

Addendum 2

City of Canton, Ohio
Purchasing Department
218 Cleveland Ave. SW, 4th floor
Canton, Ohio 44702

Construction Administration and Construction Management Services: STA 15th St SW Canton
PID No.11315

Item/Project

Engineering Department

Responsible Department

Monday, February 13, 2023, 4:00 PM local time

Proposals Due By

Proposal Submitted By:

Company Name

Street Address

City

State

Zip

Contact Person

Phone No.

Email Address

Please use the version for the Request for Qualifications for the Construction Administration and Construction Management Services: STA 15th St SW Canton PID No.11315 that is attached below when preparing your Qualification submission.

This version will replace the original Request for Qualifications that was posted on January 17, 2023.

01-23-23 Posting Date
STA-15th Street SW
PID No. 113153
City of Canton
Response Due Date: 02-13-23

Communications Restrictions

Please note the following policy concerning communication between Consultants and the City of Canton during the announcement and selection process:

During the time period between advertisement and the announcement of final consultant selection, communication with consultants (or their agents) shall be limited as follows:

Communications which are strictly prohibited:

Any discussions or marketing activities related to this specific project.

Allowable communications include:

Technical or scope of services questions specific to the project or RFP requirements.

Project Description

The services include Construction Inspection and Construction Administration services for the STA-15th Street SW project, PID No. 113153 in the City of Canton located between the following streets: Henry Avenue SW and McKinley Avenue SW with a project length of approximately 250 L.F. The proposed improvements include removal and replacement of the 15th Street SW bridge over the middle branch of Nimishillen Creek. Additional construction work includes full-depth pavement replacement, curb, sidewalk, drive approaches, drainage and water main relocation.

Estimated Construction Cost: \$2,000,000.00

Prequalification Requirements

Prequalification requirements for this agreement are listed below. For all prequalification categories other than FINANCIAL MANAGEMENT SYSTEM EVALUATION the requirement may be met by the prime consultant or a subconsultant.

Also, please note that only individuals (not firms) are prequalified construction inspection activities. In instances where prequalification for these services is required, a prequalified individual, either employed by the prime consultant or a subconsultant, must be named in order to meet the requirement.

For agreements that require prequalification in FINANCIAL MANAGEMENT SYSTEM EVALUATION, the prime consultant and **all subconsultants that provide engineering and design related services** must be prequalified in this category. Engineering and Design Related Services are defined as follows:

Program management, construction management, feasibility studies, preliminary engineering, design engineering, surveying, mapping, or architectural related services with respect to a highway construction project subject to 23 U.S.C. 112(a) as defined in 23 U.S.C 112(b)(2)(A); and

Professional services of an architectural or engineering nature, as defined by State law (ORC 5526), which are required to or may logically or justifiably be performed or approved by a person licensed, registered, or certified to provide the services with respect to a highway construction project to 23 U.S.C. 112(a) and defined in 40 U.S.C. 1102(2).

CONSTRUCTION INSPECTION AND ADMINISTRATION:

Project Structure Inspector;
Coatings Inspector;
Soils and Aggregate Inspector;
Construction Engineer Level 1;
Construction Engineer Level 2;
Construction Management Firm

FINANCIAL MANAGEMENT SYSTEM EVALUATION

Compliant with Federal Requirements (Prime consultant and subconsultants that provide engineering and design related services must meet this prequalification requirement)

Selection Subfactors None

Contract Type and Payment Method

Refer to the ODOT's Manual for Administration of Contracts for Professional Services, Volume 1: Consultant Contract Administration, Sections 4.3.A and 4.3.B for guidance concerning the appropriate contract type and payment method. Based on this guidance, contract type and payment method will be determined during the scope of services and negotiation process.

Estimated Date of Authorization

It is anticipated that the selected Consultant will be authorized to proceed by April 2023.

Project Schedule

Anticipated Bid Award April 2023, Construction Authorization May 2023. The construction project to be completed within 5 months from the date of authorization.

Disadvantaged Business Enterprise (DBE) Participation Goal None is required

Suspended or Debarred Firms

Firms included on the current Federal list of firms suspended or debarred are not eligible for selection.

Terms and Conditions

The Department's *Specifications for Consulting Services 2016 Edition* will be included in all agreements selected under this request for letters of interest.

Compliance with Title VI of the Civil Rights Act of 1964

The City of Canton, in accordance with Title VI of the Civil Rights Act of 1964 (78 Stat. 252, 42 U.S.C. §§ 2000d to 2000d-4) and the Regulations, hereby notifies all bidders that it will affirmatively ensure that any contract entered into pursuant to this advertisement, all bidders including disadvantaged business enterprises will be afforded full and fair opportunity to submit bids in response to this invitation and will not be discriminated against on the grounds of race, color, national origin, sex, age, disability, low-income status, or limited English proficiency in consideration for an award.

Questions

Please direct all questions regarding this request for qualifications in writing by Monday, February 6, 2023 at 4:00 PM to:

Andrew Roth, Director of Purchasing
purchasing@cantonohio.gov

Selection Procedures

The City of Canton will directly select a consultant based on the Letter of Interest (LoI). The requirements for the LoI and the Programmatic Consultant Selection Rating Form that will be used to select the consultant are shown below.

Deadline and Submission Procedures

Firms interested in being considered for this contract must provide a statement of qualifications and Letter of Interest (LoI) by 4:00 P.M. on Monday, February 13, 2023. Statements of Qualifications received after this deadline will not be considered. Please submit your statement of qualifications and LoI electronically via the City's sourcing tool, Vendor Registry. Vendor Registry is free for your use with City sourcing events. Go to <https://www.cantonohio.gov/448/Purchasing-Procurement>, then click on Open Solicitations and post your submission.

Responses received after 4:00 PM on the response due date will not be considered.

By order of the Director of Public Service
John M. Highman, Jr.

Published in The Repository
January 20, January 27 and February 3, 2023

Scope of Services

The Scope of Services document is included below.

Requirements for Letters of Interest, Programmatic Selection Process

A. Instructions for Preparing and Submitting a Letter of Interest

1. Provide the information requested in the Letter of Interest Content (Item B below), in the same order listed, in a letter signed by an officer of the firm. Do not send additional forms, resumes, brochures, or other material.
2. Letters of Interest shall be limited to Sixteen (16) 8½" x 11" single sided pages including cover letters and/or letters of transmittal plus two (2) pages for the Project Approach (Item B.5 below) for a maximum of 18 pages.
3. Please adhere to the following requirements in preparing and binding letters of interest:
 - a. Please use a minimum font size of 12-point and maintain margins of 1" on all four sides.
 - b. Page numbers must be centered at the bottom of each page.
 - c. Use 8½" x 11" paper only.
 - d. Bind letters of interest by stapling at the upper left-hand corner only. Do not utilize any other binding system.
 - e. Do not provide tabbed inserts or other features that may interfere with machine copying.

B. Letter of Interest Content

1. List the types of services for which your firm is currently prequalified by the Ohio Department of Transportation.
2. List significant subconsultants, their current prequalification categories and the percentage of work to be performed by each subconsultant.
3. List the Project Manager and other key staff members, including key subconsultant staff. Include project engineers for important disciplines and staff members that will be responsible for the work, and the project responsibility of each.

Address the experience of the key staff members on similar projects, and the staff qualifications relative to the selection subfactors noted.

4. Describe the capacity of your staff and their ability to perform the work in a timely manner, relative to present workload, and the availability of the assigned staff.
5. Provide a description of your Project Approach, not to exceed two pages. Confirm that the firm has visited the site and address your firm's: 1) Technical approach; 2) Understanding of the project; 3) Qualifications for the project; 4)

Knowledge and experience concerning relevant ODOT and local standards, procedures and guidance documents; 5) Innovative ideas; 6) Project specific plan for ensuring increased quality, reduced project delivery time and reduced project costs.

Items 1 thru 4 must be included within the 16-page body of the Lol. Remaining space within the sixteen (16) pages may be utilized to provide personnel resumes or additional information concerning general qualifications.

Consultant Selection Rating Form
For Programmatic Selections

Project: STA 15th St SW Canton
PID: 113153
Project Type: Local Let District: 4
Selection Committee Members:
City Engineer
Assistant City Engineer

Firm Name:

Category	Total Value	Scoring Criteria	Score
Management & Team			
Project Manager	10	See Note 1, Exhibit 1	
Strength/Experience of Assigned Staff including Subconsultants	25	See Note 2, Exhibit 1	
Firm's Current Workload/ Availability of Personnel	10	See Note 4, Exhibit 1	
Consultant's Past Performance	30	See Note 3, Exhibit 1	
Project Approach	25		
Total	100		

If Applicable: Adequate good faith efforts made to meet DBE goal Y/N

Exhibit 1 - Consultant Selection Rating Form Notes

- The proposed project manager for each consultant shall be ranked, with the highest ranked project manager receiving the greatest number of points, and lower ranked project managers receiving commensurately lower scores. The rankings and scores should be based on each project manager's experience on similar projects and past performance for the LPA and other agencies. The selection committee may contact ODOT and outside agencies if necessary. Any subfactors identified should be weighed heavily in the differential scoring.

Differential scoring should consider the relative importance of the project manager's role in the success of a given project. The project manager's role in a simple project may be less important than for a complex project, and differential scoring should reflect this, with higher differentials assigned to projects that require a larger role for the project manager.

2. The experience and strength of the assigned staff, including subconsultant staff, should be ranked and scored as noted for Number 1 above, with higher differential scores assigned on more difficult projects. Any subfactors identified in the project notification should be weighed heavily in the differential scoring.

As above, other agencies may be contacted.

3. The consultants' past performance on similar projects shall be ranked and scored on a relative, differential scoring type basis, with the highest ranked consultant receiving a commensurately greater number of points. The selection team should consider ODOT CES performance ratings if available, and consult other agencies as appropriate. The use of CES ratings shall place emphasis on the specific type of services requested.

The differential scoring should consider the complexity of the project and any subfactors identified in the project notification.

4. The consultant's workload and availability of qualified personnel, equipment and facilities shall be ranked and scored on a relative, differential scoring type basis. The scoring shall consider quantifiable concerns regarding the ability of a firm (or firms) rated higher in other categories to complete the work with staff members named in the letter of interest.

City of Canton
CONSTRUCTION ADMINISTRATION, INSPECTION, AND MATERIALS
MANAGEMENT SCOPE OF SERVICES

Project Specific Services

Project Name	STA 15 th St SW Canton
PID	113153
Project Description	Removal and replacement of the 15 th St SW Bridge over the middle branch of Nimishillen Creek. Additional work includes full-depth pavement replacement, curb, sidewalk, drive approaches, drainage and waterline.
Work Description	Work includes Construction Engineering, Project Management, inspection, materials testing and/or documentation of the Work performed by the City's Contractor. The services performed in accordance with the Ohio Department of Transportation, "Construction and Material Specifications" and City of Canton procedures, directives and other requirements. The Consultant will provide services to monitor the construction work on a full or part-time basis and report the city contractor's work and determine whether such work complies with the State's contract requirements to the Local Public Agency/Person in Responsible Charge. The Construction Project Engineer (CPE), appointed by the Consultant, will act upon the behalf of the city for the completion of the contract. Consultant will perform City's duties of reviewing payrolls for compliance with DBE and EEO requirements.
Scope of Services Meeting Date	TBD

I. GENERAL REQUIREMENTS

Provide services in accordance with ODOT's Construction Administration Manual of Procedures, 2017 or latest revision.

II. SCOPE OF WORK

Provide a project team including personnel that meet the following prequalification categories:

ODOT Prequalification Category	Approximate Number Required	Notes
Project Inspector		
Structures Inspector	1	
Coatings Inspector	1	As needed
Traffic Signals & Lighting Inspector		
Soils & Aggregate Inspector	1	As needed
Construction Engineer Level 1	1	As needed
Construction Engineer Level 2	1	CPE
Non-Prequalified Personnel	Approximate Number Required	Notes
Documentation Clerk	1	
Other (Scheduler)	1	

The services may include:

A. Construction Contract Administration Duties

The performance of engineering and supervisory duties, administration, inspection and materials management required in the administration of a Federal Aid construction contract, as defined in the Ohio Department of Transportation (ODOT) Construction Inspection Manual of Procedures, and in accordance with the Construction and Materials Specifications (CMS), and construction contract specific requirements.

The table below includes the specific services required for this agreement.

PRIMARY TASK	ODOT Oversight	Responsibility		NOTES
		LPA	CONSULTANT	
POST AWARD				
Preconstruction Conference	X	X	X	
ACTIVE PROJECT ADMINISTRATION				
Daily Field Engineering and Inspection	X		X	
MATERIALS MANAGEMENT, TESTING AND CERTIFICATION				
Asphalt, Concrete & Aggregate Producer/Supplier Monitoring	X		X	
Asphalt, Concrete & Aggregate Field Testing			X	
Field Inspection of Materials from ODOT Certified Sources			X	
Monitoring and Documentation of Materials Management Process	X		X	
PROJECT DOCUMENTATION				
Daily Diaries			X	
Documentation of Quantities, Completed & Accepted			X	
Monitoring of Project Documentation	X		X	
ACTIVE PROJECT MANAGEMENT				
Progress Meetings	X		X	
Schedule Tracking and Updates	X		X	

PAYMENT & REIMBURSEMENTS				
Contractor Payment			X	
Summary of Progressive Payment			X	
Invoice and Reimbursement Preparation			X	
Review and Approval of Reimbursement Request	X	X	X	
CONTRACT CHANGES				
Negotiation and Preparation of Change Orders		X	X	
Concurrence on significant Change Orders for Reimbursement	X			
CLAIMS MANAGEMENT				
Claims Negotiation and Approval of Resolution		X	X	
Approval of Funding for Resolution	X			
Monitoring and Documentation of Claims Management Process	X		X	
PREVAILING WAGE COMPLIANCE				
Wage Interviews, Payroll Reviews		X		
Resolution of Underpaid Wages		X		
Monitoring and Documentation of Prevailing Wage Compliance Process	X	X		
EEO AND DBE CONTRACT COMPLIANCE				
EEO/DBE Contract Requirements			X	
Bulletin Board Monitoring			X	
Review and Approval of Contractor DBE Waivers	X		X	
Commercially Useful Function Reviews			X	
Monitoring and Documentation of LPA's EEO and DBE Compliance Process	X		X	
PROJECT FINALIZATION				
Final Inspection and Acceptance	X		X	

Resolution of Punch list Items			X	
Agreement of Final Quantities, Payment			X	
Final Payment to Contractor, Release of Responsibility			X	
Preparation of Project Closeout Documents			X	
Review and Approval of Finalization Documents	X	X	X	
Completion of LPA Contract Administration Evaluation	X	X	X	

B. Inspection/Testing Equipment as listed below:

Inspection/Testing Equipment	Approximate Number Required	Notes
Nuclear Density Gauge and related tools.	1	
Concrete Control Kit to perform tests ASTM C-231, ASTM C-173, ASTM C-138 and ASTM C-143.	1	
Paint Inspection Kit in accordance with CMS 514.05.		
The type and number of vehicles, either cars or trucks, for use on-site.	As Required	

C. If included above or requested in writing, provide a documentation clerk as follows:

1. Job Duties

Performs specialized clerical tasks (e.g. searches records, gathers & organizes data, information & summarizes in preliminary reports; checks accuracy, clarifies discrepancies & certifies final data, possesses Microsoft Word and spreadsheet skills to produce basic reports and basic data entry). Performs general clerical tasks (e.g. maintains files; sorts and routes mail; answers phones, greets visitors; orders & stocks supplies; maintains calendar; makes copies; prepares materials for mailing; schedules meetings). Prepares and maintains construction project records and reports by entering information into SiteManager (e.g. prepares daily construction diaries by compiling information from the inspector's reports, prepares monthly project status reports, compiles data from records for accurate submission of contract information. Performs other miscellaneous duties as assigned by the Project Engineer.

2. Qualifications

a. High school diploma or GED.

- b. Formal education in arithmetic that includes addition, subtraction, multiplication, division, fractions, percentages & decimals, reading, writing and speaking common English vocabulary.
- c. Two (2) years training and/or experience in office practices and procedures, including use of Microsoft Word and spreadsheets.

III. COMPENSATION

- A. The City of Canton shall make payment based on actual hours worked by the Consultant's employees, excluding sick leave, personal leave, and vacation. Payment for holidays will not be made unless the Consultant is required to work; in such case, the holiday will be considered a regular work day and will be paid at the regular hourly rate, unless the forty (40) hour work week requirement has been met as described in the following Paragraph (B). Work in excess of forty (40) hour work week must be approved by the City of Canton prior to being incurred.
- B. If applicable, overtime will be paid for all hours worked over a total of forty (40) on a weekly basis, including core working hours and eligible driving time. Payment for eligible overtime shall be commensurate with the Consultant's personnel policies. Specifically, companies that treat overtime premium as a direct cost may bill directly for overtime plus any applicable premium rate (e.g., time and a half for each hour of overtime worked). Conversely, companies that treat overtime premium as an indirect cost (overhead) must bill/invoice overtime hours at the straight-time pay rate.

IV. INVOICING

The Consultant shall submit an invoice each month. ODOT's standard invoice form shall be used.

V. CONSULTANT STAFF REQUIREMENTS

The Consultant shall assign only qualified personnel to the project. The Consultant shall remove any employee who, in the determination of the City of Canton, does not perform the work in accordance with the Manual of Procedures, the Construction and Materials Specifications (CMS), and construction contract specific requirements.

Should the Consultant fail to remove the employee or employees as required, or fail to furnish suitable and sufficient personnel for proper performance of the work, the City of Canton may withhold payment of invoices submitted by the Consultant until corrective measures are taken. If the Consultant fails to comply, the City of Canton may make a finding to that effect and so notify the Consultant in writing that the Agreement is terminated in accordance with Section 2.41 of the *Specifications for Consulting Services, 2016 Edition*.

VI. REPORT-IN LOCATIONS AND TRAVEL REGULATIONS

The report-in location for Consultant personnel shall be the project field office or a location at the project site designated by the City of Canton. No compensation will be provided for commuting to and from the report-in location. Travel time to retrieve or return samples or equipment is billable. Consultants that provide leased or company owned vehicles for use on

site shall be compensated on a daily rate basis. If company owned vehicles are provided, the Consultant's indirect cost pool shall be credited for the daily rate reimbursement.

VII. SERVICES BY THE CITY OF CANTON

- A. The City of Canton will make available to the Consultant the necessary plans, specifications, copy of the proposal and other documents as required.
- B. The City of Canton will provide the Consultant with documentation requirements including inspection report forms needed for computation, reporting, record keeping and field testing.

VIII. ODOT CONSTRUCTION INSPECTION/ADMINISTRATION PREQUALIFICATION POLICY - REQUIREMENTS FOR INTERIM WORK STATUS

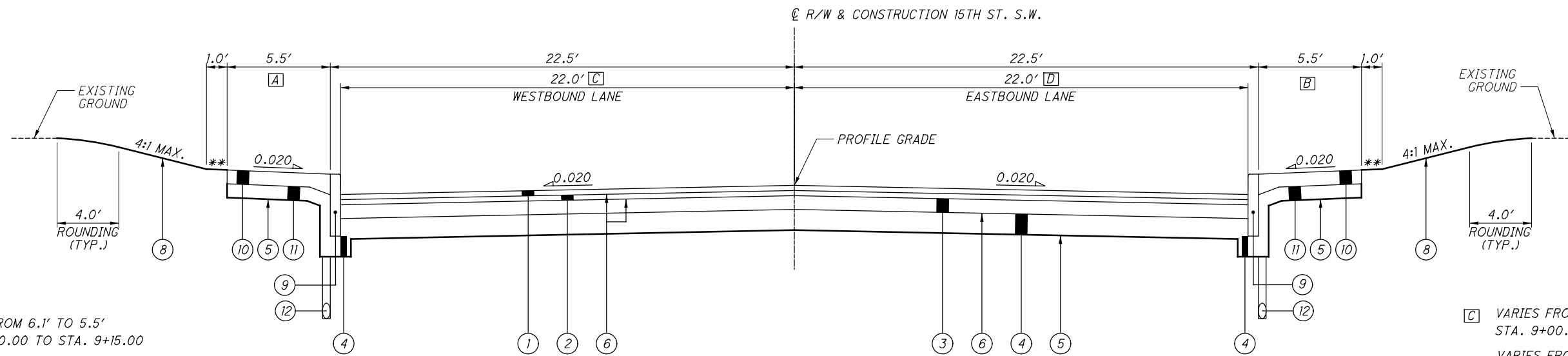
In an effort to assist individuals in becoming prequalified with ODOT to provide construction inspection and administration services, the City of Canton will allow individuals that lack only the experience requirement to work on an interim basis. In this way, individuals that meet the Degree/Certifications requirements can gain experience towards full prequalification. In this type of arrangement, the prime consulting firm will remain responsible for the quality of the work, and must actively supervise the individual and monitor the work being performed. This process is limited to the following prequalification categories and subject to the requirements listed below.

- A. Project Inspector
 - 1. The individual must meet all Degree/Certifications requirements except that Level 1 NICET certification is acceptable. Level 2 NICET certification will still be required for full prequalification.
 - 2. The individual must work under the direct supervision of a Construction Engineer Level 2 on a project that includes at least one other prequalified project inspector working on a full time basis.
- B. Construction Engineer Level 1
 - 1. The individual must meet all Degree/Certifications requirements.
 - 2. The individual must work under the direct supervision of a Construction Engineer Level 2 on a project with construction costs less than \$2,000,000.

When submitting a letter of interest for a project in which this arrangement is proposed, the firm must list employees proposed to work on this basis and demonstrate that the above requirements have been met.

Attached below are the plans for the STA 15th St SW Canton PID No.11315 project for your reference:

** = 0.020



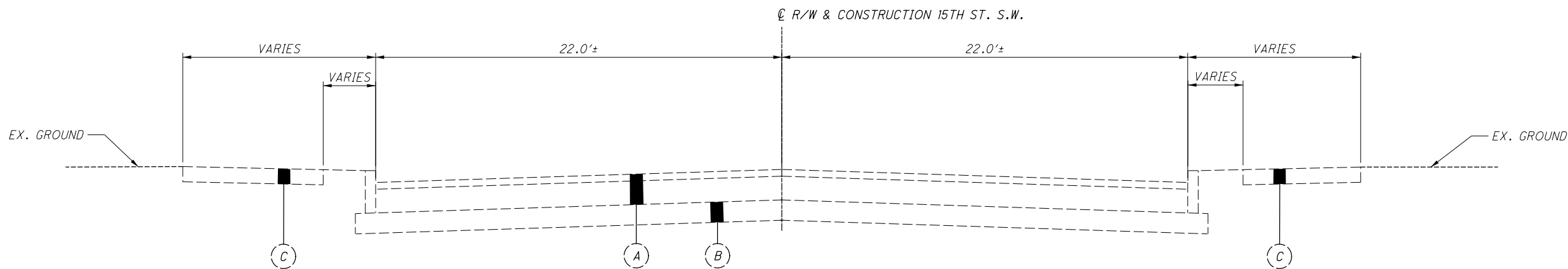
A VARIES FROM 6.1' TO 5.5'
STA. 9+00.00 TO STA. 9+15.00
VARIES FROM 5.5' TO 8.1'
STA. 10+75.00 TO STA. 11+24.00

B VARIES FROM 6.5' TO 5.5'
STA. 9+00.00 TO STA. 9+15.00
VARIES FROM 5.5' TO 7.0'±
STA. 11+00.00 TO STA. 11+11.89

NORMAL SECTION
STA. 9+00.00 TO STA. 9+34.50
STA. 10+65.50 TO STA. 11+25.00

C VARIES FROM 21.1'± TO 22.0'
STA. 9+00.00 TO STA. 9+15.00
VARIES FROM 22.0' TO 19.4'±
STA. 10+75.00 TO STA. 11+25.00

D VARIES FROM 20.8'± TO 22.0'
STA. 9+00.00 TO STA. 9+15.00
VARIES FROM 22.0' TO 19.2'±
STA. 10+90.00 TO STA. 11+25.00



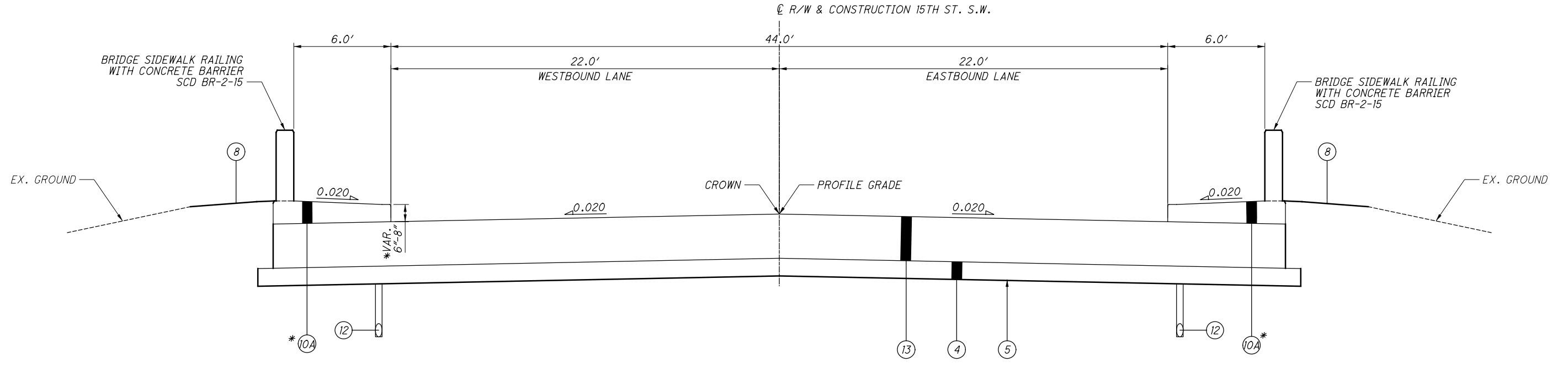
EXISTING SECTION - 15TH ST. S.W.

LEGEND

- | | | |
|---|--|-----------------------------|
| ① ITEM 441 - 1/2" ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), PG64-22 | ⑧ ITEM 659 - 4" TOPSOIL / SEED / MULCH CLASS 1 LAWN MIX | Ⓐ EXISTING ASPHALT PAVEMENT |
| ② ITEM 441 - 1/2" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, (448) | ⑨ ITEM 609 - CONCRETE CURB - CITY STD. 29 | Ⓑ EXISTING AGGREGATE BASE |
| ③ ITEM 301 - 4" ASPHALT CONCRETE BASE, PG64-22 | ⑩ ITEM 608 - 5" CONCRETE WALK | Ⓒ EXISTING CONC. WALK |
| ④ ITEM 304 - 6" AGGREGATE BASE | ⑩A CONCRETE WALK ON APPROACH SLABS AND BRIDGE (THICKNESS VARIES, SEE BRIDGE PLANS) | |
| ⑤ ITEM 204 - SUBGRADE COMPACTION | ⑪ ITEM 304 - 4" AGGREGATE BASE | |
| ⑥ ITEM 407 - TACK COAT | ⑫ ITEM 605 - 6" BASE PIPE UNDERDRAINS WITH GEOTEXTILE FABRIC | |
| | ⑬ ITEM 526 - REINFORCED CONCRETE APPROACH SLABS (T=15") | |

O:\Transportation\Projects\Local\City of Canton\15th St SW Bridge_Study\2345\roadway\sheets\2345_GY001.dgn 1/19/2023 3:13:16 PM adesimone

SEE $\frac{2}{53}$ FOR LEGEND.



APPROACH SLAB SECTION
 STA. 9+34.50 TO STA. 9+64.50
 STA. 10+35.50 TO STA. 10+65.50

* SEE BRIDGE PLANS FOR SIDEWALK AND CURB DETAILS AT THE APPROACH SLABS.

o:\Transportation\Projects\Local\City of Canton\15th St SW Bridge Study\2345\roadway\sheet\2345_gy001.dgn 1/19/2023 3:13:21PM adesimone

TYPICAL SECTIONS

STA -15SW -13.50

ROUNDING

THE ROUNDING AT SLOPE BREAKPOINTS SHOWN ON THE TYPICAL SECTIONS APPLIES TO ALL CROSS-SECTIONS, EVEN THOUGH OTHERWISE SHOWN.

UTILITIES

LISTED BELOW ARE ALL UTILITIES LOCATED WITHIN THE PROJECT CONSTRUCTION LIMITS TOGETHER WITH THEIR RESPECTIVE OWNERS:

<u>ELECTRIC</u>	<u>WATER</u>
AMERICAN ELECTRIC POWER 700 MORRISON RD GAHANNA, OH 43230 BRENT GATES 614-883-6802	CITY OF CANTON WATER DEPARTMENT 2664 HARRISBURG RD NE CANTON, OH 44708 ATTN: BRENT BURRIER 330-438-6569

GAS

DOMINION ENERGY OHIO
ATTN: 2ND FLOOR RELOCATION DESIGN
320 SPRINGSIDE DR, SUITE 320
AKRON, OH 44333
RELOCATION@DOMINIONENERGY.COM
PH: 330-664-2638
FAX: 888-504-0126

SANITARY & STORM SEWER

CANTON CITY ENGINEER'S OFFICE
2436-30TH STREET NE
CANTON, OH 44705
ATTN: JAMES BENEKOS
330-489-3381

THE LOCATION OF THE UNDERGROUND UTILITIES SHOWN ON THE PLANS ARE AS OBTAINED FROM THE OWNERS AS REQUIRED BY SECTION 153.64 O.R.C.

SURVEYING PARAMETERS

PRIMARY PROJECT CONTROL MONUMENTS GOVERN ALL POSITIONING ON ODOT PROJECTS. SEE SHEET 6. OF THE PLANS FOR A TABLE CONTAINING PROJECT CONTROL INFORMATION.

USE THE FOLLOWING PROJECT CONTROL, VERTICAL POSITIONING, AND HORIZONTAL POSITIONING PARAMETERS FOR ALL SURVEYING:

PROJECT CONTROL

POSITIONING METHOD: ODOT VRS
MONUMENT TYPE:

VERTICAL POSITIONING

ORTHOMETRIC HEIGHT DATUM: NAVD88
GEOID: G12B

HORIZONTAL POSITIONING

REFERENCE FRAME: NAD83 (2011)
 ELLIPSOID: GRS80
 MAP PROJECTION: LAMBERT CONFORMAL CONIC
 COORDINATE SYSTEM: OHIO STATE PLANE, NORTH (3401)
 COMBINED SCALE FACTOR: 0.99990812
 ORIGIN OF COORDINATE SYSTEM: 0,0

USE THE POSITIONING METHODS AND MONUMENT TYPE USED IN THE ORIGINAL SURVEY TO RESTORE ALL MONUMENTS RELATED TO PRIMARY PROJECT CONTROL THAT ARE DAMAGED OR DESTROYED BY CONSTRUCTION ACTIVITIES. RESTORE THE DAMAGED OR DESTROYED MONUMENTS IN ACCORDANCE WITH CMS 623.

UNITS ARE IN U.S. SURVEY FEET.

CLEARING AND GRUBBING

ALTHOUGH THERE ARE NO TREES OR STUMPS SPECIFICALLY MARKED FOR REMOVAL WITHIN THE LIMITS OF THE PROJECT, A LUMP SUM QUANTITY IS INCLUDED IN THE GENERAL SUMMARY FOR ITEM 201, CLEARING AND GRUBBING. ALL PROVISIONS AS SET FORTH IN THE SPECIFICATIONS UNDER THIS ITEM ARE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 201, CLEARING AND GRUBBING.

SEEDING AND MULCHING

THE FOLLOWING QUANTITIES ARE PROVIDED TO PROMOTE GROWTH AND CARE OF PERMANENT SEEDED AREAS:

659, TOPSOIL	12 CU. YD.
659, SEEDING AND MULCHING	108 SQ. YD.
659, COMMERCIAL FERTILIZER	0.02 TON
659, LIME	0.02 ACRES
659, WATER	1 M. GAL.

SEEDING AND MULCHING SHALL BE APPLIED TO ALL AREAS OF EXPOSED SOIL BETWEEN THE RIGHT-OF-WAY LINES, AND WITHIN THE CONSTRUCTION LIMITS FOR AREAS OUTSIDE THE RIGHT-OF-WAY LINES COVERED BY WORK AGREEMENT OR SLOPE EASEMENT. QUANTITY CALCULATIONS FOR SEEDING AND MULCHING ARE BASED ON THESE LIMITS.

PRECONSTRUCTION INCIDENTALS

(A) ADMINISTRATIVE REQUIREMENTS:

THE DEVELOPER/CONTRACTOR SHALL BE RESPONSIBLE FOR FULLY COMPLYING WITH ALL THE ADMINISTRATIVE DUTIES HEREIN CONTAINED.

THE DEVELOPER/CONTRACTOR SHALL DESIGNATE TO THE CITY AN EMPLOYEE RESPONSIBLE FOR CORRESPONDENCE, NOTIFICATIONS, AND SUBMITTALS PERTINENT TO THE PROJECT.

(B) PRECONSTRUCTION MEETING:

A PRECONSTRUCTION MEETING WITH THE CONTRACTOR, REPRESENTATIVES OF ALL UTILITY COMPANIES, THE CITY OF CANTON ENGINEERING DEPARTMENT AND THE CITY OF CANTON WATER DEPARTMENT IS REQUIRED FOR THIS PROJECT PRIOR TO THE START OF ANY CONSTRUCTION ACTIVITY.

FOR CITY GENERAL PROJECTS, THE CITY ENGINEER WILL CONTACT THE CONTRACTOR TO ARRANGE A MEETING DATE. THE CITY ENGINEER WILL CONTACT THE ABOVE AGENCIES TO CONFIRM THE MEETING DATE.

(C) PROJECT SAFETY:

THE CONTRACTOR SHALL MAINTAIN A SAFE WORKING ENVIRONMENT AT THE PROJECT SITE AT ALL TIMES. THE CONTRACTOR SHALL PROPERLY SUPPORT AND/OR MAINTAIN ALL EXCAVATIONS PER APPLICABLE SAFETY REQUIREMENTS AND COMPLY WITH ALL O.S.H.A. REGULATIONS. APPROPRIATE BARRICADES, WARNING LIGHTS, SIGNS, FENCING, ETC. SHALL BE ERECTED AROUND THE CONSTRUCTION AREA DURING ALL NON-WORKING HOURS TO ALERT PERSONS OF THE POTENTIAL DANGER ASSOCIATED WITH THE AREA UNDER CONSTRUCTION AS WELL AS TO PREVENT ACCESS BY UNAUTHORIZED PERSONNEL TO THE CONSTRUCTION SITE/AREA. THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THE SAFETY OF THE GENERAL PUBLIC AS WELL AS ALL CONSTRUCTION PERSONNEL. PUBLIC STREETS SHALL BE KEPT CLEAN AND FREE OF DEBRIS (MUD, STONE, ETC.) AT ALL TIMES. THE CONTRACTOR SHALL ALERT ALL LOCAL EMERGENCY AGENCIES (FIRE, POLICE, AMBULANCE, ETC.) OF THE NATURE OF THE PROPOSED PROJECT PRIOR TO BEGINNING AND CONSTRUCTION ACTIVITY. ACCESS FOR EMERGENCY VEHICLES SHALL BE MAINTAINED AT ALL TIMES.

(D) UNDERGROUND UTILITIES:

THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES SHOWN ON THE PLANS WERE OBTAINED BY FIELD OBSERVATIONS, FROM EXISTING RECORDS, AND/OR FROM THE OWNERS OF THE RESPECTIVE UTILITIES. THE INFORMATION AS SHOWN IS BELIEVED TO BE CORRECT; HOWEVER, THE COMPLETENESS AND ACCURACY OF THIS INFORMATION CANNOT BE GUARANTEED. THE CONTRACTOR SHALL BE RESPONSIBLE TO CONTACT ALL THE VARIOUS UTILITY COMPANIES (PUBLIC AND PRIVATE) TO VERIFY THE EXISTENCE, LIMITS AND/OR LOCATION OF ANY UTILITIES WHICH MAY BE ALONG THE ROUTE OR WITHIN THE VICINITY OF THIS IMPROVEMENT.

(E) UTILITY NOTIFICATION:

AT LEAST TWO WORKING DAYS PRIOR TO COMMENCING OPERATIONS ON THIS PROJECT, THE CONTRACTOR SHALL NOTIFY THE CITY ENGINEER, THE REGISTERED UTILITY PROTECTION AGENCY/SERVICE, AND THE OWNERS OF ANY OTHER UTILITIES (PUBLIC AND/OR PRIVATE) THAT MAY HAVE UTILITY LINES OR FACILITIES WITHIN THE VICINITY OF THIS PROJECT BUT WHO ARE NOT MEMBERS OF THE REGISTERED UTILITY PROTECTION SERVICE. THE OWNERS OF ANY UNDERGROUND UTILITY FACILITY SHALL, WITHIN 48 HOURS AFTER NOTICE IS RECEIVED, EXCLUDING SATURDAYS, SUNDAYS AND OTHER LEGAL HOLIDAYS; STAKE, MARK OR OTHERWISE DESIGNATE THE EXISTENCE AND/OR LOCATION OF THE UNDERGROUND UTILITY FACILITIES IN THE CONSTRUCTION AREA IN SUCH A MANNER AS TO INDICATE THEIR COURSE TOGETHER WITH THE APPROXIMATE DEPTH AT WHICH THEY WERE INSTALLED. THE MARKING AND/OR LOCATING SHALL BE COORDINATED TO STAY APPROXIMATELY TWO WORKING DAYS AHEAD OF THE PLANNED CONSTRUCTION.

OHIO UTILITIES PROTECTION SERVICE:
1-800-362-2764 (CONTACT NON-MEMBERS DIRECTLY).

THE CITY ENGINEER'S OFFICE IS TO BE CONTACTED DIRECTLY FOR SANITARY AND STORM SEWER AND TRAFFIC INTERCONNECT FACILITIES LOCATION: 330-489-3381.
[UTILITY CONTACTS LAST UPDATED 2/12/2020]

CONSTRUCTION INCIDENTALS

(A) PLAN DISCREPANCIES:

ANY DISCREPANCIES FROM THE PLAN INFORMATION SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER SO THAT THE APPROPRIATE ADJUSTMENTS IN ALIGNMENT AND/OR GRADE MAY BE MADE PRIOR TO THE START OF CONSTRUCTION OR THE CONTINUATION OF THE SAME. FAILURE BY THE CONTRACTOR TO VERIFY AND/OR DETERMINE EXISTING INFORMATION AS INDICATED WILL RESULT IN THE CONTRACTOR BEING RESPONSIBLE FOR ANY CHANGES NECESSARY TO COMPLETE THE WORK SPECIFIED WITHOUT ADDITIONAL COMPENSATION.

(B) VERIFICATION OF UNDERGROUND UTILITIES:

THE CONTRACTOR SHALL BE RESPONSIBLE TO VERIFY THE EXISTENCE AS WELL AS THE ACTUAL LOCATION, ALIGNMENT, AND ELEVATIONS OF ALL EXISTING UTILITIES/FACILITIES WITHIN AND/OR ADJACENT TO THE GENERAL LIMITS OF THESE IMPROVEMENTS INCLUDING WATERLINES, SANITARY AND STORM SEWERS, GAS LINES, COMMUNICATION LINES/BANKS, ELECTRIC LINES, ETC. THIS MAY REQUIRE EXPLORATORY EXCAVATIONS TO BE PERFORMED BY THE CONTRACTOR FOR WHICH HE WILL NOT BE REIMBURSED. THE CONTRACTOR SHALL NOT ASSUME THAT EXISTING UTILITIES/CONDUITS WERE INSTALLED AT TYPICAL/STANDARD DEPTHS OR AT UNIFORM SLOPES/GRADES/ DEPTHS BETWEEN ACCESS POINTS (CATCH BASINS, MANHOLES, JUNCTION CHAMBERS, ETC.)

WHERE PLANS PROVIDE FOR A PROPOSED CONDUIT TO BE CONNECTED TO, OR CROSS OVER OR UNDER AN EXISTING SEWER OR UNDERGROUND UTILITY, THE CONTRACTOR SHALL LOCATE THE EXISTING PIPES OR UTILITIES BOTH AS TO LINE AND GRADE BEFORE STARTING TO INSTALL THE PROPOSED CONDUIT.

(C) PROTECTION OF UTILITIES:

THE DEVELOPER/CONTRACTOR SHALL TAKE ALL PRECAUTIONS NECESSARY TO PROTECT AND SUPPORT EXISTING UTILITIES ENCOUNTERED DURING THE CONSTRUCTION OF THE PROPOSED IMPROVEMENTS AS APPROVED BY THE OWNERS OF THE UTILITY AND THE CITY ENGINEER.

THE DEVELOPER/CONTRACTOR SHALL BE RESPONSIBLE TO CLOSELY COORDINATE THEIR WORK WITH ALL UTILITY COMPANIES; ANY POTENTIAL DELAYS WILL NOT BE THE RESPONSIBILITY OF THE CITY.

THE CONTRACTOR SHOULD EXPECT AT A MINIMUM ONE SANITARY SEWER LATERAL, ONE ROOF DRAIN, ONE WATER SERVICE, AND ONE GAS SERVICE FOR EACH LOT. ANY OF THE ABOVE UTILITIES DAMAGED DUE TO THE CONTRACTOR'S WORK SHALL BE RESTORED TO THE UTILITY OWNER'S SATISFACTION AT THE CONTRACTOR'S EXPENSE, UNLESS OTHERWISE NOTED IN THE PLANS OR SPECIFICATIONS.

(D) MAINTENANCE OF UTILITY SERVICES:

THE CONTRACTOR SHALL BE RESPONSIBLE TO MAINTAIN UTILITY SERVICES AT ALL TIMES.

WATER SERVICE MAY BE INTERRUPTED FOR LIMITED PERIODS (4 HOURS MAXIMUM) DURING CONNECTION BETWEEN EXISTING WATER LINES AND RELOCATED/NEW WATER MAINS WHICH CANNOT BE COMPLETED OTHERWISE. NO SHUT DOWN SHALL OCCUR WITHOUT WRITTEN PERMISSION OF THE CITY OF CANTON WATER DEPARTMENT. PROPERTY OWNERS AFFECTED BY APPROVED INTERRUPTED SERVICE SHALL BE NOTIFIED 48 HOURS IN ADVANCE BY THE CONTRACTOR.

STORM SEWER AND SANITARY SEWER SERVICES SHALL BE MAINTAINED WITHOUT INTERRUPTION, UNLESS APPROVED BY THE CITY ENGINEER.

IN THE EVENT THAT CONSTRUCTION DISRUPTS THE FLOW OF A SANITARY SEWER, THE CONTRACTOR SHALL IMMEDIATELY RECTIFY THE DISRUPTED SEWER BY EITHER TEMPORARILY FLUMING WITH MATERIALS ACCEPTABLE TO THE ENGINEER OR BYPASSING WITH PUMPS. COST OF MAINTAINING AND REPAIR OF SANITARY SEWERS DISTURBED BY CONSTRUCTION SHALL BE AT THE CONTRACTOR'S EXPENSE, UNLESS OTHERWISE NOTED IN THE PLANS OR SPECIFICATIONS.

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(E) CONSTRUCTION NOISE:

CONSTRUCTION NOISE ASSOCIATED WITH ANY IMPROVEMENT PROJECT SHALL BE LIMITED TO LEVELS COMMENSURABLE WITH ADJOINING LAND AND THEIR ASSOCIATED USAGE AS DETERMINED BY THE CITY ENGINEER. IN ORDER TO MINIMIZE ANY ADVERSE CONSTRUCTION NOISE IMPACTS, ANY POWER-OPERATED CONSTRUCTION-TYPE DEVICES SHALL NOT BE OPERATED BETWEEN THE HOURS OF 7:00 P.M. AND 7:00 A.M. UNLESS AUTHORIZED BY THE CITY ENGINEER.

(F) OPEN TRENCH CONSTRUCTION:

THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL EXCAVATION/TRENCHING PRACTICES FOR THE PROPOSED IMPROVEMENT, OR AS FURTHER SHOWN ON THE PLANS AND SPECIFICATIONS.

THE CONTRACTOR SHALL FOLLOW ALL APPLICABLE LOCAL AND STATE SAFETY REGULATIONS, INCLUDING CODE OF FEDERAL REGULATIONS, PART 1926 (SAFETY AND HEALTH REGULATIONS FOR CONSTRUCTION), SUBPART P (EXCAVATIONS), FOR ALL APPLICABLE REQUIREMENTS AND RESPONSIBILITIES.

PRIOR TO COMMENCING CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY THE CITY ENGINEER OF THE PROJECT'S ASSIGNED "COMPETENT PERSON" IN OSHA EXCAVATION STANDARDS.

(G) TRENCH CLOSING AND TEMPORARY TOPPING:

THE DEVELOPER/CONTRACTOR SHALL BE RESPONSIBLE TO DETERMINE THE NECESSARY LEVELS OF PROTECTION AND SAFEGUARDING OF ALL OPEN TRENCHES, WHEN WORK IS EITHER COMPLETED AT THE END OF THE DAY OR SUSPENDED FOR ANY OTHER REASON.

FOR TRENCH SURFACE REQUIREMENTS, REFER TO NOTE 4 ON CITY STANDARD DRAWING NO. 19.

(H) DUST CONTROL:

THE DEVELOPER/CONTRACTOR SHALL FURNISH AND APPLY WATER AND CALCIUM CHLORIDE FOR DUST CONTROL AS DIRECTED BY THE ENGINEER. SUFFICIENT QUANTITIES OF CALCIUM CHLORIDE SHALL BE STORED ON THE JOB SITE AT ALL TIMES TO BE USED FOR DUST CONTROL.

(I) PRESERVATION AND RESTORATION OF DISTURBED FEATURES:

EXISTING DRIVES, BERMS, LAWNS, PAVEMENTS, CURBS, SIDEWALKS, SIGNS, MAILBOXES, FENCES, RETAINING WALLS, LANDSCAPING ITEMS, OR OTHER APPURTENANCES DISTURBED DURING CONSTRUCTION BUT NOT SPECIFICALLY DESIGNATED FOR REMOVAL/REPLACEMENT SHALL BE RESTORED BY THE CONTRACTOR AT HIS EXPENSE TO A CONDITION EQUAL TO OR BETTER THAN THAT WHICH EXISTED PRIOR TO DISTURBANCE AND TO THE COMPLETE SATISFACTION OF THE CITY ENGINEER.

RESTORATION OF EXISTING ROADWAYS SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE CITY, TOWNSHIP, COUNTY, AND/OR OTHER AGENCIES HAVING AUTHORITY. COST FOR THE RESTORATION OF THESE ITEMS SHALL BE THE RESPONSIBILITY OF THE DEVELOPER/CONTRACTOR, UNLESS OTHERWISE SPECIFIED IN THE PLANS OR SPECIFICATIONS. NO PUBLIC ROADWAY SHALL BE DISTURBED WITHOUT PRIOR WRITTEN APPROVAL FROM THE GOVERNING AGENCY AND ACQUISITION OF NECESSARY PERMITS.

(J) SALVAGED CASTINGS:

WHEN DIRECTED BY THE CITY ENGINEER, ALL METAL CASTINGS SHALL BE CAREFULLY REMOVED AND STORED ON SITE OR DELIVERED TO A LOCATION DESIGNATED BY THE CITY ENGINEER.

(K) PLUG EXISTING CONDUIT:

THIS ITEM SHALL CONSIST OF THE CONSTRUCTION OF BULKHEADS IN AN EXISTING CONDUIT TO BE ABANDONED.

BULKHEADS SHALL CONSIST OF BRICK AND/OR CONCRETE MASONRY WITH A MINIMUM THICKNESS OF 12 INCHES.

PAYMENT FOR PLUGGING OF EXISTING CONDUIT FOR ABANDONMENT SHALL BE INCLUDED IN THE UNIT BID OF THE VARIOUS ITEMS OF THE PROJECT.

(L) CONSTRUCTION LAYOUT:

THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CONSTRUCTION LAYOUT UTILIZING PERTINENT PLAN DATA. THE CITY ENGINEER WILL NOT BE RESPONSIBLE FOR STAKING HORIZONTAL OR VERTICAL CONTROL. CONSTRUCTION LAYOUT SHALL BE IN ACCORDANCE WITH ODOT 623 CONSTRUCTION LAYOUT STAKES.

AT THE CITY ENGINEER'S REQUEST, THE CONTRACTOR SHALL MAKE AVAILABLE ALL SURVEY FIELD NOTES FOR REVIEW.

(M) EXISTING MONUMENTATION:

THE CONTRACTOR SHALL PRESERVE ALL CORNERSTONES, IRON PINS, CONCRETE MONUMENTS AND/OR ANY TYPE OF LAND MONUMENT. THE CONTRACTOR SHALL HAVE ALL MONUMENTS IN THE PROXIMITY OF THE WORK REFERENCED. THE CONTRACTOR SHALL REPLACE/RESET ANY DISTURBED OR DAMAGED MONUMENTS AND SHALL FURNISH A CERTIFICATION BY A REGISTERED SURVEYOR THAT THE MONUMENTS HAVE BEEN RESTORED.

(N) INSPECTION:

FOLLOWING THE PRE-CONSTRUCTION MEETING(S) AND ESTABLISHMENT OF AN APPROVED SCHEDULE, THE CONTRACTOR SHALL GIVE A MINIMUM 48 HOUR NOTICE BEFORE STARTING ANY WORK ON THIS PROJECT AND SHALL KEEP THE CITY INFORMED OF HIS/HER CONSTRUCTION SCHEDULE. ALL WORK REQUIRED FOR THIS IMPROVEMENT SHALL BE SUBJECT TO INSPECTION BY THE CITY OF CANTON OR THEIR DESIGNATED REPRESENTATIVE. NO WORK SHALL BE PERFORMED WITHOUT AN AUTHORIZED INSPECTOR PRESENT, UNLESS OTHERWISE APPROVED.

(O) FIELD OFFICE:

IF A PAY ITEM IS PROVIDED, THE CONTRACTOR SHALL PROVIDE A FIELD OFFICE IN ACCORDANCE WITH ODOT 619. THE FIELD OFFICE SHALL BE TYPE 'B', AS MENTIONED IN THE PLANS.

EARTHWORK / SITE WORK

(A) EASEMENTS AND RIGHT-OF WAY:

THE CONTRACTOR SHALL STAY WITHIN THE DESIGNATED PROPERTIES, EASEMENTS, AND/OR RIGHT-OF-WAY PROVIDED FOR THE PROJECT AT ALL TIMES. NO MATERIAL SHALL BE STORED NOR ANY WORK PERFORMED ON PRIVATE PROPERTY UNLESS OTHERWISE APPROVED. DISTURBANCE OF EXISTING FEATURES AND/OR IMPROVEMENTS SHALL BE KEPT TO AN ABSOLUTE MINIMUM AND AS APPROVED BY THE CITY ENGINEER/PROPERTY OWNER.

(B) SUITABILITY OF SITE:

THE CITY OF CANTON SHALL NOT BE RESPONSIBLE FOR THE TYPE AND/OR SUITABILITY OF THE MATERIAL UNDERLYING THE PROJECT SITE. THE CONTRACTOR MUST APPRAISE THEMSELVES OF ANY EXISTING SITE CONDITIONS WHICH MAY AFFECT THEIR BID OR THE PERFORMANCE OF THE REQUIRED WORK. THE CONTRACTOR SHALL PERFORM ANY INVESTIGATIONS AND/OR TESTING NECESSARY TO ADEQUATELY DETERMINE/ESTIMATE TO THEIR SATISFACTION ALL SITE CONDITIONS WHICH COULD AFFECT THE PERFORMANCE OF THE PROPOSED IMPROVEMENTS. THIS COULD INCLUDE, BUT NOT BE LIMITED TO, UNSUITABLE AND/OR UNSTABLE SOIL/SUBSURFACE CONDITIONS, ROCK, WATER (PERCHED OR FREE), SPRINGS, ETC.

REFER TO CITY STANDARD DRAWING NO. 19 FOR ADDITIONAL DETAILS.

(C) REMOVAL/REPLACEMENT OF UNSUITABLE MATERIAL:

THE CONTRACTOR SHALL UNDERCUT AND REPLACE UNSUITABLE MATERIAL ENCOUNTERED DURING INSTALLATION OF THE PROPOSED UTILITIES AND ROADWAY IN ACCORDANCE WITH CITY STANDARD DRAWING NO. 19.

ROADWAY / DRIVE APPROACHES / WALK / CURB

(A) PAVEMENT STANDARDS:

PAVEMENTS SHALL BE CONSTRUCTED ACCORDING TO APPLICABLE CITY AND/OR ODOT STANDARD DRAWINGS AND SPECIFICATIONS EFFECTIVE AT THE TIME OF CONSTRUCTION, UNLESS SPECIFIED OTHERWISE ON THE PLANS.

(B) RESTRICTED WORK SCHEDULE:

NO CONCRETE FINISH WORK OR PERMANENT ASPHALT SHALL BE PLACED FROM NOVEMBER 15TH TO APRIL 15TH UNLESS WRITTEN APPROVAL IS GRANTED BY THE CITY ENGINEER.

(C) ASPHALT/CONCRETE:

IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO NOTIFY THE ENGINEER 48 HOURS IN ADVANCE OF BEGINNING WORK WHICH REQUIRES COMPACTION TESTING AND/OR PRE-POUR INSPECTION PRIOR TO PLACEMENT OF ASPHALT OR CONCRETE. WORK SHALL NOT PROCEED UNTIL TESTING AND/OR INSPECTION HAS BEEN COMPLETED AND APPROVED BY THE CITY ENGINEER.

SANITARY SEWERS / STORM SEWERS

STANDARD DRAWINGS AND SUPPLEMENTAL SPECIFICATIONS

CITY OF CANTON

- NO. 10 - PRECAST STORM OR SANITARY MANHOLE (2/26/2021)
- NO. 12 - MANHOLE COVER (2/26/2021)
- NO. 13 - MANHOLE ADJUSTMENTS (2/26/2021)

SUPPLEMENTAL SPECIFICATIONS (SS):

ODOT

- SS 800 - REVISIONS TO THE 2019 CONSTRUCTION & MATERIALS SPECIFICATIONS (JUL 21, 2023)
- SS 902 - CONDUIT INSPECTION EQUIPEMENT (7/19/2019)
- SS 1015 - COMPACTION TESTING OF UNBOUND MATERIALS (JAN 21, 2022)

CITY OF CANTON

SS 01-00: PROJECT DOCUMENTATION AND SUBMITTAL REQUIREMENTS FOR ALL PUBLIC WORK PROJECTS AND SUBDIVISIONS DEVELOPEMENTS (5/12/2020)

SS 03-00: TESTING PRACTICES FOR LOW-PRESSURE AIR TESTING OF INSTALLED, NON-PRESSURE, THERMOPLASTIC SEWER PIPE (7/18/2008)

SS 04-01: STANDARD TEST METHOD FOR CONCRETE SEWER MANHOLES BY THE NEGATIVE AIR PRESSURE TEST (4/2001)

STORM WATER POLLUTION PREVENTION:

(A) FOR PROJECTS LESS THAN ONE (1) ACRE OF TOTAL LAND-DISTURBANCE:

AN EPA NPDES CONSTRUCTION STORM WATER PERMIT AND SWP3 IS NOT REQUIRED. HOWEVER, THE CONTRACTOR SHALL STILL ENSURE THAT APPROPRIATE PRACTICES ARE IN PLACE TO PROVIDE CONSTRUCTION RUNOFF AND EROSION AND SEDIMENT CONTROLS WITHIN THE PROJECT LIMITS. SUCH PRACTICES MAY INCLUDE THE USE OF SILT FENCE, STORM DRAIN INLET PROTECTION, JUTE MATTING, TEMPORARY SEEDING, MULCHING, CHECK DAMS, CONSTRUCTION ENTRANCES, CONCRETE WASHOUT AREAS, ETC. ALL PRACTICES SHALL BE INSTALLED AND MAINTAINED IN ACCORDANCE WITH THE CURRENT EDITION OF THE OHIO DEPARTMENT OF NATURAL RESOURCES' RAINWATER AND LAND DEVELOPMENT MANUAL, AS APPLICABLE.

EROSION AND SEDIMENT CONTROL PRACTICES MUST BE INSTALLED PRIOR TO BEGINNING CONSTRUCTION ACTIVITY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTINUED INSPECTION AND MAINTENANCE OF ALL PRACTICES AND WILL BE HELD RESPONSIBLE FOR ADDRESSING ANY ON- OR OFF-SITE EROSION/SEDIMENT ISSUES RELATED TO THE PROJECT. THE CONTRACTOR SHALL ABIDE BY ALL ORDERS ISSUED BY THE CITY PURSUANT TO INSPECTION OF THE PROJECT SITE.

TRAFFIC

(A) MAINTAINING TRAFFIC:

THE CONTRACTOR SHALL MAINTAIN TRAFFIC ADJACENT TO THE PROJECT AS SHOWN IN THE PLANS, DESCRIBED BELOW AND IN ACCORDANCE WITH THE REQUIREMENTS OF THE OHIO DEPARTMENT OF TRANSPORTATION MANUAL OF CONSTRUCTION AND MATERIALS SPECIFICATIONS ITEM 614 MAINTAINING TRAFFIC. THE CONTRACTOR SHALL FURNISH, MAINTAIN, AND REMOVE ALL SIGNS, FLAGS, FLAGMEN, WATCHMEN, BARRICADES, SIGN SUPPORTS, CONES, BARRELS, AND INCIDENTALS IN CONFORMANCE WITH THE MOST RECENT REVISIONS OF THE CURRENT EDITION OF THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS. INTERFERENCE WITH VEHICULAR TRAFFIC SHALL BE KEPT TO A MINIMUM AT ALL TIMES. ALL OPEN TRENCHES AND EXCAVATIONS SHALL BE PROTECTED WITH DRUMS, BARRICADES, OR BARRIERS. ACCESS SHALL BE MAINTAINED AT ALL TIMES FOR EMERGENCY AND FIRE DEPARTMENT VEHICLES.

THE TEMPORARY ROADWAY CLOSING MUST BE APPROVED IN WRITING BY THE CITY TRAFFIC ENGINEER AND ANY OTHER PUBLIC AGENCY HAVING JURISDICTION. THE CONTRACTOR SHALL NOTIFY THE TRAFFIC ENGINEER AT LEAST 72 HOURS IN ADVANCE OF ANY SUCH CLOSINGS FOR PUBLICATION AND EMERGENCY AGENCY NOTIFICATION.

(B) RESIDENTIAL AND BUSINESS AREAS:

THE CONTRACTOR SHALL MAINTAIN ACCESS TO LOCAL BUSINESSES DURING CONSTRUCTION. IN THE EVENT A DRIVE ACCESS NEEDS TO BE CLOSED, THE CONTRACTOR SHALL GIVE NOTICE OF CLOSURE AND DURATION TO THE PROPERTY OWNER 24 HOURS IN ADVANCE. CONTRACTOR SHALL ARRANGE FOR ALTERNATE PARKING AND REASONABLE ACCESS FOR THOSE PROPERTY OWNERS AFFECTED BY DRIVE CLOSURES.

(C) TRAFFIC CONTROL SIGNS:

ALL TRAFFIC CONTROL SIGNS SHALL COME COMPLETE AND BE MADE IN ACCORDANCE WITH THE CITY OF CANTON SIGN AND PAINT DEPARTMENT SPECIFICATIONS. GENERALLY, ALL SIGNS SHALL HAVE HI-INTENSITY SHEETING AND BE MADE WITH .080 50/52 ALUMINUM.

POST CONSTRUCTION INCIDENTALS

(A) AS-BUILT DRAWINGS:

AS-BUILT REPRODUCIBLE DRAWINGS IN PDF FORMAT SHALL BE PROVIDED TO THE CITY OF CANTON BY THE CONTRACTOR AT THE COMPLETION OF THE PROJECT. AS-BUILT INFORMATION SHALL CONSIST OF POST-CONSTRUCTION FIELD SURVEY DATA OF THE LOCATION, FLOWLINE ELEVATIONS, AND TOP-OF-GRADE/RIM ELEVATIONS FOR ALL STORM AND SANITARY STRUCTURES CONSTRUCTED AND/OR IMPACTED BY THE PROJECT.

(B) PROPOSED MONUMENTATION:

THE CONTRACTOR'S SURVEYOR SHALL NOTIFY THE CITY ENGINEER IN WRITING UPON THE COMPLETION OF MONUMENTS BEING SET AS PER PLAN OR RECORD PLAT.

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DOMINION ENERGY

IT IS THE CONTRACTOR'S RESPONSIBILITY TO MAINTAIN THE LATERAL AND SUBJACENT SUPPORT OF DOMINION ENERGY'S PIPELINE(S), IN COMPLIANCE TO 29 CFR, PART 1926, SUBPART P, (SAFE EXCAVATION & SHORING). ONE- FOOT MINIMUM VERTICAL AND HORIZONTAL CLEARANCE MUST BE MAINTAINED BETWEEN DOMINION ENERGY OHIO'S (DEO) EXISTING PIPELINE(S) AND ALL OTHER IMPROVEMENTS. EXTREME CARE SHOULD BE TAKEN NOT TO HARM ANY DEO FACILITY (PIPELINES, ETC.) OR APPURTENANCE (PIPE COATING, TRACER WIRE, CATHODIC PROTECTION TEST STATION WIRES & DEVICES, VALVE BOXES, ETC.) DEO FACILITIES MUST BE PROTECTED WITH A TARP DURING BRIDGE CONSTRUCTION. THE CONTRACTOR WILL BE RESPONSIBLE AND LIABLE FOR ENSURING THAT ALL DEO EXISTING FACILITIES, ABOVE AND BELOW GROUND, REMAIN UNDAMAGED, ACCESSIBLE AND IN WORKING ORDER. THE CROSSING OF DEO'S PIPELINE WITH ANOTHER STEEL FACILITY MAY CREATE A POTENTIAL CORROSION ISSUE FOR THE PROPOSED FACILITY AND THE EXISTING DEO FACILITY. PLEASE CONTACT DOMINION ENERGY OHIO'S CORROSION DEPARTMENT: DAVE CUTLIP (330-266-2121), RICK MCDONALD (330-266-2122), OR AL HUMRICHOUER (330-478-3757).

IN-WATER WORK RESTRICTION DATES

NO IN-STREAM WORK SHALL BE PERFORMED WITHIN THE WEST BRANCH OF NIMISHILLEN CREEK FROM APRIL 15TH THROUGH JUNE 30TH. IN-STREAM WORK IS DEFINED AS THE PLACEMENT AND/OR REMOVAL OF FILL MATERIALS (TEMPORARY OR PERMANENT) BELOW ORDINARY HIGH WATER OF THE CREEK. EXAMPLES OF "FILL" INCLUDE, BUT ARE NOT LIMITED TO: BRIDGE PIERS, ABUTMENTS, CULVERTS, ROCK CHANNEL PROTECTION, SCOUR PROTECTION, AND TEMPORARY ACCESS FILLS. FILLS PLACED WITHIN THE WEST BRANCH OF NIMISHILLEN CREEK CAN CONTINUE TO BE WORKED FROM/DURING THE WORK RESTRICTION DATES, BUT CANNOT BE EXPANDED, REMOVED, OR OTHERWISE MODIFIED (BELOW ORDINARY HIGH WATER) UNTIL ONCE AGAIN OUTSIDE OF THE WORK RESTRICTION DATES.

ENVIRONMENTAL NOTE

THE CITY OF CANTON MUST HIRE A STATE PERMITTED MALACOLOGIST TO COMPLETE A MUSSEL SALVAGE AND RELOCATION IN ACCORDANCE WITH THE MOST RECENT VERSION OF THE OHIO MUSSEL SURVEY PROTOCOL PRIOR TO THE INITIATION OF CONSTRUCTION ACTIVITIES BELOW THE ORDINARY HIGH WATER MARK OF WEST BRANCH NIMISHILLEN CREEK.

THE MUSSEL SURVEY MUST OCCUR AFTER MAY 1 AND BEFORE OCTOBER 1 EITHER WITHIN THE SAME SEASON AS THE INSTREAM WORK OR THE SEASON PRIOR TO THE INSTREAM WORK. SUBMIT THE RESULTS OF THE MUSSEL SURVEY, SALVAGE WORK, OR BOTH TO THE OHIO DEPARTMENT OF NATURAL RESOURCES. OBTAIN APPROVAL FROM THE OHIO DEPARTMENT OF NATURAL RESOURCES PRIOR TO PERFORMING WORK BELOW THE ORDINARY HIGH WATER MARK (OHWM) OF WEST BRANCH NIMISHILLEN CREEK.

CENTERLINE REFERENCE - GROUND COORDINATES					
STATION	OFFSET	STREET	NORTHING	EASTING	DESCRIPTION
2+24.16	0.00	15TH ST	408807.4254	2276421.4040	POT
16+00.00	0.00	15TH ST	408855.9529	2277796.3879	POT

ENVIRONMENTAL WORK

BASED ON HISTORIC LAND USAGE, REGULATED MATERIALS REVIEW (RMR) INVESTIGATION AND EXCAVATION NEEDED TO CONSTRUCT THE PROJECT, THE CONTRACTOR MAY ENCOUNTER REGULATED MATERIALS DURING EXCAVATION FOR CONSTRUCTION ACTIVITIES ON TWO SITES:

1. RM-001 (NORTHWEST QUADRANT OF BRIDGE) - STARK COUNTY PARCEL NO. 239159
2. RM-007 (NORTHWEST QUADRANT OF BRIDGE) - STARK COUNTY PARCELS 281881, 281882, 281911, 283262, & 283263

ANY SOIL EXCAVATED AT THE ABOVE-MENTIONED LOCATIONS SHALL BE REUSED AND/OR WASTED ON THE SAME PROPERTY LOCATION/SITE, AS DIRECTED BY THE PROJECT ENGINEER. ANY EXCAVATED SOIL, WHICH CANNOT BE REUSED ON SITE, SHALL BE PROPERLY DISPOSED OF BY THE CONTRACTOR IN AN APPROPRIATE LANDFILL FACILITY. IF LANDFILL DISPOSAL IS REQUIRED, THE CONTRACTOR SHALL COMPLETE ALL MANIFEST(S) FOR MATERIAL TO BE TRANSPORTED AND PROVIDE TO THE PROJECT ENGINEER FOR SIGNATURE. THE CONTRACTOR SHALL CONTACT THE LANDFILL DISPOSAL FACILITY TO DETERMINE IF ANY ADDITIONAL TESTING IS REQUIRED FOR DISPOSAL. THE CONTRACTOR SHALL PROVIDE ANY ADDITIONAL SAMPLING AND ANALYSIS OF THE MATERIAL AS REQUIRED BY THE DISPOSAL FACILITY. THE CONTRACTOR SHALL OBTAIN ALL SIGNATURES ON THE MANIFEST FOR TRANSPORTING AND DISPOSAL OF THE MATERIAL AND PROVIDE A FINAL COPY TO THE PROJECT ENGINEER.

A COPY OF THE REGULATED MATERIALS REVIEW (RMR) INVESTIGATION REPORT IS AVAILABLE ON ODOT'S ENVIRONET WEBSITE.

ENDANGERED SPECIES HABITAT

THE PROJECT IS LOCATED WITHIN THE KNOWN HABITAT RANGES OF THE FEDERALLY LISTED AND PROTECTED INDIANA BAT AND NORTHERN LONG-EARED BAT. NO TREES SHALL BE REMOVED UNDER THIS PROJECT FROM APRIL 1 THROUGH SEPTEMBER 30. ALL NECESSARY TREE REMOVAL SHALL OCCUR FROM OCTOBER 1 THROUGH MARCH 31. THIS REQUIREMENT IS NECESSARY TO AVOID AND MINIMIZE IMPACTS TO THESE SPECIES AS REQUIRED BY THE ENDANGERED SPECIES ACT (ESA). FOR THE PURPOSE OF THIS NOTE, A TREE IS DEFINED AS A LIVE, DYING, OR DEAD WOODY PLANT, WITH A TRUNK THREE INCHES OR GREATER IN DIAMETER AT A HEIGHT OF 4.5 FEET ABOVE THE GROUND SURFACE, AND WITH A MINIMUM HEIGHT OF 13 FEET.

PROJECT CONTROL INFORMATION

POINT	NORTH	EAST	ELEV.	DESCRIPTION	STATION	OFFSET	NORTH (m)	EAST (m)	ELEV (m)
RE01	408813.628	2276597.135	N/A	CALPT	4+00.00	0.00	124595.1940	693844.4383	N/A
RE02	408855.953	2277796.388	N/A	CALPT	16+00.00	0.00	124608.0936	694209.9377	N/A
GP1	408855.225	2277038.354	1016.23	MAG	8+42.41	-26.01	124607.8718	693978.9097	309.748
MN6	408859.566	2277126.148	1015.65	MAGS	9+30.30	-27.25	124609.1948	694005.6669	309.571
MN5	408859.604	2277188.387	1015.94	DRILLHS	9+92.51	-25.09	124609.2064	694024.6357	309.659
MN4	408809.712	2277201.325	1015.64	DRILLHS	10+03.68	25.22	124594.0007	694028.5788	309.568
MN12	408791.514	2277209.079	1006.01	IPINS-5/8_FOK	10+10.78	43.68	124588.4544	694030.9420	306.632
MN9	408740.587	2277229.141	1005.95	IPINS-5/8_FOK	10+29.04	95.29	124572.9333	694037.0564	306.614
GP2	408861.631	2277273.269	1014.22	MAGS	10+77.41	-24.13	124609.8242	694050.5054	309.135
GP3	408865.640	2277429.310	1015.04	IPINS-5/8_FOK	12+33.49	-22.63	124611.0460	694098.0624	309.385
SVT316	408809.309	2277096.810	1016.42	BM-1_MAGS-N/S-TPP	8+99.21	21.94	124593.8779	693996.7255	309.805
SVT724	408864.311	2277438.418	1016.88	BM-2_AFH_N-SIDE_15TH	12+42.55	-20.98	124610.6410	694100.8383	309.946
MN55	408838.142	2276396.886	N/A	IPIN-5/8-BENT	N/A	N/A	124602.6654	693783.4079	N/A
MN54	408845.002	2276635.543	N/A	IPID-5/8-CAMPBELL	4+39.49	-30.00	124604.7560	693856.1440	N/A
MN56	408848.493	2276741.036	N/A	IPIN-3/4-4DIA.CONC	5+45.04	-29.77	124605.8201	693888.2954	N/A
MN52	408937.109	2276996.575	N/A	IPIN-5/8	8+03.55	-109.32	124632.8278	693966.1766	N/A
MN53	408877.318	2276998.698	N/A	IPIN-5/8-BENT	8+03.56	-49.49	124614.6050	693966.8237	N/A
MN51	408917.278	2277087.205	N/A	IPIN-5/8-BENT	8+93.42	-86.30	124626.7838	693993.7982	N/A
MN50	408880.654	2277088.524	N/A	IPIN-5/8-SL.BENT	8+93.45	-49.65	124615.6217	693994.2002	N/A
MN57	408815.746	2277507.720	N/A	IPIN-5/8-SL.BENT	13+10.09	30.00	124595.8397	694121.9596	N/A

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GENERAL NOTES

STA -15SW -13.50

SANITARY SEWERS / STORM SEWERS

SANITARY SEWER AND DRAINAGE STRUCTURE GENERAL NOTES:

ALL SANITARY SEWER CONDUIT AND SANITARY MANHOLES SHALL BE CONSTRUCTED ACCORDING TO ODOT 611 WITH THE FOLLOWING AS PER PLAN MODIFICATIONS, AS APPLICABLE. ALL COSTS ASSOCIATED WITH THE FOLLOWING AS PER PLAN MODIFICATIONS SHALL BE INCLUDED IN THE APPLICABLE CONDUIT OR DRAINAGE STRUCTURE PAY ITEM UNLESS A SEPARATE PAY ITEM IS DESCRIBED AND PROVIDED.

UNLESS OTHERWISE APPROVED BY THE CITY ENGINEER OR SHOWN IN THE PLANS, THE ONLY ACCEPTABLE PIPE MATERIALS ARE AS FOLLOWS:

- 1. POLYVINYL CHLORIDE (PVC) SOLID WALL PIPE (707.45)

THE FOLLOWING PIPE MATERIALS SHALL ONLY BE UTILIZED WHEN APPROVED BY THE CITY ENGINEER OR SPECIFICALLY CALLED FOR IN THE PLANS.

- 1. DUCTILE IRON PIPE SANITARY (748.01) WITH THE CLASSIFICATION NOTED ON THE PLANS AND THE FOLLOWING REQUIREMENTS / MODIFICATIONS:
 - A. LINING FOR ALL DUCTILE IRON PIPE AND FITTINGS SHALL BE POLYAMINE CERAMIC EPOXY.
 - B. ALL DUCTILE IRON PIPE SHALL HAVE AN ASPHALTIC EXTERIOR COATING APPLIED AT THE POINT OF MANUFACTURE.
 - C. ALL DUCTILE IRON PIPE, INCLUDING FITTINGS AND APPARATUS BURIED UNDERGROUND, SHALL BE ENCASED WITH 8 MIL. POLYETHYLENE FILM CONFORMING TO ODOT 748.07.
- 2. POLYVINYL CHLORIDE (PVC) PIPE CONFORMING TO AWWA C900 (748.02)
 - A. MINIMUM PRESSURE CLASS 165 PSI (DR 25)

PIPE MATERIALS MUST MEET THE FOLLOWING MINIMUM REQUIREMENTS, AS APPLICABLE:

MATERIAL	SIZE	PIPE MATERIAL SPECIFICATION	JOINT SPECIFICATION	BEDDING CLASSIFICATION/ INSTALLATION SPECIFICATION
PVC	4"-15"	ASTM D3034	ASTM D3212	ASTM D2321
PVC	4"-36"	AWWA C900	ASTM D3139	ASTM D2321
DUCTILE IRON	4"-64"	ASTM A746	AWWA C111	AWWA C600

PIPES ONE SIZE LARGER THAN THE SPECIFIED CONDUIT TYPE SHALL ONLY BE USED WITH THE APPROVAL OF THE CITY ENGINEER.

AN INSTALLATION PLAN IS NOT REQUIRED FOR THIS PROJECT. HOWEVER, MATERIALS USED FOR TRENCH BEDDING AN BACKFILL SHALL CONFORM TO THE FOLLOWING CITY OF CANTON SPECIFICATIONS FOR ALLOWABLE BEDDING AND BACKFILL IN SANITARY SEWER TRENCHES:

BEDDING AND STRUCTURAL BACKFILL - FURNISH MATERIALS CONFORMING TO:

ODOT 703.11 TYPE 3 (AKA AASHTO M43 SIZE NO 57 OR 67) EXCEPT NO SAND, AIR- COOLED BLAST FURNACE SLAG, OR RECYCLED PORTLAND CEMENT CONCRETE ALLOWED.

FINAL BACKFILL - FURNISH MATERIALS CONFORMING TO:

GRANULAR STRUCTURAL BACKFILL 703.11, TYPE 2 ONLY WITH THE FOLLOWING MODIFICATIONS: CRUSHED CARBONATE STONE OR GRAVEL ONLY EXCEPT NO SAND, AIR-COOLED BLAST FURNACE SLAG, OR RECYCLED PORTLAND CEMENT CONCRETE ALLOWED; OR

ITEM 304 703.17 WITH THE FOLLOWING MODIFICATIONS: CRUSHED CARBONATE STONE OR CRUSHED GRAVEL ONLY EXCEPT NO CRUSHED AIR-COOLED BLAST FURNACE SLAG OR STEEL SLAG ALLOWED; OR

FINAL BACKFILL - FURNISH MATERIALS CONFORMING TO (CONTINUED):

ITEM 411 703.18 AS APPLICABLE TO ITEM 411 WITH THE FOLLOWING MODIFICATIONS: CRUSHED CARBONATE STONE OR GRAVEL ONLY EXCEPT NO AIR COOLED BLAST FURNACE SLAG, GRANULATED SLAG, OPEN HEARTH SLAG, BASIC OXYGEN FURNACE SLAG, ELECTRIC ARC FURNACE SLAG, RECYCLED PORTLAND CEMENT CONCRETE, OR RECLAIMED ASPHALT PAVEMENT ALLOWED; OR

ITEM 613 LOW STRENGTH MORTAR BACKFILL ALLOWABLE ONLY UNDER SPECIAL CIRCUMSTANCES AS APPROVED BY THE CITY ENGINEER.

FINAL BACKFILL COMPACTION DENSITY SHALL BE A MINIMUM OF 98%.

BACKFILL MATERIAL WITHIN FOUR (4) FEET OF THE FINISHED SURFACE SHALL BE FREE OF SAND, RECYCLED PORTLAND CEMENT CONCRETE, OR SLAG OF ANY FORM.

CONDUIT INCLUDES GRAVITY SANITARY SEWER MAINS AND SANITARY LATERALS. SANITARY CONDUITS SHALL BE CLASSIFIED AS TYPE B AND TYPE C ONLY.

CENTER PIPE, MANHOLES, AND OTHER STRUCTURES HORIZONTALLY WITHIN THE BEDDING AREA.

MINIMUM BEDDING AND STRUCTURAL BACKFILL WIDTHS AND CORRESPONDING DEPTH BELOW / HEIGHT ABOVE THE PIPE SHALL BE AS STATED IN THE FOLLOWING TABLE:

CONDUIT TYPE	MIN. WIDTH	MAX. WIDTH	BEDDING DEPTH BELOW BOTTOM OF PIPE	STRUCTURAL BACKFILL HEIGHT ABOVE TOP OF PIPE
FLEXIBLE CONDUIT*	PIPE I.D.X1.25+1'-0"	PIPE O.D.+2'-0"	6"	12"

* FLEXIBLE CONDUIT PER TYPE B AND/OR TYPE C AS APPLICABLE IN 611.02.B.

THE DIMENSIONS NOTED ABOVE SHALL PROVIDE THE BASIS FOR MINIMUM AND MAXIMUM PAY LIMITS WHEN APPLICABLE, HOWEVER, BEDDING AND STRUCTURAL BACKFILL MATERIAL SHALL EXTEND THE FULL WIDTH OF THE EXCAVATED TRENCH REGARDLESS OF THE MAXIMUM WIDTHS NOTED ABOVE. ADDITIONAL WIDTH OF BEDDED MATERIAL SHALL BE INCLUDED IN THE COST OF THE APPLICABLE 611 CONDUIT PAY ITEM.

WHERE WATER IS ENCOUNTERED IN THE TRENCH, REMOVE IT DURING PIPE-LAYING OPERATIONS AND MAINTAIN THE TRENCH WATER FREE UNTIL THE ENDS OF THE PIPE ARE SEALED AND PROVISIONS ARE MADE TO PREVENT FLOATING OF THE PIPE. DO NOT ALLOW TRENCH WATER OR OTHER DELETERIOUS MATERIALS TO ENTER THE PIPE AT ANY TIME. ALL WATER REMOVED FROM THE TRENCH SHALL BE PUMPED THROUGH A SILT BAG PRIOR TO DISCHARGE TO A STORM SEWER CONVEYANCE SYSTEM. WATER REMOVED FROM THE TRENCH SHALL NOT DISCHARGE TO THE SANITARY SEWER. ALL ASSOCIATED COSTS ARE TO BE INCLUDED IN THE UNIT PRICE COST OF THE CONDUIT AND / OR STRUCTURE.

AS NOTED, CONTRACTOR IS REQUIRED TO MAINTAIN FLOWS AND DRAINAGE AT ALL TIMES. REFER TO ADDITIONAL SANITARY SEWER BYPASS PUMPING REQUIREMENTS UNDER ITEM 690 SPECIAL, IF APPLICABLE.

UNLESS NOTED OTHERWISE IN THE PLANS, WHEN JOINING CONDUITS OF DIFFERING MATERIALS, PROVIDE RESILIENT, DURABLE, AND FLEXIBLE COUPLERS WITH STAINLESS STEEL SHIELDS AND CLAMPS WHICH ARE MANUFACTURED SPECIFICALLY FOR THE PIPE MATERIALS AND SIZES BEING JOINED. ACCEPTABLE PRODUCTS INCLUDE FERNCO STRONG BACK RC SERIES, FERNCO 5000 RC SERIES, OR APPROVED EQUAL.

ALL NEW SANITARY MANHOLES SHALL BE REINFORCED PRECAST CONCRETE PER ASTM C- 478 WITH JOINT SPECIFICATIONS PER ASTM C-443. FOLLOW ODOT STANDARD CONSTRUCTION DRAWING MH-3 WITH MODIFICATIONS AS NOTED IN CITY OF CANTON STANDARD DRAWING NO. 10, UNLESS NOTED OTHERWISE IN THE PLANS. PRECAST CONCRETE SUPPLIERS SHALL BE APPROVED BY THE CITY ENGINEER.

RECONSTRUCTION OF EXISTING SANITARY MANHOLES OR STRUCTURES SHALL FOLLOW CITY OF CANTON STANDARD DRAWINGS FOR MANHOLES, MANHOLE COVERS, MANHOLE ADJUSTMENTS, OR OTHER CITY OF CANTON STANDARDS, UNLESS NOTED OTHERWISE IN THE PLANS OR AS DIRECTED BY THE CITY ENGINEER.

PROVIDE REMOTE INSPECTIONS FOR ALL NEW SANITARY SEWER MAINS. IF DEBRIS HAS TO BE REMOVED IN ACCORDANCE WITH 107.19, THE CITY OF CANTON MAY REQUIRE, AT THE CITY'S SOLE DISCRETION, ANOTHER REMOTE INSPECTION AT NO ADDITIONAL COST TO THE CITY OF CANTON.

ALL FLEXIBLE CONDUITS SHALL BE DEFLECTION TESTED. NO PIPE SHALL EXCEED A DEFLECTION OF 5%. PERFORM A MANDREL TEST UTILIZING EQUIPMENT ACCORDING TO ODOT SS 902.03 AND CRAWLER MOUNTED CAMERA ONLY UTILIZING EQUIPMENT ACCORDING TO ODOT SS 902.01 WITH CRACK AND DEFECT MEASURING CAPABILITIES ACCORDING TO ODOT SS 902.02 C. THE TEST SHALL BE PERFORMED WITHOUT MECHANICAL PULLING DEVICES. CRAWLER MOUNTED CAMERA WITH LASER PROFILING IN LIEU OF MANDREL TESTS AND CRAWLER MOUNTED CAMERA INSPECTION SHALL ONLY BE PERFORMED WITH THE APPROVAL OF THE CANTON CITY ENGINEER.

THE FOLLOWING MODIFICATIONS SHALL APPLY TO SS902.03:

TABLE 902.03 - SUMMARY OF MANDREL EFFECTIVE DIAMETER SIZES SHALL BE BASED ON 5% DEFLECTION. THE TABLE SHALL BE ADJUSTED ACCORDINGLY BASED ON THE AVERAGE INSIDE DIAMETER OF THE PIPE BEING TESTED AND AS APPROVED BY THE CANTON CITY ENGINEER.

PLASTIC CONDUIT REPLACE THE LAST TWO LISTED REQUIREMENTS IN TABLE 611.13 WITH THE FOLLOWING:

REPAIR OR REPLACE CONDUIT IF PERFORMANCE INSPECTION PER 611.12 INDICATES A DEFLECTION > 5.0%

REPLACE CONDUIT IF THE PERFORMANCE INSPECTION PER 611.12 INDICATES A DEFLECTION > 7.5%

ADDITIONAL TESTING REQUIREMENTS

SANITARY MANHOLES PER CITY OF CANTON STANDARD DRAWING NO. 10, SHALL BE TESTED ACCORDING TO CANTON SUPPLEMENTAL SPECIFICATION 04-01 STANDARD TEST METHOD FOR CONCRETE SEWER MANHOLES BY THE NEGATIVE AIR PRESSURE TEST AND CONFORM TO THE TEST PROCEDURES DESCRIBED IN ASTM C 1244.

SANITARY CONDUITS IN ADDITION TO ANY TESTING REQUIREMENTS NOTED HEREIN OR ON THE PLANS, ALL NEW SANITARY SEWERS (INCLUDING LATERALS) SHALL BE AIR TESTED IN ACCORDANCE WITH THE FOLLOWING STANDARDS, AS APPLICABLE:

ASTM F 1417 - TEST METHOD FOR INSTALLATION ACCEPTANCE OF PLASTIC GRAVITY SEWER LINES USING LOW-PRESSURE AIR. REFER TO CITY OF CANTON SUPPLEMENTAL SPECIFICATION SS 03-00: TESTING PRACTICES FOR LOW-PRESSURE AIR TESTING OF INSTALLED, NON-PRESSURE, THERMOPLASTIC SEWER PIPE (7/18/2008)

ASTM C 828 PRACTICE FOR LOW-PRESSURE AIR TEST OF VITRIFIED CLAY PIPE LINES.

ASTM C 924 PRACTICE FOR TESTING CONCRETE SEWER LINES BY LOW- PRESSURE AIR TEST METHOD.

HYDROSTATIC TEST IN LIEU OF AIR TESTING MUST BE APPROVED BY THE CITY ENGINEER AND SHALL NOT EXCEED 100 GALLONS PER INCH OF PIPE DIAMETER PER MILE PER DAY FOR ANY SECTION OF THE SYSTEM BEING TESTED.

THE REQUIREMENTS NOTED ABOVE MUST BE SPECIFICALLY IDENTIFIED IN THE INSTALLATION PLAN AND SHOP DRAWINGS, AS APPLICABLE. ANY DEVIATIONS TO THESE REQUIREMENTS MUST BE APPROVED BY THE CITY ENGINEER.

REGULATORY REQUIREMENTS

SANITARY SEWERS SHALL BE LAID AT LEAST 10 FEET HORIZONTALLY FROM ANY EXISTING OR PROPOSED WATER MAIN, MEASURED FROM THE OUTSIDE OF THE WATER MAIN AND THE OUTSIDE OF THE SEWER. IN LOCATIONS WHERE AT LEAST 10 FEET HORIZONTALLY FROM ANY EXISTING OR PROPOSED WATER MAIN CANNOT BE MAINTAINED, WATERTIGHT SANITARY CONDUIT SHALL BE INSTALLED. THE WATERTIGHT SANITARY CONDUIT SHALL BE PVC PIPE CONFORMING TO AWWA C900 (748.02) WITH JOINTS AND FITTINGS CONFORMING TO ASTM D3139 AND BEDDING CLASSIFICATION AND INSTALLATION SPECIFICATIONS PER ASTM D2321.

SANITARY SEWERS CROSSING WATER MAINS SHALL BE LAID TO A MINIMUM VERTICAL DISTANCE OF 18 INCHES BETWEEN THE OUTSIDE OF THE WATER MAIN AND THE OUTSIDE OF THE SEWER. CROSSINGS SHALL BE ARRANGED SO THAT THE SEWER JOINTS WILL BE EQUIDISTANT AND AS FAR AS POSSIBLE FROM THE WATER MAIN JOINTS.

ROOF DRAINS, FOUNDATION DRAINS, AND OTHER CLEAN WATER CONNECTIONS TO THE DISPOSAL SYSTEM ARE PROHIBITED.

ITEM 611 - MANHOLE, COMPLETE, AS PER PLAN

THIS ITEM SHALL CONSIST OF CONSTRUCTING AND TESTING SANITARY MANHOLES AT THE LOCATIONS AND ELEVATIONS SPECIFIED IN THE PLANS IN ACCORDANCE WITH "SANITARY SEWERS AND DRAINAGE STRUCTURES GENERAL NOTES".

ITEM 611 - 4" SANITARY LATERAL, COMPLETE, AS PER PLAN

THIS ITEM SHALL CONSIST OF RECONNECTION OF SANITARY LATERALS AT LOCATIONS AND ELEVATIONS SHOWN IN THE PLANS. THIS SHALL INCLUDE ALL BENDS, FITTINGS AND COUPLINGS NECESSARY TO COMPLETE IN PLACE AND SHALL BE IN ACCORDANCE WITH "SANITARY SEWERS AND DRAINAGE STRUCTURES GENERAL NOTES".

THE EXISTING LATERAL SHALL BE REPLACED FROM UNDISTURBED SOIL AT THE EDGE OF THE EXCAVATION TO THE WYE AT THE MAIN LINE GRAVITY SEWER. SLOPE OF LATERALS AT THE POINT OF CONNECTION WITH THE MAINLINE SEWER SHALL BE NO LESS THAN 1/8%₃₂ PER FOOT (1%) AND NO MORE THAN 12%₃₂ PER FOOT (45%).

LATERALS MUST BE LAID IN A MANNER TO MINIMIZE USE OF BENDS. HOWEVER, WHEN NECESSARY, USE TWO 45° BENDS IN LIEU OF 90° BENDS.

THE FOLLOWING INDIVIDUAL COMPONENTS ARE INCLUDED AS SEPARATE BID ITEMS ASSOCIATED WITH THIS ITEM:

8"X4" SANITARY WYE

ANY ADDITIONAL BENDS, FITTINGS, REDUCERS, COUPLINGS, PIPE, BEDDING, BACKFILL, ETC. NECESSARY TO COMPLETE THE LATERAL RECONNECTION SHALL BE CONSIDERED INCIDENTAL TO THE ITEM 611 - SANITARY LATERAL RECONNECTED, COMPLETE, AS PER PLAN" COST.

ITEM 611 - 8" CONDUIT, TYPE B, PVC PER AWWA C900 (748.02) PIPE AND FITTINGS, AS PER PLAN

THIS ITEM SHALL BE PROVIDED AS DIRECTED OR IN LOCATIONS NOTED IN THE PLANS AND CONFORM TO THE REQUIREMENTS NOTED IN THE SANITARY GENERAL NOTES FOR LOCATIONS WHERE THE REGULATORY REQUIREMENT OF AT LEAST 10 FEET HORIZONTALLY FROM ANY EXISTING OR PROPOSED WATER MAIN CANNOT BE MAINTAINED.

ITEM 611 - MANHOLE NO.3, AS PER PLAN

THIS ITEM SHALL CONSIST OF CONSTRUCTING THE MANHOLE ACCORDING TO CITY OF CANTON STANDARD NO. 10.

ITEM 611 - CATCH BASIN NO.3A, AS PER PLAN

THIS ITEM SHALL CONSIST OF CONSTRUCTING THE MANHOLE ACCORDING TO CITY OF CANTON STANDARD NO. 1.

ITEM 611 - MANHOLE ADJUSTED TO GRADE, AS PER PLAN

ADJUSTMENT TO GRADE OF EXISTING MANHOLES SHALL FOLLOW CITY OF CANTON STANDARD DRAWINGS FOR MANHOLES, MANHOLE COVERS, MANHOLE ADJUSTMENTS OR OTHER CITY OF CANTON STANDARDS UNLESS OTHERWISE NOTED IN THE PLANS OR AS DIRECTED BY THE ENGINEER.

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GENERAL NOTES - SANITARY / SEWER

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SANITARY SEWERS / STORM SEWERS (CONTINUED)

ITEM 690 - SPECIAL-SANITARY SEWER BYPASS PUMPING, AS PER PLAN

THIS ITEM SHALL CONSIST OF PROVIDING BYPASS PUMPING WHENEVER FLOW IN ANY SEWER IS DISRUPTED BY THE

CONSTRUCTION OR REPLACEMENT OF NEW SEWER SEGMENTS, LATERALS, MANHOLES, OR ASSOCIATED ACTIVITIES IN ACCORDANCE WITH "GENERAL NOTES - SANITARY SEWERS / STORM SEWERS" AND THE FOLLOWING:

CONTRACTOR SHALL PROVIDE A DETAILED BYPASS PUMPING PLAN AND SCHEDULE TO THE CITY FOR REVIEW PRIOR TO BEGINNING ANY WORK.

BYPASS PUMPING IS REQUIRED WHENEVER FLOW IN ANY SEWER IS DISRUPTED BY THE CONSTRUCTION OR REPLACEMENT OF NEW SEWER SEGMENTS, LATERALS, MANHOLES, OR ASSOCIATED ACTIVITIES. BYPASSING OF SEWERS MUST PROVIDE FOR POTENTIAL FLOWS THAT MAY TYPICALLY BE EXPECTED DURING THE SEASON THAT THE WORK IS IN PROGRESS, INCLUDING RAINFALL AND PEAK FLOW EVENTS.

METERING OF FLOWS HAS NOT BEEN PERFORMED. THE CONTRACTOR MAY ASSUME FULL PIPE CONDITIONS FOR SIZING BYPASS PUMPING REQUIREMENTS

BECAUSE OF THE HIGH FLOWS POSSIBLE IN THESE SEWERS, THE CONTRACTOR SHALL HAVE A CONTINGENCY PLAN TO PREVENT DAMAGE DURING HIGH FLOWS. THE CITY WILL NOT BE RESPONSIBLE FOR DAMAGES DUE TO HIGH FLOWS.

CONTRACTOR SHALL REVIEW AND COORDINATE WITH THE MAINTENANCE OF TRAFFIC PLANS PRIOR TO SUBMITTING THE BYPASS PUMPING PLAN.

CONTRACTOR WILL NOT BE PERMITTED TO RUN BYPASS PUMPS OVERNIGHT. CONTRACTOR SHALL TEMPORARILY RECONNECT ALL SEWERS AND LATERALS AT THE END OF THE WORK DAY UNLESS APPROVED BY THE CITY ENGINEER.

PUMPS SHALL BE FULLY AUTOMATIC, SELF PRIMING PUMPS. PUMPS AND GENERATORS, IF APPLICABLE, SHALL BE CRITICALLY SILENCED. ALL SUCTION AND DISCHARGE PIPING SHALL BE FREE OF LEAKS.

ACCESS TO ALL RESIDENCES AND BUSINESS SHALL BE MAINTAINED AT ALL TIMES, INCLUDING ACCESS FOR MAIL, SCHOOL, POLICE, FIRE, AND EMERGENCY VEHICLES.

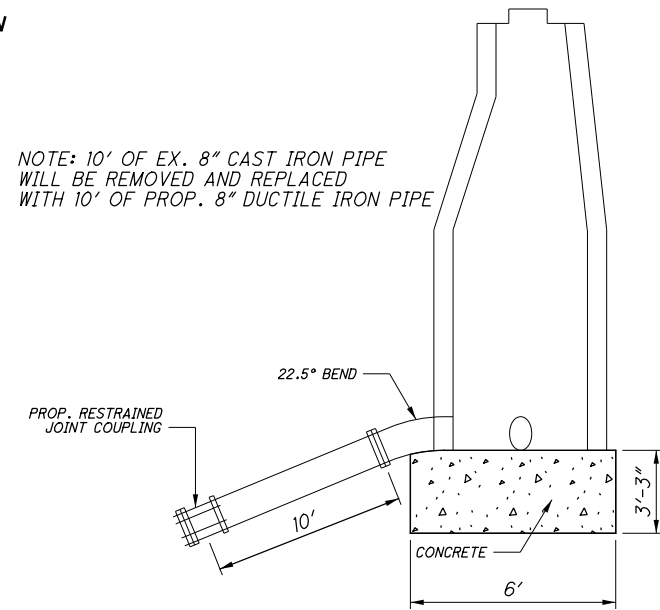
PRIOR NOTIFICATION OF SHORT DURATION INTERRUPTIONS TO SERVICE SHALL BE COORDINATED A MINIMUM OF 48 HOURS IN ADVANCE, EXCLUDING WEEKENDS AND HOLIDAYS, WITH THE CITY AND ALL AFFECTED RESIDENCES AND BUSINESSES.

BYPASS PUMPING COSTS SHALL INCLUDE ANY MAINTENANCE OF TRAFFIC COSTS AND RELATED ITEMS WHICH MAY BE NECESSARY IN ADDITION TO THE REQUIREMENTS OF ANY ROADWAY MAINTENANCE OF TRAFFIC OR DETOUR PLAN, AS APPLICABLE.

ALL PROVISIONS AS SET FORTH IN THE SPECIFICATIONS UNDER THIS ITEM ARE INCLUDED IN THE LUMP SUM PRICE. THE FOLLOWING LUMP SUM PAY ITEM HAS BEEN INCLUDED IN THE GENERAL SUMMARY:

ITEM 690 SPECIAL SANITARY SEWER BYPASS PUMPING, AS PER PLAN

MANHOLE REPLACEMENT DETAILS



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GENERAL NOTES - SANITARY / SEWER



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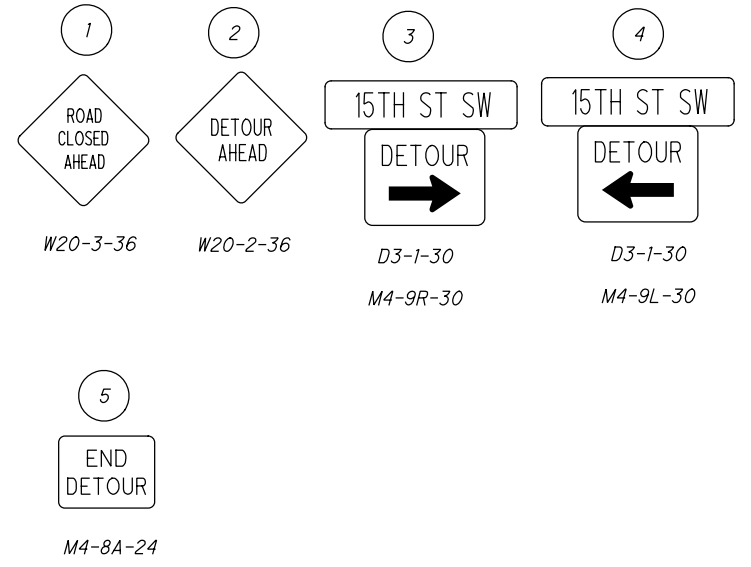
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LEGEND

-  TYPE III BARRICADE WITH ROAD CLOSED SIGN
-  TEMPORARY SIGN SUPPORT



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SHEET NUM.											PART.		ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.	CALCULATED AA	CHECKED EAK
4	21	13	14	OFFICE CALCS	16	STA15	WATER													
																	ROADWAY			
LS						LS		201	11000	LS						CLEARING AND GRUBBING				
			520			520		202	23000	520	SY					PAVEMENT REMOVED				
			941			941		202	30000	941	SF					WALK REMOVED				
			174			174		202	32000	174	FT					CURB REMOVED				
			413			413		202	35100	413	FT					PIPE REMOVED, 24" AND UNDER				
			2			2		202	58000	2	EACH					MANHOLE REMOVED				
			4			4		202	58100	4	EACH					CATCH BASIN REMOVED				
			72			72		202	75200	72	FT					FENCE REMOVED FOR REUSE				
			1			1		202	75254	1	EACH					GATE REMOVED FOR REUSE				
	49					49		203	10000	49	CY					EXCAVATION				
	10							10	20000	10	CY					EMBANKMENT				
						935		935	10000	935	SY					SUBGRADE COMPACTION				
			72			72		607	23100	72	FT					FENCE REBUILT				
			1			1		607	61111	1	EACH					GATE REBUILT, AS PER PLAN				
			1,032			1,032		608	12000	1,032	SF					5" CONCRETE WALK				
			170			170		609	26000	170	FT					CURB, TYPE A (PER COC SD-29)				
																	EROSION CONTROL			
								84		84	CY					ROCK CHANNEL PROTECTION, TYPE C WITH GEOTEXTILE FABRIC				
12						12		659	00300	12	CY					TOPSOIL				
108						108		659	10000	108	SY					SEEDING AND MULCHING				
0.02						0.02		659	20000	0.02	TON					COMMERCIAL FERTILIZER				
0.02						0.02		659	31000	0.02	ACRE					LIME				
1						1		659	35000	1	MGAL					WATER				
																	DRAINAGE			
						0.46		602	20000	0.46	CY					CONCRETE MASONRY				
			94			94		605	14020	94	FT					6" BASE PIPE UNDERDRAINS WITH GEOTEXTILE FABRIC				
			45			45		611	00510	45	FT					6" CONDUIT, TYPE F FOR UNDERDRAIN OUTLETS				
			15			15		611	04400	15	FT					12" CONDUIT, TYPE B				
			7			7		611	04600	7	FT					12" CONDUIT, TYPE C				
			107			107		611	05900	107	FT					15" CONDUIT, TYPE B				
			265			265		611	10400	265	FT					24" CONDUIT, TYPE B				
			4			4		611	98181	4	EACH					CATCH BASIN, AS PER PLAN (PER COC SD-1)			8	
			2			2		611	99575	2	EACH					MANHOLE, AS PER PLAN (PER COC SD-10)			8	
			1			1		611	99655	1	EACH					MANHOLE ADJUSTED TO GRADE, AS PER PLAN				
																	PAVEMENT			
						68		301	56000	68	CY					ASPHALT CONCRETE BASE, PG64-22, (449)				
						153		304	20000	153	CY					AGGREGATE BASE				
						81		407	10000	81	GAL					TACK COAT				
						16		441	50000	16	CY					ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), PG64-22				
						16		441	50200	16	CY					ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, (448)				
																	WATER WORK			
								82	00601	82	FT					6" WATER MAIN DUCTILE IRON PIPE ANSI CLASS 52, PUSH-ON JOINTS AND FITTINGS, AS PER PLAN			23	
						1,663		638	01201	1,663	FT					8" WATER MAIN DUCTILE IRON PIPE ANSI CLASS 52, PUSH-ON JOINTS AND FITTINGS, AS PER PLAN			23	
						20		638	02405	20	FT					12" WATER MAIN DUCTILE IRON PIPE ANSI CLASS 53, PUSH-ON JOINTS AND FITTINGS, AS PER PLAN			23	
						3		638	07480	3	EACH					6" GATE VALVE				
						6		638	07490	6	EACH					8" GATE VALVE				
						3		638	08704	3	EACH					6" CUTTING-IN SLEEVE				
						1		638	08706	1	EACH					8" CUTTING-IN SLEEVE				
						2		638	08710	2	EACH					12" CUTTING-IN SLEEVE				
						2		638	10200	2	EACH					6" FIRE HYDRANT ASSEMBLY				
						2		638	10480	2	EACH					FIRE HYDRANT REMOVED				

GENERAL SUMMARY

STA -15SW -13.50

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SHEET NUM.										PART.		ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
15			31			34		16		STAIRS	WATER						
WATER WORK																	
								1		1		638	11310	1	EACH	2" AIR RELEASE VALVE	
								5		5	SPECIAL	63820878		5	EACH	CUT AND PLUG EXISTING 6" WATER LINE	
								1		1	SPECIAL	63820880		1	EACH	CUT AND PLUG EXISTING 8" WATER LINE	
								3		3	SPECIAL	63820884		3	EACH	CUT AND PLUG EXISTING 12" WATER LINE	
								7		7		638	98000	7	EACH	WATER WORK, MISC.: 1" WATER SERVICE CONNECTION, SHORT SIDE	
								4		4		638	98000	4	EACH	WATER WORK, MISC.: 1" WATER SERVICE CONNECTION, LONG SIDE	
								4		4		638	98000	4	EACH	WATER WORK, MISC.: 6" 45° BEND	
								1		1		638	98000	1	EACH	WATER WORK, MISC.: 6" 90° BEND	
								16		16		638	98000	16	EACH	WATER WORK, MISC.: 8" 11.25° BEND	
								6		6		638	98000	6	EACH	WATER WORK, MISC.: 8" 22.5° BEND	
								6		6		638	98000	6	EACH	WATER WORK, MISC.: 8" 45° BEND	
								1		1		638	98000	1	EACH	WATER WORK, MISC.: 12" 22.5° BEND	
								1		1		638	98000	1	EACH	WATER WORK, MISC.: 2" WATER SERVICE CONNECTION, LONG SIDE	
								1		1		638	98000	1	EACH	WATER WORK, MISC.: 12" X 8" CROSS	
								1		1		638	98000	1	EACH	WATER WORK, MISC.: 12" X 8" REDUCER	
								1		1		638	98000	1	EACH	WATER WORK, MISC.: 8" X 6" REDUCER	
								1		1		638	98000	1	EACH	WATER WORK, MISC.: 6" X 6" TEE	
								1		1		638	98000	1	EACH	WATER WORK, MISC.: 8" X 6" CROSS	
								1		1		638	98000	1	EACH	WATER WORK, MISC.: 8" X 8" TEE	
								8		8		638	98000	8	EACH	WATER WORK, MISC.: ABANDON VALVE	
SANITARY SEWER																	
2										2		202	58000	2	EACH	MANHOLE REMOVED	
125										125		202	98700	125	FT	ABANDON MISC.: 8" SANITARY CONDUIT	
114										114		611	01800	114	FT	8" CONDUIT, TYPE B	
2										2		611	99575	2	EACH	MANHOLE, AS PER PLAN (PER COC SD-10)	7
1										1		611	99655	1	EACH	MANHOLE ADJUSTED TO GRADE, AS PER PLAN	7
										LS		611	97300	LS		CONDUIT, MISC.: 4" SANITARY LATERAL, COMPLETE, AS PER PLAN	7
										LS		611	97300	LS		CONDUIT, MISC.: 8" X 4" SANITARY WYE	7
TRAFFIC CONTROL																	
			4							4		614	13310	4	EACH	BARRIER REFLECTOR, TYPE 1	
			0.07							0.07		642	00300	0.07	MILE	CENTER LINE, TYPE 1	
STRUCTURES OVER 20 FOOT SPAN																	
						LS				LS		202	11003	LS		STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN	33
						210				210		202	22900	210	SY	APPROACH SLAB REMOVED	
						LS				LS		503	11100	LS		COFFERDAMS AND EXCAVATION BRACING	
						208				208		503	21100	208	CY	UNCLASSIFIED EXCAVATION	
						LS				LS		505	11100	LS		PILE DRIVING EQUIPMENT MOBILIZATION	
						2,380				2,380		507	00500	2,380	FT	12" CAST-IN-PLACE REINFORCED CONCRETE PILES, DRIVEN	
						2,565				2,565		507	00550	2,565	FT	12" CAST-IN-PLACE REINFORCED CONCRETE PILES, FURNISHED	
						61,836				61,836		509	10000	61,836	LB	EPOXY COATED STEEL REINFORCEMENT	
						2				2		511	33500	2	EACH	SEMI-INTEGRAL DIAPHRAGM GUIDE	
						166				166		511	34446	166	CY	CLASS QC2 CONCRETE WITH QC/QA, BRIDGE DECK	
						193				193		511	43512	193	CY	CLASS QC1 CONCRETE WITH QC/QA, ABUTMENT INCLUDING FOOTING	
						26				26		511	46012	26	CY	CLASS QC1 CONCRETE WITH QC/QA, RETAINING/WINGWALL NOT INCLUDING FOOTING	
						52				52		511	51512	52	CY	CLASS QC2 CONCRETE WITH QC/QA, SIDEWALK	
						192				192		512	10050	192	SY	SEALING OF CONCRETE SURFACES (NON-EPOXY)	
						331				331		512	10100	331	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	
						117,042				117,042		513	10261	117,042	LB	STRUCTURAL STEEL MEMBERS, LEVEL 3, AS PER PLAN	33
						1,401				1,401		513	20000	1,401	EACH	WELDED STUD SHEAR CONNECTORS	

GENERAL SUMMARY

STA - 15SW - 13.50

REF NO.	SHEET NO.	STATION TO STATION		202		202		202		202		202		601		607		608		609	
				PAVEMENT REMOVED SY	WALK REMOVED SF	CURB REMOVED FT	PIPE REMOVED, 24" AND UNDER FT	MANHOLE REMOVED EACH	CATCH BASIN REMOVED EACH	FENCE REMOVED FOR REUSE FT	GATE REMOVED FOR REUSE EACH	ROCK CHANNEL PROTECTION, TYPE C WITH GEOTEXTILE FABRIC CY	FENCE REBUILT FT	GATE REBUILT, AS PER PLAN EACH	5" CONCRETE WALK SF	CURB, TYPE A (PER COC SD-29) FT					
			TO																		
R-1	17	9+00.00		9+34.50		174	34.5														
R-2	17	9+00.00		9+34.50		117	34.5														
R-3	17	10+65.50		11+24.00		418	58.5														
R-4	17	10+65.50		11+11.00		232	45.60														
R-5	17	10+49.25		11+34.78									72.0	1							
R-6	17	9+43.27		9+47.30				39		1											
R-7	17	9+47.30		9+67.75				26.7	1												
R-8	17	7+93.00		9+47.30				155													
R-9	17	9+23.23		9+42.49				26		1											
R-10	17	10+32.60		10+96.06				65	1												
R-11	17	10+41.41		10+48.79				9		1											
R-12	17	10+41.41		10+60.64				40		1											
R-13	17	9+00.00		9+44.15		210															
SW-1	17	9+00.00		9+35.50														198.3		34.5	
SW-2	17	9+00.00		9+30.50														180		30.5	
SW-3	17	10+65.50		11+24.00														385.3		58.5	
SW-4	17	10+65.50		11+11.93														268.4		46	
F-1	17	10+49.25		11+34.78												72	1				
R-15	17	9+23.43		9+30.50		5															
R-16	17	9+45.74		9+67.25				22													
R-17	17	10+96.06		11+06.35				30													
R-18	17	10+57.98		11+25.00		305															
RCP-1	27	9+51.00		10+49.00										84							
TOTALS CARRIED TO GENERAL SUMMARY						520	941	174	413	2	4		72	1	84	72	1	1032		170	

ROADWAY SUBSUMMARY

STA -15SW -13.50

13
53

CALCULATED
AA
CHECKED
EAK

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REF NO.	SHEET NO.	STATION TO STATION			602	605		611	611	611	611	611	611	611	611	611	611	611	611	611	
		CONCRETE MASONRY	6" BASE PIPE UNDERDRAINS WITH GEOTEXTILE FABRIC	6" CONDUIT, TYPE F FOR UNDERDRAIN OUTLETS	12" CONDUIT, TYPE B	12" CONDUIT, TYPE C	15" CONDUIT, TYPE B	24" CONDUIT, TYPE B	CATCH BASIN, AS PER PLAN (PER COC SD-1)	MANHOLE, AS PER PLAN (PER COC SD-10)	MANHOLE ADJUSTED TO GRADE, AS PER PLAN										
			TO		CY	FT	FT	FT	FT	FT	FT	FT	EACH	EACH	EACH						
D-1		9+22.00		9+19.00						38			1								
D-2		7+93.00		9+67.00									174		1						
D-3		9+19.00		9+28.48				15					1								
D-3A		9+19.00		9+19.01						6.5											
D-4		9+23.55		9+28.48						6.5					1						
D-5		10+72.50		10+96.06								39		1							
D-6		10+33.00		11+06.06									91							1	
D-7		10+77.50		11+06.06							23			1							
UD-1		9+00.00		9+22.00		12.5		10													
UD-2		9+00.00		9+19.00		10		10													
UD-3		10+72.50		11+24.00		42		10													
UD-4		10+59.50		10+77.50		5		5													
UD-5		10+77.50		10+96.07		24		10													
HW-1			10+14.35		0.46																
TOTALS CARRIED TO GENERAL SUMMARY					0.46	94	45	15	7	107	265	4	2	1							

DRAINAGE SUBSUMMARY	CALCULATED AA CHECKED EAK
STA -15SW -13.50	14 53

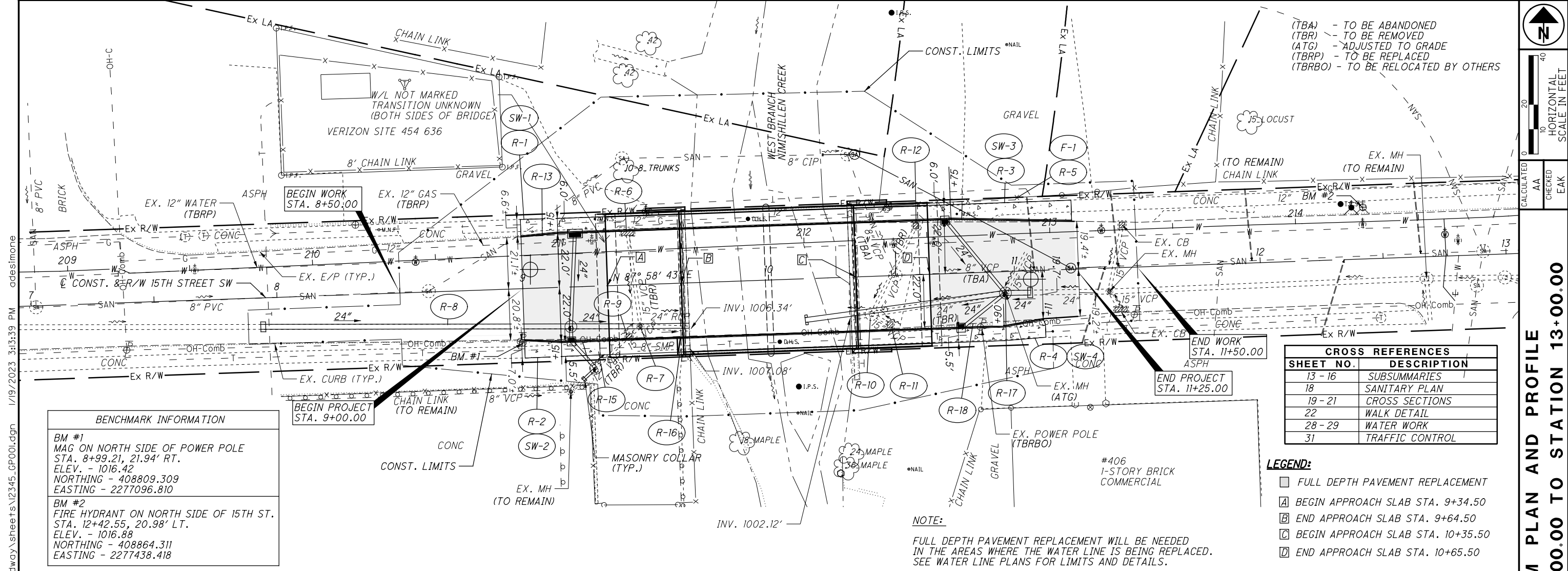
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REF NO.	SHEET NO.	STATION TO STATION		202	202	611	611	611												
				MANHOLE REMOVED	ABANDON MISC.-8" SANITARY CONDUIT	8" CONDUIT, TYPE B	MANHOLE, AS PER PLAN (PER COC SD-10)	MANHOLE ADJUSTED TO GRADE, AS PER PLAN												
			TO	EACH	FT	FT	EACH	EACH												
R-14	17	10+51.62	11+23.00	1	72															
R-19	17	10+33.76	10+51.62	1	53															
S-1			8+61.74					1												
S-2		10+33.76	11+23.00			102	1													
S-3		11+23.00	11+35.00			12	1													
TOTALS CARRIED TO GENERAL SUMMARY				2	125	114	2	1												

SANITARY SUBSUMMARY	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="font-size: small;">CALCULATED</td> </tr> <tr> <td style="font-size: small;">AA</td> </tr> <tr> <td style="font-size: small;">CHECKED</td> </tr> <tr> <td style="font-size: small;">EAK</td> </tr> </table>	CALCULATED	AA	CHECKED	EAK
CALCULATED					
AA					
CHECKED					
EAK					
STA -15SW -13.50	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="text-align: center;">15</td> </tr> <tr> <td style="text-align: center;">53</td> </tr> </table>	15	53		
15					
53					

REF NO.	SHEET NO.	STATION TO STATION		638																														
				6" WATER MAIN DUCTILE IRON PIPE ANSI CLASS 52	8" WATER MAIN DUCTILE IRON PIPE ANSI CLASS 52	12" WATER MAIN DUCTILE IRON PIPE ANSI CLASS 53	6" GATE VALVE	8" GATE VALVE	6" CUTTING-IN SLEEVE	8" CUTTING-IN SLEEVE	12" CUTTING-IN SLEEVE	6" FIRE HYDRANT ASSEMBLY	FIRE HYDRANT REMOVED	2" AIR RELEASE VALVE	SPECIAL - CUT AND PLUG EXISTING 6" WATER LINE	SPECIAL - CUT AND PLUG EXISTING 8" WATER LINE	SPECIAL - CUT AND PLUG EXISTING 12" WATER LINE	WATER WORK, MISC.: 8" WATER MAIN DUCTILE IRON PIPE ANSI CLASS 52, TR-FLEX	WATER WORK, MISC.: 1" WATER SERVICE CONNECTION, SHORT SIDE	WATER WORK, MISC.: 1" WATER SERVICE CONNECTION, LONG SIDE	WATER WORK, MISC.: 6" 45° BEND	WATER WORK, MISC.: 6" 90° BEND	WATER WORK, MISC.: 8" 11.25° BEND	WATER WORK, MISC.: 8" 22.5° BEND	WATER WORK, MISC.: 8" 45° BEND	WATER WORK, MISC.: 12" 22.5° BEND	WATER WORK, MISC.: 2" WATER SERVICE CONNECTION, LONG SIDE	WATER WORK, MISC.: 12" X 8" CROSS	WATER WORK, MISC.: 12" X 8" REDUCER	WATER WORK, MISC.: 8" X 6" REDUCER	WATER WORK, MISC.: 6" X 6" TEE	WATER WORK, MISC.: 8" X 6" CROSS	WATER WORK, MISC.: 8" X 8" TEE	WATER WORK, MISC.: ABANDON VALVE
		TO		FT	FT	FT	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	FT	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH
W-1	27	200+00.00	204+84.63	82	493	15	3	2	3						5	1		2	4	4	1	2							1		1	1	1	2
W-2	28	204+84.63	209+85.50		500									1	1			5				8	2			1								2
W-3	29	209+85.50	215+37.23		495			3		1			1	1		1	1					6	2	6									1	4
W-4	30	215+37.23	217+12.17		175	5		1															2		1				1					
TOTALS CARRIED TO GENERAL SUMMARY				82	1663	20	3	6	3	1	2	2	2	1	5	1	3	97	7	4	4	1	16	6	6	1	1	1	1	1	1	1	1	8

STA -15SW -13.50	CALCULATED
	AA
WATER SUBSUMMARY	CHECKED
	EAK

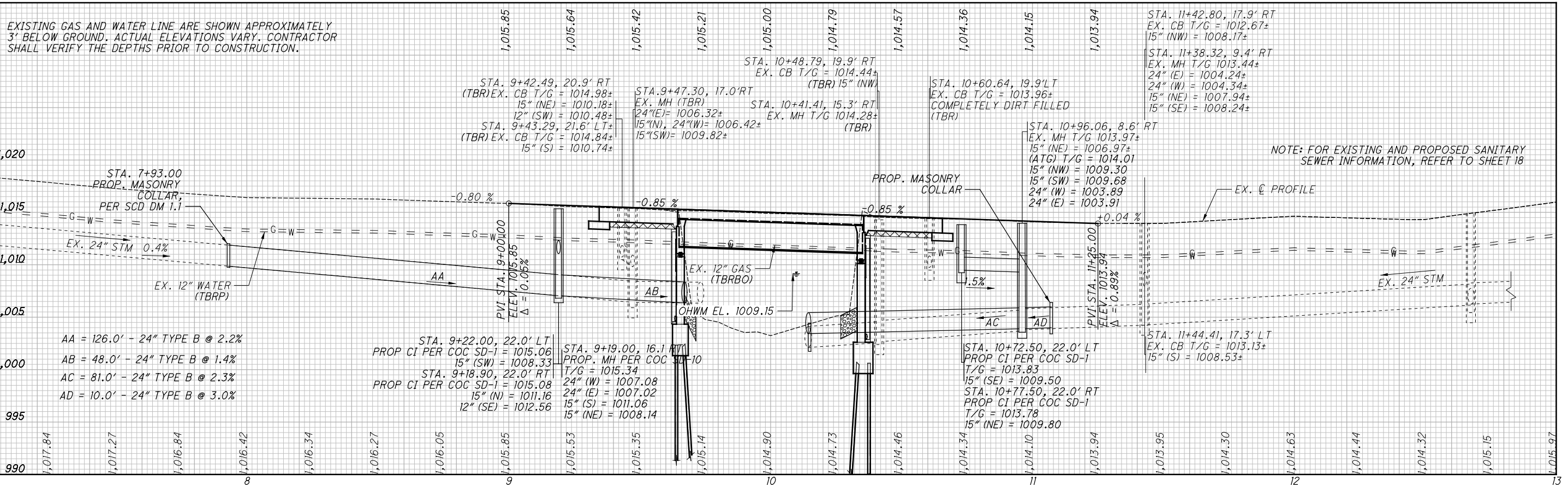


CROSS REFERENCES	
SHEET NO.	DESCRIPTION
13 - 16	SUBSUMMARIES
18	SANITARY PLAN
19 - 21	CROSS SECTIONS
22	WALK DETAIL
28 - 29	WATER WORK
31	TRAFFIC CONTROL

BENCHMARK INFORMATION	
BM #1	MAG ON NORTH SIDE OF POWER POLE STA. 8+99.21, 21.94' RT. ELEV. - 1016.42 NORTHING - 408809.309 EASTING - 2277096.810
BM #2	FIRE HYDRANT ON NORTH SIDE OF 15TH ST. STA. 12+42.55, 20.98' LT. ELEV. - 1016.88 NORTHING - 408864.311 EASTING - 2277438.418

- LEGEND:**
- FULL DEPTH PAVEMENT REPLACEMENT
 - ▭ BEGIN APPROACH SLAB STA. 9+34.50
 - ▭ END APPROACH SLAB STA. 9+64.50
 - ▭ BEGIN APPROACH SLAB STA. 10+35.50
 - ▭ END APPROACH SLAB STA. 10+65.50

NOTE:
FULL DEPTH PAVEMENT REPLACEMENT WILL BE NEEDED IN THE AREAS WHERE THE WATER LINE IS BEING REPLACED. SEE WATER LINE PLANS FOR LIMITS AND DETAILS.



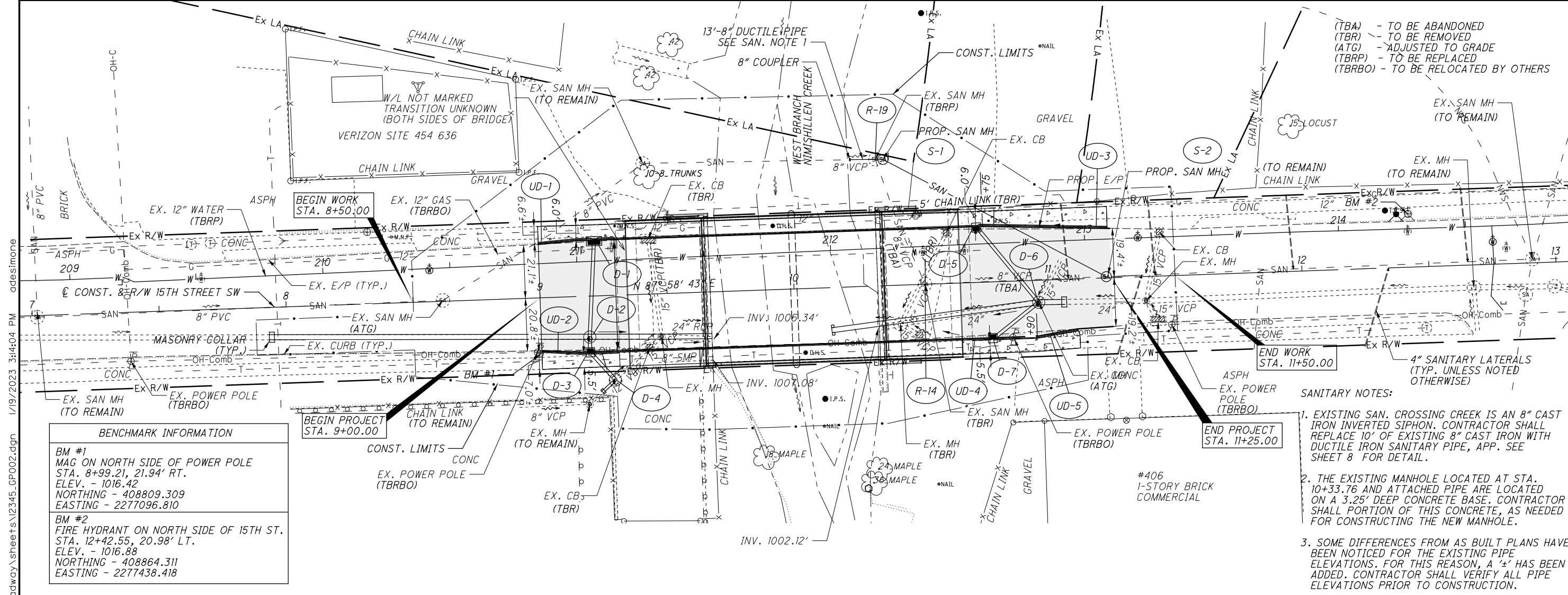
NOTE: FOR EXISTING AND PROPOSED SANITARY SEWER INFORMATION, REFER TO SHEET 18

AA	= 126.0' - 24" TYPE B @ 2.2%
AB	= 48.0' - 24" TYPE B @ 1.4%
AC	= 81.0' - 24" TYPE B @ 2.3%
AD	= 10.0' - 24" TYPE B @ 3.0%

STA. 9+22.00, 22.0' LT	PROP CI PER COC SD-1 = 1015.06
15" (SW) = 1008.33	
STA. 9+18.90, 22.0' RT	PROP CI PER COC SD-1 = 1015.08
15" (N) = 1011.16	
12" (SE) = 1012.56	
STA. 9+19.00, 16.1' RT	PROP. MH PER COC SD-10
T/G = 1015.34	
24" (W) = 1007.08	
24" (E) = 1007.02	
15" (S) = 1011.06	
15" (NE) = 1008.14	

STA. 10+72.50, 22.0' LT	PROP CI PER COC SD-1
T/G = 1013.83	
15" (SE) = 1009.50	
STA. 10+77.50, 22.0' RT	PROP CI PER COC SD-1
T/G = 1013.78	
15" (NE) = 1009.80	

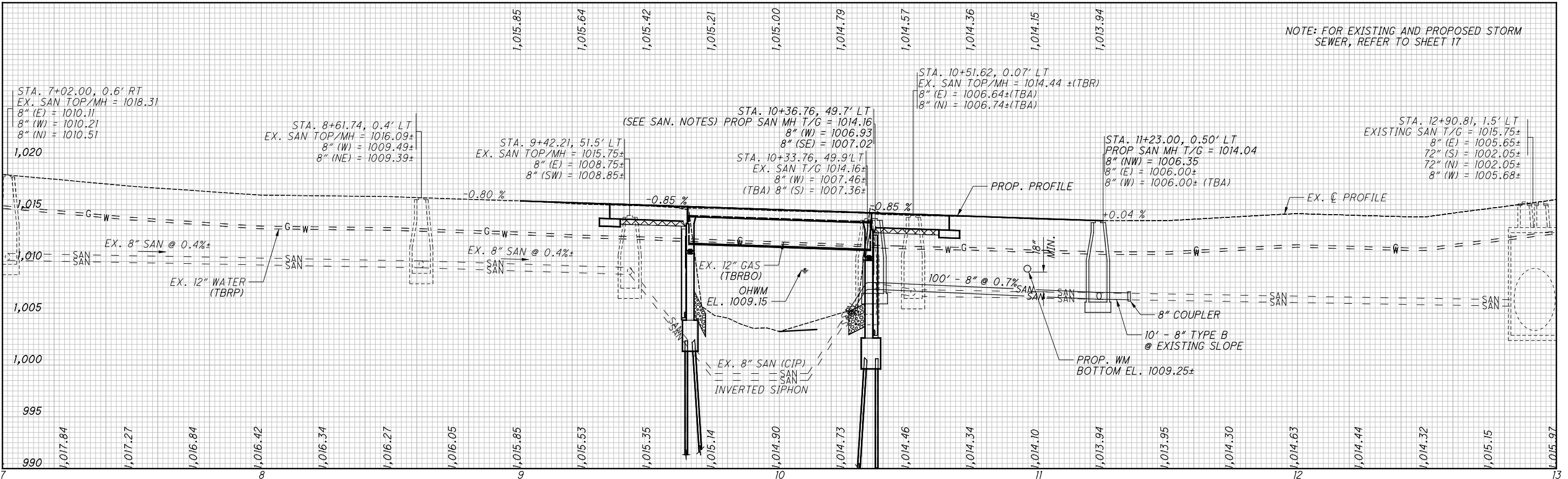
STA. 11+44.41, 17.3' LT	EX. CB T/G = 1013.13±
15" (S) = 1008.53±	



BENCHMARK INFORMATION

BM #1 MAG ON NORTH SIDE OF POWER POLE STA. 8+99.21, 21.94' RT. ELEV. - 1016.42 NORTHING - 408809.309 EASTING - 2277096.810
BM #2 FIRE HYDRANT ON NORTH SIDE OF 15TH ST. STA. 12+42.55, 20.98' LT. ELEV. - 1016.88 NORTHING - 408864.311 EASTING - 2277438.418

- SANITARY NOTES:**
- EXISTING SAN. CROSSING CREEK IS AN 8" CAST IRON INVERTED SIPHON. CONTRACTOR SHALL REPLACE 10' OF EXISTING 8" CAST IRON WITH DUCTILE IRON SANITARY PIPE, APP. SEE SHEET 8 FOR DETAIL.
 - THE EXISTING MANHOLE LOCATED AT STA. 10+33.76 AND ATTACHED PIPE ARE LOCATED ON A 3.25' DEEP CONCRETE BASE. CONTRACTOR SHALL PORTION OF THIS CONCRETE, AS NEEDED FOR CONSTRUCTING THE NEW MANHOLE.
 - SOME DIFFERENCES FROM AS BUILT PLANS HAVE BEEN NOTICED FOR THE EXISTING PIPE ELEVATIONS. FOR THIS REASON, A '+-' HAS BEEN ADDED. CONTRACTOR SHALL VERIFY ALL PIPE ELEVATIONS PRIOR TO CONSTRUCTION.



0 20 40

10 HORIZONTAL SCALE IN FEET

↑

N

CALCULATED AA

CHECKED EAK

SANITARY PLAN AND PROFILE

STATION 7+00.00 TO STATION 13+00.00

STA -15SW -13.50

18

53

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SEEDING
END SO.
WIDTH YDS.

END WIDTH	SO. YDS.
8	0
60	2
50	8
40	0
30	0
20	0
10	0
0	0
10	0
20	0
30	0
40	0
50	0
60	0

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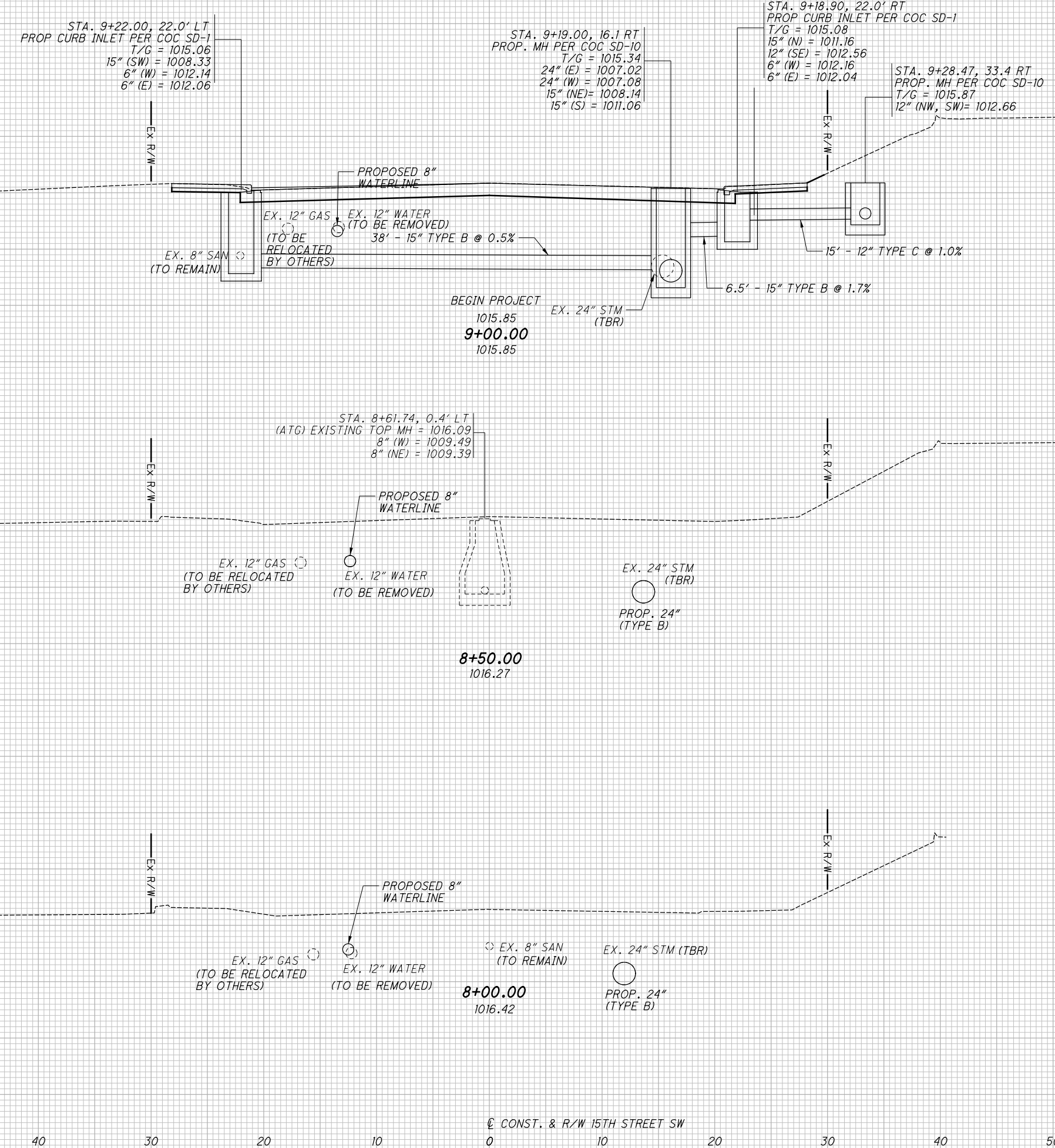
CONST. & R/W 15TH STREET SW

END AREA		VOLUME		CALCULATED AA	CHECKED EAK
CUT	FILL	CUT	FILL		
6	0	12	0		
0	0	0	0		
0	0	0	0		
0	0	12	0		

CROSS SECTIONS - 15TH ST.
STA. 8+00.00 TO STA. 9+00.00

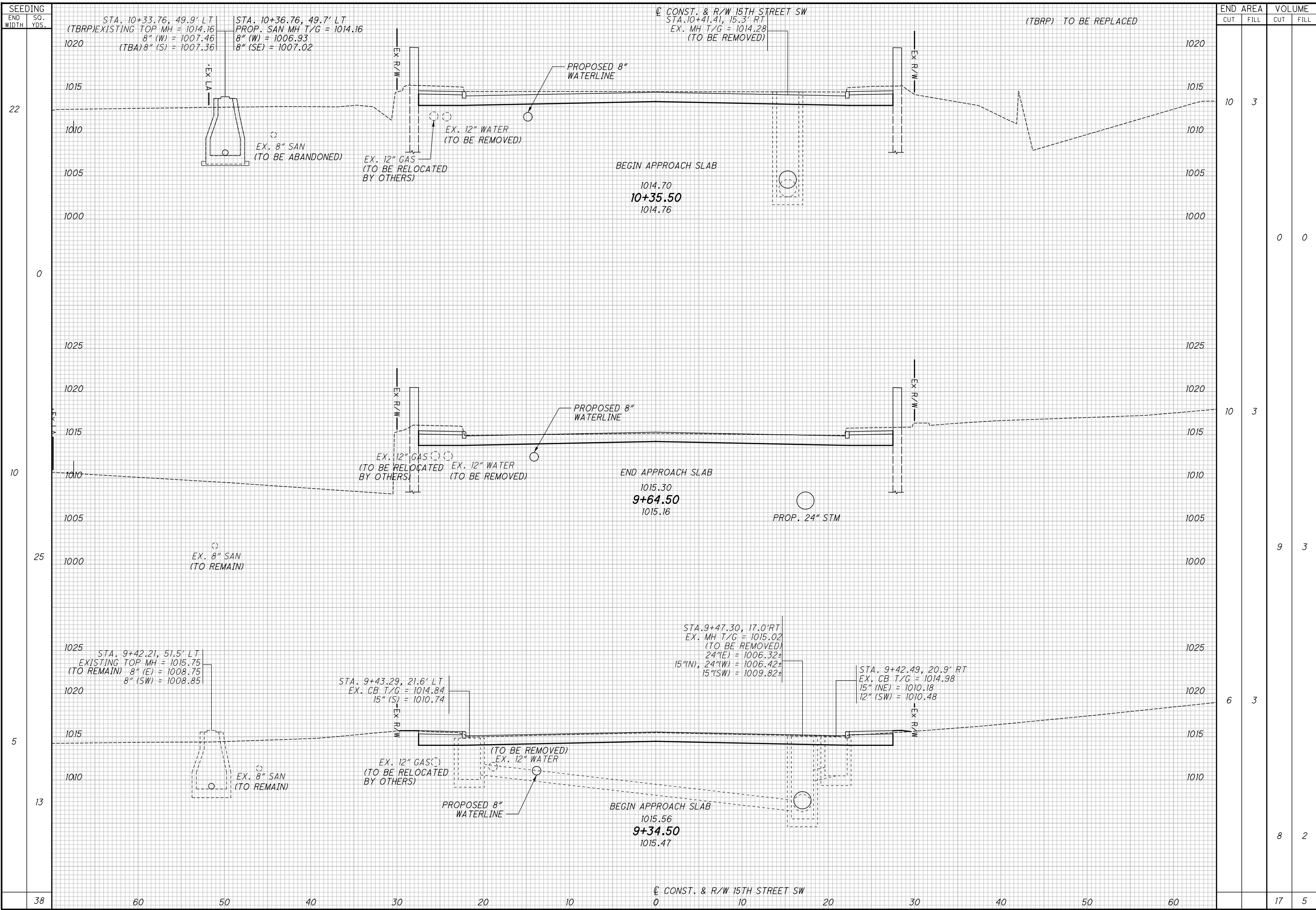
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CONST. & R/W 15TH STREET SW

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END AREA	VOLUME	CALCULATED	CHECKED		
				CUT	FILL
10	3				
10	3				
9	3				
6	3				
8	2				
17	5				

CROSS SECTIONS - 15TH ST.
 STA. 9+34.50 TO STA. 10+35.50

STA -15SW -13.50

20
 53

SEEDING
END WIDTH SO. YDS.

END WIDTH	SO. YDS.
62	0
60	0
50	0
45	3
40	14
30	5
20	14
10	5
0	45
10	62

CONST. & R/W 15TH STREET SW

END AREA	VOLUME	CALCULATED	CHECKED		
				CUT	FILL
0	0				
0	0				
0	0				
3	0				
6	0				
8	2				
6	3				
9	3				
20	5				

CROSS SECTIONS - 15TH ST.
STA. 10+65.50 TO STA. 11+50.00

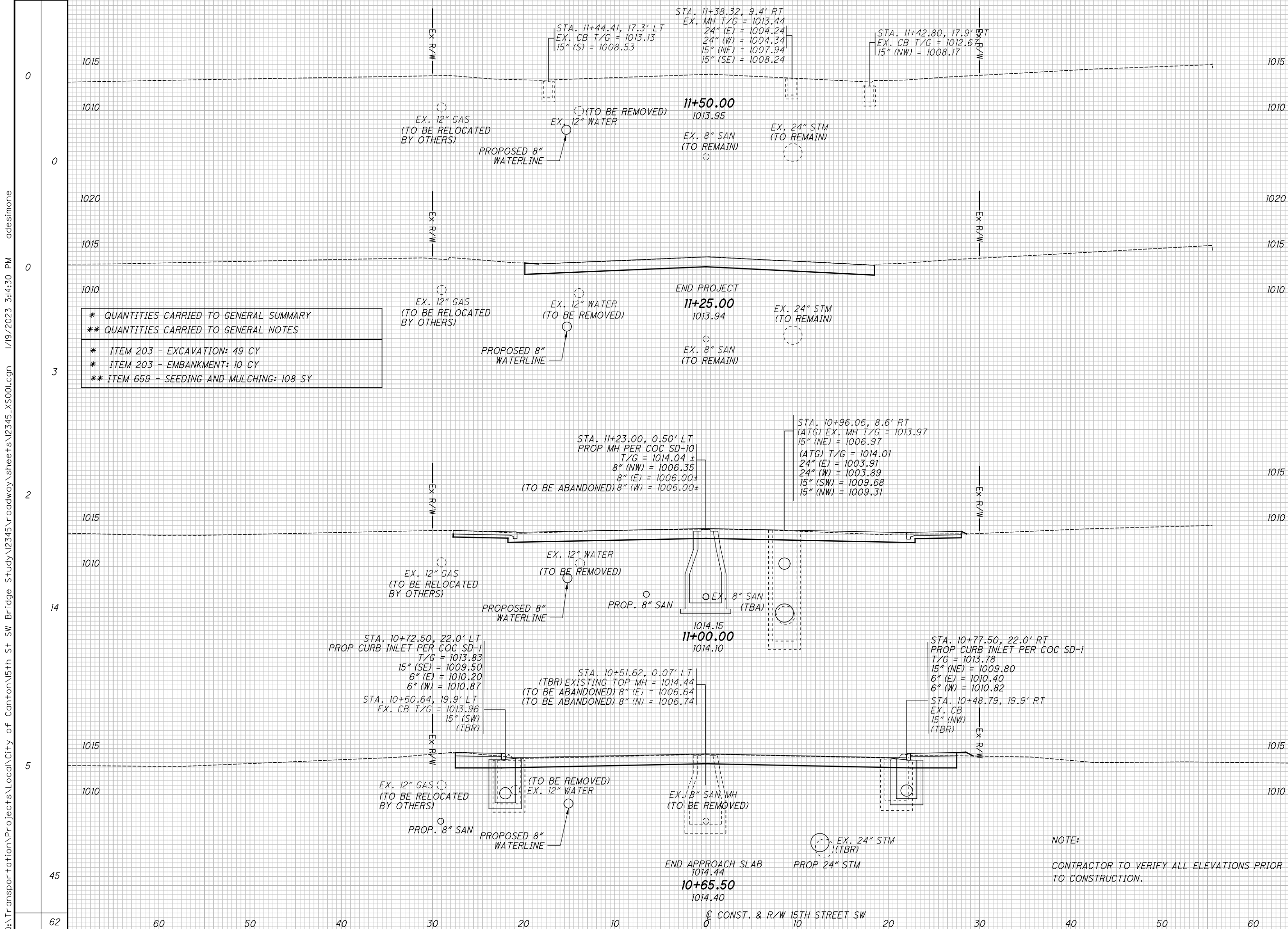
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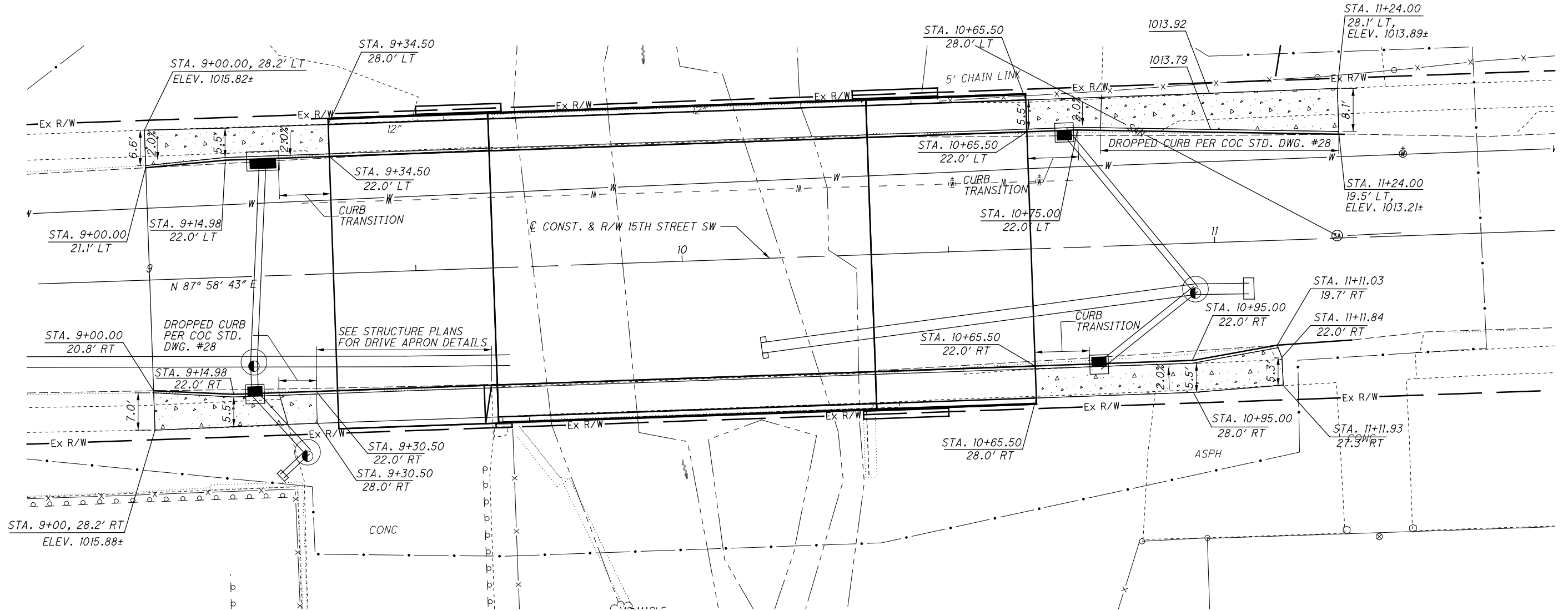
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* QUANTITIES CARRIED TO GENERAL SUMMARY
 ** QUANTITIES CARRIED TO GENERAL NOTES

* ITEM 203 - EXCAVATION: 49 CY
 * ITEM 203 - EMBANKMENT: 10 CY
 ** ITEM 659 - SEEDING AND MULCHING: 108 SY

NOTE:
 CONTRACTOR TO VERIFY ALL ELEVATIONS PRIOR TO CONSTRUCTION.





CALCULATED
AA
CHECKED
EAK

0 5 10 20
HORIZONTAL
SCALE IN FEET

SIDEWALK DETAILS

STA -15SW -13.50

EXPLORATORY BORINGS:

EXPLORATORY SOIL BORING INFORMATION IS NOT THE RESPONSIBILITY OF THE CITY OF CANTON. IT IS THE DEVELOPER/CONTRACTOR RESPONSIBILITY TO REVIEW ANY AND ALL INFORMATION AVAILABLE. IF DEVELOPER/CONTRACTOR REQUESTS TO DRILL AND OR EXCAVATE WITHIN THE CITY'S R/W, THE DEVELOPER/CONTRACTOR SHALL NOTIFY THE CITY ENGINEER AT LEAST 3 WORKING DAYS PRIOR TO THIS WORK. THE DEVELOPER/CONTRACTOR SHALL BE RESPONSIBLE FOR ALL UTILITY NOTIFICATION, AS SPECIFIED, ALL TRAFFIC CONTROL, PREMIUM BACKFILL, AND COMPACTION AND RESTORATION, AS NECESSARY.

WATER MAIN / SERVICES:

1. ALL WATER MAINS, SERVICES AND APPURTENANCES SHALL BE DESIGNED AND CONSTRUCTED ACCORDING TO THE CITY OF CANTON WATER DEPARTMENT REQUIREMENTS AND SPECIFICATIONS IN EFFECT AT THE TIME OF CONSTRUCTION. THE CONTRACTOR SHALL PROVIDE ALL LABOR, MATERIAL, EXCAVATION, BEDDING, BACKFILL, BASE MATERIAL, PAVEMENT AND OTHER ITEMS NECESSARY FOR THE RELOCATION AND INSTALLATION OF THE WATER MAINS, SERVICES, AND APPURTENANCES. THESE COSTS SHALL BE INCLUDED IN THE UNIT PRICES BID FOR ALL THE ITEMS IN THE PROPOSAL.
2. MAINS - WATER MAINS SHALL BE CLASS 52 (8" AND UNDER), CLASS 53 (12") OR CLASS 54 (OVER 12") DUCTILE IRON, MEETING AWWA C151 WITH PUSH JOINTS. THE OUTSIDE SURFACE OF ALL DUCTILE IRON PIPE, FITTINGS AND APPURTENANCES SHALL BE SHOP COATED WITH EITHER ASPHALTIC MATERIAL. IF THE COATING MATERIAL IS FOUND TO BE DAMAGED PRIOR TO THE PIPE TRENCH BEING BACKFILLED, THE CONTRACTOR SHALL PROVIDE AN ADDITIONAL APPROVED MATERIAL AS REQUIRED TO REPAIR AS DIRECTED. THE CONTRACTOR SHALL HAVE SUFFICIENT COATING MATERIALS AVAILABLE AT THE JOB SITE PRIOR TO LAYING THE PIPE. THE INTERIOR OF ALL PIPES AND FITTINGS SHALL BE LINED WITH CEMENT MORTAR AND SEAL COATED IN COMPLETE CONFORMANCE WITH AWWA C104, OR THE LATEST REVISION.
3. ALL DUCTILE IRON PIPE, INCLUDING FITTINGS, BENDS, TEES, VALVES AND APPURTENANCES BURIED UNDERGROUND, SHALL BE ENCASED WITH 8 MIL. POLYETHYLENE FILM CONFORMING TO AWWA C105.
4. THE MINIMUM COVER OVER WATER MAINS SHALL BE 4'-6" FROM GROUND SURFACE TO THE BARREL OF THE PIPE.
5. PIPE LENGTHS MAY BE DEFLECTED AT THE JOINT, IF REQUIRED, AT ONE-HALF THE DEGREE RECOMMENDED BY THE MANUFACTURER.
6. FITTINGS SHALL BE DUCTILE IRON AND BE RATED FOR 250 PSI WORKING PRESSURE IN ACCORDANCE WITH AWWA C110 OR AWWA C153. FITTINGS SHALL INCLUDE, BUT NOT LIMITED TO BENDS, TEES, SLEEVES, COUPLINGS, CROSSES, REDUCERS AND CAPS.
7. VALVES - THE ITEMS COVERED BY THIS SPECIFICATION SHALL MEET ALL APPLICABLE AWWA C509 OR C515 STANDARDS AND THE FOLLOWING: ALL VALVES SHALL BE NON-RISING STEM, IRON BODY, RESILIENT WEDGE DISC. THE DESIGN OF THE THRUST COLLAR SHALL BE SUCH THAT THE THRUST COLLAR IS SEALED FROM LINE PRESSURE BY MEANS OF AN "O" RING SEAL. ALL VALVES SHALL BE FURNISHED WITH A TWO (2) INCH SQUARE OPERATING NUT, OPEN RIGHT. ALL VALVES SHALL BE FURNISHED WITH MECHANICAL JOINT END CONNECTIONS. THE STEM SHALL BE PROTECTED FROM EXTERNAL GRIT BY A WEATHER SHIELD AND AN UPPER "O" RING. STEM SHALL BE LUBRICATED. GATE COATING SHALL HAVE A MINIMUM THICKNESS OF 10 MILS. VALVE SHALL BE TESTED AT THE RATED WORKING PRESSURE OF 250 PSI WITH NO LEAKAGE. SHELL TEST OF 500 PSI SHALL BE APPLIED TO BODY WITH VALVE IN THE OPEN POSITION WITH NO LEAKAGE THROUGH THE METAL, STEM SEALS OR JOINTS. VALVE MUST HAVE TRADITIONAL STUFFING BOX. ALL BOLTING MATERIAL IN THE THRUST COLLAR AND BONNET SHALL BE #316 SS BOLTS. ALL VALVES WITH ACCESSORIES PACK (FLANGES, RUBBERS, NUTS, BOLTS).

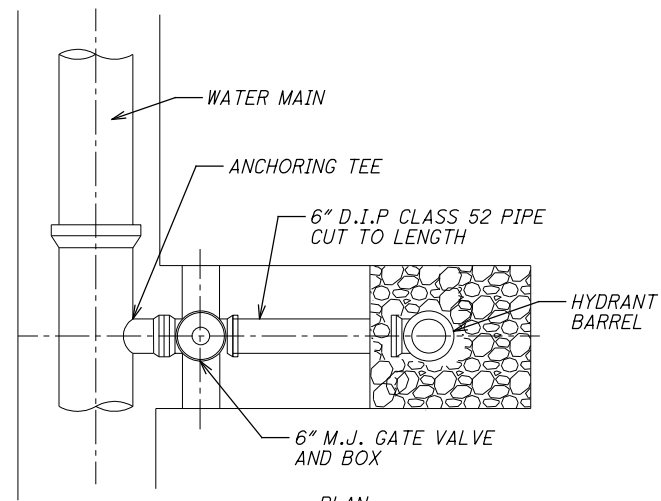
8. ALL VALVE BOXES SHALL BE HEAVY DUTY, THREE (3) PIECE SCREW TYPE, WITH "WATER" LIDS.
9. FLUSHING AND DISINFECTION OF WATER MAINS SHALL BE IN ACCORDANCE WITH AWWA C651.
10. ALL WATER LINE PRESSURE TESTING SHALL CONFORM TO AWWA C600.
11. WATER MAINS SHALL BE INSTALLED AND BACKFILLED PER O.D.O.T. ITEM 638.
12. WATER LINES LOCATED WITHIN THE LIMITS OF OR WITHIN A 1/2 TO 1 SLOPE OF EXISTING AND/OR PROPOSED ROADWAYS, PARKING AREAS, BUILDINGS, SIDEWALKS, AND/OR DRIVES SHALL BE INSTALLED AS TYPE B CONDUITS. ALL OTHER WATER MAINS SHALL BE INSTALLED AS TYPE C CONDUITS. BEDDING SHALL BE AS SPECIFIED, EXCEPT THAT SLAG WILL NOT BE PERMITTED.
13. ALL FITTINGS (BENDS, TEES, VALVES, DEAD ENDS, ETC.) SHALL BE RESTRAINED UTILIZING MEGALUGS, FIELD LOK GASKETS OR APPROVED EQUAL. POURED-IN-PLACE CONCRETE THRUST BLOCKS MAY ALSO BE REQUIRED AT/FOR EACH FITTING. THIS BLOCKING SHALL BE CAREFULLY PLACED TO ENSURE IT IS POSITIONED PROPERLY TO WITHSTAND THE RESULTANT FORCES AT EACH FITTING AND SHALL BEAR ON STABLE UNDISTURBED GROUND CAPABLE OF WITHSTANDING THE POTENTIAL LOADING. WHEN DIRECTED BY THE CITY, TIE RODS ARE TO BE 3/4 INCH DIAMETER. TWO TIE RODS ARE REQUIRED FOR AN 8 INCH PIPE, AND FOUR TIE RODS ARE REQUIRED FOR 12 INCH AND GREATER PIPE. THIS COST SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE FITTINGS.
14. IN ADDITION TO THE RESTRAINT OF ALL BENDS, FITTINGS, TEES, VALVES, DEAD ENDS, ETC. THE CONTRACTOR SHALL ALSO SECURE/RESTRAIN ALL JOINTS FOR AT LEAST THREE (3) PIPE JOINTS (50 LF MIN.) BEYOND EACH DEAD END, BEND, FITTING, VALVE, TEE, ETC. UTILIZING MEGALUGS, FIELD LOK GASKETS, OR APPROVED EQUALS. THIS COST SHALL BE INCLUDED IN THE UNIT PRICES BID FOR THE PIPE.
15. THE CONTRACTOR SHALL PROVIDE 18" VERTICAL CLEARANCE BETWEEN PROPOSED WATERLINES AND ANY SANITARY OR STORM SEWERS. WHEN 18" CLEARANCE CANNOT BE OBTAINED:
 - FOR STORM SEWERS, CONCRETE ENCASE THE STORM SEWER PIPE, 6 FT. ON EACH SIDE OF WATER MAIN.
 - FOR SANITARY SEWERS, REPLACE THE SANITARY SEWER PIPE WITH PVC C900 PIPE, 10 FT. ON EACH SIDE OF THE WATER MAIN. APPROVED COUPLINGS SHALL BE USED TO TIE ONTO THE EXISTING SEWER.

THE CONTRACTOR SHALL MAINTAIN TEN (10) FOOT HORIZONTAL CLEARANCE BETWEEN WATERLINES/SERVICES AND SANITARY OR STORM SEWERS.
16. HYDRANTS - THE FIRE HYDRANT SETTING SHALL INCLUDE THE HYDRANT, ANCHOR TEE, VALVE, VALVE BOX, 6 INCH DUCTILE IRON (CLASS 52) PIPING AND ALL FITTINGS NEEDED FOR PROPER INSTALLATION TO FINAL GRADE. FIRE HYDRANTS SHALL BE MUELLER A423 MEETING THE CITY OF CANTON WATER DEPARTMENT STANDARDS AND REQUIREMENTS. ALL COSTS FOR THE 6" PIPING ASSOCIATED WITH THE INSTALLATION OF FIRE HYDRANTS SHALL BE INCLUDED WITH THE FIRE HYDRANT PAY ITEM. ALL HYDRANTS SHALL BE INSTALLED WITH THE PUMPER NOZZLE FACING THE STREET. ALL FIRE HYDRANT THREADS SHALL BE LUBRICATED WITH A FOOD GRADE LUBRICANT AND OPERATED UPON INSTALLATION.
17. CUT-IN-SLEEVES FOR TIE-IN TO EXISTING WATER MAINS SHALL BE SMITH BLAIR 441 SLEEVES WITH #316 SS BOLTS.
18. ALL WATER TAPS AND SERVICES MUST BE INSTALLED BEFORE ANY PAVEMENT FOR THE PROPOSED ROADWAY HAS BEEN PLACED. THE CONTRACTOR SHALL MAKE ALL SERVICE TAPS ON THE WATER MAIN.
19. PRIOR TO MAKING THE TAP, THE CONTRACTOR SHALL EXPOSE THE EXISTING CURB BOX AND VERIFY THE SIZE OF THE WATER SERVICE LINE ON THE OWNER'S SIDE. THE PROPOSED TAP AND SERVICE SHALL MATCH THE SIZE OF THE OWNER'S SERVICE LINE, WITH 1" BEING A MINIMUM. AN EXISTING 1/4" SERVICE SHALL BE REPLACED WITH A 1 1/2" SERVICE AND TAP.

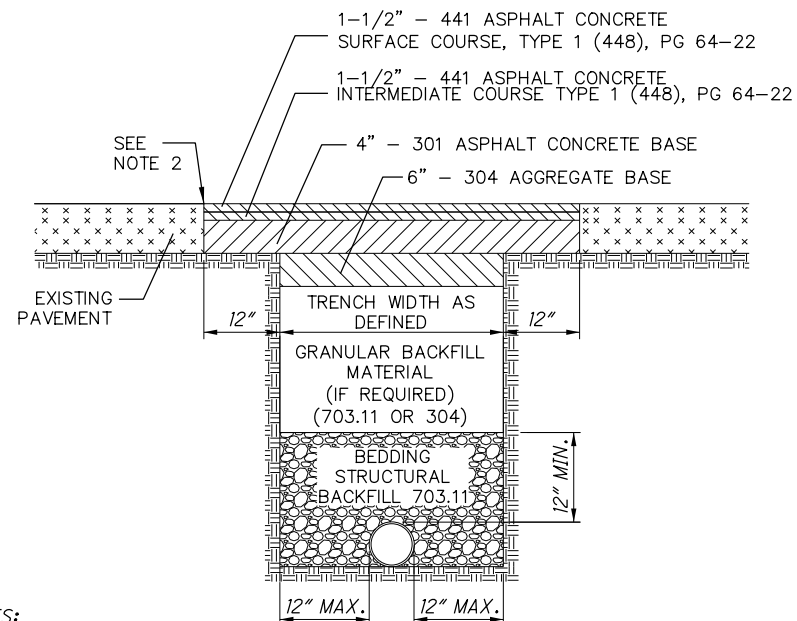
20. THE PROPOSED WATER SERVICES AND TAPS SHALL BE 1" UNLESS NOTED OTHERWISE ON THE PLANS OR DETERMINED OTHERWISE PER PREVIOUS NOTE.
21. MEASUREMENT FOR SERVICES IS ON A LUMP SUM BASIS. PAYMENT FOR "SHORT SIDE" AND "LONG SIDE" SERVICES INCLUDES ALL LABOR AND MATERIALS NECESSARY FOR LOCATING THE WATER MAIN, TAP AND CORPORATION STOP INSTALLATION, SERVICE LINE INSTALLATION, CURB STOP AND ROADWAY BOX INSTALLATION, CONNECTION FROM CORPORATION STOP TO CURB STOP, AND CONNECTION TO THE OWNER'S SIDE SERVICE LINE. EXCAVATION, BEDDING, BACKFILL, BASE MATERIAL, PAVEMENT AND COMPACTION ARE CONSIDERED INCIDENTAL TO THE SERVICE ITEMS IN THE PROPOSAL AND NO ADDITIONAL COMPENSATION WILL BE MADE FOR SUCH ITEMS.
22. FOR THE PURPOSE OF THESE PLANS AND PROPOSAL, A "SHORT SIDE" SERVICE IS CONSIDERED THE SERVICE LINE CONNECTING THE PROPOSED CURB STOP TO THE WATER MAIN ON THE SAME SIDE OF THE STREET BEFORE THE CENTERLINE OF THE ROADWAY. A "LONG SIDE" SERVICE IS CONSIDERED THE SERVICE LINE CONNECTING THE PROPOSED CURB STOP TO THE WATER MAIN ON THE OPPOSITE SIDE OF THE STREET PAST THE CENTERLINE OF THE ROADWAY. ANY CLARIFICATION ON WHETHER A SERVICE IS CONSIDERED "LONG" OR "SHORT" SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER AS A PRE-BID QUESTION.
23. THE CONTRACTOR MAY ELECT TO OPEN CUT OR PUSH/BORE THE "SHORT SIDE" SERVICES. THE CHOSEN METHOD OF INSTALLATION IS CONSIDERED MEANS AND METHODS OF THE CONTRACTOR AND SHALL BE ACCOUNTED FOR IN THE BID ITEM FOR THE "SHORT SIDE" SERVICES. THE CONTRACTOR SHALL PUSH/BORE ALL "LONG SIDE" SERVICES. NO OPEN CUTS OR TRENCHING ACROSS THE ROADWAY WILL BE PERMITTED FOR THE INSTALLATION OF THE "LONG SIDE" SERVICES WITH THE EXCEPTION OF POTHOLES FOR POTENTIAL CONFLICTS AND BORE BITS. IN THE EVENT A "LONG SIDE" SERVICE CANNOT BE PUSHED/BORED, APPROVAL MUST BE OBTAINED FROM THE ENGINEER PRIOR TO OPEN CUTTING OR TRENCHING ACROSS THE ROADWAY. NO OPEN CUTS OR TRENCHES FOR "LONG SIDE" SERVICES WILL BE PERMITTED UNTIL PROPER UTILITY POTHOLES AND VERIFICATION HAS BEEN PERFORMED AS REQUIRED PER THE CONTRACT AND PUSHING/BORING THE SERVICE IS PROVEN TO BE IMPOSSIBLE.
24. IF OPEN CUTTING A "LONG SIDE" SERVICE WOULD RESULT IN ADDITIONAL COMPENSATION, THE CONTRACTOR SHALL SUBMIT A COST PROPOSAL TO THE ENGINEER PRIOR TO RECEIVING PERMISSION TO OPEN CUT UNLESS A BID ITEM FOR SUCH WORK WAS INCLUDED IN THE PROPOSAL. IN WHICH CASE, THE EXISTING BID ITEM WILL BE USED FOR COMPENSATION OF ANY OPEN CUT SERVICE AND INCLUDE PAYMENT FOR ALL LABOR, MATERIALS, AND ITEMS OF WORK AS COVERED FOR A TYPICAL SERVICE. ADDITIONAL RESTORATION ITEMS SUCH AS AGGREGATE BASE AND ASPHALT WILL BE PAID USING EXISTING BID ITEMS AS WELL.
25. THE CONTRACTOR SHALL TAKE ANY AND ALL NECESSARY PRECAUTIONS TO PROTECT AND MAINTAIN IN SERVICE, ANY EXISTING WATER MAINS AND/OR SERVICES EXPOSED DURING CONSTRUCTION. IF THE CONTRACTOR BREAKS A WATER MAIN AND/OR SERVICE, HE SHALL BE RESPONSIBLE TO REPAIR THE BREAK, AT HIS OWN EXPENSE, AND WILL NOT BE COMPENSATED FOR ANY DOWNTIME.
26. ANY WATER SERVICE LINE THAT IS BROKEN, CUT OR OTHERWISE DAMAGED, SHALL BE REPLACED FROM THE CORPORATION STOP TO THE CURB STOP WITH A SINGLE PIECE OF HDPE TUBING, CTS, PE4710. NO SPLICING OF THE SERVICE LINE WILL BE PERMITTED.
27. SERVICE BRANCHES WILL BE INSTALLED AS PER O.D.O.T ITEM 638.16, WITH THE FOLLOWING EXCEPTIONS:
 1. WHEN A SERVICE BRANCH IS DISTURBED FOR LOWERING, RAISING, EXTENDING OR SHORTENING ON THE PROPERTY SIDE ON THE SERVICE STOP, IT SHALL BE REPLACED WITH NEW MATERIALS FROM THE CORPORATION STOP TO THE SERVICE STOP.

28. POLYETHYLENE WATER MAIN AND SERVICE TUBING 2" AND UNDER SHALL BE COPPER TUBE SIZE, SDR 9, WITH A MINIMUM PRESSURE CLASS OF 200 PSI AND MEET STANDARDS ASTM-D2737 PE4710 AND AWWA C901. THE ACCEPTABLE TUBING IS CP CHEM PERFORMANCE PIPE DRISCOPLEX 5100-ULTRA-LINE, CHARTER PLASTICS INC. BLUE ICE, ENDOT ENDOPURE AND ADS POLYFLEX.
29. THE PROPOSED FACILITIES SHALL MAINTAIN A MINIMUM 35 PSI PRESSURE DELIVERED TO THE CURB STOP DURING NORMAL OPERATING CONDITIONS.
30. A MINIMUM PRESSURE OF 20 PSI AT GROUND LEVEL SHALL BE MAINTAINED AT ALL POINTS IN THE DISTRIBUTION SYSTEM UNDER ALL CONDITIONS OF FLOW.
31. BOOSTER PUMPS ARE NOT PERMITTED ON SERVICE CONNECTIONS.
32. WHEN AN EXISTING WATER MAIN MUST BE SHUT DOWN TO PERFORM REQUIRED WORK, THE CONTRACTOR SHALL NOTIFY THE PROPERTIES TO BE AFFECTED A MINIMUM OF 24 HOURS IN ADVANCE OF SAID SHUT DOWN. THE WORK WILL BE SCHEDULED AND COORDINATED TO MINIMIZE THE TIME THE MAIN IS OUT OF SERVICE.
33. THE CONTRACTOR SHALL NOTIFY THE CITY 48 HOURS IN ADVANCE OF ANY SHUT DOWN OF AN EXISTING MAIN. THE CONTRACTOR WILL NOT OPERATE ANY VALVES. VALVES WILL BE OPERATED BY CANTON WATER DEPARTMENT PERSONNEL ONLY. VALVES DAMAGED BY THE CONTRACTOR'S OPERATION WILL BE REPLACED AT THE CONTRACTOR'S EXPENSE.
34. ALL VALVE BOXES WILL BE ADJUSTED TO FINAL GRADE OF SURROUNDING PAVEMENT OR FINISHED SURFACE TREATMENTS WHEN THE PROJECT IS COMPLETED.
35. ANY DIGGING WITHIN THE RIGHT-OF-WAY OF ANY STREET REQUIRES A ROAD OPENING PERMIT. PLEASE CONTACT THE APPROPRIATE GOVERNMENTAL ENTITY FOR INFORMATION REGARDING THE PERMITTING PROCESS AND/OR FEES DUE.
36. THE CONTRACTOR SHALL REPLACE ANY TRAFFIC SIGNAL LOOP DETECTOR WIRE DAMAGED DURING THE WATERLINE INSTALLATION. THIS COST SHALL BE INCLUDED IN THE UNIT PRICES BID FOR ALL ITEMS IN THE PROPOSAL.
37. THE CONTRACTOR SHALL REPLACE ANY ROADWAY PAVEMENT MARKINGS DAMAGED OR REMOVED DURING THIS PROJECT. THE PAVEMENT MARKINGS SHALL BE PER THE GOVERNING AUTHORITY'S SPECIFICATIONS. THIS COST SHALL BE INCLUDED IN THE UNIT PRICES BID FOR ALL ITEMS IN THE PROPOSAL.
38. THE CONTRACTOR SHALL REPLACE ANY PRIVATE IRRIGATION SYSTEMS AND/OR UNDERGROUND ELECTRIC FENCES THAT ARE DAMAGED OR REMOVED DURING THE WATERLINE CONSTRUCTION. THIS COST SHALL BE INCLUDED IN THE UNIT PRICES BID FOR ALL ITEMS IN THE PROPOSAL.
39. VALVES THAT ARE CALLED OUT TO BE ABANDONED SHALL INCLUDE ALL LABOR, MATERIAL, AND EQUIPMENT NECESSARY TO ABANDON EXISTING WATER VALVES. THIS ITEM SHALL ALSO INCLUDE ANY NECESSARY EXCAVATION AND BACKFILL REQUIRED. VALVES SHALL BE CLOSED AND HAVE THE TOP 6" OF THE CASTING REMOVED. VALVES IN PAVEMENT SHALL BE FILLED WITH CONCRETE WITH THE TOP 6" MATCHING THE EXISTING PAVEMENT COMPOSITION. VALVES IN YARD AREA SHALL BE FILLED WITH SAND.
40. FIRE HYDRANTS THAT ARE CALLED OUT TO BE REMOVED SHALL INCLUDE ALL LABOR, MATERIAL AND EQUIPMENT NECESSARY TO REMOVE THE FIRE HYDRANT, HYDRANT VALVE AND PLUG THE HYDRANT TEE.
41. FOR WATERLINES CALLED OUT TO BE ABANDONED, THE CONTRACTOR SHALL PLUG AND ABANDON THE EXISTING WATERLINE WITH A DUCTILE IRON PLUG OR AS DIRECTED BY THE CANTON WATER DEPARTMENT.
42. REMOVAL OF ANY EXISTING THRUST BLOCKS WILL BE CONSIDERED INCIDENTAL TO THE OVERALL PROJECT COST.

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PLAN

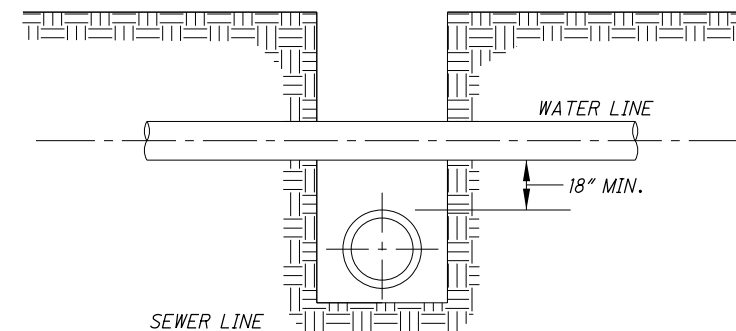


NOTES:

1. NO FOUNDRY SAND OR SLAG IS PERMITTED. ALTERNATE BACKFILL MATERIAL PERMITTED ONLY IF APPROVED BY CITY ENGINEER.
2. SAW CUT EXISTING PAVEMENT, SEAL JOINT PER ODOT ITEM 423-CRACK SEALING, TYPE IV. INCLUDE COST IN BID PRICE FOR THE PROPOSED PAVEMENT.
3. IF ADJACENT PAVEMENT IS DAMAGED OR UNDERMINED DURING THE CONSTRUCTION, ADDITIONAL PAVEMENT SHALL BE SAW CUT AND REMOVED OR MILLED IN ORDER TO PROVIDE A SOUND PAVEMENT EDGE AT NO ADDITIONAL COST TO THE PROJECT.
4. IN THE EVENT THAT THE SAW CUT WOULD LIE WITHIN 3 FEET OF THE EDGE OF PAVEMENT OR FACE OF CURB, THE PAVEMENT REPLACEMENT SHALL EXTEND TO THE EDGE OF PAVEMENT OR FACE OF CURB.
5. PAYMENT FOR ALL LABOR AND MATERIAL NECESSARY TO TRENCH AND LAY THE WATERLINE, INCLUDING THE ASPHALT CONCRETE COURSES, THE ASPHALT CONCRETE BASE, AND THE AGGREGATE BASE SHALL BE INCLUDED WITH THE BID PRICE FOR ITEM 638 - 8" WATER MAIN DUCTILE IRON PIPE ANSI CLASS 52, AS PER PLAN.

PAY LIMITS - TRENCH & ROADWAY DETAIL FOR D.I.P.

(C175)
REV 9/30/2020



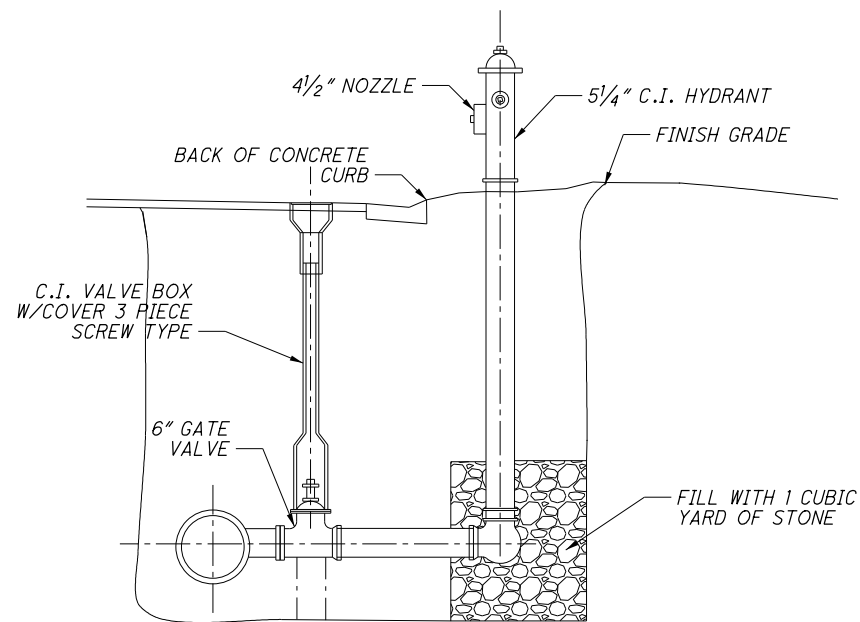
SECTION

NOTES:

1. IF JOINT ON WATER MAIN IS WITHIN LIMITS OF SEWER TRENCH, INSTALL MECHANICAL BELL JOINT CLAMP
2. IF CLEARANCE IS LESS THAN 18":
 - FOR STORM SEWERS, CONCRETE ENCASE THE STORM SEWER, 6 FT. ON EACH SIDE OF WATER MAIN
 - FOR SANITARY SEWERS, REPLACE THE SANITARY SEWER PIPE WITH PVC C900 PIPE, 10 FT. ON EACH SIDE OF WATER MAIN. APPROVED COUPLINGS SHALL BE USED TO TIE ONTO THE EXISTING SEWER.
3. IN NO CASE SHALL THE SEWER PIPE CONTACT ANY WATER MAIN, SERVICE LINE OR APPURTENANCE.

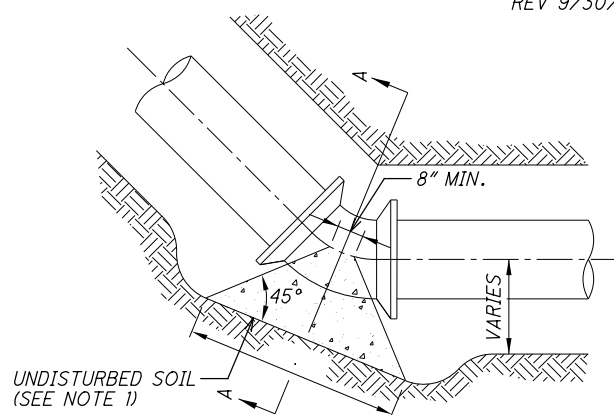
COST FOR THE ABOVE SHALL BE INCLUDED IN THE UNIT PRICES BID FOR ALL ITEMS IN THE PROPOSAL.

VERTICAL WATER MAIN CLEARANCE
(C186)

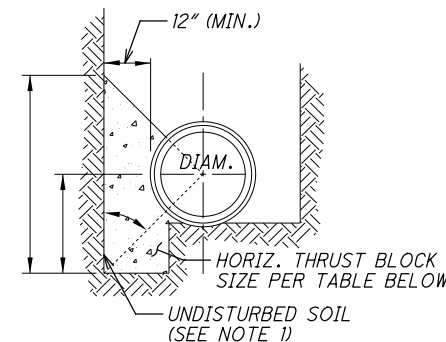


PROFILE

HYDRANT SETTING
(C71)
REV 4/6/1989



PLAN



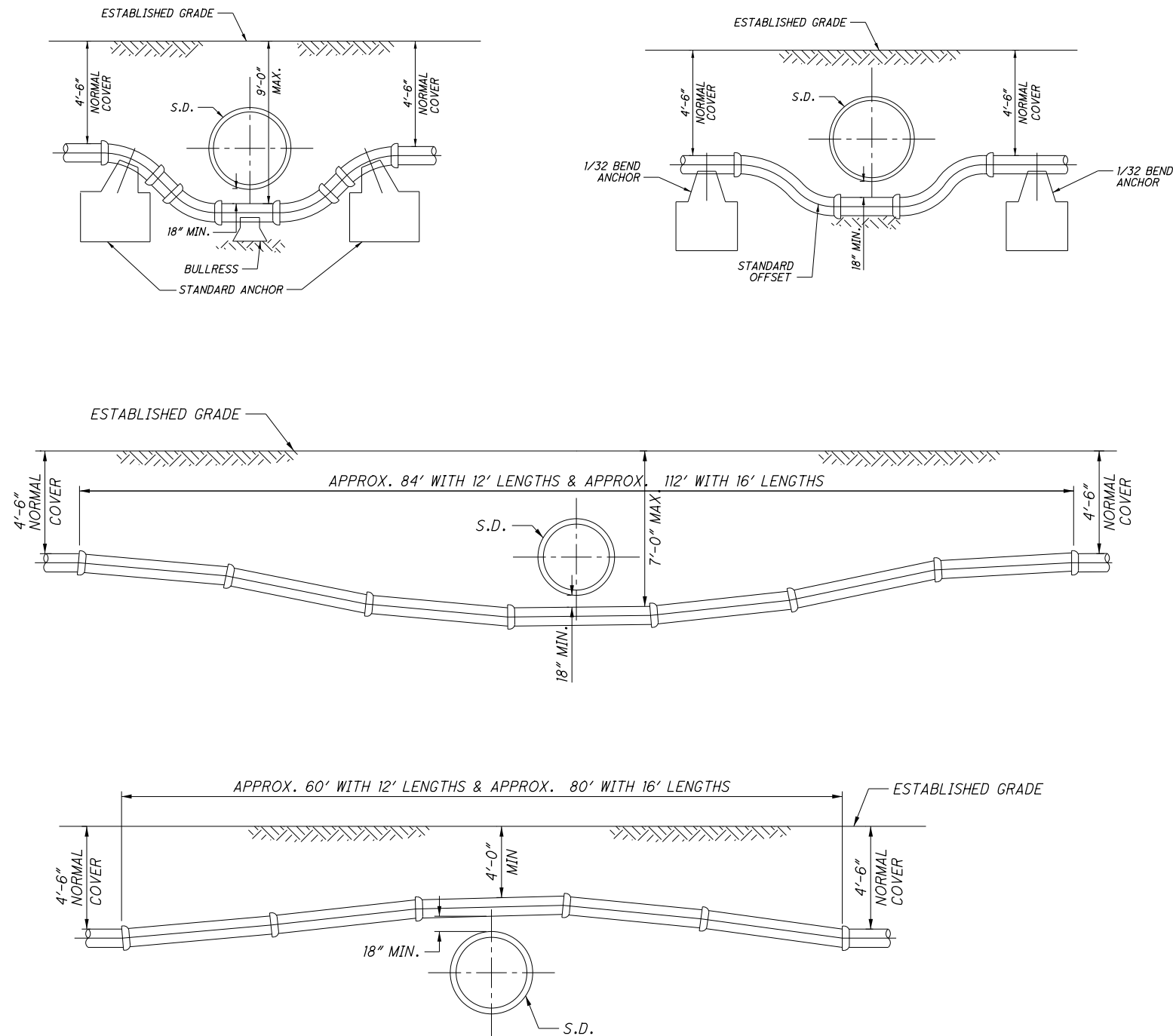
SECTION A-A

SIZE OF PIPE	DEGREE OF BEND							
	11 1/4°		22 1/2°		45°		90°	
	L	H	L	H	L	H	L	H
6"	16	8	16	10	24	14	32	18
8"	16	10	21	14	31	18	44	24
12"	21	16	32	20	48	26	66	36
16"	29	20	42	28	66	34	90	46
20"	37	24	50	36	73	48	107	60
24"	46	28	64	40	93	54	128	72

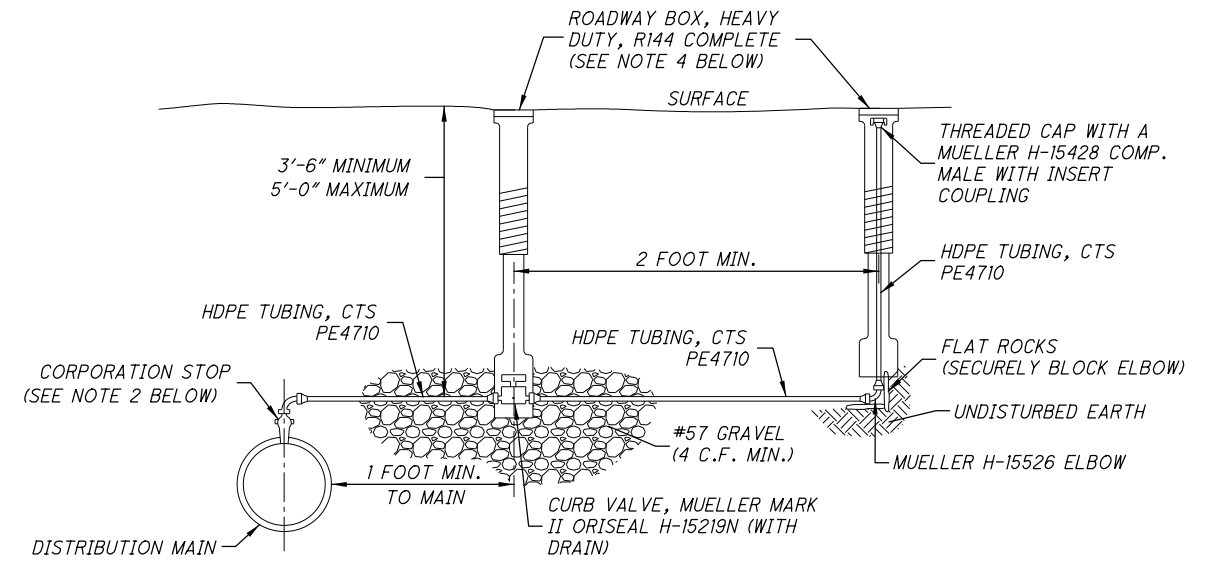
HYDRANT THRUST BLOCKS
(C130)
REV 3/7/2016

CALCULATED
HM
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AMT

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WATER MAIN CROSSING STORM DRAIN
(C187)
REV 10/22/2013



NOTES:

- 1.) TO BE USED ON MAINS UP TO AND INCLUDING 12 INCHES.
- 2.) CORPORATION STOP AND ASSEMBLY SHALL BE AS FOLLOWS:
 - 3/4" X 1" CORP. STOP ON DIP (6" AND 8" MAINS):
INSTALL AT A 90° ANGLE, A MUELLER B-25000 CORPORATION STOP WITH A MUELLER H-15067 ELBOW.
 - 3/4" X 1" CORP. STOP ON PVC C909 (6" AND 8" MAINS):
INSTALL AT A 90° ANGLE, A MUELLER B-25000 CORPORATION STOP WITH A MUELLER H-15067 ELBOW AND A FORD, STAINLESS STEEL, EPOXY COATED TAPPING SADDLE (FC202 STYLE).
 - 1" CORP. STOP ON DIP (MAINS 12" AND UP):
INSTALL AT A 90° ANGLE, A MUELLER B-25000 CORPORATION STOP WITH A MUELLER H-15067 ELBOW.
 - 1" CORP. STOP ON PVC C909 (MAINS 12" AND UP):
INSTALL AT A 90° ANGLE, A MUELLER B-25000 CORPORATION STOP WITH A MUELLER H-15067 ELBOW AND A FORD, STAINLESS STEEL, EPOXY COATED TAPPING SADDLE (FC202 STYLE).
 - 1 1/2" CORP. STOP (ALL MAIN SIZES):
INSTALL AT A 90° ANGLE, A MUELLER B-25000 CORPORATION STOP WITH A MUELLER H-15068 ELBOW AND A MUELLER H-15071 COMPRESSION FEMALE WITH INSERT COUPLING. ASSEMBLY SHALL ALSO CONSIST OF A FORD, STAINLESS STEEL, EPOXY COATED TAPPING SADDLE (FC202 STYLE).
 - 2" CORP. STOP (ALL MAIN SIZES):
INSTALL AT A 90° ANGLE, A MUELLER H-10003 CORPORATION STOP WITH 2" IRON TOP, A MUELLER H-15533 ELBOW AND A FORD, STAINLESS STEEL, EPOXY COATED TAPPING SADDLE (FC202 STYLE).
- 3.) BRASS REDUCING BUSHINGS OR SWIVEL ELLS WILL NOT BE ALLOWED.
- 4.) HEAVY DUTY VALVE BOXES, COMPLETE, MUST BE USED IN PLACE OF ROADWAY BOXES WHEN LOCATED IN ROADWAYS OR ASPHALT DRIVES.
- 5.) APPROVED EQUALS MAY BE USED IN PLACE OF SPECIFIED ITEMS.

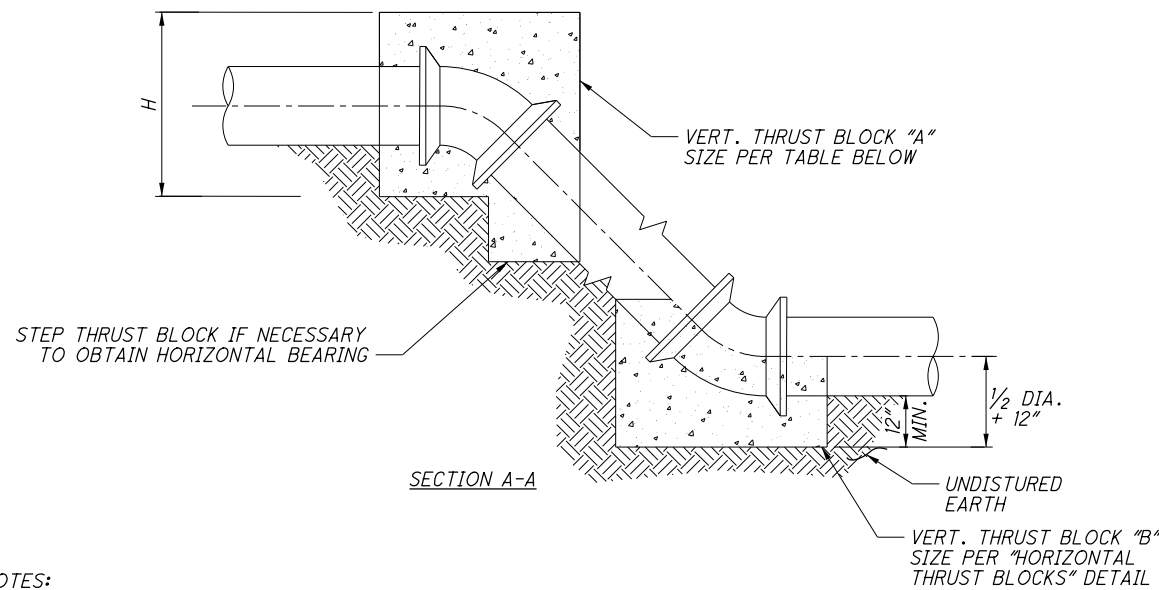
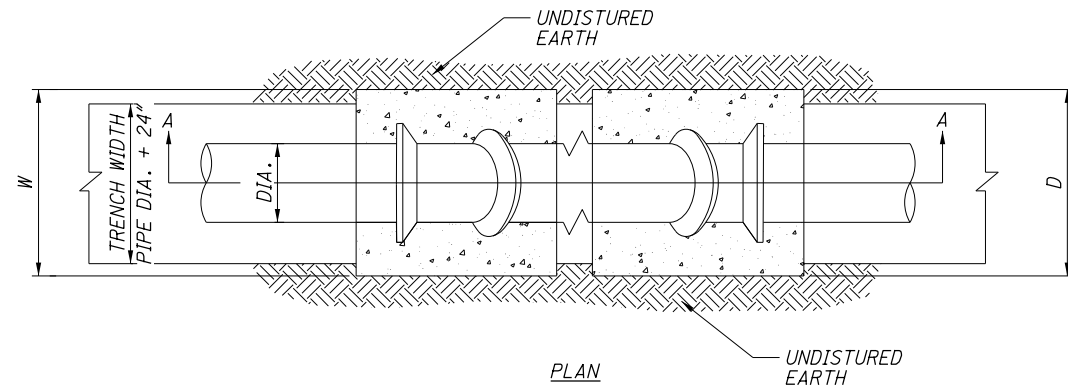
MANUAL AIR RELEASE VALVE
(C255)
REV 11/25/2020

CALCULATED
HM
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AMT

WATERLINE DETAILS (2 OF 3)

STA -15SW -13.50

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NOTES:

PIPE, BOLTS, NUTS AND FITTINGS SHALL BE WRAPPED WITH POLYETHYLENE FILM TO PREVENT CORROSION AND CONCRETE ADHESION.

THRUST BLOCKS TO BE CENTERED ON BEND HORIZONTALLY.

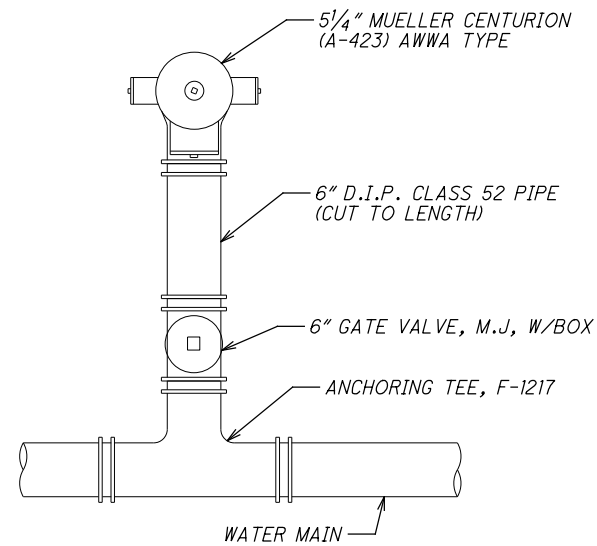
THRUST BLOCK 'A' SHALL BE OFF CENTERED ON BEND VERTICALLY TO SHIFT THE MAJORITY OF THE BLOCK ABOVE THE FITTING.

ALL JOINTS TO BE MEGALUGGED.

CONCRETE THRUST BLOCKS TO BE PLACED ON ALL VERTICAL BENDS.

SIZE OF PIPE	DEGREE OF BEND											
	11 1/4°				22 1/4°				45°			
	L	W	H	V (cy)	L	W	H	V (cy)	L	W	H	V (cy)
6"	12	48	18	0.2	15	43	36	0.5	28	55	24	0.8
8"	12	63	24	0.4	18	57	34	0.7	36	57	33	1.4
12"	20	54	36	0.8	37	62	37	1.7	48	62	51	3.1
16"	31	65	38	1.6	55	65	39	3.0	65	65	65	5.6
20"	40	56	50	2.4	57	66	59	4.8	82	74	68	8.8
24"	48	60	60	3.5	67	72	66	6.9	91	91	72	12.7

CONCRETE THRUST BLOCKS FOR VERTICAL BENDS ON WATER MAINS (POURED IN PLACE, CLASS C) (C147) REV 4/22/2015



HYDRANT SETTINGS CONSIST OF HYDRANT, VALVE, VALVE BOX, FITTINGS AND MATERIALS SHOWN OR SPECIFIED WHICH ARE NEEDED FOR PROPER INSTALLATION.

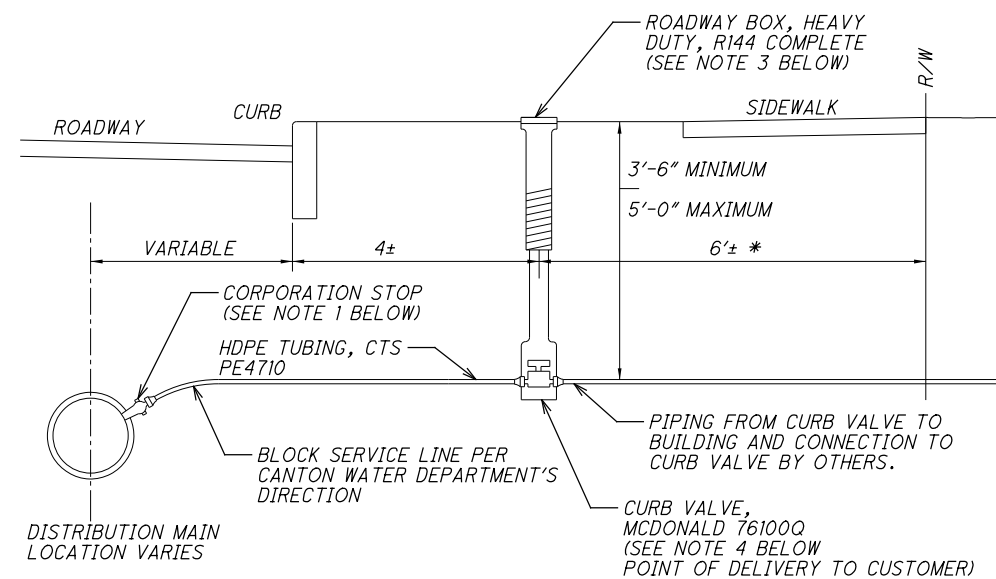
SEE SPECIFICATIONS FOR MORE INFORMATION ABOUT MATERIALS, SETTINGS HYDRANTS AND DRAINAGE REQUIREMENTS.

IF RESTRAINED JOINT FITTINGS CANNOT BE USED, (2) TIE RODS AND (4) EYE BOLTS WITH NUTS AND WASHERS MUST BE USED.

FIGURES SUCH AS F-1217 INDICATE CLOW CORPORATION STYLES. USE THIS BRAD OR APPROVED EQUAL.

ALL HYDRANT ARE TO BE INSTALLED WITH THE PUMPER NOZZLE FACING THE STREET.

HYDRANT CONNECTION (C70) REV 4/5/1989



NOTES:

1.) A 1" SERVICE ON A 6" OR 8" MAIN SHALL CONSIST OF A 3/4" TAP WITH A 3/4" X 1" CORP.

2.) CORPORATION STOP AND ASSEMBLY SHALL BE AS FOLLOWS:

- 3/4" X 1" CORP. STOP ON DIP (6" AND 8" MAINS):
INSTALL AT THE 2:00 POSITION, A MUELLER B-25008 CORPORATION STOP WITH A COMPRESSION CONNECTION.
- 3/4" X 1" CORP. STOP ON PVC C909 (6" AND 8" MAINS):
INSTALL AT THE 2:00 POSITION, A MUELLER B-25008 CORPORATION STOP WITH A COMPRESSION CONNECTION AND A FORD, STAINLESS STEEL, EPOXY COATED TAPPING SADDLE (FC202 STYLE).
- 1" CORP. STOP ON DIP (MAINS 12" AND UP):
INSTALL AT THE 2:00 POSITION, A MUELLER B-25008 CORPORATION STOP WITH A COMPRESSION CONNECTION.
- 1" CORP. STOP ON PVC C909 (MAINS 12" AND UP):
INSTALL AT THE 2:00 POSITION, A MUELLER B-25008 CORPORATION STOP WITH A COMPRESSION CONNECTION AND A FORD, STAINLESS STEEL, EPOXY COATED TAPPING SADDLE (FC202 STYLE).
- 1 1/2" CORP. STOP (ALL MAIN SIZES):
INSTALL AT THE 2:00 POSITION, A MUELLER B-25008 CORPORATION STOP WITH A COMPRESSION CONNECTION AND A FORD, STAINLESS STEEL, EPOXY COATED TAPPING SADDLE (FC202 STYLE).
- 1 1/2" X 2" CORP. STOP (ALL MAIN SIZES):
INSTALL AT THE 2:00 POSITION, A MUELLER B-25008 CORPORATION STOP WITH A COMPRESSION CONNECTION AND A FORD, STAINLESS STEEL, EPOXY COATED TAPPING SADDLE (FC202 STYLE).

3.) A SERVICE CLAMP MUST BE USED WHEN THE MAIN SIZE IS 2 INCH OR SMALLER.

4.) HEAVY DUTY VALVE BOXES, COMPLETE, MUST BE USED IN PLACE OF ROADWAY BOXES WHEN THE CURB VALVE IS LOCATED IN ROADWAYS OR ASPHALT DRIVES.

5.) WHEN CONNECTING A NEW 1" SERVICE TO AN EXISTING 3/4" SERVICE, THE CURB VALVE SIZE SHALL BE A 1" X 3/4" REDUCING CURB VALVE.

6.) BRASS REDUCING BUSHINGS OR SWIVEL ELLS WILL NOT BE ALLOWED.

7.) APPROVED EQUALS MAY BE USED IN PLACE OF SPECIFIED ITEMS.

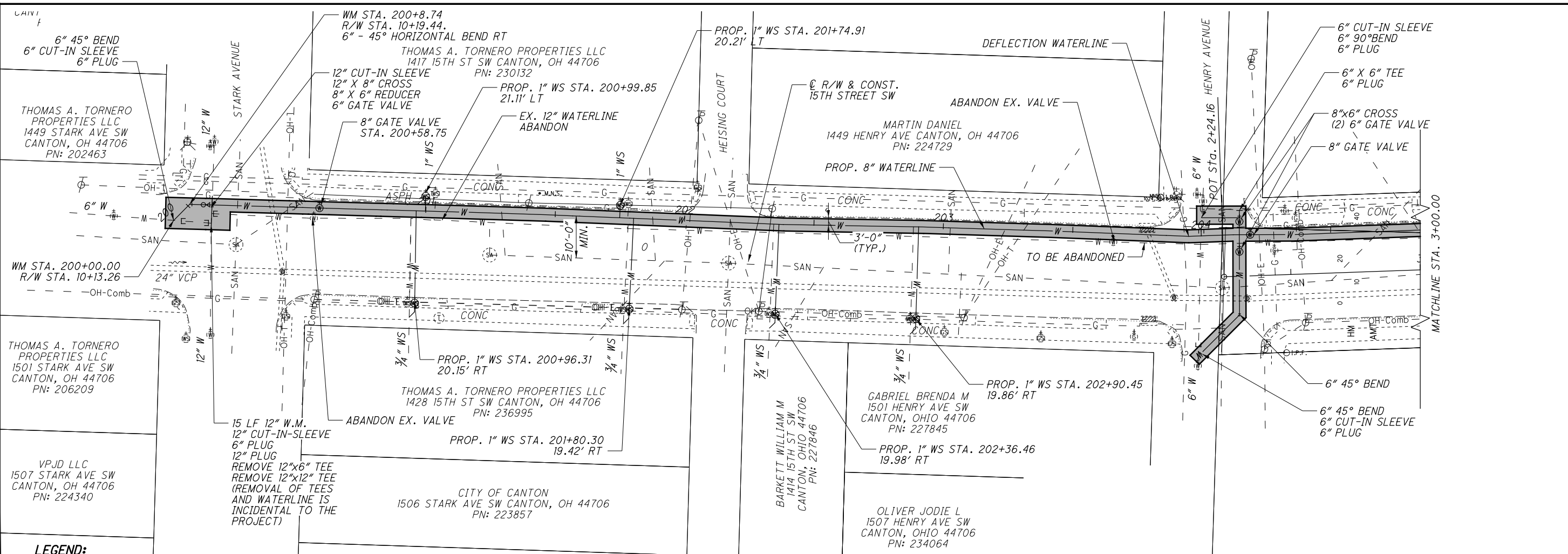
TYPICAL WATER SERVICE (C94) REV 9/15/2019

CALCULATED
HM
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AMT

WATERLINE DETAILS (3 OF 3)

STA -15SW -13.50

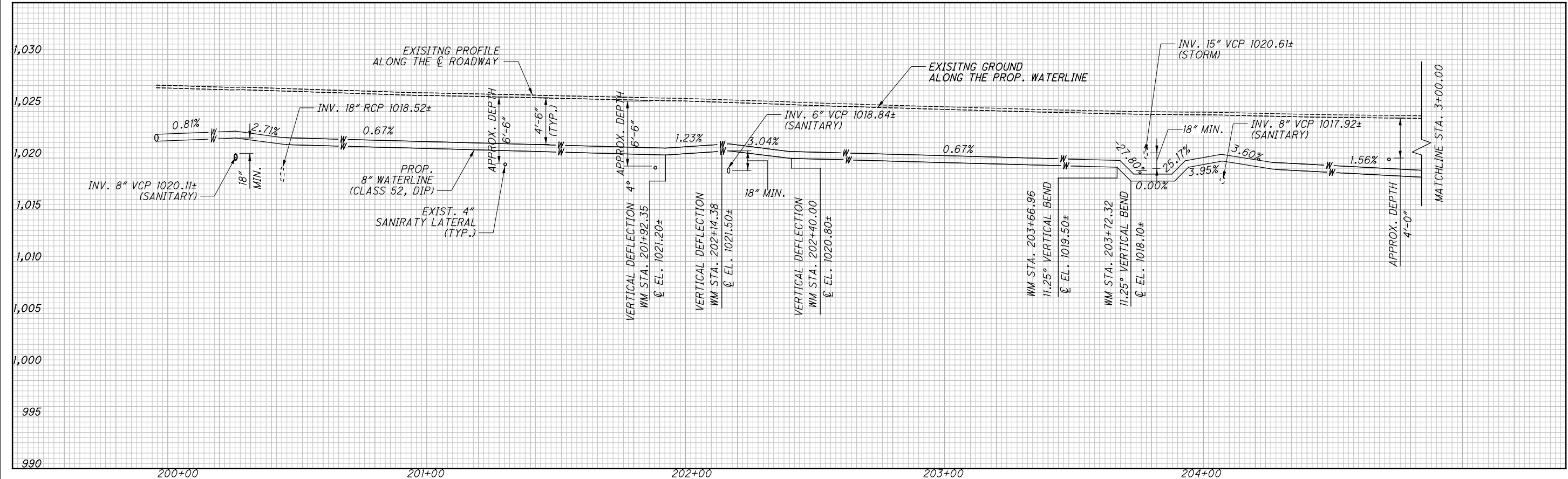
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LEGEND:

PAVEMENT REPLACEMENT FOR WATERLINE TRENCH

PLAN





HORIZONTAL SCALE IN FEET

CALCULATED

CHECKED

WATERLINE PLAN AND PROFILE

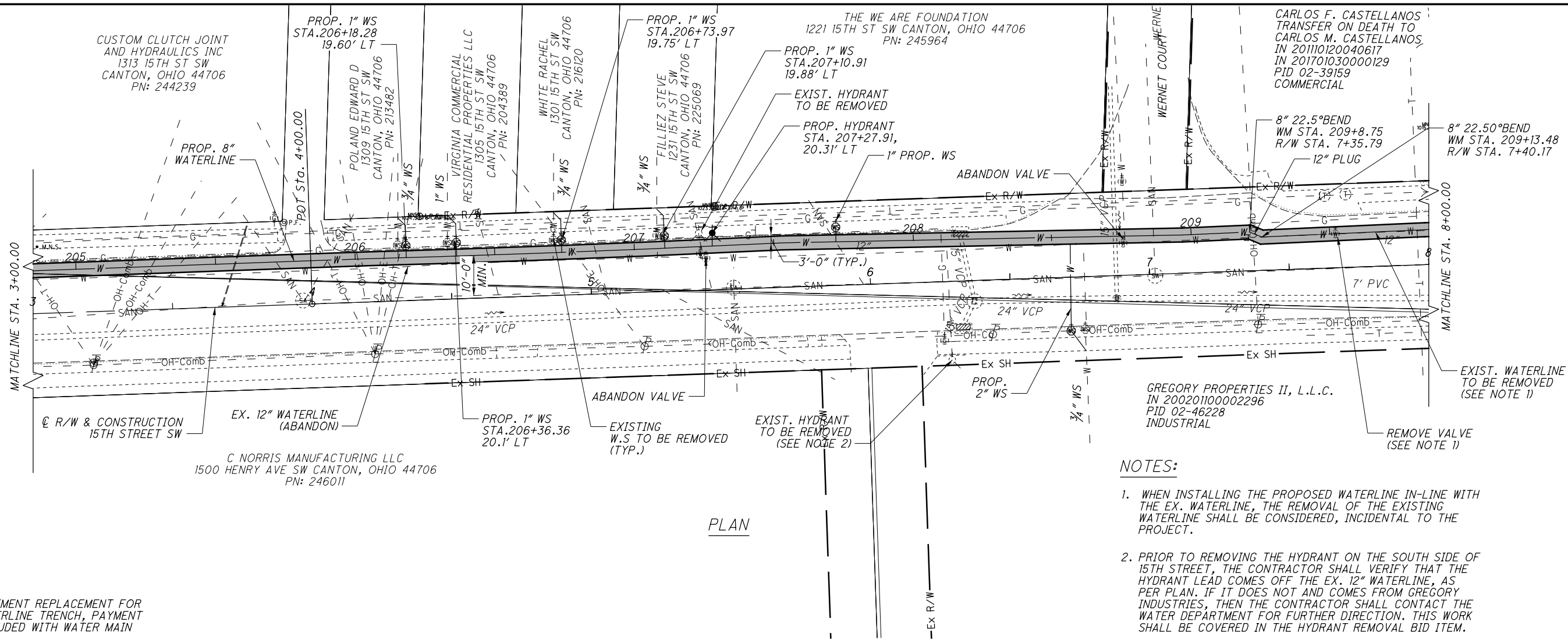
STATION 0+00.00 TO STATION 3+00.00

STA-15SW-13.50

27

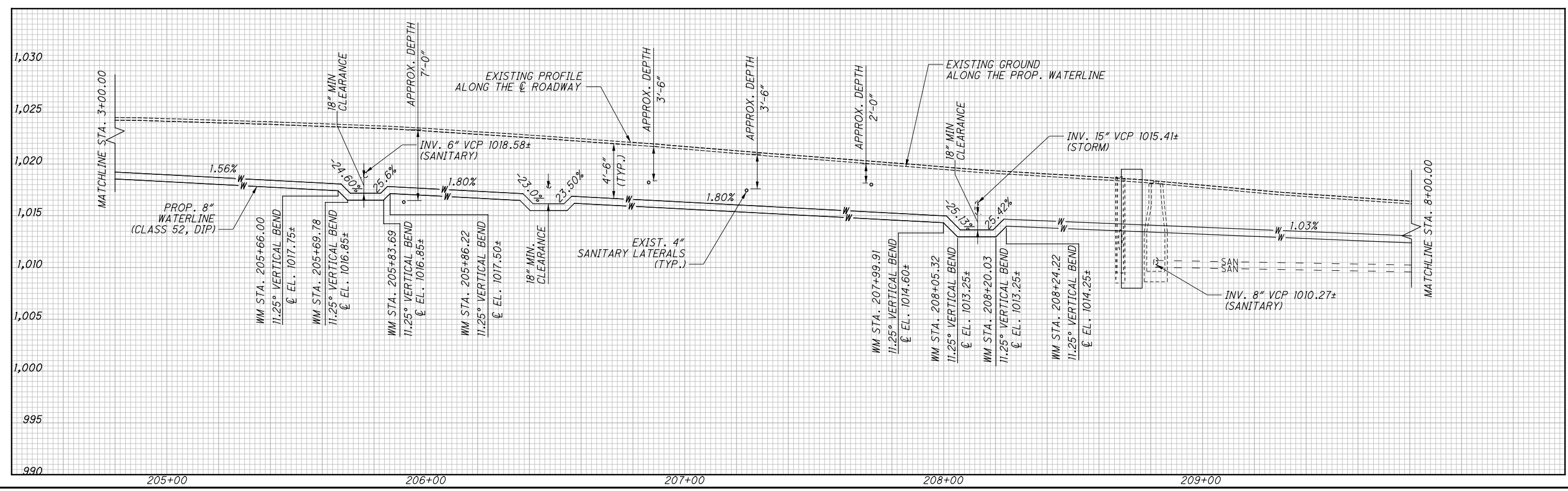
53

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LEGEND:

- PAVEMENT REPLACEMENT FOR WATERLINE TRENCH, PAYMENT INCLUDED WITH WATER MAIN



CALCULATED
HM
CHECKED
AMT

0
20
40
100
HORIZONTAL
SCALE IN FEET

WATERLINE PLAN AND PROFILE
 STATION 3+00.00 TO STATION 8+00.00

STA -15SW -13.50

28
53

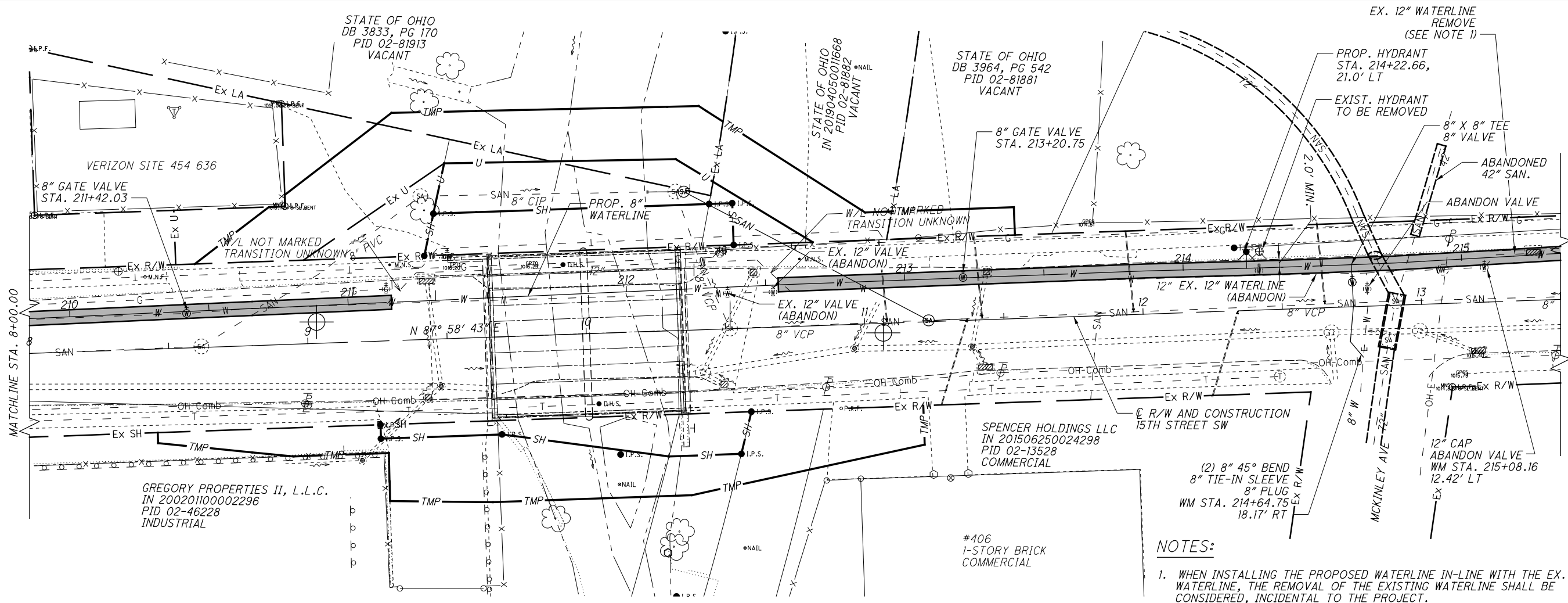
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WATERLINE PLAN AND PROFILE
STATION 8+00.00 TO STATION 13+50.00

STA -15SW -13.50



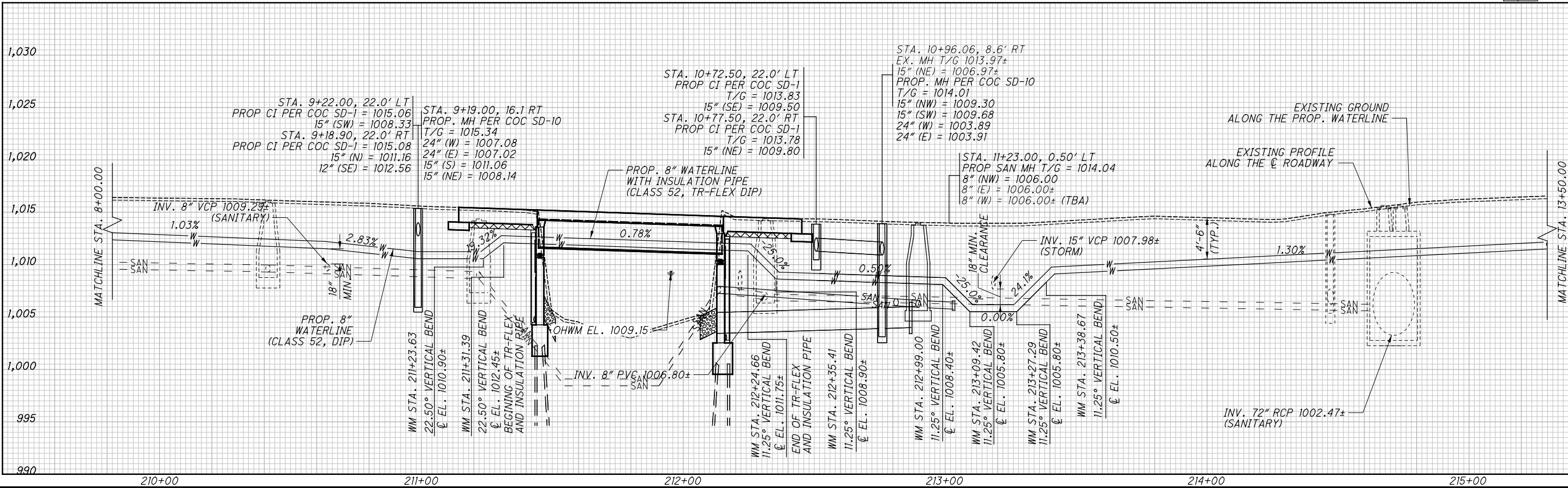
PLAN

LEGEND:

■ PAVEMENT REPLACEMENT FOR WATERLINE TRENCH, PAYMENT INCLUDED WITH WATER MAIN

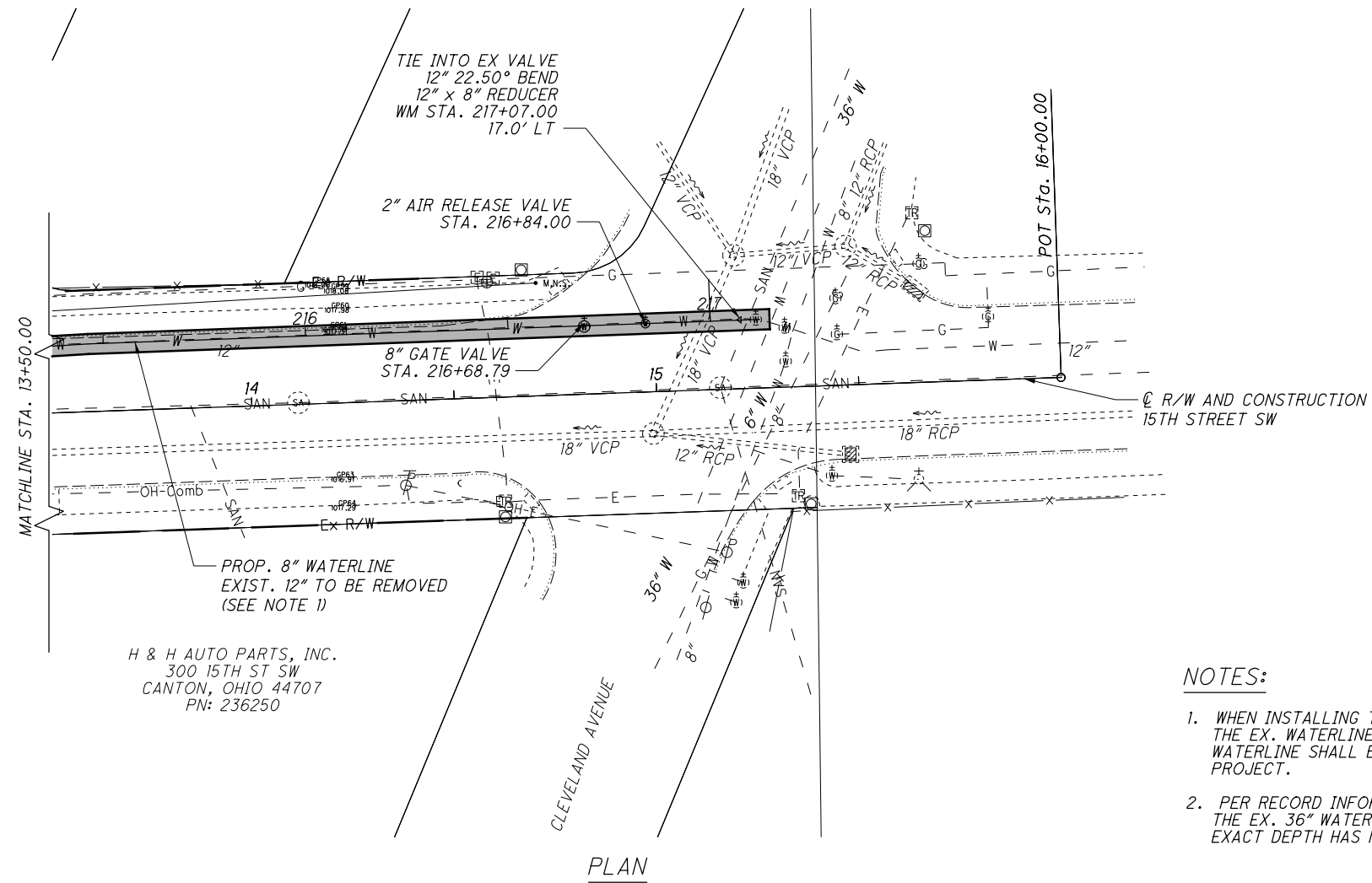
NOTES:

1. WHEN INSTALLING THE PROPOSED WATERLINE IN-LINE WITH THE EX. WATERLINE, THE REMOVAL OF THE EXISTING WATERLINE SHALL BE CONSIDERED, INCIDENTAL TO THE PROJECT.
2. A PVC CASING PIPE WITH INSULATION SHALL BE INSTALLED AROUND THE WATERLINE IN THE LIMITS SHOWN ON THE PROFILE BELOW, OUTSIDE OF THE ROLLERS AS SHOWN ON BRIDGE SHEET 12/22.



PROFILE

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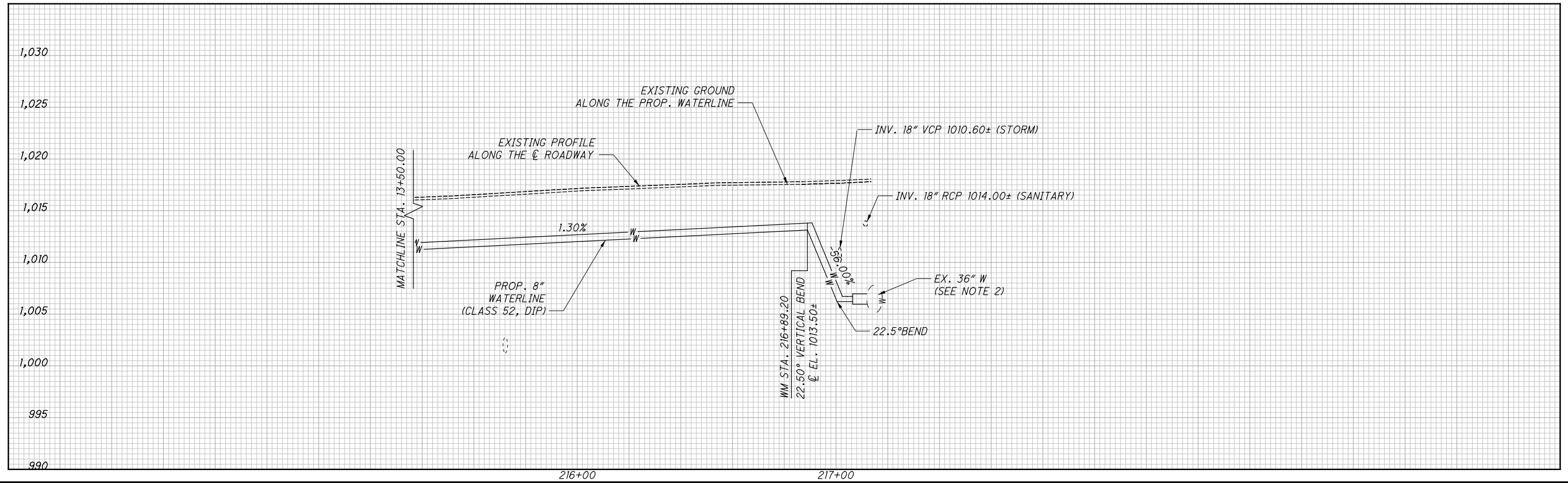


NOTES:

1. WHEN INSTALLING THE PROPOSED WATERLINE IN-LINE WITH THE EX. WATERLINE, THE REMOVAL OF THE EXISTING WATERLINE SHALL BE CONSIDERED, INCIDENTAL TO THE PROJECT.
2. PER RECORD INFORMATION, THE DEPTH TO THE TOP OF THE EX. 36" WATERLINE IS APPROXIMATELY 10'-0"±. THE EXACT DEPTH HAS NOT BEEN FIELD VERIFIED.

LEGEND:

- PAVEMENT REPLACEMENT FOR WATERLINE TRENCH, PAYMENT INCLUDED WITH WATER MAIN



CALCULATED	HM
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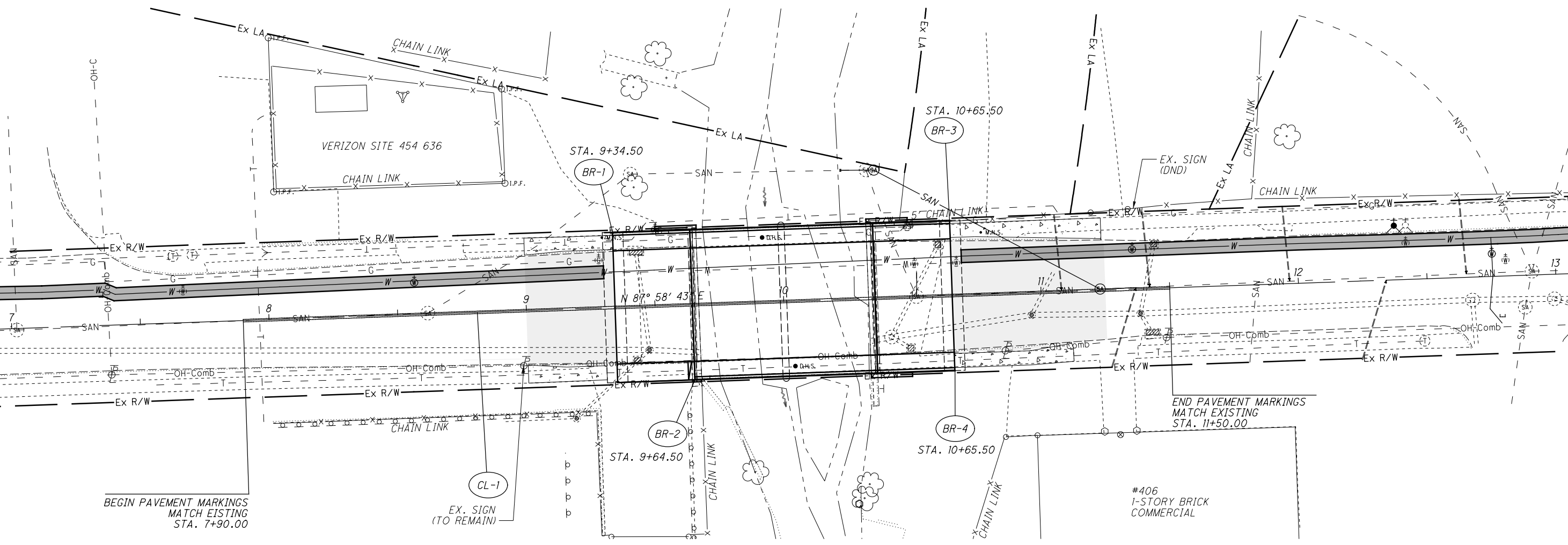
WATERLINE PLAN AND PROFILE
STATION 13+50.00 TO STATION 16+00.00

STA -15SW -13.50

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SCALE IN FEET



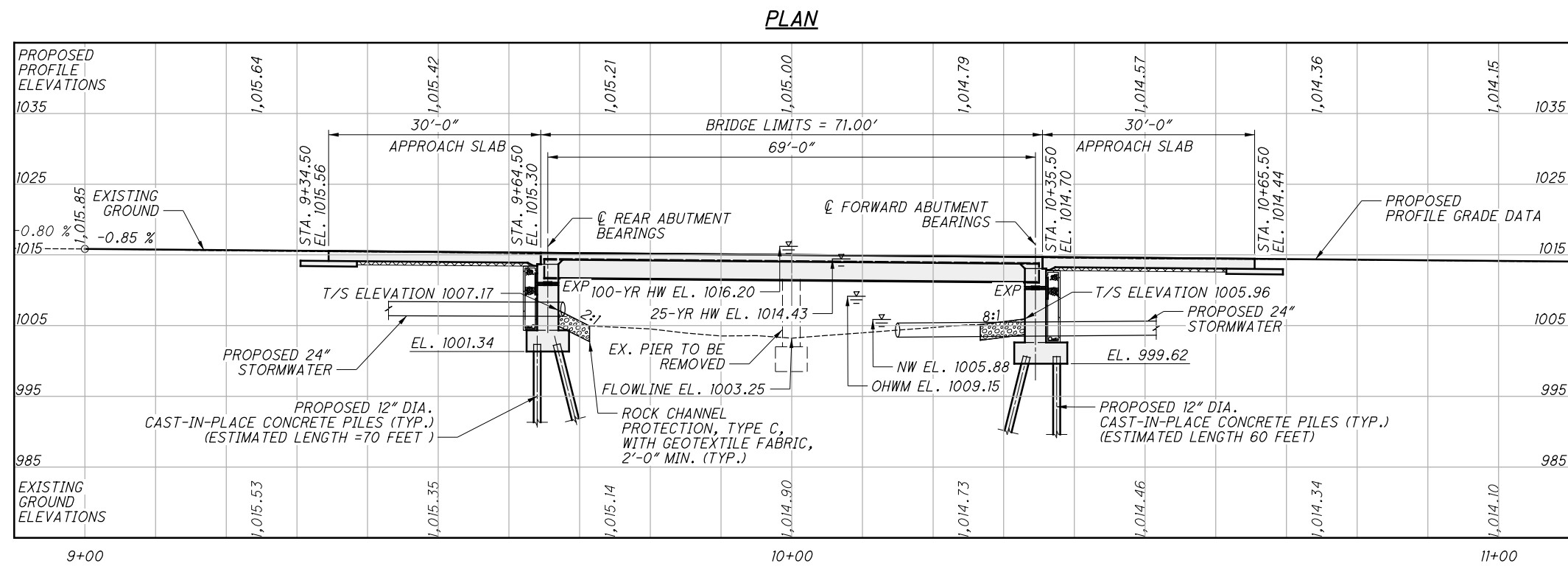
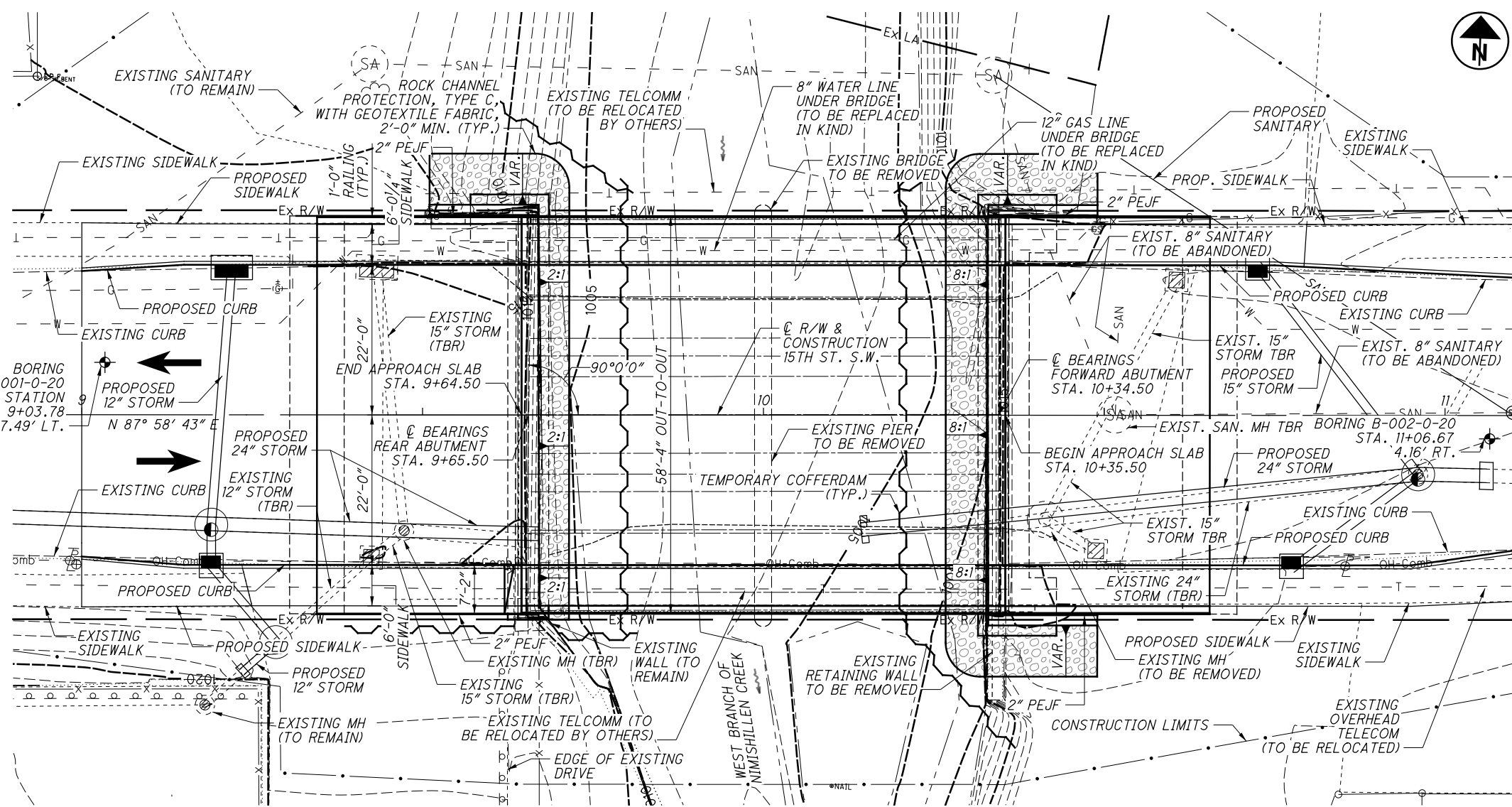
THE FOLLOWING ITEMS HAVE BEEN INCLUDED IN THE PLANS AND CARRIED TO THE GENERAL SUMMARY FOR THE PURPOSE OF TRAFFIC CONTROL:

- (CL) ITEM 642 - CENTER LINE, TYPE 1 0.07 MILE
- (BR) ITEM 626 - BARRIER REFLECTOR, TYPE 1 4 EACH

TRAFFIC CONTROL PLAN

STA -15SW -13.50

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BENCHMARK DATA	
BM #1 STA. 8+99.21,	ELEV. 1016.42, OFFSET 21.9', RT
BM #2 STA. 12+42.55,	ELEV. 1016.88, OFFSET 21.0', LT

FOR ADDITIONAL BENCHMARK INFORMATION. SEE ROADWAY PLAN SHEET 53

NOTES

- EARTHWORK LIMITS SHOWN ARE APPROXIMATE. ACTUAL SLOPES SHALL CONFORM TO PLAN CROSS SECTIONS.

LEGEND

- BORING LOCATION
- ROCK CHANNEL PROTECTION, TYPE C, WITH GEOTEXTILE FABRIC 2'-0" MIN. (TYP.)

HYDRAULIC DATA

DRAINAGE AREA = 42.8 SQ. MILES
 Q (25) = 2600 CFS V (25) = 4.05 FT/S
 Q (100) = 3500 CFS V (100) = 3.94 FT/S
 STRUCTURE DOES NOT CLEAR THE 25 YEAR DESIGN HW BY 3.72 FEET.

EXISTING STRUCTURE

TYPE: TWO SPAN CONTINUOUS STEEL BEAM BRIDGE WITH REINFORCED CONCRETE DECK AND MODIFIED CONCRETE SUBSTRUCTURES WITH SPREAD FOOTING.
 SPANS: 34'-0"±, 34'-0"± C/C BEARINGS
 ROADWAY: 44'-0" TOE/TOE WITH 6'-0" SIDEWALKS
 56'-0" TOE/TOE PARAPET
 LOADING: HS20-44 AND ALTERNATE MILITARY LOADING
 SKEW: NONE
 APPROACH SLABS: REAR - 20'-0" (AS-1-72)
 FORWARD - 16'-6" TO 27'-6" (AS-1-72)
 ALIGNMENT: TANGENT
 CROWN: 0.010± FT/FT
 STRUCTURAL FILE NUMBER: 7661169
 DATE BUILT: 1946
 WEARING COURSE: MONOLITHIC CONCRETE
 DISPOSITION: STRUCTURE REPLACEMENT

PROPOSED STRUCTURE

PROPOSED WORK: REPLACE EXISTING TWO SPAN STRUCTURE WITH A SINGLE SPAN METALIZED ROLLED STEEL BEAM BRIDGE WITH A COMPOSITE CONCRETE DECK ON NEW SEMI-INTEGRAL ABUTMENTS FOUNDED ON CAST-IN-PLACE CONCRETE PILES.

SPAN: 69'-0" C/C BEARINGS
 ROADWAY: 44'-0" TOE/TOE WITH 6'-0" SIDEWALKS
 58'-4" OUT/OUT
 LOADING: HL93 AND 60 PSF FWS
 SKEW: NONE
 APPROACH SLABS: 30'-0" LONG (AS-1-15, AS-2-15 TYPE A INSTALLATION)
 ALIGNMENT: TANGENT
 CROWN: 0.016 FT/FT
 COORDINATES: LATITUDE 40° 46' 59.99" N
 LONGITUDE 81° 23' 06.00" W
 DECK AREA: 4142 SQ. FT.

DESIGN AGENCY: **PRIMEVY**
 8415 Pulaski Rd., Suite 300
 Columbus, Ohio 43240

DATE: 12/1/2022
 REVIEWED AMT: STRUCTURE FILE NUMBER: 7661170
 DRAWN AMT: REVISED
 DESIGNED AMT: CHECKED: KDC

SITE PLAN
 BRIDGE NO. STA-15SW-1350
 15TH ST. S.W. OVER WEST BRANCH OF NIMSHILLEN CREEK

STA-15SW-1350
 1 / 22
 32
 53

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GENERAL NOTES:

REFERENCE SHALL BE MADE TO THE FOLLOWING ODOT STANDARD BRIDGE DRAWINGS:

AS-1-15	REVISED	7/17/15
AS-2-15	REVISED	1/18/19
BR-2-15	REVISED	1/21/22
GSD-1-19	DATED	1/15/21
SICD-1-21	REVISED	1/21/22
SICD-2-14	REVISED	1/15/21

REFER TO THE FOLLOWING SUPPLEMENTAL SPECIFICATIONS:

SS 845	DATED	04/20/2018
--------	-------	------------

DESIGN SPECIFICATIONS:

THIS STRUCTURE CONFORMS TO THE 9th EDITION OF THE "LRFD BRIDGE DESIGN SPECIFICATIONS" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 2020 AND THE ODOT BRIDGE DESIGN MANUAL, 2020.

OPERATIONAL IMPORTANCE:

A LOAD MODIFIER OF 1.00 HAS BEEN ASSUMED FOR THE DESIGN OF THIS STRUCTURE IN ACCORDANCE WITH THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, ARTICLE 1.3.5 AND THE ODOT BRIDGE DESIGN MANUAL, 1001.3.

DESIGN LOADING:

HL-93
FUTURE WEARING SURFACE (FWS) OF 60 POUNDS PER SQUARE FOOT.
PEDESTRIAN LIVE LOAD OF 75 POUNDS PER SQUARE FOOT.

DESIGN DATA:

CONCRETE, CLASS QC2 - COMPRESSIVE STRENGTH 4500 PSI (SUPERSTRUCTURE)
CONCRETE, CLASS QC1 - COMPRESSIVE STRENGTH 4000 PSI (SUBSTRUCTURE)
REINFORCING STEEL - MINIMUM YIELD STRENGTH 60000 PSI
STRUCTURAL STEEL - ASTM A709 GRADE 50 - YIELD STRENGTH 50000 PSI

DECK PROTECTION METHOD:

EPOXY COATED REINFORCING STEEL
2 1/2" CONCRETE COVER

MONOLITHIC WEARING SURFACE:

IS ASSUMED, FOR DESIGN PURPOSES, TO BE 1 INCH THICK.

DECK PLACEMENT DESIGN ASSUMPTIONS:

THE FOLLOWING ASSUMPTIONS OF CONSTRUCTION MEANS AND METHODS WERE MADE FOR THE ANALYSIS AND DESIGN OF THE SUPERSTRUCTURE. THE CONTRACTOR IS RESPONSIBLE FOR THE DESIGN OF THE FALSEWORK SUPPORT SYSTEM WITHIN THESE PARAMETERS AND WILL ASSUME RESPONSIBILITY FOR SUPERSTRUCTURE ANALYSIS FOR DEVIATION FROM THESE DESIGN ASSUMPTIONS.

- AN EIGHT WHEEL FINISHING MACHINE WITH A MAXIMUM WHEEL LOAD OF 2.87 KIPS.
- A MINIMUM OUT-TO-OUT WHEEL SPACING AT EACH END OF THE MACHINE OF 103 INCHES.
- A MAXIMUM SPACING OF OVERHANG FALSEWORK BRACKETS OF 48 INCHES.
- A MAXIMUM DISTANCE FROM THE CENTERLINE OF THE FASCIA GIRDER TO THE FACE OF THE SAFETY HANDRAIL OF 65 INCHES.

ITEM 202, PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN:

IN ORDER TO MAINTAIN THE EXISTING STREAM HYDRAULIC BEHAVIOR, REMOVE THE EXISTING BRIDGE PIER TO THE ELEVATION OF THE AVERAGE STREAM BOTTOM AT THE PIER. IF THE PIER IS REMOVED BELOW THIS ELEVATION, BACKFILL THE VOID WITH ROCK CHANNEL PROTECTION PER ITEM 601 TYPE C TO EQUAL THE BOTTOM OF STREAM.

PILE DESIGN LOADS (ULTIMATE BEARING VALUE:)

THE ULTIMATE BEARING VALUE IS 256 KIPS PER PILE FOR THE REAR ABUTMENT PILES. THE ULTIMATE BEARING VALUE IS 214 KIPS PER PILE FOR THE FORWARD ABUTMENT PILES. THE UBV FOR THE REAR ABUTMENT PILES INCLUDES AN ADDITIONAL 54 KIPS PER PILE DUE TO THE POSSIBILITY OF LOSING 35.3 FT. OF FRICTIONAL RESISTANCE DUE TO SCOUR. THE UBV FOR THE FORWARD ABUTMENT INCLUDES 49 KIPS DUE TO THE POSSIBILITY OF LOSING 33.6 FEET OF FRICTIONAL RESISTANCE DUE TO SCOUR. DRIVE PILES TO THE UBV OR TO A TIP ELEVATION OF 936 (REAR ABUTMENT) OR 940 (FORWARD ABUTMENT) WHICHEVER IS DEEPER.

REAR ABUTMENT PILES:
12" DIAMETER PILES 75 FEET LONG, ORDER LENGTH. PLUS 1 DYNAMIC LOAD TESTING ITEM
FORWARD ABUTMENT PILES:
12" DIAMETER PILES 65 FEET LONG, ORDER LENGTH. PLUS 1 DYNAMIC LOAD TESTING ITEM

ITEM 513 - STRUCTURAL STEEL, LEVEL 3, AS PER PLAN:

PRE-FABRICATION MEETING:
IN ADDITION TO THE PRE-FABRICATION MEETING REQUIREMENTS UNDER 513.07, BOTH THE FABRICATOR'S QUALITY CONTROL SPECIALIST, (QCS) AND METALIZERS'S QCS COATING APPLICATOR SHALL BE PRESENT AND DISCUSS METHODS OF OPERATION, QUALITY CONTROL, INCLUDING REPAIRS, TRANSPORTATION, ERECTION METHODS TO ACCOMPLISH ALL PHASES OF THE PREPARATION AND COATING WORK REQUIRED BY THIS SPECIFICATION.

COATINGS:
ALL STEEL SURFACES SHALL BE CLEANED AND METALIZED. THE THICKNESS OF THE COATING SHALL BE 254 MICROMETERS MINIMUM SPECIFIED THICKNESS. THE WIRE USED FOR THE METALIZING SHALL CONFORM TO ASTM B833 HAVING A 99.99% ZINC - UNS Z13005 COMPOSITION. SURFACE PREPARATION AND APPLICATION SHALL CONFORM TO SSPC-CS23.00-AWS C2.3M/NACE NO 12 EXCEPT AS MODIFIED BY SS845. A SEALER MUST BE APPLIED TO METALIZED SURFACES THAT WILL BE IN CONTACT WITH CONCRETE.

SHEAR STUDS SHALL BE INSTALLED AS PER CMS SECTION 513.22.
GALVANIZING FOR TST-I-99 TUBES AND MOUNTING HARDWARE IS INCLUDED WITH ITEM 517.

ALL METALIZED SURFACES DAMAGED DUE TO SHIPPING, FIELD WELDING, INSTALLATION, OR REMOVAL OF TEMPORARY SUPPORTS SHALL BE REPAIRED. THE REPAIRS SHALL BE MADE USING METHODS ACCORDING TO SS845.

SEALER TO BE APPLIED TO THE METALIZING, SHALL BE A TWO COAT PAINT SYSTEM CONSISTING OF EPOXY INTERMEDIATE COAT AND A URETHANE FINISH COAT MEETING THE REQUIREMENTS OF CMS 708.02. PAINT ACCORDING TO 514.17 AS MODIFIED IN SS845.

THE CONTRACTOR SHALL EXERCISE EXTREME CARE IN THE HANDLING OF ALL STEEL SO AS NOT TO DAMAGE THE COATED SURFACE. ANY DAMAGE TO THE COATING DUE TO HANDLING OR CONSTRUCTION OPERATIONS SHALL BE REPAIRED PER SS845 BY THE CONTRACTOR AT NO ADDITIONAL EXPENSE.

QUALITY CONTROL:
QUALITY CONTROL FOR THE METALIZING AND SEALING PROCESS SHALL FOLLOW SS845.

BASIS OF PAYMENT:
PAYMENT WILL BE MADE AT THE CONTRACT PRICE FOR THE ITEM 513 STRUCTURAL STEEL MEMBERS, LEVEL 3, AS PER PLAN.

ITEM 517, RAILING (CONCRETE PARAPET WITH TWIN STEEL TUBE RAILING, AS PER PLAN:

THE END PANEL OF THE RAILING AT THE SOUTH WEST CORNER OF THE BRIDGE IS LONGER THAN THE STANDARD BR-2-15. SEE SHEET 17/22.

UTILITY COORDINATION:
THE UTILITIES SHALL BEAR ALL EXPENSE INVOLVED IN RELOCATING (INSTALLING) THE AFFECTED UTILITY LINES. THE CONTRACTOR AND UTILITIES ARE TO COOPERATE BY ARRANGING THEIR WORK IN SUCH A MANNER THAT INCONVENIENCE EITHER WILL BE HELD TO A MINIMUM. THE LOCATION OF PROPOSED UTILITY LINES IN THESE PLANS ARE PRELIMINARY FOR THIS SUBMISSION.

ITEM 638 - CONDUIT, MISC.: 8" WATERMAIN DUCTILE IRON PIPE ANSI CLASS 52, TR FLEX, AS PER PLAN

PAYMENT FOR THIS WORK SHALL INCLUDE ALL MATERIALS AND LABOR NECESSARY TO INSTALL THE 8" WATERMAIN WITHIN THE LIMITS OF THE BRIDGE AS SHOWN IN THESE PLANS. THE COST OF THE PVC CASING PIPE, THE INSULATION GROUT, INCIDENTAL MATERIALS AND LABOR SHALL BE INCLUDED WITH THIS PAY ITEM. ROLLERS AND BRACKETS NECESSARY TO ATTACH THE LINE TO THE CROSS-FRAMES WILL BE INCLUDED WITH THIS PAY ITEM. PAYMENT FOR CROSS-FRAME MATERIALS AND INSTALLATION IS INCLUDED WITH ITEM 513 STRUCTURAL STEEL MEMBERS, LEVEL 3, AS PER PLAN. ITEM 638 - CONDUIT MISC. SHALL BE BID BY THE CONTRACTOR.

THE INSALLATION SHALL BE A FOAMED IN PLACE CLOSED CELL POLYURETHANE WHICH COMPLETEY FILLS THE ANNULAR SPACE BETWEEN THE CARRIER PIPE AND THE EXTERIOR CASING. THE INSALATION SHALL HAVE THE FOLLOWING PHYSICAL PROPERTIES:
MINIMUM DENSITY (LB/CU. FT.) 2.1 ASTM D-1622
"K" FACTOR BTU/HR. SQ. FT. °F/IN 0.147 ASTM C-518
90-95% CLOSED CELL ASTM D-2856

THE EXTERIOR CASING SHALL BE SEAMLESS, EXTRUDED WHITE PVC (JACKET OUTSIDE DIAMETER = 14.32") TYPE 1, GRADE 1, CLASS 12454-B PER ASTM D-1784
NO TAPE CASINGS WILL BE ALLOWED.

DOMINION ENERGY OHIO

CONTRACTOR SHALL COORDINATE WITH DOMINION ENERGY OHIO FOR DETAILS TO CONNECT THE GAS LINE TO THE BRIDGE IN THE LOCATION SHOWN IN THESE PLANS AS WELL AS THE SEQUENCE OF CONSTRUCTION. ALL MATERIAL, LABOR, AND INCIDENTALS TO ADD ATTACHMENTS TO THE BRIDGE SHALL BE PAID BY FOR BY DOMINION ENERGY OHIO.

ABBREVIATIONS:

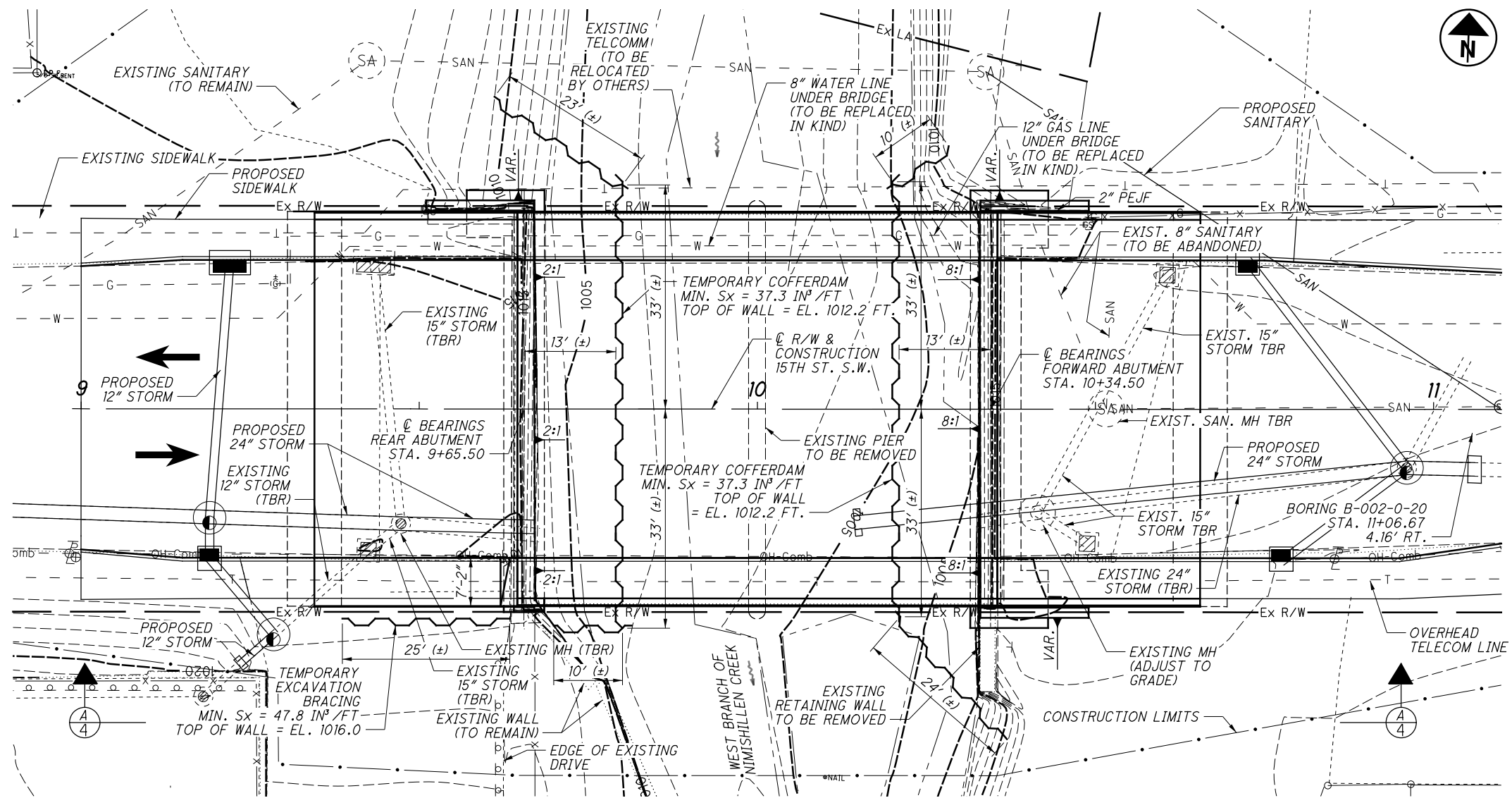
- BRG. - BEARINGS
- C/C - CENTER TO CENTER
- C.J. - CONSTRUCTION JOINT
- CLR. - CLEAR
- DIA. - DIAMETER
- E.F. - EACH FACE
- EQ. - EQUAL
- EXIST. - EXISTING
- EXP. - EXPANSION
- F.A. - FORWARD ABUTMENT
- MIN. - MINIMUM
- PEJF - PREFORMED EXPANSION JOINT FILLER
- R.A. - REAR ABUTMENT
- R/W - RIGHT OF WAY
- SPA. - SPACING/SPACES
- ST. - STREET
- S.W. - SOUTH WEST
- TYP. - TYPICAL

DESIGN AGENCY PRIMEV 8415 Pulaski Place, Suite 300 Columbus, Ohio 43240	DATE	1/27/2021
	STN	766170
REVIEWED	FILE NUMBER	766170
DRAWN	HM	REVISED
DESIGNED	HM	CHECKED
		BTJ
GENERAL NOTES (1 OF 2) BRIDGE NO. STA-15SW-1350 15TH ST. S.W. OVER WEST BRANCH OF NIMSHILLEN CREEK		
STA - 15SW - 1350		
2 / 22		
33		
53		

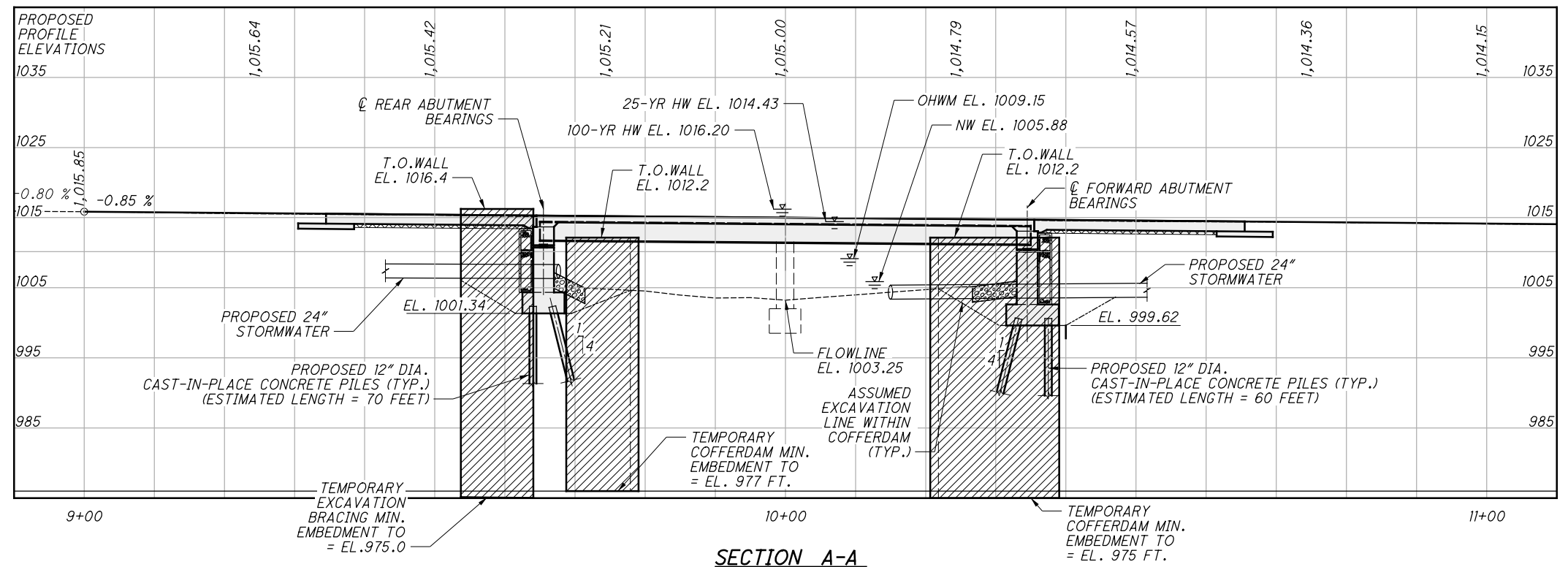
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STA-15SW-13.50 ESTIMATED QUANTITIES					MADE BY BTJ DATE 4/1/2022	CHECKED BY EJS DATE 4/11/2022		
ITEM	ITEM EXT.	TOTAL 03/IMS/BR	UNITS	DESCRIPTION	STA-15SW-13.50			SHT. REF.
					ABUTS.	SUPER.	GENERAL	
202	11003	LS	LS	STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN			LS	2 / 22
202	22900	210	SY	APPROACH SLAB REMOVED			210	
503	11100	LS	LS	COFFERDAMS AND EXCAVATION BRACING	LS			
503	21100	208	CY	UNCLASSIFIED EXCAVATION	208			
505	11100	LS	LS	PILE DRIVING EQUIPMENT MOBILIZATION			LS	
507	00500	2380	FT	12" CAST-IN-PLACE REINFORCED CONCRETE PILES, DRIVEN	2380			
507	00550	2565	FT	12" CAST-IN-PLACE REINFORCED CONCRETE PILES, FURNISHED	2565			
509	10000	61836	LB	EPOXY COATED REINFORCING STEEL	18937	36994	5905	
511	33500	2	EACH	SEMI-INTEGRAL DIAPHRAGM GUIDE		2		
511	34446	166	CY	CLASS QC2 CONCRETE WITH QC/QA, BRIDGE DECK		166		
511	43512	193	CY	CLASS QC1 CONCRETE WITH QC/QA, ABUTMENT INCLUDING FOOTING	193			
511	46012	26	CY	CLASS QC1 CONCRETE WITH QC/QA, RETAINING/WINGWALL NOT INCLUDING FOOTING	26			
511	51512	52	CY	CLASS QC2 CONCRETE WITH QC/QA, SIDEWALK	52			
512	10100	331	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	88	243		
512	10050	192	SY	SEALING OF CONCRETE SURFACES (NON-EPOXY)		192		
513	10061	117042	LB	STRUCTURAL STEEL MEMBERS, LEVEL 3, AS PER PLAN		117042		2 / 22
513	20000	1401	EACH	WELDED STUD SHEAR CONNECTORS		1401		
516	13600	6	SF	1" PREFORMED EXPANSION JOINT FILLER	6			
516	13900	167	SF	2" PREFORMED EXPANSION JOINT FILLER	167			
516	14020	134	FT	SEMI-INTEGRAL ABUTMENT EXPANSION JOINT SEAL	134			
516	44100	14	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE); T = 2.55"	14			
517	75121	232	FT	RAILING (CONCRETE PARAPET WITH TWIN STEEL TUBE RAILING), AS PER PLAN			232	2 / 22
518	21200	70	CY	POROUS BACKFILL WITH GEOTEXTILE FABRIC	70			
518	40000	138	FT	6" PERFORATED CORRUGATED PLASTIC PIPE	138			
518	40010	34	FT	6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS	34			
526	30000	389	SY	REINFORCED CONCRETE APPROACH SLAB (T=17")			389	
526	90010	117	FT	TYPE A INSTALLATION			117	
638	98600	97	FT	WATER WORK, MISC.: 8" WATERMAIN DUCTILE IRON PIPE ANSI CLASS 52, TR FLEX, AS PER PLAN			97	2 / 22

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TEMPORARY BRACING AND COFFERDAM PLAN



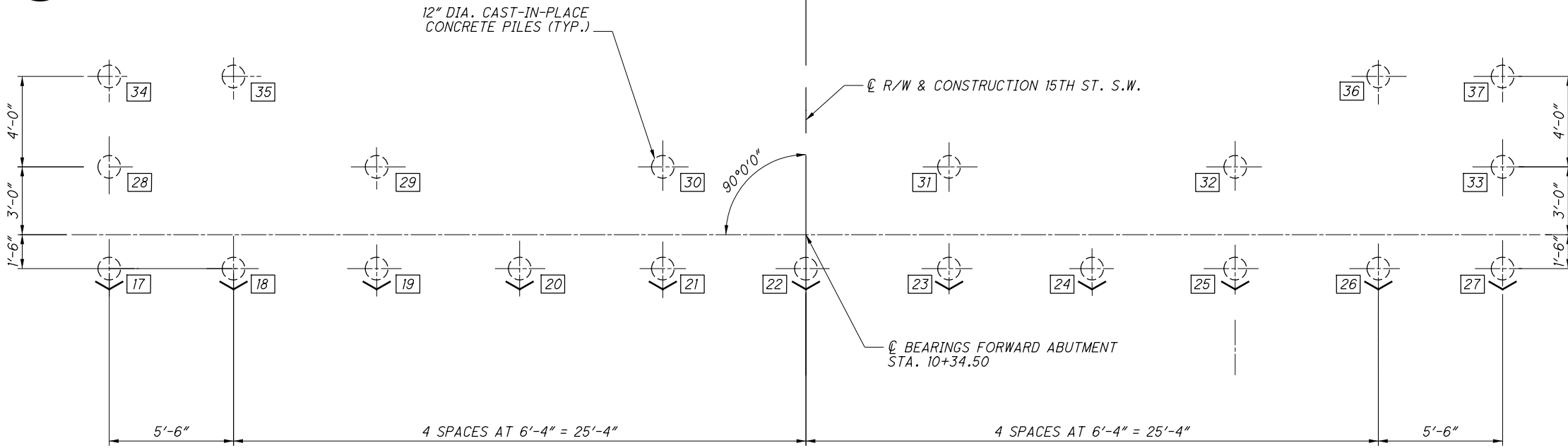
SECTION A-A

NOTES

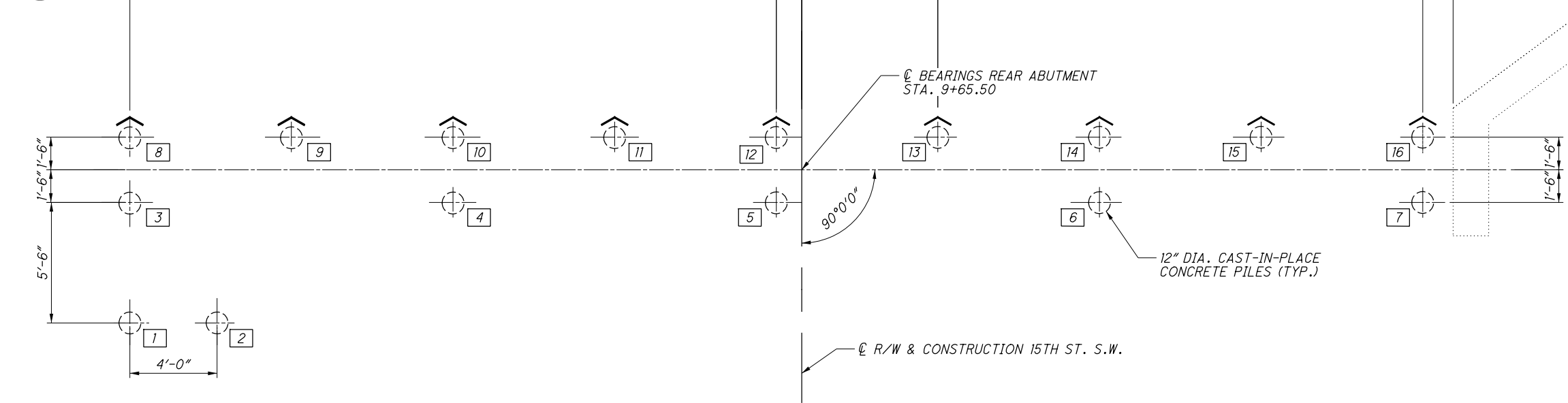
1. EXISTING BRIDGE TO BE REMOVED.
2. TOP OF COFFERDAM WALL IS BASED ON ORDINARY HIGH WATER MARK ELEVATION PLUS 3'-0" PER ITEM 503.
3. PRIOR TO CONSTRUCTION OF COFFERDAM, DETERMINE LOCATION OF AND AVOID DAMAGING ALL UTILITIES SHOWN ON PLAN THAT LIE WITHIN THE CONSTRUCTION LIMITS AND THAT MAY IMPACT THE INSTALLATION OF SHEET PILING INCLUDING ALONG EQUIPMENT PATHS AND ACCESS ROADS.
4. COFFERDAM IS TO BE WATERTIGHT.
5. CARE SHALL BE TAKEN NOT TO DISTURB THE FOUNDATION OF THE EXISTING RETAINING WALL AT THE RIGHT REAR CORNER OF THE BRIDGE. THE FOUNDATION OF THE WALL IS UNKNOWN.
6. COFFERDAM AND TEMPORARY EXCAVATION BRACING IS PAID FOR UNDER ITEM 503.
7. BOTTOM SURFACE OF THE STREAM MAY VARY SIGNIFICANTLY. IT WAS ASSUMED FOR DESIGN PURPOSES THAT THE DEPTH OF THE RIVER BOTTOM FROM TOP OF WALL IS 6 FEET ON THE RIVER SIDE AT FLOOD CONDITIONS, AND DEPTH OF THE EXCAVATION ON THE INSIDE OF THE COFFERDAM IS AN AVERAGE 9 FEET FROM TOP OF WALL. THE SHEET PILE EMBEDMENT IS BASED ON THESE DEPTHS. IF THESE DEPTHS ARE HIGHER ON THE RIVER SIDE, OR LOWER ON THE INSIDE OF COFFERDAM THEN A NEW DESIGN MAY BE NECESSARY.
8. COFFERDAM IS ASSUMED TO BE STEEL SHEET PILING WITH A MINIMUM SECTION MODULUS (Sx) AS SHOWN IN PLAN.

 <small>8415 Plaza, Suite 300 Columbus, Ohio 43240</small>	DESIGN AGENCY DATE 12/1/2022 REVIEWED AMT STRUCTURE FILE NUMBER 7661770 DRAWN BTJ REVISIONS DESIGNED BTJ CHECKED KDC
TEMPORARY BRACING AND COFFERDAM PLAN	
BRIDGE NO. STA-15SW-1350 15TH ST. S.W. OVER WEST BRANCH OF NIMSHILLEN CREEK	
STA-15SW-1350	
4 / 22	
<div style="border: 1px solid black; border-radius: 50%; width: 30px; height: 30px; display: flex; align-items: center; justify-content: center; margin: 0 auto;"> 35 </div> <div style="border: 1px solid black; border-radius: 50%; width: 30px; height: 30px; display: flex; align-items: center; justify-content: center; margin: 0 auto;"> 53 </div>	

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FORWARD ABUTMENT FOUNDATION PLAN



REAR ABUTMENT FOUNDATION PLAN

☉ PILE LOCATIONS		
PILE NO.	STA.	OFFSET
#1	9+58.50	30.83' LT.
#2	9+58.50	26.83' LT.
#3	9+64.00	30.83' LT.
#4	9+64.00	16.00' LT.
#5	9+64.00	1.16' LT.
#6	9+64.00	13.66' RT
#7	9+64.00	28.50' RT
#8	9+67.00	30.83' LT.
#9	9+67.00	23.41' LT.
#10	9+67.00	16.00' LT.
#11	9+67.00	8.58' LT.
#12	9+67.00	1.16' LT.
#13	9+67.00	6.25' RT.
#14	9+67.00	13.66' RT
#15	9+67.00	21.08' RT
#16	9+67.00	28.50' RT
#17	10+33.00	30.83' LT.
#18	10+33.00	25.33' LT.
#19	10+33.00	19.00' LT.
#20	10+33.00	12.66' LT.
#21	10+33.00	6.33' LT.
#22	10+33.00	0.00
#23	10+33.00	6.33' RT.
#24	10+33.00	12.66' RT.
#25	10+33.00	19.00' RT.
#26	10+33.00	25.33' RT.
#27	10+33.00	30.83' RT.
#28	10+37.50	30.83' LT.
#29	10+37.50	19.00' LT.
#30	10+37.50	6.33' LT.
#31	10+37.50	6.33' RT.
#32	10+37.50	19.00' RT.
#33	10+37.50	30.83' RT.
#34	10+41.50	30.83' LT.
#35	10+41.50	25.33' LT.
#36	10+41.50	25.33' RT.
#37	10+41.50	30.83' RT.

NOTES:
 1. FOR SECTION DETAILS AND REINFORCING, SEE SHEETS 8/22 AND 10/22.

- LEGEND**
- ☐ 12 INDICATES PILE NUMBER
 - ☉ INDICATES 12" DIA. CAST-IN-PLACE CONCRETE PILES
 - ☉ INDICATES 12" DIA. CAST-IN-PLACE CONCRETE PILES BATTERED 4:1 IN DIRECTION OF ARROW

DESIGN AGENCY
PRIMEV
845 Pulse Plaza, Suite 300
Columbus, Ohio 43240

DATE
12/1/2022

DESIGNED
BTJ

REVIEWED
AMT

STRUCTURE FILE NUMBER
7661770

FOUNDATION PLAN
BRIDGE NO. STA-15SW-1350

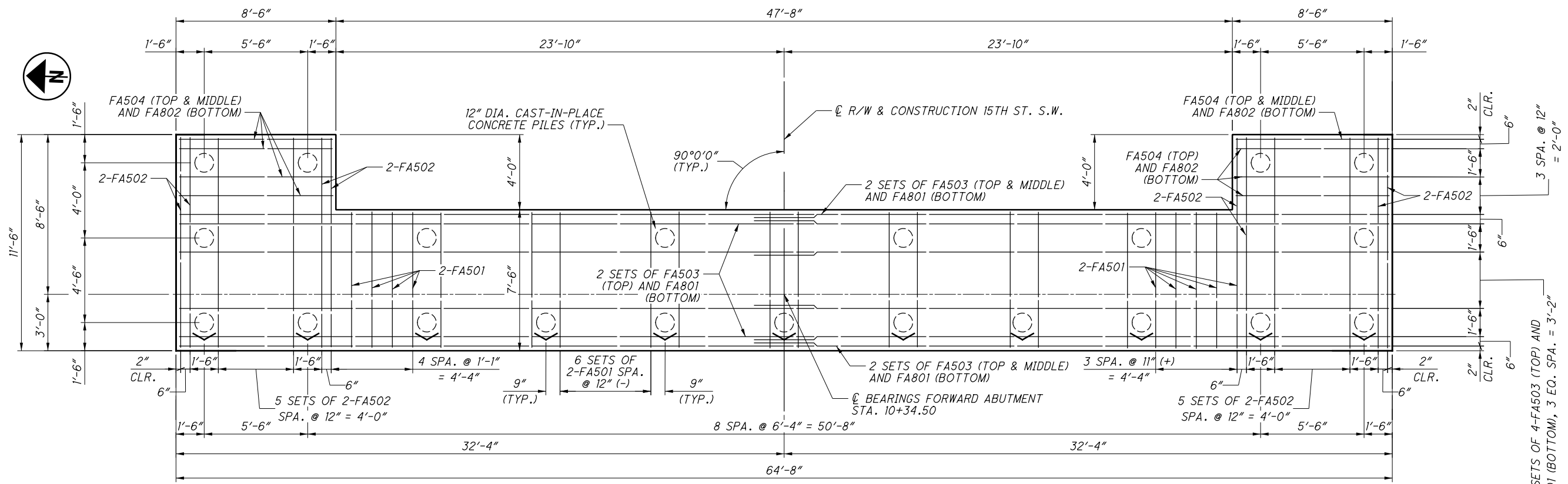
15TH ST. S.W. OVER WEST BRANCH OF NIMSHILLEN CREEK

STA-15SW-1350

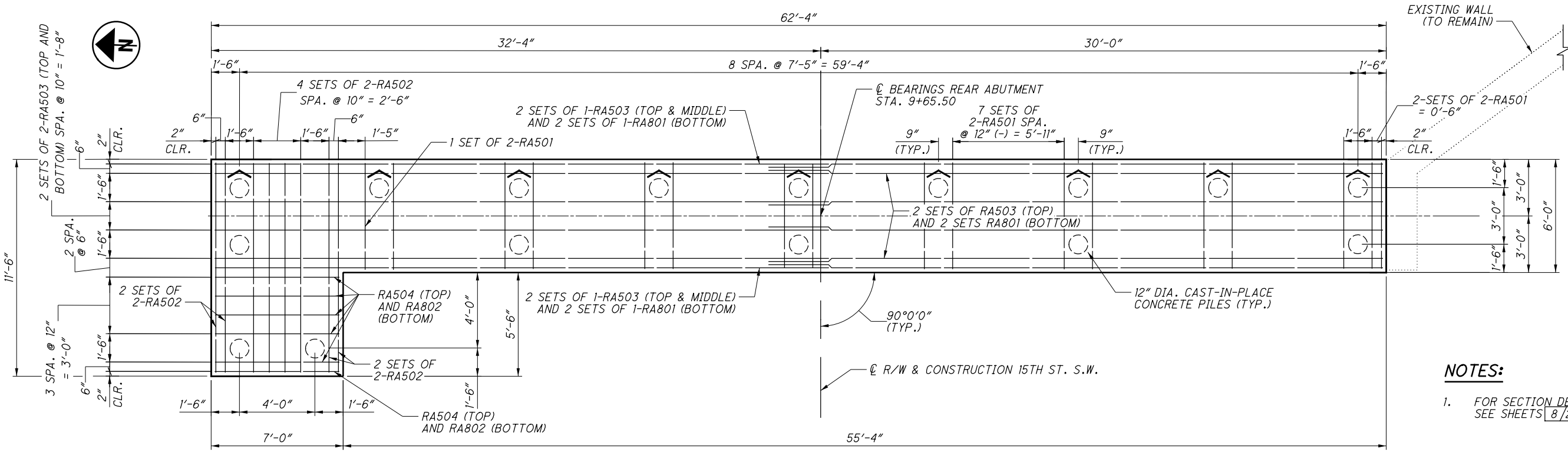
5 / 22

36
53

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FORWARD ABUTMENT FOOTING PLAN



REAR ABUTMENT FOOTING PLAN

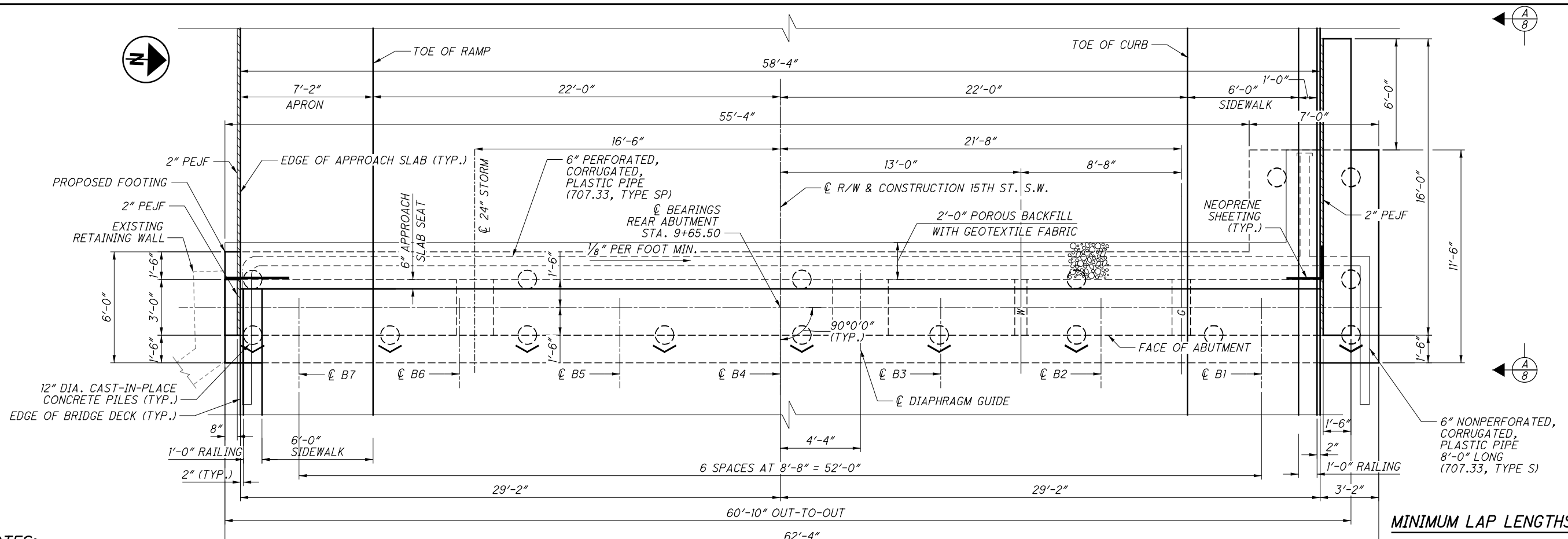
NOTES:
 1. FOR SECTION DETAILS AND REINFORCING, SEE SHEETS 8/22 AND 10/22.

MINIMUM LAP LENGTH:

#5 BAR = 3'-1"
 #8 BAR = 4'-11"

DESIGNED JAT CHECKED AMT	DRAWN JAT REVISED	REVIEWED AMT STRUCTURE FILE NUMBER 7661770	DATE 12/1/2022	DESIGN AGENCY PRIMEVU 845 Pulaski Place, Suite 300 Columbus Ohio 43240
FOOTING PLAN BRIDGE NO. STA-15SW-1350 15TH ST. S.W. OVER WEST BRANCH OF NIMSHILLEN CREEK				
STA-15SW-1350				
6 / 22				
37 53				

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REAR ABUTMENT PLAN

NOTES:

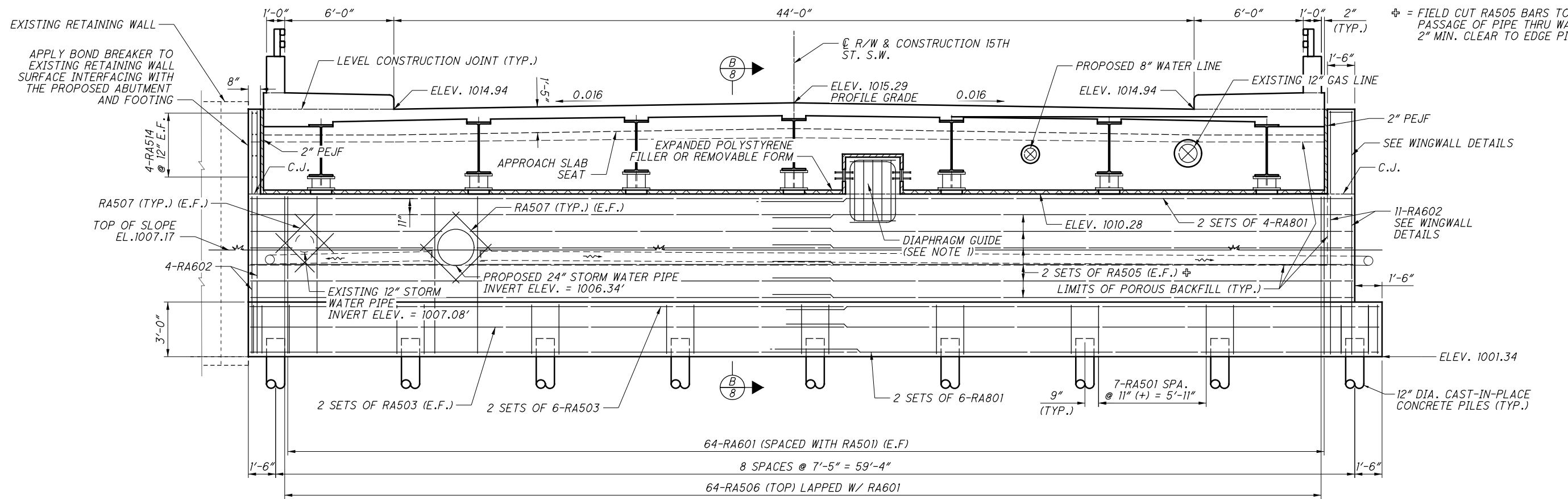
- FOR ADDITIONAL NOTES AND DETAILS, SEE ODOT STD. DWG. SICD-2-14.

MINIMUM LAP LENGTHS:

- #5 BAR = 3'-1"
- #8 BAR = 4'-11"

LEGEND

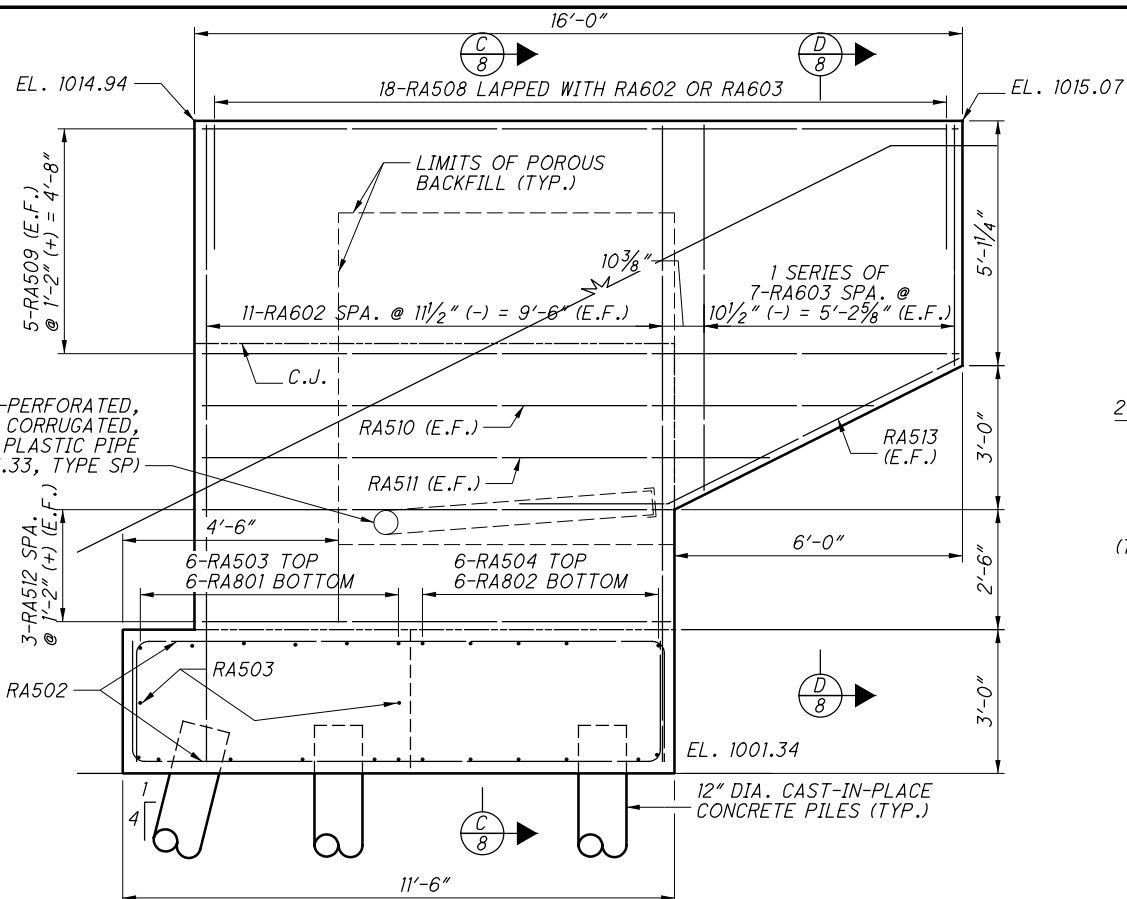
- ⊕ = FIELD CUT RA505 BARS TO ALLOW FOR PASSAGE OF PIPE THRU WALL. MAINTAIN 2" MIN. CLEAR TO EDGE PIPE.



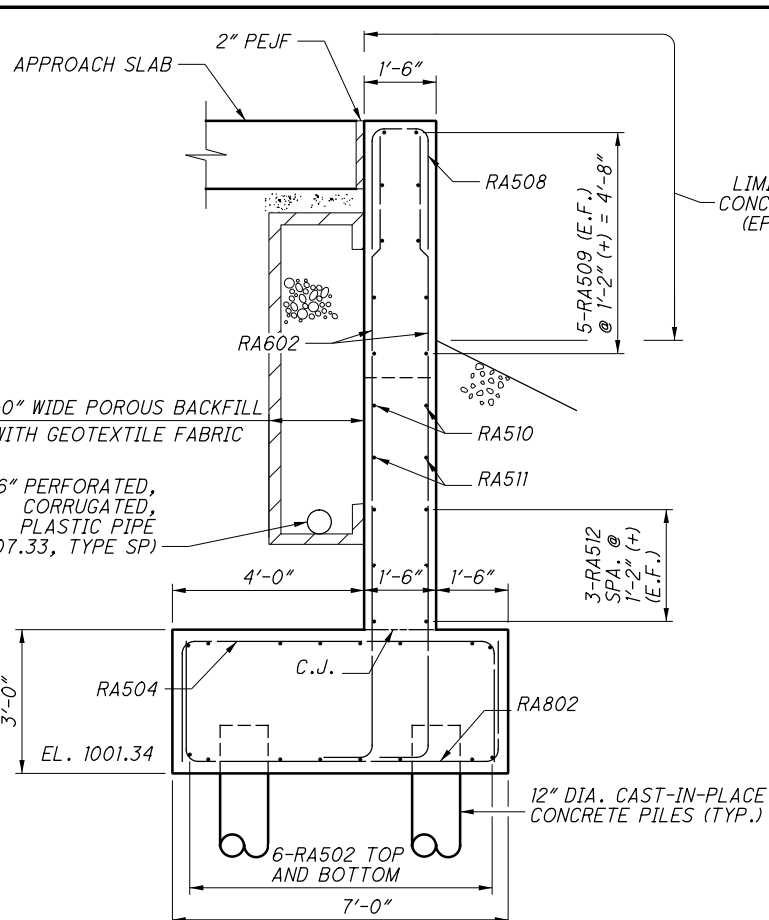
REAR ABUTMENT ELEVATION

DESIGN AGENCY PRIMEV 845 Plaza, Suite 300 Columbus, Ohio 43240
DATE 12/1/2022
REVIEWED AMT
STRUCTURE FILE NUMBER 7661770
DRAWN JAT
CHECKED BTJ
DESIGNED JAT
REVISIONS
REAR ABUTMENT PLAN AND ELEVATION
BRIDGE NO. STA-15SW-1350 15TH ST. S.W. OVER WEST BRANCH OF NIMSHILLEN CREEK
STA-15SW-1350
7 / 22
38
53

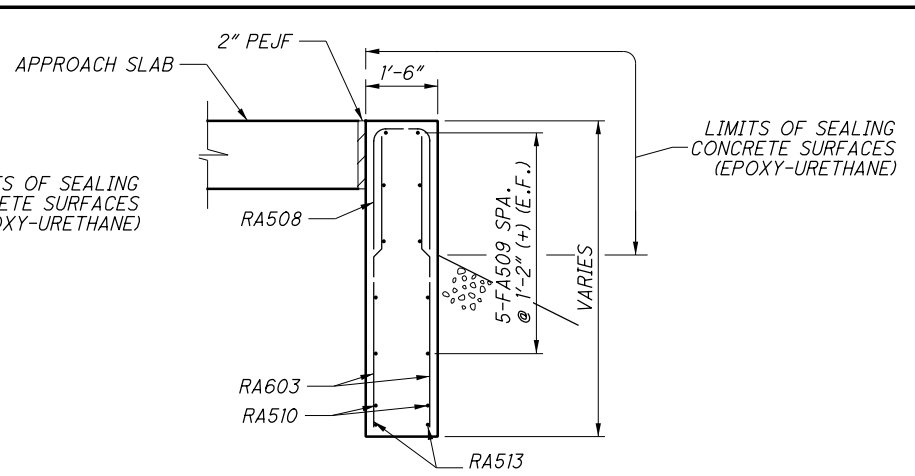
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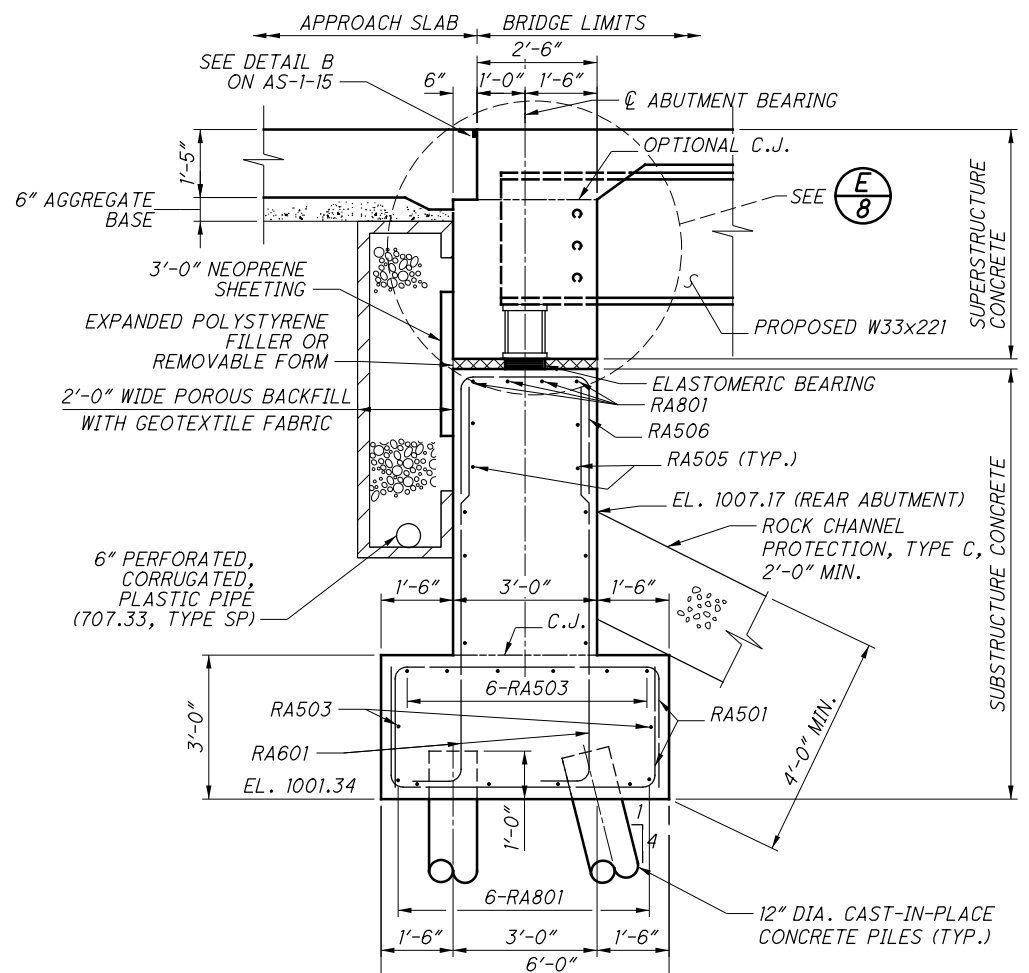
(A) WINGWALL ELEVATION



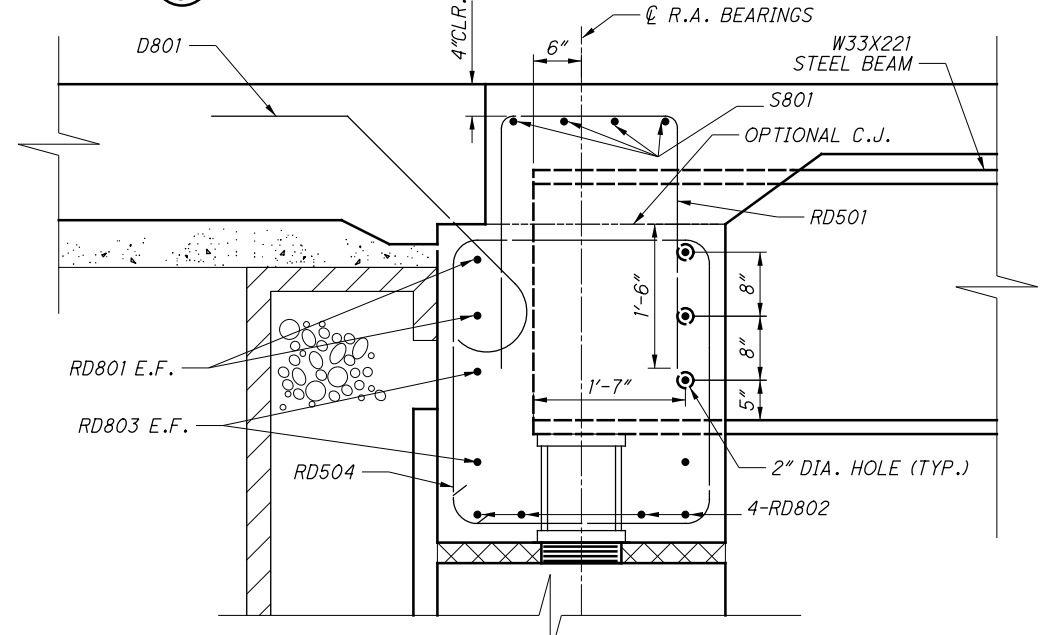
(C) SECTION THROUGH WINGWALL



(D) SECTION THROUGH WINGWALL



(B) SECTION THROUGH ABUTMENT



(E) DETAIL AT END DIAPHRAGM

NOTES:

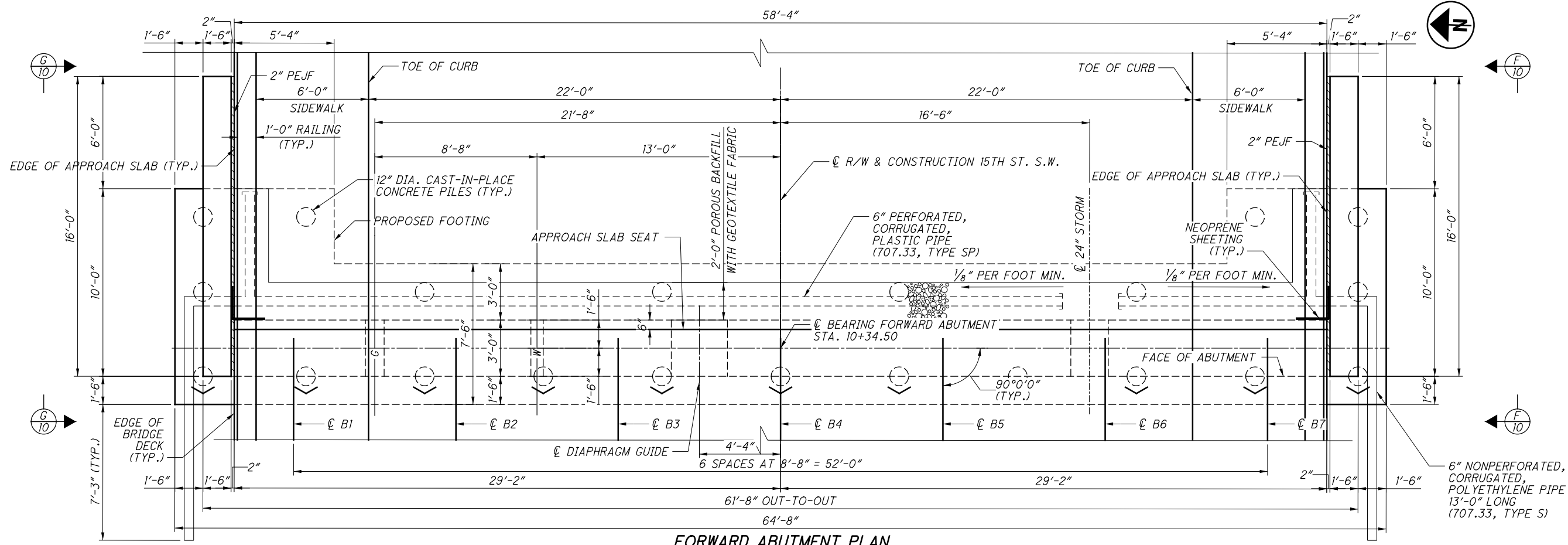
- FOR ADDITIONAL NOTES AND DETAILS, SEE ODOT STD. DWG. SICD-1-21.
- FOR FOUNDATION PLAN AND DETAILS, SEE SHEET **6/22**.
- ABUTMENT DIAPHRAGM CONCRETE: PLACE THE DIAPHRAGM CONCRETE ENCASING THE STRUCTURAL MEMBER ENDS WITH THE DECK CONCRETE OR AT LEAST 48 HOURS BEFORE PLACEMENT OF THE DECK CONCRETE. IF PLACED SEPARATELY, LOCATE A HORIZONTAL CONSTRUCTION JOINT IN THE DIAPHRAGM AS SHOWN ON SICD-1-96 FOR STEEL SUPERSTRUCTURES AND PLACE REMAINING DIAPHRAGM CONCRETE WITH THE DECK.

MINIMUM LAP LENGTHS:

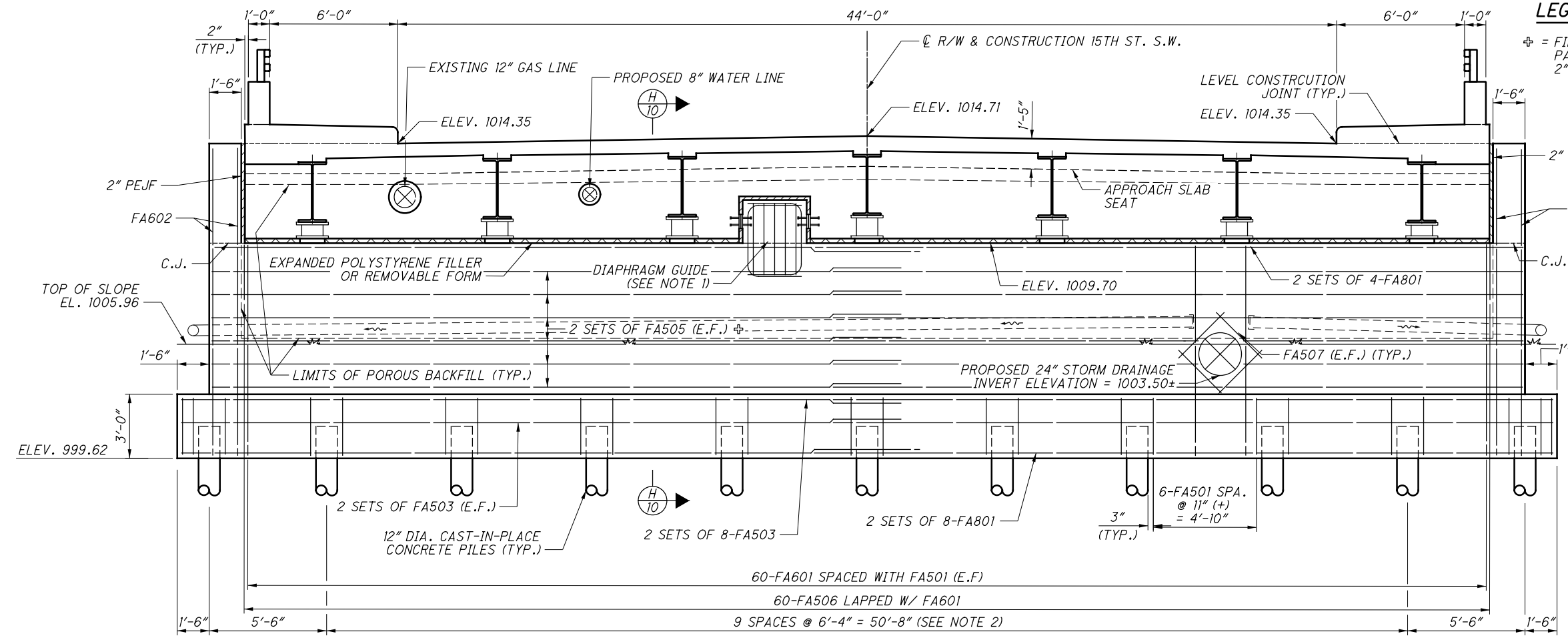
- #5 BAR = 2'-11"
- #8 BAR = 4'-9"

STA -15SW -1350 8 / 22 39 53	REAR ABUTMENT AND WINGWALL DETAILS BRIDGE NO. STA-15SW-1350 15TH ST. S.W. OVER WEST BRANCH OF NIMISHILLEN CREEK	DESIGNED: JAT CHECKED: BTJ DRAWN: JAT REVISED:	REVIEWED: AMT DATE: 12/1/2022 STRUCTURE FILE NUMBER: 7661770	DESIGN AGENCY: PRIMEV 8415 Pulaski Rd., Suite 300 Columbus, Ohio 43240
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FORWARD ABUTMENT PLAN



FORWARD ABUTMENT ELEVATION

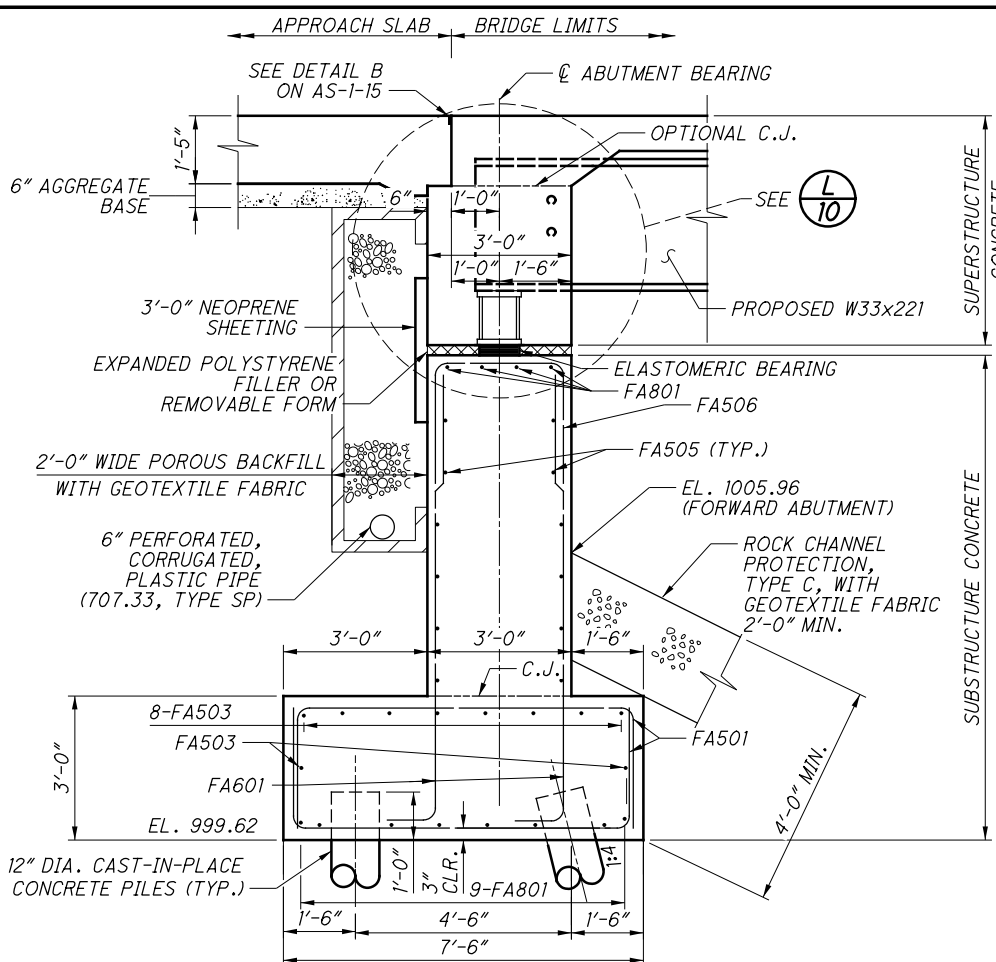
LEGEND
 ⚡ = FIELD CUT FA505 BARS TO ALLOW FOR PASSAGE OF PIPE THRU WALL. MAINTAIN 2" MIN. CLEAR TO EDGE PIPE.

NOTES:
 1. FOR ADDITIONAL NOTES AND DETAILS, SEE ODOT STD. DWG. SICD-2-14.

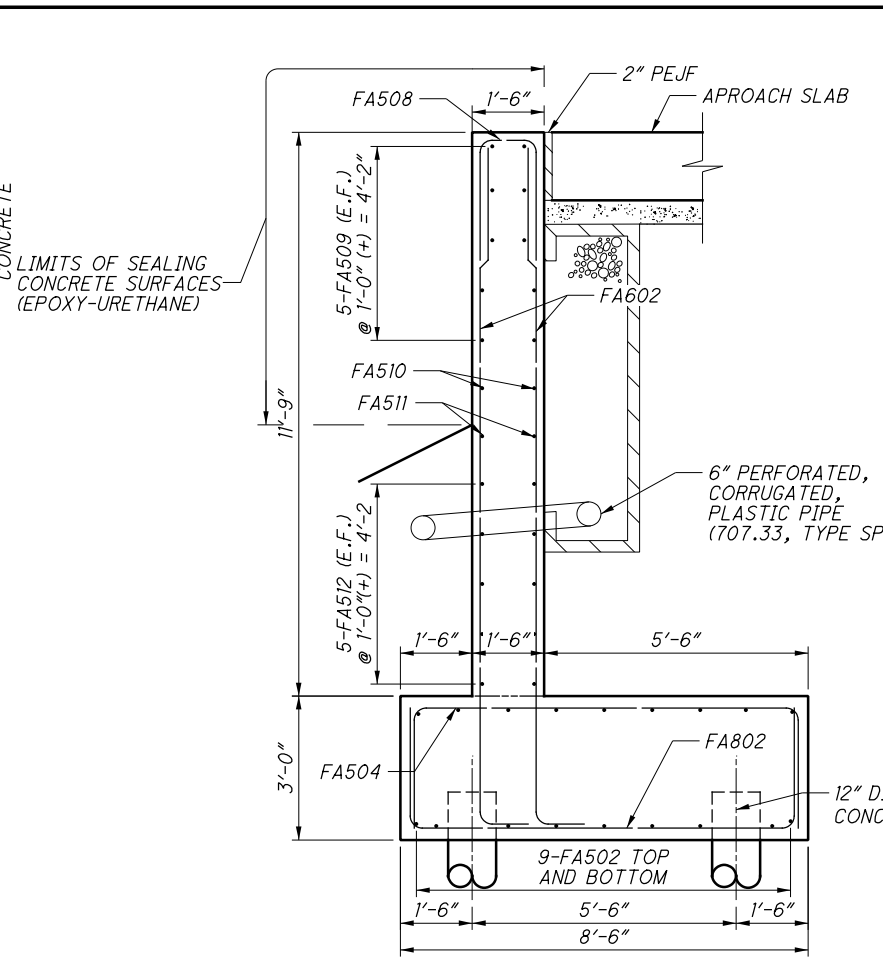
MINIMUM LAP LENGTHS:
 #5 BAR = 3'-1"
 #8 BAR = 4'-11"

 8415 Pulaski Place, Suite 300 Columbus, Ohio 43240
DESIGN AGENCY DATE: 12/1/2022 REVIEWED AMT STRUCTURE FILE NUMBER: 7661770 DRAWN JAT CHECKED BTJ
FORWARD ABUTMENT PLAN BRIDGE NO. STA-15SW-1350 15TH ST. S.W. OVER WEST BRANCH OF NIMSHILLEN CREEK
STA-15SW-1350
9 / 22
40 53

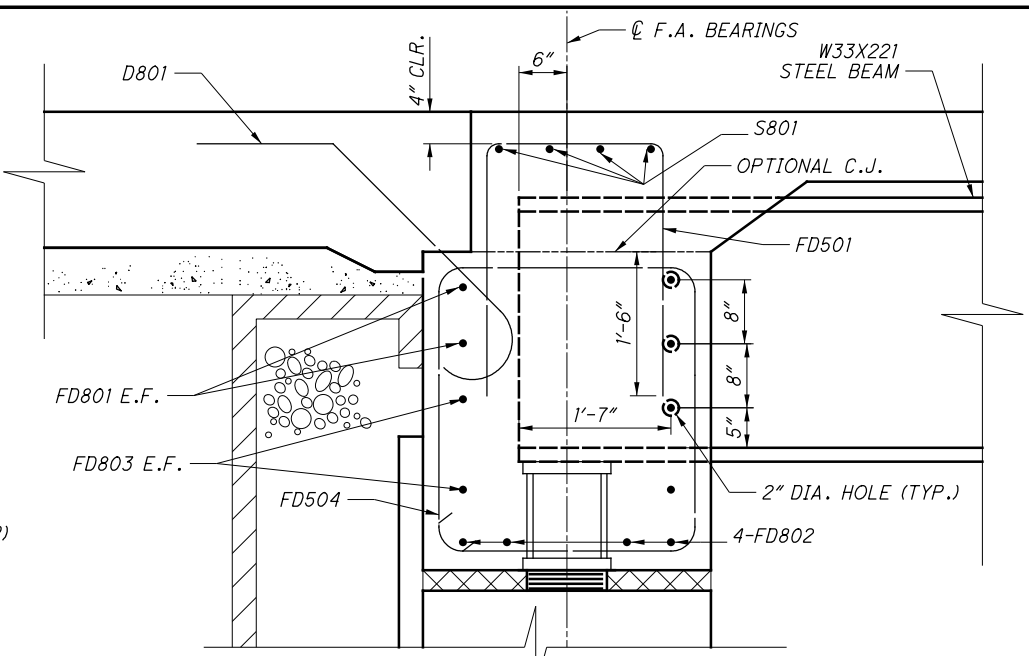
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H SECTION THROUGH ABUTMENT



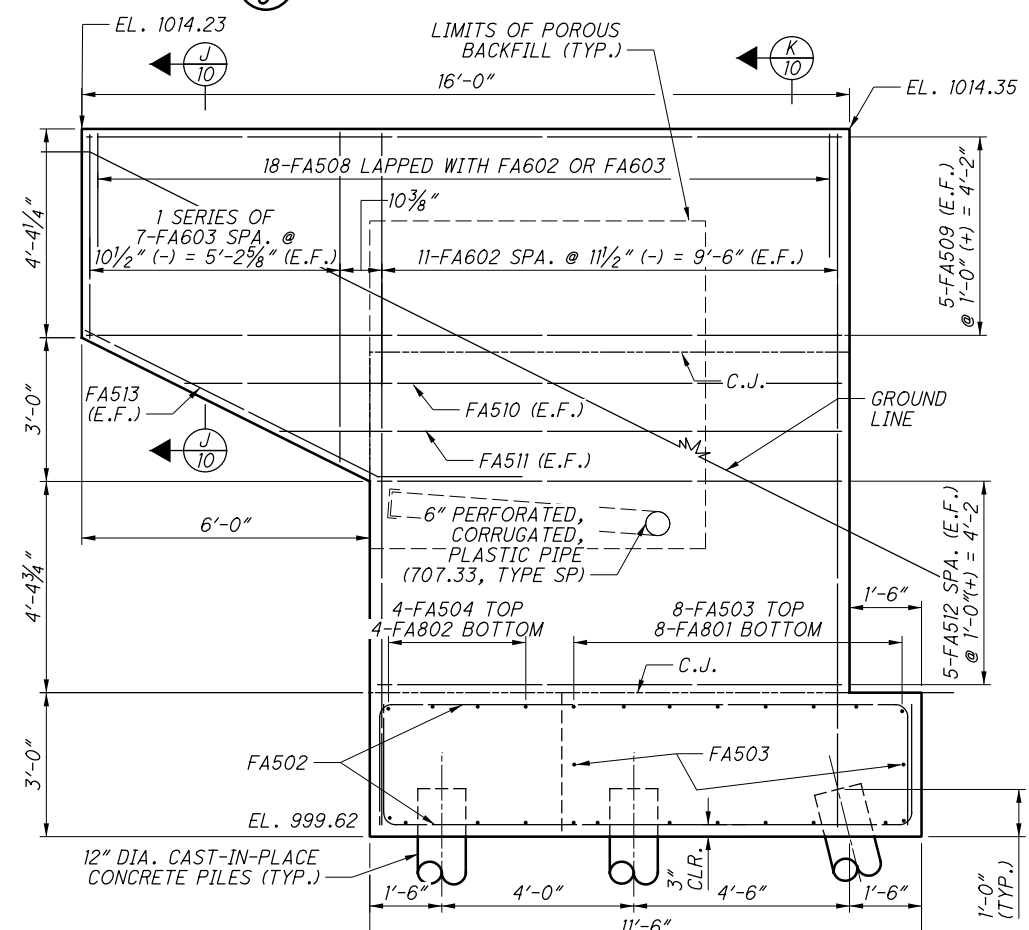
K SECTION THROUGH WINGWALL



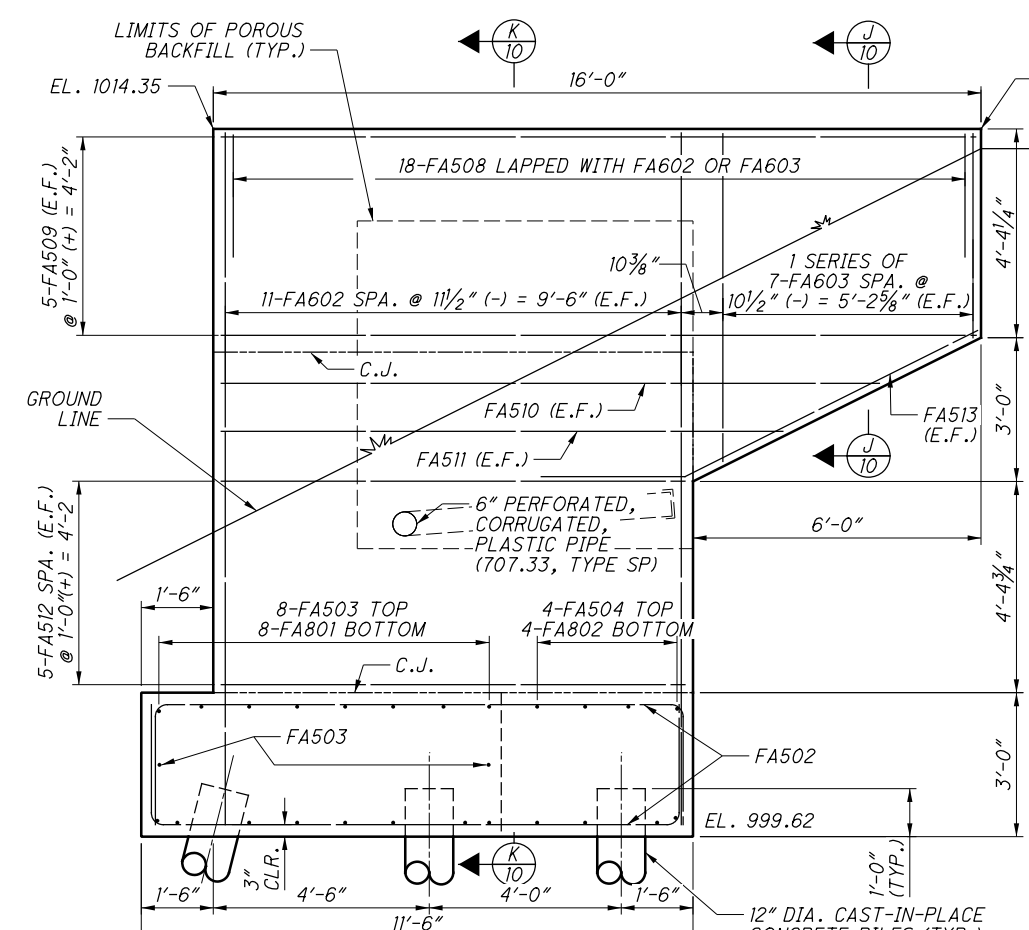
L DETAIL AT END DIAPHRAGM

MINIMUM LAP LENGTHS:

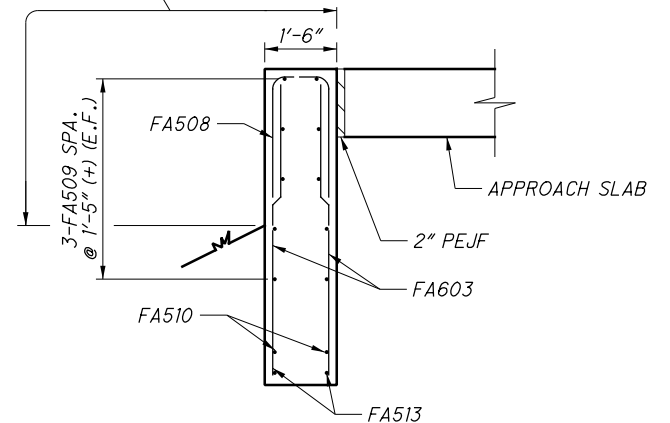
- #5 BAR = 2'-11"
- #8 BAR = 4'-9"



G WINGWALL ELEVATION



F WINGWALL ELEVATION



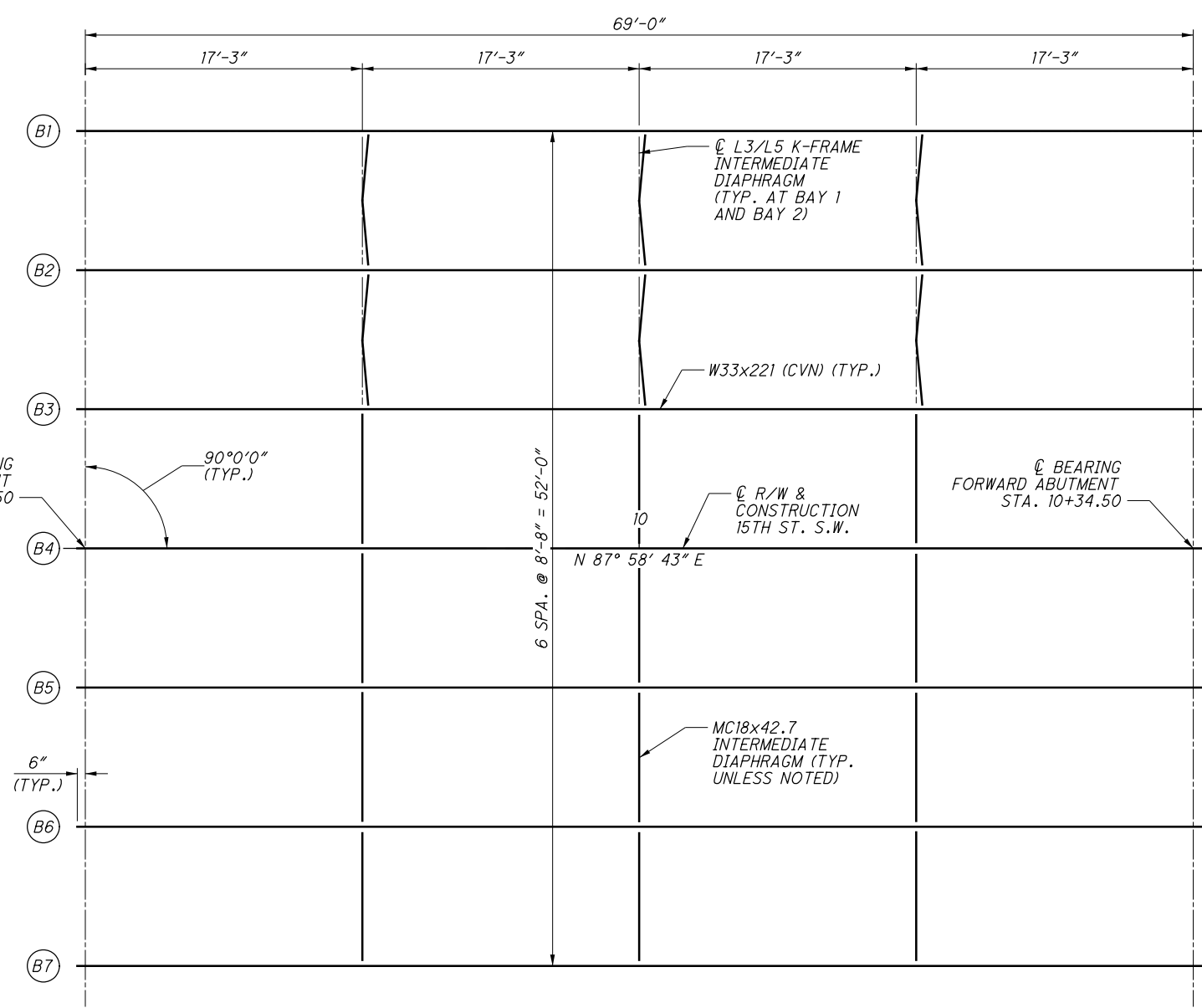
J SECTION THROUGH WINGWALL

NOTES:

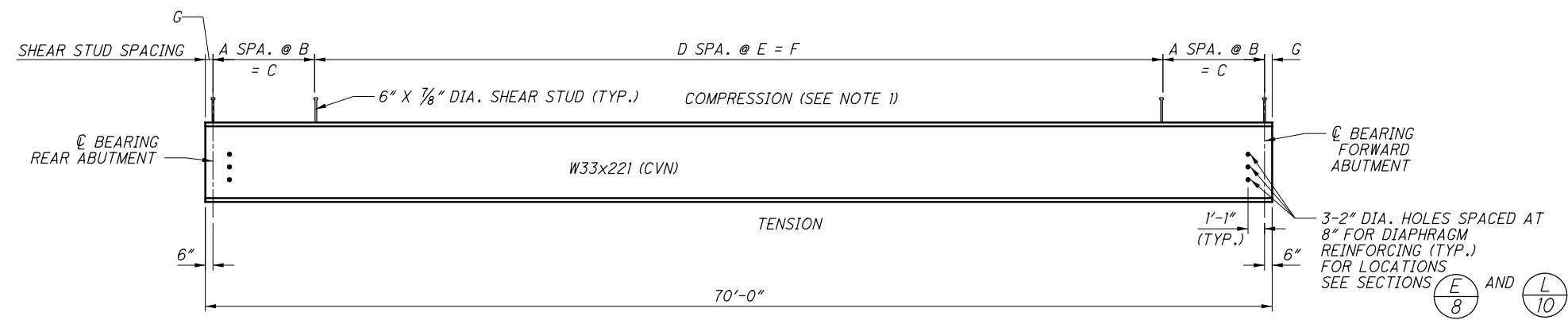
1. FOR ADDITIONAL NOTES AND DETAILS, SEE ODOT STD. DWG. SICD-1-21.
2. FOR FOUNDATION PLAN AND DETAILS, SEE SHEET 6/22.
3. ABUTMENT DIAPHRAGM CONCRETE: PLACE THE DIAPHRAGM CONCRETE ENCASING THE STRUCTURAL MEMBER ENDS WITH THE DECK CONCRETE OR AT LEAST 48 HOURS BEFORE PLACEMENT OF THE DECK CONCRETE. IF PLACED SEPARATELY, LOCATE A HORIZONTAL CONSTRUCTION JOINT IN THE DIAPHRAGM AS SHOWN ON SICD-1-96 FOR STEEL SUPERSTRUCTURES AND PLACE REMAINING DIAPHRAGM CONCRETE WITH THE DECK.

DESIGNED JAT	CHECKED AMT	DRAWN JAT	REVIEWED AMT	DATE 12/1/2022
STRUCTURE FILE NUMBER 7661770				
FORWARD ABUTMENT AND WINGWALL DETAILS				
BRIDGE NO. STA-15SW-1350 15TH ST. S.W. OVER WEST BRANCH OF NIMSHILLEN CREEK				
STA-15SW-1350				
10/22				
41 53				

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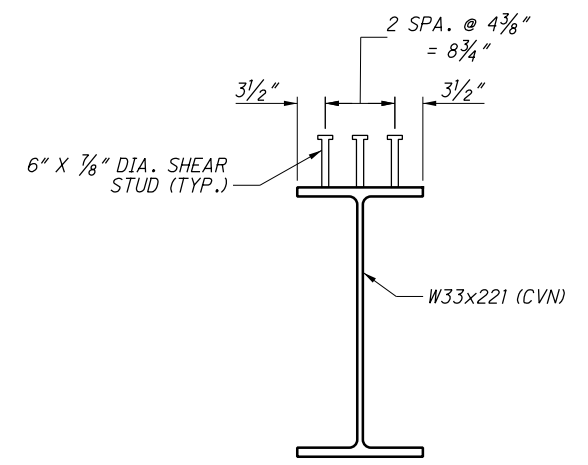


FRAMING PLAN



BEAM ELEVATION

SHEAR STUD SPACING TABLE							
	A	B	C	D	E	F	G
BEAMS 1 AND 7	3	1'-1"	3'-3"	50	1'-3"	62'-6"	6"
BEAMS 2, 4, AND 6	6	9"	4'-6"	60	1'-0"	60'-0"	6"
BEAMS 3 AND 5	8	11"	7'-4"	50	1'-1"	54'-2"	7"



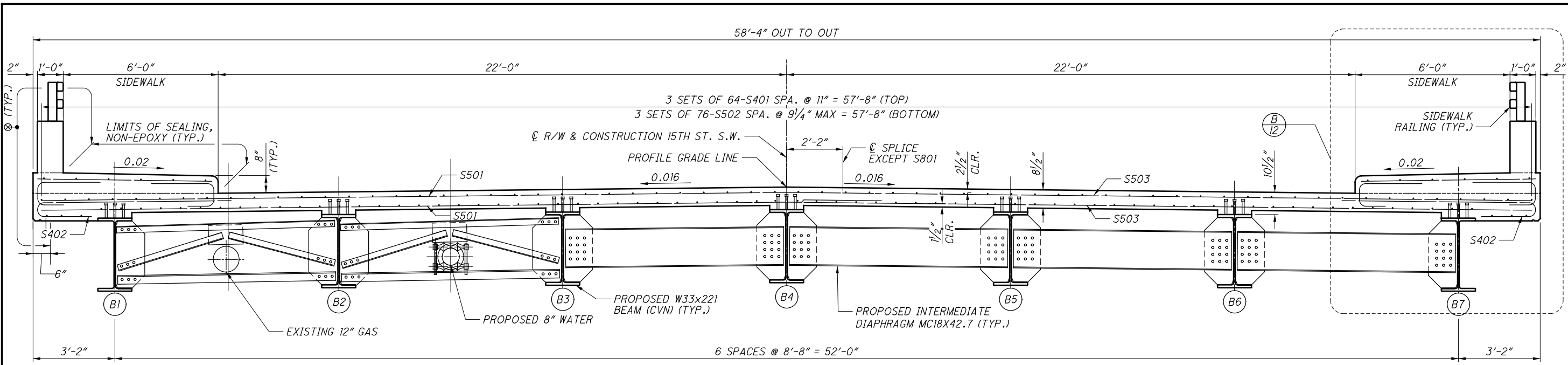
SHEAR STUD CONNECTOR LAYOUT

NOTES:

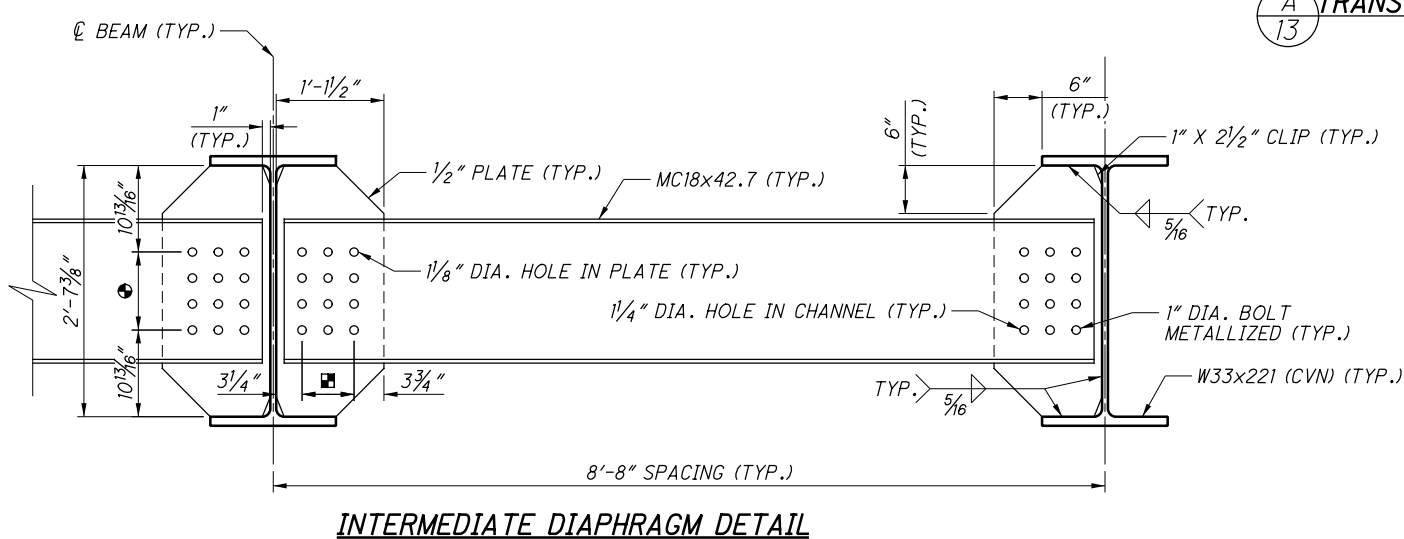
1. WELD ATTACHMENT OF SUPPORTS FOR CONCRETE DECK FINISHING MACHINE TO AREAS OF THE FASCIA STRINGER FLANGES DESIGNATED "COMPRESSION". DO NOT WELD ATTACHMENTS TO AREAS DESIGNATED "TENSION". FILLET WELDS TO COMPRESSION FLANGES SHALL BE AT LEAST 1" FROM EDGE OF FLANGE, BE NO MORE THAN 2" LONG, AND BE AT LEAST 1/4" FOR THICKNESSES UP TO 3/4" OR 5/8" FOR GREATER THAN 3/4" THICK.
2. ALL NEW STRUCTURAL STEEL SHALL BE ASTM A709 GRADE 50.
3. FOR ADDITIONAL NOTES AND DETAILS, SEE ODOT STD. DWG. GSD-1-19
4. FOR INTERMEDIATE DIAPHRAGMS DETAILS, SEE ODOT STD. DWG. GSD-1-19.
5. WHERE A SHAPE OR PLATE IS DESIGNATED (CVN) THE MATERIAL SHALL MEET SPECIFIED MINIMUM NOTCH TOUGHNESS REQUIREMENTS AS SPECIFIED IN CMS 711.01.
6. FOR BEARING DETAILS, SEE SHEET 16/22 .

DESIGN AGENCY: **PRIMEV**
 8415 Pulaski Place, Suite 300
 Columbus Ohio 43240
 DATE: 12/1/2022
 STRUCTURE FILE NUMBER: 7661770
 REVIEWED: AMT
 DRAWN: JAT
 CHECKED: AMT
 DESIGNED: JAT
 REVISIONS:
 FILE NO. STA-15SW-1350
FRAMING PLAN AND BEAM ELEVATION
 BRIDGE NO. STA-15SW-1350
 15TH ST. S.W. OVER WEST BRANCH OF NIMISHILLEN CREEK
STA-15SW-1350
 11 / 22
 42
 53

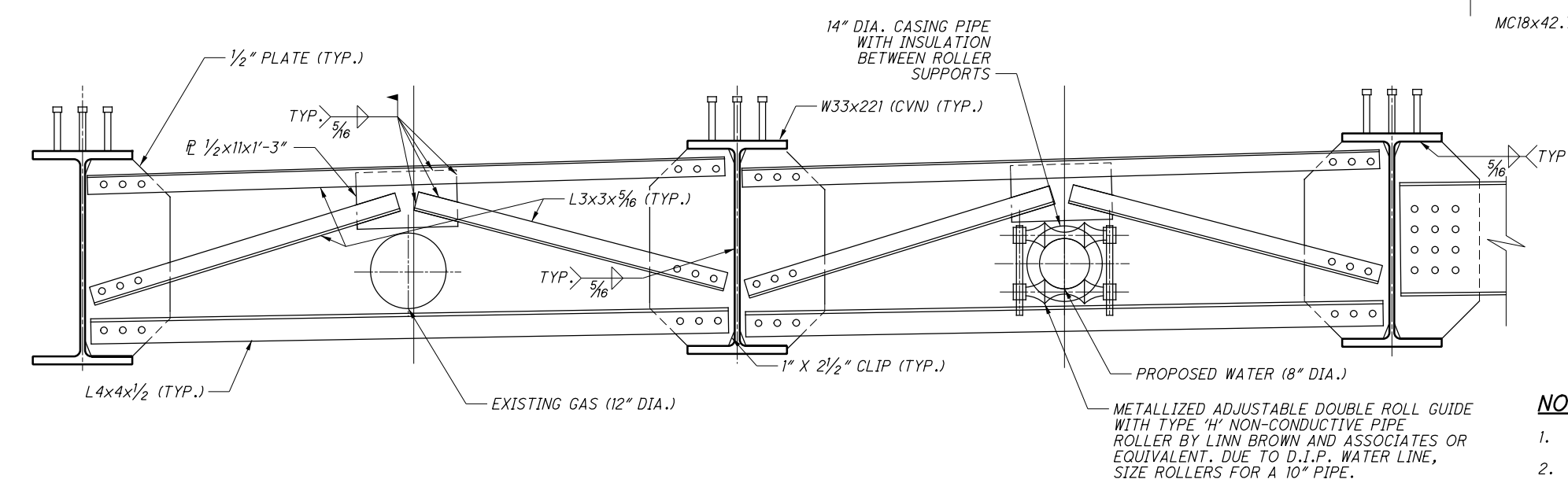
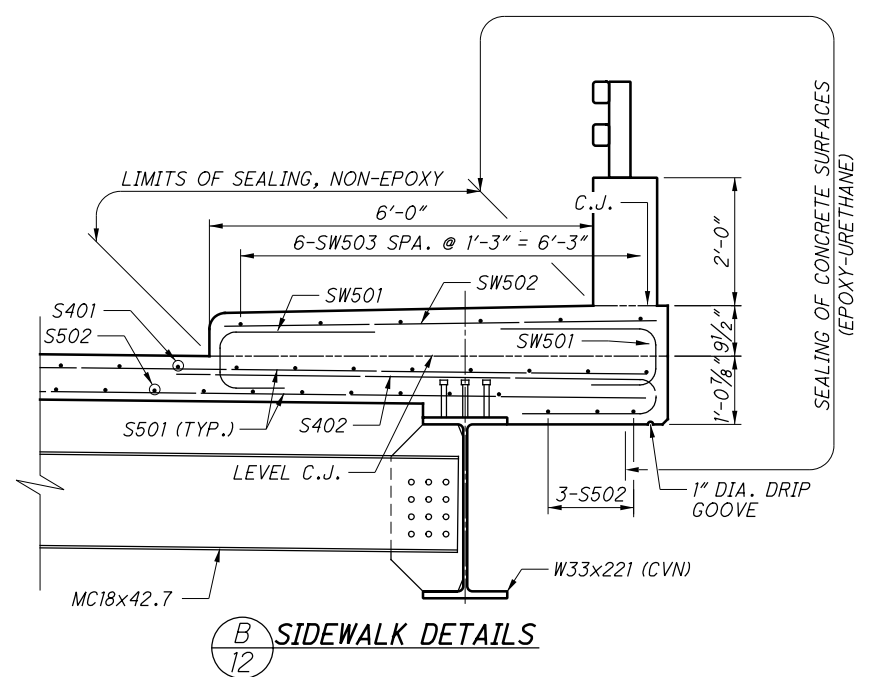
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A
13 TRANSVERSE SECTION

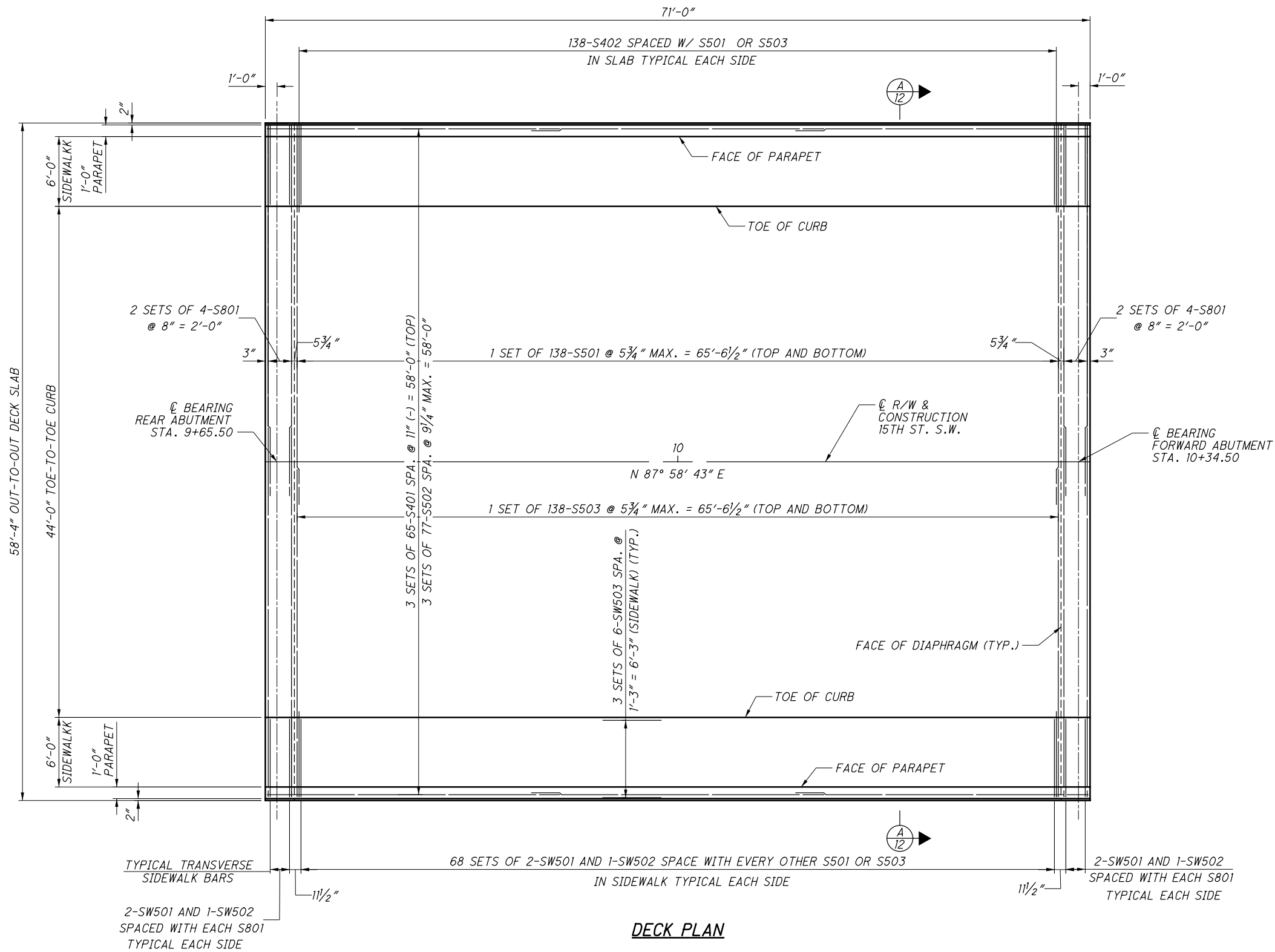


- LEGEND:**
- - 3 SPA. @ 3 1/4"
 - - 2 SPA. @ 3 1/4"
 - ⊗ - SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)
- MINIMUM LAP LENGTHS:**
1. #4 BAR = 2'-0"
 - #5 BAR = 3'-0"



- NOTES:**
1. FOR ADDITIONAL NOTES AND DETAILS, SEE ODOT STD. DWG. GSD-1-19.
 2. HIGH STRENGTH BOLTS SHALL BE 1" φ, ASTM F3125 GRADE A325 TYPE 1 METALLIZED UNLESS NOTED OTHERWISE.
 3. ALL STRUCTURAL STEEL SHALL BE METALLIZED UNLESS NOTED OTHERWISE.
 4. 14" DIAMETER CASING PIPE WITH INSULATION SHALL BE PLACED AROUND THE 8" DIAMETER WATERLINE OUTSIDE OF THE ROLLER SUPPORTS THAT ARE CONNECTED TO THE CROSS FRAMES.

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DECK PLAN

NOTES:

1. FOR DETAILS AND REINFORCING FOR THE BR-2-15 RAILING SEE SHEETS 17/22 AND 18/22.
2. FOR TRANSVERSE SECTION A, SEE SHEET 12/22.
3. DECK SLAB CONCRETE QUANTITY: THE ESTIMATED QUANTITY OF DECK SLAB CONCRETE IS BASED ON THE CONSTANT DECK SLAB THICKNESS, AS SHOWN, PLUS THE QUANTITY OF CONCRETE THAT FORMS EACH BEAM/GIRDER HAUNCH. THE ESTIMATE ASSUMES A CONSTANT HAUNCH THICKNESS OF 2 INCHES WITH VERTICAL SIDES. DEVIATE FROM THIS HAUNCH THICKNESS AS NECESSARY TO PLACE THE DECK SURFACE AT THE FINISHED GRADE.

THE HAUNCH THICKNESS WAS MEASURED AT THE CENTERLINE OF THE BEAM, FROM THE SURFACE OF THE DECK TO THE BOTTOM OF THE TOP FLANGE MINUS THE DECK SLAB THICKNESS. THE AREA OF ALL EMBEDDED STEEL PLATES HAD BEEN DEDUCTED FROM THE HAUNCH QUANTITY IN ACCORDANCE WITH 511.23.

MINIMUM LAP LENGTHS:

- #4 BAR = 2'-0"
- #5 BAR = 3'-0"
- #8 BAR = 5'-4"

DESIGN AGENCY PRIMEV 8415 Polaris Place, Suite 300 Columbus Ohio 43240	
DESIGNED JAT	DATE 12/1/2022
DRAWN JAT	REVIEWED AMT
CHECKED AMT	STRUCTURE FILE NUMBER 7661770
DECK PLAN	
BRIDGE NO. STA-15SW-1350 15TH ST. S.W. OVER WEST BRANCH OF NIMSHILLEN CREEK	
STA-15SW-1350	
13 / 22	
44 53	

CAMBER AND DEFLECTION TABLE

LOCATION	BEAM 1			BEAM 2			BEAM 3			BEAM 4			BEAM 5		
	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C
DEFLECTION DUE TO NON-COMPOSITE DL (STEEL ONLY)	- 1/4"	- 5/16"	- 1/4"	- 1/4"	- 5/16"	- 1/4"	- 1/4"	- 5/16"	- 1/4"	- 1/4"	- 5/16"	- 1/4"	- 1/4"	- 5/16"	- 1/4"
DEFLECTION DUE TO NON-COMPOSITE DL (SLAB ONLY)	- 7/8"	- 1 5/16"	- 15/16"	- 15/16"	- 1 5/16"	- 15/16"	- 15/16"	- 1 5/16"	- 15/16"	- 15/16"	- 1 5/16"	- 15/16"	- 15/16"	- 1 5/16"	- 15/16"
DEFLECTION DUE TO COMPOSITE DL	- 3/16"	- 1/4"	- 3/16"	- 3/16"	- 1/4"	- 3/16"	- 3/16"	- 1/4"	- 3/16"	- 3/16"	- 1/4"	- 3/16"	- 3/16"	- 1/4"	- 3/16"
SUM EQUALS REQUIRED SHOP CAMBER	1 5/16"	1 7/8"	1 3/8"	1 3/8"	1 7/8"	1 3/8"	1 3/8"	1 7/8"	1 3/8"	1 3/8"	1 7/8"	1 3/8"	1 3/8"	1 7/8"	1 3/8"

CAMBER AND DEFLECTION TABLE

LOCATION	BEAM 6			BEAM 7		
	A	B	C	A	B	C
DEFLECTION DUE TO NON-COMPOSITE DL (STEEL ONLY)	- 1/4"	- 5/16"	- 1/4"	- 1/4"	- 5/16"	- 1/4"
DEFLECTION DUE TO NON-COMPOSITE DL (SLAB ONLY)	- 15/16"	- 1 5/16"	- 15/16"	- 7/8"	- 1 5/16"	- 15/16"
DEFLECTION DUE TO COMPOSITE DL	- 3/16"	- 1/4"	- 3/16"	- 3/16"	- 1/4"	- 3/16"
SUM EQUALS REQUIRED SHOP CAMBER	1 3/8"	1 7/8"	1 3/8"	1 5/16"	1 7/8"	1 3/8"

FINAL DECK SURFACE ELEVATION TABLE

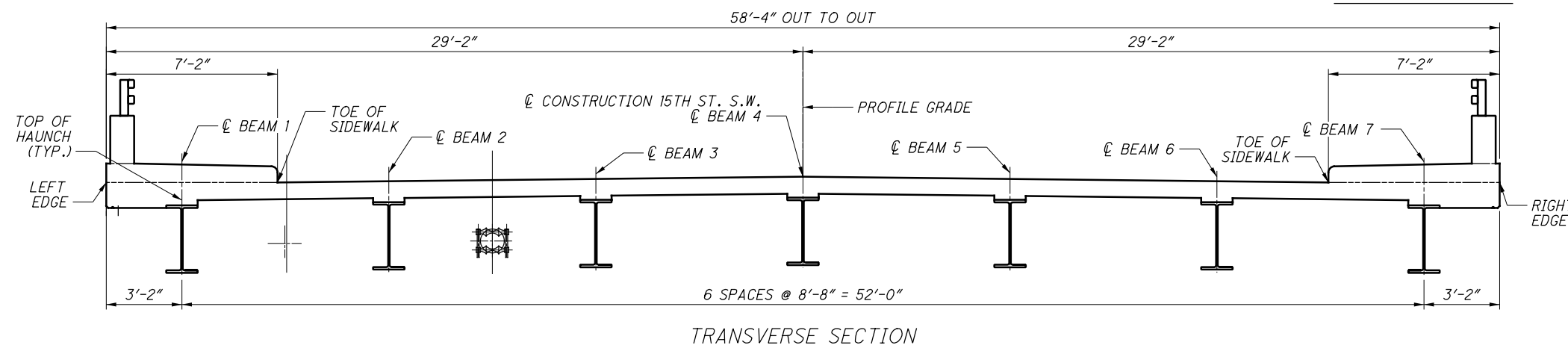
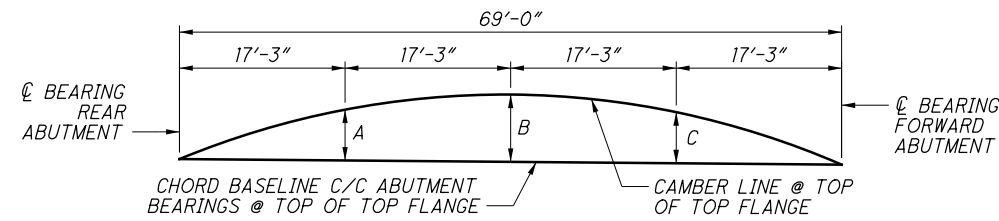
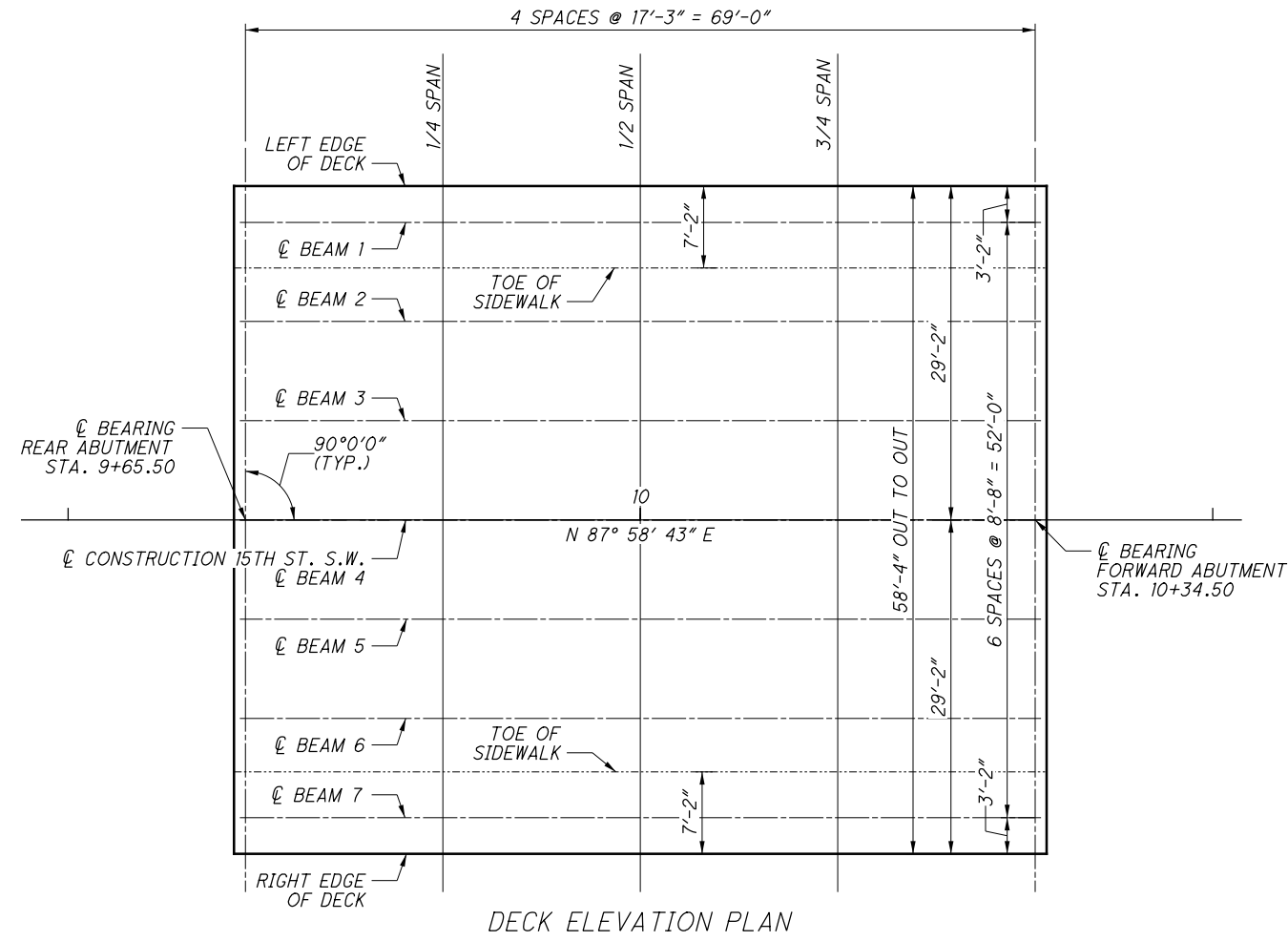
LOCATION	CL BRG. RA	1/4 SPAN	1/2 SPAN	3/4 SPAN	CL BRG. FA
STATION	9+65.50	9+82.75	10+00.00	10+17.25	10+34.50
LEFT EDGE	1014.94	1014.79	1014.65	1014.50	1014.35
CL BEAM 1	1014.94	1014.79	1014.65	1014.50	1014.35
TOE OF SIDEWALK	1014.94	1014.79	1014.65	1014.50	1014.35
CL BEAM 2	1015.02	1014.87	1014.72	1014.58	1014.43
CL BEAM 3	1015.15	1015.01	1014.86	1014.71	1014.57
CL CONSTRUCTION/ CL BEAM 4	1015.29	1015.15	1015.00	1014.85	1014.71
CL BEAM 5	1015.15	1015.01	1014.86	1014.71	1014.57
CL BEAM 6	1015.02	1014.87	1014.72	1014.58	1014.43
TOE OF SIDEWALK	1014.94	1014.79	1014.65	1014.50	1014.35
CL BEAM 7	1014.94	1014.79	1014.65	1014.50	1014.35
RIGHT EDGE	1014.94	1014.79	1014.65	1014.50	1014.35

TOP OF HAUNCH ELEVATION TABLE

LOCATION	CL BRG. RA	1/4 SPAN	1/2 SPAN	3/4 SPAN	CL BRG. FA
STATION	9+65.50	9+82.75	10+00.00	10+17.25	10+34.50
CL BEAM 1	1014.20	1014.16	1014.06	1013.87	1013.61
CL BEAM 2	1014.31	1014.27	1014.17	1013.98	1013.72
CL BEAM 3	1014.45	1014.41	1014.31	1014.12	1013.86
CL BEAM 4	1014.58	1014.55	1014.45	1014.26	1014.00
CL BEAM 5	1014.45	1014.41	1014.31	1014.12	1013.86
CL BEAM 6	1014.31	1014.27	1014.17	1013.98	1013.72
CL BEAM 7	1014.20	1014.16	1014.06	1013.87	1013.61

SCREED ELEVATION TABLE

LOCATION	CL BRG. RA	1/4 SPAN	1/2 SPAN	3/4 SPAN	CL BRG. FA
STATION	9+65.50	9+82.75	10+00.00	10+17.25	10+34.50
LEFT EDGE	1014.94	1014.90	1014.80	1014.61	1014.35
TOE OF SIDEWALK	1014.94	1014.90	1014.80	1014.61	1014.35
CL CONSTRUCTION	1015.29	1015.26	1015.16	1014.96	1014.71
TOE OF SIDEWALK	1014.94	1014.90	1014.80	1014.61	1014.35
RIGHT EDGE	1014.94	1014.90	1014.80	1014.61	1014.35

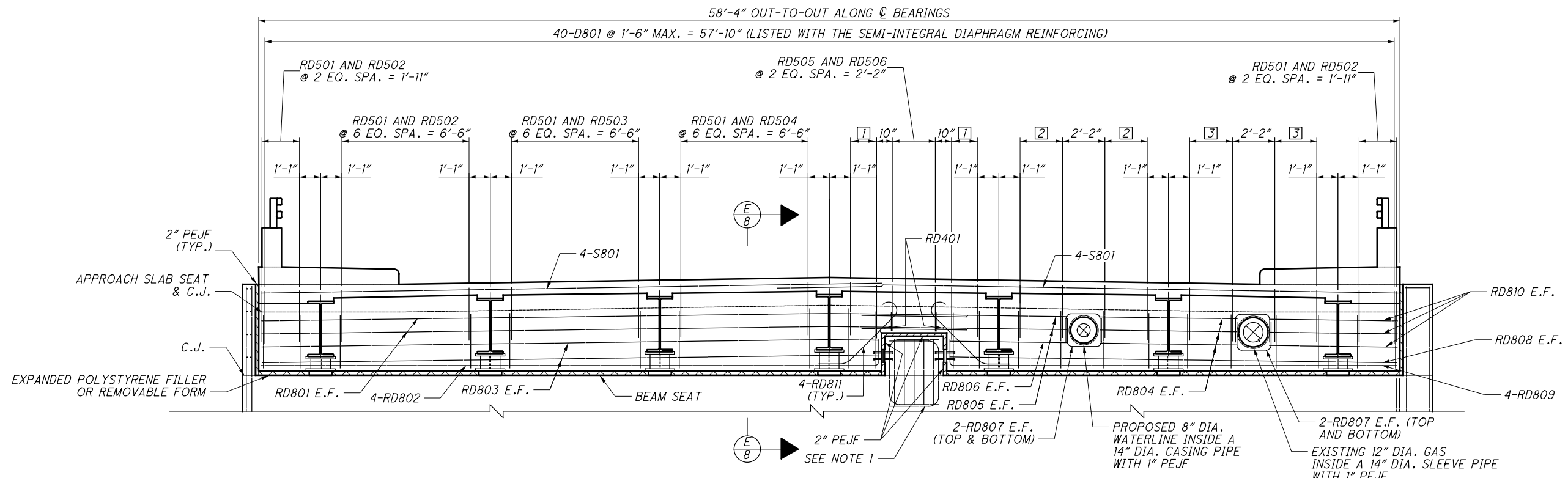


NOTES:

- SCREED ELEVATIONS SHOWN REPRESENT THE THEORETICAL DECK SURFACE LOCATION PRIOR TO DEFLECTIONS CAUSED BY DECK PLACEMENT AND OTHER ANTICIPATED DEAD LOADS.
- TOP OF HAUNCH ELEVATIONS SHOWN REPRESENT THE THEORETICAL LOCATION OF THE BOTTOM OF THE DECK ABOVE THE BEAM HAUNCH PRIOR TO DEFLECTIONS CAUSED BY DECK PLACEMENT AND OTHER ANTICIPATED DEAD LOADS.
- FINAL DECK SURFACE ELEVATIONS SHOWN REPRESENT THE DECK SURFACE LOCATION AFTER ALL ANTICIPATED DEAD LOAD DEFLECTIONS HAVE OCCURRED.

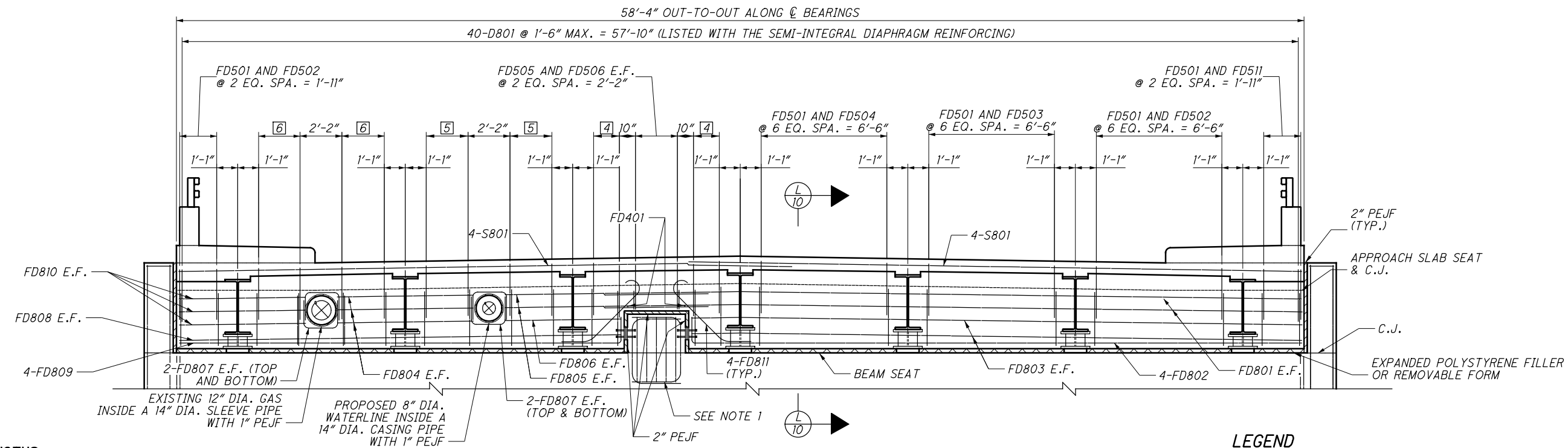
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REAR ABUTMENT DIAPHRAGM ELEVATION

VIEW SHOWN IS ALONG CENTERLINE OF BEARING
ALL VERTICAL BARS SHOWN HERE SHALL BE PLACED PARALLEL TO THE BEAMS



FORWARD ABUTMENT DIAPHRAGM ELEVATION

VIEW SHOWN IS ALONG CENTERLINE OF BEARING
ALL VERTICAL BARS SHOWN HERE SHALL BE PLACED PARALLEL TO THE BEAMS

MINIMUM LAP LENGTHS
#8 BAR = 5'-4"

NOTES:

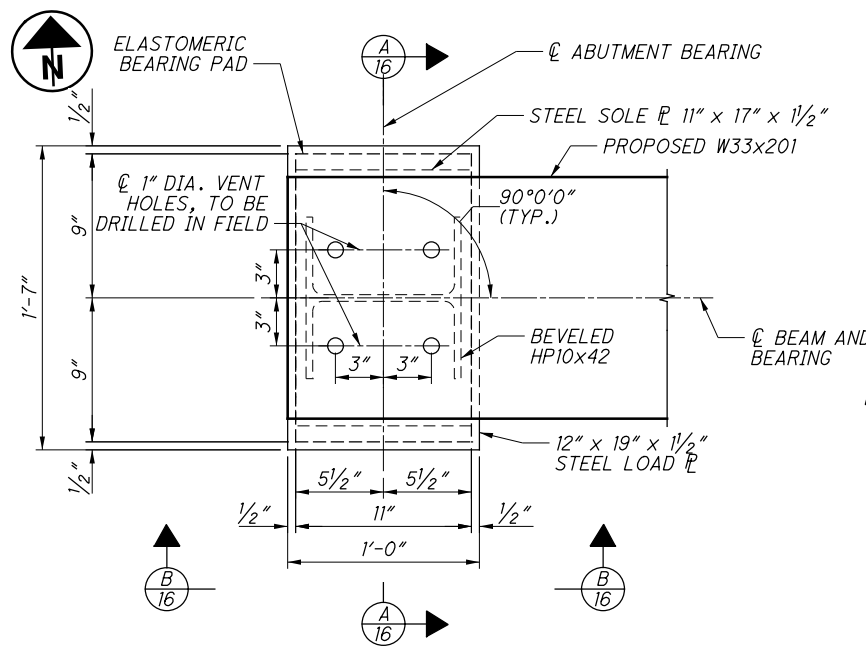
- FOR DIAPHRAGM GUIDE DETAILS AND REINFORCING STEEL SIZE AND LAYOUT, SEE STANDARD DRAWING SICD-2-14.
- ALL DIMENSIONS SHOWN ARE ALONG CENTERLINE OF BEARING.
- FOR ELEVATIONS ALONG TOP OF DIAPHRAGM, SEE SHEETS 7/22 AND 9/22.

LEGEND

- ① - RD501 AND RD504 @ 1'-4"
- ② - RD501 AND RD503 @ 2 EQ. SPA. = 2'-2"
- ③ - RD501 AND RD502 @ 2 EQ. SPA. = 2'-2"
- ④ - FD501 AND FD504 @ 1'-4"
- ⑤ - FD501 AND FD503 @ 2 EQ. SPA. = 2'-2"
- ⑥ - FD501 AND FD502 @ 2 EQ. SPA. = 2'-2"

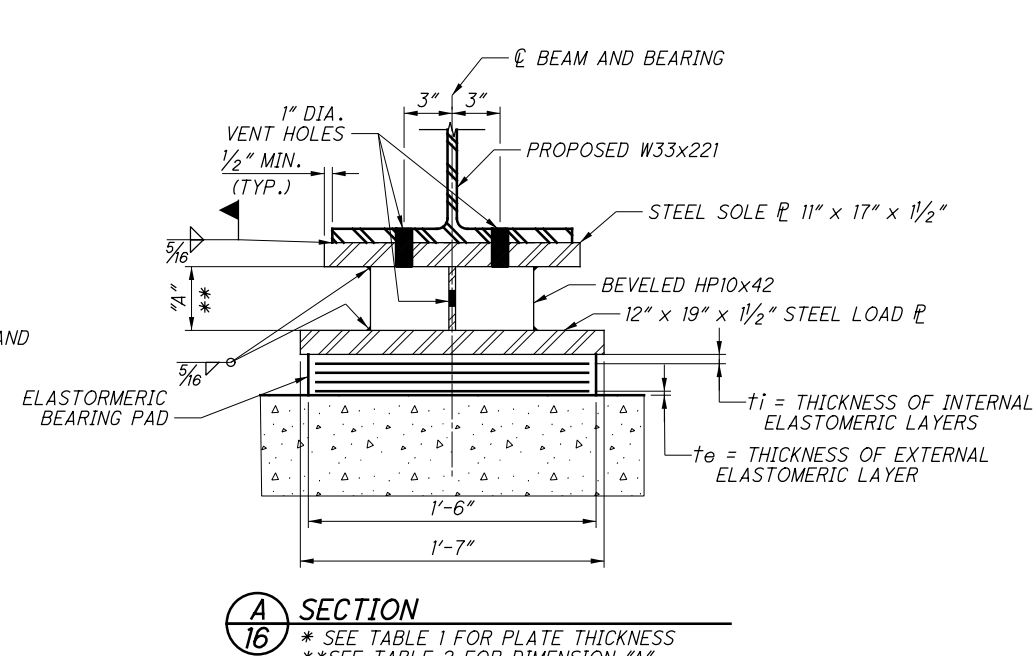
 8415 Pulaski Place, Suite 300 Columbus, Ohio 43240
DESIGN AGENCY PRIMEV 8415 Pulaski Place, Suite 300 Columbus, Ohio 43240
DATE: 12/1/2022 STRUCTURE FILE NUMBER: 7661770
REVIEWED: AMT DRAWN: EEB DESIGNED: EEB
CHECKED: BTJ
DIAPHRAGM DETAILS BRIDGE NO. STA-15SW-1350 15TH ST. S.W. OVER WEST BRANCH OF NIMSHILLEN CREEK
STA-15SW-1350
15 / 22
46 53

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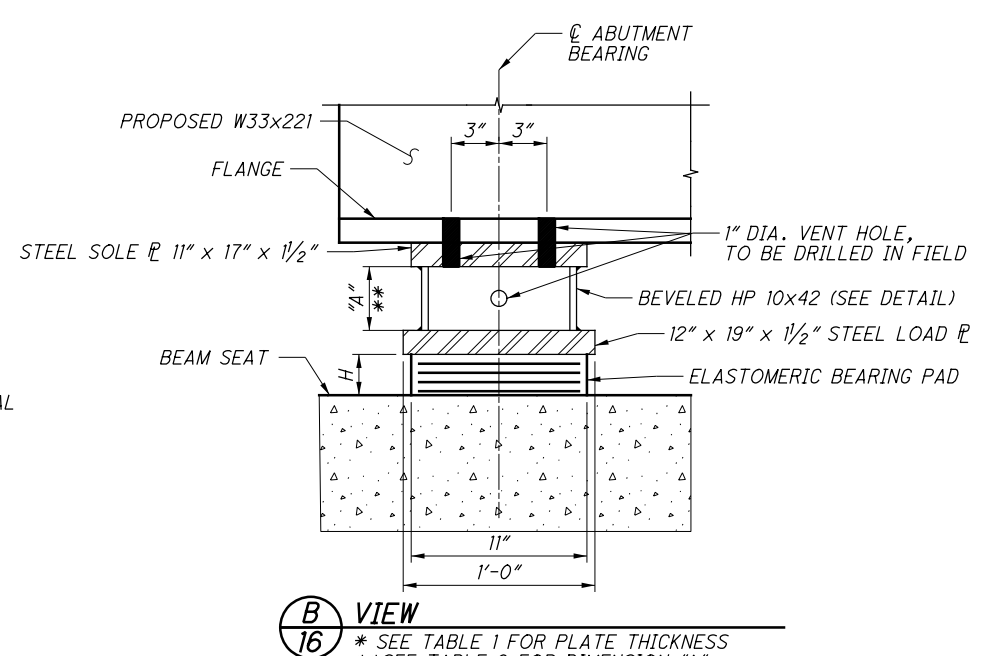
ABUTMENT BEARING PLAN

(REAR ABUTMENT SHOWN; FORWARD ABUTMENT OPPOSITE HAND)



A SECTION

* SEE TABLE 1 FOR PLATE THICKNESS
**SEE TABLE 2 FOR DIMENSION "A"



B VIEW

* SEE TABLE 1 FOR PLATE THICKNESS
**SEE TABLE 2 FOR DIMENSION "A"

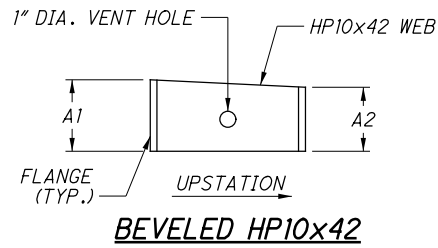
TABLE 1 - BEARING SCHEDULE

	BEARING TYPE	NO. OF BEARINGS	ELASTOMERIC BEARING PAD SIZE LxWxH	NO. OF STEEL LAMINATES 0.0747" THICK (14 GAGE)	INTERNAL LAYERS		EXTERNAL LAYERS		STEEL LOAD PLATE SIZE LxW	LOAD PLATE THICKNESS		UNFACTORED DESIGN LOADS		
					ti	NO.	te	NO.		T1	T2	DEAD LOAD IN KIPS	LIVE LOAD IN KIPS ▽	TOTAL LOAD IN KIPS
REAR ABUTMENT	EXP.	7	11"x18"x2.55"	4	0.50"	4	0.25"	1	12"x19"x1/2"	1.5"	1.5"	77.1	67.9	145.0
FORWARD ABUTMENT	EXP.	7	11"x18"x2.55"	4	0.50"	4	0.25"	1	12"x19"x1/2"	1.5"	1.5"	77.1	67.9	145.0

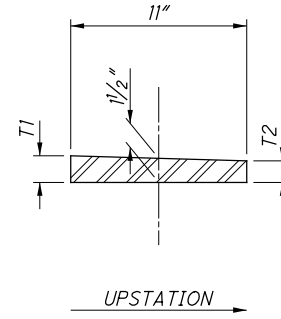
▽ = LIVE LOAD WITHOUT IMPACT

TABLE 2 - DIM "A"

BEARING	REAR ABUTMENT		FORWARD ABUTMENT	
	A1 (IN.)	A2 (IN.)	A1 (IN.)	A2 (IN.)
1	4.88	4.88	4.75	4.75
2	6.88	6.88	6.75	6.75
3	8.50	8.50	8.50	8.50
4	10.25	10.25	10.13	10.13
5	8.50	8.50	8.50	8.50
6	6.88	6.88	6.75	6.75
7	4.88	4.88	4.75	4.75



BEVELED HP10x42



LOAD PLATE

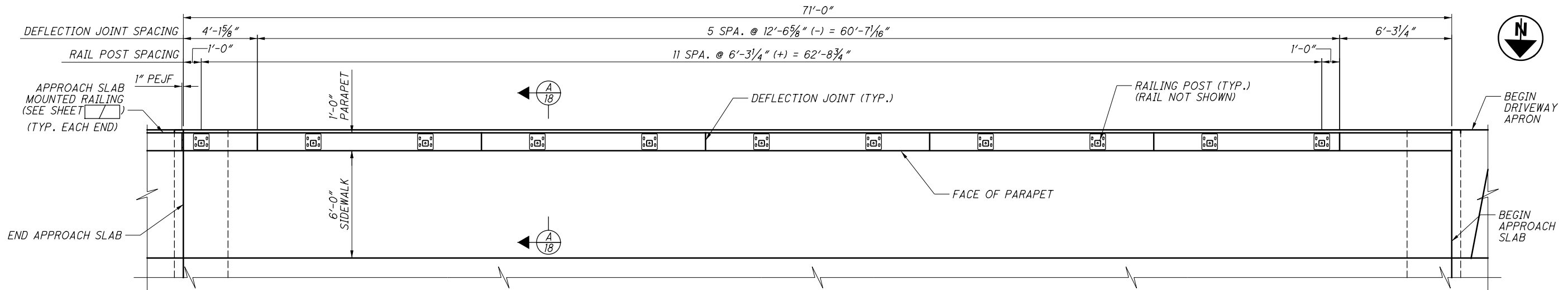
* SEE TABLE 1 FOR LOAD PLATE THICKNESS

NOTES

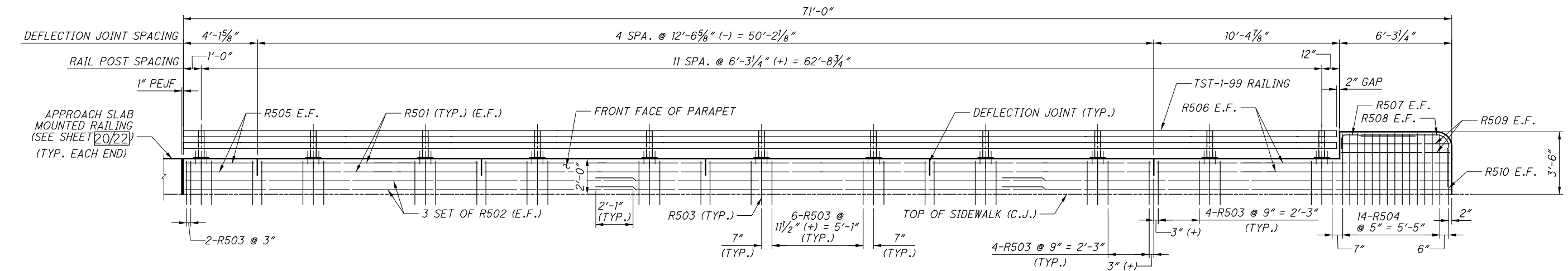
- ELASTOMERIC BEARINGS:**
THE ELASTOMER SHALL HAVE A HARDNESS OF 50 DUROMETER. ALL BEARINGS WERE DESIGNED IN ACCORDANCE WITH SECTION 14.7.6 (METHOD A) OF THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS. THE LONG-TERM COMPRESSION PROOF LOAD TEST (AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES, DIVISION II, SECTION 18.7.2.6) IS NOT REQUIRED.
- LOAD PLATES:**
THE STEEL LOAD PLATES SHALL CONFORM TO THE REQUIREMENTS OF ASTM A709 GRADE 50 AND SHALL BE BONDED TO THE ELASTOMER BY VULCANIZATION DURING THE MOLDING PROCESS.
- BASIS OF PAYMENT:**
THE UNIT BID PRICE SHALL INCLUDE ALL MATERIALS (BEARING, SOLE AND LOAD PLATES, HP SHAPES, ETC.), LABOR AND INCIDENTALS NECESSARY TO FURNISH AND INSTALL ELASTOMERIC BEARINGS. PAYMENT SHALL INCLUDE THE DRILLING OF VENT HOLES AT THE LOCATIONS SHOWN ON THIS SHEET. PAYMENT WILL BE AT THE CONTRACT PRICE FOR ITEM 516, EACH, ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE AS LISTED UNDER THE ESTIMATED QUANTITIES.
- MARKINGS:**
ALL BEARINGS SHALL BE MARKED PRIOR TO SHIPPING. THE MARKS SHALL INCLUDE THE BEARING LOCATION ON THE BRIDGE, AND A DIRECTION ARROW THAT POINTS UP-STATION. ALL MARKS SHALL BE PERMANENT AND BE VISIBLE AFTER THE BEARING IS INSTALLED.
- METALIZING:**
THE LOAD PLATES, BEVELED HP10x42 AND SOLE PLATES SHALL BE METALIZED IN ACCORDANCE WITH ITEM SS845 AND C&MS 708.02. PAYMENT FOR METALIZED PLATES TO BE INCLUDED WITH ITEM 516, ELASTOMERIC BEARINGS WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE). WHEN WELDING ON METALIZED MEMBER IS REQUIRED, REPAIR THE METALIZING PER SS845.

DESIGN AGENCY: **PRIMEV**
 8415 Pulaski Place, Suite 300
 Columbus, Ohio 43240
 DATE: 12/1/2022
 REVIEWED: AMT
 DRAWN: EJS
 CHECKED: JAT
 STRUCTURE FILE NUMBER: 766170
BEARING DETAILS
 BRIDGE NO. STA-15SW-1350
 15TH ST. S.W. OVER WEST BRANCH OF NIMSHILLEN CREEK
STA-15SW-1350
 16 / 22
 47
 53

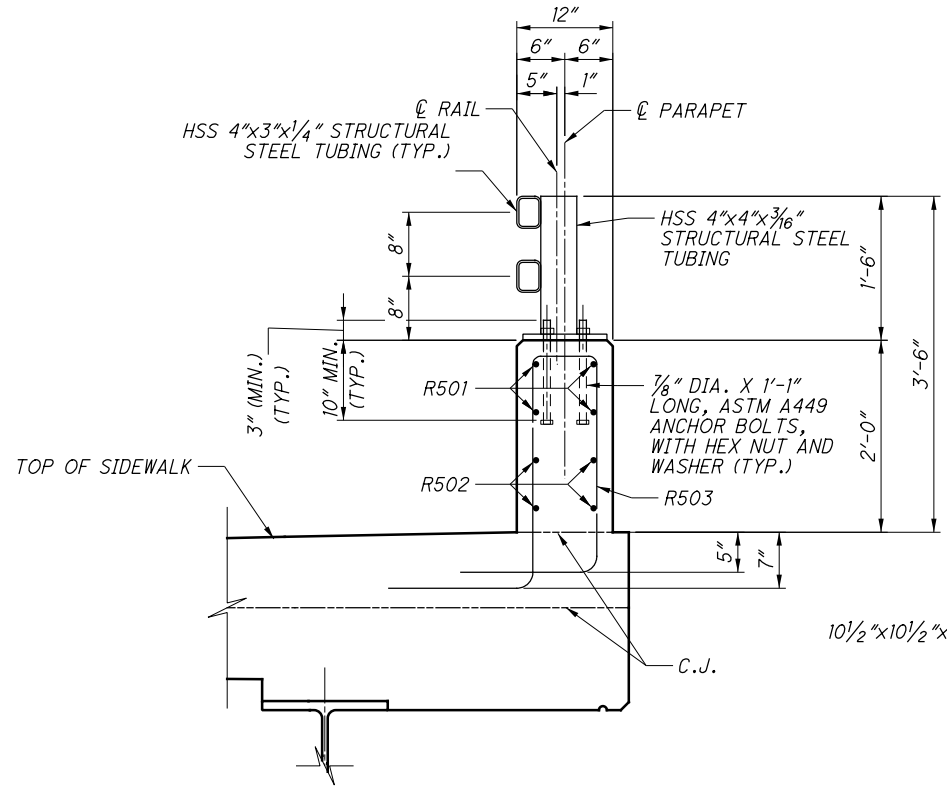
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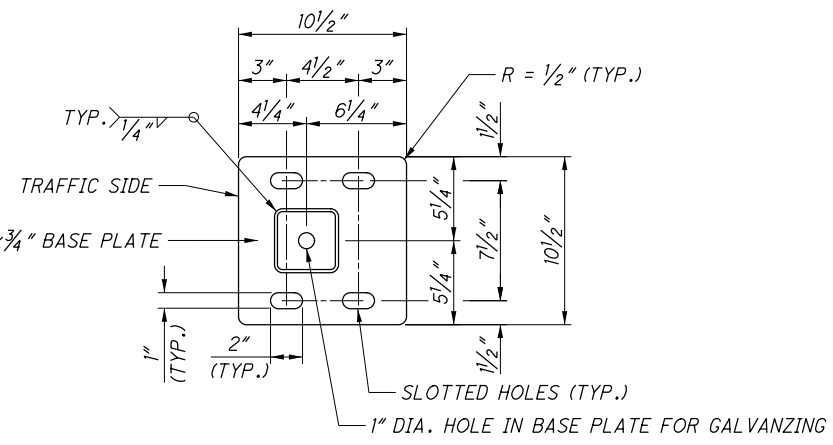
RIGHT PARAPET PLAN



RIGHT PARAPET ELEVATION



A 18 SECTION THROUGH PARAPET
(SLAB AND SIDEWALK REINFORCEMENT NOT SHOWN FOR CLARITY)

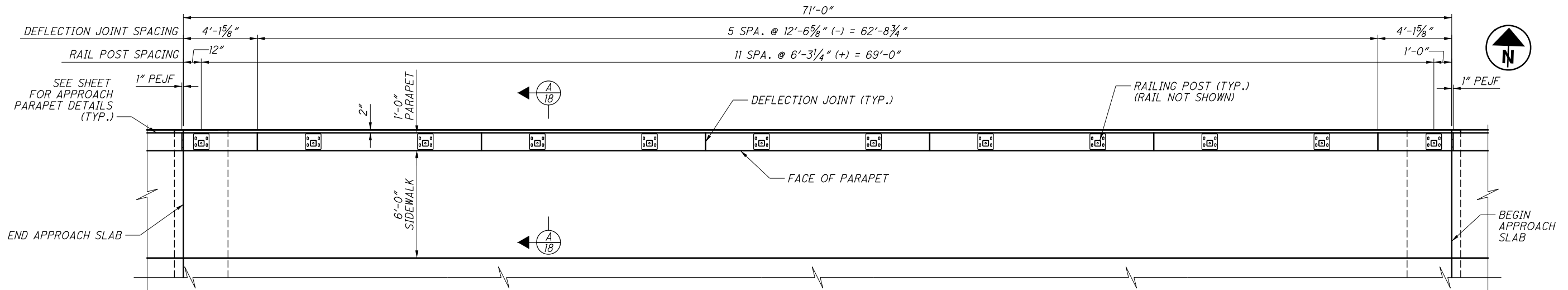


BASE PLATE DETAIL

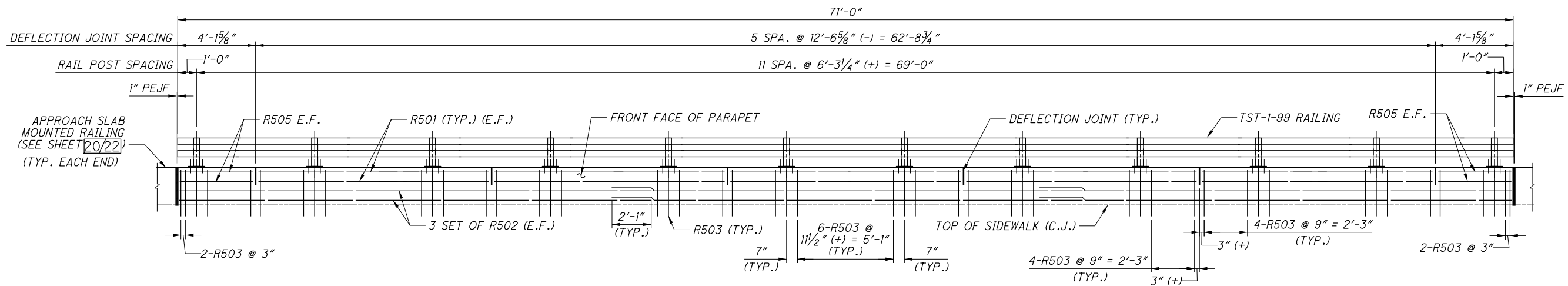
- NOTES:**
- FOR ADDITIONAL NOTES AND DETAILS, SEE ODOT STD. DWG. BR-2-15.
 - CLEAR DISTANCE FROM FACE OF CONCRETE TO FACE OF REINFORCING SHALL BE 2" UNLESS NOTED OTHERWISE.
 - TST-1-99 RAILING SHALL BE GALVANIZED.

STA-15SW-1350	RIGHT PARAPET DETAILS BRIDGE NO. STA-15SW-1350 15TH ST. S.W. OVER WEST BRANCH OF NIMSHILLEN CREEK	DESIGN AGENCY PRIMEV 8415 Pulaski Place, Suite 300 Columbus Ohio 43240
17 / 22	DATE 12/1/2022	REVIEWED AMT
48 53	DRAWN BTJ	STRUCTURE FILE NUMBER 7661770
18	CHECKED AMT	DESIGNER BTJ

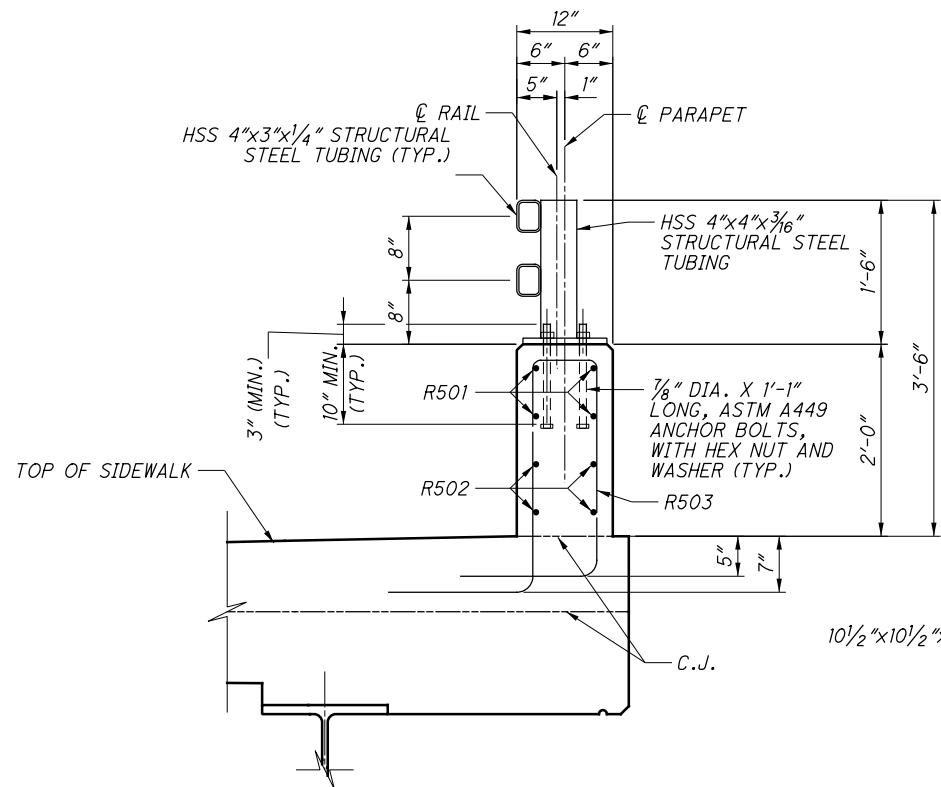
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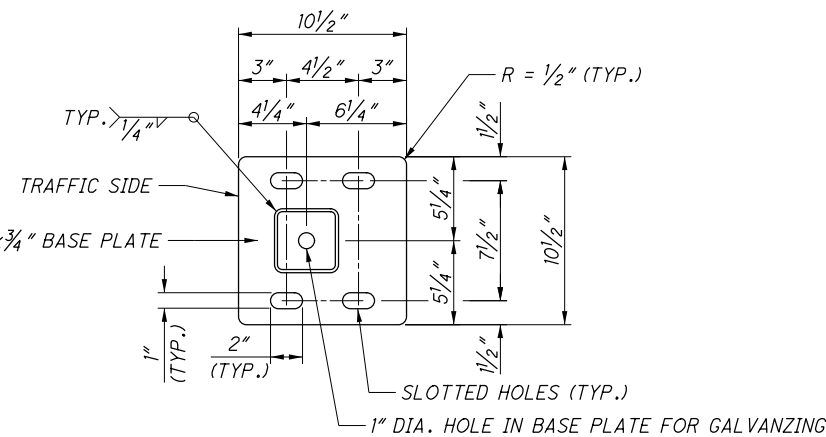
LEFT PARAPET PLAN



LEFT PARAPET ELEVATION



A 18 SECTION THROUGH PARAPET
(SLAB AND SIDEWALK REINFORCEMENT NOT SHOWN FOR CLARITY)



BASE PLATE DETAIL

NOTES:

1. FOR ADDITIONAL NOTES AND DETAILS, SEE ODOT STD. DWG. BR-2-15.
2. CLEAR DISTANCE FROM FACE OF CONCRETE TO FACE OF REINFORCING SHALL BE 2" UNLESS NOTED OTHERWISE.
3. TST-1-99 RAILING SHALL BE GALVANIZED.



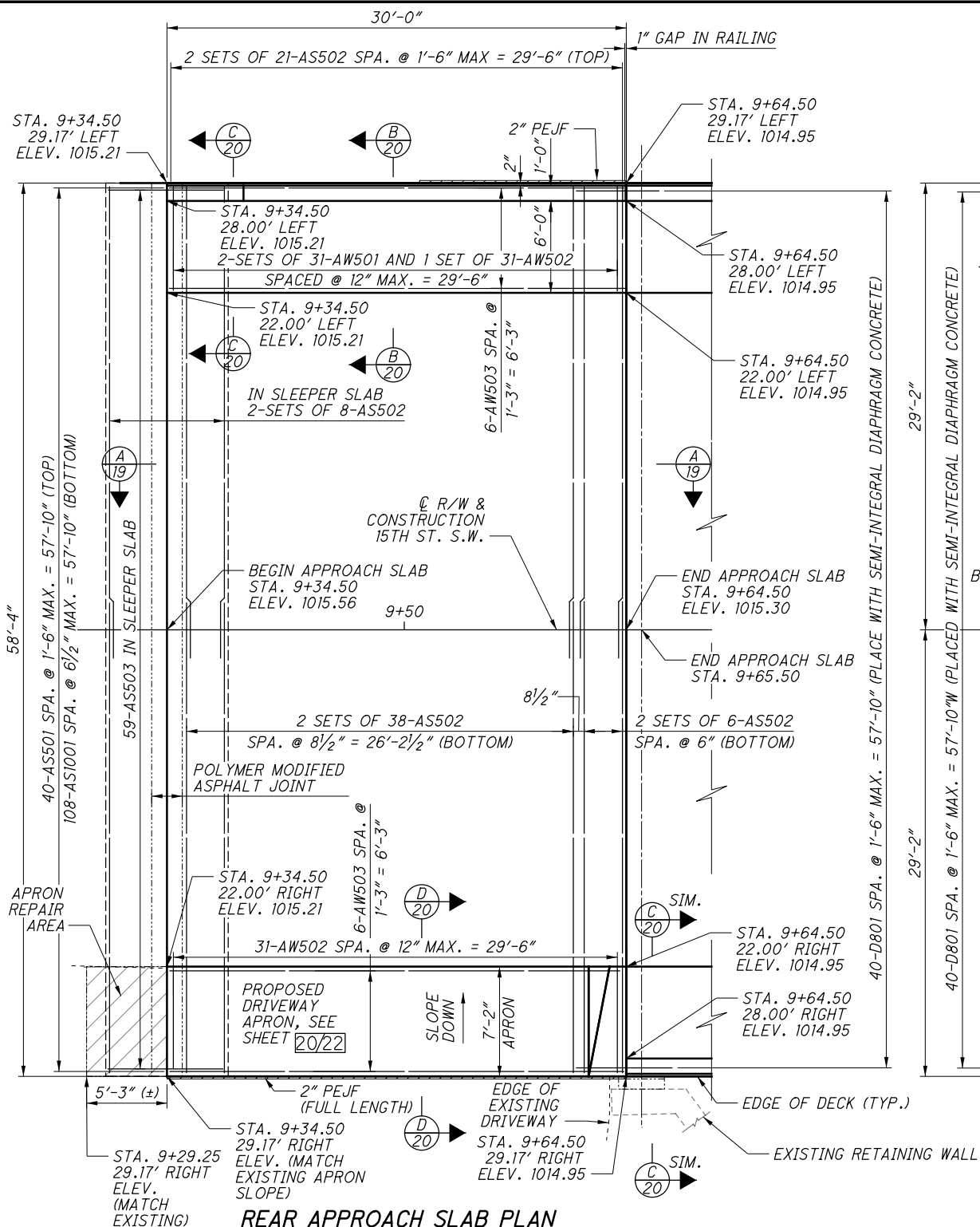
DESIGN AGENCY
PRIMEV
8415 Pulaski Place, Suite 300
Columbus, Ohio 43240

DESIGNED BY JAT
CHECKED BY AMT
DRAWN BY JAT
REVISED BY
REVIEWED BY AMT
DATE 12/1/2022
STRUCTURE FILE NUMBER 7661770

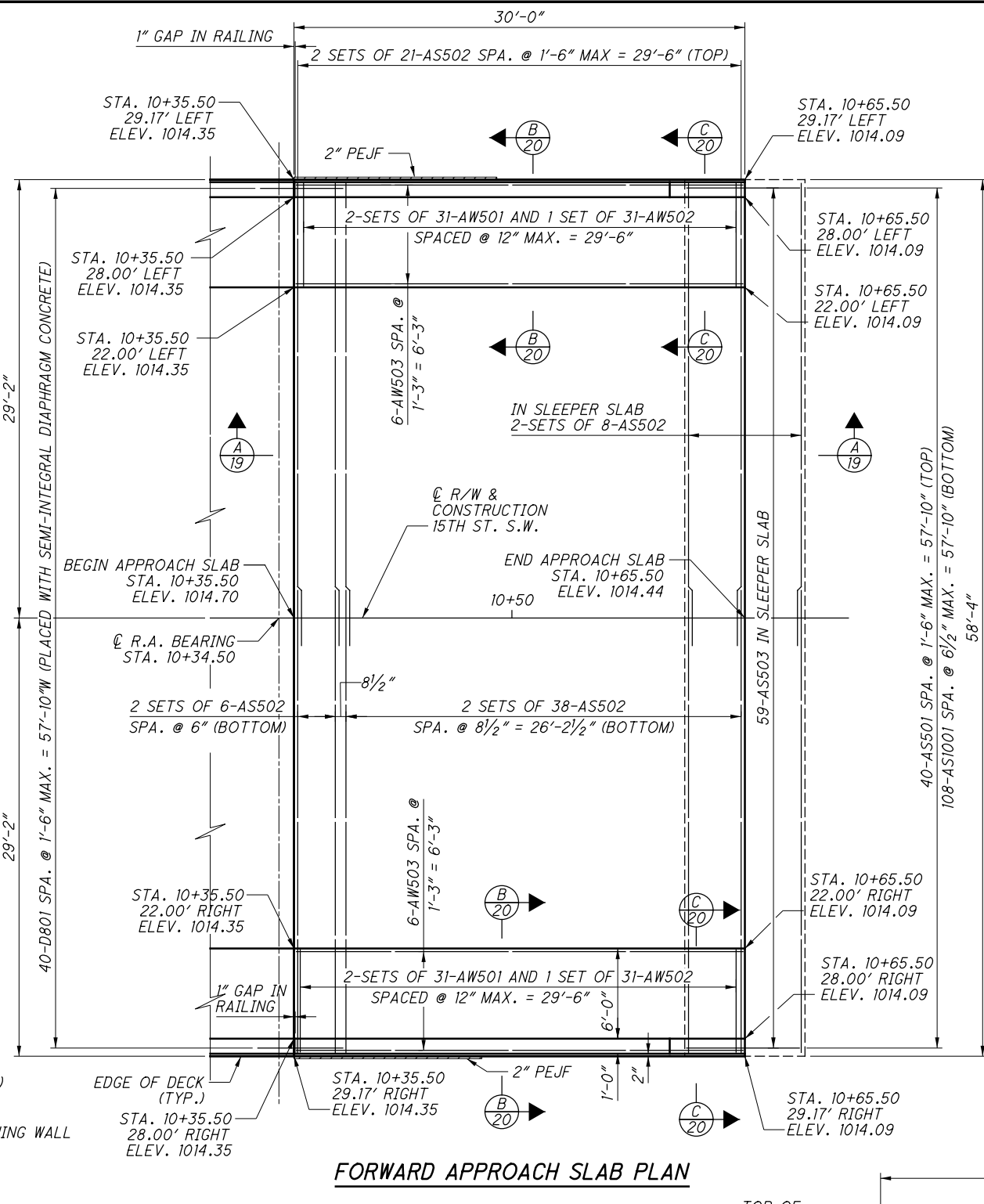
LEFT PARAPET DETAILS
BRIDGE NO. STA-15SW-1350
15TH ST. S.W. OVER WEST BRANCH OF NIMSHILLEN CREEK

STA-15SW-1350

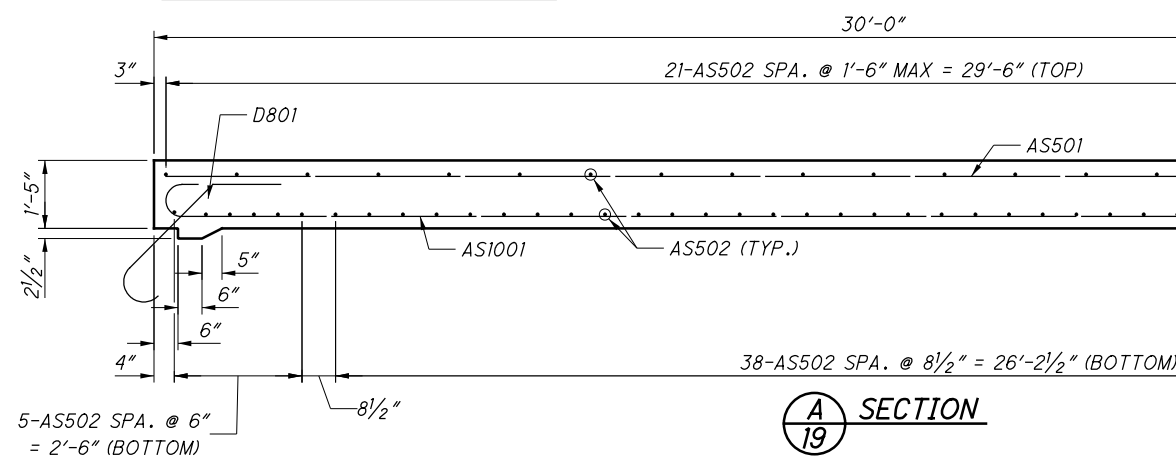
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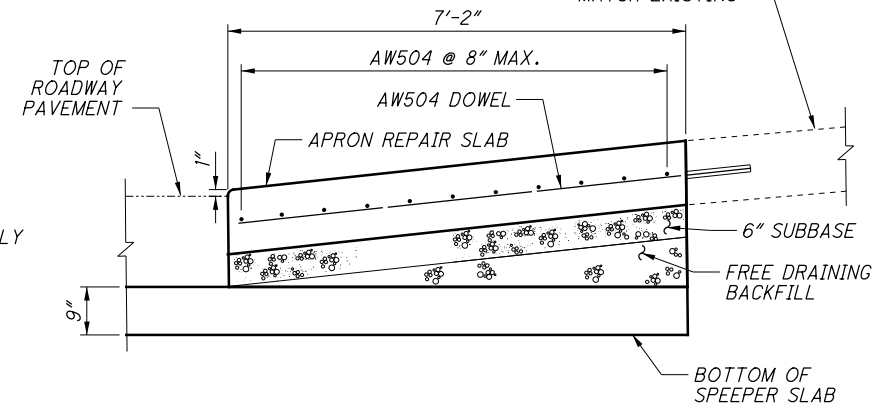
REAR APPROACH SLAB PLAN



FORWARD APPROACH SLAB PLAN



SECTION A-19



SECTION X-20

REFER TO SECTION F ON SHEET 20/22 FOR CUT LOCATION

- NOTES:**
- FOR ADDITIONAL NOTES AND DETAILS, SEE ODOT STD. DWG. AS-1-15.
 - CLEAR DISTANCE FROM FACE OF CONCRETE TO FACE OF REINFORCING SHALL BE 2" UNLESS NOTED OTHERWISE.
 - ELEVATIONS SHOWN ON THIS SHEET ARE FOR TOP OF APPROACH SLAB, NOT TOP OF SIDEWALK.

MINIMUM LAP LENGTHS:
#5 BAR = 3'-1"



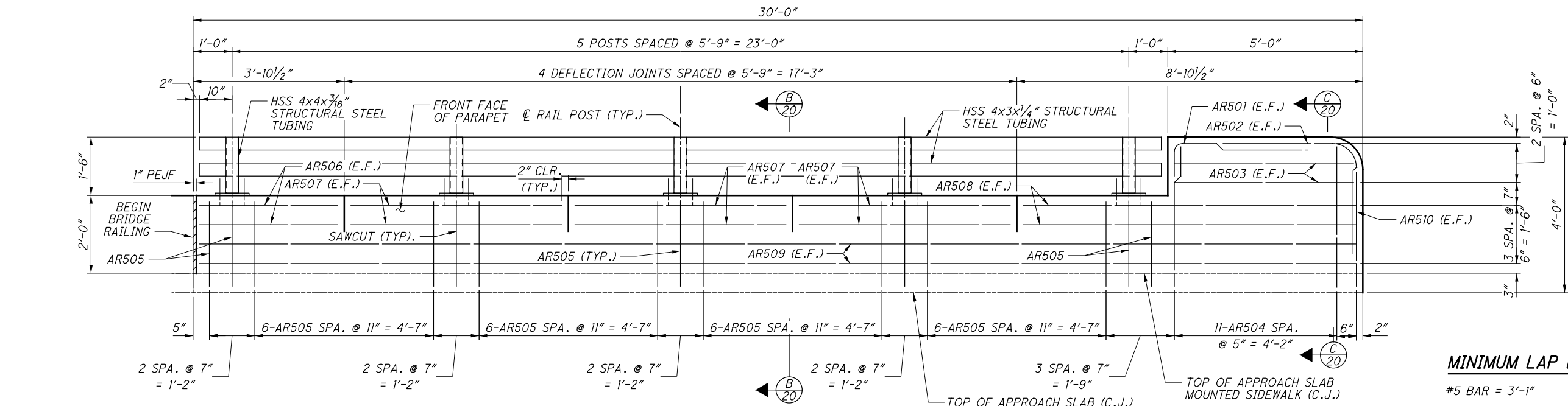
DESIGN AGENCY: **PRIMEV**
 8415 Pulaski Place, Suite 300
 Columbus, Ohio 43240

DESIGNED	JAT	CHECKED	AMT
DRAWN	JAT	REVISED	
REVIEWED	AMT	STRUCTURE FILE NUMBER	7661770
DATE	12/1/2022		

APPROACH SLAB DETAILS (1 OF 2)
 BRIDGE NO. STA-15SW-1350
 15TH ST. S.W. OVER WEST BRANCH OF NIMSHILLEN CREEK

STA-15SW-1350
 19/22
 50
 53

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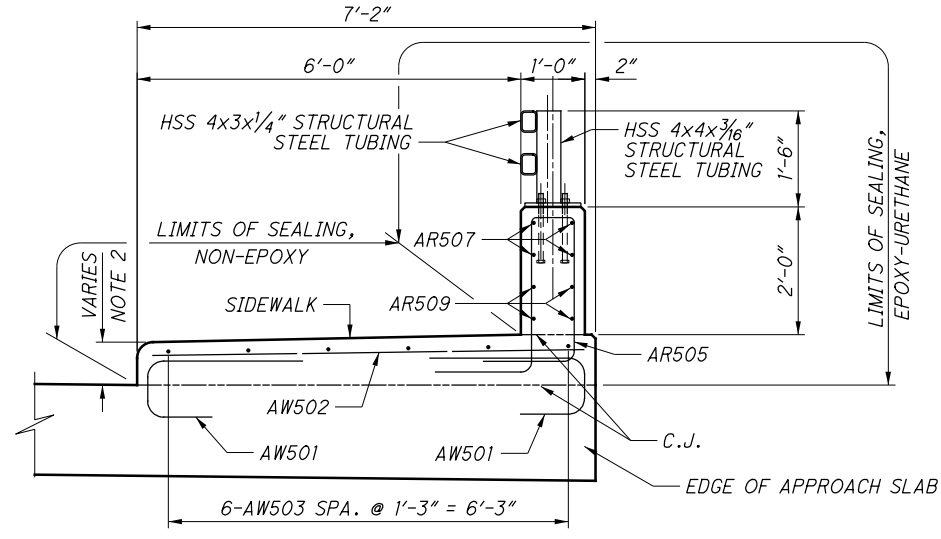
MINIMUM LAP LENGTHS:
#5 BAR = 3'-1"

APPROACH PARAPET ELEVATION

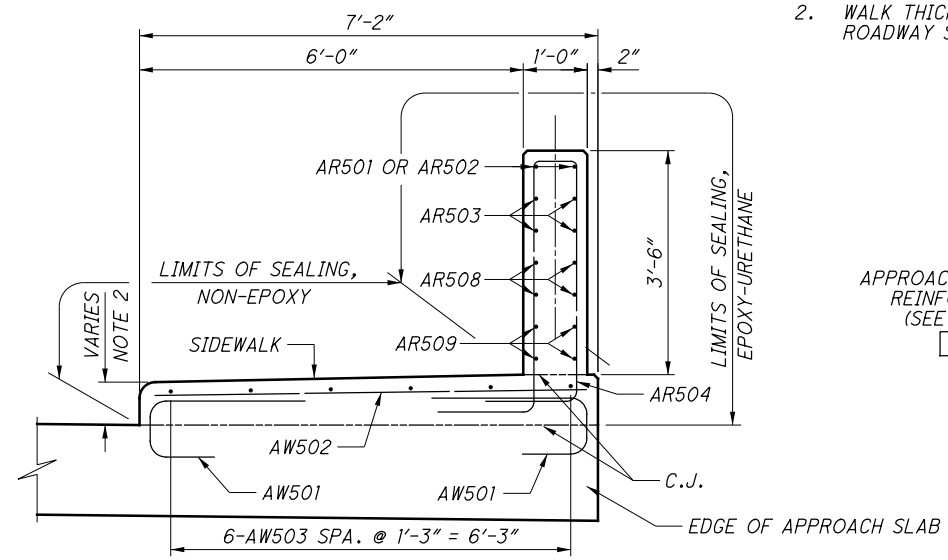
LEFT FORWARD APPROACH SLAB MOUNTED PARAPET SHOWN
LEFT REAR AND RIGHT FORWARD ARE OPPOSITE HAND

NOTES:

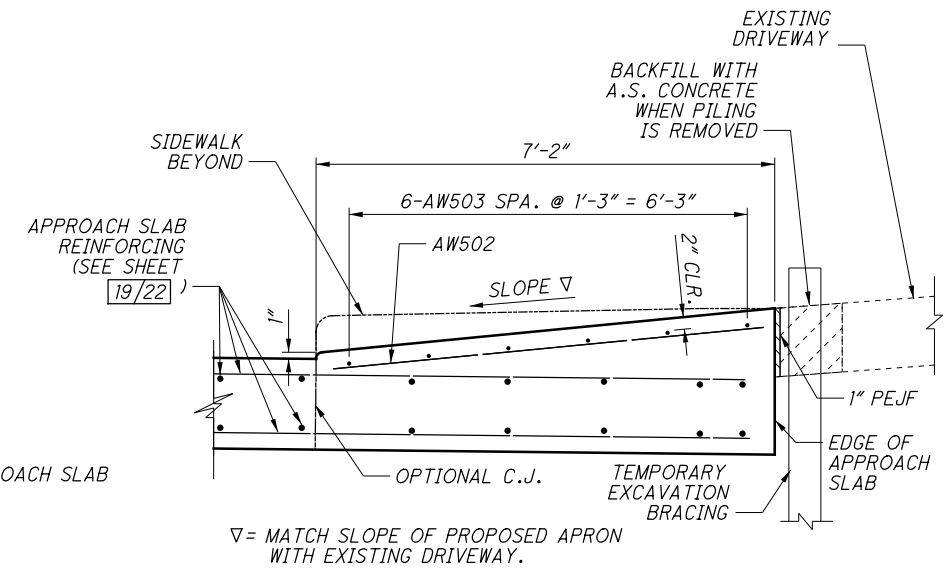
- FOR ADDITIONAL NOTES AND DETAILS, SEE ODOT STD. DWG. BR-2-15 AND SHEET 18/22.
- WALK THICKNESS ON APPROACH SLAB VARIES FROM 6" AT THE TIE IN WITH THE ROADWAY SECTION TO 8" AT THE BRIDGE LIMITS UNLESS NOTED OTHERWISE.



B SECTION
19,20



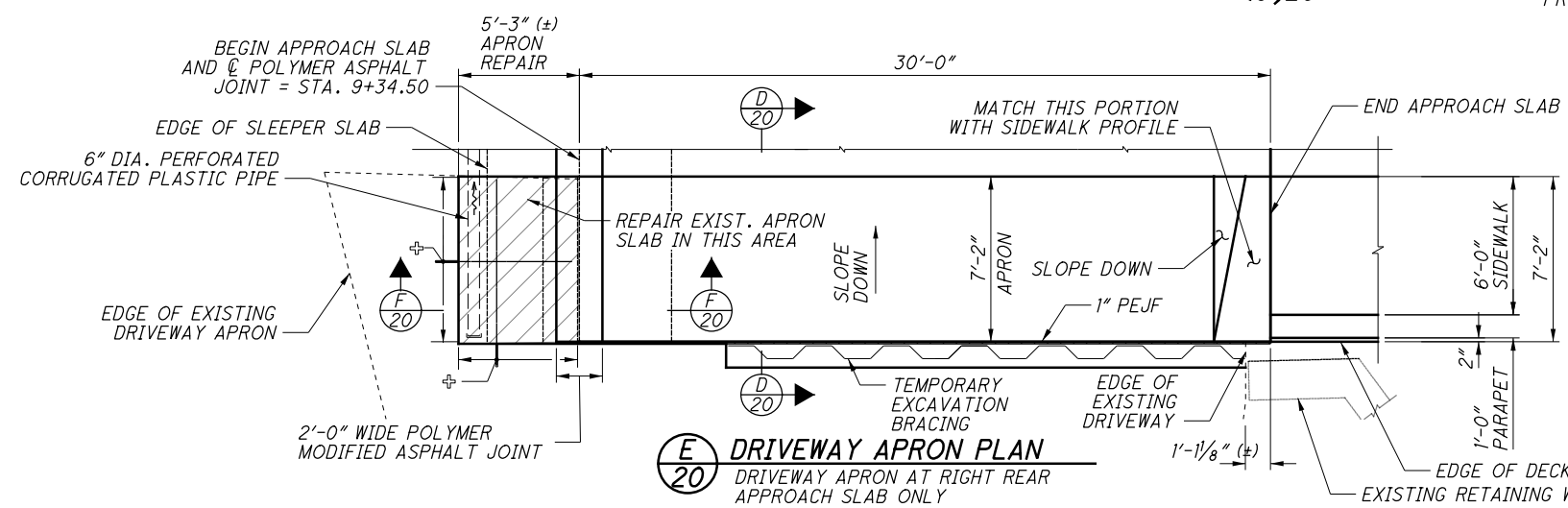
C SECTION
19,20



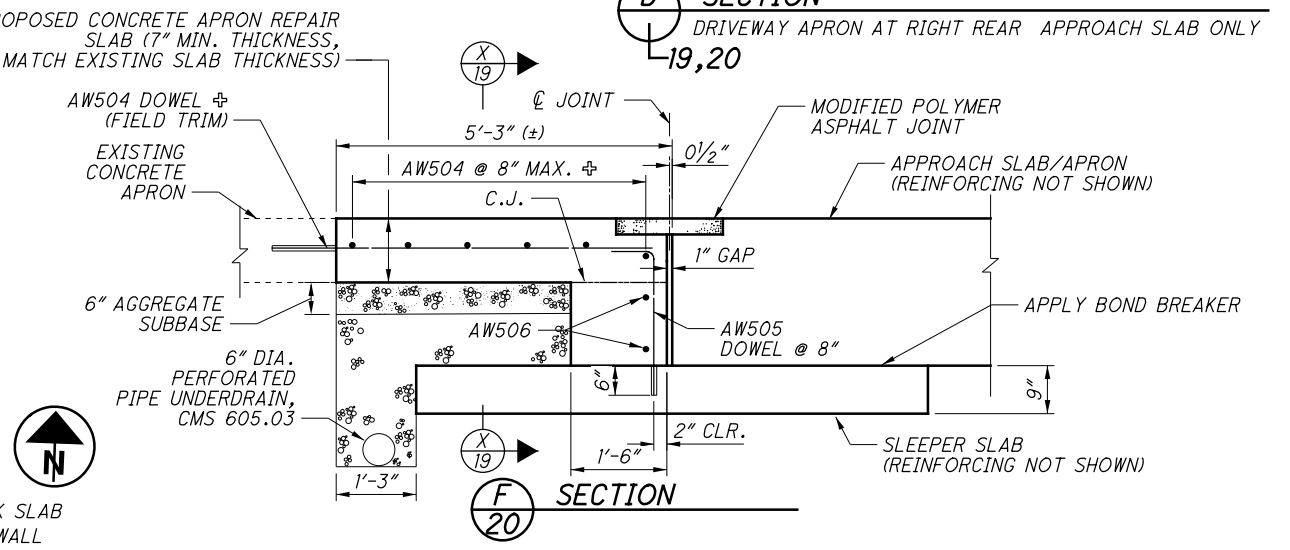
D SECTION
19,20
DRIVEWAY APRON AT RIGHT REAR APPROACH SLAB ONLY

LEGEND

⊕ = PROVIDE 17-AW504 DOWEL BARS EMBEDDED 12" INTO THE EXISTING SLAB ON GRADE USING EPOXY GROUT IN 1/16" DIA. DOWEL HOLES. PLACE 11 BARS ALONG N/S EDGE AT 8" MAX. SPACING AND 6 BARS IN E/W EDGE @ 8" MAX. SPACING. PLACE BARS AT MID-DEPTH OF SLAB.



E DRIVEWAY APRON PLAN
DRIVEWAY APRON AT RIGHT REAR APPROACH SLAB ONLY



F SECTION
20

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MARK	NUMBER TOTAL	LENGTH	WEIGHT	TYPE	DIMENSIONS						
					A	B	C	D	E	R	INC
REAR ABUTMENT											
RA501	104	10'-7"	1148	2	2'-7"	5'-8"	2'-7"				
RA502	16	16'-1"	268	2	2'-7"	11'-2"	2'-7"				
RA503	16	32'-8"	545	STR							
RA504	6	11'-7"	72	2	2'-7"	6'-8"	2'-7"				
RA505	24	31'-10"	797	STR							
RA506	64	8'-9"	584	2	3'-2"	2'-8"	3'-2"				
RA507	16	3'-0"	50	STR							
RA508	18	7'-1"	133	2	3'-1"	1'-2"	3'-1"				
RA509	10	15'-8"	163	STR							
RA510	2	13'-8"	29	STR							
RA511	2	11'-8"	24	STR							
RA512	6	9'-8"	60	STR							
RA513	2	9'-10"	21	19	6'-8"	2'-9"	1'-4 1/2"				
RA514	8	2'-8"	22	STR							
RA601	128	9'-4"	1794	1	1'-0"	8'-6"					
RA602	30	14'-0"	631	1	1'-0"	13'-2"					
	2 SR	4'-10"									0'-5 1/4"
RA603	OF	TO	129	STR							
	7	7'-5"									
RA801	20	33'-6"	1789	STR							
RA802	6	11'-5"	183	2	2'-7"	6'-8"	2'-7"				
SUB-TOTAL			8442								
FORWARD ABUTMENT											
FA501	90	12'-1"	1134	2	2'-7"	7'-2"	2'-7"				
FA502	36	16'-1"	604	2	2'-7"	11'-2"	2'-7"				
FA503	20	33'-8"	702	STR							
FA504	8	13'-1"	109	2	2'-7"	8'-2"	2'-7"				
FA505	24	32'-2"	806	STR							
FA506	60	8'-9"	548	2	3'-2"	2'-8"	3'-2"				
FA507	8	3'-0"	25	STR							
FA508	36	7'-3"	272	2	3'-2"	1'-2"	3'-2"				
FA509	20	15'-8"	327	STR							
FA510	4	13'-6"	56	STR							
FA511	4	12'-3"	51	STR							
FA512	20	9'-8"	202	STR							
FA513	4	9'-11"	41	19	6'-8"	2'-9"	1'-4 1/2"				
FA601	120	10'-6"	1893	1	1'-0"	9'-8 1/4"					
FA602	44	15'-2"	1002	1	1'-0"	14'-4"					
	4 SR	4'-0"									
FA603	OF	TO	225	STR							0'-5 1/4"
	7	6'-8"									
FA801	24	34'-8"	2222	STR							
FA802	8	12'-11"	276	2	2'-7"	8'-2"	2'-7"				
SUB-TOTAL			10495								

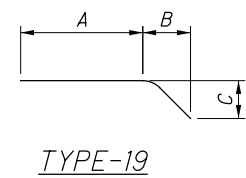
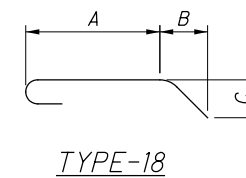
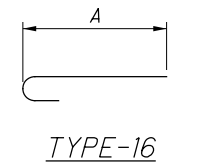
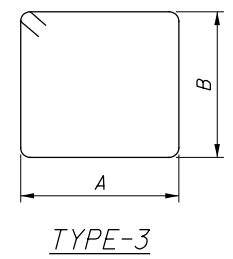
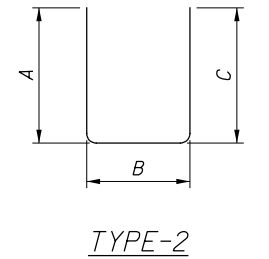
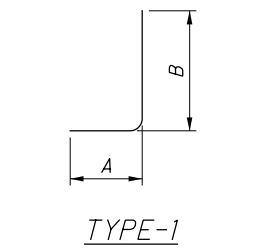
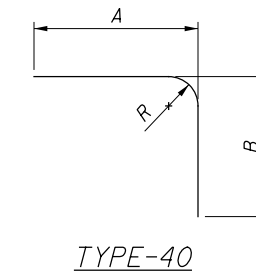
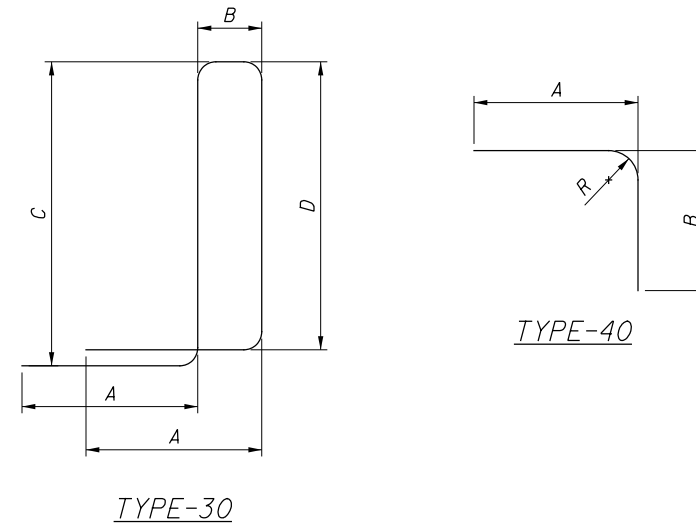
NOTES:

- ALL REINFORCING STEEL SHALL BE EPOXY COATED.
- BAR SIZE: THE BAR SIZE IS INDICATED IN THE BAR MARK. THE MARK BEGINS WITH TWO OR THREE LETTERS OR NUMBERS THAT IDENTIFY THE BAR LOCATION. THE NEXT ONE OR TWO DIGITS INDICATE THE BAR SIZE, AND THE REMAINING TWO DIGITS ARE THE SEQUENCE NUMBER.
EXAMPLE: S1001
S = SUPERSTRUCTURE BAR
10 = #10 BAR
01 = BAR SEQUENCE NUMBER 1
- BAR DIMENSIONS SHOWN ARE OUT-TO-OUT UNLESS OTHERWISE INDICATED.
- STR. IN THE BAR TYPE COLUMN INDICATES A STRAIGHT BAR.
- RAD INDICATES INSIDE RADIUS, UNLESS OTHERWISE NOTED.
- INCR. INDICATES THE LENGTH INCREMENT FOR SERIES BARS.
- STD. WRITTEN IN PLACE OF A DIMENSION INDICATES A STANDARD BEND AT THE END OF A BAR.
- FIELD BEND BARS AS NECESSARY TO MATCH CURVATURE OF ROADWAY.

MARK	NUMBER TOTAL	LENGTH	WEIGHT	TYPE	DIMENSIONS						
					A	B	C	D	E	R	INC
SUPERSTRUCTURE											
S401	195	24'-11"	3246	STR							
S402	276	10'-1"	1859	2	7'-6"	0'-7 1/2"	2'-2"				
S501	276	32'-7"	9380	STR							
S502	231	25'-7"	6164	STR							
S503	276	28'-3"	8132	STR							
S801	16	31'-8"	1353	STR							
SUB-TOTAL			30134								

MARK	NUMBER TOTAL	LENGTH	WEIGHT	TYPE	DIMENSIONS						
					A	B	C	D	E	R	INC
BRIDGE MOUNTED RAILINGS											
R501	36	12'-2"	457	STR							
R502	24	25'-0"	626	STR							
R503	178	7'-10"	1454	30	1'-6"	0'-8"	2'-5"	2'-3"			
R504	14	10'-10"	158	30	1'-6"	0'-8"	3'-11"	3'-9"			
R505	12	3'-9"	47	STR							
R506	4	16'-4"	68	STR							
R507	2	5'-4"	11	1	0'-10"	4'-8"					
R508	2	6'-1"	13	40	3'-5"	2'-11"					0'-7 3/8"
R509	4	5'-11"	25	STR							
R510	2	4'-5"	9	1	1'-6"	3'-1"					
SUB-TOTAL			2868								

FABRICATOR NOTE:
REINFORCING SHOWN IN THE BRIDGE MOUNTED RAILING TABLE IS SHOWN FOR INFORMATIONAL PURPOSES ONLY. THIS REINFORCING IS INCLUDED FOR PAYMENT WITH THE RAILING ITEM 517 FOR PAYMENT.



DESIGN AGENCY
PRIMEV
 8415 Palms Plaza, Suite 300
 Columbus, Ohio 43240

DATE
 12/1/2022

REVIEWED
 AMT

STRUCTURE FILE NUMBER
 7661770

DRAWN
 BTJ

CHECKED
 EEB

DESIGNED
 BTJ

REVISIONS
 REVISED

REINFORCING LIST (1 OF 2)
 BRIDGE NO. STA -15SW-1350
 15TH ST. S.W. OVER WEST BRANCH OF NIMSHILLEN CREEK

STA -15SW -1350

21 / 22

52
53

O:\Transportation\Projects\Local\City of Canton\15th St SW Bridge Study\12345_structures\AAA000_1111C_sheets\12345_CSL002.dgn 1/19/2023 3:15:30 PM adesimone

MARK	NUMBER	LENGTH	WEIGHT	TYPE	DIMENSIONS					
	TOTAL				A	B	C	D	E	R
REAR SEMI-INTEGRAL END DIAPHRAGM										
RD401	2	2'-8"	4	STR						
RD501	43	6'-9"	303	2	2'-7"	1'-10"	2'-7"			
RD502	19	11'-4"	225	3	2'-8"	2'-8"				
RD503	13	11'-6"	156	3	2'-8"	2'-9"				
RD504	11	11'-10"	136	3	2'-8"	2'-11"				
RD505	3	6'-1"	19	2	2'-3"	1'-10"	2'-3"			
RD506	3	8'-0"	25	3	2'-8"	1'-0"				
RD801	4	36'-0"	384	STR						
RD802	4	32'-10"	351	1	1'-6"	31'-6"				
RD803	4	31'-6"	336	STR						
RD804	6	7'-0"	112	STR						
RD805	4	10'-6"	112	STR						
RD806	2	6'-0"	32	STR						
RD807	8	4'-1"	87	2	1'-5"	1'-8"	1'-5"			
RD808	2	22'-10"	122	STR						
RD809	4	24'-2"	258	1	1'-6"	22'-10"				
RD810	6	6'-6"	104	STR						
RD811	8	6'-1"	130	18	3'-11"	1'-0"	1'-0"			
D801	40	5'-0"	534	18	2'-10"	1'-0"	1'-0"			
SUB-TOTAL			3430							
FORWARD SEMI-INTEGRAL END DIAPHRAGM										
FD401	2	2'-8"	4	STR						
FD501	43	6'-9"	303	2	2'-7"	1'-10"	2'-7"			
FD502	19	11'-4"	225	3	2'-8"	2'-8"				
FD503	13	11'-6"	156	3	2'-8"	2'-9"				
FD504	11	11'-10"	136	3	2'-8"	2'-11"				
FD505	3	6'-1"	19	2	2'-3"	1'-10"	2'-3"			
FD506	3	8'-0"	25	3	2'-8"	1'-0"				
FD801	4	36'-0"	384	STR						
FD802	4	32'-10"	351	1	1'-6"	31'-6"				
FD803	4	31'-6"	336	STR						
FD804	6	7'-0"	112	STR						
FD805	4	10'-6"	112	STR						
FD806	2	6'-0"	32	STR						
FD807	8	4'-1"	87	2	1'-5"	1'-8"	1'-5"			
FD808	2	22'-10"	122	STR						
FD809	4	24'-2"	258	1	1'-6"	22'-10"				
FD810	6	6'-6"	104	STR						
FD811	8	6'-1"	130	18	3'-11"	1'-0"	1'-0"			
D801	40	5'-0"	534	18	2'-10"	1'-0"	1'-0"			
SUB-TOTAL			3430							

MARK	NUMBER	LENGTH	WEIGHT	TYPE	DIMENSIONS					
	TOTAL				A	B	C	D	E	R
SIDEWALKS										
AW501	186	4'-0"	776	2	2'-5"	0'-10 1/2"	1'-0"			
AW502	124	6'-10"	884	STR						
AW503	24	29'-8"	743	STR						
AW504	17	8'-0"	142	STR	FIELD TRIM AS NECESSARY					
AW505	11	2'-11"	33	1	0'-10"	2'-3"				
AW506	2	6'-10"	14	STR						
SW501	304	4'-0"	1268	2	2'-5"	0'-10 1/2"	1'-0"			
SW502	152	6'-10"	1083	STR						
SW503	36	25'-7"	962	STR						
SUB-TOTAL			5905							

NOTE:
PREFIX "AW" INDICATES APPROACH SLAB MOUNTED SIDEWALK, PREFIX "SW" INDICATES SUPERSTRUCTURE MOUNTED SIDEWALK.

MARK	NUMBER	LENGTH	WEIGHT	TYPE	DIMENSIONS					
	TOTAL				A	B	C	D	E	R
APPROACH SLABS										
AS501	80	29'-6"	2461	STR						
AS502	292	30'-6"	9277	STR						
AS503	118	7'-6"	923	STR						
AS1001	216	30'-11"	28735	16	29'-6"					
SUB-TOTAL			41396							

FABRICATOR NOTE:
REINFORCING SHOWN IN THE APPROACH SLABS TABLE IS SHOWN FOR INFORMATIONAL PURPOSES ONLY. THE D801 BAR IS LISTED WITH THE SEMI-INTEGRAL END DIAPHRAGM REINFORCING STEEL TABLES. COST OF APPROACH SLAB REINFORCING IS INCLUDED WITH ITEM 526.

MARK	NUMBER	LENGTH	WEIGHT	TYPE	DIMENSIONS					
	TOTAL				A	B	C	D	E	R
APPROACH SLAB MOUNTED RAILING										
AR501	6	4'-2"	26	1	0'-10"	3'-5"				
AR502	6	6'-1"	39	40	3'-5"	2'-11"				0'-7 3/8"
AR503	12	4'-7"	57	STR						
AR504	33	10'-10"	373	30	1'-6"	0'-8"	3'-11"	3'-9"		
AR505	93	7'-10"	760	30	1'-6"	0'-8"	2'-5"	2'-3"		
AR506	12	3'-5"	43	STR						
AR507	36	5'-5"	203	STR						
AR508	12	8'-6"	107	STR						
AR509	12	29'-7"	370	STR						
AR510	6	4'-5"	28	1	1'-6"	3'-1"				
SUB-TOTAL			2006							

FABRICATOR NOTE:
REINFORCING SHOWN IN THE APPROACH SLAB MOUNTED RAILING TABLE IS SHOWN FOR INFORMATIONAL PURPOSES ONLY. THIS REINFORCING IS INCLUDED WITH THE RAILING ITEM 517 FOR PAYMENT.

DESIGNED BTJ	CHECKED EEB	DRAWN BTJ	REVISED	REVIEWED AMT	DATE 12/1/2022
REINFORCING LIST (2 OF 2)			STRUCTURE FILE NUMBER 766170		
BRIDGE NO. STA-15SW-1350					
15TH ST. S.W. OVER WEST BRANCH OF NIMSHILLEN CREEK					
STA-15SW-1350					
22/22					
53					

DESIGN AGENCY
PRIMEV
8415 Palms Plaza, Suite 300
Columbus, Ohio 43240