

ADDENDUM #1

DATE: March 14, 2023

PROJECT TITLE: Fullerton Pike – Phase III Water Main Relocation

PROJECT No.: 2021.00628

OWNER: City of Bloomington Utilities

ENGINEER: American Structurepoint, Inc.

TO: Prospective Bidders

This Addendum forms a part of the Contract Documents and modifies the Bidding Documents dated February 10, 2023, with amendments and additions noted below.

Acknowledge receipt of this Addendum in the space provided in the Bid Form. Failure to do so may disqualify the Bidder.

This Addendum consists of 2 pages and the following Attachments:

No.	Attachment Title	Issue Date
1	Pre-Bid Meeting Minutes and Attendee List	March 14, 2023
2	Revised Specification Section 013000	March 14, 2023
3	Revised Specification Section 013300	March 14, 2023
4	Revised Drawings	March 14, 2023
5	Centerpoint Gas Relocation Plans	March 14, 2023

Amendments and Additions:

1. Specification Section 01 30 00 – Administrative Requirements

- a. Replace specification section in its entirety with the section included with this Addendum.

2. Specification Section 01 33 100 – Submittal Procedures

- a. Replace specification section in its entirety with the section included with this Addendum.

3. Revision 1 Drawings

- a. Water Main Plan and Profiles have been updated with the required restrained joint lengths for polywrapped ductile iron. Any restrained joint lengths not modified apply to both PVC and polywrapped ductile iron. The additional restrained joint length associated with polywrapped ductile iron should be accounted for in the unit price for Alt. No. 1-3

Questions Received:

1. **QUESTION:** How is it possible to tie-in the water main without hot taps?

- a. **ANSWER:** *The water main system in the neighborhood is looped. Existing valves can be closed to shut out segments of the existing water main to facilitate a tie-in. Contractor to submit a proposed sequence of construction identifying the order in which the water main segments will be constructed. This will be used by the City of Bloomington Utilities to coordinate existing valve closures to facilitate the necessary water main tie-ins.*

2. **QUESTION:** Where should tree stump removal be accounted for in the unit price bid?
 - a. **ANSWER:** *Account for tree stump removal under Bid Item 0005 Clearing and Restoration.*
3. **QUESTION:** The proposed gas main appears to be in close proximity to the proposed water main.
 - a. **ANSWER:** *The gas main should be relocating 15' away from the right-of-way along Gordon Pike east of Clearview Drive. This would allow 6' of separation between the proposed gas and water main. This parallel run will occur for approximately 30' of the proposed water main installation. The gas main relocation plans are attached for Contractor reference. During the course of construction, should the gas main installation not match the referenced plan and result in a conflict with the proposed water main installation Contractor to notify CBU and the Engineer immediately.*
4. **QUESTION:** Restrain joint length concerns were expressed on the dead end segment on the far west side of the water main relocation
 - a. **ANSWER:** *Water Main Plan and Profiles have been updated with the required restrained joint lengths for polywrapped ductile iron. Any restrained joint lengths not modified apply to both PVC and polywrapped ductile iron. The additional restrained joint length associated with polywrapped ductile iron should be accounted for in the unit price for Alt. No. 1-3. All restrained joint lengths on the proposed water main are based on a 200psi test pressure.*

END OF DOCUMENT

Pre-Bid Meeting Minutes
Fullerton Pike – Phase III Water Main Relocation
Project Number 2021.00628

March 13, 2023

The meeting notes in italics below reflect our understanding of the discussions made at this meeting.

1. Introductions

- City of Bloomington Utilities – Jane Fleig, Jay Ramey, Mike Runyon
- American Structurepoint – Kaitlyn Currie, Clara Almeter

2. Project Description

- General description of work
 - i. This project includes relocation of water main as a result of a road reconstruction project involving a round-about installation.
 - ii. The relocations shall include approximately 500 lineal feet of 12-inch water main, 940 lineal feet of 8-inch water main, and 55 lineal feet of 6-inch water main as well as reinstating all existing services and appurtenances.
- Itemized Unit Price Bid
 - i. Base Bid – PVC C-900
 - ii. Alternate Bid – Ductile Iron Pipe
- Completion:
 - i. Substantial completion by August 23, 2023
 - ii. Ready for final payment by September 22, 2023

3. Work Hours

- Work Hours: 7am – 6pm

4. Access

- Contractor shall maintain access to driveways at all times. Contractor shall coordinate with property owners for any necessary short-term driveway closures.
- The Contractor shall work with business owners to maintain at least one drive open at all times during their business hours and coordinate any drive closures during non-business hours.
- Contractor to coordinate with property owner west of S. Wickens Street to maintain driveway access.

The driveway shown to the West on the Traffic Plan is not a true drive, as noted on the plans.

5. Plans and Specifications

- The Bidding Documents, including Specifications, are on file for inspection at the City of Bloomington Utilities, 600 East Miller Drive, Bloomington, Indiana. Copies of any type will not be made available.



- Complete digital project bidding documents are available at <https://bloomington.in.gov/utilities/bids> . Digital plan and specification documents may be downloaded from the website.

The specifications provided in the compiled contract book are designed to supplement City of Bloomington specifications. One does not replace the other.

If the alignment needs to be changed or adjusted from what is shown on the plans, notify the Engineer so that they may revise the restrain joint lengths according to the updated alignment.

6. Permits

- NOI to Construct a Water Main Extension – submitted on 2/3/2023. IDEM NOI response time expired on 3/3/2023 and construction was approved to commence.

7. Project Specific Water Main Items

- Valve Boxes: Contractor is to install all valve boxes such that they can be adjusted to final grade by the Owner at a later date.
 - Where fill is proposed, Contractor shall install to existing grade such that risers can be added.
 - Where cut is proposed, Contractor shall install boxes to proposed grade and add valve box risers to bring to existing grade as a temporary measure.
- Line Stops: CBU to install and remove all line stops. Contractor to provide a minimum of 3 days' notice and to provide all materials and complete all preparation work.

Contractor is to design to existing grade as road reconstruction will not begin until Spring of 2024. Valve box risers shall be used as described in the notes on the plans.

Line stops are included in the unit price bid. The contractor is to supply all line stop materials and complete all preparation work prior to installation/removal. CBU to install and remove all line stops.

8. Restoration/Pavement Repair

- All temporary road repair segments to be repaired with temporary asphalt patching. Maintenance of the temporary patch shall be the Contractor's responsibility until road construction work begins, regardless of whether the water main relocation project has been completed.
- All driveway repair segments to be repaired with the same material as the existing driveway.

The road reconstruction project is to begin in the Spring of 2024, while this water main relocation project is to be completed in September of 2023. The Contractor will be responsible for maintaining temporary pavement patches from September 2023 through the start of the road reconstruction project (Spring 2024).

9. Coordination with Owner During Construction

- Contractor to submit a proposed sequence of construction for review and approval by the City of Bloomington Utilities prior to the start of work.
- Contractor shall provide a minimum of 3 days' notice to the City of Bloomington Utilities where a line stop is required to be installed or removed. Contractor shall provide all materials and complete line stop preparation work, and the City of Bloomington Utilities will install the line stop. Contractor will complete their work and notify the City of Bloomington Utilities to insert the Contractor-supplied completion plug and remove the line stop.

The proposed sequence of construction should be prepared for CBU prior to the start of work. The sequence of construction should highlight when tie-in locations will occur, such that CBU can ensure residents will remain in service during construction.

The proposed traffic plan on sheet 4 of the plans is a possible MOT option. Contractors may submit a revised traffic plan to CBU for review if better routing options are available.

10. Schedule

- Last Date for Bidder Questions: March 17, 2023
 - i. All questions to be submitted by email to Kaitlyn Currie, kcurrie@structurepoint.com and Jane Fleig fleig@bloomington.in.gov
- Final Addenda: Posted on March 22, 2023
- Bids Due: March 27, 2023 at the City of Bloomington Utilities Department at or before 4:45 PM
- Award Bid: April 10, 2023
- Anticipated Notice to Proceed – End of April

11. Addenda

- Pre-bid meeting minutes and questions will be issued in Addendum 1.
 - i. Addendum 1 will include an update to Specification Section 013000 requiring the contractor and not the construction manager to schedule progress meetings and complete meeting minutes.
- Final questions (submitted in writing) will be issued in Addendum 2 (if applicable).

12. Questions

- How is it possible to tie-in the water main without hot taps?
- Where should tree stump removal be accounted for in the unit price bid?
- Proposed gas appears to be in close proximity to the proposed water main
- Restrain joint length concerns were express on the dead end on the far west side of the water main relocation

Refer to Addendum 1 for responses to all questions.



AMERICAN
STRUCTUREPOINT
INC.

Fullerton Pike – Phase III Water Main Relocation
Pre-Bid Meeting, March 13, 2023, 10:00 A.M (EST)
Attendance Roster

Attending Initials	Name	Organization	Preferred Phone	Email
	Kaitlyn Currie	American Structurepoint	317-547-5580	kcurrie@structurepoint.com
	Clara Almeter	American Structurepoint	317-547-5580	calmeter@structurepoint.com
	Jane Fleig	CBU		fleigj@bloomington.in.gov
	Jay Ramey	CBU		rameja@bloomington.in.gov
	Mike Runyon	CBU		runyonm@bloomington.in.gov
	Thomas Gott	Milestone		Thomas.gott@milestonelp.com
	Matthew Rollins	Reed&Sons Construction, Inc.		matthew@reedsonsconstruction.com
	Brian Waltz	Crider and Crider		bwaltz@criderandcrider.com
	Jeff Ooley	E&B Paving		Jeff.ooley@ebpaving.com
	Jon Stalker	Infrastructure System, Inc.		jstalker@infracturesystems.com
	Kelsey Alexander	Infrastructure Systems, Inc.		kalexander@infrastructureystems.com

SECTION 01 30 00 - ADMINISTRATIVE REQUIREMENTS

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Coordination and Project conditions.
- B. Preconstruction meeting.
- C. Site mobilization meeting.
- D. Progress meetings.
- E. Preinstallation meetings.
- F. Closeout meeting.

1.2 COORDINATION AND PROJECT CONDITIONS

- A. Coordinate scheduling, submittals, and Work of various Sections of Project Manual to ensure efficient and orderly sequence of installation of interdependent construction elements.
- B. Verify that utility requirements and characteristics of operating equipment are compatible with building utilities. Coordinate Work of various Sections having interdependent responsibilities for installing, connecting to, and placing operating equipment in service.
- C. Coordinate space requirements, supports, and installation of mechanical and electrical Work indicated diagrammatically on Drawings. Follow routing shown for pipes, ducts, and conduit as closely as practical; place runs parallel with lines of building. Use spaces efficiently to maximize accessibility for other installations, for maintenance, and for repairs.
 - 1. Coordination Drawings: Prepare as required to coordinate all portions of Work. Show relationship and integration of different construction elements that require coordination during fabrication or installation to fit in space provided or to function as intended. Indicate locations where space is limited for installation and access and where sequencing and coordination of installations are important.
- D. Coordination Meetings: In addition to other meetings specified in this Section, hold coordination meetings with personnel and Subcontractors to ensure coordination of Work.
- E. In finished areas conceal pipes, ducts, and wiring within construction. Coordinate locations of fixtures and outlets with finish elements.
- F. Coordinate completion and clean-up of Work of separate Sections in preparation for Substantial Completion.

- G. After Owner's occupancy of premises, coordinate access to Site for correction of defective Work and Work not complying with Contract Documents, to minimize disruption of Owner's activities.

1.3 PRECONSTRUCTION MEETING

- A. This work shall be in accordance with all applicable sections of the City of Bloomington Utilities "Construction Specifications for City of Bloomington Utilities Wastewater, Water, and Storm Projects" including, but not limited to, section 4.2.2. This document is available online at: [2020 CBU Construction Specs FINAL REVISED \(with details\) updated 5-21-20.pdf](#)

At the preconstruction meeting Contractor shall provide the proposed construction schedule for review.

1.4 SITE MOBILIZATION MEETING

- A. Contractor will schedule meeting at Project Site prior to Contractor occupancy. Contractor presides over meeting.
- B. Attendance Required: Owner, Contractor, Contractor's superintendent, major Contractors.
- C. Minimum Agenda:
 - 1. Use of premises by Owner and Contractor.
 - 2. Owner's requirements and occupancy.
 - 3. Construction facilities and controls.
 - 4. Temporary utilities.
 - 5. Security and housekeeping procedures.
 - 6. Schedules.
 - 7. Procedures for testing.
 - 8. Procedures for maintaining record documents.
 - 9. Requirements for startup of equipment.
 - 10. Inspection and acceptance of equipment put into service during construction period.
- D. Contractor: Record minutes and distribute to participants within two days after meeting to Engineer, Owner, and those affected by decisions made.

1.5 PROGRESS MEETINGS

- A. Schedule and administer meetings throughout progress of the Work at maximum bi-monthly intervals.
- B. Make arrangements for meetings, prepare agenda with copies for participants, and preside over meetings.
- C. Attendance Required: Job superintendent, major Contractors and suppliers, and Owner as appropriate to agenda topics for each meeting.
- D. Minimum Agenda:

1. Review minutes of previous meetings.
2. Review of Work progress.
3. Field observations, problems, and decisions.
4. Identification of problems impeding planned progress.
5. Review of submittal schedule and status of submittals.
6. Review of off-Site fabrication and delivery schedules.
7. Maintenance of Progress Schedule.
8. Corrective measures to regain projected schedules.
9. Planned progress during succeeding work period.
10. Coordination of projected progress.
11. Maintenance of quality and work standards.
12. Effect of proposed changes on Progress Schedule and coordination.
13. Other business relating to Work.

- E. Contractor: Record minutes and distribute to participants within **two** days after meeting, with two copies each to Engineer, Owner, and those affected by decisions made.

1.6 PREINSTALLATION MEETINGS

- A. When required in individual Specification Sections, convene preinstallation meetings at Project Site before starting Work of specific Section.
- B. Require attendance of parties directly affecting, or affected by, Work of specific Section.
- C. Notify Engineer four days in advance of meeting date.
- D. Prepare agenda and preside over meeting:
1. Review conditions of installation, preparation, and installation procedures.
 2. Review coordination with related Work.
- E. Record minutes and distribute copies to participants within two days after meeting, with two copies each to Engineer, Owner, and those affected by decisions made.

1.7 CLOSEOUT MEETING

- A. Schedule Project closeout meeting with sufficient time to prepare for requesting Substantial Completion. Preside over meeting and be responsible for minutes.
- B. Attendance Required: Major Contractors major Subcontractors, Owner, and others appropriate to agenda.
- C. Notify Engineer four days in advance of meeting date.
- D. Minimum Agenda:
1. Start-up of facilities and systems.
 2. Operations and maintenance manuals.
 3. Testing, adjusting, and balancing.
 4. System demonstration and observation.

5. Operation and maintenance instructions for Owner's personnel.
 6. Contractor's inspection of Work.
 7. Contractor's preparation of an initial "punch list."
 8. Procedure to request Engineer inspection to determine date of Substantial Completion.
 9. Completion time for correcting deficiencies.
 10. Inspections by authorities having jurisdiction.
 11. Certificate of Occupancy and transfer of insurance responsibilities.
 12. Partial release of retainage.
 13. Final cleaning.
 14. Preparation for final inspection.
 15. Closeout Submittals:
 - a. Project record documents.
 - b. Operating and maintenance documents.
 - c. Operating and maintenance materials.
 - d. Affidavits.
 16. Final Application for Payment.
 17. Contractor's demobilization of Site.
 18. Maintenance.
- E. Record minutes and distribute copies to participants within two days after meeting, with two copies each to Engineer, Owner, and those affected by decisions made.

PART 2 - PRODUCTS - Not Used

PART 3 - EXECUTION – Not Used

END OF SECTION

SECTION 01 33 00 - SUBMITTAL PROCEDURES

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Definitions.
- B. Submittal procedures.
- C. Construction progress schedules.
- D. Proposed product list.
- E. Product data.
- F. Shop Drawings.
- G. Other submittals.
- H. Design data.
- I. Test reports.
- J. Certificates.
- K. Manufacturer's instructions.
- L. Manufacturer's field reports.
- M. Construction photographs.
- N. Contractor review.
- O. Engineer review.

1.2 DEFINITIONS

- A. Action Submittals: Written and graphic information and physical samples that require Engineer's responsive action.
- B. Informational Submittals: Written and graphic information and physical Samples that do not require Engineer's responsive action. Submittals may be rejected for not complying with requirements.

1.3 SUBMITTAL PROCEDURES

- A. Sequentially number transmittal forms. Mark revised submittals with original number and sequential alphabetic suffix.
- B. Identify: Project, Contractor, Subcontractor and supplier, pertinent Drawing and detail number, and Specification Section number appropriate to submittal.
- C. Apply Contractor's stamp, signed or initialed, certifying that review, approval, verification of products required, field dimensions, adjacent construction Work, and coordination of information is according to requirements of the Work and Contract Documents.
- D. Schedule submittals to expedite Project, and submit electronic submittals via email as PDF electronic files. Coordinate submission of related items.
- E. For each submittal for review, allow 15 days excluding delivery time to and from Contractor.

- F. Identify variations in Contract Documents and product or system limitations that may be detrimental to successful performance of completed Work.
- G. Allow space on submittals for Contractor and Engineer review stamps.
- H. When revised for resubmission, identify changes made since previous submission.
- I. Distribute copies of reviewed submittals as appropriate. Instruct parties to promptly report inability to comply with requirements.
- J. Submittals not requested will not be recognized nor processed.
- K. Incomplete Submittals: Engineer will not review. Complete submittals for each item are required. Delays resulting from incomplete submittals are not the responsibility of Engineer.

1.4 CONSTRUCTION PROGRESS SCHEDULES

- A. Comply with Section 01 32 16 - Construction Progress Schedule

1.5 PROPOSED PRODUCT LIST

- A. Within 15 days after date of Notice to Proceed, submit list of major products proposed for use, with name of manufacturer, trade name, and model number of each product.
- B. For products specified only by reference standards, indicate manufacturer, trade name, model or catalog designation, and reference standards.

1.6 PRODUCT DATA

- A. Product Data: Action Submittal: Submit to Engineer for review for assessing conformance with information given and design concept expressed in Contract Documents.
- B. Submit electronic submittals via email as PDF electronic files.
- C. Mark each copy to identify applicable products, models, options, and other data. Supplement manufacturers' standard data to provide information specific to this Project.
- D. Indicate product utility and electrical characteristics, utility connection requirements, and location of utility outlets for service for functional equipment and appliances.

1.7 SHOP DRAWINGS

- A. Shop Drawings: Action Submittal: Submit to Engineer for assessing conformance with information given and design concept expressed in Contract Documents.
- B. Indicate special utility and electrical characteristics, utility connection requirements, and location of utility outlets for service for functional equipment and appliances.

- C. When required by individual Specification Sections, provide Shop Drawings signed and sealed by a professional Engineer responsible for designing components shown on Shop Drawings.
 - 1. Include signed and sealed calculations to support design.
 - 2. Submit Shop Drawings and calculations in form suitable for submission to and approval by authorities having jurisdiction.
 - 3. Make revisions and provide additional information when required by authorities having jurisdiction.
- D. Submit electronic submittals via email as PDF electronic files.

1.8 OTHER SUBMITTALS

- A. Informational Submittal: Submit data for Engineer's knowledge as Contract administrator or for Owner.
- B. Submit information for assessing conformance with information given and design concept expressed in Contract Documents.

1.9 TEST REPORTS

- A. Informational Submittal: Submit reports for Engineer's knowledge as Contract administrator or for Owner.
- B. Submit test reports for information for assessing conformance with information given and design concept expressed in Contract Documents.

1.10 CERTIFICATES

- A. Informational Submittal: Submit certification by manufacturer, installation/application Subcontractor, or Contractor to Engineer, in quantities specified for Product Data.
- B. Indicate material or product conforms to or exceeds specified requirements. Submit supporting reference data, affidavits, and certifications as appropriate.
- C. Certificates may be recent or previous test results on material or product but must be acceptable to Architect/Engineer.

1.11 MANUFACTURER'S INSTRUCTIONS

- A. Informational Submittal: Submit manufacturer's installation instructions for Engineer's knowledge as Contract administrator or for Owner.
- B. Submit printed instructions for delivery, storage, assembly, installation, adjusting, and finishing, to Engineer in quantities specified for Product Data.
- C. Indicate special procedures, perimeter conditions requiring special attention, and special environmental criteria required for application or installation.

1.12 MANUFACTURER'S FIELD REPORTS

- A. Informational Submittal: Submit reports for Engineer's knowledge as Contract administrator or for Owner.
- B. Submit report within 2 days of observation to Engineer for information.
- C. Submit reports for information for assessing conformance with information given and design concept expressed in Contract Documents.

1.13 CONSTRUCTION PHOTOGRAPHS

- A. Provide photographs of construction throughout progress of Work produced by an experienced photographer acceptable to Engineer.
- B. Each month submit photographs with Application for Payment.
- C. Photographs: Submit electronic via email.
- D. Digital Images: Deliver complete set of digital image electronic files on CD-ROM to Owner with Project record documents. Identify electronic media with date photographs were taken. Submit images that have same aspect ratio as sensor, uncropped.
 - 1. Digital Images: Uncompressed TIFF format, produced by digital camera with minimum sensor size of 4.0 megapixels, and image resolution of not less than 1024 by 768 pixels.
 - 2. Date and Time: Include date and time in filename for each image.

1.14 CONTRACTOR REVIEW

- A. Review for compliance with Contract Documents and approve submittals before transmitting to Engineer.
- B. Contractor: Responsible for:
 - 1. Determination and verification of materials including manufacturer's catalog numbers.
 - 2. Determination and verification of field measurements and field construction criteria.
 - 3. Checking and coordinating information in submittal with requirements of Work and of Contract Documents.
 - 4. Determination of accuracy and completeness of dimensions and quantities.
 - 5. Confirmation and coordination of dimensions and field conditions at Site.
 - 6. Construction means, techniques, sequences, and procedures.
 - 7. Safety precautions.
 - 8. Coordination and performance of Work of all trades.
- C. Stamp, sign or initial, and date each submittal to certify compliance with requirements of Contract Documents.
- D. Do not fabricate products or begin Work for which submittals are required until approved submittals have been received from Engineer.

1.15 ENGINEER REVIEW

- A. Do not make "mass submittals" to Engineer. "Mass submittals" are defined as six or more submittals or items in one day or 15 or more submittals or items in one week. If "mass submittals" are received, Engineer's review time stated above will be extended as necessary to perform proper review. Engineer will review "mass submittals" based on priority determined by Engineer after consultation with Owner.
- B. Informational submittals and other similar data are for Engineer's information, do not require Engineer's responsive action, and will not be reviewed or returned with comment.
- C. Submittals made by Contractor that are not required by Contract Documents may be returned without action.
- D. Submittal approval does not authorize changes to Contract requirements unless accompanied by Change Order.
- E. Owner may withhold monies due to Contractor to cover additional costs beyond the second submittal review.

PART 2 - PRODUCTS - Not Used

PART 3 - EXECUTION - Not Used

END OF SECTION

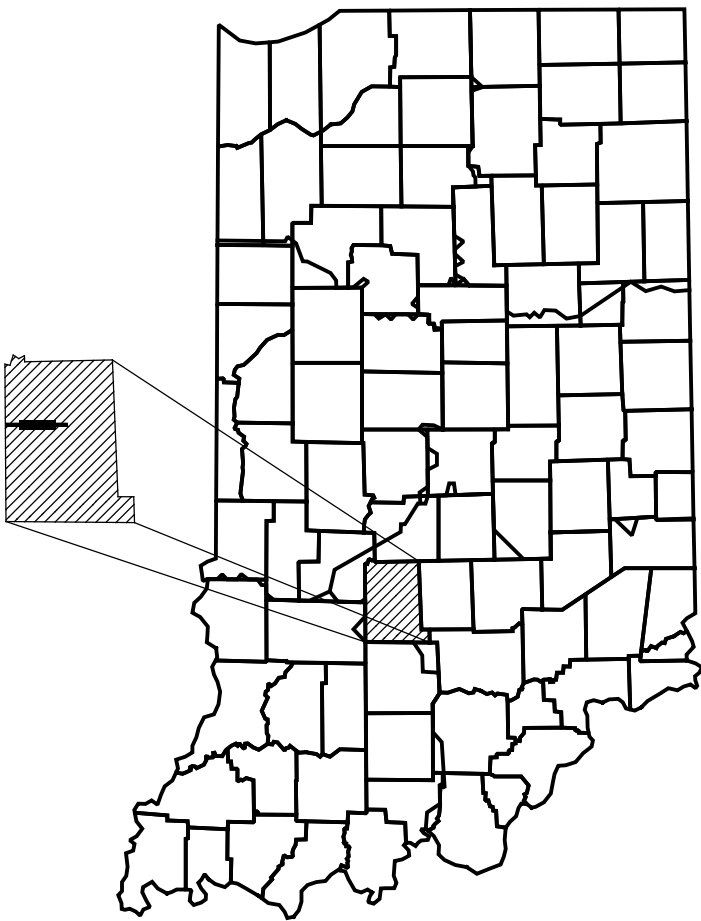
CITY OF BLOOMINGTON UTILITIES



UTILITY PLANS

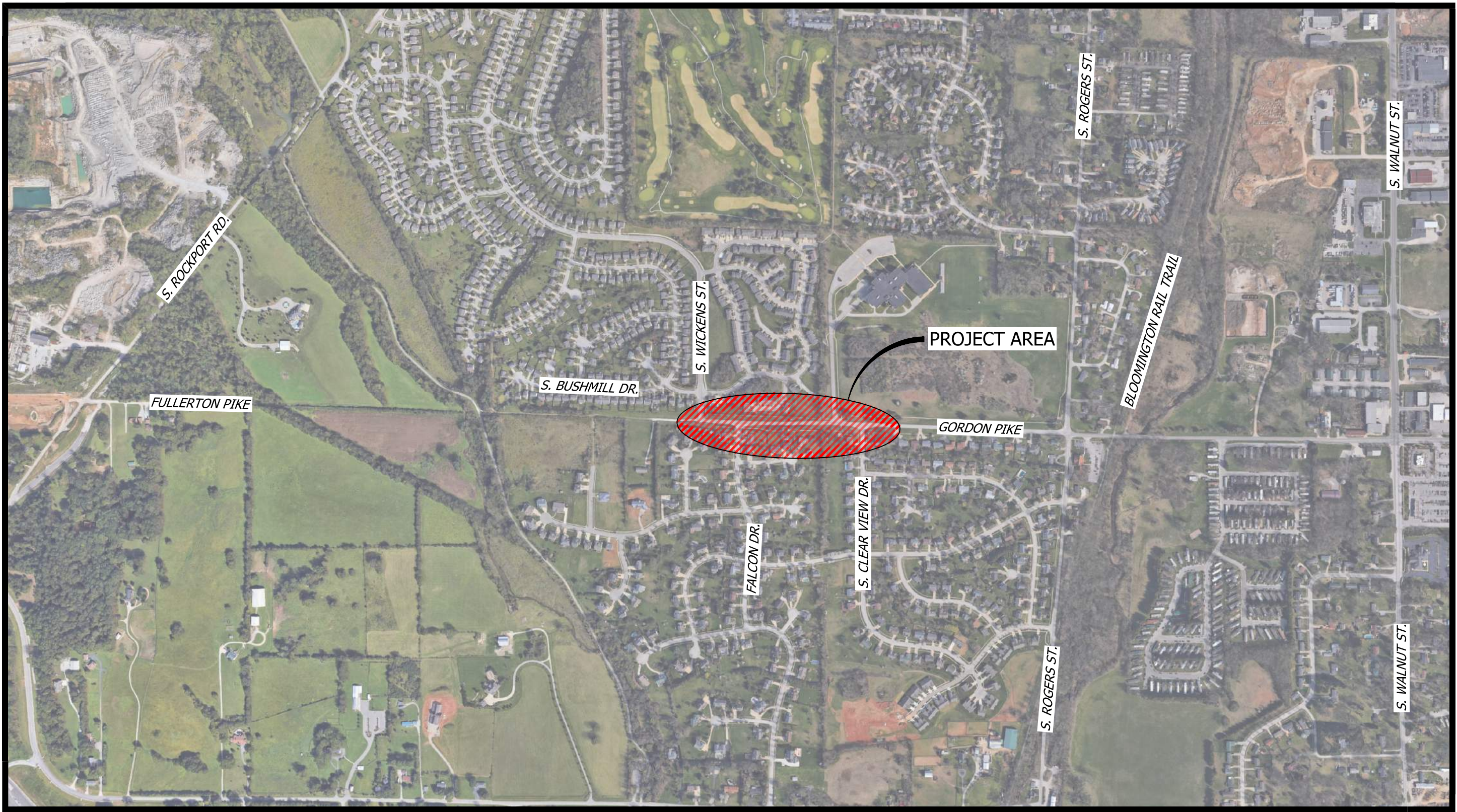
FULLERTON PIKE - PHASE III
WATER MAIN RELOCATION

PROJECT NO. 2021.00628



PROJECT LOCATION SHOWN BY —

LATITUDE: 39° 07' 19" N LONGITUDE: 86° 33' 05" W



Kaitlyn Currie 2/10/2023
Kaitlyn M. Currie
Professional Engineer No. PE11800774
State of Indiana

MONROE COUNTY



9025 RIVER ROAD, SUITE 200
INDIANAPOLIS, IN 46240
TEL 317.547.5580 FAX 317.543.0270
www.structurepoint.com

		BRIDGE FILE	
		N/A	
		DESIGNATION	
		N/A	
		SHEETS	
SURVEY BOOK		1	of 13
CONTRACT		PROJECT	
N/A		2021.00628	

UTILITIES

COMMUNICATIONS

AT&T
4517 E. Indiana Bell Ct.
Bloomington, IN 47408
(812) 334-4718
Contact: James Owens

CABLE TV
Comcast Cable
1600 W. Vernal Pike
Bloomington, IN 47404
(812) 360-3090
Contact: Steve McArtor

GAS
Vectren - Transmission
1 N. Main St.
Evansville, IN 47702
(812) 431-5670
Contact: Jeff Donnelly

Vectren - Distribution
1800 W. 26th St.
Cowan And Hines Rd.
Muncie, IN 47302
(765) 287-2119
Contact: Jon Eastham

SEWER & WATER

City of Bloomington
600 E. Miller Dr.
Bloomington, IN 47402
(812) 349-3631
Contact: Jane Fleig

TELEPHONE
Smithville Communications Inc.
1600 W. Temperance St.
Ellettsville, IN 47429
(317) 935-4457
Contact: Eric Tamewitz

ELECTRIC

Duke Energy - Distribution
2727 Central Ave.
Columbus, IN 47201
(812) 375-2111
Contact: Jared Dickey

Duke Energy - Transmission
1000 E. Main St.
Plainfield, IN 46168
(317) 838-1053
Contact: Zach Boston

Indiana 811

Know what's below. 811 before you dig.

GENERAL NOTES

1.

ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS FOR THIS PROJECT. ADDITIONS, DELETIONS, AND/OR REVISIONS TO THE FACILITIES SHALL NOT BE MADE WITHOUT PRIOR APPROVAL BY THE ENGINEER. THE CONTRACTOR SHALL KEEP AND MAINTAIN IN GOOD CONDITION A COMPLETE SET OF THE PROJECT PLANS AND SPECIFICATIONS ON THE JOB SITE AT ALL TIMES.

2.

CONTRACTOR SHALL COMPLY WITH ALL LOCAL, STATE, AND FEDERAL CODES, ORDINANCES, RULES, REGULATIONS, ORDERS, AND OTHER LEGAL REQUIREMENTS OF MUNICIPAL AUTHORITIES WHICH BEAR ON THE PERFORMANCE OF THE WORK.

3.

IN THE EVENT THAT THE CONTRACTOR DISCOVERS A DISCREPANCY ON THE CONSTRUCTION PLANS OR A POTENTIAL UTILITY CONFLICT, THEY SHALL CONTACT THE ENGINEER IMMEDIATELY FOR CLARIFICATION PRIOR TO PROCEEDING WITH CONSTRUCTION OF THE PORTION IN QUESTION.

4.

CONSTRUCTION SHALL NOT COMMENCE UNTIL ALL NECESSARY PERMITS HAVE BEEN OBTAINED.

5.

THE USE OF EXPLOSIVES FOR "ROCK REMOVAL" IS PROHIBITED UNLESS OTHERWISE AUTHORIZED IN WRITING.

6.

SITE TO BE RESTORED PER APPLICABLE CITY OF BLOOMINGTON AND INDOT STANDARDS.

7.

THE USE OF "ABANDONMENT" OR "REMOVAL" SHALL BE INTERCHANGEABLE AND IT SHALL BE UP TO THE CONTRACTOR TO DETERMINE IF ABANDONMENT OR REMOVAL IS REQUIRED TO PROPERLY COMPLETE WORK.

8.

ALL TEMPORARY ROAD REPAIR SEGMENTS TO BE REPAIRED WITH TEMPORARY ASPHALT PATCHING. MAINTENANCE OF THE TEMPORARY PATCH SHALL BE THE CONTRACTOR'S RESPONSIBILITY UNTIL ROAD CONSTRUCTION WORK BEGINS, REGARDLESS OF WHETHER THE WATER MAIN RELOCATION PROJECT HAS BEEN COMPLETED.

9.

ALL RESTRAINED JOINT LENGTHS SHOWN FOR EXISTING WATER MAINS ARE BASED ON AN OPERATING PRESSURE OF 95 PSI, NON-POLYWRAPPED DUCTILE IRON PIPE. CONTRACTOR SHALL CONTACT THE ENGINEER IF THERE ARE ANY VARIATIONS OF THESE ASSUMPTIONS FOR UPDATED RESTRAINED JOINT LENGTHS.

10.

ALL RESTRAINED JOINT LENGTHS SHOWN FOR PROPOSED WATER MAINS ARE BASED ON A TEST PRESSURE OF 200 PSI AND GRANULAR BEDDING AND BACKFILL. CONTRACTOR SHALL CONTACT THE ENGINEER IF THERE ARE ANY VARIATIONS OF THESE ASSUMPTIONS FOR UPDATED RESTRAINED JOINT LENGTHS.

11.

CONTRACTOR TO INSTALL ALL VALVE BOXES SUCH THAT THEY CAN BE ADJUSTED TO FINAL GRADE BY THE OWNER AT A LATER DATE. WHERE FILL IS PROPOSED TO OCCUR, CONTRACTOR SHALL INSTALL BOXES TO EXISTING GRADE SUCH THAT RISERS CAN BE ADDED AT A LATER DATE TO BRING TO PROPOSED GRADE. WHERE CUT IS PROPOSED TO OCCUR, CONTRACTOR SHALL INSTALL BOXES TO PROPOSED GRADE THEN ADD VALVE BOX RISERS TO BRING TO EXISTING GRADE AS A TEMPORARY MEASURE.

12.

CONTRACTOR TO SUBMIT A PROPOSED SEQUENCE OF CONSTRUCTION FOR REVIEW AND APPROVAL BY CITY OF BLOOMINGTON UTILITIES PRIOR TO THE START OF WORK.

13.

ALL DRIVEWAY REPAIR SEGMENTS TO BE REPAIRED WITH THE SAME MATERIAL AS THE EXISTING DRIVEWAY.

14.

CONTRACTOR SHALL PROVIDE A MINIMUM OF 3 DAYS NOTICE TO THE CITY OF BLOOMINGTON UTILITIES WHEN A LINE STOP IS REQUIRED TO BE INSTALLED OR REMOVED. CONTRACTOR SHALL PROVIDE ALL MATERIALS AND COMPLETE LINE STOP PREPARATION WORK INCLUDING EXCAVATION, INSTALLATION OF SADDLE, INSTALLATION OF CONCRETE THRUST RESTRAINT, INSTALLATION OF JOINT RESTRAINTS, ETC., ONCE ALL PREPARATION WORK IS COMPLETE, THE CITY OF BLOOMINGTON UTILITIES WILL INSTALL THE LINE STOP. CONTRACTOR WILL EXPEDITIOUSLY COMPLETE THEIR WORK AND NOTIFY THE CITY OF BLOOMINGTON UTILITIES TO INSERT THE CONTRACTOR SUPPLIED COMPLETION PLUG AND REMOVE THE LINE STOP.

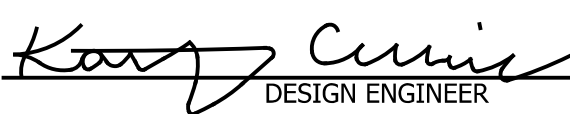
INDEX	
SHEET NO.	DRAWING INDEX
1	TITLE SHEET
2	INDEX AND GENERAL NOTES
3	GENERAL LAYOUT PLAN
4	TRAFFIC PLAN
5 - 7	PLAN AND PROFILE - WATER MAIN - LINE "W1"
8	PLAN AND PROFILE - WATER MAIN - LINE "W2", "W3", "W4"
9	RESTORATION PLAN
10	STANDARD DETAILS - WATER MAIN
11	STANDARD DETAILS
12 - 13	STANDARD DETAILS - EROSION CONTROL

EXISTING LEGEND			
	BORING LOCATION		POLE, POWER
	CONTROL POINT / BENCHMARK		POLE, LIGHT
	DOWN SPOUT		SANITARY SEWER MANHOLE
	DRAINAGE INLET		SIGN
	DRAINAGE CATCH BASIN		TELEPHONE CONTROLLER CABINET
	DRAINAGE MANHOLE		TELEPHONE PEDESTAL
	ELECTRIC MANHOLE		TELEPHONE HANDHOLE
	ELECTRIC RISER		TRAFFIC MANHOLE
	GAS VALVE		PROPERTY POST
	GAS MARKER		PROPERTY FLAG POLE
	GUY WIRE		UTILITY MARKER
	MAILBOX		WATER FIRE HYDRANT
	MISC. MANHOLE		WATER METER
	TREE, DECIDUOUS		WATER VALVE
	BUSH		

ABBREVIATIONS											
A/C	AIR CONDITIONING	DI	DUCTILE IRON	HB	HOSE BIBB	PP	POWER POLE	STD	STANDARD		
ANSI	AMERICAN NATIONAL STANDARDS INSTITUTE	DIA	DIAMETER	HDPE	HIGH DENSITY POLYETHYLENE	PED	PEDESTAL	STRUCT	STRUCTURAL		
APPROX	APPROXIMATE	DIM	DIMENSION	HH	HANDHOLE	PERF	PERFORATED	SYS	SYSTEM		
ARCH	ARCHITECT	DIMJ	DUCTILE IRON MECHANICAL JOINT	HORIZ	HORIZONTAL	PI	POINT OF INTERSECTION	TAN	TANGENT		
ARV	AIR RELIEF VALVE	DIRJ	DUCTILE IRON RESTRAINED JOINT	HP	HORSE POWER	PL	PLATE	TBA	TO BE ABANDONED THIS CONTRACT		
ASPH	ASPHALT	DS	DOWNSPOUT	HPT	HIGH POINT	PL	PROPERTY LINE	TBM	TEMPORARY BENCHMARK		
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS	DWG	DRAWING	HT	HEIGHT	PPM	PARTS PER MILLION	TEL	TELEPHONE		
AUTO	AUTOMATIC	E	EAST	HVAC	HEATING, VENTILATING AND AIR CONDITIONING	PREFAB	PREFABRICATED	TEMP	TEMPORARY		
BB	BUFFALO BOX	E	ELECTRIC	ID	INSIDE DIAMETER	PRKG	PARKING	TH	TELEPHONE HANDHOLE		
BDRY	BOUNDARY	EL	ELEVATION	IN	INCH	PROJ	PROJECT	THK	THICK(NESS)		
BFV	BUTTERFLY VALVE	ELEV	ELEVATION	INV	INVERT	PSI	POUNDS PER SQUARE INCH	TOB	TOP OF BANK		
BLDG	BUILDING	EA	EACH	LF	LINEAR FEET	PT	POINT	TOPO	TOPOGRAPHY		
BM	BENCHMARK	ELEC	ELECTRIC	LPT	LOW POINT	PV	PLUG VALVE	TOS	TOE OF SLOPE		
CB	CATCH BASIN	EQ	EQUAL	MATL	MATERIAL	PVC	POLYVINYL CHLORIDE	TOW	TOP OF WALL		
CI	CURB INLET	EQUIP	EQUIPMENT	MECH	MECHANICAL	QTY	QUANTITY	TR	TOP OF RIM		
CIP	CAST-IN-PLACE	EX	EXISTING	MFG	MANUFACTURING	R	RADIUS	TR	TRAFFIC POLE		
CIPP	CURED IN PLACE PIPE	EXIST	EXISTING	MFR	MANUFACTURER	RAS	RETURN ACTIVATED SLUDGE	TV	TELEVISION		
CLR	CLEARANCE	FD	FLOOR DRAIN	MH	MANHOLE	RCP	REINFORCED CONCRETE PIPE	TYP	TYPICAL		
CMP	CORRUGATED METAL PIPE	FH	FIRE HYDRANT	MIN	MINIMUM	RD	ROOF DRAIN	UTIL	UTILITY		
CPP	CORRUGATED PLASTIC PIPE	FIG	FIGURE	MISC	MISCELLANEOUS	REF	REFERENCE	VERT	VERTICAL		
CMU	CONCRETE MASONRY UNIT	FIN	FINISH	MJ	MECHANICAL JOINT	REQD	REQUIRED	VOL	VOLUME		
CO	CLEANOUT	FIN FLR	FINISH FLOOR	MOD	MODIFIED	REV	REVISION	W	WATER		
CONC	CONCRETE	FLEX	FLEXIBLE	N	NORTH	ROW	RIGHT OF WAY	W	WEST		
CP	CONTROL POINT	FT	FOOT (FEET)	NIC	NOT IN CONTRACT	R/W	RIGHT OF WAY	W	WIDE (WIDTH)		
C TO C	CENTER TO CENTER	FTG	FOOTING	NO	NUMBER	S	SOUTH	WAS	WASTE ACTIVATED SLUDGE		
CU FT	CUBIC FEET	G	GAS	NOM	NOMINAL	SCHD	SCHEDULE	W/	WITH		
CU YD	CUBIC YARDS	GAL	GALLON(S)	NTS	NOT TO SCALE	SD	STORM DRAIN	W/O	WITHOUT		
DAT	DATUM	GALV	GALVANIZED	OC	ON CENTER	SEC	SECTION	WS	WATERSTOP		
DEMO	DEMOLITION	GOVT	GOVERNMENT	OD	OUTSIDE DIAMETER	SPEC	SPECIFICATION	WT	WEIGHT		
DEPT	DEPARTMENT	GPM	GALLONS PER MINUTE	OH	OVERHEAD	SS	STAINLESS STEEL	WV	WATER VALVE		
DET	DETAIL	GV	GAS VALVE	P	POLE	STA	STATION	YD	YARD		



RECOMMENDED FOR APPROVAL



DESIGN ENGINEER

2/10/2023

DATE

DESIGNED: _____

CSD

DRAWN: _____

PJT

CHECKED: _____

KMC

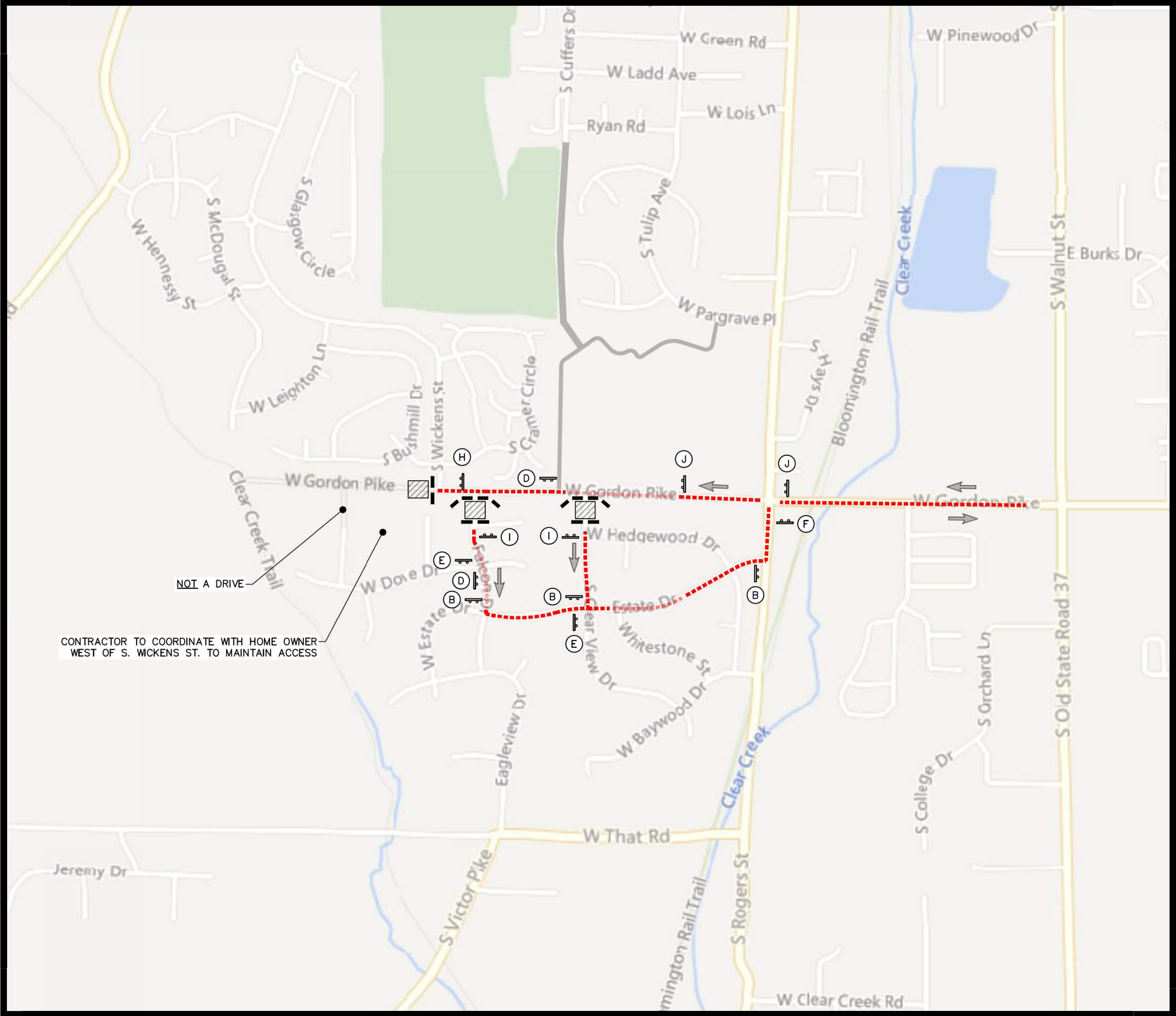
CHECKED: _____

CSD

CITY OF BLOOMINGTON UTILITIES

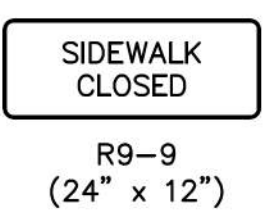
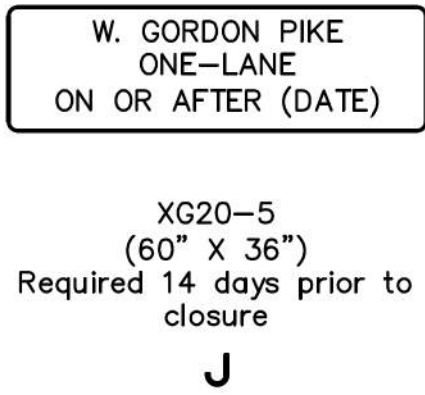
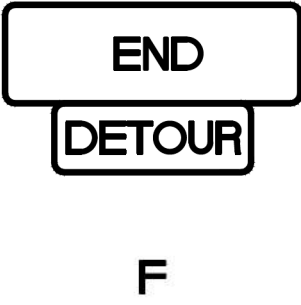
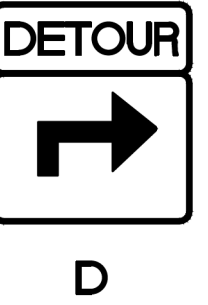
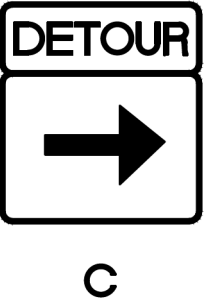
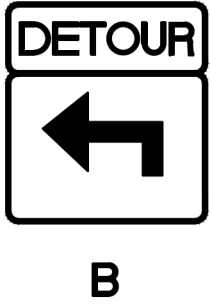
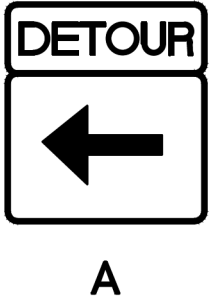
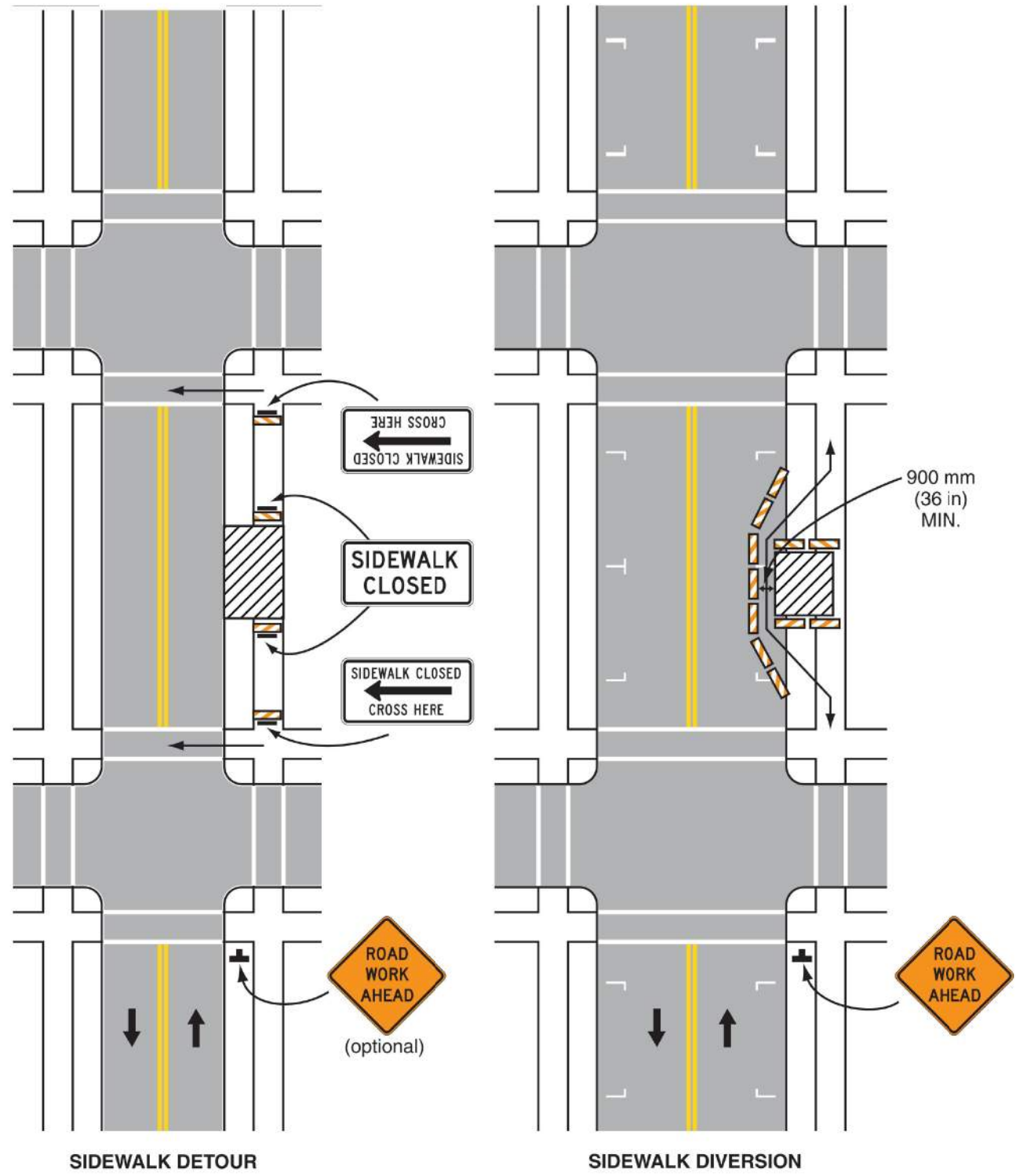
INDEX AND GENERAL NOTES

HORIZONTAL SCALE	BRIDGE FILE
N/A	N/A
VERTICAL SCALE	DESIGNATION
N/A	N/A
SURVEY BOOK	SHEETS
N/A	2 of 13
CONTRACT	PROJECT
N/A	2021.00628



MAINTENANCE OF TRAFFIC – LINES "W2", "W3" AND "W4"
ONE-LANE INTERSECTION AT
W. GORDON PIKE AND FALCON DRIVE AND
W. GORDON PIKE AND S. CLEAR VIEW DRIVE

SIDEWALK DETOUR OR DIVERSION



LEGEND	
	SIGN TYPE
	SIGN
	BARRICADE
	DETOUR ROUTE
	CONSTRUCTION ZONE
	LOW INTENSITY FLASHING YELLOW LIGHT (TYPE A)
	TRAFFIC FLOW

GENERAL NOTES	
1.	CONTRACTOR SHALL MAINTAIN ACCESS TO BUSINESSES AND RESIDENTIAL PROPERTIES THROUGHOUT THE DURATION OF THIS PROJECT.
2.	ALL SIGNS AND BARRICADES TO BE PLACED IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
3.	FLAGGING OPERATIONS SHALL BE DONE IN ACCORDANCE WITH INDOT STANDARD DRAWINGS AND SPECIFICATIONS.
4.	PEDESTRIAN TRAFFIC SHALL BE MAINTAINED. ONE SIDE OF THE SIDEWALK ALONG W. GORDON PIKE TO BE KEPT OPEN AT ALL TIMES.



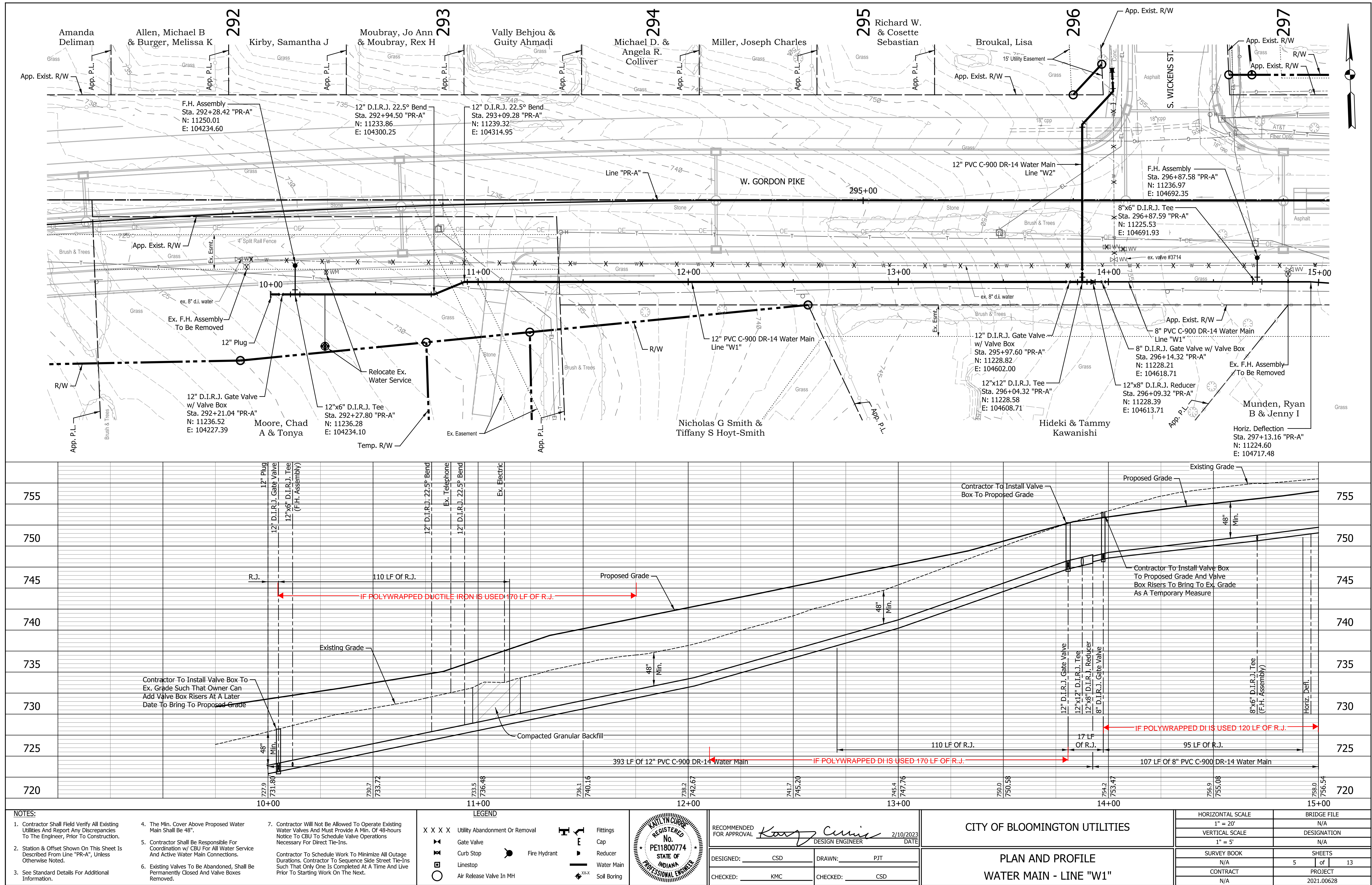
RECOMMENDED FOR APPROVAL *Kaitlyn Currie* 2/10/2023
DESIGN ENGINEER DATE

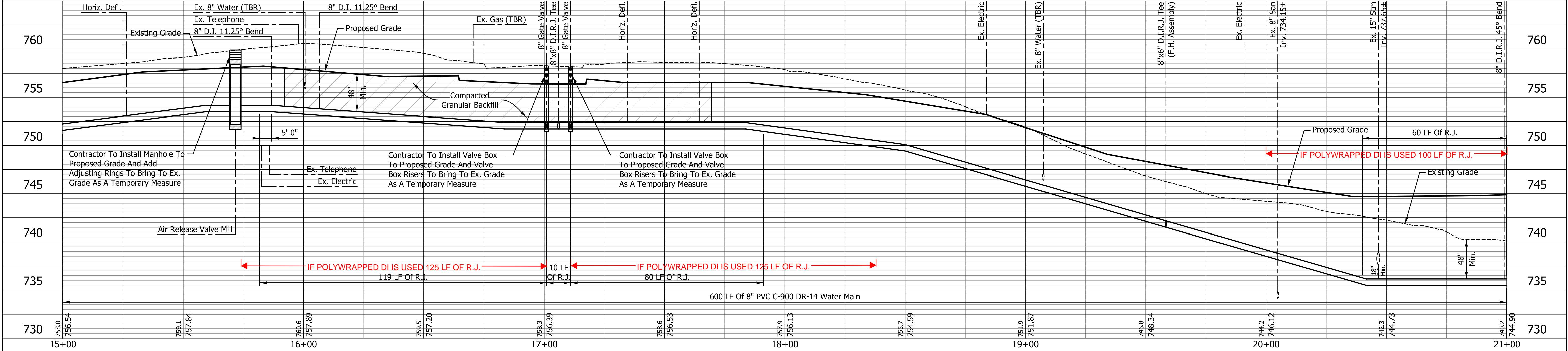
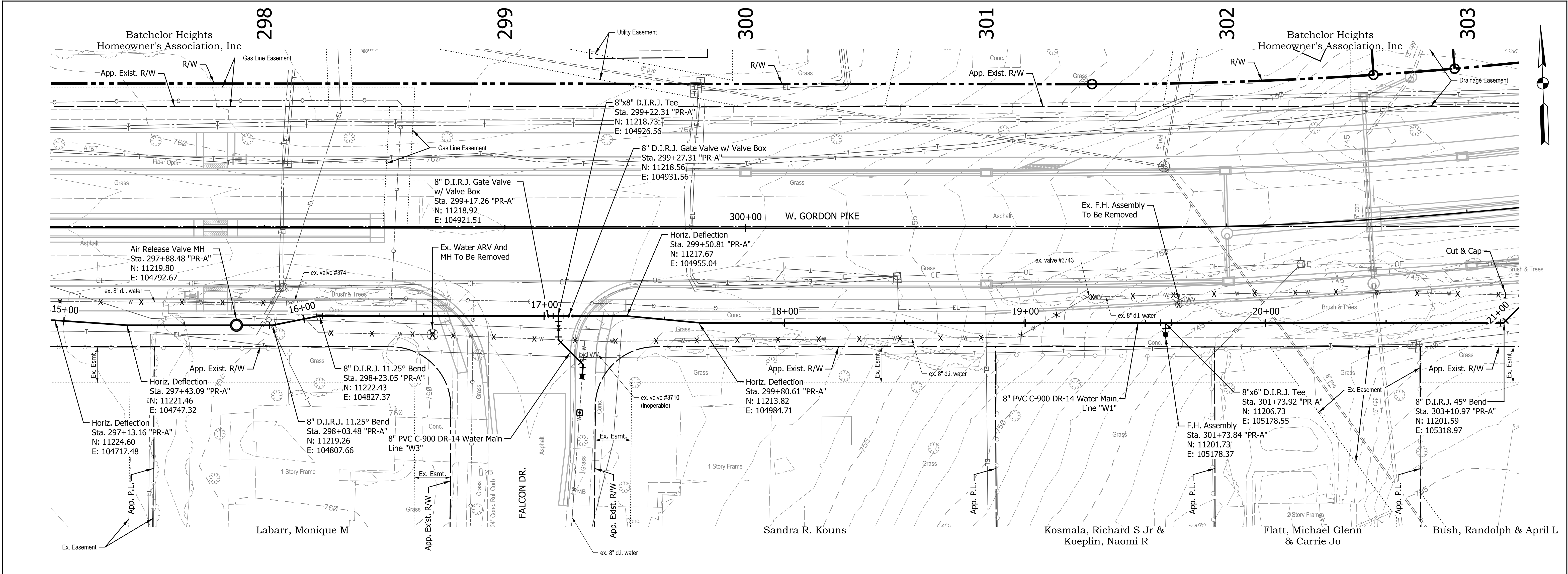
DESIGNED: CSD DRAWN: PJT
CHECKED: KMC CHECKED: CSD

CITY OF BLOOMINGTON UTILITIES

TRAFFIC PLAN

HORIZONTAL SCALE	BRIDGE FILE
N/A	N/A
VERTICAL SCALE	DESIGNATION
N/A	N/A
SURVEY BOOK	SHEETS
N/A	4 of 13
CONTRACT	PROJECT
N/A	2021.00628





NOTES:

- Contractor Shall Field Verify All Existing Utilities And Report Any Discrepancies To The Engineer, Prior To Construction.
- Station & Offset Shown On This Sheet Is Described From Line "PR-A", Unless Otherwise Noted.
- See Standard Details For Additional Information.
- The Min. Cover Above Proposed Water Main Shall Be 48".
- Contractor Shall Be Responsible For Coordination w/ CBU For All Water Service And Active Water Main Connections.
- Existing Valves To Be Abandoned, Shall Be Permanently Closed And Valve Boxes Removed.
- Contractor Will Not Be Allowed To Operate Existing Water Valves And Must Provide A Min. Of 48-hours Notice To CBU To Schedule Valve Operations Necessary For Direct Tie-Ins.
- Contractor To Schedule Work To Minimize All Outage Durations. Contractor To Sequence Side Street Tie-Ins Such That Only One Is Completed At A Time And Live Prior To Starting Work On The Next.

LEGEND

X X X X	Utility Abandonment Or Removal		Fittings
	Gate Valve		Cap
	Curb Stop		Reducer
	Linestop		Water Main
	Air Release Valve In MH		Soil Boring

REGISTERED PROFESSIONAL ENGINEER
KATHY CURRIN
No. PE11800774
STATE OF INDIANA

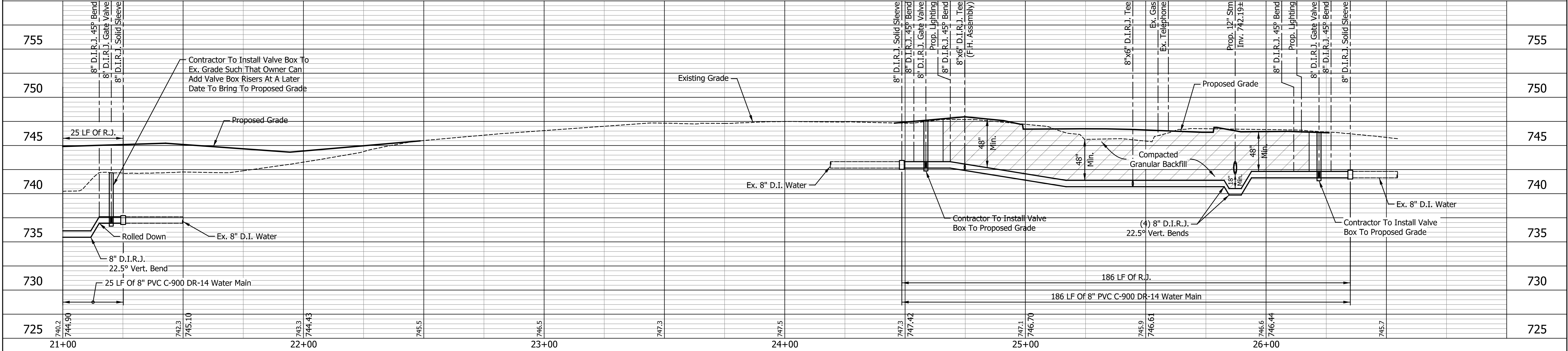
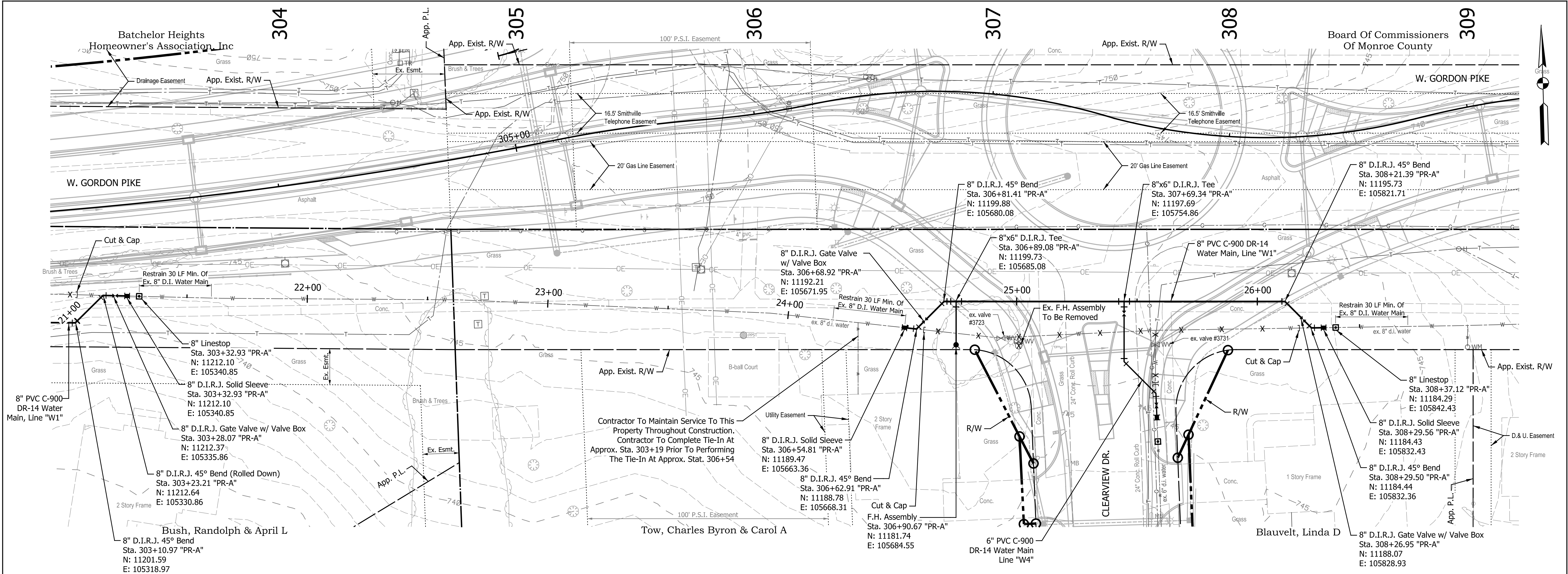
RECOMMENDED FOR APPROVAL: *Kathy Currin*
DESIGN ENGINEER
2/10/2023 DATE

DESIGNED: CSD	DRAWN: PJT
CHECKED: KMC	CHECKED: CSD

CITY OF BLOOMINGTON UTILITIES

PLAN AND PROFILE
WATER MAIN - LINE "W1"

HORIZONTAL SCALE 1" = 20'	BRIDGE FILE N/A
VERTICAL SCALE 1" = 5'	DESIGNATION N/A
SURVEY BOOK N/A	SHEETS 6 of 13
CONTRACT N/A	PROJECT 2021.00628



NOTES:

- Contractor Shall Field Verify All Existing Utilities And Report Any Discrepancies To The Engineer, Prior To Construction.
- Station & Offset Shown On This Sheet Is Described From Line "PR-A", Unless Otherwise Noted.
- See Standard Details For Additional Information.
- The Min. Cover Above Proposed Water Main Shall Be 48".
- Contractor Shall Be Responsible For Coordination w/ CBU For All Water Service And Active Water Main Connections.
- Existing Valves To Be Abandoned, Shall Be Permanently Closed And Valve Boxes Removed.
- Contractor Will Not Be Allowed To Operate Existing Water Valves And Must Provide A Min. Of 48-hours Notice To CBU To Schedule Valve Operations Necessary For Direct Tie-Ins.

Contractor To Schedule Work To Minimize All Outage Durations. Contractor To Sequence Side Street Tie-Ins Such That Only One Is Completed At A Time And Live Prior To Starting Work On The Next.

LEGEND

X X X X	Utility Abandonment Or Removal		Fittings
	Gate Valve		Cap
	Curb Stop		Reducer
	Linestop		Water Main
	Air Release Valve In MH		Soil Boring

REGISTERED PROFESSIONAL ENGINEER

STATE OF INDIANA

No. PE11800774

DESIGN ENGINEER

2/10/2023

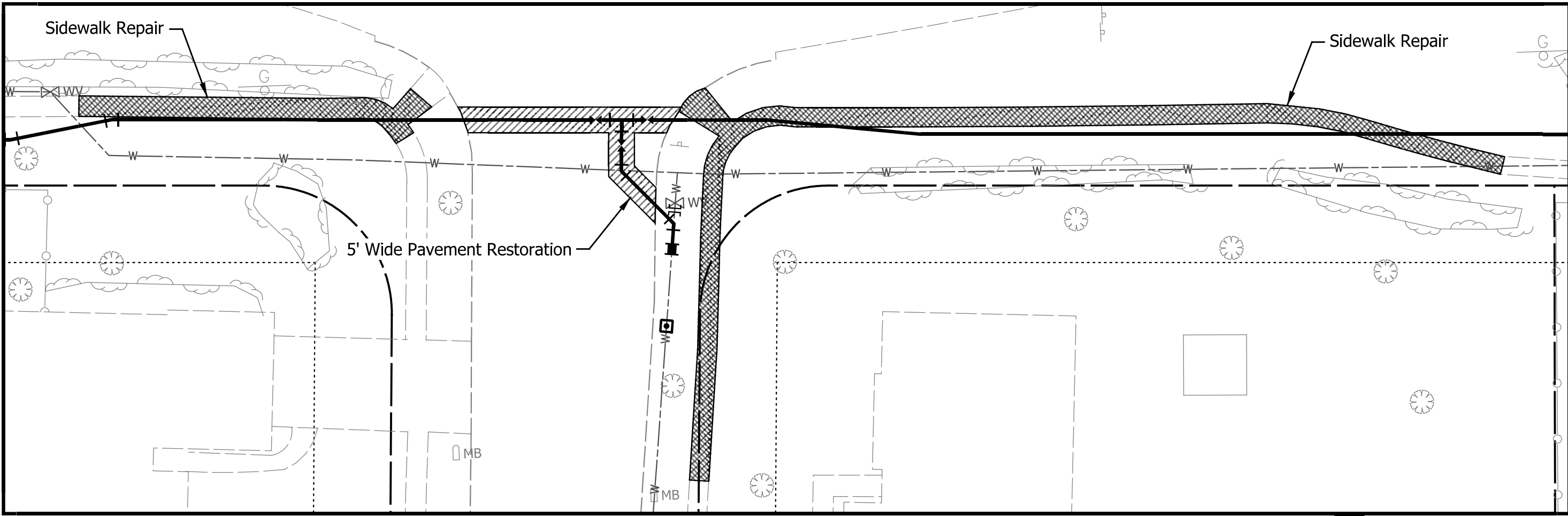
DATE

CITY OF BLOOMINGTON UTILITIES

PLAN AND PROFILE

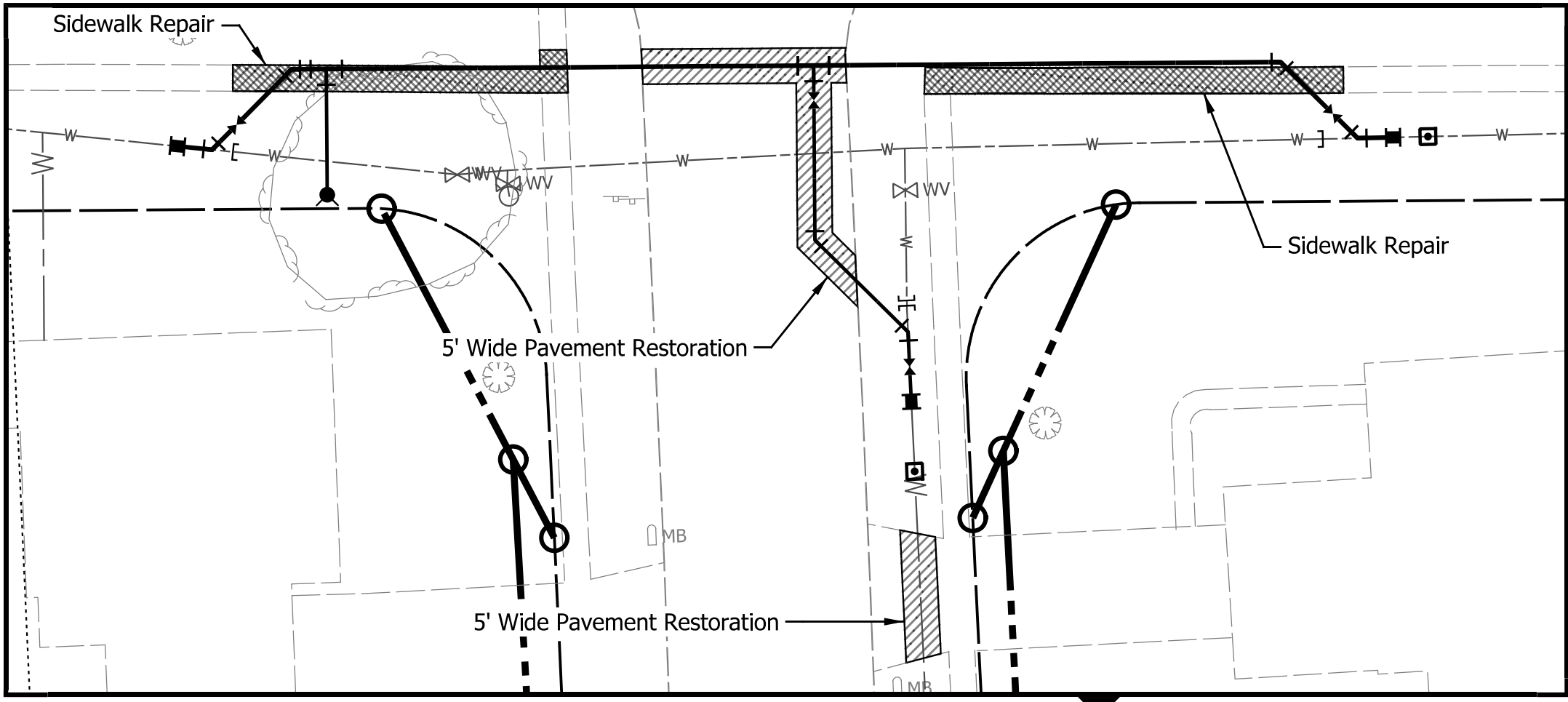
WATER MAIN - LINE "W1"

HORIZONTAL SCALE	BRIDGE FILE
1" = 20'	N/A
VERTICAL SCALE	DESIGNATION
1" = 5'	N/A
SURVEY BOOK	SHEETS
N/A	7 of 13
CONTRACT	PROJECT
N/A	2021.00628



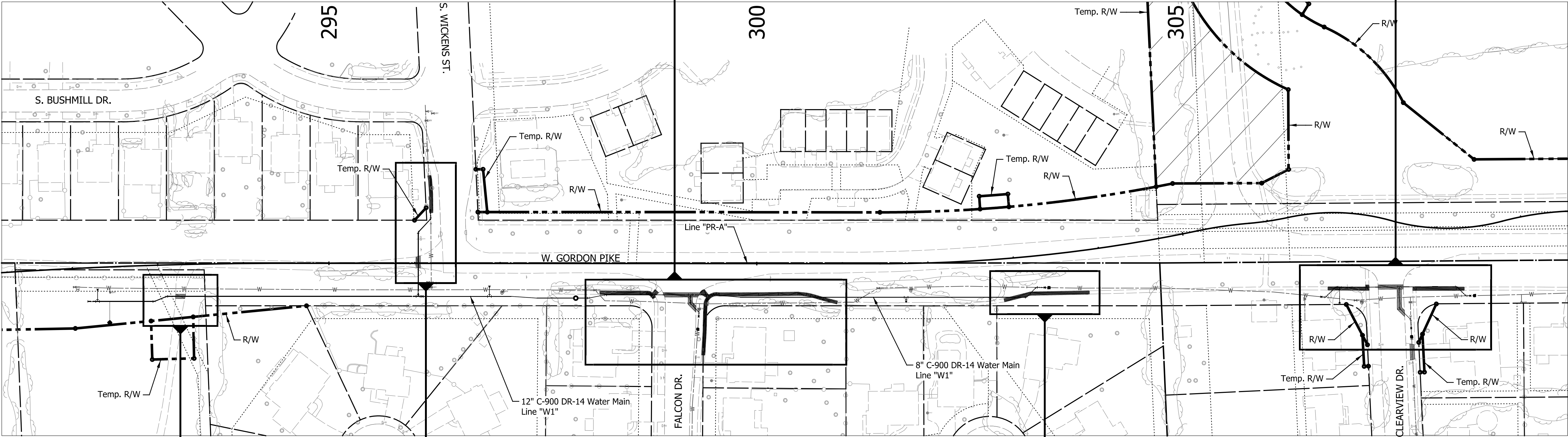
REPAIR AREA

NOT TO SCALE



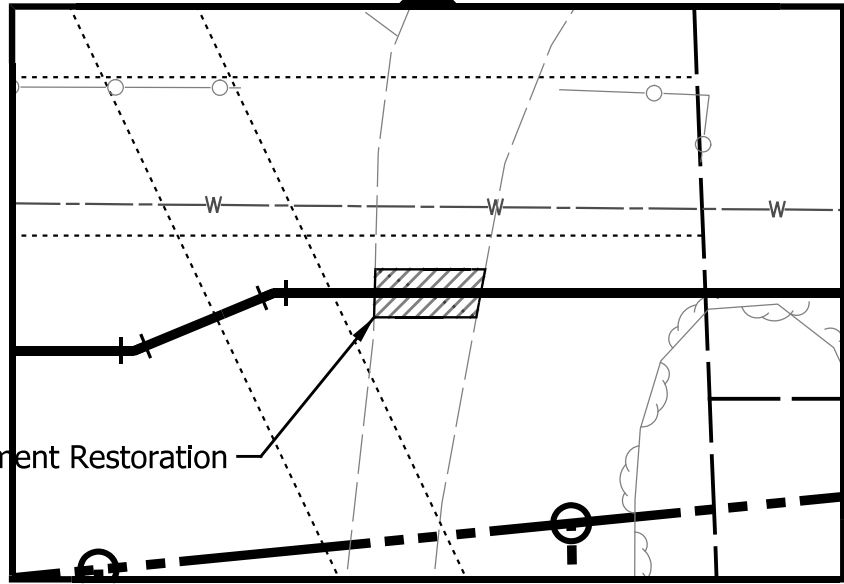
REPAIR AREA

NOT TO SCALE



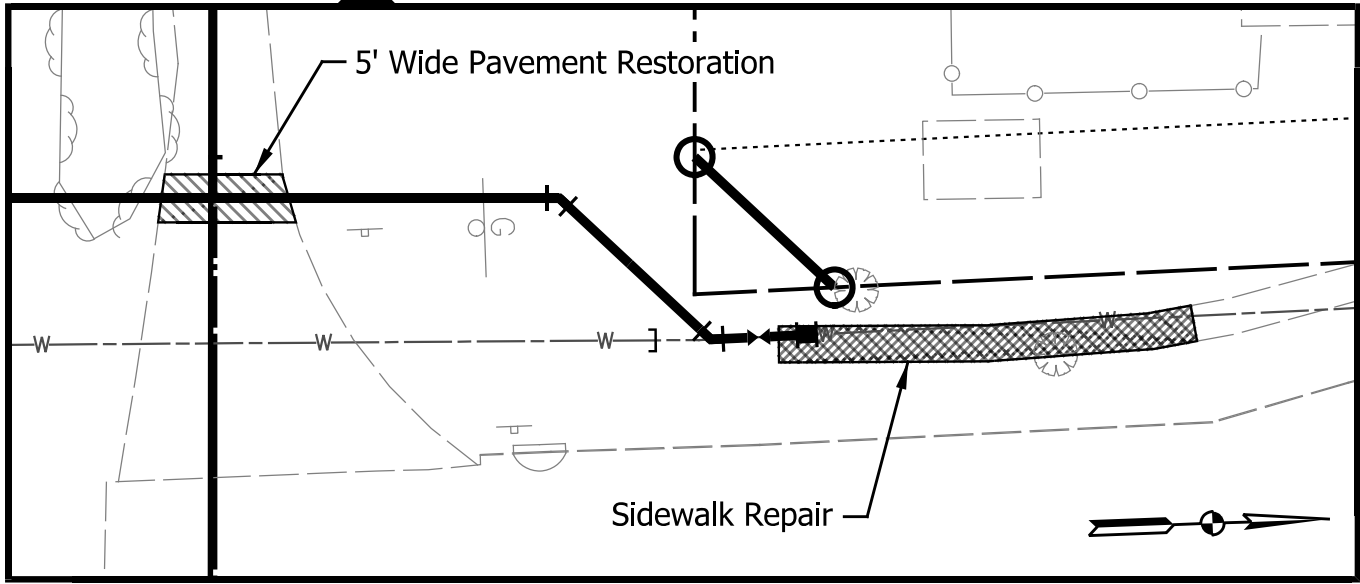
OVERALL VIEW

1" = 60'



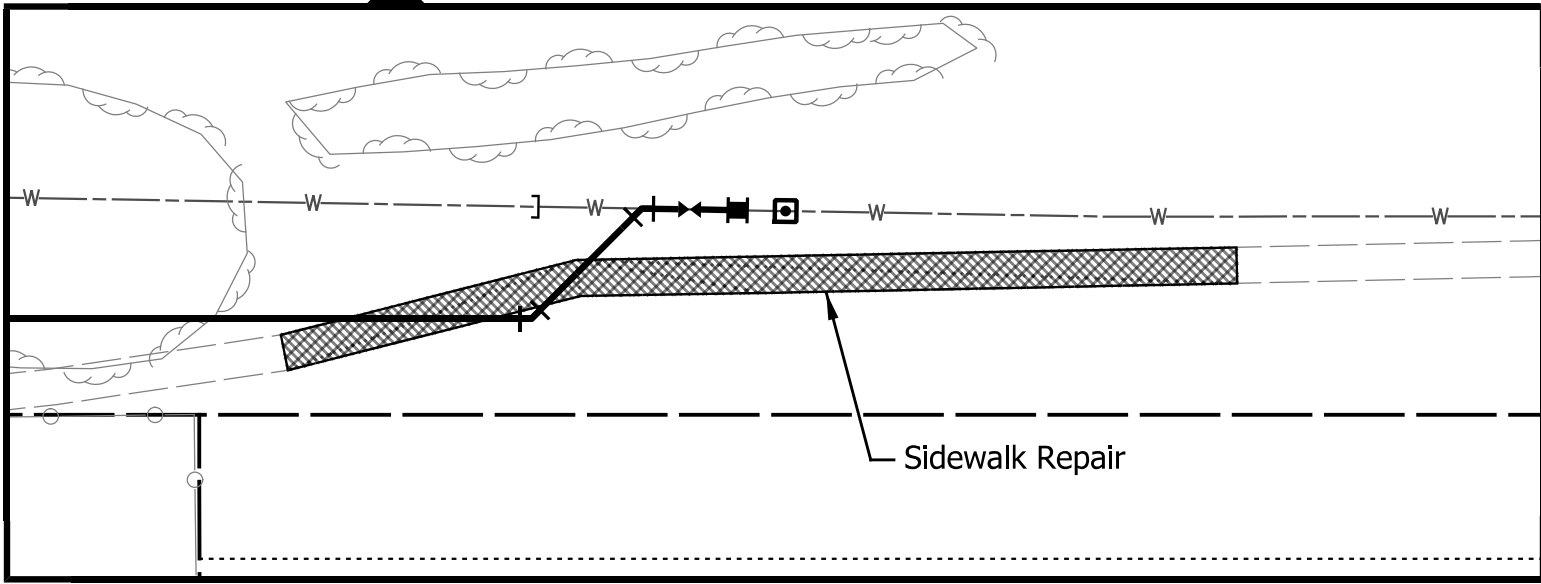
REPAIR AREA

NOT TO SCALE



REPAIR AREA

NOT TO SCALE



REPAIR AREA

NOT TO SCALE



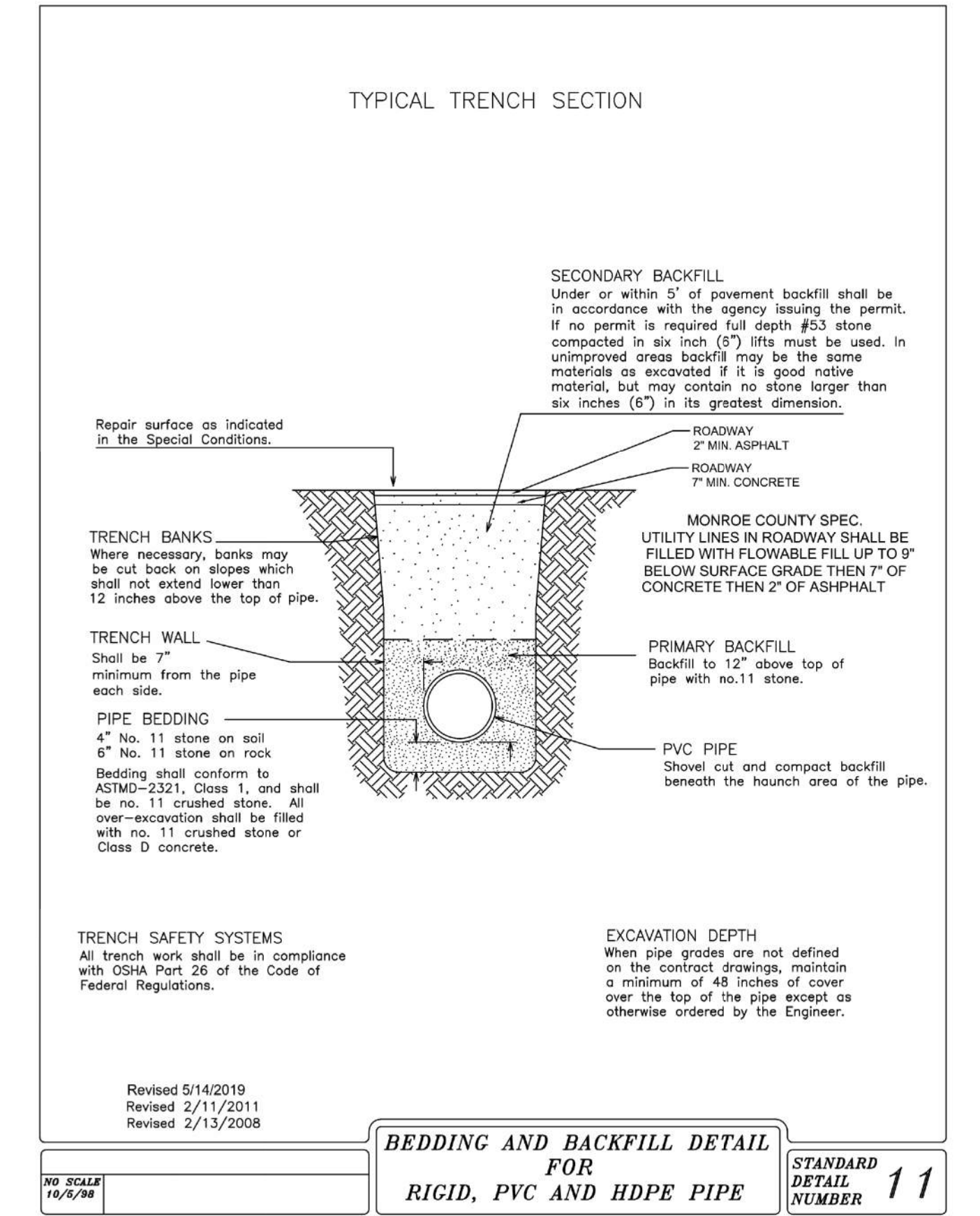
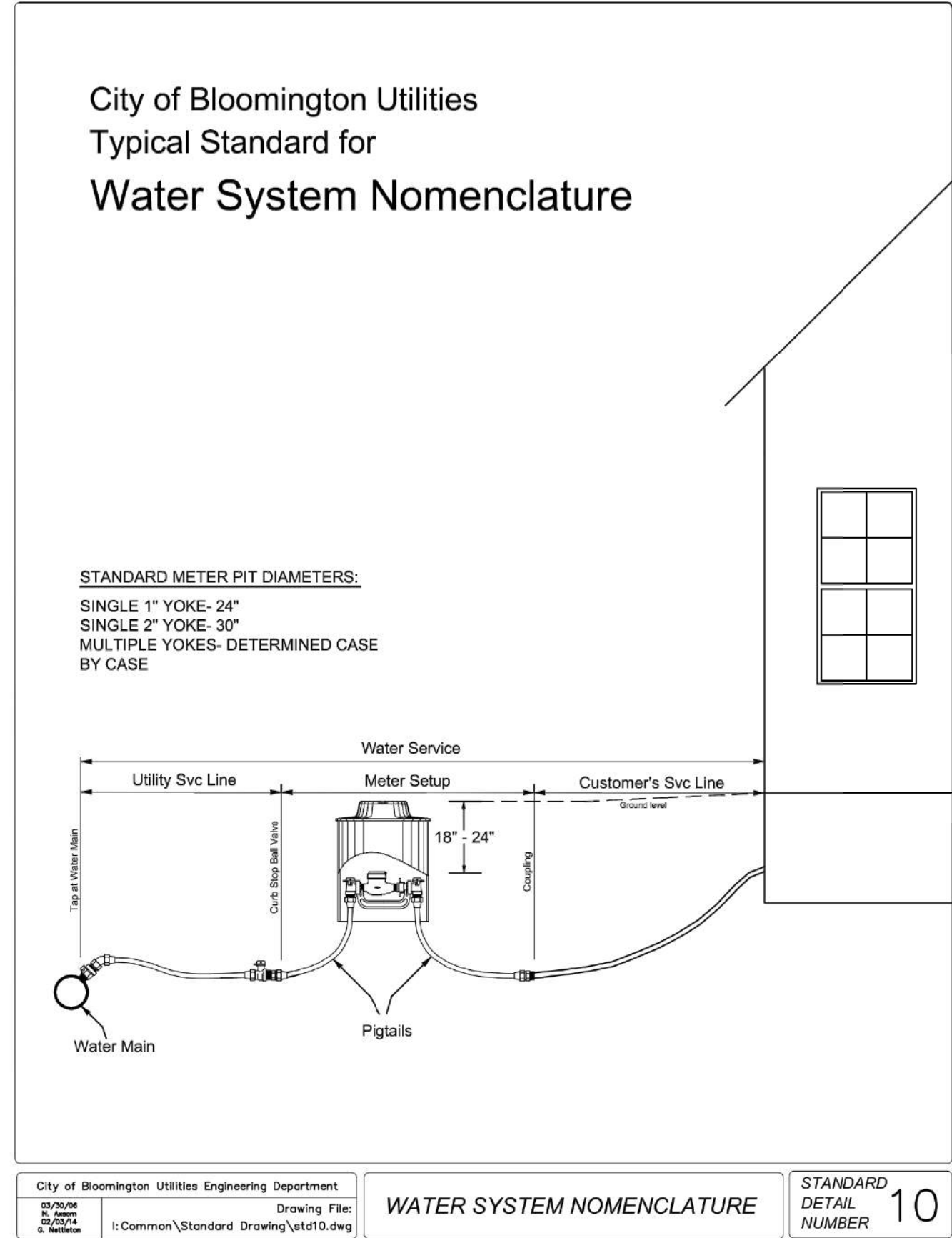
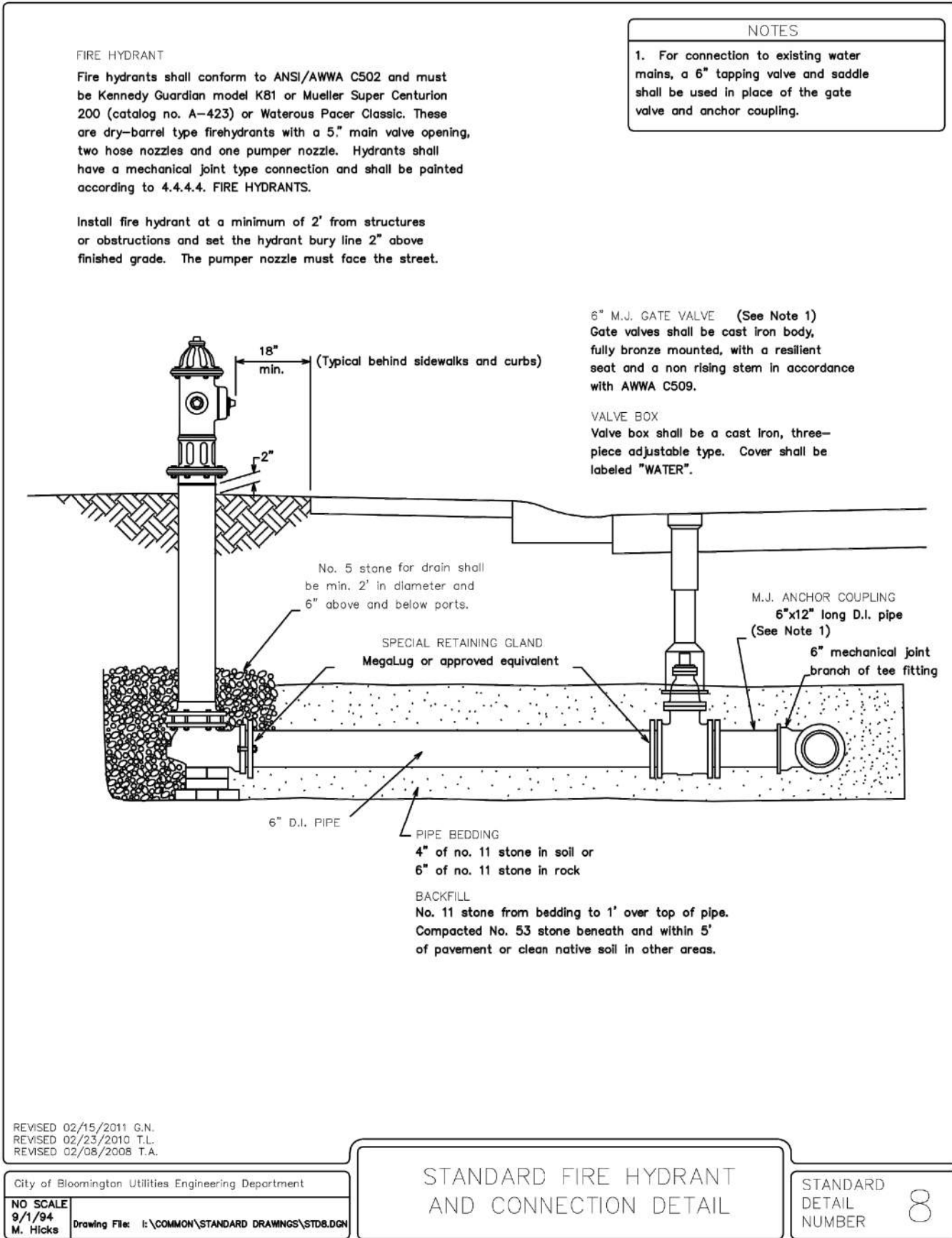
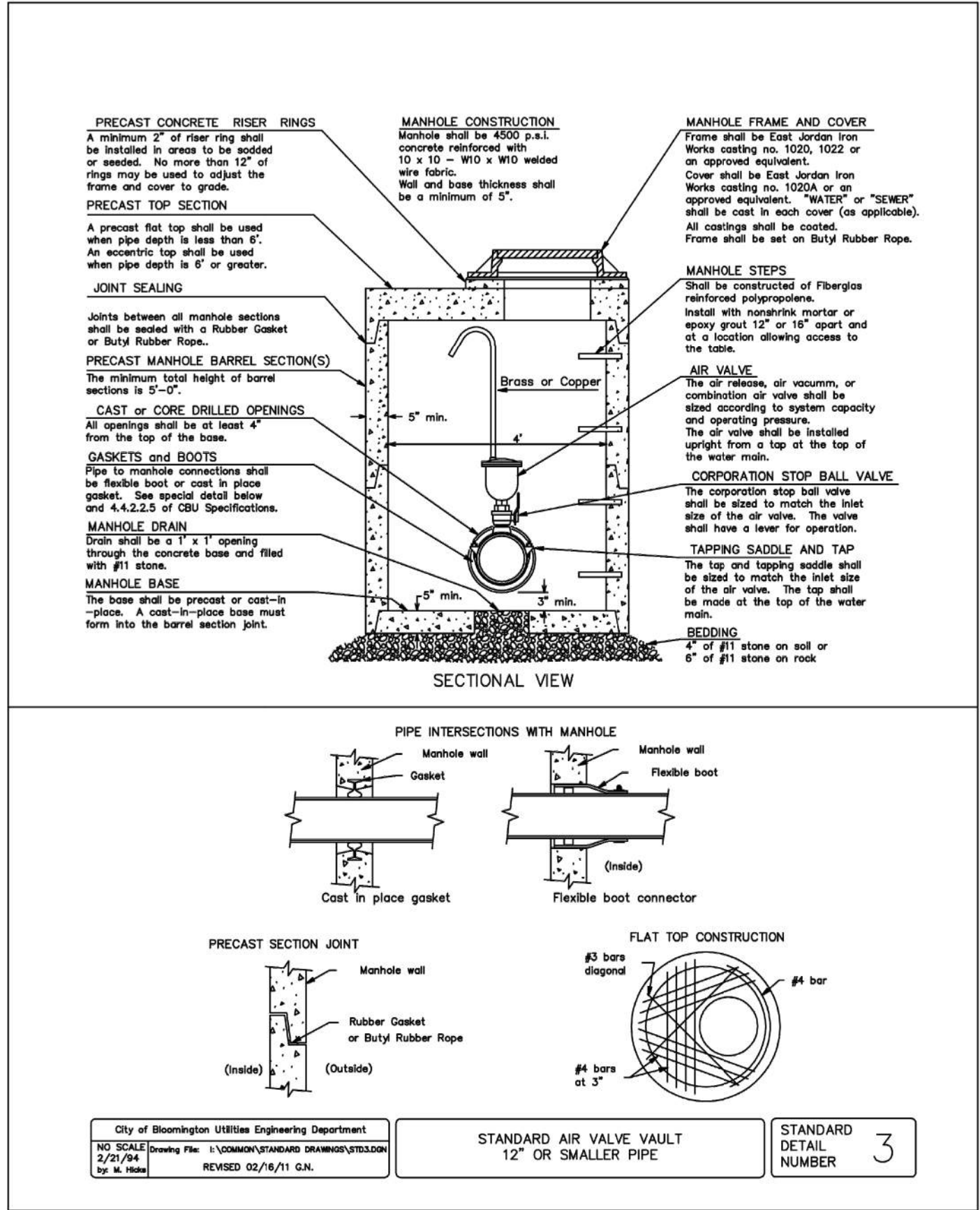
RECOMMENDED FOR APPROVAL *Kaitlyn Currie* 2/10/2023
DESIGN ENGINEER DATE

DESIGNED: CSD DRAWN: PJT
CHECKED: KMC CHECKED: CSD

CITY OF BLOOMINGTON UTILITIES

RESTORATION PLAN

HORIZONTAL SCALE	BRIDGE FILE	
AS NOTED	N/A	
VERTICAL SCALE	DESIGNATION	
N/A	N/A	
SURVEY BOOK	SHEETS	
N/A	9	of 13
CONTRACT	PROJECT	
N/A	2021.00628	



RECOMMENDED
FOR APPROVAL

Karyn Currier
DESIGN ENGINEER

2/10/2023
DATE

DESIGNED:

CSD

DRAWN:

PJT

CHECKED:

KMC

CHECKED:

CSD

CITY OF BLOOMINGTON UTILITIES

STANDARD DETAILS
WATER MAIN

HORIZONTAL SCALE

N/A

BRIDGE FILE

N/A

VERTICAL SCALE

N/A

DESIGNATION

N/A

SURVEY BOOK

SHEETS

N/A

10

of

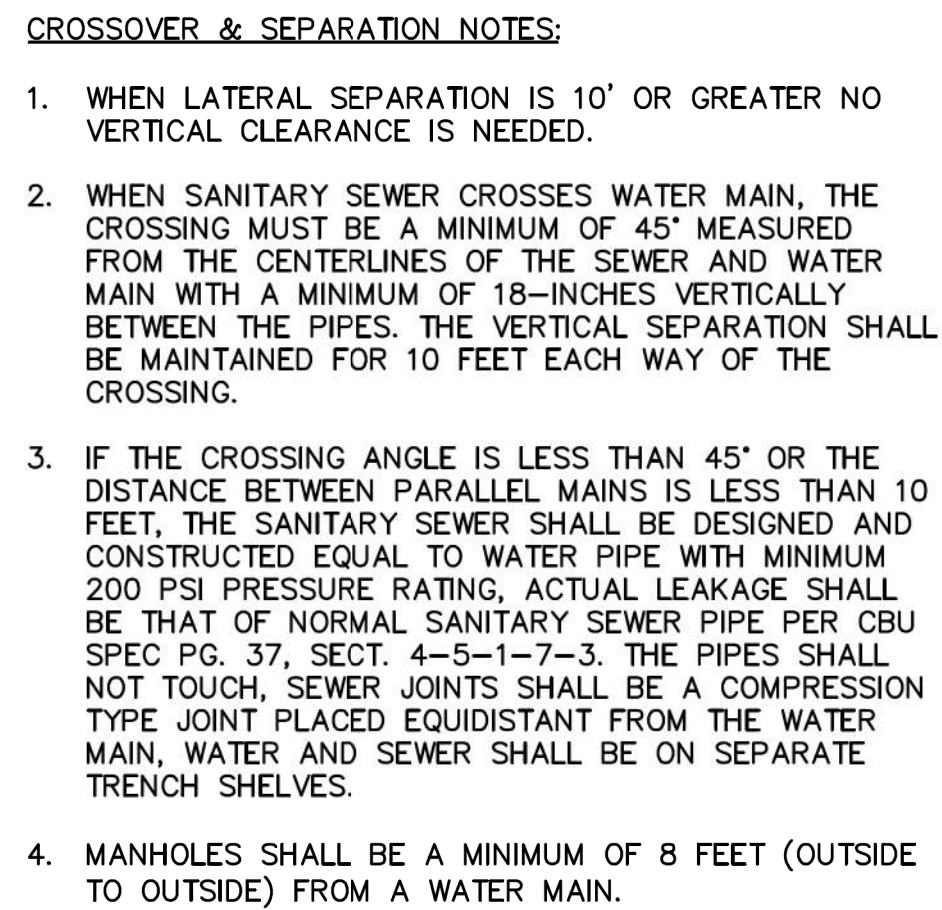
13

CONTRACT

PROJECT

N/A

2021.00628



The image contains two technical drawings of a gate valve assembly, labeled "SIDE VIEW" and "FRONT VIEW".

SIDE VIEW: This drawing shows the valve assembly from the side. Key components and dimensions include:

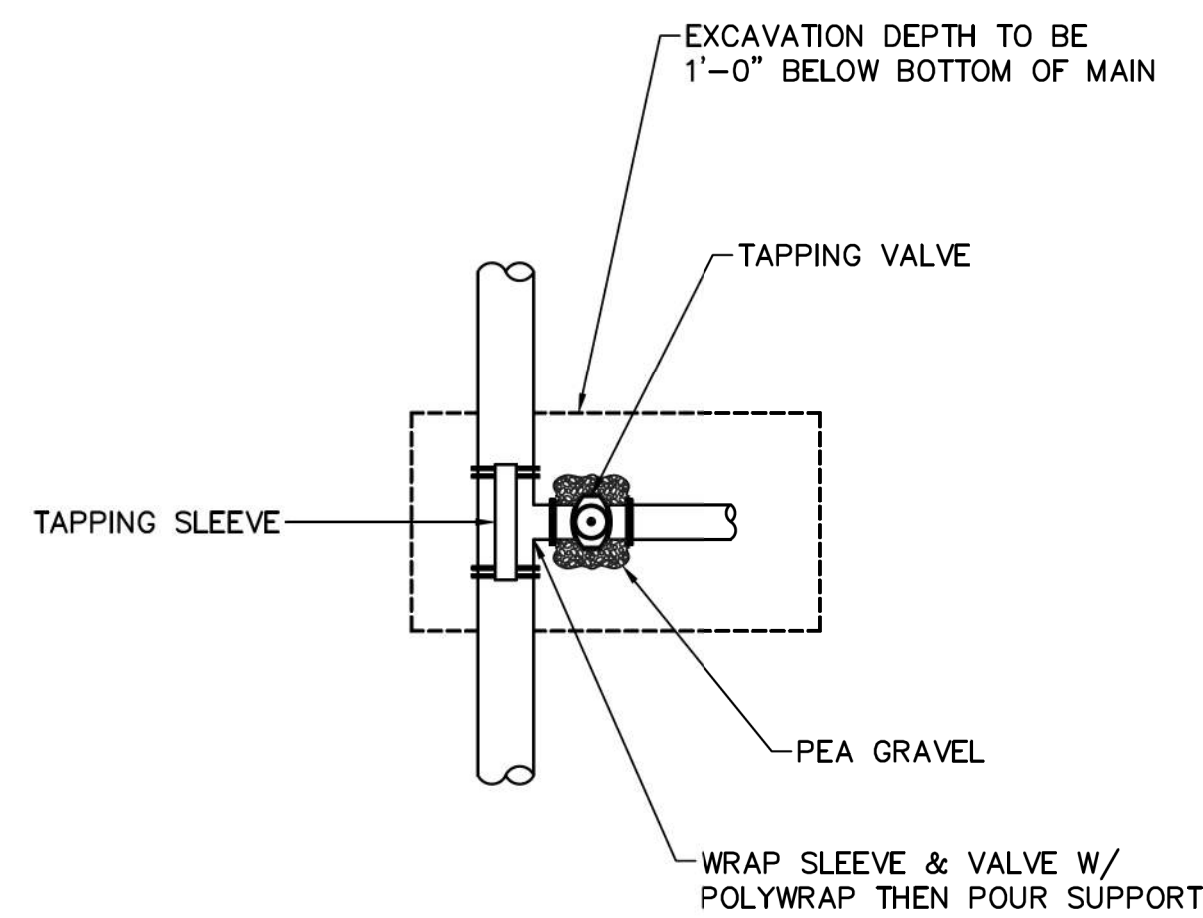
- COVER TO BE MARKED "WATER"**: Located at the top left.
- CONCRETE COLLAR**: A ring around the top of the valve box.
- FINAL GRADE**: The ground level line.
- ADJUSTABLE VALVE BOX, UPPER BARREL**: The top section of the valve box.
- ADJUSTABLE VALVE BOX, LOWER BARREL**: The bottom section of the valve box.
- VERIFY AND MATCH OPERATING KEY STYLE AND "OPEN" DIRECTION W/ WATER UTILITY BEFORE STARTING. (SEE SPECS.)**: A note pointing to the valve handle.
- VALVE BOX CENTERING DEVICE**: A device used to align the valve box.
- POLYETHYLENE WRAP**: A layer of material around the valve box.
- 3,000 PSI CONC. THRUST BLOCK (3 CU. FT.)**: A concrete block supporting the valve box.
- GATE VALVE PER SPECIFICATIONS**: The main valve assembly.
- Dimensions**: 2' MIN. (TYP.) for the distance between the cover and the final grade; 6" (TYP.) for the distance between the concrete collar and the final grade.
- Backfill**: Secondary backfill is shown above the valve box, and bedding and primary backfill material is shown below it.

FRONT VIEW: This drawing shows the valve assembly from the front. Key components and dimensions include:

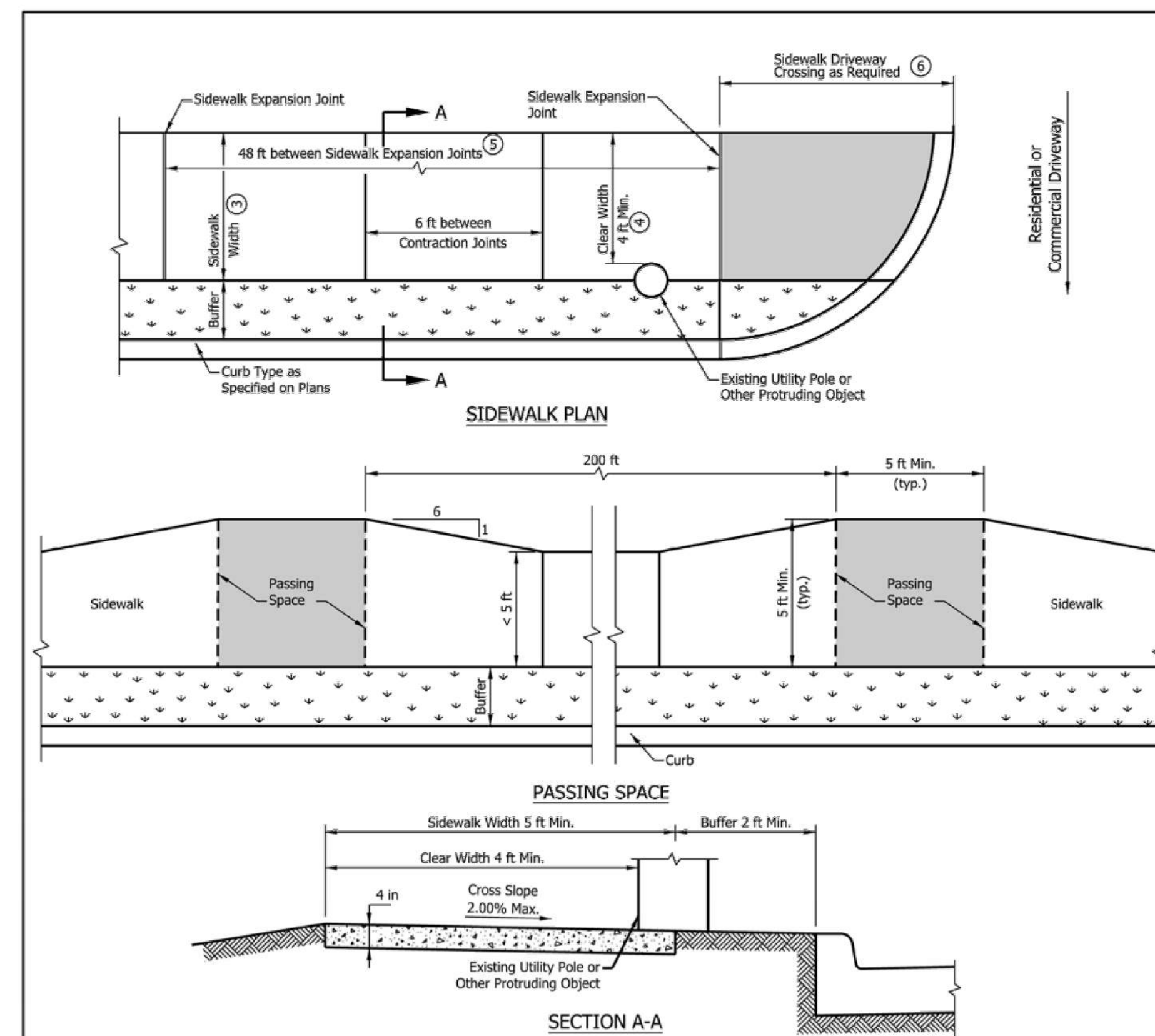
- COVER TO BE MARKED "WATER"**: Located at the top left.
- CONCRETE COLLAR**: A ring around the top of the valve box.
- FINAL GRADE**: The ground level line.
- ADJUSTABLE VALVE BOX, UPPER BARREL**: The top section of the valve box.
- ADJUSTABLE VALVE BOX, LOWER BARREL**: The bottom section of the valve box.
- VERIFY AND MATCH OPERATING KEY STYLE AND "OPEN" DIRECTION W/ WATER UTILITY BEFORE STARTING. (SEE SPECS.)**: A note pointing to the valve handle.
- VALVE BOX CENTERING DEVICE**: A device used to align the valve box.
- POLYETHYLENE WRAP**: A layer of material around the valve box.
- 3,000 PSI CONC. THRUST BLOCK (3 CU. FT.)**: A concrete block supporting the valve box.
- GATE VALVE PER SPECIFICATIONS**: The main valve assembly.
- Dimensions**: 6" (TYP.) for the distance between the cover and the final grade.
- Backfill**: Secondary backfill is shown above the valve box, and bedding and primary backfill material is shown below it.
- TRENCH WIDTH**: The width of the trench at the bottom.
- Vertical Dimension**: 48" MIN. for the height of the secondary backfill.

NOTES:

1. WRAP VALVE IN POLYETHYLENE WRAP BEFORE INSTALLING SUPPORT OR THRUST BLOCK.
2. CONCRETE COLLAR SHALL BE 6" THICK AND MADE OF 4000 PSI CONCRETE.




LIVE WATER MAIN CONNECTION DETAIL
NOT TO SCALE



NOTES:

1. All slopes are absolute rather than relative to the sidewalk or roadway grade. Slopes at least 0.50% less than the maximum are preferred.
2. The grade of the sidewalk is measured in the direction of pedestrian travel. The grade of the sidewalk shall not exceed the grade of the adjacent roadway. The cross slope is measured perpendicular to the direction of pedestrian travel. The cross slope of the sidewalk shall not exceed 2.00%.
3. Where there is a buffer between the sidewalk and curb, the preferred minimum sidewalk clear width is 5 ft.
4. A 4-ft minimum clear width shall be provided adjacent to street furniture, mailbox, utility pole, or other protruding object. Where the sidewalk clear width is less than 5 ft, a passing space shall be provided at 200 ft intervals. The passing space minimum clear dimension shall be 5 ft x 5 ft.
5. See Standard Drawing E 604-CCSJ-01 for sidewalk expansion joint details.
6. See Standard Drawing E 604-SDWK-03 for sidewalk driveway crossing configurations.

INDIANA DEPARTMENT OF TRANSPORTATION	
SIDEWALK DETAILS SIDEWALK WITH BUFFER SEPTEMBER 2016	
STANDARD DRAWING NO. E 604-SDWK-01	
	<i>s/ Elizabeth W. Phillips</i> 03/16/16 DESIGN STANDARDS ENGINEER DATE <i>s/ Mark A. Miller</i> 03/18/16 CHIEF ENGINEER DATE

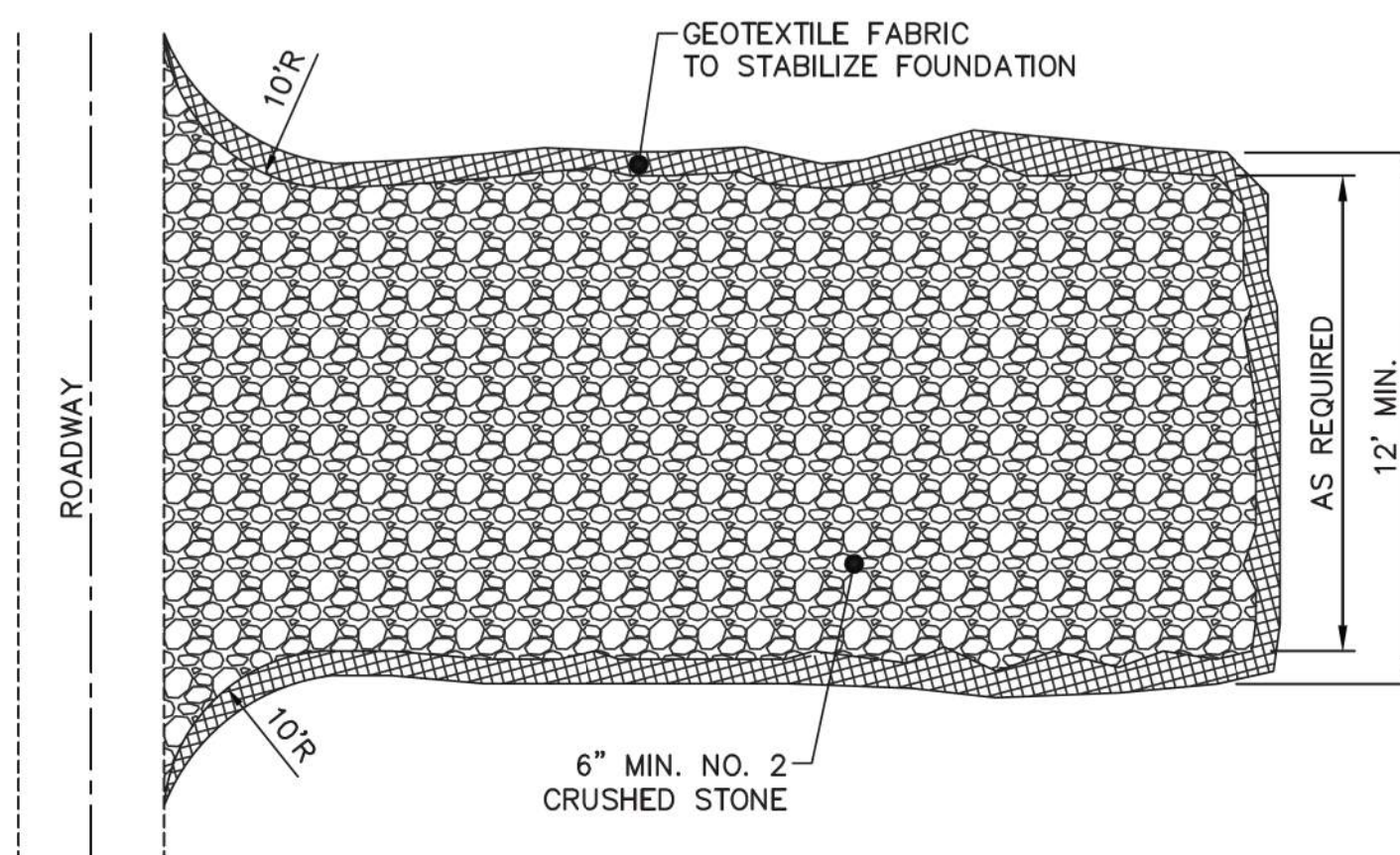
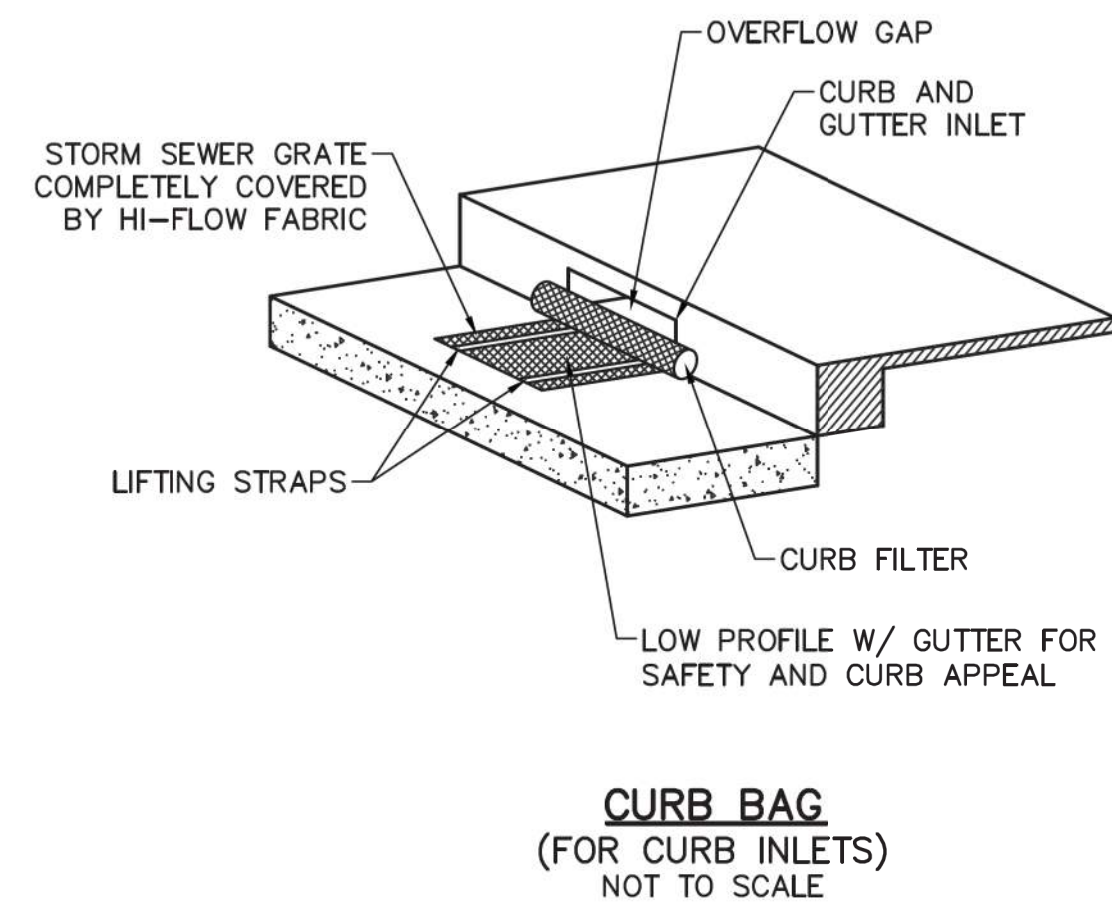
RECOMMENDED FOR APPROVAL Kary Currie 2/10/2023
DESIGN ENGINEER DATE

DESIGNED: _____ CSD	DRAWN: _____ PJT
CHECKED: _____ KMC	CHECKED: _____ CSD

CITY OF BLOOMINGTON UTILITIES

STANDARD DETAILS

	HORIZONTAL SCALE		BRIDGE FILE	
	N/A		N/A	
	VERTICAL SCALE		DESIGNATION	
	N/A		N/A	
	SURVEY BOOK		SHEETS	
	N/A	11	of	13
	CONTRACT		PROJECT	
	N/A		2021.00628	



1. REMOVE ALL VEGETATION AND OTHER OBJECTIONABLE MATERIAL FROM THE FOUNDATION AREA.
2. GRADE THE FOUNDATION AND CROWN FOR POSITIVE DAMAGE.
3. INSTALL A CULVERT PIPE UNDER THE PAD IF NEEDED TO MAINTAIN PROPER PUBLIC ROAD DRAINAGE.
4. IF WET CONDITIONS ARE ANTICIPATED, PLACE GEOTEXTILE FABRIC ON THE GRADED FOUNDATION TO IMPROVE STABILITY.
5. PLACE AGGREGATE (INDOT CA NO. 2) TO THE DIMENSIONS AND GRADE SHOWN IN THE CONSTRUCTION PLANS, LEAVING THE SURFACE SMOOTH AND SLOPED FOR DRAINAGE.
6. TOP-DRESS THE DRIVE WITH WASHED AGGREGATE (INDOT CA NO. 53).
7. WHERE POSSIBLE, DIVERT ALL STORM WATER RUNOFF AND DRAINAGE FROM THE TEMPORARY CONSTRUCTION INGRESS/EGRESS PAD TO A SEDIMENT TRAP OR BASIN.

1. INSPECT DAILY.
2. RESHAPE PAD AS NEEDED FOR DRAINAGE AND RUNOFF CONTROL
3. TOP-DRESS WITH CLEAN AGGREGATE AS NEEDED.
4. IMMEDIATELY REMOVE MUD AND SEDIMENT TRACKED OR WASHED INTO PUBLIC ROADS.
5. FLUSHING SHOULD ONLY BE USED IF THE WATER FROM THE CONSTRUCTION DRIVE CAN BE CONVEYED INTO A SEDIMENT TRAP OR BASIN.

PLAN

10' MINIMUM

10' MINIMUM

STRAW BALE (TYP.)

SILT FENCE

STAKE (TYP.)

SECTION

SILT FENCE

STAKE

STRAW BALE

2' MIN.

3' MIN.

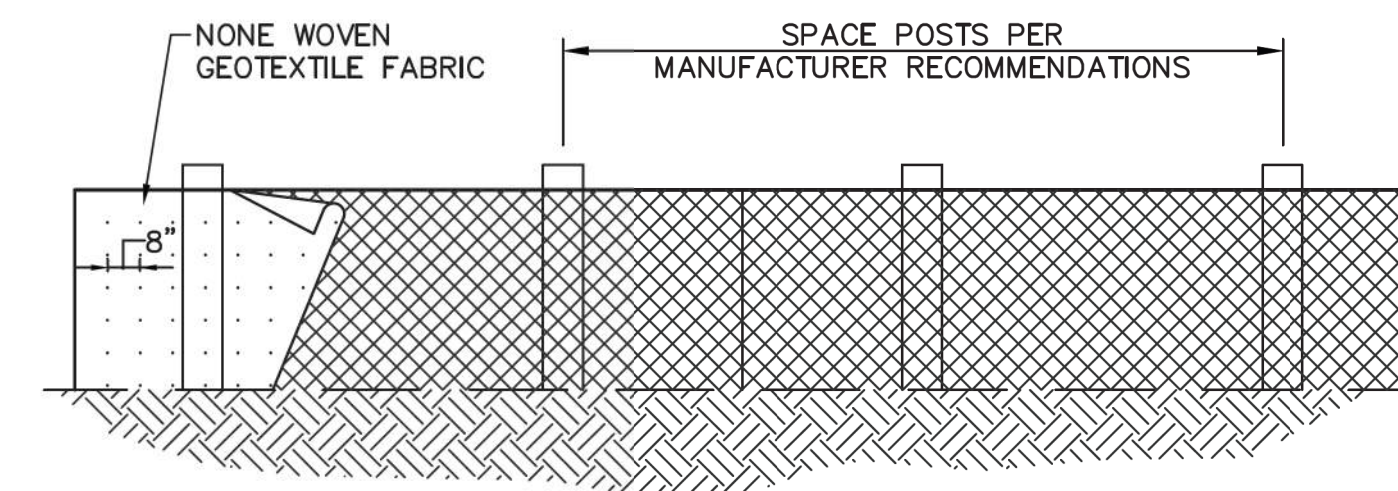
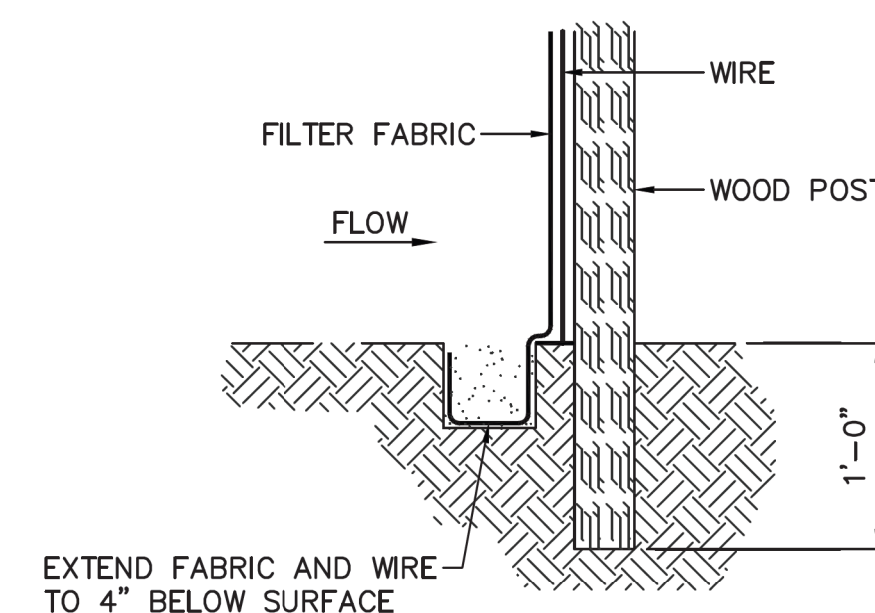


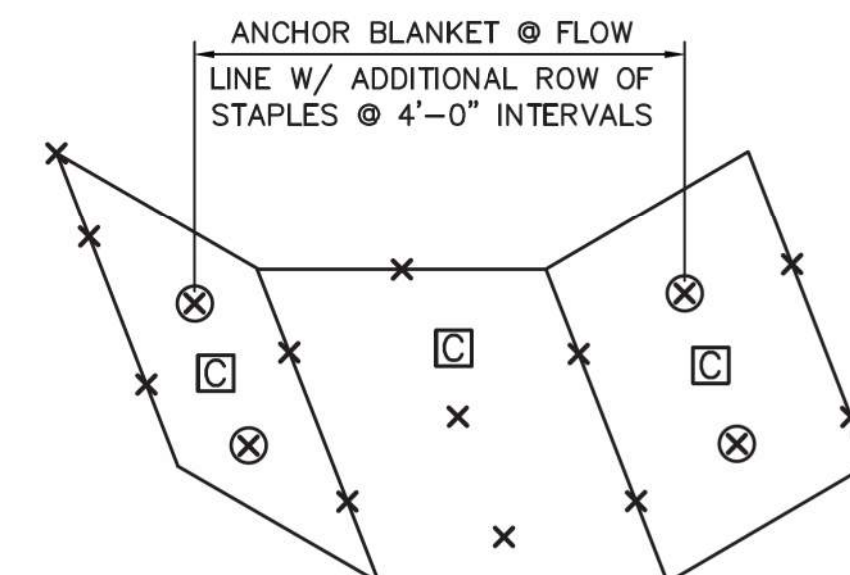
Diagram A: A 6'-0" by 6'-0" sheet with staples at the corners and midpoints of the top and bottom edges. The top edge has a 3'-0" dimension from the left corner to the first staple. The bottom edge has a 3'-0" dimension from the left corner to the first staple. The label is "1 STAPLE PER SQ. YD."

Diagram B: A 6'-0" by 6'-0" sheet with staples at the corners and midpoints of the top and bottom edges. The top edge has a 1'-6" dimension from the left corner to the first staple, followed by a 3'-0" dimension to the second staple. The bottom edge has a 1'-6" dimension from the left corner to the first staple, followed by a 3'-0" dimension to the second staple. The label is "1.5" STAPLES PER SQ. YD."

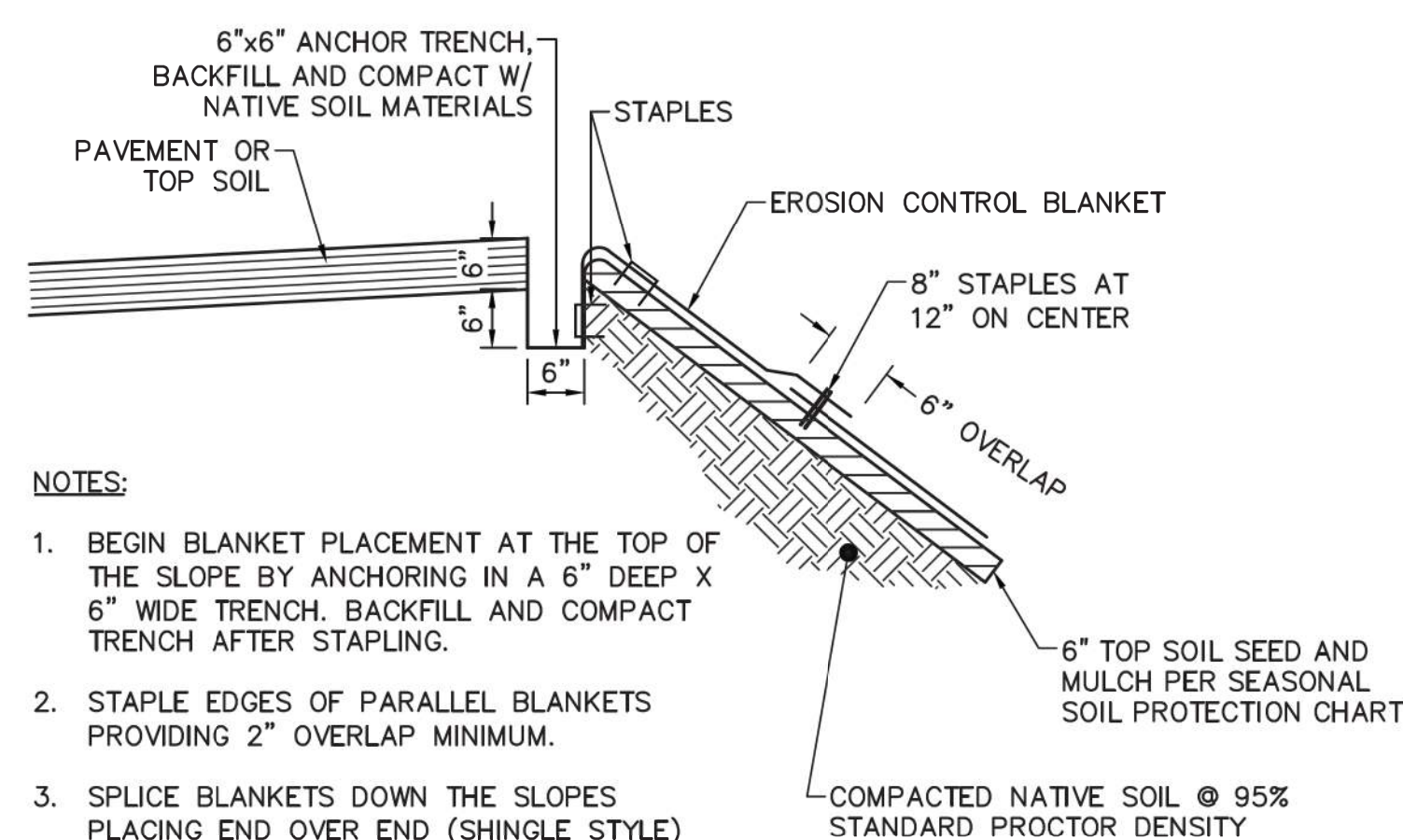
Diagram C: A 4'-0" by 4'-0" sheet with staples at the corners and midpoints of the top and bottom edges. The top edge has a 2'-0" dimension from the left corner to the first staple. The bottom edge has a 2'-0" dimension from the left corner to the first staple. The label is "2 STAPLES PER SQ. YD."

SLOPE GRADIENT
(S-75) NORTH AMERICAN GREEN,
SINGLE NET STRAW BLANKET, OR EQUAL

(S-150) NORTH AMERICAN GREEN,
DOUBLE NET STRAW BLANKET, OR EQUAL

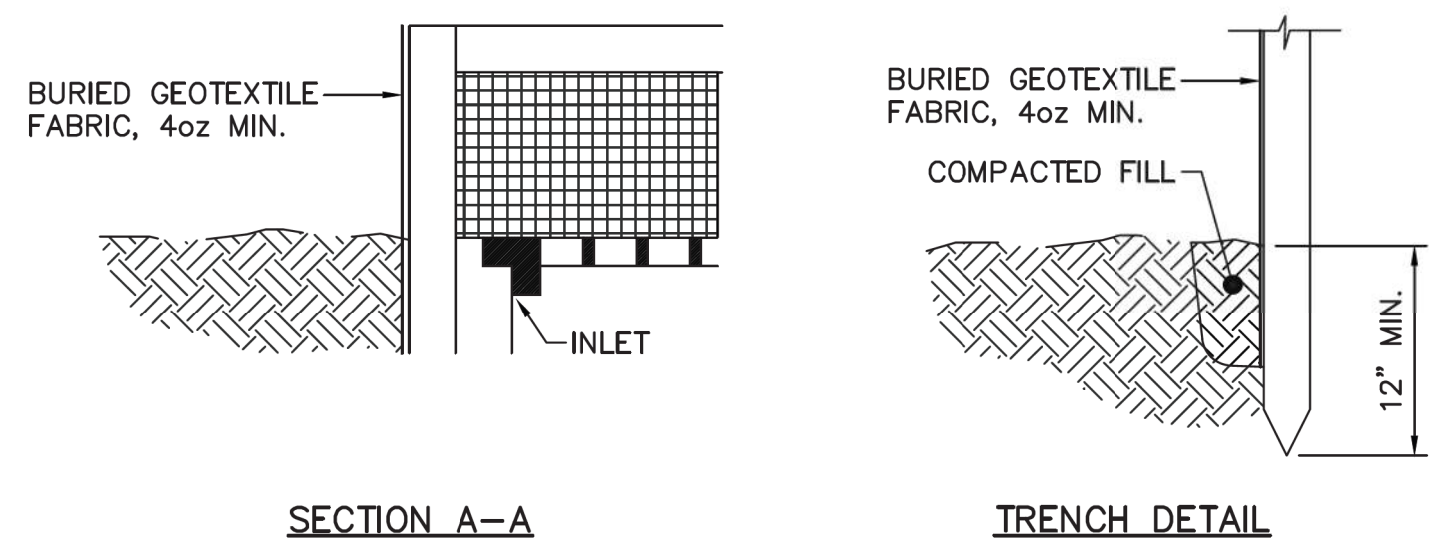
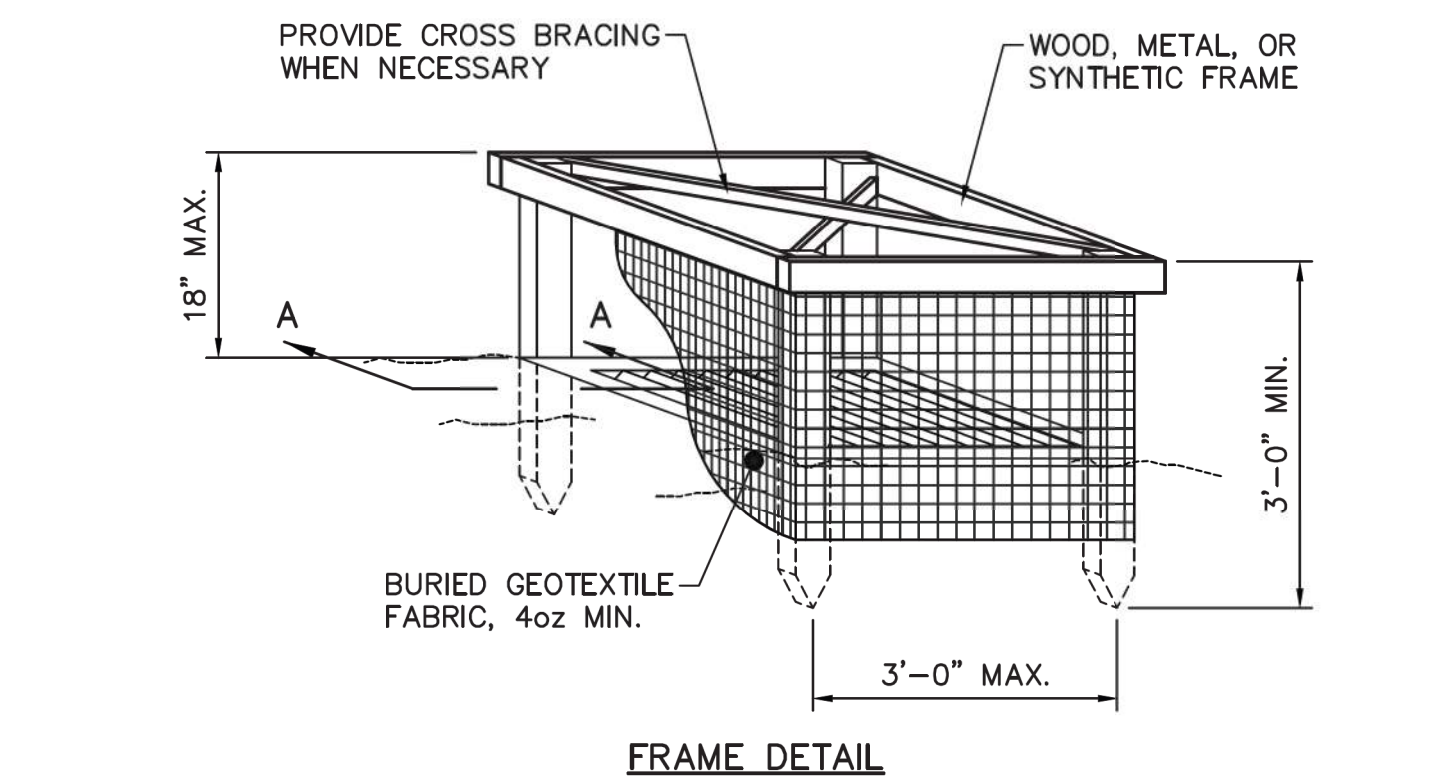


CUTTINGS CONTAINMENT BASIN
NOT TO SCALE



NOTES:

-
1. BEGIN BLANKET PLACEMENT AT THE TOP OF THE SLOPE BY ANCHORING IN A 6" DEEP X 6" WIDE TRENCH. BACKFILL AND COMPACT TRENCH AFTER STAPLING.
2. STAPLE EDGES OF PARALLEL BLANKETS PROVIDING 2" OVERLAP MINIMUM.
3. SPLICE BLANKETS DOWN THE SLOPES PLACING END OVER END (SHINGLE STYLE) WITH MINIMUM OF 6" OVERLAP. STAPLE THROUGH OVERLAPPED AREA @ 12" INTERVALS.
4. SEE DETAIL D-2 FOR STAPLE ANCHORAGE OF EROSION CONTROL MAT.
- 6" TOP SOIL SEED AND MULCH PER SEASONAL SOIL PROTECTION CHART
- COMPACTED NATIVE SOIL @ 95% STANDARD PROCTOR DENSITY



SILT FENCE INLET FILTER
(FOR BEEHIVE INLETS)
NOT TO SCALE

	HORIZONTAL SCALE	BRIDGE FILE		
	N/A	N/A		
	VERTICAL SCALE	DESIGNATION		
	N/A	N/A		
	SURVEY BOOK	SHEETS		
	N/A	12	of	13
	CONTRACT	PROJECT		
	N/A	2021.00628		

KATLYN CURRIE
REGISTERED
No.
PE11800774
STATE OF
INDIANA
PROFESSIONAL ENGINEER

RECOMMENDED FOR APPROVAL Kang Chen 2/10/2022
DESIGN ENGINEER DAT

DESIGNED: _____ CSD _____	DRAWN: _____ PJT _____
CHECKED: _____ KMC _____	CHECKED: _____ CSD _____

CITY OF BLOOMINGTON UTILITIES

STANDARD DETAILS
EROSION CONTROL

EROSION CONTROL NOTES

1. CONTRACTOR SHALL COMPLY WITH ALL STATE AND LOCAL ORDINANCES THAT APPLY.
2. THIS PLAN SHALL NOT BE CONSIDERED ALL INCLUSIVE AS THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PREVENT SEDIMENT FROM LEAVING THE SITE.
3. ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED IF DEEMED NECESSARY BY ON SITE INSPECTION BY THE LOCAL REVIEWING AUTHORITY.
4. WASTES AND UNUSED BUILDING MATERIALS SHALL NOT BE ALLOWED TO BE CARRIED FROM THE SITE BY STORM WATER RUNOFF. PROPER DISPOSAL OF ALL WASTES AND UNUSED BUILDING MATERIALS IS REQUIRED.
5. SEDIMENT BEING TRACKED ONTO PUBLIC OR PRIVATE ROADWAYS SHALL BE MINIMIZED. CLEARED SEDIMENT SHALL BE RETURNED TO THE SITE FOR DISPOSAL.
6. EXISTING VEGETATION SHALL BE PRESERVED IN AREAS NOT DISTURBED BY CONSTRUCTION ACTIVITY.
7. IF SOIL STOCKPILES WILL BE LEFT FOR A PERIOD LONGER THAN FIFTEEN (15) DAYS, THEY SHALL BE STABILIZED WITH TEMPORARY SEED MIX AND SURROUNDED BY SILT FENCE.
8. ALL APPLICABLE EROSION CONTROL MEASURES SHALL BE PLACED BEFORE ANY LAND DISTURBING ACTIVITIES.
9. UNVEGETATED AREAS THAT ARE SCHEDULED OR LIKELY TO BE LEFT INACTIVE FOR FIFTEEN (15) DAYS OR MORE MUST BE TEMPORARILY OR PERMANENTLY SEEDED. ALTERNATIVE STABILIZATION METHODS ARE ACCEPTABLE IF THEY ARE ADEQUATE TO PREVENT SEDIMENT DISCHARGE.
10. ANY DEWATERING ACTIVITIES SHALL BE PERFORMED IN A MANNER THAT WILL NOT DISCHARGE SEDIMENT LADEN WATER INTO A STREAM OR STORMWATER INLET. SEDIMENT LADEN WATER SHALL BE FILTERED THROUGH A PUMP DISCHARGE FILTER DEVICE SUCH AS A PUMP DISCHARGE BAG. PUMP DISCHARGE SHALL BE PLACED IN AN AREA THAT WILL NOT CAUSE EROSION AT THE OUTLET.
11. THE CONTRACTOR SHALL ENSURE THAT ALL APPLICABLE EROSION AND SEDIMENT CONTROL MEASURES ARE IN PLACE AT THE APPROPRIATE PHASES OF CONSTRUCTION.
12. IF CONTRACTOR WORKS OUTSIDE THE ESTABLISHED CONSTRUCTION LIMITS, SILT FENCE MAY BE REQUIRED. CONTRACTOR IS RESPONSIBLE FOR ANY WORK OUTSIDE THE CONSTRUCTION LIMITS AT NO COST TO THE OWNER.
13. THE CONTRACTOR SHALL DEVELOP A SELF-MONITORING PROGRAM TO ENSURE PROPER MAINTENANCE AND FUNCTION OF STORM WATER QUALITY MEASURES. A WRITTEN EVALUATION SHOULD BE PERFORMED BY THE END OF THE NEXT BUSINESS DAY AFTER EACH MEASURABLE STORM EVENT, AND AT A MINIMUM OF ONE (1) TIME PER WEEK. WRITTEN EVALUATION SHALL INCLUDE THE NAME OF THE INDIVIDUAL PERFORMING THE EVALUATION, DATE OF THE EVALUATION, PROBLEMS IDENTIFIED AT THE SITE, AND DETAILS OF CORRECTIVE ACTIONS RECOMMENDED AND COMPLETED. MONITORING SHOULD BE PERFORMED BY AN INDIVIDUAL TRAINED IN EROSION AND SEDIMENT CONTROL PRACTICES.

MATERIAL HANDLING AND SPILL PREVENTION PLAN

MATERIALS PRESENT ON-SITE THAT MAY BE POTENTIALLY HAZARDOUS WILL INCLUDE WASTES, EXCESS BUILDING MATERIALS, AND FUELS AND LUBRICANTS REQUIRED FOR CONSTRUCTION EQUIPMENT. THESE ITEMS SHALL NOT BE ALLOWED TO BE CARRIED FROM THE SITE BY STORM WATER RUNOFF. THE CONTRACTOR SHALL DISPOSE OF ALL EXCESS BUILDING MATERIALS AND CONTAINERS AT AN OFF-SITE LOCATION. CONSTRUCTION VEHICLES SHALL BE SERVICED IN AREAS THAT WILL MINIMIZE IMPACTS IN THE OCCURRENCE OF A SPILL OR LEAK. SHOULD A SPILL OCCUR, THE CONTRACTOR SHALL MAKE ALL EFFORTS TO CONTAIN AND CLEAN THE SPILL, AND EXPOSE OF CONTAMINATED MATERIALS/SOIL IN AN APPROVED MANNER. ALL SPILLS SHOULD BE REPORTED TO THE INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT'S EMERGENCY RESPONSE HOT LINE AT 1-888-233-7745.

MAINTENANCE REQUIREMENTS FOR EROSION CONTROL MEASURES

SILT FENCE MAINTENANCE REQUIREMENTS

1. INSPECT THE SILT FENCE PERIODICALLY AND AFTER EACH STORM EVENT.
2. IF FABRIC TEARS, STARTS TO DECOMPOSE, OR IN ANY WAY BECOMES INEFFECTIVE, REPLACE THE AFFECTED PORTION IMMEDIATELY.
3. REMOVE DEPOSITED SEDIMENT WHEN IT REACHES HALF THE HEIGHT OF THE FENCE AT ITS LOWEST POINT OR IS CAUSING THE FABRIC TO BULGE.
4. TAKE CARE TO AVOID UNDERMINING THE FENCE DURING CLEAN OUT.
5. AFTER THE CONTRIBUTING DRAINAGE AREA HAS BEEN STABILIZED REMOVE THE FENCE AND SEDIMENT DEPOSITS, BRING THE DISTURBED AREA TO GRADE, AND STABILIZE.

EROSION CONTROL BLANKET (SURFACE APPLIED) MAINTENANCE REQUIREMENTS

1. DURING VEGETATIVE ESTABLISHMENT INSPECT AFTER STORM EVENTS FOR ANY EROSION BELOW THE BLANKET.
2. IF ANY AREA SHOWS EROSION PULL BACK THAT PORTION OF THE BLANKET COVERING IT, ADD SOIL, RE-SEED THE AREA, AND RE-LAY AND STAPLE THE BLANKET.
3. AFTER VEGETATIVE ESTABLISHMENT CHECK THE TREATED AREA PERIODICALLY.

DRILLING PROCEDURES

THE SITE SUPERVISOR SHALL BE ON-SITE AT ANY TIME THAT DRILLING IS OCCURRING OR IS PLANNED TO OCCUR. DRILLING PRESSURES SHALL BE CLOSELY MONITORED SO THEY DO NOT EXCEED THOSE NEEDED TO PENETRATE THE FORMATION. PRESSURE LEVELS SHALL BE MONITORED RANDOMLY BY THE OPERATOR.

EXIT AND ENTRY PITS SHALL BE ENCLOSED BY SILT FENCES AND STRAW. A VACUUM TRUCK SHALL BE READILY AVAILABLE ON-SITE PRIOR TO AND DURING ALL DRILLING OPERATIONS. CONTAINMENT MATERIALS (STRAW, SILT FENCING, SAND BAGS, FRAC-OUT SPILL KITS, ETC.) SHALL BE STAGED ON-SITE AT LOCATIONS WHERE THEY ARE READILY AVAILABLE AND EASILY MOBILIZED FOR IMMEDIATE USE IN THE EVENT OF AN ACCIDENTAL RELEASE OF DRILLING MUD (FRAC-OUT). IF NECESSARY, BARRIERS (STRAW BALES OR SEDIMENTATION FENCES) BETWEEN THE BORE SITE AND THE EDGE OF THE WATER SOURCE SHALL BE CONSTRUCTED, PRIOR TO DRILLING, TO PREVENT RELEASED BENTONITE MATERIAL FROM REACHING THE WATER.

ONCE DRILLING BEGINS, THE DRILL OPERATOR SHALL STOP WORK WHENEVER THE PRESSURE IN THE DRILL RIG DROPS OR THERE IS A LACK OF RETURNS IN THE ENTRANCE PIT. AT THIS TIME THE SITE SUPERVISOR SHALL BE INFORMED OF THE POTENTIAL FRAC-OUT. THE SITE SUPERVISOR AND THE DRILL RIG OPERATOR(S) SHALL WORK TO IDENTIFY THE LIKELY LOCATION OF THE FRAC-OUT. THE LOCATION OF THE FRAC-OUT SHALL BE RECORDED AND NOTES MADE ON THE LOCATION AND MEASURES TAKEN TO ADDRESS THE CONCERN.

MULCHING

MULCH SPECIFICATIONS		
MATERIAL	RATE PER ACRE	COMMENTS
STRAW OR HAY	2 TONS	SHOULD BE DRY, FREE OF UNDESIREABLE SEED. SPREAD BY HAND OR MACHINE. MUST BE CRIMPED OR ANCHORED (SEE TABLE 2)
WOOD FIBER OR CELLULOSE	1 TON	APPLY WITH A HYDRAULIC MULCH MACHINE AND USE TACKING AGENT.

MULCH ANCHORING METHODS	
ANCHORING METHOD	HOW TO APPLY
MULCH ANCHORING TOOL OR FARM DISK (DULL, SERRATED, AND BLADES SET STRAIGHT)	CRIM OR PUNCH THE STRAW OR HAW TWO TO FOUR INCHES INTO THE SOIL. OPERATE MACHINERY ON THE CONTOUR OF THE SLOPE.
CLEATING WITH DOZER TRACKS	OPERATE THE SOZER UP AND DOWN SLOPE TO PREVENT FORMATION OF RILLS BY DOZER CLEATS.
WOOD HYDROMULCH FIBERS	APPLY ACCORDING TO MANUFACTURER'S RECOMMENDATIONS.
SYNTHETIC TACKIFIERS, BINDERS, OR SOIL STABILIZERS	APPLY ACCORDING TO MANUFACTURER'S RECOMMENDATIONS.
NETTING (SYNTHETIC OR BIODEGRADABLE MATERIAL)	INSTALL NETTING IMMEDIATELY AFTER APPLYING MULCH. ANCHOR NETTING WITH STAPLES. EDGES OF NETTING STRIP SHOULD OVERLAP WITH EACH UP-SLOPE STRIP OVERLAPPING FOUR TO SIX INCHES OVER THE ADJACENT DOWN-SLOPE STRIP. BEST SUITED TO SLOPE APPLICATIONS. IN MOST INSTANCES, INSTALLATION DETAILS ARE SITE SPECIFIC, SO SITE MANUFACTURER'S RECOMMENDATIONS SHOULD BE FOLLOWED.

MULCHING NOTES

1. SPREAD THE MULCH MATERIAL UNIFORMLY BY HAND, HAYFORK, MULCH BLOWER, OR HYDRAULIC MULCH MACHINE. AFTER SPREADING, NO MORE THAN 25 PERCENT OF THE GROUND SHOULD BE VISIBLE.
2. ANCHOR STRAW OR HAY MULCH IMMEDIATELY AFTER APPLICATION

MAINTENANCE

1. INSPECT WITHIN 24 HOURS OF EACH RAIN EVENT AND AT LEAST ONCE EVERY SEVEN CALENDAR DAYS.
2. CHECK FOR EROSION OR MOVEMENT OF MULCH; REPAIR DAMAGED AREAS, RESEED, APPLY NEW MULCH AND ANCHOR THE MULCH IN PLACE.
3. CONTINUE INSPECTIONS UNTIL VEGETATION IS FIRMLY ESTABLISHED.
4. IF EROSION IS SEVERE OR RECURRING, USE EROSION CONTROL BLANKETS OR OTHER MORE SUBSTANTIAL STABILIZATION METHODS TO PROTECT THE AREA.

SEASONAL SOIL PROTECTION CHART

STABILIZATION PRACTICE	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	NOV.	DEC.
PERMANENT SEEDING SUN TO PARTIAL SHADE			A		* /// // // // // // *			* / / -				
PERMANENT SEEDING PARTIAL SHADE TO SHADE			B		* /// // // // // // *			* / / -				
PERMANENT SEEDING NON-IRRIGATED AREAS			C		* /// // // // // // *			* / / -				
TEMPORARY SEEDING			D	F		* / // // // // // *	E					
MULCHING	G											

A = PERMANENT SEEDING – SUN TO PARTIAL SHADE KENTUCKY BLUEGRASS 175 LBS./ACRE; CREEPING RED FESCUE 70 LBS./ACRE; FINE TEXTURED RYE (PERENNIAL) 105 LBS./ACRE PLUS 2 TONS STRAW MULCH/ACRE, OR ADD ANNUAL RYE GRASS 20 LBS./ACRE

B = PERMANENT SEEDING – PARTIAL SHADE TO SHADE KENTUCKY BLUEGRASS 35 LBS./ACRE; CREEPING RED FESCUE 210 LBS./ACRE; FINE TEXTURED RYE (PERENNIAL) 105 LBS./ACRE PLUS 2 TONS STRAW MULCH/ACRE, OR ADD ANNUAL RYE GRASS 20 LBS./ACRE

C = PERMANENT SEEDING – NON-IRRIGATED AREAS KENTUCKY BLUEGRASS 87 LBS./ACRE; CREEPING RED FESCUE 70 LBS./ACRE; FINE TEXTURED RYE (PERENNIAL) 193 LBS./ACRE PLUS 2 TONS STRAW MULCH/ACRE, OR ADD ANNUAL RYE GRASS 20 LBS./ACRE

D = SPRING OATS 3 BUSHELS/ACRE

E = WHEAT OR RYE 2 BUSHELS/ACRE

F = ANNUAL RYE GRASS 40 LBS./ACRE (1 LB/1000 SQ. FT.)

G = STRAW MULCH 2 TONS/ACRE. ANCHOR WITH ASPHALT EMULSION AT A RATE OF 300/GAL. PER ACRE FOR SLOPES GREATER THAN 4:1 USE EROSION CONTROL BLANKET ACCEPTABLE TO LOCAL AUTHORITIES.

* / / * = IRRIGATION NEEDED DURING JUNE, JULY, AUGUST AND/OR SEPTEMBER

NOTE:

CONTRACTOR IS RESPONSIBLE FOR PROVIDING TEMPORARY SEEDING TO CONTROL EROSION AS REQUIRED BY INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT.



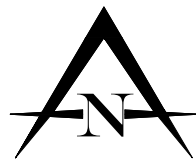
RECOMMENDED FOR APPROVAL *Kaitlyn Currie* 2/10/2023
DESIGN ENGINEER DATE

DESIGNED: _____ CSD DRAWN: _____ PJT
CHECKED: _____ KMC CHECKED: _____ CSD

CITY OF BLOOMINGTON UTILITIES

STANDARD DETAILS
EROSION CONTROL

HORIZONTAL SCALE	BRIDGE FILE
N/A	N/A
VERTICAL SCALE	DESIGNATION
N/A	N/A
SURVEY BOOK	SHEETS
N/A	13 of 13
CONTRACT	PROJECT
N/A	2021.00628



LEGEND

= PROPOSED GAS MAIN
= PROPOSED GAS SERVICE
= RETIRED GAS
= EXISTING GAS MAIN
= EXISTING GAS SERVICE
= EXISTING GAS VALVE
= GAS VALVE
= NON-CRITICAL GAS VALVE #
= CRITICAL GAS VALVE #

= ROAD CENTERLINE
= EASEMENT LINE
= ROW
= EXISTING PAVEMENT
= CABLE/TELEPHONE LINE
= FIBER OPTIC
= U.G. ELECTRIC LINE
= OVERHEAD ELECTRIC
= WATER MAIN
= STORM LINE
= SANITARY LINE

CONTRACTOR:

CREW LEADER:

VECTREN INSPECTOR:

PROJECT START DATE:

INSERVICE DATE:

COMPLETION DATE:

PROPOSED MAOP:
60 PSIG

SYSTEM MAOP:
45 PSIG

SYSTEM NOP:
40.5 PSIG

DIVISION:
VEDI-SE

OPERATING CENTER:
BLOOMINGTON

CITY:
BLOOMINGTON

STATE:
IN

COUNTY:
MONROE

GIS GRID:
168-210

LATITUDE:
39.121800

LONGITUDE:
-86.547884

DESIGNER:
LM/AT(ENE)

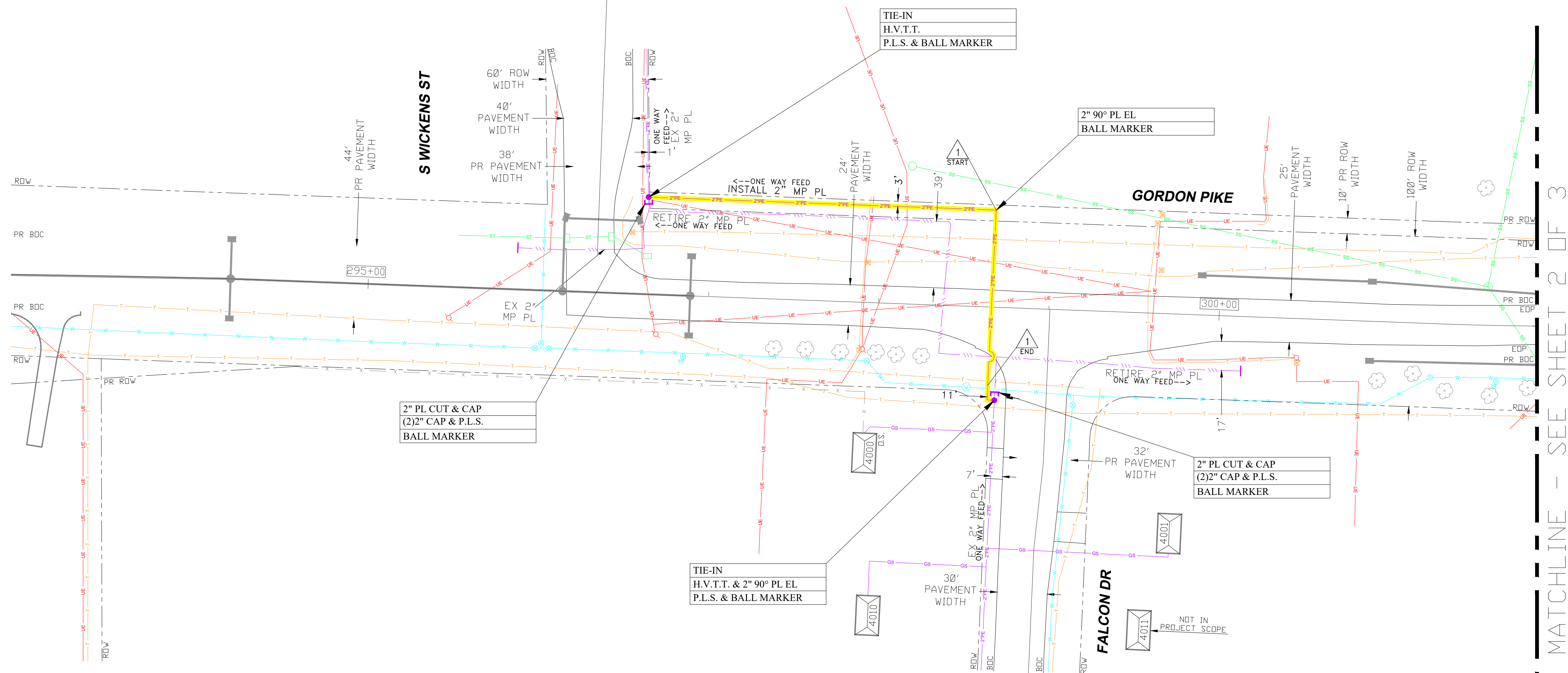
DATE:
08-16-2021

REVISION DATE:

ORACLE PROJECT NUMBER:
19592402061236

MAXIMO NUMBER:
17177730-111639

DWG NUMBER:
SHEET 1 of 3



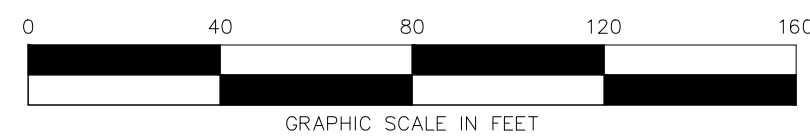
WORK ORDER QUANTITIES (THIS SHEET)

PIPE INSTALLATION						PIPE RETIREMENT			SERVICES		
ACTUAL											
SIZE/STREET NAME	ESTIMATE	INSERT	BORE	TRENCH	SIZE	ESTIMATE	ACTUAL	SIZE	ESTIMATE	ACTUAL	
INSTALL 2" PL ON GORDEN PIKE	320'				2" PL	550'		TIE-OVER (LONG SIDE)	-		
								TIE-OVER (SHORT SIDE)	-		
								INSERT (LONG SIDE)	-		
								INSERT (SHORT SIDE)	-		
								TRENCH (LONG SIDE)	-		
								TRENCH (SHORT SIDE)	-		
								BORE (LONG SIDE)/PLOW	-		
								BORE (SHORT SIDE)/PLOW	-		
								FIELD INVESTIGATE	-		
								METER MOVEOUTS	-		
								METERS REPLACED	----		
								SERVICES RETIRED	----		
SHEET TOTAL	320				SHEET TOTAL	550'					

LOC.	MAIN SIZE	STATION	DISTANCE FROM EXISTING CL	PROPOSED GAS MAIN ELEVATION	APPROX. COVER FROM EX GRADE	PROPOSED FINISHED GRADE	APPROX. COVER FROM FINISHED GRADE	DESCRIPTION OF WORK
▲	2"	298+66	57°N-46°S	VARIES	8'-0"	VARIES	5'-0"	INSTALL 2" PE MAIN BELOW PROPOSED GRADE CUTS

NOTES:

- EXISTING UTILITY AND ROADWAY INFORMATION SHOWN IS APPROXIMATE. VERIFY ACTUAL LOCATION PRIOR TO CONSTRUCTION.
- ALL PIPE IS ASSUMED TO BE INSTALLED BY HDD UNLESS OTHERWISE INDICATED ON PLANS.
- LOCATION OF PROPOSED MAIN HAS BEEN APPROVED BY THE ENGINEERING DEPARTMENT.
- "FIELD INVESTIGATE"- CONSTRUCTION CREW MUST FIELD VERIFY EXISTING SERVICE INFORMATION PRIOR TO NEW SERVICE INSTALLATION.
- CONSTRUCTION CREW TO AVOID DISTURBANCE OF ADA RAMP.



- UNLESS NOTED, ALL PLASTIC PIPE MATERIAL IS ASTM D 2513 MDPE 2708 OR HDPE 4710
- UNLESS NOTED, ALL STEEL PIPE MATERIAL IS API 5LX52.

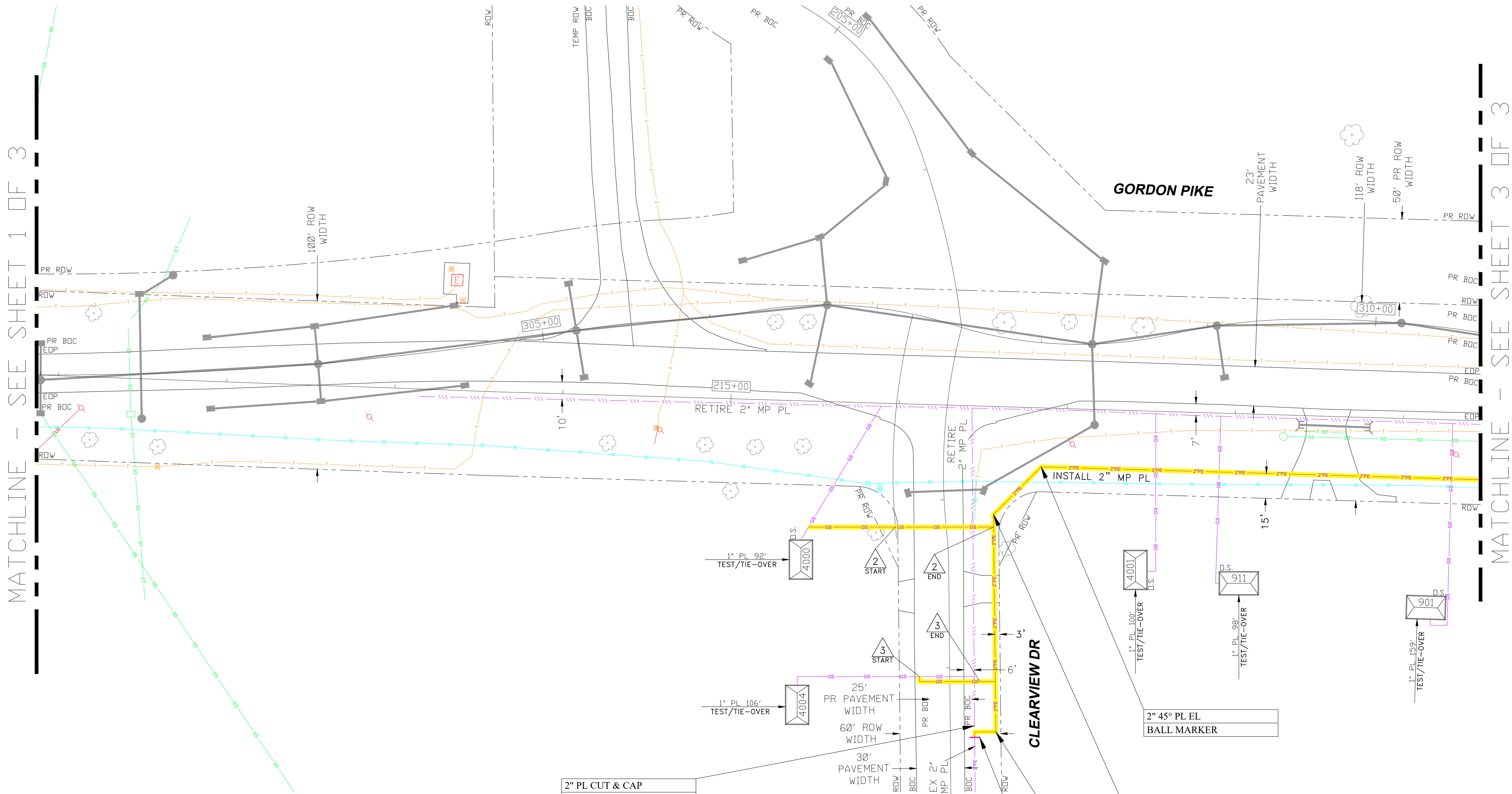
FULLERTON PIKE

FOR
CONSTRUCTION

PREPARED BY:

ENEngineering

28100 TORCH PARKWAY
WARRENVILLE, IL. 60555
TEL. 630-353-4000
FAX. 630-353-7777
WWW.ENENGINEERING.COM

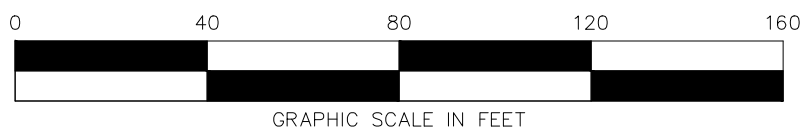


LOC.	MAIN SIZE	STATION	DISTANCE FROM EXISTING CL	PROPOSED GAS MAIN ELEVATION	APPROX. COVER FROM EX GRADE	PROPOSED FINISHED GRADE	APPROX. COVER FROM FINISHED GRADE	DESCRIPTION OF WORK
2	1"	201+84	30'W-28'E	740	3'-0"	743'	3'-0"	INSTALL 1" PE MAIN SERVICE UNDER PROPOSED SUBGRADE
3	1"	200+91	18'W-18'E	736	3'-0"	739'	3'-0"	INSTALL 1" PE MAIN SERVICE UNDER PROPOSED SUBGRADE

WORK ORDER QUANTITIES (THIS SHEET)

PIPE INSTALLATION						PIPE RETIREMENT			SERVICES		
SIZE/STREET NAME		ACTUAL				SIZE		ESTIMATE	ACTUAL		
		ESTIMATE	INSERT	BORE	TRENCH						
INSTALL 2" PL ON GORDEN PIKE		275'				2" PL		820'	TIE-OVER (LONG SIDE)		2
INSTALL 2" PL ON CLEARVIEW DR		170'							TIE-OVER (SHORT SIDE)		3
									INSERT (LONG SIDE)		-
									INSERT (SHORT SIDE)		-
									TRENCH (LONG SIDE)		-
									TRENCH (SHORT SIDE)		-
									BORE (LONG SIDE)/PLOW		-
									BORE (SHORT SIDE)/PLOW		-
									FIELD INVESTIGATE		-
									METER MOVEOUTS		-
									METERS REPLACED		----
									SERVICES RETIRED		----
SHEET TOTAL		445'				SHEET TOTAL		820'			

- NOTES:
- EXISTING UTILITY AND ROADWAY INFORMATION SHOWN IS APPROXIMATE. VERIFY ACTUAL LOCATION PRIOR TO CONSTRUCTION.
 - ALL PIPE IS ASSUMED TO BE INSTALLED BY HDD UNLESS OTHERWISE INDICATED ON PLANS.
 - LOCATION OF PROPOSED MAIN HAS BEEN APPROVED BY THE ENGINEERING DEPARTMENT.
 - "FIELD INVESTIGATE"- CONSTRUCTION CREW MUST FIELD VERIFY EXISTING SERVICE INFORMATION PRIOR TO NEW SERVICE INSTALLATION.
 - CONSTRUCTION CREW TO AVOID DISTURBANCE OF ADA RAMP.



- UNLESS NOTED, ALL PLASTIC PIPE MATERIAL IS ASTM D 2513 MDPE 2708 OR HDPE 4710
- UNLESS NOTED, ALL STEEL PIPE MATERIAL IS API 5LX52.

FULLERTON PIKE

FOR CONSTRUCTION

PREPARED BY:
ENengineering
28100 TORCH PARKWAY
WARRENVILLE, IL. 60555
TEL. 630-353-4000
FAX. 630-353-7777
WWW.ENENGINEERING.COM

DATE: 08-16-2021

REVISION DATE:

ORACLE PROJECT NUMBER: 19592402061236

MAXIMO NUMBER: 17177730-111639

DWG NUMBER: 2 of 3

LEGEND

PROPOSED GAS MAIN

PROPOSED GAS SERVICE

RETIRED GAS MAIN

EXISTING GAS MAIN

EXISTING GAS SERVICE

GAS VALVE

NON-CRITICAL GAS VALVE #

CRITICAL GAS VALVE #

ROAD CENTERLINE

EASEMENT LINE

ROW

EXISTING PAVEMENT

CABLE/TELEPHONE LINE

FIBER OPTIC

U.G. ELECTRIC

OVERHEAD ELECTRIC

WATER MAIN

STORM LINE

SANITARY LINE

CONTRACTOR:

CREW LEADER:

VECTREN INSPECTOR:

PROJECT START DATE:

INSERVICE DATE:

COMPLETION DATE:

PROPOSED MAOP: 60 PSIG

SYSTEM MAOP: 45 PSIG

SYSTEM NOP: 40.5 PSIG

DIVISION: VEDI-SE

OPERATING CENTER: BLOOMINGTON

CITY: BLOOMINGTON

STATE: IN

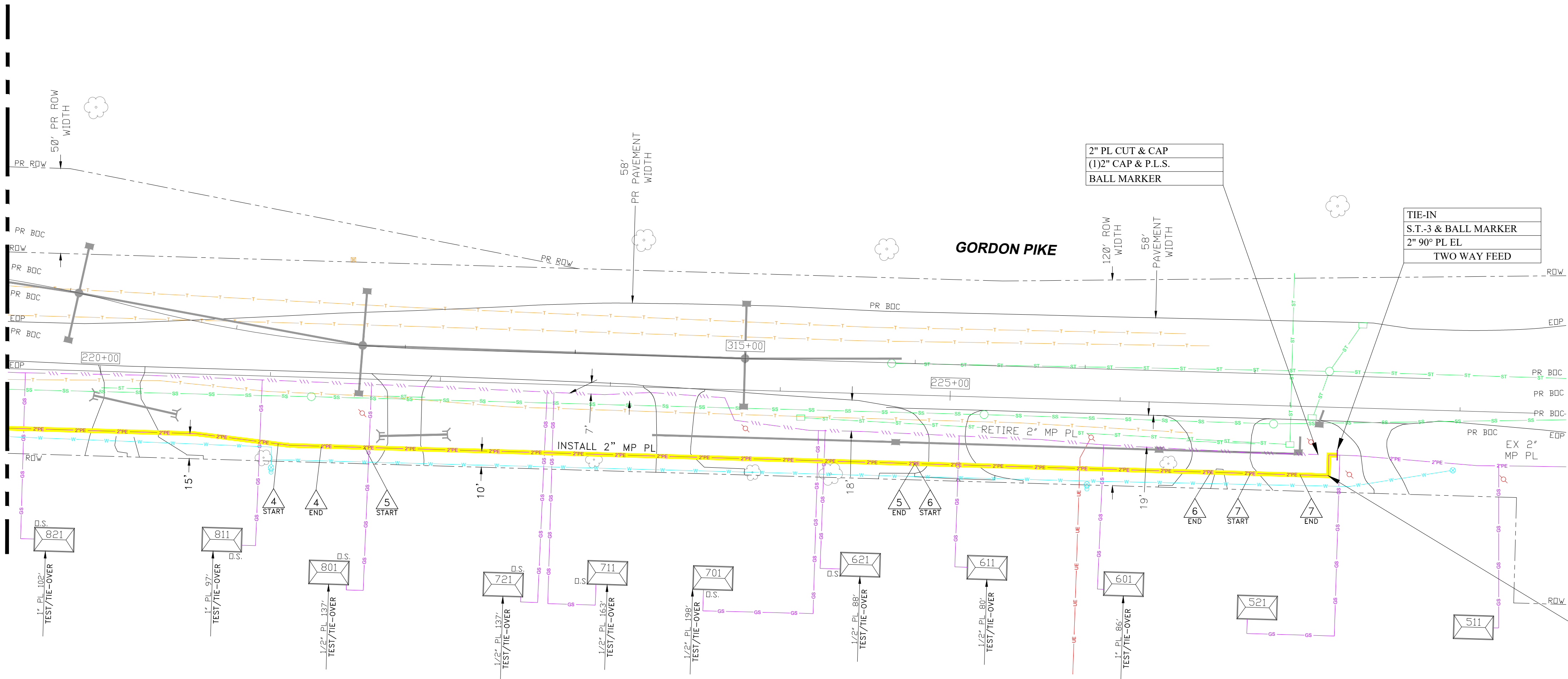
COUNTY: MONROE

GIS GRID: 168-210

LATITUDE: 39.121800

LONGITUDE: -86.547884

MATCHLINE - SEE SHEET 2 OF 3

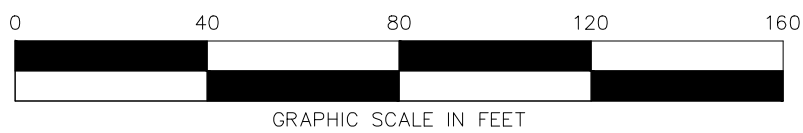


WORK ORDER QUANTITIES (THIS SHEET)

PIPE INSTALLATION						PIPE RETIREMENT			SERVICES		
ACTUAL											
SIZE/STREET NAME	ESTIMATE	INSERT	BORE	TRENCH	SIZE	ESTIMATE	ACTUAL	SIZE	ESTIMATE	ACTUAL	
INSTALL 2" PL ON GORDEN PIKE	790'				2" PL	775'		TIE-OVER (LONG SIDE)	-		
								TIE-OVER (SHORT SIDE)	9		
								INSERT (LONG SIDE)	-		
								INSERT (SHORT SIDE)	-		
								TRENCH (LONG SIDE)	-		
								TRENCH (SHORT SIDE)	-		
								BORE (LONG SIDE)/PLOW	-		
								BORE (SHORT SIDE)/PLOW	-		
								FIELD INVESTIGATE	-		
								METER MOVEOUTS	-		
								METERS REPLACED	----		
								SERVICES RETIRED	----		
SHEET TOTAL	790'				SHEET TOTAL	775'					

LOC.	MAIN SIZE	STATION	DISTANCE FROM	PROPOSED GAS MAIN ELEVATION	APPROX. COVER FROM EX GRADE	PROPOSED FINISHED GRADE	APPROX. COVER FROM FINISHED GRADE	DESCRIPTION OF WORK
			EXISTING CL					
4	2"	312+25-312+50	VARIES	713.0'	6'-0"	717.5'	4'-6"	INSTALL 2" PE MAIN BELOW PROPOSED DITCH CUTS
5	2"	312+75-316+00	40'S	VARIES	5'-0"	VARIES	3'-6"	INSTALL 2" PE MAIN BELOW PROPOSED DITCH CUTS
6	2"	316+00-317+75	40'S	VARIES	6'-0"	VARIES	4'-0"	INSTALL 2" PE MAIN BELOW PROPOSED DITCH CUTS
7	2"	318+00-318+25	40'S	691.0'	4'-6"	VARIES	3'-6"	INSTALL 2" PE MAIN BELOW PROPOSED DITCH CUTS

- NOTES:
- EXISTING UTILITY AND ROADWAY INFORMATION SHOWN IS APPROXIMATE. VERIFY ACTUAL LOCATION PRIOR TO CONSTRUCTION.
 - ALL PIPE IS ASSUMED TO BE INSTALLED BY HDD UNLESS OTHERWISE INDICATED ON PLANS.
 - LOCATION OF PROPOSED MAIN HAS BEEN APPROVED BY THE ENGINEERING DEPARTMENT.
 - "FIELD INVESTIGATE"- CONSTRUCTION CREW MUST FIELD VERIFY EXISTING SERVICE INFORMATION PRIOR TO NEW SERVICE INSTALLATION.
 - CONSTRUCTION CREW TO AVOID DISTURBANCE OF ADA RAMP.



- UNLESS NOTED, ALL PLASTIC PIPE MATERIAL IS ASTM D 2513 MDPE 2708 OR HDPE 4710
- UNLESS NOTED, ALL STEEL PIPE MATERIAL IS API 5LX52.

FULLERTON PIKE

FOR CONSTRUCTION

PREPARED BY:
ENengineering
28100 TORCH PARKWAY
WARRENVILLE, IL. 60555
TEL. 630-353-4000
FAX. 630-353-7777
WWW.ENENGINEERING.COM

DATE: 08-16-2021

REVISION DATE:

ORACLE PROJECT NUMBER: 19592402061236

MAXIMO NUMBER: 17177730-111639

DWG NUMBER: SHEET 3 of 3

LEGEND

PROPOSED GAS MAIN

PROPOSED GAS SERVICE

RETIRED GAS

EXISTING GAS MAIN

EXISTING GAS SERVICE

GAS VALVE

NON-CRITICAL GAS VALVE #

CRITICAL GAS VALVE #

ROAD CENTERLINE

EASEMENT LINE

ROW

EXISTING PAVEMENT

CABLE/TELEPHONE LINE

FIBER OPTIC

U.G. ELECTRIC LINE

OVERHEAD ELECTRIC

WATER MAIN

STORM LINE

SANITARY LINE

CONTRACTOR:

CREW LEADER:

VECTREN INSPECTOR:

PROJECT START DATE:

INSERVICE DATE:

COMPLETION DATE:

PROPOSED MAOP: 60 PSIG

SYSTEM MAOP: 45 PSIG

SYSTEM NOP: 40.5 PSIG

DIVISION: VEDI-SE

OPERATING CENTER: BLOOMINGTON

CITY: BLOOMINGTON

STATE: IN

COUNTY: MONROE

GIS GRID: 168-210

LATITUDE: 39.121800

LONGITUDE: -86.547884

DESIGNER: LM/AT(ENE)

DATE: 08-16-2021

REVISION DATE:

ORACLE PROJECT NUMBER: 19592402061236

MAXIMO NUMBER: 17177730-111639

DWG NUMBER: SHEET 3 of 3