
Storm Water Pollution Prevention Plan



Storm Water Pollution Prevention Plan (SWPPP)

Permit Number: WVR112273

Prepared For:

Town of Triadelphia

Development Name & Location:

WATER SYSTEM IMPROVEMENTS

Prepared by:

CERRONE ASSOCIATES, INC

Date:

AUGUST 2023

This Storm Water Pollution Prevention Plan (SWPPP) is provided by the West Virginia Department of Environmental Protection (WVDEP). Providing this document does not certify that the information is complete or complies with all requirements. The WVDEP claims no responsibility for omissions or inaccuracies in values or information presented to the WVDEP by businesses seeking compliance with state environmental regulations.

CERTIFICATIONS

**To Be Completed by Permittee
(Plans and Specifications Operational Control)**

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for attesting to false information, including the possibility of fine and imprisonment for knowing violations."

✱

THOMAS J ALLIETTA MAYOR
Name and Title

304-547-5000
Telephone Number

Thomas J Allietta
Signature

8-10-23
Date

**To Be Completed by Construction Site Operator/Co-Permittee
(Day-to-Day Operational Control)**

"I certify that I have reviewed this document and all attachments that were prepared under professional supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for attesting to false information, including the possibility of fine and imprisonment for knowing violations."

Name and Title

Telephone Number

Signature

Date

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1.0. CONTACT INFORMATION

<i>PERMITTEE</i>	<i>PHONE/FAX/MOBILE</i>	<i>ADDRESS</i>
<i>TOWN OF TRIADELPHIA</i>	<i>304-547-5000 – OFFICE</i>	<i>PO BOX 177 TRIADELPHIA, WV 26059</i>
<i>PROJECT CONTRACTOR</i>		
<i>QUALIFIED PERSON/ 24-HOUR CONTACT</i>		
<i>TOM ALLIETTA, MAYOR</i>	<i>304-547-5000</i>	
<i>OTHER</i>		

2.0 OBJECTIVE

A storm water pollution prevention plan must be prepared for storm water discharges that will reach Waters of West Virginia, including discharges to the Municipal Separate Storm Sewer System (MS4), and to identify and address potential sources of pollution that are reasonably expected to affect the quality of discharges from the construction site, including off-site material storage areas, overburden and stockpiles of dirt, borrow areas, equipment staging areas, vehicle repair areas, fueling areas, etc., used by the permitted project. The SWPPP must describe and ensure the implementation of practices that will be used to reduce the pollutants in storm water discharges associated with construction activity at the construction site and assure compliance with the terms and conditions of the general permit.

3.0 Non-Storm Water Discharges

All discharges authorized by this permit shall be composed entirely of storm water.

4.0 SWPPP REVIEW AND AMMENDMENTS

4.1 Review

This SWPPP must be retained on-site at the construction site or, if the site is inactive or does not have an on-site location to store the plan, a notice must be posted describing the location of the SWPPP. This SWPPP must be made readily available at the time of an on-site inspection.

4.2 Amendments

This SWPPP will be revised or updated when the following occurs:

1. Change in design, construction, operation, or maintenance that has a significant effect on the discharge of pollutants and that has not been previously addressed in this SWPPP.
2. Results of inspections or investigations indicating this SWPPP is proving ineffective in eliminating or significantly minimizing pollutants in discharges authorized under the general permit.
3. To identify any new contractor and/or subcontractor that will implement a measure of the SWPPP.

All other permittees implementing portions of the SWPPP that will be impacted by a change to the SWPPP will be notified of the change in a timely fashion.

The revisions to the SWPPP will be documented on the "SWPPP Revision Documentation Form" found in the front of this document. The authorized representative with regulatory authority (corporate officer or proprietor) to approve the SWPPP shall sign the modified plan certifying that the SWPPP revision information is true and accurate.

5.0 SITE OR PROJECT DESCRIPTION

5.1 Description of Construction Activity & Environmental Impacts

Developer: CERRONEASSOCIATES, INC

Builder: _____

Site Location: US ROUTE 40, CR 39 AND SURROUNDING AREAS THROUGHOUT THE TOWN OF TRIADELPHIA

Site/Project Description and Mitigation of Potential Environmental Impacts: Replace aging water lines throughout the Town of Triadelphia that have been causing issues with the Town's capability of providing reliable potable water service to the customers. Project includes all necessary appurtenances to make a complete operating system.

Install erosion control facilities and devices, strip and stockpile topsoil, commence excavation, install bedding (if required), install pipe, backfill, restore surface with topsoil, lime, fertilizer, seed, and mulch. Surface restoration must be done within 4 days of commencing excavation. Maintain erosion control measures until vegetative cover is established. Open trenches to be sufficient in advance of pipe laying to expose any obstructions that might alter alignment or grade, but not more than can be backfilled at the end of the work day, or 200 feet, whichever is less. No trench will be left open overnight.

5.2 Construction Activity with Potential Pollutants and Sources

The following lists the construction activities or materials that have the potential to contribute pollutants, including sediment, to storm water runoff.

Construction Activity and/or Material	Potential Pollutant
<ul style="list-style-type: none">Land clearing	<ul style="list-style-type: none">Sediment – Total Suspended Solids (TSS), turbidity, oil and grease, Total Petroleum Hydrocarbons (TPH)

• Excavation	• Sediment – TSS, turbidity, oil and grease, TPH
• Filling	• Sediment – TSS, turbidity, oil and grease, TPH
• Paving	• Sediment – TSS, turbidity, oil and grease, TPH, pH
• Install foundations, retaining walls, etc	• Sediment – TSS, turbidity, oil and grease, TPH, pH
• Grading	• Sediment – TSS, turbidity, oil and grease, TPH
• Utilities	• Sediment – TSS, turbidity, oil and grease, TPH
•	•
•	•

5.3 Major Activities Schedule

The following schedule sheet is an intended schedule or sequence of major activities that will disturb the soil for major portions of the site. Details are provided as an attachment in Appendix C.

Schedule Sheet for Soil Disturbing Activities

Estimate Construction Start Date: February 2024

Estimate Construction End Date: October 2024

Activity	Estimated Time	Actual Time
Install BMPs		
Land clearing		
Grading		
Excavation		
Filling		
Utilities		
Install foundations, retaining walls, etc		
Paving		
Revegetation		
BMP Removal		

5.4 Property Acreage

The total area of the property is NA acres. The total anticipated area of soils to be disturbed is 2.40 acres.

5.5 Construction Activity Acreage

The total number of acres of construction activities, material storage areas, stockpiles, and borrows areas are listed below:

Activity or Material	Acres
Construction Activities (resulting in land disturbance)	2.40
Off-site Material Storage Areas	
Overburden and Stockpiles of Dirt	
Borrow Areas	

5.6 Soil Data

Soil data for each lot is listed on a "Soil Data Sheet". This information includes pre-construction and post-construction runoff coefficient as well as a description of the soil type.

Soil Data Sheet

Pre-construction runoff coefficient: 25

Post-construction runoff coefficient: 25

Runoff Coefficient:

High: 70-100% impervious (example: asphalt, buildings, paved surfaces)

Medium: 40-70% impervious (example: packed soils)

Low: 0-40% impervious (example: grassy areas)

Description of soil: soil name(s), soil mapping unit, erodability, settleability, depth, texture and soil structure: Soil maps part of the permit

5.7 General Location Map and Site Map

The general location map found in Appendix A shows the location of the site. A detailed site map is also attached.

5.8 Erosion and Sediment Control Site Map

Site maps shall contain a North arrow with sites oriented to the North, with a minimum of five-foot topographical contours. The maps shall include:

- Nearest receiving streams, springs, surface waters to the site;
- Limits of all areas to be disturbed (LOD);
- Existing roads including public roads from which access to the site will be constructed;
- Access roads;
- Drainage patterns during and after construction with the outlet markers depicting the storm water discharge points;
- Slopes prior to constructions and anticipated conditions after grading activities;
- Location of topsoil stockpiles;
- Waste areas of 1 acre or greater within or contiguous to the construction site;
- Borrow sites of 1 acre or greater within or contiguous to the construction site;
- Locations and identification of sediment control structures;
- Total acreage and location of impervious areas after construction is complete;
- Location of rain gauge provided by the applicant
 - Or a statement the applicant will obtain the precipitation event information from a National Oceanic Atmospheric Administration (NOAA) weather station that is representative of the location and provide the Station ID Number. **Wheeling GHCND:USC00469482**
- Post-development storm water management structures required by local governments
- Final storm water conveyances, including all ditches and pipe systems;
- Property boundaries and easements; and
- A legend, complete with any other information necessary to describe the project in detail.

5.9 Industrial Discharges

This project does/does not (circle one) involve discharges associated with industrial activities other than commercial construction activities.

For construction occurring on an industrial site, reference existing multi-sector SWPPP, if applicable.

There are/are not (circle one) dedicated concrete or asphalt plants associated with this project.

There will be no discharge of process wastewater from concrete or asphalt plants. Water from equipment and vehicle washing, wheel washing, concrete and bituminous washout, and washout from paints, oils, and other construction materials is production waste water and cannot be disposed of on site or discharged without an individual NPDES permit. It must be contained and removed for processing and proper disposal.

5.10 Receiving Waters

The first named water body that receives stormwater discharges from the site is Little Wheeling Creek. (See Appendix A: General Site Location Map)

The Designated Uses for this water body are:

5.11 WVDEP Construction General Permit, WV0115924

A copy of the WVDEP Construction General Permit, WV0115924 is included in Appendix B.

5.12 Threatened and/or Endangered Species

To be eligible for coverage under the construction stormwater permit, facilities must provide documentation on whether a listed endangered or threatened species, or critical habitat, are found with the proximity of the project. The facility used The Endangered Species Guidance provided in the Notice of Intent to help determine the status of the site. The species that must be considered in the Parish where this site is located are:

A visual inspection of the area indicated (Check One):

- ~~No endangered or threatened species and/or critical habitat located within the proximity of the facility.~~
- The following species and/or critical habitat and findings were noted:

__ See attached US Fish & Wildlife Comment Letter in Appendix A

NOTE: Include documentation regarding authorization under the Endangered Species Act (ESA), comprehensive site assessments, and/or BMP's that are protective of listed endangered and threatened species and/or critical habitat, where applicable.

5.13 Historical Determination

The adverse effects on historic properties must be considered before a facility can be covered by the construction general permit. The National Register of Historic Places web site was reviewed and revealed the following (Check One):

- ~~None of the listed sites are located in the vicinity of the facility, or listed sites will not be affected by the facility.~~
- The following sites are located in the vicinity of the facility (West Virginia State Historic Preservation written agreement included in Appendix A.)

____ See attached SHPO comment letter located in Appendix A

NOTE: Include written agreement with the West Virginia State Historic Preservation Officer (SHPO) that outlines all measures to be undertaken to mitigate or prevent adverse effects to the historic property, where applicable.

5.14 Total Maximum Daily Loading (TMDL)

The WVDEP (Check One)

- ~~Currently, there is no TMDL established for the receiving stream that would regulate potential pollutants from the construction site.~~

- The enhanced BMP's chosen for this site and discussed in this SWPPP are expected to ensure that storm water discharges are protective of water quality standards.

6.0 EROSION AND SEDIMENT CONTROLS

This section includes descriptions of control measures that will be implemented to control pollutants in the storm water discharges. The control measures shall, at a minimum, be designed to effectively minimize the discharge of pollutants by design, installation, and maintenance, in order to meet effluent limitations required by 40 CFR 450.21. These limitations were incorporated into the reissued WV0115924, effective February 10, 2019.

6.1 Short and Long-Term Goals/Criteria

- Retain sediment on-site to the extent practicable with consideration for local topography, soil type, and rainfall.
- Select, install, and maintain control measures according to the manufacturer or designer's specifications.
- Remove sediment accumulations if sediment escapes the site at a frequency to minimize further negative effects and, whenever feasible, prior to the next storm event.
- Remove sediment from sediment traps and sedimentation ponds no later than the time that the wet storage design capacity has been reduced by 50%.
- Remove sediment from silt fences, silt socks, and straw wattles before reaching 50% of BMP height (above ground).
- Address off-site material storage areas in erosion and sediment control efforts (overburden and dirt stockpiles, borrow areas).

6.2 Best Practicable Technology (BPT)

The chosen controls shall include designs that are effective at minimizing pollutants, and should be installed and maintained to:

- Control storm water volume and velocity in ways that minimize soil erosion.
- Control storm water runoff during peak flow and total storm runoff volume to minimize channel and stream bank erosion and scour around discharge points.
- Minimize exposed soils generated during construction.
- Preserve topsoil where feasible.

- Minimize disturbance of steep slopes on site.
- Minimize sediment discharge with erosion and sediment controls that are designed and installed to address:
 - Duration, amount, frequency and intensity of precipitation,
 - Nature of resulting runoff,
 - Soil characteristics: range of particle sizes present.
- Use natural buffers around waters of the state and direct runoff to these areas, where feasible.
 - Discharges to Outstanding Natural Resource Waters and impaired streams must have a 100-foot buffer zone,
 - Explain alternative practices where site constraints limit buffer zones.
- Minimize soil compaction unless dictated by site development
- Utilize outlet structures that withdraw water from the surface of settling basins or impoundments.

6.3 Site-Specific Erosion and Sediment Controls

The erosion and sediment control methods used are listed in the “Erosion and Sediment Control Plan”. The plan for each lot, where applicable, is found in the “Individual Lot Information” section of the appendix. The sediment controls should address all of the requirements in Sections 6.1 and 6.2 of this SWPPP.

7.0 STABILIZATION PRACTICES

The site stabilization practices described in this SWPPP include temporary and permanent stabilization measures that ensure that disturbed portions of the site are stabilized, and that existing vegetation is preserved when possible. Final stabilization measures may include but are not limited to permanent protection such as pavement, compacted gravel, permeable pavements/pavers, buildings, stable waterways (riprap, concrete, grass or pipe), a healthy, vigorous stand of grass or natural vegetation that uniformly covers at least 70 percent of the ground, stable outlet channels with velocity dissipation that directs site runoff to a natural watercourse, and any other approved structure or material.

7.1 Deadline to Initiate Stabilization Measures

The types of activities that constitute the initiation of stabilization include, but are not limited to:

- Prepping soil for vegetative or non-vegetative stabilization
- Applying mulch or other non-vegetative product
- Seeding or planting

- Starting stabilization practices on a portion of the area to be stabilized
- Finalizing arrangements to have stabilization product fully installed.

Except as noted below, stabilization measures shall be initiated as soon as practicable in portions of the site where construction activities have temporarily or permanently ceased, but in no case more than 4 days after the construction activity in that portion of the site has permanently ceased or 4 days for sites required to use enhanced BMP's.

- Where the initiation of stabilization measures by the 4th day, as applicable after construction activity temporarily or permanently ceases is precluded by natural causes, stabilization measures shall be initiated as soon as conditions allow.
- Where construction activity will resume on a portion of the site within 14 days from when activities ceased, (i.e., the total time period that construction activity is temporarily halted is less than 14 days) then stabilization measures do not have to be initiated on that portion of the site by the seventh day after construction activities have temporarily ceased.
- Areas where the seed has failed to germinate adequately (uniform perennial vegetative cover with a density of 70%) within 30 days after seeding and mulching must be reseeded immediately, or as soon as weather conditions allow.

7.2 Deadline to Complete Installation of Stabilization Measures

As soon as practicable, but no later than 4 days after initiation of soil stabilization measures, the site will have completed:

- Vegetative Stabilization – initial seeding or planting, and/or
- Non-Vegetative – installation or application of stabilization measures.

With extenuating circumstances like frozen conditions, stabilization measures will be completed as soon as practicable. Routine inspections will be continued until final stabilization requirements are met.

7.3 Other Deadlines

Where the site is affected by circumstances beyond the control of the Stormwater Permittee, and vegetative stabilization measures are proposed, the following deadlines apply:

- Immediately initiate, and within 4 days complete installation of temporary non-vegetative measures to prevent erosion.

- As soon as conditions allow, the activities required to plant and initially establish vegetation will proceed.

The circumstances that led to the inability to complete the deadlines outlined in sections 7.1 and 7.2 of this SWPPP will be documented, with the outline of a schedule for initiating and completing stabilization.

7.4 Stabilization Records

The stabilization practices implemented will be recorded on the “Stabilization Practice Schedule” found in the appendix. If construction activities temporarily or permanently cease, then it will be noted in the Stabilization Practice Schedule.

Stabilization Practice Schedule

Address: _____

Stabilization Practices	Location	Time Frame*

* Time Frame: Includes dates of major grading activities, dates when construction activities temporarily or permanently ceases on a portion of the site, date when stabilization measures are initiated.

8.0 STRUCTURAL CONTROLS

8.1 Structural Control Requirements

Sediment traps and sediment basins may be used to control solids in storm water runoff for drainage locations serving less than ten (10) acres. Sediment basins must utilize outlet structures that release water from the surface, unless infeasible.

At a minimum, super silt fence, belted reinforced silt fence, standard silt fences, 18" silt socks, or equivalent sediment controls are required for all down slope boundaries (and for those side slope boundaries deemed appropriate as dictated by individual site conditions) of the construction.

8.2 Site Structural Controls

The structural controls used on each lot are listed on the Structural Controls Sheet included in the Site Information Section of the appendix. These controls are used to divert flows away from exposed soils, to limit the contact of runoff with disturbed areas, or to lessen the off-site transport of eroded soils.

Structural Control Sheet

Address: _____

Structural Control Selected	Rational

9.0 STORM WATER MANAGEMENT

If any permanent storm water controls (e.g. detention ponds, catch basin filter inserts, etc.) or velocity dissipation devices are installed during the construction process to control pollutants in storm water discharges and will remain in place after the completion of construction operations will be noted on the Structural Control Sheet found in the Site Information section of the appendix.

10.0 OTHER CONTROLS

10.1 Other Control Requirements

To minimize off-site tracking of sediments and generation of dust, typical controls may include stabilized construction entrances, shoveling and sweeping, watering for dust control, etc.

All construction and waste materials that pose a potential pollutant source to the storm water runoff from the construction site will be stored in such a manner so as to prevent or minimize storm water contact.

To demonstrate that all applicable state and local regulations governing waste disposal, sanitary sewer or septic systems are being obeyed, the following practices are in place:

- The site will have the typical waste lumber, insulation, sheetrock, roofing, used paint supplies, etc. commonly found on a construction site. Either a roll off dumpster or wire fence containment will be provided for storing trash and rubbish until it can be properly disposed of. The dumpster or fence containment will be covered when not in use to prevent storm water from coming into contact with the trash and rubbish.
- Any concrete or asphalt plants associated with the project will be permitted and operated under their appropriate stormwater pollution prevention control plans.
- Any controls required for endangered or threatened species or their habitat, and/or those required by the State Historic Preservation Officer (SHPO) will be installed properly and maintained accordingly.

10.2 Other Controls at the Site:

If any other controls will be used, it will be described on the Other Control Sheet found in the Site Information in the appendix. For complex sites with more comprehensive controls, details are included in Appendix C.

Other Controls Sheet

Controls	Rationale
Dust -	Water as needed
Off-site Tracking -	Shoveling or sweeping as needed
Sewage -	Port-a-toilets for workers; POTW for residence
Construction Litter and Trash -	Covered dumpster to minimize waste materials contact with storm water

11.0 APPROVED LOCAL PLAN

The local requirements for an Erosion and Sediment Control Plan may or may not be met by the information contained in this SWPPP. Additional information may be requested to fully comply with these local requirements.

12.0 MAINTENANCE

All erosion and sediment control measures and other protective measures identified in this SWPPP must be maintained in effective operating condition. If through inspections the permittee determines that BMPs are not operating effectively, maintenance must be performed within 24 hours for active construction sites and before the next anticipated storm event to maintain the continued effectiveness of storm water controls. If maintenance prior to the next anticipated storm event is impracticable, maintenance must be scheduled and accomplished as soon as practicable. Erosion and sediment controls that have been intentionally disabled, run-over, removed, or otherwise rendered ineffective must be replaced or

corrected immediately upon discovery. Any repair made are to be re-inspected within 48 hours following repair.

13.0 INSPECTIONS OF CONTROLS

The permittee shall ensure site inspections are conducted by a Qualified Person in accordance with this section. The purpose of the inspections is to ensure compliance with the approved plan, and when the approved plan is not effective at protecting water quality, the inspection is to document that plan improvements are needed.

The person(s) inspecting the site may be a staff person or a third party hired to conduct such inspections as long as they meet the definition of a Qualified Person.

The site must be inspected as listed below, unless the site discharges to sensitive waters or the site qualifies for a reduction in the inspection frequency.

- At least once every four (4) calendar days and
- Within 24 hours of the occurrence of a precipitation event of 0.25 inches or greater, or the occurrence of runoff from snowmelt sufficient to cause a discharge.

An increase in inspection frequency is required for sites discharging to all waters except Tier 1.

For any portion of the site that discharges to a water that is classified as Tier 2 or Tier 3, or listed on the 303(d) list, inspections must be conducted in accordance with the following inspection frequencies:

- Once every four (4) calendar days, and
- Within 24 hours of the occurrence of a precipitation event of 0.25 inches or greater, or the occurrence of runoff from snowmelt sufficient to cause a discharge.

Reductions in inspection frequency may occur in accordance with the following:

Stabilized areas:

The permittee may reduce the frequency of inspections to twice per month, no more than 14 calendar days apart, in any area of the site where final stabilization has been completed. If construction activity resumes in this portion of the site at a later date, the inspection frequency immediately increases to that required previous to the reduced frequency. The beginning and ending dates of this period must be recorded in the inspection report.

Exceptions:

For “linear projects”, where disturbed portions have undergone final stabilization at the same time active construction continues elsewhere, the permittee may reduce the frequency of inspections to twice per month no more than 14 calendar days apart, in any area of the site where the final stabilization has been completed. Inspect once more within 24 hours of the occurrence of a precipitation event of 0.25 inches or greater. If there are no issues or evidence of stabilization problems, further inspections may be suspended. If “wash-out” of stabilization materials and/or sediment is observed, following re-stabilization, the reduced inspection frequency is suspended. Inspections must continue until final stabilization is visually confirmed following a precipitation event of 0.25 inches or greater.

Frozen conditions:

If the permittee suspends construction activities due to frozen conditions, inspections on the site may be temporarily suspended until thawing conditions begin to occur if:

- Runoff is unlikely due to continuous frozen conditions that are likely to continue at the site for at least three (3) months based on historic seasonal averages. If unexpected weather conditions (such as above freezing temperatures or rain events) make discharges likely, the permittee must immediately resume the regular inspection frequency as applicable;
- Land disturbances have been suspended and all disturbed areas of the site have been stabilized.
-

If still conducting construction activities during frozen conditions, the permittee may reduce the inspection frequency to once per month if:

- Runoff is unlikely due to continuous frozen conditions that are likely to continue at the site for at least three (3) months based on historic seasonal averages. If unexpected weather conditions (such as above freezing temperatures or rain events) make discharges likely, the permittee must immediately resume the regular inspection frequency; and
- Except for areas undergoing construction activities, disturbed areas of the site have been stabilized, the beginning and ending dates of this period must be documented in the inspection report.

14.0 CONTRACTORS AND SUBCONTRACTORS RESPONSIBILITY

Each control measure implemented on site is identified along with the person responsible for implementing that measure in the Erosion and Sediment Control Plan found in the “Site Information” section of the appendix.

A list of contractors and subcontractors and the control measures their operations impact is listed in the "Site Information" section of the appendix. If the contractor is unknown at this time, this requirement may be waived.

All contractors and subcontractors working at the site are informed of the terms and conditions of the SWPPP and their obligation to follow the plan. In doing so, they agree not to perform their operations counter to the plan without first contacting the Permittee in order that the necessary adjustments to the SWPPP plan can be made to assure that pollutants are not discharged from the site in the storm water runoff.

15.0 UTILITY COMPANIES

Each control measure relating to the installation of utility service, is listed in the "Erosion and Sediment Control Plan" found in the "Site Information" section in the appendix.

16.0 EMERGENCY NOTIFICATION

In the event of an unauthorized discharge that causes an emergency condition, the operator shall notify the hotline (WVDEP 24-hour Elkview Emergency Response Unit) by telephone at 1-(304) 558-5938 or 1-(800) 642-3074 and the National Response Center at 1-(800)-424-8802 no later than one hour after learning of the discharge. Notification will be made regardless of the amount of the discharge. A written notification shall be provided within five (5) calendar days after the telephone notification, in accordance with the general permit requirements. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and time, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance.

17. EMPLOYEE TRAINING

Describe an employee training program for all on-site personnel directly involved with construction activities at all levels of responsibility that reiterates the components and goal of the SWPPP.

- Training should address topics such as spill and leak response and internal reporting, good housekeeping, and routine inspection and maintenance.
- Training shall be on a quarterly basis while construction activities are occurring.
- A list of attendees and topics covered at each training session shall be documented and maintained in the SWPPP.

APPENDIX A

General Location Map

and

Site Map



United States Department of the Interior



FISH AND WILDLIFE SERVICE
West Virginia Ecological Services Field Office
6263 Appalachian Highway
Davis, WV 26260-9475
Phone: (304) 866-3858 Fax: (304) 866-3852

In Reply Refer To:
Project code: 2022-0042673
Project Name: TR20-1W Water System Improvements

May 13, 2022

Subject: Verification letter for the 'TR20-1W Water System Improvements' project under the January 5, 2016, Programmatic Biological Opinion on Final 4(d) Rule for the Northern Long-eared Bat and Activities Excepted from Take Prohibitions.

Dear William Wallace:

The U.S. Fish and Wildlife Service (Service) received on May 13, 2022 your effects determination for the 'TR20-1W Water System Improvements' (the Action) using the northern long-eared bat (*Myotis septentrionalis*) key within the Information for Planning and Consultation (IPaC) system. This IPaC key assists users in determining whether a Federal action is consistent with the activities analyzed in the Service's January 5, 2016, Programmatic Biological Opinion (PBO). The PBO addresses activities excepted from "take"^[1] prohibitions applicable to the northern long-eared bat under the Endangered Species Act of 1973 (ESA) (87 Stat.884, as amended; 16 U.S.C. 1531 et seq.).

Based upon your IPaC submission, the Action is consistent with activities analyzed in the PBO. The Action may affect the northern long-eared bat; however, any take that may occur as a result of the Action is not prohibited under the ESA Section 4(d) rule adopted for this species at 50 CFR §17.40(o). Unless the Service advises you within 30 days of the date of this letter that your IPaC-assisted determination was incorrect, this letter verifies that the PBO satisfies and concludes your responsibilities for this Action under ESA Section 7(a)(2) with respect to the northern long-eared bat.

Please report to our office any changes to the information about the Action that you submitted in IPaC, the results of any bat surveys conducted in the Action area, and any dead, injured, or sick northern long-eared bats that are found during Action implementation. If the Action is not completed within one year of the date of this letter, you must update and resubmit the information required in the IPaC key.

This IPaC-assisted determination allows you to rely on the PBO for compliance with ESA Section 7(a)(2) only for the northern long-eared bat. It **does not** apply to the following ESA-protected species that also may occur in the Action area:

- Indiana Bat *Myotis sodalis* Endangered
- Monarch Butterfly *Danaus plexippus* Candidate

If the Action may affect other federally listed species besides the northern long-eared bat, a proposed species, and/or designated critical habitat, additional consultation between you and this Service office is required. If the Action may disturb bald or golden eagles, additional coordination with the Service under the Bald and Golden Eagle Protection Act is recommended.

[1]Take means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct [ESA Section 3(19)].

Action Description

You provided to IPaC the following name and description for the subject Action.

1. Name

TR20-1W Water System Improvements

2. Description

The following description was provided for the project 'TR20-1W Water System Improvements':

This project, located in the town of Triadelphia, WV, involves replacing and upgrading public water lines throughout the scope of the town.

Approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/@40.0504331,-80.6339489375987,14z>



Determination Key Result

This Federal Action may affect the northern long-eared bat in a manner consistent with the description of activities addressed by the Service's PBO dated January 5, 2016. Any taking that may occur incidental to this Action is not prohibited under the final 4(d) rule at 50 CFR §17.40(o). Therefore, the PBO satisfies your responsibilities for this Action under ESA Section 7(a)(2) relative to the northern long-eared bat.

Determination Key Description: Northern Long-eared Bat 4(d) Rule

This key was last updated in IPaC on May 15, 2017. Keys are subject to periodic revision.

This key is intended for actions that may affect the threatened northern long-eared bat.

The purpose of the key for Federal actions is to assist determinations as to whether proposed actions are consistent with those analyzed in the Service's PBO dated January 5, 2016.

Federal actions that may cause prohibited take of northern long-eared bats, affect ESA-listed species other than the northern long-eared bat, or affect any designated critical habitat, require ESA Section 7(a)(2) consultation in addition to the use of this key. Federal actions that may

affect species proposed for listing or critical habitat proposed for designation may require a conference under ESA Section 7(a)(4).

Determination Key Result

This project may affect the threatened Northern long-eared bat; therefore, consultation with the Service pursuant to Section 7(a)(2) of the Endangered Species Act of 1973 (87 Stat.884, as amended; 16 U.S.C. 1531 et seq.) is required. However, based on the information you provided, this project may rely on the Service's January 5, 2016, *Programmatic Biological Opinion on Final 4(d) Rule for the Northern Long-Eared Bat and Activities Excepted from Take Prohibitions* to fulfill its Section 7(a)(2) consultation obligation.

Qualification Interview

1. Is the action authorized, funded, or being carried out by a Federal agency?

Yes

2. Have you determined that the proposed action will have "no effect" on the northern long-eared bat? (If you are unsure select "No")

No

3. Will your activity purposefully **Take** northern long-eared bats?

No

4. [Semantic] Is the project action area located wholly outside the White-nose Syndrome Zone?

Automatically answered

No

5. [Semantic] Is the project action area located within 0.25 miles of a known northern long-eared bat hibernaculum?

Note: The map queried for this question contains proprietary information and cannot be displayed. If you need additional information, please contact your State wildlife agency

Automatically answered

No

6. [Semantic] Is the project action area located within 150 feet of a known occupied northern long-eared bat maternity roost tree?

Note: The map queried for this question contains proprietary information and cannot be displayed. If you need additional information, please contact your State wildlife agency

Automatically answered

No

Project Questionnaire

If the project includes forest conversion, report the appropriate acreages below. Otherwise, type '0' in questions 1-3.

1. Estimated total acres of forest conversion:

0

2. If known, estimated acres of forest conversion from April 1 to October 31

0

3. If known, estimated acres of forest conversion from June 1 to July 31

0

If the project includes timber harvest, report the appropriate acreages below. Otherwise, type '0' in questions 4-6.

4. Estimated total acres of timber harvest

0

5. If known, estimated acres of timber harvest from April 1 to October 31

0

6. If known, estimated acres of timber harvest from June 1 to July 31

0

If the project includes prescribed fire, report the appropriate acreages below. Otherwise, type '0' in questions 7-9.

7. Estimated total acres of prescribed fire

0

8. If known, estimated acres of prescribed fire from April 1 to October 31

0

9. If known, estimated acres of prescribed fire from June 1 to July 31

0

If the project includes new wind turbines, report the megawatts of wind capacity below. Otherwise, type '0' in question 10.

10. What is the estimated wind capacity (in megawatts) of the new turbine(s)?

0

IPaC User Contact Information

Agency: Cerrone Associates, Inc.
Name: William Wallace
Address: 97 14th Street
City: Wheeling
State: WV
Zip: 26003
Email: wwallace@cerrone1.com
Phone: 7402137815

Lead Agency Contact Information

Lead Agency: Environmental Protection Agency



United States Department of the Interior



FISH AND WILDLIFE SERVICE
West Virginia Ecological Services Field Office
6263 Appalachian Highway
Davis, WV 26260-9475
Phone: (304) 866-3858 Fax: (304) 866-3852

In Reply Refer To:
Project Code: 2022-0042673
Project Name: TR20-1W Water System Improvements

May 13, 2022

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2) (c)). For projects other than major construction activities, the Service suggests that a biological

evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

<http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF>

Migratory Birds: In addition to responsibilities to protect threatened and endangered species under the Endangered Species Act (ESA), there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity, intentional or unintentional, resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). For more information regarding these Acts see <https://www.fws.gov/birds/policies-and-regulations.php>.

The MBTA has no provision for allowing take of migratory birds that may be unintentionally killed or injured by otherwise lawful activities. It is the responsibility of the project proponent to comply with these Acts by identifying potential impacts to migratory birds and eagles within applicable NEPA documents (when there is a federal nexus) or a Bird/Eagle Conservation Plan (when there is no federal nexus). Proponents should implement conservation measures to avoid or minimize the production of project-related stressors or minimize the exposure of birds and their resources to the project-related stressors. For more information on avian stressors and recommended conservation measures see <https://www.fws.gov/birds/bird-enthusiasts/threats-to-birds.php>.

In addition to MBTA and BGEPA, Executive Order 13186: *Responsibilities of Federal Agencies to Protect Migratory Birds*, obligates all Federal agencies that engage in or authorize activities that might affect migratory birds, to minimize those effects and encourage conservation measures that will improve bird populations. Executive Order 13186 provides for the protection of both migratory birds and migratory bird habitat. For information regarding the implementation of Executive Order 13186, please visit <https://www.fws.gov/birds/policies-and-regulations/executive-orders/e0-13186.php>.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Code in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List
 - USFWS National Wildlife Refuges and Fish Hatcheries
 - Migratory Birds
 - Wetlands
-

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

West Virginia Ecological Services Field Office

6263 Appalachian Highway

Davis, WV 26260-9475

(304) 866-3858

Project Summary

Project Code: 2022-0042673

Event Code: None

Project Name: TR20-1W Water System Improvements

Project Type: Water Supply Pipeline - New Constr - Below Ground

Project Description: This project, located in the town of Triadelphia, WV, involves replacing and upgrading public water lines throughout the scope of the town.

Project Location:

Approximate location of the project can be viewed in Google Maps: [https://](https://www.google.com/maps/@40.0504331,-80.6339489375987,14z)

www.google.com/maps/@40.0504331,-80.6339489375987,14z



Counties: Ohio County, West Virginia

Endangered Species Act Species

There is a total of 3 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species. Note that 2 of these species should be considered only under certain conditions.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries¹, as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

-
1. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

Mammals

NAME	STATUS
Indiana Bat <i>Myotis sodalis</i> There is final critical habitat for this species. The location of the critical habitat is not available. This species only needs to be considered under the following conditions: <ul style="list-style-type: none"> ▪ All activities in this location should consider potential effects to this species. This project is within known summer foraging and roosting areas. Please contact the WVFO. ▪ All activities in this location should consider potential effects to this species. This project is not within a known-use area, but potentially occupied habitat may exist. Please contact the WVFO for additional consultation. Species profile: https://ecos.fws.gov/ecp/species/5949	Endangered
Northern Long-eared Bat <i>Myotis septentrionalis</i> No critical habitat has been designated for this species. This species only needs to be considered under the following conditions: <ul style="list-style-type: none"> ▪ No known hibernacula or maternity roost trees occur within the action area. Any 'take' that may occur incidental to this project is not prohibited under the final 4(d) rule. Please submit a Streamlined 4(d) Rule Consultation form to the WVFO. Species profile: https://ecos.fws.gov/ecp/species/9045	Threatened

Insects

NAME	STATUS
Monarch Butterfly <i>Danaus plexippus</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9743	Candidate

Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

USFWS National Wildlife Refuge Lands And Fish Hatcheries

Any activity proposed on lands managed by the [National Wildlife Refuge](#) system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS OR FISH HATCHERIES WITHIN YOUR PROJECT AREA.

Migratory Birds

Certain birds are protected under the Migratory Bird Treaty Act¹ and the Bald and Golden Eagle Protection Act².

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described [below](#).

-
1. The [Migratory Birds Treaty Act](#) of 1918.
 2. The [Bald and Golden Eagle Protection Act](#) of 1940.
 3. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

The birds listed below are birds of particular concern either because they occur on the [USFWS Birds of Conservation Concern \(BCC\) list](#) or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ [below](#). This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the [E-bird data mapping tool](#) (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found [below](#).

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON
Wood Thrush <i>Hylocichla mustelina</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 10 to Aug 31

Probability Of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is $0.25/0.25 = 1$; at week 20 it is $0.05/0.25 = 0.2$.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

Breeding Season (■)

Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort (|)

Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

No Data (—)

A week is marked as having no data if there were no survey events for that week.

Survey Timeframe

Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.

■ probability of presence ■ breeding season | survey effort — no data

SPECIES JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC

Wood Thrush
BCC Rangewide
(CON)



Additional information can be found using the following links:

- Birds of Conservation Concern <https://www.fws.gov/program/migratory-birds/species>
- Measures for avoiding and minimizing impacts to birds <https://www.fws.gov/library/collections/avoiding-and-minimizing-incident-take-migratory-birds>
- Nationwide conservation measures for birds <https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf>

Migratory Birds FAQ

Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

[Nationwide Conservation Measures](#) describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. [Additional measures](#) or [permits](#) may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the migratory birds potentially occurring in my specified location?

The Migratory Bird Resource List is comprised of USFWS [Birds of Conservation Concern \(BCC\)](#) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the [Avian Knowledge Network \(AKN\)](#). The AKN data is based on a growing collection of [survey, banding, and citizen science datasets](#) and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle ([Eagle Act](#) requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the [AKN Phenology Tool](#).

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the [Avian Knowledge Network \(AKN\)](#). This data is derived from a growing collection of [survey, banding, and citizen science datasets](#).

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go to the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering, migrating or present year-round in my project area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may refer to the following resources: [The Cornell Lab of Ornithology All About Birds Bird Guide](#), or (if you are unsuccessful in locating the bird of interest there), the [Cornell Lab of Ornithology Neotropical Birds guide](#). If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are [Birds of Conservation Concern](#) (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the [Eagle Act](#) requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the [Northeast Ocean Data Portal](#). The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the [NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf](#) project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the [Diving Bird Study](#) and the [nanotag studies](#) or contact [Caleb Spiegel](#) or [Pam Loring](#).

What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to [obtain a permit](#) to avoid violating the Eagle Act should such impacts occur.

Proper Interpretation and Use of Your Migratory Bird Report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

Wetlands

Impacts to [NWI wetlands](#) and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local [U.S. Army Corps of Engineers District](#).

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

WETLAND INFORMATION WAS NOT AVAILABLE WHEN THIS SPECIES LIST WAS GENERATED. PLEASE VISIT [HTTPS://WWW.FWS.GOV/WETLANDS/DATA/MAPPER.HTML](https://www.fws.gov/wetlands/data/mapper.html) OR CONTACT THE FIELD OFFICE FOR FURTHER INFORMATION.

IPaC User Contact Information

Agency: Cerrone Associates, Inc.
Name: William Wallace
Address: 97 14th Street
City: Wheeling
State: WV
Zip: 26003
Email: wwallace@cerrone1.com
Phone: 7402137815

Lead Agency Contact Information

Lead Agency: Environmental Protection Agency

Table. *Initial Assessment of Potential Impacts to Species*

Important information for use of Table

The below table will guide a project proponent through a series of questions to assess potential impacts (this includes adverse and beneficial) that their projects may have on federally listed species. The goal of this table is to efficiently assess potential actions that may have no effect to federally listed species in West Virginia.

**Should the questions for your project result in a “no effect” determination for all species identified in your IPaC review, no further coordination with the West Virginia Field Office (WVFO) is needed.*

Please note that potential impacts (affects) may be beneficial or adverse. Should the answers to the questions result in a potential impact (affect), either beneficial or adverse to any species identified in your IPaC review, **you should submit project to FW5_WVFO@fws.gov (see instructions on project review page for WVFO).**

Table. *Initial Assessment of Potential Impacts to Species*

Species	Question 1	Question 2	Question 3	Question 4
Indiana bat	<p>Will the project involve any tree removal or trimming?</p> <p>Yes = Potential impact, submit project to WVFO.</p> <p>No = Proceed to Question 2.</p>	<p>Are there any structures¹ present within your project area that could be considered suitable for hibernating or roosting bats?</p> <p>Yes = Potential impact, submit project to WVFO.</p> <p>No = Proceed to Question 3.</p>	<p>Is your project within known summer maternity or spring staging/fall swarming areas for the Indiana bat? ²</p> <p>Yes = Proceed to Question 4.</p> <p>No = No Effect*.</p>	<p>Will the project involve any stream/wetland impacts?</p> <p>Yes = Potential impact, submit project to WVFO.</p> <p>No = No Effect*.</p>
Northern long-eared bat	<p>Is your project within 150-feet of a documented NLEB roost tree or ¼ mile of a documented NLEB hibernacula according to IPaC? ³</p> <p>Yes = Potential impact, submit project to WVFO.</p> <p>No = Proceed to Question 2.</p>	<p>Does your project propose tree removal?</p> <p>Yes = May affect, but Final 4(d) rule applies. Submit streamlined 4(d) Rule form to WVFO.</p> <p>No = No Effect*.</p>		

¹These include but are not limited to: caves, mine portals, rock fissures, tunnels, bridges, etc. Consult Range-wide Indiana Bat Survey Guidelines, Appendix H: [Potential Hibernaculum Survey Guidance](#) for more specific information on potential Indiana Bat hibernacula. For guidance related to bridge suitability, refer to FHWA Programmatic Biological Assessment, Appendix B: [Bridge / Abandoned Structure Assessment Guidance](#).

² This information is located on your official species list from IPaC.

Table. *Initial Assessment of Potential Impacts to Species*

<p>Virginia big-eared bat</p>	<p>Will your project occur within a known use area for this species²?</p> <p>Yes = Potential impact, submit project to WVFO.</p> <p>No = No Effect*.</p>			
<p>Gray bat</p>	<p>Will your project directly or indirectly affect any caves, mine portals, bridges, fissures, structures, or culverts?</p> <p>Yes = Potential impact, submit project to WVFO.</p> <p>No = Proceed to Question 2.</p>	<p>Will the project involve any stream/wetland impacts?</p> <p>Yes = Potential impact, submit project to WVFO.</p> <p>No = No Effect*.</p>		
<p>Cheat Mountain salamander</p>	<p>Does the project occur within northern hardwood forests and/or red spruce dominant forests above 2,000 feet in elevation of Grant, Pendleton, Pocahontas, Randolph, or Tucker counties?</p> <p>Yes = Potential impact, submit project to WVFO.</p> <p>No = No Effect*.</p>			

Table. *Initial Assessment of Potential Impacts to Species*

<p>Flat-spired three toothed land snail</p>	<p>Will your project impact sandstone outcrops, cliff line features, emergent boulders, or talus slopes in the Cheat River Gorge?</p> <p>Yes = Potential impact, submit project to WVFO.</p> <p>No = No Effect*.</p>			
<p>Madison Cave isopod</p>	<p>Will your project affect any wells, springs, sinkholes, or caves, or result in the creation of new sinkholes, in Jefferson or Berkeley counties?</p> <p>Yes = Potential impact, submit project to WVFO.</p> <p>No = No Effect*.</p>			
<p>Rusty-patched bumble bee</p>	<p><u>Is your project within a RPBB High Potential Zone?</u></p> <p>Yes = Potential impact, submit project to WVFO.</p> <p>No = No Effect*.</p>			

Table. *Initial Assessment of Potential Impacts to Species*

<p>Harperella</p>	<p>Will the project directly affect the streambed (below ordinary high-watermark) or the streambanks and riparian vegetation of Back Creek, Sleepy Creek, Potomac River, or Cacapon River?</p> <p>Yes = Potential impact, submit project to WVFO.</p> <p>No = Proceed to Question 2.</p>	<p>Will the project involve earth moving and require erosion and sedimentation control measures within close proximity to these streams?</p> <p>Yes = Potential impact, submit project to WVFO.</p> <p>No = No Effect*.</p>		
<p>Virginia spiraea</p>	<p>Will the project directly affect the streambed (below ordinary high-watermark) or the streambanks and riparian vegetation of the Lower New, Meadow, Marsh Fork, Gauley, Greenbrier, Buckhannon or Bluestone rivers?</p> <p>Yes = Potential impact, submit project to WVFO.</p> <p>No = Proceed to Question 2.</p>	<p>Will the project involve earth moving and require erosion and sedimentation control measures within close proximity to these rivers?</p> <p>Yes = Potential impact, submit project to WVFO.</p> <p>No = No Effect*.</p>		

Table. *Initial Assessment of Potential Impacts to Species*

<p>Northeastern bulrush</p>	<p>Will the project affect any wetlands in Berkeley or Hardy counties?</p> <p>Yes = Potential impact, submit project to WVFO.</p> <p>No = No Effect*.</p>			
<p>Shale barren rock cress</p>	<p>Will the project affect any shale barrens in Greenbrier, Hardy, or Pendleton counties?</p> <p>Yes = Potential impact, submit project to WVFO.</p> <p>No = No Effect*.</p>			
<p>Small whorled pogonia</p>	<p>Does the project occur within deciduous forest in Greenbrier, Randolph, Tucker, or Pocahontas counties?</p> <p>Yes = Potential impact, submit project to WVFO.</p> <p>No = No Effect*.</p>			

Table. Initial Assessment of Potential Impacts to Species

<p>Federally -listed aquatic species (includes mussel, crayfish, and darters)</p> <p><i>If your project occurs within close proximity of a stream containing a federally listed species², answer the Question 1.</i></p> <p><i>If your project occurs within a watershed known to support a federally listed species², see the row below (within watershed only).</i></p>	<p>Will the project directly affect the streambed (below ordinary high-watermark) of the stream or tributary?</p> <p>Yes = Potential impact, submit project to WVFO.</p> <p>No = Proceed to Question 2.</p>	<p>Will the project bore underneath (directional bore or horizontal directional drill) a mussel/crayfish/darter stream?</p> <p>Yes = Potential impact, submit project to WVFO.</p> <p>No = Proceed to Question 3.</p>	<p>Will the project involve earth moving and require erosion and sedimentation control measures within close proximity to a mussel/crayfish/darter stream?</p> <p>Yes = Potential impact, submit project to WVFO.</p> <p>No = Proceed to Question 4.</p>	<p>Will the project affect fish quantities³ or water quantity/quality⁴ in a mussel/crayfish/darter mussel stream?</p> <p>Yes = Potential impact, submit project to WVFO.</p> <p>No = No Effect*.</p>
<p>Aquatic species (within watershed only)²</p>	<p>Will there be disturbance outside of the existing disturbed areas that causes sedimentation to waterways?</p> <p>Yes = Potential impact, submit project to WVFO.</p> <p>No = No Effect*.</p>			

Species Conclusions Table

Project Name: TR20-1W Water System Improvements

Project's FWS File Number: 2022-0042673

Date: 5/18/2022

Point of Contact: William Wallace, Cerrone Associates Inc. (wwallace@cerrone1.com, (740) 213-7815)

Species Name	ESA Determination ¹ (e.g. no effect; may affect; may affect but 4(d) rule applies).	Critical Habitat	Notes / Documentation Summary (include full rationale in your report)
Indiana Bat	NO EFFECT	N	Project answers "No" to all questions from the Initial Assessment of Potential Impacts to Species Table.
Northern Long-eared Bat	May Effect but 4(d) rule applies	N	No known hibernacula or maternity roost trees occur within the action area. Any 'take' that may occur incidental to this project is not prohibited under the final 4(d) rule.
Monarch Butterfly	NO EFFECT	N	Minimal disturbance to habitat

¹ Determination required for projects that have a Federal nexus.

Last modified: 3/30/2021



West Virginia Department of
**ARTS, CULTURE
AND HISTORY**

The Culture Center
1900 Kanawha Blvd., E.
Charleston, WV 25305-0300

Randall Reid-Smith, Curator
Phone 304.558.0220 • www.wvculture.org
Fax 304.558.2779 • TDD 304.558.3562
EEO/AA Employer

July 8, 2022

Mr. William J. Wallace
Project Manager
Cerrone Associates, Inc.
97 14th Street
Wheeling, WV 26003
Via email: wwallace@cerrone1.com

RE: Town of Triadelphia – Water System Improvements Project
Cerrone Project #TR20-1W
FR#: 22-697-OH

Dear Mr. Wallace:

We have reviewed the above referenced project to determine potential effects on cultural resources. As required by Section 106 of the National Historic Preservation Act, as amended, and its implementing regulations, 36 CFR 800: "Protection of Historic Properties, we submit our comments.

According to the submitted information, the Town of Triadelphia proposes to undertake a water system improvements project across their entire system in Ohio County, West Virginia. The work will involve the replacement of existing water lines, water meters, and 43 fire hydrants.

Architectural Resources:

We have reviewed the submitted information and determined that no architectural properties eligible for or included in the National Register of Historic Places are located within the proposed project's direct or indirect Area of Potential Effects (APE). Work is primarily confined to existing rights of way. According to submitted information and aerial photography there are no structures within the direct APE of the project. No further consultation is necessary regarding architectural resources; however, we ask that you contact our office if your project should change.

Archaeological Resources:

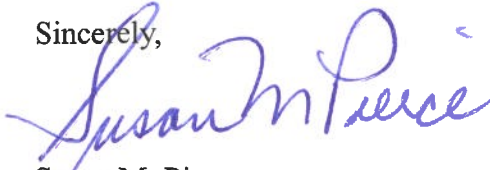
According to our records, there are three previously recorded archaeological sites located within the proposed project area. Our records indicate that these resources have been destroyed by the construction activities associated with I-70. Available information indicates that the proposed ground disturbing activities will be confined to previously disturbed areas and/or existing rights-of-way. Therefore, it is unlikely that significant intact archaeological resources will be encountered during the project's proposed ground disturbing activities. In our opinion, the proposed water system improvements project will have no effect on archaeological historic properties. No further consultation is necessary regarding archaeological resources. However, if cultural

July 8, 2022
Mr. Wallace
FR#: 22-697-OH
Page 2

materials are encountered during the project activities, cease all activity within the area of discovery and contact this office immediately.

We appreciate the opportunity to be of service. *If you have questions regarding our comments or the Section 106 process, please contact Stephen L. Gifford, Structural Historian, or Carolyn M. Kender, Archaeologist, at (304) 558-0240.*

Sincerely,



Susan M. Pierce
Deputy State Historic Preservation Officer

SMP/CMK/SLG

CC: Ms. Courtney Neff, The Osage Nation (cneff@theosagenation-nsn.gov)
Mr. Dominick Cerrone, Cerrone Associates, Inc. (dpcerrone@cerrone1.com)

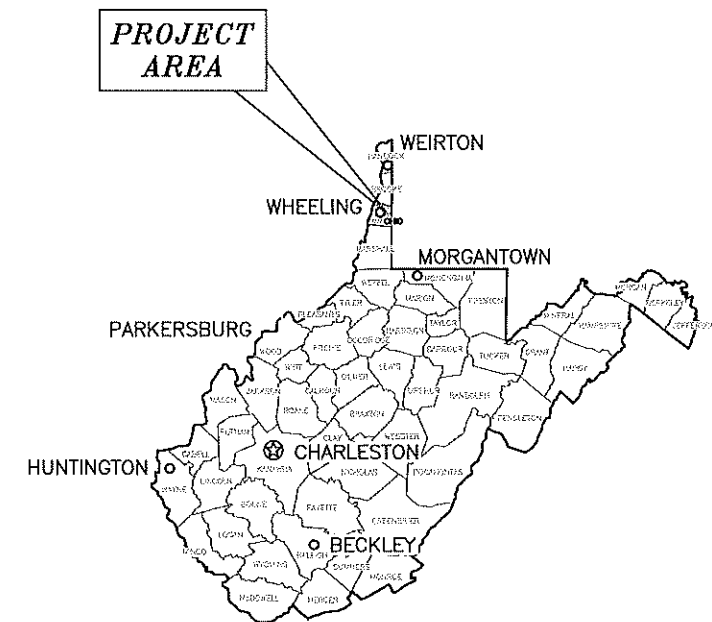
TOWN OF TRIADELPHIA

OHIO COUNTY, WEST VIRGINIA

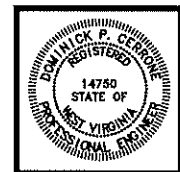
WATER SYSTEM IMPROVEMENTS

CONTRACT #1: WATER SYSTEM IMPROVEMENTS

CONSTRUCTION DRAWINGS



CERRONE ASSOCIATES, INC.
CONSULTING ENGINEERS • WHEELING, WV



APPROVED

DATE: 10-2022

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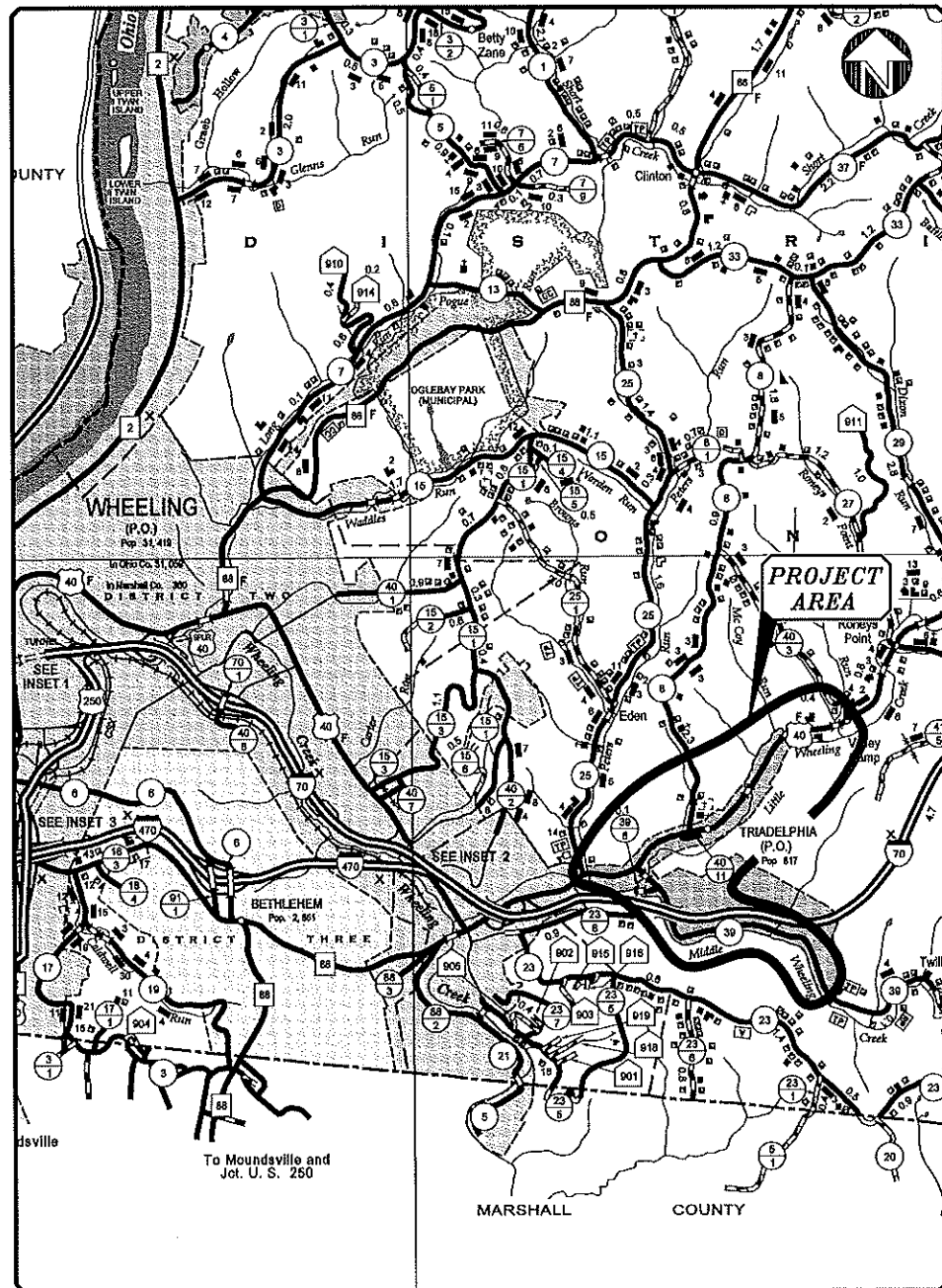
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TOWN OF TRIADELPHIA

OHIO COUNTY, WEST VIRGINIA

WASTEWATER SYSTEM IMPROVEMENTS

PROJECT AREA MAP



DRAWING LEGEND

EXISTING LEGEND		NEW LEGEND	
— W —	EXISTING WATER	— W —	WATER
— X —	EXISTING WATER VALVE	— S —	SEWER
— FH —	FIRE HYDRANT W/WATCH VALVE	— STM —	STORM DRAIN
— FO —	FLUSH OUT	— G —	GATE VALVE
— SAN —	SANITARY SEWER	— PRV —	PRESSURE REDUCING VALVE (PRV)
— G —	GAS	— FO —	FLUSH OUT
— HPG —	HIGH PRESSURE GAS	— AR —	AIR RELEASE (LOCATE AT HIGH POINT)
— OE —	OVERHEAD ELECTRIC	— FH —	FIRE HYDRANT W/WATCH VALVE
— UE —	UNDERGROUND ELECTRIC	— OC —	OPEN CUT W/CASING
— OT —	OVERHEAD TELEPHONE	— RB —	ROAD BORING W/CASING
— UT —	UNDERGROUND TELEPHONE	— CS —	COMPOST FILTER SOCK
— OC —	OVERHEAD CABLE	— SC —	SERVED CUSTOMER
— UC —	UNDERGROUND CABLE	— EC —	EXISTING CUSTOMER TO
— STEAM —	STEAM LINE	— H —	HOUSE
— WASTE —	WASTE LINE	— T —	TRAILER
— BCM —	BURIED CABLE MARKER	— B —	BARN
— O —	SEPTIC TANK	— S —	SHED
— UP —	UTILITY POLE	— CN —	CUSTOMER NUMBER
— UPL —	UTILITY POLE W/LIGHT	— ED —	EASEMENT DESIGNATION
— UPLA —	UTILITY POLE W/ANCHOR WIRE	— FGL —	FIBERGLASS
— MB —	MAIL BOX	— CMP —	CORRUGATED METAL PIPE
— GM —	GAS MARKER / GAS METER	— RCP —	REINFORCED CONCRETE PIPE
— WM —	WATER MARKER / WATER METER	— CPP —	CORRUGATED PLASTIC PIPE
— GV —	GAS VENT PIPE	— PVC —	POLYVINYL CHLORIDE PIPE
— TP —	TELEPHONE PEDESTAL	— DIP —	DUCTILE IRON PIPE
— PP —	PROPERTY PIN	— CIP —	CAST IRON PIPE
— GV —	GAS VALVE	— TR —	TANDEM SETTER
— GP —	GATE POST	— TRS —	TANDEM SETTER W/ COPPER SERVICE LINE
— EP —	ELECTRIC POST		

* ALL ROAD OFFSETS TAKEN FROM CENTER LINE
* REPLACEMENTS ORIGINATE AT END OF LEADER

LIST OF DRAWINGS

DWG. NO.	TITLE
—	COVER SHEET
1-A	TITLE SHEET
1-B	GENERAL NOTES & PRESSURE TESTING
1-EBM	ESTIMATED BILL OF MATERIALS
1-INDEX	INDEX
1-CS	CONSTRUCTION SEQUENCE
1-01	RENTCHLER AVE, WAGNER'S ADDITION, & OPPERMAN DR - OVERALL CUSTOMER LIST FOR 1-01A
1-01A	LINES 1, 1A, 1B, & 1C ~ RENTCHLER AVE, CRAGG AVE, ROMINE ST, & AMASA AVE
1-01B	LINES 2, 2A, & 2B ~ FERRELL AVE (WAGNER'S ADDITION)
1-01C	LINES 8 & 8A - OPPERMAN DR
1-02	SERVICE RELOCATE - MIDDLE CREEK RD
1-02A	MIDDLE CREEK RD, CHURCH ST, MCCOY AVE, & WICKMAN AVE - OVERALL CUSTOMER LIST FOR 1-02B
1-02B	LINE 2 - MIDDLE CREEK RD
1-02C	LINE 9 - MIDDLE CREEK RD & CHURCH ST
1-03	LINES 9, 9A, 9B, & 9C ~ CHURCH ST & MCCOY AVE
1-04	LINE 10 - WICKMAN AVE
1-05	LINES 2 & 3 ~ MIDDLE CREEK RD
1-06	LINES 3 & 4 ~ MIDDLE CREEK RD
1-06A	LINES 4 & 5 ~ MIDDLE CREEK RD
1-06B	MILLER'S ADDITION ~ TEMPORARY LINE, CUSTOMER LISTS, & OVERALL LINES 5, 5A, 5B, 6, 6A, & 7B ~ MILLER'S ADDITION (NORTH END)
1-07	LINES 6, 7, 7A, & 7B ~ MILLER'S ADDITION (SOUTH END)
1-08	LINE 11 - PETERS RUN RD (CR 25)
1-09	LINE 12 - CHAPEL HILL RD (CR 8)
1-10	LINE 13 - SYLVAN SPRING DR
1-10A	LINES 14 & 15 - MIDWAY ST
1-10B	LINE 16 - SPRINGER ADDITION
1-10C	SIMMS NESBITT ADDITION, US ROUTE 40, & SHERIDAN AVE - OVERALL CUSTOMER LIST FOR 1-02B
1-10D	LINES 17, 17A, & 17B ~ LINK AVE, NOBLE ST, HAWKINS AVE, EIMER ST, & US ROUTE 40
1-10E	LINE 18 - SHERIDAN AVE
FH-INDEX	FIRE HYDRANT & VALVE REPLACEMENTS ~ INDEX MAP
FH-1	FIRE HYDRANT & VALVE REPLACEMENTS
FH-2	FIRE HYDRANT & VALVE REPLACEMENTS
FH-3	FIRE HYDRANT & VALVE REPLACEMENTS
FH-4	FIRE HYDRANT & VALVE REPLACEMENTS
PD 1-01	LINE 1 - LITTLE WHEELING CREEK ~ DIRECTIONAL DRILL PLAN & PROFILE
PD 1-02	LINE 2 - MIDDLE CREEK ~ DIRECTIONAL DRILL PLAN & PROFILE
PD 1-03	PROJECT DETAILS
PD 1-04	PROJECT DETAILS
PD 1-05	PROJECT DETAILS
PD 1-06	PROJECT DETAILS
PD 1-07	PROJECT DETAILS
PD 1-08	PROJECT DETAILS
PD 1-09	PROJECT DETAILS
PD 1-10	PROJECT DETAILS
SD 1-01	STANDARD DETAILS
SD 1-02	STANDARD DETAILS
SD 1-03	STANDARD DETAILS
SD 1-04	STANDARD DETAILS
SD 1-05	STANDARD DETAILS - TRAFFIC CONTROL PLAN

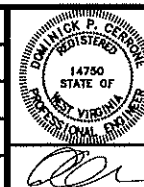
No.	DATE	DESCRIPTION	BY
5	08-2023	ADDED COMPOST FILTER SOCKS TO LEGEND	RJR
7	03-2023	ADDED DRAWING SOLO OF ASSETS WHICH	RJR
1	10-2022	REVISIONS	RJR

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CERRONE ASSOCIATES, INC.
CONSULTING ENGINEERS • WATER & WASTEWATER SYSTEMS
97 - 14TH STREET, WHEELING, WV 26003-2497

FIELD LAYOUT	N/A
DRAWN BY	RLR
CONST CHECKED BY	
RECORD CHECKED BY	
ISSUE DATE	10-1-2021



PROJECT TITLE	TOWN OF TRIADELPHIA OHIO COUNTY, WEST VIRGINIA WATER SYSTEM IMPROVEMENTS	SCALE	NONE
DRAWING TITLE	TITLE SHEET	PROJECT NO.	TR20-1W
		DRAWING NO.	1-A

GENERAL NOTES

SITE RESTORATION

- CUT OR SCORE CONTINUOUSLY ALONG A STRAIGHT LINE ALL PAVED AREAS OVER THE LINE OF THE TRENCH WHICH ARE TO BE REMOVED.
- MAINTAIN ALL TEMPORARY SURFACE REPAIRS UNTIL PERMANENT SURFACE RESTORATION IS COMPLETED.
- RESTORE CONTOURS OF DISTURBED AREAS WITH STEEP SLOPES THAT ARE SUBJECT TO EROSION. STABILIZE, RESEED, AND COVER WITH SPECIFIED MATERIAL.
- PROMPTLY RESTORE ALL SURFACES AS SOON AS EXCAVATION AND TESTING WORK IS COMPLETED.

ESTIMATED QUANTITIES

- QUANTITIES INDICATED ON THE BID PROPOSAL ARE ESTIMATES. COMPUTATIONS OF QUANTITIES THAT ARE THE BASIS FOR PAYMENTS WILL BE MADE BY THE ENGINEER BASED ON DAILY FIELD RECORDS REPORTING THE ACTUAL UNITS INSTALLED.
- THE ABSENCE FROM THE BID PROPOSAL OF BID ITEMS SPECIFICALLY DESCRIBED IN THE SPECIFICATIONS OR SHOWN ON THE DRAWINGS SHALL BE INTERPRETED AS MEANING THAT THE COST OF SUCH WORK SHALL BE INCLUDED IN THE PRICES BID FOR RELATED ITEMS, PIPE, ETC., FOR WHICH PAY ITEMS AND QUANTITIES HAVE BEEN ESTABLISHED.

TRAFFIC CONTROL

- THE CONTRACTOR IS RESPONSIBLE FOR ALL TRAFFIC CONTROL. TRAFFIC CONTROL SHALL BE IN ACCORDANCE WITH THE "WEST VIRGINIA TRAFFIC CONTROL MANUAL" FOR STREET & HIGHWAY CONSTRUCTION AND MAINTENANCE OPERATIONS.
- STATE ROADWAYS SHALL NOT BE CLOSED DURING THIS PROJECT.
- MAINTAIN ACCESS FOR EMERGENCY VEHICLES AT ALL TIMES.
- MAINTAIN ACCESS TO PRIVATE PROPERTY WHEN AT ALL POSSIBLE.
- TO ENSURE SAFETY OF TRAVELING PUBLIC KEEP ALL PAVEMENTS FREE OF EXCAVATED MATERIAL AND DITCHES OPEN TO FLOW.

EASEMENTS

- ALL WORK OF THIS PROJECT SHALL BE PERFORMED WITHIN DESIGNATED WORK AREAS.
- CONSTRUCTION AND PERMANENT EASEMENTS HAVE BEEN OBTAINED WHERE WORK OF THE PROJECT IS ON PRIVATE PROPERTY.
- EASEMENT CENTERLINES ARE THE PIPE LOCATIONS AS SHOWN ON THE CONSTRUCTION DRAWINGS, OR REVISED PIPE LOCATIONS AS INDICATED BY ENGINEER'S FIELD STAKEOUT.
- UNLESS NOTED OTHERWISE CONSTRUCTION EASEMENT WIDTH IS GENERALLY 30 FEET (15 FEET EITHER SIDE OF THE PIPE). PERMANENT EASEMENT WIDTH IS 15 FEET (7 1/2 FEET EITHER SIDE OF THE PIPE).
- PROTECT AND PRESERVE IN AN APPROVED MANNER ALL TREES AND SHRUBBERY UNLESS DESIGNATED FOR REMOVAL.
- PROTECT AND PRESERVE ALL MONUMENTS, PROPERTY PINS, STAKES, ETC., OR BEAR THE COST TO RESET LOST OR DESTROYED MARKERS BY A REGISTERED OR LICENSED LAND SURVEYOR.

ENVIRONMENTAL CONCERNS

- RESTRICT EXCAVATION AND GRADING WORK TO PERIODS WITH DRY WORKING CONDITIONS.
- LIMIT AREAS OF EXPOSED SOIL TO IMMEDIATE WORK SITES.
- SWEEP ROADWAYS IN CONSTRUCTION AREA ON A DAILY BASIS.
- PROVIDE TEMPORARY EROSION CONTROL MEASURES AS NECESSARY TO PREVENT OR CONTAIN EROSION AND SEDIMENTATION. PROTECT STOCKPILES OF ERODABLE MATERIALS.
- CONTROL FLOWS FROM DEWATERING ACTIVITIES TO REMOVE SILT PRIOR TO RELEASE.
- PROVIDE SILT BARRIERS IN FRONT OF STORM DRAINS AND ALONG PRIVATE PROPERTY TO PREVENT SILT RUNOFF WHEN EXCAVATIONS HAVE COMMENCED.

EXISTING UTILITIES

- UNDERGROUND FACILITIES, STRUCTURES AND UTILITIES HAVE BEEN PLOTTED FROM AVAILABLE SURVEYS AND RECORDS AND THEREFORE THEIR LOCATIONS MUST BE CONSIDERED APPROXIMATE ONLY. THERE MAY BE OTHERS THE EXISTENCE OF WHICH WAS NOT KNOWN OR REVEALED TO US WHEN THESE DOCUMENTS WERE PREPARED.
- EXISTING UTILITIES SHALL CONTINUE WITH UNINTERRUPTED SERVICE DURING ENTIRE CONSTRUCTION PERIOD. PROTECT ACTIVE UTILITY SERVICES UNCOVERED BY EXCAVATION.
- UNIDENTIFIED PRIVATE UTILITIES EXIST THROUGHOUT THE PROJECT. CONTACT PROPERTY OWNERS TO LOCATE AND PROVIDE TIME TO MARK BURIED UTILITIES.
- CONTRACTOR IS RESPONSIBLE FOR REPAIRS TO EXISTING UTILITIES DISTURBED BY CONSTRUCTION ACTIVITIES. REPAIRS SHALL BE IN ACCORDANCE WITH UTILITY OWNER'S STANDARDS.
- BEFORE STARTING EXCAVATION, ESTABLISH THE LOCATION AND EXTENT OF UNDERGROUND UTILITIES OCCURRING IN THE WORK AREA. CALL BEFORE YOU DIG UNDERGROUND -- MISS UTILITY OF WEST VIRGINIA 1-800-245-4848.
- THE RISK OF LOCATING AND PROTECTING ALL UTILITIES RESTS WITH THE CONTRACTOR AND APPROPRIATE ALLOWANCE SHALL BE MADE WHEN BIDDING THE WORK TO REFLECT THIS FACTOR.
- THE FOLLOWING ARE THE UTILITY OWNERS IN THE PROJECT AREA :

TELEPHONE

FRONTIER
1-800-921-8104

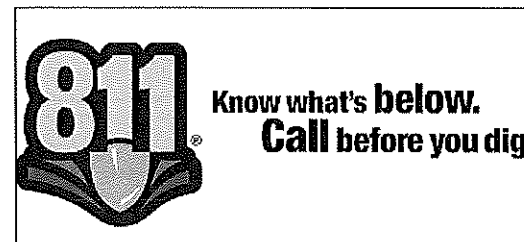
GAS

MOUNTAINEER GAS
501 STOCKTON STREET
CHARLESTON, WV 25314

WATER & SEWER

TOWN OF TRIADDELPHIA
4453 NATIONAL ROAD
(PO BOX 177)
TRIADDELPHIA, WV 26059
(304) 547-5000

OHIO COUNTY PSD
5383 NATIONAL ROAD
TRIADDELPHIA, WV 26059
(304) 547-5133



MISCELLANEOUS

- WATERLINES GO AROUND CULVERTS UNLESS OTHERWISE STATED.
- THE CONSTRUCTION PLANS AND SPECIFICATIONS DEFINE A MINIMUM QUALITY OF MATERIALS AND EQUIPMENT TO BE INCORPORATED INTO THIS PROJECT. GENERALLY, THIS MEANS THAT ALL BRASS GOODS, DUCTILE IRON FITTINGS AND METAL CASTINGS ARE TO BE FROM REPUTABLE MANUFACTURERS AND MADE IN THE USA. THE ENGINEER OR OWNER RESERVES THE RIGHT TO REJECT ANY AND ALL MATERIAL AND EQUIPMENT FROM FOREIGN MANUFACTURERS DEEMED TO BE OF INFERIOR QUALITY.

WV DOH ROW WORK

- ON THE DAY FOLLOWING PIPE PLACEMENT AND TRENCH BACKFILLING, THE DISTURBED AREA WILL BE GRADED TO FINAL CONTOURS AND APPROPRIATE TEMPORARY EROSION AND SEDIMENT POLLUTION CONTROL MEASURES/FACILITIES WILL BE INSTALLED. SEEDING AND MULCHING OF ALL DISTURBED AREAS WILL BE DONE AT THE END OF EACH WEEK

PIPE PRESSURE TESTING

PIPE CLASS	TEST PRESSURE
DUCTILE IRON	1 1/2 TIMES THE WORKING PRESSURE (150psi MIN)
CLASS 200 (DR 14)	325psi
CLASS 150 (DR 18)	250psi
CLASS 250 (SDR 17)	250psi
CLASS 200 (SDR 21)	200psi
CLASS 160 (SDR 26)	160psi

SIZE	MAXIMUM TESTING LENGTH	MAXIMUM ALLOWABLE LEAKAGE
12"	3000ft	0.95gph/1000ft
10"	4000ft	0.79gph/1000ft
8"	6000ft	0.63gph/1000ft
6"	10,000ft	0.47gph/1000ft
4"	10,000ft	0.32gph/1000ft
3"	10,000ft	0.24gph/1000ft
2"	10,000ft	0.16gph/1000ft

- MAXIMUM LENGTH OF TEST SHALL BE AS LISTED ABOVE
- ALL BRANCH LINES TO BE TESTED SEPARATELY FROM MAIN LINE
- PIPES OF DIFFERENT SIZES TO BE TESTED SEPARATELY
- PIPES OF DIFFERENT CLASSES TO BE TESTED SEPARATELY
- MINIMUM LENGTH OF TEST SHALL BE BETWEEN VALVES

No.	DATE	DESCRIPTION	BY
1	10-20-22	DRAWING CLEAR	SP

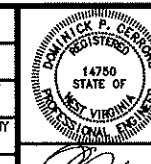
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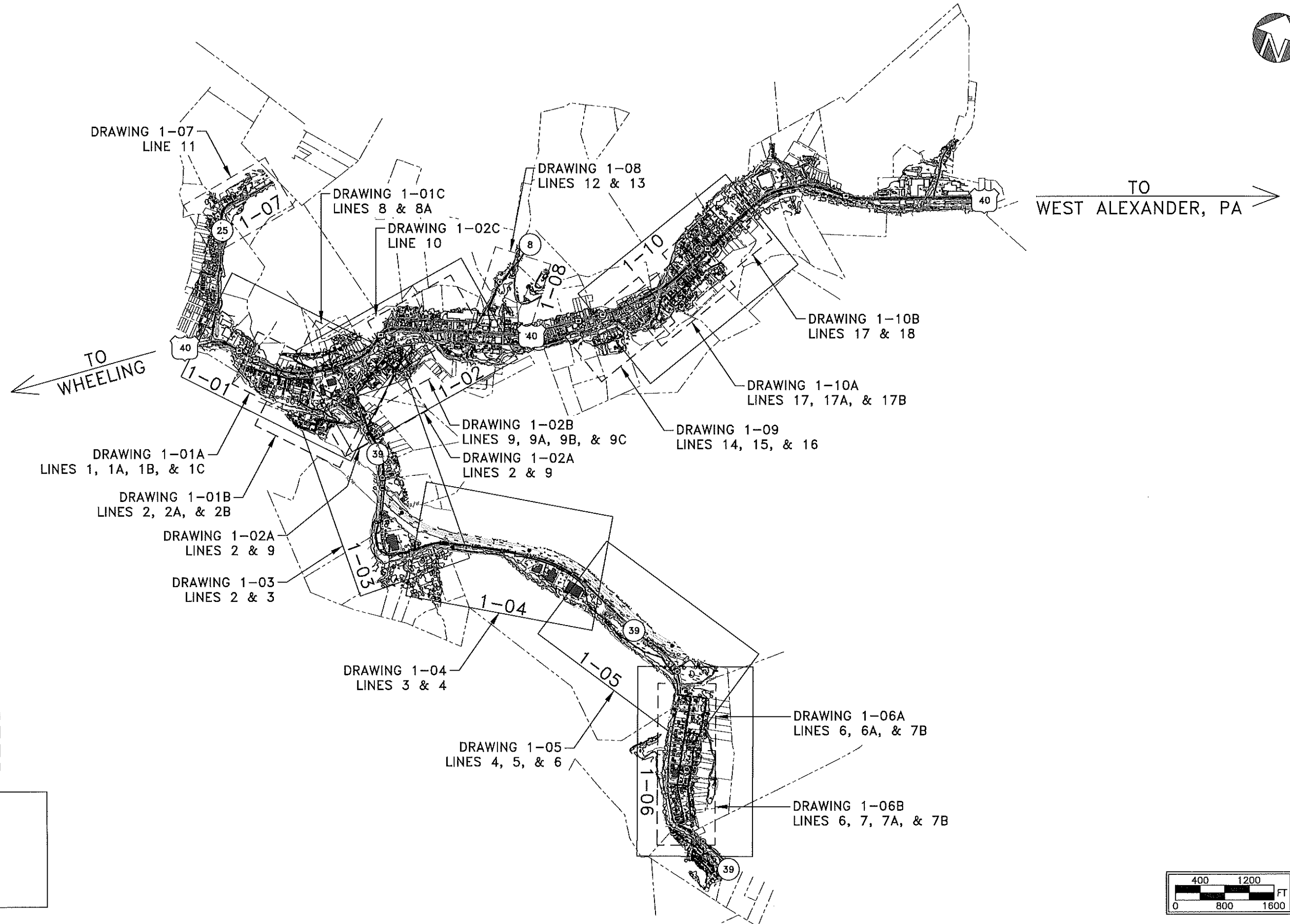


CERRONE ASSOCIATES, INC.
CONSULTING ENGINEERS • WATER & WASTEWATER SYSTEMS
97-14TH STREET, WHEELING, WV 26003-2497

FIELD LAYOUT	-
DRAWN BY	RJR
CONST CHECKED BY	-
RECORD CHECKED BY	-
ISSUE DATE	10-1-2021

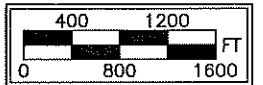


PROJECT TITLE	TOWN OF TRIADDELPHIA OHIO COUNTY, WEST VIRGINIA WATER SYSTEM IMPROVEMENTS	SCALE	N/A
DRAWING TITLE	GENERAL NOTES	PROJECT NO.	TR20-1W
		DRAWING NO.	1-B



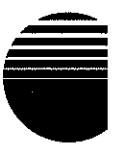
DRAWING CUT
SCALE
1"=50'

DRAWING CUT
SCALE
1"=100'



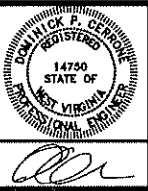
NO.	DATE	REVISION	BY
2	09-2025	UPD	RR
1	10-2022	ISSUE	RR

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CERRONE ASSOCIATES, INC.
CONSULTING ENGINEERS • WATER & WASTEWATER SYSTEMS
97-14TH STREET, WHEELING, WV 26003-2497

FIELD LAYOUT
DRAWN BY RLR
CONST CHECKED BY
RECORD CHECKED BY
ISSUE DATE 10-1-2021



TOWN OF TRIADDELPHIA
OHIO COUNTY, WEST VIRGINIA
WATER SYSTEM IMPROVEMENTS

DRAWING TITLE
INDEX MAP

SCALE GRAPHIC
PROJECT NO. TR20-1W
DRAWING NO. **1-INDEX**

CONSTRUCTION SEQUENCE
MIDDLE CREEK LINES

1. INSTALL NEW VALVE ON EXISTING 8" WATER LINE, SHOWN ON DRAWING 1-01A. MAKE SURE VALVE IS ON SOUTH SIDE OF 2" SERVICE TO CUSTOMER #1-01A-48.
2. INSTALL NEW VALVE & FITTINGS (FOR TEMPORARY TIE-IN) ON EXISTING 8" WATER LINE, SHOWN ON DRAWING 1-01B, DETAILED ON PD1-03 (DETAIL 1B-1).
3. MAKE TIE-IN TO EXISTING 10" WATER LINE ON LINE 1 DRAWING 1-01A (DETAIL 1A-2, SHOWN ON PD1-03). THEN, CONTINUE INSTALLATION OF NEW 8" MAIN LINES 1 & 2.
4. COMPLETE INSTALLATION OF 8" MAIN LINE TO THE INTERSECTION OF LINES 2 & 2A, DRAWING 1-01B.
5. PRESSURE TEST & DISINFECTED 8" MAIN LINE TO THIS POINT.
6. THE TEMPORARY CONNECTION BETWEEN THE NEW 8" LINE 2 AND THE EXISTING 8" WATER LINE CAN THEN BE MADE AS DETAIL 1B-1 SHOWS ON DRAWING PD1-03.
7. INSTALLATION OF NEW LINES CAN CONTINUE AT THIS POINT.
8. ONCE BRANCH LINES 1A, 1B, & 1C (ON DRAWING 1-01A) HAVE BEEN INSTALLED, PRESSURE TESTED, DISINFECTED, & ALL CUSTOMER RECONNECTS ARE COMPLETED ALONG RENTCHLER AVENUE, CRAGG AVENUE, DUNBAR AVENUE, ROMINE STREET, & AMASA AVENUE. THE 2" CUT & CAP NEAR THE MAIN TIE IN OF LINE 1 (DETAIL 1A-2, SHOWN ON PD1-03) CAN BE COMPLETED.
9. COMPLETE THE INSTALLATION OF THE NEW SERVICE LINE FOR CUSTOMER #1-01C-05 & RECONNECT CUSTOMER.
10. THE RECONNECTION OF CUSTOMER #1-01C-06 (WVDOH OFFICES) CAN NOW TAKE PLACE, ALONG WITH THE FIRE HYDRANT INSTALL, CUT & CAPS, & EXISTING FIRE HYDRANT REMOVAL AS SHOWN ON DETAIL 1C-1 ON PD1-04.
11. INSTALL ALL MAIN LINES ALONG MIDDLE CREEK ROAD, INCLUDING THE CONTINUATION OF LINE 2 THROUGH LINE 7B. LINES CAN BE PRESSURE TESTED & DISINFECTED AS THE INSTALLATION IS COMPLETED. REFER TO CONSTRUCTION SEQUENCE ON DRAWING 1-06 FOR WORK IN MILLERS ADDITION (PART OF LINE 5 THROUGH LINE 7B).
12. TIE-INS & RECONNECTS CAN BE COMPLETED AFTER LINES ARE PRESSURE TESTED & DISINFECTED, THE 6" TIE-IN FOR THE ELEMENTARY SCHOOL (CUSTOMER #1-03-17) CANNOT BE COMPLETED UNTIL ALL CUSTOMER RECONNECTS & TIE-INS TO THE EAST OF THE SCHOOL ARE COMPLETED.
13. COMPLETE ALL WORK ALONG MIDDLE CREEK INCLUDING LINES 2 & 2A (FERRELL AVENUE) & LINES 9, 9A, & 9B (CHURCH STREET).
14. REMOVE TEMPORARY CONNECTION MADE AT THE INTERSECTION OF LINES 2 & 2A SEE DETAIL 1B-1.1 ON DRAWING PD1-03.

CONSTRUCTION SEQUENCE
SIMS NESBITT AREA

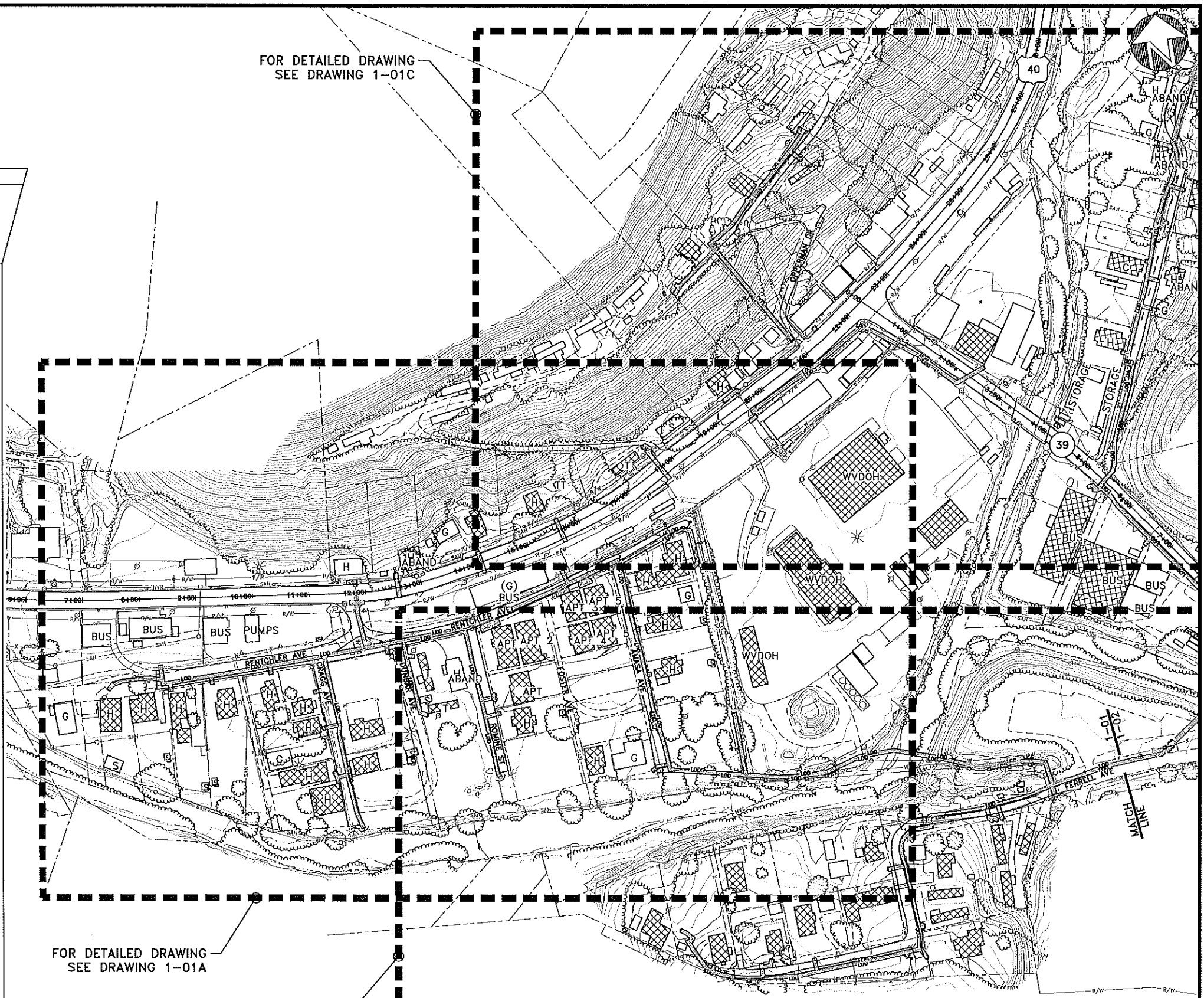
1. MAKE HOT TAP TIE-IN ON EXISTING 10" WATER LINE, SHOWN ON DRAWING 1-10A & DETAIL 10A-1 ON PD1-08.
2. INSTALL ALL OF LINES 17, 17A, & 17B. SHOWN ON DRAWINGS 1-10A & 1-10B.
3. PRESSURE TEST & DISINFECT ALL OF LINES 17, 17A, & 17B.
4. MAKE TIE-IN ON EXISTING 8" WATER LINE, SHOWN ON DRAWING 1-10B & DETAIL 10B-1 ON PD1-08. RECONNECT ALL CUSTOMERS TO NEW LINES.
5. CUT & CAP EXISTING 2" WATER LINE SHOWN ON DRAWING 1-10A.
6. CUT & CAP EXISTING 2" WATER LINE SHOWN ON DRAWING 1-09, & INSTALL 2" REPLACEMENT LINE 15.
7. REMOVE EXISTING FLUSH HYDRANT & CAP EXISTING 2" WATER LINE AS SHOWN ON DRAWING 1-10B.

		THIS DRAWING REPRESENTS THE DESIGN AND ENGINEERING EFFORTS OF CERRONE ASSOCIATES, INC.		 CERRONE ASSOCIATES, INC. CONSULTING ENGINEERS • WATER & WASTEWATER SYSTEMS 97-14TH STREET, WHEELING, WV 26003-2497		FIELD LAYOUT		PROJECT TITLE	TOWN OF TRIADDELPHIA OHIO COUNTY, WEST VIRGINIA WATER SYSTEM IMPROVEMENTS	SCALE	N/A
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No.	DATE	DESCRIPTION	BY			CONST CHECKED BY				DRAWING NO.	1-CS
1	11-21-22	DRAWING/SEAL P	JLC			RECORD CHECKED BY					
						ISSUE DATE	10-1-2021				

FOR DETAILED DRAWING
SEE DRAWING 1-01C

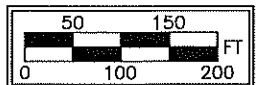
CUSTOMER LIST DRAWING 1-01A

CUSTOMER NUMBER	CUSTOMER NAME	DECLINATION		NOTES
		SIGNED	PRESS. REG.	
1-06A-01	EXISTING CUSTOMER			RECONNECT
1-06A-02	EXISTING CUSTOMER			RECONNECT
1-06A-03	EXISTING CUSTOMER			RECONNECT
1-06A-04	EXISTING CUSTOMER			RECONNECT
1-06A-05	EXISTING CUSTOMER			RECONNECT
1-06A-06	EXISTING CUSTOMER			RECONNECT
1-06A-07	EXISTING CUSTOMER			RECONNECT
1-06A-08	EXISTING CUSTOMER			RECONNECT
1-06A-09	EXISTING CUSTOMER			RECONNECT
1-06A-10	EXISTING CUSTOMER			RECONNECT
1-06A-11	EXISTING CUSTOMER			RECONNECT
1-06A-12	EXISTING CUSTOMER (APT COMPLEX 1 & 2)			RECONNECT (SEE DETAIL SV2-1, ON DWG. PD1-09)
1-06A-13	EXISTING CUSTOMER (APT COMPLEX 1 & 2)			RECONNECT (SEE DETAIL SV2-1, ON DWG. PD1-09)
1-06A-14	EXISTING CUSTOMER (APT COMPLEX 1 & 2)			RECONNECT (SEE DETAIL SV2-1, ON DWG. PD1-09)
1-06A-15	EXISTING CUSTOMER (APT COMPLEX 1 & 2)			RECONNECT (SEE DETAIL SV2-1, ON DWG. PD1-09)
1-06A-16	EXISTING CUSTOMER (APT COMPLEX 1 & 2)			RECONNECT (SEE DETAIL SV2-1, ON DWG. PD1-09)
1-06A-17	EXISTING CUSTOMER (APT COMPLEX 1 & 2)			RECONNECT (SEE DETAIL SV2-1, ON DWG. PD1-09)
1-06A-18	EXISTING CUSTOMER (APT COMPLEX 1 & 2)			RECONNECT (SEE DETAIL SV2-1, ON DWG. PD1-09)
1-06A-19	EXISTING CUSTOMER (APT COMPLEX 1 & 2)			RECONNECT (SEE DETAIL SV2-1, ON DWG. PD1-09)
1-06A-20	EXISTING CUSTOMER (APT COMPLEX 1 & 2)			RECONNECT (SEE DETAIL SV2-1, ON DWG. PD1-09)
1-06A-21	EXISTING CUSTOMER (APT COMPLEX 1 & 2)			RECONNECT (SEE DETAIL SV2-1, ON DWG. PD1-09)
1-06A-22	EXISTING CUSTOMER (APT COMPLEX 1 & 2)			RECONNECT (SEE DETAIL SV2-1, ON DWG. PD1-09)
1-06A-23	EXISTING CUSTOMER (APT COMPLEX 1 & 2)			RECONNECT (SEE DETAIL SV2-1, ON DWG. PD1-09)
1-06A-24	EXISTING CUSTOMER			RECONNECT
1-06A-25	EXISTING CUSTOMER			RECONNECT
1-06A-26	EXISTING CUSTOMER			RECONNECT
1-06A-27	EXISTING CUSTOMER (APT COMPLEX 3 & 4)			RECONNECT (SEE DETAIL SV2-1, ON DWG. PD1-09)
1-06A-28	EXISTING CUSTOMER (APT COMPLEX 3 & 4)			RECONNECT (SEE DETAIL SV2-1, ON DWG. PD1-09)
1-06A-29	EXISTING CUSTOMER (APT COMPLEX 3 & 4)			RECONNECT (SEE DETAIL SV2-1, ON DWG. PD1-09)
1-06A-30	EXISTING CUSTOMER (APT COMPLEX 3 & 4)			RECONNECT (SEE DETAIL SV2-1, ON DWG. PD1-09)
1-06A-31	EXISTING CUSTOMER (APT COMPLEX 3 & 4)			RECONNECT (SEE DETAIL SV2-1, ON DWG. PD1-09)
1-06A-32	EXISTING CUSTOMER (APT COMPLEX 3 & 4)			RECONNECT (SEE DETAIL SV2-1, ON DWG. PD1-09)
1-06A-33	EXISTING CUSTOMER (APT COMPLEX 3 & 4)			RECONNECT (SEE DETAIL SV2-1, ON DWG. PD1-09)
1-06A-34	EXISTING CUSTOMER (APT COMPLEX 3 & 4)			RECONNECT (SEE DETAIL SV2-1, ON DWG. PD1-09)
1-06A-35	EXISTING CUSTOMER (APT COMPLEX 5 & 6)			RECONNECT (SEE DETAIL SV2-1, ON DWG. PD1-09)
1-06A-36	EXISTING CUSTOMER (APT COMPLEX 5 & 6)			RECONNECT (SEE DETAIL SV2-1, ON DWG. PD1-09)
1-06A-37	EXISTING CUSTOMER (APT COMPLEX 5 & 6)			RECONNECT (SEE DETAIL SV2-1, ON DWG. PD1-09)
1-06A-38	EXISTING CUSTOMER (APT COMPLEX 5 & 6)			RECONNECT (SEE DETAIL SV2-1, ON DWG. PD1-09)
1-06A-39	EXISTING CUSTOMER (APT COMPLEX 5 & 6)			RECONNECT (SEE DETAIL SV2-1, ON DWG. PD1-09)
1-06A-40	EXISTING CUSTOMER (APT COMPLEX 5 & 6)			RECONNECT (SEE DETAIL SV2-1, ON DWG. PD1-09)
1-06A-41	EXISTING CUSTOMER (APT COMPLEX 5 & 6)			RECONNECT (SEE DETAIL SV2-1, ON DWG. PD1-09)
1-06A-42	EXISTING CUSTOMER (APT COMPLEX 5 & 6)			RECONNECT (SEE DETAIL SV2-1, ON DWG. PD1-09)
1-06A-43	EXISTING CUSTOMER			RECONNECT
1-06A-44	EXISTING CUSTOMER			RECONNECT
1-06A-45	EXISTING CUSTOMER			RECONNECT
1-06A-46	EXISTING CUSTOMER			RECONNECT
1-06A-47	EXISTING CUSTOMER			RECONNECT
1-06A-48	EXISTING CUSTOMER			RECONNECT (WVDOH - 2" METER)
1-06A-49	EXISTING CUSTOMER			RECONNECT
1-06A-50	EXISTING CUSTOMER			RECONNECT
1-06A-51	EXISTING CUSTOMER			RECONNECT
1-06A-52	EXISTING CUSTOMER			RECONNECT
1-06A-53	EXISTING CUSTOMER			RECONNECT
1-06A-54	EXISTING CUSTOMER			RECONNECT
1-06A-55	EXISTING CUSTOMER			RECONNECT
1-06A-56	EXISTING CUSTOMER			RECONNECT
1-06A-57	EXISTING CUSTOMER			RECONNECT



FOR DETAILED DRAWING
SEE DRAWING 1-01A

FOR DETAILED DRAWING
SEE DRAWING 1-01B



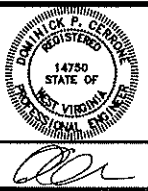
NO.	DATE	REVISION	BY
2	04-20-22	REVISED	RLR
1	03-23-22	PROPOSED	RLR

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CERRONE ASSOCIATES, INC.
CONSULTING ENGINEERS • WATER & WASTEWATER SYSTEMS
97-14TH STREET, WHEELING, WV 26003-2497

FIELD LAYOUT
DRAWN BY RLR
CONST. CHECKED BY
RECORD CHECKED BY
ISSUE DATE 10-1-2021



TOWN OF TRIADELPHIA
OHIO COUNTY, WEST VIRGINIA
WATER SYSTEM IMPROVEMENTS
DRAWING TITLE: RENTCHLER AVE, WAGNER'S ADDITION, & OPPERMAN DR - OVERALL CUSTOMER LIST FOR 1-01A

SCALE: GRAPHIC
PROJECT NO. TR20-1W
DRAWING NO. 1-01

LIST COORDINATES ~ CROSS COUNTRY				
PT.	NORTHING	EASTING	ELEV.	DESCRIPTION
COORDINATES LIST				
2001	565545.07350	1650406.27120	704.500	SPIKE NAIL (C/L WATER LINE)
2003	565534.31650	1650451.26800	703.641	SPIKE NAIL (C/L WATER LINE)
2004	565534.54240	1650480.27650	703.271	PROPERTY PIN
2005	565531.42200	1650483.25930	708.600	SPIKE NAIL (C/L WATER LINE)

LINE 1
 1260 LF 8" PVC CL150 (DR18)
 140 LF 8" RESTRAINED JOINT PVC
 260 LF DIRECTIONAL DRILL - HDPE
 CASING W/270 LF HDPE CARRIER
 PIPE (SIZED ACCORDINGLY)

LINE 1A
 400 LF 6" PVC
 CL150 (DR18)

LOCATE & TIE-INTO EXISTING 10" W/L
 SEE DETAIL 1A-2, ON DWG. PD1-03
 REPLACE 8" & 10" GATE VALVE

LOCATE, CUT & CAP EXISTING 2" W/L
 SEE DETAIL 1A-2, ON DWG. PD1-03.
 REFER TO NOTE ON PD1-03 AS TO
 SEQUENCE WORK MUST BE DONE.

REPLACE 8" GATE
 VALVE. SEE
 DETAIL 1A-1, ON
 DWG. PD1-03

COORDS:
 40°02'53.65"N
 80°38'18.91"W

CUSTOMER NOTE:
 1. INSTALL CURB VALVE & BOX @
 CUSTOMER TAP TO 10" LINE. FOR
 CUSTOMERS #1-01A-49, 50, 51, &
 52/53.
 2. SERVICE LINE UNDER ROUTE 40 TO BE
 COPPER (AS PER OWNER REQUEST).
 THIS APPLIES TO CUSTOMERS
 #1-01A-49, 50, 51, & 52/53.

LOCATE, CUT & CAP EXISTING 8" W/L (2 PLACES)
 SEE DETAIL 1A-1, ON DWG. PD1-03
 ONCE CUSTOMERS #1-01A-49, 50, 51, 52, & 53
 HAVE BEEN RECONNECTED TO 10" LINE
 & CUSTOMER 1-01-54 HAS BEEN RECONNECTED
 ON EASTERN SIDE OF CUT & CAP

W/L 2' INSIDE
 EDGE OF ROAD
 W/270' TOWN
 ROAD ASPHALT
 REPLACEMENT

65' TOWN ROAD ASPHALT
 REPLACEMENT

380' TOWN ROAD
 ASPHALT
 REPLACEMENT

W/L CROSSING
 UNDER
 STORM SEWER

NEW W/L 3' FROM
 EXISTING 2" W/L
 W/460' TOWN ROAD
 ASPHALT REPLACEMENT

OHIO
 TOWN OF TRIADDELPHIA
 TW2
 96

OHIO
 TOWN OF TRIADDELPHIA
 TW2
 40

OHIO
 TOWN OF TRIADDELPHIA
 TW2
 44

OHIO
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OHIO
 TOWN OF TRIADDELPHIA
 TW2
 43

NOTES:
 *WM/(2)WM ARE TO SHARE A 1" TAP &
 SERVICE LINE, THEN WYE TO TWO 3/4"
 SERVICE LINES AT THE METER SETTINGS.

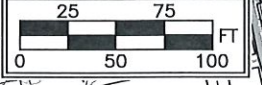
10' PVC CASING ON SERVICE LINES
 CROSSING STORM SEWER
 (TYP 3 CROSSINGS ON CRAGG AVE)

LINE 1B
 320 LF 2" PVC
 CL250 (SDR17)

WVDOH NOTES:
 1. ANY VALVE REPLACEMENTS IN
 PAVEMENT OF WVDOH ROADS, TYPE A
 TRENCH REPAIR TO BE USED. REFER TO
 DETAIL G-017B ON DWG. SD1-04.
 2. WATER LINE MARKERS TO BE PLACED
 ON EACH SIDE OF WATER MAIN
 CROSSINGS OF WVDOH ROADS.

LINE 1C
 280 LF 2" PVC
 CL250 (SDR17)

NOTE: INSTALL SILT FENCE
 AT ALL CULVERT INLETS.
 REFER TO STANDARD DETAILS.



NO.	DATE	REVISION	BY
5	08-2023	ADDED COMPOST FILTER SOCK	RJR
4	04-2023	SHIFTED LINE 1C TO EDGE OF ROAD & ADDED NOTE, AS PER TOWN REQUEST	RJR
3	08-2023	ADDED VALVE REPLACEMENTS TO PD1-03	RJR
2	01-2023	ADDED COORDINATE NOTES & WVDOH NOTES AS PER WVDOH REQUEST	RJR
1	10-2022	DRAWING STARTED	RJR

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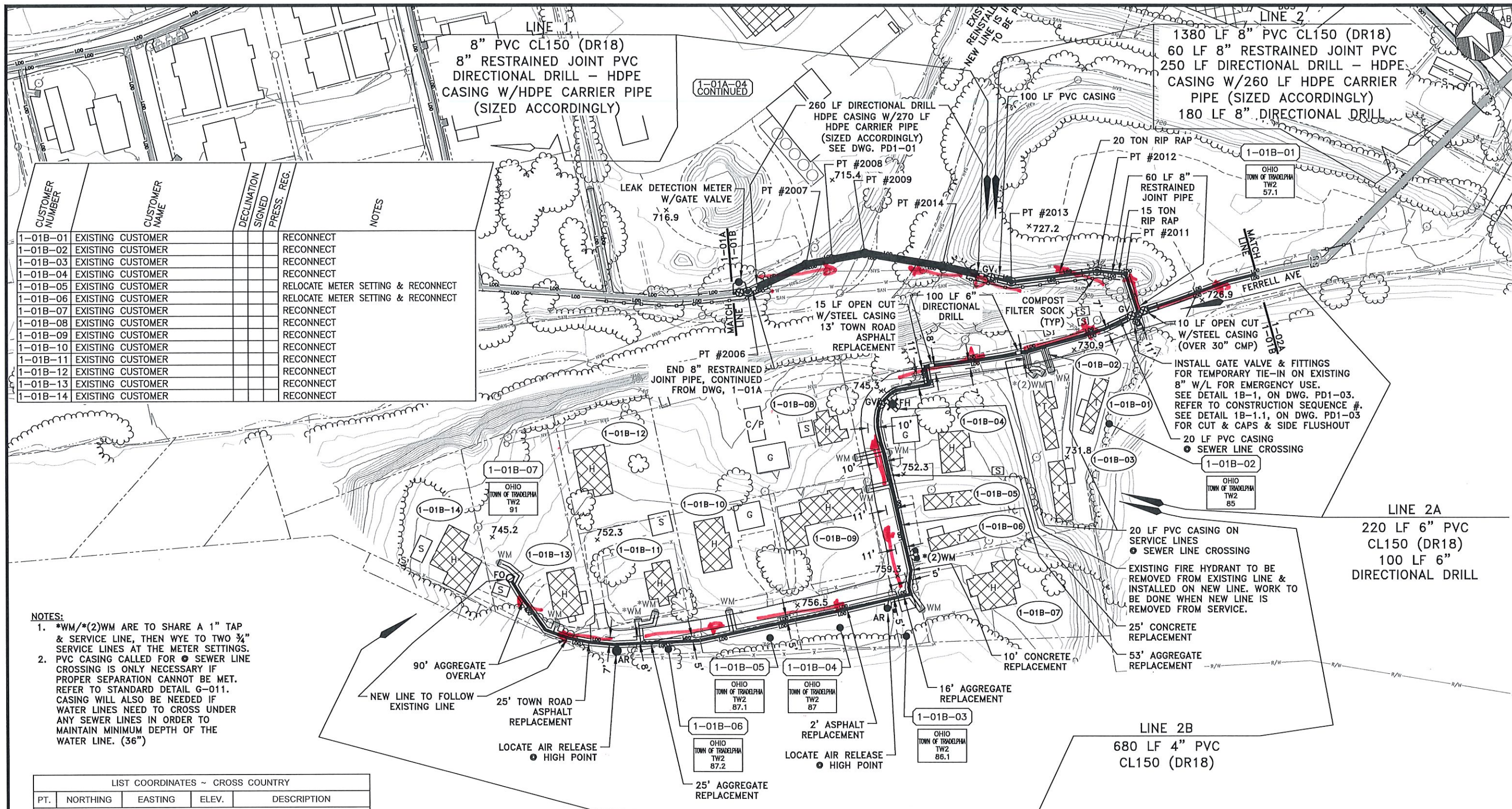
CERRONE ASSOCIATES, INC.
 CONSULTING ENGINEERS • WATER & WASTEWATER SYSTEMS
 97-14TH STREET, WHEELING, WV 26003-2497

FIELD LAYOUT
 RR, RB
 DRAWN BY
 RLR
 CONST CHECKED BY
 RECORD CHECKED BY
 ISSUE DATE



DRAWING TITLE
 TOWN OF TRIADDELPHIA
 OHIO COUNTY, WEST VIRGINIA
 WATER SYSTEM IMPROVEMENTS
 LINES 1, 1A, 1B, & 1C
 RENTCHLER AVE, CRAGG AVE, ROMINE ST,
 & AMASA AVE

SCALE
 GRAPHIC
 PROJECT NO.
 TR20-1W
 DRAWING NO.
 1-01A

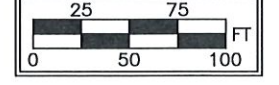


CUSTOMER NUMBER	CUSTOMER NAME	DECLINATION SIGNED	PRESS. REG.	NOTES
1-01B-01	EXISTING CUSTOMER			RECONNECT
1-01B-02	EXISTING CUSTOMER			RECONNECT
1-01B-03	EXISTING CUSTOMER			RECONNECT
1-01B-04	EXISTING CUSTOMER			RECONNECT
1-01B-05	EXISTING CUSTOMER			RELOCATE METER SETTING & RECONNECT
1-01B-06	EXISTING CUSTOMER			RELOCATE METER SETTING & RECONNECT
1-01B-07	EXISTING CUSTOMER			RECONNECT
1-01B-08	EXISTING CUSTOMER			RECONNECT
1-01B-09	EXISTING CUSTOMER			RECONNECT
1-01B-10	EXISTING CUSTOMER			RECONNECT
1-01B-11	EXISTING CUSTOMER			RECONNECT
1-01B-12	EXISTING CUSTOMER			RECONNECT
1-01B-13	EXISTING CUSTOMER			RECONNECT
1-01B-14	EXISTING CUSTOMER			RECONNECT

- NOTES:**
- *WM/(2)WM ARE TO SHARE A 1" TAP & SERVICE LINE, THEN WYE TO TWO 3/4" SERVICE LINES AT THE METER SETTINGS.
 - PVC CASING CALLED FOR @ SEWER LINE CROSSING IS ONLY NECESSARY IF PROPER SEPARATION CANNOT BE MET. REFER TO STANDARD DETAIL G-011. CASING WILL ALSO BE NEEDED IF WATER LINES NEED TO CROSS UNDER ANY SEWER LINES IN ORDER TO MAINTAIN MINIMUM DEPTH OF THE WATER LINE. (36")

LIST COORDINATES ~ CROSS COUNTRY				
PT.	NORTHING	EASTING	ELEV.	DESCRIPTION
COORDINATES LIST				
2006	565530.43840	1650535.13860	711.892	SPIKE NAIL (C/L WATER LINE)
2007	565554.51390	1650598.13010	714.019	SPIKE NAIL (C/L WATER LINE)
2008	565555.03470	1650625.64160	703.553	SPIKE NAIL (C/L WATER LINE)
2009	565553.59660	1650659.04120	704.388	SPIKE NAIL (C/L WATER LINE)
2011	565495.53090	1650922.76170	708.648	SPIKE NAIL (C/L WATER LINE)
2012	565502.37940	1650894.06750	726.442	SPIKE NAIL (C/L WATER LINE)
2013	565503.51310	1650805.11400	719.666	SPIKE NAIL (C/L WATER LINE)
2014	565529.21320	1650737.05430	713.399	SPIKE NAIL (C/L WATER LINE)

NOTE: INSTALL SILT FENCE AT ALL CULVERT INLETS. REFER TO STANDARD DETAILS.



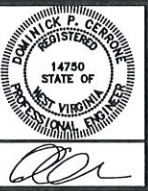
NO.	DATE	REVISION	BY
2	08-2022	ADD COMPOST FILTER SOCK	RR
1	10-2022	DRAWING COMPLETE	RR

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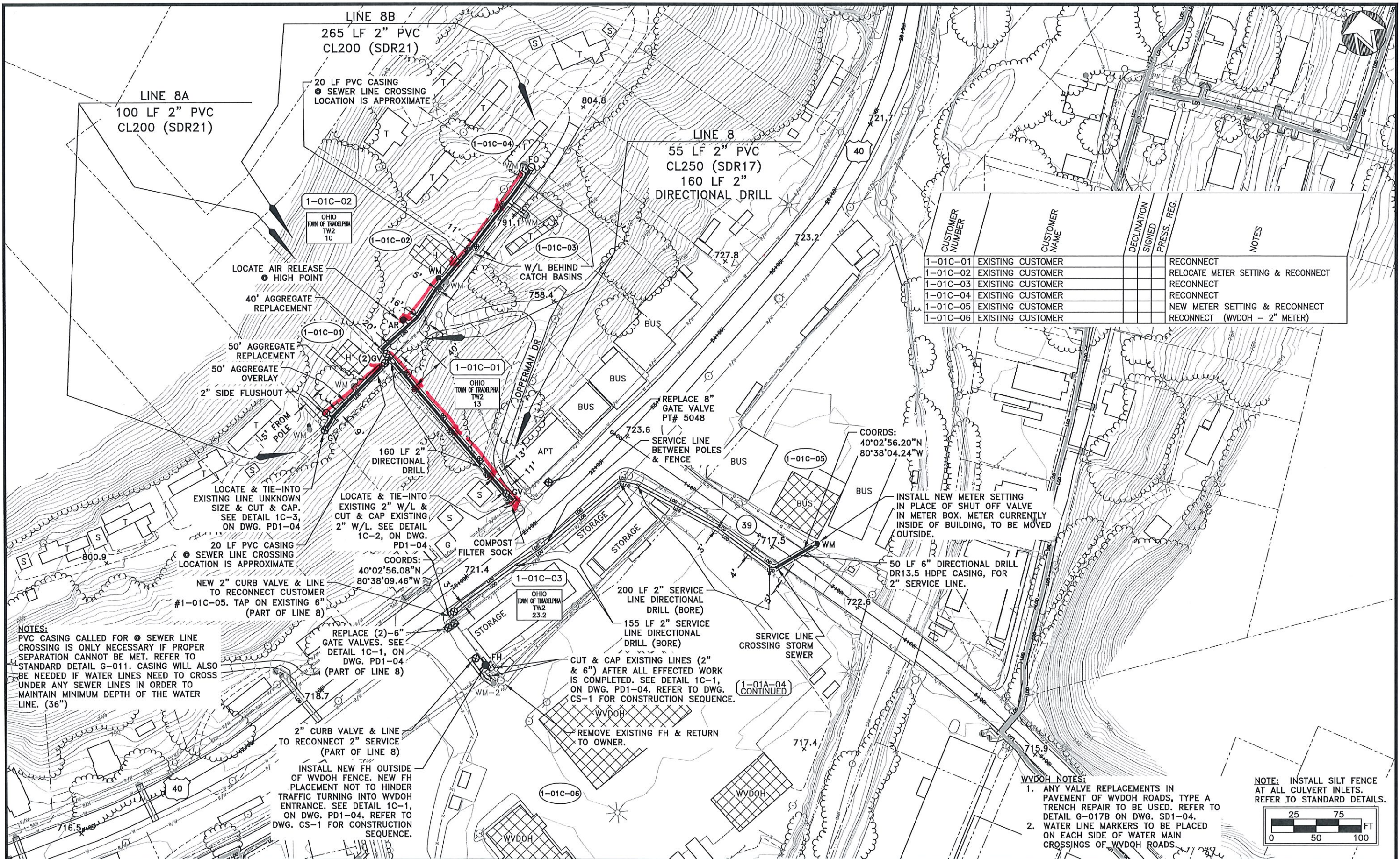
CERRONE ASSOCIATES, INC.
CONSULTING ENGINEERS • WATER & WASTEWATER SYSTEMS
97-14TH STREET, WHEELING, WV 26003-2497

FIELD LAYOUT
RR, RB, HH
DRAWN BY
RLR
CONST CHECKED BY
RECORD CHECKED BY
ISSUE DATE
10-1-2021



TOWN OF TRIADELPHIA
OHIO COUNTY, WEST VIRGINIA
WATER SYSTEM IMPROVEMENTS
DRAWING TITLE
LINES 2, 2A, & 2B
FERRELL AVE (WAGNER'S ADDITION)

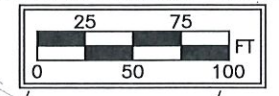
SCALE
GRAPHIC
PROJECT NO.
TR20-1W
DRAWING NO.
1-01B



CUSTOMER NUMBER	CUSTOMER NAME	DECLINATION	SIGNED	PRESS. REG.	NOTES
1-01C-01	EXISTING CUSTOMER				RECONNECT
1-01C-02	EXISTING CUSTOMER				RELOCATE METER SETTING & RECONNECT
1-01C-03	EXISTING CUSTOMER				RECONNECT
1-01C-04	EXISTING CUSTOMER				RECONNECT
1-01C-05	EXISTING CUSTOMER				NEW METER SETTING & RECONNECT
1-01C-06	EXISTING CUSTOMER				RECONNECT (WVDOH - 2" METER)

NOTES:
 PVC CASING CALLED FOR @ SEWER LINE CROSSING IS ONLY NECESSARY IF PROPER SEPARATION CANNOT BE MET. REFER TO STANDARD DETAIL G-011. CASING WILL ALSO BE NEEDED IF WATER LINES NEED TO CROSS UNDER ANY SEWER LINES IN ORDER TO MAINTAIN MINIMUM DEPTH OF THE WATER LINE. (36")

WVDOH NOTES:
 1. ANY VALVE REPLACEMENTS IN PAVEMENT OF WVDOH ROADS, TYPE A TRENCH REPAIR TO BE USED. REFER TO DETAIL G-017B ON DWG. SD1-04.
 2. WATER LINE MARKERS TO BE PLACED ON EACH SIDE OF WATER MAIN CROSSINGS OF WVDOH ROADS.



NO.	DATE	REVISION	BY
4	08-2025	ADDED COMPOST FILTER SOCK	RJR
3	02-2025	ADDED 6" CASING DRILL TO SERVICE FOR CUST #1-01C-05, AS PER WVDOH REQUEST	RJR
2	01-2025	ADDED COORDINATE NOTES & WVDOH NOTES AS PER WVDOH REQUEST	RJR
1	10-2022	DRAWING CREATED	RJR

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CERRONE ASSOCIATES, INC.
 CONSULTING ENGINEERS • WATER & WASTEWATER SYSTEMS
 97-14TH STREET, WHEELING, WV 26003-2497

FIELD LAYOUT
 RR, RB
 DRAWN BY
 RLR
 CONST CHECKED BY
 RECORD CHECKED BY
 ISSUE DATE
 10-1-2021

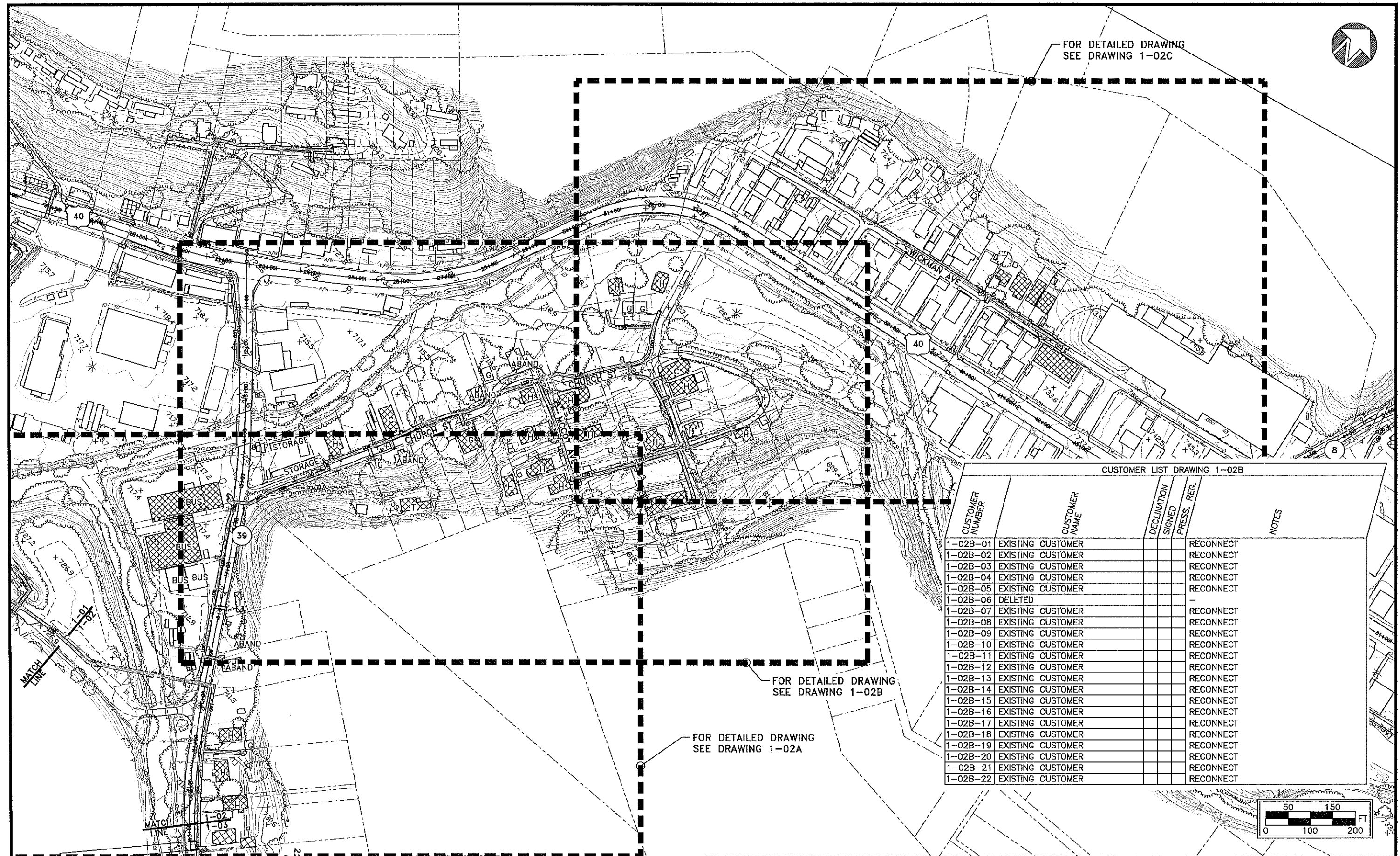


TOWN OF TRIADDELPHIA
 OHIO COUNTY, WEST VIRGINIA
WATER SYSTEM IMPROVEMENTS
 DRAWING TITLE
LINES 8 & 8A - OPPERMAN DR
SERVICE RELOCATE - MIDDLE CREEK RD

SCALE
 GRAPHIC
 PROJECT NO.
 TR20-1W
 DRAWING NO.
1-01C



FOR DETAILED DRAWING
SEE DRAWING 1-02C

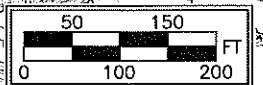


FOR DETAILED DRAWING
SEE DRAWING 1-02B

FOR DETAILED DRAWING
SEE DRAWING 1-02A

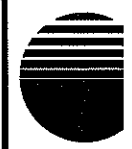
CUSTOMER LIST DRAWING 1-02B

CUSTOMER NUMBER	CUSTOMER NAME	DECLINATION SIGNED	PRESS. REG.	NOTES
1-02B-01	EXISTING CUSTOMER			RECONNECT
1-02B-02	EXISTING CUSTOMER			RECONNECT
1-02B-03	EXISTING CUSTOMER			RECONNECT
1-02B-04	EXISTING CUSTOMER			RECONNECT
1-02B-05	EXISTING CUSTOMER			RECONNECT
1-02B-06	DELETED			-
1-02B-07	EXISTING CUSTOMER			RECONNECT
1-02B-08	EXISTING CUSTOMER			RECONNECT
1-02B-09	EXISTING CUSTOMER			RECONNECT
1-02B-10	EXISTING CUSTOMER			RECONNECT
1-02B-11	EXISTING CUSTOMER			RECONNECT
1-02B-12	EXISTING CUSTOMER			RECONNECT
1-02B-13	EXISTING CUSTOMER			RECONNECT
1-02B-14	EXISTING CUSTOMER			RECONNECT
1-02B-15	EXISTING CUSTOMER			RECONNECT
1-02B-16	EXISTING CUSTOMER			RECONNECT
1-02B-17	EXISTING CUSTOMER			RECONNECT
1-02B-18	EXISTING CUSTOMER			RECONNECT
1-02B-19	EXISTING CUSTOMER			RECONNECT
1-02B-20	EXISTING CUSTOMER			RECONNECT
1-02B-21	EXISTING CUSTOMER			RECONNECT
1-02B-22	EXISTING CUSTOMER			RECONNECT



NO.	DATE	REVISION	BY
1	10-2-2021	DESIGN/CHART	RLR

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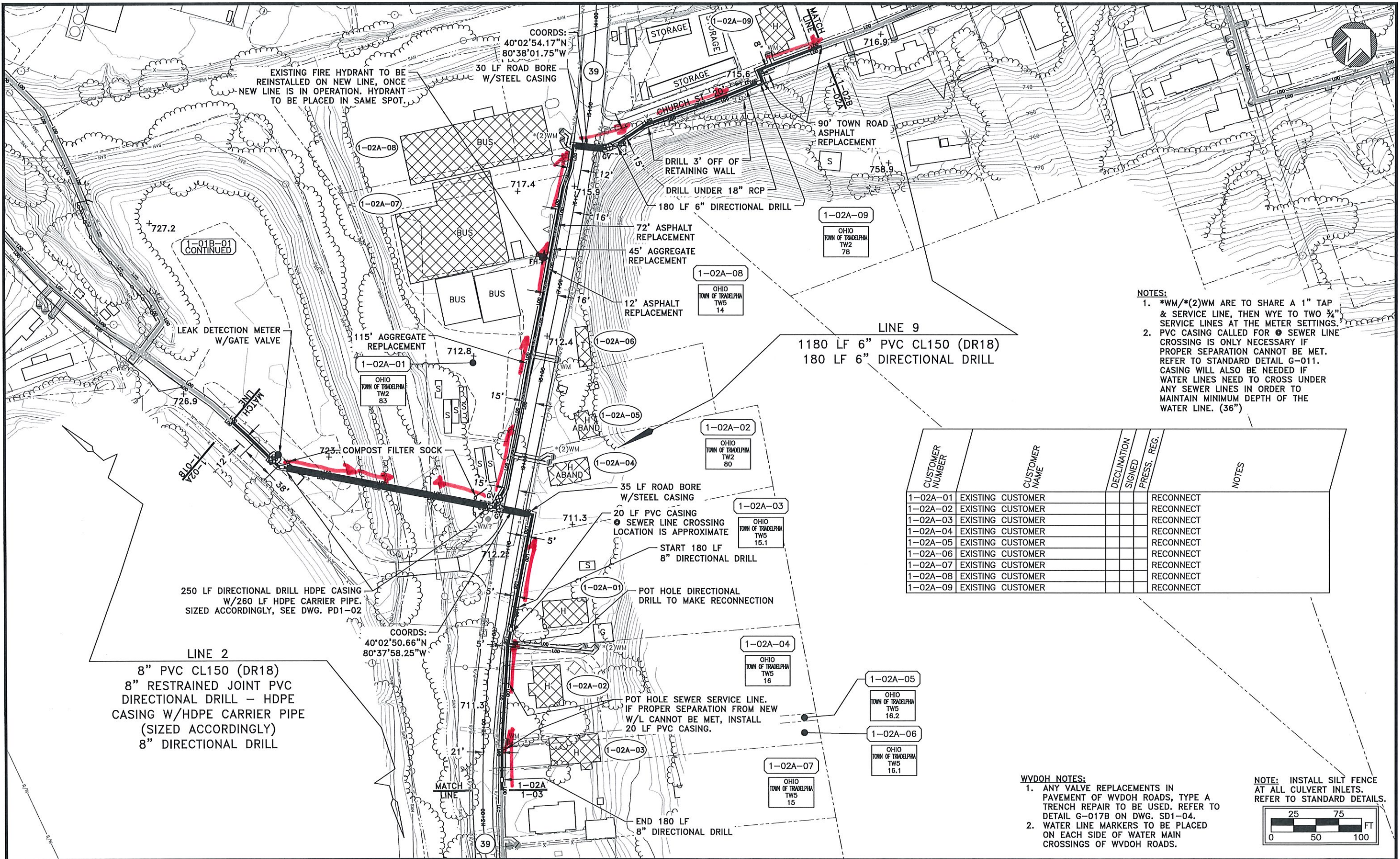
CERRONE ASSOCIATES, INC.
CONSULTING ENGINEERS • WATER & WASTEWATER SYSTEMS
97-14TH STREET, WHEELING, WV 26003-2497

FIELD LAYOUT
DRAWN BY RLR
CONST CHECKED BY
RECORD CHECKED BY
ISSUE DATE 10-1-2021



TOWN OF TRIADELPHIA
OHIO COUNTY, WEST VIRGINIA
WATER SYSTEM IMPROVEMENTS
DRAWING TITLE: MIDDLE CREEK RD, CHURCH ST, MCCOY AVE, & WICKMAN AVE - OVERALL CUSTOMER LIST FOR 1-02B

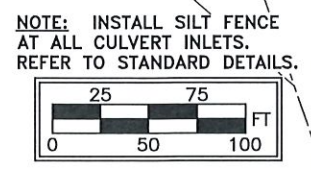
SCALE GRAPHIC
PROJECT NO. TR20-1W
DRAWING NO. 1-02



- NOTES:**
- *WM/(2)WM ARE TO SHARE A 1" TAP & SERVICE LINE, THEN WYE TO TWO 3/4" SERVICE LINES AT THE METER SETTINGS.
 - PVC CASING CALLED FOR @ SEWER LINE CROSSING IS ONLY NECESSARY IF PROPER SEPARATION CANNOT BE MET. REFER TO STANDARD DETAIL G-011. CASING WILL ALSO BE NEEDED IF WATER LINES NEED TO CROSS UNDER ANY SEWER LINES IN ORDER TO MAINTAIN MINIMUM DEPTH OF THE WATER LINE. (36")

CUSTOMER NUMBER	CUSTOMER NAME	DECLINATION SIGNED	PRESS. REG.	NOTES
1-02A-01	EXISTING CUSTOMER			RECONNECT
1-02A-02	EXISTING CUSTOMER			RECONNECT
1-02A-03	EXISTING CUSTOMER			RECONNECT
1-02A-04	EXISTING CUSTOMER			RECONNECT
1-02A-05	EXISTING CUSTOMER			RECONNECT
1-02A-06	EXISTING CUSTOMER			RECONNECT
1-02A-07	EXISTING CUSTOMER			RECONNECT
1-02A-08	EXISTING CUSTOMER			RECONNECT
1-02A-09	EXISTING CUSTOMER			RECONNECT

- WVDOH NOTES:**
- ANY VALVE REPLACEMENTS IN PAVEMENT OF WVDOH ROADS, TYPE A TRENCH REPAIR TO BE USED. REFER TO DETAIL G-017B ON DWG. SD1-04.
 - WATER LINE MARKERS TO BE PLACED ON EACH SIDE OF WATER MAIN CROSSINGS OF WVDOH ROADS.



NO.	DATE	REVISION	BY
5	08-2025	ADDED COMPOST FILTER SOCK	RJR
2	01-2025	ADDED COORDINATE NOTES & WVDON NOTES AS PER WVDON REQUEST	RJR
1	10-2022	DESIGNING/CREATE	RJR

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CONSULTING ENGINEERS • WATER & WASTEWATER SYSTEMS
97-14TH STREET, WHEELING, WV 26003-2497

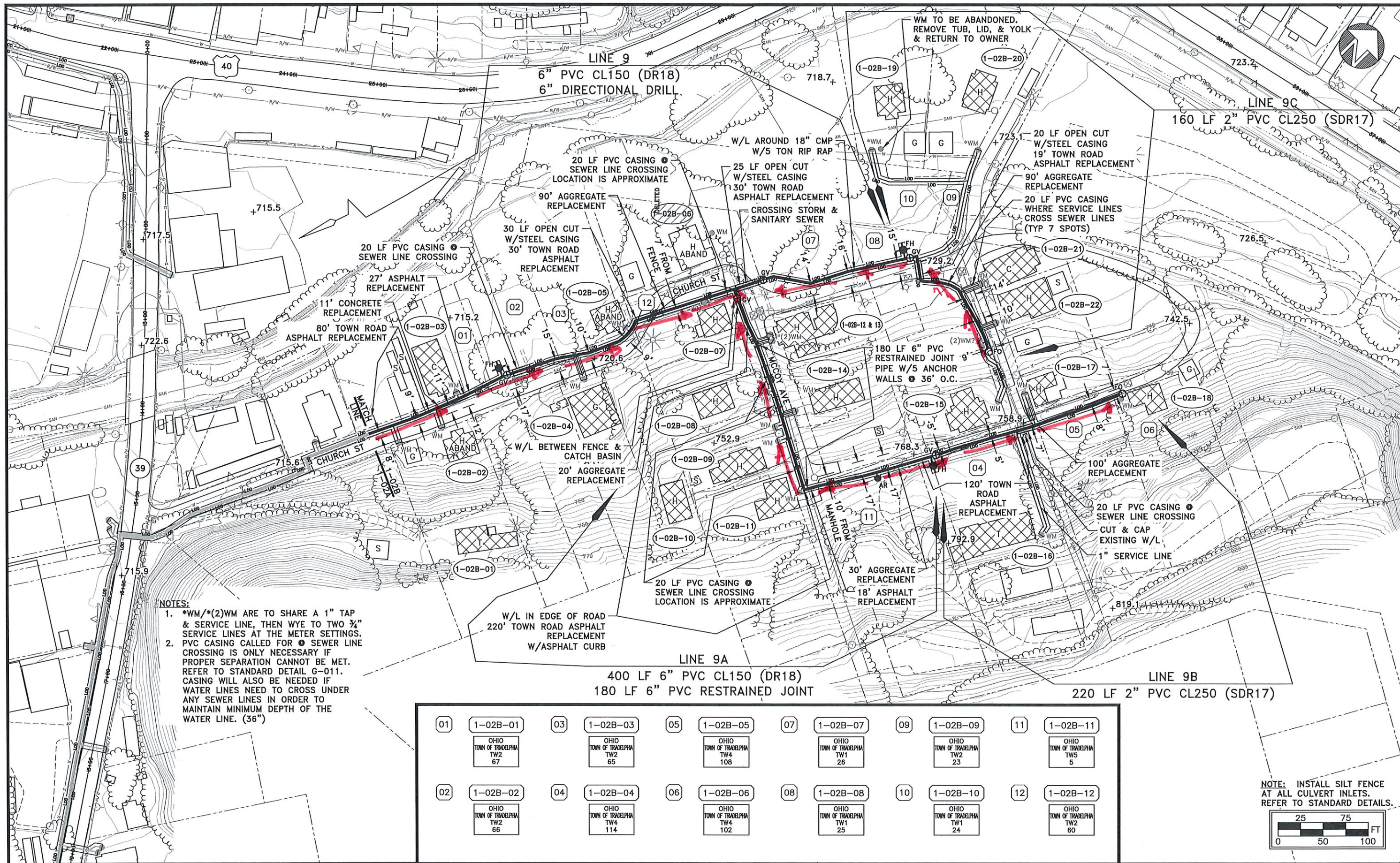
FIELD LAYOUT
RR, RB
DRAWN BY
RLR
CONST CHECKED BY
RECORD CHECKED BY
ISSUE DATE
10-1-2021



TOWN OF TRIADELPHIA
OHIO COUNTY, WEST VIRGINIA
WATER SYSTEM IMPROVEMENTS

DRAWING TITLE
LINE 2 - MIDDLE CREEK ROAD
LINE 9 - MIDDLE CREEK ROAD & CHURCH ST

SCALE
GRAPHIC
PROJECT NO.
TR20-1W
DRAWING NO.
1-02A



NOTES:

- *WM/(2)WM ARE TO SHARE A 1" TAP & SERVICE LINE, THEN WYE TO TWO 3/4" SERVICE LINES AT THE METER SETTINGS.
- PVC CASING CALLED FOR @ SEWER LINE CROSSING IS ONLY NECESSARY IF PROPER SEPARATION CANNOT BE MET. REFER TO STANDARD DETAIL G-011. CASING WILL ALSO BE NEEDED IF WATER LINES NEED TO CROSS UNDER ANY SEWER LINES IN ORDER TO MAINTAIN MINIMUM DEPTH OF THE WATER LINE. (36")

01	1-02B-01	03	1-02B-03	05	1-02B-05	07	1-02B-07	09	1-02B-09	11	1-02B-11
	OHIO TOWN OF TRIADELPHIA TW2 67		OHIO TOWN OF TRIADELPHIA TW2 65		OHIO TOWN OF TRIADELPHIA TW4 108		OHIO TOWN OF TRIADELPHIA TW1 26		OHIO TOWN OF TRIADELPHIA TW2 23		OHIO TOWN OF TRIADELPHIA TW5 5
02	1-02B-02	04	1-02B-04	06	1-02B-06	08	1-02B-08	10	1-02B-10	12	1-02B-12
	OHIO TOWN OF TRIADELPHIA TW2 66		OHIO TOWN OF TRIADELPHIA TW4 114		OHIO TOWN OF TRIADELPHIA TW4 102		OHIO TOWN OF TRIADELPHIA TW1 25		OHIO TOWN OF TRIADELPHIA TW1 24		OHIO TOWN OF TRIADELPHIA TW2 60

NOTE: INSTALL SILT FENCE AT ALL CULVERT INLETS. REFER TO STANDARD DETAILS.

NO.	DATE	REVISION	BY
2	08-2023	ADD COMPOST FILTER SOCK	RLR
1	10-2022	EXPANSION CAPTAIN	RLR

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97-14TH STREET, WHEELING, WV 26003-2497

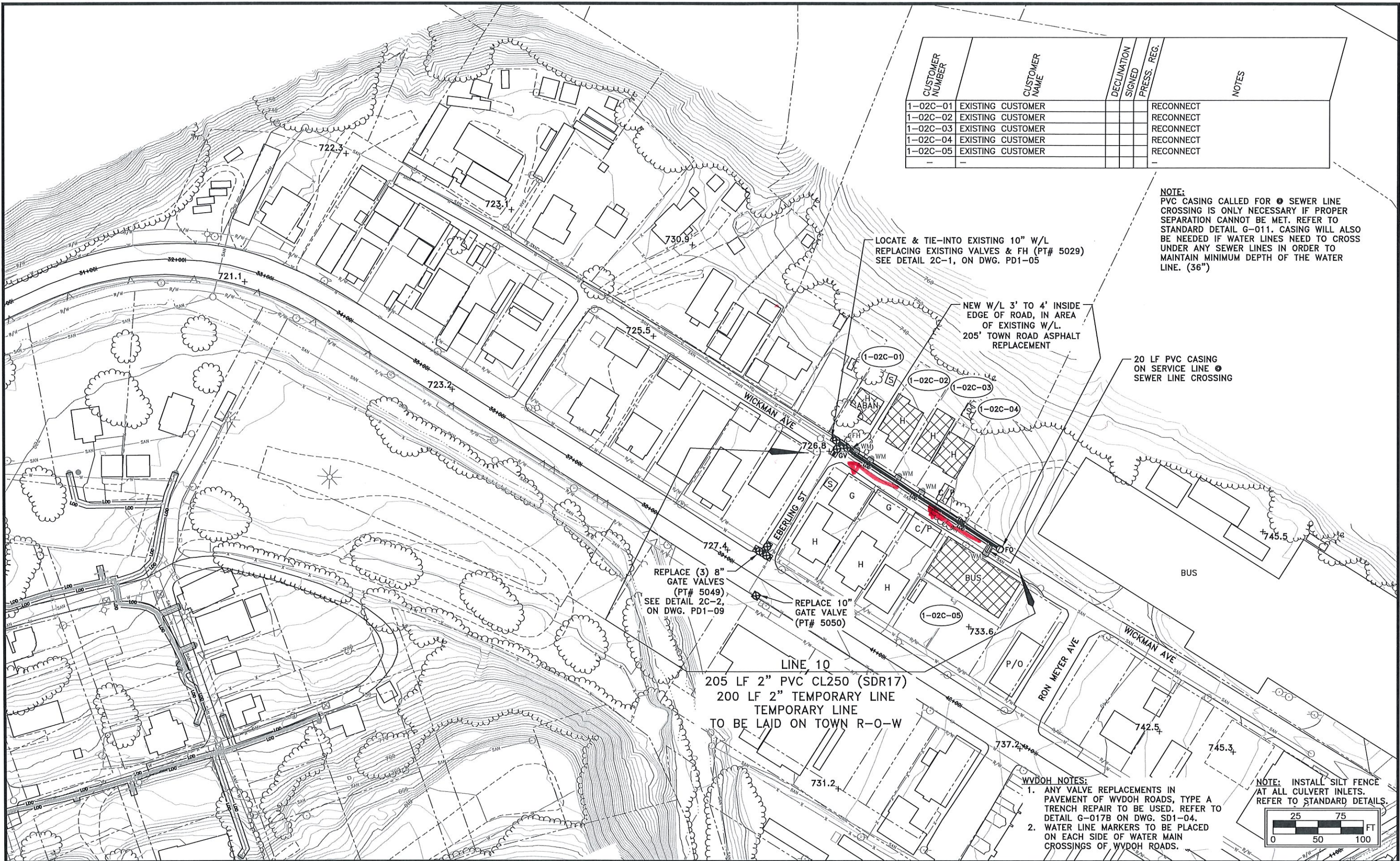
FIELD LAYOUT
RR, RB
DRAWN BY
RLR
CONST CHECKED BY
RECORD CHECKED BY
ISSUE DATE
10-1-2021



DRAWING TITLE
LINES 9, 9A, 9B, & 9C
CHURCH ST & MCCOY AVE

TOWN OF TRIADELPHIA
OHIO COUNTY, WEST VIRGINIA
WATER SYSTEM IMPROVEMENTS

SCALE
GRAPHIC
PROJECT NO.
TR20-1W
DRAWING NO.
1-02B



CUSTOMER NUMBER	CUSTOMER NAME	DECLINATION SIGNED	PRESS. REG.	NOTES
1-02C-01	EXISTING CUSTOMER			RECONNECT
1-02C-02	EXISTING CUSTOMER			RECONNECT
1-02C-03	EXISTING CUSTOMER			RECONNECT
1-02C-04	EXISTING CUSTOMER			RECONNECT
1-02C-05	EXISTING CUSTOMER			RECONNECT

NOTE:
 PVC CASING CALLED FOR @ SEWER LINE CROSSING IS ONLY NECESSARY IF PROPER SEPARATION CANNOT BE MET. REFER TO STANDARD DETAIL G-011. CASING WILL ALSO BE NEEDED IF WATER LINES NEED TO CROSS UNDER ANY SEWER LINES IN ORDER TO MAINTAIN MINIMUM DEPTH OF THE WATER LINE. (36")

LOCATE & TIE-INTO EXISTING 10" W/L REPLACING EXISTING VALVES & FH (PT# 5029) SEE DETAIL 2C-1, ON DWG. PD1-05

NEW W/L 3' TO 4' INSIDE EDGE OF ROAD, IN AREA OF EXISTING W/L. 205' TOWN ROAD ASPHALT REPLACEMENT

20 LF PVC CASING ON SERVICE LINE @ SEWER LINE CROSSING

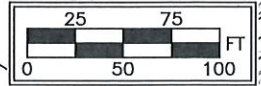
REPLACE (3) 8" GATE VALVES (PT# 5049) SEE DETAIL 2C-2, ON DWG. PD1-09

REPLACE 10" GATE VALVE (PT# 5050)

LINE 10
 205 LF 2" PVC CL250 (SDR17)
 200 LF 2" TEMPORARY LINE
 TO BE LAID ON TOWN R-O-W

- WVDOH NOTES:**
- ANY VALVE REPLACEMENTS IN PAVEMENT OF WVDOH ROADS, TYPE A TRENCH REPAIR TO BE USED. REFER TO DETAIL G-017B ON DWG. SD1-04.
 - WATER LINE MARKERS TO BE PLACED ON EACH SIDE OF WATER MAIN CROSSINGS OF WVDOH ROADS.

NOTE: INSTALL SILT FENCE AT ALL CULVERT INLETS. REFER TO STANDARD DETAILS.



NO.	DATE	REVISION	BY
2	01-2025	WVDOH NOTES AS PER WVDOH REQUEST	RF
1	10-2022	DRAWING OBTAINED	RF

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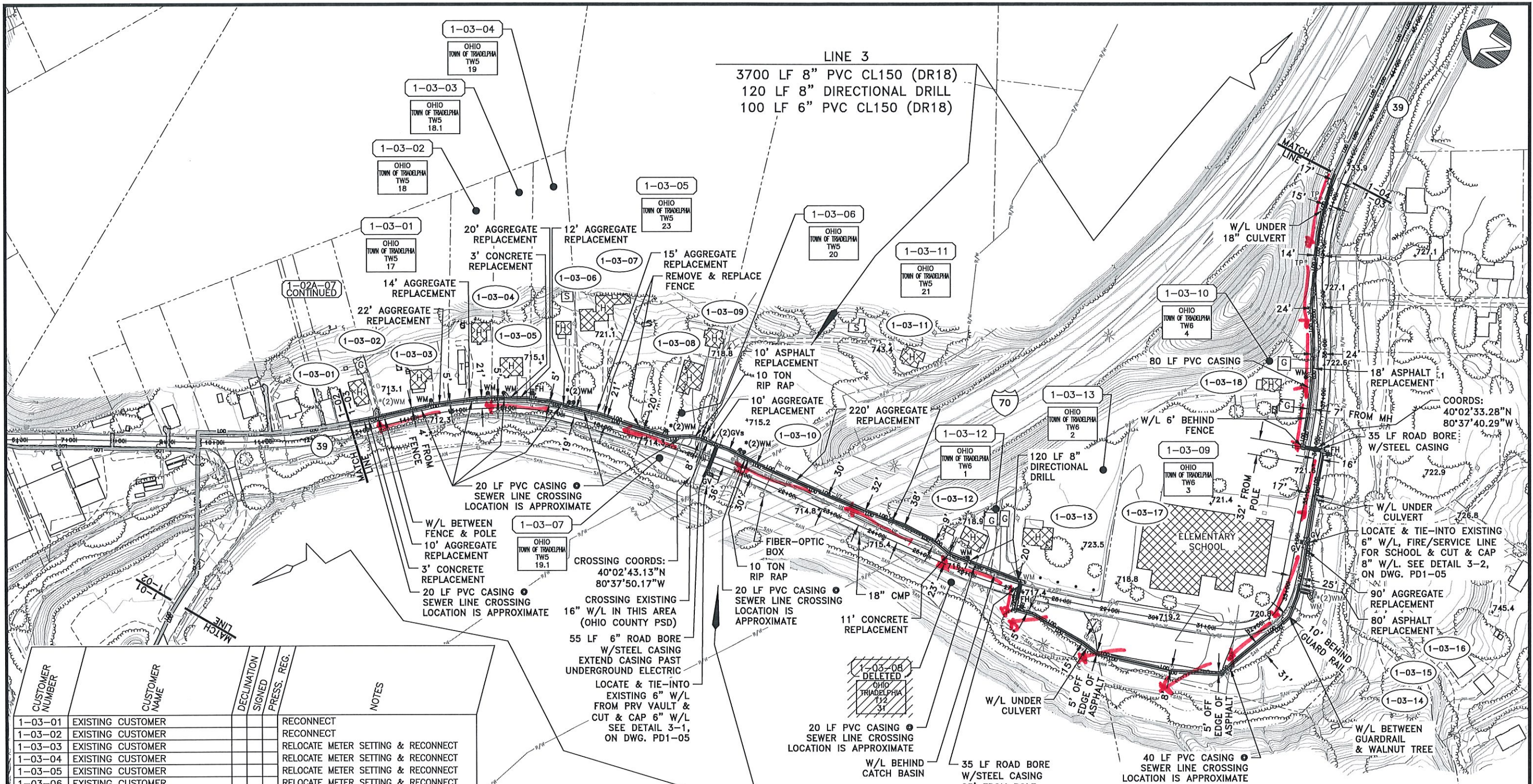
FIELD LAYOUT	
DRAWN BY	RLR
CONST CHECKED BY	
RECORD CHECKED BY	
ISSUE DATE	10-1-2021



TOWN OF TRIADDELPHIA
 OHIO COUNTY, WEST VIRGINIA
WATER SYSTEM IMPROVEMENTS

DRAWING TITLE: **LINE 10 WICKMAN AVE**

SCALE	GRAPHIC
PROJECT NO.	TR20-1W
DRAWING NO.	1-02C



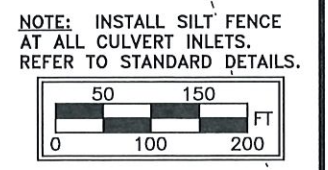
CUSTOMER NUMBER	CUSTOMER NAME	DECLINATION SIGNED	PRESS. REG.	NOTES
1-03-01	EXISTING CUSTOMER			RECONNECT
1-03-02	EXISTING CUSTOMER			RECONNECT
1-03-03	EXISTING CUSTOMER			RELOCATE METER SETTING & RECONNECT
1-03-04	EXISTING CUSTOMER			RELOCATE METER SETTING & RECONNECT
1-03-05	EXISTING CUSTOMER			RELOCATE METER SETTING & RECONNECT
1-03-06	EXISTING CUSTOMER			RELOCATE METER SETTING & RECONNECT
1-03-07	EXISTING CUSTOMER			RELOCATE METER SETTING & RECONNECT
1-03-08	EXISTING CUSTOMER			RELOCATE METER SETTING & RECONNECT
1-03-09	EXISTING CUSTOMER			DUPLEX METER SETTING IN PIT W/1-03-08
1-03-10	EXISTING CUSTOMER			RELOCATE METER SETTING & RECONNECT
1-03-11	EXISTING CUSTOMER			RELOCATE METER SETTING & RECONNECT
1-03-12	EXISTING CUSTOMER			RELOCATE METER SETTING & RECONNECT
1-03-13	EXISTING CUSTOMER			RECONNECT
1-03-14	EXISTING CUSTOMER			RECONNECT
1-03-15	EXISTING CUSTOMER			RECONNECT
1-03-16	EXISTING CUSTOMER			RECONNECT
1-03-17	EXISTING CUSTOMER			6\"/>

NOTES:

- *WM/*(2)WM ARE TO SHARE A 1\"/>

WVDOH NOTES:

- ANY VALVE REPLACEMENTS IN PAVEMENT OF WVDOH ROADS, TYPE A TRENCH REPAIR TO BE USED. REFER TO DETAIL G-017B ON DWG. SD1-04.
- WATER LINE MARKERS TO BE PLACED ON EACH SIDE OF WATER MAIN CROSSINGS OF WVDOH ROADS.



NO.	DATE	REVISION	BY
4	08-2025	UPDATED ASHLYT PAVING ACROSS FROM SCHOOL / MOVED LINE TO BACK SIDE OF PARKING	RJR
5	05-2025	MOVED LINE UNDER PRESSURE TO ACROSS ROAD AS PER ARCHITECTS/ MOVED LINE FROM BEHIND SCHOOL PARKING TO A CROSS ROAD AS PER TOWN REQUEST/ DELETED ELEMENT 1-03-08 ADDING ELEMENTS 1-03-12, 1-03-15	RJR
2	04-2025	ADDED COORDINATES NOTE & WADON NOTES AS PER WADON REQUEST	RJR
1	10-2022	DRAWINGS CREATED	RJR

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CONSULTING ENGINEERS • WATER & WASTEWATER SYSTEMS
97-14TH STREET, WHEELING, WV 26003-2497

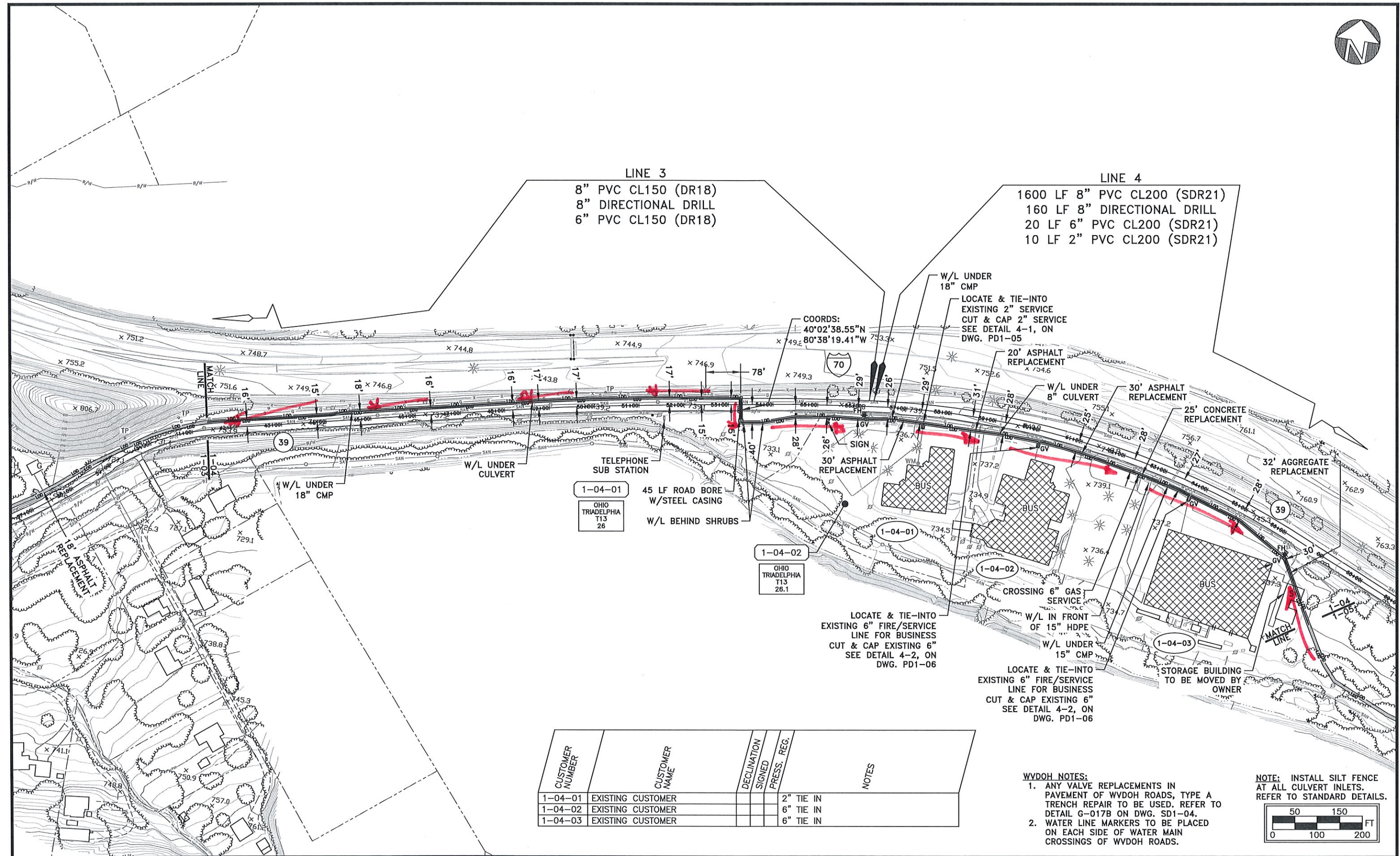
FIELD LAYOUT	
DRAWN BY	RJR
CONST CHECKED BY	
RECORD CHECKED BY	
ISSUE DATE	10-1-2021



TOWN OF TRIADELPHIA
OHIO COUNTY, WEST VIRGINIA
WATER SYSTEM IMPROVEMENTS

DRAWING TITLE: **LINES 2 & 3 MIDDLE CREEK RD**

SCALE: GRAPHIC
PROJECT NO.: TR20-1W
DRAWING NO.: **1-03**



1-04-01
OHIO TRIADELPHIA
T13
26

45 LF ROAD BORE
W/STEEL CASING
W/L BEHIND SHRUBS

1-04-02
OHIO TRIADELPHIA
T13
26.1

LOCATE & TIE-INTO
EXISTING 6" FIRE/SERVICE
LINE FOR BUSINESS
CUT & CAP EXISTING 6"
SEE DETAIL 4-2, ON
DWG. PD1-06

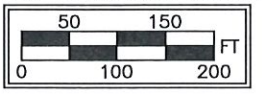
LOCATE & TIE-INTO
EXISTING 6" FIRE/SERVICE
LINE FOR BUSINESS
CUT & CAP EXISTING 6"
SEE DETAIL 4-2, ON
DWG. PD1-06

CUSTOMER NUMBER	CUSTOMER NAME	DECLINATION	SIGNED	PRESS. REG.	NOTES
1-04-01	EXISTING CUSTOMER				2" TIE IN
1-04-02	EXISTING CUSTOMER				6" TIE IN
1-04-03	EXISTING CUSTOMER				6" TIE IN

WYDOH NOTES:

- ANY VALVE REPLACEMENTS IN PAVEMENT OF WYDOH ROADS, TYPE A TRENCH REPAIR TO BE USED. REFER TO DETAIL G-017B ON DWG. SD1-04.
- WATER LINE MARKERS TO BE PLACED ON EACH SIDE OF WATER MAIN CROSSINGS OF WYDOH ROADS.

NOTE: INSTALL SILT FENCE AT ALL CULVERT INLETS. REFER TO STANDARD DETAILS.



NO.	DATE	REVISION	BY
5	06-2025	SHIFED LINE ACROSS EASEMENT #1-04-01	RF
2	01-2025	ADDED COORDINATES NOTE & WYDOH NOTES AS PER WYDOH REQUEST	RF
1	02-2022	DRAWING CREATED	RF

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CERRONE ASSOCIATES, INC.
CONSULTING ENGINEERS • WATER & WASTEWATER SYSTEMS
97-14TH STREET, WHEELING, WV 26003-2497

FIELD LAYOUT
DRAWN BY RLR
CONST CHECKED BY
RECORD CHECKED BY
ISSUE DATE 10-1-2021



TOWN OF TRIADELPHIA
OHIO COUNTY, WEST VIRGINIA
WATER SYSTEM IMPROVEMENTS

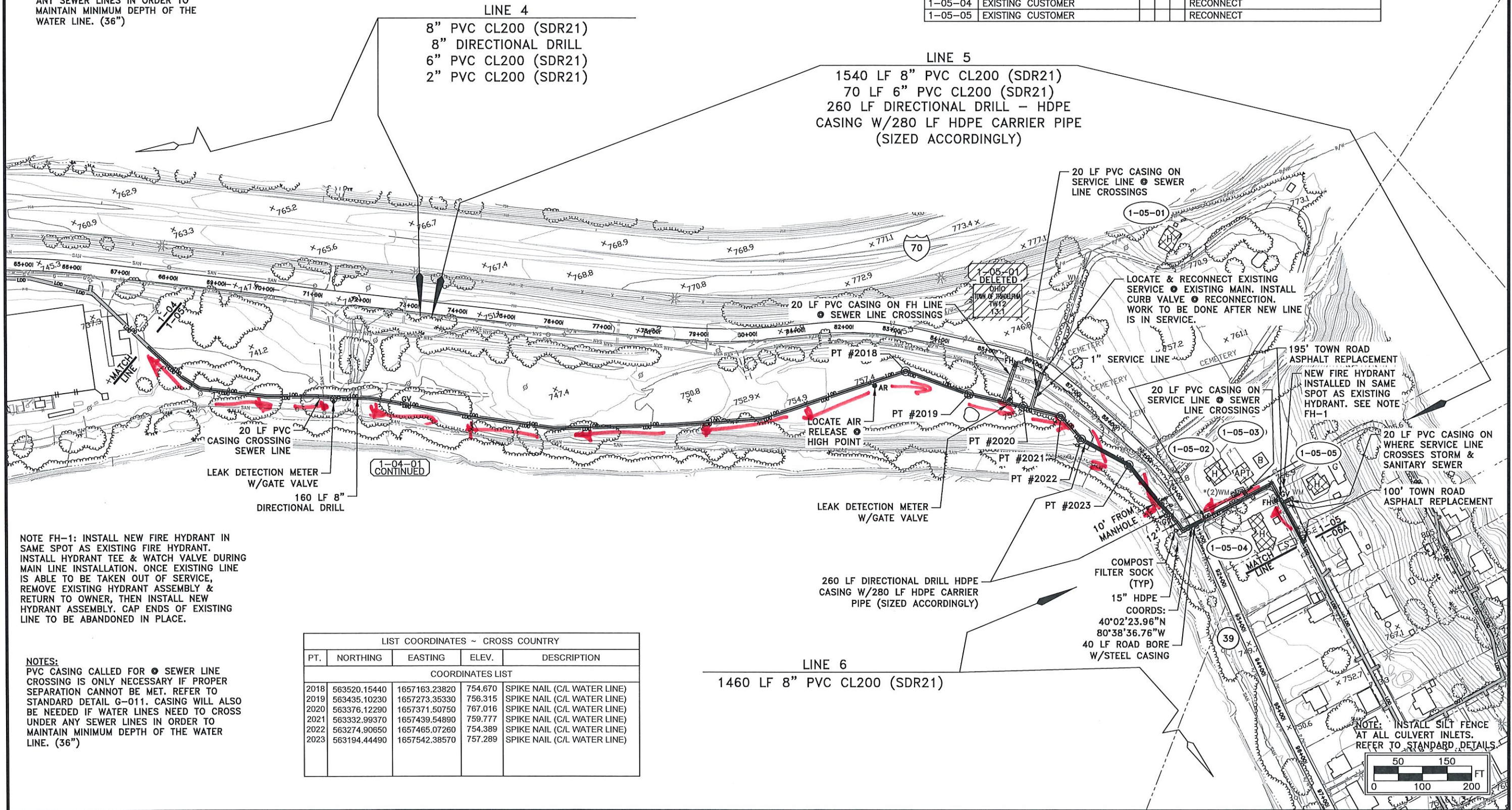
DRAWING TITLE
LINES 3 & 4
MIDDLE CREEK RD

SCALE
GRAPHIC
PROJECT NO.
TR20-1W
DRAWING NO.
1-04

NOTES:

- *WM/(2)WM ARE TO SHARE A 1" TAP & SERVICE LINE, THEN WYE TO TWO 3/4" SERVICE LINES AT THE METER SETTINGS.
- PVC CASING CALLED FOR @ SEWER LINE CROSSING IS ONLY NECESSARY IF PROPER SEPARATION CANNOT BE MET. REFER TO STANDARD DETAIL G-011. CASING WILL ALSO BE NEEDED IF WATER LINES NEED TO CROSS UNDER ANY SEWER LINES IN ORDER TO MAINTAIN MINIMUM DEPTH OF THE WATER LINE. (36")

CUSTOMER NUMBER	CUSTOMER NAME	DECLINATION SIGNED	PRESS. REG.	NOTES
1-05-01	EXISTING CUSTOMER			RECONNECT
1-05-02	EXISTING CUSTOMER			RECONNECT
1-05-03	EXISTING CUSTOMER			RECONNECT
1-05-04	EXISTING CUSTOMER			RECONNECT
1-05-05	EXISTING CUSTOMER			RECONNECT



NOTE FH-1: INSTALL NEW FIRE HYDRANT IN SAME SPOT AS EXISTING FIRE HYDRANT. INSTALL HYDRANT TEE & WATCH VALVE DURING MAIN LINE INSTALLATION. ONCE EXISTING LINE IS ABLE TO BE TAKEN OUT OF SERVICE, REMOVE EXISTING HYDRANT ASSEMBLY & RETURN TO OWNER, THEN INSTALL NEW HYDRANT ASSEMBLY. CAP ENDS OF EXISTING LINE TO BE ABANDONED IN PLACE.

NOTES:

PVC CASING CALLED FOR @ SEWER LINE CROSSING IS ONLY NECESSARY IF PROPER SEPARATION CANNOT BE MET. REFER TO STANDARD DETAIL G-011. CASING WILL ALSO BE NEEDED IF WATER LINES NEED TO CROSS UNDER ANY SEWER LINES IN ORDER TO MAINTAIN MINIMUM DEPTH OF THE WATER LINE. (36")

LIST COORDINATES ~ CROSS COUNTRY				
PT.	NORTHING	EASTING	ELEV.	DESCRIPTION
COORDINATES LIST				
2018	563520.15440	1657163.23820	754.670	SPIKE NAIL (C/L WATER LINE)
2019	563435.10230	1657273.35330	756.315	SPIKE NAIL (C/L WATER LINE)
2020	563376.12290	1657371.50750	767.016	SPIKE NAIL (C/L WATER LINE)
2021	563332.99370	1657439.54890	759.777	SPIKE NAIL (C/L WATER LINE)
2022	563274.90650	1657465.07260	754.389	SPIKE NAIL (C/L WATER LINE)
2023	563194.44490	1657542.38570	757.289	SPIKE NAIL (C/L WATER LINE)

NO.	DATE	REVISION	BY
6	08-2023	ADDED COMPOST FILTER SOCK	RLR
5	06-2023	SIGNED LINE ACROSS EASEMENT #1-04-C1	RLR
4	04-2023	MOVED RECONNECTION POINT FOR CUST #1-05-C1, DELETED EASEMENT #1-05-C1	RLR
3	04-2023	ADJUSTED LINE BETWEEN PT 2018 & 2019, ADJUSTED HIGH POINT FOR W/L @ TOP OF PAV.	RLR
2	03-2023	MOVED MAIN LINE FROM INLETS ADDITION FROM PLATE TO PROPERTY TO LEANING AVE. AS PER OWNER REQUEST. MAJOR PLOT BULK. MOVED 3 CUSTOMERS FROM 1-C6A TO THE DRAWING MAIN LINE. BREAK BETWEEN LINES 5 & 6. ADD NECESSARY NOTES.	RLR

THIS DRAWING REPRESENTS THE DESIGN AND ENGINEERING EFFORTS OF CERRONE ASSOCIATES, INC.

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CERRONE ASSOCIATES, INC.
CONSULTING ENGINEERS • WATER & WASTEWATER SYSTEMS
97-14TH STREET, WHEELING, WV 26003-2497

FIELD LAYOUT	
DRAWN BY	RLR
CONST CHECKED BY	
RECORD CHECKED BY	
ISSUE DATE	10-1-2021



TOWN OF TRIADELPHIA OHIO COUNTY, WEST VIRGINIA WATER SYSTEM IMPROVEMENTS		SCALE GRAPHIC
DRAWING TITLE LINES 4 & 5 MIDDLE CREEK RD		PROJECT NO. TR20-1W
		DRAWING NO. 1-05

CUSTOMER LIST DRAWING 1-06A				
CUSTOMER NUMBER	CUSTOMER NAME	DECLINATION SIGNED	PRESS. REG.	NOTES
-	-			NOW CUSTOMER 1-05-02
-	-			NOW CUSTOMER 1-05-03
-	-			NOW CUSTOMER 1-05-04
1-06A-04	EXISTING CUSTOMER			RECONNECT
1-06A-05	EXISTING CUSTOMER			RECONNECT
1-06A-06	EXISTING CUSTOMER			RECONNECT
1-06A-07	EXISTING CUSTOMER			RECONNECT
1-06A-08	EXISTING CUSTOMER			RECONNECT
1-06A-09	EXISTING CUSTOMER			RECONNECT
-	-			NOW CUSTOMER 1-05-05
1-06A-11	EXISTING CUSTOMER			RECONNECT
1-06A-12	EXISTING CUSTOMER			RECONNECT
1-06A-13	EXISTING CUSTOMER			RECONNECT
1-06A-14	EXISTING CUSTOMER			RECONNECT
1-06A-15	EXISTING CUSTOMER			RECONNECT
1-06A-16	EXISTING CUSTOMER			RECONNECT
1-06A-17	EXISTING CUSTOMER			RECONNECT
1-06A-18	EXISTING CUSTOMER			RECONNECT
1-06A-19	EXISTING CUSTOMER			RECONNECT
1-06A-20	EXISTING CUSTOMER			RECONNECT

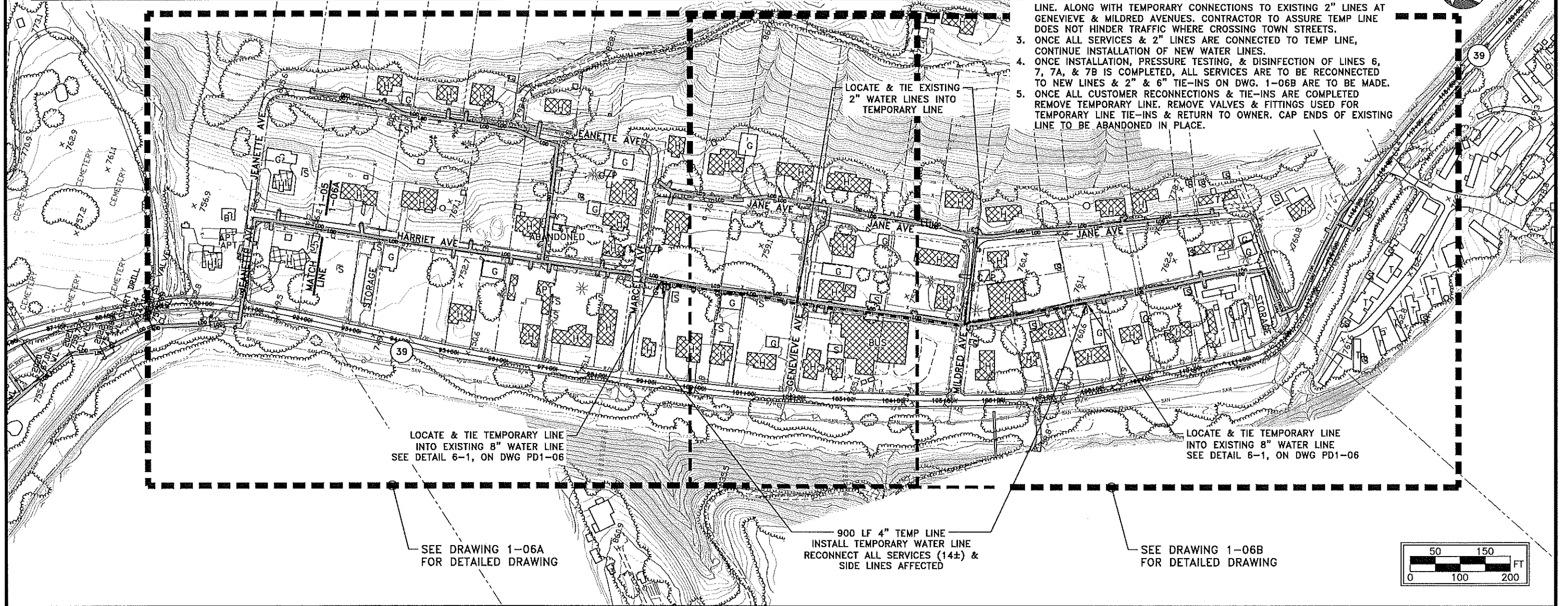
CUSTOMER LIST DRAWING 1-06A CONTINUED				
CUSTOMER NUMBER	CUSTOMER NAME	DECLINATION SIGNED	PRESS. REG.	NOTES
1-06A-21	EXISTING CUSTOMER			RECONNECT
1-06A-22	EXISTING CUSTOMER			RECONNECT
1-06A-23	EXISTING CUSTOMER			RECONNECT
1-06A-24	EXISTING CUSTOMER			RECONNECT
1-06A-25	EXISTING CUSTOMER			RECONNECT
1-06A-26	EXISTING CUSTOMER			RECONNECT
1-06A-27	EXISTING CUSTOMER			RECONNECT

CUSTOMER LIST DRAWING 1-06B				
CUSTOMER NUMBER	CUSTOMER NAME	DECLINATION SIGNED	PRESS. REG.	NOTES
1-06B-01	EXISTING CUSTOMER			RECONNECT
1-06B-02	EXISTING CUSTOMER			RECONNECT
1-06B-03	EXISTING CUSTOMER			RECONNECT
1-06B-04	EXISTING CUSTOMER			RECONNECT
1-06B-05	EXISTING CUSTOMER			RECONNECT
1-06B-06	EXISTING CUSTOMER			RECONNECT
1-06B-07	EXISTING CUSTOMER			RECONNECT
1-06B-08	EXISTING CUSTOMER			RECONNECT
1-06B-09	EXISTING CUSTOMER			RECONNECT
1-06B-10	EXISTING CUSTOMER			RECONNECT
1-06B-11	EXISTING CUSTOMER			RECONNECT

CUSTOMER LIST DRAWING 1-06B CONTINUED				
CUSTOMER NUMBER	CUSTOMER NAME	DECLINATION SIGNED	PRESS. REG.	NOTES
1-06B-12	EXISTING CUSTOMER			RECONNECT
1-06B-13	EXISTING CUSTOMER			RECONNECT
1-06B-14	EXISTING CUSTOMER			RECONNECT
1-06B-15	EXISTING CUSTOMER			RECONNECT
1-06B-16	EXISTING CUSTOMER			RECONNECT
1-06B-17	EXISTING CUSTOMER			RECONNECT
1-06B-18	EXISTING CUSTOMER			RELOCATE METER SETTING & RECONNECT
1-06B-19	EXISTING CUSTOMER			RELOCATE METER SETTING & RECONNECT
1-06B-20	EXISTING CUSTOMER			RECONNECT
1-06B-21	EXISTING CUSTOMER			RECONNECT
1-06B-22	EXISTING CUSTOMER			RECONNECT
1-06B-23	EXISTING CUSTOMER			RECONNECT
1-06B-24	EXISTING CUSTOMER			RELOCATE METER SETTING & RECONNECT
1-06B-25	EXISTING CUSTOMER			RECONNECT
1-06B-26	EXISTING CUSTOMER			RECONNECT
1-06B-27	EXISTING CUSTOMER			RECONNECT

CONSTRUCTION SEQUENCE NOTES:

- LOCATE EXISTING 8" LINE & MAKE TEMPORARY LINE TIE-INS AT THE LOCATIONS SHOWN BELOW & DETAILED ON DWG. PD1-06 (DETAIL 6-1).
- INSTALL TEMPORARY LINE & CONNECT ALL AFFECTED SERVICES TO TEMP LINE. ALONG WITH TEMPORARY CONNECTIONS TO EXISTING 2" LINES AT GENEVIEVE & MILDRED AVENUES. CONTRACTOR TO ASSURE TEMP LINE DOES NOT HINDER TRAFFIC WHERE CROSSING TOWN STREETS.
- ONCE ALL SERVICES & 2" LINES ARE CONNECTED TO TEMP LINE, CONTINUE INSTALLATION OF NEW WATER LINES.
- ONCE INSTALLATION, PRESSURE TESTING, & DISINFECTION OF LINES 6, 7, 7A, & 7B IS COMPLETED, ALL SERVICES ARE TO BE RECONNECTED TO NEW LINES & 2" & 6" TIE-INS ON DWG. 1-06B ARE TO BE MADE.
- ONCE ALL CUSTOMER RECONNECTIONS & TIE-INS ARE COMPLETED REMOVE TEMPORARY LINE. REMOVE VALVES & FITTINGS USED FOR TEMPORARY LINE TIE-INS & RETURN TO OWNER. CAP ENDS OF EXISTING LINE TO BE ABANDONED IN PLACE.



NO.	DATE	REVISION	BY
2	05-2022	ISSUED FOR CONSTRUCTION PERMITS 1-06A-F	117
1	10-2021	ISSUED FOR PERMITS	117

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CERRONE ASSOCIATES, INC.
CONSULTING ENGINEERS • WATER & WASTEWATER SYSTEMS
97-14TH STREET, WHEELING, WV 26003-2497

FIELD LAYOUT	
DRAWN BY	RLR
CONST CHECKED BY	
RECORD CHECKED BY	
ISSUE DATE	10-1-2021

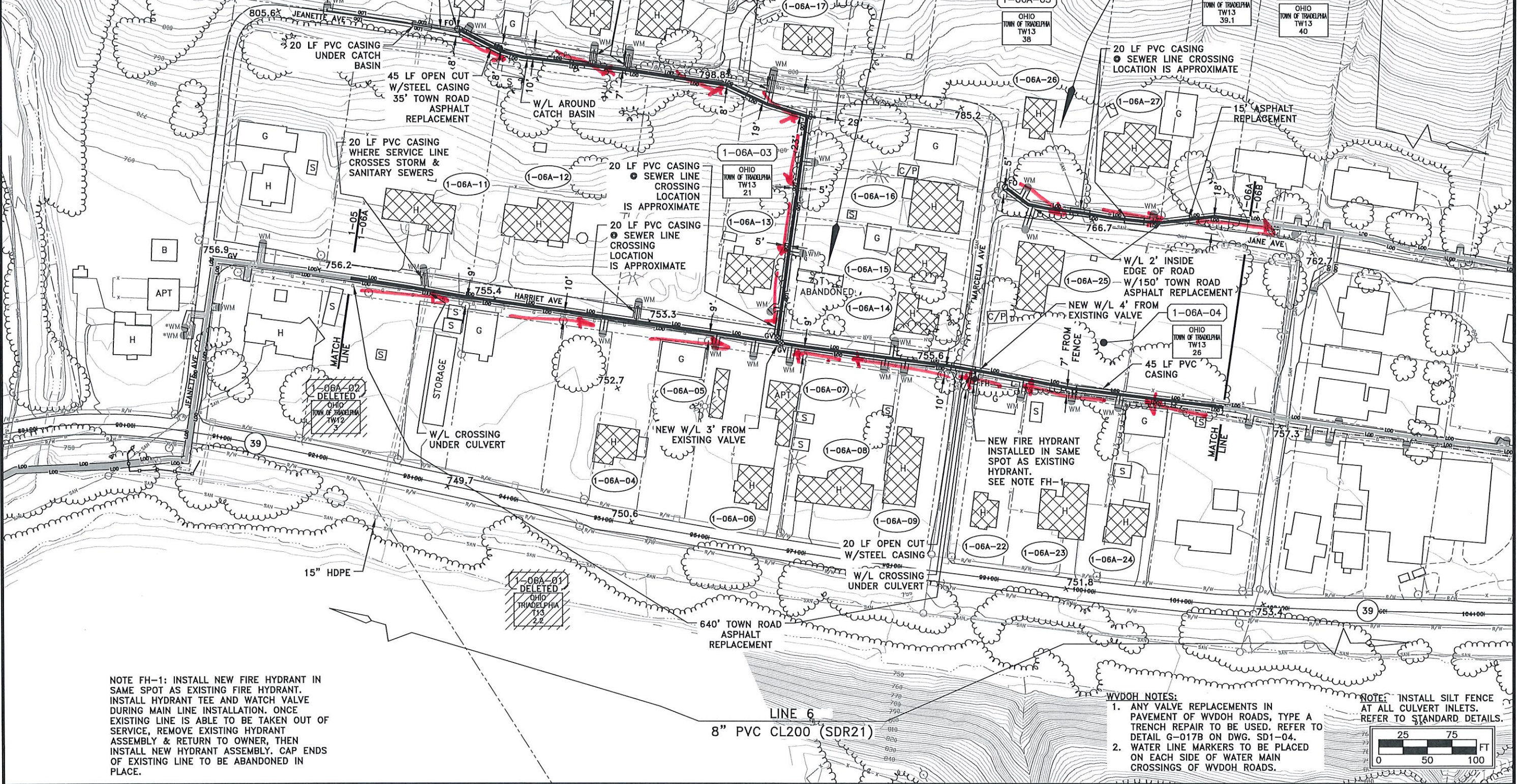
<p>TOWN OF TRIADELPHIA OHIO COUNTY, WEST VIRGINIA WATER SYSTEM IMPROVEMENTS</p>	SCALE	GRAPHIC
	PROJECT NO.	TR20-1W
DRAWING TITLE	MILLER'S ADDITION TEMPORARY LINE, CUSTOMER LISTS & OVERALL	DRAWING NO.
		1-06

NOTES:

- *WM/(2)WM ARE TO SHARE A 1" TAP & SERVICE LINE, THEN WYE TO TWO 3/4" SERVICE LINES AT THE METER SETTINGS. PVC CASING CALLED FOR @ SEWER LINE CROSSING IS ONLY NECESSARY IF PROPER SEPARATION CANNOT BE MET. REFER TO STANDARD DETAIL G-011. CASING WILL ALSO BE NEEDED IF WATER LINES NEED TO CROSS UNDER ANY SEWER LINES IN ORDER TO MAINTAIN MINIMUM DEPTH OF THE WATER LINE. (36")

CUT & CAP EXISTING 2" LINE PAST SERVICE TAP FOR CUST #1-06A-20 BEFORE INSTALLING NEW END OF LINE FLUSHOUT & SERVICE LINE TO RECONNECT WM FOR CUST #1-06A-21

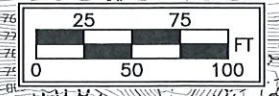
EASEMENT 1-06A-08 NOTE:
FLUSHOUT TO BE INSTALLED ON TOWN R-O-W. 10' CONSTRUCTION EASEMENT ONLY.



NOTE FH-1: INSTALL NEW FIRE HYDRANT IN SAME SPOT AS EXISTING FIRE HYDRANT. INSTALL HYDRANT TEE AND WATCH VALVE DURING MAIN LINE INSTALLATION. ONCE EXISTING LINE IS ABLE TO BE TAKEN OUT OF SERVICE, REMOVE EXISTING HYDRANT ASSEMBLY & RETURN TO OWNER, THEN INSTALL NEW HYDRANT ASSEMBLY. CAP ENDS OF EXISTING LINE TO BE ABANDONED IN PLACE.

- WVDOH NOTES:**
- ANY VALVE REPLACEMENTS IN PAVEMENT OF WVDOH ROADS, TYPE A TRENCH REPAIR TO BE USED. REFER TO DETAIL G-017B ON DWG. SD1-04.
 - WATER LINE MARKERS TO BE PLACED ON EACH SIDE OF WATER MAIN CROSSINGS OF WVDOH ROADS.

NOTE: INSTALL SILT FENCE AT ALL CULVERT INLETS. REFER TO STANDARD DETAILS.



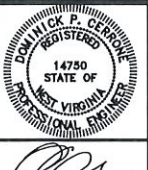
NO.	DATE	REVISION	BY
4	04-2025	ADDED NOTE TO EASEMENT 1-06A-08 AS PER LAWSON'S REQUEST	RJR
5	09-2025	MOVED MAIN LINE INTO DITCHES ADDITION FROM PRIVATE PROPERTY TO JEANETTE AVE, AS PER TOWN REQUEST. MOVED FACE OF VALVE, MOVED 1' CLEARANCES FROM 1-06A-10 TO 1-06A-11. MOVED LINE FROM BETWEEN LINES 5 & 6. RELEASED EASEMENTS 1-06A-01 & 1-06A-02	RJR
2	04-2025	ADDED COORDINATES NOTE 1. WVDOH NOTES AS PER WVDOH REQUEST	RJR
1	10-2022	DRAWING CREATED	RJR

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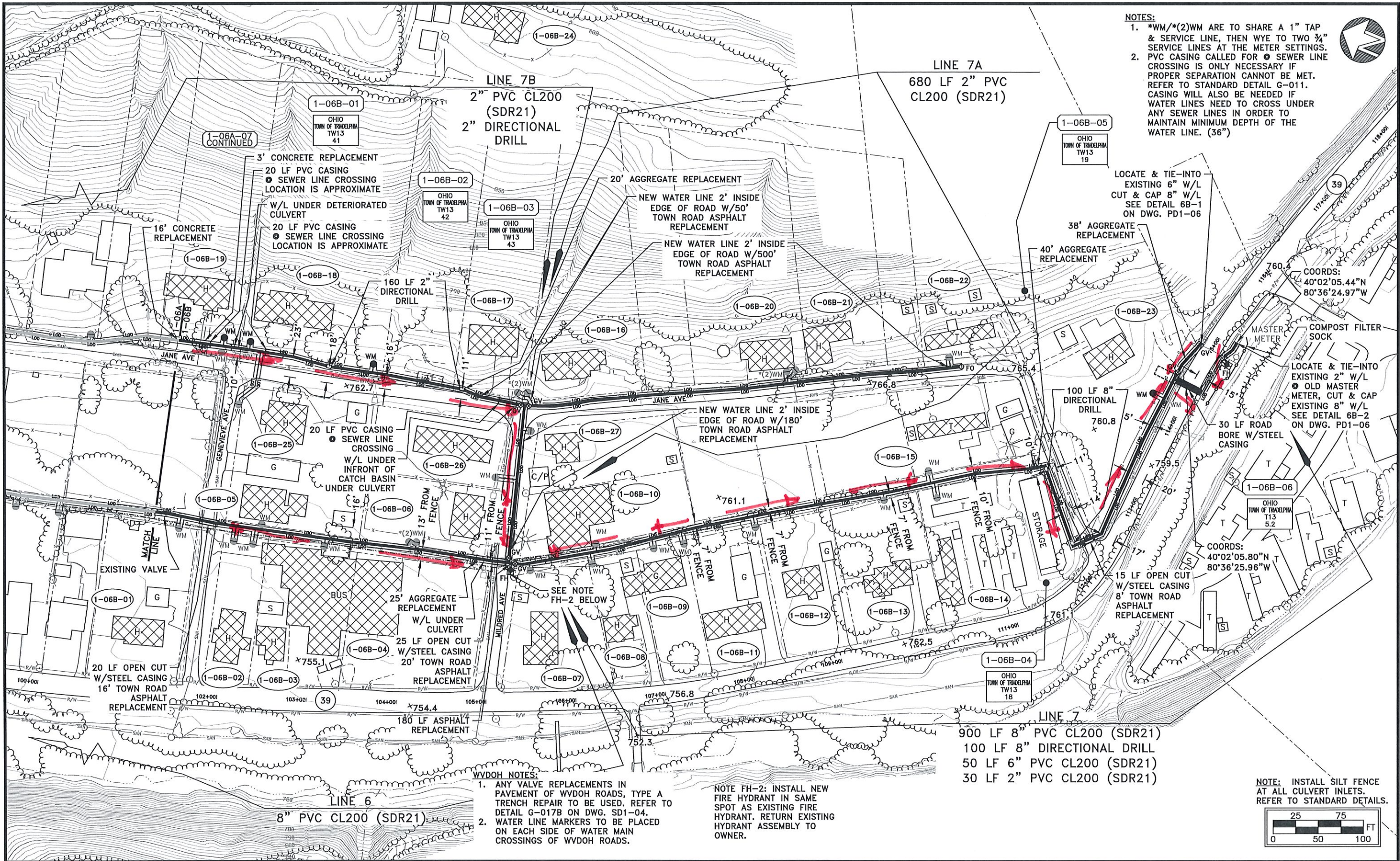
FIELD LAYOUT
DRAWN BY RLR
CONST CHECKED BY
RECORD CHECKED BY
ISSUE DATE 10-1-2021



DRAWING TITLE

TOWN OF TRIADELPHIA
OHIO COUNTY, WEST VIRGINIA
WATER SYSTEM IMPROVEMENTS
LINES 5, 5A, 5B, 6, 6A & 7B
MILLER'S ADDITION (NORTH END)

SCALE GRAPHIC
PROJECT NO. TR20-1W
DRAWING NO. 1-06A



- NOTES:**
- *WM/(2)WM ARE TO SHARE A 1" TAP & SERVICE LINE, THEN WYE TO TWO 3/4" SERVICE LINES AT THE METER SETTINGS.
 - PVC CASING CALLED FOR @ SEWER LINE CROSSING IS ONLY NECESSARY IF PROPER SEPARATION CANNOT BE MET. REFER TO STANDARD DETAIL G-011. CASING WILL ALSO BE NEEDED IF WATER LINES NEED TO CROSS UNDER ANY SEWER LINES IN ORDER TO MAINTAIN MINIMUM DEPTH OF THE WATER LINE. (36")

- WYDOH NOTES:**
- ANY VALVE REPLACEMENTS IN PAVEMENT OF WYDOH ROADS, TYPE A TRENCH REPAIR TO BE USED. REFER TO DETAIL G-017B ON DWG. SD1-04.
 - WATER LINE MARKERS TO BE PLACED ON EACH SIDE OF WATER MAIN CROSSINGS OF WYDOH ROADS.

NOTE FH-2: INSTALL NEW FIRE HYDRANT IN SAME SPOT AS EXISTING FIRE HYDRANT. RETURN EXISTING HYDRANT ASSEMBLY TO OWNER.

NOTE: INSTALL SILT FENCE AT ALL CULVERT INLETS. REFER TO STANDARD DETAILS.

NO.	DATE	REVISION	BY
7	08-2025	ADDED COMPOST FILTER SOCK	RJR
6	04/2025	ADDED 10' SILT FENCE TO LINE 7 AS PER TOWN REQUEST	RJR
5	04/2025	MOVED SECTION OF LINE FROM PAVEMENT 1-06B-05 ACROSS JANE AVE TO 1-06B-04	RJR
4	09-2025	PUT LINE ACROSS PAVEMENT 1-06B-05 BACK IN ORIGINAL LOCATION AS PER THE TOWN	RJR
3	04-2025	ADDED THE REMOVAL NOTE TO PAVEMENT 1-06B-05 & OPENED LINE ACROSS PROPERTY AS PER LANDOWNER. UPDATED LINE LENGTH OF LINE 7	RJR

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CONSULTING ENGINEERS • WATER & WASTEWATER SYSTEMS
97-14TH STREET, WHEELING, WV 26003-2497

FIELD LAYOUT	
DRAWN BY	RJR
CONST CHECKED BY	
RECORD CHECKED BY	
ISSUE DATE	10-1-2021



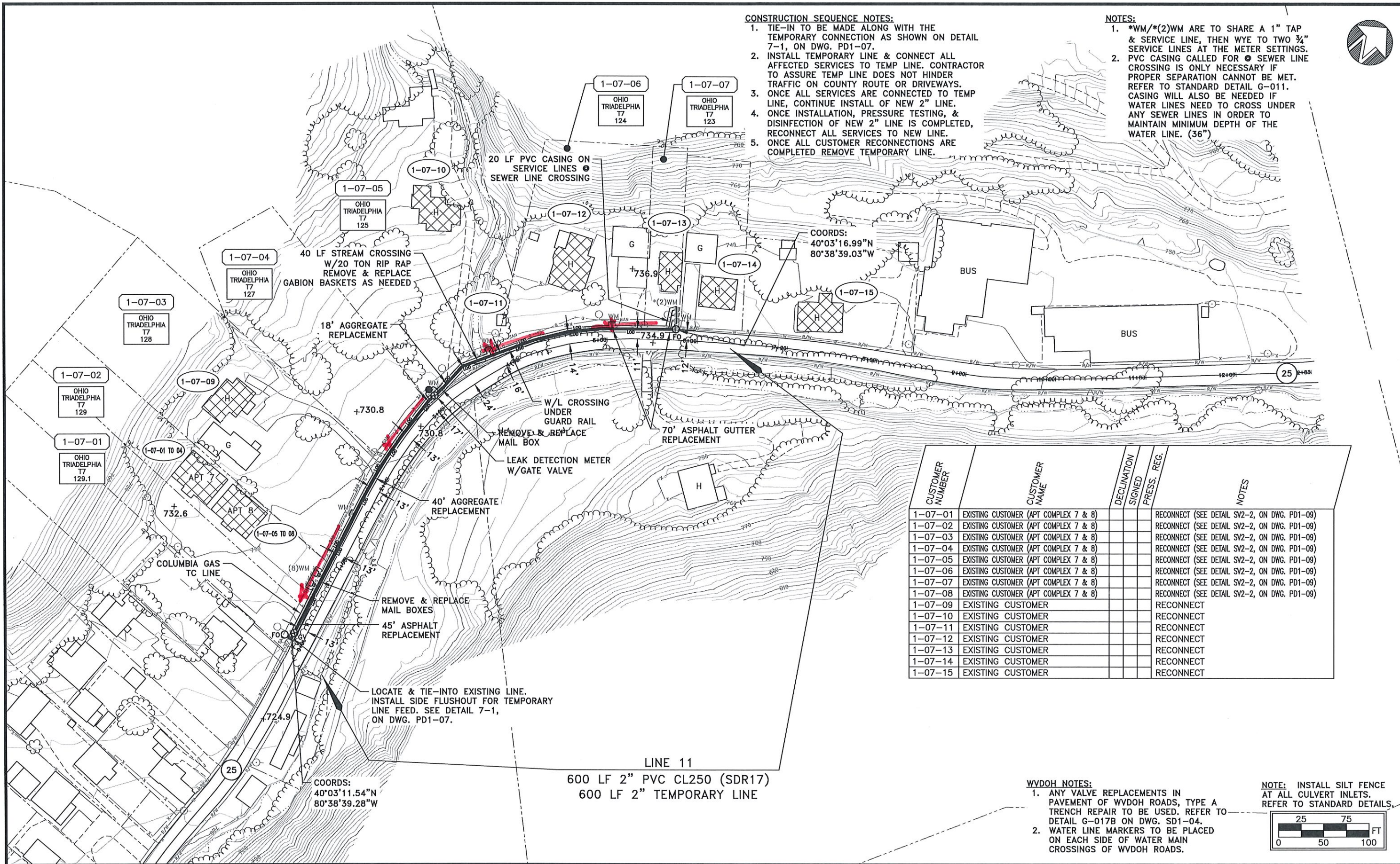
DRAWING TITLE	TOWN OF TRIADELPHIA OHIO COUNTY, WEST VIRGINIA WATER SYSTEM IMPROVEMENTS	SCALE GRAPHIC
	LINES 6, 7, 7A, & 7B MILLER'S ADDITION (SOUTH END)	PROJECT NO. TR20-1W
		DRAWING NO. 1-06B

CONSTRUCTION SEQUENCE NOTES:

1. TIE-IN TO BE MADE ALONG WITH THE TEMPORARY CONNECTION AS SHOWN ON DETAIL 7-1, ON DWG. PD1-07.
2. INSTALL TEMPORARY LINE & CONNECT ALL AFFECTED SERVICES TO TEMP LINE. CONTRACTOR TO ASSURE TEMP LINE DOES NOT HINDER TRAFFIC ON COUNTY ROUTE OR DRIVEWAYS.
3. ONCE ALL SERVICES ARE CONNECTED TO TEMP LINE, CONTINUE INSTALL OF NEW 2" LINE.
4. ONCE INSTALLATION, PRESSURE TESTING, & DISINFECTION OF NEW 2" LINE IS COMPLETED, RECONNECT ALL SERVICES TO NEW LINE. ONCE ALL CUSTOMER RECONNECTIONS ARE COMPLETED REMOVE TEMPORARY LINE.

NOTES:

1. *WM/(2)WM ARE TO SHARE A 1" TAP & SERVICE LINE, THEN WYE TO TWO 3/4" SERVICE LINES AT THE METER SETTINGS. PVC CASING CALLED FOR @ SEWER LINE CROSSING IS ONLY NECESSARY IF PROPER SEPARATION CANNOT BE MET. REFER TO STANDARD DETAIL G-011. CASING WILL ALSO BE NEEDED IF WATER LINES NEED TO CROSS UNDER ANY SEWER LINES IN ORDER TO MAINTAIN MINIMUM DEPTH OF THE WATER LINE. (36")

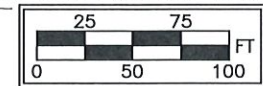


CUSTOMER NUMBER	CUSTOMER NAME	DECLINATION	SIGNED	PRESS. REG.	NOTES
1-07-01	EXISTING CUSTOMER (APT COMPLEX 7 & 8)				RECONNECT (SEE DETAIL SV2-2, ON DWG. PD1-09)
1-07-02	EXISTING CUSTOMER (APT COMPLEX 7 & 8)				RECONNECT (SEE DETAIL SV2-2, ON DWG. PD1-09)
1-07-03	EXISTING CUSTOMER (APT COMPLEX 7 & 8)				RECONNECT (SEE DETAIL SV2-2, ON DWG. PD1-09)
1-07-04	EXISTING CUSTOMER (APT COMPLEX 7 & 8)				RECONNECT (SEE DETAIL SV2-2, ON DWG. PD1-09)
1-07-05	EXISTING CUSTOMER (APT COMPLEX 7 & 8)				RECONNECT (SEE DETAIL SV2-2, ON DWG. PD1-09)
1-07-06	EXISTING CUSTOMER (APT COMPLEX 7 & 8)				RECONNECT (SEE DETAIL SV2-2, ON DWG. PD1-09)
1-07-07	EXISTING CUSTOMER (APT COMPLEX 7 & 8)				RECONNECT (SEE DETAIL SV2-2, ON DWG. PD1-09)
1-07-08	EXISTING CUSTOMER (APT COMPLEX 7 & 8)				RECONNECT (SEE DETAIL SV2-2, ON DWG. PD1-09)
1-07-09	EXISTING CUSTOMER				RECONNECT
1-07-10	EXISTING CUSTOMER				RECONNECT
1-07-11	EXISTING CUSTOMER				RECONNECT
1-07-12	EXISTING CUSTOMER				RECONNECT
1-07-13	EXISTING CUSTOMER				RECONNECT
1-07-14	EXISTING CUSTOMER				RECONNECT
1-07-15	EXISTING CUSTOMER				RECONNECT

WYDOH NOTES:

1. ANY VALVE REPLACEMENTS IN PAVEMENT OF WYDOH ROADS, TYPE A TRENCH REPAIR TO BE USED. REFER TO DETAIL G-017B ON DWG. SD1-04.
2. WATER LINE MARKERS TO BE PLACED ON EACH SIDE OF WATER MAIN CROSSINGS OF WYDOH ROADS.

NOTE: INSTALL SILT FENCE AT ALL CULVERT INLETS. REFER TO STANDARD DETAILS.



NO.	DATE	REVISION	BY
5	09-2025	ADDED LEXINGTON PER AS PER TOWN REQUEST	RF
2	01-2025	ADDED COORDINATES NOTE & WYDOH NOTES AS PER WYDOH REQUEST	RF
1	10-2022	DRAWING CREATED	RF

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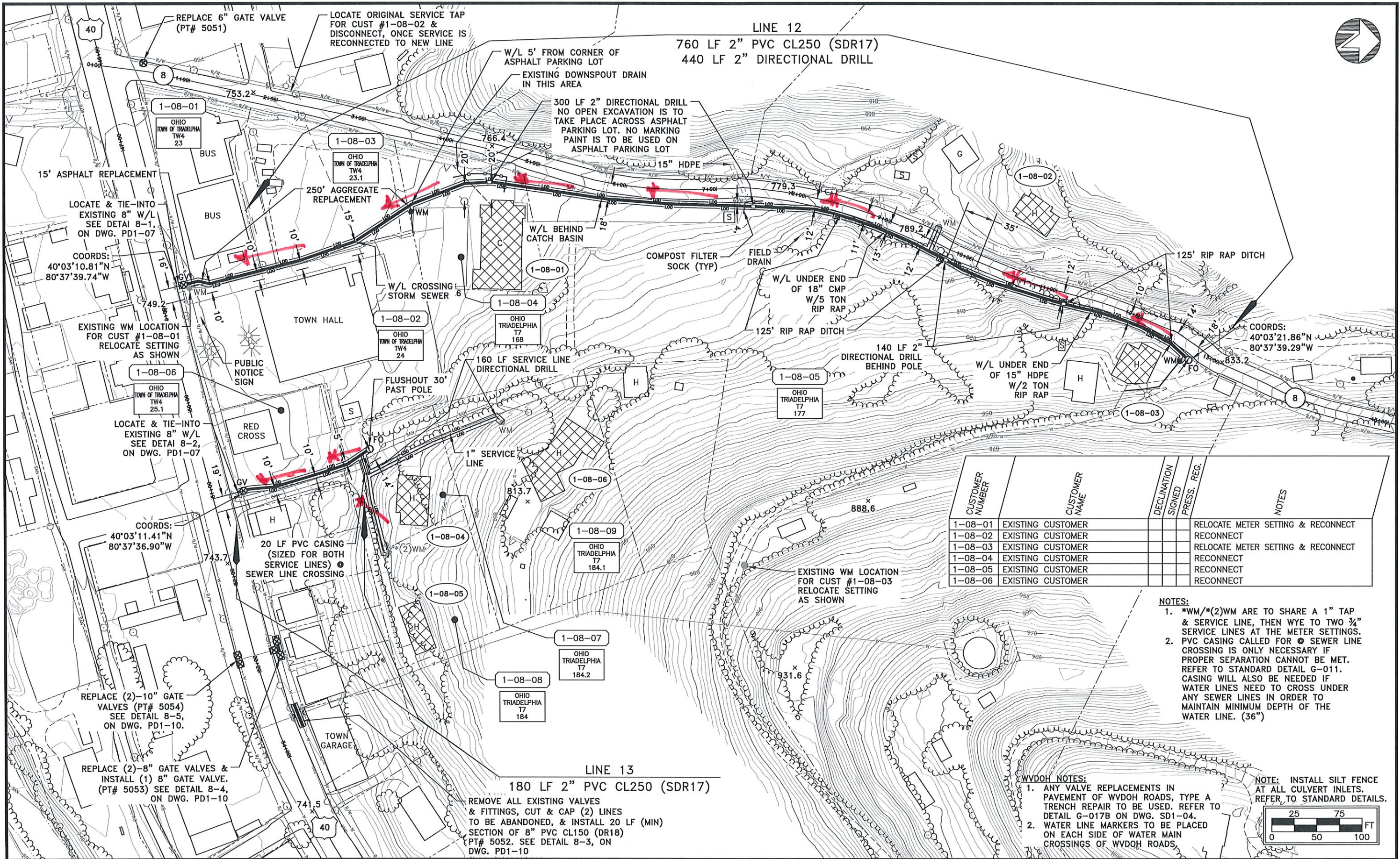


CERRONE ASSOCIATES, INC.
CONSULTING ENGINEERS • WATER & WASTEWATER SYSTEMS
97-14TH STREET, WHEELING, WV 26003-2497

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CONST CHECKED BY	
RECORD CHECKED BY	
ISSUE DATE	10-1-2021



TOWN OF TRIADELPHIA OHIO COUNTY, WEST VIRGINIA WATER SYSTEM IMPROVEMENTS		SCALE GRAPHIC
DRAWING TITLE LINE 11 PETERS RUN RD (CR 25)		PROJECT NO. TR20-1W
		DRAWING NO. 1-07

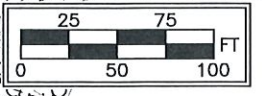


CUSTOMER NUMBER	CUSTOMER NAME	DECLINATION SIGNED	PRESS. REG.	NOTES
1-08-01	EXISTING CUSTOMER			RELOCATE METER SETTING & RECONNECT
1-08-02	EXISTING CUSTOMER			RECONNECT
1-08-03	EXISTING CUSTOMER			RELOCATE METER SETTING & RECONNECT
1-08-04	EXISTING CUSTOMER			RECONNECT
1-08-05	EXISTING CUSTOMER			RECONNECT
1-08-06	EXISTING CUSTOMER			RECONNECT

- NOTES:**
- *WM/(2)WM ARE TO SHARE A 1" TAP & SERVICE LINE, THEN WYE TO TWO 3/4" SERVICE LINES AT THE METER SETTINGS.
 - PVC CASING CALLED FOR @ SEWER LINE CROSSING IS ONLY NECESSARY IF PROPER SEPARATION CANNOT BE MET. REFER TO STANDARD DETAIL G-011. CASING WILL ALSO BE NEEDED IF WATER LINES NEED TO CROSS UNDER ANY SEWER LINES IN ORDER TO MAINTAIN MINIMUM DEPTH OF THE WATER LINE. (36")

- WVDOH NOTES:**
- ANY VALVE REPLACEMENTS IN PAVEMENT ON WVDOH ROADS, TYPE A TRENCH REPAIR TO BE USED. REFER TO DETAIL G-017B ON DWG. SD1-04.
 - WATER LINE MARKERS TO BE PLACED ON EACH SIDE OF WATER MAIN CROSSINGS OF WVDOH ROADS.

NOTE: INSTALL SILT FENCE AT ALL CULVERT INLETS. REFER TO STANDARD DETAILS.



NO.	DATE	REVISION	BY
5	08-2025	ADDED COMPOST FILTER SOCK	RLR
4	08-2025	ADDED PUBLIC NOTICE SIGN LOCATION AT TOWN HALL	RLR
3	04-2025	ADDED DOWNSPOUT DRAIN @ CHURCH / ADDED NOTES TO 500' END OF LINE 12, TO AVOID NO DRIVAGE IS PLACED TO ASPHALT PAVING AREA, AS PER REQUEST OF CHURCH	RLR
2	04-2025	ADDED COORDINATES NOTE & WVDON NOTES AS PER WVDON REQUEST	RLR
1	03-2022	DRAWING CREATED	RLR

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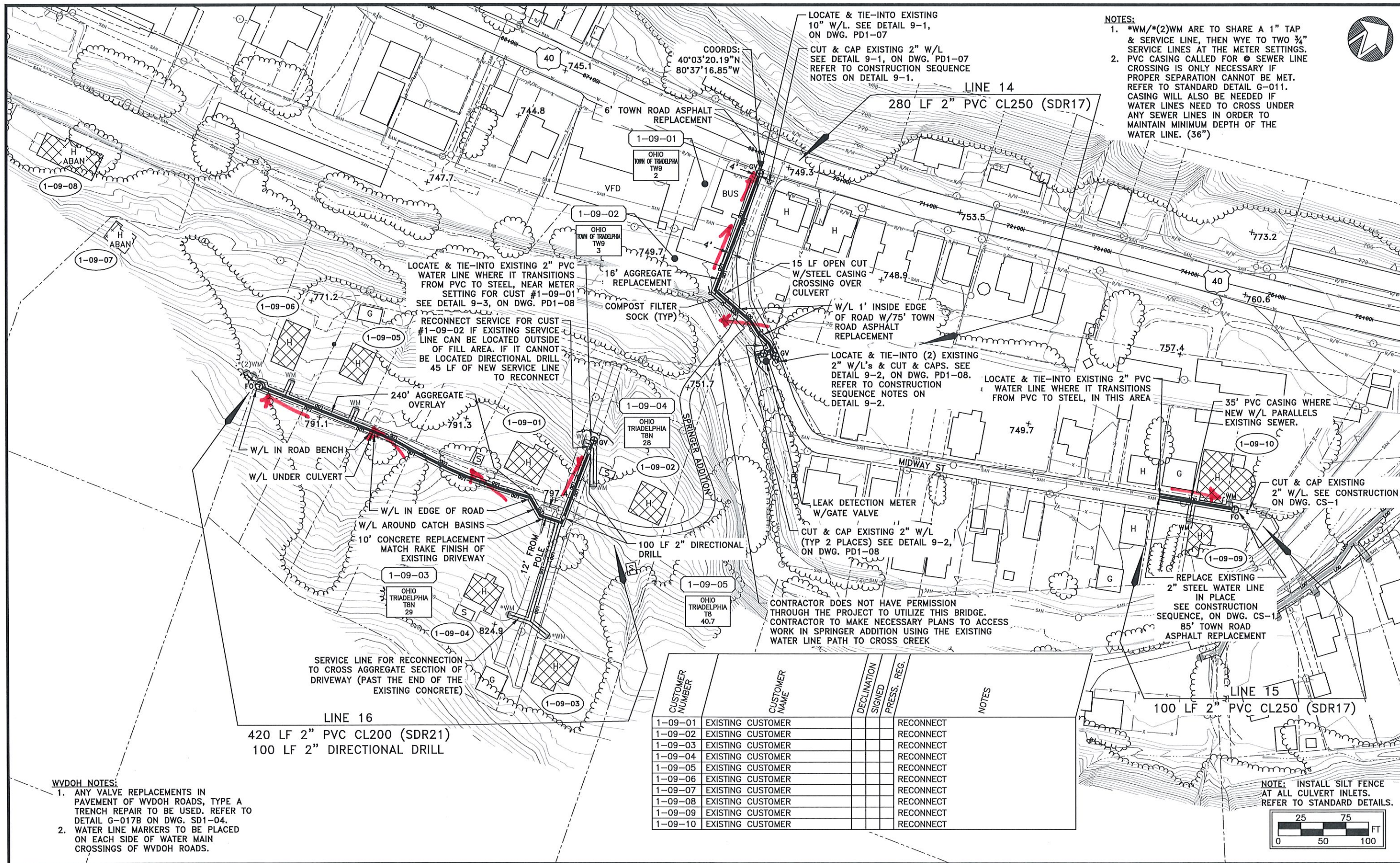
FIELD LAYOUT	
DRAWN BY	RLR
CONST CHECKED BY	
RECORD CHECKED BY	
ISSUE DATE	10-1-2021



TOWN OF TRIADELPHIA
OHIO COUNTY, WEST VIRGINIA
WATER SYSTEM IMPROVEMENTS

DRAWING TITLE: LINE 12 - CHAPEL HILL RD (CR 8)
LINE 13 - SYLVAN SPRING DR

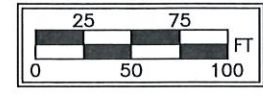
SCALE: GRAPHIC
PROJECT NO.: TR20-1W
DRAWING NO.: 1-08



- NOTES:**
- *WM/(2)WM ARE TO SHARE A 1" TAP & SERVICE LINE, THEN WYE TO TWO 3/4" SERVICE LINES AT THE METER SETTINGS.
 - PVC CASING CALLED FOR @ SEWER LINE CROSSING IS ONLY NECESSARY IF PROPER SEPARATION CANNOT BE MET. REFER TO STANDARD DETAIL G-011. CASING WILL ALSO BE NEEDED IF WATER LINES NEED TO CROSS UNDER ANY SEWER LINES IN ORDER TO MAINTAIN MINIMUM DEPTH OF THE WATER LINE. (36")

- WYDOH NOTES:**
- ANY VALVE REPLACEMENTS IN PAVEMENT OF WYDOH ROADS, TYPE A TRENCH REPAIR TO BE USED. REFER TO DETAIL G-017B ON DWG. SD1-04.
 - WATER LINE MARKERS TO BE PLACED ON EACH SIDE OF WATER MAIN CROSSINGS OF WYDOH ROADS.

CUSTOMER NUMBER	CUSTOMER NAME	DECLINATION SIGNED	PRESS. REG.	NOTES
1-09-01	EXISTING CUSTOMER			RECONNECT
1-09-02	EXISTING CUSTOMER			RECONNECT
1-09-03	EXISTING CUSTOMER			RECONNECT
1-09-04	EXISTING CUSTOMER			RECONNECT
1-09-05	EXISTING CUSTOMER			RECONNECT
1-09-06	EXISTING CUSTOMER			RECONNECT
1-09-07	EXISTING CUSTOMER			RECONNECT
1-09-08	EXISTING CUSTOMER			RECONNECT
1-09-09	EXISTING CUSTOMER			RECONNECT
1-09-10	EXISTING CUSTOMER			RECONNECT



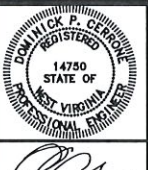
NO.	DATE	REVISION	BY
5	08-2025	ADDED COMPOST FILTER SOCK	RJR
4	04-2025	SHIF END OF LINE FO	RJR
3	04-2025	ADDED NOTES FOR CONCRETE DRIVE OF CUSTOMER #1-09-04	RJR
2	04-2025	ADDED COORDINATES NOTE & WYDOH NOTES AS PER WYDOH REQUEST	RJR
1	10-2022	DRAWING OBTAIN	RJR

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97-14TH STREET, WHEELING, WV 26003-2497

FIELD LAYOUT
DRAWN BY RJR
CONST CHECKED BY
RECORD CHECKED BY
ISSUE DATE 10-1-2021



DRAWING TITLE
LINE 14 & 15 - MIDWAY ST
LINE 16 - SPRINGER ADDITION

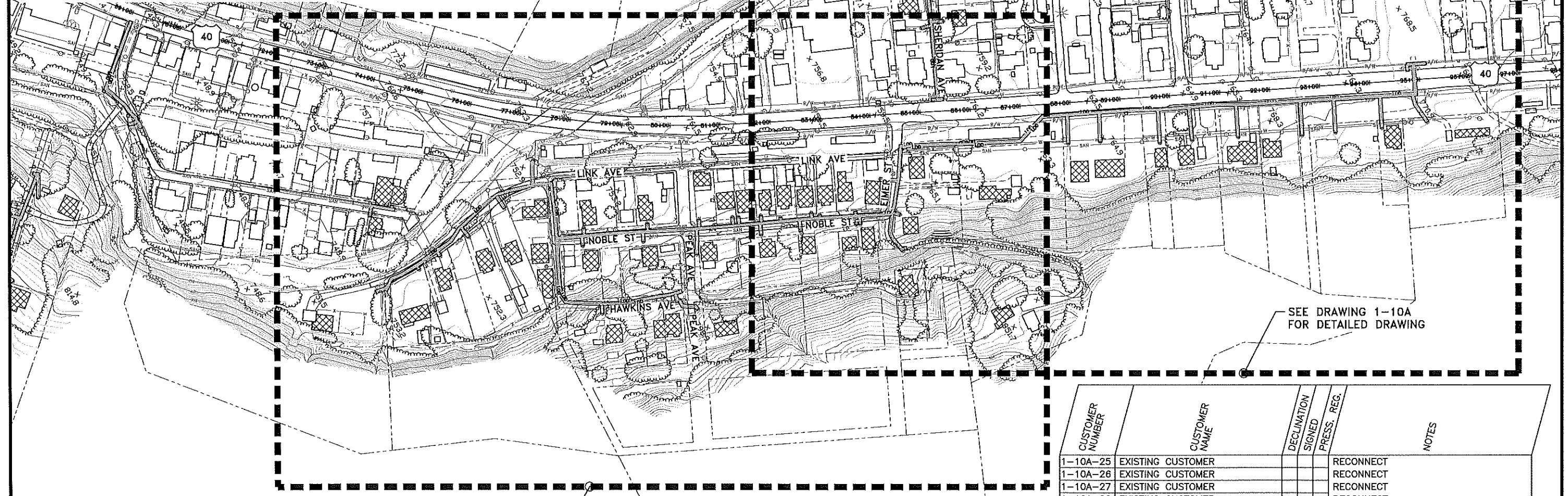
TOWN OF TRIADELPHIA
OHIO COUNTY, WEST VIRGINIA
WATER SYSTEM IMPROVEMENTS

SCALE GRAPHIC
PROJECT NO. TR20-1W
DRAWING NO. 1-09



CUSTOMER NUMBER	CUSTOMER NAME	DECLINATION SIGNED	PRESS. REG.	NOTES
1-10A-01	EXISTING CUSTOMER			RECONNECT
1-10A-02	EXISTING CUSTOMER			RECONNECT
1-10A-03	EXISTING CUSTOMER			RECONNECT
1-10A-04	EXISTING CUSTOMER			RECONNECT
1-10A-05	EXISTING CUSTOMER			RECONNECT
1-10A-06	EXISTING CUSTOMER			RECONNECT
1-10A-07	EXISTING CUSTOMER			RECONNECT
1-10A-08	EXISTING CUSTOMER			RECONNECT
1-10A-09	EXISTING CUSTOMER			RECONNECT
1-10A-10	EXISTING CUSTOMER			RECONNECT
1-10A-11	EXISTING CUSTOMER			RECONNECT
1-10A-12	EXISTING CUSTOMER			RECONNECT
1-10A-13	EXISTING CUSTOMER			RECONNECT
1-10A-14	EXISTING CUSTOMER			RECONNECT
1-10A-15	EXISTING CUSTOMER			RECONNECT
1-10A-16	EXISTING CUSTOMER			RECONNECT

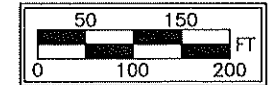
CUSTOMER NUMBER	CUSTOMER NAME	DECLINATION SIGNED	PRESS. REG.	NOTES
1-10A-17	EXISTING CUSTOMER			RECONNECT
1-10A-18	EXISTING CUSTOMER			RECONNECT
1-10A-19	EXISTING CUSTOMER			RECONNECT
1-10A-20	EXISTING CUSTOMER			RECONNECT
1-10A-21	EXISTING CUSTOMER			RECONNECT
1-10A-22	EXISTING CUSTOMER			RECONNECT
1-10A-23	EXISTING CUSTOMER			RECONNECT
1-10A-24	EXISTING CUSTOMER			RECONNECT



SEE DRAWING 1-10A FOR DETAILED DRAWING

SEE DRAWING 1-10A FOR DETAILED DRAWING

CUSTOMER NUMBER	CUSTOMER NAME	DECLINATION SIGNED	PRESS. REG.	NOTES
1-10A-25	EXISTING CUSTOMER			RECONNECT
1-10A-26	EXISTING CUSTOMER			RECONNECT
1-10A-27	EXISTING CUSTOMER			RECONNECT
1-10A-28	EXISTING CUSTOMER			RECONNECT
1-10A-29	EXISTING CUSTOMER			RECONNECT
1-10A-30	EXISTING CUSTOMER			RECONNECT
1-10A-31	EXISTING CUSTOMER			RECONNECT
1-10A-32	EXISTING CUSTOMER			RECONNECT
1-10A-33	EXISTING CUSTOMER			RECONNECT
1-10A-34	EXISTING CUSTOMER			RECONNECT (SEE DRAWING NOTE)



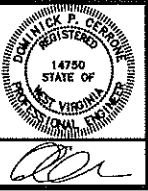
NO.	DATE	REVISION	BY
2	05-2023	ISSUED	RLR
1	10-2022	DESIGN/GRAPHIC	RLR

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CERRONE ASSOCIATES, INC.
CONSULTING ENGINEERS • WATER & WASTEWATER SYSTEMS
97-14TH STREET, WHEELING, WV 26003-2497

FIELD LAYOUT
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CONST. CHECKED BY
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ISSUE DATE 10-1-2021

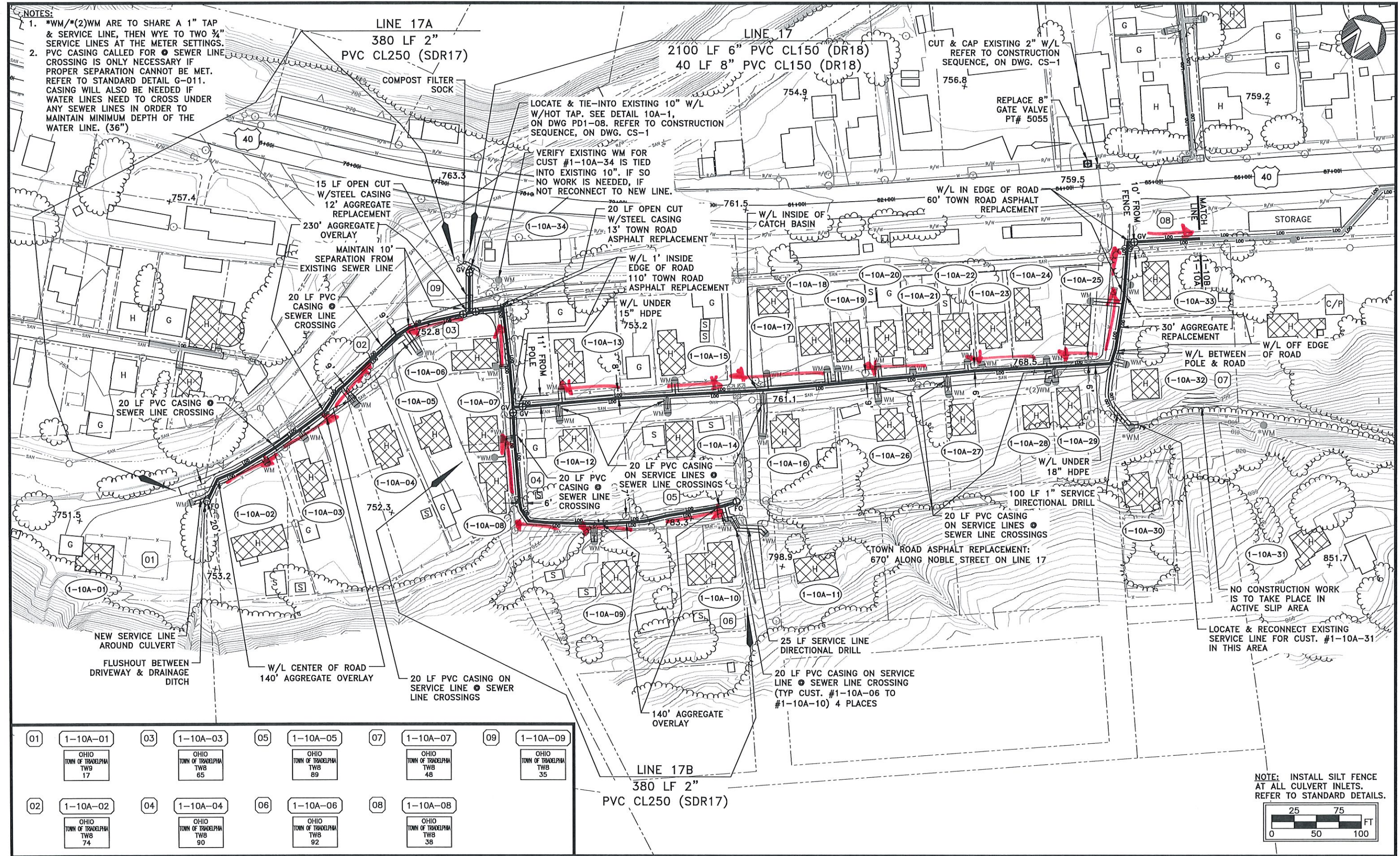


TOWN OF TRIADELPHIA
OHIO COUNTY, WEST VIRGINIA
WATER SYSTEM IMPROVEMENTS

DRAWING TITLE
**SIMMS NESBITT ADDITION,
US ROUTE 40, & SHERIDAN AVE - OVERALL
CUSTOMER LIST FOR 1-10A**

SCALE GRAPHIC
PROJECT NO. TR20-1W
DRAWING NO. **1-10**

NOTES:
 1. *WM/(2)WM ARE TO SHARE A 1" TAP & SERVICE LINE, THEN WYE TO TWO 3/4" SERVICE LINES AT THE METER SETTINGS.
 2. PVC CASING CALLED FOR SEWER LINE CROSSING IS ONLY NECESSARY IF PROPER SEPARATION CANNOT BE MET. REFER TO STANDARD DETAIL G-011. CASING WILL ALSO BE NEEDED IF WATER LINES NEED TO CROSS UNDER ANY SEWER LINES IN ORDER TO MAINTAIN MINIMUM DEPTH OF THE WATER LINE. (36")



01	1-10A-01	03	1-10A-03	05	1-10A-05	07	1-10A-07	09	1-10A-09
02	1-10A-02	04	1-10A-04	06	1-10A-06	08	1-10A-08		

NOTE: INSTALL SILT FENCE AT ALL CULVERT INLETS. REFER TO STANDARD DETAILS.

NO.	DATE	REVISION	BY
5	08-2025	ADDED COMPOST FILTER SOCK	RF
2	09-2025	ADDED 8\"/>	

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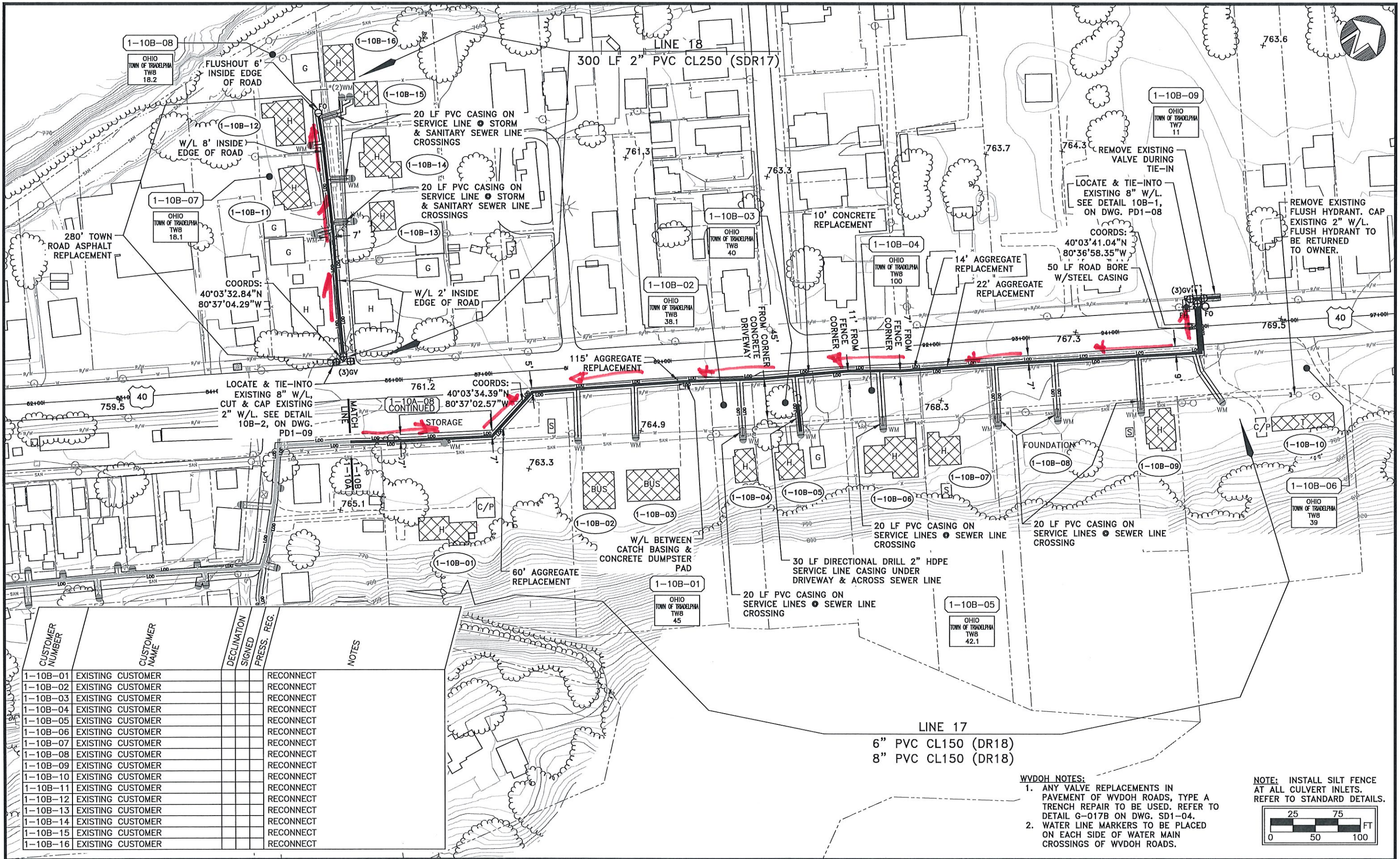


CERRONE ASSOCIATES, INC.
 CONSULTING ENGINEERS • WATER & WASTEWATER SYSTEMS
 97-14TH STREET, WHEELING, WV 26003-2497

FIELD LAYOUT
 DRAWN BY RLR
 CONST CHECKED BY
 RECORD CHECKED BY
 ISSUE DATE 10-1-2021



DRAWING TITLE	TOWN OF TRIADELPHIA OHIO COUNTY, WEST VIRGINIA WATER SYSTEM IMPROVEMENTS	SCALE GRAPHIC
	LINES 17, 17A, & 17B LINK AVE, NOBLE ST, HAWKINS AVE, EIMER ST, & US ROUTE 40	PROJECT NO. TR20-1W
		DRAWING NO. 1-10A



CUSTOMER NUMBER	CUSTOMER NAME	DECLINATION SIGNED	PRESS. REG.	NOTES
1-10B-01	EXISTING CUSTOMER			RECONNECT
1-10B-02	EXISTING CUSTOMER			RECONNECT
1-10B-03	EXISTING CUSTOMER			RECONNECT
1-10B-04	EXISTING CUSTOMER			RECONNECT
1-10B-05	EXISTING CUSTOMER			RECONNECT
1-10B-06	EXISTING CUSTOMER			RECONNECT
1-10B-07	EXISTING CUSTOMER			RECONNECT
1-10B-08	EXISTING CUSTOMER			RECONNECT
1-10B-09	EXISTING CUSTOMER			RECONNECT
1-10B-10	EXISTING CUSTOMER			RECONNECT
1-10B-11	EXISTING CUSTOMER			RECONNECT
1-10B-12	EXISTING CUSTOMER			RECONNECT
1-10B-13	EXISTING CUSTOMER			RECONNECT
1-10B-14	EXISTING CUSTOMER			RECONNECT
1-10B-15	EXISTING CUSTOMER			RECONNECT
1-10B-16	EXISTING CUSTOMER			RECONNECT

WVDOH NOTES:

- ANY VALVE REPLACEMENTS IN PAVEMENT OF WVDOH ROADS, TYPE A TRENCH REPAIR TO BE USED. REFER TO DETAIL G-017B ON DWG. SD1-04.
- WATER LINE MARKERS TO BE PLACED ON EACH SIDE OF WATER MAIN CROSSINGS OF WVDOH ROADS.

NOTE: INSTALL SILT FENCE AT ALL CULVERT INLETS. REFER TO STANDARD DETAILS.

NO.	DATE	REVISION	BY
5	04-2025	MOVED MAINLINE OFF OF EXISTING 12" CL18 PER TOWN REQUEST	RLR
4	04-2025	SHIFTED LINE FROM 5' OFF OF STORAGE BUILDING TO 1' @ REQUEST OF PROPERTY OWNER	RLR
3	05-2025	CHANGED BE BUS REPAIR INFO, ADDED NOTE ABOUT VALVE REPAIR @ BE-IN	RLR
2	04-2025	ADDED COORDINATES NOTE & W/DOH NOTES AS PER W/DOH REQUEST	RLR
1	10-2022	DRAWING CREATED	RLR

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CONSULTING ENGINEERS • WATER & WASTEWATER SYSTEMS
97-14TH STREET, WHEELING, WV 26003-2497

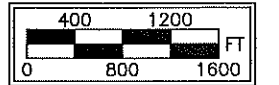
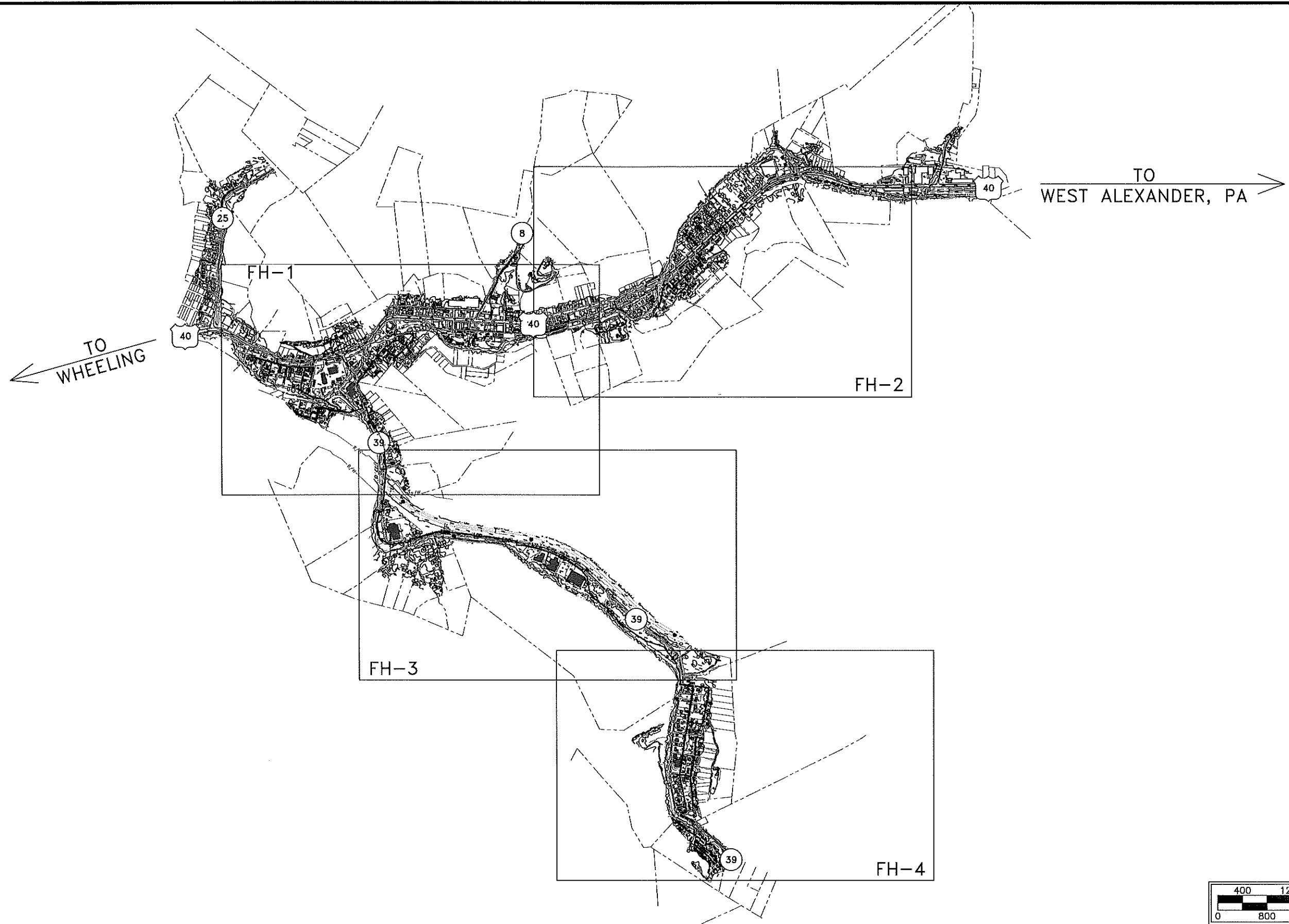
FIELD LAYOUT
DRAWN BY RLR
CONST CHECKED BY
RECORD CHECKED BY
ISSUE DATE 10-1-2021



DRAWING TITLE: **TOWN OF TRIADELPHIA**
OHIO COUNTY, WEST VIRGINIA
WATER SYSTEM IMPROVEMENTS

DRAWING TITLE: **LINES 17 - US ROUTE 40**
LINE 18 - SHERIDAN AVE

SCALE: GRAPHIC
PROJECT NO. TR20-1W
DRAWING NO. **1-10B**



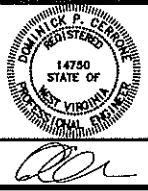
NO.	DATE	REVISION	BY
1	10-1-2021	ISSUE	RLR

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97-14TH STREET, WHEELING, WV 26003-2497

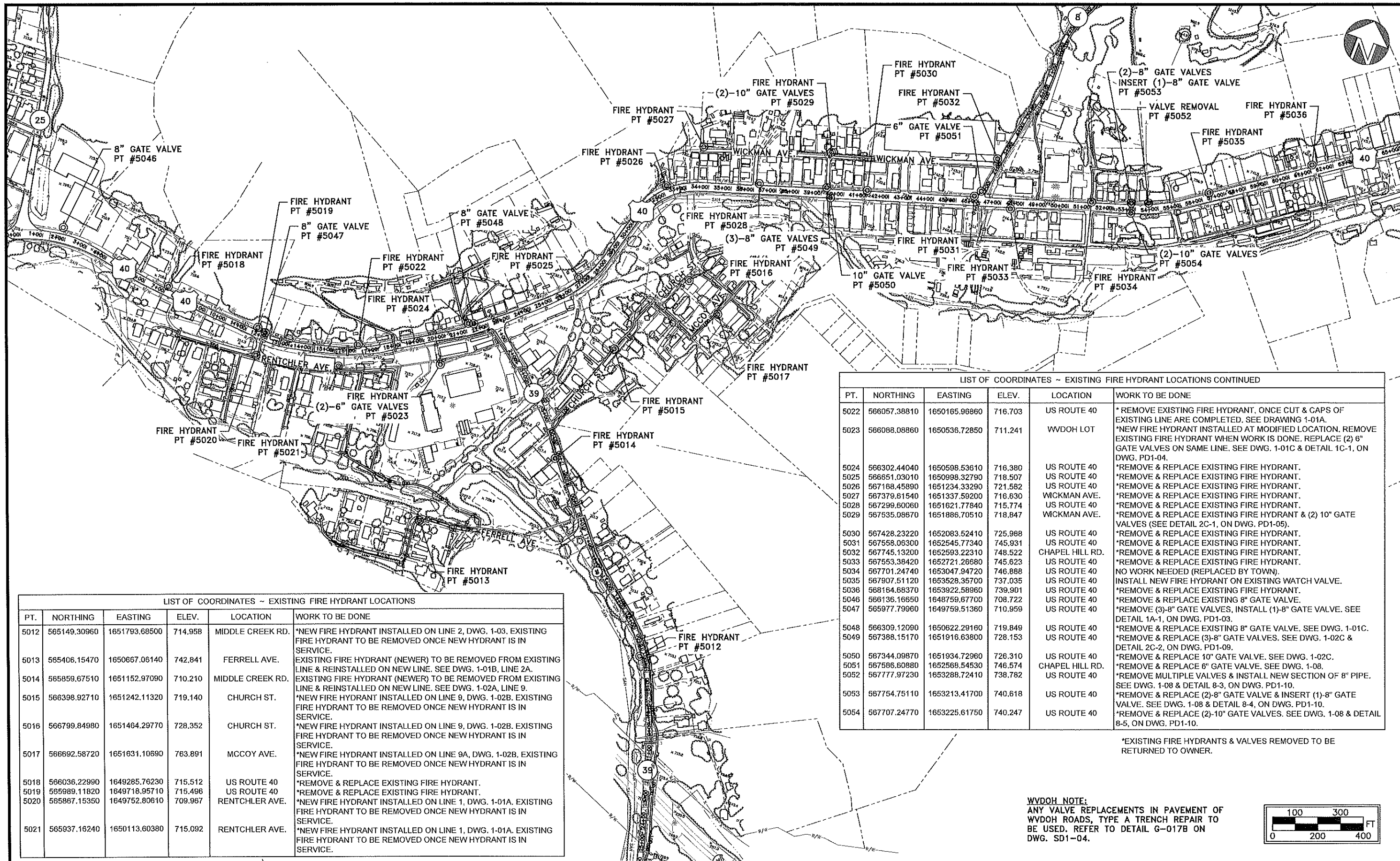
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TOWN OF TRIADELPHIA
OHIO COUNTY, WEST VIRGINIA
WATER SYSTEM IMPROVEMENTS

DRAWING TITLE
FIRE HYDRANT & VALVE REPLACEMENTS INDEX MAP

SCALE GRAPHIC
PROJECT NO. TR20-1W
DRAWING NO. FH-INDEX

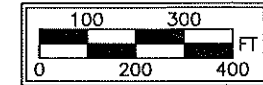


LIST OF COORDINATES ~ EXISTING FIRE HYDRANT LOCATIONS CONTINUED

PT.	NORTHING	EASTING	ELEV.	LOCATION	WORK TO BE DONE
5022	566057.38810	1650165.96860	716.703	US ROUTE 40	* REMOVE EXISTING FIRE HYDRANT, ONCE CUT & CAPS OF EXISTING LINE ARE COMPLETED. SEE DRAWING 1-01A.
5023	566088.08860	1650536.72850	711.241	WVDOH LOT	* NEW FIRE HYDRANT INSTALLED AT MODIFIED LOCATION. REMOVE EXISTING FIRE HYDRANT WHEN WORK IS DONE. REPLACE (2) 6" GATE VALVES ON SAME LINE. SEE DWG. 1-01C & DETAIL 1C-1, ON DWG. PD1-04.
5024	566302.44040	1650598.53610	716.380	US ROUTE 40	* REMOVE & REPLACE EXISTING FIRE HYDRANT.
5025	566651.03010	1650998.32790	718.507	US ROUTE 40	* REMOVE & REPLACE EXISTING FIRE HYDRANT.
5026	567168.45890	1651234.33290	721.582	US ROUTE 40	* REMOVE & REPLACE EXISTING FIRE HYDRANT.
5027	567379.61540	1651337.59200	716.630	WICKMAN AVE.	* REMOVE & REPLACE EXISTING FIRE HYDRANT.
5028	567299.60060	1651621.77840	715.774	US ROUTE 40	* REMOVE & REPLACE EXISTING FIRE HYDRANT.
5029	567535.08670	1651886.70510	718.847	WICKMAN AVE.	* REMOVE & REPLACE EXISTING FIRE HYDRANT & (2) 10" GATE VALVES (SEE DETAIL 2C-1, ON DWG. PD1-05).
5030	567428.23220	1652083.52410	725.988	US ROUTE 40	* REMOVE & REPLACE EXISTING FIRE HYDRANT.
5031	567558.06300	1652545.77340	745.931	US ROUTE 40	* REMOVE & REPLACE EXISTING FIRE HYDRANT.
5032	567745.13200	1652593.22310	748.522	CHapel Hill Rd.	* REMOVE & REPLACE EXISTING FIRE HYDRANT.
5033	567553.38420	1652721.26680	745.623	US ROUTE 40	* REMOVE & REPLACE EXISTING FIRE HYDRANT.
5034	567701.24740	1653047.94720	746.888	US ROUTE 40	NO WORK NEEDED (REPLACED BY TOWN).
5035	567907.51120	1653528.35700	737.035	US ROUTE 40	INSTALL NEW FIRE HYDRANT ON EXISTING WATCH VALVE.
5036	568164.68370	1653922.58960	739.901	US ROUTE 40	* REMOVE & REPLACE EXISTING FIRE HYDRANT.
5046	568136.16650	1648759.67700	708.722	US ROUTE 40	* REMOVE & REPLACE EXISTING 8" GATE VALVE.
5047	565977.79960	1649759.51360	710.959	US ROUTE 40	* REMOVE (3)-8" GATE VALVES, INSTALL (1)-8" GATE VALVE. SEE DETAIL 1A-1, ON DWG. PD1-03.
5048	566309.12090	1650622.29160	719.849	US ROUTE 40	* REMOVE & REPLACE EXISTING 8" GATE VALVE. SEE DWG. 1-01C.
5049	567388.15170	1651916.63800	728.153	US ROUTE 40	* REMOVE & REPLACE (3)-8" GATE VALVES. SEE DWG. 1-02C & DETAIL 2C-2, ON DWG. PD1-09.
5050	567344.09870	1651934.72960	726.310	US ROUTE 40	* REMOVE & REPLACE 10" GATE VALVE. SEE DWG. 1-02C.
5051	567586.60880	1652568.54530	746.574	CHapel Hill Rd.	* REMOVE & REPLACE 6" GATE VALVE. SEE DWG. 1-08.
5052	567777.97230	1653288.72410	738.782	US ROUTE 40	* REMOVE MULTIPLE VALVES & INSTALL NEW SECTION OF 8" PIPE. SEE DWG. 1-08 & DETAIL 8-3, ON DWG. PD1-10.
5053	567754.75110	1653213.41700	740.618	US ROUTE 40	* REMOVE & REPLACE (2)-8" GATE VALVE & INSERT (1)-8" GATE VALVE. SEE DWG. 1-08 & DETAIL 8-4, ON DWG. PD1-10.
5054	567707.24770	1653225.61750	740.247	US ROUTE 40	* REMOVE & REPLACE (2)-10" GATE VALVES. SEE DWG. 1-08 & DETAIL 8-5, ON DWG. PD1-10.

*EXISTING FIRE HYDRANTS & VALVES REMOVED TO BE RETURNED TO OWNER.

WVDOH NOTE:
ANY VALVE REPLACEMENTS IN PAVEMENT OF WVDOH ROADS, TYPE A TRENCH REPAIR TO BE USED. REFER TO DETAIL G-017B ON DWG. SD1-04.



PT.	NORTHING	EASTING	ELEV.	LOCATION	WORK TO BE DONE
5012	565149.30960	1651793.68500	714.958	MIDDLE CREEK RD.	*NEW FIRE HYDRANT INSTALLED ON LINE 2, DWG. 1-03. EXISTING FIRE HYDRANT TO BE REMOVED ONCE NEW HYDRANT IS IN SERVICE.
5013	565406.15470	1650667.06140	742.841	FERRELL AVE.	EXISTING FIRE HYDRANT (NEWER) TO BE REMOVED FROM EXISTING LINE & REINSTALLED ON NEW LINE. SEE DWG. 1-01B, LINE 2A.
5014	565859.67510	1651152.97090	710.210	MIDDLE CREEK RD.	EXISTING FIRE HYDRANT (NEWER) TO BE REMOVED FROM EXISTING LINE & REINSTALLED ON NEW LINE. SEE DWG. 1-02A, LINE 9.
5015	566398.92710	1651242.11320	719.140	CHURCH ST.	*NEW FIRE HYDRANT INSTALLED ON LINE 9, DWG. 1-02B. EXISTING FIRE HYDRANT TO BE REMOVED ONCE NEW HYDRANT IS IN SERVICE.
5016	566799.84980	1651464.29770	728.352	CHURCH ST.	*NEW FIRE HYDRANT INSTALLED ON LINE 9, DWG. 1-02B. EXISTING FIRE HYDRANT TO BE REMOVED ONCE NEW HYDRANT IS IN SERVICE.
5017	566692.58720	1651631.10690	763.891	MCCOY AVE.	*NEW FIRE HYDRANT INSTALLED ON LINE 9A, DWG. 1-02B. EXISTING FIRE HYDRANT TO BE REMOVED ONCE NEW HYDRANT IS IN SERVICE.
5018	566036.22990	1649285.76230	715.512	US ROUTE 40	*REMOVE & REPLACE EXISTING FIRE HYDRANT.
5019	565989.11820	1649718.95710	715.496	US ROUTE 40	*REMOVE & REPLACE EXISTING FIRE HYDRANT.
5020	565867.15350	1649752.80610	709.967	RENTCHLER AVE.	*NEW FIRE HYDRANT INSTALLED ON LINE 1, DWG. 1-01A. EXISTING FIRE HYDRANT TO BE REMOVED ONCE NEW HYDRANT IS IN SERVICE.
5021	565937.16240	1650113.60380	715.092	RENTCHLER AVE.	*NEW FIRE HYDRANT INSTALLED ON LINE 1, DWG. 1-01A. EXISTING FIRE HYDRANT TO BE REMOVED ONCE NEW HYDRANT IS IN SERVICE.

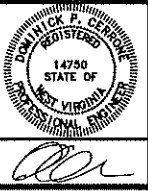
NO.	DATE	REVISION	BY
2	11-2023	WVDOH AS PER WVDOT REQUEST	STP
1	11-2022	ISSUING CHANGE	STP

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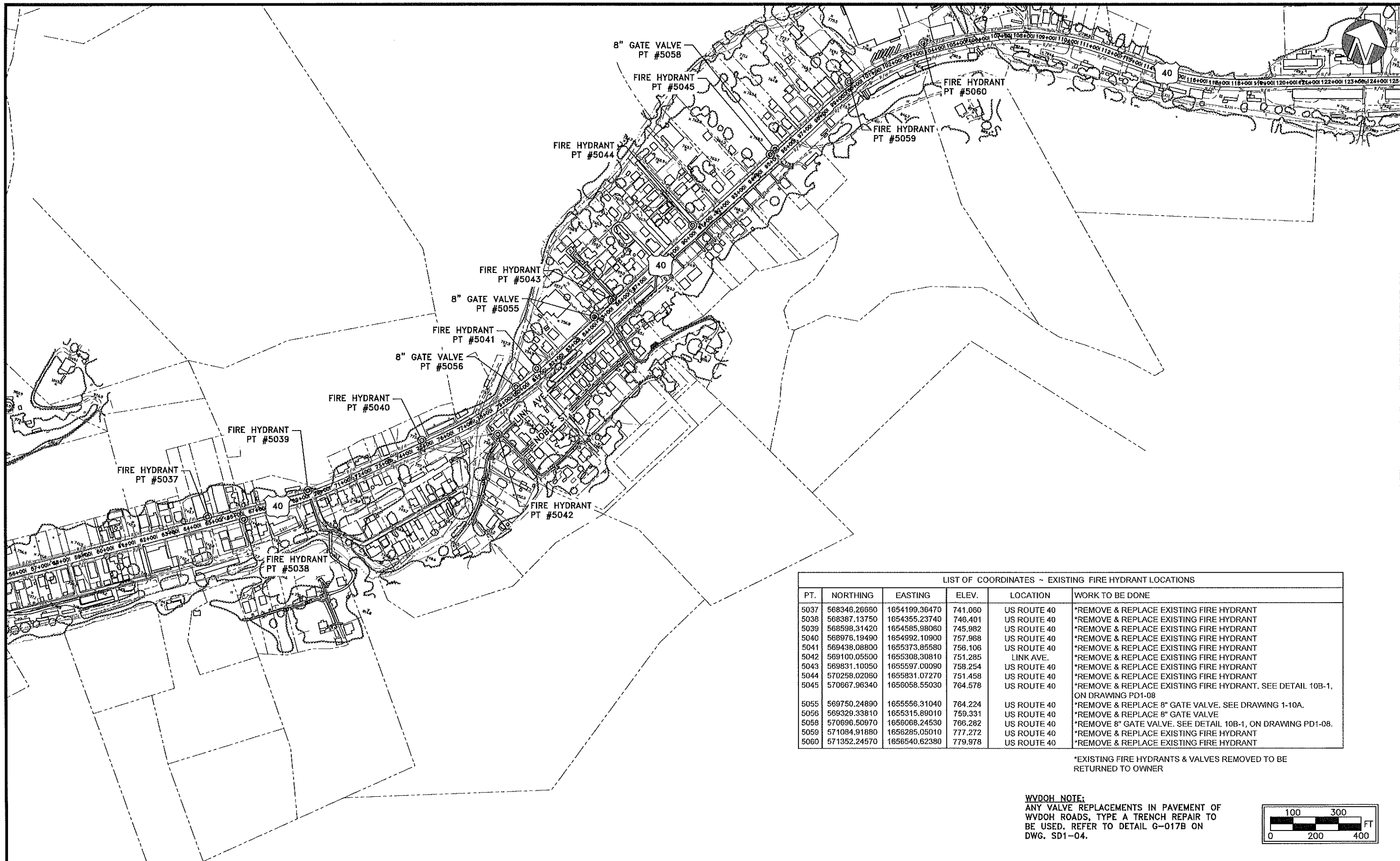


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97-14TH STREET, WHEELING, WV 26003-2497

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CONST CHECKED BY
RECORD CHECKED BY
ISSUE DATE 10-1-2021



TOWN OF TRIADELPHIA OHIO COUNTY, WEST VIRGINIA WATER SYSTEM IMPROVEMENTS		SCALE GRAPHIC
FIRE HYDRANT & VALVE REPLACEMENTS		PROJECT NO. TR20-1W
DRAWING TITLE		DRAWING NO. FH-1

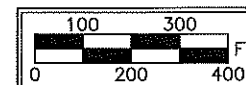


LIST OF COORDINATES ~ EXISTING FIRE HYDRANT LOCATIONS

PT.	NORTHING	EASTING	ELEV.	LOCATION	WORK TO BE DONE
5037	568346.26660	1654199.36470	741.060	US ROUTE 40	*REMOVE & REPLACE EXISTING FIRE HYDRANT
5038	568387.13750	1654355.23740	746.401	US ROUTE 40	*REMOVE & REPLACE EXISTING FIRE HYDRANT
5039	568598.31420	1654585.98060	745.982	US ROUTE 40	*REMOVE & REPLACE EXISTING FIRE HYDRANT
5040	568976.19490	1654992.10900	757.968	US ROUTE 40	*REMOVE & REPLACE EXISTING FIRE HYDRANT
5041	569438.08800	1655373.85580	756.106	US ROUTE 40	*REMOVE & REPLACE EXISTING FIRE HYDRANT
5042	569100.05500	1655308.30810	751.285	LINK AVE.	*REMOVE & REPLACE EXISTING FIRE HYDRANT
5043	569831.10050	1655597.00090	758.254	US ROUTE 40	*REMOVE & REPLACE EXISTING FIRE HYDRANT
5044	570258.02060	1655931.07270	751.458	US ROUTE 40	*REMOVE & REPLACE EXISTING FIRE HYDRANT
5045	570667.96340	1656058.55030	764.576	US ROUTE 40	*REMOVE & REPLACE EXISTING FIRE HYDRANT. SEE DETAIL 10B-1, ON DRAWING PD1-08
5055	569750.24890	1655556.31040	764.224	US ROUTE 40	*REMOVE & REPLACE 8" GATE VALVE. SEE DRAWING 1-10A.
5056	569329.33810	1655315.89010	759.331	US ROUTE 40	*REMOVE & REPLACE 8" GATE VALVE
5058	570696.50970	1656068.24530	766.282	US ROUTE 40	*REMOVE 8" GATE VALVE. SEE DETAIL 10B-1, ON DRAWING PD1-08.
5059	571084.91880	1656285.05010	777.272	US ROUTE 40	*REMOVE & REPLACE EXISTING FIRE HYDRANT
5060	571352.24570	1656540.62380	779.978	US ROUTE 40	*REMOVE & REPLACE EXISTING FIRE HYDRANT

*EXISTING FIRE HYDRANTS & VALVES REMOVED TO BE RETURNED TO OWNER

WYDOH NOTE:
 ANY VALVE REPLACEMENTS IN PAVEMENT OF WYDOH ROADS, TYPE A TRENCH REPAIR TO BE USED. REFER TO DETAIL G-017B ON DWG. SD1-04.



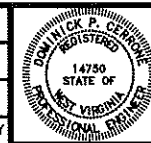
NO.	DATE	REVISION	BY
3	05-2025	ADJUSTMENTS 5038, 5058, 5059 & 5060	RLR
2	04-2025	WORKING AS PER WORK ORDER	RLR
1	10-2022	DRAWING CREATED	RLR

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FIELD LAYOUT
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 CONST CHECKED BY
 RECORD CHECKED BY
 ISSUE DATE 10-1-2025



TOWN OF TRIADELPHIA
 OHIO COUNTY, WEST VIRGINIA
WATER SYSTEM IMPROVEMENTS

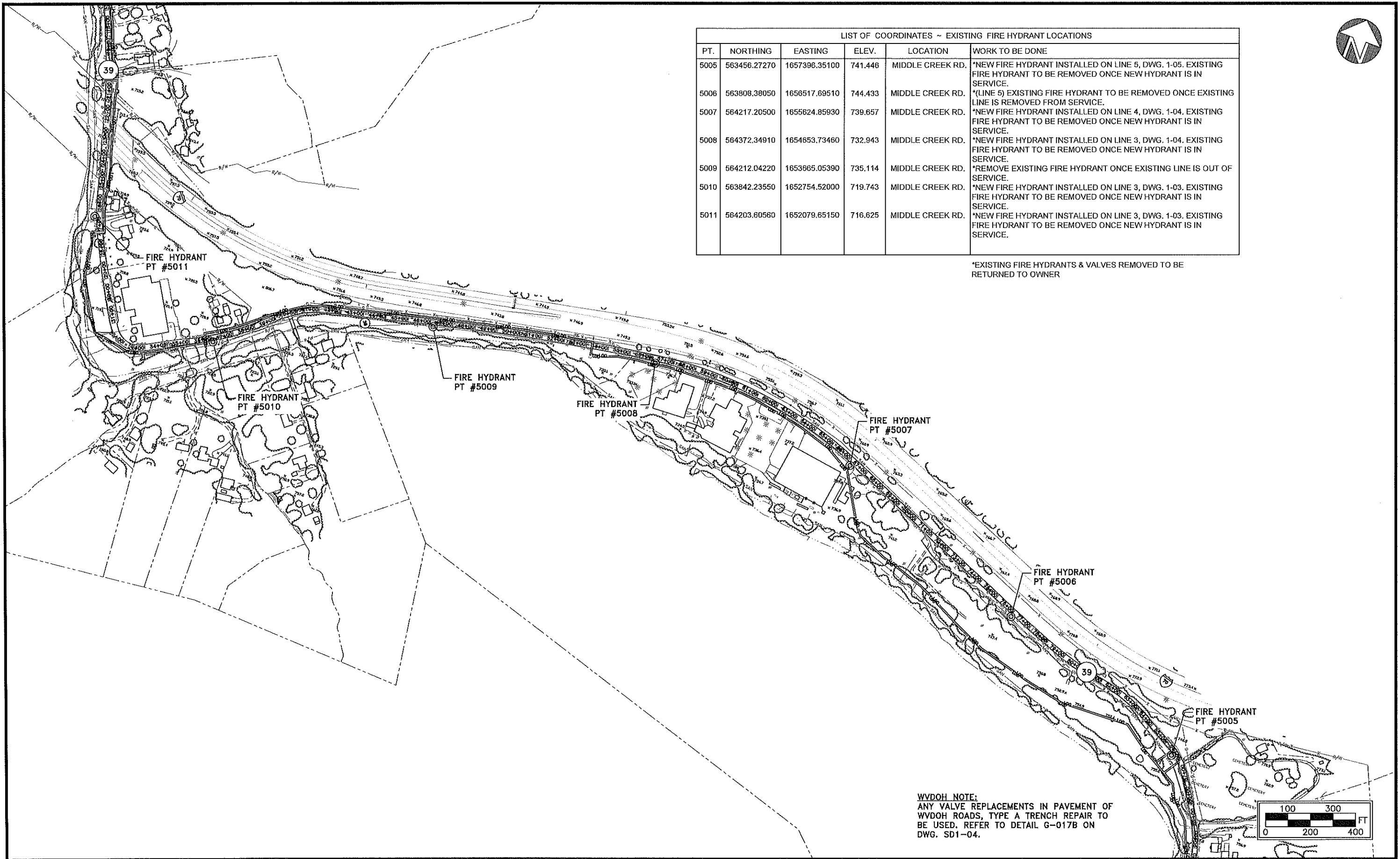
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FIRE HYDRANT & VALVE REPLACEMENTS

SCALE GRAPHIC
 PROJECT NO. TR20-1W
 DRAWING NO. FH-2

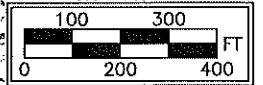


LIST OF COORDINATES ~ EXISTING FIRE HYDRANT LOCATIONS					
PT.	NORTHING	EASTING	ELEV.	LOCATION	WORK TO BE DONE
5005	563456.27270	1657398.35100	741.446	MIDDLE CREEK RD.	*NEW FIRE HYDRANT INSTALLED ON LINE 5, DWG. 1-05. EXISTING FIRE HYDRANT TO BE REMOVED ONCE NEW HYDRANT IS IN SERVICE.
5006	563808.38050	1656517.69510	744.433	MIDDLE CREEK RD.	*(LINE 5) EXISTING FIRE HYDRANT TO BE REMOVED ONCE EXISTING LINE IS REMOVED FROM SERVICE.
5007	564217.20500	1655624.85930	739.657	MIDDLE CREEK RD.	*NEW FIRE HYDRANT INSTALLED ON LINE 4, DWG. 1-04. EXISTING FIRE HYDRANT TO BE REMOVED ONCE NEW HYDRANT IS IN SERVICE.
5008	564372.34910	1654653.73460	732.943	MIDDLE CREEK RD.	*NEW FIRE HYDRANT INSTALLED ON LINE 3, DWG. 1-04. EXISTING FIRE HYDRANT TO BE REMOVED ONCE NEW HYDRANT IS IN SERVICE.
5009	564212.04220	1653665.05390	735.114	MIDDLE CREEK RD.	*REMOVE EXISTING FIRE HYDRANT ONCE EXISTING LINE IS OUT OF SERVICE.
5010	563842.23550	1652754.52000	719.743	MIDDLE CREEK RD.	*NEW FIRE HYDRANT INSTALLED ON LINE 3, DWG. 1-03. EXISTING FIRE HYDRANT TO BE REMOVED ONCE NEW HYDRANT IS IN SERVICE.
5011	564203.60560	1652079.65150	716.625	MIDDLE CREEK RD.	*NEW FIRE HYDRANT INSTALLED ON LINE 3, DWG. 1-03. EXISTING FIRE HYDRANT TO BE REMOVED ONCE NEW HYDRANT IS IN SERVICE.

*EXISTING FIRE HYDRANTS & VALVES REMOVED TO BE RETURNED TO OWNER

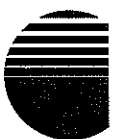


WYDOH NOTE:
 ANY VALVE REPLACEMENTS IN PAVEMENT OF WYDOH ROADS, TYPE A TRENCH REPAIR TO BE USED. REFER TO DETAIL G-017B ON DWG. SD1-04.



NO.	DATE	REVISION	BY
5	06-2025	HYDROPIPE SIZES FOR RENEWAL CALL REPLY SHEET	RLR
2	04-2025	WYDOH FOR AS PER WYDOH REQUEST	RLR
1	03-2022	CONSTRUCTION	RLR

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CERRONE ASSOCIATES, INC.
 CONSULTING ENGINEERS • WATER & WASTEWATER SYSTEMS
 97-14TH STREET, WHEELING, WV 26003-2497

FIELD LAYOUT	
DRAWN BY	RLR
CONST CHECKED BY	
RECORD CHECKED BY	
ISSUE DATE	10-1-2021



TOWN OF TRIADDELPHIA
 OHIO COUNTY, WEST VIRGINIA
WATER SYSTEM IMPROVEMENTS

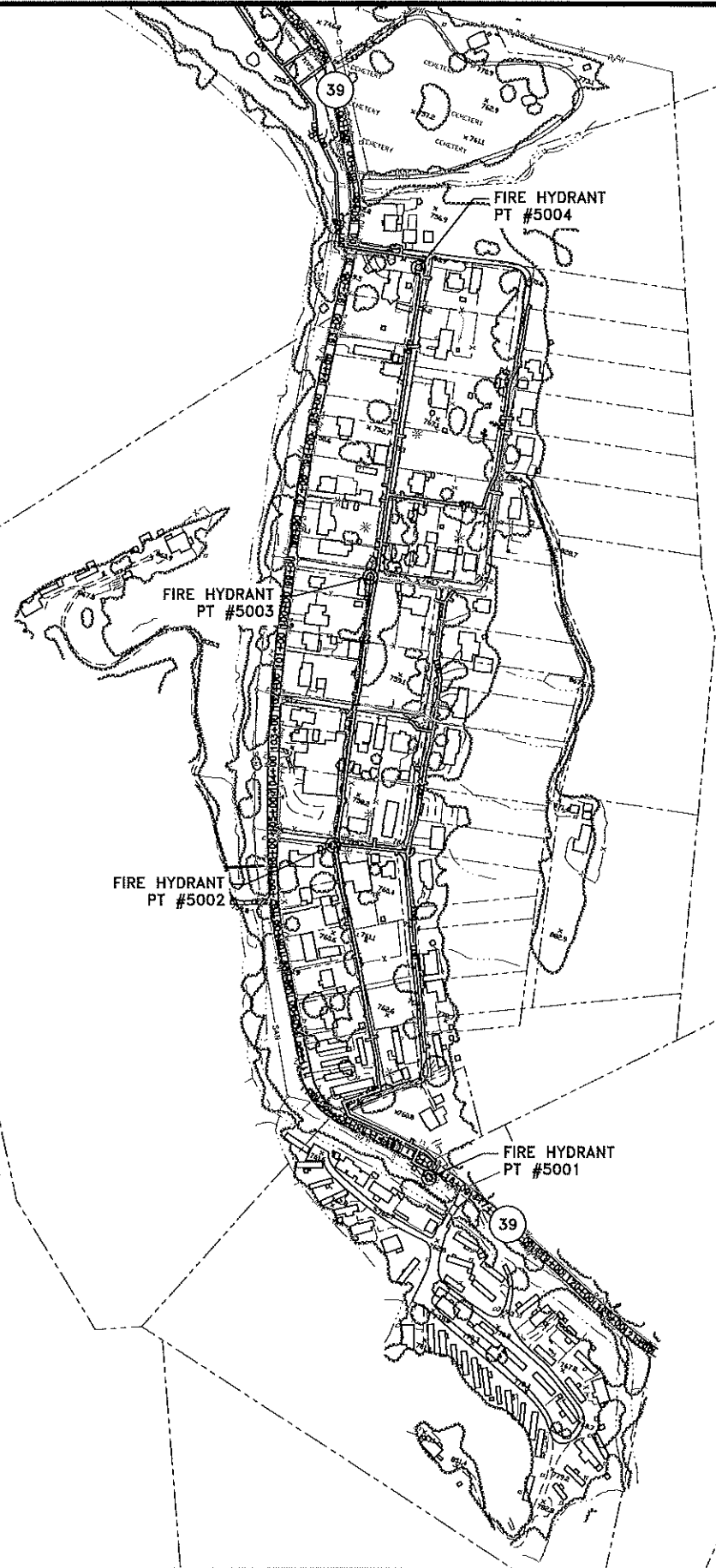
DRAWING TITLE
FIRE HYDRANT & VALVE REPLACEMENTS

SCALE	GRAPHIC
PROJECT NO.	TR20-1W
DRAWING NO.	FH-3

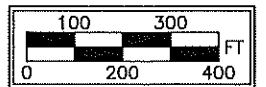


LIST OF COORDINATES ~ EXISTING FIRE HYDRANT LOCATIONS					
PT.	NORTHING	EASTING	ELEV.	LOCATION	WORK TO BE DONE
5001	560965.79480	1658529.09520	781.517	MIDDLE CREEK RD.	*NEW FIRE HYDRANT INSTALLED ON LINE 7, DWG. 1-06B. EXISTING FIRE HYDRANT TO BE REMOVED ONCE NEW HYDRANT IS IN SERVICE.
5002	561645.91810	1658051.79410	764.695	MILDRED AVE.	*NEW FIRE HYDRANT INSTALLED ON LINE 6, DWG. 1-06B. EXISTING FIRE HYDRANT TO BE REMOVED ONCE NEW HYDRANT IS IN SERVICE.
5003	562292.76770	1657936.17400	759.471	MARCELLA AVE.	*NEW FIRE HYDRANT INSTALLED ON LINE 6, DWG. 1-06A. REFER TO NOTE ON DWG. 1-06A FOR SEQUENCE OF INSTALLATION OF NEW HYDRANT AND REMOVAL OF EXISTING HYDRANT.
5004	563038.97880	1657809.16430	749.093	HARRIET AVE.	*NEW FIRE HYDRANT INSTALLED ON LINE 5A, DWG. 1-06A. REFER TO NOTE ON DWG. 1-06A FOR SEQUENCE OF INSTALLATION OF NEW HYDRANT AND REMOVAL OF EXISTING HYDRANT.

*EXISTING FIRE HYDRANTS & VALVES REMOVED TO BE RETURNED TO OWNER



WYDOH NOTE:
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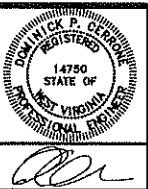
NO.	DATE	REVISION	BY
2	01-2022	WYDOH NOTE AS PER WYDOH REQUEST	RF
1	12-2021	PERMANENT	RF

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FIELD LAYOUT	-
DRAWN BY	RLR
CONST CHECKED BY	-
RECORD CHECKED BY	-
ISSUE DATE	10-1-2021



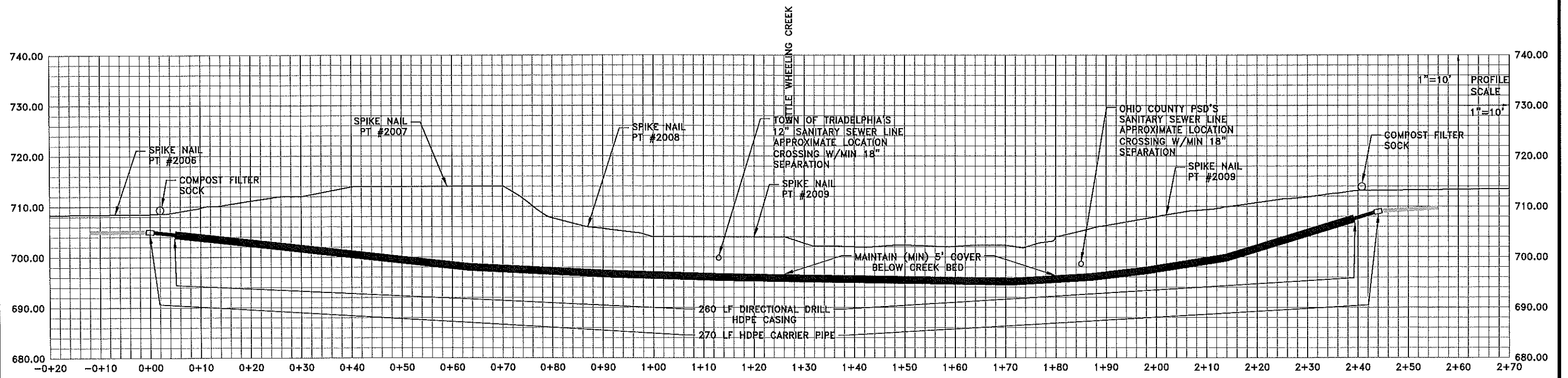
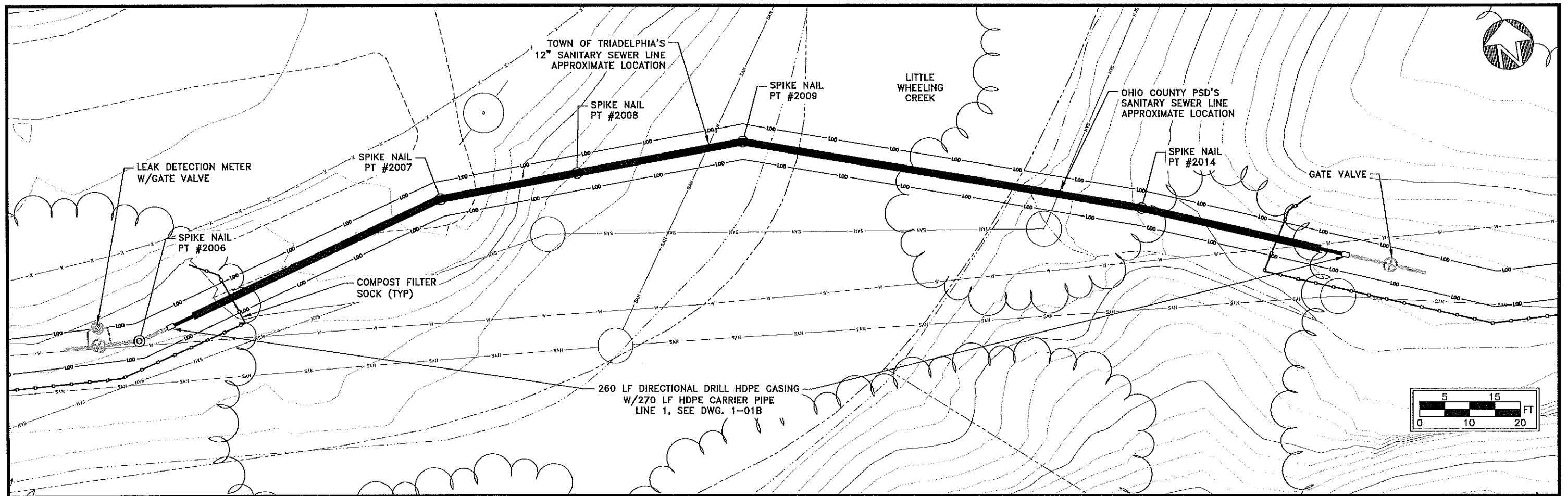
TOWN OF TRIADELPHIA
 OHIO COUNTY, WEST VIRGINIA
WATER SYSTEM IMPROVEMENTS

DRAWING TITLE
FIRE HYDRANT & VALVE REPLACEMENTS

SCALE
 GRAPHIC

PROJECT NO.
 TR20-1W

DRAWING NO.
FH-4



NO.	DATE	REVISION	BY
2	08-2025	ADDED COMPOST FILTER SOCK	RR
1	10-2022	ISSUE FOR CONSTRUCTION	RR

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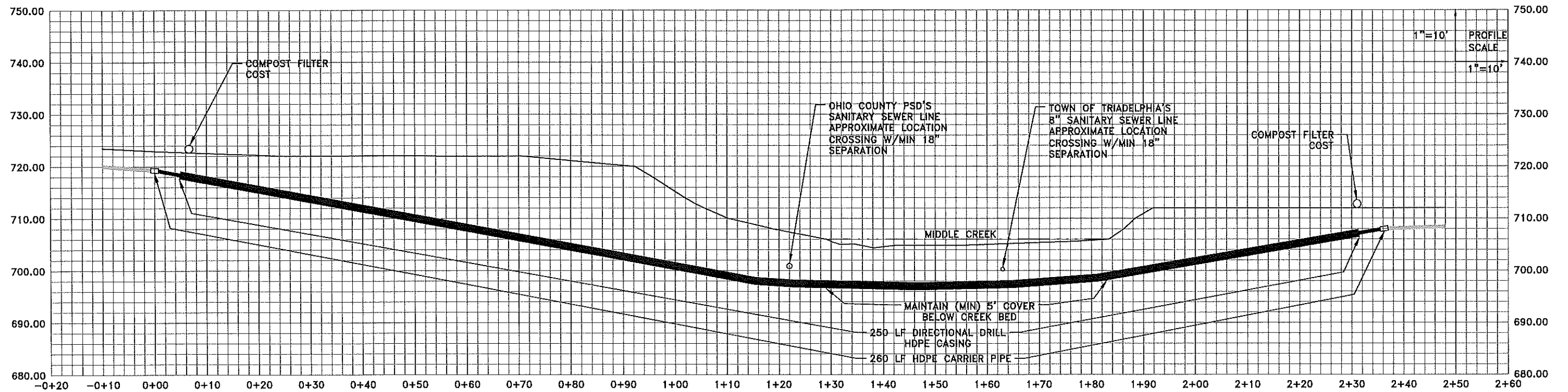
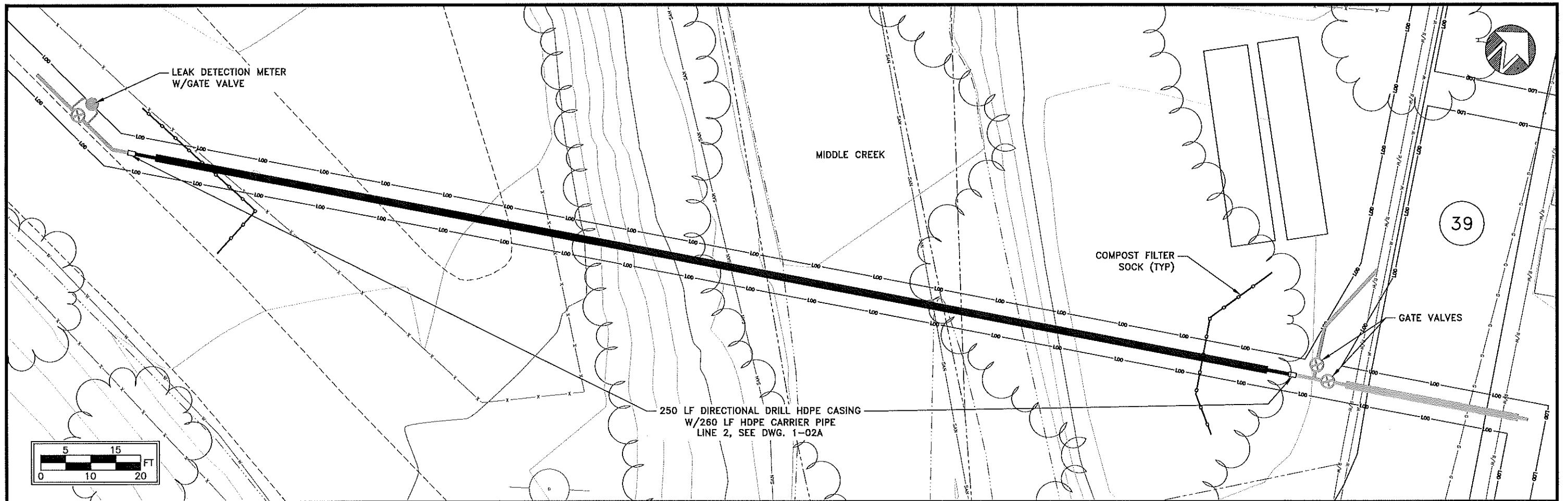
CERRONE ASSOCIATES, INC.
CONSULTING ENGINEERS • WATER & WASTEWATER SYSTEMS
97-14TH STREET, WHEELING, WV 26003-2497

FIELD LAYOUT
RR, RB, HH
DRAWN BY
RLR
CONST. CHECKED BY
RECORD CHECKED BY
ISSUE DATE
10-1-2021



TOWN OF TRIADELPHIA
OHIO COUNTY, WEST VIRGINIA
WATER SYSTEM IMPROVEMENTS
DRAWING TITLE
LINE 1 - LITTLE WHEELING CREEK
DIRECTIONAL DRILL
PLAN & PROFILE

SCALE
GRAPHIC
PROJECT NO.
TR20-1W
DRAWING NO.
PD1-01



NO.	DATE	REVISION	BY
2	08-2023	ADDED COMPOST FILTER SOCK	RLR
1	10-2022	ISSUING CONTRACT	RLR

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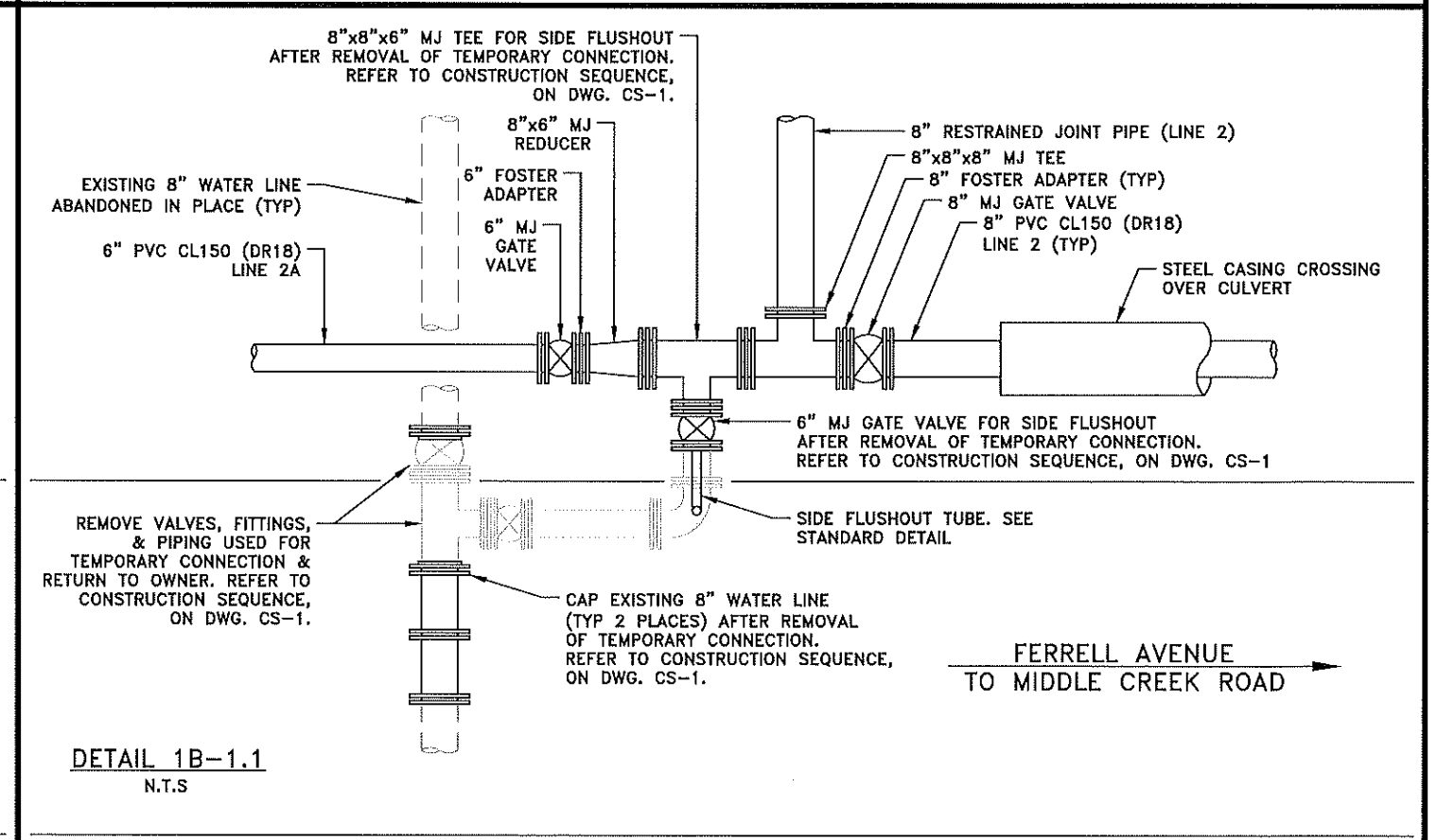
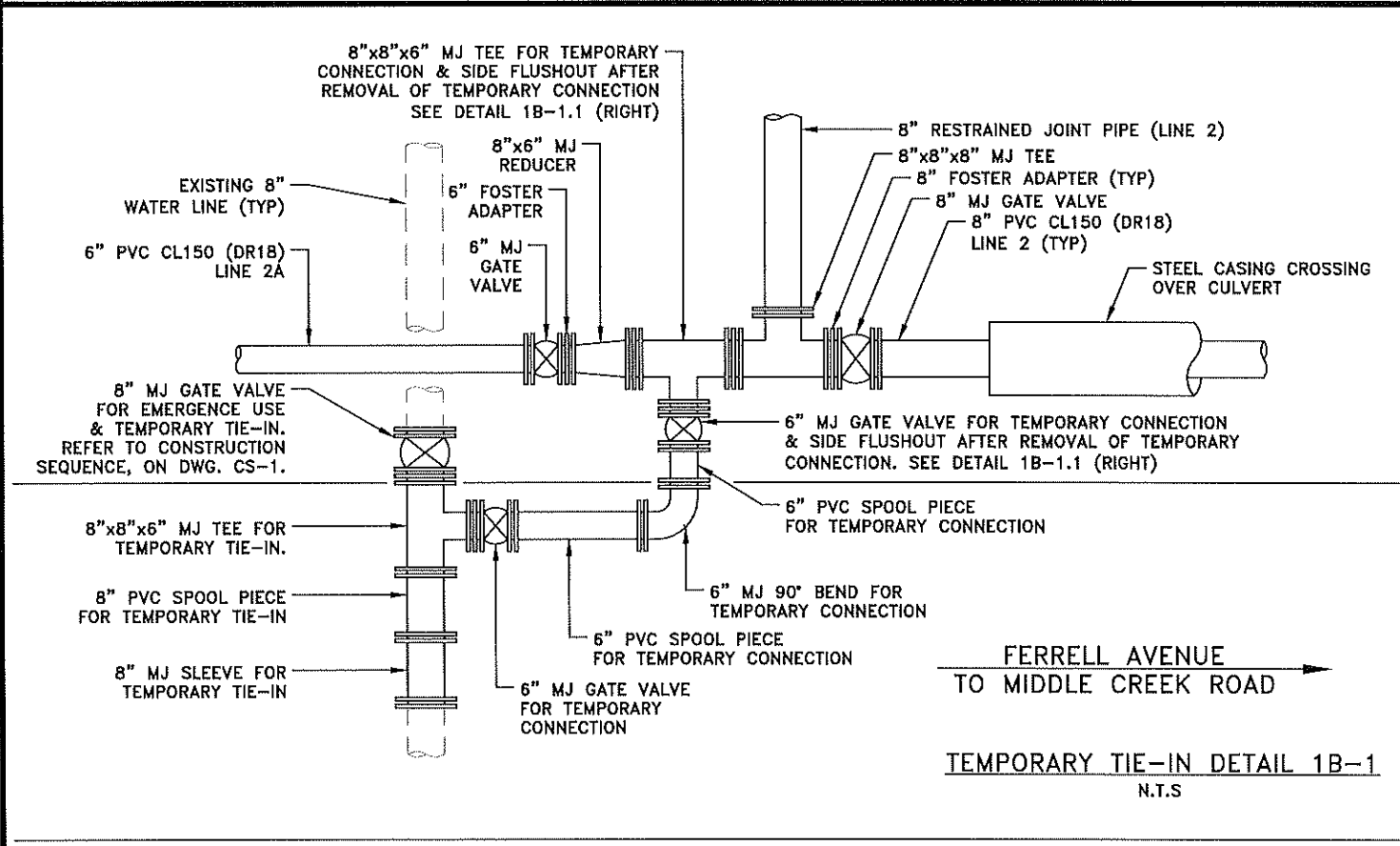
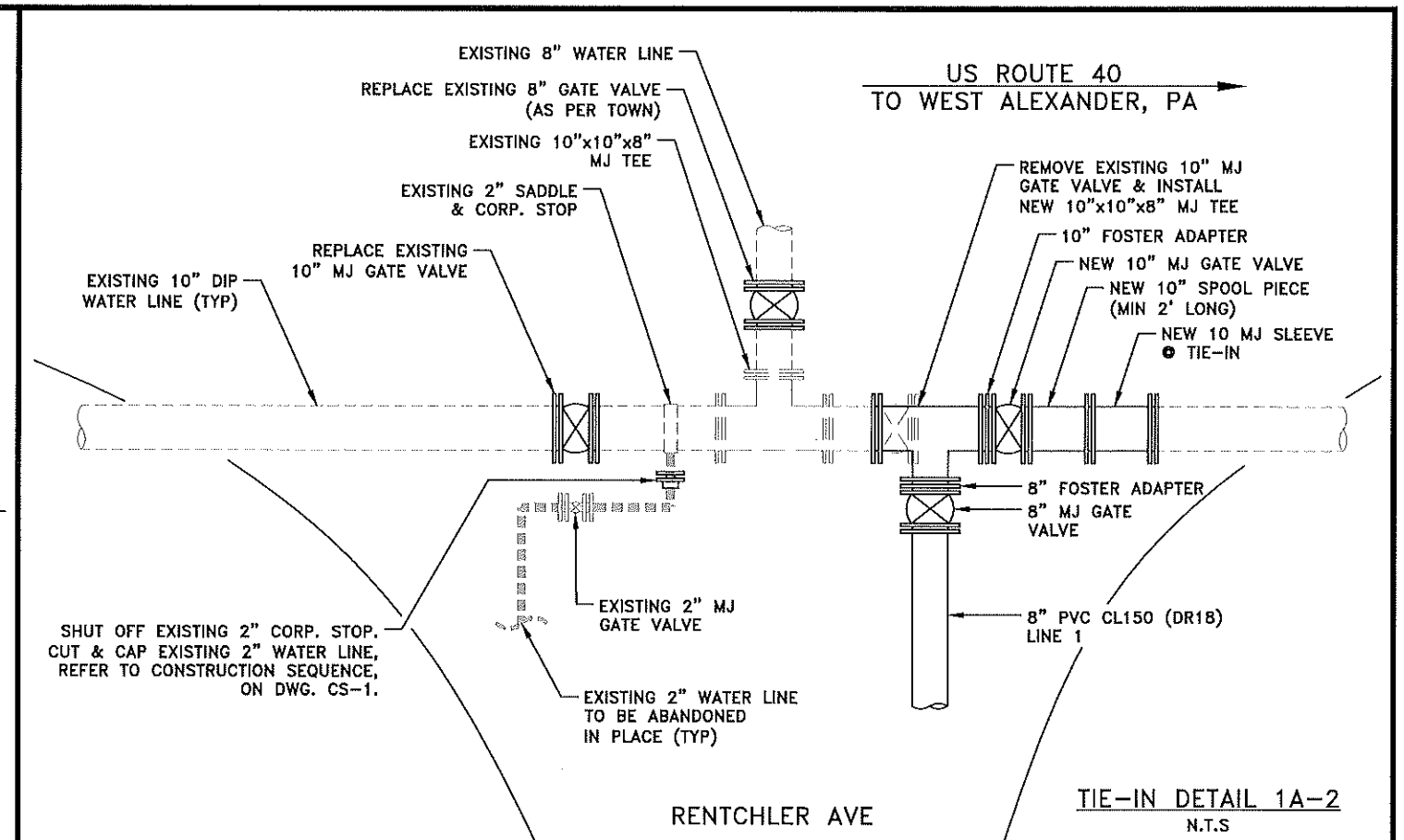
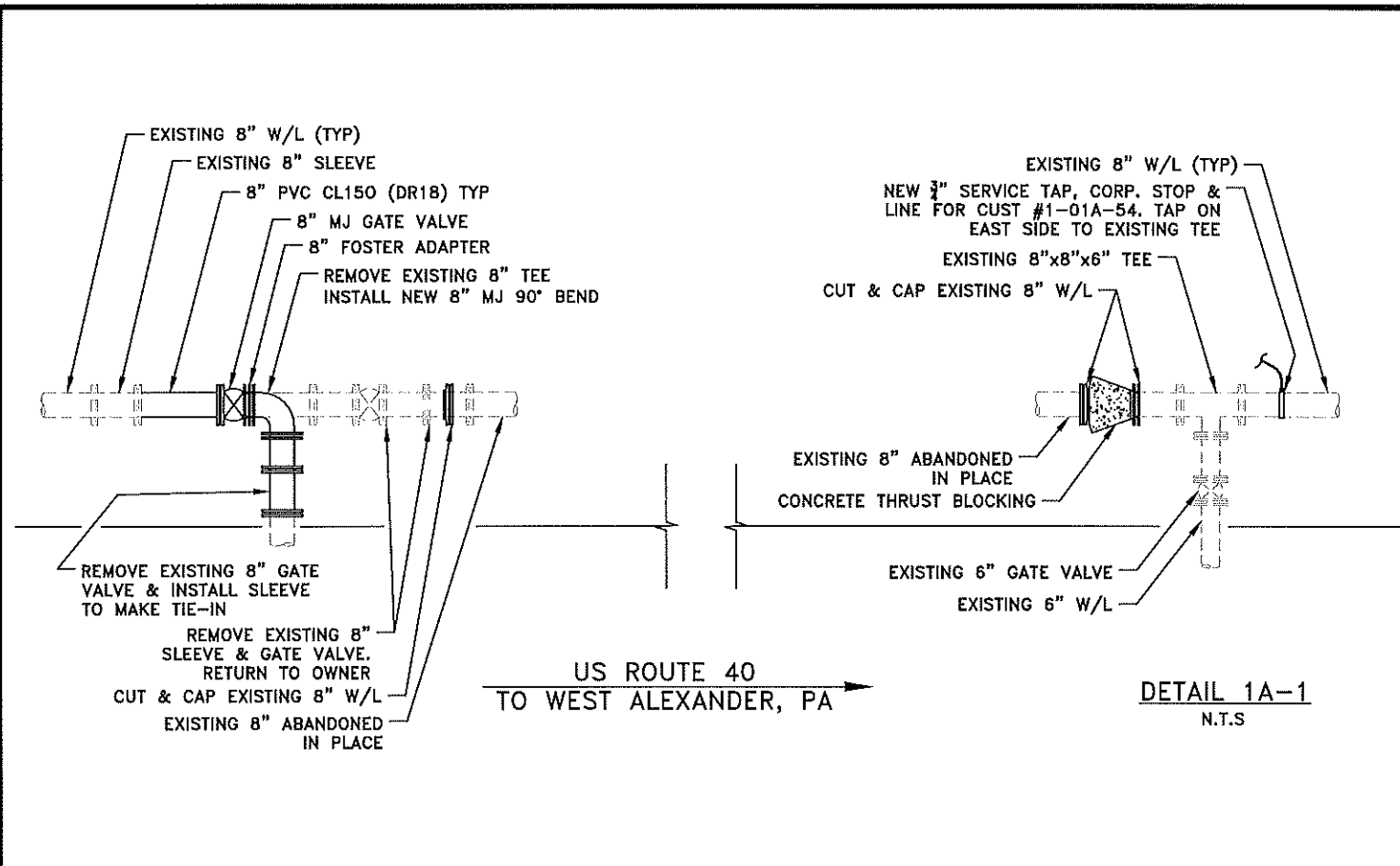


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97-14TH STREET, WHEELING, WV 26003-2497

FIELD LAYOUT
RR, RB
DRAWN BY
RLR
CONST CHECKED BY
RECORD CHECKED BY
ISSUE DATE
10-1-2021



DRAWING TITLE	TOWN OF TRIADELPHIA OHIO COUNTY, WEST VIRGINIA WATER SYSTEM IMPROVEMENTS	SCALE GRAPHIC
	LINE 2 - MIDDLE CREEK DIRECTIONAL DRILL PLAN & PROFILE	PROJECT NO. TR20-1W
		DRAWING NO. PD1-02



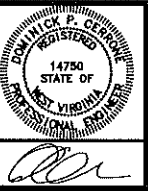
NO.	DATE	REVISION	BY
1	07-2024	ISSUED 8" VALVE REPLACEMENT TO DR. PE. IN-2, AS PER GRANVILLE	JLR

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97-14TH STREET, WHEELING, WV 26003-2497

DRAWN BY: JLR
CONST CHECKED BY:
RECORD CHECKED BY:
ISSUE DATE:

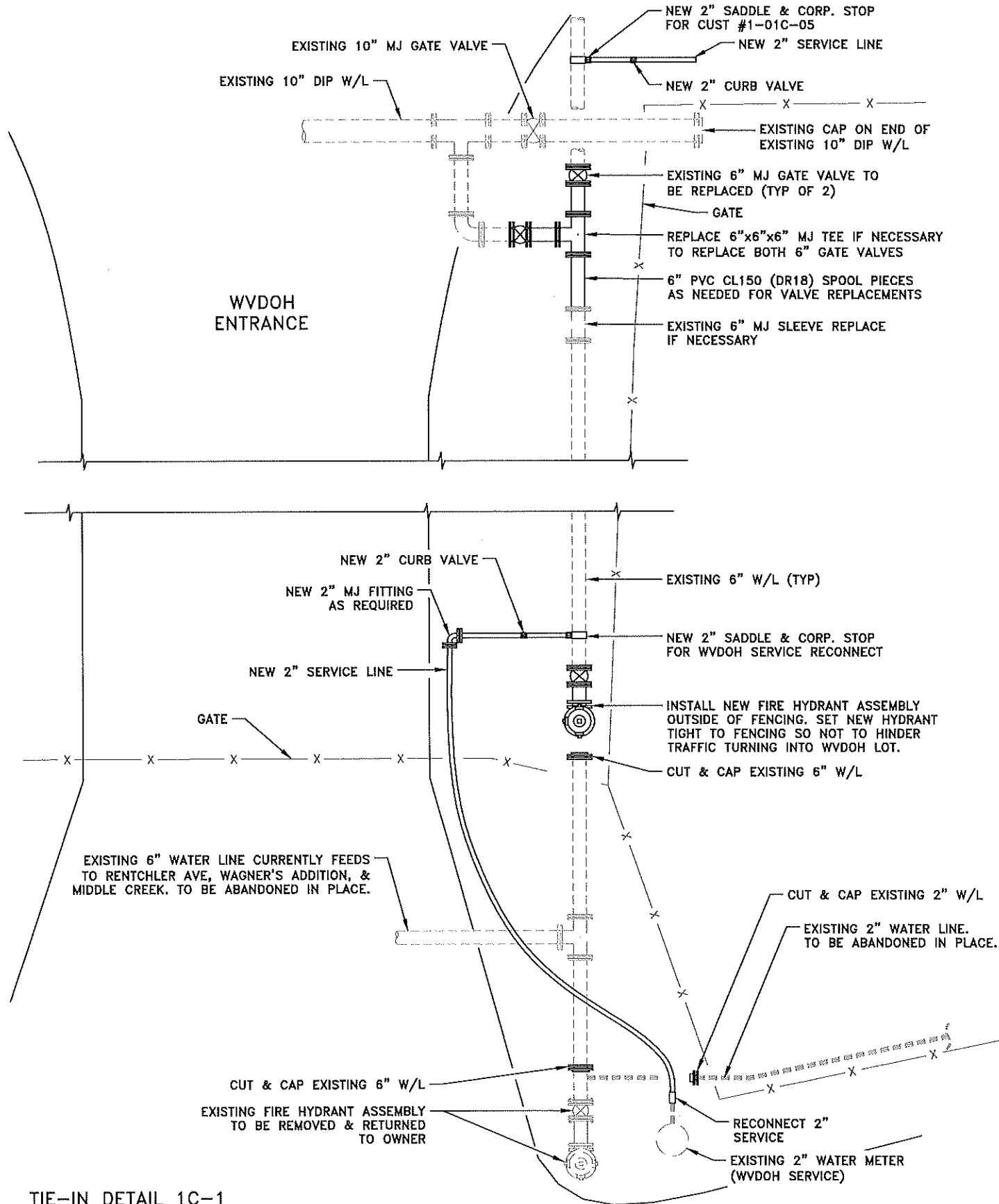


TOWN OF TRIADELPHIA
OHIO COUNTY, WEST VIRGINIA
WATER SYSTEM IMPROVEMENTS

PROJECT NO. TR20-1W
DRAWING NO. PD1-03

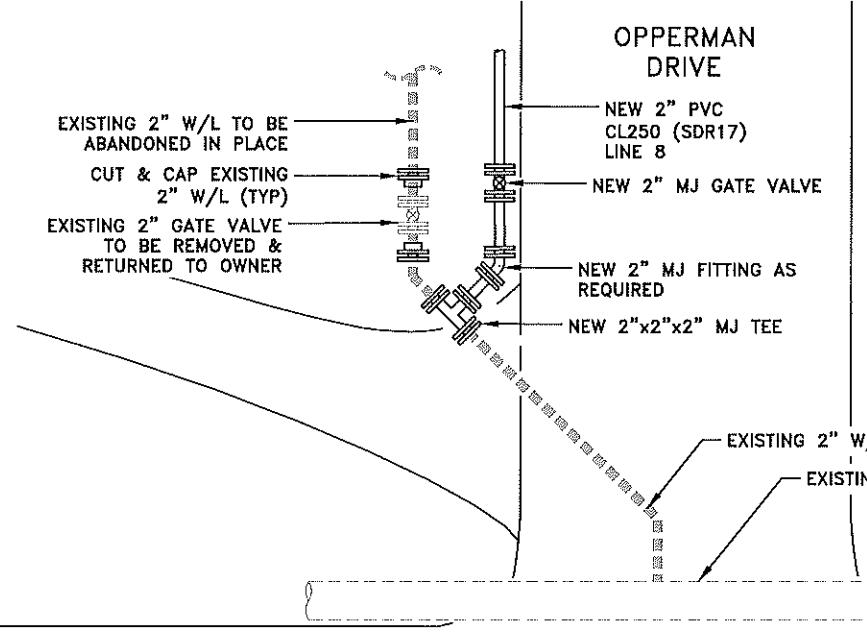
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DRAWING TITLE: PROJECT DETAILS



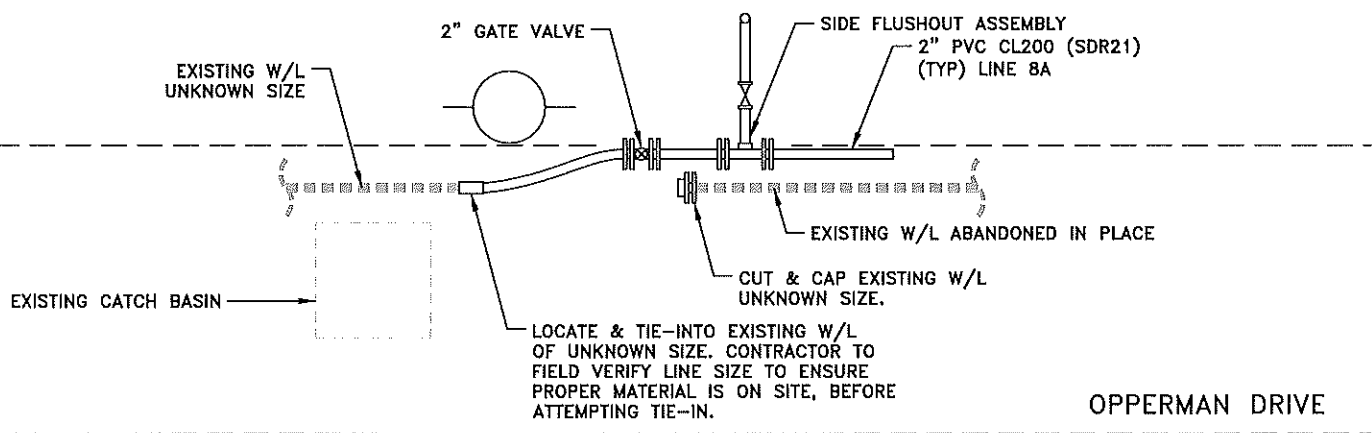
TIE-IN DETAIL 1C-1
N.T.S

NOTE: REFER TO CONSTRUCTION SEQUENCE, ON DWG. CS-1.



TIE-IN DETAIL 1C-2
N.T.S

US ROUTE 40
TO WEST ALEXANDER, PA



TIE-IN DETAIL 1C-3
N.T.S

- CONSTRUCTION SEQUENCE NOTES:**
1. MAKE TIE-INTO EXISTING 2" WATER LINE, AS SHOWN ON THIS DETAIL.
 2. INSTALL OF LINES 8, 8A, & 8B.
 3. PRESSURE TEST & DISINFECT ALL OF LINES 8, 8A, & 8B.
 4. RECONNECT ALL CUSTOMER TO NEW LINES.
 5. MAKE TIE-IN & CUT & CAP ON LINE 8A, DETAIL 1C-3 THIS DRAWING.
 6. MAKE CUT & CAPS SHOWN ON THIS DETAIL.

NO.	DATE	REVISION	BY

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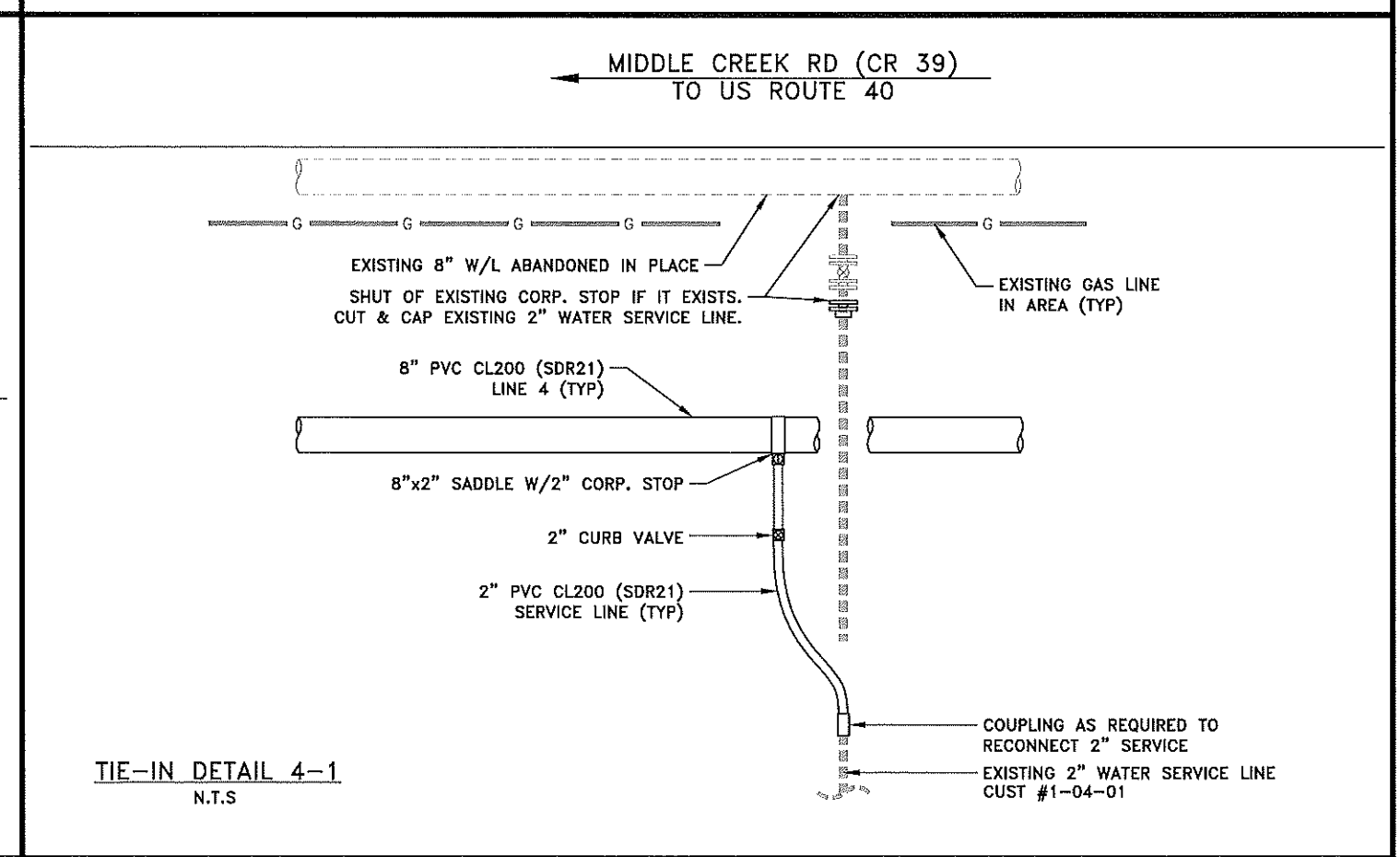
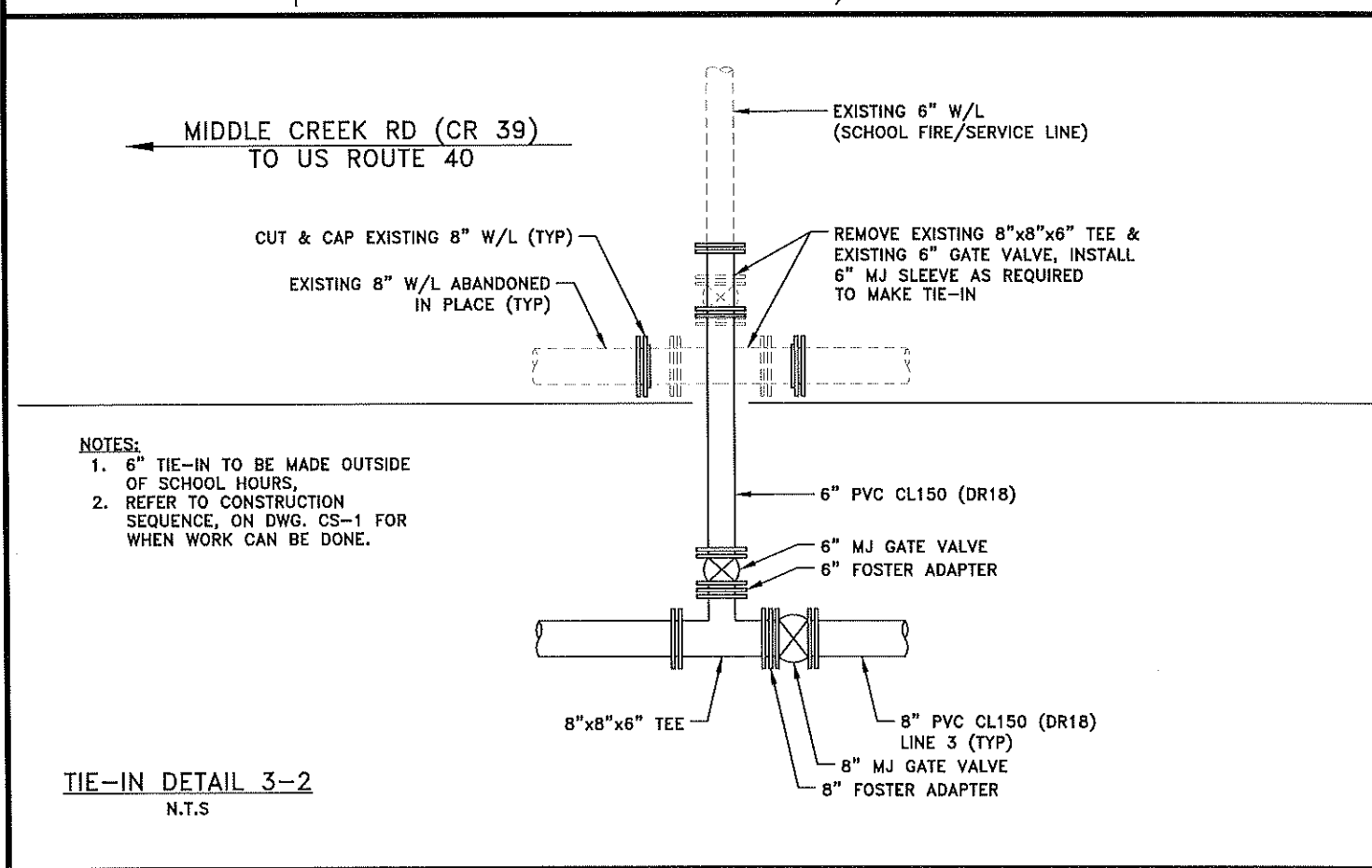
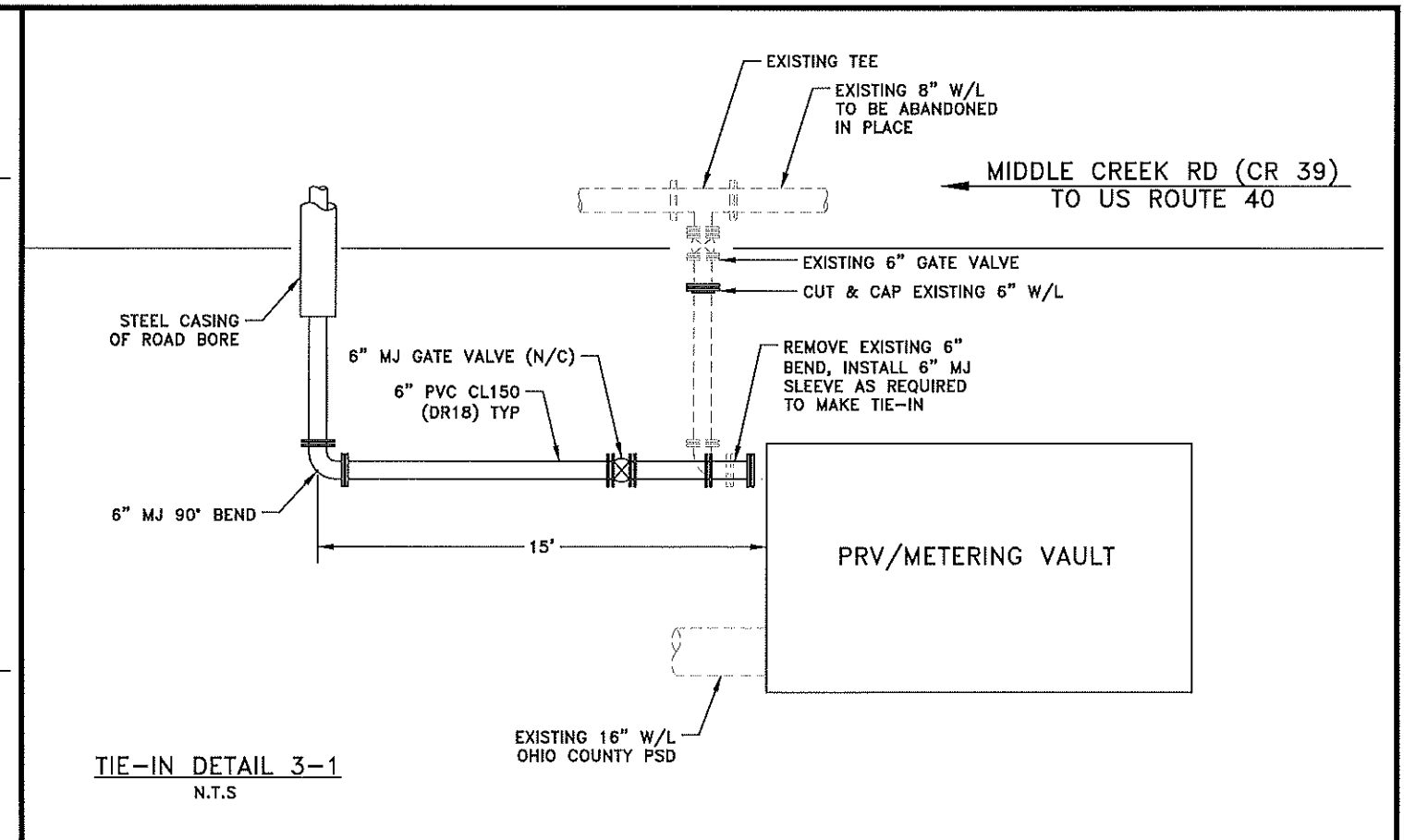
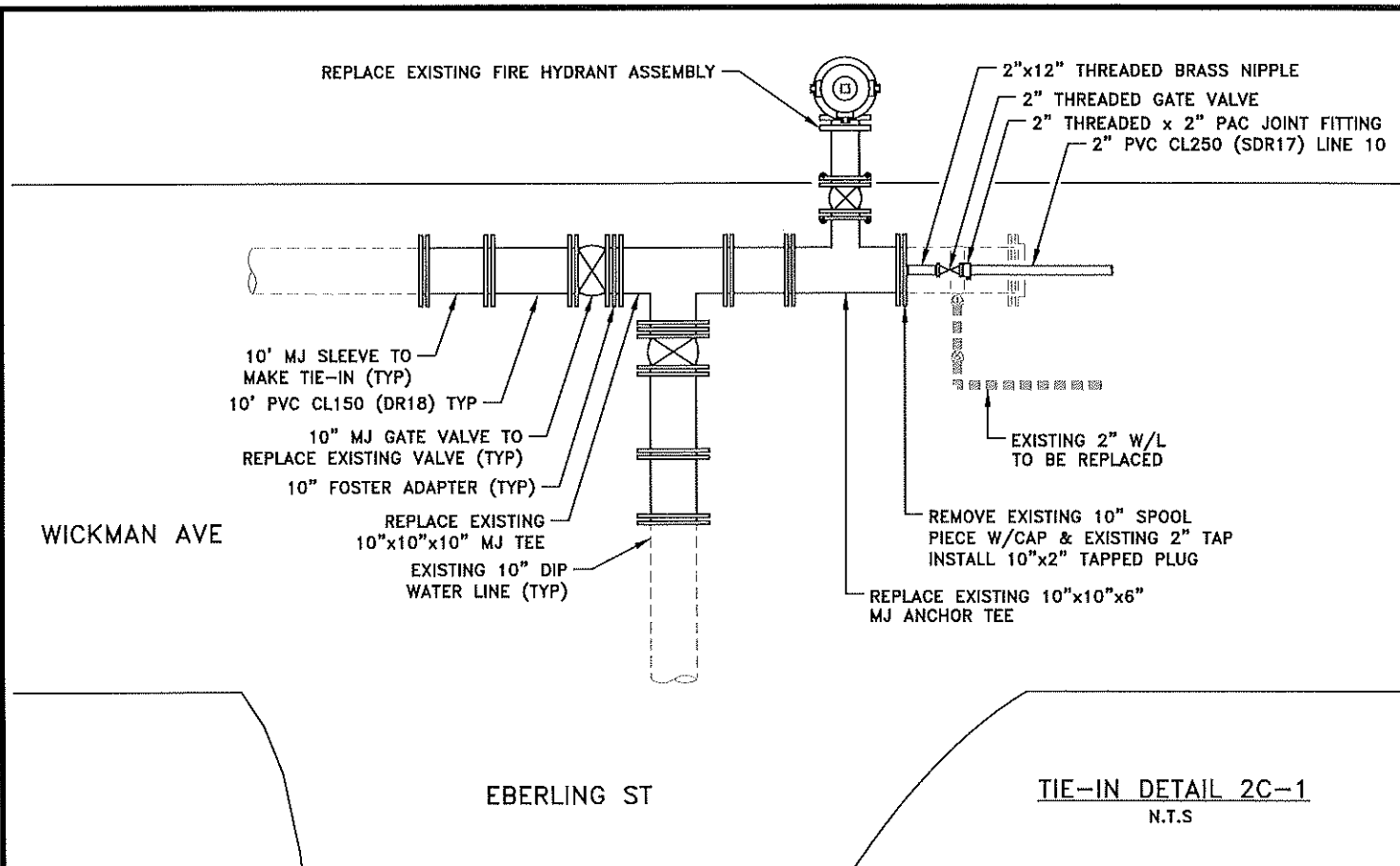
DRAWN BY	RLR
CONST CHECKED BY	
RECORD CHECKED BY	
ISSUE DATE	



TOWN OF TRIADELPHIA
OHIO COUNTY, WEST VIRGINIA
WATER SYSTEM IMPROVEMENTS

DRAWING TITLE
PROJECT DETAILS

SCALE	NONE
PROJECT NO.	TR20-1W
DRAWING NO.	PD1-04



NO.	DATE	REVISION	BY

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97-14TH STREET, WHEELING, WV 26003-2497

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ISSUE DATE



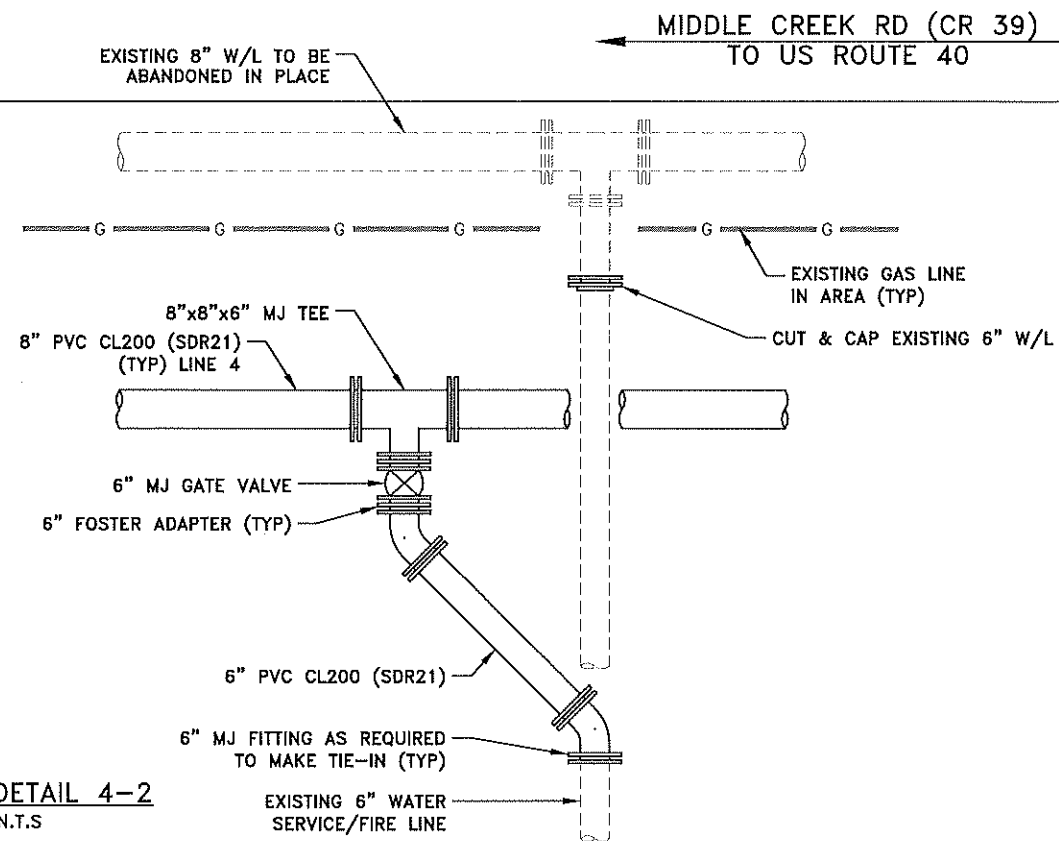
TOWN OF TRIADELPHIA
OHIO COUNTY, WEST VIRGINIA
WATER SYSTEM IMPROVEMENTS

DRAWING TITLE
PROJECT DETAILS

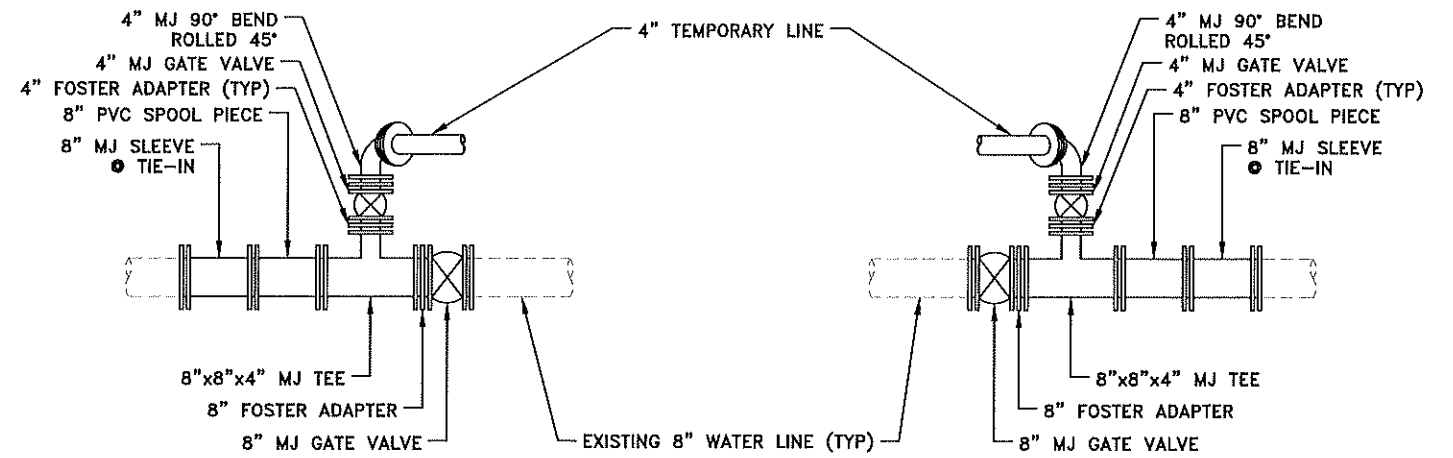
SCALE
NONE

PROJECT NO.
TR20-1W

DRAWING NO.
PD1-05



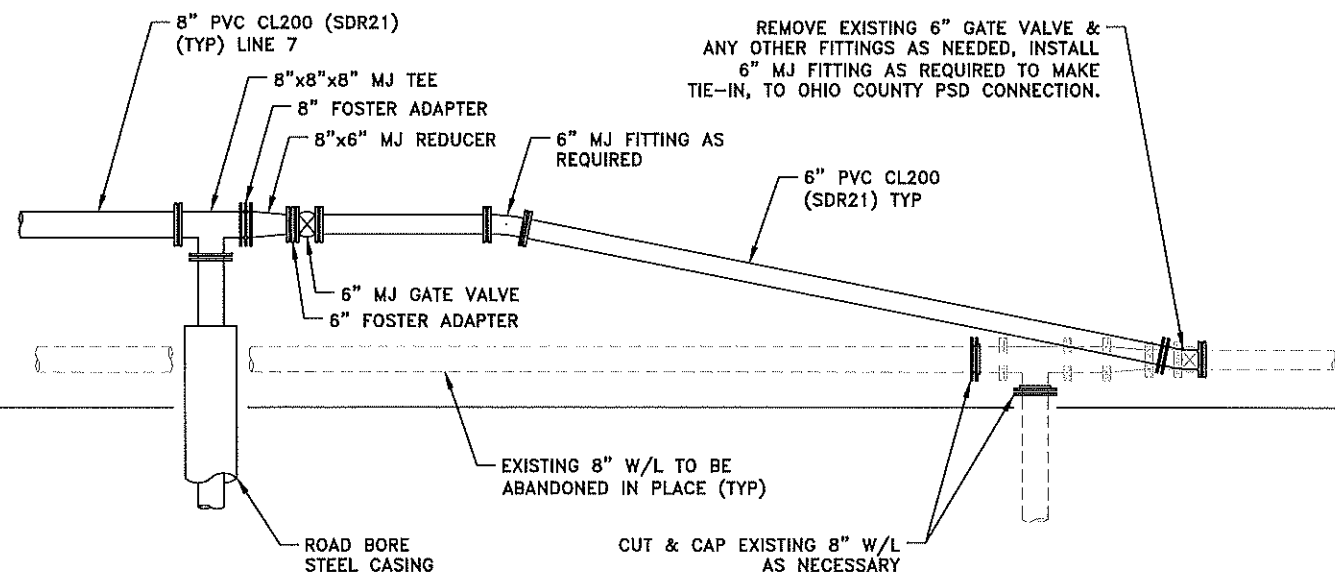
TIE-IN DETAIL 4-2
N.T.S



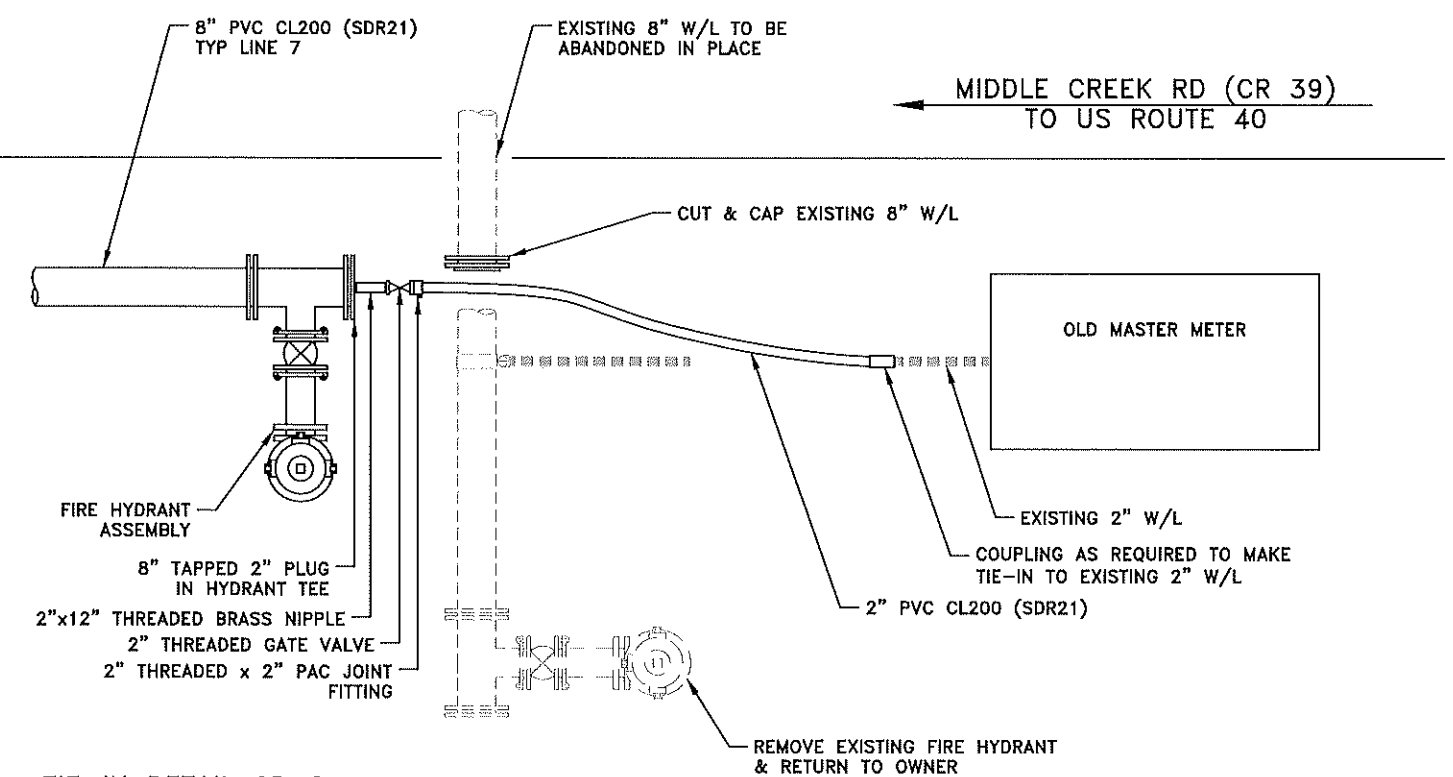
TEMPORARY LINE
TIE-IN DETAIL 6-1
N.T.S

CONSTRUCTION SEQUENCE NOTES:

1. LOCATE EXISTING 8" LINE & MAKE TEMPORARY LINE TIE-INS AT THE LOCATIONS SHOWN ON DWG. 1-06 & DETAILED ABOVE.
2. INSTALL TEMPORARY LINE & CONNECT ALL AFFECTED SERVICES TO TEMP LINE. ALONG WITH TEMPORARY CONNECTIONS TO EXISTING 2" LINES AT GENEVIEVE & MILDRED AVENUES. CONTRACTOR TO ASSURE TEMP LINE DOES NOT HINDER TRAFFIC WHERE CROSSING TOWN STREETS.
3. ONCE ALL SERVICES & 2" LINES ARE CONNECTED TO TEMP LINE, CONTINUE INSTALLATION OF NEW WATER LINES.
4. ONCE INSTALLATION, PRESSURE TESTING, & DISINFECTION OF LINES 6, 7, 7A, & 7B IS COMPLETED, ALL SERVICES ARE TO BE RECONNECTED TO NEW LINES & 2" & 6" TIE-INS ON DWG. 1-06B ARE TO BE MADE.
5. ONCE ALL CUSTOMER RECONNECTIONS & TIE-INS ARE COMPLETED REMOVE TEMPORARY LINE. REMOVE VALVES & FITTINGS USED FOR TEMPORARY LINE TIE-INS & RETURN TO OWNER. CAP ENDS OF EXISTING LINE TO BE ABANDONED IN PLACE.



TIE-IN DETAIL 6B-1
N.T.S



TIE-IN DETAIL 6B-2
N.T.S

NO.	DATE	REVISION	BY

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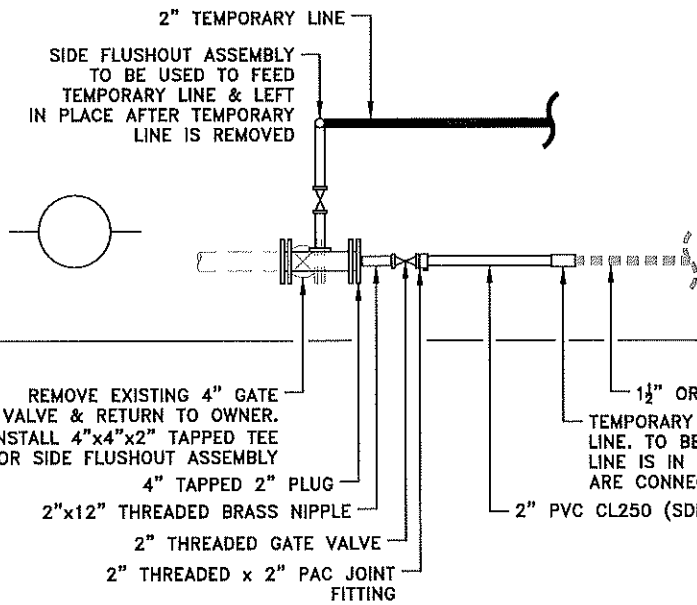


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97-14TH STREET, WHEELING, WV 26003-2497

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ISSUE DATE	

TOWN OF TRIADELPHIA OHIO COUNTY, WEST VIRGINIA WATER SYSTEM IMPROVEMENTS	
PROJECT DETAILS	
DRAWING TITLE	

SCALE	NONE
PROJECT NO.	TR20-1W
DRAWING NO.	PD1-06



- CONSTRUCTION SEQUENCE NOTES:**
1. TIE-IN TO BE MADE ALONG WITH TEMPORARY CONNECTION SHOWN.
 2. INSTALL TEMPORARY LINE & CONNECT ALL AFFECTED SERVICES TO TEMPORARY LINE. CONTRACTOR TO ASSURE TEMP LINE DOES NOT HINDER TRAFFIC ON COUNTY ROUTE OR DRIVEWAYS.
 3. ONCE ALL SERVICES ARE CONNECTED TO TEMP LINE CONTINUE INSTALL OF NEW 2" LINE.
 4. ONCE INSTALLATION, PRESSURE TESTING, & DISINFECTION OF NEW 2" LINE IS COMPLETED, RECONNECT ALL SERVICES TO NEW LINE.
 5. ONCE ALL CUSTOMER RECONNECTIONS ARE COMPLETED REMOVE TEMPORARY LINE.

REMOVE EXISTING 4" GATE VALVE & RETURN TO OWNER. INSTALL 4"x4"x2" TAPPED TEE FOR SIDE FLUSHOUT ASSEMBLY

4" TAPPED 2" PLUG

2"x12" THREADED BRASS NIPPLE

2" THREADED GATE VALVE

2" THREADED x 2" PAC JOINT FITTING

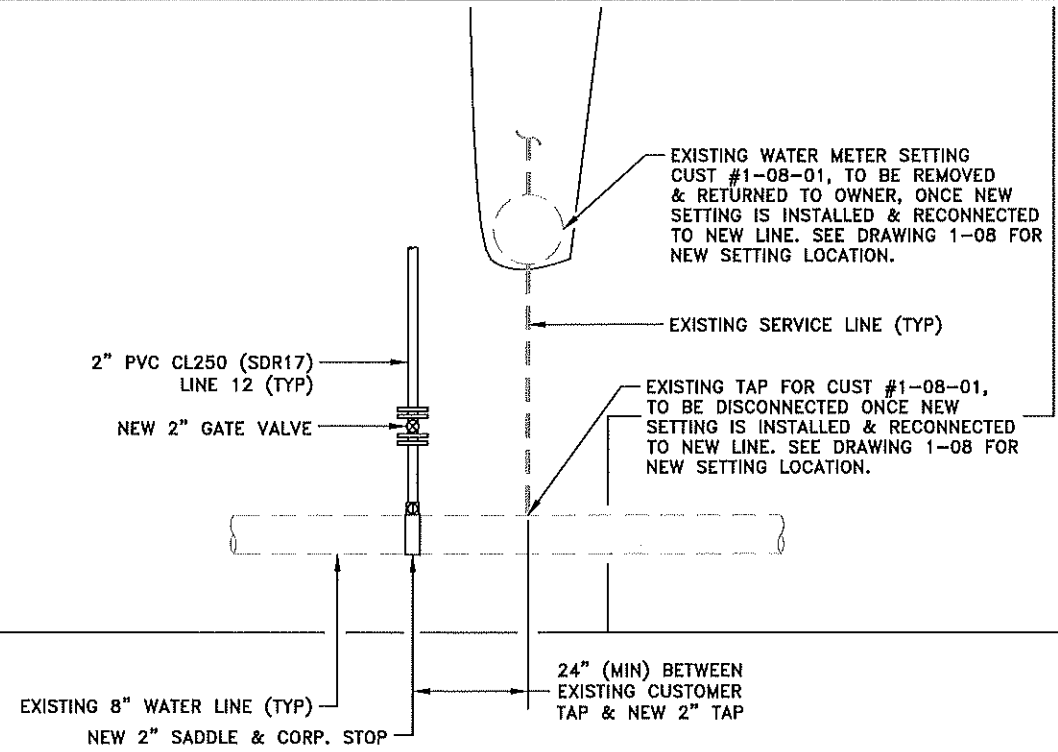
1 1/2" OR 2" EXISTING W/L

TEMPORARY CONNECTION TO EXISTING LINE. TO BE REMOVED ONCE TEMPORARY LINE IS IN PLACE & ALL CUSTOMERS ARE CONNECTED TO TEMPORARY LINE

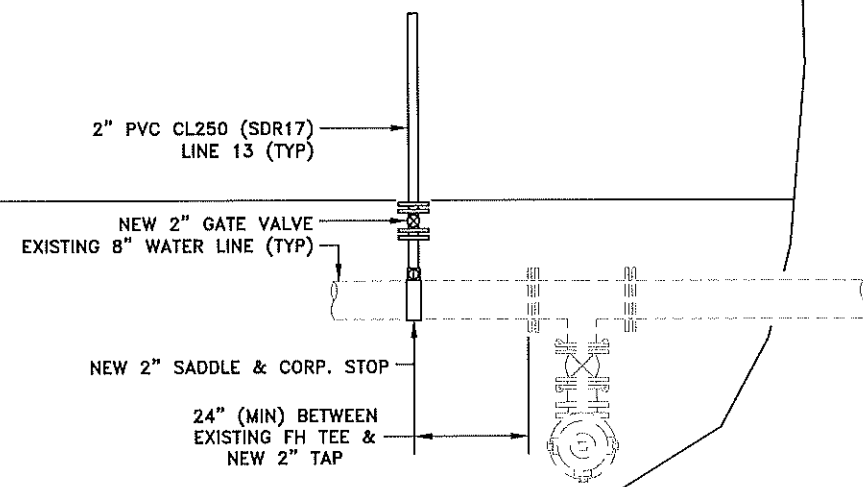
2" PVC CL250 (SDR17) LINE 11

PETERS RUN RD (CR 25)
TO US ROUTE 40

TIE-IN DETAIL 7-1
N.T.S

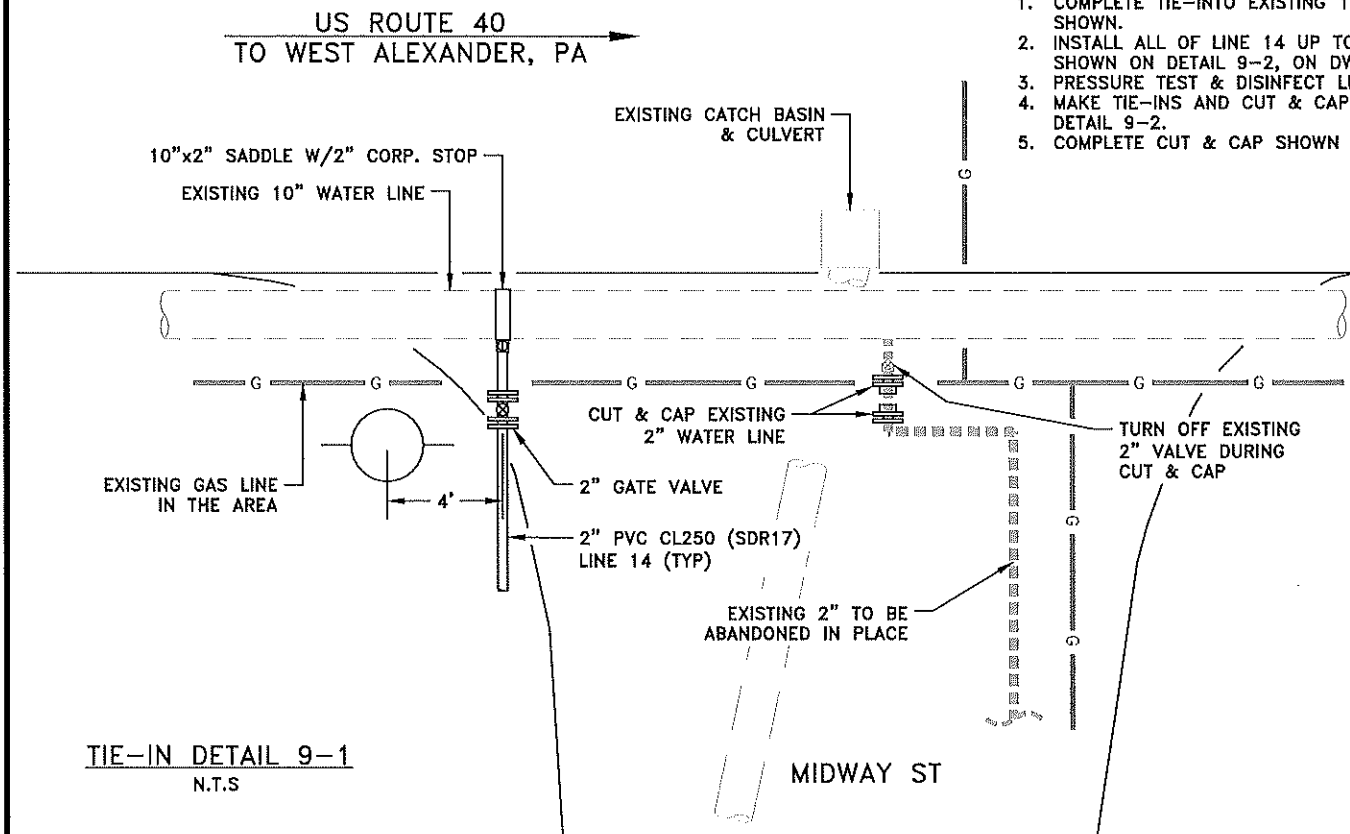


TIE-IN DETAIL 8-1
N.T.S



TIE-IN DETAIL 8-2
N.T.S

US ROUTE 40
TO WEST ALEXANDER, PA



TIE-IN DETAIL 9-1
N.T.S

- CONSTRUCTION SEQUENCE NOTES:**
1. COMPLETE TIE-INTO EXISTING 10" MAIN AS SHOWN.
 2. INSTALL ALL OF LINE 14 UP TO THE TIE-INS SHOWN ON DETAIL 9-2, ON DWG. PD1-08.
 3. PRESSURE TEST & DISINFECT LINE 14.
 4. MAKE TIE-INS AND CUT & CAPS SHOWN ON DETAIL 9-2.
 5. COMPLETE CUT & CAP SHOWN BELOW.

NO.	DATE	REVISION	BY

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97-14TH STREET, WHEELING, WV 26003-2497

DRAWN BY
RLR

CONST CHECKED BY

RECORD CHECKED BY

ISSUE DATE



TOWN OF TRIADELPHIA
OHIO COUNTY, WEST VIRGINIA
WATER SYSTEM IMPROVEMENTS

DRAWING TITLE
PROJECT DETAILS

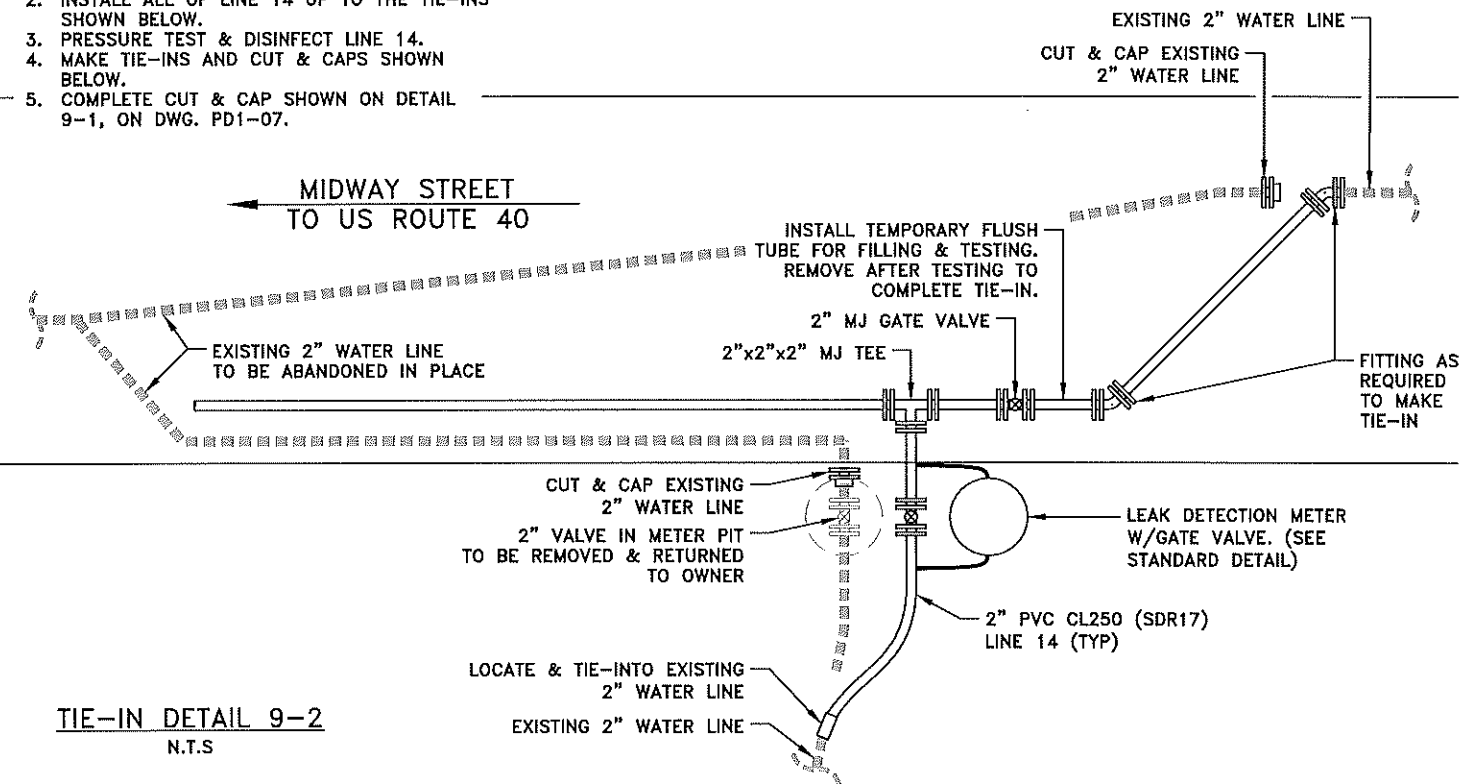
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PROJECT NO.
TR20-1W

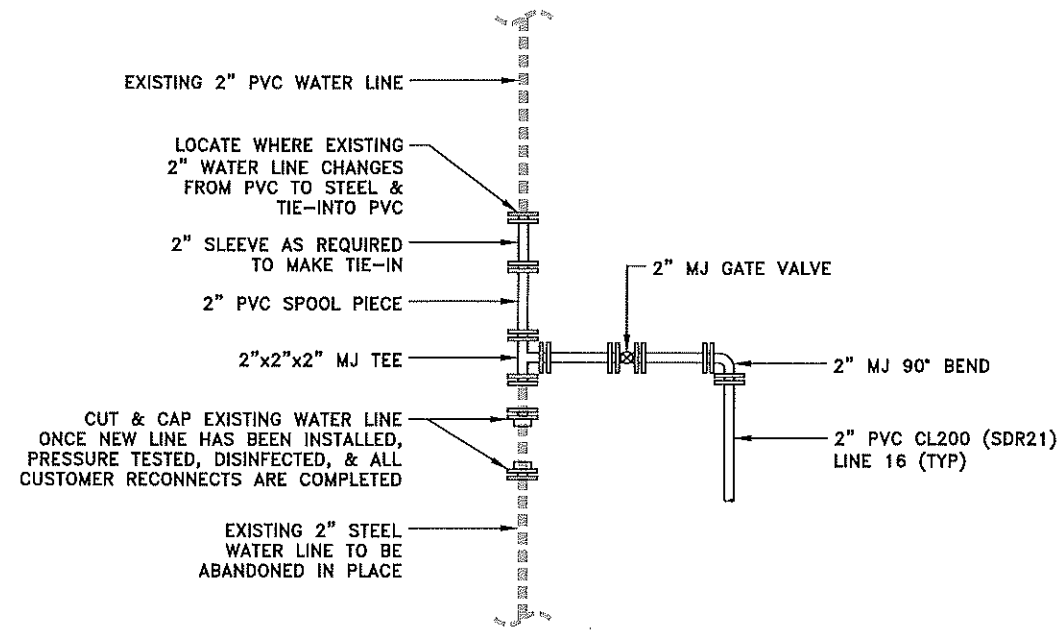
DRAWING NO.
PD1-07

CONSTRUCTION SEQUENCE NOTES:

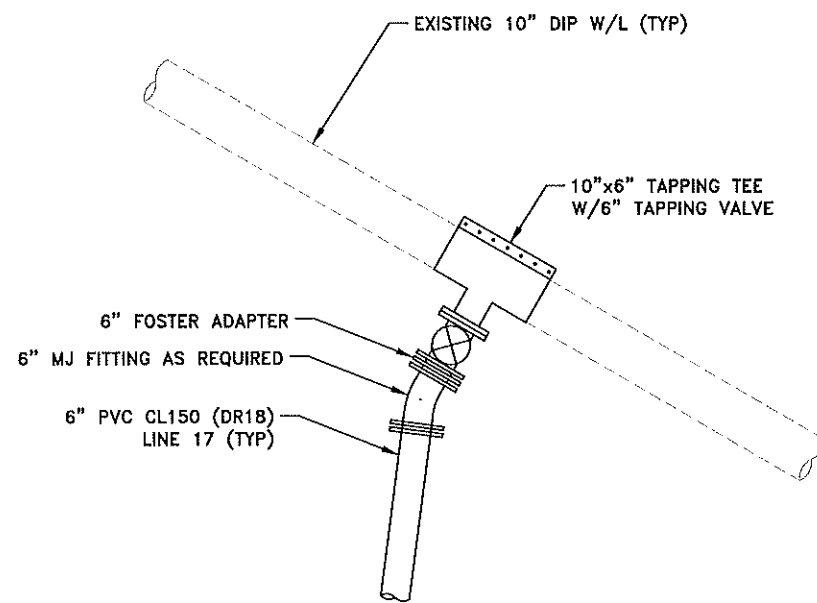
1. COMPLETE TIE-INTO EXISTING 10" MAIN AS SHOWN ON DETAIL 9-1, ON DWG. PD1-07.
2. INSTALL ALL OF LINE 14 UP TO THE TIE-INS SHOWN BELOW.
3. PRESSURE TEST & DISINFECT LINE 14.
4. MAKE TIE-INS AND CUT & CAPS SHOWN BELOW.
5. COMPLETE CUT & CAP SHOWN ON DETAIL 9-1, ON DWG. PD1-07.



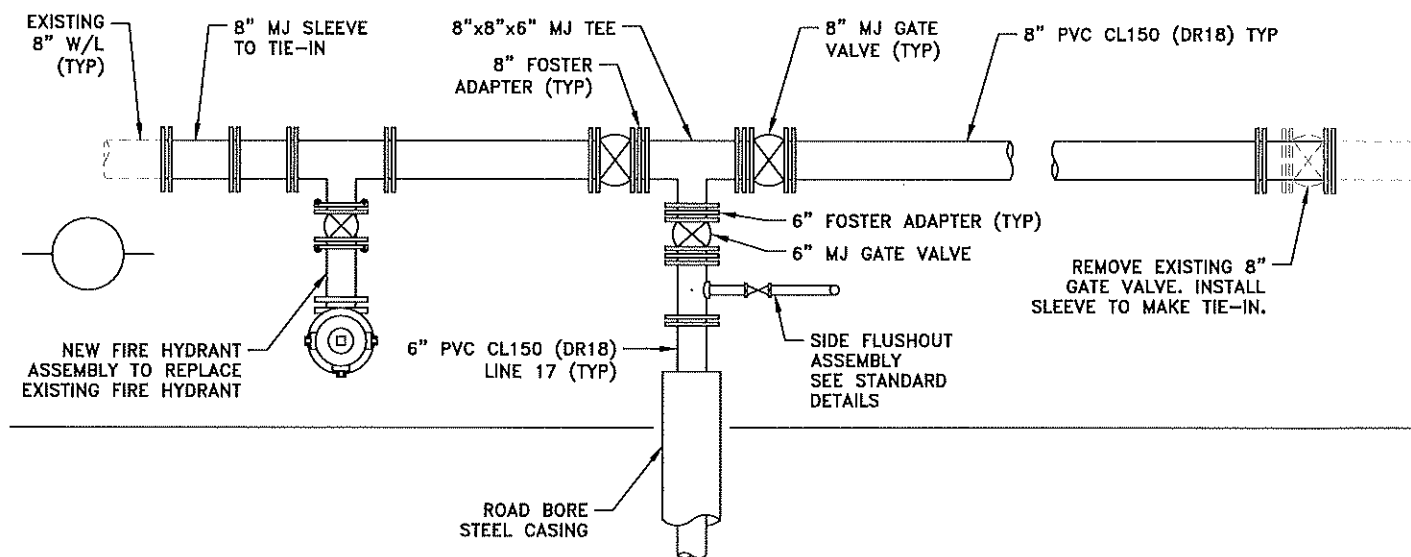
TIE-IN DETAIL 9-2
N.T.S



TIE-IN DETAIL 9-3
N.T.S



TIE-IN DETAIL 10A-1
N.T.S



TIE-IN DETAIL 10B-1
N.T.S

NO.	DATE	REVISION	BY

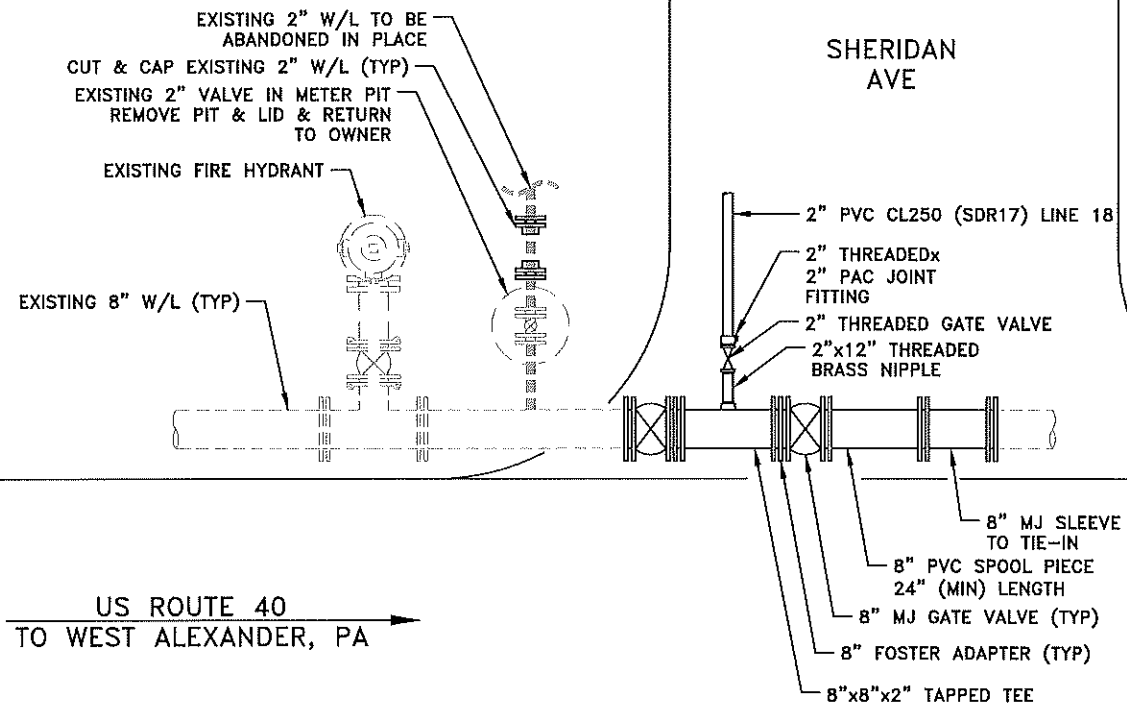
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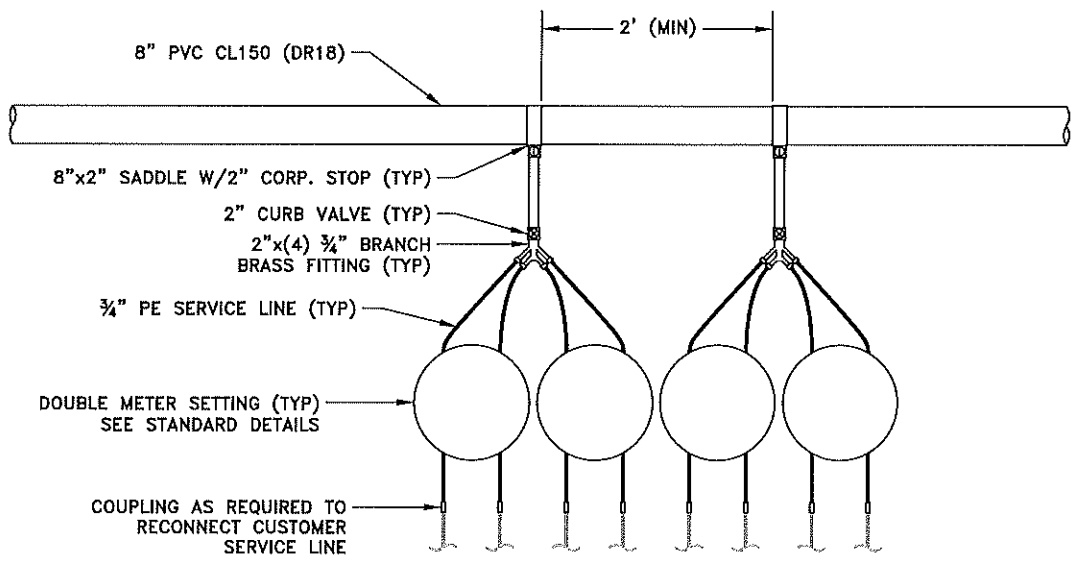
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ISSUE DATE	

DRAWING TITLE	TOWN OF TRIADELPHIA OHIO COUNTY, WEST VIRGINIA WATER SYSTEM IMPROVEMENTS
	PROJECT DETAILS
	SCALE NONE
PROJECT NO. TR20-1W	DRAWING NO. PD1-08



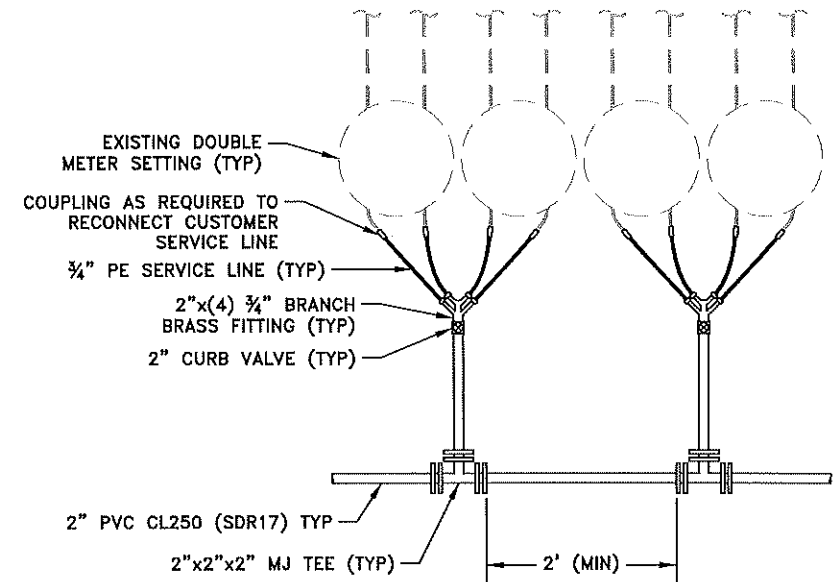
TIE-IN DETAIL 10B-2
N.T.S

- CONSTRUCTION SEQUENCE NOTES:**
1. COMPLETE TIE-INTO EXISTING 8" MAIN AS SHOWN ABOVE.
 2. INSTALL, PRESSURE TEST, & DISINFECT ALL OF LINE 18.
 3. RECONNECT ALL CUSTOMERS TO NEW LINE.
 4. COMPLETE CUT & CAP SHOWN ABOVE



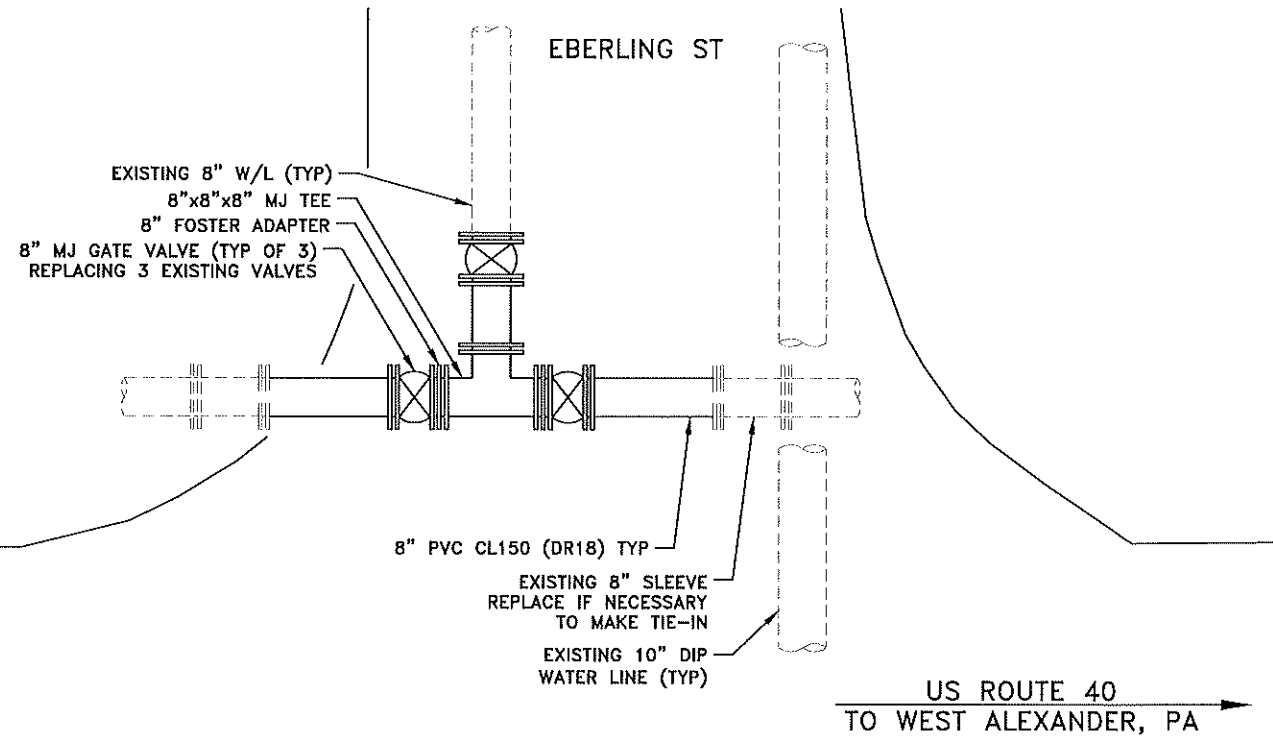
DETAIL SV-1
N.T.S

NOTE: FOR APARTMENT COMPLEXES 3 & 4 (CUSTOMERS 1-01A-27 TO 34), & APARTMENT COMPLEXES 5 & 6 (CUSTOMERS 1-01A-35 TO 42) WILL REQUIRE (2) 2" CONNECTIONS AS SHOWN FOR (8) CUSTOMER RECONNECTS EACH. FOR APARTMENT COMPLEXES 1 & 2 (CUSTOMERS 1-01A-12 TO 23) (3) 2" CONNECTIONS ARE REQUIRED FOR (12) CUSTOMER RECONNECTS.



DETAIL SV-2
N.T.S

NOTE: FOR APARTMENT COMPLEXES 7 & 8 (CUSTOMERS 1-07-01 TO 08), WILL REQUIRE (2) 2" CONNECTIONS AS SHOWN FOR (8) CUSTOMER RECONNECTS.



DETAIL 2C-2
N.T.S

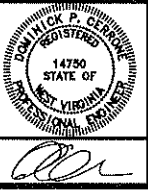
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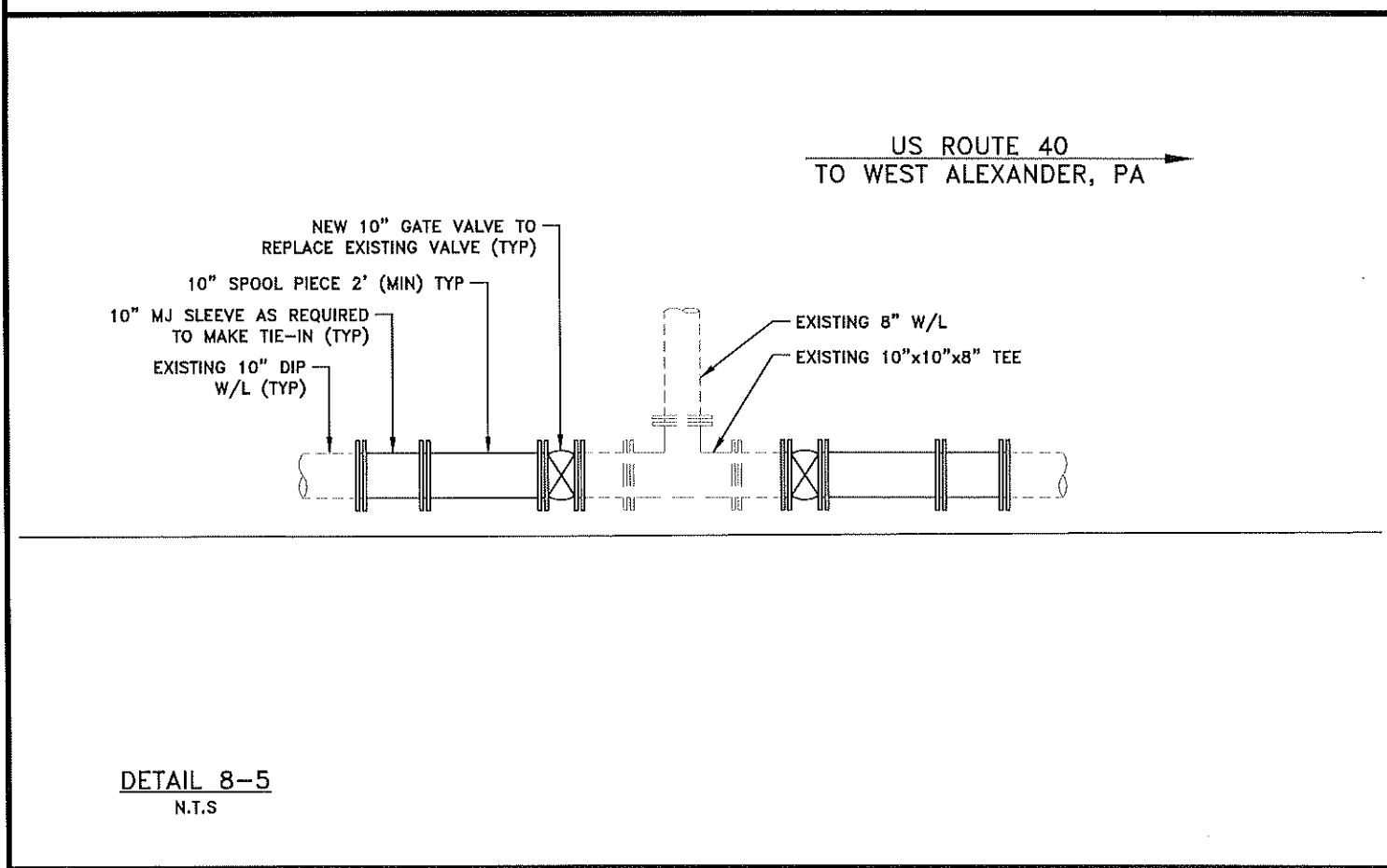
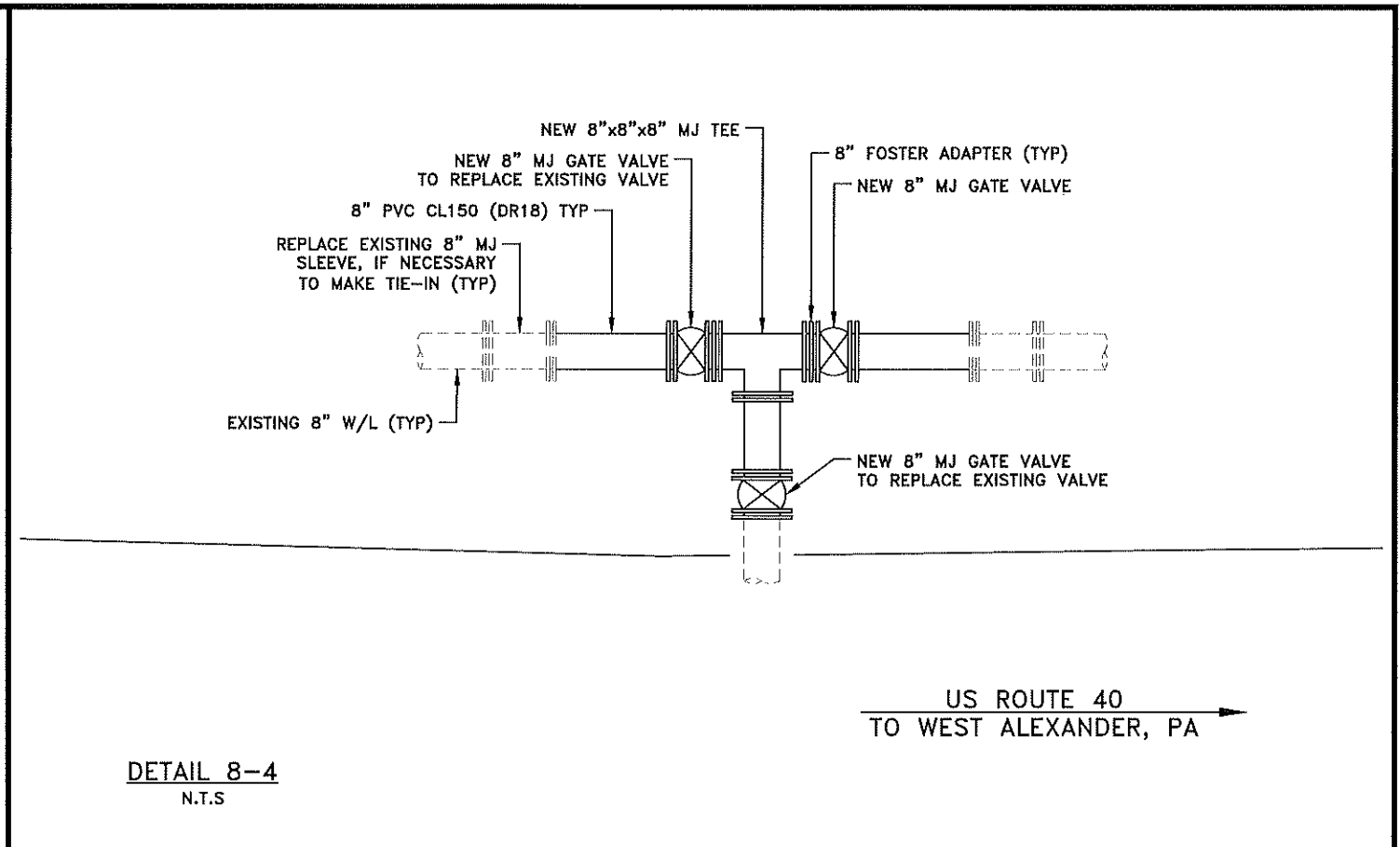
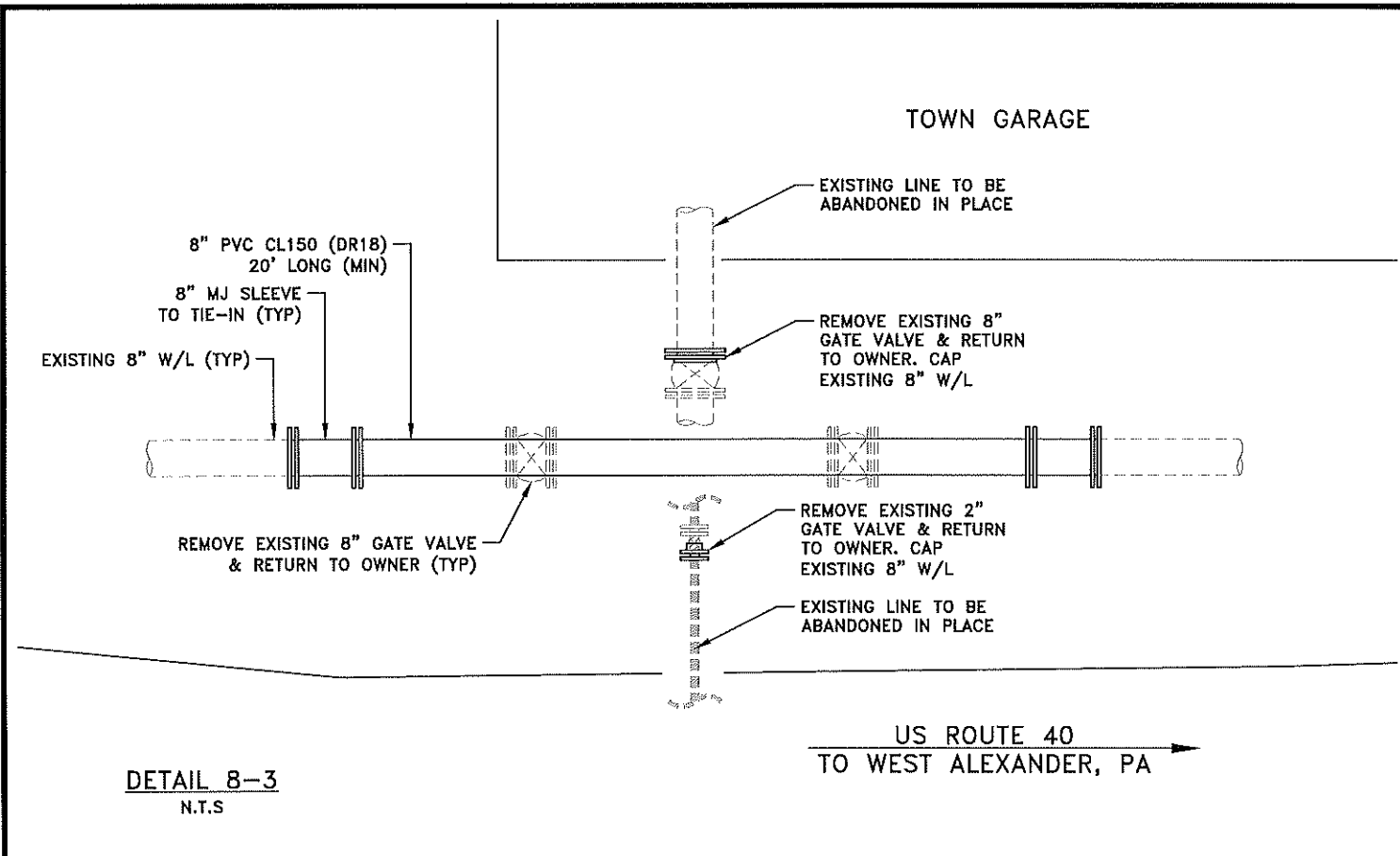
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TOWN OF TRIADDELPHIA
OHIO COUNTY, WEST VIRGINIA
WATER SYSTEM IMPROVEMENTS

DRAWING TITLE: **PROJECT DETAILS**

SCALE	NONE
PROJECT NO.	TR20-1W
DRAWING NO.	PD1-09




NO.	DATE	REVISION	BY

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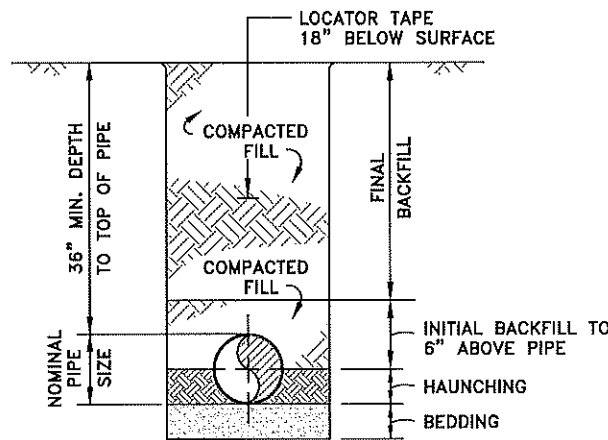
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97-14TH STREET, WHEELING, WV 26003-2497

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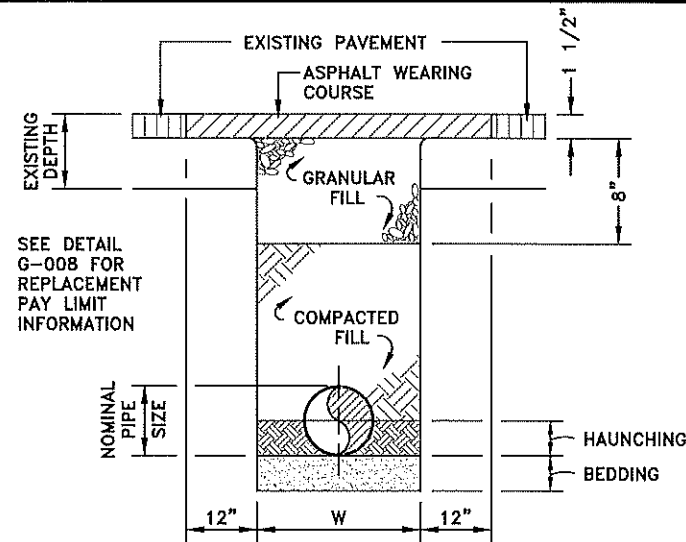
TOWN OF TRIADELPHIA
OHIO COUNTY, WEST VIRGINIA
WATER SYSTEM IMPROVEMENTS

DRAWING TITLE
PROJECT DETAILS

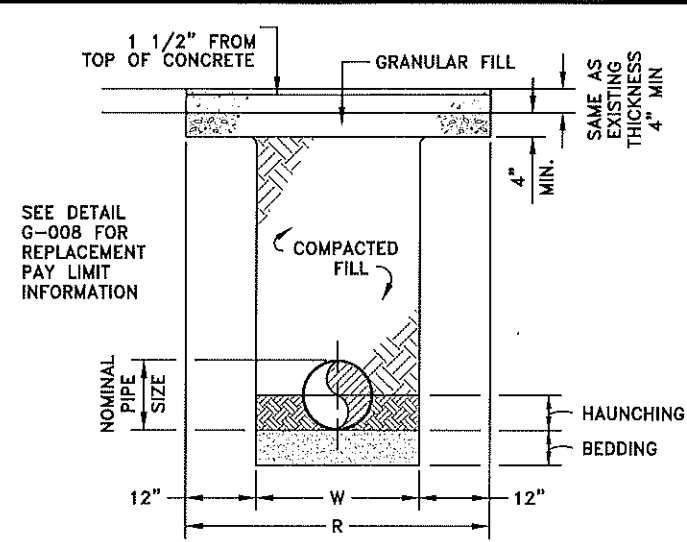
SCALE NONE
PROJECT NO. TR20-1W
DRAWING NO. PD1-10



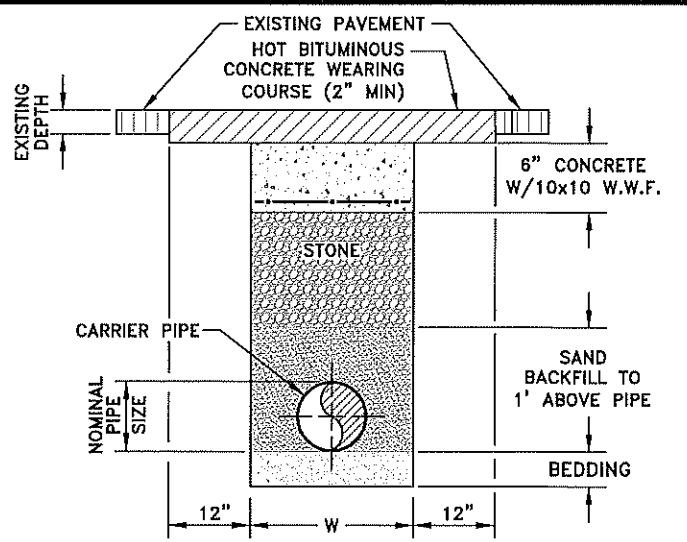
TYPICAL TRENCH SECTION G-001



ASPHALT DRIVEWAY/PARKING REPLACEMENT G-003A



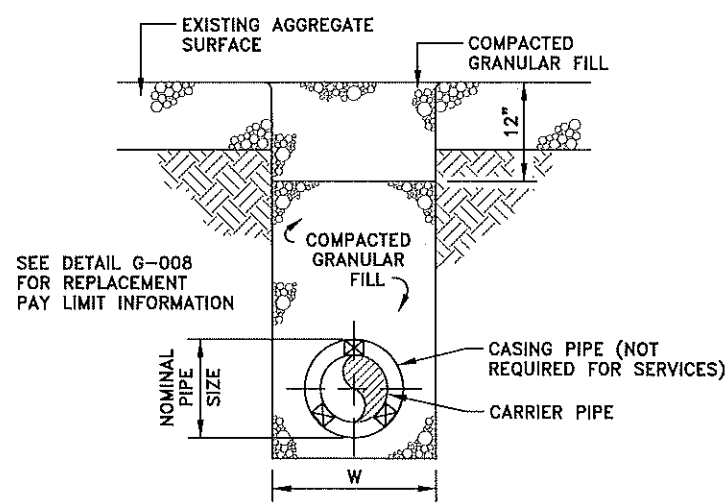
CONCRETE DRIVEWAY AND SIDEWALK REPLACEMENT G-002



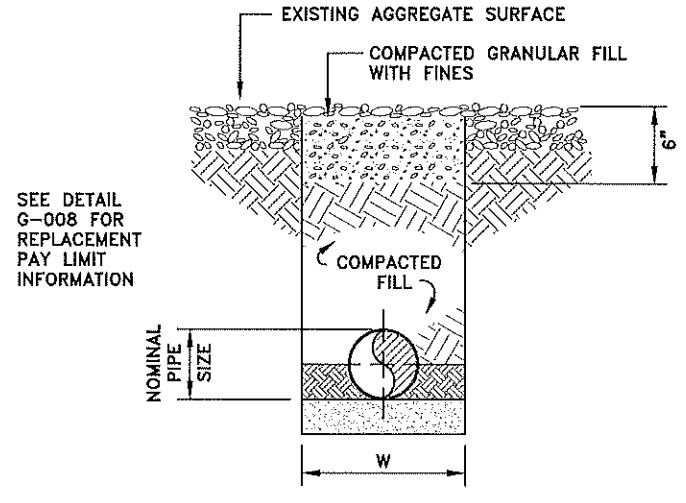
TOWN ROAD TRENCH ASPHALT REPLACEMENT DETAIL G-102A

REPLACEMENTS SCHEDULE				
NOMINAL PIPE SIZE	REPLACEMENT DIMS.		CONC. ENCSM ³ T CU. FT. PER FT. TRENCH	SELECT BEDDING CU. FT. PER FT. TRENCH
	TRENCH AND BASE COURSE	WEARING COURSE		
2" OR LESS	W 1'-6"	R 3'-6"	1.48	0.63
3" & 4"	W 1'-6"	R 3'-6"	1.68	0.75
6"	W 1'-6"	R 3'-6"	1.80	0.88
8"	W 2'-0"	R 4'-0"	2.65	1.00
10"	W 2'-4"	R 4'-4"	3.34	1.13
12"	W 2'-7"	R 4'-7"	3.94	1.25

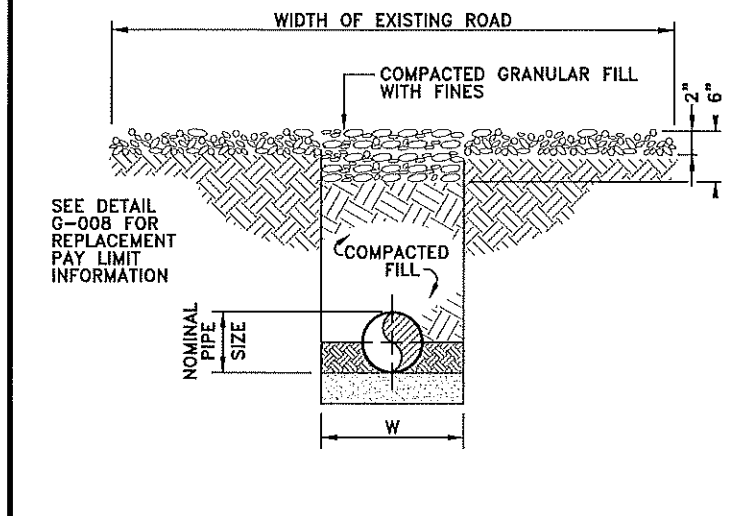
REPLACEMENT PAY LIMIT INFORMATION G-008



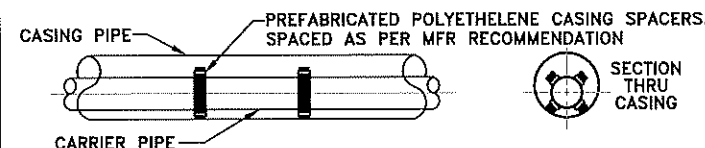
HIGHWAY OPEN CUT G-017



AGGREGATE DRIVEWAY & PARKING AREA REPLACEMENT G-026

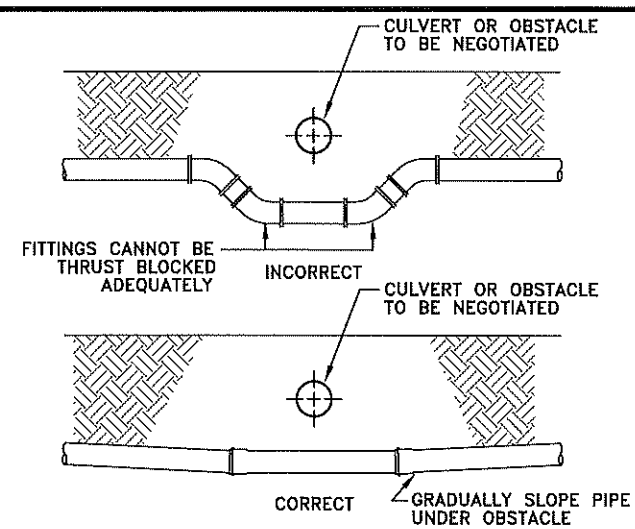


FULL WIDTH AGGREGATE OVERLAY PIPE IN MIDDLE OF ROAD G-031

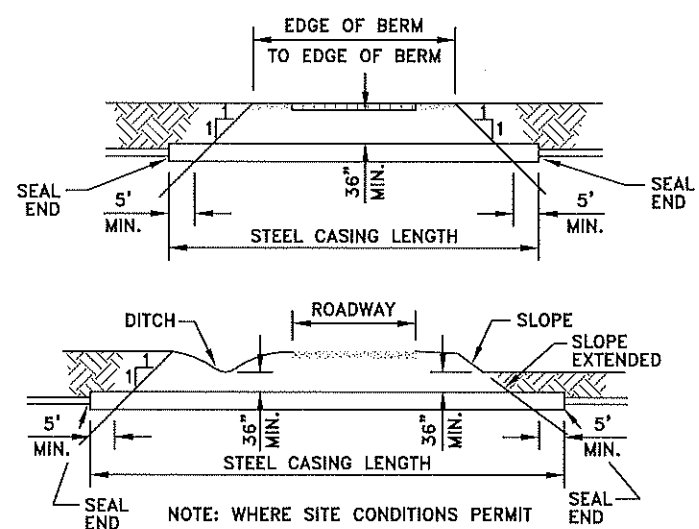


CASING SCHEDULE							
CARRIER PIPE TYPE	CASING PIPE TYPE	CARRIER PIPE SIZES					
		2"	3"	4"	6"	8"	10"
CL 100 DR 25	STEEL	—	—	10"	12"	14"	16"
CL 160 SDR 26	PVC	—	—	10"	12"	15"	18"
CL 200 SDR 21	STEEL	6"	8"	8"	10"	12"	16"
CL 250 SDR 17	PVC	6"	8"	8"	10"	15"	15"
CL 315 SDR 13.5	STEEL	6"	8"	8"	10"	12"	16"
C-900 DR 14 DR 18	PVC	6"	8"	8"	10"	15"	15"
ASTM D 3034 SDR 35	STEEL	—	—	8"	10"	12"	16"
ASTM F 794 ULTRA-RIB	STEEL	—	—	—	—	14"	16"

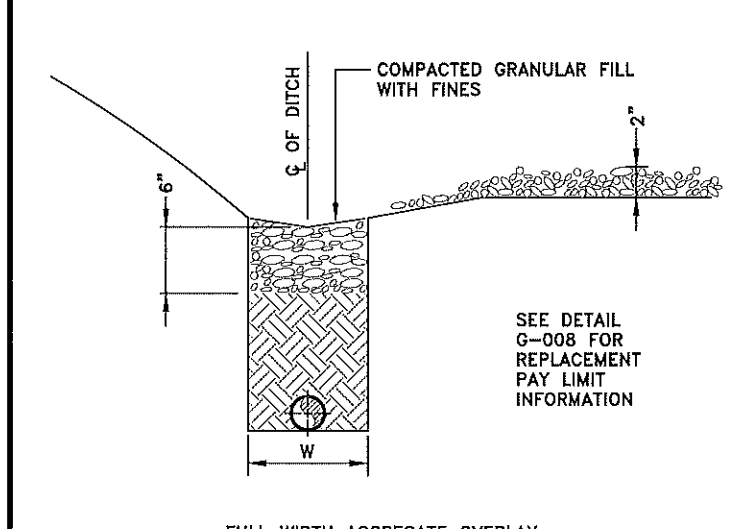
CASING G-012A



CORRECT METHOD FOR NEGOTIATING AN OBSTACLE G-010



ROAD BORINGS G-013



FULL WIDTH AGGREGATE OVERLAY PIPE IN EDGE OF ROAD G-032

No.	DATE	DESCRIPTION	BY
1	10-2-2022	CASING OBTAINED	

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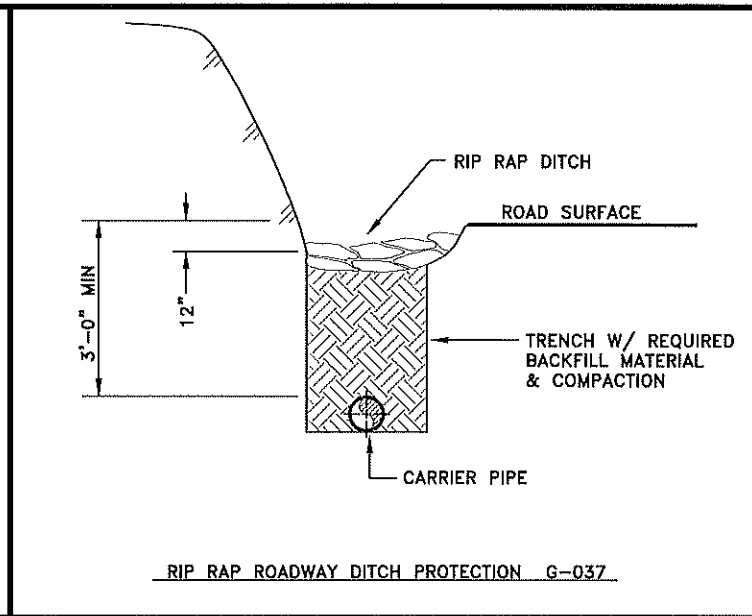
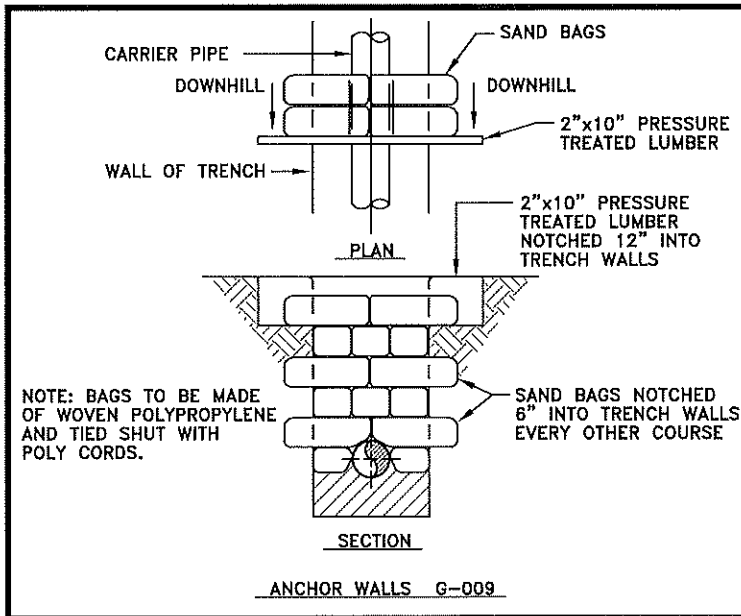


PROJECT TITLE
DRAWING TITLE

TOWN OF TRIADELPHIA
OHIO COUNTY, WEST VIRGINIA
WATER SYSTEM IMPROVEMENTS

STANDARD DETAILS

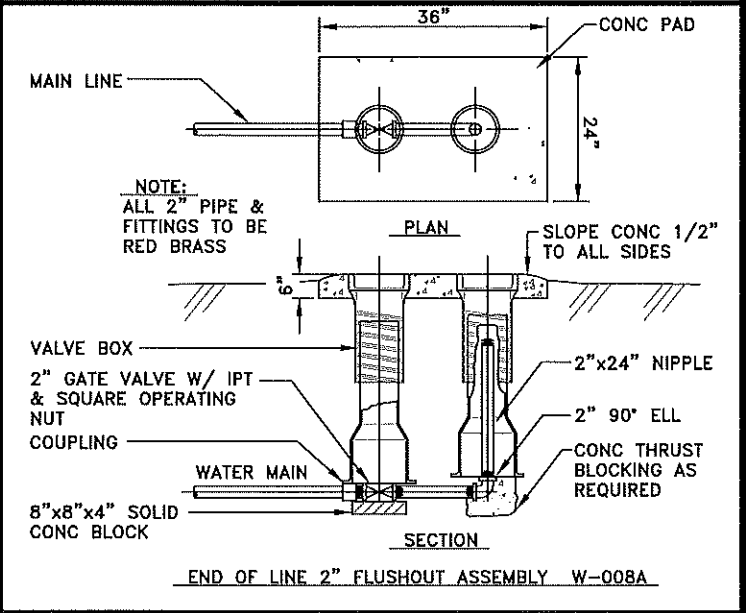
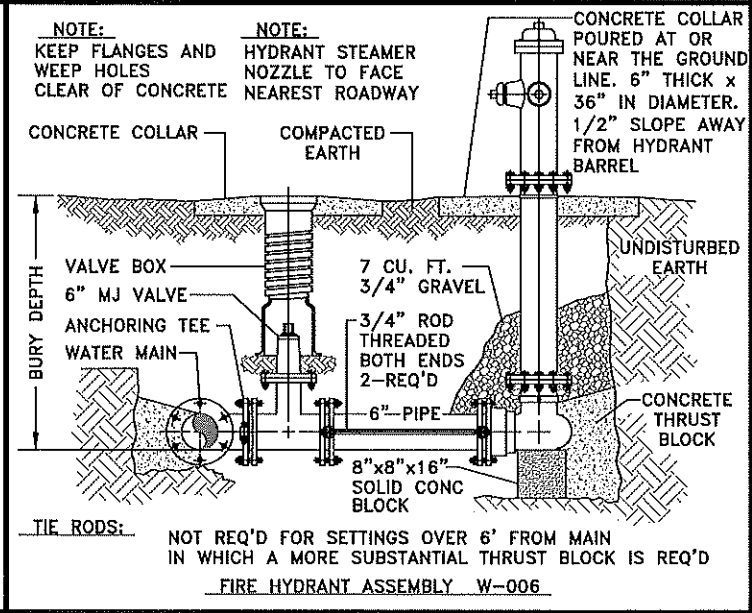
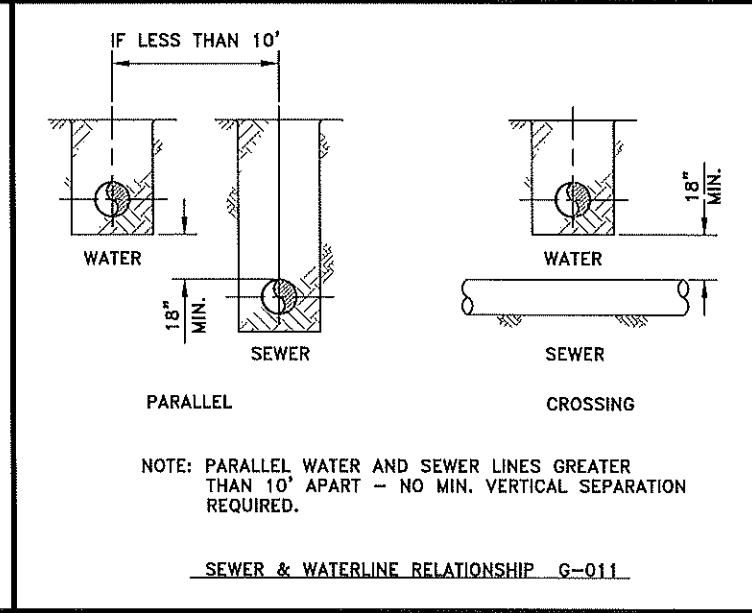
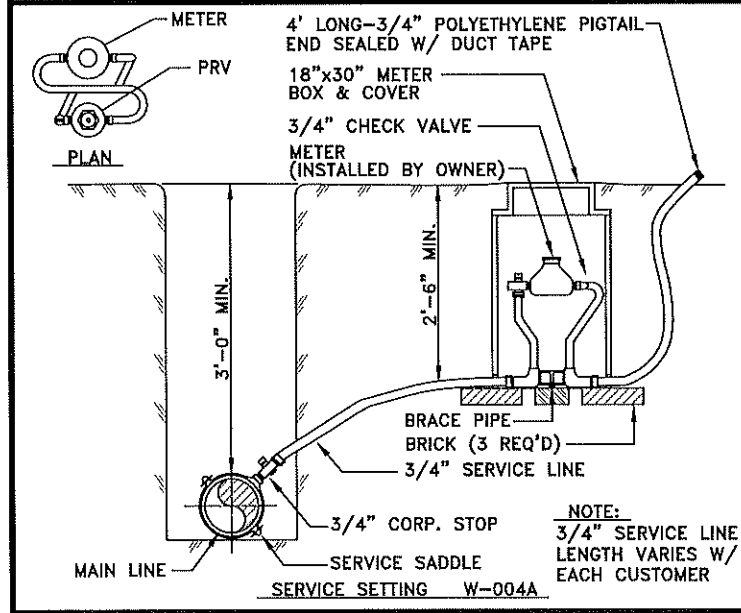
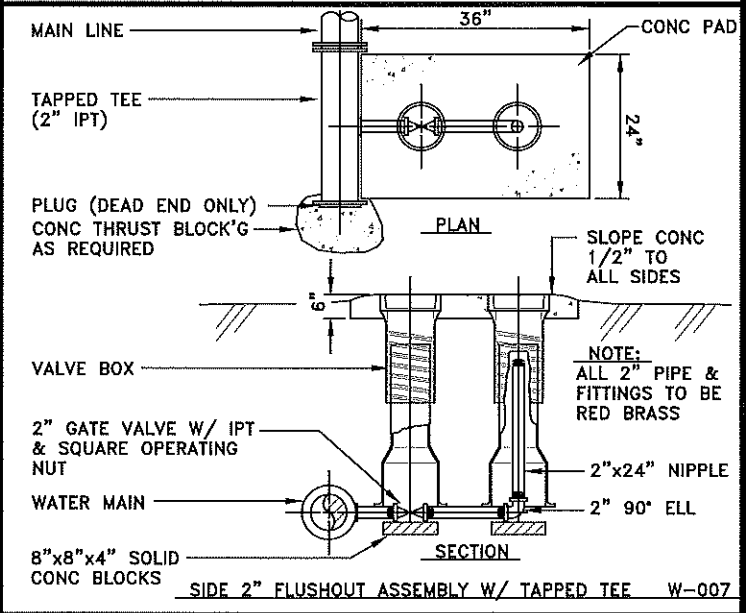
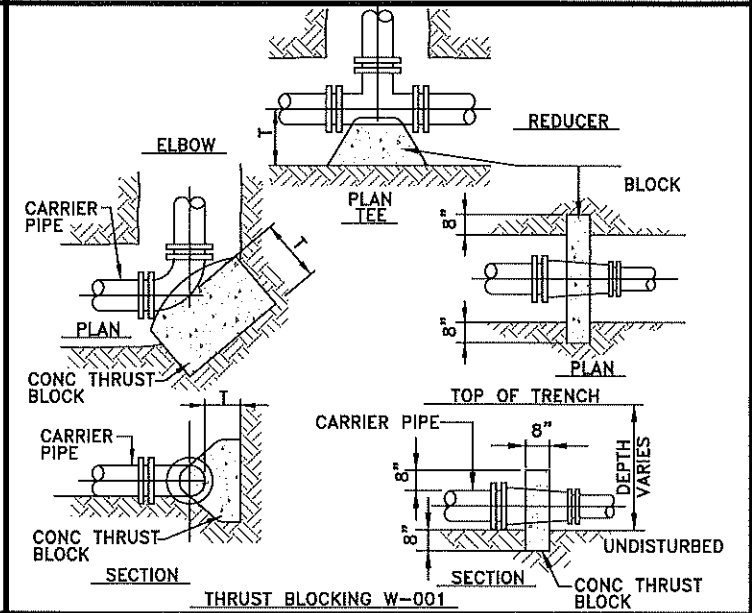
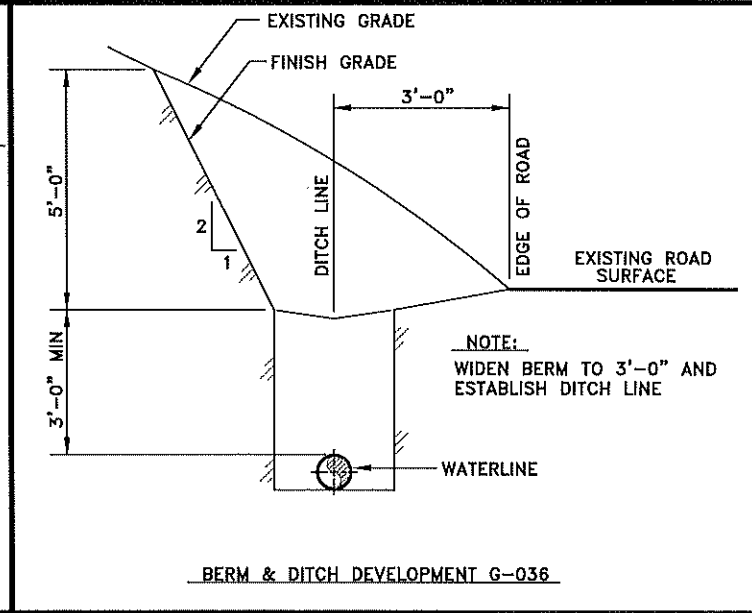
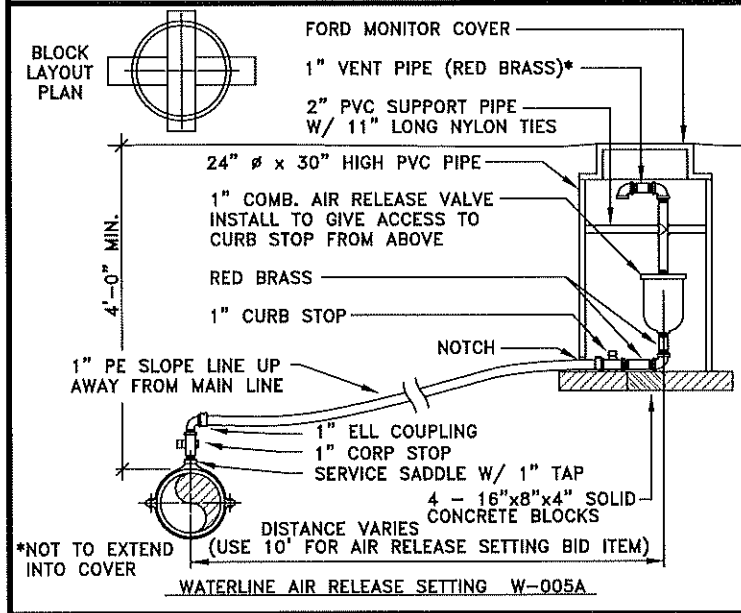
SCALE AS SHOWN
PROJECT NO. TR20-1W
DRAWING NO. SD1-01



PIPE SIZE	CLASS	FITTING (REQUIRED BEARING AREA IN SQUARE FEET)				MINIMUM THICKNESS T
		TEE OR CAP	90°	45°	11 1/4" & 22 1/2"	
ALL PIPE 3" & SMALLER		1.0	1.0	1.0	1.0	6"
4"	SDR	1.6	2.3	1.3	0.6	6"
4"	DR & DIP	3.0	4.2	2.2	1.1	6"
6"	SDR	3.5	4.9	2.7	1.4	8"
6"	DR & DIP	6.1	8.6	4.7	2.4	8"
8"	SDR	5.9	8.4	4.5	2.3	12"
8"	DR & DIP	10.3	14.6	7.9	4.0	12"
10"	SDR	9.2	13.0	7.0	3.6	12"
10"	DR & DIP	16.1	22.8	12.4	6.2	12"
12"	SDR	12.9	18.2	9.9	5.0	15"
12"	DR & DIP	22.6	32.0	17.2	8.8	15"

* FOR OTHER PIPE SIZES & CLASSES, REFER TO PROJECT ENGINEER

THRUST BLOCKING SIZE REQUIREMENTS G-030



No.	DATE	DESCRIPTION	BY
1	08-2023	FIXED CONCRETE COLLAR TO FIRE HYDRANT AS PER REQUEST & WITH RECOMMENDATION	RLR
2	08-2023	ADDED PLOTTING SIZE GENERAL NOTES TO BEAD FOLD AS PER REQUEST	RLR
1	10-2022	DRAWING CHANGE	RLR

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FIELD LAYOUT

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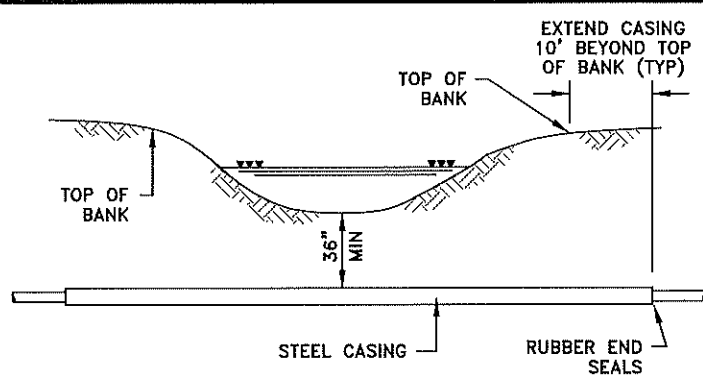
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ISSUE DATE: 10-1-2021

PROJECT TITLE: TOWN OF TRIADELPHIA OHIO COUNTY, WEST VIRGINIA WATER SYSTEM IMPROVEMENTS

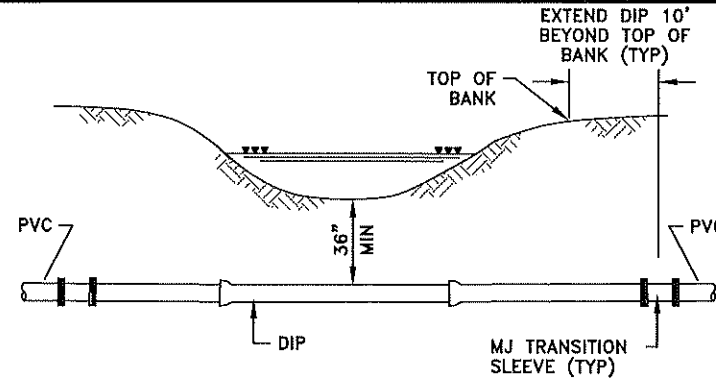
DRAWING TITLE: STANDARD DETAILS

PROJECT TITLE	TOWN OF TRIADELPHIA OHIO COUNTY, WEST VIRGINIA WATER SYSTEM IMPROVEMENTS
DRAWING TITLE	STANDARD DETAILS
SCALE	AS SHOWN
PROJECT NO.	TR20-1W
DRAWING NO.	SD1-02



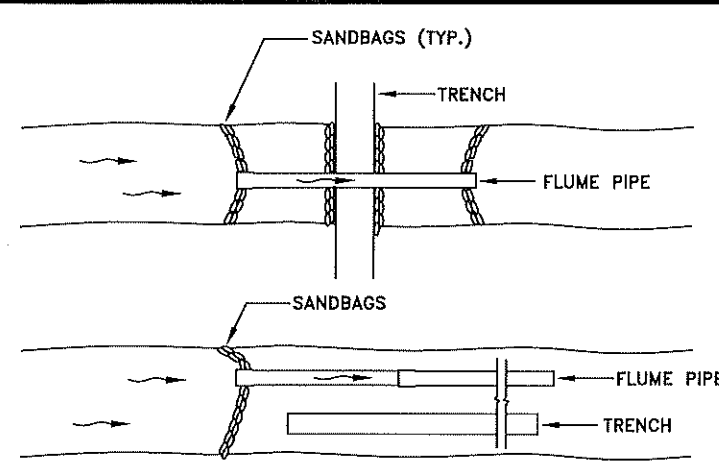
- NOTES**
- 1) STEEL CASING PROTECTION LENGTH AS SHOWN ON DRAWINGS
 - 2) REFER TO DETAIL G-012 FOR CASING SIZES
 - 3) PROVIDE PIPE SUPPORTS AS SHOWN ON DETAIL G-012
 - 4) VALVES TO BE INSTALLED AS SHOWN ON DRAWINGS

STREAM CROSSING WITH CASING G-028
(FOR CARRIER PIPE & SERVICE PIPE 4" & SMALLER)

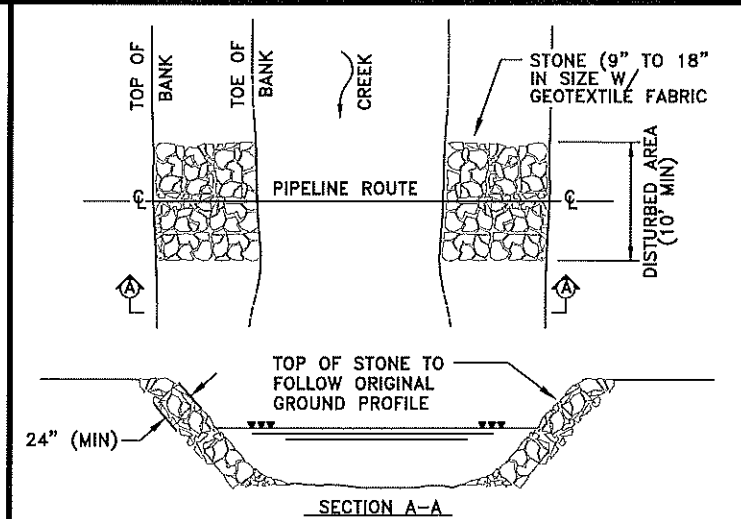


- NOTES:**
- 1) FIELD-LOCK GASKETS TO BE USED, WITH DIP, AS JOINT RESTRAINTS
 - 2) DIP PROTECTION LENGTH AS SHOWN ON DRAWINGS
 - 3) VALVES TO BE INSTALLED AS SHOWN ON DRAWINGS

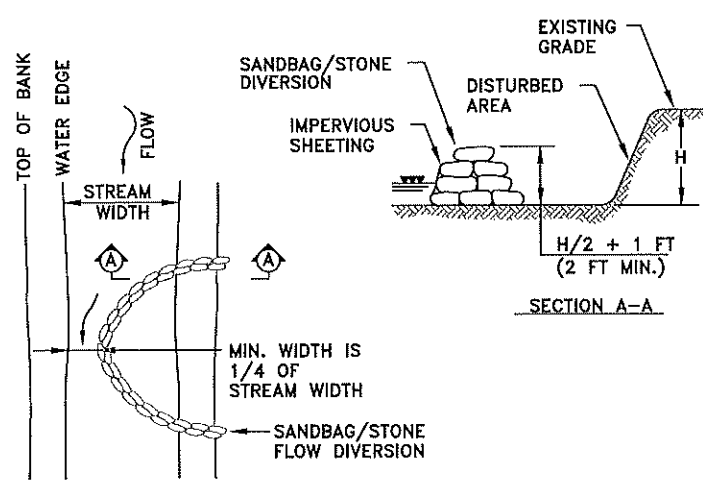
STREAM CROSSING WITH DIP G-029
(FOR CARRIER PIPE 6" & LARGER)



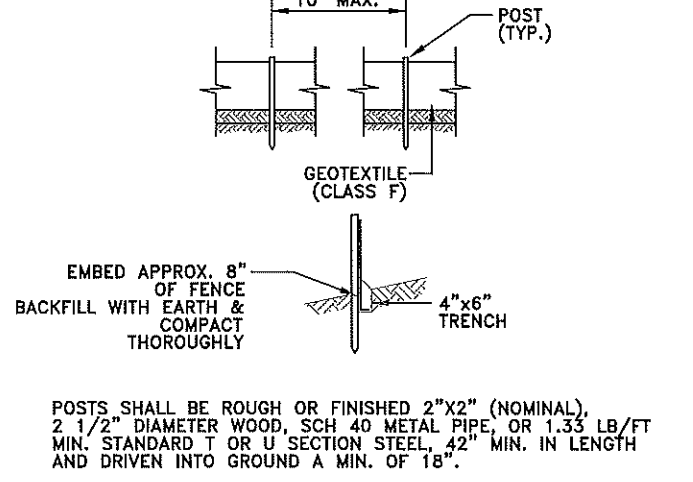
STREAM CROSSING DETAILS G-033



STONE STREAM BANK PROTECTION G-025



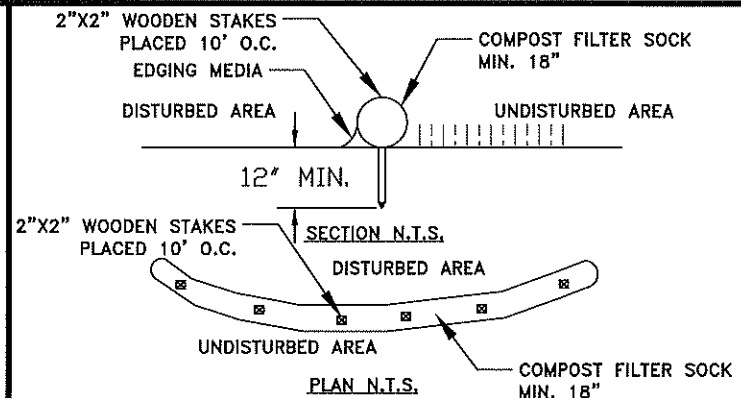
STREAM DIVERSION DETAIL G-034



SILT FENCE DETAIL G-015A
SLOPE PROTECTION

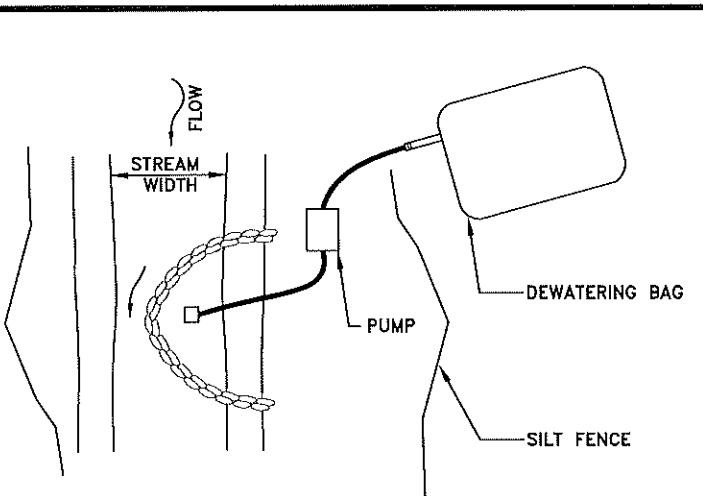
- * ALL STREAM ACTIVITIES WILL TAKE PLACE DURING PERIODS OF LOW FLOW
- * NO WORK SHALL BE PERFORMED ON THE STREAM CROSSINGS DURING FISH SPAWNING SEASON (APRIL - JUNE)
- * SEDIMENT & EROSION CONTROL STRUCTURES SHALL BE MAINTAINED FOR THE DURATION OF THE PROJECT. TORN OR DETERIORATED MATERIALS SHALL BE REPLACED
- * ALL SEDIMENT CONTROL DEVICES SHALL BE REMOVED AFTER THE END OF THE PROJECT. SILT FENCES TO BE CHECKED AT A MINIMUM OF ONCE EVERY SEVEN CALENDAR DAYS AND AFTER EVERY STORM EVENT OF .25" OR GREATER.
- * SEDIMENT BUILD-UP SHALL BE REMOVED AFTER EACH STORM.
- * EXCAVATIONS ACROSS STREAMS (WHERE SHOWN ON DRAWINGS) SHALL BE MADE USING DIVERSION WALLS & FLUME PIPE (SEE DETAILS G-33 & G-34).
- * PUMPS USED FOR DEWATERING SHALL BE PROVIDED WITH INLET SCREENS OR FILTERS TO REDUCE SUCKING MUD. PUMPED WATER SHALL BE DIRECTED TO A DEWATERING BAG BEFORE BEING RELEASED INTO THE STREAM.
- * STREAM BANKS DISTURBED DURING INSTALLATION OF THE PIPE MUST BE RESHAPED AND STABILIZED WITH APPROPRIATE MATERIAL THE SAME DAY THE BACKFILL IS COMPLETED.
- * STREAM BED SMOOTHING SHOULD BE KEPT TO A MINIMUM.
- * ANY AREAS WHICH CANNOT BE RESTORED WITHIN FOUR (4) DAYS OF REACHING FINAL GRADE WILL BE TEMPORARILY MULCHED AND SEEDED.
- * SLOPES WITH A GRADE OF 2:1 OR GREATER SHALL BE COVERED WITH AN ESTABLISHMENT BLANKET.
- * REFER TO THE SPECIFICATIONS (SECTION 02936) FOR ADDITIONAL SEEDING DETAILS.

SEDIMENT CONTROL NOTES G-035a

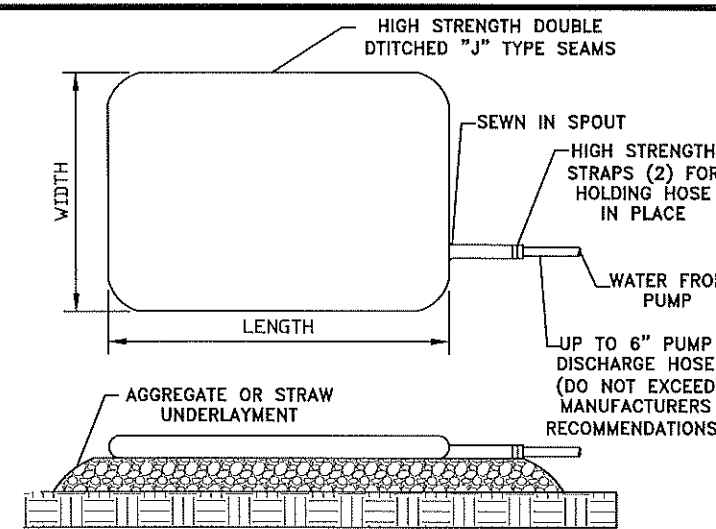


- SOCK FABRIC SHALL MEET REGULATORY STANDARDS. COMPOST SHALL MEET REGULATORY STANDARDS. COMPOST FILTER SOCK SHALL BE PLACED AT EXISTING LEVEL GRADE. TRAFFIC SHALL NOT BE PERMITTED TO CROSS FILTER SOCKS. ACCUMULATED SEDIMENT SHALL BE REMOVED WHEN IT REACHES HALF THE ABOVEGROUND HEIGHT OF THE SOCK AND DISPOSED. SOCKS SHALL BE INSPECTED WEEKLY AND AFTER EACH RUNOFF EVENT. DAMAGED SOCKS SHALL BE REPAIRED ACCORDING TO MANUFACTURER'S SPECIFICATIONS OR REPLACED WITHIN 24 HOURS OF INSPECTION.**

COMPOST FILTER SOCK DETAIL



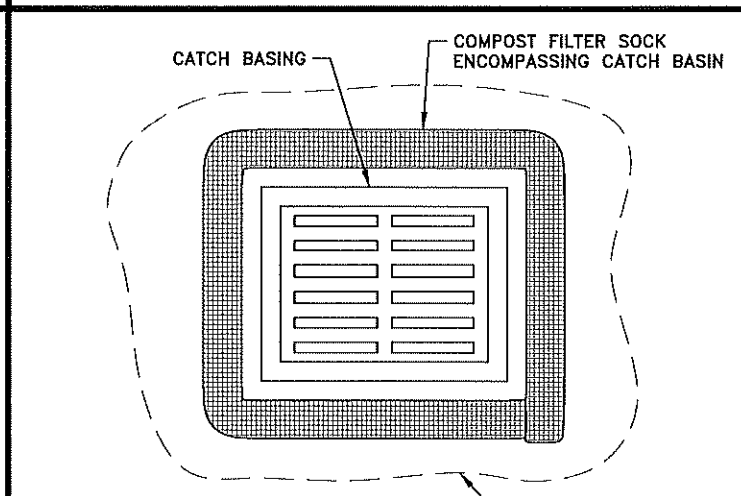
DEWATERING G-050A



DEWATERING BAG DETAIL G-050B

- THE CONTRACTOR SHALL PROVIDE MEANS TO HANDLE SPILLS AND WASTE MATERIAL DISPOSAL. THIS SHALL INCLUDE, BUT NOT BE LIMITED TO, THE FOLLOWING:
- 1: A CONTAINMENT DIKE SHALL BE PROVIDED AROUND ANY ON-SITE FUEL STORAGE TANKS. IT SHALL HAVE A CAPACITY OF 110% OF THE SIZE OF THE STORAGE TANK.
 - 2: ABSORBANT PADS SHALL BE AVAILABLE ON SITE FOR PETROLEUM SPILLS OR LEAKS ON GROUND. ABSORBANT BOOMS SHALL BE PROVIDED FOR SPILLS IN STREAMS.
 - 3: EXCESS CONCRETE SHALL NOT BE DISPOSED OF NEAR STREAMS.
 - 4: SANITARY FACILITIES SHALL BE MAINTAINED BY THE PROVIDER, WITH CLEANING AND WASTE DISPOSAL ON A WEEKLY BASIS.

SPILL PREVENTION, CONTROL, & CONTAINMENT NOTES G-035b



- NOTE: COMPOST FILTER SOCK TO BE PLACED AROUND ALL CATCH BASINS**

CATCH BASIN PROTECTION - COMPOST FILTER SOCK

No.	DATE	DESCRIPTION	BY
2	08-2025	ADDED COMPOST FILTER SOCK & CATCH BASIN PROTECTION DETAILS	RLR
1	12-2022	ISSUED FOR PERMIT	RLR

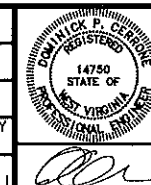
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FIELD LAYOUT
DRAWN BY RLR
CONST CHECKED BY
RECORD CHECKED BY
ISSUE DATE 10-1-2021



PROJECT TITLE

TOWN OF TRIADELPHIA
OHIO COUNTY, WEST VIRGINIA
WATER SYSTEM IMPROVEMENTS

DRAWING TITLE

STANDARD DETAILS

SCALE

NONE

PROJECT NO.

TR20-1W

DRAWING NO.

SD1-03

DIRECTIONAL DRILLING ACTIVITIES UTILIZE A BENTONITE CLAY AND WATER SLURRY FOR LUBRICATION OF THE DRILL PATH, AND THE SIGNIFICANT HYDRAULIC PRESSURES THAT ARE REQUIRED PRODUCE THE POTENTIAL FOR THE SLURRY TO "FRAC-OUT" TO THE GROUND SURFACE OR AN ENVIRONMENTALLY SENSITIVE WATERWAY. THEREFORE, IN ANTICIPATION OF DIRECTIONAL DRILLING ACTIVITIES FOR THIS PROJECT, THE FOLLOWING PLAN SHALL BE IMPLEMENTED BY THE CONTRACTOR.

PREVENTION

ALL PERSONNEL ON SITE DURING DIRECTIONAL DRILLING OPERATIONS SHALL BE TRAINED TO DETECT AND RESPOND TO A FRAC-OUT CONDITION, AND ALL NECESSARY DRILLING EQUIPMENT SHALL BE INSPECTED DAILY FOR LEAKS OR DEFECTS THAT COULD RESULT IN SPILLAGE OF DRILLING MUD; THIS IS THE SITE FOREMAN'S RESPONSIBILITY. PRIOR TO THE COMMENCEMENT OF ANY DRILLING OPERATIONS, CONTAINMENT AND CLEANUP PROVISIONS (SAND BAGS, SPILL BOOMS, PORTABLE PUMPS, VAC TRUCKS, ETC.) SHALL BE ON SITE OR NEARBY, READY FOR DEPLOYMENT WITHIN 15 MINUTES. BASED ON PAST DRILLING EXPERIENCE IN SIMILAR CONDITIONS, SELECT DRILLING PRESSURE AND DEPTHS THAT MINIMIZE THE POTENTIAL FOR FRAC-OUT.

MONITORING

DURING DRILLING OPERATIONS, PERSONNEL SHALL BE ACTIVELY LOOKING FOR ANY SURFACING OF DRILLING MUD, AND THE DRILL RIG OPERATOR SHALL CONTINUOUSLY MONITOR THE DRILLING MUD PRESSURE, LOOKING FOR SUDDEN DROPS THAT COULD INDICATE A FRAC-OUT. ALL DRILLING WORK SHALL CEASE IMMEDIATELY UPON DISCOVERY OF A FRAC-OUT CONDITION, AND SYSTEM PRESSURE SHALL BE RELIEVED TO PREVENT CONTINUED SPILLAGE.

CONTAINMENT

UPON DISCOVERY OF A FRAC-OUT, ISOLATE THE AFFECTED AREA WITH APPROPRIATE MEASURES, DEPENDING ON WHETHER THE FRAC-OUT OCCURRED ON LAND OR IN A WATERWAY. INSTALL SILT FENCE, FIBER LOGS, OR EQUIVALENT MEASURES AROUND A SPILL ON LAND TO COMPLETELY CONTAIN THE SPILL AND PREVENT ITS TRANSPORT TO WATERWAYS. FOR A FRAC-OUT IN WATER, ISOLATE THE AFFECTED AREA AS RAPIDLY AS POSSIBLE WITH SAND BAGS, SPILL BOOMS, CURTAINS, OR THEIR EQUIVALENTS. UTILIZE ANIONIC POLYMERS WITHIN A CONTAINED SPILL IN WATERWAYS TO ASSIST IN FLOCCULATION AND REMOVAL. SITE FOREMAN IS TO IMMEDIATELY NOTIFY WYDEP, EPA, WYDNR, AND USFWS ALONG WITH THE PROJECT ENGINEER WHO WILL CONTACT THE SYSTEM OPERATOR TO ISSUE AN ENVIRONMENTAL ALERT.

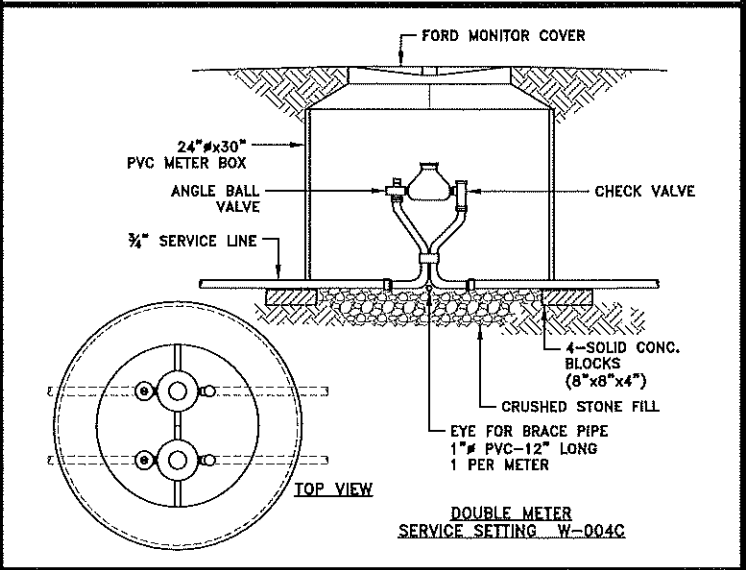
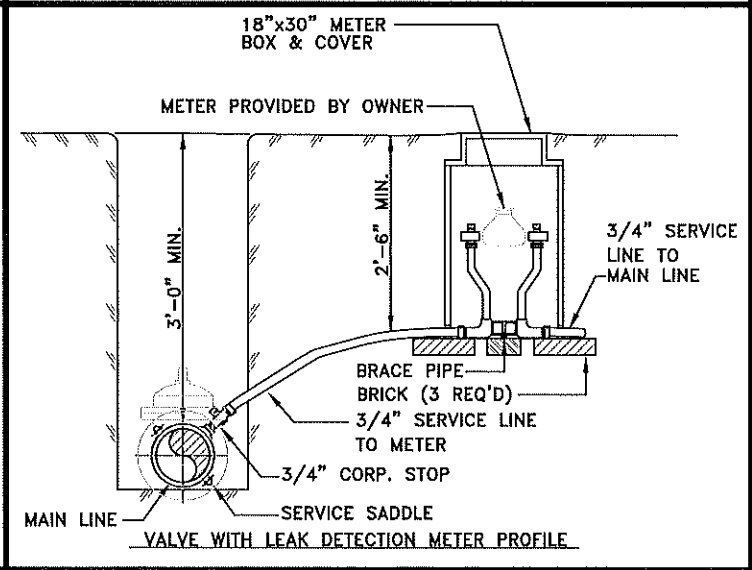
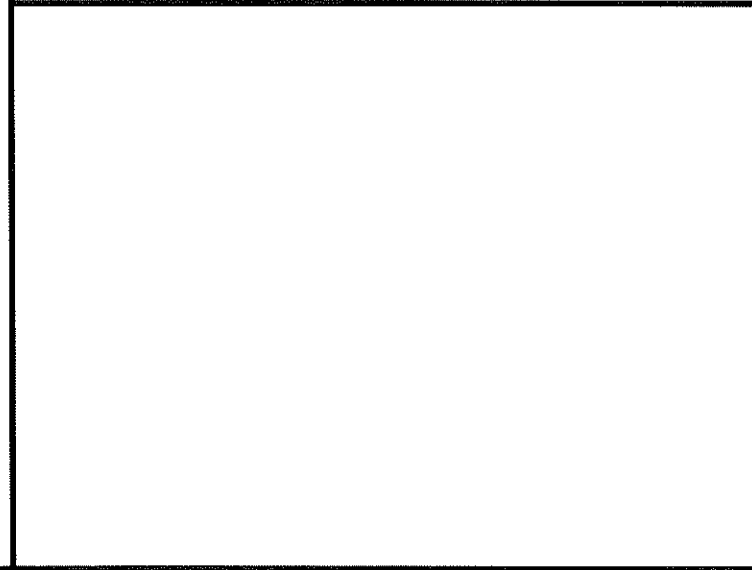
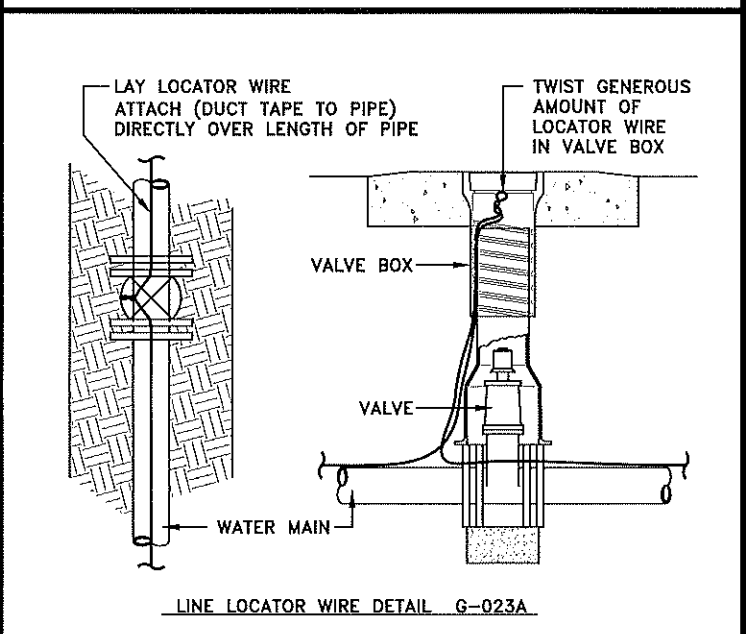
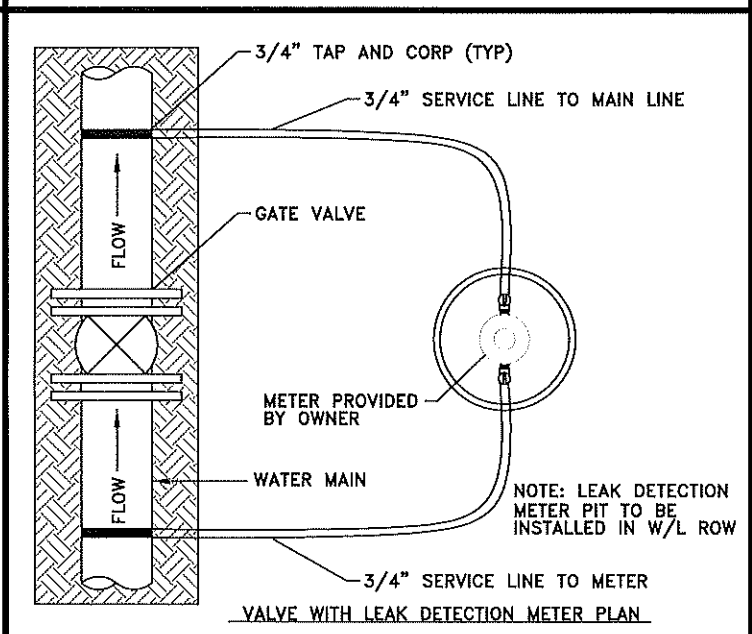
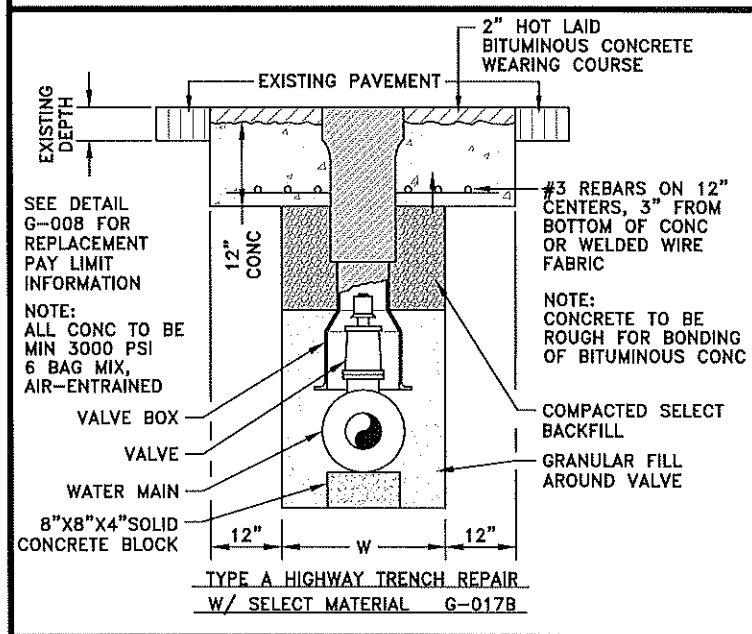
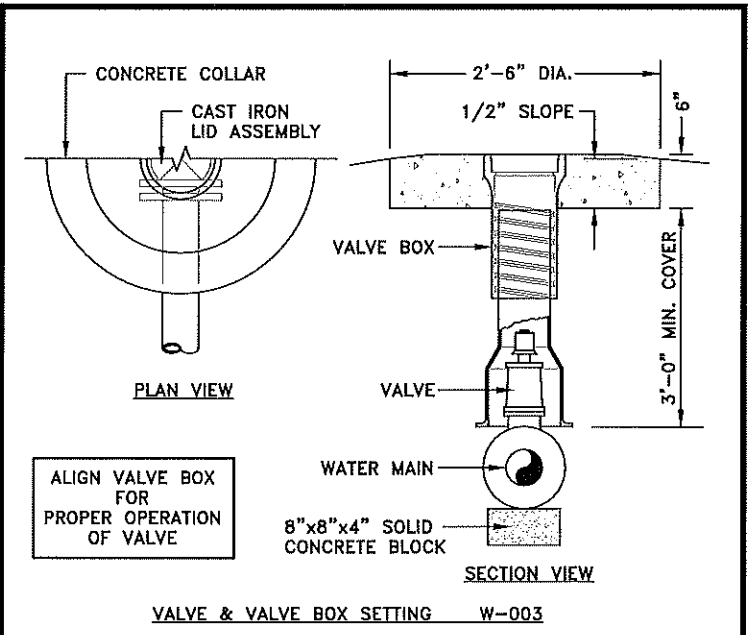
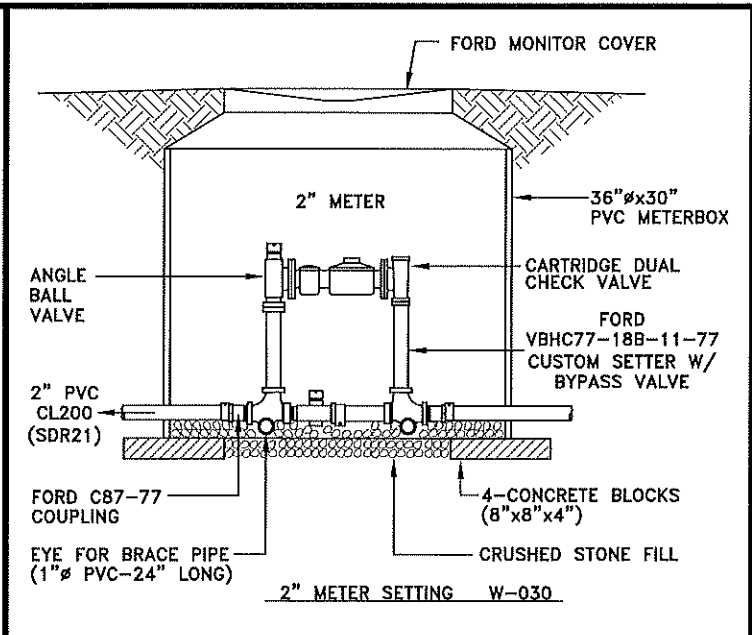
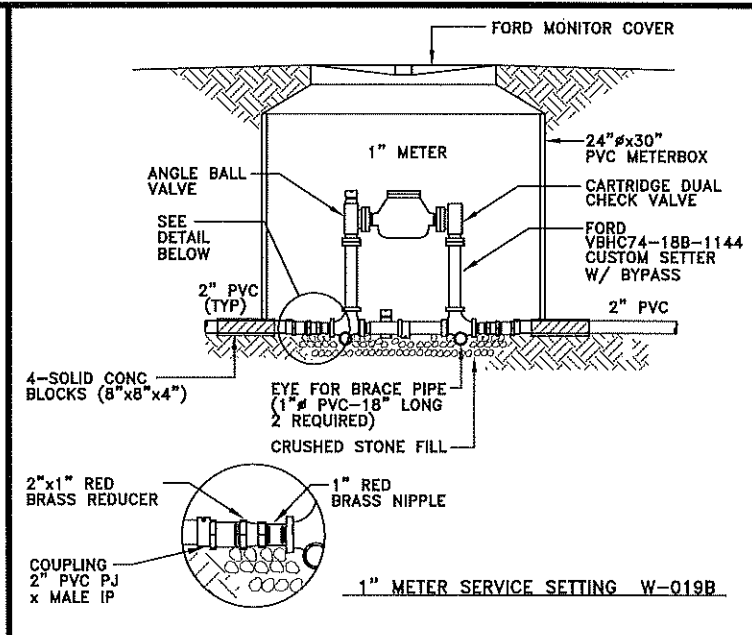
RESTART OF WORK

FOR MINOR SPILLS THAT HAVE BEEN SUCCESSFULLY CONTAINED, THE SITE FOREMAN SHALL BE RESPONSIBLE TO DETERMINE WHETHER THE LEAK CAN BE STOPPED SUCH THAT DRILLING OPERATIONS CAN BE RESTARTED OR WHETHER THE BORE PATH OR INSTALLATION METHOD MUST BE ABANDONED FOR AN ALTERNATE.

CLEANUP

COMPLETELY REMOVE THE SPILLED MATERIAL, EITHER MANUALLY OR WITH A VAC-TRUCK. AFTER DRILLING OPERATIONS HAVE BEEN COMPLETED OR ABANDONED, REMOVE ANY INSTALLED CONTAINMENT MEASURES, AND RETURN THE SITE TO ITS PRECONSTRUCTION CONTOURS AND CONDITION. DISPOSE OF ANY SPILLED MATERIALS AT AN APPROVED FACILITY IN ACCORDANCE WITH APPLICABLE LAWS.

FRAC-OUT CONTINGENCY PLAN FOR DIRECTIONAL DRILLED UTILITY INSTALLATIONS G-035C



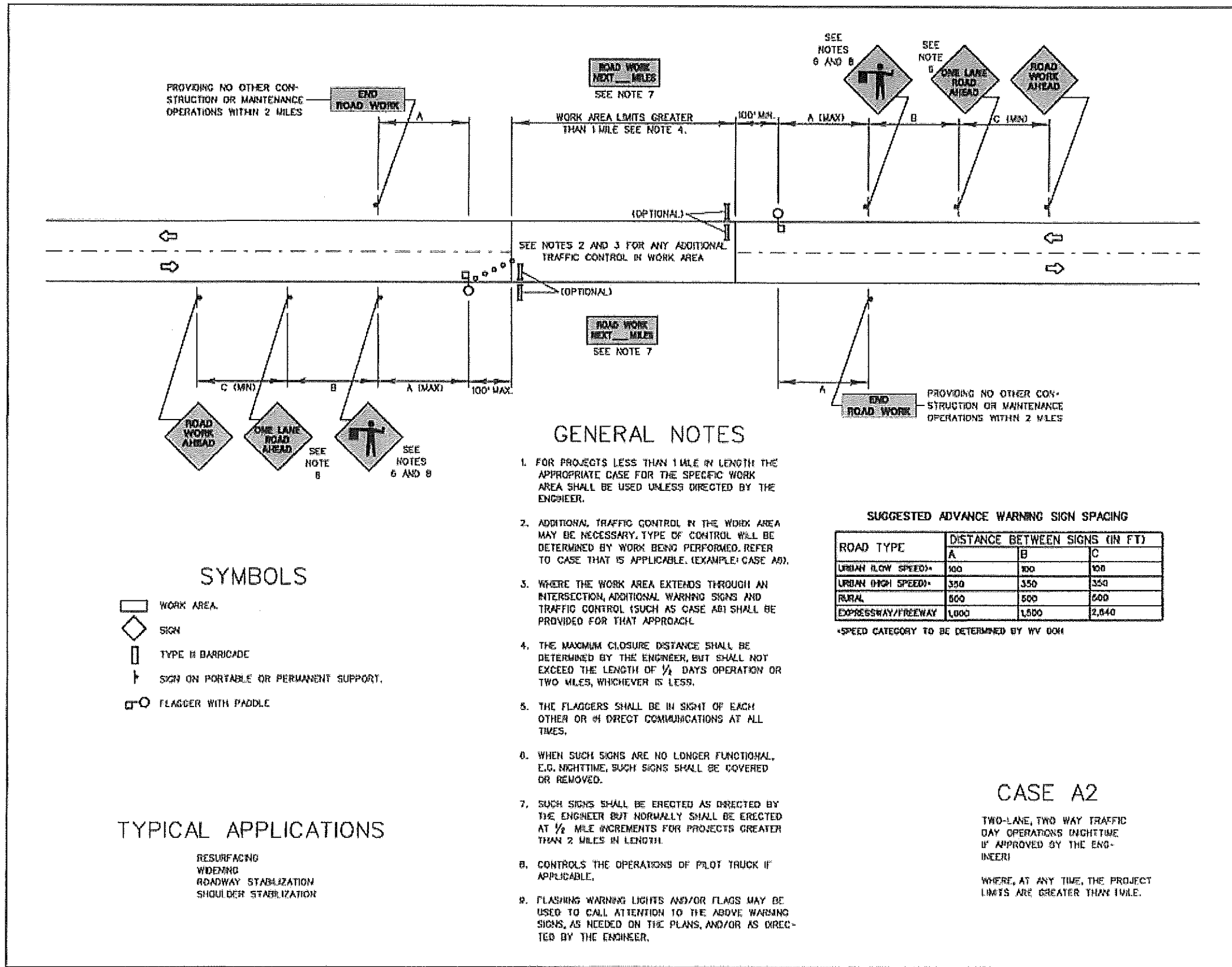
No.	DATE	DESCRIPTION	BY

THIS DRAWING REPRESENTS THE DESIGN AND ENGINEERING EFFORTS OF CERRONE ASSOCIATES, INC. THE DESIGN AND ASSOCIATED DOCUMENTS WERE INTENDED FOR A SPECIFIC PURPOSE AND MAY NOT BE REPRODUCED, LOANED, COPIED OR USED FOR ANY OTHER PURPOSE WITHOUT THE WRITTEN CONSENT OF CERRONE ASSOCIATES, INC.

CERRONE ASSOCIATES, INC.
CONSULTING ENGINEERS • WATER & WASTEWATER SYSTEMS
97-14TH STREET, WHEELING, WV 26003-2497

FIELD LAYOUT	
DRAWN BY RLR	
CONST CHECKED BY	
RECORD CHECKED BY	
ISSUE DATE 10-1-2021	

PROJECT TITLE	TOWN OF TRIADELPHIA OHIO COUNTY, WEST VIRGINIA WATER SYSTEM IMPROVEMENTS
DRAWING TITLE	STANDARD DETAILS
SCALE	NONE
PROJECT NO.	TR20-1W
DRAWING NO.	SD1-04



GENERAL NOTES

1. FOR PROJECTS LESS THAN 1 MILE IN LENGTH THE APPROPRIATE CASE FOR THE SPECIFIC WORK AREA SHALL BE USED UNLESS DIRECTED BY THE ENGINEER.
2. ADDITIONAL TRAFFIC CONTROL IN THE WORK AREA MAY BE NECESSARY. TYPE OF CONTROL WILL BE DETERMINED BY WORK BEING PERFORMED. REFER TO CASE THAT IS APPLICABLE. (EXAMPLE: CASE A0).
3. WHERE THE WORK AREA EXTENDS THROUGH AN INTERSECTION, ADDITIONAL WARNING SIGNS AND TRAFFIC CONTROL (SUCH AS CASE A0) SHALL BE PROVIDED FOR THAT APPROACH.
4. THE MAXIMUM CLOSURE DISTANCE SHALL BE DETERMINED BY THE ENGINEER, BUT SHALL NOT EXCEED THE LENGTH OF 1/2 DAYS OPERATION OR TWO MILES, WHICHEVER IS LESS.
5. THE FLAGGERS SHALL BE IN SIGHT OF EACH OTHER OR IN DIRECT COMMUNICATIONS AT ALL TIMES.
6. WHEN SUCH SIGNS ARE NO LONGER FUNCTIONAL, E.G. NIGHTTIME, SUCH SIGNS SHALL BE COVERED OR REMOVED.
7. SUCH SIGNS SHALL BE ERECTED AS DIRECTED BY THE ENGINEER BUT NORMALLY SHALL BE ERECTED AT 1/2 MILE INCREMENTS FOR PROJECTS GREATER THAN 2 MILES IN LENGTH.
8. CONTROLS THE OPERATIONS OF PLOT TRUCK IF APPLICABLE.
9. FLASHING WARNING LIGHTS AND/OR FLAGS MAY BE USED TO CALL ATTENTION TO THE ABOVE WARNING SIGNS, AS NEEDED ON THE PLANS, AND/OR AS DIRECTED BY THE ENGINEER.

SUGGESTED ADVANCE WARNING SIGN SPACING

ROAD TYPE	DISTANCE BETWEEN SIGNS (IN FT)		
	A	B	C
URBAN (LOW SPEED)*	100	100	100
URBAN (HIGH SPEED)*	350	350	350
RURAL	600	600	600
EXPRESSWAY/FREEWAY	1,000	1,500	2,840

*SPEED CATEGORY TO BE DETERMINED BY WV DDM

SYMBOLS

- WORK AREA.
- SIGN.
- TYPE II BARRICADE.
- SIGN ON PORTABLE OR PERMANENT SUPPORT.
- FLAGGER WITH PADDLE.

TYPICAL APPLICATIONS

- RESURFACING
- WIDENING
- ROADWAY STABILIZATION
- SHOULDER STABILIZATION

CASE A2

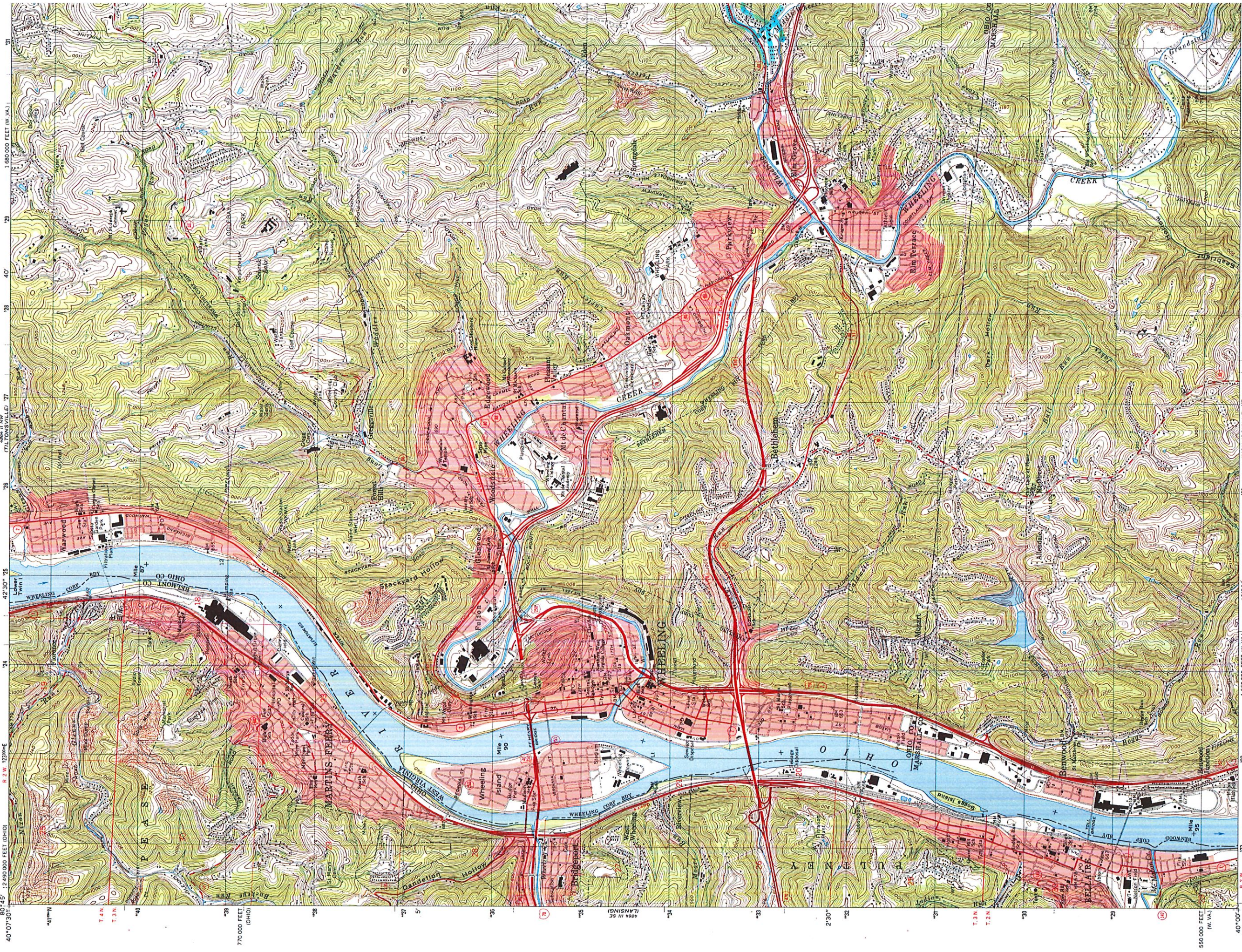
TWO-LANE, TWO WAY TRAFFIC DAY OPERATIONS NIGHTTIME IF APPROVED BY THE ENGINEER

WHERE, AT ANY TIME, THE PROJECT LIMITS ARE GREATER THAN 1 MILE.

	<p>THIS DRAWING REPRESENTS THE DESIGN AND ENGINEERING EFFORTS OF CERRONE ASSOCIATES, INC.</p> <p>THE DESIGN AND ASSOCIATED DOCUMENTS WERE INTENDED FOR A SPECIFIC PURPOSE AND MAY NOT BE REPRODUCED, LOANED, COPIED OR USED FOR ANY OTHER PURPOSE WITHOUT THE WRITTEN CONSENT OF CERRONE ASSOCIATES, INC.</p>	<p>CERRONE ASSOCIATES, INC. CONSULTING ENGINEERS • WATER & WASTEWATER SYSTEMS 97-14TH STREET, WHEELING, WV 26003-2497</p>	<p>FIELD LAYOUT</p> <p>DRAWN BY RLR</p> <p>CONST CHECKED BY</p> <p>RECORD CHECKED BY</p> <p>ISSUE DATE 10-1-2021</p>		<p>PROJECT TITLE</p> <p>TOWN OF TRIADELPHIA OHIO COUNTY, WEST VIRGINIA WATER SYSTEM IMPROVEMENTS</p> <p>DRAWING TITLE</p> <p>STANDARD DETAILS - TRAFFIC CONTROL PLAN</p>	<p>SCALE</p> <p>NONE</p> <p>PROJECT NO.</p> <p>TR20-1W</p> <p>DRAWING NO.</p> <p>SD1-05</p>								
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>No.</th> <th>DATE</th> <th>DESCRIPTION</th> <th>BY</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>10-1-2021</td> <td>BY: ANGELO PERAZICH</td> <td>ALP</td> </tr> </tbody> </table>	No.	DATE	DESCRIPTION	BY	1	10-1-2021	BY: ANGELO PERAZICH	ALP						
No.	DATE	DESCRIPTION	BY											
1	10-1-2021	BY: ANGELO PERAZICH	ALP											

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

WHEELING QUADR
WEST VIRGINIA - C
7.5 MINUTE SERIES (TOP)



Produced by the United States Geological Survey
Topography compiled 1954. Planimetry derived from imagery taken 1958. Photorevised using imagery dated 1954; no major culture boundaries, other than corporate, revised 1957.
North American Datum of 1927 (NAD 27)
Projection: West Virginia coordinate system, north zone (Lambert conformal conic)
Ohio coordinate system, south zone
1000-meter Universal Transverse Mercator grid, zone 17
North American Datum of 1983 (NAD 83) is shown by dashed corner ticks. The values of the shift between NAD 27 and NAD 83 Survey WADCON software
Ohio area lies within the Old Seven Ranges
Land lines based on the Ohio River Base
The State boundary as shown represents the approximate position of the low water line as determined from U.S. Corps of Engineers data received in 1955 and supplemented by information furnished by the U.S. and State of West Virginia
Partners of Ohio - West Virginia boundary in dispute; not shown

SCALE 1:24,000
1 MILE
1 KILOMETER
CONTOUR INTERVAL 20 FEET
DOTTED OR BRUSHED LINES
NATIONAL GEODETIC VERTICAL DATUM OF 1929
TO CONVERT FROM FEET TO METERS, MULTIPLY BY 0.3048

ROAD CLASSIFICATION
Primary highway, all weather, hard surface
Secondary highway, all weather, hard surface
Light-duty road, improved surface
Unimproved road, weather
Interstate Route
U. S. Route

UTM GRID AND 1997 MAGNETIC NORTH DECLINATION AT CENTER OF SHEET
142 MILES
142 MILES
142 MILES
W. VA.
QUADRANGLE LOCATION

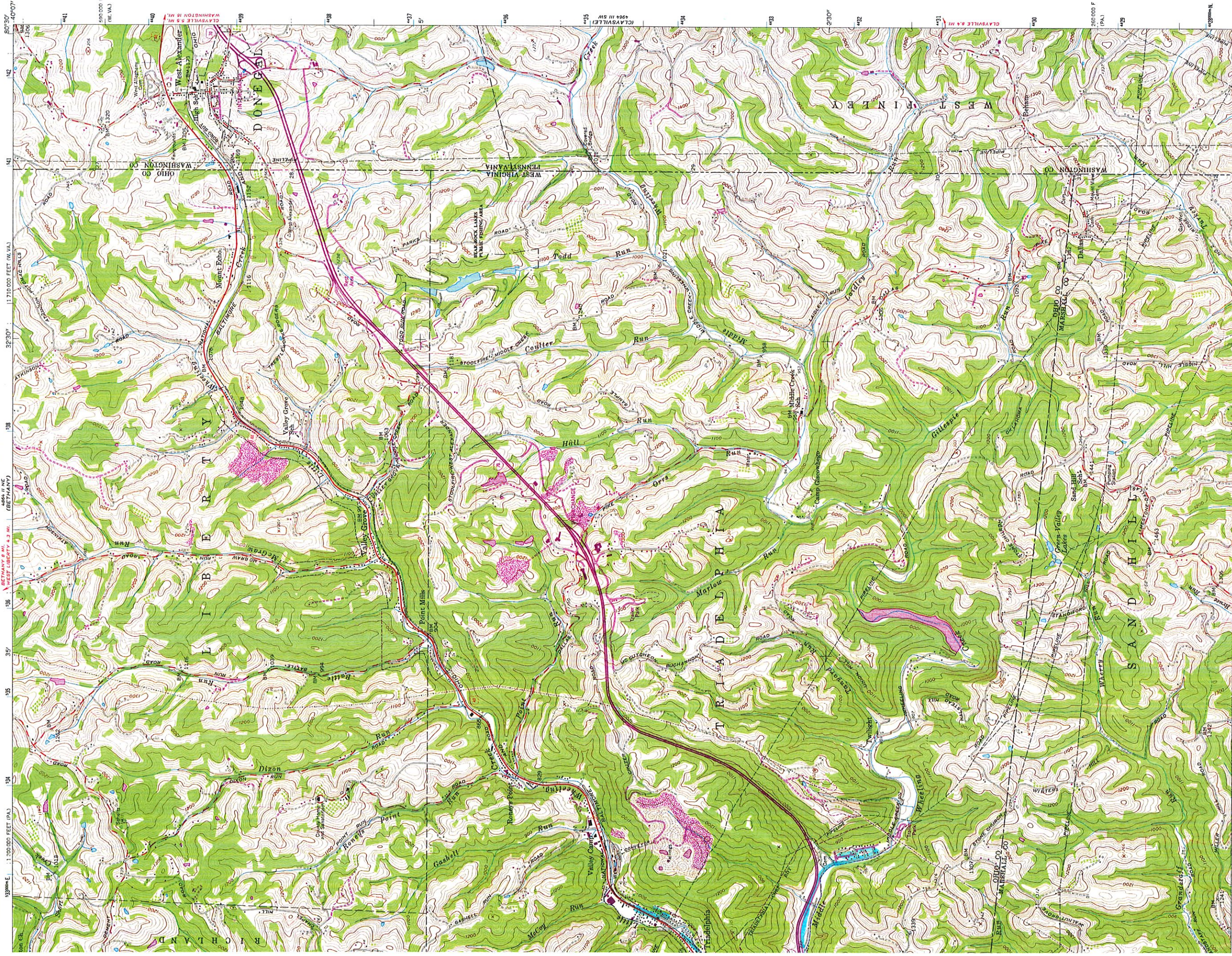
THIS MAP COMPLIES WITH NATIONAL MAP ACCURACY STANDARDS
FOR SALE BY U.S. GEOLOGICAL SURVEY, P.O. BOX 25286, DENVER, COLORADO 80225
A FOLDER DESCRIBING TOPOGRAPHIC MAPS AND SYMBOLS IS AVAILABLE ON REQUEST

WHEELING, W. V.
1994
NIMA 4884 II SW-SEI

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

STATE OF WEST VIRGINIA
REPRESENTED BY THE
STATE OF WEST VIRGINIA GEOLOGICAL SURVEY
AND OTHER STATE AGENCIES

VALLEY GROVE QUADRANGLE
WEST VIRGINIA-PENNSYLVANIA
7.5 MINUTE SERIES (TOPOGRAPHIC)



ed, edited, and published by the Geological Survey
by USGS and NOS/NOAA
by photogrammetric methods from aerial photographs
1958 and 1957. Field checked 1959
ic projection. 10,000-foot grid ticks based on West Virginia
ic system, north zone, and Pennsylvania coordinate
south zone. 1000-meter Universal Transverse Mercator grid ticks
, shown in blue. 1927 North American Datum. To place on
lled North American Datum 1983 move the projection
meters south and 17 meters west as shown
ed corner ticks

UTM GRID AND 1981 MAGNETIC NORTH
DECLINATION AT CENTER OF SHEET

SCALE 1:24,000
1:24000 FEET (PA)
1:22000 FEET (PA)
1:20000 FEET (PA)
1 MILE
1 KILOMETER
CONTOUR INTERVAL 20 FEET
NATIONAL GEODETIC VERTICAL DATUM OF 1929

ROAD CLASSIFICATION
Primary highway, hard surface
Light-duty road, hard or improved surface
Secondary highway, hard surface
Unimproved road, hard surface
Interstate Route
U.S. Route
State Route

THIS MAP COMPLES WITH NATIONAL MAP ACCURACY STANDARDS
FOR SALE BY U.S. GEOLOGICAL SURVEY, RESTON, VIRGINIA 22092
A FOLDER DESCRIBING TOPOGRAPHIC MAPS AND SYMBOLS IS AVAILABLE ON REQUEST

Revisions shown in purple and woodland compiled in cooperation with
Commonwealth of Pennsylvania agencies from aerial photographs taken 1977
and other sources. This information not field checked. Map edited 1981

VALLEY GROVE, W. VA.—PA.
N4000—W8030/7.5
1959
PHOTOREVISED 1981
DMA 4864 II SE—SERIES V854

APPENDIX B

WVDEP Construction General Permit

WV0115924



**STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATER AND WASTE MANAGEMENT
601 57th STREET SE
CHARLESTON, WV 25304-2345**

**NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM
WATER POLLUTION CONTROL PERMIT**

Permit No. WV0115924

Issue Date: January 10, 2019
Effective Date: February 9, 2019
Expiration Date: February 9, 2024

Subject: Stormwater Associated with
Construction Activities

To Whom It May Concern:

This is to certify that any establishment with discharges composed entirely of stormwater associated with construction activities disturbing one acre or greater of land area which may be regulated under the terms and conditions of this general permit, has satisfied the registration requirements, and which has not been required by the Director of the Division of Water and Waste Management to apply for an individual permit, is hereby eligible to allow stormwater discharges into the surface waters of the State under this General WV/NPDES Water Pollution Control Permit. Authorization to discharge under this permit must be provided by the Director.

Construction activities are land disturbing operations such as clearing, grubbing, grading, filling and excavation operations during site development for residential, commercial or industrial purposes. The following are not eligible for coverage under this NPDES General Permit:

1. Operations that result in the disturbance of less than one acre of total land area, which are not part of a larger common plan of development or sale.
2. Stormwater discharges associated with land disturbing activities that may reasonably be expected to be causing or contributing to a violation of a water quality standard as determined by the Director.

3. Land disturbance activities already governed by other Department of Environmental Protection NPDES permits. This includes Division of Mining and Reclamation permits for coal mining and non-metallic quarries.
4. Landfills, except in the preparation of a new landfill and/or clay borrow areas.
5. Other activities exempt from NPDES permitting requirements as set forth in 40 C.F.R. 122.3 and 47 C.S.R. 10-3.2.b.4 (NPDES Program).
6. Land disturbing activities related to oil and gas activities as required by the Energy Policy Act of 2005. These activities include but are not limited to construction of drilling sites, waste management pits, and access roads, as well as construction of the transportation and treatment infrastructure such as pipelines, natural gas treatment plants, natural gas pipeline compressor stations, and crude oil pumping stations.
7. Construction activities that result in a discharge of a reportable quantity release or that contribute pollutants (other than non-contaminated sediments) to a violation of a water quality standard are still subject to permit coverage.

This General WV/NPDES Water Pollution Control Permit is to allow stormwater discharges into the surface waters of the State while protecting water quality and is subject to the following terms and conditions:

The information submitted on and with the application form will hereby be made terms and conditions of the General Permit with like effect as if all such information were set forth herein, and other pertinent conditions set forth in Parts I, II, III, and IV and appendices A, B, and C.

Site Registration Applications approved from February 9, 2018 through February 9, 2019 must file the Notice of Termination for completed projects where all disturbed lands have been permanently stabilized, or, a signed certification of agreement to abide by the terms and conditions of this reissued General Permit within 90 days of the effective date. Additional application fees do not apply to the certification; however, annual fees still apply. Where any incomplete projects have disturbed lands that have not been permanently stabilized, status maps are required with the certification. The map may be in PDF format and is not required to conform to the specifications of II.H.1.a. The status map shall show disturbed areas and the Limits of Disturbance (LOD), which is the area approved under the registration for land disturbance. Projects that have not disturbed any lands are not required to provide the status map. Additionally, the certification will contain an updated timeline for major activities as required by Part II.H.1.

Existing registrations under the Notice of Intent approved from February 9, 2018 through February 9, 2019 shall submit the Notice of Termination if all disturbed lands are permanently stabilized. If construction is not complete and all disturbed lands are not permanently stabilized, such projects may retain permit coverage through the expiration date of this General Permit by submittal of the certification described above within 90 days of the effective date of this reissued General Permit.

Projects discharging to Waters of the State with an approved sediment-related Total Maximum Daily Load (TMDL) with registrations that were approved for one year only with approval dates from February 9, 2018 through February 9, 2019 that have not completed construction and stabilized disturbed areas at the effective date of this permit are required to submit the above described certification. Such projects shall agree to implement Enhanced best management practices (BMP's). Submittal of the certification will remove the 1-year time constraint and the registration will be valid until the expiration of this reissued General Permit unless site stabilization and termination of the registration occur first. Projects required to submit Discharge Monitoring Reports under the 2012 permit with approval dates from February 9, 2018 through February 9, 2019 must submit the above described certification agreeing to implement Enhanced BMPs within 90 days of the effective date of this General Permit, which has eliminated monitoring.

All projects approved under the 2012 permit's Site Registration Application or Notice of Intent with an approval date prior to February 9, 2018 must submit the Notice of Termination if all disturbed areas are permanently stabilized. All other projects that have not been stabilized shall submit an application for continuing coverage within 90 days of the effective date of this General Permit.

Compliance with other laws and statutes

Nothing in this General Permit shall be construed as relieving the permittee from compliance with any applicable federal, state, or local statutes, ordinances, or regulations.

Continuation of this general permit

If this general permit is not reissued or replaced prior to the expiration date, it will be administratively continued in accordance with 47 C.S.R. 10 and remain in force and effect. If you were authorized to discharge under this general permit prior to the expiration date, any discharges authorized under this permit will automatically remain covered by this general permit until the earliest of:

- Your authorization for coverage under a reissued general permit or a replacement of this general permit following your timely and appropriate submittal of a complete application requesting authorization to discharge under the new general permit and compliance with the requirements of the new permit; or
- Your submittal of notification of termination that the facility has ceased operations; or
- Issuance or denial of an individual permit for the facility's discharge; or
- A formal permit decision by DWWM not to reissue this general permit, at which time DWWM will identify a reasonable time period of covered dischargers to seek coverage under an alternative general permit or individual permit. Coverage under this permit will cease at the end of this time period.

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PART I. INTRODUCTION

I.A. TERMS OF PERMIT

Discharges from sites covered under this General Permit shall not cause or contribute to a violation of 47 C.S.R. 2 (Requirements Governing Water Quality Standards) or 47 C.S.R. 12, (Requirements Governing Groundwater Standards) of the West Virginia Legislative Rules pursuant to Chapter 22, Article 11 and Article 12. Discharges that are not in compliance with these standards are not authorized.

I.B. COMPLIANCE REQUIREMENT

Compliance with this General Permit, the approved Stormwater Pollution Prevention Plan and the Groundwater Protection Plan is required upon the beginning of the construction project.

I.C. WATER QUALITY

Subject to 47 WV C.S.R. 10.3.4.a and 47 C.S.R. 2.4, the discharges covered by this permit are to be of such quality so as not to cause a violation of applicable water quality standards. The permittee must protect the water quality and the existing uses and designations of receiving waters by implementing BMPs. Enhanced BMPs must be used for projects discharging to any waters other than Tier 1 or where standard BMPs are found to be inadequate to protect water quality based on inspections by a Qualified Person, or representatives of the Director of DWWM or the Environmental Protection Agency.

Receiving waters for the exclusive purpose required by the paragraph above and in accordance with 47 C.S.R. 2.4 shall be protected from degradation as explained below:

Tier 1 Protection- Maintains and protects existing uses of a water body and the water quality conditions necessary to support such uses. A waterbody that is listed as impaired on the state's 303(d) list is considered a Tier 1 water as it pertains to the specific pollutant listed.

Tier 2 Protection- Maintains and protects "high quality" waters - water bodies where the level of water quality exceeds levels necessary to support recreation and wildlife and the propagation and maintenance of fish and other aquatic life. Tier 2 is the default assignment for a waterbody not listed as impaired on the state's 303(d) list.

Tier 3 Protection- Maintains and protects water quality in outstanding national resource waters.

Protection of Trout Streams - Waters which sustain year-round trout populations. Excluded are those waters which receive annual stockings of trout, but which do not support year-round trout populations. Waters which meet the definition of 47 C. S.R. 2-2.19 (Requirements Governing Water Quality Standards).

Impaired Streams — Sediment-related impaired waters are those that do not meet applicable water quality standards and are listed on the state's 303(d) list.

Sediment-Related Pollutant of Concern Total Maximum Daily Loads (TMDL) - A TMDL establishes the maximum amount of a pollutant allowed in a waterbody and serves as the starting point or planning tool for restoring water quality.

I.C.1. This permit does not authorize new sources or new discharges of constituents of concern to impaired waters unless consistent with the approved sediment-related TMDL and applicable state law (WV 47CSR10 and WV Code 22-11).

Enhanced BMPs shall be used on projects discharging to all waters of the state except for those classified as Tier 1 streams (other than 303(d) listed). For discharges to sediment-related TMDL waters, the permittee shall use enhanced BMPs as defined in Appendix C of this General Permit.

The Director reserves the right to require Enhanced BMPs for any stormwater discharges associated with land disturbing activities authorized by this permit, upon a finding that water quality impacts have been observed and that standard BMPs cannot adequately protect water quality. However, this finding is not required for discharges already subject to Enhanced BMPs.

I.D. REQUIRED REPORTING

I.D.1. Reporting Spill and Accidental Discharges

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties established pursuant to 47 C.S.R. 11-2. (Special Rules) of the West Virginia Legislative Rules promulgated pursuant to Chapter 22, Article 11.

I.D.2. Immediate Reporting

The permittee shall report any noncompliance which may endanger human health or the environment immediately after becoming aware of the circumstances by using the Department's designated spill alert telephone number ((800) 642-3074) or by calling the Director or his representative. A written submission shall be provided within five calendar days of the time the permittee becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and time, and if, the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance.

I.D.3. Reportable Quantities

This permit does not relieve the permittee of the reporting requirements of 40 C.F.R. Part 117 and 40 C.F.R. Part 302. The discharge of hazardous substances in the stormwater discharge(s) from a project is not authorized by this General Permit, and in no case, shall the discharge(s) contain a hazardous substance.

I.E. DIRECTOR'S AUTHORITY TO REQUIRE OTHER PERMITS

In accordance with WV 47CSR10 §13.6.b.2.A, the Director may require any person authorized by this permit to apply for and obtain either an individual NPDES permit or an alternative NPDES General Permit. Any interested person may petition the Director to take action under this paragraph. The Director may require any owner or operator authorized by this permit to apply for an individual NPDES permit only if the owner or operator has been notified in writing that such a permit application is required.

I.F. ALLOWABLE DISCHARGES

All discharges authorized by this permit shall be composed entirely of stormwater.

I.G. PROHIBITED DISCHARGES

The following discharges are not authorized by this permit.

- Sediment laden stormwater that has not gone through an appropriate best management control;
- Directing pavement wash-waters directly into any surface water, storm drain inlet, or stormwater conveyance, unless the conveyance is connected to a sediment basin, sediment trap, or similarly effective control;
- Wastewater from washout of concrete unless managed by an appropriate control;
- Wastewater from washout and cleanout of stucco, paint, bituminous asphalt, form release oils, curing compounds and other construction materials;
- Fuels, oils, or other pollutants used in vehicle and equipment operation and maintenance; and soaps, solvents, or detergents used in vehicle and equipment washing, or external building washdown.
- Toxic or hazardous substances from a spill or other release.

This permit does not authorize the conveyance, diversion, channeling, directing or otherwise allowing the discharge of stormwater into a sinkhole without an Underground Injection Control Permit.

PART II. PRE-CONSTRUCTION REQUIREMENTS

PRIOR TO CONSTRUCTION, the following are required:

- A complete application, prepared by a Qualified Person, for authorization to discharge stormwater from construction related land disturbance shall include:
 - Installation of a sign at the entrance to the project or posting of a notice in a public place in close proximity to the construction site as indication the application has been submitted;
 - Timely corrections or submission of additional information to provide clarity about the proposed construction project, as requested by the Director;
 - Cooperation with the public notice process, when appropriate, by making prompt payment to the local newspaper that will publish the Class I legal advertisement, effectively notifying the public that the application is pending;
 - Making timely changes to the application, as necessary, based on public input; and

After receiving Director's approval and before beginning construction activities:

- Install sediment and erosion controls;
- Qualified Person inspects the newly installed sediment and erosion controls.
 - Impounding structures not built as approved shall be inspected and documented as meeting the trapping capacities and efficiencies of the structures approved in the registration.

II.A. APPLICATIONS

II.A.1. Application Requirements

Submittal of the application shall be made using the online Electronic Submission System, unless otherwise approved by the Director. All documents must be signed in accordance with the signatory requirements described in Appendix A.7.

II.A.1.a. Application Fee

The application fee shall be paid in full prior to the Director reviewing the application. Fee amounts listed in and subject to changes in the NPDES Fee Schedule C.S.R. 47-26.

II.A.1.b. Public Notice Advertisement

The following applications are subject to Public Notice in a local newspaper therefore, the Notarized Statement for Billing form is required with the application:

- Land disturbance of 100 or more acres;
- Projects of 3 acres or more with a grading phase lasting one year or longer which will not meet final stabilization, as defined in Appendix C of this General Permit, by the end of the year; and
- Projects discharging to Tier 3 streams.

The Director reserves the right to require advertisement for any other application type.

II.A.1.c. Large Construction Projects

Projects disturbing 3 or more acres of land shall submit an application containing:

- Application Form, to include template for the sign
- Stormwater Pollution Prevention Plan;
- Groundwater Protection Plan;
- Pre-Construction Drainage Map
- During Construction Drainage Map showing the proposed location of all drainage structures and associated access routes;
- Post Construction Drainage Map;
- Annual Progress Map if permitted for longer than one year;
- Detailed Site Plan (Maps) showing Limits of Disturbance and Receiving Waters; and
- Design Details for:
 - Sediment basins, road, cut and fill cross sections, and other engineered structural design calculations; and
 - Other controls to include post-development stormwater management plans required by local governments
- Applications for Large Construction Projects shall be submitted 60 days before the anticipated date construction is to begin.
 - Applications for Large Construction Projects requiring Public Notice per II.A.1.b. shall be submitted 100 days before the anticipated date construction is to begin.

II.A.1.d. Minor Construction Projects

Projects disturbing 1 to < 3 acres of land, other than single-family homes as explained in Part II.A.1.e. below, shall submit an application containing the following:

- Application form, to include template for the sign
- Stormwater Pollution Prevention Plan;
- Groundwater Protection Plan;
- Pre-Construction Drainage Map;
- During Construction Drainage Map showing the proposed location of all drainage structures and associated access routes;
- Post Construction Drainage Map;
- Annual Progress Map if permitted for longer than one year;

- Detailed Site Plan (Map) showing Limits of Disturbance and Receiving Waters
- Typical Design Details.
- Applications for Minor Construction Projects shall be submitted 30 days before the anticipated date construction is to begin.
 - Applications for Projects requiring Public Notice per II.A.1.b shall be submitted 100 days before the anticipated date construction is to begin.

II.A.1.e. Construction of Single-Family Homes: 1 to < 3 Acres

Projects for construction of Single-Family Homes of 1 to <3 acres including offsite borrow and waste sites, by the homeowner or homeowner's contractor are subject to this permit and shall submit:

- Application Form; and
- Agreement to use DWWM Individual House Sample Sediment and Erosion Control Plan found in the West Virginia Erosion and Sediment Control BMP Manual (BMP Manual), or other BMPs that are equally protective of water quality.
- Applications for construction of Single-Family Homes of 1 to < 3 acres shall be submitted 30 days before the anticipated date construction is to begin.

II.A.1.f. Offsite Waste and Borrow Areas

Offsite waste and borrow areas one acre or greater must be included in applications and approved before material may be removed from or accepted at the site. Such areas must be included in the application when associated with single-family homes, linear projects, or any other construction project. Offsite waste or borrow sites less than one acre in size that are not contiguous to the construction site must provide sediment and erosion controls and may be included with the application, however, there is no requirement to do so unless otherwise required by the Director.

If a waste/borrow area is not known during the initial application, the registration can still be issued. Once the location of a waste/borrow area is identified it is the responsibility of the applicant to modify their registration to include contiguous area(s) or non-contiguous areas of one acre or more. When the permittee does not have "legally ability to control" non-contiguous areas of one acre or more, the permittee may contact the DEP to inquire if the non-contiguous acre or more has been properly permitted and therefore, a site suitable for waste or borrow. The permittee may also make an inquiry of the party that does have the "legal ability to control" the non-contiguous site if it is properly permitted before accepting material from or sending material to the site.

When contaminated soils are identified, a soil handling plan shall be provided. Contaminated soil is not suitable material for borrow or fill unless approved by the Director.

II.A.2. Emergency Procedures

When conducting earth-disturbing activities in response to a public emergency e.g., natural disaster, widespread disruption in essential public services), and the related work requires immediate authorization to avoid imminent endangerment to human health, public safety, or the environment, or to reestablish essential public services, authorization to discharge is conditioned that a complete and accurate application is submitted within 30 calendar days after commencing earth-disturbing activities establishing eligibility under this permit.

Documentation to substantiate the occurrence of the public emergency must be included in the application.

II.B. POSTING SIGN OR NOTICE

Within 72 hours of filing an application, the applicant shall display a sign for the duration of the construction project near the entrance of the project or, for linear projects, at a location near an active part of the project that is accessible by the public; containing the following information:

- The applicant's name and emergency telephone number;
- Project Reference ID;
- For info on this stormwater permit
Call: 800-654-5227 or [DEP. Comments@wv.gov](mailto:DEP.Comments@wv.gov).
- Permit Number (See II.B.4.)

II.B.1. The sign shall be a minimum of two feet by two feet and be at least three feet above ground level; clearly visible and legible from a public roadway or right-of-way.

II.B.2. If it is not feasible to display a sign at or near the project, the applicant may post, within 72 hours of filing the application a notice containing the foregoing information at a local public building, including, but not limited to, a town hall or public library.

II.B.3. The application shall provide the location where the sign or notice is to be posted.

II.B.4. Within 7 business days of assignment of the permit registration number, the applicant shall affix such number to the sign or to the posted notice.

II.C. INCOMPLETE OR INCORRECT APPLICATIONS

As the application is evaluated by the Director, notice may be sent to the applicant during the review period that the plan does not meet one or more of the specific minimum requirements of this permit. After such notification, the applicant shall have 30 days to resubmit the application.

II.C.1. An applicant needing additional time to respond to requests for changes or additional information must request an extension prior to the end of the 30 days, or:

- The Director may terminate the application, after making a reasonable attempt at, and being unsuccessful in, contacting the applicant to provide notice of the pending termination
 - The Director may cause a pending termination message to be sent from his official mailbox which has an email address of DEPNPDESEP@wv.gov to the applicant's email address as listed on the registration application.
 - It is the responsibility of the applicant to keep the Director informed of accurate contact information, and in lieu of a successful notice from his official mailbox, the Director may attempt to contact the applicant by phone to provide notice of the pending termination.
- Upon successful contact with the applicant, the Director has the option of terminating or extending the due date for resubmission of the application.

II.D. PUBLIC NOTICING OF APPLICATIONS

The Applicant shall cooperate with the public notice of applications required by Part II.A.1.b:

- Making payment for a Class I Legal Advertisement concerning the application to the local newspaper with the largest readership in the vicinity of the proposed project.
- Obtaining from the newspaper, and submitting to the Director, an affidavit of the publication of the Class I Legal Advertisement.

II.E. AUTHORIZATION TO DISCHARGE

The applicant is prohibited from disturbing land prior to obtaining approval from the Director for activities covered by this permit. The Director shall send an approval or denial of the application via his official mailbox, DEPNPDESEP@wv.gov and,

- The Director has no further obligation to attempt to verify the applicant received the approval or denial, as
- It is the responsibility of the applicant to keep the Director informed of up-to-date and accurate contact information.

The Applicant shall maintain a copy of the approval from the Director onsite and make it available to DWWM Personnel or the public upon request.

II.F. INSTALLATION OF EROSION AND SEDIMENT CONTROLS

After receiving approval from the Director and before beginning construction activities, the permittee shall install erosion and sediment control BMPs in accordance with the approved registration. BMPs shall be in place and functional prior to land disturbance. For registrations proposed to be completed in multiple phases, the BMPs for each phase must be constructed and functional prior to land disturbance beginning in that phase. Erosion

and sediment control BMPs shall be implemented in accordance with standard procedures set forth in the BMP Manual, however, other BMPs may be used if equally protective of water quality.

II.G. QUALIFIED PERSON TO INSPECT EROSION AND SEDIMENT CONTROLS

The permittee shall ensure that all newly installed erosion and sediment control BMPs are inspected by a Qualified Person. Any defective controls identified during the inspection must be repaired and/or installed correctly within 24 hours and corrections verified upon re-inspection by the Qualified Person.

Construction activities may begin after the Qualified Person inspects and finds that all erosion and sediment control BMPs are installed properly in the areas where earth disturbing activities are planned to commence.

Sediment control BMPs shall be constructed in accordance with the approved registration (Part II A.1.c. and A.1.d.). All basins and traps not constructed in accordance with the approved registration shall be inspected and documented by a Qualified Person as affording the same trapping capacity and efficiency as the approved structures. Thereafter, routine inspections of the structures by a Qualified Person shall be conducted in accordance with III.B. until structure removal. All documentation of inspections shall be kept on site during construction on a form, prescribed by the Director for the length of the construction project.

II.H. STORMWATER POLLUTION PREVENTION PLAN (SWPPP) COMPONENTS

SWPPPs shall be prepared in accordance with good engineering practices and retained per II.H.5. The plan shall identify potential sources of pollution that may reasonably be expected to affect the quality of stormwater discharges associated with construction activity. The plan shall describe and ensure the implementation of practices that are to be used to reduce the pollutants in stormwater discharges associated with construction activity and to assure compliance with the terms and conditions of this permit. The SWPPP shall be prepared by a Qualified Person.

II.H.1. Nature of the Activity

The SWPPP shall contain a description of the nature of the construction activity, including a proposed timetable for major activities such as: cut and fill plans, proposed road construction or upgrades, grading plans, and a narrative of the pollution prevention techniques proposed to be implemented before, during and after construction. A schedule for major grading activities and stabilization measures to be initiated shall be included in the description

II.H.1.a. Maps

Site maps shall contain a North arrow with sites oriented to the North, with a minimum of five-foot topographical contours. The maps shall include:

- Nearest receiving streams, springs, surface waters to the site;
- Limits of all areas to be disturbed (LOD);
- Existing roads including public roads from which access to the site will be constructed;
- Access roads;
- Drainage patterns during and after construction with the outlet markers depicting the stormwater discharge points;
- Slopes prior to construction and anticipated conditions after grading activities;
- Location of topsoil stockpiles;
- Waste areas of 1 acre or greater within or contiguous to the construction site;
- Borrow sites of 1 acre or greater within or contiguous to the construction site;
- Locations and identification of sediment control structures;
- Total acreage and location of impervious areas after construction is complete;
- Location of rain gauge provided by the applicant
or a statement the applicant will obtain the precipitation event information from a National Oceanic Atmospheric Administration (NOAA) weather station that is representative of the location and provide the Station ID Number;
- Post-development stormwater management structures required by local governments;
- Final stormwater conveyances, including all ditches and pipe systems;
- Property boundaries and easements; and
- A legend, complete with any other information necessary to describe the project in detail.

The project shall be illustrated in an ArcGIS Shapefile (.shp) or in an AutoCAD Drawing (.dwg).

II.H.1.b. The map shall be accompanied by a description of an estimate of the total area of the site, the part of the site that is expected to undergo excavation or grading, and the total amount of excavation by cut and fill as well as an explanation of where excavated material will be moved from, and to, on the site.

Cross sections that accurately depict the surface configuration at any project area proposing a fill with a contributing drainage area of one acre or more shall be included with the mapping information. A description of measures to be taken to reduce the potential for subgrade saturation and ensure stability of fill areas shall be submitted. The cross-section shall be developed from sufficient slope measurements to adequately represent the existing land configuration of the proposed project area. Fill slope lines, original ground line, proposed keyway cut or rock toe key, drainage provisions and/or alternates shall also be identified.

II.H.1.c. For each Large Construction Project an evaluation point shall be selected. The pre-construction peak discharge from a 1-year, 24-hour storm in cubic feet per second and the post-development peak discharge from a 1-year, 24-hour storm in cubic feet per second shall be calculated at the evaluation point.

If post-construction peak discharge is 10% (or more) greater than the pre-construction peak discharges of 5 cubic foot per second or more for the 1-year, 24-hour storm, at the evaluation point, post-construction stormwater management BMPs must be implemented to

reduce potential erosion at the discharge point location. Calculations and justification must be submitted if post-construction stormwater management features are deemed unnecessary. The evaluation point will be the location for discharge, therefore, controls must be put in place to prevent erosion from stormwater released from the construction site.

The design procedures shall follow professionally accepted engineering and hydrologic methodologies.

II.H.1.d. Each road or access road shall be classified as either permanent or temporary and categorized as Construction Activity — New or Improved; Incidental Construction Activity; or Maintenance Only.

- Temporary roads shall be reclaimed as soon as practical after they are no longer needed for operations.
- New or Improved roads shall be designed with the complete specifications along the entire road.
- Incidental Construction Activity necessary to address tills and gullies and other drainage issues, shall be designed with the complete specifications on that specific segment.
- Maintenance only means to be graveled only.

The SWPPP shall contain plans and specifications for each road or access road requiring construction activities within the LOD area. The plans and specifications shall include a map, stationed baseline, appropriate profile and cross sections, gradients, flow patterns, surfacing materials, cuts, fill, embankments, drainage ditches, culverts/water bars, and erosion and sediment structures.

Each road or access road shall be designed with the following specifications:

- Stone access entrance and exit drives.
- Parking areas to reduce the tracking of sediment onto public or private roads.
- All unpaved roads on the site shall be graveled or have other durable surface unless the application contains a statement that the affected landowner disagrees with this requirement. The applicant shall provide the land use, such as agriculture and shall describe the BMPs chosen to effectively control sediment and erosion. Unpaved roads shall be stabilized in accordance with II.H.1 .d.1 . the road bed shall be seeded and mulched.
- The maximum pitch grade shall not exceed 15%.
- The surface shall pitch toward the ditch line at a minimum slope of 2% to 4%. A road located in an area that doesn't have hillside runoff may be crowned with a minimum slope of 2% to 4% from the center line.
- A ditch shall be provided on the inside of any road having hillside runoff, with ditch relief culverts and/or water bars spaced according to grade and installed wherever necessary to insure proper drainage of runoff water beneath or through the access road.

- Ditch lines shall be capable of passing the peak discharge of a 10-year, 24-hour precipitation event.
- Ditch relief culverts shall be capable of passing the peak discharge of a 2-year, 24-hour precipitation event and placed at a spacing using the formula: $4001\% \text{ grade} + 75' = \text{culvert spacing}$.
- Sediment control shall be provided at the inlet by sumps, rock checks, or equal structure and the slope at the outlet end shall be protected with an apron of rock riprap, a water energy dissipater, or other similar structure.
- Alternative design criteria for access road drainage may be used, but only when approved by the Director.

II.H.1.d.1. A road not to be retained as a permanent road shall be reclaimed as soon as practical after it is no longer needed for operations. The reclamation shall include:

- Removing and disposing of road surfacing materials that are incompatible with prior land use and revegetation requirements; and
- Reshaping cut and fill slopes as necessary to be compatible with the land use and complement the natural drainage pattern of the surrounding terrain.
- Prior to abandonment of access roads, efforts shall be made to prevent erosion by the use of culverts, water bars, or earth berms. Water bars or earth berms shall be installed according to the following formula for spacing: $400/\% \text{ grade} + 75' = \text{water bar or earth berm spacing}$.
- Upon abandonment, the road bed shall be scarified or ripped and all areas associated with access roads shall be immediately seeded and mulched.

II.H.1.d.2. The application for registration shall identify existing All-Terrain Vehicle (ATV) trails to be retained by the landowner upon termination of the permit registration. ATV trails that are not shown with the original application may be identified through a minor modification to the registration. ATV trails shall be maintained by the applicant and stabilized upon conclusion of construction when not identified in the registration as a landowner accepted trail. Stabilization shall include the vehicle travel lanes for all trails not accepted by the landowner. During construction, the applicant shall maintain the trails and include trail areas during inspections to prevent sediment laden stormwater runoff from entering the waters of the state.

II.H.1.e. Impact Reduction

Site maps shall also include the location and type of stabilization methods for all disturbed areas. Plans shall ensure that existing vegetation is preserved where attainable. Efforts shall also be made to limit disturbance on steep slopes, minimize soil compaction, and preserve topsoil where feasible. A description of interim and final stabilization practices, including site specific implementation schedules of the practices shall be provided and may include: temporary seeding, permanent seeding, mulching, geotextiles, sod stabilization, vegetative buffer strips, protection of trees, preservation of mature vegetation, and other appropriate measures.

II.H.1.e.1. The SWPPP shall contain stabilization practices to ensure that disturbed portions of the site are stabilized as rapidly as possible. Satisfactory stabilization means all disturbed areas shall be covered by permanent protection such as pavement, pervious pavement, compacted gravel, buildings, waterways (riprap, concrete, grass, or pipe), a healthy, vigorous stand of grass or native vegetation that uniformly covers more than 70% of the ground, stable outlet channels with velocity dissipation which directs site runoff to a natural watercourse, and any other structure or material approved by the Director.

II.H.1.e.2. Vegetative practices shall describe seedbed preparation requirements and the type and amount of soil amendments necessary to establish a healthy stand of vegetation. Soil maps shall be submitted.

For projects with unknown sources of potential borrow material or when excavation is necessary before adequate soil amendments may be determined, the Qualified Person shall, as soon as materials are located or excavated, prepare the soil amendment plan. The plan shall become a part of the records retained in accordance with Part II.H.5.

II.H.2. The SWPPP shall be signed in accordance with Appendix A.7. and retained onsite throughout the course of the project.

II.H.3. Potential Pollutants

The SWPPP shall include a complete list and description of potential pollutants at the project site such as products used in the operation and maintenance of vehicles and equipment as well as construction of buildings, parking lots, and other structures. The erosivity of soils must be considered when selecting erosion and sediment control BMPs.

II.H.3.a. Potential pollutants can be identified by including:

- A report showing the soil mapping units associated with the proposed area and a table with a description of each map unit, acres in the permit area, and percent of permit area;
- Identification of soils and a soil handling plan;
- A statement whether cement will be mixed onsite or delivered by truck;
- A description of the types of equipment to be used, serviced, repaired, or cleaned onsite;
- A description of the products to be used in construction of buildings and parking lots;
- A statement whether fertilizers, herbicides, and pesticides will be used on the site including a schedule of application; and
- A description of the post-development use of the site.
 - o Certain post-development discharges might require further approval for discharges from the Director, under an individual permit or other general permit.

II.H.3.b. Include a description of the controls and procedures for preventing potential pollutants from entering stormwater runoff, based on II.H.3.a.

II.H.3.b.1. Design, select, and identify erosion and sediment control BMPs. The BMPs should be selected from the BMP Manual. Alternative BMPs may be used if determined by the Director to be equally protective of water quality.

II.H.3.b.2. Projects discharging to any waters other than Tier 1 require the use of enhanced BMPs, such as:

- Inspection of all erosion and sediment control BMPs within disturbed areas at least once every four calendar days and within 24 hours after any precipitation event greater than 0.25 inches per 24 hours period.
- Repairs or maintenance to BMPs shall be performed within 24 hours, however, permittees must implement alternate BMPs prior to storm events while awaiting repair of the primary enhanced BMP.
- Temporary seeding and mulching within 4 days when areas will not be re-disturbed for more than 14 days.
- Permanent seeding and mulching within 4 days of reaching final grade.
- Final stabilization within 4 days after construction has been complete.

If the time frame associated with enhanced BMP's are unobtainable due to weather conditions, a narrative justification shall be made and maintained onsite for review by the Director.

Additional filtration BMPs should be selected from the BMP Manual, however filtration BMPs from other manuals may be approved, if equally protective of water quality.

Within six months of notification from the Director of a new sediment-related TMDL approval applicable to construction activities, permittees must incorporate any implement enhanced BMPs for discharges to the receiving waters subject to the TMDL.

II.H.3.b.3. Hay or straw bales shall not be used as primary or secondary filtering devices; Polymers, flocculants, or other treatment chemicals may be used only in accordance with good engineering practices and specifications for use by the chemical provider/supplier. The use of cationic treatment chemicals is prohibited;

II.H.3.b.4. Identify a specific location and procedure for rinsing mobile mixing drums or truck drums. The procedure must name an appropriate control for the wastewater created by such rinsing and fully explain how the permittee will prevent wastewater from entering stormwater runoff;

II.H.3.b.5. Describe procedures to prevent spillage, leakage, and improper disposal of fuel, oil, grease, solvent, soap, and cleaning plans. The procedures must explain how these products will be handled to prevent any pollutants from entering stormwater.

II.H.3.b.6. Describe how washout and cleanout of stucco, paint, form release oils, curing compounds, bituminous asphalt, and other construction materials will be managed to prevent pollutants from entering stormwater runoff;

II.H.3.b.7. Describe an employee training program for all on-site personnel directly involved with construction activities at all levels of responsibility that reiterates the components and goal of the SWPPP.

- Training should address topics such as spill and leak response and internal reporting, good housekeeping, and routine inspection and maintenance.
- Training shall be on a quarterly basis while construction activities are occurring.
- A list of attendees and topics covered at each training session shall be documented and maintained in the SWPPP.

II.H.3.b.8. A natural vegetative buffer shall be provided adjacent to receiving streams or other waters on or near the project site. Vegetative buffers shall be a minimum of 50 feet, however;

- A natural vegetated buffer may not be used as a stand-alone erosion and sediment control practice but must be used in conjunction with other BMPs.
- Vegetative buffer strips are not required if:
 - A natural vegetative buffer does not exist in pre-construction conditions, such as when the buffer has already been removed by existing developmental or agricultural activities; or
 - The receiving water is a man-made stormwater conveyance or storage structure, such as a ditch or storm water pond; or
 - Project activities occur within waters approved under a Clean Water Act (CWA) Section 404 permit and Section 401 water quality certification; or
 - The projects located where the vegetative buffer must be encroached to construct necessary infrastructure, such as a utility line or an access road. Justification for any encroachment may be subject to approval by the Director; or
 - Linear projects where right-of-way acquisition or area is limited.

II.H.3.b.9. All diversions constructed to final grade, including clean water diversions shall be stabilized prior to becoming functional. Internal construction diversions must be stabilized upon reaching final grade.

- Divert flows around exposed soils and limit runoff from exposed areas with BMPs such as:
 - Silt fences, earthen dikes and berms, land grading, diversions, drainage swales, check dams, subsurface drains, pipe slope drains, storm drain inlet protection, rock outlet protection, reinforced soil retention systems and geotextiles, gabions and riprap, and permanent and temporary sediment traps/basins.

- Fill slopes must be protected by measures used to divert runoff away from fill slopes to conveyance measures such as pipe slope drains or stable channels.
- BMPs should be selected from the BMP Manual, however, other BMPs may be approved if equally protective of water quality.
- If necessary, diversions will be used to direct runoff to the trapping structure.
 - Diversions to trapping structures must be stabilized as they are brought to final grade to prevent sediment laden water from leaving the site.
 - Diversions shall have the capacity to pass safely the peak discharge from a 10-year, 24- hour precipitation event.

II.H.3.b.10. For locations on a site that have a drainage area of five acres or less, a sediment trap which provides a storage volume equal to 3,600 cubic feet per acre of drainage area shall be installed. Half of the volume of the trap shall be in a permanent pool and half will be dry storage. A sediment trap must be able to pass through the spillway(s) a 10-year, 24-hour precipitation event, and still maintain at least one foot of freeboard.

II.H.3.b.11. For drainage areas of greater than five acres, a sediment basin providing 3,600 cubic feet per drainage acre shall be installed. Half of the volume of the basin shall be in a permanent pool and half shall be dry storage. Sediment basins must be able to dewater the dry storage volume in 48 to 72 hours. However, this requirement may be waived at the discretion of the Director when skimmer devices are used. Dewatering structures must withdraw from the surface, unless infeasible. A sediment basin must be able to pass through the spillway(s) a 25-year, 24-hour precipitation event, and still maintain at least one foot of freeboard.

II.H.3.b.12. For locations served by a common drainage where a sediment basin providing 3,600 cubic feet of storage is not attainable or dewatering structures that withdraw from the surface are not feasible, enhanced BMPs within the project area are required in lieu of the required sized sediment basin. Justification and a narrative description of the additional measures proposed must be provided for use of any practice(s) other than sediment basins or traps.

II.H.3.b.13. Protection must be provided for the inlet(s) and outlet(s) of a sediment trapping structure to protect against erosion by an appropriate material such as riprap or other similar media.

II.H.4. Preventative Maintenance

The SWPPP shall include a description of procedures to maintain in good and effective condition and promptly repair or restore all grade surfaces, walls, dams and structures, vegetation, erosion and sediment control measures and to identify and address conditions that could cause breakdowns or failures resulting in discharges of sediment to surface waters including:

- Good housekeeping protocols to ensure a clean and orderly project. This includes minimizing the exposure of building materials, building products, construction wastes, trash, landscape materials, fertilizers, pesticides, herbicides, detergents, sanitary waste and other materials present on the site to stormwater;
- All solid waste and construction/demolition material must be disposed of in accordance with the Code of West Virginia and Legislative Rule Title 33 Series 1, (Solid Waste Management Rule);
- At a frequency, sufficient to keep roads and streets clean, all public and private roads and streets adjacent to a construction site must be cleaned of debris, mud, and dirt tracked or originating from the project site;
- Provisions must be made to control fugitive dust on and originating from the construction site.;
- Spill prevention and response procedures - Areas where potential spills may occur, and their accompanying drainage points, shall be identified clearly in the SWPPP. Also, where appropriate, specify material handling procedures and storage requirements. Procedures for cleaning up spills shall be identified in the plan and made readily available to the appropriate personnel. The necessary equipment to implement a cleanup shall be available to personnel, including spill kits.

II.H.5. Record Keeping

The permittee shall retain all records required by this permit for a period of 3 years from the date permit coverage is terminated. This includes, but is not limited to:

- Personnel training records;
- Incident reports of spills, leaks and improper dumping;
- Field modifications;
- Inspection and maintenance records;
- Corrective action reports.

All SWPPPs required under this permit are considered reports that shall be available for review to the public under Section 308(b) of the CWA and WV Code 29B-1-1. The permittee may claim any portion of a SWPPP as confidential to the extent permissible by 47 C.S.R. 10-12.7. (NPDES Program).

All GPPs are considered reports and shall be made available as required by WV Code 29B1-1.

II.I. GROUNDWATER PROTECTION PLAN (GPP)

GPPs shall be prepared in accordance with the requirements of 47 C.S.R. 58-4.11. et seq. (Groundwater Protection Regulations). GPPs shall be submitted as required by 47 C.S.R. §4.12.e.1.

The GPP shall identify all operations that may reasonably be expected to contaminate groundwater resources with an indication of the potential for soil and groundwater

contamination from those operations. In addition, the GPP shall provide a thorough and detailed description of procedures designed to protect groundwater from the identified potential contamination sources. Guidance in the completion of a GPP is available from the DWWM.

II.I.1. The GPP shall be a stand-alone document and shall be submitted with the registration as such, rather than as a component of the SWPPP,

II.I.2. GPP Elements

The GPP shall include the following elements:

II.I.2.a. A description of the operations, processes and materials present at the facility that may affect or contaminate groundwater.

II.I.2.b. Procedures and containment facilities to protect groundwater resources from the potential contaminants listed above. These processes and facilities shall be identified on a facility map.

II.I.2.c. A GPP containing a Karst Mitigation Plan shall be submitted with applications for registration under this NPDES General Permit for all areas with Karst topography.

Procedures for protecting groundwater when designing and adding new equipment and operations. Adequate design of these operations should be considered in the GPP when making changes in areas of karst, wetlands, faults, subsidence, areas determined by the Bureau for Public Health to be delineated wellhead protection areas, or other areas determined by the Director to be vulnerable based upon geologic or hydrogeologic information.

- The permittee must revise the GPP within 30 calendar days to address any newly delineated areas or other vulnerable areas upon notification by the Director or the Bureau for Public Health.

II.I.2.d. A summary of activities presently regulated for groundwater protection. These may include: registration of above ground and underground storage tanks, required groundwater monitoring or the construction and use of a landfill and list any other permits, required spill prevention and response plans, registrations, certifications or approvals from agencies that regulate groundwater protection measures at the facility. These may include but are not limited to:

- Stormwater
- Solid Waste Facility
- Resource Conservation and Recovery Act (Hazardous Waste Treatment, Storage and Disposal or Transporter)
- UST — Underground Storage Tank
- AST — Above Ground Storage Tank
- CERCLA — Superfund
- WV Voluntary Remediation — Brownsfields
- FIFRA — Federal Insecticide, Fungicide and Rodenticide Act

- Well Head Protection Program
- Underground Injection Control
- Toxic Substances Control Act
- Best Management Plans
- Management of used oil

II.I.2.e. All available groundwater quality data for the facility as well as well locations or other sampling points.

II.I.2.f. A statement documenting that waste materials will not be used for deicing, fill, or any other use, unless that use is allowed by regulation or permit.

II.I.2.g. A training component wherein the applicant states that employees with the potential to pollute groundwater will be trained in prevention procedures.

II.I.2.h. Documentation of quarterly inspections of the GPP elements by facility personnel are required. Documentation of this section must include a description of groundwater protection procedures and how control structures and devices are managed. Create and attach a copy of the facility's inspection form to the GPP.

II.I.2.i. Safety data sheets for all chemicals, or substances, used or stored on site.

II.I.3. The GPP shall be signed in accordance with Appendix A.7 and a copy retained onsite.

II.J. CONSISTENCY WITH OTHER PLANS

SWPPPs may reflect requirements for Spill Prevention Control and Countermeasure plans under section 311 of the CWA or any BMPs and GPPs pursuant to 47 C.S.R. 58 (Groundwater Protection Rule) or otherwise required by an NPDES permit. Incorporate any part of such plans into the SWPPP by reference.

PART III. REQUIREMENTS DURING CONSTRUCTION

During construction, the permittee is required to:

- Follow all approved plans, follow good housekeeping protocol, respond to and report spills and leaks;
- Ensure a Qualified Person conducts inspections to verify that the approved BMPs effectively protect water quality;
- Implement additional controls as needed to protect water quality;
- Update the SWPPP/GPP with the additional controls;
- Submit modifications to the approved plans to reflect the additional controls, and
- Stabilize disturbed areas.

III.A. COMPLY WITH APPROVED REGISTRATION

III.A.1. The permittee shall construct the project as described in the approved registration.

III.A.2. The permittee shall practice good housekeeping measures to maintain a clean and orderly project. This includes minimizing the exposure of building materials, building products, construction wastes, trash, landscape materials, fertilizers, pesticides, herbicides, detergents, sanitary waste and other materials present on the site to stormwater.

III.A.2.a. The permittee shall implement spill and leak prevention practices in accordance with the approved plan and respond promptly when incidents occur. The necessary equipment to implement a cleanup shall be available on-site to personnel, including spill kits.

III.A.3. Except as noted below, stabilization measures shall be initiated as soon as practicable in portions of the site where construction activities have temporarily or permanently ceased, but in no case more than 7 days after the construction activity in that portion of the site has permanently ceased or 4 days for sites required to use enhanced BMP's.

- Where the initiation of stabilization measures by the 4th day, as applicable after construction activity temporarily or permanently ceases is precluded by natural causes, such as a drought or flood, stabilization measures shall be initiated as soon as conditions allow.
- Where construction activity will resume on a portion of the site within 14 days from when activities ceased, (i.e., the total time period that construction activity is temporarily halted is less than 14 days) then stabilization measures do not have to be initiated on that portion of the site by the seventh day after construction activities have temporarily ceased.
- Areas where the seed has failed to germinate adequately (uniform perennial vegetative cover with a density of 70%) within 30 days after seeding and mulching must be reseeded immediately, or as soon as weather conditions allow.

III.B. INSPECTIONS BY QUALIFIED PERSON

The permittee shall ensure site inspections are conducted by a Qualified Person in accordance with this section. The purpose of the inspections is to ensure compliance with the approved plan, and when the approved plan is not effective at protecting water quality, the inspection is to document that plan improvements are needed.

III.B.1. The person(s) inspecting the site may be a staff person or a third party hired to conduct such inspections as long as they meet the definition of a Qualified Person.

III.B.2. The site must be inspected as listed below, unless the site discharges to sensitive waters or the site qualifies for a reduction in the inspection frequency pursuant to III.B.2.b below:

- At least once every seven (7) calendar days and

- Within 24 hours of the occurrence of a precipitation event of 0.25 inches or greater, or the occurrence of runoff from snowmelt sufficient to cause a discharge.

III.B.2.a. An increase in inspection frequency is required for sites discharging to all waters except Tier 1.

For any portion of the site that discharges to a water that is classified as Tier 2 or Tier 3, or listed on the 303(d) list, inspections must be conducted in accordance with the following inspection frequencies:

- Once every four (4) calendar days, and
- Within 24 hours of the occurrence of a precipitation event of 0.25 inches or greater, or the occurrence of runoff from snowmelt sufficient to cause a discharge.

III.B.2.b. Reductions in inspection frequency may occur in accordance with the following:

Stabilized areas:

The permittee may reduce the frequency of inspections to twice per month, no more than 14 calendar days apart, in any area of the site where final stabilization has been completed. If construction activity resumes in this portion of the site at a later date, the inspection frequency immediately increases to that required previous to the reduced frequency. The beginning and ending dates of this period must be recorded in the inspection report.

Exceptions:

For "linear projects", where disturbed portions have undergone final stabilization at the same time active construction continues elsewhere, the permittee may reduce the frequency of inspections to twice per month no more than 14 calendar days apart, in any area of the site where the final stabilization has been completed. Inspect once more within 24 hours of the occurrence of a precipitation event of 0.25 inches or greater. If there are no issues or evidence of stabilization problems, further inspections may be suspended. If "wash-out" of stabilization materials and/or sediment is observed, following re-stabilization, the reduced inspection frequency is suspended.

Frozen conditions:

If the permittee suspends construction activities due to frozen conditions, inspections on the site may be temporarily suspended until thawing conditions begin to occur if:

- Runoff is unlikely due to continuous frozen conditions that are likely to continue at the site for at least three (3) months based on historic seasonal averages. If unexpected weather conditions (such as above freezing temperatures or rain events) make discharges likely, the permittee must immediately resume the regular inspection frequency as applicable;

- Land disturbances have been suspended and all disturbed areas of the site have been stabilized.

If still conducting construction activities during frozen conditions, the permittee may reduce the inspection frequency to once per month if:

- Runoff is unlikely due to continuous frozen conditions that are likely to continue at the site for at least three (3) months based on historic seasonal averages. If unexpected weather conditions (such as above freezing temperatures or rain events) make discharges likely, the permittee must immediately resume the regular inspection frequency; and
- Except for areas undergoing construction activities, disturbed areas of the site have been stabilized, the beginning and ending dates of this period must be documented in the inspection report.

III.B.2.c. For any day of rainfall during normal business hours that measures 0.25 inches or greater, the total rainfall measure for that day must be recorded.

To determine if a precipitation event of 0.25 inches or greater has occurred on the site, the permittee must either:

- Keep a properly maintained rain gauge on-site, or
- Obtain the precipitation event information from a NOAA weather station that is representative of the location.

III.B.2.d. Areas That Must Be Inspected

During the site inspection, the following *areas* of the site must be inspected:

- All areas that have been cleared, graded, or excavated and that have not yet completed stabilization;
- All stormwater controls (including pollution prevention controls) installed and procedures initiated must be listed in the inspection record;
- Material, waste, borrow, and equipment storage and maintenance areas that are covered by this permit;
- All areas where stormwater typically flows within the site, including drainageways designed to divert, convey, and/or filter stormwater;
- All points of discharge from the site;
- All receiving waters to look for sediment laden stormwater entering the waterbody; and
- All locations where stabilization measures have been implemented.

Areas that, at the time of the inspection, are considered unsafe to inspection personnel do not have to be inspected.

III.B.2.e. Requirements for Self-inspections

During the site inspection, the Qualified Person shall:

- Check whether all stormwater controls (i.e., erosion and sediment controls and pollution prevention controls) are properly installed, appear to be operational, and are working as intended to minimize pollutant discharges;
 - This includes the requirement to inspect for sediment that has been tracked out from the site onto paved roads, sidewalks, or other paved areas.
- Check for the presence of conditions that could lead to spills, leaks, or other accumulations of pollutants on the site;
- Identify any locations where new or modified stormwater controls are necessary to protect waters of the state or meet other requirements of this NPDES General Permit;
- Check for signs of visible erosion and sedimentation (i.e., sediment deposits) that have occurred and are attributable to the discharge at points of discharge and, if applicable, the banks of any waters of the State flowing within or immediately adjacent to the site;
- Identify any incidents of noncompliance observed;
- If a discharge is occurring during the inspection:
 - Identify all discharge points at the site; and
 - Observe and document the visual quality of the discharge and take note of the characteristics of the stormwater discharge, including color; odor; floating, settled, or suspended solids; foam; oil sheen; and other indicators of stormwater pollutants.

III.B.2.f. Self-inspection Report

An inspection report must be completed by the inspector within 24 hours of completing any site inspection. Each inspection report must include the following:

- The inspection date;
- Names and titles of personnel making the inspection;
- A summary of inspection findings, including the observations made during the inspections, and any necessary maintenance or corrective actions;
- A record of rainfall measuring 0.25 inches or greater and the source of the measurement (the applicable rain gauge or weather station readings); and
- If it was determined unsafe to inspect a portion of the site, describe the reason it was found it to be unsafe and specify the locations to which this condition applies.

Each inspection report must be signed in accordance with Appendix A.7 of this permit.

Each inspection report must be maintained at the site or at an easily accessible location, so that it can be made available at the time of an on-site inspection or upon request by the Director.

All inspection reports must be maintained for at least three (3) years from the date that permit coverage is terminated.

- The Qualified Person must re-inspect within 48 hours to verify repairs or replacements to the defective BMPs or pollution controls noted in the previous inspection.

III.B.2.g. Requirement to Correct Deficiencies

Based on the results of the inspection, the permittee must complete any necessary maintenance and corrective action within 24 hours.

The permittee shall have 24 hours after such notification to make changes relating to sediment and erosion controls to prevent loss of sediment from an active construction site, unless additional time is provided by the Director or an authorized representative in writing.

III.C. IMPLEMENT ADDITIONAL BMPS TO PROTECT WATER QUALITY

III.C.1. When an inspection indicates the BMPs are ineffective at protecting waters of the state, the permittee shall immediately implement additional controls and,

- Update the SWPPP and GPP to reflect the new BMPs, and
- Either obtain approval of the additional BMPs during a site visit conducted by the Director, or
- Submit a modification application in accordance with this permit.
- Permittees who find that the approved BMPs are ineffective at protecting receiving waters and who are unable to identify or employ BMPs capable of preventing sediment laden runoff from leaving the project site shall immediately cease further land disturbance until such time that the unauthorized discharge ceases.

No sediment-laden water shall be allowed to leave the site without going through an appropriate BMP.

III.C.2. The permittee shall modify the SWPPP, using forms provided by DWWM, whenever there is a change in design, construction, scope of operation, or maintenance of BMPs, which has the potential to adversely impact the surface waters of the State, or if the SWPPP proves to be ineffective in achieving the general objectives of controlling pollutants in stormwater discharges associated with construction activities. Should conditions warrant, the Director may request changes to the SWPPP during a field inspection. The Director may request, review and approve or require the permittee to apply for a modification to the approved application.

The permittee shall amend the GPP whenever there is a change in design, construction, operation, or maintenance of BMPs which could reasonably be expected to have an impact on the potential contamination of groundwater.

III.D. FEES

Permittees are required to pay annual permit fees within 30 days of receiving the invoice.

III.D.1. It is the responsibility of the permittee to keep the Director informed of accurate, up-to-date billing addresses and electronic addresses (email addresses) so that invoices may be delivered promptly and to the correct address.

III.D.2. Discharging stormwater from construction sites covered by this permit while failing to pay fees is considered operating without a permit.

III.D.3. Permittees must pay assessed fees until such time that the Director approves the Notice of Termination required by Part IV.

PART IV. REQUIREMENTS AFTER CONSTRUCTION

After construction is complete, the permittee is required to:

- Verify all disturbed areas are stabilized and permanent stormwater conveyances and management structures are properly constructed by having a Qualified Person confirm the site is ready for the Director to conduct the final inspection.
- Confirm all records required by this permit are available for retention for 3 years after permit coverage is terminated and make available when requested by the Director,
- Verify all fees are paid in full,
- Prepare and submit the Notice of Termination (N.O.T.)
 - The permittee has the option of including a Stabilization Certification with the N.O.T.
- Continue to maintain permit coverage until notification from the Director that coverage is terminated.

IV.A. VERIFY ALL DISTURBED AREAS ARE STABILIZED

Sediment trapping structures shall be eliminated, and the area properly reclaimed and stabilized when the contributing drainage area is stabilized, and the structures are no longer needed, unless the structure is converted into a permanent stormwater control structure. This must be accomplished before the Notice of Termination is submitted.

- All trapped sediments shall be disposed on an upland area where there is no chance of entering nearby streams.
- Breaching the embankment to dewater the structure is not permitted. Dewatering and structure removal shall not cause a violation of water quality standards.
- Dewatering may not be done by pumping from a sump, trap, or basin directly into a stream. The dewatering description shall clearly show that only clarified water is

to be discharged to waters of the state and shall include the method to be employed to ensure sediment is not pumped or otherwise discharged.

IV.B. RECORDS INSPECTIONS

In accordance with II.H.5. verify records required by this permit are assembled and ready for retention.

IV.C. PREPARE FOR TERMINATION

IV.C.1.

From the date final stabilization is achieved, the permittee has 30 days to ready the site for submittal of N.O.T and by the 30th day must submit the N.O.T. via electronic notice of termination to the Director.

IV.C.1.a. An inspection by a Qualified Person shall be conducted wherein all areas of the project and all off-site areas impacted by the project are inspected for compliance with this permit. The Qualified Person shall conduct a review of the available records to verify compliance with the retention requirements of this permit.

IV.C.1.b. The Qualified Person shall issue a report to the permittee outlining any deficiencies to be corrected. The permittee shall correct deficiencies within 24 hours and request a re-inspection by the Qualified Person. Once an inspection identifies no deficiencies, the site may be considered ready for the submittal of the N.O.T.

IV.C.1.c. The permittee shall review the fee payment history and pay any unpaid fees during this 30-day period.

IV.D. TERMINATION OF COVERAGE

After meeting the requirements of Part IV.C., the permittee shall apply for termination of permit coverage by submitting an N.O.T., which will serve as a request for final inspection. Upon receipt of the N.O.T., the Director shall inspect the site to determine the appropriateness of ending permit coverage.

IV.D.1. Final stabilization inspections for 1 to < 3 acres sites shall be conducted within 30 days of receipt of the N.O.T. and for sites 3 acres and larger the final stabilization inspection shall be conducted within 60 days.

IV.D.2. The permittee has the option of submitting a certification by a registered professional engineer or professional surveyor that the site meets stabilization requirements. Should the Director not inspect within the time frames established in this section, the Stabilization Certificate shall be accepted in lieu of the final inspection by the Director's staff.

IV.D.3. ATV trails accepted by the landowner and identified in the registration, do not require a healthy, vigorous stand of grass or native vegetation that uniformly covers more than 70 percent of the ground in the vehicle lanes of the trail to be considered for termination. No eroded areas of trails that are the source of sediment in stormwater runoff may be deemed stable or eligible for release. A registration modification must be approved by the Director prior to submittal of the Notice of Termination and prior to registration expiration for ATV trails not previously identified by the permittee to be turned over to the landowner.

IV.D.4. Permit coverage for construction activities encompassed by this permit expires upon verification of satisfactory stabilization of the site and payment of all outstanding fees. Satisfactory stabilization means ALL disturbed areas shall be covered by some permanent protection. Stabilize includes pavement, compacted gravel, permeable pavements/pavers, buildings, waterways (riprap, concrete, grass, or pipe), a healthy, vigorous stand of grass or native vegetation that uniformly covers more than 70 percent of the ground, stable outlet channels with velocity dissipation which directs site runoff to a natural watercourse, and any other approved structure or material.

The herein-described activity is to be constructed or installed and operated, used and maintained strictly in accordance with the terms and conditions of this General Permit with any plans, specifications, and information submitted with the individual application form, with any plan of maintenance and method of operation thereof submitted and with any applicable rules and regulations promulgated by the Environmental Quality Board and the Secretary of the Department of Environmental Protection.

Failure to comply with the terms and conditions of this General Permit, with any plans, specifications and information submitted, and with any plan of maintenance and method of operation thereof submitted shall constitute grounds for the revocation or suspension of this permit to any individual establishment or other person and for the invocation of all the enforcement procedures set forth in Chapter 22, Articles 11 and 12 of the Code of West Virginia.

This permit is issued in accordance with the provisions of Chapter 22, Article 11 of the Code of West Virginia.

BY:  _____
Director

Appendix A

I. STANDARD CONDITIONS

1. Duty to Comply

- (a) The permittee must comply with all conditions of this permit. Permit noncompliance constitutes a violation of the CWA and State Act (Chapter 22, Article 11 or Article 12) and is grounds for enforcement action; for permit modification, revocation and reissuance, suspension or revocation; or denial of a permit renewal application.
- (b) The permittee shall comply with all applicable standards or prohibitions established under 40 C.F.R. 503 and Title 33 Series 2 within the time provided in the regulations that establish these standards or prohibitions, even if the permit has not yet been modified to incorporate the requirement.

2. When to Apply

State NPDES rules require permit applications to be filed at least 180 days prior to the commencement of the activity. The DWWM is attempting, through this general permit process, to streamline the permitting of this activity. Therefore, projects which may potentially obtain coverage under this general permit and which submit complete application forms, shall make submission in accordance with ILA. prior to the anticipated date of discharge.

3. Duty to Reapply

If the permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the permittee must apply for a new permit by submitting a General Permit registration as detailed in permit reissuance.

4. Duty to Mitigate

The permittee shall take all reasonable steps to minimize or prevent any discharge in violation of this permit, which has a reasonable likelihood of adversely affecting human health or the environment.

5. Permit Actions

This permit may be modified, revoked and reissued, suspended, or revoked for cause. The filing of a request by the permittee for permit modification, revocation and reissuance, or revocation, or a notification of planned changes or anticipated noncompliance, does not stay any permit conditions.

6. Property Rights

This permit does not convey any property rights of any sort or any exclusive privilege.

7. Signatory Requirements

All application, reports, or information submitted to the Director shall be signed and certified as required in 47 C.S.R. 10.4.6. (NPDES Program). If an authorization becomes inaccurate because a different individual or position has responsibility for the overall operation of the project, a new authorization must be submitted to the Director prior to, or together with any reports, information, or applications to be signed by an authorized representative.

8. Transfers

This permit is not transferable to any person, except after written notice to and written approval by the Director. The Director may require modification or revocation and reissuance of the permit to change the name of the permittee and incorporate such other requirements as may be necessary. Notice must contain the new owner's name and address.

9. Duty to Provide Information

The permittee shall furnish to the Director, within a reasonable specified time, any information which the Director may request to determine whether cause exists for modifying, revoking and reissuing, suspending, or revoking this permit, or to determine compliance with this permit. The permittees shall also furnish to the Director, upon request, copies of records required to be kept by this permit.

10. Other Information

The permittee shall furnish to the Director any additional, practicable, site-specific information that is determined necessary to protect water quality or has the potential to protect water quality. Where the permittee becomes aware that he/she has failed to submit any relevant facts in a facility registration application form or submitted incorrect information in a facility registration application form or in any report to the Director, he/she shall promptly submit omitted/corrected facts or information.

11. Endangered and Threatened Species and State Historic Preservation Officer

If a site discharges to a stream where a federally endangered or threatened species or its critical habitats are present, the applicant must contact the U.S. Fish and Wildlife Service to ensure that requirements of the federal Endangered Species Act, 16 U.S.C. 1531 et. seq. is met

For those projects that may impact historic preservation sites, the permittee shall coordinate the project with the State Historic Preservation Officer.

12. Inspection and Entry

The permittee shall allow the EPA, Director, or an authorized representative, upon the presentation of credentials and other documents as may be required by law, to:

- a) Enter upon the permittee's premises in which any storage, treatment or activity is located, or where records must be kept under the conditions of this permit;
- b) Have access to and copy at reasonable times, any records that must be kept under the conditions of this permit;
- c) Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and
- d) Sample or monitor at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by 47CSR10, any substances or parameters at any locations.

13. Permit Modification

This permit may be modified, suspended, or revoked in whole or in part during its term in accordance with the provisions of Chapter 22, Article 11 of the Code of West Virginia.

Any permittee wishing to modify his coverage for a Large Construction Activity shall submit such request at least 60 days prior to the commencement of the proposed action for modification if no public notice period is required. A modification that requires a public notice period must be submitted at least 100 days prior to construction to allow for the public notice procedure.

Any permittee wishing to modify his coverage for a Minor Construction Activity shall submit such request at least 30 days prior to the commencement of the proposed action for modification if no public notice period is required. A modification that requires a public notice period must be submitted at least 60 days prior to construction to allow for the public notice procedure.

14. Oil and Hazardous Substance Liability

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties to which the permittee is or may be subject under Section 311 of the CWA.

15. Outlet Markers

In accordance with Title 47, Series 11, Section 9 (Special Rules) of the West Virginia Legislative Rules, an outlet marker shall be posted on the stream bank for each outlet covered by this permit

16. Water Withdrawal

If water for hydroseeding, dust control, or hydrostatic testing is to be derived from waters of the state, withdrawals shall only be made during times when stream flow is sufficient to support both aquatic life and the withdrawal. During periods of active withdrawal, the permittee and/or operator shall consult DWWM's Water Withdrawal Guidance Tool daily and document the recommendations. This documentation shall be maintained by the permittee and made available for inspection. Withdrawals shall only be taken when the tool indicates that it is safe by the statement "it should be safe to withdraw from any stream in the area". Use of the tool in itself does not guarantee protection of aquatic life and best professional judgment must still be used when making withdrawals, as the tool cannot account for all localized conditions and may not react to the withdrawal dependent on its proximity to the stream gage. The tool provides useful information on general stream flow adequacy to assist the permittee with withdrawal decisions. The tool may be found at the following link:

<http://www.dep.wv.gov/WWE/wateruse/Pages/WaterWithdrawal.aspx>.

17. Liabilities

17.a. Any person who violates a permit condition is subject to a civil penalty not to exceed \$25,000 per day of such violation as provided in W. Va. Code § 22-11-22. Any person who willfully or negligently violates permit conditions is subject to a fine of not less than \$2,500 nor more than \$25,000 per day of violation, or by imprisonment for not more than one year, or both, as provided in W. Va. Code §22-11-24.

17.b. Any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including reports of compliance or noncompliance shall, upon conviction, be punished by a fine of not more than \$10,000 per violation, or by imprisonment for not more than six months per violation, or by both, in accordance with W. Va. Code § 22-11-24.

17.c. Nothing in 17.a. and 17.b. shall be construed to limit or prohibit any other authority the Director may have under the State Water Pollution Control Act, Chapter 22, Article 11 and State Groundwater Protection Act, Chapter 22, Article 12.

18. Reopener Clause

If there is evidence indicating potential or realized impacts on water quality due to any stormwater discharge authorized by this General Permit, the owner or operator of such discharge may be required to obtain an individual permit or alternative General Permit in

accordance with Section I.E. of this General Permit or the General Permit may be modified to include different limitations and/or requirements.

The conditions, standards, and limitations of this General Permit shall be reviewed at the time of reissuance for possible revisions that may lead to more or less stringent conditions, standards, and limitations.

Appendix B

I. OPERATION AND MAINTENANCE

1. Proper Operation and Maintenance

The permittee shall at all times properly operate and maintain all activities and BMPs which are installed or used by the permittee to achieve compliance with the terms and conditions of the permit.

2. Need to Halt or Reduce Activity Not a Defense

It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity to maintain compliance with the conditions of this permit.

3. Bypass

3.a. Definitions

3.a.1. "Bypass" means the intentional diversion of waste streams from any portion of a BMP; and

3.a.2. "Severe property damage" means substantial physical damage to property, damage to BMPs which causes them to become inoperable, or substantial and permanent loss of natural resources that can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.

3.b. Bypass not exceeding limitations. The permittee may allow any bypass to occur which does not cause effluent limitations to be exceeded, but only if it also is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions of Appendix B 3.c. and 3.d. of this permit.

3.c. Notification of bypass

3.c.1. If the permittee knows in advance of the need for a bypass, it shall submit prior notice, if possible, at least 10 days before the date of the bypass.

3.c.2. If the permittee does not know in advance of the need for bypass, notice shall be submitted as required in E.2. of Part I of this permit.

3.d. Prohibition of bypass

3.d.1. Bypass is permitted only under the following conditions. The Director may take enforcement action against a permittee for bypass, unless;

3.d.1.A. Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;

3.d.1.B. There were no feasible alternatives to the bypass, such as the use of auxiliary BMPs, retention of untreated sediment, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate backup equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass that occurred during normal periods of equipment downtime or preventive maintenance. This condition is not satisfied if the sediment and erosion control structures were not installed in the proper sequence; and

3.d.1.C. The permittee submitted notices as required under Appendix B 3.c. of this permit.

3.d.2. The Director may approve an anticipated bypass, after considering its adverse effects, if the Director determines that it will meet the three conditions listed in Appendix B 3.d.1. of this permit.

4. Upset

4.a. "Upset" means an exceptional incident in which there is unintentional and temporary noncompliance with the technology-based permit effluent limits or failure of a BMP that occurs because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.

4.b. Effect of an upset. An upset constitutes an affirmative defense to an action brought for temporary noncompliance with the terms and conditions of the permit and the SWPPP if the requirements of Appendix B 4.c. are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review.

4.c. Conditions necessary for a demonstration of upset. A permittee who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:

4.c.1. An upset occurred, and that the permittee can identify the cause(s) of the upset.

4.c.2. The permitted project was at the time being properly operated.

4.c.3. The permittee submitted notice of the upset in accordance with Part I.D.2.; and

4.c.4. The permittee complied with any remedial measures required under Appendix A 4 of this permit.

4.d. Burden of proof. In any enforcement proceedings, the permittee seeking to establish the occurrence of an upset has the burden of proof.

5. Removed Substances

From time to time incidents occur on construction sites that cause materials to be removed. Soils or stormwater affected by fuel spills or other substances may require special handling and disposal. Such shall be disposed of only in a manner and at a site subject to the approval by the Director.

Sediment removed from a trapping device or from a stream, lake or river after deposition by stormwater runoff from a construction related activity shall be removed in a manner consistent with local, state and federal guidelines and placed behind sediment trapping BMPs in a manner that prevents erosion.

Appendix C

I. Definitions:

1. "Access Road" means surface right-of-way for purposes of travel by land vehicles and/or equipment used in Construction activities. A road consists of the entire area within the right-of-way, including the roadbed, shoulders, parking and side areas, approaches, ditches, and other related structures. The term includes access roads constructed, used, reconstructed, improved, or maintained for use in all construction operations.
2. "Application" is the form to be submitted to register a construction project that discharges to sensitive waters.
3. "Best management practices" (BMPs) means schedules of activities, prohibitions of practices, maintenance procedures, other management practices and various structural practices such as but not limited to silt fence, sediment traps, seeding and mulching, and rip-rap used to prevent or reduce erosion and sediment runoff and the pollution of surface waters of the State. BMPs also include treatment requirements, operating procedures and practices to control plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage.
4. "Clearing" means the stage of development in which vegetation is cleared from land. Clearing includes cutting and removing vegetation with chain saws, brush axes, brush hogs and other mechanical means where no soil is disturbed.
5. "Clean Water Act" (CWA) (formerly referred to as the Federal Water Pollution Control Act or Federal Water Pollution Control Act Amendments of 1972) Public Law 92-500, as amended by Public Law 95-217, Public Law 97-117 and Public Law 95-576; 33 U.S.C. 1251 et seq.
6. "Common Plan of Development" is a contiguous construction project where multiple separate and distinct construction activities may be taking place at different times on different schedules but under one plan. The "plan" is broadly defined as any announcement or piece of documentation or physical demarcation indicating construction activities may occur on a specific plot; included in this definition are most subdivisions.
7. "Control" is a best management practice such as erosion control or sediment control that will reduce sedimentation on a construction project.
8. "Construction Activity" means land disturbance operations such as clearing, and grubbing, grading, filling, and excavating during site development for residential, commercial or industrial purposes. This includes, but is not limited to, access roads, borrow and spoil areas.

9. "Detailed Site Plan" is a design plan drawing of sufficient scale to depict proposed construction activity, surface drainage patterns, erosion and sediment control best management practices, limits of disturbance boundary, north arrow with drawing oriented north, and containing surface contours on minimum 5-foot contours.
10. "Director" means the Director of the Division of Water and Waste Management, Department of Environmental Protection, or his or her designated representative.
11. "Disturbed Area" is the total area of land disturbing activity that will take place during all phases of a construction project, including, but not limited to, all waste and borrow sites, utility installation, road building, mass grading, and site development.
12. "Diversion" means a stabilized berm or stabilized excavated channel or combination berm and channel constructed across sloping land on a predetermined grade. This includes but is not limited to protecting work areas from upslope runoff and reducing the size of the drainage going to sediment trapping structures (clean water diversion), transporting runoff across a project to minimize erosion and diverting sediment-laden water to an appropriate sediment-trapping structure.
13. "Electronic Submission System (ESS)" refers to the online interactive application registration submittal, review and approval system authorized by the Director.
14. "Enhanced BMPs" means activity schedules or sediment and erosion controls that are more protective of the environment than those routinely employed to quality for coverage under this permit. Use of such practices apply when disturbed areas discharge to Tier 2 and Tier 3 Waters, or to state waters for which a sediment related TMDL has been approved.
15. "Erosion" means the displacement of solids (soil, mud, rock, and other particles) by the agents of wind, water, and ice in response to gravity.
16. "Establishment" means an industrial establishment, mill, factory, tannery, paper and pulp mill, mine, colliery, breaker or mineral processing operation, quarry, refinery, well and each and every industry or plant or works in the operation or process of which industrial wastes, sewage or other wastes are produced.
17. "Estimate" means to be based on a technical evaluation of the sources contributing to the discharge.
18. "Evaluation Point" means the point where the majority of the surface storm water leaves a permitted site.
19. "Excavating" means to engage in digging, hollowing out, or removing, accomplished usually with heavy machinery.

20. "Final stabilization" means long-term stability of soil and rock against slides, slips, erosion and mudflows by covering disturbed areas with permanent protection such as pavement, compacted gravel, permeable pavements/pavers, buildings, stable waterways (riprap, concrete, grass or pipe), a healthy, vigorous stand of grass or natural vegetation that uniformly covers at least 70 percent of the ground, stable outlet channels with velocity dissipation that directs site runoff to a natural watercourse, and any other approved structure or material.
21. "Grading" means disturbing the surface of the land, including land clearing and grubbing, excavations, creating embankments, land development, road upgrade, cut and/or fill operations, and the moving, depositing, stockpiling or storing of soil, rock, or earth materials.
22. "Groundwater" means the water occurring in the zone of saturation beneath the seasonal high-water table or any perched water zones.
23. "Groundwater Protection Plan" (GPP) means groundwater protection practices developed and implemented in accordance with WV Legislative Rules, 47 C.S.R. 58 (Groundwater Protection Rule), submitted as part of the Application.
24. "Grubbing" means physically removing vegetative stumps and roots from the ground and disturbing the earth, usually by heavy machinery.
25. "Inlet Protection" means a sediment filter or an impounding area around or upstream of a storm sewer, drop inlet, or curb inlet which allows sediment to settle out prior to stormwater entering the inlet.
26. "Impaired Streams" means waters that do not meet applicable water quality standards and are listed on the Clean Water Act Section 303(d) list.
27. "Large Construction Activity" mean an activity which disturbs 3 or more acres of land.
28. "Landowner requested trails" refers to a trail the landowner deems desirable as a post-construction accessway to portions of the released site, hereinafter called ATV (All-Terrain Vehicle) Trails.
29. "Limits of Disturbance" is a polygon shown on a map or site drawing depicting the boundary of the construction site to be disturbed.
30. "Minor Construction Activity" means an activity which disturbs one to less than three acres of land and does not discharge to sensitive waters.
31. "National Pollutant Discharge Elimination System" (NPDES) means the national program for issuing, denying, modifying, revoking and reissuing, suspending, revoking,

monitoring and enforcing permits, and imposing and enforcing pretreatment requirements under Section 307, 318, 402, and 405 of CWA, including any approved state program.

32. "Natural Vegetative Buffer" is an area of undisturbed vegetation that occurs spontaneously without regular maintenance or management and is adjacent to or surrounds streams or other waters.

33. "Notice of Termination" (NOT) is the form to be submitted by the permittee to terminate coverage under the Construction General Stormwater Permit, after final stabilization has been completed. See Final Stabilization.

34. "Point Source" is any discernible, confined and discrete conveyance, including but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, and container from which pollutants are or may be discharged to surface waters of the state.

35. "Pollutant" means industrial waste, sewage or other wastes.

36. "Pre-development" means the condition of the land, the amount and health of the ground cover and vegetation prior to development.

37. "Qualified Person" means a person who is knowledgeable in the principles and practices of sediment and erosion controls, pollution prevention, and possesses the education and abilities to assess conditions at the proposed site that could impact stormwater quality and to assess the effectiveness of proposed stormwater controls to meet the requirements of this permit.

38. "Satisfactory Stabilization": means a condition where exposed soils or disturbed areas are provided temporary vegetative and/or non-vegetative protective cover to prevent erosion and sediment loss. Satisfactory stabilization may include temporary seeding, geotextiles, mulches, and other techniques to reduce or eliminate erosion until either final stabilization can be achieved or until further construction activities take place to re-disturb this area.

39. "Sediment" means any particulate matter that can be transported by fluid flow and which eventually is deposited as a layer of solid particles on the bed or bottom of a body of water or other liquid.

40. "Sedimentation" means the deposition by settling of a suspended material.

41. "Sediment trap" means a temporary ponding area formed by constructing an embankment or excavation and embankment that will trap the flow of sediment-laden runoff. Sediment traps have a properly stabilized outlet/weir or riser and pipe to detain sediment laden runoff from disturbed areas of five acres or less. Outlets must be designed to extend the detention time and allow the majority of the sediment to settle out.

42. "Sediment basin" means a temporary structure consisting of an earthen embankment, or embankment and excavated area, located in a suitable area to capture sediment-laden runoff from a construction site. A sediment basin reduces the energy of the water through extended detention (48 to 72 hours) to settle out the majority of the suspended solids and sediment and prevent sedimentation in waterways, culverts, streams and rivers. Sediment basins have both wet and dry storage space to enhance the trapping efficiency and are appropriate in drainage areas of five acres and greater.
43. "Sensitive waters" means Tier 2 and Tier 3 Streams, trout streams, or water bodies with an established sediment related TMDL.
44. "Sinkhole" means a depression in the land surface formed by solution or collapse that directs surface runoff into subsurface or to an underground drainage flow.
45. "Stormwater" means stormwater runoff, snowmelt runoff, and surface runoff and drainage.
46. "Stormwater Pollution Prevention Plan" (SWPPP) means a site-specific, written document that, among other things: (1) identifies potential sources of stormwater pollution at the construction site; (2) describes stormwater controls to reduce or eliminate pollutants in stormwater discharges from the construction site; and (3) identifies procedures the operator will implement to comply with the terms and conditions of this general permit.
47. "Tier 1 Waters" means waters that maintains and protects existing uses of a water body and the water quality conditions necessary to support such uses. A waterbody that is listed as impaired on the states 303(d) list is considered a Tier 1 water as it pertains to the specific pollutant listed.
48. "Tier 2 Waters" means waters that maintains and protects "high quality" waters - water bodies where the level of water quality exceeds levels necessary to support recreation and wildlife and the propagation and maintenance of fish and other aquatic life. Tier 2 is the default assignment for a waterbody not listed as impaired on the states 303(d) list.
49. "Tier 3 Waters" means waters as otherwise identified in 47 C.S.R. 2-4.1.c. (Requirements Governing Water Quality Standards).
50. "Total Maximum Daily Load (or TMDL)" is a term in the Clean Water Act that establishes the maximum amount of a pollutant allowed in a waterbody and serves as the starting point or planning tool for restoring water quality.
51. Trout Streams - Waters which sustain year-round trout populations. Excluded are those waters which receive annual stockings of trout, but which do not support year-round trout

populations. Waters which meet the definition of 47 C.S.R. 2-2.19 (Requirements Governing Water Quality Standards).

52. "Water Quality Standards" are the foundation of the water quality-based control program mandated by the Clean Water Act.

53. "1-year, 24-hour precipitation event" means the maximum 24-hour precipitation event with a probable recurrence interval of once in one year.

54. "2-year, 24-hour precipitation event" means the maximum 24-hour precipitation event with a probable recurrence interval of once in two years.

55. "10-year, 24-hour precipitation event" means the maximum 24-hour precipitation event with a probable recurrence interval of once in 10 years.

56. "25-year, 24-hour precipitation" means the maximum 24-hour precipitation event with a probable recurrence interval of once in 25 years.

APPENDIX C

Site Information

- Content:**
- 1. General Description Sheet**
 - 2. Schedule Sheet for Soil Disturbing Activities**
 - 3. Soil Data Sheet**
 - 4. Erosion and Sediment Control Site Map**
 - 5. Erosion and Sediment Control Plan**
 - 6. Design Sheets**
 - 7. Design Calculations**
 - 8. Revegetation Plan**
 - 9. Stabilization Practice Schedule**
 - 10. Structural Control Sheet**
 - 11. Construction Site Inspection Report**

Erosion and Sedimentation Best Management Practices

- ✓ Triple-stack compost filter sock
 - Super silt fence
 - Corrugated metal fencing
 - Armored outlets
 - Green space buffers
- ✓ Routine inspection of BMPs
- ✓ Other: Double Row Silt Fence
- ✓ Other: Re-seeding and fertilizing disturbed areas.
- Other: _____
- Other: _____

CONTRACT #1 - Water System Improvements: Unit price contract to provide and install 12,020 LF 8 inch PVC waterline; 4,830 LF of 6 inch waterline; 680 LF 4 inch PVC waterline; 6,945 LF 2 inch waterline; 1,700 LF of temporary water lines; 2,500 LF of directional drills; 90 gate valves; 32 new fire hydrants; 5 Air Release Assemblies; 22 Flushout Assemblies; 266 Service Reconnections; and other work required to provide the complete system improvements project.

Schedule Sheet for Soil Disturbing Activities

Estimate Construction Start Date: _____

Estimate Construction End Date: _____

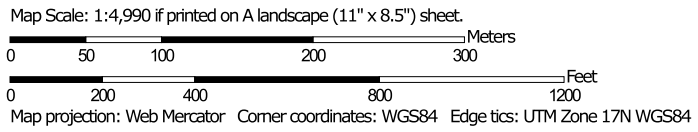
Activity	Estimated Time	Actual Time
Install BMPs		
Land clearing		
Grading		
Excavation		
Filling		
Utilities		
Install foundations, retaining walls, etc		
Paving		
Revegetation		
BMP Removal		

Install erosion control facilities and devices, strip and stockpile topsoil, commence excavation, install bedding (if required), install pipe, backfill, restore surface with topsoil, lime, fertilizer, seed, and mulch. Surface restoration must be done within 4 days of commencing excavations. Maintain erosion control measures until vegetative cover is established. Open trenches to be sufficient in advance of pipe laying to expose any obstructions that might alter alignment or grade, but not more than can be backfilled at the end of the work day, or 200 foot, whichever is less. No trench will be left open overnight.

Soil Map—Brooke, Hancock, and Ohio Counties, West Virginia




Soil Map may not be valid at this scale.




MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

Special Point Features



Blowout



Borrow Pit



Clay Spot



Closed Depression



Gravel Pit



Gravelly Spot



Landfill



Lava Flow



Marsh or swamp



Mine or Quarry



Miscellaneous Water



Perennial Water



Rock Outcrop



Saline Spot



Sandy Spot



Severely Eroded Spot



Sinkhole



Slide or Slip



Sodic Spot



Spoil Area



Stony Spot



Very Stony Spot



Wet Spot



Other



Special Line Features

Water Features



Streams and Canals

Transportation



Rails



Interstate Highways



US Routes



Major Roads



Local Roads

Background



Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:12,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service

Web Soil Survey URL:

Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Brooke, Hancock, and Ohio Counties, West Virginia

Survey Area Data: Version 17, Sep 9, 2022

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

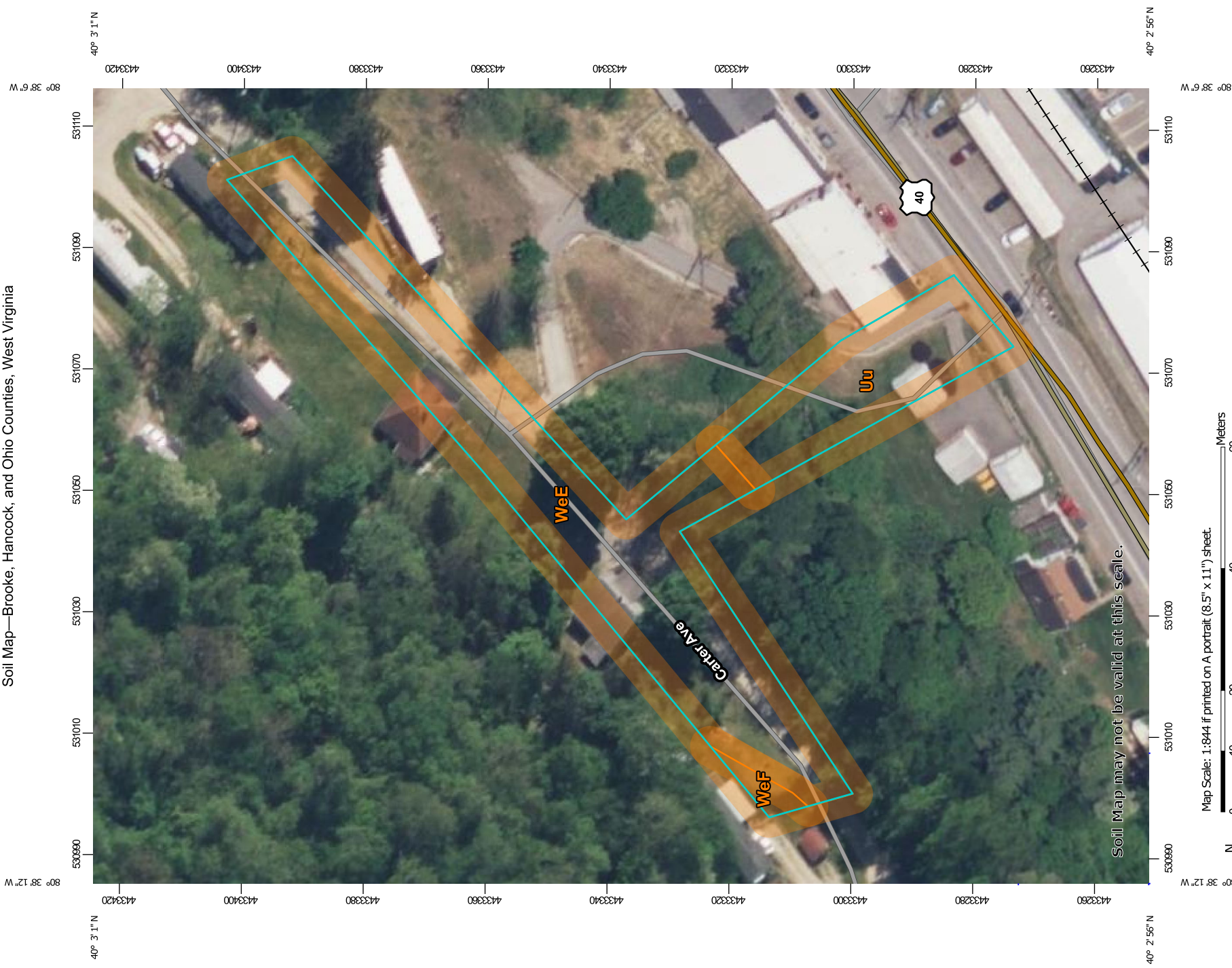
Date(s) aerial images were photographed: May 19, 2021—Sep 19, 2021

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend


Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
Cu	Cut and fill land	0.1	2.3%
Uu	Urban land-Udorthents complex	4.1	96.7%
W	Water	0.0	1.0%
Totals for Area of Interest		4.2	100.0%

Soil Map—Brooke, Hancock, and Ohio Counties, West Virginia




MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

Special Point Features



Blowout



Borrow Pit



Clay Spot



Closed Depression



Gravel Pit



Gravelly Spot



Landfill



Lava Flow



Marsh or swamp



Mine or Quarry



Miscellaneous Water



Perennial Water



Rock Outcrop



Saline Spot



Sandy Spot



Severely Eroded Spot



Sinkhole



Slide or Slip



Sodic Spot



Spoil Area



Stony Spot



Very Stony Spot



Wet Spot



Other



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Major Roads



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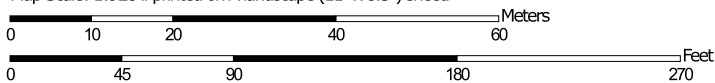
Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
Uu	Urban land-Udortheints complex	0.2	24.5%
WeE	Westmoreland silt loam, 25 to 35 percent slopes	0.5	73.5%
WeF	Westmoreland silt loam, 35 to 60 percent slopes	0.0	2.0%
Totals for Area of Interest		0.7	100.0%

Soil Map—Brooke, Hancock, and Ohio Counties, West Virginia



Map Scale: 1:928 if printed on A landscape (11" x 8.5") sheet.




Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 17N WGS84




MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

Special Point Features



Blowout



Borrow Pit



Clay Spot



Closed Depression



Gravel Pit



Gravelly Spot



Landfill



Lava Flow



Marsh or swamp



Mine or Quarry



Miscellaneous Water



Perennial Water



Rock Outcrop



Saline Spot



Sandy Spot



Severely Eroded Spot



Sinkhole



Slide or Slip



Sodic Spot



Spoil Area



Stony Spot



Very Stony Spot



Wet Spot



Other



Special Line Features

Water Features



Streams and Canals

Transportation



Rails



Interstate Highways



US Routes



Major Roads



Local Roads

Background



Aerial Photography

MAP INFORMATION

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Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

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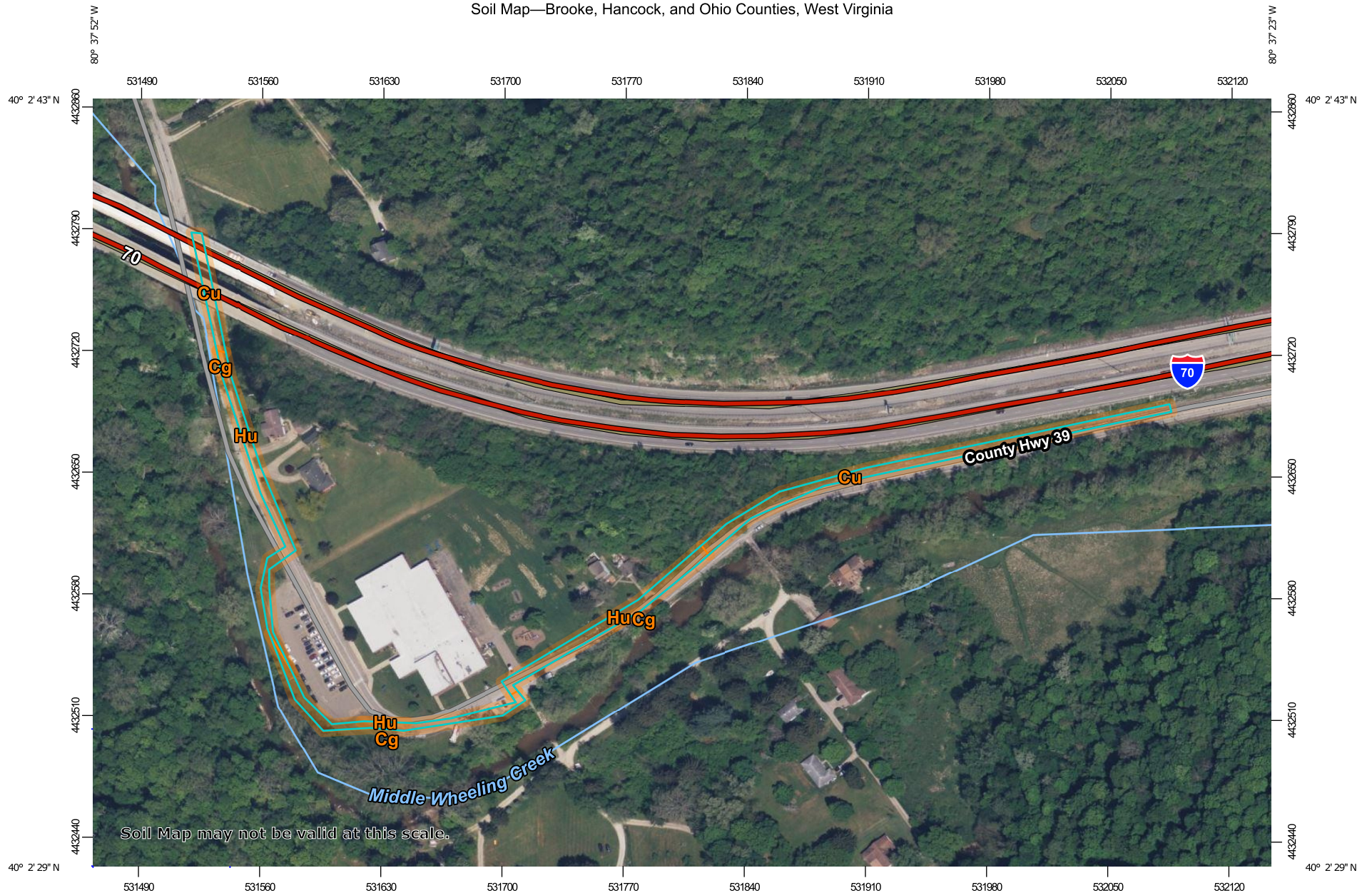
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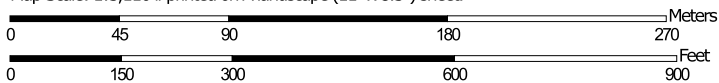
Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
Uu	Urban land-Udortheints complex	0.7	100.0%
Totals for Area of Interest		0.7	100.0%

Soil Map—Brooke, Hancock, and Ohio Counties, West Virginia



Soil Map may not be valid at this scale.


Map Scale: 1:3,110 if printed on A landscape (11" x 8.5") sheet.



Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 17N WGS84

MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

Special Point Features



Blowout



Borrow Pit



Clay Spot



Closed Depression



Gravel Pit



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Landfill



Lava Flow



Marsh or swamp



Mine or Quarry



Miscellaneous Water



Perennial Water



Rock Outcrop



Saline Spot



Sandy Spot



Severely Eroded Spot



Sinkhole



Slide or Slip



Sodic Spot



Spoil Area



Stony Spot



Very Stony Spot



Wet Spot



Other



Special Line Features

Water Features



Streams and Canals

Transportation



Rails



Interstate Highways



US Routes



Major Roads



Local Roads

Background



Aerial Photography

MAP INFORMATION

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Source of Map: Natural Resources Conservation Service

Web Soil Survey URL:

Coordinate System: Web Mercator (EPSG:3857)

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Survey Area Data: Version 17, Sep 9, 2022

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Map Unit Legend

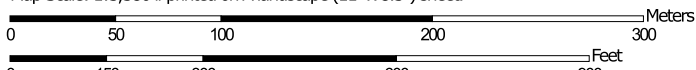
Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
Cg	Chagrin fine sandy loam	0.2	17.0%
Cu	Cut and fill land	0.5	42.5%
Hu	Huntington silt loam	0.4	40.5%
Totals for Area of Interest		1.1	100.0%

Soil Map—Brooke, Hancock, and Ohio Counties, West Virginia



Soil Map may not be valid at this scale.

Map Scale: 1:3,580 if printed on A landscape (11" x 8.5") sheet.



Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 17N WGS84




Natural Resources
Conservation Service

Web Soil Survey
National Cooperative Soil Survey


8/9/2023
Page 1 of 3


MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

Special Point Features



Blowout



Borrow Pit



Clay Spot



Closed Depression



Gravel Pit



Gravelly Spot



Landfill



Lava Flow



Marsh or swamp



Mine or Quarry



Miscellaneous Water



Perennial Water



Rock Outcrop



Saline Spot



Sandy Spot



Severely Eroded Spot



Sinkhole



Slide or Slip



Sodic Spot



Spoil Area



Stony Spot



Very Stony Spot



Wet Spot



Other



Special Line Features

Water Features



Streams and Canals

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Rails



Interstate Highways



US Routes



Major Roads



Local Roads

Background



Aerial Photography

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Coordinate System: Web Mercator (EPSG:3857)

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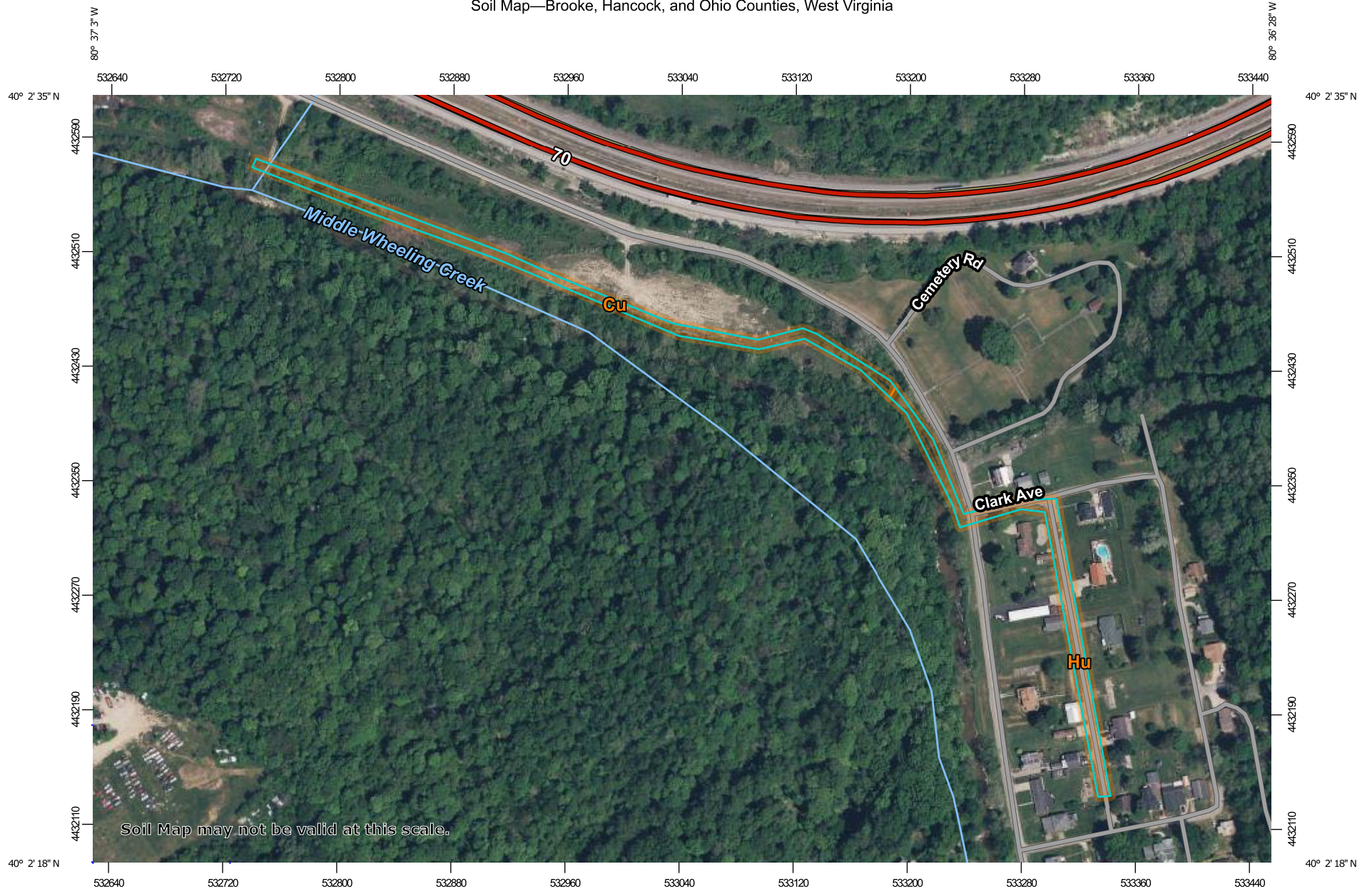
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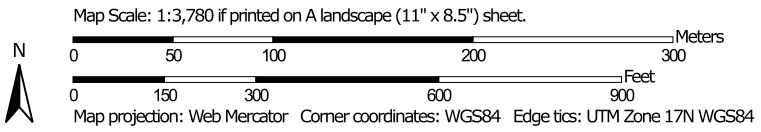
Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
Cu	Cut and fill land	0.9	100.0%
Totals for Area of Interest		0.9	100.0%

Soil Map—Brooke, Hancock, and Ohio Counties, West Virginia




Soil Map may not be valid at this scale.




MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

Special Point Features



Blowout



Borrow Pit



Clay Spot



Closed Depression



Gravel Pit



Gravelly Spot



Landfill



Lava Flow



Marsh or swamp



Mine or Quarry



Miscellaneous Water



Perennial Water



Rock Outcrop



Saline Spot



Sandy Spot



Severely Eroded Spot



Sinkhole



Slide or Slip



Sodic Spot



Spoil Area



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Very Stony Spot



Wet Spot



Other



Special Line Features

Water Features



Streams and Canals

Transportation



Rails



Interstate Highways



US Routes



Major Roads



Local Roads

Background



Aerial Photography

MAP INFORMATION

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Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service

Web Soil Survey URL:

Coordinate System: Web Mercator (EPSG:3857)

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Soil Survey Area: Brooke, Hancock, and Ohio Counties, West Virginia

Survey Area Data: Version 17, Sep 9, 2022

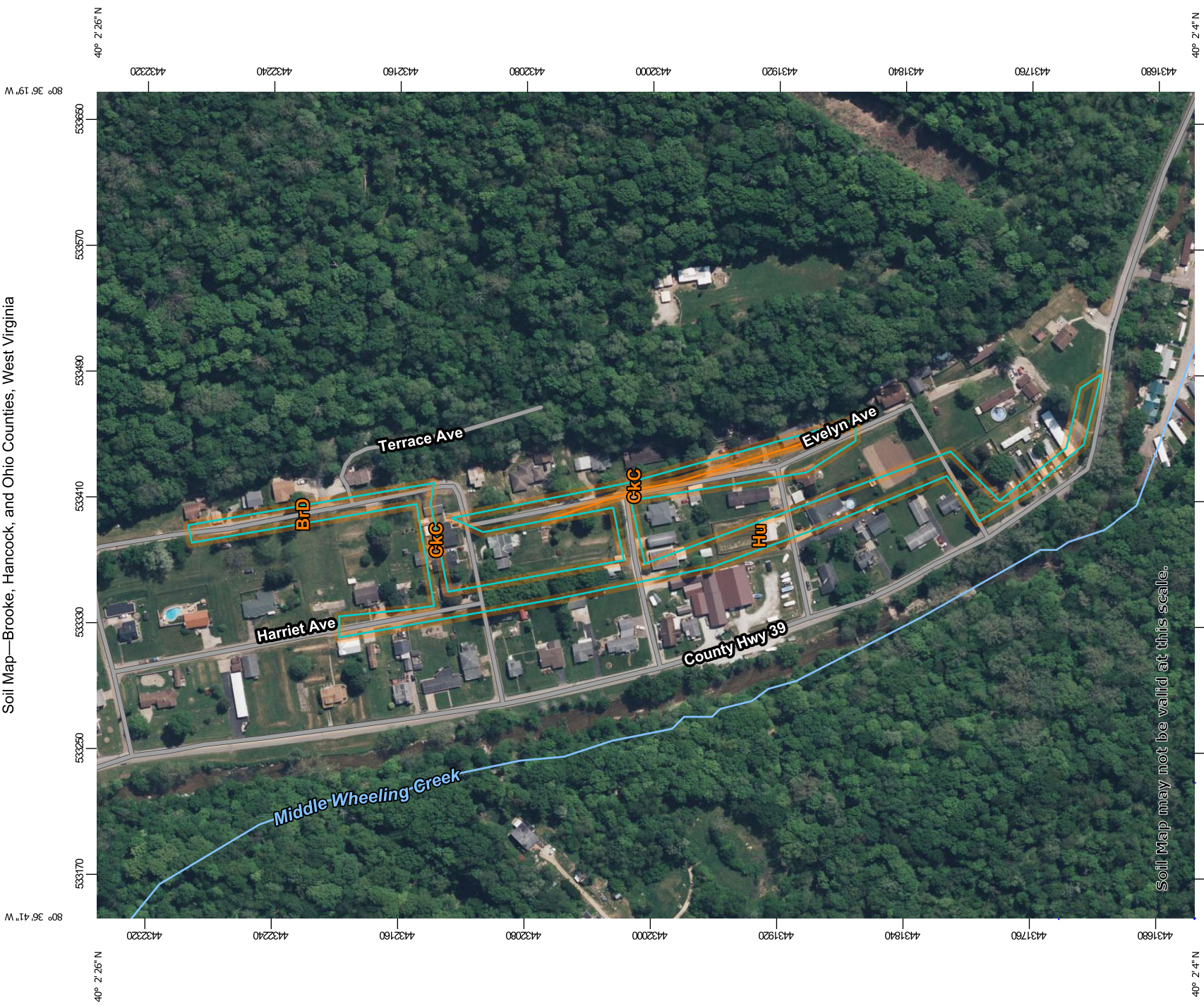
Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: May 19, 2021—Sep 19, 2021

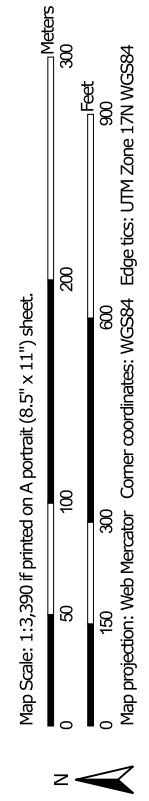
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Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
Cu	Cut and fill land	0.8	51.2%
Hu	Huntington silt loam	0.7	48.8%
Totals for Area of Interest		1.5	100.0%




Soil Map may not be valid at this scale.




MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

Special Point Features



Blowout



Borrow Pit



Clay Spot



Closed Depression



Gravel Pit



Gravelly Spot



Landfill



Lava Flow



Marsh or swamp



Mine or Quarry



Miscellaneous Water



Perennial Water



Rock Outcrop



Saline Spot



Sandy Spot



Severely Eroded Spot



Sinkhole



Slide or Slip



Sodic Spot



Spoil Area



Stony Spot



Very Stony Spot



Wet Spot



Other



Special Line Features

Water Features



Streams and Canals

Transportation



Rails



Interstate Highways



US Routes



Major Roads



Local Roads

Background



Aerial Photography

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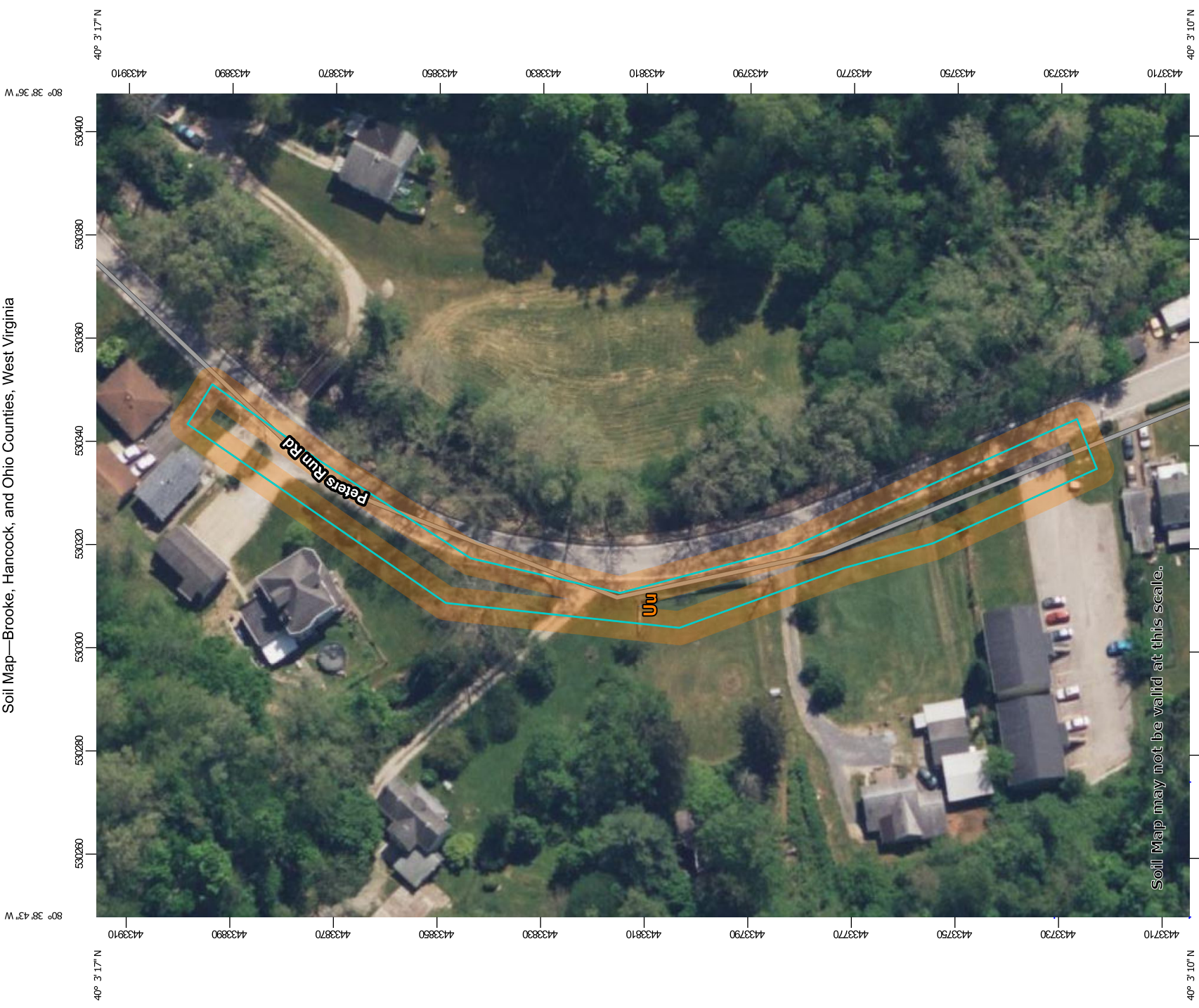
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Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
BrD	Brookside silt loam, 15 to 25 percent slopes	0.5	14.0%
CkC	Clarksburg silt loam, 8 to 15 percent slopes	0.5	14.7%
Hu	Huntington silt loam	2.5	71.2%
Totals for Area of Interest		3.5	100.0%

Soil Map—Brooke, Hancock, and Ohio Counties, West Virginia



Soil Map may not be valid at this scale.



Map Scale: 1:1,030 if printed on A portrait (8.5" x 11") sheet.



Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 17N WGS84




Natural Resources
Conservation Service


Web Soil Survey
National Cooperative Soil Survey


MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

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 Soil Map Unit Lines

 Soil Map Unit Points

Special Point Features



Blowout



Borrow Pit



Clay Spot



Closed Depression



Gravel Pit



Gravelly Spot



Landfill



Lava Flow



Marsh or swamp



Mine or Quarry



Miscellaneous Water



Perennial Water



Rock Outcrop



Saline Spot



Sandy Spot



Severely Eroded Spot



Sinkhole



Slide or Slip



Sodic Spot



Spoil Area



Stony Spot



Very Stony Spot



Wet Spot



Other



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Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
Uu	Urban land-Udortheints complex	0.4	100.0%
Totals for Area of Interest		0.4	100.0%

Soil Map—Brooke, Hancock, and Ohio Counties, West Virginia



Map Scale: 1:2,020 if printed on A portrait (8.5" x 11") sheet.



Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 17N WGS84




Natural Resources
Conservation Service

Web Soil Survey
National Cooperative Soil Survey


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Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
Uu	Urban land-Udorthents complex	0.2	55.4%
WeF	Westmoreland silt loam, 35 to 60 percent slopes	0.2	44.6%
Totals for Area of Interest		0.4	100.0%

Soil Map—Brooke, Hancock, and Ohio Counties, West Virginia



N

Map Scale: 1:2,660 if printed on A portrait (8.5" x 11") sheet.

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 17N WGS84

0 100 200 400 600 Feet

0 35 70 140 210 Meters




Natural Resources Conservation Service

Web Soil Survey National Cooperative Soil Survey


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Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
Uu	Urban land-Udorthents complex	1.1	91.2%
WeF	Westmoreland silt loam, 35 to 60 percent slopes	0.1	8.8%
Totals for Area of Interest		1.2	100.0%

Soil Map—Brooke, Hancock, and Ohio Counties, West Virginia



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Natural Resources
Conservation Service

Web Soil Survey
National Cooperative Soil Survey


MAP LEGEND

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Uu	Urban land-Udortheints complex	0.4	100.0%
Totals for Area of Interest		0.4	100.0%

Insert Erosion and Sediment Control Site Development Maps

Insert Erosion and Sediment Control Plan

SPILL PREVENTION, CONTROL & CONTAINMENT NOTES

The Contractor shall provide means to handle spills and waste material disposal. This shall include but not be limited to the following:

- 1) A containment dike shall be provided around any on-site fuel storage tanks. It shall have a capacity of 110% of the size of the storage tank.
- 2) Absorbent pads shall be available on-site for petroleum spills or leaks on ground. Absorbent booms shall be provided for spills in streams.
- 3) Excess concrete shall not be disposed of near streams. Any excess concrete will be taken off site by the concrete supplier.
- 4) Sanitary facilities shall be maintained by the provider, with cleaning and waste disposal on a weekly basis.

EROSION AND SEDIMENT CONTROL DESCRIPTION

- 1) All stream activities will take place during periods of low flow.
- 2) No work shall be performed on the stream crossings during fish spawning season (April - June).
- 3) Sediment and erosion control structures shall be maintained for the duration of the project. Torn or deteriorated materials shall be replaced immediately. All erosion and sediment control devices shall be removed when the area is stabilized. All erosion and sediment control devices to be inspected, at a minimum, of once every seven calendar days and within 24 hours after any storm event greater than 0.25 inches per 24 hour period.
- 4) Sediment build-up shall be removed when it reaches half of the storage volume provided by the control.
- 5) Excavations across streams shall be made using diversion walls and flume pipe. Refer to the construction drawings for details and locations.
- 6) Pumps used for dewatering shall be provided with inlet screens or filters to reduce sucking mud. Pumped water shall be directed to a dewatering bag before being released into the stream.
- 7) Stream banks disturbed during installation of the pipe must be reshaped and stabilized with appropriate material the same day the backfill is completed.
- 8) Stream bed smoothing should be kept to a minimum.
- 9) Any areas which cannot be restored to final/finished grade within four (4) days will be temporarily mulched and seeded.
- 10) Slopes with a grade of 2:1 or greater shall be covered with an establishment blanket.
- 11) Refer to the attached specifications (Section 02936) for additional seeding details.

Insert Design Sheets

**Town of Triadelphia
Water System Improvements**

TR20-1W

DISTURBED AREA

CONTRACT #1 - Water System Improvements

Item Description	Unit	Length
8" Water Line Piping	lf	12,100
6" Water Line Piping	lf	4,720
4" Water Line Piping	lf	680
2" Water Line Piping	lf	3,425
Total Length		20,925
		5 ft/lf
SUBTOTAL DISTRURBED AREA		<u>104,625</u> sq ft
Sq Ft (1) Acre		43,560
Total Acres Disturbed		2.40

Insert Design Calculations

Insert Revegetation Plan

SECTION 02936

SEEDING

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Seeding and fertilizing.
- B. Seed protection on slopes.
- C. Maintaining seeded areas until acceptance.

1.02 DELIVERY, STORAGE AND HANDLING

- A. Deliver grass seed in original containers showing analysis of seed mixture, percentage of pure seed, year of production, net weight, date of packaging and location of packaging. Damaged packages are not acceptable.
- B. Deliver fertilizer in waterproof bags showing weight, chemical analysis, and name of manufacturer.

1.03 EXISTING CONDITIONS

- A. Beginning work means acceptance of existing conditions.

PART 2 PRODUCTS

2.01 GROWING MEDIA

- A. Imported Topsoil: Natural, fertile, agricultural soil typical of locality, capable of sustaining vigorous plant growth, from well drained site free of flooding, not in frozen or muddy condition, not less than 10% organic matter. Free from subsoil, slag, clay, stones, lumps, live plants, roots, sticks, crabgrass, coughgrass, noxious weeds and foreign matter.
- B. Existing Topsoil: Natural, fertile agricultural soil capable of sustaining vigorous plant growth, not in frozen or muddy condition, containing not less than 10% organic matter. Free from subsoil, slag, clay, stones, lumps, live plants, roots, sticks, crabgrass, noxious weeds, and foreign matter.

- C. Peatmoss: Horticultural Grade Class A decomposed plant material, elastic and homogeneous. Free of decomposed colloidal residue, wood, sulphur, and iron. Peatmoss: pH value of 5.9 to 7.0, 60% organic matter by weight, moisture content not exceeding 15% and water absorption capacity of not less than 300% by weight on over dry basis.
- D. Sand: Hard, granular natural beach sand, washed, free of impurities, chemical or organic matter.
- E. Fertilizer: 10-20-10, commercial type with 50% of the elements derived from organic sources.
- F. Lime: Used to correct pH of soil to the range of 6.0 to 6.5 pH.

2.02 SEED

- A. Seed Mixture A: 40 Percent Kentucky Blue grass, 40 percent Creeping Red Fescue, and 20 percent Pennlawn Fescue.
- B. Seed Mixture B: 70% orchard grass, 20% Bird's foot Trefoil, and 10% White Ladino Clover. Include specific inoculation for the trefoil and clover.
- C. Seed Mixture C: Mixture to match existing growth if requested by property owner.
- D. Seed Mixture D: Temporary Seeding (areas which cannot be permanently seeded within 21 days) - rye (grain), 120 lbs. per acre, or mulch, 2 to 3 tons per acre in lieu of seeding.

2.03 ACCESSORIES

- A. Mulching Material: Oat or wheat straw, reasonably free from weeds, foreign matter detrimental to plant life, and in dry condition. Hay or chopped cornstalks is not acceptable except for woodland seeding.

- B. Establishment Blanket: Uniform, open weave jute matting; erosion control mulching fabric consisting of knitted construction of yarn interwoven with strips of biodegradable paper; or organic fiber protective fiber mat consisting of half-inch layer of chopped straw, knitted into mat with thin netting of biodegradable polypropylene.

PART 3 EXECUTION

3.01 PREPARATION

- A. Grade to eliminate rough spots and low areas where ponding may occur. Maintain smooth, uniform grade.
- B. Assure positive drainage away from structures.
- C. Finish ground level firm and sufficient to prevent sinkage pockets when irrigation is applied.

3.02 SPREADING TOPSOIL

- A. Lawns: Use existing topsoil. If additional topsoil is required, imported topsoil is to be used. When suitable topsoil is not available a growing medium consisting of 50% peatmoss, 40% horticultural grade vermiculite, and 10% sand with 1 pound of 10-10-10 fertilizer per 100 cubic feet may be used.
- B. Fields and woodlands: Use existing topsoil.
- C. Seed Bed Cultivation: Spread and cultivate topsoil to depth of 6 inches over area to be seeded. Place during dry weather, and on dry unfrozen subgrade. Rake until surface is smooth.
- D. Remove from site, foreign materials collected during cultivation.
- E. Grade to eliminate rough spots and low areas where ponding may occur. Maintain smooth, uniform grade.
- F. Assure positive drainage away from structures.
- G. Finish ground level firm and sufficient to prevent sinkage pockets when irrigation is applied.

3.03 FERTILIZING

- A. Apply fertilizer, at a rate of 1,000 lbs. per acre (23 lbs. per 1,000 sq. ft.).
- B. Apply lime at a rate of 2 tons per acre (92 lbs. per 1000 sq. ft.). Apply lime after the fertilizer has been applied and before the grass seed, not at the same time.

3.04 SEEDING

- A. Apply Seed Mixture A or C at a rate of 200 lbs. per acre (4-1/2 lbs. per 1,000 sq. ft.) evenly in two intersecting directions. Rake in lightly.
- B. Do not sow immediately following rain, when ground is too dry, or during windy periods.
- C. Immediately following seeding and compacting, apply mulch to a thickness of 1/8 inch. Maintain clear of shrubs and trees.

3.05 SEEDING FIELDS AND WOODLANDS

- A. Apply Seed Mixture B or C at a rate of 100 lbs. per acre (2 lb. per 1,000 sq. ft.) evenly in two intersecting directions. Rake in lightly.
- B. Do not sow immediately following rain, when ground is too dry, or during windy periods.
- C. Apply mulch at a rate of 2 tons per acre (92 lbs. per 1000 sq. ft.).

3.06 SEED PROTECTION ON SLOPES

- A. Cover seeded slopes where grade is 2:1 or greater with establishment blanket. Roll blanket down over slopes without stretching or pulling.
- B. Lay blanket smoothly on soil surface, burying top end of each section in narrow trench, 6 inches deep. Leave 12 inches overlap from top roll over bottom roll. Leave 4 inches overlap over adjacent section.

- C. Staple outside edges and overlaps at 36 inch intervals.
- D. Lightly dress slopes with topsoil to ensure close contact between blanket and soil.
- E. In ditches, unroll blanket in direction of flow. Overlap ends of strips 6 inches with upstream section on top.

3.07 MAINTENANCE

- A. Maintain surfaces and supply additional topsoil where necessary, including areas affected by erosion.
- B. Water where required to ensure uniform seed germination and to keep surface of soil damp.
- C. Apply water slowly so that surface of soil will not puddle and crust.
- D. Replant damaged grass areas showing root growth failure, deterioration, bare or thin spots, and eroded areas.
- E. Control growth of weeds in lawns. Apply herbicides in accordance with manufacturer's instructions. Remedy damage resulting from improper use of herbicides.

3.08 RESTORATION

- A. Restore pavement, concrete, grassed areas, planted areas and structures damaged during execution of work of this section.

3.09 ACCEPTANCE

- A. Seeded areas will be accepted at end of maintenance period when seeded areas are properly established and otherwise acceptable.

END OF SECTION

Stabilization Practice Schedule

Address: _____

Stabilization Practices	Location	Time Frame*

* Time Frame: Includes dates of major grading activities, dates when construction activities temporarily or permanently ceases on a portion of the site, date when stabilization measures are initiated.

Structural Control Sheet

Address: _____

Structural Control Selected	Rational

INSPECTION REPORT

Address: _____

Date: _____

Inspector/Title: _____

Erosion and Sediment Control Measure	Satisfactory Yes/No	Comments

Entrance(s): Clear of Mud, Dirt, Debris, or Tracking Yes _____, No _____

Corrective Action _____

Outfall Locations: BMPs are in place and working. Yes _____, No _____

Corrective Action _____

Disturbed Area(s): BMPs are in place and working. Yes _____, No _____

Corrective Action _____

Summary of Findings:

Non-Compliance Issues:

Site is in Compliance Yes _____ No _____

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I also certify that a storm water pollution prevention plan, including both construction and post construction controls, has been prepared for the site in accordance with the permit and that such plan complies with approved State, Tribal and/or local sediment and erosion plans or permits and/or storm water management plans or permits. I am aware that signature and submittal of the Site Registration Application is deemed to constitute my determination of eligibility under one or more of the requirements of Permit Appendix A.I.11., related to the Endangered Species Act requirements. To the best of my knowledge, I further certify that such discharges and discharge related activities will not have an effect on properties listed or eligible for listing on the National Register of Historic Places under the National Historic Preservation Act, or are otherwise eligible for coverage under the permit. I am also aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Name and Title

Telephone Number

Signature

Date