

# **SPECIAL PROVISIONS**

## **WATERWAY PERMITS CONDITIONS**

**C-R-S: FRA-270/23-51.50  
/4.19 (Part 1 & 2)**

**PID: 92616**

**Date: 03/09/2023**

**1. Waterway Permits Time Restrictions:**

A Regional General Permit (RGP), Section A (Linear Transportation) from the United States Army Corps of Engineers (USACE) is pending for FRA-270/23-51.50/4.19 (Part 1 & 2), PID: 92616. No fill activities in aquatic resources are not authorized until the authorization letter is acquired. When provided, a copy of the RGP and authorization letter shall be kept at the work site at all times and made available to all contractors and subcontractors. The pending permit will expire: October 24, 2024.

For work pending authorization in aquatic resources (including streams, wetlands, jurisdictional ditches, captured streams, lakes, ponds), the Department will consider the Contractor’s submission of a reauthorization to the waterway permit expiration date based on project constraints. If more than one permit is authorized for the project, then all permits become invalid once the first permit expires. In order for the request to be considered, the Contractor must submit a justification to the Engineer at least 90 days prior to the waterway permit expiration date. The Engineer will submit the request for a time extension to the Ohio Department of Transportation, Office of Environmental Services, Waterway Permits Unit (ODOT-OES-WPU) for consideration and coordination with the U.S. Army Corps of Engineers (USACE), Ohio Environmental Protection Agency (OEPA), U.S. Coast Guard (USCG), U.S. Fish and Wildlife Service (USFWS), and Ohio Department of Natural Resources (ODNR) as appropriate.

**2. Deviations From Permitted Construction Activities:**

Once the permit is authorized and obtained, no deviation from the requirements for work in aquatic resources depicted in the plans, Special Provisions, and/or Working Drawings may be made unless a modification has been submitted to ODOT-OES-WPU and approved by the appropriate agencies (i.e., USACE, OEPA, USCG, ODNR, and USFWS).

NOTE: Plan sheets submitted with the Pre-Construction Notification (PCN) are pending approval by the USACE in accordance with RGP A and are included in these Special Provisions.

For emergency situations resulting in unanticipated impacts to aquatic resources, provide notification (verbal or written) to the Engineer as soon as possible following discovery of the situation. Written notification to the Engineer and notification to the ODOT-OES-WPU (614-466-2159) must be made within 24 hours.

For non-emergency situations, notify the Engineer in writing for submission to the ODOT-OES-WPU (614-466-2159) for consideration and coordination with the appropriate agencies. Notification must be made at least 90 days prior to planned, non-permitted activities. Consideration of the requested deviation is at the discretion of the Director and must be coordinated with the appropriate regulatory agencies.

**3. In-Stream Work Restrictions:**

Work in the following aquatic resources is further restricted as follows:

Stream Name /Description	Location	Work restriction dates (No in-stream work permitted)
Stream 15	STA 690+86.92 and STA 273+21.83	None

In-stream work has been defined as the placement and/or removal of fill materials (temporary or permanent) below ordinary high water of a stream. 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 a stream identified in the above table (outside of the work restriction dates) 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.

#### 4. Materials:

Materials utilized in or adjacent to aquatic resources for temporary or permanent fill or bank protection shall consist of suitable material free from toxic contaminants in other than trace quantities. Asphalt products are specifically excluded for use as fill. Chromated Copper Arsenate (CCA), creosote, and other pressure treated lumber shall not be used in structures that are placed in aquatic resources.

#### 5. Cultural Resources:

Per CMS 107.10, if archeological sites, historical sites, or human remains are discovered, cease all work in the immediate area and notify the Engineer who will immediately contact the ODOT-District Environmental Coordinator and ODOT-OES-Cultural Resource Section at 614-466-2159. In the event of human remains are identified by OES-Cultural Resources Section, the Engineer shall also contact the Franklin County Sheriff's Office at 614-525-3333.

#### 6. Aquatic Resource Demarcation:

The tables attached (Table C and Table D) includes detailed fill quantities pending authorization within the aquatic resources. Aquatic resources not pending authorization for impact by these Special Provisions shall be demarcated in the field as per SS 832 prior to site disturbance. The fence shall remain in place and be maintained throughout the construction process. Following the completion of the project, the fence and posts shall be removed.

#### 7. Spill containment:

Provide and Maintain an Oil Spill Kit with a minimum capacity of 65 gallons. The Spill Kit shall contain:

- 6 - 3 in. X 8 ft. Oil only socks
- 4 - 18 in. X18 in. Oil only pillows
- 2 - 5 in. X 10ft. Booms
- 50 - 16in. X 20 in. Oil only pads
- 10- Disposable Bags
- 1 - 65 Gallon drum with lid
- 25 pounds of Granular Oil Absorbent

The Oil Spill Kit shall be located within 150 feet of any equipment working in a stream or wetland. The oil Spill Kit shall be maintained for the life of the contract. Any materials utilized during the project will be replaced within 48 hours. All costs associated with furnishing and maintaining the above referenced spill containment kit is incidental to work.

**8. Blasting:**

State law requires notification to the Ohio Department of Natural Resources should blasting be required within or near stream channels (See ORC 1533.58 & CMS 107.09). Notify the Engineer, in writing, a minimum of 30 days in advance of blasting, for submission to ODOT-OES-WPU (614-466-2159) for coordination with ODNR.

**9. Project Inspection:**

Inspection of Work may include inspection by representatives of other government agencies or railroad corporations that pay a portion of the cost of the Work or regulate the Work through State and Federal law. Comments from the representatives of these agencies shall be directed to the Engineer who will immediately contact the ODOT-District Environmental Coordinator and ODOT-OES-WPU at 614-466-2159.

**10. Temporary Access Fills:****Definitions:****Hydraulic Opening**

The cross-sectional area allowing an unimpeded discharge equal to twice the highest monthly flow without producing a rise in the backwater above the Ordinary High Water Mark (OHWM).

**Standard Temporary Discharge**

Discharge equal to twice the *highest monthly flow* without producing a rise in the backwater above the OHWM. The U.S. Geologic Service publication "Techniques for estimating Selected Streamflow Characteristics of Rural Unregulated Streams in Ohio" provides equations that estimate monthly flow for Ohio Waterways. These flows are also available in a web application by USGS StreamStats, (<https://water.usgs.gov/osw/streamstats/ohio.html>). The highest monthly flow is the highest monthly mean discharge occurring in a 12-month period from January to December.

**Average Monthly Flow**

The average monthly flow represents the estimated "normal" flow.

**Temporary Access Fills (TAFs)**

Include, but are not limited to, dewatering fills, causeways, cofferdams, access pads, temporary bridges, etc. below the OHWM.

**Requirements**

21 calendar days prior to the initiation of any in-stream work, provide the Engineer with Working Drawings that include:

- Plan view drawing (50 scale or less) showing the location of all TAFs proposed for use on the project.
- Scaled cross section and profile drawing showing the OHWM and the proposed hydraulic opening.
- Identify the minimum diameter size, placement location and thickness of non-erodible Dumped Rock Fill material on the plan and profile.
- Calculations analyzing the hydraulic impacts of the TAF on the waterway. Include in the calculations an analysis of the hydraulic opening sized adequately to pass the Standard Temporary



Discharge without producing a rise in backwater above the OHWM. Include, in the analysis, calculated channel velocities adjacent to the TAF, culvert exit velocities, calculated headwater and tailwater elevations, and any additional appropriate calculations to assess potential impacts to the waterway during normal and anticipated high flow (twice the highest monthly flow) events.

- A description of all temporary material to be placed below the OHWM elevation.
- A description of the installation and staging of all temporary fill over the life of the contract.
- Identify the protection methods and/or structural Best Management Practices for minimizing impacts to the waterway.
- Volume of temporary fill below the OHWM elevation.
- A description of the diversion ditches, equipment, conduits or means for maintaining normal flows in the waterway.
- A description of the removal of all temporary fill and restoration of the channel and all areas impacted by the TAFs.
- A schedule outlining the timing of the placement and removal of all temporary fill.
- Have competent individuals prepare and check the Working Drawings and hydraulic calculations. Provide a cover sheet containing the preparer(s) and checker(s): First Name, Last Name and Initials. The preparer(s) and checker(s) shall not be the same individual. Have an Ohio Registered Engineer review, approve, sign, seal and date the Working Drawings and hydraulic calculations according to ORC 4733 and OAC 4733-35. Include the following statement on the Working Drawings:

“These Working Drawings were prepared in compliance with the terms of these Special Provisions and all contract documents.”

Do not begin in-stream work until the Engineer has accepted the Working Drawings and hydraulic calculations.

The design and construction of the Contractor’s TAF must minimize impacts to water bodies, stream banks, stream beds, and riparian zones to the maximum extent practicable.

Fording of waterways and other aquatic resources is prohibited.

Construct TAFs in such a manner that will maintain flows, minimize upstream flooding, and avoid overtopping the TAF on a regular basis. ***TAFs shall be designed and constructed so that the hydraulic opening provides capacity for a discharge equal to twice the highest monthly flow without producing a rise in the backwater above the (OHWM).***

If the Contractor proposes a TAF which does not meet all the requirements of these Special Provisions, the Contractor must submit a request in writing for a modified TAF to the Engineer. The request must include all Working Drawings and hydraulic calculations required by these Special Provisions. The Department makes no guarantee to grant the request. The Contractor’s proposed TAF request will be coordinated by OES with the USACE and the OEPA, as appropriate. The time frame allowed for the coordination of the contractor’s proposed TAF will be a minimum of 60 days.

Installation of any temporary fill without appropriate authorization is strictly prohibited. All direct coordination with the USACE and/or OEPA will be performed through OES.

#### **TAFs Construction and Payment**

Begin planning and installing causeways and access fills as early in construction as possible to avoid conflicts with these Special Provisions or other environmental commitments that have been included in the construction plans.

TAFs in Streams and Rivers may include, but are not limited to, causeways, cofferdams, access pads, sheet piling, temporary bridges, etc. The Contractor must make every attempt to minimize disturbance to waterbodies, stream banks, stream beds and riparian zones during the construction, maintenance, and removal of the TAF. Construct the TAFs as narrow as practical. Install in-stream conduits parallel to the stream banks. Make the TAFs in shallow areas rather than deep pools where possible. Minimize clearing, grubbing, and excavation of stream banks, and approach sections. Construct the TAFs as to not cause erosion or allow sediment deposits in the waterway.

Prior to the initiation of any in-stream work, establish a monument upstream of the proposed TAF to visually monitor the water elevation in the waterway where the fill is permitted. Maintain the monument throughout the project. Provide a visual mark on the monument that identifies the elevation 1 foot above the OHWM. Ensure that the monument can be read from the bank of the waterway. Have this elevation set and certified by an Ohio Registered Surveyor. All costs associated with furnishing and maintaining the above referenced monument is incidental to the work.

Should the surface water elevation exceed the elevation 1 foot above OHWM, the Department will compensate the Contractor for repair of any resulting damage to the TAF up to the elevation of 1 foot above the OHWM, except as noted. The Department will recognize this event as an excusable, non-compensable delay in accordance with Section 108.06 B. of the Construction & Materials Specifications.

Follow the requirements in Item 502 for Structures for Maintaining Traffic and in Item 503 for Cofferdams and Excavation Bracing and any modifications to these items as shown in the plans. The Department will not pay for repair and maintenance of TAFs associated with Items 502 and 503 as a result of surface water elevation exceeding 1 foot above the OHWM. Compensation for damages associated with waterway flows will be provided as described in Items 502 and 503.

Construct the TAFs, not including Items 502 and 503, to a water elevation at least 1 foot (0.3 m) above the OHWM. If more than one-third the width of the stream is filled, then use culvert pipes to allow the movement of aquatic life. Ensure that any ponding of water behind the TAF will not damage property, flood roadways, or threaten human health and safety.

The following minimum requirements apply to TAFs where culverts are used:

- A. Furnish culverts on the existing stream bottom.
- B. Avoid a drop in water elevation at the downstream end of the culvert that would result in an adverse impact to the waterway.
- C. Furnish a sufficient number of culverts in addition to stream openings to provide a discharge equal to twice the highest monthly flow without producing a rise in the backwater above the OHWM.
- D. Furnish culverts with a minimum diameter of 18 inches (0.5 m).

All TAFs must be constructed of suitable materials. Causeways and access fills must be encapsulated with clean, non-erodible, nontoxic Dumped Rock Fill, Type A, B, C, or D, meeting the requirements of C&MS 703.19.B. Utilize appropriately sized Dumped Rock Fill determined by the Contractor's engineer for encapsulating the sides of the TAF. Encapsulate all sides of the TAF with the non-erodible material. For causeways, contractors may use clean aggregate meeting C&MS 703.01 Size Number 1 and 2 for creating a working surface above the OHWM. Extend the non-erodible encapsulating material to at least the elevation of the top of the working surface. Extend clean aggregate up the slope from the original stream bank for 50 feet (10 m) to remove erodible material and prevent tracking from equipment onto the TAF.

When the work requiring TAF is complete, all portions of the TAF (including all rock and culverts) will be removed in its entirety. Do not dispose of TAF material in other aquatic resources or where erosion into another aquatic resource is possible. The stream bottom affected by the TAFs will be restored to its pre-construction elevations. The TAFs will not be paid as a separate item but will be included by the Contractor as part of the total project cost.

Unless specific TAF compensation is included in the plans, all environmental protection and control associated with the authorized activities, are incidental to the work within the boundaries of the aquatic resources.

#### 11. Excavation Activities:

Excavated material will be placed at an upland site and disposed of in such a manner that sediment and runoff to streams and other aquatic resources is controlled and minimized. Additionally, no more than incidental fallback into aquatic resources is permitted during the excavation process. If any changes to the proposed work are deemed necessary, notify the Engineer who will immediately contact the ODOT-District Environmental Coordinator and ODOT-OES-WPU at 614-466-2159.

#### 12. Demolition Debris:

The intentional discharge of demolition debris from any structure (including but not limited to bridges, culverts, abutments, wing walls, piers) is not authorized for this project. If any demolition debris inadvertently falls into aquatic resources, it must be removed immediately. Notify the Engineer immediately in writing of any inadvertent fill discharged into aquatic resources. The Engineer will immediately contact ODOT-OES-WPU at 614-466-2159 if any unintentional discharge occurs.

#### 13. Construction Completion Certification:

Upon completion of the work, notify the Engineer. The USACE Construction Completion Certification must be completed and signed by the Engineer then provided via US mail or email to:

Waterway Permits Program Manager  
ODOT - Office of Environmental Services  
1980 West Broad Street, Mail Stop 4170  
Columbus, Ohio 43223  
Adrienne.Earley@dot.ohio.gov

A copy of the certification will be provided once the pending permit is authorized and obtained.

**TABLE C. STREAM DISCHARGE AND FILL QUANTITIES**

Stream	Station	Description of Impacts	Length (LF) within Project	Width (LF)	Depth (LF)	Permanent Fill Below OHWM												Total Permanent Fill			Total Temporary Fill			Total Impact Length
						Proposed Concrete (Includes Culvert, Piers, Walls, Abutments, etc.)			Proposed RCP			Proposed Earthen, Granular, or Embankment Fill			Proposed Other (Flap Gate)									
						Length (LF)	Area (AC)	Volume (CY)	Length (LF)	Area (AC)	Volume (CY)	Length (LF)	Area (AC)	Volume (CY)	Length (LF)	Area (AC)	Volume (CY)	Length (LF)	Area (AC)	Volume (CY)	Length (LF)	Area (AC)	Volume (CY)	Length (LF)
Stream 15	STA 690+86.92	Culvert extension, concrete pad, RCP, flap gate, TAF	2,260	12	1	50	0.014	22.22	25	0.007	11.11	-	-	-	5	0.001	2.22	80	0.022	35.56	10	0.003	4.44	90
Stream 15	STA 273+21.83	Culvert extension, RCP, backfill for minor realignment of stream with culvert, TAF	2,260	8	1	40	0.007	11.85	30	0.006	8.89	35	0.006	10.37	-	-	-	105	0.019	31.11	10	0.002	2.96	115
<b>SUM:</b>						<b>90</b>	<b>0.021</b>	<b>34.07</b>	<b>55</b>	<b>0.012</b>	<b>20</b>	<b>35</b>	<b>0.006</b>	<b>10.37</b>	<b>5</b>	<b>0.001</b>	<b>2.22</b>	<b>185</b>	<b>0.041</b>	<b>66.67</b>	<b>20</b>	<b>0.005</b>	<b>7.41</b>	<b>205</b>

LF = linear feet; AC = acres; CY = cubic yards; RCP = rock channel protection or the like (specify if different, i.e.. concrete block matting); NA = Not Applicable

**TABLE D. WETLAND DISCHARGE AND FILL QUANTITIES**

Wetland	Station	Description of Impacts	Acreage (AC) within Project	Permanent Fill Within Wetland Boundary				Total Permanent Fill		Total Impact Acreage
				Proposed Earthen, Granular, or Embankment Fill		Proposed Other (Turf Reinforcing Mat)		Area (AC)	Volume (CY)	Area (AC)
				Area (AC)	Volume (CY)	Area (AC)	Volume (CY)			
Wetland Z	STA 8+00	Culvert removal, excavation, grading	0.003	0.003	4.84	-	-	0.003	4.84	0.003
Wetland AL	STA 803+13 to 804+10	Ditch cleanout, grading, install turf reinforcing mat	0.051	0.022	34.90	0.018	29.63	0.040	64.53	0.040
<b>SUM:</b>				0.025	39.74	0.018	29.63	0.043	69.37	0.043

LF = linear feet; AC = acres; CY = cubic yards; RCP = rock channel protection or the like (specify if different, i.e.. concrete block matting); NA = Not Applicable

STATE OF OHIO  
DEPARTMENT OF TRANSPORTATION

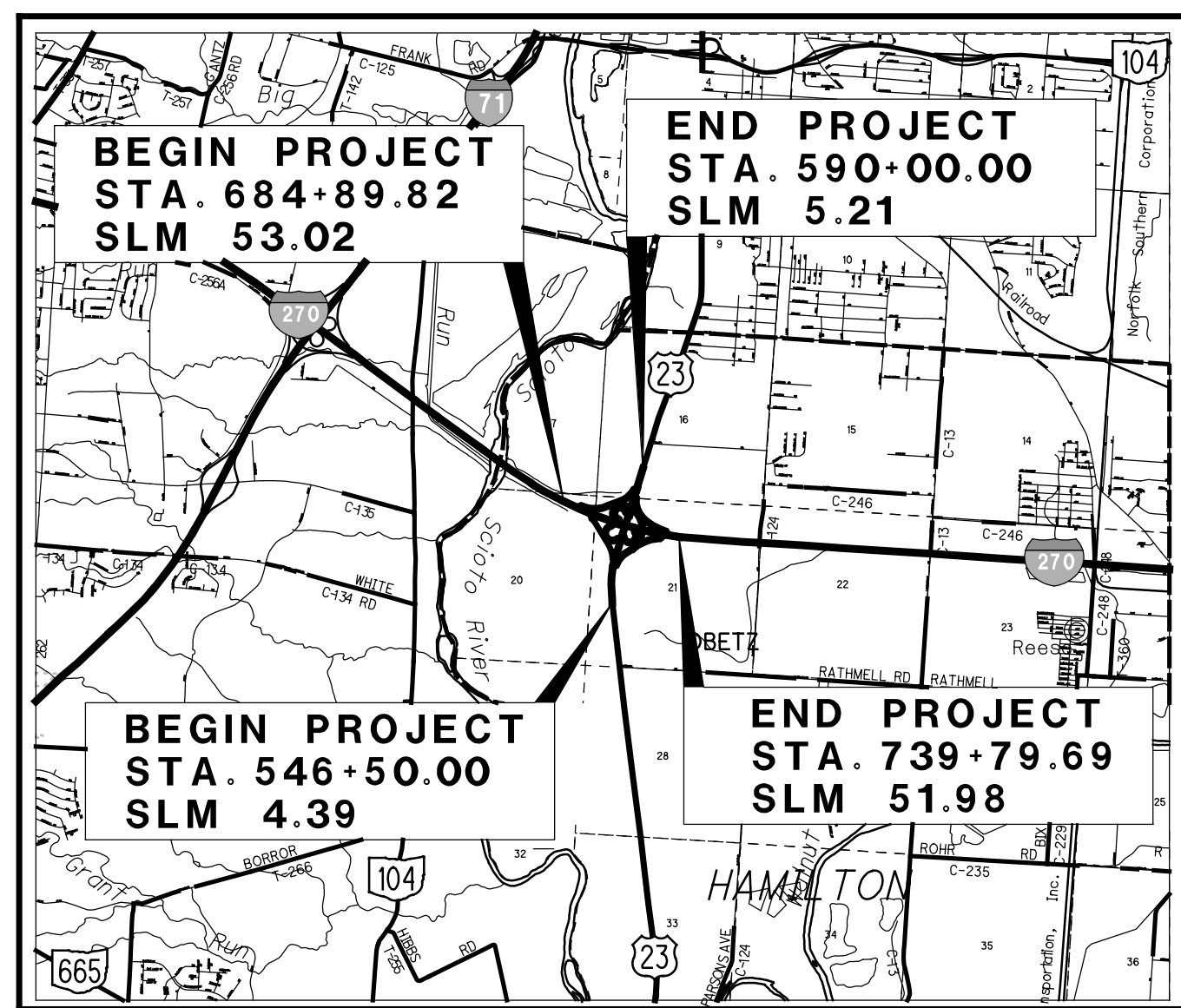
# FRA - 270 - 51.50 PART 1

CITY OF COLUMBUS  
HAMILTON TOWNSHIP  
FRANKLIN COUNTY

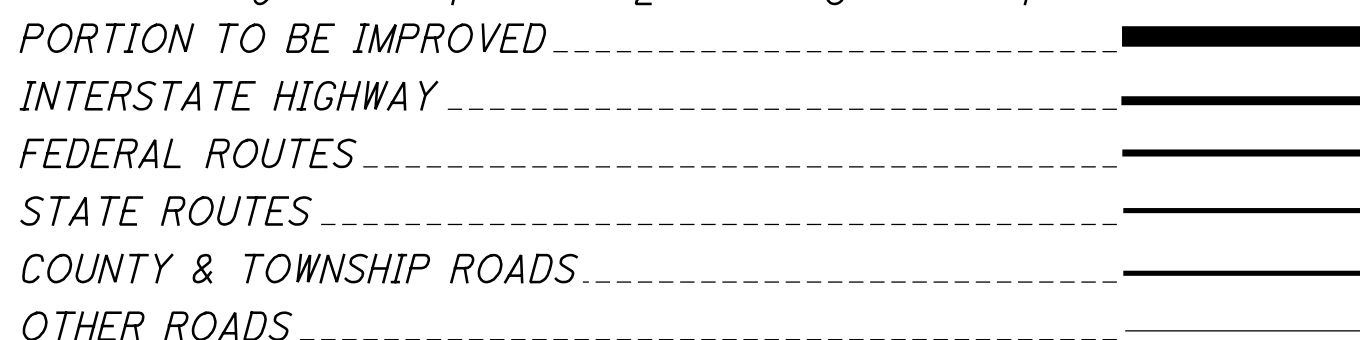
FOR PART 2, SEE FRA-23-4.19 (PID 110380)

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LOCATION MAP  
LATITUDE: 39° 52' 30" LONGITUDE: 83° 00' 14"  
SCALE IN MILES



DESIGN DESIGNATION - SEE SHEET 2

ENGINEERS SEAL:  
  
SIGNED: \_\_\_\_\_  
DATE: \_\_\_\_\_  
SHEETS: 429-482

**UNDERGROUND UTILITIES**  
CONTACT BOTH SERVICES  
CALL TWO WORKING DAYS  
**BEFORE YOU DIG**  
CALL  
**1-800-362-2764**  
(TOLL FREE)  
OHIO UTILITIES PROTECTION SERVICE  
NON-MEMBERS  
MUST BE CALLED DIRECTLY  
OIL & GAS PRODUCERS UNDERGROUND  
PROTECTION SERVICE CALL: **1-800-925-0988**

ENGINEERS SEAL:  
  
SIGNED: \_\_\_\_\_  
DATE: \_\_\_\_\_  
SHEETS: 483-545

ENGINEERS SEAL:  
  
SIGNED: \_\_\_\_\_  
DATE: \_\_\_\_\_  
SHEETS: 1 - 428

PARTS 1 AND 2

ODOT STANDARD CONSTRUCTION DRAWINGS										COC STANDARD CONSTRUCTION DRAWINGS				SUPPLEMENTAL SPECIFICATIONS					
BP-2.1	1/21/22	DM-4.4	1/15/16	ITS-14.10	1/21/22	MT-95.41	1/17/20	MT-105.10	1/17/20	TC-51.12	1/15/16	1500	9/15/15	4170	7/1/21	MIS-1	1/1/18	SS800	SEE PROPOSAL
BP-2.2	1/15/21	F-1.1	7/19/13	ITS-15.10	1/15/21	MT-95.45	1/17/20	MT-120.00	7/15/22	TC-52.10	10/18/13	1510	9/15/15	4200	8/1/15	MIS-2	1/1/18	SS804	7/15/22
BP-2.3	7/18/14	F-3.1	7/19/13	ITS-15.11	1/15/21	MT-95.50	7/21/17	RM-1.1	1/15/21	TC-52.20	1/15/21	1520	9/15/15	4202	8/10/17	MIS-3	1/1/18	SS809	7/15/22
BP-2.5	1/21/22	F-3.2	7/18/14	ITS-18.10	7/16/21	MT-95.82	7/19/13	RM-4.2	4/17/20	TC-65.10	1/17/14	1540	9/15/15	4205	5/1/14	MIS-4	1/1/18	SS813	10/19/18
BP-3.1	1/21/22	F-3.3	7/19/13	ITS-30.11	4/16/21	MT-96.11	4/16/21	RM-4.3	1/21/22	TC-65.11	7/15/22	1550	9/15/15	4253	5/1/14	MIS-54	1/1/18	SS825	1/17/20
BP-4.1	7/19/13	F-3.4	7/19/13	ITS-30.12	4/16/21	MT-96.26	1/18/19	RM-4.4	7/19/19	TC-71.10	7/15/22	4000	8/10/17	4330	8/10/17	MIS-54APP	1/1/18	SS832	7/15/22
BP-5.1	7/15/22	HL-10.11	7/15/22	ITS-30.13	4/16/21	MT-97.12	1/20/17	TC-12.31	1/21/22	TC-72.20	7/20/18	4001	8/1/15	4331	5/1/14	MIS-56	1/1/18	SS833	1/21/22
BP-6.1	7/19/13	HL-10.12	1/20/17	ITS-30.14	1/15/21	MT-97.11	1/20/17	TC-15.116	7/16/21	TC-73.20	1/17/20	4002	5/1/14	4600	7/1/20	MIS-57	1/1/18	SS844	4/20/18
BP-9.1	1/18/19	HL-10.13	4/17/20	ITS-50.10	1/15/21	MT-98.10	1/17/20	TC-16.22	7/16/21	TC-81.11	7/16/21	4020	5/1/14	4602	7/1/20	MIS-58	1/1/18	SS861	1/15/21
BP-9.2	1/15/21	HL-10.31	7/15/22	MGS-1.1	7/16/21	MT-98.11	1/17/20	TC-21.11	7/16/21	TC-83.10	1/17/20	4021	7/1/20	4603	7/1/20	MIS-202	1/1/18	SS878	1/21/22
CB-1.1	7/16/21	HL-20.11	1/15/21	MGS-2.1	1/19/18	MT-98.21	1/17/20	TC-21.21	7/15/22	TC-83.20	7/15/22	4022	7/1/20	4650	7/1/20	MIS-301	1/1/18	SS904	7/15/22
CB-2-2B	7/15/22	HL-20.21	1/15/21	MGS-3.2	1/18/13	MT-99.20	4/19/19	TC-22.10	4/17/20	TC-84.20	10/18/13	4023	7/1/20			MIS-302	1/1/18	SS909	10/21/22
CB-5A,8A	7/16/21	HL-30.11	1/15/21	MGS-4.2	7/19/13	MT-99.30	1/17/20	TC-22.20	1/17/14	TC-84.21	10/18/13	4051	5/1/14			MIS-402	1/1/18	SS913	4/16/21
CB-5	7/16/21	HL-30.21	4/17/20	MGS-4.3	1/18/13	MT-99.60	7/15/16	TC-41.10	7/19/13	TC-85.10	7/15/16	4104	8/10/17			MIS-403	1/1/18		
CB-6	1/21/22	HL-30.22	1/15/21	MGS-5.2	7/15/16	MT-101.60	1/17/20	TC-41.20	10/18/13	TC-85.21	7/16/21	4105	8/10/17	L-6310B	9/1/22	MIS-404	1/1/18	COC1611	2/1/13
CB-8	7/16/21	HL-40.20	7/15/22	MGS-5.3	7/15/16	MT-101.70	1/17/20	TC-41.30	10/18/13	TC-85.22	1/19/18	4110	10/1/18	L-6311	1/26/18	MIS-501	1/1/18	COC1620	9/10/18
DM-1.1	7/17/20	HL-60.11	7/21/17	MGS-6.1	1/19/18	MT-101.75	1/17/20	TC-41.40	10/18/13			4122	10/1/18	L-6316B	1/26/18	MIS-603	1/1/18		
DM-1.2	7/16/21	HL-60.31	1/17/20	MH-3	7/16/21	MT-101.80	1/17/20	TC-41.41	7/19/19			4160	10/1/18	L-8508B	9/21/22	MIS-700	1/1/18		
DM-1.3	7/18/14	HW-2.1	7/20/18	MT-95.30	7/19/19	MT-101.90	7/17/20	TC-41.50	10/18/13			4161	8/1/15			MIS-702	1/1/18		
DM-4.1	7/17/20	HW-2.2	7/20/18	MT-95.31	7/19/19	MT-102.10	1/17/20	TC-42.10	10/18/13			4162	7/1/20			MIS-800	1/1/18		
DM-4.2	7/20/12	ITS-10.11	7/18/15	MT-95.32	4/19/19	MT-102.20	4/19/19	TC-42.20	10/18/13			4163	7/1/21						
DM-4.3	1/15/16	ITS-14.11	1/21/22	MT-95.40	1/17/20	MT-103.10	1/21/22	TC-51.11	1/15/16			4164	10/1/20						

**SPECIAL PROVISIONS**  
GEOTECHNICAL REPORT (11/18/20)

**PROJECT DESCRIPTION**  
THIS PROJECT CONSISTS OF THE REMOVAL OF RAMP N (IR 270 WEST TO US 23 SOUTH) AND RAMP Q (IR 270 EAST TO US23 NORTH). WORK INCLUDES THE RECONFIGURATION OF RAMP P1 (IR 270 EAST) AND RAMP S (IR 270 WEST), THE CONSTRUCTION OF A SINGLE LEFT TURN LANE AT RAMP S AND US 23, AND THE CONSTRUCTION OF TWO SIGNALIZED INTERSECTIONS TO PROVIDE ACCESS TO US 23 NORTH AND SOUTH. WORK ALSO INCLUDES FULL DEPTH PAVEMENT AND PAVEMENT OVERLAY ON RAMPS L, M, O, P1, AND S.

**EARTH DISTURBED AREAS**  
PROJECT EARTH DISTURBED AREA: 78.0 ACRES  
ESTIMATED CONTRACTOR EARTH DISTURBED AREA: 9.22 ACRES  
NOTICE OF INTENT EARTH DISTURBED AREA: 87.2 ACRES  
**LIMITED ACCESS**

THIS IMPROVEMENT IS ESPECIALLY DESIGNED FOR THROUGH TRAFFIC AND HAS BEEN DECLARED A LIMITED ACCESS HIGHWAY OR FREEWAY BY ACTION OF THE DIRECTOR IN ACCORDANCE WITH THE PROVISIONS OF SECTION 5511.02 OF THE OHIO REVISED CODE.

**2019 SPECIFICATIONS**

THE STANDARD SPECIFICATIONS OF THE STATE OF OHIO, DEPARTMENT OF TRANSPORTATION, INCLUDING SUPPLEMENTAL SPECIFICATIONS LISTED IN THE PLANS AND CHANGES LISTED IN THE PROPOSAL SHALL GOVERN THIS IMPROVEMENT.

I HEREBY APPROVE THESE PLANS AND DECLARE THAT THE MAKING OF THIS IMPROVEMENT WILL NOT REQUIRE THE CLOSING TO TRAFFIC OF THE HIGHWAY EXCEPT AS NOTED ON SHEET 20, AND THAT DETOURS WILL BE PROVIDED AS INDICATED ON THE PLANS.

APPROVED \_\_\_\_\_  
DATE \_\_\_\_\_ DISTRICT DEPUTY DIRECTOR

APPROVED \_\_\_\_\_  
DATE \_\_\_\_\_ DIRECTOR, DEPARTMENT OF TRANSPORTATION

PLAN CERTIFIED AS TO COMPLETENESS AND QUALITY

\_\_\_\_\_  
SIGNATURE

\_\_\_\_\_  
DATE

\_\_\_\_\_  
FIRM

\_\_\_\_\_  
TITLE

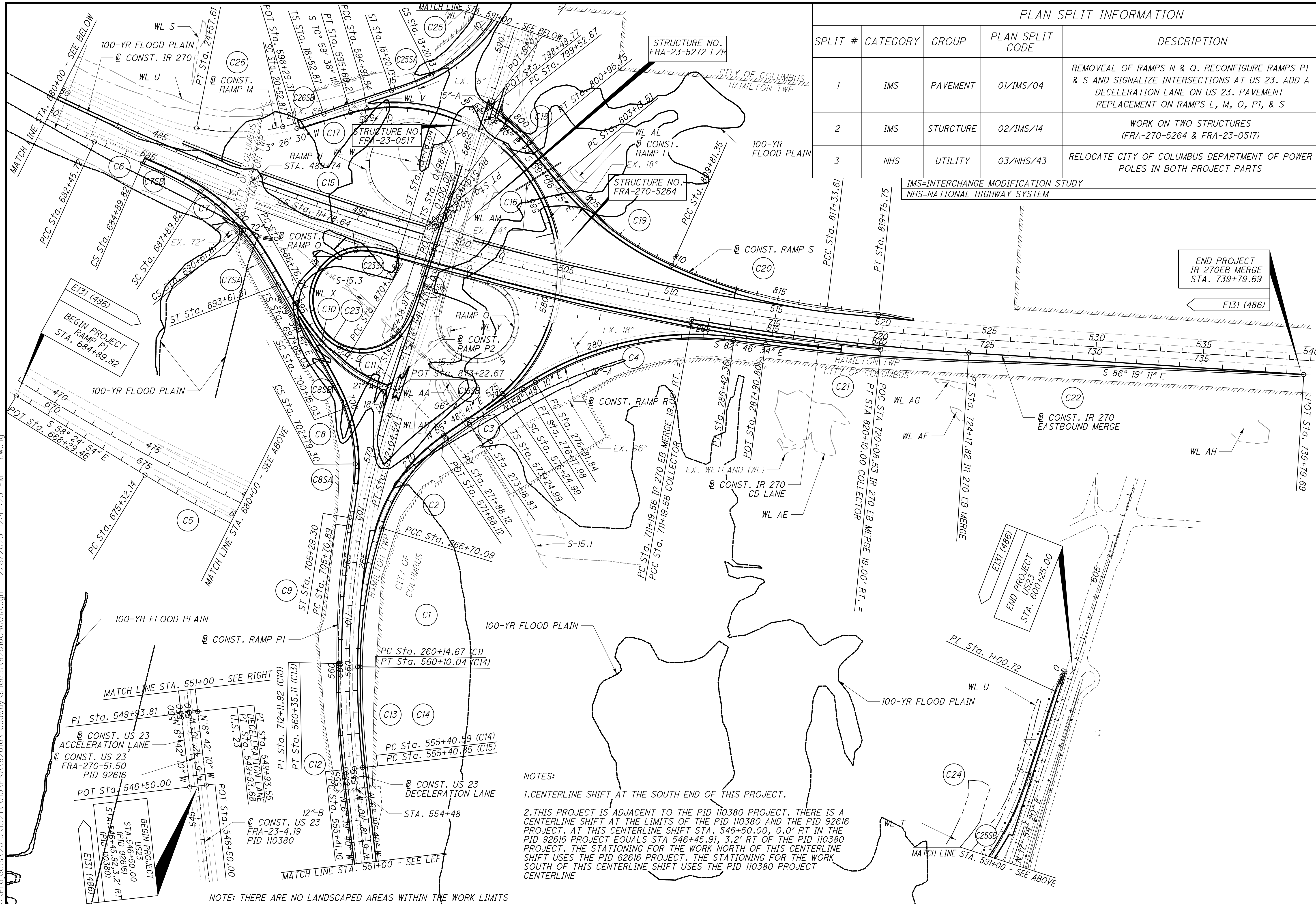
PLAN PREPARED BY:  
**EDLZ**  
ARCHITECTURE • ENGINEERING • PLANNING  
SURVEYING • CONSTRUCTION SERVICES  
INNOVATIVE IDEAS  
EXCEPTIONAL DESIGN  
UNMATCHED CLIENT SERVICE

DLZ OHIO, INC.  
6121 HUNTLEY RD.  
COLUMBUS, OH 43229

FEDERAL PROJECT NO. **E131 (486)**  
PID NO. **92616**  
CONSTRUCTION PROJECT NO. **NONE**  
RAILROAD INVOLVEMENT **NONE**  
**FRA - 270 - 51.50**  
1/554



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PLAN SPLIT INFORMATION				
SPLIT #	CATEGORY	GROUP	PLAN SPLIT CODE	DESCRIPTION
1	IMS	PAVEMENT	01/IMS/04	REMOVAL OF RAMPS N & Q. RECONFIGURE RAMPS PI & S AND SIGNALIZE INTERSECTIONS AT US 23. ADD A DECELERATION LANE ON US 23. PAVEMENT REPLACEMENT ON RAMPS L, M, O, PI, & S
2	IMS	STURCTURE	02/IMS/14	WORK ON TWO STRUCTURES (FRA-270-5264 & FRA-23-0517)
3	NHS	UTILITY	03/NHS/43	RELOCATE CITY OF COLUMBUS DEPARTMENT OF POWER POLES IN BOTH PROJECT PARTS

IMS=INTERCHANGE MODIFICATION STUDY  
NHS=NATIONAL HIGHWAY SYSTEM

END PROJECT  
IR 270EB MERGE  
STA. 739+79.69

CALCULATED  
ACF  
CHECKED  
CSR

0 100 200 300 400  
HORIZONTAL SCALE IN FEET

**SCHEMATIC PLAN**

**FRA - 270 - 51.50**

NOTES:  
 1. CENTERLINE SHIFT AT THE SOUTH END OF THIS PROJECT.  
 2. THIS PROJECT IS ADJACENT TO THE PID 110380 PROJECT. THERE IS A CENTERLINE SHIFT AT THE LIMITS OF THE PID 110380 AND THE PID 92616 PROJECT. AT THIS CENTERLINE SHIFT STA. 546+50.00, 0.0' RT IN THE PID 92616 PROJECT EQUALS STA 546+45.91, 3.2' RT OF THE PID 110380 PROJECT. THE STATIONING FOR THE WORK NORTH OF THIS CENTERLINE SHIFT USES THE PID 92616 PROJECT. THE STATIONING FOR THE WORK SOUTH OF THIS CENTERLINE SHIFT USES THE PID 110380 PROJECT CENTERLINE

NOTE: THERE ARE NO LANDSCAPED AREAS WITHIN THE WORK LIMITS



UTILITIES

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

AEP-COLUMBUS SOUTHERN POWER AT&T OHIO  
850 TECH CENTER DRIVE 111 N. FOURTH ST.  
GAHANNA, OH 43230 COLUMBUS, OH 43215  
ATTN.: MR. PAUL PAXTON ATTN.: MR. GARY VAN ALMSICK  
PHONE: (614) 883-6831 PHONE: (614) 223-7276  
E-MAIL: GV2758@ATT.COM

COLUMBIA GAS OF OHIO CITY OF COLUMBUS  
3550 JOHNNY APPLESEED CT. DIVISION OF WATER  
COLUMBUS, OH 43231 910 DUBLIN ROAD  
ATTN.: MR. BRYAN KOPACHY COLUMBUS, OH 43215  
PHONE: (614) 818-2133 PHONE: (614) 645-7788  
E-MAIL: BKOPACHY@NISOURCE.COM

SOUTH CENTRAL POWER COMPANY CITY OF COLUMBUS, DPU  
P.O. BOX 250 DIVISION OF POWER  
LANCASTER, OH 43130 3500 INDIANOLA AVE.  
ATTN.: MR. PHIL STRINGER COLUMBUS, OH 43223  
PHONE: (614) 645-7627

WIDE OPEN WEST ODOT D-6 TRAFFIC (HIGHWAY  
3675 CORPORATE DRIVE LIGHTING)  
COLUMBUS, OH 43231 400 E. WILLIAM ST.  
ATTN.: MR. JAYTEE NOVARIA DELAWARE, OH 43015  
PHONE: (614) 948-4653 (740) 833-8024  
E-MAIL: JNOVARIA@WIDEOOPENWEST.COM

CITY OF COLUMBUS ODOT CENTRAL OFFICE ITS  
DEPARTMENT OF 1606 W. BROAD ST.  
SEWERAGE AND DRAINAGE COLUMBUS, OH 43223  
SEWER MAINTENANCE 614-387-4113  
OPERATIONS CENTER CEN.ITS.LAB@DOT.OHIO.GOV  
1250 FAIRWOOD AVE  
COLUMBUS, OH 43206  
PHONE: (614) 645-7102  
THIS OFFICE OPERATES 24/7

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.

THE FOLLOWING CITY OF COLUMBUS UTILITIES MAY BE LOCATED WITHIN THE WORK LIMITS OF THIS PROJECT:

CITY OF COLUMBUS CITY OF COLUMBUS  
DEPARTMENT OF TECHNOLOGY DEPARTMENT OF PUBLIC SERVICE  
1355 MCKINLEY AVE. TRAFFIC MAINTENANCE  
BUILDING C 1820 EAST 17TH AVENUE  
COLUMBUS, OH 43222 COLUMBUS, OH 43219  
PHONE: (614) 645-7756 PHONE: (614) 645-7393

CITY OF COLUMBUS SUPPORT SERVICES DIVISION-COMMUNICATIONS  
4211 GROVES ROAD  
COLUMBUS, OH 43232  
PHONE: (614) 724-7047  
RADIO ROOM: (614) 724-4006

WORK LIMITS

THE WORK LIMITS SHOWN ON THESE PLANS ARE FOR PHYSICAL CONSTRUCTION ONLY. PROVIDE THE INSTALLATION AND OPERATION OF ALL WORK ZONE TRAFFIC CONTROL AND WORK ZONE TRAFFIC CONTROL DEVICES REQUIRED BY THESE PLANS WHETHER INSIDE OR OUTSIDE THESE WORK LIMITS.

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.

MONUMENT ASSEMBLIES

CONSTRUCT MONUMENT ASSEMBLIES IN ACCORDANCE WITH THE DETAILS SHOWN ON THE STANDARD CONSTRUCTION DRAWINGS AND AT THE LOCATIONS SHOWN IN THE RIGHT OF WAY PLANS.

SURVEY PARAMETERS

PRIMARY PROJECT CONTROL MONUMENTS GOVERN ALL POSITIONING ON ODOT PROJECTS. SEE SHEET 5-6 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: OHIO VRS  
VERTICAL POSITIONING  
ORTHOMETRIC HEIGHT DATUM: NAVD 88  
GEOID: GEOID09  
HORIZONTAL POSITIONING  
REFERENCE FRAME: NAD 83 (CORS96)  
ELLIPSOID: GRS80  
MAP PROJECTION: LAMBERT CONFORMAL CONIC  
COORDINATE SYSTEM: OHIO STATE PLANE, SOUTH ZONE  
COMBINED SCALE FACTOR: 0.999943725167  
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 C&MS 623.

UNITS ARE IN U.S. SURVEY FEET.

PROTECTION OF RIGHT-OF-WAY LANDSCAPING

PRIOR TO BEGINNING WORK, THE CONTRACTOR, THE PROJECT ENGINEER, AND A REPRESENTATIVE OF THE MAINTAINING AGENCY WILL REVIEW AND RECORD ALL LANDSCAPING ITEMS WITHIN THE RIGHT-OF-WAY (BOTH WITHIN AND OUTSIDE THE CONSTRUCTION LIMITS) A RECORD OF THIS REVIEW WILL BE KEPT IN THE PROJECT ENGINEER'S FILES. PRIOR TO FINAL ACCEPTANCE, A FINAL REVIEW OF LANDSCAPING ITEMS WILL BE MADE.

CONSTRUCT ALL ACTIVITIES, EQUIPMENT STORAGE, AND STAGING TO WITHIN THE CONSTRUCTION LIMITS.

SUBMIT A WRITTEN REQUEST TO THE PROJECT ENGINEER TO USE ANY AREA OUTSIDE THESE LIMITS. THE DOCUMENT SUBMITTED MUST CLEARLY IDENTIFY THE AREA AND EXPLAIN THE PROPOSED USE AND RESTORATION OF THE AREA. USE OF THESE AREAS FOR DISPOSAL OF WASTE MATERIAL AND CONSTRUCTION DEBRIS, EXCAVATION OF BORROW MATERIAL AND PLACEMENT OF PORTABLE PLANTS IS PROHIBITED. THE REQUEST MUST BE APPROVED, IN WRITING, BEFORE THE CONTRACTOR HAS PERMISSION TO USE THE AREA.

ANY ITEMS DAMAGED BEYOND THE CONSTRUCTION LIMITS, AS DEFINED ABOVE, WILL BE REPLACED IN KIND OR AS APPROVED BY THE PROJECT ENGINEER.

PROOF ROLLING

THE FOLLOWING QUANTITY IS PROVIDED IN THE GENERAL SUMMARY TO ADDRESS LOCATIONS REQUIRING PROOF ROLLING. SEE PLAN SHEET NO 94 FOR ADDITIONAL INFORMATION.  
ITEM 204 - PROOF ROLLING 7 HOUR.

ADDITIONAL SOIL INFORMATION

THE SOIL PROFILE AND/OR STRUCTURE FOUNDATION INVESTIGATION SHEETS CONTAIN ALL AVAILABLE SOIL AND BEDROCK INFORMATION WHICH CAN BE CONVENIENTLY SHOWN. ADDITIONAL SUBSURFACE INVESTIGATION INFORMATION IS AVAILABLE FROM ODOT DISTRICT 6

FENCE LENGTHS

THE LENGTHS OF FENCE SHOWN IN THE PLANS ARE HORIZONTAL DIMENSIONS. MEASUREMENTS OF THE FINAL QUANTITIES WILL BE IN ACCORDANCE WITH ITEM 607.

PART-WIDTH CONSTRUCTION

BECAUSE OF THE NECESSITY TO BUILD THIS PROJECT UNDER TRAFFIC AND TO CONSTRUCT THE FULL PAVEMENT WIDTH IN STAGES, EXERCISE CARE TO PREVENT THE CONSTRUCTION OF A BUTT JOINT IN THE BASE COURSES. LAP LONGITUDINAL JOINTS AS SHOWN ON STANDARD CONSTRUCTION DRAWING BP-3.1.

ITEM 204 - PROOF ROLLING AND TEST ROLLING

THE GLOBAL STABILIZATION SHALL BE SUBJECT TO PROOF ROLLING OR TEST ROLLING AS FOLLOWS:

EXCAVATION OF SUBGRADE - RAMPS P1 AND P2

- 1. PROOF ROLL THE STABILIZED AREAS ACCORDING TO 204.06 TO VERIFY STABILITY.
- 2. FINE GRADE THE SUBGRADE TO THE SPECIFIED GRADE.
- 3. COMPACT THE SUBGRADE ACCORDING TO 204.03.

CEMENT STABILIZATION - RAMPS L, S, AND R, US-23 ACCEL. AND DECEL. LANES, IR 270 CD LANE, IR 270 EASTBOUND MERGE

- 1. STABILIZE SUBGRADE
- 2. PROOF ROLL THE STABILIZED AREAS ACCORDING TO 204.06 TO VERIFY STABILITY

THE QUANTITIES FOR EXCAVATING THE UNSTABLE SUBGRADE ARE PAID UNDER ITEM 204 EXCAVATION OF SUBGRADE.

CONTRACTION AND/OR EXPANSION JOINTS

ALTHOUGH SPECIFIC LOCATIONS OF CERTAIN CONTRACTION AND EXPANSION JOINTS HAVE BEEN DETAILED ON THIS PLAN, NO WAIVER OF THE SPECIFICATIONS IS INTENDED. IN ALL CASES, THE PROVISION OF EXPANSION JOINTS AT ALL MAJOR STRUCTURES INCLUDING THE MAXIMUM SPACING BETWEEN CONTRACTION JOINTS IS IN ACCORDANCE WITH STANDARD CONSTRUCTION DRAWING BP-2.2 AND THE SPECIFICATIONS.

CONNECTION BETWEEN EXISTING AND PROPOSED GUARDRAIL

WHEN IT IS NECESSARY TO SPLICE PROPOSED GUARDRAIL TO EXISTING GUARDRAIL, ONLY THE EXISTING GUARDRAIL SHALL BE CUT, DRILLED, OR PUNCHED. THE CONNECTION SHALL BE MADE USING A W-BEAM, BEAM SPLICE AS SHOWN IN AASHTO M 180-12, EXCEPT THE BEAM WASHERS ARE NOT TO BE USED. PAYMENT SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE RESPECTIVE GUARDRAIL ITEMS.

BENCHING OF FOUNDATION SLOPES

ALTHOUGH CROSS-SECTIONS INDICATE SPECIFIC DIMENSIONS FOR PROPOSED BENCHING OF THE EMBANKMENT FOUNDATIONS IN CERTAIN AREAS, NO WAIVER OF THE SPECIFICATIONS IS INTENDED. BENCH ALL OTHER SLOPED EMBANKMENT AREAS AS SET FORTH IN 203.05. NO ADDITIONAL PAYMENT WILL BE MADE FOR BENCHING REQUIRED UNDER THE PROVISIONS OF 203.05

ITEM 606 - ANCHOR ASSEMBLY, MGS TYPE E (MASH 2016)

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING ANY OF THE GUARDRAIL END TERMINALS FOR TYPE MGS GUARDRAIL AS LISTED ON ROADWAY ENGINEERING'S WEB PAGE UNDER ROADSIDE SAFETY DEVICES FOR APPROVED GUARDRAIL END TREATMENTS. INSTALLATION SHALL BE AT THE LOCATIONS SPECIFIED IN THE PLANS, IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS.

THE FACE OF THE TYPE E IMPACT HEAD SHALL BE COVERED WITH A SHEET OF TYPE J, ASTM D4956 TYPE XI REFLECTIVE SHEETING, PER C&MS 730.193.

REFER TO THE MANUFACTURER'S INSTRUCTIONS REGARDING THE INSTALLATION OF, AND THE GRADING AROUND THE FOUNDATION TUBES AND GROUND STRUT. THE TOP OF ANY FOUNDATION TUBE SHOULD BE LESS THAN 4 INCHES ABOVE THE GROUND. THE PLACEMENT OF THE FOUNDATION TUBES SHOULD BE AN APPROPRIATE DEPTH BELOW THE LEVEL LINE IN ORDER TO MAINTAIN THE FINISHED GUARDRAIL HEIGHT OF 31 INCHES FROM THE EDGE OF THE SHOULDER.

ON-SITE GRADING IS REQUIRED IF THE TOP OF THE FOUNDATION TUBES OR TOP OF THE GROUND STRUT DOES PROJECT MORE THAN 4 INCHES ABOVE THE GROUND LINE.

PAYMENT FOR THE ABOVE WORK SHALL BE MADE AT THE UNIT PRICE BID FOR ITEM 606, ANCHOR ASSEMBLY, MGS TYPE E, EACH, AND SHALL INCLUDE ALL LABOR, TOOLS, EQUIPMENT AND MATERIALS NECESSARY TO CONSTRUCT A COMPLETE AND FUNCTIONAL ANCHOR ASSEMBLY SYSTEM, INCLUDING ALL RELATED TRANSITIONS, REFLECTIVE SHEETING, HARDWARE, GRADING, EMBANKMENT AND EXCAVATION NOT SEPARATELY SPECIFIED, AS REQUIRED BY THE MANUFACTURER.

PAVING UNDER GUARDRAIL

THIS OPERATION SHALL INCLUDE PREPARATION OF THE GRADED SHOULDER USING ITEM 209, LINEAR GRADING, AS PER PLAN AND PAVING UNDER THE GUARDRAIL USING 441 ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, (448), UNDER GUARDRAIL, AS PER PLAN.

ITEM 209, LINEAR GRADING, AS PER PLAN SHALL CONSIST OF EXCAVATING TOPSOIL, AND PLACING GRANULAR MATERIAL.

ALL COLLECTED DEBRIS AND TOPSOIL, INCLUDING RHIZOMES, ROOTS AND OTHER VEGETATIVE PLANT MATERIAL SHALL BE REMOVED AND DISPOSED OF AS SPECIFIED IN 105.17.

THE REMOVED MATERIAL SHALL BE REPLACED WITH COMPACTABLE GRANULAR MATERIAL CONFORMING TO 703.16 PLACED TO GRADE AS DETAILED ON THE TYPICAL SECTION OR AS APPROVED BY THE ENGINEER.

ALL EQUIPMENT, MATERIALS AND LABOR REQUIRED TO PERFORM THE WORK OUTLINED ABOVE SHALL BE INCLUDED FOR PAYMENT UNDER ITEM 209, LINEAR GRADING, AS PER PLAN.

PAVING UNDER GUARDRAIL SHALL CONSIST OF PLACING ITEM 441 TO THE DEPTH SPECIFIED USING ONE OF THE FOLLOWING METHODS:

METHOD A:

- 1. SET GUARDRAIL POSTS
- 2. PLACE ITEM 441

METHOD B:

- 1. PLACE ITEM 441
- 2. BORE ASPHALT AT POST LOCATIONS (MAY BE OMITTED IF STEEL POSTS ARE USED)
- 3. SET GUARDRAIL POSTS
- 4. PATCH AROUND POSTS. THE MATERIALS USED FOR PATCHING SHALL BE AN ASPHALT CONCRETE APPROVED BY THE ENGINEER. PATCHED AREAS SHALL BE COMPACTED USING EITHER HAND OR MECHANICAL METHODS. FINISHED SURFACES SHALL BE SMOOTH AND SLOPED TO DRAIN AWAY FROM THE POSTS.

ROUNDING

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

PAVING UNDER GUARDRAIL (CONTINUED)

ALL EQUIPMENT, MATERIALS AND LABOR REQUIRED TO PERFORM THE WORK OUTLINED ABOVE, WITH THE EXCEPTION OF SETTING GUARDRAIL POSTS, SHALL BE INCLUDED FOR PAYMENT UNDER ITEM 441, ASPHALT CONCRETE, INTERMEDIATE COURSE, TYPE 1 (449), UNDER GUARDRAIL, AS PER PLAN. THE FOLLOWING QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY FOR THE ABOVE NOTED WORK:

ITEM 209, LINEAR GRADING, AS PER PLAN. 0.2 MILE  
ITEM 441, ASPHALT CONCRETE, INTERMEDIATE COURSE, TYPE 1 (449), UNDER GUARDRAIL, AS PER PLAN. 7 CU. YD.

IMPACT ATTENUATORS

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING ANY OF THE TYPE 2 IMPACT ATTENUATORS AS LISTED ON THE OFFICE OF ROADWAY ENGINEERING'S WEB PAGE (REFER TO THE POSTED SHOP DRAWINGS FOR THE MOST CURRENT APPROVED PRODUCT MODELS). WHEN BI-DIRECTIONAL DESIGNS ARE SPECIFIED, THE CONTRACTOR SHALL SUPPLY APPROPRIATE TRANSITIONS. THE FACE OF THE IMPACT HEAD SHALL BE COVERED WITH TYPE G REFLECTIVE SHEETING, PER C&MS 730.19.

PAYMENT FOR THE ABOVE WORK SHALL BE MADE AT THE UNIT PRICE BID FOR ITEM 606, IMPACT ATTENUATOR, TYPE 2, EACH, AND SHALL INCLUDE ALL LABOR, TOOLS, EQUIPMENT AND MATERIALS NECESSARY TO CONSTRUCT A COMPLETE AND FUNCTIONAL IMPACT ATTENUATOR SYSTEM, INCLUDING ALL RELATED BACKUPS/BACKSTOPS, TRANSITIONS, HARDWARE AND GRADING, NOT SEPARATELY SPECIFIED, AS REQUIRED BY THE MANUFACTURER. INSTALLATION SHALL BE AT THE LOCATIONS SPECIFIED IN THE PLANS, IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS.

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GENERAL NOTES

FRA - 270-51.50



CROSSINGS AND CONNECTIONS TO EXISTING PIPES AND UTILITIES

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 LAY THE PROPOSED CONDUIT.

IF IT IS DETERMINED THAT THE ELEVATION OF THE EXISTING CONDUIT, OR EXISTING APPURTENANCE TO BE CONNECTED, DIFFERS FROM THE PLAN ELEVATION OR RESULTS IN A CHANGE IN THE PLAN CONDUIT SLOPE, THE ENGINEER SHALL BE NOTIFIED BEFORE STARTING CONSTRUCTION OF ANY PORTION OF THE PROPOSED CONDUIT WHICH WILL BE AFFECTED BY THE VARIANCE IN THE EXISTING ELEVATIONS.

IF IT IS DETERMINED THAT THE PROPOSED CONDUIT WILL INTERSECT AN EXISTING SEWER OR UNDERGROUND UTILITY IF CONSTRUCTED AS SHOWN ON THE PLAN, THE ENGINEER SHALL BE NOTIFIED BEFORE STARTING CONSTRUCTION OF ANY PORTION OF THE PROPOSED CONDUIT WHICH WOULD BE AFFECTED BY THE INTERFERENCE WITH AN EXISTING FACILITY. PAYMENT FOR ALL THE OPERATIONS DESCRIBED ABOVE SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE PERTINENT 611 CONDUIT ITEM.

PIPE CONNECTIONS TO CORRUGATED METAL STRUCTURES

CONNECTIONS OF PROPOSED LONGITUDINAL DRAINAGE TO CORRUGATED METAL STRUCTURES SHALL BE MADE BY MEANS OF A SHOP FABRICATED OR FIELD WELDED STUB ON THE STRUCTURE. THE STUB SHALL MEET THE REQUIREMENTS OF 707 AND HAVE A MINIMUM LENGTH OF 2 FEET AND A MINIMUM WALL THICKNESS OF 0.064 INCHES.

THE LOCATION AND ELEVATION OF THE STUB ARE TO BE CONSIDERED APPROXIMATE AND MAY BE ADJUSTED BY THE ENGINEER TO AVOID CUTTING THROUGH JOINTS IN THE STRUCTURE.

THE FIELD WELDED JOINT, IF USED, SHALL BE THOROUGHLY CLEANED AND REGALVANIZED OR OTHERWISE SUITABLY REPAIRED. WELDING SHALL MEET THE REQUIREMENTS OF 513.21.

A MASONRY COLLAR, AS PER STANDARD DRAWING DM-1.1, WILL BE REQUIRED TO CONNECT THE LONGITUDINAL DRAINAGE TO THE STUB, WHEN PIPE OTHER THAN CORRUGATED METAL IS PROVIDED FOR THE LONGITUDINAL DRAINAGE. PAYMENT FOR CUTTING INTO THE STRUCTURE AND PROVIDING THE CONNECTION DESCRIBED, SHALL BE INCLUDED IN THE CONTRACT PRICE FOR ITEM 611 OR 522.

FARM DRAINS

ALL FARM DRAINS, WHICH ARE ENCOUNTERED DURING CONSTRUCTION, SHALL BE PROVIDED WITH UNOBSTRUCTED OUTLETS. EXISTING COLLECTORS WHICH ARE LOCATED BELOW THE ROADWAY DITCH ELEVATIONS, AND WHICH CROSS THE ROADWAY, SHALL BE REPLACED WITHIN THE CONSTRUCTION LIMITS BY ITEM 611 CONDUIT, TYPE B, ONE COMMERCIAL SIZE LARGER THAN THE EXISTING CONDUIT.

EXISTING COLLECTORS AND ISOLATED FARM DRAINS, WHICH ARE ENCOUNTERED ABOVE THE ELEVATION OF ROADWAY DITCHES, SHALL BE OUTLETTED INTO THE ROADWAY DITCH BY 611 TYPE F CONDUIT. THE OPTIMUM OUTLET ELEVATION SHALL BE ONE FOOT ABOVE THE FLOWLINE ELEVATION OF THE DITCH. LATERAL FIELD TILES WHICH CROSS THE ROADWAY SHALL BE INTERCEPTED BY 611, TYPE E CONDUIT, AND CARRIED IN A LONGITUDINAL DIRECTION TO AN ADEQUATE OUTLET OR ROADWAY CROSSING.

THE LOCATION, TYPE, SIZE AND GRADE OF REPLACEMENTS SHALL BE DETERMINED BY THE ENGINEER AND PAYMENT SHALL BE MADE ON FINAL MEASUREMENTS.

EROSION CONTROL PADS AND ANIMAL GUARDS SHALL BE PROVIDED AT THE OUTLET END OF ALL FARM DRAINS AS PER STANDARD CONSTRUCTION DRAWING DM-1.1, EXCEPT WHEN THEY OUTLET INTO A DRAINAGE STRUCTURE. PAYMENT FOR THE EROSION CONTROL PADS AND ANIMAL GUARDS AND ANY NECESSARY BENDS OR BRANCHES SHALL BE INCLUDED FOR PAYMENT IN THE PERTINENT CONDUIT ITEMS. THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY FOR THE WORK NOTED ABOVE:

611 6" CONDUIT, TYPE B	100 FT
611 6" CONDUIT, TYPE E	100 FT
611 6" CONDUIT, TYPE F	100 FT
601 ROCK CHANNEL PROTECTION TYPE C WITH FILTER	10 CU. YD

REVIEW OF DRAINAGE FACILITIES

BEFORE ANY WORK IS STARTED ON THE PROJECT AND AGAIN BEFORE FINAL ACCEPTANCE BY THE STATE, REPRESENTATIVES OF THE STATE AND THE CONTRACTOR, ALONG WITH LOCAL REPRESENTATIVES, SHALL MAKE AN INSPECTION OF ALL EXISTING SEWERS WHICH ARE TO REMAIN IN SERVICE AND WHICH MAY BE AFFECTED BY THE WORK. THE CONDITION OF THE EXISTING CONDUITS AND THEIR APPURTENANCE SHALL BE DETERMINED FROM FIELD OBSERVATIONS. RECORDS OF THE INSPECTION SHALL BE KEPT IN WRITING BY THE STATE.

ALL NEW CONDUITS, INLETS, CATCH BASINS, AND MANHOLES CONSTRUCTED AS A PART OF THE PROJECT SHALL BE FREE OF ALL FOREIGN MATTER AND IN A CLEAN CONDITION BEFORE THE PROJECT WILL BE ACCEPTED BY THE STATE.

ALL EXISTING SEWERS INSPECTED INITIALLY BY THE ABOVE MENTIONED PARTIES SHALL BE MAINTAINED AND LEFT IN A CONDITION REASONABLY COMPARABLE TO THAT DETERMINED BY THE ORIGINAL INSPECTION. ANY CHANGE IN THE CONDITION RESULTING FROM THE CONTRACTOR'S OPERATIONS SHALL BE CORRECTED BY THE CONTRACTOR TO THE SATISFACTION OF THE ENGINEER.

PAYMENT FOR ALL OPERATIONS DESCRIBED ABOVE SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE PERTINENT 611 CONDUIT ITEMS.

UNRECORDED STORM WATER DRAINAGE

FURNISH A CONTINUANCE FOR ALL UNRECORDED STORM WATER DRAINAGE, SUCH AS ROOF DRAINS, FOOTER DRAINS, OR YARD DRAINS, DISTURBED BY THE WORK. FURNISH EITHER AN OPEN CONTINUANCE OR AN UNOBSTRUCTED CONTINUANCE BY CONNECTING A CONDUIT THROUGH THE CURB OR INTO A DRAINAGE STRUCTURE. THE LOCATION, TYPE, SIZE AND GRADE OF THE NEEDED CONDUIT TO REPLACE OR EXTEND AN EXISTING DRAIN WILL BE DETERMINED BY THE ENGINEER. ALL SUCH CONTINUANCE REQUIRES A RIGHT OF WAY USE PERMIT.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY FOR USE AS DIRECTED BY THE ENGINEER FOR THE WORK NOTED ABOVE:

611, 6" CONDUIT, TYPE B, FOR DRAINAGE CONNECTION	100 FT.
611, 6" CONDUIT, TYPE C, FOR DRAINAGE CONNECTION	100 FT.
611, 6" CONDUIT, TYPE E, FOR DRAINAGE CONNECTION	100 FT.
611, 6" CONDUIT, TYPE F, FOR DRAINAGE CONNECTION	100 FT.

MANHOLES, CATCH BASINS AND INLETS REMOVED OR ABANDONED

PAYMENT FOR ALL OF THE ABOVE SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE PERTINENT 202 ITEM.

ITEM SPECIAL - PIPE CLEANOUT

THIS WORK SHALL CONSIST OF REMOVING SEDIMENT AND DEBRIS FROM THE EXISTING DRAINAGE CONDUITS SPECIFIED IN THE PLANS. ALL MATERIAL REMOVED SHALL BE DISPOSED OF AS PER 105.16 AND 105.17. ALL SEWERS SHALL BE CLEANED OUT TO THE SATISFACTION OF THE ENGINEER.

CLEANOUT OF THE PIPE SHALL BE PAID FOR AT THE UNIT PRICE BID FOR ITEM SPECIAL - PIPE CLEANOUT. THIS PRICE SHALL INCLUDE THE COST FOR MATERIAL, EQUIPMENT, LABOR, AND ALL INCIDENTALS REQUIRED TO COMPLETE THE CLEANOUT.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY FOR THE ABOVE NOTED WORK:

SPECIAL, PIPE CLEANOUT, 24" AND UNDER	4500 FT.
SPECIAL, PIPE CLEANOUT, 27" TO 48"	250 FT.
SPECIAL, PIPE CLEANOUT, OVER 48"	1500 FT.

THE CONTRACTOR SHALL PROVIDE A VIDEO OF THE INSIDE OF THE PIPE AFTER CLEANING TO VERIFY PIPE HAS BEEN COMPLETELY CLEANED.

THE PIPES LABELED ON SHEETS 174, 175, 202, 206, 221, 224, 225, 226, 227, 229, 230, 257, 258, 269, 270, AND 302 SHALL BE CLEANED OUT PER ITEM SPECIAL - PIPE CLEANOUT.

EXISTING SUBSURFACE DRAINAGE

PROVIDE UNOBSTRUCTED OUTLETS FOR ALL EXISTING UNDERDRAINS OR AGGREGATE DRAINS ENCOUNTERED DURING CONSTRUCTION.

PROVIDE AN OUTLET PER STANDARD CONSTRUCTION DRAWING DM-1.1 FOR ALL UNDERDRAINS THAT OUTLET TO A SLOPE.

UNDERDRAINS THAT CAN BE CONNECTED TO THE NEW OR EXISTING UNDERDRAINS AT THE END OF THE PROJECT LIMITS AS WELL AS ALL NECESSARY BENDS OR BRANCHES REQUIRED FOR CONNECTION ARE INCLUDED IN THE BASIS OF PAYMENT FOR UNCLASSIFIED PIPE UNDERDRAINS.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY FOR THE WORK NOTED ABOVE:

601, TIED CONCRETE BLOCK MAT, TYPE 1	10 SQ. YD.
605, AGGREGATE DRAINS	50 FT.
611 6" CONDUIT, TYPE F	100 FT.
611, PRECAST REINFORCED CONCRETE OUTLET	10 EACH
605 6" UNCLASSIFIED PIPE UNDERDRAINS	200 FT.

SEEDING AND MULCHING

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

659, SOIL ANALYSIS TEST	2 EACH
659, TOPSOIL	5574 CU. YD.
659, SEEDING AND MULCHING	50209 SQ. YD.
659, REPAIR SEEDING AND MULCHING	2511 SQ. YD.
659, INTER-SEEDING	2511 SQ. YD.
659, COMMERCIAL FERTILIZER	7.79 TON
659, LIME	10.38 ACRES
659, WATER	407 M. GAL.
659, MOWING	113 M. SQ. FT.

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.

CULVERT AND STORM SEWER EXTENSIONS

THE EXISTING CULVERT OR STORM SEWER SHOULD BE REMOVED BACK TO THE FIRST JOINT AT THE OUTLET END AND THE SECOND JOINT AT THE INLET END OF THE CULVERT, MEASURED IN THE FIELD AND PROVIDE A MASONRY COLLAR PER DM-1.1 AT CONNECTION. MATCH EXISTING MATERIAL FOR CULVERT EXTENSION. THE CONTRACTOR SHALL INSPECT EACH PIPE TO ENSURE PIPE IS IN GOOD CONDITION AND SHALL PROMPTLY INFORM THE ENGINEER IF ADDITIONAL PIPE REMOVAL AND REPLACEMENT IS REQUIRED.

PERMITS, WATERWAY PERMITS

A WATERWAYS PERMIT SHALL BE OBTAINED FOR THE PROJECT PRIOR TO PROJECT CONSTRUCTION. ONCE RECEIVED, THE SPECIAL PROVISIONS FOR THE PROJECT SHALL BE ATTACHED TO THE CONSTRUCTION PLANS. ALL CONDITIONS SHALL BE ADHERED TO DURING CONSTRUCTION. ALSO, A COPY OF THE PERMIT IS TO BE KEPT AT THE WORK SITE AT ALL TIMES.

ANTI-SEGREGATION

PROVIDE ANTI-SEGREGATION EQUIPMENT FOR ALL COURSES OF UNIFORM THICKNESS IN ACCORDANCE WITH C&MS 401.12

NON-RUBBER TIRE VEHICLES

NO NON-RUBBER TIRE VEHICLE SHALL BE MOVED ON STATE OR COUNTY ROADS. EXCEPTIONS MAY BE GRANTED BY AN AUTHORIZED STATE OR COUNTY OFFICIAL WHERE SHORT DISTANCES AND SPECIAL CIRCUMSTANCES ARE INVOLVED. GRANTING OF EXCEPTIONS MUST BE IN WRITING AND ANY RESULTING DAMAGE MUST BE REPAIRED FOR THE SATISFACTION OF THE STATE OR COUNTY

PAVEMENT REPAIRS

THE CONTRACTOR IS RESPONSIBLE FOR ALL PAVEMENT REPAIRS THAT ARE NEEDED FROM THE START OF CONSTRUCTION THRU COMPLETION OF THE PROJECT. ANY PAVEMENT REPAIRS SHALL BE INCLUDED IN THE BID COST FOR ITEM 614 MAINTENANCE OF TRAFFIC.

PAVEMENT FOR MAINTAINING TRAFFIC

A QUANTITY OF 50 CY OF ASPHALT FOR MAINTAIN TRAFFIC HAS BEEN TO BE USED AS DIRECTED BY THE ENGINEER TO LEVEL OUT ANY SETTLEMENT IN THE TEMPORARY PAVEMENT DURING CONSTRUCTION OPERATIONS.

ITEM 202 - PAVEMENT REMOVED AS PER PLAN

ALL EXISTING PAVEMENT TO BE REMOVED CONTAINING LAYERS OF CONCRETE, INCLUDING COMPOSITE ASPHALT OVER CONCRETE PAVEMENT, SHALL BE REMOVED UNDER ITEM 202 PAVEMENT REMOVED, AS PER PLAN. EXISTING PAVEMENT NOT CONTAINING CONCRETE SHALL BE REMOVED UNDER ITEM 202 PAVEMENT REMOVED, ASPHALT. SEE THE EXISTING TYPICAL SECTIONS FOR PAVEMENT BUILDUP. PAYMENT FOR THE OPERATION DESCRIBED ABOVE SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE PERTINENT 202 ITEMS.

DRAINAGE AND UTILITY SETTLEMENT

PIPES, DRAINAGE STRUCTURES, OR UTILITIES LOCATED IN FILL ALONG THE TOE OF EMBANKMENTS SHALL NOT BE CONSTRUCTED UNTIL AT LEAST 30 DAYS AFTER COMPLETION OF EMBANKMENT.

ITEM 203 EMBANKMENT, AS PER PLAN

AS SPECIFIED IN THE GEOTECHNICAL REPORT, DRAINAGE LAYERS SHOULD BE COMPOSED OF FINE AGGREGATE THAT MEETS THE GRADATION CRITERIA OF C&MS 703.02 OR 703.03, SHOULD BE GRADED TO DRAIN, AND SHOULD HAVE A MINIMUM OF 2 FEET COVER. SEE PLAN SHEET NO 324 FOR ADDITIONAL INFORMATION.

ITEM 203 GRANULAR MATERIAL, TYPE E, AS PER PLAN

IN THE AREA ALONG TEMPORARY RAMP L BETWEEN STA. 91+00 AND 93+00, GRANULAR MATERIAL, TYPE E, SIZES NO. 1 AND NO. 2 STONE MAY BE PLACED BY THE METHOD OF END DUMPING IF SOFT/WET FOUNDATION SOILS ARE PRESENT AT THE TIME OF CONSTRUCTION. END DUMPING METHODS MAY BE USED UP TO AN ELEVATION 12 INCHES ABOVE THE FOUNDATION SUBGRADE. ABOVE THIS ELEVATION, EMBANKMENT CONSTRUCTION METHODS WILL BE IN ACCORDANCE WITH 203.05 TO 203.07 INCLUSIVE. DURING NORMAL CLEARING AND GRUBBING WHERE END DUMPING IS PERMITTED, THE REQUIREMENTS OF 201.04 FOR SCALPING SHALL BE WAIVED.

TEST PITS CONSTRUCTED FOR TEMPORARY RAMP L SHALL BE PAID FOR AS PART OF THIS PAY ITEM

BENCHING OF FOUNDATION SLOPES

ALTHOUGH CROSS-SECTIONS INDICATE SPECIFIC DIMENSIONS FOR PROPOSED BENCHING OF THE EMBANKMENT FOUNDATIONS IN CERTAIN AREAS, NO WAIVER OF THE SPECIFICATIONS IS INTENDED. BENCH ALL OTHER SLOPED EMBANKMENT AREAS AS SET FORTH IN 203.05. NO ADDITIONAL PAYMENT WILL BE MADE FOR BENCHING REQUIRED UNDER THE PROVISIONS OF 203.05

TEMPORARY DRAINAGE ITEMS

TEMPORARY DRAINAGE ITEMS LABELED ON THE MAINTENANCE OF TRAFFIC PLAN ARE ITEMIZED ON THE MOT PLANS. PAYMENT FOR THE TEMPORARY DRAINAGE ITEMS ARE ITEMIZED AND CARRIED TO THE GENERAL SUMMARY.

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GENERAL NOTES

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TEMPORARY RAMP L

CONTRACTOR SHALL MAINTAIN TRAFFIC ALONG RAMP L DURING THE RECONSTRUCTION OF THE BRIDGES BY CONSTRUCTING A TEMPORARY RAMP AS SHOWN ON SHEETS 36-43. DUE TO THE POTENTIAL PRESENCE OF PEAT SOILS IN THIS AREA, THE CONTRACTOR SHALL DIG TEST PITS TO DETERMINE THE PRESENCE AND DEPTH EXTENT OF THE PEAT. TEST PITS SHALL BE LOCATED AT 50' ON-CENTER ALONG THE ALIGNMENT AND EXTEND TO A MINIMUM DEPTH OF 4.0' EACH. TEST PITS SHALL BE PAID FOR AS PART OF THE PAY ITEM, ITEM 203 - GRANULAR MATERIAL, TYPE E, AS PER PLAN.

CONDITION 1: WHERE PEAT IS NOT ENCOUNTERED WITHIN 4.0' BELOW THE SUBGRADE, A 2.0' THICK GEOGRID AND STONE WORK PLATFORM SHALL BE CONSTRUCTED AT THE FOUNDATION SUBGRADE. THE FOUNDATION SUBGRADE SHALL BE SCALPED IN ACCORDANCE WITH C&MS ITEM 201 PRIOR TO CONSTRUCTION OF THE WORK PLATFORM. THE WORK PLATFORM SHALL BE CONSTRUCTED USING ITEM 203 GRANULAR MATERIAL, TYPE E, SIZES NO. 1 AND NO. 2 STONE. TWO LAYERS OF GEOGRID SHALL BE INCORPORATED IN THE WORK PLATFORM. THE STONE MAY BE END DUMPED TO A DEPTH OF 12 INCHES.

CONDITION 2: PEAT WITH DEPTHS LESS THAN 4.0. REMOVE PEAT IN ITS ENTIRETY. CONSTRUCT 2.0' THICK GEOGRID AND STONE WORK PLATFORM AT BOTTOM OF EXCAVATION. THE WORK PLATFORM SHALL BE CONSTRUCTED USING ITEM 203 GRANULAR MATERIAL, TYPE E, AS PER PLAN, SIZES NO. 1 AND NO. 2 STONE WITH TWO LAYERS OF GEOGRID ONE AT THE BASE AND ANOTHER PLACED MID-HEIGHT. THE STONE MAY BE END DUMPED TO A DEPTH OF 12 INCHES.

CONDITION 3: PEAT IN EXCESS OF 4.0' SHALL BE REMOVED TO A DEPTH OF 4.0' AND REPLACED WITH ITEM 203 GRANULAR MATERIAL, TYPE E, AS PER PLAN SIZES NO.1 AND NO. 2 STONE WITH GEOGRID AT THE BASE AND ANOTHER LAYER OF GEOGRID PLACED MID-HEIGHT WITHIN THE BACKFILL.

THE FOLLOWING CONTINGENCY QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY FOR THE STABILIZATION OF TEMPORARY RAMP L.

ITEM 203 EXCAVATION,	504 CY
ITEM 203 GRANULAR MATERIAL,	
TYPE E, AS PER PLAN	504 CY
ITEM 204 GEOTEXTILE	2276 SY
ITEM 861 GEOGRID	756 SY

WATER

THE CITY OF COLUMBUS, CONSTRUCTION AND MATERIAL SPECIFICATIONS, 2018 EDITION AND ALL REVISIONS, INCLUDING ALL SUPPLEMENTS THERETO, SHALL GOVERN ALL CONSTRUCTION ITEMS THAT ARE A PART OF THIS PLAN, UNLESS OTHERWISE NOTED.

ALL WATER MAIN MATERIALS AND INSTALLATIONS SHALL BE IN ACCORDANCE WITH THE CURRENT RULES AND REGULATIONS OF THE CITY OF COLUMBUS, DIVISION OF WATER. ALL CITY OF COLUMBUS, DIVISION OF WATER STANDARD DRAWINGS SHALL APPLY TO THE PROJECT, UNLESS OTHERWISE NOTED.

FOR ANY EMERGENCIES INVOLVING THE WATER DISTRIBUTION SYSTEM, PLEASE CONTACT THE DIVISION OF WATER DISTRIBUTION MAINTENANCE OFFICE AT 614-645-7788.

ALL BRASS FITTINGS ASSOCIATED WITH WATER WORK, INCLUDING REPAIRS TO THE EXISTING SYSTEM, SHALL CONFORM TO THE REVISED ALLOWABLE LEAD EXTRACTION LIMIT PER THE UPDATED NSF/ANSI 61 STANDARD. THE DIVISION OF WATER'S APPROVED MATERIALS LIST HAS BEEN UPDATED TO REFLECT THIS REQUIREMENT.

NO PERSON SHALL BEGIN CONSTRUCTION OR INSTALLATION OF A PUBLIC WATER MAIN UNTIL PLANS HAVE BEEN APPROVED BY THE STATE OF OHIO ENVIRONMENTAL PROTECTION AGENCY (OEPA).

ALL WATER MAINS SHALL BE CLEANED AND FLUSHED, AND ANY WATER MAIN 12-INCH AND LARGER MUST BE PROPERLY PIGGED, IN ACCORDANCE WITH SECTION 801.15 OF THE CITY OF COLUMBUS, CONSTRUCTION AND MATERIAL SPECIFICATIONS.

IT SHALL BE UNLAWFUL FOR ANY PERSON TO PERFORM ANY WORK ON CITY OF COLUMBUS WATER MAIN SYSTEMS WITHOUT FIRST SECURING LICENSE TO ENGAGE IN SUCH WORK, AS INDICATED IN COLUMBUS CITY CODE SECTION 1103.02 AND 1103.06. THIS WORK INCLUDES ANY ATTACHMENTS, ADDITIONS TO OR ALTERATIONS IN ANY CITY SERVICE PIPE OR APPURTENANCES (INCLUDING WATER SERVICE LINES AND TAPS). THIS REQUIREMENT MAY BE MET BY UTILIZATION OF A SUBCONTRACTOR WHO HOLDS A CITY OF COLUMBUS WATER CONTRACTOR LICENSE OR A COMBINED WATER/SEWER CONTRACTOR LICENSE TO PERFORM THIS WORK. UTILIZATION OF A SUBCONTRACTOR MUST MEET THE LICENSING REQUIREMENTS OF CITY OF COLUMBUS BUILDING CODE, IN PARTICULAR SECTION 4114.119 AND 4114.529.

THE CONTRACTOR SHALL OBTAIN THE PROPER HYDRANT PERMIT(S), AND PAY ANY APPLICABLE FEES, FOR ANY APPROVED HYDRANT USAGE DEEMED NECESSARY FOR WORK UNDER THIS IMPROVEMENT. PERMITS MAY BE OBTAINED THROUGH THE DIVISION OF WATER PERMIT OFFICE (645-7330). THE CONTRACTOR SHALL ADHERE TO ALL RULES & REGULATIONS GOVERNING SAID PERMIT AND MUST HAVE THE ORIGINAL PERMIT ON SITE ANYTIME IN WHICH THE HYDRANT IS IN USE. PERMITS MAY BE OBTAINED BY ACCESSING [HTTP://PORTAL.COLUMBUS.GOV/PERMITS/](http://portal.columbus.gov/permits/). COST TO BE INCLUDED IN THE VARIOUS BID ITEMS.

ALL WATER MAINS SHALL BE PRESSURE TESTED IN ACCORDANCE WITH SECTION 801.16 OF THE CITY OF COLUMBUS, CONSTRUCTION AND MATERIAL SPECIFICATIONS. THE CITY MAY NOT APPROVE ANY TEST LASTING LESS THAN TWO HOURS, REGARDLESS OF THE AMOUNT OF LEAKAGE.

ANY SECTION OF WATER MAIN THAT IS LONGER THAN 20 FEET IN LENGTH SHALL BE CHLORINATED. HAND SWABBING METHODS WILL ONLY BE PERMITTED FOR SECTIONS LESS THAN OR EQUAL TO 20 FEET IN LENGTH. USE UNSCENTED HOUSEHOLD BLEACH FOR HAND SWABBING OF PIPE AND FITTINGS. PLEASE NOTE THAT CUT-IN-TEES, SLEEVES, AND ANY OTHER REQUIRED FITTINGS OR PIPING SHALL BE TAKEN INTO ACCOUNT AND ARE INCLUDED IN THE TOTAL LENGTH OF THE SECTION (CUT TO CUT).

ONLY ONE CONNECTION TO AN EXISTING WATER MAIN IS PERMITTED BEFORE DISINFECTION OF A NEW WATER MAIN HAS BEEN COMPLETED. ALL OTHER CONNECTIONS MUST BE MADE AFTER THE MAIN HAS BEEN DISINFECTED.

ALL FIRE HYDRANTS TO BE INSTALLED IN THE CITY OF COLUMBUS SHALL BE PAINTED WITH THE COLOR "SAFETY ORANGE". THE FIRE HYDRANTS SHALL BE PROVIDED WITH TWO COATS IN A GLOSS ENAMEL OF THE "SAFETY ORANGE" COLOR FOR THE ENTIRE HYDRANT. THE TOPS OF THE FIRE HYDRANTS ARE NO LONGER REQUIRED TO BE PAINTED BLACK. AFTER INSTALLATION OF FIRE HYDRANTS, THE CONTRACTOR IS RESPONSIBLE TO APPLY TOUCH UP PAINT TO ANY DAMAGE TO THE FACTORY APPLIED HYDRANT PAINT. HYDRANTS WILL NOT BE ACCEPTED UNTIL ANY PAINT DAMAGE FROM SHIPPING OR INSTALLATION HAS BEEN REPAIRED. USE HYDRANT TOUCH UP PAINT IN ACCORDANCE WITH THE APPROVED MATERIALS LIST.

MAINTAIN EIGHTEEN (18) INCHES VERTICAL AND TEN (10) FEET HORIZONTAL SEPARATION BETWEEN ANY SANITARY OR STORM SEWER PIPING AND ALL PROPOSED WATER MAINS.

WHEN CROSSING THE EXISTING WATER MAIN, AND LOW STRENGTH MORTAR (ITEM 613) IS TO BE USED AS BACKFILL, THE CONTRACTOR SHALL PROVIDE SIZE NO. 57 CRUSHED CARBONATE STONE (CCS) 1 FOOT BELOW TO 1 FOOT ABOVE THE EXISTING WATER MAIN.

IF DURING EXCAVATION, THE POLYETHYLENE ENCASEMENT ON THE EXISTING WATER MAIN BECOMES DAMAGED, THE CONTRACTOR SHALL REPAIR THE POLYETHYLENE ENCASEMENT PER MANUFACTURER'S SPECIFICATIONS AND DOW STANDARD DRAWINGS L-1003 AND L-1004, AT THEIR OWN EXPENSE. ENSURE THAT THE ENTIRE EXPOSED AREA IS COVERED WITH NEW POLYETHYLENE ENCASEMENT AND SECURELY TAPED, PRIOR TO BACKFILLING.

CONTRACTOR SHALL ADHERE TO THE REQUIREMENTS OF THE OHIO ADMINISTRATIVE CODE CHAPTER 3745-83-02 WATER DISRUPTION OF SERVICE RULE. EXCAVATE PITS SUFFICIENTLY BELOW THE AREA TO BE CONNECTED TO IN ORDER TO MAINTAIN WATER LEVELS BELOW THE WATER MAIN. IF WATER FROM THE PIT ENTERS THE EXISTING MAIN, CONTACT DIVISION OF WATER IMMEDIATELY. ENSURE THAT SUFFICIENTLY SIZED PUMPS ARE UTILIZED TO REMOVE WATER FROM THE TRENCH AND BACKUP PUMPS ARE KEPT ON SITE FOR REDUNDANCY.

"ITEM SPECIAL SURVEY COORDINATES" SHALL INCLUDE ALL MATERIAL, EQUIPMENT, AND LABOR NECESSARY TO OBTAIN HORIZONTAL AND VERTICAL (NORTHING, EASTING, AND CENTERLINE OF PIPE ELEVATION) SURVEY COORDINATES FOR THE WATER MAIN IMPROVEMENTS. THE SURVEY COORDINATES SHALL BE OBTAINED FOR THE COMPLETED WATER MAIN CONSTRUCTION AND SHALL INCLUDE ALL VALVES, TEES, CROSSES, BENDS, HORIZONTAL DEFLECTIONS, PLUGS, REDUCERS, TAPPING SLEEVES, FIRE HYDRANTS, AIR RELEASES, CURB STOPS, TRACER WIRE BOXES, AND CASING PIPE TERMINI. ADDITIONAL SURVEY COORDINATES ARE REQUIRED ON THE WATER MAIN EVERY 200 FEET WHERE NO FITTING OR OTHER WATER MAIN STRUCTURE IS BEING INSTALLED WITHIN THAT LENGTH OF THE IMPROVEMENT.

ALL SURVEY COORDINATES SHALL BE REFERENCED TO THE APPLICABLE COUNTY ENGINEER'S MONUMENTS, AND SHALL BE BASED ON THE NORTH AMERICAN DATUM OF 1983 (NAD 83) WITH THE (NSRS2007) ADJUSTMENT, WITH FURTHER REFERENCE MADE TO THE OHIO STATE PLANE SOUTH COORDINATE SYSTEM, SOUTH ZONE, WITH ELEVATIONS BASED ON NAVD 88 DATUM. ALL COORDINATES (NORTHING, EASTING, CENTERLINE ELEVATION) SHALL BE REFERENCED TO THE NEAREST HUNDRETH (N XXXXXX.XX, E XXXXXX.XX, C/L ELEV. XXX.XX). ALL SURVEY COORDINATES SHALL BE ACCURATE TO WITHIN 1.0 FOOT HORIZONTAL AND A TENTH OF A FOOT (0.10) OR LESS VERTICAL.

THE COORDINATES SHALL BE DOCUMENTED TO THE ENGINEER IN DIGITAL SPREADSHEET FORM AND SHALL INCLUDE THE APPLICABLE ITEM, STATION, NORTHING, EASTING, AND CENTERLINE ELEVATION. COORDINATES SHALL BE SUBMITTED TO THE ENGINEER ON A BI-WEEKLY BASIS. COORDINATES SHALL ALSO BE REQUIRED TO BE SUBMITTED TO THE DIVISION OF WATER AS PART OF THE REQUEST FOR CHLORINATION.

LUMP SUM PAYMENT IS FULL COMPENSATION FOR ALL WORK INVOLVED IN OBTAINING AND DOCUMENTING THE SURVEY COORDINATES AS DESCRIBED IN THIS SPECIFICATION.

ALL WATER MAIN VALVE BOXES, WATER TAP BOXES, TEST STATIONS, PITOMETER TAP STRUCTURES, METER PIT COVERS, AND OTHER SURFACE UTILITY STRUCTURES WITHIN THE DISTURBED AREA SHALL BE ADJUSTED TO GRADE. ANY OF THESE STRUCTURES LOCATED WITHIN PAVEMENT, DRIVEWAYS, OR OTHER TRAVELED AREAS, WHETHER EXISTING OR PROPOSED, SHALL BE EQUIPPED WITH A TRAFFIC RATED, HEAVY DUTY VALVE BOX AND/OR COVER IN ACCORDANCE WITH THE STANDARD DRAWINGS. EXISTING WATER TAP BOXES TO REMAIN THAT ARE ENCOUNTERED WITHIN THE PROJECT LIMITS SHALL BE CLEANED OUT, CENTERED OVER THE CURB STOP, AND ADJUSTED TO THE PROPOSED GRADE.

WHERE NEW CONDUIT IS PROPOSED TO CROSS AN EXISTING OR PROPOSED WATER MAIN OR WATER TAP/SERVICE LINE, A MINIMUM OF 12-INCHES OF VERTICAL CLEARANCE SHALL BE MAINTAINED BETWEEN THE CONDUIT AND THE WATER MAIN OR TAP/SERVICE LINE. A MINIMUM OF 3-FEET OF HORIZONTAL CLEARANCE (OUT TO OUT) IS REQUIRED AT LOCATIONS WHERE THE CONDUIT IS PARALLEL TO THE WATER MAIN AND AT LOCATIONS OF WATER MAIN THRUST BLOCKS.

A MINIMUM OF 3 FEET OF HORIZONTAL CLEARANCE (OUT TO OUT) SHALL BE MAINTAINED BETWEEN ALL EXISTING WATER MAINS AND FOUNDATIONS FOR POLES, PULL BOXES, PUSH BUTTON PEDESTALS, AND ANY OTHER MISCELLANEOUS ELECTRICAL STRUCTURE.

DURING CONSTRUCTION, THE CONTRACTOR SHALL USE EXTREME CAUTION NOT TO DAMAGE THE EXISTING WATER MAINS DUE TO MINIMAL COVER.

FIRE HYDRANT RELOCATIONS SHALL CONFORM TO APPLICABLE SECTIONS OF ITEM 809 OF THE CITY OF COLUMBUS CONSTRUCTION AND MATERIAL SPECIFICATIONS. WORK SHALL CONSIST OF REMOVING THE EXISTING HYDRANT, INSTALLING NEW 6" PIPE AND FITTING AS REQUIRED TO LOCATE THE FIRE HYDRANT 2 FEET FROM BACK OF PROPOSED CURB OR 8 FEET OFF EDGE OF PAVEMENT, RESETTING HYDRANT AND BLOCKING AS REQUIRED. ALL 6" PIPE SHALL BE INSTALLED AT 4'-0" MINIMUM COVER. HYDRANT EXTENSIONS SHALL BE PROVIDED PER ITEM 810, AS REQUIRED. RELOCATED FIRE HYDRANTS SHALL BE ADJUSTED TO PROPER GRADE AND FACED IN THE PROPER DIRECTION. WHEN A HYDRANT IS RELOCATED FIFTEEN (15) FEET OR MORE FROM THE "TYPICAL HYDRANT SETTING" VALVE LOCATION (SEE L-6409 & L-6637), AN ADDITIONAL VALVE SHALL BE INSTALLED, AND RESTRAINED, WITHIN TWO (2) FEET OF THE RELOCATED HYDRANT. PAYMENT IS TO BE INCLUDED UNDER ITEM 809, FIRE HYDRANT RELOCATED.

RELOCATED FIRE HYDRANTS SHALL BE PUT BACK IN SERVICE AS SOON AS POSSIBLE. THE CONTRACTOR SHALL NOTIFY THE DIVISION OF FIRE ALARM OFFICE, 221-3132, WHENEVER FIRE HYDRANTS ARE TAKEN OUT OF SERVICE AND PLACED BACK IN SERVICE. NO TWO (2) ADJACENT FIRE HYDRANTS SHALL BE TAKEN OUT OF SERVICE CONCURRENTLY.

THE CONTRACTOR SHALL COORDINATE HIS WORK SUCH THAT NO WATER CUSTOMER WILL HAVE THEIR SERVICE DISRUPTED MORE THAN TWO (2) TIMES THROUGHOUT THE DURATION OF THIS PROJECT.

IF A LEAD WATER TAP IS ENCOUNTERED AND IS NEITHER DAMAGED NOR PART OF A PLANNED RELOCATION/REPLACEMENT, THE CONTRACTOR SHALL REPORT THE PRESENCE OF THE LEAD TAP TO THE DIVISION OF WATER DISTRIBUTION MAINTENANCE GROUP AT 614-645-7788.

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GENERAL NOTES

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WATER (CONTINUED)

IF A LEAD TAP IS EITHER DAMAGED DURING CONSTRUCTION OR IS PART OF A PLANNED WATER TAP RELOCATION/REPLACEMENT, THE CONTRACTOR SHALL TAKE THE FOLLOWING STEPS:

1. IF DAMAGED, IMMEDIATELY CONTACT LEW FLEMISTER, DIVISION OF WATER, (614-645-7028), TO REQUEST THE SHUT OFF OF THE EXISTING CURB STOP. IF LEW CANNOT BE REACHED, CONTACT THE DIVISION OF WATER DISTRIBUTION ENGINEERING OFFICE AT 614-645-7677 TO REQUEST THE SHUT OFF.

2. CONTRACTOR SHALL EXPOSE THE OWNER'S SIDE OF THE WATER SERVICE TO CONFIRM THE MATERIAL. THE INSPECTOR SHALL BE PRESENT FOR THIS.

3. IF THE CUSTOMER'S PRIVATE SERVICE MATERIAL IS LEAD, STOP WORK AND NOTIFY THE DIVISION OF WATER DISTRIBUTION ENGINEERING OFFICE (614-645-7677) IMMEDIATELY. IF THE MATERIAL IS NOT LEAD, THE CONTRACTOR SHALL REPLACE THE LEAD TAP (FROM EXISTING CORPORATION STOP TO CURB STOP) AND REINSTATE SERVICE TO THE CUSTOMER. PARTIAL REPAIRS OF THE LEAD TAP ARE NOT PERMITTED.

4. REFER TO DIVISION OF WATER STANDARD DRAWINGS L-7102C AND L-9901 FOR INFORMATION ON WATER TAP RELOCATIONS, PLACING NEW CURB STOPS, AND RELOCATING CURB BOXES.

ITEM 618 - RUMBLE STRIPS, SHOULDER (ASPHALT CONCRETE), AS PER PLAN

THE CONTRACTOR SHALL MILL 2 INCHES BY 2 FEET WIDE OF THE EXISTING ASPHALT SHOULDER IN ORDER TO REMOVE THE EXISTING RUMBLE STRIPS WITHIN THE PROJECT LIMITS IN THE AREA WHERE TRAFFIC IS SHIFTED. THE CONTRACTOR SHALL THEN COAT ALL MILLED SURFACES HORIZONTAL AND VERTICAL WITH APPROVED AC LIQUID. NEXT THE CONTRACTOR SHALL PLACE 2 INCHES OF ITEM 448 ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG 64-28.

ONCE THE PROJECT IS COMPLETE, THE CONTRACTOR SHALL INSTALL NEW RUMBLE STRIPS AS PER THE CONSTRUCTION AND MATERIAL SPECIFICATIONS SECTION 618.

ALL COST ASSOCIATED WITH THE REMOVAL OF THE EXISTING PAVEMENT, PLACEMENT OF THE SURFACE COURSE AND INSTALLATION OF THE RUMBLE STRIPS SHALL BE INCLUDED IN UNIT PRICE BID PER FOOT OF ITEM 618 - RUMBLE STRIPS, SHOULDER (ASPHALT CONCRETE), AS PER PLAN.

AN ESTIMATED QUANTITY OF 9190 FEET HAS BEEN CARRIED TO THE MAINTENANCE OF TRAFFIC SUBSUMMARY.

COORDINATION BETWEEN CONTRACTORS

THE CONTRACTOR SHALL COORDINATE WORK ON THIS PROJECT WITH ADJACENT CONSTRUCTION PROJECTS, INCLUDING PID 105839 SPOT PAVE WORK, WHILE THIS PROJECT IS UNDER CONSTRUCTION.

PAVEMENT CUTTING, SAWING, AND EXCAVATION OPERATIONS NOTE:

ALL PUBLIC AGENCIES AND PRIVATE CONTRACTORS PERFORMING PAVEMENT-CUTTING OPERATIONS ON CITY OF COLUMBUS STREETS AND ROADWAYS SHALL PROTECT THE ENVIRONMENT FROM DISCHARGES CREATED BY THEIR PAVEMENT CUTTING OPERATIONS. NOTE THAT COLUMBUS CITY CODE 1145 PROHIBITS NON-STORM WATER DISCHARGE INTO THE CITY OF COLUMBUS SEWER SYSTEM, CURB INLETS AND ANY PART OF ITS MS4 (MUNICIPAL SEPARATE STORM SEWER SYSTEM).

THE REQUIREMENT INCLUDES BUT IS NOT LIMITED TO WET OR DRY SAW-CUTTING, JACK HAMMERING, EXCAVATION EQUIPMENT USE, ETC. THE PUBLIC AGENCY AND/OR PRIVATE CONTRACTOR WORK CREWS SHALL RECOVER AND DISPOSE OF DETRITUS, POLLUTED WATERS, OR OTHER SUCH DISCHARGES RESULTING FROM THEIR PAVEMENT CUTTING OPERATIONS AND PROTECT ALL STORM SEWER INLETS FROM RECEIVING ANY DISCHARGES FROM THE CONSTRUCTION OPERATIONS. THE AGENCY OR CONTRACTOR RESPONSIBLE FOR EACH PAVEMENT CUTTING ACTIVITY SHALL BE SOLELY LIABLE FOR NOTICE OF VIOLATIONS (NOV/S) AND FINES ISSUED BY CITY OF COLUMBUS AND/OR STATE OF OHIO AUTHORITIES.

EQUIPMENT, MATERIALS AND METHODS SHALL BE PROVIDED BY THE RESPONSIBLE PUBLIC AGENCY AND/OR PRIVATE CONTRACTOR TO WORK CREWS PERFORMING THE PAVEMENT CUTTING ACTIVITY AND MADE AVAILABLE TO WORK CREWS FOR USE IN CLEANING UP DISCHARGES RESULTING FROM SUCH CUTTING ACTIVITIES AND PREVENTING RUNOFF. ALL WORK CREWS SHALL BE TRAINED TO EXERCISE AND EMPLOY EQUIPMENT, MATERIALS, AND ENVIRONMENTAL PROTECTIVE MEASURES TO PREVENT POLLUTED DISCHARGES FROM ENTERING THE CITY OF COLUMBUS STORM SEWER SYSTEM AND WATERS OF THE STATE OF OHIO.

THE PUBLIC AGENCY AND/OR PRIVATE CONTRACTOR IS SOLELY RESPONSIBLE FOR ENSURING THAT THE INLET PROTECTION IS ADEQUATE. THE MOST STRINGENT PROJECT PLANS, NOTES AND/OR DRAWINGS INCLUDING STORMWATER POLLUTION PREVENTION PLAN (SWP3) OR SPILL PREVENTION/REMEDIATION PLAN SHALL APPLY TO ALL PAVEMENT CUTTING, SAWING OR EXCAVATION OPERATIONS.

NOTE TO SPECIFICATION WRITERS: IF SWP3 OR SPILL PREVENTION/REMEDIATION PLANS ARE INCLUDED IN CONTRACT DOCUMENTS, THEY SHOULD BE CITED IN THE LAST PARAGRAPH ABOVE BY VOLUME, PAGE OR SHEET NUMBERS; SO DIRECTING THE READER TO SUCH PLAN.

DELINEATION OF PORTABLE AND PERMANENT BARRIER

BARRIER REFLECTORS AND OBJECT MARKERS SHALL BE INSTALLED ON ALL PORTABLE BARRIER (PB) USED FOR TRAFFIC CONTROL AND ON PERMANENT CONCRETE BARRIER (INCLUDING BRIDGE PARAPETS) LOCATED WITHIN 5 FEET OF THE EDGE OF THE ADJACENT TRAVEL LANE.

BARRIER REFLECTORS SHALL CONFORM TO C&MS 626, EXCEPT THAT THE SPACING SHALL BE AS PER TRAFFIC SCD MT-101.70. OBJECT MARKERS AND THEIR INSTALLATION SHALL CONFORM TO C&MS 614.03 AND SCD MT-101.70. WHEN THE PB CONTAINS GLARE SCREEN, ONE SET OF THREE VERTICAL STRIPES OF SHEETING SHALL BE CONSIDERED EQUIVALENT TO AN OBJECT MARKER, ONE-WAY.

INCREASED BARRIER DELINEATION, AS SPECIFIED HEREIN, SHALL BE INSTALLED ON ALL PB AND CONCRETE PERMANENT BARRIER LOCATED WITHIN 5 FEET OF THE EDGE OF THE TRAVELED LANE.

THE INCREASED BARRIER DELINEATION SHALL CONSIST OF THE TRIPLE STACKING OF WORK ZONE BARRIER REFLECTORS.

TRIPLE-STACKED BARRIER REFLECTORS SHALL CONSIST OF ALIGNING THREE BARRIER REFLECTORS VERTICALLY, AT LOCATIONS WHERE A SINGLE BARRIER REFLECTOR WOULD BE OTHERWISE ATTACHED. THERE SHALL BE NO OPEN SPACE BETWEEN THE ADJACENT BARRIER REFLECTORS. THE TRIPLE-STACKED BARRIER REFLECTORS SHALL CONFORM TO C&MS 626, EXCEPT THAT THEY SHALL BE SPACED AND ALIGNED PER TRAFFIC SCD MT-101.70.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE PLANS AND CARRIED TO THE GENERAL SUMMARY:

ITEM 614, BARRIER REFLECTOR, TYPE B	739 EACH
ITEM 614, OBJECT MARKER, 1-WAY	329 EACH

PAYMENT SHALL BE FULL COMPENSATION FOR ALL MATERIAL, LABOR, INCIDENTALS AND EQUIPMENT NECESSARY FOR FURNISHING, INSTALLING, MAINTAINING AND REMOVING EACH OF THE ABOVE ITEMS

CALCULATED  
ACF  
CHECKED  
CSR

GENERAL NOTES

FRA - 270-51.50

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ASBESTOS NOTIFICATION

AN ASBESTOS SURVEY OF THE BRIDGE STRUCTURES SCHEDULED FOR REHABILITATION WAS CONDUCTED BY A CERTIFIED ASBESTOS HAZARD EVALUATION SPECIALIST. THE SURVEY DETERMINED THAT NO ASBESTOS WAS PRESENT ON THE BRIDGE STRUCTURES.

A COPY OF THE OHIO ENVIRONMENTAL PROTECTION AGENCY (OEPA) NOTIFICATION OF DEMOLITION AND RENOVATION FORMS, PARTIALLY COMPLETED AND SIGNED BY THE BRIDGE OWNER, WILL BE PROVIDED TO THE SUCCESSFUL BIDDER. THE CONTRACTOR SHALL COMPLETE THE FORM AND SUBMIT IT TO THE ADDRESS BELOW AT LEAST TEN (10) WORKING DAYS PRIOR TO THE START OF ANY DEMOLITION AND/OR RENOVATION.

MR. RICK FOWLER (CENTRAL DISTRICT OFFICE)  
OHIO EPA, CDO  
PO BOX 1049  
COLUMBUS, OHIO 43216

THE CONTRACTOR SHALL PROVIDE A COPY OF THE COMPLETED FORM TO THE ENGINEER. INFORMATION REQUIRED ON THE FORM WILL INCLUDE: 1) THE CONTRACTORS NAME AND ADDRESS, 2) THE SCHEDULED DATES FOR THE START AND COMPLETION OF THE BRIDGE REMOVAL AND 3) A DESCRIPTION OF THE PLANNED DEMOLITION WORK AND THE METHOD(S) TO BE USED. COPIES OF THE OEPA FORM AND BRIDGE INSPECTION REPORT ARE AVAILABLE FOR REVIEW AT THE ODOT DISTRICT 6 OFFICE, 400 EAST WILLIAM STREET, DELAWARE, OHIO 43065.

BASIS FOR PAYMENT THE CONTRACTOR SHALL FURNISH ALL FEES, LABOR, AND MATERIAL NECESSARY TO COMPLETE AND SUBMIT THE OEPA NOTIFICATION FORM. PAYMENT FOR THIS WORK SHALL BE INCLUDED IN ITEM 202 PORTIONS OF STRUCTURE REMOVED, AS PER PLAN.

WETLANDS AVOIDANCE

JURISDICTIONAL WETLANDS HAVE BEEN IDENTIFIED TO THE RIGHT OR LEFT OF APPROXIMATE STATION 270+00 TO STATION 280+00 (RAMP R,) STATION 580+00 TO STATION 585+00 (US 23), STATION 0+00 TO STATION 20+00 (RAMP M), STATION 0+00 TO STATION 20+00 (RAMP O), STATION 0+00 TO STATION 20+00 (RAMP Q), STATION 0+00 TO STATION 20+00 (RAMP N), STATION 800+00 TO STATION 810+00 (RAMP S), AND STATION 515+00 TO STATION 8540+00 (IR 270), AS SHOWN ON THE SCHEMATIC PLAN SHEET 3 .

DIVISION OF POWER

THE DIVISION OF POWER (DOP) MAY HAVE UNDERGROUND AND OVERHEAD PRIMARY, SECONDARY, AND STREET LIGHTING AT THIS WORK LOCATION. THE CONTRACTOR IS HEREBY REQUIRED TO CONTACT OUPS AT 811 OR 1-800-362-2764 FORTY-EIGHT HOURS PRIOR TO CONDUCTING ANY ACTIVITY WITHIN THE CONSTRUCTION AREA.

ANY REQUIRED RELOCATION, SUPPORT, PROTECTION, OR ANY OTHER ACTIVITY CONCERNED WITH THE CITY'S ELECTRICAL FACILITIES IN THE CONSTRUCTION AREA IS TO BE PERFORMED BY THE CONTRACTOR UNDER THE DIRECTION OF DOP PERSONNEL AND AT THE EXPENSE OF THE PROJECT. THE CONTRACTOR SHALL USE MATERIAL AND MAKE REPAIRS TO A CITY OF COLUMBUS STREET LIGHTING SYSTEM BY FOLLOWING DOP'S "MATERIAL AND INSTALLATION SPECIFICATIONS" (MIS) AND THE CITY OF COLUMBUS "CONSTRUCTION AND MATERIAL SPECIFICATIONS" (CMSC). ANY NEW OR RE-INSTALLED UNDERGROUND STREETLIGHT SYSTEM SHALL REQUIRE TESTING AS REFERRED TO IN SECTION 1000.18 OF THE CMSC MANUAL. THE CONTRACTOR SHALL CONFORM TO DOP'S EXISTING CONDUCTOR SAFETY POLICY AND HOLD CARD SYSTEM, MIS-95, COPIES OF WHICH ARE AVAILABLE FROM DOP.

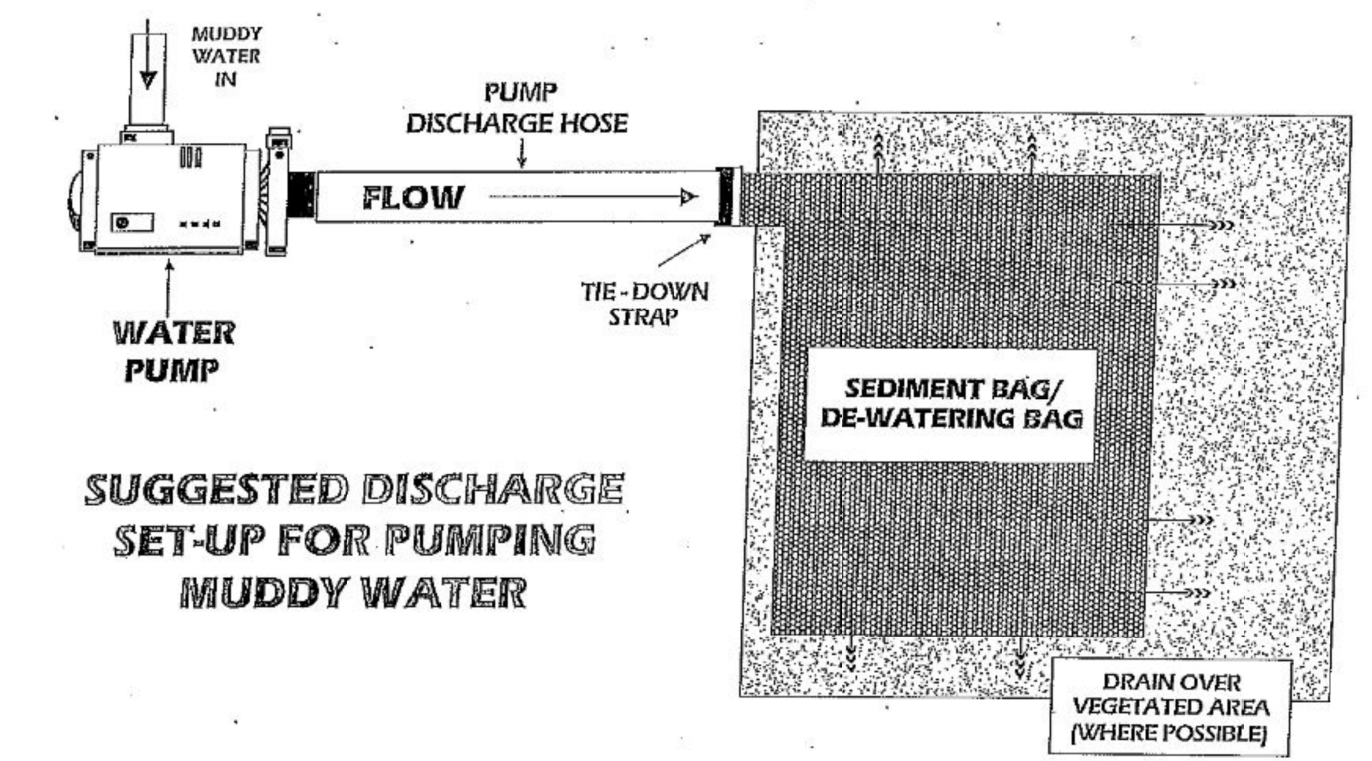
IF ANY ELECTRIC FACILITY BELONGING TO DOP IS DAMAGED IN ANY MANNER BY THE CONTRACTOR, ITS AGENTS, SERVANTS, OR EMPLOYEES, AND REQUIRES EMERGENCY REPAIRS, THE DOP DISPATCH OFFICE SHOULD BE CONTACTED IMMEDIATELY AT (614) 645-7627. DOP SHALL MAKE ALL NECESSARY REPAIRS, AND THE EXPENSE OF SUCH REPAIRS AND OTHER RELATED COSTS SHALL BE PAID BY THE CONTRACTOR TO THE DIVISION OF POWER, CITY OF COLUMBUS, OHIO.

NOTICE FROM THE CITY OF COLUMBUS

THE PUMPING OR DIRECT DISCHARGE OF SEDIMENT LADEN (MUDDY) WATER TO THE CITY'S SEWER SYSTEM OR A RECEIVING STREAM IS A VIOLATION OF OHIO EPA AND CITY OF COLUMBUS REGULATIONS.

ALL INLETS RECEIVING FLOW FROM RUNOFF, PUMPING ACTIVITIES, OR OTHER DIRECT DISCHARGES SHALL BE FITTED WITH AN INLET PROTECTION DEVICE THAT IS PROPERLY SIZED AND SECURED TO REDUCE THE DISCHARGE OF SEDIMENT INTO THE STORM SYSTEM AND RECEIVING SYSTEM. INLET PROTECTION IS REQUIRED ON ALL INLETS RECEIVING DISCHARGE REGARDLESS OF WHETHER OR NOT THE INLET IS TRIBUTARY TO ANY DOWNSTREAM EROSION AND SEDIMENT CONTROLS.

DISCHARGE HOSES USED DURING PUMPING ACTIVITIES SHALL BE FITTED WITH SEDIMENT BAGS THAT ARE PROPERLY SIZED PER MANUFACTURER'S RECOMMENDATIONS REGARDLESS OF WHAT OTHER SEDIMENT CONTROLS ARE IN PLACE FURTHER DOWNSTREAM. SEDIMENT BAGS MUST BE PROPERLY SECURED TO THE DISCHARGE HOSE AND PLACED OVER VEGETATED AREAS, WHERE FEASIBLE, DURING DISCHARGE. SEE DETAIL BELOW FOR A TYPICAL SEDIMENT BAG INSTALLATION.



ENDANGERED BAT HABITAT REMOVAL

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. FOR THE PURPOSES 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.

ECOLOGICAL ENVIRONMENTAL COMMITMENTS

2. STREAM CHANNEL EXCAVATION - THE CONTRACTOR SHALL TAKE ALL PRECAUTIONS NECESSARY TO PREVENT ANY INCIDENTAL DISCHARGES ASSOCIATED WITH THE EXCAVATION AND HAULING OF MATERIAL FROM THE STREAM CHANNEL. THIS PERTAINS TO ANY EXCAVATION OPERATION SUCH AS FOUNDATION, PIER OR ABUTMENT EXCAVATION, CHANNEL CLEAN- OUT, EXCAVATION FOR ROCK CHANNEL PROTECTION AND REMOVAL OF ANY TEMPORARY FILL ASSOCIATED WITH CONSTRUCTION OPERATIONS.

3. NO TOXIC OR HAZARDOUS MATERIALS SUCH AS SEALANTS, PAINT, SOLVENTS, CLEANING AGENTS, EARTHEN MATERIALS, WASTE-WATER FUELS OR DEBRIS OF ANY KIND SHALL BE DISCHARGED TO ANY STREAMS, DRAINAGE COURSES OR BODIES OF WATER. ALL ASPHALT OR CONCRETE GRINDINGS, EXCESS ASPHALT OR CONCRETE MATERIALS OR ANY OTHER DEBRIS GENERATED DURING RESURFACING OR OTHER SIMILAR ACTIVITIES SHALL NOT BE DISPOSED OF WITHIN A FLOODPLAIN BELOW THE 100-YEAR FLOOD ELEVATION. THE CONTRACTOR SHALL TAKE ALL PRECAUTIONS NECESSARY TO PREVENT LIQUIDS USED TO REPAIR, CLEAN, SEAL, OR TREAT ANY BRIDGE STRUCTURE (E.G. PAINT, SEALER, SOLVENT) FROM ENTERING STREAMS, WETLANDS OR OTHER "WATERS OF THE UNITED STATES" AND TAKE THE APPROPRIATE ACTIONS IN THE EVENT OF A RELEASE.

5. BEST MANAGEMENT PRACTICES (BMPS) SHOULD BE USED TO MINIMIZE SEDIMENTATION AND EROSION. RIPARIAN ZONE HABITAT SHOULD BE PRESERVED WHERE POSSIBLE. RIPARIAN AREAS SHOULD NOT BE MOWED.

6. TREE CLEARING - NO TREE CLEARING SHALL OCCUR UNTIL ALL NECESSARY PERMITS AND CONSULTATIONS HAVE BEEN COMPLETED.

WATER COORDINATES						
STATE PLANE COORDINATES (OHIO SOUTH ZONE)						
AS BUILT						
SHEET	DESCRIPTION	STATION	OFFSET	NORTHING	EASTING	CENTERLINE ELEVATION
177	FIRE HYDRANT (RELOCATED)	554+68.95	20.4' LT			
177	FIRE HYDRANT (RELOCATED)	554+69.46	28.0' LT			

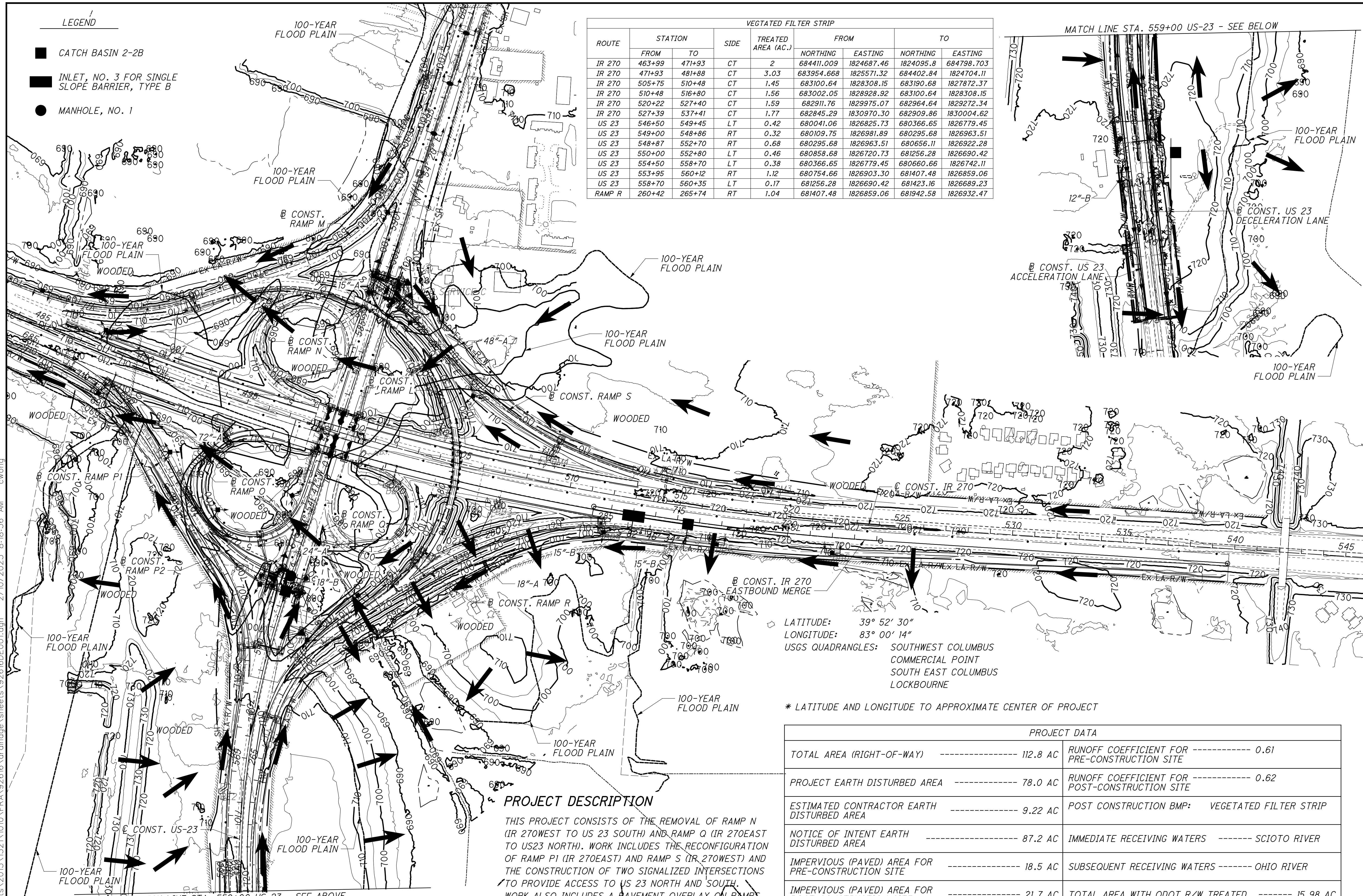
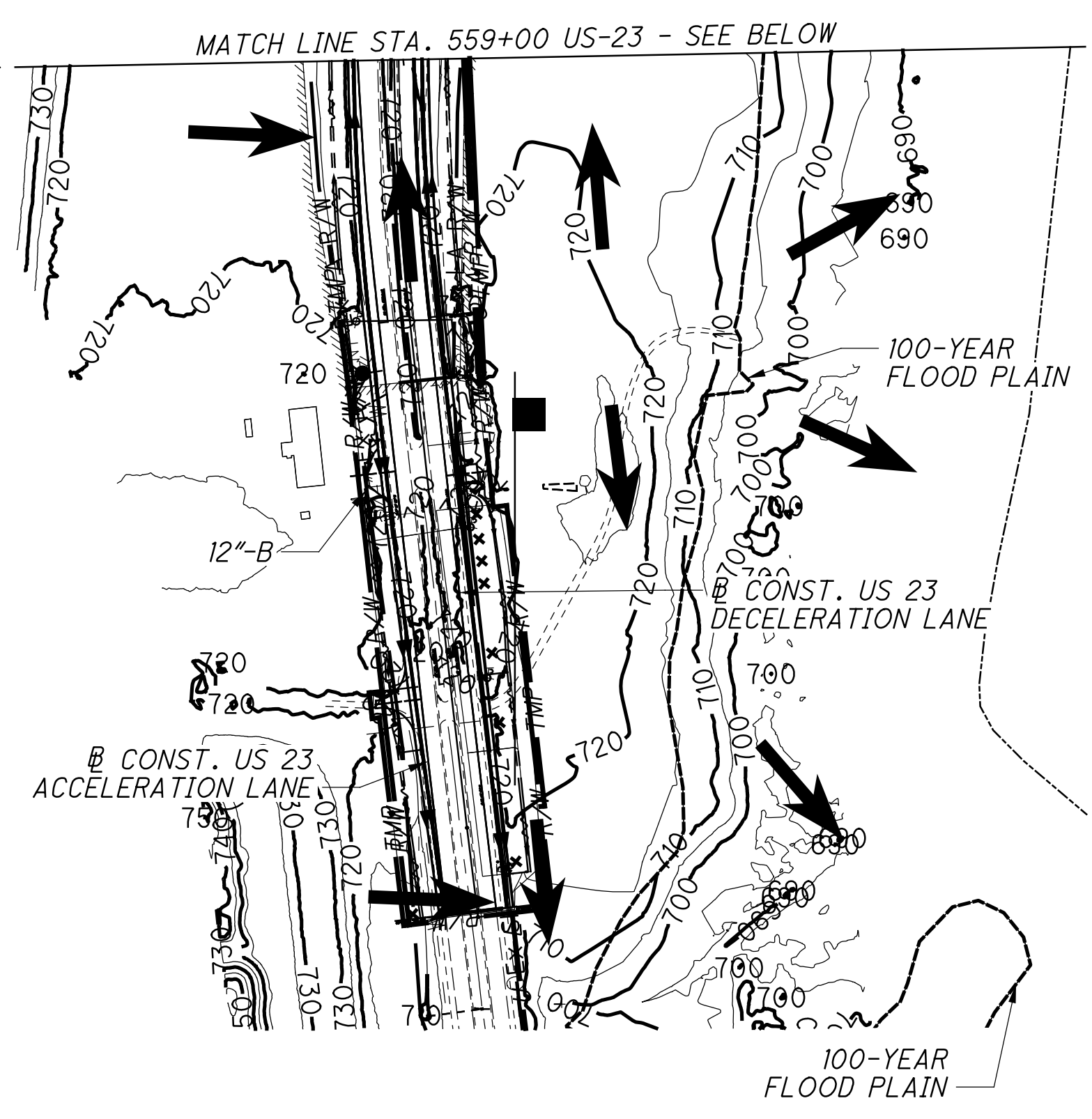
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LEGEND

- CATCH BASIN 2-2B
- INLET, NO. 3 FOR SINGLE SLOPE BARRIER, TYPE B
- MANHOLE, NO. 1

ROUTE	STATION		SIDE	TREATED AREA (AC.)	VEGETATED FILTER STRIP			
	FROM	TO			FROM	TO	NORTHING	EASTING
IR 270	463+99	471+93	CT	2	684411.009	1824687.46	1824095.8	684798.703
IR 270	471+93	481+88	CT	3.03	683954.668	1825571.32	684402.84	1824704.11
IR 270	505+75	510+48	CT	1.45	683100.64	1828308.15	683190.68	1827872.37
IR 270	510+48	516+80	CT	1.56	683002.05	1828928.92	683100.64	1828308.15
IR 270	520+22	527+40	CT	1.59	682911.76	1829975.07	682964.64	1829272.34
IR 270	527+39	537+41	CT	1.77	682845.29	1830970.30	682909.86	1830004.62
US 23	546+50	549+45	LT	0.42	680041.06	1826825.73	680366.65	1826779.45
US 23	549+00	548+86	RT	0.32	680109.75	1826981.89	680295.68	1826963.51
US 23	548+87	552+70	RT	0.68	680295.68	1826963.51	680656.11	1826922.28
US 23	550+00	552+80	LT	0.46	680858.68	1826720.73	681256.28	1826690.42
US 23	554+50	558+70	LT	0.38	680366.65	1826779.45	680660.66	1826742.11
US 23	553+95	560+12	RT	1.12	680754.66	1826903.30	681407.48	1826859.06
US 23	558+70	560+35	LT	0.17	681256.28	1826690.42	681423.16	1826689.23
RAMP R	260+42	265+74	RT	1.04	681407.48	1826859.06	681942.58	1826932.47



LATITUDE: 39° 52' 30"  
 LONGITUDE: 83° 00' 14"  
 USGS QUADRANGLES: SOUTHWEST COLUMBUS  
 COMMERCIAL POINT  
 SOUTH EAST COLUMBUS  
 LOCKBOURNE

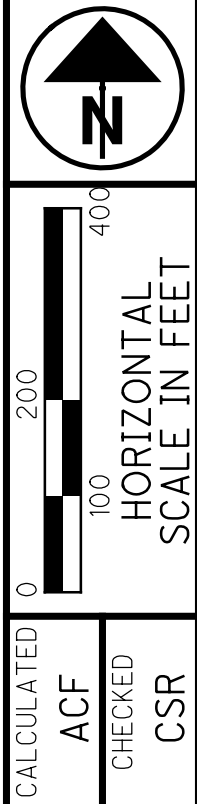
\* LATITUDE AND LONGITUDE TO APPROXIMATE CENTER OF PROJECT

**PROJECT DESCRIPTION**

THIS PROJECT CONSISTS OF THE REMOVAL OF RAMP N (IR 270 WEST TO US 23 SOUTH) AND RAMP Q (IR 270 EAST TO US 23 NORTH). WORK INCLUDES THE RECONFIGURATION OF RAMP P1 (IR 270 EAST) AND RAMP S (IR 270 WEST) AND THE CONSTRUCTION OF TWO SIGNALIZED INTERSECTIONS TO PROVIDE ACCESS TO US 23 NORTH AND SOUTH. WORK ALSO INCLUDES A PAVEMENT OVERLAY ON RAMPS L, M, P, AND S

PROJECT DATA	
TOTAL AREA (RIGHT-OF-WAY)	112.8 AC
PROJECT EARTH DISTURBED AREA	78.0 AC
ESTIMATED CONTRACTOR EARTH DISTURBED AREA	9.22 AC
NOTICE OF INTENT EARTH DISTURBED AREA	87.2 AC
IMPERVIOUS (PAVED) AREA FOR PRE-CONSTRUCTION SITE	18.5 AC
IMPERVIOUS (PAVED) AREA FOR POST-CONSTRUCTION SITE	21.7 AC
TOTAL AREA WITH ODOT R/W TREATED	15.98 AC
TREATMENT REQUIREMENTS	15.77 AC

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PROJECT SITE PLAN

FRA - 270-51.50

101  
554







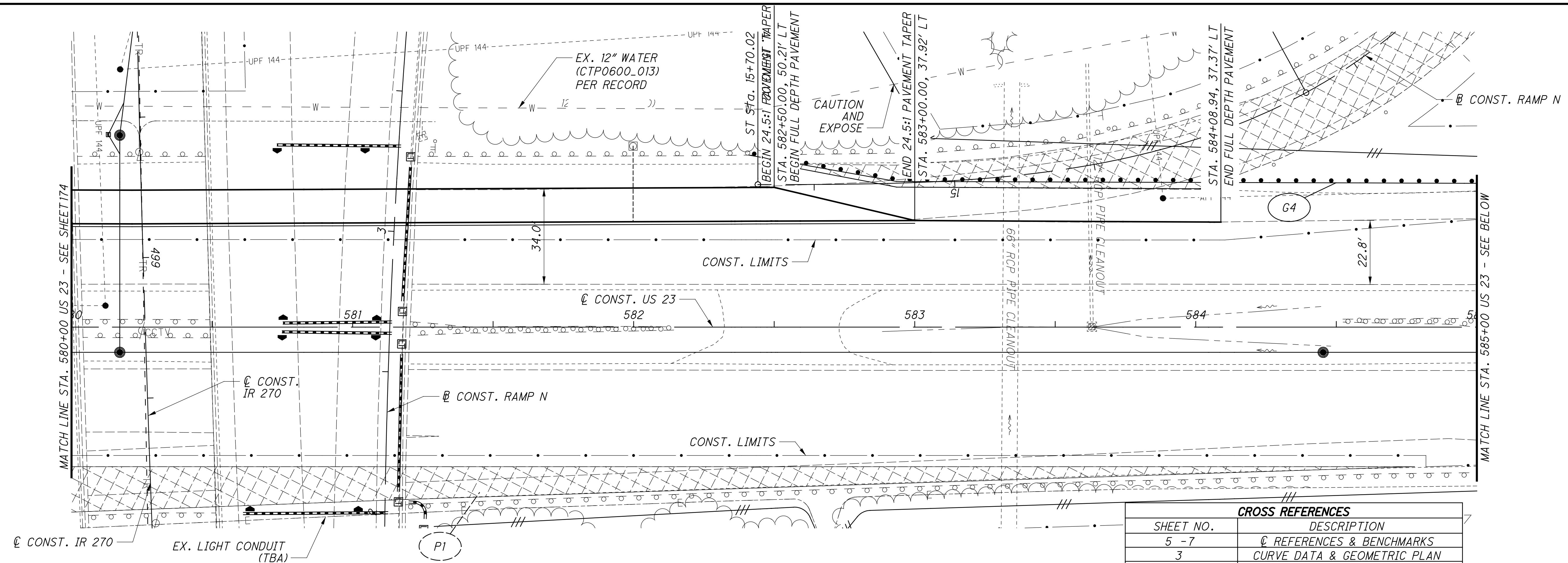
0 20 40  
 10 HORIZONTAL  
 SCALE IN FEET

CALCULATED  
 ACF  
 CHECKED  
 CSR

PLAN - US 23  
 STA. 580+00 TO STA. 590+00

FRA - 270-51.50

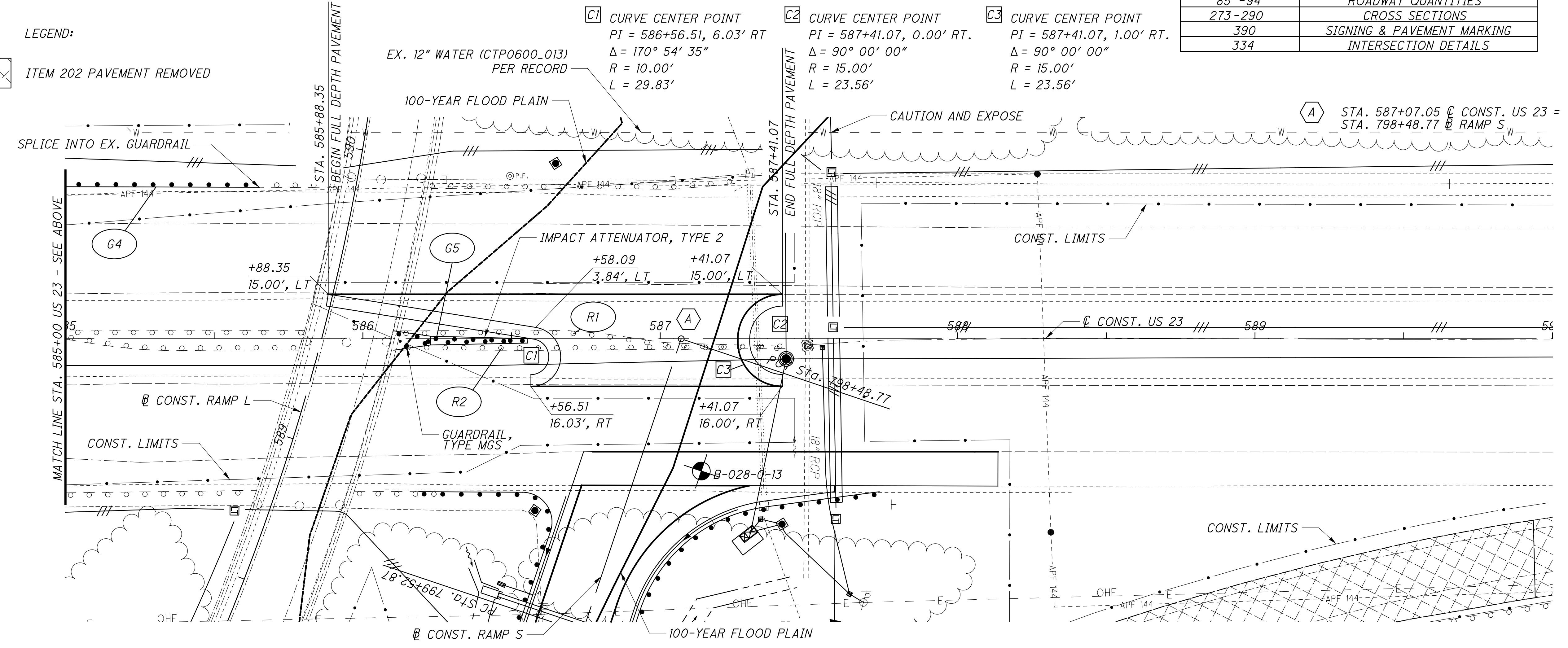
175  
 554



CROSS REFERENCES	
SHEET NO.	DESCRIPTION
5 - 7	☉ REFERENCES & BENCHMARKS
3	⌒ CURVE DATA & GEOMETRIC PLAN
85 - 94	ROADWAY QUANTITIES
273 - 290	CROSS SECTIONS
390	SIGNING & PAVEMENT MARKING
334	INTERSECTION DETAILS

LEGEND:

ITEM 202 PAVEMENT REMOVED

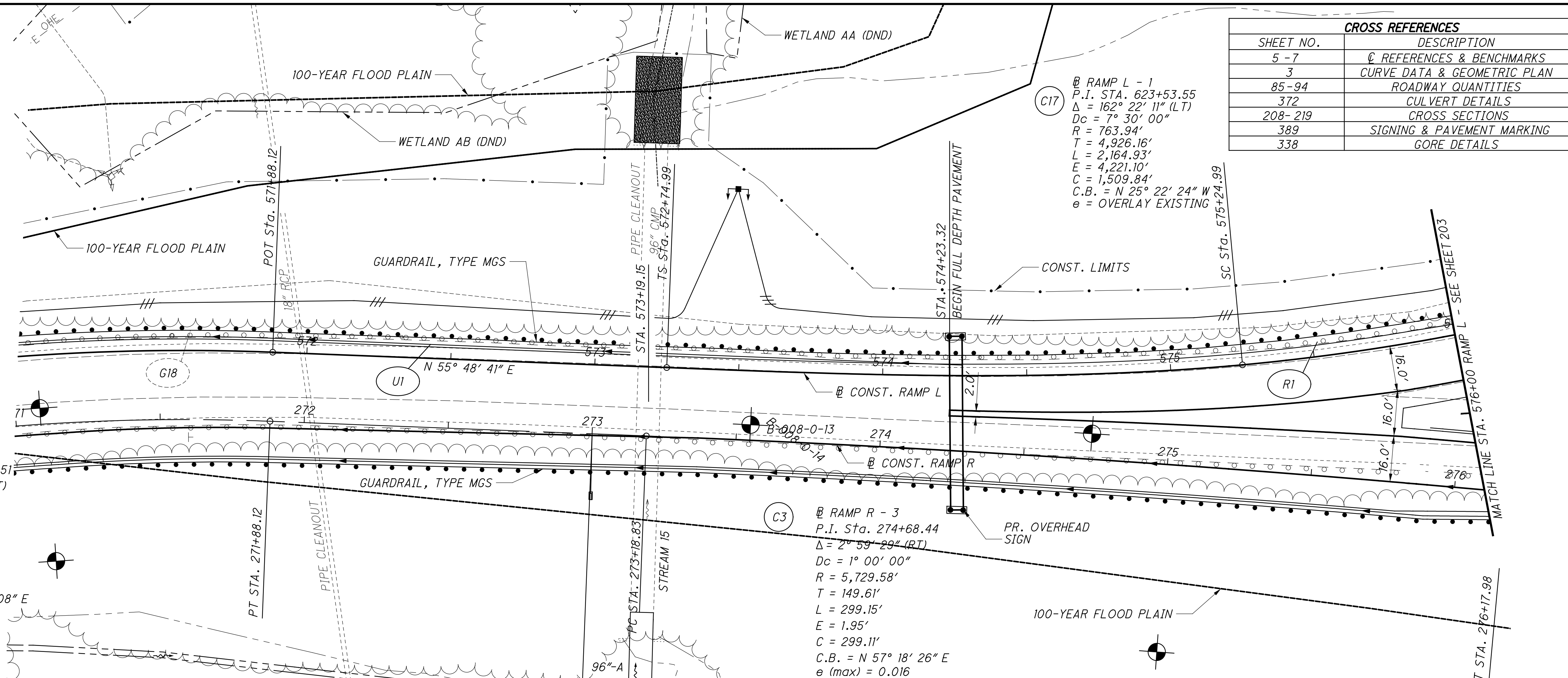


- ☉1 CURVE CENTER POINT  
 PI = 586+56.51, 6.03' RT  
 $\Delta = 170^\circ 54' 35''$   
 R = 10.00'  
 L = 29.83'
- ☉2 CURVE CENTER POINT  
 PI = 587+41.07, 0.00' RT.  
 $\Delta = 90^\circ 00' 00''$   
 R = 15.00'  
 L = 23.56'
- ☉3 CURVE CENTER POINT  
 PI = 587+41.07, 1.00' RT.  
 $\Delta = 90^\circ 00' 00''$   
 R = 15.00'  
 L = 23.56'

☉A STA. 587+07.05 ☉ CONST. US 23 =  
 STA. 798+48.77 ☉ RAMP S

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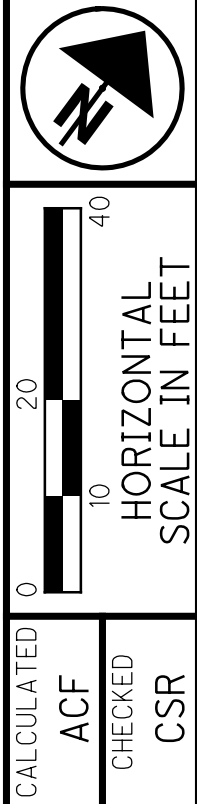
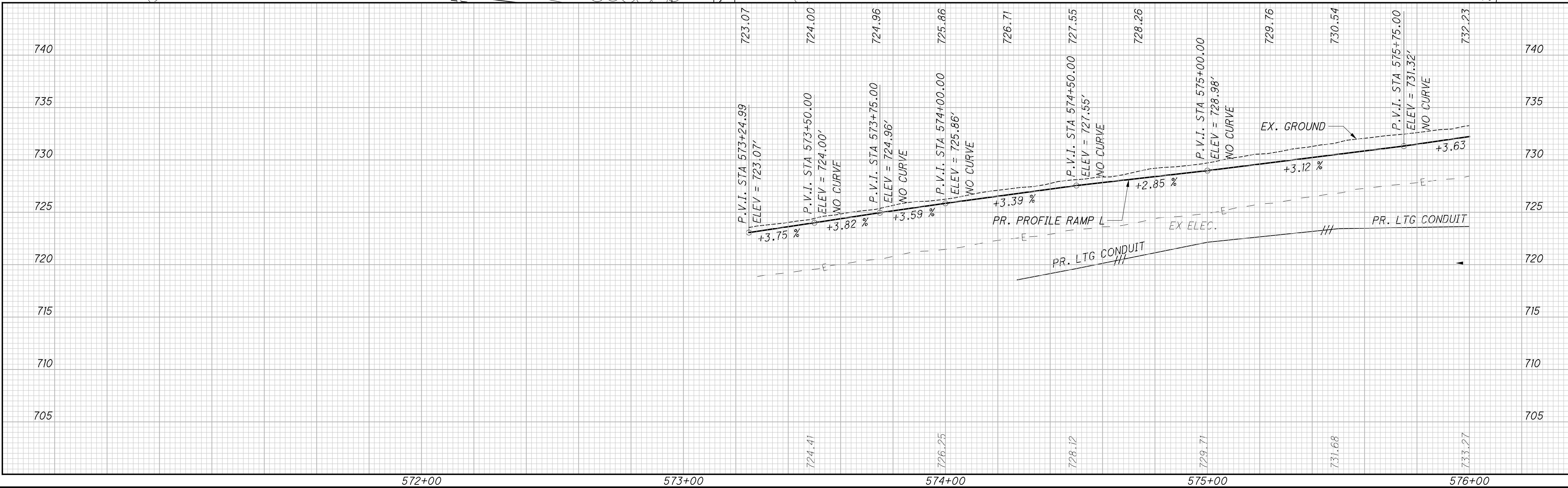


CROSS REFERENCES	
SHEET NO.	DESCRIPTION
5-7	☉ REFERENCES & BENCHMARKS
3	☉ CURVE DATA & GEOMETRIC PLAN
85-94	ROADWAY QUANTITIES
372	CULVERT DETAILS
208-219	CROSS SECTIONS
389	SIGNING & PAVEMENT MARKING
338	GORE DETAILS

**☉ RAMP L - 1**  
 P.I. STA. 623+53.55  
 $\Delta = 162^\circ 22' 11''$  (LT)  
 $Dc = 7^\circ 30' 00''$   
 $R = 763.94'$   
 $T = 4,926.16'$   
 $L = 2,164.93'$   
 $E = 4,221.10'$   
 $C = 1,509.84'$   
 $C.B. = N 25^\circ 22' 24'' W 24.99'$   
 $e = \text{OVERLAY EXISTING}$

**☉ RAMP R - 2**  
 P.I. Sta. 269+39.51  
 $\Delta = 38^\circ 51' 07''$  (RT)  
 $Dc = 7^\circ 30' 00''$   
 $R = 763.94'$   
 $T = 269.42'$   
 $L = 518.02'$   
 $E = 46.11'$   
 $C = 508.16'$   
 $C.B. = N 36^\circ 23' 08'' E$   
 $e \text{ (max)} = 0.054$

**☉ RAMP R - 3**  
 P.I. Sta. 274+68.44  
 $\Delta = 2^\circ 59' 29''$  (RT)  
 $Dc = 1^\circ 00' 00''$   
 $R = 5,729.58'$   
 $T = 149.61'$   
 $L = 299.15'$   
 $E = 1.95'$   
 $C = 299.11'$   
 $C.B. = N 57^\circ 18' 26'' E$   
 $e \text{ (max)} = 0.016$

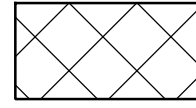
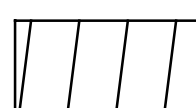


**PLAN AND PROFILE - RAMP L  
STA. 571+88.12 TO STA. 576+00**

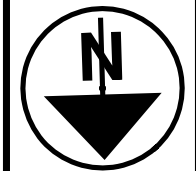
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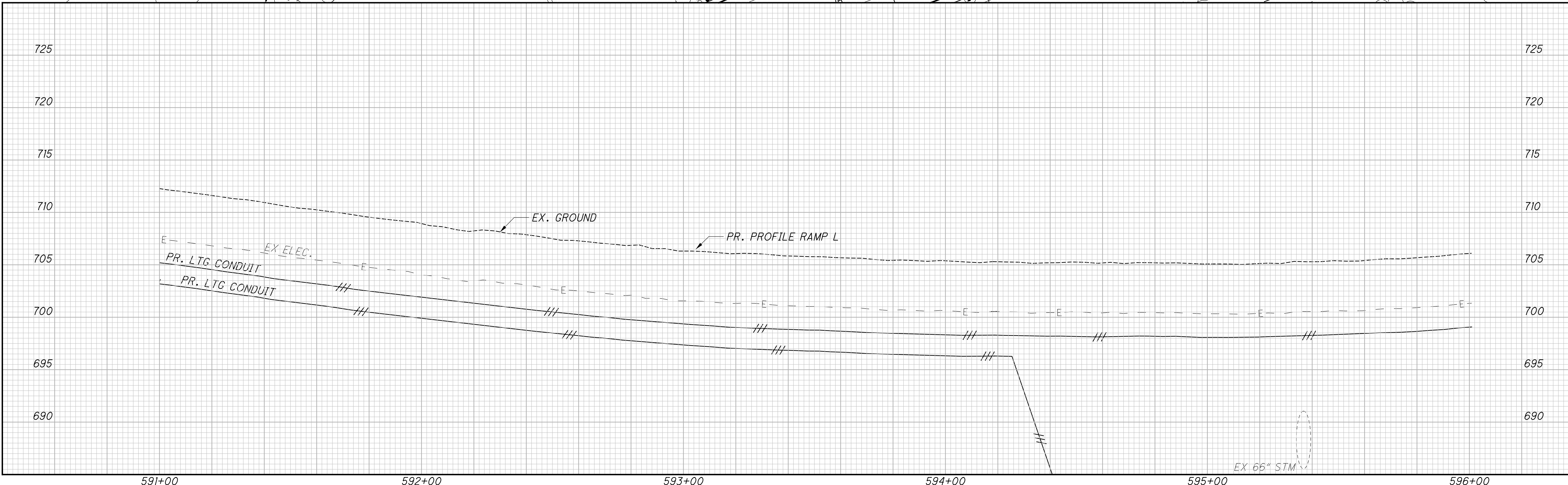
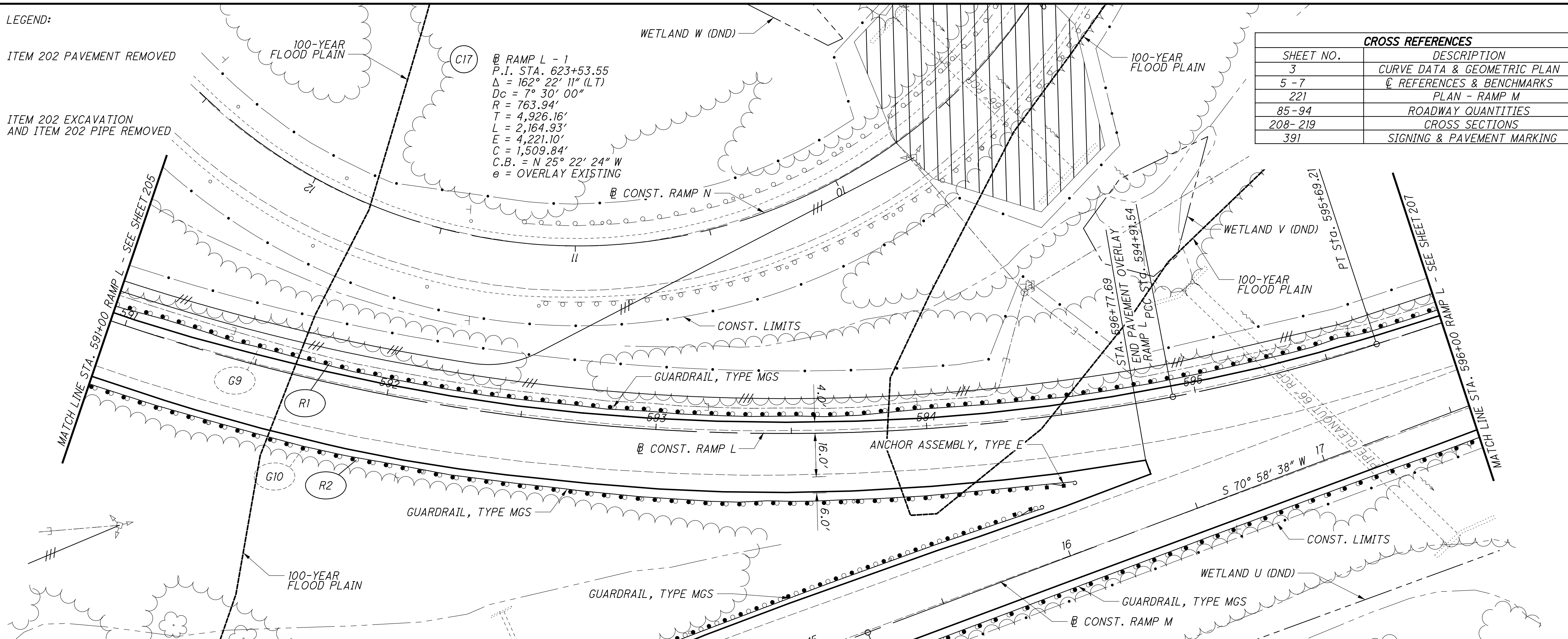


LEGEND:

-  ITEM 202 PAVEMENT REMOVED
-  ITEM 202 EXCAVATION AND ITEM 202 PIPE REMOVED

CROSS REFERENCES	
SHEET NO.	DESCRIPTION
3	CURVE DATA & GEOMETRIC PLAN
5 - 7	☉ REFERENCES & BENCHMARKS
221	PLAN - RAMP M
85-94	ROADWAY QUANTITIES
208-219	CROSS SECTIONS
391	SIGNING & PAVEMENT MARKING

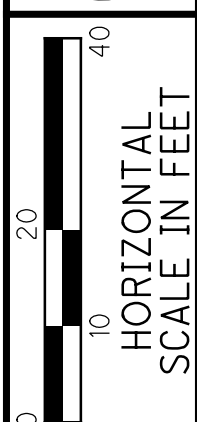
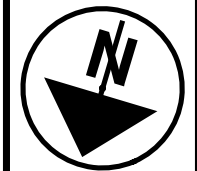
  
 0 20 40  
 HORIZONTAL SCALE IN FEET  
 CALCULATED ACF CHECKED CSR



**PLAN AND PROFILE - RAMP L**  
**STA. 591+00 TO STA. 596+00**

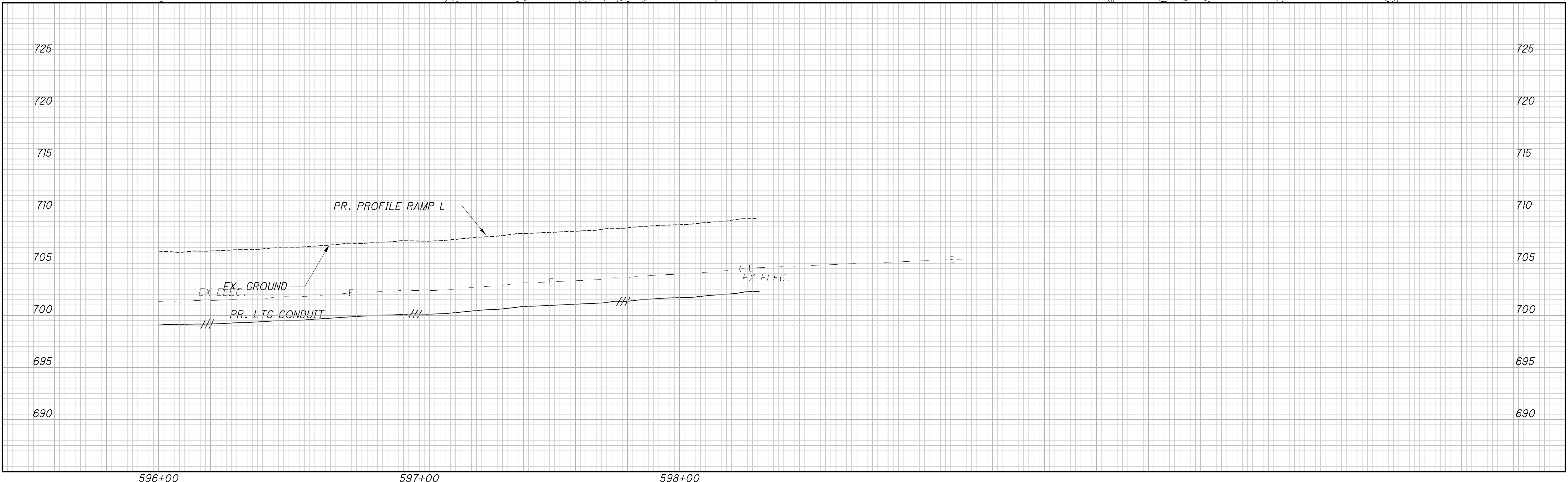
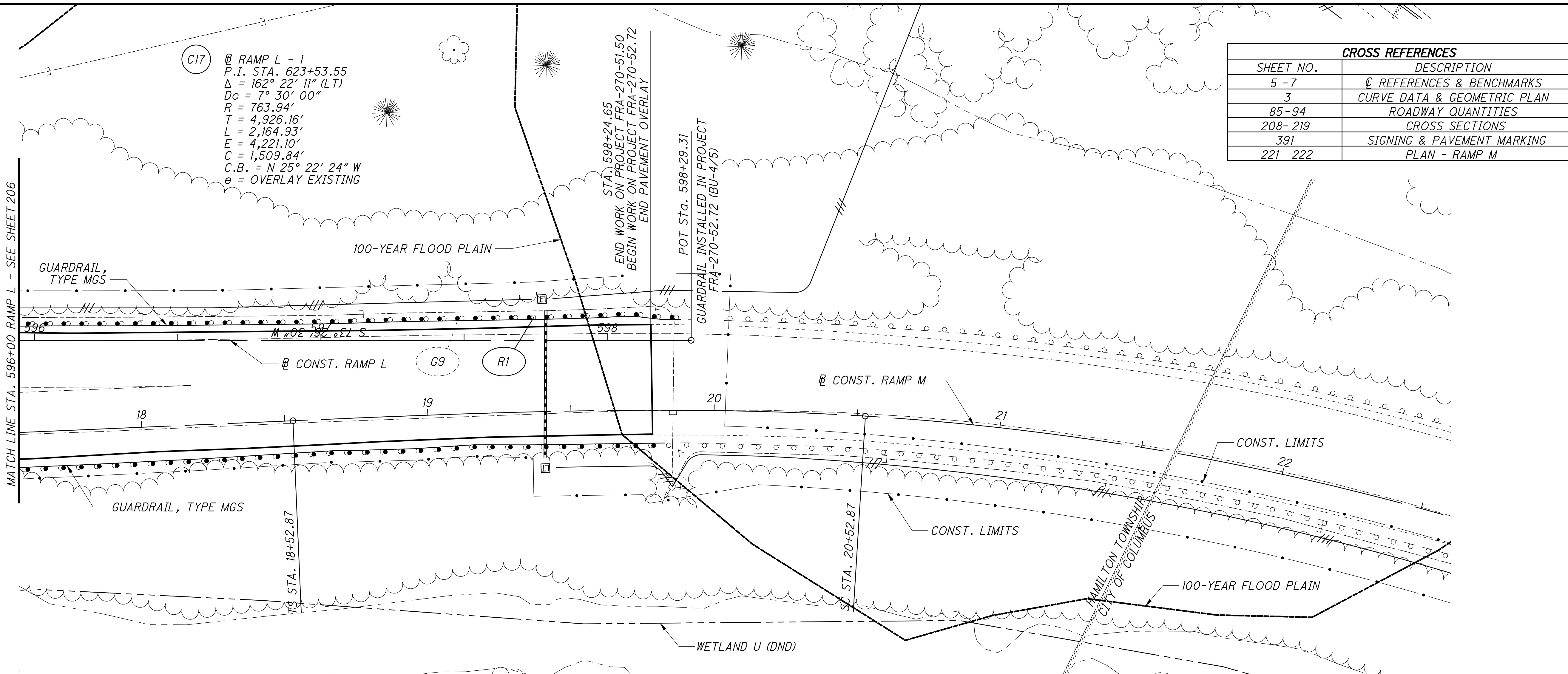
**FRA - 270-51.50**

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CALCULATED ACF CHECKED CSR

CROSS REFERENCES	
SHEET NO.	DESCRIPTION
5 - 7	REFERENCES & BENCHMARKS
3	CURVE DATA & GEOMETRIC PLAN
85 - 94	ROADWAY QUANTITIES
208 - 219	CROSS SECTIONS
391	SIGNING & PAVEMENT MARKING
221 222	PLAN - RAMP M

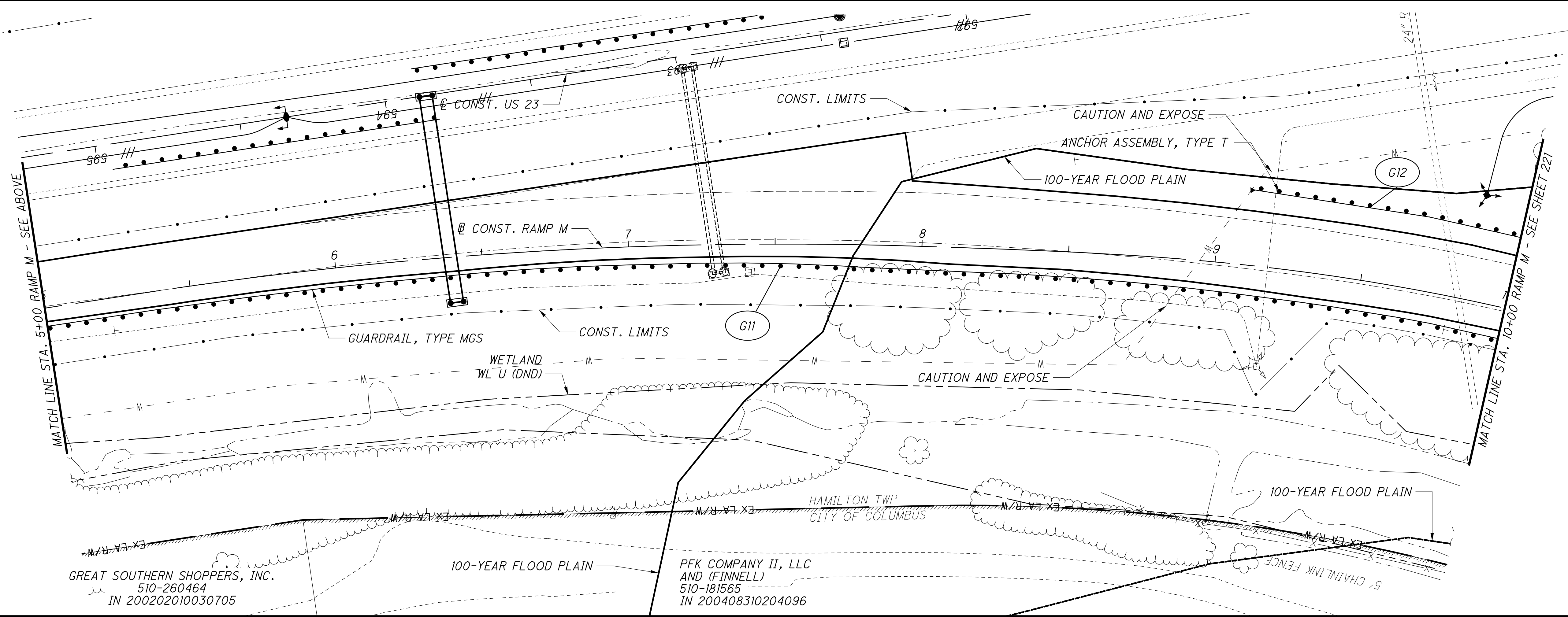
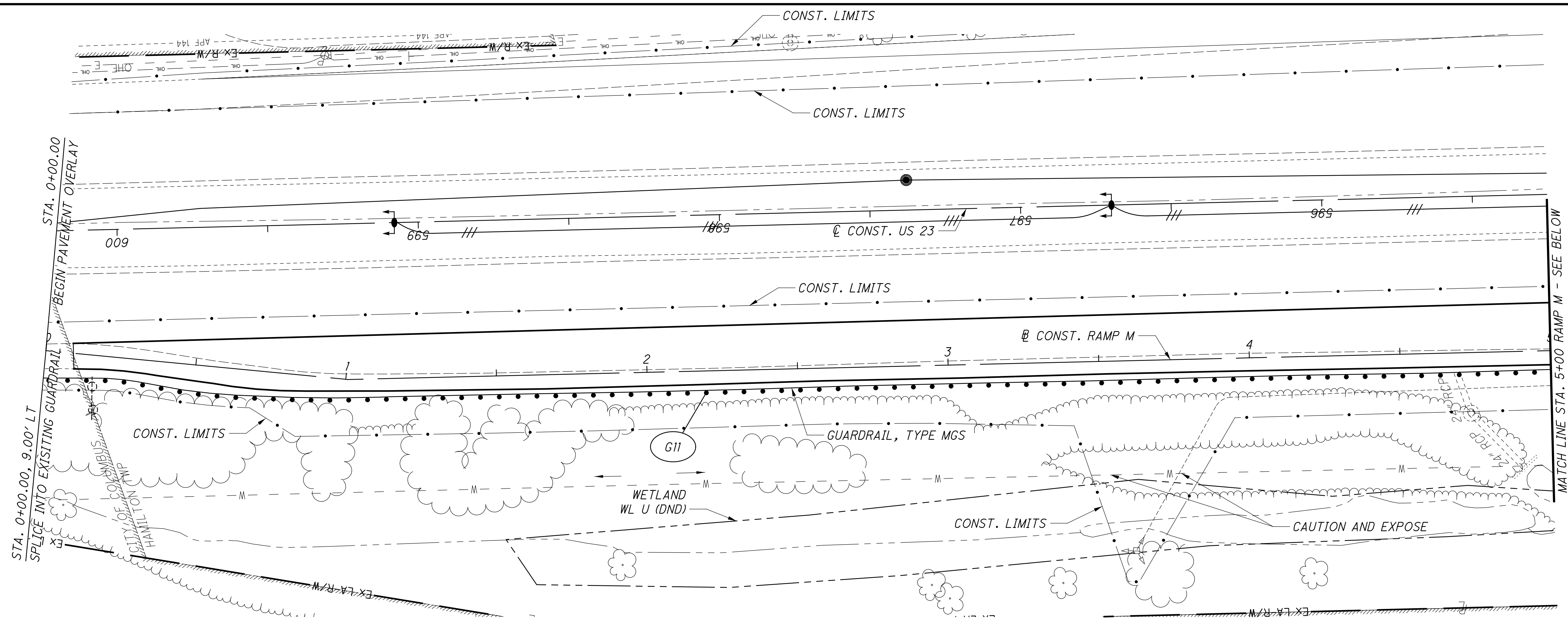


**PLAN AND PROFILE - RAMP L**  
**STA. 596+00 TO STA. 598+34.78**

**FRA - 270-51.50**

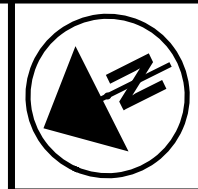
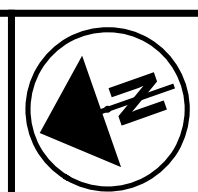
X:\Projects\2013\132\1010\FRA\92616\roadway\sheet\92616GP206.dgn 2/9/2023 11:30:58 AM cwong

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GREAT SOUTHERN SHOPPERS, INC.  
510-260464  
IN 200202010030705

PFK COMPANY II, LLC  
AND (FINNELL)  
510-181565  
IN 200408310204096



CALCULATED	ACF	CHECKED	CSR

0 10 20 40  
HORIZONTAL  
SCALE IN FEET

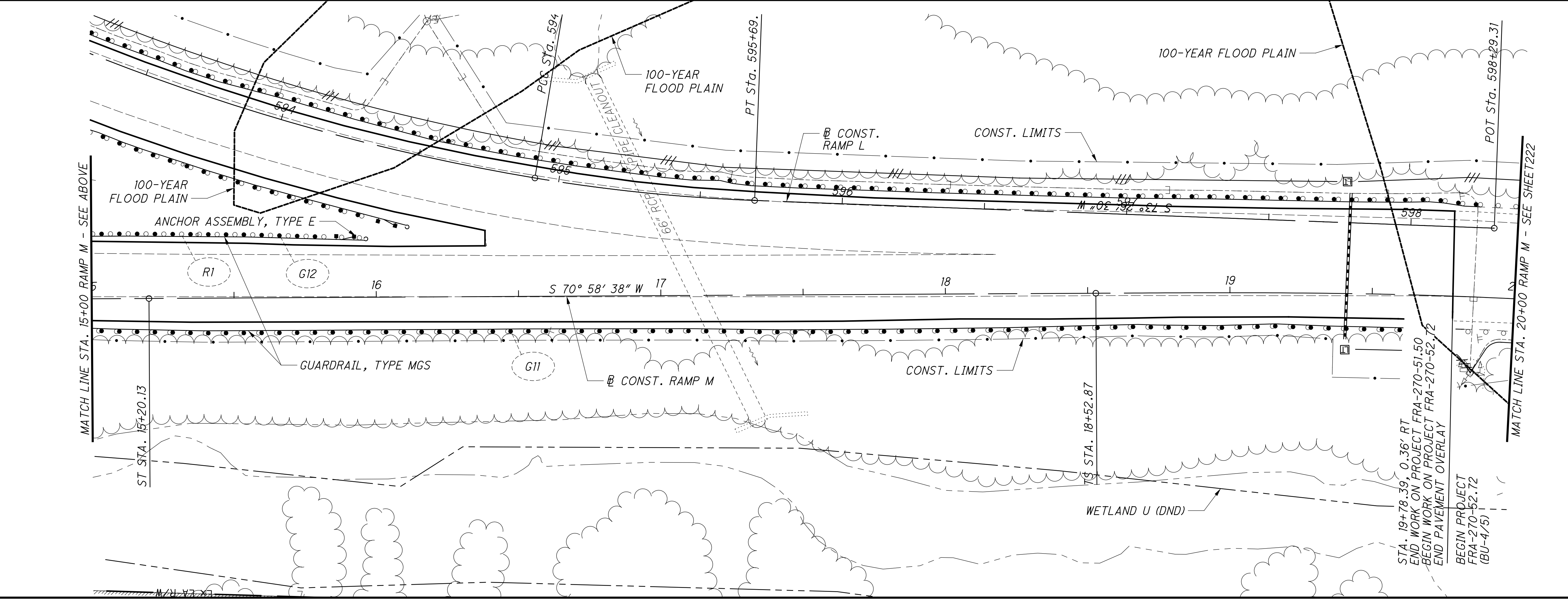
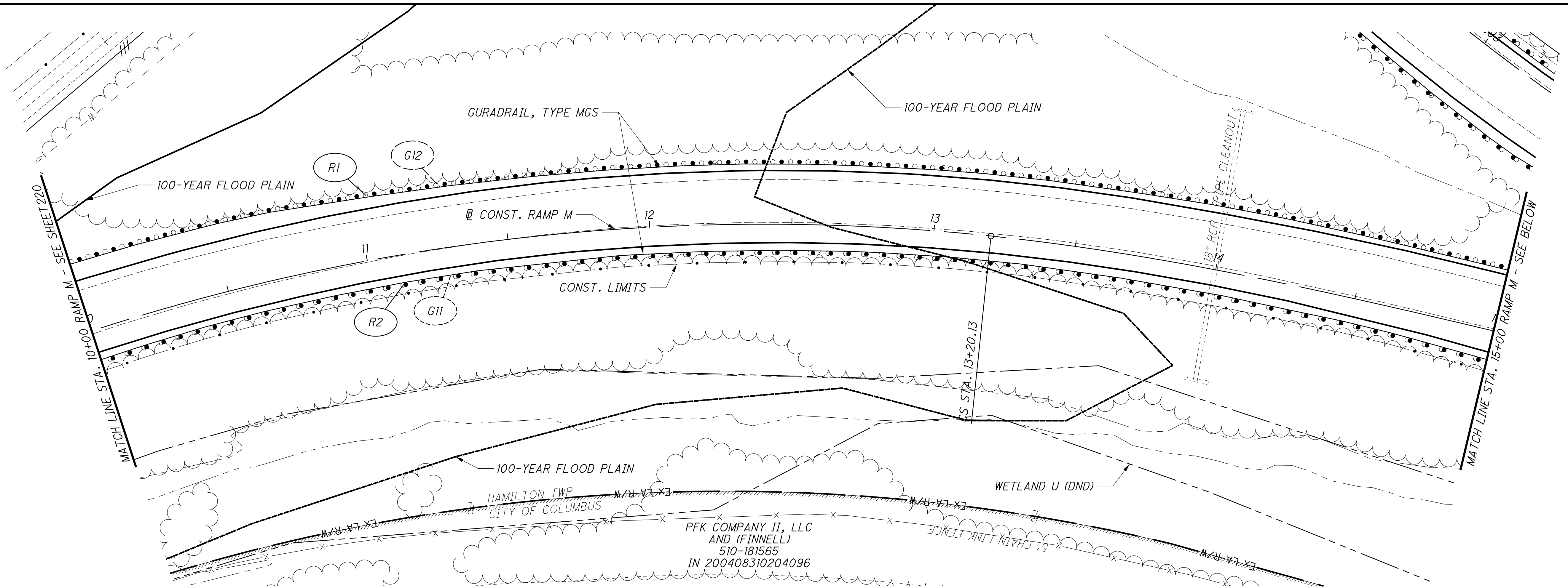
PLAN - RAMP M  
STA. 0+00.00 TO STA. 10+00.00

FRA - 270-51.50

220  
554



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CALCULATED 20  
 ACF  
 CHECKED CSR  
 HORIZONTAL SCALE IN FEET  
 0 10 20 40

**PLAN - RAMP M**  
**STA. 10+00.00 TO STA. 20+00.00**

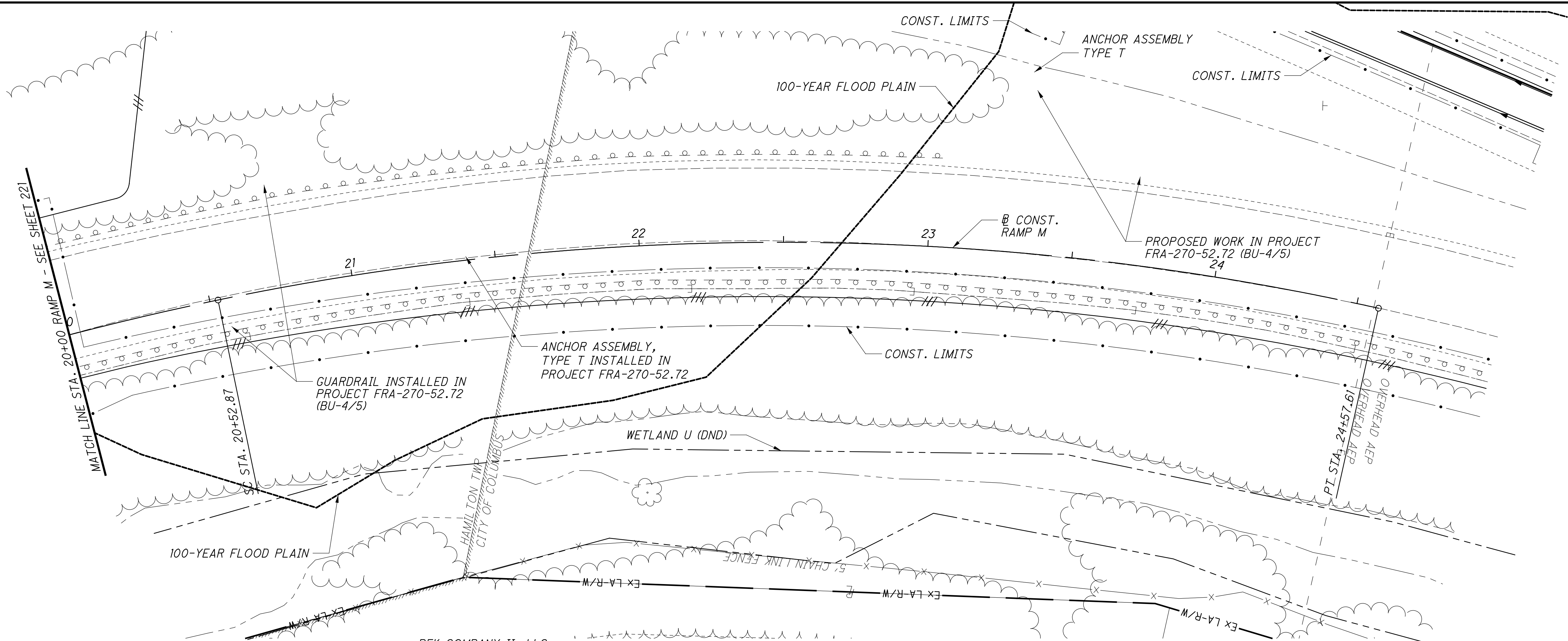
**FRA - 270-51.50**

221  
554

STA. 19+78.39, 0.36' RT  
 END WORK ON PROJECT FRA-270-51.50  
 BEGIN WORK ON PROJECT FRA-270-52.72  
 END PAVEMENT OVERLAY  
 BEGIN PROJECT  
 FRA-270-52.72  
 (BU-4/5)

PFK COMPANY II, LLC  
 AND (FINNELL)  
 510-181565  
 IN 200408310204096

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PFK COMPANY II, LLC  
 AND (FINNELL)  
 510-181565  
 IN 200408310204096

CALCULATED 0  
 ACF 10  
 CHECKED 40  
 CSR

HORIZONTAL SCALE IN FEET

**PLAN - RAMP M**  
**STA. 20+00.00 TO STA. 24+57.61**

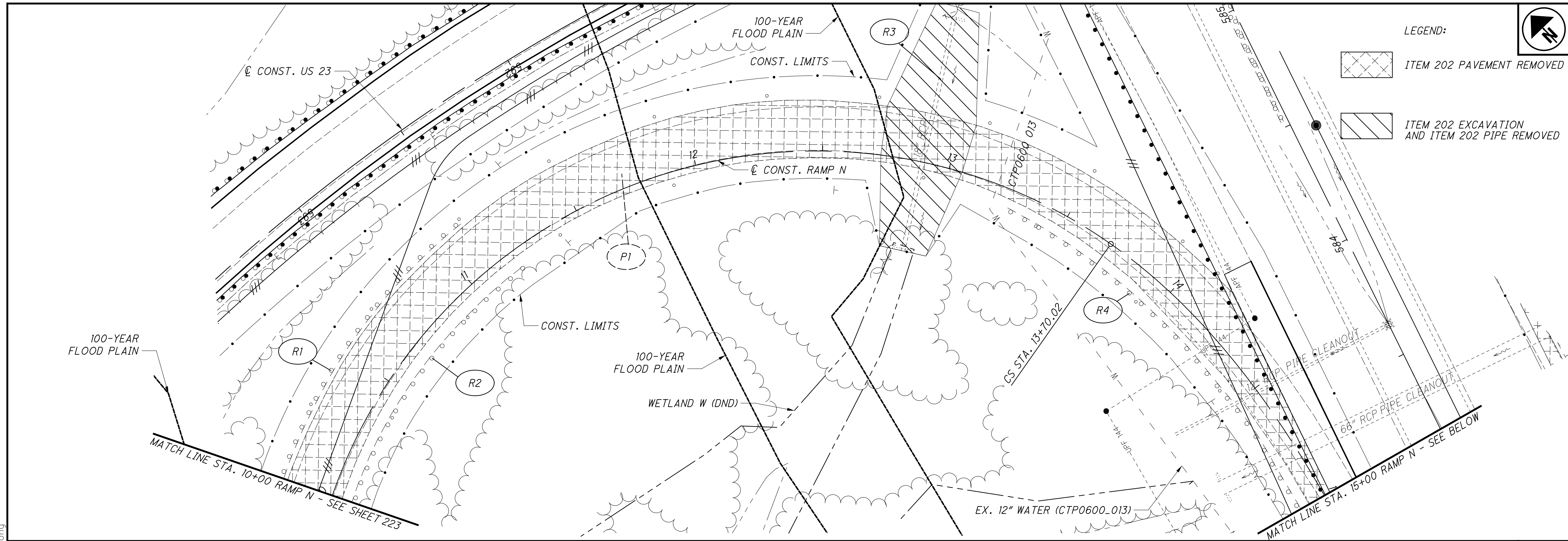
**FRA - 270 - 51.50**

222  
 554





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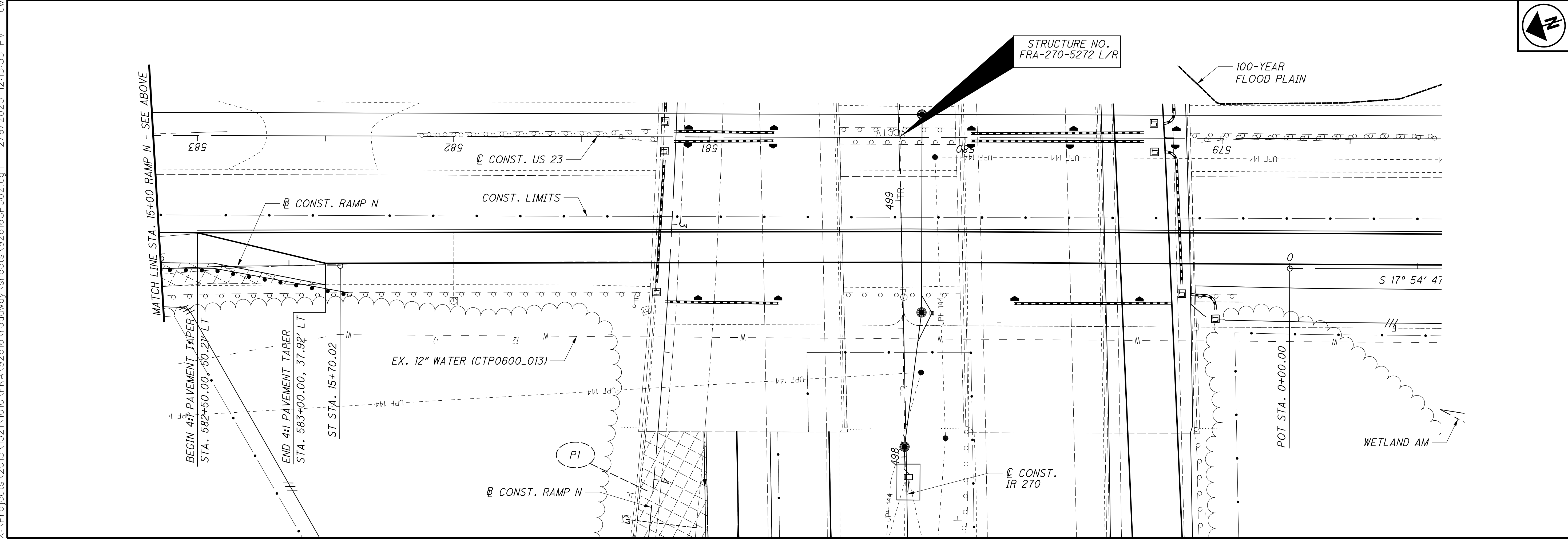
LEGEND:

- ITEM 202 PAVEMENT REMOVED
- ITEM 202 EXCAVATION AND ITEM 202 PIPE REMOVED

CALCULATED ACF CHECKED CSR

0 10 20 40  
HORIZONTAL SCALE IN FEET

PLAN - RAMP N  
STA. 10+00 TO STA. 15+70.02



STRUCTURE NO.  
FRA-270-5272 L/R

FRA - 270-51.50

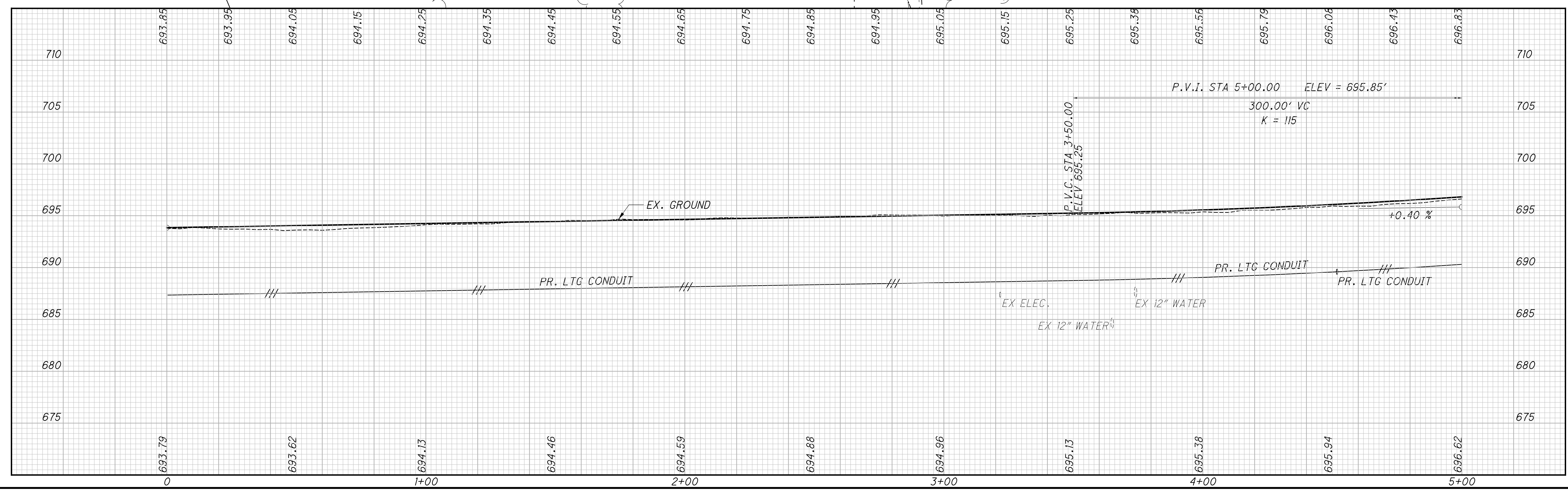
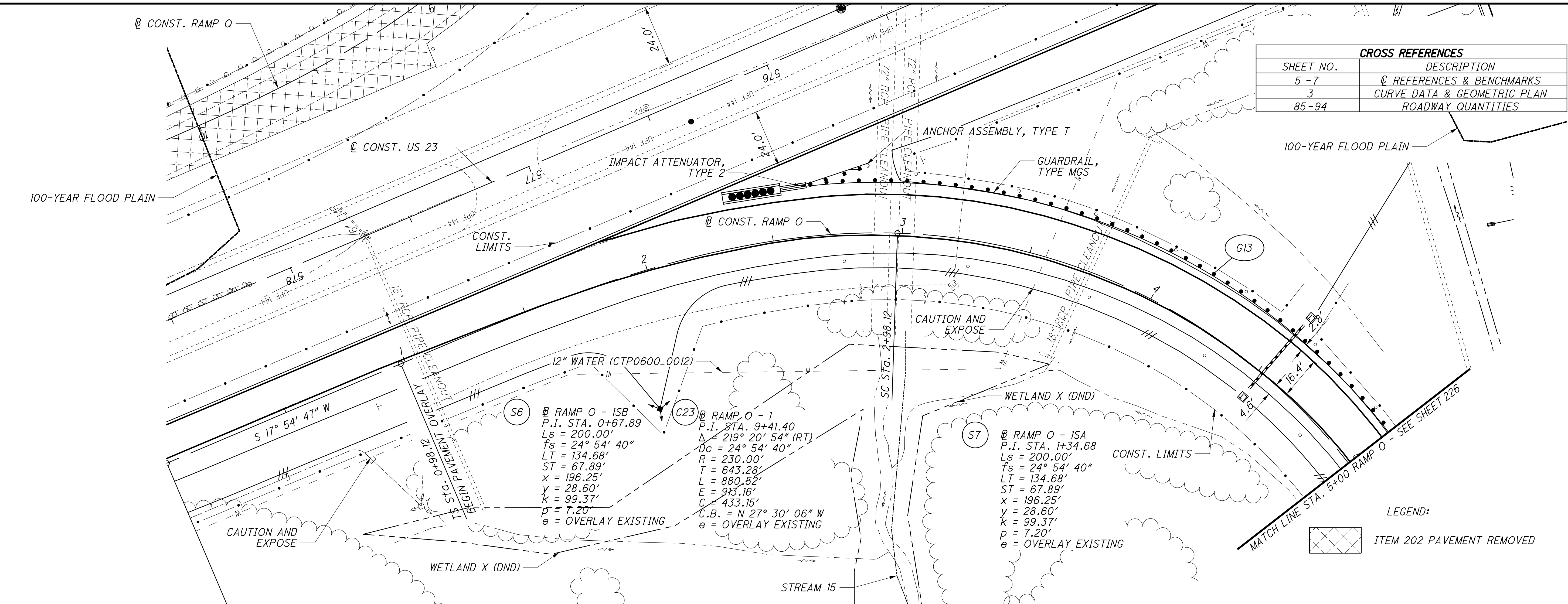
224  
554



10  
20  
40  
HORIZONTAL  
SCALE IN FEET

CALCULATED ACF CHECKED CSR

CROSS REFERENCES	
SHEET NO.	DESCRIPTION
5-7	REFERENCES & BENCHMARKS
3	CURVE DATA & GEOMETRIC PLAN
85-94	ROADWAY QUANTITIES



PLAN AND PROFILE - RAMP O  
STA. 0+00 TO STA. 5+00

FRA - 270-51.50

225  
554

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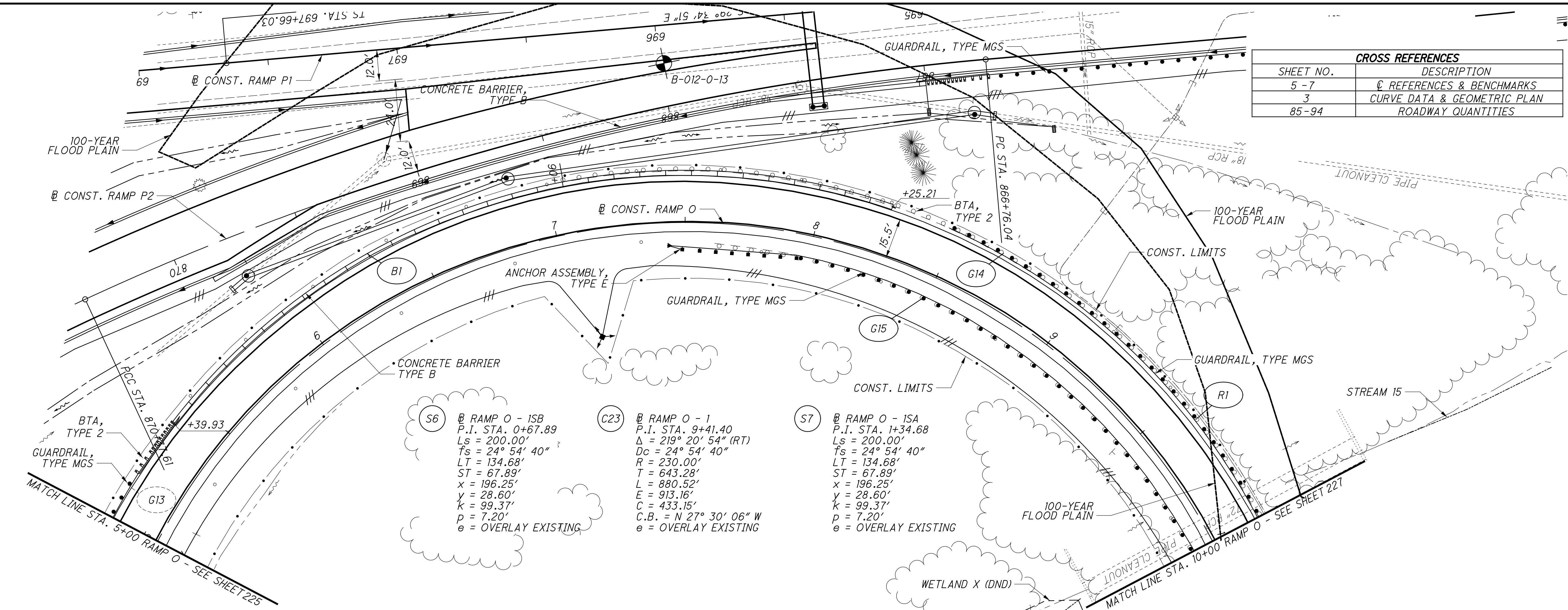




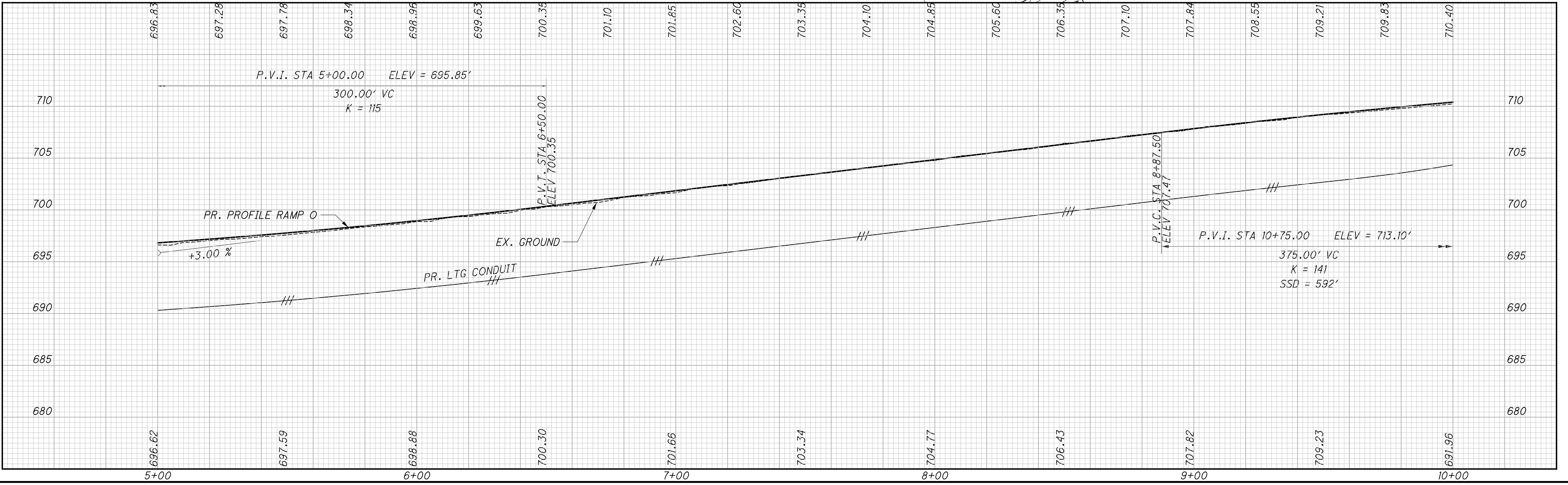
CROSS REFERENCES	
SHEET NO.	DESCRIPTION
5-7	REFERENCES & BENCHMARKS
3	CURVE DATA & GEOMETRIC PLAN
85-94	ROADWAY QUANTITIES

CALCULATED  
ACF  
CHECKED  
CSR

0 20 40  
HORIZONTAL  
SCALE IN FEET



- (S6) RAMP O - ISB  
P.I. STA. 0+67.89  
Ls = 200.00'  
fs = 24° 54' 40"  
LT = 134.68'  
ST = 67.89'  
x = 196.25'  
y = 28.60'  
k = 99.37'  
p = 7.20'  
e = OVERLAY EXISTING
- (C23) RAMP O - I  
P.I. STA. 9+41.40  
Δ = 219° 20' 54" (RT)  
Dc = 24° 54' 40"  
R = 230.00'  
T = 643.28'  
L = 880.52'  
E = 913.16'  
C = 433.15'  
C.B. = N 27° 30' 06" W  
e = OVERLAY EXISTING
- (S7) RAMP O - ISA  
P.I. STA. 1+34.68  
Ls = 200.00'  
fs = 24° 54' 40"  
LT = 134.68'  
ST = 67.89'  
x = 196.25'  
y = 28.60'  
k = 99.37'  
p = 7.20'  
e = OVERLAY EXISTING



PLAN AND PROFILE - RAMP O  
STA. 5+00 TO STA. 10+00

FRA - 270-51.50

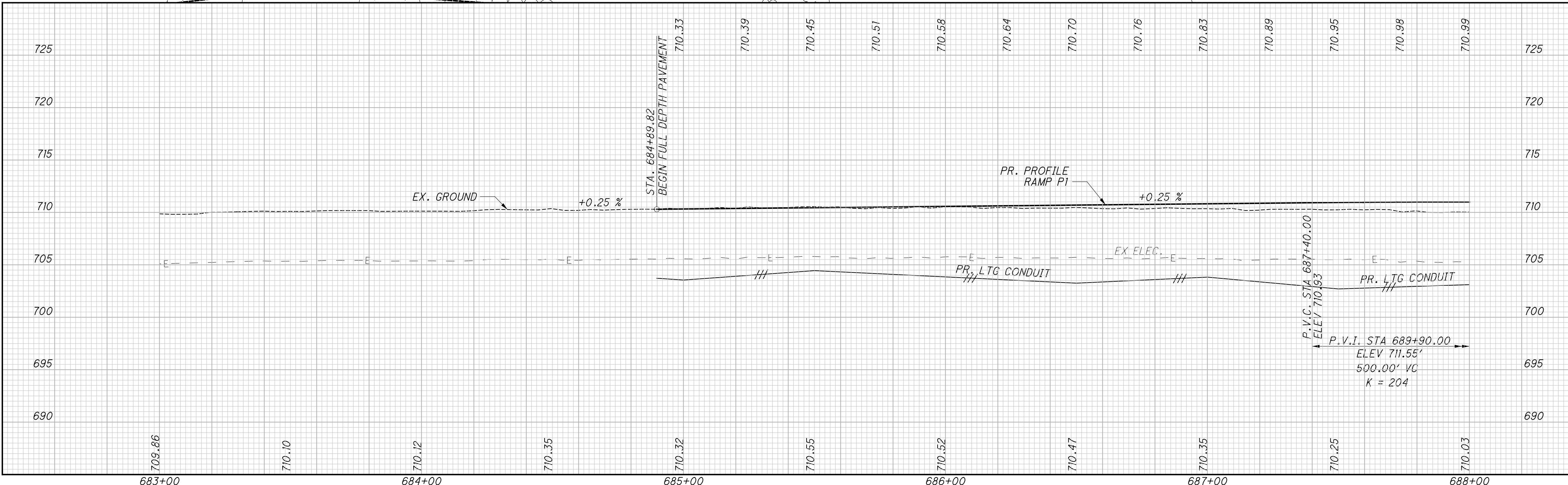
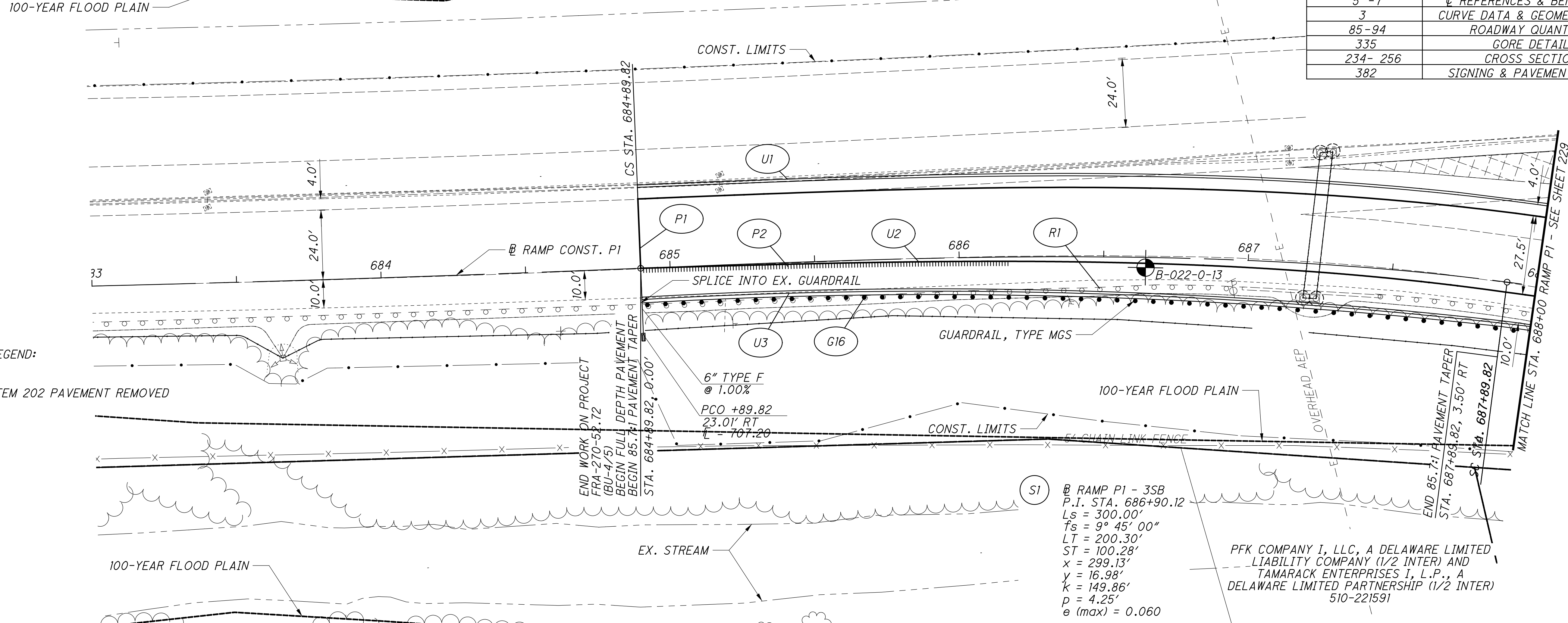
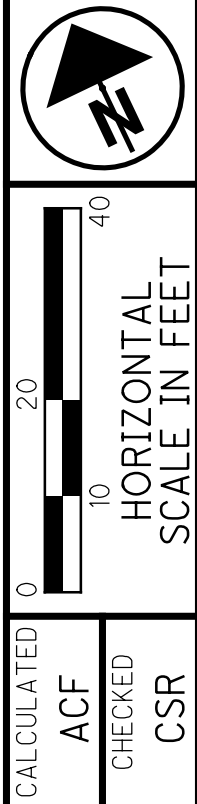
226  
554

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288 483 UPF 288 484  
 Q CONST. IR 270

CROSS REFERENCES	
SHEET NO.	DESCRIPTION
5 - 7	Q REFERENCES & BENCHMARKS
3	CURVE DATA & GEOMETRIC PLAN
85 - 94	ROADWAY QUANTITIES
335	GORE DETAILS
234 - 256	CROSS SECTIONS
382	SIGNING & PAVEMENT MARKING



**PLAN AND PROFILE - RAMP P1**  
**STA. 683+00 TO STA. 688+00**

**FRA - 270 - 51.50**

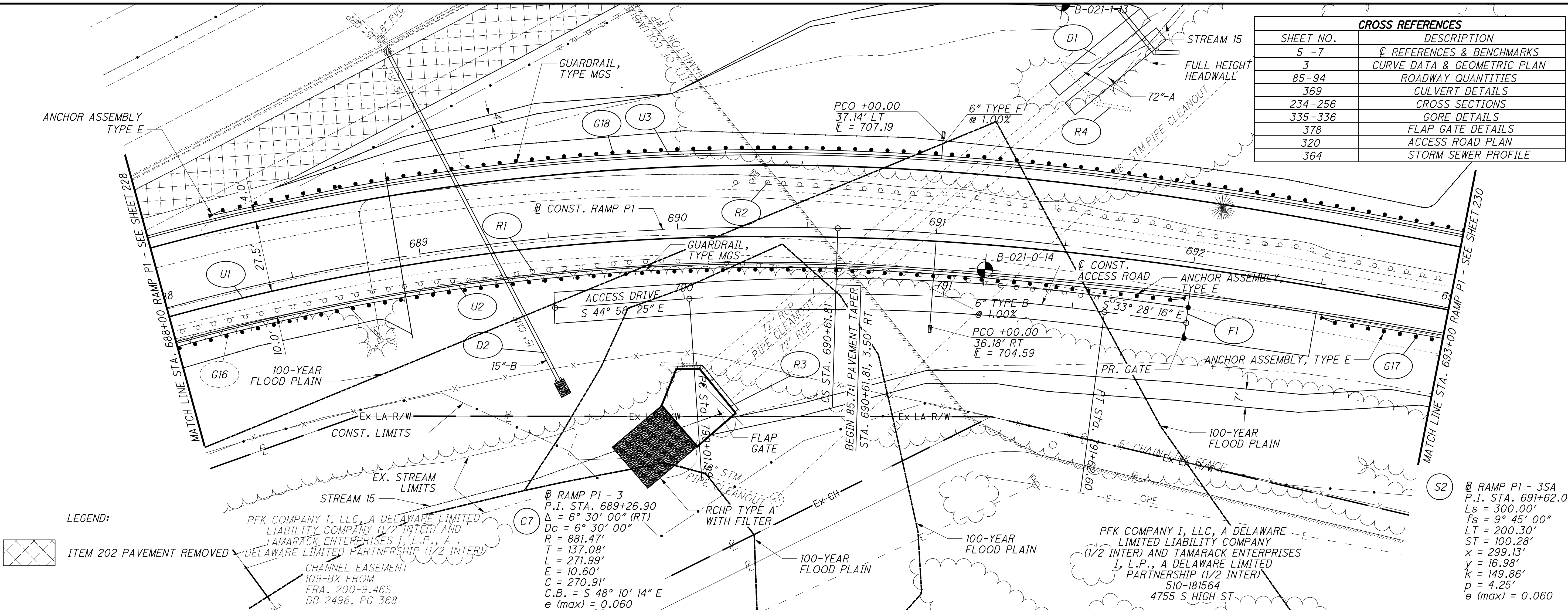
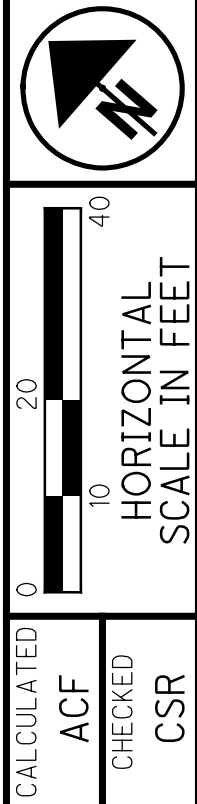
228  
 554

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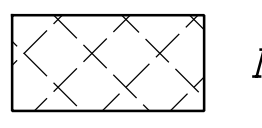


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CROSS REFERENCES	
SHEET NO.	DESCRIPTION
5 - 7	☉ REFERENCES & BENCHMARKS
3	CURVE DATA & GEOMETRIC PLAN
85 - 94	ROADWAY QUANTITIES
369	CULVERT DETAILS
234 - 256	CROSS SECTIONS
335 - 336	GORE DETAILS
378	FLAP GATE DETAILS
320	ACCESS ROAD PLAN
364	STORM SEWER PROFILE



LEGEND:



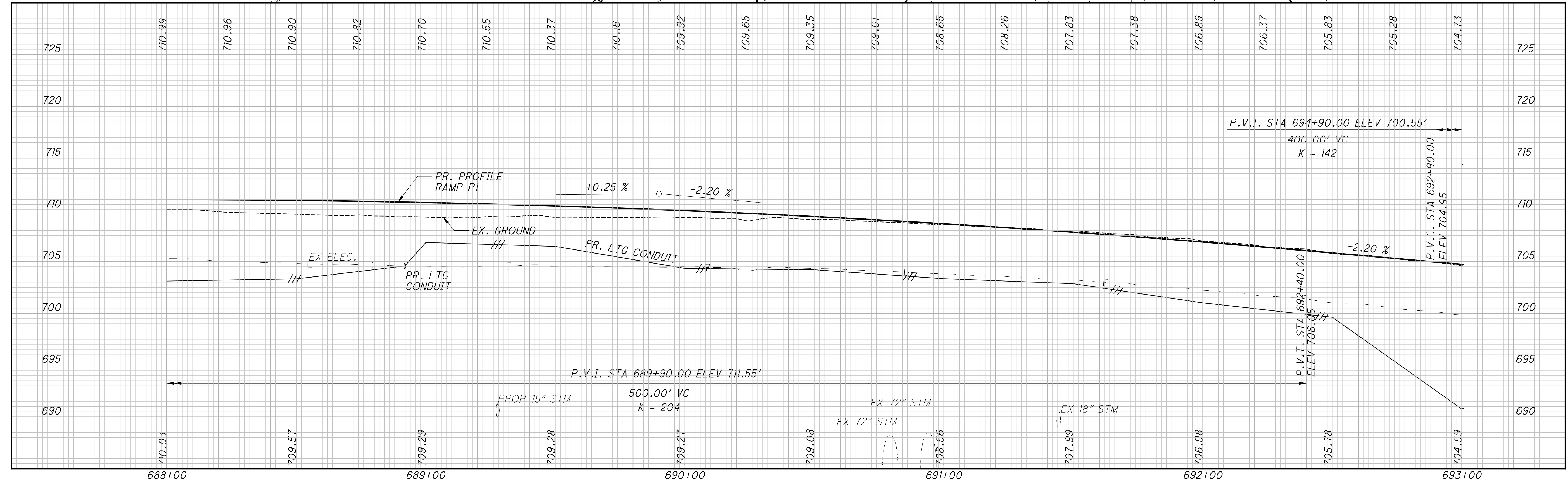
ITEM 202 PAVEMENT REMOVED

PFK COMPANY I, LLC, A DELAWARE LIMITED LIABILITY COMPANY (1/2 INTER) AND TAMARACK ENTERPRISES I, L.P., A DELAWARE LIMITED PARTNERSHIP (1/2 INTER)  
CHANNEL EASEMENT 109-BX FROM FRA. 200-9.46S DB 2498, PG 368

RAMP P1 - 3  
P.I. STA. 689+26.90  
 $\Delta = 6^\circ 30' 00''$  (RT)  
 $D_c = 6^\circ 30' 00''$   
 $R = 881.47'$   
 $T = 137.08'$   
 $L = 271.99'$   
 $E = 10.60'$   
 $C = 270.91'$   
C.B. = S 48° 10' 14" E  
e (max) = 0.060

PFK COMPANY I, LLC, A DELAWARE LIMITED LIABILITY COMPANY (1/2 INTER) AND TAMARACK ENTERPRISES I, L.P., A DELAWARE LIMITED PARTNERSHIP (1/2 INTER)  
510-181564  
4755 S HIGH ST

RAMP P1 - 3SA  
P.I. STA. 691+62.09  
 $L_s = 300.00'$   
 $f_s = 9^\circ 45' 00''$   
 $LT = 200.30'$   
 $ST = 100.28'$   
 $x = 299.13'$   
 $y = 16.98'$   
 $k = 149.86'$   
 $p = 4.25'$   
e (max) = 0.060



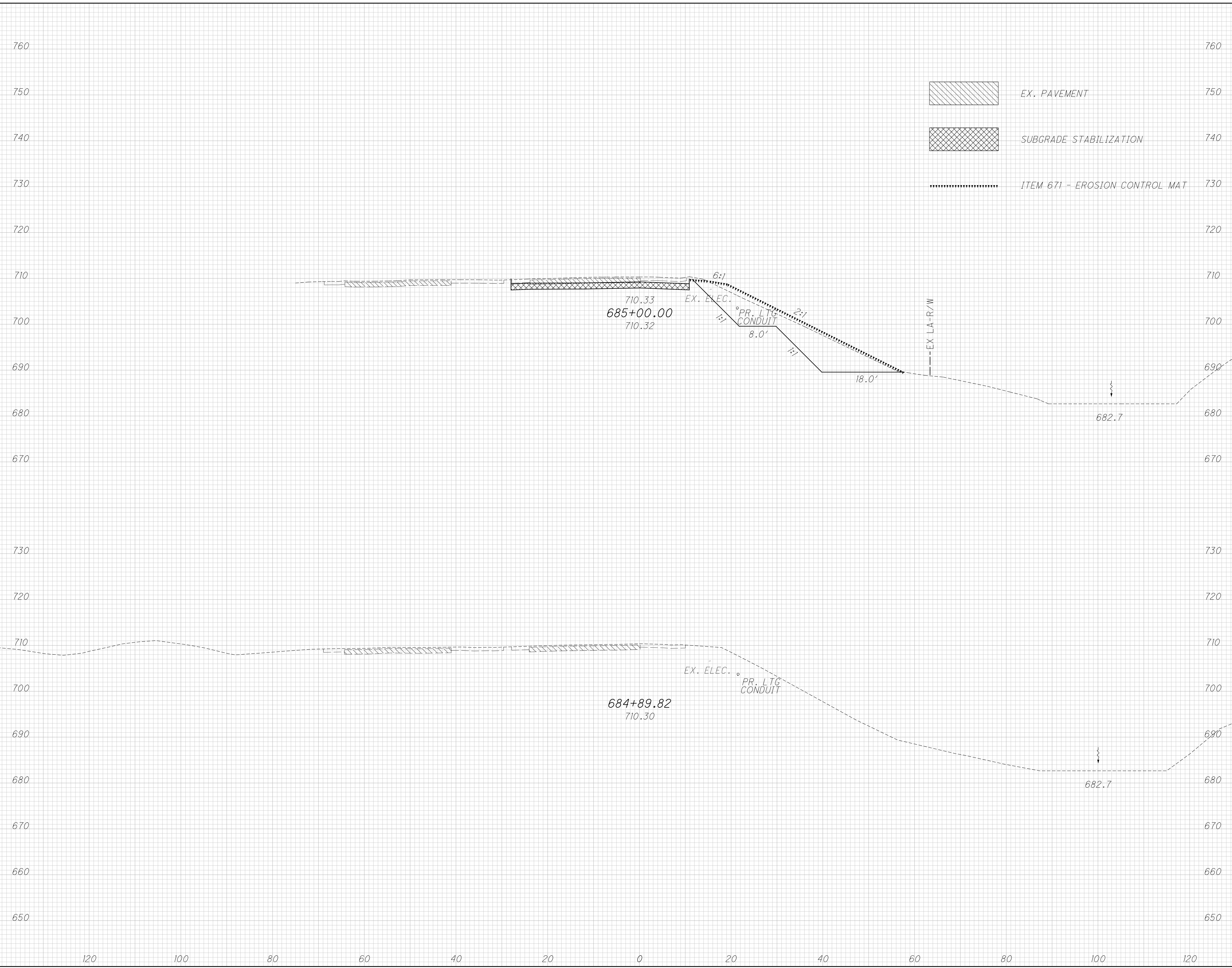
PLAN AND PROFILE - RAMP P1  
STA. 688+00 TO STA. 693+00

FRA - 270-51.50

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SEEDING

END WIDTH	SO. YDS.



END AREA		VOLUME		CALCULATED ACF	CHECKED CSR
CUT	FILL	CUT	FILL		

**CROSS SECTIONS RAMP P1**  
**STA. 684+50.00 TO STA. 685+00.00**

**FRA - 270-51.50**

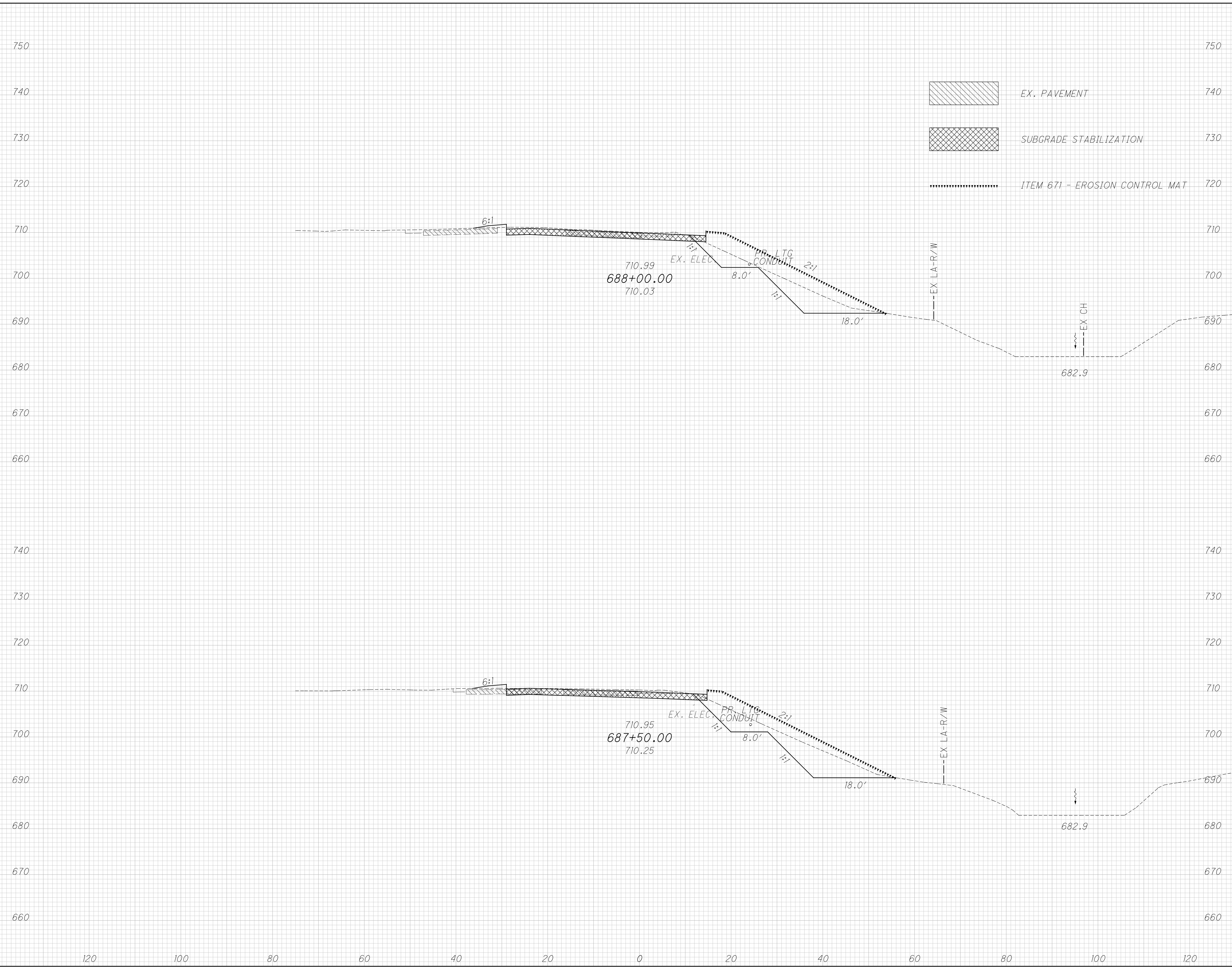
234  
554





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SEEDING  
END SO.  
WIDTH YDS.



END AREA		VOLUME		CALCULATED ACF	CHECKED CSR
CUT	FILL	CUT	FILL		

**CROSS SECTIONS RAMP P1**  
**STA. 687+50.00 TO STA. 688+00.00**

**FRA - 270-51.50**

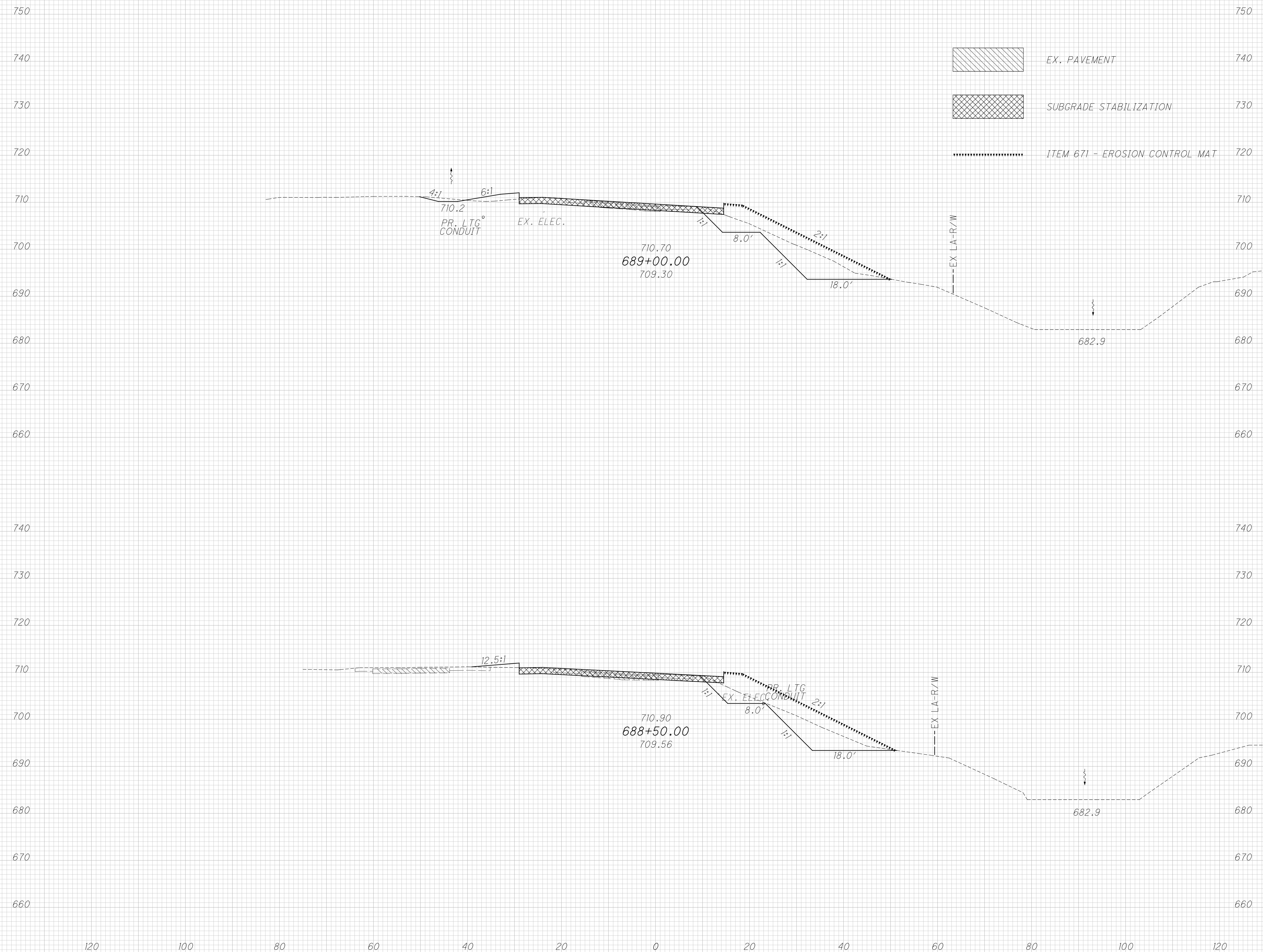
237  
554



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SEEDING  
END SO.  
WIDTH YDS.

END AREA  
CUT FILL  
VOLUME  
CUT FILL  
CALCULATED  
ACF  
CHECKED  
CSR



120 100 80 60 40 20 0 20 40 60 80 100 120

**CROSS SECTIONS RAMP P1  
STA. 688+50.00 TO STA. 689+00.00**

**FRA - 270-51.50**

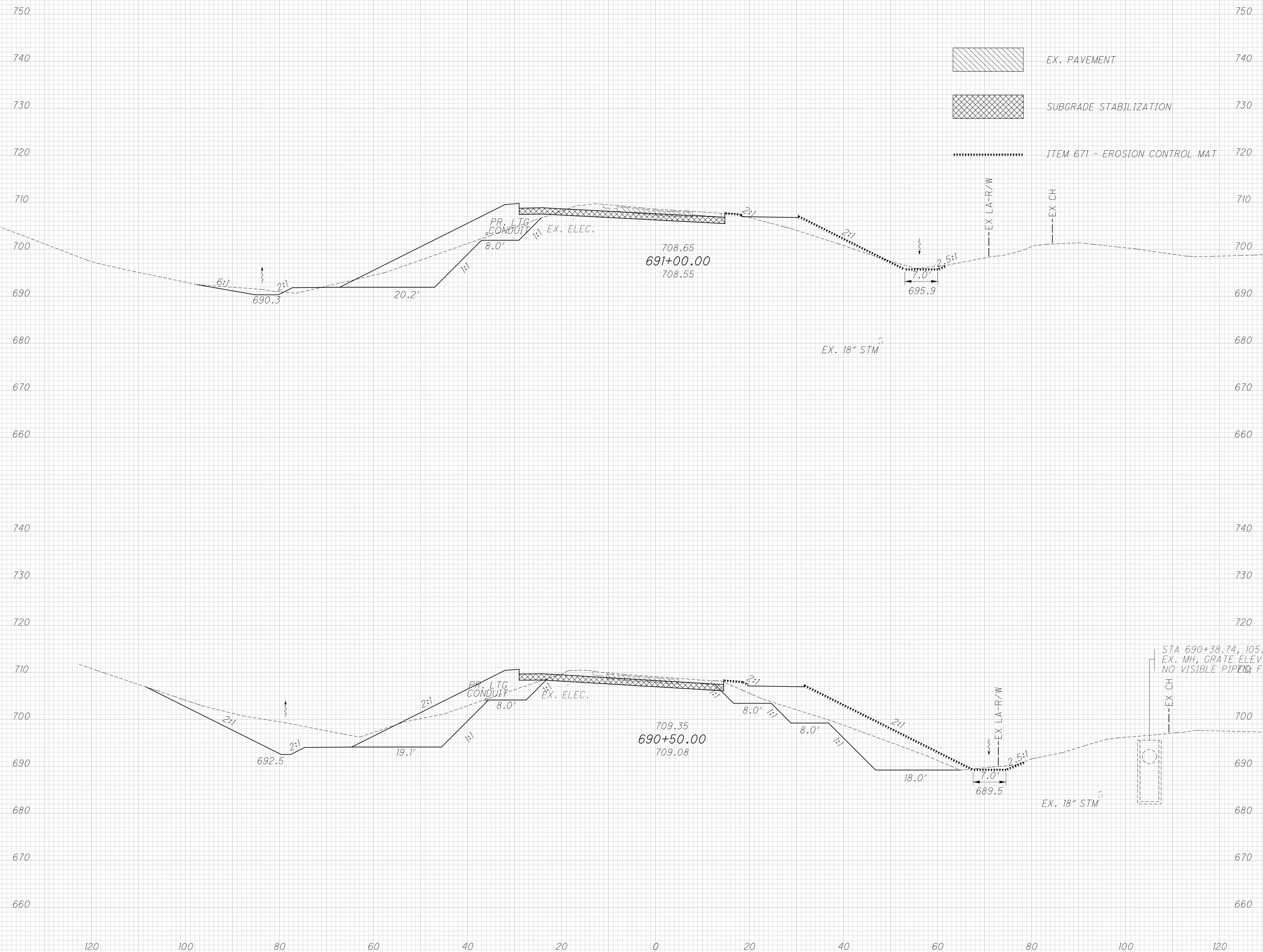
238  
554

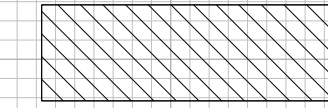
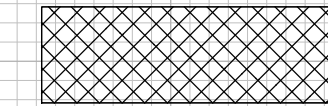
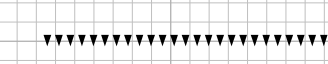


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SEEDING	
END WIDTH	SO. YDS.

END AREA		VOLUME		CALCULATED	CHECKED
CUT	FILL	CUT	FILL	ACF	CSR



 EX. PAVEMENT  
 SUBGRADE STABILIZATION  
 ITEM 671 - EROSION CONTROL MAT

**CROSS SECTIONS RAMP P1**  
**STA. 690+50.00 TO STA. 691+00.00**

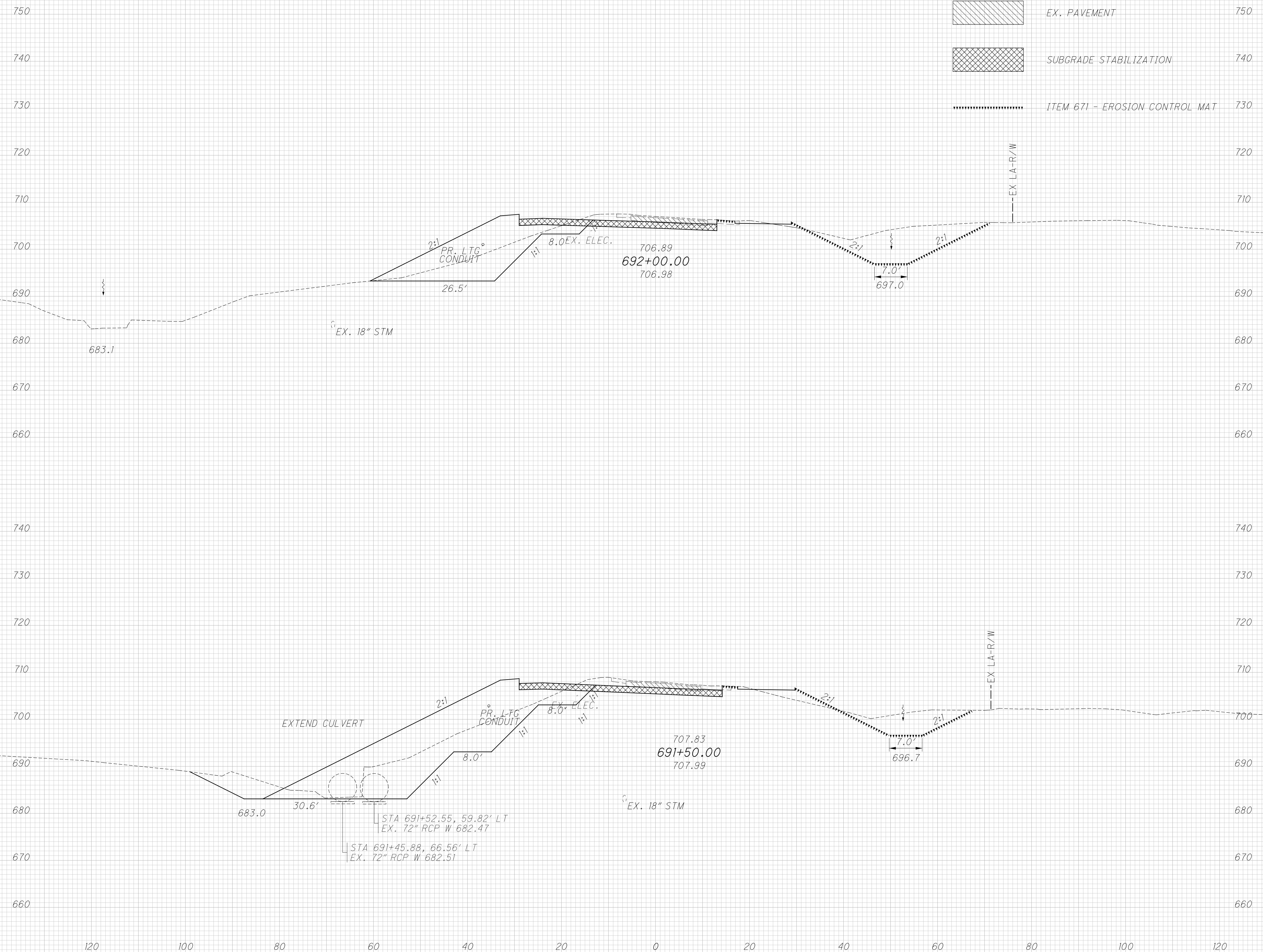
**FRA - 270 - 51.50**

240  
554

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SEEDING  
END SO.  
WIDTH YDS.

END AREA  
CUT FILL  
VOLUME  
CUT FILL  
CALCULATED  
ACF  
CHECKED  
CSR



**CROSS SECTIONS RAMP P1**  
**STA. 691+50.00 TO STA. 692+00.00**

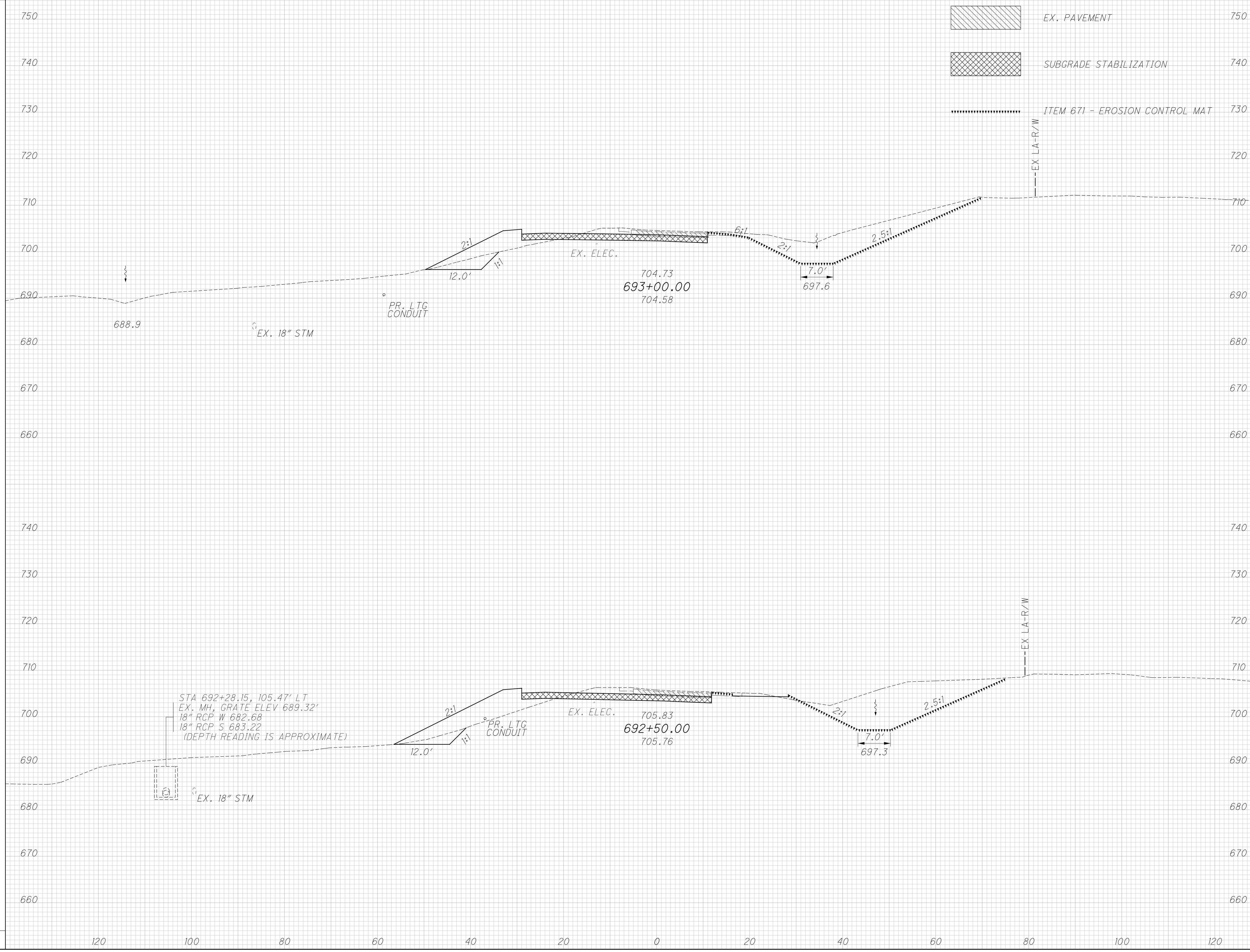
**FRA - 270-51.50**

241  
554

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SEEDING  
END SO.  
WIDTH YDS.

END AREA  
CUT FILL  
VOLUME  
CUT FILL  
CALCULATED  
CHECKED  
ACF  
CSR



**CROSS SECTIONS RAMP P1**  
**STA. 692+50.00 TO STA. 693+00.00**

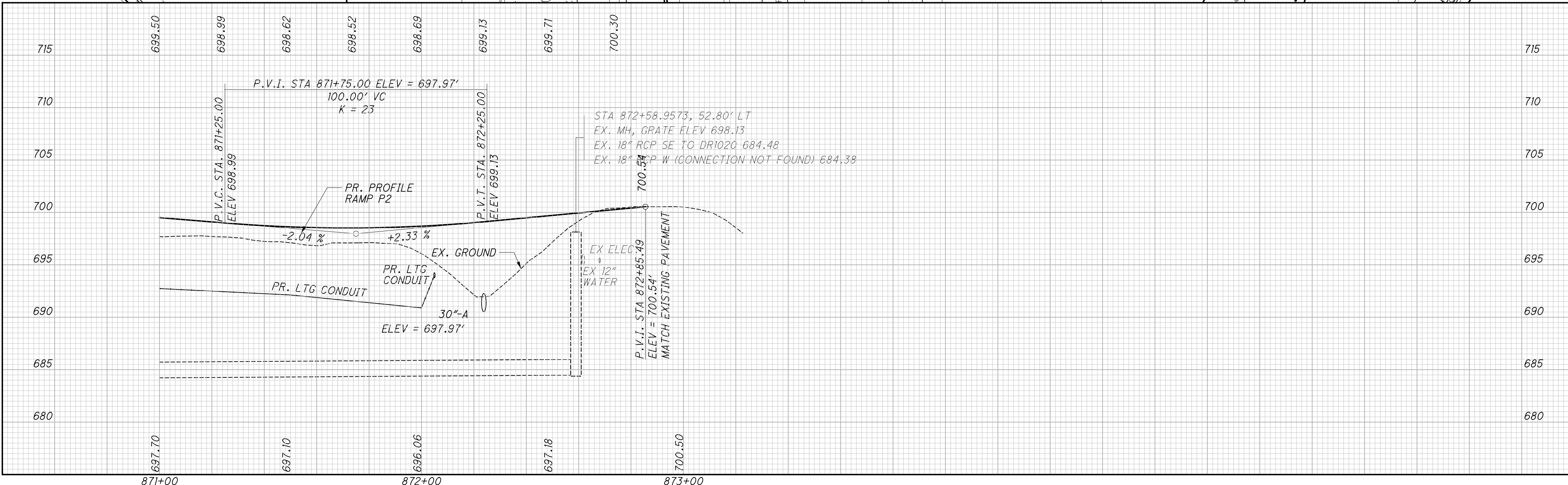
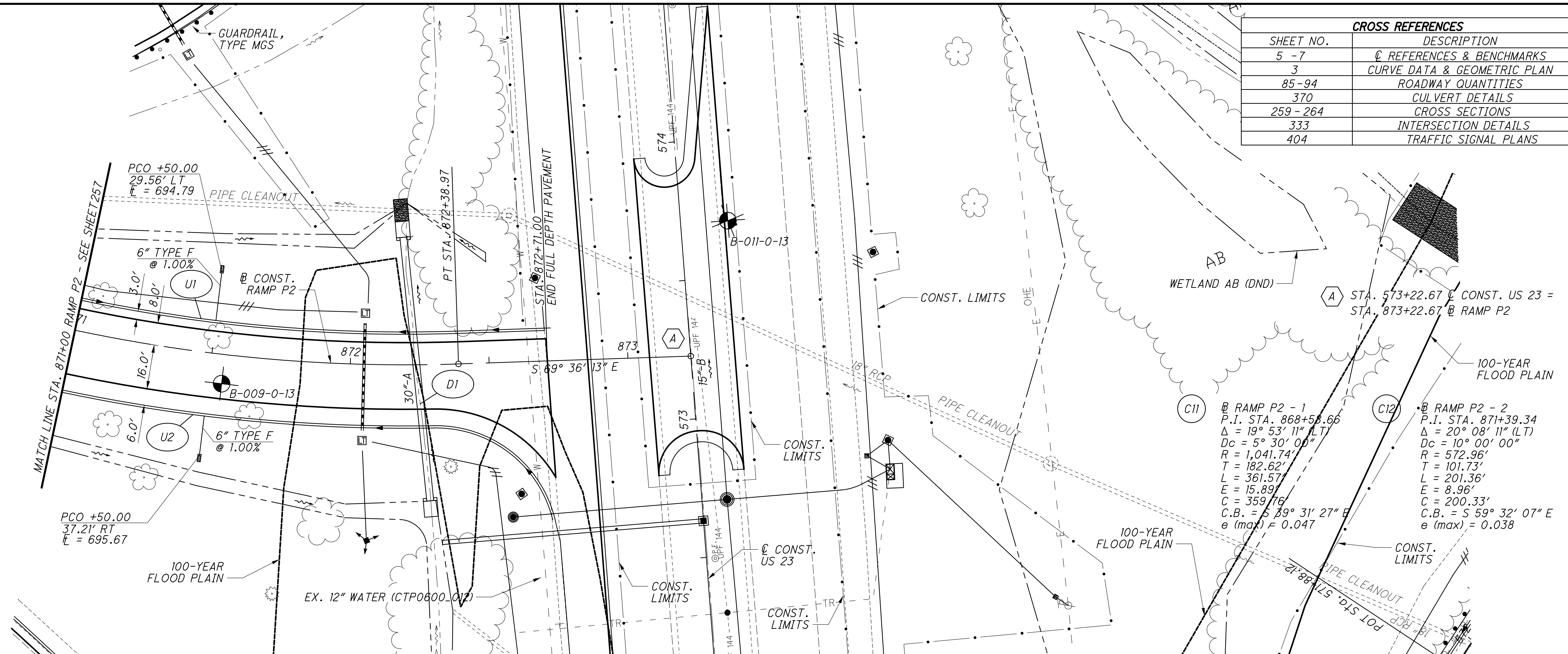
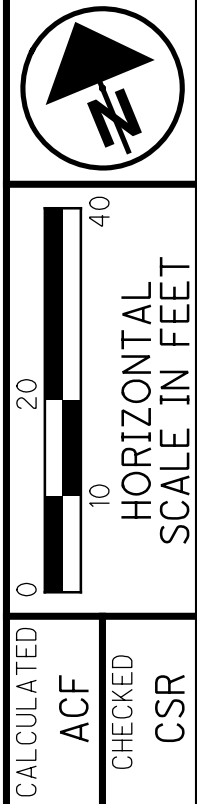
**FRA - 270-51.50**

242  
554



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CROSS REFERENCES	
SHEET NO.	DESCRIPTION
5 - 7	☐ REFERENCES & BENCHMARKS
3	☐ CURVE DATA & GEOMETRIC PLAN
85-94	☐ ROADWAY QUANTITIES
370	☐ CULVERT DETAILS
259-264	☐ CROSS SECTIONS
333	☐ INTERSECTION DETAILS
404	☐ TRAFFIC SIGNAL PLANS

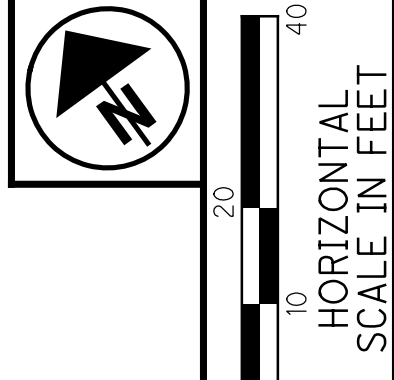


**PLAN AND PROFILE - RAMP P2**  
**STA. 871+00 TO STA. 873+22.67**

**FRA - 270-51.50**

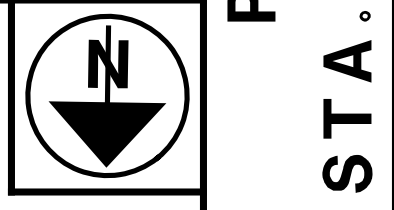
258  
554





CALCULATED 20  
ACF  
CHECKED  
CSR

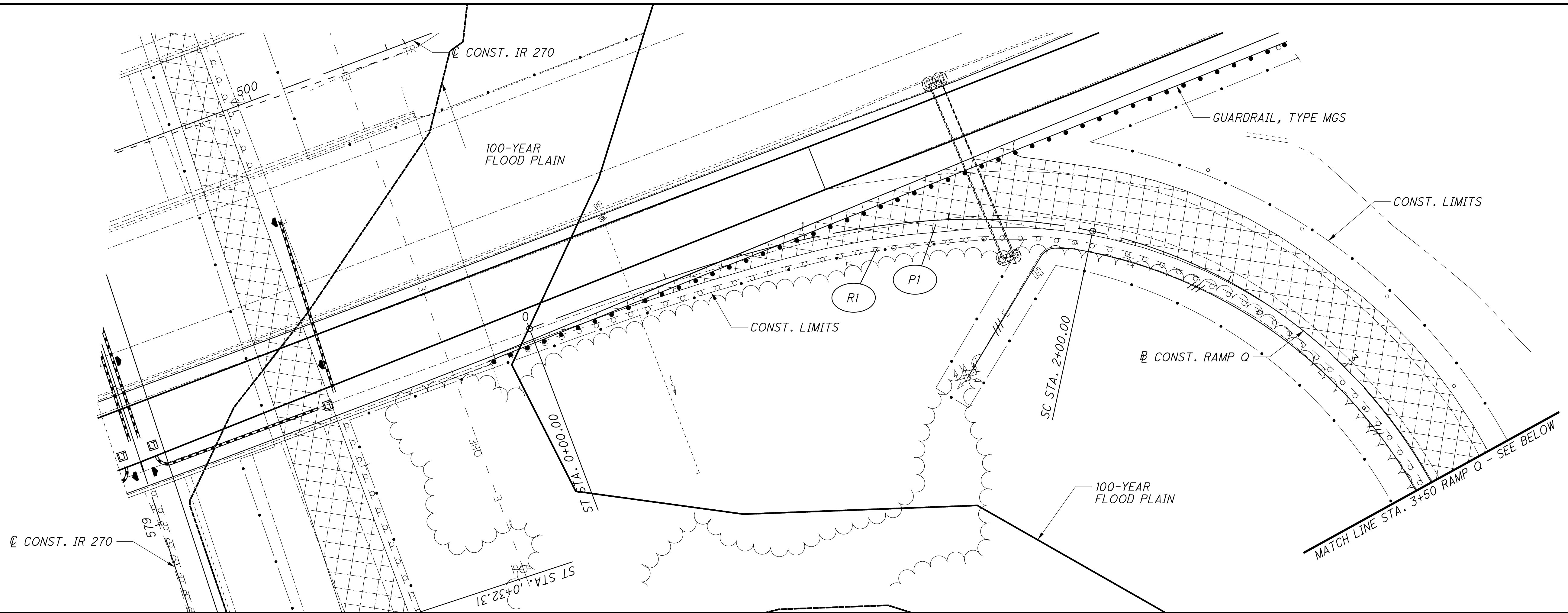
**PLAN - RAMP Q**  
**STA. 0+00 TO STA. 8+50**



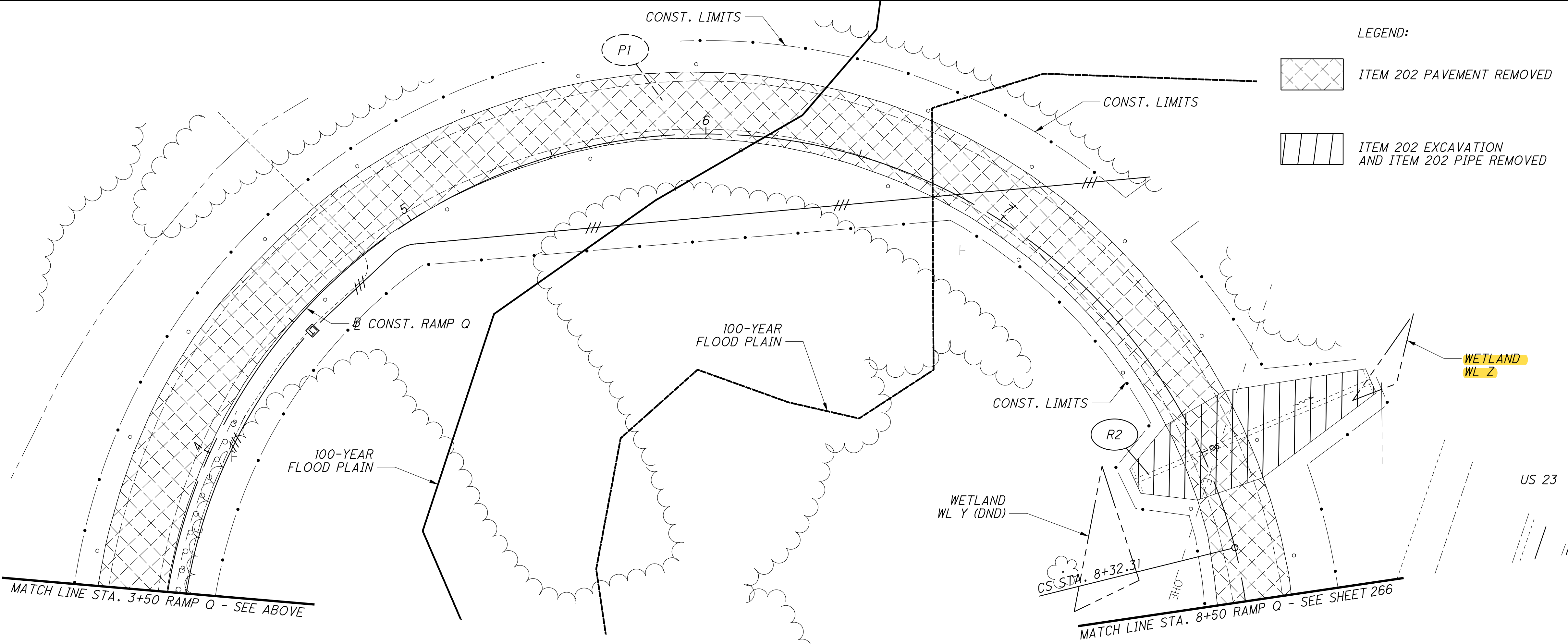
**FRA - 270-51.50**

265  
554



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RAMP Q  
 P.I. Sta. 0+77.61  
 $\Delta = 272^\circ 30' 02''$  (RT)  
 $Dc = 32^\circ 44' 26''$   
 $R = 175.00'$   
 $Ls = 200.00'$   
 $\theta s = 32^\circ 44' 26''$   
 $LT = 135.69'$   
 $ST = 68.81'$   
 $x = 193.57'$   
 $y = 37.22'$   
 $k = 98.92'$   
 $p = 9.41'$   
 $\Delta c = 207^\circ 01' 11''$  (RT)  
 $Lc = 632.31'$   
 $Es = 10.64'$   
 $C = 340.32'$   
 $C1 = C2 = 197.11'$   
 C.B.1 = S  $63^\circ 42' 16''$  E  
 C.B. = S  $61^\circ 39' 46''$  W  
 C.B.2 = S  $7^\circ 01' 48''$  W



LEGEND:

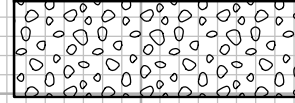


-  ITEM 202 PAVEMENT REMOVED
-  ITEM 202 EXCAVATION AND ITEM 202 PIPE REMOVED







SEEDING  
END SQ.  
WIDTH YDS.

-  ITEM 203 - EMBANKMENT, AS PER PLAN
-  EX. PAVEMENT
-  ITEM 671 - EROSION CONTROL MAT

END AREA		VOLUME	
CUT	FILL	CUT	FILL

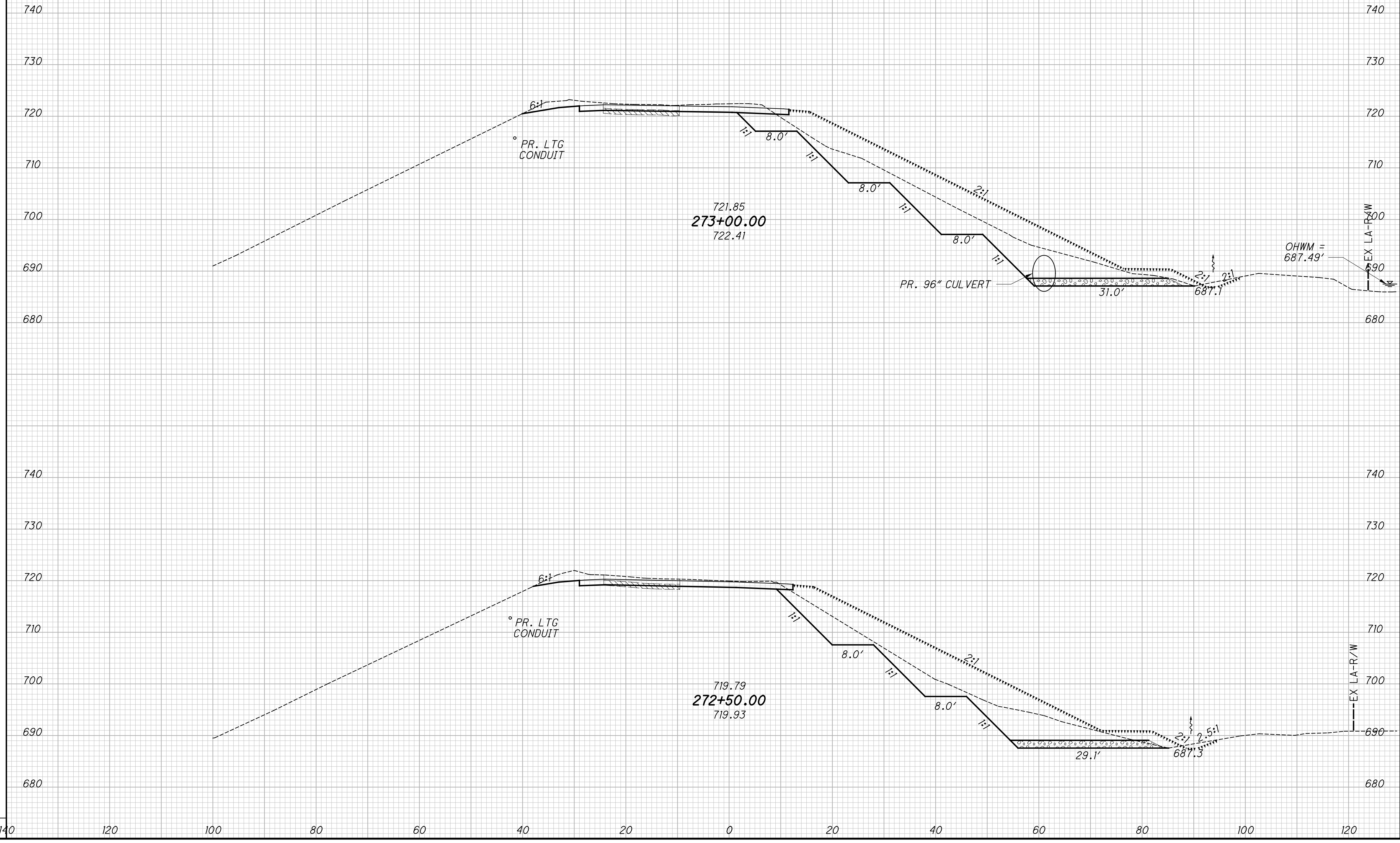
CALCULATED  
JOB  
CHECKED  
CSR

CROSS SECTIONS - RAMP R  
STA. 272+50.00 TO STA. 273+00.00

FRA-270-51.50

285  
554

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140 120 100 80 60 40 20 0 20 40 60 80 100 120

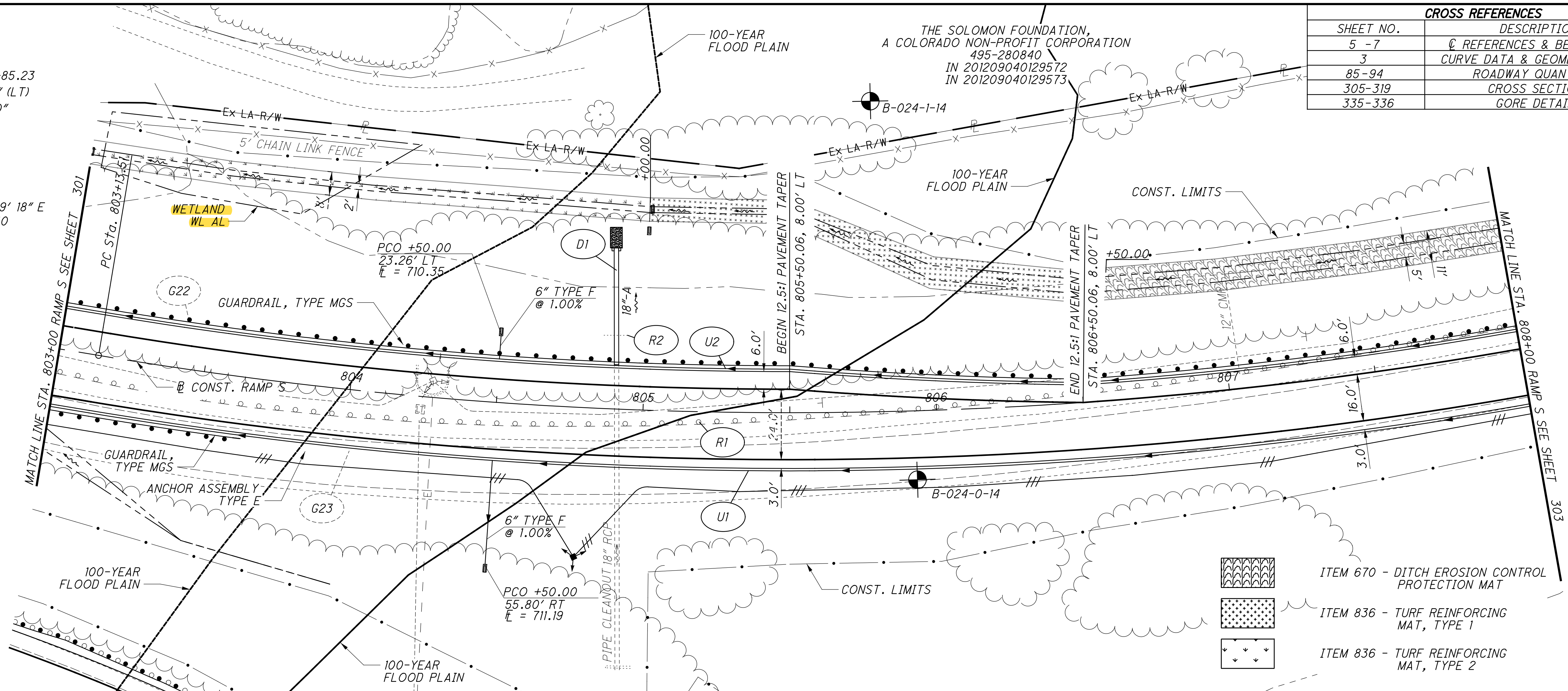
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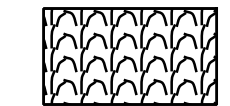
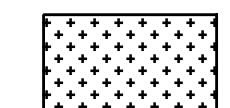
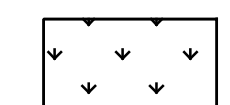
C-19 RAMP S - 2  
 P.I. Sta. 806+85.23  
 $\Delta = 29^\circ 05' 45''$  (LT)  
 $D_c = 4^\circ 00' 00''$   
 $R = 1,432.39'$   
 $T = 371.72'$   
 $L = 727.40'$   
 $E = 47.45'$   
 $C = 719.61'$   
 $C.B. = S 53^\circ 39' 18'' E$   
 $e (max) = 0.040$

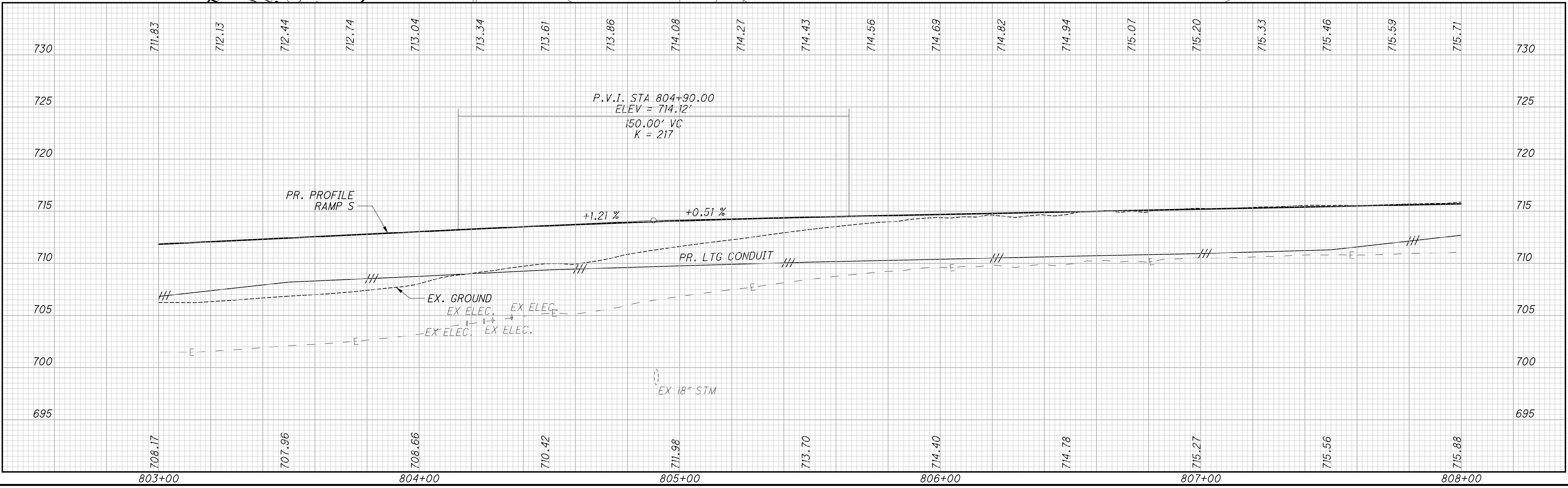
THE SOLOMON FOUNDATION,  
 A COLORADO NON-PROFIT CORPORATION  
 495-280840  
 IN 201209040129572  
 IN 201209040129573

CROSS REFERENCES	
SHEET NO.	DESCRIPTION
5 - 7	REFERENCES & BENCHMARKS
3	CURVE DATA & GEOMETRIC PLAN
85 - 94	ROADWAY QUANTITIES
305 - 319	CROSS SECTIONS
335 - 336	GORE DETAILS

  
 HORIZONTAL SCALE IN FEET  
  
 CALCULATED JGB  
 CHECKED CSR



-  ITEM 670 - DITCH EROSION CONTROL PROTECTION MAT
-  ITEM 836 - TURF REINFORCING MAT, TYPE 1
-  ITEM 836 - TURF REINFORCING MAT, TYPE 2



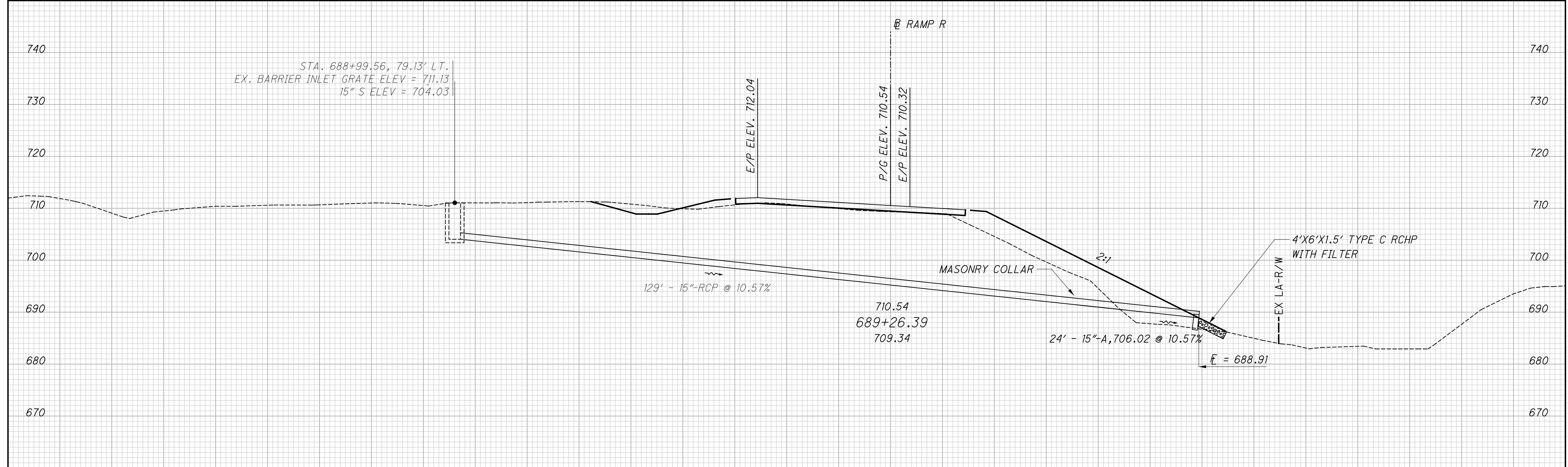
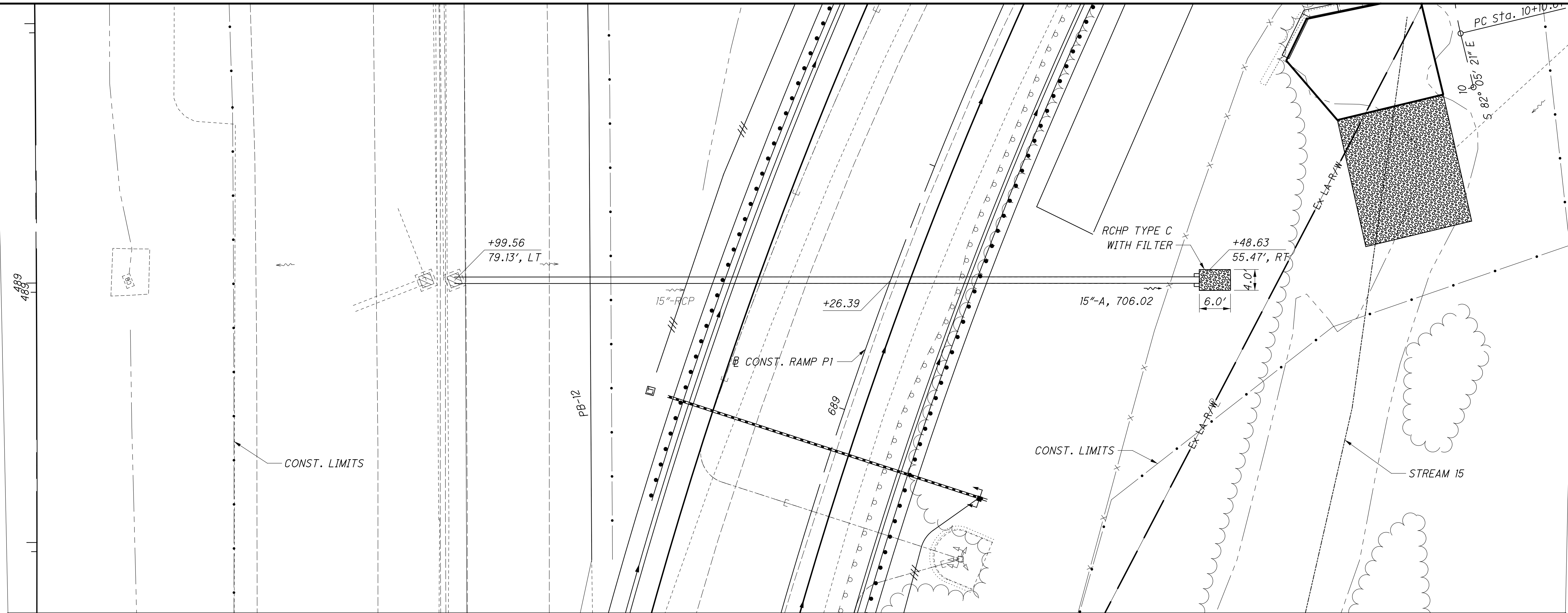
PLAN AND PROFILE RAMP S  
 STA. 803+00.00 TO STA. 808+00.00

FRA - 270-51.50

302  
 554



X:\Projects\2013\132\1010\FRA\92616\drainage\sheet\92616DC018.dgn 2/8/2023 9:59:17 AM cwrong



CALCULATED ACF CHECKED CSR

0 5 10 20

HORIZONTAL SCALE IN FEET

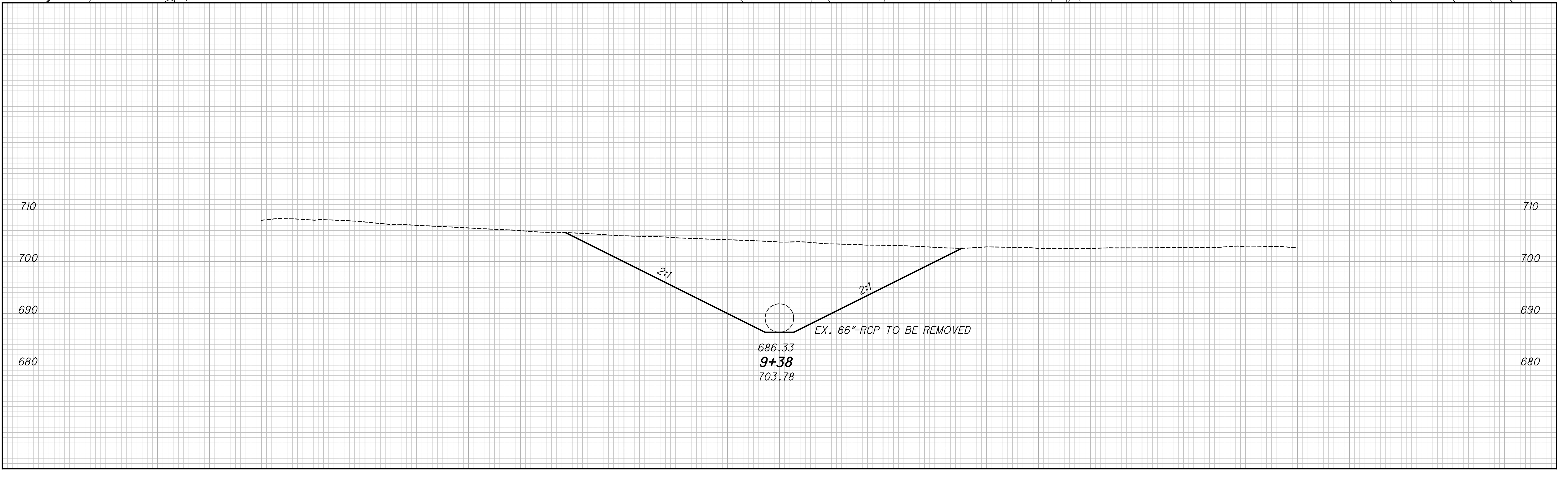
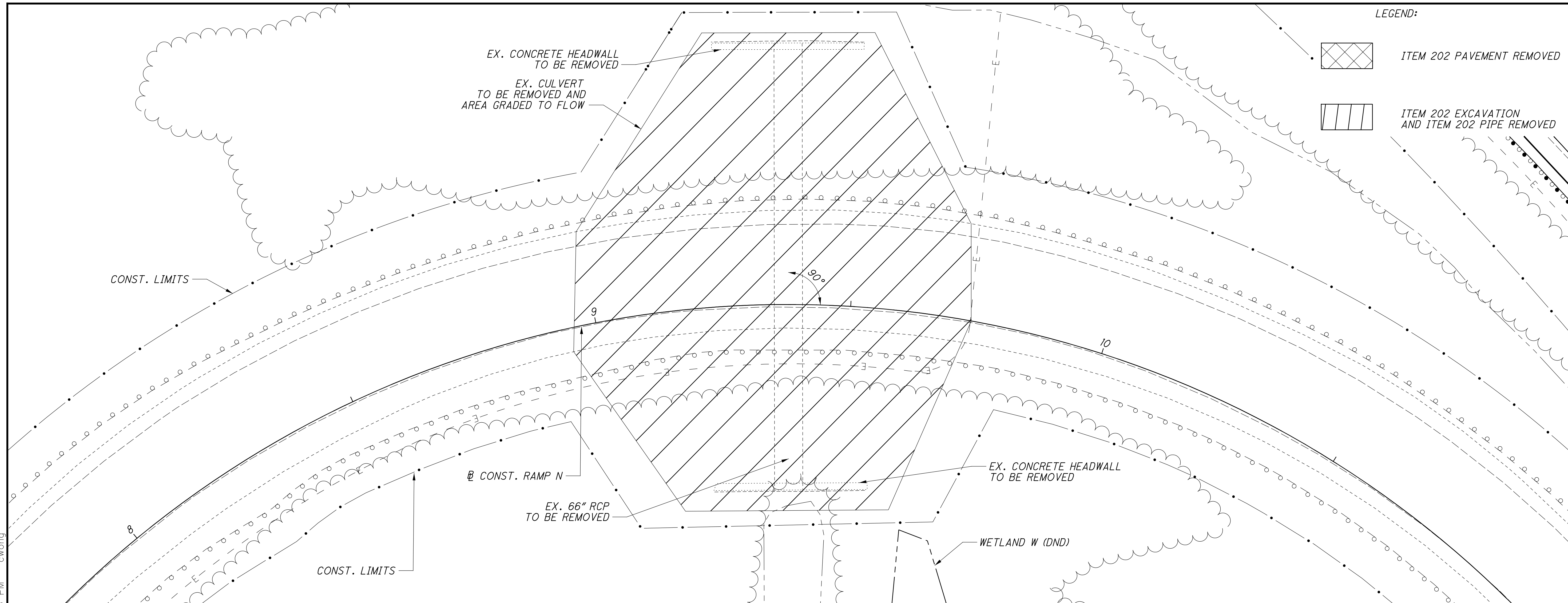
**STORM SEWER PROFILE - RAMP P1**

**STA. 689+26**

**FRA - 270-51.50**



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**CULVERT DETAILS - RAMP N**  
**STA. 9+38**

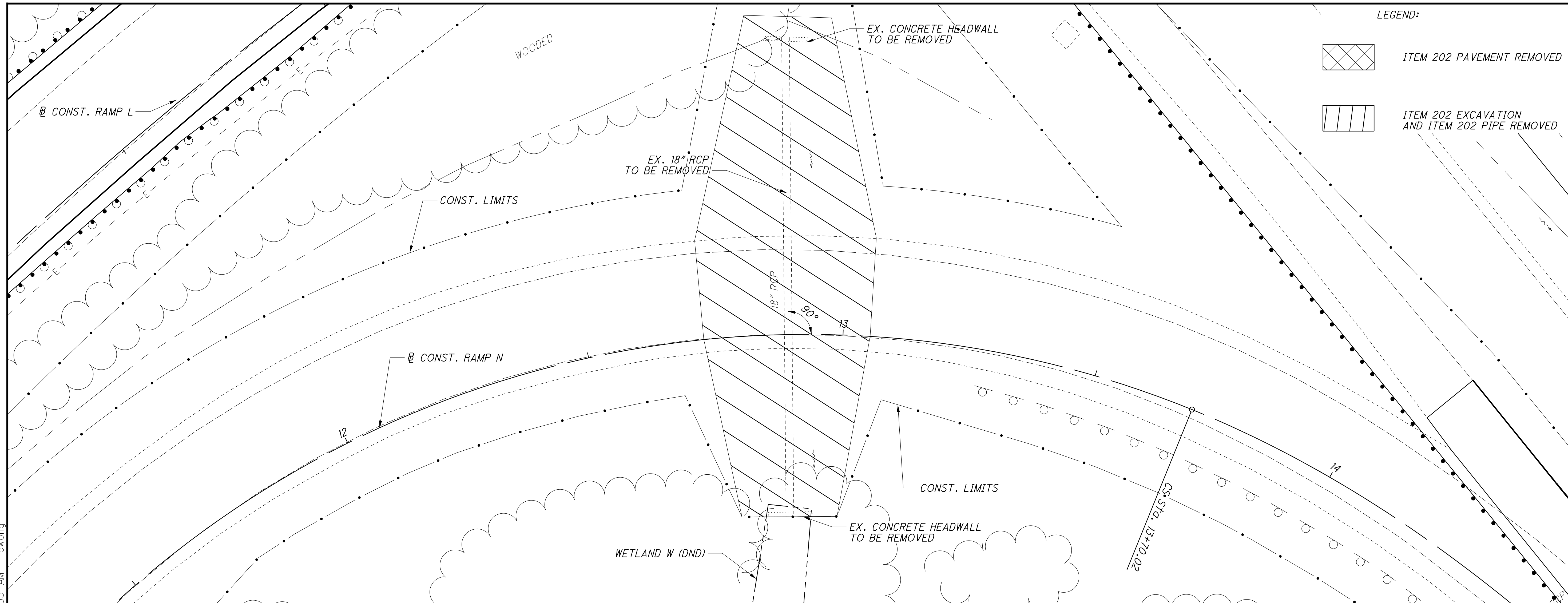
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**FRA - 270-51.50**

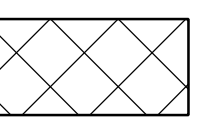
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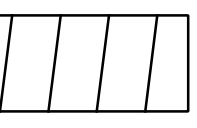
367  
554


X:\Projects\2013\1010\FRA\92616\drainage\sheet\92616DC013.dgn 2/10/2023 5:44:03 AM cwrong



LEGEND:

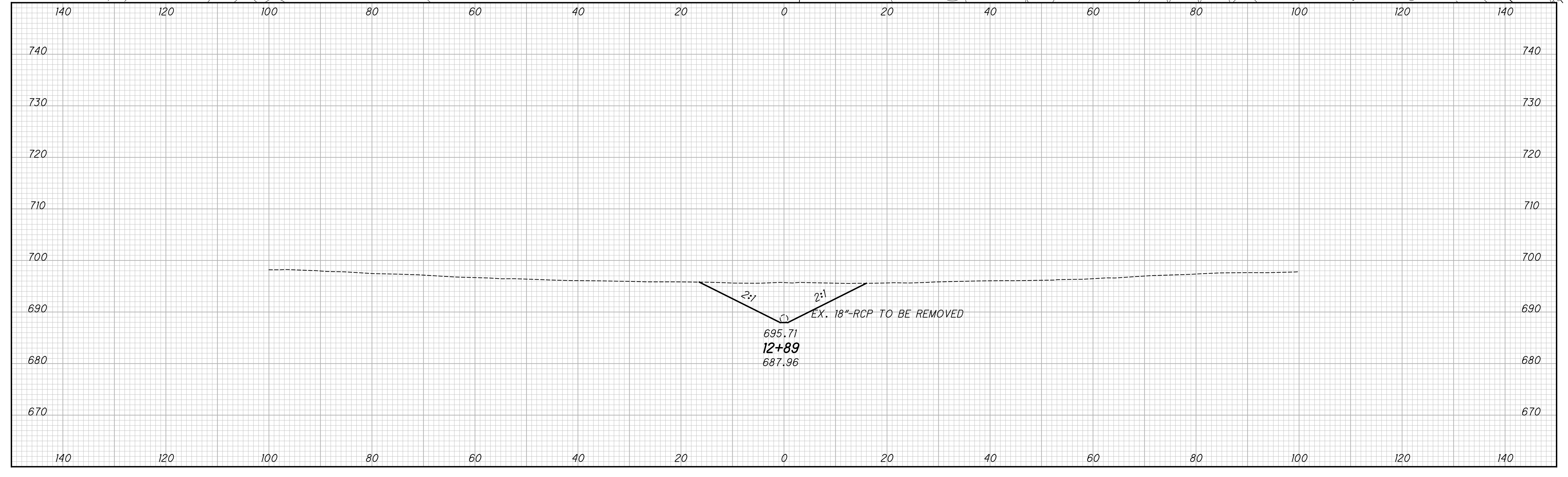
 ITEM 202 PAVEMENT REMOVED

 ITEM 202 EXCAVATION AND ITEM 202 PIPE REMOVED



0 20 40  
10  
HORIZONTAL  
SCALE IN FEET

CALCULATED ACF  
CHECKED CSR



CULVERT DETAIL - RAMP N  
STA. 12+89

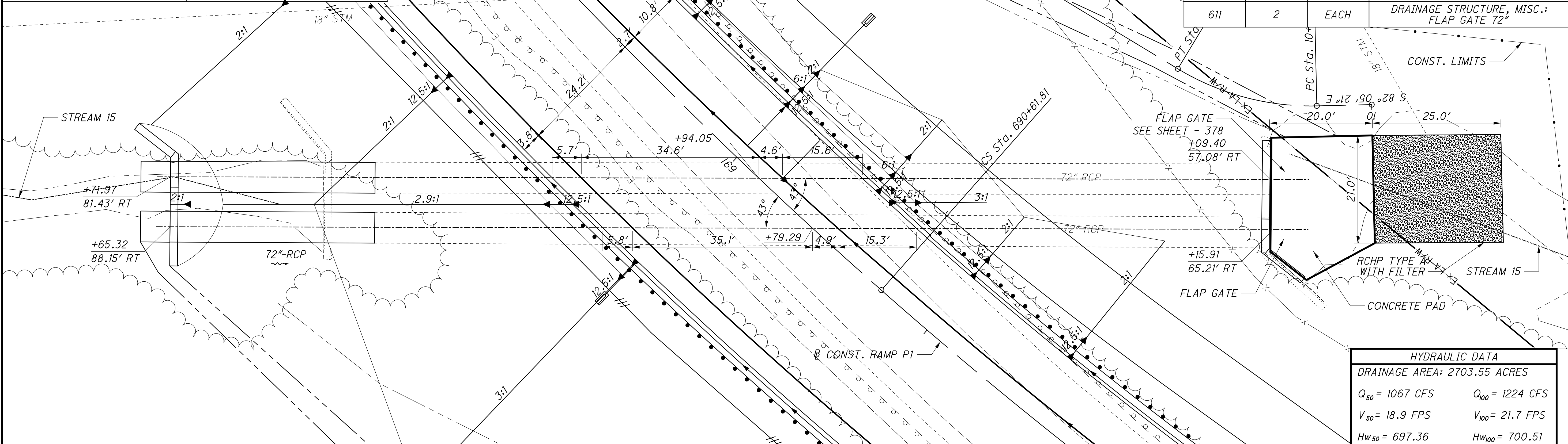
FRA - 270-51.50

368  
554

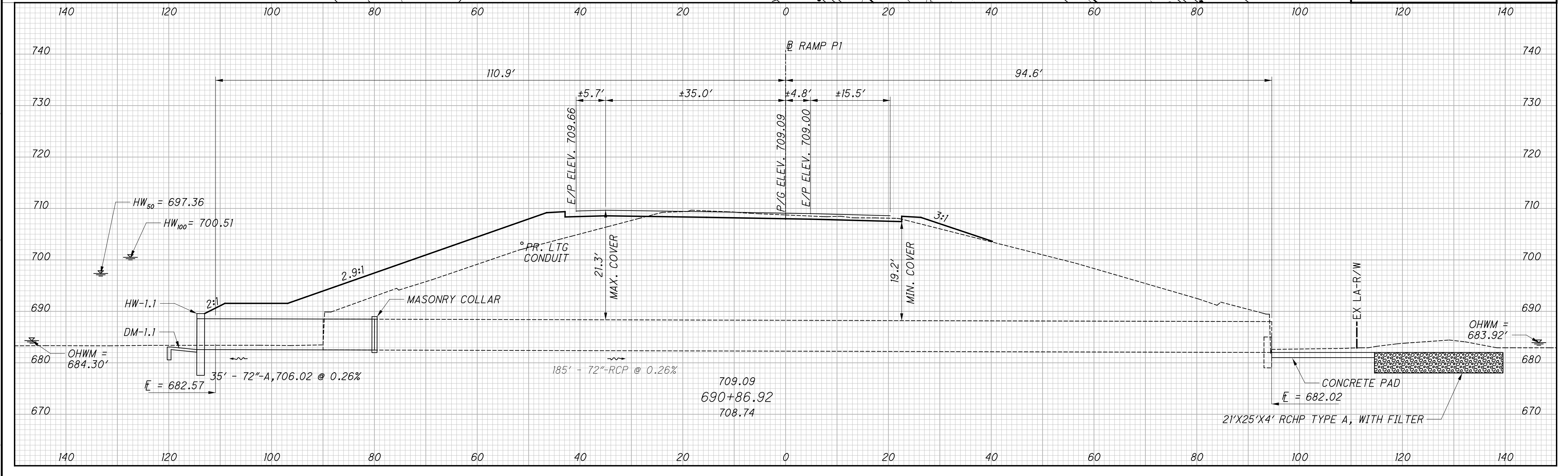
X:\Projects\2013\1321\1010\FRA\92616\drainage\sheet\92616DC002.dgn 2/10/2023 5:53:31 AM c.wong

EXISTING STRUCTURE DATA			
CFN:	1869032 1869031	DESIGN SERVICE LIFE:	50 YEARS
SIZE:	72"	STREAM pH:	7.6
TYPE:	RCP	ABBRASIVENESS:	N/A
LENGTH:	176'	HEADWALL:	FULL HEIGHT
DATE CONSTRUCTED:	1964		

ESTIMATED QUANTITIES			
ITEM	QUANTITY	UNIT	DESCRIPTION
601	8	SY	RIPRAP, TYPE D
601	78	CY	ROCK CHANNEL PROTECTION, TYPE C WITH FILTER
602	69	CY	CONCRETE MASONRY
611	70	FT	72" CONDUIT, TYPE A, 706.02
611	2	EACH	DRAINAGE STRUCTURE, MISC.: FLAP GATE 72"



HYDRAULIC DATA	
DRAINAGE AREA: 2703.55 ACRES	
$Q_{50} = 1067$ CFS	$Q_{100} = 1224$ CFS
$V_{50} = 18.9$ FPS	$V_{100} = 21.7$ FPS
$HW_{50} = 697.36$	$HW_{100} = 700.51$



CULVERT DETAILS RAMP P1  
STA. 690+87

FRA - 270-51.50



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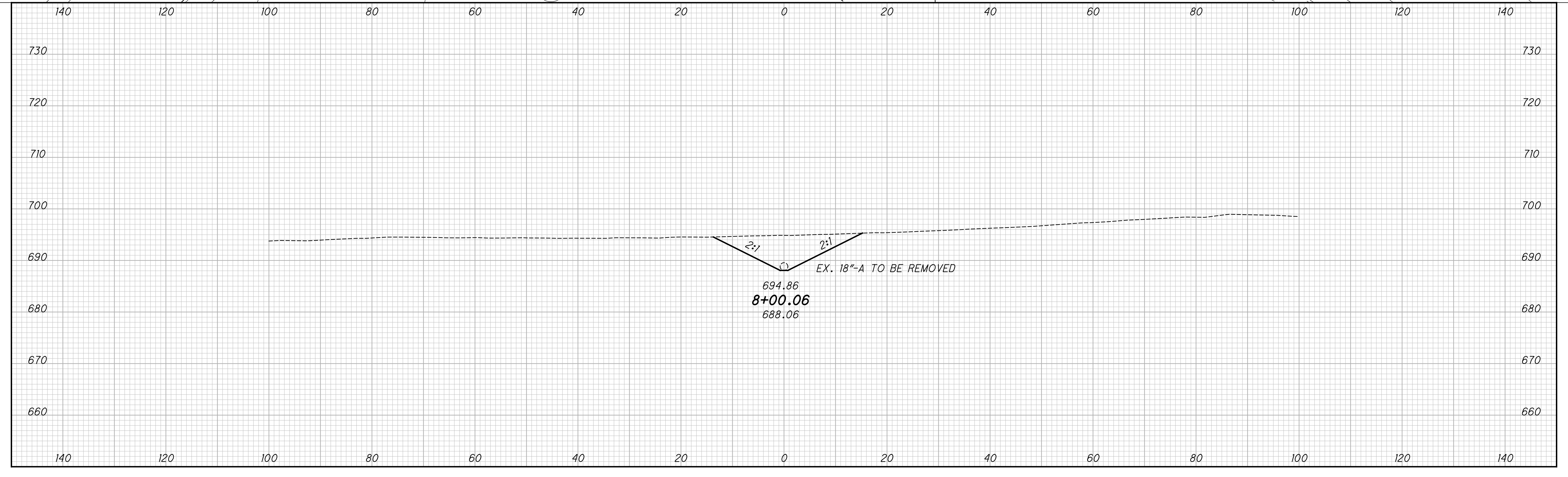
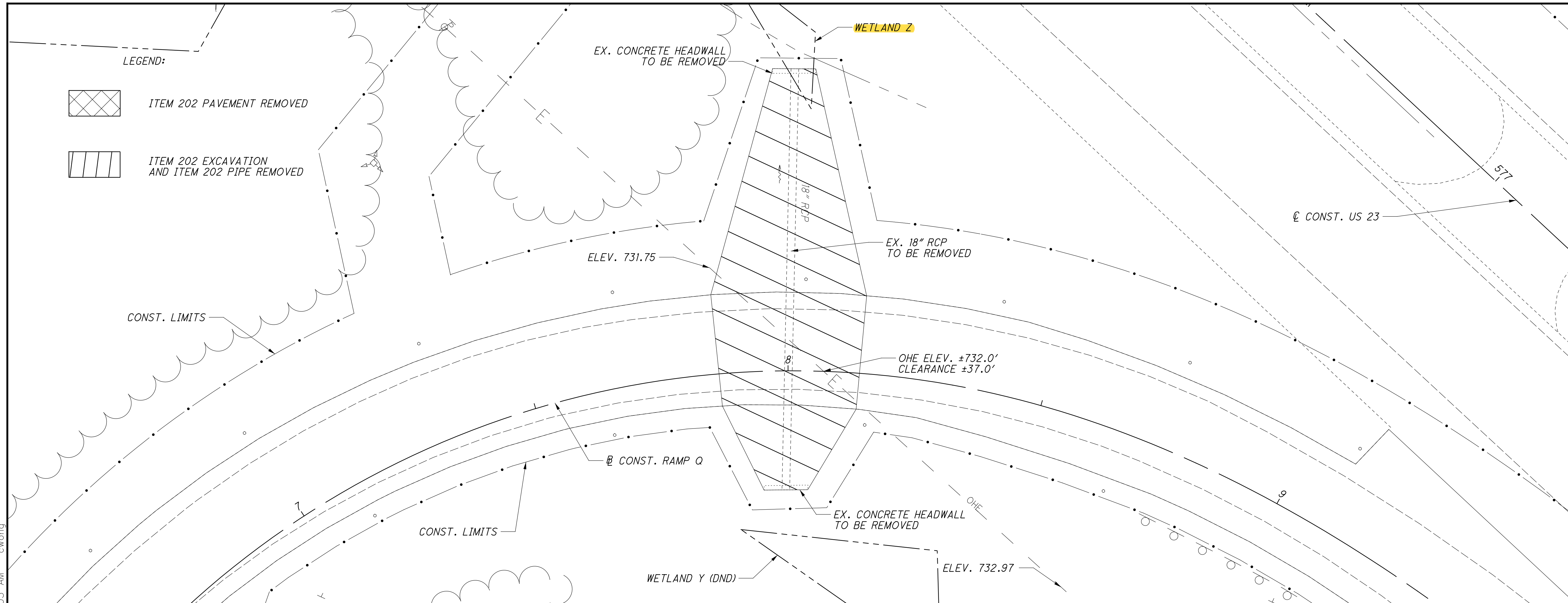
CALCULATED ACF  
CHECKED CSR

0 10 20  
HORIZONTAL SCALE IN FEET

CULVERT DETAIL - RAMP Q  
STA. 8+00.00

FRA - 270-51.50

371  
554



LEGEND:

ITEM 202 PAVEMENT REMOVED

ITEM 202 EXCAVATION AND ITEM 202 PIPE REMOVED

CONST. LIMITS

CONST. LIMITS

ELEV. 731.75

EX. 18" RCP TO BE REMOVED

OHE ELEV. ±732.0'  
CLEARANCE ±37.0'

CONST. RAMP Q

EX. CONCRETE HEADWALL TO BE REMOVED

ELEV. 732.97

WETLAND Y (DND)

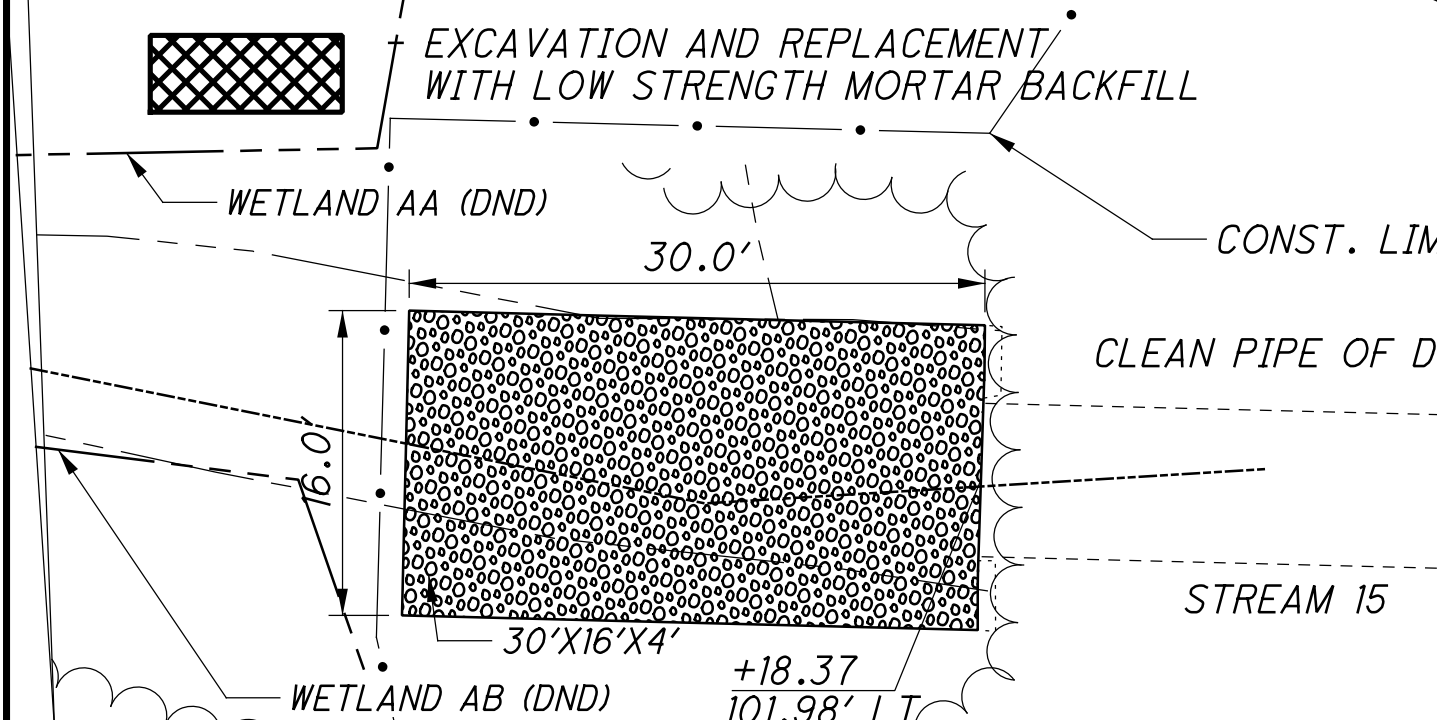
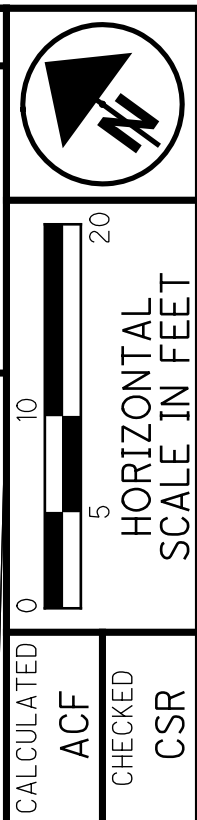
EX. 18"-A TO BE REMOVED

694.86  
8+00.06  
688.06

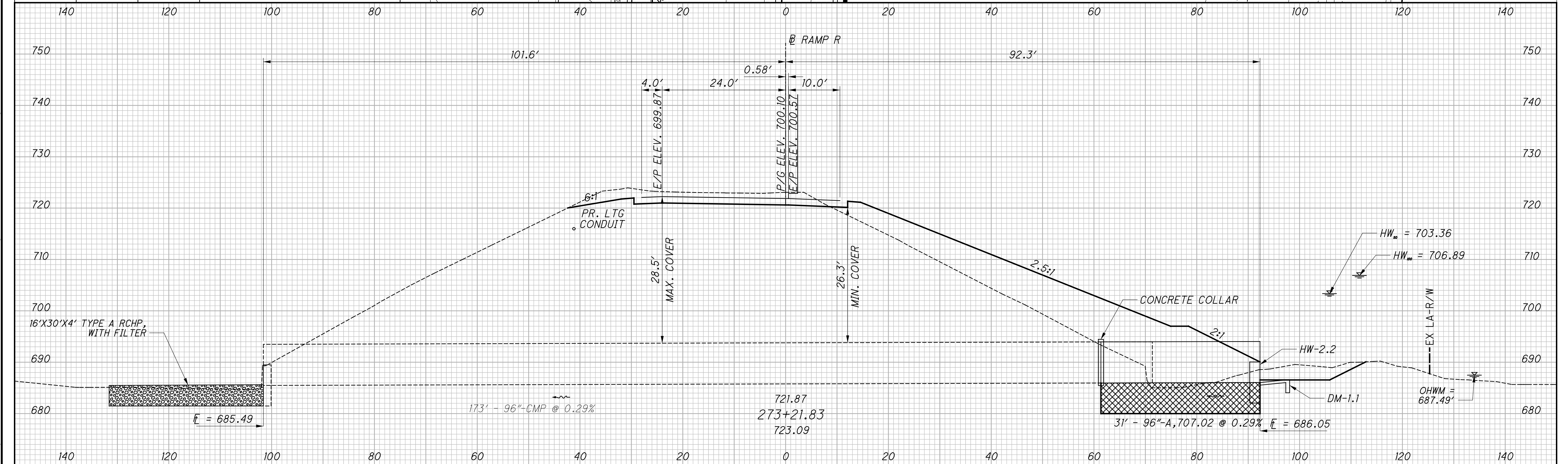
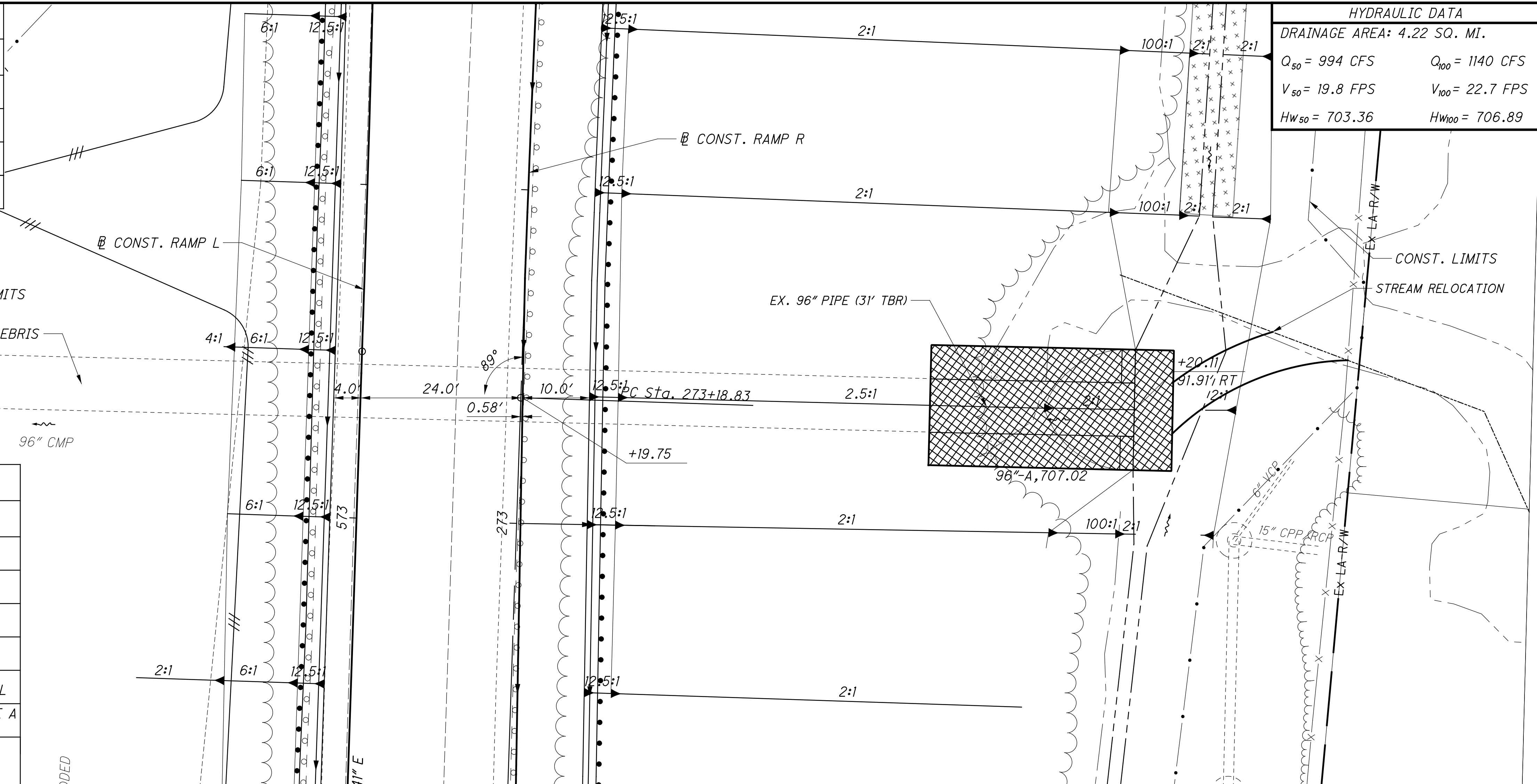
X:\Projects\2013\132\1010\FRA\92616\drainage\sheet\92616DC005.dgn 2/8/2023 10:34:27 AM cwong

EXISTING STRUCTURE DATA			
CFN:	1869019	DESIGN SERVICE LIFE:	75 YEARS
SIZE:	96"	STREAM pH:	7.0
TYPE:	CORRUGATED METAL	ABBRAVIVENESS:	N/A
LENGTH:	126'	HEADWALL:	HALF HEIGHT
DATE CONSTRUCTED:	1963		

HYDRAULIC DATA	
DRAINAGE AREA: 4.22 SQ. MI.	
$Q_{50} = 994$ CFS	$Q_{100} = 1140$ CFS
$V_{50} = 19.8$ FPS	$V_{100} = 22.7$ FPS
$HW_{50} = 703.36$	$HW_{100} = 706.89$



ESTIMATED QUANTITIES			
ITEM	QUANTITY	UNIT	DESCRIPTION
601	12	SY	RIPRAP, TYPE D
602	11	CY	CONCRETE MASONRY
611	31	FT	96" CONDUIT, TYPE A, AS PER PLAN, 707.02
203	146	CY	EXCAVATION
613	146	CY	LOW STRENGTH MORTAR BACKFILL
601	71	CY	ROCK CHANNEL PROTECTION, TYPE A WITH FILTER



CALCULATED ACF CHECKED CSR  
**CULVERT DETAIL - RAMP R**  
**STA. 273+22.00**  
**FRA - 270-51.50**  
 372  
 554



**US Army Corps of Engineers  
Huntington District**

Permit Number: 2023-00233-SCR

Name of Permittee: Ohio Department of Transportation

Date of Issuance: March 30, 2023

Upon completion of the activity authorized by this permit and any mitigation required by the permit, sign this certification and return it to the following address:

U.S. Army Corps of Engineers - Huntington District  
Building 10/ Section 10  
PO Box 3990  
Columbus, OH 43218-3990

Please note that your permitted activity is subject to a compliance inspection by an U.S. Army Corps of Engineers representative. If you fail to comply with this permit you are subject to permit suspension, modification, or revocation.

I hereby certify that the work authorized by the above-referenced permit has been completed in accordance with the terms and conditions of the said permit, and required mitigation was completed in accordance with the permit conditions.

\_\_\_\_\_  
Signature of Permittee

\_\_\_\_\_  
Date