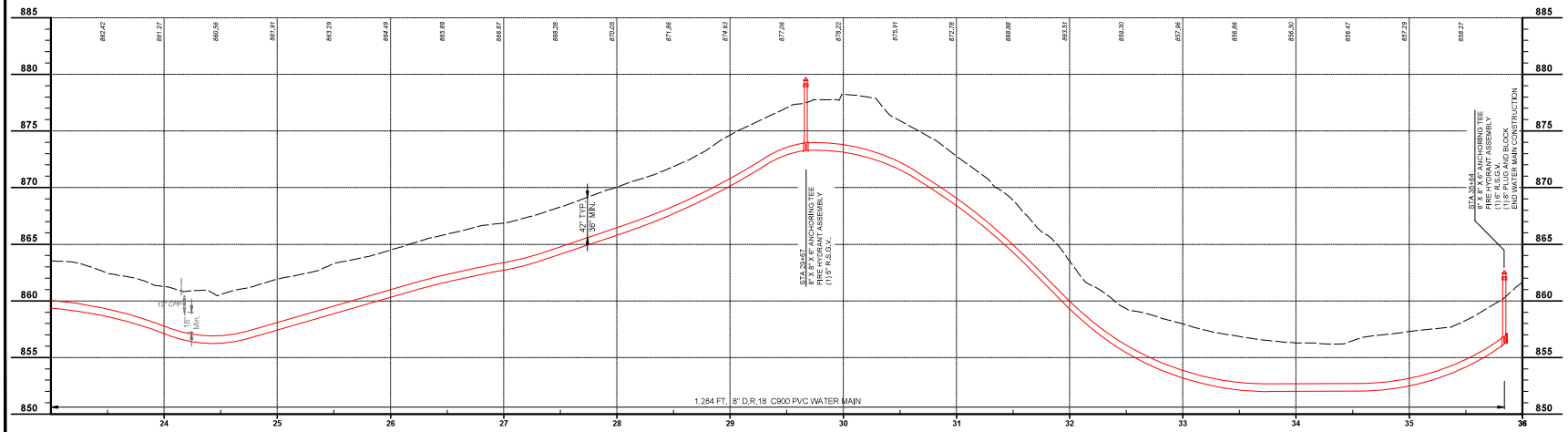
ISSUED FOR:	30% DESIGN
ISSUE DATE:	FEB 2026
SCALE:	AS SHOWN
DESIGNED BY:	JCOR
DRAWN BY:	JCOR
CHECKED BY:	JSHU

NORTHERN KENTUCKY WATER DISTRICT
SUBDISTRICT 'O'
-KENTON COUNTY -

ALEXANDER ROAD
STA. 10+00 TO STA. 23+00

PROJECT NO.	231591
DISCIPLINE	CIVIL
SHEET NAME	C-38
SHEET	39
OF	44





SCALE:
H: 1" = 50'
V: 1" = 5'

50% REVIEW

your trusted advisor
consultants
engineers
architects
planners

NO	REVISION	DATE
-	-	-

ISSUED FOR:	30% DESIGN
ISSUE DATE:	FEB 2024
SCALE:	AS SHOWN
DESIGNED BY:	JCOR
DRAWN BY:	JCOR
CHECKED BY:	JSHU

NORTHERN KENTUCKY WATER DISTRICT
SUBDISTRICT 'O'
-KENTON COUNTY -

ALEXANDER ROAD
STA. 23+00 TO STA. 36+00

PROJECT NO.	231591
DISCIPLINE	CIVIL
SHEET NAME	C-39
SHEET	40
OF	44

H:\2023\231591\DWG\BIDSTIX_231591.PWP_C_ALEXANDER.DWG • ALEXANDER • 2/7/2024 9:30:19 PM • JAMES O'CONNELL

2021 Nationwide Permit Summary

US Army Corps of Engineers
Louisville District ®

Issued: **March 15, 2021**
Expires: **March 14, 2026**

No. 58. Utility Line Activities for Water and Other Substances

(NWP Final Rule, 86 FR 2744)

Activities required for the construction, maintenance, repair, and removal of utility lines for water and other substances, excluding oil, natural gas, products derived from oil or natural gas, and electricity. Oil or natural gas pipeline activities or electric utility line and telecommunications activities may be authorized by NWPs 12 or 57, respectively. This NWP also authorizes associated utility line facilities in waters of the United States, provided the activity does not result in the loss of greater than 1/2-acre of waters of the United States for each single and complete project.

Utility lines: This NWP authorizes discharges of dredged or fill material into waters of the United States and structures or work in navigable waters for crossings of those waters associated with the construction, maintenance, or repair of utility lines for water and other substances, including outfall and intake structures. There must be no change in pre-construction contours of waters of the United States. A "utility line" is defined as any pipe or pipeline for the transportation of any gaseous, liquid, liquescent, or slurry substance, for any purpose that is not oil, natural gas, or petrochemicals. Examples of activities authorized by this NWP include utility lines that convey water, sewage, stormwater, wastewater, brine, irrigation water, and industrial products that are not petrochemicals. The term "utility line" does not include activities that drain a water of the United States, such as drainage tile or french drains, but it does apply to pipes conveying drainage from another area.

Material resulting from trench excavation may be temporarily sidecast into waters of the United States for no more than three months, provided the material is not placed in such a manner that it is dispersed by currents or other forces. The district engineer may extend the period of temporary side casting for no more than a total of 180 days, where appropriate. In wetlands, the top 6 to 12 inches of the trench should normally be backfilled with topsoil from the trench. The trench cannot be constructed or backfilled in such a manner as to drain waters of the United States (e.g., backfilling with extensive gravel layers, creating a french drain effect). Any exposed slopes and stream banks must be stabilized immediately upon completion of the utility line crossing of each waterbody.

Utility line substations: This NWP authorizes the construction, maintenance, or expansion of substation facilities associated with a utility line in non-tidal waters of the United States, provided the activity, in combination with all other activities included in one single and complete project, does not result in the loss of greater than 1/2-acre of waters of the United States. This NWP does not authorize discharges of dredged or fill material into non-tidal wetlands adjacent to tidal waters of the United States to construct, maintain, or expand substation facilities.

Foundations for above-ground utility lines: This NWP authorizes the construction or maintenance of foundations for above-ground utility lines in all waters of the United States, provided the foundations are the minimum size necessary.

Access roads: This NWP authorizes the construction of access roads for the construction and maintenance of utility lines, including utility line substations, in non-tidal waters of the United States, provided the activity, in combination with all other activities included in one single and complete project, does not cause the loss of greater than 1/2-acre of non-tidal waters of the United States. This NWP does not authorize discharges of dredged or fill material into non-tidal wetlands adjacent to tidal waters for access roads. Access roads must be the minimum width necessary (see Note 2, below). Access roads must be constructed so that the length of the road minimizes any adverse effects on waters of the United States and must be as near as possible to pre-construction contours and elevations (e.g., at grade corduroy roads or geotextile/gravel roads). Access roads constructed above pre-construction contours and elevations in waters of the United States must be properly bridged or culverted to maintain surface flows.

This NWP may authorize utility lines in or affecting navigable waters of the United States even if there is no associated discharge of dredged or fill material (see 33 CFR part 322). Overhead utility lines constructed over section 10 waters and utility lines that are routed in or under section 10 waters without a discharge of dredged or fill material require a section 10 permit.

This NWP authorizes, to the extent that Department of the Army authorization is required, temporary structures, fills, and work necessary for the remediation of inadvertent returns of drilling fluids to waters of the United States through sub-soil fissures or fractures that might occur during horizontal directional drilling activities conducted for the purpose of installing or replacing utility lines. These remediation activities must be done as soon as practicable, to restore the affected waterbody. District engineers may add special conditions to this NWP to require a remediation plan for addressing inadvertent returns of drilling fluids to waters of the United States during horizontal directional drilling activities conducted for the purpose of installing or replacing utility lines.

This NWP also authorizes temporary structures, fills, and work, including the use of temporary mats, necessary to conduct the utility line activity. Appropriate measures must be taken to maintain normal downstream flows and minimize flooding to the maximum extent practicable, when temporary structures, work, and discharges of dredged or fill material, including cofferdams, are necessary for construction activities, access fills, or dewatering of construction sites. Temporary fills must consist of materials, and be placed in a manner, that will not be eroded by expected high flows. After construction, temporary fills must be removed in their entirety and the affected areas returned to pre-construction elevations. The areas affected by temporary fills must be revegetated, as appropriate.

Notification: The permittee must submit a pre-construction notification to the district engineer prior to commencing the activity if: (1) a section 10 permit is required; or (2) the discharge will result in the loss of greater than 1/10-acre of waters of the United States. (See general condition 32.) (Authorities: Sections 10 and 404)

Note 1: Where the utility line is constructed, installed, or maintained in navigable waters of the United States (i.e., section 10 waters) within the coastal United States, the Great Lakes, and United States territories, a copy of the NWP verification will be sent by the Corps to the National Oceanic and Atmospheric Administration (NOAA), National Ocean Service (NOS), for charting the utility line to protect navigation.

Note 2: For utility line activities crossing a single waterbody more than one time at separate and distant locations, or multiple waterbodies at separate and distant locations, each crossing is considered a single and complete project for purposes of NWP authorization. Utility line activities must comply with 33 CFR 330.6(d).

Note 3: Access roads used for both construction and maintenance may be authorized, provided they meet the terms and conditions of this NWP. Access roads used solely for construction of the utility line must be removed upon completion of the work, in accordance with the requirements for temporary fills.

Note 4: Pipes or pipelines used to transport gaseous, liquid, liquescent, or slurry substances over navigable waters of the United States are considered to be bridges, not utility lines, and may require a permit from the U.S. Coast Guard pursuant to the General Bridge Act of 1946. However, any discharges of dredged or fill material into waters of the United States associated with such pipelines will require a section 404 permit (see NWP 15).

Note 5: This NWP authorizes utility line maintenance and repair activities that do not qualify for the Clean Water Act section 404(f) exemption for maintenance of currently serviceable fills or fill structures.

Note 6: For activities that require pre-construction notification, the PCN must include any other NWP(s), regional general permit(s), or individual permit(s) used or intended to be used to authorize any part of the proposed project or any related activity, including other separate and distant crossings that require Department of the Army authorization but do not require pre-construction notification (see paragraph (b)(4) of general condition 32). The district engineer will evaluate the PCN in accordance with Section D, "District Engineer's Decision." The district engineer may require mitigation to ensure that the authorized activity results in no more than minimal individual and cumulative adverse environmental effects (see general condition 23).

Nationwide Permit General Conditions

Note: To qualify for NWP authorization, the prospective permittee must comply with the following general conditions, as applicable, in addition to any regional or case-specific conditions imposed by the division engineer or district engineer. Prospective permittees should contact the appropriate Corps district office to determine if regional conditions have been imposed on an NWP. Prospective permittees should also contact the appropriate Corps district office to determine the status of Clean Water Act Section 401 water quality certification and/or Coastal Zone Management Act consistency for an NWP. Every person who may wish to obtain permit authorization under one or more NWPs, or who is currently relying on an existing or prior permit authorization under one or more NWPs, has been and is on notice that all of the provisions of 33 CFR 330.1 through 330.6 apply to every NWP authorization. Note especially 33 CFR 330.5 relating to the modification, suspension, or revocation of any NWP authorization.

1. Navigation. (a) No activity may cause more than a minimal adverse effect on navigation.

(b) Any safety lights and signals prescribed by the U.S. Coast Guard, through regulations or otherwise, must be installed and maintained at the permittee's expense on authorized facilities in navigable waters of the United States.

(c) The permittee understands and agrees that, if future operations by the United States require the removal, relocation, or other alteration, of the structure or work herein authorized, or if, in the opinion of the Secretary of the Army or his or her authorized representative, said structure or work shall cause unreasonable obstruction to the free navigation of the navigable waters, the permittee will be required, upon due notice from the Corps of Engineers, to remove, relocate, or alter the structural work or obstructions caused thereby, without expense to the United States. No claim shall be made against the United States on account of any such removal or alteration.

2. Aquatic Life Movements. No activity may substantially disrupt the necessary life cycle movements of those species of aquatic life indigenous to the waterbody, including those species that normally migrate through the area, unless the activity's primary purpose is to impound water. All permanent and temporary crossings of waterbodies shall be suitably culverted, bridged, or otherwise designed and constructed to maintain low flows to sustain the movement of those aquatic species. If a bottomless culvert cannot be used, then the crossing should be designed

and constructed to minimize adverse effects to aquatic life movements.

3. Spawning Areas. Activities in spawning areas during spawning seasons must be avoided to the maximum extent practicable. Activities that result in the physical destruction (e.g., through excavation, fill, or downstream smothering by substantial turbidity) of an important spawning area are not authorized.

4. Migratory Bird Breeding Areas. Activities in waters of the United States that serve as breeding areas for migratory birds must be avoided to the maximum extent practicable.

5. Shellfish Beds. No activity may occur in areas of concentrated shellfish populations, unless the activity is directly related to a shellfish harvesting activity authorized by NWPs 4 and 48, or is a shellfish seeding or habitat restoration activity authorized by NWP 27.

6. Suitable Material. No activity may use unsuitable material (e.g., trash, debris, car bodies, asphalt, etc.). Material used for construction or discharged must be free from toxic pollutants in toxic amounts (see section 307 of the Clean Water Act).

7. Water Supply Intakes. No activity may occur in the proximity of a public water supply intake, except where the activity is for the repair or improvement of public water supply intake structures or adjacent bank stabilization.

8. Adverse Effects From Impoundments. If the activity creates an impoundment of water, adverse effects to the aquatic system due to accelerating the passage of water, and/or restricting its flow must be minimized to the maximum extent practicable.

9. Management of Water Flows. To the maximum extent practicable, the pre-construction course, condition, capacity, and location of open waters must be maintained for each activity, including stream channelization, storm water management activities, and temporary and permanent road crossings, except as provided below. The activity must be constructed to withstand expected high flows. The activity must not restrict or impede the passage of normal or high flows, unless the primary purpose of the activity is to impound water or manage high flows. The activity may alter the pre-construction course, condition, capacity, and location of open waters if it benefits the aquatic environment (e.g., stream restoration or relocation activities).

10. Fills Within 100-Year Floodplains. The activity must comply with applicable FEMA-approved state or local floodplain management requirements.

11. Equipment. Heavy equipment working in wetlands or mudflats must be placed on mats, or other measures must be taken to minimize soil disturbance.

12. Soil Erosion and Sediment Controls. Appropriate soil erosion and sediment controls must be used and maintained in effective operating condition during construction, and all exposed soil and other fills, as well as any work below the ordinary high water mark or high tide line, must be permanently stabilized at the earliest practicable date. Permittees are encouraged to perform work within waters of the United States during periods of low-flow or no-flow, or during low tides.

13. Removal of Temporary Structures and Fills. Temporary structures must be removed, to the maximum extent practicable, after their use has been discontinued. Temporary fills must be removed in their entirety and the affected areas returned to pre-construction elevations. The affected areas must be revegetated, as appropriate.

14. Proper Maintenance. Any authorized structure or fill shall be properly maintained, including maintenance to ensure public safety and compliance with applicable NWP general conditions, as well as any activity-specific conditions added by the district engineer to an NWP authorization.

15. Single and Complete Project. The activity must be a single and complete project. The same NWP cannot be used more than once for the same single and complete project.

16. Wild and Scenic Rivers. (a) No NWP activity may occur in a component of the National Wild and Scenic River System, or in a river officially designated by Congress as a "study river" for possible inclusion in the system while the river is in an official study status, unless the appropriate Federal agency with direct management responsibility for such river, has determined in writing that the proposed activity will not adversely affect the Wild and Scenic River designation or study status.

(b) If a proposed NWP activity will occur in a component of the National Wild and Scenic River System, or in a river officially designated by Congress as a "study river" for possible inclusion in the system while the river is in an official study status, the permittee must submit a pre-construction notification (see general condition 32). The district engineer will coordinate the PCN with the Federal agency with direct management responsibility for that river. Permittees shall not begin the NWP activity until notified by the district engineer that the Federal agency with direct management responsibility for that river has determined in writing that the proposed NWP activity will not adversely affect the Wild and Scenic River designation or study status.

(c) Information on Wild and Scenic Rivers may be obtained from the appropriate Federal land management agency responsible for the designated Wild and Scenic River or study river (e.g., National Park Service, U.S. Forest Service, Bureau of Land Management, U.S. Fish and Wildlife Service). Information on these rivers is also available at: http://www.rivers.gov/.

17. Tribal Rights. No activity or its operation may impair reserved tribal rights, including, but not limited to, reserved water rights and treaty fishing and hunting rights.

18. Endangered Species. (a) No activity is authorized under any NWP which is likely to directly or indirectly jeopardize the continued existence of a threatened or endangered species or a species proposed

for such designation, as identified under the Federal Endangered Species Act (ESA), or which will directly or indirectly destroy or adversely modify designated critical habitat or critical habitat proposed for such designation. No activity is authorized under any NWP which "may affect" a listed species or critical habitat, unless ESA section 7 consultation addressing the consequences of the proposed activity on listed species or critical habitat has been completed. See 50 CFR 402.02 for the definition of "effects of the action" for the purposes of ESA section 7 consultation, as well as 50 CFR 402.17, which provides further explanation under ESA section 7 regarding "activities that are reasonably certain to occur" and "consequences caused by the proposed action."

(b) Federal agencies should follow their own procedures for complying with the requirements of the ESA (see 33 CFR 330.4(f)(1)). If pre-construction notification is required for the proposed activity, the Federal permittee must provide the district engineer with the appropriate documentation to demonstrate compliance with those requirements. The district engineer will verify that the appropriate documentation has been submitted. If the appropriate documentation has not been submitted, additional ESA section 7 consultation may be necessary for the activity and the respective federal agency would be responsible for fulfilling its obligation under section 7 of the ESA.

(c) Non-federal permittees must submit a pre-construction notification to the district engineer if any listed species (or species proposed for listing) or designated critical habitat (or critical habitat proposed such designation) might be affected or is in the vicinity of the activity, or if the activity is located in designated critical habitat or critical habitat proposed for such designation, and shall not begin work on the activity until notified by the district engineer that the requirements of the ESA have been satisfied and that the activity is authorized. For activities that might affect Federally-listed endangered or threatened species (or species proposed for listing) or designated critical habitat (or critical habitat proposed for such designation), the pre-construction notification must include the name(s) of the endangered or threatened species (or species proposed for listing) that might be affected by the proposed activity or that utilize the designated critical habitat (or critical habitat proposed for such designation) that might be affected by the proposed activity. The district engineer will determine whether the proposed activity "may affect" or will have "no effect" to listed species and designated critical habitat and will notify the non-Federal applicant of the Corps' determination within 45 days of receipt of a complete pre-construction notification. For activities where the non-Federal applicant has identified listed species (or species proposed for listing) or designated critical habitat (or critical habitat proposed for such designation) that might be affected or is in the vicinity of the activity, and has so notified the Corps, the applicant shall not begin work until the Corps has provided notification that the proposed activity will have "no effect" on listed species (or species proposed for listing or designated critical habitat (or critical habitat proposed for such designation), or until ESA section 7 consultation or conference has been completed. If the non-Federal applicant has not heard back from the Corps within 45 days, the applicant must still wait for notification from the Corps.

(d) As a result of formal or informal consultation or conference with the FWS or NMFS the district engineer may add species-specific permit conditions to the NWPs.

(e) Authorization of an activity by an NWP does not authorize the "take" of a threatened or endangered species as defined under the ESA. In the absence of separate authorization (e.g., an ESA Section 10 Permit, a Biological Opinion with "incidental take" provisions, etc.) from the FWS or the NMFS, the Endangered Species Act prohibits any person subject to the jurisdiction of the United States to take a listed species, where "take" means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct. The word "harm" in the definition of "take" means an act which actually kills or injures wildlife. Such an act may include significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding or sheltering.

(f) If the non-federal permittee has a valid ESA section 10(a)(1)(B) incidental take permit with an approved Habitat Conservation Plan for a project or a group of projects that includes the proposed NWP activity, the non-federal applicant should provide a copy of that ESA section 10(a)(1)(B) permit with the PCN required by paragraph (c) of this general condition. The district engineer will coordinate with the agency that issued the ESA section 10(a)(1)(B) permit to determine whether the proposed NWP activity and the associated incidental take were considered in the internal ESA section 7 consultation conducted for the ESA section 10(a)(1)(B) permit. If that coordination results in concurrence from the agency that the proposed NWP activity and the associated incidental take were considered in the internal ESA section 7 consultation for the ESA section 10(a)(1)(B) permit, the district engineer does not need to conduct a separate ESA section 7 consultation for the proposed NWP activity. The district engineer will notify the non-federal applicant within 45 days of receipt of a complete pre-construction notification whether the ESA section 10(a)(1)(B) permit covers the proposed NWP activity or whether additional ESA section 7 consultation is required.

(g) Information on the location of threatened and endangered species and their critical habitat can be obtained directly from the offices of the FWS and NMFS or their world wide web pages at http://www.fws.gov/ or http://www.fws.gov/ipac and http://www.nmfs.noaa.gov/pr/species/esa/ respectively.

19. Migratory Birds and Bald and Golden Eagles. The permittee is responsible for ensuring that an action authorized by an NWP complies with the Migratory Bird Treaty Act and the Bald and Golden Eagle Protection Act. The permittee is responsible for contacting the appropriate local office of the U.S. Fish and Wildlife Service to determine what measures, if any, are

necessary or appropriate to reduce adverse effects to migratory birds or eagles, including whether "incidental take" permits are necessary and available under the Migratory Bird Treaty Act or Bald and Golden Eagle Protection Act for a particular activity.

20. Historic Properties. (a) No activity is authorized under any NWP which may have the potential to cause effects to properties listed, or eligible for listing, in the National Register of Historic Places until the requirements of Section 106 of the National Historic Preservation Act (NHPA) have been satisfied.

(b) Federal permittees should follow their own procedures for complying with the requirements of section 106 of the National Historic Preservation Act (see 33 CFR 330.4(g)(1)). If pre-construction notification is required for the proposed NWP activity, the Federal permittee must provide the district engineer with the appropriate documentation to demonstrate compliance with those requirements. The district engineer will verify that the appropriate documentation has been submitted. If the appropriate documentation is not submitted, then additional consultation under section 106 may be necessary. The respective federal agency is responsible for fulfilling its obligation to comply with section 106.

(c) Non-federal permittees must submit a pre-construction notification to the district engineer if the NWP activity might have the potential to cause effects to any historic properties listed on, determined to be eligible for listing on, or potentially eligible for listing on the National Register of Historic Places, including previously unidentified properties. For such activities, the pre-construction notification must state which historic properties might have the potential to be affected by the proposed NWP activity or include a vicinity map indicating the location of the historic properties or the potential for the presence of historic properties. Assistance regarding information on the location of, or potential for, the presence of historic properties can be sought from the State Historic Preservation Officer, Tribal Historic Preservation Officer, or designated tribal representative, as appropriate, and the National Register of Historic Places (see 33 CFR 330.4(g)). When reviewing pre-construction notifications, district engineers will comply with the current procedures for addressing the requirements of section 106 of the National Historic Preservation Act. The district engineer shall make a reasonable and good faith effort to carry out appropriate identification efforts commensurate with potential impacts, which may include background research, consultation, oral history interviews, sample field investigation, and/or field survey. Based on the information submitted in the PCN and these identification efforts, the district engineer shall determine whether the proposed NWP activity has the potential to cause effects on the historic properties. Section 106 consultation is not required when the district engineer determines that the activity does not have the potential to cause effects on historic properties (see 36 CFR 800.3(a)). Section 106 consultation is required when the district engineer determines that the activity has the potential to cause effects on historic properties. The district engineer will conduct consultation with consulting parties identified under 36 CFR 800.2(c) when he or she makes any of the following effect determinations for the purposes of section 106 of the NHPA: no historic properties affected, no adverse effect, or adverse effect.

(d) Where the non-Federal applicant has identified historic properties on which the proposed NWP activity might have the potential to cause effects and has so notified the Corps, the non-Federal applicant shall not begin the activity until notified by the district engineer either that the activity has no potential to cause effects to historic properties or that NHPA section 106 consultation has been completed. For non-federal permittees, the district engineer will notify the prospective permittee within 45 days of receipt of a complete pre-construction notification whether NHPA section 106 consultation is required. If NHPA section 106 consultation is required, the district engineer will notify the non-Federal applicant that he or she cannot begin the activity until section 106 consultation is completed. If the non-Federal applicant has not heard back from the Corps within 45 days, the applicant must still wait for notification from the Corps.

(e) Prospective permittees should be aware that section 110k of the NHPA (54 U.S.C. 306113) prevents the Corps from granting a permit or other assistance to an applicant who, with intent to avoid the requirements of section 106 of the NHPA, has intentionally significantly adversely affected a historic property to which the permit would relate, or having legal power to prevent it, allowed such significant adverse effect to occur, unless the Corps, after consultation with the Advisory Council on Historic Preservation (ACHP), determines that circumstances justify granting such assistance despite the adverse effect created or permitted by the applicant. If circumstances justify granting the assistance, the Corps is required to notify the ACHP and provide documentation specifying the circumstances, the degree of damage to the integrity of any historic properties affected, and proposed mitigation. This documentation must include any views obtained from the applicant, SHPO/THPO, appropriate Indian tribes if the undertaking occurs on or affects historic properties on tribal lands or affects properties of interest to those tribes, and other parties known to have a legitimate interest in the impacts to the permitted activity on historic properties.

21. Discovery of Previously Unknown Remains and Artifacts. Permittees that discover any previously unknown historic, cultural or archeological remains and artifacts while accomplishing the activity authorized by an NWP, they must immediately notify the district engineer of what they have found, and to the maximum extent practicable, avoid construction activities that may affect the remains and artifacts until the required coordination has been completed. The district engineer will initiate the Federal, Tribal, and state coordination required to determine if the items or remains warrant a recovery effort or if the site is eligible for listing in the National Register of Historic Places.

22. Designated Critical Resource Waters. Critical resource waters include, NOAA-managed marine sanctuaries and marine

monuments, and National Estuarine Research Reserves. The district engineer may designate, after notice and opportunity for public comment, additional waters officially designated by a state as having particular environmental or ecological significance, such as outstanding national resource waters or state natural heritage sites. The district engineer may also designate additional critical resource waters after notice and opportunity for public comment.

(a) Discharges of dredged or fill material into waters of the United States are not authorized by NWPs 7, 12, 14, 16, 17, 21, 29, 31, 35, 39, 40, 42, 43, 44, 49, 50, 51, 52, 57 and 58 for any activity within, or directly affecting, critical resource waters, including wetlands adjacent to such waters.

(b) For NWPs 3, 8, 10, 13, 15, 18, 19, 22, 23, 25, 27, 28, 30, 33, 34, 36, 37, 38, and 54, notification is required in accordance with general condition 32, for any activity proposed by permittees in the designated critical resource waters including wetlands adjacent to those waters. The district engineer may authorize activities under these NWPs only after she or he determines that the impacts to the critical resource waters will be no more than minimal.

23. Mitigation. The district engineer will consider the following factors when determining appropriate and practicable mitigation necessary to ensure that the individual and cumulative adverse environmental effects are no more than minimal:

(a) The activity must be designed and constructed to avoid and minimize adverse effects, both temporary and permanent, to waters of the United States to the maximum extent practicable at the project site (i.e., on site).

(b) Mitigation in all its forms (avoiding, minimizing, rectifying, reducing, or compensating for resource losses) will be required to the extent necessary to ensure that the individual and cumulative adverse environmental effects are no more than minimal.

(c) Compensatory mitigation at a minimum one-for-one ratio will be required for all wetland losses that exceed 1/10-acre and require pre-construction notification, unless the district engineer determines in writing that either some other form of mitigation would be more environmentally appropriate or the adverse environmental effects of the proposed activity are no more than minimal, and provides an activity-specific waiver of this requirement. For wetland losses of 1/10-acre or less that require pre-construction notification, the district engineer may determine on a case-by-case basis that compensatory mitigation is required to ensure that the activity results in only minimal adverse environmental effects.

(d) Compensatory mitigation at a minimum one-for-one ratio will be required for all losses of stream bed that exceed 3/100-acre and require pre-construction notification, unless the district engineer determines in writing that either some other form of mitigation would be more environmentally appropriate or the adverse environmental effects of the proposed activity are no more than minimal, and provides an activity-specific waiver of this requirement. This compensatory mitigation requirement may be satisfied through the restoration or enhancement of riparian areas next to streams in accordance with paragraph (e) of this general condition. For losses of stream bed of 3/100-acre or less that require pre-construction notification, the district engineer may determine on a case-by-case basis that compensatory mitigation is required to ensure that the activity results in only minimal adverse environmental effects. Compensatory mitigation for losses of streams should be provided, if practicable, through stream rehabilitation, enhancement, or preservation, since streams are difficult-to-replace resources (see 33 CFR 332.3(e)(3)).

(e) Compensatory mitigation plans for NWP activities in or near streams or other open waters will normally include a requirement for the restoration or enhancement, maintenance, and legal protection (e.g., conservation easements) of riparian areas next to open waters. In some cases, the restoration or maintenance/protection of riparian areas may be the only compensatory mitigation required. If restoring riparian areas involves planting vegetation, only native species should be planted. The width of the required riparian area will address documented water quality or aquatic habitat loss concerns. Normally, the riparian area will be 25 to 50 feet wide on each side of the stream, but the district engineer may require slightly wider riparian areas to address documented water quality or habitat loss concerns. If it is not possible to restore or maintain/protect a riparian area on both sides of a stream, or if the waterbody is a lake or coastal waters, then restoring or maintaining/protecting a riparian area along a single bank or shoreline may be sufficient. Where both wetlands and open waters exist on the project site, the district engineer will determine the appropriate compensatory mitigation (e.g., riparian areas and/or wetlands compensation) based on what is best for the aquatic environment on a watershed basis. In cases where riparian areas are determined to be the most appropriate form of minimization or compensatory mitigation, the district engineer may waive or reduce the requirement to provide wetland compensatory mitigation for wetland losses.

(f) Compensatory mitigation projects provided to offset losses of aquatic resources must comply with the applicable provisions of 33 CFR part 332.

(1) The prospective permittee is responsible for proposing an appropriate compensatory mitigation option if compensatory mitigation is necessary to ensure that the activity results in no more than minimal adverse environmental effects. For the NWPs, the preferred mechanism for providing compensatory mitigation is mitigation bank credits or in-lieu fee program credits (see 33 CFR 332.3(b)(2) and (3)). However, if an appropriate number and type of mitigation bank or in-lieu credits are not available at the time the PCN is submitted to the district engineer, the district engineer may approve the use of permittee-responsible mitigation.

(2) The amount of compensatory mitigation required by the district engineer must be

sufficient to ensure that the authorized activity results in no more than minimal individual and cumulative adverse environmental effects (see 33 CFR 330.1(e)(3)). (See also 33 CFR 332.3(f).)

(3) Since the likelihood of success is greater and the impacts to potentially valuable uplands are reduced, aquatic resource restoration should be the first compensatory mitigation option considered for permittee-responsible mitigation.

(4) If permittee-responsible mitigation is the proposed option, the prospective permittee is responsible for submitting a mitigation plan. A conceptual or detailed mitigation plan may be used by the district engineer to make the decision on the NWP verification request, but a final mitigation plan that addresses the applicable requirements of 33 CFR 332.4(c)(2) through (14) must be approved by the district engineer before the permittee begins work in waters of the United States, unless the district engineer determines that prior approval of the final mitigation plan is not practicable or not necessary to ensure timely completion of the required compensatory mitigation (see 33 CFR 332.3(k)(3)). If permittee-responsible mitigation is the proposed option, and the proposed compensatory mitigation site is located on land in which another federal agency holds an easement, the district engineer will coordinate with that federal agency to determine if proposed compensatory mitigation project is compatible with the terms of the easement.

(5) If mitigation bank or in-lieu fee program credits are the proposed option, the mitigation plan needs to address only the baseline conditions at the impact site and the number of credits to be provided (see 33 CFR 332.4(c)(1)(ii)).

(6) Compensatory mitigation requirements (e.g., resource type and amount to be provided as compensatory mitigation, site protection, ecological performance standards, monitoring requirements) may be addressed through conditions added to the NWP authorization, instead of components of a compensatory mitigation plan (see 33 CFR 332.4(c)(1)(ii)).

(g) Compensatory mitigation will not be used to increase the acreage losses allowed by the acreage limits of the NWPs. For example, if an NWP has an acreage limit of 1/2-acre, it cannot be used to authorize any NWP activity resulting in the loss of greater than 1/2-acre of waters of the United States, even if compensatory mitigation is provided that replaces or restores some of the lost waters. However, compensatory mitigation can and should be used, as necessary, to ensure that an NWP activity already meeting the established acreage limits also satisfies the no more than minimal impact requirement for the NWPs.

(h) Permittees may propose the use of mitigation banks, in-lieu fee programs, or permittee-responsible mitigation. When developing a compensatory mitigation proposal, the permittee must consider appropriate and practicable options consistent with the framework at 33 CFR 332.3(b). For activities resulting in the loss of marine or estuarine resources, permittee-responsible mitigation may be environmentally preferable if there are no mitigation banks or in-lieu fee programs in the area that have marine or estuarine credits available for sale or transfer to the permittee. For permittee-responsible mitigation, the special conditions of the NWP verification must clearly indicate the party or parties responsible for the implementation and performance of the compensatory mitigation project, and, if required, its long-term management.

(i) Where certain functions and services of waters of the United States are permanently adversely affected by a regulated activity, such as discharges of dredged or fill material into waters of the United States that will convert a forested or scrub-shrub wetland to a herbaceous wetland in a permanently maintained utility line right-of-way, mitigation may be required to reduce the adverse environmental effects of the activity to the no more than minimal level.

24. Safety of Impoundment Structures. To ensure that all impoundment structures are safely designed, the district engineer may require non-Federal applicants to demonstrate that the structures comply with established state or federal, dam safety criteria or have been designed by qualified persons. The district engineer may also require documentation that the design has been independently reviewed by similarly qualified persons, and appropriate modifications made to ensure safety.

25. Water Quality. (a) Where the certifying authority (state, authorized tribe, or EPA, as appropriate) has not previously certified compliance of an NWP with CWA section 401, a CWA section 401 water quality certification for the proposed discharge must be obtained or waived (see 33 CFR 330.4(c)). If the permittee cannot comply with all of the conditions of a water quality certification previously issued by certifying authority for the issuance of the NWP, then the permittee must obtain a water quality certification or waiver for the proposed discharge in order for the activity to be authorized by an NWP.

(b) If the NWP activity requires pre-construction notification and the certifying authority has not previously certified compliance of an NWP with CWA section 401, the proposed discharge is not authorized by an NWP until water quality certification is obtained or waived. If the certifying authority issues a water quality certification for the proposed discharge, the permittee must submit a copy of the certification to the district engineer. The discharge is not authorized by an NWP until the district engineer has notified the permittee that the water quality certification requirement has been satisfied by the issuance of a water quality certification or a waiver.

(c) The district engineer or certifying authority may require additional water quality management measures to ensure that the authorized activity does not result in more than minimal degradation of water quality.

26. Coastal Zone Management. In coastal states where an NWP has not previously received a state coastal zone management consistency concurrence, an individual state coastal zone management consistency concurrence must be obtained, or a presumption of concurrence must occur (see 33 CFR 330.4(d)). If the permittee cannot comply with all of the conditions of

a coastal zone management consistency concurrence previously issued by the state, then the permittee must obtain an individual coastal zone management consistency concurrence or presumption of concurrence in order for the activity to be authorized by an NWP. The district engineer or a state may require additional measures to ensure that the authorized activity is consistent with state coastal zone management requirements.

27. Regional and Case-By-Case Conditions. The activity must comply with any regional conditions that may have been added by the Division Engineer (see 33 CFR 330.4(e)) and with any case specific conditions added by the Corps or by the state, Indian Tribe, or U.S. EPA in its CWA section 401 Water Quality Certification, or by the state in its Coastal Zone Management Act consistency determination.

28. Use of Multiple Nationwide Permits. The use of more than one NWP for a single and complete project is authorized, subject to the following restrictions:

(a) If only one of the NWPs used to authorize the single and complete project has a specified acreage limit, the acreage loss of waters of the United States cannot exceed the acreage limit of the NWP with the highest specified acreage limit. For example, if a road crossing over tidal waters is constructed under NWP 14, with associated bank stabilization authorized by NWP 13, the maximum acreage loss of waters of the United States for the total project cannot exceed 1/3-acre.

(b) If one or more of the NWPs used to authorize the single and complete project has specified acreage limits, the acreage loss of waters of the United States authorized by those NWPs cannot exceed their respective specified acreage limits. For example, if a commercial development is constructed under NWP 39, and the single and complete project includes the filling of an upland ditch authorized by NWP 46, the maximum acreage loss of waters of the United States for the commercial development under NWP 39 cannot exceed 1/2-acre, and the total acreage loss of waters of United States due to the NWP 39 and 46 activities cannot exceed 1 acre.

29. Transfer of Nationwide Permit Verifications. If the permittee sells the property associated with a nationwide permit verification, the permittee may transfer the nationwide permit verification to the new owner by submitting a letter to the appropriate Corps district office to validate the transfer. A copy of the nationwide permit verification must be attached to the letter, and the letter must contain the following statement and signature:

"When the structures or work authorized by this nationwide permit are still in existence at the time the property is transferred, the terms and conditions of this nationwide permit, including any special conditions, will continue to be binding on the new owner(s) of the property. To validate the transfer of this nationwide permit and the associated liabilities associated with compliance with its terms and conditions, have the transferee sign and date below."

_____
(Transferee)

_____
(Date)

30. Compliance Certification. Each permittee who receives an NWP verification letter from the Corps must provide a signed certification documenting completion of the authorized activity and implementation of any required compensatory mitigation. The success of any required permittee-responsible mitigation, including the achievement of ecological performance standards, will be addressed separately by the district engineer. The Corps will provide the permittee the certification document with the NWP verification letter. The certification document will include:

(a) A statement that the authorized activity was done in accordance with the NWP authorization, including any general, regional, or activity-specific conditions;

(b) A statement that the implementation of any required compensatory mitigation was completed in accordance with the permit conditions. If credits from a mitigation bank or in-lieu fee program are used to satisfy the compensatory mitigation requirements, the certification must include the documentation required by 33 CFR 332.3(l)(3) to confirm that the permittee secured the appropriate number and resource type of credits; and

(c) The signature of the permittee certifying the completion of the activity and mitigation.

The completed certification document must be submitted to the district engineer within 30 days of completion of the authorized activity or the implementation of any required compensatory mitigation, whichever occurs later.

31. Activities Affecting Structures or Works Built by the United States. If an NWP activity also requires review by, or permission from, the Corps pursuant to 33 U.S.C. 408 because it will alter or temporarily or permanently occupy or use a U.S. Army Corps of Engineers (USACE) federally authorized Civil Works project (a "USACE project"), the prospective permittee must submit a pre-construction notification. See paragraph (b)(10) of general condition 32. An activity that requires section 408 permission and/or review is not authorized by an NWP until the appropriate Corps office issues the section 408 permission or completes its review to alter, occupy, or use the USACE project, and the district engineer issues a written NWP verification.

32. Pre-Construction Notification. (a) *Timing*. Where required by the terms of the NWP, the prospective permittee must notify the district engineer by submitting a pre-construction notification (PCN) as early as possible. The district engineer must determine if the PCN is complete within 30 calendar days of the date of receipt and, if the PCN is determined to be incomplete, notify the prospective permittee within that 30 day period to request the additional information necessary to make the PCN complete. The request must specify the

information needed to make the PCN complete. As a general rule, district engineers will request additional information necessary to make the PCN complete only once. However, if the prospective permittee does not provide all of the requested information, then the district engineer will notify the prospective permittee that the PCN is still incomplete and the PCN review process will not commence until all of the requested information has been received by the district engineer. The prospective permittee shall not begin the activity until either:

(1) He or she is notified in writing by the district engineer that the activity may proceed under the NWP with any special conditions imposed by the district or division engineer; or

(2) 45 calendar days have passed from the district engineer's receipt of the complete PCN and the prospective permittee has not received written notice from the district or division engineer. However, if the permittee was required to notify the Corps pursuant to general condition 18 that listed species or critical habitat might be affected or are in the vicinity of the activity, or to notify the Corps pursuant to general condition 20 that the activity might have the potential to cause effects to historic properties, the permittee cannot begin the activity until receiving written notification from the Corps that there is "no effect" on listed species or "no potential to cause effects" on historic properties, or that any consultation required under Section 7 of the Endangered Species Act (see 33 CFR 330.4(f)) and/or section 106 of the National Historic Preservation Act (see 33 CFR 330.4(g)) has been completed. If the proposed activity requires a written waiver to exceed specified limits of an NWP, the permittee may not begin the activity until the district engineer issues the waiver. If the district or division engineer notifies the permittee in writing that an individual permit is required within 45 calendar days of receipt of a complete PCN, the permittee cannot begin the activity until an individual permit has been obtained. Subsequently, the permittee's right to proceed under the NWP may be modified, suspended, or revoked only in accordance with the procedure set forth in 33 CFR 330.5(d)(2).

(b) *Contents of Pre-Construction Notification*: The PCN must be in writing and include the following information:

(1) Name, address and telephone numbers of the prospective permittee;

(2) Location of the proposed activity;

(3) Identify the specific NWP or NWP(s) the prospective permittee wants to use to authorize the proposed activity;

(4) (i) A description of the proposed activity; the activity's purpose; direct and indirect adverse environmental effects the activity would cause, including the anticipated amount of loss of wetlands, other special aquatic sites, and other waters expected to result from the NWP activity, in acres, linear feet, or other appropriate unit of measure; a description of any proposed mitigation measures intended to reduce the adverse environmental effects caused by the proposed activity; and any other NWP(s), regional general permit(s), or individual permit(s) used or intended to be used to authorize any part of the proposed project or any related activity, including other separate and distant crossings for linear projects that require Department of the Army authorization but do not require pre-construction notification. The description of the proposed activity and any proposed mitigation measures should be sufficiently detailed to allow the district engineer to determine that the adverse environmental effects of the activity will be no more than minimal and to determine the need for compensatory mitigation or other mitigation measures.

(ii) For linear projects where one or more single and complete crossings require pre-construction notification, the PCN must include the quantity of anticipated losses of wetlands, other special aquatic sites, and other waters for each single and complete crossing of those wetlands, other special aquatic sites, and other waters (including those single and complete crossings authorized by an NWP but do not require PCNs). This information will be used by the district engineer to evaluate the cumulative adverse environmental effects of the proposed linear project, and does not change those non-PCN NWP activities into NWP PCNs.

(iii) Sketches should be provided when necessary to show that the activity complies with the terms of the NWP. (Sketches usually clarify the activity and when provided results in a quicker decision. Sketches should contain sufficient detail to provide an illustrative description of the proposed activity (e.g., a conceptual plan), but do not need to be detailed engineering plans);

(5) The PCN must include a delineation of wetlands, other special aquatic sites, and other waters, such as lakes and ponds, and perennial and intermittent streams, on the project site. Wetland delineations must be prepared in accordance with the current method required by the Corps. The permittee may ask the Corps to delineate the special aquatic sites and other waters on the project site, but there may be a delay if the Corps does the delineation, especially if the project site is large or contains many wetlands, other special aquatic sites, and other waters. Furthermore, the 45-day period will not start until the delineation has been submitted to or completed by the Corps, as appropriate;

(6) If the proposed activity will result in the loss of greater than 1/10-acre of wetlands or 3/100-acre of stream bed and a PCN is required, the prospective permittee must submit a statement describing how the mitigation requirement will be satisfied, or explaining why the adverse environmental effects are no more than minimal and why compensatory mitigation should not be required. As an alternative, the prospective permittee may submit a conceptual or detailed mitigation plan.

(7) For non-federal permittees, if any listed species (or species proposed for listing) or designated critical habitat (or critical habitat proposed for such designation) might be affected or is in the vicinity of the activity, or if the activity is located in designated critical habitat (or critical habitat proposed for such designation), the PCN must include the name(s) of those endangered or threatened species (or species proposed for listing) that might be affected by the proposed activity or utilize

the designated critical habitat (or critical habitat proposed for such designation) that might be affected by the proposed activity. For NWP activities that require pre-construction notification, Federal permittees must provide documentation demonstrating compliance with the Endangered Species Act;

(8) For non-federal permittees, if the NWP activity might have the potential to cause effects to a historic property listed on, determined to be eligible for listing on, or potentially eligible for listing on, the National Register of Historic Places, the PCN must state which historic property might have the potential to be affected by the proposed activity or include a vicinity map indicating the location of the historic property. For NWP activities that require pre-construction notification, Federal permittees must provide documentation demonstrating compliance with section 106 of the National Historic Preservation Act;

(9) For an activity that will occur in a component of the National Wild and Scenic River System, or in a river officially designated by Congress as a "study river" for possible inclusion in the system while the river is in an official study status, the PCN must identify the Wild and Scenic River or the "study river" (see general condition 16); and

(10) For an NWP activity that requires permission from, or review by, the Corps pursuant to 33 U.S.C. 408 because it will alter or temporarily or permanently occupy or use a U.S. Army Corps of Engineers federally authorized civil works project, the pre-construction notification must include a statement confirming that the project proponent has submitted a written request for section 408 permission from, or review by, the Corps office having jurisdiction over that USACE project.

(c) *Form of Pre-Construction Notification*: The nationwide permit pre-construction notification form (Form ENG 6082) should be used for NWP PCNs. A letter containing the required information may also be used. Applicants may provide electronic files of PCNs and supporting materials if the district engineer has established tools and procedures for electronic submittals.

(d) *Agency Coordination*: (1) The district engineer will consider any comments from Federal and state agencies concerning the proposed activity's compliance with the terms and conditions of the NWPs and the need for mitigation to reduce the activity's adverse environmental effects so that they are no more than minimal.

(2) Agency coordination is required for: (i) all NWP activities that require pre-construction notification and result in the loss of greater than 1/2-acre of waters of the United States; (ii) NWP 13 activities in excess of 500 linear feet, fills greater than one cubic yard per running foot, or involve discharges of dredged or fill material into special aquatic sites; and (iii) NWP 54 activities in excess of 500 linear feet, or that extend into the waterbody more than 30 feet from the mean low water line in tidal waters or the ordinary high water mark in the Great Lakes.

(3) When agency coordination is required, the district engineer will immediately provide (e.g., via e-mail, facsimile transmission, overnight mail, or other expeditious manner) a copy of the complete PCN to the appropriate Federal or state offices (FWS, state natural resource or water quality agency, EPA, and, if appropriate, the NMFS). With the exception of NWP 37, these agencies will have 10 calendar days from the date the material is transmitted to notify the district engineer via telephone, facsimile transmission, or e-mail that they intend to provide substantive, site-specific comments. The comments must explain why the agency believes the adverse environmental effects will be more than minimal. If so contacted by an agency, the district engineer will wait an additional 15 calendar days before making a decision on the pre-construction notification. The district engineer will fully consider agency comments received within the specified time frame concerning the proposed activity's compliance with the terms and conditions of the NWPs, including the need for mitigation to ensure that the net adverse environmental effects of the proposed activity are no more than minimal. The district engineer will provide no response to the resource agency, except as provided below. The district engineer will indicate in the administrative record associated with each pre-construction notification that the resource agencies' concerns were considered. For NWP 37, the emergency watershed protection and rehabilitation activity may proceed immediately in cases where there is an unacceptable hazard to life or a significant loss of property or economic hardship will occur. The district engineer will consider any comments received to decide whether the NWP 37 authorization should be modified, suspended, or revoked in accordance with the procedures at 33 CFR 330.5.

(4) In cases of where the prospective permittee is not a Federal agency, the district engineer will provide a response to NMFS within 30 calendar days of receipt of any Essential Fish Habitat conservation recommendations, as required by section 305(b)(4)(B) of the Magnuson-Stevens Fishery Conservation and Management Act.

(5) Applicants are encouraged to provide the Corps with either electronic files or multiple copies of pre-construction notifications to expedite agency coordination.

2021 District Engineer's Decision

1. In reviewing the PCN for the proposed activity, the district engineer will determine whether the activity authorized by the NWP will result in more than minimal individual or cumulative adverse environmental effects or may be contrary to the public interest. If a project proponent requests authorization by a specific NWP, the district engineer should issue the NWP verification for that activity if it meets the terms and conditions of that NWP, unless he or she determines, after considering mitigation, that the proposed activity will result in more than minimal individual and cumulative adverse effects on the aquatic environment and other aspects of the public interest and exercises discretionary authority to require an individual permit for the proposed activity. For a linear project, this determination will include an evaluation of the single and complete crossings of waters of the United States that require PCNs to determine whether they

individually satisfy the terms and conditions of the NWP(s), as well as the cumulative effects caused by all of the crossings of waters of the United States authorized by an NWP. If an applicant requests a waiver of an applicable limit, as provided for in NWPs 13, 36, or 54, the district engineer will only grant the waiver upon a written determination that the NWP activity will result in only minimal individual and cumulative adverse environmental effects.

2. When making minimal adverse environmental effects determinations the district engineer will consider the direct and indirect effects caused by the NWP activity. He or she will also consider the cumulative adverse environmental effects caused by activities authorized by an NWP and whether those cumulative adverse environmental effects are no more than minimal. The district engineer will also consider site specific factors, such as the environmental setting in the vicinity of the NWP activity, the type of resource that will be affected by the NWP activity, the functions provided by the aquatic resources that will be affected by the NWP activity, the degree or magnitude to which the aquatic resources perform those functions, the extent that aquatic resource functions will be lost as a result of the NWP activity (e.g., partial or complete loss), the duration of the adverse effects (temporary or permanent), the importance of the aquatic resource functions to the region (e.g., watershed or ecoregion), and mitigation required by the district engineer. If an appropriate functional or condition assessment method is available and practicable to use, that assessment method may be used by the district engineer to assist in the minimal adverse environmental effects determination. The district engineer may add case-specific special conditions to the NWP authorization to address site-specific environmental concerns.

3. If the proposed activity requires a PCN and will result in a loss of greater than 1/10-acre of wetlands or 3/100-acre of stream bed, the prospective permittee should submit a mitigation proposal with the PCN. Applicants may also propose compensatory mitigation for NWP activities with smaller impacts, or for impacts to other types of waters. The district engineer will consider any proposed compensatory mitigation or other mitigation measures the applicant has included in the proposal in determining whether the net adverse environmental effects of the proposed activity are no more than minimal. The compensatory mitigation proposal may be either conceptual or detailed. If the district engineer determines that the activity complies with the terms and conditions of the NWP and that the adverse environmental effects are no more than minimal, after considering mitigation, the district engineer will notify the permittee and include any activity-specific conditions in the NWP verification the district engineer deems necessary. Conditions for compensatory mitigation requirements must comply with the appropriate provisions at 33 CFR 332.3(k). The district engineer must approve the final mitigation plan before the permittee commences work in waters of the United States, unless the district engineer determines that prior approval of the final mitigation plan is not practicable or not necessary to ensure timely completion of the required compensatory mitigation. If the prospective permittee elects to submit a compensatory mitigation plan with the PCN, the district engineer will expeditiously review the proposed compensatory mitigation plan. The district engineer must review the proposed compensatory mitigation plan within 45 calendar days of receiving a complete PCN and determine whether the proposed mitigation would ensure that the NWP activity results in no more than minimal adverse environmental effects. If the net adverse environmental effects of the NWP activity (after consideration of the mitigation proposal) are determined by the district engineer to be no more than minimal, the district engineer will provide a timely written response to the applicant. The response will state that the NWP activity can proceed under the terms and conditions of the NWP, including any activity-specific conditions added to the NWP authorization by the district engineer.

4. If the district engineer determines that the adverse environmental effects of the proposed activity are more than minimal, then the district engineer will notify the applicant either: (a) that the activity does not qualify for authorization under the NWP and instruct the applicant on the procedures to seek authorization under an individual permit; (b) that the activity is authorized under the NWP subject to the applicant's submission of a mitigation plan that would reduce the adverse environmental effects so that they are no more than minimal; or (c) that the activity is authorized under the NWP with specific modifications or conditions. Where the district engineer determines that mitigation is required to ensure no more than minimal adverse environmental effects, the activity will be authorized within the 45-day PCN period (unless additional time is required to comply with general conditions 18, 20, and/or 31), with activity-specific conditions that state the mitigation requirements. The authorization will include the necessary conceptual or detailed mitigation plan or a requirement that the applicant submit a mitigation plan that would reduce the adverse environmental effects so that they are no more than minimal. When compensatory mitigation is required, no work in waters of the United States may occur until the district engineer has approved a specific mitigation plan or has determined that prior approval of a final mitigation plan is not practicable or not necessary to ensure timely completion of the required compensatory mitigation.

2021 Further Information

1. District engineers have authority to determine if an activity complies with the terms and conditions of an NWP.

2. NWPs do not obviate the need to obtain other federal, state, or local permits, approvals, or authorizations required by law.

3. NWPs do not grant any property rights or exclusive privileges.

4. NWPs do not authorize any injury to the property or rights of others.

5. NWPs do not authorize interference with any existing or proposed Federal project (see general condition 31).

2021 Nationwide Permit Definitions

Best management practices (BMPs): Policies, practices, procedures, or structures implemented to mitigate the adverse environmental effects on surface water quality resulting from development. BMPs are categorized as structural or non-structural.

Compensatory mitigation: The restoration (re-establishment or rehabilitation), establishment (creation), enhancement, and/or in certain circumstances preservation of aquatic resources for the purposes of offsetting unavoidable adverse impacts which remain after all appropriate and practicable avoidance and minimization has been achieved.

Currently serviceable: Useable as is or with some maintenance, but not so degraded as to essentially require reconstruction.

Direct effects: Effects that are caused by the activity and occur at the same time and place.

Discharge: The term "discharge" means any discharge of dredged or fill material into waters of the United States.

Ecological reference: A model used to plan and design an aquatic habitat and riparian area restoration, enhancement, or establishment activity under NWP 27. An ecological reference may be based on the structure, functions, and dynamics of an aquatic habitat type or a riparian area type that currently exists in the region where the proposed NWP 27 activity is located. Alternatively, an ecological reference may be based on a conceptual model for the aquatic habitat type or riparian area type to be restored, enhanced, or established as a result of the proposed NWP 27 activity. An ecological reference takes into account the range of variation of the aquatic habitat type or riparian area type in the region.

Enhancement: The manipulation of the physical, chemical, or biological characteristics of an aquatic resource to heighten, intensify, or improve a specific aquatic resource function(s). Enhancement results in the gain of selected aquatic resource function(s), but may also lead to a decline in other aquatic resource function(s). Enhancement does not result in a gain in aquatic resource area.

Establishment (creation): The manipulation of the physical, chemical, or biological characteristics present to develop an aquatic resource that did not previously exist at an upland site. Establishment results in a gain in aquatic resource area.

High Tide Line: The line of intersection of the land with the water's surface at the maximum height reached by a rising tide. The high tide line may be determined, in the absence of actual data, by a line of oil or scum along shore objects, a more or less continuous deposit of fine shell or debris on the foreshore or berm, other physical markings or characteristics, vegetation lines, tidal gages, or other suitable means that delineate the general height reached by a rising tide. The line encompasses spring high tides and other high tides that occur with periodic frequency but does not include storm surges in which there is a departure from the normal or predicted reach of the tide due to the piling up of water against a coast by strong winds such as those accompanying a hurricane or other intense storm.

Historic Property: Any prehistoric or historic district, site (including archaeological site), building, structure, or other object included in, or eligible for inclusion in, the National Register of Historic Places maintained by the Secretary of the Interior. This term includes artifacts, records, and remains that are related to and located within such properties. The term includes properties of traditional religious and cultural importance to an Indian tribe or Native Hawaiian organization and that meet the National Register criteria (36 CFR part 60).

Independent utility: A test to determine what constitutes a single and complete non-linear project in the Corps Regulatory Program. A project is considered to have independent utility if it would be constructed absent the construction of other projects in the project area. Portions of a multi-phase project that depend upon other phases of the project do not have independent utility. Phases of a project that would be constructed even if the other phases were not built can be considered as separate single and complete projects with independent utility.

Indirect effects: Effects that are caused by the activity and are later in time or farther removed in distance, but are still reasonably foreseeable.

Loss of waters of the United States: Waters of the United States that are permanently adversely affected by filling, flooding, excavation, or drainage because of the regulated activity. The loss of stream bed includes the acres of stream bed that are permanently adversely affected by filling or excavation because of the regulated activity. Permanent adverse effects include permanent discharges of dredged or fill material that change an aquatic area to dry land, increase the bottom elevation of a waterbody, or change the use of a waterbody. The acreage of loss of waters of the United States is a threshold measurement of the impact to jurisdictional waters or wetlands for determining whether a project may qualify for an NWP; it is not a net threshold that is calculated after considering compensatory mitigation that may be used to offset losses of aquatic functions and services. Waters of the United States temporarily filled, flooded, excavated, or drained, but restored to pre-construction contours and elevations after construction, are not included in the measurement of loss of waters of the United States. Impacts resulting from activities that do not require Department of the Army authorization, such as activities eligible for exemptions under section 404(f) of the Clean Water Act, are not considered when calculating the loss of waters of the United States.

Navigable waters: Waters subject to section 10 of the Rivers and Harbors Act of 1899. These waters are defined at 33 CFR part 329.

Non-tidal wetland: A non-tidal wetland is a wetland that is not subject to the ebb and flow of tidal waters. Non-tidal wetlands contiguous to tidal waters are located landward of the high tide line (i.e., spring high tide line).

Open water: For purposes of the NWPs, an open water is any area that in a year with normal patterns of precipitation has water flowing or standing above ground to the extent that an ordinary high water mark can be determined. Aquatic vegetation within the area of flowing or standing water is either non-emergent, sparse, or absent. Vegetated shallows are considered to be open waters. Examples of "open waters" include rivers, streams, lakes, and ponds.

Ordinary High Water Mark: The term ordinary high water mark means that line on the shore established by the fluctuations of water and indicated by physical characteristics such as a clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas.

Perennial stream: A perennial stream has surface water flowing continuously year-round during a typical year.

Practicable: Available and capable of being done after taking into consideration cost, existing technology, and logistics in light of overall project purposes.

Pre-construction notification: A request submitted by the project proponent to the Corps for confirmation that a particular activity is authorized by nationwide permit. The request may be a permit application, letter, or similar document that includes information about the proposed work and its anticipated environmental effects. Pre-construction notification may be required by the terms and conditions of a nationwide permit, or by regional conditions. A pre-construction notification may be voluntarily submitted in cases where pre-construction notification is not required and the project proponent wants confirmation that the activity is authorized by nationwide permit.

Preservation: The removal of a threat to, or preventing the decline of, aquatic resources by an action in or near those aquatic resources. This term includes activities commonly associated with the protection and maintenance of aquatic resources through the implementation of appropriate legal and physical mechanisms. Preservation does not result in a gain of aquatic resource area or functions.

Re-establishment: The manipulation of the physical, chemical, or biological characteristics of a site with the goal of returning natural/historic functions to a former aquatic resource. Re-establishment results in rebuilding a former aquatic resource and results in a gain in aquatic resource area and functions.

Rehabilitation: The manipulation of the physical, chemical, or biological characteristics of a site with the goal of repairing natural/historic functions to a degraded aquatic resource. Rehabilitation results in a gain in aquatic resource function, but does not result in a gain in aquatic resource area.

Restoration: The manipulation of the physical, chemical, or biological characteristics of a site with the goal of returning natural/historic functions to a former or degraded aquatic resource. For the purpose of tracking net gains in aquatic resource area, restoration is divided into two categories: re-establishment and rehabilitation.

Riffle and pool complex: Riffle and pool complexes are special aquatic sites under the 404(b)(1) Guidelines. Riffle and pool complexes sometimes characterize steep gradient sections of streams. Such stream sections are recognizable by their hydraulic characteristics. The rapid movement of water over a course substrate in riffles results in a rough flow, a turbulent surface, and high dissolved oxygen levels in the water. Pools are deeper areas associated with riffles. A slower stream velocity, a streaming flow, a smooth surface, and a finer substrate characterize pools.

Riparian areas: Riparian areas are lands next to streams, lakes, and estuarine-marine shorelines. Riparian areas are transitional between terrestrial and aquatic ecosystems, through which surface and subsurface hydrology connects riverine, lacustrine, estuarine, and marine waters with their adjacent wetlands, non-wetland waters, or uplands. Riparian areas provide a variety of ecological functions and services and help improve or maintain local water quality. (See general condition 23.)

Shellfish seeding: The placement of shellfish seed and/or suitable substrate to increase shellfish production. Shellfish seed consists of immature individual shellfish or individual shellfish attached to shells or shell fragments (i.e., spat on shell). Suitable substrate may consist of shellfish shells, shell fragments, or other appropriate materials placed into waters for shellfish habitat.

Single and complete linear project: A linear project is a project constructed for the purpose of getting people, goods, or services from a point of origin to a terminal point, which often involves multiple crossings of one or more waterbodies at separate and distant locations. The term "single and complete project" is defined as that portion of the total linear project proposed or accomplished by one owner/developer or partnership or other association of owners/developers that includes all crossings of a single water of the United States (i.e., a single waterbody) at a specific location. For linear projects crossing a single or multiple waterbodies several times at separate and distant locations, each crossing is considered a single and complete project for purposes of NWP authorization. However, individual channels in a braided stream or river, or individual arms of a large, irregularly shaped wetland or lake, etc., are not separate waterbodies, and crossings of such features cannot be considered separately.

Single and complete non-linear project: For non-linear projects, the term "single and complete project" is defined at 33 CFR 330.2(i) as the total project proposed or accomplished by one owner/developer or partnership or other association of owners/developers. A single and complete non-linear project must have independent utility (see definition of "independent utility"). Single and complete non-linear projects may not be "piecemealed" to avoid the limits in an NWP authorization.

Stormwater management: Stormwater management is the mechanism for controlling stormwater runoff for the

purposes of reducing downstream erosion, water quality degradation, and flooding and mitigating the adverse effects of changes in land use on the aquatic environment.

Stormwater management facilities: Stormwater management facilities are those facilities, including but not limited to, stormwater retention and detention ponds and best management practices, which retain water for a period of time to control runoff and/or improve the quality (i.e., by reducing the concentration of nutrients, sediments, hazardous substances and other pollutants) of stormwater runoff.

Stream bed: The substrate of the stream channel between the ordinary high water marks. The substrate may be bedrock or inorganic particles that range in size from clay to boulders. Wetlands contiguous to the stream bed, but outside of the ordinary high water marks, are not considered part of the stream bed.

Stream channelization: The manipulation of a stream's course, condition, capacity, or location that causes more than minimal interruption of normal stream processes. A channelized jurisdictional stream remains a water of the United States.

Structure: An object that is arranged in a definite pattern of organization. Examples of structures include, without limitation, any pier, boat dock, boat ramp, wharf, dolphin, weir, boom, breakwater, bulkhead, revetment, riprap, jetty, artificial island, artificial reef, permanent mooring structure, power transmission line, permanently moored floating vessel, piling, aid to navigation, or any other manmade obstacle or obstruction.

Tidal wetland: A tidal wetland is a jurisdictional wetland that is inundated by tidal waters. Tidal waters rise and fall in a predictable and measurable rhythm or cycle due to the gravitational pulls of the moon and sun. Tidal waters end where the rise and fall of the water surface can no longer be practically measured in a predictable rhythm due to masking by other waters, wind, or other effects. Tidal wetlands are located channelward of the high tide line.

Tribal lands: Any lands title to which is either: 1) held in trust by the United States for the benefit of any Indian tribe or individual; or 2) held by any Indian tribe or individual subject to restrictions by the United States against alienation.

Tribal rights: Those rights legally accruing to a tribe or tribes by virtue of inherent sovereign authority, unextinguished aboriginal title, treaty, statute, judicial decisions, executive order or agreement, and that give rise to legally enforceable remedies.

Vegetated shallows: Vegetated shallows are special aquatic sites under the 404(b)(1) Guidelines. They are areas that are permanently inundated and under normal circumstances have rooted aquatic vegetation, such as seagrasses in marine and estuarine systems and a variety of vascular rooted plants in freshwater systems.

Waterbody: For purposes of the NWPs, a waterbody is a "water of the United States." If a wetland is adjacent to a waterbody determined to be a water of the United States, that waterbody and any adjacent wetlands are considered together as a single aquatic unit (see 33 CFR 328.4(c)(2)).

Andy Beshear
GOVERNOR

ENERGY AND ENVIRONMENT CABINET
DEPARTMENT FOR ENVIRONMENTAL PROTECTION
300 Sower Boulevard
Frankfort, Kentucky 40601
Phone: (502) 564-2150
Fax: 502-564-4245

Rebecca W. Goodman
SECRETARY

Anthony R. Hatton
COMMISSIONER

July 30, 2024

Northern Kentucky Water District
c/o: Steve Broering
2835 Crescent Springs Road, P.O. Box 18640
Erlanger, Kentucky 41018

Re: §401 Water Quality Certification
Northern KY Water District
AI No.: 2485; Activity ID: APE20240006
WQC No: WQC2024-128-7M1
USACE ID No.: LRL-2024-00350, LRL-2024-00452, LRL-2024-00453, LRL-2024-00454, LRL-2024-00457, LRL-2024-00458, LRL-2024-00456
Multiple Streams
Campbell County, Kentucky

Dear Steve Broering:

Pursuant to Section 401 of the Clean Water Act (CWA) and 40 CFR 121.7(c), the Commonwealth of Kentucky certifies it has reasonable assurances that applicable water quality standards under Kentucky Administrative Regulations Title 401, Chapter 10, established pursuant to Sections 301, 302, 303, 304, 306, and 307 of the CWA, will not be violated by the above referenced project provided that the U.S. Army Corps of Engineers authorizes the activity under a federal license or permit, and the attached conditions are met.

Other permits from the Division of Water may be required for this activity. Activities within a floodplain may require a Permit to Construct Across or Along a Stream; contact the Floodplain Management Section (502-564-3410). Projects that disturb one acre or more of land or is part of a larger common plan of development or sale that will ultimately disturb one acre or more of land require a Kentucky Pollution Discharge Elimination System (KPDES) Stormwater Permit; contact the Surface Water Permits Branch (502-564-3410 or SWPBSupport@ky.gov). A Groundwater Protection Plan is required if activities listed in Section 2(2) of 401 KAR 5:037 are conducted. A Water Withdrawal Application is required for activities proposing raw water withdrawals of 10,000 gallons per day or more; contact the Watershed Management Branch (502-564-3410).

All future correspondence on this project must reference AI No. **2485**. **The attached document is your official Water Quality Certification; please read it carefully**. Please contact Conner Flora by phone at 502-782-3531 or email at conner.flora@ky.gov if you have any questions.

Sincerely,

Samantha Vogeler

Samantha Vogeler, Supervisor
Water Quality Certification Section
Kentucky Division of Water

SV:CF
Attachment

cc: Cory Shumate, USACE: Louisville (via email: Cory.D.Shumate@usace.army.mil)
Lindsey Jakovljevic, Consultant: CT Consultants (via email: LJakovjevic.ctconsultants.com)
Lee Andrews, USFWS: Frankfort (via email: kentuckyes@fws.gov)
Brian Storz, Licking River Basin Coordinator (via email: brian.storz@ky.gov)
Matthew Gross, Florence Regional Field Office (via email: matthew.gross@ky.gov)

Water Quality Certification

Northern KY Water District

Facility Requirements

Permit Number: WQC2024-128-7M1

Activity ID No.:APE20240006

ACTV0000000066 (AI: 2485 APE20240006) Northern KY Water District:

Submittal/Action Requirements:

Condition No.	Condition
S-1	Northern Kentucky Water District shall notify the Water Quality Certification Project Manager or Supervisor of the scheduled start of construction activities at least two weeks before the start of construction. This condition is necessary for the Division of Water to be informed of the ongoing activity for the purposes of site visits to ensure implementation of Kentucky Regulatory Statutes and Administrative Regulations; the Division will monitor the environment, minimize impact to aquatic resources, protect the use and designation of resources, allow more effective and efficient control practices, identify changes and conditions in ecological systems as a result of activities, and to warn of emergency conditions. [401 KAR 10:030 Section 1, 401 KAR 10:031 Section 2(1)(a), KRS 224.10-100, KRS 224.70-110]
S-2	Northern Kentucky Water District shall notify the Water Quality Certification Project Manager or Supervisor of substantial completion of construction no later than two weeks post-construction. This condition is necessary for the Division of Water to be informed of the ongoing activity for the purposes of site visits to ensure implementation of Kentucky Regulatory Statutes and Administrative Regulations; the Division will monitor the environment, minimize impact to aquatic resources, protect the use and designation of resources, allow more effective and efficient control practices, identify changes and conditions in ecological systems as a result of activities, and to warn of emergency conditions. [401 KAR 10:030 Section 1, 401 KAR 10:031 Section 2(1)(a), KRS 224.10-100, KRS 224.70-110]
S-3	Northern Kentucky Water District shall submit as-built drawings within 90 days after substantial completion of construction to the Water Quality Certification Section Project Manager or Supervisor. This condition is necessary to monitor the aquatic resources, minimize impact to aquatic resources, protect the use and designation of resources, allow more effective and efficient control practices, identify changes and conditions in ecological systems as a result of activities, and to warn of emergency conditions. [401 KAR 10:030 Section 1, 401 KAR 10:031 Section 2(1)(a), KRS 224.10-100, KRS 224.70-110]

Narrative Requirements:

Condition No.	Condition
T-1	The work approved by this certification shall be limited to 38.794466, -84.493575: The proposed project will construct 43,920 feet of new 8" water main extensions at 15 separate un-served roads within Kenton County, Kentucky. For the construction of The Project, temporary crossings through two (2) perennial streams, twenty-one (21) ephemeral streams, and nine (9) wetlands are unavoidable. Total temporary impacts are proposed to 0.394 acres of wetlands and 105 linear feet of perennial stream and 2,142 linear feet of ephemeral stream. The applicant is required to return the streams and wetlands to pre-construction contours, wetlands that were temporarily impacted must remain wetlands post-construction this includes the conversion of forested wetlands to emergent wetlands. This condition is necessary to confirm activities approved by this certification. [401 KAR 10:030 Section 1, 401 KAR 9:010 Section 1(a)(2), KRS 224.10-100, KRS 224.70-110]

ACTV0000000066 (AI: 2485 APE20240006) Northern KY Water District:

Narrative Requirements:

Condition No.	Condition
T-2	All work performed under this certification shall adhere to the design and specifications set forth in the following document(s): Application for Permit to Construct Across or Along a Stream and/or Water Quality Certification received on 4/19/2024, a Pre-Filling Meeting Request on 1/19/2024, and a Certification Request on 6/26/2024. Project Area.zip Sub District O- PCN Application Form - signed.pdf Sub District O- PCN.pdf Utility Line Construction WQC Table.pdf affidavit_Sub District O EEC.pdf Application Form - Sub O - signed P.pdf eTearsheet_KY Enquirer_NKWD 04.23.24_ SubDistrictO-EEC.pdf NOD#1 Northern Kentucky Water District (AI_ 2485).pdf This condition is necessary to confirm activities approved by this certification. [401 KAR 10:030 Section 1, 401 KAR 9:010 Section 1(a)(2), KRS 224.10-100, KRS 224.70-110]
T-3	Northern Kentucky Water District is responsible for preventing degradation of waters of the Commonwealth from soil erosion. An erosion and sediment control plan must be designed, implemented, and maintained in effective operating condition at all times during construction. This condition is necessary to prevent and minimize objectionable deposits and pollution and protect the use of the stream. [401 KAR 10:030 Section 1, 401 KAR 10:031 Section 2(1)(a), KRS 224.10-100, KRS 224.70-110]

ACTV0000000066 (AI: 2485 APE20240006) Northern KY Water District:

Narrative Requirements:

Condition No.	Condition
T-4	No in-stream operations or activities shall be conducted during fish spawning season (April 1 through June 30), due to the potential impacts of increased sediment load and associated water quality and designated aquatic habitat impacts. This condition is necessary to monitor the aquatic resources, minimize impact to aquatic resources, protect the use and designation of resources, allow more effective and efficient control practices, identify changes and conditions in ecological systems as a result of activities, and to warn of emergency conditions. [401 KAR 10:030 Section 1, 401 KAR 10:031 Section 4(1)(c,h), KRS 224.10-100, KRS 224.70-110]
T-5	Heavy equipment (e.g. bulldozers, backhoes, draglines, etc.), if required for this project, should not be used or operated within the stream channel. In those instances where such instream work is unavoidable, then it shall be performed in such a manner and duration as to minimize re-suspension of sediments and disturbance to the channel, banks, or riparian vegetation. This condition is necessary to prevent and minimize objectionable deposits and pollution and protect the use of the stream. [401 KAR 10:030 Section 1, 401 KAR 10:031 Section 2(1)(a), KRS 224.10-100, KRS 224.70-110]
T-6	Erosion and sediment pollution control plans and Best Management Practices must be designed, installed, and maintained in effective operating condition at all times during construction activities so that violations of state water quality standards do not occur. This condition is necessary to prevent and minimize objectionable deposits and pollution and protect the use of the stream. [401 KAR 10:030 Section 1, 401 KAR 10:031 Section 2(1)(a), KRS 224.10-100, KRS 224.70-110]
T-7	Remove all sediment and erosion control measures after re-vegetation has become well-established. This condition is necessary to prevent and minimize objectionable deposits and pollution and protect the use of the stream. [401 KAR 10:030 Section 1, 401 KAR 10:031 Section 2(1)(a), KRS 224.10-100, KRS 224.70-110]
T-8	Any fill or riprap shall be of a composition that shall not cause violations of water quality standards by adversely affecting the biological, chemical, or physical properties of waters of the Commonwealth. If riprap is used, it shall be of a weight and size that bank stress or slump conditions shall not occur. This condition is necessary to prevent and minimize objectionable deposits and pollution and protect the use of the stream. [401 KAR 10:030 Section 1, 401 KAR 10:031 Section 2(1)(a), KRS 224.10-100, KRS 224.70-110]
T-9	Sediment and erosion control measures (e.g., check-dams, silt fencing, or hay bales) shall not be placed within surface waters of the Commonwealth, either temporarily or permanently, without prior approval by the Kentucky Division of Water's Water Quality Certification Section. If placement of sediment and erosion control measures in surface waters is unavoidable, placement shall not be conducted in such a manner that may cause instability of streams that are adjacent to, upstream, or downstream of the structures. All sediment and erosion control measures shall be removed and the natural grade restored prior to withdrawal from the site. This condition is necessary to prevent and minimize objectionable deposits and pollution and protect the use of the stream. [401 KAR 10:030 Section 1, 401 KAR 10:031 Section 2(1)(a), KRS 224.10-100, KRS 224.70-110]
T-10	Measures shall be taken to prevent or control spills of fuels, lubricants, or other toxic materials used in construction from entering the watercourse. This condition is necessary to prevent water pollution as prohibited by statute. [401 KAR 10:030 Section 1, 401 KAR 10:031 Section 2(1)(a), KRS 224.10-100, KRS 224.70-110]

ACTV0000000066 (AI: 2485 APE20240006) Northern KY Water District:

Narrative Requirements:

Condition No.	Condition
T-11	To the maximum extent practicable, all in-stream work under this certification shall be performed during low flow. This condition is necessary to prevent and minimize objectionable deposits and pollution and protect the use of the stream. [401 KAR 10:030 Section 1, 401 KAR 10:031 Section 2(1)(a), KRS 224.10-100, KRS 224.70-110]
T-12	Removal of existing riparian vegetation shall be restricted to the minimum necessary for project construction. This condition is necessary to minimize negative effects to the environment, protect the use of the stream, and protect aquatic resources. [401 KAR 10:030 Section 1, 401 KAR 10:031 Section 2(1)(a), KRS 224.10-100, KRS 224.70-110]
T-13	Should stream pollution, wetland impairment, and/or violations of water quality standards occur as a result of this activity (either from a spill or other forms of water pollution), the Kentucky Division of Water shall be notified immediately by calling 800/564-2380. This condition is necessary to monitor the aquatic resources, minimize impact to aquatic resources, protect the use and designation of resources, allow more effective and efficient control practices, identify changes and conditions in ecological systems as a result of activities, and to warn of emergency conditions. [401 KAR 10:030 Section 1, 401 KAR 10:031 Section 2(1)(a), KRS 224.10-100, KRS 224.70-110]
T-14	This Water Quality Certification expires on July 29, 2024. This condition is necessary for the issuance of the certification. [KRS 224.10-100, KRS 224.16-050(2), KRS 224.70-110]
T-15	Other permits from the Division of Water may be required for this activity. If this activity occurs within a floodplain, a Permit to Construct Across or Along a Stream may be required. Please contact the Floodplain Management Section Supervisor (502-564-3410) for more information prior to construction. If the project will disturb one acre or more of land, or is part of a larger common plan of development or sale that will ultimately disturb one acre or more of land, a Kentucky Pollution Discharge Elimination System (KPDES) Stormwater Permit shall be required. Please contact the Surface Water Permits Branch (502-564-3410 or SWPBSupport@ky.gov) for more information. A Groundwater Protection Plan is required if any of the activities listed in Section 2(2) of 401 KAR 5:037 are conducted. A Water Withdrawal Application is required for any activities proposing raw water withdrawals of 10,000 gallons per day or more. For technical assistance contact the Watershed Management Branch at 502-564-3410 or visit eec.ky.gov. This condition is necessary for confirm authorized impacts, the appropriate responsible party, monitor the aquatic resources, minimize impact to aquatic resources, protect the use and designation of resources, allow more effective and efficient control practices, identify changes and conditions in ecological systems as a result of activities, and to warn of emergency conditions. [KRS 224.10-100, KRS 224.16-050(2), KRS 224.70-110]

ACTV0000000066 (AI: 2485 APE20240006) Northern KY Water District:

Narrative Requirements:

Condition No.	Condition
T-16	If there is a transfer or conveyance of the project site during the issued WQC term for the approved activity, the Northern Kentucky Water District shall submit written notice to the Water Quality Certification Section Project Manager or Supervisor of the transfer or conveyance of the project site or any part of the project site at least 60 days prior to the transfer or conveyance of the project site. The notification shall include the WQC number; the Agency Interest (AI) No.; the name, mailing address, email address, and telephone number of the current owner; the name, mailing address, email address, and telephone number of the prospective transferee; the proposed effective date of transfer/conveyance; and a copy of the documentation evidencing the transfer/conveyance. Failure to comply with this condition does not negate the validity or enforceability of this certification. This condition is necessary for confirm authorized impacts, the appropriate responsible party, monitor the aquatic resources, minimize impact to aquatic resources, protect the use and designation of resources, allow more effective and efficient control practices, identify changes and conditions in ecological systems as a result of activities, and to warn of emergency conditions. [401 KAR 10:030 Section 1, 401 KAR 9:010 Section 1(a)(2), KRS 224.10-100, KRS 224.70-110]

Kentucky Pollutant Discharge Elimination System (KPDES)

General Permit

Andy Beshear
GOVERNOR

ENERGY AND ENVIRONMENT CABINET
DEPARTMENT FOR ENVIRONMENTAL PROTECTION
300 Sower Boulevard
Frankfort, Kentucky 40601
Phone: (502) 564-2150
Fax: 502-564-4245

Rebecca W. Goodman
SECRETARY

Anthony R. Hatton
COMMISSIONER

September 24, 2024

Kyle Ryan
Northern KY Water District
2835 Crescent Springs Rd
Erlanger, KY 41018

Re: KYR10 Coverage Acknowledgment
KPDES No.: KYR10S784
Subdistrict 'O' -Steep Creek Road
Permit Type: Construction Stormwater
AI ID: 2485
Campbell County, Kentucky

Dear Kyle Ryan:

The discharges associated with the Notice of Intent you submitted have been approved for coverage under the "Kentucky Pollutant Discharge Elimination System (KPDES) General Permit for Storm Water Discharges Associated with Construction Activities (KYR100000)" master general permit. Your coverage becomes effective on the date of this letter. This coverage automatically terminates two years from the effective date of your coverage unless an extension is requested prior to the termination date, or the Division of Water revokes coverage, whichever comes first. During this period of coverage all discharges shall comply with the conditions of the KYR100000 master general permit. This permit and links to the eNOI (and permit coverage extension) and eNOT forms can be found on our website:
https://eec.ky.gov/Environmental-Protection/Water/PermitCert/KPDES/Documents/KYR10PermitPage.pdf.

Any person aggrieved by the issuance of a permit final decision may demand a hearing pursuant to KRS 224.10-420(2) within thirty (30) days from the date of the issuance of this letter. Any demand for a hearing on the permit shall be filed in accordance with the procedures specified in KRS 224.10-420, 224.10-440, 224.10-470, and the regulations promulgated thereto. The request for hearing should be submitted in writing to the Energy and Environment Cabinet, Office of Administrative Hearings, 211 Sower Boulevard, Frankfort, Kentucky 40601 and the Commonwealth of Kentucky, Energy and Environment Cabinet, Division of Water, 300 Sower Boulevard, Frankfort, Kentucky 40601. For your record keeping purposes, it is recommended that these requests be sent by certified mail. The written request must conform to the appropriate statutes referenced above.

Any questions concerning the general permit and its requirements should be directed to me at 502-782-6944 or email me at Barry.Elmore@ky.gov

Construction Site GPS Coordinates: 38.925447, -84.470239
Receiving Water: Steep Creek

Sincerely,

Barry Elmore

Barry Elmore
Surface Water Permits Branch
Division of Water

cc: Jim Cornell, eNOI Preparer
Matthew Gross, Florence Regional Office

Kentucky Transportation Cabinet Encroachment Permits

NOTICE OF COMPLETION OF ENCROACHMENT PERMIT WORK

PERMITTEE

Name: Northern Kentucky Water District
Contact Person: Steve Broering
Address: 2835 Crescent Springs Road
City: Ft. Wright
State: Kentucky
Zip: 41017
Telephone: (859) 991-1652

PROJECT IDENTIFICATION

Permit Number: 06-2024-00844

I wish to notify the Department of Highways that the above mentioned permit work and any necessary right-of-way restoration have been completed and are ready for final inspection.

Permittee

Please return this form to the address below when work is completed and ready for final inspection.

Please Return to: Permit Engineer
Department of Highways, District 6 Office
421 Buttermilk Pike
Covington, Kentucky 41017
(859) 341-2700
www.transportation.ky.gov/

LOCATION(S)			
Description	**County - Route**	**Latitude**	**Longitude**
PROPOSED 8" WATER MAIN INSTALLATION ON STEEP CREEK RD. THAT TIES INTO EXISTING 8" WM ON DECOURSEY PIKE	Kenton - KY 177	38.934462	-84.471393

APPROVED
AUGUST 27, 2024
KENTUCKY TRANSPORTATION CABINET
06-2024-00844

Andy Beshear
Governor

COMMONWEALTH OF KENTUCKY
TRANSPORTATION CABINET
Department of Highways, District 6 Office
421 Buttermilk Pike
Covington, Kentucky 41017
(859) 341-2700
www.transportation.ky.gov/

Jim Gray
Secretary

August 27, 2024

Northern Kentucky Water District
Steve Broering
2835 Crescent Springs Road
Ft. Wright, Kentucky 41017

Subject: Permit #: 06-2024-00844
Permit Type: Utilities - Water
Approval

Dear Applicant:

Attached is your permit approval and documentation for the subject permit.

Be advised that all work must be done in conformity with permit and application conditions. If you have any questions, please contact the Permits Section at this office.

Sincerely,

Linzy Brefeld

Linzy Brefeld
D6 Permits Supervisor

Attachments

APPROVED
AUGUST 27, 2024
KENTUCKY TRANSPORTATION CABINET
06-2024-00844-1

Kentucky Transportation Cabinet
Department of Highways
Division of Maintenance
Permits Branch

ENCROACHMENT PERMIT

KYTC KEPT #: 06-2024-00844

Permittee: Northern Kentucky Water District

Permit Type / Subtype: Utilities / Water

Work Completion Date: 8/27/2025

INDEMNITIES		
Type	**Amount Required**	**Tracking Number**
Performance Bond	$0.00	
Cash / Check	$0.00	
Self-Insured	$0.00	
Payment Bond	$0.00	
Liability Insurance	$0.00	

This permit has been: **APPROVED** [X] **DENIED** [ ]

Linzy Brefeld	D6 Permits Supervisor	8/27/2024
SIGNATURE	**TITLE**	**DATE**

The TC 99-1(B), including the application TC-99 1(A) and all related and accompanying documents and drawings make up the permit. It is not a permit unless both the TC 99-1(A) and TC 99-1(B) are both present.

LOCATION(S)			
Description	**County - Route**	**Latitude**	**Longitude**
PROPOSED 8" WATER MAIN INSTALLATION ON STEEP CREEK RD. THAT TIES INTO EXISTING 8" WM ON DECOURSEY PIKE	Kenton - KY 177	38.934462	-84.471393

APPROVED
AUGUST 27, 2024
TRANSPORTATION CABINET
06-2024-00844

Kentucky811 Know what's below. Call before you dig

To Submit a Locate Request
24 Hours a Day, Seven Days a Week:
Call 811 or 800-752-6007

APPLICATION FOR ENCROACHMENT PERMIT

KYTC KEPT #: 06-2024-00844

SECTION 1: APPLICANT CONTACT INFORMATION

APPLICANT	**ADDRESS**		
NORTHERN KY WATER DISTRICT	2835 CRESCENT SPRINGS PIKE		
EMAIL	**CITY**	**STATE**	**ZIP**
sbroering@nkywater.org	ERLANGER	KY	41018
CONTACT NAME 1	**EMAIL**	**PHONE #** 859-426-2728	
Steve Broering	sbroering@nkywater.org	**CELL #**	
CONTACT NAME 2 (*if applicable*)	**EMAIL**	**PHONE #**	
		CELL #	

SECTION 2: PROPOSED WORK LOCATION

ADDRESS	**CITY**		**STATE**	**ZIP**
	LATONIA		Kentucky	41015
COUNTY	**ROUTE #**	**MILE POINT**	**LONGITUDE** (*X*)	**LATITUDE** (*Y*)
KENTON	177	11.25	84D28'17"W	38D56'04"N

ADDITIONAL LOCATION INFORMATION:
DECOURSEY PIKE (KY 177) FROM RYLAN LAKES DRIVE TO STEEP CREEK ROAD

FOR KYTC USE ONLY

PERMIT TYPE: ☐ Air Right ☐ Entrance ☒ Utilities ☐ Vegetation Removal ☐ Other: _____

ACCESS: ☐ Full ☐ Partial ☒ by Permit **LOCATION:** ☐ Left ☐ Right ☐ Crossing

SECTION 3: GENERAL DESCRIPTION OF WORK

PROPOSED 8" WATER MAIN INSTALLATION ON STEEP CREEK RD. THAT TIES INTO EXISTING 8" WM ON DECOURSEY PIKE (KY 177)

THE UNDERSIGNED APPLICANT(s), being duly authorized representative(s) or owner(s), DO AGREE TO ALL ORIGINAL UNEDITED TERMS AND CONDITIONS ON THE TC 99-1A, pages 1-4.

Steve Broering
SIGNATURE

7-15-2024
DATE

This is not a permit unless and until the applicant(s) receives an approved TC 99-1B from KYTC. This application shall become void if not approved by the cancellation date. The cancellation date shall be a minimum of one year from the date the applicant submits their application.

APPROVED
AUGUST 27, 2024
KENTUCKY TRANSPORTATION CABINET
06-2024-00844

APPLICATION FOR ENCROACHMENT PERMIT

TERMS AND CONDITIONS

1. The permit, including this application and all related and accompanying documents and drawings making up the permit, remains in effect and is binding upon the Applicant/Permittee, its successors and assigns, as long as the encroachment(s) exists and also until the permittee is finally relieved by the Department of Highways from all its obligations.

2. Applicant shall meet all requirements of the Clean Water Act if the project will disturb one acre or more, the applicant shall obtain a KPDES KYR10 Permit from the Kentucky Division of Water. All disturbed areas shall meet the requirements of the Department of Highway's Standard Specifications, Sections 212 and 213, as amended.

3. **INDEMNITY:**
   - **A.** PERFORMANCE BOND: The permittee shall provide to the Department a performance bond according to the Permits Manual, Section PE-203 as a guarantee of conformance with the Department's Encroachment Permit requirements.
   - **B.** PAYMENT BOND: At the discretion of the department, a payment bond shall be required of the permittee to ensure payment of liquidated damages assessed to the permittee.
   - **C.** LIABILITY INSURANCE: Liability insurance shall be required of the permittee (in an amount approved by the department) to cover all liabilities associated with the encroachment.
   - **D.** It shall be the responsibility of the permittee, its successors and assigns, to maintain all indemnities in full force and effect until the permittee is authorized to release the indemnity by the Department.

4. A copy of this application and all related documents making up the approved permit shall be given to the applicant and shall be made readily available for review at the work site at all times.

5. Perpetual maintenance of the encroachment is the responsibility of the permittee, its successors and assigns, with the approval of the Department as required, unless otherwise stated.

6. Permittee, its successors and assigns, shall comply with and agree to be bound by the requirements and terms of (a) this application and all related documents making up the approved permit, (b) by the Department's Permits Manual, and (c) by the Manual on Uniform Traffic Control Devices, both manuals as revised to and in effect on the date of issuance of the permit, all of which documents are made a part thereof by this reference. Compliance by the permittee, its successors and assigns, with subsequent revisions to applicable provisions of either manual or other policy of the Department may be made a condition of allowing the encroachment to persist under the permit.

7. Permittee agrees that this and any encroachment may be ordered removed by the Department at any time, and for any reason, upon thirty days written notice to the last known address of the applicant or to the address at the location of the encroachment. The permittee agrees that the cost of removing and of restoring the associated right-of-way is the responsibility of the permittee, its successors and assigns.

8. Permittee, its successors and assigns, agree that if the Department determines that motor vehicular safety deficiencies develop as a result of the installation or use of the encroachment, the permittee, its successors and assigns, shall provide and bear the expenses to adjust, relocate, or reconstruct the facilities, add signs, auxiliary lanes, or other corrective measures reasonably deemed necessary by the Department within a reasonable time after receipt of a written notice of such deficiency. The period within which such adjustments, relocations, additions, modifications, or other corrective measures must be completed will be specified in the notice.

9. Where traffic signals are required as a condition of granting the requested permit or are thereafter required to correct motor vehicular safety deficiencies, as determined by the Department, the costs for signal equipment and installation(s) shall be borne by the permittee, its successors and assigns and the Department in its reasonable discretion and only in accordance with the Department's current policy set forth in the Traffic Operations Manual and Permits Manual. Any modifications to the permittee's entrance necessary to accommodate signalization (including necessary easement(s) on private property) shall be the responsibility of the permittee, its successors and assigns, at no expense to the Department.

APPROVED
KENTUCKY TRANSPORTATION CABINET
06-20-2024

APPLICATION FOR ENCROACHMENT PERMIT

10. The requested encroachment shall not infringe on the frontage rights of an abutting owner without their written consent as hereinafter described. Each abutting owner shall express their consent, which shall be binding on their successors and assigns, by the submission of a notarized statement as follows, "I (we), _____, hereby consent to the granting of the permit requested by the applicant along Route _____, which permit does affect frontage rights along my (our) adjacent real property." By signature(s) _____, subscribed and sworn by _____, on this date _____.

11. The permit, if approved, is subject to the agreement that it shall not interfere with any similar rights or permit(s) previously granted to any other party, except as otherwise provided by law.

12. Permittee shall include documentation which describes the facilities to be constructed. Permittee, its successors and assigns, agree as a condition of the granting of the permit to construct and maintain any and all permitted facilities or other encroachments in strict accordance with the submitted and approved permit documentation and the policies and procedures of the Department. Permittee, its successors and assigns, shall not use facilities authorized herein in any manner contrary to that prescribed by the approved permit. Only normal usage as contemplated by the parties and by this application and routine maintenance are authorized by the permit.

13. Permittee, its successors and assigns, at all times from the date permitted work is commenced until such time as all permitted facilities or other encroachments are removed from the right-of-way and the right-of-way restored, **shall defend, protect, indemnify and save harmless** the Department from any and all liability claims and demands arising out of the work, encroachment, maintenance, or other undertaking by the permittee, its successors and assigns, related or undertaken pursuant to the granted permit, due to any claimed act or omission by the permittee, its servants, agents, employees, or contractors. This provision shall not inure to the benefit of any third party nor operate to enlarge any liability of the Department beyond that existing at common law or otherwise if this right to indemnity did not exist.

14. Upon a violation of any provision of the permit, or otherwise in its reasonable discretion, the Department may require additional action by the permittee, its successors and assigns, up to and including the removal of the encroachment and restoration of the right-of-way. In the event additional actions required by the Department under the permit are not undertaken as ordered and within a reasonable time, the Department may in its discretion cause those or other additional corrective actions to be undertaken and the Department shall recover the reasonable costs of those corrective actions from the permittee, its successors and assigns.

15. Permittee, its successors and assigns, shall use the encroachment premises in compliance with all requirements of federal law and regulation, including those imposed pursuant to Title VI of the Civil Right Act of 1964 (42 U.S.C. § 2000d et seq.) and the related regulations of the U.S. Department of Transportation in Title 49 C.F.R. Part 21, all as amended.

16. Permittee, its successors and assigns, agree that if the Department determines it is necessary for the facilities or other encroachment authorized by the permit to be removed, relocated or reconstructed in connection with the reconstruction, relocation or improvement of a highway, the Department may revoke permission for the encroachment to remain under the permit and may order its removal, relocation or reconstruction by the permittee, its successors and assigns, at the expense of the permittee, except where the Department is required by law to pay any or all of those costs.

APPROVED
AUGUST 27, 2024
KENTUCKY TRANSPORTATION CABINET
06-2024-00814

APPLICATION FOR ENCROACHMENT PERMIT

17. Permittee agrees that the authorized permit is personal to the permittee and shall remain in effect until such time as (a) the permittee's rights to the adjoining real property to have benefitted from the requested encroachment have been relinquished, (b) until all permit obligations have been assumed by appropriate successors and assigns, and (c) unless and until a written release from permit obligations has been granted by the Department. The permit and its requirements shall also bind the real property to have benefitted from the requested encroachment to the extent permitted by law. The permit and the related encroachment become the responsibility of the successors and assigns of the permittee and the successors and assigns of each property owner benefitting from the encroachment, or the encroachment may not otherwise permissibly continue to be maintained on the right-of-way. (Does not apply to utility encroachments serving the general public.)

18. If work authorized by the permit is within a highway construction project in the construction phase, it shall be the responsibility of the permittee to make personal contact with the Department's Engineer on the project in order to coordinate all permitted work with the Department's prime contractor on the project.

19. This permit is not intended to, nor shall it, affect, alter or alleviate any requirement imposed upon the permittee, its successors and assigns, by any other agency.

20. Permittee, its successors and assigns, agree to contain and maintain all dirt, mud, and other debris emanating from the encroachment away from the surrounding right-of-way and the travel way of the highway hereafter and at all times that its obligations under the permit remain in effect.

21. Before You Dig: The contractor is instructed to call 1-800-752-6007 to reach KY 811, the One-Call system for information on the location of existing underground utilities. The call is to be placed a minimum of two (2) and no more than ten (10) business days prior to excavation. The contractor should be aware that the owners of underground facilities are not required to be members of the KY 811 One-Call Before U-Dig (BUD) service. The contractor must coordinate excavation with the utility owners, including those whom do not subscribe to KY 811. It may be necessary for the contractor to contact the County Clerk to determine what utility companies have facilities in the area.

22. The undersigned Utility acknowledges ownership and control of the facilities proposed to be installed, modified, or extended by the Applicant/Permittee and agrees to be bound by the requirements and terms of this application and all related documents making up the approved permit, by the Department's Permits Guidance Manual, and by all applicable regulations and statutes in effect on the date of issuance of the permit. This information and application is certified correct to the best knowledge and belief of the undersigned Utility.

NORTHERN KENTUCKY WATER DISTRICT
UTILITY

Steve Broering	Engineering Technician
NAME (Utility Representative)	TITLE (Utility Representative)
Steve Broering	7-15-2024
SIGNATURE (Utility Representative)	DATE



To Submit a Locate Request
24 Hours a Day, Seven Days a Week:
Call 811 or 800-752-6007

APPROVED
AUGUST 27, 2024
KENTUCKY TRANSPORTATION CABINET
06-2024-0084-1

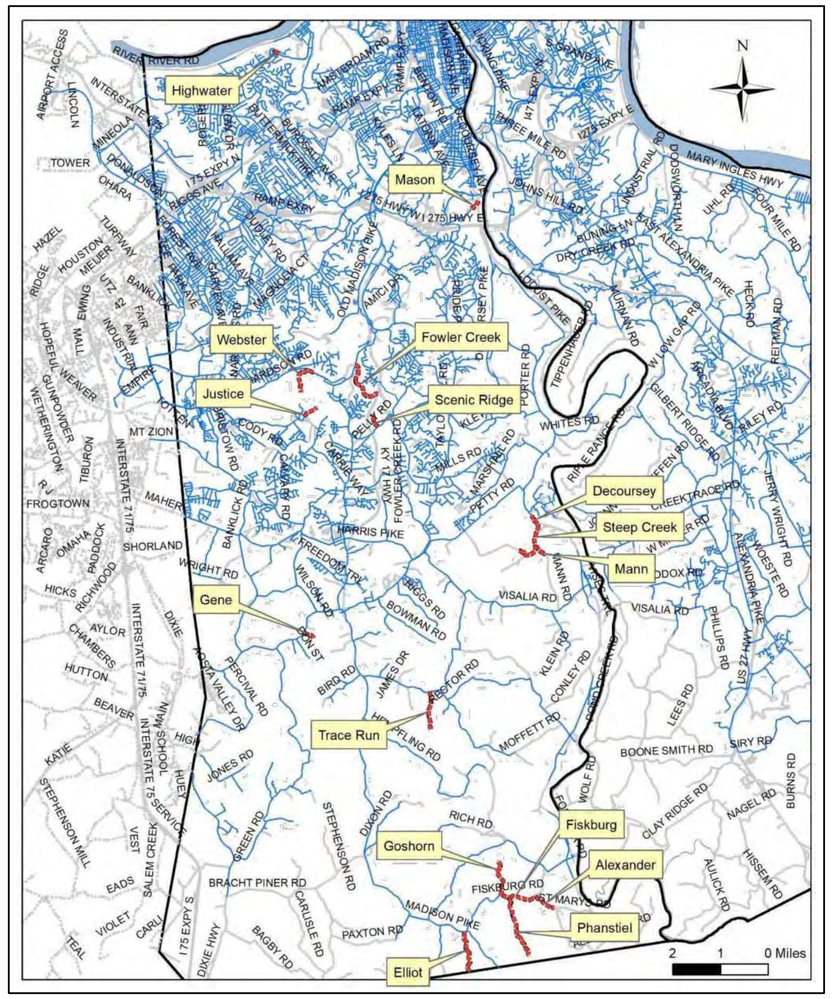
NORTHERN KENTUCKY WATER DISTRICT
SUB-DISTRICT 'O'
WATER MAIN EXTENSION
KENTON COUNTY, KENTUCKY
231591

INDEX OF SHEETS		
NO.	DWG NAME	SHEET NAME
1	TTL	TITLE
2	G-01	GENERAL NOTES & LEGEND
3	G-02	DETAILS
4	G-03	DETAILS
5	G-04	DETAILS
6	G-05	EROSION CONTROL DETAILS
7	C-01	HIGHWATER ROAD
8-9	C-02 to C-03	MASON ROAD
10-13	C-04 to C-07	WEBSTER ROAD
14-15	C-08 to C-09	JUSTICE ROAD
16-17	C-10 to C-11	SCENIC RIDGE DRIVE
18-22	C-12 to C-16	STEEP CREEK ROAD
23	C-17	STEEP CREEK / DECOURSEY
24	C-18	MANN ROAD
25	C-19	GENE STREET
26-29	C-20 to C-23	TRACE RUN ROAD
30-33	C-24 to C-27	GOSHORN ROAD
34-37	C-28 to C-31	FISKBURG ROAD
38-43	C-32 to C-37	PFANSTIEL ROAD
44-45	C-38 to C-39	ALEXANDER ROAD
46-49	C-40 to C43	ELLIOT ROAD

NORTHERN KENTUCKY WATER DISTRICT OFFICIALS

PRESIDENT / CEO
LINDSEY RECHTIN, CPA

COMMISSIONERS
FRED A. MACKE, JR. (Chair)
JODY R. LANGE (Vice-Chair)
DOUGLAS C. WAGNER (Secretary)
NICHOLAS E. WINNIKE (Treasurer)
GARY E. HOLLAND (Commissioner)
JOSEPH J. KOESTER (Commissioner)



VICINITY MAP

NORTHERN KENTUCKY WATER DISTRICT SPECIFICATIONS

THE LATEST STANDARD SPECIFICATIONS AND DRAWINGS OF THE NORTHERN KENTUCKY WATER DISTRICT FOR THE INSTALLATION OF WATER MAIN AND METER PITS SHALL GOVERN ALL WATER MAIN CONSTRUCTION ITEMS ON THIS PROJECT.

KENTUCKY TRANSPORTATION CABINET SPECIFICATIONS

THE LATEST STANDARD SPECIFICATIONS OF THE KENTUCKY TRANSPORTATION CABINET, INCLUDING CHANGES AND SUPPLEMENTAL SPECIFICATIONS THERETO AND KENTON COUNTY SUBDIVISION REGULATIONS SHALL GOVERN THIS IMPROVEMENT.

SOURCE OF OUNDARY AND TOPOGRAPHIC INFORMATION

THE TOPOGRAPHIC INFORMATION SHOWN ON THESE PLANS IS BASED UPON A SURVEY BY CT CONSULTANTS, INC.
THE BOUNDARY INFORMATION SHOWN ON THESE PLANS IS BASED ON PLANNING AND DEVELOPMENT SERVICES (P.D.S.) G.I.S. MAPPING.

2 Business Days Before You Dig
Kentucky 811
Always Call 811
or 1-800-752-6007
Before you Dig
www.kentucky811.org

JAMES M. SHUMATE *P.E. #18156*

90% REVIEW

your trusted advisor — engineers architects planners
consultants

NO	REVISION	DATE

ISSUED FOR: 90% DESIGN
ISSUE DATE: MAY 2024
SCALE: AS SHOWN
DESIGNED BY: JCOR
DRAWN BY: JCOR
CHECKED BY: JSHU

NORTHERN KENTUCKY WATER DISTRICT
SUBDISTRICT 'O'
-KENTON COUNTY -

TITLE SHEET

PROJECT NO.
231591
DISCIPLINE
CIVIL
SHEET NAME
TTL
SHEET 1 OF 48

APPROVED FOR CONSTRUCTION
AUGUST 2024
TRANSPORTATION CABINET
DISTRICT 6

H:\2023\231591\DWG\SHEETS\C_231591 00_TITLE SHEET.DWG - TITLE - 5/28/2024 10:23:19 AM - JAMES CORNELL

GENERAL NOTES

1. ALL CONSTRUCTION SHALL CONFORM TO THESE PLANS AND SPECIFICATIONS, THE LATEST EDITION OF THE NORTHERN KENTUCKY WATER DISTRICT STANDARD SPECIFICATIONS AND DRAWINGS AND THE KENTON COUNTY SUBDIVISION REGULATIONS AND THE KENTUCKY DEPARTMENT OF HIGHWAYS STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.

2. ALL DISTURBED AREAS ARE TO BE RESTORED (SEEDED AND MULCHED) BY THE CONTRACTOR AND SHALL PROCEED WITH JOB PROGRESSION. THE CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR REMOVING ANY EXCESS MATERIALS AT THE SITE AND MAINTAINING ALL SEEDED AND MULCHED AREAS UNTIL PROJECT COMPLETION AND FINAL INSPECTION PER KDOT SPEC. 212. A RESIDENTIAL YARD SHALL BE RESTORED WITHIN TWENTY-ONE (21) DAYS AFTER CONSTRUCTION.

3. ALL APPLICABLE RECOMMENDATIONS IN KENTUCKY'S BEST MANAGEMENT PRACTICES MANUAL SHALL BE FOLLOWED BY THE CONTRACTOR, INCLUDING SEEDING OF DISTURBED GROUND.

4. RIGHT-OF-WAY AND PROPERTY LINES SHOWN ARE PLOTTED FROM PLANNING AND DEVELOPMENT SERVICES (PDS) G.I.S. MAPPING AND ARE APPROXIMATE AND NOT THE RESULT OF A FIELD BOUNDARY SURVEY.

5. THE CONTRACTOR SHALL LIMIT THEIR WORK AREA TO THE EASEMENTS AND RIGHTS-OF-WAY SHOWN ON THESE PLANS UNLESS WRITTEN PERMISSION IS GIVEN BY THE PROPERTY OWNER AND APPROVED BY FORT N.K.W.D.

6. ALL OSHA, STATE AND LOCAL SAFETY REGULATIONS SHALL BE FOLLOWED DURING CONSTRUCTION.

7. NO CONSTRUCTION SHALL COMMENCE UNTIL ALL STATE, COUNTY AND LOCAL PERMITS HAVE BEEN ISSUED AS REQUIRED

8. THE CONTRACTOR SHALL COORDINATE ALL WORK WITHIN THE PUBLIC RIGHT OF WAY WITH THE KENTUCKY TRANSPORTATION CABINET AND KENTON COUNTY AND ANY LOCAL MUNICIPALITY. LOCAL TRAFFIC MUST BE MAINTAINED AT ALL TIMES DURING CONSTRUCTION UNLESS OTHERWISE NOTED IN THESE PLANS.

9. ADDITIONAL BMP'S AND EROSION AND SEDIMENT CONTROL MEASURES MAY BE REQUIRED AS DEEMED NECESSARY. ALL COST FOR ABOVE SHALL BE INCLUDED IN LUMP SUM BID FOR EROSION CONTROL AND WATER POLLUTION CONTROL.

10. ALL CONSTRUCTION WORK SHALL BE IN CONFORMANCE WITH THE RECOMMENDATIONS CONTAINED IN THE GEOTECHNICAL INVESTIGATION REPORT PREPARED BY G.A.I. CONSULTANTS DATED FEBRUARY 2024.

GENERAL TRENCH EXCAVATION NOTES

1. CONTRACTOR IS TO PROVIDE CONSTANT STABLE SUPPORT FOR THE WATER MAIN TRENCH EXCAVATION (ie SHEETING, SHORING, ETC.) TO PROTECT ALL ADJACENT EXISTING UTILITIES, STORM SEWER PIPE AND STRUCTURES AND THE EXISTING ROADWAY FROM ANY MOVEMENT. (NO ADDITIONAL PAYMENT WILL BE MADE FOR THIS WORK. ANY COSTS ASSOCIATED WITH TRENCH SUPPORT SHALL BE INCLUDED IN THE UNIT BID PRICE FOR THE ASSOCIATED WATER MAIN.

   TRENCH SUPPORT FAILURE RESULTING IN ADVERSE IMPACT TO EXISTING UTILITIES SHALL BE REPAIRED IMMEDIATELY AT THE CONTRACTOR'S EXPENSE.

2. TRENCH EXCAVATION AND OPEN, UNBACKFILLED LENGTH OF WATER MAIN TRENCH SHALL BE LIMITED AS NECESSARY ALONG THE ROADWAY IN ORDER TO PREVENT MOVEMENT OF, OR DAMAGE TO THE SURROUNDING GROUND SURFACE, NEARBY STRUCTURES/INFRASTRUCTURE AND THE EXISTING ROADWAY PAVEMENT.

   TRENCH EXCAVATION SHALL ALSO BE LIMITED TO THE CONTRACTOR'S ABILITY TO PROVIDE TRENCH BOXES FOR SUPPORT. UNDER NO CIRCUMSTANCES SHALL TRENCH EXCAVATION EXCEED LENGTH OF SUPPORT AVAILABLE.

UTILITY NOTES

1. THIS PLAN SHOWS THE APPROXIMATE LOCATION OF UNDERGROUND UTILITIES (GAS, WATER, STORM SEWER, SANITARY SEWER, TELEPHONE, ELECTRIC, ETC.). THE PREPARER DOES NOT GUARANTEE THEIR ACCURACY OR CORRECTNESS. THE INFORMATION PROVIDED SHALL BE FIELD VERIFIED PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING THE UTILITY AS WELL AS THE SERVICE LATERALS AT ALL TIMES DURING CONSTRUCTION. THE CONTRACTOR SHALL PRACTICE CARE DURING THE GRADING AND TRENCH EXCAVATION AND SHALL BE RESPONSIBLE FOR REPLACING ANY SERVICES THAT ARE DAMAGED DURING CONSTRUCTION AT THEIR EXPENSE.

2. PRIOR TO ANY EXCAVATION OVER AN EXISTING UTILITY LINE OR SERVICE, CONTRACTOR SHALL HAND EXCAVATE TO EXPOSE THE UTILITY AND DETERMINE LOCATION AND DEPTH. NOTIFY ENGINEER IMMEDIATELY OF ANY CONFLICTS.

3. TOPS OF EXISTING AND PROPOSED CASTING ELEVATIONS ARE SUBJECT TO FINAL ADJUSTMENTS AS APPROVED BY THE ENGINEER AND REQUIREMENTS OF UTILITY OWNER. THIS WORK WILL BE INCIDENTAL TO THE CONTRACT.

4. FORTY-EIGHT (48) HOURS BEFORE EXCAVATION IS TO COMMENCE, THE CONTRACTOR SHALL NOTIFY THE FOLLOWING AGENCIES: THE KENTUCKY UTILITY PROTECTION SERVICE AND ALL OTHER UTILITIES THAT MAY HAVE UNDERGROUND UTILITIES INVOLVING THIS PROJECT AND ARE NON-MEMBERS OF KENTUCKY UNDERGROUND PROTECTION.

STORM & SANITARY NOTES

1. ALL STORM AND SANITARY ITEMS SHALL BE IN ACCORDANCE WITH THE LATEST SPECIFICATIONS AND DETAILS FROM SD1. METAL PIPE MATERIALS SHALL NOT BE USED UNLESS OTHERWISE SPECIFIED ON THESE PLANS.

2. CONTRACTOR SHALL BE REQUIRED TO MAINTAIN STORM AND SANITARY SEWER FLOW THROUGHOUT THE PROJECT, FOR THE DURATION OF CONSTRUCTION. ALL COST FOR THE ABOVE SHALL BE INCIDENTAL TO THE CONTRACT.

3. IF REQUIRED, CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING AND SCHEDULING STORM AND SANITARY SEWER INSPECTIONS AS SET OUT IN THE PRECONSTRUCTION MEETING.

4. CONNECTIONS INTO EXISTING OR PROPOSED STORM OR SANITARY SEWER STRUCTURES OR PIPES SHALL BE COMPLETED BY A CERTIFIED TAPPER BY SD1.

WATER NOTES

1. ALL WORK RELATING TO WATER MAINS OR WATER SERVICE LINES SHALL BE COMPLETED IN ACCORDANCE WITH THE RULES AND REGULATIONS OF THE NORTHERN KENTUCKY WATER DISTRICT (NKWD).

2. CONTRACTOR MAY NOT USE WATER FROM FIRE HYDRANTS WITHOUT PRIOR PERMISSION FROM NKWD

GAS NOTES

1. ALL WORK RELATING TO GAS MAINS OR GAS SERVICE LINES SHALL BE COMPLETED IN ACCORDANCE WITH THE RULES AND REGULATIONS OF THE DUKE ENERGY

ELECTRIC NOTES

1. ALL WORK RELATING TO ELECTRIC LINES SHALL BE COMPLETED IN ACCORDANCE WITH THE RULES AND REGULATIONS OF THE DUKE ENERGY

WATER DISTRICT GENERAL NOTES

1. THE EXISTING WATER MAIN ELEVATION AND LOCATION AT THE CONNECTION POINT WITH THE PROPOSED MAIN WAS ASSUMED AND HAS NOT BEEN FIELD VERIFIED. PRIOR TO COMMENCEMENT OF ANY WATER MAIN WORK, THE CONTRACTOR SHALL DIG A TEST HOLE AT THE CONNECTION POINT TO LOCATE EXISTING WATER MAIN AS TO LOCATION AND ELEVATION. THE EXISTING WATER MAIN LOCATION MAY REQUIRE SOME FIELD ADJUSTMENT TO THE PROPOSED WATER MAIN INCLUDING ADJUSTING THE DEPTH OF THE PROPOSED WATER MAIN. COST OF DOING THE ABOVE SHALL BE INCIDENTAL TO THE PERTINENT WATER MAIN ITEM.

2. COST OF TRIMMING OR CLEARING ANY TREES, BUSHES, ETC. SHALL BE INCIDENTAL TO THE OVERALL CONTRACT PRICE AND SHALL BE APPROVED BY N.K.W.D. AND THE PROPERTY OWNER ALONG WITH COUNTY OR STATE WHEN REQUIRED.

3. THE UTILITY INFORMATION SHOWN ON THE PLANS IS BASED ON INFORMATION RECEIVED FROM OTHERS AND HAS NOT BEEN VERIFIED BY THE ENGINEER OR OWNER. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE LOCATION OF THE UTILITIES AND TO COORDINATE ANY IMPACT CAUSED BY THE PROPOSED WORK WITH ALL UTILITY OWNERS AND/OR THEIR CONTRACTORS. THE CONTRACTOR WILL BE REQUIRED TO DIG TEST HOLES AT ALL UTILITY CROSSINGS TO LOCATE THE UTILITY AS TO BOTH LOCATION AND ELEVATION AND WILL BE REQUIRED TO REALIGN AND ADJUST THE ELEVATION OF THE PROPOSED WATER MAIN TO AVOID THE UTILITY. COST OF ALL THE ABOVE SHALL BE INCIDENTAL TO THE OVERALL CONTRACT PRICE.

4. UNLESS SPECIFICALLY INSTRUCTED OTHERWISE, RETURN ALL REMOVED WATER EQUIPMENT INCLUDING, FIRE HYDRANTS, VALVES, AND WATER METERS TO NORTHERN KENTUCKY WATER DISTRICT (N.K.W.D).

5. WATERLINES CROSSING UNDER OR OVER SEWER LINES (DEFINED AS ANY SANITARY/COMBINED SEWER, SEPTIC TANK OR SUBSOIL TREATMENT SYSTEM) MUST MAINTAIN A MINIMUM VERTICAL CLEARANCE OF 18" AND ONE FULL LENGTH OF PIPE SHALL BE LOCATED SO BOTH JOINTS ARE AS FAR FROM THE SEWER AS POSSIBLE. SPECIAL STRUCTURAL SUPPORT FOR THE WATER AND SEWER PIPES MAY BE REQUIRED.

6. CONTRACTOR IS RESPONSIBLE FOR KEEPING FIELD NOTES THAT PROVIDE SUFFICIENT DATA FOR PREPARING "RECORD DRAWINGS" UPON COMPLETION OF CONSTRUCTION.

7. ALL WATER MAIN CONSTRUCTION SHALL CONFORM TO THE NORTHERN KENTUCKY WATER DISTRICT SPECIFICATIONS. CONTRACTOR IS RESPONSIBLE FOR OBTAINING A CURRENT COPY OF THE NORTHERN KENTUCKY WATER DISTRICT'S STANDARD DRAWINGS.

8. ALL MATERIAL FOR THE PROP. WATER MAIN INSTALLATION INCLUDING ALL FITTINGS, BLOCKING, ETC., SHALL BE INCLUDED IN THE CONTRACTOR'S UNIT PRICE FOR WATER MAIN.

9. COST OF ALL TRENCHING, PIPE, PIPE BEDDING, BACKFILL, YARD RESTORATION AND TEMPORARY PAVEMENT, DRIVEWAY AND SIDEWALK RESTORATION SHALL BE PART OF THE COST OF INSTALLING THE WATER MAIN. PERMANENT DRIVEWAY RESTORATION, SIDEWALK RESTORATION, CURB RESTORATION AND STREET RESTORATION WILL BE SEPARATE PAY ITEMS AND INCLUDE INCIDENTALS SUCH AS MAIL BOX, STREET SIGN, AND FENCE REMOVAL AND REPLACEMENT.

10. THE PROPOSED WATER MAIN SHALL BE CLASS 50 DUCTILE IRON PIPE OR D.R. 18 C900 PVC AS SHOWN ON THE PLANS. WITHIN STATE ROUTE R/W, PIPE MATERIAL SHALL BE CLASS 52 DUCTILE IRON.

11. PROPOSED WATER MAIN SHALL BE THOROUGHLY CLEANED, FLUSHED, AND DISINFECTED, AS PER NORTHERN KENTUCKY WATER DISTRICT'S SPECIFICATIONS.

12. PRESSURE TESTING SHALL BE DONE AS PER NORTHERN KENTUCKY WATER DISTRICT'S SPECIFICATIONS.

13. FOR THRUST BLOCKING REFER TO THE NORTHERN KENTUCKY WATER DISTRICT'S STANDARD DRAWING NUMBERS 104 AND 104A.

14. THE PROPOSED WATER MAIN SHALL HAVE A HORIZONTAL SEPARATION OF AT LEAST 3'-0" (MEASURED FROM OUTSIDE OF PIPE TO OUTSIDE OF PIPE) FROM ANY GAS MAIN.

15. A 10' MINIMUM LATERAL SEPARATION BETWEEN WATER MAINS AND SEWERS (DEFINED AS ANY SANITARY/COMBINED SEWER, SEPTIC TANK OR SUBSOIL TREATMENT SYSTEM) AND SEWER MANHOLES, MEASURED FROM THE OUTSIDE DIAMETER TO OUTSIDE, MUST BE MAINTAINED UNLESS A VARIANCE IS GRANTED FROM THE D.O.W.

16. ALL NEW WATER SERVICES SHALL BE 3/4" (OR MATCH EXISTING, AS INDICATED ON THE PLANS) TYPE K COPPER WITH 5/8" OR 2" WATER METERS (UNLESS OTHERWISE NOTED) MATERIAL PROVIDED BY THE NORTHERN KENTUCKY WATER DISTRICT. ALL RECONNECTED WATER SERVICES SHALL BE 3/4" OR 2" TYPE K COPPER.

17. THE CONTRACTOR SHALL COORDINATE ALL WORK WITHIN THE PUBLIC RIGHT-OF-WAY WITH KYTC, KENTON COUTY AND/OR ANY LOCAL MUNICIPALITY. TRAFFIC MUST BE MAINTAINED AT ALL TIMES DURING CONSTRUCTION. MAINTENANCE OF TRAFFIC SHALL CONFORM TO THE "MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES" REQUIREMENTS. NO ADDITIONAL PAYMENT WILL BE MADE FOR THIS WORK AND SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT.

18. **CONNECT SERVICE LINE (3/4" THRU 2"), INCLUDES THE LABOR, EQUIPMENT, EXCAVATION, BEDDING, BACKFILL, ASPHALT PAVEMENT , CONCRETE PAVEMENT, CONCRETE CURB, CONCRETE WALK AND YARD RESTORATION TO INSTALL THE SERVICE LINE AT THE LOCATIONS SHOWN ON THE PLANS OR AS DIRECTED, IN ACCORDANCE WITH THE SPECIFICATIONS AND STANDARD DRAWINGS, COMPLETE AND READY FOR USE. LEAD SERVICE LINES ENCOUNTERED BY THE EXCAVATION SHALL BE REPLACED FROM THE MAIN TO AND INCLUDING THE METER VAULT AND METER SETTING. ALL SERVICE LINE MATERIAL WILL BE SUPPLIED BY NKWD. PAID EACH (EA).**

19. THE CONTRACTOR SHALL COORDINATE WITH THE NORTHERN KENTUCKY WATER DISTRICT FOR FIELD INSPECTIONS.

20. FORTY-EIGHT (48) HOURS BEFORE EXCAVATION IS TO COMMENCE, THE CONTRACTOR SHALL NOTIFY THE FOLLOWING AGENCIES: THE KENTUCKY UTILITY PROTECTION SERVICE AND ALL OTHER UTILITIES THAT MAY HAVE UNDERGROUND UTILITIES INVOLVING THIS PROJECT AND ARE NON-MEMBERS OF KENTUCKY UNDERGROUND PROTECTION.

21. NO CONSTRUCTION SHALL COMMENCE UNTIL ALL KYTC, COUNTY AND/OR LOCAL PERMITS HAVE BEEN ISSUED AS REQUIRED.

22. CONTRACTOR IS RESPONSIBLE FOR DEWATERING TRENCH DURING INSTALLATION OF THE WATER MAIN.

23. THE COST OF TESTING THE MAIN, TEMPORARY FLUSHING DEVICES, TEMPORARY PLUG AND BLOCKS, AND ABANDONING THE EXISTING MAIN SHALL BE INCIDENTAL TO THE PROJECT.

24. ALL PAVEMENT SHALL CONFORM TO THE LATEST EDITION OF THE KENTUCKY DEPARTMENT OF HIGHWAYS STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION AND KENTON COUNTY SUBDIVISION REGULATIONS.

MAINTENANCE OF TRAFFIC NOTES

1. ALL MAINTENANCE OF TRAFFIC PROCEDURES SHALL MEET THE REQUIREMENT OF THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES AND SECTION 112 OF KTC STANDARD SPECIFICATIONS. THE CONTRACTOR SHALL MAINTAIN ACCESS TO LOCAL TRAFFIC (ACCESS TO RESIDENCES WITHIN CONSTRUCTION LIMITS) AT ALL TIMES. THE CONTRACTOR SHALL PROVIDE SUFFICIENT SIGN, WARNING LIGHTS, BARRICADES, OR OTHER NECESSARY DEVICES MAKE THE SITE SAFE TO THE TRAVELING PUBLIC.

2. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO SUBMIT TO THE ENGINEER AND THE OWNER A TRAFFIC CONTROL PLAN FOR THIS PROJECT.

3. PRIOR TO ANY CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY THE APPROPRIATE STATE, COUNTY AND/OR LOCAL POLICE DEPARTMENTS. AT ALL TIMES, EMERGENCY VEHICLES SHALL BE GIVEN ACCESS.

4. RESIDENTS OF THE PROJECT AREA SHALL BE ALLOWED ACCESS TO THEIR PROPERTY AT ALL TIMES.

5. EACH DRIVEWAY SHALL BE ACCESSIBLE WHENEVER POSSIBLE. WHEN PORTLAND CEMENT CONCRETE CONSTRUCTION AFFECTS A DRIVEWAY, THE CONTRACTOR SHALL NOTIFY THE AFFECTED OWNERS 24 HOURS IN ADVANCE AND ADVISE THEM TO FIND ALTERNATIVE PARKING FOR A PERIOD OF AT LEAST 10 CALENDAR DAYS AFTER THE POUR. ALTERNATIVE PARKING SHALL INCLUDE "ON STREET" PARKING WITH ACCESS TO THE PROPERTY. TEMPORARY SIDEWALKS, ETC. WILL BE NECESSARY TO PREVENT PERSONS FROM WALKING IN MUD IN ORDER TO ENTER THEIR PROPERTY. TEMPORARY BRIDGES, RAILINGS ETC. WILL BECOME NECESSARY IN ORDER TO CROSS FORMED CURB LINES, EXCAVATED AREAS BEHIND CURB LINES AND WALKWAYS, ETC.

EROSION CONTROL LEGEND

- IP — INLET PROTECTION (SEE DETAIL)
- SF — SILT FENCE (SEE DETAIL)

HATCH LEGEND

- 1-1/2" ASPHALT PAVEMENT MILL AND OVERLAY AREA
- TRENCH RESTORATION - ASPHALT PAVEMENT - SEE DETAIL SHEET
- TRENCH RESTORATION - CONCRETE PAVEMENT - SEE DETAIL SHEET
- TRENCH RESTORATION - 8" AGGREGATE PAVEMENT
- CONTROL DENSITY FILL - PAV'T TRENCH
- CONCRETE DRIVEWAY REPLACEMENT - SEE DETAIL SHEET
- CONCRETE WALK REPLACEMENT - SEE DETAIL SHEET
- ASPHALT DRIVEWAY REPLACEMENT - SEE DETAIL SHEET
- GRAVEL DRIVEWAY REPLACEMENT - SEE DETAIL SHEET
- CHANNEL LINING, CLASS II - SEE DETAIL SHEET

SYMBOL LEGEND

- EXISTING GAS LINE
- EXISTING GAS SERVICE
- EXISTING ELECTRIC (UNDERGROUND / OVERHEAD)
- EXISTING CABLE (UNDERGROUND / OVERHEAD)
- EXISTING TELEPHONE (UNDERGROUND / OVERHEAD)
- EXISTING WATER MAIN
- EXISTING WATER SERVICE
- EXISTING STORM SEWER
- EXISTING ROOF DRAIN
- EXISTING SANITARY SEWER
- EXISTING SANITARY FORCE MAIN
- EXISTING FIBER OPTICS
- EXISTING FENCE
- EXISTING CONTOURS (MAJOR)
- EXISTING CONTOURS (MINOR)
- EXISTING RIGHT OF WAY
- EXISTING PROPERTY LINE
- EXISTING EASEMENT
- EXISTING GUARDRAIL
- EXISTING TREE LINE
- EXISTING ROCK WALL

- PROPOSED GAS LINE
- PROPOSED GAS SERVICE
- EXISTING ELECTRIC (UNDERGROUND / OVERHEAD)
- PROPOSED CABLE (UNDERGROUND / OVERHEAD)
- PROPOSED TELEPHONE (UNDERGROUND / OVERHEAD)
- PROPOSED WATER MAIN
- PROPOSED WATER SERVICE
- PROPOSED STORM SEWER
- PROPOSED UNDERDRAIN
- PROPOSED UNDERDRAIN / DOWNSPOUT COLLECTOR COMBO
- PROPOSED SANITARY SEWER
- PROPOSED SANITARY FORCE MAIN
- PROPOSED FIBER OPTICS
- PROPOSED FENCE
- PROPOSED CONTOURS (MAJOR)
- PROPOSED CONTOURS (MINOR)
- PROPOSED RIGHT OF WAY
- PROPOSED PROPERTY LINE
- PROPOSED EASEMENT
- PROPOSED GUARDRAIL
- PROPOSED TREE LINE / CLEARING LIMITS
- PROPOSED DISTURBED LIMITS

- EXISTING FLAGPOLE
- EXISTING MAILBOX
- EXISTING SIGN
- EXISTING CABLE PEDESTAL
- EXISTING ELECTRIC PEDESTAL
- EXISTING PULL BOX
- EXISTING GROUND LIGHT
- EXISTING LIGHT POLE
- EXISTING ELECTRIC METER
- EXISTING ELECTRIC MANHOLE
- EXISTING GAS METER
- EXISTING GAS VALVE
- EXISTING GAS BOX
- EXISTING UTILITY POLE
- EXISTING GUY WIRE / ANCHOR
- EXISTING SANITARY MANHOLE
- EXISTING SANITARY CLEANOUT
- EXISTING STORM MANHOLE
- EXISTING SINGLE / DOUBLE CURB INLET
- EXISTING CATCH BASIN
- EXISTING STORM CLEANOUT
- EXISTING TELEPHONE MANHOLE
- EXISTING TELEPHONE PEDESTAL
- EXISTING FIRE HYDRANT
- EXISTING WATER METER
- EXISTING WATER VALVE
- EXISTING BUSHES / TREES
- EXISTING SURVEY BENCHMARK
- TEST BORING LOCATION

- PROPOSED FLAGPOLE
- PROPOSED MAILBOX
- PROPOSED SIGN
- PROPOSED CABLE PEDESTAL
- PROPOSED ELECTRIC PEDESTAL
- PROPOSED PULL BOX
- PROPOSED GROUND LIGHT
- PROPOSED LIGHT POLE
- PROPOSED ELECTRIC METER
- PROPOSED ELECTRIC MANHOLE
- PROPOSED GAS METER
- PROPOSED GAS VALVE
- PROPOSED GAS BOX
- PROPOSED UTILITY POLE
- PROPOSED GUY WIRE / ANCHOR
- PROPOSED SANITARY MANHOLE
- PROPOSED SANITARY CLEANOUT
- PROPOSED STORM MANHOLE
- PROPOSED SINGLE / DOUBLE CURB INLET
- PROPOSED CATCH BASIN
- PROPOSED STORM CLEANOUT
- PROPOSED TELEPHONE MANHOLE
- PROPOSED TELEPHONE PEDESTAL
- PROPOSED FIRE HYDRANT
- PROPOSED WATER METER
- PROPOSED WATER VALVE
- REMOVE EXISTING BUSH / TREE
- PROPOSED SLOPE DIRECTION

90% REVIEW

your trusted advisor — engineers architects planners consultants

NO	REVISION	DATE
.	.	.

ISSUED FOR: 90% DESIGN
ISSUE DATE: MAY 2024
SCALE: AS SHOWN
DESIGNED BY: JCOR
DRAWN BY: JCOR
CHECKED BY: JSHU

NORTHERN KENTUCKY WATER DISTRICT
SUBDISTRICT 'O'
- KENTON COUNTY -

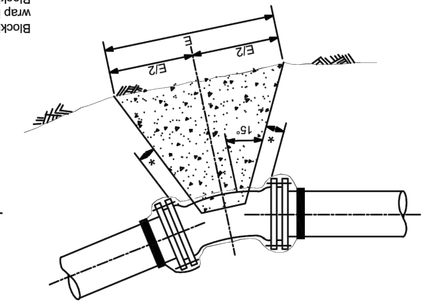
GENERAL NOTES AND LEGEND

PROJECT NO. 231591
DISCIPLINE: CIVIL
SHEET NAME: G-01
SHEET 2 OF 49

APPROVED — Kentucky Transportation Cabinet — August 1, 2024

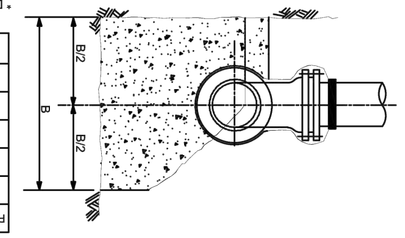
H:\CAD\PROJECTS\23159 00 DETAIL SHEET.DWG - 5/30/2024 2:45:27 PM - JAMES CONNELL

11 1/4° & 22 1/2° BEND



Blocking shall be poured after blue polyethelene wrap is in place.
Blocking shall be inspected by the District prior to backfilling.

ELEVATION



NOTES

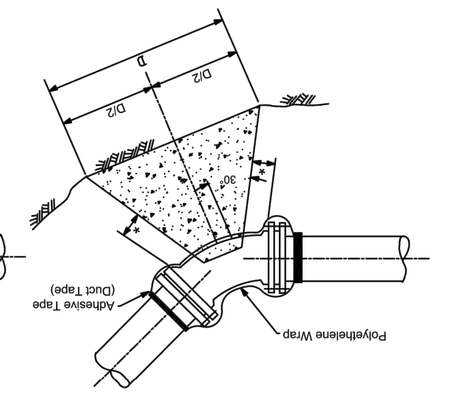
1 DIP Fittings shall be per specifications.
2 Concrete to be 3500 psi.
3 All fittings to be Mechanical Joint.
4 Thrust blocks to be placed against undisturbed earth - use additional concrete as required for over excavation.
5 Blocking to be placed in a manner so that bolts can be removed without disturbing the block.

* Distance to be 1/2" longer than entire length of the bolt used.

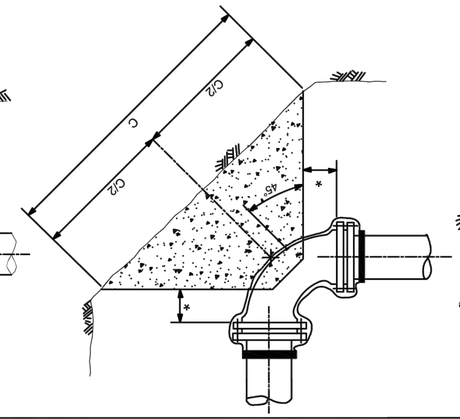
150 PSI/260 PSI

PIPE SIZE	A	B	C	D	E
6"	2'0"/2'6"	1'6"/1'9"	3'0"/3'6"	1'6"/2'0"	1'0"/1'0"
8"	2'6"/3'6"	2'0"/2'6"	3'6"/4'6"	2'0"/2'6"	1'0"/1'6"
10"	3'6"/4'0"	2'6"/2'6"	4'6"/5'6"	2'6"/3'0"	1'6"/1'6"
12"	4'6"/5'0"	3'0"/3'0"	5'6"/6'6"	3'0"/3'6"	1'6"/2'0"
16"	5'0"/6'0"	3'0"/4'0"	7'0"/8'6"	4'0"/4'6"	3'0"/3'0"
20"	6'0"/7'6"	4'0"/5'0"	7'0"/10'6"	4'0"/6'0"	3'0"/3'0"

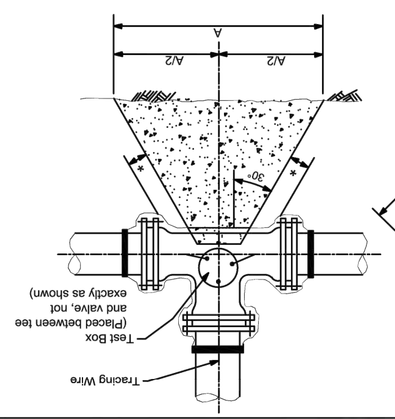
45° BEND



90° BEND



TEE (DEAD END OR FIRE HYDRANT SIMILAR



N. KY. WATER DISTRICT
CONCRETE THRUST BLOCK DETAIL

DRAWN BY: SAR
APPROVED: RH
DATE: 8/5/2014
STANDARD DRAWING NO. 104

NO	REVISION	BY	DATE
1	Per New Standards	MRT	7/2/2025

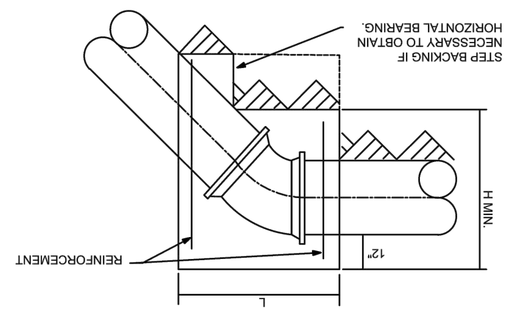
ALTERNATE TO BE USED ONLY ON APPROVAL BY THE DISTRICT

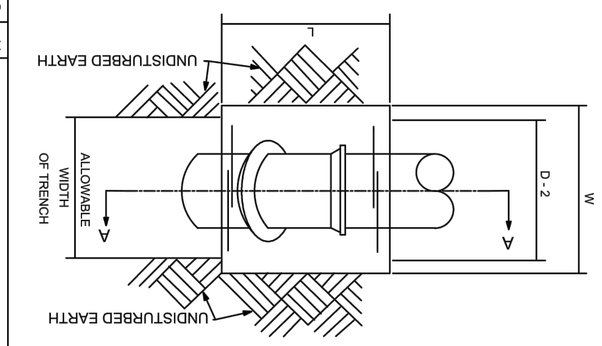
CONCRETE BACKING FOR VERTICAL BENDS

1. BACKING DESIGNED FOR 3000 POUNDS PER SQUARE FOOT SOIL BEARING AND 150 POUNDS PER SQUARE INCH INTERNAL PRESSURE.
2. PROVIDE MINIMUM CONCRETE REINFORCEMENT OF 2 PAIR OF TWO 5' 'U' BARS @ 12" C.
3. CENTER BACKING ON BEND.

BLOCKING FOR SIZES NOT SHOWN SHALL USE THE NEXT LARGER SIZE.

SECTION A-A





NOTE: VOLUMES GIVEN IN CUBIC FEET

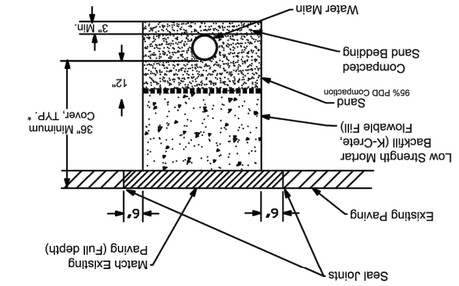
	DEGREE OF BEND											
SIZE of PIPE	11 1/4				22 1/2				45			
	L'	W'	H'	VOL.	L'	W'	H'	VOL.	L'	W'	H'	VOL.
4"	12	24	16	2.7	15	30	18	4.7	22	36	24	11.0
6"	12	43	18	5.4	16	48	34	15.1	30	55	24	22.9
8"	12	54	24	9.0	18	57	36	21.4	36	57	33	33.2
12"	20	63	36	26.3	37	62	37	49.2	48	62	51	88.0
16"	31	65	38	44.4	60	65	39	88.2	65	65	65	159.2
20"	45	70	40	73.0	56	70	60	136.4	72	76	78	247.5
24"	47	72	54	106.0	67	74	69	196.4	68	64	64	360.1

N. KY. WATER DISTRICT
CONCRETE THRUST BLOCKING FOR VERTICAL BENDS

DRAWN BY: SAR
APPROVED: RH
DATE: 8/5/2014
STANDARD DRAWING NO. 104A

NO	REVISION	BY	DATE
1	All bends to right-hand	MRT	7/2/2025

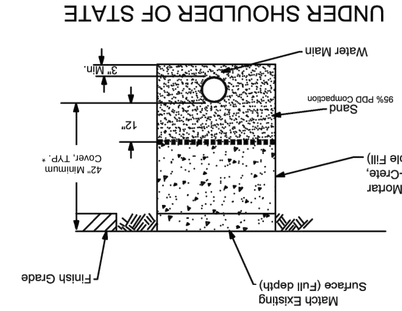
PDD= Standard Proctor Dry Density -ASTM D698



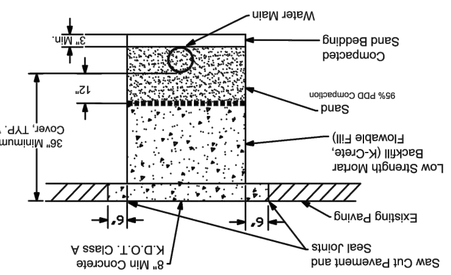
UNDER ASPHALT CONCRETE PAVEMENT

TEMPORARY STREET RESTORATION

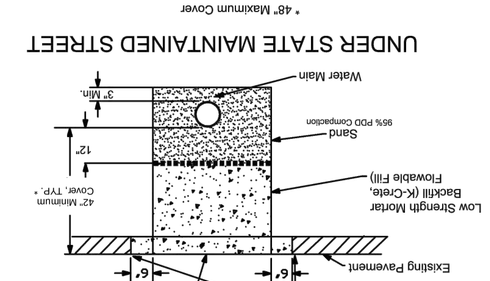
UNDER SHOULDER OF STATE MAINTAINED STREET



UNDER CONCRETE PAVEMENT



UNDER STATE MAINTAINED STREET



* 48" Maximum Cover

ALL CONSTRUCTION

N. KY. WATER DISTRICT
TYPICAL PIPELINE TRENCH DETAIL

DRAWN BY: SAR
APPROVED: RH
DATE: 8/5/2014
STANDARD DRAWING NO. 103A

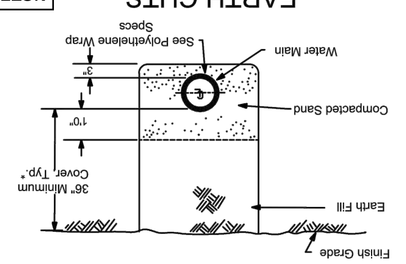
NO	REVISION	BY	DATE
1	Per New Standards	MRT	7/2/2025

SUBDIVISION CONSTRUCTION

* Unless Otherwise Noted

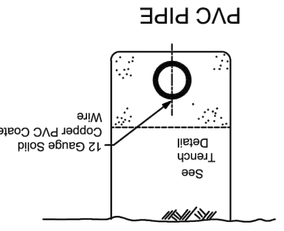
TRENCH DETAIL

EARTH CUTS



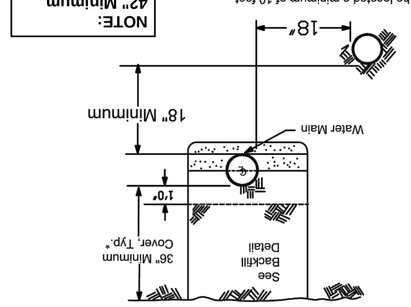
NOTE: 42" Minimum Cover, TYP. within State R/W

PVC PIPE



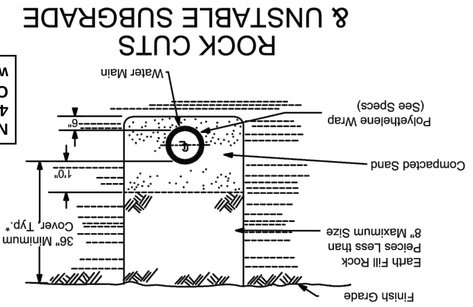
WATER MAIN PARALLELING SEWER MAIN

Water Main must be located a minimum of 10 feet lateral distance from anyexisting or future sewer lines or manholes, or as shown in the above alternate.



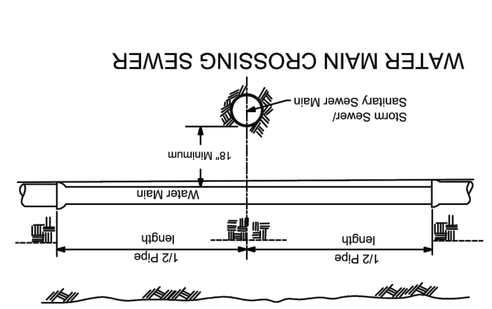
NOTE: 42" Minimum Cover, TYP. within State R/W

ROCK CUTS & UNSTABLE SUBGRADE



NOTE: 42" Minimum Cover, TYP. within State R/W

WATER MAIN CROSSING SEWER



NO	REVISION	DATE
1	90% DESIGN	MAY 2024

ISSUED FOR:
ISSUE DATE:
SCALE: AS SHOWN
DESIGNED BY: JCOR
DRAWN BY: JCOR
CHECKED BY: JSHU

your trusted advisor
consultants → engineers
architects
planners

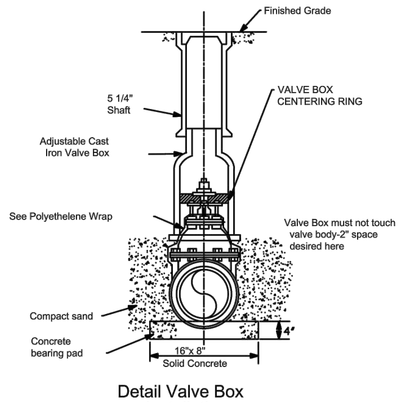
90% REVIEW

NORTHERN KENTUCKY WATER DISTRICT
SUBDISTRICT 'O'
-KENTON COUNTY -

DETAILS

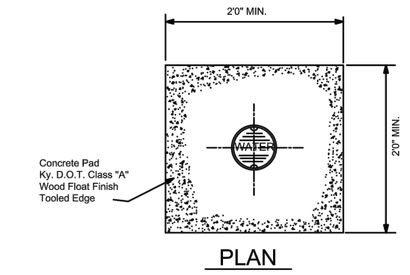
PROJECT NO. 23159.1
DISCIPLINE: CIVIL
SHEET NAME: G-02
SHEET: 3 OF 49

APPROVED FOR CONSTRUCTION
Approval Subject to Comments
Not Approved
Revise and Resubmit

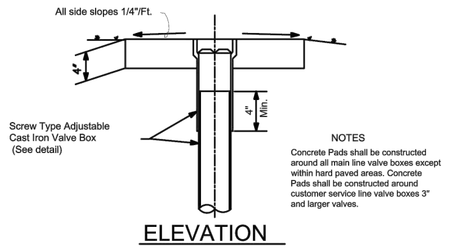


Detail Valve Box Installation

Note:Valve box shall not transmit shock or stress to the valve



PLAN



ELEVATION

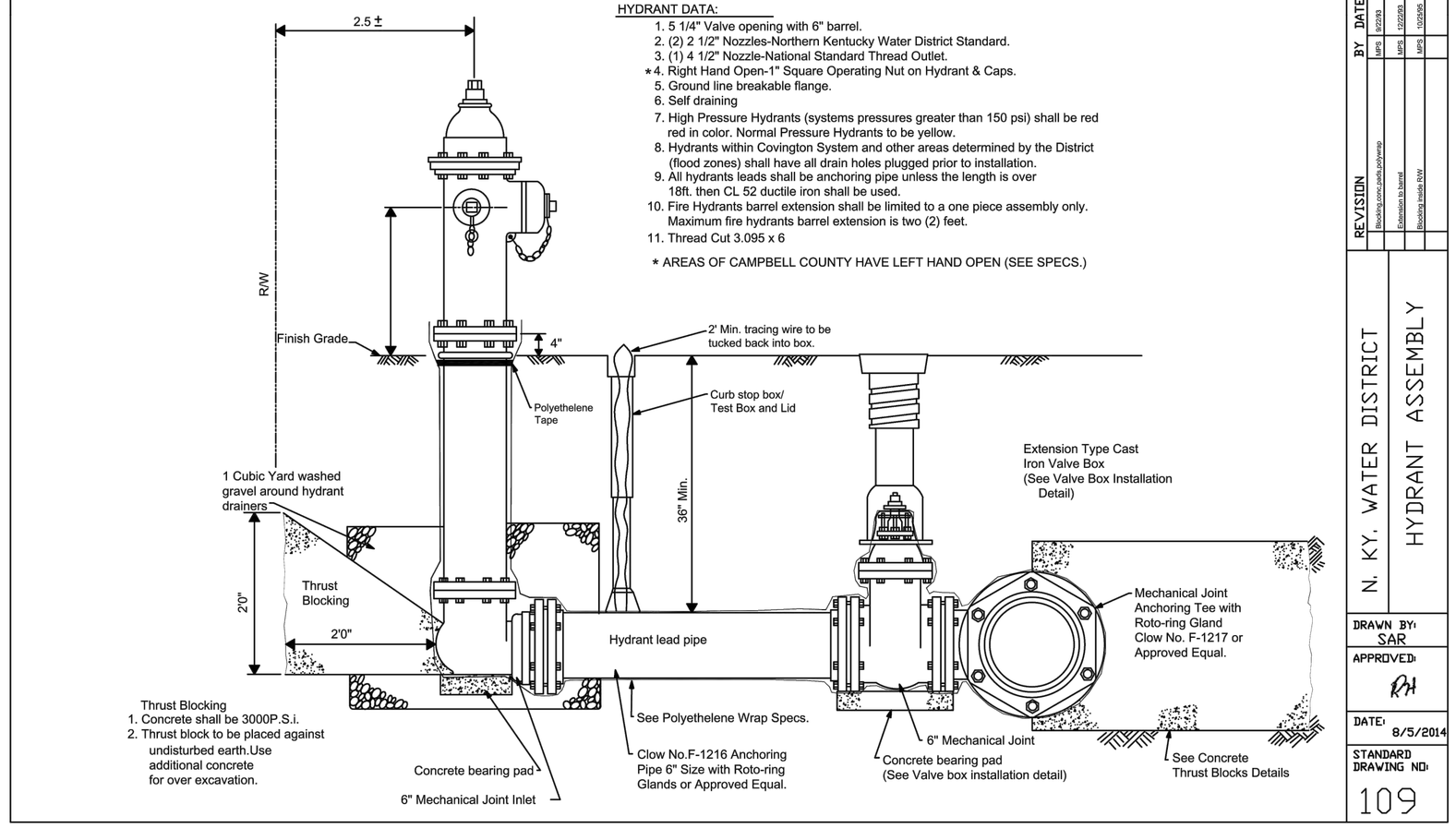
NOTES

Concrete Pads shall be constructed around all main line valve boxes except within hard paved areas. Concrete Pads shall be constructed around customer service line valve boxes 3" and larger valves.

REVISION	BY	DATE
* 30" Concrete pad size * Valve Box Installation	MRS	6/2023
	MRS	6/2023

N. KY. WATER DISTRICT
VALVE BOX AND VALVE PAD DETAIL

DRAWN BY: SAR
APPROVED: RH
DATE: 8/5/2014
STANDARD DRAWING NO: 105



HYDRANT DATA:

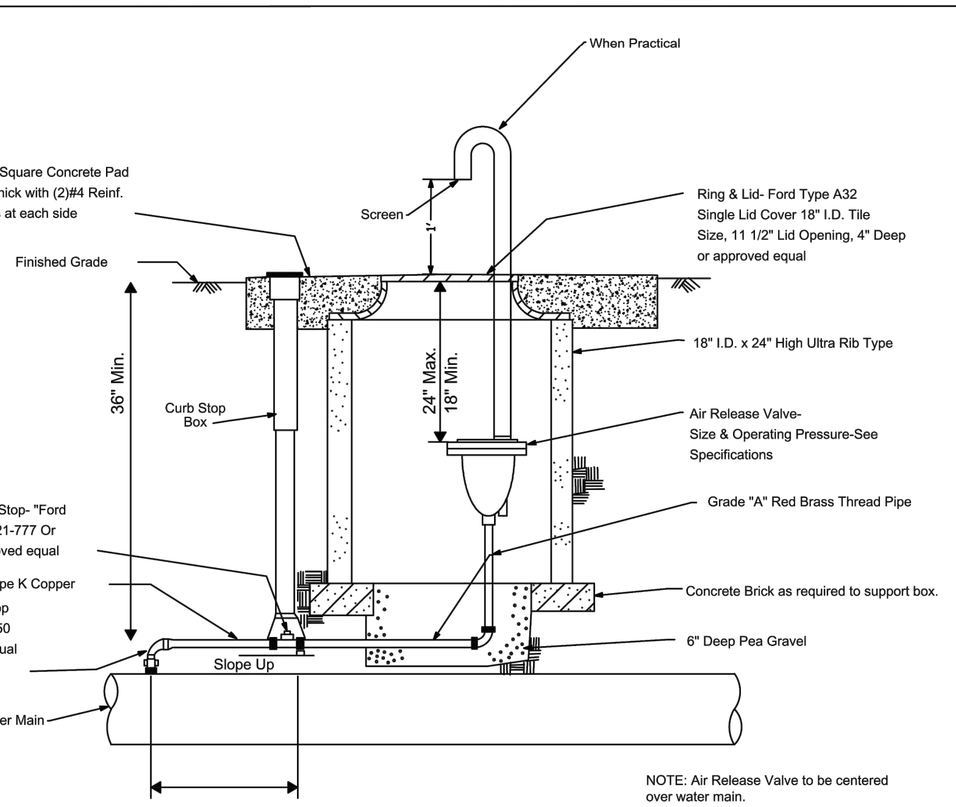
1. 5 1/4" Valve opening with 6" barrel.
2. (2) 2 1/2" Nozzles-Northern Kentucky Water District Standard.
3. (1) 4 1/2" Nozzle-National Standard Thread Outlet.
4. * Right Hand Open-1" Square Operating Nut on Hydrant & Caps.
5. Ground line breakable flange.
6. Self draining
7. High Pressure Hydrants (systems pressures greater than 150 psi) shall be red red in color. Normal Pressure Hydrants to be yellow.
8. Hydrants within Covington System and other areas determined by the District (flood zones) shall have all drain holes plugged prior to installation.
9. All hydrants leads shall be anchoring pipe unless the length is over 18ft. then CL 52 ductile iron shall be used.
10. Fire Hydrants barrel extension shall be limited to a one piece assembly only. Maximum fire hydrants barrel extension is two (2) feet.
11. Thread Cut 3.095 x 6

* AREAS OF CAMPBELL COUNTY HAVE LEFT HAND OPEN (SEE SPECS.)

REVISION	BY	DATE
Blocking and Lead Dimensions	MRS	6/2023
Dimensions to Barrel	MRS	12/2020
Revised Leads NW	MRS	12/2020

N. KY. WATER DISTRICT
HYDRANT ASSEMBLY

DRAWN BY: SAR
APPROVED: RH
DATE: 8/5/2014
STANDARD DRAWING NO: 109

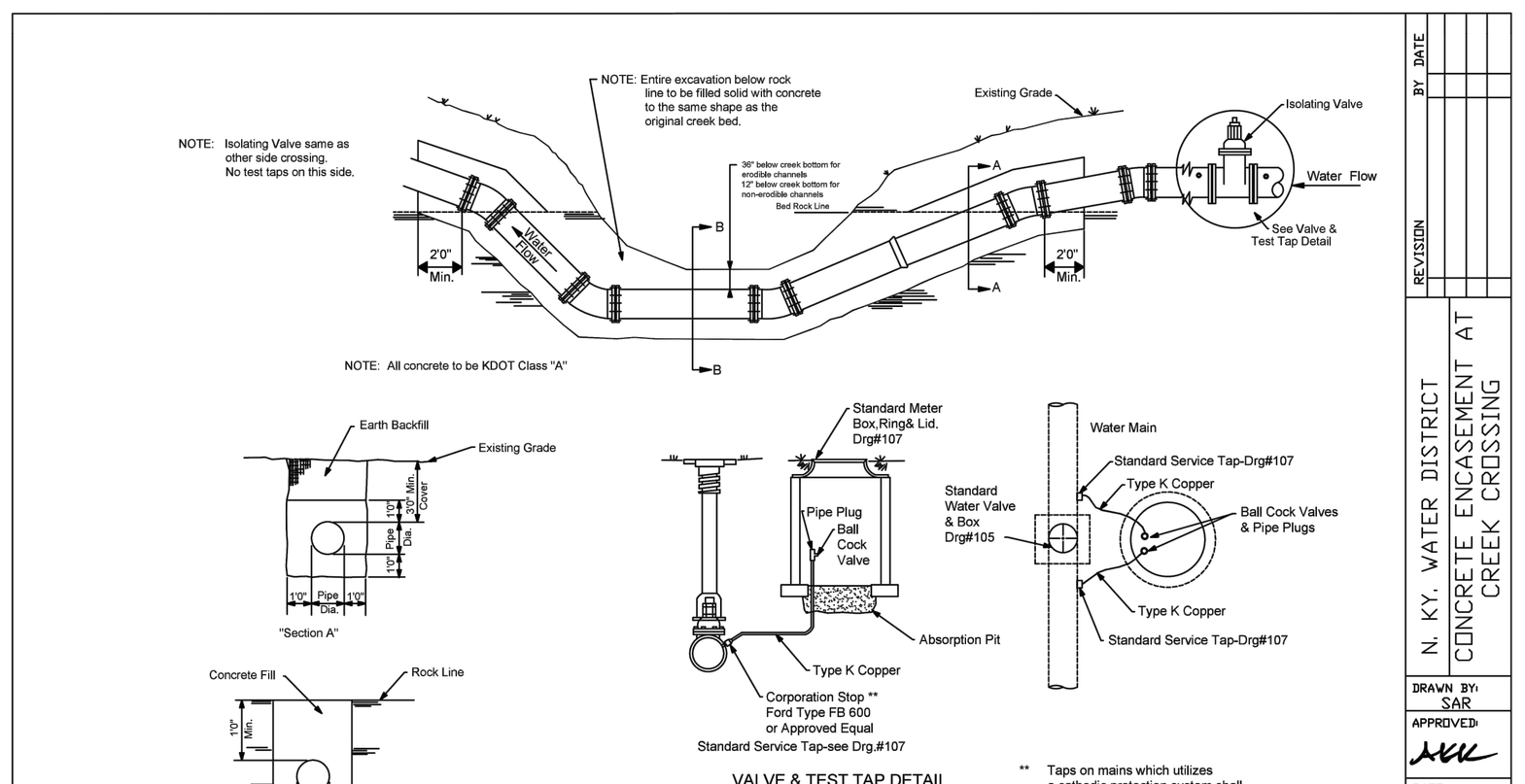


NOTE: Air Release Valve to be centered over water main.
Air Release Valves larger than 1" use:
vault size 24"x24"
lid Ford Type MC 24 &
Extension Ring Ext-2 or approved equal.

REVISION	BY	DATE

N. KY. WATER DISTRICT
N.KY WATER DISTRICT AIR RELEASE VALE

DRAWN BY: SAR
APPROVED: RH
DATE: 8/5/2014
STANDARD DRAWING NO: 106



VALVE & TEST TAP DETAIL

Valve shall be installed in areas not subject to flooding
No services will be tapped between the isolating valve on the creek crossings.

** Taps on mains which utilizes a cathodic protection system shall require an isolation corporation stop

REVISION	BY	DATE

N. KY. WATER DISTRICT
CONCRETE ENCASEMENT AT CREEK CROSSING

DRAWN BY: SAR
APPROVED: MKK
DATE: 2/1/2021
STANDARD DRAWING NO: 110

90% REVIEW

your trusted advisor consultants engineers architects planners

NO	REVISION	DATE
.	.	.

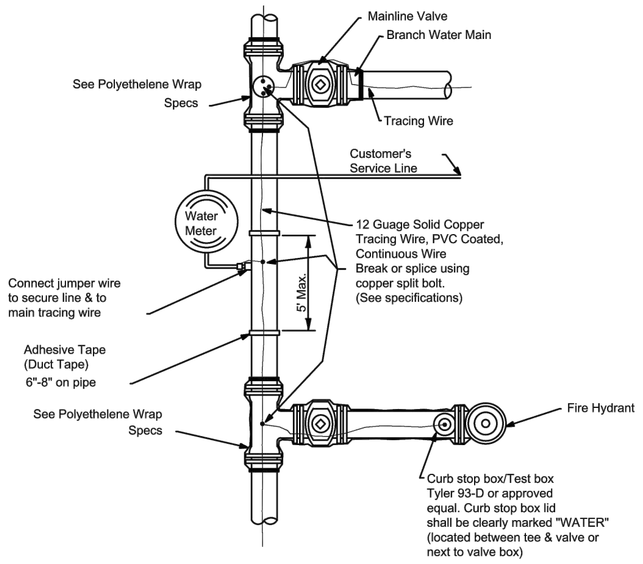
ISSUED FOR:	90% DESIGN
ISSUE DATE:	MAY 2024
SCALE:	AS SHOWN
DESIGNED BY:	JCOR
DRAWN BY:	JCOR
CHECKED BY:	JSHU

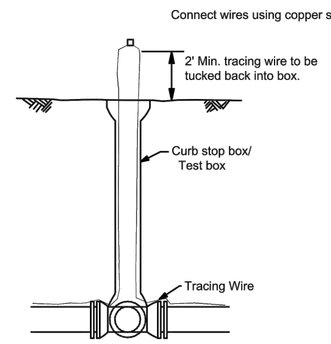
NORTHERN KENTUCKY WATER DISTRICT
SUBDISTRICT 'O'
-KENTON COUNTY -

DETAILS

PROJECT NO.: 231591
DISCIPLINE: CIVIL
SHEET NAME: G-03
SHEET: 4 OF 49

APPROVED FOR CONSTRUCTION
ADJUSTMENTS MAY BE REQUIRED IN THE FIELD
TRANSPORTATION CABINET
KENTUCKY





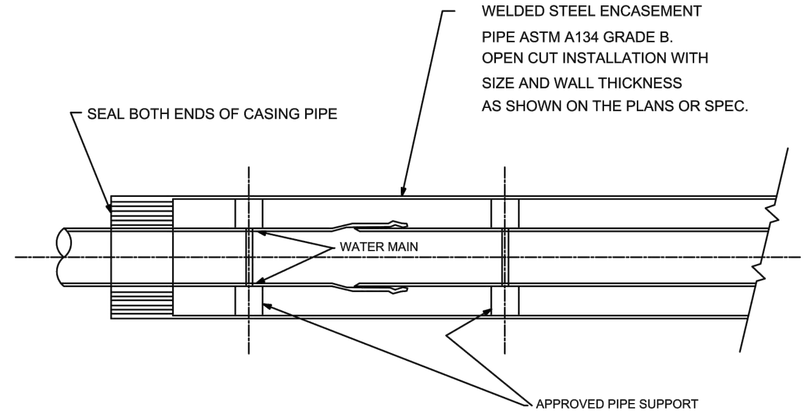
DUCTILE IRON AND PVC PIPE WITH DUCTILE IRON FITTINGS

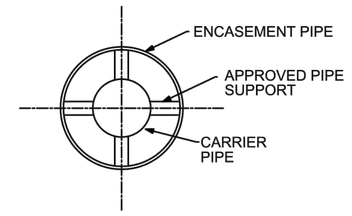
Note: Curb stop box/test box shall not be installed in paved areas.

REVISION	BY	DATE

N. KY. WATER DISTRICT
TRACING WIRE INSTALLATION DETAIL

DRAWN BY: SAR
APPROVED: DH
DATE: 8/5/2014
STANDARD DRAWING NO: 111





1. All carrier pipe placed in steel casing pipe shall be minimum class 50 ductile iron pipe and conform to the latest edition of AWWA C151.
2. Carrier pipe gaskets shall develop a wedging action between pairs of high-strength stainless steel elements spaced around the gasket (FIELD LOK , FASTGRIP, or approved equal gaskets).

NOTE: CASING PIPE JOINTS SHALL BE SEAM WELDED SO THAT CASING IS WATER TIGHT FROM END TO END.

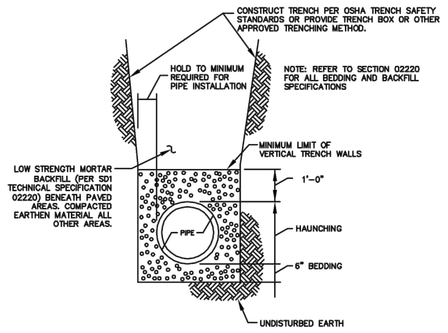
ENCASEMENT PIPE DETAIL

NO SCALE

REVISION	BY	DATE
1 Remove Dimension Fig.	HS	2/2/20

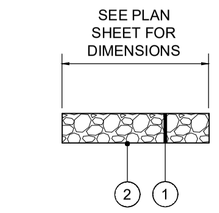
N. KY. WATER DISTRICT
ENCASEMENT PIPE DETAIL

DRAWN BY: SAR
APPROVED: DH
DATE: 8/5/2014
STANDARD DRAWING NO: 114



STORM TRENCH DETAIL

N.T.S.



ROCK CHANNEL PROTECTION

N.T.S.

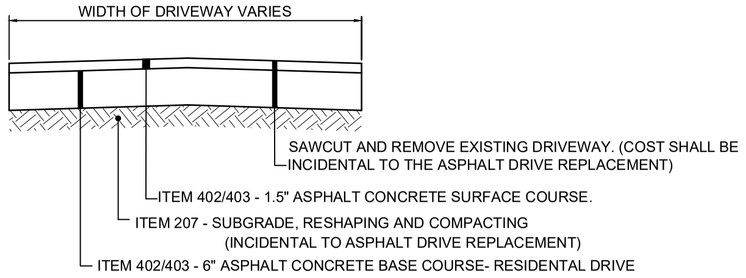
1. ITEM 703 - 12" CHANNEL LINING, CLASS II
2. NON WOVEN GEOTEXTILE FILTER FABRIC

90% REVIEW

your trusted advisor consultants engineers architects planners

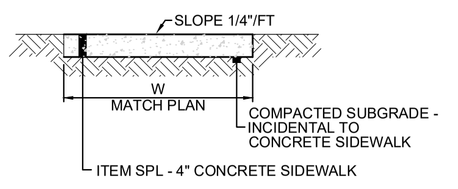
NO	REVISION	DATE
	.	

ISSUED FOR:	90% DESIGN
ISSUE DATE:	MAY 2024
SCALE:	AS SHOWN
DESIGNED BY:	JCOR
DRAWN BY:	JCOR
CHECKED BY:	JSHU



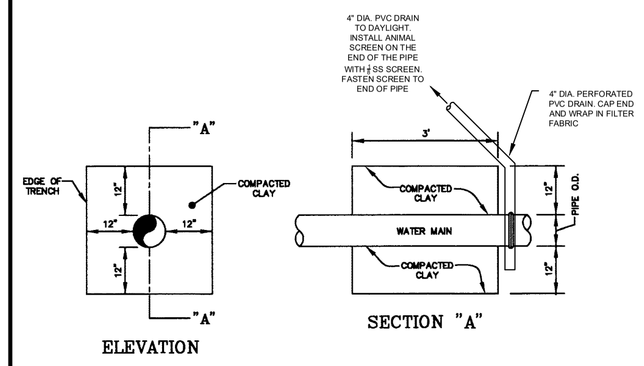
ASPHALT DRIVEWAY REPLACEMENT

N.T.S.



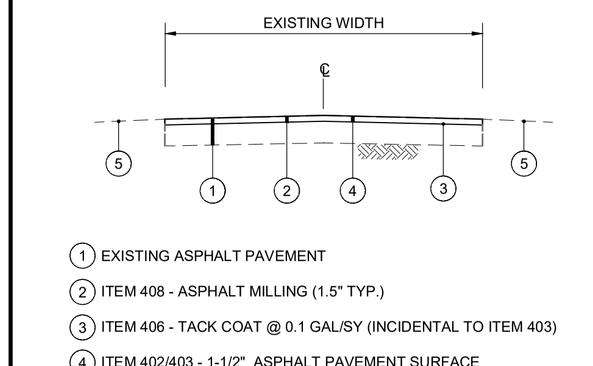
4" CONCRETE SIDEWALK REPLACEMENT DETAIL

(SAWCUTTING AND REMOVAL OF EXISTING CONCRETE SIDEWALK AND EXCAVATION TO PROPOSED SUBGRADE INCIDENTAL TO SIDEWALK REPLACEMENT)



CLAY BULKHEAD

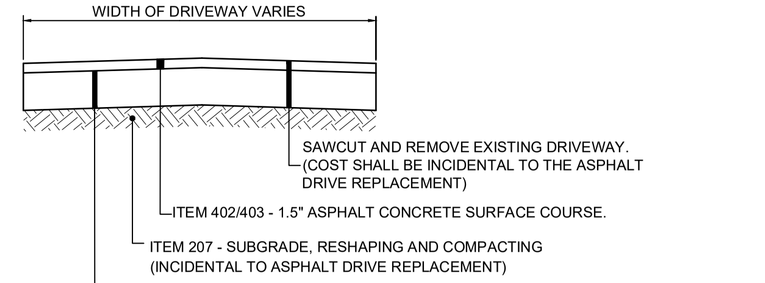
N.T.S.



1. EXISTING ASPHALT PAVEMENT
2. ITEM 408 - ASPHALT MILLING (1.5" TYP.)
3. ITEM 406 - TACK COAT @ 0.1 GAL/SY (INCIDENTAL TO ITEM 403)
4. ITEM 402/403 - 1-1/2" ASPHALT PAVEMENT SURFACE
5. DO NOT DISTURB YARD AREA

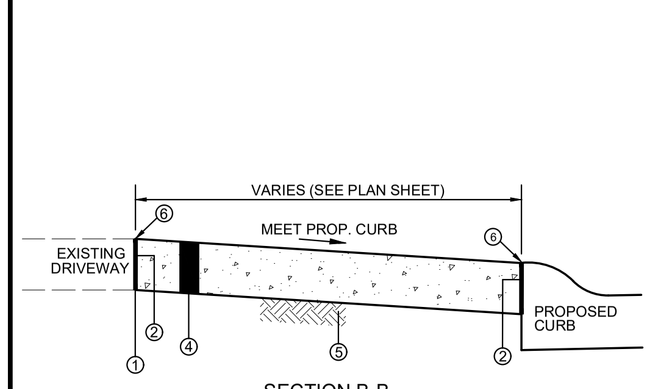
TYPICAL PAVEMENT RESURFACING SECTION

N.T.S.

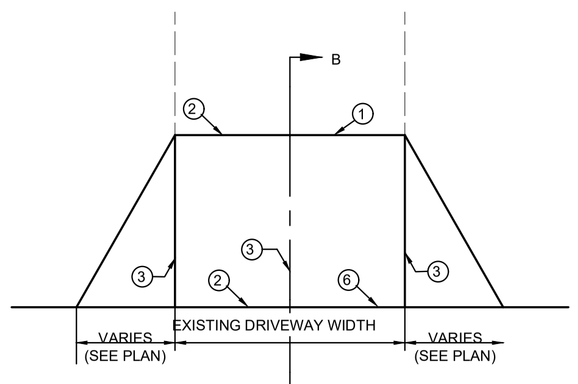


GRAVEL DRIVEWAY REPLACEMENT

N.T.S.



SECTION B-B



PLAN

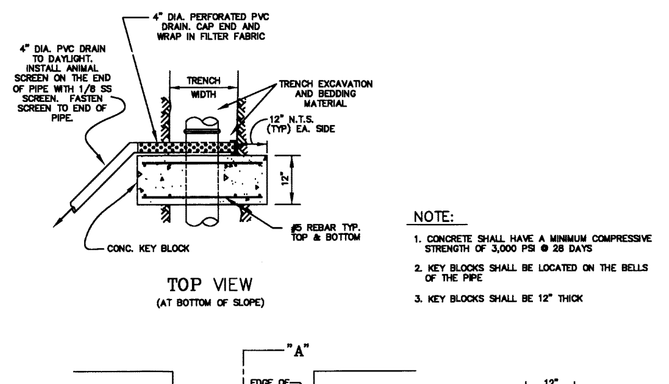
1. SAWCUT AT NEAREST JOINT AND REMOVE EXISTING CONCRETE PAVEMENT (INCIDENTAL TO ITEM 505)
2. 1" PREFORMED EXPANSION JOINT MATERIAL (FLEXIBLE FOAM-CERAMAR BY W.R. MEADOWS OR APPROVED EQUAL)
3. TOOLED JOINT
4. ITEM 505 - 6" CONCRETE DRIVEWAY/APRON (OR MATCH EXISTING WHICHEVER IS GREATER)
5. COMPACTED SUBGRADE (INCIDENTAL TO ITEM 505 - 6" CONCRETE DRIVEWAY/APRON)
6. SEAL JOINT WITH GRAY SELF LEVELING SEALANT (SIKA FLEX OR APPROVED EQUAL)

NOTE:

1. ANY YARD AREA DISTURBED BY THE CONSTRUCTION OF THE DRIVEWAY APRON SHALL BE RESTORED WITH TOPSOIL, SEED AND MULCH (INCIDENTAL TO CONCRETE DRIVEWAY APRON REPLACEMENT).
2. ALL EXCAVATION REQUIRED FOR THE PLACEMENT OF THE PROPOSED DRIVEWAY SHALL BE INCIDENTAL TO CONCRETE DRIVEWAY REPLACEMENT BID ITEM.

CONCRETE DRIVEWAY REPLACEMENT

N.T.S.

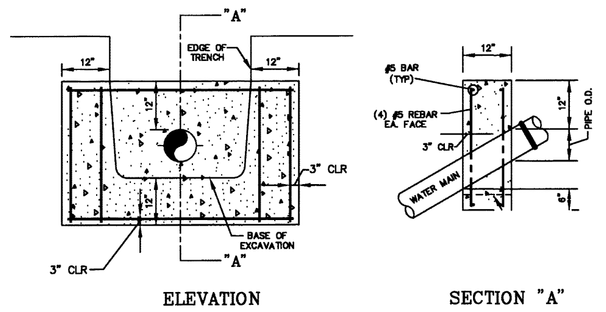


TOP VIEW

(AT BOTTOM OF SLOPE)

NOTE:

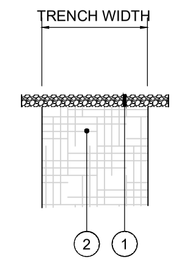
1. CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 3,000 PSI @ 28 DAYS
2. KEY BLOCKS SHALL BE LOCATED ON THE BELLS OF THE PIPE
3. KEY BLOCKS SHALL BE 12" THICK



ELEVATION SECTION "A"

CONCRETE KEY BLOCK

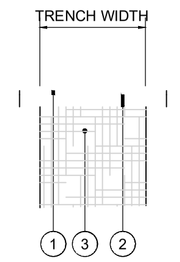
(IN BEDROOCK)
N.T.S.



AGGREGATE ROADWAY REPLACEMENT SECTION

N.T.S.

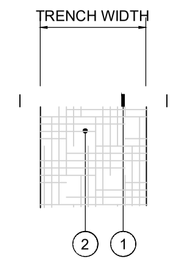
1. ITEM 302 - 8" CRUSHED STONE BASE, (LESS THAN 7% FINES) COMPACTED TO 100% (ASTM D698).
2. CONTROL DENSITY FILL PER NKWD SPECIFICATIONS (SEE DETAIL SHEET (G-02)



ASPHALT ROADWAY REPLACEMENT SECTION

N.T.S.

1. ITEM 402/403 - 1.5" ASPHALT CONCRETE SURFACE COURSE
2. ITEM 402/403 - 7.75" ASPHALT CONCRETE BASE (OR MATCH EXISTING)
3. CONTROL DENSITY FILL PER NKWD SPECIFICATIONS (SEE DETAIL SHEET (G-02)



CONCRETE ROADWAY REPLACEMENT SECTION

N.T.S.

1. ITEM SPL - 8" PORTLAND CEMENT CONCRETE PAVEMENT - PER KENTON COUNTY SUBDIVISION REGULATIONS (OR MATCH EXISTING)
2. CONTROL DENSITY FILL PER NKWD SPECIFICATIONS (SEE DETAIL SHEET (G-02)

NOTE:
GENE STREET HAS AN ADDITIONAL 1.5" ASPHALT OVERLAY ON THE CONCRETE PAVEMENT

NORTHERN KENTUCKY WATER DISTRICT
SUBDISTRICT 'O'
-KENTON COUNTY -

DETAILS

PROJECT NO. 231591
DISCIPLINE: CIVIL
SHEET NAME: G-04
SHEET 5 OF 49

APPROVED FOR CONSTRUCTION
AUGUST 2024
TRANSMISSION CARNET
KENTUCKY AMERICAN WATER

I:\CTC LOCAL\CT_DATA\PROJECTS\2023\231591\DWG\SHEETS\C_231591 00_DETAIL SHEET.DWG - NKWD DTLS (3) - 5/28/2024 2:45:27 PM - JAMES CORNELL

SEDIMENT BASINS

DEFINITION
A TEMPORARY BARRIER OR DAM CONSTRUCTED ACROSS A WATERCOURSE OR AT OTHER SUITABLE LOCATION TO RETAIN SEDIMENT AND OTHER WATERBORNE DEBRIS.

SCOPE
THIS STANDARD ESTABLISHES MINIMUM ACCEPTABLE QUALITY FOR THE DESIGN AND CONSTRUCTION OF TEMPORARY SEDIMENT BASINS FORMED BY AN EMBANKMENT, EXCAVATION OR A COMBINATION OF EMBANKMENT AND EXCAVATION. THE STANDARD IS LIMITED TO SITES WHERE:

1. FAILURE OF THE STRUCTURE WOULD NOT RESULT IN LOSS OF LIFE; DAMAGE TO HOMES; COMMERCIAL OR INDUSTRIAL BUILDINGS; DAMAGE TO HIGHWAYS OR RAILROADS OR INTERRUPTION OF USE OR SERVICE OF PRIVATE UTILITIES.
2. THE HEIGHT OF DAM IS 25 FEET OR LESS, AS MEASURED FROM THE NATURAL STREAMBED AT THE CENTERLINE OF DAM TO THE TOP OF DAM.
3. THE TOTAL VOLUME OF STORAGE IS 150 ACRE-FEET OR LESS.
4. THE DRAINAGE AREA IS 100 ACRES OR LESS.
5. THE BASIN WILL BE REMOVED WITHIN A THREE-YEAR PERIOD AFTER CONSTRUCTION.

PURPOSE
TEMPORARY SEDIMENT BASINS ARE USED AS A MEANS OF TRAPPING AND STORING SEDIMENT FROM ERODING AREAS IN ORDER TO PROTECT DOWNSTREAM AREAS FROM DAMAGE RESULTING FROM SEDIMENTATION AND WATERBORNE DEBRIS.

CONDITIONS WHERE PRACTICE APPLIES
TEMPORARY SEDIMENT BASINS APPLY WHERE PHYSICAL SITE CONDITIONS OR OTHER RESTRICTIONS PRECLUDE THE INSTALLATION OF EROSION CONTROL MEASURES TO ADEQUATELY CONTROL EROSION AND SEDIMENTATION. IT MAY BE USED DOWNSLOPE FROM CONSTRUCTION OPERATIONS WHICH EXPOSE AREAS TO EROSION. TEMPORARY SEDIMENT BASINS WILL BE REMOVED AFTER THE EXPOSED AREAS ARE ADEQUATELY PROTECTED AGAINST EROSION BY VEGETATIVE OR MECHANICAL MEANS.

COMPLIANCE WITH LAWS AND REGULATIONS
DESIGN AND CONSTRUCTION SHALL COMPLY WITH ALL LOCAL LAWS, ORDINANCES, RULES AND REGULATIONS.

LOCATION
TO IMPROVE THE EFFECTIVENESS OF THE BASIN, IT SHOULD BE LOCATED SO AS TO INTERCEPT THE LARGEST POSSIBLE AMOUNT OF RUNOFF FROM THE DISTURBED AREA. THE BEST LOCATIONS ARE GENERALLY LOW AREAS AND NATURAL DRAINAGEWAYS BELOW DISTURBED AREAS. DRAINAGE INTO THE BASIN CAN BE IMPROVED BY THE USE OF DIVERSION DIKES AND DITCHES. THE BASIN MUST NOT BE LOCATED IN A LIVE STREAM BUT SHOULD BE LOCATED TO TRAP SEDIMENT-LADEN RUNOFF BEFORE IT ENTERS THE STREAM. THE BASIN SHOULD NOT BE LOCATED WHERE ITS FAILURE WOULD RESULT IN THE LOSS OF LIFE OR IN INTERRUPTION OF THE USE OR SERVICE OF PUBLIC UTILITIES OR ROADS.

MULTIPLE USE
SEDIMENT BASINS MAY BE DESIGNED AS PERMANENT STRUCTURES TO REMAIN IN PLACE AFTER CONSTRUCTION IS COMPLETED. SITE CONDITIONS MAY MAKE THE USE OF THESE STRUCTURES DESIRABLE FOR STORMWATER DETENTION PURPOSES. WHEREVER THESE STRUCTURES ARE TO BECOME PERMANENT, OR IF THEY EXCEED THE SIZE LIMITATIONS OF THE DESIGN CRITERIA, THEY MUST BE DESIGNED AS PERMANENT PONDS BY A QUALIFIED PROFESSIONAL ENGINEER. PERMANENT PONDS ARE BEYOND THE SCOPE OF THESE STANDARDS AND SPECIFICATIONS. THE PERMANENT STRUCTURES MUST BE SUBMITTED WITH CONSTRUCTION DRAWINGS FOR REVIEW AND ACCEPTANCE BY THE CITY ENGINEER.

MAINTENANCE BASINS SHALL BE CHECKED WEEKLY AND CLEANED WHEN NO LONGER EFFECTIVE.

STORM DRAIN INLET PROTECTION
DEFINITION
A SEDIMENT FILTER INSTALLED AROUND A STORM DRAIN INLET OR CURB INLET TO REDUCE SEDIMENT DISCHARGE.

PURPOSE
TO PREVENT SEDIMENT FROM ENTERING THE STORM DISCHARGE SYSTEMS PRIOR TO PERMANENT STABILIZATION OF THE DISTURBED DRAINAGE AREA. DIFFERENT TYPES OF STRUCTURES ARE APPLICABLE TO DIFFERENT CONDITIONS.

STORM WATER POLLUTION PREVENTION NOTES

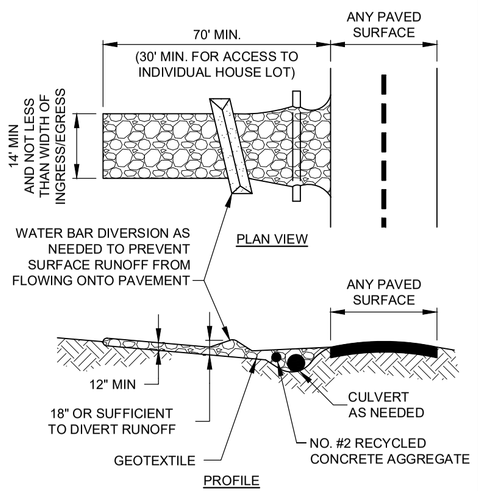
1. SANITATION DISTRICT NO. 1 IS TO BE CONTACTED 72 HOURS PRIOR TO ANY CONSTRUCTION ACTIVITY AT 859-578-6892
2. ALL EROSION AND SEDIMENTATION CONTROL SHALL BE PERFORMED AS SHOWN ON THE PLANS, AND SHALL BE IN COMPLIANCE WITH THE LATEST CONSTRUCTION ACTIVITY " NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM" RULES AND REGULATIONS.
3. A COPY OF THE STORM WATER POLLUTION PREVENTION PLAN (SWPPP) AND A COPY OF THE "NOTICE OF INTENT" (NOI) SHALL BE KEPT ON SITE.
4. AN AMENDMENT OF THE SWPPP IS REQUIRED WHENEVER A CHANGE IN DESIGN, CONSTRUCTION, AND OPERATION OR MAINTENANCE HAS A SIGNIFICANT EFFECT ON THE POTENTIAL FOR THE DISCHARGE OF POLLUTANTS, OR IF THE SWPPP PROVES TO BE INEFFECTIVE IN ACHIEVING THE GENERAL OBJECTIVES OF THE SWPPP.
5. THE CONTRACTOR SHALL ALSO MAINTAIN THE FOLLOWING RECORDS ON SITE:
   A. GENERAL CONTRACTOR AND/OR SUBCONTRACTOR SWPPP CERTIFICATIONS
   B. THE DATE, TIME, AND EXACT LOCATION OF THE INSPECTION, AND THE NAME OF THE INSPECTOR
   C. AN ASSESSMENT OF THE CONDITION OF THE EROSION CONTROLS
   D. A DESCRIPTION OF ANY EROSION CONTROL IMPLEMENTATION AND MAINTENANCE PERFORMED
   E. A DESCRIPTION OF THE PRESENT PHASE OF CONSTRUCTION AT THE SITE
6. CONSTRUCTION SEQUENCE
   - ALL PERIMETER SILT FENCE, INLET PROTECTION AND OTHER EROSION CONTROLS SHALL BE IN PLACE BEFORE ANY OTHER EARTH MOVING ACTIVITIES BEGIN.
   - THE CONTRACTOR SHALL CLEAR AND GRUB ONLY THE AREAS PLANNED FOR EARTH MOVING.
   - REMOVE TOPSOIL, STOCKPILE IT, AND INSTALL SILT FENCE AROUND PERIMETER.
   - SEED SOIL STOCKPILE WITH PERENNIAL RYE GRASS AND MULCH WITH STRAW IF NO TO BE DISTURBED FOR MORE THAN 21 DAYS.
   - CONSTRUCT DETENTION BASIN AND CONTROL STRUCTURE. DETENTION BASIN SHALL BE USED AS A SEDIMENT BASIN UNTIL THE SITE IS STABILIZED.
   - INSTALL STORM SEWER SYSTEM AND SURFACE STORM INLET AND MANHOLE PROTECTION.
   - ESTABLISH A TEMPORARY SEEDING ON ALL BARE AREAS THAT ARE TO REMAIN UNDISTURBED FOR MORE THAN 21 DAYS. SEED WITH PERENNIAL RYE GRASS MULCH WITH STRAW.
   - IMMEDIATE AFTER TOPSOIL HAS BEEN PLACED, STABILIZE THE SAME SURFACE AREA WITH FINAL SEED AND MULCH 7 DAYS AFTER REACHING FINAL GRADE.
   - AFTER THE VEGETATION HAS BECOME WELL ESTABLISHED, REMOVE TEMPORARY EROSION OR SEDIMENT CONTROL PRACTICES.
7. EROSION CONTROLS MUST BE INSPECTED ONCE EVERY 7 DAYS AND WITHIN 24 HOURS OF 0.5" OR GREATER RAINFALL. REMOVE ACCUMULATED SEDIMENT FROM EROSION CONTROLS.
8. TEMPORARY SEEDING SHALL BE PERENNIAL RYE GRASS (40 LB / ACRED) AND MULCH AT 3 BALES OF STRAW PER 1000 S.F.
9. CONTRACTOR IS RESPONSIBLE FOR OBTAINING BORROW MATERIAL ONSITE AND / OR DISPOSING OF EXCESS MATERIAL OFF SITE AS REQUIRED TO MEET INDICATED DESIGN ELEVATIONS.
10. DEBRIS SHALL BE COLLECTED WITHIN PROPERTY LIMITS WEEKLY OR AS NEEDED FOR PUBLIC SAFETY. SURROUNDING STREETS AFFECTED BY THE CONSTRUCTION SHALL BE CLEANED DAILY OR AS NEEDED FOR PUBLIC SAFETY. SEE CONSTRUCTION ENTRANCE DETAIL IN SWPPP DETAILS SHEET.
11. THE CONSTRUCTION OF BMPs SHALL BE REVISED OR ADDED IF DEEMED NECESSARY PER SECTION 1000 OF THE SANITATION DISTRICT 1 REGULATIONS.
12. CONTACT SANITATION DISTRICT NO. 1 72 HOURS PRIOR TO INSTALLATION OF THE WATER QUALITY FEATURE.

NOTES:
1) SUBSOILING SHALL OCCUR WHEN SOIL MOISTURE IS LOW ENOUGH TO ALLOW THE SOIL TO CRACK OR FRACTURE. SUBSOILING IS NOT PERMITTED ON SLIP-PRONE AREAS.
2) THE SITE SHALL BE GRADED TO PERMIT THE USE OF CONVENTIONAL EQUIPMENT FOR SEEDBED PREPARATION AND SEEDING.
3) TOPSOIL SHALL BE APPLIED WHERE NEEDED TO ESTABLISH VEGETATION.
4) THE SEEDBED SHALL BE PREPARED BY APPLYING AGRICULTURAL GROUND LIMESTONE OR FERTILIZER AS RECOMMENDED BY A SOIL TEST. IN LIEU OF A SOIL TEST, APPLY LIME AT 2 TONS/AC. OR FERTILIZER AT 500 LB/AC. OF 10-10-10 OR 12-12-12 ANALYSIS. LIME AND FERTILIZER SHALL BE WORKED INTO THE SOIL TO A DEPTH OF 3".
5) APPLY SEED UNIFORMLY ON FIRM, MOIST SEED BED.
6) SEEDING SHOULD BE APPLIED FROM MARCH 1 TO MAY 31 OR AUGUST 1 TO SEPTEMBER 30. IF SEEDING OCCURS OUTSIDE OF THESE DATES, ADDITIONAL MULCH AND IRRIGATION MAY BE REQUIRED TO ENSURE A MINIMUM OF 80% GERMINATION. TILLAGE FOR SEEDBED PREPARATION SHALL OCCUR WHEN THE SOIL IS DRY ENOUGH TO CRUMBLE AND NOT FORM RIBBONS WHEN COMPRESSED BY HAND.
7) SEEDING SHOULD NOT BE APPLIED FROM OCTOBER 1 TO NOVEMBER 20 BECAUSE SEEDS MAY GERMINATE, BUT WILL NOT SURVIVE THE WINTER. USE THE FOLLOWING METHODS FOR DORMANT SEEDING:
   - FROM OCTOBER 1 TO NOVEMBER 20, INCREASE THE SEEDING RATE BY 50%, PREPARE THE SEED BED, ADD LIME AND FERTILIZER, MULCH AND ANCHOR.
   - FROM NOVEMBER 20 TO MARCH 15, ONLY IF SOIL CONDITIONS PERMIT, INCREASE THE SEEDING RATE BY 50%, PREPARE THE SEED BED, ADD LIME AND FERTILIZER, APPLY THE SEED MIXTURE, MULCH AND ANCHOR.
8) APPLY MULCH MATERIAL IMMEDIATELY AFTER SEEDING.
9) PERMANENT SEEDING SHALL INCLUDE IRRIGATION TO ESTABLISH VEGETATION DURING DRY OR HOT WEATHER OR ON ADVERSE SITE CONDITIONS AS NEEDED. AVOID EXCESSIVE IRRIGATION AND MONITOR TO PREVENT EROSION AND DAMAGE FROM RUNOFF.
10) PERMANENT SEEDING SHALL NOT BE CONSIDERED ESTABLISHED FOR AT LEAST 1 FULL YEAR FROM THE TIME OF PLANTING. DURING THIS PERIOD, INSPECT FOR SOIL EROSION OR PLANT LOSS AND REPAIR BARE OR SPARSE AREAS, FILL GULLIES, RE-FERTILIZE, RE-SEED OR RE-MULCH AS NEEDED.
11) A MINIMUM OF 70% GROWTH DENSITY, BASED ON A VISUAL INSPECTION, MUST EXIST FOR AN ADEQUATE PERMANENT VEGETATIVE PLANTING.

PERMANENT SEEDING FERTILIZATION AND MOWING CHART				
MIXTURE	FORMULA	LB/ AC.	TIME	MOW
CREEPING RED FESCUE DOMESTIC RYEGRASS KENTUCKY BLUEGRASS	10-10-10	500	FALL, YEARLY, OR AS NEEDED	≥3"
TALL FESCUE	10-10-10	500		≥4"
TURF-TYPE FESCUE	10-10-10	500		
CROWN VETCH FESCUE	0-20-20	400	SPRING, AND YEARLY AFTER ESTABLISHED	DO NOT MOW
FLAT PEA FESCUE	0-20-20	400		

PERMANENT SEEDING SPECIES SELECTION		
SEED MIX	SEED RATE LB/AC.	NOTES:
GENERAL USE		
CREEPING RED FESCUE DOMESTIC RYEGRASS KENTUCKY BLUEGRASS	20 - 40 10 - 20 20 - 40	FOR CLOSE MOWING AND WATERWAYS WITH ≤2.0 FT./SEC. VELOCITY
TALL FESCUE	40 - 50	
TURF-TYPE FESCUE	90	
STEEP BANKS OR CUT SLOPES		
TALL FESCUE	40 - 50	
CROWN VETCH TALL FESCUE	10 - 20 20 - 30	DO NOT SEED LATER THAN AUGUST
FLAT PEA TALL FESCUE	20 - 25 20 - 30	DO NOT SEED LATER THAN AUGUST
ROAD DITCHES AND SWALES		
TALL FESCUE	40 - 50	
TURF-TYPE FESCUE KENTUCKY BLUEGRASS	90 5	
LAWN		
KENTUCKY BLUEGRASS PERENNIAL RYEGRASS	100 - 120 100 - 120	
KENTUCKY BLUEGRASS CREEPING RED FESCUE	100 - 120 100 - 120	FOR SHADED AREAS

PERMANENT SEEDING DETAIL
SCALE: NONE



NOTES:
1. PLACE GEOTEXTILE OVER THE ENTIRE AREA PRIOR TO PLACING STONE MEETING THE MIN. SPECIFICATIONS:

A.	TENSILE STRENGTH	= 200 LBS.
B.	PUNCTURE STRENGTH	= 80 PSI
C.	TEAR STRENGTH	= 50 LBS.
D.	BURST STRENGTH	= 320 PSI
E.	ELONGATION	= 20%
F.	EQUIVALENT OPENING SIZE	≤ 0.6 MM
G.	PERMITTIVITY	= 0.001 CM/SEC

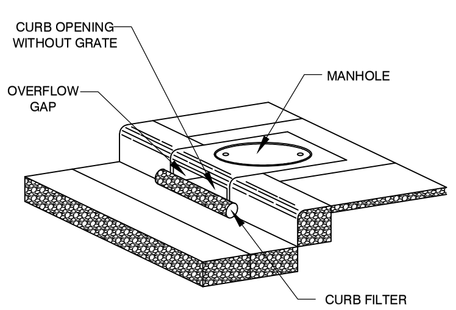
2. APPLY ADDITIONAL STONE AS CONDITIONS DEMAND AND REPLENISH STONE WHEN THE DEPTH IS LESS THAN 6". REMOVE AND REPLACE IF STONES BECOMES MUD-LADEN.
3. IMMEDIATELY REMOVE MUD DROPPED, WASHED OR TRACKED ONTO ROADS OR ANY SURFACE WHERE RUNOFF IS NOT CHECKED BY SEDIMENT CONTROLS BY SCRAPING OR SWEEPING.
4. CONSTRUCTION ENTRANCES SHALL NOT BE RELIED UPON TO REMOVE MUD FROM VEHICLES OR TO PREVENT OFF-SITE TRACKING. VEHICLES THAT ENTER AND LEAVE THE CONSTRUCTION SITE SHALL BE RESTRICTED FROM MUDDY AREAS.

CE **CONSTRUCTION ENTRANCE**
SCALE: NONE

NOTES:
1) THE SEED BED SHALL BE PULVERIZED AND LOOSE TO ENSURE THE SUCCESS OF ESTABLISHING VEGETATION.
2) SOIL AMENDMENTS MAY BE REQUIRED TO ESTABLISH ADEQUATE VEGETATION. PERFORM SOIL TESTS ON THE SITE TO PREDICT THE NEED FOR LIME AND FERTILIZER.
3) APPLY SEED UNIFORMLY. COVER BROADCASTED SEED BY RAKING OR DRAGGING AND THEN LIGHTLY TAMPING INTO PLACE.
4) APPLY MULCHING IMMEDIATELY AFTER SEEDING.
5) SEEDING SHALL BE INSPECTED FOR BARE SPOTS AND WASHOUTS, AND RESEEDED AS NECESSARY.

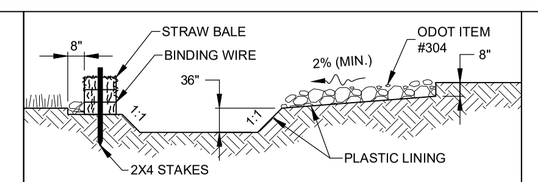
TEMPORARY SEEDING SPECIES SELECTION			
DATES	SPECIES	LB/1,000 SF	LB/AC.
MARCH 1 TO AUGUST 15	OATS	3	128
	TALL FESCUE	1	40
	PERENNIAL RYEGRASS	1	40
	PERENNIAL RYEGRASS	2	40
	TALL FESCUE	1	40
AUGUST 16 TO NOVEMBER 1	RYE	3	112
	TALL FESCUE	1	40
	PERENNIAL RYEGRASS	1	40
	WHEAT	3	120
	TALL FESCUE	1	40
	PERENNIAL RYEGRASS	1	40
	PERENNIAL RYEGRASS	2	40
	TALL FESCUE	1	40
NOVEMBER 1 TO SPRING	ONLY MULCH OR DORMANT SEEDING.		

TEMPORARY SEEDING DETAIL
SCALE: NONE

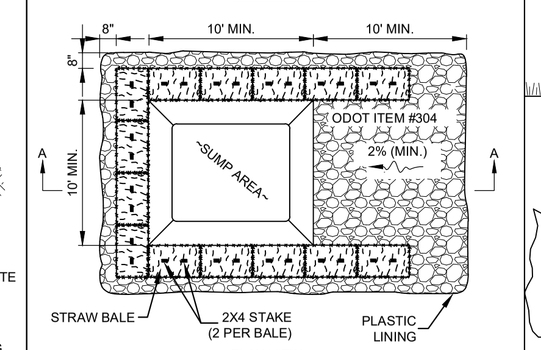


DETAIL OF CURB INLET SEDIMENT CONTROL DEVICE WITH CURB FILTER

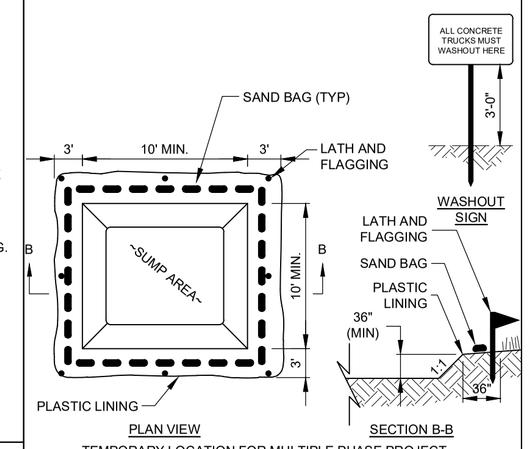
IP **DANDY CURB**
SCALE: NONE



SECTION A-A



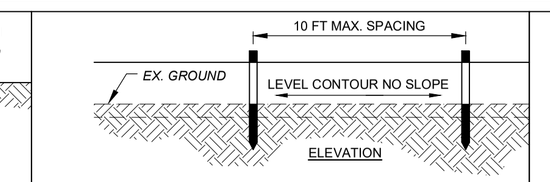
PLAN VIEW
SINGLE LOCATION FOR ENTIRE PROJECT

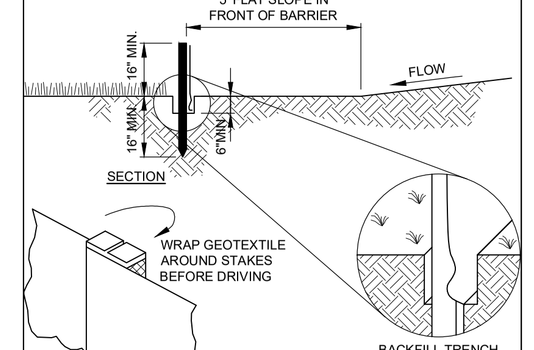


TEMPORARY LOCATION FOR MULTIPLE PHASE PROJECT

NOTES:
1. WASHOUT PIT SHALL BE LOCATED 100' MINIMUM FROM INLETS, STREAMS, WETLANDS AND ANY OTHER SURFACE WATERS.
2. ALL EXCESS CONCRETE AND CONCRETE WASHOUT, INCLUDING FROM HAND MIXERS AND LIGHT EQUIPMENT, SHALL BE DISPOSED OF IN THE CONCRETE WASHOUT AREA. DISPOSAL OF EXCESS CONCRETE OR CONCRETE WASHOUT ON THE GROUND, OR IN STORM DRAINS, DITCHES OR WATER BODIES, IS PROHIBITED.
3. CONCRETE WASHOUT AREA SHALL BE SUFFICIENT SIZE TO CONTAIN CONCRETE WASTE GENERATED. FOR LARGER SITES, MULTIPLE CONCRETE WASHOUT AREAS MAY BE REQUIRED.
4. IF CONCRETE WASHOUT AREA IS LOCATED AWAY FROM A PAVED SURFACE, CONSTRUCT A GRAVEL ACCESS ROUTE EQUAL IN COMPOSITION TO THE CONSTRUCTION ENTRANCE.
5. PLASTIC LINING SHALL BE DOUBLE-LINED, CONTINUOUS 10-MIL POLYETHYLENE SHEETING FREE OF HOLES, TEARS OR OTHER DEFECTS, AND INSTALLED ON A SMOOTH, LEVEL SURFACE, FREE OF ROCKS OR DEBRIS.
6. CONCRETE WASHOUT SIGNAGE SHALL BE CLEARLY VISIBLE AND LOCATED WITHIN 30 FEET OF EACH WASHOUT AREA.
7. CONCRETE WASHOUT AREAS SHALL BE COVERED DURING INCLEMENT WEATHER TO PREVENT OVERFLOWS.
8. PREFABRICATED, PORTABLE AND RE-USABLE CONCRETE WASHOUT CONTAINERS ARE ACCEPTABLE, BUT MUST BE SPECIFICALLY DESIGNED FOR CONCRETE WASHOUT USE.
9. CONCRETE WASHOUT AREA SHALL BE INSPECTED DAILY TO CHECK FOR DAMAGE AND TO DETERMINE IF IT NEEDS CLEANED OR REPLACED. ANY DAMAGE TO THE SIDEWALLS OR POLYETHYLENE SHEETING SHALL BE REPAIRED IMMEDIATELY. THE CONCRETE WASHOUT AREA SHALL BE CLEANED OR REPLACED WHEN IT IS 75% FULL. THE POLYETHYLENE SHEETING SHALL BE REPLACED AFTER EACH CLEANING.
10. SAW CUT CONCRETE, RESIDUE FROM SAW CUT, AND GRINDINGS SHALL BE DISPOSED OF IN THE WASHOUT PIT.

WA **CONCRETE WASHOUT DETAIL**
SCALE: NONE

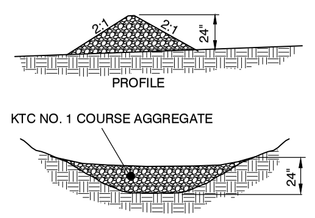




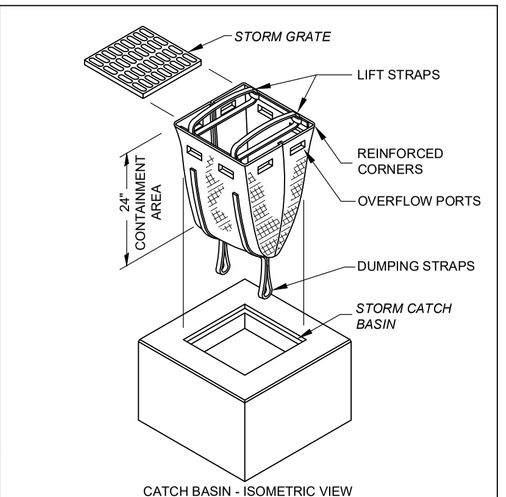
NOTES:
1. PRESERVE VEGETATION FOR 5 FEET, OR AS MUCH AS POSSIBLE, UPSLOPE FROM THE SILT FENCE. IF VEGETATION IS REMOVED, IT SHALL BE RE-ESTABLISHED WITHIN 7 DAYS FROM SILT FENCE INSTALLATION.
2. SILT FENCE SHALL ALLOW RUNOFF TO PASS ONLY AS DIFFUSE FLOW THROUGH THE GEOTEXTILE. PERFORM ONE OF THE FOLLOWING IF RUNOFF OVERTOPS THE SILT FENCE, FLOWS UNDER OR AROUND THE ENDS, OR IN ANY OTHER WAY BECOMES A CONCENTRATED FLOW:
   - CHANGE THE LAYOUT OF THE SILT FENCE.
   - REMOVE ACCUMULATED SEDIMENT.
   - INSTALL OTHER PRACTICES.

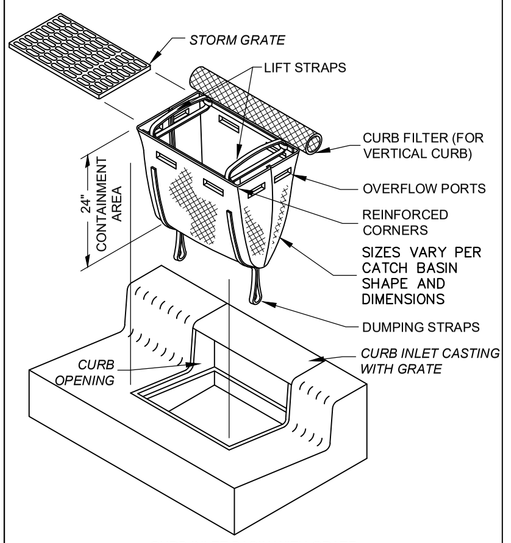
FABRIC PROPERTIES	VALUES	TEST METHOD
GRAB TENSILE STRENGTH	90 LB. MIN	ASTM D-1682
MULLEN BURST STRENGTH	190 PSI MIN	ASTM D-3786
SLURRY FLOW RATE	0.3 GAL./MIN./S.F. MAX.	
EQUIVALENT OPENING SIZE	40-80	US STD. SIEVE CW-02215
ULTRAVIOLET RADIATION STABILITY	90% MIN	ASTM-G-26

SF **SILT FENCE**
SCALE: NONE

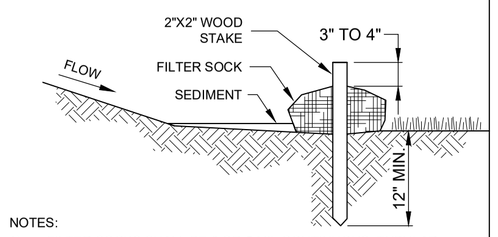


CD **CHECK DAM**
N.T.S.





IP **STORM DRAIN INLET PROTECTION DETAIL**
SCALE: NONE



NOTES:
1) FILTER SOCKS SHALL BE 3 OR 5 MIL CONTINUOUS, TUBULAR, HDPE 3/8" KNITTED MESH NETTING MATERIAL, FILLED WITH COMPOST.
2) COMPOST SHALL BE WEED, PATHOGEN AND INSECT FREE, FREE OF ANY REFUSE, CONTAMINANTS OR OTHER MATERIALS TOXIC TO PLANT GROWTH, BE DERIVED FROM A WELL-DECOMPOSED SOURCE OF ORGANIC MATTER, AND CONSIST OF PARTICLES RANGING FROM 3/8" TO 2".
3) FILTER SOCKS SHALL BE PLACED ON A LEVEL LINE ACROSS SLOPES PARALLEL TO THE BASE OF THE SLOPE.
4) FILTER SOCKS SHALL BE PLACED AT LEAST 5' FROM THE TOE OF SLOPE FOR SEDIMENT DEPOSIT.
5) BUILT UP SEDIMENT SHALL BE REMOVED WHEN IT HAS REACHED 1/3 THE FILTER SOCK HEIGHT.
6) WHEN A FILTER SOCK IS NO LONGER REQUIRED, IT SHALL BE DISPERSED ON-SITE.
7) THE MAXIMUM DRAINAGE AREA PER 100 FEET OF FILTER SOCK IS 1/2 ACRE AND IS DEPENDENT ON THE SLOPE:

MAX. SLOPE LENGTH ABOVE FILTER SOCK					
SLOPE	RATIO (H:V)	8"	12"	18"	24"
0% - 2%	0 - 50:1	125'	250'	300'	350'
2% - 10%	50:1 - 10:1	100'	125'	200'	250'
10% - 20%	10:1 - 5:1	75'	100'	150'	200'

FILTER SOCK DETAIL
SCALE: NONE

90% REVIEW

your trusted advisor
engineers
architects
planners
consultants

NO	REVISION	DATE

ISSUED FOR:	90% DESIGN
ISSUE DATE:	MAY 2024
SCALE:	AS SHOWN
DESIGNED BY:	JCOR
DRAWN BY:	JCOR
CHECKED BY:	JSHU

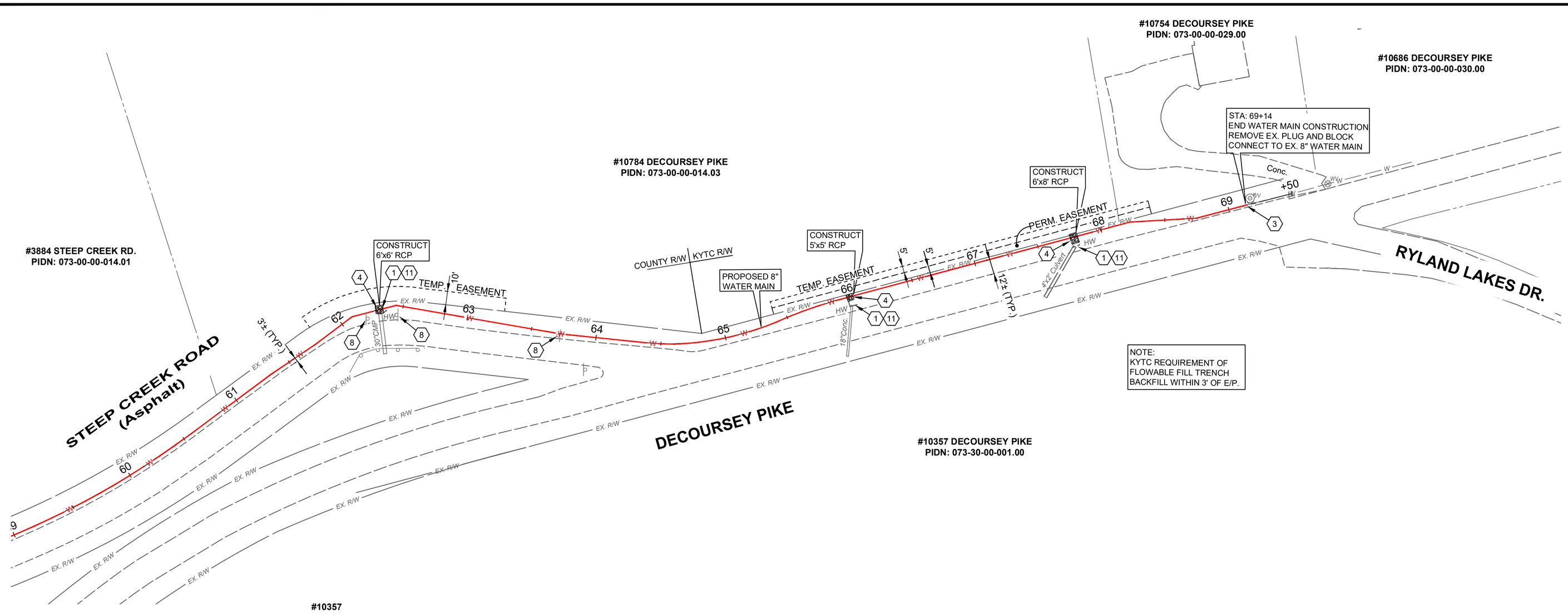
NORTHERN KENTUCKY WATER DISTRICT
SUBDISTRICT 'O'
-KENTON COUNTY -

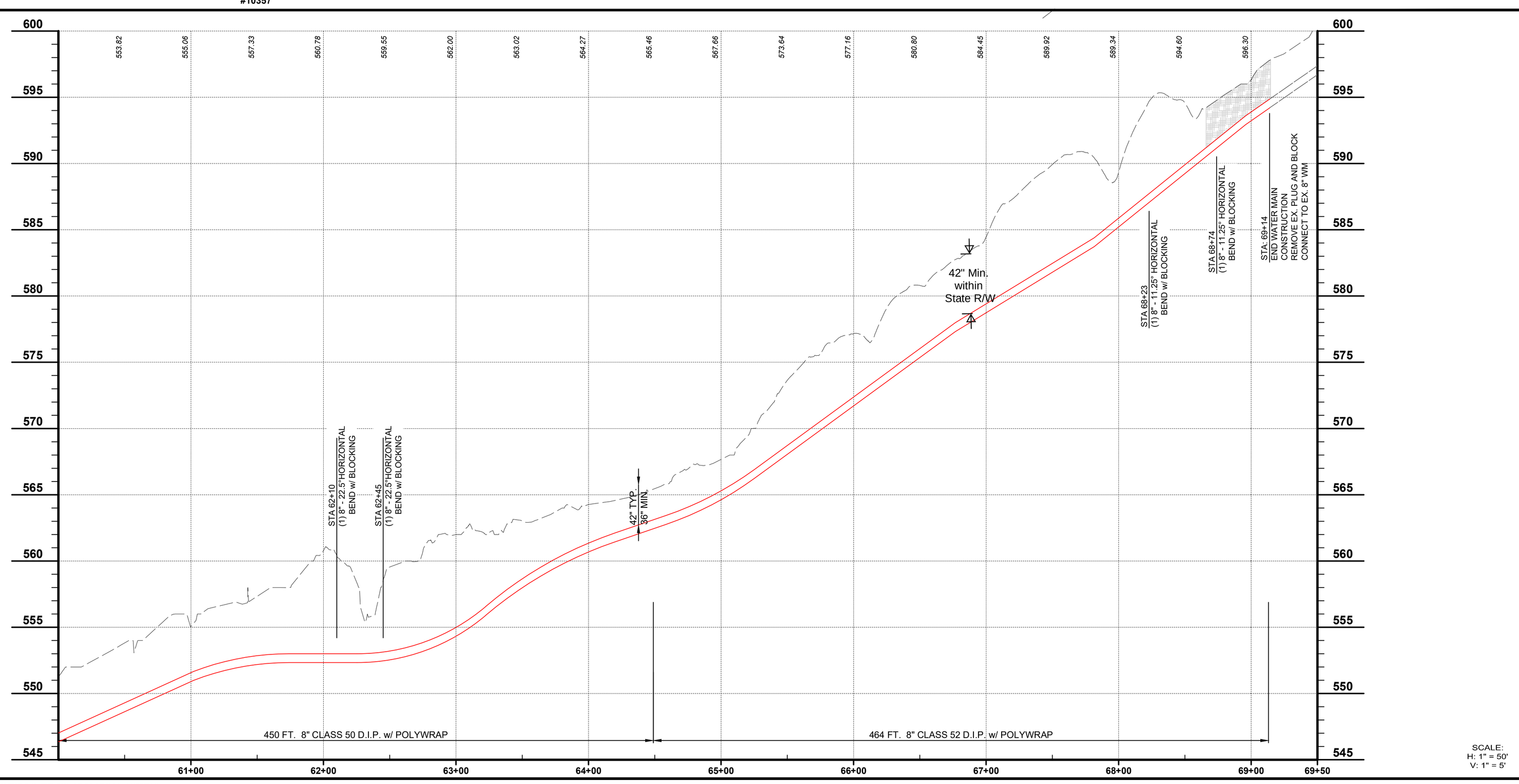
EROSION CONTROL DETAILS

PROJECT NO.
231591
DISCIPLINE
CIVIL
SHEET NAME
G-05
SHEET 6 OF 49

APPROVED FOR CONSTRUCTION
AUGUST 2024
TRANSACTION NO. 24-0111
KENTUCKY DIVISION OF WATER

H:\2023\231591\DWG\SHEETS\C_231591 EROSION CONTROL DETAILS.DWG - SHEET NAME - 5/28/2024 10:25:09 AM - JAMES CORNELL





SCALE: 1" = 50'

CONSTRUCTION NOTES

1. MAINTAIN MANAGEABLE VERTICAL CLEARANCE BETWEEN THE PROPOSED WATER MAIN AND THE EXISTING STORM SEWER, WATER MAIN, TELEPHONE DUCTS, AND GAS MAIN. CONSTRUCT ALL SANITARY SEWER CROSSINGS PER N.K.W.D. SPECIFICATIONS ITEM 1.14. MAINTAIN MINIMUM 18" BETWEEN THE PROPOSED WATER MAIN AND THE EXISTING SANITARY SEWER, ACTUAL ELEVATION UNKNOWN. CONTRACTOR TO EXCAVATE & VERIFY ACTUAL LOCATION, SIZE AND ELEVATION OF EXISTING UTILITY PRIOR TO BEGINNING WATER MAIN CONSTRUCTION. THE CONTRACTOR SHALL NOTIFY THE ENGINEER PRIOR TO CONSTRUCTION OF ANY POTENTIAL CONFLICT. NO ADDITIONAL PAYMENT WILL BE MADE FOR THIS WORK AND THE COST SHALL BE INCLUDED IN THE BID ITEM FOR WATER MAIN.
2. PROPOSED FIRE HYDRANT ASSEMBLY, VALVE AND BLOCKING AS PER N.K.W.D. STD. DRAWING NO. 109. COORDINATE LOCATION WITH N.K.W.D. INSPECTOR. ANCHOR VALVE TO TEE.
3. CONNECT TO EXISTING WATER MAIN (ACTUAL ELEVATION UNKNOWN). CONTRACTOR TO VERIFY DEPTH PRIOR TO CONSTRUCTION.
4. CHANNEL LINING, CLASS II (12") w/ NON-WOVEN GEOTEXTILE FILTER FABRIC
5. CONTRACTOR TO VERIFY LOCATION AND ELEVATION OF UTILITY PRIOR TO EXCAVATION ACTIVITY AND NOTIFY ENGINEER AND N.K.W.D. OF CONFLICTS.
6. DO NOT DISTURB
7. CONTRACTOR TO SUPPORT UTILITY POLE DURING PIPE INSTALLATION
8. REMOVE AND REPLACE SIGN
9. REMOVE AND REPLACE MAILBOX
10. NOT USED
11. REMOVE AND REPLACE EXISTING STORM STRUCTURE (CB,HW) AS NEEDED FOR WATER MAIN INSTALLATION
12. DRIVEWAY RESTORATION (SEE DETAILS)
13. CONSTRUCT CLAY BULKHEAD IN TRENCH WITH UNDERDRAIN. DAYLIGHT UNDERDRAIN TO DITCH OR DRAINAGE STRUCTURE

HATCH LEGEND

- 1-1/2" ASPHALT PAVEMENT MILL AND OVERLAY AREA
- TRENCH RESTORATION - ASPHALT PAVEMENT - SEE DETAIL SHEET
- TRENCH RESTORATION - CONCRETE PAVEMENT - SEE DETAIL SHEET
- TRENCH RESTORATION - 8" AGGREGATE PAVEMENT
- CONTROL DENSITY FILL - PAV'T TRENCH
- CONCRETE DRIVEWAY REPLACEMENT - SEE DETAIL SHEET
- CONCRETE WALK REPLACEMENT - SEE DETAIL SHEET
- ASPHALT DRIVEWAY REPLACEMENT - SEE DETAIL SHEET
- GRAVEL DRIVEWAY REPLACEMENT - SEE DETAIL SHEET
- CHANNEL LINING, CLASS II - SEE DETAIL SHEET

90% REVIEW

your trusted advisor — engineers architects planners consultants

NO	REVISION	DATE
.	.	.

ISSUED FOR:	FINAL
ISSUE DATE:	JUNE 2024
SCALE:	AS SHOWN
DESIGNED BY:	JCOR
DRAWN BY:	JCOR
CHECKED BY:	JSHU

NORTHERN KENTUCKY WATER DISTRICT
SUBDISTRICT 'O'
-KENTON COUNTY -

STEEP CREEK ROAD / DECOURSEY PIKE
STA. 60+00 TO STA. 68+80

PROJECT NO.: 231591
DISCIPLINE: CIVIL
SHEET NAME: C-17
SHEET: 23 OF 49

APPROVED
August 30, 2024
TRANSPORTATION CABINET
DISTRICT 6

H:\2023\231591\DWG\SHEETS\C_231591 PNP_08_STEEP CREEK.DWG - DECOURSEY - 7/26/2024 6:00:34 PM - JAMES CORNELL

KENTUCKY TRANSPORTATION CABINET

KYTC Division of Maintenance
Permits Branch
District 6

ENCROACHMENT PERMIT GENERAL NOTES & SPECIFICATIONS

YOU MUST NOTIFY KYTC BEFORE BEGINNING ANY WORK IN THE RIGHT-OF-WAY. ***Failure to alert KYTC of working within the right of way may result in permit revocation.***

Two ways to notify KYTC of your construction start date:

By Email: KYTCD6PERMITS@KY.GOV

**must include permit number and county in subject line*

By Phone: 859-341-2700

**must know permit number and county when calling*

YOU MUST ALSO NOTIFY KYTC UPON COMPLETION OF WORK WITHIN RIGHT-OF-WAY. ***Failure to alert KYTC of completion of work may result in withholding release of any associated bonds.***

Kentucky UNBRIDLED SPIRIT™

APPROVED
AUGUST 27, 2024
KENTUCKY TRANSPORTATION CABINET
06-2024-0081-1

I. SAFETY

A. General Provisions

☑ All signs and control of traffic shall be in accordance with the Manual on Uniform Traffic Control Devices (MUTCD) for Streets and Highways, latest edition, Part VI, and safety requirements shall comply with the Permits Manual. Federal law requires that traffic control shall be implemented in accordance with MUTCD standards and KYTC's Standard Specifications for Road and Bridge Construction (KYTC SSRBC) under the supervision of a certified Work Zone Traffic Control Supervisor.

☑ All work necessary in shoulder or ditch line areas of a state highway shall be scheduled to be promptly completed so that hazards adjacent to the traveled way are kept to an absolute minimum.

☑ No more than one (1) traveled-lane shall be blocked or obstructed during normal working hours. All signs and flaggers during lane closure shall conform to the MUTCD. The traveled-way and shoulders shall be kept clear of mud and other construction debris at all times during construction of the permitted facility. No non-construction equipment or vehicles or office trailers shall be allowed on the right of way during working hours. The right of way shall be left free and clear of equipment, material, and vehicles during non-working hours.

☑ When necessary to block one (1) traveled-lane of a state highway, the normal working hours shall be as directed by the Department. No lanes shall be blocked or obstructed during adverse weather conditions (rain, snow, fog, etc.) without specific permission from the Department.

☑ Working hours shall be between **9:00 AM** and **3:00 PM**. Further date and time restrictions are as follows:

B. Explosives

☑ No explosive devices or explosive material shall be used within state right of way without proper license and approval of the Kentucky Department of Mines and Minerals, Explosive Division.

C. OSHA

☑ Kentucky Occupational Safety and Health Standards for the construction industry, which has the effect of law, states in part: (Page 52, 1926.651, Specific Excavation Requirements) "Prior to opening an excavation, effort shall be made to determine whether underground installations, (sewer, telephone, water, fuel, electric lines, etc.) will be encountered, and if so, where such underground installations are located. When the excavation approaches the estimated location of such an installation, the exact location shall be determined, and when it is uncovered, proper supports shall be provided for the existing installation. Utility companies shall be contacted and advised of proposed work prior to the start of actual excavation."

D. Archaeological

☑ Whenever materials of an archaeological nature are discovered during the course of construction work or maintenance operations, contact shall be made immediately with the Division of Environmental Analysis, which maintains an archaeologist on staff, or with the Office of the State Archaeologist located at the University of Kentucky. Following this consultation, further action shall be decided on a case-by-case basis by the State Highway Engineer or the Transportation Planning Engineer or their designated representative.

E. Environmental

☑ If the activity to which this permit related disturbs one acre of more of land, you must obtain KPDES KYR10 permit. Information can be found at http://water.ky.gov/permitting/Pages/GeneralPermits.aspx

F. Additional Notes

☑ The following additional notes apply to this permit:

24 hour notice is required prior to restoration of pavement, concrete or topsoil. Call Rick Shay at 859-307-5768

APPROVED
AUGUST 27, 2024
KENTUCKY TRANSPORTATION CABINET
06-2024-00844

II. UTILITIES

- [x] The permittee shall be responsible for any damage to existing utilities. Any utility modifications or relocations within state right of way necessary, as determined by the Department or by the owner of the utility, shall be at the expense of the permittee and subject to the approval of the Department. Operators of underground utilities in right of way shall be members of Kentucky 811.

- [ ] All existing manholes and valve boxes shall be adjusted to be flush with finished grade.

- [x] All pavement cuts shall be restored per Kentucky Transportation Cabinet standards and specifications.

- [x] Any excavation within 3' of edge of pavement will require flowable fill as backfill.

- [x] The clear zone requirement shall be met to the extent possible in accordance with the Roadside Design Guide.

- [ ] Encasement pipe shall conform to current standards for highway crossings in accordance with the Permits Manual. Pipe encasing shall not be required if the pipe crossing is 2" or less.

- [ ] Aerial crossing of utility lines shall have a minimum clearance from the high point of the roadway to the low point of the line of 24' on fully controlled access highways and 18' on non-fully controlled access highways

- [x] Minimum depth for underground Gas and Electric lines is 60" under roadways, ramps, and ditch lines and 42" in all other areas within state right of way. The minimum depth for all other utilities is 42" in all areas.

- [x] When steel plates are installed over an open excavation in the roadway, they must be anchored to the pavement and have asphalt applied to all exposed edges and an MUTCD approved sign noting "Road Plates Ahead." KYTC must be notified of the location, date, time, and permit number associated to BOTH the installation and removal of the plate. Failure to do so may result in permit revocation.

- [ ] Utility poles moved for replacement must be removed in their entirety and the hole left behind must be backfilled.

- [ ] No poles or anchors shall be installed in a roadside ditch.

- [ ] ***Utility notes specific to fully-controlled access highways ONLY:***
All work necessary within the right-of-way shall be performed behind a temporary fence erected prior to the start of work. The temporary woven wire fence shall be removed immediately upon completion of work on the right-of-way, and the control of access immediately restored to original condition, in accordance with applicable KYTC SSRBC. All vents, valves, manholes, etc., shall be located outside of the right-of-way. Encasement pipe shall extend from right-of-way line to right-of-way line and shall be one continuous run of pipe. The encasement pipe shall be welded at all joints. The boring pit and tail ditch shall extend past the existing toe of slope or bottom of ditch line and shall be a minimum of 42 inches deep. Work in interstate right-of-way requires approval from FHWA (Federal Highway Administration).

- [ ] Additional notes:

MINIMUM COVER MUST BE 60" IN THE ROW AND UNDER PAVEMENT

APPROVED
AUGUST 27, 2024
KENTUCKY TRANSPORTATION CABINET
06-2024-00844

III. DRAINAGE

☑ Negative impacts to existing drainage will be the applicant's responsibility to repair in accordance with KYTC SSRBC.

☐ All pipe shall be laid in a straight alignment, to proper grades, and with all materials and methods of installation including bedding and joint seating. Pipe shall not be covered until inspected by the Department and express permission obtained to make backfill. It is the applicant's responsibility to request inspection.

☐ All gutter lines at the base of new curbs shall be on continuous grades, and pockets of water along with curbs or in entrance areas or other paved areas within the right-of-way shall not be acceptable.

☐ All drainage structures and appurtenances (manholes, catch basins, curbing, inlet basins, etc.) shall conform to the Department specifications and shall be constructed in accordance with the KYTC's Standard Drawings.

☐ Additional notes:

IV. PAVING

☑ No bituminous pavement shall be installed within the right of way between November 15 and April 1, nor when the temperature is below 40 degrees Fahrenheit, without the express consent of the Department. No bituminous pavement shall be installed when the underlying course is wet.

☑ Paving within the right of way shall be as follows:

- Base (Type): **Match Existing**, (Thickness) **Match Existing**
- Surface Base (Type) **Match Existing** , (Thickness) **Match Existing**
- Finished Surface (Type) **Match Existing**, (Thickness) **Match Existing**

☑ All materials and methods of construction, including base and subgrade preparation, shall be in accordance with KYTC's Standard Specifications. At least 24 hours notice to the Department is required prior to beginning paving operations.

Phone: **859-307-5768** Name: **Rick Shay**

☑ Utility companies performing road cuts must restore the pavement to pre-existing condition. Pictures/videos are recommended to ensure proper placement of signs and lane markers that are temporarily removed for paving operations. In some cases, a pre-work inventory may be requested from the Department.

☑ Existing pavement and shoulder material shall be removed to accommodate the above paving specifications.

☑ The finished surface of all new pavement within the right of way shall be true to the required slope and grade, uniform in density and texture, free of irregularities, and equivalent in riding qualities to the adjacent highway pavement or as determined by KYTC.

☑ To ensure proper surface drainage, the new pavement shall be flush with the edge of existing highway pavement and shall slope away from the existing edge of the pavement as specified in drawings.

☑ Existing edge of pavement shall be saw-cut to provide a straight and uniform joint for new pavement, and an edge key will be installed in the overlap. An approved joint sealer, in accordance with Kentucky Department of Highways Standard Specifications (latest edition), shall be applied between new and existing pavements.

☐ Additional notes:

APPROVED
AUGUST 27, 2024
KENTUCKY TRANSPORTATION CABINET
06-2024-00844

V. ENTRANCES

☐ Encroachment permits issued by KYTC in no way supersede local planning/zoning requirements or subdivision regulations. KYTC has no authority with zoning changes.

☐ Commercial entrances must be paved to the right-of-way line. Any deviations must be approved by KYTC before installation.

☐ KTYC can dictate drainage improvement installation during construction or after entrance is at final grade. The permit release does not release the permit applicant from drainage maintenance.

☐ Signs (ground-mounted and span-mounted), stop bars, crosswalk, and proper lane markings must be in-place before entrance is open for traffic. Lane width modifications must be approved by the Department.

☐ Guardrail installation must be pre-approved by the Department and installed by a KYTC pre-qualified contractor. Any guardrail that is removed during construction must be returned to the local KTYC maintenance facility.

☐ Additional notes:

VI. TRAFFIC

☑ Any contractor performing work within the vicinity of KYTC roadway lighting or traffic signals, must request locates from the KYTC District 6 Traffic section at least one week before of starting work in the right-of-way.

☐ Applicant must maintain all KYTC Roadway signage that is impacted by the permitted work. In the event that any signs have to be moved, it is the applicant's responsibility to mark the sign's location before removal and to install the original or new sign per KYTC standards for sign installation.

☐ Any thermoplastic or striping damaged during the encroachment must be restored in a timely manner per KYTC standards. Stopbars, arrows, and crosswalks must be thermoplastic material, paint is not acceptable. This work must be performed by a KYTC pre-qualified contractor.

☐ Excavating near a signal, lighting pole, or anchoring facility must be done so that it does not impact the structural integrity of the pole. Any work that requires a temporary support or anchoring must receive prior approval.

☐ If the scope of the permit involves a signal build or rebuild, it is the applicant's responsibility to apply for power service (and pay monthly electrical bill) as well as request electrical inspection from the KYTC District 6 Traffic section. If the signal modifications require timing or phasing changes this must be requested at least two weeks in advance of the signal's turn-on date. KYTC will not take ownership of permitted signals until the electrical inspection is formally accepted and approved.

☐ Work which impacts traffic loops requires 48-hour notice to the KYTC District 6 Traffic section at 859-341-2700. Accidental damage of a traffic loop must be reported immediately to KYTC District 6's emergency line at 859-620-2738. Any disturbed traffic loops must be replaced in a timely manner. Traffic loops out of operation for more than five working days will subject the applicant to the cancellation of the permit. Loop repair must be performed by a KYTC pre-qualified contractor.

☐ Additional Notes:

APPROVED
AUGUST 27, 2024
KENTUCKY TRANSPORTATION CABINET
06-2024-00844-1-P

VII. SIDEWALK SPECIFICATIONS

☐ All sidewalk modifications, retrofitting, or installations must meet current ADA guidelines

A. New Sidewalks

☐ New sidewalk specifications, dimensions, and designs shall be in accordance with KYTC's latest edition of the Standard Specifications, or with the plans provided on the permit if approved by a KYTC D6 Construction or Permits Engineer.

☐ All materials and methods of construction, including curing, shall be in accordance with KYTC's latest edition of the Standard Specifications.

B. Existing Sidewalks

☐ Use of the sidewalk shall not be blocked or obstructed and a usable walkway shall be maintained across the construction area at all times per MUTCD . Sidewalk closures must be approved by the Department before implementation.

☐ The location of ADA ramps (truncated domes/tactile warnings/etc.) will need to be field verified by KYTC before installation.

☐ Any section of sidewalk that becomes damaged shall be entirely replaced to match existing sections.

☐ Additional notes:

VIII. RIGHT OF WAY RESTORATION

☑ All disturbed portions of the right of way shall be restored to grass as per Kentucky Department of Highways Standard Specifications for Road and Bridge Construction (latest edition). A satisfactory turf, as determined by the Department, shall be established by the permittee prior to release of indemnity. Sodding or seeding shall be as follows:

- ☑ Slopes 3:1 or Less: 90% Kentucky 31 Tall Fescue and 10% White Dutch Clover at 100 lbs/acre
- ☑ Slopes Greater than 3:1: 90% Kentucky 31 Tall Fescue and 10% Partridge Pea at 100 lbs/acre
- ☑ Urban or Residential Areas: 95% Turf Type Fall Fescue Blend and 5% White Dutch Clover at 275 lbs/acre

☑ Two tons of clean straw mulch per acre of seeding.

☑ Prior to seeding, the ground shall be prepared in accordance with Kentucky Department of Highways Standard Specifications for Road and Bridge Construction (latest edition).

☐ Substitutes for sod such as artificial turf, rocked mulch, or paved areas may be acceptable if they are aesthetically pleasing and receive prior approval from KYTC.

☐ All ditch-flow lines and all ditch-side slopes shall be sodded.

☐ Existing concrete right of way markers shall not be disturbed. If damaged in any way, they shall be entirely replaced by the permittee with new concrete markers to match the original markers, in accordance with Kentucky Department of Highways Standard Drawings. Markers that are entirely removed shall be re-established in the proper locations by the permittee and to the satisfaction of the Department.

☐ Additional notes:

APPROVED
AUGUST 27, 2024
KENTUCKY TRANSPORTATION CABINET
06-2024-00844

IX. RIGHT OF WAY FENCE RESTORATION

- ☐ The replacement fence shall be a height of at least 48 inches and shall be of sufficient density to protect against encroachment.
- ☐ The replacement fence shall be a minimum of 1 foot and a maximum of 2 feet outside the right-of-way line
- ☐ The fence materials and design shall meet accepted industry standards and be treated as paintable. Durable finish materials such as vinyl are acceptable.
- ☐ The permittee shall be required to construct and maintain the replacement fencing to an acceptable level of functionality and state of repair. All work on the fencing shall be performed by access from the private property. Access from the roadway is not allowed.
- ☐ The existing fence shall be removed by permittee and stored at the Department's maintenance storage yard for future reuse by the Department, or the Department shall be reimbursed the cost of fencing removed.
- ☐ Right of way monuments shall be installed regardless of if replacement fence is installed or not.
- ☐ The control of access shall not be diminished as a result of replacement of the fence.
- ☐ Additional notes:

X. MISCELLANEOUS NOTES

NOTICE TO PERMITTEE

THE PERMITTEE AGREES THAT ALL WORK WITHIN THE EXISTING RIGHT OF WAY SHALL BE DONE IN ACCORDANCE WITH THE CURRENT KYTC STANDARD SPECIFICATIONS AND THE PLANS AS APPROVED AND PERMITTED BY AN ENCROACHMENT PERMIT. ANY CHANGES OR VARIANCES MADE AT THE TIME OF CONSTRUCTION WITHOUT WRITTEN APPROVAL FROM THE DEPARTMENT OF HIGHWAYS SHALL BE REMOVED BY THE PERMITTEE AT NO EXPENSE TO THE DEPARTMENT OF HIGHWAYS AND SHALL BE REDONE BY THE PERMITTEE TO CONFORM WITH THE APPROVED PLANS.

APPROVED
KENTUCKY TRANSPORTATION CABINET

NOTICE OF COMPLETION OF ENCROACHMENT PERMIT WORK

PERMITTEE

Name: Northern Kentucky Water District
Contact Person: Steve Broering
Address: 2835 Crescent Springs Road
City: Erlanger
State: Kentucky
Zip: 41018
Telephone: (859) 991-1652

PROJECT IDENTIFICATION

Permit Number: 06-2024-00696

I wish to notify the Department of Highways that the above mentioned permit work and any necessary right-of-way restoration have been completed and are ready for final inspection.

Permittee

Please return this form to the address below when work is completed and ready for final inspection.

Please Return to: Permit Engineer
Department of Highways, District 6 Office
421 Buttermilk Pike
Covington, Kentucky 41017
(859) 341-2700
www.transportation.ky.gov/

LOCATION(S)			
Description	**County - Route**	**Latitude**	**Longitude**
FISKBURG ROAD FROM GOSHORN ROAD TO ALEXANDER ROAD WATER MAIN INSTALL	Kenton - KY 2046	38.819728	-84.483648

APPROVED
MARCH 20, 2025
KENTUCKY TRANSPORTATION CABINET
06-2024-00696

Andy Beshear
Governor

COMMONWEALTH OF KENTUCKY
TRANSPORTATION CABINET
Department of Highways, District 6 Office
421 Buttermilk Pike
Covington, Kentucky 41017
(859) 341-2700
www.transportation.ky.gov/

Jim Gray
Secretary

March 20, 2025

Northern Kentucky Water District
Steve Broering
2835 Crescent Springs Road
Erlanger, Kentucky 41018

Subject: Permit #: 06-2024-00696
Permit Type: Utilities - Water
Approval

Dear Applicant:

Attached is your permit approval and documentation for the subject permit.

Be advised that all work must be done in conformity with permit and application conditions. If you have any questions, please contact the Permits Section at this office.

Sincerely,

Linzy Brefeld

Linzy Brefeld
D6 Permits Supervisor

Attachments

APPROVED
MARCH 20, 2025
KENTUCKY TRANSPORTATION CABINET
06-2024-00696

Kentucky Transportation Cabinet
Department of Highways
Division of Maintenance
Permits Branch

ENCROACHMENT PERMIT

KYTC KEPT #: 06-2024-00696

Permittee: Northern Kentucky Water District

Permit Type / Subtype: Utilities / Water

Work Completion Date: 7/23/2025

INDEMNITIES		
Type	**Amount Required**	**Tracking Number**
Performance Bond	$0.00	
Cash / Check	$0.00	
Self-Insured	$0.00	
Payment Bond	$0.00	
Liability Insurance	$0.00	

This permit has been: **APPROVED** [X] **DENIED** [ ]

Linzy Brefeld	D6 Permits Supervisor	3/20/2025
SIGNATURE	**TITLE**	**DATE**

The TC 99-1(B), including the application TC-99 1(A) and all related and accompanying documents and drawings make up the permit. It is not a permit unless both the TC 99-1(A) and TC 99-1(B) are both present.

LOCATION(S)			
Description	**County - Route**	**Latitude**	**Longitude**
FISKBURG ROAD FROM GOSHORN ROAD TO ALEXANDER ROAD WATER MAIN INSTALL	Kenton - KY 2046	38.819728	-84.483648

APPROVED
MARCH 20, 2025
TRANSPORTATION CABINET
KYTC KEPT #06-2024-00696

Kentucky 811 Know what's below. Call before you dig

To Submit a Locate Request
24 Hours a Day, Seven Days a Week:
Call 811 or 800-752-6007

TEAM KENTUCKY TRANSPORTATION CABINET

KENTUCKY TRANSPORTATION CABINET
Department of Highways
PERMITS BRANCH

TC 99-1A
Rev. 10/2020

APPLICATION FOR ENCROACHMENT PERMIT

KYTC KEPT #: 06-2024-00696

SECTION 1: APPLICANT CONTACT INFORMATION

APPLICANT	**ADDRESS**		
NORTHERN KY WATER DISTRICT	2835 CRESCENT SPRINGS PIKE		
EMAIL	**CITY**	**STATE**	**ZIP**
sbroering@nkywater.org	ERLANGER	KY	41018
CONTACT NAME 1	**EMAIL**	**PHONE #** 859-426-2728	
Steve Broering	sbroering@nkywater.org	**CELL #**	
CONTACT NAME 2 (*if applicable*)	**EMAIL**	**PHONE #**	
		CELL #	

SECTION 2: PROPOSED WORK LOCATION

ADDRESS	**CITY**		**STATE**	**ZIP**
	MORNING VIEW		Kentucky	41063
COUNTY	**ROUTE #**	**MILE POINT**	**LONGITUDE** (*X*)	**LATITUDE** (*Y*)
KENTON	2046	6.9 - 7.7	84D28'30"W	38D49'08"N

ADDITIONAL LOCATION INFORMATION:
FISKBURG ROAD FROM GOSHORN ROAD TO ALEXANDER ROAD

FOR KYTC USE ONLY

PERMIT TYPE: ☐ Air Right ☐ Entrance ☒ Utilities ☐ Vegetation Removal ☐ Other: _____

ACCESS: ☐ Full ☐ Partial ☒ by Permit **LOCATION:** ☐ Left ☐ Right ☐ Crossing

SECTION 3: GENERAL DESCRIPTION OF WORK

PROPOSED 8" WATER MAIN INSTALLATION ALONG FISKBURG ROAD THAT TIES INTO EXISTING 8" WM ON FISKBURG AND INCLUDES PROPOSED WATER MAIN TIE-INS ON GOSHORN, PFANSTIEL AND ALEXANDER ROADS

THE UNDERSIGNED APPLICANT(s), being duly authorized representative(s) or owner(s), DO AGREE TO ALL ORIGINAL UNEDITED TERMS AND CONDITIONS ON THE TC 99-1A, pages 1-4.

Steve Broering
SIGNATURE

7-15-2024
DATE

This is not a permit unless and until the applicant(s) receives an approved TC 99-1B from KYTC. This application shall become void if not approved by the cancellation date. The cancellation date shall be a minimum of one year from the date the applicant submits their application.

APPROVED
MARCH 20, 2025
KENTUCKY TRANSPORTATION CABINET
06-2024-00696

APPLICATION FOR ENCROACHMENT PERMIT

TERMS AND CONDITIONS

1. The permit, including this application and all related and accompanying documents and drawings making up the permit, remains in effect and is binding upon the Applicant/Permittee, its successors and assigns, as long as the encroachment(s) exists and also until the permittee is finally relieved by the Department of Highways from all its obligations.

2. Applicant shall meet all requirements of the Clean Water Act if the project will disturb one acre or more, the applicant shall obtain a KPDES KYR10 Permit from the Kentucky Division of Water. All disturbed areas shall meet the requirements of the Department of Highway's Standard Specifications, Sections 212 and 213, as amended.

3. **INDEMNITY:**
   - **A.** PERFORMANCE BOND: The permittee shall provide to the Department a performance bond according to the Permits Manual, Section PE-203 as a guarantee of conformance with the Department's Encroachment Permit requirements.
   - **B.** PAYMENT BOND: At the discretion of the department, a payment bond shall be required of the permittee to ensure payment of liquidated damages assessed to the permittee.
   - **C.** LIABILITY INSURANCE: Liability insurance shall be required of the permittee (in an amount approved by the department) to cover all liabilities associated with the encroachment.
   - **D.** It shall be the responsibility of the permittee, its successors and assigns, to maintain all indemnities in full force and effect until the permittee is authorized to release the indemnity by the Department.

4. A copy of this application and all related documents making up the approved permit shall be given to the applicant and shall be made readily available for review at the work site at all times.

5. Perpetual maintenance of the encroachment is the responsibility of the permittee, its successors and assigns, with the approval of the Department as required, unless otherwise stated.

6. Permittee, its successors and assigns, shall comply with and agree to be bound by the requirements and terms of (a) this application and all related documents making up the approved permit, (b) by the Department's Permits Manual, and (c) by the Manual on Uniform Traffic Control Devices, both manuals as revised to and in effect on the date of issuance of the permit, all of which documents are made a part thereof by this reference. Compliance by the permittee, its successors and assigns, with subsequent revisions to applicable provisions of either manual or other policy of the Department may be made a condition of allowing the encroachment to persist under the permit.

7. Permittee agrees that this and any encroachment may be ordered removed by the Department at any time, and for any reason, upon thirty days written notice to the last known address of the applicant or to the address at the location of the encroachment. The permittee agrees that the cost of removing and of restoring the associated right-of-way is the responsibility of the permittee, its successors and assigns.

8. Permittee, its successors and assigns, agree that if the Department determines that motor vehicular safety deficiencies develop as a result of the installation or use of the encroachment, the permittee, its successors and assigns, shall provide and bear the expenses to adjust, relocate, or reconstruct the facilities, add signs, auxiliary lanes, or other corrective measures reasonably deemed necessary by the Department within a reasonable time after receipt of a written notice of such deficiency. The period within which such adjustments, relocations, additions, modifications, or other corrective measures must be completed will be specified in the notice.

9. Where traffic signals are required as a condition of granting the requested permit or are thereafter required to correct motor vehicular safety deficiencies, as determined by the Department, the costs for signal equipment and installation(s) shall be borne by the permittee, its successors and assigns and the Department in its reasonable discretion and only in accordance with the Department's current policy set forth in the Traffic Operations Manual and Permits Manual. Any modifications to the permittee's entrance necessary to accommodate signalization (including necessary easement(s) on private property) shall be the responsibility of the permittee, its successors and assigns, at no expense to the Department.

APPROVED
MARCH 20, 2026
KENTUCKY TRANSPORTATION CABINET
06-202-F-0026

APPLICATION FOR ENCROACHMENT PERMIT

10. The requested encroachment shall not infringe on the frontage rights of an abutting owner without their written consent as hereinafter described. Each abutting owner shall express their consent, which shall be binding on their successors and assigns, by the submission of a notarized statement as follows, "I (we), _____, hereby consent to the granting of the permit requested by the applicant along Route _____, which permit does affect frontage rights along my (our) adjacent real property." By signature(s) _____, subscribed and sworn by _____, on this date _____.

11. The permit, if approved, is subject to the agreement that it shall not interfere with any similar rights or permit(s) previously granted to any other party, except as otherwise provided by law.

12. Permittee shall include documentation which describes the facilities to be constructed. Permittee, its successors and assigns, agree as a condition of the granting of the permit to construct and maintain any and all permitted facilities or other encroachments in strict accordance with the submitted and approved permit documentation and the policies and procedures of the Department. Permittee, its successors and assigns, shall not use facilities authorized herein in any manner contrary to that prescribed by the approved permit. Only normal usage as contemplated by the parties and by this application and routine maintenance are authorized by the permit.

13. Permittee, its successors and assigns, at all times from the date permitted work is commenced until such time as all permitted facilities or other encroachments are removed from the right-of way and the right-of-way restored, **shall defend, protect, indemnify and save harmless** the Department from any and all liability claims and demands arising out of the work, encroachment, maintenance, or other undertaking by the permittee, its successors and assigns, related or undertaken pursuant to the granted permit, due to any claimed act or omission by the permittee, its servants, agents, employees, or contractors. This provision shall not inure to the benefit of any third party nor operate to enlarge any liability of the Department beyond that existing at common law or otherwise if this right to indemnity did not exist.

14. Upon a violation of any provision of the permit, or otherwise in its reasonable discretion, the Department may require additional action by the permittee, its successors and assigns, up to and including the removal of the encroachment and restoration of the right-of-way. In the event additional actions required by the Department under the permit are not undertaken as ordered and within a reasonable time, the Department may in its discretion cause those or other additional corrective actions to be undertaken and the Department shall recover the reasonable costs of those corrective actions from the permittee, its successors and assigns.

15. Permittee, its successors and assigns, shall use the encroachment premises in compliance with all requirements of federal law and regulation, including those imposed pursuant to Title VI of the Civil Right Act of 1964 (42 U.S.C. § 2000d et seq.) and the related regulations of the U.S. Department of Transportation in Title 49 C.F.R. Part 21, all as amended.

16. Permittee, its successors and assigns, agree that if the Department determines it is necessary for the facilities or other encroachment authorized by the permit to be removed, relocated or reconstructed in connection with the reconstruction, relocation or improvement of a highway, the Department may revoke permission for the encroachment to remain under the permit and may order its removal, relocation or reconstruction by the permittee, its successors and assigns, at the expense of the permittee, except where the Department is required by law to pay any or all of those costs.

APPROVED
MARCH 20, 2025
KENTUCKY TRANSPORTATION CABINET
06-2024-00696

APPLICATION FOR ENCROACHMENT PERMIT

17. Permittee agrees that the authorized permit is personal to the permittee and shall remain in effect until such time as (a) the permittee's rights to the adjoining real property to have benefitted from the requested encroachment have been relinquished, (b) until all permit obligations have been assumed by appropriate successors and assigns, and (c) unless and until a written release from permit obligations has been granted by the Department. The permit and its requirements shall also bind the real property to have benefitted from the requested encroachment to the extent permitted by law. The permit and the related encroachment become the responsibility of the successors and assigns of the permittee and the successors and assigns of each property owner benefitting from the encroachment, or the encroachment may not otherwise permissibly continue to be maintained on the right-of-way. (Does not apply to utility encroachments serving the general public.)

18. If work authorized by the permit is within a highway construction project in the construction phase, it shall be the responsibility of the permittee to make personal contact with the Department's Engineer on the project in order to coordinate all permitted work with the Department's prime contractor on the project.

19. This permit is not intended to, nor shall it, affect, alter or alleviate any requirement imposed upon the permittee, its successors and assigns, by any other agency.

20. Permittee, its successors and assigns, agree to contain and maintain all dirt, mud, and other debris emanating from the encroachment away from the surrounding right-of-way and the travel way of the highway hereafter and at all times that its obligations under the permit remain in effect.

21. Before You Dig: The contractor is instructed to call 1-800-752-6007 to reach KY 811, the One-Call system for information on the location of existing underground utilities. The call is to be placed a minimum of two (2) and no more than ten (10) business days prior to excavation. The contractor should be aware that the owners of underground facilities are not required to be members of the KY 811 One-Call Before U-Dig (BUD) service. The contractor must coordinate excavation with the utility owners, including those whom do not subscribe to KY 811. It may be necessary for the contractor to contact the County Clerk to determine what utility companies have facilities in the area.

22. The undersigned Utility acknowledges ownership and control of the facilities proposed to be installed, modified, or extended by the Applicant/Permittee and agrees to be bound by the requirements and terms of this application and all related documents making up the approved permit, by the Department's Permits Guidance Manual, and by all applicable regulations and statutes in effect on the date of issuance of the permit. This information and application is certified correct to the best knowledge and belief of the undersigned Utility.

NORTHERN KENTUCKY WATER DISTRICT
UTILITY

Steve Broering	Engineering Technician
NAME (Utility Representative)	TITLE (Utility Representative)
Steve Broering	7-15-2024
SIGNATURE (Utility Representative)	DATE

APPROVED
March 25, 2025
Kentucky Transportation Cabinet
06-2024-00096

Kentucky 811 Know what's below. Call before you dig.

To Submit a Locate Request
24 Hours a Day, Seven Days a Week:
Call 811 or 800-752-6007

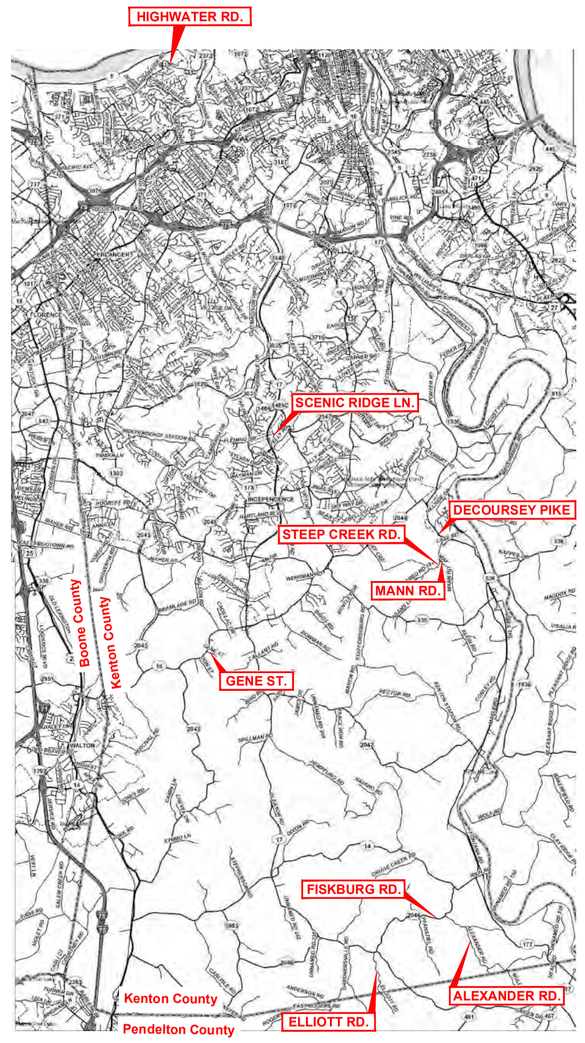
NORTHERN KENTUCKY WATER DISTRICT
SUB-DISTRICT 'O'
WATER MAIN EXTENSION
KENTON COUNTY, KENTUCKY
231591

INDEX OF SHEETS		
NO.	DWG NAME	SHEET NAME
1	TTL	TITLE
2	G-01	GENERAL NOTES & LEGEND
3	G-02	DETAILS
4	G-03	DETAILS
5	G-04	DETAILS
6	G-05	DETAILS
7	G-06	EROSION CONTROL DETAILS
8	C-01	HIGHWATER ROAD
9-10	C-02 to C-03	SCENIC RIDGE DRIVE
11-15	C-04 to C-08	STEEP CREEK ROAD
16	C-09	STEEP CREEK / DECOURSEY
17	C-10	MANN ROAD
18	C-11	GENE STREET
19-22	C-12 to C-15	FISKBURG ROAD
23-24	C-16 to C-17	ALEXANDER ROAD
25-28	C-18 to C-21	ELLIOT ROAD

NORTHERN KENTUCKY WATER DISTRICT OFFICIALS

PRESIDENT / CEO
LINDSEY RECHTIN, CPA

COMMISSIONERS
FRED A. MACKE, JR. (Chair)
JODY R. LANGE (Vice-Chair)
DOUGLAS C. WAGNER (Secretary)
NICHOLAS E. WINNIKE (Treasurer)
GARY E. HOLLAND (Commissioner)
JOSEPH J. KOESTER (Commissioner)



VICINITY MAP

NORTHERN KENTUCKY WATER DISTRICT SPECIFICATIONS

THE LATEST STANDARD SPECIFICATIONS AND DRAWINGS OF THE NORTHERN KENTUCKY WATER DISTRICT FOR THE INSTALLATION OF WATER MAIN AND METER PITS SHALL GOVERN ALL WATER MAIN CONSTRUCTION ITEMS ON THIS PROJECT.

KENTUCKY TRANSPORTATION CABINET SPECIFICATIONS

THE LATEST STANDARD SPECIFICATIONS OF THE KENTUCKY TRANSPORTATION CABINET, INCLUDING CHANGES AND SUPPLEMENTAL SPECIFICATIONS THERETO AND KENTON COUNTY SUBDIVISION REGULATIONS SHALL GOVERN THIS IMPROVEMENT.

SOURCE OF OUNDARY AND TOPOGRAPHIC INFORMATION

THE TOPOGRAPHIC INFORMATION SHOWN ON THESE PLANS IS BASED UPON A SURVEY BY CT CONSULTANTS, INC.
THE BOUNDARY INFORMATION SHOWN ON THESE PLANS IS BASED ON PLANNING AND DEVELOPMENT SERVICES (P.D.S.) G.I.S. MAPPING.

JAMES M. SHUMATE *P.E. #18156*

STATE OF KENTUCKY
JAMES M. SHUMATE
18156
LICENSED PROFESSIONAL ENGINEER

your trusted advisor consultants engineers architects planners

NO	REVISION	DATE

ISSUED FOR: BID
ISSUE DATE: FEB 2025
SCALE: AS SHOWN
DESIGNED BY: JCOR
DRAWN BY: JCOR
CHECKED BY: JSHU

NORTHERN KENTUCKY WATER DISTRICT
SUBDISTRICT 'O'
-KENTON COUNTY -

TITLE SHEET

PROJECT NO.
231591
DISCIPLINE
CIVIL
SHEET NAME
TTL
SHEET
1
OF
28

APPROVED
Kentucky Transportation Cabinet
MARCH 31, 2025

tok-tcu427_DaoSharedX17AdvDiD Bluffdale-Rail-and-Hospitality-roundabout.jpg

GENERAL NOTES

1. ALL CONSTRUCTION SHALL CONFORM TO THESE PLANS AND SPECIFICATIONS, THE LATEST EDITION OF THE NORTHERN KENTUCKY WATER DISTRICT STANDARD SPECIFICATIONS AND DRAWINGS AND THE KENTON COUNTY SUBDIVISION REGULATIONS AND THE KENTUCKY DEPARTMENT OF HIGHWAYS STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.

2. ALL DISTURBED AREAS ARE TO BE RESTORED (SEEDED AND MULCHED) BY THE CONTRACTOR AND SHALL PROCEED WITH JOB PROGRESSION. THE CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR REMOVING ANY EXCESS MATERIALS AT THE SITE AND MAINTAINING ALL SEEDED AND MULCHED AREAS UNTIL PROJECT COMPLETION AND FINAL INSPECTION PER KDOT SPEC. 212. A RESIDENTIAL YARD SHALL BE RESTORED WITHIN TWENTY-ONE (21) DAYS AFTER CONSTRUCTION.

3. ALL APPLICABLE RECOMMENDATIONS IN KENTUCKY'S BEST MANAGEMENT PRACTICES MANUAL SHALL BE FOLLOWED BY THE CONTRACTOR, INCLUDING SEEDING OF DISTURBED GROUND.

4. RIGHT-OF-WAY AND PROPERTY LINES SHOWN ARE PLOTTED FROM PLANNING AND DEVELOPMENT SERVICES (PDS) G.I.S. MAPPING AND ARE APPROXIMATE AND NOT THE RESULT OF A FIELD BOUNDARY SURVEY.

5. THE CONTRACTOR SHALL LIMIT THEIR WORK AREA TO THE EASEMENTS AND RIGHTS-OF-WAY SHOWN ON THESE PLANS UNLESS WRITTEN PERMISSION IS GIVEN BY THE PROPERTY OWNER AND APPROVED BY FORT N.K.W.D.

6. ALL OSHA, STATE AND LOCAL SAFETY REGULATIONS SHALL BE FOLLOWED DURING CONSTRUCTION.

7. NO CONSTRUCTION SHALL COMMENCE UNTIL ALL STATE, COUNTY AND LOCAL PERMITS HAVE BEEN ISSUED AS REQUIRED

8. THE CONTRACTOR SHALL COORDINATE ALL WORK WITHIN THE PUBLIC RIGHT OF WAY WITH THE KENTUCKY TRANSPORTATION CABINET AND KENTON COUNTY AND ANY LOCAL MUNICIPALITY. LOCAL TRAFFIC MUST BE MAINTAINED AT ALL TIMES DURING CONSTRUCTION UNLESS OTHERWISE NOTED IN THESE PLANS.

9. ADDITIONAL BMP'S AND EROSION AND SEDIMENT CONTROL MEASURES MAY BE REQUIRED AS DEEMED NECESSARY. ALL COST FOR ABOVE SHALL BE INCLUDED IN LUMP SUM BID FOR EROSION CONTROL AND WATER POLLUTION CONTROL.

10. ALL CONSTRUCTION WORK SHALL BE IN CONFORMANCE WITH THE RECOMMENDATIONS CONTAINED IN THE GEOTECHNICAL INVESTIGATION REPORT PREPARED BY G.A.I. CONSULTANTS DATED FEBRUARY 2024.

GENERAL TRENCH EXCAVATION NOTES

1. CONTRACTOR IS TO PROVIDE CONSTANT STABLE SUPPORT FOR THE WATER MAIN TRENCH EXCAVATION (ie SHEETING, SHORING, ETC.) TO PROTECT ALL ADJACENT EXISTING UTILITIES, STORM SEWER PIPE AND STRUCTURES AND THE EXISTING ROADWAY FROM ANY MOVEMENT. (NO ADDITIONAL PAYMENT WILL BE MADE FOR THIS WORK. ANY COSTS ASSOCIATED WITH TRENCH SUPPORT SHALL BE INCLUDED IN THE UNIT BID PRICE FOR THE ASSOCIATED WATER MAIN.

   TRENCH SUPPORT FAILURE RESULTING IN ADVERSE IMPACT TO EXISTING UTILITIES SHALL BE REPAIRED IMMEDIATELY AT THE CONTRACTOR'S EXPENSE.

2. TRENCH EXCAVATION AND OPEN, UNBACKFILLED LENGTH OF WATER MAIN TRENCH SHALL BE LIMITED AS NECESSARY ALONG THE ROADWAY IN ORDER TO PREVENT MOVEMENT OF, OR DAMAGE TO THE SURROUNDING GROUND SURFACE, NEARBY STRUCTURES/INFRASTRUCTURE AND THE EXISTING ROADWAY PAVEMENT.

   TRENCH EXCAVATION SHALL ALSO BE LIMITED TO THE CONTRACTOR'S ABILITY TO PROVIDE TRENCH BOXES FOR SUPPORT. UNDER NO CIRCUMSTANCES SHALL TRENCH EXCAVATION EXCEED LENGTH OF SUPPORT AVAILABLE.

UTILITY NOTES

1. THIS PLAN SHOWS THE APPROXIMATE LOCATION OF UNDERGROUND UTILITIES (GAS, WATER, STORM SEWER, SANITARY SEWER, TELEPHONE, ELECTRIC, ETC.). THE PREPARER DOES NOT GUARANTEE THEIR ACCURACY OR CORRECTNESS. THE INFORMATION PROVIDED SHALL BE FIELD VERIFIED PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING THE UTILITY AS WELL AS THE SERVICE LATERALS AT ALL TIMES DURING CONSTRUCTION. THE CONTRACTOR SHALL PRACTICE CARE DURING THE GRADING AND TRENCH EXCAVATION AND SHALL BE RESPONSIBLE FOR REPLACING ANY SERVICES THAT ARE DAMAGED DURING CONSTRUCTION AT THEIR EXPENSE.

2. PRIOR TO ANY EXCAVATION OVER AN EXISTING UTILITY LINE OR SERVICE, CONTRACTOR SHALL HAND EXCAVATE TO EXPOSE THE UTILITY AND DETERMINE LOCATION AND DEPTH. NOTIFY ENGINEER IMMEDIATELY OF ANY CONFLICTS.

3. TOPS OF EXISTING AND PROPOSED CASTING ELEVATIONS ARE SUBJECT TO FINAL ADJUSTMENTS AS APPROVED BY THE ENGINEER AND REQUIREMENTS OF UTILITY OWNER. THIS WORK WILL BE INCIDENTAL TO THE CONTRACT.

4. FORTY-EIGHT (48) HOURS BEFORE EXCAVATION IS TO COMMENCE, THE CONTRACTOR SHALL NOTIFY THE FOLLOWING AGENCIES: THE KENTUCKY UTILITY PROTECTION SERVICE AND ALL OTHER UTILITIES THAT MAY HAVE UNDERGROUND UTILITIES INVOLVING THIS PROJECT AND ARE NON-MEMBERS OF KENTUCKY UNDERGROUND PROTECTION.

STORM & SANITARY NOTES

1. ALL STORM AND SANITARY ITEMS SHALL BE IN ACCORDANCE WITH THE LATEST SPECIFICATIONS AND DETAILS FROM SD1. METAL PIPE MATERIALS SHALL NOT BE USED UNLESS OTHERWISE SPECIFIED ON THESE PLANS.

2. CONTRACTOR SHALL BE REQUIRED TO MAINTAIN STORM AND SANITARY SEWER FLOW THROUGHOUT THE PROJECT, FOR THE DURATION OF CONSTRUCTION. ALL COST FOR THE ABOVE SHALL BE INCIDENTAL TO THE CONTRACT.

3. IF REQUIRED, CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING AND SCHEDULING STORM AND SANITARY SEWER INSPECTIONS AS SET OUT IN THE PRECONSTRUCTION MEETING.

4. CONNECTIONS INTO EXISTING OR PROPOSED STORM OR SANITARY SEWER STRUCTURES OR PIPES SHALL BE COMPLETED BY A CERTIFIED TAPPER BY SD1.

WATER NOTES

1. ALL WORK RELATING TO WATER MAINS OR WATER SERVICE LINES SHALL BE COMPLETED IN ACCORDANCE WITH THE RULES AND REGULATIONS OF THE NORTHERN KENTUCKY WATER DISTRICT (NKWD).

2. CONTRACTOR MAY NOT USE WATER FROM FIRE HYDRANTS WITHOUT PRIOR PERMISSION FROM NKWD

GAS NOTES

1. ALL WORK RELATING TO GAS MAINS OR GAS SERVICE LINES SHALL BE COMPLETED IN ACCORDANCE WITH THE RULES AND REGULATIONS OF THE DUKE ENERGY

ELECTRIC NOTES

1. ALL WORK RELATING TO ELECTRIC LINES SHALL BE COMPLETED IN ACCORDANCE WITH THE RULES AND REGULATIONS OF THE DUKE ENERGY

WATER DISTRICT GENERAL NOTES

1. THE EXISTING WATER MAIN ELEVATION AND LOCATION AT THE CONNECTION POINT WITH THE PROPOSED MAIN WAS ASSUMED AND HAS NOT BEEN FIELD VERIFIED. PRIOR TO COMMENCEMENT OF ANY WATER MAIN WORK, THE CONTRACTOR SHALL DIG A TEST HOLE AT THE CONNECTION POINT TO LOCATE EXISTING WATER MAIN AS TO LOCATION AND ELEVATION. THE EXISTING WATER MAIN LOCATION MAY REQUIRE SOME FIELD ADJUSTMENT TO THE PROPOSED WATER MAIN INCLUDING ADJUSTING THE DEPTH OF THE PROPOSED WATER MAIN. COST OF DOING THE ABOVE SHALL BE INCIDENTAL TO THE PERTINENT WATER MAIN ITEM.

2. COST OF TRIMMING OR CLEARING ANY TREES, BUSHES, ETC. SHALL BE INCIDENTAL TO THE OVERALL CONTRACT PRICE AND SHALL BE APPROVED BY N.K.W.D. AND THE PROPERTY OWNER ALONG WITH COUNTY OR STATE WHEN REQUIRED.

3. THE UTILITY INFORMATION SHOWN ON THE PLANS IS BASED ON INFORMATION RECEIVED FROM OTHERS AND HAS NOT BEEN VERIFIED BY THE ENGINEER OR OWNER. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE LOCATION OF THE UTILITIES AND TO COORDINATE ANY IMPACT CAUSED BY THE PROPOSED WORK WITH ALL UTILITY OWNERS AND/OR THEIR CONTRACTORS. THE CONTRACTOR WILL BE REQUIRED TO DIG TEST HOLES AT ALL UTILITY CROSSINGS TO LOCATE THE UTILITY AS TO BOTH LOCATION AND ELEVATION AND WILL BE REQUIRED TO REALIGN AND ADJUST THE ELEVATION OF THE PROPOSED WATER MAIN TO AVOID THE UTILITY. COST OF ALL THE ABOVE SHALL BE INCIDENTAL TO THE OVERALL CONTRACT PRICE.

4. UNLESS SPECIFICALLY INSTRUCTED OTHERWISE, RETURN ALL REMOVED WATER EQUIPMENT INCLUDING, FIRE HYDRANTS, VALVES, AND WATER METERS TO NORTHERN KENTUCKY WATER DISTRICT (N.K.W.D).

5. WATERLINES CROSSING UNDER OR OVER SEWER LINES (DEFINED AS ANY SANITARY/COMBINED SEWER, SEPTIC TANK OR SUBSOIL TREATMENT SYSTEM) MUST MAINTAIN A MINIMUM VERTICAL CLEARANCE OF 18" AND ONE FULL LENGTH OF PIPE SHALL BE LOCATED SO BOTH JOINTS ARE AS FAR FROM THE SEWER AS POSSIBLE. SPECIAL STRUCTURAL SUPPORT FOR THE WATER AND SEWER PIPES MAY BE REQUIRED.

6. CONTRACTOR IS RESPONSIBLE FOR KEEPING FIELD NOTES THAT PROVIDE SUFFICIENT DATA FOR PREPARING "RECORD DRAWINGS" UPON COMPLETION OF CONSTRUCTION.

7. ALL WATER MAIN CONSTRUCTION SHALL CONFORM TO THE NORTHERN KENTUCKY WATER DISTRICT SPECIFICATIONS. CONTRACTOR IS RESPONSIBLE FOR OBTAINING A CURRENT COPY OF THE NORTHERN KENTUCKY WATER DISTRICT'S STANDARD DRAWINGS.

8. ALL MATERIAL FOR THE PROP. WATER MAIN INSTALLATION INCLUDING ALL FITTINGS, BLOCKING, ETC., SHALL BE INCLUDED IN THE CONTRACTOR'S UNIT PRICE FOR WATER MAIN.

9. COST OF ALL TRENCHING, PIPE, PIPE BEDDING, BACKFILL, YARD RESTORATION AND TEMPORARY PAVEMENT, DRIVEWAY AND SIDEWALK RESTORATION SHALL BE PART OF THE COST OF INSTALLING THE WATER MAIN. PERMANENT DRIVEWAY RESTORATION, SIDEWALK RESTORATION, CURB RESTORATION AND STREET RESTORATION WILL BE SEPARATE PAY ITEMS AND INCLUDE INCIDENTALS SUCH AS MAIL BOX, STREET SIGN, AND FENCE REMOVAL AND REPLACEMENT.

10. THE PROPOSED WATER MAIN SHALL BE CLASS 50 DUCTILE IRON PIPE OR D.R. 18 C900 PVC AS SHOWN ON THE PLANS. WITHIN STATE ROUTE R/W, PIPE MATERIAL SHALL BE CLASS 52 DUCTILE IRON.

11. PROPOSED WATER MAIN SHALL BE THOROUGHLY CLEANED, FLUSHED, AND DISINFECTED, AS PER NORTHERN KENTUCKY WATER DISTRICT'S SPECIFICATIONS.

12. PRESSURE TESTING SHALL BE DONE AS PER NORTHERN KENTUCKY WATER DISTRICT'S SPECIFICATIONS.

13. FOR THRUST BLOCKING REFER TO THE NORTHERN KENTUCKY WATER DISTRICT'S STANDARD DRAWING NUMBERS 104 AND 104A.

14. THE PROPOSED WATER MAIN SHALL HAVE A HORIZONTAL SEPARATION OF AT LEAST 3'-0" (MEASURED FROM OUTSIDE OF PIPE TO OUTSIDE OF PIPE) FROM ANY GAS MAIN.

15. A 10' MINIMUM LATERAL SEPARATION BETWEEN WATER MAINS AND SEWERS (DEFINED AS ANY SANITARY/COMBINED SEWER, SEPTIC TANK OR SUBSOIL TREATMENT SYSTEM) AND SEWER MANHOLES, MEASURED FROM THE OUTSIDE DIAMETER TO OUTSIDE, MUST BE MAINTAINED UNLESS A VARIANCE IS GRANTED FROM THE D.O.W.

16. ALL NEW WATER SERVICES SHALL BE 3/4" (OR MATCH EXISTING, AS INDICATED ON THE PLANS) TYPE K COPPER WITH 5/8" OR 2" WATER METERS (UNLESS OTHERWISE NOTED) MATERIAL PROVIDED BY THE NORTHERN KENTUCKY WATER DISTRICT. ALL RECONNECTED WATER SERVICES SHALL BE 3/4" OR 2" TYPE K COPPER.

17. THE CONTRACTOR SHALL COORDINATE ALL WORK WITHIN THE PUBLIC RIGHT-OF-WAY WITH KYTC, KENTON COUTY AND/OR ANY LOCAL MUNICIPALITY. TRAFFIC MUST BE MAINTAINED AT ALL TIMES DURING CONSTRUCTION. MAINTENANCE OF TRAFFIC SHALL CONFORM TO THE "MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES" REQUIREMENTS. NO ADDITIONAL PAYMENT WILL BE MADE FOR THIS WORK AND SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT.

18. **CONNECT SERVICE LINE (3/4" THRU 2"), INCLUDES THE LABOR, EQUIPMENT, EXCAVATION, BEDDING, BACKFILL, ASPHALT PAVEMENT , CONCRETE PAVEMENT, CONCRETE CURB, CONCRETE WALK AND YARD RESTORATION TO INSTALL THE SERVICE LINE AT THE LOCATIONS SHOWN ON THE PLANS OR AS DIRECTED, IN ACCORDANCE WITH THE SPECIFICATIONS AND STANDARD DRAWINGS, COMPLETE AND READY FOR USE. LEAD SERVICE LINES ENCOUNTERED BY THE EXCAVATION SHALL BE REPLACED FROM THE MAIN TO AND INCLUDING THE METER VAULT AND METER SETTING. ALL SERVICE LINE MATERIAL WILL BE SUPPLIED BY NKWD. PAID EACH (EA).**

19. THE CONTRACTOR SHALL COORDINATE WITH THE NORTHERN KENTUCKY WATER DISTRICT FOR FIELD INSPECTIONS.

20. FORTY-EIGHT (48) HOURS BEFORE EXCAVATION IS TO COMMENCE, THE CONTRACTOR SHALL NOTIFY THE FOLLOWING AGENCIES: THE KENTUCKY UTILITY PROTECTION SERVICE AND ALL OTHER UTILITIES THAT MAY HAVE UNDERGROUND UTILITIES INVOLVING THIS PROJECT AND ARE NON-MEMBERS OF KENTUCKY UNDERGROUND PROTECTION.

21. NO CONSTRUCTION SHALL COMMENCE UNTIL ALL KYTC, COUNTY AND/OR LOCAL PERMITS HAVE BEEN ISSUED AS REQUIRED.

22. CONTRACTOR IS RESPONSIBLE FOR DEWATERING TRENCH DURING INSTALLATION OF THE WATER MAIN.

23. THE COST OF TESTING THE MAIN, TEMPORARY FLUSHING DEVICES, TEMPORARY PLUG AND BLOCKS, AND ABANDONING THE EXISTING MAIN SHALL BE INCIDENTAL TO THE PROJECT.

24. ALL PAVEMENT SHALL CONFORM TO THE LATEST EDITION OF THE KENTUCKY DEPARTMENT OF HIGHWAYS STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION AND KENTON COUNTY SUBDIVISION REGULATIONS.

MAINTENANCE OF TRAFFIC NOTES

1. ALL MAINTENANCE OF TRAFFIC PROCEDURES SHALL MEET THE REQUIREMENT OF THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES AND SECTION 112 OF KTC STANDARD SPECIFICATIONS. THE CONTRACTOR SHALL MAINTAIN ACCESS TO LOCAL TRAFFIC (INCLUDING ACCESS TO RESIDENCES WITHIN CONSTRUCTION LIMITS) AT ALL TIMES UTILIZING KTC STANDARD DRAWING TTC-100-05 "SINGLE LANE CLOSURE ON TWO-LANE HIGHWAY". THE CONTRACTOR SHALL PROVIDE SUFFICIENT SIGN, WARNING LIGHTS, BARRICADES, OR OTHER NECESSARY DEVICES MAKE THE SITE SAFE TO THE TRAVELING PUBLIC. LENGTH OF SINGLE LANE CLOSURES WILL BE HELD TO DISTANCES NOT ADVERSELY AFFECTING VEHICLE SAFETY.

2. ALL UNBACKFILLED TRENCH EXCAVATION SHALL BE SECURELY PLATED AT THE END OF EACH WORK DAY AND DURING PERIODS OF INACTIVITY.

3. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO SUBMIT TO THE ENGINEER AND THE OWNER A TRAFFIC CONTROL PLAN FOR THIS PROJECT.

4. PRIOR TO ANY CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY THE APPROPRIATE STATE, COUNTY AND/OR LOCAL POLICE DEPARTMENTS. AT ALL TIMES, EMERGENCY VEHICLES SHALL BE GIVEN ACCESS.

5. RESIDENTS OF THE PROJECT AREA SHALL BE ALLOWED ACCESS TO THEIR PROPERTY AT ALL TIMES.

6. EACH DRIVEWAY SHALL BE ACCESSIBLE WHENEVER POSSIBLE. WHEN PORTLAND CEMENT CONCRETE CONSTRUCTION AFFECTS A DRIVEWAY, THE CONTRACTOR SHALL NOTIFY THE AFFECTED OWNERS 24 HOURS IN ADVANCE AND ADVISE THEM TO FIND ALTERNATIVE PARKING FOR A PERIOD OF AT LEAST 10 CALENDAR DAYS AFTER THE POUR. ALTERNATIVE PARKING SHALL INCLUDE "ON STREET" PARKING WITH ACCESS TO THE PROPERTY. TEMPORARY SIDEWALKS, ETC. WILL BE NECESSARY TO PREVENT PERSONS FROM WALKING IN MUD IN ORDER TO ENTER THEIR PROPERTY. TEMPORARY BRIDGES, RAILINGS ETC. WILL BECOME NECESSARY IN ORDER TO CROSS FORMED CURB LINES, EXCAVATED AREAS BEHIND CURB LINES AND WALKWAYS, ETC.

EROSION CONTROL LEGEND

- (IP) INLET PROTECTION (SEE DETAIL)
- (SF) SILT FENCE (SEE DETAIL)

HATCH LEGEND

- 1-1/2" ASPHALT PAVEMENT MILL AND OVERLAY AREA - SEE DETAIL SHEET G-05
- TRENCH RESTORATION - ASPHALT PAVEMENT - SEE DETAIL SHEET G-05
- TRENCH RESTORATION - CONCRETE PAVEMENT - SEE DETAIL SHEET G-05
- TRENCH RESTORATION - 8" AGGREGATE PAVEMENT - SEE DETAIL SHEET G-05
- CONTROL DENSITY FILL - PAV'T TRENCH
- CONCRETE DRIVEWAY REPLACEMENT - SEE DETAIL SHEET G-05
- CONCRETE WALK REPLACEMENT - SEE DETAIL SHEET G-05
- ASPHALT DRIVEWAY REPLACEMENT - SEE DETAIL SHEET G-05
- GRAVEL DRIVEWAY REPLACEMENT - SEE DETAIL SHEET G-05
- CHANNEL LINING, CLASS II - SEE DETAIL SHEET G-05

SYMBOL LEGEND

G	EXISTING GAS LINE
GS	EXISTING GAS SERVICE
E-UG / E-OH	EXISTING ELECTRIC (UNDERGROUND / OVERHEAD)
C-UG / C-OH	EXISTING CABLE (UNDERGROUND / OVERHEAD)
T-UG / T-OH	EXISTING TELEPHONE (UNDERGROUND / OVERHEAD)
W	EXISTING WATER MAIN
WS	EXISTING WATER SERVICE
	EXISTING STORM SEWER
RD	EXISTING ROOF DRAIN
S	EXISTING SANITARY SEWER
FM	EXISTING SANITARY FORCE MAIN
FO	EXISTING FIBER OPTICS
X	EXISTING FENCE
650	EXISTING CONTOURS (MAJOR)
648	EXISTING CONTOURS (MINOR)
EX. R/W	EXISTING RIGHT OF WAY
	EXISTING PROPERTY LINE
	EXISTING EASEMENT
	EXISTING GUARDRAIL
	EXISTING TREE LINE
	EXISTING ROCK WALL
G	PROPOSED GAS LINE
GS	PROPOSED GAS SERVICE
E-UG / E-OH	EXISTING ELECTRIC (UNDERGROUND / OVERHEAD)
C-UG / C-OH	PROPOSED CABLE (UNDERGROUND / OVERHEAD)
T-UG / T-OH	PROPOSED TELEPHONE (UNDERGROUND / OVERHEAD)
W	PROPOSED WATER MAIN
WS	PROPOSED WATER SERVICE
	PROPOSED STORM SEWER
UD	PROPOSED UNDERDRAIN
UD/DSC	PROPOSED UNDERDRAIN / DOWNSPOUT COLLECTOR COMBO
S	PROPOSED SANITARY SEWER
FM	PROPOSED SANITARY FORCE MAIN
FO	PROPOSED FIBER OPTICS
X	PROPOSED FENCE
650	PROPOSED CONTOURS (MAJOR)
648	PROPOSED CONTOURS (MINOR)
	PROPOSED RIGHT OF WAY
	PROPOSED PROPERTY LINE
	PROPOSED EASEMENT
	PROPOSED GUARDRAIL
	PROPOSED TREE LINE / CLEARING LIMITS
	PROPOSED DISTURBED LIMITS

	EXISTING FLAGPOLE
MB	EXISTING MAILBOX
	EXISTING SIGN
CP	EXISTING CABLE PEDESTAL
EP	EXISTING ELECTRIC PEDESTAL
PB	EXISTING PULL BOX
	EXISTING GROUND LIGHT
	EXISTING LIGHT POLE
EM	EXISTING ELECTRIC METER
E	EXISTING ELECTRIC MANHOLE
GM	EXISTING GAS METER
GV	EXISTING GAS VALVE
GF	EXISTING GAS BOX
	EXISTING UTILITY POLE
	EXISTING GUY WIRE / ANCHOR
S	EXISTING SANITARY MANHOLE
SCO	EXISTING SANITARY CLEANOUT
	EXISTING STORM MANHOLE
	EXISTING SINGLE / DOUBLE CURB INLET
	EXISTING CATCH BASIN
DCO	EXISTING STORM CLEANOUT
T	EXISTING TELEPHONE MANHOLE
TP	EXISTING TELEPHONE PEDESTAL
	EXISTING FIRE HYDRANT
WM	EXISTING WATER METER
WV	EXISTING WATER VALVE
	EXISTING BUSHES / TREES
	EXISTING SURVEY BENCHMARK
TB	TEST BORING LOCATION

	PROPOSED FLAGPOLE
MB	PROPOSED MAILBOX
	PROPOSED SIGN
CP	PROPOSED CABLE PEDESTAL
EP	PROPOSED ELECTRIC PEDESTAL
PB	PROPOSED PULL BOX
	PROPOSED GROUND LIGHT
	PROPOSED LIGHT POLE
EM	PROPOSED ELECTRIC METER
E	PRPOSED ELECTRIC MANHOLE
GM	PROPOSED GAS METER
GV	PROPOSED GAS VALVE
GF	PROPOSED GAS BOX
	PROPOSED UTILITY POLE
	PROPOSED GUY WIRE / ANCHOR
S	PROPOSED SANITARY MANHOLE
SCO	PROPOSED SANITARY CLEANOUT
	PROPOSED STORM MANHOLE
	PROPOSED SINGLE / DOUBLE CURB INLET
	PROPOSED CATCH BASIN
DCO	PROPOSED STORM CLEANOUT
T	PROPOSED TELEPHONE MANHOLE
TP	PROPOSED TELEPHONE PEDESTAL
	PROPOSED FIRE HYDRANT
WM	PROPOSED WATER METER
WV	PROPOSED WATER VALVE
	REMOVE EXISTING BUSH / TREE
	PROPOSED SLOPE DIRECTION

your trusted advisor — engineers architects planners consultants

NO	REVISION	DATE
	.	

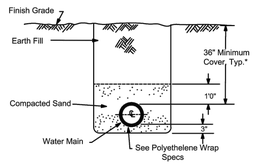
BID	
ISSUED FOR:	FEB 2025
ISSUE DATE:	AS SHOWN
SCALE:	JCOR
DESIGNED BY:	JCOR
DRAWN BY:	JSH
CHECKED BY:	

NORTHERN KENTUCKY WATER DISTRICT
SUBDISTRICT 'O'
-KENTON COUNTY -

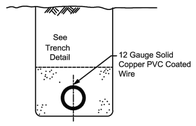
GENERAL NOTES AND LEGEND

PROJECT NO.
231591
DISCIPLINE
CIVIL
SHEET NAME
G-01
SHEET
2
OF
28

APPROVED
TRANSPORTATION CABINET
MARCH 05, 2025
KENTUCKY

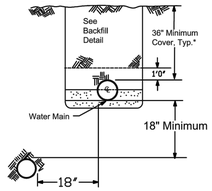


EARTH CUTS
TRENCH DETAIL



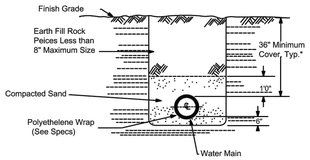
PVC PIPE

ALTERNATE TO BE USED ONLY ON APPROVAL BY THE DISTRICT



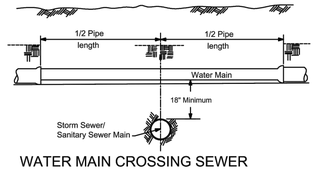
Water Main must be located a minimum of 10 feet lateral distance from anyexisting or future sewer lines or manholes, or as shown in the above alternate.

WATER MAIN PARALLELING
SEWER MAIN



ROCK CUTS
& UNSTABLE SUBGRADE

TRENCH DETAIL



WATER MAIN CROSSING SEWER

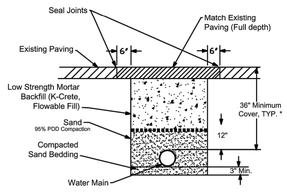
SUBDIVISION CONSTRUCTION

* Unless Otherwise Noted

REVISION	BY	DATE
1 8" Min. Rock Size	KPT	1/2025

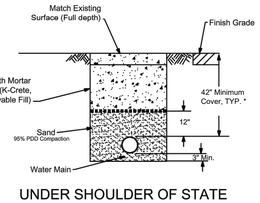
N. KY. WATER DISTRICT
TYPICAL PIPELINE TRENCH
DETAIL

DRAWN BY: SAR
APPROVED: RH
DATE: 8/5/2014
STANDARD DRAWING NO: 103

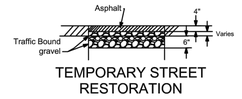


UNDER ASPHALT CONCRETE
PAVEMENT

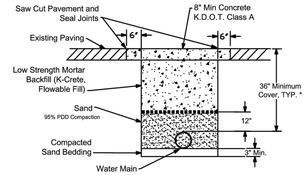
PDD= Standard Proctor Dry Density
-ASTM D698



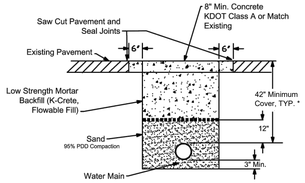
UNDER SHOULDER OF STATE
MAINTAINED STREET



TEMPORARY STREET
RESTORATION



UNDER CONCRETE PAVEMENT



UNDER STATE MAINTAINED STREET

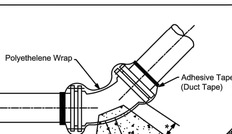
* 48" Maximum Cover

ALL CONSTRUCTION

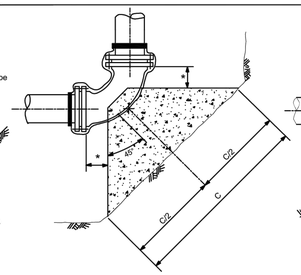
REVISION	BY	DATE
1 All streets but I-64/I-265	KPT	1/2025

N. KY. WATER DISTRICT
TYPICAL PIPELINE TRENCH
DETAIL

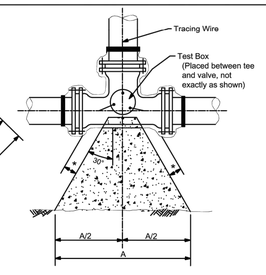
DRAWN BY: SAR
APPROVED: RH
DATE: 8/5/2014
STANDARD DRAWING NO: 103A



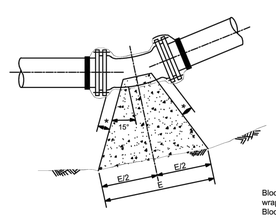
45° BEND



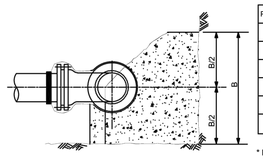
90° BEND



TEE (DEAD END OR FIRE HYDRANT SIMILAP



11 1/4° & 22 1/2° BEND



ELEVATION

Blocking shall be poured after blue polyethelene wrap is in place.
Blocking shall be inspected by the District prior to backfilling.

150 PSI/250 PSI

PIPE SIZE	A	B	C	D	E
6"	2'0"/2'6"	1'6"/1'6"	3'0"/3'6"	1'6"/2'0"	1'0"/1'0"
8"	2'6"/3'6"	2'0"/2'0"	3'6"/4'6"	2'0"/2'6"	1'0"/1'6"
10"	3'6"/4'0"	2'6"/2'6"	4'6"/5'6"	2'6"/3'0"	1'6"/1'6"
12"	4'0"/5'0"	3'0"/3'0"	5'6"/6'6"	3'0"/3'6"	1'6"/2'0"
16"	5'0"/6'0"	3'0"/4'0"	7'0"/8'6"	4'0"/4'6"	3'0"/3'0"
20"	6'0"/7'6"	5'0"/5'0"	7'0"/10'6"	4'0"/6'0"	3'0"/3'0"

* Distance to be 1/2" longer than entire length of the bolt used.

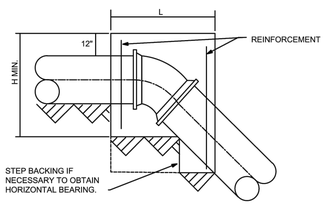
NOTES

1 DIP Fittings shall be per specifications.
2 Concrete to be 3500 psi.
3 All fittings to be Mechanical Joint.
4 Thrust blocks to be placed against undisturbed earth - use additional concrete as required for over excavation.
5 Blocking to be placed in a manner so that bolts can be removed without distrubing the block.

REVISION	BY	DATE

N. KY. WATER DISTRICT
CONCRETE THRUST BLOCK
DETAIL

DRAWN BY: SAR
APPROVED: RH
DATE: 8/5/2014
STANDARD DRAWING NO: 104



SECTION A-A

CONCRETE BACKING FOR VERTICAL BENDS

1. BACKING DESIGNED FOR 3000 POUNDS PER SQUARE FOOT SOIL BEARING AND 150 POUNDS PER SQUARE INCH INTERNAL PRESSURE.

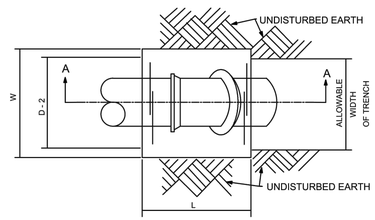
2. PROVIDE MINIMUM CONCRETE REINFORCEMENT OF 2 PAIR OF TWO 5" "U" BARS @ 12" C.

3. CENTER BACKING ON BEND.

BLOCKING FOR SIZES NOT SHOWN SHALL USE THE NEXT LARGER SIZE.

SIZE of PIPE	DEGREE OF BEND 11 1/4 L'	W"	H"	VOL.	22 1/2 L'	W"	H"	VOL.	45 L'	W"	H"	VOL.
4"	12	24	16	2.7	15	30	18	4.7	22	36	24	11.0
6"	12	43	18	5.4	16	48	34	15.1	30	55	24	22.9
8"	12	54	24	9.0	18	57	36	21.4	36	57	33	39.2
12"	20	63	36	26.3	37	62	37	49.2	48	62	51	88.0
16"	31	65	38	44.4	60	65	39	88.2	65	65	65	159.2
20"	45	70	40	73.0	56	70	60	136.4	72	76	78	247.5
24"	47	72	54	106.0	67	74	69	198.4	88	84	84	360.1

NOTE: VOLUMES GIVEN IN CUBIC FEET



PLAN

REVISION	BY	DATE

N. KY. WATER DISTRICT
CONCRETE THRUST BLOCKING
FOR VERTICAL BENDS

DRAWN BY: SAR
APPROVED: RH
DATE: 8/5/2014
STANDARD DRAWING NO: 104A

your trusted advisor
engineers
architects
consultants
planners

NO	REVISION	DATE
-	-	-

ISSUED FOR:	BID
ISSUE DATE:	FEB 2025
SCALE:	AS SHOWN
DESIGNED BY:	JCOR
DRAWN BY:	JCOR
CHECKED BY:	JSHU

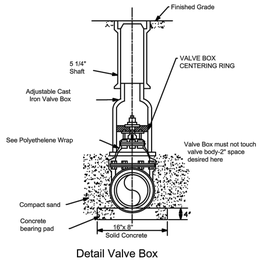
NORTHERN KENTUCKY WATER DISTRICT
SUBDISTRICT 'O'
-KENTON COUNTY -

DETAILS

PROJECT NO: 231591
DISCIPLINE: CIVIL
SHEET NAME: G-02
SHEET: 3 OF 28

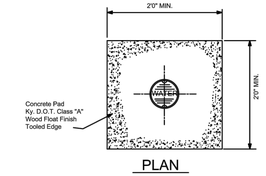
APPROVED
MARCH 31, 2025
TRANSPORTATION CABINET
HIGHWAY DISTRICT 6
KENTUCKY

H:\2023\231591\DWG\SHEETS\C_231591 00_DETAIL SHEET.DWG - NKWD DTLS - 2/17/2025 1:49:39 PM - JAMES CORNELL

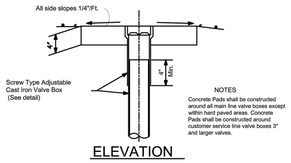


Detail Valve Box Installation

Note:Valve box shall not transmit shock or stress to the valve



PLAN



ELEVATION

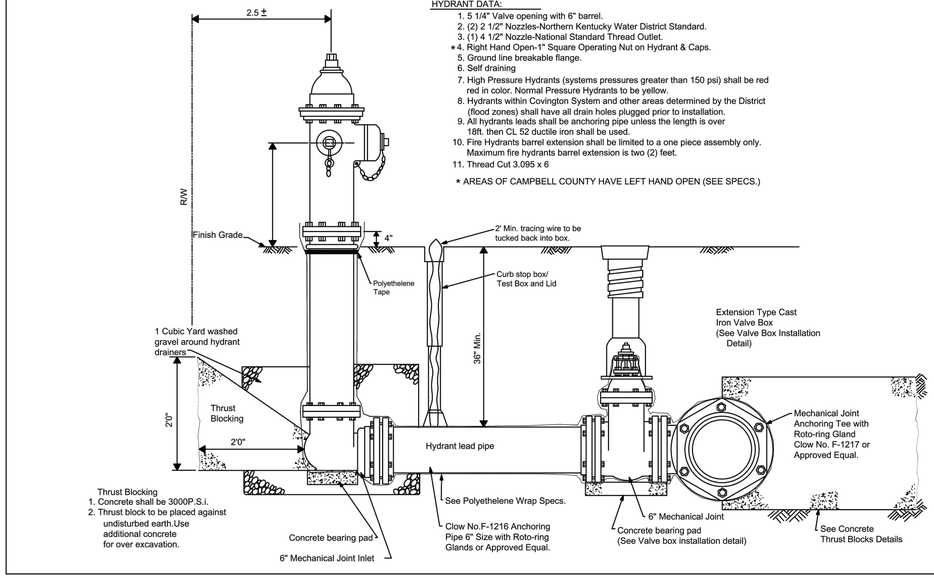
NOTES

Concrete Pads shall be constructed around all main line valve boxes except within hard paved areas. Concrete Pads shall be constructed around customer service line valve boxes 3" and larger valves.

REVISION	BY	DATE
* 20" Concrete pad size changed to 24" Square Box Installation	MRS	6/2013
	MRS	6/2013

N. KY. WATER DISTRICT
VALVE BOX AND VALVE PAD DETAIL

DRAWN BY: SAR
APPROVED: RH
DATE: 8/5/2014
STANDARD DRAWING NO: 105



HYDRANT DATA:

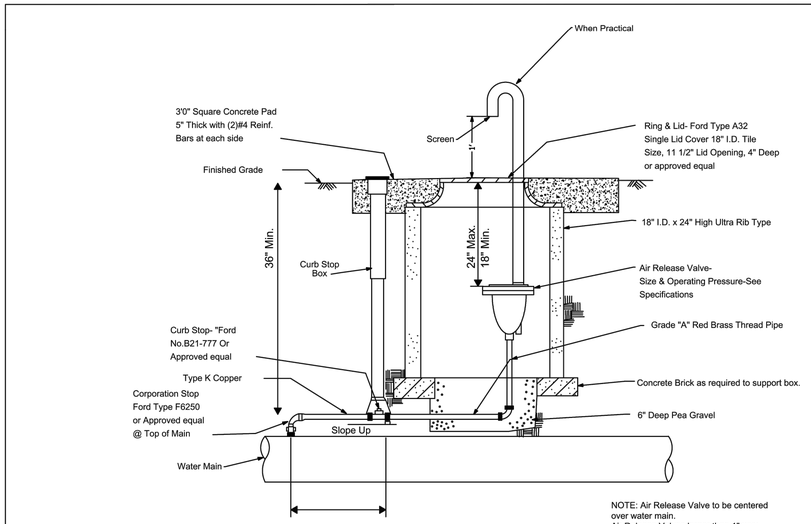
1. 5 1/4" Valve opening with 6" barrel.
2. (2) 2 1/2" Nozzles-Northern Kentucky Water District Standard.
3. (1) 4 1/2" Nozzle-National Standard Thread Outlet.
4. * Right Hand Open-1" Square Operating Nut on Hydrant & Caps.
5. Ground line breakable flange.
6. Self draining
7. High Pressure Hydrants (systems pressures greater than 150 psi) shall be red red in color. Normal Pressure Hydrants to be yellow.
8. Hydrants within Covington System and other areas determined by the District (flood zones) shall have all drain holes plugged prior to installation.
9. All hydrants leads shall be anchoring pipe unless the length is over 18ft. then CL 52 ductile iron shall be used.
10. Fire Hydrants barrel extension shall be limited to a one piece assembly only. Maximum fire hydrants barrel extension is two (2) feet.
11. Thread Cut 3.095 x 6

* AREAS OF CAMPBELL COUNTY HAVE LEFT HAND OPEN (SEE SPECS.)

REVISION	BY	DATE
Blocking note,valve,anchoring	MRS	6/2013
Extension to barrel	MRS	12/2/2020
Blocking leads NW	MRS	12/2/2020

N. KY. WATER DISTRICT
HYDRANT ASSEMBLY

DRAWN BY: SAR
APPROVED: RH
DATE: 8/5/2014
STANDARD DRAWING NO: 109

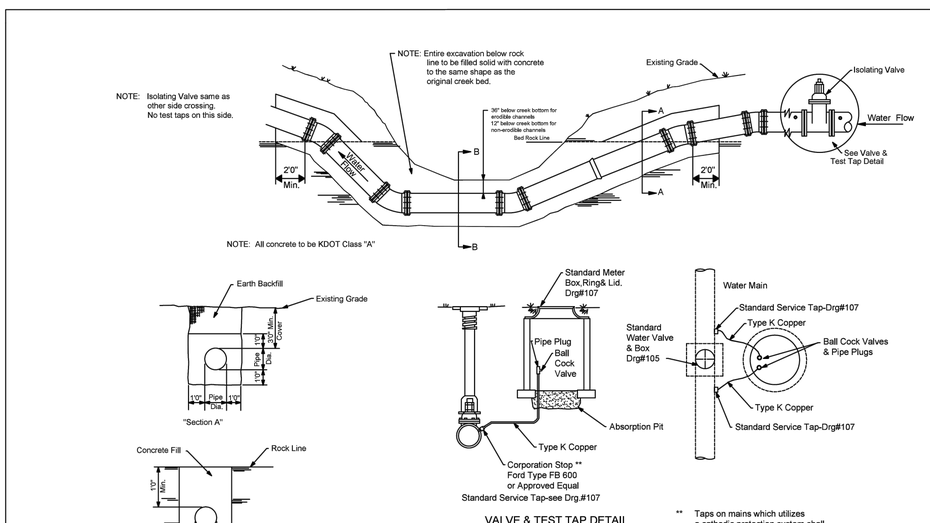


NOTE: Air Release Valve to be centered over water main.
Air Release Valves larger than 1" use:
vault size 24"x24"
lid Ford Type MC 24 &
Extension Ring Ext-2 or approved equal.

REVISION	BY	DATE

N. KY. WATER DISTRICT
N.KY WATER DISTRICT AIR RELEASE VALE

DRAWN BY: SAR
APPROVED: RH
DATE: 8/5/2014
STANDARD DRAWING NO: 106



VALVE & TEST TAP DETAIL

Valve shall be installed in areas not subject to flooding
No services will be tapped between the isolating valve on the creek crossings.

** Taps on mains which utilizes a cathodic protection system shall require an isolation corporation stop

REVISION	BY	DATE

N. KY. WATER DISTRICT
CONCRETE ENCASEMENT AT CREEK CROSSING

DRAWN BY: SAR
APPROVED: MKK
DATE: 2/1/2021
STANDARD DRAWING NO: 110

your trusted advisor
engineers
architects
consultants
planners

NO	REVISION	DATE
-	-	

ISSUED FOR:	BID
ISSUE DATE:	FEB 2025
SCALE:	AS SHOWN
DESIGNED BY:	JCOR
DRAWN BY:	JCOR
CHECKED BY:	JSHU

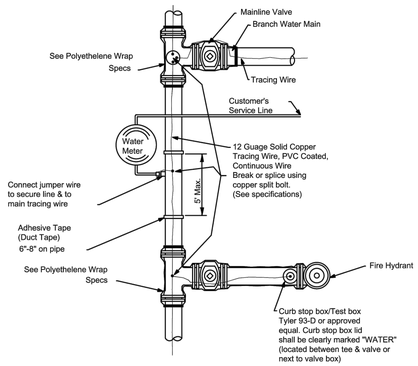
NORTHERN KENTUCKY WATER DISTRICT
SUBDISTRICT 'O'
-KENTON COUNTY -

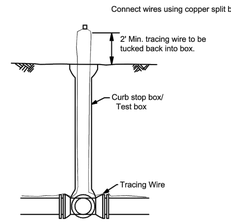
DETAILS

PROJECT NO.
231591
DISCIPLINE
CIVIL
SHEET NAME
G-03
SHEET
4
OF
28

APPROVED
MARCH 26, 2025
TRANSPORTATION CABINET
Kentucky Transportation Cabinet

H:\2023\231591\DWG\SHEETS\C_231591.00_DETAIL SHEET.DWG - NKWD DTLS (2) - 2/10/2025 5:10:40 PM - JAMES CORNELL





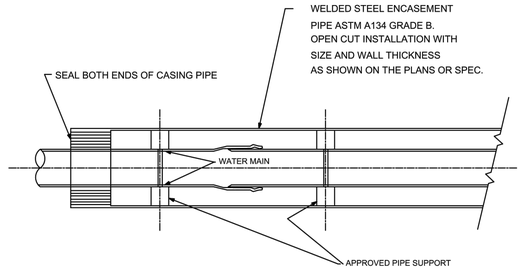
DUCTILE IRON AND PVC PIPE WITH DUCTILE IRON FITTINGS

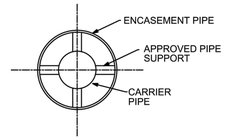
Note: Curb stop box/test box shall not be installed in paved areas.

REVISION	BY	DATE

N. KY. WATER DISTRICT
TRACING WIRE INSTALLATION DETAIL

DRAWN BY: SAR
APPROVED: RH
DATE: 8/5/2014
STANDARD DRAWING NO: 111





1. All carrier pipe placed in steel casing pipe shall be minimum class 50 ductile iron pipe and conform to the latest edition of AWWA C151.
2. Carrier pipe gaskets shall develop a wedging action between pairs of high-strength stainless steel elements spaced around the gasket (FIELD LOK , FASTGRIP, or approved equal gaskets).

NOTE: CASING PIPE JOINTS SHALL BE SEAM WELDED SO THAT CASING IS WATER TIGHT FROM END TO END.

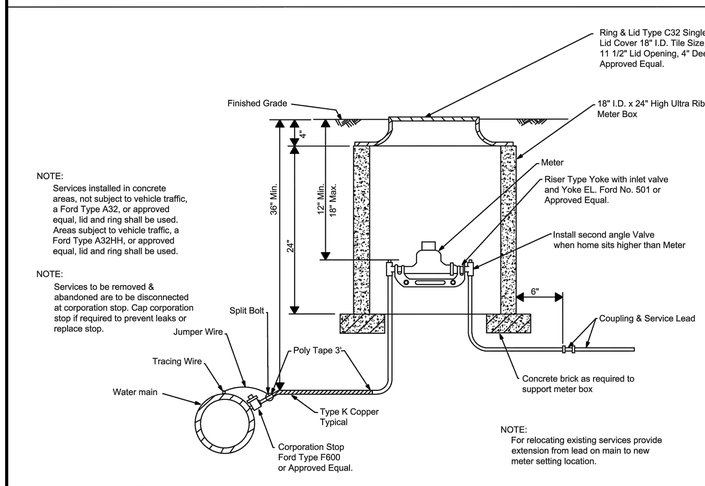
ENCASEMENT PIPE DETAIL

NO SCALE

REVISION	BY	DATE
1	RS	2/7/20
Removed Standard #8		

N. KY. WATER DISTRICT
ENCASEMENT PIPE DETAIL

DRAWN BY: SAR
APPROVED: RH
DATE: 8/5/2014
STANDARD DRAWING NO: 114



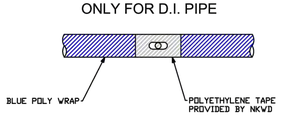
NOTE:
Services installed in concrete areas, not subject to vehicle traffic, a Ford Type A32, or approved equal, lid and ring shall be used. Areas subject to vehicle traffic, a Ford Type A32HH, or approved equal, lid and ring shall be used.

NOTE:
Services to be removed & abandoned are to be disconnected at corporation stop. Cap corporation stop if required to prevent leaks or replace stop.

NOTE:
For relocating existing services provide extension from lead on main to new meter setting location.

PVC Mains-Use single band brass saddle Ford Type 101 BS or equal.

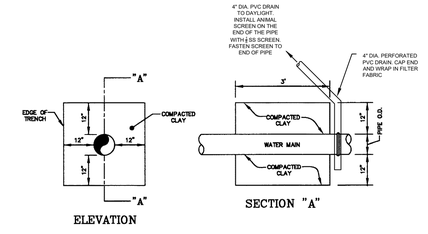
ONLY FOR D.I. PIPE



REVISION	BY	DATE

N. KY. WATER DISTRICT
5/8" & 1" METER SETTING COPPER

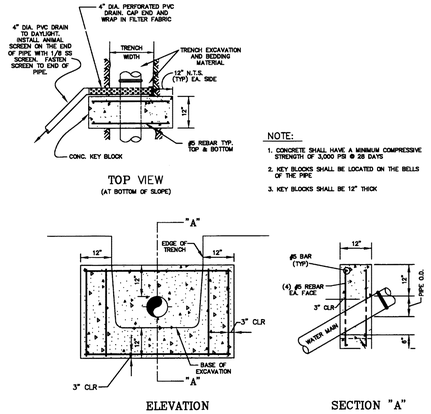
DRAWN BY: SAR
APPROVED: RH
DATE: 8/5/2014
STANDARD DRAWING NO: 107



ELEVATION

SECTION "A"

CLAY BULKHEAD
N.T.S.



TOP VIEW
(AT BOTTOM OF SLOPE)

NOTE:
1. CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 3,000 PSI @ 28 DAYS
2. KEY BLOCKS SHALL BE LOCATED ON THE BELLS OF THE PIPE
3. KEY BLOCKS SHALL BE 12" THICK

ELEVATION

SECTION "A"

CONCRETE KEY BLOCK
(IN BEDROCK)
N.T.S.

your trusted advisor
engineers
architects
planners
consultants

NO	REVISION	DATE
.	.	.

ISSUED FOR:	BID
ISSUE DATE:	FEB 2025
SCALE:	AS SHOWN
DESIGNED BY:	JCOR
DRAWN BY:	JCOR
CHECKED BY:	JSHU

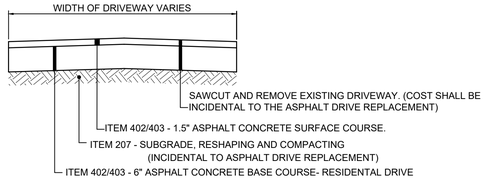
NORTHERN KENTUCKY WATER DISTRICT
SUBDISTRICT 'O'
-KENTON COUNTY -

DETAILS

PROJECT NO: 231591
DISCIPLINE: CIVIL
SHEET NAME: G-04
SHEET: 5 OF 28

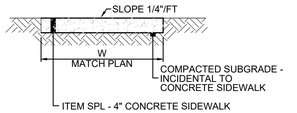
APPROVED
MARCH 26, 2025
TRANSPORTATION CABINET
Kentucky Transportation Cabinet

H:\2023\231591\DWG\SHEETS\C_231591.00_DETAIL SHEET.DWG - NKWD DTLS (3) - 2/10/2025 5:10:40 PM - JAMES CORNELL



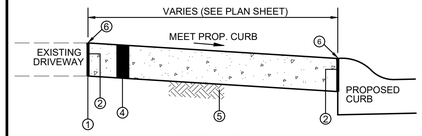
ASPHALT DRIVEWAY REPLACEMENT

N.T.S.



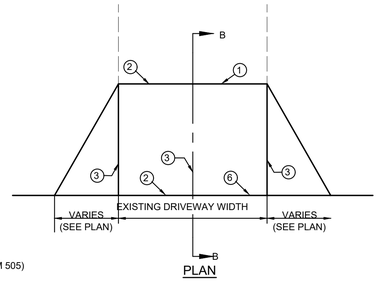
4" CONCRETE SIDEWALK REPLACEMENT DETAIL

(SAWCUTTING AND REMOVAL OF EXISTING CONCRETE SIDEWALK AND EXCAVATION TO PROPOSED SUBGRADE INCIDENTAL TO SIDEWALK REPLACEMENT)



SECTION B-B

1. SAWCUT AT NEAREST JOINT AND REMOVE EXISTING CONCRETE PAVEMENT (INCIDENTAL TO ITEM 505)
2. 1" PREFORMED EXPANSION JOINT MATERIAL (FLEXIBLE FOAM-CERAMAR BY W.R. MEADOWS OR APPROVED EQUAL)
3. TOOLED JOINT
4. ITEM 505 - 6" CONCRETE DRIVEWAY/APRON (OR MATCH EXISTING WHICHEVER IS GREATER)
5. COMPACTED SUBGRADE (INCIDENTAL TO ITEM 505 - 6" CONCRETE DRIVEWAY/APRON)
6. SEAL JOINT WITH GRAY SELF LEVELING SEALANT (SIKA FLEX OR APPROVED EQUAL)



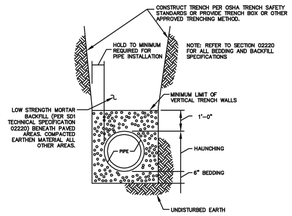
PLAN

NOTE:

1. ANY YARD AREA DISTURBED BY THE CONSTRUCTION OF THE DRIVEWAY APRON SHALL BE RESTORED WITH TOPSOIL, SEED AND MULCH (INCIDENTAL TO CONCRETE DRIVEWAY APRON REPLACEMENT).
2. ALL EXCAVATION REQUIRED FOR THE PLACEMENT OF THE PROPOSED DRIVEWAY SHALL BE INCIDENTAL TO CONCRETE DRIVEWAY REPLACEMENT BID ITEM.

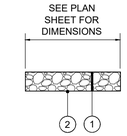
CONCRETE DRIVEWAY REPLACEMENT

N.T.S.



STORM TRENCH DETAIL

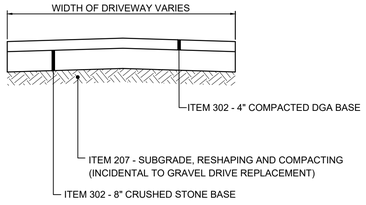
N.T.S.



ROCK CHANNEL PROTECTION

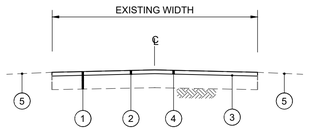
N.T.S.

1. ITEM 703 - 18" CHANNEL LINING, KYTC CLASS II
2. NON WOVEN GEOTEXTILE FILTER FABRIC



GRAVEL DRIVEWAY REPLACEMENT

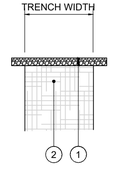
N.T.S.



1. EXISTING ASPHALT PAVEMENT
2. ITEM 408 - ASPHALT MILLING (1.5" TYP.)
3. ITEM 406 - TACK COAT @ 0.1 GAL/SY (INCIDENTAL TO ITEM 403)
4. ITEM 402/403 - 1-1/2" ASPHALT PAVEMENT SURFACE
5. DO NOT DISTURB YARD AREA

TYPICAL PAVEMENT RESURFACING SECTION

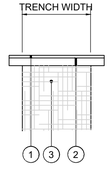
N.T.S.



AGGREGATE ROADWAY REPLACEMENT SECTION

N.T.S.

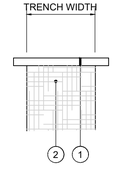
1. ITEM 302 - 4" DGA BASE OVER 8" CRUSHED STONE BASE, (LESS THAN 7% FINES) COMPACTED TO 100% (ASTM D698).
2. CONTROL DENSITY FILL PER NKWD SPECIFICATIONS (SEE DETAIL SHEET (G-02)



ASPHALT ROADWAY REPLACEMENT SECTION

N.T.S.

1. ITEM 402/403 - 1.5" ASPHALT CONCRETE SURFACE COURSE
2. ITEM 402/403 - 7.75" ASPHALT CONCRETE BASE (OR MATCH EXISTING)
3. CONTROL DENSITY FILL PER NKWD SPECIFICATIONS (SEE DETAIL SHEET (G-02)



CONCRETE ROADWAY REPLACEMENT SECTION

N.T.S.

1. ITEM SPL - 8" PORTLAND CEMENT CONCRETE PAVEMENT - PER KENTON COUNTY SUBDIVISION REGULATIONS (OR MATCH EXISTING WHICHEVER IS GREATER)
2. CONTROL DENSITY FILL PER NKWD SPECIFICATIONS (SEE DETAIL SHEET (G-02)

NOTE:
GENE STREET HAS AN ADDITIONAL 1.5" ASPHALT OVERLAY ON THE CONCRETE PAVEMENT

your trusted advisor
engineers
architects
planners
consultants

NO	REVISION	DATE
-		

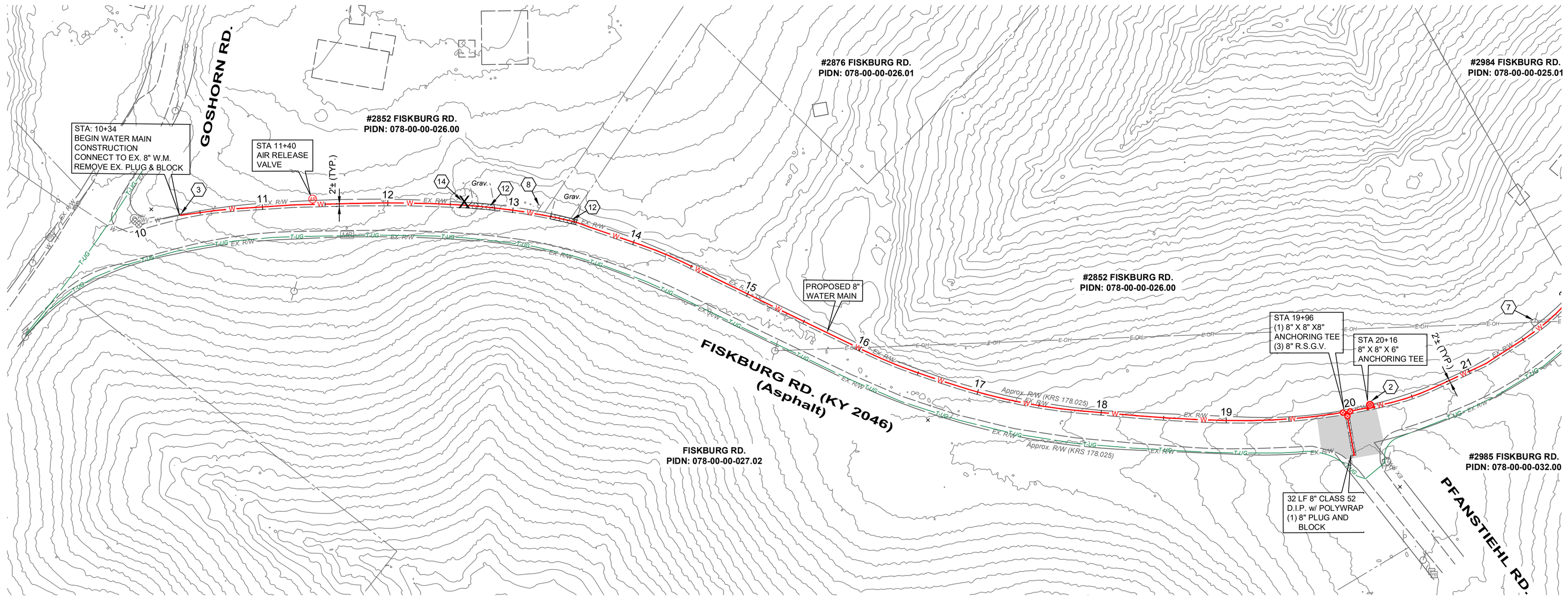
ISSUED FOR:	BID
ISSUE DATE:	FEB 2025
SCALE:	AS SHOWN
DESIGNED BY:	JCOR
DRAWN BY:	JCOR
CHECKED BY:	JSHU

NORTHERN KENTUCKY WATER DISTRICT
SUBDISTRICT 'O'
-KENTON COUNTY -

DETAILS

PROJECT NO
231591
DISCIPLINE
CIVIL
SHEET NAME
G-05
SHEET
6
OF
28

APPROVED
MARCH 26, 2025
TRANSPORTATION CABINET
KENTUCKY



0' 50'' 100'

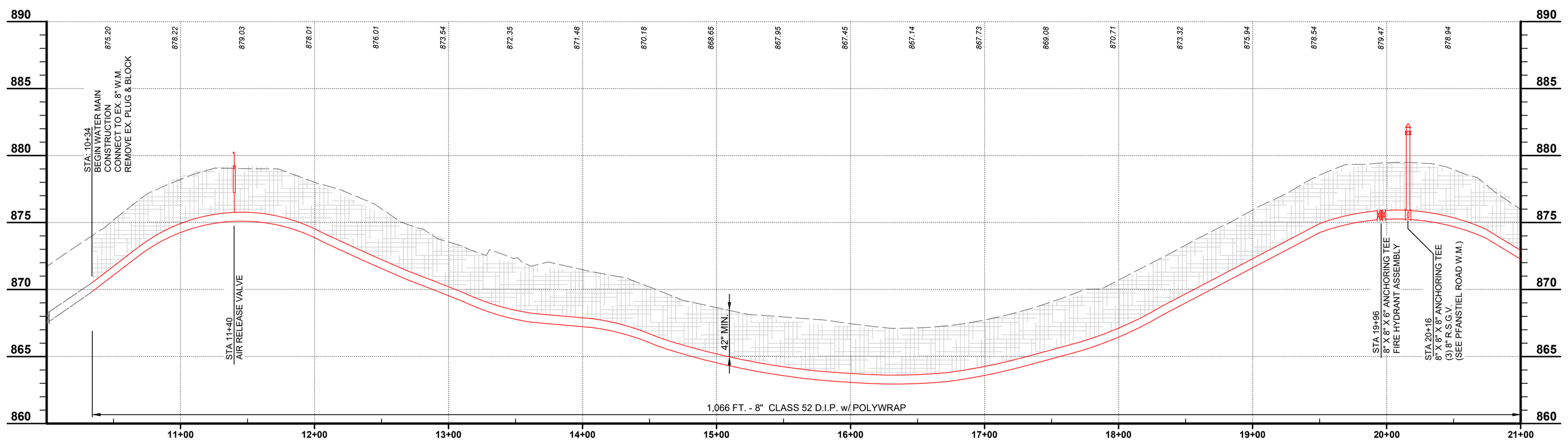
SCALE: 1" = 50

CONSTRUCTION NOTES

1. MAINTAIN MANAGEABLE VERTICAL CLEARANCE BETWEEN THE PROPOSED WATER MAIN AND THE EXISTING STORM SEWER, WATER MAIN, TELEPHONE DUCTS, AND GAS MAIN. CONSTRUCT ALL SANITARY SEWER CROSSINGS PER N.K.W.D. SPECIFICATIONS ITEM 1.14. MAINTAIN MINIMUM 18" BETWEEN THE PROPOSED WATER MAIN AND THE EXISTING SANITARY SEWER, ACTUAL ELEVATION UNKNOWN. CONTRACTOR TO EXCAVATE & VERIFY ACTUAL LOCATION, SIZE AND ELEVATION OF EXISTING UTILITY PRIOR TO BEGINNING WATER MAIN CONSTRUCTION. THE CONTRACTOR SHALL NOTIFY THE ENGINEER PRIOR TO CONSTRUCTION OF ANY POTENTIAL CONFLICT. NO ADDITIONAL PAYMENT WILL BE MADE FOR THIS WORK AND THE COST SHALL BE INCLUDED IN THE BID ITEM FOR WATER MAIN.
2. PROPOSED FIRE HYDRANT ASSEMBLY, VALVE AND BLOCKING AS PER N.K.W.D. STD. DRAWING NO. 109. COORDINATE LOCATION WITH N.K.W.D. INSPECTOR. ANCHOR VALVE TO TEE.
3. CONNECT TO EXISTING WATER MAIN (ACTUAL ELEVATION UNKNOWN). CONTRACTOR TO VERIFY DEPTH PRIOR TO CONSTRUCTION.
4. CHANNEL LINING, CLASS II (12") w/ NON-WOVEN GEOTEXTILE FILTER FABRIC
5. CONTRACTOR TO VERIFY LOCATION AND ELEVATION OF UTILITY PRIOR TO EXCAVATION ACTIVITY AND NOTIFY ENGINEER AND N.K.W.D. OF CONFLICTS.
6. DO NOT DISTURB
7. CONTRACTOR TO SUPPORT UTILITY POLE DURING PIPE INSTALLATION
8. REMOVE AND REPLACE SIGN
9. REMOVE AND REPLACE MAILBOX
10. INSTALL 5/8" METER SETTING PER NKWD STD. DWG. No. 107. INSTALL WATER SERVICE LINE (3/4" TYPE K COPPER) FROM THE PROPOSED WATER MAIN TO THE METER SETTING. MATERIAL WILL BE PROVIDED BY NKWD FOR THIS WORK. UNIT PRICE INCLUDES LABOR, EQUIPMENT, EXCAVATION, BEDDING, BACKFILL, ASPHALT, CONCRETE AND YARD RESTORATION TO INSTALL SERVICE LINE AS SHOWN ON PLANS OR DIRECTED BY NKWD IN ACCORDANCE WITH SPECS & STD. DWGS., COMPLETE.
11. REMOVE AND REPLACE EXISTING STORM STRUCTURE (CB,HW) AS NEEDED FOR WATER MAIN INSTALLATION
12. DRIVEWAY RESTORATION (SEE DETAILS)
13. CONSTRUCT CLAY BULKHEAD IN TRENCH WITH UNDERDRAIN. DAYLIGHT UNDERDRAIN TO DITCH OR DRAINAGE STRUCTURE
14. TREE TO BE REMOVED

HATCH LEGEND

- 1-1/2" ASPHALT PAVEMENT MILL AND OVERLAY AREA
- TRENCH RESTORATION - ASPHALT PAVEMENT - SEE DETAIL SHEET
- TRENCH RESTORATION - CONCRETE PAVEMENT - SEE DETAIL SHEET
- TRENCH RESTORATION - 8" AGGREGATE PAVEMENT
- CONTROL DENSITY FILL - PAV'T TRENCH
- CONCRETE DRIVEWAY REPLACEMENT - SEE DETAIL SHEET
- CONCRETE WALK REPLACEMENT - SEE DETAIL SHEET
- ASPHALT DRIVEWAY REPLACEMENT - SEE DETAIL SHEET
- GRAVEL DRIVEWAY REPLACEMENT - SEE DETAIL SHEET
- CHANNEL LINING, CLASS II - SEE DETAIL SHEET



SCALE:
H: 1" = 50'
V: 1" = 5'

your trusted advisor — engineers architects planners consultants

NO	REVISION	DATE
-	-	-

ISSUED FOR:	BID
ISSUE DATE:	FEB 2025
SCALE:	AS SHOWN
DESIGNED BY:	JCOR
DRAWN BY:	JCOR
CHECKED BY:	JSHU

NORTHERN KENTUCKY WATER DISTRICT
SUBDISTRICT 'O'
-KENTON COUNTY -

FISKBURG ROAD
STA. 10+00 TO STA. 21+00

PROJECT NO.
231591
DISCIPLINE
CIVIL
SHEET NAME
C-12
SHEET
19
OF
28

APPROVED
Transportation Cabinet
March 03, 2026
KENTUCKY TRANSPORTATION CABINET

H:\2023\231591\DWG\SHEETS\C_231591 PNP_13_FISKBURG.DWG - FISKBURG-1 - 2/18/2025 2:33:22 PM - JAMES CORNELL

H:\2023\23191\DWG\SHEETS\C-23191 PMP_11_PSNKMUNC-2 - 2/19/2025 2:33:23 PM - JAMES CONNELL

NORTHERN KENTUCKY WATER DISTRICT
SUBDISTRICT 'O'
-KENTON COUNTY -

FISKBURG ROAD
STA. 21+00 TO STA. 32+00

PROJECT NO	23191
DISCIPLINE	CIVIL
SHEET NAME	C-13
SHEET	20
OF	28

APPROVED
Marsh Run Sanitary Trunk Sewer
Kenton County, Kentucky

your trusted advisor
consultants → engineers
architects
planners

NO	REVISION	DATE

ISSUED FOR:	BID
ISSUE DATE:	FEB 2025
SCALE:	AS SHOWN
DESIGNED BY:	JCOR
DRAWN BY:	JCOR
CHECKED BY:	JHSP

SCALE: H: 1" = 50'
V: 1" = 5'

1,100 FT. - 8" CLASS 52 D.I.P. w/ POLYWRAP

STA 26+83
8" X 8" X 6" ANCHORING TEE
FIRE HYDRANT ASSEMBLY

42" MIN.

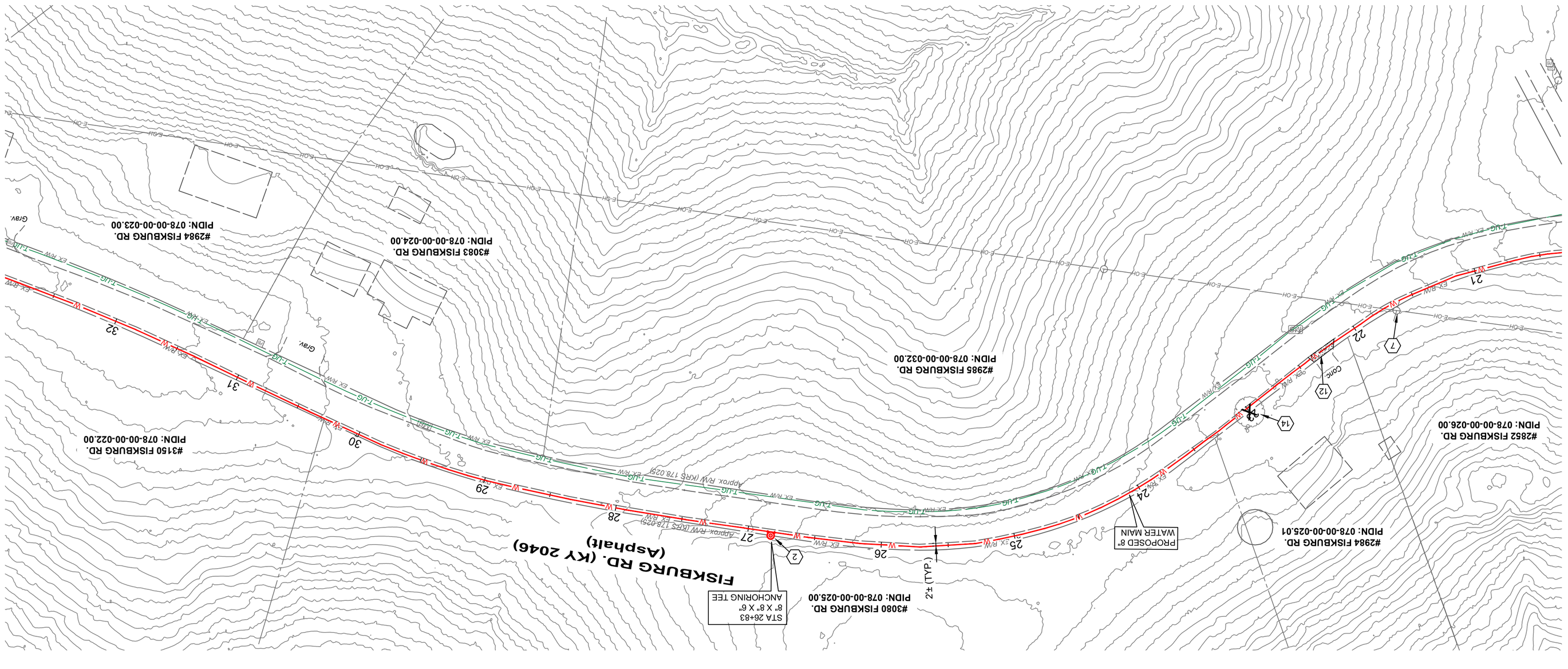
22+00	23+00	24+00	25+00	26+00	27+00	28+00	29+00	30+00	31+00	32+00
845	850	855	860	865	870	875	880	885		
872.84	871.49	870.52	868.89	867.17	865.79	864.90	864.83	864.94	863.84	863.57	860.74	857.48	855.72	855.07	854.87	855.62	856.96	858.73	860.79	861.86

HATCH LEGEND

- 1-1/2" ASPHALT PAVEMENT MILL AND OVERLAY AREA
- TRENCH RESTORATION - ASPHALT PAVEMENT - SEE DETAIL SHEET
- TRENCH RESTORATION - CONCRETE PAVEMENT - SEE DETAIL SHEET
- TRENCH RESTORATION - 8" AGGREGATE PAVEMENT
- CONTROL DENSITY FILL - PAVT TRENCH
- CONCRETE DRIVEWAY REPLACEMENT - SEE DETAIL SHEET
- CONCRETE WALK REPLACEMENT - SEE DETAIL SHEET
- ASPHALT DRIVEWAY REPLACEMENT - SEE DETAIL SHEET
- GRAVEL DRIVEWAY REPLACEMENT - SEE DETAIL SHEET
- CHANNEL LINING, CLASS II - SEE DETAIL SHEET

CONSTRUCTION NOTES

1. MAINTAIN MANAGEABLE VERTICAL CLEARANCE BETWEEN THE PROPOSED WATER MAIN AND THE EXISTING STORM SEWER, WATER MAIN, TELEPHONE DUCTS, AND GAS MAIN. CONSTRUCT ALL SANITARY SEWER CROSSINGS PER K.W.W.D. SPECIFICATIONS ITEM 1.14. MAINTAIN MINIMUM 18" BETWEEN THE PROPOSED WATER MAIN AND THE EXISTING SANITARY SEWER. ACTUAL ELEVATION UNKNOWN. CONTRACTOR TO EXCAVATE & VERIFY ACTUAL LOCATION, SIZE AND ELEVATION OF EXISTING UTILITY PRIOR TO BEGINNING WATER MAIN CONSTRUCTION. THE CONTRACTOR SHALL NOTIFY THE ENGINEER PRIOR TO CONSTRUCTION OF ANY POTENTIAL CONFLICT. NO ADDITIONAL PAYMENT WILL BE MADE FOR THIS WORK AND THE COST SHALL BE INCLUDED IN THE BID ITEM FOR WATER MAIN.
2. PROPOSED FIRE HYDRANT ASSEMBLY, VALVE AND BLOCKING AS PER K.W.W.D. STD. DRAWING NO. 109. COORDINATE LOCATION WITH K.W.W.D. INSPECTOR. ANCHOR VALVE TO TEE.
3. CONNECT TO EXISTING WATER MAIN (ACTUAL ELEVATION UNKNOWN). CONTRACTOR TO VERIFY DEPTH PRIOR TO CONSTRUCTION.
4. CHANNEL LINING, CLASS II (12") w/ NON-WOVEN GEOTEXTILE FILTER FABRIC
5. CONTRACTOR TO VERIFY LOCATION AND ELEVATION OF UTILITY PRIOR TO EXCAVATION ACTIVITY AND NOTIFY ENGINEER AND K.W.W.D. OF CONFLICTS.
6. DO NOT DISTURB
7. CONTRACTOR TO SUPPORT UTILITY POLE DURING PIPE INSTALLATION
8. REMOVE AND REPLACE SIGN
9. REMOVE AND REPLACE MAILBOX
10. INSTALL 5/8" METER SETTING PER KWWD STD. DWG No. 107. INSTALL WATER SERVICE LINE (3/4" TYPE K COPPER) FROM THE PROPOSED WATER MAIN TO THE METER SETTING. MATERIAL WILL BE PROVIDED BY KWWD FOR THIS WORK. UNIT PRICE INCLUDES LABOR, EQUIPMENT, EXCAVATION, BEDDING, BACKFILL, ASPHALT, CONCRETE AND YARD RESTORATION TO INSTALL SERVICE LINE AS SHOWN ON PLANS OR DIRECTED BY KWWD IN ACCORDANCE WITH SPECS & STD. DWGS., COMPLETE.
11. REMOVE AND REPLACE EXISTING STORM STRUCTURE (GB,HW) AS NEEDED FOR WATER MAIN INSTALLATION
12. DRIVEWAY RESTORATION (SEE DETAILS)
13. CONSTRUCT CLAY BULKHEAD IN TRENCH WITH UNDERDRAIN. DAYLIGHT UNDERDRAIN TO DITCH OR DRAINAGE STRUCTURE
14. TREE TO BE REMOVED


FISKBURG RD. (KY 2046)
(Asphalt)
#3080 FISKBURG RD.
PIDN: 078-00-00-025.00
#3083 FISKBURG RD.
PIDN: 078-00-00-024.00
#2984 FISKBURG RD.
PIDN: 078-00-00-023.00
#3150 FISKBURG RD.
PIDN: 078-00-00-022.00
#2985 FISKBURG RD.
PIDN: 078-00-00-032.00
#2852 FISKBURG RD.
PIDN: 078-00-00-026.00
#2984 FISKBURG RD.
PIDN: 078-00-00-026.01
STA 26+83
8" X 8" X 6"
ANCHORING TEE
PROPOSED 8" WATER MAIN
2± (Typ.)
Approx. R/W (Appx 178.02')
Approx. R/W (Appx 178.02')
Gravel
Gravel
Gravel

APPROVED
FOR CONSTRUCTION
Mar 04, 2026
TJR
CIVIL
Kentucky
DISTRICT
CAUTION! CONTRACTOR TO FIELD VERIFY ALL UTILITIES PRIOR TO CONSTRUCTION

NORTHERN KENTUCKY WATER DISTRICT
SUBDISTRICT 'O'
-KENTON COUNTY -

FISKBURG ROAD
STA. 32+00 TO STA. 43+00

PROJECT NO	231691
DISCIPLINE	CIVIL
SHEET NAME	C-14
SHEET	21
OF	28

your trusted advisor
consultants -engineers
architects
planners

NO	REVISION	DATE
.	.	.

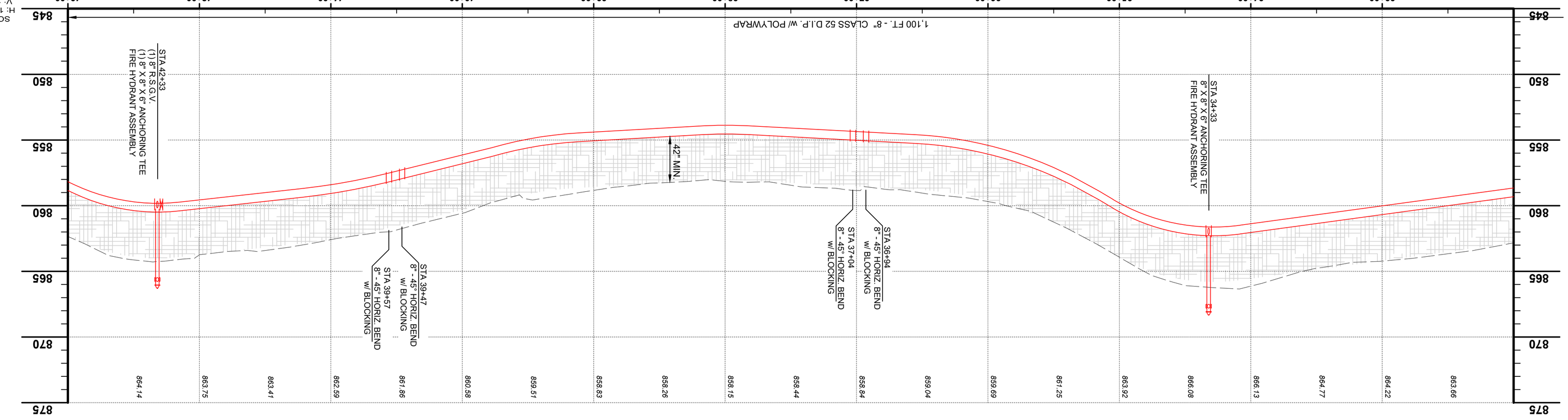
ISSUED FOR:	BID
ISSUE DATE:	FEB 2025
SCALE:	AS SHOWN
DESIGNED BY:	JCOR
DRAWN BY:	JCOR
CHECKED BY:	JSHU

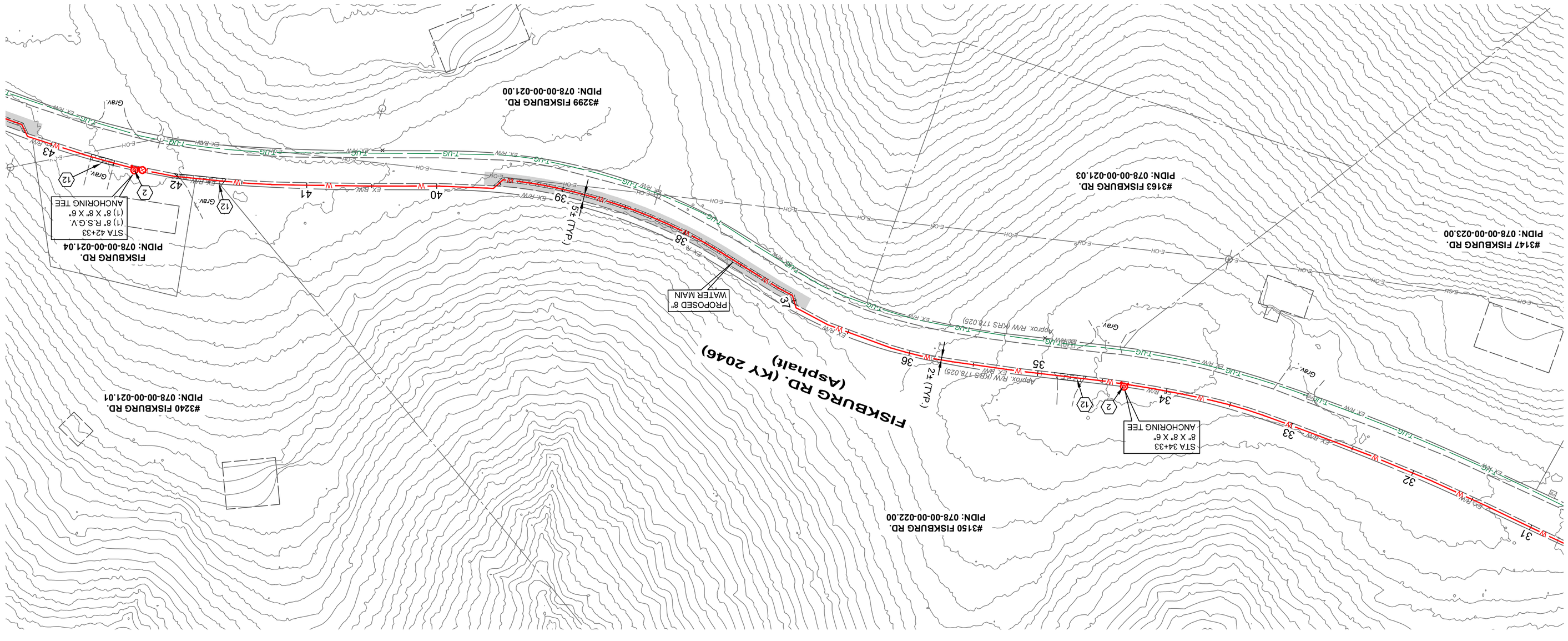
CONSTRUCTION NOTES

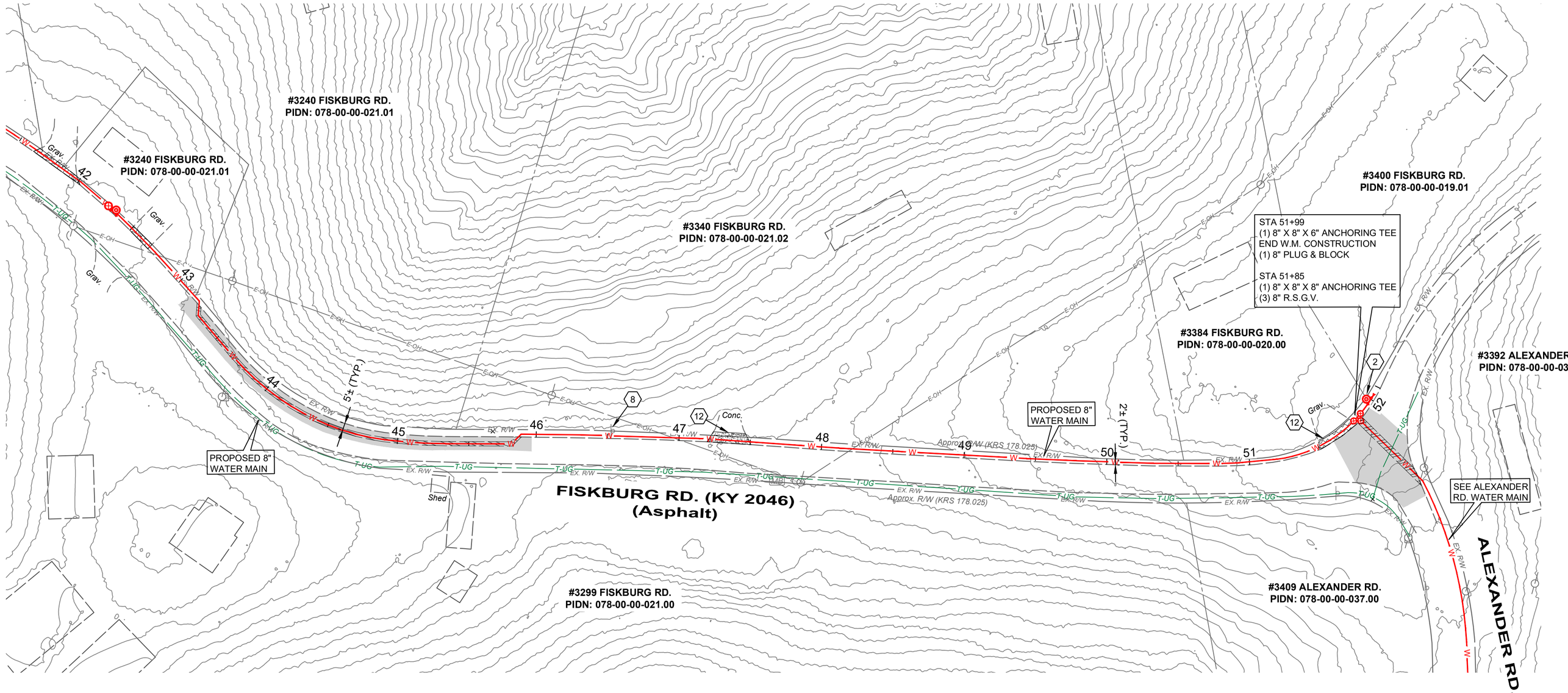
1. MAINTAIN MANAGEABLE VERTICAL CLEARANCE BETWEEN THE PROPOSED WATER MAIN AND THE EXISTING STORM SEWER, WATER MAIN, TELEPHONE DUCTS, AND GAS MAIN. CONSTRUCT ALL SANITARY SEWER CROSSINGS PER N.K.W.D. SPECIFICATIONS ITEM 1.14. MAINTAIN MINIMUM 18" BETWEEN THE PROPOSED WATER MAIN AND THE EXISTING SANITARY SEWER. ACTUAL ELEVATION UNKNOWN. CONTRACTOR TO EXCAVATE & VERIFY ACTUAL LOCATION, SIZE AND ELEVATION OF EXISTING UTILITY PRIOR TO BEGINNING WATER MAIN CONSTRUCTION. THE CONTRACTOR SHALL NOTIFY THE ENGINEER PRIOR TO CONSTRUCTION OF ANY POTENTIAL CONFLICT. NO ADDITIONAL PAYMENT WILL BE MADE FOR THIS WORK AND THE COST SHALL BE INCLUDED IN THE BID ITEM FOR WATER MAIN.
2. PROPOSED FIRE HYDRANT ASSEMBLY, VALVE AND BLOCKING AS PER N.K.W.D. STD. DRAWING NO. 109. COORDINATE LOCATION WITH N.K.W.D. INSPECTOR. ANCHOR VALVE TO TEE.
3. CONNECT TO EXISTING WATER MAIN (ACTUAL ELEVATION UNKNOWN). CONTRACTOR TO VERIFY DEPTH PRIOR TO CONSTRUCTION.
4. CHANNEL LINING, CLASS II (12") W/ NON-WOVEN GEOTEXTILE FILTER FABRIC
5. CONTRACTOR TO VERIFY LOCATION AND ELEVATION OF UTILITY PRIOR TO EXCAVATION ACTIVITY AND NOTIFY ENGINEER AND K.W.W.D. OF CONFLICTS.
6. DO NOT DISTURB
7. CONTRACTOR TO SUPPORT UTILITY POLE DURING PIPE INSTALLATION
8. REMOVE AND REPLACE SIGN
9. REMOVE AND REPLACE MAILBOX
10. INSTALL 5/8" METER SETTING PER NKWD STD. DWG. No. 107. INSTALL WATER SERVICE LINE (3/4" TYPE K COPPER) FROM THE PROPOSED WATER MAIN TO THE METER SETTING. MATERIAL WILL BE PROVIDED BY NKWD FOR THIS WORK. UNIT PRICE INCLUDES LABOR, EQUIPMENT, EXCAVATION, BEDDING, BACKFILL, ASPHALT, CONCRETE AND YARD RESTORATION TO INSTALL SERVICE LINE AS SHOWN ON PLANS OR DIRECTED BY NKWD IN ACCORDANCE WITH SPECS & STD. DWGS., COMPLETE.
11. REMOVE AND REPLACE EXISTING STORM STRUCTURE (CB,HW) AS NEEDED FOR WATER MAIN INSTALLATION
12. DRIVEWAY RESTORATION (SEE DETAILS)
13. CONSTRUCT CLAY BULKHEAD IN TRENCH WITH UNDERDRAIN. DAYLIGHT UNDERDRAIN TO DITCH OR DRAINAGE STRUCTURE
14. TREE TO BE REMOVED

HATCH LEGEND

- 1-1/2" ASPHALT PAVEMENT MILL AND OVERLAY AREA
- TRENCH RESTORATION - ASPHALT PAVEMENT - SEE DETAIL SHEET
- TRENCH RESTORATION - CONCRETE PAVEMENT - SEE DETAIL SHEET
- TRENCH RESTORATION - 8" AGGREGATE PAVEMENT
- CONTROL DENSITY FILL - PAVT TRENCH
- CONCRETE DRIVEWAY REPLACEMENT - SEE DETAIL SHEET
- CONCRETE WALK REPLACEMENT - SEE DETAIL SHEET
- ASPHALT DRIVEWAY REPLACEMENT - SEE DETAIL SHEET
- GRAVEL DRIVEWAY REPLACEMENT - SEE DETAIL SHEET
- CHANNEL LINING, CLASS II - SEE DETAIL SHEET




#3299 FISKBURG RD.
PIDN: 078-00-00-021.00
#3163 FISKBURG RD.
PIDN: 078-00-00-021.03
#3147 FISKBURG RD.
PIDN: 078-00-00-023.00
#3150 FISKBURG RD.
PIDN: 078-00-00-022.00
#3240 FISKBURG RD.
PIDN: 078-00-00-021.01
FISKBURG RD.
PIDN: 078-00-00-021.04
FISKBURG RD. (KY 2046)
(Asphalt)
PROPOSED 8" WATER MAIN
STA 42+33
(1) 8" R.S.G.V.
(1) 8" X 8" X 6" ANCHORING TEE
STA 34+33
8" X 8" X 6" ANCHORING TEE
55' (TYP.)
42
41
40
39
38
37
36
35
34
33
32
31
43
12' (TYP.)
Approx. R/W (ADDS 17.8 (0.25))
Approx. R/W (ADDS 17.8 (0.25))
Approx. R/W (ADDS 17.8 (0.25))

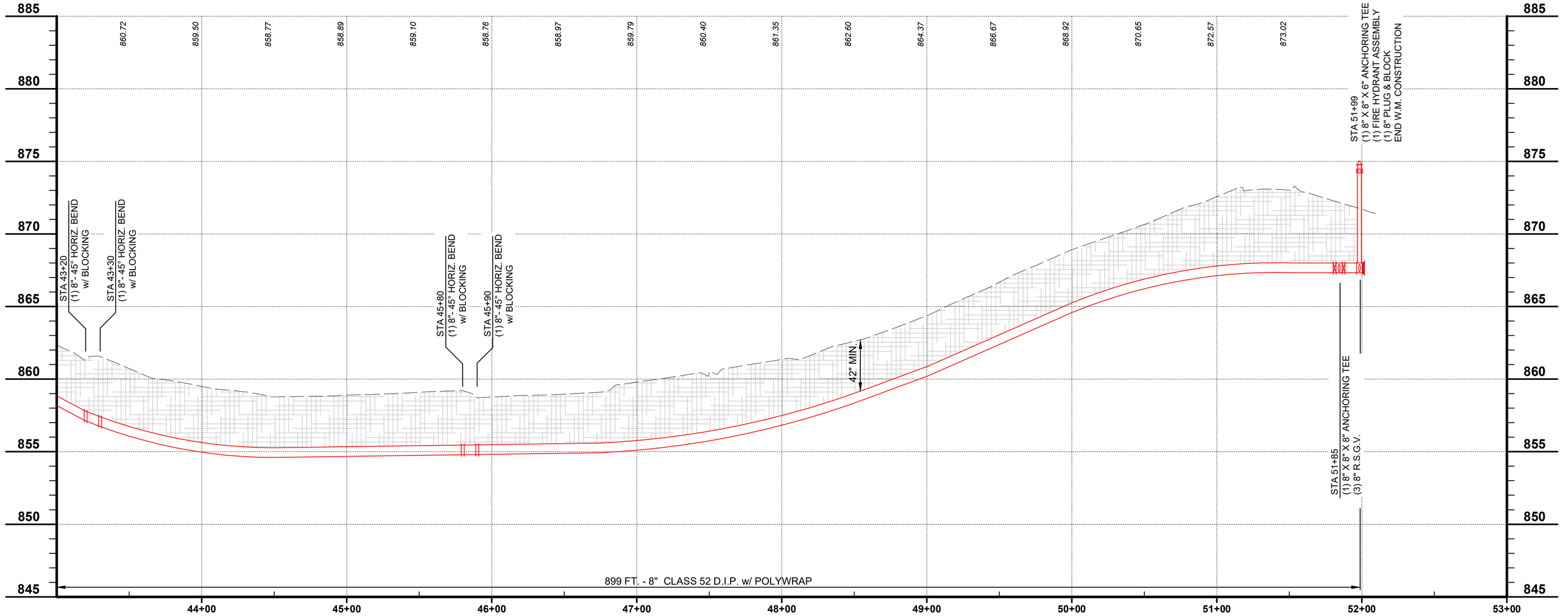


0' 50'' 100'

SCALE: 1" = 50

CONSTRUCTION NOTES

1. MAINTAIN MANAGEABLE VERTICAL CLEARANCE BETWEEN THE PROPOSED WATER MAIN AND THE EXISTING STORM SEWER, WATER MAIN, TELEPHONE DUCTS, AND GAS MAIN. CONSTRUCT ALL SANITARY SEWER CROSSINGS PER N.K.W.D. SPECIFICATIONS ITEM 1.14. MAINTAIN MINIMUM 18" BETWEEN THE PROPOSED WATER MAIN AND THE EXISTING SANITARY SEWER, ACTUAL ELEVATION UNKNOWN. CONTRACTOR TO EXCAVATE & VERIFY ACTUAL LOCATION, SIZE AND ELEVATION OF EXISTING UTILITY PRIOR TO BEGINNING WATER MAIN CONSTRUCTION. THE CONTRACTOR SHALL NOTIFY THE ENGINEER PRIOR TO CONSTRUCTION OF ANY POTENTIAL CONFLICT. NO ADDITIONAL PAYMENT WILL BE MADE FOR THIS WORK AND THE COST SHALL BE INCLUDED IN THE BID ITEM FOR WATER MAIN.
2. PROPOSED FIRE HYDRANT ASSEMBLY, VALVE AND BLOCKING AS PER N.K.W.D. STD. DRAWING NO. 109. COORDINATE LOCATION WITH N.K.W.D. INSPECTOR. ANCHOR VALVE TO TEE.
3. CONNECT TO EXISTING WATER MAIN (ACTUAL ELEVATION UNKNOWN). CONTRACTOR TO VERIFY DEPTH PRIOR TO CONSTRUCTION.
4. CHANNEL LINING, CLASS II (12") w/ NON-WOVEN GEOTEXTILE FILTER FABRIC
5. CONTRACTOR TO VERIFY LOCATION AND ELEVATION OF UTILITY PRIOR TO EXCAVATION ACTIVITY AND NOTIFY ENGINEER AND N.K.W.D. OF CONFLICTS.
6. DO NOT DISTURB
7. CONTRACTOR TO SUPPORT UTILITY POLE DURING PIPE INSTALLATION
8. REMOVE AND REPLACE SIGN
9. REMOVE AND REPLACE MAILBOX
10. INSTALL 5/8" METER SETTING PER NKWD STD. DWG. No. 107. INSTALL WATER SERVICE LINE (3/4" TYPE K COPPER) FROM THE PROPOSED WATER MAIN TO THE METER SETTING. MATERIAL WILL BE PROVIDED BY NKWD FOR THIS WORK. UNIT PRICE INCLUDES LABOR, EQUIPMENT, EXCAVATION, BEDDING, BACKFILL, ASPHALT, CONCRETE AND YARD RESTORATION TO INSTALL SERVICE LINE AS SHOWN ON PLANS OR DIRECTED BY NKWD IN ACCORDANCE WITH SPECS & STD. DWGS., COMPLETE.
11. REMOVE AND REPLACE EXISTING STORM STRUCTURE (CB,HW) AS NEEDED FOR WATER MAIN INSTALLATION
12. DRIVEWAY RESTORATION (SEE DETAILS)
13. CONSTRUCT CLAY BULKHEAD IN TRENCH WITH UNDERDRAIN. DAYLIGHT UNDERDRAIN TO DITCH OR DRAINAGE STRUCTURE
14. TREE TO BE REMOVED



SCALE:
H: 1" = 50'
V: 1" = 5'

HATCH LEGEND

- 1-1/2" ASPHALT PAVEMENT MILL AND OVERLAY AREA
- TRENCH RESTORATION - ASPHALT PAVEMENT - SEE DETAIL SHEET
- TRENCH RESTORATION - CONCRETE PAVEMENT - SEE DETAIL SHEET
- TRENCH RESTORATION - 8" AGGREGATE PAVEMENT
- CONTROL DENSITY FILL - PAV'T TRENCH
- CONCRETE DRIVEWAY REPLACEMENT - SEE DETAIL SHEET
- CONCRETE WALK REPLACEMENT - SEE DETAIL SHEET
- ASPHALT DRIVEWAY REPLACEMENT - SEE DETAIL SHEET
- GRAVEL DRIVEWAY REPLACEMENT - SEE DETAIL SHEET
- CHANNEL LINING, CLASS II - SEE DETAIL SHEET

your trusted advisor — engineers architects planners consultants

NO	REVISION	DATE
.	.	.

ISSUED FOR: BID
ISSUE DATE: FEB 2025
SCALE: AS SHOWN
DESIGNED BY: JCOR
DRAWN BY: JCOR
CHECKED BY: JSHU

NORTHERN KENTUCKY WATER DISTRICT
SUBDISTRICT 'O'
-KENTON COUNTY -

FISKBURG ROAD
STA. 43+00 TO STA. 52+27

PROJECT NO. 231591
DISCIPLINE CIVIL
SHEET NAME C-15
SHEET 22 OF 28

APPROVED
KENTUCKY DIVISION OF WATER
MARCH 21, 2025
DEPUTY DIRECTOR

H:\2023\231591\DWG\SHEETS\C_231591 PNP_13_FISKBURG.DWG - FISKBURG-4 - 2/18/2025 2:33:22 PM - JAMES CORNELL

KYTC Division of Maintenance

Permits Branch
District 6

ENCROACHMENT PERMIT GENERAL NOTES & SPECIFICATIONS

YOU MUST NOTIFY KYTC BEFORE BEGINNING ANY WORK IN THE RIGHT-OF-WAY. ***Failure to alert KYTC of working within the right of way may result in permit revocation.***

Two ways to notify KYTC of your construction start date:

By Email: KYTCD6PERMITS@KY.GOV

**must include permit number and county in subject line*

By Phone: 859-341-2700

**must know permit number and county when calling*

YOU MUST ALSO NOTIFY KYTC UPON COMPLETION OF WORK WITHIN RIGHT-OF-WAY. ***Failure to alert KYTC of completion of work may result in withholding release of any associated bonds.***

Kentucky UNBRIDLED SPIRIT™

APPROVED
MARCH 20, 2024
KENTUCKY TRANSPORTATION CABINET
06-2024-00696

I. SAFETY

A. General Provisions

☑ All signs and control of traffic shall be in accordance with the Manual on Uniform Traffic Control Devices (MUTCD) for Streets and Highways, latest edition, Part VI, and safety requirements shall comply with the Permits Manual. Federal law requires that traffic control shall be implemented in accordance with MUTCD standards and KYTC's Standard Specifications for Road and Bridge Construction (KYTC SSRBC) under the supervision of a certified Work Zone Traffic Control Supervisor.

☑ All work necessary in shoulder or ditch line areas of a state highway shall be scheduled to be promptly completed so that hazards adjacent to the traveled way are kept to an absolute minimum.

☑ No more than one (1) traveled-lane shall be blocked or obstructed during normal working hours. All signs and flaggers during lane closure shall conform to the MUTCD. The traveled-way and shoulders shall be kept clear of mud and other construction debris at all times during construction of the permitted facility. No non-construction equipment or vehicles or office trailers shall be allowed on the right of way during working hours. The right of way shall be left free and clear of equipment, material, and vehicles during non-working hours.

☑ When necessary to block one (1) traveled-lane of a state highway, the normal working hours shall be as directed by the Department. No lanes shall be blocked or obstructed during adverse weather conditions (rain, snow, fog, etc.) without specific permission from the Department.

☑ Working hours shall be between **9:00 AM** and **3:00 PM**. Further date and time restrictions are as follows:

B. Explosives

☑ No explosive devices or explosive material shall be used within state right of way without proper license and approval of the Kentucky Department of Mines and Minerals, Explosive Division.

C. OSHA

☑ Kentucky Occupational Safety and Health Standards for the construction industry, which has the effect of law, states in part: (Page 52, 1926.651, Specific Excavation Requirements) "Prior to opening an excavation, effort shall be made to determine whether underground installations, (sewer, telephone, water, fuel, electric lines, etc.) will be encountered, and if so, where such underground installations are located. When the excavation approaches the estimated location of such an installation, the exact location shall be determined, and when it is uncovered, proper supports shall be provided for the existing installation. Utility companies shall be contacted and advised of proposed work prior to the start of actual excavation."

D. Archaeological

☑ Whenever materials of an archaeological nature are discovered during the course of construction work or maintenance operations, contact shall be made immediately with the Division of Environmental Analysis, which maintains an archaeologist on staff, or with the Office of the State Archaeologist located at the University of Kentucky. Following this consultation, further action shall be decided on a case-by-case basis by the State Highway Engineer or the Transportation Planning Engineer or their designated representative.

E. Environmental

☑ If the activity to which this permit related disturbs one acre of more of land, you must obtain KPDES KYR10 permit. Information can be found at http://water.ky.gov/permitting/Pages/GeneralPermits.aspx

F. Additional Notes

☑ The following additional notes apply to this permit:

24 hour notice is required prior to restoration of pavement, concrete or topsoil. Call Rick Shay at 859-307-5768

APPROVED
MARCH 20, 2024
KENTUCKY TRANSPORTATION CABINET
06-2024-00844

II. UTILITIES

- [x] The permittee shall be responsible for any damage to existing utilities. Any utility modifications or relocations within state right of way necessary, as determined by the Department or by the owner of the utility, shall be at the expense of the permittee and subject to the approval of the Department. Operators of underground utilities in right of way shall be members of Kentucky 811.

- [ ] All existing manholes and valve boxes shall be adjusted to be flush with finished grade.

- [x] All pavement cuts shall be restored per Kentucky Transportation Cabinet standards and specifications.

- [x] Any excavation within 3' of edge of pavement will require flowable fill as backfill.

- [x] The clear zone requirement shall be met to the extent possible in accordance with the Roadside Design Guide.

- [ ] Encasement pipe shall conform to current standards for highway crossings in accordance with the Permits Manual. Pipe encasing shall not be required if the pipe crossing is 2" or less.

- [ ] Aerial crossing of utility lines shall have a minimum clearance from the high point of the roadway to the low point of the line of 24' on fully controlled access highways and 18' on non-fully controlled access highways

- [x] Minimum depth for underground Gas and Electric lines is 60" under roadways, ramps, and ditch lines and 42" in all other areas within state right of way. The minimum depth for all other utilities is 42" in all areas.

- [x] When steel plates are installed over an open excavation in the roadway, they must be anchored to the pavement and have asphalt applied to all exposed edges and an MUTCD approved sign noting "Road Plates Ahead." KYTC must be notified of the location, date, time, and permit number associated to BOTH the installation and removal of the plate. Failure to do so may result in permit revocation.

- [ ] Utility poles moved for replacement must be removed in their entirety and the hole left behind must be backfilled.

- [ ] No poles or anchors shall be installed in a roadside ditch.

- [ ] ***Utility notes specific to fully-controlled access highways ONLY:***
All work necessary within the right-of-way shall be performed behind a temporary fence erected prior to the start of work. The temporary woven wire fence shall be removed immediately upon completion of work on the right-of-way, and the control of access immediately restored to original condition, in accordance with applicable KYTC SSRBC. All vents, valves, manholes, etc., shall be located outside of the right-of-way. Encasement pipe shall extend from right-of-way line to right-of-way line and shall be one continuous run of pipe. The encasement pipe shall be welded at all joints. The boring pit and tail ditch shall extend past the existing toe of slope or bottom of ditch line and shall be a minimum of 42 inches deep. Work in interstate right-of-way requires approval from FHWA (Federal Highway Administration).

- [ ] Additional notes:

MINIMUM COVER MUST BE 60" IN THE ROW AND UNDER PAVEMENT

APPROVED
MARCH 20, 2025
KENTUCKY TRANSPORTATION CABINET
06-2024-00696

III. DRAINAGE

☑ Negative impacts to existing drainage will be the applicant's responsibility to repair in accordance with KYTC SSRBC.

☐ All pipe shall be laid in a straight alignment, to proper grades, and with all materials and methods of installation including bedding and joint seating. Pipe shall not be covered until inspected by the Department and express permission obtained to make backfill. It is the applicant's responsibility to request inspection.

☐ All gutter lines at the base of new curbs shall be on continuous grades, and pockets of water along with curbs or in entrance areas or other paved areas within the right-of-way shall not be acceptable.

☐ All drainage structures and appurtenances (manholes, catch basins, curbing, inlet basins, etc.) shall conform to the Department specifications and shall be constructed in accordance with the KYTC's Standard Drawings.

☐ Additional notes:

IV. PAVING

☑ No bituminous pavement shall be installed within the right of way between November 15 and April 1, nor when the temperature is below 40 degrees Fahrenheit, without the express consent of the Department. No bituminous pavement shall be installed when the underlying course is wet.

☑ Paving within the right of way shall be as follows:

- Base (Type): **Match Existing**, (Thickness) **Match Existing**
- Surface Base (Type) **Match Existing** , (Thickness) **Match Existing**
- Finished Surface (Type) **Match Existing**, (Thickness) **Match Existing**

☑ All materials and methods of construction, including base and subgrade preparation, shall be in accordance with KYTC's Standard Specifications. At least 24 hours notice to the Department is required prior to beginning paving operations.

Phone: **859-307-5768** Name: **Rick Shay**

☑ Utility companies performing road cuts must restore the pavement to pre-existing condition. Pictures/videos are recommended to ensure proper placement of signs and lane markers that are temporarily removed for paving operations. In some cases, a pre-work inventory may be requested from the Department.

☑ Existing pavement and shoulder material shall be removed to accommodate the above paving specifications.

☑ The finished surface of all new pavement within the right of way shall be true to the required slope and grade, uniform in density and texture, free of irregularities, and equivalent in riding qualities to the adjacent highway pavement or as determined by KYTC.

☑ To ensure proper surface drainage, the new pavement shall be flush with the edge of existing highway pavement and shall slope away from the existing edge of the pavement as specified in drawings.

☑ Existing edge of pavement shall be saw-cut to provide a straight and uniform joint for new pavement, and an edge key will be installed in the overlap. An approved joint sealer, in accordance with Kentucky Department of Highways Standard Specifications (latest edition), shall be applied between new and existing pavements.

☐ Additional notes:

APPROVED
MARCH 20, 2025
KENTUCKY TRANSPORTATION CABINET
06-2024-00844

V. ENTRANCES

☐ Encroachment permits issued by KYTC in no way supersede local planning/zoning requirements or subdivision regulations. KYTC has no authority with zoning changes.

☐ Commercial entrances must be paved to the right-of-way line. Any deviations must be approved by KYTC before installation.

☐ KTYC can dictate drainage improvement installation during construction or after entrance is at final grade. The permit release does not release the permit applicant from drainage maintenance.

☐ Signs (ground-mounted and span-mounted), stop bars, crosswalk, and proper lane markings must be in-place before entrance is open for traffic. Lane width modifications must be approved by the Department.

☐ Guardrail installation must be pre-approved by the Department and installed by a KYTC pre-qualified contractor. Any guardrail that is removed during construction must be returned to the local KTYC maintenance facility.

☐ Additional notes:

VI. TRAFFIC

☑ Any contractor performing work within the vicinity of KYTC roadway lighting or traffic signals, must request locates from the KYTC District 6 Traffic section at least one week before of starting work in the right-of-way.

☐ Applicant must maintain all KYTC Roadway signage that is impacted by the permitted work. In the event that any signs have to be moved, it is the applicant's responsibility to mark the sign's location before removal and to install the original or new sign per KYTC standards for sign installation.

☐ Any thermoplastic or striping damaged during the encroachment must be restored in a timely manner per KYTC standards. Stopbars, arrows, and crosswalks must be thermoplastic material, paint is not acceptable. This work must be performed by a KYTC pre-qualified contractor.

☐ Excavating near a signal, lighting pole, or anchoring facility must be done so that it does not impact the structural integrity of the pole. Any work that requires a temporary support or anchoring must receive prior approval.

☐ If the scope of the permit involves a signal build or rebuild, it is the applicant's responsibility to apply for power service (and pay monthly electrical bill) as well as request electrical inspection from the KYTC District 6 Traffic section. If the signal modifications require timing or phasing changes this must be requested at least two weeks in advance of the signal's turn-on date. KYTC will not take ownership of permitted signals until the electrical inspection is formally accepted and approved.

☐ Work which impacts traffic loops requires 48-hour notice to the KYTC District 6 Traffic section at 859-341-2700. Accidental damage of a traffic loop must be reported immediately to KYTC District 6's emergency line at 859-620-2738. Any disturbed traffic loops must be replaced in a timely manner. Traffic loops out of operation for more than five working days will subject the applicant to the cancellation of the permit. Loop repair must be performed by a KYTC pre-qualified contractor.

☐ Additional Notes:

APPROVED
MARCH 20, 2024
KENTUCKY TRANSPORTATION CABINET
06-2024-00844

VII. SIDEWALK SPECIFICATIONS

☐ All sidewalk modifications, retrofitting, or installations must meet current ADA guidelines

A. New Sidewalks

☐ New sidewalk specifications, dimensions, and designs shall be in accordance with KYTC's latest edition of the Standard Specifications, or with the plans provided on the permit if approved by a KYTC D6 Construction or Permits Engineer.

☐ All materials and methods of construction, including curing, shall be in accordance with KYTC's latest edition of the Standard Specifications.

B. Existing Sidewalks

☐ Use of the sidewalk shall not be blocked or obstructed and a usable walkway shall be maintained across the construction area at all times per MUTCD . Sidewalk closures must be approved by the Department before implementation.

☐ The location of ADA ramps (truncated domes/tactile warnings/etc.) will need to be field verified by KYTC before installation.

☐ Any section of sidewalk that becomes damaged shall be entirely replaced to match existing sections.

☐ Additional notes:

VIII. RIGHT OF WAY RESTORATION

☑ All disturbed portions of the right of way shall be restored to grass as per Kentucky Department of Highways Standard Specifications for Road and Bridge Construction (latest edition). A satisfactory turf, as determined by the Department, shall be established by the permittee prior to release of indemnity. Sodding or seeding shall be as follows:

- ☑ Slopes 3:1 or Less: 90% Kentucky 31 Tall Fescue and 10% White Dutch Clover at 100 lbs/acre
- ☑ Slopes Greater than 3:1: 90% Kentucky 31 Tall Fescue and 10% Partridge Pea at 100 lbs/acre
- ☑ Urban or Residential Areas: 95% Turf Type Fall Fescue Blend and 5% White Dutch Clover at 275 lbs/acre

☑ Two tons of clean straw mulch per acre of seeding.

☑ Prior to seeding, the ground shall be prepared in accordance with Kentucky Department of Highways Standard Specifications for Road and Bridge Construction (latest edition).

☐ Substitutes for sod such as artificial turf, rocked mulch, or paved areas may be acceptable if they are aesthetically pleasing and receive prior approval from KYTC.

☐ All ditch-flow lines and all ditch-side slopes shall be sodded.

☐ Existing concrete right of way markers shall not be disturbed. If damaged in any way, they shall be entirely replaced by the permittee with new concrete markers to match the original markers, in accordance with Kentucky Department of Highways Standard Drawings. Markers that are entirely removed shall be re-established in the proper locations by the permittee and to the satisfaction of the Department.

☐ Additional notes:

APPROVED
MARCH 29, 2024
KENTUCKY TRANSPORTATION CABINET
06-2024-00844

IX. RIGHT OF WAY FENCE RESTORATION

- ☐ The replacement fence shall be a height of at least 48 inches and shall be of sufficient density to protect against encroachment.
- ☐ The replacement fence shall be a minimum of 1 foot and a maximum of 2 feet outside the right-of-way line
- ☐ The fence materials and design shall meet accepted industry standards and be treated as paintable. Durable finish materials such as vinyl are acceptable.
- ☐ The permittee shall be required to construct and maintain the replacement fencing to an acceptable level of functionality and state of repair. All work on the fencing shall be performed by access from the private property. Access from the roadway is not allowed.
- ☐ The existing fence shall be removed by permittee and stored at the Department's maintenance storage yard for future reuse by the Department, or the Department shall be reimbursed the cost of fencing removed.
- ☐ Right of way monuments shall be installed regardless of if replacement fence is installed or not.
- ☐ The control of access shall not be diminished as a result of replacement of the fence.
- ☐ Additional notes:

X. MISCELLANEOUS NOTES

NOTICE TO PERMITTEE

THE PERMITTEE AGREES THAT ALL WORK WITHIN THE EXISTING RIGHT OF WAY SHALL BE DONE IN ACCORDANCE WITH THE CURRENT KYTC STANDARD SPECIFICATIONS AND THE PLANS AS APPROVED AND PERMITTED BY AN ENCROACHMENT PERMIT. ANY CHANGES OR VARIANCES MADE AT THE TIME OF CONSTRUCTION WITHOUT WRITTEN APPROVAL FROM THE DEPARTMENT OF HIGHWAYS SHALL BE REMOVED BY THE PERMITTEE AT NO EXPENSE TO THE DEPARTMENT OF HIGHWAYS AND SHALL BE REDONE BY THE PERMITTEE TO CONFORM WITH THE APPROVED PLANS.

APPROVED
KENTUCKY TRANSPORTATION CABINET

INTRODUCTION

The Northern Kentucky Water District is in the design phase for the installation of new 8” water mains within various unserved areas of Kenton County. One of these areas is along Fiskburg Road (KY 2046) from Goshorn Road to Alexander Road. It is understood that KYTC policy per the Utilities Chapter of their Permits Manual states that new or relocated utility facilities shall not be installed longitudinally under pavement. It also states that exceptions to this requirement can be permitted at the discretion of the State Highway Engineer. NKWD is requesting that an exception to this requirement be granted for the project due to several existing condition conflicts that prevent NKWD from meeting this requirement. This report outlines the existing conditions that create the conflicts that NKWD is facing. See applicable plan set sheets included with this submittal to reference to the written descriptions.

PROPOSED ALIGNMENT

The proposed water main alignment begins at the intersection of Fiskburg Road and Goshorn Road and will connect to the existing 8” water main at station 10+34. For the most part, the proposed water main will follow just outside of the northern pavement edge.

Station 37+00 to Station 39+50

The existing terrain in this area is characterized by a steep slope from the roadway edge. To continue the water main alignment outside of the pavement area could present unfavorable conditions for constructing a water main. NKWD is proposing shifting the alignment into the north lane for approximately 150 feet through the area of concern and then returning the alignment back outside of the roadway. The impact to traffic would be

APPROVED
MARCH 20, 2025
KENTUCKY TRANSPORTATION CABINET
06-2022-00696

minimized with a single lane closure and the water main could be placed in more stable soil.

Station 43+25 to Station 46+00

Once again, the existing terrain in this area is characterized a steep slope from the roadway edge. To continue the water main alignment outside of the pavement area could present unfavorable conditions for constructing a water main. NKWD is proposing shifting the alignment into the north lane for approximately 150 feet through the area of concern and then returning the alignment back outside of the roadway. The impact to traffic would be minimized with a single lane closure and the water main could be place in more stable soil.

Road crossings at Station 19+96 and Station 51+99

These two locations are tie-in points for the Pfanstiehl Road (Sta. 19+96) and Alexander Road (Sta. 51+99) proposed water mains.

Additional Alignment Notes

As shown on the plans, the proposed Fiskburg water main will also feed the proposed water main on both Phanstiehl Road and Alexander Road. Originally the preliminary alignment was presented along the south edge of Fiskburg Road and was based off of the proposed water main being able to fit within the right-of-way alongside of an underground Alta Fiber line. After multiple requests, the UG line was field marked. The Alta Fiber line was determined to be in the middle of the limited space between the south edge of pavement and the south R/W line along the whole Fiskburg Road corridor. After discussing the situation with NKWD, it was determined that the available space along the buried cable would not be sufficient for common trenching methods. In

your trusted advisor
consultants
engineers
architects
planners

APPROVED
MARCH 20, 2024
KENTUCKY TRANSPORTATION CABINET
06-2024-00696

addition, the Kentucky Public Service Commissions guidelines recommend hand digging any excavation within 2 feet of a buried utility which would be impractical for this 4,200 feet corridor. Finally, the narrow right-of-way width (30' total per KRS 178.025) does not allow enough room to construct the new water main on the south side behind the underground Alta Fiber line while still remaining in the existing R/W.

If an exception to the KYTC requirements cannot be granted for the Fiskburg Road water main project, NKWD will likely not be able to offer the planned water main extension for the Pfanstiel Road and Alexander Road projects.

SUMMARY

Given the location of the underground Alta Fiber cable and the surrounding terrain, the current proposed alignment is the only feasible alignment for the proposed work. The proposed alignment has met the KYTC requirements where possible. In the areas where it was not possible to meet those requirements, the alignment was laid out to try to minimize the impact on traffic and to minimize the length of water main installation longitudinally in the pavement that does not meet KYTC's standard requirements.

It is anticipated that conventional trench excavation will be utilized in the (4) areas noted where the water main installation encroaches into the pavement. Jack and bore installation for the longitudinal pavement cuts would not be feasible since the casing pipe could only be utilized between the horizontal bends requiring the launch and receiving pits to be in the pavement thus creating traffic safety concerns and still impacting traffic flow. For the two roadway crossings at Pfanstiehl Road and Alexander Road, again jack and bore installation would not be feasible largely due to the minimal 30 feet right-of-way width that would require the launch pits to also encroach into the pavement area creating the same safety and traffic concerns mentioned previously.

APPROVED
MARCH 20, 2025
KENTUCKY TRANSPORTATION CABINET
06-2024-00696

In each of these 4 instances, the casing pipe ends would be in the pavement and any future water main repairs would disturb the pavement. In addition, utilizing casing pipe access for repairs would require pulling a new piece of pipe the length of the casing which would extend the repair time, traffic impact and impact to residential service since this main would be a one-way feed verses spot repair via open trench excavation. For these reasons, a non-encased 8” ductile iron water main installed by open cut methods is recommended at these four locations. Traffic would only be impacted during working hours with a single lane closure (per TT-100-05) having both lanes opened during non-working hours by the utilization of secured steel plating where the trench has not been backfilled per plans set Maintenance of Traffic notes.

NKWD request that KYTC grant an exception to the requirements for this specific case. If you have any questions about the proposed alignment, please contact Jim Shumate at jshumate@ctconsultants.com or at 859-534-9931.

APPROVED
MARCH 20, 2025
KENTUCKY TRANSPORTATION CABINET
06-2024-00696

NOTICE OF COMPLETION OF ENCROACHMENT PERMIT WORK

PERMITTEE

Name: Northern Kentucky Water District
Contact Person: Steve Broering
Address: 2835 Crescent Springs Road
City: Ft. Wright
State: Kentucky
Zip: 41017
Telephone: (859) 991-1652

PROJECT IDENTIFICATION

Permit Number: 06-2024-00840

I wish to notify the Department of Highways that the above mentioned permit work and any necessary right-of-way restoration have been completed and are ready for final inspection.

Permittee

Please return this form to the address below when work is completed and ready for final inspection.

Please Return to: Permit Engineer
Department of Highways, District 6 Office
421 Buttermilk Pike
Covington, Kentucky 41017
(859) 341-2700
www.transportation.ky.gov/

LOCATION(S)			
Description	**County - Route**	**Latitude**	**Longitude**
PROPOSED 8" WATER MAIN INSTALLATION ALONG ELLIOTT ROAD THAT TIES INTO EXISTING 16" WM ON MADISON PIKE	Kenton - KY 17	38.808592	-84.497293

APPROVED
AUGUST 27, 2024
KENTUCKY TRANSPORTATION CABINET
06-2024-00840

Andy Beshear
Governor

COMMONWEALTH OF KENTUCKY
TRANSPORTATION CABINET
Department of Highways, District 6 Office
421 Buttermilk Pike
Covington, Kentucky 41017
(859) 341-2700
www.transportation.ky.gov/

Jim Gray
Secretary

August 27, 2024

Northern Kentucky Water District
Steve Broering
2835 Crescent Springs Road
Ft. Wright, Kentucky 41017

Subject: Permit #: 06-2024-00840
Permit Type: Utilities - Water
Approval

Dear Applicant:

Attached is your permit approval and documentation for the subject permit.

Be advised that all work must be done in conformity with permit and application conditions. If you have any questions, please contact the Permits Section at this office.

Sincerely,

Linzy Brefeld

Linzy Brefeld
D6 Permits Supervisor

Attachments

APPROVED
AUGUST 27, 2024
KENTUCKY TRANSPORTATION CABINET
06-2024-00840

Kentucky Transportation Cabinet
Department of Highways
Division of Maintenance
Permits Branch

ENCROACHMENT PERMIT

KYTC KEPT #: 06-2024-00840

Permittee: Northern Kentucky Water District

Permit Type / Subtype: Utilities / Water

Work Completion Date: 8/26/2025

INDEMNITIES		
Type	**Amount Required**	**Tracking Number**
Performance Bond	$0.00	
Cash / Check	$0.00	
Self-Insured	$0.00	
Payment Bond	$0.00	
Liability Insurance	$0.00	

This permit has been: **APPROVED** [X] **DENIED** [ ]

Linzy Brefeld	D6 Permits Supervisor	8/26/2024
SIGNATURE	**TITLE**	**DATE**

The TC 99-1(B), including the application TC-99 1(A) and all related and accompanying documents and drawings make up the permit. It is not a permit unless both the TC 99-1(A) and TC 99-1(B) are both present.

LOCATION(S)			
Description	**County - Route**	**Latitude**	**Longitude**
PROPOSED 8" WATER MAIN INSTALLATION ALONG ELLIOTT ROAD THAT TIES INTO EXISTING 16" WM ON MADISON PIKE	Kenton - KY 17	38.808592	-84.497293

APPROVED
AUGUST 27, 2024
TRANSPORTATION CABINET
06-2024-00840
KENTUCKY

Kentucky811 Know what's below. Call before you dig

To Submit a Locate Request
24 Hours a Day, Seven Days a Week:
Call 811 or 800-752-6007

APPLICATION FOR ENCROACHMENT PERMIT

KYTC KEPT #: 06-2024-00840

SECTION 1: APPLICANT CONTACT INFORMATION

APPLICANT NORTHERN KY WATER DISTRICT	**ADDRESS** 2835 CRESCENT SPRINGS PIKE		
EMAIL sbroering@nkywater.org	**CITY** ERLANGER	**STATE** KY	**ZIP** 41018
CONTACT NAME 1 Steve Broering	**EMAIL** sbroering@nkywater.org	**PHONE #** 859-426-2728 **CELL #**	
CONTACT NAME 2 (*if applicable*)	**EMAIL**	**PHONE #** **CELL #**	

SECTION 2: PROPOSED WORK LOCATION

ADDRESS	**CITY** DEMOSSVILLE		**STATE** Kentucky	**ZIP** 41033
COUNTY KENTON	**ROUTE #** 17	**MILE POINT** 1.1	**LONGITUDE** (*X*) 84D28'30"W	**LATITUDE** (*Y*) 38D49'08"N

ADDITIONAL LOCATION INFORMATION:
MADISON PIKE (KY 17) AT ELLIOTT ROAD

FOR KYTC USE ONLY

PERMIT TYPE: ☐ Air Right ☐ Entrance ☒ Utilities ☐ Vegetation Removal ☐ Other: _____

ACCESS: ☐ Full ☐ Partial ☒ by Permit **LOCATION:** ☐ Left ☐ Right ☐ Crossing

SECTION 3: GENERAL DESCRIPTION OF WORK

PROPOSED 8" WATER MAIN INSTALLATION ALONG ELLIOTT ROAD THAT TIES INTO EXISTING 16" WM ON MADISON PIKE

THE UNDERSIGNED APPLICANT(s), being duly authorized representative(s) or owner(s), DO AGREE TO ALL ORIGINAL UNEDITED TERMS AND CONDITIONS ON THE TC 99-1A, pages 1-4.

Steve Broering
SIGNATURE

7-15-2024
DATE

This is not a permit unless and until the applicant(s) receives an approved TC 99-1B from KYTC. This application shall become void if not approved by the cancellation date. The cancellation date shall be a minimum of one year from the date the applicant submits their application.

APPROVED
AUGUST 27, 2024
KENTUCKY TRANSPORTATION CABINET
06-2024-00840-10

APPLICATION FOR ENCROACHMENT PERMIT

TERMS AND CONDITIONS

1. The permit, including this application and all related and accompanying documents and drawings making up the permit, remains in effect and is binding upon the Applicant/Permittee, its successors and assigns, as long as the encroachment(s) exists and also until the permittee is finally relieved by the Department of Highways from all its obligations.

2. Applicant shall meet all requirements of the Clean Water Act if the project will disturb one acre or more, the applicant shall obtain a KPDES KYR10 Permit from the Kentucky Division of Water. All disturbed areas shall meet the requirements of the Department of Highway's Standard Specifications, Sections 212 and 213, as amended.

3. **INDEMNITY:**
   - **A.** PERFORMANCE BOND: The permittee shall provide to the Department a performance bond according to the Permits Manual, Section PE-203 as a guarantee of conformance with the Department's Encroachment Permit requirements.
   - **B.** PAYMENT BOND: At the discretion of the department, a payment bond shall be required of the permittee to ensure payment of liquidated damages assessed to the permittee.
   - **C.** LIABILITY INSURANCE: Liability insurance shall be required of the permittee (in an amount approved by the department) to cover all liabilities associated with the encroachment.
   - **D.** It shall be the responsibility of the permittee, its successors and assigns, to maintain all indemnities in full force and effect until the permittee is authorized to release the indemnity by the Department.

4. A copy of this application and all related documents making up the approved permit shall be given to the applicant and shall be made readily available for review at the work site at all times.

5. Perpetual maintenance of the encroachment is the responsibility of the permittee, its successors and assigns, with the approval of the Department as required, unless otherwise stated.

6. Permittee, its successors and assigns, shall comply with and agree to be bound by the requirements and terms of (a) this application and all related documents making up the approved permit, (b) by the Department's Permits Manual, and (c) by the Manual on Uniform Traffic Control Devices, both manuals as revised to and in effect on the date of issuance of the permit, all of which documents are made a part thereof by this reference. Compliance by the permittee, its successors and assigns, with subsequent revisions to applicable provisions of either manual or other policy of the Department may be made a condition of allowing the encroachment to persist under the permit.

7. Permittee agrees that this and any encroachment may be ordered removed by the Department at any time, and for any reason, upon thirty days written notice to the last known address of the applicant or to the address at the location of the encroachment. The permittee agrees that the cost of removing and of restoring the associated right-of-way is the responsibility of the permittee, its successors and assigns.

8. Permittee, its successors and assigns, agree that if the Department determines that motor vehicular safety deficiencies develop as a result of the installation or use of the encroachment, the permittee, its successors and assigns, shall provide and bear the expenses to adjust, relocate, or reconstruct the facilities, add signs, auxiliary lanes, or other corrective measures reasonably deemed necessary by the Department within a reasonable time after receipt of a written notice of such deficiency. The period within which such adjustments, relocations, additions, modifications, or other corrective measures must be completed will be specified in the notice.

9. Where traffic signals are required as a condition of granting the requested permit or are thereafter required to correct motor vehicular safety deficiencies, as determined by the Department, the costs for signal equipment and installation(s) shall be borne by the permittee, its successors and assigns and the Department in its reasonable discretion and only in accordance with the Department's current policy set forth in the Traffic Operations Manual and Permits Manual. Any modifications to the permittee's entrance necessary to accommodate signalization (including necessary easement(s) on private property) shall be the responsibility of the permittee, its successors and assigns, at no expense to the Department.

APPROVED
KENTUCKY TRANSPORTATION CABINET
06-23-2021

APPLICATION FOR ENCROACHMENT PERMIT

10. The requested encroachment shall not infringe on the frontage rights of an abutting owner without their written consent as hereinafter described. Each abutting owner shall express their consent, which shall be binding on their successors and assigns, by the submission of a notarized statement as follows, "I (we), _____, hereby consent to the granting of the permit requested by the applicant along Route _____, which permit does affect frontage rights along my (our) adjacent real property." By signature(s) _____, subscribed and sworn by _____, on this date _____.

11. The permit, if approved, is subject to the agreement that it shall not interfere with any similar rights or permit(s) previously granted to any other party, except as otherwise provided by law.

12. Permittee shall include documentation which describes the facilities to be constructed. Permittee, its successors and assigns, agree as a condition of the granting of the permit to construct and maintain any and all permitted facilities or other encroachments in strict accordance with the submitted and approved permit documentation and the policies and procedures of the Department. Permittee, its successors and assigns, shall not use facilities authorized herein in any manner contrary to that prescribed by the approved permit. Only normal usage as contemplated by the parties and by this application and routine maintenance are authorized by the permit.

13. Permittee, its successors and assigns, at all times from the date permitted work is commenced until such time as all permitted facilities or other encroachments are removed from the right-of-way and the right-of-way restored, **shall defend, protect, indemnify and save harmless** the Department from any and all liability claims and demands arising out of the work, encroachment, maintenance, or other undertaking by the permittee, its successors and assigns, related or undertaken pursuant to the granted permit, due to any claimed act or omission by the permittee, its servants, agents, employees, or contractors. This provision shall not inure to the benefit of any third party nor operate to enlarge any liability of the Department beyond that existing at common law or otherwise if this right to indemnity did not exist.

14. Upon a violation of any provision of the permit, or otherwise in its reasonable discretion, the Department may require additional action by the permittee, its successors and assigns, up to and including the removal of the encroachment and restoration of the right-of-way. In the event additional actions required by the Department under the permit are not undertaken as ordered and within a reasonable time, the Department may in its discretion cause those or other additional corrective actions to be undertaken and the Department shall recover the reasonable costs of those corrective actions from the permittee, its successors and assigns.

15. Permittee, its successors and assigns, shall use the encroachment premises in compliance with all requirements of federal law and regulation, including those imposed pursuant to Title VI of the Civil Right Act of 1964 (42 U.S.C. § 2000d et seq.) and the related regulations of the U.S. Department of Transportation in Title 49 C.F.R. Part 21, all as amended.

16. Permittee, its successors and assigns, agree that if the Department determines it is necessary for the facilities or other encroachment authorized by the permit to be removed, relocated or reconstructed in connection with the reconstruction, relocation or improvement of a highway, the Department may revoke permission for the encroachment to remain under the permit and may order its removal, relocation or reconstruction by the permittee, its successors and assigns, at the expense of the permittee, except where the Department is required by law to pay any or all of those costs.

APPROVED
AUGUST 27, 2024
KENTUCKY TRANSPORTATION CABINET
06-2024-00040

APPLICATION FOR ENCROACHMENT PERMIT

17. Permittee agrees that the authorized permit is personal to the permittee and shall remain in effect until such time as (a) the permittee's rights to the adjoining real property to have benefitted from the requested encroachment have been relinquished, (b) until all permit obligations have been assumed by appropriate successors and assigns, and (c) unless and until a written release from permit obligations has been granted by the Department. The permit and its requirements shall also bind the real property to have benefitted from the requested encroachment to the extent permitted by law. The permit and the related encroachment become the responsibility of the successors and assigns of the permittee and the successors and assigns of each property owner benefitting from the encroachment, or the encroachment may not otherwise permissibly continue to be maintained on the right-of-way. (Does not apply to utility encroachments serving the general public.)

18. If work authorized by the permit is within a highway construction project in the construction phase, it shall be the responsibility of the permittee to make personal contact with the Department's Engineer on the project in order to coordinate all permitted work with the Department's prime contractor on the project.

19. This permit is not intended to, nor shall it, affect, alter or alleviate any requirement imposed upon the permittee, its successors and assigns, by any other agency.

20. Permittee, its successors and assigns, agree to contain and maintain all dirt, mud, and other debris emanating from the encroachment away from the surrounding right-of-way and the travel way of the highway hereafter and at all times that its obligations under the permit remain in effect.

21. Before You Dig: The contractor is instructed to call 1-800-752-6007 to reach KY 811, the One-Call system for information on the location of existing underground utilities. The call is to be placed a minimum of two (2) and no more than ten (10) business days prior to excavation. The contractor should be aware that the owners of underground facilities are not required to be members of the KY 811 One-Call Before U-Dig (BUD) service. The contractor must coordinate excavation with the utility owners, including those whom do not subscribe to KY 811. It may be necessary for the contractor to contact the County Clerk to determine what utility companies have facilities in the area.

22. The undersigned Utility acknowledges ownership and control of the facilities proposed to be installed, modified, or extended by the Applicant/Permittee and agrees to be bound by the requirements and terms of this application and all related documents making up the approved permit, by the Department's Permits Guidance Manual, and by all applicable regulations and statutes in effect on the date of issuance of the permit. This information and application is certified correct to the best knowledge and belief of the undersigned Utility.

NORTHERN KENTUCKY WATER DISTRICT
UTILITY

Steve Broering	Engineering Technician
NAME (Utility Representative)	TITLE (Utility Representative)
Steve Broering	7-15-2024
SIGNATURE (Utility Representative)	DATE



To Submit a Locate Request
24 Hours a Day, Seven Days a Week:
Call 811 or 800-752-6007

APPROVED
AUGUST 27, 2024
KENTUCKY TRANSPORTATION CABINET
06-2024-00840

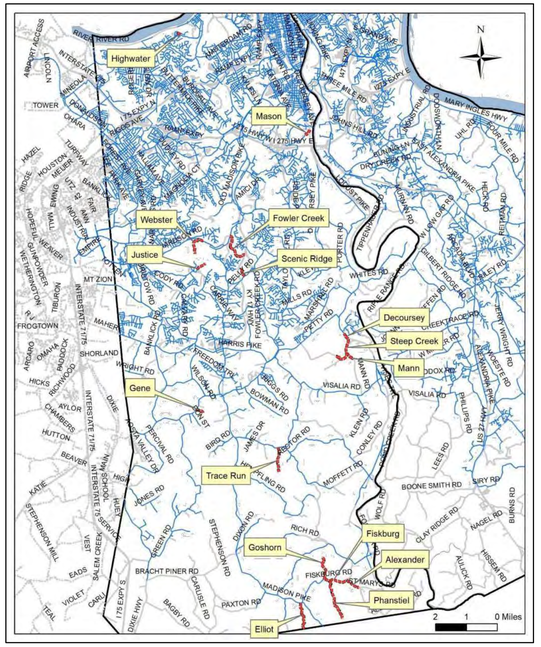
NORTHERN KENTUCKY WATER DISTRICT
SUB-DISTRICT 'O'
WATER MAIN EXTENSION
KENTON COUNTY, KENTUCKY
231591

INDEX OF SHEETS		
NO.	DWG NAME	SHEET NAME
1	TTL	TITLE
2	G-01	GENERAL NOTES & LEGEND
3	G-02	DETAILS
4	G-03	DETAILS
5	G-04	DETAILS
6	G-05	EROSION CONTROL DETAILS
7	C-01	HIGHWATER ROAD
8-9	C-02 to C-03	MASON ROAD
10-13	C-04 to C-07	WEBSTER ROAD
14-15	C-08 to C-09	JUSTICE ROAD
16-17	C-10 to C-11	SCENIC RIDGE DRIVE
18-22	C-12 to C-16	STEEP CREEK ROAD
23	C-17	STEEP CREEK / DECOURSEY
24	C-18	MANN ROAD
25	C-19	GENE STREET
26-29	C-20 to C-23	TRACE RUN ROAD
30-33	C-24 to C-27	GOSHORN ROAD
34-37	C-28 to C-31	FISKBURG ROAD
38-43	C-32 to C-37	PFANSTIEL ROAD
44-45	C-38 to C-39	ALEXANDER ROAD
46-49	C-40 to C43	ELLIOT ROAD

NORTHERN KENTUCKY WATER DISTRICT OFFICIALS

PRESIDENT / CEO
LINDSEY RECHTIN, CPA

COMMISSIONERS
FRED A. MACKE, JR. (Chair)
JODY R. LANGE (Vice-Chair)
DOUGLAS C. WAGNER (Secretary)
NICHOLAS E. WINNIKE (Treasurer)
GARY E. HOLLAND (Commissioner)
JOSEPH J. KOESTER (Commissioner)



VICINITY MAP

NORTHERN KENTUCKY WATER DISTRICT SPECIFICATIONS

THE LATEST STANDARD SPECIFICATIONS AND DRAWINGS OF THE NORTHERN KENTUCKY WATER DISTRICT FOR THE INSTALLATION OF WATER MAIN AND METER PITS SHALL GOVERN ALL WATER MAIN CONSTRUCTION ITEMS ON THIS PROJECT.

KENTUCKY TRANSPORTATION CABINET SPECIFICATIONS

THE LATEST STANDARD SPECIFICATIONS OF THE KENTUCKY TRANSPORTATION CABINET, INCLUDING CHANGES AND SUPPLEMENTAL SPECIFICATIONS THERETO AND KENTON COUNTY SUBDIVISION REGULATIONS SHALL GOVERN THIS IMPROVEMENT.

SOURCE OF OUNDARY AND TOPOGRAPHIC INFORMATION

THE TOPOGRAPHIC INFORMATION SHOWN ON THESE PLANS IS BASED UPON A SURVEY BY CT CONSULTANTS, INC.
THE BOUNDARY INFORMATION SHOWN ON THESE PLANS IS BASED ON PLANNING AND DEVELOPMENT SERVICES (P.D.S.) G.I.S. MAPPING.

2 Business Days Before You Dig
Kentucky 811
Always Call 811
or 1-800-752-6007
Before you Dig
www.kentucky811.org

JAMES M. SHUMATE *P.E. #18156*

90% REVIEW

your trusted advisor — engineers architects planners consultants

NO	REVISION	DATE

ISSUED FOR: 90% DESIGN
ISSUE DATE: MAY 2024
SCALE: AS SHOWN
DESIGNED BY: JCOR
DRAWN BY: JCOR
CHECKED BY: JSHU

NORTHERN KENTUCKY WATER DISTRICT
SUBDISTRICT 'O'
-KENTON COUNTY -

TITLE SHEET

PROJECT NO.
231591
DISCIPLINE
CIVIL
SHEET NAME
TTL
SHEET 1 OF 48

APPROVED FOR CONSTRUCTION
AUGUST 2024
TRANSPORTATION CABINET
KENTUCKY

H:\2023\231591\DWG\SHEETS\C_231591 00_TITLE SHEET.DWG - TITLE - 5/28/2024 10:23:19 AM - JAMES CORNELL

GENERAL NOTES

1. ALL CONSTRUCTION SHALL CONFORM TO THESE PLANS AND SPECIFICATIONS, THE LATEST EDITION OF THE NORTHERN KENTUCKY WATER DISTRICT STANDARD SPECIFICATIONS AND DRAWINGS AND THE KENTON COUNTY SUBDIVISION REGULATIONS AND THE KENTUCKY DEPARTMENT OF HIGHWAYS STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.

2. ALL DISTURBED AREAS ARE TO BE RESTORED (SEEDED AND MULCHED) BY THE CONTRACTOR AND SHALL PROCEED WITH JOB PROGRESSION. THE CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR REMOVING ANY EXCESS MATERIALS AT THE SITE AND MAINTAINING ALL SEEDED AND MULCHED AREAS UNTIL PROJECT COMPLETION AND FINAL INSPECTION PER KDOT SPEC. 212. A RESIDENTIAL YARD SHALL BE RESTORED WITHIN TWENTY-ONE (21) DAYS AFTER CONSTRUCTION.

3. ALL APPLICABLE RECOMMENDATIONS IN KENTUCKY'S BEST MANAGEMENT PRACTICES MANUAL SHALL BE FOLLOWED BY THE CONTRACTOR, INCLUDING SEEDING OF DISTURBED GROUND.

4. RIGHT-OF-WAY AND PROPERTY LINES SHOWN ARE PLOTTED FROM PLANNING AND DEVELOPMENT SERVICES (PDS) G.I.S. MAPPING AND ARE APPROXIMATE AND NOT THE RESULT OF A FIELD BOUNDARY SURVEY.

5. THE CONTRACTOR SHALL LIMIT THEIR WORK AREA TO THE EASEMENTS AND RIGHTS-OF-WAY SHOWN ON THESE PLANS UNLESS WRITTEN PERMISSION IS GIVEN BY THE PROPERTY OWNER AND APPROVED BY FORT N.K.W.D.

6. ALL OSHA, STATE AND LOCAL SAFETY REGULATIONS SHALL BE FOLLOWED DURING CONSTRUCTION.

7. NO CONSTRUCTION SHALL COMMENCE UNTIL ALL STATE, COUNTY AND LOCAL PERMITS HAVE BEEN ISSUED AS REQUIRED

8. THE CONTRACTOR SHALL COORDINATE ALL WORK WITHIN THE PUBLIC RIGHT OF WAY WITH THE KENTUCKY TRANSPORTATION CABINET AND KENTON COUNTY AND ANY LOCAL MUNICIPALITY. LOCAL TRAFFIC MUST BE MAINTAINED AT ALL TIMES DURING CONSTRUCTION UNLESS OTHERWISE NOTED IN THESE PLANS.

9. ADDITIONAL BMP'S AND EROSION AND SEDIMENT CONTROL MEASURES MAY BE REQUIRED AS DEEMED NECESSARY. ALL COST FOR ABOVE SHALL BE INCLUDED IN LUMP SUM BID FOR EROSION CONTROL AND WATER POLLUTION CONTROL.

10. ALL CONSTRUCTION WORK SHALL BE IN CONFORMANCE WITH THE RECOMMENDATIONS CONTAINED IN THE GEOTECHNICAL INVESTIGATION REPORT PREPARED BY G.A.I. CONSULTANTS DATED FEBRUARY 2024.

GENERAL TRENCH EXCAVATION NOTES

1. CONTRACTOR IS TO PROVIDE CONSTANT STABLE SUPPORT FOR THE WATER MAIN TRENCH EXCAVATION (ie SHEETING, SHORING, ETC.) TO PROTECT ALL ADJACENT EXISTING UTILITIES, STORM SEWER PIPE AND STRUCTURES AND THE EXISTING ROADWAY FROM ANY MOVEMENT. (NO ADDITIONAL PAYMENT WILL BE MADE FOR THIS WORK. ANY COSTS ASSOCIATED WITH TRENCH SUPPORT SHALL BE INCLUDED IN THE UNIT BID PRICE FOR THE ASSOCIATED WATER MAIN.

   TRENCH SUPPORT FAILURE RESULTING IN ADVERSE IMPACT TO EXISTING UTILITIES SHALL BE REPAIRED IMMEDIATELY AT THE CONTRACTOR'S EXPENSE.

2. TRENCH EXCAVATION AND OPEN, UNBACKFILLED LENGTH OF WATER MAIN TRENCH SHALL BE LIMITED AS NECESSARY ALONG THE ROADWAY IN ORDER TO PREVENT MOVEMENT OF, OR DAMAGE TO THE SURROUNDING GROUND SURFACE, NEARBY STRUCTURES/INFRASTRUCTURE AND THE EXISTING ROADWAY PAVEMENT.

   TRENCH EXCAVATION SHALL ALSO BE LIMITED TO THE CONTRACTOR'S ABILITY TO PROVIDE TRENCH BOXES FOR SUPPORT. UNDER NO CIRCUMSTANCES SHALL TRENCH EXCAVATION EXCEED LENGTH OF SUPPORT AVAILABLE.

UTILITY NOTES

1. THIS PLAN SHOWS THE APPROXIMATE LOCATION OF UNDERGROUND UTILITIES (GAS, WATER, STORM SEWER, SANITARY SEWER, TELEPHONE, ELECTRIC, ETC.). THE PREPARER DOES NOT GUARANTEE THEIR ACCURACY OR CORRECTNESS. THE INFORMATION PROVIDED SHALL BE FIELD VERIFIED PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING THE UTILITY AS WELL AS THE SERVICE LATERALS AT ALL TIMES DURING CONSTRUCTION. THE CONTRACTOR SHALL PRACTICE CARE DURING THE GRADING AND TRENCH EXCAVATION AND SHALL BE RESPONSIBLE FOR REPLACING ANY SERVICES THAT ARE DAMAGED DURING CONSTRUCTION AT THEIR EXPENSE.

2. PRIOR TO ANY EXCAVATION OVER AN EXISTING UTILITY LINE OR SERVICE, CONTRACTOR SHALL HAND EXCAVATE TO EXPOSE THE UTILITY AND DETERMINE LOCATION AND DEPTH. NOTIFY ENGINEER IMMEDIATELY OF ANY CONFLICTS.

3. TOPS OF EXISTING AND PROPOSED CASTING ELEVATIONS ARE SUBJECT TO FINAL ADJUSTMENTS AS APPROVED BY THE ENGINEER AND REQUIREMENTS OF UTILITY OWNER. THIS WORK WILL BE INCIDENTAL TO THE CONTRACT.

4. FORTY-EIGHT (48) HOURS BEFORE EXCAVATION IS TO COMMENCE, THE CONTRACTOR SHALL NOTIFY THE FOLLOWING AGENCIES: THE KENTUCKY UTILITY PROTECTION SERVICE AND ALL OTHER UTILITIES THAT MAY HAVE UNDERGROUND UTILITIES INVOLVING THIS PROJECT AND ARE NON-MEMBERS OF KENTUCKY UNDERGROUND PROTECTION.

STORM & SANITARY NOTES

1. ALL STORM AND SANITARY ITEMS SHALL BE IN ACCORDANCE WITH THE LATEST SPECIFICATIONS AND DETAILS FROM SD1. METAL PIPE MATERIALS SHALL NOT BE USED UNLESS OTHERWISE SPECIFIED ON THESE PLANS.

2. CONTRACTOR SHALL BE REQUIRED TO MAINTAIN STORM AND SANITARY SEWER FLOW THROUGHOUT THE PROJECT, FOR THE DURATION OF CONSTRUCTION. ALL COST FOR THE ABOVE SHALL BE INCIDENTAL TO THE CONTRACT.

3. IF REQUIRED, CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING AND SCHEDULING STORM AND SANITARY SEWER INSPECTIONS AS SET OUT IN THE PRECONSTRUCTION MEETING.

4. CONNECTIONS INTO EXISTING OR PROPOSED STORM OR SANITARY SEWER STRUCTURES OR PIPES SHALL BE COMPLETED BY A CERTIFIED TAPPER BY SD1.

WATER NOTES

1. ALL WORK RELATING TO WATER MAINS OR WATER SERVICE LINES SHALL BE COMPLETED IN ACCORDANCE WITH THE RULES AND REGULATIONS OF THE NORTHERN KENTUCKY WATER DISTRICT (NKWD).

2. CONTRACTOR MAY NOT USE WATER FROM FIRE HYDRANTS WITHOUT PRIOR PERMISSION FROM NKWD

GAS NOTES

1. ALL WORK RELATING TO GAS MAINS OR GAS SERVICE LINES SHALL BE COMPLETED IN ACCORDANCE WITH THE RULES AND REGULATIONS OF THE DUKE ENERGY

ELECTRIC NOTES

1. ALL WORK RELATING TO ELECTRIC LINES SHALL BE COMPLETED IN ACCORDANCE WITH THE RULES AND REGULATIONS OF THE DUKE ENERGY

WATER DISTRICT GENERAL NOTES

1. THE EXISTING WATER MAIN ELEVATION AND LOCATION AT THE CONNECTION POINT WITH THE PROPOSED MAIN WAS ASSUMED AND HAS NOT BEEN FIELD VERIFIED. PRIOR TO COMMENCEMENT OF ANY WATER MAIN WORK, THE CONTRACTOR SHALL DIG A TEST HOLE AT THE CONNECTION POINT TO LOCATE EXISTING WATER MAIN AS TO LOCATION AND ELEVATION. THE EXISTING WATER MAIN LOCATION MAY REQUIRE SOME FIELD ADJUSTMENT TO THE PROPOSED WATER MAIN INCLUDING ADJUSTING THE DEPTH OF THE PROPOSED WATER MAIN. COST OF DOING THE ABOVE SHALL BE INCIDENTAL TO THE PERTINENT WATER MAIN ITEM.

2. COST OF TRIMMING OR CLEARING ANY TREES, BUSHES, ETC. SHALL BE INCIDENTAL TO THE OVERALL CONTRACT PRICE AND SHALL BE APPROVED BY N.K.W.D. AND THE PROPERTY OWNER ALONG WITH COUNTY OR STATE WHEN REQUIRED.

3. THE UTILITY INFORMATION SHOWN ON THE PLANS IS BASED ON INFORMATION RECEIVED FROM OTHERS AND HAS NOT BEEN VERIFIED BY THE ENGINEER OR OWNER. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE LOCATION OF THE UTILITIES AND TO COORDINATE ANY IMPACT CAUSED BY THE PROPOSED WORK WITH ALL UTILITY OWNERS AND/OR THEIR CONTRACTORS. THE CONTRACTOR WILL BE REQUIRED TO DIG TEST HOLES AT ALL UTILITY CROSSINGS TO LOCATE THE UTILITY AS TO BOTH LOCATION AND ELEVATION AND WILL BE REQUIRED TO REALIGN AND ADJUST THE ELEVATION OF THE PROPOSED WATER MAIN TO AVOID THE UTILITY. COST OF ALL THE ABOVE SHALL BE INCIDENTAL TO THE OVERALL CONTRACT PRICE.

4. UNLESS SPECIFICALLY INSTRUCTED OTHERWISE, RETURN ALL REMOVED WATER EQUIPMENT INCLUDING, FIRE HYDRANTS, VALVES, AND WATER METERS TO NORTHERN KENTUCKY WATER DISTRICT (N.K.W.D).

5. WATERLINES CROSSING UNDER OR OVER SEWER LINES (DEFINED AS ANY SANITARY/COMBINED SEWER, SEPTIC TANK OR SUBSOIL TREATMENT SYSTEM) MUST MAINTAIN A MINIMUM VERTICAL CLEARANCE OF 18" AND ONE FULL LENGTH OF PIPE SHALL BE LOCATED SO BOTH JOINTS ARE AS FAR FROM THE SEWER AS POSSIBLE. SPECIAL STRUCTURAL SUPPORT FOR THE WATER AND SEWER PIPES MAY BE REQUIRED.

6. CONTRACTOR IS RESPONSIBLE FOR KEEPING FIELD NOTES THAT PROVIDE SUFFICIENT DATA FOR PREPARING "RECORD DRAWINGS" UPON COMPLETION OF CONSTRUCTION.

7. ALL WATER MAIN CONSTRUCTION SHALL CONFORM TO THE NORTHERN KENTUCKY WATER DISTRICT SPECIFICATIONS. CONTRACTOR IS RESPONSIBLE FOR OBTAINING A CURRENT COPY OF THE NORTHERN KENTUCKY WATER DISTRICT'S STANDARD DRAWINGS.

8. ALL MATERIAL FOR THE PROP. WATER MAIN INSTALLATION INCLUDING ALL FITTINGS, BLOCKING, ETC., SHALL BE INCLUDED IN THE CONTRACTOR'S UNIT PRICE FOR WATER MAIN.

9. COST OF ALL TRENCHING, PIPE, PIPE BEDDING, BACKFILL, YARD RESTORATION AND TEMPORARY PAVEMENT, DRIVEWAY AND SIDEWALK RESTORATION SHALL BE PART OF THE COST OF INSTALLING THE WATER MAIN. PERMANENT DRIVEWAY RESTORATION, SIDEWALK RESTORATION, CURB RESTORATION AND STREET RESTORATION WILL BE SEPARATE PAY ITEMS AND INCLUDE INCIDENTALS SUCH AS MAIL BOX, STREET SIGN, AND FENCE REMOVAL AND REPLACEMENT.

10. THE PROPOSED WATER MAIN SHALL BE CLASS 50 DUCTILE IRON PIPE OR D.R. 18 C900 PVC AS SHOWN ON THE PLANS. WITHIN STATE ROUTE R/W, PIPE MATERIAL SHALL BE CLASS 52 DUCTILE IRON.

11. PROPOSED WATER MAIN SHALL BE THOROUGHLY CLEANED, FLUSHED, AND DISINFECTED, AS PER NORTHERN KENTUCKY WATER DISTRICT'S SPECIFICATIONS.

12. PRESSURE TESTING SHALL BE DONE AS PER NORTHERN KENTUCKY WATER DISTRICT'S SPECIFICATIONS.

13. FOR THRUST BLOCKING REFER TO THE NORTHERN KENTUCKY WATER DISTRICT'S STANDARD DRAWING NUMBERS 104 AND 104A.

14. THE PROPOSED WATER MAIN SHALL HAVE A HORIZONTAL SEPARATION OF AT LEAST 3'-0" (MEASURED FROM OUTSIDE OF PIPE TO OUTSIDE OF PIPE) FROM ANY GAS MAIN.

15. A 10' MINIMUM LATERAL SEPARATION BETWEEN WATER MAINS AND SEWERS (DEFINED AS ANY SANITARY/COMBINED SEWER, SEPTIC TANK OR SUBSOIL TREATMENT SYSTEM) AND SEWER MANHOLES, MEASURED FROM THE OUTSIDE DIAMETER TO OUTSIDE, MUST BE MAINTAINED UNLESS A VARIANCE IS GRANTED FROM THE D.O.W.

16. ALL NEW WATER SERVICES SHALL BE 3/4" (OR MATCH EXISTING, AS INDICATED ON THE PLANS) TYPE K COPPER WITH 5/8" OR 2" WATER METERS (UNLESS OTHERWISE NOTED) MATERIAL PROVIDED BY THE NORTHERN KENTUCKY WATER DISTRICT. ALL RECONNECTED WATER SERVICES SHALL BE 3/4" OR 2" TYPE K COPPER.

17. THE CONTRACTOR SHALL COORDINATE ALL WORK WITHIN THE PUBLIC RIGHT-OF-WAY WITH KYTC, KENTON COUTY AND/OR ANY LOCAL MUNICIPALITY. TRAFFIC MUST BE MAINTAINED AT ALL TIMES DURING CONSTRUCTION. MAINTENANCE OF TRAFFIC SHALL CONFORM TO THE "MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES" REQUIREMENTS. NO ADDITIONAL PAYMENT WILL BE MADE FOR THIS WORK AND SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT.

18. **CONNECT SERVICE LINE (3/4" THRU 2"), INCLUDES THE LABOR, EQUIPMENT, EXCAVATION, BEDDING, BACKFILL, ASPHALT PAVEMENT , CONCRETE PAVEMENT, CONCRETE CURB, CONCRETE WALK AND YARD RESTORATION TO INSTALL THE SERVICE LINE AT THE LOCATIONS SHOWN ON THE PLANS OR AS DIRECTED, IN ACCORDANCE WITH THE SPECIFICATIONS AND STANDARD DRAWINGS, COMPLETE AND READY FOR USE. LEAD SERVICE LINES ENCOUNTERED BY THE EXCAVATION SHALL BE REPLACED FROM THE MAIN TO AND INCLUDING THE METER VAULT AND METER SETTING. ALL SERVICE LINE MATERIAL WILL BE SUPPLIED BY NKWD. PAID EACH (EA).**

19. THE CONTRACTOR SHALL COORDINATE WITH THE NORTHERN KENTUCKY WATER DISTRICT FOR FIELD INSPECTIONS.

20. FORTY-EIGHT (48) HOURS BEFORE EXCAVATION IS TO COMMENCE, THE CONTRACTOR SHALL NOTIFY THE FOLLOWING AGENCIES: THE KENTUCKY UTILITY PROTECTION SERVICE AND ALL OTHER UTILITIES THAT MAY HAVE UNDERGROUND UTILITIES INVOLVING THIS PROJECT AND ARE NON-MEMBERS OF KENTUCKY UNDERGROUND PROTECTION.

21. NO CONSTRUCTION SHALL COMMENCE UNTIL ALL KYTC, COUNTY AND/OR LOCAL PERMITS HAVE BEEN ISSUED AS REQUIRED.

22. CONTRACTOR IS RESPONSIBLE FOR DEWATERING TRENCH DURING INSTALLATION OF THE WATER MAIN.

23. THE COST OF TESTING THE MAIN, TEMPORARY FLUSHING DEVICES, TEMPORARY PLUG AND BLOCKS, AND ABANDONING THE EXISTING MAIN SHALL BE INCIDENTAL TO THE PROJECT.

24. ALL PAVEMENT SHALL CONFORM TO THE LATEST EDITION OF THE KENTUCKY DEPARTMENT OF HIGHWAYS STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION AND KENTON COUNTY SUBDIVISION REGULATIONS.

MAINTENANCE OF TRAFFIC NOTES

1. ALL MAINTENANCE OF TRAFFIC PROCEDURES SHALL MEET THE REQUIREMENT OF THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES AND SECTION 112 OF KTC STANDARD SPECIFICATIONS. THE CONTRACTOR SHALL MAINTAIN ACCESS TO LOCAL TRAFFIC (ACCESS TO RESIDENCES WITHIN CONSTRUCTION LIMITS) AT ALL TIMES. THE CONTRACTOR SHALL PROVIDE SUFFICIENT SIGN, WARNING LIGHTS, BARRICADES, OR OTHER NECESSARY DEVICES MAKE THE SITE SAFE TO THE TRAVELING PUBLIC.

2. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO SUBMIT TO THE ENGINEER AND THE OWNER A TRAFFIC CONTROL PLAN FOR THIS PROJECT.

3. PRIOR TO ANY CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY THE APPROPRIATE STATE, COUNTY AND/OR LOCAL POLICE DEPARTMENTS. AT ALL TIMES, EMERGENCY VEHICLES SHALL BE GIVEN ACCESS.

4. RESIDENTS OF THE PROJECT AREA SHALL BE ALLOWED ACCESS TO THEIR PROPERTY AT ALL TIMES.

5. EACH DRIVEWAY SHALL BE ACCESSIBLE WHENEVER POSSIBLE. WHEN PORTLAND CEMENT CONCRETE CONSTRUCTION AFFECTS A DRIVEWAY, THE CONTRACTOR SHALL NOTIFY THE AFFECTED OWNERS 24 HOURS IN ADVANCE AND ADVISE THEM TO FIND ALTERNATIVE PARKING FOR A PERIOD OF AT LEAST 10 CALENDAR DAYS AFTER THE POUR. ALTERNATIVE PARKING SHALL INCLUDE "ON STREET" PARKING WITH ACCESS TO THE PROPERTY. TEMPORARY SIDEWALKS, ETC. WILL BE NECESSARY TO PREVENT PERSONS FROM WALKING IN MUD IN ORDER TO ENTER THEIR PROPERTY. TEMPORARY BRIDGES, RAILINGS ETC. WILL BECOME NECESSARY IN ORDER TO CROSS FORMED CURB LINES, EXCAVATED AREAS BEHIND CURB LINES AND WALKWAYS, ETC.

EROSION CONTROL LEGEND

- IP — INLET PROTECTION (SEE DETAIL)
- SF — SILT FENCE (SEE DETAIL)

HATCH LEGEND

- 1-1/2" ASPHALT PAVEMENT MILL AND OVERLAY AREA
- TRENCH RESTORATION - ASPHALT PAVEMENT - SEE DETAIL SHEET
- TRENCH RESTORATION - CONCRETE PAVEMENT - SEE DETAIL SHEET
- TRENCH RESTORATION - 8" AGGREGATE PAVEMENT
- CONTROL DENSITY FILL - PAV'T TRENCH
- CONCRETE DRIVEWAY REPLACEMENT - SEE DETAIL SHEET
- CONCRETE WALK REPLACEMENT - SEE DETAIL SHEET
- ASPHALT DRIVEWAY REPLACEMENT - SEE DETAIL SHEET
- GRAVEL DRIVEWAY REPLACEMENT - SEE DETAIL SHEET
- CHANNEL LINING, CLASS II - SEE DETAIL SHEET

SYMBOL LEGEND

- EXISTING GAS LINE
- EXISTING GAS SERVICE
- EXISTING ELECTRIC (UNDERGROUND / OVERHEAD)
- EXISTING CABLE (UNDERGROUND / OVERHEAD)
- EXISTING TELEPHONE (UNDERGROUND / OVERHEAD)
- EXISTING WATER MAIN
- EXISTING WATER SERVICE
- EXISTING STORM SEWER
- EXISTING ROOF DRAIN
- EXISTING SANITARY SEWER
- EXISTING SANITARY FORCE MAIN
- EXISTING FIBER OPTICS
- EXISTING FENCE
- EXISTING CONTOURS (MAJOR)
- EXISTING CONTOURS (MINOR)
- EXISTING RIGHT OF WAY
- EXISTING PROPERTY LINE
- EXISTING EASEMENT
- EXISTING GUARDRAIL
- EXISTING TREE LINE
- EXISTING ROCK WALL

- PROPOSED GAS LINE
- PROPOSED GAS SERVICE
- EXISTING ELECTRIC (UNDERGROUND / OVERHEAD)
- PROPOSED CABLE (UNDERGROUND / OVERHEAD)
- PROPOSED TELEPHONE (UNDERGROUND / OVERHEAD)
- PROPOSED WATER MAIN
- PROPOSED WATER SERVICE
- PROPOSED STORM SEWER
- PROPOSED UNDERDRAIN
- PROPOSED UNDERDRAIN / DOWNSPOUT COLLECTOR COMBO
- PROPOSED SANITARY SEWER
- PROPOSED SANITARY FORCE MAIN
- PROPOSED FIBER OPTICS
- PROPOSED FENCE
- PROPOSED CONTOURS (MAJOR)
- PROPOSED CONTOURS (MINOR)
- PROPOSED RIGHT OF WAY
- PROPOSED PROPERTY LINE
- PROPOSED EASEMENT
- PROPOSED GUARDRAIL
- PROPOSED TREE LINE / CLEARING LIMITS
- PROPOSED DISTURBED LIMITS

- EXISTING FLAGPOLE
- EXISTING MAILBOX
- EXISTING SIGN
- EXISTING CABLE PEDESTAL
- EXISTING ELECTRIC PEDESTAL
- EXISTING PULL BOX
- EXISTING GROUND LIGHT
- EXISTING LIGHT POLE
- EXISTING ELECTRIC METER
- EXISTING ELECTRIC MANHOLE
- EXISTING GAS METER
- EXISTING GAS VALVE
- EXISTING GAS BOX
- EXISTING UTILITY POLE
- EXISTING GUY WIRE / ANCHOR
- EXISTING SANITARY MANHOLE
- EXISTING SANITARY CLEANOUT
- EXISTING STORM MANHOLE
- EXISTING SINGLE / DOUBLE CURB INLET
- EXISTING CATCH BASIN
- EXISTING STORM CLEANOUT
- EXISTING TELEPHONE MANHOLE
- EXISTING TELEPHONE PEDESTAL
- EXISTING FIRE HYDRANT
- EXISTING WATER METER
- EXISTING WATER VALVE
- EXISTING BUSHES / TREES
- EXISTING SURVEY BENCHMARK
- TEST BORING LOCATION

- PROPOSED FLAGPOLE
- PROPOSED MAILBOX
- PROPOSED SIGN
- PROPOSED CABLE PEDESTAL
- PROPOSED ELECTRIC PEDESTAL
- PROPOSED PULL BOX
- PROPOSED GROUND LIGHT
- PROPOSED LIGHT POLE
- PROPOSED ELECTRIC METER
- PROPOSED ELECTRIC MANHOLE
- PROPOSED GAS METER
- PROPOSED GAS VALVE
- PROPOSED GAS BOX
- PROPOSED UTILITY POLE
- PROPOSED GUY WIRE / ANCHOR
- PROPOSED SANITARY MANHOLE
- PROPOSED SANITARY CLEANOUT
- PROPOSED STORM MANHOLE
- PROPOSED SINGLE / DOUBLE CURB INLET
- PROPOSED CATCH BASIN
- PROPOSED STORM CLEANOUT
- PROPOSED TELEPHONE MANHOLE
- PROPOSED TELEPHONE PEDESTAL
- PROPOSED FIRE HYDRANT
- PROPOSED WATER METER
- PROPOSED WATER VALVE
- REMOVE EXISTING BUSH / TREE
- PROPOSED SLOPE DIRECTION

90% REVIEW

your trusted advisor — engineers architects planners consultants

NO	REVISION	DATE
.	.	.

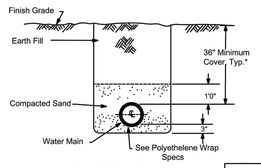
ISSUED FOR:	90% DESIGN
ISSUE DATE:	MAY 2024
SCALE:	AS SHOWN
DESIGNED BY:	JCOR
DRAWN BY:	JCOR
CHECKED BY:	JSHU

NORTHERN KENTUCKY WATER DISTRICT
SUBDISTRICT 'O'
-KENTON COUNTY -

GENERAL NOTES AND LEGEND

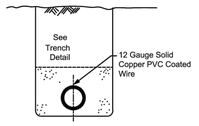
PROJECT NO.: 231591
DISCIPLINE: CIVIL
SHEET NAME: G-01
SHEET: 2 OF: 49

APPROVED FOR CONSTRUCTION
AUGUST 01, 2024
TRANSPORTATION CABINET
KENTUCKY DEPARTMENT OF HIGHWAYS



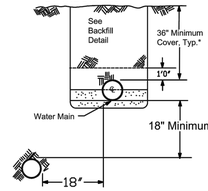
EARTH CUTS
TRENCH DETAIL

NOTE: 42" Minimum Cover, TYP. within State R/W



PVC PIPE

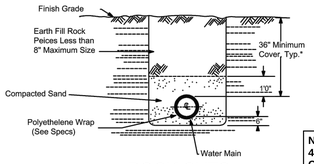
ALTERNATE TO BE USED ONLY ON APPROVAL BY THE DISTRICT



Water Main must be located a minimum of 10 feet lateral distance from anyexisting or future sewer lines or manholes, or as shown in the above alternate.

WATER MAIN PARALLELING
SEWER MAIN

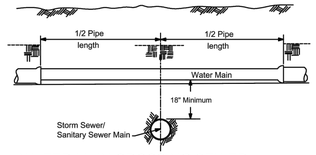
NOTE: 42" Minimum Cover, TYP. within State R/W



ROCK CUTS
& UNSTABLE SUBGRADE

TRENCH DETAIL

NOTE: 42" Minimum Cover, TYP. within State R/W



WATER MAIN CROSSING SEWER

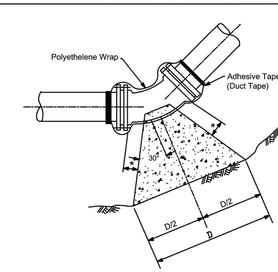
SUBDIVISION CONSTRUCTION

* Unless Otherwise Noted

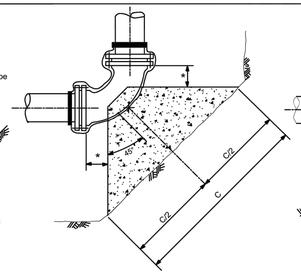
REVISION	BY	DATE
1 8" Min. Rock Size	KPT	1/2/20

N. KY. WATER DISTRICT
TYPICAL PIPELINE TRENCH DETAIL

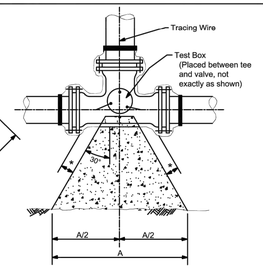
DRAWN BY: SAR
APPROVED: RH
DATE: 8/5/2014
STANDARD DRAWING NO: 103



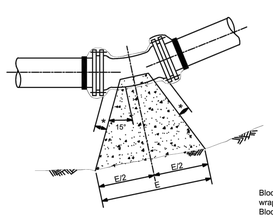
45° BEND



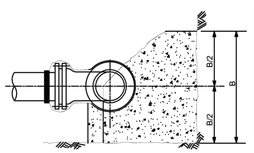
90° BEND



TEE (DEAD END OR FIRE HYDRANT SIMILAP



11 1/4° & 22 1/2° BEND



ELEVATION

Blocking shall be poured after blue polyethelene wrap is in place.
Blocking shall be inspected by the District prior to backfilling.

150 PSI/250 PSI

PIPE SIZE	A	B	C	D	E
6"	2'0"/2'6"	1'6"/1'6"	3'0"/3'6"	1'6"/2'0"	1'0"/1'0"
8"	2'6"/3'6"	2'0"/2'0"	3'6"/4'6"	2'0"/2'6"	1'0"/1'6"
10"	3'6"/4'0"	2'6"/2'6"	4'6"/5'6"	2'6"/3'0"	1'6"/1'6"
12"	4'0"/5'0"	3'0"/3'0"	5'6"/6'6"	3'0"/3'6"	1'6"/2'0"
16"	5'0"/6'0"	3'0"/4'0"	7'0"/8'6"	4'0"/4'6"	3'0"/3'0"
20"	6'0"/7'6"	5'0"/5'0"	7'0"/10'6"	4'0"/6'0"	3'0"/3'0"

* Distance to be 1/2" longer than entire length of the bolt used.

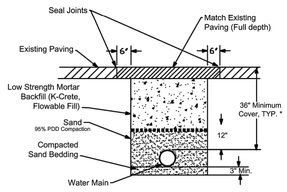
NOTES

1 DIP Fittings shall be per specifications.
2 Concrete to be 3500 psi.
3 All fittings to be Mechanical Joint.
4 Thrust blocks to be placed against undisturbed earth - use additional concrete as required for over excavation.
5 Blocking to be placed in a manner so that bolts can be removed without distrubing the block.

REVISION	BY	DATE
1 All sheets bm= NAVD 88	KPT	1/2/2020

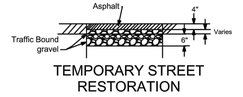
N. KY. WATER DISTRICT
CONCRETE THRUST BLOCK DETAIL

DRAWN BY: SAR
APPROVED: RH
DATE: 8/5/2014
STANDARD DRAWING NO: 104

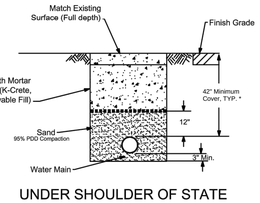


UNDER ASPHALT CONCRETE
PAVEMENT

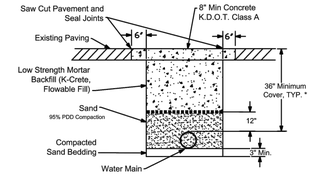
PDD= Standard Proctor Dry Density
-ASTM D698



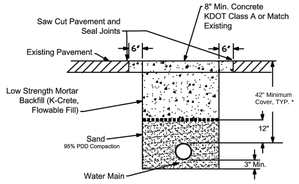
TEMPORARY STREET
RESTORATION



UNDER SHOULDER OF STATE
MAINTAINED STREET



UNDER CONCRETE PAVEMENT



UNDER STATE MAINTAINED STREET

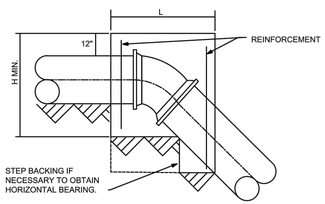
* 48" Maximum Cover

ALL CONSTRUCTION

REVISION	BY	DATE
1 All sheets bm= NAD 1983/88	KPT	1/2/2020

N. KY. WATER DISTRICT
TYPICAL PIPELINE TRENCH DETAIL

DRAWN BY: SAR
APPROVED: RH
DATE: 8/5/2014
STANDARD DRAWING NO: 103A



SECTION A-A

CONCRETE BACKING FOR VERTICAL BENDS

1. BACKING DESIGNED FOR 3000 POUNDS PER SQUARE FOOT SOIL BEARING AND 150 POUNDS PER SQUARE INCH INTERNAL PRESSURE.

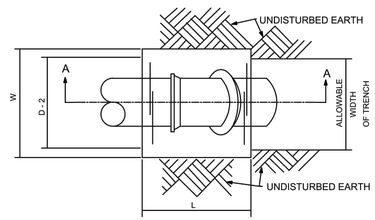
2. PROVIDE MINIMUM CONCRETE REINFORCEMENT OF 2 PAIR OF TWO 5" "U" BARS @ 12" C.

3. CENTER BACKING ON BEND.

BLOCKING FOR SIZES NOT SHOWN SHALL USE THE NEXT LARGER SIZE.

SIZE of PIPE	DEGREE OF BEND 11 1/4 L'	W'	H'	VOL.	22 1/2 L'	W'	H'	VOL.	45 L'	W'	H'	VOL.
4"	12	24	16	2.7	15	30	18	4.7	22	36	24	11.0
6"	12	43	18	5.4	16	48	34	15.1	30	55	24	22.9
8"	12	54	24	9.0	18	57	36	21.4	36	57	33	39.2
12"	20	63	36	26.3	37	62	37	49.2	48	62	51	88.0
16"	31	65	38	44.4	60	65	39	88.2	65	65	65	159.2
20"	45	70	40	73.0	56	70	60	136.4	72	76	78	247.5
24"	47	72	54	106.0	67	74	69	198.4	88	84	84	360.1

NOTE: VOLUMES GIVEN IN CUBIC FEET



PLAN

REVISION	BY	DATE
1 8" Min. Rock Size	KPT	1/2/20

N. KY. WATER DISTRICT
CONCRETE THRUST BLOCKING FOR VERTICAL BENDS

DRAWN BY: SAR
APPROVED: RH
DATE: 8/5/2014
STANDARD DRAWING NO: 104A

90% REVIEW

your trusted advisor
consultants
engineers
architects
planners

NO	REVISION	DATE
-	-	-

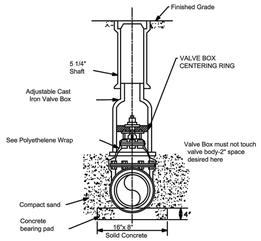
ISSUED FOR: 90% DESIGN
ISSUE DATE: MAY 2024
SCALE: AS SHOWN
DESIGNED BY: JCOR
DRAWN BY: JCOR
CHECKED BY: JSHU

NORTHERN KENTUCKY WATER DISTRICT
SUBDISTRICT 'O'
-KENTON COUNTY -

DETAILS

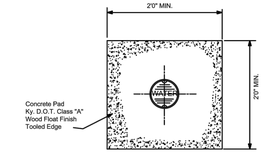
PROJECT NO.: 231591
DISCIPLINE: CIVIL
SHEET NAME: G-02
SHEET: 3 OF 49

APPROVED
AUGUST 13, 2024
TRANSPORTATION CABINET
Kentucky Transportation Cabinet

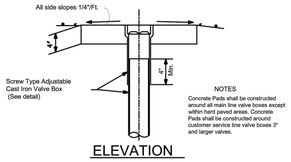


Detail Valve Box Installation

Note:Valve box shall not transmit shock or stress to the valve



PLAN



NOTES

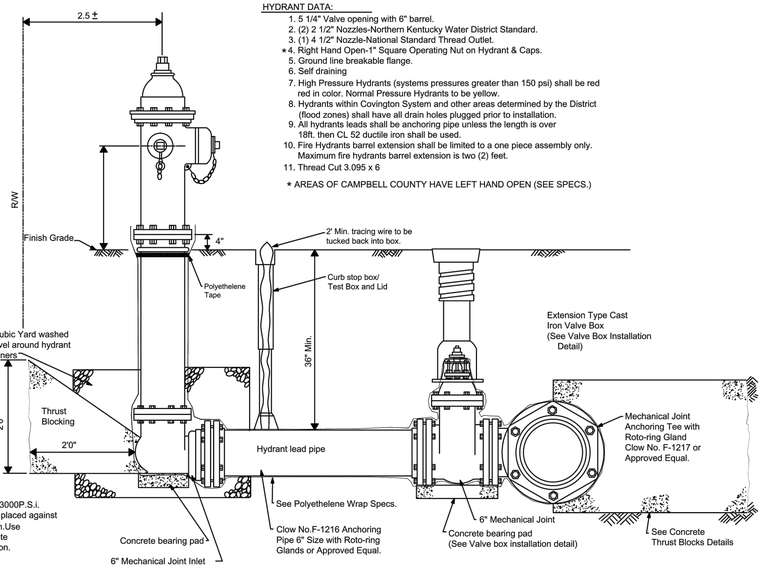
Concrete Pads shall be constructed around all main line valve boxes except within hard paved areas. Concrete Pads shall be constructed around customer service line valve boxes 3" and larger valves.

ELEVATION

REVISION	BY	DATE
* 20" Concrete pad size changed to 24" Square Box Installation	MPS	6/2023
	MPS	6/2023

N. KY. WATER DISTRICT
VALVE BOX AND VALVE PAD DETAIL

DRAWN BY: SAR
APPROVED: RH
DATE: 8/5/2014
STANDARD DRAWING NO: 105



HYDRANT DATA:

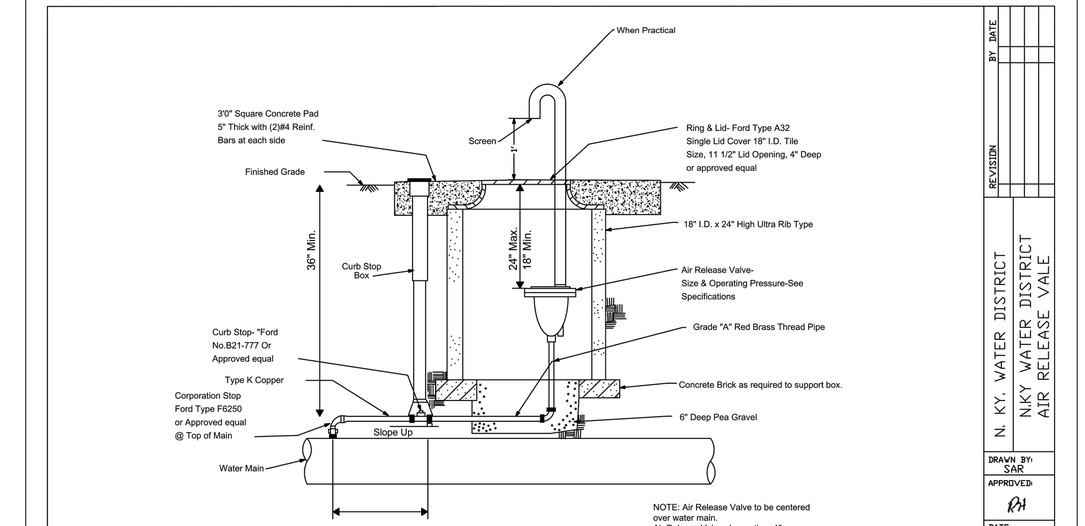
1. 5 1/4" Valve opening with 6" barrel.
2. (2) 2 1/2" Nozzles-Northern Kentucky Water District Standard.
3. (1) 4 1/2" Nozzle-National Standard Thread Outlet.
4. * Right Hand Open-1" Square Operating Nut on Hydrant & Caps.
5. Ground line breakable flange.
6. Self draining
7. High Pressure Hydrants (systems pressures greater than 150 psi) shall be red red in color. Normal Pressure Hydrants to be yellow.
8. Hydrants within Covington System and other areas determined by the District (flood zones) shall have all drain holes plugged prior to installation.
9. All hydrants leads shall be anchoring pipe unless the length is over 18ft. then CL 52 ductile iron shall be used.
10. Fire Hydrants barrel extension shall be limited to a one piece assembly only. Maximum fire hydrants barrel extension is two (2) feet.
11. Thread Cut 3.095 x 6

* AREAS OF CAMPBELL COUNTY HAVE LEFT HAND OPEN (SEE SPECS.)

REVISION	BY	DATE
Blocking note,valve,anchorage	MPS	6/2023
Extension to barrel	MPS	12/2020
Blocking leads NW	MPS	12/2020

N. KY. WATER DISTRICT
HYDRANT ASSEMBLY

DRAWN BY: SAR
APPROVED: RH
DATE: 8/5/2014
STANDARD DRAWING NO: 109

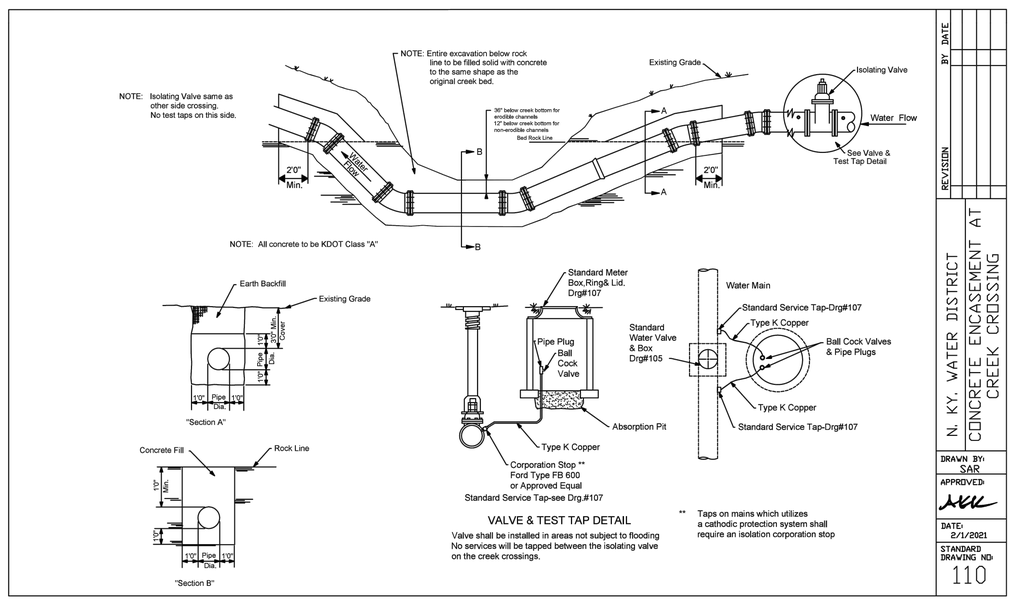


NOTE: Air Release Valve to be centered over water main.
Air Release Valves larger than 1" use:
vault size 24"x24"
lid Ford Type MC 24 &
Extension Ring Ext-2 or approved equal.

REVISION	BY	DATE

N. KY. WATER DISTRICT
N.KY WATER DISTRICT AIR RELEASE VALE

DRAWN BY: SAR
APPROVED: RH
DATE: 8/5/2014
STANDARD DRAWING NO: 106



VALVE & TEST TAP DETAIL

Valve shall be installed in areas not subject to flooding No services will be tapped between the isolating valve on the creek crossings.

** Taps on mains which utilizes a cathodic protection system shall require an isolation corporation stop

REVISION	BY	DATE

N. KY. WATER DISTRICT
CONCRETE ENCASEMENT AT CREEK CROSSING

DRAWN BY: SAR
APPROVED: MKK
DATE: 2/1/2021
STANDARD DRAWING NO: 110

90% REVIEW

your trusted advisor consultants engineers architects planners

NO	REVISION	DATE
-	-	-

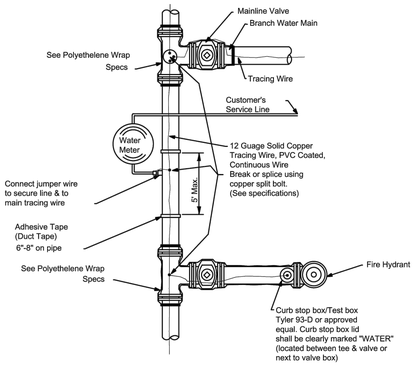
ISSUED FOR: 90% DESIGN
ISSUE DATE: MAY 2024
SCALE: AS SHOWN
DESIGNED BY: JCOR
DRAWN BY: JCOR
CHECKED BY: JSHU

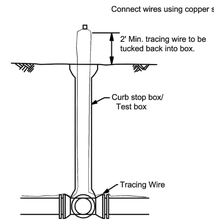
NORTHERN KENTUCKY WATER DISTRICT
SUBDISTRICT 'O'
-KENTON COUNTY -

DETAILS

PROJECT NO. 231591
DISCIPLINE: CIVIL
SHEET NAME: G-03
SHEET: 4 OF 49

APPROVED FOR CONSTRUCTION
ADJUSTMENTS MAY BE REQUIRED DURING CONSTRUCTION
Kentucky Transportation Cabinet





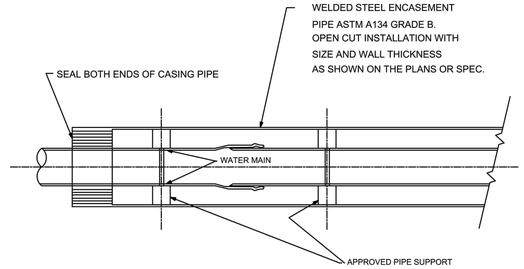
DUCTILE IRON AND PVC PIPE WITH DUCTILE IRON FITTINGS

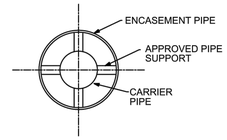
Note: Curb stop box/test box shall not be installed in paved areas.

REVISION	BY	DATE

N. KY. WATER DISTRICT
TRACING WIRE INSTALLATION DETAIL

DRAWN BY: SAR
APPROVED: DH
DATE: 8/5/2014
STANDARD DRAWING NO: 111





1. All carrier pipe placed in steel casing pipe shall be minimum class 50 ductile iron pipe and conform to the latest edition of AWWA C151.
2. Carrier pipe gaskets shall develop a wedging action between pairs of high-strength stainless steel elements spaced around the gasket (FIELD LOK , FASTGRIP, or approved equal gaskets).

NOTE: CASING PIPE JOINTS SHALL BE SEAM WELDED SO THAT CASING IS WATER TIGHT FROM END TO END.

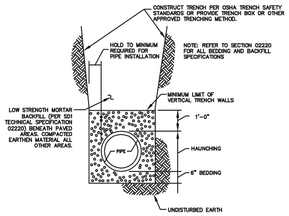
ENCASEMENT PIPE DETAIL

NO SCALE

REVISION	BY	DATE
1 Remove Detail #3	JS	2/7/20

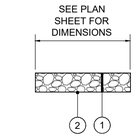
N. KY. WATER DISTRICT
ENCASEMENT PIPE DETAIL

DRAWN BY: SAR
APPROVED: DH
DATE: 8/5/2014
STANDARD DRAWING NO: 114



STORM TRENCH DETAIL

N.T.S.



ROCK CHANNEL PROTECTION

N.T.S.

1. ITEM 703 - 12" CHANNEL LINING, CLASS II
2. NON WOVEN GEOTEXTILE FILTER FABRIC

90% REVIEW

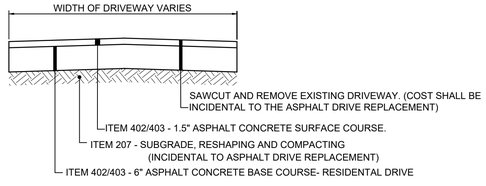
your trusted advisor consultants engineers architects planners

NO	REVISION	DATE
	.	

ISSUED FOR:	90% DESIGN
ISSUE DATE:	MAY 2024
SCALE:	AS SHOWN
DESIGNED BY:	JCOR
DRAWN BY:	JCOR
CHECKED BY:	JSHU

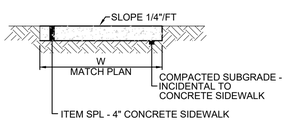
NORTHERN KENTUCKY WATER DISTRICT
SUBDISTRICT 'O'
-KENTON COUNTY -

DETAILS



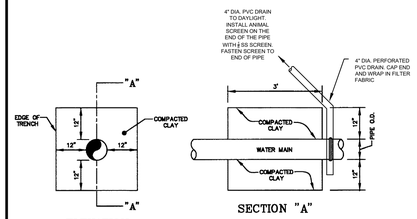
ASPHALT DRIVEWAY REPLACEMENT

N.T.S.



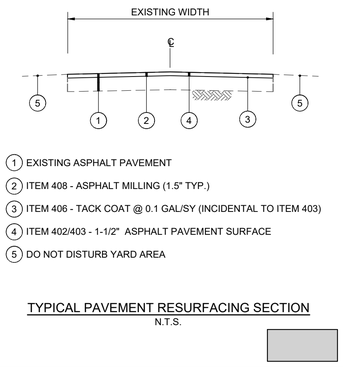
4" CONCRETE SIDEWALK REPLACEMENT DETAIL

(SAWCUTTING AND REMOVAL OF EXISTING CONCRETE SIDEWALK AND EXCAVATION TO PROPOSED SUBGRADE INCIDENTAL TO SIDEWALK REPLACEMENT)



CLAY BULKHEAD

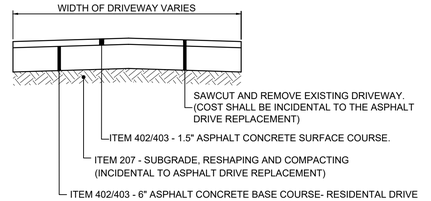
N.T.S.



1. EXISTING ASPHALT PAVEMENT
2. ITEM 408 - ASPHALT MILLING (1.5" TYP.)
3. ITEM 406 - TACK COAT @ 0.1 GAL/SY (INCIDENTAL TO ITEM 403)
4. ITEM 402/403 - 1-1/2" ASPHALT PAVEMENT SURFACE
5. DO NOT DISTURB YARD AREA

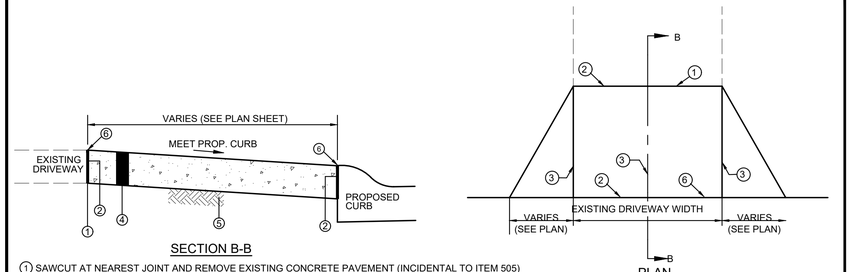
TYPICAL PAVEMENT RESURFACING SECTION

N.T.S.



GRAVEL DRIVEWAY REPLACEMENT

N.T.S.



SECTION B-B

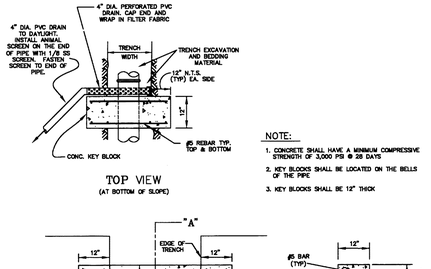
1. SAWCUT AT NEAREST JOINT AND REMOVE EXISTING CONCRETE PAVEMENT (INCIDENTAL TO ITEM 505)
2. 1" PREFORMED EXPANSION JOINT MATERIAL (FLEXIBLE FOAM-CERAMAR BY W.R. MEADOWS OR APPROVED EQUAL)
3. TOOLED JOINT
4. ITEM 505 - 6" CONCRETE DRIVEWAY/APRON (OR MATCH EXISTING WHICHEVER IS GREATER)
5. COMPACTED SUBGRADE (INCIDENTAL TO ITEM 505 - 6" CONCRETE DRIVEWAY/APRON)
6. SEAL JOINT WITH GRAY SELF LEVELING SEALANT (SIKA FLEX OR APPROVED EQUAL)

NOTE:

1. ANY YARD AREA DISTURBED BY THE CONSTRUCTION OF THE DRIVEWAY APRON SHALL BE RESTORED WITH TOPSOIL, SEED AND MULCH (INCIDENTAL TO CONCRETE DRIVEWAY APRON REPLACEMENT).
2. ALL EXCAVATION REQUIRED FOR THE PLACEMENT OF THE PROPOSED DRIVEWAY SHALL BE INCIDENTAL TO CONCRETE DRIVEWAY REPLACEMENT BID ITEM.

CONCRETE DRIVEWAY REPLACEMENT

N.T.S.

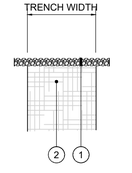


NOTE:

1. CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 3,000 PSI @ 28 DAYS
2. KEY BLOCKS SHALL BE LOCATED ON THE BELLS OF THE PIPE
3. KEY BLOCKS SHALL BE 12" THICK

CONCRETE KEY BLOCK

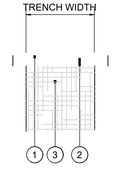
(IN BEDROOCK)
N.T.S.



AGGREGATE ROADWAY REPLACEMENT SECTION

N.T.S.

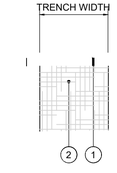
1. ITEM 302 - 8" CRUSHED STONE BASE, (LESS THAN 7% FINES) COMPACTED TO 100% (ASTM D698).
2. CONTROL DENSITY FILL PER NKWD SPECIFICATIONS (SEE DETAIL SHEET (G-02)



ASPHALT ROADWAY REPLACEMENT SECTION

N.T.S.

1. ITEM 402/403 - 1.5" ASPHALT CONCRETE SURFACE COURSE
2. ITEM 402/403 - 7.75" ASPHALT CONCRETE BASE (OR MATCH EXISTING)
3. CONTROL DENSITY FILL PER NKWD SPECIFICATIONS (SEE DETAIL SHEET (G-02)



CONCRETE ROADWAY REPLACEMENT SECTION

N.T.S.

1. ITEM SPL - 8" PORTLAND CEMENT CONCRETE PAVEMENT - PER KENTON COUNTY SUBDIVISION REGULATIONS (OR MATCH EXISTING)
2. CONTROL DENSITY FILL PER NKWD SPECIFICATIONS (SEE DETAIL SHEET (G-02)

NOTE:
GENE STREET HAS AN ADDITIONAL 1.5" ASPHALT OVERLAY ON THE CONCRETE PAVEMENT

PROJECT NO.	
231591	
DISCIPLINE:	
CIVIL	
SHEET NAME	
G-04	
SHEET	OF
5	49

APPROVED
Addressing Comments
Resubmittal Required
Not Approved for Construction

\\CTC-LOCAL\CT_DATA\PROJECTS\2023\231591\DWG\SHEETS\C_231591-00_DETAIL SHEET.DWG - NKWD DTLS (3) - 5/28/2024 2:43:27 PM - JAMES CORNELL

SEDIMENT BASINS

DEFINITION
A TEMPORARY BARRIER OR DAM CONSTRUCTED ACROSS A WATERCOURSE OR AT OTHER SUITABLE LOCATION TO RETAIN SEDIMENT AND OTHER WATERBORNE DEBRIS.

SCOPE
THIS STANDARD ESTABLISHES MINIMUM ACCEPTABLE QUALITY FOR THE DESIGN AND CONSTRUCTION OF TEMPORARY SEDIMENT BASINS FORMED BY AN EMBANKMENT, EXCAVATION OR A COMBINATION OF EMBANKMENT AND EXCAVATION. THE STANDARD IS LIMITED TO SITES WHERE:

1. FAILURE OF THE STRUCTURE WOULD NOT RESULT IN LOSS OF LIFE; DAMAGE TO HOMES; COMMERCIAL OR INDUSTRIAL BUILDINGS; DAMAGE TO HIGHWAYS OR RAILROADS OR INTERRUPTION OF USE OR SERVICE OF PRIVATE UTILITIES.
2. THE HEIGHT OF DAM IS 25 FEET OR LESS, AS MEASURED FROM THE NATURAL STREAMBED AT THE CENTERLINE OF DAM TO THE TOP OF DAM.
3. THE TOTAL VOLUME OF STORAGE IS 150 ACRE-FEET OR LESS.
4. THE DRAINAGE AREA IS 100 ACRES OR LESS.
5. THE BASIN WILL BE REMOVED WITHIN A THREE-YEAR PERIOD AFTER CONSTRUCTION.

PURPOSE
TEMPORARY SEDIMENT BASINS ARE USED AS A MEANS OF TRAPPING AND STORING SEDIMENT FROM ERODING AREAS IN ORDER TO PROTECT DOWNSTREAM AREAS FROM DAMAGE RESULTING FROM SEDIMENTATION AND WATERBORNE DEBRIS.

CONDITIONS WHERE PRACTICE APPLIES
TEMPORARY SEDIMENT BASINS APPLY WHERE PHYSICAL SITE CONDITIONS OR OTHER RESTRICTIONS PRECLUDE THE INSTALLATION OF EROSION CONTROL MEASURES TO ADEQUATELY CONTROL EROSION AND SEDIMENTATION. IT MAY BE USED DOWNSLOPE FROM CONSTRUCTION OPERATIONS WHICH EXPOSE AREAS TO EROSION. TEMPORARY SEDIMENT BASINS WILL BE REMOVED AFTER THE EXPOSED AREAS ARE ADEQUATELY PROTECTED AGAINST EROSION BY VEGETATIVE OR MECHANICAL MEANS.

COMPLIANCE WITH LAWS AND REGULATIONS
DESIGN AND CONSTRUCTION SHALL COMPLY WITH ALL LOCAL LAWS, ORDINANCES, RULES AND REGULATIONS.

LOCATION
TO IMPROVE THE EFFECTIVENESS OF THE BASIN, IT SHOULD BE LOCATED SO AS TO INTERCEPT THE LARGEST POSSIBLE AMOUNT OF RUNOFF FROM THE DISTURBED AREA. THE BEST LOCATIONS ARE GENERALLY LOW AREAS AND NATURAL DRAINAGEWAYS BELOW DISTURBED AREAS. DRAINAGE INTO THE BASIN CAN BE IMPROVED BY THE USE OF DIVERSION DIKES AND DITCHES. THE BASIN MUST NOT BE LOCATED IN A LIVE STREAM BUT SHOULD BE LOCATED TO TRAP SEDIMENT-LADEN RUNOFF BEFORE IT ENTERS THE STREAM. THE BASIN SHOULD NOT BE LOCATED WHERE ITS FAILURE WOULD RESULT IN THE LOSS OF LIFE OR IN INTERRUPTION OF THE USE OR SERVICE OF PUBLIC UTILITIES OR ROADS.

MULTIPLE USE
SEDIMENT BASINS MAY BE DESIGNED AS PERMANENT STRUCTURES TO REMAIN IN PLACE AFTER CONSTRUCTION IS COMPLETED. SITE CONDITIONS MAY MAKE THE USE OF THESE STRUCTURES DESIRABLE FOR STORMWATER DETENTION PURPOSES. WHEREVER THESE STRUCTURES ARE TO BECOME PERMANENT, OR IF THEY EXCEED THE SIZE LIMITATIONS OF THE DESIGN CRITERIA, THEY MUST BE DESIGNED AS PERMANENT PONDS BY A QUALIFIED PROFESSIONAL ENGINEER. PERMANENT PONDS ARE BEYOND THE SCOPE OF THESE STANDARDS AND SPECIFICATIONS. THE PERMANENT STRUCTURES MUST BE SUBMITTED WITH CONSTRUCTION DRAWINGS FOR REVIEW AND ACCEPTANCE BY THE CITY ENGINEER.

MAINTENANCE BASINS SHALL BE CHECKED WEEKLY AND CLEANED WHEN NO LONGER EFFECTIVE.

STORM DRAIN INLET PROTECTION
DEFINITION
A SEDIMENT FILTER INSTALLED AROUND A STORM DRAIN INLET OR CURB INLET TO REDUCE SEDIMENT DISCHARGE.

PURPOSE
TO PREVENT SEDIMENT FROM ENTERING THE STORM DISCHARGE SYSTEMS PRIOR TO PERMANENT STABILIZATION OF THE DISTURBED DRAINAGE AREA. DIFFERENT TYPES OF STRUCTURES ARE APPLICABLE TO DIFFERENT CONDITIONS.

STORM WATER POLLUTION PREVENTION NOTES

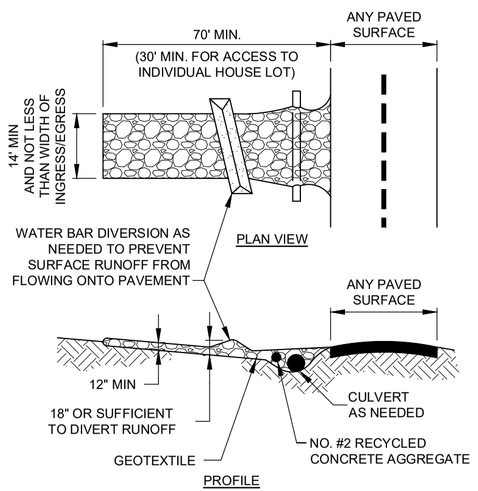
1. SANITATION DISTRICT NO. 1 IS TO BE CONTACTED 72 HOURS PRIOR TO ANY CONSTRUCTION ACTIVITY AT 859-578-6892
2. ALL EROSION AND SEDIMENTATION CONTROL SHALL BE PERFORMED AS SHOWN ON THE PLANS, AND SHALL BE IN COMPLIANCE WITH THE LATEST CONSTRUCTION ACTIVITY " NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM" RULES AND REGULATIONS.
3. A COPY OF THE STORM WATER POLLUTION PREVENTION PLAN (SWPPP) AND A COPY OF THE "NOTICE OF INTENT" (NOI) SHALL BE KEPT ON SITE.
4. AN AMENDMENT OF THE SWPPP IS REQUIRED WHENEVER A CHANGE IN DESIGN, CONSTRUCTION, AND OPERATION OR MAINTENANCE HAS A SIGNIFICANT EFFECT ON THE POTENTIAL FOR THE DISCHARGE OF POLLUTANTS, OR IF THE SWPPP PROVES TO BE INEFFECTIVE IN ACHIEVING THE GENERAL OBJECTIVES OF THE SWPPP.
5. THE CONTRACTOR SHALL ALSO MAINTAIN THE FOLLOWING RECORDS ON SITE:
   A. GENERAL CONTRACTOR AND/OR SUBCONTRACTOR SWPPP CERTIFICATIONS
   B. THE DATE, TIME, AND EXACT LOCATION OF THE INSPECTION, AND THE NAME OF THE INSPECTOR
   C. AN ASSESSMENT OF THE CONDITION OF THE EROSION CONTROLS
   D. A DESCRIPTION OF ANY EROSION CONTROL IMPLEMENTATION AND MAINTENANCE PERFORMED
   E. A DESCRIPTION OF THE PRESENT PHASE OF CONSTRUCTION AT THE SITE
6. CONSTRUCTION SEQUENCE
   - ALL PERIMETER SILT FENCE, INLET PROTECTION AND OTHER EROSION CONTROLS SHALL BE IN PLACE BEFORE ANY OTHER EARTH MOVING ACTIVITIES BEGIN.
   - THE CONTRACTOR SHALL CLEAR AND GRUB ONLY THE AREAS PLANNED FOR EARTH MOVING.
   - REMOVE TOPSOIL, STOCKPILE IT, AND INSTALL SILT FENCE AROUND PERIMETER.
   - SEED SOIL STOCKPILE WITH PERENNIAL RYE GRASS AND MULCH WITH STRAW IF NO TO BE DISTURBED FOR MORE THAN 21 DAYS.
   - CONSTRUCT DETENTION BASIN AND CONTROL STRUCTURE. DETENTION BASIN SHALL BE USED AS A SEDIMENT BASIN UNTIL THE SITE IS STABILIZED.
   - INSTALL STORM SEWER SYSTEM AND SURFACE STORM INLET AND MANHOLE PROTECTION.
   - ESTABLISH A TEMPORARY SEEDING ON ALL BARE AREAS THAT ARE TO REMAIN UNDISTURBED FOR MORE THAN 21 DAYS. SEED WITH PERENNIAL RYE GRASS MULCH WITH STRAW.
   - IMMEDIATE AFTER TOPSOIL HAS BEEN PLACED, STABILIZE THE SAME SURFACE AREA WITH FINAL SEED AND MULCH 7 DAYS AFTER REACHING FINAL GRADE.
   - AFTER THE VEGETATION HAS BECOME WELL ESTABLISHED, REMOVE TEMPORARY EROSION OR SEDIMENT CONTROL PRACTICES.
7. EROSION CONTROLS MUST BE INSPECTED ONCE EVERY 7 DAYS AND WITHIN 24 HOURS OF 0.5" OR GREATER RAINFALL. REMOVE ACCUMULATED SEDIMENT FROM EROSION CONTROLS.
8. TEMPORARY SEEDING SHALL BE PERENNIAL RYE GRASS (40 LB / ACRED) AND MULCH AT 3 BALES OF STRAW PER 1000 S.F.
9. CONTRACTOR IS RESPONSIBLE FOR OBTAINING BORROW MATERIAL ONSITE AND / OR DISPOSING OF EXCESS MATERIAL OFF SITE AS REQUIRED TO MEET INDICATED DESIGN ELEVATIONS.
10. DEBRIS SHALL BE COLLECTED WITHIN PROPERTY LIMITS WEEKLY OR AS NEEDED FOR PUBLIC SAFETY. SURROUNDING STREETS AFFECTED BY THE CONSTRUCTION SHALL BE CLEANED DAILY OR AS NEEDED FOR PUBLIC SAFETY. SEE CONSTRUCTION ENTRANCE DETAIL IN SWPPP DETAILS SHEET.
11. THE CONSTRUCTION OF BMPs SHALL BE REVISED OR ADDED IF DEEMED NECESSARY PER SECTION 1000 OF THE SANITATION DISTRICT 1 REGULATIONS.
12. CONTACT SANITATION DISTRICT NO. 1 72 HOURS PRIOR TO INSTALLATION OF THE WATER QUALITY FEATURE.

NOTES:
1) SUBSOILING SHALL OCCUR WHEN SOIL MOISTURE IS LOW ENOUGH TO ALLOW THE SOIL TO CRACK OR FRACTURE. SUBSOILING IS NOT PERMITTED ON SLIP-PRONE AREAS.
2) THE SITE SHALL BE GRADED TO PERMIT THE USE OF CONVENTIONAL EQUIPMENT FOR SEEDBED PREPARATION AND SEEDING.
3) TOPSOIL SHALL BE APPLIED WHERE NEEDED TO ESTABLISH VEGETATION.
4) THE SEEDBED SHALL BE PREPARED BY APPLYING AGRICULTURAL GROUND LIMESTONE OR FERTILIZER AS RECOMMENDED BY A SOIL TEST. IN LIEU OF A SOIL TEST, APPLY LIME AT 2 TONS/AC. OR FERTILIZER AT 500 LB/AC. OF 10-10-10 OR 12-12-12 ANALYSIS. LIME AND FERTILIZER SHALL BE WORKED INTO THE SOIL TO A DEPTH OF 3".
5) APPLY SEED UNIFORMLY ON FIRM, MOIST SEED BED.
6) SEEDING SHOULD BE APPLIED FROM MARCH 1 TO MAY 31 OR AUGUST 1 TO SEPTEMBER 30. IF SEEDING OCCURS OUTSIDE OF THESE DATES, ADDITIONAL MULCH AND IRRIGATION MAY BE REQUIRED TO ENSURE A MINIMUM OF 80% GERMINATION. TILLAGE FOR SEEDBED PREPARATION SHALL OCCUR WHEN THE SOIL IS DRY ENOUGH TO CRUMBLE AND NOT FORM RIBBONS WHEN COMPRESSED BY HAND.
7) SEEDING SHOULD NOT BE APPLIED FROM OCTOBER 1 TO NOVEMBER 20 BECAUSE SEEDS MAY GERMINATE, BUT WILL NOT SURVIVE THE WINTER. USE THE FOLLOWING METHODS FOR DORMANT SEEDING:
   - FROM OCTOBER 1 TO NOVEMBER 20, INCREASE THE SEEDING RATE BY 50%, PREPARE THE SEED BED, ADD LIME AND FERTILIZER, MULCH AND ANCHOR.
   - FROM NOVEMBER 20 TO MARCH 15, ONLY IF SOIL CONDITIONS PERMIT, INCREASE THE SEEDING RATE BY 50%, PREPARE THE SEED BED, ADD LIME AND FERTILIZER, APPLY THE SEED MIXTURE, MULCH AND ANCHOR.
8) APPLY MULCH MATERIAL IMMEDIATELY AFTER SEEDING.
9) PERMANENT SEEDING SHALL INCLUDE IRRIGATION TO ESTABLISH VEGETATION DURING DRY OR HOT WEATHER OR ON ADVERSE SITE CONDITIONS AS NEEDED. AVOID EXCESSIVE IRRIGATION AND MONITOR TO PREVENT EROSION AND DAMAGE FROM RUNOFF.
10) PERMANENT SEEDING SHALL NOT BE CONSIDERED ESTABLISHED FOR AT LEAST 1 FULL YEAR FROM THE TIME OF PLANTING. DURING THIS PERIOD, INSPECT FOR SOIL EROSION OR PLANT LOSS AND REPAIR BARE OR SPARSE AREAS, FILL GULLIES, RE-FERTILIZE, RE-SEED OR RE-MULCH AS NEEDED.
11) A MINIMUM OF 70% GROWTH DENSITY, BASED ON A VISUAL INSPECTION, MUST EXIST FOR AN ADEQUATE PERMANENT VEGETATIVE PLANTING.

PERMANENT SEEDING FERTILIZATION AND MOWING CHART				
MIXTURE	FORMULA	LB/ AC.	TIME	MOW
CREEPING RED FESCUE DOMESTIC RYEGRASS KENTUCKY BLUEGRASS	10-10-10	500	FALL, YEARLY, OR AS NEEDED	≥3"
TALL FESCUE	10-10-10	500		≥4"
TURF-TYPE FESCUE	10-10-10	500		
CROWN VETCH FESCUE	0-20-20	400	SPRING, AND YEARLY AFTER ESTABLISHED	DO NOT MOW
FLAT PEA FESCUE	0-20-20	400		

PERMANENT SEEDING SPECIES SELECTION		
SEED MIX	SEED RATE LB/AC.	NOTES:
GENERAL USE		
CREEPING RED FESCUE DOMESTIC RYEGRASS KENTUCKY BLUEGRASS	20 - 40 10 - 20 20 - 40	FOR CLOSE MOWING AND WATERWAYS WITH ≤2.0 FT./SEC. VELOCITY
TALL FESCUE	40 - 50	
TURF-TYPE FESCUE	90	
STEEP BANKS OR CUT SLOPES		
TALL FESCUE	40 - 50	
CROWN VETCH TALL FESCUE	10 - 20 20 - 30	DO NOT SEED LATER THAN AUGUST
FLAT PEA TALL FESCUE	20 - 25 20 - 30	DO NOT SEED LATER THAN AUGUST
ROAD DITCHES AND SWALES		
TALL FESCUE	40 - 50	
TURF-TYPE FESCUE KENTUCKY BLUEGRASS	90 5	
LAWN		
KENTUCKY BLUEGRASS PERENNIAL RYEGRASS	100 - 120 100 - 120	
KENTUCKY BLUEGRASS CREEPING RED FESCUE	100 - 120 100 - 120	FOR SHADED AREAS

PERMANENT SEEDING DETAIL
SCALE: NONE



NOTES:
1. PLACE GEOTEXTILE OVER THE ENTIRE AREA PRIOR TO PLACING STONE MEETING THE MIN. SPECIFICATIONS:

A.	TENSILE STRENGTH	= 200 LBS.
B.	PUNCTURE STRENGTH	= 80 PSI
C.	TEAR STRENGTH	= 50 LBS.
D.	BURST STRENGTH	= 320 PSI
E.	ELONGATION	= 20%
F.	EQUIVALENT OPENING SIZE	≤ 0.6 MM
G.	PERMITTIVITY	= 0.001 CM/SEC

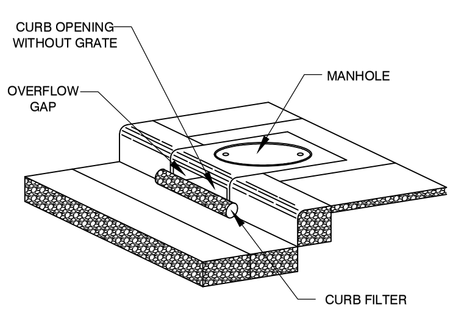
2. APPLY ADDITIONAL STONE AS CONDITIONS DEMAND AND REPLENISH STONE WHEN THE DEPTH IS LESS THAN 6". REMOVE AND REPLACE IF STONES BECOMES MUD-LADEN.
3. IMMEDIATELY REMOVE MUD DROPPED, WASHED OR TRACKED ONTO ROADS OR ANY SURFACE WHERE RUNOFF IS NOT CHECKED BY SEDIMENT CONTROLS BY SCRAPING OR SWEEPING.
4. CONSTRUCTION ENTRANCES SHALL NOT BE RELIED UPON TO REMOVE MUD FROM VEHICLES OR TO PREVENT OFF-SITE TRACKING. VEHICLES THAT ENTER AND LEAVE THE CONSTRUCTION SITE SHALL BE RESTRICTED FROM MUDDY AREAS.

CE **CONSTRUCTION ENTRANCE**
SCALE: NONE

NOTES:
1) THE SEED BED SHALL BE PULVERIZED AND LOOSE TO ENSURE THE SUCCESS OF ESTABLISHING VEGETATION.
2) SOIL AMENDMENTS MAY BE REQUIRED TO ESTABLISH ADEQUATE VEGETATION. PERFORM SOIL TESTS ON THE SITE TO PREDICT THE NEED FOR LIME AND FERTILIZER.
3) APPLY SEED UNIFORMLY. COVER BROADCASTED SEED BY RAKING OR DRAGGING AND THEN LIGHTLY TAMPING INTO PLACE.
4) APPLY MULCHING IMMEDIATELY AFTER SEEDING.
5) SEEDING SHALL BE INSPECTED FOR BARE SPOTS AND WASHOUTS, AND RESEEDED AS NECESSARY.

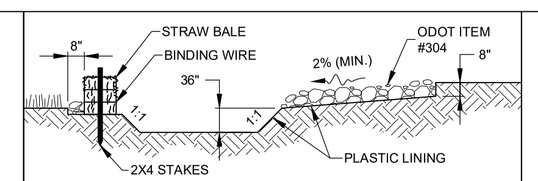
TEMPORARY SEEDING SPECIES SELECTION			
DATES	SPECIES	LB/1,000 SF	LB/AC.
MARCH 1 TO AUGUST 15	OATS	3	128
	TALL FESCUE	1	40
	PERENNIAL RYEGRASS	1	40
	PERENNIAL RYEGRASS	2	40
	TALL FESCUE	1	40
AUGUST 16 TO NOVEMBER 1	RYE	3	112
	TALL FESCUE	1	40
	PERENNIAL RYEGRASS	1	40
	WHEAT	3	120
	TALL FESCUE	1	40
	PERENNIAL RYEGRASS	1	40
	PERENNIAL RYEGRASS	2	40
	TALL FESCUE	1	40
NOVEMBER 1 TO SPRING	ONLY MULCH OR DORMANT SEEDING.		

TEMPORARY SEEDING DETAIL
SCALE: NONE

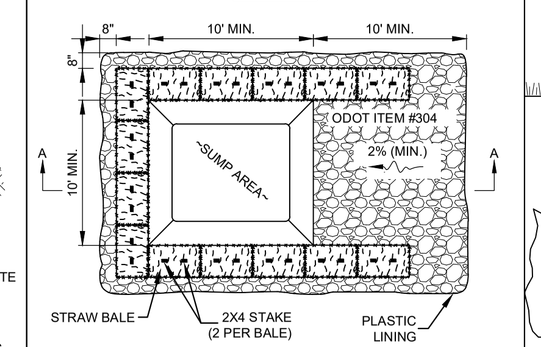


DETAIL OF CURB INLET SEDIMENT CONTROL DEVICE WITH CURB FILTER

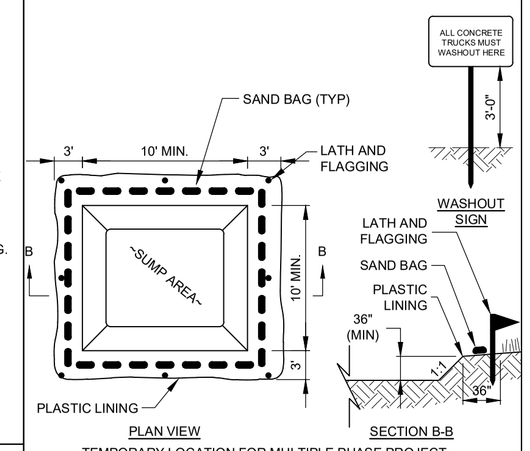
IP **DANDY CURB**
SCALE: NONE



SECTION A-A



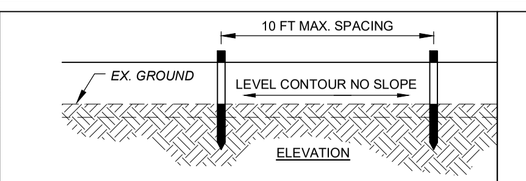
PLAN VIEW
SINGLE LOCATION FOR ENTIRE PROJECT

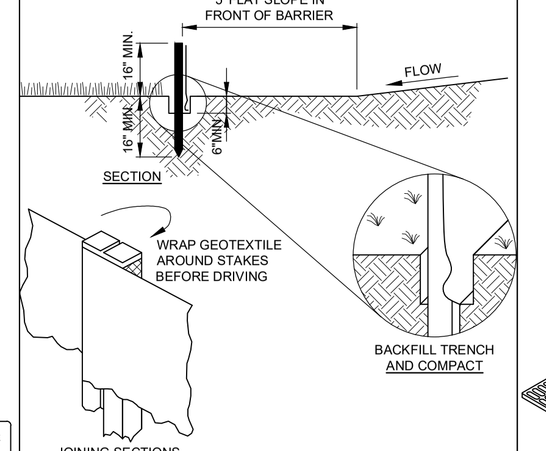


PLAN VIEW SECTION B-B
TEMPORARY LOCATION FOR MULTIPLE PHASE PROJECT

NOTES:
1. WASHOUT PIT SHALL BE LOCATED 100' MINIMUM FROM INLETS, STREAMS, WETLANDS AND ANY OTHER SURFACE WATERS.
2. ALL EXCESS CONCRETE AND CONCRETE WASHOUT, INCLUDING FROM HAND MIXERS AND LIGHT EQUIPMENT, SHALL BE DISPOSED OF IN THE CONCRETE WASHOUT AREA. DISPOSAL OF EXCESS CONCRETE OR CONCRETE WASHOUT ON THE GROUND, OR IN STORM DRAINS, DITCHES OR WATER BODIES, IS PROHIBITED.
3. CONCRETE WASHOUT AREA SHALL BE SUFFICIENT SIZE TO CONTAIN CONCRETE WASTE GENERATED. FOR LARGER SITES, MULTIPLE CONCRETE WASHOUT AREAS MAY BE REQUIRED.
4. IF CONCRETE WASHOUT AREA IS LOCATED AWAY FROM A PAVED SURFACE, CONSTRUCT A GRAVEL ACCESS ROUTE EQUAL IN COMPOSITION TO THE CONSTRUCTION ENTRANCE.
5. PLASTIC LINING SHALL BE DOUBLE-LINED, CONTINUOUS 10-MIL POLYETHYLENE SHEETING FREE OF HOLES, TEARS OR OTHER DEFECTS, AND INSTALLED ON A SMOOTH, LEVEL SURFACE, FREE OF ROCKS OR DEBRIS.
6. CONCRETE WASHOUT SIGNAGE SHALL BE CLEARLY VISIBLE AND LOCATED WITHIN 30 FEET OF EACH WASHOUT AREA.
7. CONCRETE WASHOUT AREAS SHALL BE COVERED DURING INCLEMENT WEATHER TO PREVENT OVERFLOWS.
8. PREFABRICATED, PORTABLE AND RE-USABLE CONCRETE WASHOUT CONTAINERS ARE ACCEPTABLE, BUT MUST BE SPECIFICALLY DESIGNED FOR CONCRETE WASHOUT USE.
9. CONCRETE WASHOUT AREA SHALL BE INSPECTED DAILY TO CHECK FOR DAMAGE AND TO DETERMINE IF IT NEEDS CLEANED OR REPLACED. ANY DAMAGE TO THE SIDEWALLS OR POLYETHYLENE SHEETING SHALL BE REPAIRED IMMEDIATELY. THE CONCRETE WASHOUT AREA SHALL BE CLEANED OR REPLACED WHEN IT IS 75% FULL. THE POLYETHYLENE SHEETING SHALL BE REPLACED AFTER EACH CLEANING.
10. SAW CUT CONCRETE, RESIDUE FROM SAW CUT, AND GRINDINGS SHALL BE DISPOSED OF IN THE WASHOUT PIT.

WA **CONCRETE WASHOUT DETAIL**
SCALE: NONE

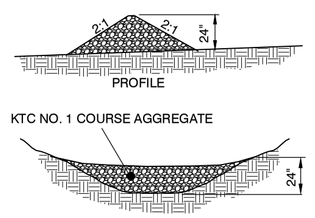




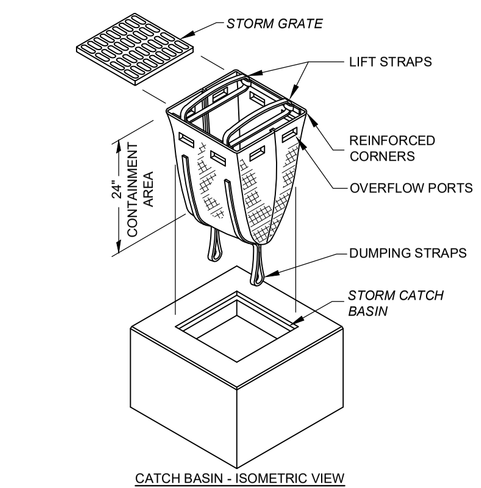
NOTES:
1. PRESERVE VEGETATION FOR 5 FEET, OR AS MUCH AS POSSIBLE, UPSLOPE FROM THE SILT FENCE. IF VEGETATION IS REMOVED, IT SHALL BE RE-ESTABLISHED WITHIN 7 DAYS FROM SILT FENCE INSTALLATION.
2. SILT FENCE SHALL ALLOW RUNOFF TO PASS ONLY AS DIFFUSE FLOW THROUGH THE GEOTEXTILE. PERFORM ONE OF THE FOLLOWING IF RUNOFF OVERTOPS THE SILT FENCE, FLOWS UNDER OR AROUND THE ENDS, OR IN ANY OTHER WAY BECOMES A CONCENTRATED FLOW:
   - CHANGE THE LAYOUT OF THE SILT FENCE.
   - REMOVE ACCUMULATED SEDIMENT.
   - INSTALL OTHER PRACTICES.

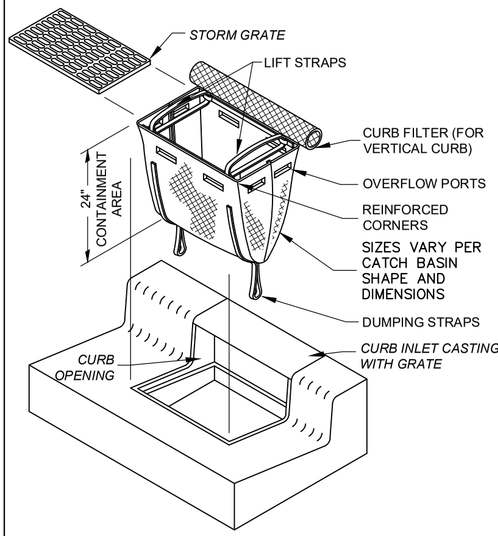
FABRIC PROPERTIES	VALUES	TEST METHOD
GRAB TENSILE STRENGTH	90 LB. MIN	ASTM D-1682
MULLEN BURST STRENGTH	190 PSI MIN	ASTM D-3786
SLURRY FLOW RATE	0.3 GAL./MIN./S.F. MAX.	
EQUIVALENT OPENING SIZE	40-80	US STD. SIEVE CW-02215
ULTRAVIOLET RADIATION STABILITY	90% MIN	ASTM-G-26

SF **SILT FENCE**
SCALE: NONE

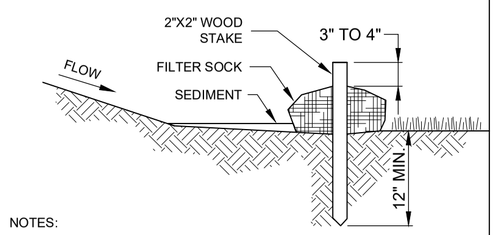


CD **CHECK DAM**
N.T.S.





IP **STORM DRAIN INLET PROTECTION DETAIL**
SCALE: NONE



NOTES:
1) FILTER SOCKS SHALL BE 3 OR 5 MIL CONTINUOUS, TUBULAR, HDPE 3/8" KNITTED MESH NETTING MATERIAL, FILLED WITH COMPOST.
2) COMPOST SHALL BE WEED, PATHOGEN AND INSECT FREE, FREE OF ANY REFUSE, CONTAMINANTS OR OTHER MATERIALS TOXIC TO PLANT GROWTH, BE DERIVED FROM A WELL-DECOMPOSED SOURCE OF ORGANIC MATTER, AND CONSIST OF PARTICLES RANGING FROM 3/8" TO 2".
3) FILTER SOCKS SHALL BE PLACED ON A LEVEL LINE ACROSS SLOPES PARALLEL TO THE BASE OF THE SLOPE.
4) FILTER SOCKS SHALL BE PLACED AT LEAST 5' FROM THE TOE OF SLOPE FOR SEDIMENT DEPOSIT.
5) BUILT UP SEDIMENT SHALL BE REMOVED WHEN IT HAS REACHED 1/3 THE FILTER SOCK HEIGHT.
6) WHEN A FILTER SOCK IS NO LONGER REQUIRED, IT SHALL BE DISPERSED ON-SITE.
7) THE MAXIMUM DRAINAGE AREA PER 100 FEET OF FILTER SOCK IS 1/2 ACRE AND IS DEPENDENT ON THE SLOPE:

MAX. SLOPE LENGTH ABOVE FILTER SOCK					
SLOPE	RATIO (H:V)	8"	12"	18"	24"
0% - 2%	0 - 50:1	125'	250'	300'	350'
2% - 10%	50:1 - 10:1	100'	125'	200'	250'
10% - 20%	10:1 - 5:1	75'	100'	150'	200'

FILTER SOCK DETAIL
SCALE: NONE

90% REVIEW

your trusted advisor engineers architects consultants planners

NO	REVISION	DATE

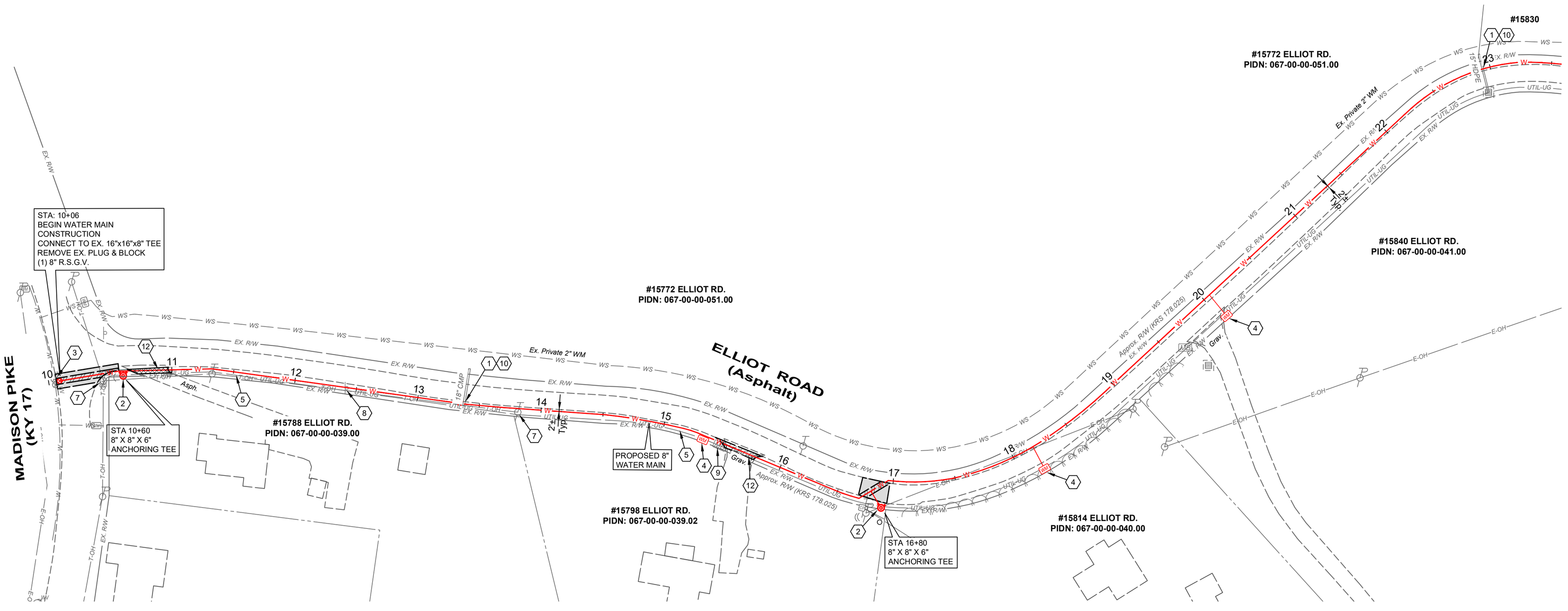
ISSUED FOR:	90% DESIGN
ISSUE DATE:	MAY 2024
SCALE:	AS SHOWN
DESIGNED BY:	JCOR
DRAWN BY:	JCOR
CHECKED BY:	JSHU

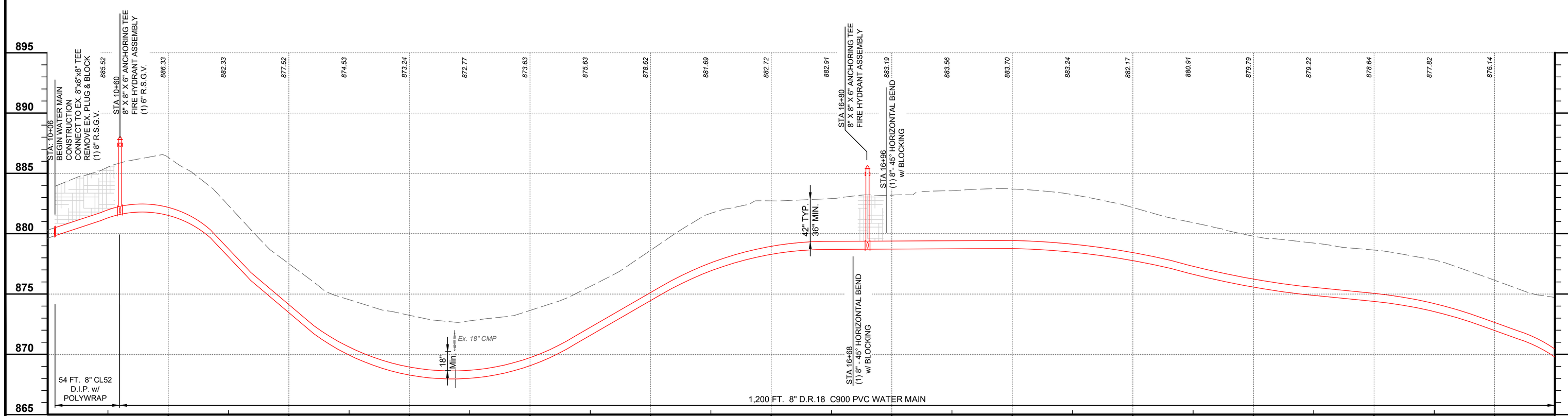
NORTHERN KENTUCKY WATER DISTRICT
SUBDISTRICT 'O'
-KENTON COUNTY -

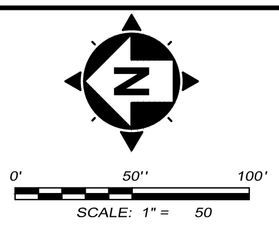
EROSION CONTROL DETAILS

PROJECT NO.
231591
DISCIPLINE
CIVIL
SHEET NAME
G-05
SHEET 6 OF 49

APPROVED FOR CONSTRUCTION
AUGUST 2024
TRANSPORTATION CABINET
KENTUCKY DEPARTMENT OF HIGHWAYS







CONSTRUCTION NOTES

1. MAINTAIN MANAGEABLE VERTICAL CLEARANCE BETWEEN THE PROPOSED WATER MAIN AND THE EXISTING STORM SEWER, WATER MAIN, TELEPHONE DUCTS, AND GAS MAIN. CONSTRUCT ALL SANITARY SEWER CROSSINGS PER N.K.W.D. SPECIFICATIONS ITEM 1.14. MAINTAIN MINIMUM 18" BETWEEN THE PROPOSED WATER MAIN AND THE EXISTING SANITARY SEWER, ACTUAL ELEVATION UNKNOWN. CONTRACTOR TO EXCAVATE & VERIFY ACTUAL LOCATION, SIZE AND ELEVATION OF EXISTING UTILITY PRIOR TO BEGINNING WATER MAIN CONSTRUCTION. THE CONTRACTOR SHALL NOTIFY THE ENGINEER PRIOR TO CONSTRUCTION OF ANY POTENTIAL CONFLICT. NO ADDITIONAL PAYMENT WILL BE MADE FOR THIS WORK AND THE COST SHALL BE INCLUDED IN THE BID ITEM FOR WATER MAIN.
2. PROPOSED FIRE HYDRANT ASSEMBLY, VALVE AND BLOCKING AS PER N.K.W.D. STD. DRAWING NO. 109. COORDINATE LOCATION WITH N.K.W.D. INSPECTOR. ANCHOR VALVE TO TEE.
3. CONNECT TO EXISTING WATER MAIN (ACTUAL ELEVATION UNKNOWN). CONTRACTOR TO VERIFY DEPTH PRIOR TO CONSTRUCTION.
4. CHANNEL LINING, CLASS II (12") w/ NON-WOVEN GEOTEXTILE FILTER FABRIC
5. CONTRACTOR TO VERIFY LOCATION AND ELEVATION OF UTILITY PRIOR TO EXCAVATION ACTIVITY AND NOTIFY ENGINEER AND N.K.W.D. OF CONFLICTS.
6. DO NOT DISTURB
7. CONTRACTOR TO SUPPORT UTILITY POLE DURING PIPE INSTALLATION
8. REMOVE AND REPLACE SIGN
9. REMOVE AND REPLACE MAILBOX
10. NOT USED
11. REMOVE AND REPLACE EXISTING STORM STRUCTURE (CB,HW) AS NEEDED FOR WATER MAIN INSTALLATION
12. DRIVEWAY RESTORATION (SEE DETAILS)
13. CONSTRUCT CLAY BULKHEAD IN TRENCH WITH UNDERDRAIN. DAYLIGHT UNDERDRAIN TO DITCH OR DRAINAGE STRUCTURE

HATCH LEGEND

- 1-1/2" ASPHALT PAVEMENT MILL AND OVERLAY AREA
- TRENCH RESTORATION - ASPHALT PAVEMENT - SEE DETAIL SHEET
- TRENCH RESTORATION - CONCRETE PAVEMENT - SEE DETAIL SHEET
- TRENCH RESTORATION - 8" AGGREGATE PAVEMENT
- CONTROL DENSITY FILL - PAV'T TRENCH
- CONCRETE DRIVEWAY REPLACEMENT - SEE DETAIL SHEET
- CONCRETE WALK REPLACEMENT - SEE DETAIL SHEET
- ASPHALT DRIVEWAY REPLACEMENT - SEE DETAIL SHEET
- GRAVEL DRIVEWAY REPLACEMENT - SEE DETAIL SHEET
- CHANNEL LINING, CLASS II - SEE DETAIL SHEET

90% REVIEW

your trusted advisor — engineers architects planners consultants

NO	REVISION	DATE
.	.	.

ISSUED FOR:	90% DESIGN
ISSUE DATE:	MAY 2024
SCALE:	AS SHOWN
DESIGNED BY:	JCOR
DRAWN BY:	JCOR
CHECKED BY:	JSHU

NORTHERN KENTUCKY WATER DISTRICT
SUBDISTRICT 'O'
-KENTON COUNTY -

ELLIOT ROAD
STA. 10+00 TO STA. 22+50

PROJECT NO.
231591
DISCIPLINE
CIVIL
SHEET NAME
C-40
SHEET
46
OF
49

APPROVED
Kentucky Transportation Cabinet
AUG 14 2024
DISTRICT 6 - PLANNING

KYTC Division of Maintenance

Permits Branch
District 6

ENCROACHMENT PERMIT GENERAL NOTES & SPECIFICATIONS

YOU MUST NOTIFY KYTC BEFORE BEGINNING ANY WORK IN THE RIGHT-OF-WAY. ***Failure to alert KYTC of working within the right of way may result in permit revocation.***

Two ways to notify KYTC of your construction start date:

By Email: KYTCD6PERMITS@KY.GOV

**must include permit number and county in subject line*

By Phone: 859-341-2700

**must know permit number and county when calling*

YOU MUST ALSO NOTIFY KYTC UPON COMPLETION OF WORK WITHIN RIGHT-OF-WAY. ***Failure to alert KYTC of completion of work may result in withholding release of any associated bonds.***

Kentucky UNBRIDLED SPIRIT™

APPROVED
August 27, 2024
Kentucky Transportation Cabinet
06-2024-00840

I. SAFETY

A. General Provisions

☑ All signs and control of traffic shall be in accordance with the Manual on Uniform Traffic Control Devices (MUTCD) for Streets and Highways, latest edition, Part VI, and safety requirements shall comply with the Permits Manual. Federal law requires that traffic control shall be implemented in accordance with MUTCD standards and KYTC's Standard Specifications for Road and Bridge Construction (KYTC SSRBC) under the supervision of a certified Work Zone Traffic Control Supervisor.

☑ All work necessary in shoulder or ditch line areas of a state highway shall be scheduled to be promptly completed so that hazards adjacent to the traveled way are kept to an absolute minimum.

☑ No more than one (1) traveled-lane shall be blocked or obstructed during normal working hours. All signs and flaggers during lane closure shall conform to the MUTCD. The traveled-way and shoulders shall be kept clear of mud and other construction debris at all times during construction of the permitted facility. No non-construction equipment or vehicles or office trailers shall be allowed on the right of way during working hours. The right of way shall be left free and clear of equipment, material, and vehicles during non-working hours.

☑ When necessary to block one (1) traveled-lane of a state highway, the normal working hours shall be as directed by the Department. No lanes shall be blocked or obstructed during adverse weather conditions (rain, snow, fog, etc.) without specific permission from the Department.

☑ Working hours shall be between **9:00 AM** and **3:00 PM**. Further date and time restrictions are as follows:

B. Explosives

☑ No explosive devices or explosive material shall be used within state right of way without proper license and approval of the Kentucky Department of Mines and Minerals, Explosive Division.

C. OSHA

☑ Kentucky Occupational Safety and Health Standards for the construction industry, which has the effect of law, states in part: (Page 52, 1926.651, Specific Excavation Requirements) "Prior to opening an excavation, effort shall be made to determine whether underground installations, (sewer, telephone, water, fuel, electric lines, etc.) will be encountered, and if so, where such underground installations are located. When the excavation approaches the estimated location of such an installation, the exact location shall be determined, and when it is uncovered, proper supports shall be provided for the existing installation. Utility companies shall be contacted and advised of proposed work prior to the start of actual excavation."

D. Archaeological

☑ Whenever materials of an archaeological nature are discovered during the course of construction work or maintenance operations, contact shall be made immediately with the Division of Environmental Analysis, which maintains an archaeologist on staff, or with the Office of the State Archaeologist located at the University of Kentucky. Following this consultation, further action shall be decided on a case-by-case basis by the State Highway Engineer or the Transportation Planning Engineer or their designated representative.

E. Environmental

☑ If the activity to which this permit related disturbs one acre of more of land, you must obtain KPDES KYR10 permit. Information can be found at http://water.ky.gov/permitting/Pages/GeneralPermits.aspx

F. Additional Notes

☑ The following additional notes apply to this permit:

24 hour notice is required prior to restoration of pavement, concrete or topsoil. Call Rick Shay at 859-307-5768

APPROVED
AUGUST 27, 2024
KENTUCKY TRANSPORTATION CABINET
06-2024-00844

II. UTILITIES

- [x] The permittee shall be responsible for any damage to existing utilities. Any utility modifications or relocations within state right of way necessary, as determined by the Department or by the owner of the utility, shall be at the expense of the permittee and subject to the approval of the Department. Operators of underground utilities in right of way shall be members of Kentucky 811.

- [ ] All existing manholes and valve boxes shall be adjusted to be flush with finished grade.

- [x] All pavement cuts shall be restored per Kentucky Transportation Cabinet standards and specifications.

- [x] Any excavation within 3' of edge of pavement will require flowable fill as backfill.

- [x] The clear zone requirement shall be met to the extent possible in accordance with the Roadside Design Guide.

- [ ] Encasement pipe shall conform to current standards for highway crossings in accordance with the Permits Manual. Pipe encasing shall not be required if the pipe crossing is 2" or less.

- [ ] Aerial crossing of utility lines shall have a minimum clearance from the high point of the roadway to the low point of the line of 24' on fully controlled access highways and 18' on non-fully controlled access highways

- [x] Minimum depth for underground Gas and Electric lines is 60" under roadways, ramps, and ditch lines and 42" in all other areas within state right of way. The minimum depth for all other utilities is 42" in all areas.

- [x] When steel plates are installed over an open excavation in the roadway, they must be anchored to the pavement and have asphalt applied to all exposed edges and an MUTCD approved sign noting "Road Plates Ahead." KYTC must be notified of the location, date, time, and permit number associated to BOTH the installation and removal of the plate. Failure to do so may result in permit revocation.

- [ ] Utility poles moved for replacement must be removed in their entirety and the hole left behind must be backfilled.

- [ ] No poles or anchors shall be installed in a roadside ditch.

- [ ] ***Utility notes specific to fully-controlled access highways ONLY:***
All work necessary within the right-of-way shall be performed behind a temporary fence erected prior to the start of work. The temporary woven wire fence shall be removed immediately upon completion of work on the right-of-way, and the control of access immediately restored to original condition, in accordance with applicable KYTC SSRBC. All vents, valves, manholes, etc., shall be located outside of the right-of-way. Encasement pipe shall extend from right-of-way line to right-of-way line and shall be one continuous run of pipe. The encasement pipe shall be welded at all joints. The boring pit and tail ditch shall extend past the existing toe of slope or bottom of ditch line and shall be a minimum of 42 inches deep. Work in interstate right-of-way requires approval from FHWA (Federal Highway Administration).

- [ ] Additional notes:

MINIMUM COVER MUST BE 60" IN THE ROW AND UNDER PAVEMENT

APPROVED
AUGUST 27, 2024
KENTUCKY TRANSPORTATION CABINET
06-2024-00844

III. DRAINAGE

☑ Negative impacts to existing drainage will be the applicant's responsibility to repair in accordance with KYTC SSRBC.

☐ All pipe shall be laid in a straight alignment, to proper grades, and with all materials and methods of installation including bedding and joint seating. Pipe shall not be covered until inspected by the Department and express permission obtained to make backfill. It is the applicant's responsibility to request inspection.

☐ All gutter lines at the base of new curbs shall be on continuous grades, and pockets of water along with curbs or in entrance areas or other paved areas within the right-of-way shall not be acceptable.

☐ All drainage structures and appurtenances (manholes, catch basins, curbing, inlet basins, etc.) shall conform to the Department specifications and shall be constructed in accordance with the KYTC's Standard Drawings.

☐ Additional notes:

IV. PAVING

☑ No bituminous pavement shall be installed within the right of way between November 15 and April 1, nor when the temperature is below 40 degrees Fahrenheit, without the express consent of the Department. No bituminous pavement shall be installed when the underlying course is wet.

☑ Paving within the right of way shall be as follows:

- Base (Type): **Match Existing**, (Thickness) **Match Existing**
- Surface Base (Type) **Match Existing** , (Thickness) **Match Existing**
- Finished Surface (Type) **Match Existing**, (Thickness) **Match Existing**

☑ All materials and methods of construction, including base and subgrade preparation, shall be in accordance with KYTC's Standard Specifications. At least 24 hours notice to the Department is required prior to beginning paving operations.

Phone: **859-307-5768** Name: **Rick Shay**

☑ Utility companies performing road cuts must restore the pavement to pre-existing condition. Pictures/videos are recommended to ensure proper placement of signs and lane markers that are temporarily removed for paving operations. In some cases, a pre-work inventory may be requested from the Department.

☑ Existing pavement and shoulder material shall be removed to accommodate the above paving specifications.

☑ The finished surface of all new pavement within the right of way shall be true to the required slope and grade, uniform in density and texture, free of irregularities, and equivalent in riding qualities to the adjacent highway pavement or as determined by KYTC.

☑ To ensure proper surface drainage, the new pavement shall be flush with the edge of existing highway pavement and shall slope away from the existing edge of the pavement as specified in drawings.

☑ Existing edge of pavement shall be saw-cut to provide a straight and uniform joint for new pavement, and an edge key will be installed in the overlap. An approved joint sealer, in accordance with Kentucky Department of Highways Standard Specifications (latest edition), shall be applied between new and existing pavements.

☐ Additional notes:

APPROVED
AUGUST 27, 2024
KENTUCKY TRANSPORTATION CABINET
06-2024-00844

V. ENTRANCES

- ☐ Encroachment permits issued by KYTC in no way supersede local planning/zoning requirements or subdivision regulations. KYTC has no authority with zoning changes.
- ☐ Commercial entrances must be paved to the right-of-way line. Any deviations must be approved by KYTC before installation.
- ☐ KTYC can dictate drainage improvement installation during construction or after entrance is at final grade. The permit release does not release the permit applicant from drainage maintenance.
- ☐ Signs (ground-mounted and span-mounted), stop bars, crosswalk, and proper lane markings must be in-place before entrance is open for traffic. Lane width modifications must be approved by the Department.
- ☐ Guardrail installation must be pre-approved by the Department and installed by a KYTC pre-qualified contractor. Any guardrail that is removed during construction must be returned to the local KTYC maintenance facility.
- ☐ Additional notes:

VI. TRAFFIC

- ☑ Any contractor performing work within the vicinity of KYTC roadway lighting or traffic signals, must request locates from the KYTC District 6 Traffic section at least one week before of starting work in the right-of-way.
- ☐ Applicant must maintain all KYTC Roadway signage that is impacted by the permitted work. In the event that any signs have to be moved, it is the applicant's responsibility to mark the sign's location before removal and to install the original or new sign per KYTC standards for sign installation.
- ☐ Any thermoplastic or striping damaged during the encroachment must be restored in a timely manner per KYTC standards. Stopbars, arrows, and crosswalks must be thermoplastic material, paint is not acceptable. This work must be performed by a KYTC pre-qualified contractor.
- ☐ Excavating near a signal, lighting pole, or anchoring facility must be done so that it does not impact the structural integrity of the pole. Any work that requires a temporary support or anchoring must receive prior approval.
- ☐ If the scope of the permit involves a signal build or rebuild, it is the applicant's responsibility to apply for power service (and pay monthly electrical bill) as well as request electrical inspection from the KYTC District 6 Traffic section. If the signal modifications require timing or phasing changes this must be requested at least two weeks in advance of the signal's turn-on date. KYTC will not take ownership of permitted signals until the electrical inspection is formally accepted and approved.
- ☐ Work which impacts traffic loops requires 48-hour notice to the KYTC District 6 Traffic section at 859-341-2700. Accidental damage of a traffic loop must be reported immediately to KYTC District 6's emergency line at 859-620-2738. Any disturbed traffic loops must be replaced in a timely manner. Traffic loops out of operation for more than five working days will subject the applicant to the cancellation of the permit. Loop repair must be performed by a KYTC pre-qualified contractor.
- ☐ Additional Notes:

APPROVED
AUGUST 27, 2024
KENTUCKY TRANSPORTATION CABINET
06-2024-00844

VII. SIDEWALK SPECIFICATIONS

☐ All sidewalk modifications, retrofitting, or installations must meet current ADA guidelines

A. New Sidewalks

☐ New sidewalk specifications, dimensions, and designs shall be in accordance with KYTC's latest edition of the Standard Specifications, or with the plans provided on the permit if approved by a KYTC D6 Construction or Permits Engineer.

☐ All materials and methods of construction, including curing, shall be in accordance with KYTC's latest edition of the Standard Specifications.

B. Existing Sidewalks

☐ Use of the sidewalk shall not be blocked or obstructed and a usable walkway shall be maintained across the construction area at all times per MUTCD . Sidewalk closures must be approved by the Department before implementation.

☐ The location of ADA ramps (truncated domes/tactile warnings/etc.) will need to be field verified by KYTC before installation.

☐ Any section of sidewalk that becomes damaged shall be entirely replaced to match existing sections.

☐ Additional notes:

VIII. RIGHT OF WAY RESTORATION

☑ All disturbed portions of the right of way shall be restored to grass as per Kentucky Department of Highways Standard Specifications for Road and Bridge Construction (latest edition). A satisfactory turf, as determined by the Department, shall be established by the permittee prior to release of indemnity. Sodding or seeding shall be as follows:

- ☑ Slopes 3:1 or Less: 90% Kentucky 31 Tall Fescue and 10% White Dutch Clover at 100 lbs/acre
- ☑ Slopes Greater than 3:1: 90% Kentucky 31 Tall Fescue and 10% Partridge Pea at 100 lbs/acre
- ☑ Urban or Residential Areas: 95% Turf Type Fall Fescue Blend and 5% White Dutch Clover at 275 lbs/acre

☑ Two tons of clean straw mulch per acre of seeding.

☑ Prior to seeding, the ground shall be prepared in accordance with Kentucky Department of Highways Standard Specifications for Road and Bridge Construction (latest edition).

☐ Substitutes for sod such as artificial turf, rocked mulch, or paved areas may be acceptable if they are aesthetically pleasing and receive prior approval from KYTC.

☐ All ditch-flow lines and all ditch-side slopes shall be sodded.

☐ Existing concrete right of way markers shall not be disturbed. If damaged in any way, they shall be entirely replaced by the permittee with new concrete markers to match the original markers, in accordance with Kentucky Department of Highways Standard Drawings. Markers that are entirely removed shall be re-established in the proper locations by the permittee and to the satisfaction of the Department.

☐ Additional notes:

APPROVED
AUGUST 27, 2024
KENTUCKY TRANSPORTATION CABINET
06-2024-00844

IX. RIGHT OF WAY FENCE RESTORATION

- ☐ The replacement fence shall be a height of at least 48 inches and shall be of sufficient density to protect against encroachment.
- ☐ The replacement fence shall be a minimum of 1 foot and a maximum of 2 feet outside the right-of-way line
- ☐ The fence materials and design shall meet accepted industry standards and be treated as paintable. Durable finish materials such as vinyl are acceptable.
- ☐ The permittee shall be required to construct and maintain the replacement fencing to an acceptable level of functionality and state of repair. All work on the fencing shall be performed by access from the private property. Access from the roadway is not allowed.
- ☐ The existing fence shall be removed by permittee and stored at the Department's maintenance storage yard for future reuse by the Department, or the Department shall be reimbursed the cost of fencing removed.
- ☐ Right of way monuments shall be installed regardless of if replacement fence is installed or not.
- ☐ The control of access shall not be diminished as a result of replacement of the fence.
- ☐ Additional notes:

X. MISCELLANEOUS NOTES

NOTICE TO PERMITTEE

THE PERMITTEE AGREES THAT ALL WORK WITHIN THE EXISTING RIGHT OF WAY SHALL BE DONE IN ACCORDANCE WITH THE CURRENT KYTC STANDARD SPECIFICATIONS AND THE PLANS AS APPROVED AND PERMITTED BY AN ENCROACHMENT PERMIT. ANY CHANGES OR VARIANCES MADE AT THE TIME OF CONSTRUCTION WITHOUT WRITTEN APPROVAL FROM THE DEPARTMENT OF HIGHWAYS SHALL BE REMOVED BY THE PERMITTEE AT NO EXPENSE TO THE DEPARTMENT OF HIGHWAYS AND SHALL BE REDONE BY THE PERMITTEE TO CONFORM WITH THE APPROVED PLANS.

APPROVED
Highway District
Date 7-12-2024
KENTUCKY TRANSPORTATION CABINET

NOTICE OF COMPLETION OF ENCROACHMENT PERMIT WORK

PERMITTEE

Name: Northern Kentucky Water District
Contact Person: Steve Broering
Address: 2835 Crescent Springs Road
City: Ft. Wright
State: Kentucky
Zip: 41017
Telephone: (859) 991-1652

PROJECT IDENTIFICATION

Permit Number: 06-2024-00838

I wish to notify the Department of Highways that the above mentioned permit work and any necessary right-of-way restoration have been completed and are ready for final inspection.

Permittee

Please return this form to the address below when work is completed and ready for final inspection.

Please Return to: Permit Engineer
Department of Highways, District 6 Office
421 Buttermilk Pike
Covington, Kentucky 41017
(859) 341-2700
www.transportation.ky.gov/

LOCATION(S)			
Description	**County - Route**	**Latitude**	**Longitude**
PROPOSED 8" WATER MAIN INSTALLATION ON GENE STREET THAT TIES INTO EXISTING 8" WM ON WALTONNICHOLSON PIKE (KY 16) THE	Kenton - KY 16	38.899193	-84.559854

APPROVED
AUGUST 27, 2024
KENTUCKY TRANSPORTATION CABINET
06-2024-00838

Andy Beshear
Governor

COMMONWEALTH OF KENTUCKY
TRANSPORTATION CABINET
Department of Highways, District 6 Office
421 Buttermilk Pike
Covington, Kentucky 41017
(859) 341-2700
www.transportation.ky.gov/

Jim Gray
Secretary

August 27, 2024

Northern Kentucky Water District
Steve Broering
2835 Crescent Springs Road
Ft. Wright, Kentucky 41017

Subject: Permit #: 06-2024-00838
Permit Type: Utilities - Water
Approval

Dear Applicant:

Attached is your permit approval and documentation for the subject permit.

Be advised that all work must be done in conformity with permit and application conditions. If you have any questions, please contact the Permits Section at this office.

Sincerely,

Linzy Brefeld

Linzy Brefeld
D6 Permits Supervisor

Attachments

APPROVED
AUGUST 27, 2024
KENTUCKY TRANSPORTATION CABINET
06-2024-00838

Kentucky Transportation Cabinet
Department of Highways
Division of Maintenance
Permits Branch

ENCROACHMENT PERMIT

KYTC KEPT #: 06-2024-00838

Permittee: Northern Kentucky Water District

Permit Type / Subtype: Utilities / Water

Work Completion Date: 8/26/2025

INDEMNITIES		
Type	**Amount Required**	**Tracking Number**
Performance Bond	$0.00	
Cash / Check	$0.00	
Self-Insured	$0.00	
Payment Bond	$0.00	
Liability Insurance	$0.00	

This permit has been: **APPROVED** [X] **DENIED** [ ]

Linzy Brefeld	D6 Permits Supervisor	8/26/2024
SIGNATURE	**TITLE**	**DATE**

The TC 99-1(B), including the application TC-99 1(A) and all related and accompanying documents and drawings make up the permit. It is not a permit unless both the TC 99-1(A) and TC 99-1(B) are both present.

LOCATION(S)			
Description	**County - Route**	**Latitude**	**Longitude**
PROPOSED 8" WATER MAIN INSTALLATION ON GENE STREET THAT TIES INTO EXISTING 8" WM ON WALTONNICHOLSON PIKE (KY 16) THE	Kenton - KY 16	38.899193	-84.559854

APPROVED
AUGUST 27, 2024
TRANSPORTATION CABINET
KENTUCKY 06-2024-00838

Kentucky811 Know what's below. Call before you dig

To Submit a Locate Request
24 Hours a Day, Seven Days a Week:
Call 811 or 800-752-6007

KENTUCKY TRANSPORTATION CABINET
Department of Highways
PERMITS BRANCH

APPLICATION FOR ENCROACHMENT PERMIT

KYTC KEPT #: 06-2024-00838

SECTION 1: APPLICANT CONTACT INFORMATION

APPLICANT NORTHERN KY WATER DISTRICT	**ADDRESS** 2835 CRESCENT SPRINGS PIKE		
EMAIL sbroering@nkywater.org	**CITY** ERLANGER	**STATE** KY	**ZIP** 41018
CONTACT NAME 1 Steve Broering	**EMAIL** sbroering@nkywater.org	**PHONE #** 859-426-2728 **CELL #**	
CONTACT NAME 2 (*if applicable*)	**EMAIL**	**PHONE #** **CELL #**	

SECTION 2: PROPOSED WORK LOCATION

ADDRESS	**CITY** WALTON		**STATE** Kentucky	**ZIP** 41094
COUNTY KENTON	**ROUTE #** 16	**MILE POINT** 2.5	**LONGITUDE** (*X*) 84D33'35"W	**LATITUDE** (*Y*) 38D53'57"N

ADDITIONAL LOCATION INFORMATION:
WALTON - NICHOLSON PIKE AT GENE STREET

FOR KYTC USE ONLY

PERMIT TYPE: ☐ Air Right ☐ Entrance ☒ Utilities ☐ Vegetation Removal ☐ Other: _____

ACCESS: ☐ Full ☐ Partial ☒ by Permit **LOCATION:** ☐ Left ☐ Right ☐ Crossing

SECTION 3: GENERAL DESCRIPTION OF WORK

PROPOSED 8" WATER MAIN INSTALLATION ON GENE STREET THAT TIES INTO EXISTING 8" WM ON WALTON-NICHOLSON PIKE (KY 16)

THE UNDERSIGNED APPLICANT(s), being duly authorized representative(s) or owner(s), DO AGREE TO ALL ORIGINAL UNEDITED TERMS AND CONDITIONS ON THE TC 99-1A, pages 1-4.

Steve Broering
SIGNATURE

7-15-2024
DATE

This is not a permit unless and until the applicant(s) receives an approved TC 99-1B from KYTC. This application shall become void if not approved by the cancellation date. The cancellation date shall be a minimum of one year from the date the applicant submits their application.

APPROVED
AUGUST 27, 2024
KENTUCKY TRANSPORTATION CABINET
06-2024-00838

APPLICATION FOR ENCROACHMENT PERMIT

TERMS AND CONDITIONS

1. The permit, including this application and all related and accompanying documents and drawings making up the permit, remains in effect and is binding upon the Applicant/Permittee, its successors and assigns, as long as the encroachment(s) exists and also until the permittee is finally relieved by the Department of Highways from all its obligations.

2. Applicant shall meet all requirements of the Clean Water Act if the project will disturb one acre or more, the applicant shall obtain a KPDES KYR10 Permit from the Kentucky Division of Water. All disturbed areas shall meet the requirements of the Department of Highway's Standard Specifications, Sections 212 and 213, as amended.

3. **INDEMNITY:**
   - **A.** PERFORMANCE BOND: The permittee shall provide to the Department a performance bond according to the Permits Manual, Section PE-203 as a guarantee of conformance with the Department's Encroachment Permit requirements.
   - **B.** PAYMENT BOND: At the discretion of the department, a payment bond shall be required of the permittee to ensure payment of liquidated damages assessed to the permittee.
   - **C.** LIABILITY INSURANCE: Liability insurance shall be required of the permittee (in an amount approved by the department) to cover all liabilities associated with the encroachment.
   - **D.** It shall be the responsibility of the permittee, its successors and assigns, to maintain all indemnities in full force and effect until the permittee is authorized to release the indemnity by the Department.

4. A copy of this application and all related documents making up the approved permit shall be given to the applicant and shall be made readily available for review at the work site at all times.

5. Perpetual maintenance of the encroachment is the responsibility of the permittee, its successors and assigns, with the approval of the Department as required, unless otherwise stated.

6. Permittee, its successors and assigns, shall comply with and agree to be bound by the requirements and terms of (a) this application and all related documents making up the approved permit, (b) by the Department's Permits Manual, and (c) by the Manual on Uniform Traffic Control Devices, both manuals as revised to and in effect on the date of issuance of the permit, all of which documents are made a part thereof by this reference. Compliance by the permittee, its successors and assigns, with subsequent revisions to applicable provisions of either manual or other policy of the Department may be made a condition of allowing the encroachment to persist under the permit.

7. Permittee agrees that this and any encroachment may be ordered removed by the Department at any time, and for any reason, upon thirty days written notice to the last known address of the applicant or to the address at the location of the encroachment. The permittee agrees that the cost of removing and of restoring the associated right-of-way is the responsibility of the permittee, its successors and assigns.

8. Permittee, its successors and assigns, agree that if the Department determines that motor vehicular safety deficiencies develop as a result of the installation or use of the encroachment, the permittee, its successors and assigns, shall provide and bear the expenses to adjust, relocate, or reconstruct the facilities, add signs, auxiliary lanes, or other corrective measures reasonably deemed necessary by the Department within a reasonable time after receipt of a written notice of such deficiency. The period within which such adjustments, relocations, additions, modifications, or other corrective measures must be completed will be specified in the notice.

9. Where traffic signals are required as a condition of granting the requested permit or are thereafter required to correct motor vehicular safety deficiencies, as determined by the Department, the costs for signal equipment and installation(s) shall be borne by the permittee, its successors and assigns and the Department in its reasonable discretion and only in accordance with the Department's current policy set forth in the Traffic Operations Manual and Permits Manual. Any modifications to the permittee's entrance necessary to accommodate signalization (including necessary easement(s) on private property) shall be the responsibility of the permittee, its successors and assigns, at no expense to the Department.

APPROVED
KENTUCKY TRANSPORTATION CABINET
06-20-2024

APPLICATION FOR ENCROACHMENT PERMIT

10. The requested encroachment shall not infringe on the frontage rights of an abutting owner without their written consent as hereinafter described. Each abutting owner shall express their consent, which shall be binding on their successors and assigns, by the submission of a notarized statement as follows, "I (we), _____, hereby consent to the granting of the permit requested by the applicant along Route _____, which permit does affect frontage rights along my (our) adjacent real property." By signature(s) _____, subscribed and sworn by _____, on this date _____.

11. The permit, if approved, is subject to the agreement that it shall not interfere with any similar rights or permit(s) previously granted to any other party, except as otherwise provided by law.

12. Permittee shall include documentation which describes the facilities to be constructed. Permittee, its successors and assigns, agree as a condition of the granting of the permit to construct and maintain any and all permitted facilities or other encroachments in strict accordance with the submitted and approved permit documentation and the policies and procedures of the Department. Permittee, its successors and assigns, shall not use facilities authorized herein in any manner contrary to that prescribed by the approved permit. Only normal usage as contemplated by the parties and by this application and routine maintenance are authorized by the permit.

13. Permittee, its successors and assigns, at all times from the date permitted work is commenced until such time as all permitted facilities or other encroachments are removed from the right-of-way and the right-of-way restored, **shall defend, protect, indemnify and save harmless** the Department from any and all liability claims and demands arising out of the work, encroachment, maintenance, or other undertaking by the permittee, its successors and assigns, related or undertaken pursuant to the granted permit, due to any claimed act or omission by the permittee, its servants, agents, employees, or contractors. This provision shall not inure to the benefit of any third party nor operate to enlarge any liability of the Department beyond that existing at common law or otherwise if this right to indemnity did not exist.

14. Upon a violation of any provision of the permit, or otherwise in its reasonable discretion, the Department may require additional action by the permittee, its successors and assigns, up to and including the removal of the encroachment and restoration of the right-of-way. In the event additional actions required by the Department under the permit are not undertaken as ordered and within a reasonable time, the Department may in its discretion cause those or other additional corrective actions to be undertaken and the Department shall recover the reasonable costs of those corrective actions from the permittee, its successors and assigns.

15. Permittee, its successors and assigns, shall use the encroachment premises in compliance with all requirements of federal law and regulation, including those imposed pursuant to Title VI of the Civil Right Act of 1964 (42 U.S.C. § 2000d et seq.) and the related regulations of the U.S. Department of Transportation in Title 49 C.F.R. Part 21, all as amended.

16. Permittee, its successors and assigns, agree that if the Department determines it is necessary for the facilities or other encroachment authorized by the permit to be removed, relocated or reconstructed in connection with the reconstruction, relocation or improvement of a highway, the Department may revoke permission for the encroachment to remain under the permit and may order its removal, relocation or reconstruction by the permittee, its successors and assigns, at the expense of the permittee, except where the Department is required by law to pay any or all of those costs.

APPROVED
AUGUST 27, 2024
KENTUCKY TRANSPORTATION CABINET
06-2024-00038

APPLICATION FOR ENCROACHMENT PERMIT

17. Permittee agrees that the authorized permit is personal to the permittee and shall remain in effect until such time as (a) the permittee's rights to the adjoining real property to have benefitted from the requested encroachment have been relinquished, (b) until all permit obligations have been assumed by appropriate successors and assigns, and (c) unless and until a written release from permit obligations has been granted by the Department. The permit and its requirements shall also bind the real property to have benefitted from the requested encroachment to the extent permitted by law. The permit and the related encroachment become the responsibility of the successors and assigns of the permittee and the successors and assigns of each property owner benefitting from the encroachment, or the encroachment may not otherwise permissibly continue to be maintained on the right-of-way. (Does not apply to utility encroachments serving the general public.)

18. If work authorized by the permit is within a highway construction project in the construction phase, it shall be the responsibility of the permittee to make personal contact with the Department's Engineer on the project in order to coordinate all permitted work with the Department's prime contractor on the project.

19. This permit is not intended to, nor shall it, affect, alter or alleviate any requirement imposed upon the permittee, its successors and assigns, by any other agency.

20. Permittee, its successors and assigns, agree to contain and maintain all dirt, mud, and other debris emanating from the encroachment away from the surrounding right-of-way and the travel way of the highway hereafter and at all times that its obligations under the permit remain in effect.

21. Before You Dig: The contractor is instructed to call 1-800-752-6007 to reach KY 811, the One-Call system for information on the location of existing underground utilities. The call is to be placed a minimum of two (2) and no more than ten (10) business days prior to excavation. The contractor should be aware that the owners of underground facilities are not required to be members of the KY 811 One-Call Before U-Dig (BUD) service. The contractor must coordinate excavation with the utility owners, including those whom do not subscribe to KY 811. It may be necessary for the contractor to contact the County Clerk to determine what utility companies have facilities in the area.

22. The undersigned Utility acknowledges ownership and control of the facilities proposed to be installed, modified, or extended by the Applicant/Permittee and agrees to be bound by the requirements and terms of this application and all related documents making up the approved permit, by the Department's Permits Guidance Manual, and by all applicable regulations and statutes in effect on the date of issuance of the permit. This information and application is certified correct to the best knowledge and belief of the undersigned Utility.

NORTHERN KENTUCKY WATER DISTRICT
UTILITY

Steve Broering	Engineering Technician
NAME (Utility Representative)	TITLE (Utility Representative)
Steve Broering	7-15-2024
SIGNATURE (Utility Representative)	DATE

APPROVED
AUGUST 27, 2024
KENTUCKY TRANSPORTATION CABINET
06-2024-00338

Kentucky 811 Know what's below. Call before you dig.

To Submit a Locate Request
24 Hours a Day, Seven Days a Week:
Call 811 or 800-752-6007

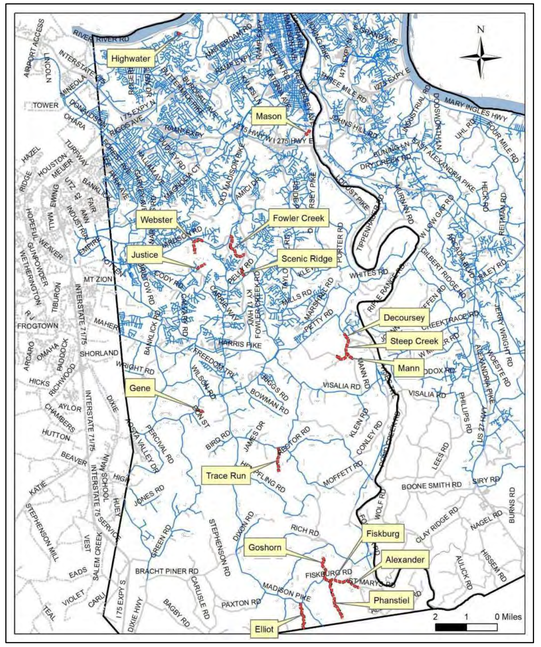
NORTHERN KENTUCKY WATER DISTRICT
SUB-DISTRICT 'O'
WATER MAIN EXTENSION
KENTON COUNTY, KENTUCKY
231591

INDEX OF SHEETS		
NO.	DWG NAME	SHEET NAME
1	TTL	TITLE
2	G-01	GENERAL NOTES & LEGEND
3	G-02	DETAILS
4	G-03	DETAILS
5	G-04	DETAILS
6	G-05	EROSION CONTROL DETAILS
7	C-01	HIGHWATER ROAD
8-9	C-02 to C-03	MASON ROAD
10-13	C-04 to C-07	WEBSTER ROAD
14-15	C-08 to C-09	JUSTICE ROAD
16-17	C-10 to C-11	SCENIC RIDGE DRIVE
18-22	C-12 to C-16	STEEP CREEK ROAD
23	C-17	STEEP CREEK / DECOURSEY
24	C-18	MANN ROAD
25	C-19	GENE STREET
26-29	C-20 to C-23	TRACE RUN ROAD
30-33	C-24 to C-27	GOSHORN ROAD
34-37	C-28 to C-31	FISKBURG ROAD
38-43	C-32 to C-37	PFANSTIEL ROAD
44-45	C-38 to C-39	ALEXANDER ROAD
46-49	C-40 to C43	ELLIOT ROAD

NORTHERN KENTUCKY WATER DISTRICT OFFICIALS

PRESIDENT / CEO
LINDSEY RECHTIN, CPA

COMMISSIONERS
FRED A. MACKE, JR. (Chair)
JODY R. LANGE (Vice-Chair)
DOUGLAS C. WAGNER (Secretary)
NICHOLAS E. WINNIKE (Treasurer)
GARY E. HOLLAND (Commissioner)
JOSEPH J. KOESTER (Commissioner)



VICINITY MAP

NORTHERN KENTUCKY WATER DISTRICT SPECIFICATIONS

THE LATEST STANDARD SPECIFICATIONS AND DRAWINGS OF THE NORTHERN KENTUCKY WATER DISTRICT FOR THE INSTALLATION OF WATER MAIN AND METER PITS SHALL GOVERN ALL WATER MAIN CONSTRUCTION ITEMS ON THIS PROJECT.

KENTUCKY TRANSPORTATION CABINET SPECIFICATIONS

THE LATEST STANDARD SPECIFICATIONS OF THE KENTUCKY TRANSPORTATION CABINET, INCLUDING CHANGES AND SUPPLEMENTAL SPECIFICATIONS THERETO AND KENTON COUNTY SUBDIVISION REGULATIONS SHALL GOVERN THIS IMPROVEMENT.

SOURCE OF OUNDARY AND TOPOGRAPHIC INFORMATION

THE TOPOGRAPHIC INFORMATION SHOWN ON THESE PLANS IS BASED UPON A SURVEY BY CT CONSULTANTS, INC.
THE BOUNDARY INFORMATION SHOWN ON THESE PLANS IS BASED ON PLANNING AND DEVELOPMENT SERVICES (P.D.S.) G.I.S. MAPPING.

2 Business Days Before You Dig
Kentucky 811
Always Call 811
or 1-800-752-6007
Before you Dig
www.kentucky811.org

JAMES M. SHUMATE *P.E. #18156*

90% REVIEW

your trusted advisor — engineers architects planners
consultants

NO	REVISION	DATE

ISSUED FOR: 90% DESIGN
ISSUE DATE: MAY 2024
SCALE: AS SHOWN
DESIGNED BY: JCOR
DRAWN BY: JCOR
CHECKED BY: JSHU

NORTHERN KENTUCKY WATER DISTRICT
SUBDISTRICT 'O'
-KENTON COUNTY -

TITLE SHEET

PROJECT NO.
231591
DISCIPLINE
CIVIL
SHEET NAME
TTL
SHEET 1 OF 48

APPROVED FOR CONSTRUCTION
AUGUST 31, 2024
TRANSPORTATION CABINET
KENTUCKY

H:\2023\231591\DWG\SHEETS\C_231591 00_TITLE SHEET.DWG - TITLE - 5/28/2024 10:23:19 AM - JAMES CORNELL

GENERAL NOTES

1. ALL CONSTRUCTION SHALL CONFORM TO THESE PLANS AND SPECIFICATIONS, THE LATEST EDITION OF THE NORTHERN KENTUCKY WATER DISTRICT STANDARD SPECIFICATIONS AND DRAWINGS AND THE KENTON COUNTY SUBDIVISION REGULATIONS AND THE KENTUCKY DEPARTMENT OF HIGHWAYS STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.

2. ALL DISTURBED AREAS ARE TO BE RESTORED (SEEDED AND MULCHED) BY THE CONTRACTOR AND SHALL PROCEED WITH JOB PROGRESSION. THE CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR REMOVING ANY EXCESS MATERIALS AT THE SITE AND MAINTAINING ALL SEEDED AND MULCHED AREAS UNTIL PROJECT COMPLETION AND FINAL INSPECTION PER KDOT SPEC. 212. A RESIDENTIAL YARD SHALL BE RESTORED WITHIN TWENTY-ONE (21) DAYS AFTER CONSTRUCTION.

3. ALL APPLICABLE RECOMMENDATIONS IN KENTUCKY'S BEST MANAGEMENT PRACTICES MANUAL SHALL BE FOLLOWED BY THE CONTRACTOR, INCLUDING SEEDING OF DISTURBED GROUND.

4. RIGHT-OF-WAY AND PROPERTY LINES SHOWN ARE PLOTTED FROM PLANNING AND DEVELOPMENT SERVICES (PDS) G.I.S. MAPPING AND ARE APPROXIMATE AND NOT THE RESULT OF A FIELD BOUNDARY SURVEY.

5. THE CONTRACTOR SHALL LIMIT THEIR WORK AREA TO THE EASEMENTS AND RIGHTS-OF-WAY SHOWN ON THESE PLANS UNLESS WRITTEN PERMISSION IS GIVEN BY THE PROPERTY OWNER AND APPROVED BY FORT N.K.W.D.

6. ALL OSHA, STATE AND LOCAL SAFETY REGULATIONS SHALL BE FOLLOWED DURING CONSTRUCTION.

7. NO CONSTRUCTION SHALL COMMENCE UNTIL ALL STATE, COUNTY AND LOCAL PERMITS HAVE BEEN ISSUED AS REQUIRED

8. THE CONTRACTOR SHALL COORDINATE ALL WORK WITHIN THE PUBLIC RIGHT OF WAY WITH THE KENTUCKY TRANSPORTATION CABINET AND KENTON COUNTY AND ANY LOCAL MUNICIPALITY. LOCAL TRAFFIC MUST BE MAINTAINED AT ALL TIMES DURING CONSTRUCTION UNLESS OTHERWISE NOTED IN THESE PLANS.

9. ADDITIONAL BMP'S AND EROSION AND SEDIMENT CONTROL MEASURES MAY BE REQUIRED AS DEEMED NECESSARY. ALL COST FOR ABOVE SHALL BE INCLUDED IN LUMP SUM BID FOR EROSION CONTROL AND WATER POLLUTION CONTROL.

10. ALL CONSTRUCTION WORK SHALL BE IN CONFORMANCE WITH THE RECOMMENDATIONS CONTAINED IN THE GEOTECHNICAL INVESTIGATION REPORT PREPARED BY G.A.I. CONSULTANTS DATED FEBRUARY 2024.

GENERAL TRENCH EXCAVATION NOTES

1. CONTRACTOR IS TO PROVIDE CONSTANT STABLE SUPPORT FOR THE WATER MAIN TRENCH EXCAVATION (ie SHEETING, SHORING, ETC.) TO PROTECT ALL ADJACENT EXISTING UTILITIES, STORM SEWER PIPE AND STRUCTURES AND THE EXISTING ROADWAY FROM ANY MOVEMENT. (NO ADDITIONAL PAYMENT WILL BE MADE FOR THIS WORK. ANY COSTS ASSOCIATED WITH TRENCH SUPPORT SHALL BE INCLUDED IN THE UNIT BID PRICE FOR THE ASSOCIATED WATER MAIN.

   TRENCH SUPPORT FAILURE RESULTING IN ADVERSE IMPACT TO EXISTING UTILITIES SHALL BE REPAIRED IMMEDIATELY AT THE CONTRACTOR'S EXPENSE.

2. TRENCH EXCAVATION AND OPEN, UNBACKFILLED LENGTH OF WATER MAIN TRENCH SHALL BE LIMITED AS NECESSARY ALONG THE ROADWAY IN ORDER TO PREVENT MOVEMENT OF, OR DAMAGE TO THE SURROUNDING GROUND SURFACE, NEARBY STRUCTURES/INFRASTRUCTURE AND THE EXISTING ROADWAY PAVEMENT.

   TRENCH EXCAVATION SHALL ALSO BE LIMITED TO THE CONTRACTOR'S ABILITY TO PROVIDE TRENCH BOXES FOR SUPPORT. UNDER NO CIRCUMSTANCES SHALL TRENCH EXCAVATION EXCEED LENGTH OF SUPPORT AVAILABLE.

UTILITY NOTES

1. THIS PLAN SHOWS THE APPROXIMATE LOCATION OF UNDERGROUND UTILITIES (GAS, WATER, STORM SEWER, SANITARY SEWER, TELEPHONE, ELECTRIC, ETC.). THE PREPARER DOES NOT GUARANTEE THEIR ACCURACY OR CORRECTNESS. THE INFORMATION PROVIDED SHALL BE FIELD VERIFIED PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING THE UTILITY AS WELL AS THE SERVICE LATERALS AT ALL TIMES DURING CONSTRUCTION. THE CONTRACTOR SHALL PRACTICE CARE DURING THE GRADING AND TRENCH EXCAVATION AND SHALL BE RESPONSIBLE FOR REPLACING ANY SERVICES THAT ARE DAMAGED DURING CONSTRUCTION AT THEIR EXPENSE.

2. PRIOR TO ANY EXCAVATION OVER AN EXISTING UTILITY LINE OR SERVICE, CONTRACTOR SHALL HAND EXCAVATE TO EXPOSE THE UTILITY AND DETERMINE LOCATION AND DEPTH. NOTIFY ENGINEER IMMEDIATELY OF ANY CONFLICTS.

3. TOPS OF EXISTING AND PROPOSED CASTING ELEVATIONS ARE SUBJECT TO FINAL ADJUSTMENTS AS APPROVED BY THE ENGINEER AND REQUIREMENTS OF UTILITY OWNER. THIS WORK WILL BE INCIDENTAL TO THE CONTRACT.

4. FORTY-EIGHT (48) HOURS BEFORE EXCAVATION IS TO COMMENCE, THE CONTRACTOR SHALL NOTIFY THE FOLLOWING AGENCIES: THE KENTUCKY UTILITY PROTECTION SERVICE AND ALL OTHER UTILITIES THAT MAY HAVE UNDERGROUND UTILITIES INVOLVING THIS PROJECT AND ARE NON-MEMBERS OF KENTUCKY UNDERGROUND PROTECTION.

STORM & SANITARY NOTES

1. ALL STORM AND SANITARY ITEMS SHALL BE IN ACCORDANCE WITH THE LATEST SPECIFICATIONS AND DETAILS FROM SD1. METAL PIPE MATERIALS SHALL NOT BE USED UNLESS OTHERWISE SPECIFIED ON THESE PLANS.

2. CONTRACTOR SHALL BE REQUIRED TO MAINTAIN STORM AND SANITARY SEWER FLOW THROUGHOUT THE PROJECT, FOR THE DURATION OF CONSTRUCTION. ALL COST FOR THE ABOVE SHALL BE INCIDENTAL TO THE CONTRACT.

3. IF REQUIRED, CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING AND SCHEDULING STORM AND SANITARY SEWER INSPECTIONS AS SET OUT IN THE PRECONSTRUCTION MEETING.

4. CONNECTIONS INTO EXISTING OR PROPOSED STORM OR SANITARY SEWER STRUCTURES OR PIPES SHALL BE COMPLETED BY A CERTIFIED TAPPER BY SD1.

WATER NOTES

1. ALL WORK RELATING TO WATER MAINS OR WATER SERVICE LINES SHALL BE COMPLETED IN ACCORDANCE WITH THE RULES AND REGULATIONS OF THE NORTHERN KENTUCKY WATER DISTRICT (NKWD).

2. CONTRACTOR MAY NOT USE WATER FROM FIRE HYDRANTS WITHOUT PRIOR PERMISSION FROM NKWD

GAS NOTES

1. ALL WORK RELATING TO GAS MAINS OR GAS SERVICE LINES SHALL BE COMPLETED IN ACCORDANCE WITH THE RULES AND REGULATIONS OF THE DUKE ENERGY

ELECTRIC NOTES

1. ALL WORK RELATING TO ELECTRIC LINES SHALL BE COMPLETED IN ACCORDANCE WITH THE RULES AND REGULATIONS OF THE DUKE ENERGY

WATER DISTRICT GENERAL NOTES

1. THE EXISTING WATER MAIN ELEVATION AND LOCATION AT THE CONNECTION POINT WITH THE PROPOSED MAIN WAS ASSUMED AND HAS NOT BEEN FIELD VERIFIED. PRIOR TO COMMENCEMENT OF ANY WATER MAIN WORK, THE CONTRACTOR SHALL DIG A TEST HOLE AT THE CONNECTION POINT TO LOCATE EXISTING WATER MAIN AS TO LOCATION AND ELEVATION. THE EXISTING WATER MAIN LOCATION MAY REQUIRE SOME FIELD ADJUSTMENT TO THE PROPOSED WATER MAIN INCLUDING ADJUSTING THE DEPTH OF THE PROPOSED WATER MAIN. COST OF DOING THE ABOVE SHALL BE INCIDENTAL TO THE PERTINENT WATER MAIN ITEM.

2. COST OF TRIMMING OR CLEARING ANY TREES, BUSHES, ETC. SHALL BE INCIDENTAL TO THE OVERALL CONTRACT PRICE AND SHALL BE APPROVED BY N.K.W.D. AND THE PROPERTY OWNER ALONG WITH COUNTY OR STATE WHEN REQUIRED.

3. THE UTILITY INFORMATION SHOWN ON THE PLANS IS BASED ON INFORMATION RECEIVED FROM OTHERS AND HAS NOT BEEN VERIFIED BY THE ENGINEER OR OWNER. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE LOCATION OF THE UTILITIES AND TO COORDINATE ANY IMPACT CAUSED BY THE PROPOSED WORK WITH ALL UTILITY OWNERS AND/OR THEIR CONTRACTORS. THE CONTRACTOR WILL BE REQUIRED TO DIG TEST HOLES AT ALL UTILITY CROSSINGS TO LOCATE THE UTILITY AS TO BOTH LOCATION AND ELEVATION AND WILL BE REQUIRED TO REALIGN AND ADJUST THE ELEVATION OF THE PROPOSED WATER MAIN TO AVOID THE UTILITY. COST OF ALL THE ABOVE SHALL BE INCIDENTAL TO THE OVERALL CONTRACT PRICE.

4. UNLESS SPECIFICALLY INSTRUCTED OTHERWISE, RETURN ALL REMOVED WATER EQUIPMENT INCLUDING, FIRE HYDRANTS, VALVES, AND WATER METERS TO NORTHERN KENTUCKY WATER DISTRICT (N.K.W.D).

5. WATERLINES CROSSING UNDER OR OVER SEWER LINES (DEFINED AS ANY SANITARY/COMBINED SEWER, SEPTIC TANK OR SUBSOIL TREATMENT SYSTEM) MUST MAINTAIN A MINIMUM VERTICAL CLEARANCE OF 18" AND ONE FULL LENGTH OF PIPE SHALL BE LOCATED SO BOTH JOINTS ARE AS FAR FROM THE SEWER AS POSSIBLE. SPECIAL STRUCTURAL SUPPORT FOR THE WATER AND SEWER PIPES MAY BE REQUIRED.

6. CONTRACTOR IS RESPONSIBLE FOR KEEPING FIELD NOTES THAT PROVIDE SUFFICIENT DATA FOR PREPARING "RECORD DRAWINGS" UPON COMPLETION OF CONSTRUCTION.

7. ALL WATER MAIN CONSTRUCTION SHALL CONFORM TO THE NORTHERN KENTUCKY WATER DISTRICT SPECIFICATIONS. CONTRACTOR IS RESPONSIBLE FOR OBTAINING A CURRENT COPY OF THE NORTHERN KENTUCKY WATER DISTRICT'S STANDARD DRAWINGS.

8. ALL MATERIAL FOR THE PROP. WATER MAIN INSTALLATION INCLUDING ALL FITTINGS, BLOCKING, ETC., SHALL BE INCLUDED IN THE CONTRACTOR'S UNIT PRICE FOR WATER MAIN.

9. COST OF ALL TRENCHING, PIPE, PIPE BEDDING, BACKFILL, YARD RESTORATION AND TEMPORARY PAVEMENT, DRIVEWAY AND SIDEWALK RESTORATION SHALL BE PART OF THE COST OF INSTALLING THE WATER MAIN. PERMANENT DRIVEWAY RESTORATION, SIDEWALK RESTORATION, CURB RESTORATION AND STREET RESTORATION WILL BE SEPARATE PAY ITEMS AND INCLUDE INCIDENTALS SUCH AS MAIL BOX, STREET SIGN, AND FENCE REMOVAL AND REPLACEMENT.

10. THE PROPOSED WATER MAIN SHALL BE CLASS 50 DUCTILE IRON PIPE OR D.R. 18 C900 PVC AS SHOWN ON THE PLANS. WITHIN STATE ROUTE R/W, PIPE MATERIAL SHALL BE CLASS 52 DUCTILE IRON.

11. PROPOSED WATER MAIN SHALL BE THOROUGHLY CLEANED, FLUSHED, AND DISINFECTED, AS PER NORTHERN KENTUCKY WATER DISTRICT'S SPECIFICATIONS.

12. PRESSURE TESTING SHALL BE DONE AS PER NORTHERN KENTUCKY WATER DISTRICT'S SPECIFICATIONS.

13. FOR THRUST BLOCKING REFER TO THE NORTHERN KENTUCKY WATER DISTRICT'S STANDARD DRAWING NUMBERS 104 AND 104A.

14. THE PROPOSED WATER MAIN SHALL HAVE A HORIZONTAL SEPARATION OF AT LEAST 3'-0" (MEASURED FROM OUTSIDE OF PIPE TO OUTSIDE OF PIPE) FROM ANY GAS MAIN.

15. A 10' MINIMUM LATERAL SEPARATION BETWEEN WATER MAINS AND SEWERS (DEFINED AS ANY SANITARY/COMBINED SEWER, SEPTIC TANK OR SUBSOIL TREATMENT SYSTEM) AND SEWER MANHOLES, MEASURED FROM THE OUTSIDE DIAMETER TO OUTSIDE, MUST BE MAINTAINED UNLESS A VARIANCE IS GRANTED FROM THE D.O.W.

16. ALL NEW WATER SERVICES SHALL BE 3/4" (OR MATCH EXISTING, AS INDICATED ON THE PLANS) TYPE K COPPER WITH 5/8" OR 2" WATER METERS (UNLESS OTHERWISE NOTED) MATERIAL PROVIDED BY THE NORTHERN KENTUCKY WATER DISTRICT. ALL RECONNECTED WATER SERVICES SHALL BE 3/4" OR 2" TYPE K COPPER.

17. THE CONTRACTOR SHALL COORDINATE ALL WORK WITHIN THE PUBLIC RIGHT-OF-WAY WITH KYTC, KENTON COUTY AND/OR ANY LOCAL MUNICIPALITY. TRAFFIC MUST BE MAINTAINED AT ALL TIMES DURING CONSTRUCTION. MAINTENANCE OF TRAFFIC SHALL CONFORM TO THE "MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES" REQUIREMENTS. NO ADDITIONAL PAYMENT WILL BE MADE FOR THIS WORK AND SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT.

18. **CONNECT SERVICE LINE (3/4" THRU 2"), INCLUDES THE LABOR, EQUIPMENT, EXCAVATION, BEDDING, BACKFILL, ASPHALT PAVEMENT , CONCRETE PAVEMENT, CONCRETE CURB, CONCRETE WALK AND YARD RESTORATION TO INSTALL THE SERVICE LINE AT THE LOCATIONS SHOWN ON THE PLANS OR AS DIRECTED, IN ACCORDANCE WITH THE SPECIFICATIONS AND STANDARD DRAWINGS, COMPLETE AND READY FOR USE. LEAD SERVICE LINES ENCOUNTERED BY THE EXCAVATION SHALL BE REPLACED FROM THE MAIN TO AND INCLUDING THE METER VAULT AND METER SETTING. ALL SERVICE LINE MATERIAL WILL BE SUPPLIED BY NKWD. PAID EACH (EA).**

19. THE CONTRACTOR SHALL COORDINATE WITH THE NORTHERN KENTUCKY WATER DISTRICT FOR FIELD INSPECTIONS.

20. FORTY-EIGHT (48) HOURS BEFORE EXCAVATION IS TO COMMENCE, THE CONTRACTOR SHALL NOTIFY THE FOLLOWING AGENCIES: THE KENTUCKY UTILITY PROTECTION SERVICE AND ALL OTHER UTILITIES THAT MAY HAVE UNDERGROUND UTILITIES INVOLVING THIS PROJECT AND ARE NON-MEMBERS OF KENTUCKY UNDERGROUND PROTECTION.

21. NO CONSTRUCTION SHALL COMMENCE UNTIL ALL KYTC, COUNTY AND/OR LOCAL PERMITS HAVE BEEN ISSUED AS REQUIRED.

22. CONTRACTOR IS RESPONSIBLE FOR DEWATERING TRENCH DURING INSTALLATION OF THE WATER MAIN.

23. THE COST OF TESTING THE MAIN, TEMPORARY FLUSHING DEVICES, TEMPORARY PLUG AND BLOCKS, AND ABANDONING THE EXISTING MAIN SHALL BE INCIDENTAL TO THE PROJECT.

24. ALL PAVEMENT SHALL CONFORM TO THE LATEST EDITION OF THE KENTUCKY DEPARTMENT OF HIGHWAYS STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION AND KENTON COUNTY SUBDIVISION REGULATIONS.

MAINTENANCE OF TRAFFIC NOTES

1. ALL MAINTENANCE OF TRAFFIC PROCEDURES SHALL MEET THE REQUIREMENT OF THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES AND SECTION 112 OF KTC STANDARD SPECIFICATIONS. THE CONTRACTOR SHALL MAINTAIN ACCESS TO LOCAL TRAFFIC (ACCESS TO RESIDENCES WITHIN CONSTRUCTION LIMITS) AT ALL TIMES. THE CONTRACTOR SHALL PROVIDE SUFFICIENT SIGN, WARNING LIGHTS, BARRICADES, OR OTHER NECESSARY DEVICES MAKE THE SITE SAFE TO THE TRAVELING PUBLIC.

2. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO SUBMIT TO THE ENGINEER AND THE OWNER A TRAFFIC CONTROL PLAN FOR THIS PROJECT.

3. PRIOR TO ANY CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY THE APPROPRIATE STATE, COUNTY AND/OR LOCAL POLICE DEPARTMENTS. AT ALL TIMES, EMERGENCY VEHICLES SHALL BE GIVEN ACCESS.

4. RESIDENTS OF THE PROJECT AREA SHALL BE ALLOWED ACCESS TO THEIR PROPERTY AT ALL TIMES.

5. EACH DRIVEWAY SHALL BE ACCESSIBLE WHENEVER POSSIBLE. WHEN PORTLAND CEMENT CONCRETE CONSTRUCTION AFFECTS A DRIVEWAY, THE CONTRACTOR SHALL NOTIFY THE AFFECTED OWNERS 24 HOURS IN ADVANCE AND ADVISE THEM TO FIND ALTERNATIVE PARKING FOR A PERIOD OF AT LEAST 10 CALENDAR DAYS AFTER THE POUR. ALTERNATIVE PARKING SHALL INCLUDE "ON STREET" PARKING WITH ACCESS TO THE PROPERTY. TEMPORARY SIDEWALKS, ETC. WILL BE NECESSARY TO PREVENT PERSONS FROM WALKING IN MUD IN ORDER TO ENTER THEIR PROPERTY. TEMPORARY BRIDGES, RAILINGS ETC. WILL BECOME NECESSARY IN ORDER TO CROSS FORMED CURB LINES, EXCAVATED AREAS BEHIND CURB LINES AND WALKWAYS, ETC.

EROSION CONTROL LEGEND

- IP — INLET PROTECTION (SEE DETAIL)
- SF — SILT FENCE (SEE DETAIL)

HATCH LEGEND

- 1-1/2" ASPHALT PAVEMENT MILL AND OVERLAY AREA
- TRENCH RESTORATION - ASPHALT PAVEMENT - SEE DETAIL SHEET
- TRENCH RESTORATION - CONCRETE PAVEMENT - SEE DETAIL SHEET
- TRENCH RESTORATION - 8" AGGREGATE PAVEMENT
- CONTROL DENSITY FILL - PAV'T TRENCH
- CONCRETE DRIVEWAY REPLACEMENT - SEE DETAIL SHEET
- CONCRETE WALK REPLACEMENT - SEE DETAIL SHEET
- ASPHALT DRIVEWAY REPLACEMENT - SEE DETAIL SHEET
- GRAVEL DRIVEWAY REPLACEMENT - SEE DETAIL SHEET
- CHANNEL LINING, CLASS II - SEE DETAIL SHEET

SYMBOL LEGEND

- G — EXISTING GAS LINE
- GS — EXISTING GAS SERVICE
- E-UG / E-OH — EXISTING ELECTRIC (UNDERGROUND / OVERHEAD)
- C-UG / C-OH — EXISTING CABLE (UNDERGROUND / OVERHEAD)
- T-UG / T-OH — EXISTING TELEPHONE (UNDERGROUND / OVERHEAD)
- W — EXISTING WATER MAIN
- WS — EXISTING WATER SERVICE
- EXISTING STORM SEWER
- RD — EXISTING ROOF DRAIN
- S — EXISTING SANITARY SEWER
- FM — EXISTING SANITARY FORCE MAIN
- FO — EXISTING FIBER OPTICS
- X — EXISTING FENCE
- 650 — EXISTING CONTOURS (MAJOR)
- 648 — EXISTING CONTOURS (MINOR)
- EX. R/W — EXISTING RIGHT OF WAY
- EXISTING PROPERTY LINE
- EXISTING EASEMENT
- EXISTING GUARDRAIL
- EXISTING TREE LINE
- EXISTING ROCK WALL

- G — PROPOSED GAS LINE
- GS — PROPOSED GAS SERVICE
- E-UG / E-OH — EXISTING ELECTRIC (UNDERGROUND / OVERHEAD)
- C-UG / C-OH — PROPOSED CABLE (UNDERGROUND / OVERHEAD)
- T-UG / T-OH — PROPOSED TELEPHONE (UNDERGROUND / OVERHEAD)
- W — PROPOSED WATER MAIN
- WS — PROPOSED WATER SERVICE
- PROPOSED STORM SEWER
- UD — PROPOSED UNDERDRAIN
- UD/DSC — PROPOSED UNDERDRAIN / DOWNSPOUT COLLECTOR COMBO
- S — PROPOSED SANITARY SEWER
- FM — PROPOSED SANITARY FORCE MAIN
- FO — PROPOSED FIBER OPTICS
- X — PROPOSED FENCE
- 650 — PROPOSED CONTOURS (MAJOR)
- 648 — PROPOSED CONTOURS (MINOR)
- PROPOSED RIGHT OF WAY
- PROPOSED PROPERTY LINE
- PROPOSED EASEMENT
- PROPOSED GUARDRAIL
- PROPOSED TREE LINE / CLEARING LIMITS
- PROPOSED DISTURBED LIMITS

- EXISTING FLAGPOLE
- MB — EXISTING MAILBOX
- EXISTING SIGN
- CP — EXISTING CABLE PEDESTAL
- EP — EXISTING ELECTRIC PEDESTAL
- PB — EXISTING PULL BOX
- EXISTING GROUND LIGHT
- EXISTING LIGHT POLE
- EM — EXISTING ELECTRIC METER
- EXISTING ELECTRIC MANHOLE
- GM — EXISTING GAS METER
- GV — EXISTING GAS VALVE
- GF — EXISTING GAS BOX
- EXISTING UTILITY POLE
- EXISTING GUY WIRE / ANCHOR
- EXISTING SANITARY MANHOLE
- SCO — EXISTING SANITARY CLEANOUT
- EXISTING STORM MANHOLE
- EXISTING SINGLE / DOUBLE CURB INLET
- EXISTING CATCH BASIN
- DCO — EXISTING STORM CLEANOUT
- EXISTING TELEPHONE MANHOLE
- TP — EXISTING TELEPHONE PEDESTAL
- EXISTING FIRE HYDRANT
- WM — EXISTING WATER METER
- WV — EXISTING WATER VALVE
- EXISTING BUSHES / TREES
- EXISTING SURVEY BENCHMARK
- TB — TEST BORING LOCATION

- PROPOSED FLAGPOLE
- MB — PROPOSED MAILBOX
- PROPOSED SIGN
- CP — PROPOSED CABLE PEDESTAL
- EP — PROPOSED ELECTRIC PEDESTAL
- PB — PROPOSED PULL BOX
- PROPOSED GROUND LIGHT
- PROPOSED LIGHT POLE
- EM — PROPOSED ELECTRIC METER
- PROPOSED ELECTRIC MANHOLE
- GM — PROPOSED GAS METER
- GV — PROPOSED GAS VALVE
- GF — PROPOSED GAS BOX
- PROPOSED UTILITY POLE
- PROPOSED GUY WIRE / ANCHOR
- PROPOSED SANITARY MANHOLE
- SCO — PROPOSED SANITARY CLEANOUT
- PROPOSED STORM MANHOLE
- PROPOSED SINGLE / DOUBLE CURB INLET
- PROPOSED CATCH BASIN
- DCO — PROPOSED STORM CLEANOUT
- PROPOSED TELEPHONE MANHOLE
- TP — PROPOSED TELEPHONE PEDESTAL
- PROPOSED FIRE HYDRANT
- WM — PROPOSED WATER METER
- WV — PROPOSED WATER VALVE
- REMOVE EXISTING BUSH / TREE
- PROPOSED SLOPE DIRECTION

90% REVIEW

your trusted advisor — engineers architects planners consultants

NO	REVISION	DATE
.	.	.

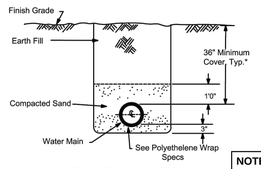
ISSUED FOR:	90% DESIGN
ISSUE DATE:	MAY 2024
SCALE:	AS SHOWN
DESIGNED BY:	JCOR
DRAWN BY:	JCOR
CHECKED BY:	JSHU

NORTHERN KENTUCKY WATER DISTRICT
SUBDISTRICT 'O'
-KENTON COUNTY -

GENERAL NOTES AND LEGEND

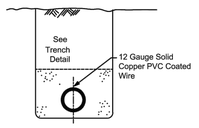
PROJECT NO.: 231591
DISCIPLINE: CIVIL
SHEET NAME: G-01
SHEET: 2 OF: 49

APPROVED FOR CONSTRUCTION
AUGUST 01, 2024
TRANSPORTATION CABINET
KENTUCKY DEPARTMENT OF HIGHWAYS



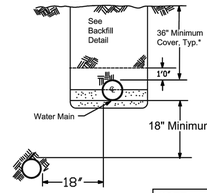
EARTH CUTS
TRENCH DETAIL

NOTE: 42" Minimum Cover, TYP. within State R/W



PVC PIPE

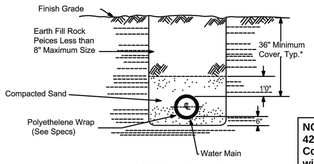
ALTERNATE TO BE USED ONLY ON APPROVAL BY THE DISTRICT



Water Main must be located a minimum of 10 feet lateral distance from anyexisting or future sewer lines or manholes, or as shown in the above alternate.

WATER MAIN PARALLELING
SEWER MAIN

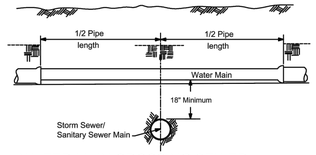
NOTE: 42" Minimum Cover, TYP. within State R/W



ROCK CUTS
& UNSTABLE SUBGRADE

TRENCH DETAIL

NOTE: 42" Minimum Cover, TYP. within State R/W



WATER MAIN CROSSING SEWER

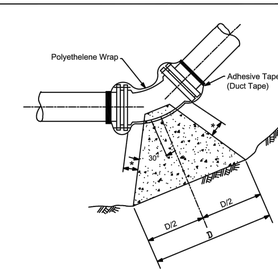
SUBDIVISION CONSTRUCTION

* Unless Otherwise Noted

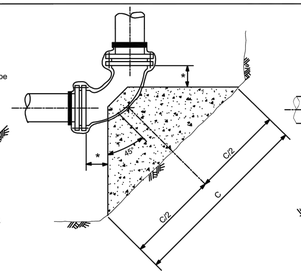
REVISION	BY	DATE
1 8" Min. Rock Size	KPT	1/2/20

N. KY. WATER DISTRICT
TYPICAL PIPELINE TRENCH DETAIL

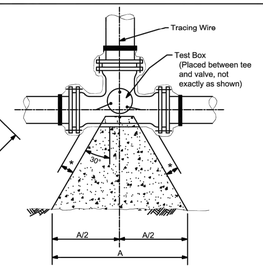
DRAWN BY: SAR
APPROVED: RH
DATE: 8/5/2014
STANDARD DRAWING NO: 103



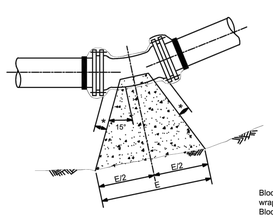
45° BEND



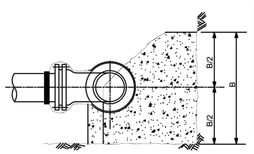
90° BEND



TEE (DEAD END OR FIRE HYDRANT SIMILAP



11 1/4° & 22 1/2° BEND



ELEVATION

Blocking shall be poured after blue polyethelene wrap is in place.
Blocking shall be inspected by the District prior to backfilling.

150 PSI/250 PSI

PIPE SIZE	A	B	C	D	E
6"	2'0"/2'6"	1'6"/1'6"	3'0"/3'6"	1'6"/2'0"	1'0"/1'0"
8"	2'6"/3'6"	2'0"/2'0"	3'6"/4'6"	2'0"/2'6"	1'0"/1'6"
10"	3'6"/4'0"	2'6"/2'6"	4'6"/5'6"	2'6"/3'0"	1'6"/1'6"
12"	4'0"/5'0"	3'0"/3'0"	5'6"/6'6"	3'0"/3'6"	1'6"/2'0"
16"	5'0"/6'0"	3'0"/4'0"	7'0"/8'6"	4'0"/4'6"	3'0"/3'0"
20"	6'0"/7'6"	5'0"/5'0"	7'0"/10'6"	4'0"/6'0"	3'0"/3'0"

* Distance to be 1/2" longer than entire length of the bolt used.

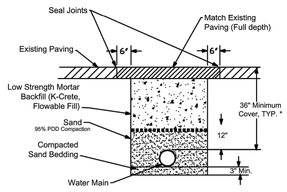
NOTES

1 DIP Fittings shall be per specifications.
2 Concrete to be 3500 psi.
3 All fittings to be Mechanical Joint.
4 Thrust blocks to be placed against undisturbed earth - use additional concrete as required for over excavation.
5 Blocking to be placed in a manner so that bolts can be removed without distrubing the block.

REVISION	BY	DATE
1 All sweets bar right mortar	SAH	1/9/2015

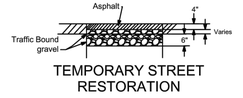
N. KY. WATER DISTRICT
CONCRETE THRUST BLOCK DETAIL

DRAWN BY: SAR
APPROVED: RH
DATE: 8/5/2014
STANDARD DRAWING NO: 104

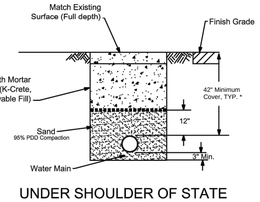


UNDER ASPHALT CONCRETE
PAVEMENT

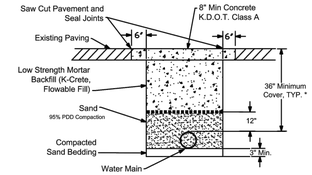
PDD= Standard Proctor Dry Density
-ASTM D698



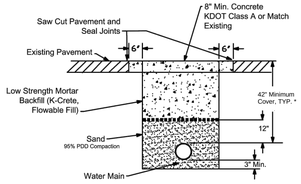
TEMPORARY STREET
RESTORATION



UNDER SHOULDER OF STATE
MAINTAINED STREET



UNDER CONCRETE PAVEMENT



UNDER STATE MAINTAINED STREET

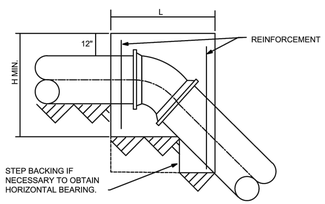
* 48" Maximum Cover

ALL CONSTRUCTION

REVISION	BY	DATE
1 All sweets bar right mortar	SAH	1/9/2015

N. KY. WATER DISTRICT
TYPICAL PIPELINE TRENCH DETAIL

DRAWN BY: SAR
APPROVED: RH
DATE: 8/5/2014
STANDARD DRAWING NO: 103A



SECTION A-A

CONCRETE BACKING FOR VERTICAL BENDS

1. BACKING DESIGNED FOR 3000 POUNDS PER SQUARE FOOT SOIL BEARING AND 150 POUNDS PER SQUARE INCH INTERNAL PRESSURE.

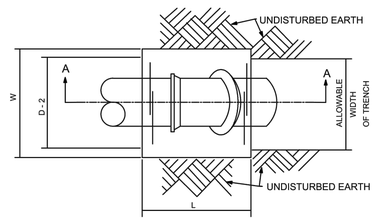
2. PROVIDE MINIMUM CONCRETE REINFORCEMENT OF 2 PAIR OF TWO 5" "U" BARS @ 12" C.

3. CENTER BACKING ON BEND.

BLOCKING FOR SIZES NOT SHOWN SHALL USE THE NEXT LARGER SIZE.

SIZE of PIPE	DEGREE OF BEND 11 1/4 L'	W'	H'	VOL.	22 1/2 L'	W'	H'	VOL.	45 L'	W'	H'	VOL.
4"	12	24	16	2.7	15	30	18	4.7	22	36	24	11.0
6"	12	43	18	5.4	16	48	34	15.1	30	55	24	22.9
8"	12	54	24	9.0	18	57	36	21.4	36	57	33	39.2
12"	20	63	36	26.3	37	62	37	49.2	48	62	51	88.0
16"	31	65	38	44.4	60	65	39	88.2	65	65	65	159.2
20"	45	70	40	73.0	56	70	60	136.4	72	76	78	247.5
24"	47	72	54	106.0	67	74	69	198.4	88	84	84	360.1

NOTE: VOLUMES GIVEN IN CUBIC FEET



PLAN

REVISION	BY	DATE
1 8" Min. Rock Size	KPT	1/2/20

N. KY. WATER DISTRICT
CONCRETE THRUST BLOCKING FOR VERTICAL BENDS

DRAWN BY: SAR
APPROVED: RH
DATE: 8/5/2014
STANDARD DRAWING NO: 104A

90% REVIEW

your trusted advisor
consultants
engineers
architects
planners

NO	REVISION	DATE
-	-	-

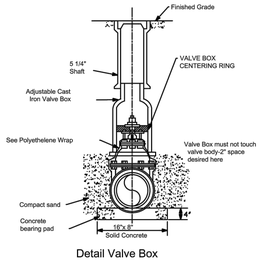
ISSUED FOR: 90% DESIGN
ISSUE DATE: MAY 2024
SCALE: AS SHOWN
DESIGNED BY: JCOR
DRAWN BY: JCOR
CHECKED BY: JSHU

NORTHERN KENTUCKY WATER DISTRICT
SUBDISTRICT 'O'
-KENTON COUNTY -

DETAILS

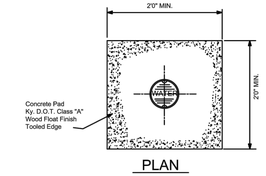
PROJECT NO.
231591
DISCIPLINE
CIVIL
SHEET NAME
G-02
SHEET
3
OF
49

APPROVED
ACCEPTANCE IS TRANSMITTAL ONLY
Kentucky American Water

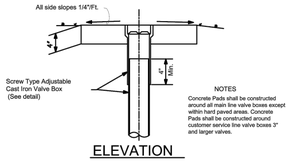


Detail Valve Box Installation

Note:Valve box shall not transmit shock or stress to the valve



PLAN



ELEVATION

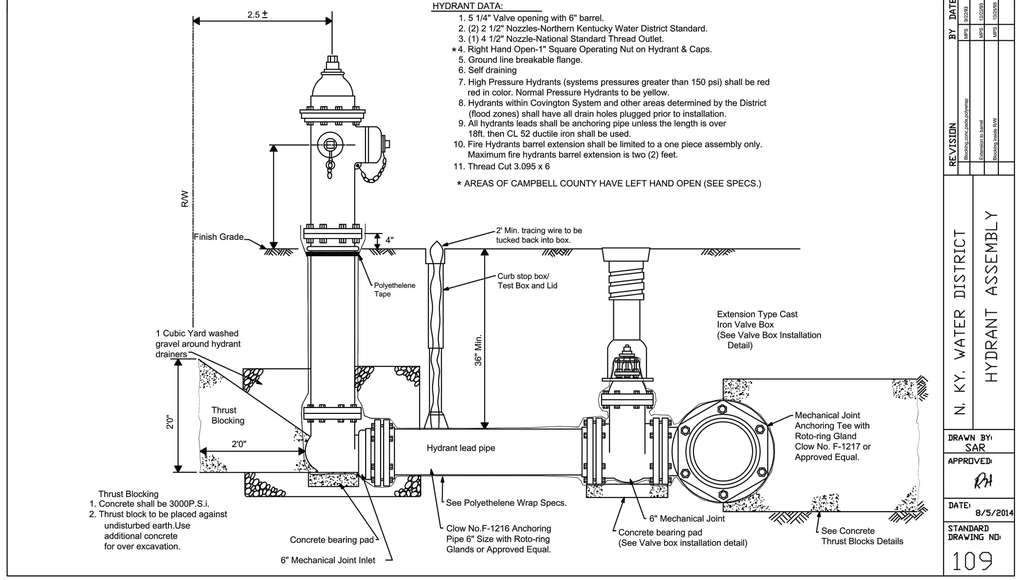
NOTES

Concrete Pads shall be constructed around all main line valve boxes except within hard paved areas. Concrete Pads shall be constructed around customer service line valve boxes 3" and larger valves.

REVISION	BY	DATE
* 22" Concrete pad size changed to Square	MPS	6/2023
Installation	MPS	6/2023

N. KY. WATER DISTRICT
VALVE BOX AND VALVE PAD DETAIL

DRAWN BY: SAR
APPROVED: RH
DATE: 8/5/2014
STANDARD DRAWING NO: 105



HYDRANT DATA:

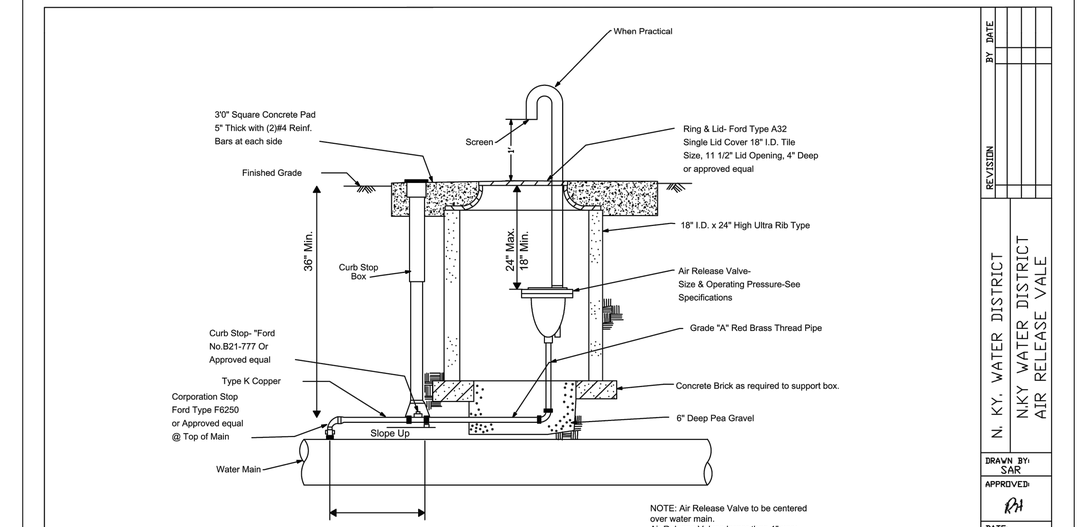
1. 5 1/4" Valve opening with 6" barrel.
2. (2) 2 1/2" Nozzles-Northern Kentucky Water District Standard.
3. (1) 4 1/2" Nozzle-National Standard Thread Outlet.
4. * Right Hand Open-1" Square Operating Nut on Hydrant & Caps.
5. Ground line breakable flange.
6. Self draining
7. High Pressure Hydrants (systems pressures greater than 150 psi) shall be red red in color. Normal Pressure Hydrants to be yellow.
8. Hydrants within Covington System and other areas determined by the District (flood zones) shall have all drain holes plugged prior to installation.
9. All hydrants leads shall be anchoring pipe unless the length is over 18ft. then CL 52 ductile iron shall be used.
10. Fire Hydrants barrel extension shall be limited to a one piece assembly only. Maximum fire hydrants barrel extension is two (2) feet.
11. Thread Cut 3.095 x 6

* AREAS OF CAMPBELL COUNTY HAVE LEFT HAND OPEN (SEE SPECS.)

REVISION	BY	DATE
Blocking note,valve,anchorage	MPS	6/2023
Extension is 6 inch	MPS	12/2020
Blocking needs WM	MPS	12/2020

N. KY. WATER DISTRICT
HYDRANT ASSEMBLY

DRAWN BY: SAR
APPROVED: RH
DATE: 8/5/2014
STANDARD DRAWING NO: 109

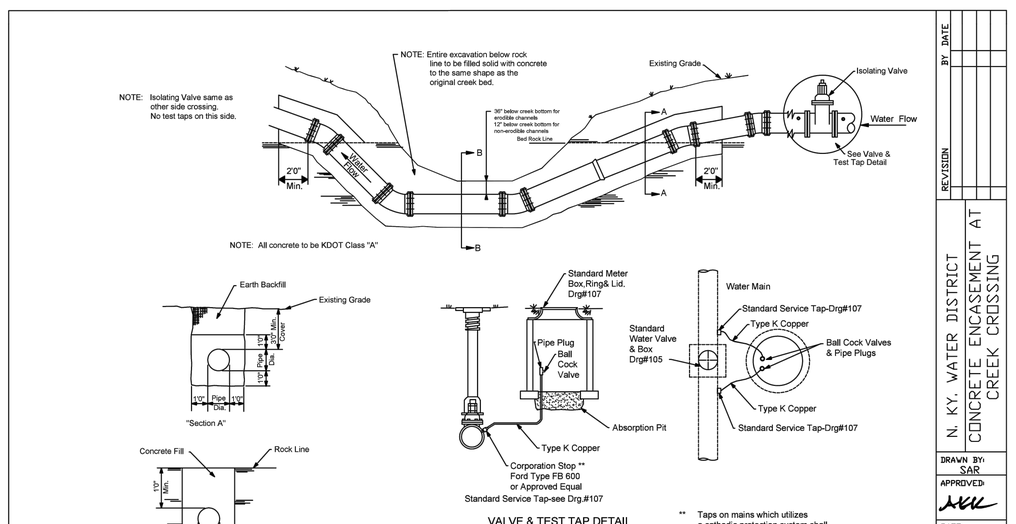


NOTE: Air Release Valve to be centered over water main.
Air Release Valves larger than 1" use:
vault size 24"x24"
lid Ford Type MC 24 &
Extension Ring Ext-2 or approved equal.

REVISION	BY	DATE

N. KY. WATER DISTRICT
N.KY WATER DISTRICT AIR RELEASE VALE

DRAWN BY: SAR
APPROVED: RH
DATE: 8/5/2014
STANDARD DRAWING NO: 106



VALVE & TEST TAP DETAIL

Valve shall be installed in areas not subject to flooding
No services will be tapped between the isolating valve on the creek crossings.

** Taps on mains which utilizes a cathodic protection system shall require an isolation corporation stop

REVISION	BY	DATE

N. KY. WATER DISTRICT
CONCRETE ENCASEMENT AT CREEK CROSSING

DRAWN BY: SAR
APPROVED: MKK
DATE: 2/1/2021
STANDARD DRAWING NO: 110

90% REVIEW

your trusted advisor consultants engineers architects planners

NO	REVISION	DATE
-	-	-

ISSUED FOR: 90% DESIGN
ISSUE DATE: MAY 2024
SCALE: AS SHOWN
DESIGNED BY: JCOR
DRAWN BY: JCOR
CHECKED BY: JSHU

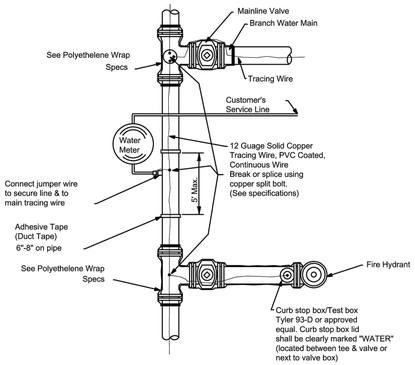
NORTHERN KENTUCKY WATER DISTRICT
SUBDISTRICT 'O'
-KENTON COUNTY -

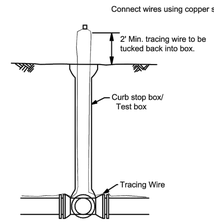
DETAILS

PROJECT NO.: 231591
DISCIPLINE: CIVIL
SHEET NAME: G-03
SHEET: 4 OF 49

APPROVED FOR CONSTRUCTION
AUGUST 19, 2024
TRANSPORTATION CABINET
KENTUCKY

I:\CTC.LOCAL\CT_DATA\PROJECTS\2023\231591\DWG\SHEETS\C_231591-00_DETAIL SHEET.DWG - NKWD DTLS (2) - 5/28/2024 2:43:27 PM - JAMES CORNELL





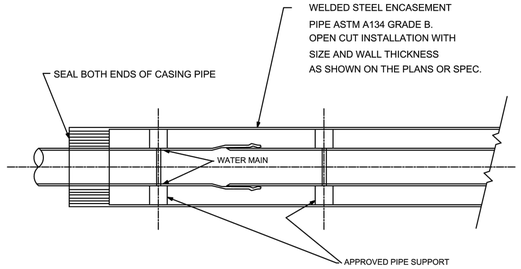
DUCTILE IRON AND PVC PIPE WITH DUCTILE IRON FITTINGS

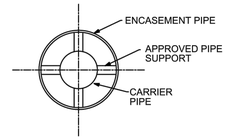
Note: Curb stop box/test box shall not be installed in paved areas.

REVISION	BY	DATE

N. KY. WATER DISTRICT
TRACING WIRE INSTALLATION DETAIL

DRAWN BY: SAR
APPROVED: DH
DATE: 8/5/2014
STANDARD DRAWING NO: 111





1. All carrier pipe placed in steel casing pipe shall be minimum class 50 ductile iron pipe and conform to the latest edition of AWWA C151.
2. Carrier pipe gaskets shall develop a wedging action between pairs of high-strength stainless steel elements spaced around the gasket (FIELD LOK , FASTGRIP, or approved equal gaskets).

NOTE: CASING PIPE JOINTS SHALL BE SEAM WELDED SO THAT CASING IS WATER TIGHT FROM END TO END.

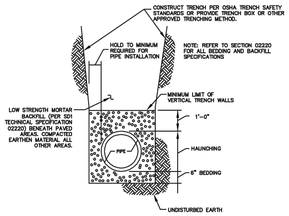
ENCASEMENT PIPE DETAIL

NO SCALE

REVISION	BY	DATE
1 Remove Detail #3	JS	2/7/20

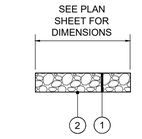
N. KY. WATER DISTRICT
ENCASEMENT PIPE DETAIL

DRAWN BY: SAR
APPROVED: DH
DATE: 8/5/2014
STANDARD DRAWING NO: 114



STORM TRENCH DETAIL

N.T.S.



ROCK CHANNEL PROTECTION

N.T.S.

1. ITEM 703 - 12" CHANNEL LINING, CLASS II
2. NON WOVEN GEOTEXTILE FILTER FABRIC

90% REVIEW

your trusted advisor consultants engineers architects planners

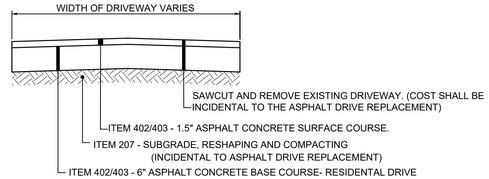
NO	REVISION	DATE
	.	

ISSUED FOR:	90% DESIGN
ISSUE DATE:	MAY 2024
SCALE:	AS SHOWN
DESIGNED BY:	JCOR
DRAWN BY:	JCOR
CHECKED BY:	JSHU

NORTHERN KENTUCKY WATER DISTRICT
SUBDISTRICT 'O'
-KENTON COUNTY -

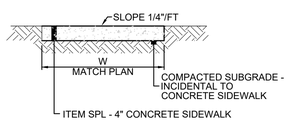
DETAILS

PROJECT NO.: 231591
DISCIPLINE: CIVIL
SHEET NAME: G-04
SHEET: 5 OF: 49



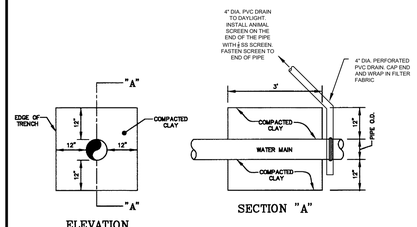
ASPHALT DRIVEWAY REPLACEMENT

N.T.S.



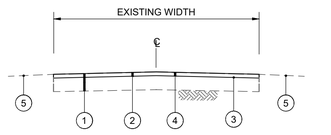
4" CONCRETE SIDEWALK REPLACEMENT DETAIL

(SAWCUTTING AND REMOVAL OF EXISTING CONCRETE SIDEWALK AND EXCAVATION TO PROPOSED SUBGRADE INCIDENTAL TO SIDEWALK REPLACEMENT)



CLAY BULKHEAD

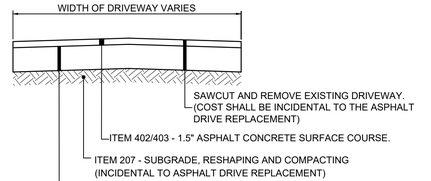
N.T.S.



1. EXISTING ASPHALT PAVEMENT
2. ITEM 408 - ASPHALT MILLING (1.5" TYP.)
3. ITEM 406 - TACK COAT @ 0.1 GAL/SY (INCIDENTAL TO ITEM 403)
4. ITEM 402/403 - 1-1/2" ASPHALT PAVEMENT SURFACE
5. DO NOT DISTURB YARD AREA

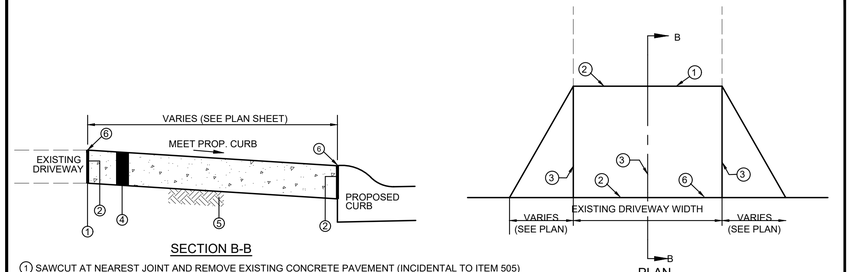
TYPICAL PAVEMENT RESURFACING SECTION

N.T.S.



GRAVEL DRIVEWAY REPLACEMENT

N.T.S.



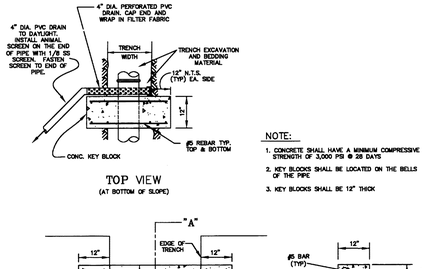
1. SAWCUT AT NEAREST JOINT AND REMOVE EXISTING CONCRETE PAVEMENT (INCIDENTAL TO ITEM 505)
2. 1" PREFORMED EXPANSION JOINT MATERIAL (FLEXIBLE FOAM-CERAMAR BY W.R. MEADOWS OR APPROVED EQUAL)
3. TOOLED JOINT
4. ITEM 505 - 6" CONCRETE DRIVEWAY/APRON (OR MATCH EXISTING WHICHEVER IS GREATER)
5. COMPACTED SUBGRADE (INCIDENTAL TO ITEM 505 - 6" CONCRETE DRIVEWAY/APRON)
6. SEAL JOINT WITH GRAY SELF LEVELING SEALANT (SIKA FLEX OR APPROVED EQUAL)

NOTE:

1. ANY YARD AREA DISTURBED BY THE CONSTRUCTION OF THE DRIVEWAY APRON SHALL BE RESTORED WITH TOPSOIL, SEED AND MULCH (INCIDENTAL TO CONCRETE DRIVEWAY APRON REPLACEMENT).
2. ALL EXCAVATION REQUIRED FOR THE PLACEMENT OF THE PROPOSED DRIVEWAY SHALL BE INCIDENTAL TO CONCRETE DRIVEWAY REPLACEMENT BID ITEM.

CONCRETE DRIVEWAY REPLACEMENT

N.T.S.

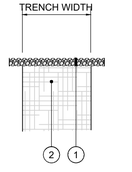


NOTE:

1. CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 3,000 PSI @ 28 DAYS
2. KEY BLOCKS SHALL BE LOCATED ON THE BELLS OF THE PIPE
3. KEY BLOCKS SHALL BE 12" THICK

CONCRETE KEY BLOCK

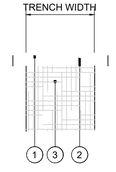
(IN BEDROOCK)
N.T.S.



AGGREGATE ROADWAY REPLACEMENT SECTION

N.T.S.

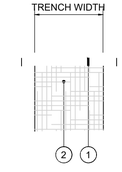
1. ITEM 302 - 8" CRUSHED STONE BASE, (LESS THAN 7% FINES) COMPACTED TO 100% (ASTM D698).
2. CONTROL DENSITY FILL PER NKWD SPECIFICATIONS (SEE DETAIL SHEET (G-02)



ASPHALT ROADWAY REPLACEMENT SECTION

N.T.S.

1. ITEM 402/403 - 1.5" ASPHALT CONCRETE SURFACE COURSE
2. ITEM 402/403 - 7.75" ASPHALT CONCRETE BASE (OR MATCH EXISTING)
3. CONTROL DENSITY FILL PER NKWD SPECIFICATIONS (SEE DETAIL SHEET (G-02)



CONCRETE ROADWAY REPLACEMENT SECTION

N.T.S.

1. ITEM SPL - 8" PORTLAND CEMENT CONCRETE PAVEMENT - PER KENTON COUNTY SUBDIVISION REGULATIONS (OR MATCH EXISTING)
2. CONTROL DENSITY FILL PER NKWD SPECIFICATIONS (SEE DETAIL SHEET (G-02)

NOTE:
GENE STREET HAS AN ADDITIONAL 1.5" ASPHALT OVERLAY ON THE CONCRETE PAVEMENT

APPROVED
Kentucky Transportation Cabinet
Highway Construction Support
Electronically Signed 05/30/24

SEDIMENT BASINS

DEFINITION
A TEMPORARY BARRIER OR DAM CONSTRUCTED ACROSS A WATERCOURSE OR AT OTHER SUITABLE LOCATION TO RETAIN SEDIMENT AND OTHER WATERBORNE DEBRIS.

SCOPE
THIS STANDARD ESTABLISHES MINIMUM ACCEPTABLE QUALITY FOR THE DESIGN AND CONSTRUCTION OF TEMPORARY SEDIMENT BASINS FORMED BY AN EMBANKMENT, EXCAVATION OR A COMBINATION OF EMBANKMENT AND EXCAVATION. THE STANDARD IS LIMITED TO SITES WHERE:

1. FAILURE OF THE STRUCTURE WOULD NOT RESULT IN LOSS OF LIFE; DAMAGE TO HOMES; COMMERCIAL OR INDUSTRIAL BUILDINGS; DAMAGE TO HIGHWAYS OR RAILROADS OR INTERRUPTION OF USE OR SERVICE OF PRIVATE UTILITIES.
2. THE HEIGHT OF DAM IS 25 FEET OR LESS, AS MEASURED FROM THE NATURAL STREAMBED AT THE CENTERLINE OF DAM TO THE TOP OF DAM.
3. THE TOTAL VOLUME OF STORAGE IS 150 ACRE-FEET OR LESS.
4. THE DRAINAGE AREA IS 100 ACRES OR LESS.
5. THE BASIN WILL BE REMOVED WITHIN A THREE-YEAR PERIOD AFTER CONSTRUCTION.

PURPOSE
TEMPORARY SEDIMENT BASINS ARE USED AS A MEANS OF TRAPPING AND STORING SEDIMENT FROM ERODING AREAS IN ORDER TO PROTECT DOWNSTREAM AREAS FROM DAMAGE RESULTING FROM SEDIMENTATION AND WATERBORNE DEBRIS.

CONDITIONS WHERE PRACTICE APPLIES
TEMPORARY SEDIMENT BASINS APPLY WHERE PHYSICAL SITE CONDITIONS OR OTHER RESTRICTIONS PRECLUDE THE INSTALLATION OF EROSION CONTROL MEASURES TO ADEQUATELY CONTROL EROSION AND SEDIMENTATION. IT MAY BE USED DOWNSLOPE FROM CONSTRUCTION OPERATIONS WHICH EXPOSE AREAS TO EROSION. TEMPORARY SEDIMENT BASINS WILL BE REMOVED AFTER THE EXPOSED AREAS ARE ADEQUATELY PROTECTED AGAINST EROSION BY VEGETATIVE OR MECHANICAL MEANS.

COMPLIANCE WITH LAWS AND REGULATIONS
DESIGN AND CONSTRUCTION SHALL COMPLY WITH ALL LOCAL LAWS, ORDINANCES, RULES AND REGULATIONS.

LOCATION
TO IMPROVE THE EFFECTIVENESS OF THE BASIN, IT SHOULD BE LOCATED SO AS TO INTERCEPT THE LARGEST POSSIBLE AMOUNT OF RUNOFF FROM THE DISTURBED AREA. THE BEST LOCATIONS ARE GENERALLY LOW AREAS AND NATURAL DRAINAGEWAYS BELOW DISTURBED AREAS. DRAINAGE INTO THE BASIN CAN BE IMPROVED BY THE USE OF DIVERSION DIKES AND DITCHES. THE BASIN MUST NOT BE LOCATED IN A LIVE STREAM BUT SHOULD BE LOCATED TO TRAP SEDIMENT-LADEN RUNOFF BEFORE IT ENTERS THE STREAM. THE BASIN SHOULD NOT BE LOCATED WHERE ITS FAILURE WOULD RESULT IN THE LOSS OF LIFE OR IN INTERRUPTION OF THE USE OR SERVICE OF PUBLIC UTILITIES OR ROADS.

MULTIPLE USE
SEDIMENT BASINS MAY BE DESIGNED AS PERMANENT STRUCTURES TO REMAIN IN PLACE AFTER CONSTRUCTION IS COMPLETED. SITE CONDITIONS MAY MAKE THE USE OF THESE STRUCTURES DESIRABLE FOR STORMWATER DETENTION PURPOSES. WHEREVER THESE STRUCTURES ARE TO BECOME PERMANENT, OR IF THEY EXCEED THE SIZE LIMITATIONS OF THE DESIGN CRITERIA, THEY MUST BE DESIGNED AS PERMANENT PONDS BY A QUALIFIED PROFESSIONAL ENGINEER. PERMANENT PONDS ARE BEYOND THE SCOPE OF THESE STANDARDS AND SPECIFICATIONS. THE PERMANENT STRUCTURES MUST BE SUBMITTED WITH CONSTRUCTION DRAWINGS FOR REVIEW AND ACCEPTANCE BY THE CITY ENGINEER.

MAINTENANCE BASINS SHALL BE CHECKED WEEKLY AND CLEANED WHEN NO LONGER EFFECTIVE.

STORM DRAIN INLET PROTECTION
DEFINITION
A SEDIMENT FILTER INSTALLED AROUND A STORM DRAIN INLET OR CURB INLET TO REDUCE SEDIMENT DISCHARGE.

PURPOSE
TO PREVENT SEDIMENT FROM ENTERING THE STORM DISCHARGE SYSTEMS PRIOR TO PERMANENT STABILIZATION OF THE DISTURBED DRAINAGE AREA. DIFFERENT TYPES OF STRUCTURES ARE APPLICABLE TO DIFFERENT CONDITIONS.

STORM WATER POLLUTION PREVENTION NOTES

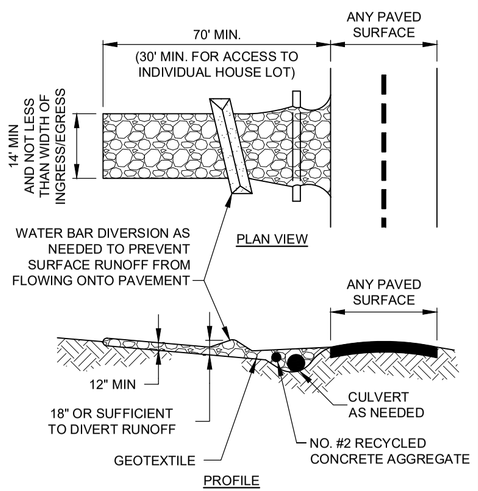
1. SANITATION DISTRICT NO. 1 IS TO BE CONTACTED 72 HOURS PRIOR TO ANY CONSTRUCTION ACTIVITY AT 859-578-6892
2. ALL EROSION AND SEDIMENTATION CONTROL SHALL BE PERFORMED AS SHOWN ON THE PLANS, AND SHALL BE IN COMPLIANCE WITH THE LATEST CONSTRUCTION ACTIVITY " NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM" RULES AND REGULATIONS.
3. A COPY OF THE STORM WATER POLLUTION PREVENTION PLAN (SWPPP) AND A COPY OF THE "NOTICE OF INTENT" (NOI) SHALL BE KEPT ON SITE.
4. AN AMENDMENT OF THE SWPPP IS REQUIRED WHENEVER A CHANGE IN DESIGN, CONSTRUCTION, AND OPERATION OR MAINTENANCE HAS A SIGNIFICANT EFFECT ON THE POTENTIAL FOR THE DISCHARGE OF POLLUTANTS, OR IF THE SWPPP PROVES TO BE INEFFECTIVE IN ACHIEVING THE GENERAL OBJECTIVES OF THE SWPPP.
5. THE CONTRACTOR SHALL ALSO MAINTAIN THE FOLLOWING RECORDS ON SITE:
   A. GENERAL CONTRACTOR AND/OR SUBCONTRACTOR SWPPP CERTIFICATIONS
   B. THE DATE, TIME, AND EXACT LOCATION OF THE INSPECTION, AND THE NAME OF THE INSPECTOR
   C. AN ASSESSMENT OF THE CONDITION OF THE EROSION CONTROLS
   D. A DESCRIPTION OF ANY EROSION CONTROL IMPLEMENTATION AND MAINTENANCE PERFORMED
   E. A DESCRIPTION OF THE PRESENT PHASE OF CONSTRUCTION AT THE SITE
6. CONSTRUCTION SEQUENCE
   - ALL PERIMETER SILT FENCE, INLET PROTECTION AND OTHER EROSION CONTROLS SHALL BE IN PLACE BEFORE ANY OTHER EARTH MOVING ACTIVITIES BEGIN.
   - THE CONTRACTOR SHALL CLEAR AND GRUB ONLY THE AREAS PLANNED FOR EARTH MOVING.
   - REMOVE TOPSOIL, STOCKPILE IT, AND INSTALL SILT FENCE AROUND PERIMETER.
   - SEED SOIL STOCKPILE WITH PERENNIAL RYE GRASS AND MULCH WITH STRAW IF NO TO BE DISTURBED FOR MORE THAN 21 DAYS.
   - CONSTRUCT DETENTION BASIN AND CONTROL STRUCTURE. DETENTION BASIN SHALL BE USED AS A SEDIMENT BASIN UNTIL THE SITE IS STABILIZED.
   - INSTALL STORM SEWER SYSTEM AND SURFACE STORM INLET AND MANHOLE PROTECTION.
   - ESTABLISH A TEMPORARY SEEDING ON ALL BARE AREAS THAT ARE TO REMAIN UNDISTURBED FOR MORE THAN 21 DAYS. SEED WITH PERENNIAL RYE GRASS MULCH WITH STRAW.
   - IMMEDIATE AFTER TOPSOIL HAS BEEN PLACED, STABILIZE THE SAME SURFACE AREA WITH FINAL SEED AND MULCH 7 DAYS AFTER REACHING FINAL GRADE.
   - AFTER THE VEGETATION HAS BECOME WELL ESTABLISHED, REMOVE TEMPORARY EROSION OR SEDIMENT CONTROL PRACTICES.
7. EROSION CONTROLS MUST BE INSPECTED ONCE EVERY 7 DAYS AND WITHIN 24 HOURS OF 0.5" OR GREATER RAINFALL. REMOVE ACCUMULATED SEDIMENT FROM EROSION CONTROLS.
8. TEMPORARY SEEDING SHALL BE PERENNIAL RYE GRASS (40 LB / ACRED) AND MULCH AT 3 BALES OF STRAW PER 1000 S.F.
9. CONTRACTOR IS RESPONSIBLE FOR OBTAINING BORROW MATERIAL ONSITE AND / OR DISPOSING OF EXCESS MATERIAL OFF SITE AS REQUIRED TO MEET INDICATED DESIGN ELEVATIONS.
10. DEBRIS SHALL BE COLLECTED WITHIN PROPERTY LIMITS WEEKLY OR AS NEEDED FOR PUBLIC SAFETY. SURROUNDING STREETS AFFECTED BY THE CONSTRUCTION SHALL BE CLEANED DAILY OR AS NEEDED FOR PUBLIC SAFETY. SEE CONSTRUCTION ENTRANCE DETAIL IN SWPPP DETAILS SHEET.
11. THE CONSTRUCTION OF BMPs SHALL BE REVISED OR ADDED IF DEEMED NECESSARY PER SECTION 1000 OF THE SANITATION DISTRICT 1 REGULATIONS.
12. CONTACT SANITATION DISTRICT NO. 1 72 HOURS PRIOR TO INSTALLATION OF THE WATER QUALITY FEATURE.

NOTES:
1) SUBSOILING SHALL OCCUR WHEN SOIL MOISTURE IS LOW ENOUGH TO ALLOW THE SOIL TO CRACK OR FRACTURE. SUBSOILING IS NOT PERMITTED ON SLIP-PRONE AREAS.
2) THE SITE SHALL BE GRADED TO PERMIT THE USE OF CONVENTIONAL EQUIPMENT FOR SEEDBED PREPARATION AND SEEDING.
3) TOPSOIL SHALL BE APPLIED WHERE NEEDED TO ESTABLISH VEGETATION.
4) THE SEEDBED SHALL BE PREPARED BY APPLYING AGRICULTURAL GROUND LIMESTONE OR FERTILIZER AS RECOMMENDED BY A SOIL TEST. IN LIEU OF A SOIL TEST, APPLY LIME AT 2 TONS/AC. OR FERTILIZER AT 500 LB/AC. OF 10-10-10 OR 12-12-12 ANALYSIS. LIME AND FERTILIZER SHALL BE WORKED INTO THE SOIL TO A DEPTH OF 3".
5) APPLY SEED UNIFORMLY ON FIRM, MOIST SEED BED.
6) SEEDING SHOULD BE APPLIED FROM MARCH 1 TO MAY 31 OR AUGUST 1 TO SEPTEMBER 30. IF SEEDING OCCURS OUTSIDE OF THESE DATES, ADDITIONAL MULCH AND IRRIGATION MAY BE REQUIRED TO ENSURE A MINIMUM OF 80% GERMINATION. TILLAGE FOR SEEDBED PREPARATION SHALL OCCUR WHEN THE SOIL IS DRY ENOUGH TO CRUMBLE AND NOT FORM RIBBONS WHEN COMPRESSED BY HAND.
7) SEEDING SHOULD NOT BE APPLIED FROM OCTOBER 1 TO NOVEMBER 20 BECAUSE SEEDS MAY GERMINATE, BUT WILL NOT SURVIVE THE WINTER. USE THE FOLLOWING METHODS FOR DORMANT SEEDING:
   - FROM OCTOBER 1 TO NOVEMBER 20, INCREASE THE SEEDING RATE BY 50%, PREPARE THE SEED BED, ADD LIME AND FERTILIZER, MULCH AND ANCHOR.
   - FROM NOVEMBER 20 TO MARCH 15, ONLY IF SOIL CONDITIONS PERMIT, INCREASE THE SEEDING RATE BY 50%, PREPARE THE SEED BED, ADD LIME AND FERTILIZER, APPLY THE SEED MIXTURE, MULCH AND ANCHOR.
8) APPLY MULCH MATERIAL IMMEDIATELY AFTER SEEDING.
9) PERMANENT SEEDING SHALL INCLUDE IRRIGATION TO ESTABLISH VEGETATION DURING DRY OR HOT WEATHER OR ON ADVERSE SITE CONDITIONS AS NEEDED. AVOID EXCESSIVE IRRIGATION AND MONITOR TO PREVENT EROSION AND DAMAGE FROM RUNOFF.
10) PERMANENT SEEDING SHALL NOT BE CONSIDERED ESTABLISHED FOR AT LEAST 1 FULL YEAR FROM THE TIME OF PLANTING. DURING THIS PERIOD, INSPECT FOR SOIL EROSION OR PLANT LOSS AND REPAIR BARE OR SPARSE AREAS, FILL GULLIES, RE-FERTILIZE, RE-SEED OR RE-MULCH AS NEEDED.
11) A MINIMUM OF 70% GROWTH DENSITY, BASED ON A VISUAL INSPECTION, MUST EXIST FOR AN ADEQUATE PERMANENT VEGETATIVE PLANTING.

PERMANENT SEEDING FERTILIZATION AND MOWING CHART				
MIXTURE	FORMULA	LB/ AC.	TIME	MOW
CREEPING RED FESCUE DOMESTIC RYEGRASS KENTUCKY BLUEGRASS	10-10-10	500	FALL, YEARLY, OR AS NEEDED	≥3"
TALL FESCUE	10-10-10	500		≥4"
TURF-TYPE FESCUE	10-10-10	500		
CROWN VETCH FESCUE	0-20-20	400	SPRING, AND YEARLY AFTER ESTABLISHED	DO NOT MOW
FLAT PEA FESCUE	0-20-20	400		

PERMANENT SEEDING SPECIES SELECTION		
SEED MIX	SEED RATE LB/AC.	NOTES:
GENERAL USE		
CREEPING RED FESCUE DOMESTIC RYEGRASS KENTUCKY BLUEGRASS	20 - 40 10 - 20 20 - 40	FOR CLOSE MOWING AND WATERWAYS WITH ≤2.0 FT./SEC. VELOCITY
TALL FESCUE	40 - 50	
TURF-TYPE FESCUE	90	
STEEP BANKS OR CUT SLOPES		
TALL FESCUE	40 - 50	
CROWN VETCH TALL FESCUE	10 - 20 20 - 30	DO NOT SEED LATER THAN AUGUST
FLAT PEA TALL FESCUE	20 - 25 20 - 30	DO NOT SEED LATER THAN AUGUST
ROAD DITCHES AND SWALES		
TALL FESCUE	40 - 50	
TURF-TYPE FESCUE KENTUCKY BLUEGRASS	90 5	
LAWN		
KENTUCKY BLUEGRASS PERENNIAL RYEGRASS	100 - 120 100 - 120	
KENTUCKY BLUEGRASS CREEPING RED FESCUE	100 - 120 100 - 120	FOR SHADED AREAS

PERMANENT SEEDING DETAIL
SCALE: NONE



NOTES:
1. PLACE GEOTEXTILE OVER THE ENTIRE AREA PRIOR TO PLACING STONE MEETING THE MIN. SPECIFICATIONS:

A.	TENSILE STRENGTH	= 200 LBS.
B.	PUNCTURE STRENGTH	= 80 PSI
C.	TEAR STRENGTH	= 50 LBS.
D.	BURST STRENGTH	= 320 PSI
E.	ELONGATION	= 20%
F.	EQUIVALENT OPENING SIZE	≤ 0.6 MM
G.	PERMITTIVITY	= 0.001 CM/SEC

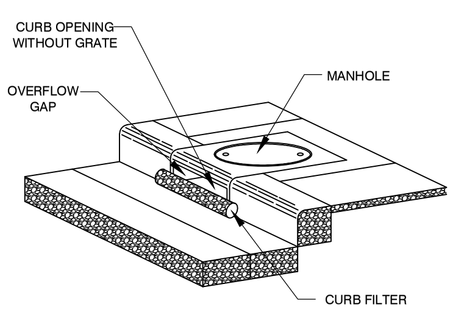
2. APPLY ADDITIONAL STONE AS CONDITIONS DEMAND AND REPLENISH STONE WHEN THE DEPTH IS LESS THAN 6". REMOVE AND REPLACE IF STONES BECOMES MUD-LADEN.
3. IMMEDIATELY REMOVE MUD DROPPED, WASHED OR TRACKED ONTO ROADS OR ANY SURFACE WHERE RUNOFF IS NOT CHECKED BY SEDIMENT CONTROLS BY SCRAPING OR SWEEPING.
4. CONSTRUCTION ENTRANCES SHALL NOT BE RELIED UPON TO REMOVE MUD FROM VEHICLES OR TO PREVENT OFF-SITE TRACKING. VEHICLES THAT ENTER AND LEAVE THE CONSTRUCTION SITE SHALL BE RESTRICTED FROM MUDDY AREAS.

CE **CONSTRUCTION ENTRANCE**
SCALE: NONE

NOTES:
1) THE SEED BED SHALL BE PULVERIZED AND LOOSE TO ENSURE THE SUCCESS OF ESTABLISHING VEGETATION.
2) SOIL AMENDMENTS MAY BE REQUIRED TO ESTABLISH ADEQUATE VEGETATION. PERFORM SOIL TESTS ON THE SITE TO PREDICT THE NEED FOR LIME AND FERTILIZER.
3) APPLY SEED UNIFORMLY. COVER BROADCASTED SEED BY RAKING OR DRAGGING AND THEN LIGHTLY TAMPING INTO PLACE.
4) APPLY MULCHING IMMEDIATELY AFTER SEEDING.
5) SEEDING SHALL BE INSPECTED FOR BARE SPOTS AND WASHOUTS, AND RESEEDED AS NECESSARY.

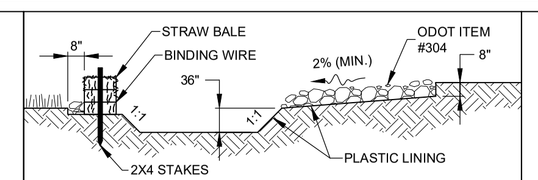
TEMPORARY SEEDING SPECIES SELECTION			
DATES	SPECIES	LB/1,000 SF	LB/AC.
MARCH 1 TO AUGUST 15	OATS	3	128
	TALL FESCUE	1	40
	PERENNIAL RYEGRASS	1	40
	PERENNIAL RYEGRASS	2	40
	TALL FESCUE	1	40
AUGUST 16 TO NOVEMBER 1	RYE	3	112
	TALL FESCUE	1	40
	PERENNIAL RYEGRASS	1	40
	WHEAT	3	120
	TALL FESCUE	1	40
	PERENNIAL RYEGRASS	1	40
	PERENNIAL RYEGRASS	2	40
	TALL FESCUE	1	40
NOVEMBER 1 TO SPRING	ONLY MULCH OR DORMANT SEEDING.		

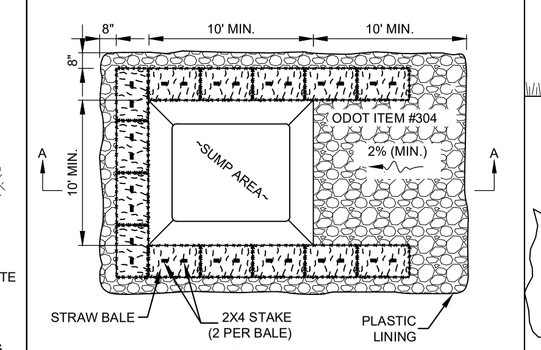
TEMPORARY SEEDING DETAIL
SCALE: NONE

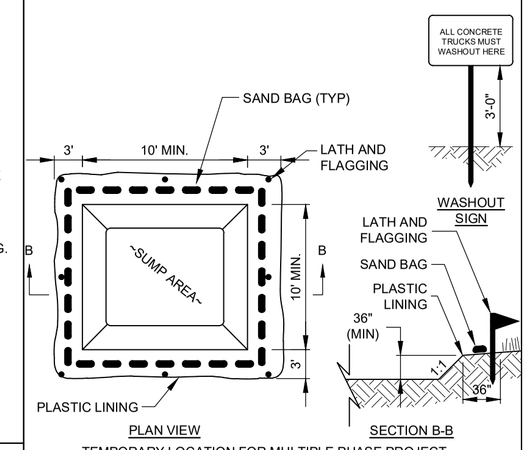


DETAIL OF CURB INLET SEDIMENT CONTROL DEVICE WITH CURB FILTER

IP **DANDY CURB**
SCALE: NONE

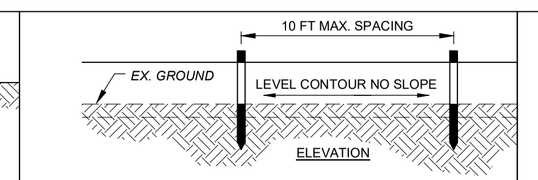






NOTES:
1. WASHOUT PIT SHALL BE LOCATED 100' MINIMUM FROM INLETS, STREAMS, WETLANDS AND ANY OTHER SURFACE WATERS.
2. ALL EXCESS CONCRETE AND CONCRETE WASHOUT, INCLUDING FROM HAND MIXERS AND LIGHT EQUIPMENT, SHALL BE DISPOSED OF IN THE CONCRETE WASHOUT AREA. DISPOSAL OF EXCESS CONCRETE OR CONCRETE WASHOUT ON THE GROUND, OR IN STORM DRAINS, DITCHES OR WATER BODIES, IS PROHIBITED.
3. CONCRETE WASHOUT AREA SHALL BE SUFFICIENT SIZE TO CONTAIN CONCRETE WASTE GENERATED. FOR LARGER SITES, MULTIPLE CONCRETE WASHOUT AREAS MAY BE REQUIRED.
4. IF CONCRETE WASHOUT AREA IS LOCATED AWAY FROM A PAVED SURFACE, CONSTRUCT A GRAVEL ACCESS ROUTE EQUAL IN COMPOSITION TO THE CONSTRUCTION ENTRANCE.
5. PLASTIC LINING SHALL BE DOUBLE-LINED, CONTINUOUS 10-MIL POLYETHYLENE SHEETING FREE OF HOLES, TEARS OR OTHER DEFECTS, AND INSTALLED ON A SMOOTH, LEVEL SURFACE, FREE OF ROCKS OR DEBRIS.
6. CONCRETE WASHOUT SIGNAGE SHALL BE CLEARLY VISIBLE AND LOCATED WITHIN 30 FEET OF EACH WASHOUT AREA.
7. CONCRETE WASHOUT AREAS SHALL BE COVERED DURING INCLEMENT WEATHER TO PREVENT OVERFLOWS.
8. PREFABRICATED, PORTABLE AND RE-USABLE CONCRETE WASHOUT CONTAINERS ARE ACCEPTABLE, BUT MUST BE SPECIFICALLY DESIGNED FOR CONCRETE WASHOUT USE.
9. CONCRETE WASHOUT AREA SHALL BE INSPECTED DAILY TO CHECK FOR DAMAGE AND TO DETERMINE IF IT NEEDS CLEANED OR REPLACED. ANY DAMAGE TO THE SIDEWALLS OR POLYETHYLENE SHEETING SHALL BE REPAIRED IMMEDIATELY. THE CONCRETE WASHOUT AREA SHALL BE CLEANED OR REPLACED WHEN IT IS 75% FULL. THE POLYETHYLENE SHEETING SHALL BE REPLACED AFTER EACH CLEANING.
10. SAW CUT CONCRETE, RESIDUE FROM SAW CUT, AND GRINDINGS SHALL BE DISPOSED OF IN THE WASHOUT PIT.

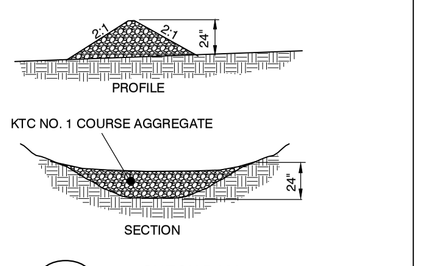
WA **CONCRETE WASHOUT DETAIL**
SCALE: NONE



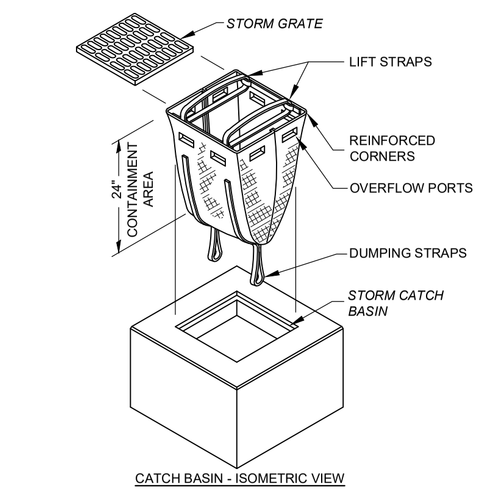
NOTES:
1. PRESERVE VEGETATION FOR 5 FEET, OR AS MUCH AS POSSIBLE, UPSLOPE FROM THE SILT FENCE. IF VEGETATION IS REMOVED, IT SHALL BE RE-ESTABLISHED WITHIN 7 DAYS FROM SILT FENCE INSTALLATION.
2. SILT FENCE SHALL ALLOW RUNOFF TO PASS ONLY AS DIFFUSE FLOW THROUGH THE GEOTEXTILE. PERFORM ONE OF THE FOLLOWING IF RUNOFF OVERTOPS THE SILT FENCE, FLOWS UNDER OR AROUND THE ENDS, OR IN ANY OTHER WAY BECOMES A CONCENTRATED FLOW:
   - CHANGE THE LAYOUT OF THE SILT FENCE.
   - REMOVE ACCUMULATED SEDIMENT.
   - INSTALL OTHER PRACTICES.

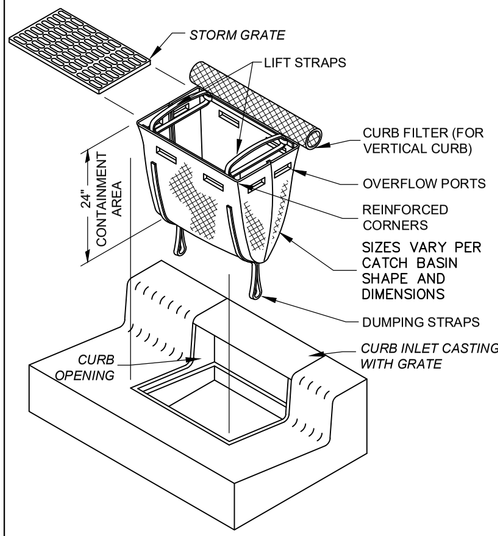
FABRIC PROPERTIES	VALUES	TEST METHOD
GRAB TENSILE STRENGTH	90 LB. MIN	ASTM D-1682
MULLEN BURST STRENGTH	190 PSI MIN	ASTM D-3786
SLURRY FLOW RATE	0.3 GAL./MIN./S.F. MAX.	
EQUIVALENT OPENING SIZE	40-80	US STD. SIEVE CW-02215
ULTRAVIOLET RADIATION STABILITY	90% MIN	ASTM-G-26

SF **SILT FENCE**
SF
SCALE: NONE

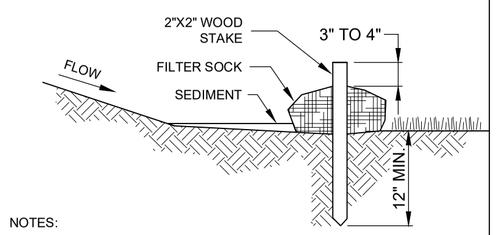


CD **CHECK DAM**
N.T.S.





IP **STORM DRAIN INLET PROTECTION DETAIL**
SCALE: NONE



NOTES:
1) FILTER SOCKS SHALL BE 3 OR 5 MIL CONTINUOUS, TUBULAR, HDPE 3/8" KNITTED MESH NETTING MATERIAL, FILLED WITH COMPOST.
2) COMPOST SHALL BE WEED, PATHOGEN AND INSECT FREE, FREE OF ANY REFUSE, CONTAMINANTS OR OTHER MATERIALS TOXIC TO PLANT GROWTH, BE DERIVED FROM A WELL-DECOMPOSED SOURCE OF ORGANIC MATTER, AND CONSIST OF PARTICLES RANGING FROM 3/8" TO 2".
3) FILTER SOCKS SHALL BE PLACED ON A LEVEL LINE ACROSS SLOPES PARALLEL TO THE BASE OF THE SLOPE.
4) FILTER SOCKS SHALL BE PLACED AT LEAST 5' FROM THE TOE OF SLOPE FOR SEDIMENT DEPOSIT.
5) BUILT UP SEDIMENT SHALL BE REMOVED WHEN IT HAS REACHED 1/3 THE FILTER SOCK HEIGHT.
6) WHEN A FILTER SOCK IS NO LONGER REQUIRED, IT SHALL BE DISPERSED ON-SITE.
7) THE MAXIMUM DRAINAGE AREA PER 100 FEET OF FILTER SOCK IS 1/2 ACRE AND IS DEPENDENT ON THE SLOPE:

MAX. SLOPE LENGTH ABOVE FILTER SOCK					
SLOPE	RATIO (H:V)	8"	12"	18"	24"
0% - 2%	0 - 50:1	125'	250'	300'	350'
2% - 10%	50:1 - 10:1	100'	125'	200'	250'
10% - 20%	10:1 - 5:1	75'	100'	150'	200'

FILTER SOCK DETAIL
SCALE: NONE

90% REVIEW

your trusted advisor engineers architects consultants

NO	REVISION	DATE

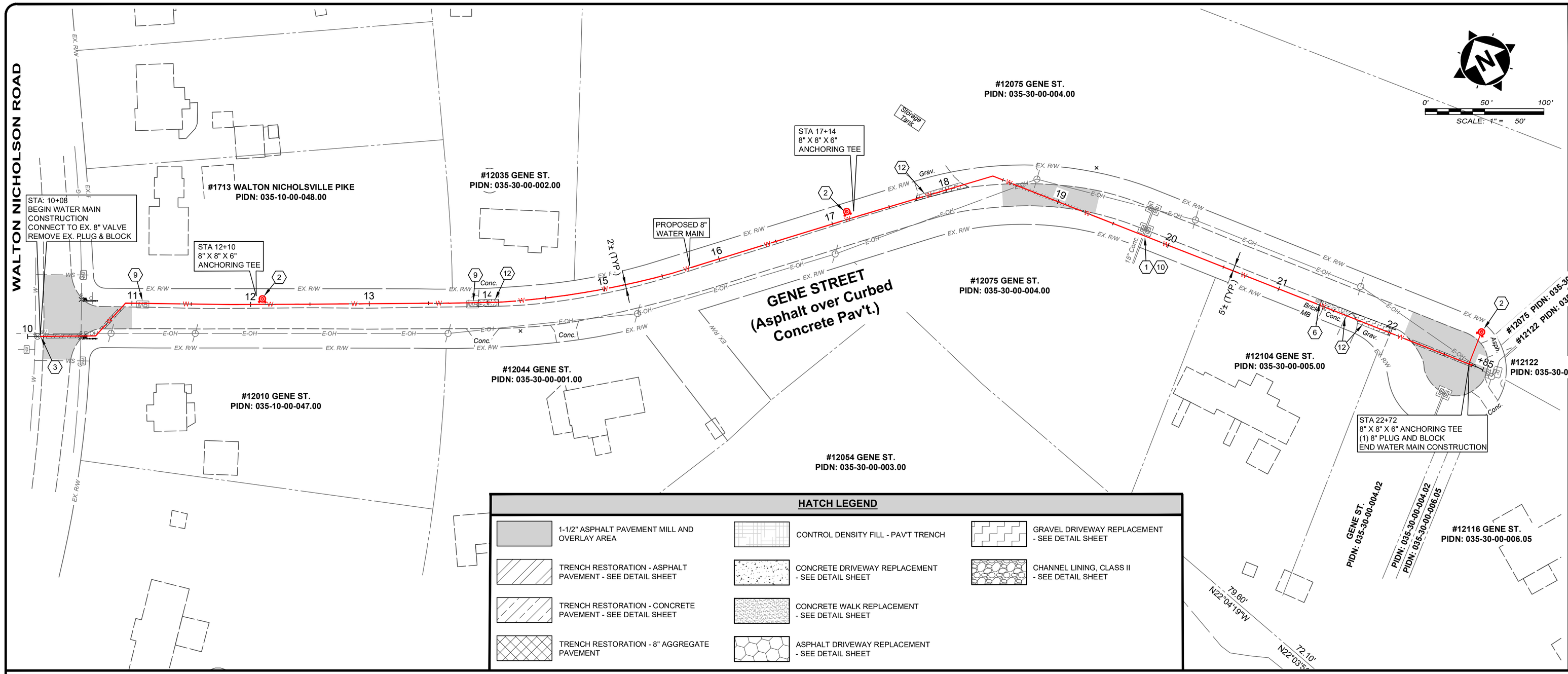
ISSUED FOR:	90% DESIGN
ISSUE DATE:	MAY 2024
SCALE:	AS SHOWN
DESIGNED BY:	JCOR
DRAWN BY:	JCOR
CHECKED BY:	JSHU

NORTHERN KENTUCKY WATER DISTRICT
SUBDISTRICT 'O'
-KENTON COUNTY -

EROSION CONTROL DETAILS

PROJECT NO.
231591
DISCIPLINE
CIVIL
SHEET NAME
G-05
SHEET
6
OF
49

APPROVED FOR CONSTRUCTION
AUGUST 2024
TRANSACTION ID 10830
KENTUCKY TRANSPORTATION CABINET

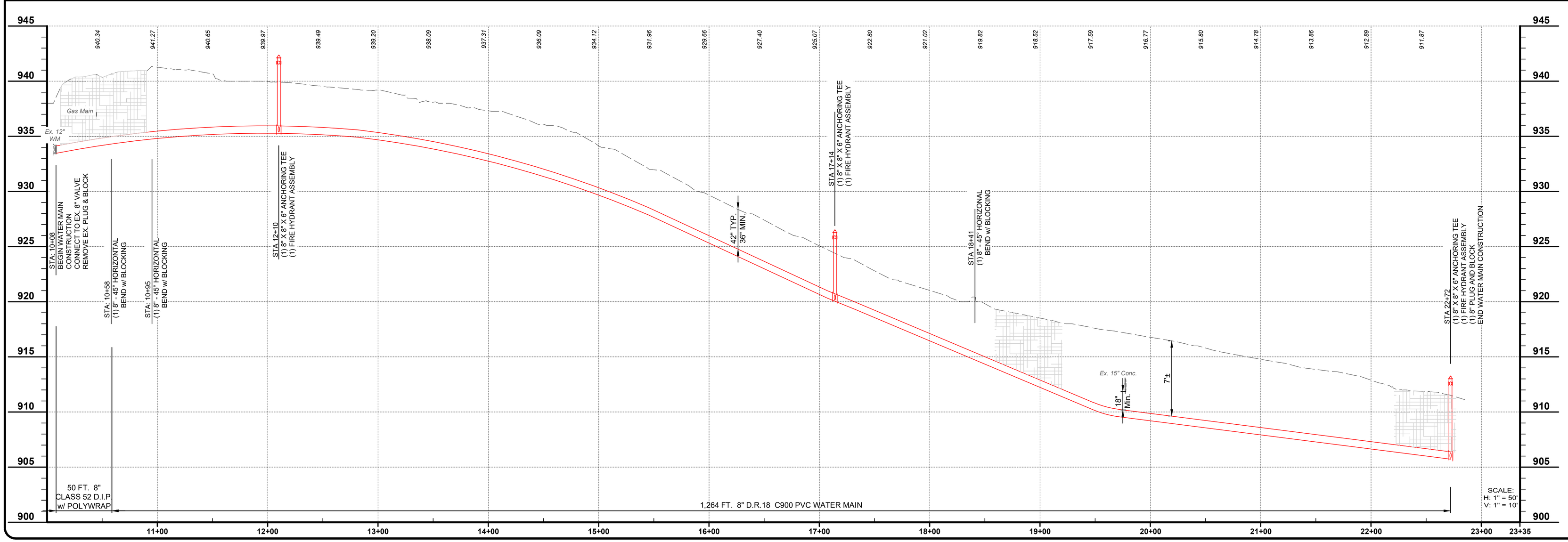


HATCH LEGEND

- 1-1/2" ASPHALT PAVEMENT MILL AND OVERLAY AREA
- TRENCH RESTORATION - ASPHALT PAVEMENT - SEE DETAIL SHEET
- TRENCH RESTORATION - CONCRETE PAVEMENT - SEE DETAIL SHEET
- TRENCH RESTORATION - 8" AGGREGATE PAVEMENT
- CONTROL DENSITY FILL - PAV'T TRENCH
- CONCRETE DRIVEWAY REPLACEMENT - SEE DETAIL SHEET
- CONCRETE WALK REPLACEMENT - SEE DETAIL SHEET
- ASPHALT DRIVEWAY REPLACEMENT - SEE DETAIL SHEET
- GRAVEL DRIVEWAY REPLACEMENT - SEE DETAIL SHEET
- CHANNEL LINING, CLASS II - SEE DETAIL SHEET

CONSTRUCTION NOTES

1. MAINTAIN MANAGEABLE VERTICAL CLEARANCE BETWEEN THE PROPOSED WATER MAIN AND THE EXISTING STORM SEWER, WATER MAIN, TELEPHONE DUCTS, AND GAS MAIN. CONSTRUCT ALL SANITARY SEWER CROSSINGS PER N.K.W.D. SPECIFICATIONS ITEM 1.14. MAINTAIN MINIMUM 18" BETWEEN THE PROPOSED WATER MAIN AND THE EXISTING SANITARY SEWER, ACTUAL ELEVATION UNKNOWN. CONTRACTOR TO EXCAVATE & VERIFY ACTUAL LOCATION, SIZE AND ELEVATION OF EXISTING UTILITY PRIOR TO BEGINNING WATER MAIN CONSTRUCTION. THE CONTRACTOR SHALL NOTIFY THE ENGINEER PRIOR TO CONSTRUCTION OF ANY POTENTIAL CONFLICT. NO ADDITIONAL PAYMENT WILL BE MADE FOR THIS WORK AND THE COST SHALL BE INCLUDED IN THE BID ITEM FOR WATER MAIN.
2. PROPOSED FIRE HYDRANT ASSEMBLY, VALVE AND BLOCKING AS PER N.K.W.D. STD. DRAWING NO. 109. COORDINATE LOCATION WITH N.K.W.D. INSPECTOR. ANCHOR VALVE TO TEE.
3. CONNECT TO EXISTING WATER MAIN (ACTUAL ELEVATION UNKNOWN). CONTRACTOR TO VERIFY DEPTH PRIOR TO CONSTRUCTION.
4. CHANNEL LINING, CLASS II (12") w/ NON-WOVEN GEOTEXTILE FILTER FABRIC
5. CONTRACTOR TO VERIFY LOCATION AND ELEVATION OF UTILITY PRIOR TO EXCAVATION ACTIVITY AND NOTIFY ENGINEER AND N.K.W.D. OF CONFLICTS.
6. DO NOT DISTURB
7. CONTRACTOR TO SUPPORT UTILITY POLE DURING PIPE INSTALLATION
8. REMOVE AND REPLACE SIGN
9. REMOVE AND REPLACE MAILBOX
10. NOT USED
11. REMOVE AND REPLACE EXISTING STORM STRUCTURE (CB,HW) AS NEEDED FOR WATER MAIN INSTALLATION
12. DRIVEWAY RESTORATION (SEE DETAILS)
13. CONSTRUCT CLAY BULKHEAD IN TRENCH WITH UNDERDRAIN. DAYLIGHT UNDERDRAIN TO DITCH OR DRAINAGE STRUCTURE



H:\2023\231591\DWG\SHEETS\C_231591 PNP_10_GENE.DWG - GENE - 7/10/2024 4:18:23 PM - JAMES CORNELL

90% REVIEW

your trusted advisor — engineers, architects, consultants, planners

NO	REVISION	DATE

ISSUED FOR:	FINAL
ISSUE DATE:	JUNE 2024
SCALE:	AS SHOWN
DESIGNED BY:	JCOR
DRAWN BY:	JCOR
CHECKED BY:	JSHU

NORTHERN KENTUCKY WATER DISTRICT
SUBDISTRICT 'O'
-KENTON COUNTY -

GENE STREET

PROJECT NO.
231591
DISCIPLINE
CIVIL
SHEET NAME
C-19
SHEET
25
OF
49

APPROVED
KENTUCKY TRANSPORTATION CABINET

KYTC Division of Maintenance

Permits Branch
District 6

ENCROACHMENT PERMIT GENERAL NOTES & SPECIFICATIONS

YOU MUST NOTIFY KYTC BEFORE BEGINNING ANY WORK IN THE RIGHT-OF-WAY. ***Failure to alert KYTC of working within the right of way may result in permit revocation.***

Two ways to notify KYTC of your construction start date:

By Email: KYTCD6PERMITS@KY.GOV

**must include permit number and county in subject line*

By Phone: 859-341-2700

**must know permit number and county when calling*

YOU MUST ALSO NOTIFY KYTC UPON COMPLETION OF WORK WITHIN RIGHT-OF-WAY. ***Failure to alert KYTC of completion of work may result in withholding release of any associated bonds.***

Kentucky UNBRIDLED SPIRIT

APPROVED
AUGUST 27, 2024
KENTUCKY TRANSPORTATION CABINET
06-2024-00838

I. SAFETY

A. General Provisions

☑ All signs and control of traffic shall be in accordance with the Manual on Uniform Traffic Control Devices (MUTCD) for Streets and Highways, latest edition, Part VI, and safety requirements shall comply with the Permits Manual. Federal law requires that traffic control shall be implemented in accordance with MUTCD standards and KYTC's Standard Specifications for Road and Bridge Construction (KYTC SSRBC) under the supervision of a certified Work Zone Traffic Control Supervisor.

☑ All work necessary in shoulder or ditch line areas of a state highway shall be scheduled to be promptly completed so that hazards adjacent to the traveled way are kept to an absolute minimum.

☑ No more than one (1) traveled-lane shall be blocked or obstructed during normal working hours. All signs and flaggers during lane closure shall conform to the MUTCD. The traveled-way and shoulders shall be kept clear of mud and other construction debris at all times during construction of the permitted facility. No non-construction equipment or vehicles or office trailers shall be allowed on the right of way during working hours. The right of way shall be left free and clear of equipment, material, and vehicles during non-working hours.

☑ When necessary to block one (1) traveled-lane of a state highway, the normal working hours shall be as directed by the Department. No lanes shall be blocked or obstructed during adverse weather conditions (rain, snow, fog, etc.) without specific permission from the Department.

☑ Working hours shall be between **9:00 AM** and **3:00 PM**. Further date and time restrictions are as follows:

B. Explosives

☑ No explosive devices or explosive material shall be used within state right of way without proper license and approval of the Kentucky Department of Mines and Minerals, Explosive Division.

C. OSHA

☑ Kentucky Occupational Safety and Health Standards for the construction industry, which has the effect of law, states in part: (Page 52, 1926.651, Specific Excavation Requirements) "Prior to opening an excavation, effort shall be made to determine whether underground installations, (sewer, telephone, water, fuel, electric lines, etc.) will be encountered, and if so, where such underground installations are located. When the excavation approaches the estimated location of such an installation, the exact location shall be determined, and when it is uncovered, proper supports shall be provided for the existing installation. Utility companies shall be contacted and advised of proposed work prior to the start of actual excavation."

D. Archaeological

☑ Whenever materials of an archaeological nature are discovered during the course of construction work or maintenance operations, contact shall be made immediately with the Division of Environmental Analysis, which maintains an archaeologist on staff, or with the Office of the State Archaeologist located at the University of Kentucky. Following this consultation, further action shall be decided on a case-by-case basis by the State Highway Engineer or the Transportation Planning Engineer or their designated representative.

E. Environmental

☑ If the activity to which this permit related disturbs one acre of more of land, you must obtain KPDES KYR10 permit. Information can be found at http://water.ky.gov/permitting/Pages/GeneralPermits.aspx

F. Additional Notes

☑ The following additional notes apply to this permit:

24 hour notice is required prior to restoration of pavement, concrete or topsoil. Call Rick Shay at 859-307-5768

APPROVED
AUGUST 27, 2024
KENTUCKY TRANSPORTATION CABINET
06-2024-00844

II. UTILITIES

- [x] The permittee shall be responsible for any damage to existing utilities. Any utility modifications or relocations within state right of way necessary, as determined by the Department or by the owner of the utility, shall be at the expense of the permittee and subject to the approval of the Department. Operators of underground utilities in right of way shall be members of Kentucky 811.

- [ ] All existing manholes and valve boxes shall be adjusted to be flush with finished grade.

- [x] All pavement cuts shall be restored per Kentucky Transportation Cabinet standards and specifications.

- [x] Any excavation within 3' of edge of pavement will require flowable fill as backfill.

- [x] The clear zone requirement shall be met to the extent possible in accordance with the Roadside Design Guide.

- [ ] Encasement pipe shall conform to current standards for highway crossings in accordance with the Permits Manual. Pipe encasing shall not be required if the pipe crossing is 2" or less.

- [ ] Aerial crossing of utility lines shall have a minimum clearance from the high point of the roadway to the low point of the line of 24' on fully controlled access highways and 18' on non-fully controlled access highways

- [x] Minimum depth for underground Gas and Electric lines is 60" under roadways, ramps, and ditch lines and 42" in all other areas within state right of way. The minimum depth for all other utilities is 42" in all areas.

- [x] When steel plates are installed over an open excavation in the roadway, they must be anchored to the pavement and have asphalt applied to all exposed edges and an MUTCD approved sign noting "Road Plates Ahead." KYTC must be notified of the location, date, time, and permit number associated to BOTH the installation and removal of the plate. Failure to do so may result in permit revocation.

- [ ] Utility poles moved for replacement must be removed in their entirety and the hole left behind must be backfilled.

- [ ] No poles or anchors shall be installed in a roadside ditch.

- [ ] ***Utility notes specific to fully-controlled access highways ONLY:***
All work necessary within the right-of-way shall be performed behind a temporary fence erected prior to the start of work. The temporary woven wire fence shall be removed immediately upon completion of work on the right-of-way, and the control of access immediately restored to original condition, in accordance with applicable KYTC SSRBC. All vents, valves, manholes, etc., shall be located outside of the right-of-way. Encasement pipe shall extend from right-of-way line to right-of-way line and shall be one continuous run of pipe. The encasement pipe shall be welded at all joints. The boring pit and tail ditch shall extend past the existing toe of slope or bottom of ditch line and shall be a minimum of 42 inches deep. Work in interstate right-of-way requires approval from FHWA (Federal Highway Administration).

- [ ] Additional notes:

MINIMUM COVER MUST BE 60" IN THE ROW AND UNDER PAVEMENT

APPROVED
AUGUST 27, 2024
KENTUCKY TRANSPORTATION CABINET
06-2024-00844

III. DRAINAGE

☑ Negative impacts to existing drainage will be the applicant's responsibility to repair in accordance with KYTC SSRBC.

☐ All pipe shall be laid in a straight alignment, to proper grades, and with all materials and methods of installation including bedding and joint seating. Pipe shall not be covered until inspected by the Department and express permission obtained to make backfill. It is the applicant's responsibility to request inspection.

☐ All gutter lines at the base of new curbs shall be on continuous grades, and pockets of water along with curbs or in entrance areas or other paved areas within the right-of-way shall not be acceptable.

☐ All drainage structures and appurtenances (manholes, catch basins, curbing, inlet basins, etc.) shall conform to the Department specifications and shall be constructed in accordance with the KYTC's Standard Drawings.

☐ Additional notes:

IV. PAVING

☑ No bituminous pavement shall be installed within the right of way between November 15 and April 1, nor when the temperature is below 40 degrees Fahrenheit, without the express consent of the Department. No bituminous pavement shall be installed when the underlying course is wet.

☑ Paving within the right of way shall be as follows:

- Base (Type): **Match Existing**, (Thickness) **Match Existing**
- Surface Base (Type) **Match Existing** , (Thickness) **Match Existing**
- Finished Surface (Type) **Match Existing**, (Thickness) **Match Existing**

☑ All materials and methods of construction, including base and subgrade preparation, shall be in accordance with KYTC's Standard Specifications. At least 24 hours notice to the Department is required prior to beginning paving operations.

Phone: **859-307-5768** Name: **Rick Shay**

☑ Utility companies performing road cuts must restore the pavement to pre-existing condition. Pictures/videos are recommended to ensure proper placement of signs and lane markers that are temporarily removed for paving operations. In some cases, a pre-work inventory may be requested from the Department.

☑ Existing pavement and shoulder material shall be removed to accommodate the above paving specifications.

☑ The finished surface of all new pavement within the right of way shall be true to the required slope and grade, uniform in density and texture, free of irregularities, and equivalent in riding qualities to the adjacent highway pavement or as determined by KYTC.

☑ To ensure proper surface drainage, the new pavement shall be flush with the edge of existing highway pavement and shall slope away from the existing edge of the pavement as specified in drawings.

☑ Existing edge of pavement shall be saw-cut to provide a straight and uniform joint for new pavement, and an edge key will be installed in the overlap. An approved joint sealer, in accordance with Kentucky Department of Highways Standard Specifications (latest edition), shall be applied between new and existing pavements.

☐ Additional notes:

APPROVED
AUGUST 27, 2024
KENTUCKY TRANSPORTATION CABINET
06-2024-00844

V. ENTRANCES

☐ Encroachment permits issued by KYTC in no way supersede local planning/zoning requirements or subdivision regulations. KYTC has no authority with zoning changes.

☐ Commercial entrances must be paved to the right-of-way line. Any deviations must be approved by KYTC before installation.

☐ KTYC can dictate drainage improvement installation during construction or after entrance is at final grade. The permit release does not release the permit applicant from drainage maintenance.

☐ Signs (ground-mounted and span-mounted), stop bars, crosswalk, and proper lane markings must be in-place before entrance is open for traffic. Lane width modifications must be approved by the Department.

☐ Guardrail installation must be pre-approved by the Department and installed by a KYTC pre-qualified contractor. Any guardrail that is removed during construction must be returned to the local KTYC maintenance facility.

☐ Additional notes:

VI. TRAFFIC

☑ Any contractor performing work within the vicinity of KYTC roadway lighting or traffic signals, must request locates from the KYTC District 6 Traffic section at least one week before of starting work in the right-of-way.

☐ Applicant must maintain all KYTC Roadway signage that is impacted by the permitted work. In the event that any signs have to be moved, it is the applicant's responsibility to mark the sign's location before removal and to install the original or new sign per KYTC standards for sign installation.

☐ Any thermoplastic or striping damaged during the encroachment must be restored in a timely manner per KYTC standards. Stopbars, arrows, and crosswalks must be thermoplastic material, paint is not acceptable. This work must be performed by a KYTC pre-qualified contractor.

☐ Excavating near a signal, lighting pole, or anchoring facility must be done so that it does not impact the structural integrity of the pole. Any work that requires a temporary support or anchoring must receive prior approval.

☐ If the scope of the permit involves a signal build or rebuild, it is the applicant's responsibility to apply for power service (and pay monthly electrical bill) as well as request electrical inspection from the KYTC District 6 Traffic section. If the signal modifications require timing or phasing changes this must be requested at least two weeks in advance of the signal's turn-on date. KYTC will not take ownership of permitted signals until the electrical inspection is formally accepted and approved.

☐ Work which impacts traffic loops requires 48-hour notice to the KYTC District 6 Traffic section at 859-341-2700. Accidental damage of a traffic loop must be reported immediately to KYTC District 6's emergency line at 859-620-2738. Any disturbed traffic loops must be replaced in a timely manner. Traffic loops out of operation for more than five working days will subject the applicant to the cancellation of the permit. Loop repair must be performed by a KYTC pre-qualified contractor.

☐ Additional Notes:

APPROVED
AUGUST 27, 2024
KENTUCKY TRANSPORTATION CABINET
06-2024-00844

VII. SIDEWALK SPECIFICATIONS

☐ All sidewalk modifications, retrofitting, or installations must meet current ADA guidelines

A. New Sidewalks

☐ New sidewalk specifications, dimensions, and designs shall be in accordance with KYTC's latest edition of the Standard Specifications, or with the plans provided on the permit if approved by a KYTC D6 Construction or Permits Engineer.

☐ All materials and methods of construction, including curing, shall be in accordance with KYTC's latest edition of the Standard Specifications.

B. Existing Sidewalks

☐ Use of the sidewalk shall not be blocked or obstructed and a usable walkway shall be maintained across the construction area at all times per MUTCD . Sidewalk closures must be approved by the Department before implementation.

☐ The location of ADA ramps (truncated domes/tactile warnings/etc.) will need to be field verified by KYTC before installation.

☐ Any section of sidewalk that becomes damaged shall be entirely replaced to match existing sections.

☐ Additional notes:

VIII. RIGHT OF WAY RESTORATION

☑ All disturbed portions of the right of way shall be restored to grass as per Kentucky Department of Highways Standard Specifications for Road and Bridge Construction (latest edition). A satisfactory turf, as determined by the Department, shall be established by the permittee prior to release of indemnity. Sodding or seeding shall be as follows:

- ☑ Slopes 3:1 or Less: 90% Kentucky 31 Tall Fescue and 10% White Dutch Clover at 100 lbs/acre
- ☑ Slopes Greater than 3:1: 90% Kentucky 31 Tall Fescue and 10% Partridge Pea at 100 lbs/acre
- ☑ Urban or Residential Areas: 95% Turf Type Fall Fescue Blend and 5% White Dutch Clover at 275 lbs/acre

☑ Two tons of clean straw mulch per acre of seeding.

☑ Prior to seeding, the ground shall be prepared in accordance with Kentucky Department of Highways Standard Specifications for Road and Bridge Construction (latest edition).

☐ Substitutes for sod such as artificial turf, rocked mulch, or paved areas may be acceptable if they are aesthetically pleasing and receive prior approval from KYTC.

☐ All ditch-flow lines and all ditch-side slopes shall be sodded.

☐ Existing concrete right of way markers shall not be disturbed. If damaged in any way, they shall be entirely replaced by the permittee with new concrete markers to match the original markers, in accordance with Kentucky Department of Highways Standard Drawings. Markers that are entirely removed shall be re-established in the proper locations by the permittee and to the satisfaction of the Department.

☐ Additional notes:

APPROVED
AUGUST 27, 2024
KENTUCKY TRANSPORTATION CABINET
06-2024-00844

IX. RIGHT OF WAY FENCE RESTORATION

- ☐ The replacement fence shall be a height of at least 48 inches and shall be of sufficient density to protect against encroachment.
- ☐ The replacement fence shall be a minimum of 1 foot and a maximum of 2 feet outside the right-of-way line
- ☐ The fence materials and design shall meet accepted industry standards and be treated as paintable. Durable finish materials such as vinyl are acceptable.
- ☐ The permittee shall be required to construct and maintain the replacement fencing to an acceptable level of functionality and state of repair. All work on the fencing shall be performed by access from the private property. Access from the roadway is not allowed.
- ☐ The existing fence shall be removed by permittee and stored at the Department's maintenance storage yard for future reuse by the Department, or the Department shall be reimbursed the cost of fencing removed.
- ☐ Right of way monuments shall be installed regardless of if replacement fence is installed or not.
- ☐ The control of access shall not be diminished as a result of replacement of the fence.
- ☐ Additional notes:

X. MISCELLANEOUS NOTES

NOTICE TO PERMITTEE

THE PERMITTEE AGREES THAT ALL WORK WITHIN THE EXISTING RIGHT OF WAY SHALL BE DONE IN ACCORDANCE WITH THE CURRENT KYTC STANDARD SPECIFICATIONS AND THE PLANS AS APPROVED AND PERMITTED BY AN ENCROACHMENT PERMIT. ANY CHANGES OR VARIANCES MADE AT THE TIME OF CONSTRUCTION WITHOUT WRITTEN APPROVAL FROM THE DEPARTMENT OF HIGHWAYS SHALL BE REMOVED BY THE PERMITTEE AT NO EXPENSE TO THE DEPARTMENT OF HIGHWAYS AND SHALL BE REDONE BY THE PERMITTEE TO CONFORM WITH THE APPROVED PLANS.

APPROVED
Highway District
KENTUCKY TRANSPORTATION CABINET

Kenton County Roadway Permit

KENTON COUNTY
PUBLIC WORKS

LEADING FROM THE FRONTIER TO THE FUTURE

August 26, 2024

Northern Kentucky Water District
Kyle Ryan
2835 Crescent Springs Road
Erlanger, KY 41018

RE: NKWD Sub-District 'O' Water Main Extension;
Project # 231591
Location: Alexander Rd, Gene St, Elliott Rd, Highwater Rd, Pfanstiel Rd, Mann Rd, Steep Creek Rd, Trace Run Rd, Goshorn Rd, Kenton County

This letter should serve to provide your company permission to perform the work as requested in the attached documents. A permit is granted from Kenton County Public Works contingent upon all work being performed in accordance with the following parameters:

- Kenton County Public Works shall be notified 72 hours before work is scheduled to begin. Individual notice shall be provided for work on each route.
- Maintenance of Traffic for all installations will be in accordance with the MUTCD
- The permit holder shall be responsible for any damage to the ditch line or roadway that occurs from construction activities.
- Construction shall be in conformance the plans and specifications attached to this permit.
- If necessary, the roadway shall be saw cut and the pavement structure shall be restored in kind to match existing field conditions.
- Asphalt patches for restoration work in the roadway shall be extended to the full width of the road.
- See attached for Special Notes for repair.
- Best Management Practices with regard to erosion and sediment control shall be used on all locations.
- The roadway must be kept clean during construction.
- Final grading, seeding, and restoration shall be performed to the satisfaction of the Kenton County Engineer.
- The contractor is advised to contact the B.U.D. one-call system, however, the permit holder should be aware that the underground facilities are not required to be member of the B.U.D. one-call system. It is the responsibility of the

contractor to appropriately coordinate with all potentially impacted utility owners.

Our office will hold this permit for a period of 180 days following formal notice from you of project completion. Upon notice of completion, we will perform an inspection of the project area and notify you of any corrective work.

If you have any questions, please feel free to contact me at 859-392-1920.

Regards,

Scott Hansman
Engineering Services

SPECIAL NOTE FOR ROADWAY REPAIR

The Engineer will determine actual repair locations and dimensions at the time of construction. Place in equal lifts not to exceed 4" of Class 2 Asphalt Base 1.00D PG64-22 to meet existing field conditions. Compact the asphalt base to the compaction required in Section 403.03.10. Perform repair in such a manner that removal and replacement are completed on the same day. Do this work as one of the Contractor's first operations in order to allow further compaction by traffic. Do not mill or place new asphalt surface over repaired asphalt base areas until a minimum of 7 calendar days have elapsed after placement of the asphalt base. After a minimum of 7 calendar days and when the Engineer determines the asphalt base repair areas have sufficiently stabilized, begin milling and/or resurfacing operations.

Mill out area determined by Engineer to a depth of 1" and replace with Class 2 Asphalt Surface 0.38D PG 64-22. Compact the asphalt surface to the compaction required in Section 403.03.10
Perform repair in such a manner that removal and replacement are completed on the same day.

City of Independence Roadway Permit

CITY OF INDEPENDENCE
5409 MADISON PIKE • INDEPENDENCE, KY 41051
859-356-5302 • FAX: 859-356-6843

CERTIFICATE OF ENCROACHMENT APPLICATION

Private Entrance

To Be Completed By Applicant

(Please Type or Print)

1. Name: CT Consultants, Inc on behalf of Northern Kentucky Water District

   Address: 2835 Crescent Springs Pike

   City: Erlanger

   State: Kentucky

   Zip Code: 41018

   Phone Number: 859-426-2713 (Kyle Ryan) (jcornell@ctconsultants.com)

2. Address of Proposed Encroachment: Scenic Ridge Drive - Pelly Road to north end

3. ☐N ☐S ☒E ☐W side of Scenic Ridge Drive

   Approximately _____ feet ☐N ☐S ☐E ☐W of See attached plans

4. Is Location of Encroachment on a: ☒City Road
5. Additional Information: proposed installation of 8" water main

For Official Use Only

Approved: ☒Yes ☐No

Conditions: Heads up when you start
Ken - 859-743-3218

Inspected By: _____ : Date: _____

Approved By: _____ : Date: 10/8/24

Kentucky UNBRIDLED SPIRIT

Independence Vision Statement:
"To become one of America's most livable cities, relentless in the pursuit of an outstanding quality of life for our citizens."

Villa Hills Roadway Permit

CITY OF VILLA HILLS

ENCROACHMENT PERMIT APPLICATION

Application Date 10-14-2024

Applicant Name Northern Kentucky Water District **Occupational License #**

Applicant Address

2835 Crescent Springs Pike

City Erlanger **State** Ky **ZIP** 41018

Contact Person Steve Broering **Phone** 859-426-2728

Type of Encroachment ☒ Street ☐ Sidewalk ☐ Other:

Location of Obstruction

Highwater Road from River Heights Lane to #1873

Brief Description of the Work

Extension of an existing 8" water main

Accurate and Complete Description of Encroachment

Construction of 367 ft of 8" water main along Highwater Road from the current water main terminus across from River Heights Lane to #1873 Highwater Road

Explanation of Need for Encroachment

Due to topography along the roadway in this area and the close proximity of an existing gas main, the proposed water main alignment needs to be constructed in the pavement area.

Date & Time Activity to Commence TBD **To be Completed** TBD

Cellular Equipment Only Has the proposed work been reviewed and approved by the Kenton County Municipal Planning and Zoning Commission? ☐ Yes ☐ No

The following must be included:

☐ A scaled plot plan showing the location, dimensions, and details of the proposed encroachment.

☐ $100.00 application fee.

The undersigned hereby agrees to indemnify and hold harmless the City of Villa Hills and its agents for any and all injuries or losses resulting from the proposed activity related to this encroachment permit. Approval does not relieve the applicant from obligations and responsibilities to protect traffic and personnel. Other permits may be necessary and it is the Applicant's responsibility to obtain any and all necessary permits related to the activity. The undersigned hereby agrees to comply with the City of Villa Hills Code of Ordinances Chapter 51 (Encroachments).

APPLICANT

STATE OF Kentucky :SS

COUNTY OF Kenton

Acknowledged, subscribed and sworn to before me this the 14 day of Oct, 2024.

Notary Public KYNP24206

My Commission Expires: 2/24/25

APPROVED: D.C Yelton **PERMIT NO.** 2024-ENC-059

1430500.1
225415-74698