Department of Transportation
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Mike DeWine, *Governor*
Jon Husted, *Lt. Governor*
Jack Marchbanks, Ph.D., *Director*

January 7, 2025

Kokosing Construction Company, Inc.
3802 N. Dents Run Road
Morgantown, West Virginia 26501

Attention: Mr. Jason Jackson

Re: Project 240512 Lawrence
LAW-SR-7-2.17-Phase 2
PID#75923
Type: New Construction

Dear Mr. Jackson:

Please note the preconstruction meeting for the above-mentioned project has been scheduled for Friday, February 7, 2025, at 10:00 a.m. at the District 9 Headquarters at 650 Eastern Avenue, Chillicothe, Ohio 45601. This Precon will be held in the Great Seal Conference Room on the first floor. I will be sending out a Microsoft Teams Meeting Invite for those that are not able to attend in person but would like to attend the Precon. All the information that you will need to attend this phone meeting will be in the email with this letter.

The purpose of this meeting is to discuss the new construction project referenced above. We will also discuss the Department's initiative of instituting informal partnering on this project. The CML for your project

should be submitted before Precon. Please submit your CML to this email address ODOT_CML@dot.ohio.gov and cc RoseAnne Barnett.

In addition, this project requires a Critical Path Method Schedule. Please email the Bar Chart Schedule to this District ahead of this Meeting.

Should you have any questions or need additional information, please contact this office.

Respectfully,

Michael L. Dombrowski
District 9 Deputy Director

By: Paul W. Maravy, by RAB

Paul W. Maravy, P.E.
District 9 Construction Engineer

MLD/PWM/rab

CC:

Barnes	Dombrowski	Henshaw	Schaaf
Beck	Elliott	Immell	Zickafoose
Beekman	Francis	Maravy	Capper
Beery	Frazee	Sherron	McLaughlin
Bell	Hurst	McClellan	Wagner
Bruning	Grooms	Cockrell	OSHP
Cottrell	Barnitz	Pridemore	Hauck

District 9
650 Eastern Avenue
Chillicothe, OH 45601 U.S.A.

740 | 773 2691
transportation.ohio.gov

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Ohio Department of Transportation - Prebid Questions

Project No. 240512 **Sale Date - 12/12/2024**

LAW-75923 - SR 7-02.17 Phase 2

Question Submitted: 12/10/2024 5:05:09 PM

Bridges 0251, 0376, 0563, 0711P, 0713L, 0713R and 0105 require the contractor to build the approach embankment behind abutments up to subgrade elevation for a minimum distance of 200 feet behind each abutment (Pile Driving Constraint Note). Based on CMS 503.09.B.b the 1 LS Unclassified Excavation is bounded on top in fill section by the surface of embankment. CMS 503.08 says to backfill all excavations made under this item with materials conforming to 203.02R, except behind abutments and below the approach slabs use materials conforming to Item 203 Granular Type B. With this said, there is a significant amount of cost in excavation and granular backfill at these bridges. Could the Department confirm that the excavation behind the abutments is to be backfilled with granular?

The Department does not determine the means and methods of the pile driving or the excavation needed after the embankment waiting period is complete for the abutment footing or other needs, however, the Department confirms that whatever excavation is required after the initial embankment is constructed to drive piles, excavate for abutment footing construction, or other needs of the contractor, must be replaced with Item 203 Granular Material Type B per the Contract Documents.

Question Submitted: 12/6/2024 4:52:42 PM

PBQ 11/7/24 regarding MSE walls says the Department has no objection to changing the annular space between the wire walls and MSE panels from 3' of select granular backfill (SGB) to a 10" cast-in-place concrete closure pour, provided the MSE wall and panels can perform as intended. As this concrete is required by MSE wall design, will the Department pay for this change to a 10"cast-in-place concrete closure as a Change Order, or will the contractor be required to carry the additional cost of this reinforced concrete in their bid? If the contractor is required to carry this cost, please confirm that the Department will not reduce the pay qty of SGB in the 3' annular space, as shown per plan.

The Department cannot pay for materials not used. Any additional costs for changing the closure pour material should be included in the MSE wall cost by the contractor. SGB will be paid based on measurements/delivered and placed quantities.

Question Submitted: 12/6/2024 4:47:45 PM

For Ref #184 - What size junction box is required for this reference number? Is a barrier junction box 14x14x10 correct? (HL-30.41)

The junction box size is defined per the Standard Construction Drawing HL-30.31 and the box sized proposed in the question is correct.

Question Submitted: 12/6/2024 4:06:53 PM

I am looking at the letting and it shows an Impact Attenuator Type II Bidirectional and I cannot locate it on the Plans sheets.

This quantity comes from the Ramp K plan and profile sheet 442.

Question Submitted: 12/6/2024 3:15:49 PM

Pay item # 265 is for a TS-2 cabinet, but the plans do controller have a pay item for a controller for this cabinet. Is a controller needed or is the state providing a controller that will need programmed. Can an addendum be issued for a pay item for either of these items to be included id needed?

A pay item for Item 809 – ATC Controller, As per plan was missed and will be added to the next addendum.

Question Submitted: 12/6/2024 2:19:12 PM

Please refer to Bridge LAW-775-0105, plan sheet 1027 of 1247 regarding the HLMR bearings at the Pier. Please provide the required HLMR bearing type, i.e. guided expansion or unguided expansion. And please provide the required design movements for the HLMR bearings.

The HLMR bearings should be guided expansion, allowing movement parallel to the centerline of the bridge. Based on setting the bearings at 60 degrees Fahrenheit, the anticipated movement is 0.3 inches in each direction.

Question Submitted: 12/6/2024 1:23:08 PM

Preliminary design from an MSE supplier is requiring significantly more Select Granular Backfill for the wire wall/MSE design. If more SGB is required than plan quantity due to the design, will plan reference item quantities be extended to compensate the contractor per CY? If not, where should the contractor bid cost for additional material required?

The Department provides quantities in the plans for SGB based on the minimum length required for the soil reinforcement lengths. If the Contractor is using an approved MSE wall system listed in SS 840.02 and the SGB passes the tests in 840.03.E and the design requirements in 840.04 show a need of additional SGB then the Department would extend the quantities after the Engineers review and approval of an acceptable and reasonable design meeting normal industry standards.

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Ohio Department of Transportation - Prebid Questions

Question Submitted: 12/6/2024 12:16:14 PM

Can ODOT please provide an updated RELOCATION SEQUENCE AND DATES schematic to the Reference Folder?

The Department initially prepared this exhibit to visually show the bidders the overall sequence of planned utility relocation, however, it was general in nature and the Utility Note has the details needed, therefore the Department won't be updating this exhibit.

Question Submitted: 12/5/2024 9:55:10 AM

Can durable shale, as defined by CMS 703.16-D, be used for Item 203 - Embankment, APP (Type C)?

CMS 703.16-D refers to the bucket test for classification of durable shales to be used as embankment. The Item 203 – Embankment, As Per Plan (Type C) plan note requires Slake Durability Index (SDI) testing, so this material needs to be tested to ensure durability by the SDI method indicated, not the bucket test. Durable shale/siltstone that meets the minimum Slake Durability Index requirement can be used for this item.

Question Submitted: 12/5/2024 6:10:39 AM

It has come to our attention that a previous project in the District (LAW US 52 11.75 PID 104167) was required to do mist net surveys prior to the contractor clearing trees in an adjacent waste/borrow area. Typically, the contractor is permitted to remove trees from October 1 to March 31 and the mist net surveys cannot take place until after April 1st. Will the contractor be required to do mist net surveys for borrow/waste areas prior to removal of trees on this project per the Amended Programmatic Biological Opinion on the Federally Endangered Indiana Bat and Federally Endangered Northern Long-eared Bat? If mist net surveys are required, this will add a year to the project schedule with the delay in clearing to the next season.

The Contractor will need to follow ODOT CMS 107.10 and obtain all environmental clearances and permits prior to the beginning of work when utilizing the available excess parcels for staging, waste, or borrow. Through this process, the Contractor will use environmental contractor(s) prequalified by ODOT to review the ecological resources and coordinate with the U.S. Fish and Wildlife Service (USFWS) and the Ohio Department of Natural Resources (ODNR) if habitats for state or federally listed species is present and will be impacted. This would include impacts to suitable wooded/forested habitat (trees) for state and federally listed bats. The use of the excess parcels or other areas outside of the work limits of the project by a Contractor is not part of ODOT's coordination and consultation for the project, and therefore, ODOT's Amended Programmatic Biological Opinion on the Federally Endangered Indiana Bat and Federally Endangered Northern Long-eared Bat is not applicable to the Contractor's actions on the excess parcels or other areas. Any requirements on the on the timing of the removal of suitable wooded habitat for listed bat species will need to be determined through coordination between the Contractor, the USFWS, and ODNR. While ODOT will not be involved in this coordination process, in our experience the Contractor's direct coordination with the USFWS and ODNR would likely result in the need to implement avoidance and/or minimization measures to obtain approvals from those agencies. As noted in the question, typical avoidance and minimization measures for bat species would include cutting suitable wooded habitat for those species when the bats would not be using the trees for roosting. The resource agencies typically request that the removal of suitable wooded habitat occur between the dates of October 1 and March 31 to avoid direct impacts if no site-specific survey has been completed to confirm absence of listed bat species. If these dates cannot be followed, then the resource agencies may request a survey to confirm the presence or absence of listed bat species. This could include a mist-net or acoustic call survey following the USFWS and ODNR approved survey guidelines. If absence is confirmed using a valid survey, then cutting of suitable wooded habitat may be authorized by the resource agencies to occur at any time. If presence of listed bats is confirmed by a survey, then the resource agencies may require seasonal removal of suitable wooded habitat or may allow for tree clearing during the active roosting season (April 1 through September 30) if certain conservation or mitigation measures are implemented to account for species impacts (such as mitigation at an approved bat conservation area).

Question Submitted: 12/4/2024 5:51:28 PM

Is the pay item for pneumatic piezometers correct? The plan notes only refer to piezometers. Pneumatic piezometers have largely been replaced with vibrating wire piezometers. The notes are also not clear as to who is taking readings and how often?

The reference to Pneumatic Piezometer (Item 20307500) will be changed to Item 20307510 – Piezometer in the next plan release. There will also be plan note edits included in the next release that specify following Section 502 of the Specifications for Geotechnical Explorations (SGE) rather than the Geotechnical Design Manual (GDM) and that the Contractor will be responsible for installation, daily monitoring during embankment construction, and weekly (minimum) reporting of readings to the Engineer.

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Ohio Department of Transportation - Prebid Questions

Question Submitted: 12/4/2024 2:56:08 PM

Bid Item 16, Embankment, As Per Plan (Type C) includes 582,155 Cubic Yards of providing and placement of a rock embankment drainage layer using the best on-site sandstone or siltstone rock that has a slake durability index greater than 90 percent according to ASTM D4644-87. Without the ability for a Bidder to collect a representative number of samples prior to the bid to test a significant portion of the rock excavation materials, the Bidders cannot reasonably determine the amount of on-site sandstone or siltstone that will pass the slake durability test and be acceptable according to the requirements of the General Note. Furthermore, the plan Geotechnical report by Stantec performed 40 slake durability tests with samples from 5 borings and only 10 samples passed the test. The information provided in the plans and reference files is insufficient to price this item of work. If the intent is to utilize the best available on-site sandstone or siltstone, would the Department consider removing the slake durability test requirement and consider using visual inspection for designating the best rock to be used? If there is not enough on-site material that satisfies the slake durability testing, will the department add an item of work for off-site import of borrow material meeting the requirements?

The question addresses on-site materials that can be used. Off-site materials that meets the plan note criteria can also be used for this bid item. The existing plan note requires the material to meet slake durability index (SDI) greater than 90 percent according to ASTM D4644-87. However, the Department will be adjusting the plan note to reflect that Sandstone and Siltstone with SDI values of at least 90% are acceptable as well as Sandstone and Siltstone with SDI values from 85%-90% if the retained material after SDI testing is classified as Type 1.The Department will not be removing the SDI testing requirement for this pay item nor will another item of work be added for off-site borrow. As mentioned, this Item 203 Embankment, As Per Plan (Type C) can include both on-site and off-site sources of material. The Department will be making plan note changes in the next Addendum to include the revised SDI criteria cited in this response.

Question Submitted: 12/4/2024 2:03:57 PM

Does the department still plan on changing the quantity for Line 0305, 616E10000, Water? It was not changed by addendum #4

The Department is planning on making all the known plan changes and this will be available by Addendum this Friday 12/6/2024 or Monday. Most of the planned changes have been addressed by previous pre-bid questions. Also, we anticipate a revised Utility Note to be published tomorrow 12/5/2024.

Question Submitted: 12/4/2024 8:40:52 AM

Regarding the PBQ submitted on 11/20/2024 8:29:19 AM, does Ref No. 465 represent the waterproofing needed for 22’ diameter multiplate? If it does, will the Department please clarify if the Contractor shall waterproof per 611.09 or 512.08.D (Type A Waterproofing)? If Ref No. 465 does not represent waterproofing for the 22’ diameter multiplate, should it be included in with Ref No. 472?

The Department concurs there is a conflict. The 22' diameter multiplate bridge LAW-7-0510 over Bent Creek will be coated per 611.09 and the 611.09 waterproofing will be included in the unit price bid for the Item 611 Conduit, Misc.: 22’DIA, TYPE A 707.03 (WT:35) (Proposal Ref No 472). These changes and Proposal Reference No. 465 will be removed from the proposal and plan by Addendum.

Question Submitted: 12/4/2024 8:31:51 AM

There are conflicting answers to previous pre-bid questions regarding the required waterproofing for Bridge LAW-7-0510 over Bent Creek. On 11/14/2024 the state responded that Waterproofing per CMS 611.09 is required for the Corrugated Steel Structural Plate Culvert. On 11/20/2024 the state responded that Type A waterproofing is required. The waterproofing requirements per 611.09 differ from the requirements of 512.08 Type A waterproofing. Typically, 611.09 is followed for waterproofing steel Structural Plate pipe culverts in the field. Which specification is to be followed for the Waterproofing material and installation? Furthermore, as an alternate, will the state allow or prefer a full bituminous coating per the requirements of AASHTO M-190 to be done in a shop facility owned and operated by the corrugated steel structural plate manufacturer?

The Department concurs there is a conflict. The 22' diameter multiplate bridge LAW-7-0510 over Bent Creek will be coated per 611.09 and the 611.09 waterproofing will be included in the unit price bid for the Item 611 Conduit, Misc.: 22’DIA, TYPE A 707.03 (WT:35) (Proposal Ref No 472). These changes and Proposal Reference No. 465 will be removed from the proposal and plan by Addendum. Regarding the shop application of the coating, the Department would allow that method provided AASHTO M 243 is used for the seams, bolts and any damage to the coating during installation.

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Ohio Department of Transportation - Prebid Questions

Question Submitted: 12/2/2024 5:54:41 PM

Does ODOT have any additional geotechnical investigation for the provided borrow near Sta. 190+00+/-? As shown, there is not enough information to determine if any durable material is present.

No other geotechnical information is available as the geotechnical investigation program was focused on the mainline and not excess parcels. A boring near the station requested is Boring No. R-216-0-99, drilled at Station 187+65, 54' Lt. (shown on geotechnical profile, sheet 1093/1247), which indicates a sandstone seam from Elev. 646 to 655 (approx.).

Question Submitted: 12/2/2024 11:28:17 AM

Department asked Prebid Question The Department has replaced the utility relocation plans for AEP and Buckeye Rural Electric in the Reference Files and anticipates slight revisions to Frontier and Armstrong. Changes are not anticipated to the underground utility relocation plans. The revised utility note will be included by Addendum and is anticipated late this week.

Question Submitted: 12/2/2024 8:41:31 AM

The typical sections for the Noise Wall show no underdrain at the base of the Wall. Usually Noise walls have a 6" underdrain as part of the item. Will underdrains be required at base of the wall?

Drainage is provided via the variable depth aggregate base which is sloped towards the underdrain at the edge of shoulder.

Question Submitted: 11/30/2024 5:03:58 PM

We believe the quantity for 42" Type C Conduit is wrong. Sheet 645 lists a 73 LF section of 42" Type C Between Structures 37 & 36. Combined with the 3 additional runs on this sheet (309', 318' & 267') we believe the total of 42" Type C should be 967LF.

The Department has confirmed that the quantity should be 967 ft and will be updated by Addendum.

Question Submitted: 11/27/2024 12:51:07 PM

Department asked Prebid Question As a result of the waterway permitting process, a new environmental commitment is required related to recreational boating on Symmes Creek and Indian Guyan Creek. The commitment includes the contractor providing signage and portage at each stream crossing location when the stream is blocked to recreational boating. This commitment will be added to the plans via Addendum next week and work is incidental to other bid items.

Question Submitted: 11/27/2024 7:52:12 AM

Please provide an update on the 401 permit. If the bid date is holding we have been given less than two weeks with the holiday to make adjustments to our bid. The permit will have major impacts on means and methods.

The Department has received all of the final waterway permits from the agencies and is executing final signatures this week. The final Special Provisions-Waterway Permit is expected to be issued by Addendum today or early next week. Compared to the already published Special Provisions-Waterway Permit dated 8/2/24, there are no significant changes in the final Special Provisions-Waterway Permit.

Question Submitted: 11/26/2024 1:09:26 PM

Can ODOT provide a width dimension for the steel load plate that welds to the precast on bridge 7-0563.Page 920/1247 also shows the bearings getting welded 100%, is this correct as this is the only bridge on the project that requires it?

Steel load plate size will be PL 1-1/2x11x1'-11" and will not require a field weld all around and will match other bridges. The details will be updated with the forthcoming addendum. While investigating this question we have determined that the bearing pad size should be 1'-11"x11"x2.803" and this correction will also be included in the forthcoming addendum.

Question Submitted: 11/26/2024 11:52:01 AM

The quantity for Item 305 - Water seems excessively high for the project. Can ODOT review the quantity and adjust to a more appropriate lesser quantity?

The quantity will be reduced by Addendum to about 20,000 MGAL.

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Ohio Department of Transportation - Prebid Questions

Question Submitted: 11/25/2024 5:00:41 PM

As stated in Note 4 on the approach slab bridge drawings: "The cost of concrete and incidentals in the barrier is to be included with Item 526 - Reinforced Concrete, Approach Slab, as per plan."Could you please clarify the following:1)Does this note indicate that the cost of the barrier and transition pieces on the approach slab should be included under the approach slab item, or should it be accounted for in the bridge parapet item?2)Is the Type 4C curb considered incidental to the approach slab?

The cost of the barrier and transition pieces on the approach slab and curb is included in Item 526 – Reinforced Concrete, Approach Slab, as per plan.

Question Submitted: 11/25/2024 2:36:28 PM

Department asked Prebid Question Regarding pre-bid questions asked 11/5/2024 11:03:52 am and 11/5/2024 10:55:50 am, the Department is preparing design changes to be included by Addendum, however a DRAFT sketch of the plan and profile showing the changes has been included with the Reference Files in order for bidders to know the type of changes. Installation method to be determined by contractor. See "DRAFT-LAW-75923_SR7-SR527 interchange revised storm plan_profile".

Question Submitted: 11/25/2024 2:10:23 PM

Please add ref 700 to the EBS File. The current addendums does not have it listed.

The Department has confirmed that added reference item 0700; Item 208E10000, PRE-BLAST CONDITION SURVEY was not added to the EBS file. Also, reference item 0065; Item 659E00540, SEEDING AND MULCHING, CLASS 3C was revised with Addendum-001, but the EBS file was not updated to the new quantity. The Department will update the EBS file with the next Addendum.

Question Submitted: 11/25/2024 7:57:40 AM

The response to a prior question indicated that all of the items under the plan note "ROCK OR SHALE BLASTING OPERATIONS" are paid for by the included 208 lump sum items, however;; " ITEM 208 PRE-BLAST CONDITION SURVEY" was missed. Will this item be added in the next addendum?

Addendum-001 added ITEM 208 PRE-BLAST CONDITION SURVEY to sheet 37 and the general summary on sheet 67. This was given a bid item reference number of 0700.

Question Submitted: 11/25/2024 7:50:34 AM

The reference document “Sandstone and Bedrock Estimate” shows 109k cy of sandstone between stations 174 & 182. The borings show most of the rock excavation in this area to be shale, some of which is under significant quantities of overburden (see borings R-214-0-99, R-2P1-0-99, B-007-2-23, B-007-3-23, B-007-4-23, B-007-5-23). Please double check the quantity of sandstone in this area.

The cited reference document was provided "as-is" and will not be updated.

Question Submitted: 11/25/2024 7:49:05 AM

The details for Embankment, As Per Plan (Type C) on plan sheet 38 reference 703.19 dump rock. Spec 703.19 requires soundness testing. Please confirm that 703.19 was only referenced for the size of the rock and that soundness testing will not be required for Embankment, As Per Plan (Type C).

Correct, the plan note only specifies the size requirement of CMS 703.19. Soundness testing will not be required.

Question Submitted: 11/25/2024 7:46:21 AM

The scale for the plan view on sheet 656 appears to be doubled. Also, the flowline elevations listed in the profile view do not line up with the elevations listed in the grid on the side of the page. Please advise.

The Department agrees and will correct by Addendum.

Question Submitted: 11/22/2024 4:11:52 PM

The previous question submitted on 11/22/2024 at 2:55:20 PM claims there is a 700,000 CY bust. We understand that there is a bust of roughly 115,893 CY from PBQ on 11/15/2024 at 2:13:08 PM. A significant quantity of borrow has been known since day of advertisement. Will ODOT please confirm that there is not a bust of 700,000 CY?

The original prebid question regarding this alleged shortage (11/21/2024 9:12:47am), acknowledged that they did not account for swell of the excavated material. To address a separate prebid question, the Department corrected the spreadsheet error and subsequent reduction in Embankment in Addendum-003. The Department is not aware of any further changes in earthwork quantities.

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Ohio Department of Transportation - Prebid Questions

Question Submitted: 11/22/2024 3:41:57 PM

The Draft Utility note for the BREC pole removals at the SR-243 / SR-7 intersection will not be complete until 6/6/2025. The Environmental Commitment note on sheet restricts excavation between Sta. 307+00 – 348+00 until 5/15/2025. There is no available Excavation to complete the Embankment / Embankment APP Type C needed for the CR-69 Interim Completion Date of 7/15/2025 in a reasonable time. Will the Department extend the Interim Milestone Date due to the proposed Utility Note?

The Department will revise by Addendum the interim completion date of July 15, 2025 to November 15, 2025.

Question Submitted: 11/22/2024 3:06:42 PM

As the bid date approaches it is becoming more and more apparent that there is a lack of DBE interest in the project. The location of the project is the biggest concern when talking to DBE contractor's. The matchmaker for the project did not provide nearly enough options for bidding prime contractors. Please consider adding a proposal note similar to a Design Build Project. Compiling good faith paperwork has not shown to be successful in the past.

The DBE goal will be revised by a forthcoming Addendum.

Question Submitted: 11/22/2024 2:55:20 PM

There have been multiple references to potential on site sources for borrow that will be coming in an addendum. With a current bust of roughly 700,000 CY this information is vitally important to have. With the holiday coming up, contractors will have limited time to re-run the calculations, let alone try and find potential borrow sources

As mentioned in a previous pre-bid question, this evaluation of a shortage of material did not account for swell of the excavated material and therefore the amount of shortage does not appear to be as indicated. Although we anticipate adding this information by Addendum next week, please refer to the proposed plan note and also refer to the Reference document "OTHER DEPARTMENT OWNED PROPERTY_Pages 13-14 from 75923-RW plan_boundary only".OTHER DEPARTMENT OWNED PROPERTYTHE DEPARTMENT HAS IDENTIFIED PARCELS THAT ARE CURRENTLY OWNED BY THE DEPARTMENT THAT ARE NOT WITHIN THE LA-ROW THAT MAY BE USED BY THE CONTRACTOR FOR WASTE OR BORROW AREAS, SUBJECT TO THE REQUIREMENTS OF C&MS 105.16, 107.10 AND 107.11.THE USE OF THE PARCELS FOR THESE PURPOSES IS ALSO RESTRICTED TO ANY EXISTING EASEMENT AND/OR UTILITY RELOCATION OR INSTALLATION PLANS APPROVED FOR THE PROJECT. FOR EXAMPLE, UTILITY EASEMENTS EXIST FOR A PORTION OF PARCEL 121E AND THE CONTRACTOR SHALL NOT IMPACT THE EXISTING GROUND ON THE EASEMENT OR FUTURE UTILITY RELOCATION OR INSTALLATION PLANNED ON THIS PARCEL. THE SAME APPLIES TO OTHER EXCESS (E) PARCELS WITH SIMILAR EASEMENTS OR PLANNED UTILITY RELOCATION OR INSTALLATION. THE DEPARTMENT MAKES NO GUARANTEE AS TO THE SUITABILITY OF THESE PARCELS FOR WASTE OR BORROW AREAS BUT IS MAKING THEM AVAILABLE FOR THE CONTRACTORS USE.

THESE PARCELS HAVE NOT BEEN STUDIED OR CLEARED WITH THE DEPARTMENTS NEPA OR ENVIRONMENTAL DOCUMENT, NOR HAS ANY MITIGATION BEEN PERFORMED TO ACCOUNT FOR ANY ENVIRONMENTAL IMPACTS ON THESE PARCELS. IF THE ENGINEER APPROVES THE USE OF ANY OF THESE PARCELS FOR WASTE OR BORROW, THE DEPARTMENT WILL WAIVE THE FEE OF $0.50 PER CUBIC YARD. THE PARCELS AVAILABLE FOR USE INCLUDE: 46E, 50E, 55E2, 60E, 90E, 96E, 106E, 106E1, 111E, 112E, 121E, 126E1, 126E2, 126E3, 138E, 139E, 140E.

Question Submitted: 11/22/2024 10:56:40 AM

The note at the bottom of Sheet 37, that was added in Addendum 1, indicated that items would be added to the contract to address requirements pertaining to blasting on the project. All of the items have been added, except for Pre-Blast Construction Surveys. Will this item be added in the future addendum?

The Department has included the pay item ITEM 208 PRE-BLAST CONDITION SURVEY with Addendum-001 on sheet 67. We are not aware of an item titled Pre-Blast Construction Surveys. Also, please note that the text of this plan note in Addendum-001 was further revised in Addendum-002. All items included in the plan note "ROCK OR SHALE BLASTING OPERATIONS" are paid for by the included 208 lump sum items.

Question Submitted: 11/22/2024 8:20:32 AM

Can CMS 707.18 which meets the ODOT Durability Design Spreadsheet be added as an acceptable material for ref. 128 and 129 60" Conduit Type A?

The Departments Engineer will consider proposed equal or betterment changes to conduit material types during construction, provided the hydraulic and durability requirements are met.

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Ohio Department of Transportation - Prebid Questions

Question Submitted: 11/22/2024 8:15:20 AM

Can CMS 707.85 which meets the ODOT Durability Design Spreadsheet be added as an acceptable material for ref. 130 66" Conduit Type A?

The Departments Engineer will consider proposed equal or betterment changes to conduit material types during construction, provided the hydraulic and durability requirements are met.

Question Submitted: 11/22/2024 8:08:06 AM

Can CMS 707.01 (0.064) Aluminized be added as an acceptable material for references 106 and 121?

The Departments Engineer will consider proposed equal or betterment changes to conduit material types during construction, provided the hydraulic and durability requirements are met.

Question Submitted: 11/22/2024 8:00:44 AM

Can CMS 707.05 be added as an acceptable material type for the Type F Conduit references 99, 105, 110, and 114?

Due to the configuration of the conduit system, the Department prefers to keep the conduits specified as designed.

Question Submitted: 11/22/2024 7:17:40 AM

Addendum No. 2 replaced page 619. There is a revision bubble on this pages however we cannot see anything that changed. What changed on this page?

The designer removed some stray CADD lines from this area on sheet 619 to clean up the sheet. Nothing in the design changed.

Question Submitted: 11/21/2024 4:23:56 PM

Would the Department consider pushing the project bid back one week to the already scheduled Dec. 19, 2024 letting?

No, it has been intentionally put into this special letting.

Question Submitted: 11/21/2024 3:27:56 PM

Addendum No.2 added a restrictive plan note to sheet 15. Will Grubbing be able to be performed before May 15th?

The restriction on excavation/blasting within the station range was part of the original plan note. Addendum-002 clarified the note to reflect rock outcrop (RO) areas as otherwise identified in the plans. It is the mass excavation that is restricted to begin on or after May 15 and completed by September 30. It is anticipated that these areas will be disturbed with mass excavation the first year of work and after that this restriction will no longer apply. Grubbing is not considered mass excavation and is therefore allowed in this area prior to May 15, except the individual areas identified as rock outcrops shall not be grubbed until May 15 or later.

Question Submitted: 11/21/2024 3:21:26 PM

Will the final addendum be posted before Thanksgiving?

Addendum-003 is being processed now and should be available 11/22/2024 and it includes revisions to the excavation quantity, the reinforced soil slope plan note and waterproofing on structure LAW-7-0510. The final Addendum is targeted for the first week of December, however, another Addendum may be issued sooner if information such as the approved waterway permits becomes available and warrants an Addendum.

Question Submitted: 11/21/2024 2:11:45 PM

In the prebid meeting ODOT stated that they were going to identify areas within the plan to designate for contractor's use. None were shown in Addendum No.2. Will these areas be shown in a future addendum?

Yes, the Department is reviewing and preparing to identify Other Department Owned Property for potential use as waste or borrow areas by the contractor.

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Ohio Department of Transportation - Prebid Questions

Question Submitted: 11/21/2024 1:53:50 PM

ODOT CMS 203.08.A specifically states “When topsoil is specified, use the following: 1. In fill areas, construct the embankment to the bottom of the topsoil depth. 2. In cut areas, excavate additional depth to allow for the topsoil. For cuts or fills, the cross sections show the finished grade, which is the top of the topsoil.” And CMS 203.10 states “When topsoil is specified, the Department will not make deductions or additions from the earthwork quantities for the topsoil.” Then, ODOT CMS 659.11 states “f shown on the plans, place topsoil in loose lifts that construct a 4-inch (100 mm) compacted depth.” The plans only call out topsoil needed for Vegetated Filter Strips / Vegetated BioFilter for 468 CY and 1741 CY respectively. Vegetated Biofilter (pg. 37) states “THIS PLAN UTILIZES VEGETATED BIOFILTER(S) FOR POST CONSTRUCTION STORM WATER TREATMENT. PLACE EITHER ITEM 660 SODDING OR ITEM 659 SEEDING AND MULCHING WITH A 4-INCH LIFT OF TOPSOIL AS SHOWN IN THE PLANS TO ANY DISTURBED AREA ON THE SHOULDER AND FORESLOPE DRAINING TO A VEGETATED BIOFILTER. THE DITCH FOR EACH VEGETATED BIOFILTER SHALL BE TRAPEZOIDAL, AS SHOWN IN THE PLAN CROSS SECTIONS. PROVIDE ITEM 670 AS SPECIFIED IN THE PLANS.” It seems like the only topsoil specified and shown in the plans for the project is for the Vegetated BioFilters/Strips. However we would like to ask a clarifying question- Is there other topsoil needed for the project that is to be included incidental to the Embankment/Excavation including the 2:1 & 3:1 embankments, and the 4:1 & 3:1 cut slopes?

No. A topsoil pay item was only included for vegetated filter strips and vegetated biofilters.

Question Submitted: 11/21/2024 9:12:47 AM

The Department responded to a previous question acknowledging that the excavation quantity would be lowered to correct a spreadsheet error, but also felt that the magnitude of the site balance was not an issue. Based on the new excavation quantity, there is 4,929,886 cy of material available to make 4,528,857 cy of embankment, 582,155 cy of Type C embankment (if it comes from the cut), and 525,387 cy of reinforced embankment. Not accounting for shrink and swell of material, this would leave the site out of balance by over 700,000 cy of required embankment. Will the Department have any additional on-site borrow options to account for this imbalance?

Once a swell factor is applied to the excavation volumes, the amount available for embankment is likely close to the amount needed. To allow for contractor use of available Department Owned Property per CMS 107.11, particularly excess parcels adjacent to the LA-ROW, the Department is reviewing and intends to add via Addendum a list of these parcels potentially available for borrow or waste areas. Otherwise, the contractor is responsible for identifying any potential waste or borrow areas on-site or off-site.

Question Submitted: 11/20/2024 8:29:19 AM

The office calcs and plan summary on sheet 899/1247 for LAW-7-0510 show Type A Waterproofing. Ref no. 465 in the proposal shows Type 2 Waterproofing. Please clarify which waterproofing is required.

Type A waterproofing is correct, the item and extension should have been 512 Ext. 33300, in lieu of 512 Ext. 33000. Extension will be corrected to 33300 by Addendum.

Question Submitted: 11/20/2024 7:55:17 AM

Is the contractor permitted to use steel intermediate diaphragms per PSID-1-13 on concrete beams greater than or equal to 60”?

Yes, per Standard drawing PSID-1-13, intermediate diaphragms for 60”, 66” and 72” deep concrete beams may be cast-in-place or galvanized steel.

Question Submitted: 11/19/2024 7:56:51 AM

The Department responded to the Ramp J+K quantity discrepancy Prebid Question by stating they would reevaluate with more information. When comparing the Ramp J XML + Ramp K XML + 775 XML we yield 655,408 CY Excavation. When subtotaling ODOT's office calcs for the same area we total 779,670 CY Excavation. This is a delta of 124,262 CY. Given the recent response to another Quantity Error at Sta. 338+00 we have reason to believe that there is an error in ODOT's spreadsheet. We have yet to pinpoint the error to a specific cell within the spreadsheet. Will ODOT review the end area quantity input cell by cell in this region of the project to correct the large quantity discrepancy between the XML provided by ODOT and the end areas provided by ODOT?

The Department has double checked each cell of the spreadsheet twice for this area and has not discovered a discrepancy. Bidders should be aware that the special benching is not included in the XML files. The designer has used shapes and end areas from the actual cross sections to generate the earthwork volumes.

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Ohio Department of Transportation - Prebid Questions

Question Submitted: 11/15/2024 2:13:08 PM

Please review the provided average end area spread sheet Station 338+00. It appears that the number was incorrectly typed into the sheet (Cell AI 454), which created a substantial amount of excavation that is not available in this area. This error has been carried over to the Summary Sheets as well as the Excavation Bid Item. If there is an error at STA 338+00, this will cause the project to be 900,000 CY short of embankment material. Does The State have any additional on-site borrow options to account for this?

The Department confirms that there is a change in the excavation amount, but not the magnitude expressed in the pre-bid question. The total excavation for SR 7 will change on sheet 418 from 3,620,043 CY to 3,504,150 CY. The quantity will be carried to sheet 74 which will update the total earthwork on this sheet from 5,039,677 CY to 4,923,784 CY. The total excavation on the general summary sheet 67 will be updated resulting in a total excavation for the project change from 5,045,779 CY to 4,929,886 CY. These changes will be made by Addendum.

Question Submitted: 11/15/2024 8:58:46 AM

Please provide the engineering calculations for the probable sources of rock that could be used for item 203 Embankment, APP Type C.

An unrefined excel spreadsheet will be posted with the Reference Files that made some rough evaluation of possible sandstone quantities at different locations and at various elevations. This evaluation only looked at possible sandstone and not any other potential durable rock. Please note the Disclaimer that is associated with this file as well as all Reference Files and that disclaimer is replicated herein. Disclaimer - The Ohio Department of Transportation is providing the attached information as a courtesy to those who bid on our construction projects. However, please be advised that the Department expressly states that the attached information is not and nor shall it be considered, a part of the bidding documents. The Department shall NOT accept, review, hear or consider any bid protest or construction claims arising from the attached information. In the event that there is a conflict between the attached information and the bidding documents, the bidding documents shall take precedence.

Question Submitted: 11/14/2024 3:56:24 PM

Reference the BREC relocation plans. For clarification, what will be the lowest utility between pole 60 and 67 at Sta. 248+50?

While at some locations, there will be communication lines attached to new electric poles, at this location on BREC poles 60 and 67, only the BREC electric lines will be attached, and communication lines are not proposed.

Question Submitted: 11/14/2024 3:51:42 PM

The clearing note on page 34 of the plans states, “REMOVE ALL TREES AND STUMPS WITHIN CONSTRUCTION LIMITS.” The plans show clearing & grubbing outside the work limits to the R/W limits. Is the contractor required to clear outside the construction limits to the R/W or should the clearing stop at the construction limits. If the contractor is required to clear outside the construction limits, is grubbing required between the construction limits and R/W limits?

The contractor is to clear and grub to the limits as shown in the plans. Grubbing outside of the construction limits can be completed following the 201 specifications.

Question Submitted: 11/14/2024 2:45:23 PM

Can ODOT give a better description on the framing plan for bridge 775-0105, page 1024/1247 showing where the cross frames will be located due to the skew of the bridge.

A revised framing plan for this structure showing the cross frames in more detail and dimensioned more thoroughly will be provided by Addendum.

Question Submitted: 11/14/2024 12:39:51 PM

It appears that ODOT may have double accounted for Excavation quantity in Ramp J & K. When comparing Ramp J Sta. 391+15 left of the matchline and Ramp K Sta. 388+00 right of the matchline there is overlap. There may also be overlap on the SR-775 Sta. 65+00 - 70+00 right side and Ramp J+K. We believe this is approx 75,000 +/- CY less excavation. Can ODOT please look into this and revise the end areas and quantity of Excavation?

The Department has double checked the calculations and verified them to be correct as shown in the plans. If additional information becomes available, we will certainly re-evaluate.

Question Submitted: 11/14/2024 11:39:43 AM

Regarding Bridge no. LAW-7-2.17, Is waterproofing per 611.09 required for the Corrugated Steel Structural Plate Pipe Culvert?

Waterproofing per CMS 611.09 is required.

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Ohio Department of Transportation - Prebid Questions

Question Submitted: 11/14/2024 11:02:54 AM

The estimated wall quantities refer to 'Embankment as per plan' items and are listed under bid items for each bridge structure. However, they are not referenced in the general roadway summary. Could you please clarify whether these items should be added to the general summary, removed from the bridge sub-summary or totaled?

The "Item 203 – Embankment, As Per Plan" are listed for payment under each respective bridge and are in addition to the roadway quantities.

Question Submitted: 11/13/2024 10:01:23 AM

All 4 MSE Walls show the top of the wing walls sloped from the corner at the bottom of pile cap elevation, up to finished top of roadway elevation. In the sloped area, the panels are significantly blocked by the abutment cheek wall. How will strips be attached to the panels blocked by the abutment? Can the wall and abutment geometry be revised so the MSE wall steps up at the back of the cheek wall and is not blocked by the abutment?

The Department concurs there is an issue with the design and revisions will be made by Addendum.

Question Submitted: 11/13/2024 10:00:35 AM

For LAW-0370 bridge abutments, the MSE Walls have an acute corner on one side of the abutment for both walls 1 and 2. To fit strips in the acute corner, strips would need to be skewed up to 25 degrees. Is this allowed? If not allowed, we will need to do a tied across bin wall design. Please advise if a 25 degree skew is allowed.

Yes, a 25 skew is allowable as long as the MSE wall performs as intended.

Question Submitted: 11/12/2024 11:10:57 AM

Bridge structure LAW-7-0387 shown on plan sheet 870 of 1247 and quantified on sheet 873 of 1247, does NOT have a bid item for the installation of moment slabs associated with the abutment MSE walls and approach slabs as detailed on sheets 887,888,889,890. We believe a bid item for these moment slabs is needed (CL QC2 CONC, MMT SLAB W/QC QA). Please provide this pay item for this bridge structure and specify if the reinforcing bars for the moment slabs is incidental to this pay item.

The installation of the moment slab is paid for in the plans under Item 622 Ext. 90200, Barrier, Misc.: Single Slope Concrete Bridge Railing with Moment Slab. The reinforcing has been detailed and is included on the reinforcing table on sheet 892/1247, the total weight / length of reinforcing steel / GFRP bars are carried to the estimated quantities.

Question Submitted: 11/12/2024 11:09:25 AM

Bridge structure LAW-7-0370 shown on plan sheet 817 of 1247 and quantified on sheet 820 of 1247, does NOT have a bid item for the installation of moment slabs associated with the abutment MSE walls and approach slabs as detailed on sheets 834,835,836,837. We believe a bid item for these moment slabs is needed (CL QC2 CONC, MMT SLAB W/QC QA). Please provide this pay item for this bridge structure and specify if the reinforcing bars for the moment slabs is incidental to this pay item.

The installation of the moment slab is paid for in the plans under Item 622 Ext. 90200, Barrier, Misc.: Single Slope Concrete Bridge Railing with Moment Slab. The reinforcing has been detailed and is included on the reinforcing table on sheet 839/1247, the total weight / length of reinforcing steel / GFRP bars are carried to the estimated quantities.

Question Submitted: 11/11/2024 12:57:06 PM

One of the largest embankments on the project between approx station range Sta. 360 - 378 is significantly impacted by the permissible fill rate of 4.6 feet per week. This limits the contractor's production on such a large fill to approx. 25,000 CY per week on average impacting both cost and schedule. This fill additionally has a settlement period of 120 days. Is it the designers intent to have both a lengthy permissible fill and a lengthy settlement period on this embankment?

Geotechnical engineering analysis showed that normal embankment construction rates caused low short-term factor of safety, therefore the controlled rate of embankment construction is required for various areas of the project as it is designed. The 120 day waiting period is associated with the bridge approaches before driving piles, not the entire station range from 360-378. The actual waiting periods will be determined by the Engineer and will be based on the results of the settlement platforms. Although not guaranteed, the waiting periods may be shorter than anticipated due to some of the settlement occurring during embankment construction.

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Ohio Department of Transportation - Prebid Questions

Question Submitted: 11/11/2024 12:55:20 PM

Currently the entire embankment cross-section is quantified as Reinforced Embankment. The geogrid embedded lengths in the tables provided do not completely reach the center of the embankment. ODOT SS 863 requires the use of natural soils or granular materials in the reinforced embankment. Since the site is predominantly shale, can the inner core of the embankment be constructed of rock or shale where there is no geogrid?

Most of the material available from the cut areas of the project is considered non-durable shale as defined by CMS 703.16D. The design of the ITEM 863 - Reinforced Embankment was performed using the design parameters of this non-durable shale material. This material (non-durable shale as defined in CMS 703.16D) is allowed for use within all areas of the ITEM 863 - Reinforced Embankment, including the non-reinforced core of the embankment if placed and compacted in accordance with CMS 203.06B.

Material other than non-durable shale but meeting SS 863 for the reinforced zone of ITEM 863 - Reinforced Embankment may be permitted at the discretion of the Engineer, however, adjustments to the reinforcement spacing and lengths may be necessary. Material meeting ITEM 203 may be permitted for use in the non-reinforced zone of ITEM 863 - Reinforced Embankment at the discretion of the Engineer, however, adjustments to the reinforcement spacing and lengths may be necessary. Plan notes will be added and/or revised by Addendum to address these clarifications.

Question Submitted: 11/8/2024 3:20:43 PM

The pier columns and caps for the LAW-7-0251 bridge are classified as QC4 Mass Concrete. The minimum dimension for these units are 4'-0" and 4'-8" respectively. These do not meet mass concrete CMS requirements. Please confirm if QC4 Mass Concrete is the correct bid item or if these piers should be QC1.

The Department agrees the concrete for the pier on bridge LAW-7-0251 should be Class QC1 and not QC4. Pay item will be updated to Item 511 Ext. 41012 Class QC1 Concrete with QC/QA, Pier Above Footings. This change will be made by Addendum.

Question Submitted: 11/7/2024 1:02:00 PM

The section for the MSE specify a 2'-6" annular space between the wire wall and backface of precast panel. However, a typical connection approach for this type of design requires a maximum of 10". Previous ODOT projects incorporated a 10" concrete closure pour. Confirming that the 2'-6" width can be changed to 10" to conform with current design practices.

The Department has no objection to reducing the width of the space between the wire wall and back of precast panel provided the MSE wall and panels can perform as intended.

Question Submitted: 11/7/2024 12:19:18 PM

For item reference 0272 SPREAD SPECTRUM RADIO ; is it the intention of the project to only provide a communication link between the 2 intersections, or are there other locations that are expected to communicate with these radios?

The communication link will only connect the two ramp intersections.

Question Submitted: 11/7/2024 11:20:08 AM

In the reference files folder there is a KMZ file that has a broken or missing link to download. Please provide the KMZ file.

The file has been replaced.

Question Submitted: 11/6/2024 5:21:48 PM

When will the utility note be available by Addendum? Even if a draft utility note was provided it would be helpful for the contractor to estimate the complex schedule for the project.

The Department will provide a Draft Utility Note as a Reference File until utility relocation sequence and timeframes are determined and then a final Utility Note will be provided by Addendum.

Question Submitted: 11/6/2024 8:46:19 AM

Can ODOT provide the office calculations for the structures on the project?

The Department has added the bridge estimated quantity files as Reference Files. Note: They are dated July 2024 and have not been updated as plan corrections have been made. No corrections to these quantity sheets will be made and all corrections will be made only to the bidding documents.

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Ohio Department of Transportation - Prebid Questions

Question Submitted: 11/5/2024 2:33:51 PM

How can we access the foundation design report for the MSE Walls?

The MSE wall foundation design information for these walls are within the geotechnical reports for the specific bridges. We have added them to the projects Reference Files for ease of access. https://ftp.dot.state.oh.us/pub/contracts/Attach/LAW-75923/

Question Submitted: 11/5/2024 2:22:45 PM

Is there an architectural, textured finish for the MSE panels or shall it be a plain, smooth finish?

The plans do not call out specific architectural treatment for the MSE wall panels. Per Specification 840.05 F if no aesthetic surface treatment is required, finish the front face of the panels to a smooth surface.

Question Submitted: 11/5/2024 2:11:10 PM

The ASTM D4644 Durability testing is a 24-48 hour laboratory test including oven drying. The frequency of 5,000 CY adversely impacts schedule and production on the project and may require an onsite laboratory. Will ODOT reduce the frequency to every 25,000 CY to avoid impacting schedule and to avoid adding cost of an onsite lab to the bid?

The Department will revise the ITEM 203 EMBANKMENT, AS PER PLAN (TYPE C) plan note to reflect one slake durability test every 20,000 CY or change in material, as determined by the Engineer.

Question Submitted: 11/5/2024 1:44:21 PM

The note added to Addendum No.1 Sheet 34 is hard to bid accurately. How much orange fence will be left, and how many drive pipes/culverts will remain from the clearing contractor?

The Department is having the Tree Clearing contractor that is now working on the project site install orange snow fence around the two active gas wells shown on sheets 22E and 22H. These two areas are designated as Tree Clearing Area - C for this contract. The plan note will be revised by Addendum to remove the "culverts/drive pipes". Additionally, Special Provisions - Waterway Permits requires demarcation of aquatic resources not authorized for impacts. These areas will be demarcated by the Tree Clearing contractor and the fence left in place at the completion of their contract. Per the Special Provision Waterway Permits, the Highway contractor will maintain and remove the fence following completion of the project.

Question Submitted: 11/5/2024 11:03:52 AM

Referencing sheet 95,plan view, and sheet 639, profile.The proposed 21" conduit crossing Rt.7 at Station 115+15 is indicated to be under existing roadway which is to be milled/overlayed and in the same alignment as the existing 18" conduit. Would ODOT consider offsetting alignment for a Jack & Bore /abandoning 18" in-place?

The Department is reconsidering the design and replacement of this conduit at this location and will address any changes by Addendum.

Question Submitted: 11/5/2024 10:55:50 AM

Referencing sheet 95,plan view, and sheet 639, profile.The proposed 30" conduit crossing Rt.7 at Station 1411+30 is indicated to be 35' deep with tight construction limits in the same alignment as the existing 24" conduit. Would ODOT consider offsetting alignment for a Jack & Bore /abandoning 24" in-place?

The Department is reconsidering the design and replacement of this conduit at this location and will address any changes by Addendum.

Question Submitted: 11/1/2024 12:54:32 PM

Profile sheet 643 indicates 248’ of 15” Conduit, Type C at Station 376+22 that is not on the Subsummary sheet. Please advise.

The Department concurs and will be corrected and added to 2-D on sheet 79 by Addendum.

Question Submitted: 11/1/2024 12:54:14 PM

Profile sheet 388 indicates 72’ of 15” Conduit, Type B at Station 395+50 that is not on the Subsummary sheet. Please advise.

The quantity for this item is included in 1-D for sheet 146 on the Subsummary sheet 79.

Question Submitted: 10/31/2024 7:30:52 PM

Is the ASTM testing required for the Embankment As Per Plan Type C to be performed by the contractor?

Yes

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Ohio Department of Transportation - Prebid Questions

Question Submitted: 10/31/2024 6:41:33 PM

Is the ASTM testing required for the Embankment As Per Plan Type C to be performed by the contractor?

Yes

Question Submitted: 10/30/2024 11:46:23 AM

When will the final CAD surface file be available? We have been checking the FTP site everyday and its still not there. We would appreciate the file as it assists in our takeoff efforts for this large project.

The Department uploaded ten XML files this evening 10/30/2024 and they should be available soon.

Question Submitted: 10/30/2024 11:44:08 AM

Per Subsummary sheet 79, 21" Conduit, Type D; the 88' indicated on plan sheet 490 and profile sheet 647 could not be identified. Please advise.

This pipe has the indicator 2-D on sheet 490 and is located under the Thompson Drive at roughly 20+20 left.

Question Submitted: 10/30/2024 11:42:52 AM

Per Subsummary, sheet 79, 15" Conduit, Type B; the 249' indicated on plan sheet 146 and profile sheet 647 could not be identified. 107' of 15" Conduit, Type B was shown on profile sheet 647 which is not on the Subsummary. Please advise.

The 249' of conduit, Type B will need to be revised to 179'. This quantity includes the 107' from structures 43C-39A shown on sheet 647 and 72' from structures 39C-39 shown on the cross sections on sheet 388. The total quantity for 15" Type B will be revised to 1,574 ft and a reference to the storm profile that is shown on the cross section will be added to the plan sheet. This change will be made by Addendum.

Question Submitted: 10/30/2024 11:41:54 AM

Plan page 37A now includes a Durable Material note. Please clarify the intent of this note. It reads as if all base of embankments, even those outside of the drainage layer areas, should be constructed with the referenced durable material. Please clarify.

The intent of the Durable Material note is not to require durable material for all embankments. The note is simply to instruct the contractor to not waste durable materials when they could be used where the ITEM 203 - EMBANKMENT, AS PER PLAN (TYPE C) material is needed on the project. The existing note on sheet 37A will be replaced with the following by Addenda. DURABLE SANDSTONE AND SILTSTONE ENCOUNTERED DURING EXCAVATION SHOULD FIRST BE USED FOR AREAS REQUIRING ITEM 203 - EMBANKMENT, AS PER PLAN (TYPE C) SHOULD IT MEET THE CRITERIA IDENTIFIED IN THE PLANS. ANY EXCESS DURABLE MATERIAL CAN BE USED FOR REGULAR ITEM 203 - EMBANKMENT AND NOT WASTED.

Question Submitted: 10/30/2024 11:40:45 AM

Item 203 – Embankment, As Per Plan (Type C) specifically states that ALL MATERIALS SHALL BE FREE OF SOILS but fails to mention Shale. The site is predominately shale and it is reasonable to expect some shale to be intermixed into the onsite sandstone/siltstone because of blasting operations. Will the department allow small amounts of Shale within the Drainage Layer?

The plan note for ITEM 203 – EMBANKMENT, AS PER PLAN (TYPE C) will be revised to allow a small amount (less than 5%) of soil and/or non-durable rock as determined by volume and visual inspection. This change will be made by Addendum.

Question Submitted: 10/30/2024 11:39:50 AM

ODOT did not answer the separation layer question via Addendum No. 1. Can a quantity and Item for Separation Fabric Geotextile Fabric Type A be provided for the bidder?

The geotextile included in ITEM 203-EMBANKMENT, AS PER PLAN (TYPE C) will remain as incidental to this pay item. A separate pay item will not be provided.

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Ohio Department of Transportation - Prebid Questions

Question Submitted: 10/30/2024 11:39:18 AM

1)A note has been provided on sheet 37A regarding Durable Material. This note essentially makes the Embankment a special As Per Plan item. Since the site is predominately shale this added note for all embankments is a considerable cost add to the project. Will ODOT provide a quantity of this material and designate it as a different item so the project can be accurately bid. Will ODOT create a new item and quantities?

The intent of the Durable Material note is not to require durable material for all embankments. The note is simply to instruct the contractor to not waste durable materials when they could be used where the ITEM 203 - EMBANKMENT, AS PER PLAN (TYPE C) material is needed on the project. The existing note on sheet 37A will be replaced with the following by Addenda. DURABLE SANDSTONE AND SILTSTONE ENCOUNTERED DURING EXCAVATION SHOULD FIRST BE USED FOR AREAS REQUIRING ITEM 203 - EMBANKMENT, AS PER PLAN (TYPE C) SHOULD IT MEET THE CRITERIA IDENTIFIED IN THE PLANS. ANY EXCESS DURABLE MATERIAL CAN BE USED FOR REGULAR ITEM 203 - EMBANKMENT AND NOT WASTED.

Question Submitted: 10/29/2024 9:24:39 AM

Is there a prebid meeting?

Yes, it will be on November 13, 2024. The notice has been posted here: https://www.dot.state.oh.us/divisions/contractadmin/contracts/lists/prebidmtg/dates.aspx.

Question Submitted: 10/28/2024 5:11:09 PM

Bridge structures LAW-7-0713 R shown on plan sheet 989 of 1247 and quantified on sheet 993 of 1247. Please review the Class QC4 Mass Concrete, Substructure with QC/QA quantity for bridge Structure LAW-7-0713R, we are coming up with substantially more cubic yards of concrete.

The Department concurs that the quantity shown for Item 511E45602, Class QC4 Mass Concrete, Substructure with QC/QA is low. The estimated quantity should be 331 cy. This will be updated by Addendum.

Question Submitted: 10/28/2024 5:10:16 PM

Bridge structures LAW-7-0713 L shown on plan sheet 961 of 1247 and quantified on sheet 964 of 1247. Please refer to purchased lengths of pile on sheet 963 and review quantity calculations for furnished pile quantities.

The Department concurs that the estimated quantities for ITEM 507E00200, STEEL PILES HP 12x53, FURNISHED is low. An initial review indicates a new total of 6,840 ft, with 3,780 ft at the abutments and 3,060 ft at the piers. This will be corrected by Addendum.

Question Submitted: 10/28/2024 5:09:34 PM

Bridge structures LAW-7-0713 R shown on plan sheet 989 of 1247 and Bridge structure LAW-7-0713 L shown on plan sheet 961 of 1247 do NOT depict a separation line for the quantification of crushed aggregate slope protection and rock channel protection. Please provide a dividing line that represents the limits of crushed aggregate slope protection and rock channel protection for each bridge structure.

Perhaps we are misunderstanding the question, but the division for RCP and crushed aggregate slope protection for LAW-7-0713R is shown in both the plan and profile view. The profile view shows the RCP terminating at El. 560.0. The plan view shows the limits of each on the south side of the bridge at the rear abutment and under the bridge at the forward abutment.The division for RCP and crushed aggregate slope protection for LAW-7-0713L is shown in both the plan and profile view. The profile view shows the RCP terminating at El. 560.0. The plan view shows the limits of each on the north side of the bridge at the forward abutment and under the bridge at the rear abutment.

Question Submitted: 10/28/2024 5:08:42 PM

Bridge structure LAW-7-0713 L shown on plan sheet 961 of 1247 and quantified on sheet 964 of 1247, does NOT have a bid item for the installation of cofferdams and excavation bracing. We believe a cofferdam with excavation bracing will be necessary to construct pier 2 adjacent to Little Paddy Creek. Please provide a Cofferdam and Excavation Bracing Item for this bridge structure.

The Department will add a pay item for cofferdams and excavation bracing by Addendum.

Question Submitted: 10/28/2024 5:07:48 PM

Bridge structure LAW-7-0713 R shown on plan sheet 989 of 1247 and quantified on sheet 993 of 1247, does NOT have a bid item for the installation of cofferdams and excavation bracing. We believe a cofferdam with excavation bracing will be necessary to construct pier 2 adjacent to Little Paddy Creek. Please provide a Cofferdam and Excavation Bracing Item for this bridge structure.

The Department will add a pay item for cofferdams and excavation bracing by Addendum.

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Ohio Department of Transportation - Prebid Questions

Question Submitted: 10/28/2024 5:06:44 PM

Bridge structure LAW-775-0105 shown on plan sheet 1015 of 1247 and quantified on sheet 1018 of 1247, shows a pay item for the prebore holes but is NOT detailed any where on the plans. All bridge embankments have construction of pile windows for piling installation. Will this prebore pay item still be required or can this item be eliminated?

After review, the Department will be removing the pile driving window at the pier for this structure. The change will be made by Addendum.

Question Submitted: 10/28/2024 5:05:13 PM

The retaining wall structure located between ramps J & K shown on plan sheet 706 of 1247 and quantified on sheet 707 of 1247, no pay item is provided for the granular structural backfill. Please provide a pay item.

The granular backfill Type B is included with the ITEM 503- UNCLASSIFIED EXCAVATION, AS PER PLAN. No separate pay item will be added. The specifications for this material can be found in CMS 703.16C.

Question Submitted: 10/28/2024 5:04:15 PM

The retaining wall structure located between ramps J & K shown on plan sheet 706 of 1247 and quantified on sheet 707 of 1247, no pay items are provided for the 6” PCP pipe with geotextile and associated porous backfill. Please provide pay items.

Quantities for both the pipe and porous backfill will be added by Addendum.

Question Submitted: 10/28/2024 9:33:10 AM

Id like to recall question - (The average end area spreadsheet provided does not match the bid quantities. Approx 968,156 CY less Excavation item, Approx 78,358 CY less Embankment, Approx. 112,085 CY less Reinforced Embankment, and Approx. 40,893 less Embankment Type C is missing from the spreadsheet. Can ODOT provide a more accurate spreadsheet?)

We found additional cells within the spreadsheet that work.

Question Submitted: 10/28/2024 9:07:37 AM

The average end area spreadsheet provided does not match the bid quantities. Approx 968,156 CY less Excavation item, Approx 78,358 CY less Embankment, Approx. 112,085 CY less Reinforced Embankment, and Approx. 40,893 less Embankment Type C is missing from the spreadsheet. Can ODOT provide a more accurate spreadsheet?

Question Submitted: 10/24/2024 9:54:20 AM

There are two gas wells shown on sheet #103. Do both of these need plugged or just the #34087601320000 Active Well?

The Department records, ODNR oil & gas well logs, as well as the current owner has only documented one active oil/gas well at this location. One of the symbols will be removed from this sheet.

Question Submitted: 10/24/2024 9:32:38 AM

The gasline and well shown on page 22H shows DND. Will this crosshatching be removed?

Yes, the areas where the natural gas wells and appurtenances are shown on sheets 22E and 22H will be revised to a "Tree Clearing Area - C" and the Do Not Disturb (DND) hatching removed.

Question Submitted: 10/24/2024 9:10:15 AM

Are there any work restrictions and clearances under the 138kV denoted as "Et" on Pg. 13?

In general, the answer is yes. The exact amount and type of restrictions and clearances would be determined by OSHA regulations and the specific utility. Contractors are responsible to determine those restrictions and clearances based on the work, and equipment they intend to use near this utility.

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Ohio Department of Transportation - Prebid Questions

Question Submitted: 10/24/2024 8:10:20 AM

The Utility information is limited to (2) Pages on sheet 13 and 14. More details are shown on the plan pages but theres no information on the disposition of what utilities will remain and/or be relocated. Will the Department please provide a Utility Note or Utility Disposition for each of the Utility Providers listed on sheets 13 and 14?

The Department is finalizing the Utility Note and will issue it as soon as it is ready via Addendum. We know that due to the accelerated schedule of project delivery, the majority of utility relocations will need to occur after this contract is awarded and will be ongoing for 4-8 months after this contractor begins work. A phased approach to utility relocation is being pursued in order to move utilities to coincide with the plan MOT phasing, namely the SR243/CR69/CR118/Brentwood/CR 104 area first, the beginning of the project and CR 32 area second and SR 775 interchange area last.

Question Submitted: 10/23/2024 1:36:07 PM

The Tree Clearing Area C is on the critical path of the project due to the Bat Tree restrictions. This critical path is impacting feasible construction of CR69 Phase 1 for the Interim Date of 7/15/2025. Will ODOT have the Clearing Contractor for LAW-120720 perform Area C clearing (especially between STA. 245+00 and 300+00) to avoid schedule impacts?

The Department intends to add additional tree clearing limits to the existing Tree Clearing Contractor for the areas outside of the 2001 NEPA limits and approximately from Sta 248 to Sta 296. The revision will be shown in an Addendum.

Question Submitted: 10/22/2024 12:49:17 PM

Referencing Special Provisions, Waterway Permits Conditions, C-R-S: LAW-7-2.17, PID: 75923/113211, Dated Aug. 2, 2024.Permit conditions 10- Temporary Access Fills without SreamStats data- lists streams 1,2,3a,4,5,6,7,82,10a,10b,10c,12,13a,13a1,13a2,13a3,15,15a,15b,16a,and 17.Permit condition 11-Temparary Access Fills with StreamStats data-lists streams 3,9,9a,10,11,13,14,16, Symmes Creek, Bear Creek, Bent Creek, Indian Guyan Creek and Little Paddy Creek.Please provide StreamStats or reclassify streams 3,9,10,13,14,16 and Bear Creek. These streams are listed under condition 11 but we could not find data.

The Department completed a StreamStats check prior to advertising the project for sale and again recently and have verified that these streams are delineated and available on StreamStats. Bidders have access to this data. The Contractor is responsible for obtaining flow information on StreamStats, per the Special Provisions.

Question Submitted: 10/22/2024 12:47:56 PM

Referencing Special Provisions, Waterway Permits Conditions, C-R-S: LAW-7-2.17, PID: 75923/113211, Dated Aug. 2, 2024.Permit conditions 10- Temporary Access Fills without SreamStats data- lists streams 1,2,3a,4,5,6,7,82,10a,10b,10c,12,13a,13a1,13a2,13a3,15,15a,15b,16a,and 17.Permit condition 11-Temparary Access Fills with StreamStats data-lists streams 3,9,9a,10,11,13,14,16, Symmes Creek, Bear Creek, Bent Creek, Indian Guyan Creek and Little Paddy Creek.Please indicate which condition streams 14a,14b,16a1, and 18 should be considered.

These four streams (14a,14b,16a1, and 18) are small ephemeral streams that will either be completely graded/filled (14a,14b,16a1) or have very minor RCP fill impacts (18). No TAF is being permitted for these streams so they don't fall under either TAF condition. Since no temporary fills of any kind are allowed in these four streams, only permanent fills stated in the Special Provisions will be authorized in streams 14a,14b,16a1, and 18.

Question Submitted: 10/21/2024 3:56:28 PM

When will ODOT post Addendum No.1 ?

We anticipate Addendum #1 to be posted early next week.

Question Submitted: 10/18/2024 10:44:18 AM

Traffic signal structures on sheet 772/1247 do not match the pole chart designs on sheet 773A/1247. Please confirm what designs are needed for these structures.

It appears the callouts on sheet 772 are not correct and will be corrected with an Addendum.

Question Submitted: 10/17/2024 2:10:37 PM

Regarding the questions regarding office calcs and the new CADD files - > is this the reference folder you are referencing? -----> https://ftp.dot.state.oh.us/pub/Contracts/Attach/LAW-75923/REFERENCE%20FILES/

Yes

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Ohio Department of Transportation - Prebid Questions

Question Submitted: 10/16/2024 8:03:43 AM

Can the department please provide a link to the excel file for the end area calculations referenced in an earlier prebid question? We do not see this file listed on the ftp site with the other reference files.

There was a delay in the upload. The file will be uploaded this evening.

Question Submitted: 10/15/2024 2:27:30 PM

Will metal SIP deck forms be allowed for bridges?

Stay-in-place (SIP) deck forms are not allowed.

Question Submitted: 10/15/2024 1:35:54 PM

Structure LAW-7-0370 requires preloading via temporary fill or jersey barrier for the noted settlement periods prior to continuing construction. Pile driving notes on sheet 818 state pile driving may continue after a 30-day waiting period, whereas MSE construction may not continue until after a 90-day waiting period per note on sheet 844. Do both waiting periods require preloading for the full duration, or may preloading be removed after the initial 30-day waiting period for pile driving?

The waiting period on sheet 844 for ITEM 867 - TEMPORARY WIRE FACED MECHANICALLY STABILIZED EARTH WALL, AS PER PLAN will be revised to 30 days. This will be corrected via Addendum.

Question Submitted: 10/14/2024 4:53:12 PM

ITEM 203 Embankment, As Per Plan is described as "Type C". What is Type C referencing?

ITEM 203 - EMBANKMENT, AS PER PLAN (TYPE C) is simply the name chosen to describe this AS PER PLAN material. At one time, there were Types "A" and "B", but these were not needed for this phase of the project. The "Type C" is not referencing any other material or ODOT specification.

Question Submitted: 10/14/2024 4:49:11 PM

This project will require blasting. There are homes, structures, and drinking water well(s) within the blast radius. Will the department add Lump Sum items for any applicable items such as Pre-Blast Condition Survey, Blasting Consultant, Airblast and Noise Control, Vibration Control and Monitoring and/or Hydrologist?

Yes, the Department will be adding additional detail regarding blasting with Addendum #1.

Question Submitted: 10/14/2024 4:48:03 PM

The plan note for Item 203 – Embankment As Per Plan (Type C) is ambiguous. References are made to both cohesive material and crushed stone per 703. Can cohesive material meeting the classifications in 703 be utilized to construct the drainage layer in its entirety?

The plan note for Item 203 - Embankment As Per Plan (Type C) is being reviewed for clarity and will be revised in Addendum #1.

Question Submitted: 10/14/2024 4:44:19 PM

This project is in a remote part of the state, the DBE Goal of 9.5% (approx. $20,000,000) will require small DBE firms to travel and relocate to this remote area which is not feasible. Will ODOT consider reducing the DBE goal for this project?

The DBE goal of 9.5% won't be changed. PN22 outlines what the contractor should do in the event they can’t meet the goal.

Question Submitted: 10/14/2024 4:41:04 PM

The embankments which require Embankment As Per Plan (Type C) will be uneven, sloped, irregular, and potentially soft subgrade which often require a bridging per 203.05. When bridging is needed, it won't be possible to maintain a 6" lift of ITEM 304, therefore the increased lift thickness determined by the Engineer will be entirely of Item 304 not Item 203 Embankment, As Per Plan(Type C). By having a separate pay item to measure and quantify the Separation Layer of Item 304, ODOT will receive the best value for the Item 203 Embankment, As Per Plan (Type C). If this Separation Layer is kept incidental to the Embankment, then every bridging lift placed in the field will be subject to a potential Change Order and delay. ODOT will also pay for additional risk coverage and material waste via the Item 203 Embankment As Per Plan (Type C) if this material is left incidental. Will ODOT create a separate bid item for Item 304 Separation Layer(CY) and Separation Fabric, Geotextile Type A(SY)?

The plan note for Item 203 - Embankment As Per Plan (Type C) is being reviewed for clarity and will be revised in Addendum #1.

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Ohio Department of Transportation - Prebid Questions

Question Submitted: 10/14/2024 7:22:33 AM

The CADD files currently available in the reference files contain an XML file for the existing surface but not the proposed. Please provide an XML file for the proposed surface.

The Department will provide the requested information for the SR7 mainline, CR69, SR243 and ramps. It will be posted to the FTP site when complete.

Question Submitted: 10/10/2024 3:28:53 PM

Can a typical section be provided to clarify how the geogrid for the reinforced soil slopes is layered, how it is measured, and how it is differentiated between the right and left sides of the slope? For example on page 38, Sta. 134+56, at elevation 525 the embedded length is 90 feet and the linear length of the embankment is 169 FT. 90 FT x 2 sides of the embankment x 169 LF = 3380 SY. Table shows 5280 SY. Also, STA. 300+06 Elev 536 shows 80 Ft geogrid layer, 80FT x 94 LF x 1 side = 835.5 SY. Table shows 2862 SY.

This will be addressed in Addendum #1.

Question Submitted: 10/10/2024 3:00:57 PM

Can office calculation spreadsheets be provided for the average end area calculations of the excavations and embankments shown in the cross-sections?

Office calculations in an Excel spreadsheet named "75923_Earthwork Side and Main Calcs and Sheet Totals" has been provided in the Reference files.

Question Submitted: 10/10/2024 2:40:47 PM

Can the 8/2/24 Oil and Gas Well Special Provision be made available to the bidders?

The Special Provisions are currently packaged with the Plan set, not the proposal, and they are available through DigitalPaper XE for download.

Question Submitted: 10/10/2024 2:39:53 PM

Can the Special Provision 8/2/24 Waterway Permit be made available?

The Special Provisions are currently packaged with the Plan set, not the proposal, and they are available through DigitalPaper XE for download.

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Ohio Department of Transportation
Official Bid Tabulation
Jack Marchbanks, Ph.D., Director

Project No. 240512
PID 75923
LAW-SR 7-02.17 Phase 2
Federal
Type: NEW CONSTRUCTION
Letting Date: 12/12/2024
Completion Date: 11/1/2028

Contract Awarded To: KOKOSING CONSTRUCTION COMPANY INC
Award Amount: $128,588,034.98

Engineer's Estimate: $179,217,000.00

Bidder 1
KOKOSING CONSTRUCTION COMPANY INC
6235 WESTERVILLE RD
Franklin
WESTERVILLE, OH 43081
Bid $128,588,034.98

Bidder 2
TRUMBULL CORPORATION/RUHLIN COMPANY
225 NORTH SHORE DRIVE

PITTSBURGH, PA 15212
Bid $139,634,420.50

Bidder 3
TRITON CONSTRUCTION INC
P O BOX 1360

SAINT ALBANS, WV 25177
Bid $143,232,890.00

Bidder 4
BEAVER EXCAVATING COMPANY
P O BOX 6059
Stark
CANTON, OH 44706
Bid $167,730,285.29

Ref #1	**201E11001**	**CLEARING AND GRUBBING, AS PER PLAN, (LUMP SUM)**	
	Awd	$1,340,000.00	$1,340,000.00
	2	$4,019,650.48	$4,019,650.48
	3	$4,541,447.88	$4,541,447.88
	4	$5,567,000.00	$5,567,000.00
Ref #2	**202E20010**	**HEADWALL REMOVED, (1 EACH)**	
	Awd	$1,000.00	$1,000.00
	2	$762.63	$762.63
	3	$500.00	$500.00
	4	$1,000.00	$1,000.00
Ref #3	**202E23000**	**PAVEMENT REMOVED, (50306 SY)**	
	Awd	$2.50	$125,765.00
	2	$1.59	$79,986.54
	3	$10.00	$503,060.00
	4	$5.00	$251,530.00
Ref #4	**202E35100**	**PIPE REMOVED, 24" DIAMETER AND UNDER, (2536 FT)**	
	Awd	$25.00	$63,400.00
	2	$19.78	$50,162.08
	3	$25.00	$63,400.00
	4	$33.00	$83,688.00
Ref #5	**202E35200**	**PIPE REMOVED, OVER 24" DIAMETER, (1033 FT)**	
	Awd	$70.00	$72,310.00
	2	$80.21	$82,856.93
	3	$40.00	$41,320.00
	4	$53.00	$54,749.00
Ref #6	**202E38000**	**GUARDRAIL REMOVED, (6500 FT)**	
	Awd	$2.30	$14,950.00
	2	$2.40	$15,600.00
	3	$2.30	$14,950.00
	4	$2.30	$14,950.00
Ref #7	**202E58000**	**MANHOLE REMOVED, (2 EACH)**	
	Awd	$1,000.00	$2,000.00
	2	$944.47	$1,888.94
	3	$1,000.00	$2,000.00
	4	$950.00	$1,900.00
Ref #8	**202E58100**	**CATCH BASIN REMOVED, (6 EACH)**	
	Awd	$1,200.00	$7,200.00
	2	$1,011.31	$6,067.86
	3	$650.00	$3,900.00
	4	$325.00	$1,950.00
Ref #9	**202E64000**	**SPECIAL - PLUGGING AND VENTING GAS AND/OR OIL WELL, (3 EACH)**	
	Awd	$14,000.00	$42,000.00
	2	$10,000.00	$30,000.00
	3	$160,000.00	$480,000.00
	4	$100,000.00	$300,000.00
Ref #10	**202E70000**	**SPECIAL - FILL AND PLUG EXISTING CONDUIT, 21" AND , (99 FT)**	
	Awd	$67.00	$6,633.00
	2	$48.57	$4,808.43
	3	$150.00	$14,850.00
	4	$36.00	$3,564.00

Ref #11	**202E75000**	**FENCE REMOVED, (6799 FT)**	
	Awd	$3.07	$20,872.93
	2	$3.00	$20,397.00
	3	$5.80	$39,434.20
	4	$3.00	$20,397.00
Ref #12	**202E75250**	**GATE REMOVED, (1 EACH)**	
	Awd	$195.00	$195.00
	2	$195.00	$195.00
	3	$350.00	$350.00
	4	$200.00	$200.00
Ref #13	**203E07510**	**SPECIAL - PIEZOMETER, (12 EACH)**	
	Awd	$6,390.42	$76,685.04
	2	$8,030.03	$96,360.36
	3	$5,000.00	$60,000.00
	4	$11,500.00	$138,000.00
Ref #14	**203E10000**	**EXCAVATION, (4929854 CY)**	
	Awd	$4.69	$23,121,015.26
	2	$5.05	$24,895,762.70
	3	$5.50	$27,114,197.00
	4	$8.22	$40,523,399.88
Ref #15	**203E20000**	**EMBANKMENT, (4531429 CY)**	
	Awd	$1.04	$4,712,686.16
	2	$1.50	$6,797,143.50
	3	$1.20	$5,437,714.80
	4	$2.15	$9,742,572.35
Ref #16	**203E20001**	**EMBANKMENT, AS PER PLAN (TYPE C), (582155 CY)**	
	Awd	$1.93	$1,123,559.15
	2	$3.50	$2,037,542.50
	3	$2.50	$1,455,387.50
	4	$3.00	$1,746,465.00
Ref #17	**203E22000**	**EMBANKMENT, USING NATURAL SOILS, 703.16.A, (7459 CY)**	
	Awd	$1.40	$10,442.60
	2	$3.90	$29,090.10
	3	$5.00	$37,295.00
	4	$1.00	$7,459.00
Ref #18	**204E10000**	**SUBGRADE COMPACTION, (328438 SY)**	
	Awd	$1.75	$574,766.50
	2	$2.62	$860,507.56
	3	$1.30	$426,969.40
	4	$2.00	$656,876.00
Ref #19	**204E13000**	**EXCAVATION OF SUBGRADE, (16878 CY)**	
	Awd	$5.50	$92,829.00
	2	$5.95	$100,424.10
	3	$11.00	$185,658.00
	4	$23.00	$388,194.00
Ref #20	**204E30010**	**GRANULAR MATERIAL, TYPE B, (16878 CY)**	
	Awd	$40.00	$675,120.00
	2	$78.38	$1,322,897.64
	3	$87.00	$1,468,386.00
	4	$72.00	$1,215,216.00

Ref #21	**204E45000**	**PROOF ROLLING, (110 HOUR)**	
	Awd	$250.00	$27,500.00
	2	$338.23	$37,205.30
	3	$230.00	$25,300.00
	4	$500.00	$55,000.00
Ref #22	**204E50000**	**GEOTEXTILE FABRIC, (68575 SY)**	
	Awd	$1.80	$123,435.00
	2	$1.84	$126,178.00
	3	$2.30	$157,722.50
	4	$2.00	$137,150.00
Ref #23	**209E60201**	**LINEAR GRADING, AS PER PLAN, (258 STA)**	
	Awd	$185.00	$47,730.00
	2	$623.93	$160,973.94
	3	$300.00	$77,400.00
	4	$900.00	$232,200.00
Ref #24	**606E15050**	**GUARDRAIL, TYPE MGS, (20261.2 FT)**	
	Awd	$16.80	$340,388.16
	2	$20.00	$405,224.00
	3	$16.80	$340,388.16
	4	$16.80	$340,388.16
Ref #25	**606E15100**	**GUARDRAIL, TYPE MGS WITH LONG POSTS, (6137.5 FT)**	
	Awd	$18.16	$111,457.00
	2	$22.40	$137,480.00
	3	$18.16	$111,457.00
	4	$18.16	$111,457.00
Ref #26	**606E15550**	**GUARDRAIL, BARRIER DESIGN, TYPE MGS, (375 FT)**	
	Awd	$30.28	$11,355.00
	2	$32.80	$12,300.00
	3	$30.28	$11,355.00
	4	$30.28	$11,355.00
Ref #27	**606E17350**	**GUARDRAIL, TYPE MGS, 25' LONG-SPAN, (150 FT)**	
	Awd	$17.92	$2,688.00
	2	$24.40	$3,660.00
	3	$17.92	$2,688.00
	4	$17.92	$2,688.00
Ref #28	**606E26150**	**ANCHOR ASSEMBLY, MGS TYPE E, (MASH 2016), (36 EACH)**	
	Awd	$2,240.00	$80,640.00
	2	$2,950.00	$106,200.00
	3	$2,240.00	$80,640.00
	4	$2,240.00	$80,640.00
Ref #29	**606E26550**	**ANCHOR ASSEMBLY, MGS TYPE T, (22 EACH)**	
	Awd	$1,100.11	$24,202.42
	2	$1,425.00	$31,350.00
	3	$1,050.00	$23,100.00
	4	$1,050.00	$23,100.00
Ref #30	**606E35002**	**MGS BRIDGE TERMINAL ASSEMBLY, TYPE 1, (31 EACH)**	
	Awd	$2,000.00	$62,000.00
	2	$2,920.00	$90,520.00
	3	$2,000.00	$62,000.00
	4	$2,000.00	$62,000.00

Ref #31	**606E35102**	**MGS BRIDGE TERMINAL ASSEMBLY, TYPE 2, (5 EACH)**	
	Awd	$350.00	$1,750.00
	2	$620.00	$3,100.00
	3	$350.00	$1,750.00
	4	$350.00	$1,750.00
Ref #32	**606E60012**	**IMPACT ATTENUATOR, TYPE 1 (BIDIRECTIONAL), (2 EACH)**	
	Awd	$4,350.00	$8,700.00
	2	$4,350.00	$8,700.00
	3	$7,000.00	$14,000.00
	4	$6,688.81	$13,377.62
Ref #33	**606E60022**	**IMPACT ATTENUATOR, TYPE 2 (UNIDIRECTIONAL), (55 MP, (1 EACH)**	
	Awd	$60,165.70	$60,165.70
	2	$58,000.00	$58,000.00
	3	$50,000.00	$50,000.00
	4	$60,338.80	$60,338.80
Ref #34	**607E15000**	**FENCE, TYPE 47, (43587 FT)**	
	Awd	$16.33	$711,775.71
	2	$16.40	$714,826.80
	3	$22.00	$958,914.00
	4	$16.40	$714,826.80
Ref #35	**607E23000**	**FENCE, TYPE CLT, (15174 FT)**	
	Awd	$26.30	$399,076.20
	2	$26.30	$399,076.20
	3	$38.00	$576,612.00
	4	$26.30	$399,076.20
Ref #36	**607E98100**	**FENCE, MISC.: GATE, AS PER PLAN, (4 EACH)**	
	Awd	$1,825.00	$7,300.00
	2	$1,825.00	$7,300.00
	3	$3,000.00	$12,000.00
	4	$1,825.00	$7,300.00
Ref #37	**622E10160**	**CONCRETE BARRIER, SINGLE SLOPE, TYPE D, (8076 FT)**	
	Awd	$75.00	$605,700.00
	2	$88.57	$715,291.32
	3	$100.00	$807,600.00
	4	$90.00	$726,840.00
Ref #38	**622E25050**	**CONCRETE BARRIER, END ANCHORAGE, REINFORCED, TYPE , (4 EACH)**	
	Awd	$4,500.00	$18,000.00
	2	$4,258.70	$17,034.80
	3	$5,000.00	$20,000.00
	4	$9,000.00	$36,000.00
Ref #39	**623E38500**	**MONUMENT ASSEMBLY, TYPE C, (3 EACH)**	
	Awd	$1,500.00	$4,500.00
	2	$1,629.17	$4,887.51
	3	$1,400.00	$4,200.00
	4	$1,600.00	$4,800.00
Ref #40	**623E40500**	**REFERENCE MONUMENT, TYPE A, (106 EACH)**	
	Awd	$600.00	$63,600.00
	2	$574.78	$60,926.68
	3	$1,400.00	$148,400.00
	4	$450.00	$47,700.00

Ref #41	**623E40900**	**MONUMENT, MISC.: RIGHT-OF-WAY MONUMENT RESET, (30 EACH)**	
	Awd	$125.00	$3,750.00
	2	$200.56	$6,016.80
	3	$800.00	$24,000.00
	4	$635.00	$19,050.00
Ref #42	**623E50000**	**PRECONSTRUCTION SURVEY MONUMENT VERIFICATION AND R, (LUMP SUM)**	
	Awd	$22,000.00	$22,000.00
	2	$10,000.00	$10,000.00
	3	$10,000.00	$10,000.00
	4	$2,000.00	$2,000.00
Ref #43	**623E51000**	**POST CONSTRUCTION SURVEY MONUMENT VERIFICATION AND, (LUMP SUM)**	
	Awd	$13,000.00	$13,000.00
	2	$10,000.00	$10,000.00
	3	$10,000.00	$10,000.00
	4	$2,500.00	$2,500.00
Ref #44	**625E32000**	**GROUND ROD, (4 EACH)**	
	Awd	$350.00	$1,400.00
	2	$285.00	$1,140.00
	3	$285.00	$1,140.00
	4	$285.00	$1,140.00
Ref #45	**690E50350**	**SPECIAL - MAILBOX REMOVED AND RESET, (4 EACH)**	
	Awd	$275.00	$1,100.00
	2	$881.38	$3,525.52
	3	$250.00	$1,000.00
	4	$300.00	$1,200.00
Ref #46	**863E00100**	**GEOGRID, TYPE P1, (482309 SY)**	
	Awd	$1.85	$892,271.65
	2	$2.04	$983,910.36
	3	$3.00	$1,446,927.00
	4	$2.00	$964,618.00
Ref #47	**863E00300**	**GEOGRID, TYPE P3, (171133 SY)**	
	Awd	$2.00	$342,266.00
	2	$2.41	$412,430.53
	3	$3.00	$513,399.00
	4	$2.10	$359,379.30
Ref #48	**863E00600**	**GEOGRID, TYPE S1, (162167 SY)**	
	Awd	$2.00	$324,334.00
	2	$1.55	$251,358.85
	3	$3.00	$486,501.00
	4	$1.78	$288,657.26
Ref #49	**863E00801**	**REINFORCED EMBANKMENT, AS PER PLAN, (524387 CY)**	
	Awd	$1.90	$996,335.30
	2	$1.50	$786,580.50
	3	$1.60	$839,019.20
	4	$8.00	$4,195,096.00
Ref #50	**878E25000**	**INSPECTION AND COMPACTION TESTING OF UNBOUND MATER, (LUMP SUM)**	
	Awd	$1,100,000.00	$1,100,000.00
	2	$2,210,825.00	$2,210,825.00
	3	$725,000.00	$725,000.00
	4	$1,500,000.00	$1,500,000.00

Ref #700	**208E10000**	**PRE-BLAST CONDITION SURVEY, (LUMP SUM)**	
	Awd	$130,000.00	$130,000.00
	2	$134,708.00	$134,708.00
	3	$200,000.00	$200,000.00
	4	$70,000.00	$70,000.00
Ref #701	**208E12000**	**BLASTING CONSULTANT, (LUMP SUM)**	
	Awd	$56,560.00	$56,560.00
	2	$49,000.00	$49,000.00
	3	$50,000.00	$50,000.00
	4	$150,000.00	$150,000.00
Ref #702	**208E13000**	**AIR BLAST AND NOISE CONTROL, (LUMP SUM)**	
	Awd	$14,700.00	$14,700.00
	2	$1.37	$1.37
	3	$83,000.00	$83,000.00
	4	$25,000.00	$25,000.00
Ref #703	**208E14000**	**VIBRATION CONTROL AND MONITORING, (LUMP SUM)**	
	Awd	$14,700.00	$14,700.00
	2	$56,602.86	$56,602.86
	3	$83,000.00	$83,000.00
	4	$25,000.00	$25,000.00
Ref #704	**208E16000**	**HYDROLOGIST, (LUMP SUM)**	
	Awd	$17,875.00	$17,875.00
	2	$9,500.00	$9,500.00
	3	$80,000.00	$80,000.00
	4	$55,000.00	$55,000.00
Ref #705	**606E15200**	**GUARDRAIL, TYPE MGS HALF POST SPACING WITH LONG PO, (137.5 FT)**	
	Awd	$27.16	$3,734.50
	2	$29.60	$4,070.00
	3	$27.16	$3,734.50
	4	$27.16	$3,734.50
Ref #713	**606E60028**	**IMPACT ATTENUATOR, TYPE 2 (BIDIRECTIONAL), (30 MPH, (1 EACH)**	
	Awd	$30,800.00	$30,800.00
	2	$26,750.00	$26,750.00
	3	$28,693.40	$28,693.40
	4	$30,800.00	$30,800.00
Ref #714	**622E10121**	**CONCRETE BARRIER, SINGLE SLOPE, TYPE C, AS PER PLA, (34 FT)**	
	Awd	$475.00	$16,150.00
	2	$448.36	$15,244.24
	3	$350.00	$11,900.00
	4	$600.00	$20,400.00
Ref #715	**622E24840**	**CONCRETE BARRIER END SECTION, TYPE B, (1 EACH)**	
	Awd	$10,000.00	$10,000.00
	2	$8,091.78	$8,091.78
	3	$5,000.00	$5,000.00
	4	$10,500.00	$10,500.00

Section 1 - ROADWAY - Totals

Awd	**$38,786,369.28**
2	**$48,532,094.71**
3	**$49,978,660.54**
4	**$71,511,172.87**

Ref #51	**601E11000**	**RIPRAP, TYPE D, (117 SY)**	
	Awd	$450.00	$52,650.00
	2	$384.94	$45,037.98
	3	$172.00	$20,124.00
	4	$500.00	$58,500.00
Ref #52	**601E21050**	**TIED CONCRETE BLOCK MAT WITH TYPE 1 UNDERLAYMENT, (175 SY)**	
	Awd	$170.00	$29,750.00
	2	$249.23	$43,615.25
	3	$80.00	$14,000.00
	4	$205.00	$35,875.00
Ref #53	**601E21100**	**SLOPE PROTECTION, MISC.: SEEDING AND EROSION CONTR, (11199 SY)**	
	Awd	$96.00	$1,075,104.00
	2	$4.31	$48,267.69
	3	$94.00	$1,052,706.00
	4	$70.00	$783,930.00
Ref #54	**601E23000**	**ARTICULATING CONCRETE BLOCK REVETMENT SYSTEM, TYPE, (2821 SY)**	
	Awd	$203.00	$572,663.00
	2	$266.74	$752,473.54
	3	$210.00	$592,410.00
	4	$225.00	$634,725.00
Ref #55	**601E27001**	**DUMPED ROCK FILL, TYPE C, AS PER PLAN, (14 CY)**	
	Awd	$145.00	$2,030.00
	2	$118.15	$1,654.10
	3	$200.00	$2,800.00
	4	$110.00	$1,540.00
Ref #56	**601E32000**	**ROCK CHANNEL PROTECTION, TYPE A WITH FILTER, (525 CY)**	
	Awd	$200.00	$105,000.00
	2	$228.78	$120,109.50
	3	$105.00	$55,125.00
	4	$155.00	$81,375.00
Ref #57	**601E32100**	**ROCK CHANNEL PROTECTION, TYPE B WITH FILTER, (3163 CY)**	
	Awd	$105.00	$332,115.00
	2	$110.48	$349,448.24
	3	$100.00	$316,300.00
	4	$130.00	$411,190.00
Ref #58	**601E32200**	**ROCK CHANNEL PROTECTION, TYPE C WITH FILTER, (3407 CY)**	
	Awd	$105.00	$357,735.00
	2	$128.49	$437,765.43
	3	$100.00	$340,700.00
	4	$133.00	$453,131.00
Ref #59	**601E32300**	**ROCK CHANNEL PROTECTION, TYPE D WITH FILTER, (78 CY)**	
	Awd	$105.00	$8,190.00
	2	$100.65	$7,850.70
	3	$170.00	$13,260.00
	4	$115.00	$8,970.00
Ref #60	**601E34200**	**ROCK CHANNEL PROTECTION, TYPE C WITHOUT FILTER, (1247 CY)**	
	Awd	$105.00	$130,935.00
	2	$117.26	$146,223.22
	3	$100.00	$124,700.00
	4	$65.00	$81,055.00

Ref #61	**601E45030**	**DETENTION BASIN FILTER, (2157 SY)**	
	Awd	$34.00	$73,338.00
	2	$20.64	$44,520.48
	3	$33.00	$71,181.00
	4	$26.50	$57,160.50
Ref #62	**659E00100**	**SOIL ANALYSIS TEST, (14 EACH)**	
	Awd	$200.00	$2,800.00
	2	$25.00	$350.00
	3	$25.00	$350.00
	4	$25.00	$350.00
Ref #63	**659E00300**	**TOPSOIL, (468 CY)**	
	Awd	$21.00	$9,828.00
	2	$60.00	$28,080.00
	3	$30.00	$14,040.00
	4	$45.00	$21,060.00
Ref #64	**659E00301**	**TOPSOIL, AS PER PLAN, (1741 CY)**	
	Awd	$37.00	$64,417.00
	2	$60.00	$104,460.00
	3	$45.00	$78,345.00
	4	$30.00	$52,230.00
Ref #65	**659E00540**	**SEEDING AND MULCHING, CLASS 3C, (1182427 SY)**	
	Awd	$0.75	$886,820.25
	2	$0.78	$922,293.06
	3	$0.78	$922,293.06
	4	$0.78	$922,293.06
Ref #66	**659E14000**	**REPAIR SEEDING AND MULCHING, (59221 SY)**	
	Awd	$0.75	$44,415.75
	2	$0.78	$46,192.38
	3	$0.78	$46,192.38
	4	$0.78	$46,192.38
Ref #67	**659E15000**	**INTER-SEEDING, (59221 SY)**	
	Awd	$0.75	$44,415.75
	2	$0.01	$592.21
	3	$0.01	$592.21
	4	$0.01	$592.21
Ref #68	**659E20000**	**COMMERCIAL FERTILIZER, (166 TON)**	
	Awd	$1,300.00	$215,800.00
	2	$250.00	$41,500.00
	3	$250.00	$41,500.00
	4	$250.00	$41,500.00
Ref #69	**659E31000**	**LIME, (244.71 ACRE)**	
	Awd	$150.00	$36,706.50
	2	$25.00	$6,117.75
	3	$25.00	$6,117.75
	4	$25.00	$6,117.75
Ref #70	**659E35000**	**WATER, (6556 MGAL)**	
	Awd	$1.00	$6,556.00
	2	$0.01	$65.56
	3	$0.01	$65.56
	4	$0.01	$65.56

Ref #71	**659E40000**	**MOWING, (2665 MSF)**	
	Awd	$12.00	$31,980.00
	2	$18.00	$47,970.00
	3	$1.50	$3,997.50
	4	$3.75	$9,993.75
Ref #72	**670E00500**	**SLOPE EROSION PROTECTION, (9135 SY)**	
	Awd	$2.50	$22,837.50
	2	$1.25	$11,418.75
	3	$1.25	$11,418.75
	4	$1.25	$11,418.75
Ref #73	**670E00700**	**DITCH EROSION PROTECTION, (10580 SY)**	
	Awd	$2.50	$26,450.00
	2	$1.25	$13,225.00
	3	$1.25	$13,225.00
	4	$1.25	$13,225.00
Ref #74	**670E00720**	**DITCH EROSION PROTECTION MAT, TYPE B, (13207 SY)**	
	Awd	$2.50	$33,017.50
	2	$1.25	$16,508.75
	3	$1.25	$16,508.75
	4	$1.25	$16,508.75
Ref #75	**832E15000**	**STORM WATER POLLUTION PREVENTION PLAN, (LUMP SUM)**	
	Awd	$30,000.00	$30,000.00
	2	$47,000.00	$47,000.00
	3	$89,000.00	$89,000.00
	4	$100,000.00	$100,000.00
Ref #76	**832E15002**	**STORM WATER POLLUTION PREVENTION INSPECTIONS, (LUMP SUM)**	
	Awd	$142,600.00	$142,600.00
	2	$394,108.00	$394,108.00
	3	$6,000.00	$6,000.00
	4	$26,000.00	$26,000.00
Ref #77	**832E15010**	**STORM WATER POLLUTION PREVENTION INSPECTION SOFTWA, (LUMP SUM)**	
	Awd	$36,671.45	$36,671.45
	2	$30,838.71	$30,838.71
	3	$30,838.71	$30,838.71
	4	$27,000.00	$27,000.00
Ref #78	**832E30000**	**EROSION CONTROL, (4420289 EACH)**	
	Awd	$1.00	$4,420,289.00
	2	$1.00	$4,420,289.00
	3	$1.00	$4,420,289.00
	4	$1.00	$4,420,289.00
Ref #79	**836E10000**	**SEEDING AND EROSION CONTROL WITH TURF REINFORCING , (18348 SY)**	
	Awd	$5.00	$91,740.00
	2	$4.00	$73,392.00
	3	$4.00	$73,392.00
	4	$4.00	$73,392.00
Ref #80	**836E10020**	**SEEDING AND EROSION CONTROL WITH TURF REINFORCING , (9192 SY)**	
	Awd	$5.50	$50,556.00
	2	$4.00	$36,768.00
	3	$4.00	$36,768.00
	4	$4.00	$36,768.00

Ref #81	**836E10030**	**SEEDING AND EROSION CONTROL WITH TURF REINFORCING , (6406 SY)**	
	Awd	$5.00	$32,030.00
	2	$5.00	$32,030.00
	3	$5.00	$32,030.00
	4	$5.00	$32,030.00

Section 2 - EROSION CONTROL - Totals

Awd	**$8,969,440.70**
2	**$8,270,165.30**
3	**$8,446,269.67**
4	**$8,464,477.71**

Ref #82	**602E20000**	**CONCRETE MASONRY, (37.6 CY)**	
	Awd	$3,200.00	$120,320.00
	2	$3,209.53	$120,678.33
	3	$5,500.00	$206,800.00
	4	$3,600.00	$135,360.00
Ref #83	**605E11100**	**6" SHALLOW PIPE UNDERDRAINS, (32781 FT)**	
	Awd	$18.00	$590,058.00
	2	$15.07	$494,009.67
	3	$13.75	$450,738.75
	4	$11.75	$385,176.75
Ref #84	**605E13300**	**6" UNCLASSIFIED PIPE UNDERDRAINS, (3870 FT)**	
	Awd	$38.00	$147,060.00
	2	$25.55	$98,878.50
	3	$11.50	$44,505.00
	4	$13.00	$50,310.00
Ref #85	**605E13301**	**6" UNCLASSIFIED PIPE UNDERDRAINS, AS PER PLAN, (215 FT)**	
	Awd	$65.00	$13,975.00
	2	$50.26	$10,805.90
	3	$25.00	$5,375.00
	4	$14.50	$3,117.50
Ref #86	**605E13402**	**6" UNCLASSIFIED PIPE UNDERDRAINS FOR SPRINGS, (750 FT)**	
	Awd	$42.00	$31,500.00
	2	$54.66	$40,995.00
	3	$25.00	$18,750.00
	4	$32.00	$24,000.00
Ref #87	**605E13500**	**6" ROCK CUT UNDERDRAINS, (19922 FT)**	
	Awd	$23.00	$458,206.00
	2	$24.40	$486,096.80
	3	$18.75	$373,537.50
	4	$10.00	$199,220.00
Ref #88	**605E14000**	**6" BASE PIPE UNDERDRAINS, (99751 FT)**	
	Awd	$13.00	$1,296,763.00
	2	$11.65	$1,162,099.15
	3	$9.45	$942,646.95
	4	$15.00	$1,496,265.00
Ref #89	**605E31100**	**AGGREGATE DRAINS, (5041 FT)**	
	Awd	$22.00	$110,902.00
	2	$42.94	$216,460.54
	3	$16.50	$83,176.50
	4	$28.00	$141,148.00

Ref #90	**611E00510**	**6" CONDUIT, TYPE F FOR UNDERDRAIN OUTLETS, (3567 FT)**	
	Awd	$42.00	$149,814.00
	2	$37.19	$132,656.73
	3	$23.50	$83,824.50
	4	$27.00	$96,309.00
Ref #91	**611E00900**	**6" CONDUIT, TYPE B, (2345 FT)**	
	Awd	$89.00	$208,705.00
	2	$26.32	$61,720.40
	3	$25.00	$58,625.00
	4	$32.00	$75,040.00
Ref #92	**611E01400**	**6" CONDUIT, TYPE E, (150 FT)**	
	Awd	$129.00	$19,350.00
	2	$59.36	$8,904.00
	3	$25.00	$3,750.00
	4	$57.00	$8,550.00
Ref #93	**611E01500**	**6" CONDUIT, TYPE F, (250 FT)**	
	Awd	$130.00	$32,500.00
	2	$37.48	$9,370.00
	3	$25.00	$6,250.00
	4	$44.00	$11,000.00
Ref #94	**611E04900**	**12" CONDUIT, TYPE D, (76 FT)**	
	Awd	$120.00	$9,120.00
	2	$84.15	$6,395.40
	3	$150.00	$11,400.00
	4	$69.00	$5,244.00
Ref #95	**611E05700**	**15" CONDUIT, TYPE A, 706.02, 707.33, (92 FT)**	
	Awd	$275.00	$25,300.00
	2	$130.91	$12,043.72
	3	$188.00	$17,296.00
	4	$120.00	$11,040.00
Ref #96	**611E05900**	**15" CONDUIT, TYPE B, (1476 FT)**	
	Awd	$225.00	$332,100.00
	2	$105.45	$155,644.20
	3	$175.00	$258,300.00
	4	$146.00	$215,496.00
Ref #97	**611E06100**	**15" CONDUIT, TYPE C, (1122 FT)**	
	Awd	$165.00	$185,130.00
	2	$111.92	$125,574.24
	3	$155.00	$173,910.00
	4	$114.00	$127,908.00
Ref #98	**611E06700**	**15" CONDUIT, TYPE F, (307 FT)**	
	Awd	$180.00	$55,260.00
	2	$95.47	$29,309.29
	3	$175.00	$53,725.00
	4	$115.00	$35,305.00
Ref #99	**611E06700**	**15" CONDUIT, TYPE F, 707.21, 707.33, (953 FT)**	
	Awd	$148.00	$141,044.00
	2	$113.57	$108,232.21
	3	$180.00	$171,540.00
	4	$115.00	$109,595.00

Ref #100	**611E07400**	**18" CONDUIT, TYPE B, (125 FT)**	
	Awd	$168.00	$21,000.00
	2	$125.23	$15,653.75
	3	$170.00	$21,250.00
	4	$110.00	$13,750.00
Ref #101	**611E07600**	**18" CONDUIT, TYPE C, (777 FT)**	
	Awd	$154.00	$119,658.00
	2	$106.33	$82,618.41
	3	$163.00	$126,651.00
	4	$175.00	$135,975.00
Ref #102	**611E08900**	**21" CONDUIT, TYPE B, (392 FT)**	
	Awd	$274.00	$107,408.00
	2	$134.76	$52,825.92
	3	$178.00	$69,776.00
	4	$158.00	$61,936.00
Ref #103	**611E09400**	**21" CONDUIT, TYPE D, (88 FT)**	
	Awd	$197.00	$17,336.00
	2	$127.47	$11,217.36
	3	$195.00	$17,160.00
	4	$95.00	$8,360.00
Ref #104	**611E09700**	**21" CONDUIT, TYPE F, (20 FT)**	
	Awd	$300.00	$6,000.00
	2	$171.41	$3,428.20
	3	$230.00	$4,600.00
	4	$125.00	$2,500.00
Ref #105	**611E09700**	**21" CONDUIT, TYPE F, 707.21, (65 FT)**	
	Awd	$243.00	$15,795.00
	2	$211.38	$13,739.70
	3	$240.00	$15,600.00
	4	$146.00	$9,490.00
Ref #106	**611E10200**	**24" CONDUIT, TYPE A, 707.01, 707.02, 707.33, (384 FT)**	
	Awd	$192.00	$73,728.00
	2	$145.36	$55,818.24
	3	$195.00	$74,880.00
	4	$250.00	$96,000.00
Ref #107	**611E10400**	**24" CONDUIT, TYPE B, (69 FT)**	
	Awd	$275.00	$18,975.00
	2	$156.00	$10,764.00
	3	$185.00	$12,765.00
	4	$125.00	$8,625.00
Ref #108	**611E10600**	**24" CONDUIT, TYPE C, (10 FT)**	
	Awd	$330.00	$3,300.00
	2	$232.72	$2,327.20
	3	$220.00	$2,200.00
	4	$161.00	$1,610.00
Ref #109	**611E11200**	**24" CONDUIT, TYPE F, (20 FT)**	
	Awd	$386.00	$7,720.00
	2	$133.38	$2,667.60
	3	$217.00	$4,340.00
	4	$146.00	$2,920.00

Ref #110	**611E11200**	**24" CONDUIT, TYPE F, 707.21, (224 FT)**	
	Awd	$238.00	$53,312.00
	2	$148.06	$33,165.44
	3	$224.00	$50,176.00
	4	$141.00	$31,584.00
Ref #111	**611E11900**	**27" CONDUIT, TYPE B, (91 FT)**	
	Awd	$274.00	$24,934.00
	2	$184.22	$16,764.02
	3	$246.00	$22,386.00
	4	$130.00	$11,830.00
Ref #112	**611E12100**	**27" CONDUIT, TYPE C, (405 FT)**	
	Awd	$349.00	$141,345.00
	2	$213.61	$86,512.05
	3	$230.00	$93,150.00
	4	$248.00	$100,440.00
Ref #113	**611E12700**	**27" CONDUIT, TYPE F, (18 FT)**	
	Awd	$300.00	$5,400.00
	2	$165.95	$2,987.10
	3	$285.00	$5,130.00
	4	$175.00	$3,150.00
Ref #114	**611E12700**	**27" CONDUIT, TYPE F, 707.21, (24 FT)**	
	Awd	$350.00	$8,400.00
	2	$415.19	$9,964.56
	3	$335.00	$8,040.00
	4	$226.00	$5,424.00
Ref #115	**611E13400**	**30" CONDUIT, TYPE B, (229 FT)**	
	Awd	$229.00	$52,441.00
	2	$228.44	$52,312.76
	3	$230.00	$52,670.00
	4	$250.00	$57,250.00
Ref #116	**611E13600**	**30" CONDUIT, TYPE C, (240 FT)**	
	Awd	$216.00	$51,840.00
	2	$245.39	$58,893.60
	3	$228.00	$54,720.00
	4	$295.00	$70,800.00
Ref #117	**611E16200**	**36" CONDUIT, TYPE A, 707.18, 706.01, 707.33 OR 48", (181 FT)**	
	Awd	$397.00	$71,857.00
	2	$227.26	$41,134.06
	3	$290.00	$52,490.00
	4	$189.00	$34,209.00
Ref #118	**611E16400**	**36" CONDUIT, TYPE B, (270 FT)**	
	Awd	$431.00	$116,370.00
	2	$223.08	$60,231.60
	3	$340.00	$91,800.00
	4	$257.00	$69,390.00
Ref #119	**611E16600**	**36" CONDUIT, TYPE C, (12 FT)**	
	Awd	$373.00	$4,476.00
	2	$287.26	$3,447.12
	3	$340.00	$4,080.00
	4	$196.00	$2,352.00

Ref #120	**611E17200**	**36" CONDUIT, TYPE F, (83 FT)**	
	Awd	$310.00	$25,730.00
	2	$263.35	$21,858.05
	3	$325.00	$26,975.00
	4	$239.00	$19,837.00
Ref #121	**611E19200**	**42" CONDUIT, TYPE A, 707.01, 707.02, 707.33, (128 FT)**	
	Awd	$322.00	$41,216.00
	2	$280.31	$35,879.68
	3	$300.00	$38,400.00
	4	$185.00	$23,680.00
Ref #122	**611E19400**	**42" CONDUIT, TYPE B, (441 FT)**	
	Awd	$354.00	$156,114.00
	2	$248.73	$109,689.93
	3	$253.00	$111,573.00
	4	$438.00	$193,158.00
Ref #123	**611E19600**	**42" CONDUIT, TYPE C, (967 FT)**	
	Awd	$327.00	$316,209.00
	2	$265.73	$256,960.91
	3	$375.00	$362,625.00
	4	$360.00	$348,120.00
Ref #124	**611E19904**	**42" CONDUIT, TYPE F, (47 FT)**	
	Awd	$393.00	$18,471.00
	2	$344.75	$16,203.25
	3	$370.00	$17,390.00
	4	$322.00	$15,134.00
Ref #125	**611E22400**	**54" CONDUIT, TYPE B, (426 FT)**	
	Awd	$540.00	$230,040.00
	2	$462.06	$196,837.56
	3	$380.00	$161,880.00
	4	$300.00	$127,800.00
Ref #126	**611E22600**	**54" CONDUIT, TYPE C, (325 FT)**	
	Awd	$474.00	$154,050.00
	2	$332.87	$108,182.75
	3	$400.00	$130,000.00
	4	$278.00	$90,350.00
Ref #127	**611E23600**	**60" CONDUIT, TYPE A, 707.01, 707.04, 707.18, (428 FT)**	
	Awd	$495.00	$211,860.00
	2	$457.10	$195,638.80
	3	$575.00	$246,100.00
	4	$653.00	$279,484.00
Ref #128	**611E23600**	**60" CONDUIT, TYPE A, 707.02, 707.04, (1582 FT)**	
	Awd	$479.00	$757,778.00
	2	$519.66	$822,102.12
	3	$700.00	$1,107,400.00
	4	$510.00	$806,820.00
Ref #129	**611E23600**	**60" CONDUIT, TYPE A, 707.02, 707.33, (100 FT)**	
	Awd	$678.00	$67,800.00
	2	$495.54	$49,554.00
	3	$750.00	$75,000.00
	4	$475.00	$47,500.00

Ref #130	**611E25000**	**66" CONDUIT, TYPE A, 707.02, 707.04, (377 FT)**	
	Awd	$535.00	$201,695.00
	2	$600.32	$226,320.64
	3	$730.00	$275,210.00
	4	$500.00	$188,500.00
Ref #131	**611E98180**	**CATCH BASIN, NO. 3A, (8 EACH)**	
	Awd	$5,900.00	$47,200.00
	2	$5,406.05	$43,248.40
	3	$3,400.00	$27,200.00
	4	$3,700.00	$29,600.00
Ref #132	**611E98230**	**CATCH BASIN, NO. 4, (6 EACH)**	
	Awd	$9,800.00	$58,800.00
	2	$8,222.14	$49,332.84
	3	$8,000.00	$48,000.00
	4	$6,500.00	$39,000.00
Ref #133	**611E98260**	**CATCH BASIN, NO. 4 WITHOUT APRON, (3 EACH)**	
	Awd	$7,430.00	$22,290.00
	2	$6,601.50	$19,804.50
	3	$5,300.00	$15,900.00
	4	$4,000.00	$12,000.00
Ref #134	**611E98270**	**CATCH BASIN, NO. 4A, (3 EACH)**	
	Awd	$11,000.00	$33,000.00
	2	$13,486.55	$40,459.65
	3	$11,200.00	$33,600.00
	4	$9,600.00	$28,800.00
Ref #135	**611E98300**	**CATCH BASIN, NO. 5, (8 EACH)**	
	Awd	$9,000.00	$72,000.00
	2	$7,093.64	$56,749.12
	3	$7,000.00	$56,000.00
	4	$5,200.00	$41,600.00
Ref #136	**611E98341**	**CATCH BASIN, NO. 5A, (3 EACH)**	
	Awd	$14,000.00	$42,000.00
	2	$13,796.84	$41,390.52
	3	$16,200.00	$48,600.00
	4	$11,400.00	$34,200.00
Ref #137	**611E98350**	**CATCH BASIN, NO. 5A, AS PER PLAN, (3 EACH)**	
	Awd	$19,300.00	$57,900.00
	2	$16,004.35	$48,013.05
	3	$12,000.00	$36,000.00
	4	$15,500.00	$46,500.00
Ref #138	**611E98410**	**CATCH BASIN, NO. 8, (17 EACH)**	
	Awd	$9,500.00	$161,500.00
	2	$8,342.17	$141,816.89
	3	$7,500.00	$127,500.00
	4	$7,100.00	$120,700.00
Ref #139	**611E98434**	**CATCH BASIN, NO. 8A, (1 EACH)**	
	Awd	$14,100.00	$14,100.00
	2	$13,574.79	$13,574.79
	3	$12,300.00	$12,300.00
	4	$11,000.00	$11,000.00

Ref #140	**611E98435**	**CATCH BASIN, NO. 8A, AS PER PLAN, (1 EACH)**	
	Awd	$17,500.00	$17,500.00
	2	$13,574.79	$13,574.79
	3	$12,300.00	$12,300.00
	4	$11,000.00	$11,000.00
Ref #141	**611E98470**	**CATCH BASIN, NO. 2-2B, (1 EACH)**	
	Awd	$4,600.00	$4,600.00
	2	$4,751.77	$4,751.77
	3	$5,800.00	$5,800.00
	4	$5,000.00	$5,000.00
Ref #142	**611E98511**	**CATCH BASIN, NO. 2-3, AS PER PLAN, (4 EACH)**	
	Awd	$8,000.00	$32,000.00
	2	$7,740.01	$30,960.04
	3	$4,200.00	$16,800.00
	4	$3,100.00	$12,400.00
Ref #143	**611E99114**	**INLET, NO. 3 FOR SINGLE SLOPE BARRIER, TYPE D, (14 EACH)**	
	Awd	$14,000.00	$196,000.00
	2	$16,432.33	$230,052.62
	3	$16,000.00	$224,000.00
	4	$12,400.00	$173,600.00
Ref #144	**611E99574**	**MANHOLE, NO. 3, (2 EACH)**	
	Awd	$8,200.00	$16,400.00
	2	$4,992.89	$9,985.78
	3	$6,000.00	$12,000.00
	4	$4,800.00	$9,600.00
Ref #145	**611E99710**	**PRECAST REINFORCED CONCRETE OUTLET, (37 EACH)**	
	Awd	$970.00	$35,890.00
	2	$629.90	$23,306.30
	3	$425.00	$15,725.00
	4	$500.00	$18,500.00

Section 3 - DRAINAGE - Totals

Awd	**$7,840,545.00**
2	**$6,702,595.52**
3	**$6,992,292.20**
4	**$6,591,562.25**

Ref #146	**252E01500**	**FULL DEPTH PAVEMENT SAWING, (4770 FT)**	
	Awd	$1.47	$7,011.90
	2	$3.10	$14,787.00
	3	$4.50	$21,465.00
	4	$2.50	$11,925.00
Ref #147	**254E01000**	**PAVEMENT PLANING, ASPHALT CONCRETE, 3.25", (21747 SY)**	
	Awd	$4.75	$103,298.25
	2	$4.75	$103,298.25
	3	$4.75	$103,298.25
	4	$4.75	$103,298.25
Ref #148	**301E56000**	**ASPHALT CONCRETE BASE, PG64-22, (449), (1678 CY)**	
	Awd	$197.75	$331,824.50
	2	$197.75	$331,824.50
	3	$197.50	$331,405.00
	4	$197.75	$331,824.50

Ref #149	**302E56000**	**ASPHALT CONCRETE BASE, PG64-22, (449), (40850 CY)**	
	Awd	$187.75	$7,669,587.50
	2	$193.70	$7,912,645.00
	3	$187.75	$7,669,587.50
	4	$193.70	$7,912,645.00
Ref #150	**304E20000**	**AGGREGATE BASE, (42620 CY)**	
	Awd	$85.00	$3,622,700.00
	2	$74.66	$3,182,009.20
	3	$56.80	$2,420,816.00
	4	$87.17	$3,715,185.40
Ref #151	**407E10000**	**TACK COAT, (29793 GAL)**	
	Awd	$3.01	$89,676.93
	2	$3.01	$89,676.93
	3	$3.01	$89,676.93
	4	$3.01	$89,676.93
Ref #152	**411E10000**	**STABILIZED CRUSHED AGGREGATE, (70 CY)**	
	Awd	$300.00	$21,000.00
	2	$138.46	$9,692.20
	3	$110.00	$7,700.00
	4	$165.00	$11,550.00
Ref #153	**441E50000**	**ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), PG, (679 CY)**	
	Awd	$225.00	$152,775.00
	2	$225.00	$152,775.00
	3	$225.00	$152,775.00
	4	$225.00	$152,775.00
Ref #154	**441E50300**	**ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, (448, (951 CY)**	
	Awd	$208.25	$198,045.75
	2	$208.25	$198,045.75
	3	$208.25	$198,045.75
	4	$208.25	$198,045.75
Ref #155	**441E70500**	**ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (449), (D, (20 CY)**	
	Awd	$330.00	$6,600.00
	2	$330.00	$6,600.00
	3	$330.00	$6,600.00
	4	$330.00	$6,600.00
Ref #156	**441E70801**	**ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, (449, (796 CY)**	
	Awd	$310.00	$246,760.00
	2	$310.00	$246,760.00
	3	$310.00	$246,760.00
	4	$310.00	$246,760.00
Ref #157	**442E00100**	**ANTI-SEGREGATION EQUIPMENT, (25147 CY)**	
	Awd	$6.50	$163,455.50
	2	$6.50	$163,455.50
	3	$6.50	$163,455.50
	4	$6.50	$163,455.50
Ref #158	**442E10100**	**ASPHALT CONCRETE INTERMEDIATE COURSE, 19 MM, TYPE , (15343 CY)**	
	Awd	$208.00	$3,191,344.00
	2	$208.00	$3,191,344.00
	3	$208.00	$3,191,344.00
	4	$208.00	$3,191,344.00

Ref #159	**442E10300**	**ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A (, (9691 CY)**	
	Awd	$242.75	$2,352,490.25
	2	$242.75	$2,352,490.25
	3	$242.75	$2,352,490.25
	4	$242.75	$2,352,490.25
Ref #160	**443E12000**	**STONE MATRIX ASPHALT CONCRETE, 12.5 MM, PG76-22M, , (423 CY)**	
	Awd	$318.00	$134,514.00
	2	$318.00	$134,514.00
	3	$318.00	$134,514.00
	4	$318.00	$134,514.00
Ref #161	**452E12010**	**8" NON-REINFORCED CONCRETE PAVEMENT, CLASS QC 1P, (455 SY)**	
	Awd	$120.00	$54,600.00
	2	$125.00	$56,875.00
	3	$125.00	$56,875.00
	4	$125.00	$56,875.00
Ref #162	**609E12000**	**COMBINATION CURB AND GUTTER, TYPE 2, (2656 FT)**	
	Awd	$45.00	$119,520.00
	2	$34.98	$92,906.88
	3	$34.00	$90,304.00
	4	$36.68	$97,422.08
Ref #163	**609E26000**	**CURB, TYPE 6, (2126 FT)**	
	Awd	$30.00	$63,780.00
	2	$41.62	$88,484.12
	3	$28.00	$59,528.00
	4	$30.56	$64,970.56
Ref #164	**609E31000**	**COMBINATION CURB AND GUTTER, TYPE 9, (382 FT)**	
	Awd	$60.00	$22,920.00
	2	$32.69	$12,487.58
	3	$32.00	$12,224.00
	4	$34.56	$13,201.92
Ref #165	**609E72000**	**CONCRETE MEDIAN, (778 SY)**	
	Awd	$100.00	$77,800.00
	2	$125.00	$97,250.00
	3	$125.00	$97,250.00
	4	$127.89	$99,498.42

Section 4 - PAVEMENT - Totals

Awd	**$18,629,703.58**
2	**$18,437,921.16**
3	**$17,406,114.18**
4	**$18,954,057.56**

Ref #166	**625E00450**	**CONNECTION, FUSED PULL APART, (84 EACH)**	
	Awd	$210.00	$17,640.00
	2	$110.00	$9,240.00
	3	$110.00	$9,240.00
	4	$110.00	$9,240.00
Ref #167	**625E00480**	**CONNECTION, UNFUSED PERMANENT, (54 EACH)**	
	Awd	$165.00	$8,910.00
	2	$110.00	$5,940.00
	3	$110.00	$5,940.00
	4	$110.00	$5,940.00

Ref #168	**625E10490**	**LIGHT POLE, CONVENTIONAL: AT10B40, (1 EACH)**	
	Awd	$4,500.00	$4,500.00
	2	$3,600.00	$3,600.00
	3	$3,600.00	$3,600.00
	4	$3,600.00	$3,600.00
Ref #169	**625E10490**	**LIGHT POLE, CONVENTIONAL: AT12B40, (4 EACH)**	
	Awd	$4,500.00	$18,000.00
	2	$3,650.00	$14,600.00
	3	$3,650.00	$14,600.00
	4	$3,650.00	$14,600.00
Ref #170	**625E10490**	**LIGHT POLE, CONVENTIONAL: AT15B40, (6 EACH)**	
	Awd	$4,600.00	$27,600.00
	2	$3,800.00	$22,800.00
	3	$3,800.00	$22,800.00
	4	$3,800.00	$22,800.00
Ref #171	**625E10490**	**LIGHT POLE, CONVENTIONAL: AT16B40, (10 EACH)**	
	Awd	$4,700.00	$47,000.00
	2	$3,850.00	$38,500.00
	3	$3,850.00	$38,500.00
	4	$3,850.00	$38,500.00
Ref #172	**625E10490**	**LIGHT POLE, CONVENTIONAL: AT18B40, (1 EACH)**	
	Awd	$5,000.00	$5,000.00
	2	$4,150.00	$4,150.00
	3	$4,150.00	$4,150.00
	4	$4,150.00	$4,150.00
Ref #173	**625E10490**	**LIGHT POLE, CONVENTIONAL: AT6B40, (2 EACH)**	
	Awd	$4,400.00	$8,800.00
	2	$3,500.00	$7,000.00
	3	$3,500.00	$7,000.00
	4	$3,500.00	$7,000.00
Ref #174	**625E10490**	**LIGHT POLE, CONVENTIONAL: AT8B40, (8 EACH)**	
	Awd	$4,400.00	$35,200.00
	2	$3,550.00	$28,400.00
	3	$3,550.00	$28,400.00
	4	$3,550.00	$28,400.00
Ref #175	**625E14100**	**LIGHT POLE FOUNDATION, 24" X 8' DEEP, (32 EACH)**	
	Awd	$2,700.00	$86,400.00
	2	$2,200.00	$70,400.00
	3	$2,200.00	$70,400.00
	4	$2,200.00	$70,400.00
Ref #176	**625E23200**	**NO. 4 AWG 2400 VOLT DISTRIBUTION CABLE, (6318 FT)**	
	Awd	$3.50	$22,113.00
	2	$4.00	$25,272.00
	3	$4.00	$25,272.00
	4	$4.00	$25,272.00
Ref #177	**625E23400**	**NO. 10 AWG POLE AND BRACKET CABLE, (5046 FT)**	
	Awd	$2.00	$10,092.00
	2	$2.00	$10,092.00
	3	$2.00	$10,092.00
	4	$2.00	$10,092.00

Ref #178	**625E24320**	**1-1/2" DUCT CABLE WITH THREE NO. 4 AWG 2400 VOLT C, (9246 FT)**	
	Awd	$12.40	$114,650.40
	2	$13.00	$120,198.00
	3	$13.00	$120,198.00
	4	$13.00	$120,198.00
Ref #179	**625E25400**	**CONDUIT, 2", 725.04, (974 FT)**	
	Awd	$32.70	$31,849.80
	2	$26.00	$25,324.00
	3	$26.00	$25,324.00
	4	$26.00	$25,324.00
Ref #180	**625E25500**	**CONDUIT, 3", 725.04, (184 FT)**	
	Awd	$52.25	$9,614.00
	2	$34.00	$6,256.00
	3	$34.00	$6,256.00
	4	$34.00	$6,256.00
Ref #181	**625E25900**	**CONDUIT, JACKED OR DRILLED; 3", (735 FT)**	
	Awd	$112.00	$82,320.00
	2	$58.00	$42,630.00
	3	$58.00	$42,630.00
	4	$58.00	$42,630.00
Ref #182	**625E26253**	**LUMINAIRE, CONVENTIONAL, SOLID STATE (LED), AS PER, (32 EACH)**	
	Awd	$627.00	$20,064.00
	2	$425.00	$13,600.00
	3	$425.00	$13,600.00
	4	$425.00	$13,600.00
Ref #183	**625E29002**	**TRENCH, 24" DEEP, (8332 FT)**	
	Awd	$8.10	$67,489.20
	2	$14.00	$116,648.00
	3	$14.00	$116,648.00
	4	$14.00	$116,648.00
Ref #184	**625E29900**	**JUNCTION BOX, (4 EACH)**	
	Awd	$2,425.00	$9,700.00
	2	$2,400.00	$9,600.00
	3	$2,400.00	$9,600.00
	4	$2,400.00	$9,600.00
Ref #185	**625E30700**	**PULL BOX, 725.08, 18", (17 EACH)**	
	Awd	$1,525.00	$25,925.00
	2	$1,100.00	$18,700.00
	3	$1,100.00	$18,700.00
	4	$1,100.00	$18,700.00
Ref #186	**625E30706**	**PULL BOX, 725.08, 24", (2 EACH)**	
	Awd	$2,560.00	$5,120.00
	2	$1,250.00	$2,500.00
	3	$1,250.00	$2,500.00
	4	$1,250.00	$2,500.00
Ref #187	**625E32000**	**GROUND ROD, (32 EACH)**	
	Awd	$320.00	$10,240.00
	2	$285.00	$9,120.00
	3	$285.00	$9,120.00
	4	$285.00	$9,120.00

Ref #188	**625E34001**	**POWER SERVICE, AS PER PLAN, (3 EACH)**	
	Awd	$14,000.00	$42,000.00
	2	$8,800.00	$26,400.00
	3	$8,800.00	$26,400.00
	4	$8,800.00	$26,400.00
Ref #189	**625E36010**	**UNDERGROUND WARNING/MARKING TAPE, (8332 FT)**	
	Awd	$1.60	$13,331.20
	2	$2.95	$24,579.40
	3	$2.95	$24,579.40
	4	$2.95	$24,579.40
Ref #190	**625E75510**	**POWER SERVICE REMOVED, (1 EACH)**	
	Awd	$1,600.00	$1,600.00
	2	$700.00	$700.00
	3	$700.00	$700.00
	4	$700.00	$700.00
Ref #191	**625E75800**	**DISCONNECT CIRCUIT, (21 EACH)**	
	Awd	$140.00	$2,940.00
	2	$50.00	$1,050.00
	3	$50.00	$1,050.00
	4	$50.00	$1,050.00

Section 5 - LIGHTING - Totals

Awd	**$728,098.60**
2	**$657,299.40**
3	**$657,299.40**
4	**$657,299.40**

Ref #192	**618E41000**	**RUMBLE STRIPES, EDGE LINE (ASPHALT CONCRETE), (10.99 MILE)**	
	Awd	$1,050.00	$11,539.50
	2	$1,325.00	$14,561.75
	3	$1,325.00	$14,561.75
	4	$2,375.00	$26,101.25
Ref #193	**618E43000**	**RUMBLE STRIPES, CENTER LINE (ASPHALT CONCRETE), (3.44 MILE)**	
	Awd	$1,050.00	$3,612.00
	2	$1,325.00	$4,558.00
	3	$1,325.00	$4,558.00
	4	$2,375.00	$8,170.00
Ref #194	**621E00100**	**RPM, (1100 EACH)**	
	Awd	$48.70	$53,570.00
	2	$37.00	$40,700.00
	3	$37.00	$40,700.00
	4	$37.00	$40,700.00
Ref #195	**625E32000**	**GROUND ROD, (4 EACH)**	
	Awd	$375.00	$1,500.00
	2	$285.00	$1,140.00
	3	$575.00	$2,300.00
	4	$285.00	$1,140.00
Ref #196	**626E00102**	**BARRIER REFLECTOR, TYPE 1, BIDIRECTIONAL, (180 EACH)**	
	Awd	$11.25	$2,025.00
	2	$10.00	$1,800.00
	3	$20.00	$3,600.00
	4	$10.00	$1,800.00

Ref #197	**626E00102**	**BARRIER REFLECTOR, TYPE 1, UNIDIRECTIONAL, (158 EACH)**	
	Awd	$11.25	$1,777.50
	2	$10.00	$1,580.00
	3	$15.00	$2,370.00
	4	$10.00	$1,580.00
Ref #198	**630E03100**	**GROUND MOUNTED SUPPORT, NO. 3 POST, (2915 FT)**	
	Awd	$15.20	$44,308.00
	2	$14.00	$40,810.00
	3	$14.00	$40,810.00
	4	$14.00	$40,810.00
Ref #199	**630E06400**	**GROUND MOUNTED STRUCTURAL BEAM SUPPORT, S4X7.7, (103.1 FT)**	
	Awd	$35.00	$3,608.50
	2	$18.50	$1,907.35
	3	$18.50	$1,907.35
	4	$18.50	$1,907.35
Ref #200	**630E06500**	**GROUND MOUNTED STRUCTURAL BEAM SUPPORT, W6X9, (42.6 FT)**	
	Awd	$40.00	$1,704.00
	2	$18.50	$788.10
	3	$18.50	$788.10
	4	$18.50	$788.10
Ref #201	**630E07000**	**GROUND MOUNTED STRUCTURAL BEAM SUPPORT, W8X18, (96.6 FT)**	
	Awd	$55.00	$5,313.00
	2	$32.50	$3,139.50
	3	$32.50	$3,139.50
	4	$32.50	$3,139.50
Ref #202	**630E07600**	**GROUND MOUNTED STRUCTURAL BEAM SUPPORT, W10X12, (179.5 FT)**	
	Awd	$46.00	$8,257.00
	2	$24.00	$4,308.00
	3	$24.00	$4,308.00
	4	$24.00	$4,308.00
Ref #203	**630E08000**	**GROUND MOUNTED STRUCTURAL BEAM SUPPORT, W12X30, (331.7 FT)**	
	Awd	$85.00	$28,194.50
	2	$52.00	$17,248.40
	3	$52.00	$17,248.40
	4	$52.00	$17,248.40
Ref #204	**630E08004**	**ONE WAY SUPPORT, NO. 3 POST, (73 FT)**	
	Awd	$17.00	$1,241.00
	2	$18.00	$1,314.00
	3	$18.00	$1,314.00
	4	$18.00	$1,314.00
Ref #205	**630E08520**	**STREET NAME SIGN SUPPORT, NO. 3 POST, (111 FT)**	
	Awd	$18.00	$1,998.00
	2	$18.00	$1,998.00
	3	$18.00	$1,998.00
	4	$18.00	$1,998.00
Ref #206	**630E08600**	**SIGN POST REFLECTOR, (76 EACH)**	
	Awd	$50.00	$3,800.00
	2	$50.00	$3,800.00
	3	$50.00	$3,800.00
	4	$50.00	$3,800.00

Ref #207	**630E09000**	**BREAKAWAY STRUCTURAL BEAM CONNECTION, (32 EACH)**	
	Awd	$785.00	$25,120.00
	2	$425.00	$13,600.00
	3	$425.00	$13,600.00
	4	$425.00	$13,600.00
Ref #208	**630E72420**	**OVERHEAD SIGN SUPPORT, TYPE TC-15.116, DESIGN 2, (1 EACH)**	
	Awd	$88,750.00	$88,750.00
	2	$82,500.00	$82,500.00
	3	$82,500.00	$82,500.00
	4	$82,500.00	$82,500.00
Ref #209	**630E76530**	**SPAN WIRE SIGN SUPPORT, TYPE TC-17.11, DESIGN 10, (1 EACH)**	
	Awd	$36,975.00	$36,975.00
	2	$29,500.00	$29,500.00
	3	$29,500.00	$29,500.00
	4	$29,500.00	$29,500.00
Ref #210	**630E79600**	**SIGN SUPPORT ASSEMBLY, BRIDGE MOUNTED, TYPE 1, (2 EACH)**	
	Awd	$1,950.00	$3,900.00
	2	$1,250.00	$2,500.00
	3	$1,250.00	$2,500.00
	4	$1,250.00	$2,500.00
Ref #211	**630E80100**	**SIGN, FLAT SHEET, (1476.8 SF)**	
	Awd	$17.50	$25,844.00
	2	$18.50	$27,320.80
	3	$18.50	$27,320.80
	4	$18.50	$27,320.80
Ref #212	**630E80200**	**SIGN, GROUND MOUNTED EXTRUSHEET, (1519 SF)**	
	Awd	$25.00	$37,975.00
	2	$22.54	$34,238.26
	3	$22.50	$34,177.50
	4	$22.50	$34,177.50
Ref #213	**630E80224**	**SIGN, OVERHEAD EXTRUSHEET, (1028 SF)**	
	Awd	$25.00	$25,700.00
	2	$22.50	$23,130.00
	3	$22.50	$23,130.00
	4	$22.50	$23,130.00
Ref #214	**630E80400**	**SIGN, PERMANENT OVERLAY, (35 SF)**	
	Awd	$20.00	$700.00
	2	$50.00	$1,750.00
	3	$50.00	$1,750.00
	4	$50.00	$1,750.00
Ref #215	**630E80500**	**SIGN, DOUBLE FACED, STREET NAME, (8 EACH)**	
	Awd	$285.00	$2,280.00
	2	$225.00	$1,800.00
	3	$225.00	$1,800.00
	4	$225.00	$1,800.00
Ref #216	**630E84500**	**GROUND MOUNTED STRUCTURAL BEAM SUPPORT FOUNDATION, (32 EACH)**	
	Awd	$1,150.00	$36,800.00
	2	$1,500.00	$48,000.00
	3	$1,500.00	$48,000.00
	4	$1,500.00	$48,000.00

Ref #217	**630E84510**	**RIGID OVERHEAD SIGN SUPPORT FOUNDATION, (2 EACH)**	
	Awd	$11,550.00	$23,100.00
	2	$12,500.00	$25,000.00
	3	$12,500.00	$25,000.00
	4	$12,500.00	$25,000.00
Ref #218	**630E84520**	**SPAN WIRE SIGN SUPPORT FOUNDATION, (2 EACH)**	
	Awd	$8,850.00	$17,700.00
	2	$7,500.00	$15,000.00
	3	$7,500.00	$15,000.00
	4	$7,500.00	$15,000.00
Ref #219	**630E84900**	**REMOVAL OF GROUND MOUNTED SIGN AND DISPOSAL, (103 EACH)**	
	Awd	$15.00	$1,545.00
	2	$20.00	$2,060.00
	3	$20.00	$2,060.00
	4	$20.00	$2,060.00
Ref #220	**630E85100**	**REMOVAL OF GROUND MOUNTED SIGN AND REERECTION, (1 EACH)**	
	Awd	$65.00	$65.00
	2	$250.00	$250.00
	3	$250.00	$250.00
	4	$250.00	$250.00
Ref #221	**630E86002**	**REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSA, (67 EACH)**	
	Awd	$20.00	$1,340.00
	2	$20.00	$1,340.00
	3	$20.00	$1,340.00
	4	$20.00	$1,340.00
Ref #222	**630E86102**	**REMOVAL OF GROUND MOUNTED STRUCTURAL BEAM SUPPORT , (4 EACH)**	
	Awd	$285.00	$1,140.00
	2	$400.00	$1,600.00
	3	$400.00	$1,600.00
	4	$400.00	$1,600.00
Ref #223	**630E87400**	**REMOVAL OF OVERHEAD MOUNTED SIGN AND DISPOSAL, (6 EACH)**	
	Awd	$345.00	$2,070.00
	2	$400.00	$2,400.00
	3	$400.00	$2,400.00
	4	$400.00	$2,400.00
Ref #224	**630E89702**	**REMOVAL OF OVERHEAD SIGN SUPPORT AND DISPOSAL, (1 EACH)**	
	Awd	$1,950.00	$1,950.00
	2	$3,000.00	$3,000.00
	3	$3,000.00	$3,000.00
	4	$3,000.00	$3,000.00
Ref #225	**644E00104**	**EDGE LINE, 6", (19.89 MILE)**	
	Awd	$4,485.00	$89,206.65
	2	$4,865.00	$96,764.85
	3	$4,485.00	$89,206.65
	4	$4,485.00	$89,206.65
Ref #226	**644E00204**	**LANE LINE, 6", (5.86 MILE)**	
	Awd	$2,025.00	$11,866.50
	2	$2,925.00	$17,140.50
	3	$2,025.00	$11,866.50
	4	$2,025.00	$11,866.50

Ref #227	**644E00300**	**CENTER LINE, (5.59 MILE)**	
	Awd	$5,850.00	$32,701.50
	2	$8,480.00	$47,403.20
	3	$5,850.00	$32,701.50
	4	$5,850.00	$32,701.50
Ref #228	**644E00404**	**CHANNELIZING LINE, 12", (7145 FT)**	
	Awd	$1.75	$12,503.75
	2	$3.15	$22,506.75
	3	$1.75	$12,503.75
	4	$1.75	$12,503.75
Ref #229	**644E00500**	**STOP LINE, (338 FT)**	
	Awd	$9.15	$3,092.70
	2	$9.00	$3,042.00
	3	$9.15	$3,092.70
	4	$9.15	$3,092.70
Ref #230	**644E00700**	**TRANSVERSE/DIAGONAL LINE, (2077 FT)**	
	Awd	$8.90	$18,485.30
	2	$9.00	$18,693.00
	3	$8.90	$18,485.30
	4	$8.90	$18,485.30
Ref #231	**644E00720**	**CHEVRON MARKING, (394 FT)**	
	Awd	$8.90	$3,506.60
	2	$9.00	$3,546.00
	3	$8.90	$3,506.60
	4	$8.90	$3,506.60
Ref #232	**644E00900**	**ISLAND MARKING, (55 SF)**	
	Awd	$8.65	$475.75
	2	$4.50	$247.50
	3	$8.65	$475.75
	4	$8.65	$475.75
Ref #233	**644E01300**	**LANE ARROW, (20 EACH)**	
	Awd	$150.00	$3,000.00
	2	$125.00	$2,500.00
	3	$150.00	$3,000.00
	4	$150.00	$3,000.00
Ref #234	**644E01350**	**LANE REDUCTION ARROW, (12 EACH)**	
	Awd	$350.00	$4,200.00
	2	$280.00	$3,360.00
	3	$350.00	$4,200.00
	4	$350.00	$4,200.00
Ref #235	**644E01360**	**WRONG WAY ARROW, (2 EACH)**	
	Awd	$340.00	$680.00
	2	$200.00	$400.00
	3	$340.00	$680.00
	4	$340.00	$680.00
Ref #236	**644E01410**	**WORD ON PAVEMENT, 96", (2 EACH)**	
	Awd	$180.00	$360.00
	2	$180.00	$360.00
	3	$180.00	$360.00
	4	$180.00	$360.00

Ref #237	**644E01510**	**DOTTED LINE, 6", (10459 FT)**	
	Awd	$1.70	$17,780.30
	2	$1.10	$11,504.90
	3	$1.70	$17,780.30
	4	$1.70	$17,780.30
Ref #238	**644E20800**	**YIELD LINE, (57 FT)**	
	Awd	$15.00	$855.00
	2	$14.00	$798.00
	3	$15.00	$855.00
	4	$15.00	$855.00
Ref #239	**644E30000**	**REMOVAL OF PAVEMENT MARKING, (1735 FT)**	
	Awd	$3.35	$5,812.25
	2	$2.65	$4,597.75
	3	$3.35	$5,812.25
	4	$3.35	$5,812.25
Ref #240	**646E10010**	**EDGE LINE, 6", (1.12 MILE)**	
	Awd	$7,205.00	$8,069.60
	2	$12,775.00	$14,308.00
	3	$7,205.00	$8,069.60
	4	$7,205.00	$8,069.60
Ref #241	**646E10110**	**LANE LINE, 6", (0.21 MILE)**	
	Awd	$2,820.00	$592.20
	2	$12,000.00	$2,520.00
	3	$2,820.00	$592.20
	4	$2,820.00	$592.20
Ref #242	**646E10200**	**CENTER LINE, (0.32 MILE)**	
	Awd	$10,060.00	$3,219.20
	2	$21,650.00	$6,928.00
	3	$10,060.00	$3,219.20
	4	$10,060.00	$3,219.20
Ref #243	**646E10310**	**CHANNELIZING LINE, 12", (633 FT)**	
	Awd	$3.95	$2,500.35
	2	$4.50	$2,848.50
	3	$3.95	$2,500.35
	4	$3.95	$2,500.35
Ref #244	**646E20300**	**LANE ARROW, (5 EACH)**	
	Awd	$300.00	$1,500.00
	2	$200.00	$1,000.00
	3	$300.00	$1,500.00
	4	$300.00	$1,500.00
Ref #245	**646E20504**	**DOTTED LINE, 6", (808 FT)**	
	Awd	$3.55	$2,868.40
	2	$1.65	$1,333.20
	3	$3.55	$2,868.40
	4	$3.55	$2,868.40

Section 6 - TRAFFIC CONTROL - Totals

Awd	**$728,678.05**
2	**$716,444.31**
3	**$681,607.45**
4	**$693,008.95**

Ref #246	**625E18100**	**BRACKET ARM, 12', (4 EACH)**	
	Awd	$760.00	$3,040.00
	2	$1,000.00	$4,000.00
	3	$1,000.00	$4,000.00
	4	$1,000.00	$4,000.00
Ref #247	**625E23306**	**NO. 10 AWG 600 VOLT DISTRIBUTION CABLE, (882 FT)**	
	Awd	$3.75	$3,307.50
	2	$2.00	$1,764.00
	3	$2.00	$1,764.00
	4	$2.00	$1,764.00
Ref #248	**625E25400**	**CONDUIT, 2", 725.04, (22 FT)**	
	Awd	$26.00	$572.00
	2	$23.00	$506.00
	3	$23.00	$506.00
	4	$23.00	$506.00
Ref #249	**625E26250**	**LUMINAIRE, CONVENTIONAL, OBSOLETE, (4 EACH)**	
	Awd	$635.00	$2,540.00
	2	$425.00	$1,700.00
	3	$425.00	$1,700.00
	4	$425.00	$1,700.00
Ref #250	**625E29000**	**TRENCH, (22 FT)**	
	Awd	$15.00	$330.00
	2	$14.00	$308.00
	3	$14.00	$308.00
	4	$14.00	$308.00
Ref #251	**625E32000**	**GROUND ROD, (10 EACH)**	
	Awd	$320.00	$3,200.00
	2	$285.00	$2,850.00
	3	$285.00	$2,850.00
	4	$285.00	$2,850.00
Ref #252	**632E05006**	**VEHICULAR SIGNAL HEAD, (LED), 3-SECTION, 12" LENS,, (14 EACH)**	
	Awd	$1,220.00	$17,080.00
	2	$1,225.00	$17,150.00
	3	$1,225.00	$17,150.00
	4	$1,225.00	$17,150.00
Ref #253	**632E05086**	**VEHICULAR SIGNAL HEAD, (LED), 5-SECTION, 12" LENS,, (2 EACH)**	
	Awd	$2,080.00	$4,160.00
	2	$2,000.00	$4,000.00
	3	$2,000.00	$4,000.00
	4	$2,000.00	$4,000.00
Ref #254	**632E25000**	**COVERING OF VEHICULAR SIGNAL HEAD, (16 EACH)**	
	Awd	$175.00	$2,800.00
	2	$70.00	$1,120.00
	3	$70.00	$1,120.00
	4	$70.00	$1,120.00
Ref #255	**632E29900**	**MESSENGER WIRE, 7 STRAND, 1/4" DIAMETER WITH ACCES, (728 FT)**	
	Awd	$9.50	$6,916.00
	2	$22.00	$16,016.00
	3	$22.00	$16,016.00
	4	$22.00	$16,016.00

Ref #256	**632E30600**	**TETHER WIRE, WITH ACCESSORIES, (728 FT)**	
	Awd	$5.30	$3,858.40
	2	$22.00	$16,016.00
	3	$22.00	$16,016.00
	4	$22.00	$16,016.00
Ref #257	**632E40500**	**SIGNAL CABLE, 5 CONDUCTOR, NO. 14 AWG, (860 FT)**	
	Awd	$3.75	$3,225.00
	2	$3.00	$2,580.00
	3	$3.00	$2,580.00
	4	$3.00	$2,580.00
Ref #258	**632E40700**	**SIGNAL CABLE, 7 CONDUCTOR, NO. 14 AWG, (458 FT)**	
	Awd	$4.50	$2,061.00
	2	$3.20	$1,465.60
	3	$3.20	$1,465.60
	4	$3.20	$1,465.60
Ref #259	**632E64000**	**STRAIN POLE FOUNDATION, (8 EACH)**	
	Awd	$6,000.00	$48,000.00
	2	$6,450.00	$51,600.00
	3	$6,450.00	$51,600.00
	4	$6,450.00	$51,600.00
Ref #260	**632E70000**	**POWER SERVICE, (2 EACH)**	
	Awd	$12,000.00	$24,000.00
	2	$2,700.00	$5,400.00
	3	$2,700.00	$5,400.00
	4	$2,700.00	$5,400.00
Ref #261	**632E86120**	**STRAIN POLE, TYPE TC-81.11, DESIGN 8, (2 EACH)**	
	Awd	$12,000.00	$24,000.00
	2	$8,200.00	$16,400.00
	3	$8,200.00	$16,400.00
	4	$8,200.00	$16,400.00
Ref #262	**632E87120**	**COMBINATION STRAIN POLE, TYPE TC-81.11, DESIGN 8, (3 EACH)**	
	Awd	$12,000.00	$36,000.00
	2	$8,250.00	$24,750.00
	3	$8,250.00	$24,750.00
	4	$8,250.00	$24,750.00
Ref #263	**632E87130**	**COMBINATION STRAIN POLE, TYPE TC-81.11, DESIGN 10, (1 EACH)**	
	Awd	$13,400.00	$13,400.00
	2	$9,295.00	$9,295.00
	3	$9,295.00	$9,295.00
	4	$9,295.00	$9,295.00
Ref #264	**632E90400**	**SIGNALIZATION, MISC.:COMBINATION STRAIN POLE, TC 8, (2 EACH)**	
	Awd	$21,000.00	$42,000.00
	2	$17,000.00	$34,000.00
	3	$17,000.00	$34,000.00
	4	$17,000.00	$34,000.00
Ref #265	**633E65511**	**CABINET, TYPE TS-2, AS PER PLAN, (2 EACH)**	
	Awd	$20,000.00	$40,000.00
	2	$17,350.00	$34,700.00
	3	$17,350.00	$34,700.00
	4	$17,350.00	$34,700.00

Ref #266	**633E67100**	**CABINET FOUNDATION, (2 EACH)**	
	Awd	$4,300.00	$8,600.00
	2	$3,110.00	$6,220.00
	3	$3,100.00	$6,200.00
	4	$3,100.00	$6,200.00
Ref #267	**633E67200**	**CONTROLLER WORK PAD, (2 EACH)**	
	Awd	$4,900.00	$9,800.00
	2	$650.00	$1,300.00
	3	$650.00	$1,300.00
	4	$650.00	$1,300.00
Ref #268	**633E75001**	**UNINTERRUPTIBLE POWER SUPPLY (UPS), 1000 WATT, AS , (2 EACH)**	
	Awd	$8,725.00	$17,450.00
	2	$7,700.00	$15,400.00
	3	$7,700.00	$15,400.00
	4	$7,700.00	$15,400.00
Ref #269	**644E00500**	**STOP LINE, (70 FT)**	
	Awd	$9.15	$640.50
	2	$9.15	$640.50
	3	$9.15	$640.50
	4	$9.15	$640.50
Ref #270	**809E69000**	**ADVANCE RADAR DETECTION, (4 EACH)**	
	Awd	$9,851.66	$39,406.64
	2	$9,750.00	$39,000.00
	3	$9,750.00	$39,000.00
	4	$9,750.00	$39,000.00
Ref #271	**809E69100**	**STOP LINE RADAR DETECTION, (3 EACH)**	
	Awd	$9,488.51	$28,465.53
	2	$9,450.00	$28,350.00
	3	$9,450.00	$28,350.00
	4	$9,450.00	$28,350.00
Ref #272	**815E30000**	**SPREAD SPECTRUM RADIO, (2 EACH)**	
	Awd	$6,936.70	$13,873.40
	2	$3,550.00	$7,100.00
	3	$3,550.00	$7,100.00
	4	$3,550.00	$7,100.00

Section 7 - TRAFFIC SIGNALS - Totals

Awd	**$398,725.97**
2	**$343,631.10**
3	**$343,611.10**
4	**$343,611.10**

Ref #273	**661E20080**	**DECIDUOUS SHRUB, 4' HEIGHT, RHUS AROMATICA, (7 EACH)**	
	Awd	$154.79	$1,083.53
	2	$1,250.00	$8,750.00
	3	$160.00	$1,120.00
	4	$1,250.00	$8,750.00
Ref #274	**661E99930**	**PLANTING, MISC.:, 10" GRAY WASHED RIVER STONE MULC, (796 SY)**	
	Awd	$43.95	$34,984.20
	2	$44.00	$35,024.00
	3	$45.00	$35,820.00
	4	$40.00	$31,840.00

Ref #275	**662E31000**	**LANDSCAPE WATERING, (49 GAL)**	
	Awd	$12.00	$588.00
	2	$245.00	$12,005.00
	3	$15.00	$735.00
	4	$5.00	$245.00

Section 8 - LANDSCAPING - Totals

Awd	**$36,655.73**
2	**$55,779.00**
3	**$37,675.00**
4	**$40,835.00**

Ref #276	**202E56001**	**BUILDING DEMOLISHED, AS PER PLAN, ABANDONED 1 - S, (LUMP SUM)**	
	Awd	$8,000.00	$8,000.00
	2	$12,957.51	$12,957.51
	3	$15,000.00	$15,000.00
	4	$19,500.00	$19,500.00
Ref #277	**202E56001**	**BUILDING DEMOLISHED, AS PER PLAN, (2) 1 - STORY FR, (LUMP SUM)**	
	Awd	$8,000.00	$8,000.00
	2	$23,332.42	$23,332.42
	3	$25,000.00	$25,000.00
	4	$19,500.00	$19,500.00
Ref #278	**202E56001**	**BUILDING DEMOLISHED, AS PER PLAN, 1 - STORY FRAME , (LUMP SUM)**	
	Awd	$10,000.00	$10,000.00
	2	$27,206.29	$27,206.29
	3	$55,000.00	$55,000.00
	4	$19,500.00	$19,500.00
Ref #279	**202E56001**	**BUILDING DEMOLISHED, AS PER PLAN, 1 - STORY FRAME , (LUMP SUM)**	
	Awd	$8,000.00	$8,000.00
	2	$11,666.25	$11,666.25
	3	$25,000.00	$25,000.00
	4	$19,500.00	$19,500.00
Ref #280	**202E56001**	**BUILDING DEMOLISHED, AS PER PLAN, 1.5 - STORY FRAM, (LUMP SUM)**	
	Awd	$9,000.00	$9,000.00
	2	$12,957.51	$12,957.51
	3	$25,000.00	$25,000.00
	4	$19,500.00	$19,500.00
Ref #281	**202E56001**	**BUILDING DEMOLISHED, AS PER PLAN, 1.5 - STORY FRAM, (LUMP SUM)**	
	Awd	$9,000.00	$9,000.00
	2	$19,754.14	$19,754.14
	3	$33,000.00	$33,000.00
	4	$19,500.00	$19,500.00
Ref #282	**202E56001**	**BUILDING DEMOLISHED, AS PER PLAN, 1.5 - STORY FRAM, (LUMP SUM)**	
	Awd	$9,000.00	$9,000.00
	2	$12,957.51	$12,957.51
	3	$45,000.00	$45,000.00
	4	$19,500.00	$19,500.00
Ref #283	**202E56001**	**BUILDING DEMOLISHED, AS PER PLAN, 2 - STORY BRICK , (LUMP SUM)**	
	Awd	$12,000.00	$12,000.00
	2	$19,754.14	$19,754.14
	3	$30,000.00	$30,000.00
	4	$19,500.00	$19,500.00

Ref #284	**202E56001**	**BUILDING DEMOLISHED, AS PER PLAN, 2 - STORY BRICK , (LUMP SUM)**	
	Awd	$12,000.00	$12,000.00
	2	$14,248.77	$14,248.77
	3	$25,000.00	$25,000.00
	4	$19,500.00	$19,500.00
Ref #285	**202E56001**	**BUILDING DEMOLISHED, AS PER PLAN, 2 - STORY METAL , (LUMP SUM)**	
	Awd	$9,000.00	$9,000.00
	2	$6,796.63	$6,796.63
	3	$18,000.00	$18,000.00
	4	$19,500.00	$19,500.00
Ref #286	**202E56001**	**BUILDING DEMOLISHED, AS PER PLAN, GARAGE, CAR PORT, (LUMP SUM)**	
	Awd	$2,000.00	$2,000.00
	2	$6,796.63	$6,796.63
	3	$15,000.00	$15,000.00
	4	$19,500.00	$19,500.00
Ref #287	**202E56001**	**BUILDING DEMOLISHED, AS PER PLAN, (2) 1-STORY FRAM, (LUMP SUM)**	
	Awd	$9,000.00	$9,000.00
	2	$6,796.63	$6,796.63
	3	$50,000.00	$50,000.00
	4	$19,500.00	$19,500.00
Ref #288	**202E56001**	**BUILDING DEMOLISHED, AS PER PLAN, SEPTIC TANK, WEL, (LUMP SUM)**	
	Awd	$1,000.00	$1,000.00
	2	$1,946.13	$1,946.13
	3	$6,000.00	$6,000.00
	4	$19,500.00	$19,500.00
Ref #289	**202E56001**	**BUILDING DEMOLISHED, AS PER PLAN, SHED, (LUMP SUM)**	
	Awd	$1,000.00	$1,000.00
	2	$323.57	$323.57
	3	$6,000.00	$6,000.00
	4	$19,500.00	$19,500.00
Ref #290	**202E56001**	**BUILDING DEMOLISHED, AS PER PLAN, WOOD SHED, BARN, (LUMP SUM)**	
	Awd	$1,000.00	$1,000.00
	2	$6,796.63	$6,796.63
	3	$6,000.00	$6,000.00
	4	$19,500.00	$19,500.00

Section 9 - BUILDING DEMOLITION - Totals

Awd	**$108,000.00**
2	**$184,290.76**
3	**$379,000.00**
4	**$292,500.00**

Ref #291	**606E10210**	**SPECIAL - NOISE BARRIER (REFLECTIVE), (114072 SF)**	
	Awd	$33.00	$3,764,376.00
	2	$28.50	$3,251,052.00
	3	$40.00	$4,562,880.00
	4	$33.75	$3,849,930.00

Section 10 - NOISE BARRIERS - Totals

Awd	**$3,764,376.00**
2	**$3,251,052.00**
3	**$4,562,880.00**
4	**$3,849,930.00**

Ref #292	**614E11110**	**LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSIST, (40 HOUR)**	
	Awd	$125.00	$5,000.00
	2	$85.00	$3,400.00
	3	$70.00	$2,800.00
	4	$75.00	$3,000.00
Ref #293	**614E11630**	**INCREASED BARRIER DELINEATION, (1396 FT)**	
	Awd	$2.20	$3,071.20
	2	$2.00	$2,792.00
	3	$2.00	$2,792.00
	4	$0.70	$977.20
Ref #294	**614E12380**	**WORK ZONE IMPACT ATTENUATOR, 24" WIDE HAZARDS, (UN, (3 EACH)**	
	Awd	$2,340.00	$7,020.00
	2	$3,240.00	$9,720.00
	3	$3,000.00	$9,000.00
	4	$2,300.00	$6,900.00
Ref #295	**614E12420**	**DETOUR SIGNING, (LUMP SUM)**	
	Awd	$34,000.00	$34,000.00
	2	$15,650.00	$15,650.00
	3	$15,650.00	$15,650.00
	4	$17,500.00	$17,500.00
Ref #296	**614E12801**	**WORK ZONE RAISED PAVEMENT MARKER, AS PER PLAN, (298 EACH)**	
	Awd	$85.81	$25,571.38
	2	$17.75	$5,289.50
	3	$17.75	$5,289.50
	4	$37.00	$11,026.00
Ref #297	**614E18601**	**PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN, (25 SNMT)**	
	Awd	$1,100.00	$27,500.00
	2	$2,134.59	$53,364.75
	3	$1,650.00	$41,250.00
	4	$1,650.00	$41,250.00
Ref #298	**614E21000**	**WORK ZONE CENTER LINE, CLASS I, (4.2 MILE)**	
	Awd	$2,350.00	$9,870.00
	2	$1,775.00	$7,455.00
	3	$1,775.00	$7,455.00
	4	$1,775.00	$7,455.00
Ref #299	**614E22010**	**WORK ZONE EDGE LINE, CLASS I, 6", (8.34 MILE)**	
	Awd	$1,790.00	$14,928.60
	2	$1,350.00	$11,259.00
	3	$1,350.00	$11,259.00
	4	$1,350.00	$11,259.00
Ref #300	**614E23000**	**WORK ZONE CHANNELIZING LINE, CLASS I, 8", (421 FT)**	
	Awd	$0.90	$378.90
	2	$3.00	$1,263.00
	3	$3.00	$1,263.00
	4	$3.00	$1,263.00

Ref #301	**614E26000**	**WORK ZONE STOP LINE, CLASS I, (24 FT)**	
	Awd	$7.25	$174.00
	2	$14.00	$336.00
	3	$14.00	$336.00
	4	$14.00	$336.00
Ref #302	**614E30000**	**WORK ZONE ARROW, CLASS I, (2 EACH)**	
	Awd	$125.00	$250.00
	2	$200.00	$400.00
	3	$300.00	$600.00
	4	$300.00	$600.00
Ref #303	**615E10000**	**ROADS FOR MAINTAINING TRAFFIC, (LUMP SUM)**	
	Awd	$10,000.00	$10,000.00
	2	$16,826.81	$16,826.81
	3	$10,000.00	$10,000.00
	4	$15,000.00	$15,000.00
Ref #304	**615E25000**	**PAVEMENT FOR MAINTAINING TRAFFIC, CLASS B, (437 SY)**	
	Awd	$68.00	$29,716.00
	2	$68.00	$29,716.00
	3	$68.00	$29,716.00
	4	$143.00	$62,491.00
Ref #305	**616E10000**	**WATER, (20000 MGAL)**	
	Awd	$18.00	$360,000.00
	2	$86.23	$1,724,600.00
	3	$18.00	$360,000.00
	4	$70.50	$1,410,000.00
Ref #306	**622E41100**	**PORTABLE BARRIER, UNANCHORED, (1396 FT)**	
	Awd	$45.00	$62,820.00
	2	$75.35	$105,188.60
	3	$42.00	$58,632.00
	4	$35.00	$48,860.00

Section 11 - MAINTENANCE OF TRAFFIC - Totals

Awd	**$590,300.08**
2	**$1,987,260.66**
3	**$556,042.50**
4	**$1,637,917.20**

Ref #307	**503E21101**	**UNCLASSIFIED EXCAVATION, AS PER PLAN, (4811 CY)**	
	Awd	$67.00	$322,337.00
	2	$62.49	$300,639.39
	3	$60.00	$288,660.00
	4	$110.00	$529,210.00
Ref #308	**509E10001**	**EPOXY COATED STEEL REINFORCEMENT, AS PER PLAN, (101808 LB)**	
	Awd	$1.52	$154,748.16
	2	$1.51	$153,730.08
	3	$2.00	$203,616.00
	4	$2.00	$203,616.00
Ref #309	**511E46012**	**CLASS QC1 CONCRETE WITH QC/QA, RETAINING/WINGWALL , (465 CY)**	
	Awd	$1,036.00	$481,740.00
	2	$1,322.50	$614,962.50
	3	$840.00	$390,600.00
	4	$1,200.00	$558,000.00

Ref #310	**511E46512**	**CLASS QC1 CONCRETE WITH QC/QA, FOOTING, (371 CY)**	
	Awd	$625.00	$231,875.00
	2	$621.25	$230,483.75
	3	$800.00	$296,800.00
	4	$650.00	$241,150.00
Ref #311	**512E10100**	**SEALING OF CONCRETE SURFACES (EPOXY-URETHANE), (700 SY)**	
	Awd	$26.13	$18,291.00
	2	$28.00	$19,600.00
	3	$28.00	$19,600.00
	4	$30.00	$21,000.00
Ref #312	**512E33000**	**TYPE 2 WATERPROOFING, (46 SY)**	
	Awd	$32.00	$1,472.00
	2	$51.26	$2,357.96
	3	$60.00	$2,760.00
	4	$65.00	$2,990.00
Ref #313	**516E13200**	**1/2" PREFORMED EXPANSION JOINT FILLER, (440 SF)**	
	Awd	$36.00	$15,840.00
	2	$12.22	$5,376.80
	3	$6.00	$2,640.00
	4	$6.00	$2,640.00
Ref #314	**518E20000**	**PREFABRICATED GEOCOMPOSITE DRAIN, (362 SY)**	
	Awd	$24.00	$8,688.00
	2	$50.83	$18,400.46
	3	$40.00	$14,480.00
	4	$9.00	$3,258.00
Ref #315	**622E10160**	**CONCRETE BARRIER, SINGLE SLOPE, TYPE D, (310 FT)**	
	Awd	$75.00	$23,250.00
	2	$223.34	$69,235.40
	3	$160.00	$49,600.00
	4	$225.00	$69,750.00
Ref #316	**622E25000**	**CONCRETE BARRIER END SECTION, TYPE D, (1 EACH)**	
	Awd	$5,000.00	$5,000.00
	2	$5,214.91	$5,214.91
	3	$4,500.00	$4,500.00
	4	$8,500.00	$8,500.00
Ref #707	**518E21050**	**POROUS BACKFILL WITH GEOTEXTILE FABRIC, (55 SY)**	
	Awd	$109.00	$5,995.00
	2	$145.99	$8,029.45
	3	$130.00	$7,150.00
	4	$112.00	$6,160.00
Ref #708	**518E40000**	**6" PERFORATED CORRUGATED PLASTIC PIPE, (375 FT)**	
	Awd	$19.00	$7,125.00
	2	$16.63	$6,236.25
	3	$12.00	$4,500.00
	4	$3.00	$1,125.00
Ref #709	**518E40010**	**6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDI, (26 FT)**	
	Awd	$19.00	$494.00
	2	$25.40	$660.40
	3	$50.00	$1,300.00
	4	$25.00	$650.00

Section 12 - RETAINING WALLS (001) - Totals

Awd	**$1,276,855.16**
2	**$1,434,927.35**
3	**$1,286,206.00**
4	**$1,648,049.00**

Ref #317	**203E65000**	**SPECIAL - SETTLEMENT PLATFORM, (2 EACH)**	
	Awd	$1,080.00	$2,160.00
	2	$1,955.25	$3,910.50
	3	$1,200.00	$2,400.00
	4	$1,500.00	$3,000.00
Ref #318	**503E11100**	**COFFERDAMS AND EXCAVATION BRACING, (LUMP SUM)**	
	Awd	$260,000.00	$260,000.00
	2	$1.00	$1.00
	3	$1.00	$1.00
	4	$1.00	$1.00
Ref #319	**503E21300**	**UNCLASSIFIED EXCAVATION, (LUMP SUM)**	
	Awd	$150,000.00	$150,000.00
	2	$107,114.53	$107,114.53
	3	$250,000.00	$250,000.00
	4	$150,000.00	$150,000.00
Ref #320	**505E11100**	**PILE DRIVING EQUIPMENT MOBILIZATION, (LUMP SUM)**	
	Awd	$30,000.00	$30,000.00
	2	$24,525.38	$24,525.38
	3	$50,000.00	$50,000.00
	4	$30,000.00	$30,000.00
Ref #321	**507E00200**	**STEEL PILES HP12X53, FURNISHED, (3120 FT)**	
	Awd	$44.00	$137,280.00
	2	$38.40	$119,808.00
	3	$50.00	$156,000.00
	4	$45.00	$140,400.00
Ref #322	**507E00250**	**STEEL PILES HP12X53, DRIVEN, (2880 FT)**	
	Awd	$20.00	$57,600.00
	2	$24.66	$71,020.80
	3	$18.00	$51,840.00
	4	$19.00	$54,720.00
Ref #323	**509E10000**	**EPOXY COATED STEEL REINFORCEMENT, (210079 LB)**	
	Awd	$1.45	$304,614.55
	2	$1.51	$317,219.29
	3	$2.00	$420,158.00
	4	$1.50	$315,118.50
Ref #324	**509E30020**	**NO. 4 DEFORMED GFRP REINFORCEMENT, (9071 FT)**	
	Awd	$1.45	$13,152.95
	2	$1.44	$13,062.24
	3	$2.50	$22,677.50
	4	$1.40	$12,699.40
Ref #325	**511E34446**	**CLASS QC2 CONCRETE WITH QC/QA, BRIDGE DECK, (454 CY)**	
	Awd	$975.00	$442,650.00
	2	$1,101.66	$500,153.64
	3	$1,500.00	$681,000.00
	4	$1,040.00	$472,160.00

Ref #326	**511E34450**	**CLASS QC2 CONCRETE WITH QC/QA, BRIDGE DECK (PARAPE, (80 CY)**	
	Awd	$725.00	$58,000.00
	2	$740.86	$59,268.80
	3	$700.00	$56,000.00
	4	$1,040.00	$83,200.00
Ref #327	**511E43512**	**CLASS QC1 CONCRETE WITH QC/QA, ABUTMENT INCLUDING , (280 CY)**	
	Awd	$885.00	$247,800.00
	2	$1,076.38	$301,386.40
	3	$920.00	$257,600.00
	4	$715.00	$200,200.00
Ref #329	**512E10100**	**SEALING OF CONCRETE SURFACES (EPOXY-URETHANE), (1459 SY)**	
	Awd	$22.33	$32,579.47
	2	$26.00	$37,934.00
	3	$26.00	$37,934.00
	4	$28.00	$40,852.00
Ref #330	**512E10300**	**SEALING CONCRETE BRIDGE DECKS WITH HMWM RESIN, (44 SY)**	
	Awd	$45.00	$1,980.00
	2	$70.34	$3,094.96
	3	$75.00	$3,300.00
	4	$30.50	$1,342.00
Ref #331	**512E33000**	**TYPE 2 WATERPROOFING, (54 SY)**	
	Awd	$32.00	$1,728.00
	2	$51.26	$2,768.04
	3	$70.00	$3,780.00
	4	$33.00	$1,782.00
Ref #332	**515E15030**	**DRAPED STRAND PRESTRESSED CONCRETE BRIDGE I-BEAM M, (5 EACH)**	
	Awd	$55,000.00	$275,000.00
	2	$63,708.48	$318,542.40
	3	$55,000.00	$275,000.00
	4	$70,000.00	$350,000.00
Ref #333	**515E15030**	**DRAPED STRAND PRESTRESSED CONCRETE BRIDGE I-BEAM M, (5 EACH)**	
	Awd	$55,000.00	$275,000.00
	2	$63,721.27	$318,606.35
	3	$55,000.00	$275,000.00
	4	$70,000.00	$350,000.00
Ref #334	**515E15030**	**DRAPED STRAND PRESTRESSED CONCRETE BRIDGE I-BEAM M, (5 EACH)**	
	Awd	$55,000.00	$275,000.00
	2	$63,868.38	$319,341.90
	3	$65,000.00	$325,000.00
	4	$70,000.00	$350,000.00
Ref #335	**515E20000**	**INTERMEDIATE DIAPHRAGMS, (36 EACH)**	
	Awd	$2,500.00	$90,000.00
	2	$2,556.31	$92,027.16
	3	$2,500.00	$90,000.00
	4	$2,250.00	$81,000.00
Ref #336	**516E12300**	**STRIP SEAL EXPANSION JOINT ANCHORED WITH ELASTOMER, (100 FT)**	
	Awd	$1,050.00	$105,000.00
	2	$546.71	$54,671.00
	3	$350.00	$35,000.00
	4	$450.00	$45,000.00

Ref #337	**516E44100**	**ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LO, (30 EACH)**	
	Awd	$1,700.00	$51,000.00
	2	$1,606.00	$48,180.00
	3	$1,800.00	$54,000.00
	4	$1,500.00	$45,000.00
Ref #338	**518E20000**	**PREFABRICATED GEOCOMPOSITE DRAIN, (225 SY)**	
	Awd	$24.00	$5,400.00
	2	$50.83	$11,436.75
	3	$45.00	$10,125.00
	4	$17.00	$3,825.00
Ref #339	**518E21200**	**POROUS BACKFILL WITH GEOTEXTILE FABRIC, (33 CY)**	
	Awd	$126.00	$4,158.00
	2	$145.99	$4,817.67
	3	$160.00	$5,280.00
	4	$125.00	$4,125.00
Ref #340	**518E40000**	**6" PERFORATED CORRUGATED PLASTIC PIPE, (161 FT)**	
	Awd	$17.50	$2,817.50
	2	$16.63	$2,677.43
	3	$12.00	$1,932.00
	4	$12.00	$1,932.00
Ref #341	**518E40010**	**6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDI, (55 FT)**	
	Awd	$17.50	$962.50
	2	$25.40	$1,397.00
	3	$25.00	$1,375.00
	4	$15.00	$825.00
Ref #342	**524E94950**	**DRILLED SHAFTS, 72" DIAMETER, INTO BEDROCK, (60 FT)**	
	Awd	$1,325.00	$79,500.00
	2	$3,670.40	$220,224.00
	3	$3,500.00	$210,000.00
	4	$1,115.00	$66,900.00
Ref #343	**524E94970**	**DRILLED SHAFTS, 78" DIAMETER ABOVE BEDROCK, (189 FT)**	
	Awd	$1,860.00	$351,540.00
	2	$906.57	$171,341.73
	3	$1,500.00	$283,500.00
	4	$1,240.00	$234,360.00
Ref #344	**526E30011**	**REINFORCED CONCRETE APPROACH SLABS WITH QC/QA (T=1, (302 SY)**	
	Awd	$380.00	$114,760.00
	2	$470.85	$142,196.70
	3	$620.00	$187,240.00
	4	$450.00	$135,900.00
Ref #345	**526E90010**	**TYPE A INSTALLATION, (100 FT)**	
	Awd	$225.00	$22,500.00
	2	$210.83	$21,083.00
	3	$280.00	$28,000.00
	4	$240.00	$24,000.00
Ref #346	**601E32104**	**ROCK CHANNEL PROTECTION, TYPE B WITH GEOTEXTILE FA, (1376 CY)**	
	Awd	$105.00	$144,480.00
	2	$128.16	$176,348.16
	3	$75.00	$103,200.00
	4	$100.00	$137,600.00

Ref #347	**894E10000**	**THERMAL INTEGRITY PROFILING (TIP) TEST, (6 EACH)**	
	Awd	$4,000.00	$24,000.00
	2	$4,378.81	$26,272.86
	3	$4,000.00	$24,000.00
	4	$5,000.00	$30,000.00
Ref #710	**511E41012**	**CLASS QC1 CONCRETE WITH QC/QA, PIER ABOVE FOOTINGS, (159 CY)**	
	Awd	$1,170.00	$186,030.00
	2	$1,240.97	$197,314.23
	3	$1,320.00	$209,880.00
	4	$1,075.00	$170,925.00

Section 13 - STRUCTURE OVER 20 FOOT SPAN (LAW-7-0251) - Totals

Awd	**$3,746,692.97**
2	**$3,687,745.92**
3	**$4,111,222.50**
4	**$3,536,866.90**

Ref #348	**203E20001**	**EMBANKMENT, AS PER PLAN, (200 CY)**	
	Awd	$15.00	$3,000.00
	2	$4.64	$928.00
	3	$30.00	$6,000.00
	4	$9.45	$1,890.00
Ref #349	**203E35110**	**GRANULAR MATERIAL, TYPE B, (1391 CY)**	
	Awd	$70.00	$97,370.00
	2	$76.37	$106,230.67
	3	$70.00	$97,370.00
	4	$89.00	$123,799.00
Ref #350	**203E65000**	**SPECIAL - SETTLEMENT PLATFORM, (4 EACH)**	
	Awd	$1,080.00	$4,320.00
	2	$1,955.25	$7,821.00
	3	$1,200.00	$4,800.00
	4	$1,800.00	$7,200.00
Ref #351	**505E11100**	**PILE DRIVING EQUIPMENT MOBILIZATION, (LUMP SUM)**	
	Awd	$30,000.00	$30,000.00
	2	$24,525.38	$24,525.38
	3	$50,000.00	$50,000.00
	4	$30,000.00	$30,000.00
Ref #352	**507E00100**	**STEEL PILES HP10X42, FURNISHED, (1815 FT)**	
	Awd	$44.00	$79,860.00
	2	$31.41	$57,009.15
	3	$40.00	$72,600.00
	4	$40.00	$72,600.00
Ref #353	**507E00150**	**STEEL PILES HP10X42, DRIVEN, (1705 FT)**	
	Awd	$20.00	$34,100.00
	2	$26.76	$45,625.80
	3	$18.00	$30,690.00
	4	$26.00	$44,330.00
Ref #354	**509E10000**	**EPOXY COATED STEEL REINFORCEMENT, (71810 LB)**	
	Awd	$1.45	$104,124.50
	2	$1.51	$108,433.10
	3	$2.00	$143,620.00
	4	$1.50	$107,715.00

Ref #355	**509E30020**	**NO. 4 DEFORMED GFRP REINFORCEMENT, (7034.75 FT)**	
	Awd	$1.45	$10,200.39
	2	$1.44	$10,130.04
	3	$2.50	$17,586.88
	4	$1.40	$9,848.65
Ref #356	**511E33500**	**SEMI-INTEGRAL DIAPHRAGM GUIDE, (2 EACH)**	
	Awd	$3,840.00	$7,680.00
	2	$5,399.76	$10,799.52
	3	$4,500.00	$9,000.00
	4	$4,165.00	$8,330.00
Ref #357	**511E34446**	**CLASS QC2 CONCRETE WITH QC/QA, BRIDGE DECK, (220 CY)**	
	Awd	$975.00	$214,500.00
	2	$1,318.94	$290,166.80
	3	$1,500.00	$330,000.00
	4	$900.00	$198,000.00
Ref #358	**511E34450**	**CLASS QC2 CONCRETE WITH QC/QA, BRIDGE DECK (PARAPE, (26 CY)**	
	Awd	$1,000.00	$26,000.00
	2	$749.41	$19,484.66
	3	$760.00	$19,760.00
	4	$1,615.00	$41,990.00
Ref #359	**511E43512**	**CLASS QC1 CONCRETE WITH QC/QA, ABUTMENT INCLUDING , (146 CY)**	
	Awd	$885.00	$129,210.00
	2	$1,076.38	$157,151.48
	3	$1,200.00	$175,200.00
	4	$700.00	$102,200.00
Ref #360	**512E10100**	**SEALING OF CONCRETE SURFACES (EPOXY-URETHANE), (494 SY)**	
	Awd	$22.33	$11,031.02
	2	$26.00	$12,844.00
	3	$26.00	$12,844.00
	4	$28.00	$13,832.00
Ref #361	**515E15020**	**DRAPED STRAND PRESTRESSED CONCRETE BRIDGE I-BEAM M, (5 EACH)**	
	Awd	$52,000.00	$260,000.00
	2	$57,940.12	$289,700.60
	3	$60,000.00	$300,000.00
	4	$70,000.00	$350,000.00
Ref #362	**515E20000**	**INTERMEDIATE DIAPHRAGMS, (12 EACH)**	
	Awd	$2,500.00	$30,000.00
	2	$3,781.63	$45,379.56
	3	$5,800.00	$69,600.00
	4	$2,600.00	$31,200.00
Ref #363	**516E10010**	**ARMORLESS PREFORMED JOINT SEAL, (103 FT)**	
	Awd	$80.00	$8,240.00
	2	$54.48	$5,611.44
	3	$55.00	$5,665.00
	4	$48.00	$4,944.00
Ref #364	**516E13900**	**2" PREFORMED EXPANSION JOINT FILLER, (266 SF)**	
	Awd	$14.00	$3,724.00
	2	$19.08	$5,075.28
	3	$10.00	$2,660.00
	4	$10.00	$2,660.00

Ref #365	**516E14020**	**SEMI-INTEGRAL ABUTMENT EXPANSION JOINT SEAL, (124 FT)**	
	Awd	$35.00	$4,340.00
	2	$40.86	$5,066.64
	3	$40.00	$4,960.00
	4	$33.50	$4,154.00
Ref #366	**516E44100**	**ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LO, (10 EACH)**	
	Awd	$2,550.00	$25,500.00
	2	$2,477.80	$24,778.00
	3	$1,800.00	$18,000.00
	4	$2,200.00	$22,000.00
Ref #367	**518E21200**	**POROUS BACKFILL WITH GEOTEXTILE FABRIC, (98 CY)**	
	Awd	$126.00	$12,348.00
	2	$145.99	$14,307.02
	3	$140.00	$13,720.00
	4	$122.00	$11,956.00
Ref #368	**518E40000**	**6" PERFORATED CORRUGATED PLASTIC PIPE, (134 FT)**	
	Awd	$17.50	$2,345.00
	2	$16.63	$2,228.42
	3	$12.00	$1,608.00
	4	$12.00	$1,608.00
Ref #369	**518E40010**	**6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDI, (14 FT)**	
	Awd	$17.50	$245.00
	2	$25.40	$355.60
	3	$90.00	$1,260.00
	4	$15.00	$210.00
Ref #370	**526E30011**	**REINFORCED CONCRETE APPROACH SLABS WITH QC/QA (T=1, (302 SY)**	
	Awd	$380.00	$114,760.00
	2	$470.85	$142,196.70
	3	$540.00	$163,080.00
	4	$450.00	$135,900.00
Ref #371	**526E90030**	**TYPE C INSTALLATION, (103 FT)**	
	Awd	$235.00	$24,205.00
	2	$333.03	$34,302.09
	3	$350.00	$36,050.00
	4	$305.00	$31,415.00
Ref #372	**601E37501**	**PAVED GUTTER, TYPE 1-2, AS PER PLAN, (110 FT)**	
	Awd	$92.00	$10,120.00
	2	$68.25	$7,507.50
	3	$70.00	$7,700.00
	4	$62.00	$6,820.00
Ref #373	**611E99114**	**INLET, NO. 3 FOR SINGLE SLOPE BARRIER, TYPE D, (3 EACH)**	
	Awd	$14,000.00	$42,000.00
	2	$16,524.52	$49,573.56
	3	$13,500.00	$40,500.00
	4	$15,000.00	$45,000.00
Ref #374	**622E25000**	**CONCRETE BARRIER END SECTION, TYPE D, (4 EACH)**	
	Awd	$5,000.00	$20,000.00
	2	$4,729.08	$18,916.32
	3	$4,500.00	$18,000.00
	4	$4,200.00	$16,800.00

Ref #375	**622E90200**	**BARRIER, MISC.: TYPE D BARRIER WITH MOMENT SLAB, (4 EACH)**	
	Awd	$19,600.00	$78,400.00
	2	$22,407.26	$89,629.04
	3	$25,000.00	$100,000.00
	4	$15,750.00	$63,000.00
Ref #376	**840E20000**	**MECHANICALLY STABILIZED EARTH WALL, (10921 SF)**	
	Awd	$49.00	$535,129.00
	2	$43.32	$473,097.72
	3	$65.00	$709,865.00
	4	$35.00	$382,235.00
Ref #377	**840E21000**	**WALL EXCAVATION, (269 CY)**	
	Awd	$51.00	$13,719.00
	2	$22.12	$5,950.28
	3	$60.00	$16,140.00
	4	$23.00	$6,187.00
Ref #378	**840E22000**	**FOUNDATION PREPARATION, (1008 SY)**	
	Awd	$36.00	$36,288.00
	2	$41.18	$41,509.44
	3	$50.00	$50,400.00
	4	$36.00	$36,288.00
Ref #379	**840E23000**	**SELECT GRANULAR BACKFILL, (9221 CY)**	
	Awd	$78.00	$719,238.00
	2	$112.93	$1,041,327.53
	3	$70.00	$645,470.00
	4	$95.00	$875,995.00
Ref #380	**840E23050**	**NATURAL SOIL, (132 CY)**	
	Awd	$13.50	$1,782.00
	2	$93.11	$12,290.52
	3	$40.00	$5,280.00
	4	$45.00	$5,940.00
Ref #381	**840E25010**	**6" DRAINAGE PIPE, PERFORATED, (520 FT)**	
	Awd	$11.00	$5,720.00
	2	$16.63	$8,647.60
	3	$10.00	$5,200.00
	4	$12.00	$6,240.00
Ref #382	**840E25020**	**6" DRAINAGE PIPE, NON-PERFORATED, (115 FT)**	
	Awd	$11.00	$1,265.00
	2	$36.75	$4,226.25
	3	$30.00	$3,450.00
	4	$15.00	$1,725.00
Ref #383	**840E26000**	**CONCRETE COPING, (400 FT)**	
	Awd	$197.00	$78,800.00
	2	$266.53	$106,612.00
	3	$250.00	$100,000.00
	4	$170.00	$68,000.00
Ref #384	**840E27000**	**ON-SITE ASSISTANCE, (2.5 DAY)**	
	Awd	$100.00	$250.00
	2	$1,234.84	$3,087.10
	3	$1,500.00	$3,750.00
	4	$1.00	$2.50

Ref #386	**867E00101**	**TEMPORARY WIRE FACED MECHANICALLY STABILIZED EARTH, (LUMP SUM)**	
	Awd	$335,000.00	$335,000.00
	2	$854,534.14	$854,534.14
	3	$500,000.00	$500,000.00
	4	$700,000.00	$700,000.00

Section 14 - STRUCTURE OVER 20 FOOT SPAN (LAW-7-0370) - Totals

Awd	**$3,114,813.91**
2	**$4,137,059.95**
3	**$3,791,828.88**
4	**$3,572,014.15**

Ref #387	**203E65000**	**SPECIAL - SETTLEMENT PLATFORM, (4 EACH)**	
	Awd	$1,080.00	$4,320.00
	2	$1,955.25	$7,821.00
	3	$1,200.00	$4,800.00
	4	$1,800.00	$7,200.00
Ref #388	**503E11100**	**COFFERDAMS AND EXCAVATION BRACING, (LUMP SUM)**	
	Awd	$200,000.00	$200,000.00
	2	$1.00	$1.00
	3	$1.00	$1.00
	4	$1.00	$1.00
Ref #389	**503E21300**	**UNCLASSIFIED EXCAVATION, (LUMP SUM)**	
	Awd	$150,000.00	$150,000.00
	2	$105,861.73	$105,861.73
	3	$250,000.00	$250,000.00
	4	$175,000.00	$175,000.00
Ref #390	**505E11100**	**PILE DRIVING EQUIPMENT MOBILIZATION, (LUMP SUM)**	
	Awd	$30,000.00	$30,000.00
	2	$24,525.38	$24,525.38
	3	$50,000.00	$50,000.00
	4	$30,000.00	$30,000.00
Ref #391	**507E00200**	**STEEL PILES HP12X53, FURNISHED, (3720 FT)**	
	Awd	$44.00	$163,680.00
	2	$38.40	$142,848.00
	3	$50.00	$186,000.00
	4	$44.00	$163,680.00
Ref #392	**507E00250**	**STEEL PILES HP12X53, DRIVEN, (3480 FT)**	
	Awd	$20.00	$69,600.00
	2	$24.66	$85,816.80
	3	$18.00	$62,640.00
	4	$23.00	$80,040.00
Ref #393	**509E10001**	**EPOXY COATED STEEL REINFORCEMENT, AS PER PLAN, (264122 LB)**	
	Awd	$1.52	$401,465.44
	2	$1.51	$398,824.22
	3	$2.00	$528,244.00
	4	$1.50	$396,183.00
Ref #394	**509E30020**	**NO. 4 DEFORMED GFRP REINFORCEMENT, (11345 FT)**	
	Awd	$1.45	$16,450.25
	2	$1.44	$16,336.80
	3	$2.50	$28,362.50
	4	$1.40	$15,883.00

Ref #395	**511E34446**	**CLASS QC2 CONCRETE WITH QC/QA, BRIDGE DECK, (505 CY)**	
	Awd	$975.00	$492,375.00
	2	$1,103.27	$557,151.35
	3	$1,500.00	$757,500.00
	4	$1,000.00	$505,000.00
Ref #396	**511E34450**	**CLASS QC2 CONCRETE WITH QC/QA, BRIDGE DECK (PARAPE, (94 CY)**	
	Awd	$725.00	$68,150.00
	2	$735.34	$69,121.96
	3	$600.00	$56,400.00
	4	$1,015.00	$95,410.00
Ref #397	**511E43512**	**CLASS QC1 CONCRETE WITH QC/QA, ABUTMENT INCLUDING , (274 CY)**	
	Awd	$885.00	$242,490.00
	2	$1,056.74	$289,546.76
	3	$960.00	$263,040.00
	4	$750.00	$205,500.00
Ref #398	**511E45602**	**CLASS QC4 MASS CONCRETE, SUBSTRUCTURE WITH QC/QA, (270 CY)**	
	Awd	$1,000.00	$270,000.00
	2	$1,265.69	$341,736.30
	3	$1,225.00	$330,750.00
	4	$1,360.00	$367,200.00
Ref #399	**512E10100**	**SEALING OF CONCRETE SURFACES (EPOXY-URETHANE), (1649 SY)**	
	Awd	$22.33	$36,822.17
	2	$26.00	$42,874.00
	3	$26.00	$42,874.00
	4	$28.00	$46,172.00
Ref #400	**512E10300**	**SEALING CONCRETE BRIDGE DECKS WITH HMWM RESIN, (38 SY)**	
	Awd	$45.00	$1,710.00
	2	$70.34	$2,672.92
	3	$75.00	$2,850.00
	4	$30.00	$1,140.00
Ref #401	**512E33000**	**TYPE 2 WATERPROOFING, (50 SY)**	
	Awd	$32.00	$1,600.00
	2	$51.26	$2,563.00
	3	$75.00	$3,750.00
	4	$35.00	$1,750.00
Ref #402	**515E15040**	**DRAPED STRAND PRESTRESSED CONCRETE BRIDGE I-BEAM M, (5 EACH)**	
	Awd	$70,000.00	$350,000.00
	2	$70,000.00	$350,000.00
	3	$80,000.00	$400,000.00
	4	$80,000.00	$400,000.00
Ref #403	**515E15040**	**DRAPED STRAND PRESTRESSED CONCRETE BRIDGE I-BEAM M, (5 EACH)**	
	Awd	$70,000.00	$350,000.00
	2	$70,000.00	$350,000.00
	3	$70,000.00	$350,000.00
	4	$80,000.00	$400,000.00
Ref #404	**515E15040**	**DRAPED STRAND PRESTRESSED CONCRETE BRIDGE I-BEAM M, (5 EACH)**	
	Awd	$70,000.00	$350,000.00
	2	$70,000.00	$350,000.00
	3	$70,000.00	$350,000.00
	4	$80,000.00	$400,000.00

Ref #405	**515E20000**	**INTERMEDIATE DIAPHRAGMS, (36 EACH)**	
	Awd	$2,500.00	$90,000.00
	2	$2,556.31	$92,027.16
	3	$2,500.00	$90,000.00
	4	$2,250.00	$81,000.00
Ref #406	**516E12300**	**STRIP SEAL EXPANSION JOINT ANCHORED WITH ELASTOMER, (85 FT)**	
	Awd	$1,050.00	$89,250.00
	2	$546.71	$46,470.35
	3	$350.00	$29,750.00
	4	$450.00	$38,250.00
Ref #407	**516E44100**	**ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LO, (30 EACH)**	
	Awd	$1,800.00	$54,000.00
	2	$1,728.25	$51,847.50
	3	$1,800.00	$54,000.00
	4	$1,500.00	$45,000.00
Ref #408	**518E12301**	**SCUPPERS, INCLUDING SUPPORTS, AS PER PLAN, (1 EACH)**	
	Awd	$3,600.00	$3,600.00
	2	$3,966.80	$3,966.80
	3	$3,500.00	$3,500.00
	4	$4,400.00	$4,400.00
Ref #409	**518E20000**	**PREFABRICATED GEOCOMPOSITE DRAIN, (224 SY)**	
	Awd	$24.00	$5,376.00
	2	$50.83	$11,385.92
	3	$45.00	$10,080.00
	4	$17.00	$3,808.00
Ref #410	**518E21200**	**POROUS BACKFILL WITH GEOTEXTILE FABRIC, (26 CY)**	
	Awd	$126.00	$3,276.00
	2	$145.99	$3,795.74
	3	$180.00	$4,680.00
	4	$130.00	$3,380.00
Ref #411	**518E40000**	**6" PERFORATED CORRUGATED PLASTIC PIPE, (147 FT)**	
	Awd	$17.50	$2,572.50
	2	$16.63	$2,444.61
	3	$18.00	$2,646.00
	4	$12.00	$1,764.00
Ref #412	**518E40010**	**6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDI, (60 FT)**	
	Awd	$17.50	$1,050.00
	2	$25.40	$1,524.00
	3	$60.00	$3,600.00
	4	$15.00	$900.00
Ref #413	**524E94950**	**DRILLED SHAFTS, 72" DIAMETER, INTO BEDROCK, (60 FT)**	
	Awd	$1,325.00	$79,500.00
	2	$3,521.56	$211,293.60
	3	$3,500.00	$210,000.00
	4	$1,115.00	$66,900.00
Ref #414	**524E94970**	**DRILLED SHAFTS, 78" DIAMETER ABOVE BEDROCK, (168 FT)**	
	Awd	$1,860.00	$312,480.00
	2	$934.48	$156,992.64
	3	$1,500.00	$252,000.00
	4	$1,295.00	$217,560.00

Ref #415	**526E30011**	**REINFORCED CONCRETE APPROACH SLABS WITH QC/QA (T=1, (292 SY)**	
	Awd	$380.00	$110,960.00
	2	$470.85	$137,488.20
	3	$615.00	$179,580.00
	4	$450.00	$131,400.00
Ref #416	**526E90010**	**TYPE A INSTALLATION, (85 FT)**	
	Awd	$225.00	$19,125.00
	2	$210.83	$17,920.55
	3	$350.00	$29,750.00
	4	$240.00	$20,400.00
Ref #417	**601E32204**	**ROCK CHANNEL PROTECTION, TYPE C WITH GEOTEXTILE FA, (2726 CY)**	
	Awd	$105.00	$286,230.00
	2	$118.79	$323,821.54
	3	$75.00	$204,450.00
	4	$85.00	$231,710.00
Ref #418	**894E10000**	**THERMAL INTEGRITY PROFILING (TIP) TEST, (6 EACH)**	
	Awd	$4,000.00	$24,000.00
	2	$4,235.56	$25,413.36
	3	$4,000.00	$24,000.00
	4	$5,000.00	$30,000.00

Section 15 - STRUCTURE OVER 20 FOOT SPAN (LAW-7-0376) - Totals

Awd	**$4,280,082.36**
2	**$4,224,093.19**
3	**$4,765,247.50**
4	**$4,166,631.00**

Ref #419	**203E20001**	**EMBANKMENT, AS PER PLAN, (200 CY)**	
	Awd	$15.00	$3,000.00
	2	$4.64	$928.00
	3	$30.00	$6,000.00
	4	$9.50	$1,900.00
Ref #420	**203E35110**	**GRANULAR MATERIAL, TYPE B, (922 CY)**	
	Awd	$70.00	$64,540.00
	2	$76.37	$70,413.14
	3	$70.00	$64,540.00
	4	$90.00	$82,980.00
Ref #421	**203E65000**	**SPECIAL - SETTLEMENT PLATFORM, (4 EACH)**	
	Awd	$1,080.00	$4,320.00
	2	$1,955.25	$7,821.00
	3	$1,200.00	$4,800.00
	4	$1,800.00	$7,200.00
Ref #422	**503E11100**	**COFFERDAMS AND EXCAVATION BRACING, (LUMP SUM)**	
	Awd	$1.00	$1.00
	2	$1.00	$1.00
	3	$1.00	$1.00
	4	$1.00	$1.00
Ref #423	**505E11100**	**PILE DRIVING EQUIPMENT MOBILIZATION, (LUMP SUM)**	
	Awd	$30,000.00	$30,000.00
	2	$24,525.38	$24,525.38
	3	$50,000.00	$50,000.00
	4	$30,000.00	$30,000.00

Ref #424	**507E00100**	**STEEL PILES HP10X42, FURNISHED, (1980 FT)**	
	Awd	$44.00	$87,120.00
	2	$31.41	$62,191.80
	3	$40.00	$79,200.00
	4	$35.00	$69,300.00
Ref #425	**507E00150**	**STEEL PILES HP10X42, DRIVEN, (1870 FT)**	
	Awd	$20.00	$37,400.00
	2	$26.76	$50,041.20
	3	$18.00	$33,660.00
	4	$24.50	$45,815.00
Ref #426	**509E10000**	**EPOXY COATED STEEL REINFORCEMENT, (58350 LB)**	
	Awd	$1.45	$84,607.50
	2	$1.51	$88,108.50
	3	$2.00	$116,700.00
	4	$1.45	$84,607.50
Ref #427	**509E30020**	**NO. 4 DEFORMED GFRP REINFORCEMENT, (5475.25 FT)**	
	Awd	$1.45	$7,939.11
	2	$1.44	$7,884.36
	3	$2.50	$13,688.13
	4	$1.40	$7,665.35
Ref #428	**511E33500**	**SEMI-INTEGRAL DIAPHRAGM GUIDE, (2 EACH)**	
	Awd	$3,840.00	$7,680.00
	2	$4,776.04	$9,552.08
	3	$4,500.00	$9,000.00
	4	$4,200.00	$8,400.00
Ref #429	**511E34446**	**CLASS QC2 CONCRETE WITH QC/QA, BRIDGE DECK, (176 CY)**	
	Awd	$975.00	$171,600.00
	2	$1,330.72	$234,206.72
	3	$1,500.00	$264,000.00
	4	$1,015.00	$178,640.00
Ref #430	**511E34450**	**CLASS QC2 CONCRETE WITH QC/QA, BRIDGE DECK (PARAPE, (24 CY)**	
	Awd	$1,000.00	$24,000.00
	2	$728.51	$17,484.24
	3	$900.00	$21,600.00
	4	$1,675.00	$40,200.00
Ref #431	**511E43512**	**CLASS QC1 CONCRETE WITH QC/QA, ABUTMENT INCLUDING , (151 CY)**	
	Awd	$885.00	$133,635.00
	2	$1,076.38	$162,533.38
	3	$950.00	$143,450.00
	4	$680.00	$102,680.00
Ref #432	**512E10100**	**SEALING OF CONCRETE SURFACES (EPOXY-URETHANE), (463 SY)**	
	Awd	$22.33	$10,338.79
	2	$26.00	$12,038.00
	3	$26.00	$12,038.00
	4	$28.00	$12,964.00
Ref #433	**515E15020**	**DRAPED STRAND PRESTRESSED CONCRETE BRIDGE I-BEAM M, (5 EACH)**	
	Awd	$48,000.00	$240,000.00
	2	$54,295.33	$271,476.65
	3	$55,000.00	$275,000.00
	4	$70,000.00	$350,000.00

Ref #434	**515E20000**	**INTERMEDIATE DIAPHRAGMS, (4 EACH)**	
	Awd	$2,500.00	$10,000.00
	2	$3,781.63	$15,126.52
	3	$5,800.00	$23,200.00
	4	$2,700.00	$10,800.00
Ref #435	**516E10010**	**ARMORLESS PREFORMED JOINT SEAL, (93 FT)**	
	Awd	$80.00	$7,440.00
	2	$54.48	$5,066.64
	3	$55.00	$5,115.00
	4	$48.00	$4,464.00
Ref #436	**516E13900**	**2" PREFORMED EXPANSION JOINT FILLER, (270 SF)**	
	Awd	$14.00	$3,780.00
	2	$19.08	$5,151.60
	3	$10.00	$2,700.00
	4	$9.50	$2,565.00
Ref #437	**516E14020**	**SEMI-INTEGRAL ABUTMENT EXPANSION JOINT SEAL, (118 FT)**	
	Awd	$35.00	$4,130.00
	2	$40.86	$4,821.48
	3	$40.00	$4,720.00
	4	$33.00	$3,894.00
Ref #438	**516E44100**	**ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LO, (10 EACH)**	
	Awd	$2,600.00	$26,000.00
	2	$2,525.95	$25,259.50
	3	$1,800.00	$18,000.00
	4	$2,200.00	$22,000.00
Ref #439	**518E21200**	**POROUS BACKFILL WITH GEOTEXTILE FABRIC, (90 CY)**	
	Awd	$126.00	$11,340.00
	2	$145.99	$13,139.10
	3	$150.00	$13,500.00
	4	$125.00	$11,250.00
Ref #440	**518E40000**	**6" PERFORATED CORRUGATED PLASTIC PIPE, (126 FT)**	
	Awd	$17.50	$2,205.00
	2	$16.63	$2,095.38
	3	$12.00	$1,512.00
	4	$12.00	$1,512.00
Ref #441	**518E40010**	**6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDI, (14 FT)**	
	Awd	$17.50	$245.00
	2	$25.40	$355.60
	3	$50.00	$700.00
	4	$15.00	$210.00
Ref #442	**526E30011**	**REINFORCED CONCRETE APPROACH SLABS WITH QC/QA (T=1, (304 SY)**	
	Awd	$380.00	$115,520.00
	2	$470.85	$143,138.40
	3	$540.00	$164,160.00
	4	$450.00	$136,800.00
Ref #443	**526E90030**	**TYPE C INSTALLATION, (93 FT)**	
	Awd	$235.00	$21,855.00
	2	$333.03	$30,971.79
	3	$380.00	$35,340.00
	4	$310.00	$28,830.00

Ref #444	**601E37501**	**PAVED GUTTER, TYPE 1-2, AS PER PLAN, (126 FT)**	
	Awd	$92.00	$11,592.00
	2	$62.74	$7,905.24
	3	$70.00	$8,820.00
	4	$65.00	$8,190.00
Ref #445	**611E99114**	**INLET, NO. 3 FOR SINGLE SLOPE BARRIER, TYPE D, (4 EACH)**	
	Awd	$14,000.00	$56,000.00
	2	$16,483.62	$65,934.48
	3	$13,500.00	$54,000.00
	4	$15,100.00	$60,400.00
Ref #446	**622E25000**	**CONCRETE BARRIER END SECTION, TYPE D, (4 EACH)**	
	Awd	$5,000.00	$20,000.00
	2	$5,854.10	$23,416.40
	3	$4,500.00	$18,000.00
	4	$4,200.00	$16,800.00
Ref #447	**622E90200**	**BARRIER, MISC.: SINGLE SLOPE CONCRETE BRIDGE RAILI, (4 EACH)**	
	Awd	$10,500.00	$42,000.00
	2	$11,993.68	$47,974.72
	3	$15,000.00	$60,000.00
	4	$8,725.00	$34,900.00
Ref #448	**840E20000**	**MECHANICALLY STABILIZED EARTH WALL, (6802 SF)**	
	Awd	$49.00	$333,298.00
	2	$42.70	$290,445.40
	3	$65.00	$442,130.00
	4	$40.00	$272,080.00
Ref #449	**840E21000**	**WALL EXCAVATION, (1510 CY)**	
	Awd	$51.00	$77,010.00
	2	$33.01	$49,845.10
	3	$60.00	$90,600.00
	4	$24.00	$36,240.00
Ref #450	**840E22000**	**FOUNDATION PREPARATION, (762 SY)**	
	Awd	$36.00	$27,432.00
	2	$37.43	$28,521.66
	3	$50.00	$38,100.00
	4	$35.00	$26,670.00
Ref #451	**840E23000**	**SELECT GRANULAR BACKFILL, (5121 CY)**	
	Awd	$78.00	$399,438.00
	2	$111.98	$573,449.58
	3	$70.00	$358,470.00
	4	$95.00	$486,495.00
Ref #452	**840E23050**	**NATURAL SOIL, (93 CY)**	
	Awd	$13.50	$1,255.50
	2	$79.88	$7,428.84
	3	$40.00	$3,720.00
	4	$50.00	$4,650.00
Ref #453	**840E25010**	**6" DRAINAGE PIPE, PERFORATED, (412 FT)**	
	Awd	$30.00	$12,360.00
	2	$16.63	$6,851.56
	3	$10.00	$4,120.00
	4	$12.00	$4,944.00

Ref #454	**840E25020**	**6" DRAINAGE PIPE, NON-PERFORATED, (210 FT)**	
	Awd	$30.00	$6,300.00
	2	$36.74	$7,715.40
	3	$35.00	$7,350.00
	4	$15.00	$3,150.00
Ref #455	**840E26000**	**CONCRETE COPING, (340 FT)**	
	Awd	$197.00	$66,980.00
	2	$303.11	$103,057.40
	3	$250.00	$85,000.00
	4	$170.00	$57,800.00
Ref #456	**840E27000**	**ON-SITE ASSISTANCE, (2.5 DAY)**	
	Awd	$100.00	$250.00
	2	$1,234.84	$3,087.10
	3	$1,500.00	$3,750.00
	4	$1.00	$2.50
Ref #458	**867E00101**	**TEMPORARY WIRE FACED MECHANICALLY STABILIZED EARTH, (LUMP SUM)**	
	Awd	$335,000.00	$335,000.00
	2	$553,887.46	$553,887.46
	3	$400,000.00	$400,000.00
	4	$500,000.00	$500,000.00

Section 16 - STRUCTURE OVER 20 FOOT SPAN (LAW-7-0387) - Totals

Awd	**$2,497,611.90**
2	**$3,033,851.80**
3	**$2,936,684.13**
4	**$2,756,999.35**

Ref #459	**203E10000**	**EXCAVATION, (3124 CY)**	
	Awd	$13.25	$41,393.00
	2	$9.52	$29,740.48
	3	$50.00	$156,200.00
	4	$31.00	$96,844.00
Ref #460	**503E21100**	**UNCLASSIFIED EXCAVATION, (949 CY)**	
	Awd	$80.00	$75,920.00
	2	$27.08	$25,698.92
	3	$20.00	$18,980.00
	4	$20.00	$18,980.00
Ref #461	**509E10000**	**EPOXY COATED STEEL REINFORCEMENT, (51501 LB)**	
	Awd	$1.44	$74,161.44
	2	$1.51	$77,766.51
	3	$2.00	$103,002.00
	4	$1.45	$74,676.45
Ref #462	**511E46010**	**CLASS QC1 CONCRETE, RETAINING/WINGWALL NOT INCLUDI, (173 CY)**	
	Awd	$1,036.00	$179,228.00
	2	$1,453.16	$251,396.68
	3	$1,500.00	$259,500.00
	4	$1,600.00	$276,800.00
Ref #463	**511E46510**	**CLASS QC1 CONCRETE, FOOTING, (219 CY)**	
	Awd	$545.00	$119,355.00
	2	$552.76	$121,054.44
	3	$700.00	$153,300.00
	4	$610.00	$133,590.00

Ref #464	**512E10100**	**SEALING OF CONCRETE SURFACES (EPOXY-URETHANE), (180 SY)**	
	Awd	$26.13	$4,703.40
	2	$50.00	$9,000.00
	3	$50.00	$9,000.00
	4	$28.00	$5,040.00
Ref #466	**518E21200**	**POROUS BACKFILL WITH GEOTEXTILE FABRIC, (74 CY)**	
	Awd	$126.00	$9,324.00
	2	$145.99	$10,803.26
	3	$150.00	$11,100.00
	4	$120.00	$8,880.00
Ref #467	**518E40000**	**6" PERFORATED CORRUGATED PLASTIC PIPE, (74 FT)**	
	Awd	$17.50	$1,295.00
	2	$16.63	$1,230.62
	3	$35.00	$2,590.00
	4	$12.00	$888.00
Ref #468	**518E40010**	**6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDI, (30 FT)**	
	Awd	$34.00	$1,020.00
	2	$28.57	$857.10
	3	$65.00	$1,950.00
	4	$15.00	$450.00
Ref #469	**601E11001**	**RIPRAP, TYPE D, AS PER PLAN, (108 SY)**	
	Awd	$12.00	$1,296.00
	2	$264.15	$28,528.20
	3	$15.00	$1,620.00
	4	$245.00	$26,460.00
Ref #470	**601E32104**	**ROCK CHANNEL PROTECTION, TYPE B WITH GEOTEXTILE FA, (321 CY)**	
	Awd	$105.00	$33,705.00
	2	$128.16	$41,139.36
	3	$20.00	$6,420.00
	4	$120.00	$38,520.00
Ref #471	**601E34200**	**ROCK CHANNEL PROTECTION, TYPE C WITHOUT FILTER, (782 CY)**	
	Awd	$105.00	$82,110.00
	2	$175.35	$137,123.70
	3	$100.00	$78,200.00
	4	$155.00	$121,210.00
Ref #472	**611E97400**	**CONDUIT, MISC.: 22' DIA., TYPE A, 707.03, AS PER P, (452 FT)**	
	Awd	$5,500.00	$2,486,000.00
	2	$4,572.42	$2,066,733.84
	3	$5,700.00	$2,576,400.00
	4	$3,955.00	$1,787,660.00

Section 17 - STRUCTURE OVER 20 FOOT SPAN (LAW-7-0510) - Totals

Awd	**$3,109,510.84**
2	**$2,801,073.11**
3	**$3,378,262.00**
4	**$2,589,998.45**

Ref #473	**203E65000**	**SPECIAL - SETTLEMENT PLATFORM, (4 EACH)**	
	Awd	$1,080.00	$4,320.00
	2	$1,955.25	$7,821.00
	3	$1,200.00	$4,800.00
	4	$1,800.00	$7,200.00

Ref #474	**503E11100**	**COFFERDAMS AND EXCAVATION BRACING, (LUMP SUM)**	
	Awd	$275,000.00	$275,000.00
	2	$534,273.25	$534,273.25
	3	$120,000.00	$120,000.00
	4	$350,000.00	$350,000.00
Ref #475	**503E21300**	**UNCLASSIFIED EXCAVATION, (LUMP SUM)**	
	Awd	$150,000.00	$150,000.00
	2	$108,993.73	$108,993.73
	3	$380,000.00	$380,000.00
	4	$135,000.00	$135,000.00
Ref #476	**505E11100**	**PILE DRIVING EQUIPMENT MOBILIZATION, (LUMP SUM)**	
	Awd	$30,000.00	$30,000.00
	2	$24,525.38	$24,525.38
	3	$50,000.00	$50,000.00
	4	$25,000.00	$25,000.00
Ref #477	**507E00200**	**STEEL PILES HP12X53, FURNISHED, (2690 FT)**	
	Awd	$44.00	$118,360.00
	2	$30.86	$83,013.40
	3	$50.00	$134,500.00
	4	$38.00	$102,220.00
Ref #478	**507E00250**	**STEEL PILES HP12X53, DRIVEN, (2350 FT)**	
	Awd	$20.00	$47,000.00
	2	$17.39	$40,866.50
	3	$18.00	$42,300.00
	4	$22.00	$51,700.00
Ref #479	**509E10001**	**EPOXY COATED STEEL REINFORCEMENT, AS PER PLAN, (197284 LB)**	
	Awd	$1.52	$299,871.68
	2	$1.51	$297,898.84
	3	$2.00	$394,568.00
	4	$1.45	$286,061.80
Ref #480	**509E30020**	**NO. 4 DEFORMED GFRP REINFORCEMENT, (8919 FT)**	
	Awd	$1.45	$12,932.55
	2	$1.44	$12,843.36
	3	$2.50	$22,297.50
	4	$1.40	$12,486.60
Ref #481	**511E34447**	**CLASS QC2 CONCRETE WITH QC/QA, BRIDGE DECK, AS PER, (467 CY)**	
	Awd	$975.00	$455,325.00
	2	$1,101.21	$514,265.07
	3	$1,400.00	$653,800.00
	4	$1,010.00	$471,670.00
Ref #482	**511E34450**	**CLASS QC2 CONCRETE WITH QC/QA, BRIDGE DECK (PARAPE, (80 CY)**	
	Awd	$725.00	$58,000.00
	2	$737.16	$58,972.80
	3	$700.00	$56,000.00
	4	$1,030.00	$82,400.00
Ref #483	**511E41012**	**CLASS QC1 CONCRETE WITH QC/QA, PIER ABOVE FOOTINGS, (149 CY)**	
	Awd	$1,170.00	$174,330.00
	2	$1,284.54	$191,396.46
	3	$1,400.00	$208,600.00
	4	$1,120.00	$166,880.00

Ref #484	**511E43512**	**CLASS QC1 CONCRETE WITH QC/QA, ABUTMENT INCLUDING , (146 CY)**	
	Awd	$885.00	$129,210.00
	2	$951.05	$138,853.30
	3	$908.00	$132,568.00
	4	$730.00	$106,580.00
Ref #485	**511E46512**	**CLASS QC1 CONCRETE WITH QC/QA, FOOTING, (128 CY)**	
	Awd	$625.00	$80,000.00
	2	$658.19	$84,248.32
	3	$800.00	$102,400.00
	4	$540.00	$69,120.00
Ref #486	**512E10100**	**SEALING OF CONCRETE SURFACES (EPOXY-URETHANE), (1658 SY)**	
	Awd	$22.33	$37,023.14
	2	$26.00	$43,108.00
	3	$26.00	$43,108.00
	4	$28.00	$46,424.00
Ref #487	**512E10300**	**SEALING CONCRETE BRIDGE DECKS WITH HMWM RESIN, (38 SY)**	
	Awd	$45.00	$1,710.00
	2	$70.34	$2,672.92
	3	$75.00	$2,850.00
	4	$30.00	$1,140.00
Ref #488	**515E15030**	**DRAPED STRAND PRESTRESSED CONCRETE BRIDGE I-BEAM M, (10 EACH)**	
	Awd	$55,000.00	$550,000.00
	2	$62,421.78	$624,217.80
	3	$55,000.00	$550,000.00
	4	$65,000.00	$650,000.00
Ref #489	**515E15030**	**DRAPED STRAND PRESTRESSED CONCRETE BRIDGE I-BEAM M, (5 EACH)**	
	Awd	$55,000.00	$275,000.00
	2	$62,532.11	$312,660.55
	3	$65,000.00	$325,000.00
	4	$65,000.00	$325,000.00
Ref #490	**515E20000**	**INTERMEDIATE DIAPHRAGMS, (36 EACH)**	
	Awd	$2,500.00	$90,000.00
	2	$2,556.31	$92,027.16
	3	$2,500.00	$90,000.00
	4	$2,250.00	$81,000.00
Ref #491	**516E13600**	**1" PREFORMED EXPANSION JOINT FILLER, (120 SF)**	
	Awd	$14.00	$1,680.00
	2	$15.18	$1,821.60
	3	$7.00	$840.00
	4	$7.50	$900.00
Ref #492	**516E14014**	**INTEGRAL ABUTMENT EXPANSION JOINT SEAL, (118 FT)**	
	Awd	$35.00	$4,130.00
	2	$40.86	$4,821.48
	3	$40.00	$4,720.00
	4	$33.00	$3,894.00
Ref #493	**516E44100**	**ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LO, (20 EACH)**	
	Awd	$1,760.00	$35,200.00
	2	$1,715.90	$34,318.00
	3	$1,800.00	$36,000.00
	4	$1,500.00	$30,000.00

Ref #494	**516E44101**	**ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LO, (10 EACH)**	
	Awd	$2,760.00	$27,600.00
	2	$2,602.88	$26,028.80
	3	$1,800.00	$18,000.00
	4	$2,500.00	$25,000.00
Ref #495	**518E12301**	**SCUPPERS, INCLUDING SUPPORTS, AS PER PLAN, (2 EACH)**	
	Awd	$3,600.00	$7,200.00
	2	$3,966.82	$7,933.64
	3	$3,500.00	$7,000.00
	4	$4,400.00	$8,800.00
Ref #496	**518E21200**	**POROUS BACKFILL WITH GEOTEXTILE FABRIC, (118 CY)**	
	Awd	$126.00	$14,868.00
	2	$145.99	$17,226.82
	3	$120.00	$14,160.00
	4	$120.00	$14,160.00
Ref #497	**518E40000**	**6" PERFORATED CORRUGATED PLASTIC PIPE, (148 FT)**	
	Awd	$17.50	$2,590.00
	2	$16.63	$2,461.24
	3	$12.00	$1,776.00
	4	$12.00	$1,776.00
Ref #498	**518E40010**	**6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDI, (50 FT)**	
	Awd	$17.50	$875.00
	2	$25.40	$1,270.00
	3	$40.00	$2,000.00
	4	$15.00	$750.00
Ref #499	**526E25011**	**REINFORCED CONCRETE APPROACH SLABS WITH QC/QA (T=1, (243 SY)**	
	Awd	$360.00	$87,480.00
	2	$468.92	$113,947.56
	3	$580.00	$140,940.00
	4	$425.00	$103,275.00
Ref #500	**526E90010**	**TYPE A INSTALLATION, (85 FT)**	
	Awd	$225.00	$19,125.00
	2	$210.83	$17,920.55
	3	$350.00	$29,750.00
	4	$240.00	$20,400.00
Ref #501	**601E32104**	**ROCK CHANNEL PROTECTION, TYPE B WITH GEOTEXTILE FA, (1550 CY)**	
	Awd	$105.00	$162,750.00
	2	$128.16	$198,648.00
	3	$75.00	$116,250.00
	4	$92.00	$142,600.00

Section 18 - STRUCTURE OVER 20 FOOT SPAN (LAW-7-0563) - Totals

Awd	**$3,151,580.37**
2	**$3,599,055.53**
3	**$3,684,227.50**
4	**$3,321,437.40**

Ref #502	**203E65000**	**SPECIAL - SETTLEMENT PLATFORM, (2 EACH)**	
	Awd	$1,080.00	$2,160.00
	2	$1,955.25	$3,910.50
	3	$1,200.00	$2,400.00
	4	$2,500.00	$5,000.00

Ref #503	**503E21300**	**UNCLASSIFIED EXCAVATION, (LUMP SUM)**	
	Awd	$90,000.00	$90,000.00
	2	$328,233.97	$328,233.97
	3	$320,000.00	$320,000.00
	4	$100,000.00	$100,000.00
Ref #504	**505E11100**	**PILE DRIVING EQUIPMENT MOBILIZATION, (LUMP SUM)**	
	Awd	$30,000.00	$30,000.00
	2	$24,525.38	$24,525.38
	3	$50,000.00	$50,000.00
	4	$35,000.00	$35,000.00
Ref #505	**507E00100**	**STEEL PILES HP10X42, FURNISHED, (3960 FT)**	
	Awd	$44.00	$174,240.00
	2	$31.41	$124,383.60
	3	$40.00	$158,400.00
	4	$28.00	$110,880.00
Ref #506	**507E00150**	**STEEL PILES HP10X42, DRIVEN, (3590 FT)**	
	Awd	$20.00	$71,800.00
	2	$26.76	$96,068.40
	3	$18.00	$64,620.00
	4	$40.00	$143,600.00
Ref #507	**509E10000**	**EPOXY COATED STEEL REINFORCEMENT, (263032 LB)**	
	Awd	$1.45	$381,396.40
	2	$1.51	$397,178.32
	3	$2.00	$526,064.00
	4	$2.00	$526,064.00
Ref #508	**509E30020**	**NO. 4 DEFORMED GFRP REINFORCEMENT, (10402 FT)**	
	Awd	$1.45	$15,082.90
	2	$1.44	$14,978.88
	3	$2.50	$26,005.00
	4	$2.00	$20,804.00
Ref #509	**511E34446**	**CLASS QC2 CONCRETE WITH QC/QA, BRIDGE DECK, (570 CY)**	
	Awd	$975.00	$555,750.00
	2	$1,102.97	$628,692.90
	3	$1,300.00	$741,000.00
	4	$1,150.00	$655,500.00
Ref #510	**511E34450**	**CLASS QC2 CONCRETE WITH QC/QA, BRIDGE DECK (PARAPE, (102 CY)**	
	Awd	$725.00	$73,950.00
	2	$734.32	$74,900.64
	3	$700.00	$71,400.00
	4	$950.00	$96,900.00
Ref #511	**511E43512**	**CLASS QC1 CONCRETE WITH QC/QA, ABUTMENT INCLUDING , (137 CY)**	
	Awd	$885.00	$121,245.00
	2	$1,076.38	$147,464.06
	3	$1,000.00	$137,000.00
	4	$1,200.00	$164,400.00
Ref #512	**511E45602**	**CLASS QC4 MASS CONCRETE, SUBSTRUCTURE WITH QC/QA, (342 CY)**	
	Awd	$1,000.00	$342,000.00
	2	$1,184.44	$405,078.48
	3	$1,240.00	$424,080.00
	4	$1,450.00	$495,900.00

Ref #513	**511E46512**	**CLASS QC1 CONCRETE WITH QC/QA, FOOTING, (205 CY)**	
	Awd	$625.00	$128,125.00
	2	$658.19	$134,928.95
	3	$800.00	$164,000.00
	4	$900.00	$184,500.00
Ref #514	**512E10100**	**SEALING OF CONCRETE SURFACES (EPOXY-URETHANE), (1681 SY)**	
	Awd	$22.33	$37,536.73
	2	$26.00	$43,706.00
	3	$26.00	$43,706.00
	4	$30.00	$50,430.00
Ref #515	**515E15100**	**DRAPED STRAND PRESTRESSED CONCRETE BRIDGE I-BEAM M, (5 EACH)**	
	Awd	$70,000.00	$350,000.00
	2	$75,000.00	$375,000.00
	3	$80,000.00	$400,000.00
	4	$85,000.00	$425,000.00
Ref #516	**515E15100**	**DRAPED STRAND PRESTRESSED CONCRETE BRIDGE I-BEAM M, (5 EACH)**	
	Awd	$70,000.00	$350,000.00
	2	$75,000.00	$375,000.00
	3	$80,000.00	$400,000.00
	4	$85,000.00	$425,000.00
Ref #517	**515E15100**	**DRAPED STRAND PRESTRESSED CONCRETE BRIDGE I-BEAM M, (5 EACH)**	
	Awd	$70,000.00	$350,000.00
	2	$75,000.00	$375,000.00
	3	$70,000.00	$350,000.00
	4	$85,000.00	$425,000.00
Ref #518	**515E20000**	**INTERMEDIATE DIAPHRAGMS, (36 EACH)**	
	Awd	$2,500.00	$90,000.00
	2	$3,781.63	$136,138.68
	3	$2,500.00	$90,000.00
	4	$6,000.00	$216,000.00
Ref #519	**516E10010**	**ARMORLESS PREFORMED JOINT SEAL, (83 FT)**	
	Awd	$80.00	$6,640.00
	2	$54.48	$4,521.84
	3	$55.00	$4,565.00
	4	$100.00	$8,300.00
Ref #520	**516E13200**	**1/2" PREFORMED EXPANSION JOINT FILLER, (83 SF)**	
	Awd	$16.00	$1,328.00
	2	$12.22	$1,014.26
	3	$6.00	$498.00
	4	$5.00	$415.00
Ref #521	**516E13600**	**1" PREFORMED EXPANSION JOINT FILLER, (83 SF)**	
	Awd	$14.00	$1,162.00
	2	$15.18	$1,259.94
	3	$7.00	$581.00
	4	$7.00	$581.00
Ref #522	**516E13900**	**2" PREFORMED EXPANSION JOINT FILLER, (62 SF)**	
	Awd	$14.00	$868.00
	2	$19.08	$1,182.96
	3	$10.00	$620.00
	4	$10.00	$620.00

Ref #523	**516E25000**	**NYLON REINFORCED NEOPRENE SHEETING, (307 SF)**	
	Awd	$13.00	$3,991.00
	2	$13.62	$4,181.34
	3	$12.00	$3,684.00
	4	$30.00	$9,210.00
Ref #524	**516E44100**	**ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LO, (5 EACH)**	
	Awd	$2,300.00	$11,500.00
	2	$2,217.61	$11,088.05
	3	$1,800.00	$9,000.00
	4	$2,000.00	$10,000.00
Ref #525	**516E44101**	**ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LO, (10 EACH)**	
	Awd	$2,800.00	$28,000.00
	2	$2,735.01	$27,350.10
	3	$1,800.00	$18,000.00
	4	$2,500.00	$25,000.00
Ref #526	**516E44200**	**ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LO, (15 EACH)**	
	Awd	$2,450.00	$36,750.00
	2	$2,377.40	$35,661.00
	3	$1,800.00	$27,000.00
	4	$2,500.00	$37,500.00
Ref #527	**518E21200**	**POROUS BACKFILL WITH GEOTEXTILE FABRIC, (119 CY)**	
	Awd	$126.00	$14,994.00
	2	$145.99	$17,372.81
	3	$120.00	$14,280.00
	4	$150.00	$17,850.00
Ref #528	**518E40000**	**6" PERFORATED CORRUGATED PLASTIC PIPE, (152 FT)**	
	Awd	$17.50	$2,660.00
	2	$16.63	$2,527.76
	3	$12.00	$1,824.00
	4	$4.00	$608.00
Ref #529	**518E40010**	**6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDI, (80 FT)**	
	Awd	$17.50	$1,400.00
	2	$25.40	$2,032.00
	3	$35.00	$2,800.00
	4	$14.00	$1,120.00
Ref #530	**526E25010**	**REINFORCED CONCRETE APPROACH SLABS WITH QC/QA (T=1, (230 SY)**	
	Awd	$360.00	$82,800.00
	2	$470.85	$108,295.50
	3	$560.00	$128,800.00
	4	$400.00	$92,000.00
Ref #531	**526E90030**	**TYPE C INSTALLATION, (83 FT)**	
	Awd	$235.00	$19,505.00
	2	$333.03	$27,641.49
	3	$400.00	$33,200.00
	4	$450.00	$37,350.00
Ref #532	**601E20000**	**CRUSHED AGGREGATE SLOPE PROTECTION, (1315 SY)**	
	Awd	$36.00	$47,340.00
	2	$51.76	$68,064.40
	3	$18.00	$23,670.00
	4	$50.00	$65,750.00

Ref #533	**601E32204**	**ROCK CHANNEL PROTECTION, TYPE C WITH GEOTEXTILE FA, (260 CY)**	
	Awd	$105.00	$27,300.00
	2	$118.79	$30,885.40
	3	$90.00	$23,400.00
	4	$140.00	$36,400.00

Section 19 - STRUCTURE OVER 20 FOOT SPAN (LAW-7-0711) - Totals

Awd	**$3,449,524.03**
2	**$4,028,267.61**
3	**$4,260,597.00**
4	**$4,422,682.00**

Ref #534	**503E21300**	**UNCLASSIFIED EXCAVATION, (LUMP SUM)**	
	Awd	$90,000.00	$90,000.00
	2	$186,604.76	$186,604.76
	3	$320,000.00	$320,000.00
	4	$25,000.00	$25,000.00
Ref #535	**505E11100**	**PILE DRIVING EQUIPMENT MOBILIZATION, (LUMP SUM)**	
	Awd	$30,000.00	$30,000.00
	2	$24,525.38	$24,525.38
	3	$50,000.00	$50,000.00
	4	$20,000.00	$20,000.00
Ref #536	**507E00200**	**STEEL PILES HP12X53, FURNISHED, (6840 FT)**	
	Awd	$44.00	$300,960.00
	2	$30.86	$211,082.40
	3	$50.00	$342,000.00
	4	$35.00	$239,400.00
Ref #537	**507E00250**	**STEEL PILES HP12X53, DRIVEN, (6010 FT)**	
	Awd	$20.00	$120,200.00
	2	$17.39	$104,513.90
	3	$18.00	$108,180.00
	4	$40.00	$240,400.00
Ref #538	**509E10000**	**EPOXY COATED STEEL REINFORCEMENT, (317755 LB)**	
	Awd	$1.45	$460,744.75
	2	$1.51	$479,810.05
	3	$2.00	$635,510.00
	4	$2.00	$635,510.00
Ref #539	**509E30020**	**NO. 4 DEFORMED GFRP REINFORCEMENT, (11750 FT)**	
	Awd	$1.45	$17,037.50
	2	$1.44	$16,920.00
	3	$2.50	$29,375.00
	4	$2.00	$23,500.00
Ref #540	**511E34446**	**CLASS QC2 CONCRETE WITH QC/QA, BRIDGE DECK, (718 CY)**	
	Awd	$975.00	$700,050.00
	2	$1,102.64	$791,695.52
	3	$1,400.00	$1,005,200.00
	4	$1,200.00	$861,600.00
Ref #541	**511E34450**	**CLASS QC2 CONCRETE WITH QC/QA, BRIDGE DECK (PARAPE, (98 CY)**	
	Awd	$725.00	$71,050.00
	2	$743.13	$72,826.74
	3	$700.00	$68,600.00
	4	$1,000.00	$98,000.00

Ref #542	**511E43512**	**CLASS QC1 CONCRETE WITH QC/QA, ABUTMENT INCLUDING , (313 CY)**	
	Awd	$885.00	$277,005.00
	2	$1,076.38	$336,906.94
	3	$950.00	$297,350.00
	4	$900.00	$281,700.00
Ref #543	**511E45602**	**CLASS QC4 MASS CONCRETE, SUBSTRUCTURE WITH QC/QA, (425 CY)**	
	Awd	$1,000.00	$425,000.00
	2	$1,215.37	$516,532.25
	3	$1,500.00	$637,500.00
	4	$1,500.00	$637,500.00
Ref #544	**511E46512**	**CLASS QC1 CONCRETE WITH QC/QA, FOOTING, (224 CY)**	
	Awd	$625.00	$140,000.00
	2	$658.19	$147,434.56
	3	$800.00	$179,200.00
	4	$900.00	$201,600.00
Ref #545	**512E10100**	**SEALING OF CONCRETE SURFACES (EPOXY-URETHANE), (2778 SY)**	
	Awd	$22.33	$62,032.74
	2	$26.00	$72,228.00
	3	$26.00	$72,228.00
	4	$30.00	$83,340.00
Ref #546	**512E10300**	**SEALING CONCRETE BRIDGE DECKS WITH HMWM RESIN, (50 SY)**	
	Awd	$45.00	$2,250.00
	2	$70.34	$3,517.00
	3	$75.00	$3,750.00
	4	$32.00	$1,600.00
Ref #547	**512E33000**	**TYPE 2 WATERPROOFING, (60 SY)**	
	Awd	$32.00	$1,920.00
	2	$51.27	$3,076.20
	3	$65.00	$3,900.00
	4	$30.00	$1,800.00
Ref #548	**515E15041**	**DRAPED STRAND PRESTRESSED CONCRETE BRIDGE I-BEAM M, (1 EACH)**	
	Awd	$65,000.00	$65,000.00
	2	$85,095.77	$85,095.77
	3	$70,000.00	$70,000.00
	4	$80,000.00	$80,000.00
Ref #549	**515E15041**	**DRAPED STRAND PRESTRESSED CONCRETE BRIDGE I-BEAM M, (6 EACH)**	
	Awd	$65,000.00	$390,000.00
	2	$85,111.77	$510,670.62
	3	$70,000.00	$420,000.00
	4	$80,000.00	$480,000.00
Ref #550	**515E15041**	**DRAPED STRAND PRESTRESSED CONCRETE BRIDGE I-BEAM M, (1 EACH)**	
	Awd	$65,000.00	$65,000.00
	2	$85,111.76	$85,111.76
	3	$70,000.00	$70,000.00
	4	$80,000.00	$80,000.00
Ref #551	**515E15041**	**DRAPED STRAND PRESTRESSED CONCRETE BRIDGE I-BEAM M, (5 EACH)**	
	Awd	$65,000.00	$325,000.00
	2	$85,247.68	$426,238.40
	3	$80,000.00	$400,000.00
	4	$80,000.00	$400,000.00

Ref #552	**515E15041**	**DRAPED STRAND PRESTRESSED CONCRETE BRIDGE I-BEAM M, (1 EACH)**	
	Awd	$65,000.00	$65,000.00
	2	$85,255.67	$85,255.67
	3	$80,000.00	$80,000.00
	4	$80,000.00	$80,000.00
Ref #553	**515E15041**	**DRAPED STRAND PRESTRESSED CONCRETE BRIDGE I-BEAM M, (1 EACH)**	
	Awd	$65,000.00	$65,000.00
	2	$85,255.67	$85,255.67
	3	$80,000.00	$80,000.00
	4	$80,000.00	$80,000.00
Ref #554	**515E15041**	**DRAPED STRAND PRESTRESSED CONCRETE BRIDGE I-BEAM M, (5 EACH)**	
	Awd	$65,000.00	$325,000.00
	2	$85,095.78	$425,478.90
	3	$70,000.00	$350,000.00
	4	$80,000.00	$400,000.00
Ref #555	**515E20000**	**INTERMEDIATE DIAPHRAGMS, (51 EACH)**	
	Awd	$2,500.00	$127,500.00
	2	$2,556.31	$130,371.81
	3	$2,500.00	$127,500.00
	4	$2,451.00	$125,001.00
Ref #556	**516E12300**	**STRIP SEAL EXPANSION JOINT ANCHORED WITH ELASTOMER, (120 FT)**	
	Awd	$1,050.00	$126,000.00
	2	$546.71	$65,605.20
	3	$350.00	$42,000.00
	4	$750.00	$90,000.00
Ref #557	**516E44100**	**ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LO, (40 EACH)**	
	Awd	$1,700.00	$68,000.00
	2	$1,614.12	$64,564.80
	3	$1,800.00	$72,000.00
	4	$1,750.00	$70,000.00
Ref #558	**518E20000**	**PREFABRICATED GEOCOMPOSITE DRAIN, (204 SY)**	
	Awd	$24.00	$4,896.00
	2	$50.83	$10,369.32
	3	$50.00	$10,200.00
	4	$12.00	$2,448.00
Ref #559	**518E21200**	**POROUS BACKFILL WITH GEOTEXTILE FABRIC, (30 CY)**	
	Awd	$126.00	$3,780.00
	2	$145.99	$4,379.70
	3	$150.00	$4,500.00
	4	$150.00	$4,500.00
Ref #560	**518E40000**	**6" PERFORATED CORRUGATED PLASTIC PIPE, (178 FT)**	
	Awd	$17.50	$3,115.00
	2	$16.63	$2,960.14
	3	$12.00	$2,136.00
	4	$4.00	$712.00
Ref #561	**518E40011**	**6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDI, (40 FT)**	
	Awd	$17.50	$700.00
	2	$25.40	$1,016.00
	3	$35.00	$1,400.00
	4	$16.00	$640.00

Ref #562	**526E25011**	**REINFORCED CONCRETE APPROACH SLABS WITH QC/QA (T=1, (319 SY)**	
	Awd	$360.00	$114,840.00
	2	$472.33	$150,673.27
	3	$575.00	$183,425.00
	4	$400.00	$127,600.00
Ref #563	**526E90010**	**TYPE A INSTALLATION, (115 FT)**	
	Awd	$225.00	$25,875.00
	2	$210.83	$24,245.45
	3	$250.00	$28,750.00
	4	$250.00	$28,750.00
Ref #564	**601E20000**	**CRUSHED AGGREGATE SLOPE PROTECTION, (1949 SY)**	
	Awd	$36.00	$70,164.00
	2	$51.76	$100,880.24
	3	$18.00	$35,082.00
	4	$50.00	$97,450.00
Ref #565	**601E32204**	**ROCK CHANNEL PROTECTION, TYPE C WITH GEOTEXTILE FA, (634 CY)**	
	Awd	$105.00	$66,570.00
	2	$118.79	$75,312.86
	3	$85.00	$53,890.00
	4	$125.00	$79,250.00
Ref #711	**503E11100**	**COFFERDAMS AND EXCAVATION BRACING, (LUMP SUM)**	
	Awd	$350,000.00	$350,000.00
	2	$205,373.36	$205,373.36
	3	$50,000.00	$50,000.00
	4	$35,000.00	$35,000.00

Section 20 - STRUCTURE OVER 20 FOOT SPAN (LAW-7-0713L - Totals

Awd	**$4,959,689.99**
2	**$5,506,532.64**
3	**$5,833,676.00**
4	**$5,612,301.00**

Ref #566	**203E65000**	**SPECIAL - SETTLEMENT PLATFORM, (3 EACH)**	
	Awd	$1,080.00	$3,240.00
	2	$1,955.24	$5,865.72
	3	$1,200.00	$3,600.00
	4	$3,500.00	$10,500.00
Ref #567	**503E21300**	**UNCLASSIFIED EXCAVATION, (LUMP SUM)**	
	Awd	$90,000.00	$90,000.00
	2	$149,960.32	$149,960.32
	3	$320,000.00	$320,000.00
	4	$25,000.00	$25,000.00
Ref #568	**505E11100**	**PILE DRIVING EQUIPMENT MOBILIZATION, (LUMP SUM)**	
	Awd	$30,000.00	$30,000.00
	2	$24,525.38	$24,525.38
	3	$50,000.00	$50,000.00
	4	$20,000.00	$20,000.00
Ref #569	**507E00200**	**STEEL PILES HP12X53, FURNISHED, (5415 FT)**	
	Awd	$44.00	$238,260.00
	2	$30.86	$167,106.90
	3	$50.00	$270,750.00
	4	$35.00	$189,525.00

Ref #570	**507E00250**	**STEEL PILES HP12X53, DRIVEN, (4985 FT)**	
	Awd	$20.00	$99,700.00
	2	$17.39	$86,689.15
	3	$18.00	$89,730.00
	4	$40.00	$199,400.00
Ref #571	**509E10000**	**EPOXY COATED STEEL REINFORCEMENT, (254033 LB)**	
	Awd	$1.45	$368,347.85
	2	$1.51	$383,589.83
	3	$2.00	$508,066.00
	4	$2.00	$508,066.00
Ref #572	**509E30020**	**NO. 4 DEFORMED GFRP REINFORCEMENT, (11871 FT)**	
	Awd	$1.45	$17,212.95
	2	$1.44	$17,094.24
	3	$2.50	$29,677.50
	4	$2.00	$23,742.00
Ref #573	**511E34446**	**CLASS QC2 CONCRETE WITH QC/QA, BRIDGE DECK, (533 CY)**	
	Awd	$975.00	$519,675.00
	2	$1,101.53	$587,115.49
	3	$1,400.00	$746,200.00
	4	$1,250.00	$666,250.00
Ref #574	**511E34450**	**CLASS QC2 CONCRETE WITH QC/QA, BRIDGE DECK (PARAPE, (98 CY)**	
	Awd	$725.00	$71,050.00
	2	$740.10	$72,529.80
	3	$600.00	$58,800.00
	4	$1,000.00	$98,000.00
Ref #575	**511E43512**	**CLASS QC1 CONCRETE WITH QC/QA, ABUTMENT INCLUDING , (245 CY)**	
	Awd	$885.00	$216,825.00
	2	$1,067.59	$261,559.55
	3	$960.00	$235,200.00
	4	$1,200.00	$294,000.00
Ref #576	**511E45602**	**CLASS QC4 MASS CONCRETE, SUBSTRUCTURE WITH QC/QA, (331 CY)**	
	Awd	$1,000.00	$331,000.00
	2	$1,223.18	$404,872.58
	3	$1,220.00	$403,820.00
	4	$1,650.00	$546,150.00
Ref #577	**511E46512**	**CLASS QC1 CONCRETE WITH QC/QA, FOOTING, (142 CY)**	
	Awd	$625.00	$88,750.00
	2	$658.19	$93,462.98
	3	$800.00	$113,600.00
	4	$900.00	$127,800.00
Ref #578	**512E10100**	**SEALING OF CONCRETE SURFACES (EPOXY-URETHANE), (2383 SY)**	
	Awd	$22.33	$53,212.39
	2	$26.00	$61,958.00
	3	$26.00	$61,958.00
	4	$30.00	$71,490.00
Ref #579	**512E10300**	**SEALING CONCRETE BRIDGE DECKS WITH HMWM RESIN, (39 SY)**	
	Awd	$45.00	$1,755.00
	2	$70.34	$2,743.26
	3	$50.00	$1,950.00
	4	$32.00	$1,248.00

Ref #580	**512E33000**	**TYPE 2 WATERPROOFING, (51 SY)**	
	Awd	$32.00	$1,632.00
	2	$51.26	$2,614.26
	3	$75.00	$3,825.00
	4	$30.00	$1,530.00
Ref #581	**515E15041**	**DRAPED STRAND PRESTRESSED CONCRETE BRIDGE I-BEAM M, (5 EACH)**	
	Awd	$65,000.00	$325,000.00
	2	$88,751.68	$443,758.40
	3	$70,000.00	$350,000.00
	4	$80,000.00	$400,000.00
Ref #582	**515E15041**	**DRAPED STRAND PRESTRESSED CONCRETE BRIDGE I-BEAM M, (5 EACH)**	
	Awd	$65,000.00	$325,000.00
	2	$88,767.67	$443,838.35
	3	$70,000.00	$350,000.00
	4	$80,000.00	$400,000.00
Ref #583	**515E15041**	**DRAPED STRAND PRESTRESSED CONCRETE BRIDGE I-BEAM M, (5 EACH)**	
	Awd	$65,000.00	$325,000.00
	2	$88,911.58	$444,557.90
	3	$85,000.00	$425,000.00
	4	$80,000.00	$400,000.00
Ref #584	**515E20000**	**INTERMEDIATE DIAPHRAGMS, (36 EACH)**	
	Awd	$2,500.00	$90,000.00
	2	$2,556.31	$92,027.16
	3	$2,500.00	$90,000.00
	4	$2,500.00	$90,000.00
Ref #585	**516E12300**	**STRIP SEAL EXPANSION JOINT ANCHORED WITH ELASTOMER, (94 FT)**	
	Awd	$1,050.00	$98,700.00
	2	$546.71	$51,390.74
	3	$350.00	$32,900.00
	4	$750.00	$70,500.00
Ref #586	**516E44100**	**ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LO, (30 EACH)**	
	Awd	$1,720.00	$51,600.00
	2	$1,635.22	$49,056.60
	3	$1,800.00	$54,000.00
	4	$1,750.00	$52,500.00
Ref #587	**518E20000**	**PREFABRICATED GEOCOMPOSITE DRAIN, (165 SY)**	
	Awd	$24.00	$3,960.00
	2	$50.83	$8,386.95
	3	$45.00	$7,425.00
	4	$12.00	$1,980.00
Ref #588	**518E21200**	**POROUS BACKFILL WITH GEOTEXTILE FABRIC, (26 CY)**	
	Awd	$126.00	$3,276.00
	2	$145.99	$3,795.74
	3	$180.00	$4,680.00
	4	$160.00	$4,160.00
Ref #589	**518E40000**	**6" PERFORATED CORRUGATED PLASTIC PIPE, (154 FT)**	
	Awd	$17.50	$2,695.00
	2	$16.63	$2,561.02
	3	$12.00	$1,848.00
	4	$5.00	$770.00

Ref #590	**518E40011**	**6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDI, (50 FT)**	
	Awd	$17.50	$875.00
	2	$25.40	$1,270.00
	3	$45.00	$2,250.00
	4	$15.00	$750.00
Ref #591	**526E25011**	**REINFORCED CONCRETE APPROACH SLABS WITH QC/QA (T=1, (251 SY)**	
	Awd	$360.00	$90,360.00
	2	$468.98	$117,713.98
	3	$590.00	$148,090.00
	4	$400.00	$100,400.00
Ref #592	**526E90010**	**TYPE A INSTALLATION, (91 FT)**	
	Awd	$225.00	$20,475.00
	2	$210.83	$19,185.53
	3	$350.00	$31,850.00
	4	$250.00	$22,750.00
Ref #593	**601E20000**	**CRUSHED AGGREGATE SLOPE PROTECTION, (1769 SY)**	
	Awd	$36.00	$63,684.00
	2	$51.76	$91,563.44
	3	$18.00	$31,842.00
	4	$40.00	$70,760.00
Ref #594	**601E32204**	**ROCK CHANNEL PROTECTION, TYPE C WITH GEOTEXTILE FA, (497 CY)**	
	Awd	$105.00	$52,185.00
	2	$118.79	$59,038.63
	3	$80.00	$39,760.00
	4	$150.00	$74,550.00
Ref #712	**503E11100**	**COFFERDAMS AND EXCAVATION BRACING, (LUMP SUM)**	
	Awd	$325,000.00	$325,000.00
	2	$100,000.00	$100,000.00
	3	$50,000.00	$50,000.00
	4	$50,000.00	$50,000.00

Section 21 - STRUCTURE OVER 20 FOOT SPAN (LAW-7-0713R - Totals

Awd	**$3,908,470.19**
2	**$4,249,831.90**
3	**$4,516,821.50**
4	**$4,521,821.00**

Ref #595	**203E65000**	**SPECIAL - SETTLEMENT PLATFORM, (3 EACH)**	
	Awd	$1,080.00	$3,240.00
	2	$1,955.24	$5,865.72
	3	$1,200.00	$3,600.00
	4	$2,350.00	$7,050.00
Ref #596	**503E21300**	**UNCLASSIFIED EXCAVATION, (LUMP SUM)**	
	Awd	$150,000.00	$150,000.00
	2	$100,000.00	$100,000.00
	3	$250,000.00	$250,000.00
	4	$12,000.00	$12,000.00
Ref #597	**505E11100**	**PILE DRIVING EQUIPMENT MOBILIZATION, (LUMP SUM)**	
	Awd	$30,000.00	$30,000.00
	2	$24,525.38	$24,525.38
	3	$50,000.00	$50,000.00
	4	$20,000.00	$20,000.00

Ref #598	**507E00100**	**STEEL PILES HP10X42, FURNISHED, (8380 FT)**	
	Awd	$44.00	$368,720.00
	2	$31.41	$263,215.80
	3	$40.00	$335,200.00
	4	$30.00	$251,400.00
Ref #599	**507E00150**	**STEEL PILES HP10X42, DRIVEN, (8030 FT)**	
	Awd	$20.00	$160,600.00
	2	$26.76	$214,882.80
	3	$18.00	$144,540.00
	4	$32.00	$256,960.00
Ref #600	**507E92200**	**PREBORED HOLES, (1404 FT)**	
	Awd	$29.00	$40,716.00
	2	$101.31	$142,239.24
	3	$100.00	$140,400.00
	4	$125.00	$175,500.00
Ref #601	**509E10000**	**EPOXY COATED STEEL REINFORCEMENT, (299121 LB)**	
	Awd	$1.45	$433,725.45
	2	$1.51	$451,672.71
	3	$2.00	$598,242.00
	4	$2.00	$598,242.00
Ref #602	**509E30020**	**NO. 4 DEFORMED GFRP REINFORCEMENT, (10281.5 FT)**	
	Awd	$1.45	$14,908.18
	2	$1.44	$14,805.36
	3	$2.50	$25,703.75
	4	$2.00	$20,563.00
Ref #603	**511E34446**	**CLASS QC2 CONCRETE WITH QC/QA, BRIDGE DECK, (796 CY)**	
	Awd	$975.00	$776,100.00
	2	$950.00	$756,200.00
	3	$1,300.00	$1,034,800.00
	4	$1,200.00	$955,200.00
Ref #604	**511E34450**	**CLASS QC2 CONCRETE WITH QC/QA, BRIDGE DECK (PARAPE, (88 CY)**	
	Awd	$725.00	$63,800.00
	2	$740.02	$65,121.76
	3	$700.00	$61,600.00
	4	$1,150.00	$101,200.00
Ref #605	**511E41012**	**CLASS QC1 CONCRETE WITH QC/QA, PIER ABOVE FOOTINGS, (100 CY)**	
	Awd	$1,170.00	$117,000.00
	2	$1,441.69	$144,169.00
	3	$2,000.00	$200,000.00
	4	$2,100.00	$210,000.00
Ref #606	**511E43512**	**CLASS QC1 CONCRETE WITH QC/QA, ABUTMENT INCLUDING , (206 CY)**	
	Awd	$885.00	$182,310.00
	2	$1,076.38	$221,734.28
	3	$950.00	$195,700.00
	4	$1,200.00	$247,200.00
Ref #607	**511E46512**	**CLASS QC1 CONCRETE WITH QC/QA, FOOTING, (78 CY)**	
	Awd	$625.00	$48,750.00
	2	$658.19	$51,338.82
	3	$800.00	$62,400.00
	4	$1,000.00	$78,000.00

Ref #608	**512E10100**	**SEALING OF CONCRETE SURFACES (EPOXY-URETHANE), (1106 SY)**	
	Awd	$22.33	$24,696.98
	2	$26.00	$28,756.00
	3	$26.00	$28,756.00
	4	$30.00	$33,180.00
Ref #609	**513E10281**	**STRUCTURAL STEEL MEMBERS, LEVEL 4, AS PER PLAN, (907132 LB)**	
	Awd	$2.80	$2,539,969.60
	2	$2.35	$2,131,760.20
	3	$2.35	$2,131,760.20
	4	$2.75	$2,494,613.00
Ref #610	**513E20000**	**WELDED STUD SHEAR CONNECTORS, (8424 EACH)**	
	Awd	$7.00	$58,968.00
	2	$6.00	$50,544.00
	3	$10.00	$84,240.00
	4	$7.00	$58,968.00
Ref #611	**516E10010**	**ARMORLESS PREFORMED JOINT SEAL, (167 FT)**	
	Awd	$80.00	$13,360.00
	2	$54.48	$9,098.16
	3	$55.00	$9,185.00
	4	$95.00	$15,865.00
Ref #612	**516E13200**	**1/2" PREFORMED EXPANSION JOINT FILLER, (140 SF)**	
	Awd	$15.50	$2,170.00
	2	$12.22	$1,710.80
	3	$6.00	$840.00
	4	$5.00	$700.00
Ref #613	**516E13600**	**1" PREFORMED EXPANSION JOINT FILLER, (156 SF)**	
	Awd	$14.00	$2,184.00
	2	$15.18	$2,368.08
	3	$7.00	$1,092.00
	4	$7.00	$1,092.00
Ref #614	**516E13900**	**2" PREFORMED EXPANSION JOINT FILLER, (72 SF)**	
	Awd	$14.00	$1,008.00
	2	$19.08	$1,373.76
	3	$10.00	$720.00
	4	$10.00	$720.00
Ref #615	**516E25000**	**NYLON REINFORCED NEOPRENE SHEETING, (598 SF)**	
	Awd	$13.00	$7,774.00
	2	$13.62	$8,144.76
	3	$12.00	$7,176.00
	4	$30.00	$17,940.00
Ref #616	**516E44100**	**ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LO, (9 EACH)**	
	Awd	$2,250.00	$20,250.00
	2	$2,215.62	$19,940.58
	3	$1,800.00	$16,200.00
	4	$1,600.00	$14,400.00
Ref #617	**516E44100**	**ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LO, (9 EACH)**	
	Awd	$2,350.00	$21,150.00
	2	$2,241.55	$20,173.95
	3	$1,800.00	$16,200.00
	4	$1,600.00	$14,400.00

Ref #618	**518E21200**	**POROUS BACKFILL WITH GEOTEXTILE FABRIC, (200 CY)**	
	Awd	$126.00	$25,200.00
	2	$145.99	$29,198.00
	3	$120.00	$24,000.00
	4	$150.00	$30,000.00
Ref #619	**518E40000**	**6" PERFORATED CORRUGATED PLASTIC PIPE, (240 FT)**	
	Awd	$17.50	$4,200.00
	2	$16.63	$3,991.20
	3	$12.00	$2,880.00
	4	$4.00	$960.00
Ref #620	**518E40010**	**6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDI, (100 FT)**	
	Awd	$17.50	$1,750.00
	2	$25.40	$2,540.00
	3	$35.00	$3,500.00
	4	$12.00	$1,200.00
Ref #621	**526E25011**	**REINFORCED CONCRETE APPROACH SLABS WITH QC/QA (T=1, (441 SY)**	
	Awd	$360.00	$158,760.00
	2	$471.92	$208,116.72
	3	$560.00	$246,960.00
	4	$400.00	$176,400.00
Ref #622	**526E90030**	**TYPE C INSTALLATION, (167 FT)**	
	Awd	$235.00	$39,245.00
	2	$333.03	$55,616.01
	3	$380.00	$63,460.00
	4	$325.00	$54,275.00
Ref #623	**601E20000**	**CRUSHED AGGREGATE SLOPE PROTECTION, (1503 SY)**	
	Awd	$36.00	$54,108.00
	2	$51.76	$77,795.28
	3	$18.00	$27,054.00
	4	$45.00	$67,635.00
Ref #624	**869E00100**	**HIGH LOAD MULTI-ROTATIONAL (HLMR) BEARINGS, (9 EACH)**	
	Awd	$7,300.00	$65,700.00
	2	$9,020.61	$81,185.49
	3	$8,000.00	$72,000.00
	4	$6,500.00	$58,500.00

Section 22 - STRUCTURE OVER 20 FOOT SPAN (LAW-775-010 - Totals

Awd	**$5,430,363.21**
2	**$5,188,083.86**
3	**$5,838,208.95**
4	**$5,974,163.00**

Ref #625	**100E51100**	**DEPARTMENT'S SHARE OF THE DISPUTE RESOLUTION BOARD, (145000 EACH)**	
	Awd	$1.00	$145,000.00
	2	$1.00	$145,000.00
	3	$1.00	$145,000.00
	4	$1.00	$145,000.00
Ref #626	**103E05000**	**PREMIUM FOR CONTRACT PERFORMANCE BOND AND FOR PAYM, (LUMP SUM)**	
	Awd	$700,000.00	$700,000.00
	2	$842,155.61	$842,155.61
	3	$557,506.00	$557,506.00
	4	$1,200,000.00	$1,200,000.00

Ref #627	**108E10000**	**CPM PROGRESS SCHEDULE, (LUMP SUM)**	
	Awd	$20,000.00	$20,000.00
	2	$10,000.00	$10,000.00
	3	$10,000.00	$10,000.00
	4	$50,000.00	$50,000.00
Ref #628	**111E10100**	**SPECIAL - DEPARTMENTS SHARE FACILITATED PARTNERING, (7750 EACH)**	
	Awd	$1.00	$7,750.00
	2	$1.00	$7,750.00
	3	$1.00	$7,750.00
	4	$1.00	$7,750.00
Ref #629	**614E11000**	**MAINTAINING TRAFFIC, (LUMP SUM)**	
	Awd	$407,000.00	$407,000.00
	2	$300,000.00	$300,000.00
	3	$300,000.00	$300,000.00
	4	$1,220,000.00	$1,220,000.00
Ref #630	**619E16021**	**FIELD OFFICE, TYPE C, AS PER PLAN, (42 MNTH)**	
	Awd	$4,000.00	$168,000.00
	2	$2,500.00	$105,000.00
	3	$3,500.00	$147,000.00
	4	$8,500.00	$357,000.00
Ref #631	**623E10000**	**CONSTRUCTION LAYOUT STAKES AND SURVEYING, (LUMP SUM)**	
	Awd	$1,173,200.00	$1,173,200.00
	2	$500,000.00	$500,000.00
	3	$450,000.00	$450,000.00
	4	$1,200,000.00	$1,200,000.00
Ref #632	**624E10000**	**MOBILIZATION, (LUMP SUM)**	
	Awd	$6,430,000.00	$6,430,000.00
	2	$6,649,258.11	$6,649,258.11
	3	$7,150,000.00	$7,150,000.00
	4	$8,375,000.00	$8,375,000.00
Ref #706	**623E11000**	**PROVIDING ELECTRONIC INSTRUMENTATION, (LUMP SUM)**	
	Awd	$18,000.00	$18,000.00
	2	$35,000.00	$35,000.00
	3	$10,000.00	$10,000.00
	4	$5,000.00	$5,000.00

Section 23 - INCIDENTALS - Totals

Awd	**$9,068,950.00**
2	**$8,594,163.72**
3	**$8,777,256.00**
4	**$12,559,750.00**

Reference # Listing for Project 240512

Let Date: 12/12/2024
PID # 75923
Federal NEW CONSTRUCTION
LAW - SR 7-02.17 Phase 2

Prime: KOKOSING CONSTRUCTION COMPANY INC
6235 WESTERVILLE RD
WESTERVILLE, OH 43081

Ref #	Bid Amt:	Item Code:		Work Type Required:		Prime Can Do This Work?
1	$1,340,000.00	201E11001	CLEARING AND GRUBBING, AS PER PL	1	Clearing & Grubbing	Yes
2	$1,000.00	202E20010	HEADWALL REMOVED	0	(No WT Req)	Yes
3	$125,765.00	202E23000	PAVEMENT REMOVED	0	(No WT Req)	Yes
4	$63,400.00	202E35100	PIPE REMOVED, 24" DIAMETER AND UN	0	(No WT Req)	Yes
5	$72,310.00	202E35200	PIPE REMOVED, OVER 24" DIAMETER	0	(No WT Req)	Yes
6	$14,950.00	202E38000	GUARDRAIL REMOVED	0	(No WT Req)	Yes
7	$2,000.00	202E58000	MANHOLE REMOVED	0	(No WT Req)	Yes
8	$7,200.00	202E58100	CATCH BASIN REMOVED	0	(No WT Req)	Yes
9	$42,000.00	202E64000	SPECIAL - PLUGGING AND VENTING GA	3	Gas, Oil, Water Well Abandonments	Yes
10	$6,633.00	202E70000	SPECIAL - FILL AND PLUG EXISTING CO	0	(No WT Req)	Yes
11	$20,872.93	202E75000	FENCE REMOVED	0	(No WT Req)	Yes
12	$195.00	202E75250	GATE REMOVED	0	(No WT Req)	Yes
13	$76,685.04	203E07510	SPECIAL - PIEZOMETER	4	Roadway Excavation & Embankment C	Yes
14	$23,121,015.26	203E10000	EXCAVATION	5	Major Roadway Excavation	Yes
15	$4,712,686.16	203E20000	EMBANKMENT	5	Major Roadway Excavation	Yes
16	$1,123,559.15	203E20001	EMBANKMENT, AS PER PLAN (TYPE C)	4	Roadway Excavation & Embankment C	Yes
17	$10,442.60	203E22000	EMBANKMENT, USING NATURAL SOILS,	6	Incidental Grading	Yes
18	$574,766.50	204E10000	SUBGRADE COMPACTION	4	Roadway Excavation & Embankment C	Yes
19	$92,829.00	204E13000	EXCAVATION OF SUBGRADE	4	Roadway Excavation & Embankment C	Yes
20	$675,120.00	204E30010	GRANULAR MATERIAL, TYPE B	4	Roadway Excavation & Embankment C	Yes
21	$27,500.00	204E45000	PROOF ROLLING	0	(No WT Req)	Yes
22	$123,435.00	204E50000	GEOTEXTILE FABRIC	6	Incidental Grading	Yes
23	$47,730.00	209E60201	LINEAR GRADING, AS PER PLAN	6	Incidental Grading	Yes
24	$340,388.16	606E15050	GUARDRAIL, TYPE MGS	36	Guardrail / Attenuators	Yes
25	$111,457.00	606E15100	GUARDRAIL, TYPE MGS WITH LONG PO	36	Guardrail / Attenuators	Yes
26	$11,355.00	606E15550	GUARDRAIL, BARRIER DESIGN, TYPE M	36	Guardrail / Attenuators	Yes
27	$2,688.00	606E17350	GUARDRAIL, TYPE MGS, 25' LONG-SPA	36	Guardrail / Attenuators	Yes
28	$80,640.00	606E26150	ANCHOR ASSEMBLY, MGS TYPE E, (MA	36	Guardrail / Attenuators	Yes
29	$24,202.42	606E26550	ANCHOR ASSEMBLY, MGS TYPE T	36	Guardrail / Attenuators	Yes
30	$62,000.00	606E35002	MGS BRIDGE TERMINAL ASSEMBLY, TY	36	Guardrail / Attenuators	Yes
31	$1,750.00	606E35102	MGS BRIDGE TERMINAL ASSEMBLY, TY	36	Guardrail / Attenuators	Yes
32	$8,700.00	606E60012	IMPACT ATTENUATOR, TYPE 1 (BIDIRE	36	Guardrail / Attenuators	Yes
33	$60,165.70	606E60022	IMPACT ATTENUATOR, TYPE 2 (UNIDIR	36	Guardrail / Attenuators	Yes
34	$711,775.71	607E15000	FENCE, TYPE 47	37	Fence	» No
35	$399,076.20	607E23000	FENCE, TYPE CLT	37	Fence	» No
36	$7,300.00	607E98100	FENCE, MISC.: GATE, AS PER PLAN	37	Fence	» No
37	$605,700.00	622E10160	CONCRETE BARRIER, SINGLE SLOPE, T	38	Misc. Concrete	Yes
38	$18,000.00	622E25050	CONCRETE BARRIER, END ANCHORAG	38	Misc. Concrete	Yes
39	$4,500.00	623E38500	MONUMENT ASSEMBLY, TYPE C	0	(No WT Req)	Yes
40	$63,600.00	623E40500	REFERENCE MONUMENT, TYPE A	0	(No WT Req)	Yes
41	$3,750.00	623E40900	MONUMENT, MISC.: RIGHT-OF-WAY MO	0	(No WT Req)	Yes
42	$22,000.00	623E50000	PRECONSTRUCTION SURVEY MONUME	0	(No WT Req)	Yes
43	$13,000.00	623E51000	POST CONSTRUCTION SURVEY MONU	0	(No WT Req)	Yes
44	$1,400.00	625E32000	GROUND ROD	43	Highway Lighting	Yes
45	$1,100.00	690E50350	SPECIAL - MAILBOX REMOVED AND RE	0	(No WT Req)	Yes
46	$892,271.65	863E00100	GEOGRID, TYPE P1	6	Incidental Grading	Yes
47	$342,266.00	863E00300	GEOGRID, TYPE P3	6	Incidental Grading	Yes
48	$324,334.00	863E00600	GEOGRID, TYPE S1	6	Incidental Grading	Yes
49	$996,335.30	863E00801	REINFORCED EMBANKMENT, AS PER P	4	Roadway Excavation & Embankment C	Yes
50	$1,100,000.00	878E25000	INSPECTION AND COMPACTION TESTIN	0	(No WT Req)	Yes
51	$52,650.00	601E11000	RIPRAP, TYPE D	35	Drainage (Culverts, Misc.)	Yes

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52	$29,750.00	601E21050	TIED CONCRETE BLOCK MAT WITH TYP	35	Drainage (Culverts, Misc.)	Yes
53	$1,075,104.00	601E21100	SLOPE PROTECTION, MISC.: SEEDING	35	Drainage (Culverts, Misc.)	Yes
54	$572,663.00	601E23000	ARTICULATING CONCRETE BLOCK REV	35	Drainage (Culverts, Misc.)	Yes
55	$2,030.00	601E27001	DUMPED ROCK FILL, TYPE C, AS PER P	35	Drainage (Culverts, Misc.)	Yes
56	$105,000.00	601E32000	ROCK CHANNEL PROTECTION, TYPE A	35	Drainage (Culverts, Misc.)	Yes
57	$332,115.00	601E32100	ROCK CHANNEL PROTECTION, TYPE B	35	Drainage (Culverts, Misc.)	Yes
58	$357,735.00	601E32200	ROCK CHANNEL PROTECTION, TYPE C	35	Drainage (Culverts, Misc.)	Yes
59	$8,190.00	601E32300	ROCK CHANNEL PROTECTION, TYPE D	35	Drainage (Culverts, Misc.)	Yes
60	$130,935.00	601E34200	ROCK CHANNEL PROTECTION, TYPE C	35	Drainage (Culverts, Misc.)	Yes
61	$73,338.00	601E45030	DETENTION BASIN FILTER	35	Drainage (Culverts, Misc.)	Yes
62	$2,800.00	659E00100	SOIL ANALYSIS TEST	0	(No WT Req)	Yes
63	$9,828.00	659E00300	TOPSOIL	46	Landscaping	Yes
64	$64,417.00	659E00301	TOPSOIL, AS PER PLAN	46	Landscaping	Yes
65	$886,820.25	659E00540	SEEDING AND MULCHING, CLASS 3C	46	Landscaping	Yes
66	$44,415.75	659E14000	REPAIR SEEDING AND MULCHING	46	Landscaping	Yes
67	$44,415.75	659E15000	INTER-SEEDING	46	Landscaping	Yes
68	$215,800.00	659E20000	COMMERCIAL FERTILIZER	46	Landscaping	Yes
69	$36,706.50	659E31000	LIME	46	Landscaping	Yes
70	$6,556.00	659E35000	WATER	46	Landscaping	Yes
71	$31,980.00	659E40000	MOWING	46	Landscaping	Yes
72	$22,837.50	670E00500	SLOPE EROSION PROTECTION	46	Landscaping	Yes
73	$26,450.00	670E00700	DITCH EROSION PROTECTION	46	Landscaping	Yes
74	$33,017.50	670E00720	DITCH EROSION PROTECTION MAT, TY	46	Landscaping	Yes
75	$30,000.00	832E15000	STORM WATER POLLUTION PREVENTI	0	(No WT Req)	Yes
76	$142,600.00	832E15002	STORM WATER POLLUTION PREVENTI	0	(No WT Req)	Yes
77	$36,671.45	832E15010	STORM WATER POLLUTION PREVENTI	0	(No WT Req)	Yes
78	$4,420,289.00	832E30000	EROSION CONTROL	8	Temporary Soil Erosion & Sediment Co	Yes
79	$91,740.00	836E10000	SEEDING AND EROSION CONTROL WIT	46	Landscaping	Yes
80	$50,556.00	836E10020	SEEDING AND EROSION CONTROL WIT	46	Landscaping	Yes
81	$32,030.00	836E10030	SEEDING AND EROSION CONTROL WIT	46	Landscaping	Yes
82	$120,320.00	602E20000	CONCRETE MASONRY	35	Drainage (Culverts, Misc.)	Yes
83	$590,058.00	605E11100	6" SHALLOW PIPE UNDERDRAINS	35	Drainage (Culverts, Misc.)	Yes
84	$147,060.00	605E13300	6" UNCLASSIFIED PIPE UNDERDRAINS	35	Drainage (Culverts, Misc.)	Yes
85	$13,975.00	605E13301	6" UNCLASSIFIED PIPE UNDERDRAINS,	35	Drainage (Culverts, Misc.)	Yes
86	$31,500.00	605E13402	6" UNCLASSIFIED PIPE UNDERDRAINS	35	Drainage (Culverts, Misc.)	Yes
87	$458,206.00	605E13500	6" ROCK CUT UNDERDRAINS	35	Drainage (Culverts, Misc.)	Yes
88	$1,296,763.00	605E14000	6" BASE PIPE UNDERDRAINS	35	Drainage (Culverts, Misc.)	Yes
89	$110,902.00	605E31100	AGGREGATE DRAINS	35	Drainage (Culverts, Misc.)	Yes
90	$149,814.00	611E00510	6" CONDUIT, TYPE F FOR UNDERDRAIN	35	Drainage (Culverts, Misc.)	Yes
91	$208,705.00	611E00900	6" CONDUIT, TYPE B	35	Drainage (Culverts, Misc.)	Yes
92	$19,350.00	611E01400	6" CONDUIT, TYPE E	35	Drainage (Culverts, Misc.)	Yes
93	$32,500.00	611E01500	6" CONDUIT, TYPE F	35	Drainage (Culverts, Misc.)	Yes
94	$9,120.00	611E04900	12" CONDUIT, TYPE D	35	Drainage (Culverts, Misc.)	Yes
95	$25,300.00	611E05700	15" CONDUIT, TYPE A, 706.02, 707.33	35	Drainage (Culverts, Misc.)	Yes
96	$332,100.00	611E05900	15" CONDUIT, TYPE B	35	Drainage (Culverts, Misc.)	Yes
97	$185,130.00	611E06100	15" CONDUIT, TYPE C	35	Drainage (Culverts, Misc.)	Yes
98	$55,260.00	611E06700	15" CONDUIT, TYPE F	35	Drainage (Culverts, Misc.)	Yes
99	$141,044.00	611E06700	15" CONDUIT, TYPE F, 707.21, 707.33	35	Drainage (Culverts, Misc.)	Yes
100	$21,000.00	611E07400	18" CONDUIT, TYPE B	35	Drainage (Culverts, Misc.)	Yes
101	$119,658.00	611E07600	18" CONDUIT, TYPE C	35	Drainage (Culverts, Misc.)	Yes
102	$107,408.00	611E08900	21" CONDUIT, TYPE B	35	Drainage (Culverts, Misc.)	Yes
103	$17,336.00	611E09400	21" CONDUIT, TYPE D	35	Drainage (Culverts, Misc.)	Yes
104	$6,000.00	611E09700	21" CONDUIT, TYPE F	35	Drainage (Culverts, Misc.)	Yes
105	$15,795.00	611E09700	21" CONDUIT, TYPE F, 707.21	35	Drainage (Culverts, Misc.)	Yes
106	$73,728.00	611E10200	24" CONDUIT, TYPE A, 707.01, 707.02, 70	35	Drainage (Culverts, Misc.)	Yes
107	$18,975.00	611E10400	24" CONDUIT, TYPE B	35	Drainage (Culverts, Misc.)	Yes
108	$3,300.00	611E10600	24" CONDUIT, TYPE C	35	Drainage (Culverts, Misc.)	Yes
109	$7,720.00	611E11200	24" CONDUIT, TYPE F	35	Drainage (Culverts, Misc.)	Yes

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110	$53,312.00	611E11200	24" CONDUIT, TYPE F, 707.21	35	Drainage (Culverts, Misc.)	Yes
111	$24,934.00	611E11900	27" CONDUIT, TYPE B	35	Drainage (Culverts, Misc.)	Yes
112	$141,345.00	611E12100	27" CONDUIT, TYPE C	35	Drainage (Culverts, Misc.)	Yes
113	$5,400.00	611E12700	27" CONDUIT, TYPE F	35	Drainage (Culverts, Misc.)	Yes
114	$8,400.00	611E12700	27" CONDUIT, TYPE F, 707.21	35	Drainage (Culverts, Misc.)	Yes
115	$52,441.00	611E13400	30" CONDUIT, TYPE B	35	Drainage (Culverts, Misc.)	Yes
116	$51,840.00	611E13600	30" CONDUIT, TYPE C	35	Drainage (Culverts, Misc.)	Yes
117	$71,857.00	611E16200	36" CONDUIT, TYPE A, 707.18, 706.01, 70	35	Drainage (Culverts, Misc.)	Yes
118	$116,370.00	611E16400	36" CONDUIT, TYPE B	35	Drainage (Culverts, Misc.)	Yes
119	$4,476.00	611E16600	36" CONDUIT, TYPE C	35	Drainage (Culverts, Misc.)	Yes
120	$25,730.00	611E17200	36" CONDUIT, TYPE F	35	Drainage (Culverts, Misc.)	Yes
121	$41,216.00	611E19200	42" CONDUIT, TYPE A, 707.01, 707.02, 70	35	Drainage (Culverts, Misc.)	Yes
122	$156,114.00	611E19400	42" CONDUIT, TYPE B	35	Drainage (Culverts, Misc.)	Yes
123	$316,209.00	611E19600	42" CONDUIT, TYPE C	35	Drainage (Culverts, Misc.)	Yes
124	$18,471.00	611E19904	42" CONDUIT, TYPE F	35	Drainage (Culverts, Misc.)	Yes
125	$230,040.00	611E22400	54" CONDUIT, TYPE B	35	Drainage (Culverts, Misc.)	Yes
126	$154,050.00	611E22600	54" CONDUIT, TYPE C	35	Drainage (Culverts, Misc.)	Yes
127	$211,860.00	611E23600	60" CONDUIT, TYPE A, 707.01, 707.04, 70	35	Drainage (Culverts, Misc.)	Yes
128	$757,778.00	611E23600	60" CONDUIT, TYPE A, 707.02, 707.04	35	Drainage (Culverts, Misc.)	Yes
129	$67,800.00	611E23600	60" CONDUIT, TYPE A, 707.02, 707.33	35	Drainage (Culverts, Misc.)	Yes
130	$201,695.00	611E25000	66" CONDUIT, TYPE A, 707.02, 707.04	35	Drainage (Culverts, Misc.)	Yes
131	$47,200.00	611E98180	CATCH BASIN, NO. 3A	35	Drainage (Culverts, Misc.)	Yes
132	$58,800.00	611E98230	CATCH BASIN, NO. 4	35	Drainage (Culverts, Misc.)	Yes
133	$22,290.00	611E98260	CATCH BASIN, NO. 4 WITHOUT APRON	35	Drainage (Culverts, Misc.)	Yes
134	$33,000.00	611E98270	CATCH BASIN, NO. 4A	35	Drainage (Culverts, Misc.)	Yes
135	$72,000.00	611E98300	CATCH BASIN, NO. 5	35	Drainage (Culverts, Misc.)	Yes
136	$42,000.00	611E98341	CATCH BASIN, NO. 5A	35	Drainage (Culverts, Misc.)	Yes
137	$57,900.00	611E98350	CATCH BASIN, NO. 5A, AS PER PLAN	35	Drainage (Culverts, Misc.)	Yes
138	$161,500.00	611E98410	CATCH BASIN, NO. 8	35	Drainage (Culverts, Misc.)	Yes
139	$14,100.00	611E98434	CATCH BASIN, NO. 8A	35	Drainage (Culverts, Misc.)	Yes
140	$17,500.00	611E98435	CATCH BASIN, NO. 8A, AS PER PLAN	35	Drainage (Culverts, Misc.)	Yes
141	$4,600.00	611E98470	CATCH BASIN, NO. 2-2B	35	Drainage (Culverts, Misc.)	Yes
142	$32,000.00	611E98511	CATCH BASIN, NO. 2-3, AS PER PLAN	35	Drainage (Culverts, Misc.)	Yes
143	$196,000.00	611E99114	INLET, NO. 3 FOR SINGLE SLOPE BARRI	35	Drainage (Culverts, Misc.)	Yes
144	$16,400.00	611E99574	MANHOLE, NO. 3	35	Drainage (Culverts, Misc.)	Yes
145	$35,890.00	611E99710	PRECAST REINFORCED CONCRETE OU	35	Drainage (Culverts, Misc.)	Yes
146	$7,011.90	252E01500	FULL DEPTH PAVEMENT SAWING	15	Sawing	Yes
147	$103,298.25	254E01000	PAVEMENT PLANING, ASPHALT CONCR	13	Pavement Planing, Milling, Scarification	Yes
148	$331,824.50	301E56000	ASPHALT CONCRETE BASE, PG64-22, (4	10	Flexible Paving	Yes
149	$7,669,587.50	302E56000	ASPHALT CONCRETE BASE, PG64-22, (4	10	Flexible Paving	Yes
150	$3,622,700.00	304E20000	AGGREGATE BASE	9	Aggregate Bases	Yes
151	$89,676.93	407E10000	TACK COAT	10	Flexible Paving	Yes
152	$21,000.00	411E10000	STABILIZED CRUSHED AGGREGATE	0	(No WT Req)	Yes
153	$152,775.00	441E50000	ASPHALT CONCRETE SURFACE COURS	10	Flexible Paving	Yes
154	$198,045.75	441E50300	ASPHALT CONCRETE INTERMEDIATE C	10	Flexible Paving	Yes
155	$6,600.00	441E70500	ASPHALT CONCRETE SURFACE COURS	10	Flexible Paving	Yes
156	$246,760.00	441E70801	ASPHALT CONCRETE INTERMEDIATE C	10	Flexible Paving	Yes
157	$163,455.50	442E00100	ANTI-SEGREGATION EQUIPMENT	10	Flexible Paving	Yes
158	$3,191,344.00	442E10100	ASPHALT CONCRETE INTERMEDIATE C	10	Flexible Paving	Yes
159	$2,352,490.25	442E10300	ASPHALT CONCRETE SURFACE COURS	10	Flexible Paving	Yes
160	$134,514.00	443E12000	STONE MATRIX ASPHALT CONCRETE, 1	10	Flexible Paving	Yes
161	$54,600.00	452E12010	8" NON-REINFORCED CONCRETE PAVE	12	Rigid Paving	Yes
162	$119,520.00	609E12000	COMBINATION CURB AND GUTTER, TYP	38	Misc. Concrete	Yes
163	$63,780.00	609E26000	CURB, TYPE 6	38	Misc. Concrete	Yes
164	$22,920.00	609E31000	COMBINATION CURB AND GUTTER, TYP	38	Misc. Concrete	Yes
165	$77,800.00	609E72000	CONCRETE MEDIAN	38	Misc. Concrete	Yes
166	$17,640.00	625E00450	CONNECTION, FUSED PULL APART	43	Highway Lighting	Yes
167	$8,910.00	625E00480	CONNECTION, UNFUSED PERMANENT	43	Highway Lighting	Yes

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168	$4,500.00	625E10490	LIGHT POLE, CONVENTIONAL: AT10B40	43	Highway Lighting		Yes
169	$18,000.00	625E10490	LIGHT POLE, CONVENTIONAL: AT12B40	43	Highway Lighting		Yes
170	$27,600.00	625E10490	LIGHT POLE, CONVENTIONAL: AT15B40	43	Highway Lighting		Yes
171	$47,000.00	625E10490	LIGHT POLE, CONVENTIONAL: AT16B40	43	Highway Lighting		Yes
172	$5,000.00	625E10490	LIGHT POLE, CONVENTIONAL: AT18B40	43	Highway Lighting		Yes
173	$8,800.00	625E10490	LIGHT POLE, CONVENTIONAL: AT6B40	43	Highway Lighting		Yes
174	$35,200.00	625E10490	LIGHT POLE, CONVENTIONAL: AT8B40	43	Highway Lighting		Yes
175	$86,400.00	625E14100	LIGHT POLE FOUNDATION, 24" X 8' DEE	43	Highway Lighting		Yes
176	$22,113.00	625E23200	NO. 4 AWG 2400 VOLT DISTRIBUTION C	43	Highway Lighting		Yes
177	$10,092.00	625E23400	NO. 10 AWG POLE AND BRACKET CABL	43	Highway Lighting		Yes
178	$114,650.40	625E24320	1-1/2" DUCT CABLE WITH THREE NO. 4	43	Highway Lighting		Yes
179	$31,849.80	625E25400	CONDUIT, 2", 725.04	43	Highway Lighting		Yes
180	$9,614.00	625E25500	CONDUIT, 3", 725.04	43	Highway Lighting		Yes
181	$82,320.00	625E25900	CONDUIT, JACKED OR DRILLED; 3"	43	Highway Lighting		Yes
182	$20,064.00	625E26253	LUMINAIRE, CONVENTIONAL, SOLID ST	43	Highway Lighting		Yes
183	$67,489.20	625E29002	TRENCH, 24" DEEP	43	Highway Lighting		Yes
184	$9,700.00	625E29900	JUNCTION BOX	43	Highway Lighting		Yes
185	$25,925.00	625E30700	PULL BOX, 725.08, 18"	43	Highway Lighting		Yes
186	$5,120.00	625E30706	PULL BOX, 725.08, 24"	43	Highway Lighting		Yes
187	$10,240.00	625E32000	GROUND ROD	43	Highway Lighting		Yes
188	$42,000.00	625E34001	POWER SERVICE, AS PER PLAN	43	Highway Lighting		Yes
189	$13,331.20	625E36010	UNDERGROUND WARNING/MARKING T	0	(No WT Req)		Yes
190	$1,600.00	625E75510	POWER SERVICE REMOVED	0	(No WT Req)		Yes
191	$2,940.00	625E75800	DISCONNECT CIRCUIT	0	(No WT Req)		Yes
192	$11,539.50	618E41000	RUMBLE STRIPES, EDGE LINE (ASPHAL	0	(No WT Req)		Yes
193	$3,612.00	618E43000	RUMBLE STRIPES, CENTER LINE (ASPH	0	(No WT Req)		Yes
194	$53,570.00	621E00100	RPM	41	Raised Pavement Markers	»	No
195	$1,500.00	625E32000	GROUND ROD	43	Highway Lighting		Yes
196	$2,025.00	626E00102	BARRIER REFLECTOR, TYPE 1, BIDIREC	0	(No WT Req)		Yes
197	$1,777.50	626E00102	BARRIER REFLECTOR, TYPE 1, UNIDIR	0	(No WT Req)		Yes
198	$44,308.00	630E03100	GROUND MOUNTED SUPPORT, NO. 3 P	42	Signing	»	No
199	$3,608.50	630E06400	GROUND MOUNTED STRUCTURAL BEA	42	Signing	»	No
200	$1,704.00	630E06500	GROUND MOUNTED STRUCTURAL BEA	42	Signing	»	No
201	$5,313.00	630E07000	GROUND MOUNTED STRUCTURAL BEA	42	Signing	»	No
202	$8,257.00	630E07600	GROUND MOUNTED STRUCTURAL BEA	42	Signing	»	No
203	$28,194.50	630E08000	GROUND MOUNTED STRUCTURAL BEA	42	Signing	»	No
204	$1,241.00	630E08004	ONE WAY SUPPORT, NO. 3 POST	42	Signing	»	No
205	$1,998.00	630E08520	STREET NAME SIGN SUPPORT, NO. 3 P	42	Signing	»	No
206	$3,800.00	630E08600	SIGN POST REFLECTOR	42	Signing	»	No
207	$25,120.00	630E09000	BREAKAWAY STRUCTURAL BEAM CON	42	Signing	»	No
208	$88,750.00	630E72420	OVERHEAD SIGN SUPPORT, TYPE TC-1	42	Signing	»	No
209	$36,975.00	630E76530	SPAN WIRE SIGN SUPPORT, TYPE TC-1	42	Signing	»	No
210	$3,900.00	630E79600	SIGN SUPPORT ASSEMBLY, BRIDGE M	42	Signing	»	No
211	$25,844.00	630E80100	SIGN, FLAT SHEET	42	Signing	»	No
212	$37,975.00	630E80200	SIGN, GROUND MOUNTED EXTRUSHEE	42	Signing	»	No
213	$25,700.00	630E80224	SIGN, OVERHEAD EXTRUSHEET	42	Signing	»	No
214	$700.00	630E80400	SIGN, PERMANENT OVERLAY	42	Signing	»	No
215	$2,280.00	630E80500	SIGN, DOUBLE FACED, STREET NAME	42	Signing	»	No
216	$36,800.00	630E84500	GROUND MOUNTED STRUCTURAL BEA	42	Signing	»	No
217	$23,100.00	630E84510	RIGID OVERHEAD SIGN SUPPORT FOU	42	Signing	»	No
218	$17,700.00	630E84520	SPAN WIRE SIGN SUPPORT FOUNDATI	42	Signing	»	No
219	$1,545.00	630E84900	REMOVAL OF GROUND MOUNTED SIGN	0	(No WT Req)		Yes
220	$65.00	630E85100	REMOVAL OF GROUND MOUNTED SIGN	42	Signing	»	No
221	$1,340.00	630E86002	REMOVAL OF GROUND MOUNTED POS	0	(No WT Req)		Yes
222	$1,140.00	630E86102	REMOVAL OF GROUND MOUNTED STR	0	(No WT Req)		Yes
223	$2,070.00	630E87400	REMOVAL OF OVERHEAD MOUNTED SI	0	(No WT Req)		Yes
224	$1,950.00	630E89702	REMOVAL OF OVERHEAD SIGN SUPPO	0	(No WT Req)		Yes
225	$89,206.65	644E00104	EDGE LINE, 6"	45	Pavement Markings		Yes

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226	$11,866.50	644E00204	LANE LINE, 6"	45	Pavement Markings	Yes
227	$32,701.50	644E00300	CENTER LINE	45	Pavement Markings	Yes
228	$12,503.75	644E00404	CHANNELIZING LINE, 12"	45	Pavement Markings	Yes
229	$3,092.70	644E00500	STOP LINE	45	Pavement Markings	Yes
230	$18,485.30	644E00700	TRANSVERSE/DIAGONAL LINE	45	Pavement Markings	Yes
231	$3,506.60	644E00720	CHEVRON MARKING	45	Pavement Markings	Yes
232	$475.75	644E00900	ISLAND MARKING	45	Pavement Markings	Yes
233	$3,000.00	644E01300	LANE ARROW	45	Pavement Markings	Yes
234	$4,200.00	644E01350	LANE REDUCTION ARROW	45	Pavement Markings	Yes
235	$680.00	644E01360	WRONG WAY ARROW	45	Pavement Markings	Yes
236	$360.00	644E01410	WORD ON PAVEMENT, 96"	45	Pavement Markings	Yes
237	$17,780.30	644E01510	DOTTED LINE, 6"	45	Pavement Markings	Yes
238	$855.00	644E20800	YIELD LINE	45	Pavement Markings	Yes
239	$5,812.25	644E30000	REMOVAL OF PAVEMENT MARKING	45	Pavement Markings	Yes
240	$8,069.60	646E10010	EDGE LINE, 6"	45	Pavement Markings	Yes
241	$592.20	646E10110	LANE LINE, 6"	45	Pavement Markings	Yes
242	$3,219.20	646E10200	CENTER LINE	45	Pavement Markings	Yes
243	$2,500.35	646E10310	CHANNELIZING LINE, 12"	45	Pavement Markings	Yes
244	$1,500.00	646E20300	LANE ARROW	45	Pavement Markings	Yes
245	$2,868.40	646E20504	DOTTED LINE, 6"	45	Pavement Markings	Yes
246	$3,040.00	625E18100	BRACKET ARM, 12'	43	Highway Lighting	Yes
247	$3,307.50	625E23306	NO. 10 AWG 600 VOLT DISTRIBUTION C	43	Highway Lighting	Yes
248	$572.00	625E25400	CONDUIT, 2", 725.04	43	Highway Lighting	Yes
249	$2,540.00	625E26250	LUMINAIRE, CONVENTIONAL, OBSOLET	43	Highway Lighting	Yes
250	$330.00	625E29000	TRENCH	43	Highway Lighting	Yes
251	$3,200.00	625E32000	GROUND ROD	43	Highway Lighting	Yes
252	$17,080.00	632E05006	VEHICULAR SIGNAL HEAD, (LED), 3-SEC	44	Traffic Signals - Standard	Yes
253	$4,160.00	632E05086	VEHICULAR SIGNAL HEAD, (LED), 5-SEC	44	Traffic Signals - Standard	Yes
254	$2,800.00	632E25000	COVERING OF VEHICULAR SIGNAL HEA	44	Traffic Signals - Standard	Yes
255	$6,916.00	632E29900	MESSENGER WIRE, 7 STRAND, 1/4" DIA	44	Traffic Signals - Standard	Yes
256	$3,858.40	632E30600	TETHER WIRE, WITH ACCESSORIES	44	Traffic Signals - Standard	Yes
257	$3,225.00	632E40500	SIGNAL CABLE, 5 CONDUCTOR, NO. 14	44	Traffic Signals - Standard	Yes
258	$2,061.00	632E40700	SIGNAL CABLE, 7 CONDUCTOR, NO. 14	44	Traffic Signals - Standard	Yes
259	$48,000.00	632E64000	STRAIN POLE FOUNDATION	44	Traffic Signals - Standard	Yes
260	$24,000.00	632E70000	POWER SERVICE	44	Traffic Signals - Standard	Yes
261	$24,000.00	632E86120	STRAIN POLE, TYPE TC-81.11, DESIGN	44	Traffic Signals - Standard	Yes
262	$36,000.00	632E87120	COMBINATION STRAIN POLE, TYPE TC-	44	Traffic Signals - Standard	Yes
263	$13,400.00	632E87130	COMBINATION STRAIN POLE, TYPE TC-	44	Traffic Signals - Standard	Yes
264	$42,000.00	632E90400	SIGNALIZATION, MISC.:COMBINATION S	44	Traffic Signals - Standard	Yes
265	$40,000.00	633E65511	CABINET, TYPE TS-2, AS PER PLAN	44	Traffic Signals - Standard	Yes
266	$8,600.00	633E67100	CABINET FOUNDATION	44	Traffic Signals - Standard	Yes
267	$9,800.00	633E67200	CONTROLLER WORK PAD	44	Traffic Signals - Standard	Yes
268	$17,450.00	633E75001	UNINTERRUPTIBLE POWER SUPPLY (U	44	Traffic Signals - Standard	Yes
269	$640.50	644E00500	STOP LINE	45	Pavement Markings	Yes
270	$39,406.64	809E69000	ADVANCE RADAR DETECTION	44	Traffic Signals - Standard	Yes
271	$28,465.53	809E69100	STOP LINE RADAR DETECTION	44	Traffic Signals - Standard	Yes
272	$13,873.40	815E30000	SPREAD SPECTRUM RADIO	44	Traffic Signals - Standard	Yes
273	$1,083.53	661E20080	DECIDUOUS SHRUB, 4' HEIGHT, RHUS	46	Landscaping	Yes
274	$34,984.20	661E99930	PLANTING, MISC.:, 10" GRAY WASHED	46	Landscaping	Yes
275	$588.00	662E31000	LANDSCAPE WATERING	46	Landscaping	Yes
276	$8,000.00	202E56001	BUILDING DEMOLISHED, AS PER PLAN,	2	Building Removal	Yes
277	$8,000.00	202E56001	BUILDING DEMOLISHED, AS PER PLAN,	2	Building Removal	Yes
278	$10,000.00	202E56001	BUILDING DEMOLISHED, AS PER PLAN,	2	Building Removal	Yes
279	$8,000.00	202E56001	BUILDING DEMOLISHED, AS PER PLAN,	2	Building Removal	Yes
280	$9,000.00	202E56001	BUILDING DEMOLISHED, AS PER PLAN,	2	Building Removal	Yes
281	$9,000.00	202E56001	BUILDING DEMOLISHED, AS PER PLAN,	2	Building Removal	Yes
282	$9,000.00	202E56001	BUILDING DEMOLISHED, AS PER PLAN,	2	Building Removal	Yes
283	$12,000.00	202E56001	BUILDING DEMOLISHED, AS PER PLAN,	2	Building Removal	Yes

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284	$12,000.00	202E56001	BUILDING DEMOLISHED, AS PER PLAN,	2	Building Removal		Yes
285	$9,000.00	202E56001	BUILDING DEMOLISHED, AS PER PLAN,	2	Building Removal		Yes
286	$2,000.00	202E56001	BUILDING DEMOLISHED, AS PER PLAN,	2	Building Removal		Yes
287	$9,000.00	202E56001	BUILDING DEMOLISHED, AS PER PLAN,	2	Building Removal		Yes
288	$1,000.00	202E56001	BUILDING DEMOLISHED, AS PER PLAN,	2	Building Removal		Yes
289	$1,000.00	202E56001	BUILDING DEMOLISHED, AS PER PLAN,	2	Building Removal		Yes
290	$1,000.00	202E56001	BUILDING DEMOLISHED, AS PER PLAN,	2	Building Removal		Yes
291	$3,764,376.00	606E10210	SPECIAL - NOISE BARRIER (REFLECTIV	34	Earth Retaining Structures		Yes
292	$5,000.00	614E11110	LAW ENFORCEMENT OFFICER WITH PA	39	Maintenance of Traffic		Yes
293	$3,071.20	614E11630	INCREASED BARRIER DELINEATION	39	Maintenance of Traffic		Yes
294	$7,020.00	614E12380	WORK ZONE IMPACT ATTENUATOR, 24"	39	Maintenance of Traffic		Yes
295	$34,000.00	614E12420	DETOUR SIGNING	39	Maintenance of Traffic		Yes
296	$25,571.38	614E12801	WORK ZONE RAISED PAVEMENT MARK	39	Maintenance of Traffic		Yes
297	$27,500.00	614E18601	PORTABLE CHANGEABLE MESSAGE SI	39	Maintenance of Traffic		Yes
298	$9,870.00	614E21000	WORK ZONE CENTER LINE, CLASS I	39	Maintenance of Traffic		Yes
299	$14,928.60	614E22010	WORK ZONE EDGE LINE, CLASS I, 6"	39	Maintenance of Traffic		Yes
300	$378.90	614E23000	WORK ZONE CHANNELIZING LINE, CLA	39	Maintenance of Traffic		Yes
301	$174.00	614E26000	WORK ZONE STOP LINE, CLASS I	39	Maintenance of Traffic		Yes
302	$250.00	614E30000	WORK ZONE ARROW, CLASS I	39	Maintenance of Traffic		Yes
303	$10,000.00	615E10000	ROADS FOR MAINTAINING TRAFFIC	39	Maintenance of Traffic		Yes
304	$29,716.00	615E25000	PAVEMENT FOR MAINTAINING TRAFFIC	10	Flexible Paving		Yes
305	$360,000.00	616E10000	WATER	0	(No WT Req)		Yes
306	$62,820.00	622E41100	PORTABLE BARRIER, UNANCHORED	39	Maintenance of Traffic		Yes
307	$322,337.00	503E21101	UNCLASSIFIED EXCAVATION, AS PER P	6	Incidental Grading		Yes
308	$154,748.16	509E10001	EPOXY COATED STEEL REINFORCEME	23	Reinforcing Steel		Yes
309	$481,740.00	511E46012	CLASS QC1 CONCRETE WITH QC/QA, R	34	Earth Retaining Structures		Yes
310	$231,875.00	511E46512	CLASS QC1 CONCRETE WITH QC/QA, F	38	Misc. Concrete		Yes
311	$18,291.00	512E10100	SEALING OF CONCRETE SURFACES (E	57	Sealing of Concrete Surfaces with Epox	»	No
312	$1,472.00	512E33000	TYPE 2 WATERPROOFING	40	Waterproofing		Yes
313	$15,840.00	516E13200	1/2" PREFORMED EXPANSION JOINT FIL	0	(No WT Req)		Yes
314	$8,688.00	518E20000	PREFABRICATED GEOCOMPOSITE DRA	35	Drainage (Culverts, Misc.)		Yes
315	$23,250.00	622E10160	CONCRETE BARRIER, SINGLE SLOPE, T	38	Misc. Concrete		Yes
316	$5,000.00	622E25000	CONCRETE BARRIER END SECTION, TY	38	Misc. Concrete		Yes
317	$2,160.00	203E65000	SPECIAL - SETTLEMENT PLATFORM	4	Roadway Excavation & Embankment C		Yes
318	$260,000.00	503E11100	COFFERDAMS AND EXCAVATION BRACI	53	Piling		Yes
319	$150,000.00	503E21300	UNCLASSIFIED EXCAVATION	6	Incidental Grading		Yes
320	$30,000.00	505E11100	PILE DRIVING EQUIPMENT MOBILIZATI	0	(No WT Req)		Yes
321	$137,280.00	507E00200	STEEL PILES HP12X53, FURNISHED	53	Piling		Yes
322	$57,600.00	507E00250	STEEL PILES HP12X53, DRIVEN	53	Piling		Yes
323	$304,614.55	509E10000	EPOXY COATED STEEL REINFORCEME	23	Reinforcing Steel		Yes
324	$13,152.95	509E30020	NO. 4 DEFORMED GFRP REINFORCEME	23	Reinforcing Steel		Yes
325	$442,650.00	511E34446	CLASS QC2 CONCRETE WITH QC/QA, B	21	Level 2 Bridge		Yes
326	$58,000.00	511E34450	CLASS QC2 CONCRETE WITH QC/QA, B	21	Level 2 Bridge		Yes
327	$247,800.00	511E43512	CLASS QC1 CONCRETE WITH QC/QA, A	21	Level 2 Bridge		Yes
329	$32,579.47	512E10100	SEALING OF CONCRETE SURFACES (E	57	Sealing of Concrete Surfaces with Epox	»	No
330	$1,980.00	512E10300	SEALING CONCRETE BRIDGE DECKS W	57	Sealing of Concrete Surfaces with Epox	»	No
331	$1,728.00	512E33000	TYPE 2 WATERPROOFING	40	Waterproofing		Yes
332	$275,000.00	515E15030	DRAPED STRAND PRESTRESSED CON	21	Level 2 Bridge		Yes
333	$275,000.00	515E15030	DRAPED STRAND PRESTRESSED CON	21	Level 2 Bridge		Yes
334	$275,000.00	515E15030	DRAPED STRAND PRESTRESSED CON	21	Level 2 Bridge		Yes
335	$90,000.00	515E20000	INTERMEDIATE DIAPHRAGMS	21	Level 2 Bridge		Yes
336	$105,000.00	516E12300	STRIP SEAL EXPANSION JOINT ANCHO	27	Expansion & Contraction Joints, Joint S		Yes
337	$51,000.00	516E44100	ELASTOMERIC BEARING WITH INTERN	27	Expansion & Contraction Joints, Joint S		Yes
338	$5,400.00	518E20000	PREFABRICATED GEOCOMPOSITE DRA	35	Drainage (Culverts, Misc.)		Yes
339	$4,158.00	518E21200	POROUS BACKFILL WITH GEOTEXTILE	34	Earth Retaining Structures		Yes
340	$2,817.50	518E40000	6" PERFORATED CORRUGATED PLASTI	0	(No WT Req)		Yes
341	$962.50	518E40010	6" NON-PERFORATED CORRUGATED PL	0	(No WT Req)		Yes
342	$79,500.00	524E94950	DRILLED SHAFTS, 72" DIAMETER, INTO	28	Caissons / Drilled Shafts		Yes

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343	$351,540.00	524E94970	DRILLED SHAFTS, 78" DIAMETER ABOV	28	Caissons / Drilled Shafts		Yes
344	$114,760.00	526E30011	REINFORCED CONCRETE APPROACH S	29	Structure Repairs		Yes
345	$22,500.00	526E90010	TYPE A INSTALLATION	29	Structure Repairs		Yes
346	$144,480.00	601E32104	ROCK CHANNEL PROTECTION, TYPE B	35	Drainage (Culverts, Misc.)		Yes
347	$24,000.00	894E10000	THERMAL INTEGRITY PROFILING (TIP)	28	Caissons / Drilled Shafts		Yes
348	$3,000.00	203E20001	EMBANKMENT, AS PER PLAN	4	Roadway Excavation & Embankment C		Yes
349	$97,370.00	203E35110	GRANULAR MATERIAL, TYPE B	6	Incidental Grading		Yes
350	$4,320.00	203E65000	SPECIAL - SETTLEMENT PLATFORM	4	Roadway Excavation & Embankment C		Yes
351	$30,000.00	505E11100	PILE DRIVING EQUIPMENT MOBILIZATI	0	(No WT Req)		Yes
352	$79,860.00	507E00100	STEEL PILES HP10X42, FURNISHED	53	Piling		Yes
353	$34,100.00	507E00150	STEEL PILES HP10X42, DRIVEN	53	Piling		Yes
354	$104,124.50	509E10000	EPOXY COATED STEEL REINFORCEME	23	Reinforcing Steel		Yes
355	$10,200.39	509E30020	NO. 4 DEFORMED GFRP REINFORCEME	23	Reinforcing Steel		Yes
356	$7,680.00	511E33500	SEMI-INTEGRAL DIAPHRAGM GUIDE	21	Level 2 Bridge		Yes
357	$214,500.00	511E34446	CLASS QC2 CONCRETE WITH QC/QA, B	21	Level 2 Bridge		Yes
358	$26,000.00	511E34450	CLASS QC2 CONCRETE WITH QC/QA, B	21	Level 2 Bridge		Yes
359	$129,210.00	511E43512	CLASS QC1 CONCRETE WITH QC/QA, A	21	Level 2 Bridge		Yes
360	$11,031.02	512E10100	SEALING OF CONCRETE SURFACES (E	57	Sealing of Concrete Surfaces with Epox	»	No
361	$260,000.00	515E15020	DRAPED STRAND PRESTRESSED CON	21	Level 2 Bridge		Yes
362	$30,000.00	515E20000	INTERMEDIATE DIAPHRAGMS	21	Level 2 Bridge		Yes
363	$8,240.00	516E10010	ARMORLESS PREFORMED JOINT SEAL	27	Expansion & Contraction Joints, Joint S		Yes
364	$3,724.00	516E13900	2" PREFORMED EXPANSION JOINT FILL	0	(No WT Req)		Yes
365	$4,340.00	516E14020	SEMI-INTEGRAL ABUTMENT EXPANSIO	27	Expansion & Contraction Joints, Joint S		Yes
366	$25,500.00	516E44100	ELASTOMERIC BEARING WITH INTERN	27	Expansion & Contraction Joints, Joint S		Yes
367	$12,348.00	518E21200	POROUS BACKFILL WITH GEOTEXTILE	34	Earth Retaining Structures		Yes
368	$2,345.00	518E40000	6" PERFORATED CORRUGATED PLASTI	0	(No WT Req)		Yes
369	$245.00	518E40010	6" NON-PERFORATED CORRUGATED PL	0	(No WT Req)		Yes
370	$114,760.00	526E30011	REINFORCED CONCRETE APPROACH S	29	Structure Repairs		Yes
371	$24,205.00	526E90030	TYPE C INSTALLATION	29	Structure Repairs		Yes
372	$10,120.00	601E37501	PAVED GUTTER, TYPE 1-2, AS PER PLA	38	Misc. Concrete		Yes
373	$42,000.00	611E99114	INLET, NO. 3 FOR SINGLE SLOPE BARRI	35	Drainage (Culverts, Misc.)		Yes
374	$20,000.00	622E25000	CONCRETE BARRIER END SECTION, TY	38	Misc. Concrete		Yes
375	$78,400.00	622E90200	BARRIER, MISC.: TYPE D BARRIER WIT	38	Misc. Concrete		Yes
376	$535,129.00	840E20000	MECHANICALLY STABILIZED EARTH WA	34	Earth Retaining Structures		Yes
377	$13,719.00	840E21000	WALL EXCAVATION	34	Earth Retaining Structures		Yes
378	$36,288.00	840E22000	FOUNDATION PREPARATION	34	Earth Retaining Structures		Yes
379	$719,238.00	840E23000	SELECT GRANULAR BACKFILL	34	Earth Retaining Structures		Yes
380	$1,782.00	840E23050	NATURAL SOIL	34	Earth Retaining Structures		Yes
381	$5,720.00	840E25010	6" DRAINAGE PIPE, PERFORATED	34	Earth Retaining Structures		Yes
382	$1,265.00	840E25020	6" DRAINAGE PIPE, NON-PERFORATED	34	Earth Retaining Structures		Yes
383	$78,800.00	840E26000	CONCRETE COPING	34	Earth Retaining Structures		Yes
384	$250.00	840E27000	ON-SITE ASSISTANCE	34	Earth Retaining Structures		Yes
386	$335,000.00	867E00101	TEMPORARY WIRE FACED MECHANICA	34	Earth Retaining Structures		Yes
387	$4,320.00	203E65000	SPECIAL - SETTLEMENT PLATFORM	4	Roadway Excavation & Embankment C		Yes
388	$200,000.00	503E11100	COFFERDAMS AND EXCAVATION BRACI	53	Piling		Yes
389	$150,000.00	503E21300	UNCLASSIFIED EXCAVATION	6	Incidental Grading		Yes
390	$30,000.00	505E11100	PILE DRIVING EQUIPMENT MOBILIZATI	0	(No WT Req)		Yes
391	$163,680.00	507E00200	STEEL PILES HP12X53, FURNISHED	53	Piling		Yes
392	$69,600.00	507E00250	STEEL PILES HP12X53, DRIVEN	53	Piling		Yes
393	$401,465.44	509E10001	EPOXY COATED STEEL REINFORCEME	23	Reinforcing Steel		Yes
394	$16,450.25	509E30020	NO. 4 DEFORMED GFRP REINFORCEME	23	Reinforcing Steel		Yes
395	$492,375.00	511E34446	CLASS QC2 CONCRETE WITH QC/QA, B	21	Level 2 Bridge		Yes
396	$68,150.00	511E34450	CLASS QC2 CONCRETE WITH QC/QA, B	21	Level 2 Bridge		Yes
397	$242,490.00	511E43512	CLASS QC1 CONCRETE WITH QC/QA, A	21	Level 2 Bridge		Yes
398	$270,000.00	511E45602	CLASS QC4 MASS CONCRETE, SUBSTR	21	Level 2 Bridge		Yes
399	$36,822.17	512E10100	SEALING OF CONCRETE SURFACES (E	57	Sealing of Concrete Surfaces with Epox	»	No
400	$1,710.00	512E10300	SEALING CONCRETE BRIDGE DECKS W	57	Sealing of Concrete Surfaces with Epox	»	No
401	$1,600.00	512E33000	TYPE 2 WATERPROOFING	40	Waterproofing		Yes

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402	$350,000.00	515E15040	DRAPED STRAND PRESTRESSED CON	21	Level 2 Bridge	Yes
403	$350,000.00	515E15040	DRAPED STRAND PRESTRESSED CON	21	Level 2 Bridge	Yes
404	$350,000.00	515E15040	DRAPED STRAND PRESTRESSED CON	21	Level 2 Bridge	Yes
405	$90,000.00	515E20000	INTERMEDIATE DIAPHRAGMS	21	Level 2 Bridge	Yes
406	$89,250.00	516E12300	STRIP SEAL EXPANSION JOINT ANCHO	27	Expansion & Contraction Joints, Joint S	Yes
407	$54,000.00	516E44100	ELASTOMERIC BEARING WITH INTERN	27	Expansion & Contraction Joints, Joint S	Yes
408	$3,600.00	518E12301	SCUPPERS, INCLUDING SUPPORTS, AS	21	Level 2 Bridge	Yes
409	$5,376.00	518E20000	PREFABRICATED GEOCOMPOSITE DRA	35	Drainage (Culverts, Misc.)	Yes
410	$3,276.00	518E21200	POROUS BACKFILL WITH GEOTEXTILE	34	Earth Retaining Structures	Yes
411	$2,572.50	518E40000	6" PERFORATED CORRUGATED PLASTI	0	(No WT Req)	Yes
412	$1,050.00	518E40010	6" NON-PERFORATED CORRUGATED PL	0	(No WT Req)	Yes
413	$79,500.00	524E94950	DRILLED SHAFTS, 72" DIAMETER, INTO	28	Caissons / Drilled Shafts	Yes
414	$312,480.00	524E94970	DRILLED SHAFTS, 78" DIAMETER ABOV	28	Caissons / Drilled Shafts	Yes
415	$110,960.00	526E30011	REINFORCED CONCRETE APPROACH S	29	Structure Repairs	Yes
416	$19,125.00	526E90010	TYPE A INSTALLATION	29	Structure Repairs	Yes
417	$286,230.00	601E32204	ROCK CHANNEL PROTECTION, TYPE C	35	Drainage (Culverts, Misc.)	Yes
418	$24,000.00	894E10000	THERMAL INTEGRITY PROFILING (TIP)	28	Caissons / Drilled Shafts	Yes
419	$3,000.00	203E20001	EMBANKMENT, AS PER PLAN	4	Roadway Excavation & Embankment C	Yes
420	$64,540.00	203E35110	GRANULAR MATERIAL, TYPE B	6	Incidental Grading	Yes
421	$4,320.00	203E65000	SPECIAL - SETTLEMENT PLATFORM	4	Roadway Excavation & Embankment C	Yes
422	$1.00	503E11100	COFFERDAMS AND EXCAVATION BRACI	53	Piling	Yes
423	$30,000.00	505E11100	PILE DRIVING EQUIPMENT MOBILIZATI	0	(No WT Req)	Yes
424	$87,120.00	507E00100	STEEL PILES HP10X42, FURNISHED	53	Piling	Yes
425	$37,400.00	507E00150	STEEL PILES HP10X42, DRIVEN	53	Piling	Yes
426	$84,607.50	509E10000	EPOXY COATED STEEL REINFORCEME	23	Reinforcing Steel	Yes
427	$7,939.11	509E30020	NO. 4 DEFORMED GFRP REINFORCEME	23	Reinforcing Steel	Yes
428	$7,680.00	511E33500	SEMI-INTEGRAL DIAPHRAGM GUIDE	21	Level 2 Bridge	Yes
429	$171,600.00	511E34446	CLASS QC2 CONCRETE WITH QC/QA, B	21	Level 2 Bridge	Yes
430	$24,000.00	511E34450	CLASS QC2 CONCRETE WITH QC/QA, B	21	Level 2 Bridge	Yes
431	$133,635.00	511E43512	CLASS QC1 CONCRETE WITH QC/QA, A	21	Level 2 Bridge	Yes
432	$10,338.79	512E10100	SEALING OF CONCRETE SURFACES (E	57	Sealing of Concrete Surfaces with Epox	» No
433	$240,000.00	515E15020	DRAPED STRAND PRESTRESSED CON	21	Level 2 Bridge	Yes
434	$10,000.00	515E20000	INTERMEDIATE DIAPHRAGMS	21	Level 2 Bridge	Yes
435	$7,440.00	516E10010	ARMORLESS PREFORMED JOINT SEAL	27	Expansion & Contraction Joints, Joint S	Yes
436	$3,780.00	516E13900	2" PREFORMED EXPANSION JOINT FILL	0	(No WT Req)	Yes
437	$4,130.00	516E14020	SEMI-INTEGRAL ABUTMENT EXPANSIO	27	Expansion & Contraction Joints, Joint S	Yes
438	$26,000.00	516E44100	ELASTOMERIC BEARING WITH INTERN	27	Expansion & Contraction Joints, Joint S	Yes
439	$11,340.00	518E21200	POROUS BACKFILL WITH GEOTEXTILE	34	Earth Retaining Structures	Yes
440	$2,205.00	518E40000	6" PERFORATED CORRUGATED PLASTI	0	(No WT Req)	Yes
441	$245.00	518E40010	6" NON-PERFORATED CORRUGATED PL	0	(No WT Req)	Yes
442	$115,520.00	526E30011	REINFORCED CONCRETE APPROACH S	29	Structure Repairs	Yes
443	$21,855.00	526E90030	TYPE C INSTALLATION	29	Structure Repairs	Yes
444	$11,592.00	601E37501	PAVED GUTTER, TYPE 1-2, AS PER PLA	38	Misc. Concrete	Yes
445	$56,000.00	611E99114	INLET, NO. 3 FOR SINGLE SLOPE BARRI	35	Drainage (Culverts, Misc.)	Yes
446	$20,000.00	622E25000	CONCRETE BARRIER END SECTION, TY	38	Misc. Concrete	Yes
447	$42,000.00	622E90200	BARRIER, MISC.: SINGLE SLOPE CONC	38	Misc. Concrete	Yes
448	$333,298.00	840E20000	MECHANICALLY STABILIZED EARTH WA	34	Earth Retaining Structures	Yes
449	$77,010.00	840E21000	WALL EXCAVATION	34	Earth Retaining Structures	Yes
450	$27,432.00	840E22000	FOUNDATION PREPARATION	34	Earth Retaining Structures	Yes
451	$399,438.00	840E23000	SELECT GRANULAR BACKFILL	34	Earth Retaining Structures	Yes
452	$1,255.50	840E23050	NATURAL SOIL	34	Earth Retaining Structures	Yes
453	$12,360.00	840E25010	6" DRAINAGE PIPE, PERFORATED	34	Earth Retaining Structures	Yes
454	$6,300.00	840E25020	6" DRAINAGE PIPE, NON-PERFORATED	34	Earth Retaining Structures	Yes
455	$66,980.00	840E26000	CONCRETE COPING	34	Earth Retaining Structures	Yes
456	$250.00	840E27000	ON-SITE ASSISTANCE	34	Earth Retaining Structures	Yes
458	$335,000.00	867E00101	TEMPORARY WIRE FACED MECHANICA	34	Earth Retaining Structures	Yes
459	$41,393.00	203E10000	EXCAVATION	5	Major Roadway Excavation	Yes
460	$75,920.00	503E21100	UNCLASSIFIED EXCAVATION	6	Incidental Grading	Yes

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461	$74,161.44	509E10000	EPOXY COATED STEEL REINFORCEME	23	Reinforcing Steel		Yes
462	$179,228.00	511E46010	CLASS QC1 CONCRETE, RETAINING/WI	38	Misc. Concrete		Yes
463	$119,355.00	511E46510	CLASS QC1 CONCRETE, FOOTING	38	Misc. Concrete		Yes
464	$4,703.40	512E10100	SEALING OF CONCRETE SURFACES (E	57	Sealing of Concrete Surfaces with Epox	»	No
466	$9,324.00	518E21200	POROUS BACKFILL WITH GEOTEXTILE	34	Earth Retaining Structures		Yes
467	$1,295.00	518E40000	6" PERFORATED CORRUGATED PLASTI	0	(No WT Req)		Yes
468	$1,020.00	518E40010	6" NON-PERFORATED CORRUGATED PL	0	(No WT Req)		Yes
469	$1,296.00	601E11001	RIPRAP, TYPE D, AS PER PLAN	35	Drainage (Culverts, Misc.)		Yes
470	$33,705.00	601E32104	ROCK CHANNEL PROTECTION, TYPE B	35	Drainage (Culverts, Misc.)		Yes
471	$82,110.00	601E34200	ROCK CHANNEL PROTECTION, TYPE C	35	Drainage (Culverts, Misc.)		Yes
472	$2,486,000.00	611E97400	CONDUIT, MISC.: 22' DIA., TYPE A, 707.0	35	Drainage (Culverts, Misc.)		Yes
473	$4,320.00	203E65000	SPECIAL - SETTLEMENT PLATFORM	4	Roadway Excavation & Embankment C		Yes
474	$275,000.00	503E11100	COFFERDAMS AND EXCAVATION BRACI	53	Piling		Yes
475	$150,000.00	503E21300	UNCLASSIFIED EXCAVATION	6	Incidental Grading		Yes
476	$30,000.00	505E11100	PILE DRIVING EQUIPMENT MOBILIZATI	0	(No WT Req)		Yes
477	$118,360.00	507E00200	STEEL PILES HP12X53, FURNISHED	53	Piling		Yes
478	$47,000.00	507E00250	STEEL PILES HP12X53, DRIVEN	53	Piling		Yes
479	$299,871.68	509E10001	EPOXY COATED STEEL REINFORCEME	23	Reinforcing Steel		Yes
480	$12,932.55	509E30020	NO. 4 DEFORMED GFRP REINFORCEME	23	Reinforcing Steel		Yes
481	$455,325.00	511E34447	CLASS QC2 CONCRETE WITH QC/QA, B	21	Level 2 Bridge		Yes
482	$58,000.00	511E34450	CLASS QC2 CONCRETE WITH QC/QA, B	21	Level 2 Bridge		Yes
483	$174,330.00	511E41012	CLASS QC1 CONCRETE WITH QC/QA, PI	21	Level 2 Bridge		Yes
484	$129,210.00	511E43512	CLASS QC1 CONCRETE WITH QC/QA, A	21	Level 2 Bridge		Yes
485	$80,000.00	511E46512	CLASS QC1 CONCRETE WITH QC/QA, F	38	Misc. Concrete		Yes
486	$37,023.14	512E10100	SEALING OF CONCRETE SURFACES (E	57	Sealing of Concrete Surfaces with Epox	»	No
487	$1,710.00	512E10300	SEALING CONCRETE BRIDGE DECKS W	57	Sealing of Concrete Surfaces with Epox	»	No
488	$550,000.00	515E15030	DRAPED STRAND PRESTRESSED CON	21	Level 2 Bridge		Yes
489	$275,000.00	515E15030	DRAPED STRAND PRESTRESSED CON	21	Level 2 Bridge		Yes
490	$90,000.00	515E20000	INTERMEDIATE DIAPHRAGMS	21	Level 2 Bridge		Yes
491	$1,680.00	516E13600	1" PREFORMED EXPANSION JOINT FILL	0	(No WT Req)		Yes
492	$4,130.00	516E14014	INTEGRAL ABUTMENT EXPANSION JOIN	0	(No WT Req)		Yes
493	$35,200.00	516E44100	ELASTOMERIC BEARING WITH INTERN	27	Expansion & Contraction Joints, Joint S		Yes
494	$27,600.00	516E44101	ELASTOMERIC BEARING WITH INTERN	27	Expansion & Contraction Joints, Joint S		Yes
495	$7,200.00	518E12301	SCUPPERS, INCLUDING SUPPORTS, AS	21	Level 2 Bridge		Yes
496	$14,868.00	518E21200	POROUS BACKFILL WITH GEOTEXTILE	34	Earth Retaining Structures		Yes
497	$2,590.00	518E40000	6" PERFORATED CORRUGATED PLASTI	0	(No WT Req)		Yes
498	$875.00	518E40010	6" NON-PERFORATED CORRUGATED PL	0	(No WT Req)		Yes
499	$87,480.00	526E25011	REINFORCED CONCRETE APPROACH S	29	Structure Repairs		Yes
500	$19,125.00	526E90010	TYPE A INSTALLATION	29	Structure Repairs		Yes
501	$162,750.00	601E32104	ROCK CHANNEL PROTECTION, TYPE B	35	Drainage (Culverts, Misc.)		Yes
502	$2,160.00	203E65000	SPECIAL - SETTLEMENT PLATFORM	4	Roadway Excavation & Embankment C		Yes
503	$90,000.00	503E21300	UNCLASSIFIED EXCAVATION	6	Incidental Grading		Yes
504	$30,000.00	505E11100	PILE DRIVING EQUIPMENT MOBILIZATI	0	(No WT Req)		Yes
505	$174,240.00	507E00100	STEEL PILES HP10X42, FURNISHED	53	Piling		Yes
506	$71,800.00	507E00150	STEEL PILES HP10X42, DRIVEN	53	Piling		Yes
507	$381,396.40	509E10000	EPOXY COATED STEEL REINFORCEME	23	Reinforcing Steel		Yes
508	$15,082.90	509E30020	NO. 4 DEFORMED GFRP REINFORCEME	23	Reinforcing Steel		Yes
509	$555,750.00	511E34446	CLASS QC2 CONCRETE WITH QC/QA, B	21	Level 2 Bridge		Yes
510	$73,950.00	511E34450	CLASS QC2 CONCRETE WITH QC/QA, B	21	Level 2 Bridge		Yes
511	$121,245.00	511E43512	CLASS QC1 CONCRETE WITH QC/QA, A	21	Level 2 Bridge		Yes
512	$342,000.00	511E45602	CLASS QC4 MASS CONCRETE, SUBSTR	21	Level 2 Bridge		Yes
513	$128,125.00	511E46512	CLASS QC1 CONCRETE WITH QC/QA, F	38	Misc. Concrete		Yes
514	$37,536.73	512E10100	SEALING OF CONCRETE SURFACES (E	57	Sealing of Concrete Surfaces with Epox	»	No
515	$350,000.00	515E15100	DRAPED STRAND PRESTRESSED CON	21	Level 2 Bridge		Yes
516	$350,000.00	515E15100	DRAPED STRAND PRESTRESSED CON	21	Level 2 Bridge		Yes
517	$350,000.00	515E15100	DRAPED STRAND PRESTRESSED CON	21	Level 2 Bridge		Yes
518	$90,000.00	515E20000	INTERMEDIATE DIAPHRAGMS	21	Level 2 Bridge		Yes
519	$6,640.00	516E10010	ARMORLESS PREFORMED JOINT SEAL	27	Expansion & Contraction Joints, Joint S		Yes

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520	$1,328.00	516E13200	1/2" PREFORMED EXPANSION JOINT FIL	0	(No WT Req)		Yes
521	$1,162.00	516E13600	1" PREFORMED EXPANSION JOINT FILL	0	(No WT Req)		Yes
522	$868.00	516E13900	2" PREFORMED EXPANSION JOINT FILL	0	(No WT Req)		Yes
523	$3,991.00	516E25000	NYLON REINFORCED NEOPRENE SHEE	27	Expansion & Contraction Joints, Joint S		Yes
524	$11,500.00	516E44100	ELASTOMERIC BEARING WITH INTERN	27	Expansion & Contraction Joints, Joint S		Yes
525	$28,000.00	516E44101	ELASTOMERIC BEARING WITH INTERN	27	Expansion & Contraction Joints, Joint S		Yes
526	$36,750.00	516E44200	ELASTOMERIC BEARING WITH INTERN	27	Expansion & Contraction Joints, Joint S		Yes
527	$14,994.00	518E21200	POROUS BACKFILL WITH GEOTEXTILE	34	Earth Retaining Structures		Yes
528	$2,660.00	518E40000	6" PERFORATED CORRUGATED PLASTI	0	(No WT Req)		Yes
529	$1,400.00	518E40010	6" NON-PERFORATED CORRUGATED PL	0	(No WT Req)		Yes
530	$82,800.00	526E25010	REINFORCED CONCRETE APPROACH S	29	Structure Repairs		Yes
531	$19,505.00	526E90030	TYPE C INSTALLATION	29	Structure Repairs		Yes
532	$47,340.00	601E20000	CRUSHED AGGREGATE SLOPE PROTE	35	Drainage (Culverts, Misc.)		Yes
533	$27,300.00	601E32204	ROCK CHANNEL PROTECTION, TYPE C	35	Drainage (Culverts, Misc.)		Yes
534	$90,000.00	503E21300	UNCLASSIFIED EXCAVATION	6	Incidental Grading		Yes
535	$30,000.00	505E11100	PILE DRIVING EQUIPMENT MOBILIZATI	0	(No WT Req)		Yes
536	$300,960.00	507E00200	STEEL PILES HP12X53, FURNISHED	53	Piling		Yes
537	$120,200.00	507E00250	STEEL PILES HP12X53, DRIVEN	53	Piling		Yes
538	$460,744.75	509E10000	EPOXY COATED STEEL REINFORCEME	23	Reinforcing Steel		Yes
539	$17,037.50	509E30020	NO. 4 DEFORMED GFRP REINFORCEME	23	Reinforcing Steel		Yes
540	$700,050.00	511E34446	CLASS QC2 CONCRETE WITH QC/QA, B	21	Level 2 Bridge		Yes
541	$71,050.00	511E34450	CLASS QC2 CONCRETE WITH QC/QA, B	21	Level 2 Bridge		Yes
542	$277,005.00	511E43512	CLASS QC1 CONCRETE WITH QC/QA, A	21	Level 2 Bridge		Yes
543	$425,000.00	511E45602	CLASS QC4 MASS CONCRETE, SUBSTR	21	Level 2 Bridge		Yes
544	$140,000.00	511E46512	CLASS QC1 CONCRETE WITH QC/QA, F	38	Misc. Concrete		Yes
545	$62,032.74	512E10100	SEALING OF CONCRETE SURFACES (E	57	Sealing of Concrete Surfaces with Epox	»	No
546	$2,250.00	512E10300	SEALING CONCRETE BRIDGE DECKS W	57	Sealing of Concrete Surfaces with Epox	»	No
547	$1,920.00	512E33000	TYPE 2 WATERPROOFING	40	Waterproofing		Yes
548	$65,000.00	515E15041	DRAPED STRAND PRESTRESSED CON	21	Level 2 Bridge		Yes
549	$390,000.00	515E15041	DRAPED STRAND PRESTRESSED CON	21	Level 2 Bridge		Yes
550	$65,000.00	515E15041	DRAPED STRAND PRESTRESSED CON	21	Level 2 Bridge		Yes
551	$325,000.00	515E15041	DRAPED STRAND PRESTRESSED CON	21	Level 2 Bridge		Yes
552	$65,000.00	515E15041	DRAPED STRAND PRESTRESSED CON	21	Level 2 Bridge		Yes
553	$65,000.00	515E15041	DRAPED STRAND PRESTRESSED CON	21	Level 2 Bridge		Yes
554	$325,000.00	515E15041	DRAPED STRAND PRESTRESSED CON	21	Level 2 Bridge		Yes
555	$127,500.00	515E20000	INTERMEDIATE DIAPHRAGMS	21	Level 2 Bridge		Yes
556	$126,000.00	516E12300	STRIP SEAL EXPANSION JOINT ANCHO	27	Expansion & Contraction Joints, Joint S		Yes
557	$68,000.00	516E44100	ELASTOMERIC BEARING WITH INTERN	27	Expansion & Contraction Joints, Joint S		Yes
558	$4,896.00	518E20000	PREFABRICATED GEOCOMPOSITE DRA	35	Drainage (Culverts, Misc.)		Yes
559	$3,780.00	518E21200	POROUS BACKFILL WITH GEOTEXTILE	34	Earth Retaining Structures		Yes
560	$3,115.00	518E40000	6" PERFORATED CORRUGATED PLASTI	0	(No WT Req)		Yes
561	$700.00	518E40011	6" NON-PERFORATED CORRUGATED PL	0	(No WT Req)		Yes
562	$114,840.00	526E25011	REINFORCED CONCRETE APPROACH S	29	Structure Repairs		Yes
563	$25,875.00	526E90010	TYPE A INSTALLATION	29	Structure Repairs		Yes
564	$70,164.00	601E20000	CRUSHED AGGREGATE SLOPE PROTE	35	Drainage (Culverts, Misc.)		Yes
565	$66,570.00	601E32204	ROCK CHANNEL PROTECTION, TYPE C	35	Drainage (Culverts, Misc.)		Yes
566	$3,240.00	203E65000	SPECIAL - SETTLEMENT PLATFORM	4	Roadway Excavation & Embankment C		Yes
567	$90,000.00	503E21300	UNCLASSIFIED EXCAVATION	6	Incidental Grading		Yes
568	$30,000.00	505E11100	PILE DRIVING EQUIPMENT MOBILIZATI	0	(No WT Req)		Yes
569	$238,260.00	507E00200	STEEL PILES HP12X53, FURNISHED	53	Piling		Yes
570	$99,700.00	507E00250	STEEL PILES HP12X53, DRIVEN	53	Piling		Yes
571	$368,347.85	509E10000	EPOXY COATED STEEL REINFORCEME	23	Reinforcing Steel		Yes
572	$17,212.95	509E30020	NO. 4 DEFORMED GFRP REINFORCEME	23	Reinforcing Steel		Yes
573	$519,675.00	511E34446	CLASS QC2 CONCRETE WITH QC/QA, B	21	Level 2 Bridge		Yes
574	$71,050.00	511E34450	CLASS QC2 CONCRETE WITH QC/QA, B	21	Level 2 Bridge		Yes
575	$216,825.00	511E43512	CLASS QC1 CONCRETE WITH QC/QA, A	21	Level 2 Bridge		Yes
576	$331,000.00	511E45602	CLASS QC4 MASS CONCRETE, SUBSTR	21	Level 2 Bridge		Yes
577	$88,750.00	511E46512	CLASS QC1 CONCRETE WITH QC/QA, F	38	Misc. Concrete		Yes

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578	$53,212.39	512E10100	SEALING OF CONCRETE SURFACES (E	57	Sealing of Concrete Surfaces with Epox	»	No
579	$1,755.00	512E10300	SEALING CONCRETE BRIDGE DECKS W	57	Sealing of Concrete Surfaces with Epox	»	No
580	$1,632.00	512E33000	TYPE 2 WATERPROOFING	40	Waterproofing		Yes
581	$325,000.00	515E15041	DRAPED STRAND PRESTRESSED CON	21	Level 2 Bridge		Yes
582	$325,000.00	515E15041	DRAPED STRAND PRESTRESSED CON	21	Level 2 Bridge		Yes
583	$325,000.00	515E15041	DRAPED STRAND PRESTRESSED CON	21	Level 2 Bridge		Yes
584	$90,000.00	515E20000	INTERMEDIATE DIAPHRAGMS	21	Level 2 Bridge		Yes
585	$98,700.00	516E12300	STRIP SEAL EXPANSION JOINT ANCHO	27	Expansion & Contraction Joints, Joint S		Yes
586	$51,600.00	516E44100	ELASTOMERIC BEARING WITH INTERN	27	Expansion & Contraction Joints, Joint S		Yes
587	$3,960.00	518E20000	PREFABRICATED GEOCOMPOSITE DRA	35	Drainage (Culverts, Misc.)		Yes
588	$3,276.00	518E21200	POROUS BACKFILL WITH GEOTEXTILE	34	Earth Retaining Structures		Yes
589	$2,695.00	518E40000	6" PERFORATED CORRUGATED PLASTI	0	(No WT Req)		Yes
590	$875.00	518E40011	6" NON-PERFORATED CORRUGATED PL	0	(No WT Req)		Yes
591	$90,360.00	526E25011	REINFORCED CONCRETE APPROACH S	29	Structure Repairs		Yes
592	$20,475.00	526E90010	TYPE A INSTALLATION	29	Structure Repairs		Yes
593	$63,684.00	601E20000	CRUSHED AGGREGATE SLOPE PROTE	35	Drainage (Culverts, Misc.)		Yes
594	$52,185.00	601E32204	ROCK CHANNEL PROTECTION, TYPE C	35	Drainage (Culverts, Misc.)		Yes
595	$3,240.00	203E65000	SPECIAL - SETTLEMENT PLATFORM	4	Roadway Excavation & Embankment C		Yes
596	$150,000.00	503E21300	UNCLASSIFIED EXCAVATION	6	Incidental Grading		Yes
597	$30,000.00	505E11100	PILE DRIVING EQUIPMENT MOBILIZATI	0	(No WT Req)		Yes
598	$368,720.00	507E00100	STEEL PILES HP10X42, FURNISHED	53	Piling		Yes
599	$160,600.00	507E00150	STEEL PILES HP10X42, DRIVEN	53	Piling		Yes
600	$40,716.00	507E92200	PREBORED HOLES	53	Piling		Yes
601	$433,725.45	509E10000	EPOXY COATED STEEL REINFORCEME	23	Reinforcing Steel		Yes
602	$14,908.18	509E30020	NO. 4 DEFORMED GFRP REINFORCEME	23	Reinforcing Steel		Yes
603	$776,100.00	511E34446	CLASS QC2 CONCRETE WITH QC/QA, B	21	Level 2 Bridge		Yes
604	$63,800.00	511E34450	CLASS QC2 CONCRETE WITH QC/QA, B	21	Level 2 Bridge		Yes
605	$117,000.00	511E41012	CLASS QC1 CONCRETE WITH QC/QA, PI	21	Level 2 Bridge		Yes
606	$182,310.00	511E43512	CLASS QC1 CONCRETE WITH QC/QA, A	21	Level 2 Bridge		Yes
607	$48,750.00	511E46512	CLASS QC1 CONCRETE WITH QC/QA, F	38	Misc. Concrete		Yes
608	$24,696.98	512E10100	SEALING OF CONCRETE SURFACES (E	57	Sealing of Concrete Surfaces with Epox	»	No
609	$2,539,969.60	513E10281	STRUCTURAL STEEL MEMBERS, LEVEL	24	Structural Steel Erection		Yes
610	$58,968.00	513E20000	WELDED STUD SHEAR CONNECTORS	25	Stud Welding		Yes
611	$13,360.00	516E10010	ARMORLESS PREFORMED JOINT SEAL	27	Expansion & Contraction Joints, Joint S		Yes
612	$2,170.00	516E13200	1/2" PREFORMED EXPANSION JOINT FIL	0	(No WT Req)		Yes
613	$2,184.00	516E13600	1" PREFORMED EXPANSION JOINT FILL	0	(No WT Req)		Yes
614	$1,008.00	516E13900	2" PREFORMED EXPANSION JOINT FILL	0	(No WT Req)		Yes
615	$7,774.00	516E25000	NYLON REINFORCED NEOPRENE SHEE	27	Expansion & Contraction Joints, Joint S		Yes
616	$20,250.00	516E44100	ELASTOMERIC BEARING WITH INTERN	27	Expansion & Contraction Joints, Joint S		Yes
617	$21,150.00	516E44100	ELASTOMERIC BEARING WITH INTERN	27	Expansion & Contraction Joints, Joint S		Yes
618	$25,200.00	518E21200	POROUS BACKFILL WITH GEOTEXTILE	34	Earth Retaining Structures		Yes
619	$4,200.00	518E40000	6" PERFORATED CORRUGATED PLASTI	0	(No WT Req)		Yes
620	$1,750.00	518E40010	6" NON-PERFORATED CORRUGATED PL	0	(No WT Req)		Yes
621	$158,760.00	526E25011	REINFORCED CONCRETE APPROACH S	29	Structure Repairs		Yes
622	$39,245.00	526E90030	TYPE C INSTALLATION	29	Structure Repairs		Yes
623	$54,108.00	601E20000	CRUSHED AGGREGATE SLOPE PROTE	35	Drainage (Culverts, Misc.)		Yes
624	$65,700.00	869E00100	HIGH LOAD MULTI-ROTATIONAL (HLMR)	27	Expansion & Contraction Joints, Joint S		Yes
625	$145,000.00	100E51100	DEPARTMENT'S SHARE OF THE DISPUT	0	(No WT Req)		Yes
626	$700,000.00	103E05000	PREMIUM FOR CONTRACT PERFORMA	0	(No WT Req)		Yes
627	$20,000.00	108E10000	CPM PROGRESS SCHEDULE	0	(No WT Req)		Yes
628	$7,750.00	111E10100	SPECIAL - DEPARTMENTS SHARE FACI	0	(No WT Req)		Yes
629	$407,000.00	614E11000	MAINTAINING TRAFFIC	39	Maintenance of Traffic		Yes
630	$168,000.00	619E16021	FIELD OFFICE, TYPE C, AS PER PLAN	0	(No WT Req)		Yes
631	$1,173,200.00	623E10000	CONSTRUCTION LAYOUT STAKES AND	0	(No WT Req)		Yes
632	$6,430,000.00	624E10000	MOBILIZATION	0	(No WT Req)		Yes
700	$130,000.00	208E10000	PRE-BLAST CONDITION SURVEY	0	(No WT Req)		Yes
701	$56,560.00	208E12000	BLASTING CONSULTANT	0	(No WT Req)		Yes
702	$14,700.00	208E13000	AIR BLAST AND NOISE CONTROL	0	(No WT Req)		Yes

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703	$14,700.00	208E14000	VIBRATION CONTROL AND MONITORIN	0	(No WT Req)	Yes
704	$17,875.00	208E16000	HYDROLOGIST	0	(No WT Req)	Yes
705	$3,734.50	606E15200	GUARDRAIL, TYPE MGS HALF POST SP	36	Guardrail / Attenuators	Yes
706	$18,000.00	623E11000	PROVIDING ELECTRONIC INSTRUMENT	0	(No WT Req)	Yes
707	$5,995.00	518E21050	POROUS BACKFILL WITH GEOTEXTILE	34	Earth Retaining Structures	Yes
708	$7,125.00	518E40000	6" PERFORATED CORRUGATED PLASTI	0	(No WT Req)	Yes
709	$494.00	518E40010	6" NON-PERFORATED CORRUGATED PL	0	(No WT Req)	Yes
710	$186,030.00	511E41012	CLASS QC1 CONCRETE WITH QC/QA, PI	21	Level 2 Bridge	Yes
711	$350,000.00	503E11100	COFFERDAMS AND EXCAVATION BRACI	53	Piling	Yes
712	$325,000.00	503E11100	COFFERDAMS AND EXCAVATION BRACI	53	Piling	Yes
713	$30,800.00	606E60028	IMPACT ATTENUATOR, TYPE 2 (BIDIRE	36	Guardrail / Attenuators	Yes
714	$16,150.00	622E10121	CONCRETE BARRIER, SINGLE SLOPE, T	38	Misc. Concrete	Yes
715	$10,000.00	622E24840	CONCRETE BARRIER END SECTION, TY	38	Misc. Concrete	Yes
716	$12,997.06	809E69123	ATC CONTROLLER, AS PER PLAN	44	Traffic Signals - Standard	Yes

$128,588,034.98 Total Prime is not Pre-Qual for: $1,932,727.74 1.50%

10/29/2024

Project 240512 **Addendum No. 1**
PID No. 75923
LAW-7-2.17
NEW CONSTRUCTION
Letting: December 05, 2024

Notice to all Bidders and Suppliers to please be advised of the attached Proposal Addendum.

> For internet access to information referenced in this addendum, please see the ODOT web site at: https://ftp.dot.state.oh.us/pub/Contracts/Attach/LAW-75923/

The Department utilizes Bid Express (http://www.bidx.com) as the official medium for electronic bid submittal. All bidders must prepare bids and submit them online via Bid Express using AASHTOWare Project Bids software.

Addenda amendments must be acknowledged in the miscellaneous section of the Project Bids file and all amendments loaded in order for your bid to be considered for award of this project. Bid express will not accept bids that do not have amendments incorporated. Failure to incorporate changed quantities or items in your Project Bids submissions will result in the rejection of your bid.

PROPOSAL ADDENDUM
FOR
PROJECT: 240512 | **CRS:** LAW-7-2.17 | **PID:** 75923

MODIFICATIONS

REVISED COMPLETION DATE	N/A
REPLACE/ADD PLAN SHEETS	**1, 22D, 22E, 22H, 22I, 22J, 22K, 22N, 22O, 22Q, 22R, 22S, 22U, 22V, 22W, 22CC, 22DD, 22HH, 22II, 22JJ, 28, 29, 34, 37, 37A, 38, 39, 40, 41, 41B, 42, 43, 47, 54, 67, 68, 69, 70, 70A, 72, 73, 83, 101, 103, 104, 131, 133, 142, 144, 189, 190, 191, 192, 193, 305, 306, 431, 560, 629A, 633, 638A, 665, 666, 667, 668, 669, 670, 707, 713, 719, 740, 766, 767, 772, 844, 873, 897, 1039, 1040, 1041**

CONTRACT (PAY) ITEM MODIFICATIONS

REVISED

REF. NO.	ITEM	DESCRIPTION	TOTAL QTY.	UNIT	SECTION
0004	202E35100	PIPE REMOVED, 24" AND UNDER	2,536	FT	0001
0011	202E75000	FENCE REMOVED	6,799	FT	0001
0014	203E10000	EXCAVATION	5,045,779	CY	0001
0015	203E20000	EMBANKMENT	4,531,419	CY	0001
0018	204E10000	SUBGRADE COMPACTION	328,438	SY	0001
0029	606E26550	ANCHOR ASSEMBLY, MGS TYPE T	22	EACH	0001
0034	607E15000	FENCE, TYPE 47	43,587	FT	0001
0053	601E21100	SLOPE PROTECTION, MISC.: SEEDING AND EROSION CONTROL WITH TURF REINFORCING MAT, TYPE 3 AND PERCUSSION DRIVEN EARTH ANCHORS	11,199	SY	0002
0063	659E00300	TOPSOIL	468	CY	0002
0065	659E00540	SEEDING AND MULCHING, CLASS 3C	1,182,427	SY	0002
0145	611E99710	PRECAST REINFORCED CONCRETE OUTLET	37	EA	0003
0150	304E20000	AGGREGATE BASE	42,620	CY	0004
0159	442E10300	ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A (447)	9,691	CY	0004
0160	443E12000	STONE MATRIX ASPHALT CONCRETE, 12.5 MM, PG76-22M, (446)	423	CY	0004
0198	630E03100	GROUND MOUNTED SUPPORT, NO. 3 POST	2915	FT	0006
0211	630E80100	SIGN, FLAT SHEET	1476.8	SQ FT	0006
0263	632E87130	COMBINATION STRAIN POLE, TYPE TC-81.11, DESIGN 10	1	EACH	0007

DELETED

REF. NO.	ITEM	DESCRIPTION	TOTAL QTY.	UNIT	SECTION
0385	840E28000	SGB INSPECTION AND COMPACTION TESTING	1	LS	0014
0457	840E28000	SGB INSPECTION AND COMPACTION TESTING	1	LS	0016

ADDED

REF.	ITEM	DESCRIPTION	TOTAL QTY.	UNIT	SECTION

NO.					
0700	208E10000	PRE-BLAST CONDITION SURVEY	1	LS	0001 Roadway
0701	208E12000	BLASTING CONSULTANT	1	LS	0001 Roadway
0702	208E13000	AIR BLAST AND NOISE CONTROL	1	LS	0001 Roadway
0703	208E14000	VIBRATION CONTROL AND MONITORING	1	LS	0001 Roadway
0704	208E16000	HYDROLOGIST	1	LS	0001 Roadway
0705	606E15200	GUARDRAIL, TYPE MGS HALF POST SPACING WITH LONG POSTS	137.5	FT	0001 Roadway

ADDED NOTES

1. Added ROCK OR SHALE BLASTING OPERATIONS on sheet 37
2. Added DURABLE MATERIAL note on sheet 37A
3. Revised the ITEM 203 – EMBANKMENT, AS PER PLAN (TYPE C) plan note on sheet 38 to make it more simple and define material sizing allowable for the drainage layer.
4. Added ITEM 605 - 6” ROCK CUT UNDERDRAINS, AS PER PLAN On sheet 41B
5. PN 127 added

FOR REFERENCE ONLY

PRE-BID QUESTIONS

The inclusion of the question(s) that accompany answer(s) in this addendum is provided for reference only and the question(s) shall not be construed as a contract modification or change.

Question Submitted: **10/24/2024 9:54:20 AM**

There are two gas wells shown on sheet #103. Do both of these need plugged or just the #34087601320000 Active Well?

Answer: The Department records, ODNR oil & gas well logs, as well as the current owner has only documented one active oil/gas well at this location. One of the symbols will be removed from this sheet.

Question Submitted: **10/24/2024 9:32:38 AM**

The gasline and well shown on page 22H shows DND. Will this crosshatching be removed?

Answer: Yes, the areas where the natural gas wells and appurtenances are shown on sheets 22E and 22H will be revised to a "Tree Clearing Area - C" and the Do Not Disturb (DND) hatching removed.

Question Submitted: **10/24/2024 9:10:15 AM**

Are there any work restrictions and clearances under the 138kV denoted as "Et" on Pg. 13?

Answer: In general, the answer is yes. The exact amount and type of restrictions and clearances would be determined by OSHA regulations and the specific utility. Contractors are responsible to determine those restrictions and clearances based on the work, and equipment they intend to use near this utility.

Question Submitted: **10/24/2024 8:10:20 AM**

The Utility information is limited to (2) Pages on sheet 13 and 14. More details are shown on the plan pages but theres no information on the disposition of what utilities will remain and/or be relocated. Will the Department please provide a Utility Note or Utility Disposition for each of the Utility Providers listed on sheets 13 and 14?

Answer: The Department is finalizing the Utility Note and will issue it as soon as it is ready via Addendum. We know that due to the accelerated schedule of project delivery, the majority of utility relocations will need to occur after this contract is awarded and will be ongoing for 4-8 months after this contractor begins work. A phased approach to utility relocation is being pursued in order to move utilities to coincide with the plan MOT phasing, namely the SR243/CR69/CR118/Brentwood/CR 104 area first, the beginning of the project and CR 32 area second and SR 775 interchange area last.

Question Submitted: **10/23/2024 1:36:07 PM**

The Tree Clearing Area C is on the critical path of the project due to the Bat Tree restrictions. This critical path is impacting feasible construction of CR69 Phase 1 for the Interim Date of 7/15/2025. Will ODOT have the Clearing Contractor for LAW-120720 perform Area C clearing (especially between STA. 245+00 and 300+00) to avoid schedule impacts?

Answer: The Department intends to add additional tree clearing limits to the existing Tree Clearing Contractor for the areas outside of the 2001 NEPA limits and approximately from Sta 248 to Sta 296. The revision will be shown in an Addendum.

Question Submitted: **10/22/2024 12:49:17 PM**

Referencing Special Provisions, Waterway Permits Conditions, C-R-S: LAW-7-2.17, PID: 75923/113211, Dated Aug. 2, 2024.Permit conditions 10- Temporary Access Fills without SreamStats data- lists streams 1,2,3a,4,5,6,7,82,10a,10b,10c,12,13a,13a1,13a2,13a3,15,15a,15b,16a, and 17.Permit condition 11-Temparary Access Fills with StreamStats data-lists streams 3,9,9a,10,11,13,14,16, Symmes Creek, Bear Creek, Bent Creek, Indian Guyan Creek and Little Paddy Creek.Please provide StreamStats or reclassify streams 3,9,10,13,14,16 and Bear Creek. These streams are listed under condition 11 but we could not find data.

Answer: The Department completed a StreamStats check prior to advertising the project for sale and again recently and have verified that these streams are delineated and

available on StreamStats. Bidders have access to this data. The Contractor is responsible for obtaining flow information on StreamStats, per the Special Provisions.

Question Submitted: **10/22/2024 12:47:56 PM**

Referencing Special Provisions, Waterway Permits Conditions, C-R-S: LAW-7-2.17, PID: 75923/113211, Dated Aug. 2, 2024.Permit conditions 10- Temporary Access Fills without SreamStats data- lists streams 1,2,3a,4,5,6,7,82,10a,10b,10c,12,13a,13a1,13a2,13a3,15,15a,15b,16a, and 17. Permit condition 11-Temparary Access Fills with StreamStats data-lists streams 3,9,9a,10,11,13,14,16, Symmes Creek, Bear Creek, Bent Creek, Indian Guyan Creek and Little Paddy Creek. Please indicate which condition streams 14a,14b,16a1, and 18 should be considered.

Answer: These four streams (14a,14b,16a1, and 18) are small ephemeral streams that will either be completely graded/filled (14a,14b,16a1) or have very minor RCP fill impacts (18). No TAF is being permitted for these streams so they don't fall under either TAF condition. Since no temporary fills of any kind are allowed in these four streams, only permanent fills stated in the Special Provisions will be authorized in streams 14a,14b,16a1, and 18.

Question Submitted: **10/21/2024 3:56:28 PM**

When will ODOT post Addendum No.1 ?

Answer: We anticipate Addendum #1 to be posted early next week.

Question Submitted: **10/18/2024 10:44:18 AM**

Traffic signal structures on sheet 772/1247 do not match the pole chart designs on sheet 773A/1247. Please confirm what designs are needed for these structures.

Answer: It appears the callouts on sheet 772 are not correct and will be corrected with an Addendum.

Question Submitted: **10/17/2024 2:10:37 PM**

Regarding the questions regarding office calcs and the new CADD files - > is this the reference folder you are referencing? -----> https://ftp.dot.state.oh.us/pub/Contracts/Attach/LAW-75923/REFERENCE%20FILES/

Answer: Yes

Question Submitted: **10/16/2024 8:03:43 AM**

Can the department please provide a link to the excel file for the end area calculations referenced in an earlier prebid question? We do not see this file listed on the ftp site with the other reference files.

Answer: There was a delay in the upload. The file will be uploaded this evening.

Question Submitted: **10/15/2024 2:27:30 PM**

Will metal SIP deck forms be allowed for bridges?

Answer: **Stay-in-place (SIP) deck forms are not allowed.**

Question Submitted: **10/15/2024 1:35:54 PM**

Structure LAW-7-0370 requires preloading via temporary fill or jersey barrier for the noted settlement periods prior to continuing construction. Pile driving notes on sheet 818 state pile driving may continue after a 30-day waiting period, whereas MSE construction may not continue until after a 90-day waiting period per note on sheet 844. Do both waiting periods require preloading for the full duration, or may preloading be removed after the initial 30-day waiting period for pile driving?

Answer: **The waiting period on sheet 844 for ITEM 867 - TEMPORARY WIRE FACED MECHANICALLY STABILIZED EARTH WALL, AS PER PLAN will be revised to 30 days. This will be corrected via Addendum.**

Question Submitted: **10/14/2024 4:53:12 PM**

ITEM 203 Embankment, As Per Plan is described as "Type C". What is Type C referencing?

Answer: **ITEM 203 - EMBANKMENT, AS PER PLAN (TYPE C) is simply the name chosen to describe this AS PER PLAN material. At one time, there were Types "A" and "B", but these were not needed for this phase of the project. The "Type C" is not referencing any other material or ODOT specification.**

Question Submitted: **10/14/2024 4:49:11 PM**

This project will require blasting. There are homes, structures, and drinking water well(s) within the blast radius. Will the department add Lump Sum items for any applicable items such as Pre-Blast Condition Survey, Blasting Consultant, Airblast and Noise Control, Vibration Control and Monitoring and/or Hydrologist?

Answer: **Yes, the Department will be adding additional detail regarding blasting with Addendum #1.**

Question Submitted: **10/14/2024 4:48:03 PM**

The plan note for Item 203 – Embankment As Per Plan (Type C) is ambiguous. References are made to both cohesive material and crushed stone per 703. Can cohesive material meeting the classifications in 703 be utilized to construct the drainage layer in its entirety?

Answer: **The plan note for Item 203 - Embankment As Per Plan (Type C) is being reviewed for clarity and will be revised in Addendum #1.**

Question Submitted: **10/14/2024 4:44:19 PM**

This project is in a remote part of the state, the DBE Goal of 9.5% (approx. $20,000,000) will require small DBE firms to travel and relocate to this remote area which is not feasible. Will ODOT consider reducing the DBE goal for this project?

Answer: The DBE goal of 9.5% won't be changed. PN22 outlines what the contractor should do in the event they can't meet the goal.

Question Submitted: **10/14/2024 4:41:04 PM**

The embankments which require Embankment As Per Plan (Type C) will be uneven, sloped, irregular, and potentially soft subgrade which often require a bridging per 203.05. When bridging is needed, it won't be possible to maintain a 6" lift of ITEM 304, therefore the increased lift thickness determined by the Engineer will be entirely of Item 304 not Item 203 Embankment, As Per Plan(Type C). By having a separate pay item to measure and quantify the Separation Layer of Item 304, ODOT will receive the best value for the Item 203 Embankment, As Per Plan (Type C). If this Separation Layer is kept incidental to the Embankment, then every bridging lift placed in the field will be subject to a potential Change Order and delay. ODOT will also pay for additional risk coverage and material waste via the Item 203 Embankment As Per Plan (Type C) if this material is left incidental. Will ODOT create a separate bid item for Item 304 Separation Layer(CY) and Separation Fabric, Geotextile Type A(SY)?

Answer: The plan note for Item 203 - Embankment As Per Plan (Type C) is being reviewed for clarity and will be revised in Addendum #1.

Question Submitted: **10/14/2024 7:22:33 AM**

The CADD files currently available in the reference files contain an XML file for the existing surface but not the proposed. Please provide an XML file for the proposed surface.

Answer: The Department will provide the requested information for the SR7 mainline, CR69, SR243 and ramps. It will be posted to the FTP site when complete.

Question Submitted: **10/10/2024 3:28:53 PM**

Can a typical section be provided to clarify how the geogrid for the reinforced soil slopes is layered, how it is measured, and how it is differentiated between the right and left sides of the slope? For example on page 38, Sta. 134+56, at elevation 525 the embedded length is 90 feet and the linear length of the embankment is 169 FT. 90 FT x 2 sides of the embankment x 169 LF = 3380 SY. Table shows 5280 SY.

Also, STA. 300+06 Elev 536 shows 80 Ft geogrid layer, 80FT x 94 LF x 1 side = 835.5 SY. Table shows 2862 SY.

Answer: This will be addressed in Addendum #1.

Question Submitted: **10/10/2024 3:00:57 PM**

Can office calculation spreadsheets be provided for the average end area calculations of the excavations and embankments shown in the cross-sections?

Answer: **Office calculations in an Excel spreadsheet named "75923_Earthwork Side and Main Calcs and Sheet Totals" has been provided in the Reference files.**

Question Submitted: **10/10/2024 2:40:47 PM**

Can the 8/2/24 Oil and Gas Well Special Provision be made available to the bidders?

Answer: **The Special Provisions are currently packaged with the Plan set, not the proposal, and they are available through DigitalPaper XE for download.**

Question Submitted: **10/10/2024 2:39:53 PM**

Can the Special Provision 8/2/24 Waterway Permit be made available?

Answer: **The Special Provisions are currently packaged with the Plan set, not the proposal, and they are available through DigitalPaper XE for download.**

PN 127 – 01/18/2019 - Lane Value Contract:

The Contractor shall be assessed Disincentives as designated in the Lane Value Contract Table for each unit of time the described Critical Lane/Ramp is restricted from full use by the traveling public within the restricted time period. The Lane Value Contract Table is located in the Plan General Notes. The Disincentives will be assessed for all restrictions of the critical work.

Critical work is shown in the Lane Value Contract Table.

Critical work is defined as having the designated sections open to unrestricted traffic as shown in the table, or the entire project if not otherwise listed.

Unrestricted traffic is defined as all traffic lanes being available for use with specified striping and safety features in place.

11/19/2024

Project 240512 **Addendum No. 2**
PID No. 75923
LAW-SR 7-02.17 Phase 2
New Construction
Letting: December 12, 2024

Notice to all Bidders and Suppliers to please be advised of the attached Proposal Addendum.

> For internet access to information referenced in this addendum, please see the ODOT web site at: https://ftp.dot.state.oh.us/pub/Contracts/Attach/LAW-75923/

The Department utilizes Bid Express (http://www.bidx.com) as the official medium for electronic bid submittal. All bidders must prepare bids and submit them online via Bid Express using AASHTOWare Project Bids software.

Addenda amendments must be acknowledged in the miscellaneous section of the Project Bids file and all amendments loaded in order for your bid to be considered for award of this project. Bid express will not accept bids that do not have amendments incorporated. Failure to incorporate changed quantities or items in your Project Bids submissions will result in the rejection of your bid.

PROPOSAL ADDENDUM-002
FOR
PROJECT: 240512 | **CRS:** LAW-7-2.17 | **PID:** 75923

MODIFICATIONS

REVISED COMPLETION DATE	No
REPLACE/ADD PLAN SHEETS	1, 1A, 11, 15, 22A, 22B, 22N, 22O, 22P, 22Q, 22R, 22S, 22T, 22U, 22HH, 29, 34, 37, 37A, 38, 67, 68, 70, 70A, 78, 79, 81, 146, 442, 445, 457, 560, 619, 620, 621, 628, 706, 707, 709, 711, 744, 792, 794, 796, 845, 847, 870, 871, 873, 907, 908, 964, 993, 1015, 1231A, 1231B, 1231C

CONTRACT (PAY) ITEM MODIFICATIONS

REVISED

REF. NO.	ITEM	DESCRIPTION	TOTAL QTY.	UNIT	SECTION
0065	659E00540	SEEDING AND MULCHING, CLASS 3C	1,183,035	SY	0002
0096	611E05900	15" CONDUIT, TYPE B	1,574	FT	0003
0097	611E06100	15" CONDUIT, TYPE C	1,122	FT	0003
0287	202E56001	BUILDING DEMOLISHED, AS PER PLAN, (2) 1-STORY FRAME HOUSE, WELL, 1-STORY BLOCK GARAGE	1	LS	0009
0309	511E46012	CLASS QC1 CONCRETE WITH QC/QA, RETAINING/WINGWALL NOT INCLUDING FOOTING	465	CY	0012
0311	512E10100	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	700	SY	0012
0424	507E00100	STEEL PILES HP10X42, FURNISHED	2,340	FT	0016
0425	507E00150	STEEL PILES HP10X42, DRIVEN	2,210	FT	0016
0536	507E00200	STEEL PILES HP12X53, FURNISHED	6,840	FT	0020
0576	511E45602	CLASS QC4 MASS CONCRETE, SUBSTRUCTURE WITH QC/QA	331	CY	0021

DELETED

REF. NO.	ITEM	DESCRIPTION	TOTAL QTY.	UNIT	SECTION
0328	511E45602	CLASS QC4 MASS CONCRETE, SUBSTRUCTURE WITH QC/QA	159	CY	0013

ADDED

REF. NO.	ITEM	DESCRIPTION	TOTAL QTY.	UNIT	SECTION
0706	623E11000	PROVIDING ELECTRONIC INSTRUMENTATION	1	LS	0023
0707	518E21050	POROUS BACKFILL WITH GEOTEXTILE FABRIC	55	SY	0012
0708	518E40000	6" PERFORATED CORRUGATED PLASTIC PIPE	375	FT	0012
0709	518E40010	6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS	26	FT	0012
0710	511E41012	CLASS QC1 CONCRETE WITH QC/QA, PIER ABOVE FOOTINGS	159	CY	0013
0711	503E11100	COFFERDAMS AND EXCAVATION BRACING	1	LS	0020
0712	503E11100	COFFERDAMS AND EXCAVATION BRACING	1	LS	0021

0713	606E60028	IMPACT ATTENUATOR, TYPE 2 (BIDIRECTIONAL), (30 MPH, 24" WIDE HAZARD)	1	EACH	0001
0714	622E10121	CONCRETE BARRIER, SINGLE SLOPE, TYPE C, AS PER PLAN	34	FT	0001
0715	622E24840	CONCRETE BARRIER END SECTION, TYPE B	1	EA	0001

ADDED NOTES

1. Added SS 902 on sheet 2.

2. Revised the ITEM 203 – EMBANKMENT, AS PER PLAN (TYPE C) plan note – sheet 38

3. Revised ENVIRONMENTAL COMMITMENTS plan note on sheet 15 to clarify constraints apply to certain Rock Outcrops.

4. Revised ROCK OR SHALE BLASTING OPERATIONS plan note on sheet 37.

5. Added COOPERATION BETWEEN CONTRACTORS plan note on sheet 37A.

6. Revised DURABLE MATERIAL plan note on sheet 37A.

7. Added ITEM 622 – CONCRETE BARRIER, SINGLE SLOPE, TYPE C, AS PER PLAN on sheet 37A.

8. Revised PILE DRIVING CONSTRAINTS plan note on sheets 794, 847, 908

FOR REFERENCE ONLY

PRE-BID QUESTIONS

The inclusion of the question(s) that accompany answer(s) in this addendum is provided for reference only and the question(s) shall not be construed as a contract modification or change.

Question Submitted: **11/15/2024 8:58:46 AM**

Please provide the engineering calculations for the probable sources of rock that could be used for item 203 Embankment, APP Type C.

Answer: An unrefined excel spreadsheet will be posted with the Reference Files that made some rough evaluation of possible sandstone quantities at different locations and at various elevations. This evaluation only looked at possible sandstone and not any other potential durable rock. Please note the Disclaimer that is associated with this file as well as all Reference Files and that disclaimer is replicated herein. Disclaimer - The Ohio Department of Transportation is providing the attached information as a courtesy to those who bid on our construction projects. However, please be advised that the Department expressly states that the attached information is not and nor shall it be considered, a part of the bidding documents. The Department shall NOT accept, review, hear or

consider any bid protest or construction claims arising from the attached information. In the event that there is a conflict between the attached information and the bidding documents, the bidding documents shall take precedence.

***Question Submitted*: 11/14/2024 3:56:24 PM**

Reference the BREC relocation plans. For clarification, what will be the lowest utility between pole 60 and 67 at Sta. 248+50?

Answer: While at some locations, there will be communication lines attached to new electric poles, at this location on BREC poles 60 and 67, only the BREC electric lines will be attached, and communication lines are not proposed.

***Question Submitted:* 11/14/2024 3:51:42 PM**

The clearing note on page 34 of the plans states, "REMOVE ALL TREES AND STUMPS WITHIN CONSTRUCTION LIMITS." The plans show clearing & grubbing outside the work limits to the R/W limits. Is the contractor required to clear outside the construction limits to the R/W or should the clearing stop at the construction limits. If the contractor is required to clear outside the construction limits, is grubbing required between the construction limits and R/W limits?

Answer: The contractor is to clear and grub to the limits as shown in the plans. Grubbing outside of the construction limits can be completed following the 201 specifications.

***Question Submitted:* 11/14/2024 12:39:51 PM**

It appears that ODOT may have double accounted for Excavation quantity in Ramp J & K. When comparing Ramp J Sta. 391+15 left of the matchline and Ramp K Sta. 388+00 right of the matchline there is overlap. There may also be overlap on the SR-775 Sta. 65+00 - 70+00 right side and Ramp J+K. We believe this is approx 75,000 +/- CY less excavation. Can ODOT please look into this and revise the end areas and quantity of Excavation?

Answer: The Department has double checked the calculations and verified them to be correct as shown in the plans. If additional information becomes available, we will certainly re-evaluate.

***Question Submitted:* 11/14/2024 11:39:43 AM**

Regarding Bridge no. LAW-7-2.17, Is waterproofing per 611.09 required for the Corrugated Steel Structural Plate Pipe Culvert?

Answer: Waterproofing per CMS 611.09 is required.

***Question Submitted:* 11/14/2024 11:02:54 AM**

The estimated wall quantities refer to 'Embankment as per plan' items and are listed under bid items for each bridge structure. However, they are not referenced in the general roadway summary. Could you please clarify whether these items should be added to the general summary, removed from the bridge sub-summary or totaled?

Answer: The "Item 203 – Embankment, As Per Plan" are listed for payment under each respective bridge and are in addition to the roadway quantities.

Question Submitted: **11/12/2024 11:10:57 AM**

Bridge structure LAW-7-0387 shown on plan sheet 870 of 1247 and quantified on sheet 873 of 1247, does NOT have a bid item for the installation of moment slabs associated with the abutment MSE walls and approach slabs as detailed on sheets 887,888,889,890. We believe a bid item for these moment slabs is needed (CL QC2 CONC, MMT SLAB W/QC QA). Please provide this pay item for this bridge structure and specify if the reinforcing bars for the moment slabs is incidental to this pay item.

Answer: The installation of the moment slab is paid for in the plans under Item 622 Ext. 90200, Barrier, Misc.: Single Slope Concrete Bridge Railing with Moment Slab. The reinforcing has been detailed and is included on the reinforcing table on sheet 892/1247, the total weight / length of reinforcing steel / GFRP bars are carried to the estimated quantities.

Question Submitted: **11/12/2024 11:09:25 AM**

Bridge structure LAW-7-0370 shown on plan sheet 817 of 1247 and quantified on sheet 820 of 1247, does NOT have a bid item for the installation of moment slabs associated with the abutment MSE walls and approach slabs as detailed on sheets 834,835,836,837. We believe a bid item for these moment slabs is needed (CL QC2 CONC, MMT SLAB W/QC QA). Please provide this pay item for this bridge structure and specify if the reinforcing bars for the moment slabs is incidental to this pay item.

Answer: The installation of the moment slab is paid for in the plans under Item 622 Ext. 90200, Barrier, Misc.: Single Slope Concrete Bridge Railing with Moment Slab. The reinforcing has been detailed and is included on the reinforcing table on sheet 839/1247, the total weight / length of reinforcing steel / GFRP bars are carried to the estimated quantities.

Question Submitted: **11/11/2024 12:57:06 PM**

One of the largest embankments on the project between approx station range Sta. 360 - 378 is significantly impacted by the permissible fill rate of 4.6 feet per week. This limits the contractor's production on such a large fill to approx. 25,000 CY per week on average impacting both cost and schedule. This fill additionally has a settlement period of 120 days. Is it the designers intent to have both a lengthy permissible fill and a lengthy settlement period on this embankment?

Answer: Geotechnical engineering analysis showed that normal embankment construction rates caused low short-term factor of safety, therefore the controlled rate of embankment construction is required for various areas of the project as it is designed. The 120 day waiting period is associated with the bridge approaches before driving piles, not the entire station range from 360-378. The actual waiting periods will be determined by the Engineer and will be based on the results of the settlement platforms. Although not guaranteed, the waiting periods may be shorter than anticipated due to some of the settlement occurring during embankment construction.

Question Submitted: **11/8/2024 3:20:43 PM**

The pier columns and caps for the LAW-7-0251 bridge are classified as QC4 Mass Concrete. The minimum dimension for these units are 4'- 0" and 4'-8" respectively. These do not meet mass concrete CMS requirements. Please confirm if QC4 Mass Concrete is the correct bid item or if these piers should be QC1.

Answer: **The Department agrees the concrete for the pier on bridge LAW-7-0251 should be Class QC1 and not QC4. Pay item will be updated to Item 511 Ext. 41012 Class QC1 Concrete with QC/QA, Pier Above Footings. This change will be made by Addendum.**

Question Submitted: **11/7/2024 1:02:00 PM**

The section for the MSE specify a 2'-6" annular space between the wire wall and backface of precast panel. However, a typical connection approach for this type of design requires a maximum of 10". Previous ODOT projects incorporated a 10" concrete closure pour. Confirming that the 2'-6" width can be changed to 10" to conform with current design practices.

Answer: **The Department has no objection to reducing the width of the space between the wire wall and back of precast panel provided the MSE wall and panels can perform as intended.**

Question Submitted: **11/7/2024 12:19:18 PM**

For item reference 0272 SPREAD SPECTRUM RADIO ; is it the intention of the project to only provide a communication link between the 2 intersections, or are there other locations that are expected to communicate with these radios?

Answer: **The communication link will only connect the two ramp intersections.**

Question Submitted: **11/7/2024 11:20:08 AM**

In the reference files folder there is a KMZ file that has a broken or missing link to download. Please provide the KMZ file.

Answer: **The file has been replaced.**

Question Submitted: **11/6/2024 5:21:48 PM**

When will the utility note be available by Addendum? Even if a draft utility note was provided it would be helpful for the contractor to estimate the complex schedule for the project.

Answer: **The Department will provide a Draft Utility Note as a Reference File until utility relocation sequence and timeframes are determined and then a final Utility Note will be provided by Addendum.**

Question Submitted: **11/6/2024 8:46:19 AM**

Can ODOT provide the office calculations for the structures on the project?

Answer: **The Department has added the bridge estimated quantity files as Reference Files. Note: They are dated July 2024 and have not been updated as plan corrections have been made. No corrections to these quantity sheets will be made and all corrections will be made only to the bidding documents.**

Question Submitted: **11/5/2024 2:33:51 PM**

How can we access the foundation design report for the MSE Walls?

Answer: **The MSE wall foundation design information for these walls are within the geotechnical reports for the specific bridges. We have added them to the projects Reference Files for ease of access. https://ftp.dot.state.oh.us/pub/contracts/Attach/LAW-75923/**

Question Submitted: **11/5/2024 2:22:45 PM**

Is there an architectural, textured finish for the MSE panels or shall it be a plain, smooth finish?

Answer: The plans do not call out specific architectural treatment for the MSE wall panels. Per Specification 840.05 F if no aesthetic surface treatment is required, finish the front face of the panels to a smooth surface.

Question Submitted: **11/5/2024 2:11:10 PM**

The ASTM D4644 Durability testing is a 24-48 hour laboratory test including oven drying. The frequency of 5,000 CY adversely impacts schedule and production on the project and may require an onsite laboratory. Will ODOT reduce the frequency to every 25,000 CY to avoid impacting schedule and to avoid adding cost of an onsite lab to the bid?

Answer: The Department will revise the ITEM 203 EMBANKMENT, AS PER PLAN (TYPE C) plan note to reflect one slake durability test every 20,000 CY or change in material, as determined by the Engineer.

Question Submitted: **11/5/2024 1:44:21 PM**

The note added to Addendum No.1 Sheet 34 is hard to bid accurately. How much orange fence will be left, and how many drive pipes/culverts will remain from the clearing contractor?

Answer: The Department is having the Tree Clearing contractor that is now working on the project site install orange snow fence around the two active gas wells shown on sheets 22E and 22H. These two areas are designated as Tree Clearing Area - C for this contract. The plan note will be revised by Addendum to remove the "culverts/drive pipes". Additionally, Special Provisions - Waterway Permits requires demarcation of aquatic resources not authorized for impacts. These areas will be demarcated by the Tree Clearing contractor and the fence left in place at the completion of their contract. Per the Special Provision Waterway Permits, the Highway contractor will maintain and remove the fence following completion of the project.

Question Submitted: **11/5/2024 11:03:52 AM**

Referencing sheet 95, plan view, and sheet 639, profile.The proposed 21" conduit crossing Rt.7 at Station 115+15 is indicated to be under existing roadway which is to be milled/overlayed and in the same alignment as the existing 18" conduit. Would ODOT consider offsetting alignment for a Jack & Bore /abandoning 18" in-place?

Answer: The Department is reconsidering the design and replacement of this conduit at this location and will address any changes by Addendum.

Question Submitted: **11/5/2024 10:55:50 AM**

Referencing sheet 95, plan view, and sheet 639, profile.The proposed 30" conduit crossing Rt.7 at Station 1411+30 is indicated to be 35' deep with tight construction limits in the same alignment as the existing 24" conduit. Would ODOT consider offsetting alignment for a Jack & Bore /abandoning 24" in-place?

Answer: The Department is reconsidering the design and replacement of this conduit at this location and will address any changes by Addendum.

Question Submitted: **11/1/2024 12:54:32 PM**

Profile sheet 643 indicates 248’ of 15” Conduit, Type C at Station 376+22 that is not on the Subsummary sheet. Please advise.

Answer: **The Department concurs and will be corrected and added to 2-D on sheet 79 by Addendum.**

Question Submitted: **11/1/2024 12:54:14 PM**

Profile sheet 388 indicates 72’ of 15” Conduit, Type B at Station 395+50 that is not on the Subsummary sheet. Please advise.

Answer: **The quantity for this item is included in 1-D for sheet 146 on the Subsummary sheet 79.**

Question Submitted: **10/31/2024 7:30:52 PM**

Is the ASTM testing required for the Embankment As Per Plan Type C to be performed by the contractor?

Answer: **Yes**

Question Submitted: **10/31/2024 6:41:33 PM**

Is the ASTM testing required for the Embankment As Per Plan Type C to be performed by the contractor?

Answer: **Yes**

Question Submitted: **10/30/2024 11:46:23 AM**

When will the final CAD surface file be available? We have been checking the FTP site everyday and its still not there. We would appreciate the file as it assists in our takeoff efforts for this large project.

Answer: **The Department uploaded ten XML files this evening 10/30/2024 and they should be available soon.**

Question Submitted: **10/30/2024 11:44:08 AM**

Per Subsummary sheet 79, 21” Conduit, Type D; the 88’ indicated on plan sheet 490 and profile sheet 647 could not be identified. Please
advise.

Answer: **This pipe has the indicator 2-D on sheet 490 and is located under the Thompson Drive at roughly 20+20 left.**

Question Submitted: **10/30/2024 11:42:52 AM**

Per Subsummary, sheet 79, 15” Conduit, Type B; the 249’ indicated on plan sheet 146 and profile sheet 647 could not be identified. 107’ of 15” Conduit, Type B was shown on profile sheet 647 which is not on the Subsummary. Please advise.

Answer: **The 249’ of conduit, Type B will need to be revised to 179’. This quantity includes the 107’ from structures 43C-39A shown on sheet 647 and 72’ from structures 39C-39 shown on the cross sections on sheet 388. The total quantity for 15” Type B will be revised to 1,574 ft and a reference to the storm profile that is shown on the cross section will be added to the plan sheet. This change will be made by Addendum.**

Question Submitted: **10/30/2024 11:41:54 AM**

Plan page 37A now includes a Durable Material note. Please clarify the intent of this note. It reads as

if all base of embankments, even those outside of the drainage layer areas, should be constructed with the referenced durable material. Please clarify.

Answer: The intent of the Durable Material note is not to require durable material for all embankments. The note is simply to instruct the contractor to not waste durable materials when they could be used where the ITEM 203 - EMBANKMENT, AS PER PLAN (TYPE C) material is needed on the project. The existing note on sheet 37A will be replaced with the following by Addenda. DURABLE SANDSTONE AND SILTSTONE ENCOUNTERED DURING EXCAVATION SHOULD FIRST BE USED FOR AREAS REQUIRING ITEM 203 - EMBANKMENT, AS PER PLAN (TYPE C) SHOULD IT MEET THE CRITERIA IDENTIFIED IN THE PLANS. ANY EXCESS DURABLE MATERIAL CAN BE USED FOR REGULAR ITEM 203 - EMBANKMENT AND NOT WASTED.

Question Submitted: **10/30/2024 11:40:45 AM**

Item 203 – Embankment, As Per Plan (Type C) specifically states that ALL MATERIALS SHALL BE FREE OF SOILS but fails to mention Shale. The site is predominately shale and it is reasonable to expect some shale to be intermixed into the onsite sandstone/siltstone because of blasting operations. Will the department allow small amounts of Shale within the Drainage Layer?

Answer: The plan note for ITEM 203 – EMBANKMENT, AS PER PLAN (TYPE C) will be revised to allow a small amount (less than 5%) of soil and/or non-durable rock as determined by volume and visual inspection. This change will be made by Addendum.

Question Submitted: **10/30/2024 11:39:50 AM**

ODOT did not answer the separation layer question via Addendum No. 1. Can a quantity and Item for Separation Fabric Geotextile Fabric Type A be provided for the bidder?

Answer: The geotextile included in ITEM 203-EMBANKMENT, AS PER PLAN (TYPE C) will remain as incidental to this pay item. A separate pay item will not be provided.

Question Submitted: **10/30/2024 11:39:18 AM**

1)A note has been provided on sheet 37A regarding Durable Material. This note essentially makes the Embankment a special As Per Plan item. Since the site is predominately shale this added note for all embankments is a considerable cost add to the project. Will ODOT provide a quantity of this material and designate it as a different item so the project can be accurately bid. Will ODOT create a new item and quantities?

Answer: The intent of the Durable Material note is not to require durable material for all embankments. The note is simply to instruct the contractor to not waste durable materials when they could be used where the ITEM 203 - EMBANKMENT, AS PER PLAN (TYPE C) material is needed on the project. The existing note on sheet 37A will be replaced with the following by Addenda. DURABLE SANDSTONE AND SILTSTONE ENCOUNTERED DURING EXCAVATION SHOULD FIRST BE USED FOR AREAS REQUIRING ITEM 203 - EMBANKMENT, AS PER PLAN (TYPE C) SHOULD IT MEET THE CRITERIA IDENTIFIED IN THE PLANS. ANY EXCESS DURABLE MATERIAL CAN BE USED FOR REGULAR ITEM 203 - EMBANKMENT AND NOT WASTED.

Question Submitted: **10/29/2024 9:24:39 AM**

Is there a prebid meeting?

Answer: Yes, it will be on November 13, 2024. The notice has been posted here:

https://www.dot.state.oh.us/divisions/contractadmin/contracts/lists/prebidmtg/dates.aspx.

Question Submitted: **10/28/2024 5:11:09 PM**

Bridge structures LAW-7-0713 R shown on plan sheet 989 of 1247 and quantified on sheet 993 of 1247. Please review the Class QC4 Mass Concrete, Substructure with QC/QA quantity for bridge Structure LAW-7-0713R, we are coming up with substantially more cubic yards of concrete.

Answer: The Department concurs that the quantity shown for Item 511E45602, Class QC4 Mass Concrete, Substructure with QC/QA is low. The estimated quantity should be 331 cy. This will be updated by Addendum.

Question Submitted: **10/28/2024 5:10:16 PM**

Bridge structures LAW-7-0713 L shown on plan sheet 961 of 1247 and quantified on sheet 964 of 1247. Please refer to purchased lengths of pile on sheet 963 and review quantity calculations for furnished pile quantities.

Answer: The Department concurs that the estimated quantities for ITEM 507E00200, STEEL PILES HP 12x53, FURNISHED is low. An initial review indicates a new total of 6,840 ft, with 3,780 ft at the abutments and 3,060 ft at the piers. This will be corrected by Addendum.

Question Submitted: **10/28/2024 5:09:34 PM**

Bridge structures LAW-7-0713 R shown on plan sheet 989 of 1247 and Bridge structure LAW-7-0713 L shown on plan sheet 961 of 1247 do NOT depict a separation line for the quantification of crushed aggregate slope protection and rock channel protection. Please provide a dividing line that represents the limits of crushed aggregate slope protection and rock channel protection for each bridge structure.

Answer: Perhaps we are misunderstanding the question, but the division for RCP and crushed aggregate slope protection for LAW-7-0713R is shown in both the plan and profile view. The profile view shows the RCP terminating at El. 560.0. The plan view shows the limits of each on the south side of the bridge at the rear abutment and under the bridge at the forward abutment.The division for RCP and crushed aggregate slope protection for LAW-7-0713L is shown in both the plan and profile view. The profile view shows the RCP terminating at El. 560.0. The plan view shows the limits of each on the north side of the bridge at the forward abutment and under the bridge at the rear abutment.

Question Submitted: **10/28/2024 5:08:42 PM**

Bridge structure LAW-7-0713 L shown on plan sheet 961 of 1247 and quantified on sheet 964 of 1247, does NOT have a bid item for the installation of cofferdams and excavation bracing. We believe a cofferdam with excavation bracing will be necessary to construct pier 2 adjacent to Little Paddy Creek. Please provide a Cofferdam and Excavation Bracing Item for this bridge structure.

Answer: The Department will add a pay item for cofferdams and excavation bracing by Addendum.

Question Submitted: **10/28/2024 5:07:48 PM**

Bridge structure LAW-7-0713 R shown on plan sheet 989 of 1247 and quantified on sheet 993 of 1247, does NOT have a bid item for the installation of cofferdams and excavation bracing. We believe

a cofferdam with excavation bracing will be necessary to construct pier 2 adjacent to Little Paddy Creek. Please provide a Cofferdam and Excavation Bracing Item for this bridge structure.

Answer: The Department will add a pay item for cofferdams and excavation bracing by Addendum.

Question Submitted: **10/28/2024 5:06:44 PM**

Bridge structure LAW-775-0105 shown on plan sheet 1015 of 1247 and quantified on sheet 1018 of 1247, shows a pay item for the prebore holes but is NOT detailed any where on the plans. All bridge embankments have construction of pile windows for piling installation. Will this prebore pay item still be required or can this item be eliminated?

Answer: After review, the Department will be removing the pile driving window at the pier for this structure. The change will be made by Addendum.

Question Submitted: **10/28/2024 5:05:13 PM**

The retaining wall structure located between ramps J & K shown on plan sheet 706 of 1247 and quantified on sheet 707 of 1247, no pay item is provided for the granular structural backfill. Please provide a pay item.

Answer: The granular backfill Type B is included with the ITEM 503- UNCLASSIFIED EXCAVATION, AS PER PLAN. No separate pay item will be added. The specifications for this material can be found in CMS 703.16C.

Question Submitted: **10/28/2024 5:04:15 PM**

The retaining wall structure located between ramps J & K shown on plan sheet 706 of 1247 and quantified on sheet 707 of 1247, no pay items are provided for the 6” PCP pipe with geotextile and associated porous backfill. Please provide pay items.

Answer: Quantities for both the pipe and porous backfill will be added by Addendum.

11/21/2024

Project 240512 **Addendum No. 3**
PID No. 75923
LAW-SR 7-02.17 Phase 2
New Construction
Letting: December 12, 2024

Notice to all Bidders and Suppliers to please be advised of the attached Proposal Addendum.

> For internet access to information referenced in this addendum, please see the ODOT web site at: https://ftp.dot.state.oh.us/pub/Contracts/Attach/LAW-75923/

The Department utilizes Bid Express (http://www.bidx.com) as the official medium for electronic bid submittal. All bidders must prepare bids and submit them online via Bid Express using AASHTOWare Project Bids software.

Addenda amendments must be acknowledged in the miscellaneous section of the Project Bids file and all amendments loaded in order for your bid to be considered for award of this project. Bid express will not accept bids that do not have amendments incorporated. Failure to incorporate changed quantities or items in your Project Bids submissions will result in the rejection of your bid.

PROPOSAL ADDENDUM-003
FOR
PROJECT: 240512 | **CRS:** LAW-7-2.17 | **PID:** 75923

MODIFICATIONS

REVISED COMPLETION DATE	N/A
REPLACE/ADD PLAN SHEETS	38, 67, 74, 337, 338, 418, 899

CONTRACT (PAY) ITEM MODIFICATIONS

REVISED

REF. NO.	ITEM	DESCRIPTION	TOTAL QTY.	UNIT	SECTION
0014	203E10000	EXCAVATION	4,929,886	CY	0001
0465	512E33300	TYPE A WATERPROOFING	2,868	SY	0017

ADDED NOTES

1. Revised plan note EMBANKMENTS – REINFORCED SOIL SLOPES on sheet 38.

FOR REFERENCE ONLY

PRE-BID QUESTIONS

The inclusion of the question(s) that accompany answer(s) in this addendum is provided for reference only and the question(s) shall not be construed as a contract modification or change.

Question Submitted: **11/20/2024 8:29:19 AM**

The office calcs and plan summary on sheet 899/1247 for LAW-7-0510 show Type A Waterproofing. Ref no. 465 in the proposal shows Type 2 Waterproofing. Please clarify which waterproofing is required.

Answer: Type A waterproofing is correct, the item and extension should have been 512 Ext. 33300, in lieu of 512 Ext. 33000. Extension will be corrected to 33300 by Addendum.

Question Submitted: **11/20/2024 7:55:17 AM**

Is the contractor permitted to use steel intermediate diaphragms per PSID-1-13 on concrete beams greater than or equal to 60”?

Answer: Yes, per Standard drawing PSID-1-13, intermediate diaphragms for 60”, 66” and 72” deep concrete beams may be cast-in-place or galvanized steel.

Question Submitted: **11/19/2024 7:56:51 AM**

The Department responded to the Ramp J+K quantity discrepancy Prebid Question by stating they would reevaluate with more information. When comparing the Ramp J XML + Ramp K XML + 775 XML we yield 655,408 CY Excavation. When subtotaling ODOT's office calcs for the same area we total 779,670 CY Excavation.

This is a delta of 124,262 CY. Given the recent response to another Quantity Error at Sta. 338+00 we have reason to believe that there is an error in ODOT's spreadsheet. We have yet to pinpoint the error to a specific cell within the spreadsheet. Will ODOT review the end area quantity input cell by cell in this region of the project to correct the large quantity discrepancy between the XML provided by ODOT and the end areas provided by ODOT?

Answer: The Department has double checked each cell of the spreadsheet twice for this area and has not discovered a discrepancy. Bidders should be aware that the special benching is not included in the XML files. The designer has used shapes and end areas from the actual cross sections to generate the earthwork volumes.

Question Submitted: **11/15/2024 2:13:08 PM**

Please review the provided average end area spread sheet Station 338+00. It appears that the number was incorrectly typed into the sheet (Cell AI 454), which created a substantial amount of excavation that is not available in this area. This error has been carried over to the Summary Sheets as well as the Excavation Bid Item. If there is an error at STA 338+00, this will cause the project to be 900,000 CY short of embankment material. Does The State have any additional on-site borrow options to account for this?

Answer: The Department confirms that there is a change in the excavation amount, but not the magnitude expressed in the pre-bid question. The total excavation for SR 7 will change on sheet 418 from 3,620,043 CY to 3,504,150 CY. The quantity will be carried to sheet 74 which will update the total earthwork on this sheet from 5,039,677 CY to 4,923,784 CY. The total excavation on the general summary sheet 67 will be updated resulting in a total excavation for the project change from 5,045,779 CY to 4,929,886 CY. These changes will be made by Addendum.

Question Submitted: **11/14/2024 2:45:23 PM**

Can ODOT give a better description on the framing plan for bridge 775-0105, page 1024/1247 showing where the cross frames will be located due to the skew of the bridge.

Answer: A revised framing plan for this structure showing the cross frames in more detail and dimensioned more thoroughly will be provided by Addendum.

Question Submitted: **11/13/2024 10:01:23 AM**

All 4 MSE Walls show the top of the wing walls sloped from the corner at the bottom of pile cap elevation, up to finished top of roadway elevation. In the sloped area, the panels are significantly blocked by the abutment cheek wall. How will strips be attached to the panels blocked by the abutment? Can the wall and abutment geometry be revised so the MSE wall steps up at the back of the cheek wall and is not blocked by the abutment?

Answer: The Department concurs there is an issue with the design and revisions will be made by Addendum.

Question Submitted: **11/13/2024 10:00:35 AM**

For LAW-0370 bridge abutments, the MSE Walls have an acute corner on one side of the abutment for both walls 1 and 2. To fit strips in the acute corner, strips would need to be skewed up to 25 degrees. Is this allowed? If not allowed, we will need to do a tied across bin wall design. Please advise if a 25 degree skew is allowed.

Answer: Yes, a 25 skew is allowable as long as the MSE wall performs as intended.

Question Submitted: **11/11/2024 12:55:20 PM**

Currently the entire embankment cross-section is quantified as Reinforced Embankment. The geogrid embedded lengths in the tables provided do not completely reach the center of the embankment. ODOT SS 863 requires the use of natural soils or granular materials in the reinforced embankment. Since the site is predominantly shale, can the inner core of the embankment be constructed of rock or shale where there is no geogrid?

Answer: Most of the material available from the cut areas of the project is considered non-durable shale as defined by CMS 703.16D. The design of the ITEM 863 - Reinforced Embankment was performed using the design parameters of this non-durable shale material. This material (non-durable shale as defined in CMS 703.16D) is allowed for use within all areas of the ITEM 863 - Reinforced Embankment, including the non-reinforced core of the embankment if placed and compacted in accordance with CMS 203.06B.

Material other than non-durable shale but meeting SS 863 for the reinforced zone of ITEM 863 - Reinforced Embankment may be permitted at the discretion of the Engineer, however, adjustments to the reinforcement spacing and lengths may be necessary. Material meeting ITEM 203 may be permitted for use in the non-reinforced zone of ITEM 863 - Reinforced Embankment at the discretion of the Engineer, however, adjustments to the reinforcement spacing and lengths may be necessary. Plan notes will be added and/or revised by Addendum to address these clarifications.

Department of Transportation
transportation.ohio.gov

Mike DeWine, *Governor*
Jon Husted, *Lt. Governor*
Pamela Boratyn, *Director*

11/27/2024

Project 240512 **Addendum No. 4**
PID No. 75923
LAW-SR 7-02.17 Phase 2
New Construction
Letting: December 12, 2024

Notice to all Bidders and Suppliers to please be advised of the attached Proposal Addendum.

The Department utilizes Bid Express (http://www.bidx.com) as the official medium for electronic bid submittal. All bidders must prepare bids and submit them online via Bid Express using AASHTOWare Project Bids software.

Addenda amendments must be acknowledged in the miscellaneous section of the Project Bids file and all amendments loaded in order for your bid to be considered for award of this project. Bid express will not accept bids that do not have amendments incorporated. Failure to incorporate changed quantities or items in your Project Bids submissions will result in the rejection of your bid.

1980 West Broad Street
Columbus, OH 43223 U.S.A.

614 | 466 7170
transportation.ohio.gov

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PROPOSAL ADDENDUM-004
FOR
PROJECT: 240512 | **CRS:** LAW-7-2.17 | **PID:** 75923

MODIFICATIONS

REVISED COMPLETION DATE	No
REPLACE/ADD PLAN SHEETS	No

CONTRACT (PAY) ITEM MODIFICATIONS

REVISED

REF. NO.	ITEM	DESCRIPTION	TOTAL QTY.	UNIT	SECTION
0065	659E00540	SEEDING AND MULCHING, CLASS 3C	1,182,427	SY	0002

ADDED

REF. NO.	ITEM	DESCRIPTION	TOTAL QTY.	UNIT	SECTION
0700	208E10000	PRE-BLAST CONDITION SURVEY	1	LS	0001

ADDED NOTES

1. Revised Reference No. 0065 and Added Reference No. 0700 are updated in the electronic bidding file (EBS) to match what is shown in Addendum-001.

2. The Special Provision – Waterway Permit has been updated since the ACOE and OEPA have approved the waterway permits. The revised SP-Waterway Permits Conditions dated 11/27/2024 is attached to this Addendum-004.

FOR REFERENCE ONLY

PRE-BID QUESTIONS

The inclusion of the question(s) that accompany answer(s) in this addendum is provided for reference only and the question(s) shall not be construed as a contract modification or change.

Question Submitted: 11/27/2024 7:52:12 AM

Please provide an update on the 401 permit. If the bid date is holding we have been given less than two weeks with the holiday to make adjustments to our bid. The permit will have major impacts on means and methods.

Answer: The Department has received all of the final waterway permits from the agencies and is executing final signatures this week. The final Special Provisions-Waterway Permit is expected to be issued by Addendum today or early next week. Compared to the already published Special Provisions-Waterway Permit dated 8/2/24, there are no significant changes in the final Special Provisions-Waterway Permit.

Question Submitted: 11/26/2024 11:52:01 AM

The quantity for Item 305 - Water seems excessively high for the project. Can ODOT review the

quantity and adjust to a more appropriate lesser quantity?

Answer: The quantity will be reduced by Addendum to about 20,000 MGAL.

Question Submitted: 11/25/2024 5:00:41 PM

As stated in Note 4 on the approach slab bridge drawings: "The cost of concrete and incidentals in the barrier is to be included with Item 526 - Reinforced Concrete, Approach Slab, as per plan." Could you please clarify the following: 1) Does this note indicate that the cost of the barrier and transition pieces on the approach slab should be included under the approach slab item, or should it be accounted for in the bridge parapet item? 2) Is the Type 4C curb considered incidental to the approach slab?

Answer: The cost of the barrier and transition pieces on the approach slab and curb is included in Item 526 – Reinforced Concrete, Approach Slab, as per plan.

Question Submitted: 11/25/2024 2:36:28 PM

Department asked Prebid Question Regarding pre-bid questions asked 11/5/2024 11:03:52 am and 11/5/2024 10:55:50 am, the Department is preparing design changes to be included by Addendum, however a DRAFT sketch of the plan and profile showing the changes has been included with the Reference Files in order for bidders to know the type of changes. Installation method to be determined by contractor. See "DRAFT-LAW-75923_SR7-SR527 interchange revised storm plan_profile".

Question Submitted: 11/25/2024 2:10:23 PM

Please add ref 700 to the EBS File. The current addendums does not have it listed.

Answer: The Department has confirmed that added reference item 0700; Item 208E10000, PRE-BLAST CONDITION SURVEY was not added to the EBS file. Also, reference item 0065; Item 659E00540, SEEDING AND MULCHING, CLASS 3C was revised with Addendum-001, but the EBS file was not updated to the new quantity. The Department will update the EBS file with the next Addendum.

Question Submitted: 11/25/2024 7:57:40 AM

The response to a prior question indicated that all of the items under the plan note "ROCK OR SHALE BLASTING OPERATIONS" are paid for by the included 208 lump sum items, however;; " ITEM 208 PRE-BLAST CONDITION SURVEY" was missed. Will this item be added in the next addendum?

Answer: Addendum-001 added ITEM 208 PRE-BLAST CONDITION SURVEY to sheet 37 and the general summary on sheet 67. This was given a bid item reference number of 0700.

Question Submitted: 11/25/2024 7:50:34 AM

The reference document “Sandstone and Bedrock Estimate” shows 109k cy of sandstone between stations 174 & 182. The borings show most of the rock excavation in this area to be shale, some of which is under significant quantities of overburden (see borings R-214-0-99, R-2P1-0-99, B-007-2-23, B-007-3-23, B-007-4-23, B-007-5-23). Please double check the quantity of sandstone in this area.

Answer: The cited reference document was provided "as-is" and will not be updated.

Question Submitted: 11/25/2024 7:49:05 AM

The details for Embankment, As Per Plan (Type C) on plan sheet 38 reference 703.19 dump rock. Spec 703.19 requires soundness testing. Please confirm that 703.19 was only referenced for the size of the rock and that soundness testing will not be required for Embankment, As Per Plan (Type C).

Answer: Correct, the plan note only specifies the size requirement of CMS 703.19. Soundness testing will not be required.

Question Submitted: 11/25/2024 7:46:21 AM

The scale for the plan view on sheet 656 appears to be doubled. Also, the flowline elevations listed in the profile view do not line up with the elevations listed in the grid on the side of the page. Please advise.

Answer: The Department agrees and will correct by Addendum.

Question Submitted: 11/22/2024 4:11:52 PM

The previous question submitted on 11/22/2024 at 2:55:20 PM claims there is a 700,000 CY bust. We understand that there is a bust of roughly 115,893 CY from PBQ on 11/15/2024 at 2:13:08 PM. A significant quantity of borrow has been known since day of advertisement. Will ODOT please confirm that there is not a bust of 700,000 CY?

Answer: The original prebid question regarding this alleged shortage (11/21/2024 9:12:47am), acknowledged that they did not account for swell of the excavated material. To address a separate prebid question, the Department corrected the spreadsheet error and subsequent reduction in Embankment in Addendum-003. The Department is not aware of any further changes in earthwork quantities.

Question Submitted: 11/22/2024 3:41:57 PM

The Draft Utility note for the BREC pole removals at the SR-243 / SR-7 intersection will not be complete until 6/6/2025. The Environmental Commitment note on sheet restricts excavation between Sta. 307+00 – 348+00 until 5/15/2025. There is no available Excavation to complete the Embankment / Embankment APP Type C needed for the CR-69 Interim Completion Date of 7/15/2025 in a reasonable time.

Will the Department extend the Interim Milestone Date due to the proposed Utility Note?

Answer: The Department will revise by Addendum the interim completion date of July 15, 2025 to November 15, 2025.

Question Submitted: 11/22/2024 2:55:20 PM

There have been multiple references to potential on site sources for borrow that will be coming in an addendum. With a current bust of roughly 700,000 CY this information is vitally important to have. With the holiday coming up, contractors will have limited time to re-run the calculations, let alone try and find potential borrow sources

Answer: As mentioned in a previous pre-bid question, this evaluation of a shortage of material did not account for swell of the excavated material and therefore the amount of shortage does not appear to be as indicated. Although we anticipate adding this information by Addendum next week,

please refer to the proposed plan note and also refer to the Reference document "OTHER DEPARTMENT OWNED PROPERTY_Pages 13-14 from 75923-RW plan_boundary only".OTHER DEPARTMENT OWNED PROPERTYTHE DEPARTMENT

HAS IDENTIFIED PARCELS THAT ARE CURRENTLY OWNED BY THE DEPARTMENT THAT ARE NOT WITHIN THE LA-ROW THAT MAY BE USED BY THE CONTRACTOR FOR WASTE OR BORROW AREAS, SUBJECT TO THE REQUIREMENTS OF C&MS 105.16, 107.10 AND 107.11.THE USE OF THE PARCELS FOR THESE PURPOSES IS ALSO RESTRICTED TO ANY EXISTING EASEMENT AND/OR UTILITY RELOCATION OR INSTALLATION PLANS APPROVED FOR THE PROJECT. FOR EXAMPLE, UTILITY EASEMENTS EXIST FOR A PORTION OF PARCEL 121E AND THE CONTRACTOR SHALL NOT IMPACT THE EXISTING GROUND ON THE EASEMENT OR FUTURE UTILITY RELOCATION OR INSTALLATION PLANNED ON THIS PARCEL. THE SAME APPLIES TO OTHER EXCESS (E) PARCELS WITH SIMILAR EASEMENTS OR PLANNED UTILITY RELOCATION OR INSTALLATION. THE DEPARTMENT MAKES NO GUARANTEE AS TO THE SUITABILITY OF THESE PARCELS FOR WASTE OR BORROW AREAS BUT IS MAKING THEM AVAILABLE FOR THE CONTRACTORS USE. THESE PARCELS HAVE NOT BEEN STUDIED OR CLEARED WITH THE DEPARTMENTS NEPA OR ENVIRONMENTAL DOCUMENT, NOR HAS ANY MITIGATION BEEN PERFORMED TO ACCOUNT FOR ANY ENVIRONMENTAL IMPACTS ON THESE PARCELS. IF THE ENGINEER APPROVES THE USE OF ANY OF THESE PARCELS FOR WASTE OR BORROW, THE DEPARTMENT WILL WAIVE THE FEE OF $0.50 PER CUBIC YARD. THE PARCELS AVAILABLE FOR USE INCLUDE: 46E, 50E, 55E2, 60E, 90E, 96E, 106E, 106E1, 111E, 112E, 121E, 126E1, 126E2, 126E3, 138E, 139E, 140E.

Question Submitted: 11/22/2024 10:56:40 AM

The note at the bottom of Sheet 37, that was added in Addendum 1, indicated that items would be added to the contract to address

requirements pertaining to blasting on the project. All of the items have been added, except for Pre-Blast Construction Surveys. Will this item be added in the future addendum?

Answer: The Department has included the pay item ITEM 208 PRE-BLAST CONDITION SURVEY with Addendum-001 on sheet 67. We are not aware of an item titled Pre-Blast Construction Surveys. Also, please note that the text of this plan note in Addendum-001 was further revised in Addendum-002. All items included in the plan note "ROCK OR SHALE BLASTING OPERATIONS" are paid for by the included 208 lump sum items.

Question Submitted: 11/22/2024 8:20:32 AM

Can CMS 707.18 which meets the ODOT Durability Design Spreadsheet be added as an acceptable material for ref. 128 and 129 60" Conduit Type A?

Answer: The Departments Engineer will consider proposed equal or betterment changes to conduit material types during construction, provided the hydraulic and durability requirements are met.

Question Submitted: 11/22/2024 8:15:20 AM

Can CMS 707.85 which meets the ODOT Durability Design Spreadsheet be added as an acceptable material for ref. 130 66" Conduit Type A?

Answer: **The Departments Engineer will consider proposed equal or betterment changes to conduit material types during construction, provided the hydraulic and durability requirements are met.**

Question Submitted: 11/22/2024 8:08:06 AM
Can CMS 707.01 (0.064) Aluminized be added as an acceptable material for references 106 and 121?

Answer: **The Departments Engineer will consider proposed equal or betterment changes to conduit material types during construction, provided the hydraulic and durability requirements are met.**

Question Submitted: 11/22/2024 8:00:44 AM
Can CMS 707.05 be added as an acceptable material type for the Type F Conduit references 99, 105, 110, and 114?

Answer: **Due to the configuration of the conduit system, the Department prefers to keep the conduits specified as designed.**

Question Submitted: 11/22/2024 7:17:40 AM
Addendum No. 2 replaced page 619. There is a revision bubble on this pages however we cannot see anything that changed. What changed on this page?

Answer: **The designer removed some stray CADD lines from this area on sheet 619 to clean up the sheet. Nothing in the design changed.**

Question Submitted: 11/21/2024 4:23:56 PM
Would the Department consider pushing the project bid back one week to the already scheduled Dec. 19, 2024 letting?

Answer: **No, it has been intentionally put into this special letting.**

Question Submitted: 11/21/2024 3:27:56 PM
Addendum No.2 added a restrictive plan note to sheet 15. Will Grubbing be able to be performed before May 15th?

Answer: **The restriction on excavation/blasting within the station range was part of the original plan note. Addendum-002 clarified the note to reflect rock outcrop (RO) areas as otherwise identified in the plans. It is the mass excavation that is restricted to begin on or after May 15 and completed by September 30. It is anticipated that these areas will be disturbed with mass excavation the first year of work and after that this restriction will no longer apply. Grubbing is not considered mass excavation and is therefore allowed in this area prior to May 15, except the individual areas identified as rock outcrops shall not be grubbed until May 15 or later.**

Question Submitted: 11/21/2024 3:21:26 PM
Will the final addendum be posted before Thanksgiving?

Answer: **Addendum-003 is being processed now and should be available 11/22/2024 and it includes revisions to the excavation quantity, the reinforced soil slope plan note and waterproofing on structure LAW-7-0510. The final Addendum is targeted for the first week of December, however,**

another Addendum may be issued sooner if information such as the approved waterway permits becomes available and warrants an Addendum.

Question Submitted: 11/21/2024 2:11:45 PM

In the prebid meeting ODOT stated that they were going to identify areas within the plan to designate for contractor's use. None were shown in Addendum No.2. Will these areas be shown in a future addendum?

Answer: Yes, the Department is reviewing and preparing to identify Other Department Owned Property for potential use as waste or borrow areas by the contractor.

Question Submitted: 11/21/2024 1:53:50 PM

ODOT CMS 203.08.A specifically states “When topsoil is specified, use the following: 1. In fill areas, construct the embankment to the bottom of the topsoil depth. 2. In cut areas, excavate additional depth to allow for the topsoil. For cuts or fills, the cross sections show the finished grade, which is the top of the topsoil.” And CMS 203.10 states “When topsoil is specified, the Department will not make deductions or additions from the earthwork quantities for the topsoil.” Then, ODOT CMS 659.11 states “f shown on the plans, place topsoil in loose lifts that construct a 4-inch (100 mm) compacted depth.” The plans only call out topsoil needed for Vegetated Filter Strips/ Vegetated BioFilter for 468 CY and 1741 CY respectively. Vegetated Biofilter (pg. 37) states “THIS PLAN UTILIZES VEGETATED BIOFILTER(S) FOR POST CONSTRUCTION STORM WATER TREATMENT. PLACE EITHER ITEM 660 SODDING OR ITEM 659 SEEDING AND MULCHING WITH A 4- INCH LIFT OF TOPSOIL AS SHOWN IN THE PLANS TO ANY DISTURBED AREA ON THE SHOULDER AND FORESLOPE DRAINING TO A VEGETATED BIOFILTER. THE DITCH FOR EACH VEGETATED BIOFILTER SHALL BE TRAPEZOIDAL, AS SHOWN IN THE PLAN CROSS SECTIONS. PROVIDE ITEM 670

AS SPECIFIED IN THE PLANS.” It seems like the only topsoil specified and shown in the plans for the project is for the Vegetated

BioFilters/Strips. However we would like to ask a clarifying question- Is there other topsoil needed for the project that is to be included incidental to the Embankment/Excavation including the 2:1 & 3:1 embankments, and the 4:1 & 3:1 cut slopes?

Answer: No. A topsoil pay item was only included for vegetated filter strips and vegetated biofilters.

Question Submitted: 11/21/2024 9:12:47 AM

The Department responded to a previous question acknowledging that the excavation quantity would be lowered to correct a spreadsheet error, but also felt that the magnitude of the site balance was not an issue. Based on the new excavation quantity, there is 4,929,886 cy of material available to make 4,528,857 cy of embankment, 582,155 cy of Type C embankment (if it comes from the cut), and 525,387 cy of reinforced embankment. Not accounting for shrink and swell of material, this would leave the site out of balance by over 700,000 cy of required embankment. Will the Department have any additional on-site borrow options to account for this imbalance?

Answer: Once a swell factor is applied to the excavation volumes, the amount available for embankment is likely close to the amount needed. To allow for contractor use of available

Department Owned Property per CMS 107.11, particularly excess parcels adjacent to the LA- ROW, the Department is reviewing and intends to add via Addendum a list of these parcels potentially available for borrow or waste areas. Otherwise, the contractor is responsible for identifying any potential waste or borrow areas on-site or off-site.

SPECIAL PROVISIONS

WATERWAY PERMITS CONDITIONS

C-R-S: LAW-7-2.17

PID: 75923

Date: November 27, 2024

1. Waterway Permits Time Restrictions:

A Section 404 Individual Permit (404 IP) from the U.S. Army Corps of Engineers (USACE) has been authorized for LAW-7-2.17, PID 75923. A copy of the Section 404 Permit authorization letter (LRH-2022-00165-OHR – Symmes Creek) shall be kept at the work site at all times and made available to all contractors and subcontractors. The permit is effective starting: November 27, 2024. The permit expires: December 31, 2030.

A Section 401 Water Quality Certification (401 WQC) from the Ohio Environmental Protection Agency (OEPA) is authorized for LAW-7-2.17, PID 75923. A copy of the authorization letter (Ohio EPA ID No. 238961A) shall be kept at the work site at all times and made available to all contractors and subcontractors. The permit is effective starting: November 27, 2024. The permit expires: December 31, 2030.

For authorized work 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:

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 Section 404 IP and Section 401 WQC applications 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 1	STA 124+50 to 128+00	none
Stream 2	STA 158+00	none
Stream 3	STA 161+00 to 164+25	none
Stream 3a	STA 161+50 to 164.75	none
Stream 4	STA 1416+60	none
Stream 5	STA 183+60 to 184+90	none
Stream 6	STA 189+00 to 192+50	none
Stream 7	STA 193+00 to 200+00	none
Stream 8	STA 200+75 to 202+00	none
Stream 9	STA 218+50 to 230+20	none
Stream 9a	STA 228+80 to 229+70	none
Stream 10	STA 238+00 to 270+50	none
Stream 10a	STA 241+45 to 242+00	none
Stream 10b	STA 247+90 to 248+45	none
Stream 10c	STA 261+75	none
Stream 11	STA 270+00 to 270+75	none
Stream 12	STA 227+80 to 278+40	none
Stream 13	STA 320+50 to 323+25	none
Stream 13a	STA 319+90 to 322+25	none
Stream 13a1	STA 317+75 to 319+90	none
Stream 13a2	STA 319+50 to 320+10	none
Stream 13a3	STA 321+00	none
Stream 14	STA 337+00 to 339+80	none
Stream 14a	STA 338+65 to 340+25	none
Stream 14b	STA 339+90 to 340+60	none
Stream 15	STA 355+00 to 356+50	none
Stream 15a	STA 353+00	none
Stream 15b	STA 349+00	none
Stream 16	STA 366+50 to 377+00	none
Stream 16a	STA 364+80 to 374+00	none
Stream 16a1	STA 363+25 to 365+25	none
Stream 17	STA 379+75 to 385+75	none
Stream 18	STA 69+69L of SR 775	none
Symmes Creek2	STA 134+00	April 15 to June 30

Stream Name/ Description	Location	Work Restriction dates (No In-stream work permitted)
Symmes Creek3	STA 200+50	April 15 to June 30
Bear Creek	STA 299+00	none
Bent Creek	STA 270+00 to 274+75	none
Indian Guyan Creek	STA 299+40	April 15 to June 30
Little Paddy Creek	STA 378+50	none
Little Paddy Creek – Ramp I	STA 378+00	none

*Restriction dates do not apply if the stream has been dewatered prior to April 15.

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 Lawrence County Sheriff's Office at (740) 532-3525.

6. Aquatic Resource Demarcation:

Tables D and E (attached) include detailed fill quantities authorized within the aquatic resources. Aquatic resources not authorized 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:

Streams without StreamStats data (Streams 1, 2, 3a, 4, 5, 6, 7, 8, 10a, 10b, 10c, 12, 13a, 13a1, 13a2, 13a3, 15, 15a, 15b, 16a, 17) shall adhere to this condition of the Special Provisions for Temporary Access Fills (TAFs). All remaining streams with TAFs shall adhere to condition 11 of the Special Provisions.

Special Provisions Notes:

Definitions:

Normal Flow
Normal flow is the flow necessary to maintain chemical, physical, and biological integrity of the waterway. Normal flows for this type of waterway may vary during the year. It is anticipated that the Normal Flow is less than the flow producing an elevation equal to the OHWM but greater than zero. The Contractor's means and methods may vary depending on the time of year the work is active.

Temporary Access Fills (TAFs)
Include, but are not limited to, dewatering fills, causeways, cofferdams, access pads, and temporary bridges below the OHWM.

Requirements

7 calendar days prior to the initiation of any in-stream work, provide the Engineer with a written plan that includes the following:

- Plan view drawing showing the location of all TAFs proposed for use on the project.

- 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.
- 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 TAFs.

Do not begin in-stream work until the Engineer has accepted the written plan. Submit any changes to the planned TAF to the Engineer for acceptance a minimum of 7 days prior to performing any instream work.

The design 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.

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

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. Minimize clearing, grubbing, and excavation of waterway banks, and approach sections. Construct the TAFs as to not cause erosion or allow sediment deposits in the waterway.

Prior to the installation of any work in the waterway, establish a visual monument upstream of the proposed TAF. Maintain the monument throughout the project. Provide a visual mark on the monument that identifies the elevation of the OHWM.

Construct the TAFs to a water elevation at least 1 foot (0.3 m) above the OHWM. Use TAFs to dewater sections of the waterway for accessing proposed work areas only. Provide diversion ditches, conduits, pumps or other methods to maintain normal flows to the downstream waterway. Passing normal flows through active work areas of the waterway is prohibited. Ensure that any ponding of water behind the TAFs will not damage property, flood roadways, or threaten human health and safety.

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, as specified in C&MS 703.19.B.

When the work requiring TAF is complete, all portions of the TAF (including all rock and temporary diversions) 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 waterway 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. Temporary Access Fills:

Streams that have StreamStats data (Streams 3, 9, 9a, 10, 11, 13, 14, 16, Symmes Creek, Bear Creek, Bent Creek, Indian Guyan Creek, and Little Paddy Creek) shall adhere to this condition of the Special Provisions for Temporary Access Fills (TAFs). All remaining streams with TAFs shall adhere to condition 10 of the Special Provisions.

Special Provisions Notes:

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.

12. 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 jurisdictional waters of the U.S. 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.

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 upon receipt.

14. Demolition Debris:

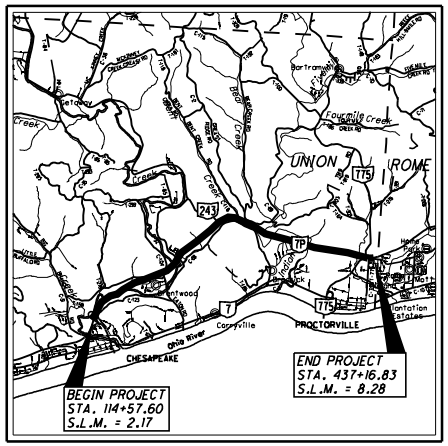
The intentional discharge of demolition debris from any structure (including but not limited to bridges, culverts, abutments, wing walls, piers) is not authorized for this project. If any demolition debris inadvertently falls into aquatic resources, it must be removed immediately. Notify the Engineer 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.

Version: July 2020

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION

LAW-7-2.17-PHASE 2A

VILLAGE OF CHESAPEAKE
VILLAGE OF PROCTORVILLE
UNION TOWNSHIP
ROME TOWNSHIP
LAWRENCE COUNTY



LOCATION MAP

LATITUDE: N 38°27'16" LONGITUDE: W 82°25'19"

SCALE IN MILES

0 1 2 3 4

PORTION TO BE IMPROVED

INTERSTATE HIGHWAY

FEDERAL ROUTES

STATE ROUTES

COUNTY & TOWNSHIP ROADS

OTHER ROADS

FOR DESIGN DESIGNATIONS AND DESIGN EXCEPTIONS, SEE SHEET 2.

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DRAINAGE DETAILS	285-294
TRAFFIC CONTROL PLAN	295-297
SOIL PROFILE	-

PROJECT DESCRIPTION

THIS PROJECT IS THE THIRD PHASE OF THE LAW-7-2.17 STATE ROUTE 7 RELOCATION PROJECT. THIS GRADE AND DRAIN PROJECT WILL CONSTRUCT THE EMBANKMENT AND NECESSARY DRAINAGE ITEMS FOR 3.26 MILES OF STATE ROUTE 7. ALSO INCLUDED IS THE CONSTRUCTION OF ROADWAY IMPROVEMENTS ALONG 0.5 MILES OF C.R. 104 AND C.R. 32. THE RELOCATION OF 0.08 MILES OF LYNN LANE WILL ALSO BE A PART OF THIS PROJECT. THE CONSTRUCTION OF SIX TURNAROUNDS, TWO DETENTION BASINS AND PERMANENT TRAFFIC CONTROL WILL ALSO BE INCLUDED WITH THIS PROJECT.

EARTH DISTURBED AREAS

PROJECT EARTH DISTURBED AREA: ACRES

ESTIMATED CONTRACTOR EARTH DISTURBED AREA: ACRES

NOTICE OF INTENT EARTH DISTURBED AREA: 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 CHANGES AND SUPPLEMENTAL SPECIFICATIONS 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 FOR THE SIDE ROADS AS DESCRIBED ON SHEETS 19-22 AND THAT PROVISIONS FOR THE MAINTENANCE AND SAFETY OF TRAFFIC WILL BE AS SET FORTH ON THE PLANS AND ESTIMATES.

APPROVED _____

DATE _____ DISTRICT DEPUTY DIRECTOR

APPROVED _____

DATE _____ DIRECTOR, DEPARTMENT OF TRANSPORTATION

UNDERGROUND UTILITIES

Contact Two Working Days Before You Dig

OHIO811.org Before You Dig

OHIO811, 8-1-1, or 1-800-362-2764

(Non-members must be called directly)

PLAN PREPARED BY:

Stantec

1500 Lake Shore Drive, Suite 100

Columbus, Ohio 43204

(614) 486-4383

OHIO DEPARTMENT OF TRANSPORTATION, DISTRICT NINE

650 EASTERN AVENUE, P.O. BOX 467

CHILLICOTHE, OHIO 45601

ENGINEERS SEAL:

SIGNED: _____

DATE: _____

ENGINEERS SEAL:

SIGNED: _____

DATE: _____

ENGINEERS SEAL:

SIGNED: _____

DATE: _____

STANDARD CONSTRUCTION DRAWINGS					SUPPLEMENTAL SPECIFICATIONS	SPECIAL PROVISIONS

FEDERAL PROJECT NO. E035(921) E060(482)

PID NO. 75923

CONSTRUCTION PROJECT NO.

RAILROAD INVOLVEMENT NONE

LAW-7-2.17

1/297

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CURVE DATA
S.R. 7
CURVE NO. 1

P.I. STA. 138+60.99
Δ = 53° 33' 53" (RT)
Dc = 1° 27' 15"
R = 3,940.00'
T = 1,880.13'
L = 3,508.44'
E = 425.60'
TS STA. 117+84.61
SC STA. 119+59.61

θs = 1° 16' 21"
Ls = 175.00'
Ts = 2,076.38'
LT = 116.67'
ST = 58.34'
e_{max} = 4.00%
CS STA. 154+68.05
ST STA. 156+43.05

CURVE DATA
S.R. 7
CURVE NO. 2

P.I. STA. 182+06.44
Δ = 24° 16' 14" (LT)
Dc = 2° 10' 43"
R = 2,630.00'
T = 423.13'
L = 839.08'
E = 33.82'
TS STA. 175+03.18
SC STA. 177+78.18

θs = 2° 59' 44"
Ls = 275.00'
Ts = 703.26'
LT = 183.36'
ST = 91.69'
e_{max} = 5.51%
CS STA. 186+17.26
ST STA. 188+92.26

CURVE DATA
S.R. 7
CURVE NO. 3

P.I. STA. 205+33.31
Δ = 27° 30' 45" (RT)
Dc = 1° 45' 00"
R = 3,274.04'
T = 683.24'
L = 1,347.14'
E = 70.53'
TS STA. 196+19.13
SC STA. 198+44.13

θs = 1° 58' 07"
Ls = 225.00'
Ts = 914.18'
LT = 150.01'
ST = 75.01'
e_{max} = 4.60%
CS STA. 211+91.27
ST STA. 214+16.27

CURVE DATA
S.R. 7
CURVE NO. 4

P.I. STA. 232+01.52
Δ = 34° 12' 59" (LT)
Dc = 4° 45' 00"
R = 1,206.23'
T = 161.12'
L = 320.35'
E = 10.71'
TS STA. 226+28.73
SC STA. 230+28.73

θs = 9° 30' 00"
Ls = 400.00'
Ts = 572.79'
LT = 267.05'
ST = 133.68'
e_{max} = 8.00%
CS STA. 233+49.08
ST STA. 237+49.08

CURVE DATA
S.R. 7
CURVE NO. 5

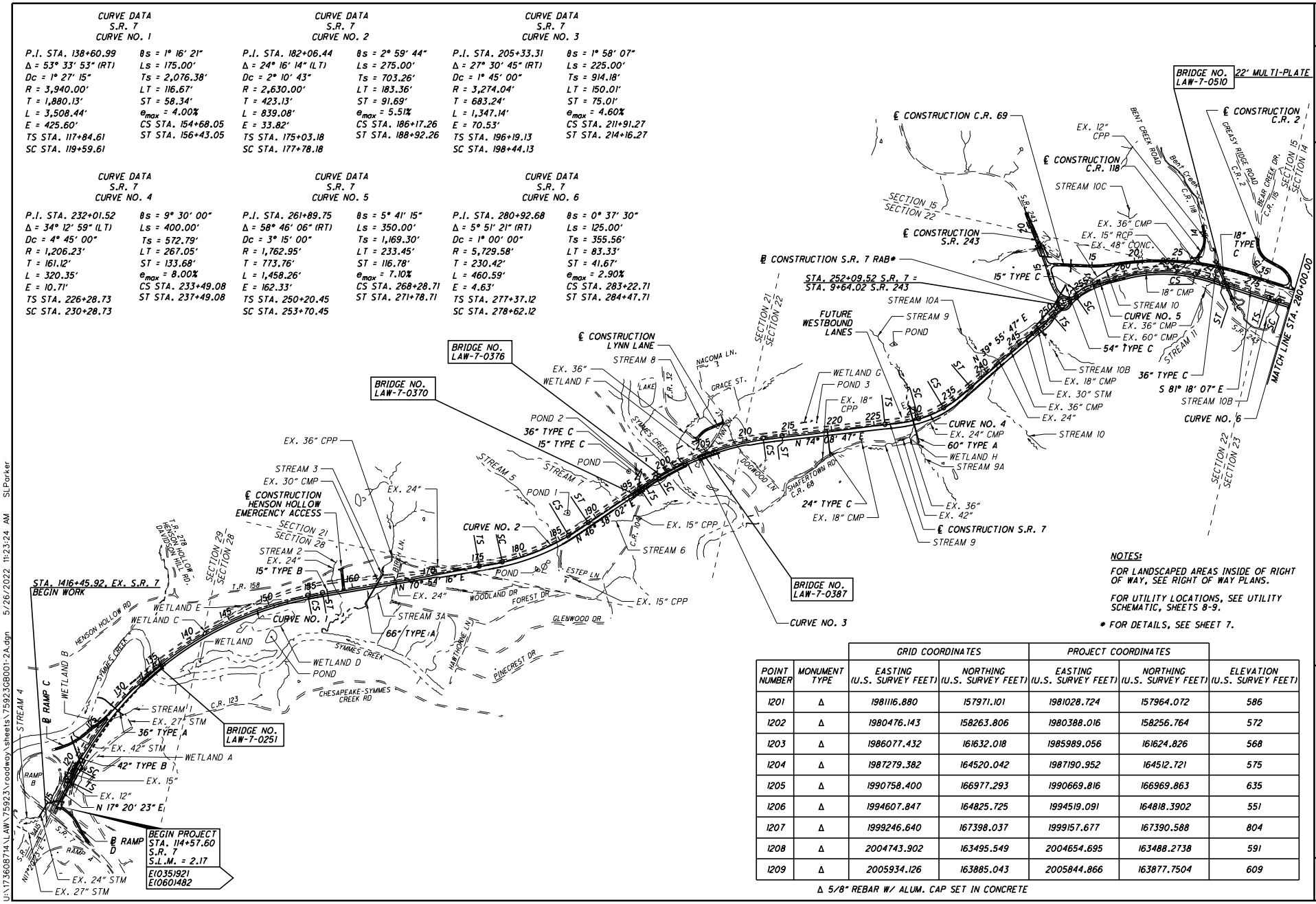
P.I. STA. 261+89.75
Δ = 58° 46' 06" (RT)
Dc = 3° 15' 00"
R = 1,762.95'
T = 773.76'
L = 1,458.26'
E = 162.33'
TS STA. 250+20.45
SC STA. 253+70.45

θs = 5° 41' 15"
Ls = 350.00'
Ts = 1,169.30'
LT = 233.45'
ST = 116.78'
e_{max} = 7.10%
CS STA. 268+28.71
ST STA. 271+78.71

CURVE DATA
S.R. 7
CURVE NO. 6

P.I. STA. 280+92.68
Δ = 5° 51' 21" (RT)
Dc = 1° 00' 00"
R = 5,729.58'
T = 230.42'
L = 460.59'
E = 4.63'
TS STA. 277+37.12
SC STA. 278+62.12

θs = 0° 37' 30"
Ls = 125.00'
Ts = 355.56'
LT = 83.33'
ST = 41.67'
e_{max} = 2.90%
CS STA. 283+22.71
ST STA. 284+47.71



NOTES:

FOR LANDSCAPED AREAS INSIDE OF RIGHT OF WAY, SEE RIGHT OF WAY PLANS.

FOR UTILITY LOCATIONS, SEE UTILITY SCHEMATIC, SHEETS 8-9.

* FOR DETAILS, SEE SHEET 7.

POINT NUMBER	MONUMENT TYPE	GRID COORDINATES EASTING (U.S. SURVEY FEET)	GRID COORDINATES NORTHING (U.S. SURVEY FEET)	PROJECT COORDINATES EASTING (U.S. SURVEY FEET)	PROJECT COORDINATES NORTHING (U.S. SURVEY FEET)	ELEVATION (U.S. SURVEY FEET)
1201	Δ	1981116.880	157971.101	1981028.724	157964.072	586
1202	Δ	1980476.143	158263.806	1980388.016	158256.764	572
1203	Δ	1986077.432	161632.018	1985989.056	161624.826	568
1204	Δ	1987279.382	164520.042	1987190.952	164512.721	575
1205	Δ	1990758.400	166977.293	1990669.816	166969.863	635
1206	Δ	1994607.847	164825.725	1994519.091	164818.3902	551
1207	Δ	1999246.640	167398.037	1999157.677	167390.588	804
1208	Δ	2004743.902	163495.549	2004654.695	163488.2738	591
1209	Δ	2005934.126	163885.043	2005844.866	163877.7504	609

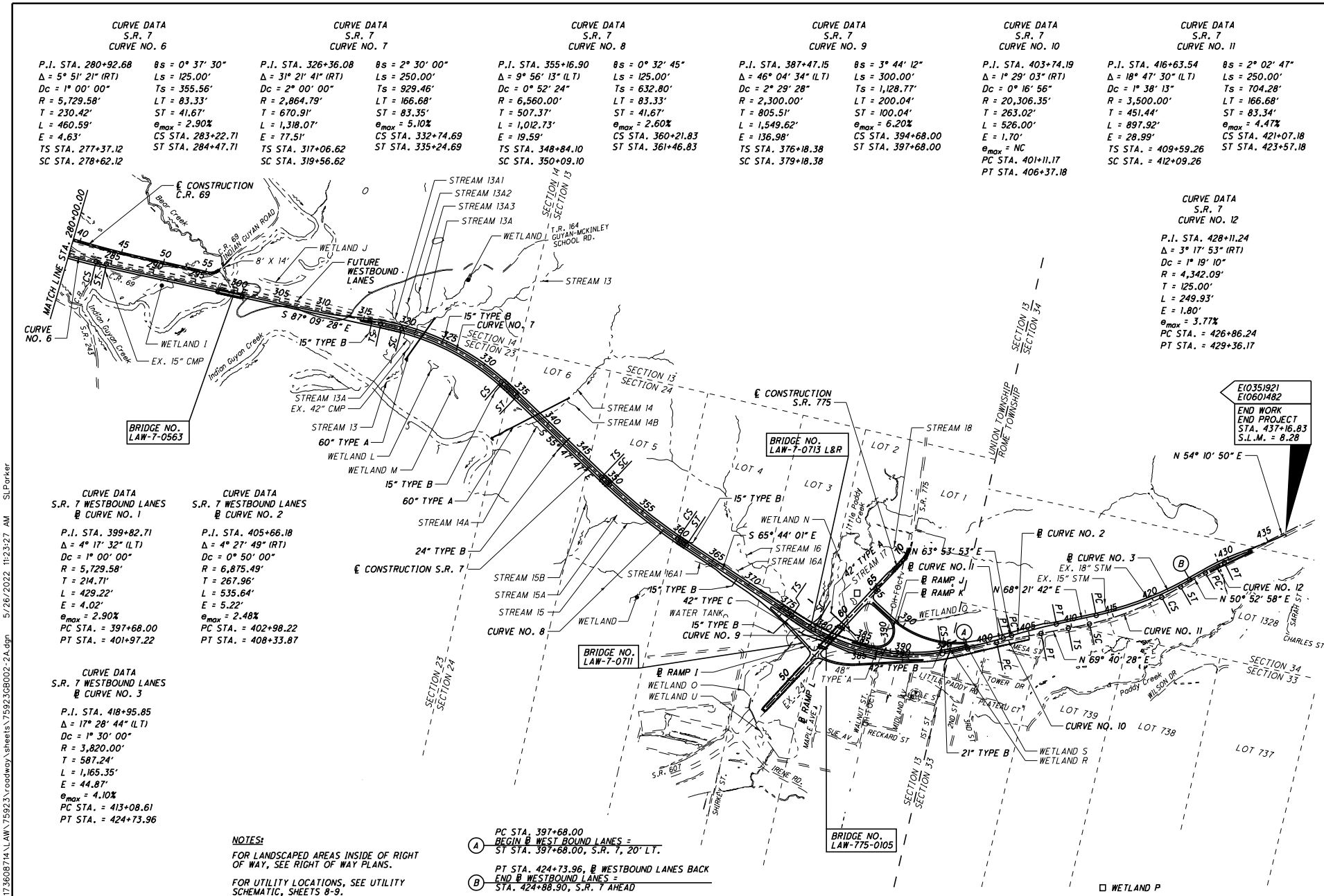
Δ 5/8" REBAR W/ ALUM. CAP SET IN CONCRETE

HORIZONTAL SCALE IN FEET 0 250 500 1000

SCHEMATIC PLAN

LAW-7-2.17

3
297


CURVE DATA
S.R. 7
CURVE NO. 6
P.I. STA. 280+92.68
Δ = 5° 51' 21" (RT)
Dc = 1° 00' 00"
R = 5,729.58'
T = 230.42'
L = 460.59'
E = 4.63'
TS STA. 277+37.12
SC STA. 278+62.12
θs = 0° 37' 30"
Ls = 125.00'
Ts = 355.56'
LT = 83.33'
ST = 41.67'
emax = 2.90%
CS STA. 283+22.71
ST STA. 284+47.71
CURVE DATA
S.R. 7
CURVE NO. 7
P.I. STA. 326+36.08
Δ = 31° 21' 41" (RT)
Dc = 2° 00' 00"
R = 2,864.79'
T = 670.91'
L = 1,318.07'
E = 77.51'
TS STA. 317+06.62
SC STA. 319+56.62
θs = 2° 30' 00"
Ls = 250.00'
Ts = 929.46'
LT = 166.68'
ST = 83.35'
emax = 5.10%
CS STA. 332+74.69
ST STA. 335+24.69
CURVE DATA
S.R. 7
CURVE NO. 8
P.I. STA. 355+16.90
Δ = 9° 56' 13" (LT)
Dc = 0° 52' 24"
R = 6,560.00'
T = 507.37'
L = 1,012.73'
E = 19.59'
TS STA. 348+84.10
SC STA. 350+09.10
θs = 0° 32' 45"
Ls = 125.00'
Ts = 632.80'
LT = 83.33'
ST = 41.67'
emax = 2.60%
CS STA. 360+21.83
ST STA. 361+46.83
CURVE DATA
S.R. 7
CURVE NO. 9
P.I. STA. 387+47.15
Δ = 46° 04' 34" (LT)
Dc = 2° 29' 28"
R = 2,300.00'
T = 805.51'
L = 1,549.62'
E = 136.98'
TS STA. 376+18.38
SC STA. 379+18.38
θs = 3° 44' 12"
Ls = 300.00'
Ts = 1,128.77'
LT = 200.04'
ST = 100.04'
emax = 6.20%
CS STA. 394+68.00
ST STA. 397+68.00
CURVE DATA
S.R. 7
CURVE NO. 10
P.I. STA. 403+74.19
Δ = 1° 29' 03" (RT)
Dc = 0° 16' 56"
R = 20,306.35'
T = 263.02'
L = 526.00'
E = 1.70'
emax = NC
PC STA. 401+11.17
PT STA. 406+37.18
CURVE DATA
S.R. 7
CURVE NO. 11
P.I. STA. 416+63.54
Δ = 18° 47' 30" (LT)
Dc = 1° 38' 13"
R = 3,500.00'
T = 451.44'
L = 897.92'
E = 28.99'
TS STA. = 409+59.26
SC STA. = 412+09.26
θs = 2° 02' 47"
Ls = 250.00'
Ts = 704.28'
LT = 166.68'
ST = 83.34'
emax = 4.47%
CS STA. 421+07.18
ST STA. 423+57.18
CURVE DATA
S.R. 7
CURVE NO. 12
P.I. STA. 428+11.24
Δ = 3° 17' 53" (RT)
Dc = 1° 19' 10"
R = 4,342.09'
T = 125.00'
L = 249.93'
E = 1.80'
emax = 3.77%
PC STA. = 426+86.24
PT STA. = 429+36.17
CURVE DATA
S.R. 7 WESTBOUND LANES
@ CURVE NO. 1
P.I. STA. 399+82.71
Δ = 4° 17' 32" (LT)
Dc = 1° 00' 00"
R = 5,729.58'
T = 214.71'
L = 429.22'
E = 4.02'
emax = 2.90%
PC STA. = 397+68.00
PT STA. = 401+97.22
CURVE DATA
S.R. 7 WESTBOUND LANES
@ CURVE NO. 2
P.I. STA. 405+66.18
Δ = 4° 27' 49" (RT)
Dc = 0° 50' 00"
R = 6,875.49'
T = 267.96'
L = 535.64'
E = 5.22'
emax = 2.48%
PC STA. = 402+98.22
PT STA. = 408+33.87
CURVE DATA
S.R. 7 WESTBOUND LANES
@ CURVE NO. 3
P.I. STA. 418+95.85
Δ = 17° 28' 44" (LT)
Dc = 1° 30' 00"
R = 3,820.00'
T = 587.24'
L = 1,165.35'
E = 44.87'
emax = 4.10%
PC STA. = 413+08.61
PT STA. = 424+73.96
NOTES:
FOR LANDSCAPED AREAS INSIDE OF RIGHT OF WAY, SEE RIGHT OF WAY PLANS.
FOR UTILITY LOCATIONS, SEE UTILITY SCHEMATIC, SHEETS 8-9.
A PC STA. 397+68.00 BEGIN @ WEST BOUND LANES = ST STA. 397+68.00, S.R. 7, 20' LT.
B PT STA. 424+73.96, @ WESTBOUND LANES BACK END @ WESTBOUND LANES = STA. 424+88.90, S.R. 7 AHEAD
℄ CONSTRUCTION C.R. 69
℄ CONSTRUCTION S.R. 775
℄ CONSTRUCTION S.R. 7
MATCH LINE STA. 280+00.00
CURVE NO. 6
CURVE NO. 7
CURVE NO. 8
CURVE NO. 9
CURVE NO. 10
CURVE NO. 11
CURVE NO. 12
@ CURVE NO. 1
@ CURVE NO. 2
@ CURVE NO. 3
@ RAMP I
@ RAMP J
@ RAMP K
@ RAMP L
BRIDGE NO. LAW-7-0563
BRIDGE NO. LAW-7-0711
BRIDGE NO. LAW-7-0713 L&R
BRIDGE NO. LAW-775-0105
E(035)921
E(060)482
END WORK
END PROJECT
STA. 437+16.83
S.L.M. = 8.28
N 54° 10' 50" E
N 63° 53' 53" E
N 68° 21' 42" E
N 50° 52' 58" E
N 69° 40' 28" E
S 87° 09' 28" E
S 65° 44' 01" E
S 55° 47' 47" E
Bear Creek
Indian Guyan Creek
C.R. 69
INDIAN GUYAN ROAD
GUYAN-MCKINLEY SCHOOL RD.
T.R. 164
S.R. 775
S.R. 243
WETLAND I
WETLAND J
WETLAND L
WETLAND M
WETLAND N
WETLAND O
WETLAND P
WETLAND Q
WETLAND R
WETLAND S
WETLAND U
EX. 15" CMP
8' X 14'
FUTURE WESTBOUND LANES
STREAM 13
STREAM 13A
STREAM 13A1
STREAM 13A2
STREAM 13A3
STREAM 14
STREAM 14A
STREAM 14B
STREAM 15
STREAM 15A
STREAM 15B
STREAM 16
STREAM 16A
STREAM 16A1
STREAM 17
STREAM 18
EX. 42" CMP
60" TYPE A
24" TYPE B
15" TYPE B
42" TYPE C
42" TYPE A
48" TYPE A
21" TYPE B
WATER TANK
EX. 18" STM
EX. 15" STM
EX. 24" STM
CURVE NO. 8
CURVE NO. 9
CURVE NO. 10
CURVE NO. 11
CURVE NO. 12
LOT 1
LOT 2
LOT 3
LOT 4
LOT 5
LOT 6
LOT 737
LOT 738
LOT 739
LOT 1328
SECTION 13 SECTION 24
SECTION 14 SECTION 23
SECTION 13 SECTION 34
SECTION 13 SECTION 33
SECTION 34 SECTION 33
SECTION 23 SECTION 24
UNION TOWNSHIP ROME TOWNSHIP
Little Paddy Creek
Paddy Creek
Indian Guyan Creek
S.R. 601
IRENE RD.
SHIRKEY ST.
MAPLE AVE.
WALNUT ST.
MIDLAND AV.
MESA ST.
LITTLE PADDY RD.
PLATEAU CT.
LOWER DR.
WILSON DR.
RECKARD ST
SAHARA ST
CHARLES ST
1ST ST
2ND ST
3RD ST
SLE AV
OH-FO-CH
HORIZONTAL SCALE IN FEET
0
250
500
1000
SCHEMATIC PLAN
LAW-7-2.17
4
297
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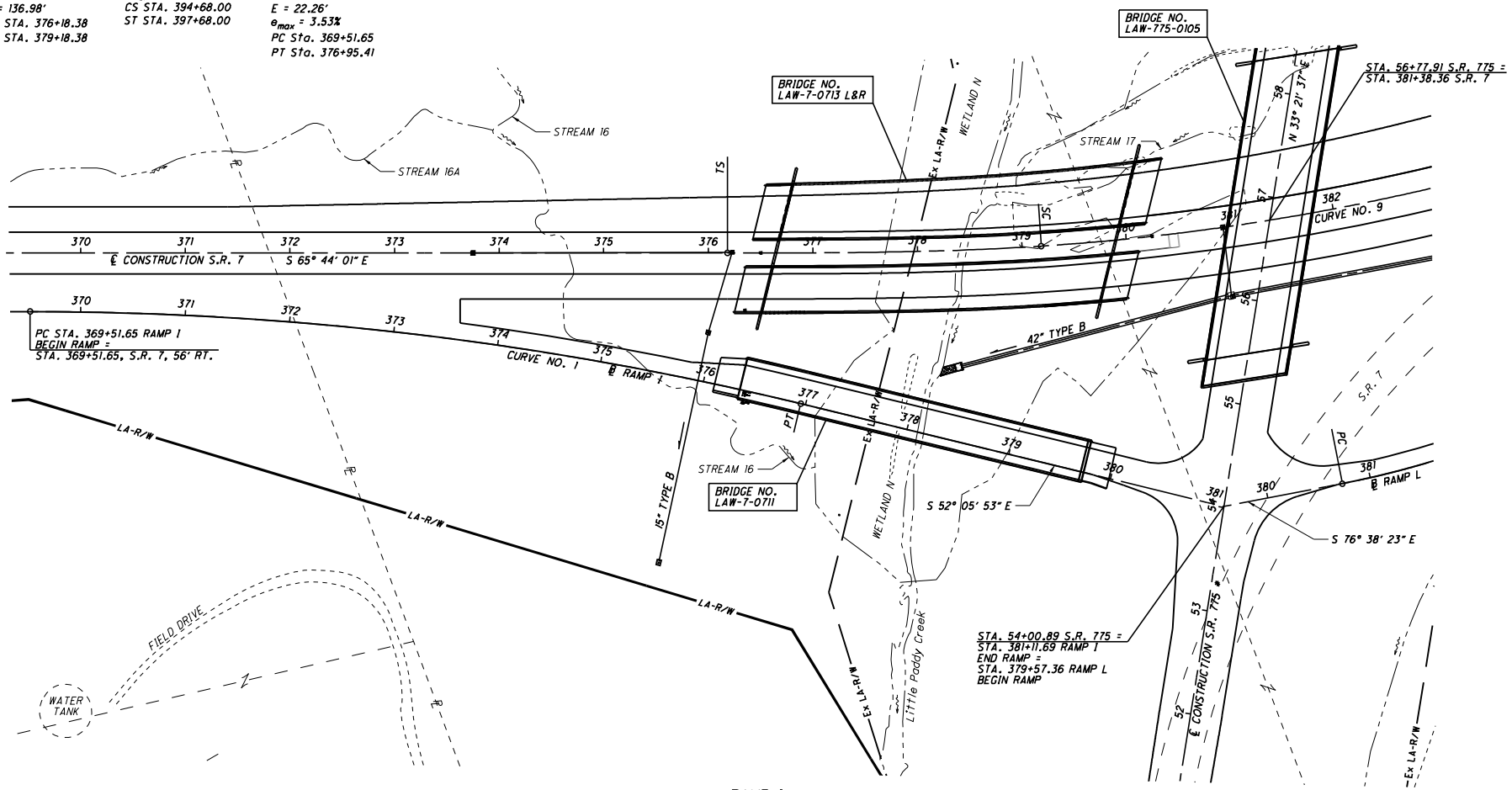
CURVE DATA
S.R. 7
CURVE NO. 9

P.I. STA. 387+47.15
Δ = 46° 04' 34" (LT)
Dc = 2° 29' 28"
R = 2,300.00'
T = 805.51'
L = 1,549.62'
E = 136.98'
TS STA. 376+18.38
SC STA. 379+18.38

θs = 3° 44' 12"
Ls = 300.00'
Ts = 1,128.77'
LT = 200.04'
ST = 100.04'
e_{max} = 6.20%
CS STA. 394+68.00
ST STA. 397+68.00

CURVE DATA
RAMP I
CURVE NO. 1

P.I. Sta. 373+25.29
Δ = 13° 38' 08" (RT)
Dc = 1° 50' 00"
R = 3,125.22'
T = 373.64'
L = 743.76'
E = 22.26'
e_{max} = 3.53%
PC Sta. 369+51.65
PT Sta. 376+95.41



RAMP I

NOTES:

FOR LANDSCAPED AREAS INSIDE OF RIGHT OF WAY, SEE RIGHT OF WAY PLANS.

FOR UTILITY LOCATIONS, SEE UTILITY SCHEMATIC, SHEETS 8-9.

HORIZONTAL SCALE IN FEET
0 25 50 100

SCHEMATIC PLAN

LAW-7-2.17

5
297

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P.I. STA. 11+53.11
Δ = 2° 41' 45"
NO CURVE

P.I. STA. 14+07.46
Δ = 2° 39' 07"
NO CURVE

P.I. STA. 16+72.90
Δ = 4° 02' 33"
NO CURVE

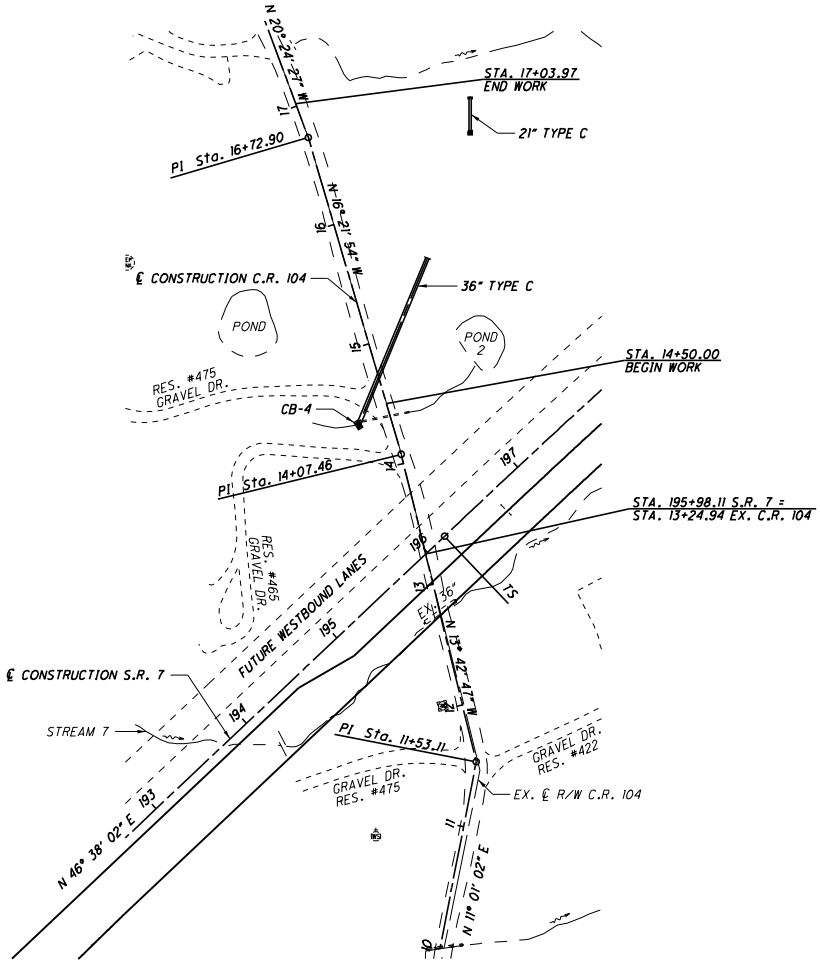
P.I. STA. 10+98.09
Δ = 9° 00' 49"
NO CURVE

P.I. STA. 11+92.44
Δ = 5° 16' 18"
NO CURVE

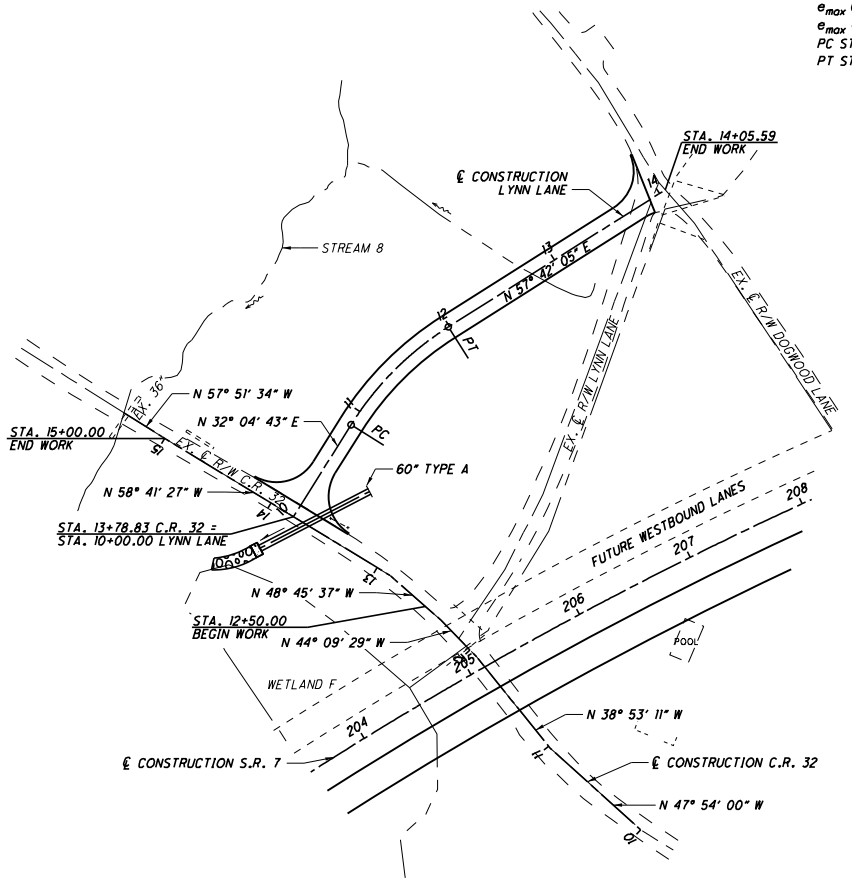
P.I. STA. 12+33.35
Δ = 4° 36' 08"
NO CURVE

P.I. STA. 12+87.96
Δ = 9° 55' 50"
NO CURVE

P.I. STA. 15+02.34
Δ = 0° 49' 53"
NO CURVE



CURVE DATA
LYNN LANE
P.I. STA. 11+44.17
Δ = 25° 37' 23" (RT)
Dc = 22° 55' 06"
R = 250.00'
T = 56.85'
L = 111.80'
E = 6.38'
e_{max} (N.D.C.) = 8.00%
e_{max} = NC
PC STA. 10+87.32
PT STA. 11+99.12



NOTES:

FOR LANDSCAPED AREAS INSIDE OF RIGHT OF WAY, SEE RIGHT OF WAY PLANS.

FOR UTILITY LOCATIONS, SEE UTILITY SCHEMATIC, SHEETS 8-9.

HORIZONTAL SCALE IN FEET
0 25 50 100

SCHEMATIC PLAN

LAW-7-2.17

6
297

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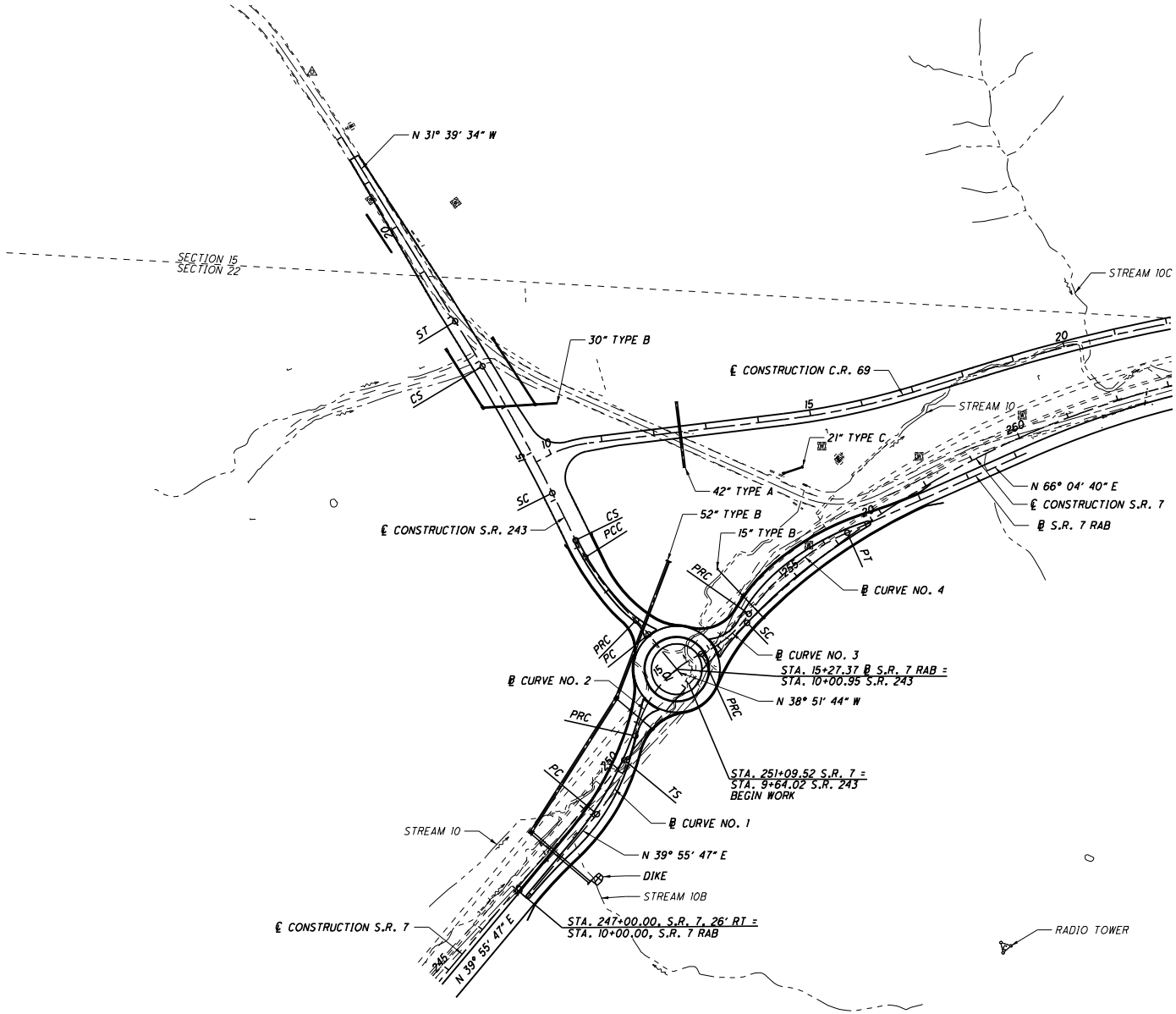

CURVE DATA
℄ S.R. 7 RAB
CURVE NO. 1

P.I. Sta. 12+93.43
Δ = 27° 26' 21" (LT)
Dc = 16° 22' 13"
R = 350.00'
T = 85.45'
L = 167.62'
E = 10.28'
PC Sta. 12+07.99
PRC Sta. 13+75.60

CURVE DATA
℄ S.R. 7 RAB
CURVE NO. 2

P.I. Sta. 14+87.13
Δ = 52° 43' 55" (RT)
Dc = 25° 27' 53"
R = 225.00'
T = 111.52'
L = 207.08'
E = 26.12'
PRC Sta. 13+75.60
PRC Sta. 15+82.68

CURVE DATA
℄ S.R. 7 RAB
CURVE NO. 3

P.I. Sta. 16+43.83
Δ = 30° 24' 24" (LT)
Dc = 25° 27' 53"
R = 225.00'
T = 61.15'
L = 119.41'
E = 8.16'
PRC Sta. 15+82.68
PRC Sta. 17+02.09

CURVE DATA
℄ S.R. 7 RAB
CURVE NO. 4

P.I. Sta. 18+27.99
Δ = 31° 15' 43" (RT)
Dc = 12° 43' 57"
R = 450.00'
T = 125.90'
L = 245.53'
E = 17.28'
PRC Sta. 17+02.09
PT Sta. 19+47.62

HORIZONTAL SCALE IN FEET
0 50 100 200

SCHEMATIC PLAN

LAW-7-2.17

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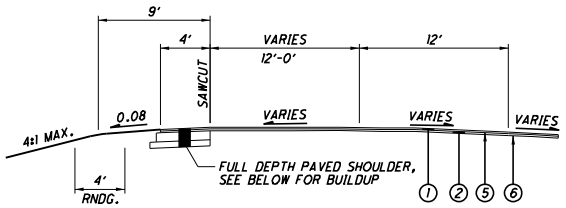
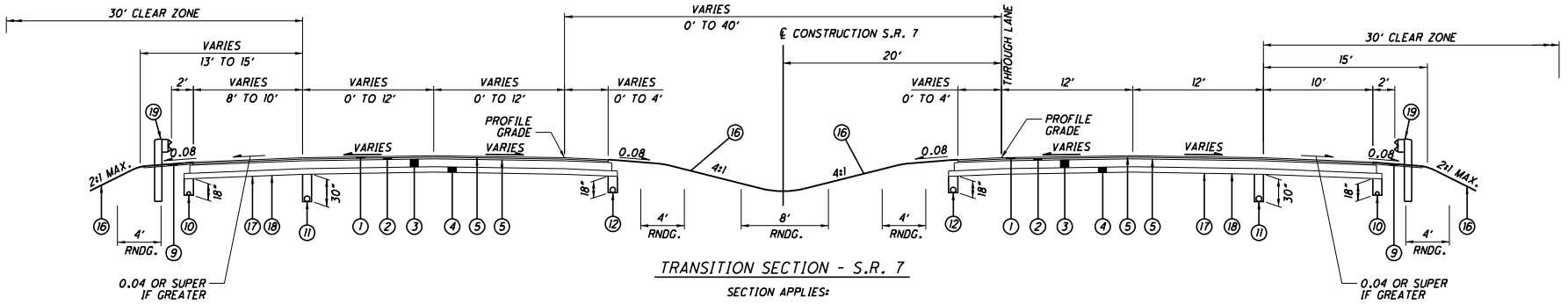


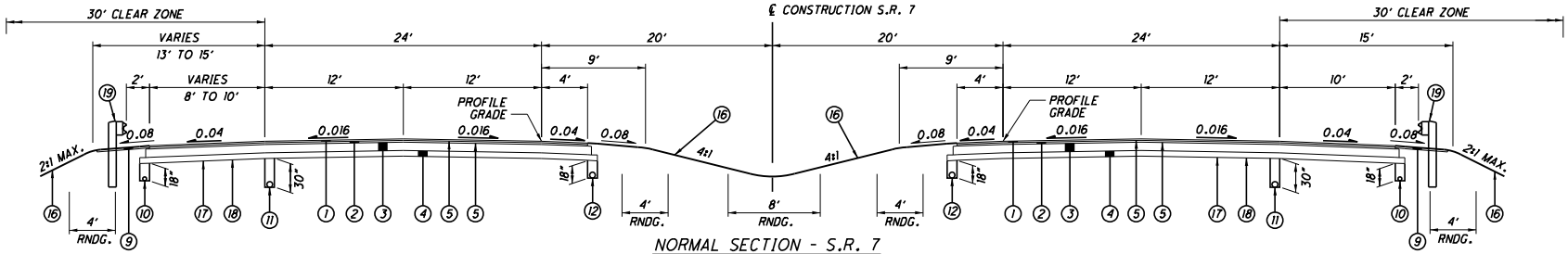
OVERLAY SECTION - S.R. 7

SECTION APPLIES:
STA. 427+42.37 TO STA. 437+16.83



TRANSITION SECTION - S.R. 7

SECTION APPLIES:
STA. 309+49.89 TO STA. 319+56.62
STA. 424+88.90 TO STA. 437+16.83



NORMAL SECTION - S.R. 7

SECTION APPLIES:
STA. 335+67.69 TO STA. 348+41.10
STA. 361+89.83 TO STA. 375+75.38

NOTES:
SUPERELEVATION TO BE OPPOSITE HAND TO TYPICAL SHOWN.
FOR LEGEND, SEE SHEET 10.
FOR DITCH DETAILS, SEE SHEET 16.
FOR EDGE COURSE DETAILS, SEE SHEET 17.
FOR SUPERELEVATED SHOULDER DETAILS, SEE DETAIL A, SHEET 17.

PAVEMENT AREA SHOWN FOR INFORMATION ONLY. AREA TO BE SEEDED AND MULCHED.

TYPICAL SECTION - S.R. 7

LAW-7-2.17

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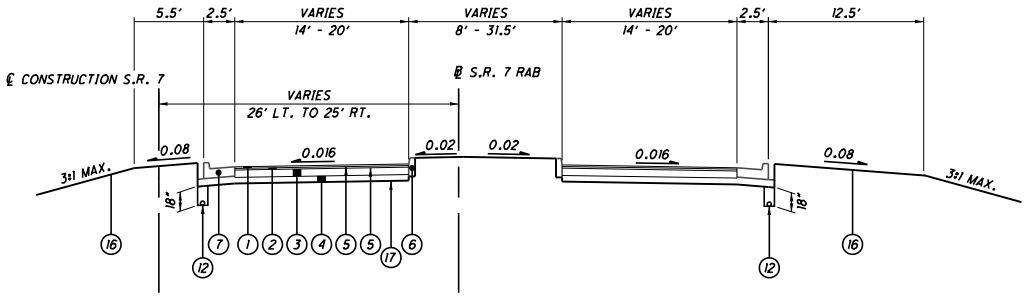

NORMAL SECTION - S.R. 7 RAB

SECTION APPLIES:
S.R. 7 STA. 247+00.00 TO STA. 251+00.00

PAVEMENT AREA SHOWN FOR INFORMATION ONLY. AREA TO BE SEEDED AND MULCHED.

NOTES:
TYPICAL SHOWN FOR INFORMATION ONLY.

PAVEMENT BUILDUP IS THE SAME FOR BOTH SIDES OF ℄.
SEE PAVEMENT DETAILS FOR LIMITS OF CONCRETE MEDIAN.

FOR LEGEND, SEE SHEET 10.

TYPICAL SECTION - S.R. 7

LAW-7-2.17

12
297

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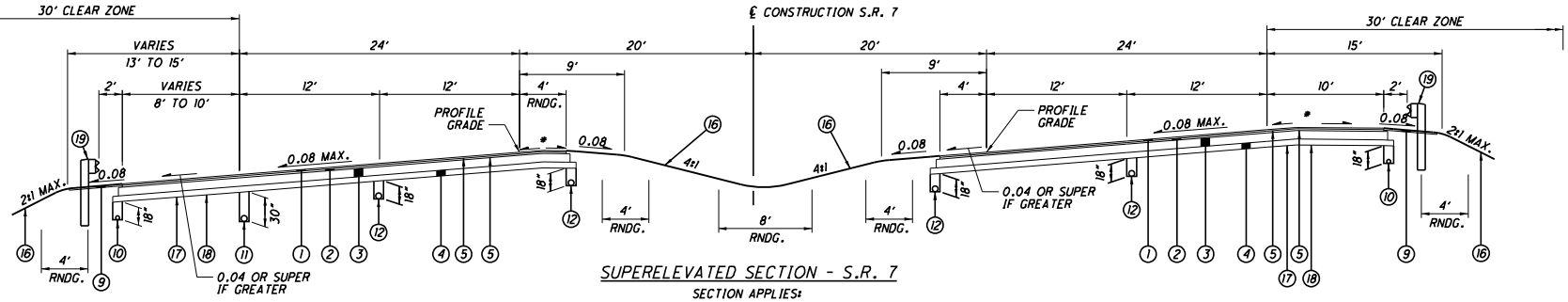


SUPERELEVATED SECTION - S.R. 7

SECTION APPLIES:

+ STA. 319+56.52 TO STA. 335+67.69
STA. 348+41.10 TO STA. 361+89.83
STA. 375+75.38 TO STA. 397+68.00

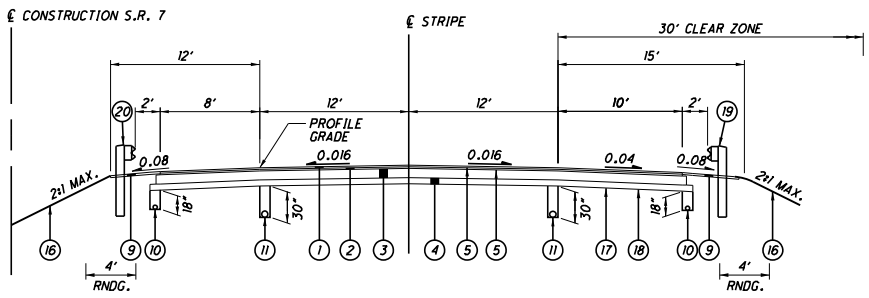
PAVEMENT AREA SHOWN FOR INFORMATION ONLY. AREA TO BE SEEDED AND MULCHED.

NOTES:

+ SUPERELEVATION TO BE OPPOSITE HAND TO TYPICAL SHOWN.
FOR LEGEND, SEE SHEET 10.
FOR DITCH DETAILS, SEE SHEET 16.
FOR EDGE COURSE DETAILS, SEE SHEET 17.
* FOR SUPERELEVATED SHOULDER DETAILS, SEE DETAIL A, SHEET 17.

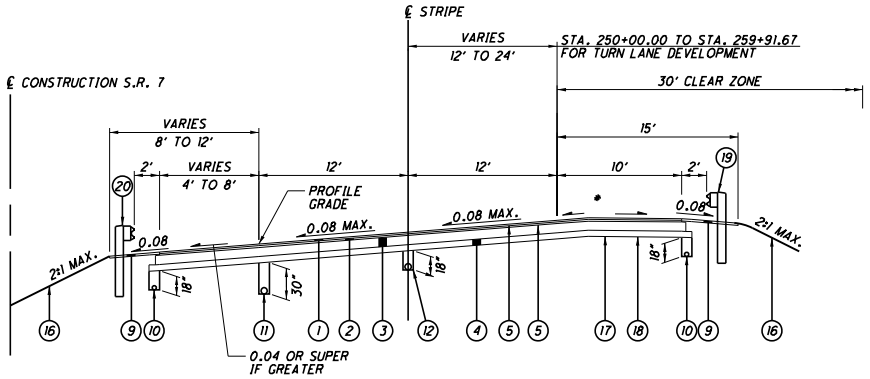
TYPICAL SECTION - S.R. 7

LAW-7-2.17



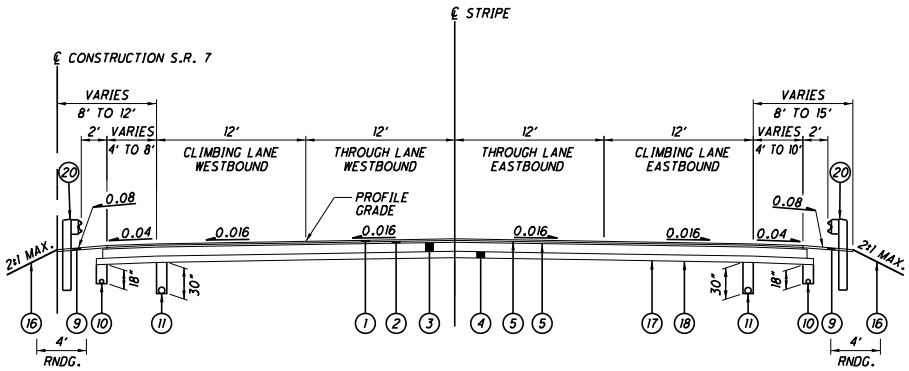
NORMAL SECTION - S.R. 7

SECTION APPLIES:
STA. 156+86.05 TO STA. 167+72.52
STA. 195+00.00 TO STA. 195+76.13
STA. 272+21.71 TO STA. 276+94.12
STA. 284+90.71 TO STA. 309+49.89



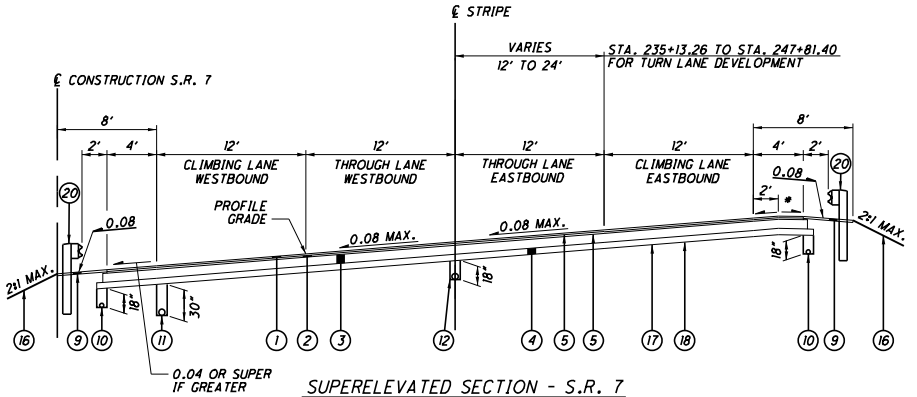
SUPERELEVATED SECTION - S.R. 7

SECTION APPLIES:
+ STA. 120+56.37 TO STA. 156+86.05
STA. 195+76.13 TO STA. 209+79.72
+ STA. 250+00.00 TO STA. 272+21.71
STA. 276+94.12 TO STA. 284+90.71
STA. 376+00.00 TO STA. 390+75.00



NORMAL SECTION - S.R. 7
WITH CLIMBING LANES

SECTION APPLIES:
STA. 167+72.52 TO STA. 174+60.18
STA. 189+35.26 TO STA. 195+00.00
STA. 214+59.27 TO STA. 225+85.73
STA. 237+92.08 TO STA. 247+00.00



SUPERELEVATED SECTION - S.R. 7
WITH CLIMBING LANES

SECTION APPLIES:
STA. 174+60.18 TO STA. 189+35.26
+ STA. 209+79.72 TO STA. 214+59.27
STA. 225+85.73 TO STA. 237+92.08

PAVEMENT AREA SHOWN FOR INFORMATION ONLY. AREA TO BE SEEDED AND MULCHED.

NOTES:
+ SUPERELEVATION TO BE OPPOSITE HAND TO TYPICAL SHOWN.
FOR LEGEND, SEE SHEET 10.
FOR DITCH DETAILS, SEE SHEET 16.
FOR EDGE COURSE DETAILS, SEE SHEET 17.
* FOR SUPERELEVATED SHOULDER DETAILS, SEE DETAIL A, SHEET 17.

TYPICAL SECTION - S.R. 7

LAW-7-2.17

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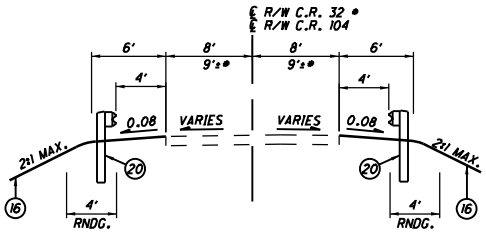
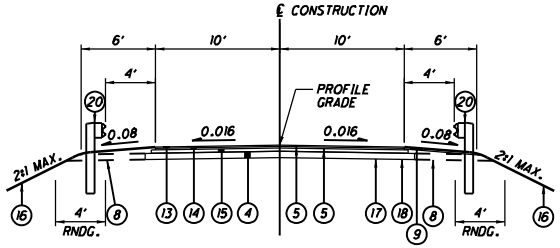


NORMAL SECTION - SIDE ROADS

SECTION APPLIES
C.R. 104
STA. 14+50.00 TO STA. 17+03.97
C.R. 32
STA. 12+50.00 TO STA. 15+00.00



NORMAL SECTION - SIDE ROADS

SECTION APPLIES
LYNN LANE
STA. 10+10.00 TO STA. 13+90.68

NOTES:
FOR LEGEND, SEE SHEET 10
FOR DITCH DETAILS, SEE SHEET 16
FOR EDGE COURSE DETAILS, SEE SHEET 17

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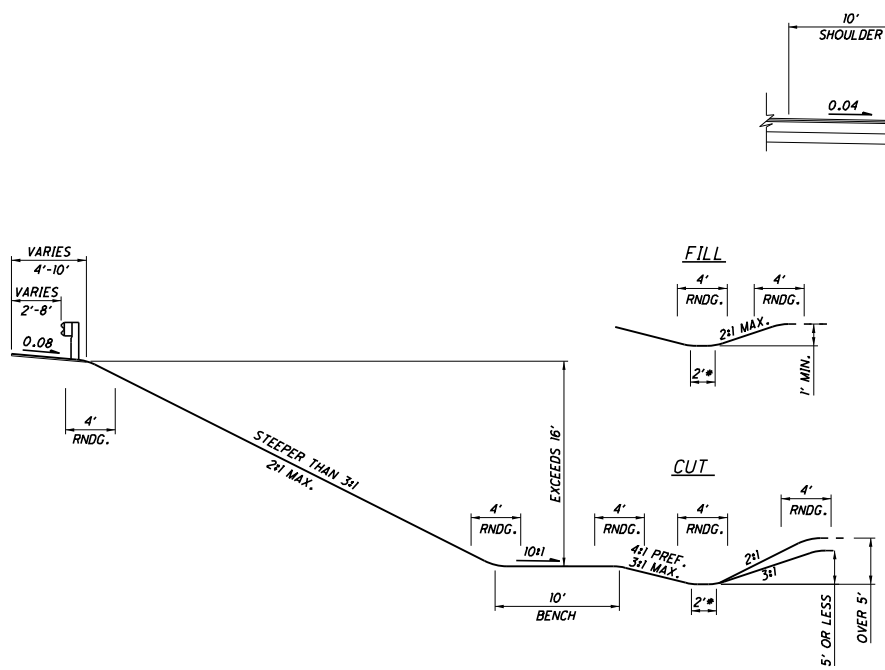
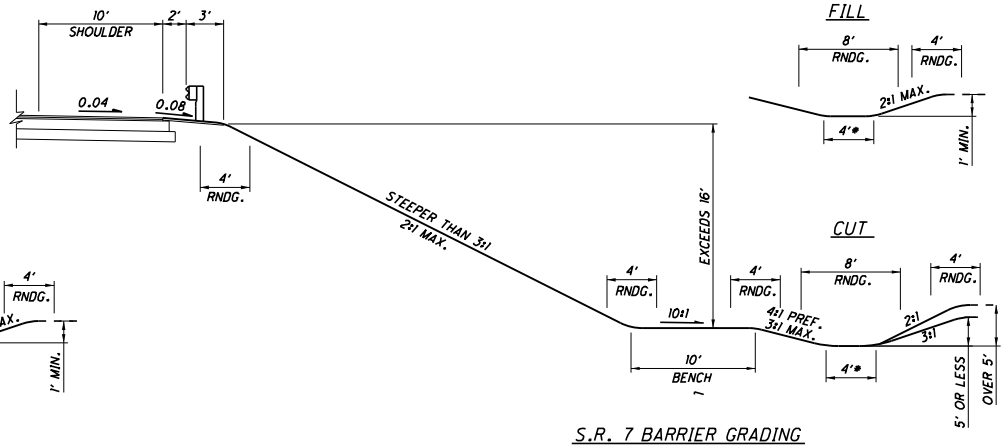
TYPICAL SECTIONS - COUNTY ROADS AND SIDE ROADS

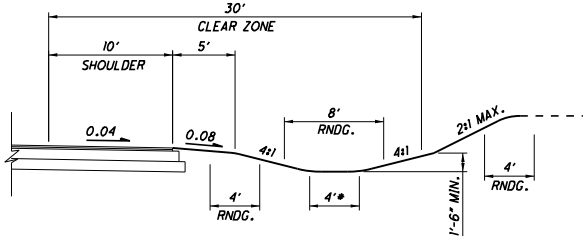
LAW-7-2.17



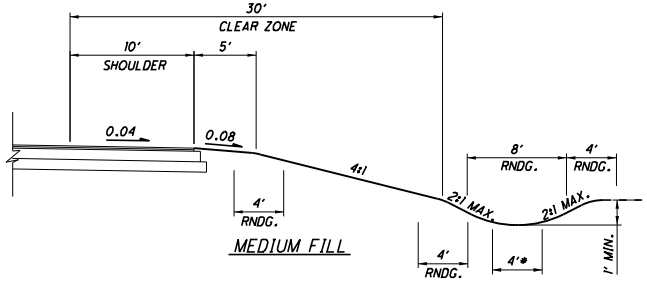
SIDE ROAD BARRIER GRADING



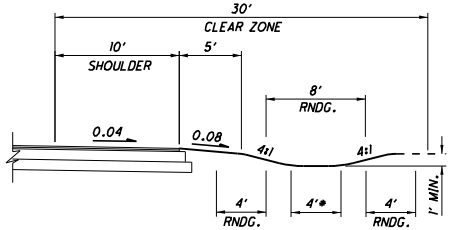
S.R. 7 BARRIER GRADING



CUT SECTION



MEDIUM FILL



LOW FILL

NOTES:
* SEE CROSS SECTIONS FOR POST CONSTRUCTION ENHANCED BANKFULL WIDTHS ROUNDING SHALL BE 4' WIDER THAN DITCH WIDTH SHOWN

TYPICAL SECTIONS - DITCH DETAILS

LAW-7-2.17

16
297

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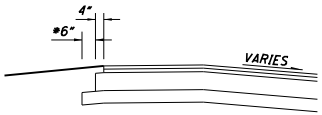
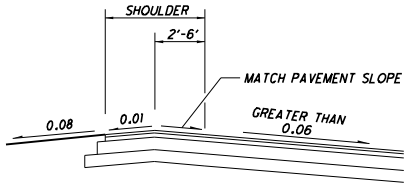
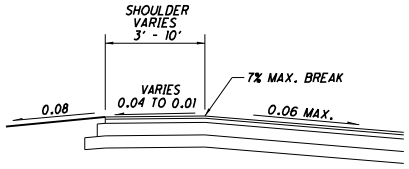
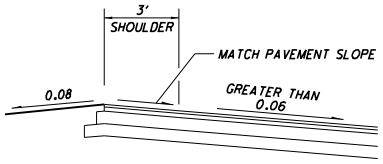


EDGE COURSE DETAIL
FOR ALL TYPICALS

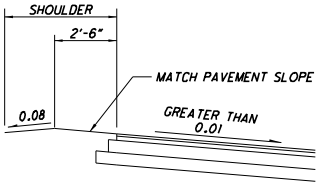
* 6" OR THE THICKNESS OF OVERLYING LIFT, WHICHEVER IS GREATER.

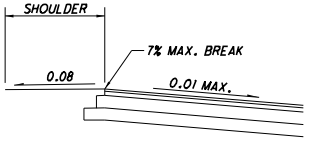






DETAIL A
PAVED SHOULDERS





DETAIL B
TURF SHOULDERS

TYPICAL SECTIONS - MISCELLANEOUS DETAILS

LAW-7-2.17

17
297

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ROUNDING

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

UTILITIES

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

FRONTIER COMMUNICATIONS
(FORMERLY VERIZON)
1315 SLPERT STREET
PORTSMOUTH, OHIO 45662
PHONE: (740) 354-0512
MR. PAUL MONTAVON

COLUMBIA GAS OF OHIO (KENTUCKY)
P.O. BOX 14241
LEXINGTON, KENTUCKY 40512
PHONE: (859) 288-0225
MR. GARY SULLIVAN

AMERICAN ELECTRIC POWER
(DISTRIBUTION)
850 TECH CENTER DRIVE
GAHANNA, OHIO 43230
PHONE: (614) 883-6831
MR. PAUL PAXTON

ARMSTRONG CABLE SERVICES
9651 COUNTY ROAD 1
SOUTH POINT, OHIO 45680
PHONE: (740) 894-6357
MR. LEONARD HARVEY

AMERICAN ELECTRIC POWER
(TRANSMISSION)
700 MORRISON ROAD
GAHANNA, OHIO 43230
PHONE: (614) 552-1801
MS. TINA HAIRSTON

TIME WARNER CABLE
225 RUSSELL ROAD
ASHLAND, KENTUCKY 41101
PHONE: (606) 326-6803
MR. MIKE JONES

BUCKEYE RURAL ELECTRIC CO-OP
P.O. BOX 200
RIO GRANDE, OHIO 45674
PHONE: (740) 379-2025
MR. JEFF TACKETT

HECLA WATER ASSOCIATION
3190 SR 141
IRONTON, OHIO 45638
PHONE: (740) 533-0526
MR. TIM DALTON

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.

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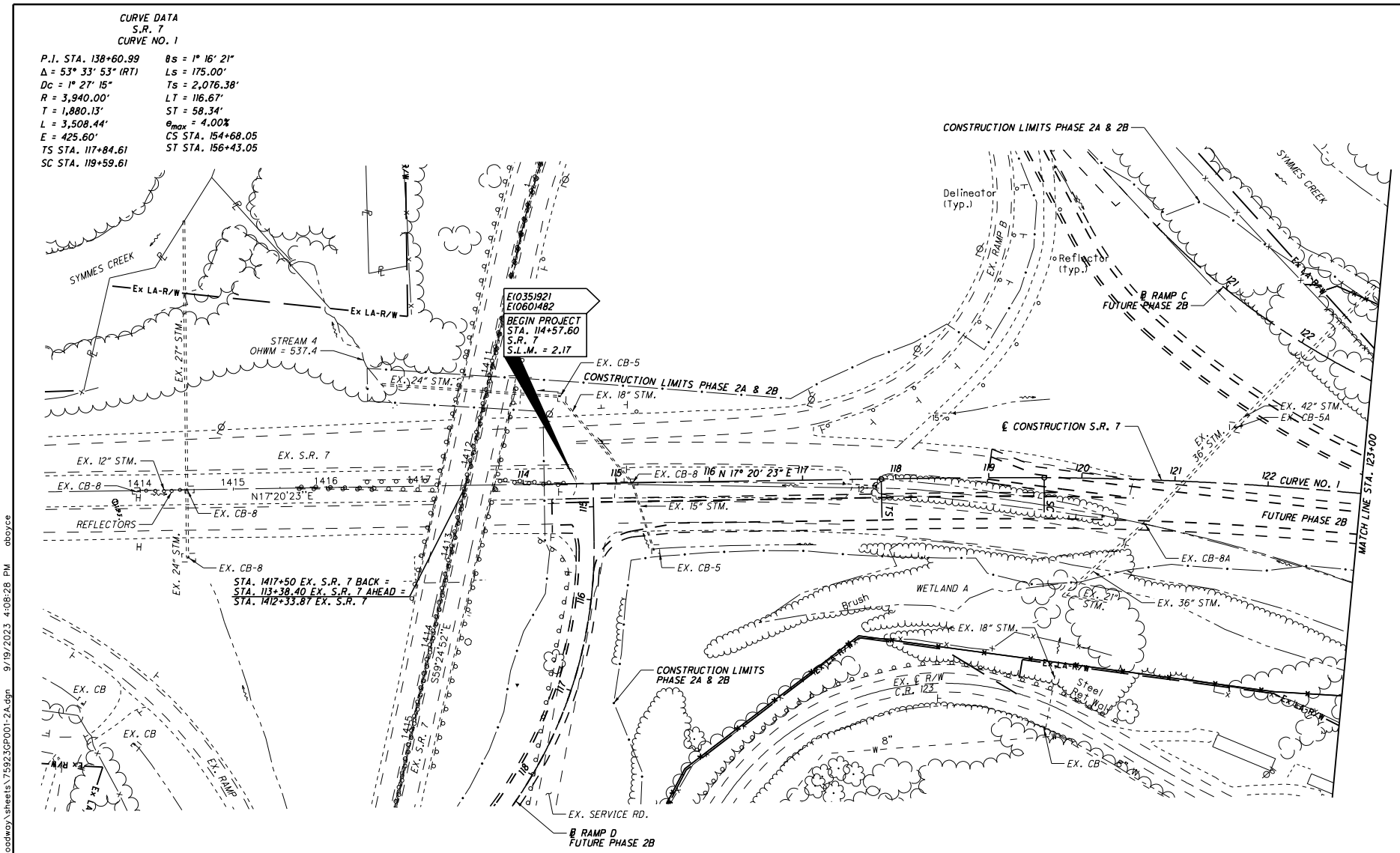
CALCULATED SLP CHECKED ALB

GENERAL NOTES

LAW-7-2.17



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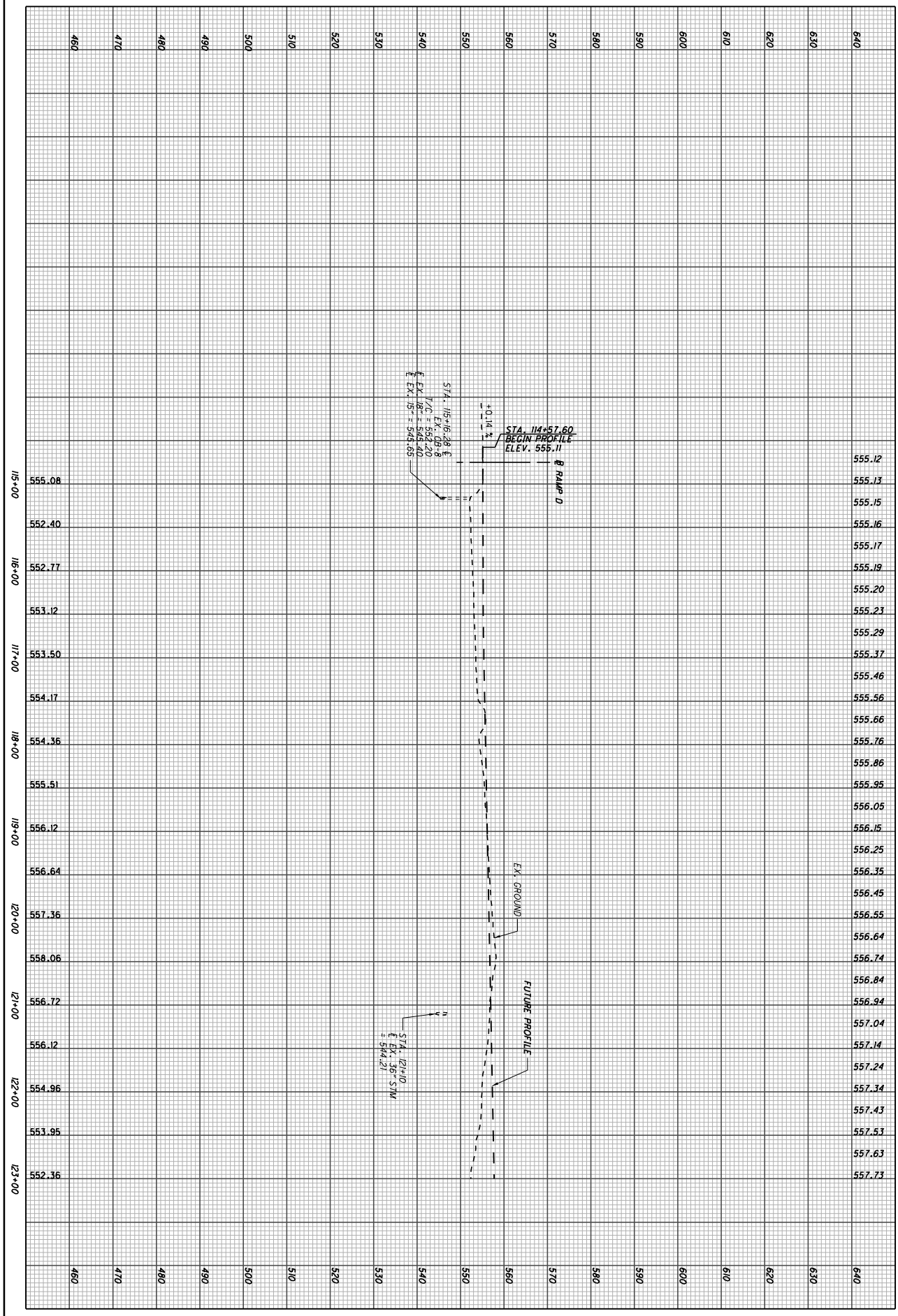
HORIZONTAL SCALE IN FEET
0 25 50 100

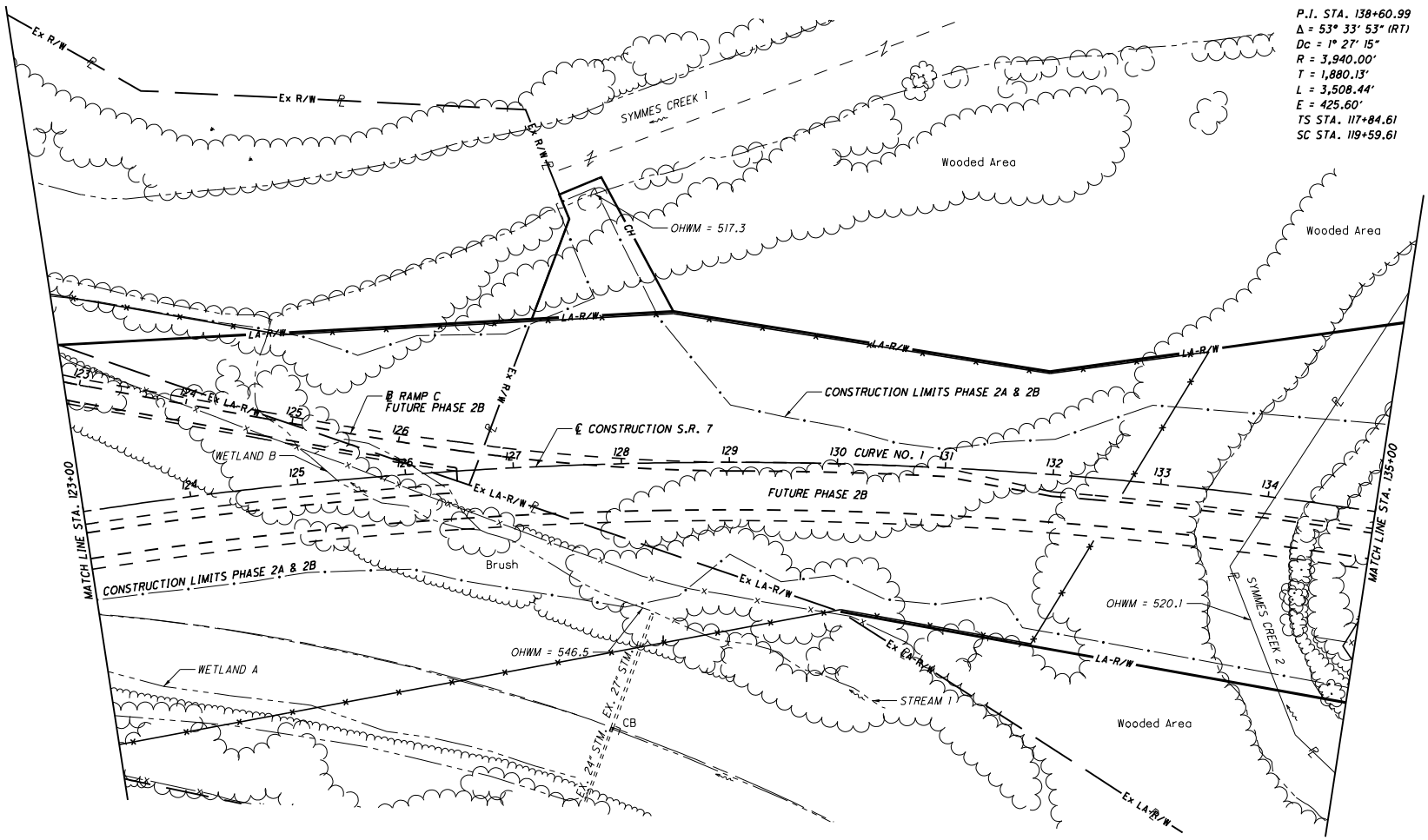
CALCULATED SLP
CHECKED ALB

PLAN - S.R. 7
STA. 114+57.60 TO STA. 123+00

LAW-7-2.17



24/297	LAW-7-2.17	PROFILE - S.R. 7 STA. 114+57.60 TO STA. 123+00	CALCULATED ALB CHECKED TCM



PLAN - S.R. 7
STA. 123+00 TO STA. 135+00

LAW-7-2.17

CALCULATED SLP
CHECKED ALB

HORIZONTAL SCALE IN FEET
0 25 50 100

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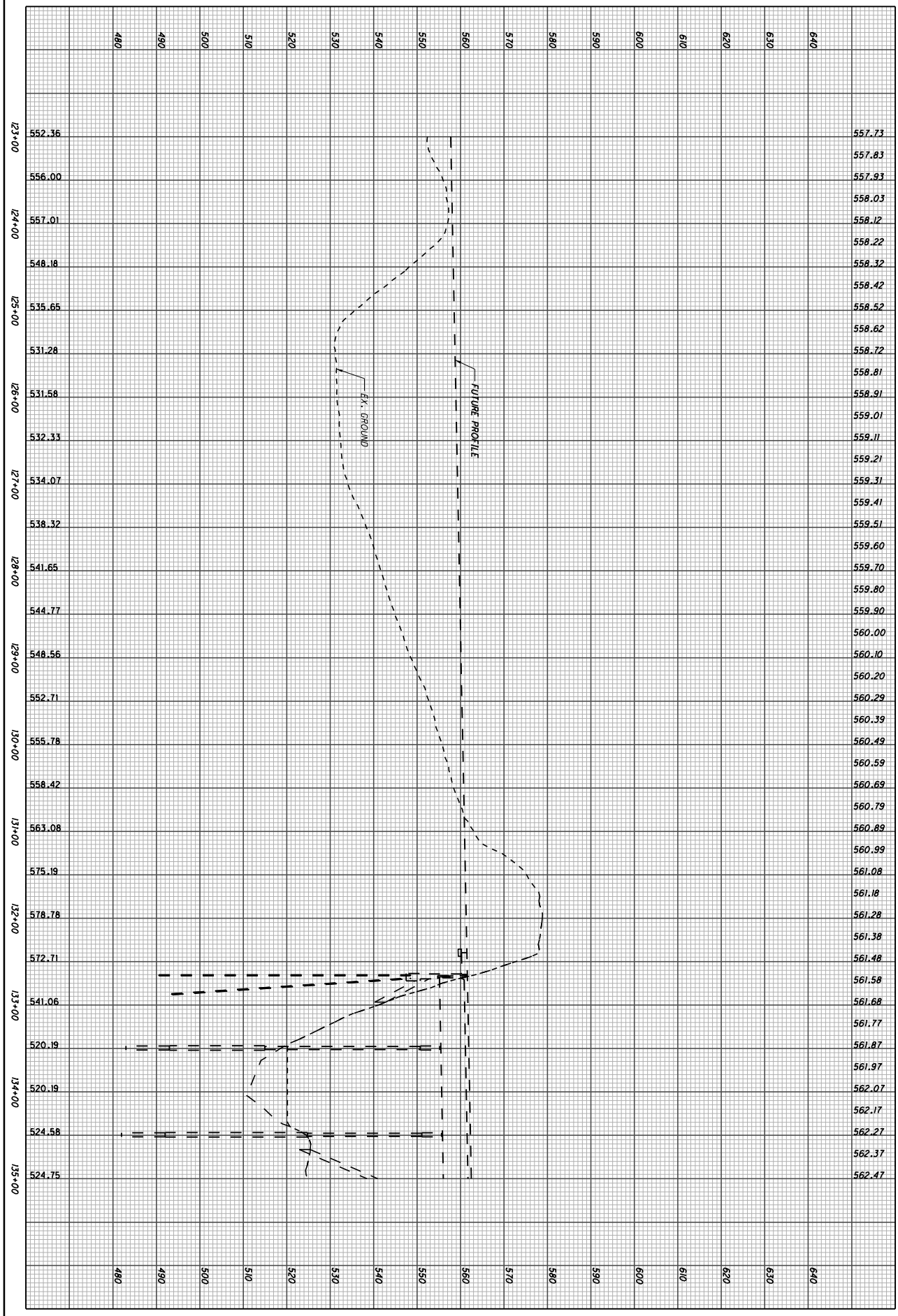
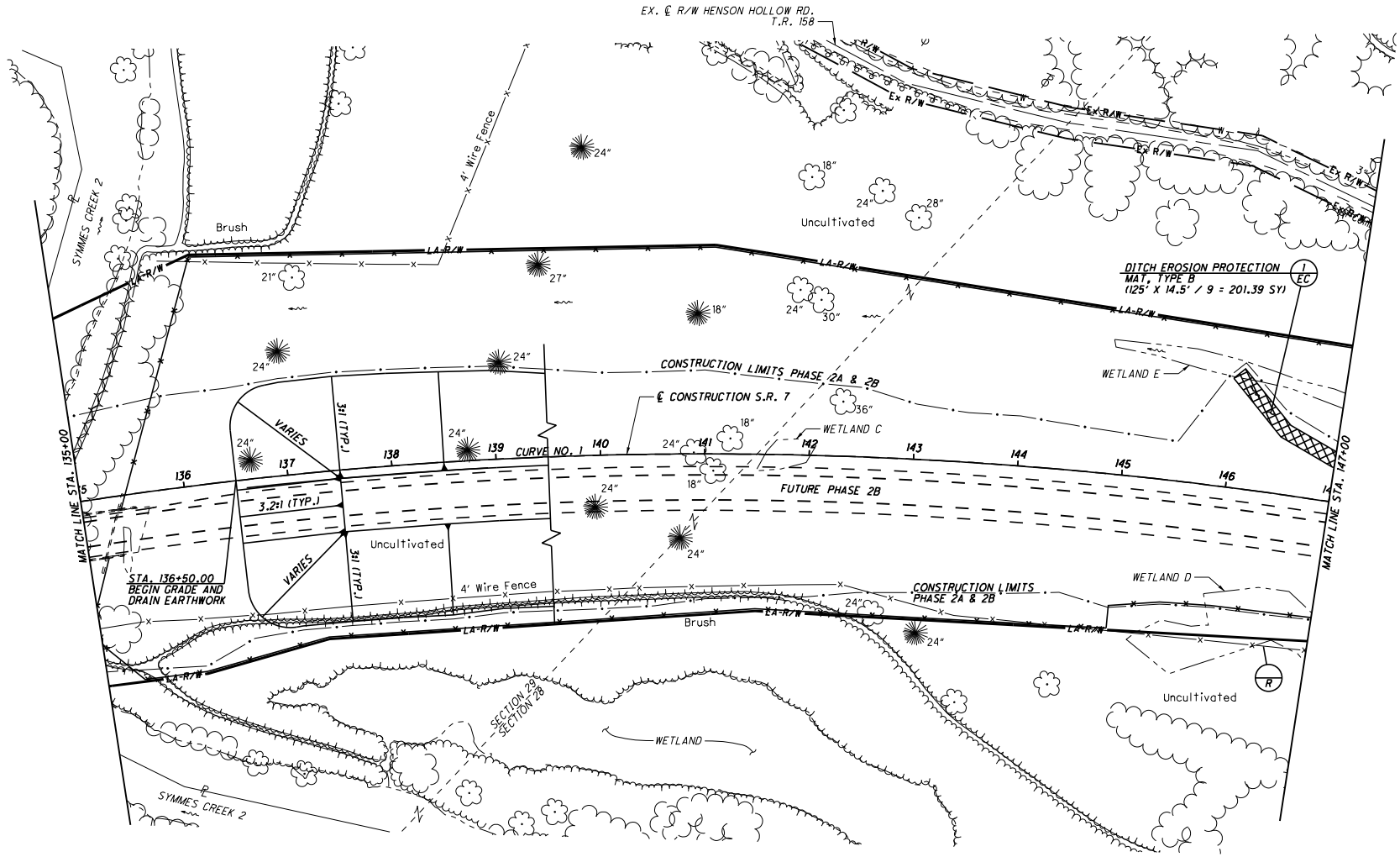


26 / 297	LAW-7-2.17	PROFILE - S.R. 7 STA. 123+00 TO STA. 135+00	CALCULATED ALB CHECKED TCM



CURVE DATA
S.R. 7
CURVE NO. 1

P.I. STA. 138+60.99	θs = 1° 16' 21"
Δ = 53° 33' 53" (RT)	Ls = 175.00'
Dc = 1° 27' 15"	Ts = 2,076.38'
R = 3,940.00'	LT = 116.67'
T = 1,880.13'	ST = 58.34'
L = 3,508.44'	e_{max} = 4.00%
E = 425.60'	CS STA. 154+68.05
TS STA. 117+84.61	ST STA. 156+43.05
SC STA. 119+59.61	

FOR PROFILE, SEE SHEET 2B

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED SLP
CHECKED ALB

PLAN - S.R. 7
STA. 135+00 TO STA. 147+00

LAW-7-2.17

27
297

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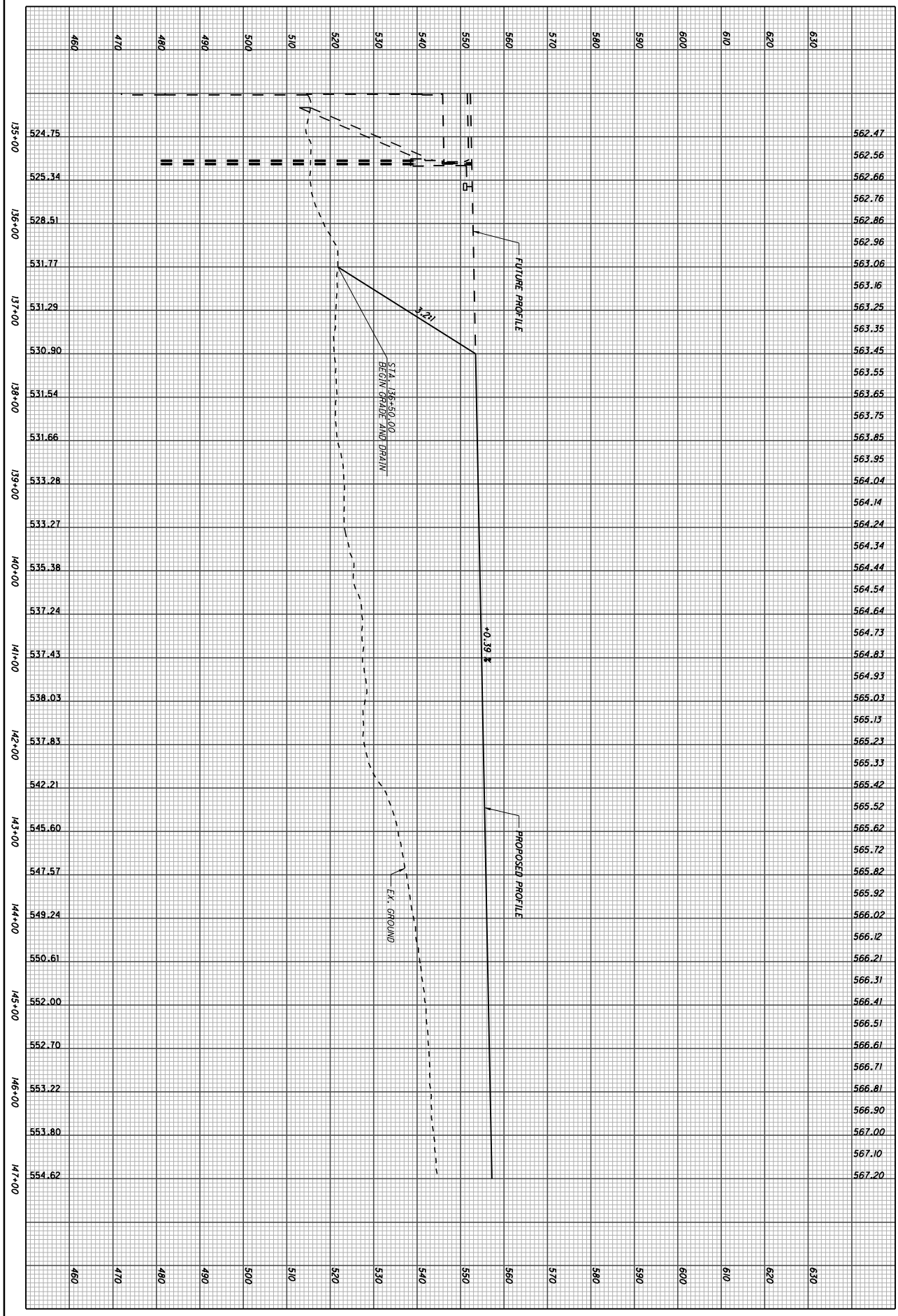
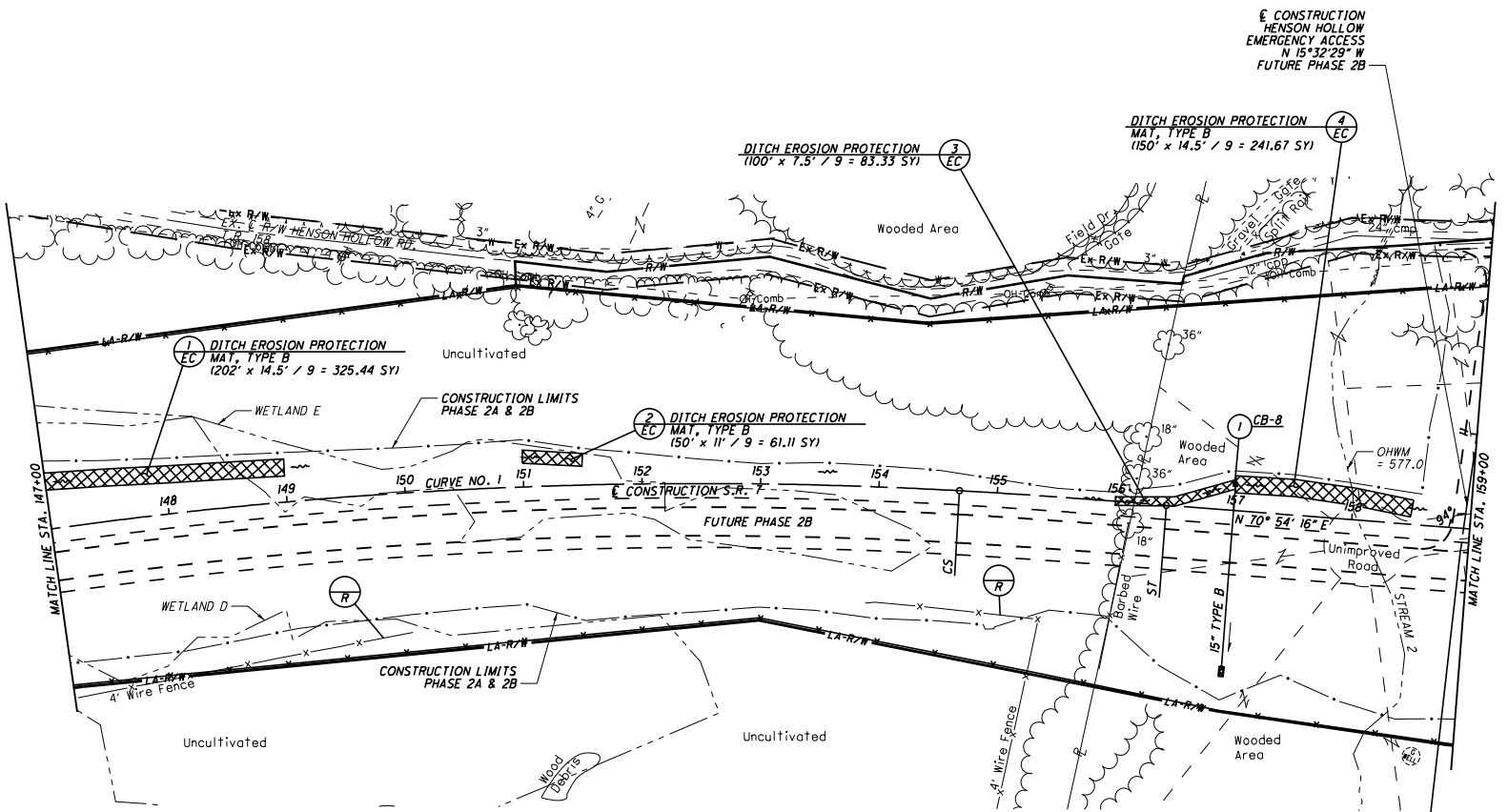


28 / 297	LAW-7-2.17	PROFILE - S.R. 7 STA. 135+00 TO STA. 147+00	CALCULATED ALB CHECKED TCM



CURVE DATA
S.R. 7
CURVE NO. 1

P.I. STA. 138+60.99	θs = 1° 16' 21"
Δ = 53° 33' 53" (RT)	Ls = 175.00'
Dc = 1° 27' 15"	Ts = 2,076.38'
R = 3,940.00'	LT = 116.67'
T = 1,880.13'	ST = 58.34'
L = 3,508.44'	e_{max} = 4.00%
E = 425.60'	CS STA. 154+68.05
TS STA. 117+84.61	ST STA. 156+43.05
SC STA. 119+59.61	

FOR PROFILE, SEE SHEET 30
FOR STORM SEWER PROFILE, SEE SHEET 97

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED SLP
CHECKED ALB

PLAN - S.R. 7
STA. 147+00 TO STA. 159+00

LAW-7-2.17

29
297

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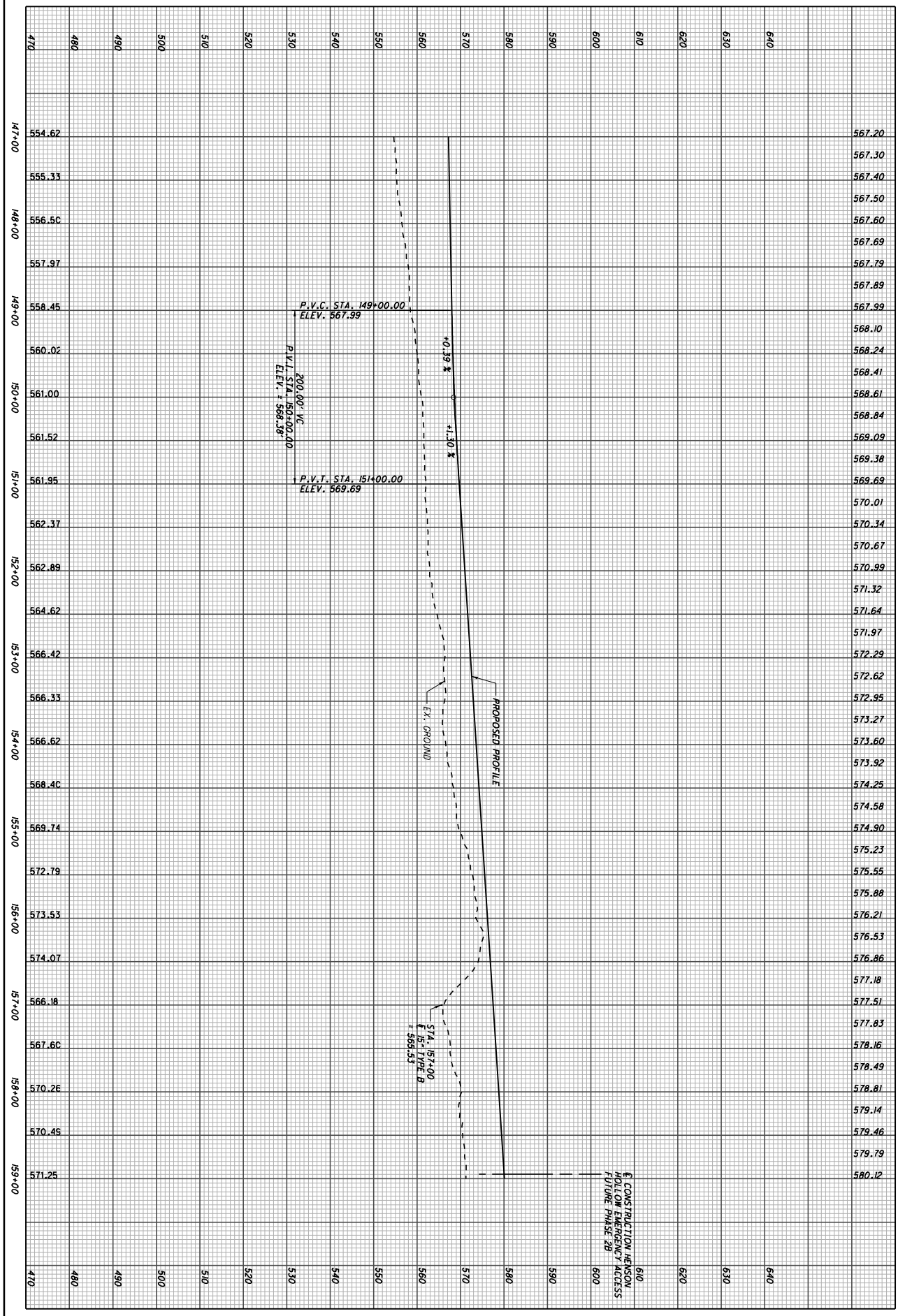
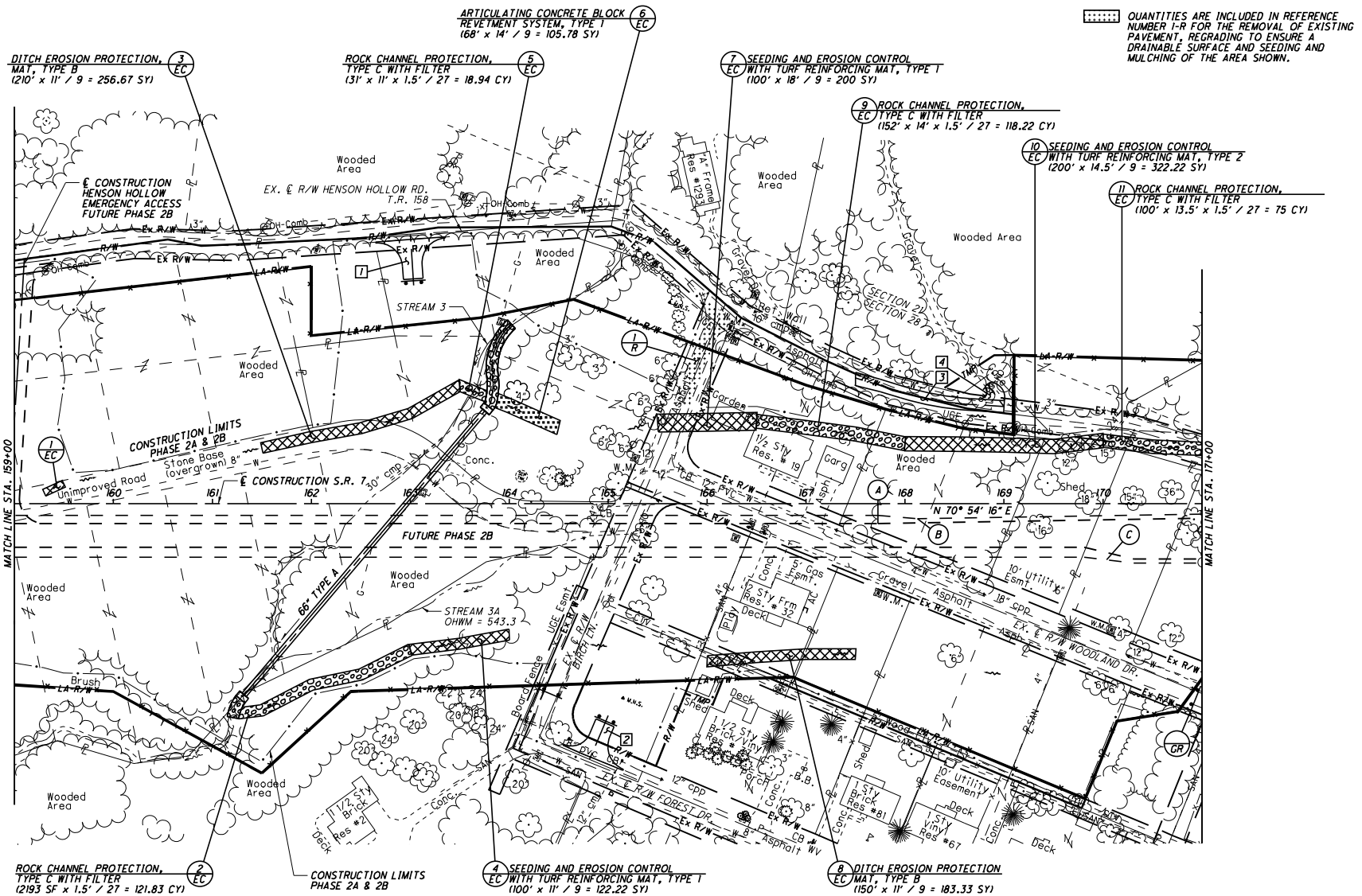


30 / 297	LAW-7-2.17	PROFILE - S.R. 7 STA. 147+00 TO STA. 159+00	CALCULATED ALB CHECKED TCM



N

HORIZONTAL SCALE IN FEET 0 25 50 100

CALCULATED SLP CHECKED ALB

PLAN - S.R. 7
STA. 159+00 TO STA. 171+00

LAW-7-2.17

31
297

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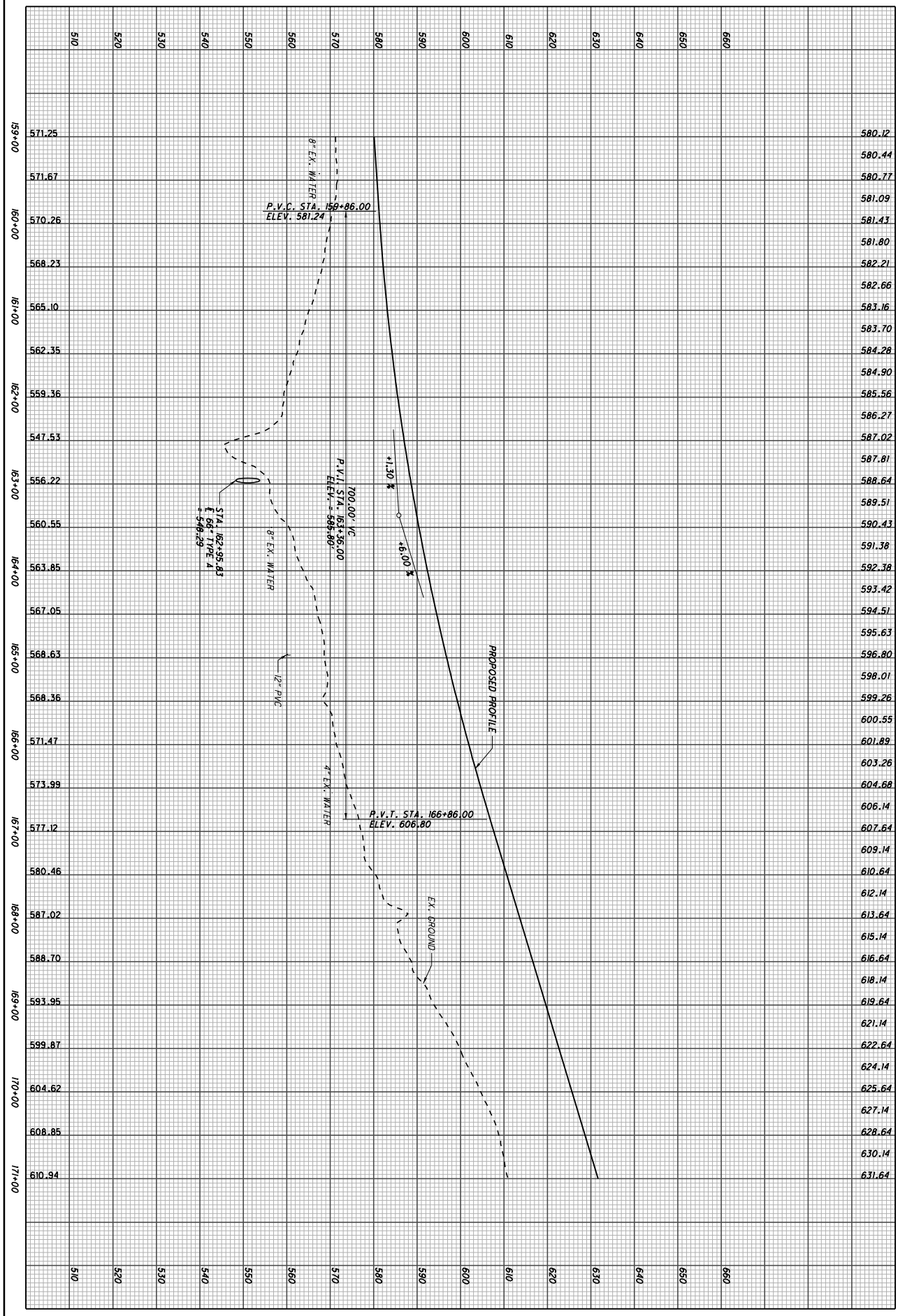
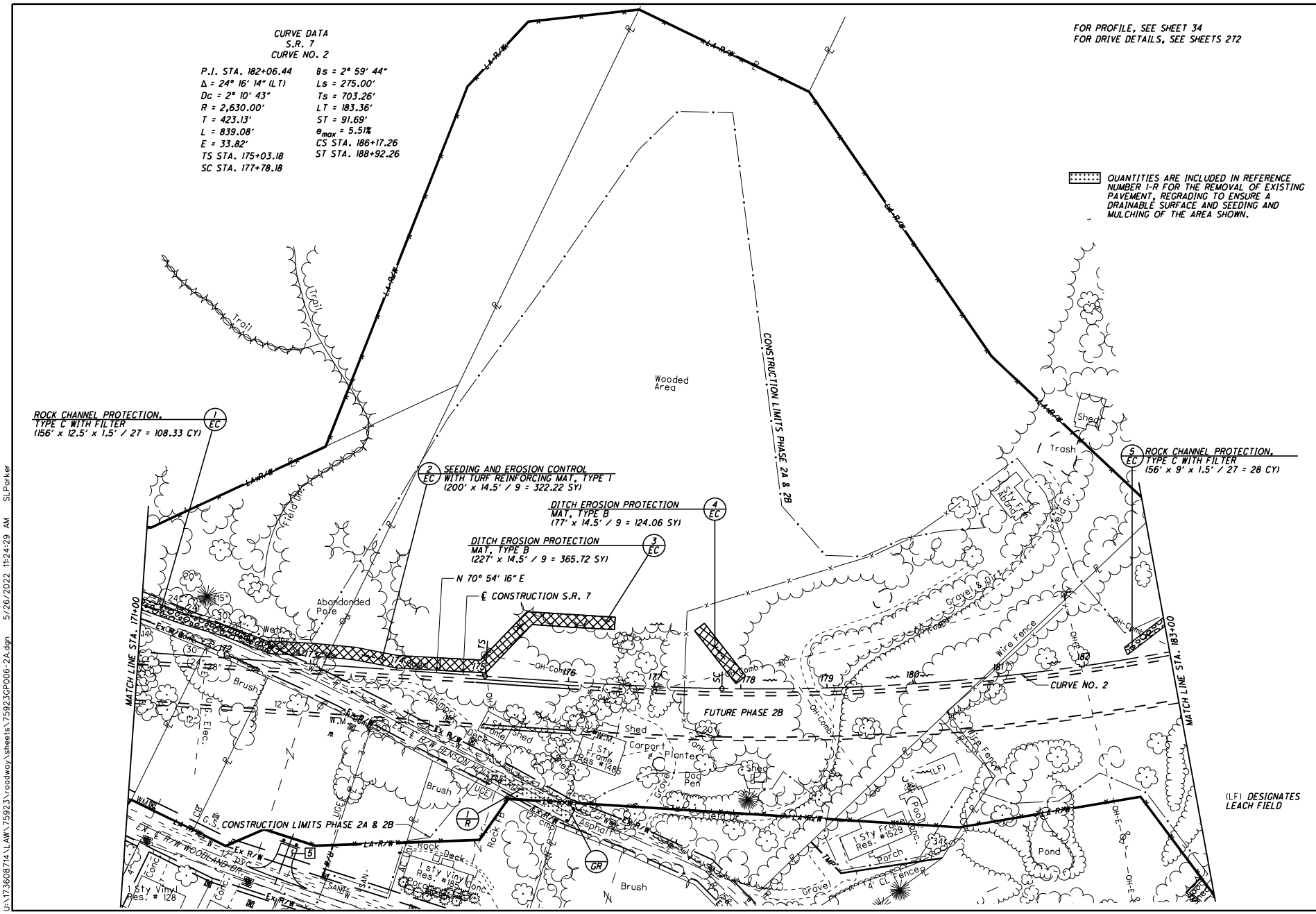
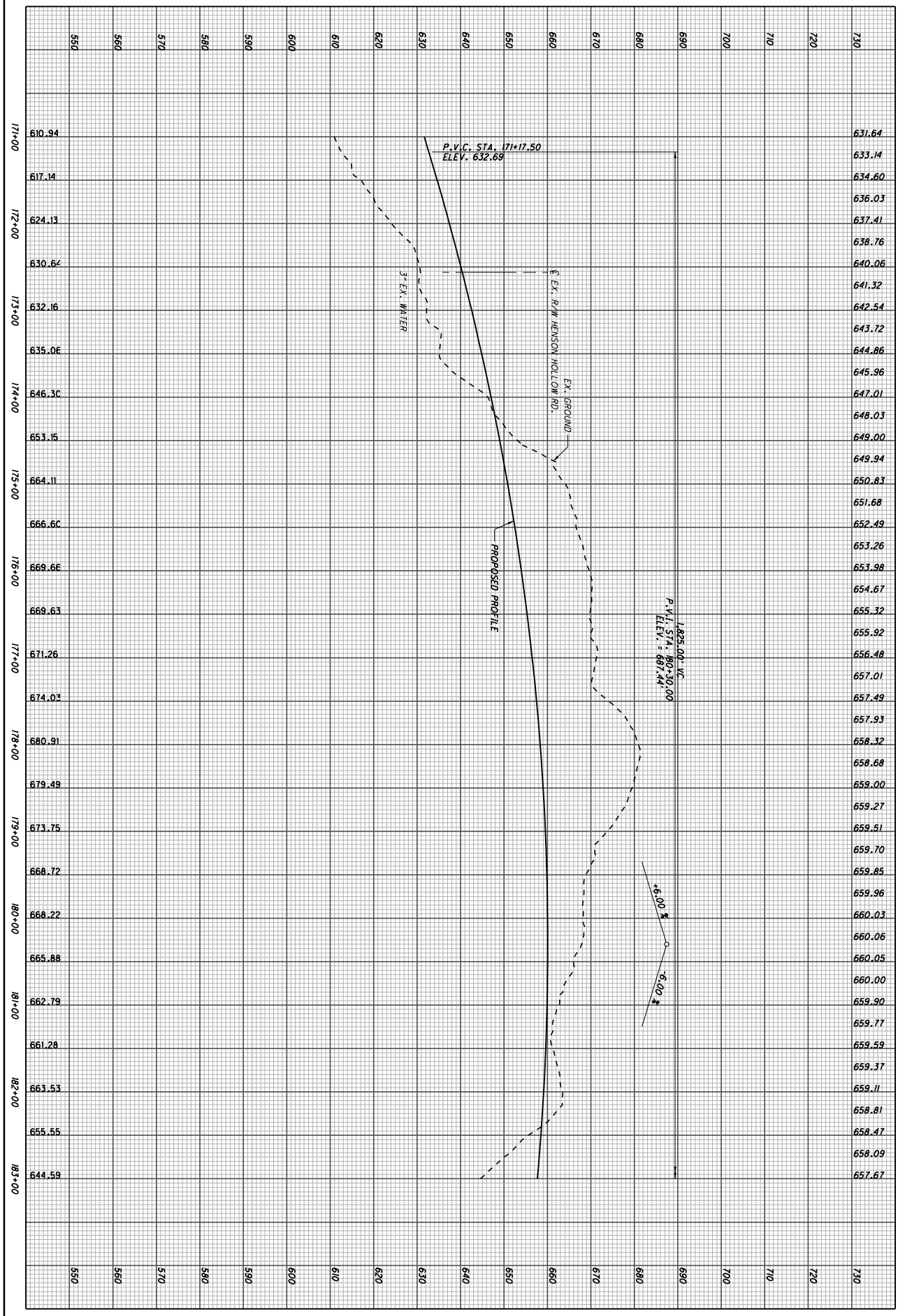
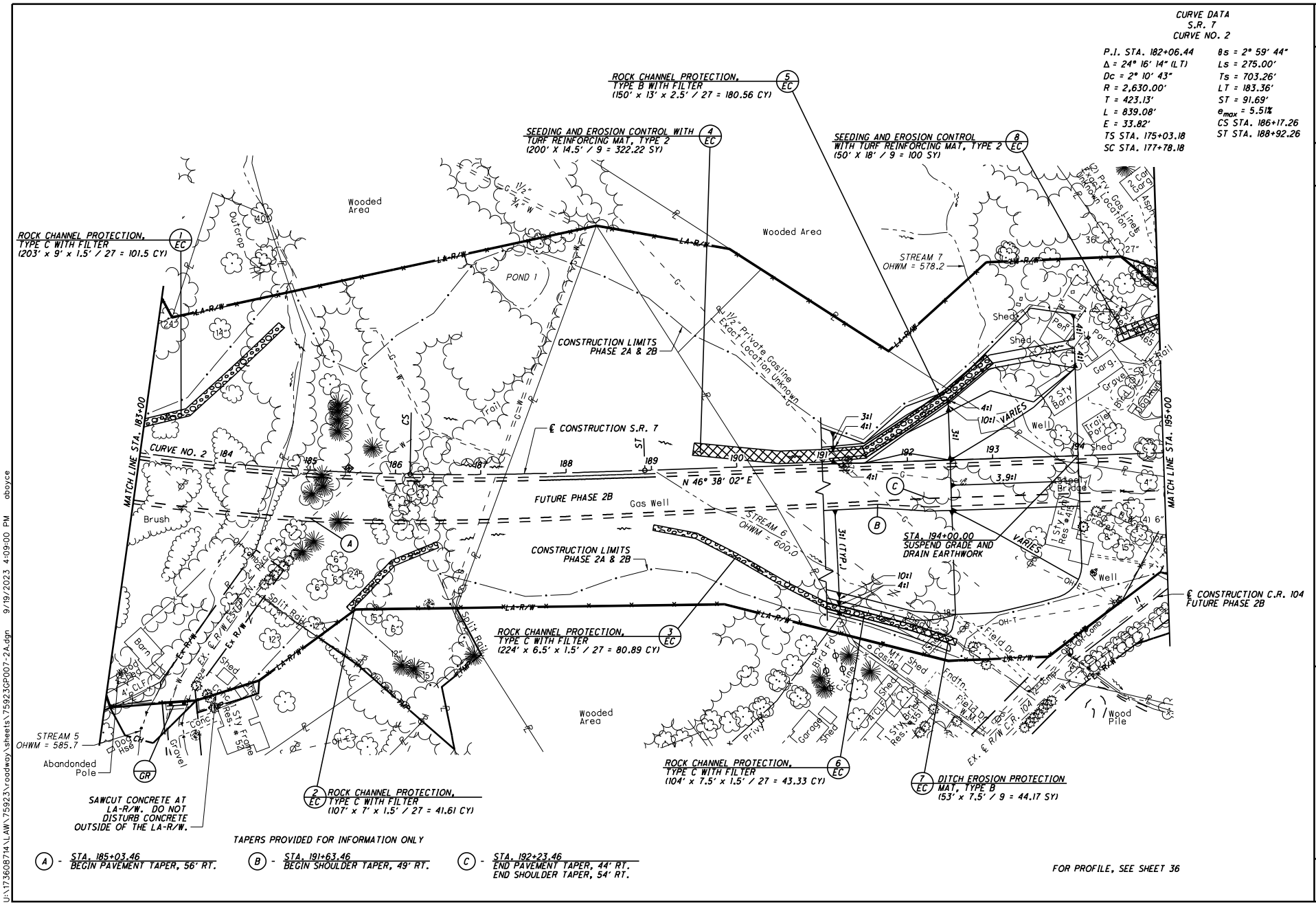


32 / 297	LAW-7-2.17	PROFILE - S.R. 7 STA. 159+00 TO STA. 171+00	CALCULATED ALB CHECKED TCM


CURVE DATA
S.R. 7
CURVE NO. 2
P.I. STA. 182+06.44
Δ = 24° 16' 14" (LT)
Dc = 2° 10' 43"
R = 2,630.00'
T = 423.13'
L = 839.08'
E = 33.82'
TS STA. 175+03.18
SC STA. 177+78.18
Bs = 2° 59' 44"
Ls = 275.00'
Ts = 703.26'
LT = 183.36'
ST = 91.69'
e max = 5.51%
CS STA. 186+17.26
ST STA. 188+92.26
FOR PROFILE, SEE SHEET 34
FOR DRIVE DETAILS, SEE SHEETS 272
QUANTITIES ARE INCLUDED IN REFERENCE NUMBER 1-R FOR THE REMOVAL OF EXISTING PAVEMENT, REGRADING TO ENSURE A DRAINABLE SURFACE AND SEEDING AND MULCHING OF THE AREA SHOWN.
1 EC ROCK CHANNEL PROTECTION, TYPE C WITH FILTER (156' x 12.5' x 1.5' / 27 = 108.33 CY)
2 EC SEEDING AND EROSION CONTROL WITH TURF REINFORCING MAT, TYPE 1 (200' x 14.5' / 9 = 322.22 SY)
3 EC DITCH EROSION PROTECTION MAT, TYPE B (227' x 14.5' / 9 = 365.72 SY)
4 EC DITCH EROSION PROTECTION MAT, TYPE B (77' x 14.5' / 9 = 124.06 SY)
5 EC ROCK CHANNEL PROTECTION, TYPE C WITH FILTER (56' x 9' x 1.5' / 27 = 28 CY)
1 R
GR
N 70° 54' 16" E
℄ CONSTRUCTION S.R. 7
CONSTRUCTION LIMITS PHASE 2A & 2B
FUTURE PHASE 2B
CURVE NO. 2
MATCH LINE STA. 171+00
MATCH LINE STA. 183+00
(LF) DESIGNATES LEACH FIELD
Wooded Area
Abandoned Pole
Brush
Trail
Field Dr.
Shed
Trash
Gravel & Dirt
Wire Fence
Carport
Planter
Dog Pen
Pond
Porch
Gravel
4' Cl. Fence
1 Sty Frame Res. #1465
1 Sty Frame Res. #1529
1 Sty Vinyl Res. # 128
1 Sty Vinyl Res. # 136
Ex. R/W HENSON ROAD
Ex. R/W WOODLAND DR.
LA-R/W
Ex R/W
OH-Com
OH-Elec
UGE
WATER
GAS
SANIT.
Rock Lined Ditch
Asphalt
Concr.
Rock Lined Ditch
Rock Lined Ditch
Rock Lined Ditch



34 / 297	LAW-7-2.17	PROFILE - S.R. 7 STA. 171+00 STA. 183+00	CALCULATED ALB CHECKED TCM



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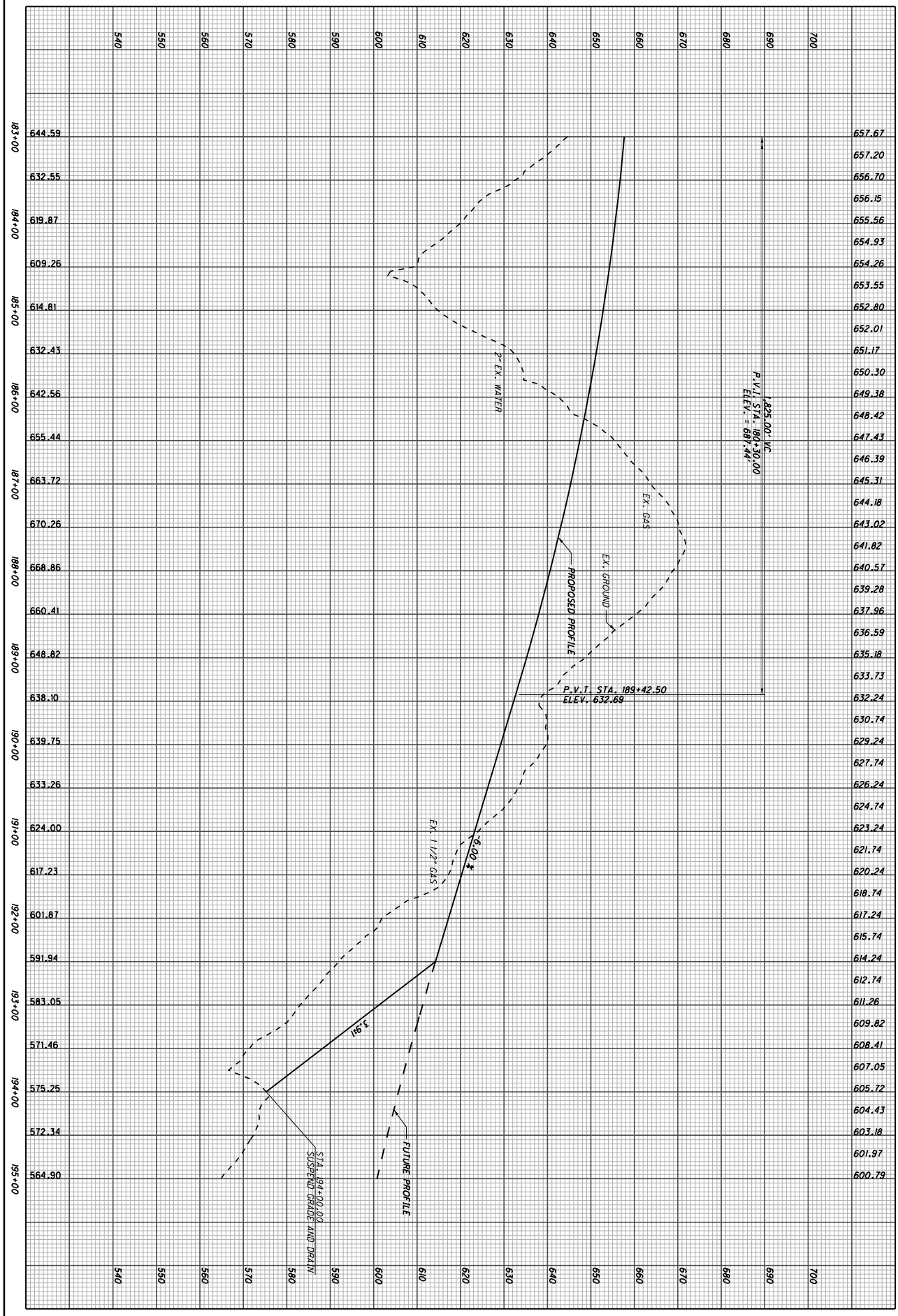
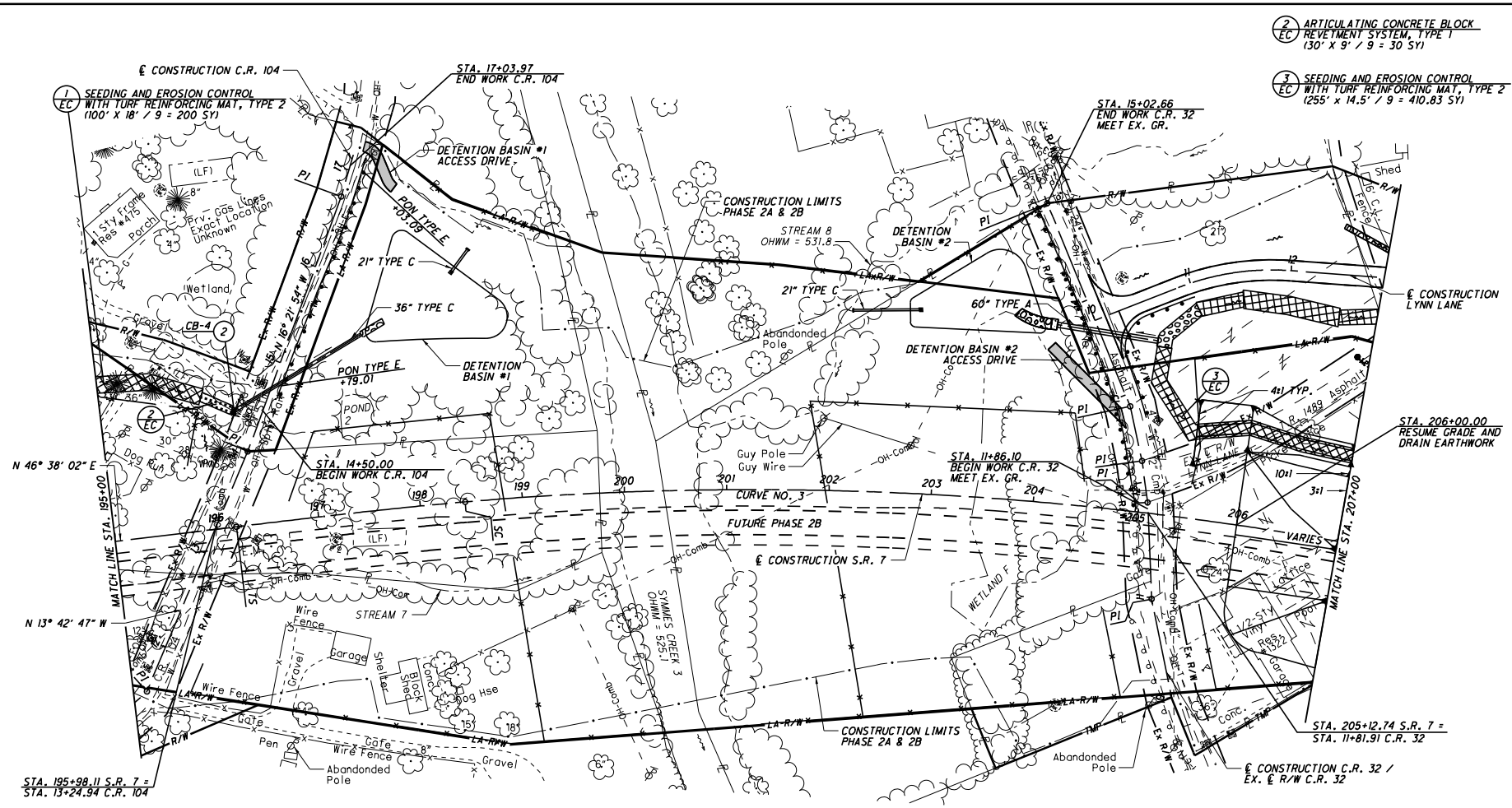


36 / 297	LAW-7-2.17	PROFILE - S.R. 7 STA. 183+00 TO STA. 195+00	CALCULATED ALB CHECKED TCM



CURVE DATA
S.R. 7
CURVE NO. 3

P.I. STA. 205+33.31
Δ = 27° 30' 45" (RT)
Dc = 1° 45' 00"
R = 3,274.04'
T = 683.24'
L = 1,347.14'
E = 70.53'
TS STA. 196+19.13
SC STA. 198+44.13

θs = 1° 58' 07"
Ls = 225.00'
Ts = 914.18'
LT = 150.01'
ST = 75.01'
e_{max} = 4.60%
CS STA. 211+91.27
ST STA. 214+16.27

C.R. 104

P.I. STA. 11+53.11
Δ = 2° 41' 45"
NO CURVE

P.I. STA. 14+07.46
Δ = 2° 39' 07"
NO CURVE

P.I. STA. 16+72.90
Δ = 4° 02' 33"
NO CURVE

C.R. 32

P.I. STA. 10+98.09
Δ = 9° 00' 49"
NO CURVE

P.I. STA. 11+92.44
Δ = 5° 16' 18"
NO CURVE

P.I. STA. 12+33.35
Δ = 4° 36' 08"
NO CURVE

P.I. STA. 12+87.96
Δ = 9° 55' 50"
NO CURVE

P.I. STA. 15+02.34
Δ = 0° 49' 53"
NO CURVE

(LF) DESIGNATES LEACH FIELD

FOR PROFILE, SEE SHEET 38
FOR LYNN LANE PLAN AND PROFILE, SEE SHEET 249
FOR CULVERT DETAIL, SEE SHEET 279
FOR STORM SEWER PROFILES, SEE SHEET 274
FOR DETENTION BASIN DETAILS, SEE SHEETS 292-294

HORIZONTAL SCALE IN FEET
0 25 50 100
CALCULATED SLP
CHECKED ALB

PLAN - S.R. 7
STA. 195+00 TO STA. 207+00

LAW-7-2.17

37
297

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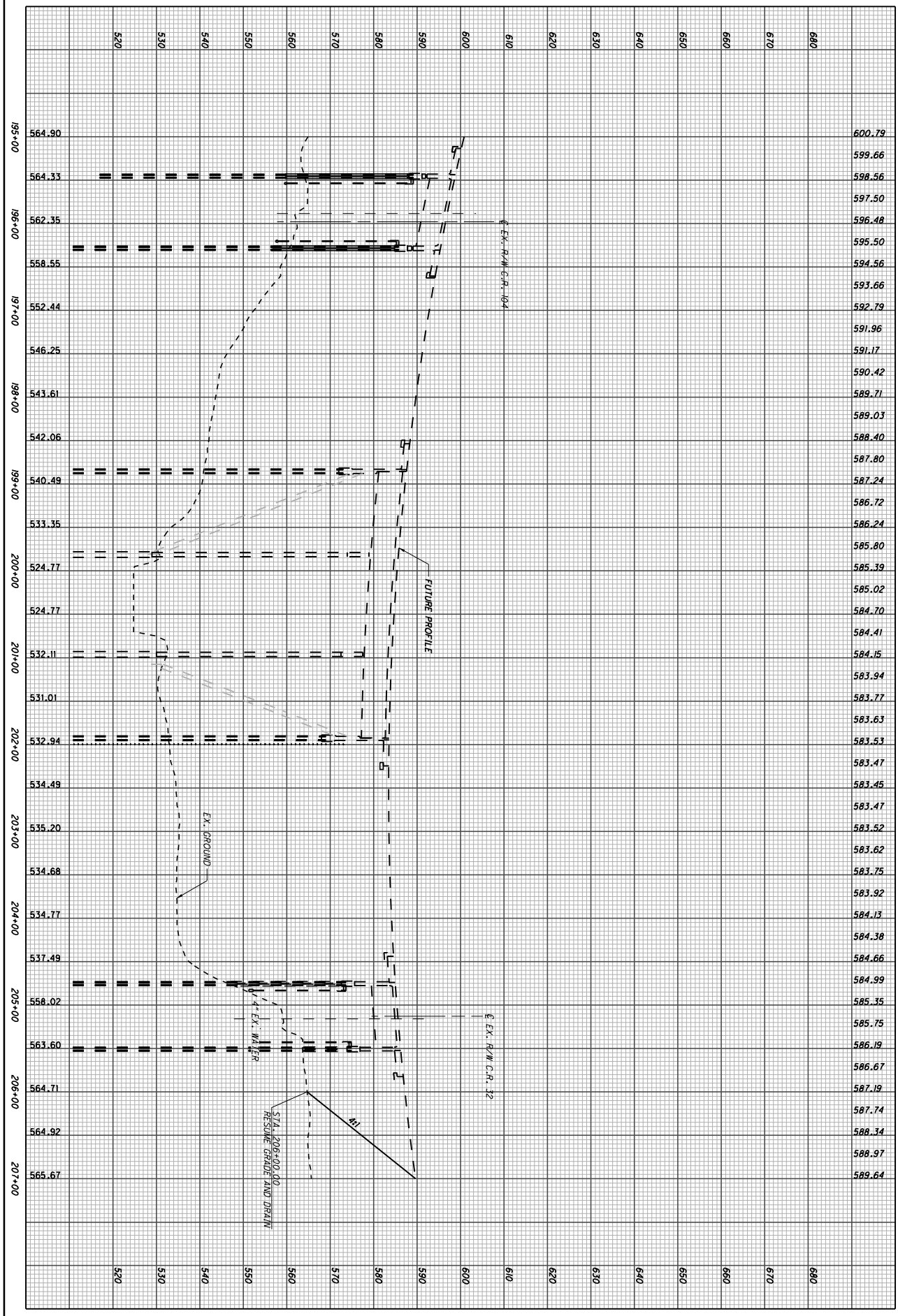
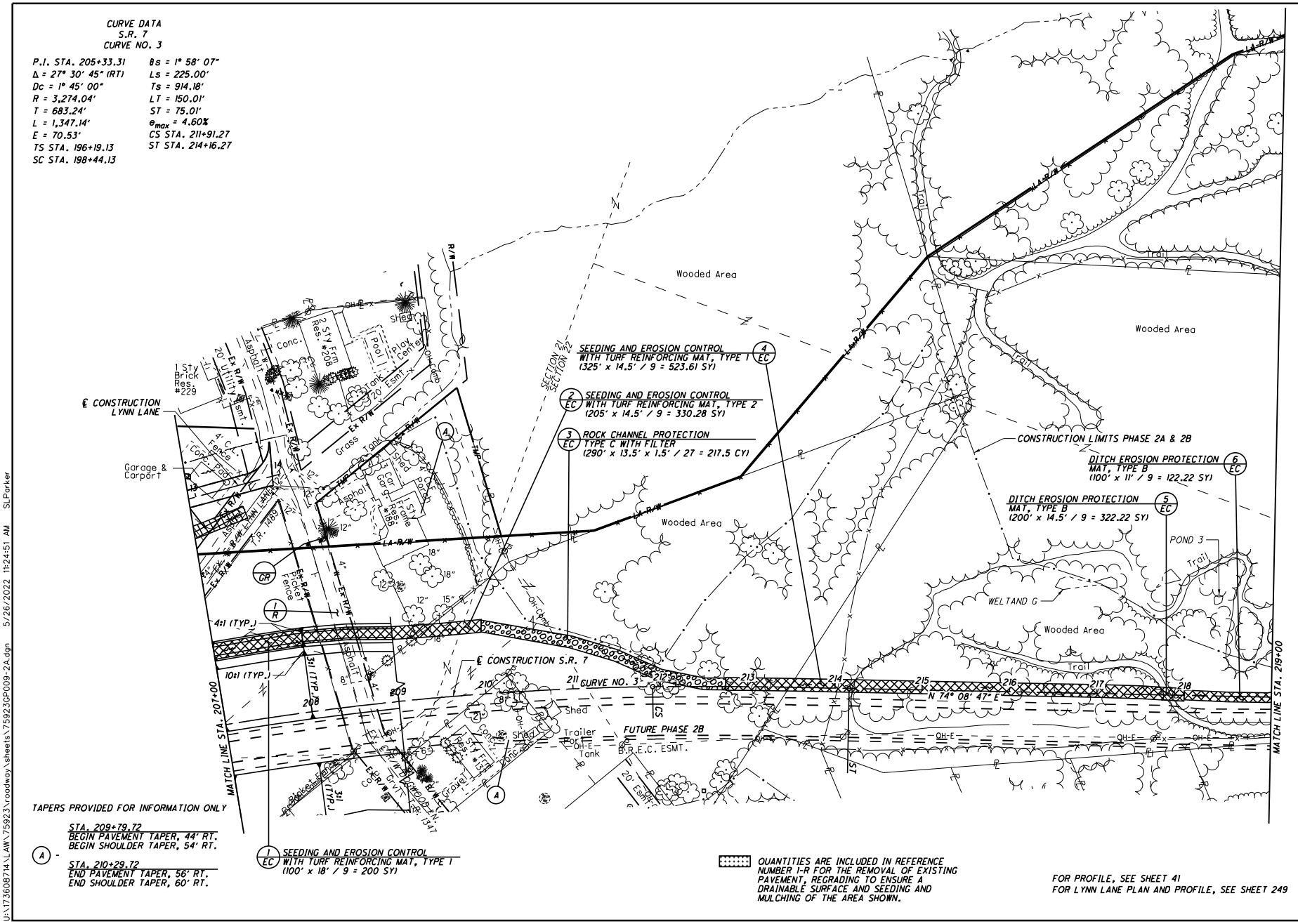


38 / 297	LAW-7-2.17	PROFILE - S.R. 7 STA. 195+00 STA. 207+00	CALCULATED ALB CHECKED TCM



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HORIZONTAL SCALE IN FEET 0 25 50 100

CALCULATED SLP CHECKED ALB

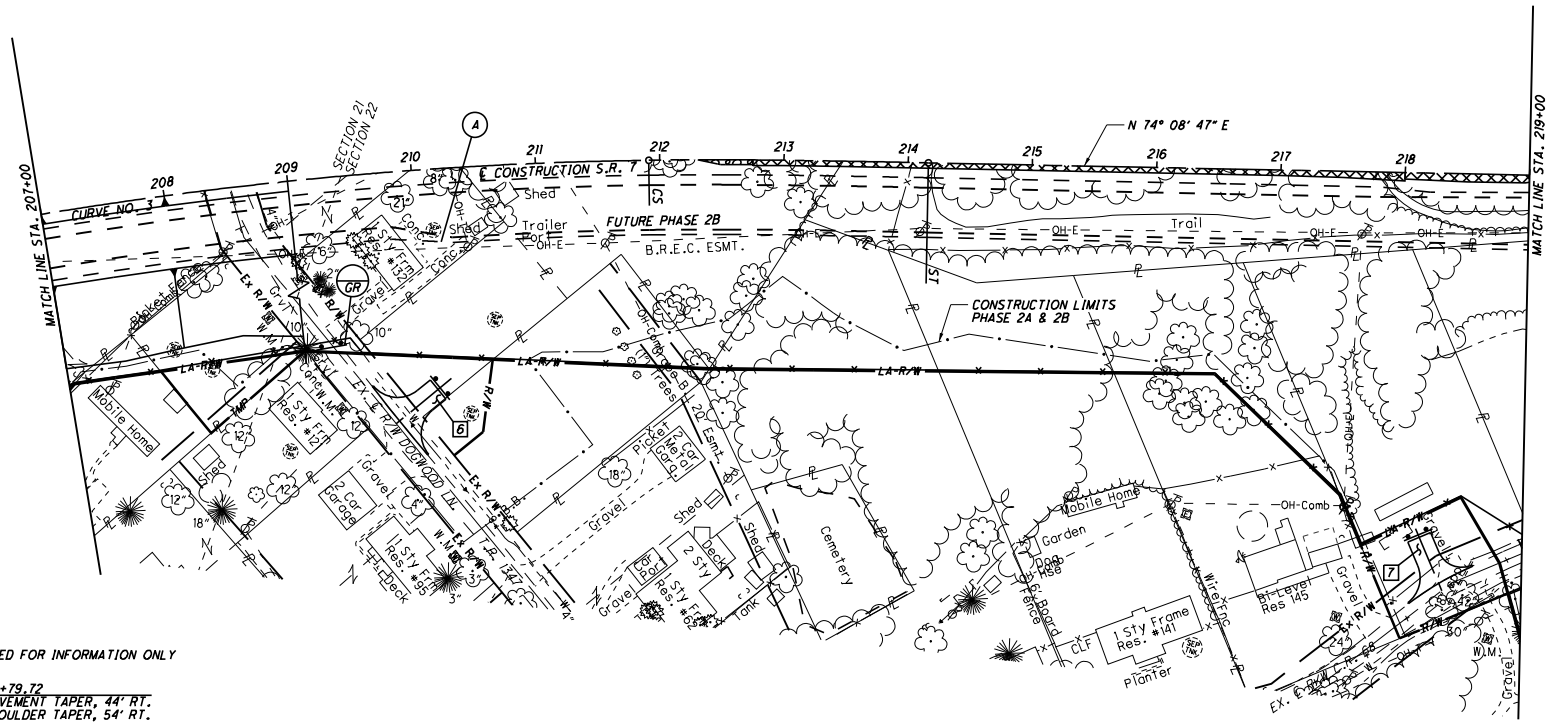
PLAN - S.R. 7
STA. 207+00 TO STA. 219+00 (NORTH)

LAW-7-2.17

CURVE DATA
S.R. 7
CURVE NO. 3

P.I. STA. 205+33.31
Δ = 27° 30' 45" (RT)
Dc = 1° 45' 00"
R = 3,274.04'
T = 683.24'
L = 1,347.14'
E = 70.53'
TS STA. 196+19.13
SC STA. 198+44.13

θs = 1° 58' 07"
Ls = 225.00'
Ts = 914.18'
LT = 150.01'
ST = 75.01'
e_{max} = 4.60%
CS STA. 211+91.27
ST STA. 214+16.27



TAPERS PROVIDED FOR INFORMATION ONLY

(A) -
STA. 209+79.72
BEGIN PAVEMENT TAPER, 44' RT.
BEGIN SHOULDER TAPER, 54' RT.

STA. 210+29.72
END PAVEMENT TAPER, 56' RT.
END SHOULDER TAPER, 60' RT.

FOR PROFILE, SEE SHEET 41
FOR DRIVE DETAILS, SEE SHEETS 272-273

HORIZONTAL SCALE IN FEET
0 25 50 100
CALCULATED SLP
CHECKED ALB

PLAN - S.R. 7
STA. 207+00 TO STA. 219+00 (SOUTH)

LAW-7-2.17

40
297

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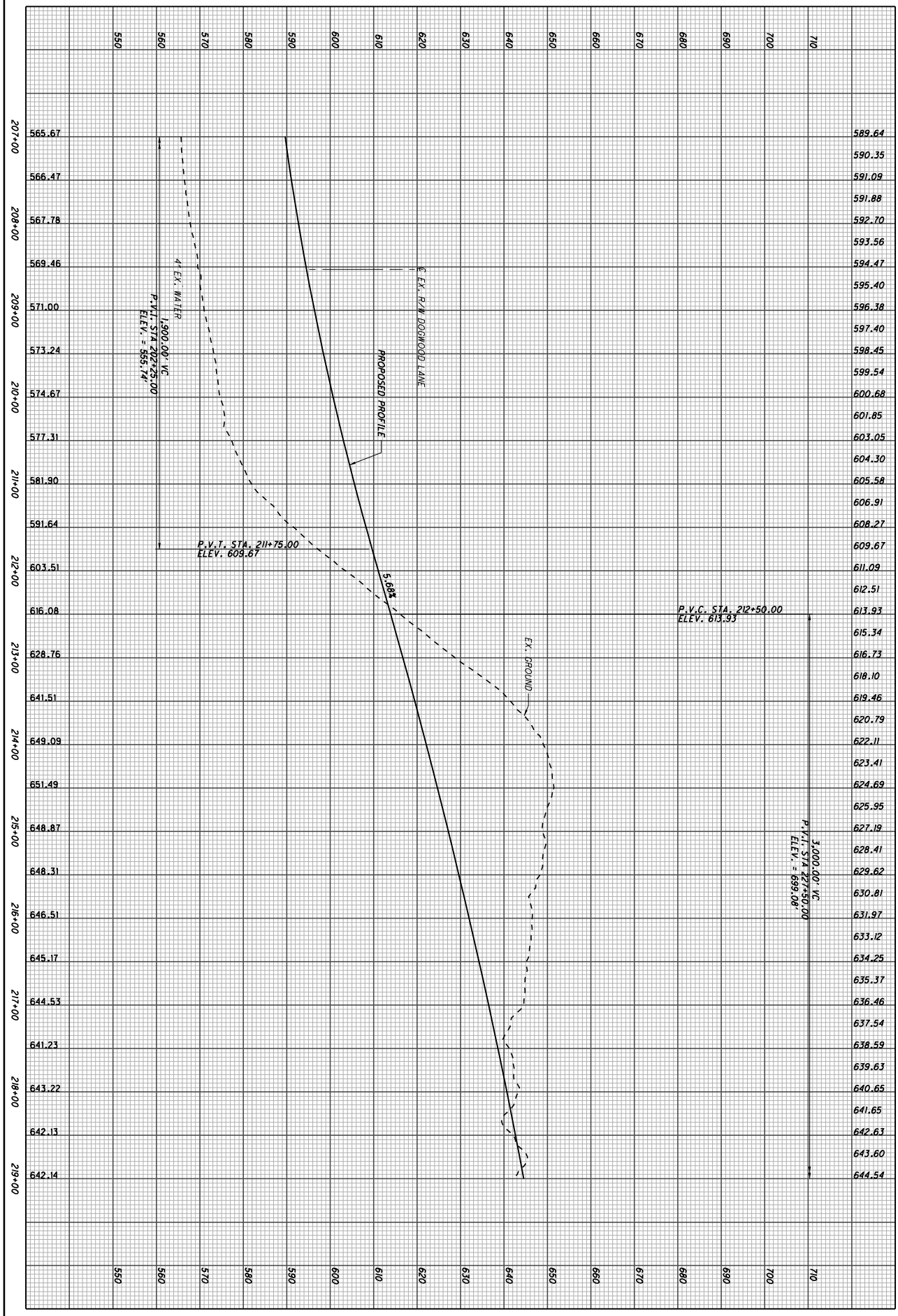
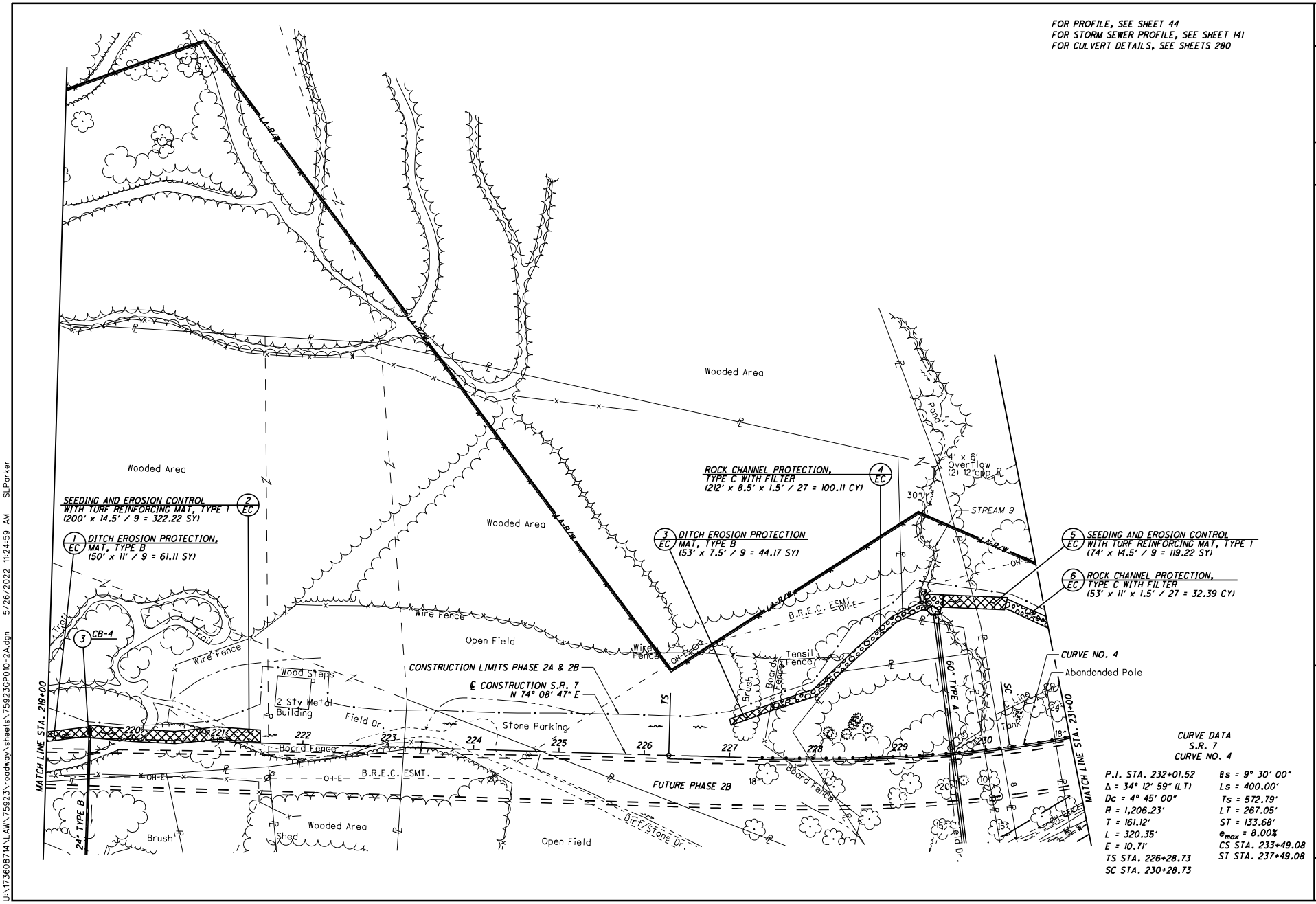


41 / 297	LAW-7-2.17	PROFILE - S.R. 7 STA. 207+00 TO STA. 219+00	CALCULATED ALB CHECKED TCM



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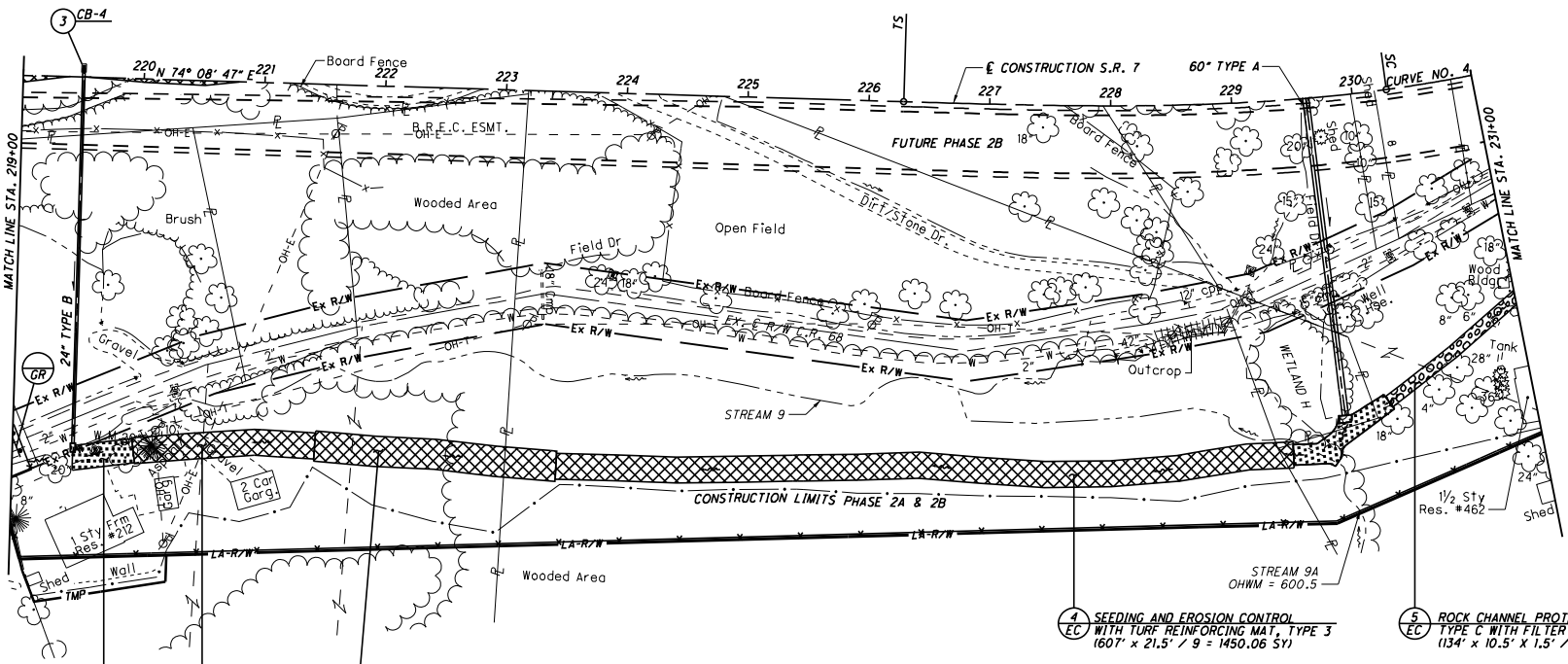

CURVE DATA
S.R. 7
CURVE NO. 4

P.I. STA. 232+01.52
Δ = 34° 12' 59" (LT)
Dc = 4° 45' 00"
R = 1,206.23'
T = 161.12'
L = 320.35'
E = 10.71'
TS STA. 226+28.73
SC STA. 230+28.73

θs = 9° 30' 00"
Ls = 400.00'
Ts = 572.79'
LT = 267.05'
ST = 133.68'
e_{max} = 8.00%
CS STA. 233+49.08
ST STA. 237+49.08

ARTICULATING CONCRETE BLOCK REVETMENT SYSTEM, TYPE 1 (50' x 20' / 9 = 111.11 SY) — 1 EC

SEEDING AND EROSION CONTROL WITH TURF REINFORCING MAT, TYPE 3 (151' x 21.5' / 9 = 360.72 SY) — 2 EC

SEEDING AND EROSION CONTROL WITH TURF REINFORCING MAT, TYPE 1 (200' x 25' / 9 = 555.56 SY) — 3 EC

SEEDING AND EROSION CONTROL WITH TURF REINFORCING MAT, TYPE 3 (607' x 21.5' / 9 = 1450.06 SY) — 4 EC

ROCK CHANNEL PROTECTION, TYPE C WITH FILTER (134' x 10.5' x 1.5' / 27 = 78.17 CY) — 5 EC

FOR PROFILE, SEE SHEET 44
FOR STORM SEWER PROFILE, SEE SHEET 141
FOR CULVERT DETAILS, SEE SHEETS 280

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED SLP
CHECKED ALB

PLAN - S.R. 7
STA. 219+00 TO STA. 231+00 (SOUTH)

LAW-7-2.17

43
297

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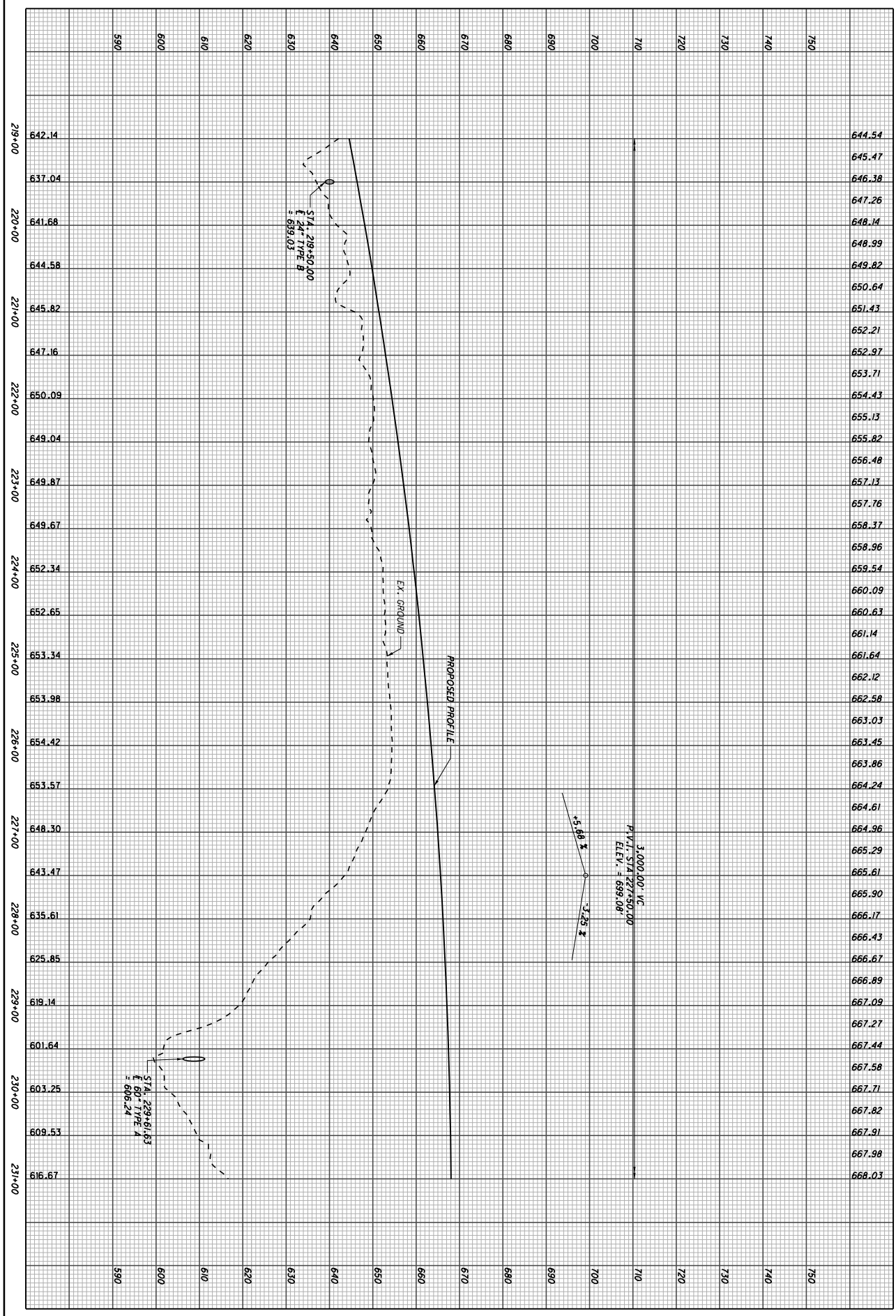
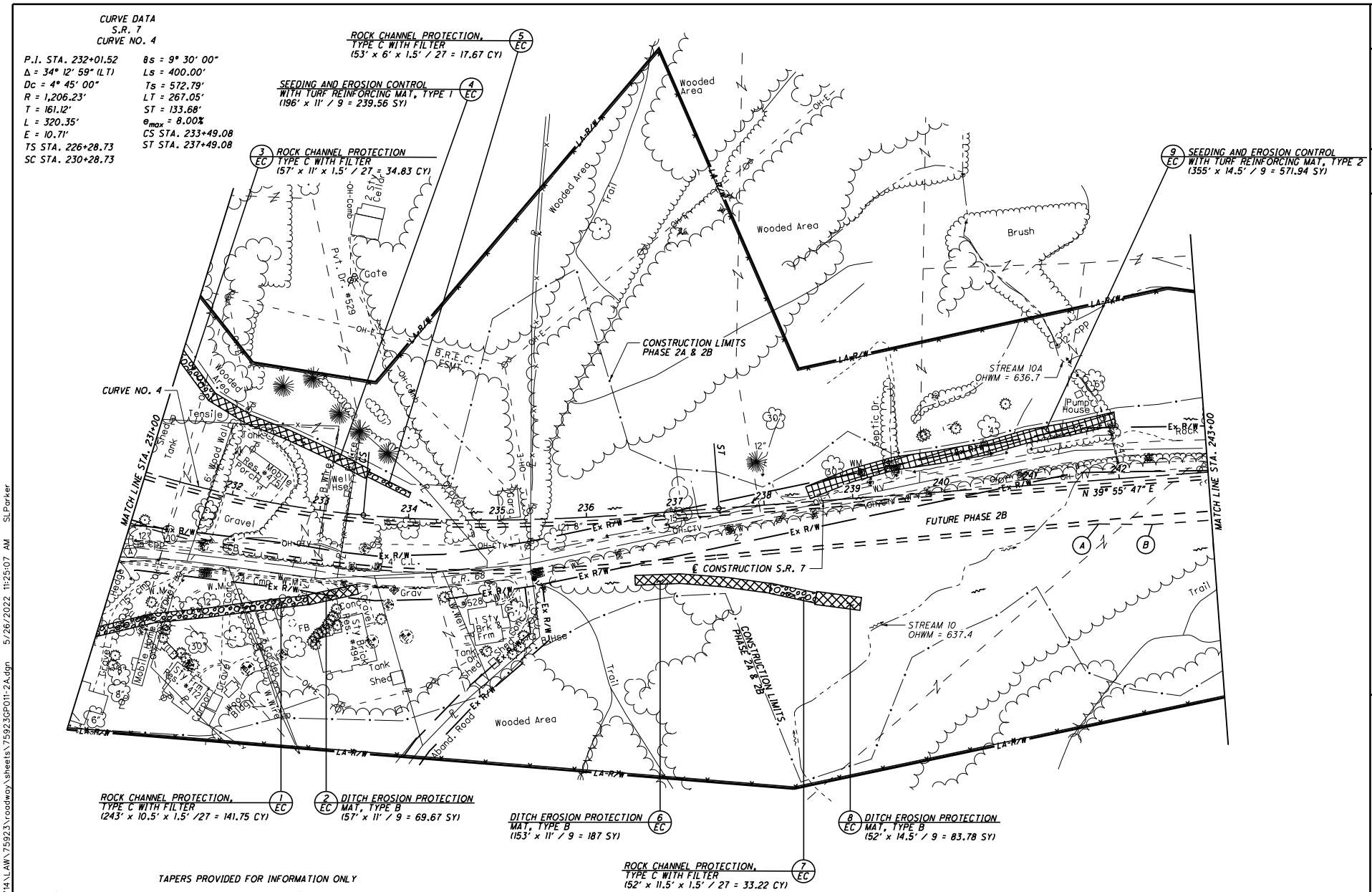


44 / 297	LAW-7-2.17	PROFILE - S.R. 7 STA. 219+00 TO STA. 231+00	CALCULATED ALB CHECKED TCM



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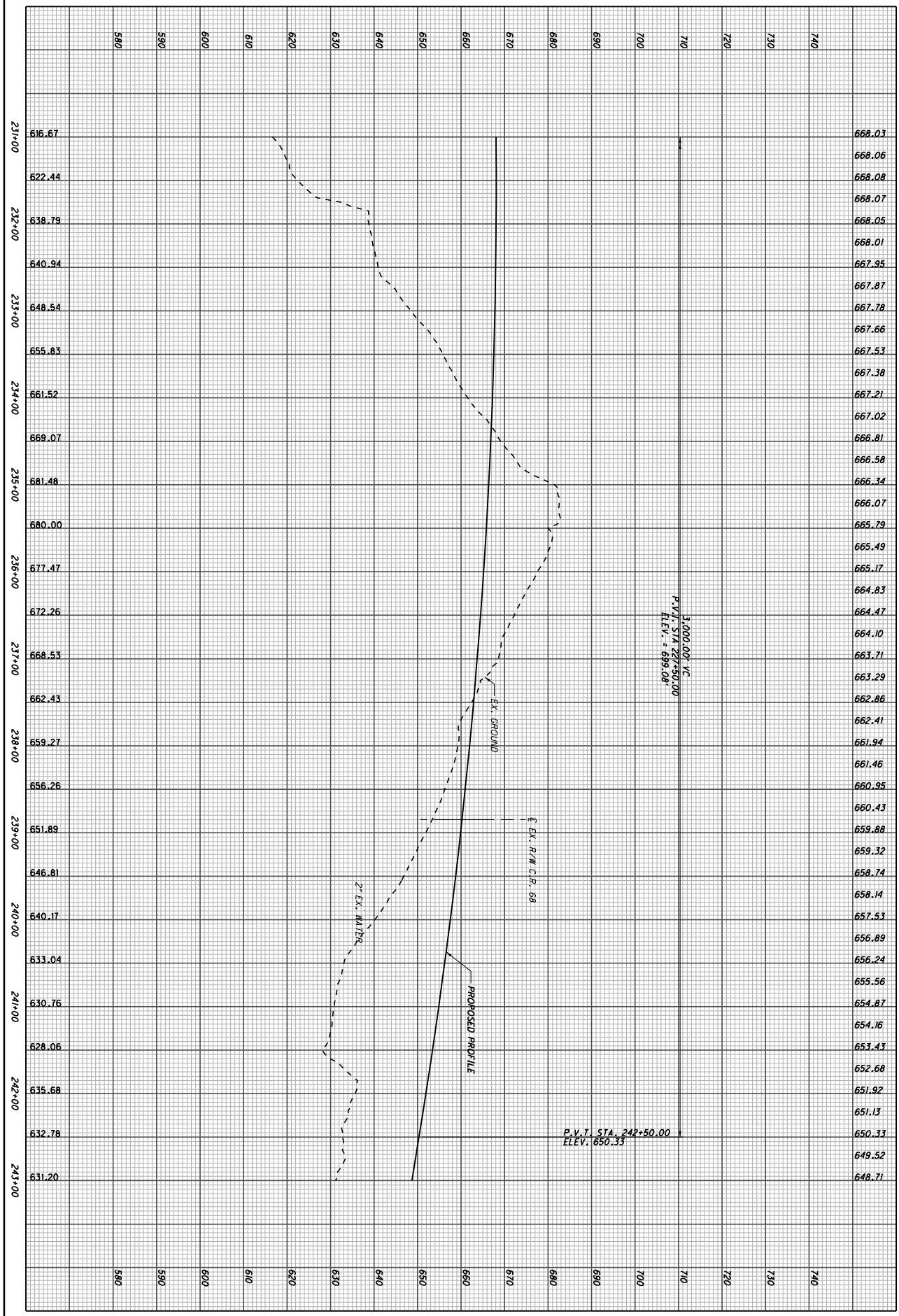
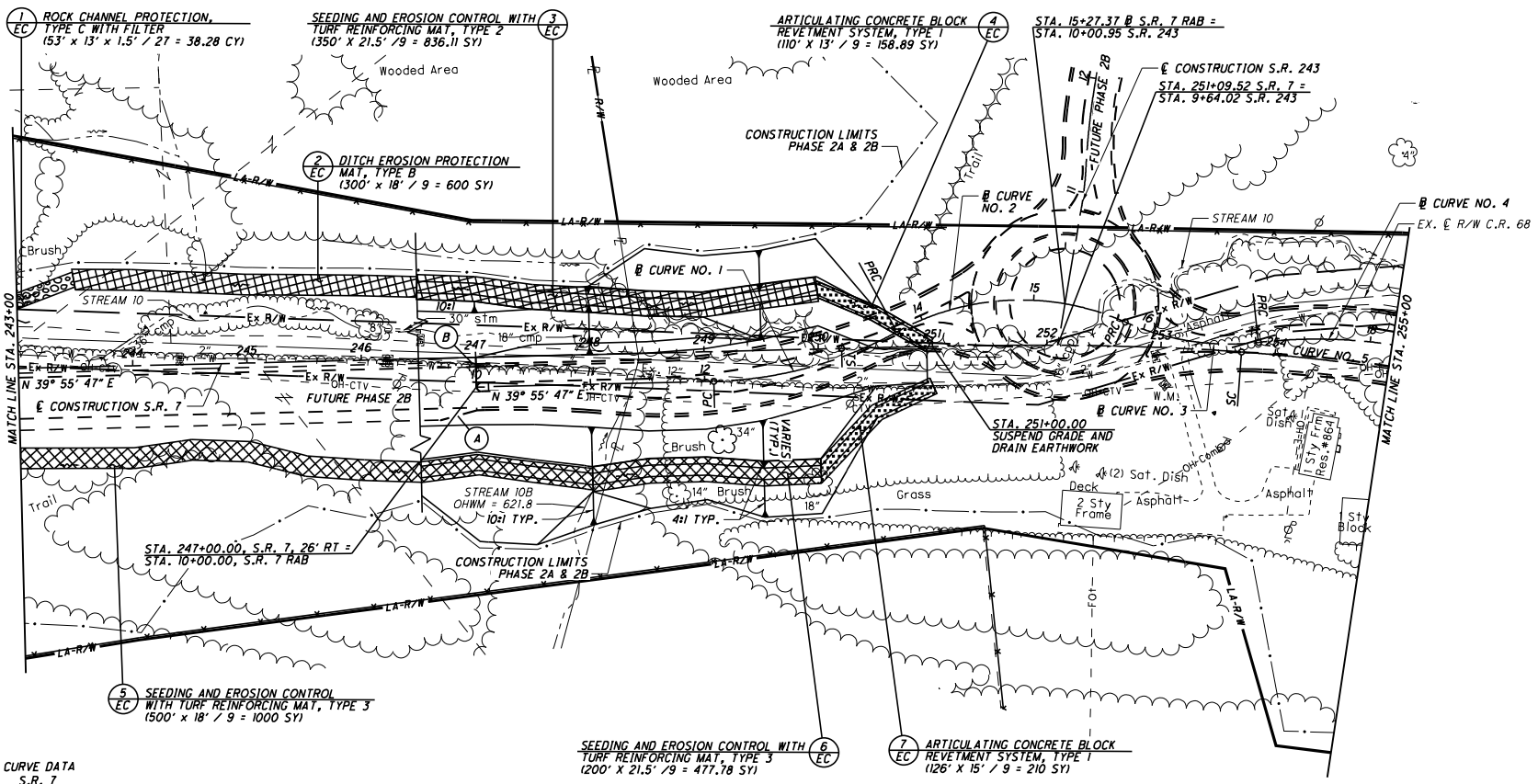


46 / 297	LAW-7-2.17	PROFILE - S.R. 7 STA. 231+00 TO STA. 243+00	CALCULATED ALB CHECKED TCM



CURVE DATA
℄ S.R. 7 RAB
CURVE NO. 1

P.I. Sta. 12+93.43
Δ = 27° 26' 21" (LT)
Dc = 16° 22' 13"
R = 350.00'
T = 85.45'
L = 167.62'
E = 10.28'
PC Sta. 12+07.99
PRC Sta. 13+75.60

CURVE DATA
℄ S.R. 7 RAB
CURVE NO. 2

P.I. Sta. 14+87.13
Δ = 52° 43' 55" (RT)
Dc = 25° 27' 53"
R = 225.00'
T = 111.52'
L = 207.08'
E = 26.12'
PRC Sta. 13+75.60
PRC Sta. 15+82.68

CURVE DATA
℄ S.R. 7 RAB
CURVE NO. 3

P.I. Sta. 16+43.83
Δ = 30° 24' 24" (LT)
Dc = 25° 27' 53"
R = 225.00'
T = 61.15'
L = 119.41'
E = 8.16'
PRC Sta. 15+82.68
PRC Sta. 17+02.09

CURVE DATA
℄ S.R. 7 RAB
CURVE NO. 4

P.I. Sta. 18+27.99
Δ = 31° 15' 43" (RT)
Dc = 12° 43' 57"
R = 450.00'
T = 125.90'
L = 245.53'
E = 17.28'
PRC Sta. 17+02.09
PT Sta. 19+47.62

CURVE DATA
S.R. 7
CURVE NO. 5

P.I. STA. 261+89.75
Δ = 58° 46' 06" (RT)
Dc = 3° 15' 00"
R = 1,762.95'
T = 773.76'
L = 1,458.26'
E = 162.33'
TS STA. 250+20.45
SC STA. 253+70.45
θs = 5° 41' 15"
Ls = 350.00'
Ts = 1,169.30'
LT = 233.45'
ST = 116.78'
e_{max} = 7.10%
CS STA. 268+28.71
ST STA. 271+78.71

TAPERS PROVIDED FOR INFORMATION ONLY

(A) - STA. 246+68.00 BEGIN SHOULDER TAPER, 54' RT.
STA. 247+00.00 END SHOULDER TAPER, 58' RT.

(B) - STA. 246+92.00 BEGIN SHOULDER TAPER, 4' LT.
STA. 247+00.00 END SHOULDER TAPER, 6' LT.

FOR PROFILE, SEE SHEET 48-49

HORIZONTAL SCALE IN FEET
0 25 50 100
CALCULATED SLP
CHECKED ALB

PLAN - S.R. 7
STA. 243+00 TO STA. 255+00 (NORTH)

LAW-7-2.17

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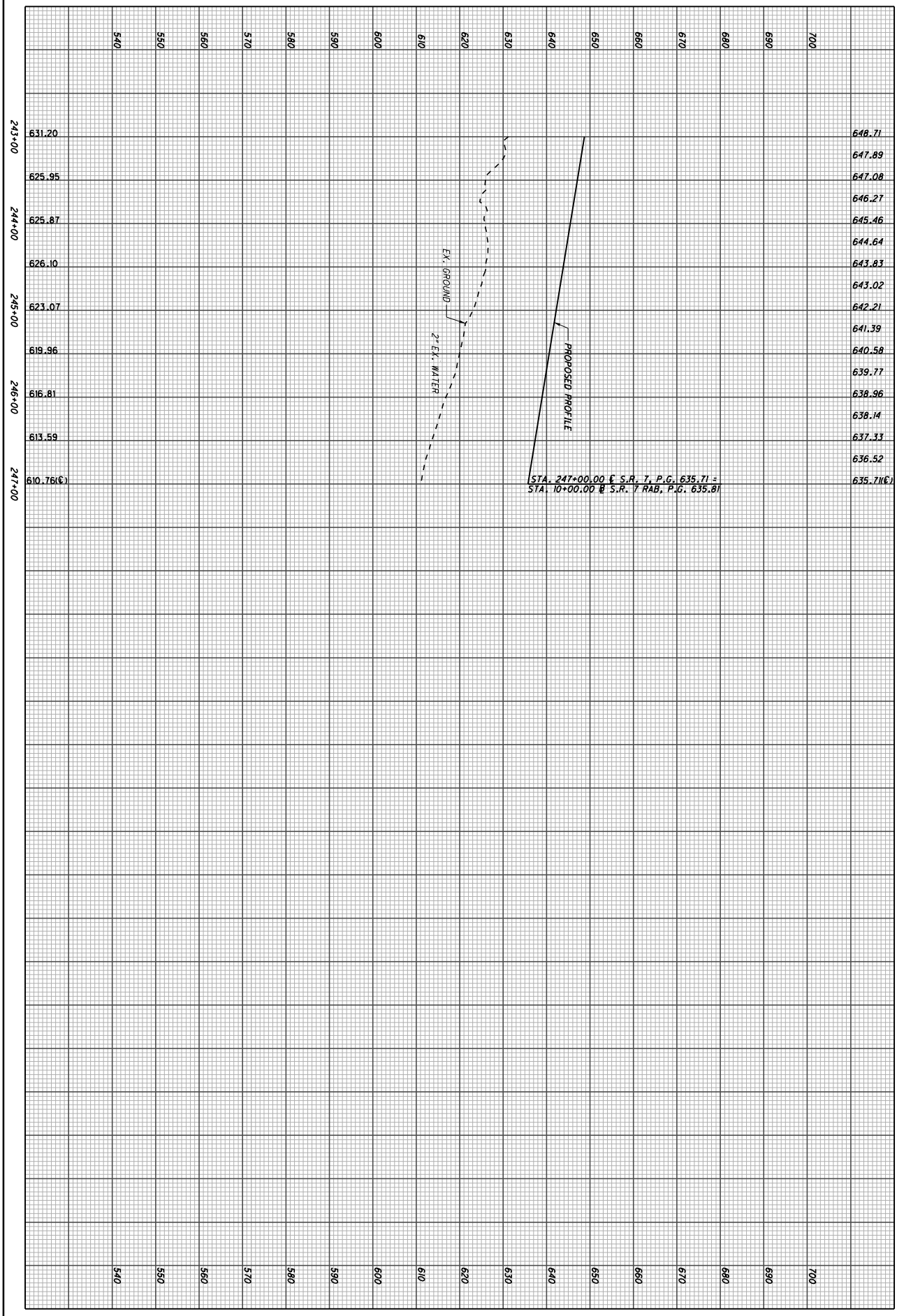
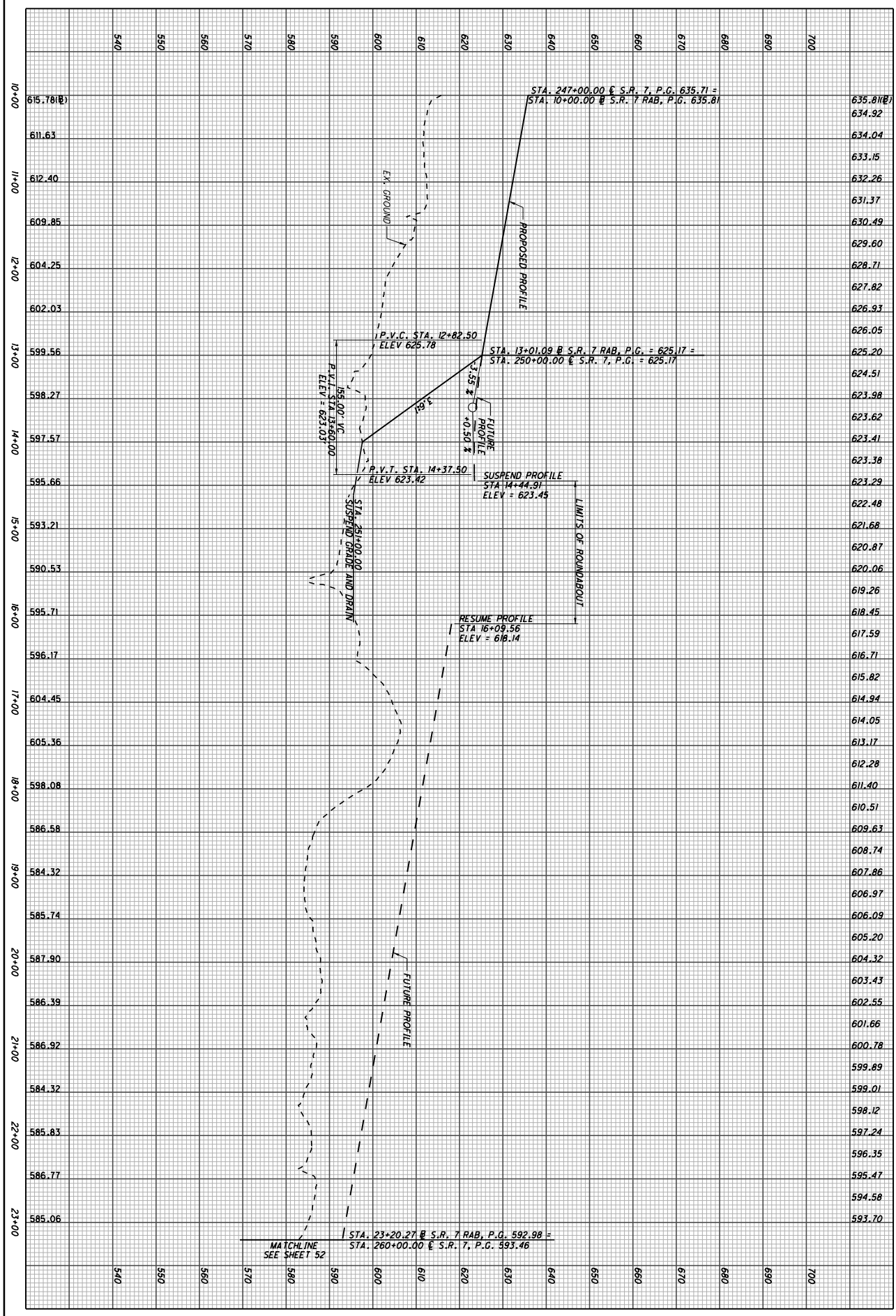
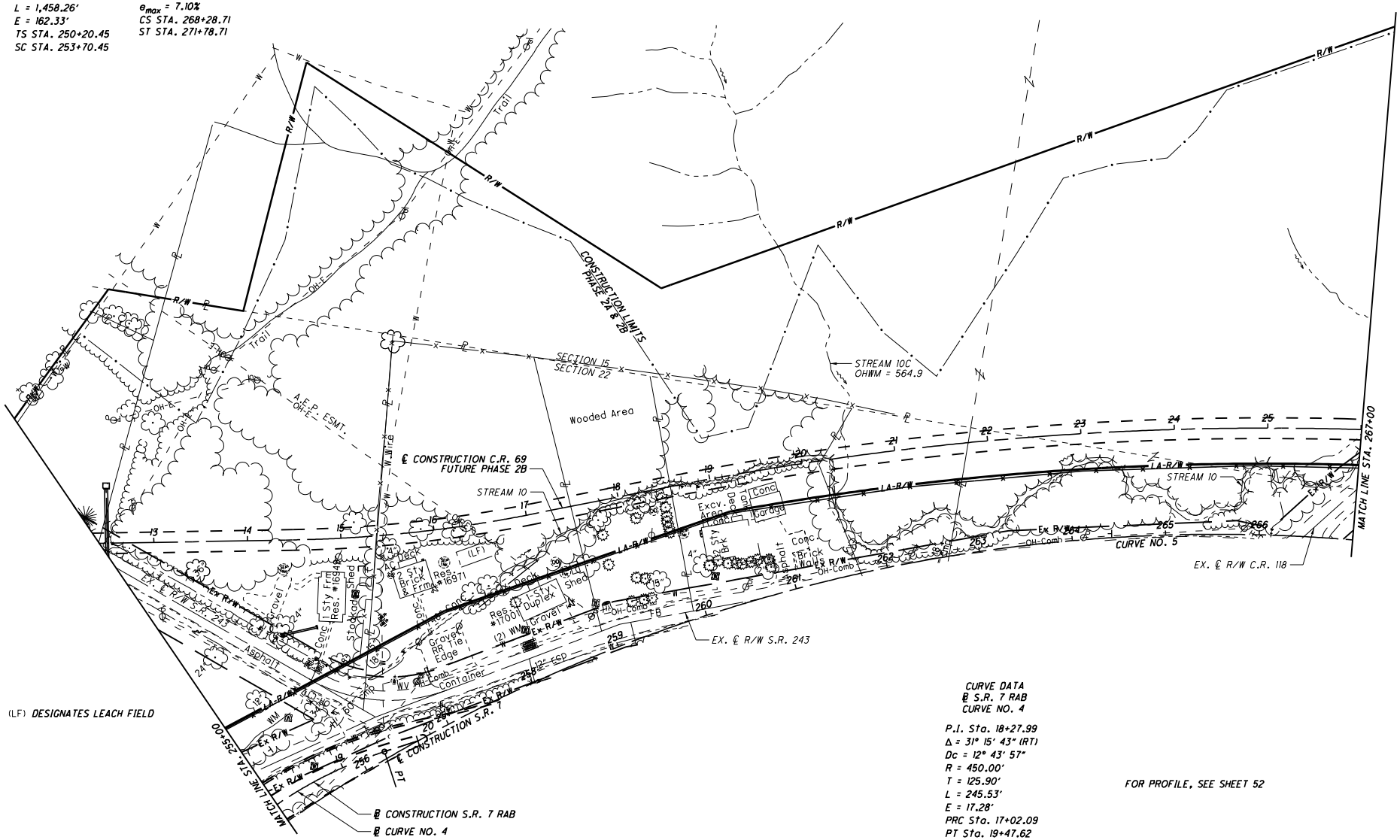


48 / 297	LAW-7-2.17	PROFILE - S.R. 7 STA. 243+000 TO STA. 247+00	CALCULATED ALB CHECKED TCM



49 297	LAW-7-2.17	PROFILE - S.R. 7 RAB STA. 10+00 TO STA. 23+20.27	CALCULATED ALB CHECKED TCM



HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED SLP
CHECKED ALB

PLAN - S.R. 7
STA. 255+00 TO STA. 267+00 (NORTH)

LAW-7-2.17

50
297

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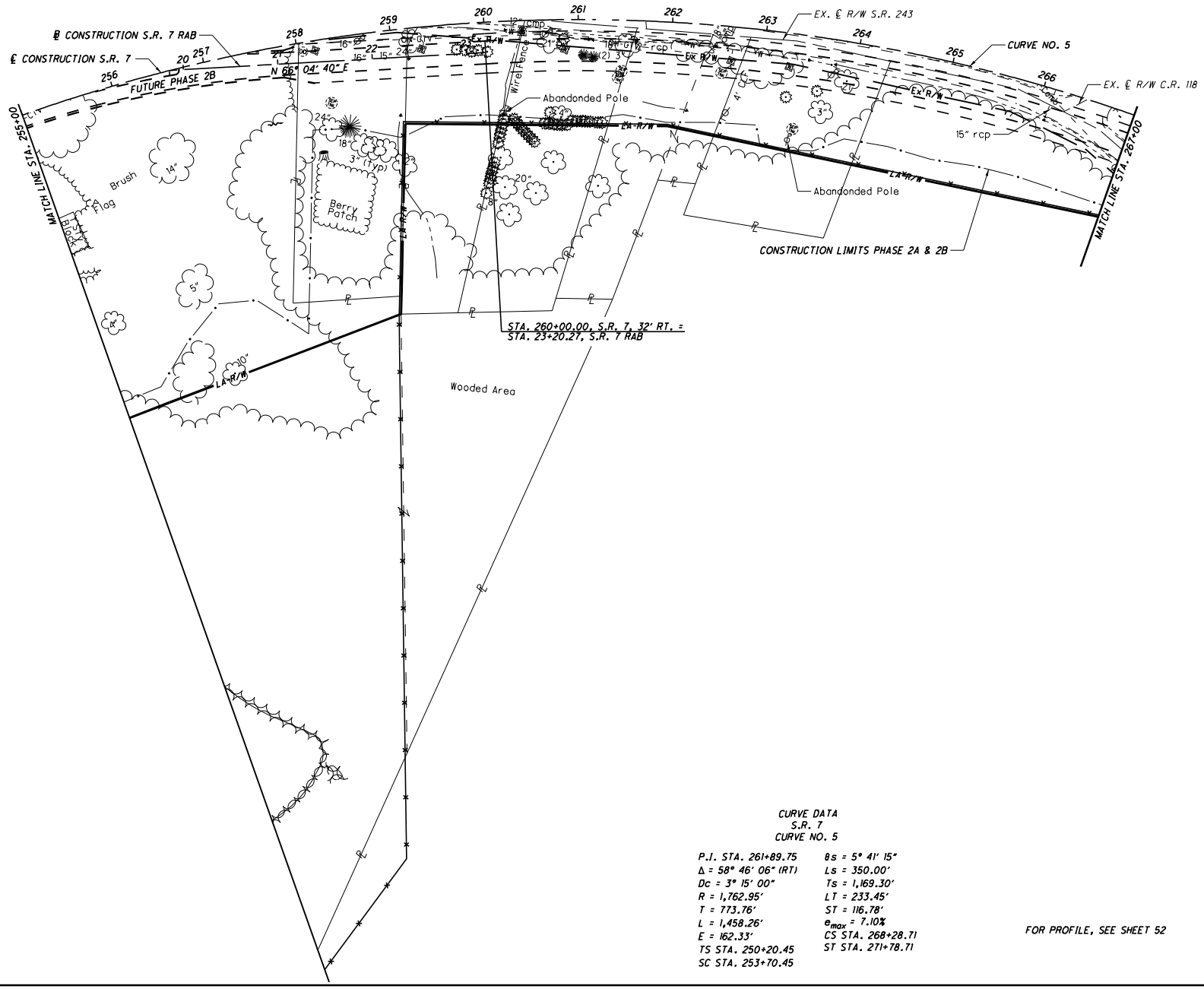

CURVE DATA
S.R. 7
CURVE NO. 5

P.I. STA. 261+89.75	Bs = 5° 41' 15"
Δ = 58° 46' 06" (RT)	Ls = 350.00'
Dc = 3° 15' 00"	Ts = 1,169.30'
R = 1,762.95'	LT = 233.45'
T = 773.76'	ST = 116.78'
L = 1,458.26'	e_{max} = 7.10%
E = 162.33'	CS STA. 268+28.71
TS STA. 250+20.45	ST STA. 271+78.71
SC STA. 253+70.45	

FOR PROFILE, SEE SHEET 52

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED SLP
CHECKED ALB

PLAN - S.R. 7
STA. 255+00 TO STA. 267+00 (SOUTH)

LAW-7-2.17

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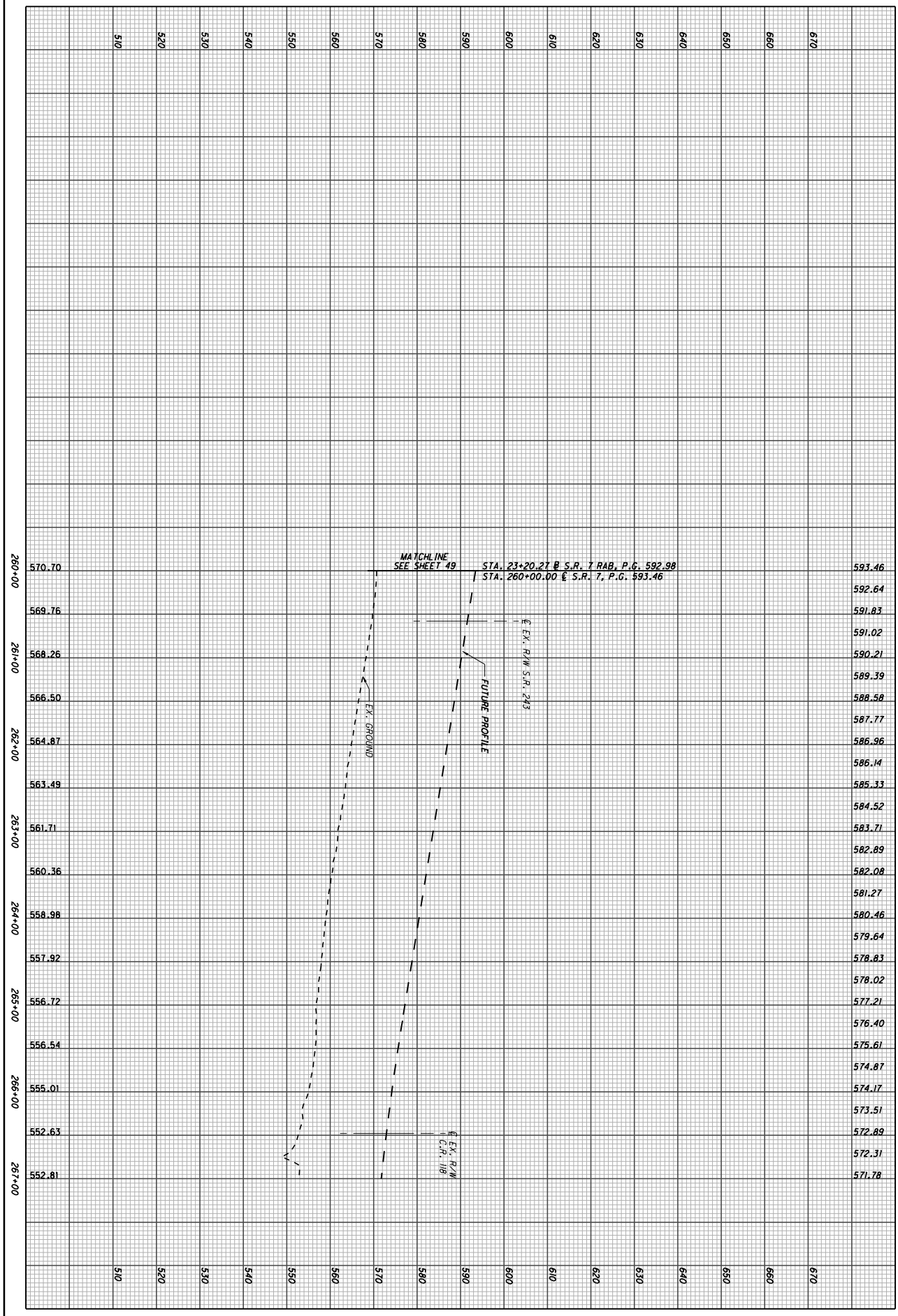
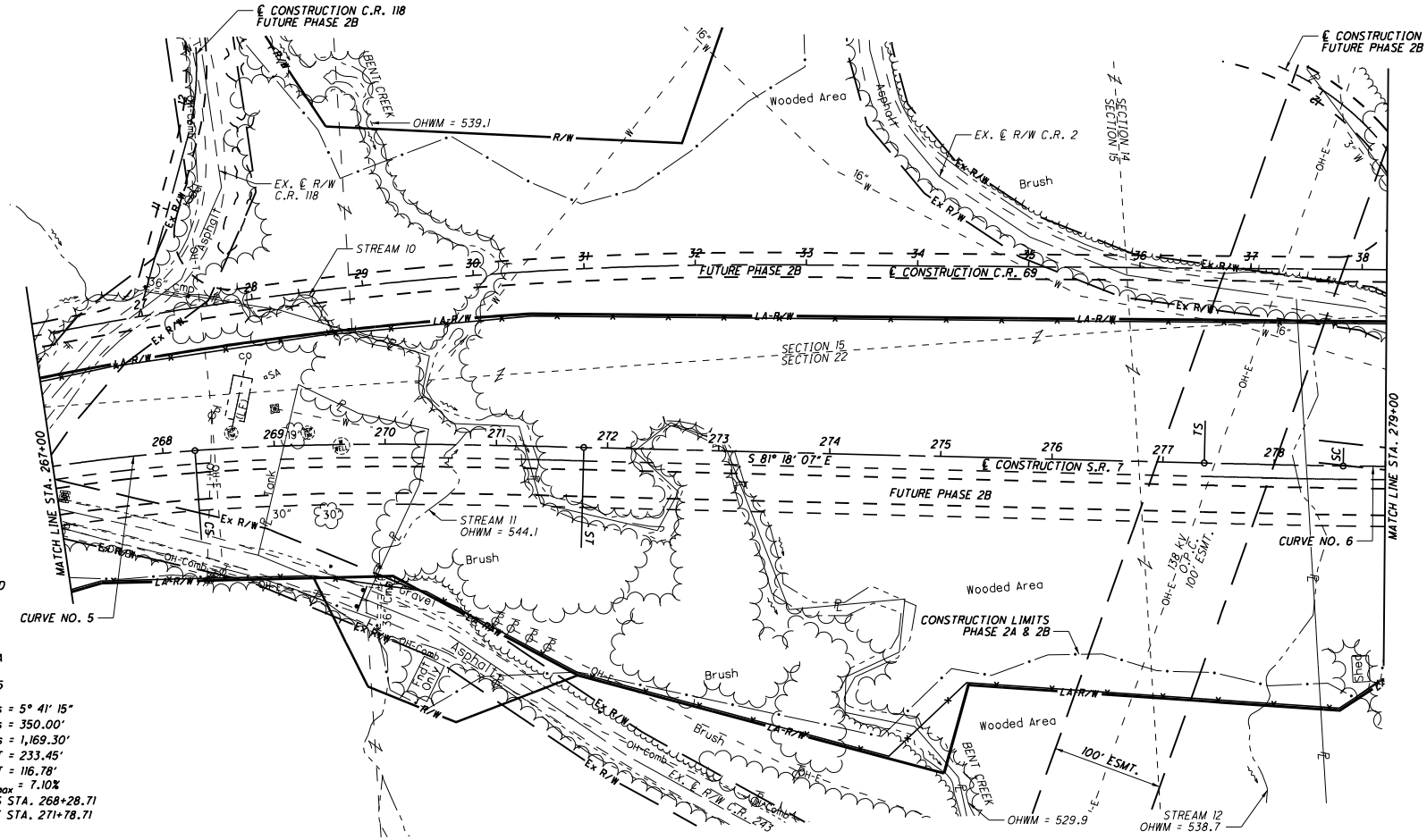


52 / 297	LAW-7-2.17	PROFILE - S.R. 7 STA. 260+00 TO 267+00	CALCULATED ALB CHECKED TCM



(LF) *DESIGNATES LEACH FIELD*

CURVE DATA
S.R. 7
CURVE NO. 5

P.I. STA. 261+89.75	*θs = 5° 41' 15"*
Δ = 58° 46' 06" (RT)	*Ls = 350.00'*
Dc = 3° 15' 00"	*Ts = 1,169.30'*
R = 1,762.95'	*LT = 233.45'*
T = 773.76'	*ST = 116.78'*
L = 1,458.26'	*e_{max} = 7.10%*
E = 162.33'	*CS STA. 268+28.71*
TS STA. 250+20.45	*ST STA. 271+78.71*
SC STA. 253+70.45	

CURVE DATA
S.R. 7
CURVE NO. 6

P.I. STA. 280+92.68	*θs = 0° 37' 30"*
Δ = 5° 51' 21" (RT)	*Ls = 125.00'*
Dc = 1° 00' 00"	*Ts = 355.56'*
R = 5,729.58'	*LT = 83.33'*
T = 230.42'	*ST = 41.67'*
L = 460.59'	*e_{max} = 2.90%*
E = 4.63'	*CS STA. 283+22.71*
TS STA. 277+37.12	*ST STA. 284+47.71*
SC STA. 278+62.12	

CALCULATED SLP
CHECKED ALB

HORIZONTAL SCALE IN FEET
0 25 50 100

PLAN - S.R. 7
STA. 267+00 TO STA. 279+00

LAW-7-2.17

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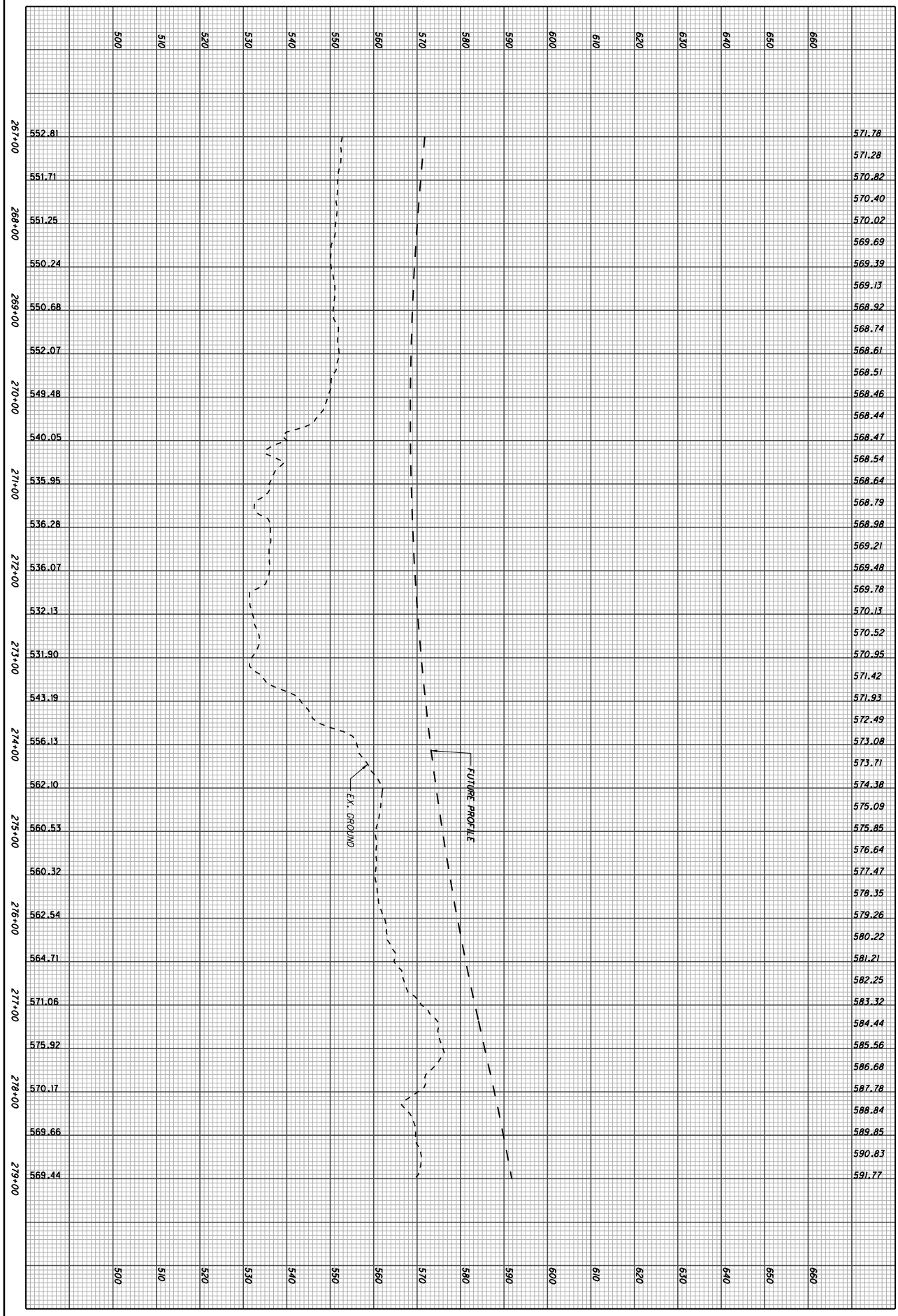
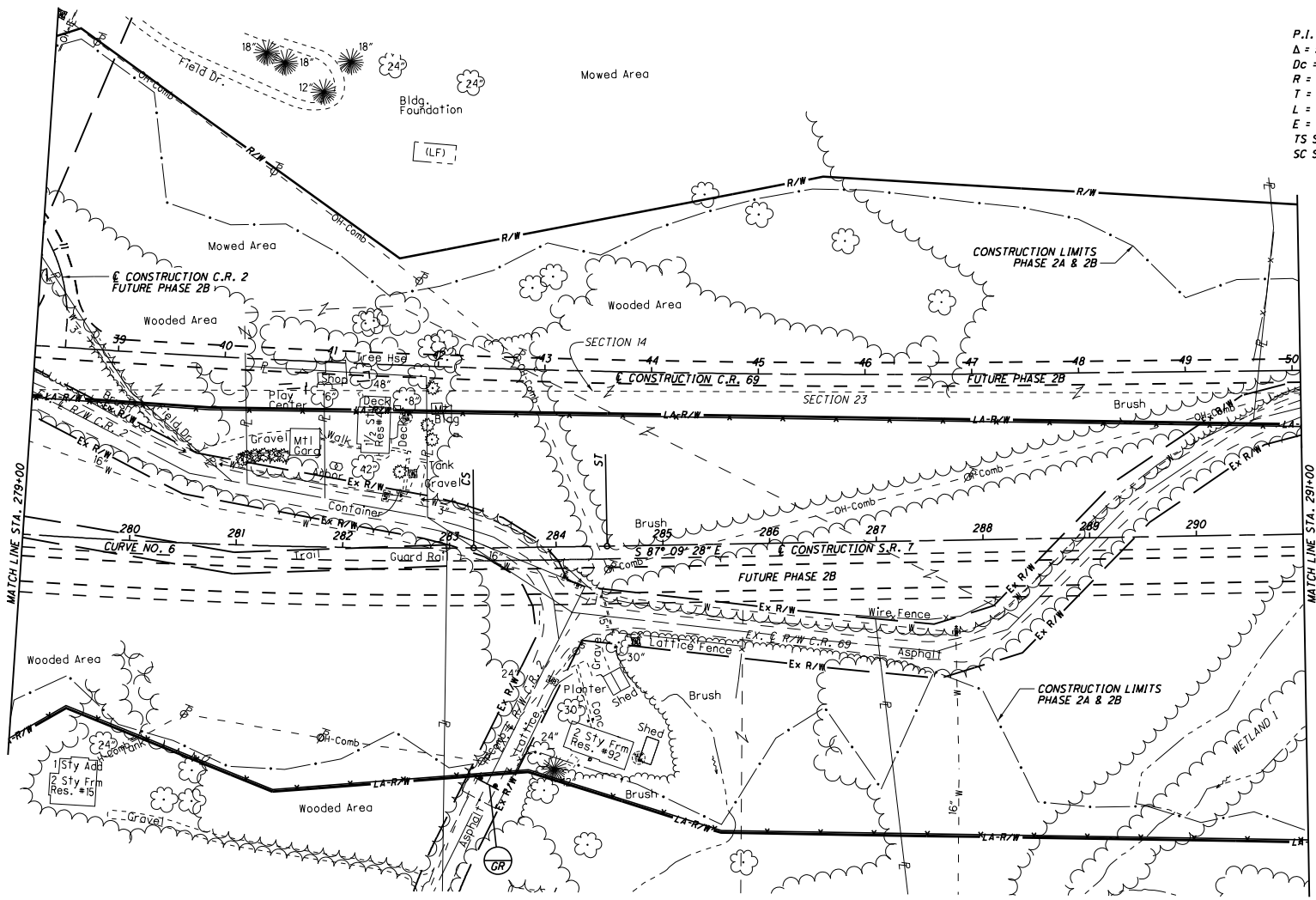


54 / 297	LAW-7-2.17	PROFILE - S.R. 7 STA. 267+00 TO STA. 279+00	CALCULATED ALB CHECKED TCM



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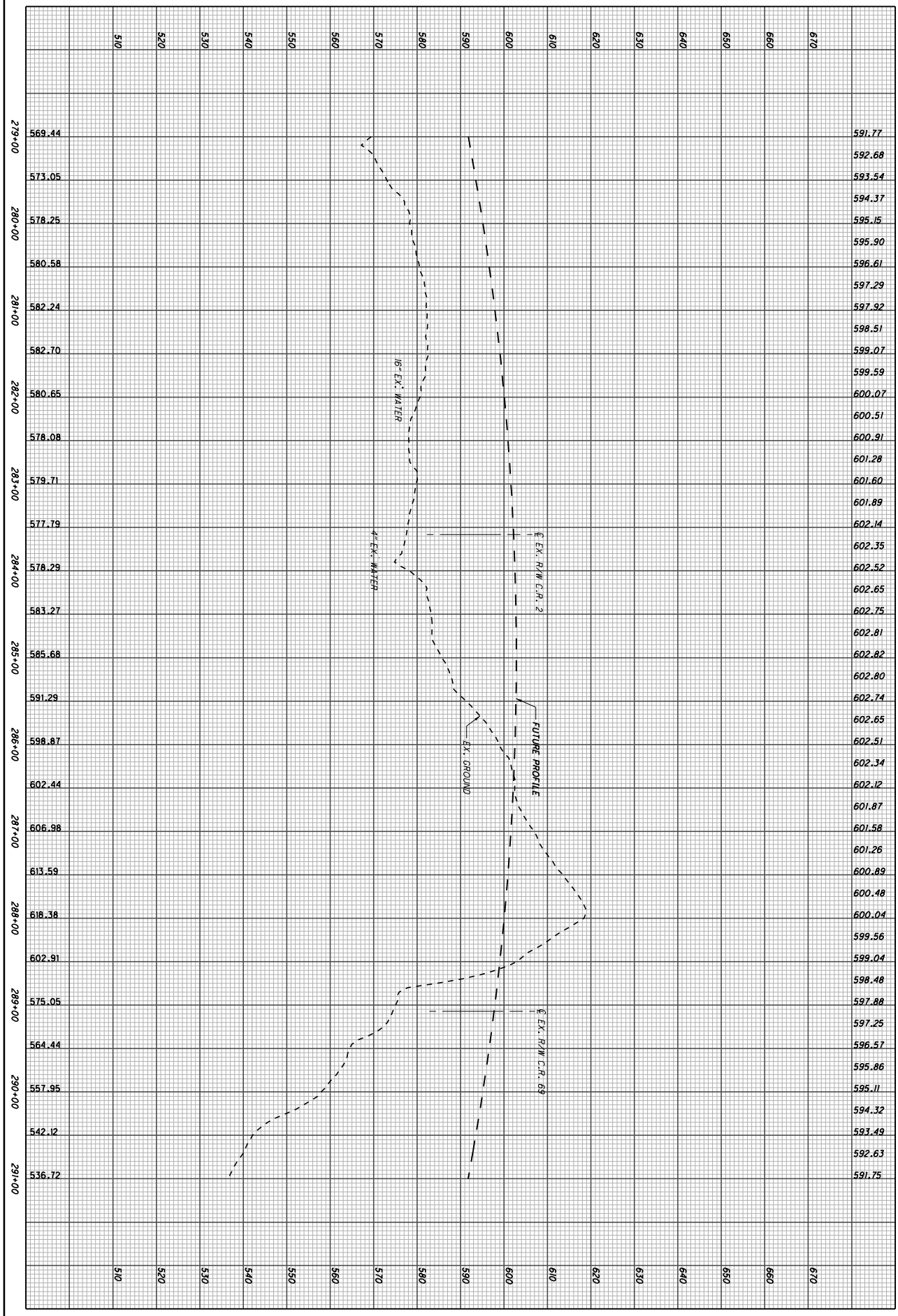
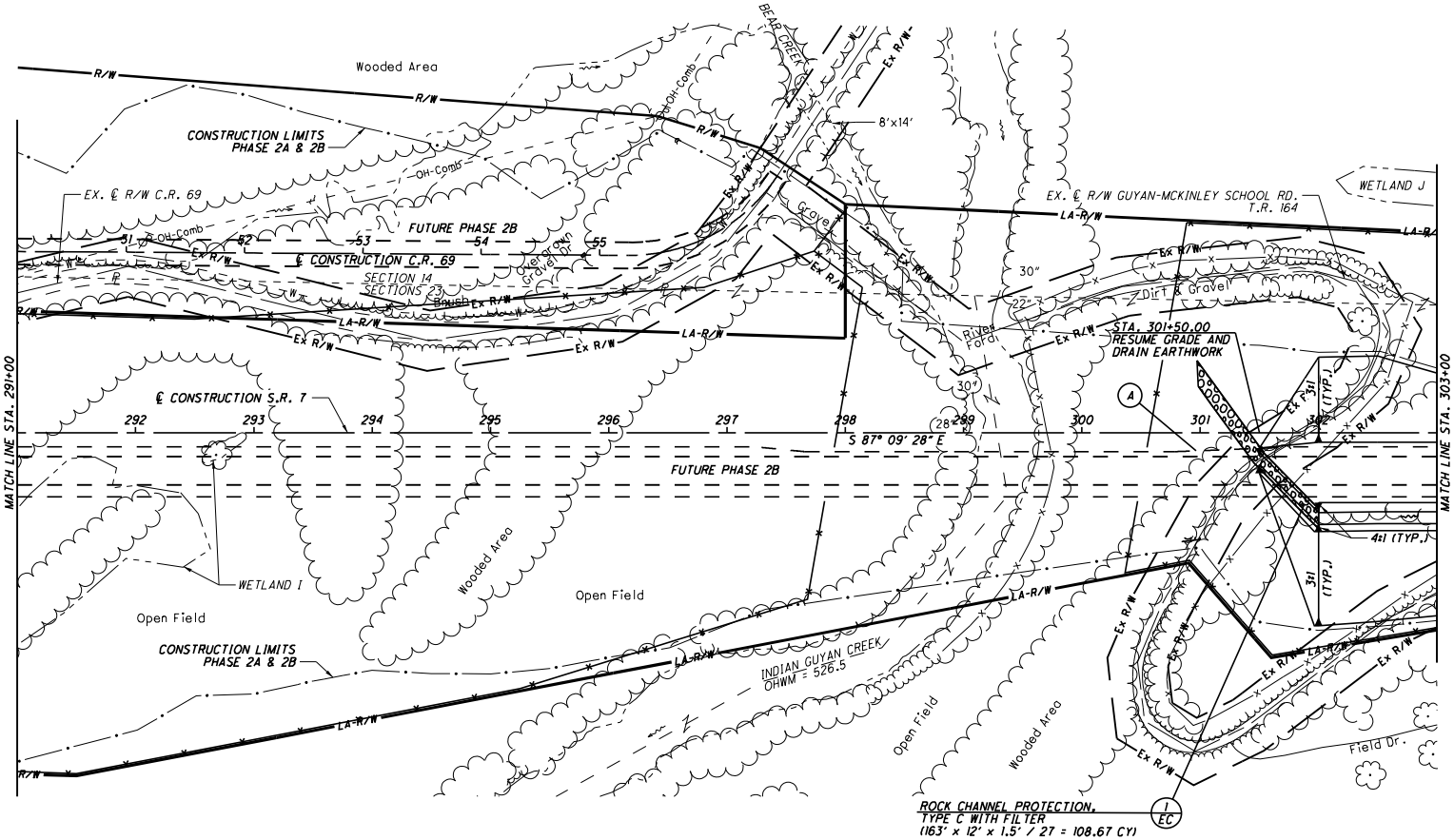


56 / 297	LAW-7-2.17	PROFILE - S.R. 7 STA. 279+00 TO STA. 291+00	CALCULATED ALB CHECKED TCM



TAPERS PROVIDED FOR INFORMATION ONLY

(A) - STA. 300+78.70 BEGIN SHOULDER TAPER, 16' RT.

STA. 301+78.70 END SHOULDER TAPER, 12' RT.

FOR PROFILE, SEE SHEET 58

N

HORIZONTAL SCALE IN FEET 0 25 50 100

CALCULATED SLP CHECKED ALB

PLAN - S.R. 7
STA. 291+00 TO 303+00

LAW-7-2.17

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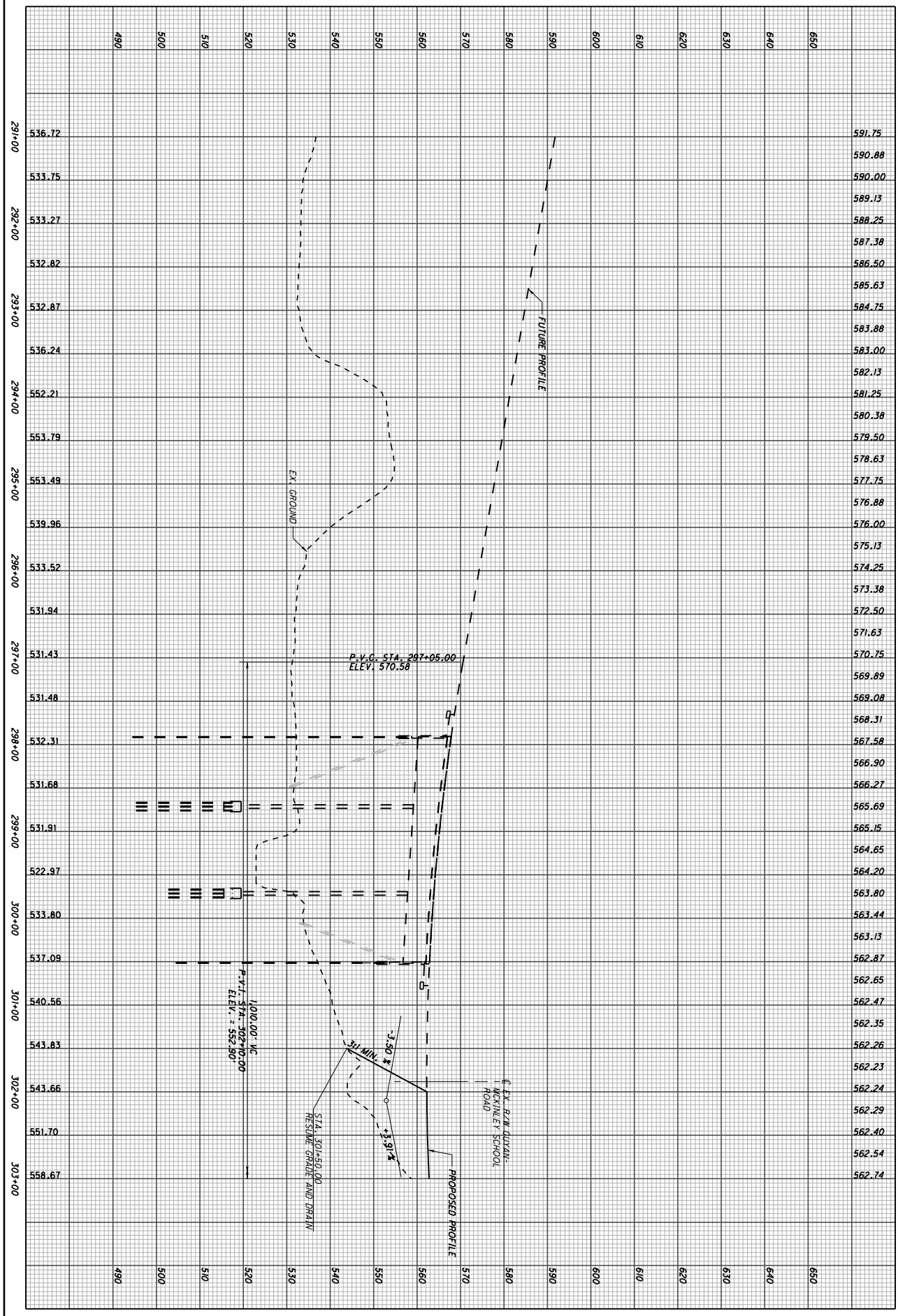
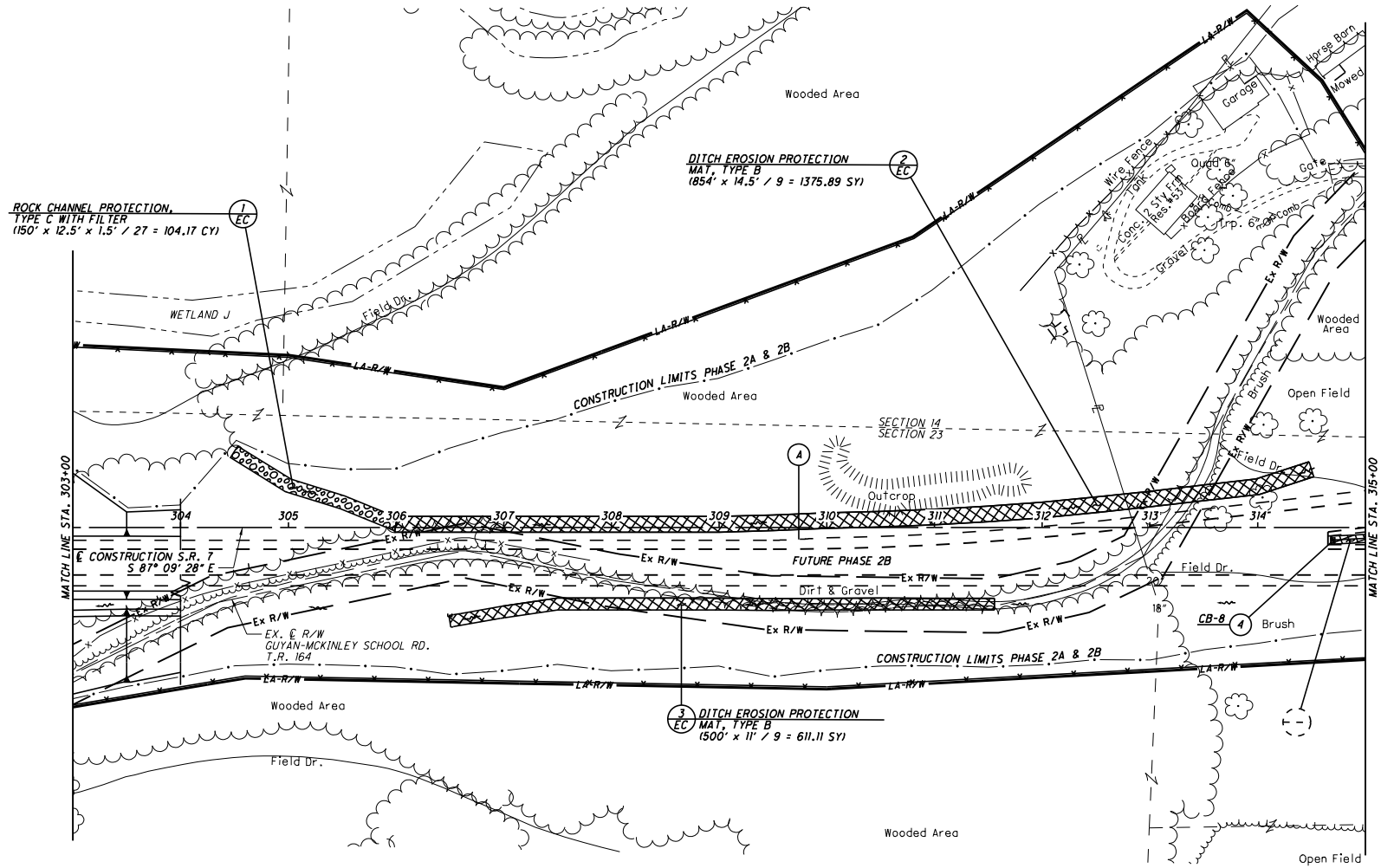


58 / 297	LAW-7-2.17	PROFILE - S.R. 7 STA. 291+00 TO STA. 303+00	CALCULATED ALB CHECKED TCM



CURVE DATA
S.R. 7 LANE TRANSITION
TRANSITION CURVE NO. 1
(FOR HORIZONTAL LAYOUT ONLY)

P.I. Sta. 311+12.46, S.R. 7, 20' RT.
Δ = 6° 29' 46" (LT)
Dc = 2° 00' 00"
R = 2,864.79'
T = 162.58'
L = 324.81'
E = 4.61'
e_{max} = NC
PC STA. = 309+49.89, S.R. 7, 20' RT.
PT STA. = 312+74.00, S.R. 7, 1.61' RT.

TAPERS PROVIDED FOR INFORMATION ONLY

(A) - STA. 309+49.89
BEGIN SHOULDER TAPER, 12' RT.

STA. 309+99.71
END SHOULDER TAPER, 9.57' RT.

FOR PROFILE, SEE SHEET 60
FOR STORM SEWER PROFILE, SEE SHEET 274

N

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED SLP
CHECKED ALB

PLAN - S.R. 7
STA. 303+00 TO STA. 315+00

LAW-7-2.17

59
297

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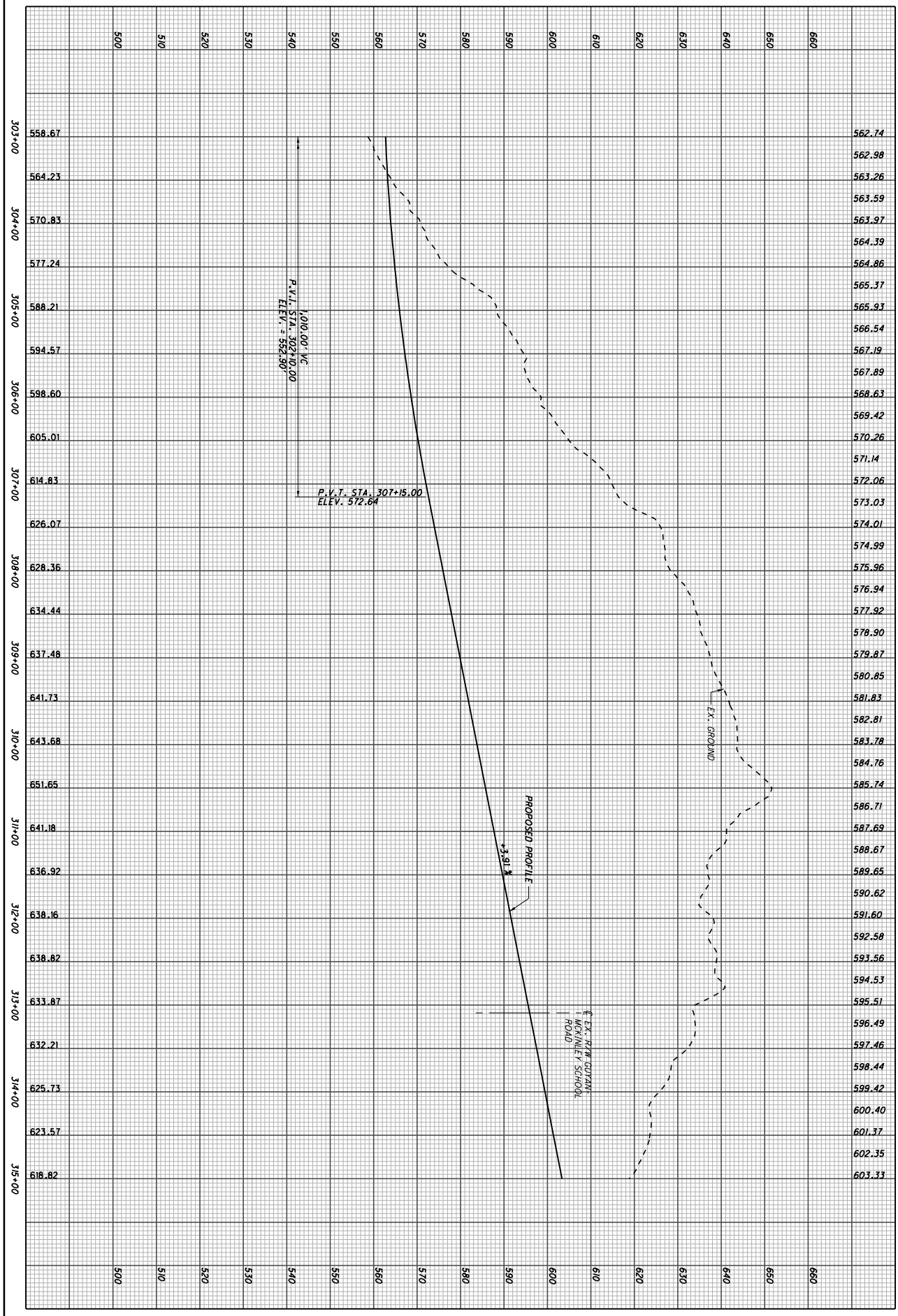
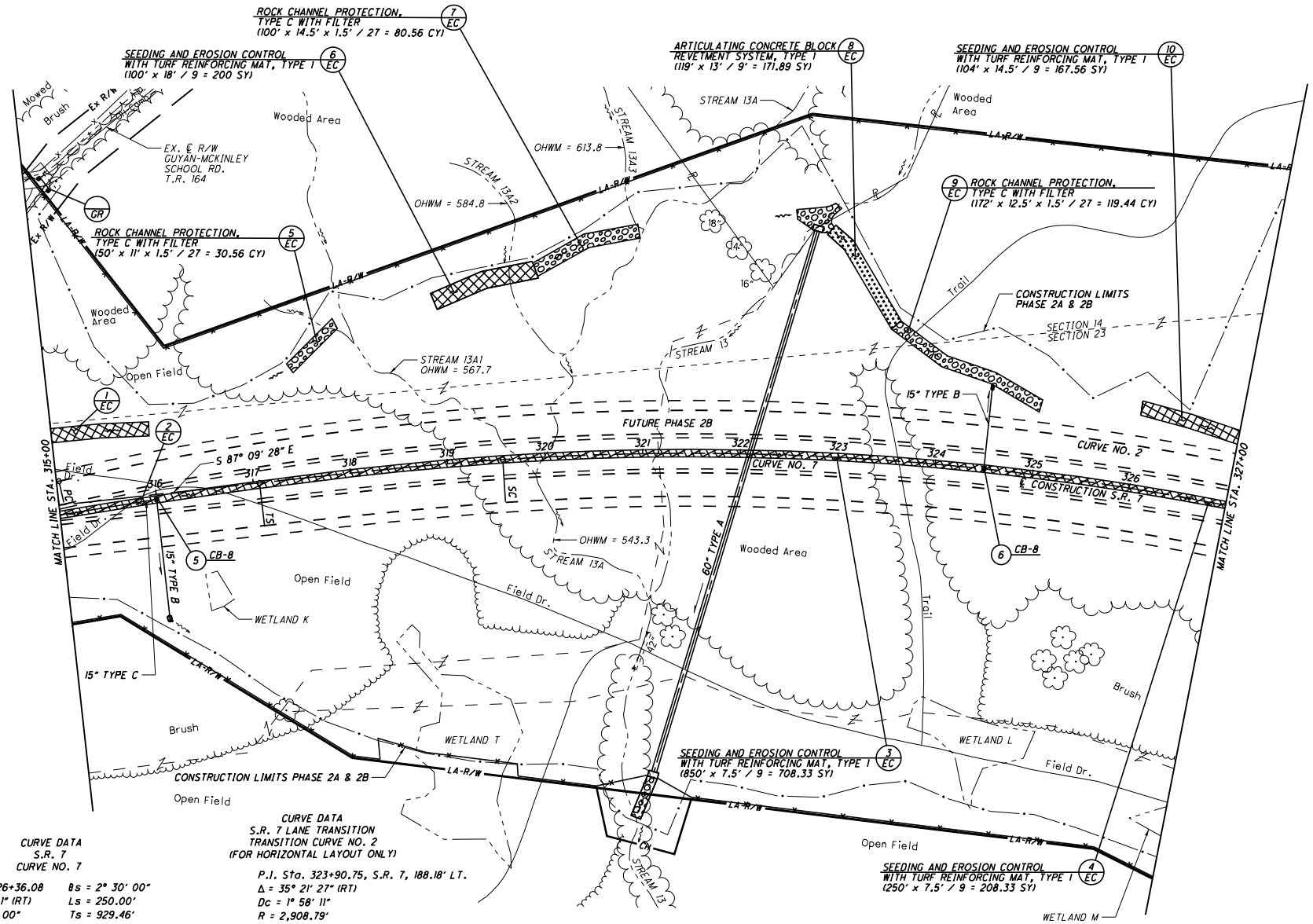


60 / 297	LAW-7-2.17	PROFILE - S.R. 7 STA. 303+00 TO STA. 315+00	CALCULATED ALB CHECKED TCM



CURVE DATA
S.R. 7
CURVE NO. 7

P.I. STA. 326+36.08
Δ = 31° 21' 41" (RT)
Dc = 2° 00' 00"
R = 2,864.79'
T = 670.91'
L = 1,318.07'
E = 77.51'
TS STA. 317+06.62
SC STA. 319+56.62

θs = 2° 30' 00"
Ls = 250.00'
Ts = 929.46'
LT = 166.68'
ST = 83.35'
e_{max} = 5.10%
CS STA. 332+74.69
ST STA. 335+24.69

CURVE DATA
S.R. 7 LANE TRANSITION
TRANSITION CURVE NO. 2
(FOR HORIZONTAL LAYOUT ONLY)

P.I. Sta. 323+90.75, S.R. 7, 188.18' LT.
Δ = 35° 21' 27" (RT)
Dc = 1° 58' 11"
R = 2,908.79'
T = 927.12'
L = 1,795.03'
E = 144.18'
e_{max} = 5.10%
PC STA. = 315+02.52, S.R. 7, 24.41' LT.
PT STA. = 332+74.69, S.R. 7, 44' LT.

1 EC DITCH EROSION PROTECTION (VBF) (50' x 14.5' / 9 = 80.56 SY)

2 EC DITCH EROSION PROTECTION (130' x 7.5' / 9 = 108.33 SY)

(VBF) DENOTES LOCATION OF VEGETATED BIOFILTER.

FOR PROFILE, SEE SHEET 62
FOR STORM SEWER PROFILE, SEE SHEETS 189
FOR CULVERT DETAILS, SEE SHEETS 281-282

CALCULATED SLP
CHECKED ALB

HORIZONTAL SCALE IN FEET
0 25 50 100

PLAN - S.R. 7
STA. 315+00 TO STA. 327+00

LAW-7-2.17

61
297

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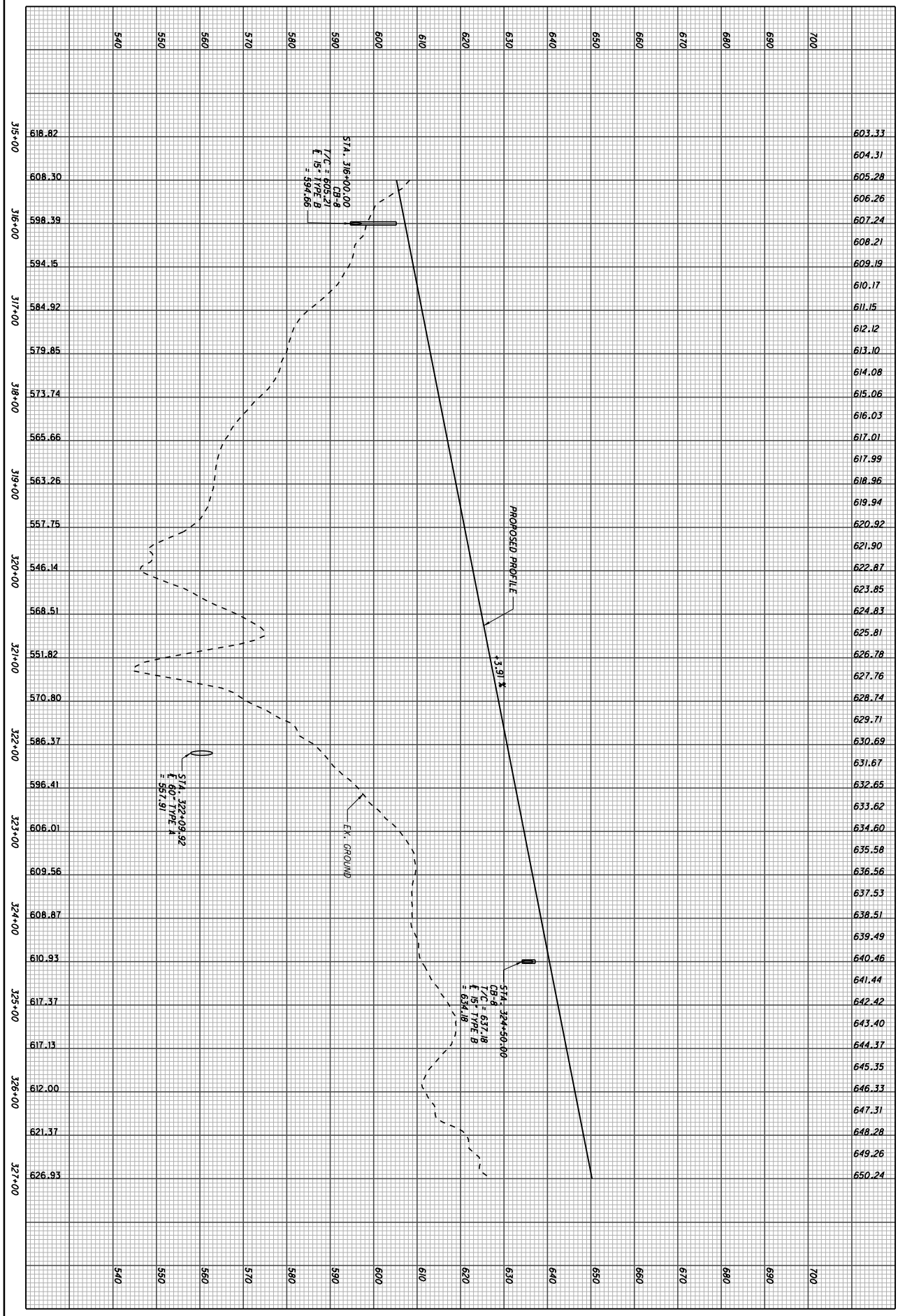
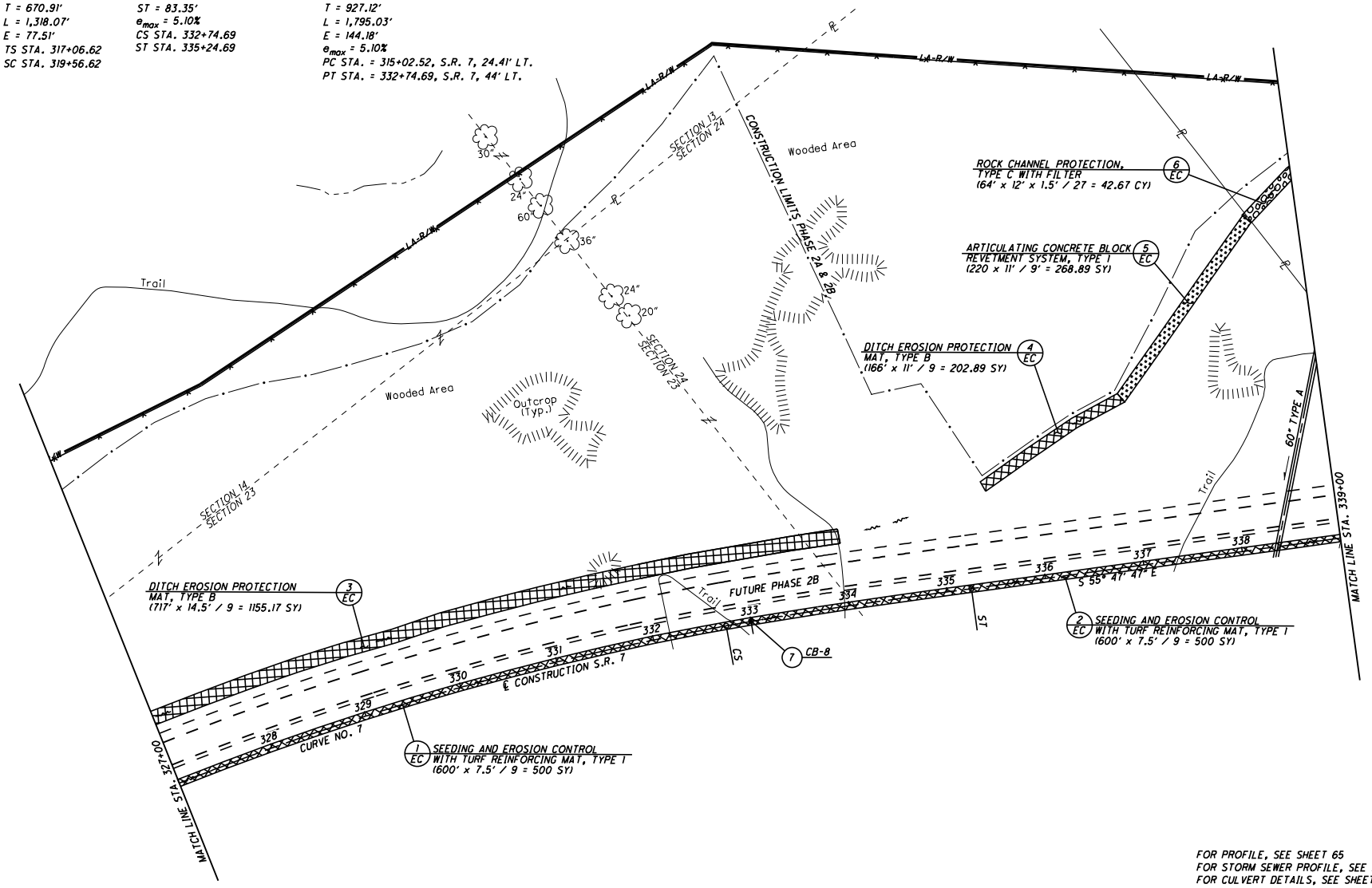


62 / 297	LAW-7-2.17	PROFILE - S.R. 7 STA. 315+00 TO STA. 327+00	CALCULATED ALB CHECKED TCM



FOR PROFILE, SEE SHEET 65
FOR STORM SEWER PROFILE, SEE SHEET 204
FOR CULVERT DETAILS, SEE SHEETS 283-284

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED SLP
CHECKED ALB

PLAN - S.R. 7
STA. 327+00 TO STA. 339+00 (NORTH)

LAW-7-2.17

63
297

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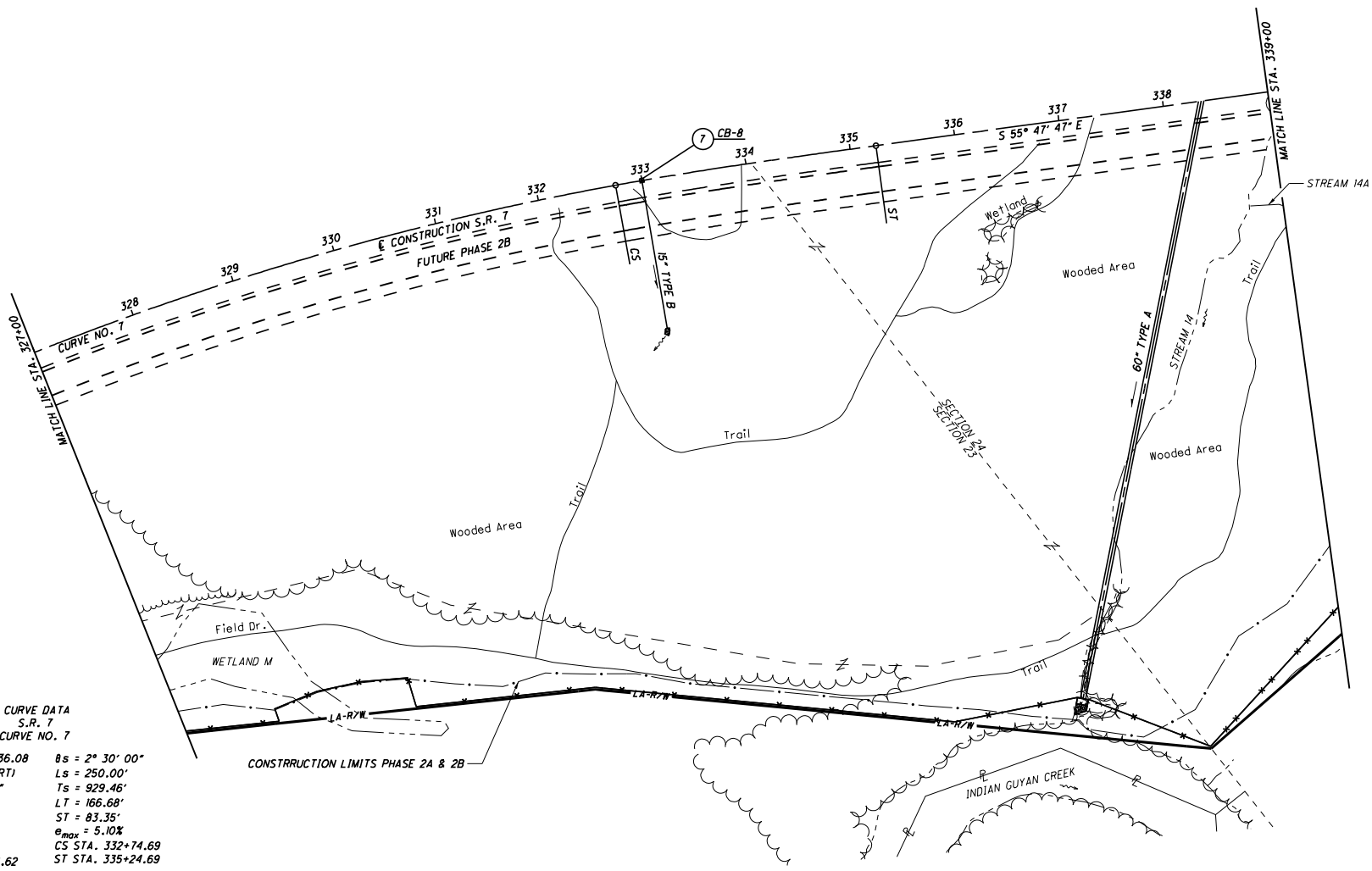

CURVE DATA
S.R. 7
CURVE NO. 7

P.I. STA. 326+36.08	θs = 2° 30' 00"
Δ = 31° 21' 41" (RT)	Ls = 250.00'
Dc = 2° 00' 00"	Ts = 929.46'
R = 2,864.79'	LT = 166.68'
T = 670.91'	ST = 83.35'
L = 1,318.07'	e_{max} = 5.10%
E = 77.51'	CS STA. 332+74.69
TS STA. 317+06.62	ST STA. 335+24.69
SC STA. 319+56.62	

FOR PROFILE, SEE SHEET 65
FOR STORM SEWER PROFILE, SEE SHEET 204
FOR CULVERT DETAILS, SEE SHEETS 283-284

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED SLP
CHECKED ALB

PLAN - S.R. 7
STA. 327+00 TO STA. 339+00 (SOUTH)

LAW-7-2.17

64
297

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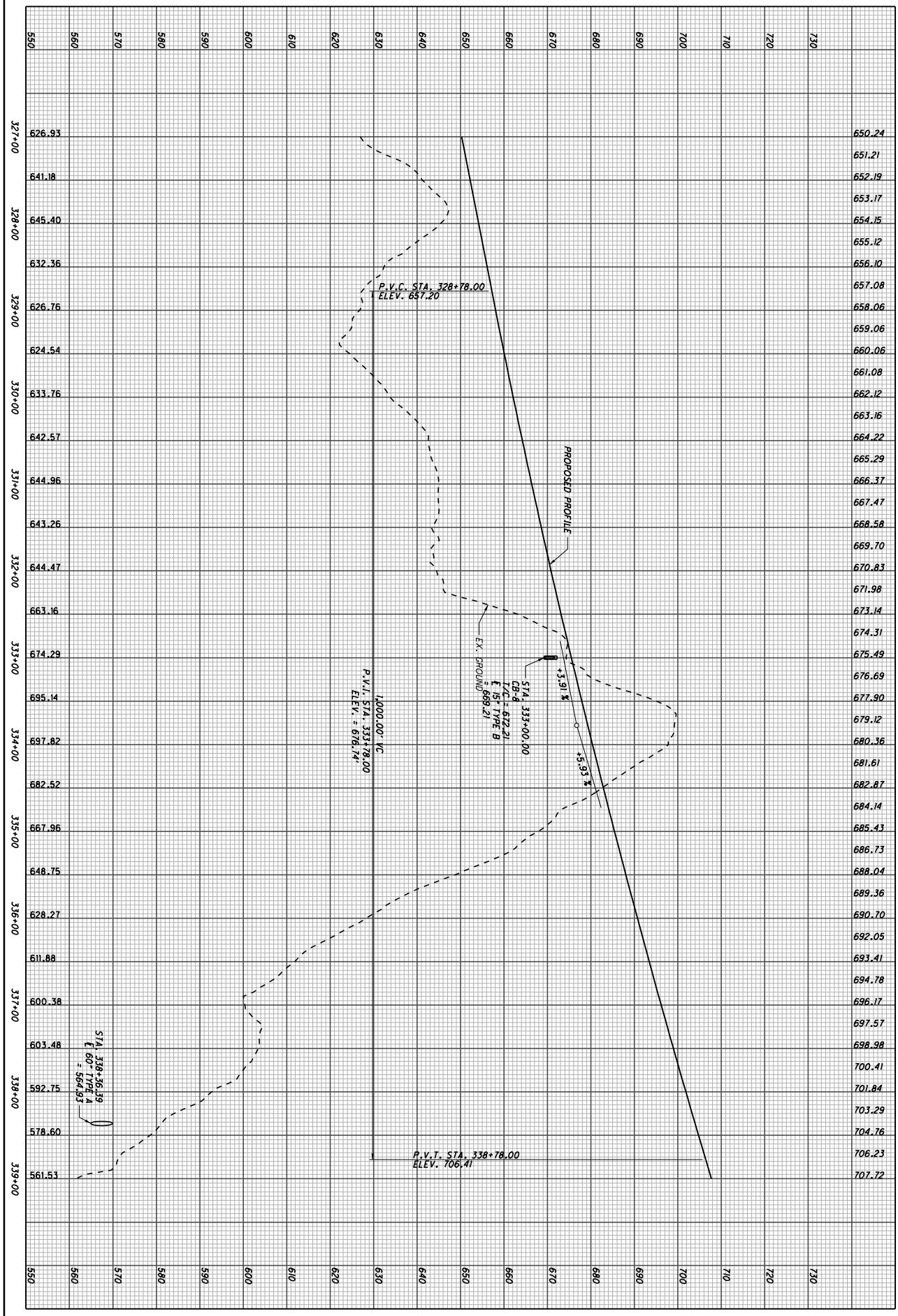
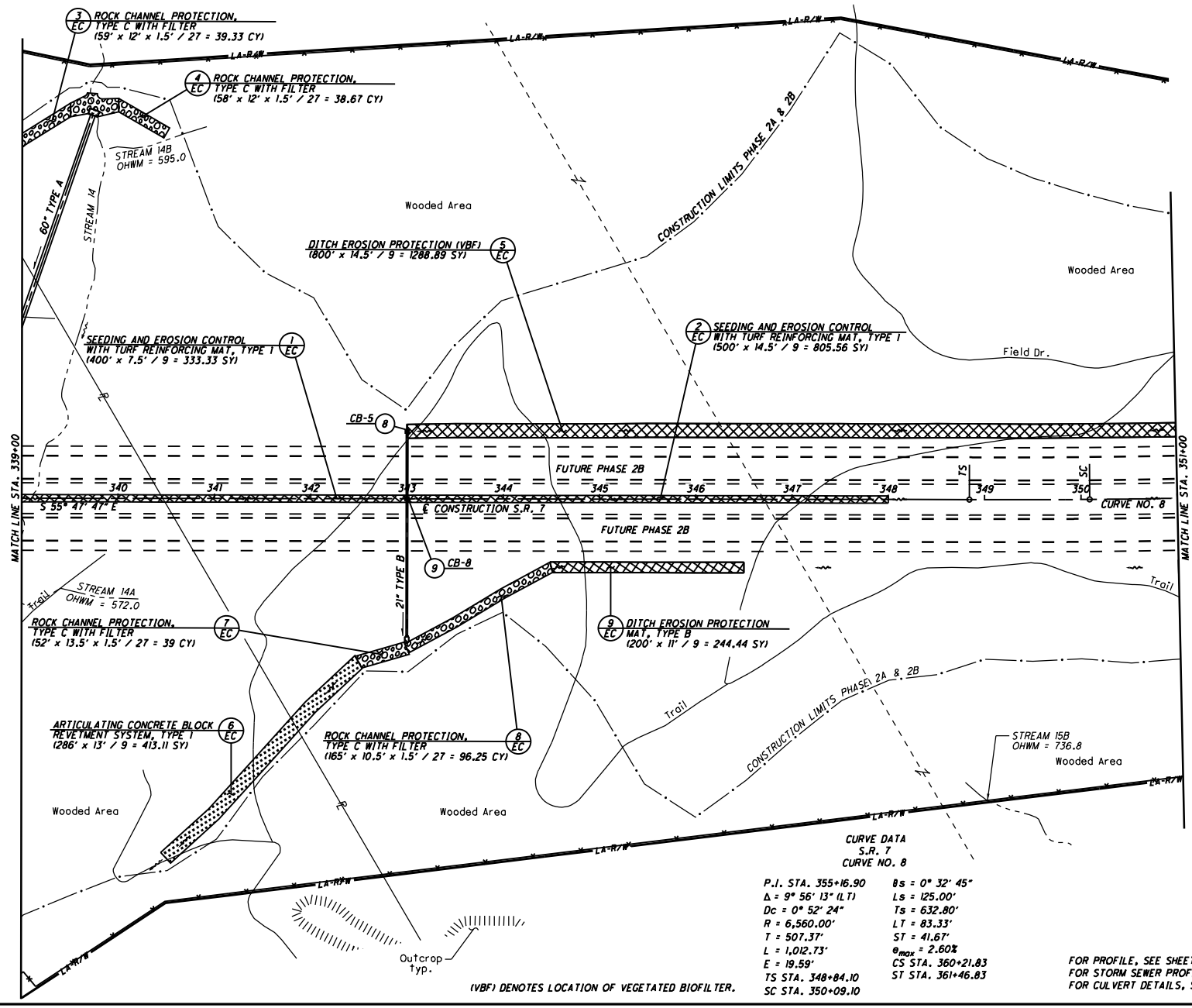


65 / 297	LAW-7-2.17	PROFILE - S.R. 7 STA. 327+00 TO STA. 339+00	CALCULATED ALB CHECKED TCM



N

HORIZONTAL SCALE IN FEET 0 25 50 100

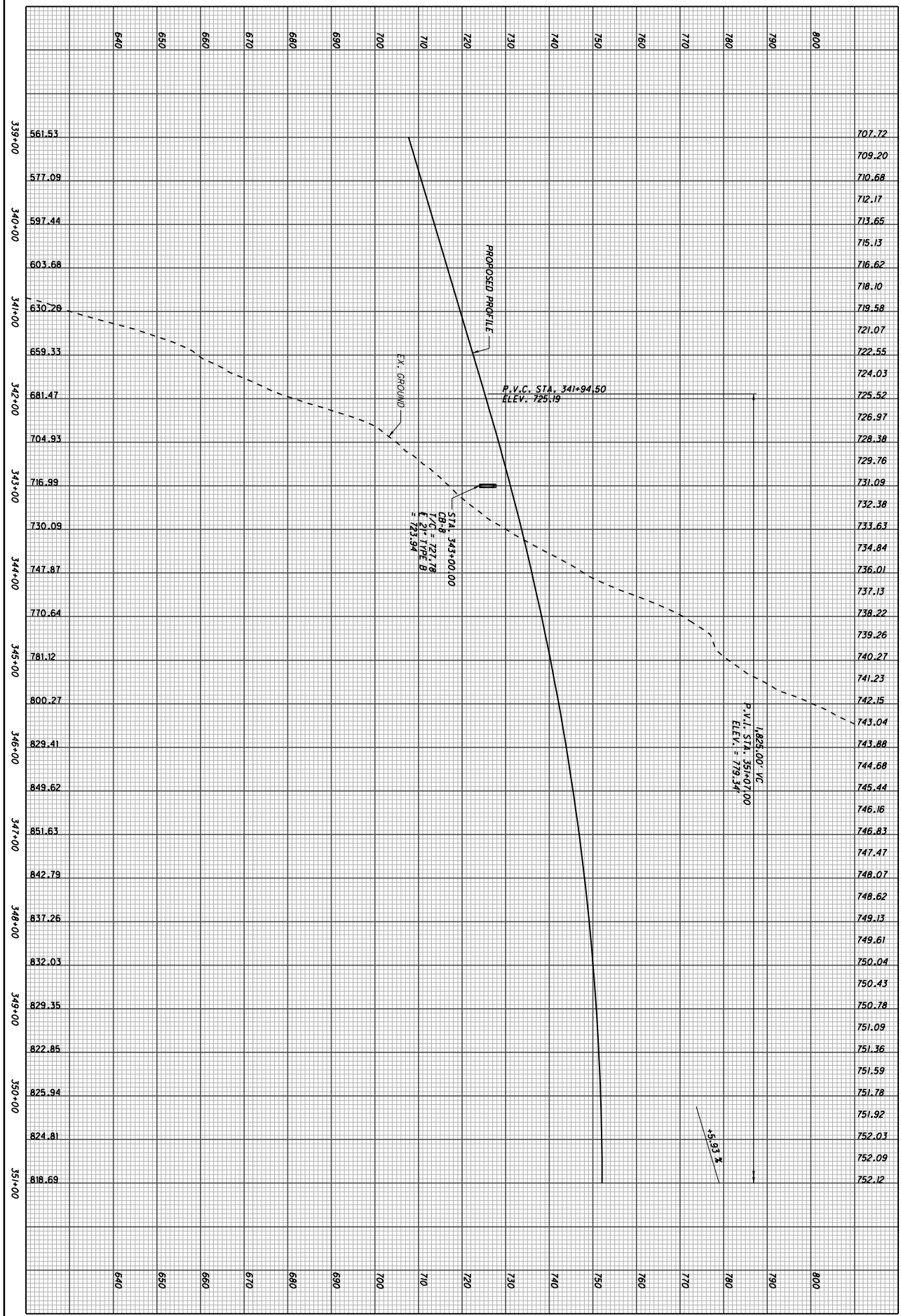
CALCULATED SLP CHECKED ALB

PLAN - S.R. 7
STA. 339+00 TO STA. 351+00

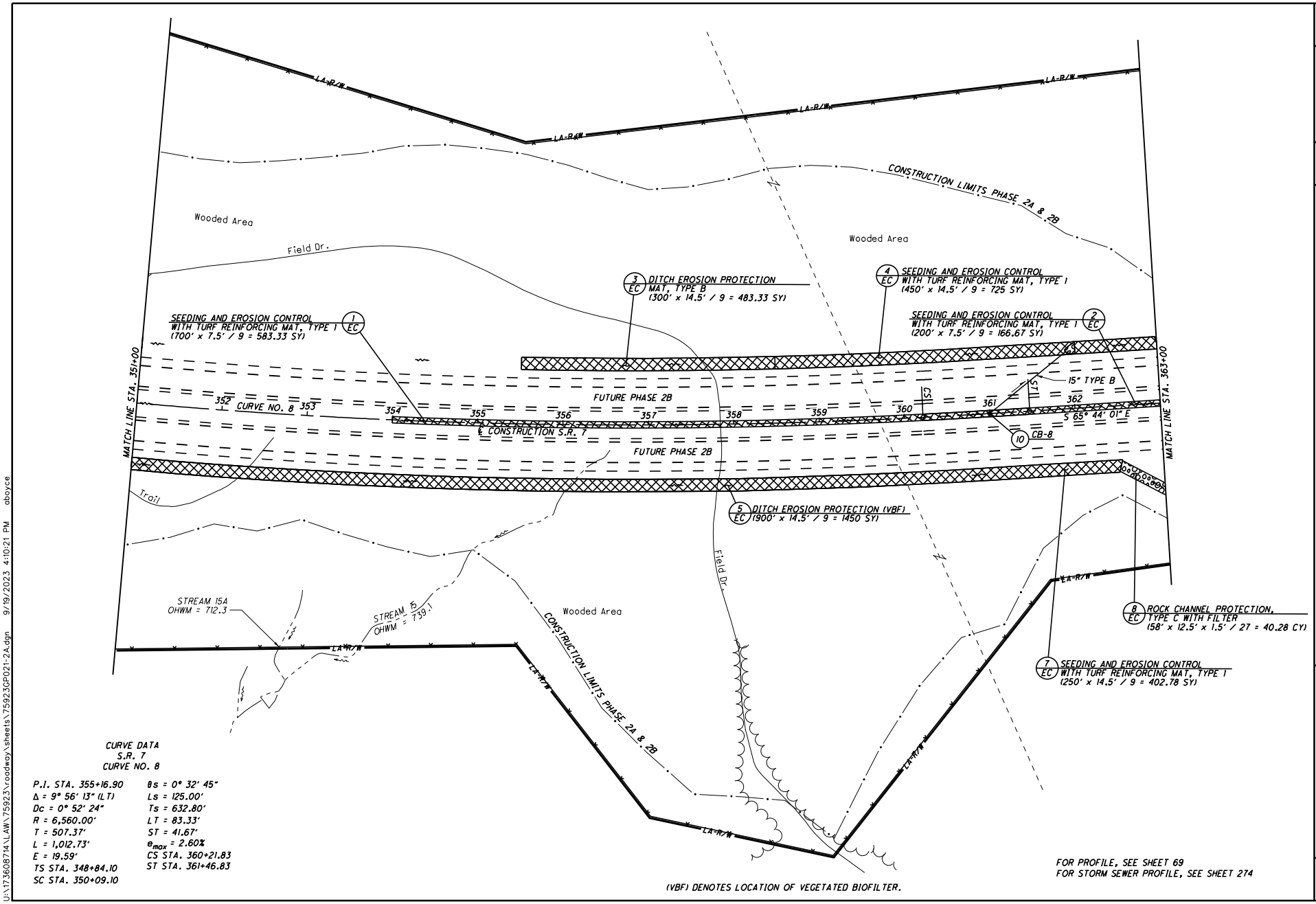
LAW-7-2.17

66
297

U:\1736087\4\LAW\75923\roadway\sheets\75923GP020-2A.dgn Sheet 9/19/2023 4:09:49 PM aboyce



67 / 297	LAW-7-2.17	PROFILE - S.R. 7 STA. 339+00 STA. 351+00	CALCULATED ALB CHECKED TCM



CURVE DATA
S.R. 7
CURVE NO. 8

P.I. STA. 355+16.90	θs = 0° 32' 45"
Δ = 9° 56' 13" (LT)	Ls = 125.00'
Dc = 0° 52' 24"	Ts = 632.80'
R = 6,560.00'	LT = 83.33'
T = 507.37'	ST = 41.67'
L = 1,012.73'	e_{max} = 2.60%
E = 19.59'	CS STA. 360+21.83
TS STA. 348+84.10	ST STA. 361+46.83
SC STA. 350+09.10	

(VBF) DENOTES LOCATION OF VEGETATED BIOFILTER.

FOR PROFILE, SEE SHEET 69
FOR STORM SEWER PROFILE, SEE SHEET 274

HORIZONTAL SCALE IN FEET
0 25 50 100

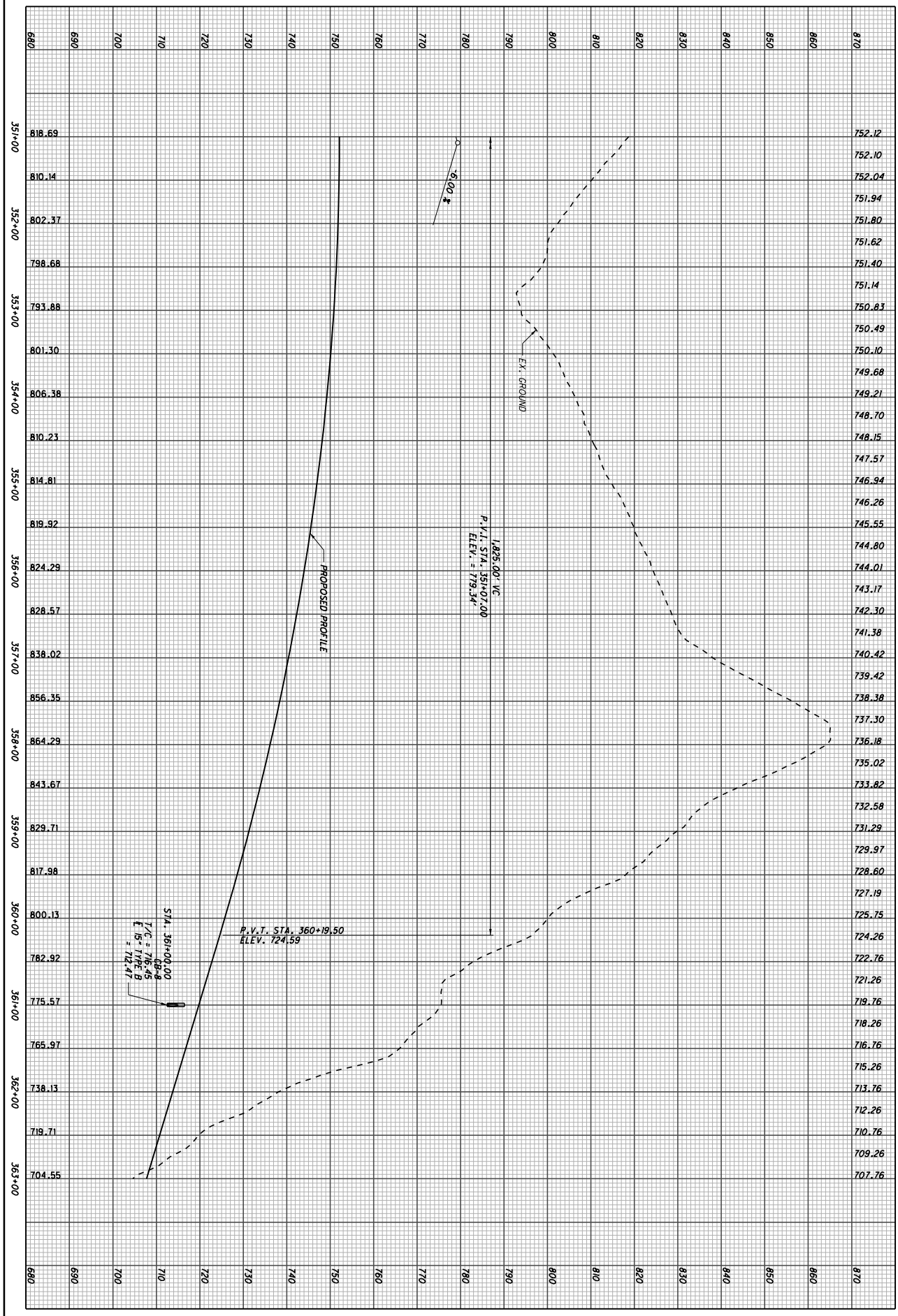
CALCULATED SLP
CHECKED ALB

PLAN - S.R. 7
STA. 351+00 TO STA. 363+00

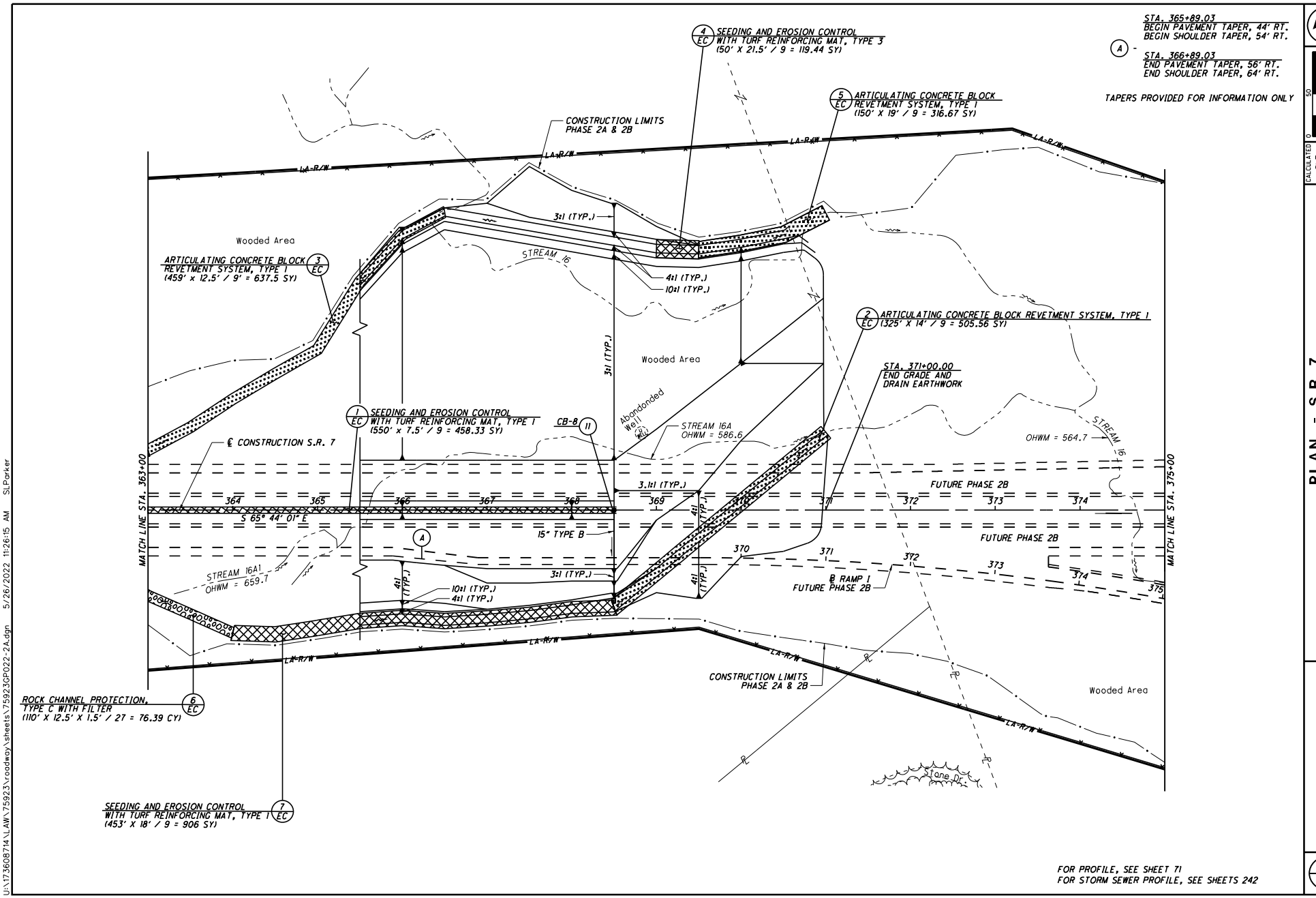
LAW-7-2.17

68
297

U:\1736087\4\LAW\75923\roadway\sheets\75923GP021-2A.dgn 9/19/2023 4:10:21 PM aboyce



69 / 297	LAW-7-2.17	PROFILE - S.R. 7 STA. 351+00 TO STA. 363+00	CALCULATED ALB CHECKED TCM



N

HORIZONTAL SCALE IN FEET 0 25 50 100

CALCULATED SLP CHECKED ALB

PLAN - S.R. 7
STA. 363+00 TO STA. 375+00

LAW-7-2.17

70
297

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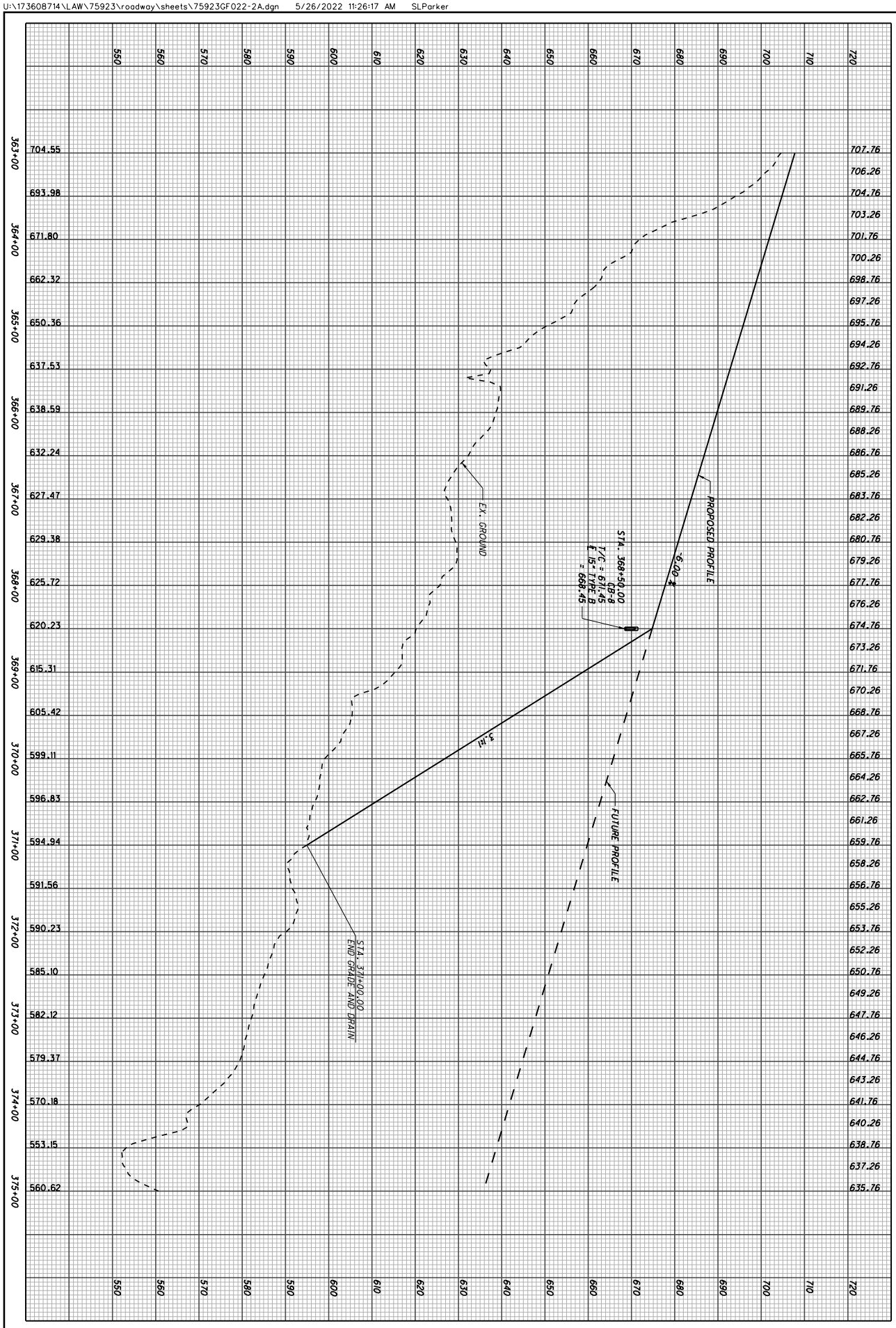
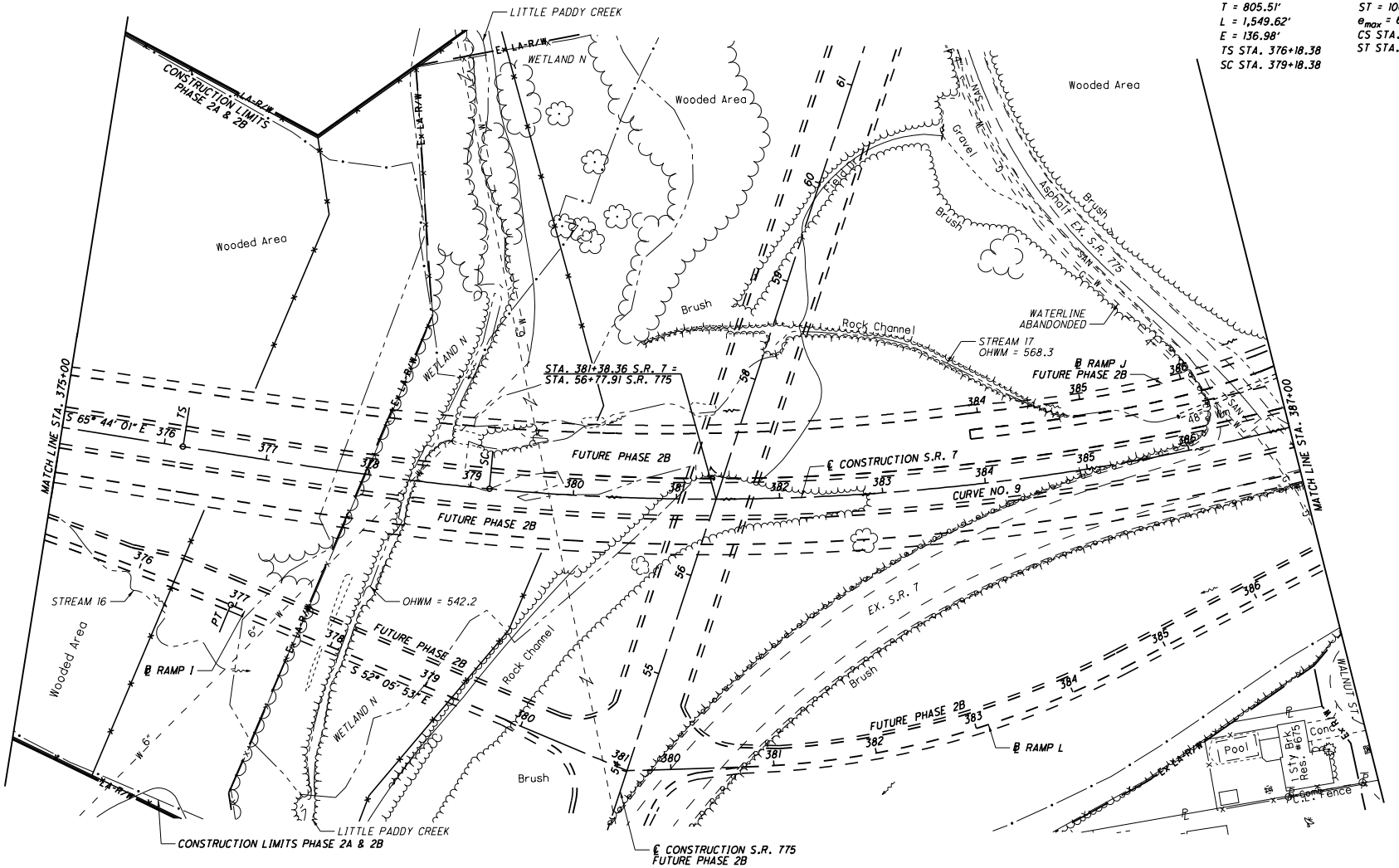


71 / 297	LAW-7-2.17	PROFILE - S.R. 7 STA. 363+00 TO STA. 375+00

CALCULATED ALB
CHECKED TCM



CALCULATED SLP
CHECKED ALB

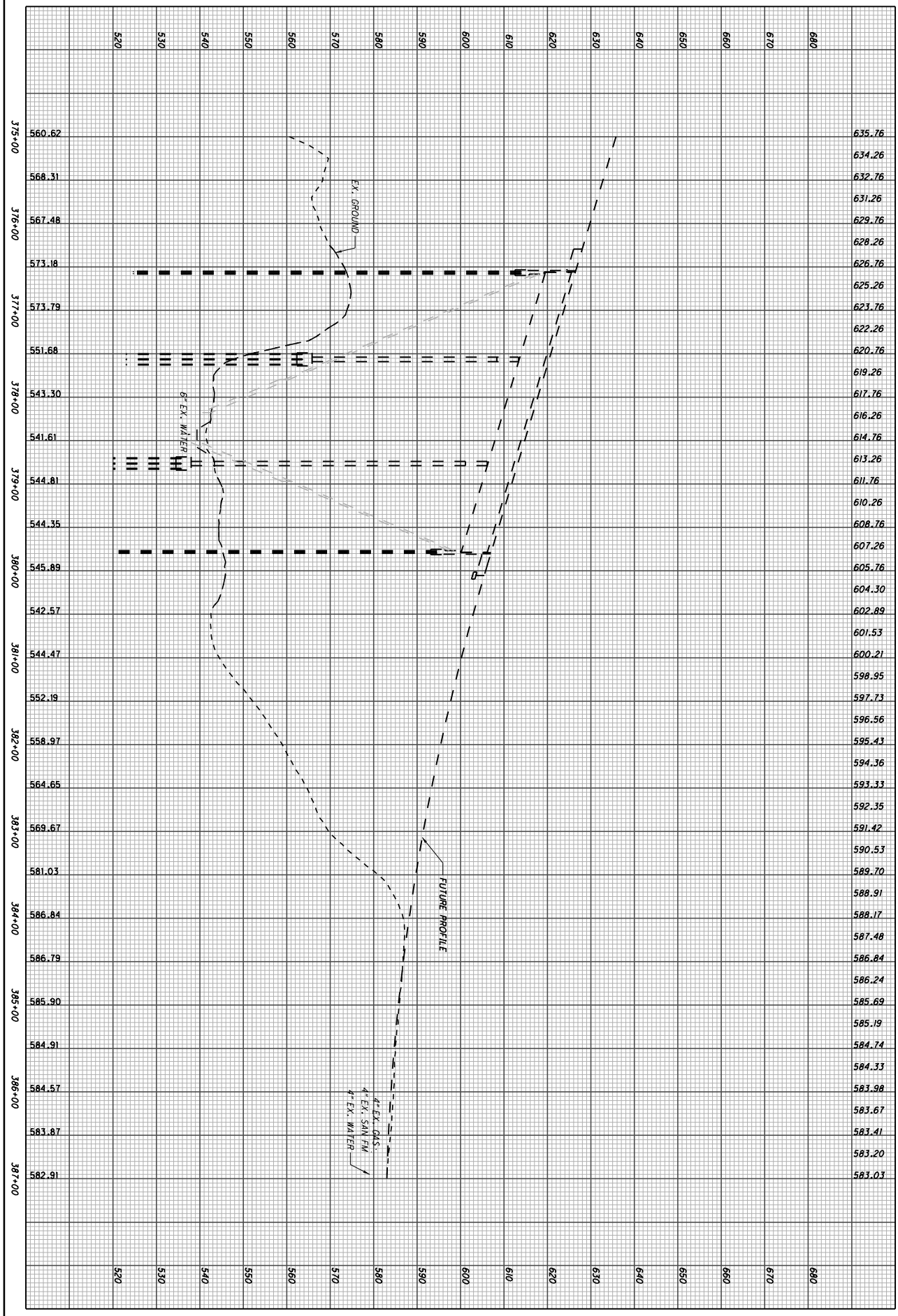
HORIZONTAL SCALE IN FEET
0 25 50 100

PLAN - S.R. 7
STA. 375+00 TO STA. 387+00

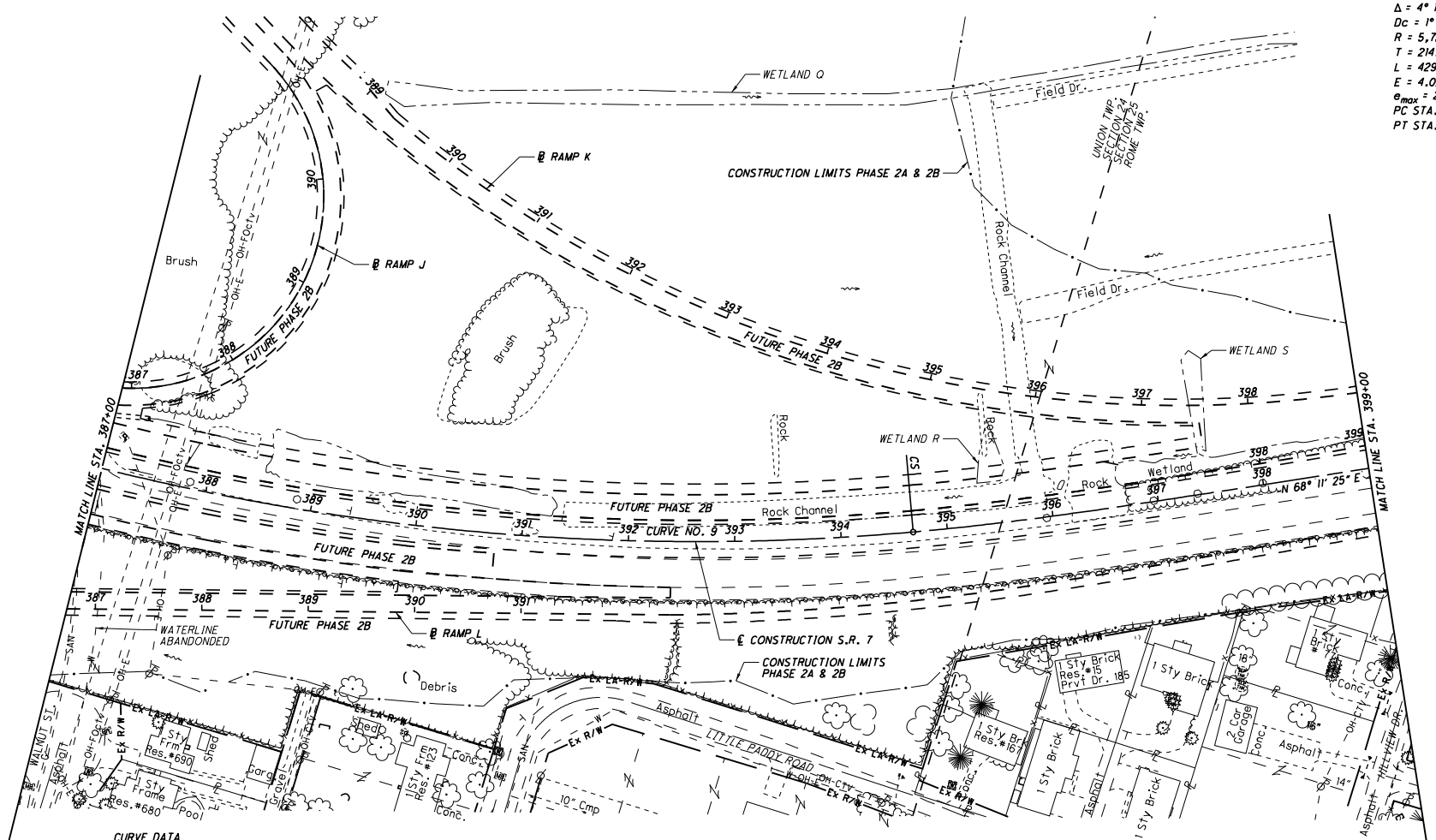
LAW-7-2.17

72
297

U:\1736087\4\LAW\75923\roadway\sheets\75923GP023-2A.dgn 9/19/2023 4:10:30 PM aboyce



173 / 297	LAW-7-2.17	PROFILE - S.R. 7 STA. 375+00 TO STA. 387+00	CALCULATED ALB CHECKED TCM



CURVE DATA
S.R. 7 WESTBOUND LANES
℄ CURVE NO. 1

P.I. STA. 399+82.71
Δ = 4° 17' 32" (LT)
Dc = 1° 00' 00"
R = 5,729.58'
T = 214.71'
L = 429.22'
E = 4.02'
e_{max} = 2.90%
PC STA. = 397+68.00
PT STA. = 401+97.22

CURVE DATA
S.R. 7
CURVE NO. 9

P.I. STA. 387+47.15
Δ = 46° 04' 34" (LT)
Dc = 2° 29' 28"
R = 2,300.00'
T = 805.51'
L = 1,549.62'
E = 136.98'
TS STA. 376+18.38
SC STA. 379+18.38

θs = 3° 44' 12"
Ls = 300.00'
Ts = 1,128.77'
LT = 200.04'
ST = 100.04'
e_{max} = 6.20%
CS STA. 394+68.00
ST STA. 397+68.00

HORIZONTAL SCALE IN FEET
0 25 50 100
CALCULATED SLP
CHECKED ALB

PLAN - S.R. 7
STA. 387+00 STA. 399+00

LAW-7-2.17

74
297

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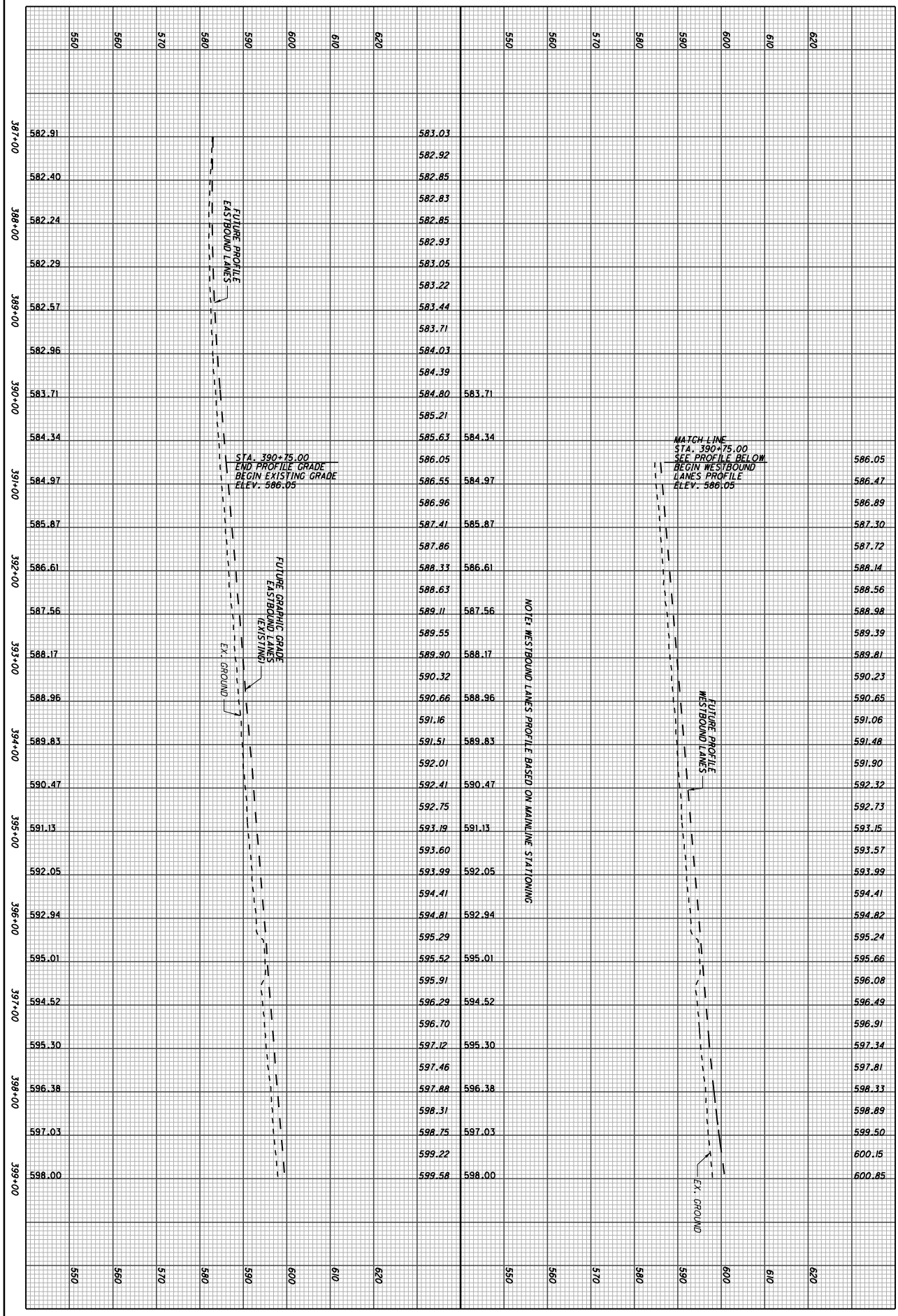


75 297	LAW-7-2.17	PROFILE - S.R. 7 STA. 387+00 TO STA. 399+00	CALCULATED ALB CHECKED TCM

CURVE DATA
S.R. 7
CURVE NO. 10

P.I. STA. 403+74.19
Δ = 1° 29' 03" (RT)
Dc = 0° 16' 56"
R = 20,306.35'
T = 263.02'
L = 526.00'
E = 1.70'
e_{max} = NC
PC STA. 401+11.17
PT STA. 406+37.18

CURVE DATA
S.R. 7
CURVE NO. 11

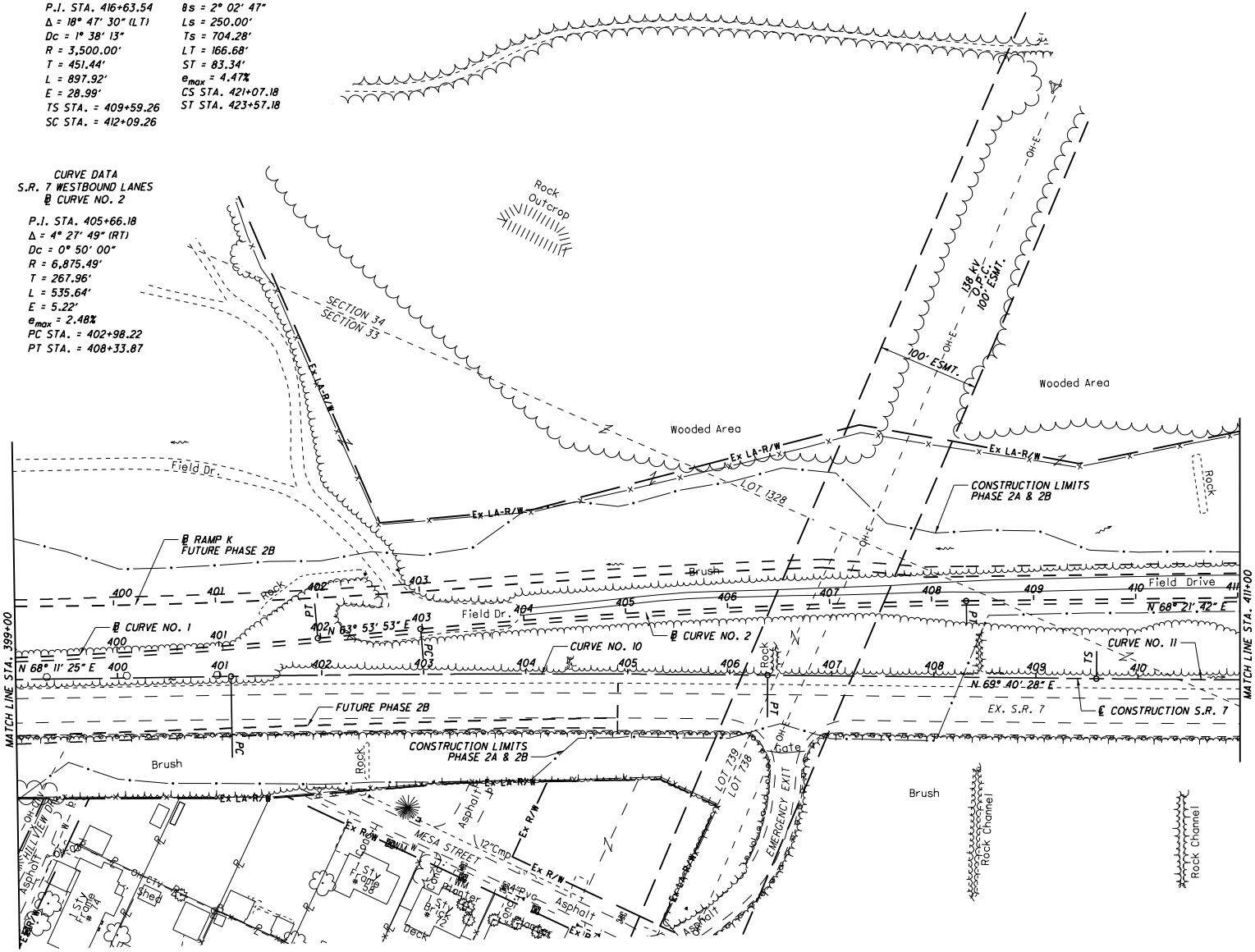
P.I. STA. 416+63.54
Δ = 18° 47' 30" (LT)
Dc = 1° 38' 13"
R = 3,500.00'
T = 451.44'
L = 897.92'
E = 28.99'
TS STA. = 409+59.26
SC STA. = 412+09.26
θs = 2° 02' 47"
Ls = 250.00'
Ts = 704.28'
LT = 166.68'
ST = 83.34'
e_{max} = 4.47%
CS STA. 421+07.18
ST STA. 423+57.18

CURVE DATA
S.R. 7 WESTBOUND LANES
℄ CURVE NO. 1

P.I. STA. 399+82.71
Δ = 4° 17' 32" (LT)
Dc = 1° 00' 00"
R = 5,729.58'
T = 214.71'
L = 429.22'
E = 4.02'
e_{max} = 2.90%
PC STA. = 397+68.00
PT STA. = 401+97.22

CURVE DATA
S.R. 7 WESTBOUND LANES
℄ CURVE NO. 2

P.I. STA. 405+66.18
Δ = 4° 27' 49" (RT)
Dc = 0° 50' 00"
R = 6,875.49'
T = 267.96'
L = 535.64'
E = 5.22'
e_{max} = 2.48%
PC STA. = 402+98.22
PT STA. = 408+33.87



CALCULATED SLP
CHECKED ALB

HORIZONTAL SCALE IN FEET
0 25 50 100

PLAN - S.R. 7
STA. 399+00 TO STA. 411+00

LAW-7-2.17

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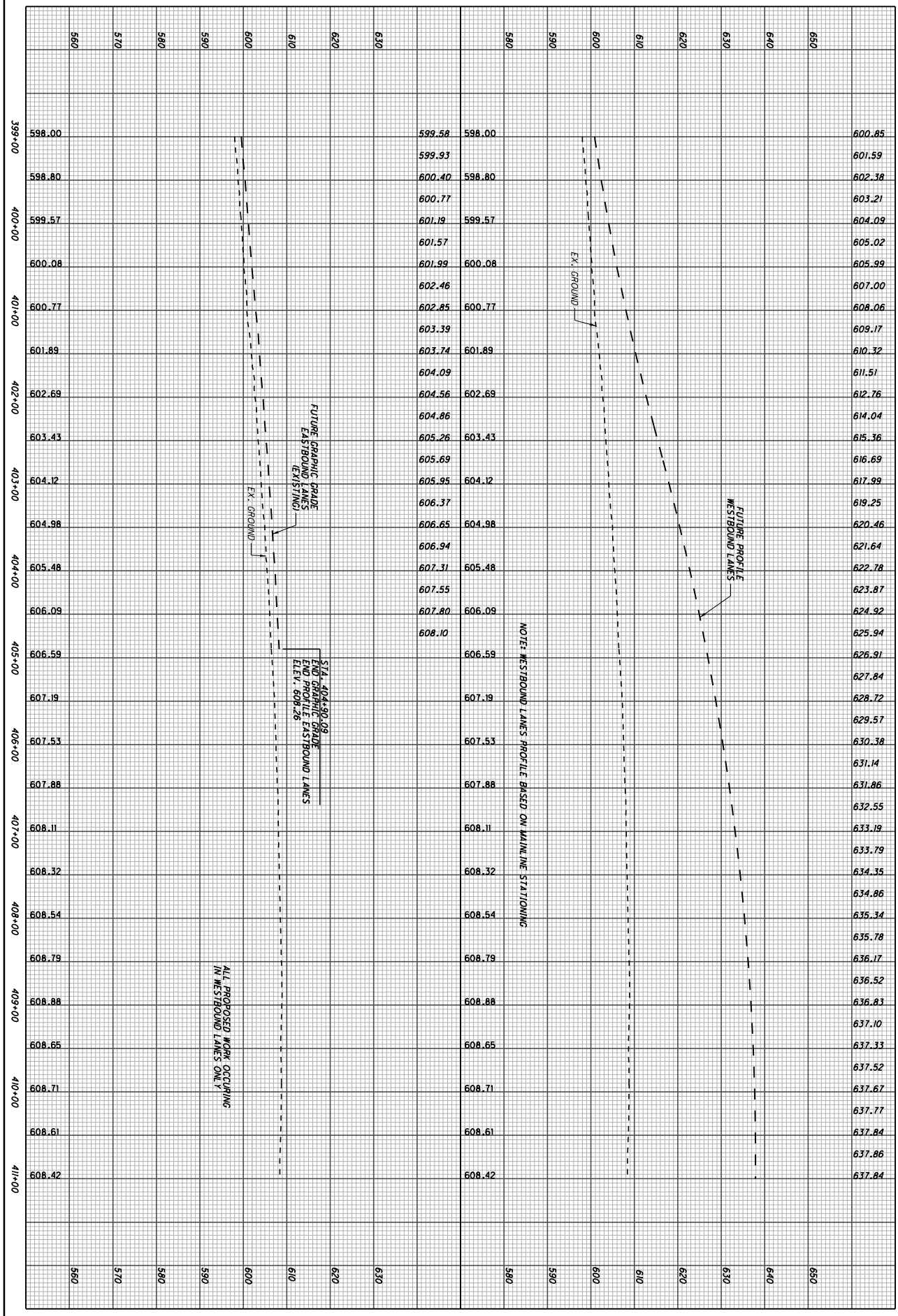


77 / 297	LAW-7-2.17	PROFILE - S.R. 7 STA. 399+00 TO 411+00	CALCULATED ALB CHECKED TCM

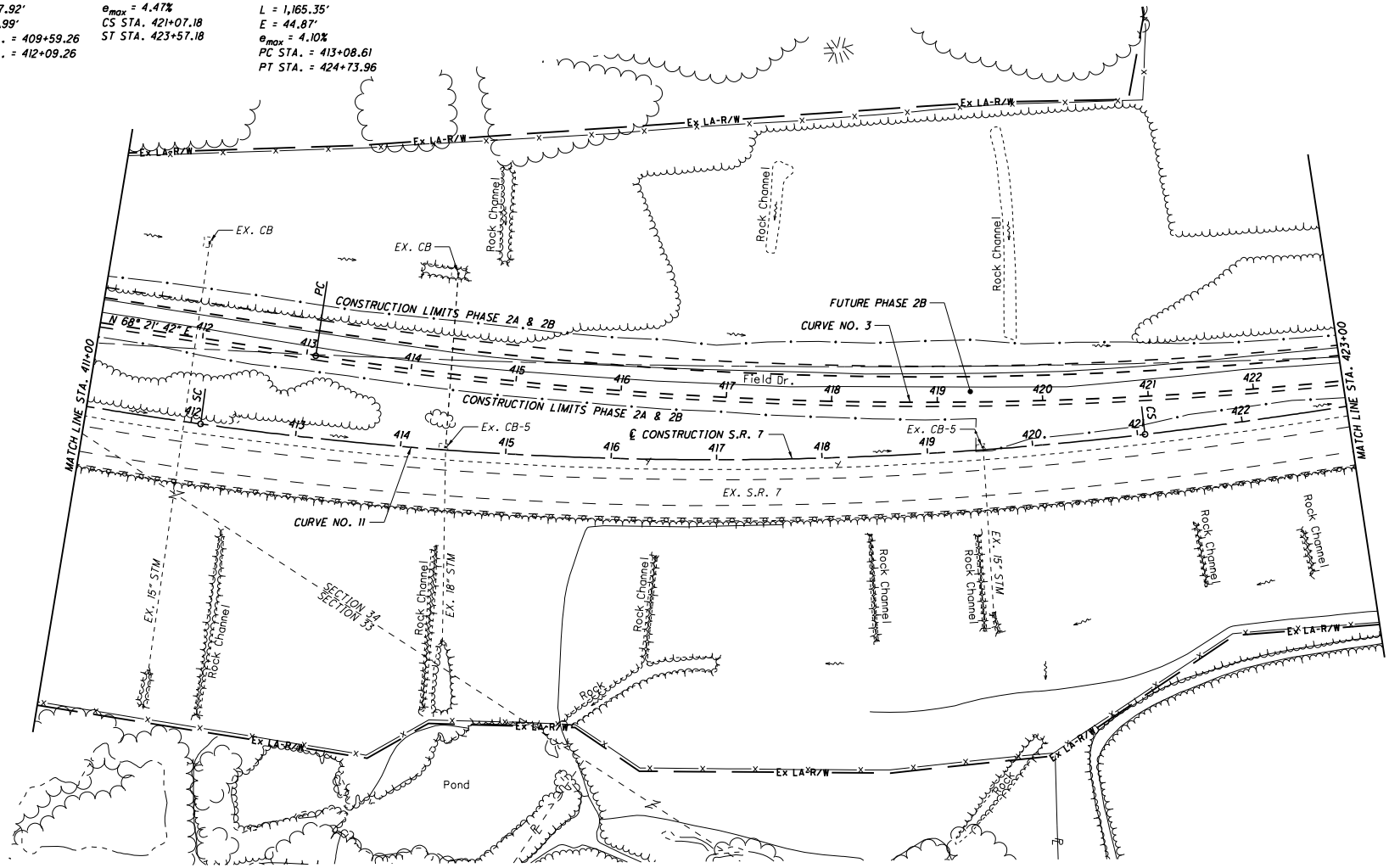
CURVE DATA
S.R. 7
CURVE NO. 11

P.I. STA. 416+63.54
Δ = 18° 47' 30" (LT)
Dc = 1° 38' 13"
R = 3,500.00'
T = 451.44'
L = 897.92'
E = 28.99'
TS STA. = 409+59.26
SC STA. = 412+09.26

θs = 2° 02' 47"
Ls = 250.00'
Ts = 704.28'
LT = 166.68'
ST = 83.34'
e_{max} = 4.47%
CS STA. 421+07.18
ST STA. 423+57.18

CURVE DATA
S.R. 7 WESTBOUND LANES
℄ CURVE NO. 3

P.I. STA. 418+95.85
Δ = 17° 28' 44" (LT)
Dc = 1° 30' 00"
R = 3,820.00'
T = 587.24'
L = 1,165.35'
E = 44.87'
e_{max} = 4.10%
PC STA. = 413+08.61
PT STA. = 424+73.96



CALCULATED SLP
CHECKED ALB

HORIZONTAL SCALE IN FEET
0 25 50 100

PLAN - S.R. 7
STA. 411+00 TO STA. 423+00

LAW-7-2.17

78
297

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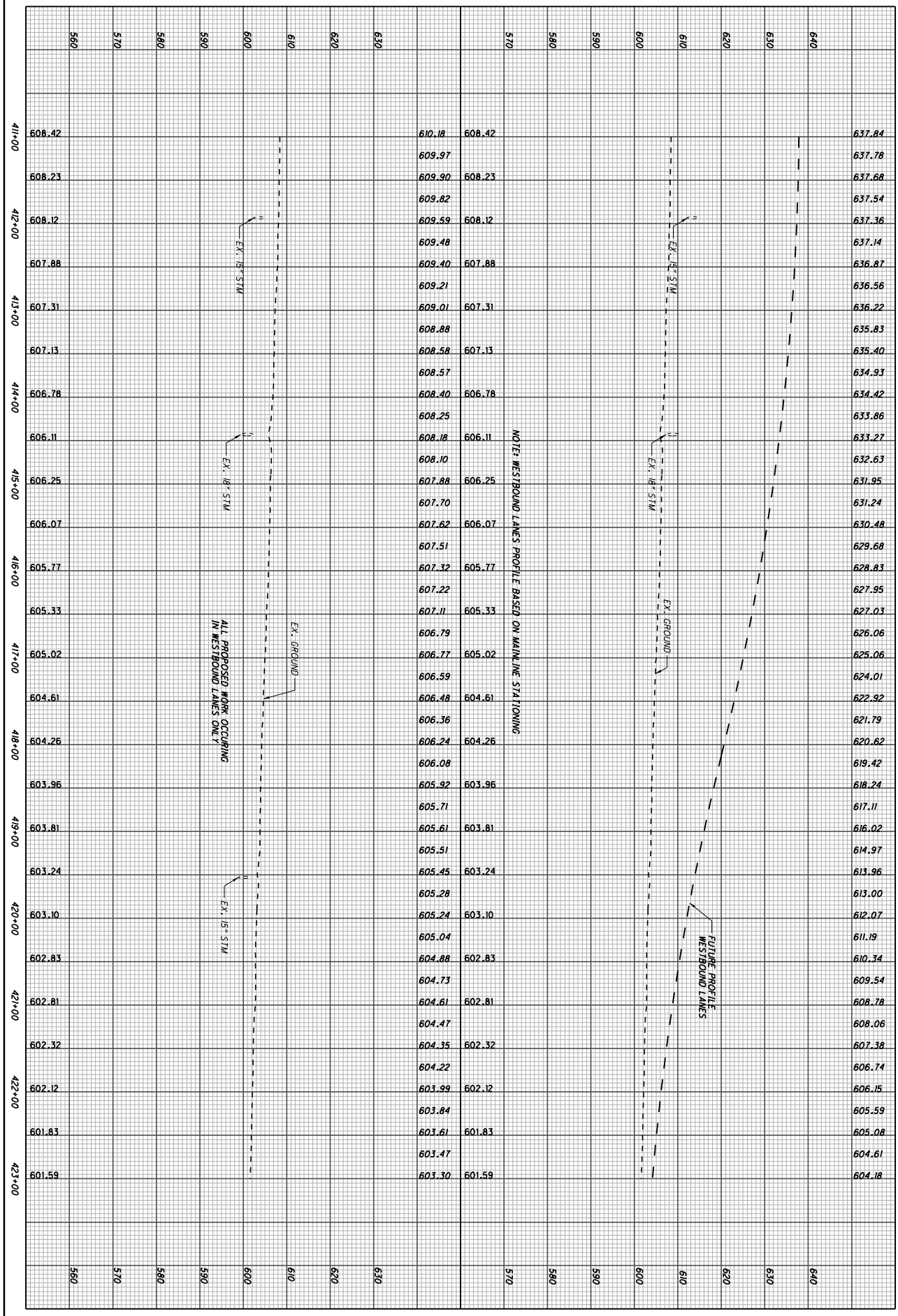


79 / 297	LAW-7-2.17	PROFILE - S.R. 7 STA. 411+00 TO STA. 423+00	CALCULATED ALB CHECKED TCM

CURVE DATA
S.R. 7
CURVE NO. 11

P.I. STA. 416+63.54
Δ = 18° 47' 30" (LT)
Dc = 1° 38' 13"
R = 3,500.00'
T = 451.44'
L = 897.92'
E = 28.99'
TS STA. = 409+59.26
SC STA. = 412+09.26

θs = 2° 02' 47"
Ls = 250.00'
Ts = 704.28'
LT = 166.68'
ST = 83.34'
e_{max} = 4.47%
CS STA. 421+07.18
ST STA. 423+57.18

CURVE DATA
S.R. 7
CURVE NO. 12

P.I. STA. 428+11.24
Δ = 3° 17' 53" (RT)
Dc = 1° 19' 10"
R = 4,342.09'
T = 125.00'
L = 249.93'
E = 1.80'
e_{max} = 3.77%
PC STA. = 426+86.24
PT STA. = 429+36.17

CURVE DATA
S.R. 7
@ WESTBOUND LANES
CURVE NO. 3

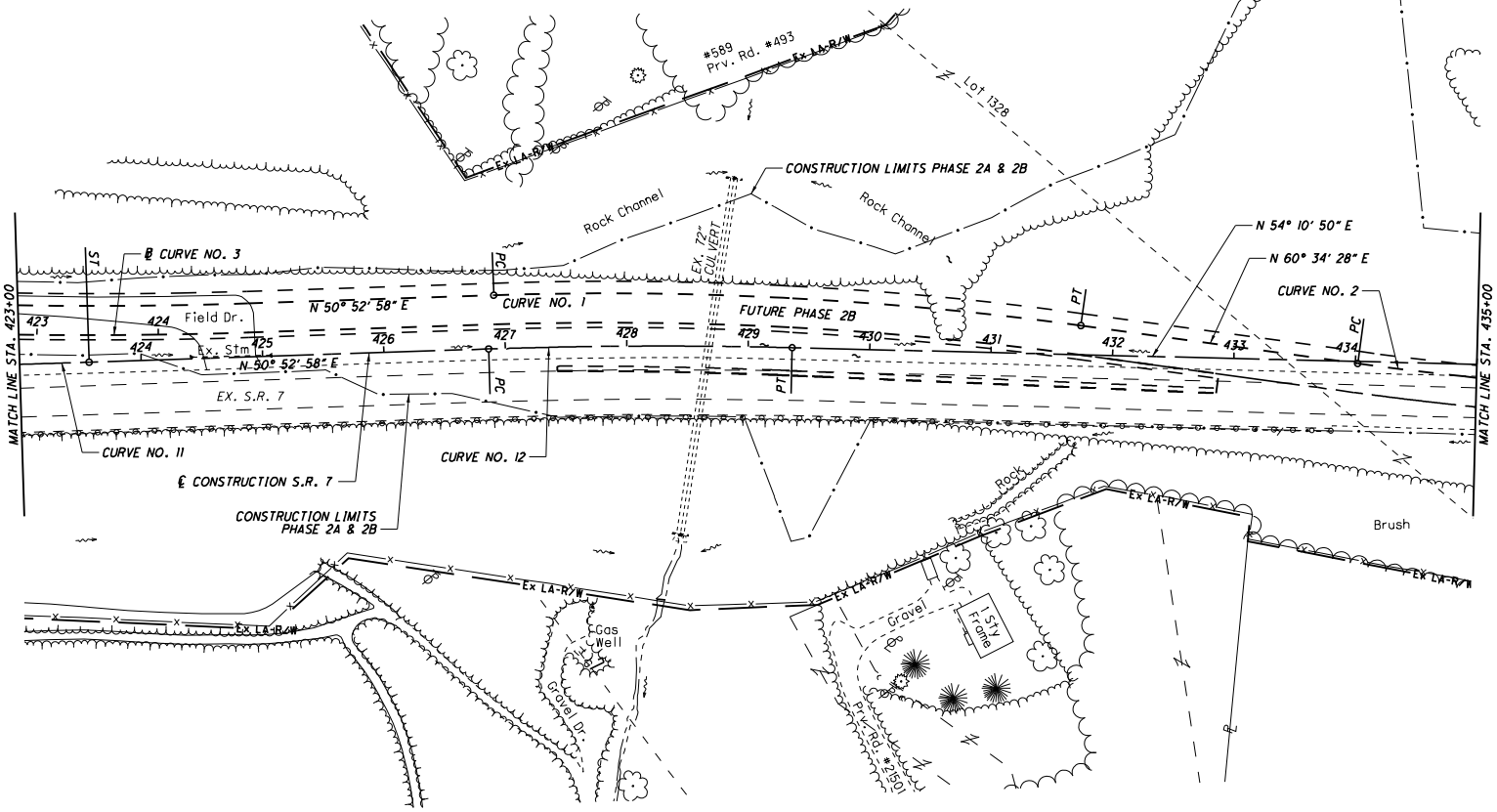
P.I. STA. 418+95.85
Δ = 17° 28' 44" (LT)
Dc = 1° 30' 00"
R = 3,820.00'
T = 587.24'
L = 1,165.35'
E = 44.87'
e_{max} = 4.10%
PC STA. 413+08.61
PT STA. 424+73.96

CURVE DATA
S.R. 7 LANE TRANSITION
TRANSITION CURVE NO. 1
(FOR HORIZONTAL LAYOUT ONLY)

P.I. STA. 429+32.01, S.R. 7, 51.04' LT.
Δ = 9° 41' 31" (RT)
Dc = 2° 00' 00"
R = 2,864.79'
T = 242.88'
L = 484.59'
E = 10.28'
e_{max} = 5.10%
PC STA. 426+91.84, S.R. 7, 44' LT.
PT STA. 431+73.33, S.R. 7, 23.99' LT.

CURVE DATA
S.R. 7 LANE TRANSITION
TRANSITION CURVE NO. 2
(FOR HORIZONTAL LAYOUT ONLY)

P.I. STA. 435+58.87, S.R. 7, 19.22' RT.
Δ = 6° 18' 42" (LT)
Dc = 2° 00' 00"
R = 2,864.79'
T = 157.95'
L = 315.59'
E = 4.35'
e_{max} = NC
PC STA. 434+01.90, S.R. 7, 1.63' RT.
PT STA. 437+16.83, S.R. 7, 19.44' RT.



CALCULATED SLP
CHECKED ALB

HORIZONTAL SCALE IN FEET
0 25 50 100

PLAN - S.R. 7
STA. 423+00 TO STA. 435+00

LAW-7-2.17

80
297

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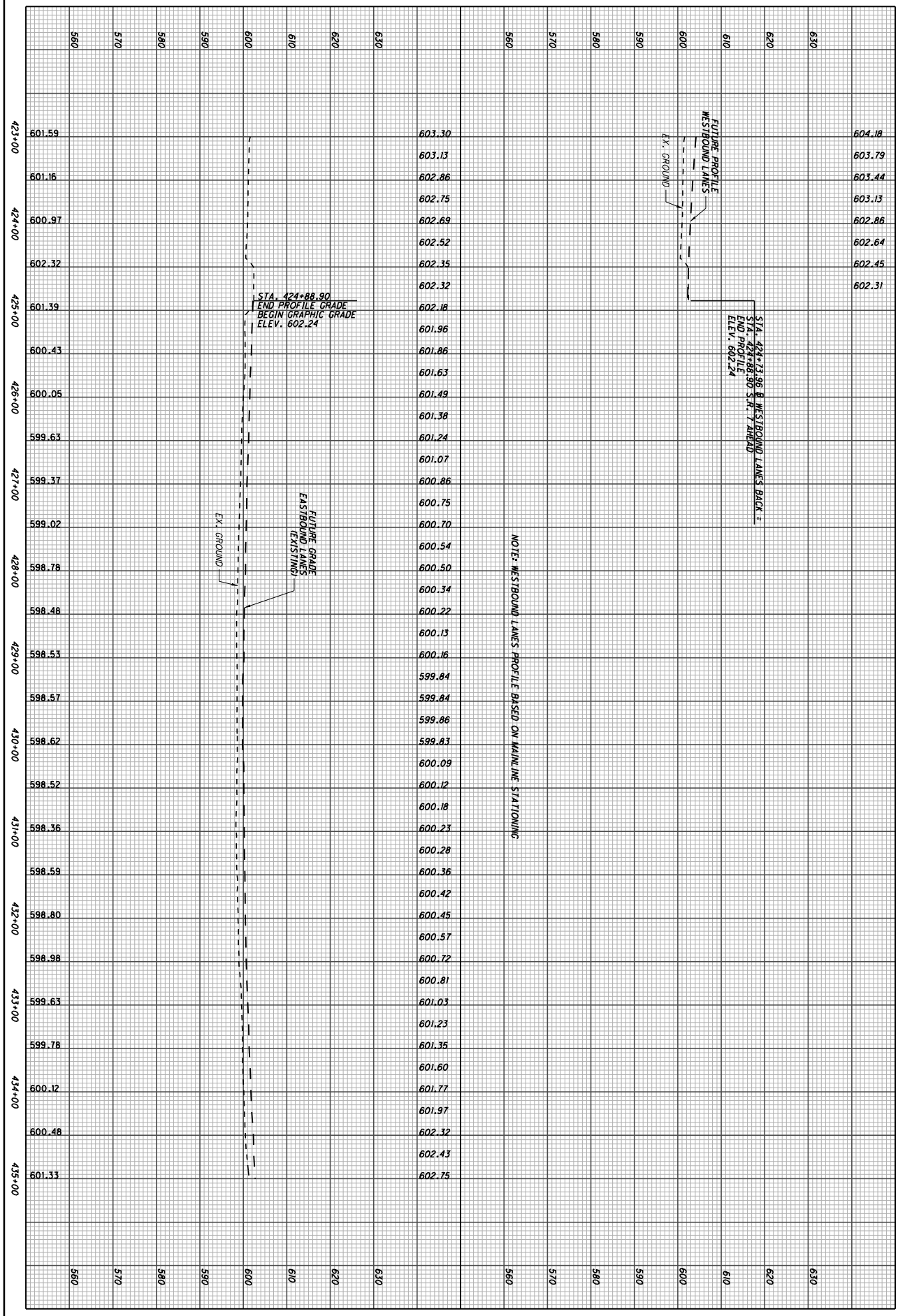
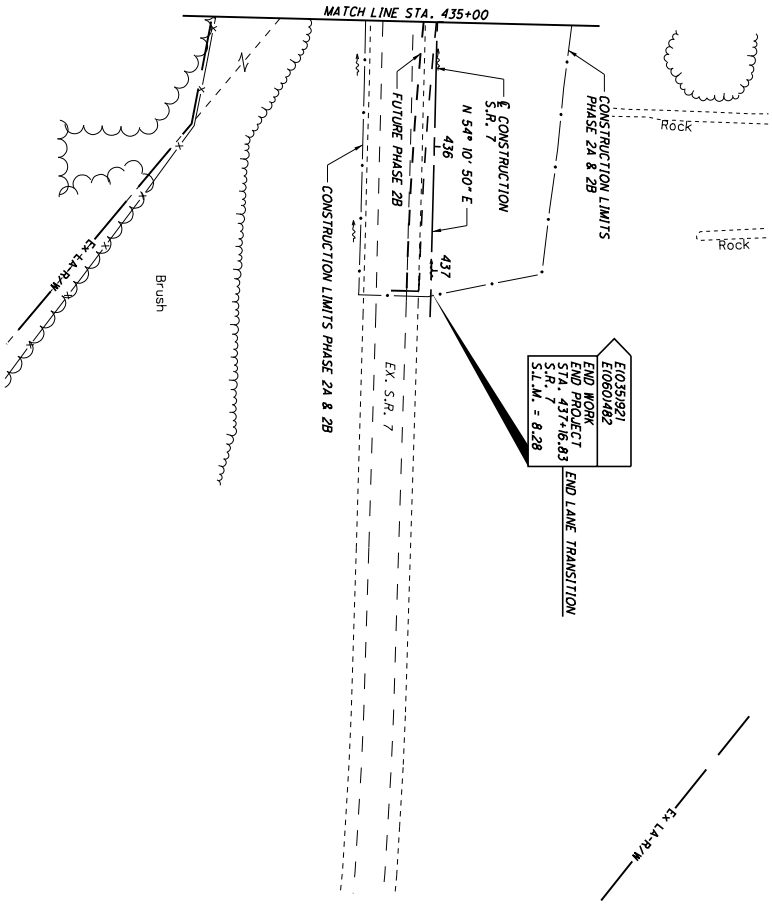
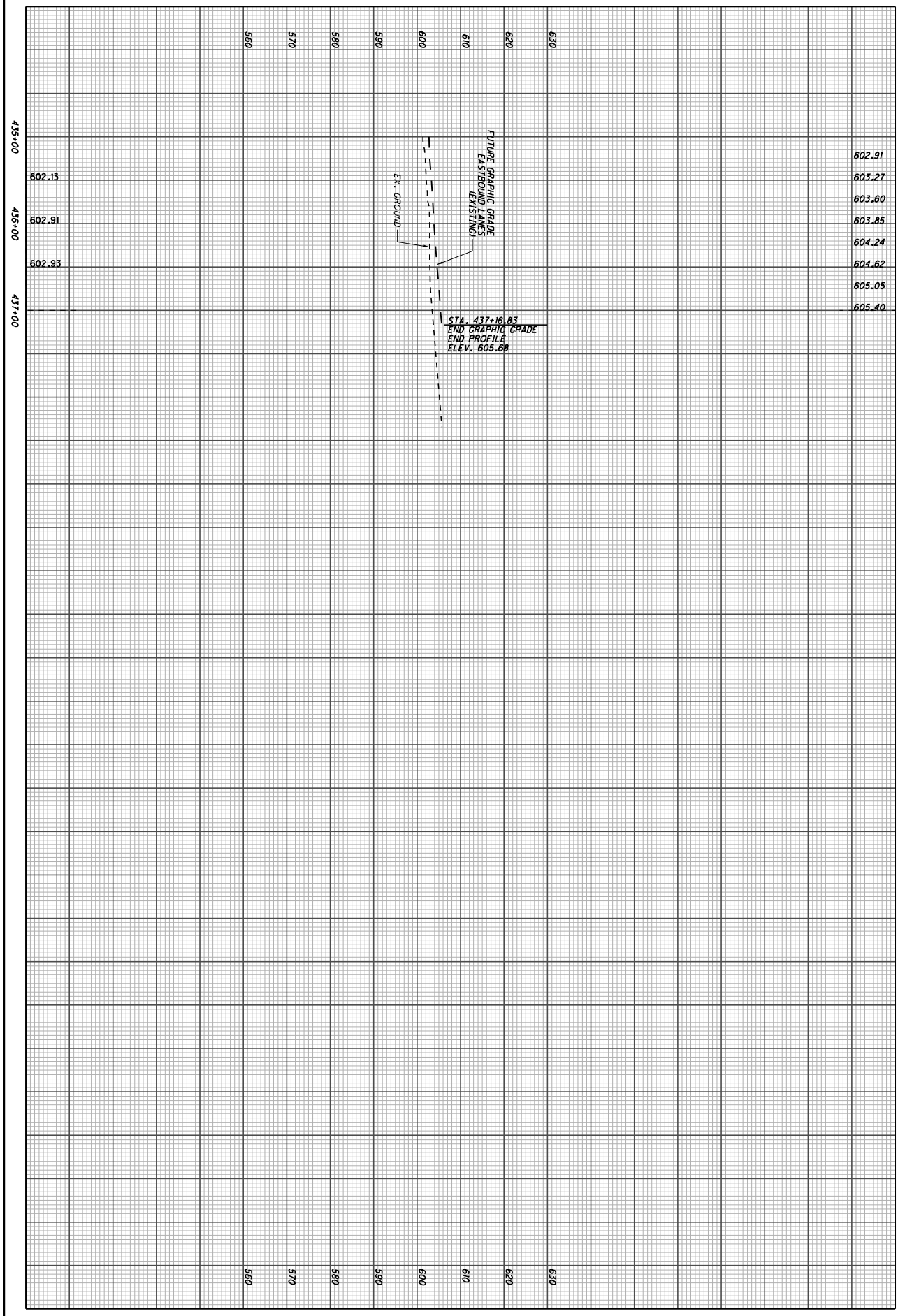


81 / 297	LAW-7-2.17	PROFILE - S.R. 7 STA. 423+00 TO 435+00	CALCULATED ALB CHECKED TCM

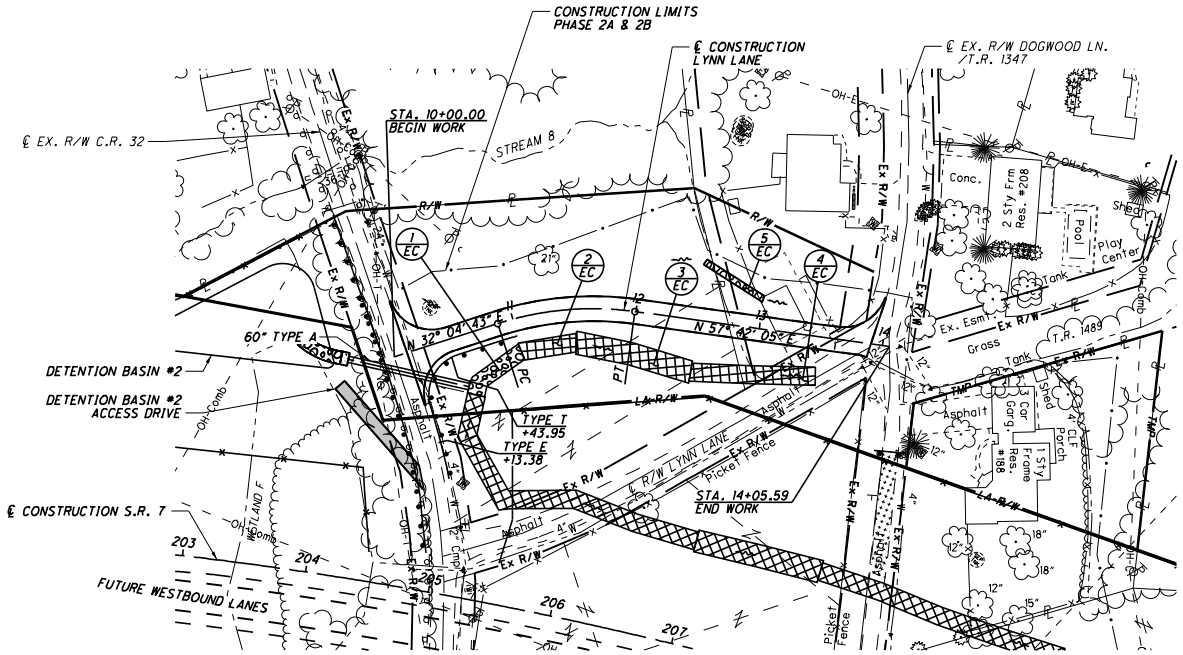


82 / 297	LAW-7-2.17	PLAN - S.R. 7 STA. 435+00 TO STA. 437+16.83	CALCULATED SLP CHECKED ALB	0 50 25 100 HORIZONTAL SCALE IN FEET



83 / 297	LAW-7-2.17	PROFILE - S.R. 7 STA. 435+00 TO 437+16.83	CALCULATED ALB CHECKED TCM

CURVE DATA
LYNN LANE
P.I. STA. 11+44.17
Δ = 25° 37' 23" (RT)
Dc = 22° 55' 06"
R = 250.00'
T = 56.85'
L = 111.80'
E = 6.38'
e_{max} (N.D.C.) = 8.00%
e_{max} = NC
PC STA. 10+87.32
PT STA. 11+99.12



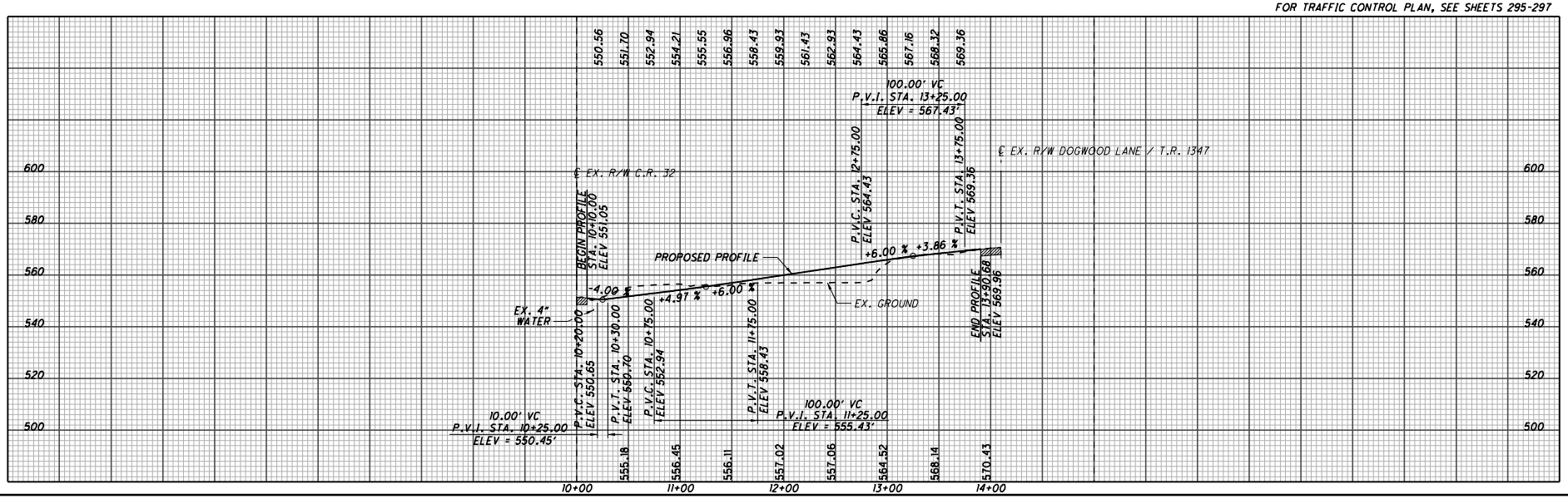
1 EC ROCK CHANNEL PROTECTION
TYPE C WITH FILTER
(69) SF x 1.5' / 27 = 38.39 CY)

2 EC SEEDING AND EROSION CONTROL
WITH TURF REINFORCING MAT, TYPE 1
(45' x 14.5' / 9 = 72.50 SY)

3 EC DITCH EROSION PROTECTION
MAT, TYPE B
(95' x 18' / 9 = 190 SY)

4 EC SEEDING AND EROSION CONTROL
WITH TURF REINFORCING MAT, TYPE 2
(101' x 14.5' / 9 = 162.72 SY)

5 EC ROCK CHANNEL PROTECTION,
TYPE C WITH FILTER
(55' x 5' x 1.5' / 27 = 15.28 CY)



FOR S.R. 7 PLAN & PROFILE, SEE SHEETS 37-40
FOR INTERSECTION DETAILS, SEE SHEET 268
FOR CULVERT DETAILS, SEE SHEET 279
FOR DETENTION BASIN DETAILS, SEE SHEETS 293-294
FOR TRAFFIC CONTROL PLAN, SEE SHEETS 295-297

HORIZONTAL SCALE IN FEET
0 25 50 100
CALCULATED SLP
CHECKED ALB

PLAN AND PROFILE
LYNN LANE

LAW-7-2.17

249
297

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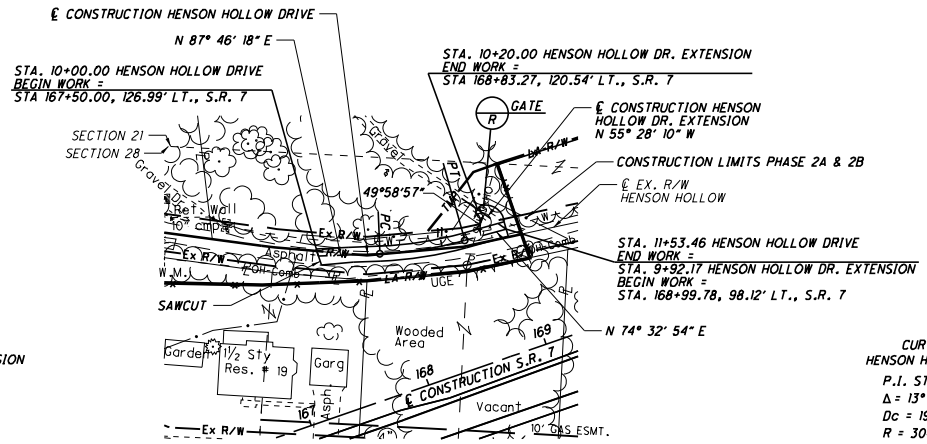


HENSON HOLLOW DRIVE EXTENSION
LEFT E/P RETURN DATA

- Δ = 130° 42' 18"
- R = 8.00'
- T = 17.44'
- L = 18.25'
- R.P. STA. 11+27.27, 14' LT., HENSON HOLLOW DR.
- P.C. STA. 11+27.27, 6' LT., HENSON HOLLOW DR.
- P.T. STA. 10+19.68, 2.89' LT., HENSON HOLLOW DR. EXTENSION

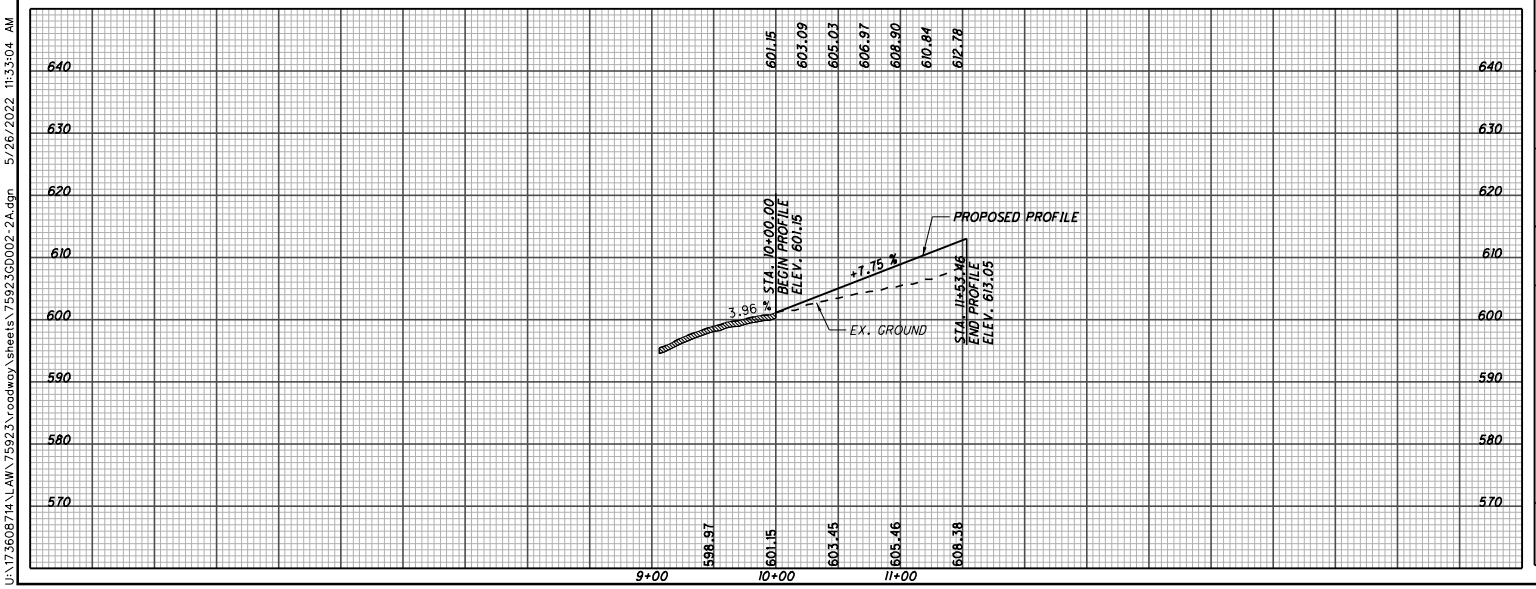
HENSON HOLLOW DRIVE EXTENSION
RIGHT E/P RETURN DATA

- Δ = 102° 28' 43"
- R = 15.00'
- T = 18.68'
- L = 26.83'
- R.P. STA. 11+38.66, 8.47' LT., HENSON HOLLOW DR.
- P.C. STA. 11+53.46, 6' LT., HENSON HOLLOW DR.
- P.T. STA. 10+20.00, 3.32' RT., HENSON HOLLOW DR. EXTENSION

CURVE DATA
HENSON HOLLOW DRIVE

- P.I. STA. 10+84.31
- Δ = 13° 13' 25" (LT)
- Dc = 19° 05' 55"
- R = 300.00'
- T = 34.77'
- L = 69.24'
- E = 2.01'
- PC STA. 10+49.54
- PT STA. 11+18.78

HENSON HOLLOW DRIVE - 3
HENSON HOLLOW DRIVE EXTENSION - 4



REF NO.	STATION FROM	STATION TO	SIDE

TOTALS CARRIED TO GENERAL SUMMARY

CALCULATED SLP
CHECKED ALB

HORIZONTAL SCALE IN FEET
0 25 50 100

PLAN AND PROFILE
HENSON HOLLOW DRIVE

LAW-7-2.17

271
297

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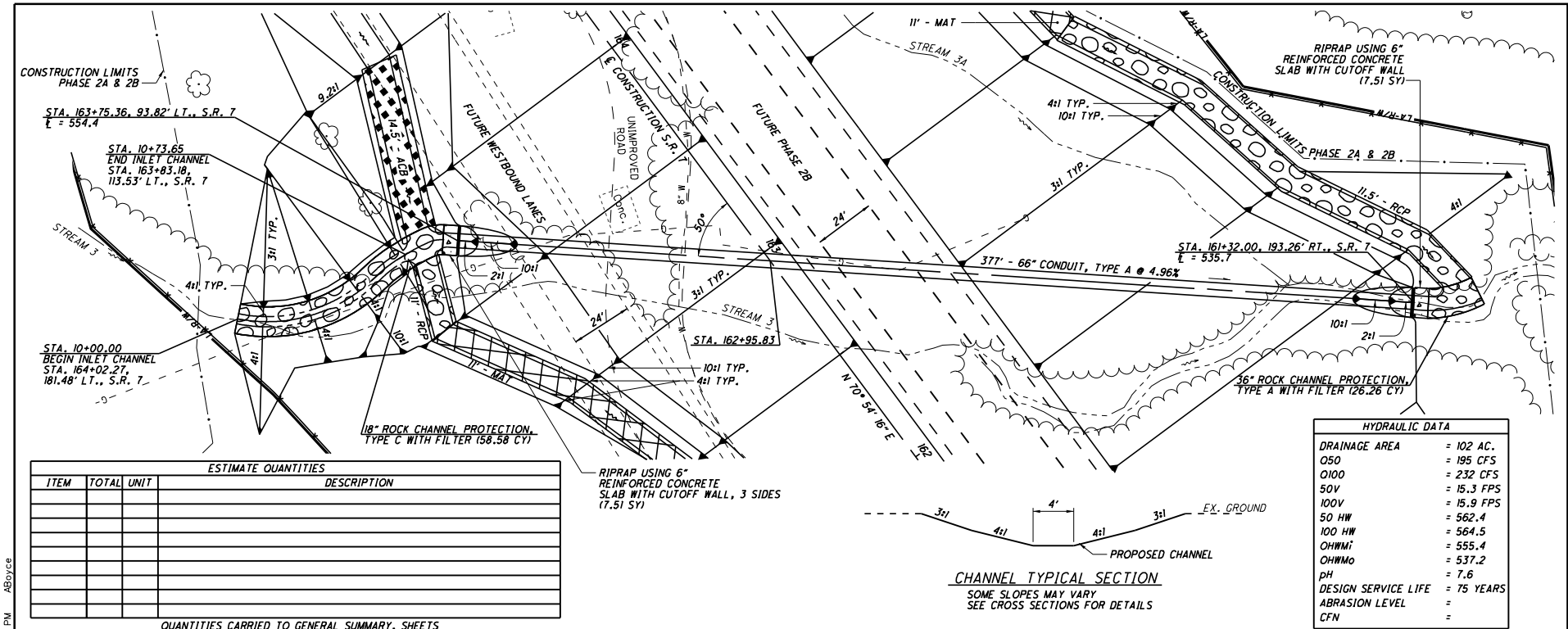
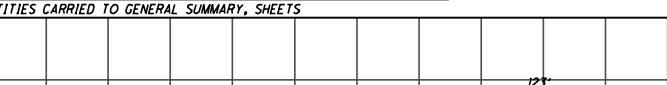


ESTIMATE QUANTITIES			
ITEM	TOTAL	UNIT	DESCRIPTION

QUANTITIES CARRIED TO GENERAL SUMMARY, SHEETS



CHANNEL TYPICAL SECTION

SOME SLOPES MAY VARY
SEE CROSS SECTIONS FOR DETAILS

HYDRAULIC DATA	
DRAINAGE AREA	= 102 AC.
Q50	= 195 CFS
Q100	= 232 CFS
50V	= 15.3 FPS
100V	= 15.9 FPS
50 HW	= 562.4
100 HW	= 564.5
OHWMi	= 555.4
OHWMo	= 537.2
pH	= 7.6
DESIGN SERVICE LIFE	= 75 YEARS
ABRASION LEVEL	=
CFN	=

N

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED SLP
CHECKED ALB

CULVERT DETAIL
S.R. 7 STA. 162+95.83

LAW-7-2.17

275
297

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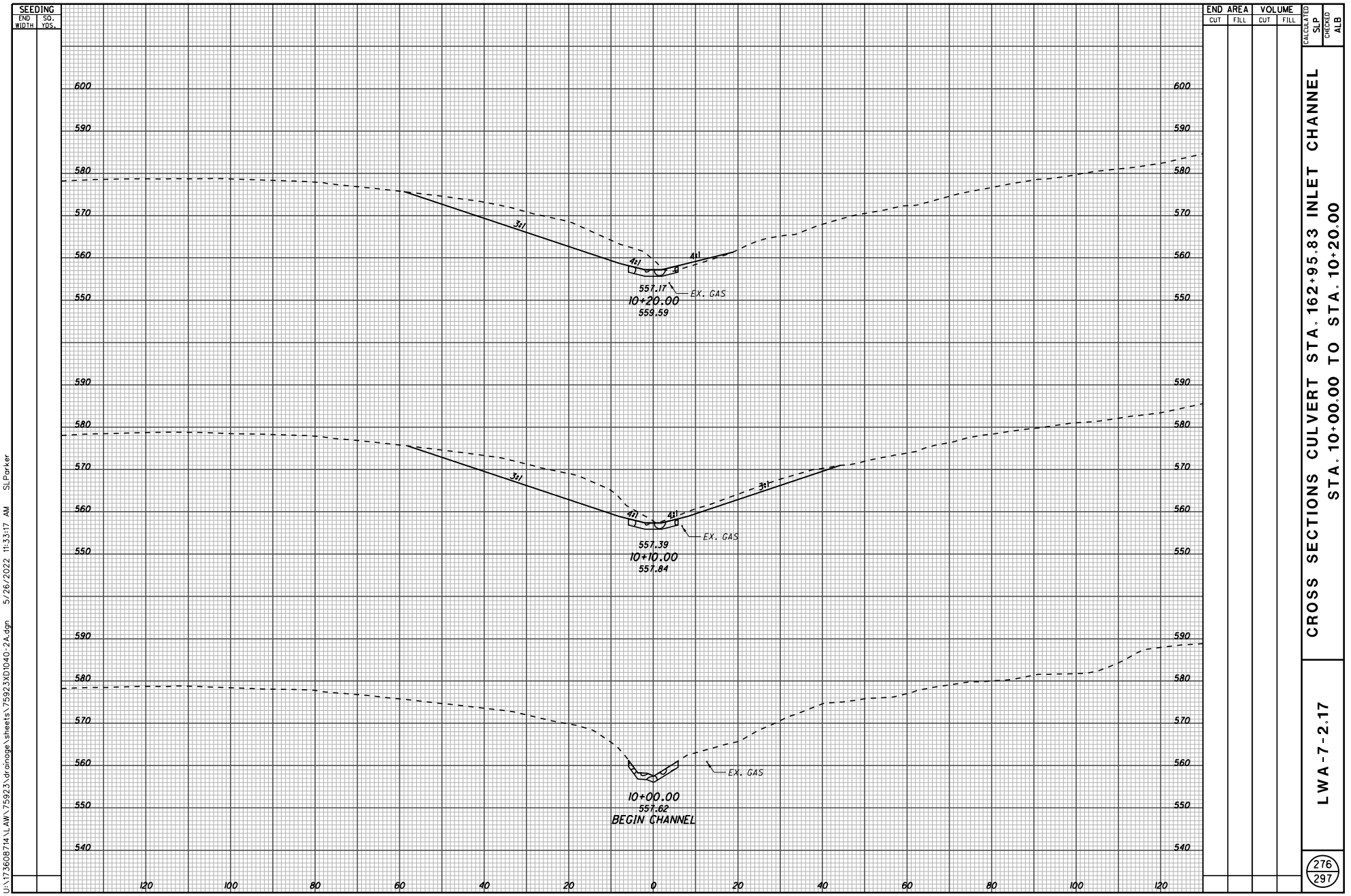

CROSS SECTIONS CULVERT STA. 162+95.83 INLET CHANNEL STA. 10+00.00 TO STA. 10+20.00

LWA-7-2.17

276
297

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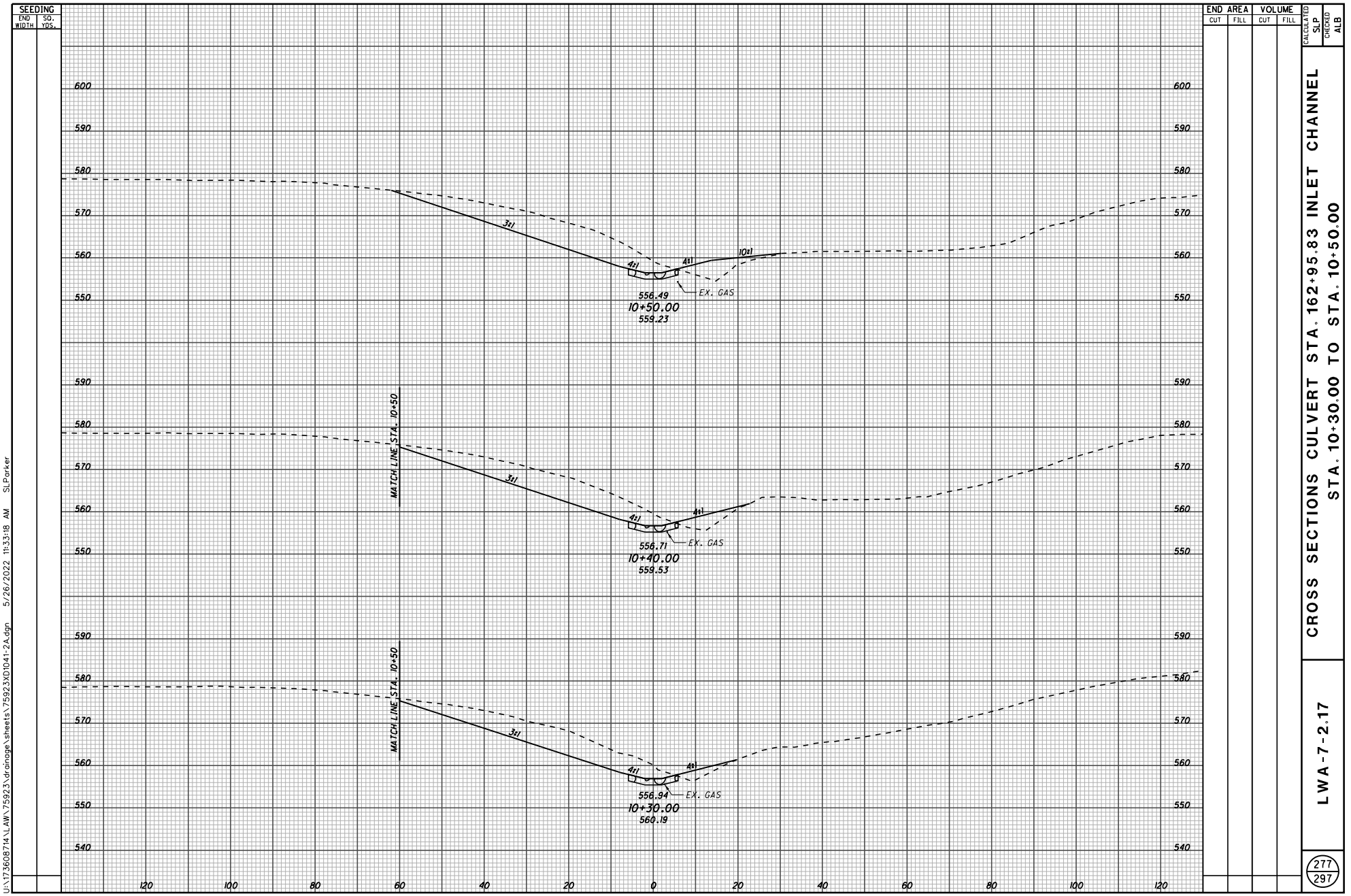

CROSS SECTIONS CULVERT STA. 162+95.83 INLET CHANNEL STA. 10+30.00 TO STA. 10+50.00

LWA-7-2.17

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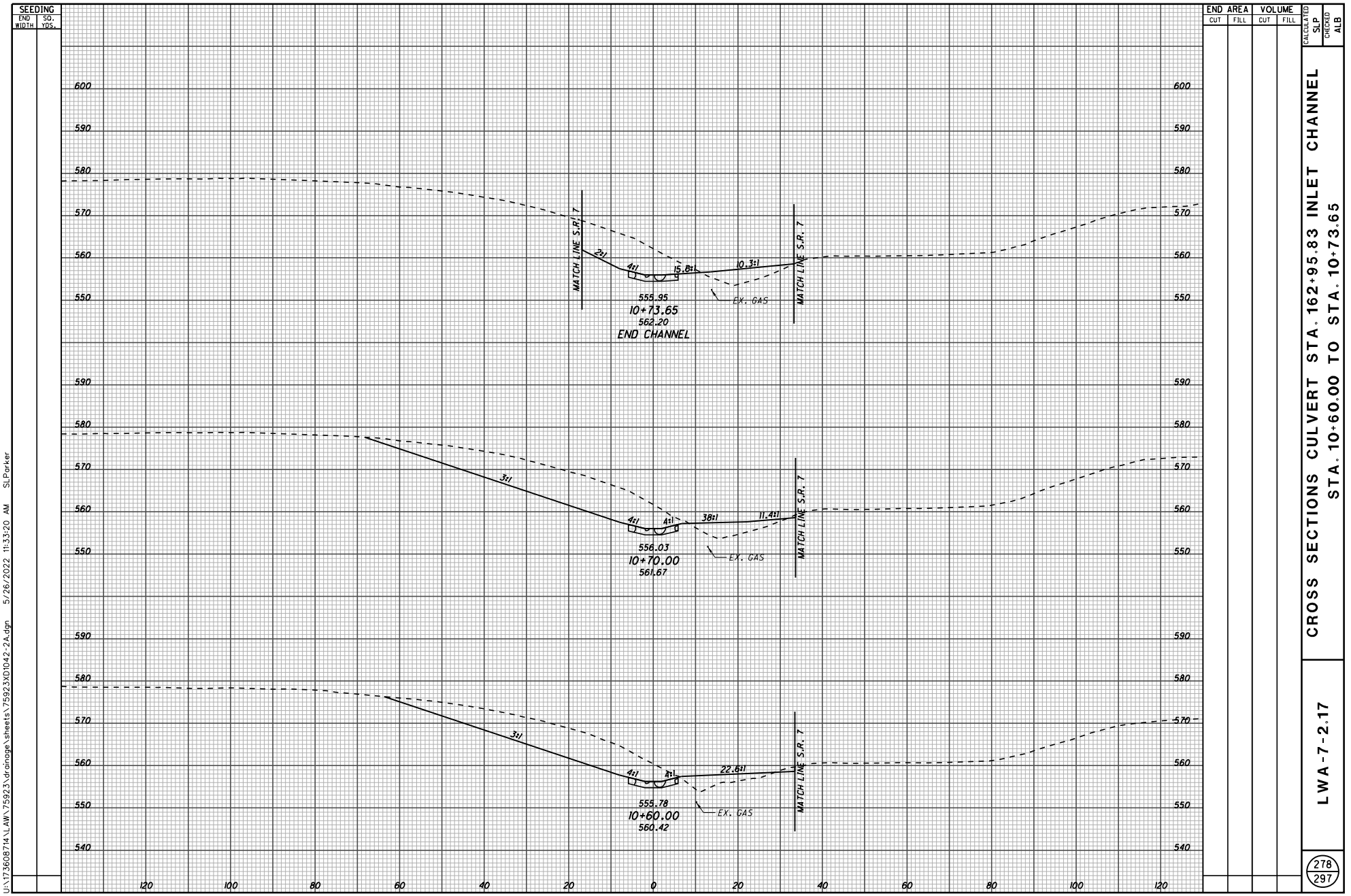
SEEDING
END WIDTH
SQ. YDS.
END AREA
CUT
FILL
VOLUME
CUT
FILL
CALCULATED SLP
CHECKED ALB
MATCH LINE S.R. 7
2:1
4:1
15.6:1
10.3:1
555.95
10+73.65
562.20
END CHANNEL
EX. GAS
3:1
4:1
4:1
38:1
11.4:1
556.03
10+70.00
561.67
22.6:1
555.78
10+60.00
560.42
600
590
580
570
560
550
540
120
100
80
60
40
20
0
CROSS SECTIONS CULVERT STA. 162+95.83 INLET CHANNEL
STA. 10+60.00 TO STA. 10+73.65
LWA-7-2.17
278
297
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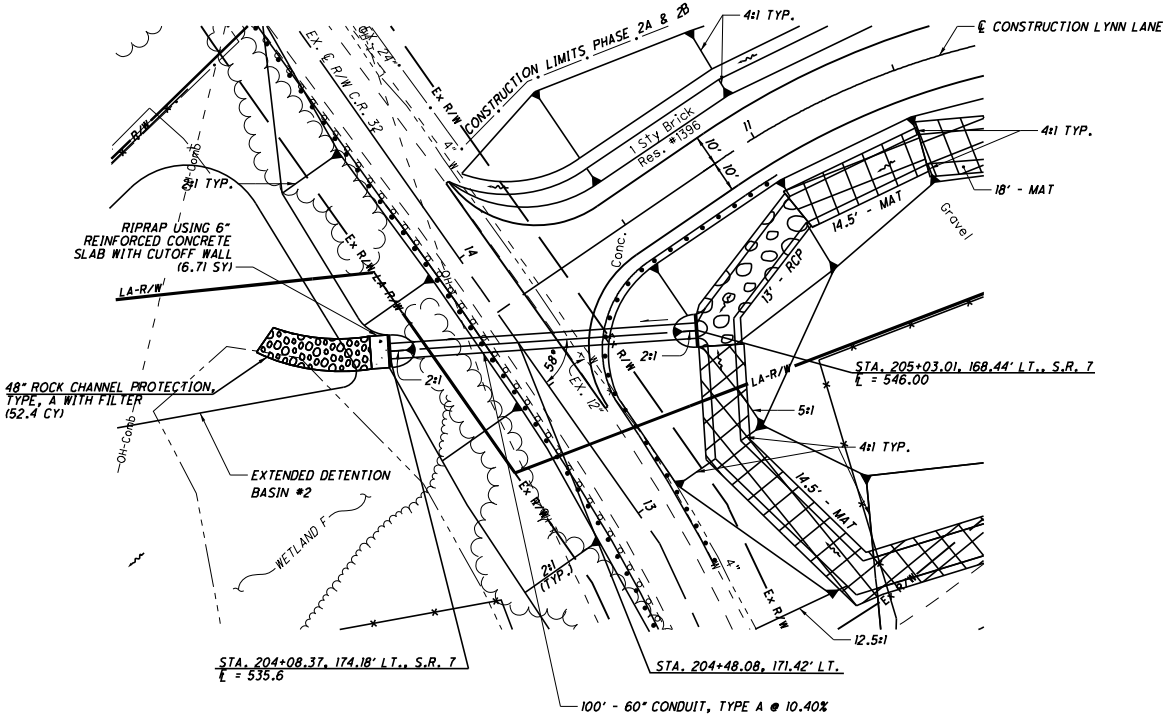
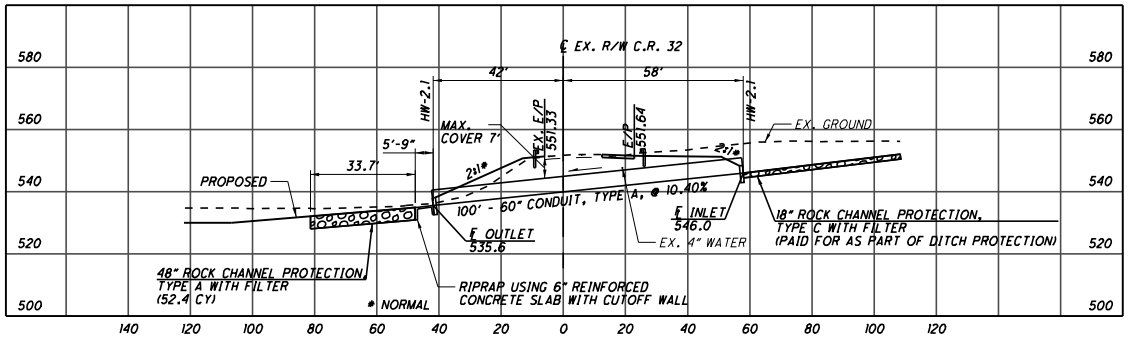


HYDRAULIC DATA	
DRAINAGE AREA	= 29 AC.
Q25	= 98 CFS
Q100	= 133 CFS
25V	= 16.9 FPS
100V	= 18.4 FPS
25 HW	= 550.3
100 HW	= 551.4
OHWMi	= 547.9
OHWMo	= 536.2
pH	= 7.6
DESIGN SERVICE LIFE	= 75 YEARS
ABRASION LEVEL	=
CFN	=



ESTIMATE QUANTITIES			
ITEM	TOTAL	UNIT	DESCRIPTION

QUANTITIES CARRIED TO GENERAL SUMMARY, SHEETS

CULVERT DETAIL
S.R. 7 STA. 204+48.08

LAW-7-2.17

CALCULATED SLP
CHECKED ALB

HORIZONTAL SCALE IN FEET
0 10 20 40

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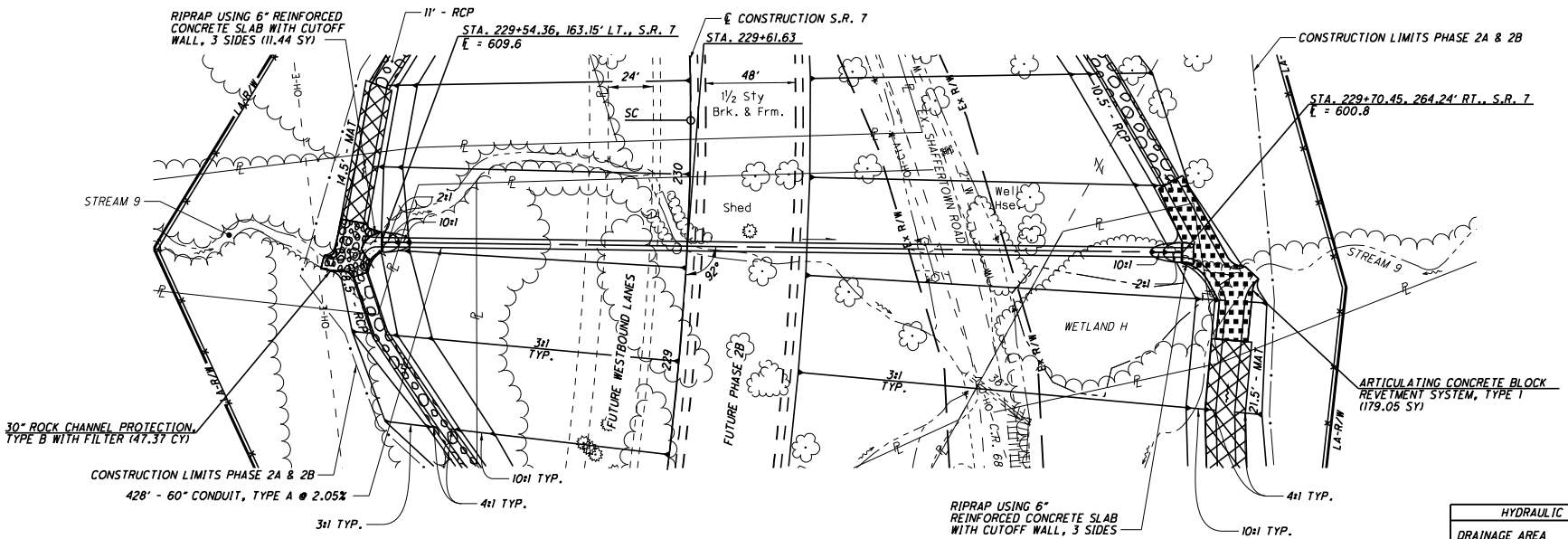
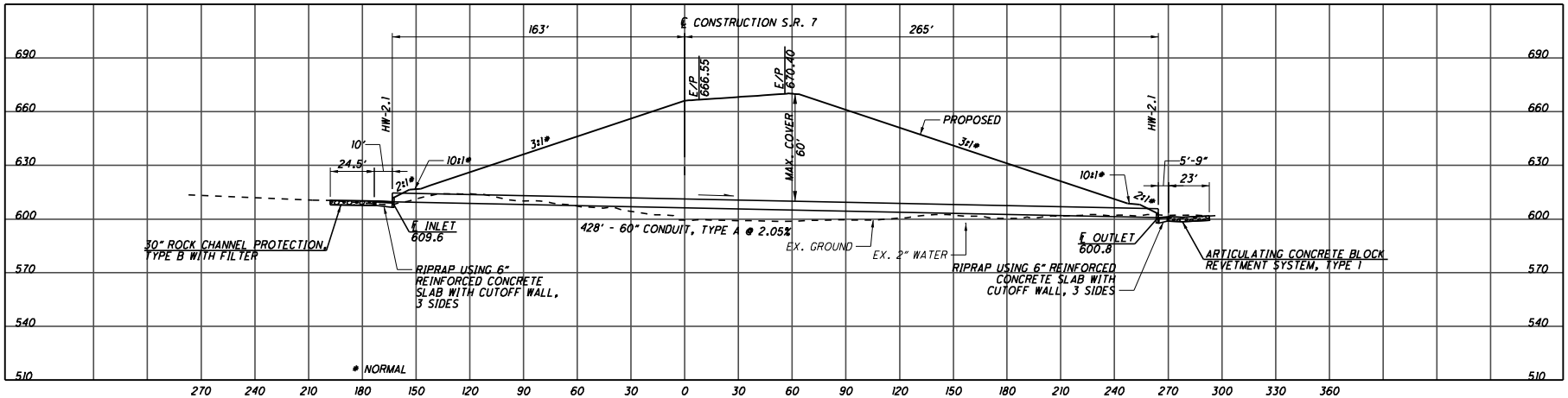


ESTIMATE QUANTITIES			
ITEM	TOTAL	UNIT	DESCRIPTION

QUANTITIES CARRIED TO GENERAL SUMMARY, SHEETS

HYDRAULIC DATA	
DRAINAGE AREA	= 80 AC.
Q50	= 147 CFS
Q100	= 175 CFS
50V	= 9.8 FPS
100V	= 11.7 FPS
50 HW	= 617.9
100 HW	= 623.4
OHWMi	= 610.5
OHWMo	= 601.1
pH	= 7.6
DESIGN SERVICE LIFE	= 75 YEARS
ABRASION LEVEL	=
CFN	=



HORIZONTAL SCALE IN FEET 0 15 30 60

CALCULATED SLP CHECKED ALB

CULVERT DETAIL
S.R. 7 STA. 229+61.63

LAW-7-2.17

280
297

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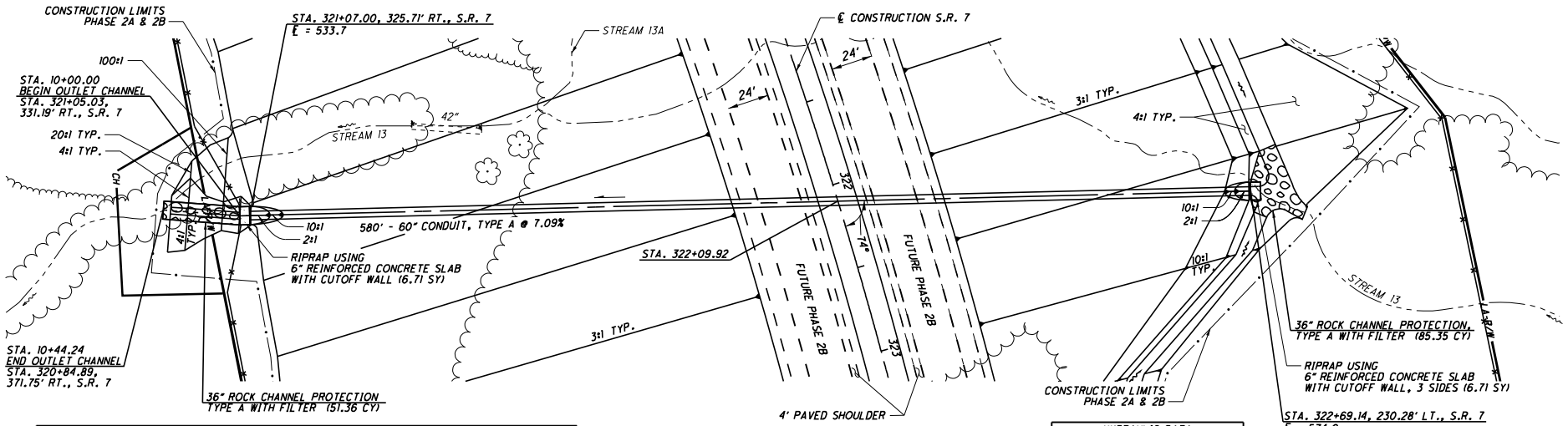
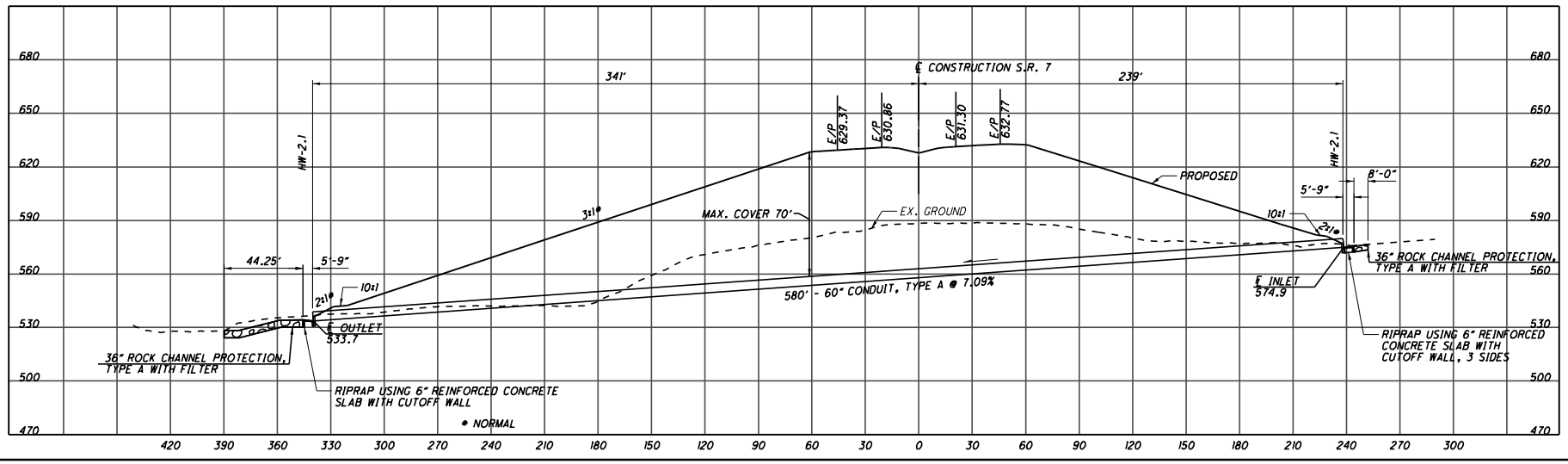


ESTIMATE QUANTITIES			
ITEM	TOTAL	UNIT	DESCRIPTION

QUANTITIES CARRIED TO GENERAL SUMMARY, SHEETS

HYDRAULIC DATA	
DRAINAGE AREA	= 81 AC.
Q50	= 166 CFS.
Q100	= 198 CFS
50V	= 16.8 FPS
100V	= 17.4 FPS
50 HW	= 583.1
100 HW	= 585.4
OHWMi	= 575.4
OHWMo	= 534.3
pH	= 7.6
DESIGN SERVICE LIFE	= 75 YEARS
ABRASION LEVEL	=
CFN	=



HORIZONTAL SCALE IN FEET 0 15 30 60

CALCULATED SLP CHECKED ALB

CULVERT DETAIL
S.R. 7 STA. 322+09.92

LAW-7-2.17

281
297

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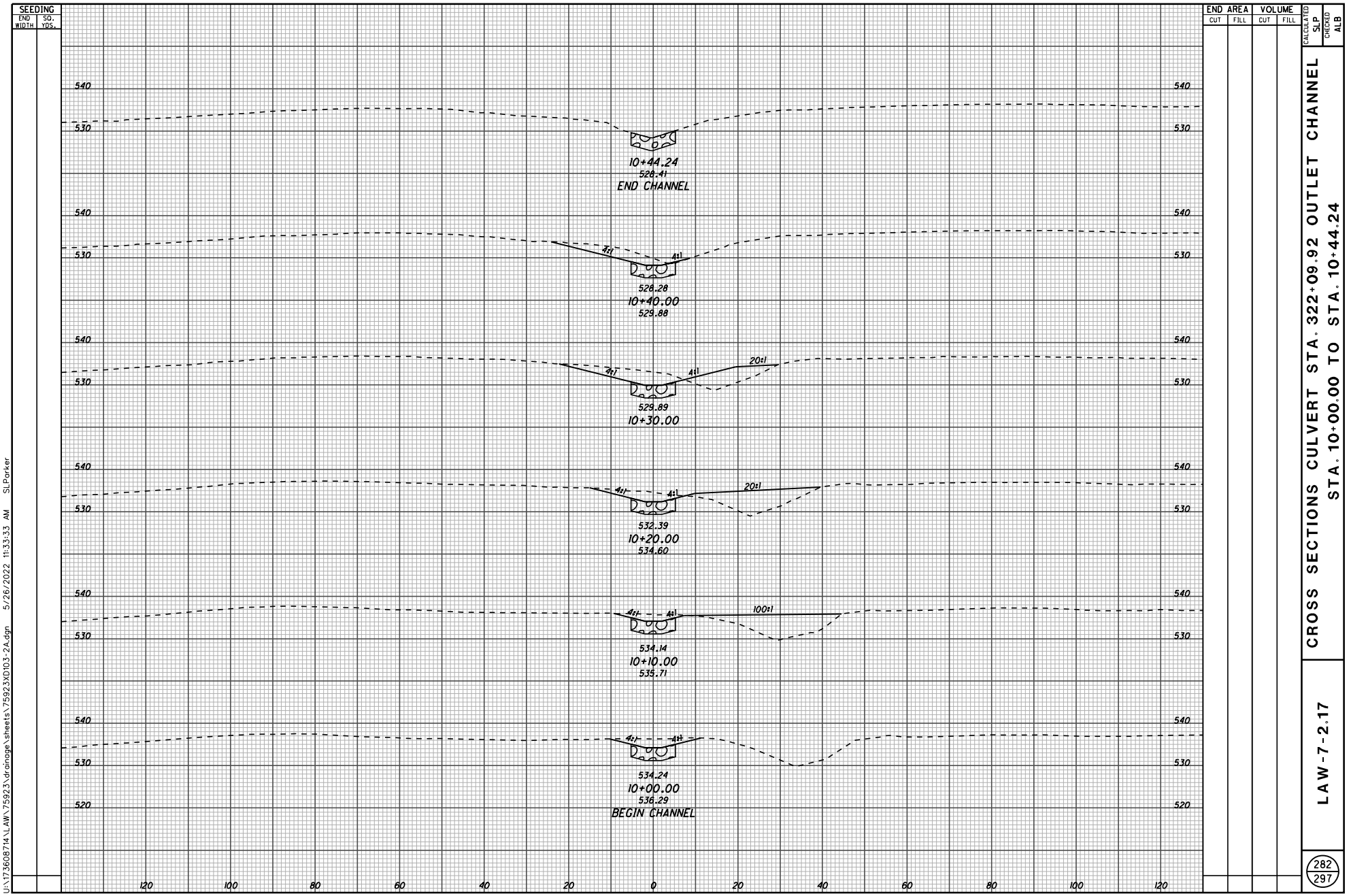
SEEDING
END WIDTH
SQ. YDS.
END AREA
CUT
FILL
VOLUME
CUT
FILL
CALCULATED SLP
CHECKED ALB
540
530
520
10+44.24
528.41
END CHANNEL
4:1
526.28
10+40.00
529.88
20:1
529.89
10+30.00
532.39
10+20.00
534.60
100:1
534.14
10+10.00
535.71
534.24
10+00.00
536.29
BEGIN CHANNEL
120
100
80
60
40
20
0
20
40
60
80
100
120
CROSS SECTIONS CULVERT STA. 322+09.92 OUTLET CHANNEL
STA. 10+00.00 TO STA. 10+44.24
LAW-7-2.17
282
297
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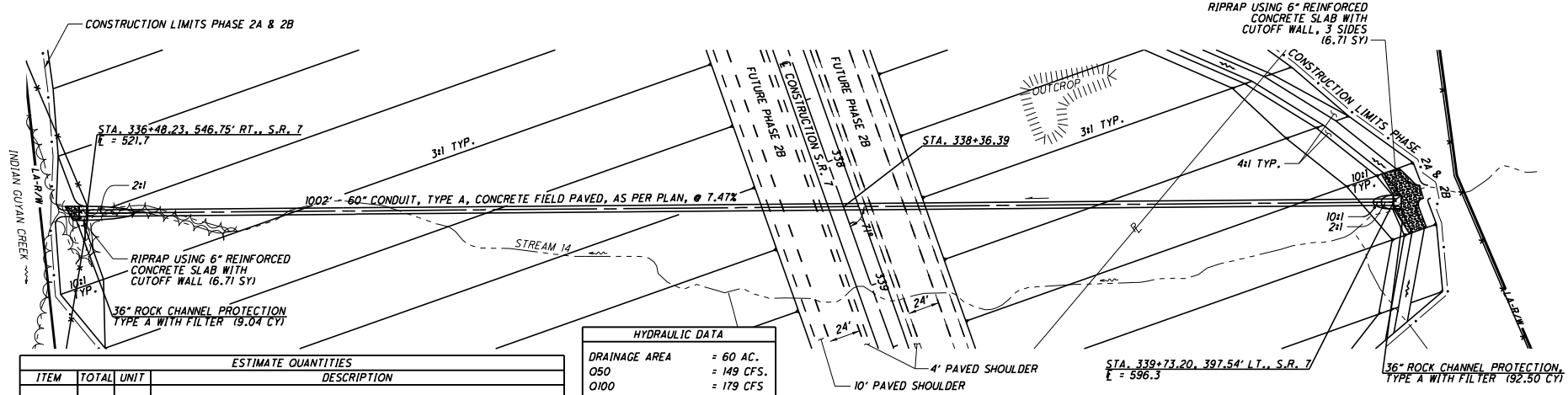
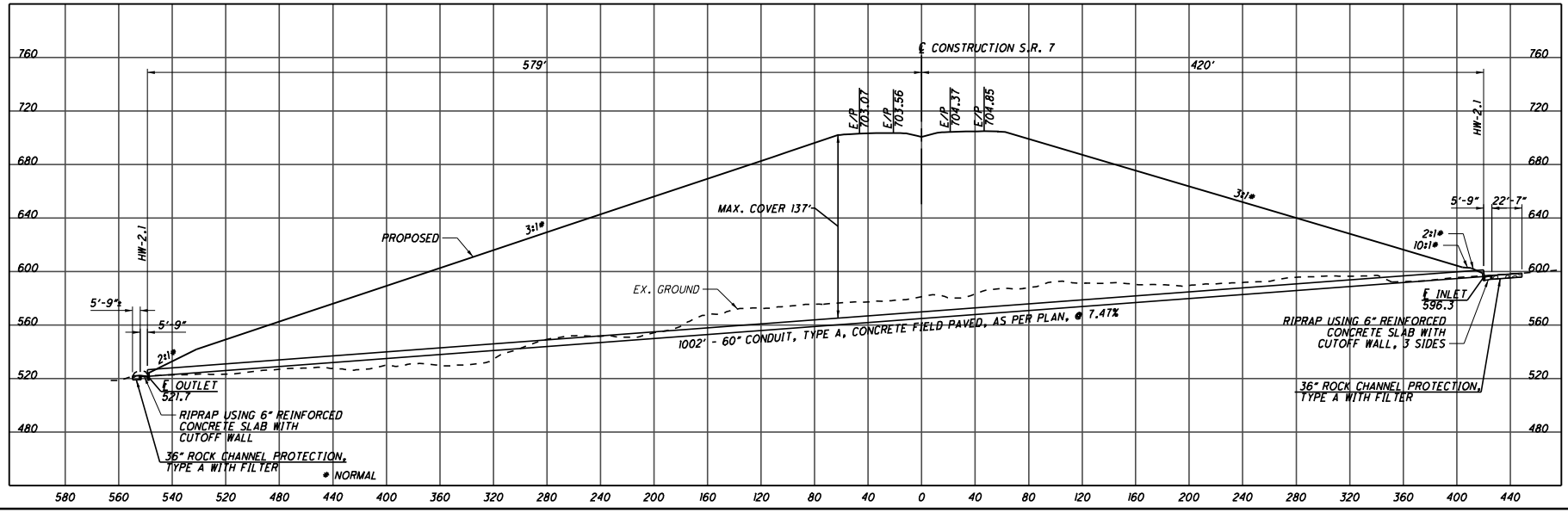


ESTIMATE QUANTITIES			
ITEM	TOTAL	UNIT	DESCRIPTION

QUANTITIES CARRIED TO GENERAL SUMMARY, SHEETS

HYDRAULIC DATA	
DRAINAGE AREA	= 60 AC.
Q50	= 149 CFS.
Q100	= 179 CFS
50V	= 16.7 FPS
100V	= 17.4 FPS
50 HW	= 603.5
100 HW	= 605.5
OHWMi	= 597.3
OHWMo	= 522.8
pH	= 7.6
DESIGN SERVICE LIFE	= 75 YEARS
ABRASION LEVEL	=
CFN	=



HORIZONTAL SCALE IN FEET: 0 20 40 80

CALCULATED: ALB CHECKED: TCM

CULVERT DETAIL
S.R. 7 STA. 338+36.39

LAW-7-2.17

283
297

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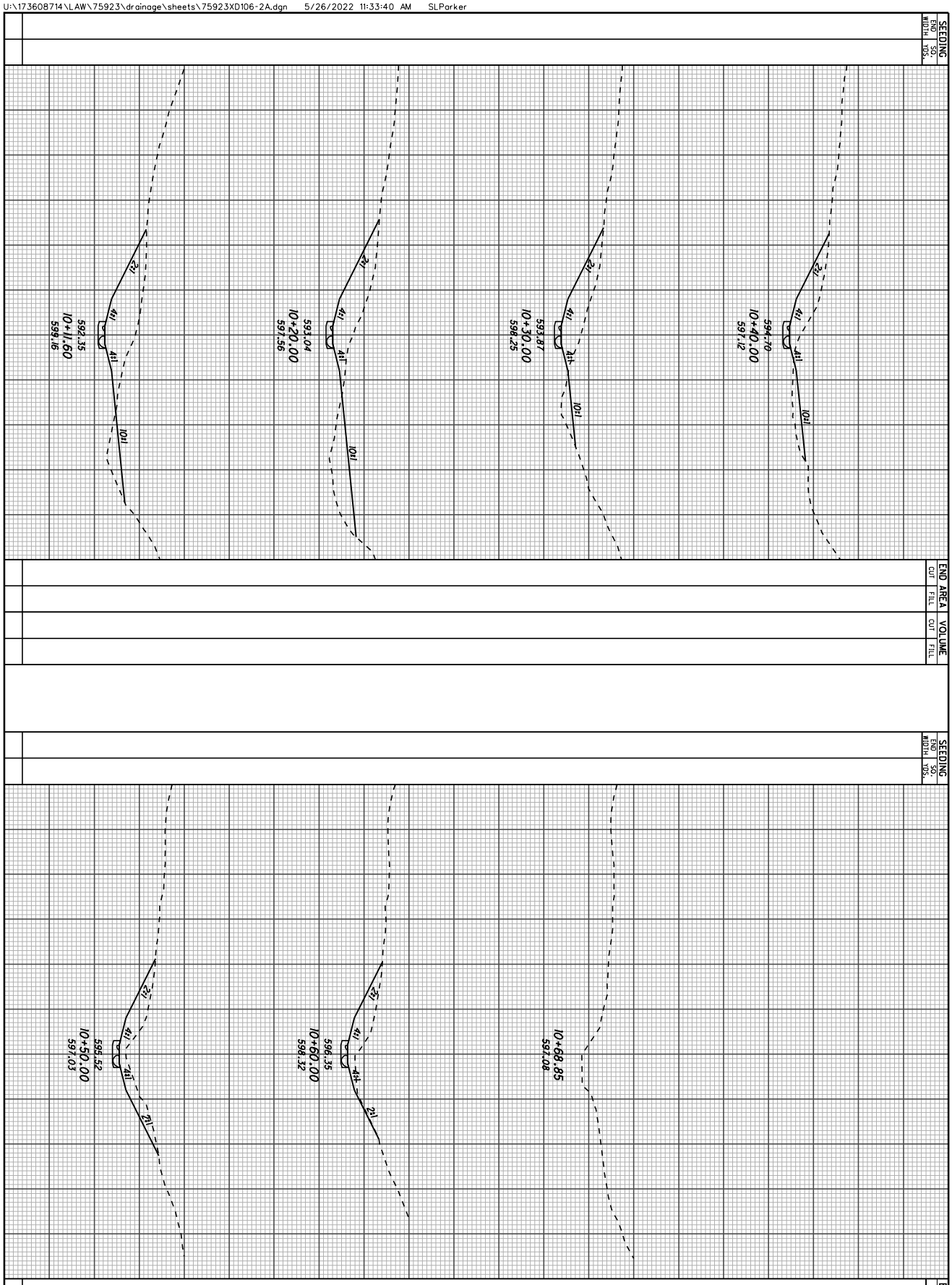


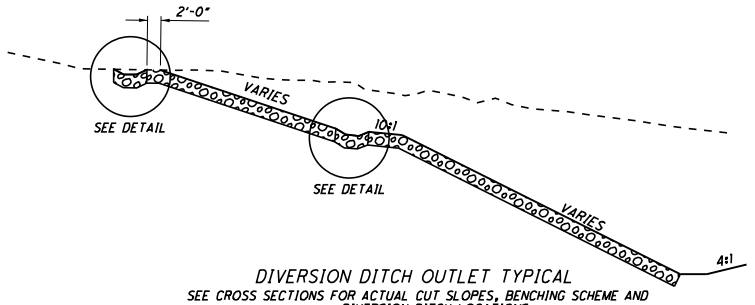
284/297	LAW-7-2.17	CROSS SECTIONS CULVERT STA. 338+36.39 INLET CHANEL STA. 10+11.60 TO STA. 10+68.85	CALCULATED ALB / CHECKED TCM

DIVERSION DITCH

THE CONTRACTOR IS TO PROVIDE A DIVERSION DITCH AS DETAILED ON THIS SHEET AND AS SHOWN IN THE CROSS SECTIONS. THE FOLLOWING QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY FOR THE PLACEMENT OF THE DIVERSION DITCH.

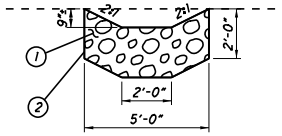
ITEM 203 - EXCAVATION (FOR OUTLET CHANNELS ONLY)	XX CU YD
ITEM 204 - GEOTEXTILE FABRIC	XX SQ YD
ITEM 601 - ROCK CHANNEL PROTECTION, TYPE D WITH FILTER	XX CU YD

EARTHWORK QUANTITIES FOR THE DIVERSION DITCHES HAVE BEEN INCLUDED IN THE CROSS SECTIONS.



DIVERSION DITCH OUTLET TYPICAL

SEE CROSS SECTIONS FOR ACTUAL CUT SLOPES, BENCHING SCHEME AND DIVERSION DITCH LOCATIONS



DIVERSION DETAIL TYPICAL

(1) - ITEM 601 - ROCK CHANNEL PROTECTION, TYPE D WITH FILTER

(2) - ITEM 204 - GEOTEXTILE FABRIC

N

HORIZONTAL SCALE IN FEET: 0, 25, 50, 100

CALCULATED: SLP

CHECKED: ALB

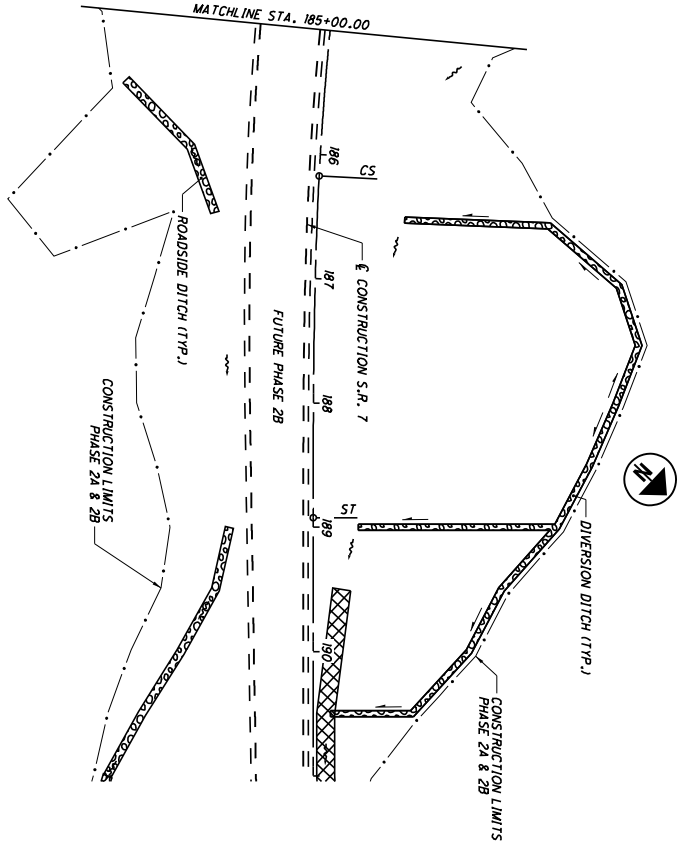
DRAINAGE DETAILS

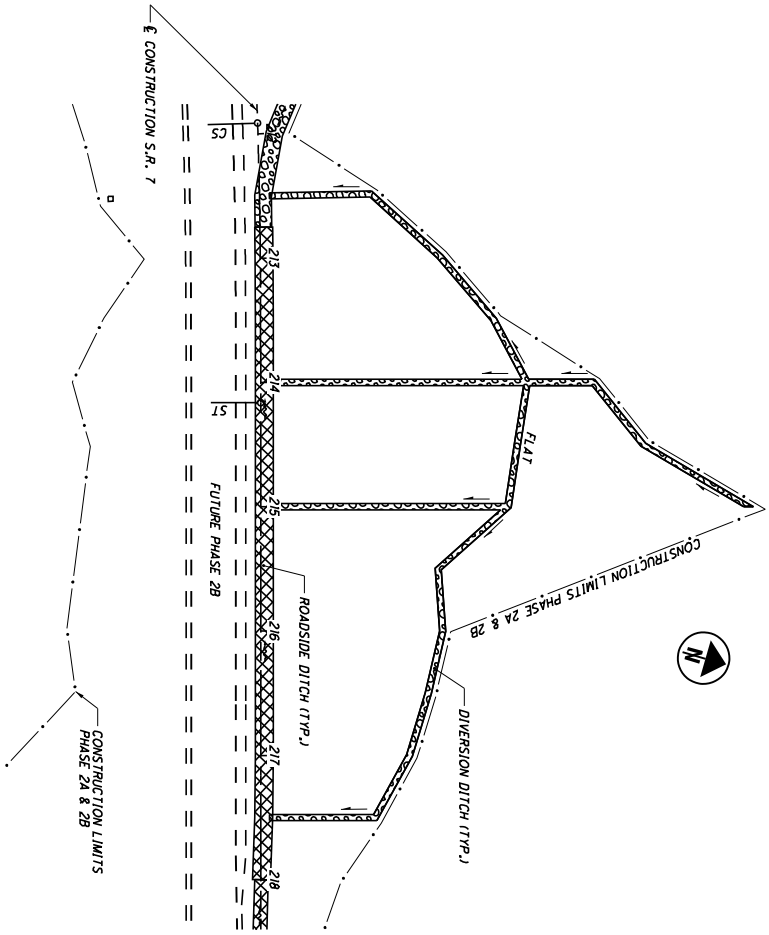
DIVERSION DITCH LOCATION AND DETAILS

LAW-7-2.17

285
297

U:\173608714\LAW\75923\drainage\sheets\759230000I-2A.dgn 5/26/2022 11:33:42 AM SLParker





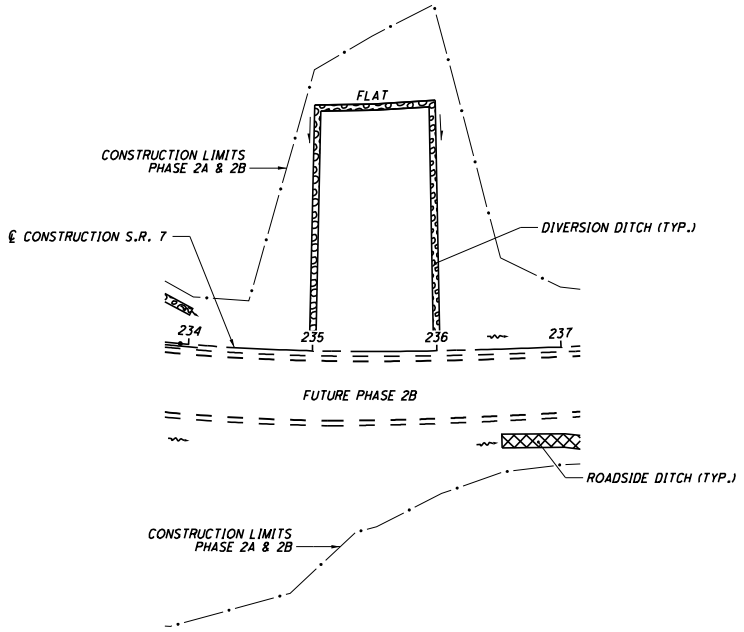
286/297

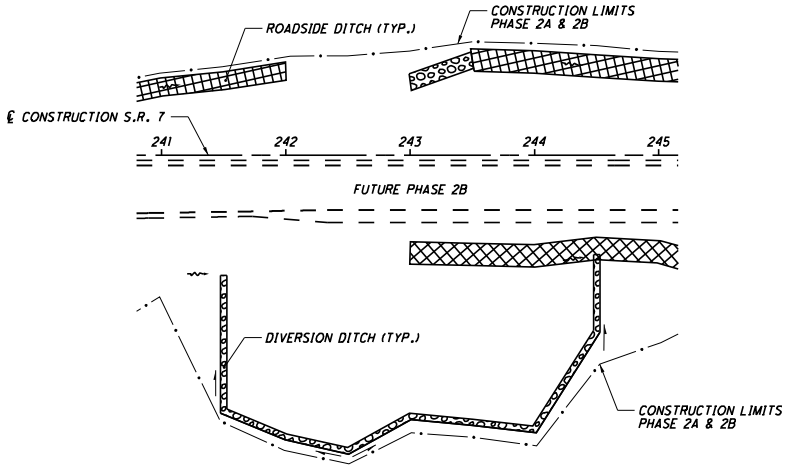
LAW-7-2.17

DRAINAGE DETAILS
DIVERSION DITCH LOCATION AND DETAILS

CALCULATED SLP
CHECKED ALB

0 25 50 100
HORIZONTAL SCALE IN FEET





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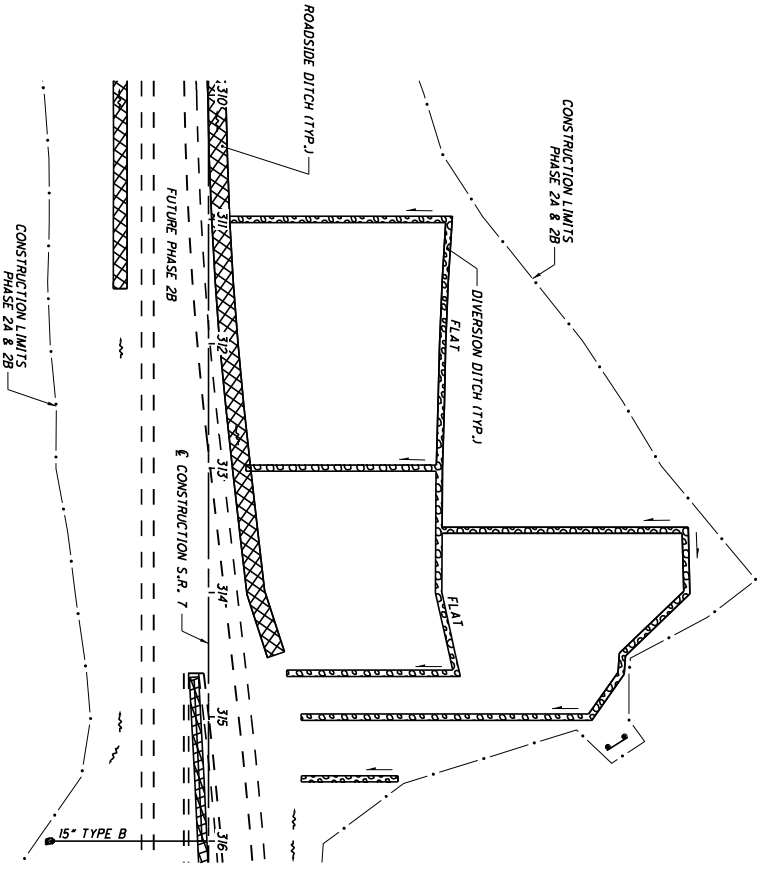
CALCULATED SLP
CHECKED ALB

0 25 50 100
HORIZONTAL SCALE IN FEET

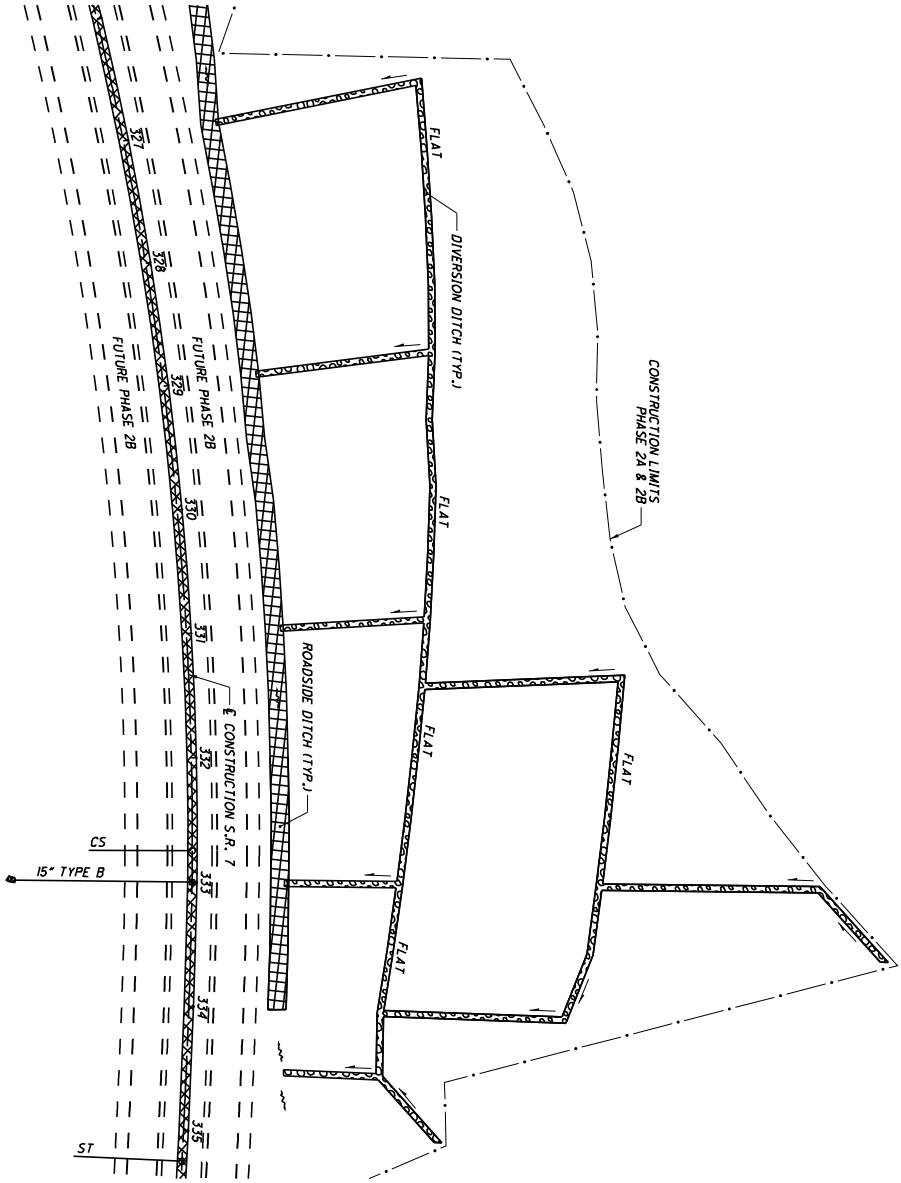
DRAINAGE DETAILS
DIVERSION DITCH LOCATION AND DETAILS

LAW-7-2.17

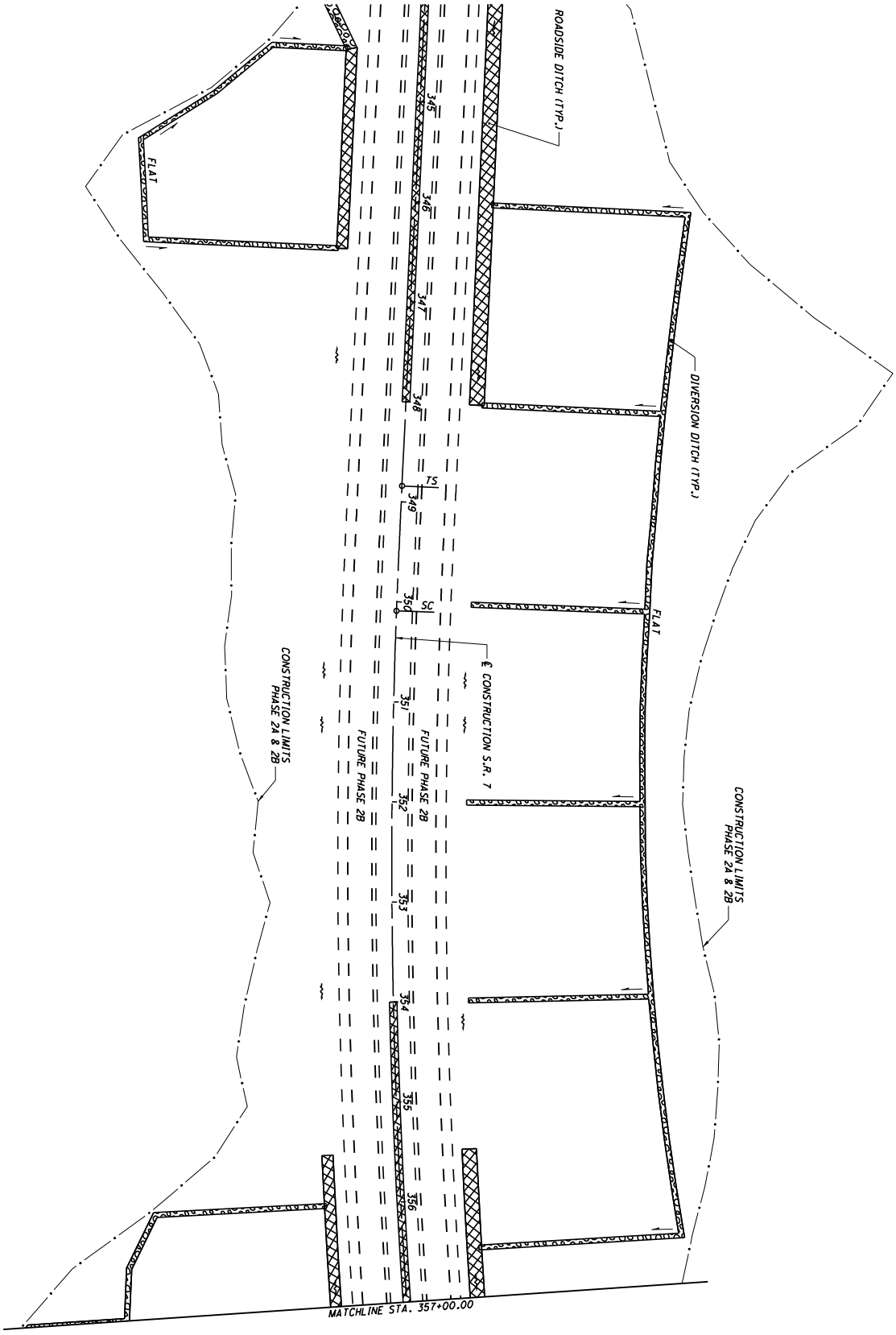
287
297



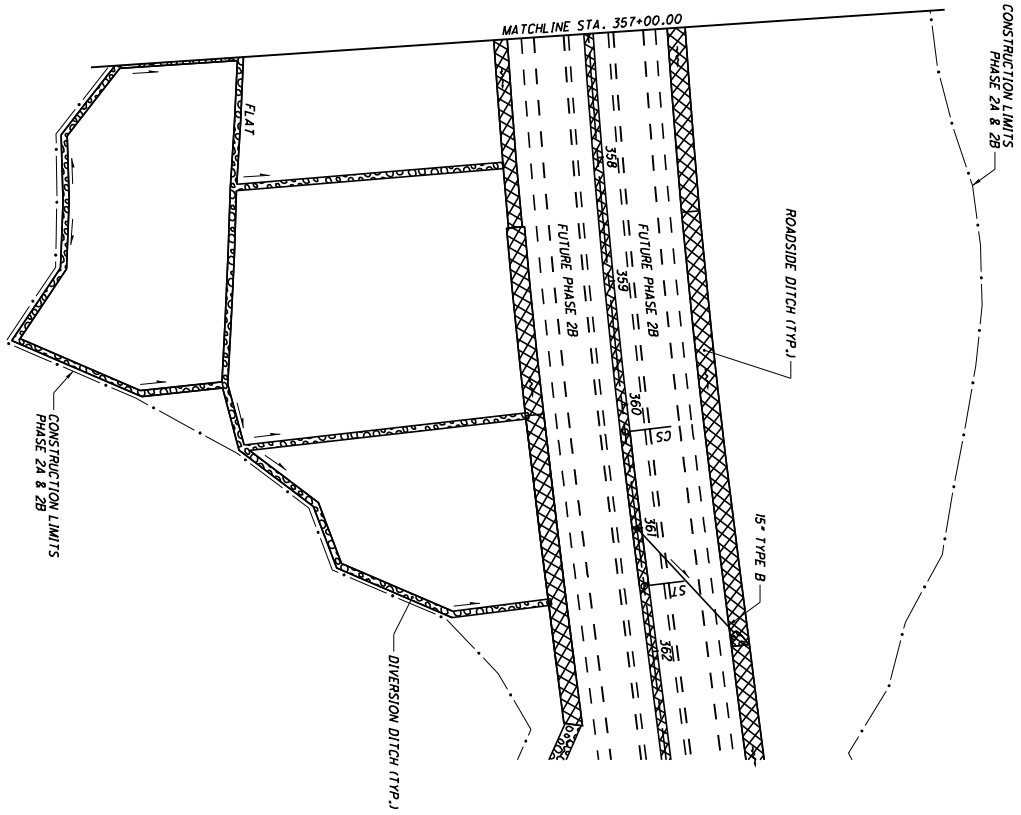
288/297	LAW-7-2.17	DRAINAGE DETAILS DIVERSION DITCH LOCATION AND DETAILS	CALCULATED SLP CHECKED SLP	0 50 25 100 HORIZONTAL SCALE IN FEET

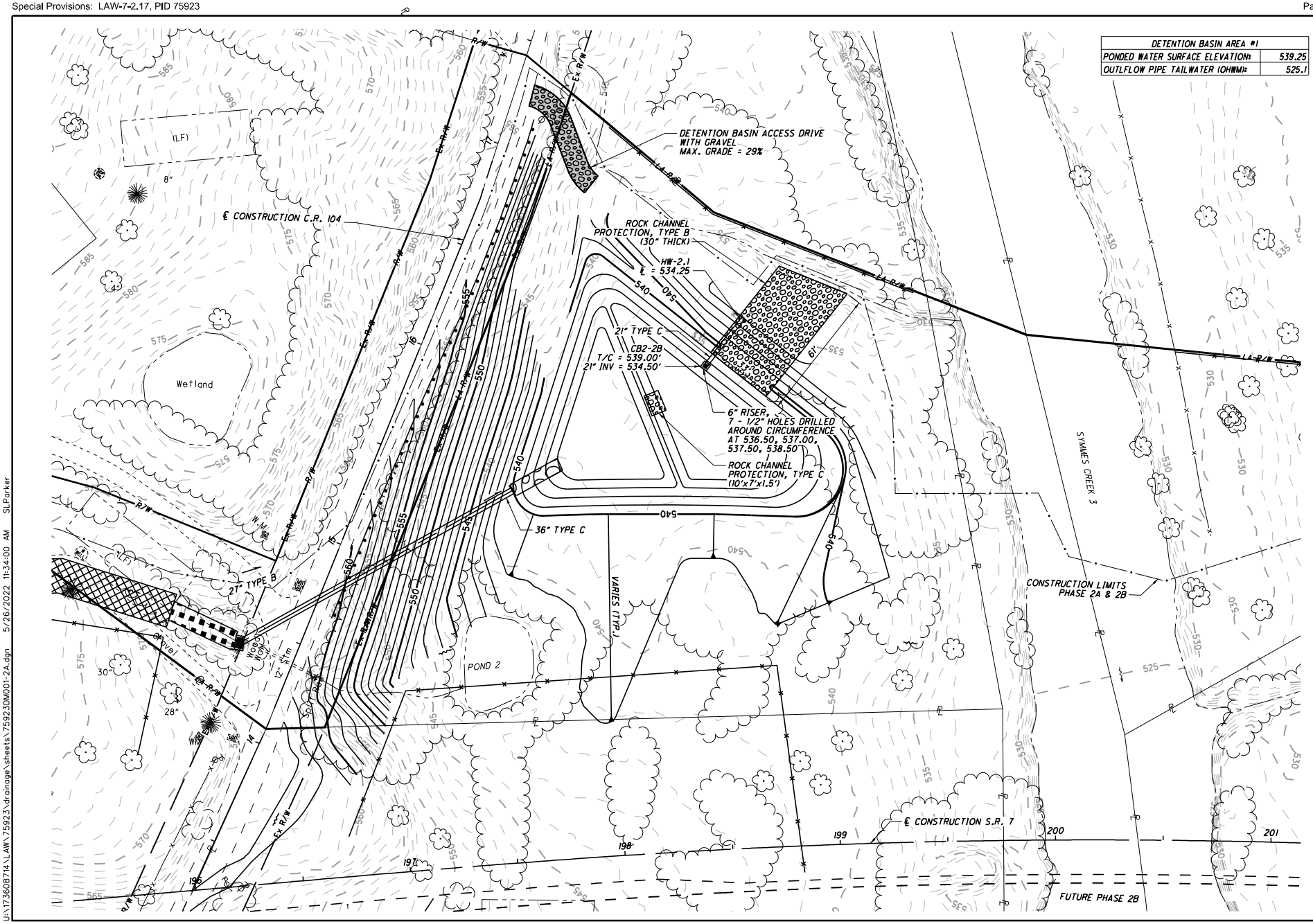


289/297	LAW-7-2.17	DRAINAGE DETAILS DIVERSION DITCH LOCATION AND DETAILS	CALCULATED SLP CHECKED ALB	0 25 50 100 HORIZONTAL SCALE IN FEET



290/297	LAW-7-2.17	DRAINAGE DETAILS DIVERSION DITCH LOCATION AND DETAILS	CALCULATED SLP CHECKED ALB	0 25 50 100 HORIZONTAL SCALE IN FEET


MATCHLINE STA. 357+00.00
CONSTRUCTION LIMITS PHASE 2A & 2B
FLAT
358
359
360
361
362
CS
S1
FUTURE PHASE 2B
FUTURE PHASE 2B
ROADSIDE DITCH (TYP.)
15" TYPE B
CONSTRUCTION LIMITS PHASE 2A & 2B
DIVERSION DITCH (TYP.)



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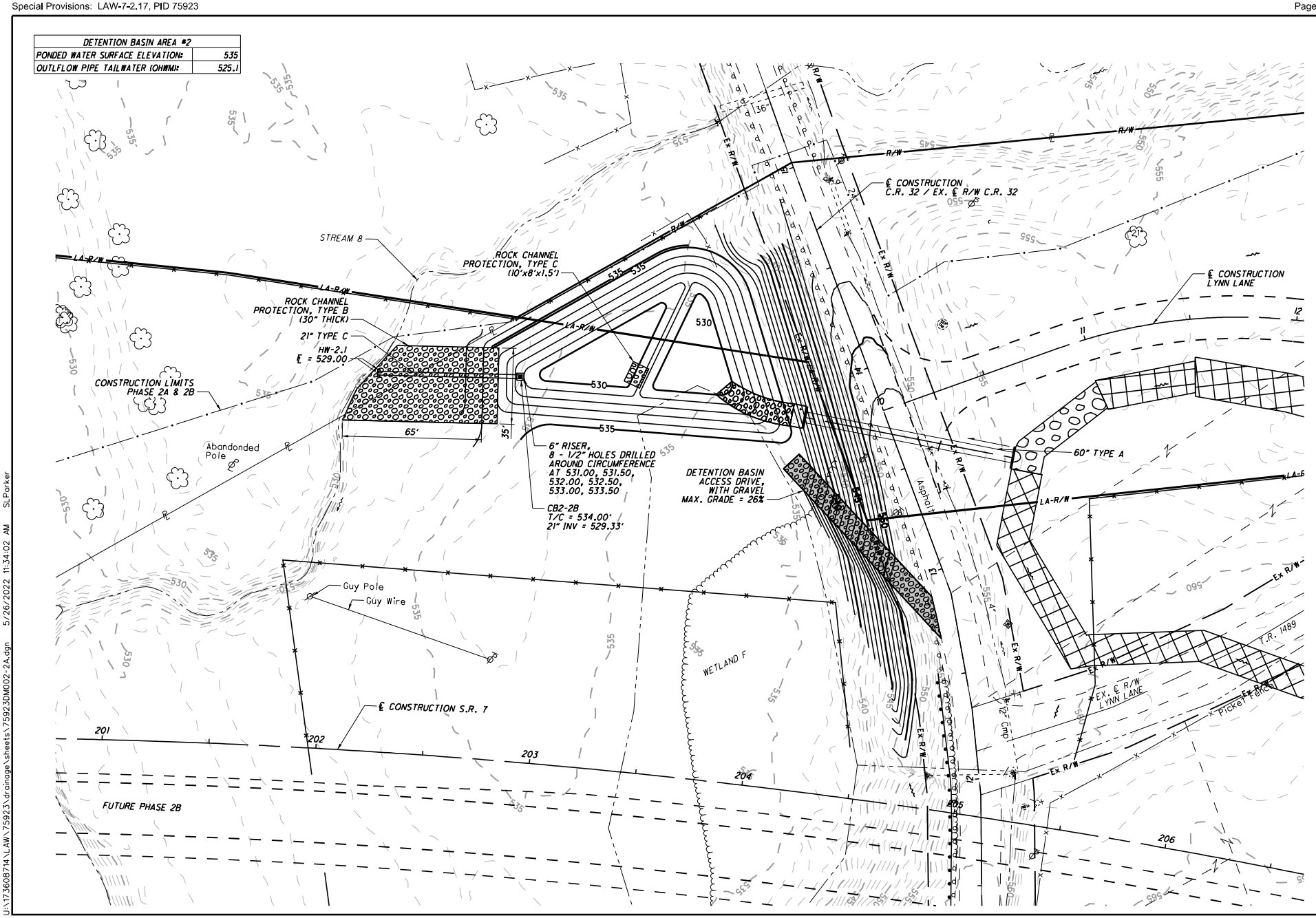

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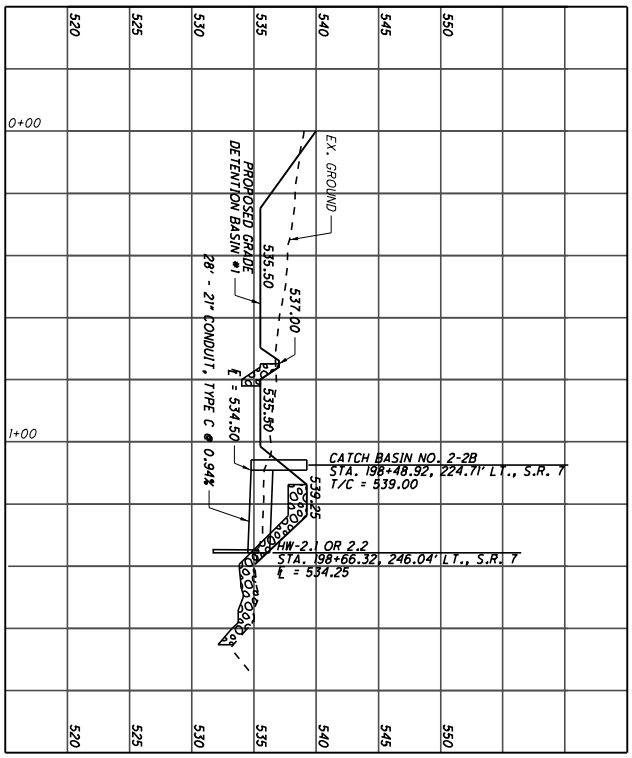
CALCULATED EDA
CHECKED ALB

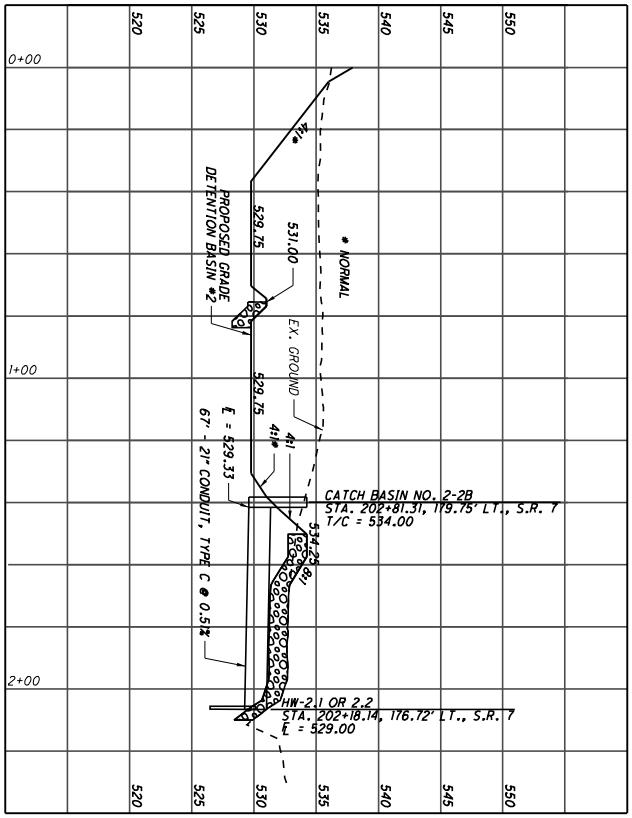
0 25 50 100
HORIZONTAL SCALE IN FEET

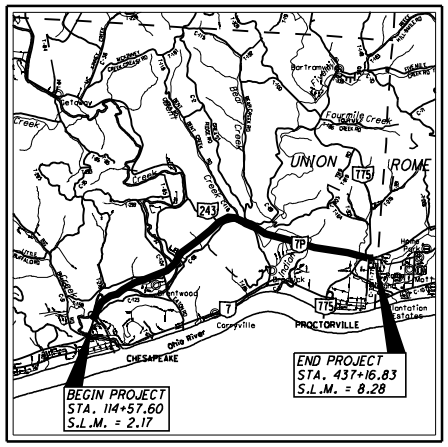
DRAINAGE DETAILS
DETENTION BASIN #2

LAW-7-2.17

293
297


520
525
530
535
540
545
550
0+00
1+00
EX. GROUND
PROPOSED GRADE
DETENTION BASIN #1
28" - 21" CONDUIT, TYPE C @ 0.94%
℄ = 534.50
535.50
537.00
535.50
CATCH BASIN NO. 2-2B
STA. 198+48.92, 224.71' LT., S.R. 7
T/C = 539.00
539.25
HW-2.1 OR 2.2
STA. 198+66.32, 246.04' LT., S.R. 7
℄ = 534.25


520
525
530
535
540
545
550
0+00
1+00
2+00
4:1
* NORMAL
PROPOSED GRADE
DETENTION BASIN #2
529.75
531.00
EX. GROUND
529.75
4:1
℄ = 429.33
67" - 21" CONDUIT, TYPE C @ 0.5%
CATCH BASIN NO. 2-2B
STA. 202+81.31, 179.75' LT., S.R. 7
T/C = 534.00
534.25
HW-2.1 OR 2.2
STA. 202+18.14, 176.72' LT., S.R. 7
℄ = 529.00


UNION
ROME
PROCTORVILLE
CHESAPEAKE
Ohio River
Coal Run
Creek
Creek
Creek

CURVE DATA
S.R. 7
CURVE NO. 1

P.I. STA. 138+60.99
Δ = 53° 33' 53" (RT)
Dc = 1° 27' 15"
R = 3,940.00'
T = 1,880.13'
L = 3,508.44'
E = 425.60'
TS STA. 117+84.61
SC STA. 119+59.61
θs = 1° 16' 21"
Ls = 175.00'
Ts = 2,076.38'
LT = 116.67'
ST = 58.34'
e_{max} = 4.00%
CS STA. 154+68.05
ST STA. 156+43.05

CURVE DATA
S.R. 7
CURVE NO. 2

P.I. STA. 182+06.44
Δ = 24° 16' 14" (LT)
Dc = 2° 10' 43"
R = 2,630.00'
T = 423.13'
L = 839.08'
E = 33.82'
TS STA. 175+03.18
SC STA. 177+78.18
θs = 2° 59' 44"
Ls = 275.00'
Ts = 703.26'
LT = 183.36'
ST = 91.69'
e_{max} = 5.51%
CS STA. 186+17.26
ST STA. 188+92.26

CURVE DATA
S.R. 7
CURVE NO. 3

P.I. STA. 205+33.31
Δ = 27° 30' 45" (RT)
Dc = 1° 45' 00"
R = 3,274.04'
T = 683.24'
L = 1,347.14'
E = 70.53'
TS STA. 196+19.13
SC STA. 198+44.13
θs = 1° 58' 07"
Ls = 225.00'
Ts = 914.18'
LT = 150.01'
ST = 75.01'
e_{max} = 4.60%
CS STA. 211+91.27
ST STA. 214+16.27

CURVE DATA
S.R. 7
CURVE NO. 4

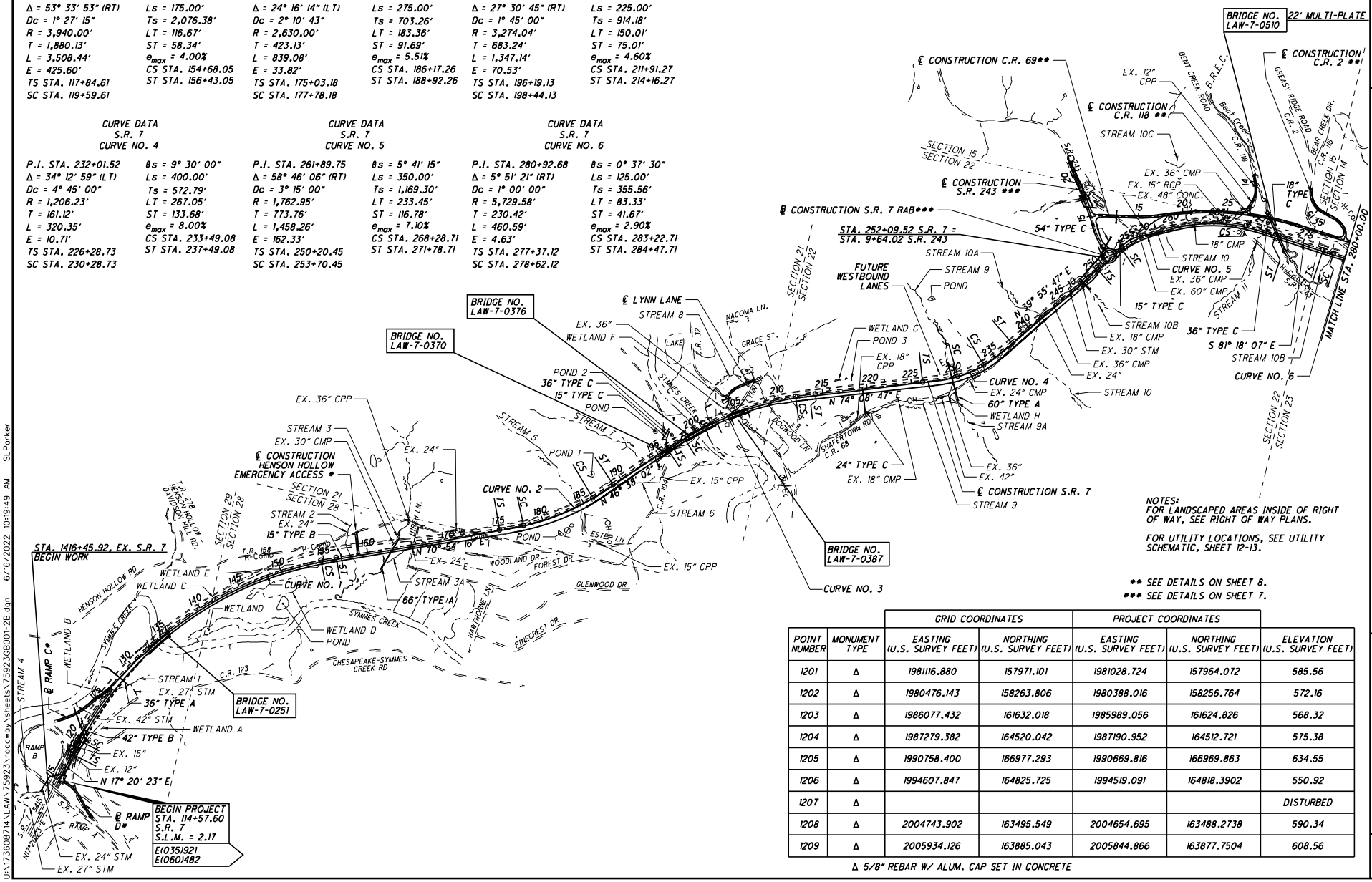
P.I. STA. 232+01.52
Δ = 34° 12' 59" (LT)
Dc = 4° 45' 00"
R = 1,206.23'
T = 161.12'
L = 320.35'
E = 10.71'
TS STA. 226+28.73
SC STA. 230+28.73
θs = 9° 30' 00"
Ls = 400.00'
Ts = 572.79'
LT = 267.05'
ST = 133.68'
e_{max} = 8.00%
CS STA. 233+49.08
ST STA. 237+49.08

CURVE DATA
S.R. 7
CURVE NO. 5

P.I. STA. 261+89.75
Δ = 58° 46' 06" (RT)
Dc = 3° 15' 00"
R = 1,762.95'
T = 773.76'
L = 1,458.26'
E = 162.33'
TS STA. 250+20.45
SC STA. 253+70.45
θs = 5° 41' 15"
Ls = 350.00'
Ts = 1,169.30'
LT = 233.45'
ST = 116.78'
e_{max} = 7.10%
CS STA. 268+28.71
ST STA. 271+78.71

CURVE DATA
S.R. 7
CURVE NO. 6

P.I. STA. 280+92.68
Δ = 5° 51' 21" (RT)
Dc = 1° 00' 00"
R = 5,729.58'
T = 230.42'
L = 460.59'
E = 4.63'
TS STA. 277+37.12
SC STA. 278+62.12
θs = 0° 37' 30"
Ls = 125.00'
Ts = 355.56'
LT = 83.33'
ST = 41.67'
e_{max} = 2.90%
CS STA. 283+22.71
ST STA. 284+47.71


BRIDGE NO. LAW-7-0510 22' MULTI-PLATE
℄ CONSTRUCTION C.R. 69**
℄ CONSTRUCTION C.R. 118 **
℄ CONSTRUCTION C.R. 2 **
℄ CONSTRUCTION S.R. 243 ***
℄ CONSTRUCTION S.R. 7 RAB***
STA. 252+09.52 S.R. 7 = STA. 9+64.02 S.R. 243
MATCH LINE STA. 280+00.00
BRIDGE NO. LAW-7-0376
BRIDGE NO. LAW-7-0370
BRIDGE NO. LAW-7-0387
BRIDGE NO. LAW-7-0251
FUTURE WESTBOUND LANES
℄ LYNN LANE
CURVE NO. 1
CURVE NO. 2
CURVE NO. 3
CURVE NO. 4
CURVE NO. 5
CURVE NO. 6
℄ CONSTRUCTION HENSON HOLLOW EMERGENCY ACCESS *
℄ CONSTRUCTION S.R. 7
℄ RAMP C*
℄ RAMP D*
STA. 1416+45.92, EX. S.R. 7 BEGIN WORK
BEGIN PROJECT STA. 114+57.60 S.R. 7 S.L.M. = 2.17
E(035)921 E(060)482
SECTION 15 SECTION 22
SECTION 21 SECTION 22
SECTION 21 SECTION 28
SECTION 29 SECTION 28
SECTION 22 SECTION 23
SECTION 15 SECTION 14
54" TYPE C
18" TYPE C
15" TYPE C
24" TYPE C
36" TYPE C
66" TYPE A
60" TYPE A
42" TYPE B
36" TYPE A
15" TYPE B
S 81° 18' 07" E
N 74° 08' 47" E
N 39° 55' 47" E
N 46° 38' 02" E
N 10° 54' 16" E
N 17° 20' 23" E
EX. 36" CPP
EX. 30" CMP
EX. 24"
EX. 15" CPP
EX. 18" CPP
EX. 12" CPP
EX. 36" CMP
EX. 15" RCP
EX. 48" CONC.
EX. 18" CMP
EX. 30" STM
EX. 60" CMP
EX. 24" CMP
EX. 42"
EX. 27" STM
EX. 42" STM
EX. 15"
EX. 12"
EX. 24" STM
STREAM 1
STREAM 2
STREAM 3
STREAM 4
STREAM 5
STREAM 6
STREAM 7
STREAM 8
STREAM 9
STREAM 10
STREAM 10A
STREAM 10B
STREAM 11
STREAM 3A
STREAM 9A
POND
POND 1
POND 2
POND 3
WETLAND A
WETLAND B
WETLAND C
WETLAND D
WETLAND E
WETLAND F
WETLAND G
WETLAND H
SYMMES CREEK
CHESAPEAKE-SYMMES CREEK RD
HENSON HOLLOW RD
DAVIDSON HILL RD.
T.R. 278 HENSON HOLLOW
T.R. 158 H. COMBS
BEAR LN.
WOODLAND DR
FOREST DR
GLENWOOD DR
HAWTHORNE LN.
PINECREST DR
ESTER LN
NACOMA LN.
GRACE ST.
LYNN
WOODROW LN
SHAFFERTOWN RD
C.R. 104
C.R. 123
C.R. 68
BENT CREEK ROAD
B.R.E.C.
BEAR CREEK DR.
GREASY RIDGE ROAD C.R. 2
C.R. 15
C.R. 118
BENT CREEK
CS 05
CS 06
CS 07
CS 08
CS 09
CS 10
CS 11
CS 12
CS 13
CS 14
CS 15
CS 16
CS 17
CS 18
CS 19
CS 20
CS 21
CS 22
CS 23
CS 24
CS

CURVE DATA
S.R. 7
CURVE NO. 6

P.I. STA. 280+92.68
Δ = 5° 51' 21" (RT)
Dc = 1° 00' 00"
R = 5,729.58'
T = 230.42'
L = 460.59'
E = 4.63'
TS STA. 277+37.12
SC STA. 278+62.12
θs = 0° 37' 30"
Ls = 125.00'
Ts = 355.56'
LT = 83.33'
ST = 41.67'
e_{max} = 2.90%
CS STA. 283+22.71
ST STA. 284+47.71

CURVE DATA
S.R. 7
CURVE NO. 7

P.I. STA. 326+36.08
Δ = 31° 21' 41" (RT)
Dc = 2° 00' 00"
R = 2,864.79'
T = 670.91'
L = 1,318.07'
E = 77.51'
TS STA. 317+06.62
SC STA. 319+56.62
θs = 2° 30' 00"
Ls = 250.00'
Ts = 929.46'
LT = 166.68'
ST = 83.35'
e_{max} = 5.10%
CS STA. 332+74.69
ST STA. 335+24.69

CURVE DATA
S.R. 7
CURVE NO. 8

P.I. STA. 355+16.90
Δ = 9° 56' 13" (LT)
Dc = 0° 52' 24"
R = 6,560.00'
T = 507.37'
L = 1,012.73'
E = 19.59'
TS STA. 348+84.10
SC STA. 350+09.10
θs = 0° 32' 45"
Ls = 125.00'
Ts = 632.80'
LT = 83.33'
ST = 41.67'
e_{max} = 2.60%
CS STA. 360+21.83
ST STA. 361+46.83

CURVE DATA
S.R. 7
CURVE NO. 9

P.I. STA. 387+47.15
Δ = 46° 04' 34" (LT)
Dc = 2° 29' 28"
R = 2,300.00'
T = 805.51'
L = 1,549.62'
E = 136.98'
TS STA. 376+18.38
SC STA. 379+18.38
θs = 3° 44' 12"
Ls = 300.00'
Ts = 1,128.77'
LT = 200.04'
ST = 100.04'
e_{max} = 6.20%
CS STA. 394+68.00
ST STA. 397+68.00

CURVE DATA
S.R. 7
CURVE NO. 10

P.I. STA. 403+74.19
Δ = 1° 29' 03" (RT)
Dc = 0° 16' 56"
R = 20,306.35'
T = 263.02'
L = 526.00'
E = 1.70'
e_{max} = NC
PC STA. 401+11.17
PT STA. 406+37.18

CURVE DATA
S.R. 7
CURVE NO. 11

P.I. STA. 416+63.54
Δ = 18° 47' 30" (LT)
Dc = 1° 38' 13"
R = 3,500.00'
T = 451.44'
L = 897.92'
E = 28.99'
TS STA. = 409+59.26
SC STA. = 412+09.26
θs = 2° 02' 47"
Ls = 250.00'
Ts = 704.28'
LT = 166.68'
ST = 83.34'
e_{max} = 4.47%
CS STA. 421+07.18
ST STA. 423+57.18

CURVE DATA
S.R. 7
CURVE NO. 12

P.I. STA. 428+11.24
Δ = 3° 17' 53" (RT)
Dc = 1° 19' 10"
R = 4,342.09'
T = 125.00'
L = 249.93'
E = 1.80'
e_{max} = 3.77%
PC STA. = 426+86.24
PT STA. = 429+36.17

CURVE DATA
S.R. 7 WESTBOUND LANES
@ CURVE NO. 1

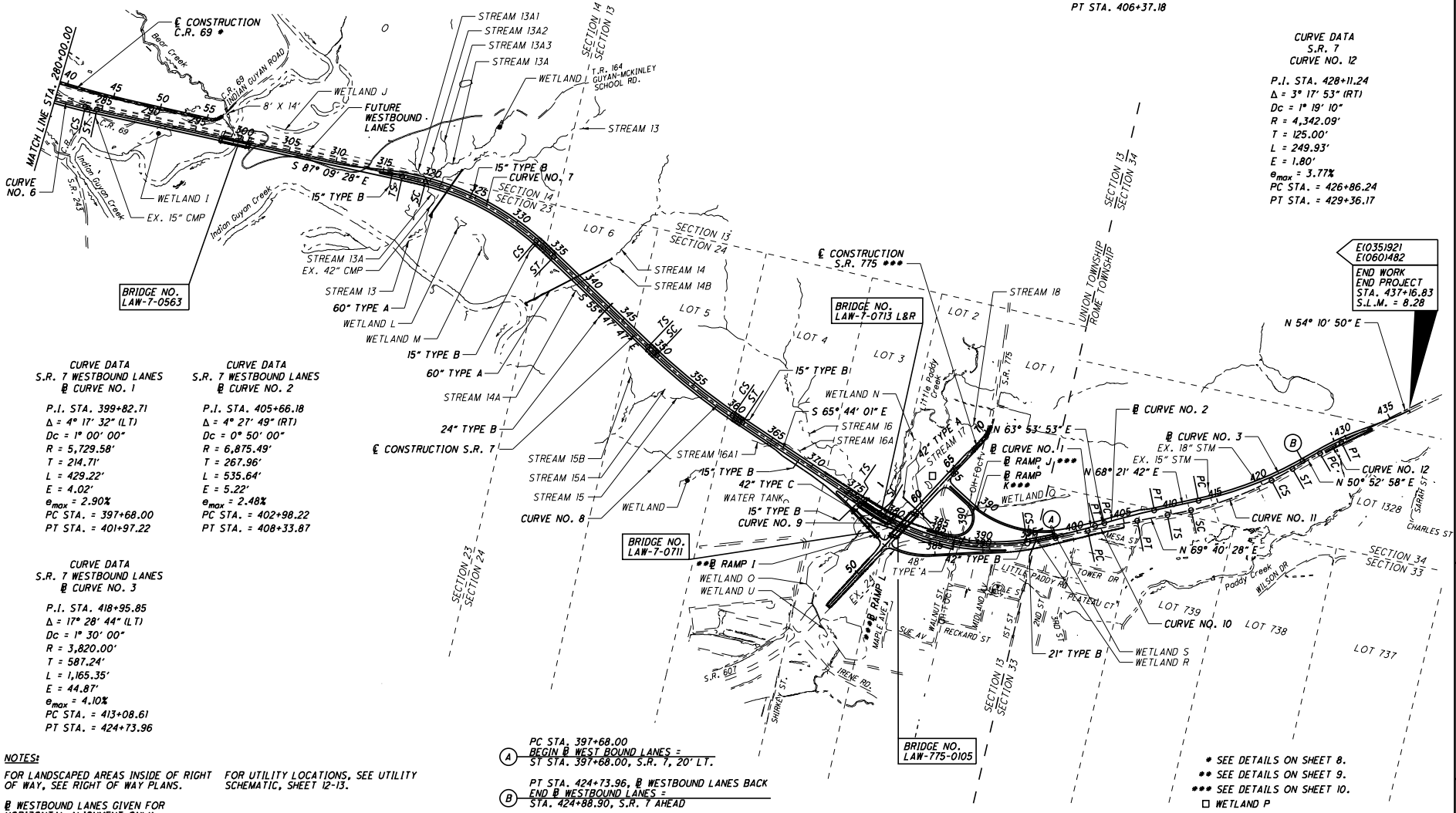
P.I. STA. 399+82.71
Δ = 4° 17' 32" (LT)
Dc = 1° 00' 00"
R = 5,729.58'
T = 214.71'
L = 429.22'
E = 4.02'
e_{max} = 2.90%
PC STA. = 397+68.00
PT STA. = 401+97.22

CURVE DATA
S.R. 7 WESTBOUND LANES
@ CURVE NO. 2

P.I. STA. 405+66.18
Δ = 4° 27' 49" (RT)
Dc = 0° 50' 00"
R = 6,875.49'
T = 267.96'
L = 535.64'
E = 5.22'
e_{max} = 2.48%
PC STA. = 402+98.22
PT STA. = 408+33.87

CURVE DATA
S.R. 7 WESTBOUND LANES
@ CURVE NO. 3

P.I. STA. 418+95.85
Δ = 17° 28' 44" (LT)
Dc = 1° 30' 00"
R = 3,820.00'
T = 587.24'
L = 1,165.35'
E = 44.87'
e_{max} = 4.10%
PC STA. = 413+08.61
PT STA. = 424+73.96



NOTES:

FOR LANDSCAPED AREAS INSIDE OF RIGHT OF WAY, SEE RIGHT OF WAY PLANS.

FOR UTILITY LOCATIONS, SEE UTILITY SCHEMATIC, SHEET 12-13.

@ WESTBOUND LANES GIVEN FOR HORIZONTAL ALIGNMENT ONLY.

(A) PC STA. 397+68.00
BEGIN @ WEST BOUND LANES =
ST STA. 397+68.00, S.R. 7, 20' LT.

(B) PT STA. 424+73.96, @ WESTBOUND LANES BACK
END @ WESTBOUND LANES =
STA. 424+88.90, S.R. 7 AHEAD

* SEE DETAILS ON SHEET 8.
** SEE DETAILS ON SHEET 9.
*** SEE DETAILS ON SHEET 10.
□ WETLAND P

HORIZONTAL SCALE IN FEET
0 250 500 1000

SCHEMATIC PLAN

LAW-7-2.17

4
633

UA\173608714\LAW\75923\roadway\sheets\75923GB002-2B.dgn 6/16/2022 10:19:52 AM SLParker

CURVE DATA
RAMP C
CURVE NO. 1

P.I. STA. 121+46.57
Δ = 22° 43' 51" (LT)
Dc = 6° 55' 23"
R = 827.61'
T = 166.35'
L = 328.33'
E = 16.55'
e_{max} = 6.80%
PC STA. 119+80.21
PT STA. 123+08.55

CURVE DATA
RAMP C
CURVE NO. 2

P.I. STA. 127+45.87
Δ = 10° 02' 27" (LT)
Dc = 3° 00' 00"
R = 1,909.86'
T = 111.22'
L = 222.19'
E = 3.24'
TS STA. 124+71.85
SC STA. 126+96.85

θs BACK = 3° 22' 30"
Ls = 225.00'
Ts = 274.02'
LT = 150.03'
ST = 75.02'
e_{max} (N.D.C.) = 6.00%
e_{max} = 2.22%

CURVE DATA
RAMP D
CURVE NO. 1

P.I. STA. 116+98.94
Δ = 37° 15' 49" (RT)
Dc = 12° 00' 00"
R = 477.46'
T = 160.98'
L = 310.53'
E = 26.41'
e_{max} = 7.30%
PC STA. 115+37.96
PT STA. 118+48.49

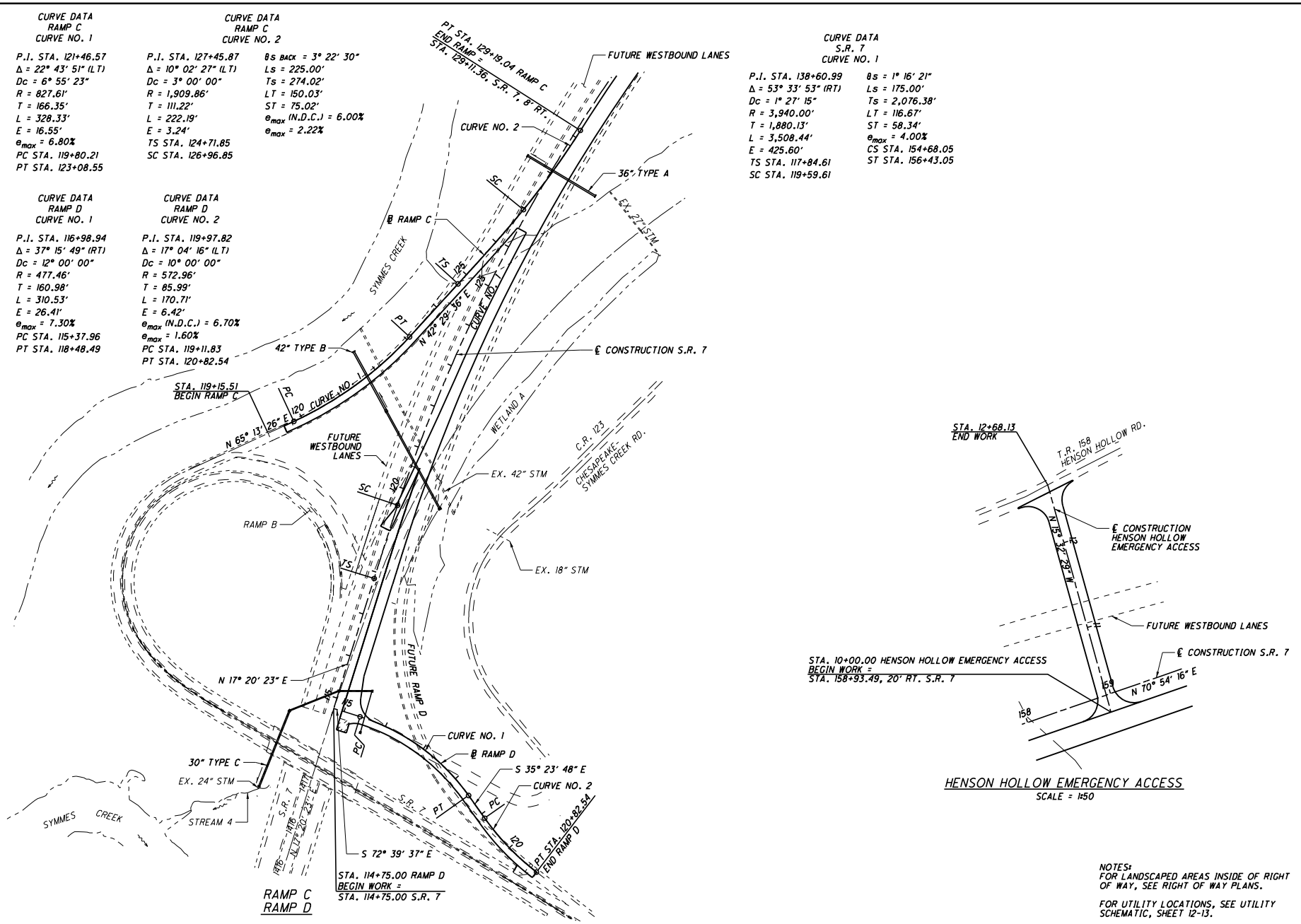
CURVE DATA
RAMP D
CURVE NO. 2

P.I. STA. 119+97.82
Δ = 17° 04' 16" (LT)
Dc = 10° 00' 00"
R = 572.96'
T = 85.99'
L = 170.71'
E = 6.42'
e_{max} (N.D.C.) = 6.70%
e_{max} = 1.60%
PC STA. 119+11.83
PT STA. 120+82.54

CURVE DATA
S.R. 7
CURVE NO. 1

P.I. STA. 138+60.99
Δ = 53° 33' 53" (RT)
Dc = 1° 27' 15"
R = 3,940.00'
T = 1,880.13'
L = 3,508.44'
E = 425.60'
TS STA. 117+84.61
SC STA. 119+59.61

θs = 1° 16' 21"
Ls = 175.00'
Ts = 2,076.38'
LT = 116.67'
ST = 58.34'
e_{max} = 4.00%
CS STA. 154+68.05
ST STA. 156+43.05



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SCALE = 1:50

NOTES:
FOR LANDSCAPED AREAS INSIDE OF RIGHT OF WAY, SEE RIGHT OF WAY PLANS.

FOR UTILITY LOCATIONS, SEE UTILITY SCHEMATIC, SHEET 12-13.

HORIZONTAL SCALE IN FEET
0 50 100 200

SCHEMATIC PLAN

LAW-7-2.17

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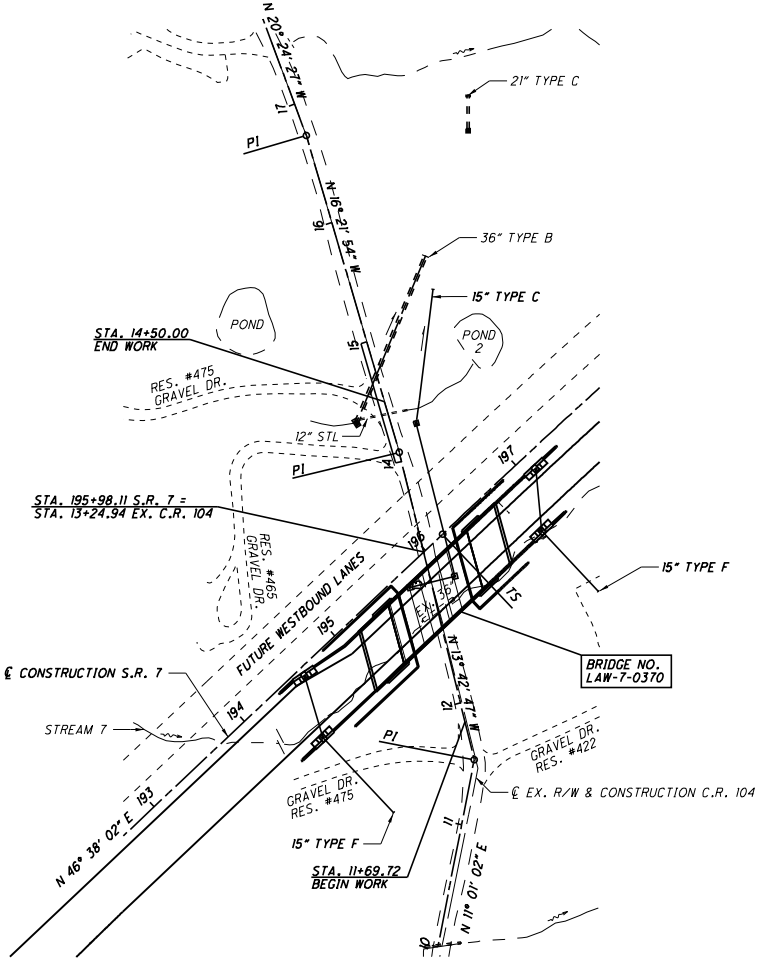
EX. C.R. 104

P.I. STA. 11+53.11
Δ = 2° 41' 45" (LT)
NO CURVE

P.I. STA. 14+07.46
Δ = 2° 39' 07" (LT)
NO CURVE

P.I. STA. 16+72.90
Δ = 4° 02' 33" (LT)
NO CURVE



C.R. 104

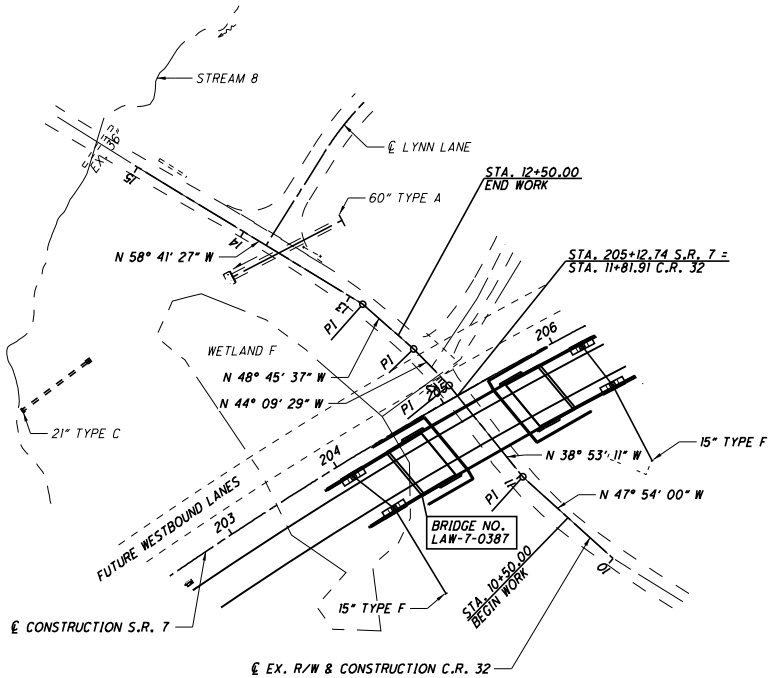
EX. C.R. 32

P.I. STA. 10+98.09
Δ = 9° 00' 49" (RT)
NO CURVE

P.I. STA. 11+92.44
Δ = 5° 16' 19" (LT)
NO CURVE

P.I. STA. 12+33.35
Δ = 4° 36' 07" (LT)
NO CURVE

P.I. STA. 12+87.96
Δ = 9° 55' 50" (LT)
NO CURVE



C.R. 32

NOTES:

FOR LANDSCAPED AREAS INSIDE OF RIGHT OF WAY, SEE RIGHT OF WAY PLANS.

FOR UTILITY LOCATIONS, SEE UTILITY SCHEMATIC, SHEETS 12-13.

HORIZONTAL SCALE IN FEET
0 25 50 100

SCHEMATIC PLAN

LAW-7-2.17

6
633

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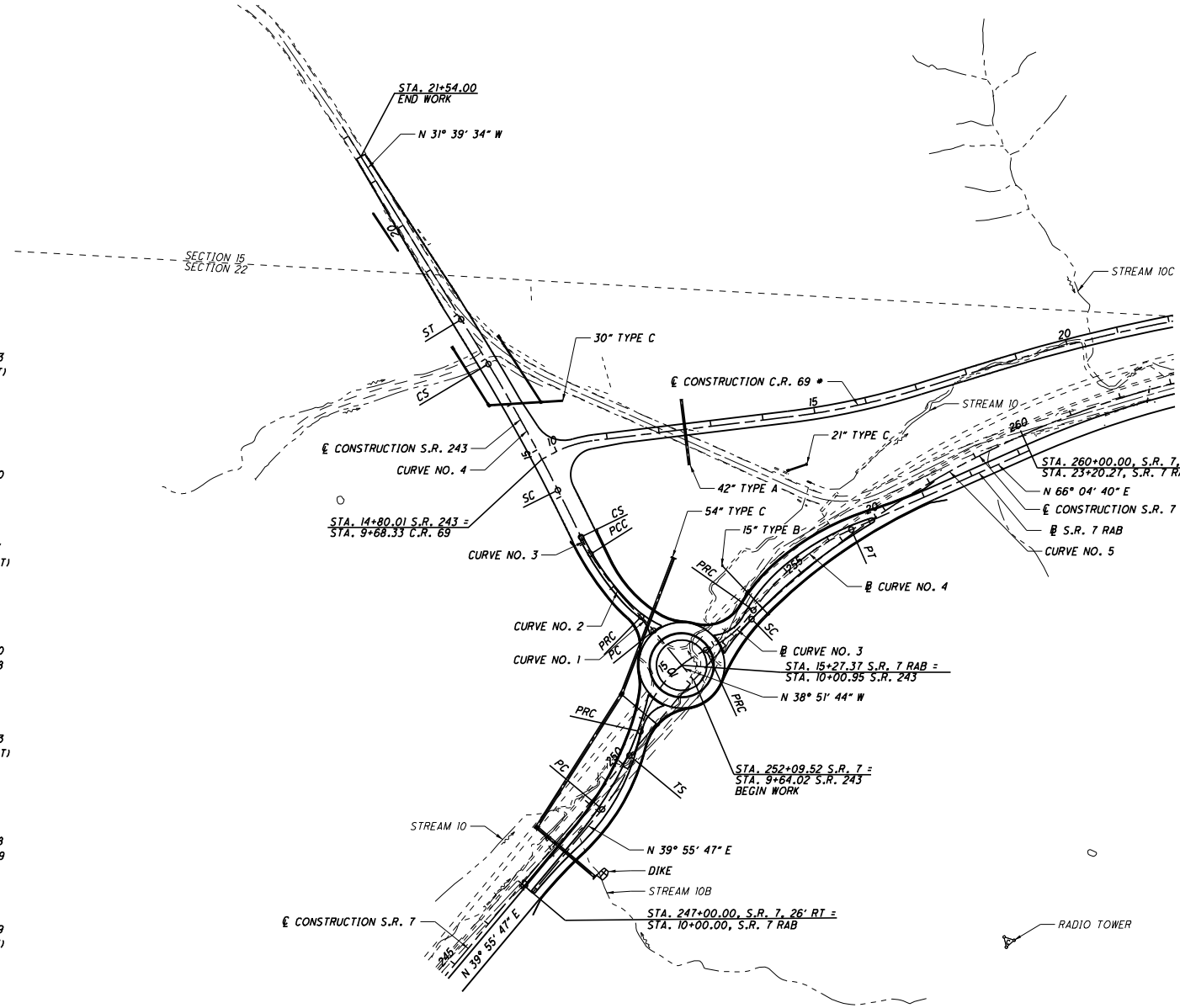

CURVE DATA
℄ S.R. 7 RAB
CURVE NO. 1

P.I. Sta. 12+93.43
Δ = 27° 26' 21" (LT)
Dc = 16° 22' 13"
R = 350.00'
T = 85.45'
L = 167.62'
E = 10.28'
PC Sta. 12+07.99
PRC Sta. 13+75.60

CURVE DATA
℄ S.R. 7 RAB
CURVE NO. 2

P.I. Sta. 14+87.13
Δ = 52° 43' 55" (RT)
Dc = 25° 27' 53"
R = 225.00'
T = 111.52'
L = 207.08'
E = 26.12'
PRC Sta. 13+75.60
PRC Sta. 15+82.68

CURVE DATA
℄ S.R. 7 RAB
CURVE NO. 3

P.I. Sta. 16+43.83
Δ = 30° 24' 24" (LT)
Dc = 25° 27' 53"
R = 225.00'
T = 61.15'
L = 119.41'
E = 8.16'
PRC Sta. 15+82.68
PRC Sta. 17+02.09

CURVE DATA
℄ S.R. 7 RAB
CURVE NO. 4

P.I. Sta. 18+27.99
Δ = 31° 15' 43" (RT)
Dc = 12° 43' 57"
R = 450.00'
T = 125.90'
L = 245.53'
E = 17.28'
PRC Sta. 17+02.09
PT Sta. 19+47.62

CURVE DATA
S.R. 243
CURVE NO. 1

P.I. Sta. 11+03.86
Δ = 6° 51' 57" (LT)
Dc = 19° 05' 55"
R = 300.00'
T = 18.00'
L = 35.95'
E = 0.54'
e_{max} = 1.60%
PC Sta. 10+85.87
PRC Sta. 11+21.82

CURVE DATA
S.R. 243
CURVE NO. 2

P.I. Sta. 11+99.38
Δ = 13° 36' 35" (RT)
Dc = 8° 48' 53"
R = 650.00'
T = 77.56'
L = 154.40'
E = 4.61'
e_{max} = 1.60%
PRC Sta. 11+21.82
PCC Sta. 12+76.21

CURVE DATA
S.R. 243
CURVE NO. 3

P.I. Sta. 12+94.82
Δ = 6° 05' 09" (RT)
Dc = 16° 22' 13"
R = 350.00'
T = 18.61'
L = 37.18'
E = 0.49'
e_{max} = 1.60%
PCC Sta. 12+76.21
CS Sta. 13+13.39

CURVE DATA
S.R. 243
CURVE NO. 4

P.I. Sta. 15+51.11
Δ = 5° 37' 36" (LT)
Dc = 1° 30' 00"
R = 3,819.72'
T = 137.62'
L = 275.13'
E = 2.48'
TS STA. 13+13.39
SC STA. 14+13.39
θs = 00° 45' 00"
Ls = 100.00'
Ts = 237.72'
LT = 66.67'
ST = 33.33'
e_{max} = 3.50%
CS Sta. 16+88.52
ST Sta. 17+88.52

CURVE DATA
S.R. 7
CURVE NO. 5

P.I. STA. 261+89.75
Δ = 58° 46' 06" (RT)
Dc = 3° 15' 00"
R = 1,762.95'
T = 773.76'
L = 1,458.26'
E = 162.33'
TS STA. 250+20.45
SC STA. 253+70.45
θs = 5° 41' 15"
Ls = 350.00'
Ts = 1,169.30'
LT = 233.45'
ST = 116.78'
e_{max} = 7.10%
CS STA. 268+28.71
ST STA. 271+78.71

NOTES:
FOR LANDSCAPED AREAS INSIDE OF RIGHT OF WAY, SEE RIGHT OF WAY PLANS.

FOR UTILITY LOCATIONS, SEE UTILITY SCHEMATIC, SHEET 12-13.

* SEE DETAILS ON SHEET 8

HORIZONTAL SCALE IN FEET
0 50 100 200

SCHEMATIC PLAN

LAW-7-2.17

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633

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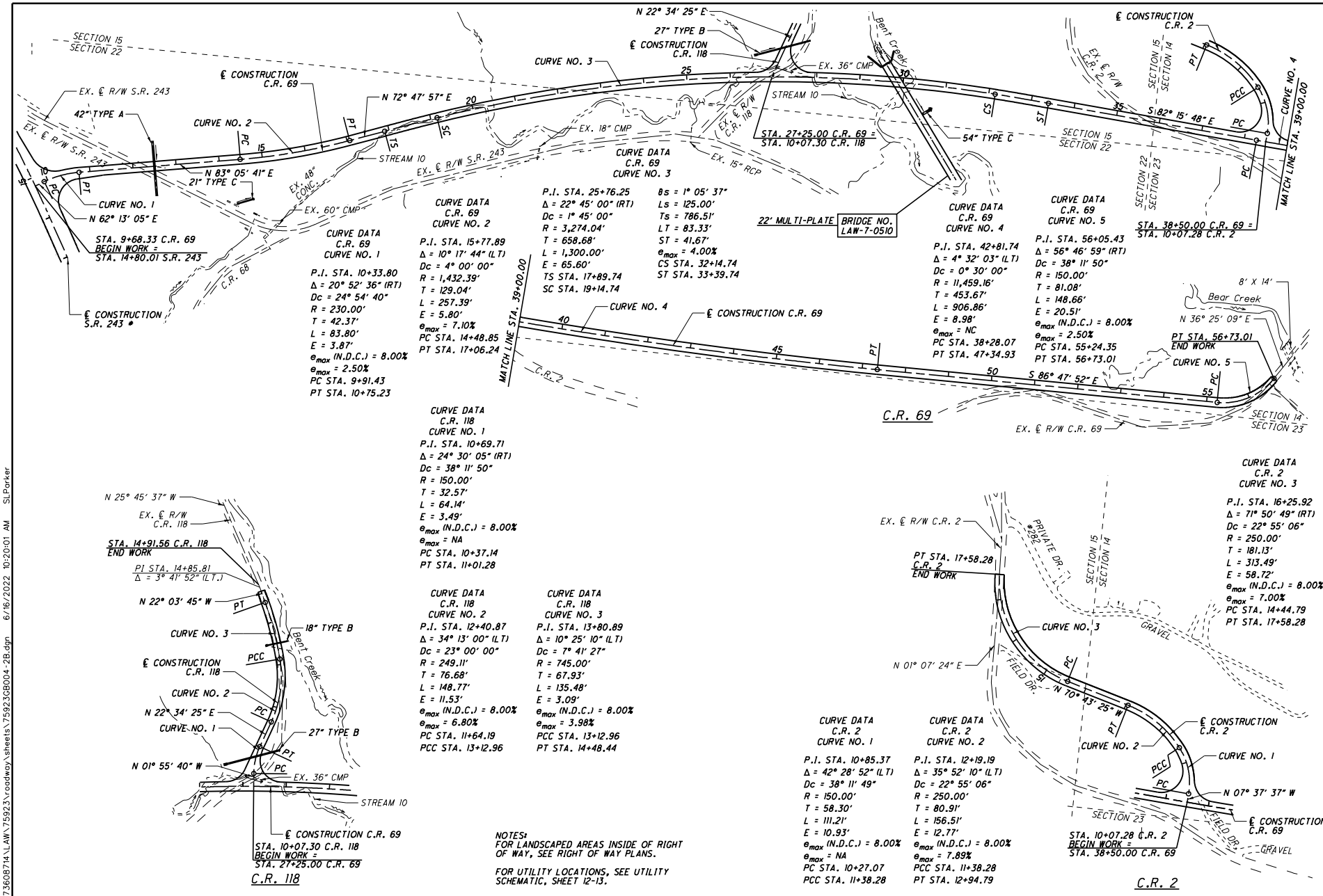
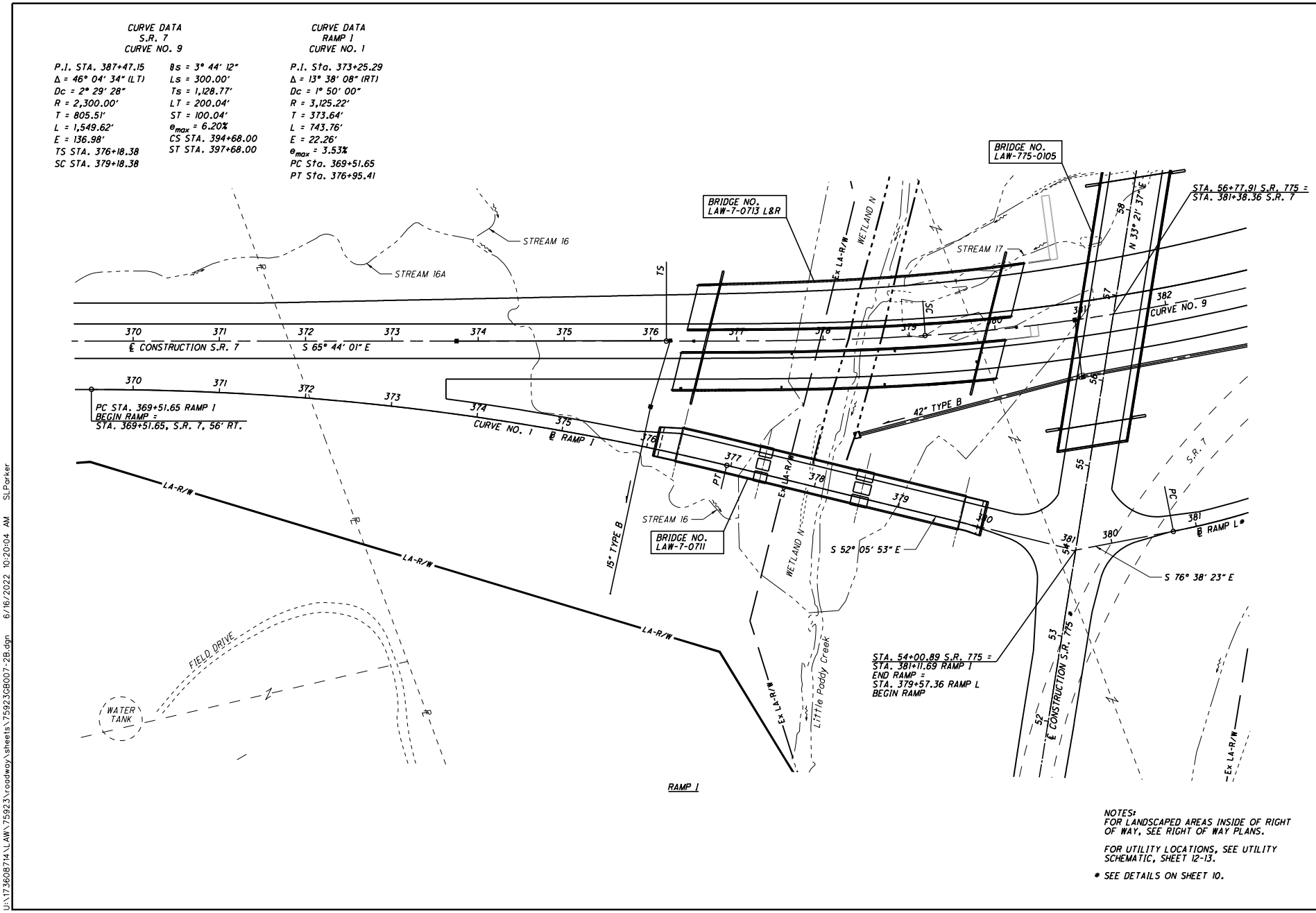

SECTION 15
SECTION 22
EX. ℄ R/W S.R. 243
42" TYPE A
℄ CONSTRUCTION C.R. 69
CURVE NO. 2
N 72° 47' 57" E
N 83° 05' 41" E
21" TYPE C
EX. 48" CONC.
EX. 60" CMP
STREAM 10
CURVE NO. 1
N 62° 13' 05" E
STA. 9+68.33 C.R. 69
BEGIN WORK =
STA. 14+80.01 S.R. 243
℄ CONSTRUCTION S.R. 243 *
C.R. 68
CURVE DATA C.R. 69 CURVE NO. 1
P.I. STA. 10+33.80
Δ = 20° 52' 36" (RT)
Dc = 24° 54' 40"
R = 230.00'
T = 42.37'
L = 83.80'
E = 3.87'
e_max (N.D.C.) = 8.00%
e_max = 2.50%
PC STA. 9+91.43
PT STA. 10+75.23
CURVE DATA C.R. 69 CURVE NO. 2
P.I. STA. 15+77.89
Δ = 10° 17' 44" (LT)
Dc = 4° 00' 00"
R = 1,432.39'
T = 129.04'
L = 257.39'
E = 5.80'
e_max = 7.10%
PC STA. 14+48.85
PT STA. 17+06.24
N 22° 34' 25" E
27" TYPE B
℄ CONSTRUCTION C.R. 118
CURVE NO. 3
EX. 36" CMP
EX. ℄ R/W C.R. 118
EX. 18" CMP
EX. 15" RCP
STA. 27+25.00 C.R. 69 =
STA. 10+07.30 C.R. 118
54" TYPE C
22' MULTI-PLATE
BRIDGE NO. LAW-7-0510
CURVE DATA C.R. 69 CURVE NO. 3
P.I. STA. 25+76.25
Δ = 22° 45' 00" (RT)
Dc = 1° 45' 00"
R = 3,274.04'
T = 658.68'
L = 1,300.00'
E = 65.60'
TS STA. 17+89.74
SC STA. 19+14.74
θs = 1° 05' 37"
Ls = 125.00'
Ts = 786.51'
LT = 83.33'
ST = 41.67'
e_max = 4.00%
CS STA. 32+14.74
ST STA. 33+39.74
CURVE DATA C.R. 69 CURVE NO. 4
P.I. STA. 42+81.74
Δ = 4° 32' 03" (LT)
Dc = 0° 30' 00"
R = 11,459.16'
T = 453.67'
L = 906.86'
E = 8.98'
e_max = NC
PC STA. 38+28.07
PT STA. 47+34.93
CURVE DATA C.R. 69 CURVE NO. 5
P.I. STA. 56+05.43
Δ = 56° 46' 59" (RT)
Dc = 38° 11' 50"
R = 150.00'
T = 81.08'
L = 148.66'
E = 20.51'
e_max (N.D.C.) = 8.00%
e_max = 2.50%
PC STA. 55+24.35
PT STA. 56+73.01
STA. 38+50.00 C.R. 69 =
STA. 10+07.28 C.R. 2
℄ CONSTRUCTION C.R. 2
CURVE NO. 4
MATCH LINE STA. 39+00.00
S 82° 15' 48" E
SECTION 15
SECTION 14
SECTION 22
SECTION 23
MATCH LINE STA. 39+00.00
CURVE NO. 4
℄ CONSTRUCTION C.R. 69
S 86° 47' 52" E
C.R. 69
EX. ℄ R/W C.R. 69
8' X 14'
Bear Creek
N 36° 25' 09" E
PT STA. 56+73.01
END WORK
CURVE NO. 5
SECTION 14
SECTION 23
N 25° 45' 37" W
EX. ℄ R/W C.R. 118
STA. 14+91.56 C.R. 118
END WORK
PI STA. 14+85.81
Δ = 3° 41' 52" (LT.)
N 22° 03' 45" W
CURVE NO. 3
18" TYPE B
Bent Creek
℄ CONSTRUCTION C.R. 118
CURVE NO. 2
N 22° 34' 25" E
CURVE NO. 1
N 01° 55' 40" W
27" TYPE B
EX. 36" CMP
STREAM 10
℄ CONSTRUCTION C.R. 69
STA. 10+07.30 C.R. 118
BEGIN WORK =
STA. 27+25.00 C.R. 69
C.R. 118
CURVE DATA C.R. 118 CURVE NO. 1
P.I. STA. 10+69.71
Δ = 24° 30' 05" (RT)
Dc = 38° 11' 50"
R = 150.00'
T = 32.57'
L = 64.14'
E = 3.49'
e_max (N.D.C.) = 8.00%
e_max = NA
PC STA. 10+37.14
PT STA. 11+01.28
CURVE DATA C.R. 118 CURVE NO. 2
P.I. STA. 12+40.87
Δ = 34° 13' 00" (LT)
Dc = 23° 00' 00"
R = 249.11'
T = 76.68'
L = 148.77'
E = 11.53'
e_max (N.D.C.) = 8.00%
e_max = 6.80%
PC STA. 11+64.19
PCC STA. 13+12.96
CURVE DATA C.R. 118 CURVE NO. 3
P.I. STA. 13+80.89
Δ = 10° 25' 10" (LT)
Dc = 7° 41' 27"
R = 745.00'
T = 67.93'
L = 135.48'
E = 3.09'
e_max (N.D.C.) = 8.00%
e_max = 3.98%
PCC STA. 13+12.96
PT STA. 14+48.44
NOTES:
FOR LANDSCAPED AREAS INSIDE OF RIGHT OF WAY, SEE RIGHT OF WAY PLANS.
FOR UTILITY LOCATIONS, SEE UTILITY SCHEMATIC, SHEET 12-13.
* FOR DETAILS, SEE SHEET 7
EX. ℄ R/W C.R. 2
PRIVATE DR. #28
PT STA. 17+58.28
C.R. 2
END WORK
CURVE NO. 3
GRAVEL
N 01° 07' 24" E
FIELD DR.
N 70° 43' 25" W
CURVE NO. 2
CURVE NO. 1
℄ CONSTRUCTION C.R. 2
N 07° 37' 37" W
℄ CONSTRUCTION C.R. 69
STA. 10+07.28 C.R. 2
BEGIN WORK =
STA. 38+50.00 C.R. 69
C.R. 2
CURVE DATA C.R. 2 CURVE NO. 1
P.I. STA. 10+85.37
Δ = 42° 28' 52" (LT)
Dc = 38° 11' 49"
R = 150.00'
T = 58.30'
L = 111.21'
E = 10.93'
e_max (N.D.C.) = 8.00%
e_max = NA
PC STA. 10+27.07
PCC STA. 11+38.28
CURVE DATA C.R. 2 CURVE NO. 2
P.I. STA. 12+19.19
Δ = 35° 52' 10" (LT)
Dc = 22° 55' 06"
R = 250.00'
T = 80.91'
L = 156.51'
E = 12.77'
e_max (N.D.C.) = 8.00%
e_max = 7.89%
PCC STA. 11+38.28
PT STA. 12+94.79
CURVE DATA C.R. 2 CURVE NO. 3
P.I. STA. 16+25.92
Δ = 71° 50' 49" (RT)
Dc = 22° 55' 06"
R = 250.00'
T = 181.13'
L = 313.49'
E = 58.72'
e_max (N.D.C.) = 8.00%
e_max = 7.00%
PC STA. 14+44.79
PT STA. 17+58.28
HORIZONTAL SCALE IN FEET
0
50
100
200
SCHEMATIC PLAN
LAW-7-2.17
8
633



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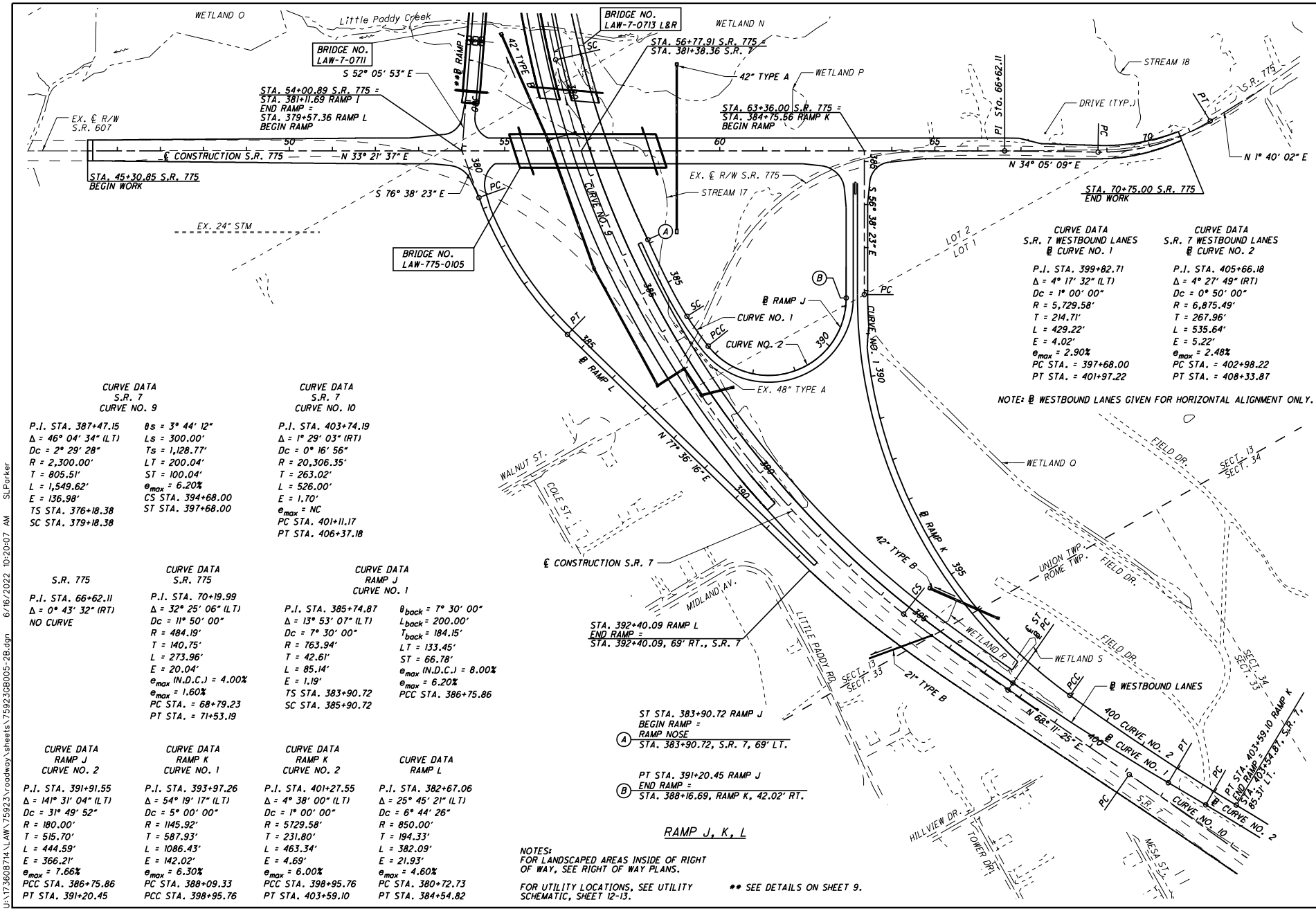


CURVE DATA S.R. 7 WESTBOUND LANES ℄ CURVE NO. 1

P.I. STA. 399+82.71
Δ = 4° 17' 32" (LT)
Dc = 1° 00' 00"
R = 5,729.58'
T = 214.71'
L = 429.22'
E = 4.02'
e_{max} = 2.90%
PC STA. = 397+68.00
PT STA. = 401+97.22

CURVE DATA S.R. 7 WESTBOUND LANES ℄ CURVE NO. 2

P.I. STA. 405+66.18
Δ = 4° 27' 49" (RT)
Dc = 0° 50' 00"
R = 6,875.49'
T = 267.96'
L = 535.64'
E = 5.22'
e_{max} = 2.48%
PC STA. = 402+98.22
PT STA. = 408+33.87

NOTE: ℄ WESTBOUND LANES GIVEN FOR HORIZONTAL ALIGNMENT ONLY.

CURVE DATA S.R. 7 CURVE NO. 9

P.I. STA. 387+47.15
Δ = 46° 04' 34" (LT)
Dc = 2° 29' 28"
R = 2,300.00'
T = 805.51'
L = 1,549.62'
E = 136.98'
TS STA. 376+18.38
SC STA. 379+18.38
θs = 3° 44' 12"
Ls = 300.00'
Ts = 1,128.77'
LT = 200.04'
ST = 100.04'
e_{max} = 6.20%
CS STA. 394+68.00
ST STA. 397+68.00

CURVE DATA S.R. 7 CURVE NO. 10

P.I. STA. 403+74.19
Δ = 1° 29' 03" (RT)
Dc = 0° 16' 56"
R = 20,306.35'
T = 263.02'
L = 526.00'
E = 1.70'
e_{max} = NC
PC STA. 401+11.17
PT STA. 406+37.18

S.R. 775

P.I. STA. 66+62.11
Δ = 0° 43' 32" (RT)
NO CURVE

CURVE DATA S.R. 775

P.I. STA. 70+19.99
Δ = 32° 25' 06" (LT)
Dc = 11° 50' 00"
R = 484.19'
T = 140.75'
L = 273.96'
E = 20.04'
e_{max} (N.D.C.) = 4.00%
e_{max} = 1.60%
PC STA. = 68+79.23
PT STA. = 71+53.19

CURVE DATA RAMP J CURVE NO. 1

P.I. STA. 385+74.87
Δ = 13° 53' 07" (LT)
Dc = 7° 30' 00"
R = 763.94'
T = 42.61'
L = 85.14'
E = 1.19'
TS STA. 383+90.72
SC STA. 385+90.72
$θ_{back}$ = 7° 30' 00"
L_{back} = 200.00'
T_{back} = 184.15'
LT = 133.45'
ST = 66.78'
e_{max} (N.D.C.) = 8.00%
e_{max} = 6.20%
PCC STA. 386+75.86

CURVE DATA RAMP J CURVE NO. 2

P.I. STA. 391+91.55
Δ = 141° 31' 04" (LT)
Dc = 31° 49' 52"
R = 180.00'
T = 515.70'
L = 444.59'
E = 366.21'
e_{max} = 7.66%
PCC STA. 386+75.86
PT STA. 391+20.45

CURVE DATA RAMP K CURVE NO. 1

P.I. STA. 393+97.26
Δ = 54° 19' 17" (LT)
Dc = 5° 00' 00"
R = 1145.92'
T = 587.93'
L = 1086.43'
E = 142.02'
e_{max} = 6.30%
PC STA. 388+09.33
PCC STA. 398+95.76

CURVE DATA RAMP K CURVE NO. 2

P.I. STA. 401+27.55
Δ = 4° 38' 00" (LT)
Dc = 1° 00' 00"
R = 5729.58'
T = 231.80'
L = 463.34'
E = 4.69'
e_{max} = 6.00%
PCC STA. 398+95.76
PT STA. 403+59.10

CURVE DATA RAMP L

P.I. STA. 382+67.06
Δ = 25° 45' 21" (LT)
Dc = 6° 44' 26"
R = 850.00'
T = 194.33'
L = 382.09'
E = 21.93'
e_{max} = 4.60%
PC STA. 380+72.73
PT STA. 384+54.82

HORIZONTAL SCALE IN FEET
0 50 100 200

SCHEMATIC PLAN

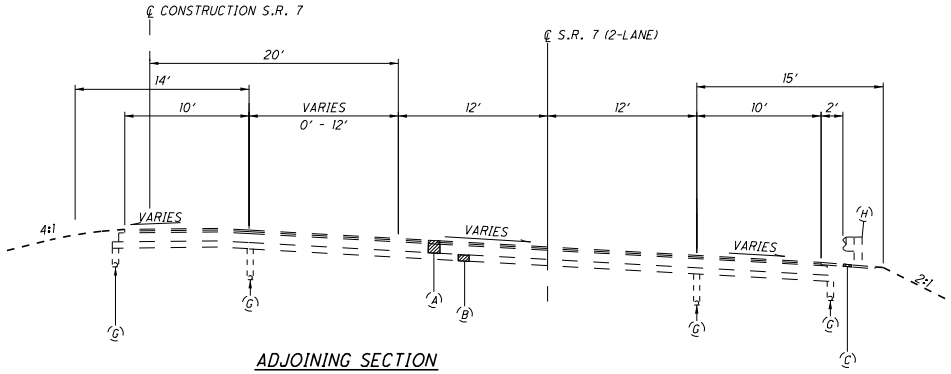
LAW-7-2.17

10 633

LEGEND

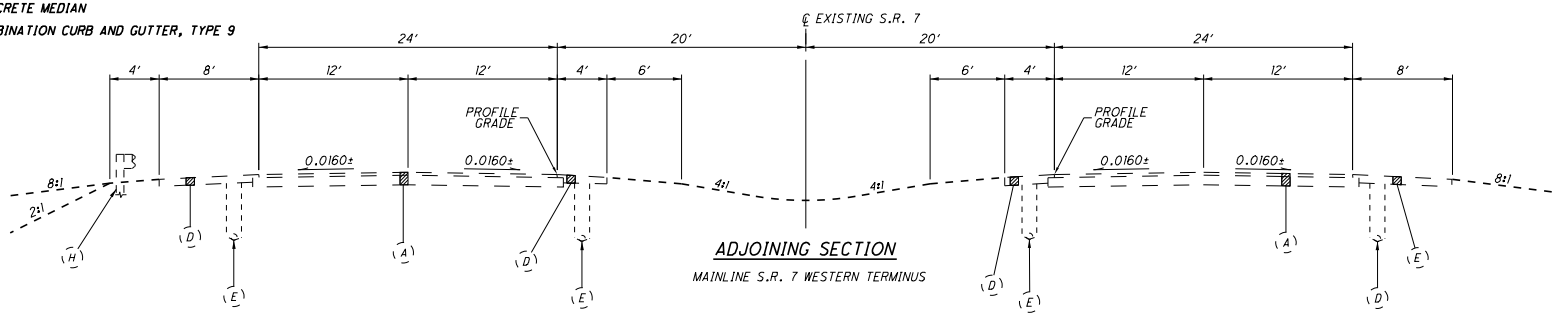
1. ITEM 442 - 1 1/2" ASPHALT CONCRETE SURFACE COURSE, 12.5MM, TYPE A (446)
2. ITEM 442 - 1 3/4" ASPHALT CONCRETE INTERMEDIATE COURSE, 12.5MM, TYPE A (446)
3. ITEM 302 - 7" ASPHALT CONCRETE BASE, PG64-22, (449)
4. ITEM 304 - 6" AGGREGATE BASE
5. ITEM 407 - TACK COAT
6. ITEM 609 - CURB, TYPE 6
7. ITEM 609 - COMBINATION CURB AND GUTTER, TYPE 2
8. ITEM 605 - AGGREGATE DRAIN (SLOPE @ 0.04 MIN., 0.08 DESIRABLE)
9. ITEM 441 - 2" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, (449), (UNDER GUARDRAIL), AS PER PLAN
10. ITEM 605 - 4" BASE PIPE UNDERDRAIN
11. ITEM 605 - 6" SHALLOW PIPE UNDERDRAIN
12. ITEM 605 - 6" BASE PIPE UNDERDRAIN
13. ITEM 441 - 1 1/4" ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (449), PG64-22
14. ITEM 441 - 1 3/4" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, (449)
15. ITEM 301 - 3" ASPHALT CONCRETE BASE PG64-22, (449)
16. ITEM 659 - SEEDING AND MULCHING
17. ITEM 204 - SUBGRADE COMPACTION
18. ITEM 204 - PROOF ROLLING
19. ITEM 606 - GUARDRAIL, TYPE MGS
20. ITEM 606 - GUARDRAIL, TYPE MGS WITH LONG POSTS
21. ITEM 609 - CONCRETE MEDIAN
22. ITEM 609 - COMBINATION CURB AND GUTTER, TYPE 9

(A) EX. 12"± ASPHALT CONCRETE
(B) EX. 6"± SUBBASE
(C) 2" ASPHALT CONCRETE
(D) ASPHALT CONCRETE BERM
(E) UNDERDRAIN
(F) GUARDRAIL, TYPE 5



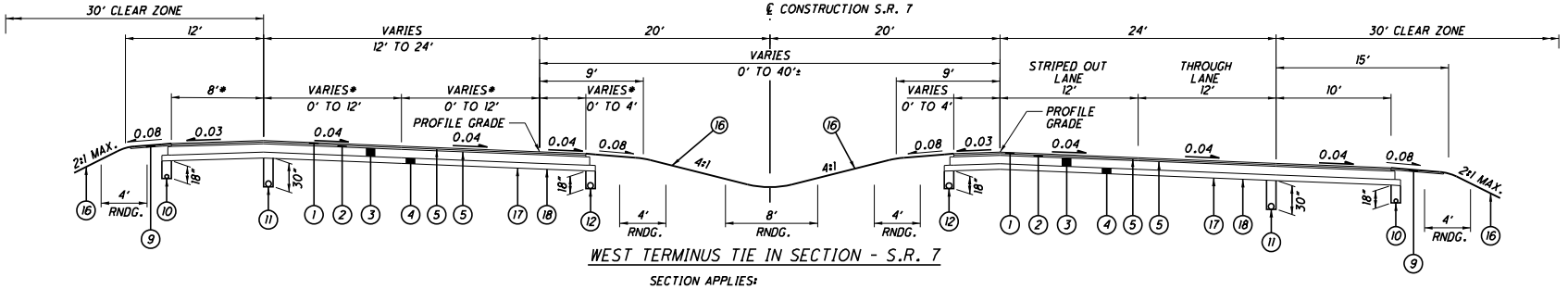
ADJOINING SECTION

MAINLINE S.R. 7 EASTERN TERMINUS



ADJOINING SECTION

MAINLINE S.R. 7 WESTERN TERMINUS



WEST TERMINUS TIE IN SECTION - S.R. 7

SECTION APPLIES:

STA. 114+30.42 TO STA. 120+56.37

* MILL/FILL EXISTING SECTION FROM STA. 114+30.42 TO STA. 118+99.14

NOTES:

FOR DITCH DETAILS, SEE SHEET 23
FOR EDGE COURSE DETAILS, SEE SHEET 24
FOR EXACT LOCATION OF UNDERDRAINS, SEE UNDERDRAIN TABLE SHEETS 579-583

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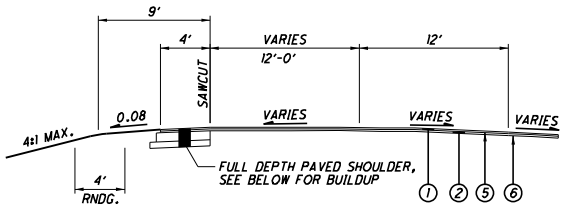
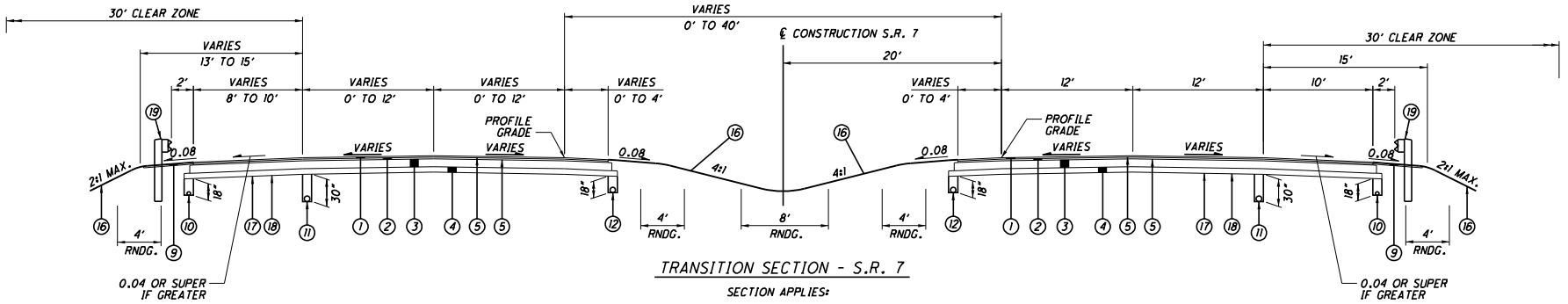
TYPICAL SECTIONS - S.R. 7

LAW-7-2.17



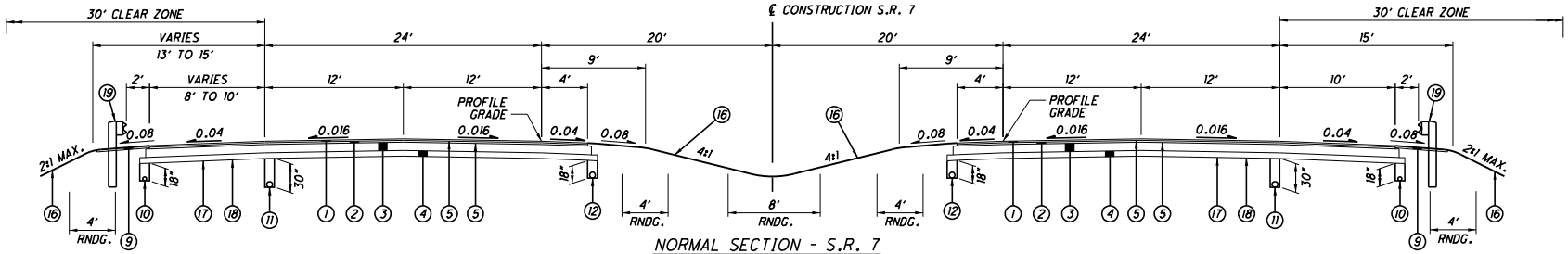
OVERLAY SECTION - S.R. 7

SECTION APPLIES:
STA. 427+42.37 TO STA. 437+16.83



TRANSITION SECTION - S.R. 7

SECTION APPLIES:
STA. 309+49.89 TO STA. 319+56.62
STA. 424+88.90 TO STA. 437+16.83



NORMAL SECTION - S.R. 7

SECTION APPLIES:
STA. 335+67.69 TO STA. 348+41.10
STA. 361+89.83 TO STA. 375+75.38

NOTES:
- SUPERELEVATION TO BE OPPOSITE HAND TO TYPICAL SHOWN
- FOR LEGEND, SEE SHEET 14
- FOR DITCH DETAILS, SEE SHEET 23
- FOR EDGE COURSE DETAILS, SEE SHEET 24
- FOR SUPERELEVATED SHOULDER DETAILS, SEE DETAIL A, SHEET 24
- FOR EXACT LOCATION OF UNDERDRAINS, SEE UNDERDRAIN TABLE SHEETS 579-583

TYPICAL SECTION - S.R. 7

LAW-7-2.17

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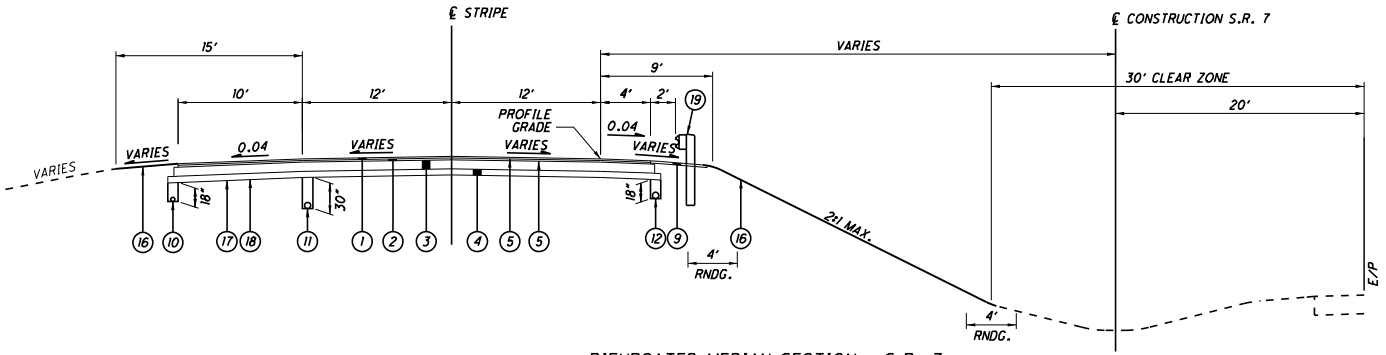
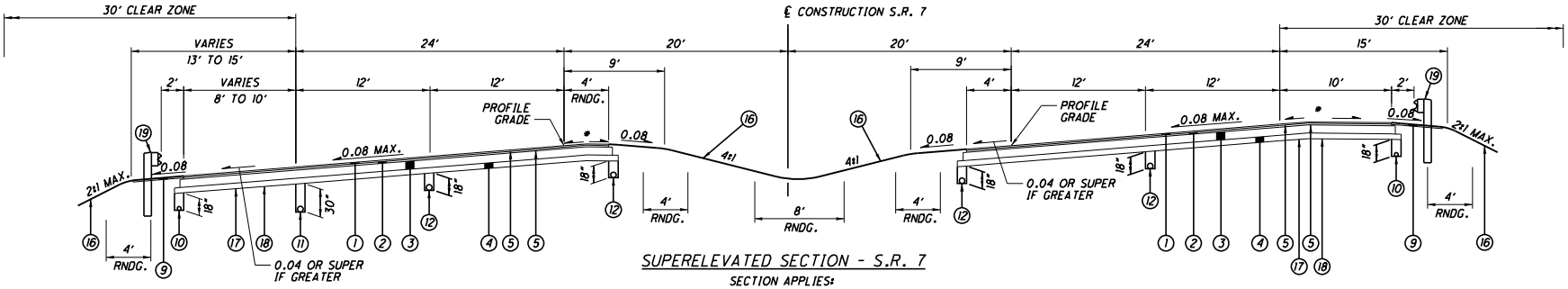


BIFURCATED MEDIAN SECTION - S.R. 7

SECTION APPLIES:
STA. 397+68.00 TO STA. 424+88.90



SUPERELEVATED SECTION - S.R. 7

SECTION APPLIES:
+ STA. 319+56.52 TO STA. 335+67.69
STA. 348+41.10 TO STA. 361+89.83
STA. 375+75.38 TO STA. 397+68.00

NOTES:
+ SUPERELEVATION TO BE OPPOSITE HAND TO TYPICAL SHOWN
FOR LEGEND, SEE SHEET 14
FOR DITCH DETAILS, SEE SHEET 23
FOR EDGE COURSE DETAILS, SEE SHEET 24
* FOR SUPERELEVATED SHOULDER DETAILS, SEE DETAIL A, SHEET 24
FOR EXACT LOCATION OF UNDERDRAINS, SEE UNDERDRAIN TABLE SHEETS 579-583

TYPICAL SECTION - S.R. 7

LAW-7-2.17

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633

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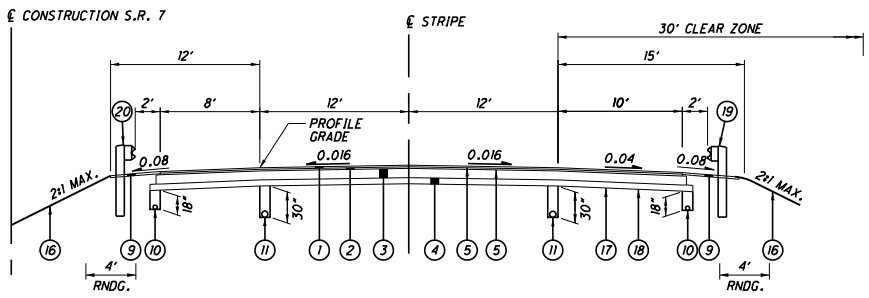
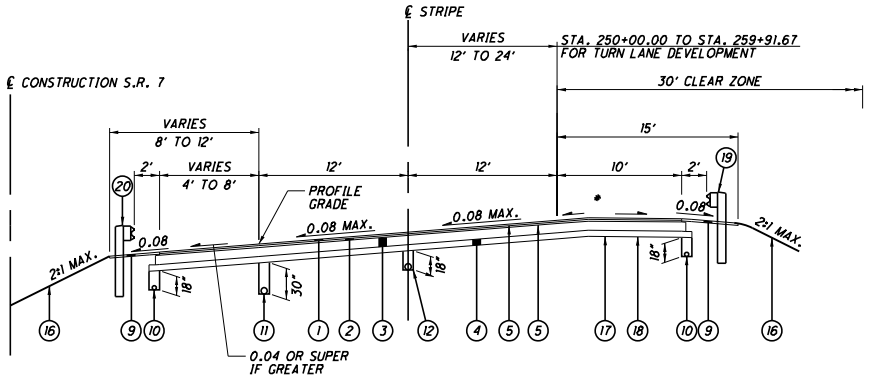


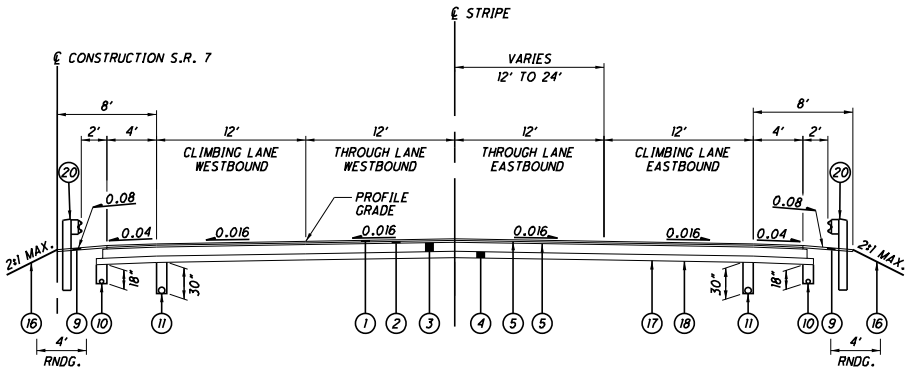
NORMAL SECTION - S.R. 7

SECTION APPLIES:
STA. 156+86.05 TO STA. 167+72.52
STA. 195+00.00 TO STA. 195+76.13
STA. 272+21.71 TO STA. 276+94.12
STA. 284+90.71 TO STA. 309+49.89



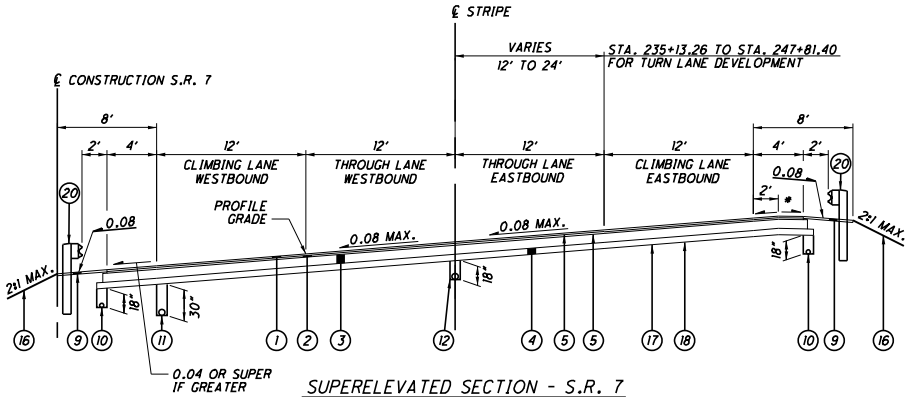
SUPERELEVATED SECTION - S.R. 7

SECTION APPLIES:
+ STA. 120+56.37 TO STA. 156+86.05
STA. 195+76.13 TO STA. 209+79.72
+ STA. 257+84.54 TO STA. 272+21.71
STA. 276+94.12 TO STA. 284+90.71
STA. 376+00.00 TO STA. 390+75.00



NORMAL SECTION - S.R. 7
WITH CLIMBING LANES

SECTION APPLIES:
STA. 167+72.52 TO STA. 174+60.18
STA. 189+35.26 TO STA. 195+00.00
STA. 214+59.27 TO STA. 225+85.73
STA. 237+92.08 TO STA. 247+00.00



SUPERELEVATED SECTION - S.R. 7
WITH CLIMBING LANES

SECTION APPLIES:
STA. 174+60.18 TO STA. 189+35.26
+ STA. 209+79.72 TO STA. 214+59.27
STA. 225+85.73 TO STA. 237+92.08

NOTES:
+ SUPERELEVATION TO BE OPPOSITE HAND TO TYPICAL SHOWN
FOR LEGEND, SEE SHEET 14
FOR DITCH DETAILS, SEE SHEET 23
FOR EDGE COURSE DETAILS, SEE SHEET 24
* FOR SUPERELEVATED SHOULDER DETAILS, SEE DETAIL A, SHEET 24
FOR EXACT LOCATION OF UNDERDRAINS, SEE UNDERDRAIN TABLE SHEETS 579-583

TYPICAL SECTION - S.R. 7

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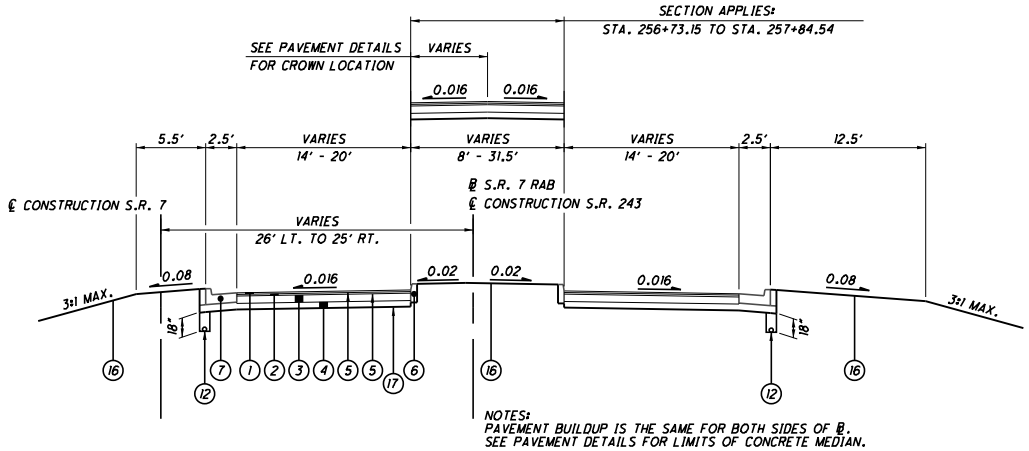
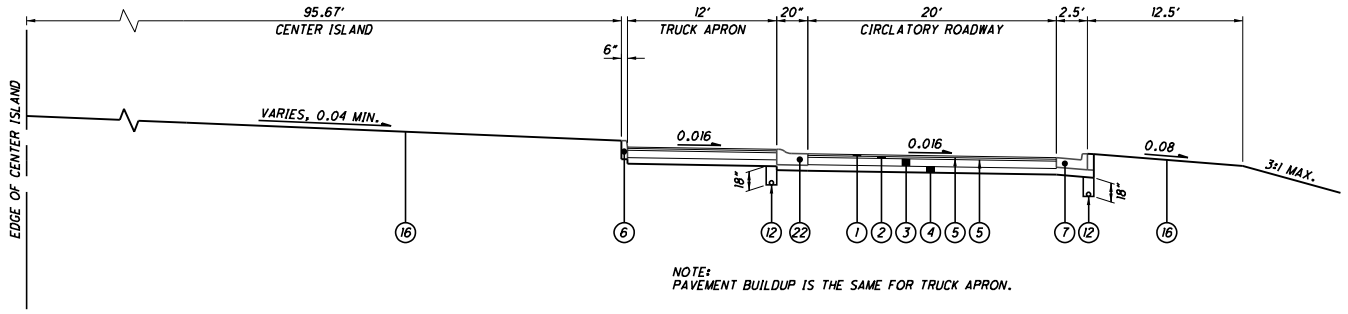


NORMAL SECTION - S.R. 7 RAB & S.R. 243

SECTION APPLIES:
S.R. 7 STA. 247+00.00 TO STA. 251+00.00
S.R. 7 STA. 253+00.00 TO STA. 257+84.54
S.R. 243 STA. 11+00.00 TO STA. 13+07.05



ROUNDABOUT SECTION

NOTES:
FOR DITCH DETAILS, SEE SHEET 23
FOR EDGE COURSE DETAILS, SEE SHEET 24
FOR EXACT LOCATION OF UNDERDRAINS, SEE UNDERDRAIN TABLE SHEETS 579-583

TYPICAL SECTION - S.R. 7

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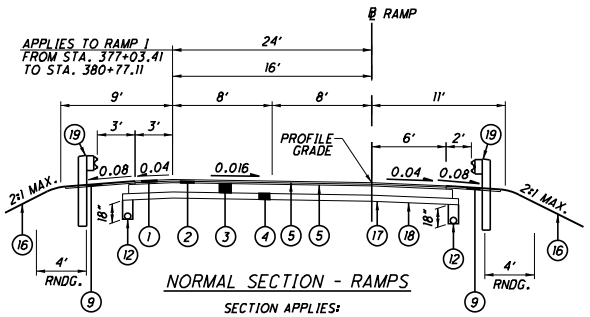
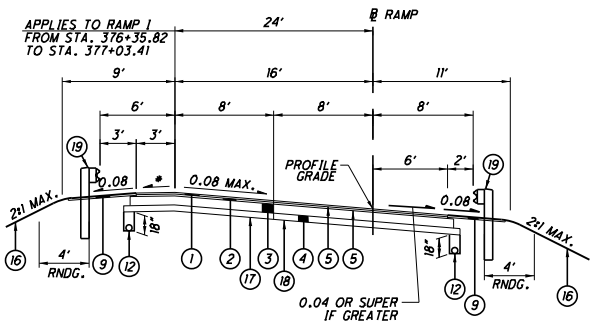


NORMAL SECTION - RAMPS

SECTION APPLIES:

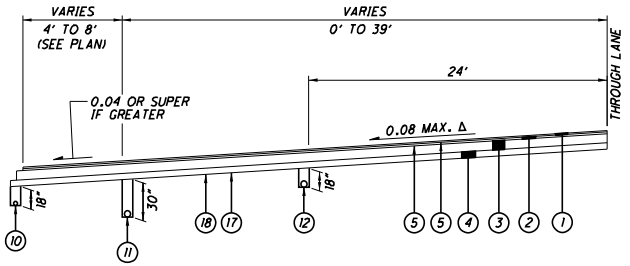
RAMPS C & D @ WESTERN TERMINUS
RAMPS I, J, K & L @ S.R. 775



SUPERELEVATED SECTION - RAMPS

SECTION APPLIES:

RAMPS C & D @ WESTERN TERMINUS
RAMPS I, J, K & L @ S.R. 775



SPEED LANE CHANGE

SECTION APPLIES:

STA. 126+47.37 TO STA. 132+00.00

NOTES:

PROFILE GRADE ON RIGHT SIDE OF DIRECTION OF TRAVEL
\+ SUPERELEVATION TO BE OPPOSITE HAND TO TYPICAL SHOWN
FOR LEGEND, SEE SHEET 14
FOR DITCH DETAILS, SEE SHEET 23
FOR EDGE COURSE DETAILS, SEE SHEET 24
* FOR SUPERELEVATED SHOULDER DETAILS, SEE DETAIL A, SHEET 24
FOR EXACT LOCATION OF UNDERDRAINS, SEE UNDERDRAIN TABLE SHEETS 579-583
Δ DENOTES MAXIMUM FOR ENTIRE PROJECT, FOR SPECIFIC CURVE SUPERELEVATION, SEE PLANS

TYPICAL SECTIONS - RAMPS

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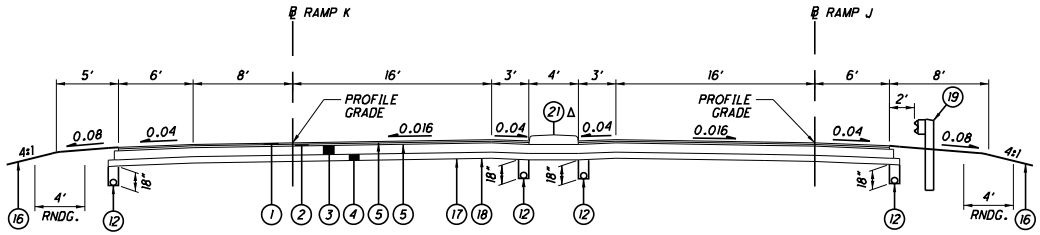
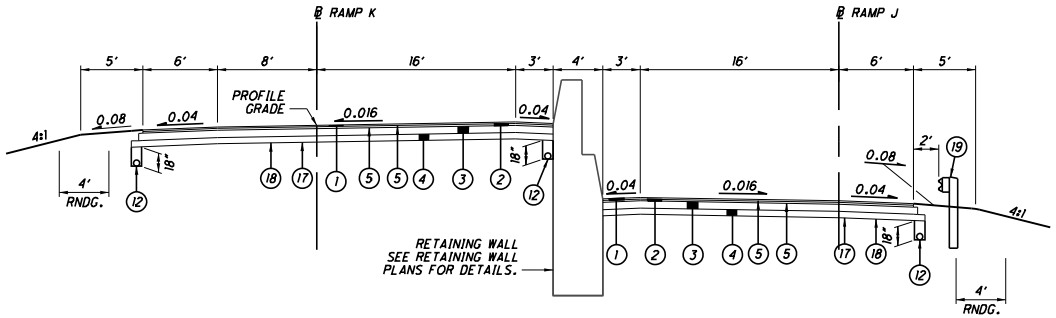


NORMAL SECTION - RAMPS J & K CONCRETE MEDIAN

SECTION APPLIES:

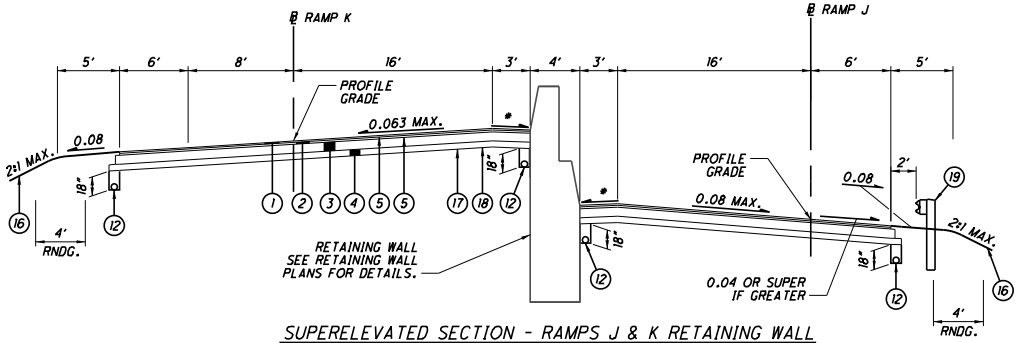
STA. 384+75.56 TO STA. 385+75.77
Δ STA. 385+48.00 TO STA. 385+75.77



NORMAL SECTION - RAMPS

SECTION APPLIES:

STA. 385+75.77 TO STA. 387+63.83



SUPERELEVATED SECTION - RAMPS J & K RETAINING WALL

SECTION APPLIES:

STA. 387+63.83 TO STA. 388+64.51

NOTES:

+ SUPERELEVATION TO BE OPPOSITE HAND TO TYPICAL SHOWN
FOR LEGEND, SEE SHEET 14
FOR DITCH DETAILS, SEE SHEET 23
FOR EDGE COURSE DETAILS, SEE SHEET 24
* FOR SUPERELEVATED SHOULDER DETAILS, SEE DETAIL A, SHEET 24
FOR EXACT LOCATION OF UNDERDRAINS, SEE UNDERDRAIN TABLE SHEETS 579-583

TYPICAL SECTIONS - RAMPS

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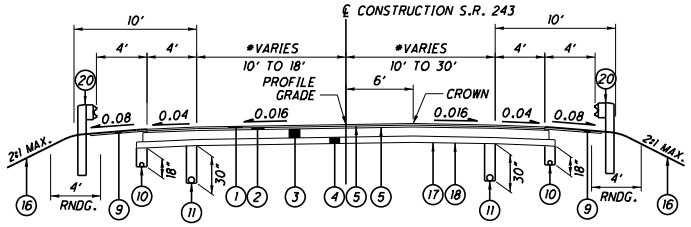
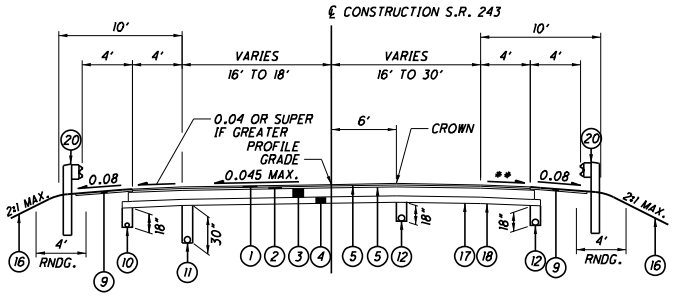


NORMAL SECTION - S.R. 243

SECTION APPLIES:

STA. 12+51.68 TO STA. 12+67.39
STA. 18+34.52 TO STA. 21+54.00

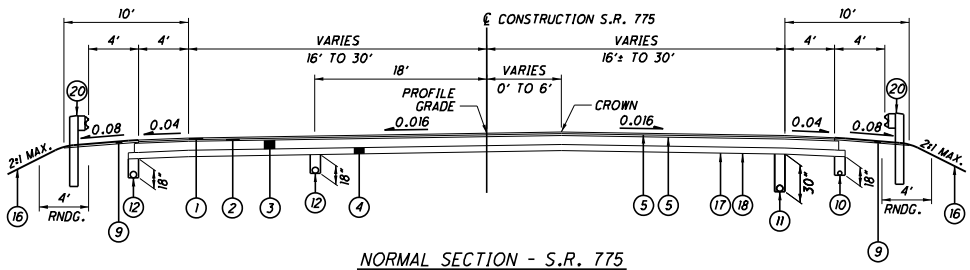
* OVERLAY EXISTING SECTION FROM STA. 19+05.08 TO STA. 21+54.00



SUPERELEVATED SECTION - S.R. 243

SECTION APPLIES:

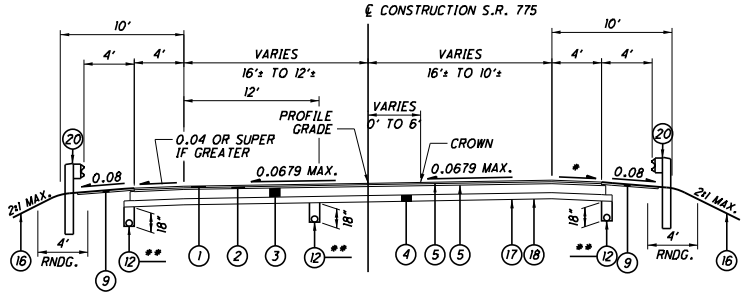
+ STA. 9+36.00 TO STA. 12+51.68
STA. 12+67.39 TO STA. 18+34.52



NORMAL SECTION - S.R. 775

SECTION APPLIES:

STA. 45+42.93 TO STA. 68+10.76



SUPERELEVATED SECTION - S.R. 775

SECTION APPLIES:

STA. 68+10.76 TO STA. 70+75.00

** AGGREGATE DRAINS TO BE USED
FROM STA. 65+50.37 TO STA. 70+75.00.

NOTES:

+ SUPERELEVATION TO BE OPPOSITE HAND TO TYPICAL SHOWN
FOR LEGEND, SEE SHEET 14
FOR DITCH DETAILS, SEE SHEET 23
FOR EDGE COURSE DETAILS, SEE SHEET 24
* FOR SUPERELEVATED SHOULDER DETAILS, SEE DETAIL A, SHEET 24
FOR EXACT LOCATION OF UNDERDRAINS, SEE UNDERDRAIN TABLE SHEETS 579-583

TYPICAL SECTIONS - S.R. 243 & S.R. 775

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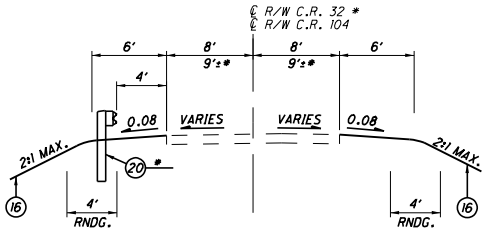
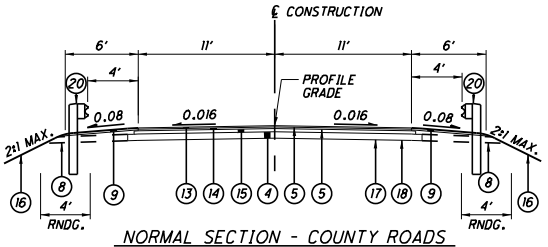


NORMAL SECTION - SIDE ROADS

SECTION APPLIES

C.R. 104
C.R. 32

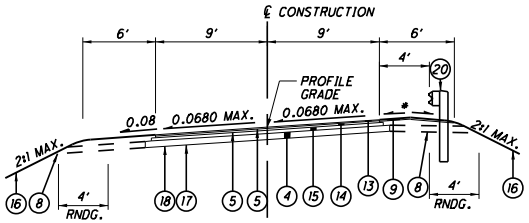


NORMAL SECTION - COUNTY ROADS

SECTION APPLIES:

C.R. 69

STA. 9+90.51 TO STA. 13+27.35
STA. 33+77.74 TO STA. 54+56.85

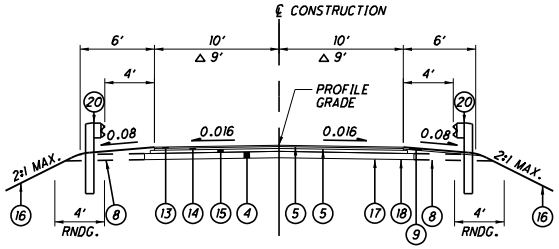


SUPERELEVATED SECTION - SIDE ROADS

SECTION APPLIES

C.R. 118

STA. 10+99.19 TO STA. 14+76.01



NORMAL SECTION - SIDE ROADS

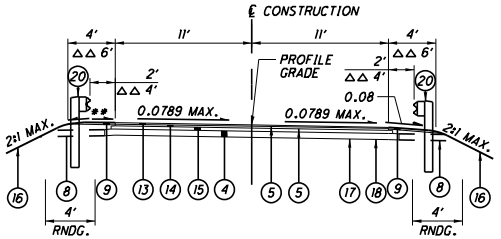
SECTION APPLIES

HENSON HOLLOW EMERGENCY ACCESS

STA. 10+00.00 TO STA. 12+60.04

△ C.R. 118

STA. 10+18.30 TO STA. 10+99.19



SUPERELEVATED SECTION - COUNTY ROADS

SECTION APPLIES:

△△ C.R. 69

STA. 13+27.35 TO STA. 33+77.74
STA. 54+56.85 TO STA. 56+73.01

C.R. 2

+ STA. 10+28.28 TO STA. 12+40.34
STA. 12+40.34 TO STA. 17+58.28

NOTES:

+ SUPERELEVATION TO BE OPPOSITE HAND TO TYPICAL SHOWN
FOR LEGEND, SEE SHEET 14
FOR DITCH DETAILS, SEE SHEET 23
FOR EDGE COURSE DETAILS, SEE SHEET 24
* FOR SUPERELEVATED SHOULDER DETAILS, SEE DETAIL A, SHEET 24
FOR EXACT LOCATION OF UNDERDRAINS, SEE UNDERDRAIN TABLE SHEETS 579-583

TYPICAL SECTIONS - COUNTY ROADS AND SIDE ROADS

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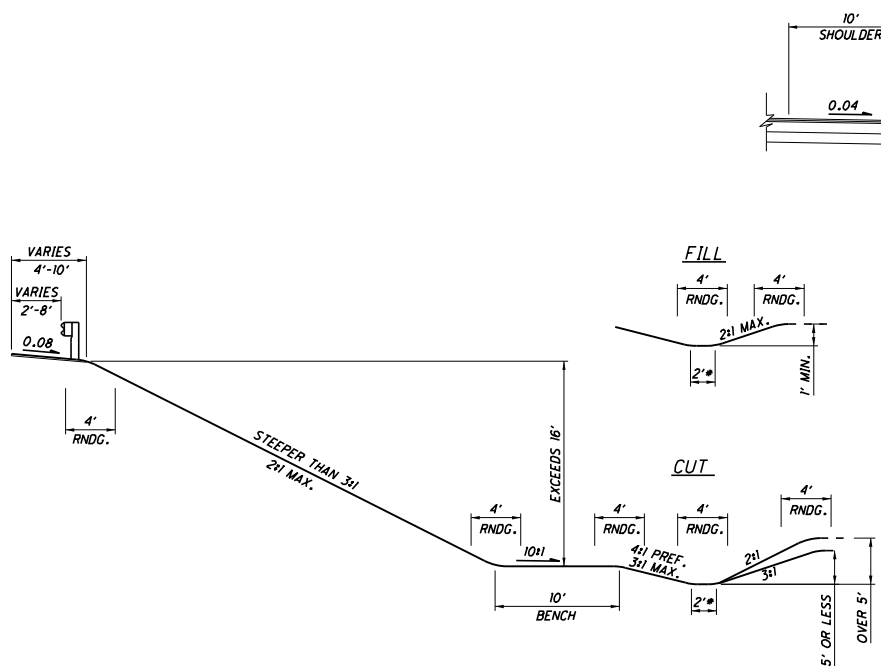
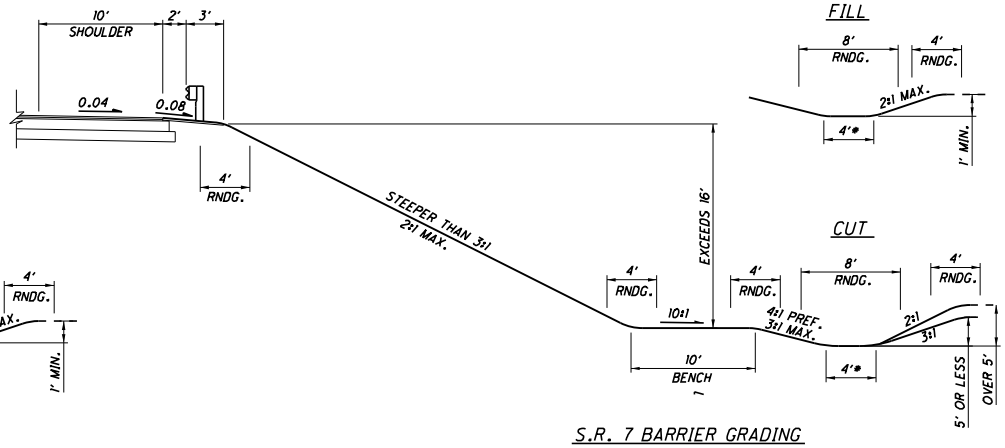
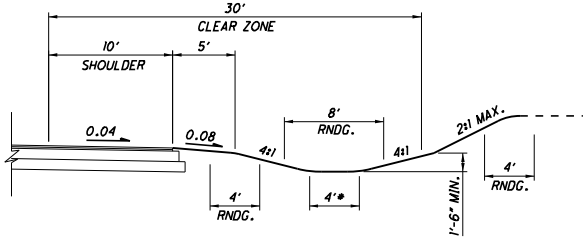


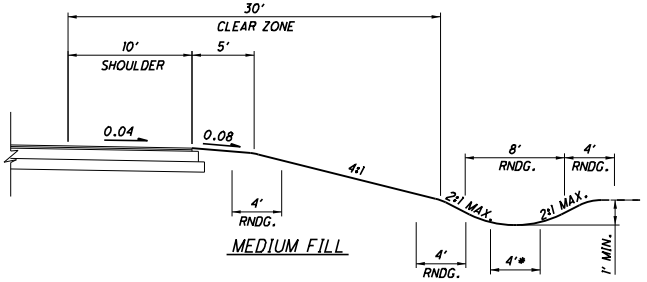
SIDE ROAD BARRIER GRADING



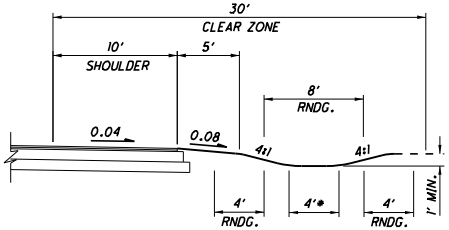
S.R. 7 BARRIER GRADING



CUT SECTION



MEDIUM FILL



LOW FILL

NOTES:
* SEE CROSS SECTIONS FOR POST CONSTRUCTION ENHANCED BANKFULL WIDTHS ROUNDING SHALL BE 4' WIDER THAN DITCH WIDTH SHOWN

TYPICAL SECTIONS - DITCH DETAILS

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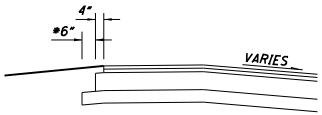
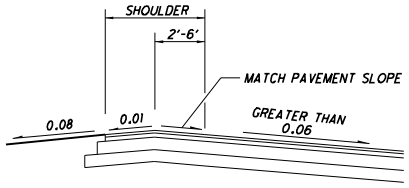
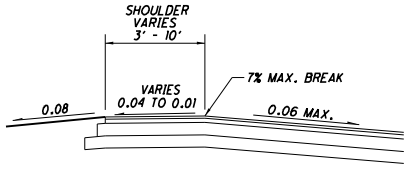
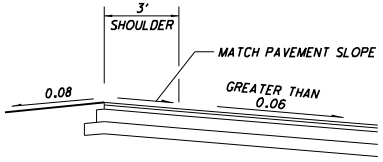


EDGE COURSE DETAIL
FOR ALL TYPICALS

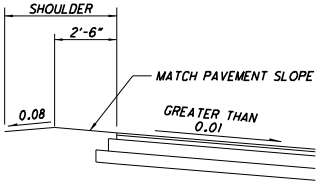
* 6" OR THE THICKNESS OF OVERLYING LIFT, WHICHEVER IS GREATER.

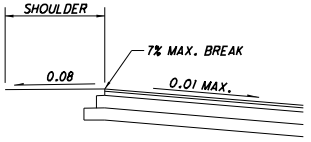






DETAIL A
PAVED SHOULDERS





DETAIL B
TURF SHOULDERS

TYPICAL SECTIONS - MISCELLANEOUS DETAILS

LAW-7-2.17

24
633

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ROUNDING

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

UTILITIES

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

FRONTIER COMMUNICATIONS
1315 ALBERT STREET
PORTSMOUTH, OHIO 45662
PHONE: (740) 354-0521
MS. DENA MARTIN

AMERICAN ELECTRIC POWER (DISTRIBUTION)
38831 STATE ROUTE 7
REEDSVILLE, OHIO 45772
PHONE: (740) 985-3054
MR. CLARKE SAUNDERS

AMERICAN ELECTRIC POWER (TRANSMISSION)
8600 SMITHS HILL ROAD
NEW ALBANY, OHIO 43054
PHONE: (380) 205-5072
MR. MICHAEL CARR

BUCKEYE RURAL ELECTRIC CO-OP, INC.
P.O. BOX 200
RIO GRANDE, OHIO 45674
PHONE: (740) 379-9658
MS. MARTINE-DENISE LONG

HECLA WATER ASSOCIATION, INC.
3190 SR 141
IRONTON, OHIO 45638
PHONE: (740) 533-0526, EXT. 5
MR. TIM DALTON

AQUA OHIO (FORMERLY OHIO-AMERICAN WATER COMPANY)
6650 SOUTH AVENUE
BOARDMAN, OHIO 44512
PHONE: (330) 397-0776
MR. ANDY HIPPLEY

COLUMBIA GAS OF OHIO
843 PIATT AVENUE
CHILLICOTHE, OHIO 45601
PHONE: (740) 656-7401
MR. JOSEPH DiBENEDETTO

MYERS DRILLING COMPANY
P.O. BOX 290
BARBOURSVILLE, WV. 25504
PHONE: (304) 736-7431
MR. JOHN DIAL

ARMSTRONG CABLE SERVICES
9651 COUNTY ROAD 1
SOUTH POINT, OHIO 45680
PHONE: (740) 451-1833
MR. NATHAN ITTIG

UNION-ROME TOWNSHIPS
SUBSEWER DISTRICT
P.O. BOX 430
CHESAPEAKE, OHIO 45619
PHONE: (740) 867-8700
MR. JAROD LEFFINGWELL

CHARTER COMMUNICATIONS
(AKA SPECTRUM FKA TIME WARNER CABLE)
1617 FOXHAVEN DRIVE
RICHMOND, KENTUCKY 40475
PHONE: (859) 626-4899
MR. MARK HARLOW

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

SURVEYING PARAMETERS

PRIMARY PROJECT CONTROL MONUMENTS GOVERN ALL POSITIONING ON ODOT PROJECTS. SEE TABLE CONTAINING PROJECT CONTROL INFORMATION.

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

PROJECT CONTROL

POSITIONING METHOD: STATIC GPS (2011)
MONUMENT TYPE: TYPE A

VERTICAL POSITIONING

ORTHOMETRIC HEIGHT DATUM:	NAVD88
GEOID:	GEOID09

HORIZONTAL POSITIONING

REFERENCE FRAME:	NAD83 (CORS 96)
ELLIPSOID:	GRS80
MAP PROJECTION:	LAMBERT CONFORMAL CONIC
COORDINATE SYSTEM:	OHIO STATE PLANE, SOUTH ZONE
COMBINED SCALE FACTOR:	1.000044500000 (FROM GROUND TO SPC)
ORIGIN OF COORDINATE SYSTEM:	0,0

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

UNITS ARE IN U.S. SURVEY FEET.

CALCULATED SLP CHECKED ALB

GENERAL NOTES

LAW-7-2.17

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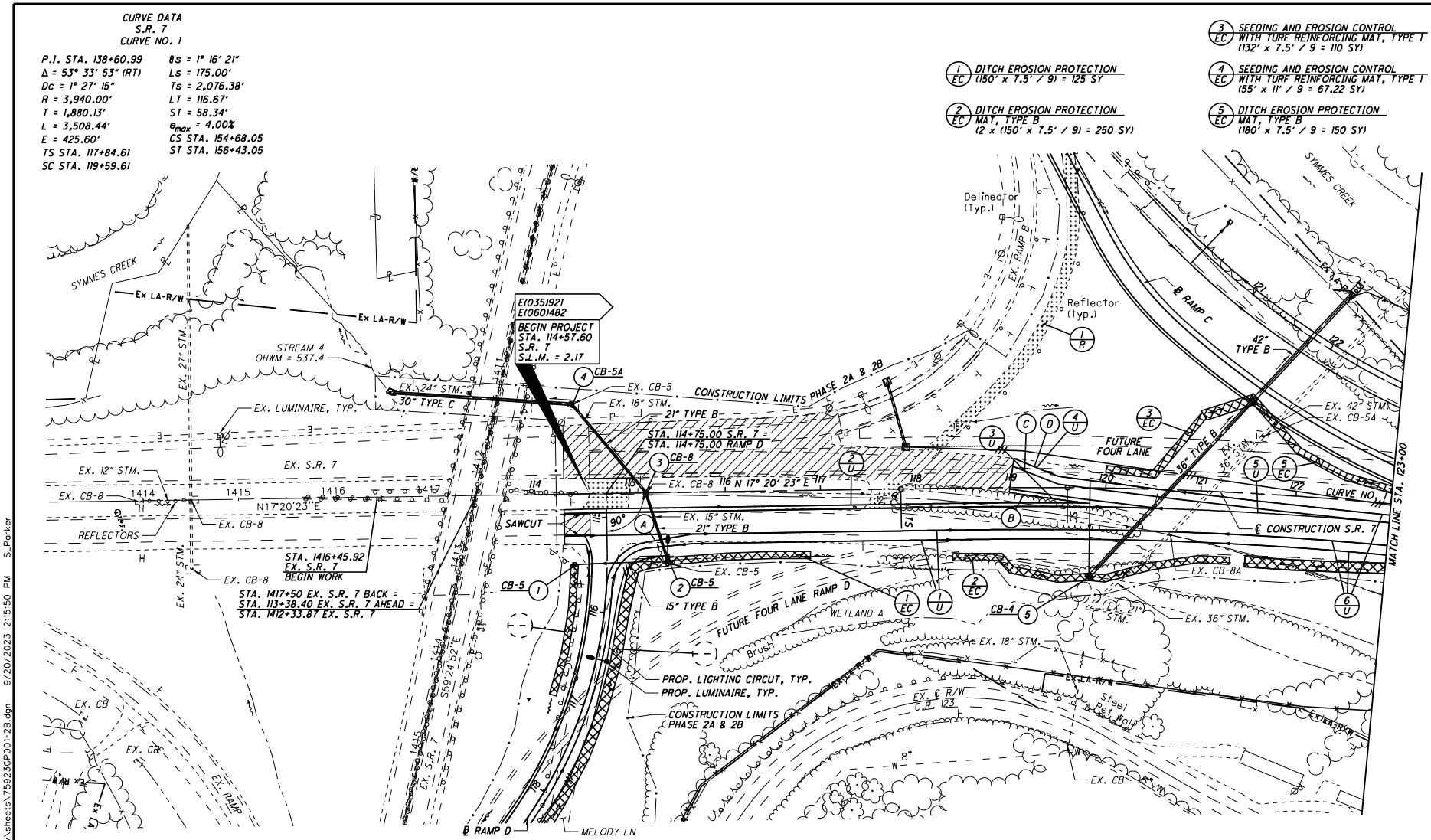

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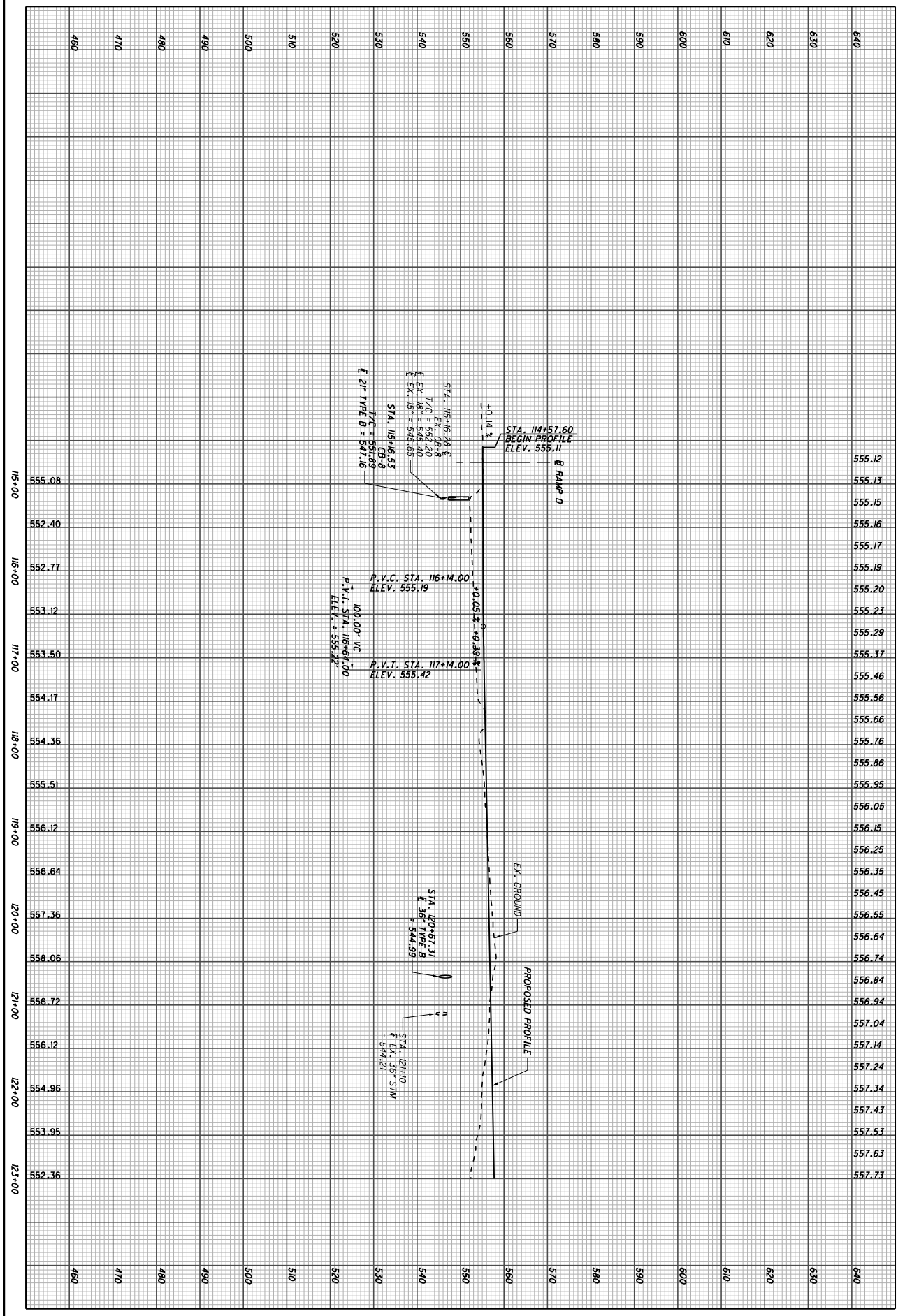
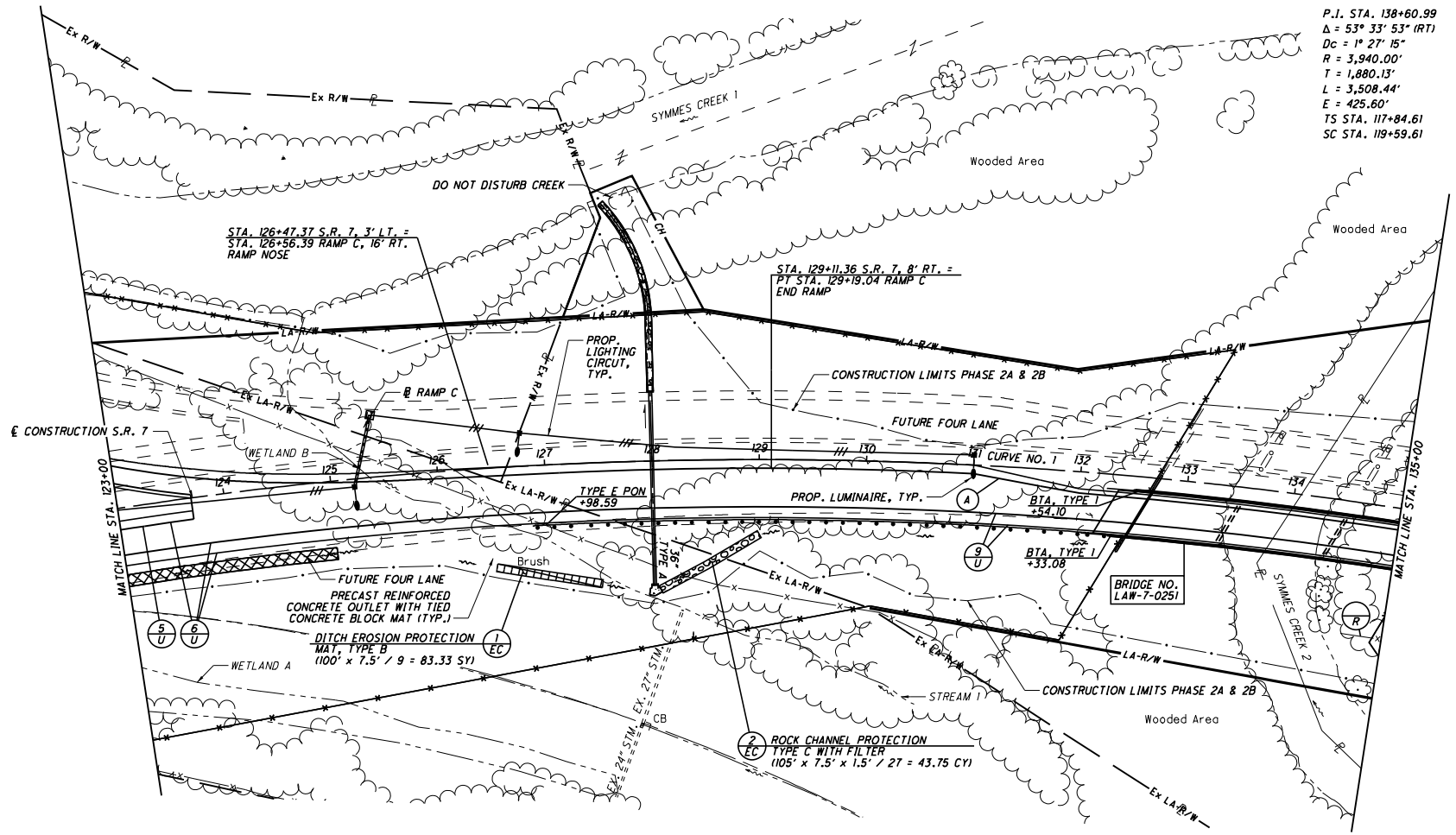


47 633	LAW-7-2.17	PROFILE - S.R. 7 STA. 114+57.60 TO STA. 123+00	CALCULATED SLP CHECKED ALB



CURVE DATA
S.R. 7
CURVE NO. 1

P.I. STA. 138+60.99
Δ = 53° 33' 53" (RT)
Dc = 1° 27' 15"
R = 3,940.00'
T = 1,880.13'
L = 3,508.44'
E = 425.60'
TS STA. 117+84.61
SC STA. 119+59.61

θs = 1° 16' 21"
Ls = 175.00'
Ts = 2,076.38'
LT = 116.67'
ST = 58.34'
e_{max} = 4.00%
CS STA. 154+68.05
ST STA. 156+43.05

A -
STA. 131+00.00
BEGIN PAVEMENT TAPER, 8' RT.
BEGIN SHOULDER TAPER, 0' RT./LT.

STA. 132+00.00
END PAVEMENT TAPER, 20' RT.
END SHOULDER TAPER, 16' RT.

(VBF) DENOTES LOCATION OF VEGETATED BIOFILTER

FOR PROFILE, SEE SHEET 49
FOR RAMP C PLAN & PROFILE, SEE SHEET 367
FOR PAVEMENT DETAILS, SEE SHEET 532
FOR INTERCHANGE DETAILS, SEE SHEETS 543-548
FOR CULVERT DETAILS, SEE SHEETS 568-570
FOR UNDERDRAIN TABLES, SEE SHEETS 581-585
FOR TRAFFIC CONTROL PLAN, SEE SHEETS 589-619
1

HORIZONTAL SCALE IN FEET
0 25 50 100
CALCULATED SLP
CHECKED ALB

PLAN - S.R. 7
STA. 123+00 TO STA. 135+00

LAW-7-2.17

48
635

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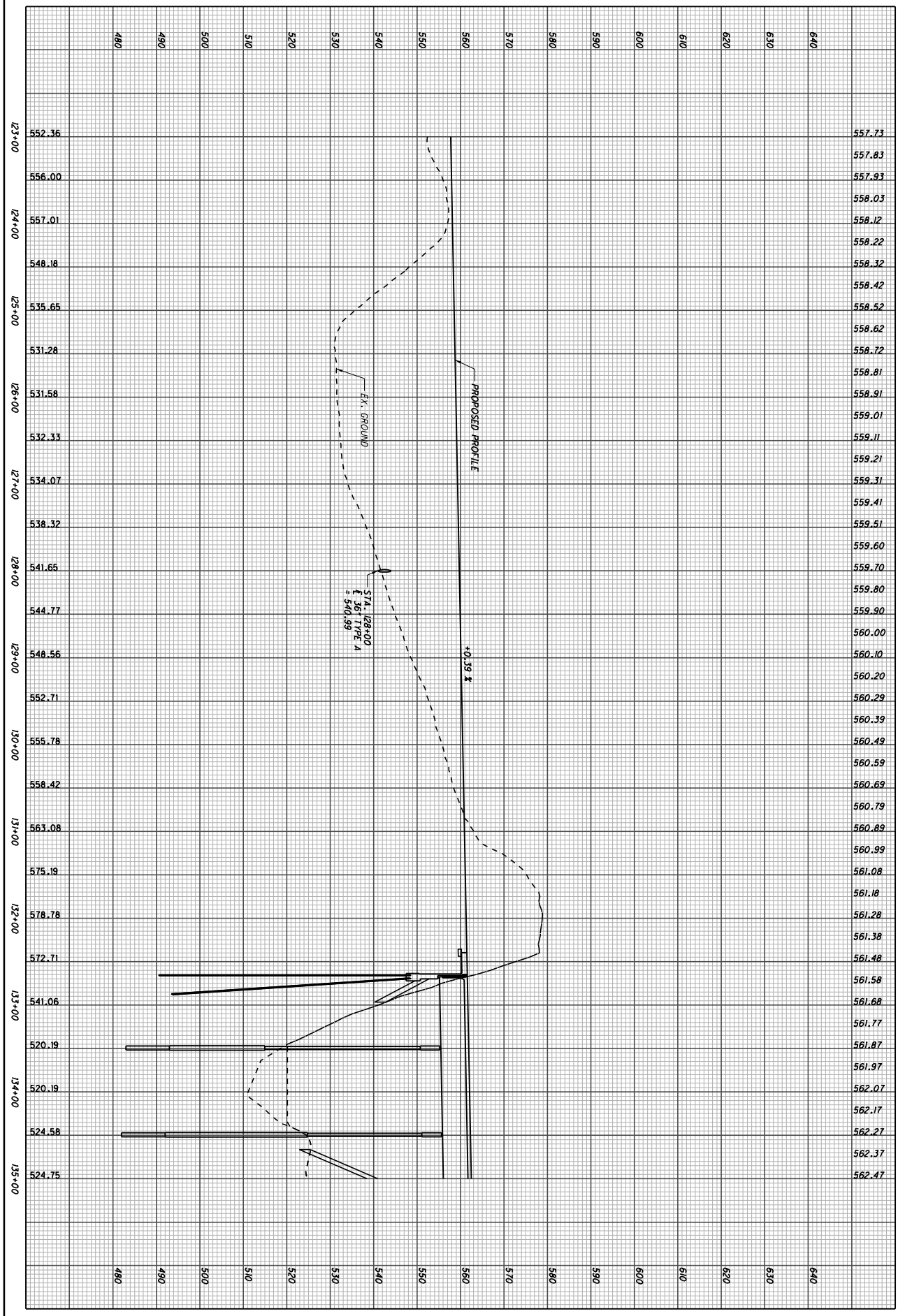
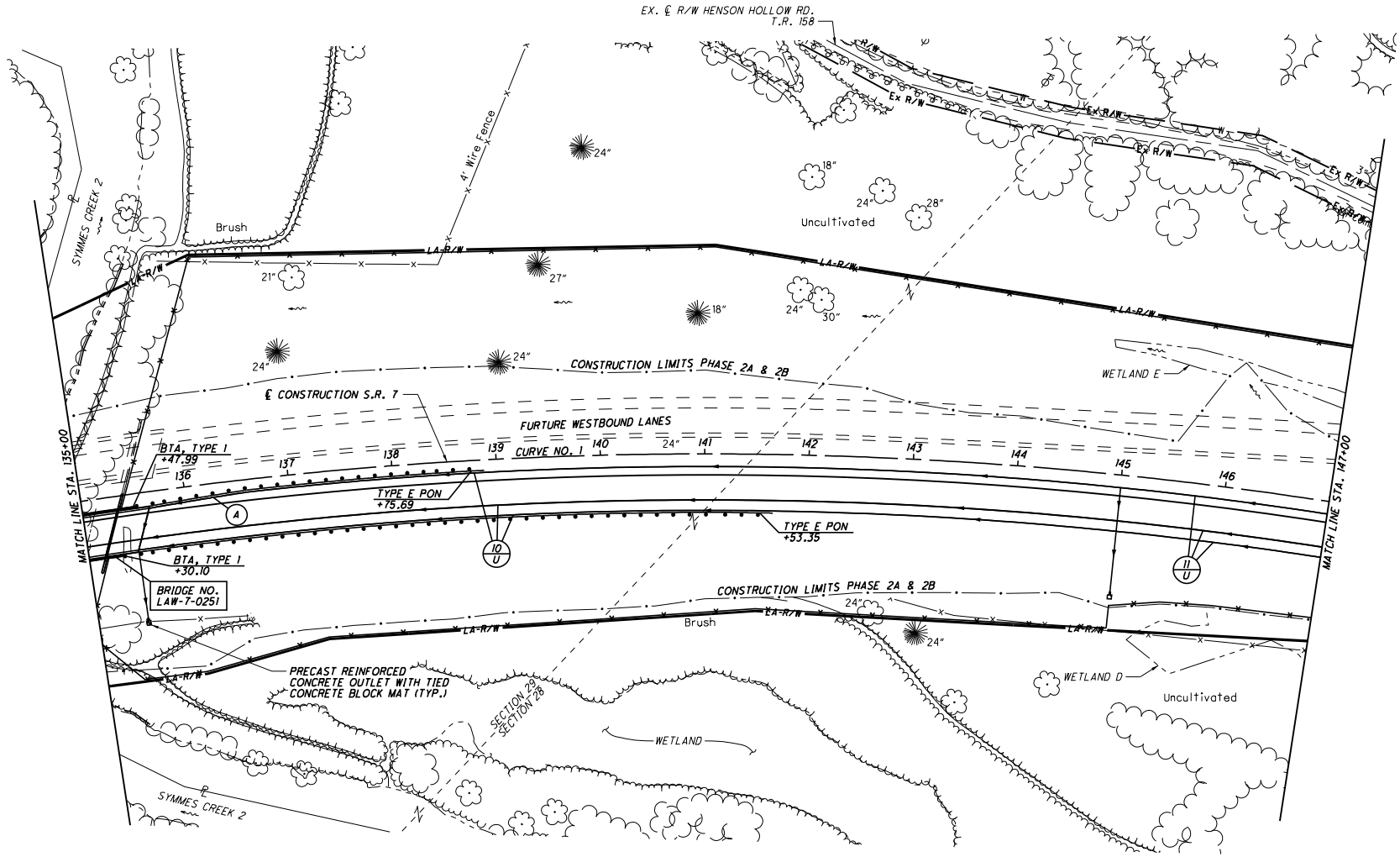


49 / 633	LAW-7-2.17	PROFILE - S.R. 7 STA. 123+00 TO STA. 135+00	CALCULATED SLP CHECKED ALB



CURVE DATA
S.R. 7
CURVE NO. 1

P.I. STA. 138+60.99	θs = 1° 16' 21"
Δ = 53° 33' 53" (RT)	Ls = 175.00'
Dc = 1° 27' 15"	Ts = 2,076.38'
R = 3,940.00'	LT = 116.67'
T = 1,880.13'	ST = 58.34'
L = 3,508.44'	e_{max} = 4.00%
E = 425.60'	CS STA. 154+68.05
TS STA. 117+84.61	ST STA. 156+43.05
SC STA. 119+59.61	

(A) - STA. 135+59.43
BEGIN SHOULDER TAPER, 16' RT.
STA. 136+59.43
END SHOULDER TAPER, 12' RT.

FOR PROFILE, SEE SHEET 51
FOR UNDERDRAIN TABLES, SEE SHEETS 581-585
FOR TRAFFIC CONTROL PLAN, SEE SHEETS 589-619
FOR STRUCTURES 20' AND OVER, SEE SHEETS XXX-XXX

HORIZONTAL SCALE IN FEET
0 25 50 100
CALCULATED SLP
CHECKED ALB

PLAN - S.R. 7
STA. 135+00 TO STA. 147+00

LAW-7-2.17

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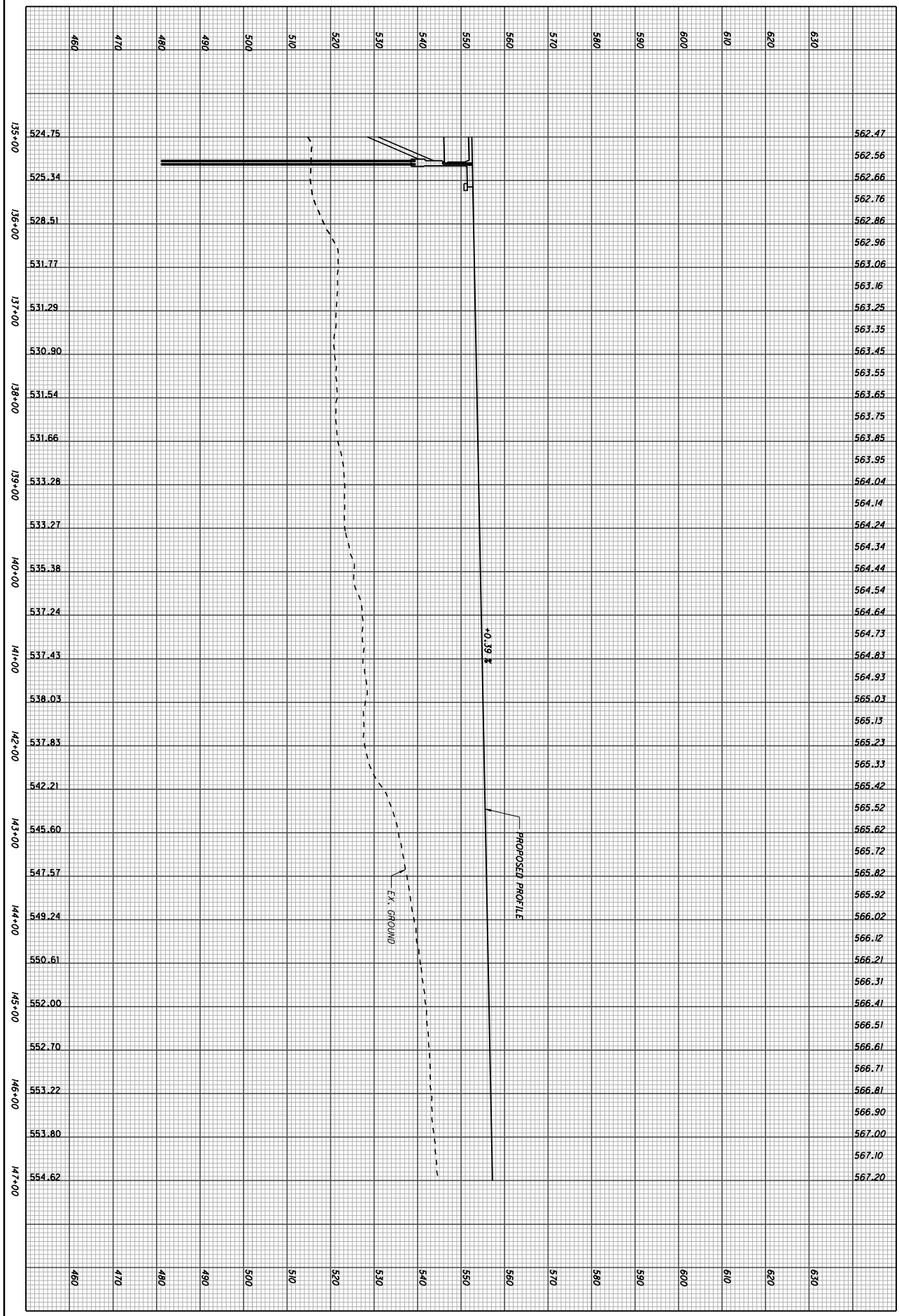
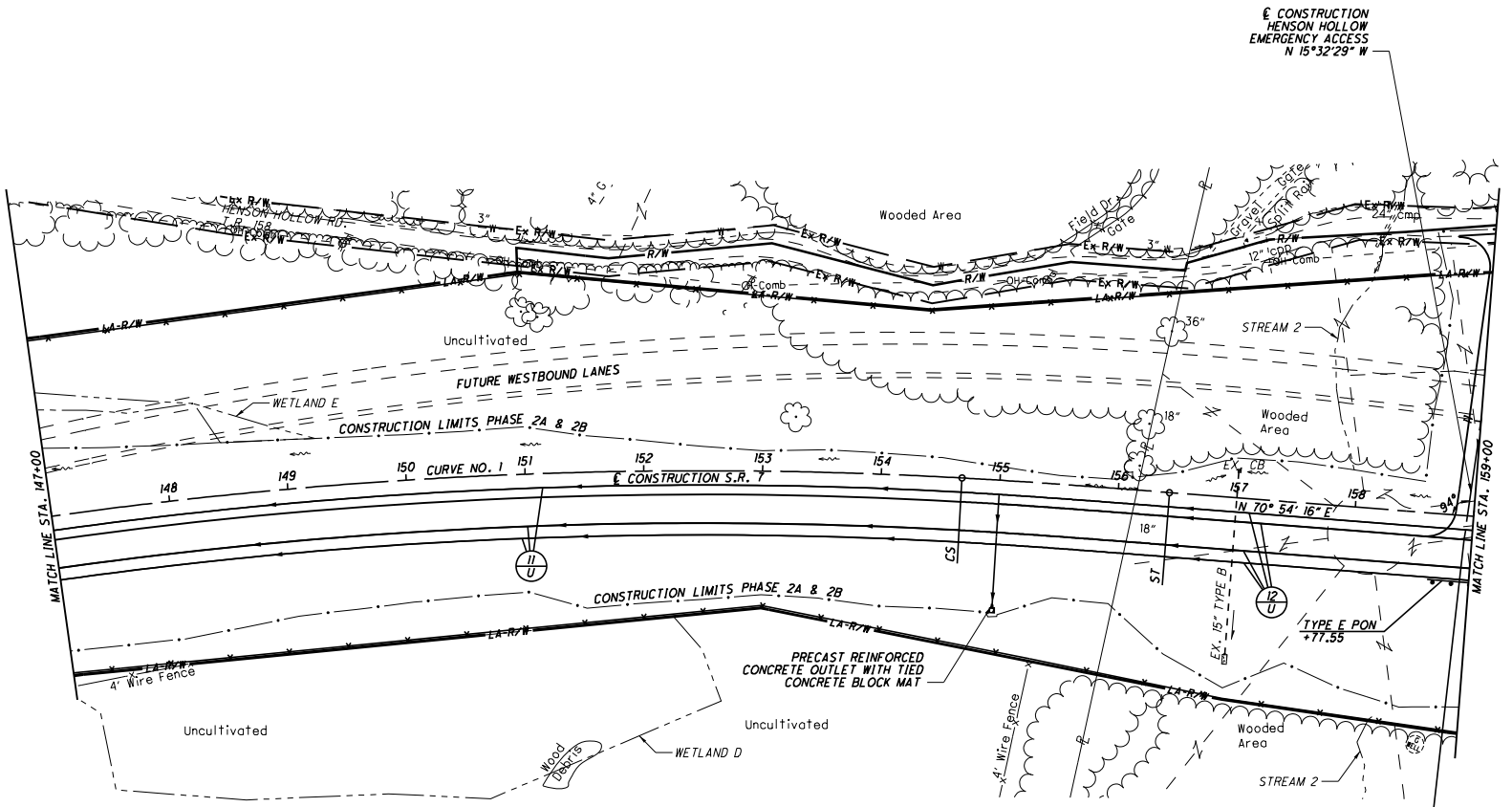


51 / 633	LAW-7-2.17	PROFILE - S.R. 7 STA. 135+00 TO STA. 147+00	CALCULATED SLP CHECKED ALB



CURVE DATA
S.R. 7
CURVE NO. 1

P.I. STA. 138+60.99	θs = 1° 16' 21"
Δ = 53° 33' 53" (RT)	Ls = 175.00'
Dc = 1° 27' 15"	Ts = 2,076.38'
R = 3,940.00'	LT = 116.67'
T = 1,880.13'	ST = 58.34'
L = 3,508.44'	e_{max} = 4.00%
E = 425.60'	CS STA. 154+68.05
TS STA. 117+84.61	ST STA. 156+43.05
SC STA. 119+59.61	

FOR PROFILE, SEE SHEET 53
FOR STORM SEWER PROFILE, SEE SHEET 135
FOR UNDERDRAIN TABLES, SEE SHEETS 579-583
FOR TRAFFIC CONTROL PLAN, SEE SHEETS 589-619

HORIZONTAL SCALE IN FEET
0 25 50 100
CALCULATED SLP
CHECKED ALB

PLAN - S.R. 7
STA. 147+00 TO STA. 159+00

LAW-7-2.17

52
633

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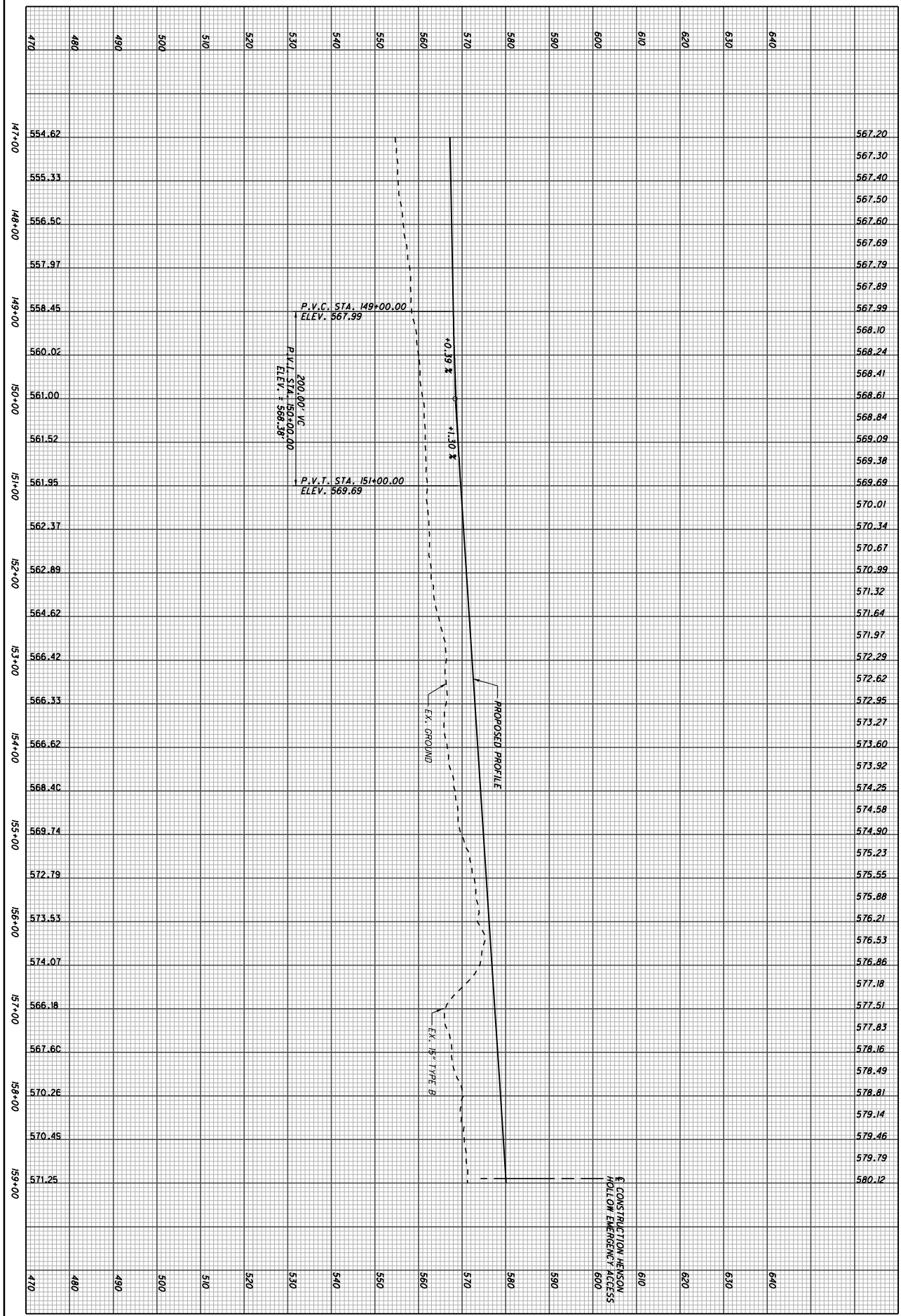
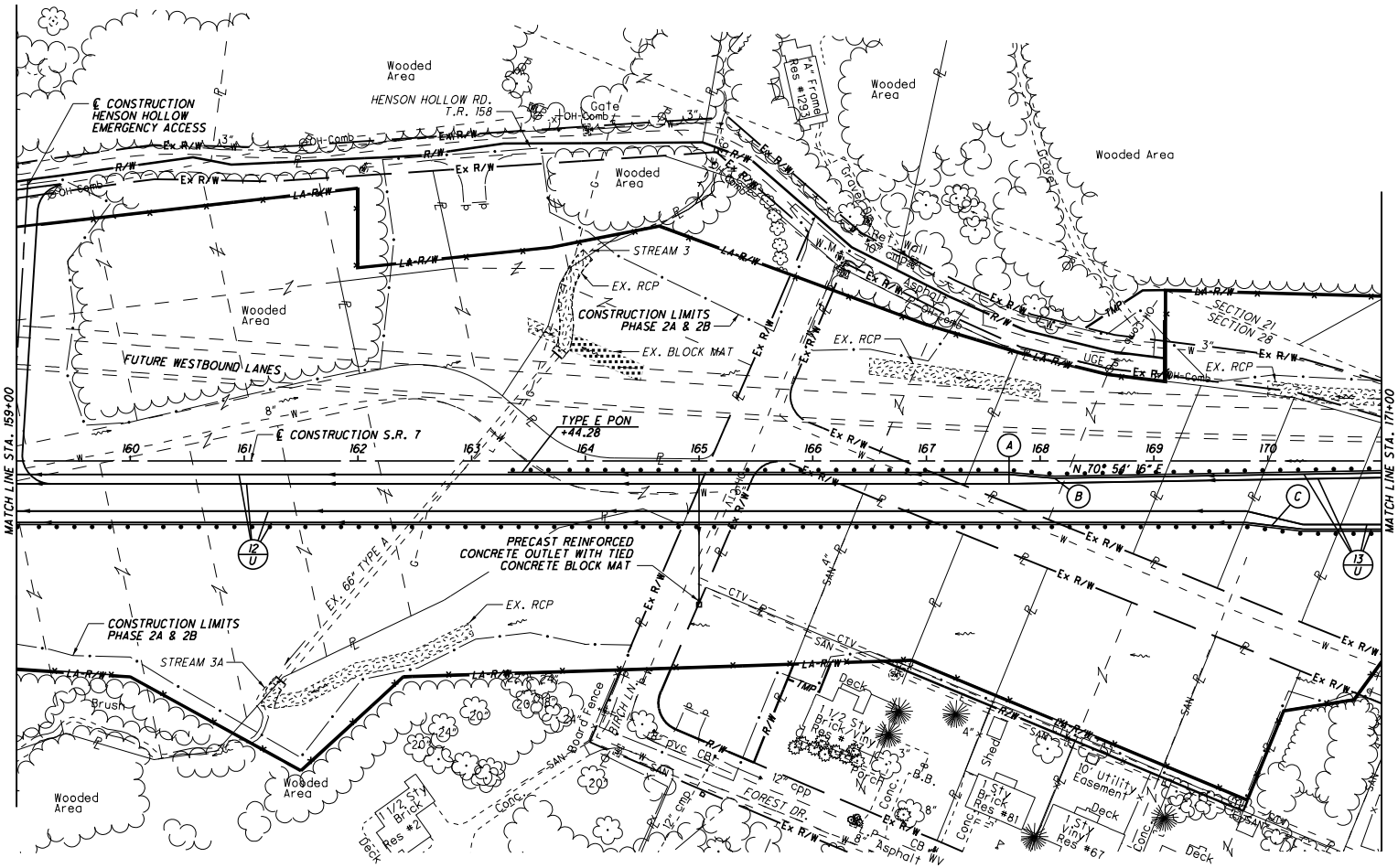


53 / 633	LAW-7-2.17	PROFILE - S.R. 7 STA. 147+00 TO STA. 159+00	CALCULATED SLP CHECKED ALB



(A) - STA. 167+72.52
BEGIN PAVEMENT TAPER, 20' RT.
BEGIN SHOULDER TAPER, 12' RT.

(B) - STA. 168+12.52
END SHOULDER TAPER, 15.33' RT.

(C) - STA. 169+80.98
BEGIN PAVEMENT TAPER, 44' RT.
BEGIN SHOULDER TAPER, 54' RT.

STA. 170+30.98
END PAVEMENT TAPER, 56' RT.
END SHOULDER TAPER, 60' RT.

FOR PROFILE, SEE SHEET 55
FOR DRIVE DETAILS, SEE SHEETS 553-557
FOR UNDERDRAIN TABLES, SEE SHEETS 579-583
FOR TRAFFIC CONTROL PLAN, SEE SHEETS 589-619

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED SLP
CHECKED ALB

PLAN - S.R. 7
STA. 159+00 TO STA. 171+00

LAW-7-2.17

54
633

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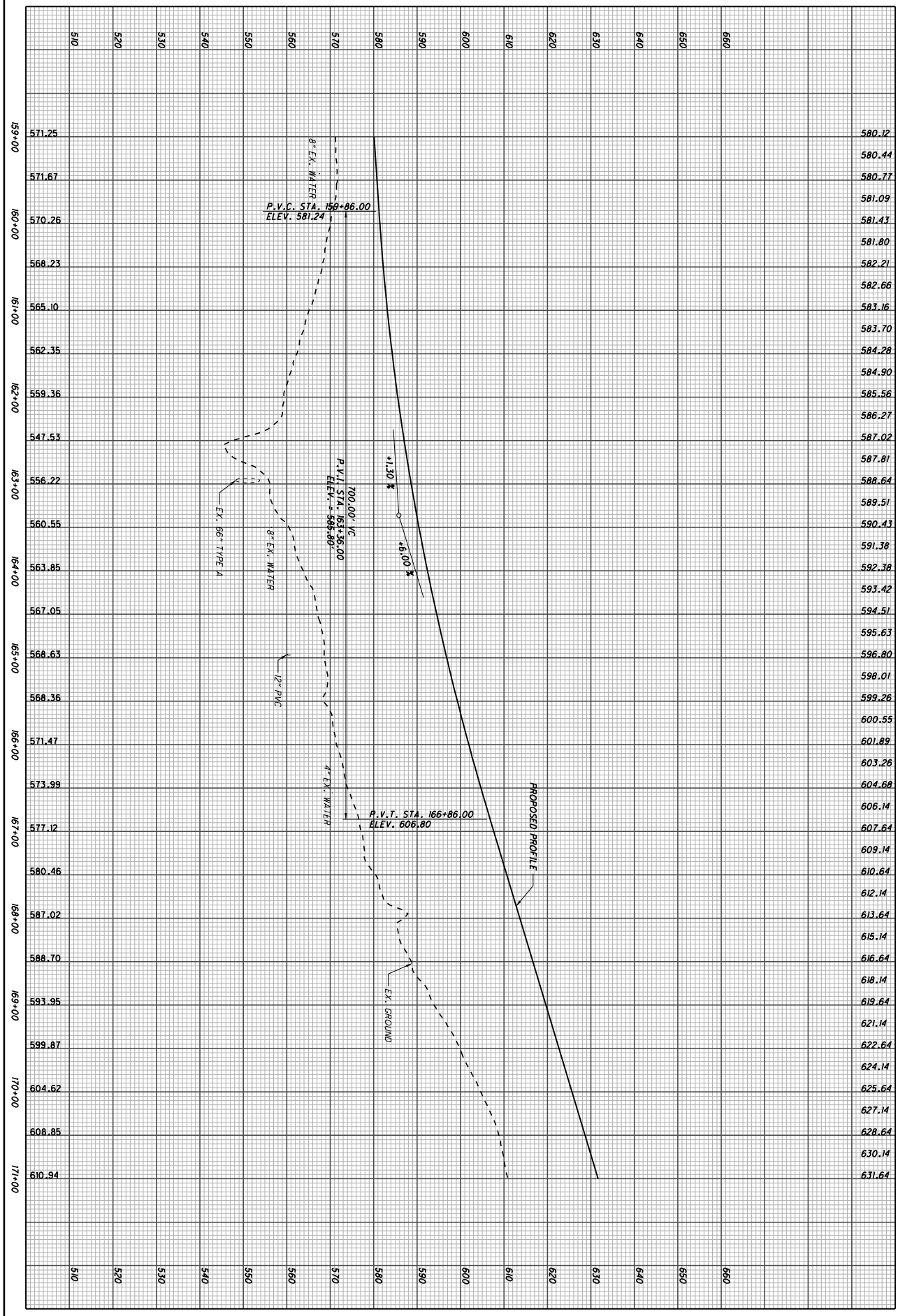
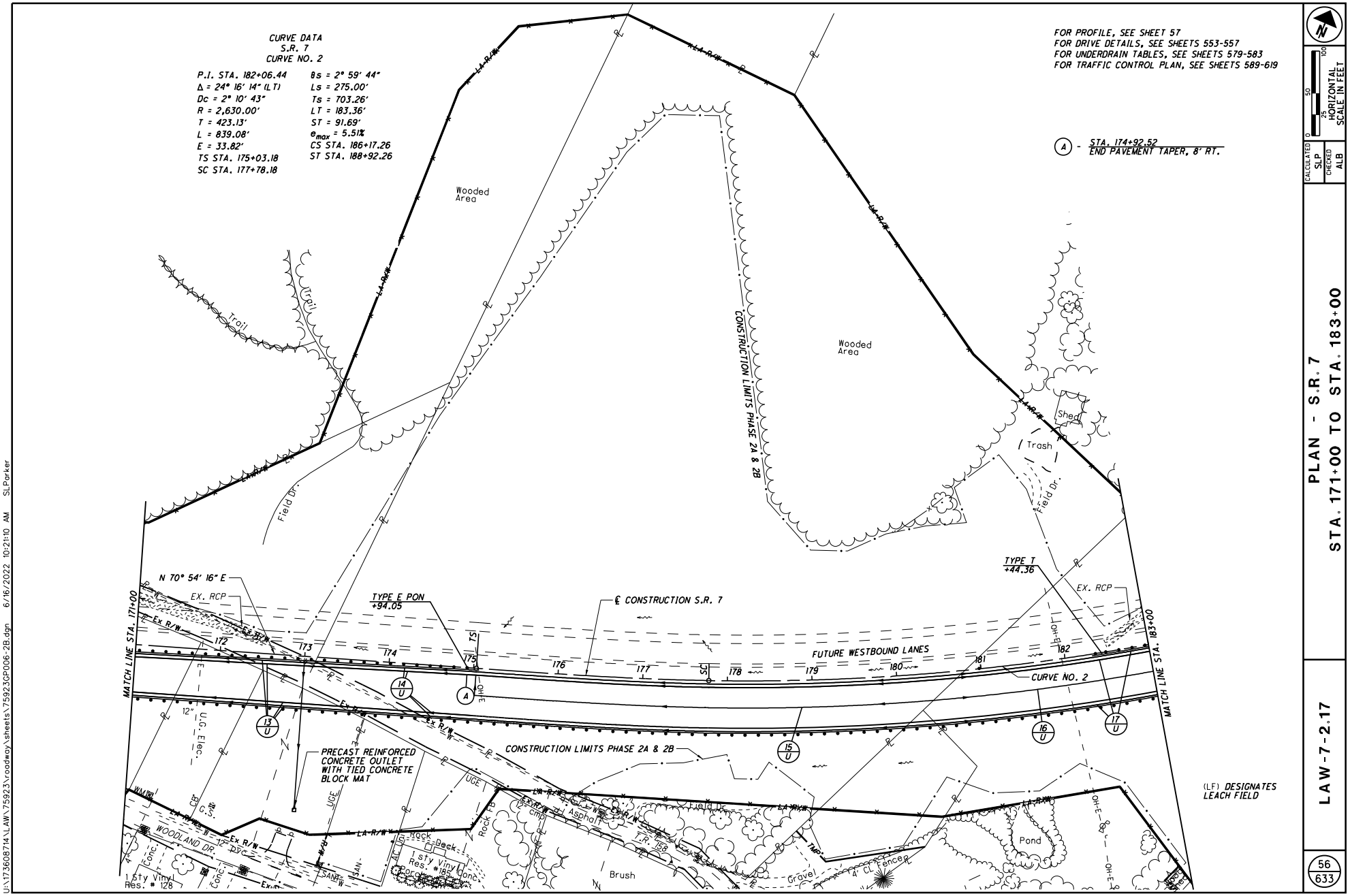


55 / 633	LAW-7-2.17	PROFILE - S.R. 7 STA. 159+00 TO STA. 171+00	CALCULATED SLP CHECKED ALB



PLAN - S.R. 7
STA. 171+00 TO STA. 183+00

CALCULATED SLP
CHECKED ALB

HORIZONTAL SCALE IN FEET
0 25 50 100

LAW-7-2.17

56
633

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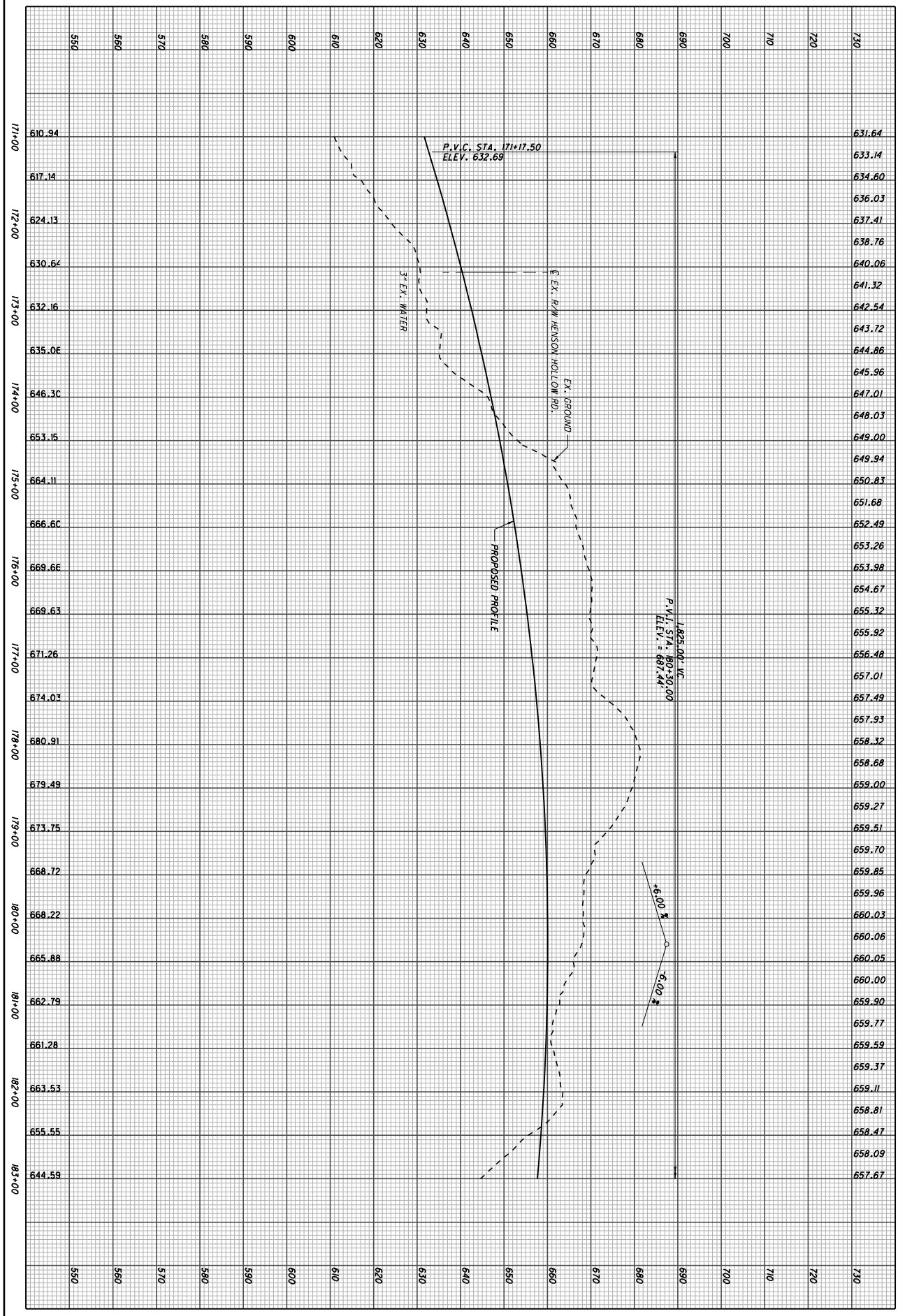
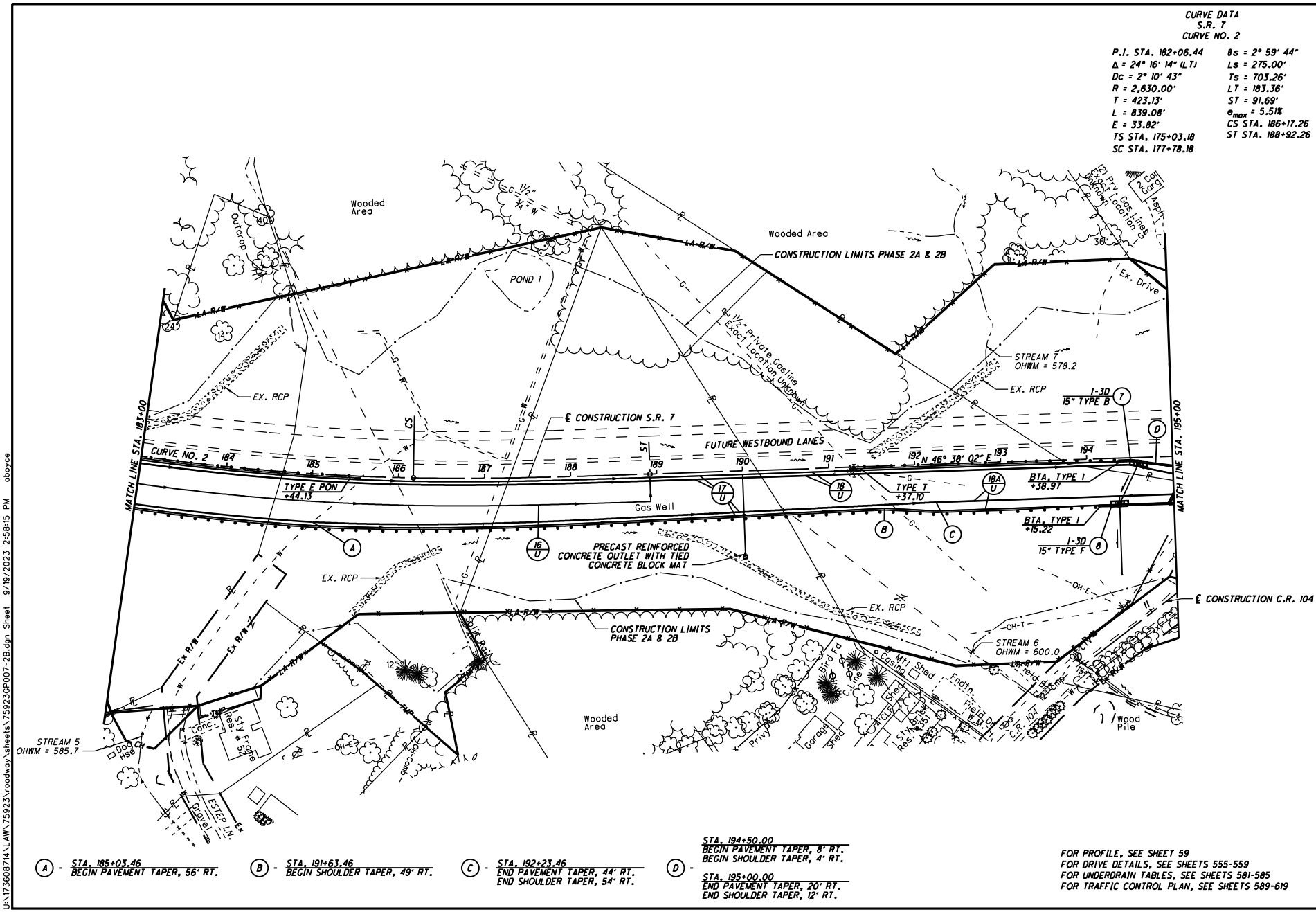


57 / 633	LAW-7-2.17	PROFILE - S.R. 7 STA. 171+00 STA. 183+00	CALCULATED SLP CHECKED ALB



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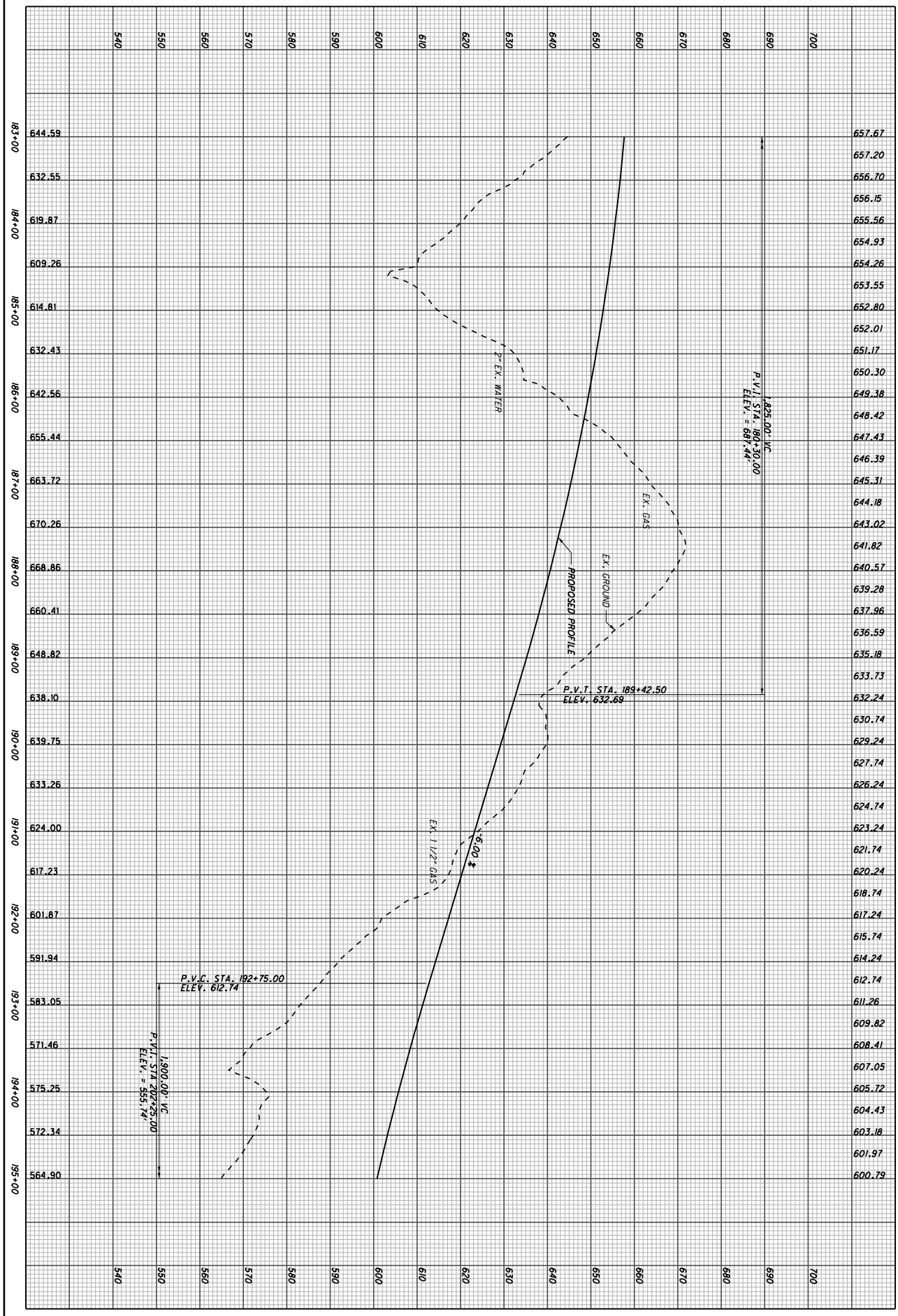
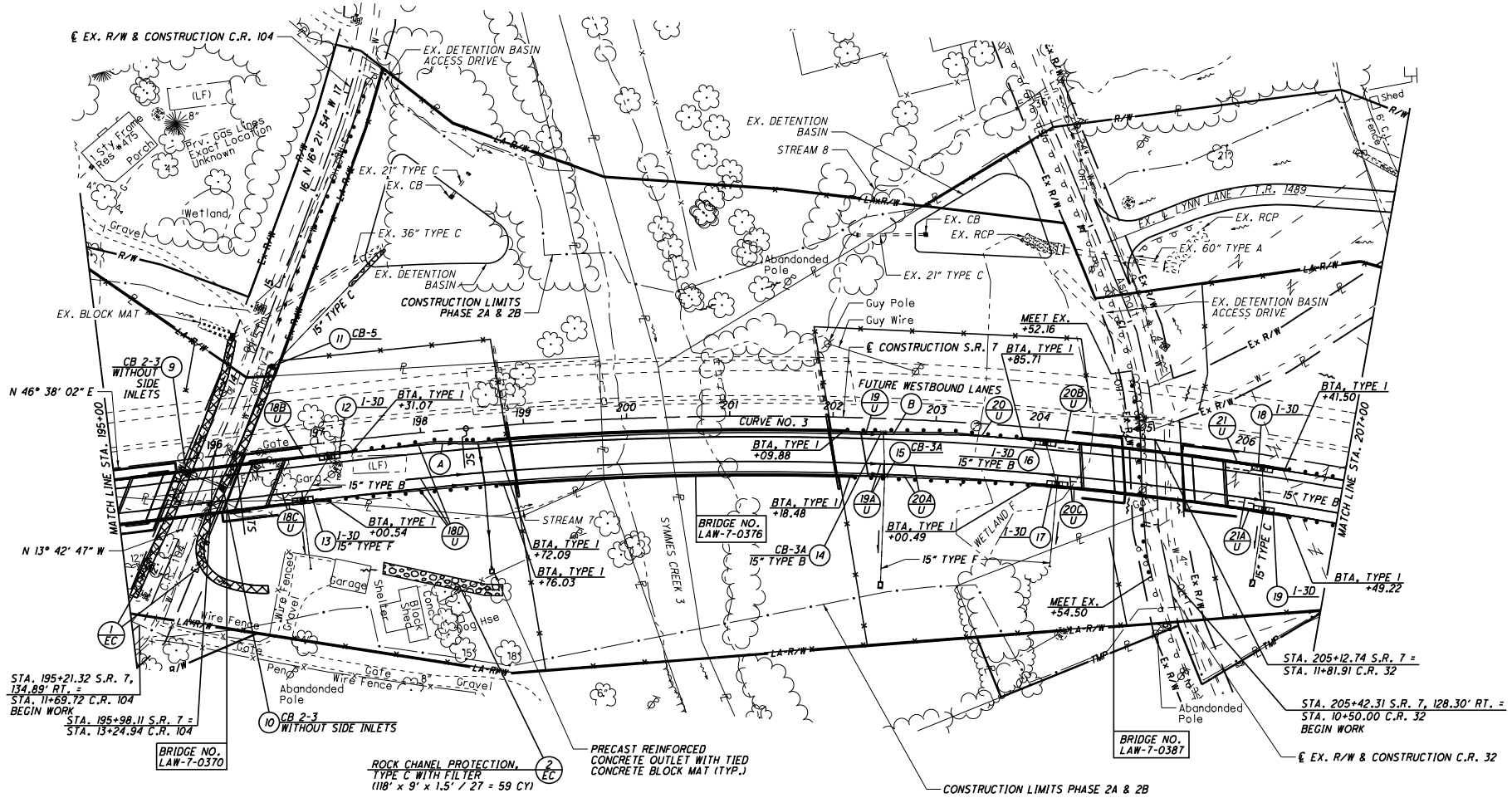


59 633	LAW-7-2.17	PROFILE - S.R. 7 STA. 183+00 TO STA. 195+00	CALCULATED SLP CHECKED ALB



CURVE DATA
S.R. 7
CURVE NO. 3

P.I. STA. 205+33.31
Δ = 27° 30' 45" (RT)
Dc = 1° 45' 00"
R = 3,274.04'
T = 683.24'
L = 1,347.14'
E = 70.53'
TS STA. 196+19.13
SC STA. 198+44.13
Bs = 1° 58' 07"
Ls = 225.00'
Ts = 914.18'
LT = 150.01'
ST = 75.01'
e_{max} = 4.60%
CS STA. 211+91.27
ST STA. 214+16.27

(1 EC) DITCH EROSION PROTECTION
(231' x 7.5' / 9 = 192.5 SY) LT.
(277' x 7.5' / 9 = 230.83 SY) RT.

(A) - STA. 198+14.83 BEGIN SHOULDER TAPER, 12' RT.
STA. 198+54.83 END SHOULDER TAPER, 16' RT.

(B) - STA. 202+27.86 BEGIN SHOULDER TAPER, 16' RT.
STA. 203+27.86 BEGIN SHOULDER TAPER, 12' RT.

(LF) DESIGNATES LEACH FIELD

FOR PROFILE, SEE SHEET 61
FOR STORM SEWER PROFILE, SEE SHEET 563
FOR UNDERDRAIN TABLES, SEE SHEETS 579-583
FOR TRAFFIC CONTROL PLAN, SEE SHEETS 589-619

HORIZONTAL SCALE IN FEET
0 25 50 100
CALCULATED SLP
CHECKED ALB

PLAN - S.R. 7
STA. 195+00 TO STA. 207+00

LAW-7-2.17

60
633

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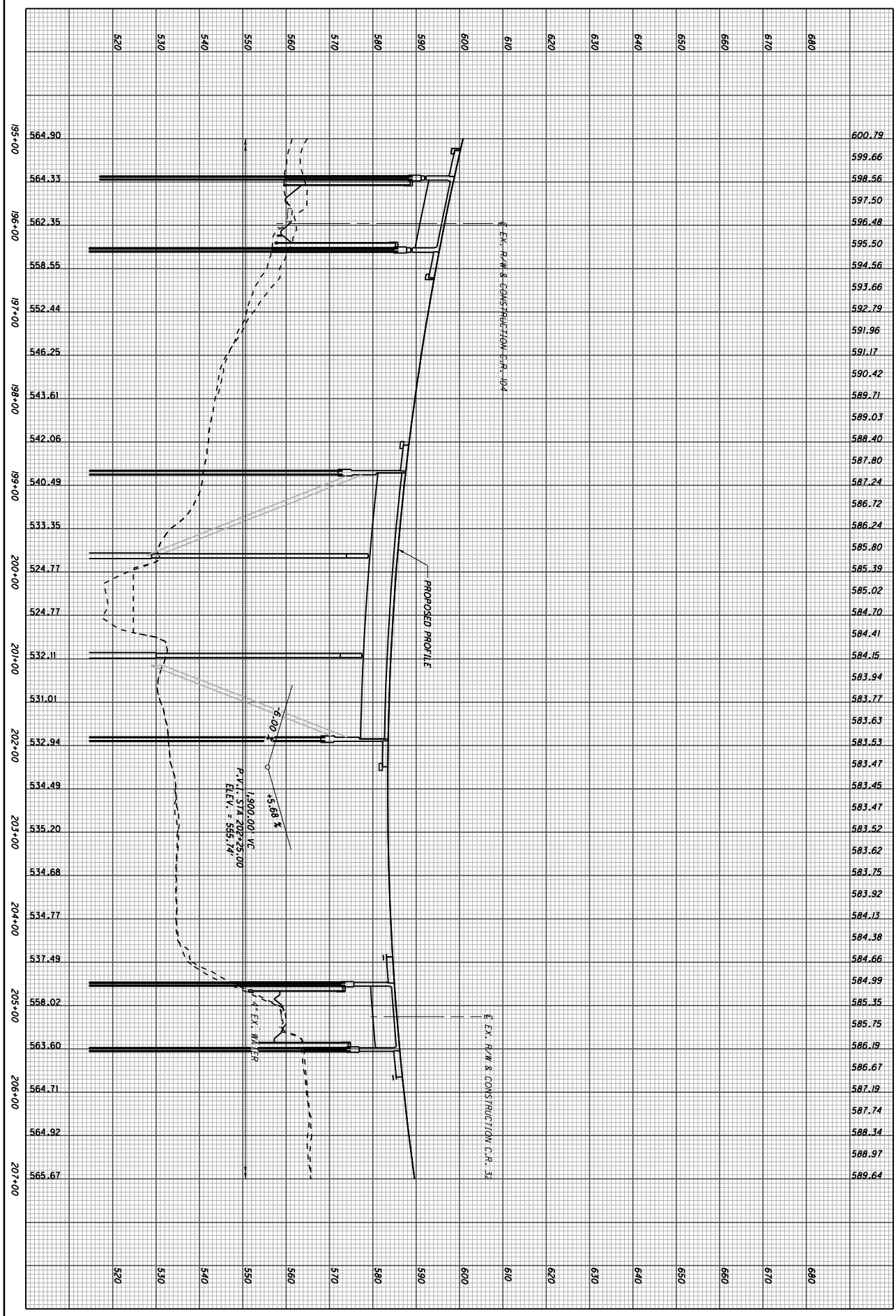
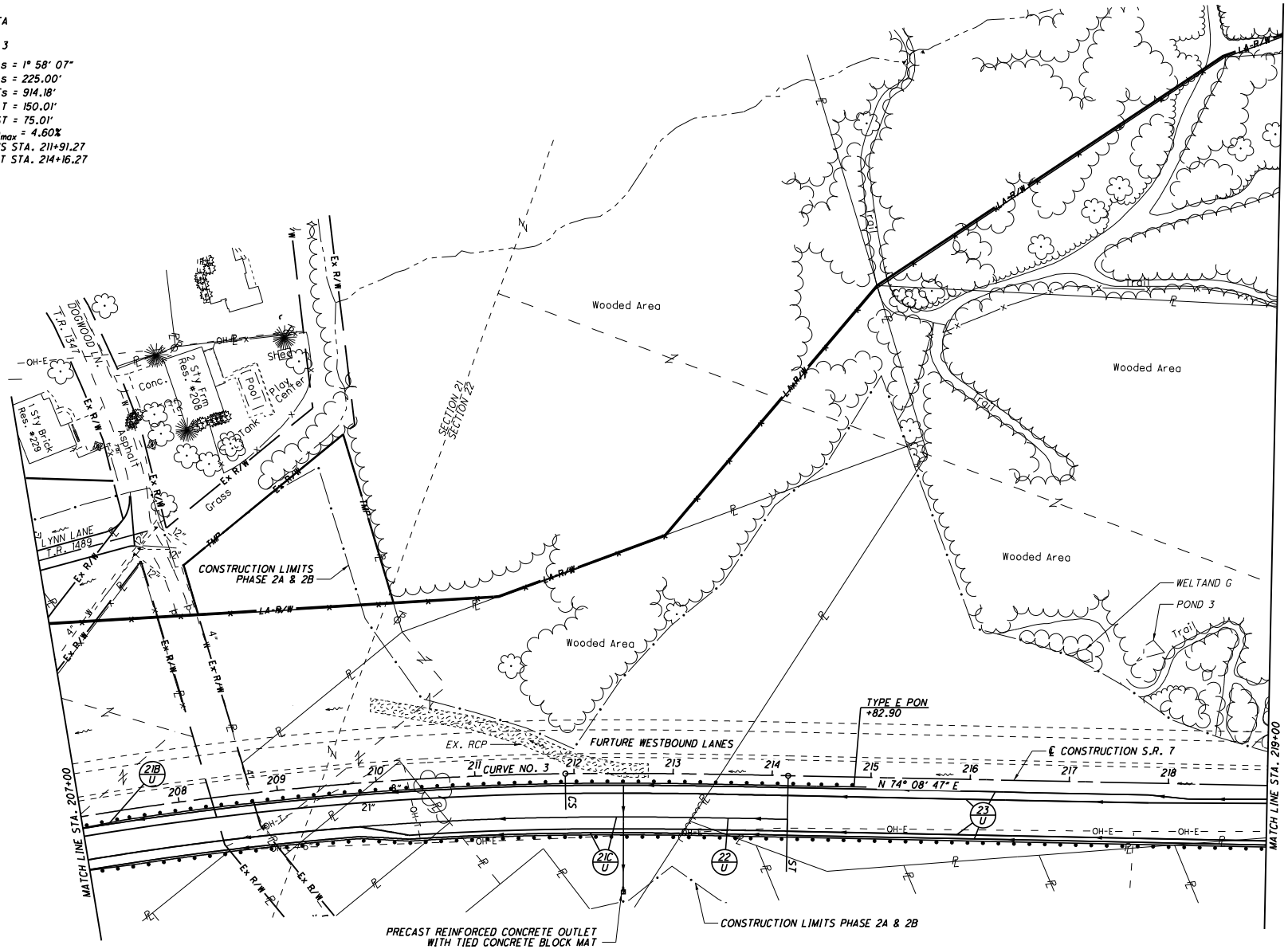


61 / 633	LAW-7-2.17	PROFILE - S.R. 7 STA. 195+00 STA. 207+00	CALCULATED SLP CHECKED ALB

CURVE DATA
S.R. 7
CURVE NO. 3

P.I. STA. 205+33.31
Δ = 27° 30' 45" (RT)
Dc = 1° 45' 00"
R = 3,274.04'
T = 683.24'
L = 1,347.14'
E = 70.53'
TS STA. 196+19.13
SC STA. 198+44.13

Bs = 1° 58' 07"
Ls = 225.00'
Ts = 914.18'
LT = 150.01'
ST = 75.01'
e_{max} = 4.60%
CS STA. 211+91.27
ST STA. 214+16.27



FOR PROFILE, SEE SHEET 64
FOR UNDERDRAIN TABLES, SEE SHEETS 579-583
FOR TRAFFIC CONTROL PLAN, SEE SHEETS 589-619

CALCULATED SLP
CHECKED ALB

HORIZONTAL SCALE IN FEET
0 25 50 100

PLAN - S.R. 7
STA. 207+00 TO STA. 219+00 (NORTH)

LAW-7-2.17

62
633

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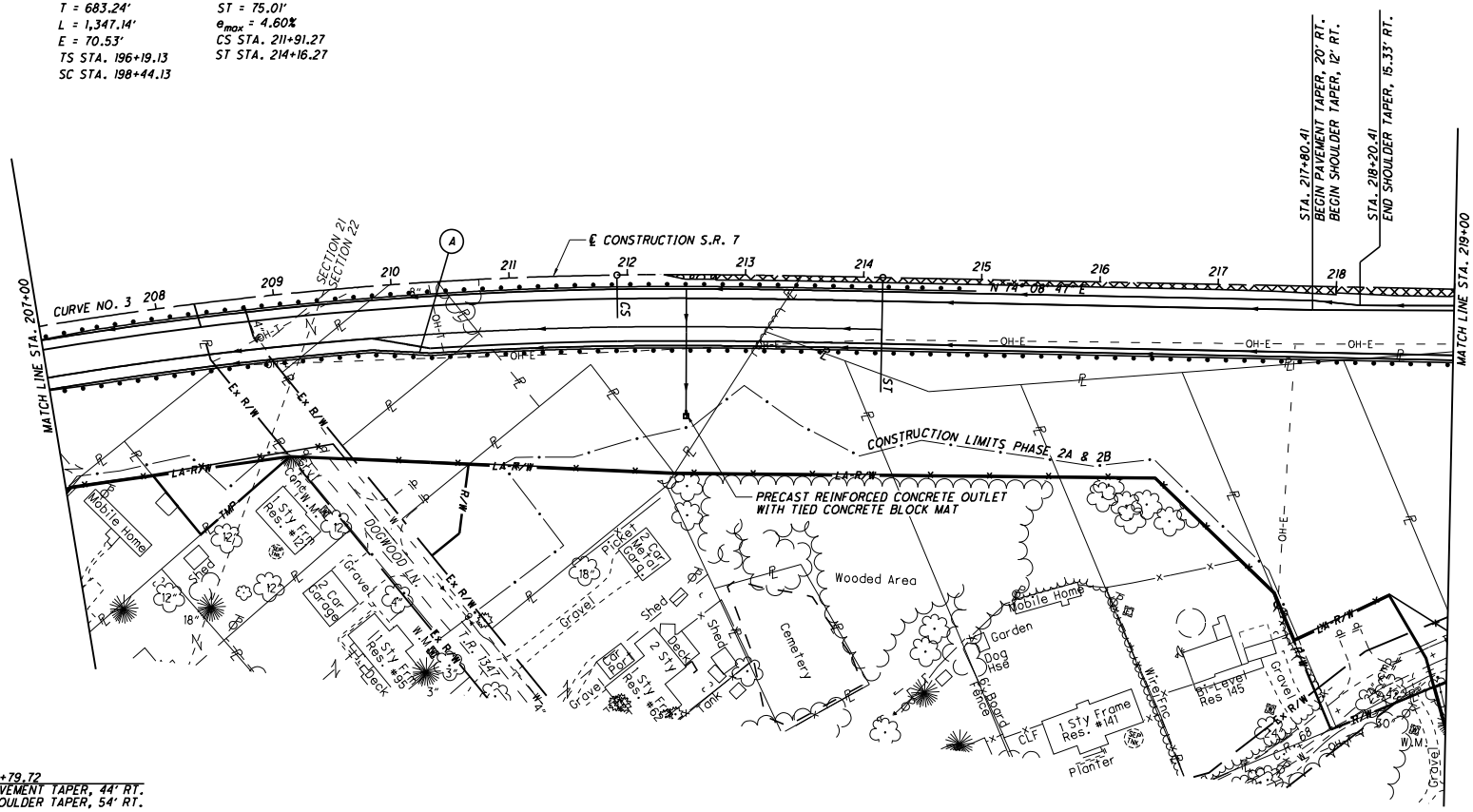
CURVE DATA
S.R. 7
CURVE NO. 3

P.I. STA. 205+33.31
Δ = 27° 30' 45" (RT)
Dc = 1° 45' 00"
R = 3,274.04'
T = 683.24'
L = 1,347.14'
E = 70.53'
TS STA. 196+19.13
SC STA. 198+44.13

θs = 1° 58' 07"
Ls = 225.00'
Ts = 914.18'
LT = 150.01'
ST = 75.01'
e_{max} = 4.60%
CS STA. 211+91.27
ST STA. 214+16.27



(A) -
STA. 209+79.72
BEGIN PAVEMENT TAPER, 44' RT.
BEGIN SHOULDER TAPER, 54' RT.

STA. 210+29.72
END PAVEMENT TAPER, 56' RT.
END SHOULDER TAPER, 60' RT.

FOR PROFILE, SEE SHEET 64
FOR UNDERDRAIN TABLES, SEE SHEETS 579-583
FOR TRAFFIC CONTROL PLAN, SEE SHEETS 589-619

CALCULATED SLP
CHECKED ALB

HORIZONTAL SCALE IN FEET
0 25 50 100

PLAN - S.R. 7
STA. 207+00 TO STA. 219+00 (SOUTH)

LAW-7-2.17

63
633

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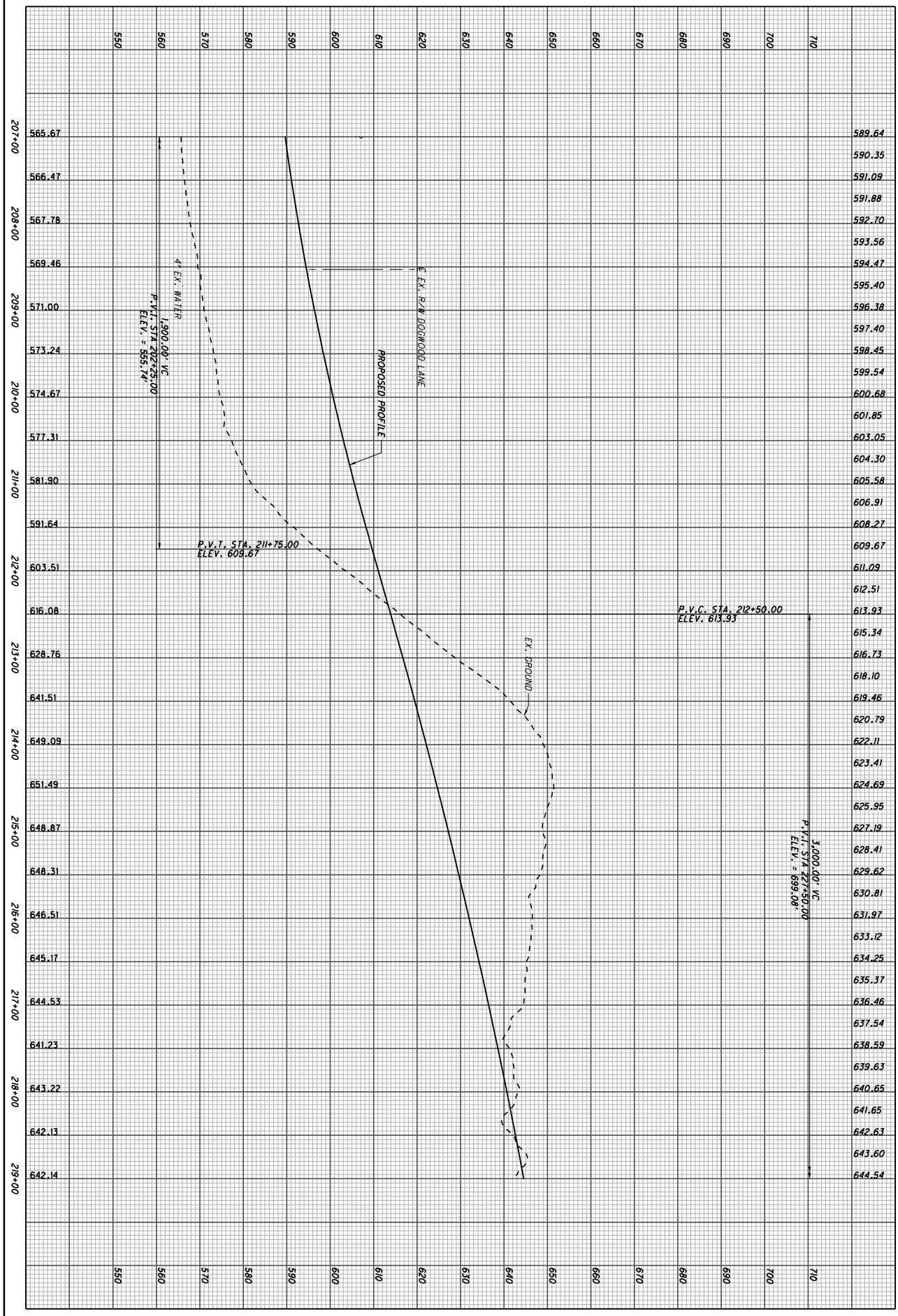
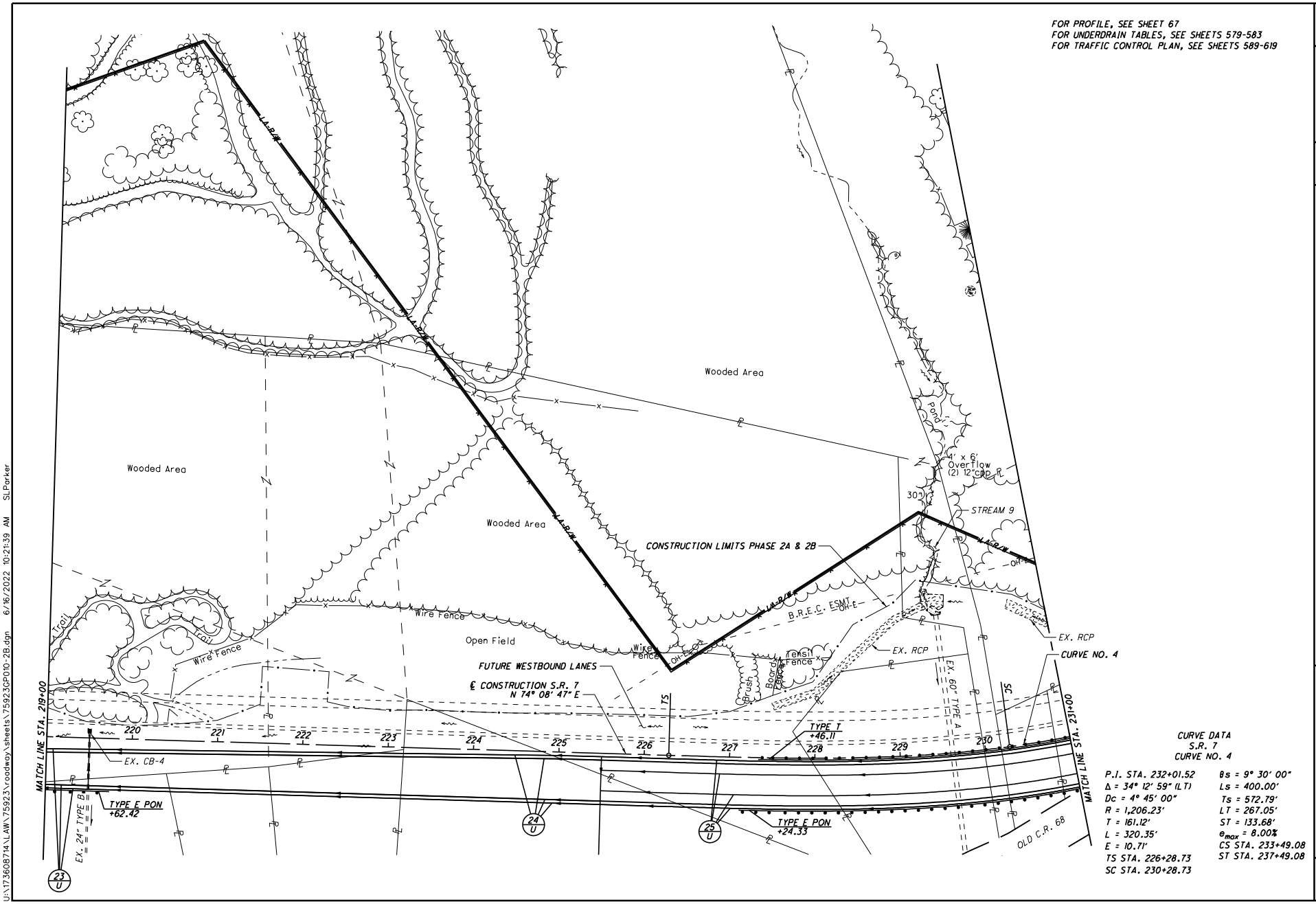


64 / 633	LAW-7-2.17	PROFILE - S.R. 7 STA. 207+00 TO STA. 219+00	CALCULATED SLP CHECKED ALB



CURVE DATA
S.R. 7
CURVE NO. 4

P.I. STA. 232+01.52	θs = 9° 30' 00"
Δ = 34° 12' 59" (LT)	Ls = 400.00'
Dc = 4° 45' 00"	Ts = 572.79'
R = 1,206.23'	LT = 267.05'
T = 161.12'	ST = 133.68'
L = 320.35'	e_{max} = 8.00%
E = 10.71'	CS STA. 233+49.08
TS STA. 226+28.73	ST STA. 237+49.08
SC STA. 230+28.73	

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED SLP
CHECKED ALB

PLAN - S.R. 7
STA. 219+00 TO STA. 231+00 (NORTH)

LAW-7-2.17

65
633

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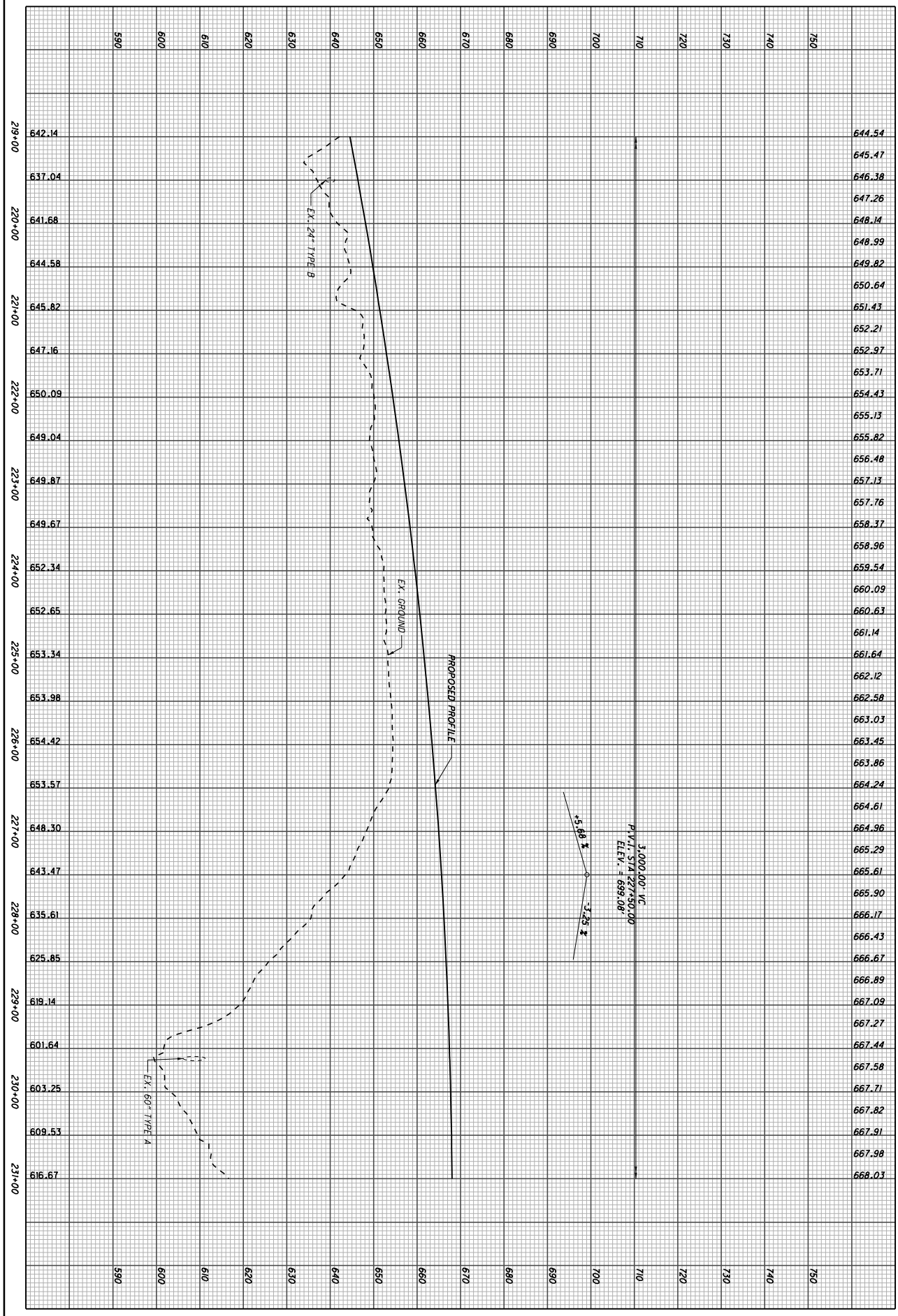
PLAN - S.R. 7
STA. 219+00 TO STA. 231+00 (SOUTH)
LAW-7-2.17
66
635
CALCULATED SLP
CHECKED ALB
HORIZONTAL SCALE IN FEET
0 25 50 100
CURVE DATA
S.R. 7
CURVE NO. 4
P.I. STA. 232+01.52
Δ = 34° 12' 59" (LT)
Dc = 4° 45' 00"
R = 1,206.23'
T = 161.12'
L = 320.35'
E = 10.71'
TS STA. 226+28.73
SC STA. 230+28.73
θs = 9° 30' 00"
Ls = 400.00'
Ts = 572.79'
LT = 267.05'
ST = 133.68'
θmax = 8.00%
CS STA. 233+49.08
ST STA. 237+49.08
FOR PROFILE, SEE SHEET 67
FOR UNDERDRAIN TABLES, SEE SHEETS 581-585
FOR TRAFFIC CONTROL PLAN, SEE SHEETS 589-619
MATCH LINE STA. 231+00
MATCH LINE STA. 219+00
STREAM 94
OHWM = 600.5
EX. RCP
EX. BLOCK MAT
Shed
24"
SC
CURVE NO. 4
ST
℄ CONSTRUCTION S.R. 7
EX. 60" TYPE A
Ex R/W
OH-T
OH-E
CONSTRUCTION LIMITS, PHASE 2A & 2B
PRECAST REINFORCED CONCRETE OUTLET WITH TIED CONCRETE BLOCK MAT
OLD C.R. 68
STA. 225+00.41
END PAVEMENT TAPER, 8' RT.
Wooded Area
EX. CB-4
N 74° 08' 47" E
EX. 24" TYPE B
EX. BLOCK MAT
TMP
230
229
228
227
226
225
224
223
222
221
220

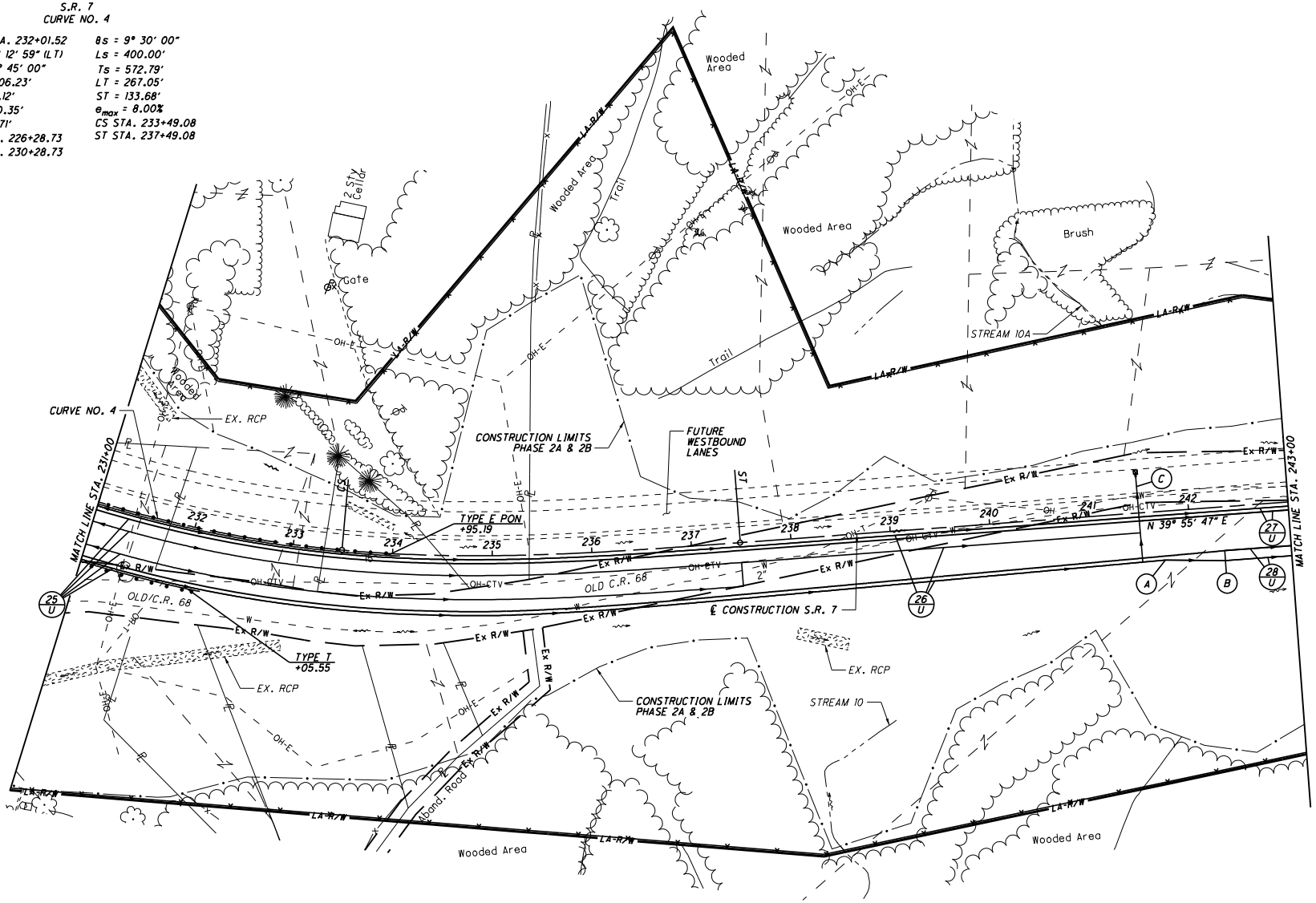


67 / 633	LAW-7-2.17	PROFILE - S.R. 7 STA. 219+00 TO STA. 231+00	CALCULATED SLP CHECKED ALB

CURVE DATA
S.R. 7
CURVE NO. 4

P.I. STA. 232+01.52
Δ = 34° 12' 59" (LT)
Dc = 4° 45' 00"
R = 1,206.23'
T = 161.12'
L = 320.35'
E = 10.71'
TS STA. 226+28.73
SC STA. 230+28.73

θs = 9° 30' 00"
Ls = 400.00'
Ts = 572.79'
LT = 267.05'
ST = 133.68'
e_{max} = 8.00%
CS STA. 233+49.08
ST STA. 237+49.08



(A) - STA. 241+73.20
BEGIN SHOULDER TAPER, 49' RT.

(B) - STA. 242+33.20
END PAVEMENT TAPER, 44' RT.
(FOR CLIMBING LANE)
END SHOULDER TAPER, 54' RT.

(C) - PRECAST REINFORCED OUTLET WITH TIED CONCRETE BLOCK MAT

(LF) DESIGNATES LEACH FIELD

FOR PROFILE, SEE SHEET 69
FOR UNDERDRAIN TABLES, SEE SHEETS 579-583
FOR TRAFFIC CONTROL PLAN, SEE SHEETS 589-619

HORIZONTAL SCALE IN FEET
0 25 50 100
CALCULATED SLP
CHECKED ALB

PLAN - S.R. 7
STA. 231+00 TO STA. 243+00

LAW-7-2.17

68
633

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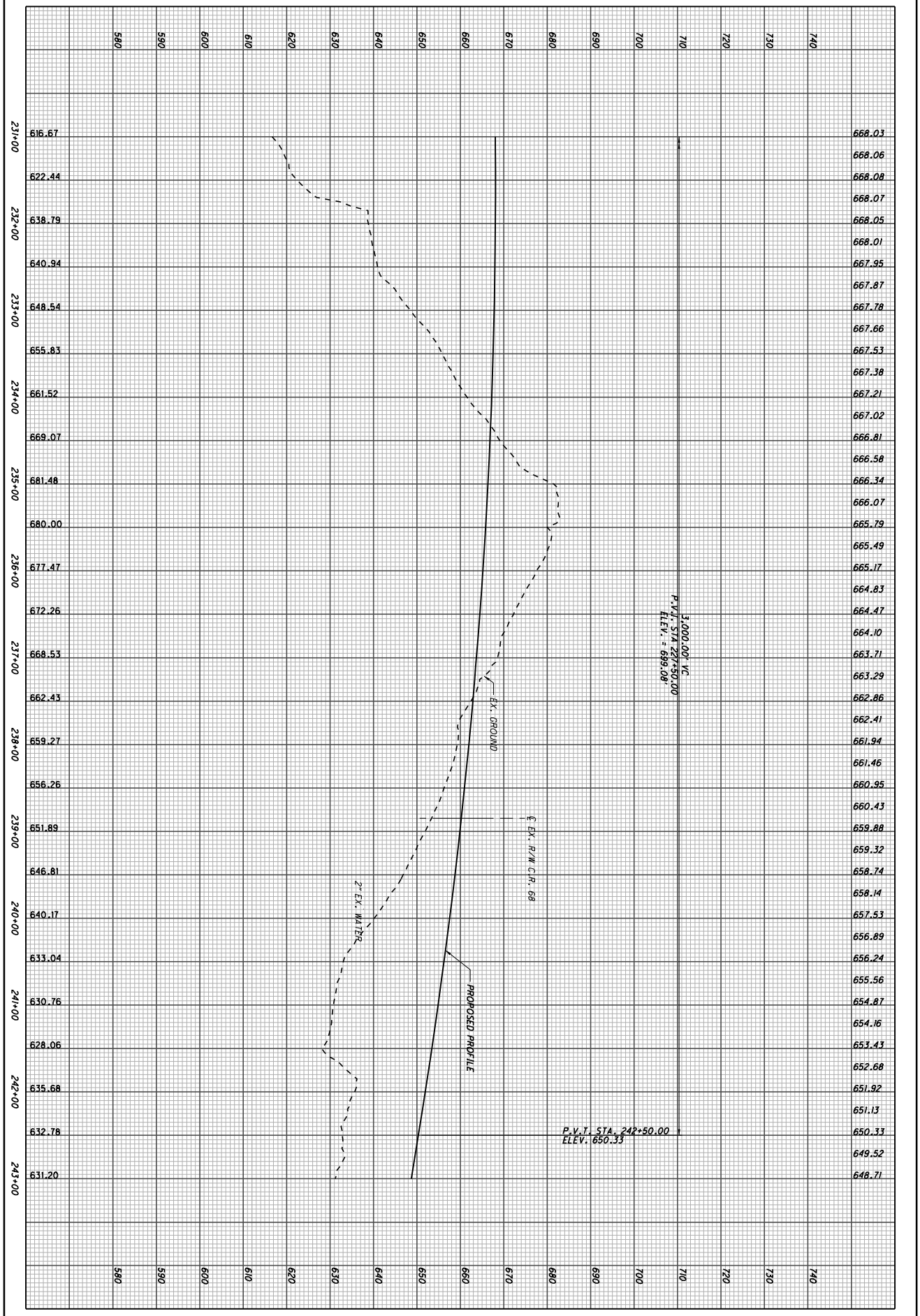
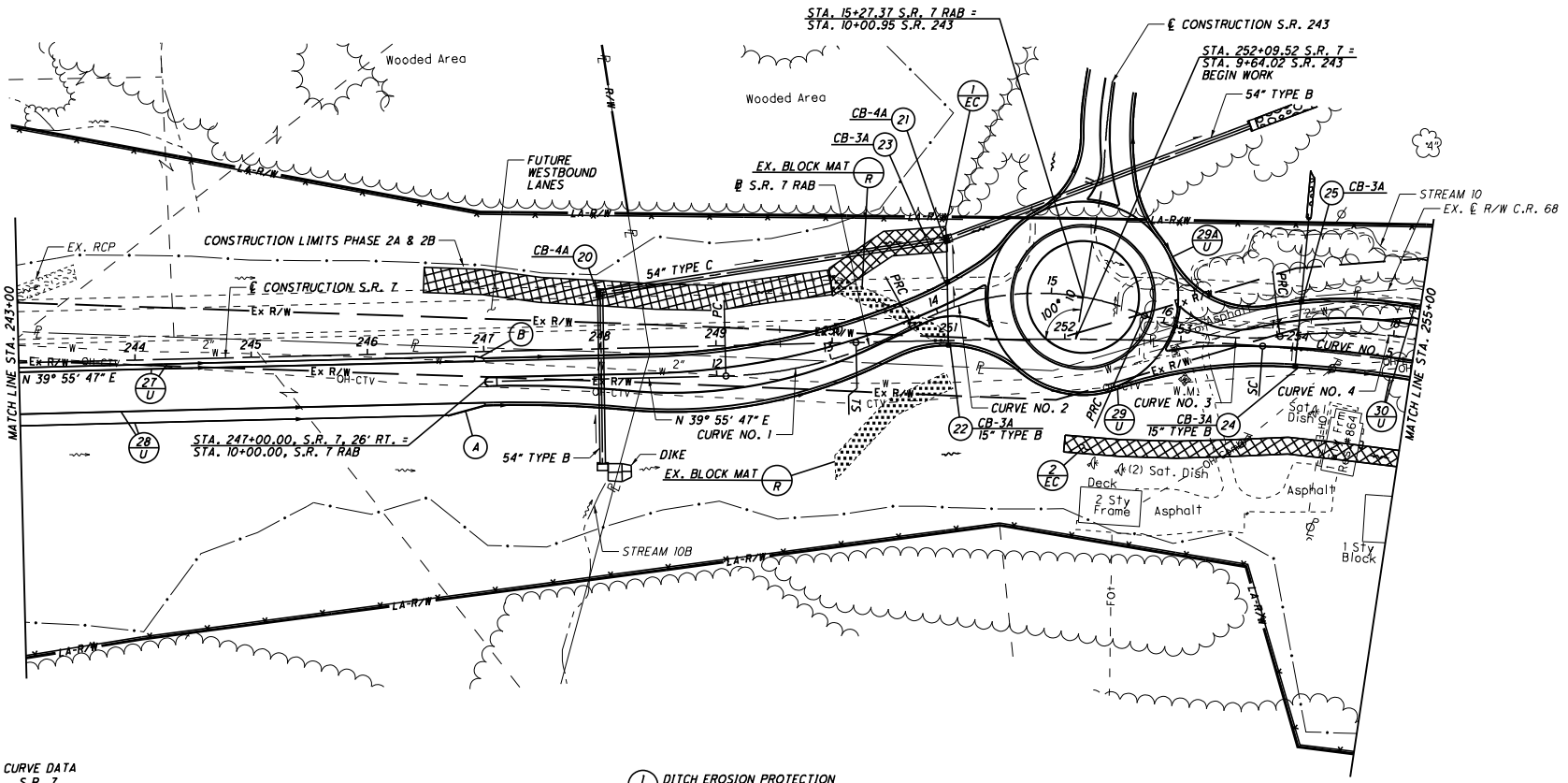


69 / 633	LAW-7-2.17	PROFILE - S.R. 7 STA. 231+00 TO STA. 243+00	CALCULATED SLP CHECKED ALB

CURVE DATA @ S.R. 7 RAB CURVE NO. 1	CURVE DATA @ S.R. 7 RAB CURVE NO. 2	CURVE DATA @ S.R. 7 RAB CURVE NO. 3	CURVE DATA @ S.R. 7 RAB CURVE NO. 4
P.I. Sta. 12+93.43	P.I. Sta. 14+87.13	P.I. Sta. 16+43.83	P.I. Sta. 18+27.99
Δ = 27° 26' 21" (LT)	Δ = 52° 43' 55" (RT)	Δ = 30° 24' 24" (LT)	Δ = 31° 15' 43" (RT)
Dc = 16° 22' 13"	Dc = 25° 27' 53"	Dc = 25° 27' 53"	Dc = 12° 43' 57"
R = 350.00'	R = 225.00'	R = 225.00'	R = 450.00'
T = 85.45'	T = 111.52'	T = 61.15'	T = 125.90'
L = 167.62'	L = 207.08'	L = 119.41'	L = 245.53'
E = 10.28'	E = 26.12'	E = 8.16'	E = 17.28'
PC Sta. 12+07.99	PRC Sta. 13+75.60	PRC Sta. 15+82.68	PRC Sta. 17+02.09
PRC Sta. 13+75.60	PRC Sta. 15+82.68	PRC Sta. 17+02.09	PT Sta. 19+47.62



CURVE DATA S.R. 7 CURVE NO. 5	
P.I. STA. 261+89.75	θs = 5° 41' 15"
Δ = 58° 46' 06" (RT)	Ls = 350.00'
Dc = 3° 15' 00"	Ts = 1,169.30'
R = 1,762.95'	LT = 233.45'
T = 773.76'	ST = 116.78'
L = 1,458.26'	e_{max} = 7.10%
E = 162.33'	CS STA. 268+28.71
TS STA. 250+20.45	ST STA. 271+78.71
SC STA. 253+70.45	

* (A) - STA. 246+68.00 BEGIN SHOULDER TAPER, 54' RT. / STA. 247+00.00 END SHOULDER TAPER, 58' RT.

* (B) - STA. 246+92.00 BEGIN SHOULDER TAPER, 4' LT. / STA. 247+00.00 END SHOULDER TAPER, 6' LT.

(1 EC) DITCH EROSION PROTECTION (100' X 21.5' /9 = 238.89 SY)

(2 EC) SEEDING AND EROSION CONTROL WITH TURF REINFORCING MAT, TYPE 1 (288' x 14.5' / 9 = 464 SY)

* USE TYPE 6 CURB TO TAPER SHOULDER. TAPER CURB HEIGHT FROM 0" TO 6" IN 10'.

FOR PROFILE, SEE SHEETS 71 & 75
FOR S.R. 243 PLAN AND PROFILE, SEE SHEETS 418-418A
FOR STORM SEWER PROFILES, SEE SHEETS 207 & 564
FOR UNDERDRAIN TABLES, SEE SHEETS 579-583
FOR TRAFFIC CONTROL PLAN, SEE SHEETS 589-619

HORIZONTAL SCALE IN FEET 0 25 50 100

CALCULATED SLP CHECKED ALB

PLAN - S.R. 7
STA. 243+00 TO STA. 255+00

LAW-7-2.17

70
633

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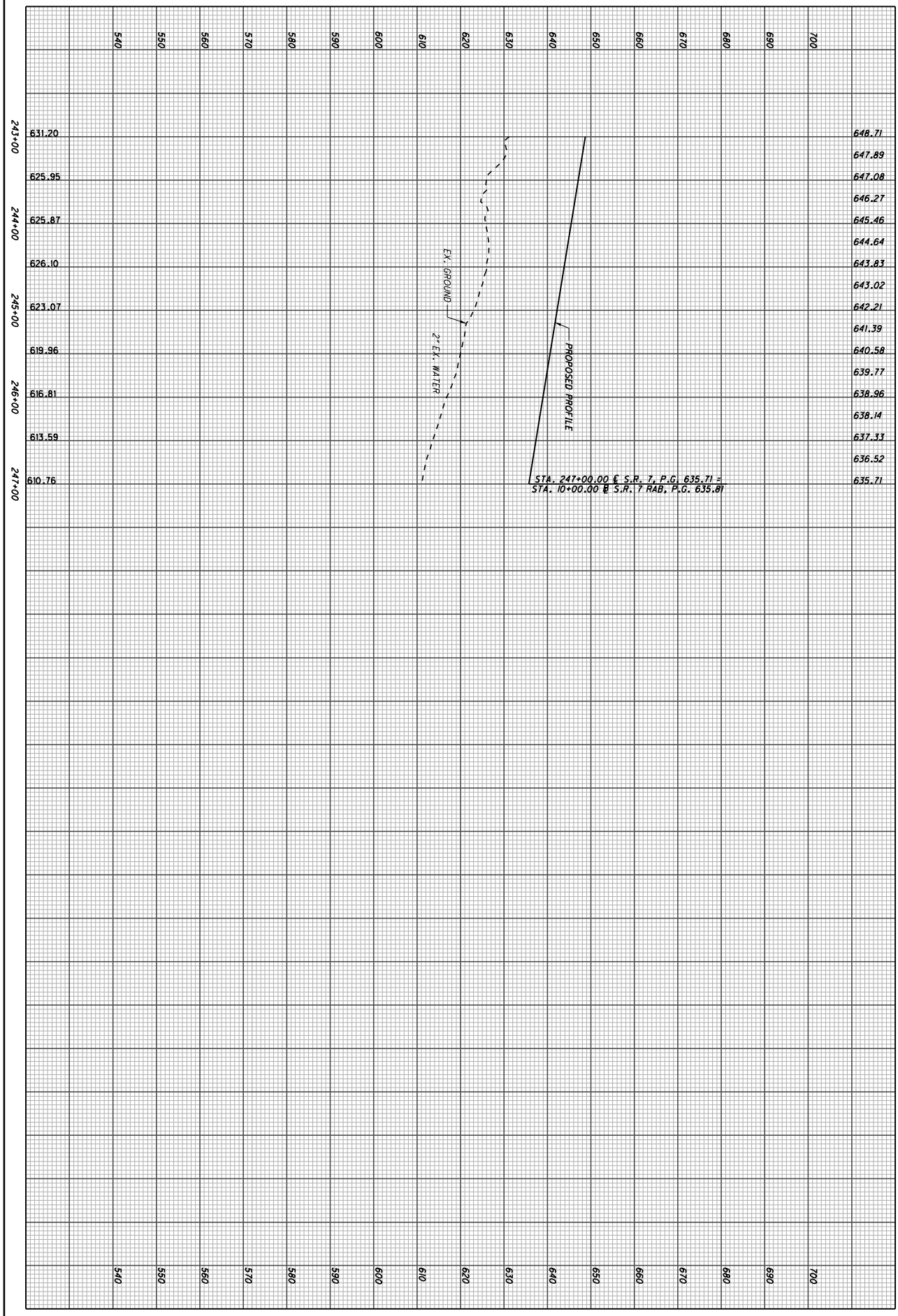
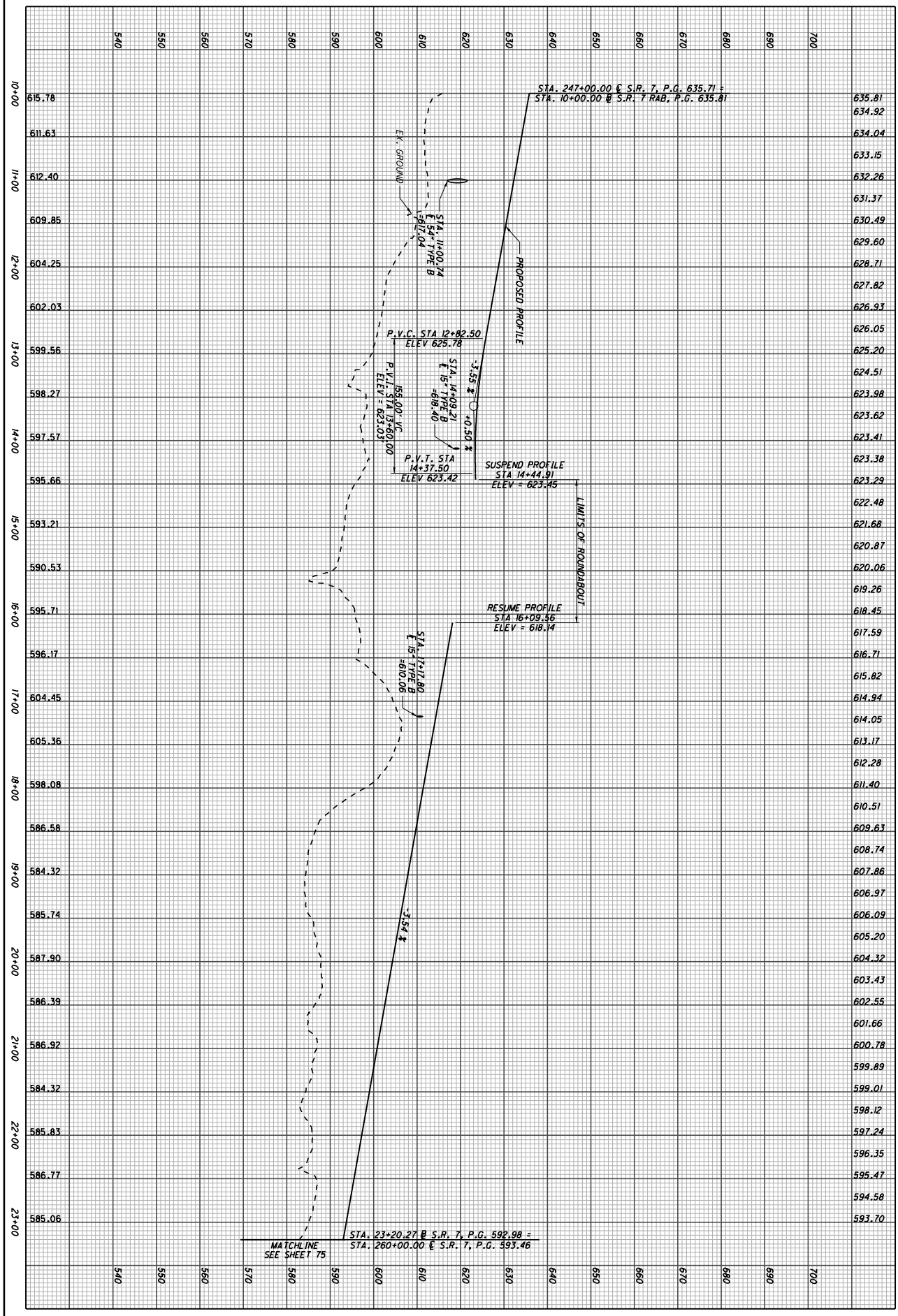
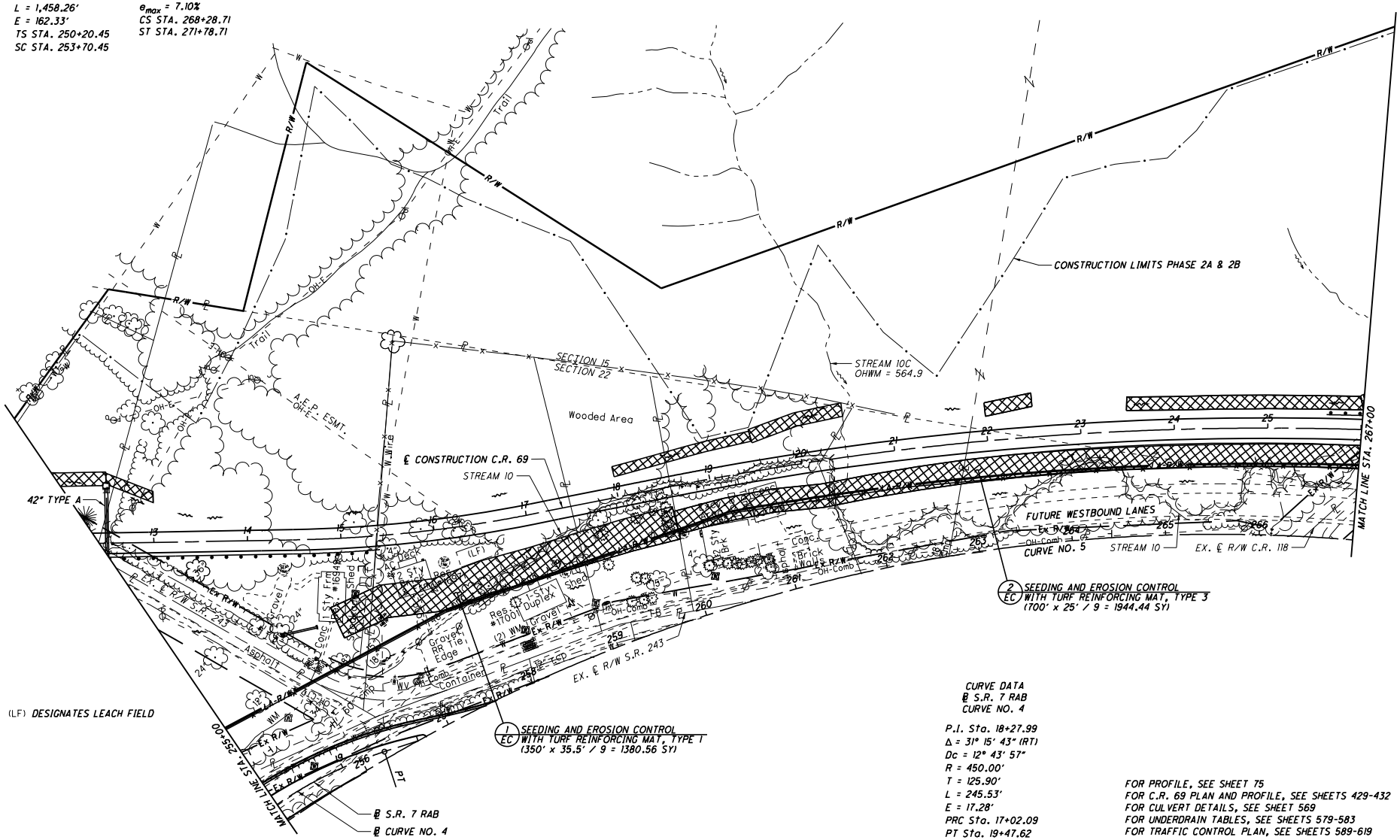


71 / 633	LAW-7-2.17	PROFILE - S.R. 7 STA. 243+00.00 TO STA. 247+00.00	CALCULATED SLP CHECKED ALB



72 / 633	LAW-7-2.17	PROFILE - S.R. 7 RAB STA. 10+00 TO STA. 23+20.27	CALCULATED SLP CHECKED ALB



N

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED SLP
CHECKED ALB

PLAN - S.R. 7
STA. 255+00 TO STA. 267+00 (NORTH)

LAW-7-2.17

73
633

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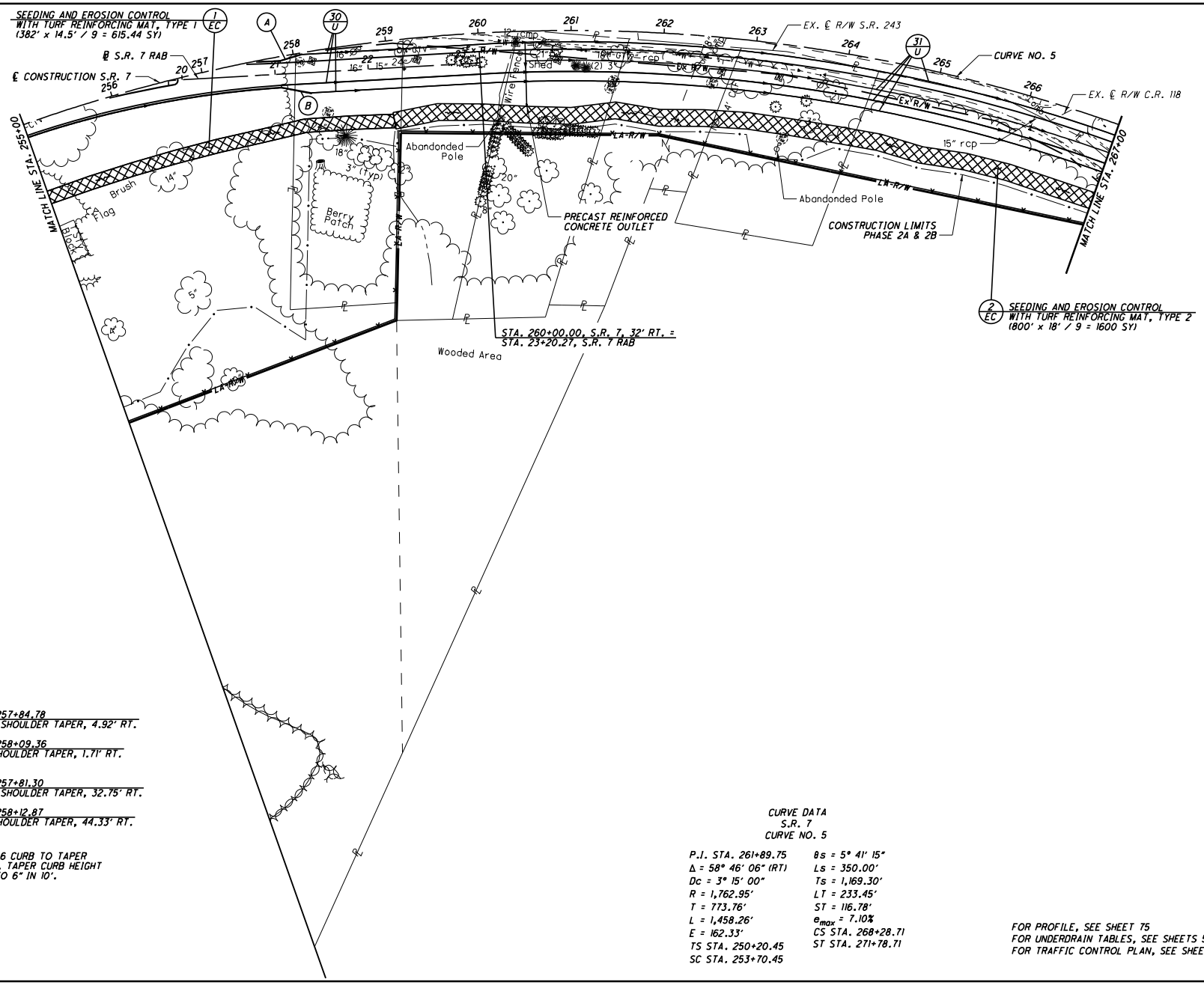

* (A) -
STA. 257+84.78
BEGIN SHOULDER TAPER, 4.92' RT.
STA. 258+09.36
END SHOULDER TAPER, 1.71' RT.

* (B) -
STA. 257+81.30
BEGIN SHOULDER TAPER, 32.75' RT.
STA. 258+12.87
END SHOULDER TAPER, 44.33' RT.

* USE TYPE 6 CURB TO TAPER SHOULDER. TAPER CURB HEIGHT FROM 0" TO 6" IN 10'.

CURVE DATA
S.R. 7
CURVE NO. 5

P.I. STA. 261+89.75	Bs = 5° 41' 15"
Δ = 58° 46' 06" (RT)	Ls = 350.00'
Dc = 3° 15' 00"	Ts = 1,169.30'
R = 1,762.95'	LT = 233.45'
T = 773.76'	ST = 116.78'
L = 1,458.26'	e_{max} = 7.10%
E = 162.33'	CS STA. 268+28.71
TS STA. 250+20.45	ST STA. 271+78.71
SC STA. 253+70.45	

FOR PROFILE, SEE SHEET 75
FOR UNDERDRAIN TABLES, SEE SHEETS 579-583
FOR TRAFFIC CONTROL PLAN, SEE SHEETS 589-619

HORIZONTAL SCALE IN FEET
0 25 50 100
CALCULATED SLP
CHECKED ALB

PLAN - S.R. 7
STA. 255+00 TO STA. 267+00 (SOUTH)

LAW-7-2.17

74
633

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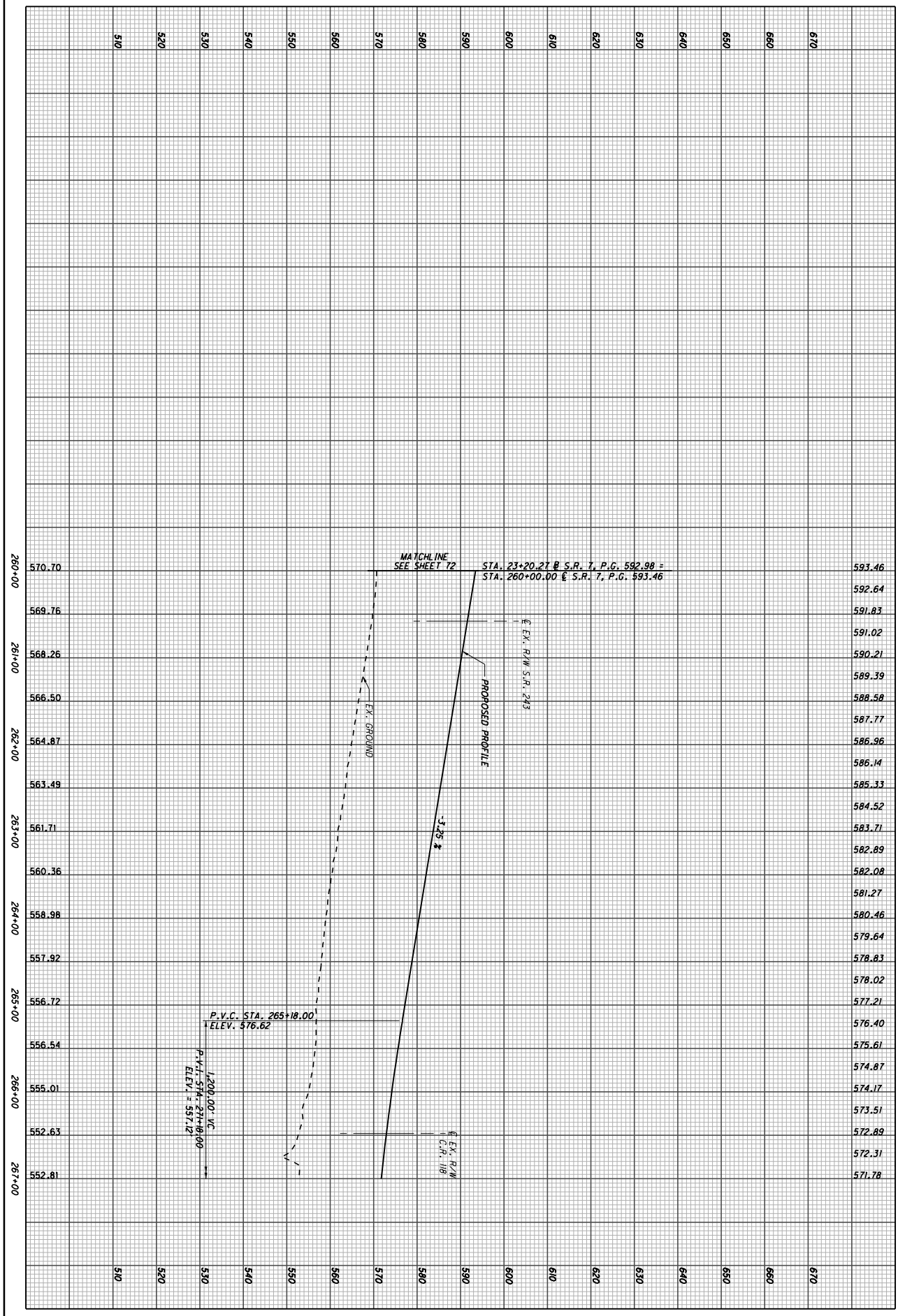
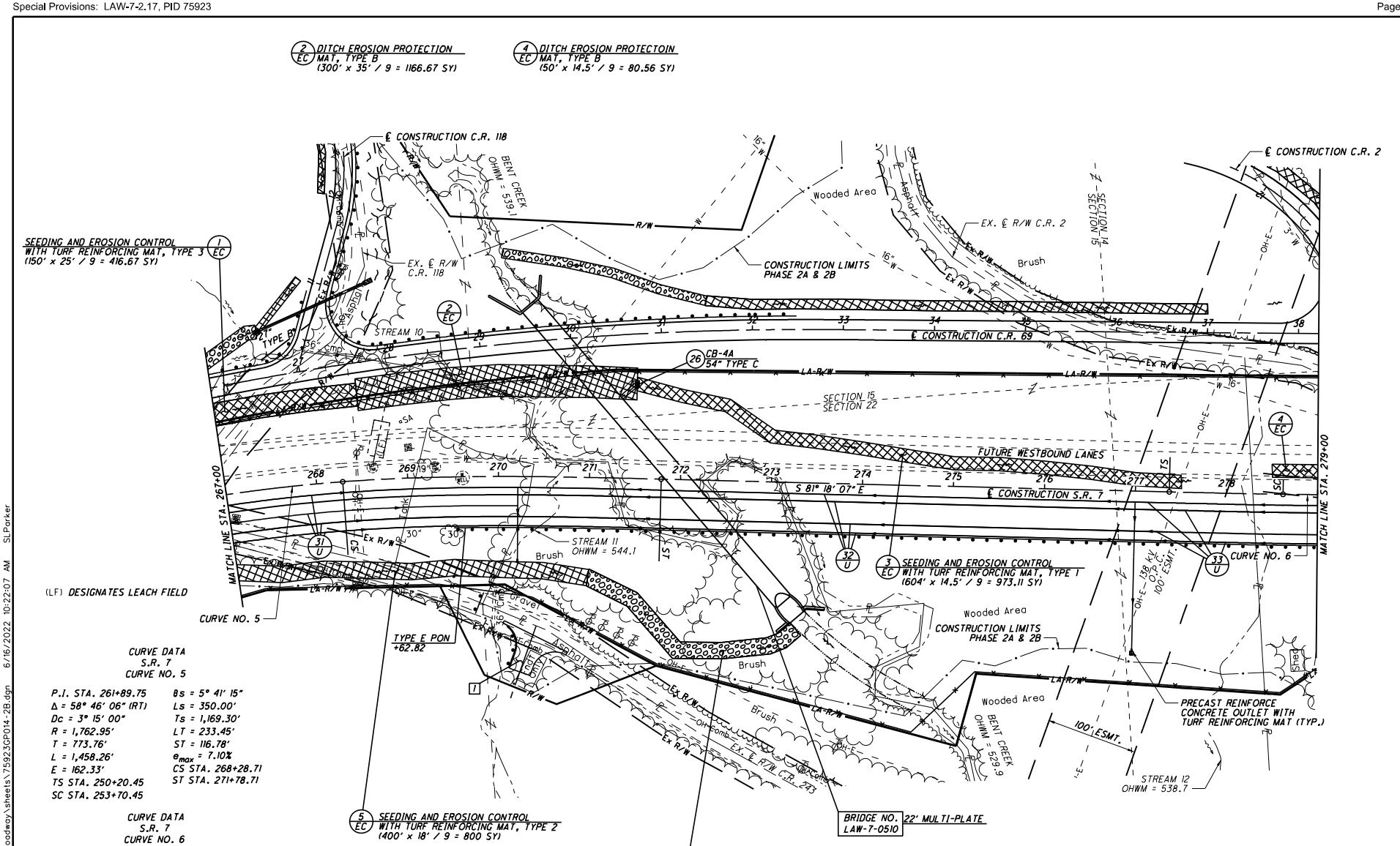


75 633	LAW-7-2.17	PROFILE - S.R. 7 STA. 260+00 TO 267+00	CALCULATED SLP CHECKED ALB



CURVE DATA
S.R. 7
CURVE NO. 5

P.I. STA. 261+89.75	θs = 5° 41' 15"
Δ = 58° 46' 06" (RT)	Ls = 350.00'
Dc = 3° 15' 00"	Ts = 1,169.30'
R = 1,762.95'	LT = 233.45'
T = 773.76'	ST = 116.78'
L = 1,458.26'	e_{max} = 7.10%
E = 162.33'	CS STA. 268+28.71
TS STA. 250+20.45	ST STA. 271+78.71
SC STA. 253+70.45	

CURVE DATA
S.R. 7
CURVE NO. 6

P.I. STA. 280+92.68	θs = 0° 37' 30"
Δ = 5° 51' 21" (RT)	Ls = 125.00'
Dc = 1° 00' 00"	Ts = 355.56'
R = 5,729.58'	LT = 83.33'
T = 230.42'	ST = 41.67'
L = 460.59'	e_{max} = 2.90%
E = 4.63'	CS STA. 283+22.71
TS STA. 277+37.12	ST STA. 284+47.71
SC STA. 278+62.12	

FOR PROFILE, SEE SHEET 77
FOR C.R. 69 PLAN AND PROFILE, SEE SHEETS 429-432
FOR C.R. 118 PLAN AND PROFILE, SEE SHEET 472
FOR C.R. 2 PLAN AND PROFILE, SEE SHEET 478
FOR DRIVE DETAILS, SEE SHEETS 553 & 554
FOR STORM SEWER PROFILES, SEE SHEET 558
FOR UNDERDRAIN TABLES, SEE SHEETS 579-583
FOR TRAFFIC CONTROL PLAN, SEE SHEETS 589-619
FOR STRUCTURE DETAILS, SEE SHEETS XXX-XXX

N

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED SLP
CHECKED ALB

PLAN - S.R. 7
STA. 267+00 TO STA. 279+00

LAW-7-2.17

76
633

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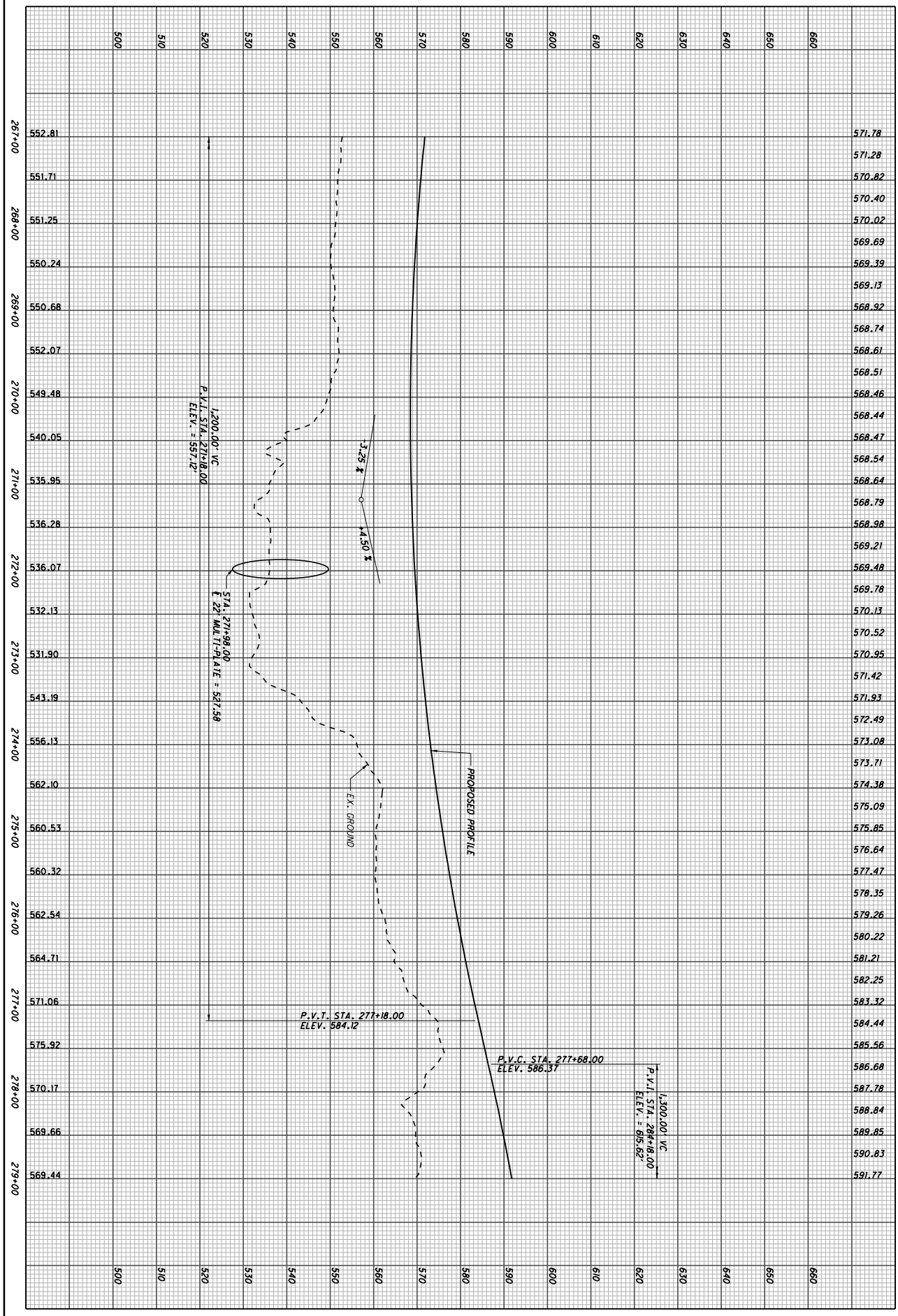
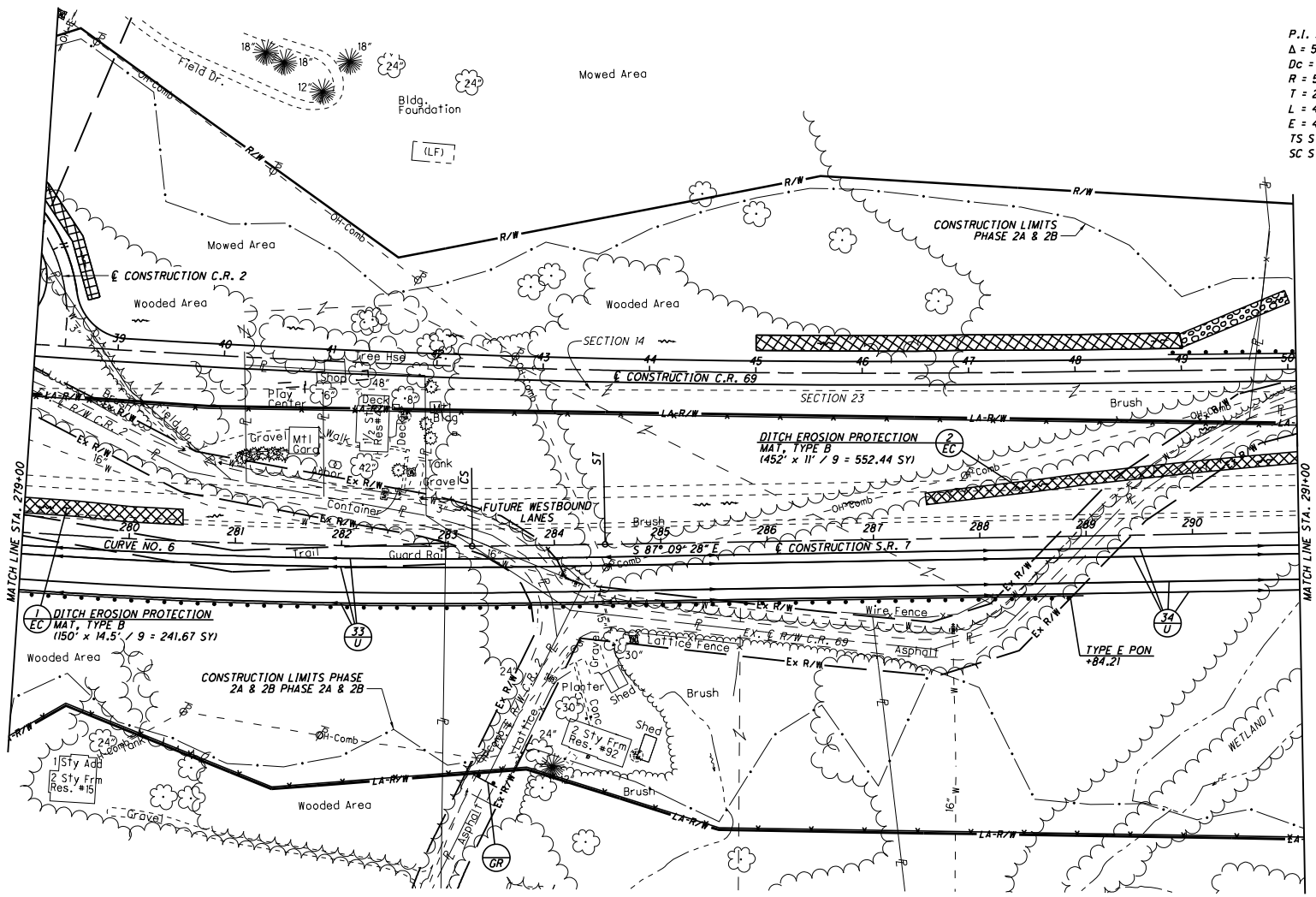


77 / 633	LAW-7-2.17	PROFILE - S.R. 7 STA. 267+00 TO STA. 279+00	CALCULATED SLP CHECKED ALB



HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED SLP
CHECKED ALB

PLAN - S.R. 7
STA. 279+00 TO STA. 291+00

LAW-7-2.17

78
633

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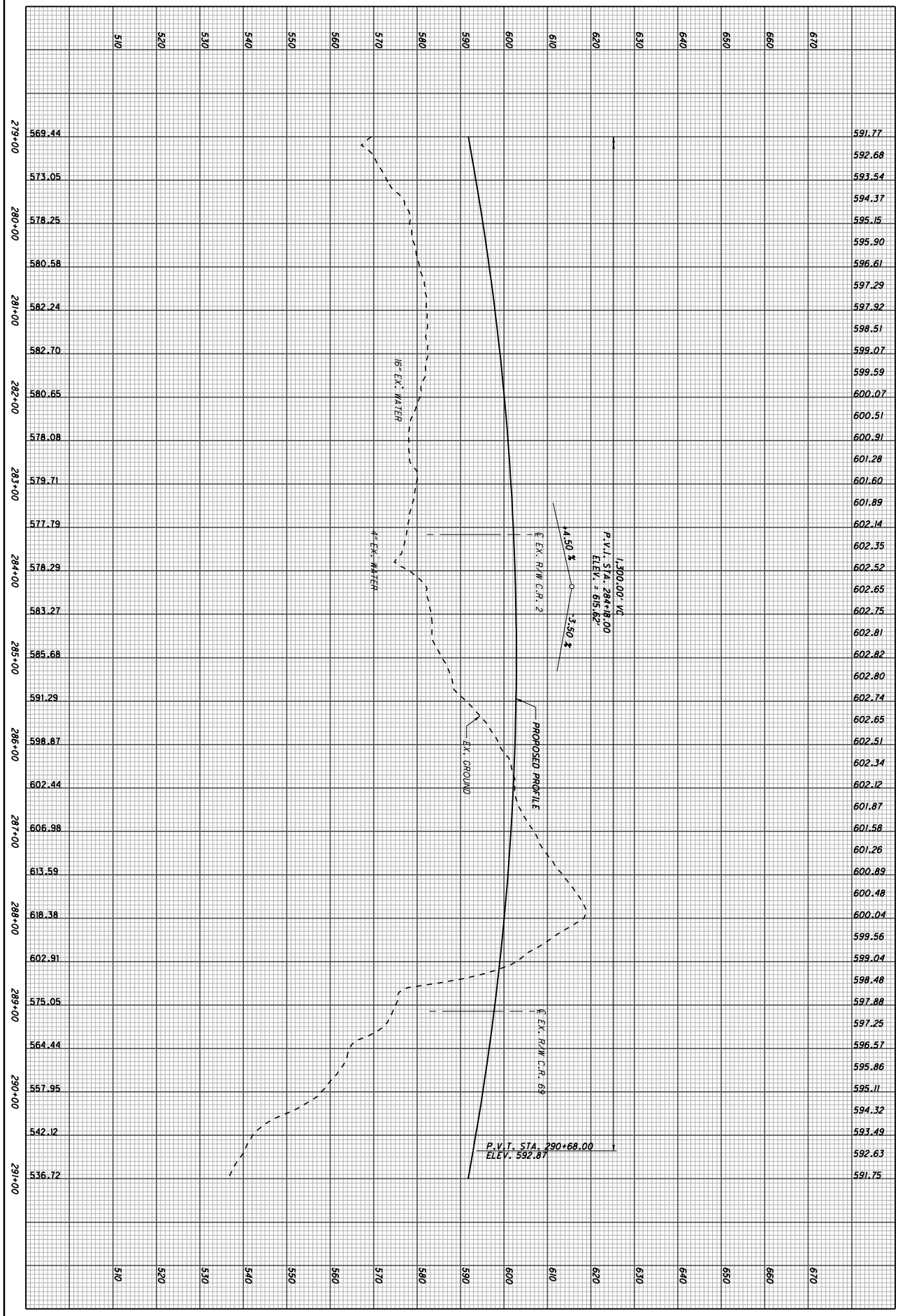
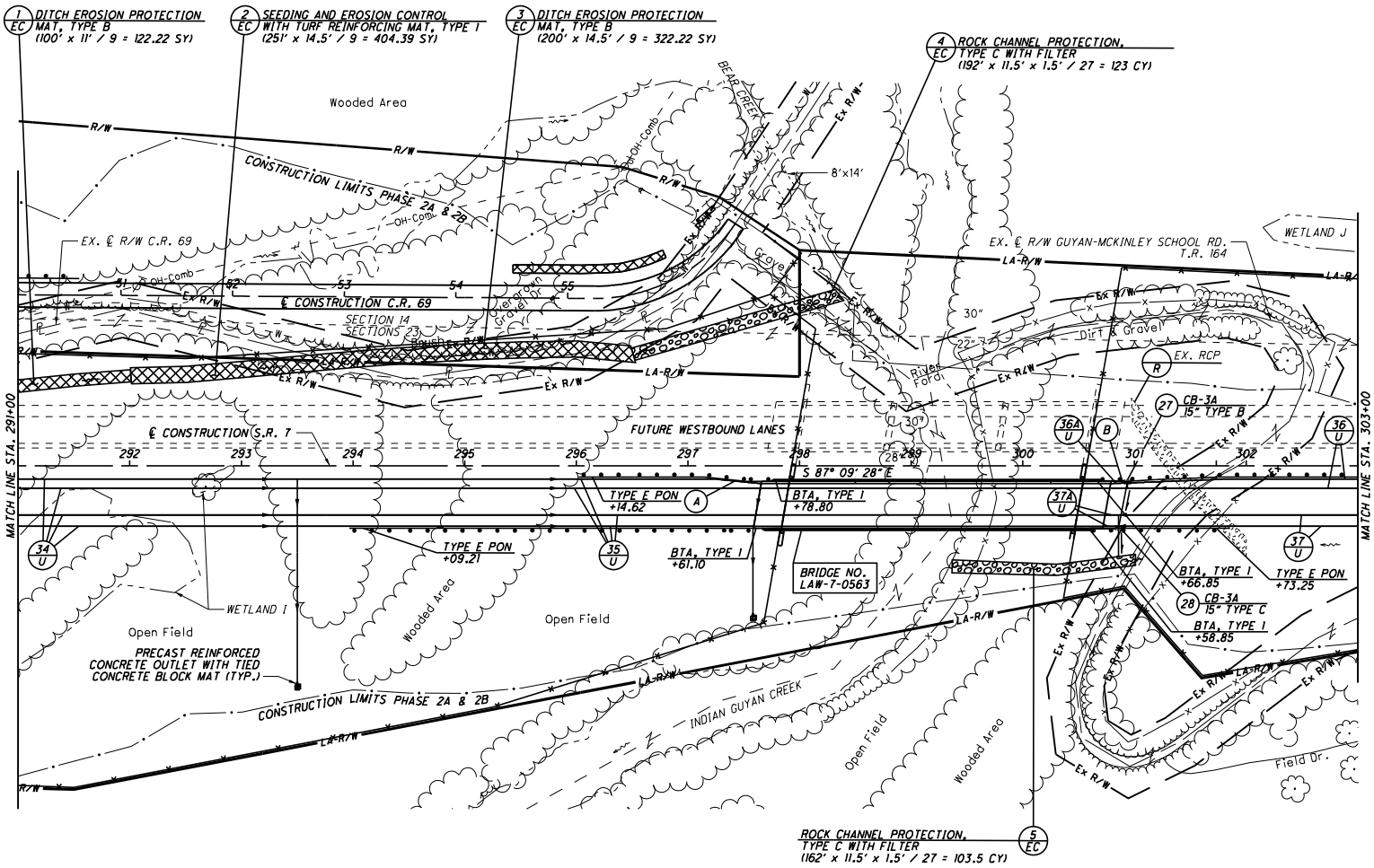


79 633	LAW-7-2.17	PROFILE - S.R. 7 STA. 279+00 TO STA. 291+00	CALCULATED SLP CHECKED ALB



(A) - STA. 297+25.66 BEGIN SHOULDER TAPER, 12' RT.
STA. 297+65.66 END SHOULDER TAPER, 16' RT.

(B) - STA. 300+78.70 BEGIN SHOULDER TAPER, 16' RT.
STA. 301+78.70 END SHOULDER TAPER, 12' RT.

FOR PROFILE, SEE SHEET 81
FOR C.R. 69 PLAN AND PROFILE, SEE SHEETS 429-432
FOR UNDERDRAIN TABLES, SEE SHEETS 579-583
FOR TRAFFIC CONTROL PLAN, SEE SHEETS 589-619

N

HORIZONTAL SCALE IN FEET 0 25 50 100

CALCULATED SLP CHECKED ALB

PLAN - S.R. 7
STA. 291+00 TO 303+00

LAW-7-2.17

80
633

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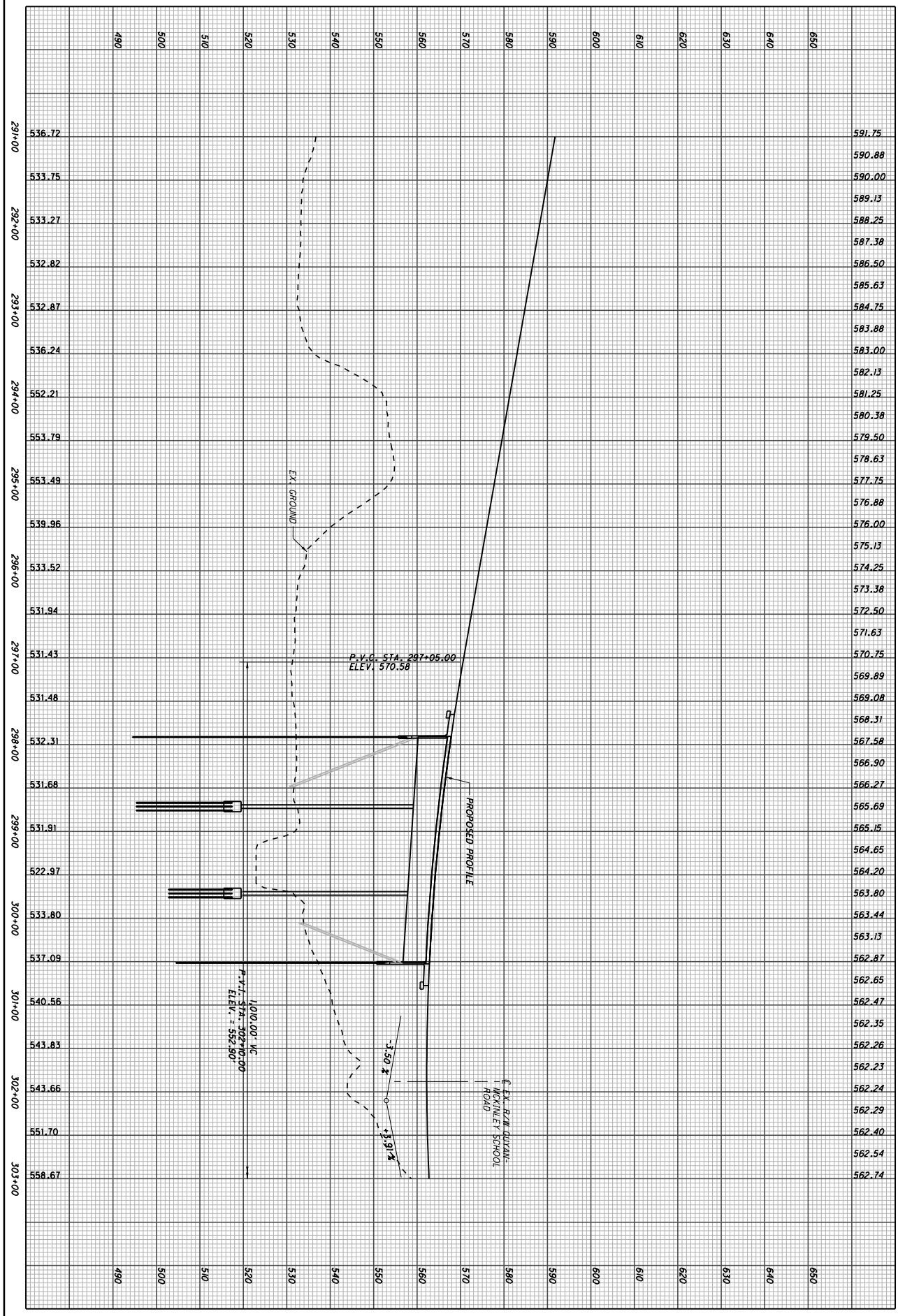
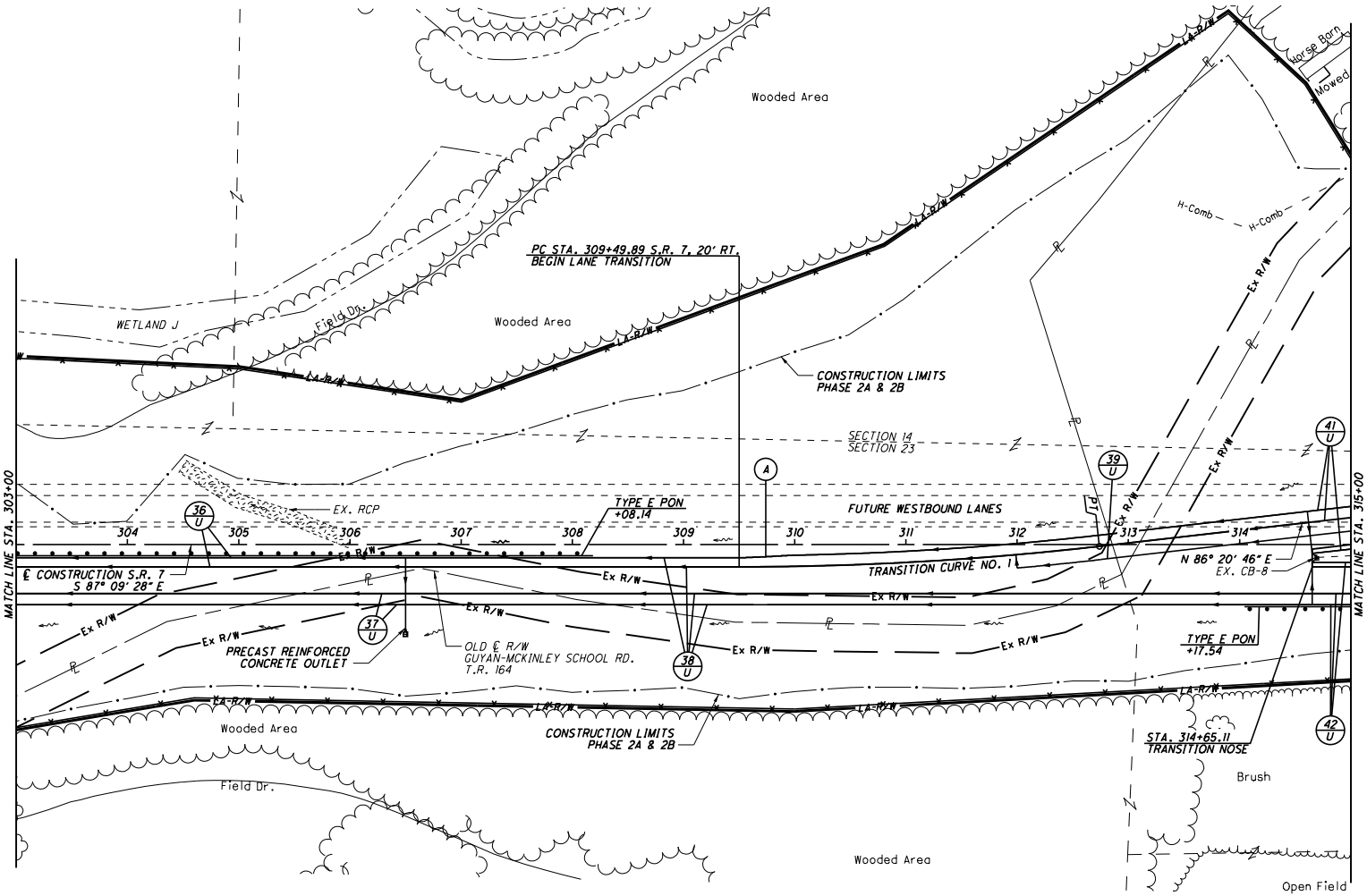


81 / 633	LAW-7-2.17	PROFILE - S.R. 7 STA. 291+00 TO STA. 303+00	CALCULATED SLP CHECKED ALB



CURVE DATA
S.R. 7 LANE TRANSITION
TRANSITION CURVE NO. 1
(FOR HORIZONTAL LAYOUT ONLY)

P.I. Sta. 311+12.46, S.R. 7, 20' RT.
Δ = 6° 29' 46" (LT)
Dc = 2° 00' 00"
R = 2,864.79'
T = 162.58'
L = 324.81'
E = 4.61'
e_{max} = NC
PC STA. = 309+49.89, S.R. 7, 20' RT.
PT STA. = 312+74.00, S.R. 7, 1.61' RT.

(A) - STA. 309+49.89
BEGIN SHOULDER TAPER, 12' RT.

STA. 309+99.71
END SHOULDER TAPER, 9.57' RT.

FOR PROFILE, SEE SHEET 83
FOR UNDERDRAIN TABLES, SEE SHEETS 579-583
FOR TRAFFIC CONTROL PLAN, SEE SHEETS 589-619

N

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED SLP
CHECKED ALB

PLAN - S.R. 7
STA. 303+00 TO STA. 315+00

LAW-7-2.17

82
633

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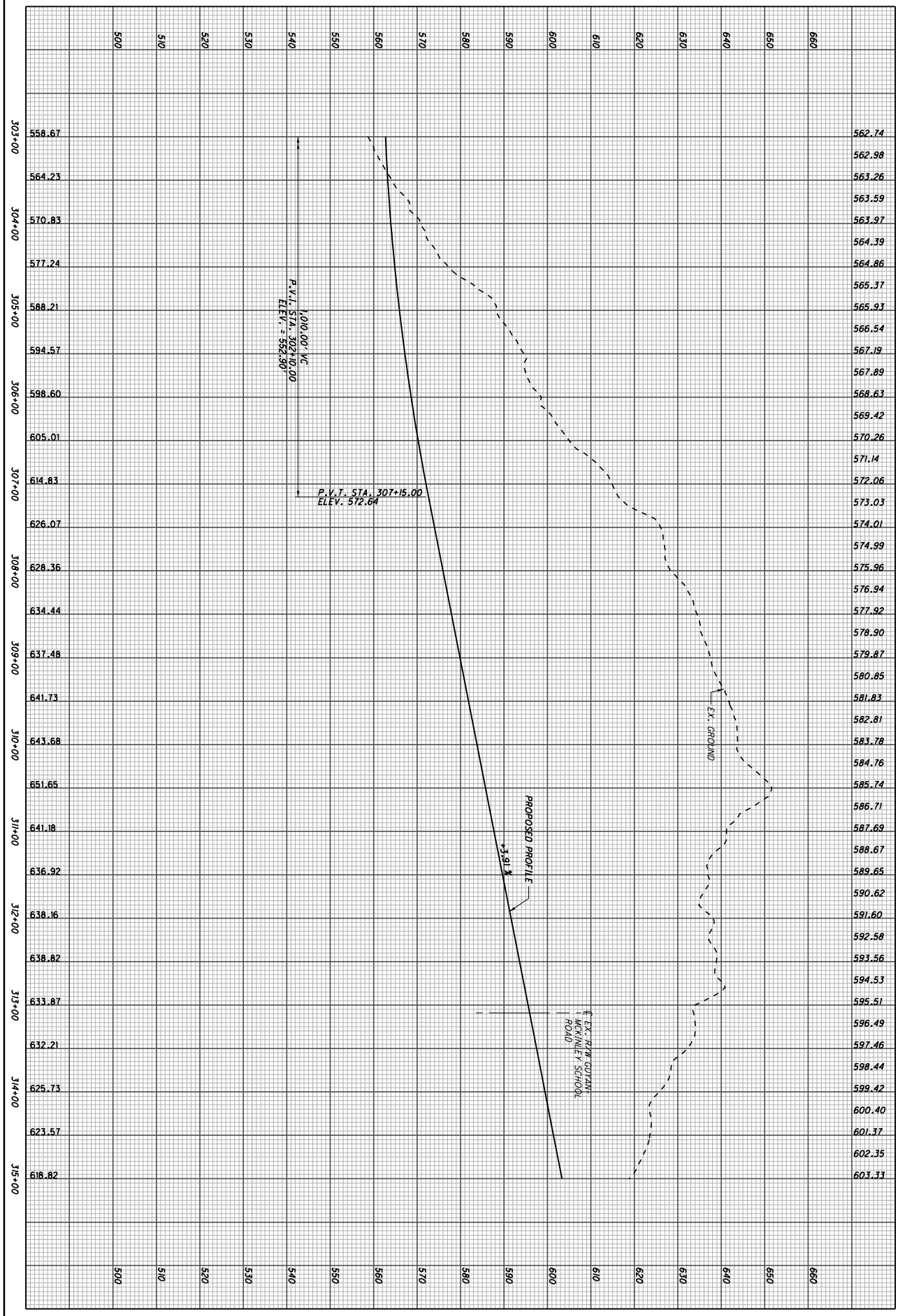
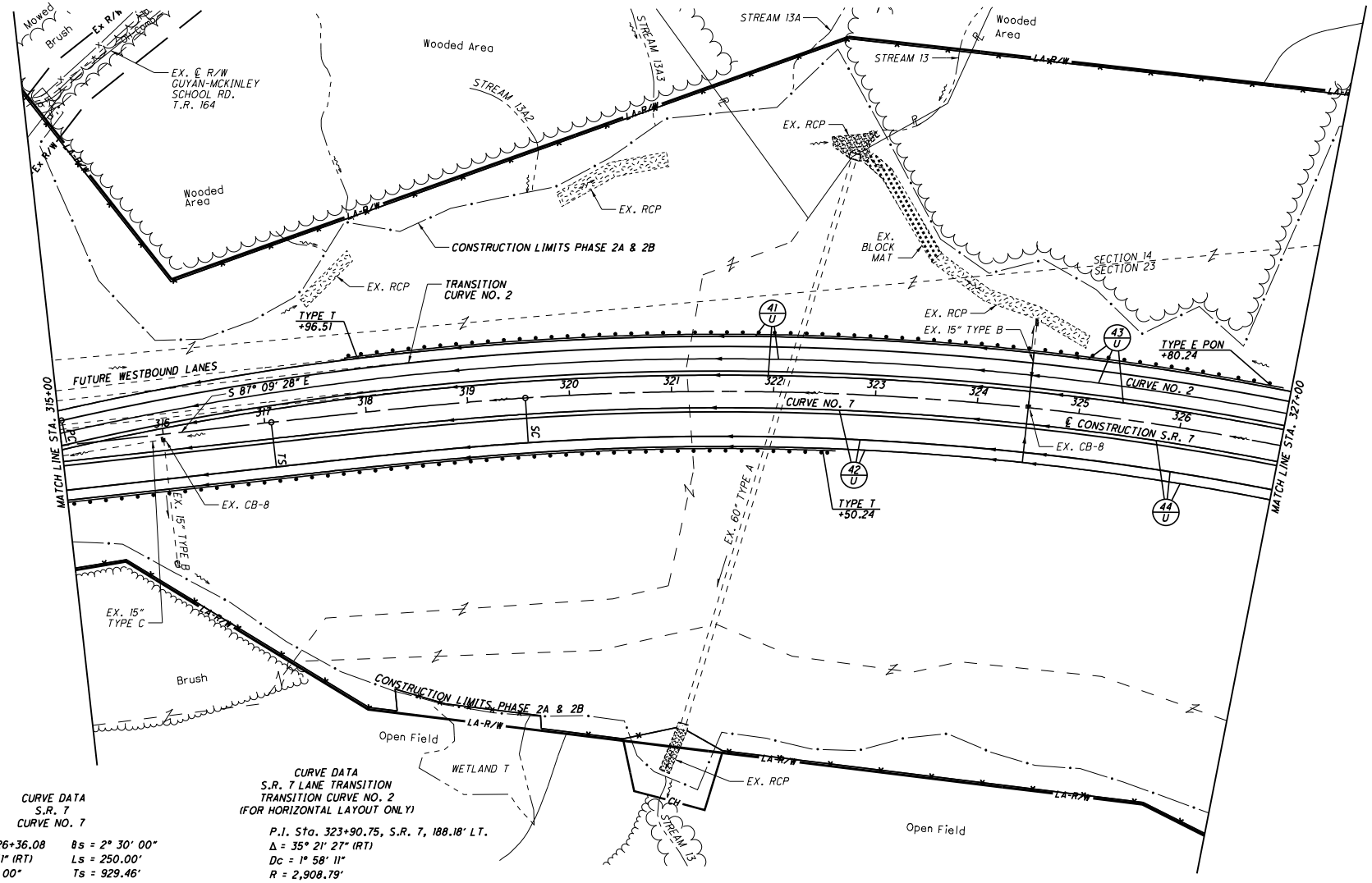


83 633	LAW-7-2.17	PROFILE - S.R. 7 STA. 303+00 TO STA. 315+00	CALCULATED SLP CHECKED ALB



CURVE DATA
S.R. 7
CURVE NO. 7

P.I. STA. 326+36.08
Δ = 31° 21' 41" (RT)
Dc = 2° 00' 00"
R = 2,864.79'
T = 670.91'
L = 1,318.07'
E = 77.51'
TS STA. 317+06.62
SC STA. 319+56.62
θs = 2° 30' 00"
Ls = 250.00'
Ts = 929.46'
LT = 166.68'
ST = 83.35'
e_{max} = 5.10%
CS STA. 332+74.69
ST STA. 335+24.69

CURVE DATA
S.R. 7 LANE TRANSITION
TRANSITION CURVE NO. 2
(FOR HORIZONTAL LAYOUT ONLY)

P.I. Sta. 323+90.75, S.R. 7, 188.18' LT.
Δ = 35° 21' 27" (RT)
Dc = 1° 58' 11"
R = 2,908.79'
T = 927.12'
L = 1,795.03'
E = 144.18'
e_{max} = 5.10%
PC STA. = 315+02.52, S.R. 7, 24.41' LT.
PT STA. = 332+74.69, S.R. 7, 44' LT.

FOR PROFILE, SEE SHEET 85
FOR UNDERDRAIN TABLES, SEE SHEETS 581-585
FOR TRAFFIC CONTROL PLAN, SEE SHEETS 589-619

CALCULATED SLP
CHECKED ALB

HORIZONTAL SCALE IN FEET
0 25 50 100

PLAN - S.R. 7
STA. 315+00 TO STA. 327+00

LAW-7-2.17

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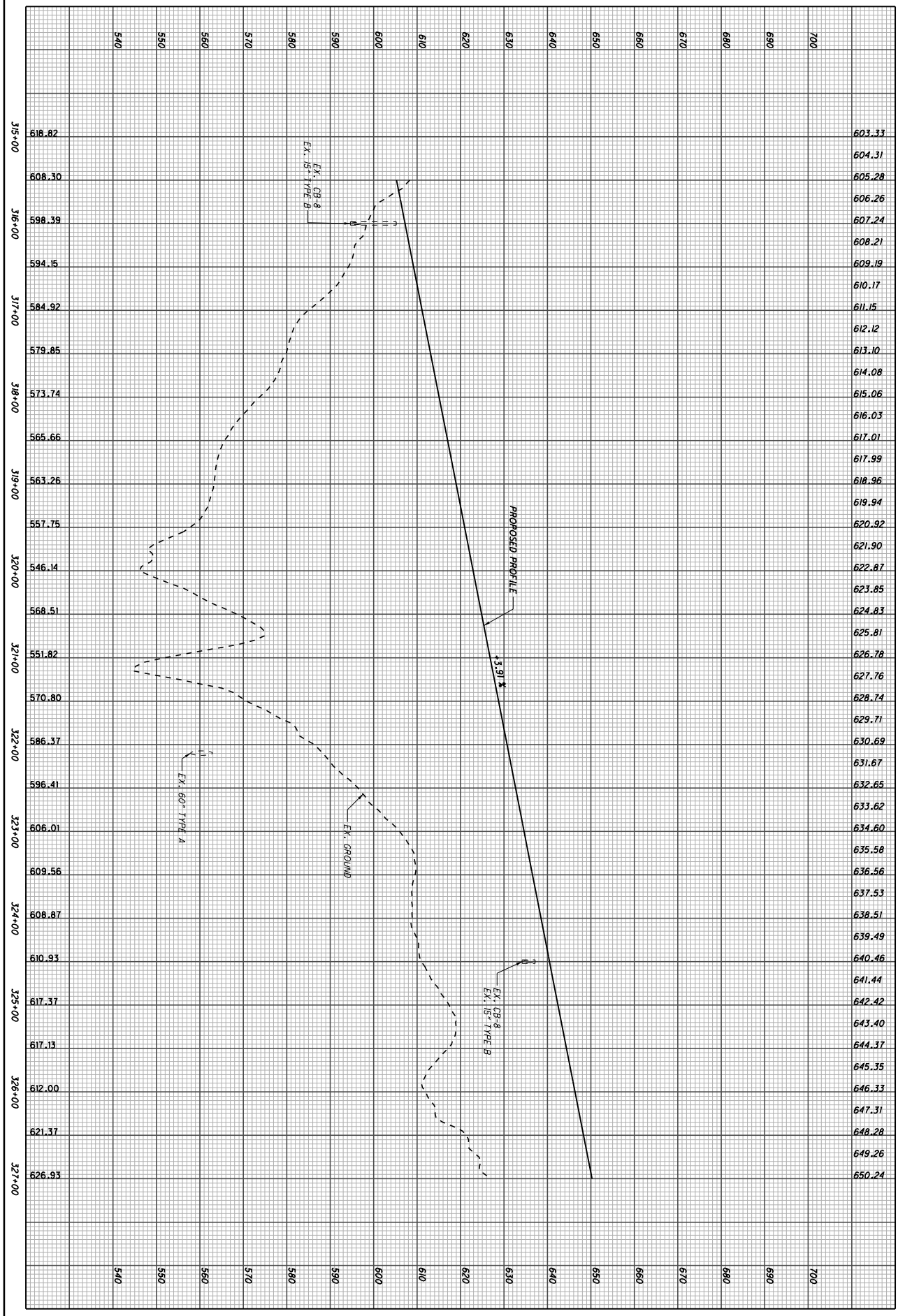


85 / 633	LAW-7-2.17	PROFILE - S.R. 7 STA. 315+00 TO STA. 327+00	CALCULATED SLP CHECKED ALB

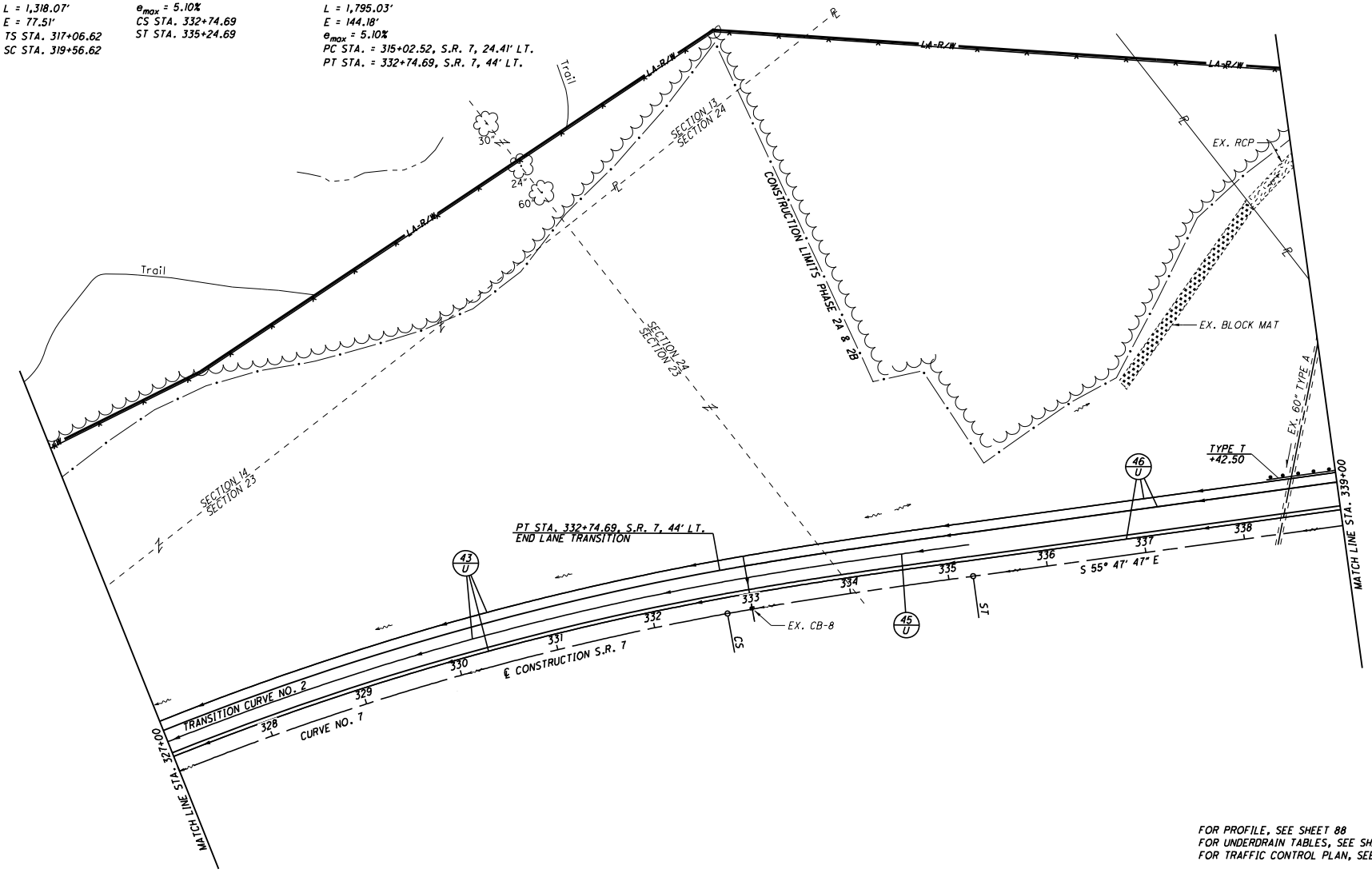
CURVE DATA
S.R. 7
CURVE NO. 7

P.I. STA. 326+36.08
Δ = 31° 21' 41" (RT)
Dc = 2° 00' 00"
R = 2,864.79'
T = 670.91'
L = 1,318.07'
E = 77.51'
TS STA. 317+06.62
SC STA. 319+56.62

θs = 2° 30' 00"
Ls = 250.00'
Ts = 929.46'
LT = 166.68'
ST = 83.35'
e_{max} = 5.10%
CS STA. 332+74.69
ST STA. 335+24.69

CURVE DATA
S.R. 7 LANE TRANSITION
TRANSITION CURVE NO. 2
(FOR HORIZONTAL LAYOUT ONLY)

P.I. STA. 323+90.75, S.R. 7, 188.18' LT.
Δ = 35° 21' 27" (RT)
Dc = 1° 58' 11"
R = 2,908.79'
T = 927.12'
L = 1,795.03'
E = 144.18'
e_{max} = 5.10%
PC STA. = 315+02.52, S.R. 7, 24.41' LT.
PT STA. = 332+74.69, S.R. 7, 44' LT.



FOR PROFILE, SEE SHEET 88
FOR UNDERDRAIN TABLES, SEE SHEETS 579-583
FOR TRAFFIC CONTROL PLAN, SEE SHEETS 589-619

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED SLP
CHECKED ALB

PLAN - S.R. 7
STA. 327+00 TO STA. 339+00 (NORTH)

LAW-7-2.17

86
633

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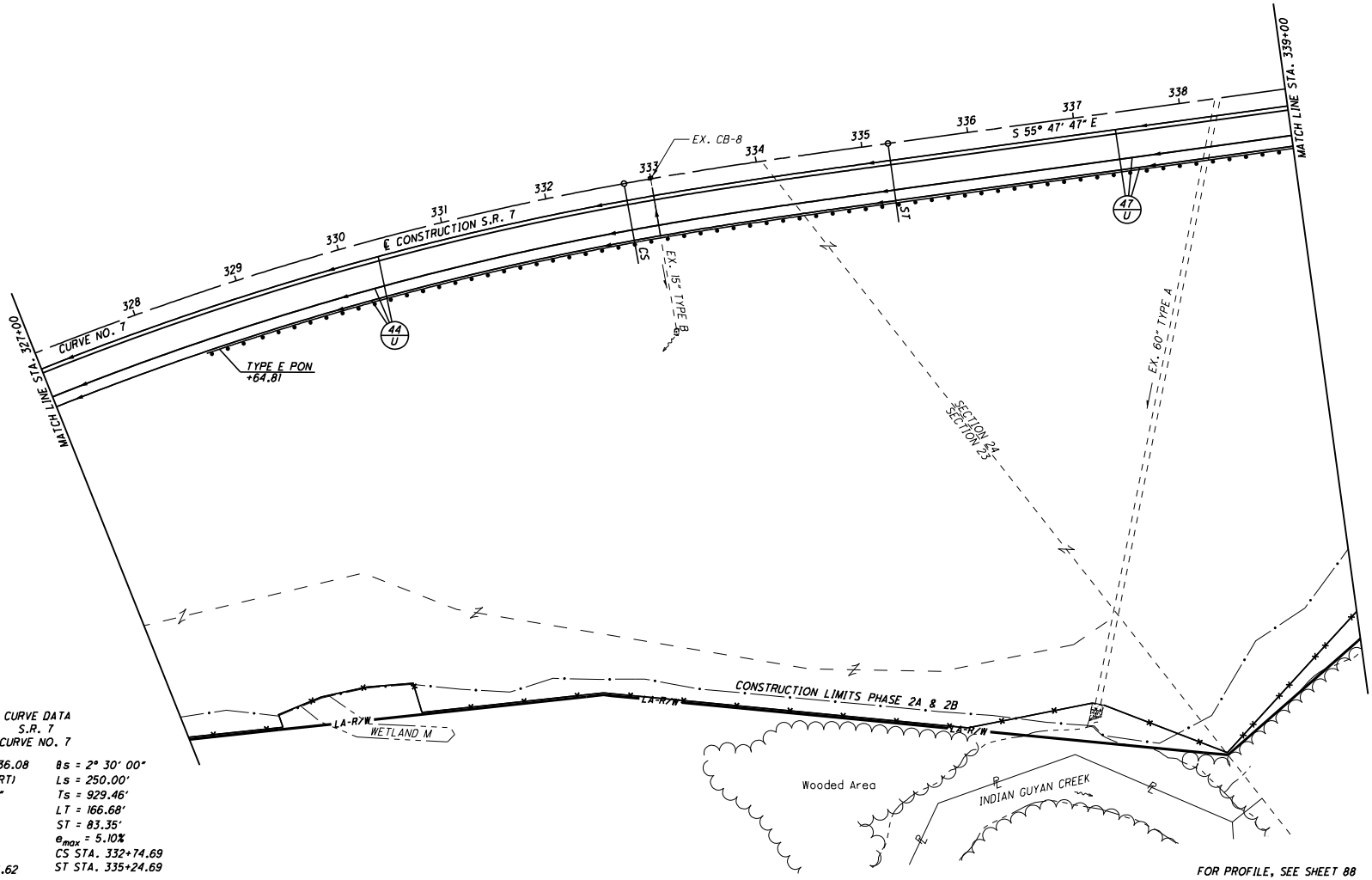

CURVE DATA
S.R. 7
CURVE NO. 7

P.I. STA. 326+36.08	θs = 2° 30' 00"
Δ = 31° 21' 41" (RT)	Ls = 250.00'
Dc = 2° 00' 00"	Ts = 929.46'
R = 2,864.79'	LT = 166.68'
T = 670.91'	ST = 83.35'
L = 1,318.07'	e_{max} = 5.10%
E = 77.51'	CS STA. 332+74.69
TS STA. 317+06.62	ST STA. 335+24.69
SC STA. 319+56.62	

FOR PROFILE, SEE SHEET 88
FOR UNDERDRAIN TABLES, SEE SHEETS 581-585
FOR TRAFFIC CONTROL PLAN, SEE SHEETS 589-619

HORIZONTAL SCALE IN FEET
0 25 50 100
CALCULATED SLP
CHECKED ALB

PLAN - S.R. 7
STA. 327+00 TO STA. 339+00 (SOUTH)

LAW-7-2.17

87
635

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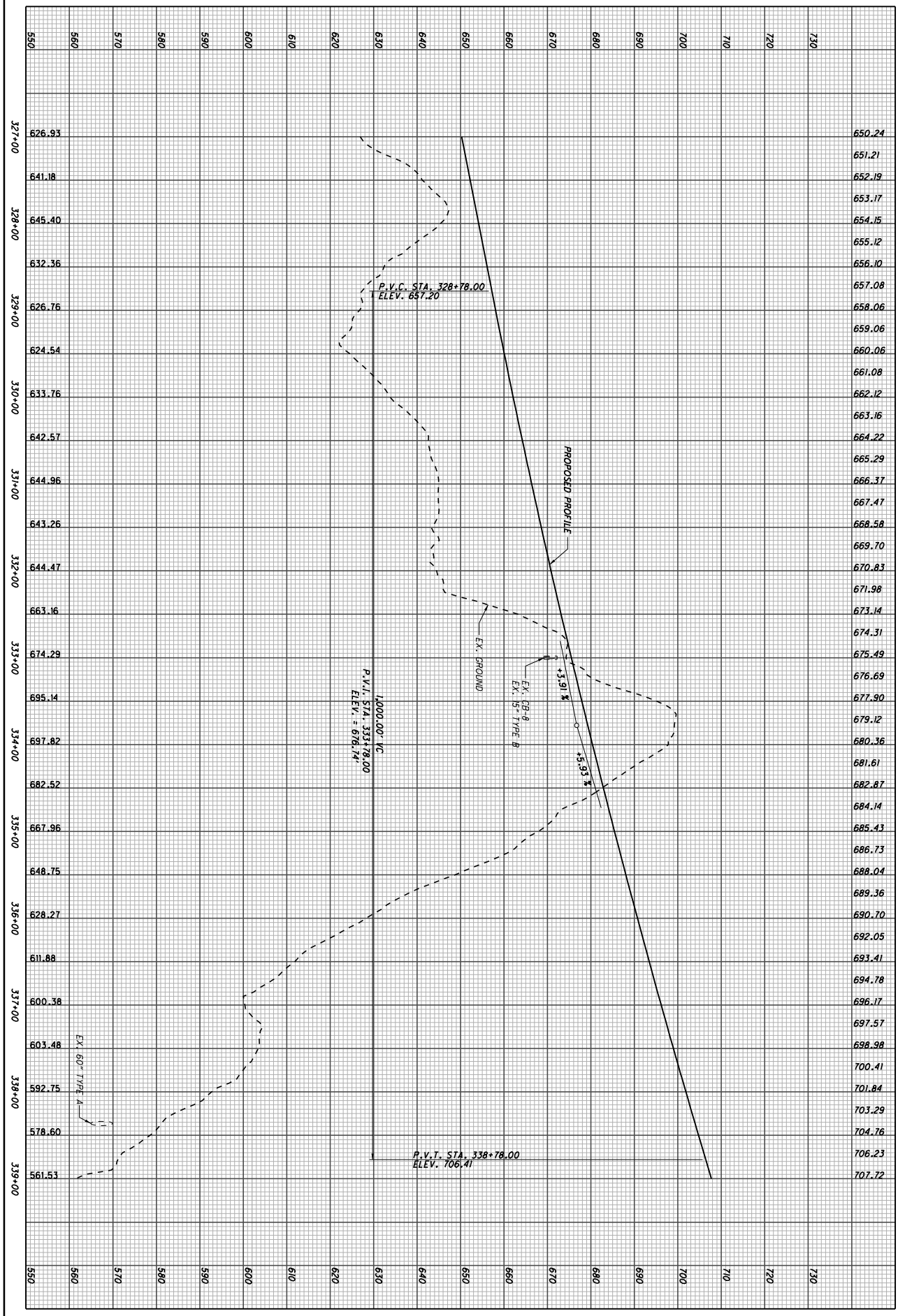
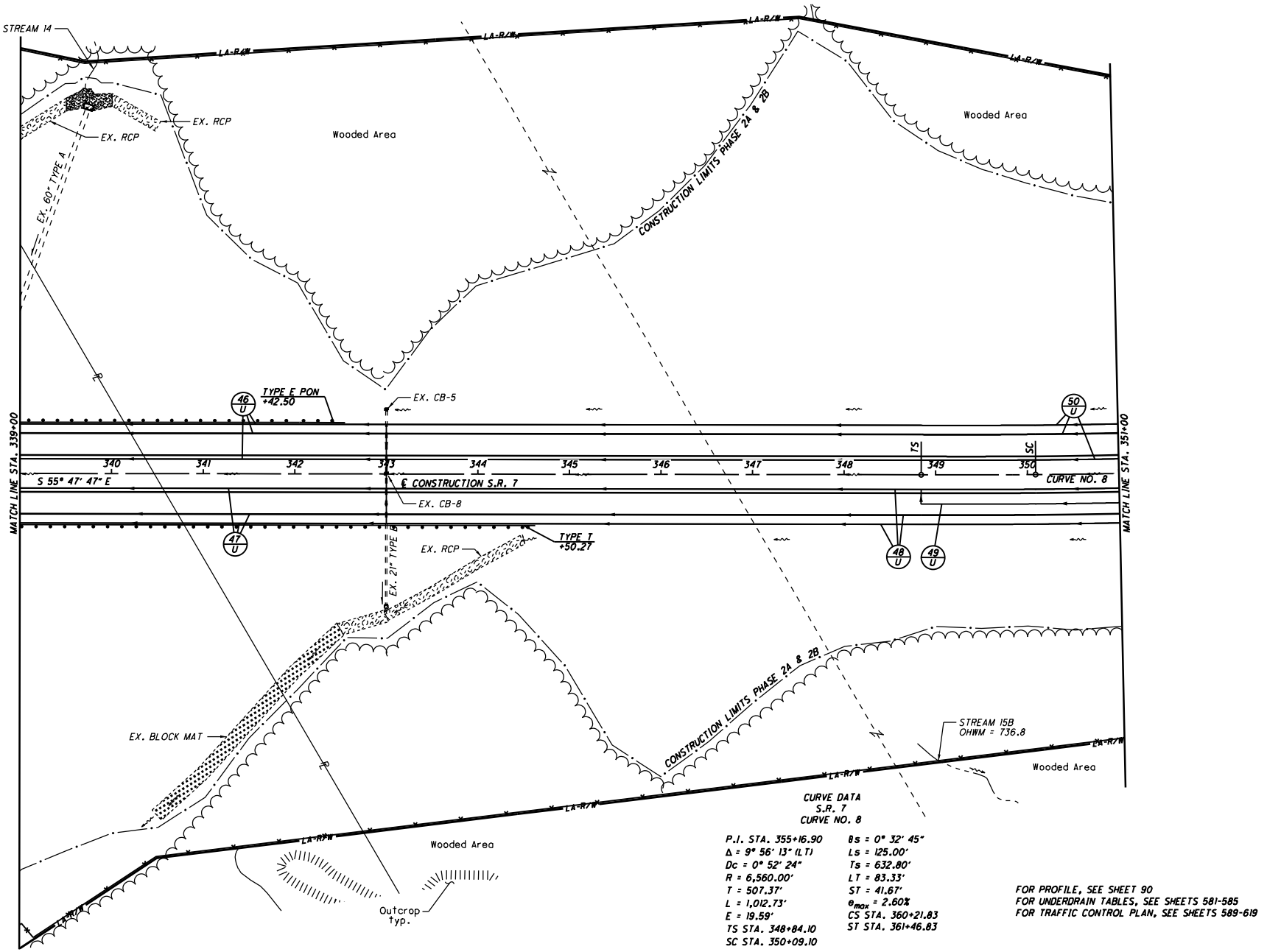


88 / 633	LAW-7-2.17	PROFILE - S.R. 7 STA. 327+00 TO STA. 339+00	CALCULATED SLP CHECKED ALB



CURVE DATA
S.R. 7
CURVE NO. 8

P.I. STA. 355+16.90	Bs = 0° 32' 45"
Δ = 9° 56' 13" (LT)	Ls = 125.00'
Dc = 0° 52' 24"	Ts = 632.80'
R = 6,560.00'	LT = 83.33'
T = 507.37'	ST = 41.67'
L = 1,012.73'	e_{max} = 2.60%
E = 19.59'	CS STA. 360+21.83
TS STA. 348+84.10	ST STA. 361+46.83
SC STA. 350+09.10	

FOR PROFILE, SEE SHEET 90
FOR UNDERDRAIN TABLES, SEE SHEETS 581-585
FOR TRAFFIC CONTROL PLAN, SEE SHEETS 589-619

HORIZONTAL SCALE IN FEET
0 25 50 100

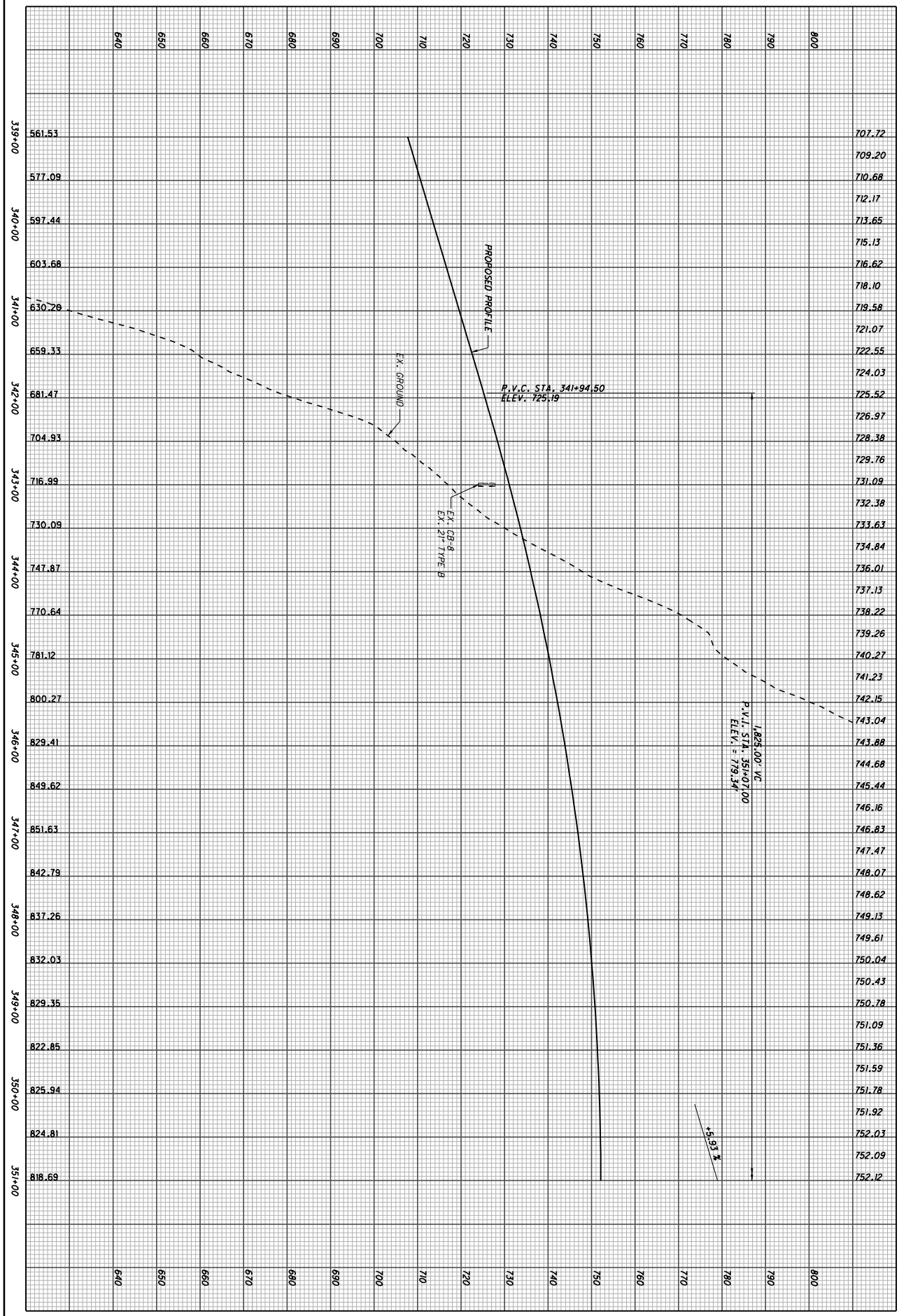
CALCULATED SLP
CHECKED ALB

PLAN - S.R. 7
STA. 339+00 TO STA. 351+00

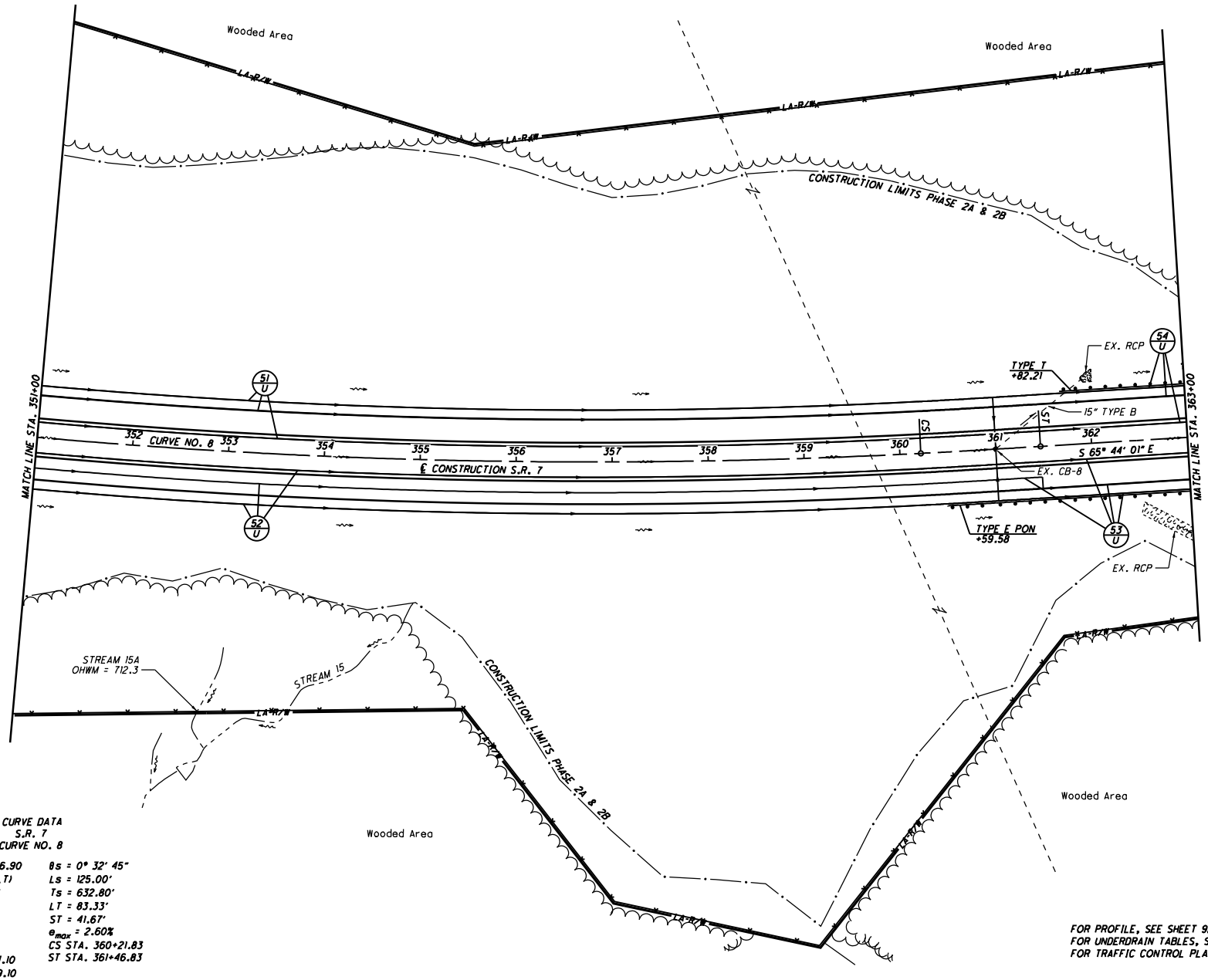
LAW-7-2.17

89
635

U:\1736087\4\LAW\75923\roadway\sheets\75923GP020-28.dgn Sheet 9/19/2023 4:04:39 PM aboyce



90 / 633	LAW-7-2.17	PROFILE - S.R. 7 STA. 339+00 STA. 351+00	CALCULATED SLP CHECKED ALB



CURVE DATA
S.R. 7
CURVE NO. 8

P.I. STA. 355+16.90	θs = 0° 32' 45"
Δ = 9° 56' 13" (LT)	Ls = 125.00'
Dc = 0° 52' 24"	Ts = 632.80'
R = 6,560.00'	LT = 83.33'
T = 507.37'	ST = 41.67'
L = 1,012.73'	e_{max} = 2.60%
E = 19.59'	CS STA. 360+21.83
TS STA. 348+84.10	ST STA. 361+46.83
SC STA. 350+09.10	

FOR PROFILE, SEE SHEET 92
FOR UNDERDRAIN TABLES, SEE SHEETS 581-585
FOR TRAFFIC CONTROL PLAN, SEE SHEETS 589-619

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED SLP
CHECKED ALB

PLAN - S.R. 7
STA. 351+00 TO STA. 363+00

LAW-7-2.17

91
635

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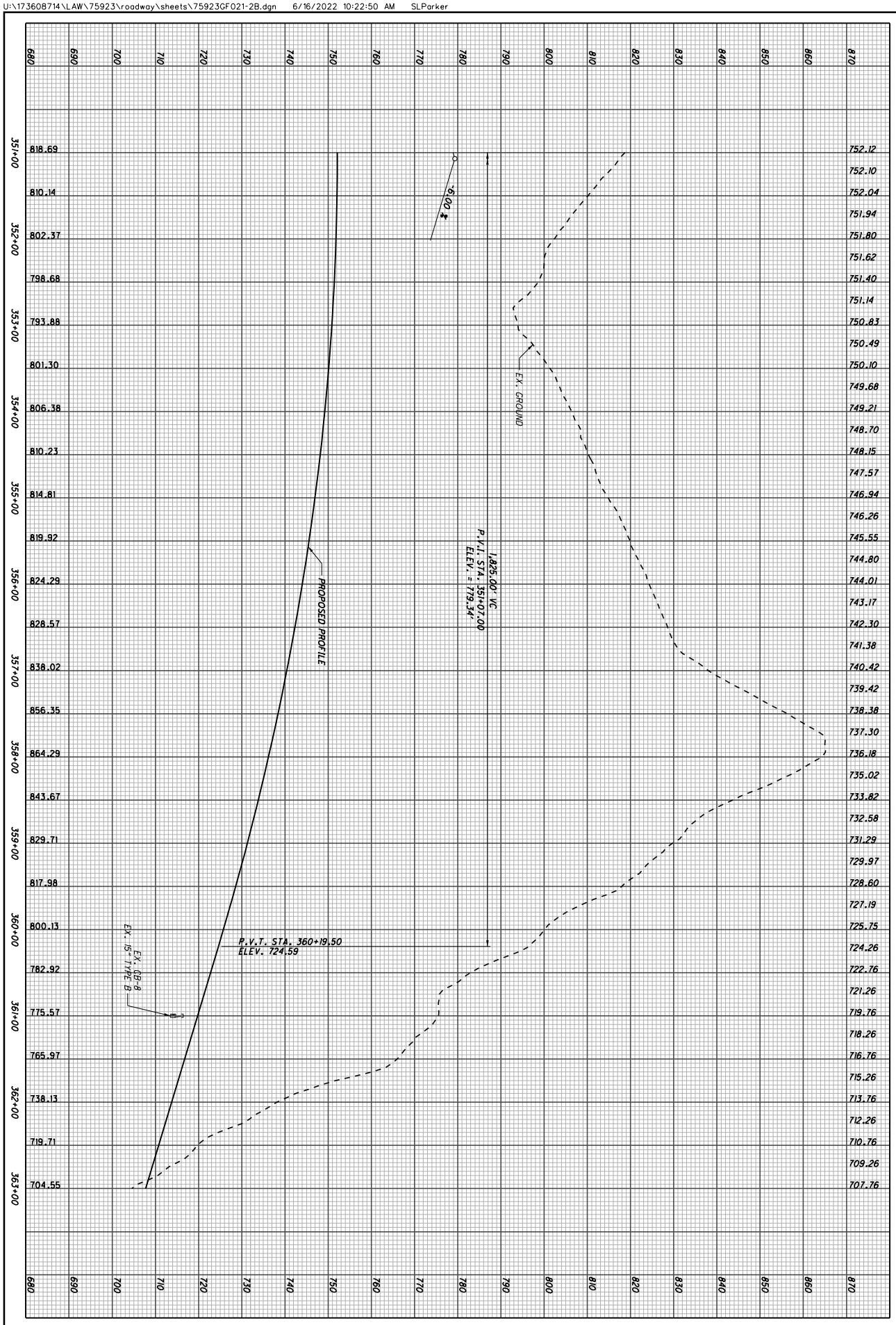
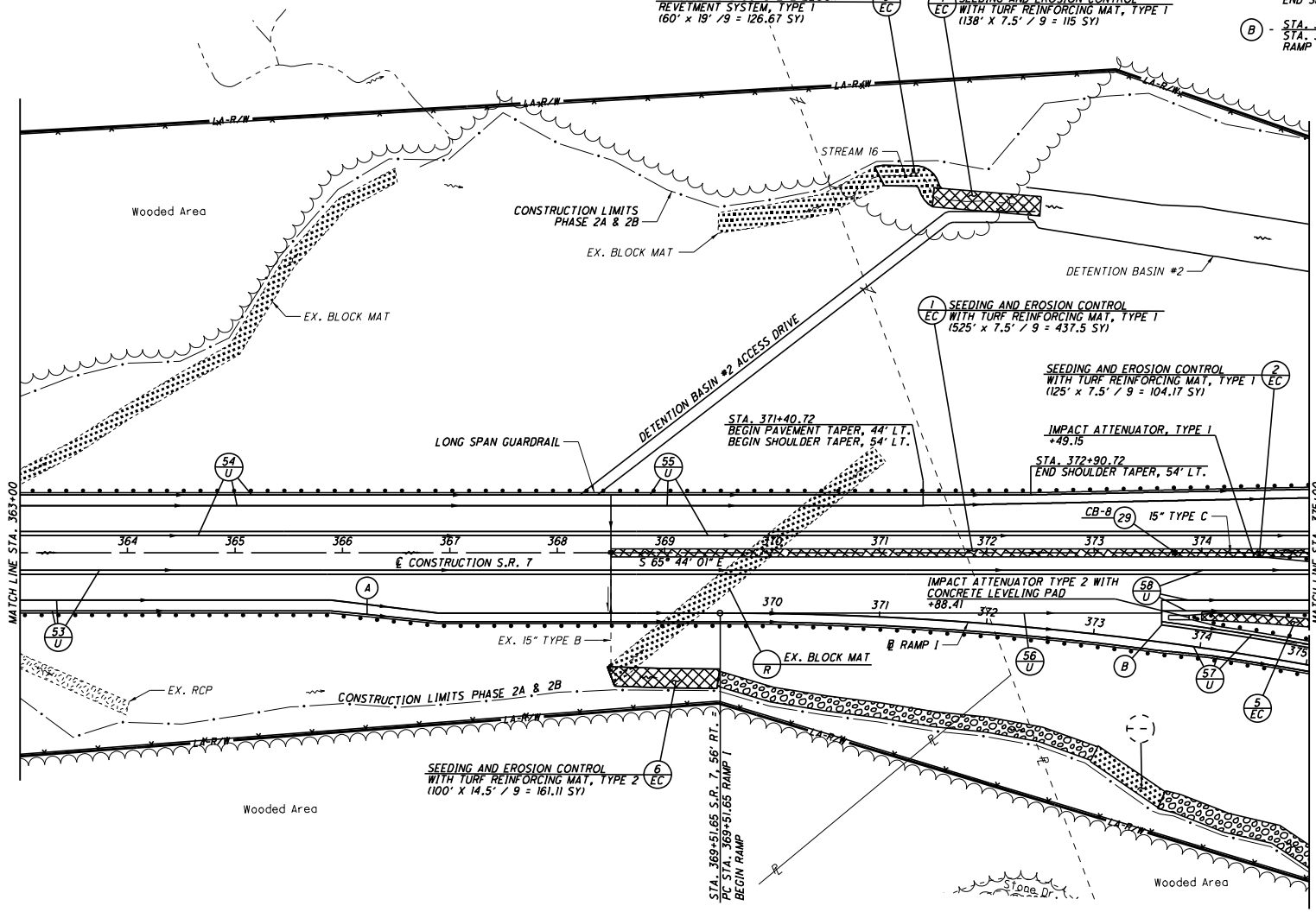


92 / 633	LAW-7-2.17	PROFILE - S.R. 7 STA. 351+00 TO STA. 363+00	CALCULATED SLP CHECKED ALB



HORIZONTAL SCALE IN FEET
0 25 50 100
CALCULATED SLP
CHECKED ALB

PLAN - S.R. 7
STA. 363+00 TO STA. 375+00

LAW-7-2.17

93
633

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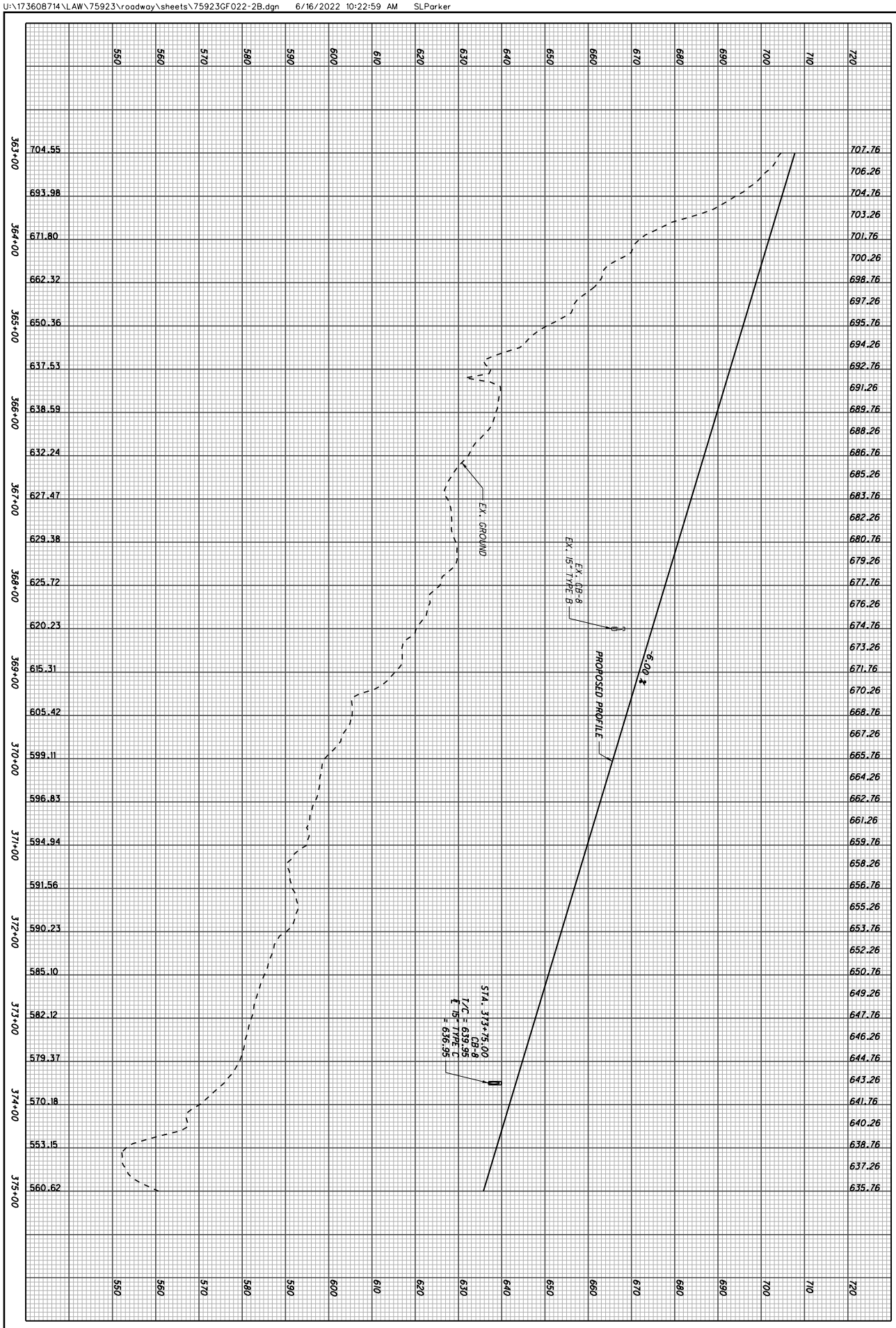
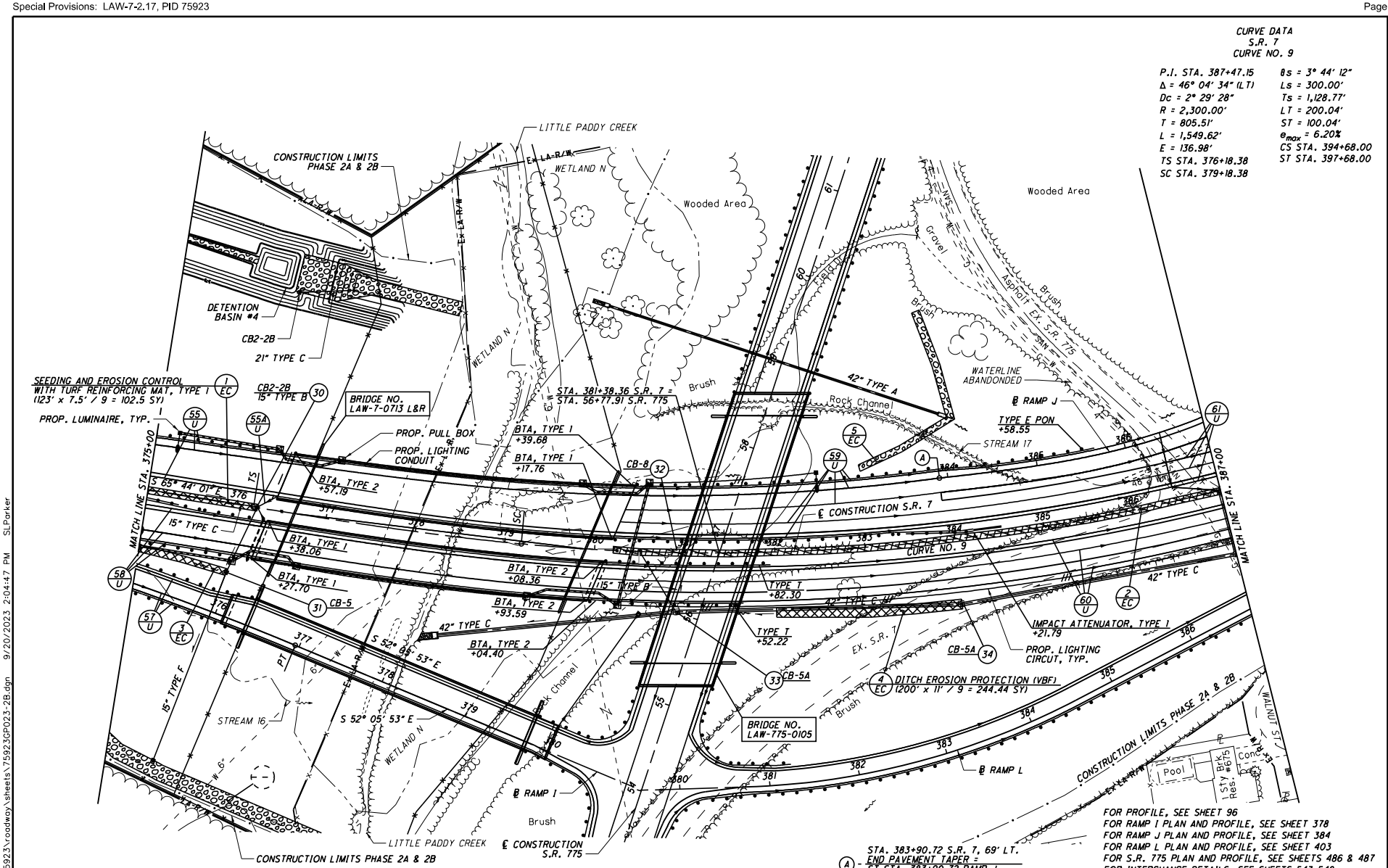


94 / 633	LAW-7-2.17	PROFILE - S.R. 7 STA. 363+00 TO STA. 375+00

CALCULATED SLP
CHECKED ALB



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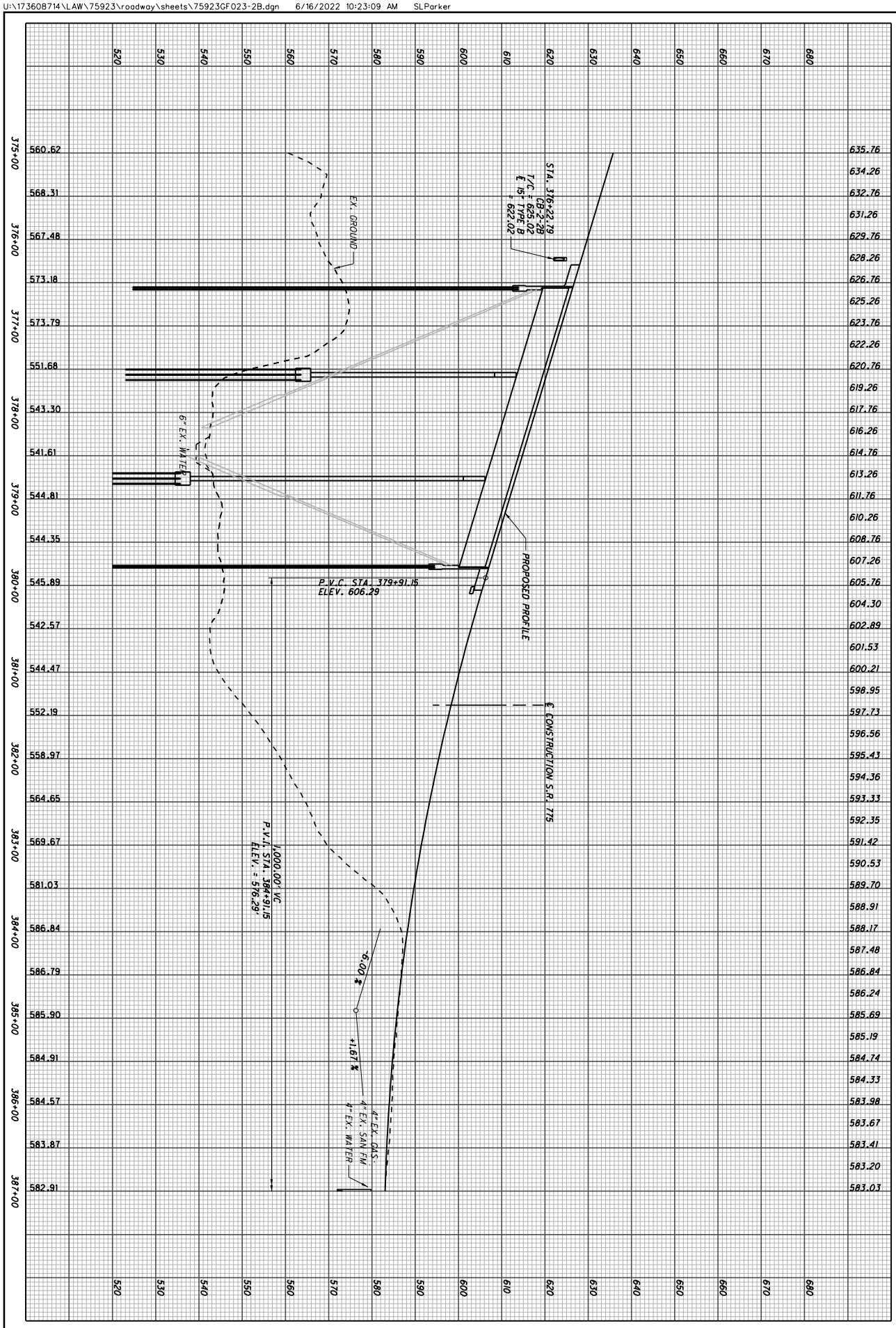
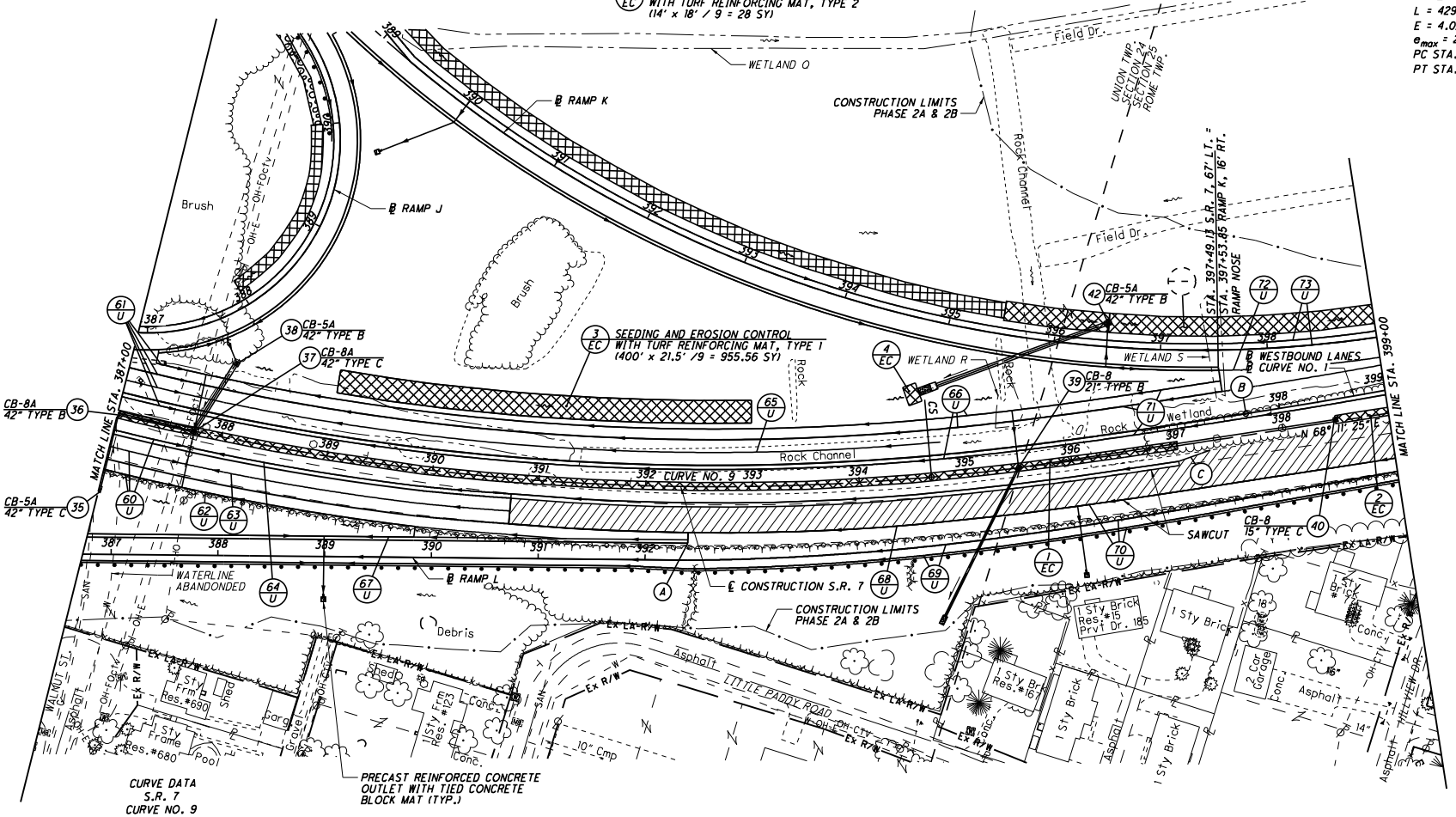


96 / 633	LAW-7-2.17	PROFILE - S.R. 7 STA. 375+00 TO STA. 387+00	CALCULATED SLP CHECKED ALB



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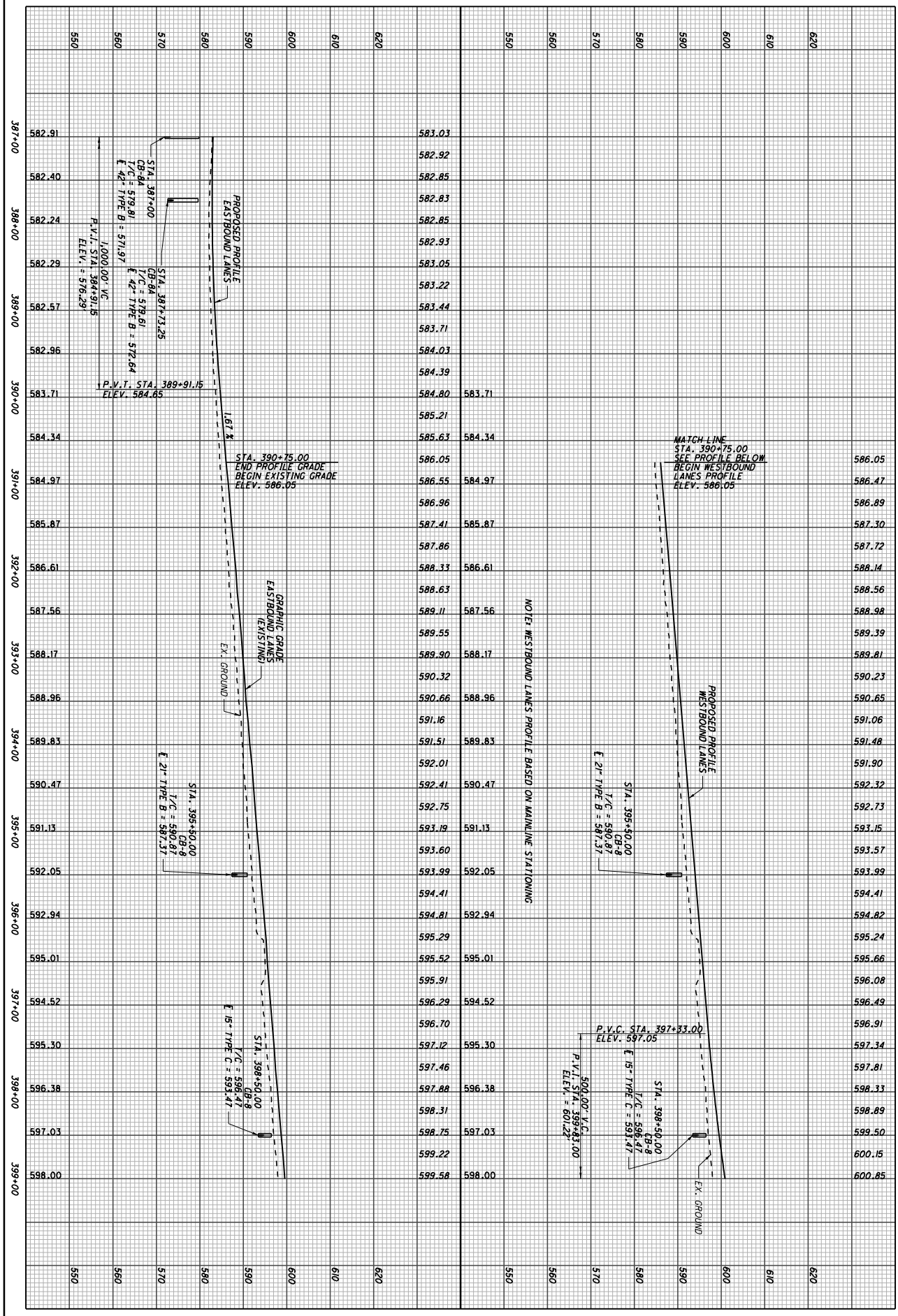


98 / 633	LAW-7-2.17	PROFILE - S.R. 7 STA. 387+00 TO STA. 399+00	CALCULATED SLP CHECKED ALB

CURVE DATA
S.R. 7
CURVE NO. 10

P.I. STA. 403+74.19
Δ = 1° 29' 03" (RT)
Dc = 0° 16' 56"
R = 20,306.35'
T = 263.02'
L = 526.00'
E = 1.70'
e_{max} = NC
PC STA. 401+11.17
PT STA. 406+37.18

CURVE DATA
S.R. 7
CURVE NO. 11

P.I. STA. 416+63.54
Δ = 18° 47' 30" (LT)
Dc = 1° 38' 13"
R = 3,500.00'
T = 451.44'
L = 897.92'
E = 28.99'
TS STA. = 409+59.26
SC STA. = 412+09.26
θs = 2° 02' 47"
Ls = 250.00'
Ts = 704.28'
LT = 166.68'
ST = 83.34'
e_{max} = 4.47%
CS STA. 421+07.18
ST STA. 423+57.18

CURVE DATA
S.R. 7 WESTBOUND LANES
℄ CURVE NO. 1

P.I. STA. 399+82.71
Δ = 4° 17' 32" (LT)
Dc = 1° 00' 00"
R = 5,729.58'
T = 214.71'
L = 429.22'
E = 4.02'
e_{max} = 2.90%
PC STA. = 397+68.00
PT STA. = 401+97.22

CURVE DATA
S.R. 7 WESTBOUND LANES
℄ CURVE NO. 2

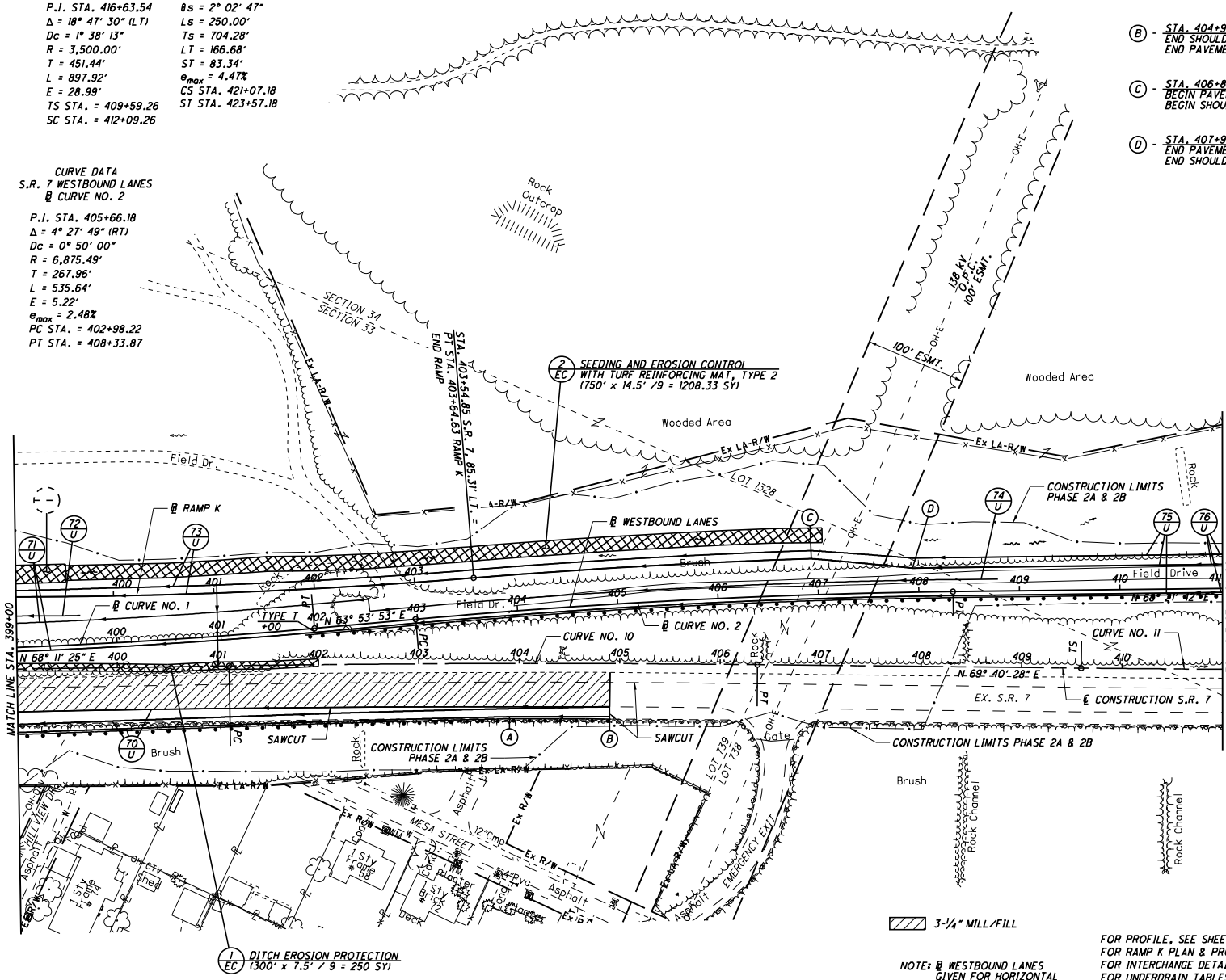
P.I. STA. 405+66.18
Δ = 4° 27' 49" (RT)
Dc = 0° 50' 00"
R = 6,875.49'
T = 267.96'
L = 535.64'
E = 5.22'
e_{max} = 2.48%
PC STA. = 402+98.22
PT STA. = 408+33.87

Ⓐ - STA. 403+90.09
BEGIN SHOULDER TAPER, 52.91' RT.

Ⓑ - STA. 404+90.09
END SHOULDER TAPER, 52.82' RT.
END PAVEMENT TAPER, 42.82' RT.

Ⓒ - STA. 406+89.52, S.R. 7
BEGIN PAVEMENT TAPER, 106.08' LT.
BEGIN SHOULDER TAPER, 114.08' LT.

Ⓓ - STA. 407+90.33, S.R. 7
END PAVEMENT TAPER, 97.70' LT.
END SHOULDER TAPER, 107.70' LT.



NOTE: ℄ WESTBOUND LANES GIVEN FOR HORIZONTAL ALIGNMENT ONLY.

FOR PROFILE, SEE SHEET 100
FOR RAMP K PLAN & PROFILE, SEE SHEET 389-390
FOR INTERCHANGE DETAILS, SEE SHEETS 544-546
FOR UNDERDRAIN TABLES, SEE SHEETS 579-583
FOR TRAFFIC CONTROL PLAN, SEE SHEETS 589-619

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED SLP
CHECKED ALB

PLAN - S.R. 7
STA. 399+00 TO STA. 411+00

LAW-7-2.17

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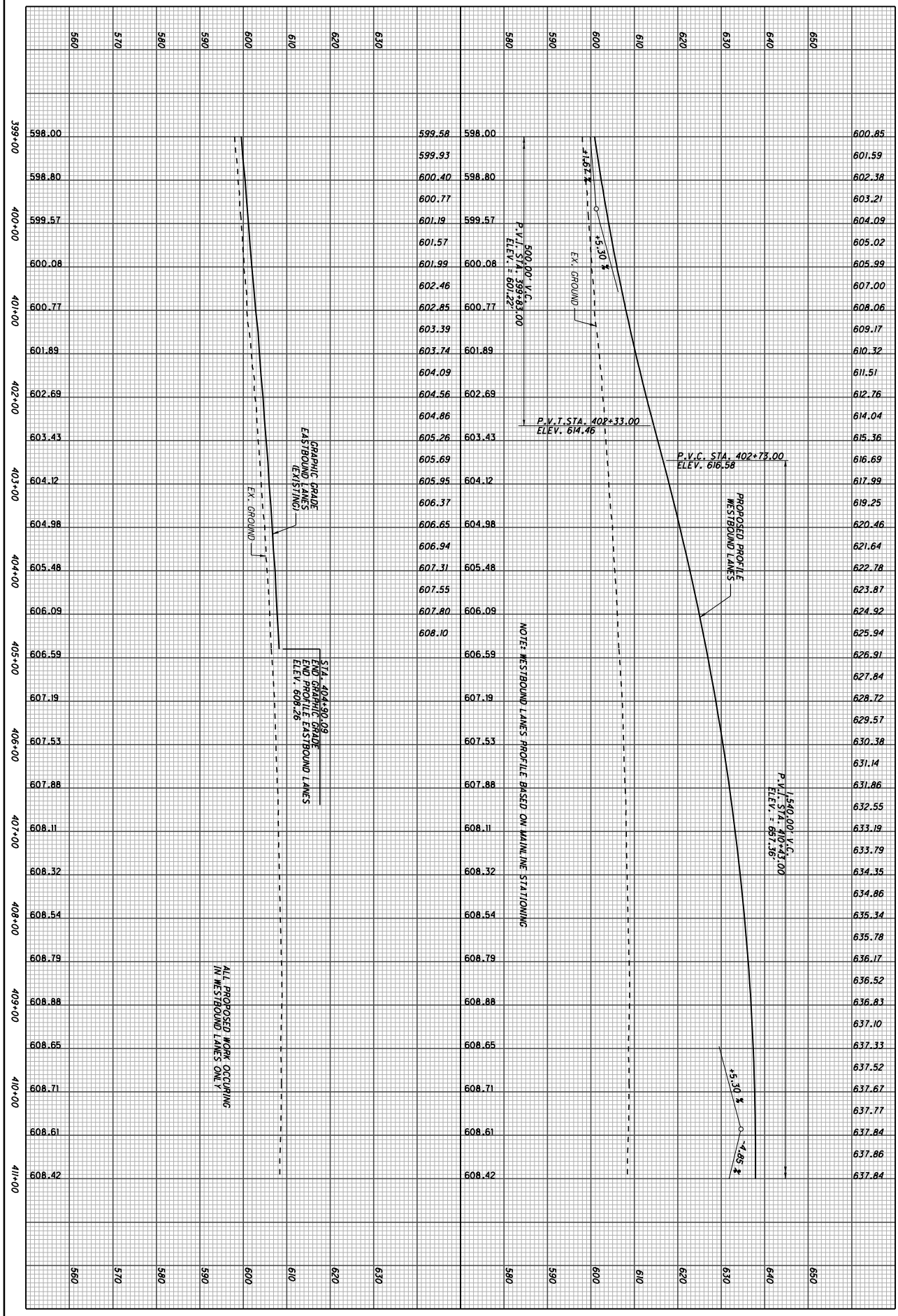


100 / 633	LAW-7-2.17	PROFILE - S.R. 7 STA. 399+00 TO 411+00	CALCULATED SLP CHECKED ALB

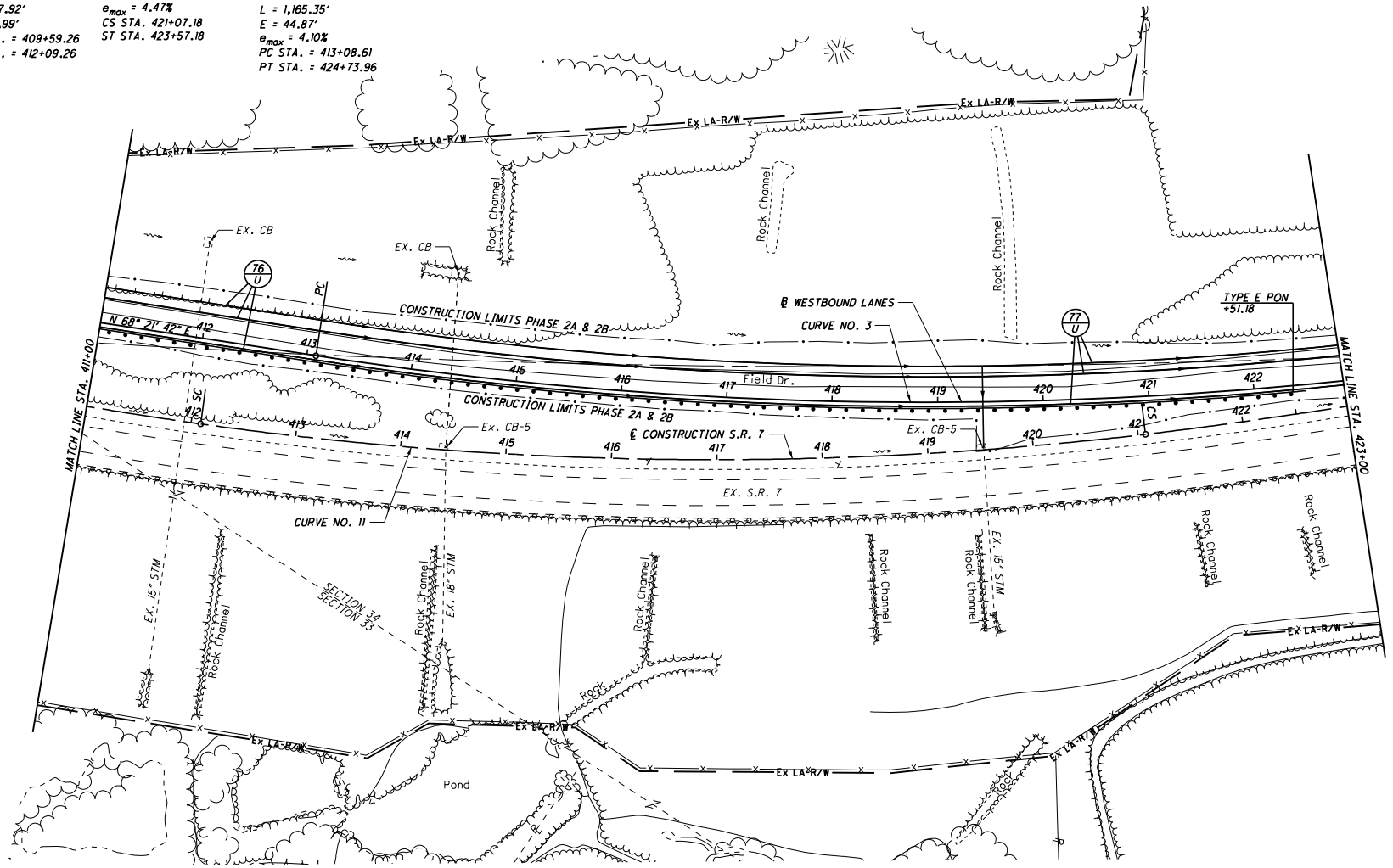
CURVE DATA
S.R. 7
CURVE NO. 11

P.I. STA. 416+63.54
Δ = 18° 47' 30" (LT)
Dc = 1° 38' 13"
R = 3,500.00'
T = 451.44'
L = 897.92'
E = 28.99'
TS STA. = 409+59.26
SC STA. = 412+09.26

θs = 2° 02' 47"
Ls = 250.00'
Ts = 704.28'
LT = 166.68'
ST = 83.34'
e_{max} = 4.47%
CS STA. 421+07.18
ST STA. 423+57.18

CURVE DATA
S.R. 7 WESTBOUND LANES
℄ CURVE NO. 3

P.I. STA. 418+95.85
Δ = 17° 28' 44" (LT)
Dc = 1° 30' 00"
R = 3,820.00'
T = 587.24'
L = 1,165.35'
E = 44.87'
e_{max} = 4.10%
PC STA. = 413+08.61
PT STA. = 424+73.96



NOTE: ℄ WESTBOUND LANES GIVEN FOR HORIZONTAL ALIGNMENT ONLY.

FOR PROFILE, SEE SHEET 102
FOR UNDERDRAIN TABLES, SEE SHEETS 579-583
FOR TRAFFIC CONTROL PLAN, SEE SHEETS 589-619

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED SLP
CHECKED ALB

PLAN - S.R. 7
STA. 411+00 TO STA. 423+00

LAW-7-2.17

101
633

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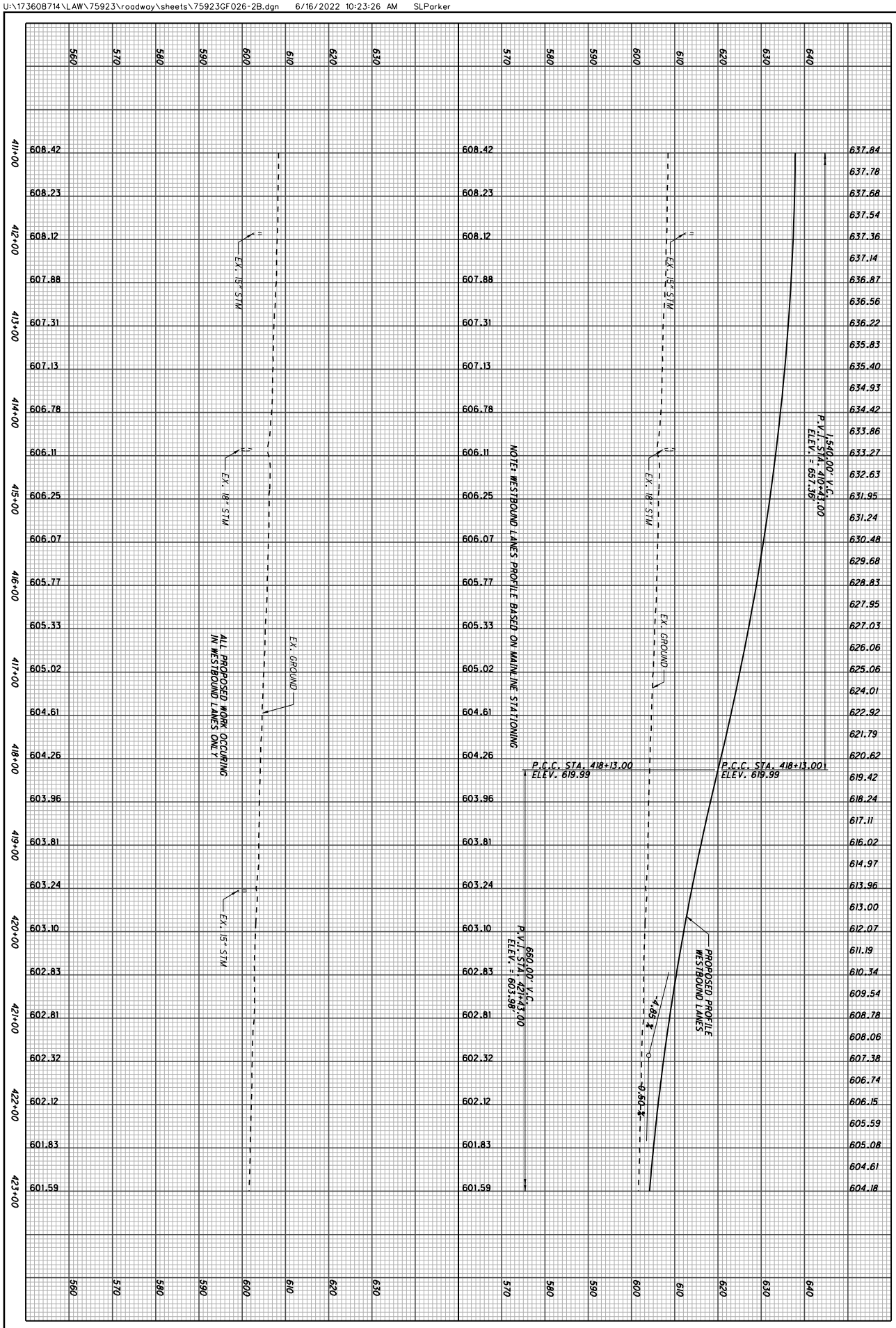


102 / 633	LAW-7-2.17	PROFILE - S.R. 7 STA. 411+00 TO STA. 423+00	CALCULATED SLP CHECKED ALB

CURVE DATA
S.R. 7
CURVE NO. 11

P.I. STA. 416+63.54
Δ = 18° 47' 30" (LT)
Dc = 1° 38' 13"
R = 3,500.00'
T = 451.44'
L = 897.92'
E = 28.99'
TS STA. = 409+59.26
SC STA. = 412+09.26

Bs = 2° 02' 47"
Ls = 250.00'
Ts = 704.28'
LT = 166.68'
ST = 83.34'
e_{max} = 4.47%
CS STA. 421+07.18
ST STA. 423+57.18

CURVE DATA
S.R. 7
CURVE NO. 12

P.I. STA. 428+11.24
Δ = 3° 17' 53" (RT)
Dc = 1° 19' 10"
R = 4,342.09'
T = 125.00'
L = 249.93'
E = 1.80'
e_{max} = 3.77%
PC STA. = 426+86.24
PT STA. = 429+36.17

CURVE DATA
S.R. 7
℄ WESTBOUND LANES
CURVE NO. 3

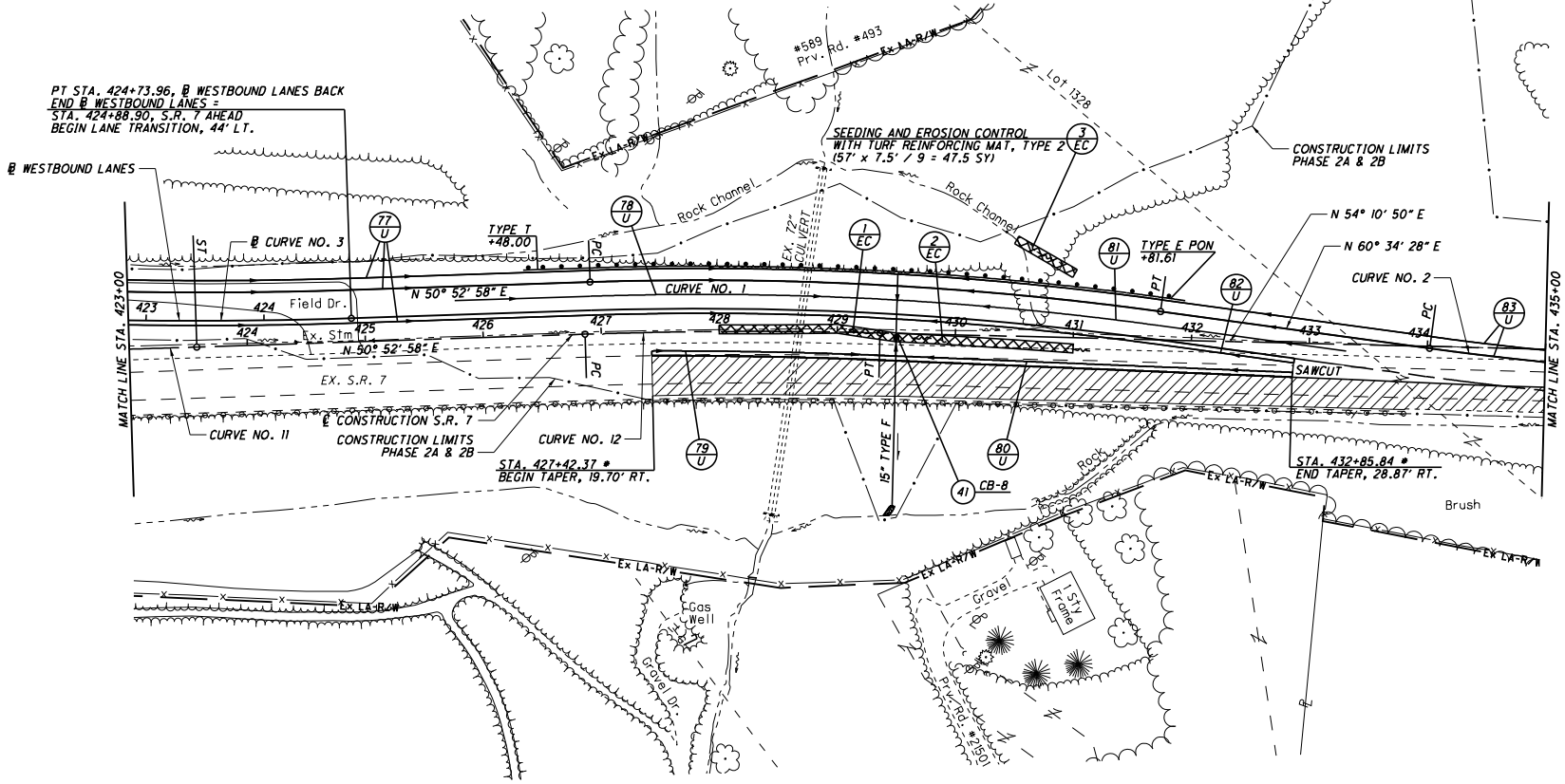
P.I. STA. 418+95.85
Δ = 17° 28' 44" (LT)
Dc = 1° 30' 00"
R = 3,820.00'
T = 587.24'
L = 1,165.35'
E = 44.87'
e_{max} = 4.10%
PC STA. 413+08.61
PT STA. 424+73.96

CURVE DATA
S.R. 7 LANE TRANSITION
TRANSITION CURVE NO. 1
(FOR HORIZONTAL LAYOUT ONLY)

P.I. STA. 429+32.01, S.R. 7, 51.04' LT.
Δ = 9° 41' 31" (RT)
Dc = 2° 00' 00"
R = 2,864.79'
T = 242.88'
L = 484.59'
E = 10.28'
e_{max} = 5.10%
PC STA. 426+91.84, S.R. 7, 44' LT.
PT STA. 431+73.33, S.R. 7, 23.99' LT.

CURVE DATA
S.R. 7 LANE TRANSITION
TRANSITION CURVE NO. 2
(FOR HORIZONTAL LAYOUT ONLY)

P.I. STA. 435+58.87, S.R. 7, 19.22' RT.
Δ = 6° 18' 42" (LT)
Dc = 2° 00' 00"
R = 2,864.79'
T = 157.95'
L = 315.59'
E = 4.35'
e_{max} = NC
PC STA. 434+01.90, S.R. 7, 1.63' RT.
PT STA. 437+16.83, S.R. 7, 19.44' RT.



1 EC SEEDING AND EROSION CONTROL WITH TURF REINFORCING MAT, TYPE 1 (150' x 7.5' / 9 = 125 SY)

2 EC DITCH EROSION PROTECTION (150' x 7.5' / 9 = 125 SY)

* - SEE TRAFFIC CONTROL PLAN SHEET XXX FOR FULL TAPER LENGTH.

3-¼" MILL/FILL

NOTE: ℄ WESTBOUND LANES GIVEN FOR HORIZONTAL ALIGNMENT ONLY.

FOR PROFILE, SEE SHEET 104
FOR STORM SEWER PROFILE, SEE SHEET 360
FOR PAVEMENT DETAILS, SEE SHEET 540
FOR UNDERDRAIN TABLES, SEE SHEETS 579-583
FOR TRAFFIC CONTROL PLAN, SEE SHEETS 589-619

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED SLP
CHECKED ALB

PLAN - S.R. 7
STA. 423+00 TO STA. 435+00

LAW-7-2.17

103
633

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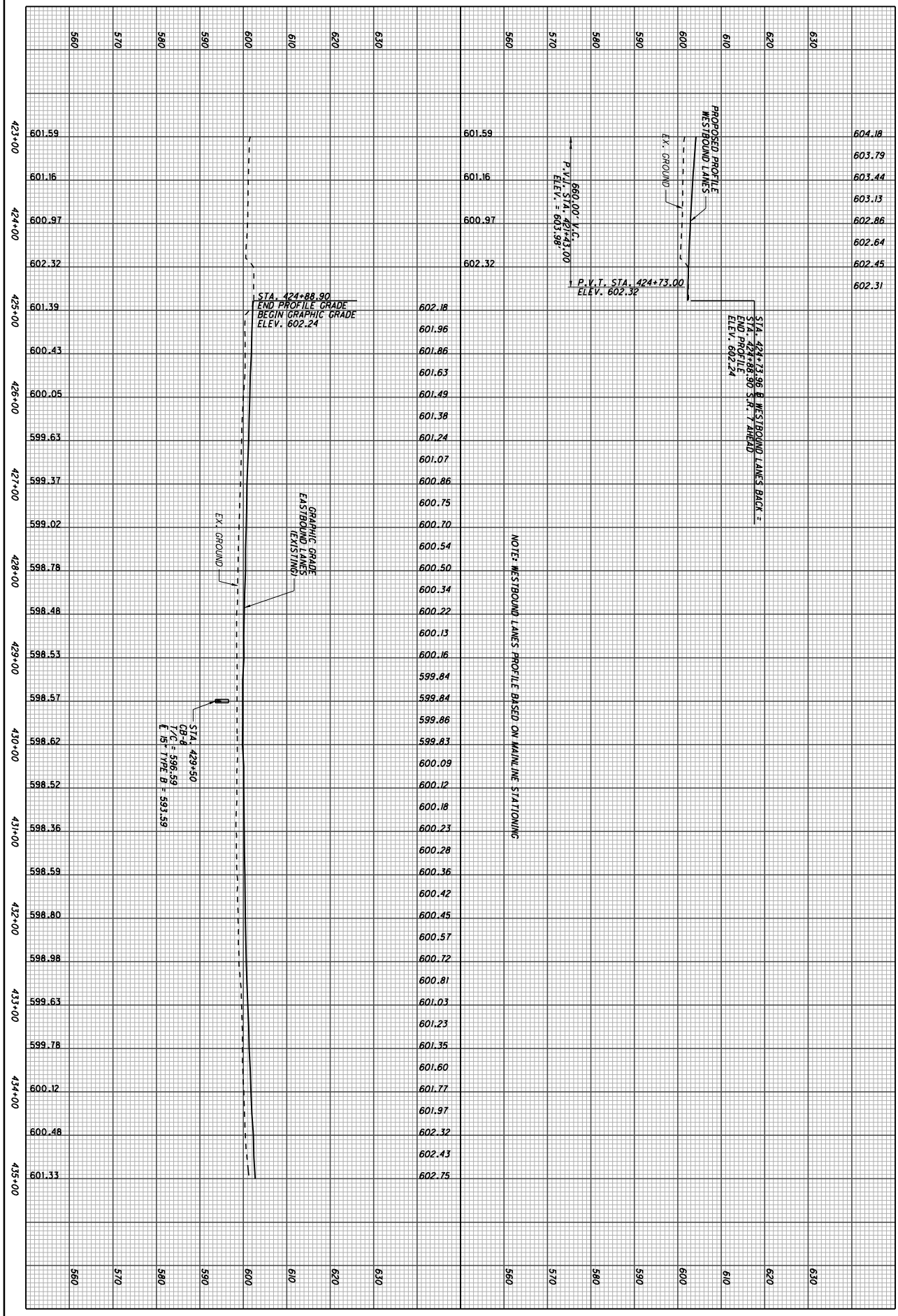
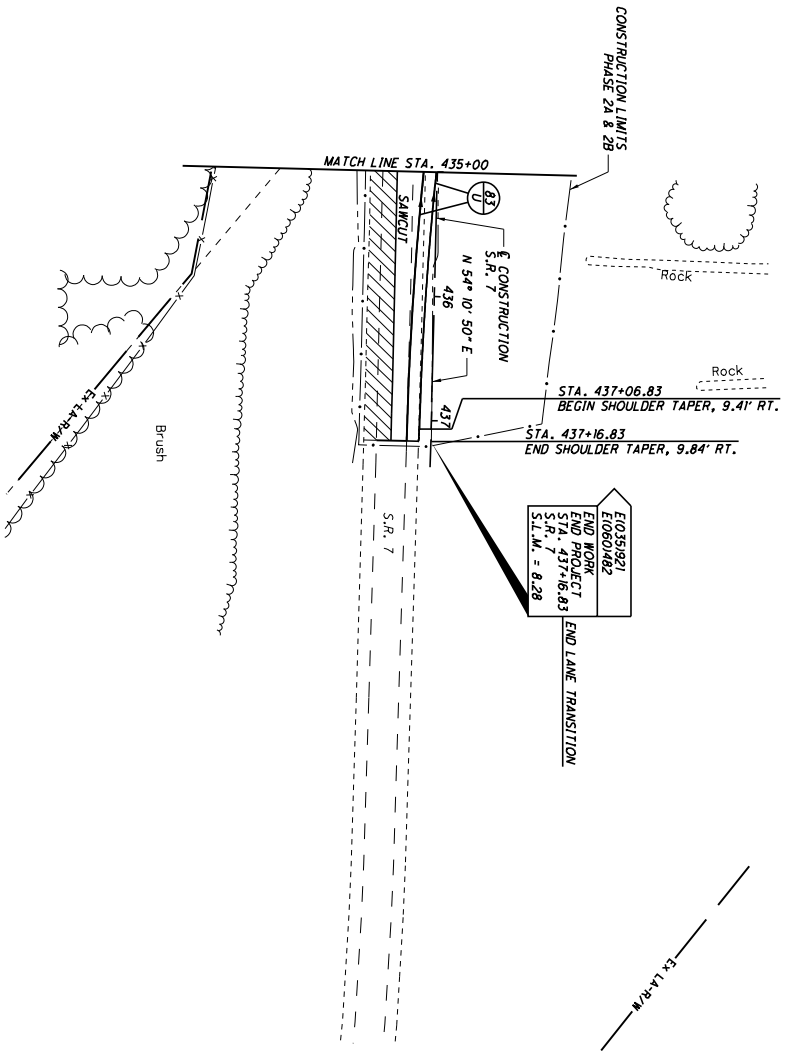


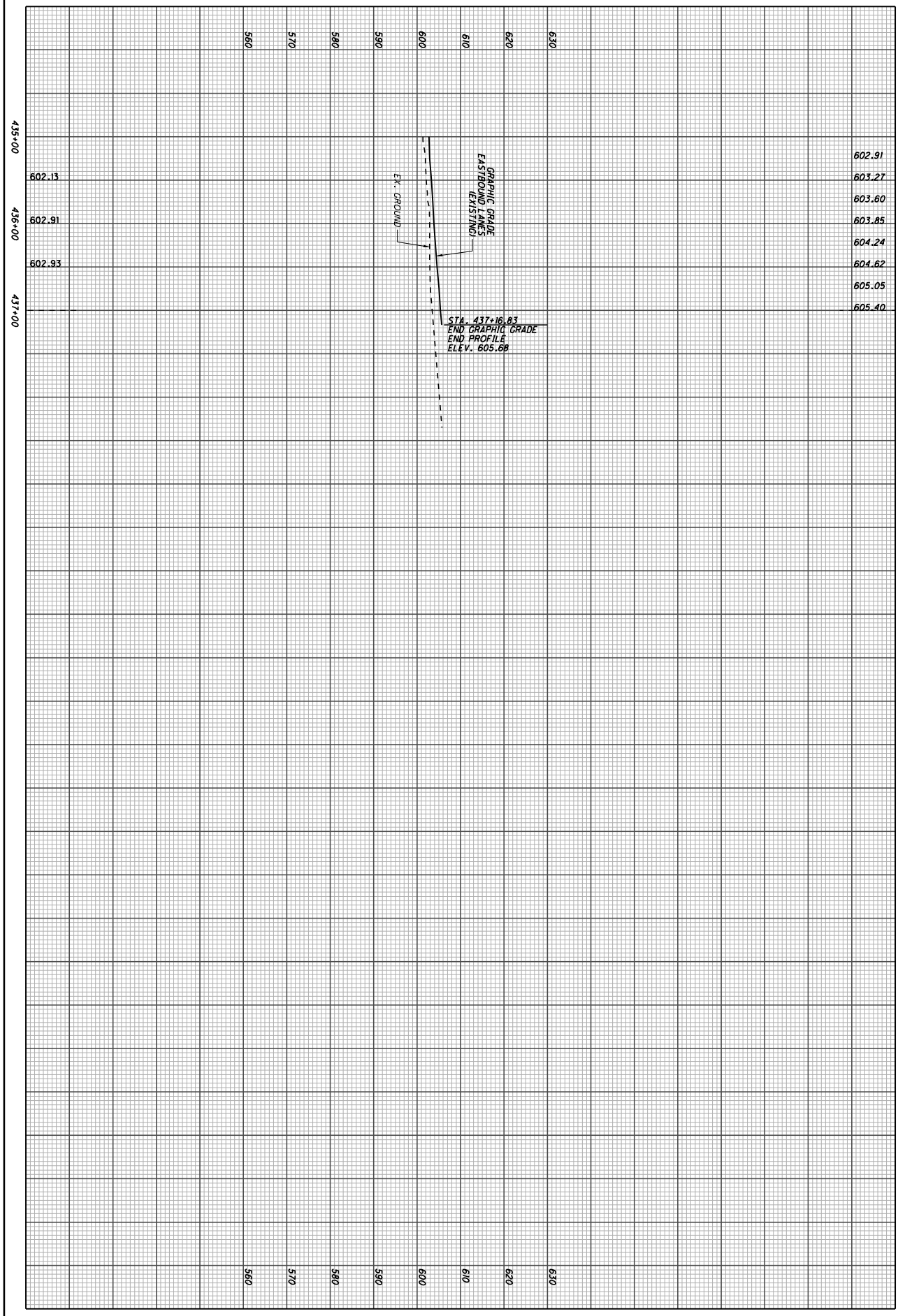
104 / 633	LAW-7-2.17	PROFILE - S.R. 7 STA. 423+00 TO 435+00	CALCULATED SLP CHECKED ALB



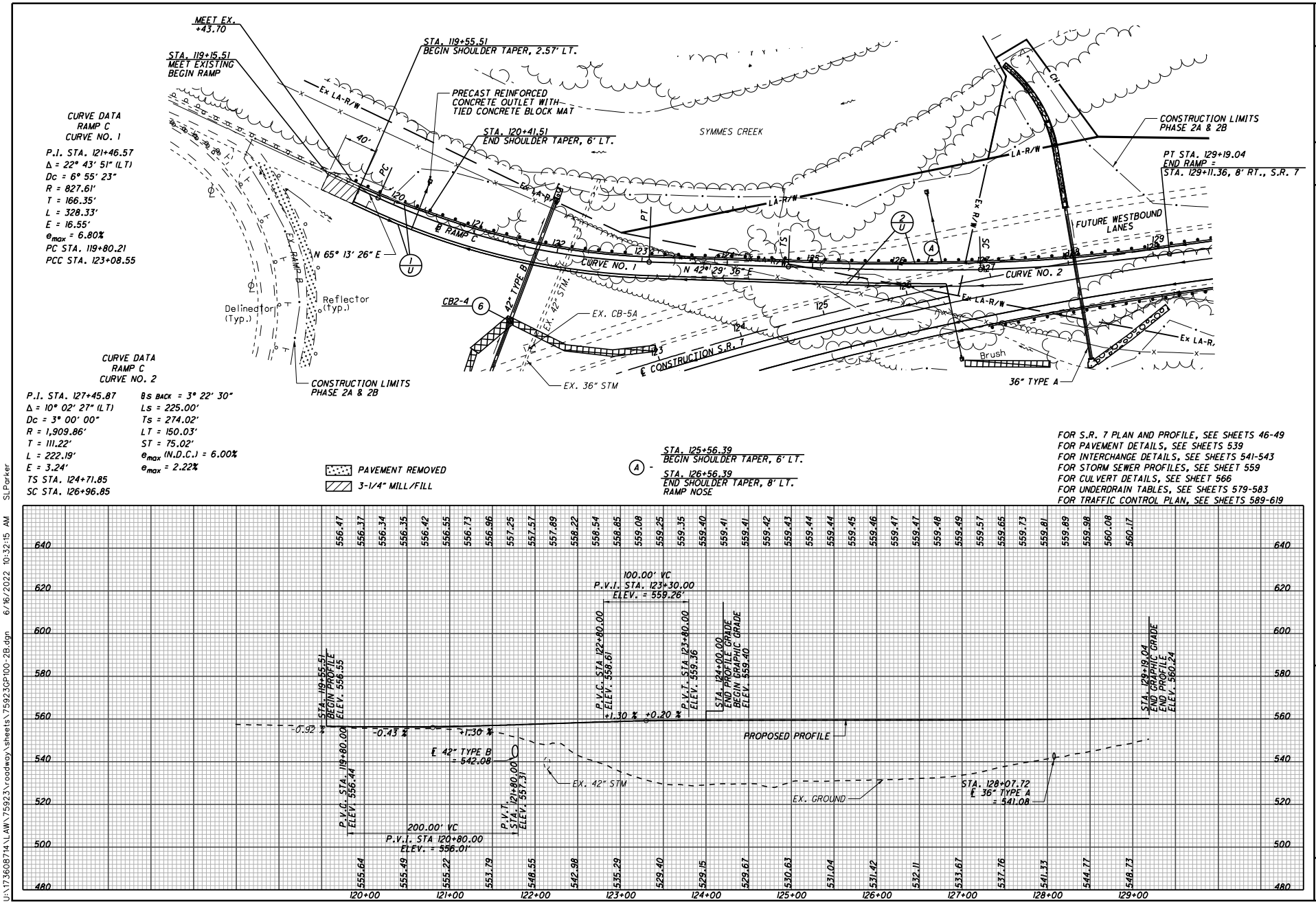
3-1/4" MILL/FILL

FOR PROFILE, SEE SHEET 106
FOR PAVEMENT DETAILS, SEE SHEET 540
FOR UNDERDRAIN TABLES, SEE SHEETS 579-583
FOR TRAFFIC CONTROL PLAN, SEE SHEETS 589-619

105 / 633	LAW-7-2.17	PLAN - S.R. 7 STA. 435+00 TO STA. 437+16.83	CALCULATED SLP CHECKED ALB	0 25 50 100 HORIZONTAL SCALE IN FEET



106 / 633	LAW-7-2.17	PROFILE - S.R. 7 STA. 435+00 TO 437+16.83	CALCULATED SLP CHECKED ALB



CURVE DATA RAMP C CURVE NO. 1

P.I. STA. 121+46.57
Δ = 22° 43' 51" (LT)
Dc = 6° 55' 23"
R = 827.61'
T = 166.35'
L = 328.33'
E = 16.55'
e_{max} = 6.80%
PC STA. 119+80.21
PCC STA. 123+08.55

CURVE DATA RAMP C CURVE NO. 2

P.I. STA. 127+45.87
Δ = 10° 02' 27" (LT)
Dc = 3° 00' 00"
R = 1,909.86'
T = 111.22'
L = 222.19'
E = 3.24'
TS STA. 124+71.85
SC STA. 126+96.85

Bs back = 3° 22' 30"
Ls = 225.00'
Ts = 274.02'
LT = 150.03'
ST = 75.02'
e_{max} (N.D.C.) = 6.00%
e_{max} = 2.22%

PAVEMENT REMOVED
3-1/4" MILL/FILL

(A) - STA. 125+56.39 BEGIN SHOULDER TAPER, 6' LT.
STA. 126+56.39 END SHOULDER TAPER, 8' LT. RAMP NOSE

FOR S.R. 7 PLAN AND PROFILE, SEE SHEETS 46-49
FOR PAVEMENT DETAILS, SEE SHEETS 539
FOR INTERCHANGE DETAILS, SEE SHEETS 541-543
FOR STORM SEWER PROFILES, SEE SHEET 559
FOR CULVERT DETAILS, SEE SHEET 566
FOR UNDERDRAIN TABLES, SEE SHEETS 579-583
FOR TRAFFIC CONTROL PLAN, SEE SHEETS 589-619

CALCULATED SLP CHECKED ALB

HORIZONTAL SCALE IN FEET 0 25 50 100

PLAN AND PROFILE RAMP C

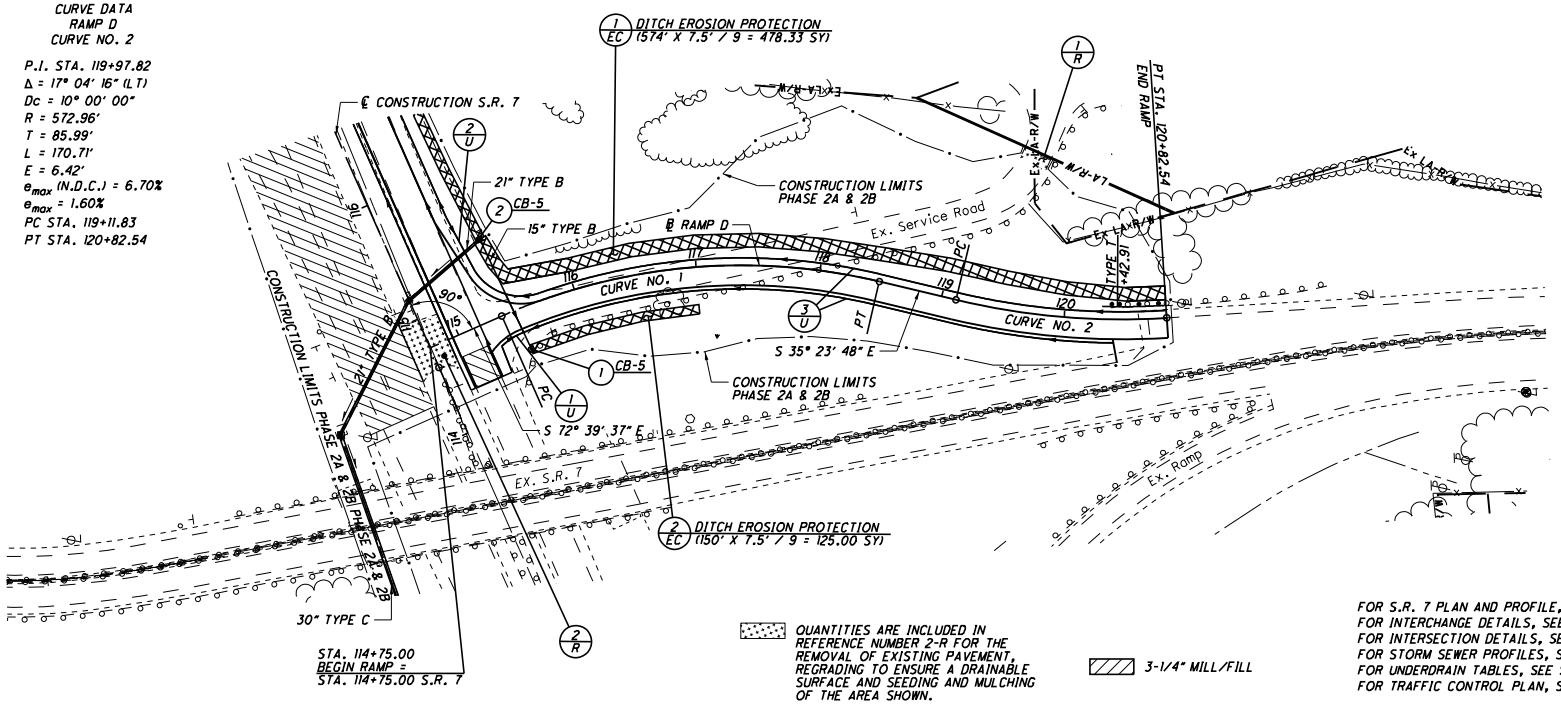
LAW-7-2.17

CURVE DATA
RAMP D
CURVE NO. 1

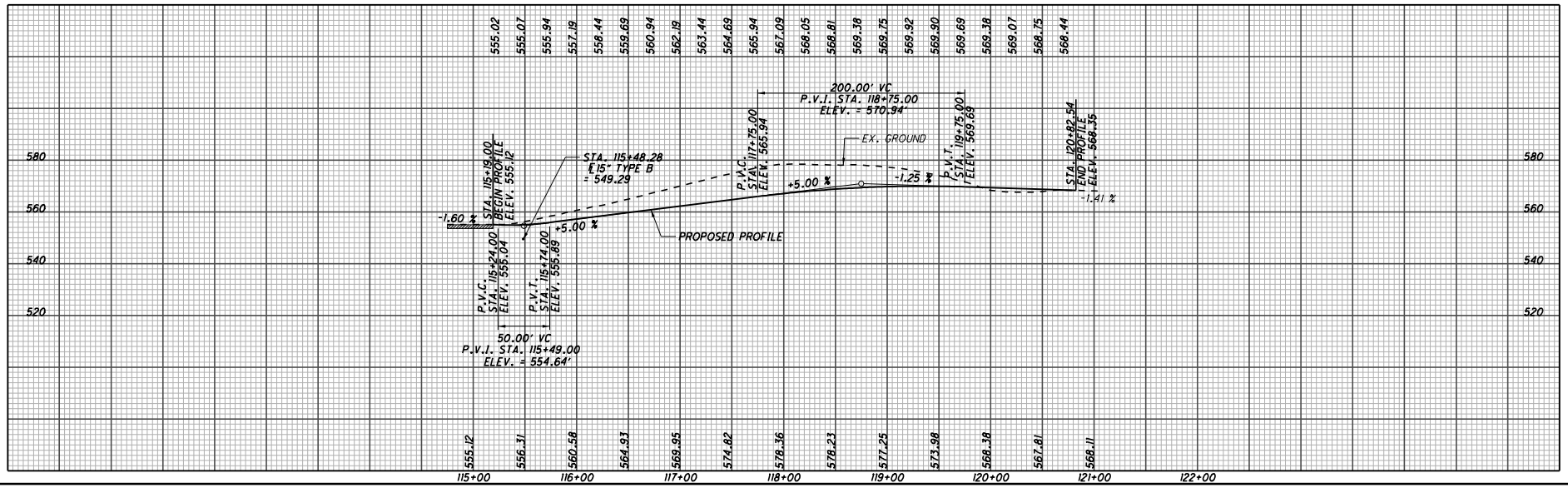
P.I. STA. 116+98.94
Δ = 37° 15' 49" (RT)
Dc = 12° 00' 00"
R = 477.46'
T = 160.98'
L = 310.53'
E = 26.41'
e_{max} = 7.30%
PC STA. 115+37.96
PT STA. 118+48.49

CURVE DATA
RAMP D
CURVE NO. 2

P.I. STA. 119+97.82
Δ = 17° 04' 16" (LT)
Dc = 10° 00' 00"
R = 572.96'
T = 85.99'
L = 170.71'
E = 6.42'
e_{max} (N.D.C.) = 6.70%
e_{max} = 1.60%
PC STA. 119+11.83
PT STA. 120+82.54



FOR S.R. 7 PLAN AND PROFILE, SEE SHEETS 46-47
FOR INTERCHANGE DETAILS, SEE SHEETS 541-543
FOR INTERSECTION DETAILS, SEE SHEET 547
FOR STORM SEWER PROFILES, SEE SHEET 559
FOR UNDERDRAIN TABLES, SEE SHEETS 579-583
FOR TRAFFIC CONTROL PLAN, SEE SHEETS 589-619



PLAN AND PROFILE
RAMP D

LAW-7-2.17

373
633

CALCULATED SLP
CHECKED ALB

HORIZONTAL SCALE IN FEET
0 25 50 100

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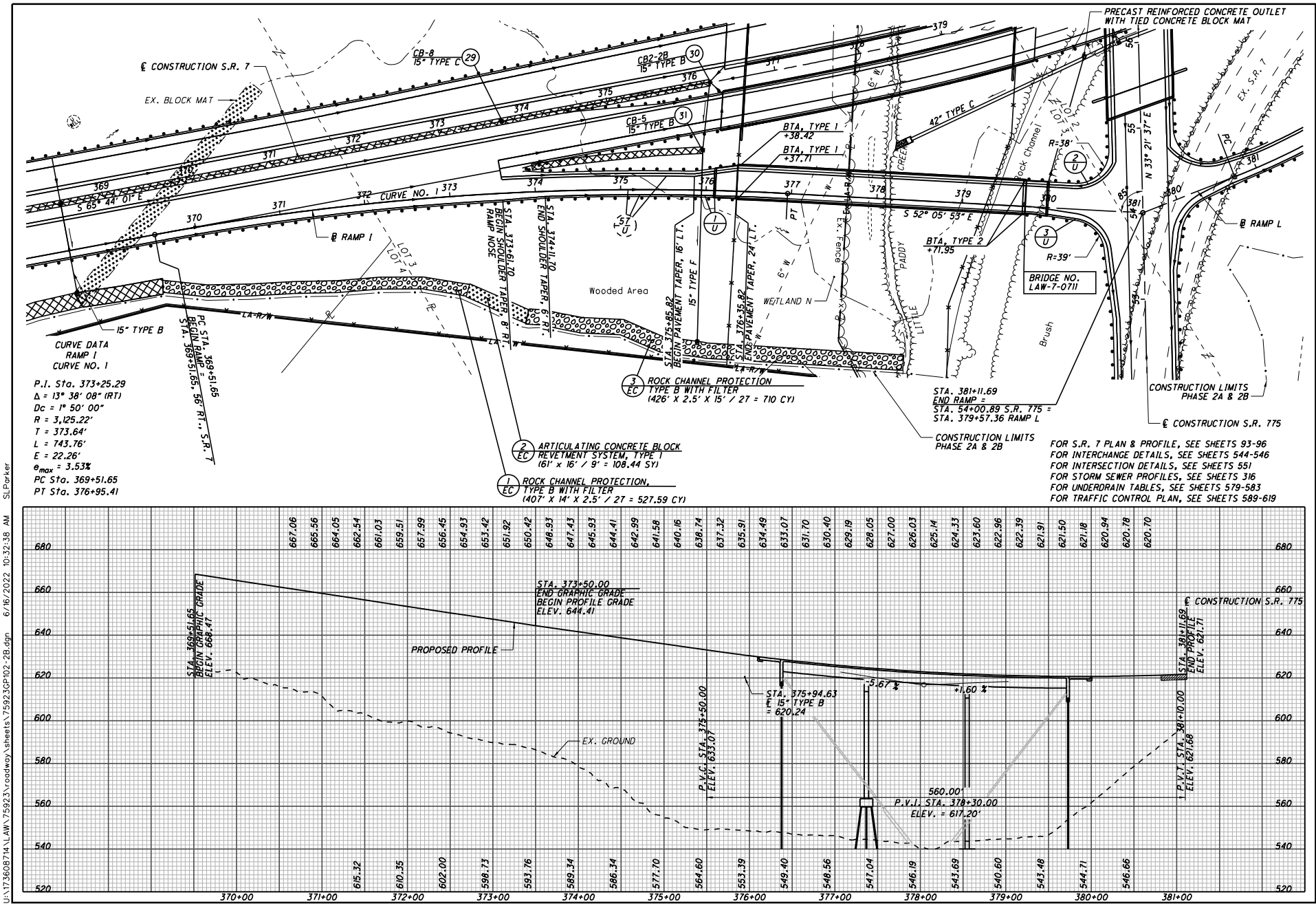

CALCULATED SLP
CHECKED ALB

HORIZONTAL SCALE IN FEET
0 25 50 100

PLAN AND PROFILE RAMP I

LAW-7-2.17

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CURVE DATA
RAMP J
CURVE NO. 1

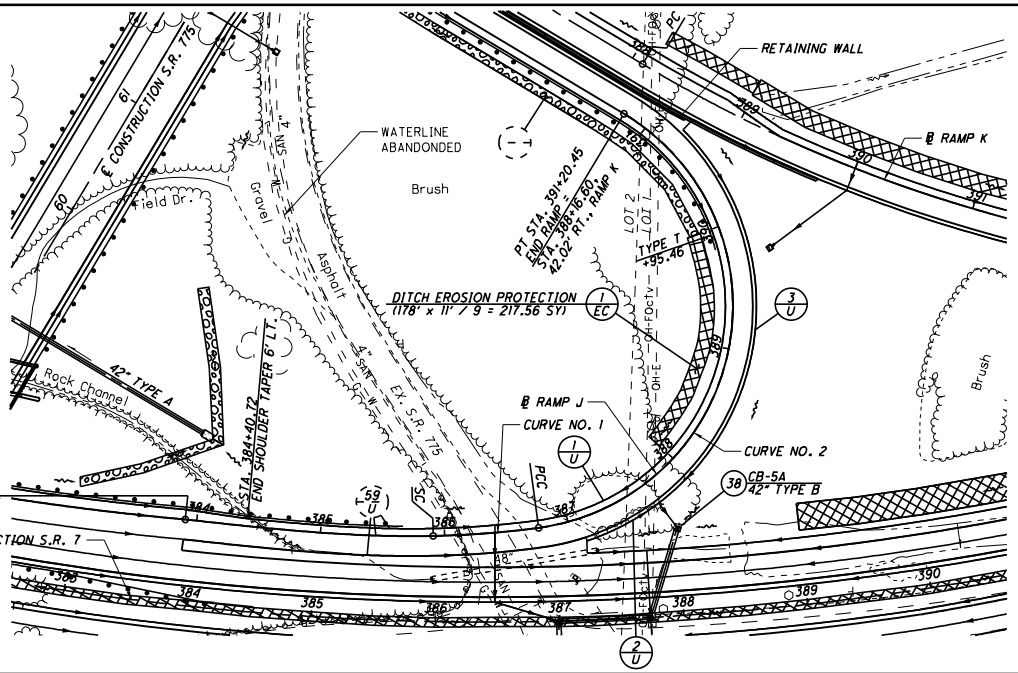
P.I. STA. 385+74.87
Δ = 13° 53' 07" (LT)
Dc = 7° 30' 00"
R = 763.94'
T = 42.61'
L = 85.14'
E = 1.19'
TS STA. 383+90.72
SC STA. 385+90.72

θ_{back} = 7° 30' 00"
L_{back} = 200.00'
T_{back} = 184.15'
LT = 133.45'
ST = 66.78'
e_{max} (N.D.C.) = 8.00%
e_{max} = 6.20%
PCC STA. 386+75.86

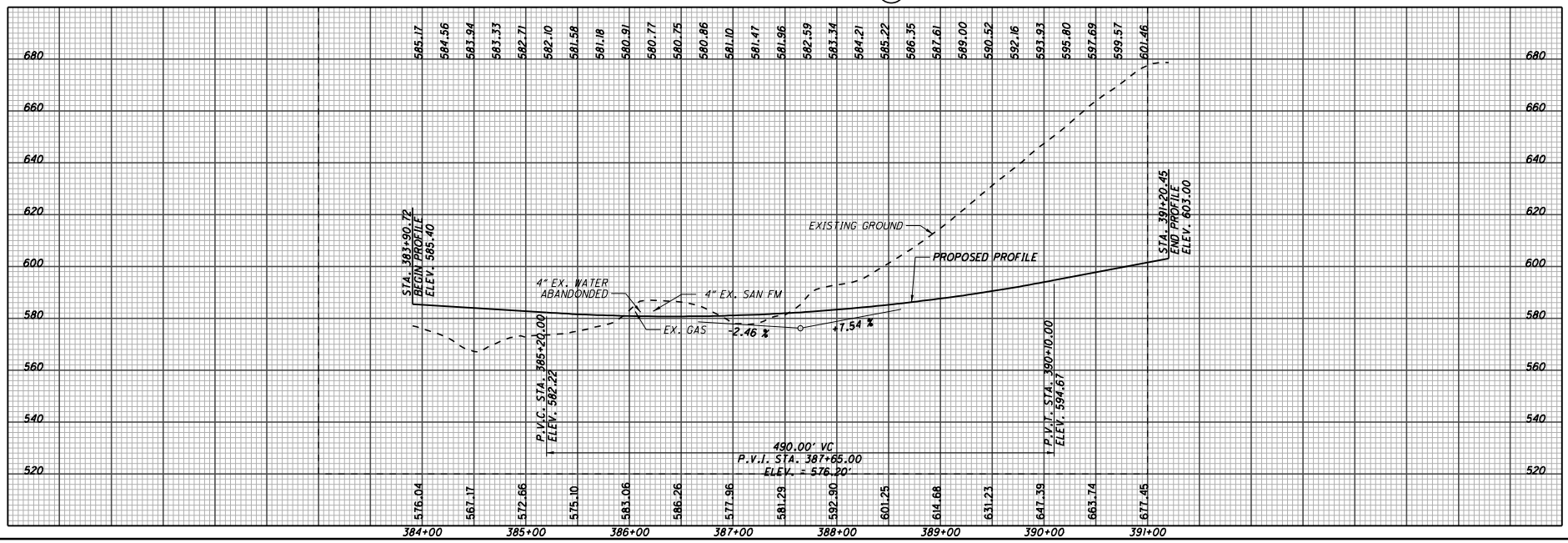
CURVE DATA
RAMP J
CURVE NO. 2

P.I. STA. 391+91.55
Δ = 141° 31' 04" (LT)
Dc = 31° 49' 52"
R = 180.00'
T = 515.70'
L = 444.59'
E = 366.21'
e_{max} = 7.66%
PCC STA. 386+75.86
PT STA. 391+20.45

ST STA. 383+90.72
BEGIN SHOULDER TAPER, 8' LT.
BEGIN RAMP
RAMP NOSE =
STA. 383+90.72, 69' LT., S.R. 7



FOR S.R. 7 PLAN & PROFILE, SEE SHEETS 95-98
FOR RAMP K PLAN AND PROFILE, SEE SHEETS 389-390
FOR S.R. 775 PLAN & PROFILE, SEE SHEET 484-485
FOR INTERCHANGE DETAILS, SEE SHEETS 546-403
FOR STORM SEWER PROFILE, SEE SHEET 561
FOR CULVERT DETAILS, SEE SHEET 570
FOR UNDERDRAIN TABLES, SEE SHEETS 579-583
FOR RETAINING WALL DETAILS, SEE SHEETS 584-588
FOR TRAFFIC CONTROL PLAN, SEE SHEETS 589-619



CALCULATED SLP
CHECKED ALB

HORIZONTAL SCALE IN FEET
0 25 50 100

PLAN AND PROFILE
RAMP J

LAW-7-2.17

384
633

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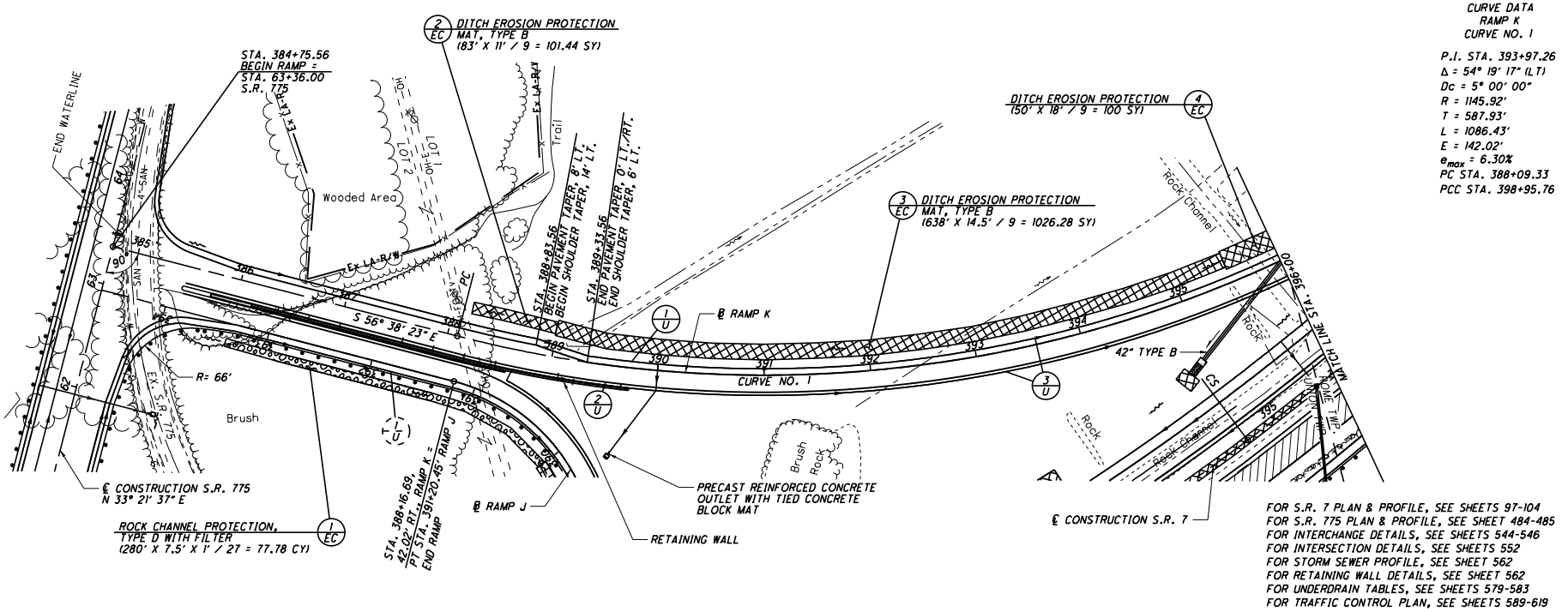

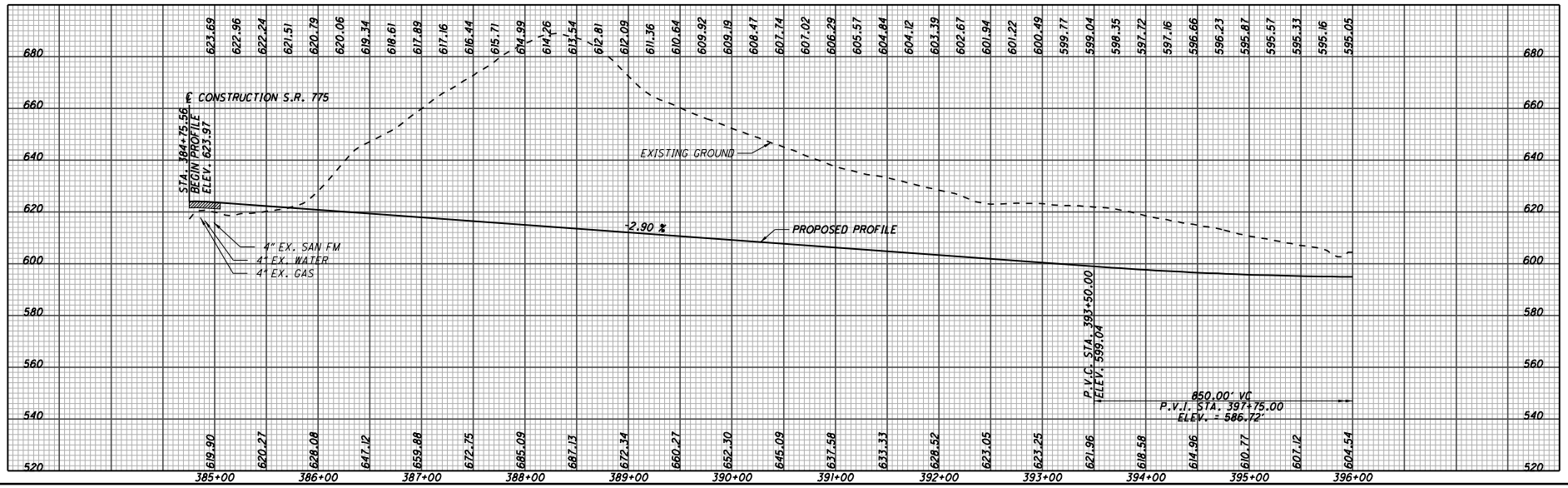

PLAN AND PROFILE - RAMP K
STA. 384+75.56 TO STA. 396+00.00

LAW-7-2.17

389
633

CALCULATED SLP
CHECKED ALB

HORIZONTAL SCALE IN FEET
0 25 50 100

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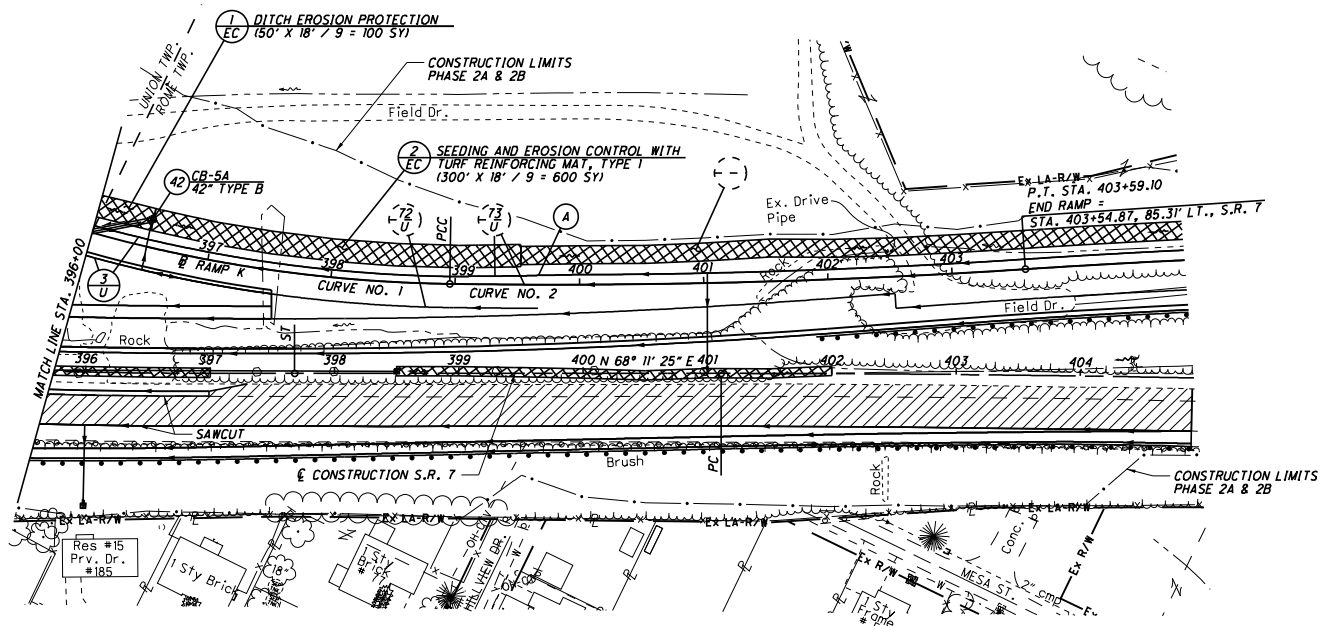
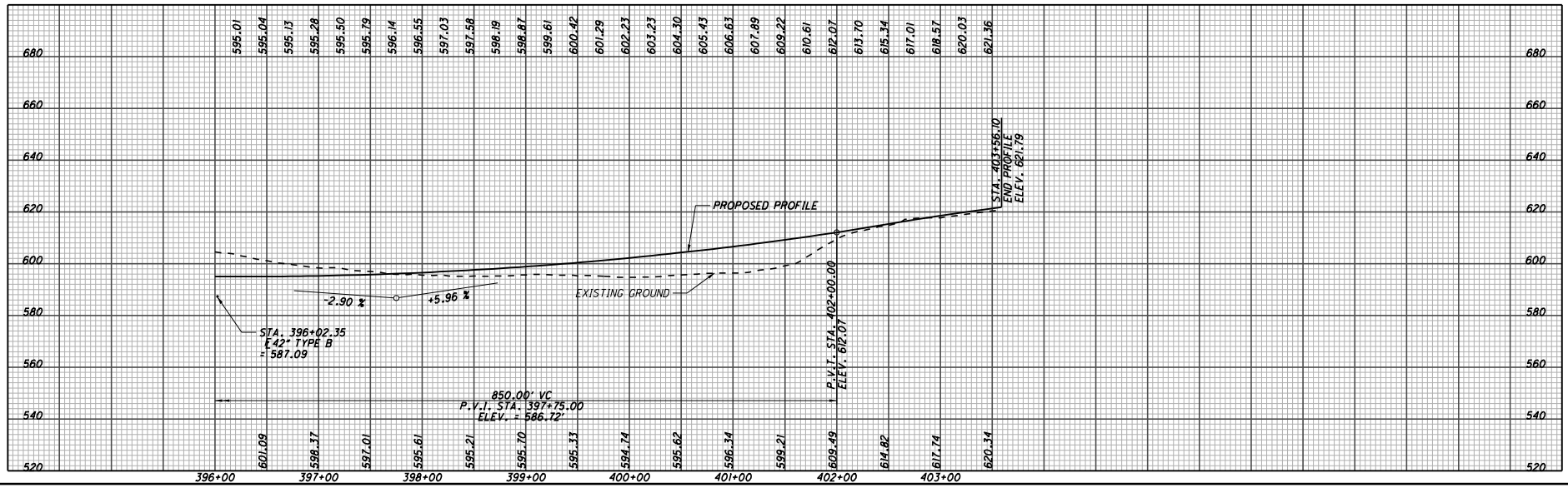


CURVE DATA RAMP K CURVE NO. 1	CURVE DATA RAMP K CURVE NO. 2
P.I. STA. 393+97.26	P.I. STA. 401+27.55
Δ = 54° 19' 17" (LT)	Δ = 4° 38' 00" (LT)
Dc = 5° 00' 00"	Dc = 1° 00' 00"
R = 1145.92'	R = 5729.58'
T = 587.93'	T = 231.80'
L = 1086.43'	L = 463.34'
E = 142.02'	E = 4.69'
e_{max} = 6.30%	e_{max} = 2.10%
PC STA. 388+09.33	PCC STA. 398+95.76
PCC STA. 398+95.76	PT STA. 403+59.10

(A) - STA. 398+95.76 BEGIN SHOULDER TAPER, 6' LT.
STA. 399+95.76 END SHOULDER TAPER, 8' LT.

3-¼" MILL/FILL

FOR S.R. 7 PLAN & PROFILE, SEE SHEETS 97-100
FOR PAVEMENT DETAILS, SEE SHEET 538
FOR INTERCHANGE DETAILS, SEE SHEETS 544-546
FOR STORM SEWER PROFILE, SEE SHEET 562
FOR UNDERDRAIN TABLES, SEE SHEETS 579-583
FOR TRAFFIC CONTROL PLAN, SEE SHEETS 589-619



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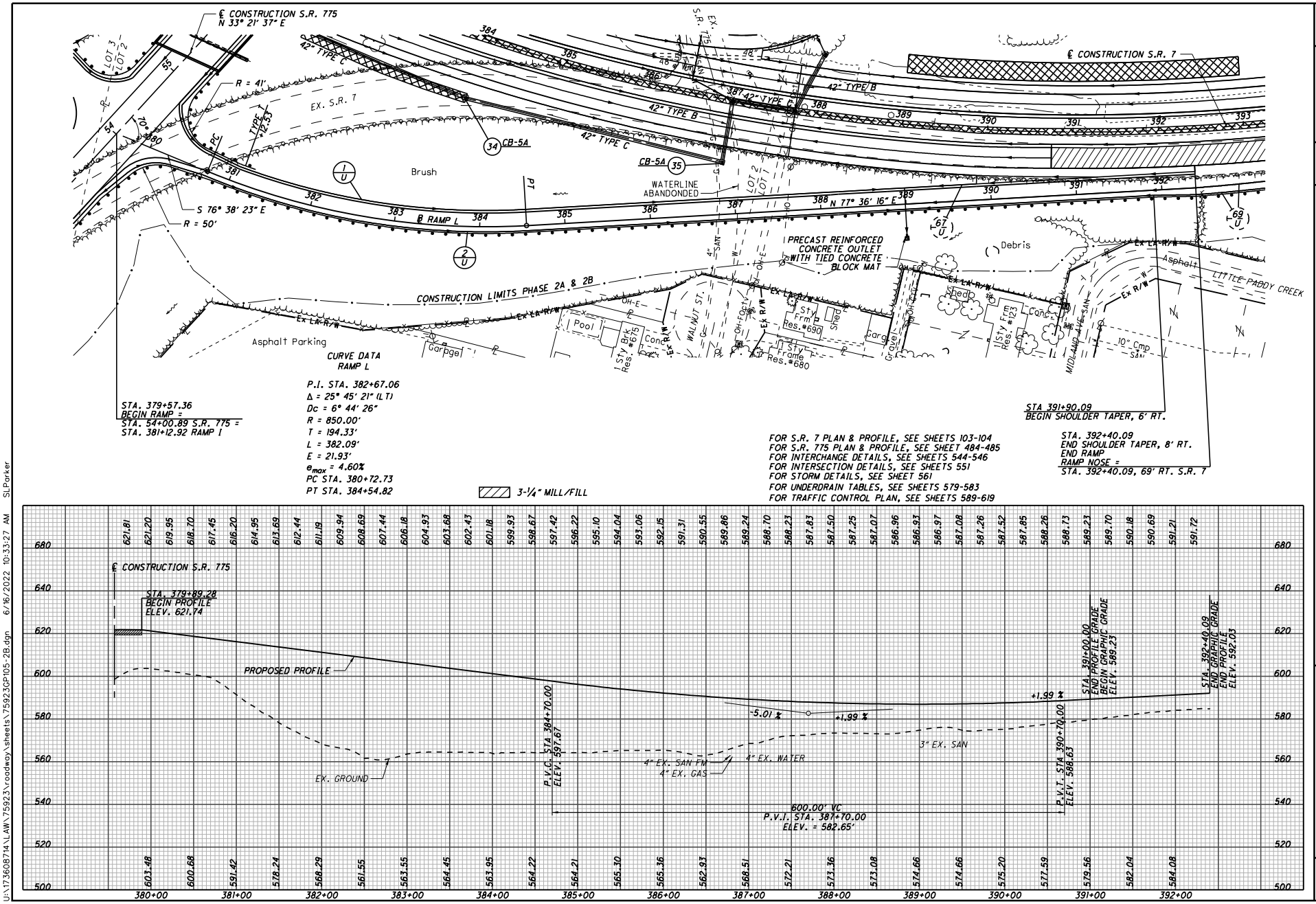
PLAN AND PROFILE - RAMP K
STA. 396+00.00 TO STA. 403+59.10

LAW-7-2.17

CALCULATED SLP CHECKED ALB

HORIZONTAL SCALE IN FEET 0 25 50 100



HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED SLP
CHECKED ALB

PLAN AND PROFILE
RAMP L

LAW-7-2.17

403
633

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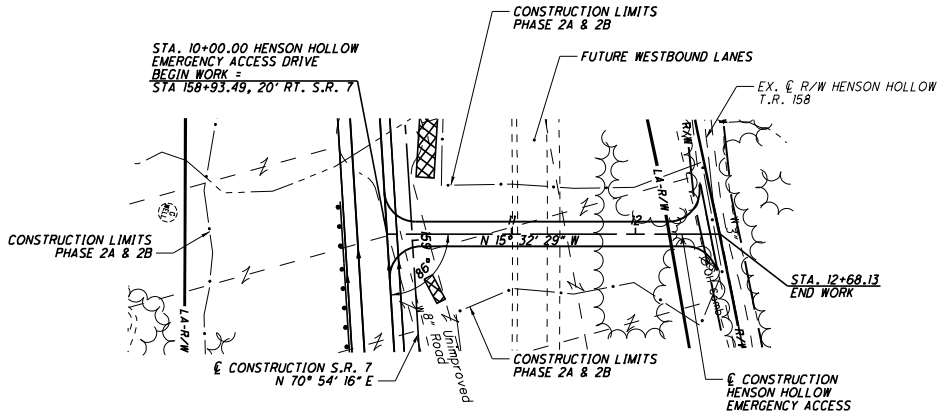
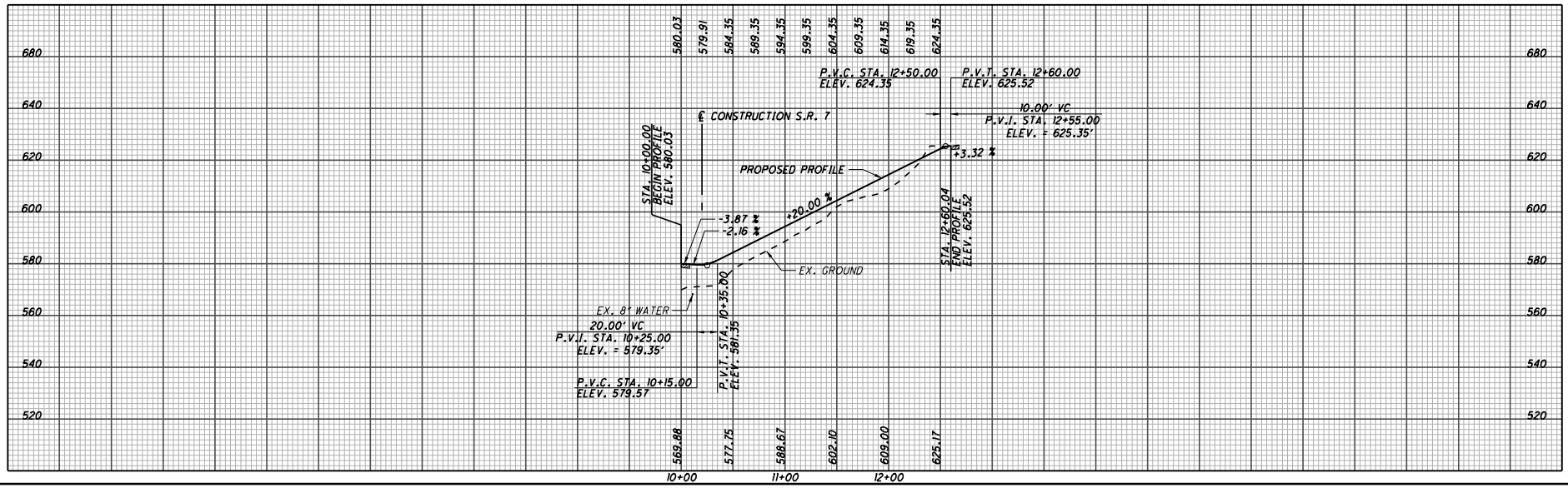


FOR S.R. 7 PLAN & PROFILE, SEE SHEETS 52-55
FOR INTERSECTION DETAILS, SEE SHEETS 548
FOR TRAFFIC CONTROL PLAN, SEE SHEETS 589-619



CALCULATED SLP
CHECKED ALB

HORIZONTAL SCALE IN FEET
0 25 50 100

PLAN AND PROFILE
HENSON HOLLOW EMERGENCY ACCESS

LAW-7-2.17

411
633

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CURVE DATA
S.R. 243
CURVE NO. 1

P.I. Sta. 11+03.86
Δ = 6° 51' 57" (LT)
Dc = 19° 05' 55"
R = 300.00'
T = 18.00'
L = 35.95'
E = 0.54'
e_{max} = 1.60%
PC Sta. 10+85.87
PRC Sta. 11+21.82

CURVE DATA
S.R. 243
CURVE NO. 2

P.I. Sta. 11+99.38
Δ = 13° 36' 35" (RT)
Dc = 8° 48' 53"
R = 650.00'
T = 77.56'
L = 154.40'
E = 4.61'
e_{max} = 1.60%
PRC Sta. 11+21.82
PCC Sta. 12+76.21

CURVE DATA
S.R. 243
CURVE NO. 3

P.I. Sta. 12+94.82
Δ = 6° 05' 09" (RT)
Dc = 16° 22' 13"
R = 350.00'
T = 18.61'
L = 37.18'
E = 0.49'
e_{max} = 1.60%
PCC Sta. 12+76.21
CS Sta. 13+13.39

CURVE DATA
S.R. 243
CURVE NO. 4

P.I. Sta. 15+51.11
Δ = 5° 37' 36" (LT)
Dc = 1° 30' 00"
R = 3,819.72'
T = 137.62'
L = 275.13'
E = 2.48'
TS STA. 13+13.39
SC STA. 14+13.39

θs = 00° 45' 00"
Ls = 100.00'
Ts = 237.72'
LT = 66.67'
ST = 33.33'
e_{max} = 3.50%
CS Sta. 16+88.52
ST Sta. 17+88.52

FOR S.R. 7 PLAN & PROFILE, SEE SHEETS 70-71
FOR INTERSECTION DETAILS, SEE SHEETS 551
FOR STORM SEWER PROFILE, SEE SHEET 562
FOR CULVERT DETAILS, SEE SHEET 568
FOR DRIVE DETAILS, SEE SHEETS 555-557
FOR DETENTION BASIN DETAILS, SEE SHEETS 5758578
FOR UNDERDRAIN TABLES, SEE SHEETS 579-583
FOR TRAFFIC CONTROL PLAN, SEE SHEETS 589-619

*(A) STA. 13+07.06
BEGIN SHOULDER TAPER, 20.02' LT.
STA. 13+15.05
END SHOULDER TAPER, 22' LT.

*(B) STA. 13+06.93
BEGIN SHOULDER TAPER, 31.95' RT.
STA. 13+14.93
END SHOULDER TAPER, 34' RT.

(C) STA. 15+38.99
BEGIN PAVEMENT TAPER, 22.63' RT.
BEGIN SHOULDER TAPER, 26.63' RT.
STA. 16+00.62
END PAVEMENT TAPER, 18' RT.
END SHOULDER TAPER, 22' RT.

(2 EC) SEEDING AND EROSION CONTROL WITH TURF REINFORCING MAT, TYPE 1
(213' X 14.5' / 9 = 343.17 SY)

(3 EC) SEEDING AND EROSION CONTROL WITH TURF REINFORCING MAT, TYPE 3
(51' X 11' / 9 = 62.33 SY)

(4 EC) SEEDING AND EROSION CONTROL WITH TURF REINFORCING MAT, TYPE 3
(56' X 7.5' / 9 = 46.67 SY)

STA. 21+54.00
END PAVEMENT TAPER, 9.77' LT. & 9.11' RT.
END SHOULDER TAPER, 11.33' LT. & 11.12' RT.
END WORK

(1 EC) DITCH EROSION PROTECTION MAT, TYPE B
(431' x 14.5' / 9 = 694.39 SY)

STA. 14+80.01 S.R. 243 =
STA. 9+68.33 C.R. 69

STA. 18+24.00
BEGIN PAVEMENT TAPER
18' LT./RT.

CONSTRUCTION LIMITS
PHASE 2A & 2B

STREAM 10

EX. BLOCK MAT

STA. 10+00.95 S.R. 243 =
STA. 15+27.37 S.R. 7 RAB

CONSTRUCTION LIMITS
PHASE 2A & 2B

STA. 9+64.02
BEGIN WORK =
STA. 252+09.52 S.R.7

54" TYPE C

FUTURE WESTBOUND LANES 14 & 15

250' W

CB-4A

CB-4 W/O APRON
30" TYPE B

CB-4 W/O APRON
21" TYPE B

MH-3
30" TYPE C

PRECAST REINFORCED CONCRETE OUTLET WITH TURF REINFORCING MAT (TYP.)

DETENTION BASIN #1
ACCESS DRIVE

54" TYPE B

30" TYPE B

TYPE E

CURVE NO. 1

CURVE NO. 2

CURVE NO. 3

N 62° 13' 05" E

N 38° 51' 44" W

℄ CONSTRUCTION S.R. 243

℄ S.R. 7 RAB

℄ CONSTRUCTION C.R. 69

Wooded Area

Trail

Asphalt

Pasture

Concrete

Brush

SAWCUT

Metal Bldg
Auto Repair

Block Bldg

Split Rail

Dead Ash

Grass

Fence

Deck

Frame

1 Sty Brk Res. #16804

20-30 Scrap Vehicles

A.E.P. ESMT.

B.R.E.C. ESMT.

SECTION 15

SECTION 16

* USE TYPE 6 CURB TO TAPER SHOULDER. TAPER CURB HEIGHT FROM 0" TO 6" IN 10'.

- 3 1/4" MILL FILL

STA. 21+04.00
BEGIN SHOULDER TAPER
15.02' LT. & 14.46' RT.

(5 EC) SEEDING AND EROSION CONTROL WITH TURF REINFORCING MAT, TYPE 2
(431' x 11' / 9 = 526.78 SY)

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED SLP
CHECKED ALB

PLAN
S.R. 243

LAW-7-2.17

418
633

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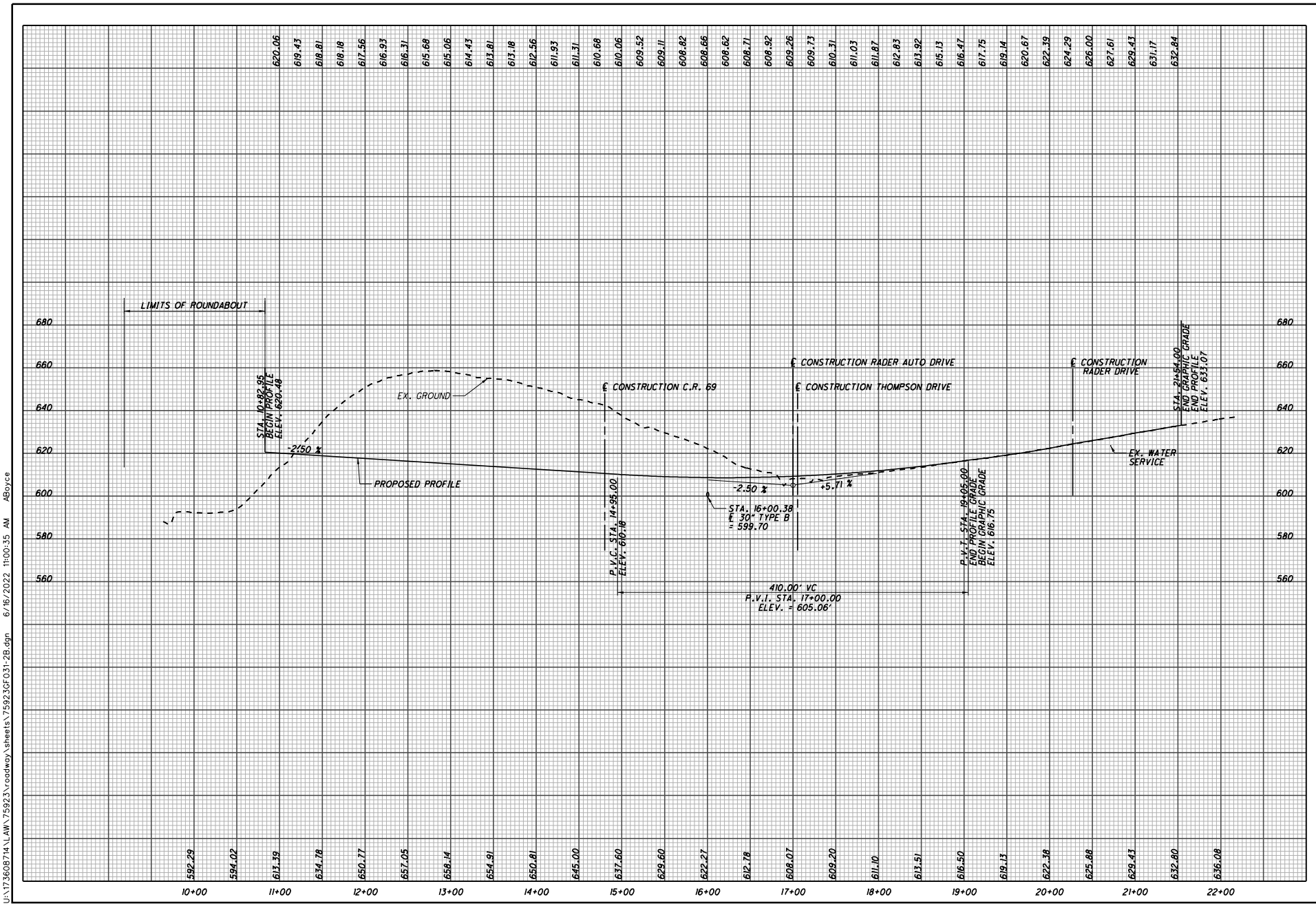

PROFILE
S.R. 243

LAW-7-2.17

418A
633

CALCULATED SLP
CHECKED ALB

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FOR S.R. 243 PLAN & PROFILE, SEE SHEETS 418 & 418A
FOR INTERSECTION DETAILS, SEE SHEET 549
FOR CULVERT DETAILS, SEE SHEET 569
FOR DETENTION BASIN DETAILS, SEE SHEETS 575&578
FOR UNDERDRAIN TABLES, SEE SHEETS 579-583
FOR TRAFFIC CONTROL PLAN, SEE SHEETS 589-619

3 EC DITCH EROSION PROTECTION MAT, TYPE B (54' X 11' / 9 = 66 SY)

1 EC SEEDING AND EROSION CONTROL WITH TURF REINFORCING MAT, TYPE 2 (214' X 14.5' / 9 = 344.78 SY)

CURVE DATA
C.R. 69
CURVE NO. 1
P.I. STA. 10+33.80
Δ = 20° 52' 36" (RT)
Dc = 24° 54' 40"
R = 230.00'
T = 42.37'
L = 83.80'
E = 3.87'
e_{max} (N.D.C.) = 8.00%
e_{max} = 2.50%
PC STA. 9+91.43
PT STA. 10+75.23

CURVE DATA
C.R. 69
CURVE NO. 2
P.I. STA. 15+77.89
Δ = 10° 17' 44" (LT)
Dc = 4° 00' 00"
R = 1,432.39'
T = 129.04'
L = 257.39'
E = 5.80'
e_{max} = 7.10%
PC STA. 14+48.85
PT STA. 17+06.24

CURVE DATA
C.R. 69
CURVE NO. 3
P.I. STA. 25+76.25
Δ = 22° 45' 00" (RT)
Dc = 1° 45' 00"
R = 3,274.04'
T = 658.68'
L = 1,300.00'
E = 65.60'
TS STA. 17+89.74
SC STA. 19+14.74
θs = 1° 05' 37"
Ls = 125.00'
Ts = 786.51'
LT = 83.33'
ST = 41.67'
e_{max} = 4.00%
CS STA. 32+14.74
ST STA. 33+39.74

(LF) DESIGNATES LEACH FIELD

5 EC SEEDING AND EROSION CONTROL WITH TURF REINFORCING MAT, TYPE 1 (102' X 14.5' / 9 = 167.56 SY)

6 EC SEEDING AND EROSION CONTROL WITH TURF REINFORCING MAT, TYPE 1 (50' X 14.5' / 9 = 80.56 SY)

7 EC SEEDING AND EROSION CONTROL WITH TURF REINFORCING MAT, TYPE 1 (50' X 14.5' / 9 = 80.56 SY)

4 EC DITCH EROSION PROTECTION MAT, TYPE B (151' X 11' / 9 = 184.56 SY)

N 62° 13' 05" E
Wooded Area
℄ EX. R/W S.R. 243
CURVE NO. 1
R = 42'
R.E.C. ESMT.
Brush
STA. 9+68.33 C.R. 69 BEGIN WORK = STA. 14+80.01 S.R. 243
℄ CONSTRUCTION S.R. 243
ROCK CHANNEL PROTECTION, TYPE C WITH FILTER (39' X 6' X 1.5' / 27 = 13.00 CY) (156' X 7' X 1.5' / 27 = 60.67 CY)
2 EC
CB2-2B 21" TYPE C
DETENTION BASIN #1
42" TYPE A
N 83° 05' 41" E
A.E.P. ESMT.
W. Wire
Wooded Area
SECTION 15 SECTION 22
CURVE NO. 2
PC
PT
TS
SC
N 72° 47' 57" E
STREAM 10
CONSTRUCTION LIMITS PHASE 2A & 2B
CURVE NO. 3
℄ CONSTRUCTION C.R. 69
MATCH LINE STA. 24+00
FUTURE WESTBOUND LANES
EX. R/W
R/W
1-Sty Duplex Res. (1700)
2 Sty Brk Res. #17039
Shed
Garage
Asphalt
Conc.
Brick
Wall
Ch-Comb
Trees
Brush
24"
18" Conc
4" Thick Conc. Pad
2 Sty Brick Res.
1 Sty Frm #16948

STA. 10+68.68
BEGIN PAVEMENT TAPER, 15.02' RT.
STA. 11+30.77
END PAVEMENT TAPER, 11' RT.

(A) (B) - DETENTION BASIN #1 ACCESS DRIVE

* PRECAST REINFORCED CONCRETE OUTLET WITH TIED CONCRETE BLOCK MAT

611.61 611.33 610.99 610.65 610.28 609.87 609.42 608.92 608.38 607.79 607.16 606.49 605.77 605.00 604.21 603.43 602.64 601.85 601.06 600.27 599.49 598.70 597.91 597.12 596.34 595.55 594.76 593.97 593.18 592.40 591.61 590.82 590.03 589.25 588.46 587.67 586.88 586.09 585.31 584.52 583.73 582.94 582.16 581.37 580.58 579.79 579.00 578.22 577.43 576.64 575.85 575.07 574.28 573.49 572.70 571.92 571.13

℄ CONSTRUCTION S.R. 243
10.00' VC
P.V.I. STA. 10+00.00
ELEV = 611.67'
250.00' VC
P.V.I. STA. 12+00.00
ELEV = 608.94'
℄ EX. R/W S.R. 243
P.V.C. STA. 9+95.00 ELEV 611.49
P.V.T. STA. 10+05.00 ELEV 611.60
P.V.C. STA. 10+75.00 ELEV 610.65
P.V.T. STA. 13+25.00 ELEV 605.00
STA. 9+86.33 BEGIN PROFILE ELEV. 611.19
+3.50 %
-1.36 %
-3.15 %
℄ 42" TYPE A = 591.40
2" EX. WATER
EX. GROUND
PROPOSED PROFILE

680 660 640 620 600 580 560 540

630.70 617.12 602.74 596.60 589.32 587.36 588.52 599.01 604.28 603.47 594.47 589.40 586.65 584.21 581.84 573.19 564.28 561.16 560.37 557.28 559.09 559.61 561.61 562.22 563.52 564.73 563.38 563.91 563.63

10+00 11+00 12+00 13+00 14+00 15+00 16+00 17+00 18+00 19+00 20+00 21+00 22+00 23+00 24+00

N

HORIZONTAL SCALE IN FEET 0 25 50 100

CALCULATED SLP CHECKED ALB

PLAN AND PROFILE - C.R. 69
STA. 9+68.33 TO STA. 24+00.00

LAW-7-2.17

429
633

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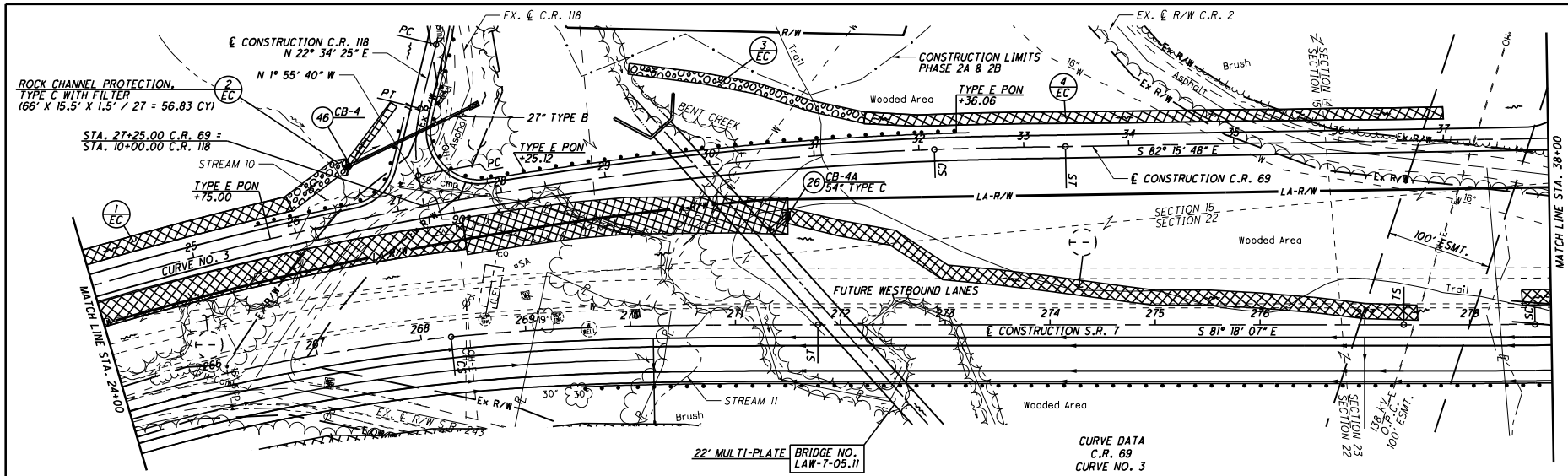


1 EC SEEDING AND EROSION CONTROL WITH TURF REINFORCING MAT, TYPE I (202' X 14.5' / 9 = 325.44 SY)

3 EC ROCK CHANNEL PROTECTION, TYPE C WITH FILTER (231' X 10.5' X 1.5' / 27 = 134.75 CY)

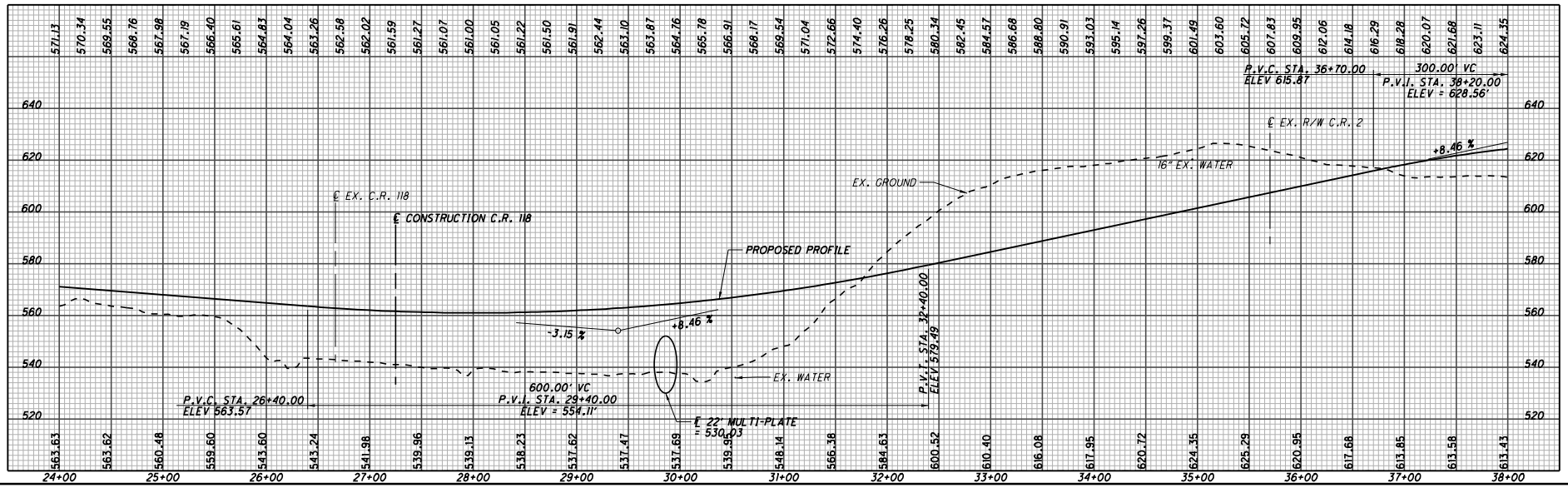
4 EC SEEDING AND EROSION CONTROL WITH TURF REINFORCING MAT, TYPE I (551' X 11' / 9 = 673.44 SY)

CURVE DATA
C.R. 69
CURVE NO. 3

P.I. STA. 25+76.25
Δ = 22° 45' 00" (RT)
Dc = 1° 45' 00"
R = 3,274.04'
T = 658.68'
L = 1,300.00'
E = 65.60'
TS STA. 17+89.74
SC STA. 19+14.74

θs = 1° 05' 37"
Ls = 125.00'
Ts = 786.51'
LT = 83.33'
ST = 41.67'
e_{max} = 4.00%
CS STA. 32+14.74
ST STA. 33+39.74

FOR S.R. 7 PLAN & PROFILE, SEE SHEETS 76-77
FOR C.R. 118 PLAN AND PROFILE, SEE SHEET 472
FOR INTERSECTION DETAILS, SEE SHEET 550
FOR STORM SEWER PROFILE, SEE SHEET 563
FOR TRAFFIC CONTROL PLAN, SEE SHEETS 589-619
FOR STRUCTURE DETAILS, SEE SHEETS XXX-XXX



CALCULATED SLP
CHECKED ALB

HORIZONTAL SCALE IN FEET
0 25 50 100

PLAN AND PROFILE - C.R. 69
STA. 24+00.00 TO STA. 38+00.00

LAW-7-2.17

430
633

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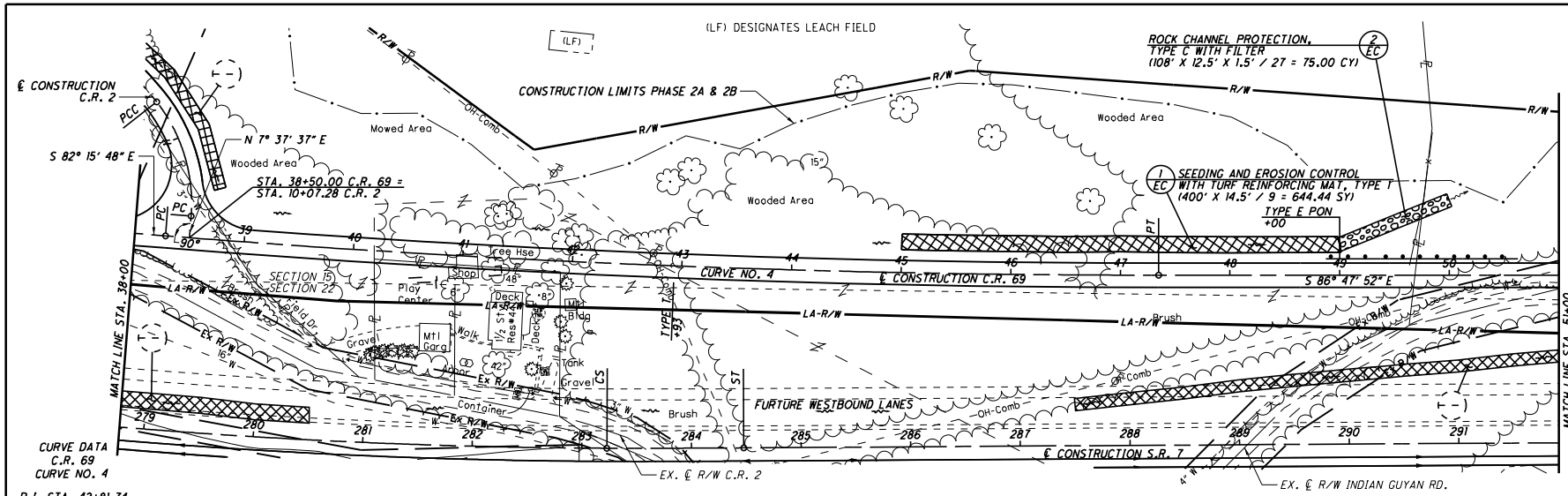
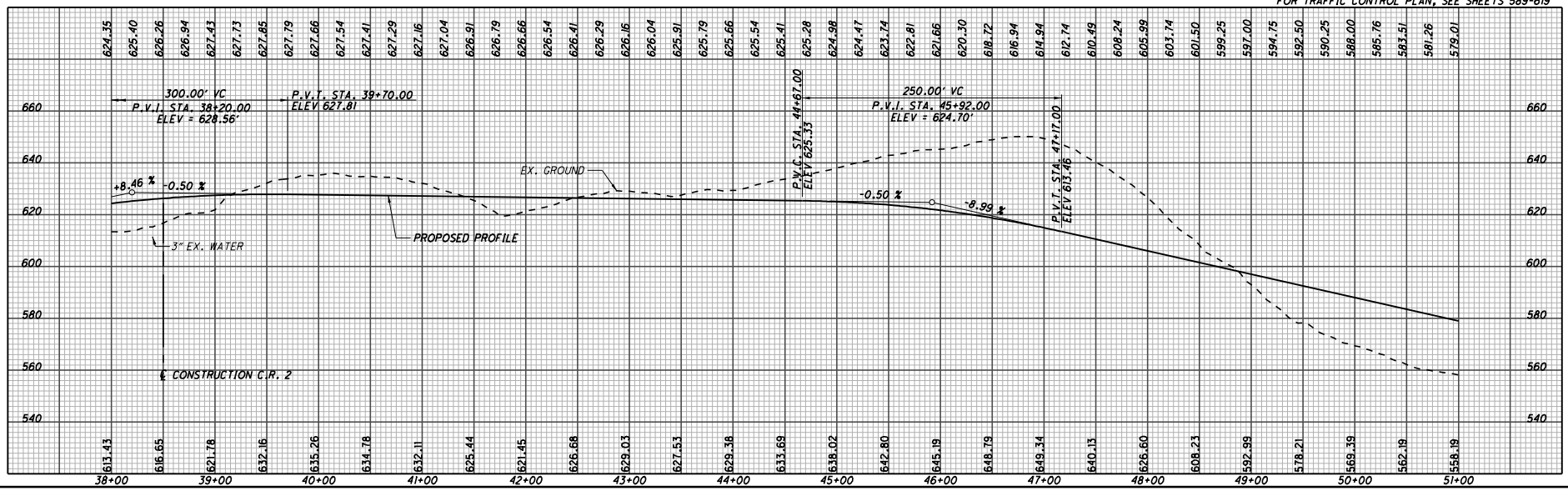


CURVE DATA
C.R. 69
CURVE NO. 4

P.I. STA. 42+81.74
Δ = 4° 32' 03" (LT)
Dc = 0° 30' 00"
R = 11,459.16'
T = 453.67'
L = 906.86'
E = 8.98'
e_{max} = 1.60%
PC STA. 38+28.07
PT STA. 47+34.93

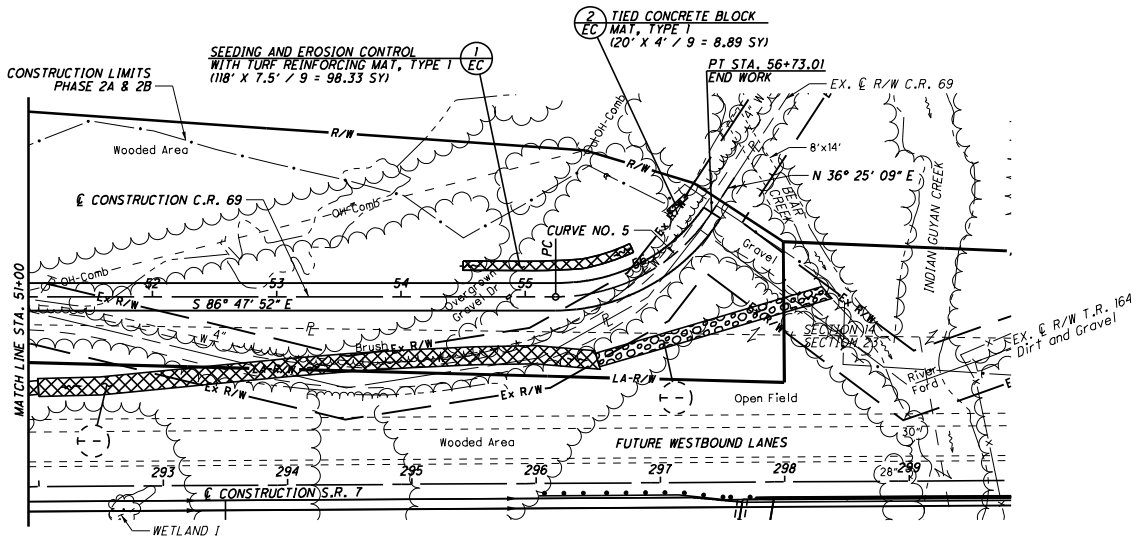
FOR S.R. 7 PLAN & PROFILE, SEE SHEETS 78-79
FOR C.R. 2 PLAN AND PROFILE, SEE SHEET 478
FOR INTERSECTION DETAILS, SEE SHEET 550
FOR TRAFFIC CONTROL PLAN, SEE SHEETS 589-619



HORIZONTAL SCALE IN FEET
0 25 50 100
CALCULATED SLP
CHECKED ALB

PLAN AND PROFILE - C.R. 69
STA. 38+00.00 TO STA. 51+00.00

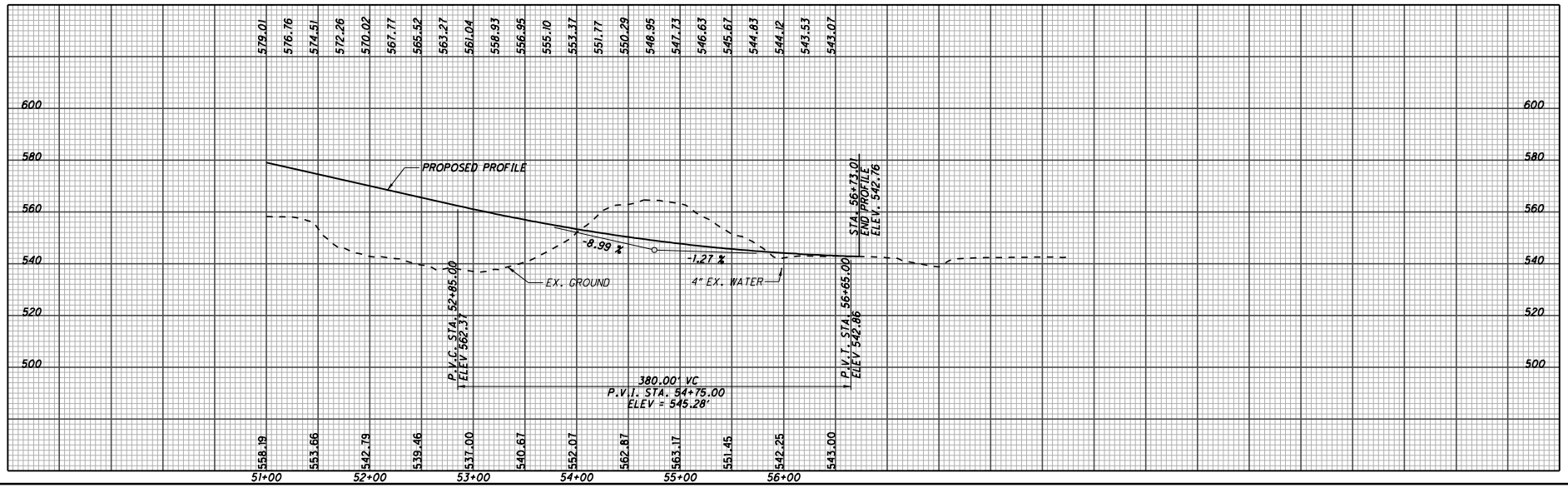
LAW-7-2.17



CURVE DATA
C.R. 69
CURVE NO. 5

P.I. STA. 56+05.43
Δ = 56° 46' 59" (RT)
Dc = 38° 11' 50"
R = 150.00'
T = 81.08'
L = 148.66'
E = 20.51'
e_{max} (N.D.C.) = 8.00%
e_{max} = 2.50%
PC STA. 55+24.35
PT STA. 56+73.01

FOR S.R. 7 PLAN & PROFILE, SEE SHEETS 80-81
FOR TRAFFIC CONTROL PLAN, SEE SHEETS 589-619



HORIZONTAL SCALE IN FEET
0 25 50 100
CALCULATED SLP
CHECKED ALB

PLAN AND PROFILE - C.R. 69
STA. 51+00.00 TO STA. 56+73.01

LAW-7-2.17

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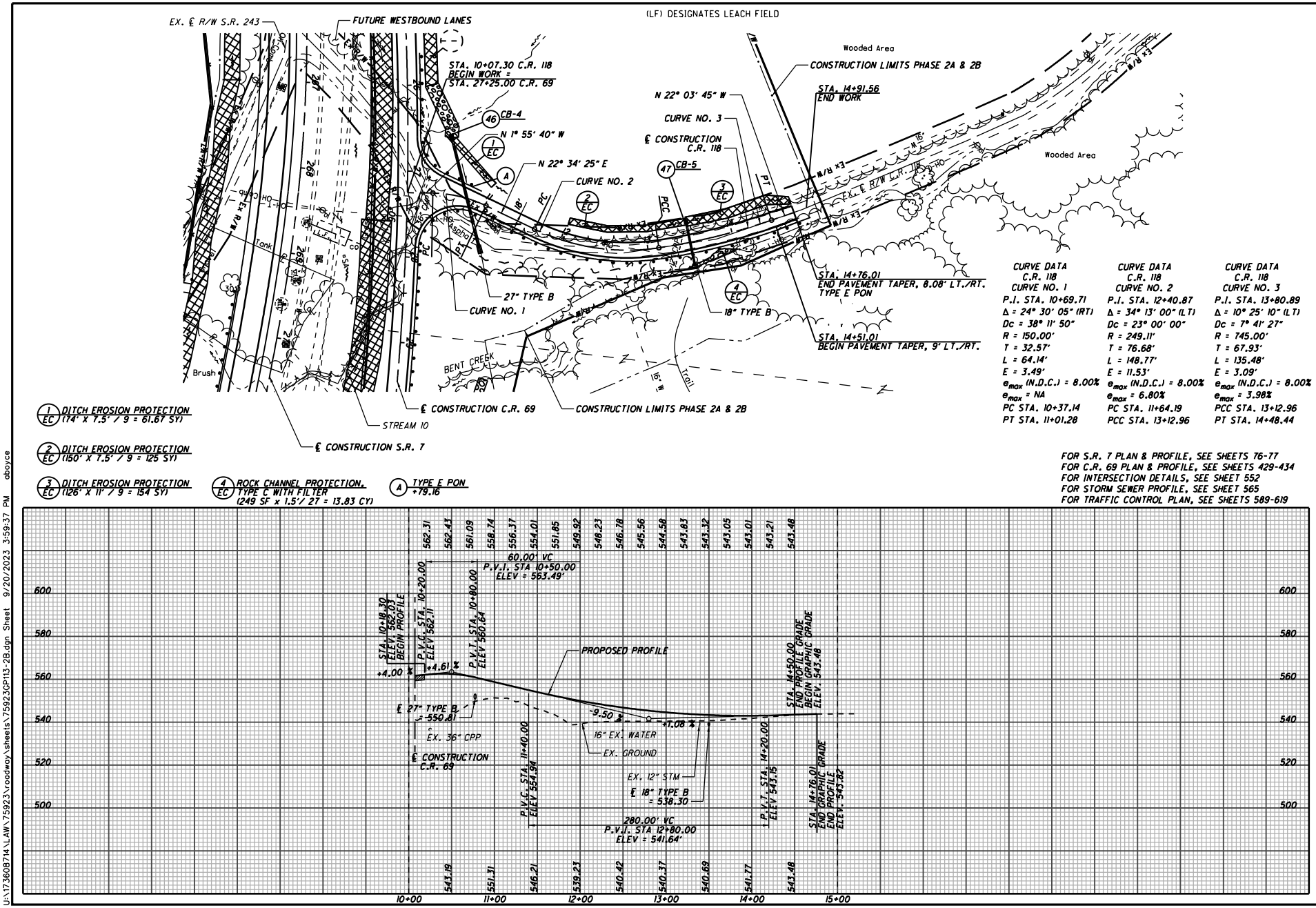

N

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED SLP
CHECKED ALB

PLAN AND PROFILE
C.R. 118

LAW-7-2.17

474
635

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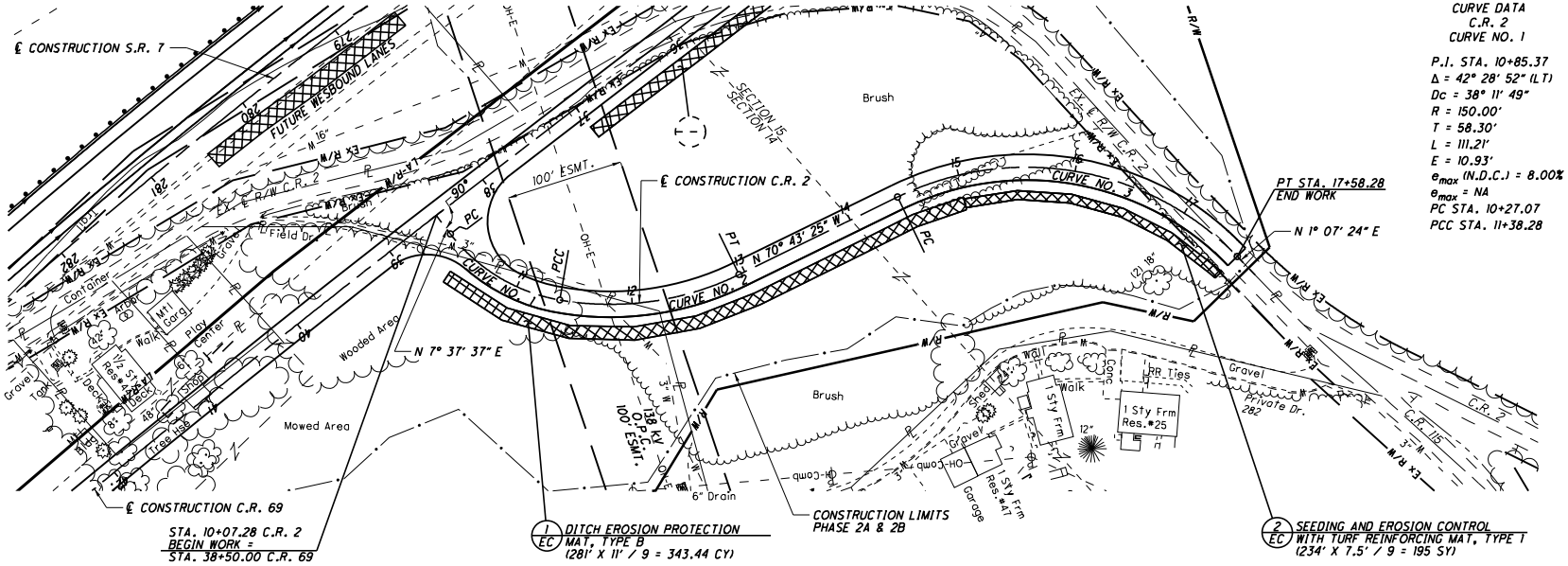


CURVE DATA C.R. 2 CURVE NO. 1

P.I. STA. 10+85.37
Δ = 42° 28' 52" (LT)
Dc = 38° 11' 49"
R = 150.00'
T = 58.30'
L = 111.21'
E = 10.93'
e_{max} (N.D.C.) = 8.00%
e_{max} = NA
PC STA. 10+27.07
PCC STA. 11+38.28

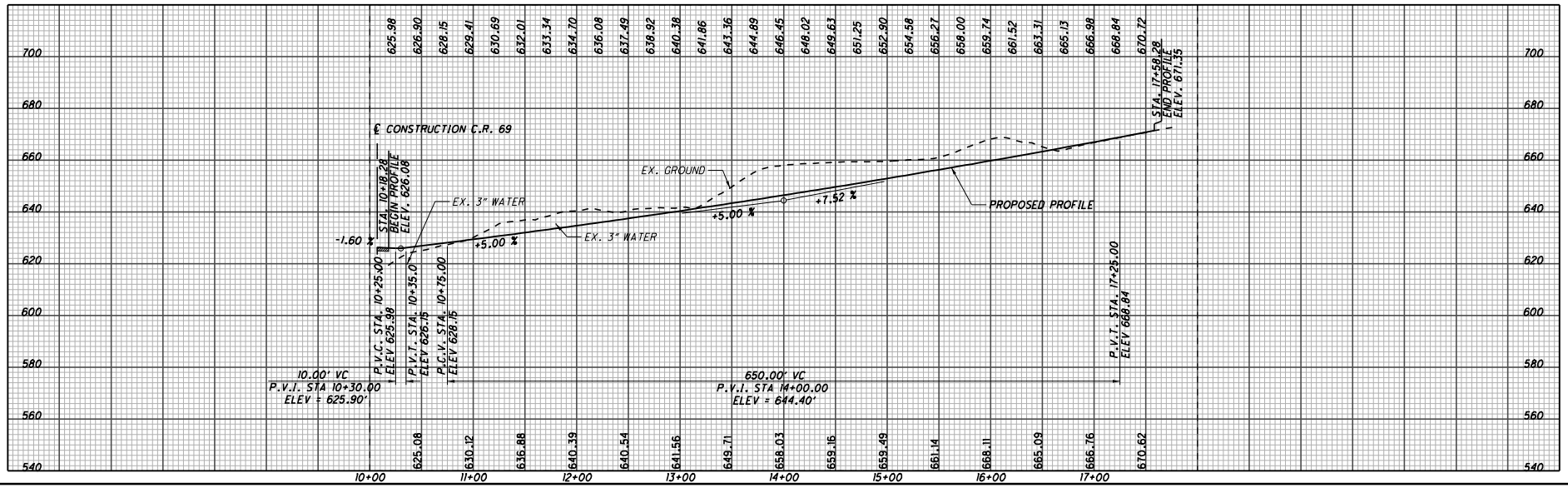
CURVE DATA C.R. 2 CURVE NO. 2

P.I. STA. 12+19.20
Δ = 35° 52' 10" (LT)
Dc = 22° 55' 06"
R = 250.00'
T = 80.91'
L = 156.51'
E = 12.77'
e_{max} (N.D.C.) = 8.00%
e_{max} = 7.89%
PCC STA. 11+38.28
PT STA. 12+94.79

CURVE DATA C.R. 2 CURVE NO. 3

P.I. STA. 16+25.92
Δ = 71° 50' 49" (RT)
Dc = 22° 55' 06"
R = 250.00'
T = 181.13'
L = 313.49'
E = 58.72'
e_{max} (N.D.C.) = 8.00%
e_{max} = 7.00%
PC STA. 14+44.79
PT STA. 17+58.28

FOR S.R. 7 PLAN & PROFILE, SEE SHEETS 78-79
FOR C.R. 69 PLAN & PROFILE, SEE SHEETS 429-432
FOR INTERSECTION DETAILS, SEE SHEET 550
FOR TRAFFIC CONTROL PLAN, SEE SHEETS 589-619



HORIZONTAL SCALE IN FEET 0 25 50 100

CALCULATED SLP CHECKED ALB

PLAN AND PROFILE C.R. 2

LAW-7-2.17

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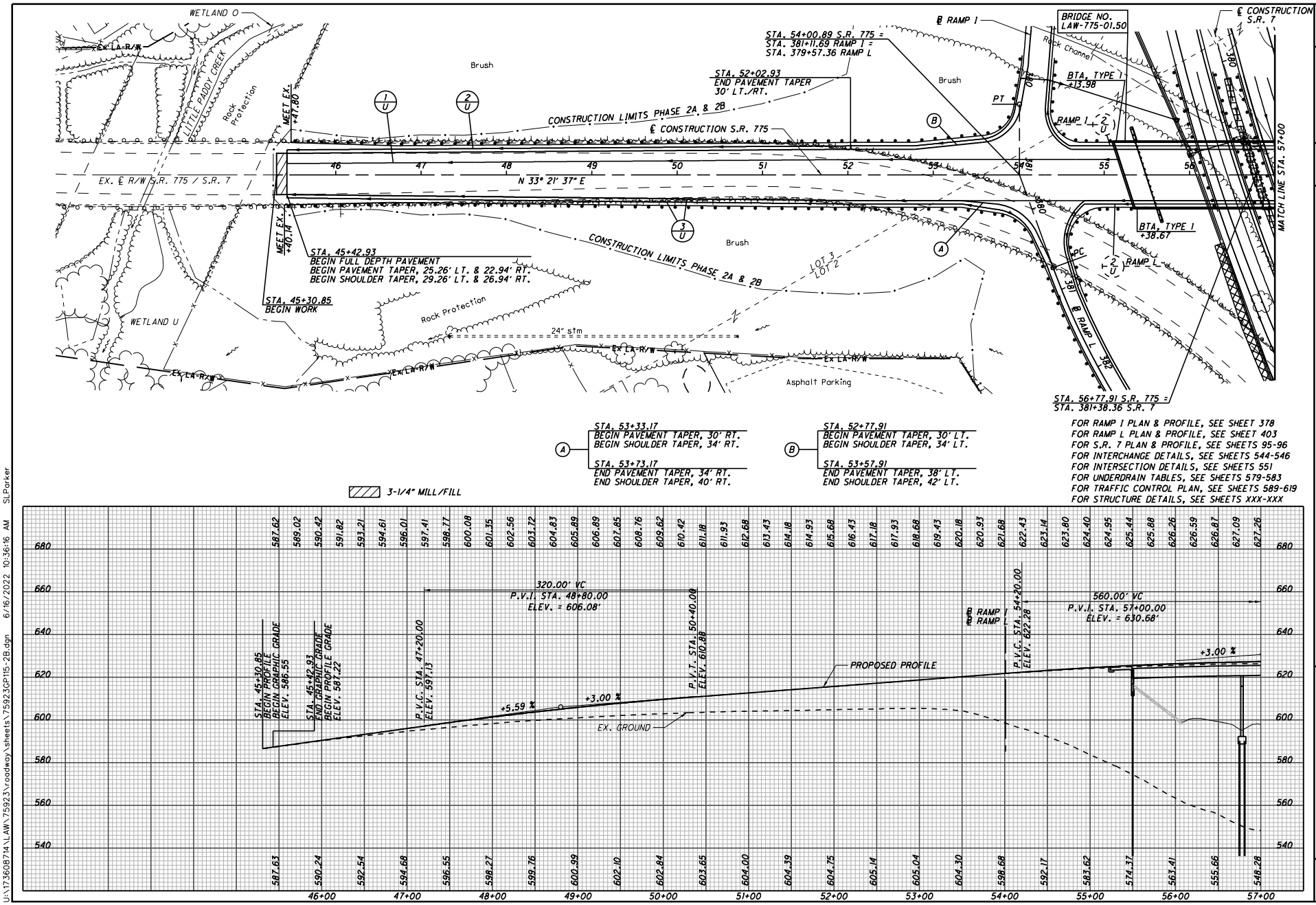

HORIZONTAL SCALE IN FEET
0 25 50 100
CALCULATED SLP
CHECKED ALB

PLAN AND PROFILE - S.R. 775
STA. 45+30.85 TO STA. 57+00.00

LAW-7-2.17

484
633

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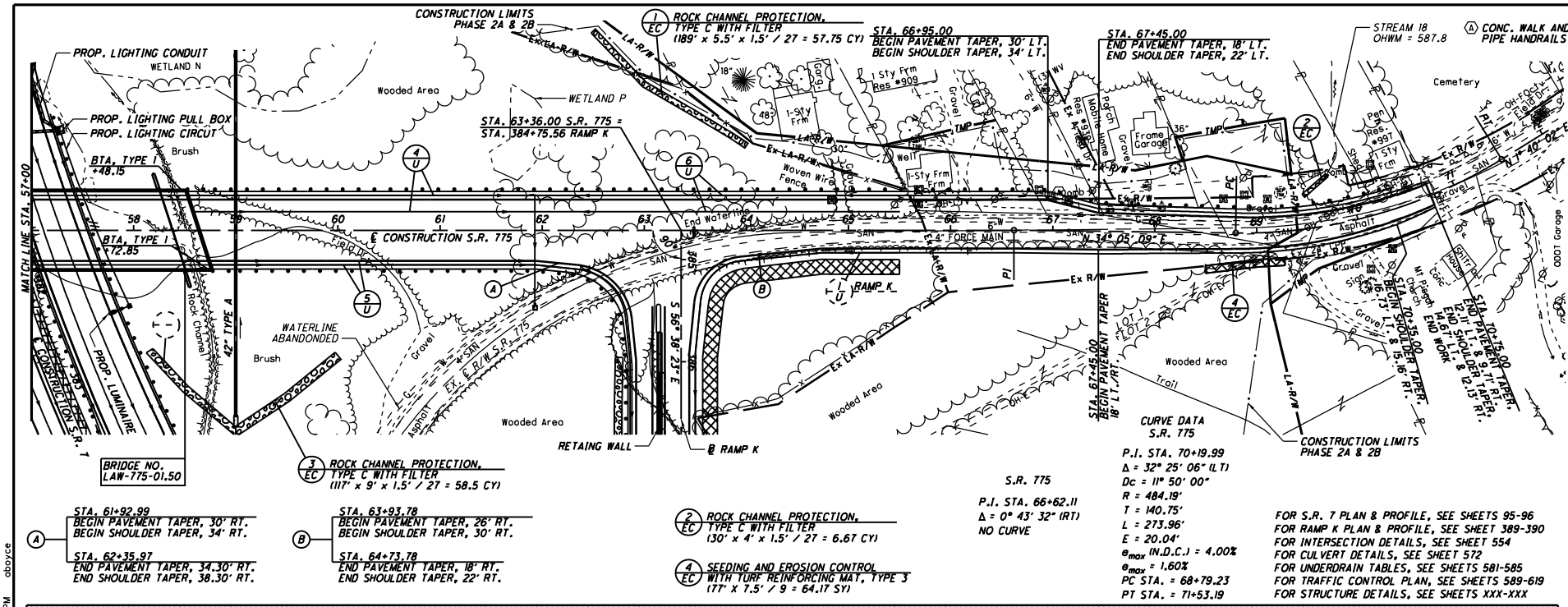

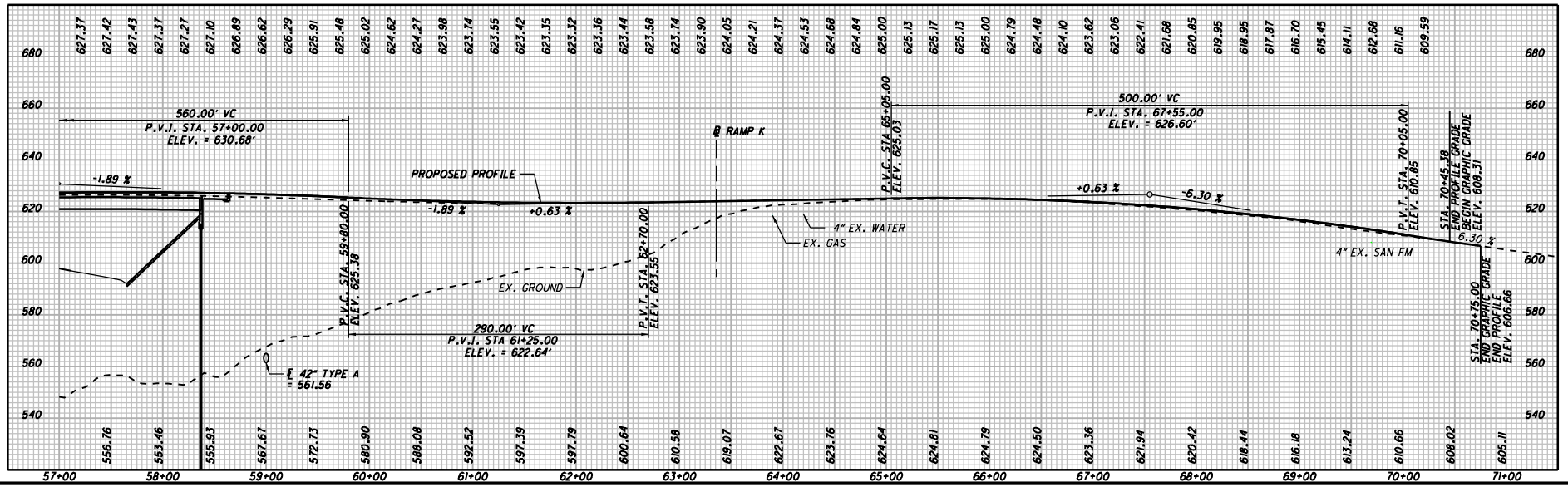

PLAN AND PROFILE - S.R. 775
STA. 57+00.00 TO STA. 70+75.00

LAW-7-2.17

HORIZONTAL SCALE IN FEET
0 25 50 100
CALCULATED SLP
CHECKED ALB

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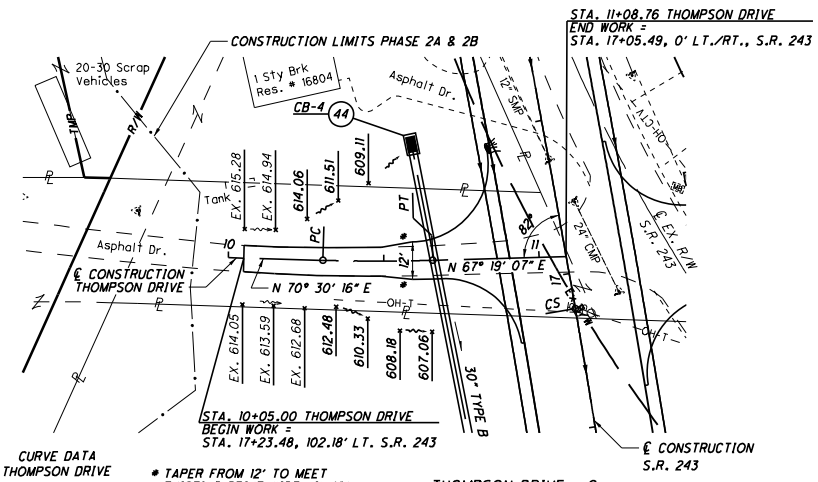
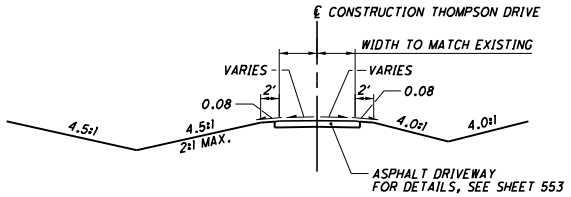




TYPICAL SECTION - THOMPSON DRIVE
NOT TO SCALE

CURVE DATA
THOMPSON DRIVE
P.I. STA. 10+48.13
Δ = 3° 11' 08" (LT)
Dc = 9° 01' 23"
R = 635.00'
T = 17.66'
L = 35.31'
E = 0.25'
e_{max} = NA
PC STA. 10+30.48
PT STA. 10+65.78

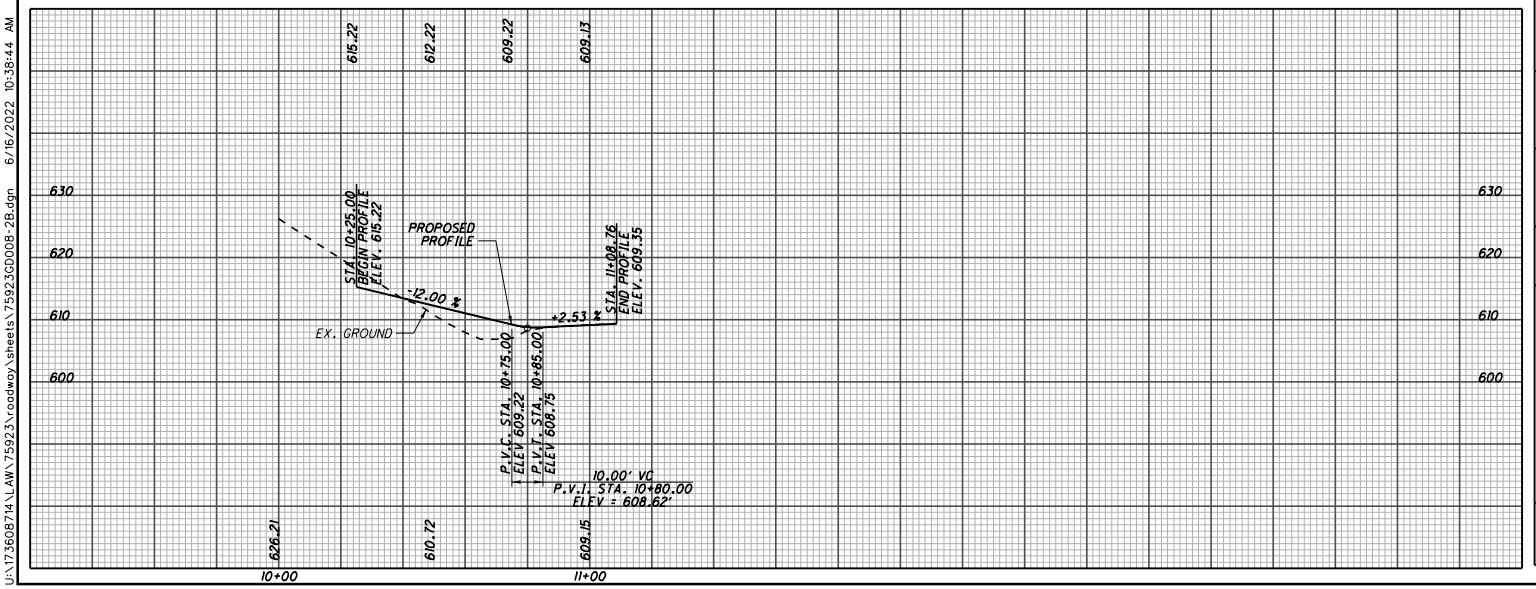
* TAPER FROM 12' TO MEET EXISTING DRIVE WIDTH IN 10'.

THOMPSON DRIVE - 2

LEFT E/P RETURN DATA
Δ = 99° 25' 18"
R = 25.00'
T = 29.49'
L = 43.38'
R.P. STA. 17+43.71, 41' LT., S.R. 243
P.C. STA. 17+43.71, 19' LT., S.R. 243
P.T. STA. 10+59.20, 6' LT., THOMPSON DRIVE

RIGHT E/P RETURN DATA
Δ = 81° 53' 36"
R = 25.00'
T = 21.69'
L = 35.73'
R.P. STA. 10+68.81, 31' RT., THOMPSON DRIVE
P.C. STA. 10+68.81, 6' RT., THOMPSON DRIVE
P.T. STA. 16+80.43, 19' LT., S.R. 243

FOR STORM SEWER PROFILE, SEE SHEET 564



REF NO.	STATION FROM	STATION TO	SIDE

TOTALS CARRIED TO GENERAL SUMMARY

CALCULATED SLP
CHECKED ALB

HORIZONTAL SCALE IN FEET
0 10 20 40

PLAN AND PROFILE
THOMPSON DRIVE

LAW-7-2.17

555
633

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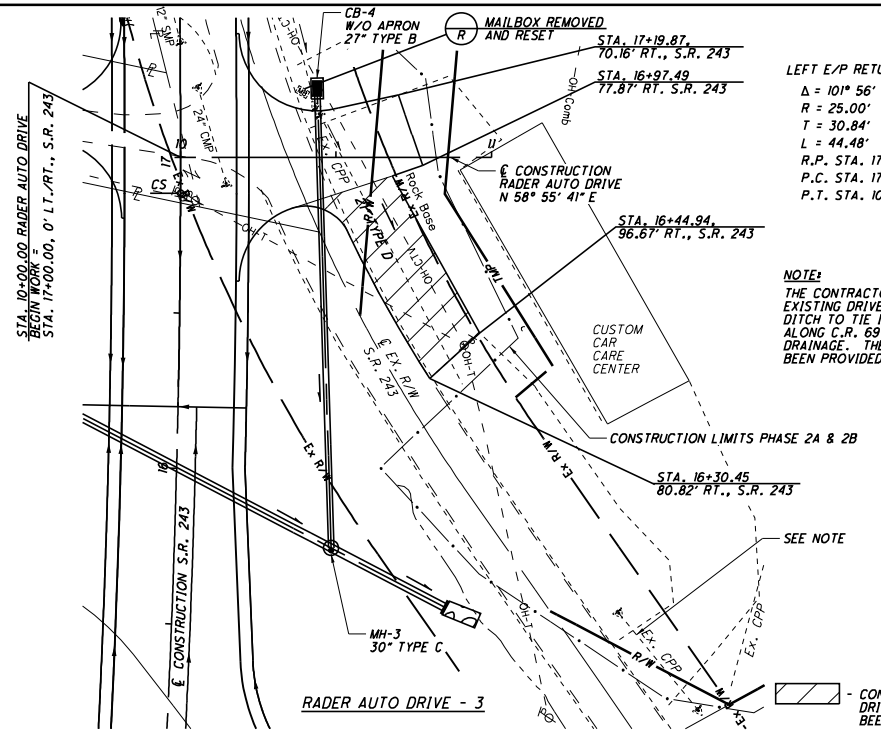


LEFT E/P RETURN DATA

Δ = 101° 56' 10"
R = 25.00'
T = 30.84'
L = 44.48'
R.P. STA. 17+39.68, 44' RT., S.R. 243
P.C. STA. 17+39.68, 19' RT., S.R. 243
P.T. STA. 10+49.19, 15.58' LT., THOMPSON DRIVE

RIGHT E/P RETURN DATA (CURVE NO. 1)

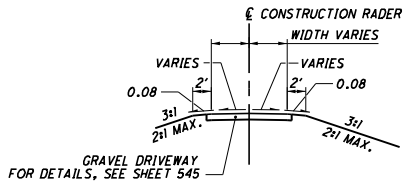
Δ 69° 27' 03"
R = 25.00'
T = 17.33'
L = 30.30'
R.P. STA. 16+60.44, 44' RT., S.R. 243
P.C. STA. 16+60.44, 19' RT., S.R. 243
P.C.C. STA. 10+35.26, 16.50' RT., THOMPSON DRIVE

RIGHT E/P RETURN DATA (CURVE NO. 1)

Δ = 83° 54' 43"
R = 15.00'
T = 13.49'
L = 21.97'
R.P. STA. 10+40.38, 30.60' RT., THOMPSON DRIVE
P.C.C. STA. 10+35.26, 16.50' RT., THOMPSON DRIVE
P.T. STA. 10+53.86, 24.01' RT., THOMPSON DRIVE

NOTE:

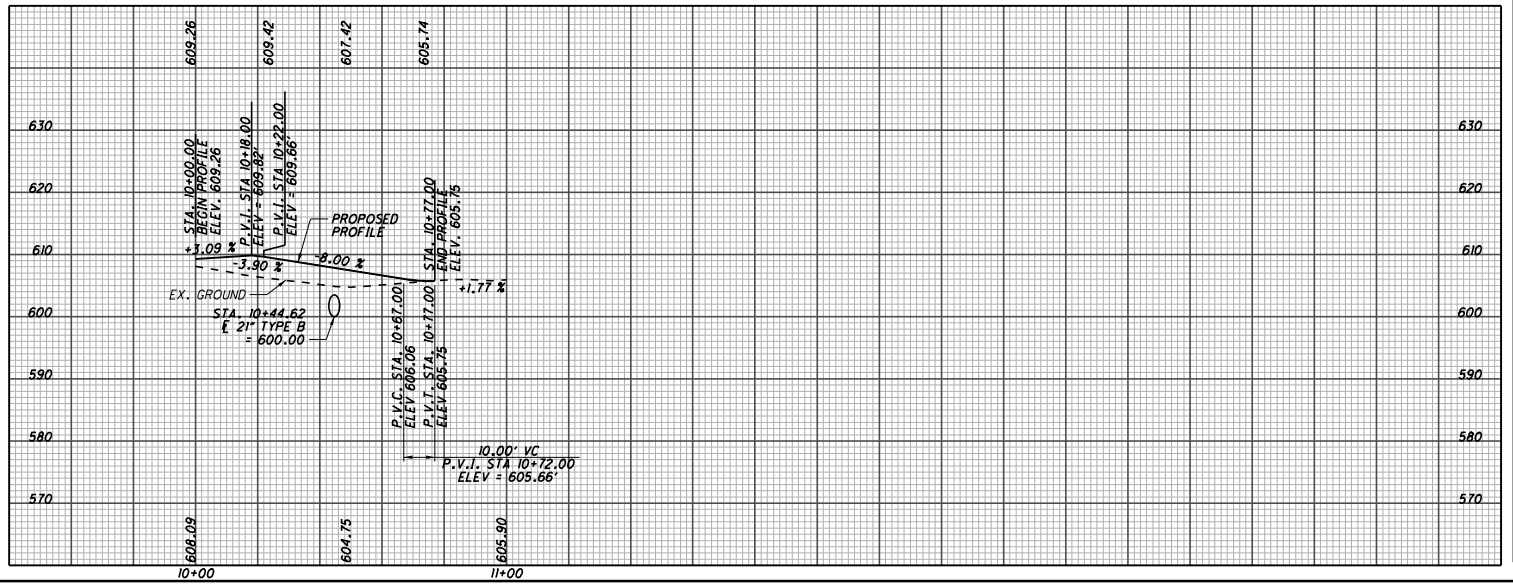
THE CONTRACTOR SHALL REMOVE THE EXISTING DRIVE AND DRIVE PIPE AND REGRADE DITCH TO TIE INTO THE PROPOSED DITCH ALONG C.R. 69 TO PROVIDE POSITIVE DRAINAGE. THE FOLLOWING QUANTITIES HAVE BEEN PROVIDED TO COMPLETE THIS WORK.



TYPICAL SECTION - RADER AUTO DRIVE
NOT TO SCALE

- CONTRACTOR SHALL REGRADE EXISTING DRIVE. THE FOLLOWING QUANTITIES HAVE BEEN ADDED TO COMPLETE THE WORK.

FOR STORM SEWER PROFILES, SEE SHEETS 564-565



REF NO.	STATION FROM	STATION TO	SIDE

TOTALS CARRIED TO GENERAL SUMMARY

CALCULATED SLP
CHECKED ALB

HORIZONTAL SCALE IN FEET
0 10 20 40

PLAN AND PROFILE
RADER AUTO DRIVE

LAW-7-2.17

556
633

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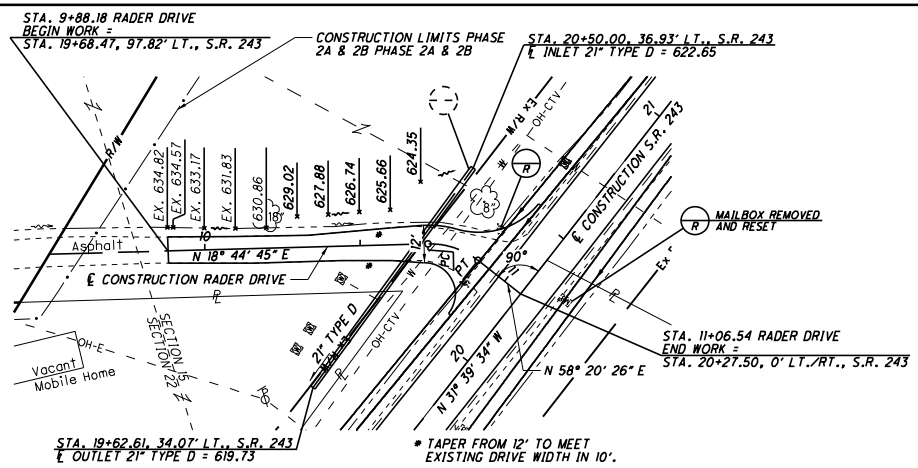
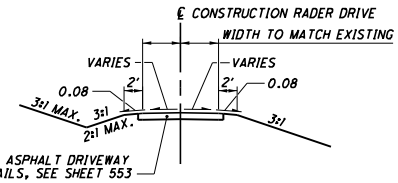




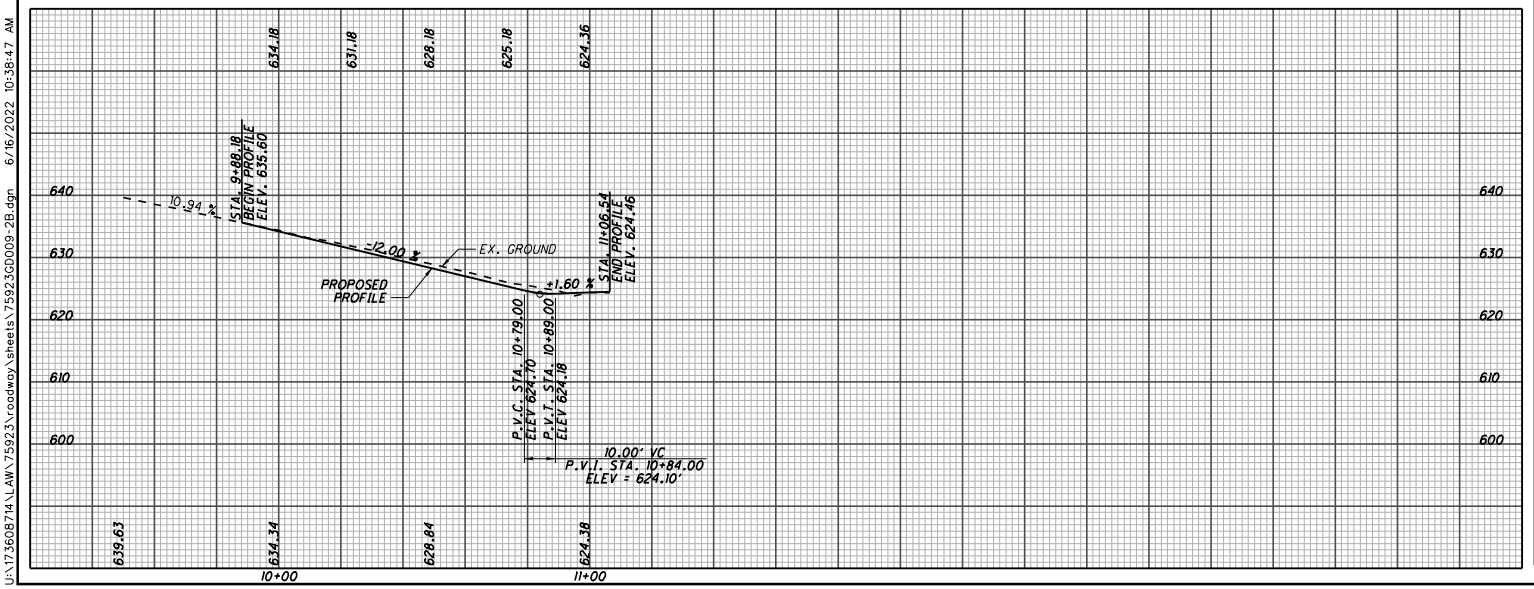
TYPICAL SECTION - RADER DRIVE
NOT TO SCALE

RADER DRIVE - 4

CURVE DATA
RADER DRIVE
P.I. STA. 10+80.82
Δ = 39° 35' 40" (RT)
Dc = 229° 10' 59"
R = 25.00'
T = 9.00'
L = 17.28'
E = 1.57'
e_{max} = NA
PC STA. 10+71.82
PT STA. 10+89.09

LEFT E/P RETURN DATA
Δ = 66° 44' 56"
R = 25.00'
T = 16.47'
L = 29.12'
R.P. STA. 10+79.57, 31' LT., RADER DRIVE
P.C. STA. 20+53.87, 13.27' LT., S.R. 243
P.T. STA. 10+79.57, 6' LT., RADER DRIVE

RIGHT E/P RETURN DATA
Δ = 131° 01' 25"
R = 10.00'
T = 21.95'
L = 22.87'
R.P. STA. 10+70.23, 16' RT., RADER DRIVE
P.C. STA. 10+70.23, 6' RT., RADER DRIVE
P.T. STA. 20+08.18, 14.41' LT., S.R. 243



REF NO.	STATION FROM	STATION TO	SIDE

TOTALS CARRIED TO GENERAL SUMMARY

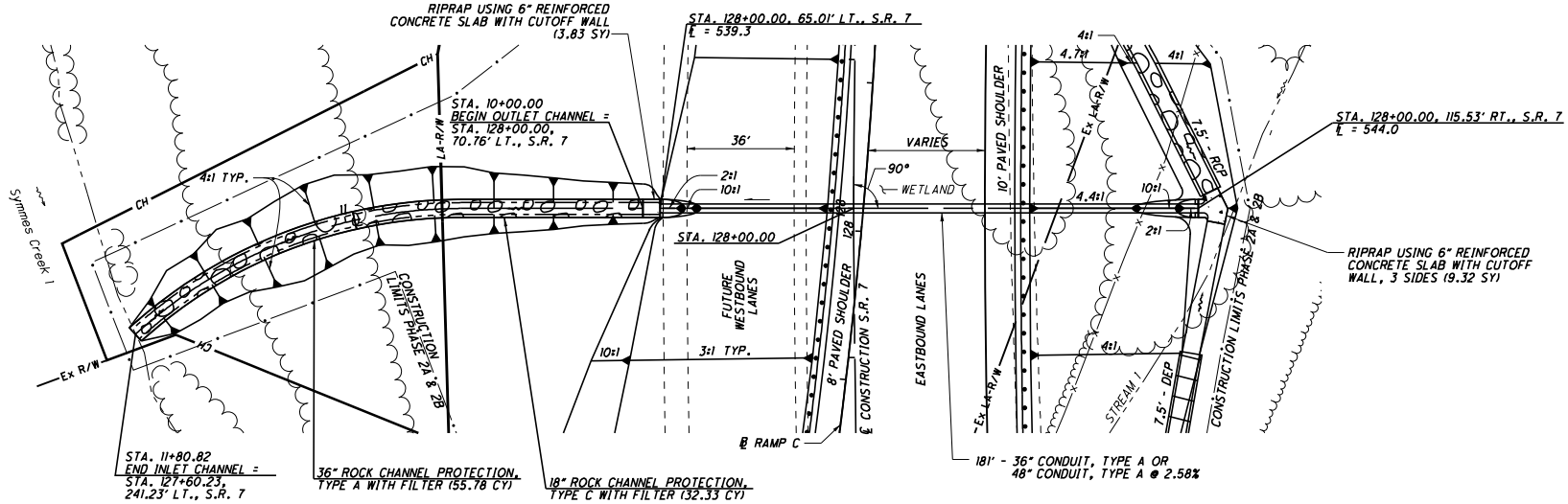
CALCULATED SLP
CHECKED ALB

HORIZONTAL SCALE IN FEET
0 10 20 40

PLAN AND PROFILE
RADER DRIVE

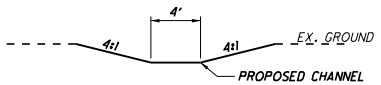
LAW-7-2.17

557
633



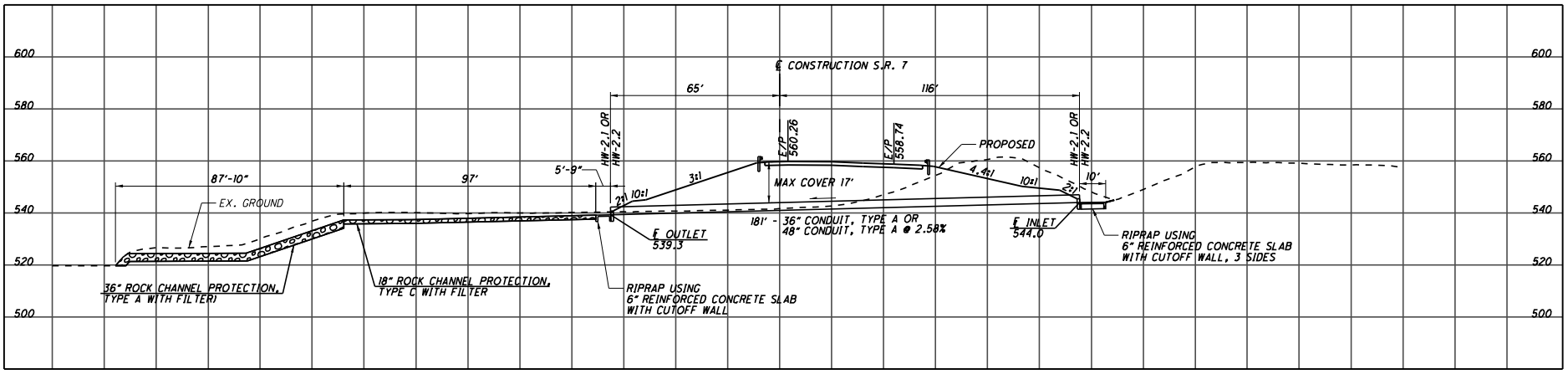
ESTIMATE QUANTITIES			
ITEM	TOTAL	UNIT	DESCRIPTION

QUANTITIES CARRIED TO GENERAL SUMMARY, SHEETS



CHANNEL TYPICAL SECTION

HYDRAULIC DATA	
DRAINAGE AREA	= 15 AC.
Q50	= 56 CFS
Q100	= 64 CFS
50V	= 7.92 FPS
100V	= 9.05 FPS
50 HW	= 548.5
100 HW	= 549.2
OHWMi	= 546.5
OHWMo	= 517.3
pH	= 7.6
DESIGN SERVICE LIFE	= 75 YEARS
ABRASION LEVEL	=
CFN	=



HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED SLP
CHECKED ALB

CULVERT DETAIL
S.R. 7 STA. 128+00.00

LAW-7-2.17

566
633

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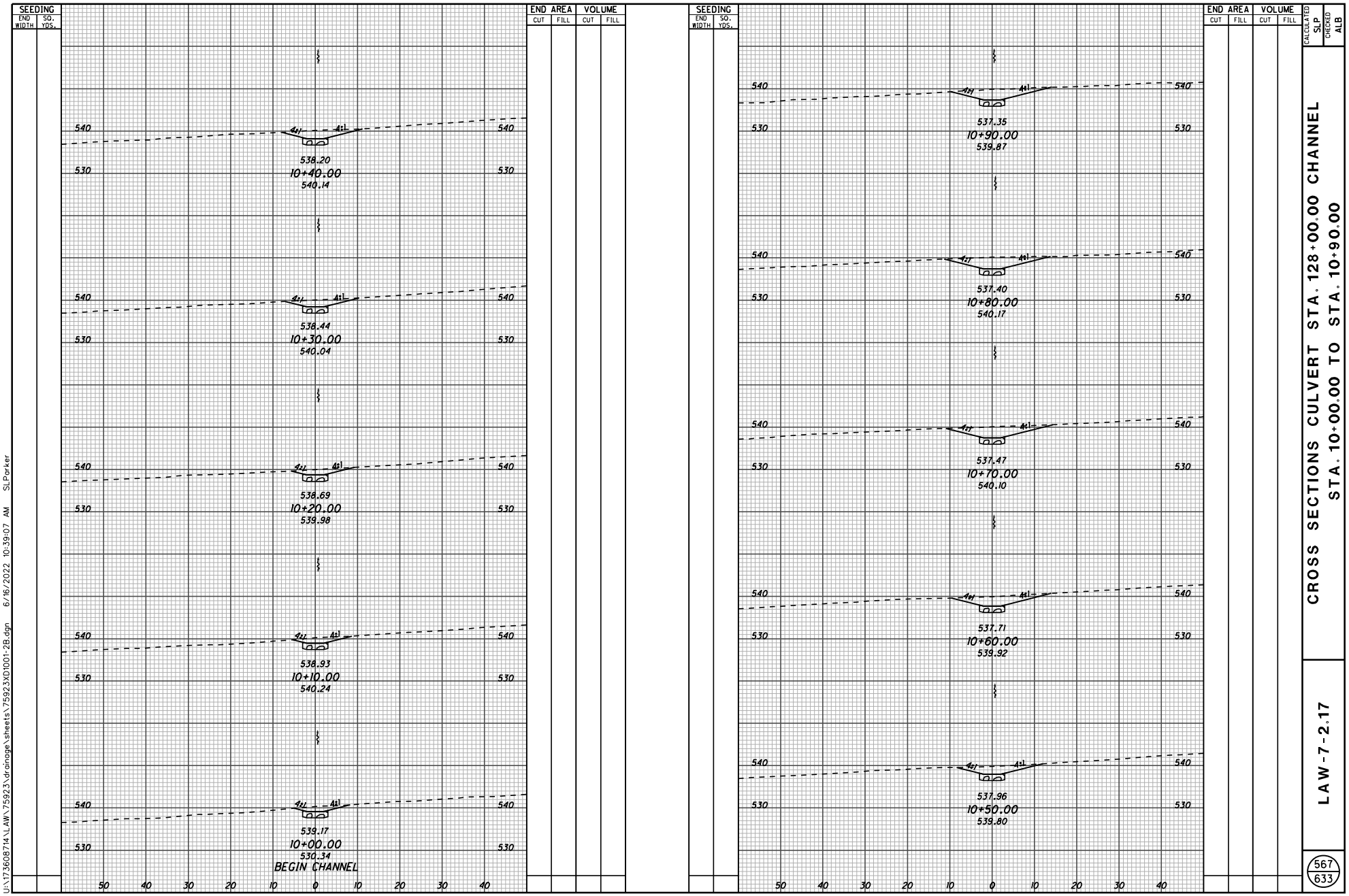

CROSS SECTIONS CULVERT STA. 128+00.00 CHANNEL STA. 10+00.00 TO STA. 10+90.00

CALCULATED SLP

CHECKED ALB

LAW-7-2.17

567
633

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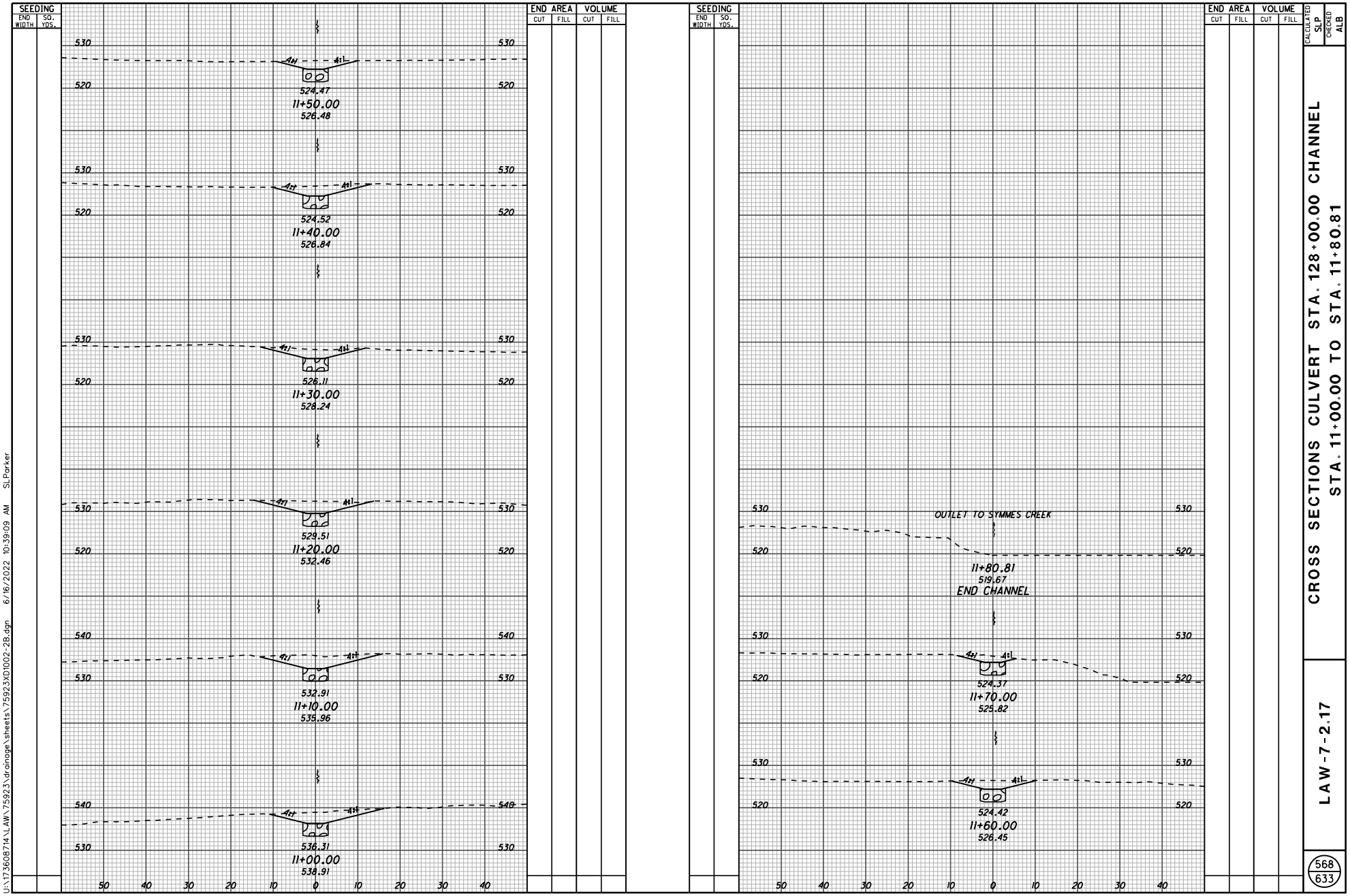

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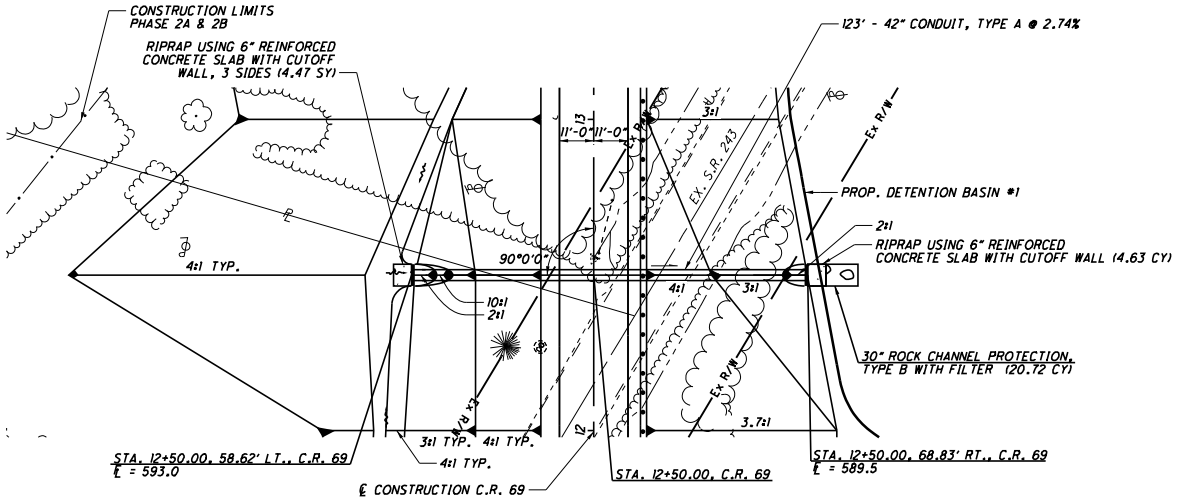

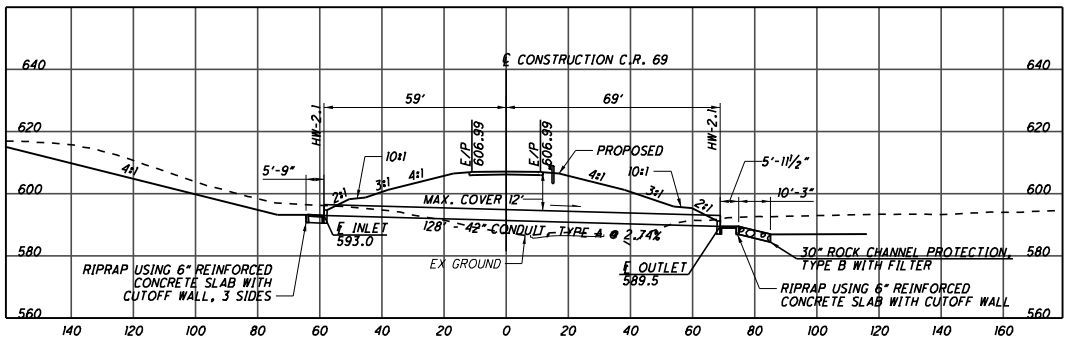

HYDRAULIC DATA	
DRAINAGE AREA	= 41 AC.
Q25	= 84 CFS
Q100	= 102 CFS
25V	= 10.8 FPS
100V	= 10.6 FPS
25 HW	= 599.0
100 HW	= 600.8
OHWMi	= 586.5
OHWMo	= 585.1
pH	= 7.6
DESIGN SERVICE LIFE	= 75 YEARS
ABRASION LEVEL	=
CFN	=

ESTIMATE QUANTITIES

ITEM	TOTAL	UNIT	DESCRIPTION

QUANTITIES CARRIED TO GENERAL SUMMARY, SHEETS

CULVERT DETAIL
C.R. 69 STA. 12+50.00

LAW-7-2.17

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED SLP
CHECKED ALB

569
633

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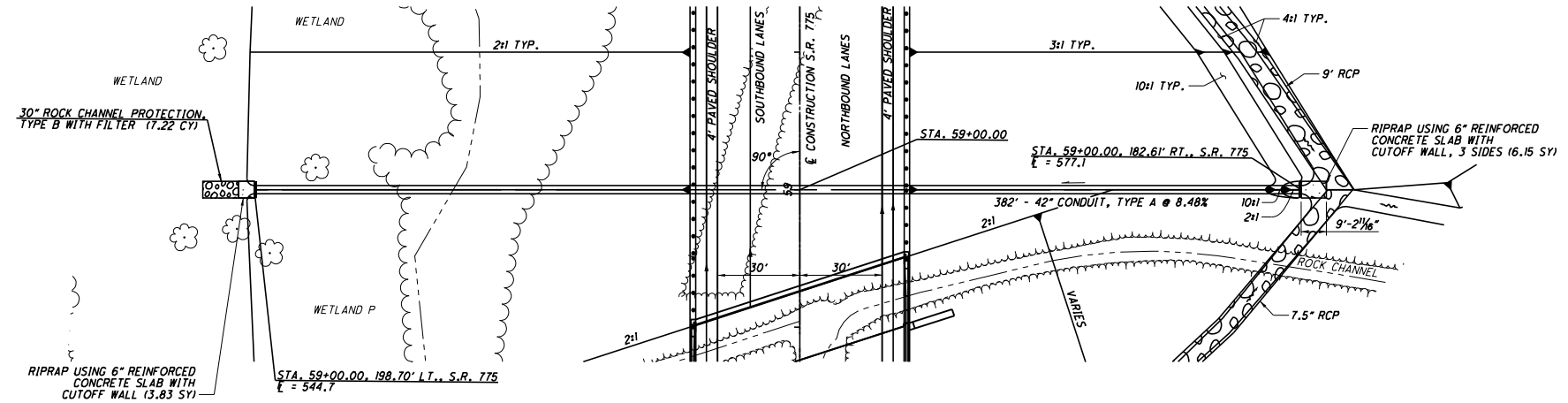
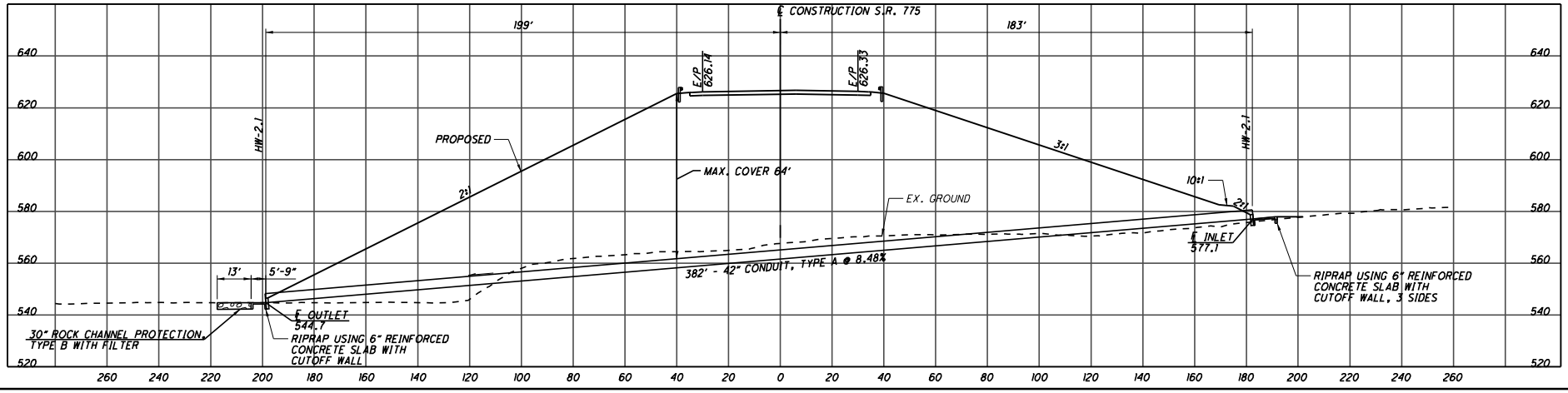


ESTIMATE QUANTITIES			
ITEM	TOTAL	UNIT	DESCRIPTION

QUANTITIES CARRIED TO GENERAL SUMMARY, SHEETS

HYDRAULIC DATA	
DRAINAGE AREA	= 8 AC.
Q50	= 22 CFS
Q100	= 23 CFS
50V	= 11.7 FPS
100V	= 11.9 FPS
50 HW	= 579.4
100 HW	= 579.4
OHWMi	= 578.70
OHWMo	= 545.51
pH	= 7.6
DESIGN SERVICE LIFE	= 75 YEARS
ABRASION LEVEL	=
CFN	=



HORIZONTAL SCALE IN FEET: 0 10 20 40

CALCULATED SLP CHECKED ALB

CULVERT DETAIL
S.R. 775 STA. 59+00.00

LAW-7-2.17

570
633

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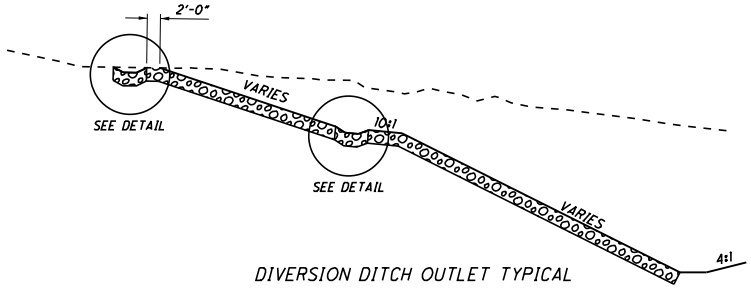
DIVERSION DITCH

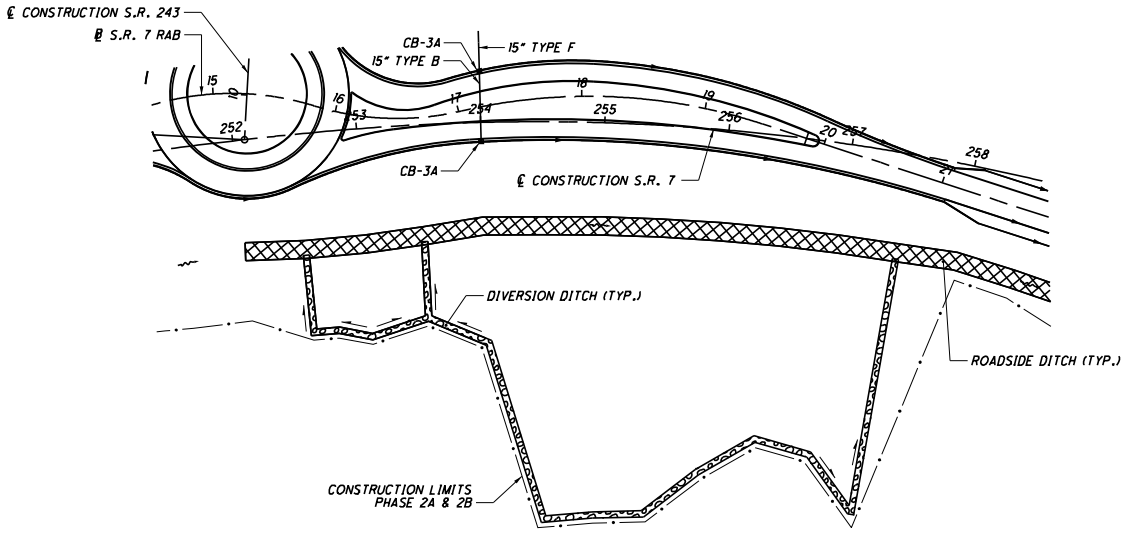
THE CONTRACTOR IS TO PROVIDE A DIVERSION DITCH AS DETAILED ON THIS SHEET AND AS SHOWN IN THE CROSS SECTIONS. THE FOLLOWING QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY FOR THE PLACEMENT OF THE DIVERSION DITCH.

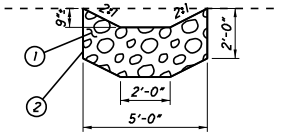
ITEM 203 - EXCAVATION (FOR OUTLET CHANNELS ONLY)	*XX CU YD*
ITEM 204 - GEOTEXTILE FABRIC	*XX SQ YD*
ITEM 601 - ROCK CHANNEL PROTECTION, TYPE D WITH FILTER	*XX CU YD*

EARTHWORK QUANTITIES FOR THE DIVERSION DITCHES HAVE BEEN INCLUDED IN THE CROSS SECTIONS.



DIVERSION DITCH OUTLET TYPICAL
SEE CROSS SECTIONS FOR ACTUAL CUT SLOPES, BENCHING SCHEME AND DIVERSION DITCH LOCATIONS





DIVERSION DETAIL TYPICAL

(1) - ITEM 601 - ROCK CHANNEL PROTECTION, TYPE D WITH FILTER
(2) - ITEM 204 - GEOTEXTILE FABRIC

HORIZONTAL SCALE IN FEET: 0, 25, 50, 100

CALCULATED: SLP
CHECKED: ALB

DRAINAGE DETAILS
DIVERSION DITCH LOCATION AND DETAILS

LAW-7-2.17

571
633

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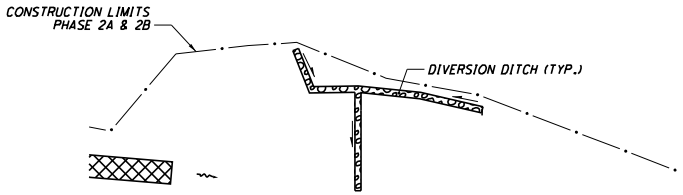

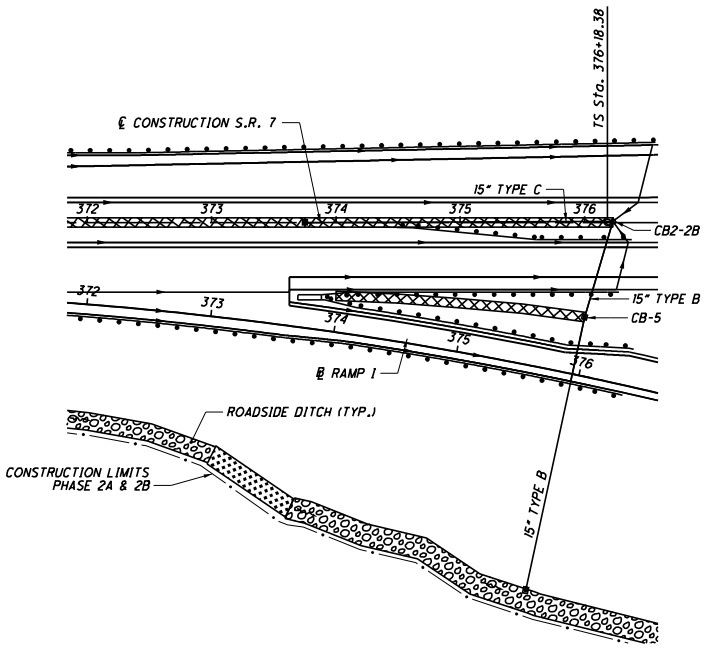

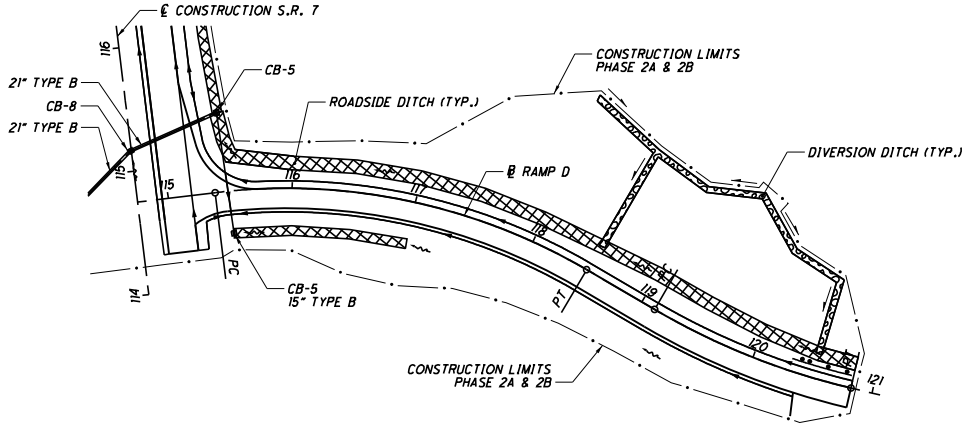

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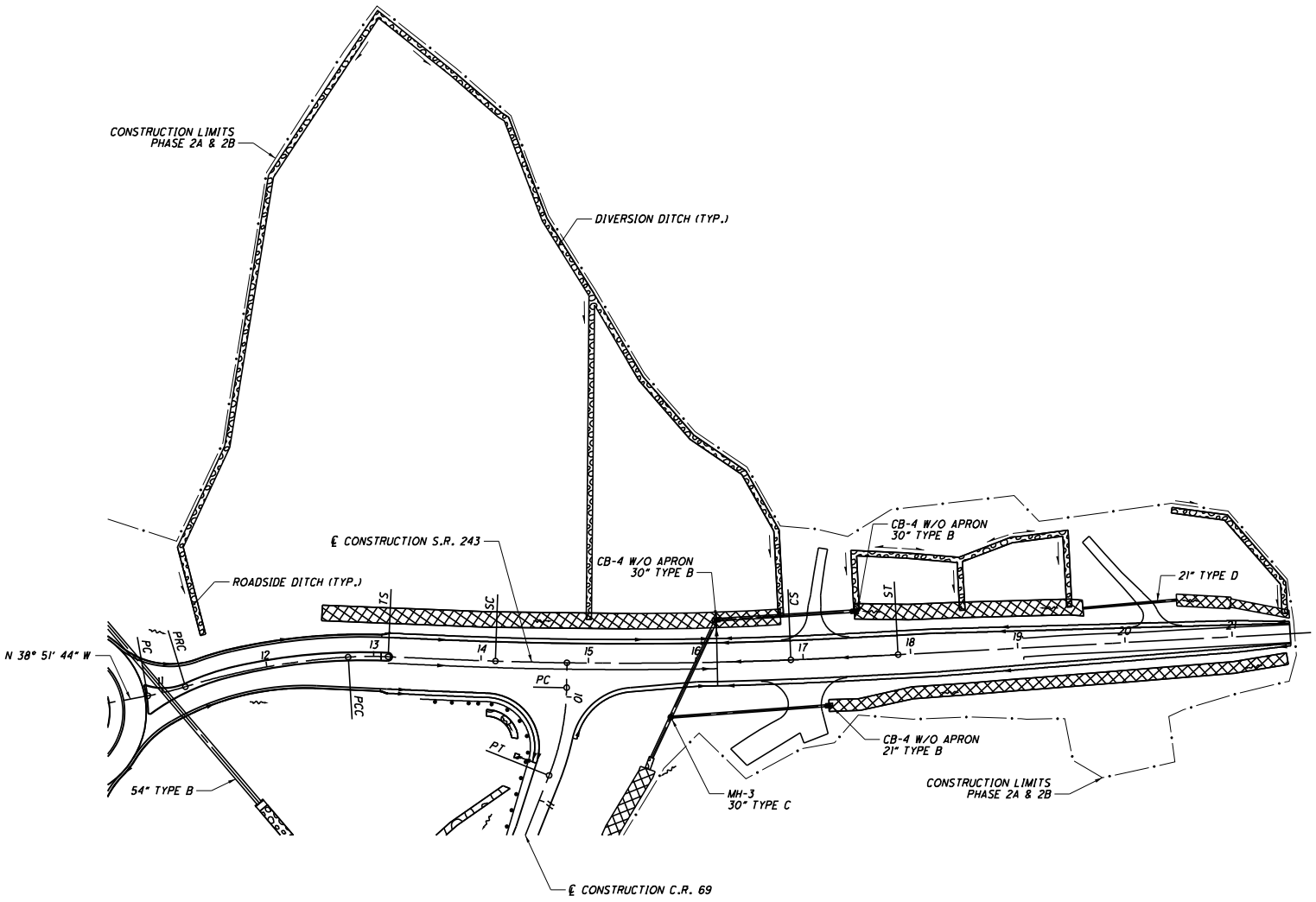
HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED SLP
CHECKED ALB

DRAINAGE DETAILS
DIVERSION DITCH LOCATION AND DETAILS

LAW-7-2.17

572
633



DRAINAGE DETAILS

DIVERSION DITCH LOCATION AND DETAILS

CALCULATED SLP

CHECKED ALB

HORIZONTAL SCALE IN FEET 0 25 50 100

LAW-7-2.17

573
633

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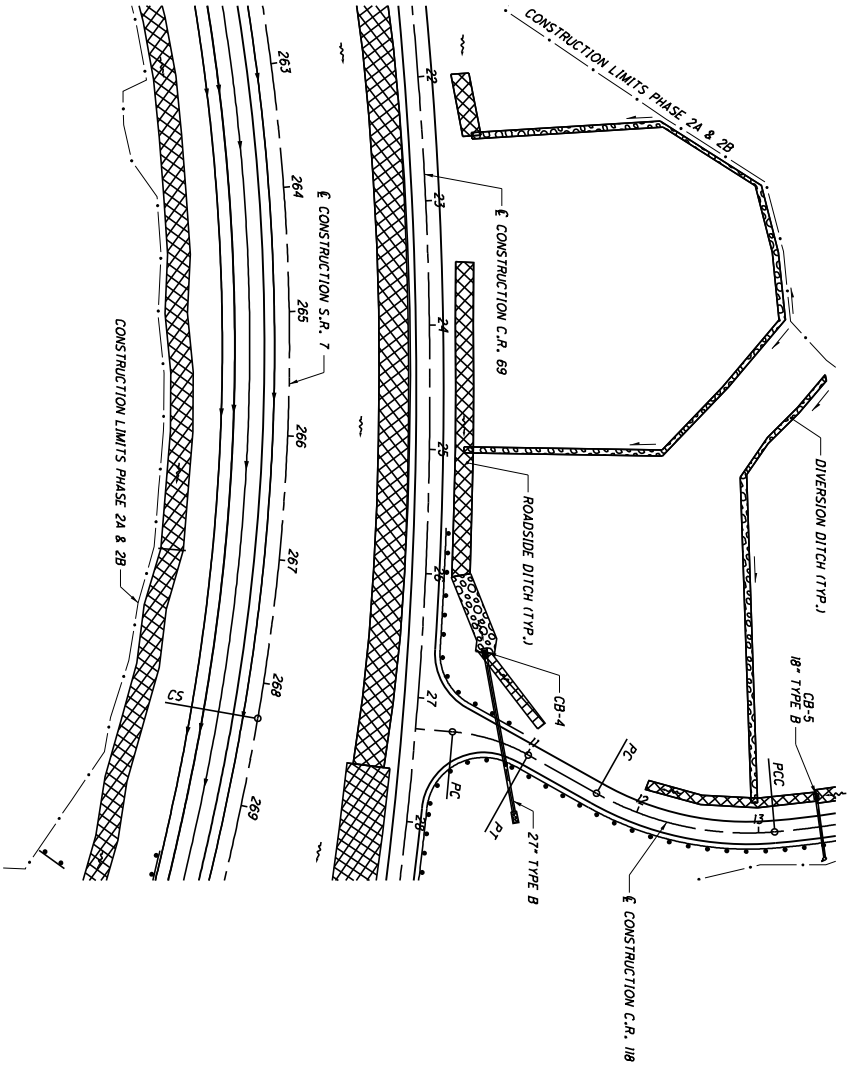
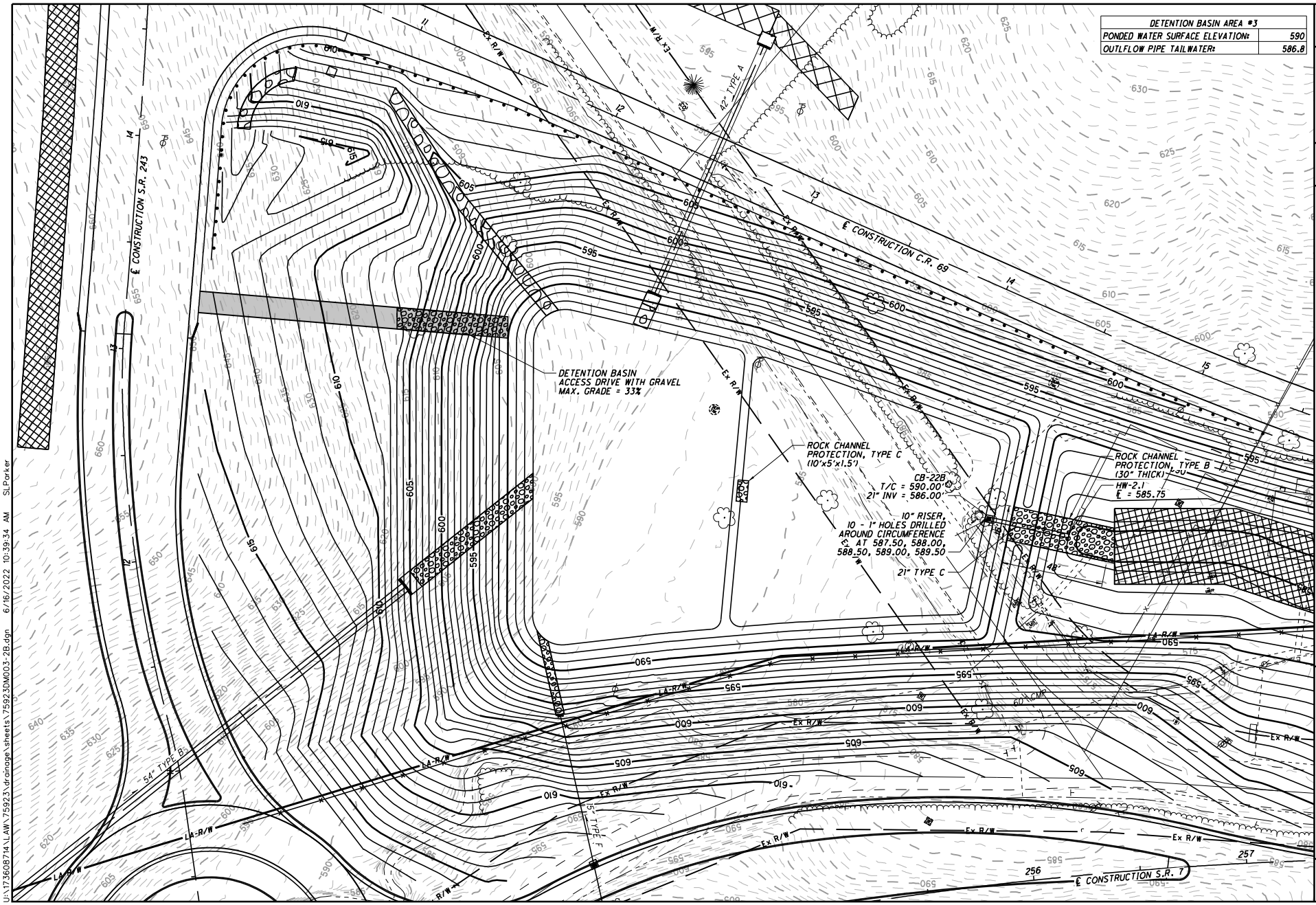


574 633	LAW-7-2.17	DRAINAGE DETAILS DIVERSION DITCH LOCATION AND DETAILS	CALCULATED SLP CHECKED ALB	0 50 25 100 HORIZONTAL SCALE IN FEET



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CALCULATED EDA
CHECKED ALB

HORIZONTAL SCALE IN FEET
0 25 50 100

DRAINAGE DETAILS
DETENTION BASIN #2

LAW-7-2.17

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633

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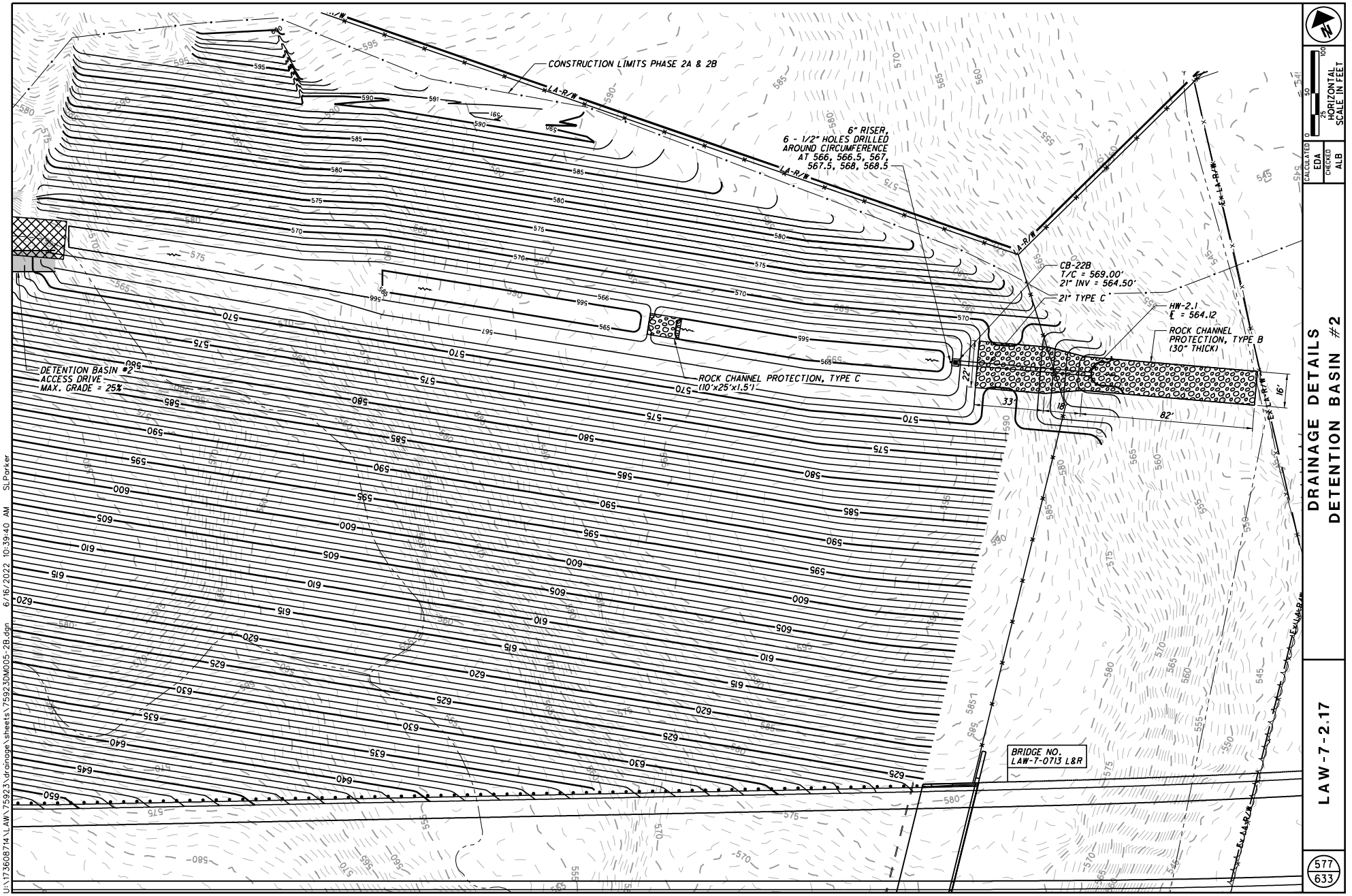

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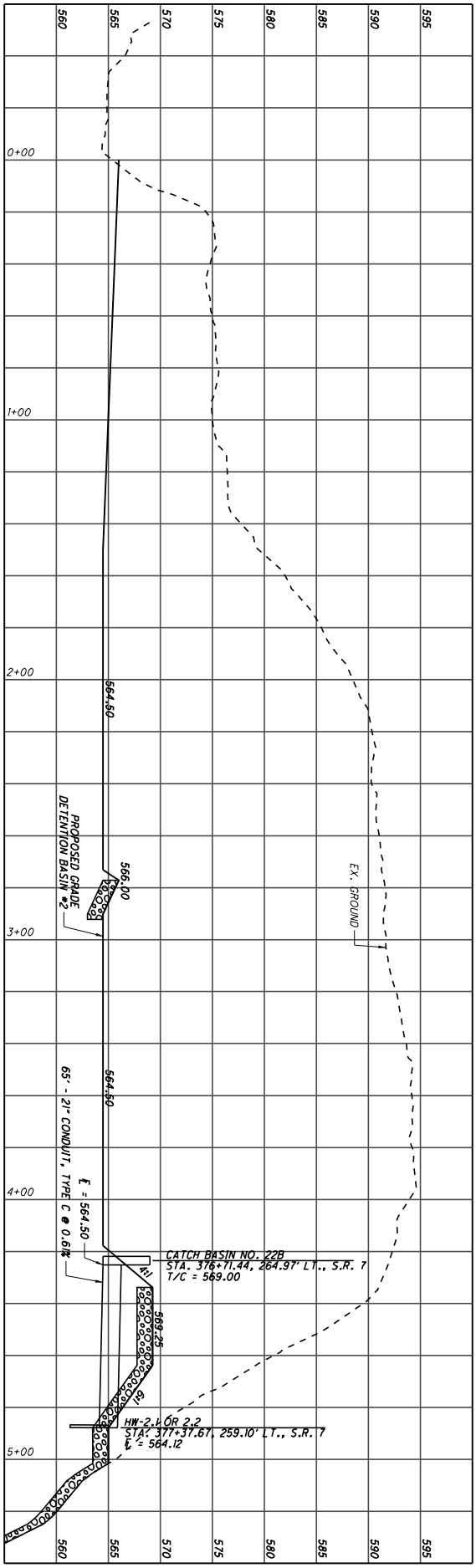
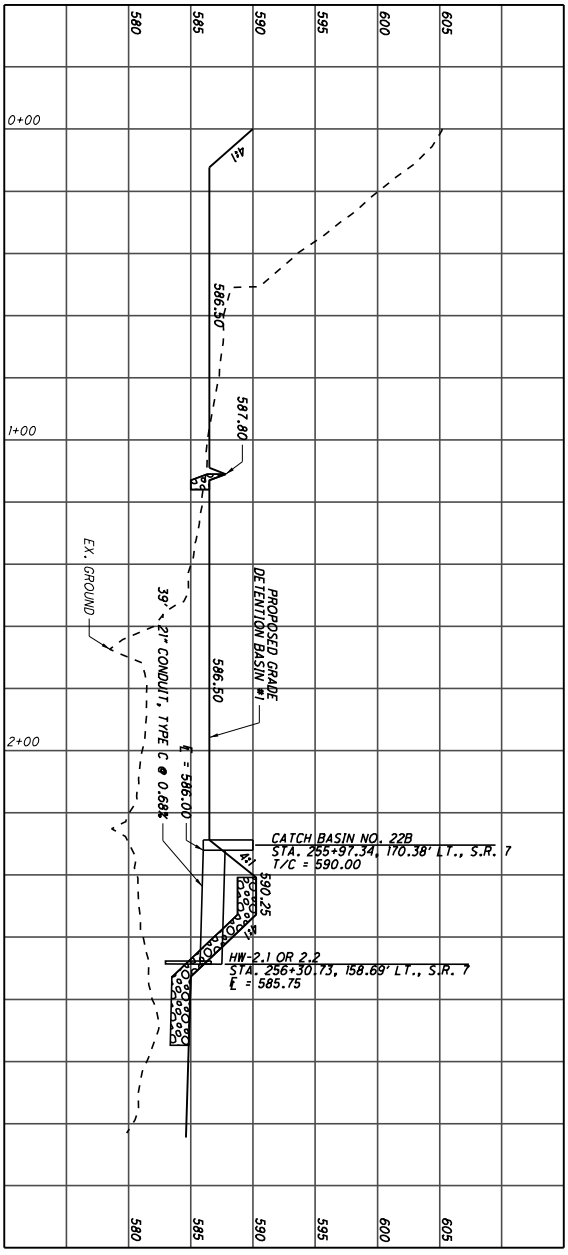




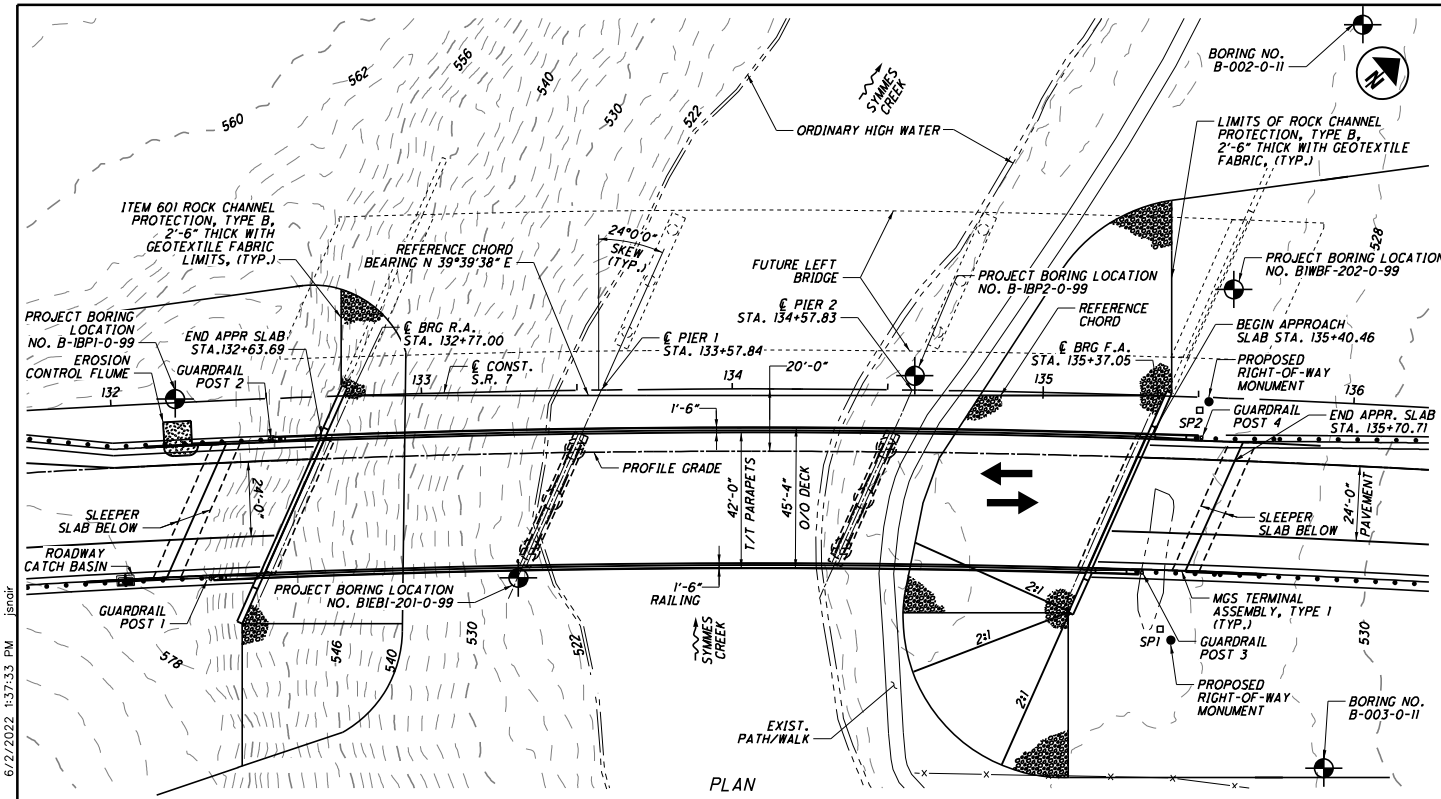
578
633

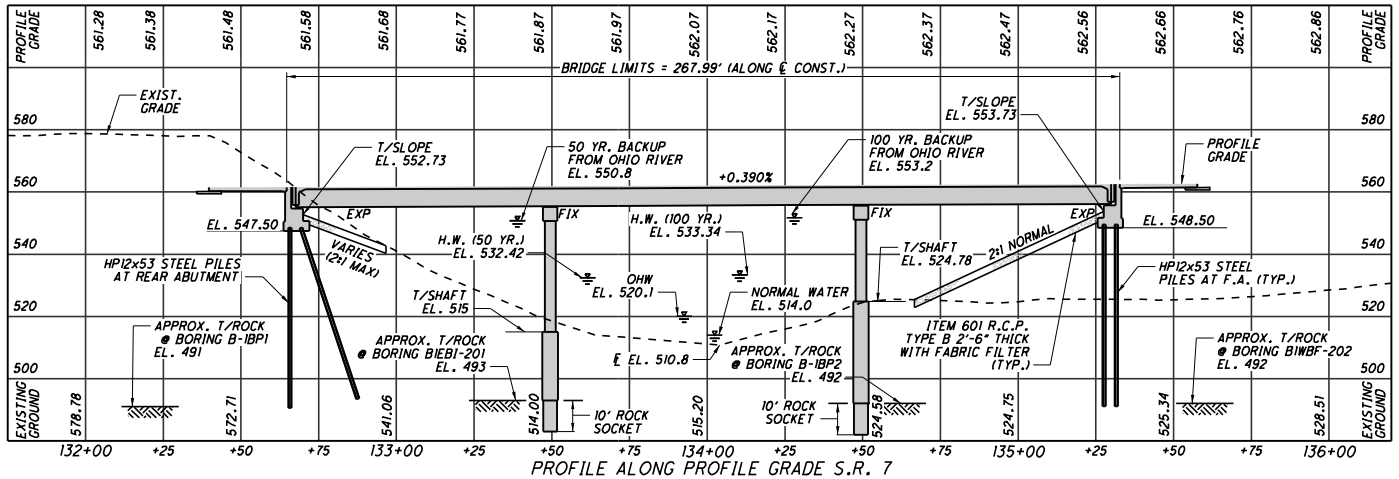
LAW-7-2.17

DETENTION BASIN PROFILES

CALCULATED EDA
CHECKED ALB

0 20 40
SCALE IN FEET





NOTES

1. EARTHWORK LIMITS SHOWN ARE APPROXIMATE. ACTUAL SLOPES SHALL CONFORM TO PLAN CROSS SECTIONS.
2. FOR PRIMARY PROJECT CONTROL INFORMATION TABLE SEE ROADWAY GENERAL NOTES.
3. BRIDGE DECK DRAINAGE IS CONTROLLED BY ROADWAY CURBS EXTENDING OFF THE EAST END OF THE BRIDGE TO ROADWAY CATCH BASINS.
4. FOR LIST OF ABBREVIATIONS SEE SHEET 4/25.

DESIGN TRAFFIC:
2015 ADT = 10,300 2015 ADTT = 1,133
2035 ADT = 21,400 2035 ADTT = 2,354
DIRECTIONAL DISTRIBUTION = 69/31

LEGEND

- PROJECT BORING LOCATION
- SETTLEMENT PLATFORM
- PROPOSED RIGHT-OF-WAY MONUMENT

HYDRAULIC DATA

DRAINAGE AREA = 351.7 SQ. MILES
Q (50) = 17,000 CFS V (50) = 8.67 FT/S EL. (50) = 532.42
Q (100) = 19,100 CFS V (100) = 9.06 FT/S EL. (100) = 533.34
STRUCTURE CLEARS THE 50 YEAR DESIGN HW BY 23.2 FEET.

ESTIMATED PILE LENGTHS

REAR ABUTMENT HP12x53 = 60 FT.
FORWARD ABUTMENT HP12x53 = 60 FT.

S.R. 7 CURVE NO. 1 DATA		
P.I. STA. 138+60.99	L = 3,508.44'	Ts = 2,076.38'
Δ = 53° 33' 53" (RT)	E = 425.60'	LT = 116.67'
Dc = 1° 27' 15"	TS STA. = 117+84.61	ST = 58.34'
R = 3,940.00'	SC STA. = 119+59.61	e_{max} = 4.00%
T = 1,880.13'	θs = 1° 16' 21"	CS STA. 154+68.05
	Ls = 175.00'	ST STA. 156+43.05

POST NUMBER	FIRST GUARDRAIL POST	STATION
1	EASTBOUND R.A.	132+28.76
2	WESTBOUND R.A.	132+50.63
3	EASTBOUND F.A.	135+33.61
4	WESTBOUND F.A.	135+51.46

PROPOSED STRUCTURE

TYPE: 3-SPAN PRESTRESSED CONCRETE I-BEAMS (60" MODIFIED TYPE 4) COMPOSITE WITH REINFORCED CONCRETE DECK ON CAP & COLUMN PIERS ON DRILLED SHAFTS & STUB TYPE ABUTMENTS ON STEEL HP PILES

SPANS: 78.93', 97.83', 78.91' C/C BRGS (MEASURED ALONG REF. CHORD)

ROADWAY: 42'-0" TOE/TOE PARAPETS

LOADING: HL-93 AND 60 LBS/FT² FUTURE WEARING SURFACE

WEARING SURFACE: 1" MONOLITHIC WEARING SURFACE

SKEW: 24°00'00" L.F. FROM PERPENDICULAR TO REF. CHORD

APPROACH SLABS: AS-1-15 AND APPLICABLE DETAILS FROM AS-2-15, 30'-0" LONG

ALIGNMENT: 01°27'15" CURVE RIGHT

SUPERELEVATION: 0.0400 FT. PER FT.

COORDINATES: LATITUDE 38° 26' 20.82" N
LONGITUDE 82° 27' 16.08" W

DESIGN AGENCY: Stantec, 1500 Lake Shore Dr., Columbus, OH 43204, (614) 486-4383
DATE: 11/3/2017
REVIEWED: MRS
DRAWN: JWS
DESIGNED: BSM
CHECKED: EER
REVISED:
STRUCTURE FILE NUMBER: 4400070
LAWRENCE COUNTY
STA. 132+63.69
STA. 135+40.46
SITE PLAN
BRIDGE NO. LAW-7-0251
S.R. 7 OVER SYMMES CREEK
LAW-7-2.17
PID No. 75923
1 / 25

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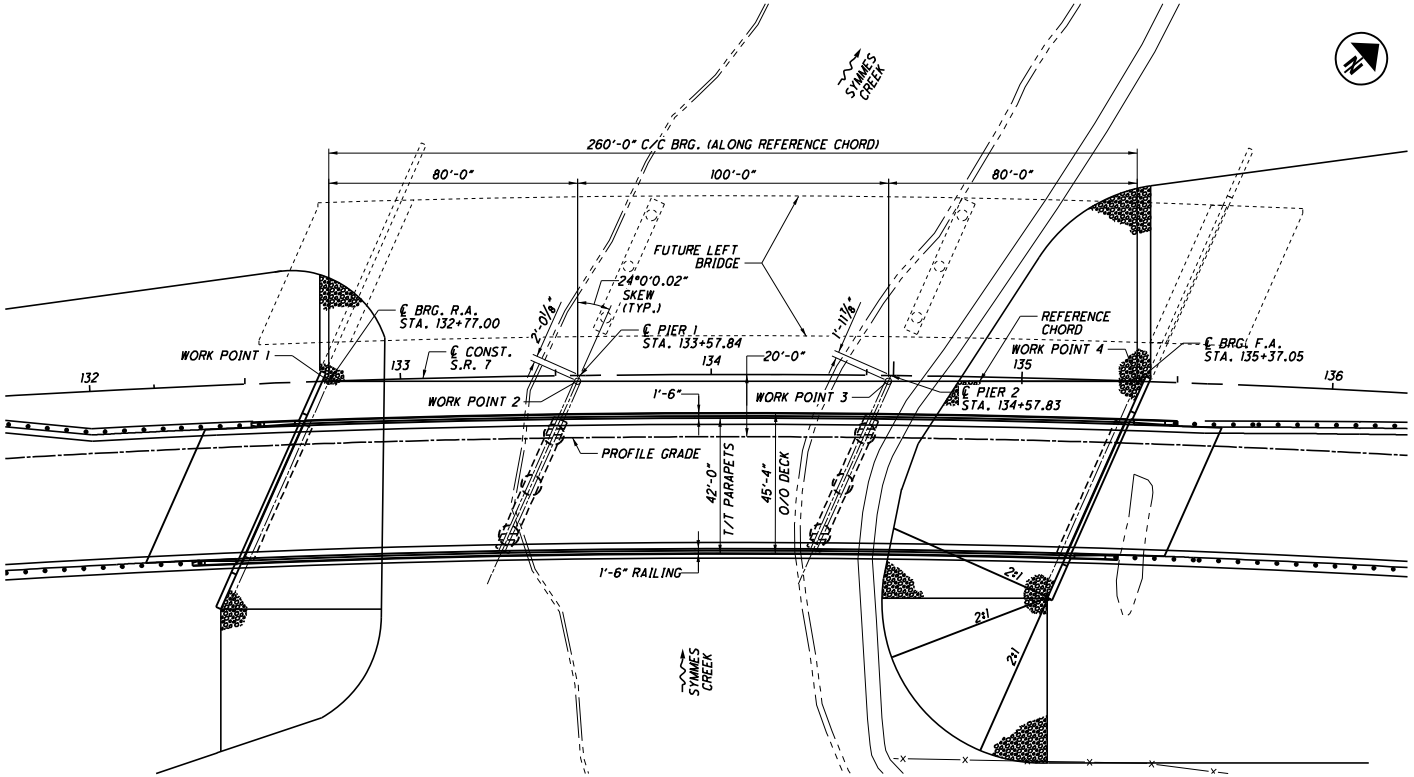

PLAN

S.R. 7 CURVE NO. 1

P.I. STA. 138+60.99
Δ = 53° 33' 53" (RT)
Dc = 1° 27' 15"
R = 3,940.00'
T = 1,880.13'
L = 3,508.44'
E = 425.60'
e_{max} = 4.00%
SC STA. 119+59.61
CS STA. 154+68.05

DESIGN AGENCY: Stantec, 1500 Lake Shore Dr., Columbus, OH 43204, (614) 486-4383

DESIGNED	DRAWN	REVIEWED	DATE
BSM	JWS	MRS	11/3/2017
CHECKED	REVISED	STRUCTURE FILE NUMBER	
EER		4400070	

GENERAL PLAN
BRIDGE NO. LAW-7-0251
S.R. 7 OVER SYMMES CREEK

LAW-7-2.17
PID No. 75923

2 / 25

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REFER TO THE FOLLOWING STANDARD BRIDGE DRAWINGS:

AS-1-15	REVISED	07-17-15
AS-2-15	REVISED	01-18-19
DM-4.1	REVISED	01-15-16
EXJ-6-17	DATED	01-15-21
PSID-1-13	REVISED	01-15-21
SBR-1-20	REVISED	07-17-20

AND TO THE FOLLOWING SUPPLEMENTAL SPECIFICATION:

800	DATED	07-16-21
832	DATED	10-19-18

DESIGN SPECIFICATIONS:
THIS STRUCTURE CONFORMS TO THE 9TH EDITION OF "LRFD BRIDGE DESIGN SPECIFICATIONS" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 2000 AND THE ODOT BRIDGE DESIGN MANUAL, 2020.

DESIGN LOADING:
HL-93
FUTURE WEARING SURFACE (FWS) OF 0.060 KIPS/FT²

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

DESIGN DATA:

CONCRETE CLASS QC2	- COMPRESSIVE STRENGTH 4.5 KSI (SUPERSTRUCTURE)
CONCRETE CLASS QC1	- COMPRESSIVE STRENGTH 4.0 KSI (SUBSTRUCTURE)
CONCRETE CLASS QC5	- WITH 1-IN MAX. AGGREGATE SIZE - COMPRESSIVE STRENGTH 4.5 KSI (DRILLED SHAFT)
REINFORCING STEEL	- MINIMUM YIELD STRENGTH 60 KSI

STEEL H-PILES - A572 - YIELD STRENGTH 50 KSI

CONCRETE FOR PRESTRESSED BEAMS:
COMPRESSIVE STRENGTH (FINAL) = 7 KSI
COMPRESSIVE STRENGTH (RELEASE) = 6 KSI
WELDED WIRE FABRIC - YIELD STRENGTH = 70 KSI

PRESTRESSING STRAND:
AREA = 0.217 SQ. IN.
ULTIMATE STRENGTH = 270 K.S.I.
INITIAL STRESS = 202.5 K.S.I.
(LOW RELAXATION STRANDS)

DECK PROTECTION METHOD:
EPOXY COATED REINFORCING STEEL
2-1/2" CONCRETE COVER

MONOLITHIC WEARING SURFACE:
MONOLITHIC WEARING SURFACE IS ASSUMED, FOR DESIGN PURPOSES, TO BE 1 INCH THICK.

PILE DRIVING CONSTRAINTS:
PRIOR TO DRIVING PILES, CONSTRUCT THE SPILL THROUGH SLOPES AND THE BRIDGE APPROACH EMBANKMENT BEHIND THE ABUTMENTS UP TO THE LEVEL OF THE SUBGRADE ELEVATION FOR A MINIMUM DISTANCE OF 200 FEET BEHIND EACH ABUTMENT (SEE FORWARD APPROACH EMBANKMENT CONSTRUCTION THIS SHEET). DO NOT BEGIN THE EXCAVATION FOR THE ABUTMENT FOOTINGS AND THE INSTALLATION OF THE ABUTMENT PILES UNTIL AFTER THE ABOVE REQUIRED EMBANKMENT HAS BEEN CONSTRUCTED.

PILES TO BEDROCK:
DRIVE PILES THROUGH THE EMBANKMENT REINFORCING. DRIVE PILES TO REFUSAL ON BEDROCK. THE DEPARTMENT WILL CONSIDER REFUSAL TO BE OBTAINED WHEN THE PILE PENETRATION IS AN INCH OR LESS AFTER RECIEVING AT LEAST 20 BLOWS FROM THE PILE HAMMER. SELECT THE HAMMER SIZE TO ACHIEVE THE REQUIRED DEPTH TO BEDROCK AND REFUSAL.

THE TOTAL FACTORED LOAD IS 210.6 KIPS PER PILE FOR THE REAR ABUTMENT PILES.

THE TOTAL FACTORED LOAD IS 206.5 KIPS PER PILE FOR THE FORWARD ABUTMENT PILES.

REAR ABUTMENT PILES:
20 PILES 65 FEET LONG, ORDER LENGTH

FORWARD ABUTMENT PILES:
28 PILES 65 FEET LONG, ORDER LENGTH

PILE SPLICES:
IN LIEU OF USING THE FULL PENETRATION BUTT WELDS SPECIFIED IN CMS 507.09 TO SPLICE STEEL H-PILES, THE CONTRACTOR MAY USE A MANUFACTURED H-PILE SPLICER. FURNISH SPLICERS FROM THE FOLLOWING MANUFACTURER:

ASSOCIATED PILE AND FITTING CORPORATION
8 WOOD HOLLOW RD. PLAZA 1
PARSIPPANY, NEW JERSEY 07054

INSTALL AND WELD THE SPLICER TO THE PILE SECTIONS IN ACCORDANCE WITH THE MANUFACTURER'S WRITTEN ASSEMBLY PROCEDURE SUPPLIED TO THE ENGINEER BEFORE THE WELDING IS PERFORMED.

DRILLED SHAFTS:
PIER 1
THE MAXIMUM FACTORED LOAD TO BE SUPPORTED BY EACH DRILLED SHAFT IS 1,061 KIPS AT THE PIERS. THIS LOAD IS RESISTED BY TIP RESISTANCE. ROCK SOCKET DEPTH PROVIDED FOR LATERAL SUPPORT.

PIER 2
THE MAXIMUM FACTORED LOAD TO BE SUPPORTED BY EACH DRILLED SHAFT IS 1,080 KIPS AT THE PIERS. THIS LOAD IS RESISTED BY TIP RESISTANCE. ROCK SOCKET DEPTH PROVIDED FOR LATERAL SUPPORT.

ITEM 623 - RIGHT-OF-WAY MONUMENT, AS PER PLAN:
IN ADDITION TO THE PROVISIONS OF ITEM 623, PLACE RIGHT-OF-WAY MONUMENTS WITHIN 5 FEET OF SETTLEMENT PLATFORMS AFTER REACHING FINISHED GRADE ELEVATIONS.

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

AN EIGHT WHEEL FINISHING MACHINE WITH A MAXIMUM WHEEL LOAD OF 2.44 KIPS.

A MINIMUM OUT-TO-OUT WHEEL SPACING AT EACH END OF THE MACHINE OF 103".

A MAXIMUM SPACING OF OVERHANG FALSEWORK BRACKETS OF 48 IN.

A MAXIMUM DISTANCE FROM THE CENTERLINE OF THE FASCIA GIRDER TO THE FACE OF THE SAFETY HANDRAIL OF 65".

SCOUR ELEVATIONS

THE DESIGN FLOOD AND CHECK FLOOD SCOUR ELEVATIONS ARE PROVIDED BELOW:

	REAR ABUTMENT	PIER 1	PIER 2	FORWARD ABUTMENT
DESIGN FLOOD				
CHECK FLOOD				

APPROACH EMBANKMENT CONSTRUCTION:

THE APPROACH EMBANKMENTS SHALL BE CONSTRUCTED AND THEN UNDERGO AN ESTIMATED WAITING PERIOD OF 180 DAYS PRIOR TO DRIVING PILES.

REFER TO SHEETS XX FOR DETAILS AND NOTES REGARDING REINFORCED SLOPE AND EMBANKMENT CONSTRUCTION.

DESIGN AGENCY: Stantec, 1500 Lake Shore Dr., Columbus, OH 43204, (614) 486-4383

DESIGNED	DRAWN	REVIEWED	DATE
BSM	JWS	MRS	11/3/2017
CHECKED	REVISED	STRUCTURE FILE NUMBER	
EER		4400070	

GENERAL NOTES
BRIDGE NO. LAW-7-0251
S.R. 7 OVER SYMMES CREEK

LAW-7-2.17
PID No. 75923

3 / 25

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ITEM SPECIAL - SETTLEMENT PLATFORM:

DESCRIPTION: THIS ITEM CONSISTS OF FURNISHING, CONSTRUCTING, AND MAINTAINING SETTLEMENT PLATFORMS AND OBTAINING SETTLEMENT READINGS AS REQUIRED BY THE PLANS OR AS DIRECTED BY THE ENGINEER. SEE SETTLEMENT PLATFORM DETAIL THIS SHEET. AT THE OPTION AND EXPENSE OF THE CONTRACTOR, ADDITIONAL SETTLEMENT PLATFORMS MAY BE INSTALLED AT LOCATIONS APPROVED BY THE ENGINEER. SETTLEMENT READINGS SHALL BE TAKEN WEEKLY DURING CONSTRUCTION AND DURING THE SPECIFIED WAITING PERIOD BEGINNING WITH THE FIRST WEEK FOLLOWING PLACEMENT OF EACH PLATFORM. THE READINGS SHALL BE PLOTTED ON GRAPH PAPER PRESENTING DEFORMATION (ON THE NEGATIVE Y-AXIS) AND FILL HEIGHT (ON THE POSITIVE Y-AXIS) VERSUS TIME (ON THE X-AXIS). A COPY OF EACH CUMULATIVE PLOT SHALL BE SENT TO ODOT, CO, CONSTRUCTION MANAGEMENT/CONSTRUCTION ADMINISTRATION, GEOTECHNICAL AND EARTHWORK ENGINEER AND ODOT, CO, OFFICE OF GEOTECHNICAL ENGINEERING, FOUNDATIONS AND RETAINING WALLS ENGINEER, AFTER EACH SETTLEMENT READING IS RECORDED.

MATERIAL: SOUND LUMBER SUCH AS ¾" EXTERIOR GRADE PLYWOOD SHALL BE USED FOR THE BASE. THE PIPE SHALL BE 2½" STANDARD BLACK PIPE WITH THREADED FITTINGS AS SHOWN ON THE PLANS. A STEEL PLATE 36" X 36" X ⅛" MAY BE SUBSTITUTED FOR THE LUMBER FOR THE PLATFORMS, AT THE CONTRACTOR'S OPTION.

CONSTRUCTION METHODS: THE PLATFORM SHALL CONFORM TO THE SETTLEMENT PLATFORM DETAILS SHOWN ON THIS SHEET. THE PLATFORM SHALL BE SET ON A LEVEL SURFACE. THE PIPE SHALL BE FIRMLY SECURED TO THE PLATFORM AND SHALL BE MAINTAINED IN A PLUMB POSITION DURING THE PLACEMENT OF THE EMBANKMENT. THE PIPE SHALL BE MARKED AT INTERVALS TO FACILITATE MEASUREMENT OF THE DEPTH OF FILL. THE CONTRACTOR SHALL STOP WORK IN ANY LOCATION WHERE THE SETTLEMENT PLATFORM HAS BEEN DISTURBED OR DAMAGED. PLATFORMS OR PIPES DAMAGED OR DISPLACED DURING CONSTRUCTION SHALL BE RESTORED TO THEIR PROPER CONDITION AT THE CONTRACTOR'S EXPENSE.

SETTLEMENT PLATFORMS SHALL BE PLACED AT THE FOLLOWING LOCATIONS:

I.D.	STATION	OFFSET
SP1	135+40	75' RT.
SP2	135+60	10' RT

PRIOR TO PAVING, THE TOP OF THE SETTLEMENT PLATFORM PIPE SHALL BE CUT OFF TWO FEET BELOW THE FINISHED SURFACE OF THE SUBGRADE OR FINISHED GROUND SURFACE, WHICHEVER IS APPLICABLE.

REFER TO ODOT GEOTECHNICAL BULLETIN GB4 "GUIDELINES FOR THE USE OF GEOTECHNICAL INSTRUMENTATION" FOR ADDITIONAL INSTALLATION AND MONITORING INSTRUCTION.

WAITING PERIOD CRITERIA:
THE ENGINEER WILL CONSIDER THE WAITING PERIOD COMPLETE WHEN CONSECUTIVE SETTLEMENT READINGS, RECORDED AFTER EMBANKMENT CONSTRUCTION IS COMPLETE AND AT LEAST ONE WEEK (168 HOURS) APART, RESULT IN ELEVATION DIFFERENCES EQUAL TO OR LESS THAN ⅛ INCH. THE MINIMUM WAITING PERIOD IS 90 CALENDAR DAYS.

IF SETTLEMENT RATES EXCEED ¼ INCH PER MONTH AFTER EMBANKMENT CONSTRUCTION HAS BEEN COMPLETE FOR 45 CALENDAR DAYS, REMAINING CONSTRUCTION, INCLUDING ANY NECCESARY CORRECTIVE MEASURES, MAY PROCEED ONLY AT THE DIRECTION OF THE ENGINEER.

THE DEPARTMENT WILL CONSIDER VIBRATING WIRE SETTLEMENT MONITORING PLATFORMS IN LIEU OF THE CONVENTIONAL SETTLEMENT PLATFORMS. THE CONTRACTOR SHOULD PROVIDE DETAILS OF THE PROPOSED VIBRATING WIRE SETTLEMENT PLATFORMS AS WELL AS DESIGN DRAWINGS OF THE PROPOSED 30 DAYS PRIOR TO CONSTRUCTION. THE DEPARTMENT WILL REQUIRE 10 WORKING DAYS FOR REVIEW AND APPROVAL. THE DESIGN DRAWINGS SHOULD ILLUSTRATE THE LOCATIONS WITH ALL EXISTING AND PROPOSED SITE FEATURES TO VERIFY THE PROPOSED CABLING WILL NOT CONFLICT WITH EXISTING FACILITIES, PROPOSED FACILITIES OR UTILITIES. NO ADDITIONAL PAYMENT WILL BE PROVIDED IF THE CONTRACTOR ELECTS TO UTILIZE VIBRATING WIRE SETTLEMENT PLATFORMS.

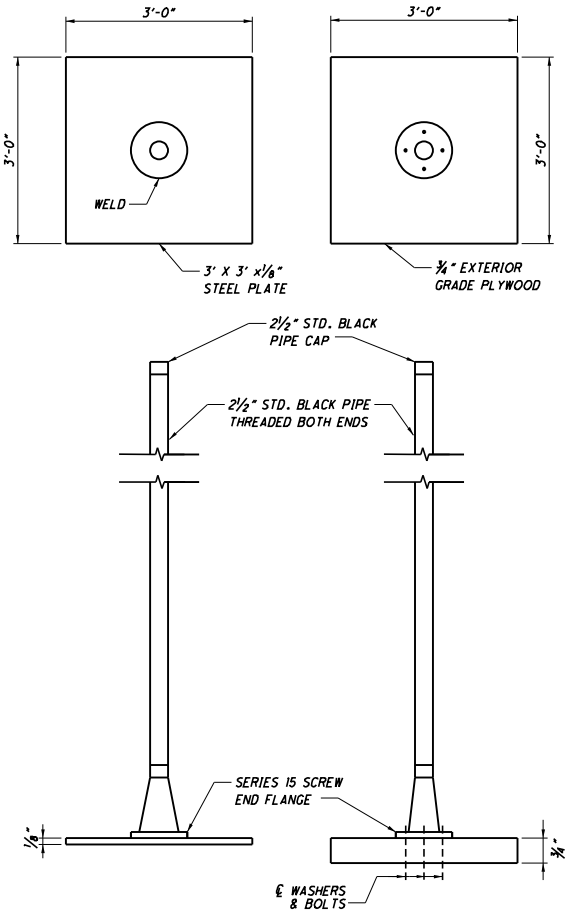
MORE INFORMATION PERTAINING TO EMBANKMENT CONSTRUCTION AND CONTROLLED RATES OF FILL ARE PROVIDED IN THE ROADWAY PLANS.

METHOD OF MEASUREMENT, THE NUMBER OF SETTLEMENT PLATFORMS TO BE PAID FOR SHALL BE THE ACTUAL NUMBER OF SETTLEMENT PLATFORMS COMPLETED, MAINTAINED, AND ACCEPTED BY THE ENGINEER.

BASIS OF PAYMENT: PAYMENT SHALL BE MADE AT THE CONTRACT UNIT PRICE EACH FOR "ITEM SPECIAL - SETTLEMENT PLATFORM" WHICH IS COMPENSATION FOR CONSTRUCTING, MAINTAINING, AND MONITORING THE SETTLEMENT PLATFORMS INCLUDING FURNISHING ALL LABOR, EQUIPMENT, MATERIALS, AND INCIDENTALS NECESSARY TO COMPLETE THE WORK. PAYMENT SHALL NOT BE MADE FOR SETTLEMENT PLATFORMS WHICH BECOME USELESS DUE TO DAMAGE CAUSED BY THE CONTRACTOR'S OPERATIONS. SEE DETAIL THIS SHEET.

ABBREVIATIONS

APPROX.	- APPROXIMATELY
BRG.	- BEARING
℄	- CENTERLINE
CLR.	- CLEAR
CONST.	- CONSTRUCTION
DWG.	- DRAWING
EF	- EACH FACE
EL.	- ELEVATION
EQ.	- EQUAL
EXIST.	- EXISTING
F.A.	- FORWARD ABUTMENT
℄	- FLOW LINE
H.W.	- HIGH WATER
NO.	- NUMBER
OHW	- ORDINARY HIGH WATER MARK
R.A.	- REAR ABUTMENT
SP	- SETTLEMENT PLATFORM
SPA.	- SPACE
STA.	- STATION
STD.	- STANDARD
T/	- TOP OF
TYP.	- TYPICAL
YR.	- YEAR



SETTLEMENT PLATFORM

(NOT TO SCALE)

NOTES:

1. SETTLEMENT PLATFORMS SHALL BE ANCHORED BY STAKES DRIVEN AT EACH CORNER TO PREVENT OVERTURNING.

DESIGN AGENCY: Stantec, 1500 Lake Shore Dr., Columbus, OH 43204, (614) 486-4383
DATE: 11/3/2017
REVIEWED: MRS
DRAWN: JWS
DESIGNED: BSM
CHECKED: EER
REVISED
STRUCTURE FILE NUMBER: 4400070

GENERAL NOTES 2
BRIDGE NO. LAW-7-0251
S.R. 7 OVER SYMMES CREEK

LAW-7-2.17
PID No. 75923

4 / 25

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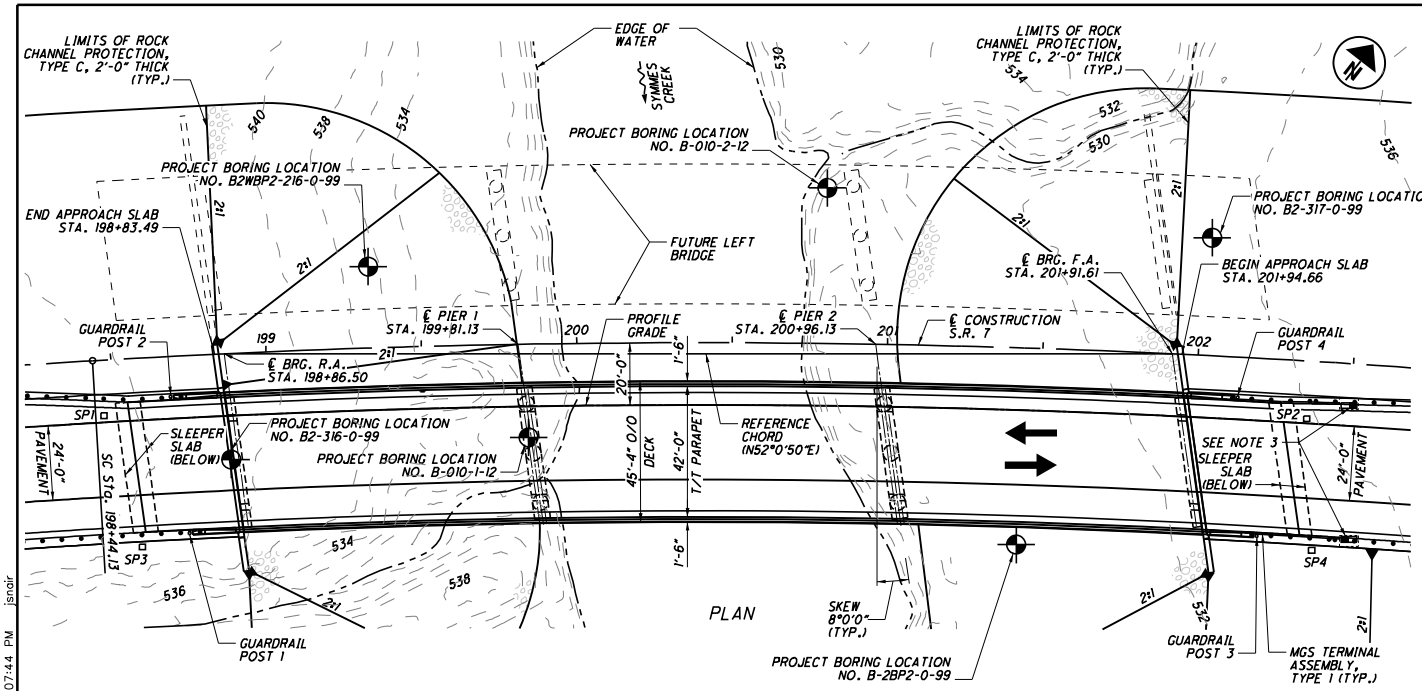

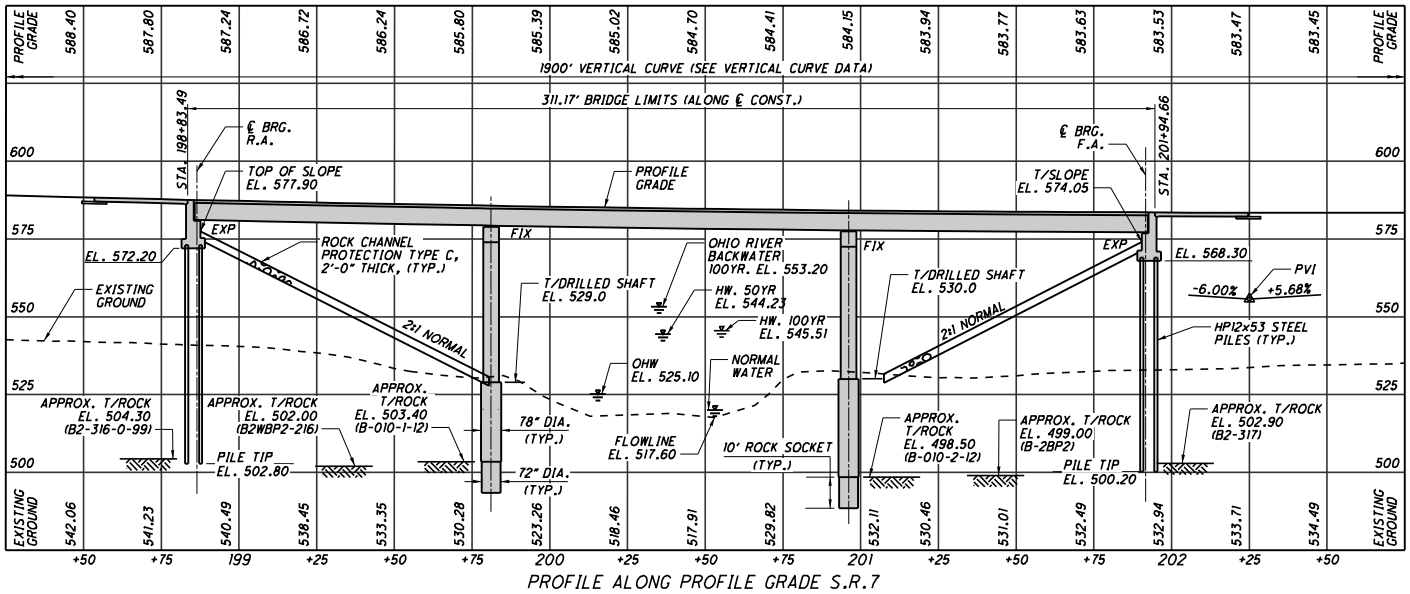

NOTES

1. EARTHWORK LIMITS SHOWN ARE APPROXIMATE. ACTUAL SLOPES SHALL CONFORM TO PLAN CROSS SECTIONS.
2. FOR PRIMARY PROJECT CONTROL INFORMATION TABLE SEE ROADWAY GENERAL NOTES.
3. BRIDGE DECK DRAINAGE IS CONTROLLED BY 1 BRIDGE SCUPPER, (SEE ITEM 518 NOTE ON SHEET 3/25) AND DIRECTED BY ROADWAY CURBS EXTENDING OFF THE EAST END OF THE BRIDGE TO ROADWAY CATCH BASINS.

DESIGN TRAFFIC:
2015 ADT = 10,300 2015 ADTT = 1,133
2035 ADT = 21,400 2035 ADTT = 2,354
DIRECTIONAL DISTRIBUTION = 69/31

LEGEND

PROJECT BORING LOCATION ◻ SETTLEMENT PLATFORM

HYDRAULIC DATA

DRAINAGE AREA = 350.3 SQ. MILES
Q (50) = 17,000 CFS V (50) = 6.46 FT/S DESIGN YEAR
Q (100) = 19,100 CFS V (100) = 6.67 FT/S
STRUCTURE CLEARS THE 50 YEAR DESIGN HW BY 31.22 FEET.

ESTIMATED PILE LENGTHS

REAR ABUTMENT HP12x53 = 75 FT
FORWARD ABUTMENT HP12x53 = 70 FT

ADDITIONAL PROJECT BORING LOCATIONS

BORING NUMBER	STATION	OFFSET
B-010-0-11	197+89.00	183' LEFT
B-011-0-11	202+02.00	232' LEFT
B-012-0-11	201+90.00	197' RIGHT

S.R. 7 CURVE NO. 3 DATA

P.I. STA. 205+33.31	L = 1,347.14'	Ts = 914.18'
Δ = 27° 30' 45" (RT)	E = 70.53'	LT = 150.01'
Dc = 1° 45' 00"	TS STA. = 196+19.13	ST = 75.01'
R = 3,274.04'	SC STA. = 198+44.13	e_{max} = 4.60%
T = 683.24'	θs = 1° 58' 07"	CS STA. 211+91.27
	Ls = 225.00'	ST STA. 214+16.27

POST NUMBER	FIRST POST GUARDRAIL	STATION
1	EASTBOUND R.A.	198+72.52
2	WESTBOUND R.A.	198+68.62
3	EASTBOUND F.A.	202+22.03
4	WESTBOUND F.A.	202+13.35

VERTICAL CURVE DATA

LENGTH = 1900'
PVC STA. = 192+75.00 PVC ELEV. = 612.74
PVI STA. = 202+25.00 PVI ELEV. = 555.74
PVT STA. = 211+75.00 PVT ELEV. = 609.67
G1 = -6.00% G2 = 5.68%

PROPOSED STRUCTURE

TYPE: 3-SPAN PRESTRESSED CONCRETE I-BEAM (66" MODIFIED TYPE 4) WITH COMPOSITE REINFORCED CONCRETE DECK SUPPORTED BY STUB TYPE ABUTMENTS ON STEEL PILES AND CAP & COLUMN PIERS ON DRILLED SHAFTS

SPANS: 93.92'-112.83'-93.92', c/c BRGS. (MEASURED ALONG REFERENCE CHORD)

ROADWAY: 42'-0" TOE/TOE PARAPETS

LOADING: HL-93 AND 60 PSF FUTURE WEARING SURFACE

WEARING SURFACE: 1" MONOLITHIC WEARING SURFACE

SKEW: 8°00'00" R.F. FROM PERP. TO REFERENCE CHORD

APPROACH SLABS: AS-1-15, 30'-0" LONG (MODIFIED)

ALIGNMENT: 01°45'00" CURVE RT.

SUPERELEVATION: 0.0460 FT/FT

COORDINATES: LATITUDE 38°26'53.65" N
LONGITUDE 82°26'05.44" W

DESIGN AGENCY: Stantec, 1500 Lake Shore Dr., Columbus, OH 43204, (614) 486-4383
DATE: 12/15/17
REVIEWED: MRS
DRAWN: JWS
REVISED:
DESIGNED: BSM
CHECKED: EER
STRUCTURE FILE NUMBER: 4400224

LAWRENCE COUNTY
STA. 198+83.49
STA. 201+94.66

SITE PLAN
BRIDGE NO. LAW-7-0376
S.R. 7 OVER SYMMES CREEK

LAW-7-2.17
PID No. 75923

1 / 25

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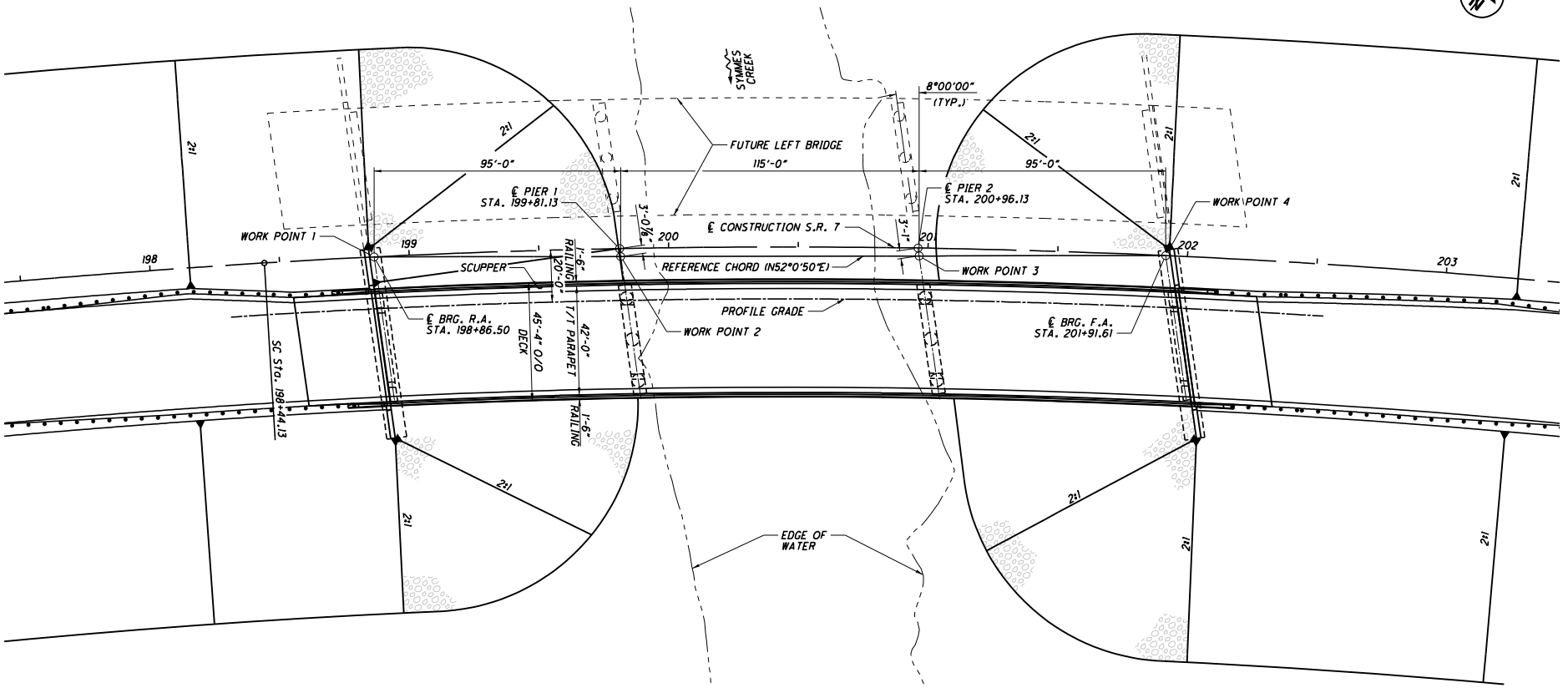

PLAN

S.R. 7 CURVE NO. 3

P.I. STA. 205+33.31
Δ = 27° 30' 45" (RT)
Dc = 1° 45' 00"
R = 3,274.04'
T = 683.24'
L = 1,347.14'
E = 70.53'
e_{max} = 4.60%
SC STA. 198+44.13
CS STA. 211+91.27

DESIGN AGENCY: Stantec (1500 Lake Shore Dr., Columbus, OH 43204, (614) 486-4383)

DESIGNED	DRAWN	REVIEWED	DATE:
BSM	JWS	MRS	12/15/17
CHECKED	REVISED	STRUCTURE FILE NUMBER	
EER		4400224	

GENERAL PLAN
BRIDGE NO. LAW-7-0376
S.R. 7 OVER SYMMES CREEK

LAW-7-2.17
PID No. 75923

2 / 25

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REFER TO THE FOLLOWING STANDARD BRIDGE DRAWINGS:

AS-1-15	REVISED	07-17-15
AS-2-15	REVISED	01-18-19
EXJ-6-17	DATED	01-15-21
GSD-1-96	REVISED	01-15-21
PSID-1-13	REVISED	01-15-21
SBR-1-20	REVISED	07-17-21

AND TO THE FOLLOWING SUPPLEMENTAL SPECIFICATIONS:

800	DATED	07-16-21
832	DATED	10-19-18

DESIGN SPECIFICATIONS:
THIS STRUCTURE CONFORMS TO THE "LRFD BRIDGE DESIGN SPECIFICATIONS" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 2014 INCLUDING THE 2015 AND 2016 INTERIM SPECIFICATIONS AND THE ODOT BRIDGE DESIGN MANUAL, 2007.

DESIGN LOADING:
HL-93
FUTURE WEARING SURFACE (FWS) OF 0.060 KIPS/FT²

OPERATIONAL IMPORTANCE:
A LOAD MODIFIER OF 1.00 HAS BEEN ASSUMED FOR THE DESIGN OF THIS STRUCTURE IN ACCORDANCE WITH THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, ARTICLE 1.3.5 AND THE ODOT BRIDGE DESIGN MANUAL, 2007.

DESIGN DATA:
CONCRETE CLASS QC2 - COMPRESSIVE STRENGTH 4.5 K.S.I. (SUPERSTRUCTURE)
CONCRETE CLASS QC1 - COMPRESSIVE STRENGTH 4.0 K.S.I. (SUBSTRUCTURE)
CONCRETE CLASS QC5 - WITH 1-IN MAX. AGGREGATE SIZE - COMPRESSIVE STRENGTH 4.5 KSI (DRILLED SHAFT)

REINFORCING STEEL - MINIMUM YIELD STRENGTH 60 K.S.I.

STEEL H-PILES - A572 - YIELD STRENGTH 50 K.S.I.

CONCRETE FOR PRESTRESSED BEAMS:
COMPRESSIVE STRENGTH (FINAL) = 7000 P.S.I.
COMPRESSIVE STRENGTH (RELEASE) = 6000 P.S.I.

PRESTRESSING STRAND:
AREA = 0.217 SQ. IN.
ULTIMATE STRENGTH = 270 K.S.I.
INITIAL STRESS = 202.5 K.S.I.
(LOW RELAXATION STRANDS)

WELDED WIRE FABRIC
YIELD STRENGTH - 70 K.S.I.

DECK PROTECTION METHOD:
2-1/2" CONCRETE COVER
EPOXY COATED REINFORCING STEEL

MONOLITHIC WEARING SURFACE:
MONOLITHIC WEARING SURFACE IS ASSUMED, FOR DESIGN PURPOSES, TO BE 1 INCH THICK.

NOISE BARRIER:
DUE TO THE POTENTIAL FUTURE CONSTRUCTION OF A 12 FOOT TALL NOISE BARRIER ALONG THE RIGHT SIDE OF THE BRIDGE THE PRECAST CONCRETE BEAMS AND CONCRETE DECK HAVE BOTH BEEN DESIGNED TO INCLUDE THE VERTICAL AND LATERAL LOAD CONTRIBUTION DUE TO THE NOISE BARRIER. THE ESTIMATED VERTICAL DEAD LOAD WAS SET AS 167 POUNDS PER FOOT. THE CENTER OF GRAVITY FOR THE NOISE BARRIER WAS SET AT 11 INCHES FROM THE BACK EDGE OF THE STANDARD ODOT SINGLE SLOPE BRIDGE RAILING. LATERAL LOADING ASSUMED, WIND LOAD EQUAL TO 30 POUNDS PER SQUARE FOOT OR A VEHICULAR COLLISION FORCE PER AASHTO SECTION 15.8.4.

THE SINGLE SLOPE BRIDGE RAILING SHOWN IN THE PLANS HAS NOT BEEN MODIFIED FROM THE ODOT STANDARD DRAWINGS AND IS NOT DESIGNED TO SUPPORT THE ABOVE DESCRIBED NOISE BARRIER. IF THE NOISE BARRIER IS CONSTRUCTED IN THE FUTURE THE BRIDGE RAILING WILL NEED TO BE REMOVED AND REPLACED WITH A RAILING THAT IS DESIGNED TO SUPPORT A NOISE BARRIER AND PROPERLY TRANSFER ALL LOADS TO THE EXISTING CONCRETE BRIDGE DECK.

PILE DRIVING CONSTRAINTS:
PRIOR TO DRIVING PILES, CONSTRUCT THE SPILL THROUGH SLOPES AND THE BRIDGE APPROACH EMBANKMENT BEHIND THE ABUTMENTS UP TO THE LEVEL OF THE SUBGRADE ELEVATION FOR A MINIMUM DISTANCE OF 200 FEET BEHIND EACH ABUTMENT (SEE FORWARD AND REAR APPROACH EMBANKMENT CONSTRUCTION THIS SHEET). DO NOT BEGIN THE EXCAVATION FOR THE ABUTMENT FOOTINGS AND THE INSTALLATION OF THE ABUTMENT PILES UNTIL AFTER THE ABOVE REQUIRED EMBANKMENT HAS BEEN CONSTRUCTED.

THE APPROACH EMBANKMENT SHALL BE CONSTRUCTED AND THEN UNDERGO A WAITING PERIOD OF 163 DAYS PRIOR TO DRIVING PILES.

PILES TO BEDROCK:
DRIVE PILES TO REFUSAL ON BEDROCK. THE DEPARTMENT WILL CONSIDER REFUSAL TO BE OBTAINED WHEN THE PILE PENETRATION IS AN INCH OR LESS AFTER RECEIVING AT LEAST 20 BLOWS FROM THE PILE HAMMER. SELECT THE HAMMER SIZE TO ACHIEVE THE REQUIRED DEPTH TO BEDROCK AND REFUSAL.

THE TOTAL FACTORED LOAD IS 188 KIPS PER PILE FOR THE REAR ABUTMENT PILES.

THE TOTAL FACTORED LOAD IS 185 KIPS PER PILE FOR THE FORWARD ABUTMENT PILES.

ABUTMENT PILES:
HP12x53 PILES 80 FEET LONG, ORDER LENGTH, REAR ABUTMENT
HP12x53 PILES 75 FEET LONG, ORDER LENGTH, FORWARD ABUTMENT

PILE SPLICES:
IN LIEU OF USING THE FULL PENETRATION BUTT WELDS SPECIFIED IN CMS 507.09 TO SPLICE STEEL H-PILES, THE CONTRACTOR MAY USE A MANUFACTURED H-PILE SPLICER. FURNISH SPLICERS FROM THE FOLLOWING MANUFACTURER:

ASSOCIATED PILE AND FITTING CORPORATION
8 WOOD HOLLOW RD. PLAZA 1
PARSIPPANY, NEW JERSEY 07054

INSTALL AND WELD THE SPLICER TO THE PILE SECTIONS IN ACCORDANCE WIHT THE MANUFACTURER'S WRITTEN ASSEMBLY PROCEDURE SUPPLIED TO THE ENGINEER BEFORE THE WELDING IS PERFORMED.

DRILLED SHAFTS:
PIER 1
THE MAXIMUM FACTORED LOAD TO BE SUPPORTED BY EACH DRILLED SHAFT IS 1610 KIPS AT THE PIERS. THIS LOAD IS RESISTED BY SIDE RESISTANCE WITHIN A PORTION OF THE BEDROCK SOCKET AND ALSO BY TIP RESISTANCE. THE FACTORED RESISTANCE DEVELOPED BY SIDE RESISTANCE IS 680.1 KIPS, ASSUMED TO ACT ALONG THE BOTTOM 8 FEET OF THE BEDROCK SOCKET FOR THE PIERS. THE FACTORED RESISTANCE PROVIDED BY THE DRILLED SHAFT TIP IS 929.9 KIPS.

PIER 2
THE MAXIMUM FACTORED LOAD TO BE SUPPORTED BY EACH DRILLED SHAFT IS 1612 KIPS AT THE PIERS. THIS LOAD IS RESISTED BY SIDE RESISTANCE WITHIN A PORTION OF THE BEDROCK SOCKET AND ALSO BY TIP RESISTANCE. THE FACTORED RESISTANCE DEVELOPED BY SIDE RESISTANCE IS 680.1 KIPS, ASSUMED TO ACT ALONG THE BOTTOM 8 FEET OF THE BEDROCK SOCKET FOR THE PIERS. THE FACTORED RESISTANCE PROVIDED BY THE DRILLED SHAFT TIP IS 931.9 KIPS.

ITEM 509 - EPOXY COATED REINFORCING STEEL, AS PER PLAN:
IN ADDITION TO THE PROVISIONS OF ITEM 509, FIELD BEND AND/OR FIELD CUT THE REINFORCING STEEL DESIGNATED IN THE PLANS, AS NECESSARY, IN ORDER TO MAINTAIN THE REQUIRED CLEARANCES AND BAR SPACINGS. REPAIR ALL DAMAGE TO THE EPOXY COATING, AS A RESULT OF THIS WORK, ACCORDING TO 709.00.

ITEM 518 - SCUPPERS, INCLUDING SUPPORTS, AS PER PLAN:
REFER TO SHEET 18/25 FOR SCUPPER LOCATION AND SHEET 19/25 FOR DETAILS AND NOTES.

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

AN EIGHT WHEEL FINISHING MACHINE WITH A MAXIMUM WHEEL LOAD OF 2.32 KIPS.

A MINIMUM OUT-TO-OUT WHEEL SPACING AT EACH END OF THE MACHINE OF 103".

A MAXIMUM SPACING OF OVERHANG FALSEWORK BRACKETS OF 48 IN.

A MAXIMUM DISTANCE FROM THE CENTERLINE OF THE FASCIA GIRDER TO THE FACE OF THE SAFETY HANDRAIL OF 65".

FORWARD AND REAR APPROACH EMBANKMENT CONSTRUCTION:
THE APPROACH EMBANKMENTS SHALL BE CONSTRUCTED AND THEN UNDERGO A WAITING PERIOD OF 90 DAYS PRIOR TO DRIVING PILES.

APPROACH EMBANKMENTS SHALL BE REINFORCED WITH PRIMARY INTERNAL REINFORCEMENT FOR STABILIZATION. SEE ROADWAY AND SLOPE REINFORCEMENT PLANS FOR DETAILS AND NOTES REGARDING EMBANKMENT CONSTRUCTION.

MSE (MECHANICALLY STABILIZED EARTH) WALLS SHALL NOT BE PROPOSED AS AN ALTERNATIVE DESIGN IN ANY VALUE ENGINEERING STUDY DUE TO GEOTECHNICAL CONCERNS.

THE CONTRACTOR SHALL REVIEW THE BORING LOGS, SUBSURFACE INVESTIGATION, AND THE ROADWAY GENERAL NOTES PRIOR TO COMMENCING WORK ON THE BRIDGE.

IN ORDER TO MINIMIZE SIGNIFICANT DAMAGE TO THE FILL EMBANKMENT REINFORCEMENT DURING THE DRIVING OF ABUTMENT PILES H-PILES, A SINGLE-SHEET "PUNCHED" TYPE REINFORCEMENT SHALL BE USED. THIS TYPE OF REINFORCEMENT WILL BE EASILY PENETRATED WITH A DRIVEN PILE, WHEREAS A WELDED TYPE REINFORCEMENT WILL BE SIGNIFICANTLY DAMAGED DURING PILE DRIVING.

THE CONTRACTOR SHALL SUBMIT PILE DRIVING HAMMER SPECIFICATIONS TO THE GEOTECHNICAL ENGINEER OF RECORD, PRIOR TO PILE INSTALLATION FOR THE ENGINEER'S APPROVAL. IN ACCORDANCE WITH ODOT ITEM 507, THE PILE HAMMER SHALL BE OF ADEQUATE SIZE TO DRIVE THE PILES THROUGH THE INTERNALLY REINFORCED COMPACTED EMBANKMENT AND AT THE SAME TIME NOT TO DAMAGE THE PILES DURING DRIVING OR RETAPPING.

THE MATERIAL THAT WILL BE USED FOR EMBANKMENT FILL CONSTRUCTION WILL BE COMPOSED OF THE SOIL AND ROCK REMOVED FROM THE LARGE CUT SECTIONS. BASED ON THE BORINGS PERFORMED IN THE PROPOSED CUT AREAS, THIS MATERIAL WILL CONSIST PRIMARILY OF NON-DURABLE SHALE, AND TO A MUCH LESSER EXTENT, DURABLE SHALE, SANDSTONE AND SILTSTONE. WHERE PILES ARE TO BE DRIVEN THROUGH THE EMBANKMENT, THE EMBANKMENT FILL MATERIAL SHALL BE CLEAN OF DURABLE ROCK THAT MAY IMPEDE PILE DRIVING. THE EMBANKMENT FILL MATERIAL SHALL BE COMPACTED IN ACCORDANCE WITH ODOT ITEM 203. THE USE OF WATER TO AID IN BREAKING DOWN LARGE PARTICLES FOR NON-DURABLE SHALE WILL BE REQUIRED AS PER ODOT ITEM 203.06 B.

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DESIGN AGENCY: Stantec, 1500 Lake Shore Dr., Columbus, OH 43204, (614) 486-4383
DESIGNED: BSM
DRAWN: JWS
CHECKED: EER
REVISED:
REVIEWED: MRS
DATE: 12/15/17
STRUCTURE FILE NUMBER: 4400224

GENERAL NOTES 1
BRIDGE NO. LAW-7-0376
S.R. 7 OVER SYMMES CREEK

LAW-7-2.17
PID No. 75923

ITEM SPECIAL - SETTLEMENT PLATFORM:

DESCRIPTION: THIS ITEM CONSISTS OF FURNISHING, CONSTRUCTING, AND MAINTAINING SETTLEMENT PLATFORMS AND OBTAINING SETTLEMENT READINGS AS REQUIRED BY THE PLANS OR AS DIRECTED BY THE ENGINEER. SEE SETTLEMENT PLATFORM DETAIL THIS SHEET. AT THE OPTION AND EXPENSE OF THE CONTRACTOR, ADDITIONAL SETTLEMENT PLATFORMS MAY BE INSTALLED AT LOCATIONS APPROVED BY THE ENGINEER. SETTLEMENT READINGS SHALL BE TAKEN WEEKLY BEGINNING WITH THE FIRST WEEK FOLLOWING PLACEMENT OF EACH PLATFORM AND DURING ANY SPECIFIED WAITING PERIOD. READINGS SHALL BE TAKEN MONTHLY DURING ANY CONSOLIDATION OR OFF-SEASON TIMES. THE READINGS SHALL BE PLOTTED ON GRAPH PAPER PRESENTING DEFORMATION (ON THE NEGATIVE Y-AXIS) AND FILL HEIGHT (ON THE POSITIVE Y-AXIS) VERSUS TIME (ON THE X-AXIS). A COPY OF EACH CUMULATIVE PLOT SHALL BE SENT TO ODOT, CO, CONSTRUCTION MANAGEMENT/CONSTRUCTION ADMINISTRATION, GEOTECHNICAL AND EARTHWORK ENGINEER AND ODOT, CO, OFFICE OF GEOTECHNICAL ENGINEERING, FOUNDATIONS AND RETAINING WALLS ENGINEER, AFTER EACH SETTLEMENT READING IS RECORDED.

MATERIAL: SOUND LUMBER SUCH AS ¾" EXTERIOR GRADE PLYWOOD SHALL BE USED FOR THE BASE. THE PIPE SHALL BE 2½" STANDARD BLACK PIPE WITH THREADED FITTINGS AS SHOWN ON THE PLANS. A STEEL PLATE 36" X 36" X ⅛" MAY BE SUBSTITUTED FOR THE LUMBER FOR THE PLATFORMS, AT THE CONTRACTOR'S OPTION.

CONSTRUCTION METHODS: THE PLATFORM SHALL CONFORM TO THE SETTTLEMENT PLATFORM DETAILS SHOWN ON THIS SHEET. THE PLATFORM SHALL BE SET ON A LEVEL SURFACE. THE PIPE SHALL BE FIRMLY SECURED TO THE PLATFORM AND SHALL BE MAINTAINED IN A PLUMB POSITION DURING THE PLACEMENT OF THE EMBANKMENT. THE PIPE SHALL BE MARKED AT INTERVALS TO FACILITATE MEASUREMENT OF THE DEPTH OF FILL. THE CONTRACTOR SHALL STOP WORK IN ANY LOCATION WHERE THE SETTLEMENT PLATFORM HAS BEEN DISTURBED OR DAMAGED. PLATFORMS OR PIPES DAMAGED OR DISPLACED DURING CONSTRUCTION SHALL BE RESTORED TO THEIR PROPER CONDITION AT THE CONTRACTOR'S EXPENSE.

SETTLEMENT PLATFORMS SHALL BE PLACED AT THE FOLLOWING LOCATIONS:

I.D.	STATION	OFFSET
SP1	198+47	18' RT.
SP2	202+35	19' RT.
SP3	198+56	61' RT.
SP4	202+40	61' RT.

PRIOR TO PAVING, THE TOP OF THE SETTLEMENT PLATFORM PIPE SHALL BE CUT OFF TWO FEET BELOW THE FINISHED SURFACE OF THE SUBGRADE OR FINISHED GROUND SURFACE, WHICHEVER IS APPLICABLE.

REFER TO ODOT GEOTECHNICAL BULLETIN GB4 "GUIDELINES FOR THE USE OF GEOTECHNICAL INSTRUMENTATION" FOR ADDITIONAL INSTALLATION AND MONITORING INSTRUCTION.

WAITING PERIOD CRITERIA:
THE ENGINEER WILL CONSIDER THE WAITING PERIOD COMPLETE WHEN CONSECUTIVE SETTLEMENT READINGS, RECORDED AFTER EMBANKMENT CONSTRUCTION IS COMPLETE AND AT LEAST ONE WEEK (168 HOURS) APART, RESULT IN ELEVATION DIFFERENCES EQUAL TO OR LESS THAN ⅛ INCH. THE MINIMUM WAITING PERIOD IS 90 CALENDAR DAYS.

IF SETTLEMENT RATES EXCEED ¾ INCH PER MONTH AFTER EMBANKMENT CONSTRUCTION HAS BEEN COMPLETE FOR 45 CALENDAR DAY, REMAINING CONSTRUCTION, INCLUDING ANY NECCESARY CORRECTIVE MEASURES, MAY PROCEED ONLY AT THE DIRECTION OF THE ENGINEER.

THE DEPARTMENT WILL CONSIDER VIBRATING WIRE SETTLEMENT MONITORING PLATFORMS IN LIEU OF THE CONVENTIONAL SETTLEMENT PLATFORMS. THE CONTRACTOR SHOULD PROVIDE DETAILS OF THE PROPOSED VIBRATING WIRE SETTLEMENT PLATFORMS AS WELL AS DESIGN DRAWINGS OF THE PROPOSED 30 DAYS PRIOR TO CONSTRUCTION. THE DEPARTMENT WILL REQUIRE 10 WORKING DAYS FOR REVIEW AND APPROVAL. THE DESIGN DRAWINGS SHOULD ILLUSTRATE THE LOCATIONS WITH ALL EXISTING AND PROPOSED SITE FEATURES TO VERIFY THE PROPOSED CABLING WILL NOT CONFLICT WITH EXISITING FACILITIES, PROPOSED FACILITIES OR UTILITIES. NO ADDITIONAL PAYMENT WILL BE PROVIDED IF THE CONTRACTOR ELECTS TO UTILIZE VIBRATING WIRE SETTLEMENT PLATFORMS.

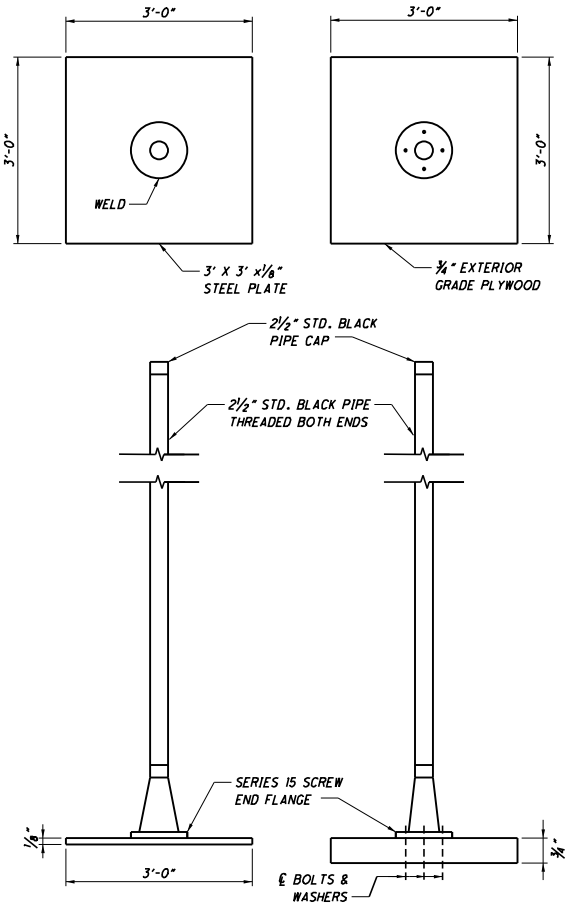
MORE INFORMATION PERTAINING TO EMBANKMENT CONSTRUCTION AND CONTROLLED RATES OF FILL ARE PROVIDED IN THE ROADWAY PLANS.

METHOD OF MEASUREMENT, THE NUMBER OF SETTLEMENT PLATFORMS TO BE PAID FOR SHALL BE THE ACTUAL NUMBER OF SETTLEMENT PLATFORMS COMPLETED, MAINTAINED, AND ACCEPTED BY THE ENGINEER.

BASIS OF PAYMENT: PAYMENT SHALL BE MADE AT THE CONTRACT UNIT PRICE EACH FOR "ITEM SPECIAL - SETTLEMENT PLATFORM" WHICH IS COMPENSATION FOR CONSTRUCTING, MAINTAINING, AND MONITORING THE SETTLEMENT PLATFORMS INCLUDING FURNISHING ALL LABOR, EQUIPMENT, MATERIALS, AND INCIDENTALS NECESSARY TO COMPLETE THE WORK. PAYMENT SHALL NOT BE MADE FOR SETTLEMENT PLATFORMS WHICH BECOME USELESS DUE TO DAMAGE CAUSED BY THE CONTRACTOR'S OPERATIONS. SEE DETAIL THIS SHEET.

ABBREVIATIONS:

℄	- CENTERLINE
ABUT.	- ABUTMENTS
BF	- BACK FACE
BOT.	- BOTTOM
BRG.	- BEARINGS
CIP	- CAST IN PLACE
CJ	- CONSTRUCTION JOINT
CONT.	- CONTINUED
EF	- EACH FACE
EQ.	- EQUAL
F.A.	- FORWARD ABUTMENT
FF	- FRONT FACE
GFRP	- GLASS FIBER REINFORCED POLYMER
LT	- LEFT
M.C.	- MECHANICAL CONNECTOR
NPCPP	- NON -PERFORATED CORRUGATED PLASTIC PIPE
PCPP	- PERFORATED CORRUGATED PLASTIC PIPE
R.A.	- REAR ABUTMENT
RCP	- ROCK CHANNEL PROTECTION
RT.	- RIGHT
SPA.	- STATION
SP	- SETTLEMENT PLATFORM
STA.	- STATION
STR	- STRAIGHT
T/	- TOP OF
T&B	- TOP AND BOTTOM
TYP.	- TYPICAL
U.N.O.	- UNLESS NOTED OTHERWISE



SETTLEMENT PLATFORM
(NOT TO SCALE)

NOTE:

1. SETTLEMENT PLATFORMS SHALL BE ANCHORED BY STAKES DRIVEN AT EACH CORNER TO PREVENT OVERTURNING.

DESIGN AGENCY: Stantec, 1500 Lake Shore Dr. Columbus, OH 43204, (614) 486-4383
DATE: 12/15/17
REVIEWED: MRS
STRUCTURE FILE NUMBER: 4400224
DRAWN: JWS
REVISED:
DESIGNED: BSM
CHECKED: EER

GENERAL NOTES 2
BRIDGE NO. LAW-7-0376
S.R. 7 OVER SYMMES CREEK

LAW-7-2.17
PID No. 75923

4 / 25

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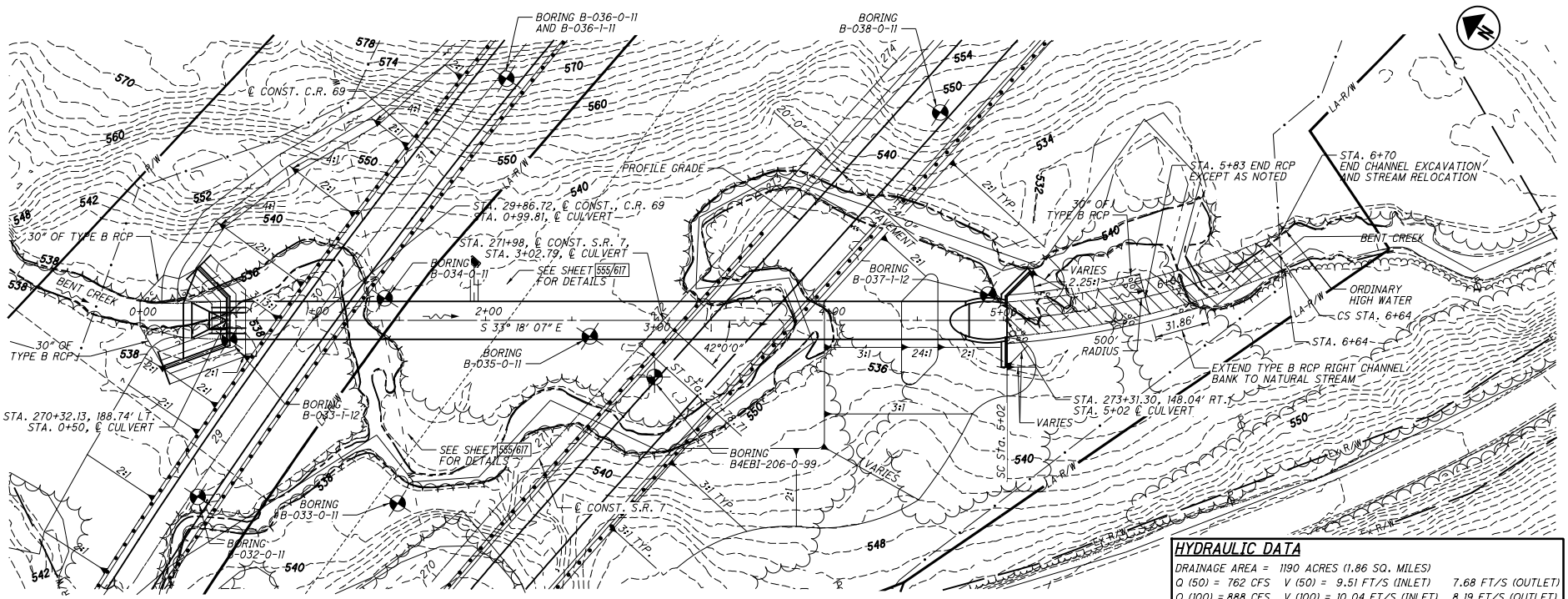
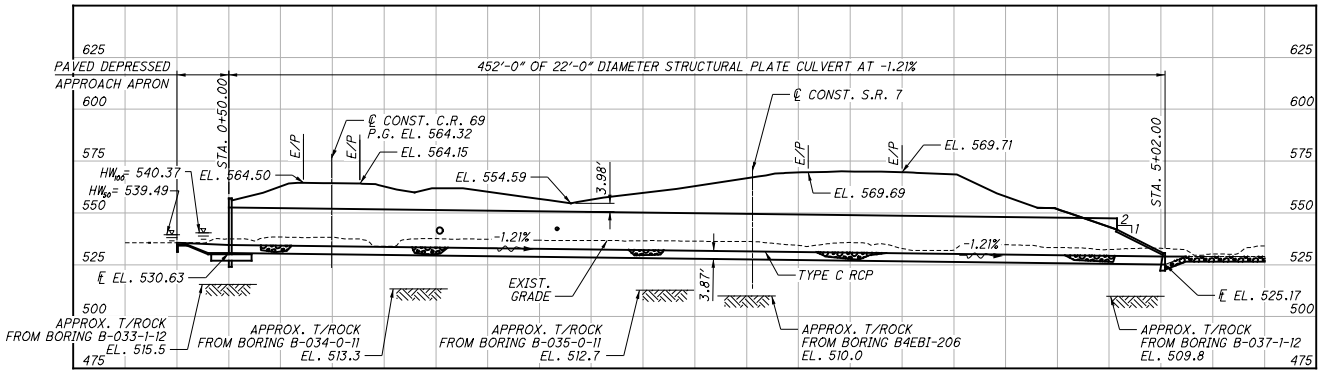


PLAN



PROFILE ALONG ℄ CULVERT

HYDRAULIC DATA

DRAINAGE AREA = 1190 ACRES (1.86 SQ. MILES)
Q (50) = 762 CFS V (50) = 9.51 FT/S (INLET) 7.68 FT/S (OUTLET)
Q (100) = 888 CFS V (100) = 10.04 FT/S (INLET) 8.19 FT/S (OUTLET)
ORDINARY HIGH WATER MARK= 532.7'
PH: 7.6
ABRASIVE: YES

NOTES

1. EARTHWORK LIMITS SHOWN ARE APPROXIMATE. ACTUAL SLOPES SHALL CONFORM TO PLAN CROSS SECTIONS.
2. SEE SHEET 6/8 FOR STREAM EXCAVATION DETAILS.

DESIGN TRAFFIC:
2015 ADT = 10,300 2015 ADTT = 1,133
2035 ADT = 21,400 2035 ADTT = 2,354
DIRECTIONAL DISTRIBUTION = 61/31

LEGEND

PROJECT BORING LOCATION
- CHANNEL EXCAVATION

PROPOSED STRUCTURE

TYPE: 22' DIA. STRUCUTRAL PLATE (MIN. 8 GAGE) PIPE CULVERT WITH REINFORCED CONCRETE HEADWALLS
SPANS: 22'-0"
ROADWAY: 42' EDGE TO EDGE OF SHOULDER
LOADING: HL-93 AND FWS (60 PSF)
SKEW: 42°0'0" RF
APPROACH SLABS: NONE
COORDINATES: LATITUDE 38°27'25.92"
LONGITUDE 82°24'49.82"

DESIGN AGENCY: Stantec, 1500 Lake Shore Dr., Columbus, OH 43204, (614) 486-4383
DRAWN: JWS | REVIEWED: EER | DATE: 3/8/18
DESIGNED: EDA | CHECKED: MRS | REVISED: | STRUCTURE FILE NUMBER: 4400348

SITE PLAN
LAW-7-0510
S.R. 7 OVER BENT CREEK

LAW-7-2.17
PID No. 75923

1/8

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ESTIMATED QUANTITIES

CALCULATED BY: EDA 3/7/2018
CHECKED BY: ALH 3/7/2018

ITEM	EXTENSION	TOTAL	UNIT	DESCRIPTION	GEN.	SEE SHEET
203	10000	589	CY	EXCAVATION		
503	21100	940	CY	UNCLASSIFIED EXCAVATION		
509	10000	97638	LB	EPOXY COATED REINFORCING STEEL		
511	46010	150	CY	CLASS QC1 CONCRETE, RETAINING/WINGWALL NOT INCLUDING FOOTING		
511	46510	219	CY	CLASS QC1 CONCRETE, FOOTING		
512	33000	16	SY	TYPE 2 WATERPROOFING		
512	10100	155	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)		
518	21200	84	CY	POROUS BACKFILL WITH GEOTEXTILE FABRIC		
518	40000	72	FT	6" PERFORATED CORRUGATED PLASTIC PIPE		
518	40010	30	FT	6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS		
601	11001	108	SY	RIPRAP, TYPE D, AS PER PLAN		
601	32104	290	CY	ROCK CHANNEL PROTECTION, TYPE B WITH GEOTEXTILE FABRIC		
601	34200	820	CY	ROCK CHANNEL PROTECTION, TYPE C WITHOUT FILTER		
611	97400	452	FT	CONDUIT, MISC.: 22' DIA., TYPE A, 707.03, AS PER PLAN		

GENERAL NOTES

DESIGN SPECIFICATIONS:
THIS STRUCTURE CONFORMS TO THE "LRFD BRIDGE DESIGN SPECIFICATIONS" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 2014, INCLUDING 2015 AND 2016 INTERIM SPECIFICATIONS AND THE ODOT BRIDGE DESIGN MANUAL, 2007.

OPERATIONAL IMPORTANCE:
A LOAD MODIFIER OF 1.0 HAS BEEN ASSUMED FOR THE DESIGN OF THIS STRUCTURE IN ACCORDANCE WITH THE AASHTO LRFD BRIDGE DESING SPECIFICATIONS, ARTICLE 1.3.5 AND THE ODOT BRIDGE DESIGN MANUAL, 2007.

DESIGN DATA:
CONCRETE CLASS QC1 - COMPRESSIVE STRENGTH 4.0 K.S.I.
(SUBSTRUCTURE)

REINFORCING STEEL - MINIMUM YIELD STRENGTH 60 K.S.I.

DESIGN LOADING:
HL-93
FUTURE WEARING SURFACE (FWS) OF 0.060 KIPS/FT²

FOUNDATION BEARING RESISTANCE:
HEADWALL FOOTINGS, AS DESIGNED, PRODUCE A MAXIMUM SERVICE LOAD PRESSURE OF 3.021 KIPS PER SQUARE FOOT AND A MAXIMUM STRENGTH LOAD PRESSURE OF 4.256 KIPS PER SQUARE FOOT. THE BEARING RESISTANCE IS 3.025 KIPS PER SQUARE FOOT FOR SERVICE AND 5.5 KIPS PER SQUARE FOOT FOR STRENGTH.

ITEM 511 CLASS QC1 CONC. MISC. PAVED INLET:
THE ITEM INCLUDES ALL MATERIAL, LABOR, AND ACCESSORIES NECESSARY TO FURNISH AND PLACE THE PAVED CONCRETE INLET AND CUTOFF WALLS.
ITEM 601 RIPRAP, TYPE D, AS PER PLAN:
CONSTRUCT A RIPRAP CUTOFF WALL AS DETAILED ON SHEET 4/7 .

ITEM 611 22'-0" CONDUIT, TYPE A, AS PER PLAN:
WORK SHALL CONFORM TO ITEM 611 PIPE CULVERTS, SEWERS, DRAINS, AND DRAINAGE STRUCTURES. STEEL STRUCTURAL PLATE (707.03) WITH MINIMUM 8 GA. THICKNESS PER ODOT DURABILITY DESIGN SPREAD SHEET, THE PAVED INVERT SPECIFIED BY THE DURABILITY DESIGN SPREADSHEET SHALL BE OMITTED AS THE CULVERT INVERT IS FILLED WITH TYPE C ROCK CHANNEL PROTECTION.

ANCHOR BOLTS FOR ANCHORING BOTH ENDS OF THE METAL PIPE, MEETING ASTM A307 AND GALVANIZED ACCORDING TO ASTM A153, SHALL BE INCLUDED IN THE PRICE BID PER FOOT OF ITEM 611 22'-0" CONDUIT, TYPE A, 707.03, AS PER PLAN.

ABBREVIATIONS:

APPROX. - APPROXIMATELY
ABUT. - ABUTMENTS
BF - BACK FACE
B/ - BOTTOM OF
BRG. - BEARINGS
℄ - CENTERLINE
CJ - CONSTRUCTION JOINT
CLR. - CLEAR
CONC. - CONCRETE
CONST. - CONSTRUCTION
CONT. - CONTINUED
DIA. - DIAMETER
DWG. - DRAWING
EF - EACH FACE
EL. - ELEVATION
EQ. - EQUAL
EXIST. - EXISTING
℄ - FLOW LINE
FF - FRONT FACE
GFRP - GLASS FIBER REINFORCED POLYMER
H.W. - HIGH WATER
LT - LEFT
MAX. - MAXIMUM
M.C. - MECHANICAL CONNECTOR
MISC. - MISCELLANEOUS
NO. - NUMBER
NPCPP - NON-PERFORATED CORRUGATED PLASTIC PIPE
OHWM - ORDINARY HIGH WATER MARK
PCPP - PERFORATED CORRUGATED PLASTIC PIPE
RCP - ROCK CHANNEL PROTECTION
RT. - RIGHT
SPA. - SPACE
SP - SETTLEMENT PLATFORM
STA. - STATION
STD. - STANDARD
STR - STRAIGHT
T/ - TOP OF
T&B - TOP AND BOTTOM
TYP. - TYPICAL
U.N.O. - UNLESS NOTED OTHERWISE
YR. - YEAR

DESIGN AGENCY: Stantec, 1500 Lake Shore Dr., Columbus, OH 43204, (614) 486-4383
DESIGNED EDA | DRAWN JWS | REVIEWED EER | DATE 3/8/18
CHECKED MRS | REVISED | STRUCTURE FILE NUMBER 4400348

GENERAL NOTES & ESTIMATED QUANTITIES
LAW-7-0510
S.R. 7 OVER BENT CREEK

LAW-7-2.17
PID No. 75923

2 / 8

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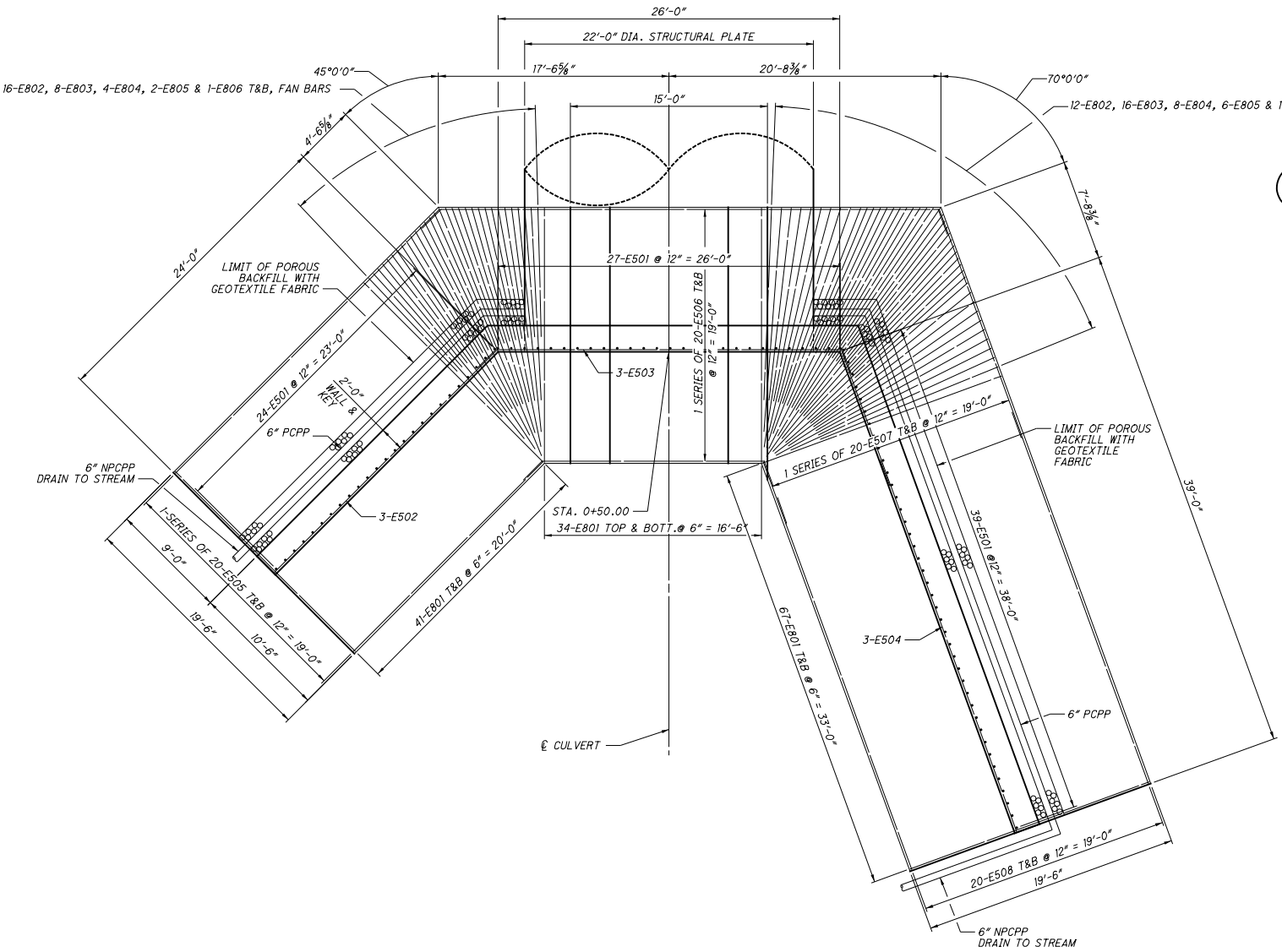

INLET FOOTING PLAN

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

NOTE:
FOR WALL REINFORCING, SEE SHEET 4/8 .

DESIGN AGENCY
Stantec
1500 Lake Shore Dr.
Columbus, OH 43204
(614) 486-4383

DESIGNED	DRAWN	REVIEWED	DATE
EDA	JWS	EER	3/8/18
CHECKED	REVISED	STRUCTURE FILE NUMBER	
MRS		4400348	

INLET FOOTING PLAN
LAW-7-0510
S.R. 7 OVER BENT CREEK

LAW-7-2.17
PID No. 75923

3 / 8

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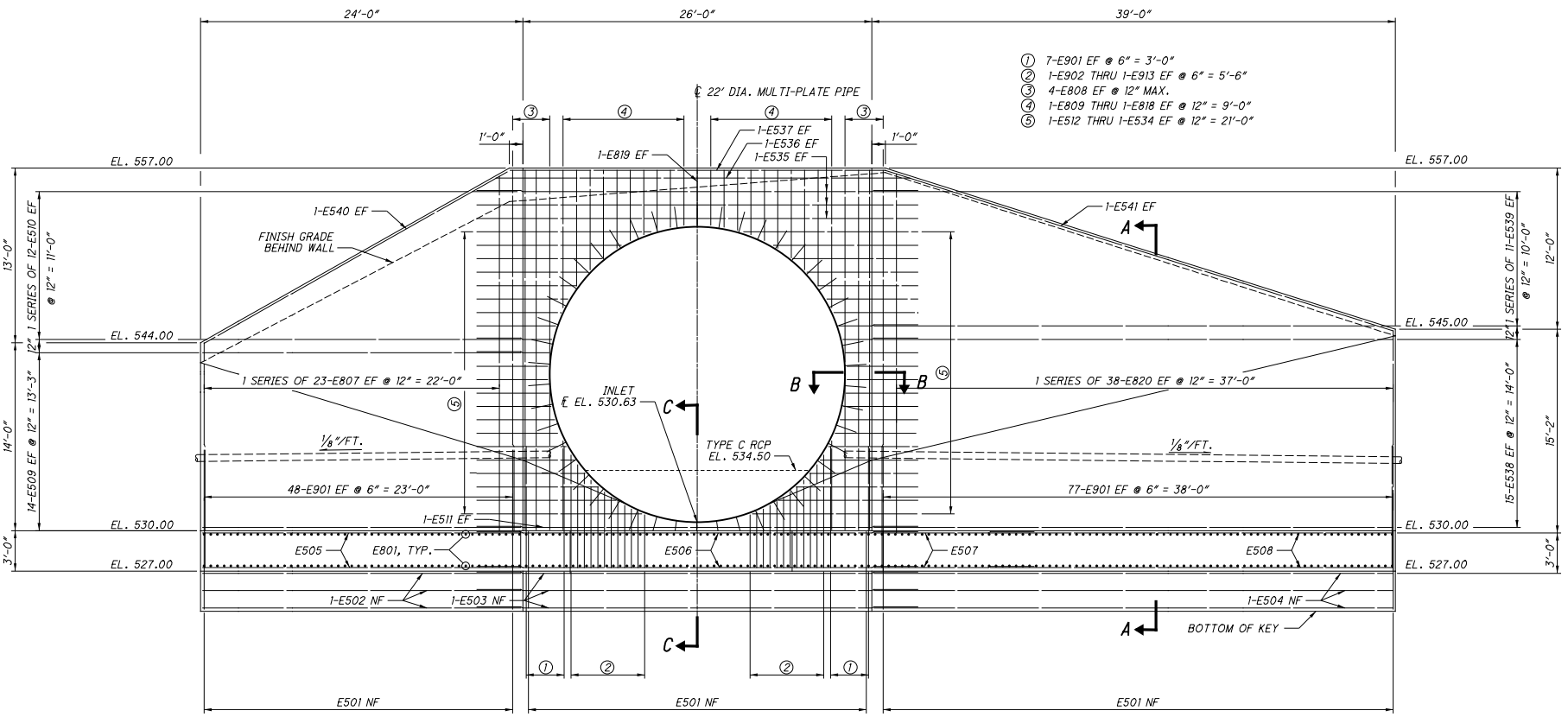

INLET HEADWALL
(DEVELOPED VIEW)

LAP LENGTHS:
#5 BARS = 3'-3"

NOTES:
1. *ANCHORS AROUND CIRCUMFERENCE OF PIPE AT HEADWALL 18" ON CENTER SHALL BE 3#4" DIA. x 19"x5" HOOK BOLTS. HOOK SHALL BE CUT OFF AS NECESSARY TO ACCOMODATE THE HEADWALL FOOTING NEAR THE INVERT OF THE PIPE. DOUBLE NUT EACH BOLT.*
2. *FOR SECTIONS A-A, B-B AND C-C, SEE SHEET* 5/8 .

DESIGN AGENCY: Stantec, 1500 Lake Shore Dr., Columbus, OH 43204, (614) 486-4383

DESIGNED EDA | DRAWN JWS | REVIEWED EER | DATE 3/8/18

CHECKED MRS | REVISED | STRUCTURE FILE NUMBER 4400348

INLET HEADWALL ELEVATION

LAW-7-0510

S.R. 7 OVER BENT CREEK

LAW-7-2.17

PID No. 75923

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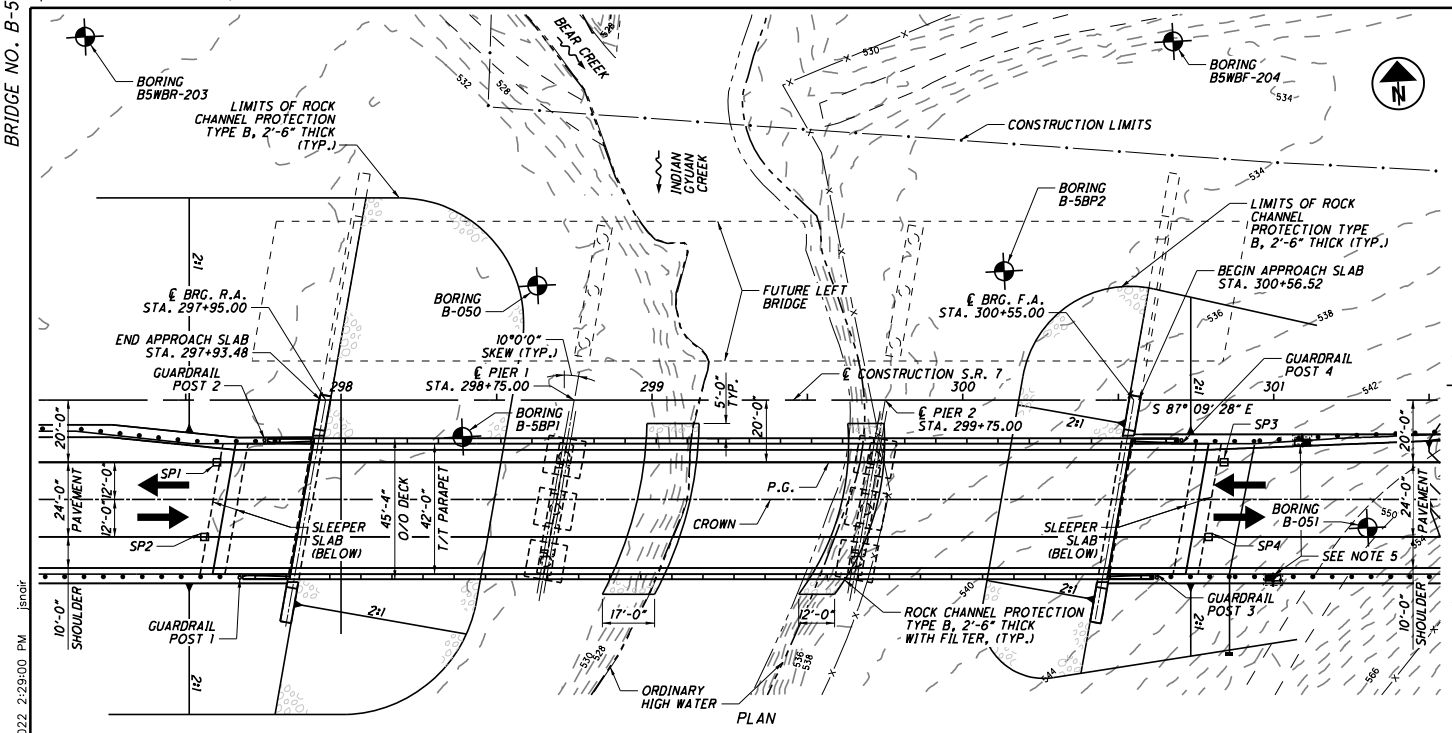
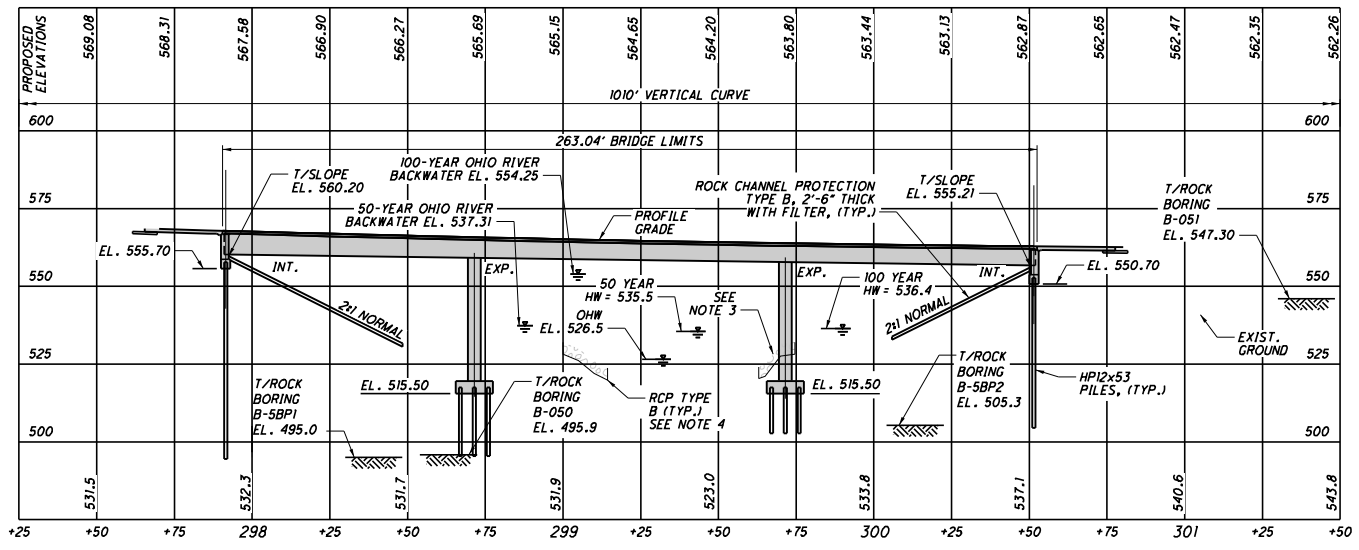
BRIDGE NO. B-5



PLAN



PROFILE ALONG PROFILE GRADE S.R. 7

NOTES

1. EARTHWORK LIMITS SHOWN ARE APPROXIMATE. ACTUAL SLOPES SHALL CONFORM TO PLAN CROSS SECTIONS.
2. FOR PRIMARY PROJECT CONTROL INFORMATION TABLE SEE ROADWAY GENERAL NOTES.
3. RESTORE EXISTING GROUND AT PIER 2 INCORPORATING ROCK CHANNEL PROTECTION SHOWN IN THE PLAN AND PROFILE.
4. PLACE ROCK CHANNEL PROTECTION AT THE WEST BANK AS SHOWN IN THE PLAN AND PROFILE.
5. BRIDGE DECK DRAINAGE IS CONTROLLED BY 2 SCUPPERS ALONG THE LEFT TOE OF PARAPET. TOTAL DECK FLOW IS CONTROLLED BY CATCH BASIN INLETS OFF THE BRIDGE AT THE EAST END.

DESIGN TRAFFIC:
2015 ADT = 10,300 2015 ADTT = 1,133
2035 ADT = 21,400 2035 ADTT = 2,354
DIRECTIONAL DISTRIBUTION = 69/31

LEGEND

PROJECT BORING LOCATION
SETTLEMENT PLATFORM

HYDRAULIC DATA

DRAINAGE AREA = 75.2 SQ. MILES
Q (50) = 7050 CFS V (50) = 8.1 FT/S
Q (100) = 8010 CFS V (100) = 8.5 FT/S
STRUCTURE CLEARS THE 50 YEAR
DESIGN HW BY 21.2 FEET.

ESTIMATED PILE LENGTHS

REAR ABUTMENT HP12x53 = 65 FT.
PIER 1 HP12x53 = 25 FT.
PIER 2 HP12x53 = 25 FT.
FORWARD ABUTMENT HP12x53 = 50 FT.

POST NUMBER	FIRST POST GUARDRAIL	STATION
1	EASTBOUND R.A.	297+67.35
2	WESTBOUND R.A.	297+75.34
3	EASTBOUND F.A.	300+62.31
4	WESTBOUND F.A.	300+70.31

VERTICAL CURVE DATA

LENGTH = 1010'
PVC STA. = 297+05.00 PVC ELEV. = 570.58
PVI STA. = 302+10.00 PVI ELEV. = 552.90
PVT STA. = 307+15.00 PVT ELEV. = 572.65
G1 = -3.50% G2 = 3.91%

PROPOSED STRUCTURE

TYPE: 3 SPAN PRESTRESSED CONCRETE I-BEAM (60" MODIFIED TYPE 4) WITH COMPOSITE REINFORCED CONCRETE DECK SUPPORTED ON INTEGRAL ABUTMENTS ON STEEL HP PILES AND CAP & COLUMN PIERS ON STEEL HP PILES.

SPANS: 78.92', 97.833', 78.92' C/C BRGS. (ALONG ℄ CONST.)

ROADWAY: 42'-0" TOE/TOE PARAPET

LOADING: HL-93 AND 60 LBS/FT² FUTURE WEARING SURFACE

WEARING SURFACE: 1" MONOLITHIC WEARING SURFACE

SKEW: 10° LT. FWD.

APPROACH SLABS: AS-1-15 AND APPLICABLE DETAILS FROM AS-2-15, 25'-0" LONG

ALIGNMENT: TANGENT

CROWN: 0.016 FT/FT

COORDINATES: LATITUDE 38° 27' 23.09" N
LONGITUDE 82° 24' 15.61" W

DESIGN AGENCY: Stantec, 1500 Lake Shore Dr., Columbus, OH 43204, (614) 486-4383
DATE: 3/26/18
REVIEWED: MRS
STRUCTURE FILE NUMBER: 4400372
DRAWN: JWS
REVISED:
DESIGNED: BSM
CHECKED: EER

LAWRENCE COUNTY
STA. 297+93.47
STA. 300+56.52

SITE PLAN
BRIDGE NO. LAW-7-0563
S.R. 7 OVER INDIAN GUYAN CREEK

LAW-7-2.17
PID No. 75923

1 / 24

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REFER TO THE FOLLOWING STANDARD BRIDGE DRAWINGS:

AS-1-15	REVISED	07-17-15
AS-2-15	REVISED	07-17-15
PSID-1-13	REVISED	10-18-13
SBR-1-13	REVISED	01-17-14

AND TO THE FOLLOWING SUPPLEMENTAL SPECIFICATION:

800	DATED	01-19-18
832	DATED	10-17-14

DESIGN SPECIFICATIONS:
THIS STRUCTURE CONFORMS TO THE "LRFD BRIDGE DESIGN SPECIFICATIONS" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 2014 INCLUDING THE 2015 AND 2016 INTERIM SPECIFICATIONS AND THE ODOT BRIDGE DESIGN MANUAL, 2007.

DESIGN LOADING:
HL-93
FUTURE WEARING SURFACE (FWS) OF 0.060 KIPS/FT²

OPERATIONAL IMPORTANCE:
A LOAD MODIFIER OF 1.00 HAS BEEN ASSUMED FOR THE DESIGN OF THIS STRUCTURE IN ACCORDANCE WITH THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, ARTICLE 1.3.5 AND THE ODOT BRIDGE DESIGN MANUAL, 2007.

DESIGN DATA:
CONCRETE CLASS QC2 - COMPRESSIVE STRENGTH 4.5 K.S.I. (SUPERSTRUCTURE)
CONCRETE CLASS QC1 - COMPRESSIVE STRENGTH 4.0 K.S.I. (SUBSTRUCTURE)

REINFORCING STEEL - MINIMUM YIELD STRENGTH 60 K.S.I.

STEEL H-PILES - A572 - YIELD STRENGTH 50 K.S.I.

CONCRETE FOR PRESTRESSED BEAMS:
COMPRESSIVE STRENGTH (FINAL) = 7000 P.S.I.
COMPRESSIVE STRENGTH (RELEASE) = 6000 P.S.I.

PRESTRESSING STRAND:
AREA = 0.217 SQ. IN.
ULTIMATE STRENGTH = 270 K.S.I.
INITIAL STRESS = 202.5 K.S.I.
(LOW RELAXATION STRANDS)

WELDED WIRE FABRIC:
YIELD STRENGTH = 70 K.S.I.

DECK PROTECTION METHOD:
2-1/2" CONCRETE COVER
EPOXY COATED REINFORCING STEEL

MONOLITHIC WEARING SURFACE:
MONOLITHIC WEARING SURFACE IS ASSUMED, FOR DESIGN PURPOSES, TO BE 1 INCH THICK.

PILE DRIVING CONSTRAINTS:
PRIOR TO DRIVING PILES, CONSTRUCT THE SPILL THROUGH SLOPES AND THE BRIDGE APPROACH EMBANKMENT BEHIND THE ABUTMENTS UP TO THE LEVEL OF THE SUBGRADE ELEVATION FOR A MINIMUM DISTANCE OF 200 FEET BEHIND EACH ABUTMENT (SEE FORWARD AND REAR APPROACH EMBANKMENT CONSTRUCTION THIS SHEET). DO NOT BEGIN THE EXCAVATION FOR THE ABUTMENT FOOTINGS AND THE INSTALLATION OF THE ABUTMENT PILES UNTIL AFTER THE ABOVE REQUIRED EMBANKMENT HAS BEEN CONSTRUCTED.

THE APPROACH SLAB EMBANKMENT SHALL BE CONSTRUCTED AND THEN UNDERGO A WAITING PERIOD OF 133 DAYS.

PILES TO BEDROCK:
DRIVE PILES TO REFUSAL ON BEDROCK. THE DEPARTMENT WILL CONSIDER REFUSAL TO BE OBTAINED WHEN THE PILE PENETRATION IS AN INCH OR LESS AFTER RECIEVING AT LEAST 20 BLOWS FROM THE PILE HAMMER. SELECT THE HAMMER SIZE TO ACHIEVE THE REQUIRED DEPTH TO BEDROCK AND REFUSAL.

THE TOTAL FACTORED LOAD IS 226 KIPS PER PILE FOR THE REAR ABUTMENT PILES.
THE TOTAL FACTORED LOAD IS 238 KIPS PER PILE FOR THE FORWARD ABUTMENT PILES.

THE TOTAL FACTORED LOAD IS 243 KIPS PER PILE FOR THE PIER 1 PILES.
THE TOTAL FACTORED LOAD IS 238 KIPS PER PILE FOR THE PIER 2 PILES.

ABUTMENT PILES:
REAR ABUTMENT PILES:
10 PILES 70 FEET LONG, ORDER LENGTH.

FORWARD ABUTMENT PILES:
10 PILES 55 FEET LONG, ORDER LENGTH.

PIER PILES:
27 PILES 30 FEET LONG, ORDER LENGTH AT PIER 1.
27 PILES 30 FEET LONG, ORDER LENGTH AT PIER 2.

PILE SPLICES:
IN LIEU OF USING THE FULL PENETRATION BUTT WELDS SPECIFIED IN CMS 507.09 TO SPLICE STEEL H-PILES, THE CONTRACTOR MAY USE A MANUFACTURED H-PILE SPLICER. FURNISH SPLICERS FROM THE FOLLOWING MANUFACTURER:

ASSOCIATED PILE AND FITTING CORPORATION
8 WOOD HOLLOW RD. PLAZA 1
PARSIPPANY, NEW JERSEY 07054

INSTALL AND WELD THE SPLICER TO THE PILE SECTIONS IN ACCORDANCE WITH THE MANUFACTURER'S WRITTEN ASSEMBLY PROCEDURE SUPPLIED TO THE ENGINEER BEFORE THE WELDING IS PERFORMED.

ITEM 509 - EPOXY COATED REINFORCING STEEL, AS PER PLAN:
IN ADDITION TO THE PROVISIONS OF ITEM 509, FIELD BEND AND/OR FIELD CUT THE REINFORCING STEEL DESIGNATED IN THE PLANS, AS NECESSARY, IN ORDER TO MAINTAIN THE REQUIRED CLEARENCES AND BAR SPACING. REPAIR ALL DAMAGE TO EPOXY COATING, AS A RESULT OF THIS WORK, ACCORDING TO 709.00.

ITEM 511 - CLASS QC2 CONCRETE WITH QC/QA, SUPERSTRUCTURE, AS PER PLAN:
FURNISH POLYSTYRENE MATERIAL MEETING THE REQUIRMENTS OF ASTM C578 TYPE IV. NEATLY CUT MATERIAL AS NECESSARY TO ALLOW FOR PROPER INSTALLATION. JOINTS AT ABUTTING PIECES SHALL BE SEALED WITH DUCT TAPE.

ITEM 518 - SCUPPERS, INCLUDING SUPPORTS, AS PER PLAN:
REFER TO SHEET 17/24 FOR SCUPPER LOCATIONS AND SHEET 18/24 FOR DETAILS AND NOTES.

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

AN EIGHT WHEEL FINISHING MACHINE WITH A MAXIMUM WHEEL LOAD OF 2.37 KIPS.

A MINIMUM OUT-TO-OUT WHEEL SPACING AT EACH END OF THE MACHINE OF 103".

A MAXIMUM SPACING OF OVERHANG FALSEWORK BRACKETS OF 48 IN.

A MAXIMUM DISTANCE FROM THE CENTERLINE OF THE FASCIA GIRDER TO THE FACE OF THE SAFETY HANDRAIL OF 65".

FORWARD AND REAR APPROACH EMBANKMENT CONSTRUCTION:
THE APPROACH EMBANKMENTS SHALL BE CONSTRUCTED AND THEN UNDERGO A WAITING PERIOD OF 133 DAYS PRIOR TO DRIVING PILES.

APPROACH EMBANKMENTS SHALL BE REINFORCED WITH PRIMARY INTERNAL REINFORCEMENT FOR STABILIZATION AS PER RECOMMENDATIONS BY STANTEC.

SEE ROADWAY AND SLOPE REINFORCEMENT PLANS FOR DETAILS AND NOTES REGARDING EMBANKMENT CONSTRUCTION.

MSE (MECHANICALLY STABILIZED EARTH) WALLS SHALL NOT BE PROPOSED AS AN ALTERNATIVE DESIGN IN ANY VALUE ENGINEERING STUDY DUE TO GEOTECHNICAL CONCERNS.

THE CONTRACTOR SHALL REVIEW THE BORING LOGS, SUBSURFACE INVESTIGATION, AND THE ROADWAY GENERAL NOTES PRIOR TO COMMENCING WORK ON THE BRIDGE.

IN ORDER TO MINIMIZE SIGNIFICANT DAMAGE TO THE FILL EMBANKMENT REINFORCEMENT DURING THE DRIVING OF ABUTMENT PILES H-PILES, A SINGLE-SHEET "PUNCHED" TYPE REINFORCEMENT SHALL BE USED. THIS TYPE OF REINFORCEMENT WILL BE EASILY PENETRATED WITH A DRIVEN PILE, WHEREAS A WELDED TYPE REINFORCEMENT WILL BE SIGNIFICANTLY DAMAGED DURING PILE DRIVING.

THE CONTRACTOR SHALL SUBMIT PILE DRIVING HAMMER SPECIFICATIONS TO THE GEOTECHNICAL ENGINEER OF RECORD, PRIOR TO PILE INSTALLATION FOR THE ENGINEER'S APPROVAL. IN ACCORDANCE WITH ODOT ITEM 507, THE PILE HAMMER SHALL BE OF ADEQUATE SIZE TO DRIVE THE PILES THROUGH THE INTERNALLY REINFORCED COMPACTED EMBANKMENT AND AT THE SAME TIME NOT TO DAMAGE THE PILES DURING DRIVING OR RETAPPING.

THE MATERIAL THAT WILL BE USED FOR EMBANKMENT FILL CONSTRUCTION WILL BE COMPOSED OF THE SOIL AND ROCK REMOVED FROM THE LARGE CUT SECTIONS. BASED ON THE BORINGS PERFORMED IN THE PROPOSED CUT AREAS, THIS MATERIAL WILL CONSIST PRIMARILY OF NON-DURABLE SHALE, AND TO A MUCH LESSER EXTENT, DURABLE SHALE, SANDSTONE AND SILTSTONE. WHERE PILES ARE TO BE DRIVEN THROUGH THE EMBANKMENT, THE EMBANKMENT FILL MATERIAL SHALL BE CLEAN OF DURABLE ROCK THAT MAY IMPEDE PILE DRIVING. THE EMBANKMENT FILL MATERIAL SHALL BE COMPACTED IN ACCORDANCE WITH ODOT ITEM 203. THE USE OF WATER TO AID IN BREAKING DOWN LARGE PARTICLES FOR NON-DURABLE SHALE WILL BE REQUIRED AS PER ODOT ITEM 203.06 B.

U:\1736\08714\LAW\75923\structures\LAW007_0563C\sheets\007_0563RGN001.dgn 6/2/2022 2:29:02 PM jsnair

DESIGN AGENCY: Stantec, 1500 Lake Shore Dr. Columbus, OH 43204, (614) 486-4383
DATE: 3/26/18
REVIEWED: MRS
DRAWN: JWS
DESIGNED: BSM
CHECKED: EER
REVISED:
STRUCTURE FILE NUMBER: 4400372

GENERAL NOTES 1
BRIDGE NO. LAW-7-0563
S.R. 7 OVER INDIAN GUYAN CREEK

LAW-7-2.17
PID No. 75923

2/24

ITEM SPECIAL - SETTLEMENT PLATFORM:

DESCRIPTION: THIS ITEM CONSISTS OF FURNISHING, CONSTRUCTING, AND MAINTAINING SETTLEMENT PLATFORMS AND OBTAINING SETTLEMENT READINGS AS REQUIRED BY THE PLANS OR AS DIRECTED BY THE ENGINEER. SEE SETTLEMENT PLATFORM DETAIL THIS SHEET. AT THE OPTION AND EXPENSE OF THE CONTRACTOR, ADDITIONAL SETTLEMENT PLATFORMS MAY BE INSTALLED AT LOCATIONS APPROVED BY THE ENGINEER. SETTLEMENT READINGS SHALL BE TAKEN WEEKLY BEGINNING WITH THE FIRST WEEK FOLLOWING PLACEMENT OF EACH PLATFORM AND DURING ANY SPECIFIED WAITING PERIOD. READINGS SHALL BE TAKEN MONTHLY DURING ANY CONSOLIDATION OR OFF-SEASON TIMES. THE READINGS SHALL BE PLOTTED ON GRAPH PAPER PRESENTING DEFORMATION (ON THE NEGATIVE Y-AXIS) AND FILL HEIGHT (ON THE POSITIVE Y-AXIS) VERSUS TIME (ON THE X-AXIS). A COPY OF EACH CUMULATIVE PLOT SHALL BE SENT TO ODOT, CO, CONSTRUCTION MANAGEMENT/CONSTRUCTION ADMINISTRATION, GEOTECHNICAL AND EARTHWORK ENGINEER AND ODOT, CO, OFFICE OF GEOTECHNICAL ENGINEERING, FOUNDATIONS AND RETAINING WALLS ENGINEER, AFTER EACH SETTLEMENT READING IS RECORDED.

MATERIAL: SOUND LUMBER SUCH AS ¾" EXTERIOR GRADE PLYWOOD SHALL BE USED FOR THE BASE. THE PIPE SHALL BE 2½" STANDARD BLACK PIPE WITH THREADED FITTINGS AS SHOWN ON THE PLANS. A STEEL PLATE 36" X 36" X ⅛" MAY BE SUBSTITUTED FOR THE LUMBER FOR THE PLATFORMS, AT THE CONTRACTOR'S OPTION.

CONSTRUCTION METHODS: THE PLATFORM SHALL CONFORM TO THE SETTTLEMENT PLATFORM DETAILS SHOWN ON THIS SHEET. THE PLATFORM SHALL BE SET ON A LEVEL SURFACE. THE PIPE SHALL BE FIRMLY SECURED TO THE PLATFORM AND SHALL BE MAINTAINED IN A PLUMB POSITION DURING THE PLACEMENT OF THE EMBANKMENT. THE PIPE SHALL BE MARKED AT INTERVALS TO FACILITATE MEASUREMENT OF THE DEPTH OF FILL. THE CONTRACTOR SHALL STOP WORK IN ANY LOCATION WHERE THE SETTLEMENT PLATFORM HAS BEEN DISTURBED OR DAMAGED. PLATFORMS OR PIPES DAMAGED OR DISPLACED DURING CONSTRUCTION SHALL BE RESTORED TO THEIR PROPER CONDITION AT THE CONTRACTOR'S EXPENSE.

SETTLEMENT PLATFORMS SHALL BE PLACED AT THE FOLLOWING LOCATIONS:

I.D.	STATION	OFFSET
SP1	297+60	20' RT.
SP2	297+56	44' RT.
SP3	300+84	20' RT.
SP4	300+79	44' RT.

PRIOR TO PAVING, THE TOP OF THE SETTLEMENT PLATFORM PIPE SHALL BE CUT OFF TWO FEET BELOW THE FINISHED SURFACE OF THE SUBGRADE OR FINISHED GROUND SURFACE, WHICHEVER IS APPLICABLE.

REFER TO ODOT GEOTECHNICAL BULLETIN GB4 "GUIDELINES FOR THE USE OF GEOTECHNICAL INSTRUMENTATION" FOR ADDITIONAL INSTALLATION AND MONITORING INSTRUCTION.

WAITING PERIOD CRITERIA: THE ENGINEER WILL CONSIDER THE WAITING PERIOD COMPLETE WHEN CONSECUTIVE SETTLEMENT READINGS, RECORDED AFTER EMBANKMENT CONSTRUCTION IS COMPLETE AND AT LEAST ONE WEEK (168 HOURS) APART, RESULT IN ELEVATION DIFFERENCES EQUAL TO OR LESS THAN ⅛ INCH. THE ANTICIPATED WAITING PERIOD IS 133 CALENDAR DAYS.

IF SETTLEMENT RATES EXCEED ¾ INCH PER MONTH AFTER EMBANKMENT CONSTRUCTION HAS BEEN COMPLETE FOR 45 CALENDAR DAYS. REMAINING CONSTRUCTION, INCLUDING ANY NECESSARY CORRECTIVE MEASURES, MAY PROCEED ONLY AT THE DIRECTION OF THE ENGINEER.

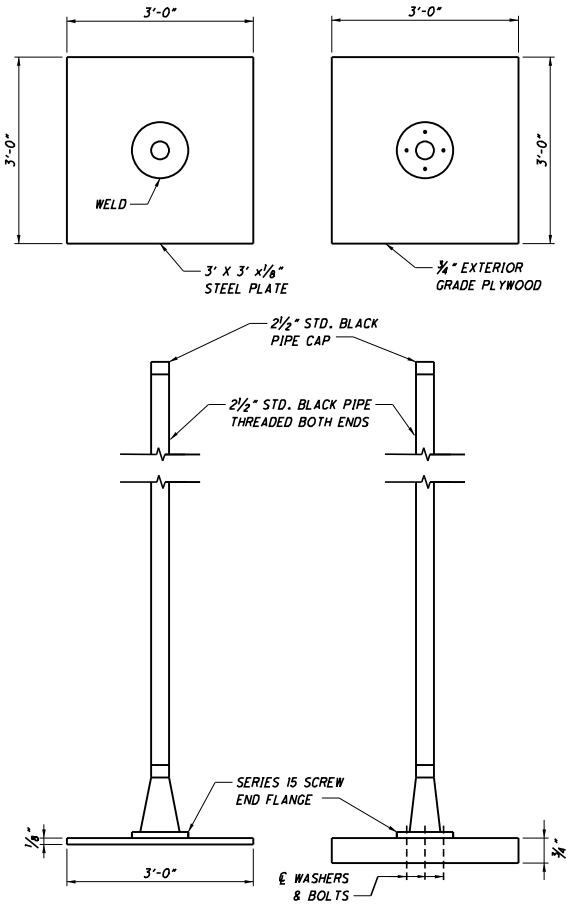
METHOD OF MEASUREMENT, THE NUMBER OF SETTLEMENT PLATFORMS TO BE PAID FOR SHALL BE THE ACTUAL NUMBER OF SETTLEMENT PLATFORMS COMPLETED, MAINTAINED, AND ACCEPTED BY THE ENGINEER.

THE DEPARTMENT WILL CONSIDER VIBRATING WIRE SETTLEMENT MONITORING PLATFORMS IN LIEU OF THE CONVENTIONAL SETTLEMENT PLATFORMS. THE CONTRACTOR SHOULD PROVIDE DETAILS OF THE PROPOSED VIBRATING WIRE SETTLEMENT PLATFORMS AS WELL AS DESIGN DRAWINGS OF THE PROPOSED PLATFORM AND CABLING LAYOUT TO THE ENGINEER AT LEAST 30 DAYS PRIOR TO CONSTRUCTION. THE DEPARTMENT WILL REQUIRE 10 WORKING DAYS FOR REVIEW AND APPROVAL. THE DESIGN DRAWINGS SHOULD ILLUSTRATE THE PROPOSED SETTLEMENT VIBRATING WIRE SETTLEMENT PLATFORM LOCATIONS WITH ALL EXISTING AND PROPOSED SITE FEATURES TO VERIFY THE PROPOSED CABLING WILL NOT CONFLICT WITH EXISTING FACILITIES, PROPOSED FACILITIES OR UTILITIES. NO ADDITIONAL PAYMENT WILL BE PROVIDED IF THE CONTRACTOR ELECTS TO UTILIZE VIBRATING WIRE SETTLEMENT PLATFORMS.

BASIS OF PAYMENT: PAYMENT SHALL BE MADE AT THE CONTRACT UNIT PRICE EACH FOR "ITEM SPECIAL - SETTLEMENT PLATFORM" WHICH IS COMPENSATION FOR CONSTRUCTING, MAINTAINING, AND MONITORING THE SETTLEMENT PLATFORMS INCLUDING FURNISHING ALL LABOR, EQUIPMENT, MATERIALS, AND INCIDENTALS NECESSARY TO COMPLETE THE WORK. PAYMENT SHALL NOT BE MADE FOR SETTLEMENT PLATFORMS WHICH BECOME USELESS DUE TO DAMAGE CAUSED BY THE CONTRACTOR'S OPERATIONS. SEE DETAIL THIS SHEET.

ABBREVIATIONS:

℄	- CENTERLINE
ABUT.	- ABUTMENTS
BF	- BACK FACE
BOT.	- BOTTOM
BRG.	- BEARING
CIP	- CAST IN PLACE
CJ	- CONSTRUCTION JOINT
CONT.	- CONTINUED
CONST.	- CONSTRUCTION
DIA.	- DIAMETER
EF	- EACH FACE
EL.	- ELEVATION
EQ.	- EQUAL
EXIST.	- EXISTING
EXP.	- EXPANSION
F.A.	- FORWARD ABUTMENT
FF	- FRONT FACE
INT.	- INTERMEDIATE
JT.	- JOINT
LT	- LEFT
M.C.	- MECHANICAL CONNECTOR
NPCPP	- NON - PERFORATED CORRUGATED PLASTIC PIPE
PCPP	- PERFORATED CORRUGATED PLASTIC PIPE
P.G.	- PROFILE GRADE
R.A.	- REAR ABUTMENT
RCP	- ROCK CHANNEL PROTECTION
RT.	- RIGHT
SPA.	- STATION
SP	- SETTLEMENT PLATFORM
STA.	- STATION
STR	- STRAIGHT
T/	- TOP OF
T/T	- TOE TO TOE
T&B	- TOP AND BOTTOM
TYP.	- TYPICAL
U.N.O.	- UNLESS NOTED OTHERWISE



NOTES:

1. SETTLEMENT PLATFORMS SHALL BE PLACED AT THE LOCATION INDICATED IN THE PLANS, UNLESS ORTHERWISE DIRECT BY THE ENGINEER.

SETTLEMENT PLATFORM
(NOT TO SCALE)

DESIGN AGENCY: Stantec, 1500 Lake Shore Dr., Columbus, OH 43204, (614) 486-4383
DESIGNED BSM | DRAWN JWS | REVIEWED MRS | DATE 3/26/18
CHECKED EER | REVISED | STRUCTURE FILE NUMBER 4400372

GENERAL NOTES 2
BRIDGE NO. LAW-7-0563
S.R. 7 OVER INDIAN GUYAN CREEK

LAW-7-2.17
PID No. 75923

3 / 24

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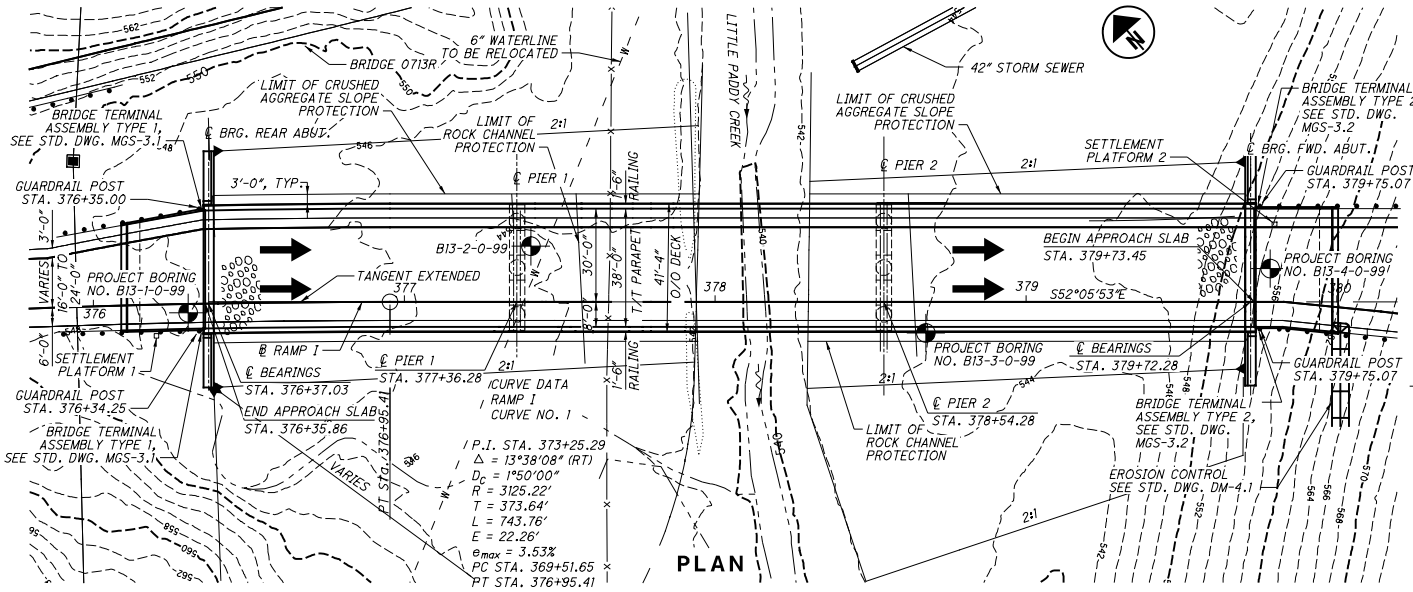
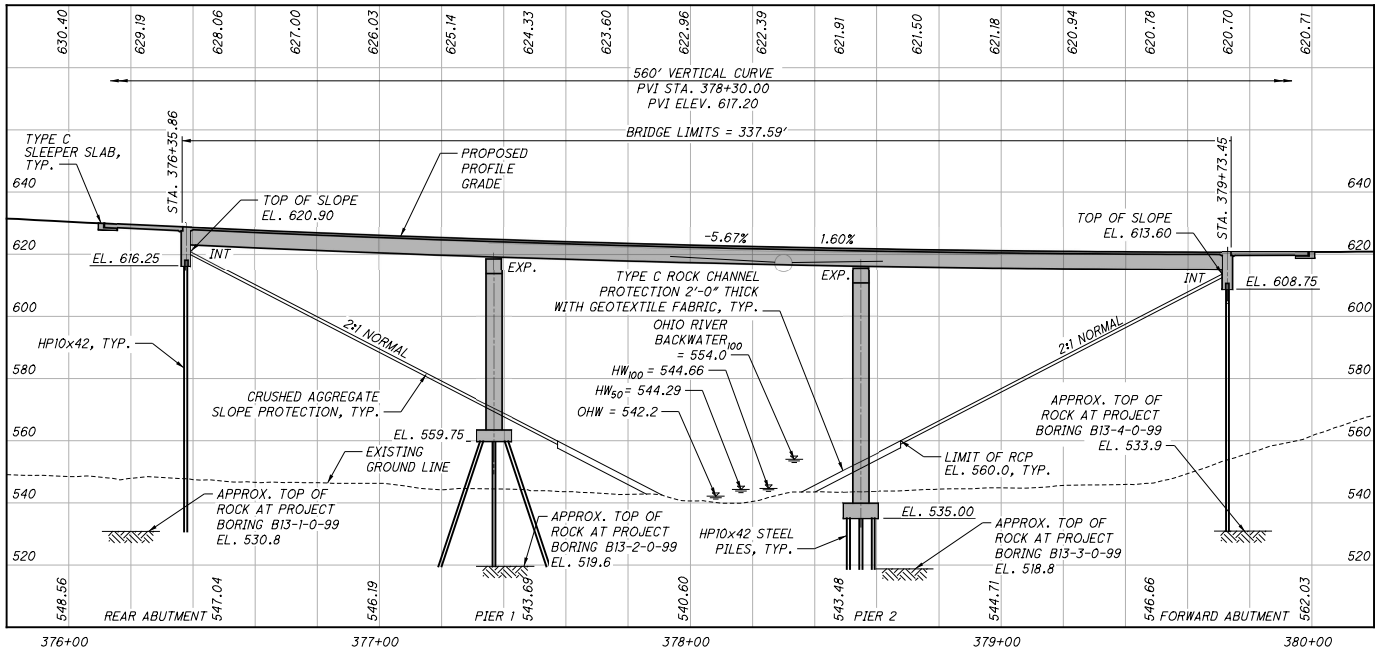




BENCHMARK DATA

	EASTING	NORTHING	ELEVATION
BM #1	1999157.677	167390.5880	804.00
BM #2	2004654.695	163488.2738	951.00

FOR ADDITIONAL BENCHMARK INFORMATION. SEE ROADWAY PLAN SHEET ⊖

NOTES

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

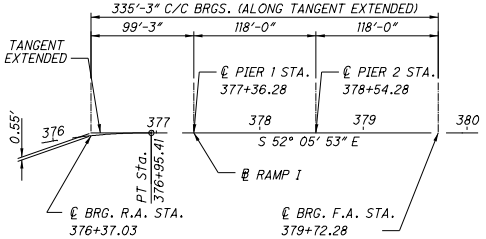
DESIGN TRAFFIC:
2028 ADT = 3,300 2028 ADTT = 231
2048 ADT = 5,100 2048 ADTT = 357
ALL TRAFFIC EASTBOUND ON THIS EXIT RAMP

LEGEND

PROJECT BORING LOCATION

HYDRAULIC DATA

DRAINAGE AREA = 1.74 SQ. MILES
Q (50) = 954 CFS V (50) = 5.42 FT/S
Q (100) = 1160 CFS V (100) = 5.87 FT/S
STRUCTURE CLEARS THE 50 YEAR
DESIGN HW BY 70.81 FEET.



GEOMETRIC LAYOUT

ESTIMATED LENGTH OF PILING	
REAR ABUT.	90 FT.
PIER 1	50 FT.
PIER 2	25 FT.
FWD. ABUT.	80 FT.

PROPOSED STRUCTURE

TYPE: PRESTRESSED CONCRETE I-BEAMS (WF54-49) WITH COMPOSITE CONCRETE SLAB SUPPORTED BY INTEGRAL ABUTMENTS AND CAP & COLUMN PIERS ON PILES
SPANS: 98'-2", 115'-10", 116'-11" C/C BEARINGS (MEASURED ALONG TANGENT EXTENDED)
ROADWAY: 38'-0" TOE/TOE BRIDGE RAILING
VEHICULAR LIVE LOAD: HL-93
SKEW: 0°00'00" (WITH RESPECT TO TANGENT EXTENDED)
FUTURE WEARING SURFACE: 0.060 KIP/FT^2
APPROACH SLABS: 25' LONG (T=15") AS-1-15 (MODIFIED) & AS-2-15, TYPE C
ALIGNMENT: 1°50'00" CURVE (RT) - TANGENT
SUPERELEVATION: VARIES (.0353 MAX)
COORDINATES: LATITUDE N 38° 26' 56.01"
LONGITUDE W 82° 22' 47.56"
DECK AREA: 13,954 SF

DESIGN AGENCY
Stantec Consulting Services Inc.
1500 Lake Shore Drive, Suite 100
Columbus, Ohio 43204
(614) 486-4383

DATE 5/18/2022
REVIEWED BSM
STRUCTURE FILE NUMBER 4400496
DRAWN ALH
REVISED XXX
DESIGNED EDA
CHECKED MRS

LAWRENCE COUNTY
STA. 376+35.86
STA. 379+73.45

SITE PLAN
BRIDGE NO. LAW-7-0711P
RAMP I OVER LITTLE PADDY CREEK

LAW-7-2.17
PID No. 75923

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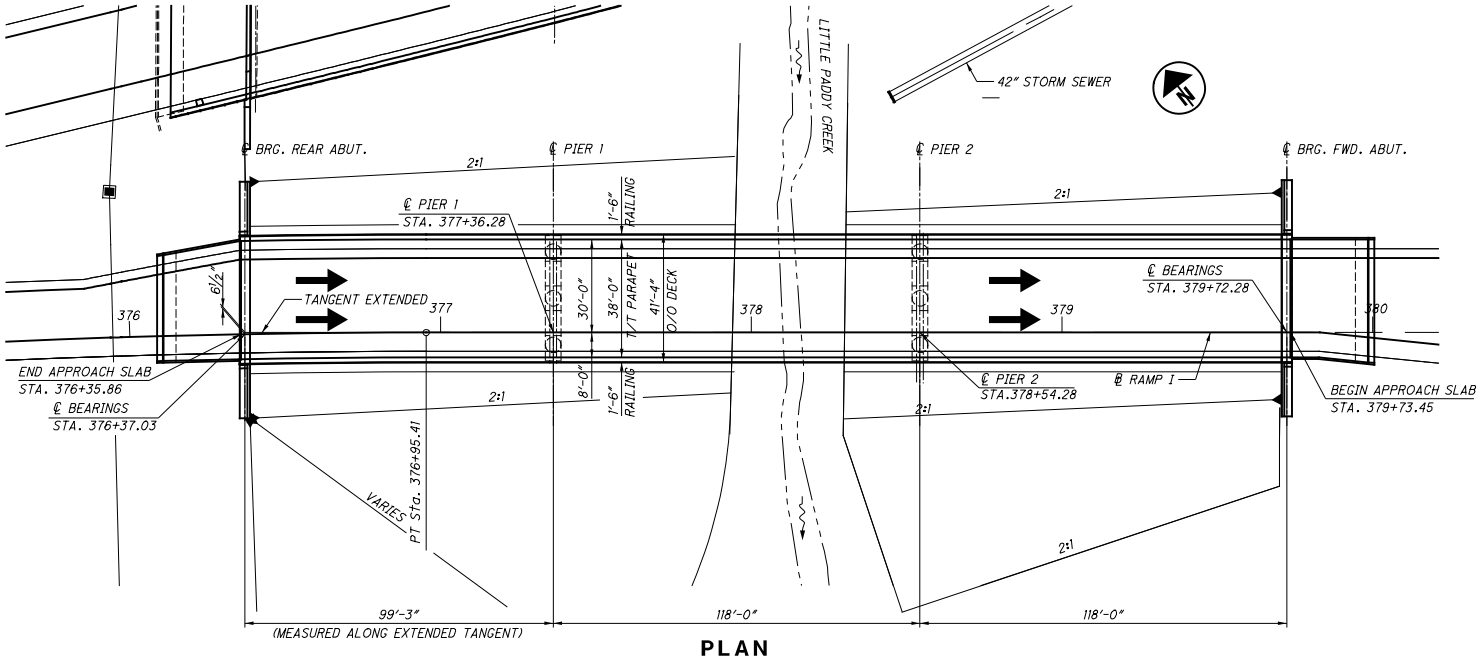

PLAN

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DESIGN AGENCY
Stantec Consulting Services Inc.
1500 Lake Shore Drive, Suite 100
Columbus, Ohio 43204
(614) 486-4383

DESIGNED	DRAWN	REVIEWED	DATE
EDA	ALH	BSM	5/18/2022
CHECKED	REVISED	STRUCTURE FILE NUMBER	
MRS	XXX	4400496	

GENERAL PLAN
BRIDGE NO. LAW-7-0711
RAMP I OVER LITTLE PADDY CREEK

LAW-7-2.17
PID No. 75923

2 / 30

0
0

STANDARD DRAWINGS AND SUPPLEMENTAL SPECIFICATIONS

REFER TO THE FOLLOWING STANDARD BRIDGE DRAWING(S):

AS-1-15	REVISED	07-17-15
AS-2-15	REVISED	01-18-19
PSID-1-13	REVISED	01-15-21
SBR-1-20	DATED	01-17-20

AND TO THE FOLLOWING SUPPLEMENTAL SPECIFICATION

800	DATED	01-15-21

DESIGN SPECIFICATIONS

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

OPERATIONAL IMPORTANCE

A LOAD MODIFIER OF 1.0 HAS BEEN ASSUMED FOR THE DESIGN OF THIS STRUCTURE IN ACCORDANCE WITH THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, ARTICLE 1.3.5 AND THE ODOT BRIDGE DESIGN MANUAL, 2020

DESIGN LOADING

DESIGN LOADING: HL-93

FUTURE WEARING SURFACE (FWS) OF 0.060 KIPS/SQ.FT.

DESIGN DATA

CONCRETE CLASS QC2 WITH QC/QA
-COMPRESSIVE STRENGTH 4.5 KSI (SUPERSTRUCTURE)

CONCRETE CLASS QC1 WITH QC/QA
-COMPRESSIVE STRENGTH 4.0 KSI (PIERS)

CONCRETE CLASS QC4 WITH QC/QA
-COMPRESSIVE STRENGTH 4.0 KSI (SUBSTRUCTURE)

REINFORCING STEEL
-MINIMUM YIELD STRENGTH 60 KSI

STEEL H-PILES - ASTM A572 - YIELD STRENGTH 50 KSI

STRUCTURAL STEEL - ASTM A709 GRADE 50
-YIELD STRENGTH 50 KSI

CONCRETE FOR PRESTRESSED BEAMS:
COMPRESSIVE STRENGTH (FINAL) - 7 KSI
COMPRESSIVE STRENGTH (RELEASE) - 6 KSI

WELDED WIRE FABRIC:
YIELD STRENGTH - 70 KSI

PRESTRESSING STRAND:
AREA = 0.217 SQ.IN.
ULTIMATE STRENGTH = 270 KSI
INITIAL STRESS = 202.5 KSI (LOW RELAXATION STRANDS)

MONOLITHIC WEARING SURFACE

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

PILE DRIVING CONSTRAINTS

PRIOR TO DRIVING PILES, CONSTRUCT THE SPILL THROUGH SLOPES AND THE BRIDGE APPROACH EMBANKMENT BEHIND THE ABUTMENTS UP TO THE LEVEL OF THE SUBGRADE ELEVATION FOR A MINIMUM DISTANCE OF 200 FEET BEHIND EACH ABUTMENT. DO NOT BEGIN THE EXCAVATION FOR THE ABUTMENT AND PIER FOOTINGS AND THE INSTALLATION OF THE ABUTMENT AND PIER PILES UNTIL AFTER THE ABOVE REQUIRED EMBANKMENT HAS BEEN CONSTRUCTED AND A 128 CALENDAR DAY WAITING PERIOD HAS ELAPSED. THE ENGINEER MAY ADJUST THE LENGTH OF THE WAITING PERIOD BASED ON SETTLEMENT PLATFORM READINGS. AFTER THE SPECIFIED WAITING PERIOD HAS ELAPSED, DRIVE THE ABUTMENT AND PIER 1 AND 2 PILES TO REFUSAL ON BEDROCK.

PILES TO BEDROCK

DRIVE PILES TO REFUSAL ON BEDROCK THE DEPARTMENT WILL CONSIDER REFUSAL TO BE OBTAINED WHEN THE PILE PENETRATION IS AN INCH OR LESS AFTER RECEIVING AT LEAST 20 BLOWS FROM THE PILE HAMMER. SELECT THE HAMMER SIZE TO ACHIEVE THE REQUIRED DEPTH TO BEDROCK AND REFUSAL.

THE TOTAL FACTORED LOAD IS 177 KIPS PER PILE FOR THE REAR ABUTMENT PILES AND 203 KIPS PER PILE FOR THE FORWARD ABUTMENT PILES. NO ADDITIONAL LOADING DUE TO DOWNDRAG IS ANTICIPATED AS LONG AS THE WAITING PERIOD FOR THE APPROACH EMBANKMENTS IS OBSERVED. THE TOTAL FACTORED LOAD IS 181 KIPS PER PILE FOR THE PIER 1 PILES AND 230 KIPS PER PILE FOR THE PIER 2 PILES .

REAR ABUTMENT PILES:
10 HP 10X42 PILES 95 FEET LONG, ORDER LENGTH

PIER 1 PILES:
27 HP 10X42 PILES 55 FEET LONG, ORDER LENGTH

PIER 2 PILES:
27 HP 10X42 PILES 30 FEET LONG, ORDER LENGTH

FORWARD ABUTMENT PILES:
10 HP 10X42 PILES 85 FEET LONG, ORDER LENGTH

PILE SPLICES

IN LIEU OF USING THE FULL PENETRATION BUTT WELDS SPECIFIED IN CMS 507.09 TO SPLICE STEEL H-PILES, THE CONTRACTOR MAY USE A MANUFACTURED H-PILE SPLICER. FURNISH SPLICERS FROM THE FOLLOWING MANUFACTURER:

ASSOCIATED PILE AND FITTING CORPORATION
8 WOOD HOLLOW RD. PLAZA 1
PARSIPPANY, NEW JERSEY 07054

INSTALL AND WELD THE SPLICER TO THE PILE SECTIONS IN ACCORDANCE WITH THE MANUFACTURER'S WRITTEN ASSEMBLY PROCEDURE SUPPLIED TO THE ENGINEER BEFORE THE WELDING IS PERFORMED.

DECK PLACEMENT DESIGN ASSUMPTIONS

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

AN EIGHT WHEEL FINISHING MACHINE WITH A MAXIMUM WHEEL LOAD OF 2.4 KIPS.

A MINIMUM OUT-TO-OUT WHEEL SPACING AT EACH END OF THE MACHINE OF 103".

A MAXIMUM SPACING OF OVERHANG FALSEWORK BRACKETS OF 48 IN.

A MAXIMUM DISTANCE FROM THE CENTERLINE OF THE FASCIA GIRDER TO THE FACE OF THE SAFETY HANDRAIL OF 65".

APPROACH EMBANKMENT CONSTRUCTION:

THE APPROACH EMBANKMENTS SHALL BE CONSTRUCTED AND THEN UNDERGO A WAITING PERIOD OF 128 DAYS PRIOR TO DRIVING PILES.

SEE SHEETS XX FOR SLOPE REINFORCEMENT DETAILS AND NOTES REGARDING EMBANKMENT CONSTRUCTION.

ABBREVIATIONS:

ABUT	-	ABUTMENT
APPROX.	-	APPROXIMATE
BM	-	BENCHMARK
BRG.	-	BEARING
B/	-	BOTTOM OF
℄	-	CENTERLINE
CONC.	-	CONCRETE
CLR.	-	CLEARANCE
CONST.	-	CONSTRUCTION
DIA.	-	DIAMETER
DWG.	-	DRAWING
EF	-	EACH FACE
EL.	-	ELEVATION
EQ.	-	EQUAL
EST.	-	ESTIMATED
EXIST.	-	EXISTING
EXP.	-	EXPANSION
F.A.	-	FORWARD ABUTMENT
FF	-	FAR FACE
FNDN.	-	FOUNDATION
FTG.	-	FOOTING
FWD.	-	FORWARD
F/F	-	FACE TO FACE
HLMR	-	HIGH LOAD MULTI-ROTATIONAL BEARINGS
JT.	-	JOINT
LT.	-	LEFT
MAX.	-	MAXIMUM
MIN.	-	MINIMUM
NF	-	NEAR FACE
NO.	-	NUMBER
O/O	-	OUT TO OUT
PAVT.	-	PAVEMENT
PEJF	-	PREFORMED EXPANSION JOINT FILLER
R.A.	-	REAR ABUTMENT
REF.	-	REFERENCE
RF	-	RIGHT FORWARD
REINF.	-	REINFORCED
RT.	-	RIGHT
SP.	-	SETTLEMENT PLATFORM
SPA.	-	SPACE
S.R.	-	STATE ROUTE
STA.	-	STATION
STD.	-	STANDARD
TYP.	-	TYPICAL
T/	-	TOP OF
T/T	-	TOE TO TOE
T&B	-	TOP AND BOTTOM
VAR.	-	VARIES
REQ'D	-	REQUIRED

DESIGN AGENCY
Stantec Consulting Services Inc.
1500 Lake Shore Drive, Suite 100
Columbus, Ohio 43204
(614) 486-4383

DESIGNED EDA | DRAWN ALH | REVIEWED BSM | DATE 5/18/2022
CHECKED MRS | REVISED | STRUCTURE FILE NUMBER 44004961

GENERAL NOTES
BRIDGE NO. LAW-7-0711
RAMP I OVER LITTLE PADDY CREEK

LAW-7-2.17
PID No. 75923

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ITEM SPECIAL - SETTLEMENT PLATFORM:

DESCRIPTION: THIS ITEM CONSISTS OF FURNISHING, CONSTRUCTING, AND MAINTAINING SETTLEMENT PLATFORMS AND OBTAINING SETTLEMENT READINGS AS REQUIRED BY THE PLANS OR AS DIRECTED BY THE ENGINEER. SEE SETTLEMENT PLATFORM DETAIL THIS SHEET. AT THE OPTION AND EXPENSE OF THE CONTRACTOR, ADDITIONAL SETTLEMENT PLATFORMS MAY BE INSTALLED AT LOCATIONS APPROVED BY THE ENGINEER. SETTLEMENT READINGS SHALL BE TAKEN WEEKLY BEGINNING WITH THE FIRST WEEK FOLLOWING PLACEMENT OF EACH PLATFORM. THE READINGS SHALL BE PLOTTED ON GRAPH PAPER PRESENTING DEFORMATION (ON THE NEGATIVE Y-AXIS) AND FILL HEIGHT (ON THE POSITIVE Y-AXIS) VERSUS TIME (ON THE X-AXIS). A COPY OF EACH CUMULATIVE PLOT SHALL BE SENT TO ODOT, CO, CONSTRUCTION MANAGEMENT/CONSTRUCTION ADMINISTRATION, GEOTECHNICAL AND EARTHWORK ENGINEER AND ODOT, CO, OFFICE OF GEOTECHNICAL ENGINEERING, FOUNDATIONS AND RETAINING WALLS ENGINEER, AFTER EACH SETTLEMENT READING IS RECORDED.

MATERIAL: SOUND LUMBER SUCH AS ¾" EXTERIOR GRADE PLYWOOD SHALL BE USED FOR THE BASE. THE PIPE SHALL BE 2½" STANDARD BLACK PIPE WITH THREADED FITTINGS AS SHOWN ON THE PLANS. A STEEL PLATE 36" X 36" X ⅛" MAY BE SUBSTITUTED FOR THE LUMBER FOR THE PLATFORMS, AT THE CONTRACTOR'S OPTION.

CONSTRUCTION METHODS: THE PLATFORM SHALL CONFORM TO THE SETTLEMENT PLATFORM DETAILS SHOWN ON THIS SHEET. THE PLATFORM SHALL BE SET ON A LEVEL SURFACE. THE PIPE SHALL BE FIRMLY SECURED TO THE PLATFORM AND SHALL BE MAINTAINED IN A PLUMB POSITION DURING THE PLACEMENT OF THE EMBANKMENT. THE PIPE SHALL BE MARKED AT INTERVALS TO FACILITATE MEASUREMENT OF THE DEPTH OF FILL. THE CONTRACTOR SHALL STOP WORK IN ANY LOCATION WHERE THE SETTLEMENT PLATFORM HAS BEEN DISTURBED OR DAMAGED. PLATFORMS OR PIPES DAMAGED OR DISPLACED DURING CONSTRUCTION SHALL BE RESTORED TO THEIR PROPER CONDITION AT THE CONTRACTOR'S EXPENSE.

SETTLEMENT PLATFORMS SHALL BE PLACED AT THE FOLLOWING LOCATIONS:

I.D.	STATION	OFFSET
SP1	376+20	10' RIGHT
SP2	379+80	25' LEFT

PRIOR TO PAVING, THE TOP OF THE SETTLEMENT PLATFORM PIPE SHALL BE CUT OFF TWO FEET BELOW THE FINISHED SURFACE OF THE SUBGRADE OR FINISHED GROUND SURFACE, WHICHEVER IS APPLICABLE.

REFER TO ODOT GEOTECHNICAL BULLETIN GB4 "GUIDELINES FOR THE USE OF GEOTECHNICAL INSTRUMENTATION" FOR ADDITIONAL INSTALLATION AND MONITORING INSTRUCTION.

WAITING PERIOD CRITERIA:
THE ENGINEER WILL CONSIDER THE WAITING PERIOD COMPLETE WHEN CONSECUTIVE SETTLEMENT READINGS, RECORDED AFTER EMBANKMENT CONSTRUCTION IS COMPLETE AND AT LEAST ONE WEEK (168 HOURS) APART, RESULT IN ELEVATION DIFFERENCES EQUAL TO OR LESS THAN ⅛ INCH.

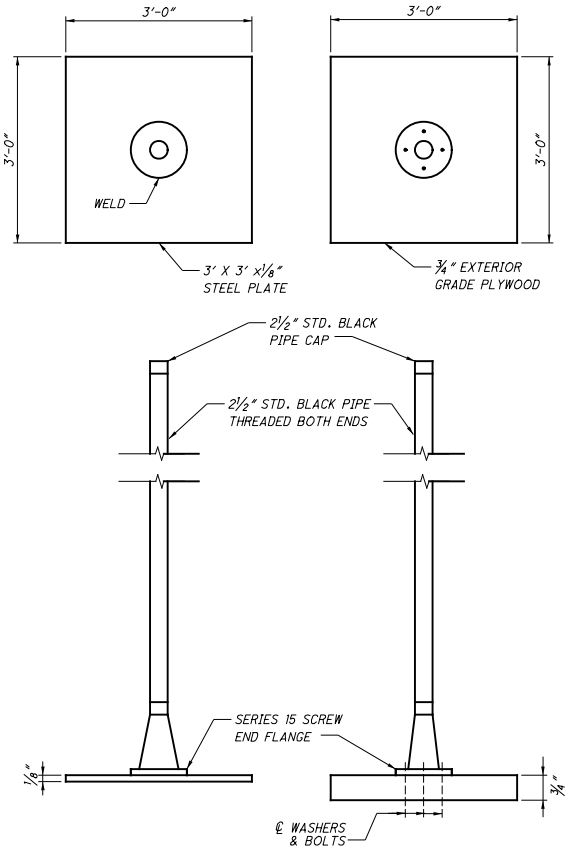
IF SETTLEMENT RATES EXCEED ¾ INCH PER MONTH AFTER EMBANKMENT CONSTRUCTION HAS BEEN COMPLETE FOR 128 CALENDAR DAYS, REMAINING CONSTRUCTION, INCLUDING ANY NECCESARY CORRECTIVE MEASURES, MAY PROCEED ONLY AT THE DIRECTION OF THE ENGINEER.

THE DEPARTMENT WILL CONSIDER VIBRATING WIRE SETTLEMENT MONITORING PLATFORMS IN LIEU OF THE CONVENTIONAL SETTLEMENT PLATFORMS. THE CONTRACTOR SHOULD PROVIDE DETAILS OF THE PROPOSED VIBRATING WIRE SETTLEMENT PLATFORMS AS WELL AS DESIGN DRAWINGS OF THE PROPOSED 30 DAYS PRIOR TO CONSTRUCTION. THE DEPARTMENT WILL REQUIRE 10 WORKING DAYS FOR REVIEW AND APPROVAL. THE DESIGN DRAWINGS SHOULD ILLUSTRATE THE LOCATIONS WITH ALL EXISTING AND PROPOSED SITE FEATURES TO VERIFY THE PROPOSED CABLING WILL NOT CONFLICT WITH EXISTING FACILITIES, PROPOSED FACILITIES OR UTILITIES. NO ADDITIONAL PAYMENT WILL BE PROVIDED IF THE CONTRACTOR ELECTS TO UTILIZE VIBRATING WIRE SETTLEMENT PLATFORMS.

MORE INFORMATION PERTAINING TO EMBANKMENT CONSTRUCTION AND CONTROLLED RATES OF FILL ARE PROVIDED IN THE ROADWAY PLANS.

METHOD OF MEASUREMENT, THE NUMBER OF SETTLEMENT PLATFORMS TO BE PAID FOR SHALL BE THE ACTUAL NUMBER OF SETTLEMENT PLATFORMS COMPLETED, MAINTAINED, AND ACCEPTED BY THE ENGINEER.

BASIS OF PAYMENT: PAYMENT SHALL BE MADE AT THE CONTRACT UNIT PRICE EACH FOR "ITEM SPECIAL - SETTLEMENT PLATFORM" WHICH IS COMPENSATION FOR CONSTRUCTING, MAINTAINING, AND MONITORING THE SETTLEMENT PLATFORMS INCLUDING FURNISHING ALL LABOR, EQUIPMENT, MATERIALS, AND INCIDENTALS NECESSARY TO COMPLETE THE WORK. PAYMENT SHALL NOT BE MADE FOR SETTLEMENT PLATFORMS WHICH BECOME USELESS DUE TO DAMAGE CAUSED BY THE CONTRACTOR'S OPERATIONS. SEE DETAIL THIS SHEET.



SETTLEMENT PLATFORM

(NOT TO SCALE)

NOTES:

1. SETTLEMENT PLATFORMS SHALL BE ANCHORED BY STAKES DRIVEN AT EACH CORNER TO PREVENT OVERTURNING.

DESIGN AGENCY
Stantec Consulting Services Inc.
1500 Lake Shore Drive, Suite 100
Columbus, Ohio 43204
(614) 486-4383

DESIGNED EDA | DRAWN ALH | REVIEWED BSM | DATE 5/18/2022
CHECKED MRS | REVISED | STRUCTURE FILE NUMBER 4400496

GENERAL NOTES
BRIDGE NO. LAW-7-0711
RAMP I OVER LITTLE PADDY CREEK

LAW-7-2.17
PID No. 75923

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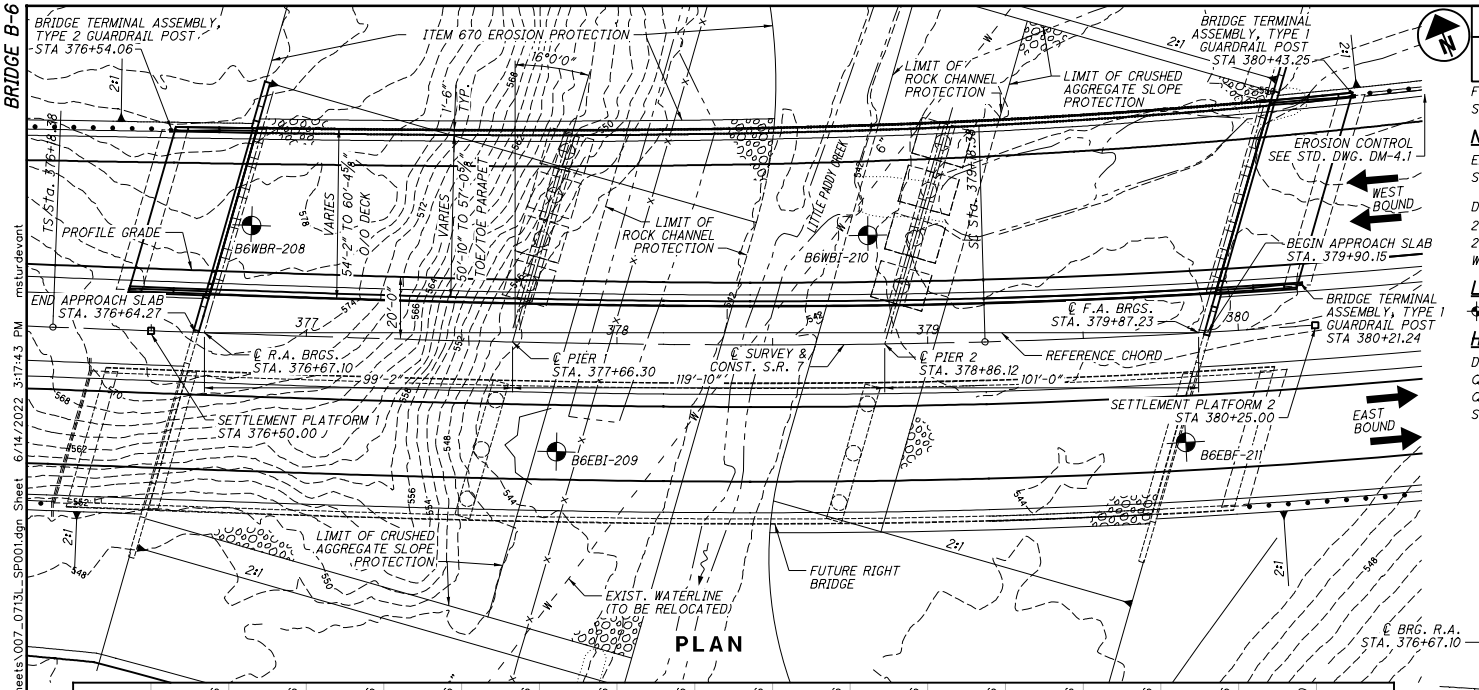
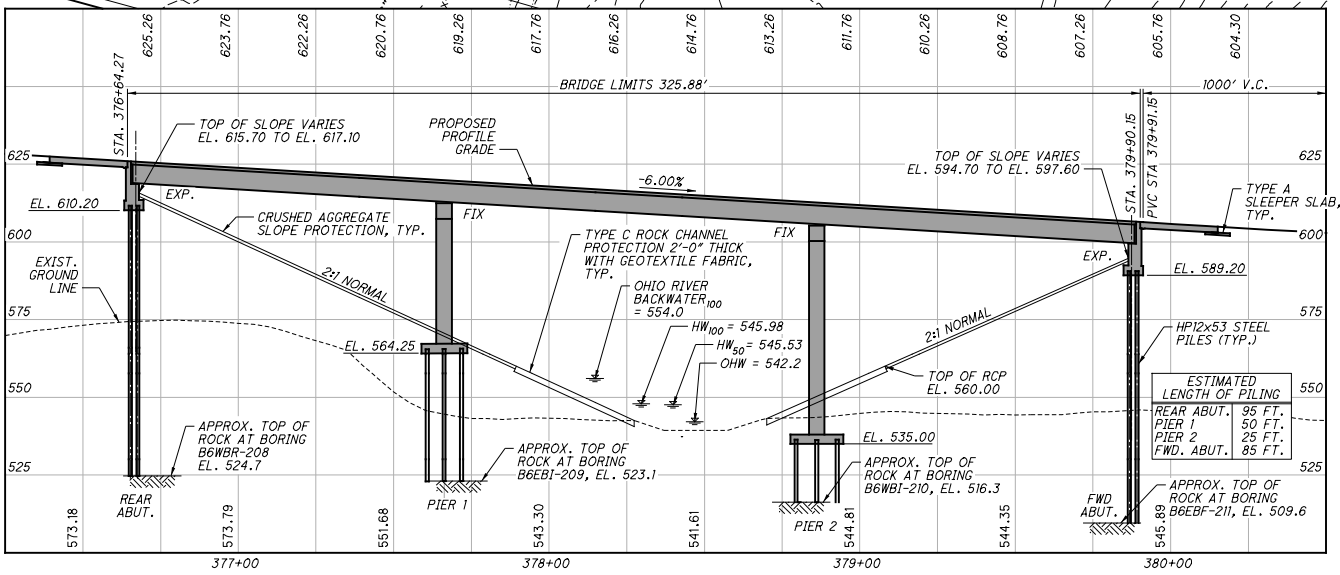
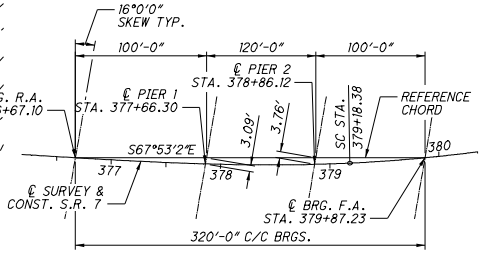
BRIDGE B-6





PROFILE ALONG S.R. 7 PROFILE GRADE



GEOMETRIC LAYOUT

BENCHMARK DATA

BM #1 STA. 394+68.00, EL. 590.43, OFFSET 0.00,
BM #2 STA. 407+19.64, EL. 608.57, OFFSET 65.06,

FOR ADDITIONAL BENCHMARK INFORMATION. SEE ROADWAY PLAN SHEET ⊕

NOTES

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

DESIGN TRAFFIC:
2028 ADT = 6,298 2028 ADTT = 693
2048 ADT = 8,225 2048 ADTT = 905
WESTBOUND TRAFFIC

LEGEND

PROJECT BORING LOCATION

HYDRAULIC DATA

DRAINAGE AREA = 1.74 SQ. MILES
Q (50) = 954 CFS V (50) = 4.23 FT/S EL. = 545.53
Q (100) = 1160 CFS V (100) = 4.46 FT/S EL. = 545.98
STRUCTURE CLEARS THE 50 YEAR DESIGN HW BY 50.61 FEET.

CURVE DATA (S.R. 7 CURVE NO. 9)

P.I. STA. 387+47.15	E = 136.98'	LT = 200.04'
Δ = 46° 04' 34" (LT)	TS STA. 376+18.38	ST = 100.04'
Dc = 2° 29' 28"	SC STA. 379+18.38	e_{max} = 6.20%
R = 2,300.00'	θs = 3° 44' 12"	CS STA. 394+68.00
T = 805.51'	Ls = 300.00'	ST STA. 397+68.00
L = 1,549.62'	Ts = 1,128.77'	

PROPOSED STRUCTURE

TYPE: PRESTRESSED CONCRETE I-BEAMS (66" AASHTO MODIFIED TYPE 4) WITH COMPOSITE CONCRETE SLAB SUPPORTED BY STUB TYPE ABUTMENTS AND CAP & COLUMN PIERS ON PILES
SPANS: 98'-11", 117'-10", 98'-11" C/C BEARINGS MEASURED ALONG REFERENCE CHORD
ROADWAY: VARIES FROM 50'-9½" TO 57'-0½"
LOADING: HL-93 AND 60 LBS/FT² FUTURE WEARING SURFACE
WEARING SURFACE: 1" MONOLITHIC WEARING SURFACE
SKEW: 16°00'00" LF MEASURED TO REFERENCE CHORD
APPROACH SLABS: AS-1-15 & AS-2-15, 25' LONG (MODIFIED)
ALIGNMENT: 03°44'12" SPIRAL AND 02°29'28" CURVE LEFT
SUPERELEVATION: VARIES (.062 MAX)
COORDINATES: LATITUDE N 38° 26' 56.76"
LONGITUDE W 82° 22' 44.29"
DECK AREA: 18,860 SF

DESIGN AGENCY: Stantec, 1500 Lake Shore Dr. Columbus, OH 43204, (614) 486-4383
DATE: 5/2021
REVIEWED: BSM
STRUCTURE FILE NUMBER: 4400534
DRAWN: JWS
REVISED:
DESIGNED: MRS
CHECKED: EDA

LAWRENCE COUNTY
STA. 376+64.27
STA. 379+90.15

SITE PLAN
BRIDGE NO. LAW-7-0713 L
S.R. 7 OVER LITTLE PADDY CREEK

LAW-7-2.17
PID No. 75923

1/27

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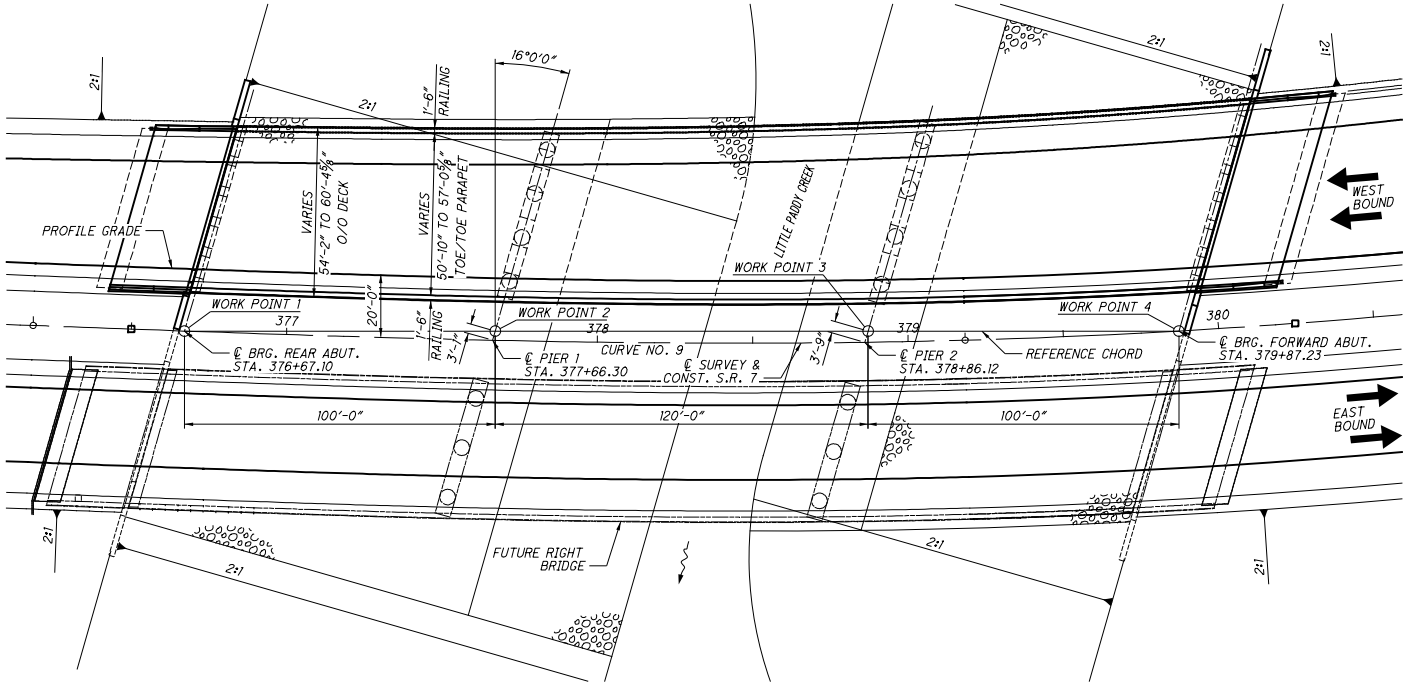
CURVE DATA
S.R. 7
CURVE NO. 9

P.I. STA. 387+47.15
Δ = 46° 04′ 34″ (LT)
Dc = 2° 29′ 28″
R = 2,300.00′
T = 805.51′
L = 1,549.62′
E = 136.98′
TS STA. 376+18.38
SC STA. 379+18.38

θs = 3° 44′ 12″
Ls = 300.00′
Ts = 1,128.77′
LT = 200.04′
ST = 100.04′
e_{max} = 6.20%
CS STA. 394+68.00
ST STA. 397+68.00



PLAN

GENERAL PLAN
BRIDGE NO. LAW-7-0713 L
S.R. 7 OVER LITTLE PADDY CREEK

LAW-7-2.17
PID No. 75923

2 / 27

DESIGNED MRS | DRAWN JWS | REVIEWED BSM 5/2021 | DESIGN AGENCY Stantec 1500 Lake Shore Dr. Columbus, OH 43204 (614) 486-4383
CHECKED EDA | REVISED | STRUCTURE FILE NUMBER 4400534

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STANDARD DRAWINGS AND SUPPLEMENTAL SPECIFICATIONS

REFER TO THE FOLLOWING STANDARD BRIDGE DRAWING(S):

AS-1-15	REVISED	07-17-15
AS-2-15	REVISED	01-18-19
EXJ-6-17	REVISED	01-15-21
PSID-1-13	REVISED	07-20-18
SBR-1-20	DATED	01-17-20

AND TO THE FOLLOWING SUPPLEMENTAL SPECIFICATION

800 DATED 01-15-21

DESIGN SPECIFICATIONS

THIS STRUCTURE CONFORMS TO THE "LRFD BRIDGE DESIGN SPECIFICATIONS" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 9TH EDITION AND THE ODOT BRIDGE DESIGN MANUAL, 2021.

OPERATIONAL IMPORTANCE

A LOAD MODIFIER OF 1.0 HAS BEEN ASSUMED FOR THE DESIGN OF THIS STRUCTURE IN ACCORDANCE WITH THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, ARTICLE 1.3.5 AND THE ODOT BRIDGE DESIGN MANUAL, 2020

DESIGN LOADING

DESIGN LOADING: HL-93

FUTURE WEARING SURFACE (FWS) OF 0.060 KIPS/SQ.FT.

DESIGN DATA

CONCRETE CLASS QC2 WITH QC/QA
-COMPRESSIVE STRENGTH 4.5 KSI (SUPERSTRUCTURE)

CONCRETE CLASS QC1 WITH QC/QA
-COMPRESSIVE STRENGTH 4.0 KSI (SUBSTRUCTURE)

CONCRETE CLASS QC4 MASS CONCRETE WITH QC/QA
-COMPRESSIVE STRENGTH 4.0 KSI (PIER CAPS AND COLUMNS)

REINFORCING STEEL
-MINIMUM YIELD STRENGTH 60 KSI

STEEL H-PILES - ASTM A572 - YIELD STRENGTH 50 KSI

CONCRETE FOR PRESTRESSED BEAMS:
COMPRESSIVE STRENGTH (FINAL) - 7 KSI
COMPRESSIVE STRENGTH (RELEASE) - 6 KSI

WELDED WIRE FABRIC:
YIELD STRENGTH - 70 KSI

PRESTRESSING STRAND:
AREA = 0.217 SQ.IN.
ULTIMATE STRENGTH = 270 KSI
INITIAL STRESS = 202.5 KSI
(LOW RELAXATION STRANDS)

DECK PROTECTION METHOD

EPOXY COATED REINFORCING STEEL

2.5" CONCRETE COVER

MONOLITHIC WEARING SURFACE

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

PILE DRIVING CONSTRAINTS

PRIOR TO DRIVING PILES, CONSTRUCT THE SPILL THROUGH SLOPES AND THE BRIDGE APPROACH EMBANKMENT BEHIND THE ABUTMENTS UP TO THE LEVEL OF THE SUBGRADE ELEVATION FOR A MINIMUM DISTANCE OF 200 FEET BEHIND EACH ABUTMENT. DO NOT BEGIN THE EXCAVATION FOR THE ABUTMENT AND PIER FOOTINGS AND THE INSTALLATION OF THE ABUTMENT AND PIER 1 AND 2 PILES UNTIL AFTER THE ABOVE REQUIRED EMBANKMENT HAS BEEN CONSTRUCTED AND A 180 CALENDAR DAY WAITING PERIOD HAS ELAPSED. THE ENGINEER MAY ADJUST THE LENGTH OF THE WAITING PERIOD BASED ON SETTLEMENT PLATFORM READINGS. AFTER THE SPECIFIED WAITING PERIOD HAS ELAPSED, DRIVE THE ABUTMENT AND PIER 1 AND 2 PILES TO REFUSAL ON BEDROCK.

PILES TO BEDROCK

DRIVE PILES TO REFUSAL ON BEDROCK THE DEPARTMENT WILL CONSIDER REFUSAL TO BE OBTAINED WHEN THE PILE PENETRATION IS AN INCH OR LESS AFTER RECEIVING AT LEAST 20 BLOWS FROM THE PILE HAMMER. SELECT THE HAMMER SIZE TO ACHIEVE THE REQUIRED DEPTH TO BEDROCK AND REFUSAL.

THE TOTAL FACTORED LOAD IS 125 KIPS PER PILE FOR THE ABUTMENT PILES. NO ADDITIONAL LOADING DUE TO DOWNDRAG IS ANTICIPATED AS LONG AS THE WAITING PERIOD FOR THE APPROACH EMBANKMENTS IS OBSERVED. THE TOTAL FACTORED LOAD IS 322 KIPS PER PILE FOR THE PIER 1 PILES AND 319 KIPS PER PILE FOR THE PIER 2 PILES .

REAR ABUTMENT PILES:
34 HP 12X53 PILES 100 FEET LONG, ORDER LENGTH

PIER 1 PILES:
36 HP 12X53 PILES 55 FEET LONG, ORDER LENGTH

PIER 2 PILES:
36 HP 12X53 PILES 30 FEET LONG, ORDER LENGTH

REAR ABUTMENT PILES:
36 HP 12X53 PILES 90 FEET LONG, ORDER LENGTH

PILE SPLICES

IN LIEU OF USING THE FULL PENETRATION BUTT WELDS SPECIFIED IN CMS 507.09 TO SPLICE STEEL H-PILES, THE CONTRACTOR MAY USE A MANUFACTURED H-PILE SPLICER. FURNISH SPLICERS FROM THE FOLLOWING MANUFACTURER:

ASSOCIATED PILE AND FITTING CORPORATION
8 WOOD HOLLOW RD. PLAZA 1
PARSIPPANY, NEW JERSEY 07054

INSTALL AND WELD THE SPLICER TO THE PILE SECTIONS IN ACCORDANCE WITH THE MANUFACTURER'S WRITTEN ASSEMBLY PROCEDURE SUPPLIED TO THE ENGINEER BEFORE THE WELDING IS PERFORMED.

PILE DRIVING:

THE MINIMUM RATED ENERGY OF THE HAMMER USED TO INSTALL THE PILES SHALL BE 20,100 FOOT-POUNDS. ENSURE THAT STRESSES IN THE PILES DURING DRIVING DO NOT EXCEED 45,000 POUNDS PER SQUARE INCH.

DECK PLACEMENT DESIGN ASSUMPTIONS

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

AN EIGHT WHEEL FINISHING MACHINE WITH A MAXIMUM WHEEL LOAD OF 2.4 KIPS.

A MINIMUM OUT-TO-OUT WHEEL SPACING AT EACH END OF THE MACHINE OF 103".

A MAXIMUM SPACING OF OVERHANG FALSEWORK BRACKETS OF 48 IN.

A MAXIMUM DISTANCE FROM THE CENTERLINE OF THE FASCIA GIRDER TO THE FACE OF THE SAFETY HANDRAIL OF 65".

APPROACH EMBANKMENT CONSTRUCTION:

THE APPROACH EMBANKMENTS SHALL BE CONSTRUCTED AND THEN UNDERGO AN ESTIMATED WAITING PERIOD OF 180 DAYS PRIOR TO DRIVING PILES.

REFER TO SHEETS XX FOR DETAILS AND NOTES REGARDING REINFORCED SLOPE AND EMBANKMENT CONSTRUCTION.

ACCORDINGLY, MULTIPLE APPLICATIONS OF SIGNIFICANT QUANTITIES OF WATER AS WELL AS CONSIDERABLE EFFORT WILL BE REQUIRED TO PROPERLY BREAK DOWN AND MOISTURE CONDITION THE SHALE FOR USE IN EMBANKMENT CONSTRUCTION.

ABBREVIATIONS:

ABUT	-	ABUTMENT
APPROX.	-	APPROXIMATE
BM	-	BENCHMARK
BRG.	-	BEARING
B/	-	BOTTOM OF
℄	-	CENTERLINE
CONC.	-	CONCRETE
CLR.	-	CLEARANCE
CONST.	-	CONSTRUCTION
DIA.	-	DIAMETER
EF	-	EACH FACE
EL.	-	ELEVATION
EQ.	-	EQUAL
EST.	-	ESTIMATED
EXIST.	-	EXISTING
EXP.	-	EXPANSION
F.A.	-	FORWARD ABUTMENT
FF	-	FAR FACE
FNDN.	-	FOUNDATION
FTG.	-	FOOTING
FWD.	-	FORWARD
F/F	-	FACE TO FACE
JT.	-	JOINT
LT.	-	LEFT
MAX.	-	MAXIMUM
MIN.	-	MINIMUM
NF	-	NEAR FACE
O/O	-	OUT TO OUT
PAVT.	-	PAVEMENT
PEJF	-	PREFORMED EXPANSION JOINT FILLER
R.A.	-	REAR ABUTMENT
REF.	-	REFERENCE
RF	-	RIGHT FORWARD
REINF.	-	REINFORCED
RT.	-	RIGHT
SP.	-	SETTLEMENT PLATFORM
SPA.	-	SPACE
S.R.	-	STATE ROUTE
STA.	-	STATION
TYP.	-	TYPICAL
T/	-	TOP OF
T/T	-	TOE TO TOE
T&B	-	TOP AND BOTTOM
VAR.	-	VARIES
REQ'D	-	REQUIRED

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DESIGN AGENCY
Stantec
1500 Lake Shore Dr.
Columbus, OH 43204
(614) 486-4383

DESIGNED	DRAWN	REVIEWED	DATE
MRS	JWS	BSM	5/2021
CHECKED	REVISED		STRUCTURE FILE NUMBER
EDA			4400534

GENERAL NOTES
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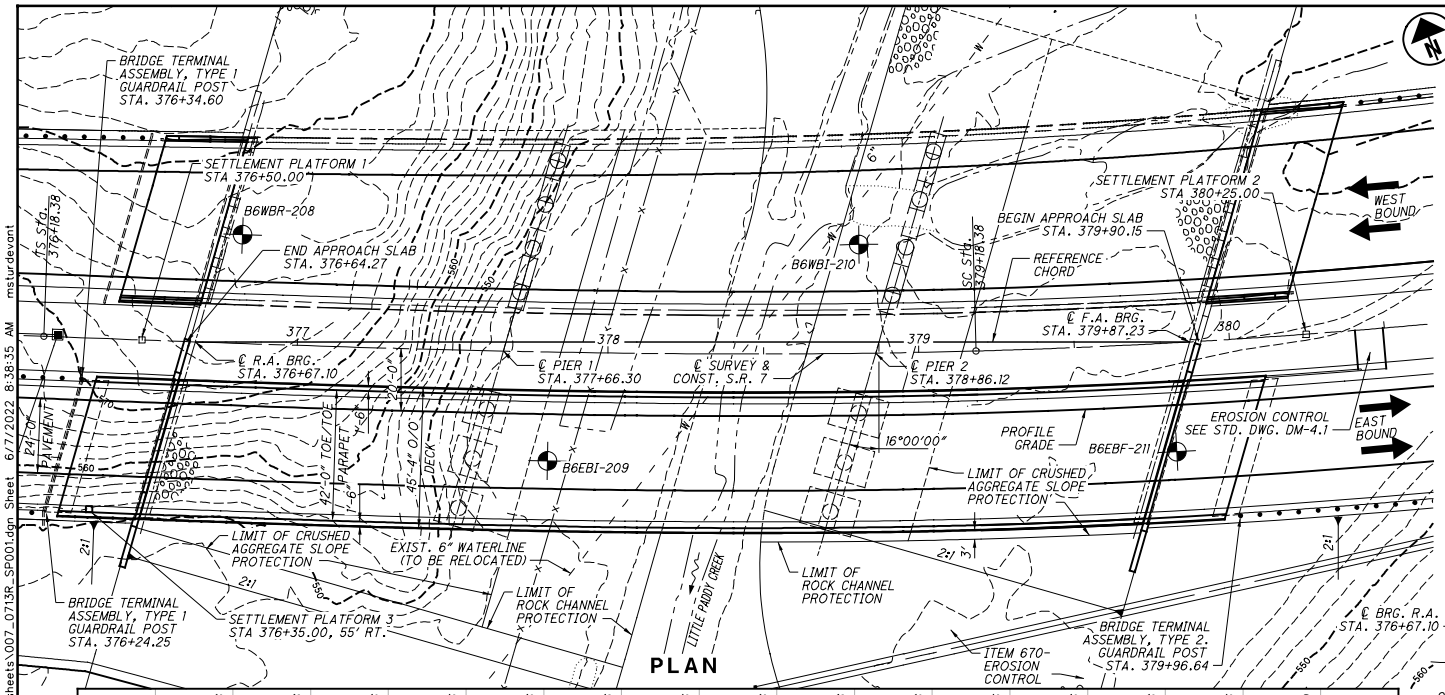
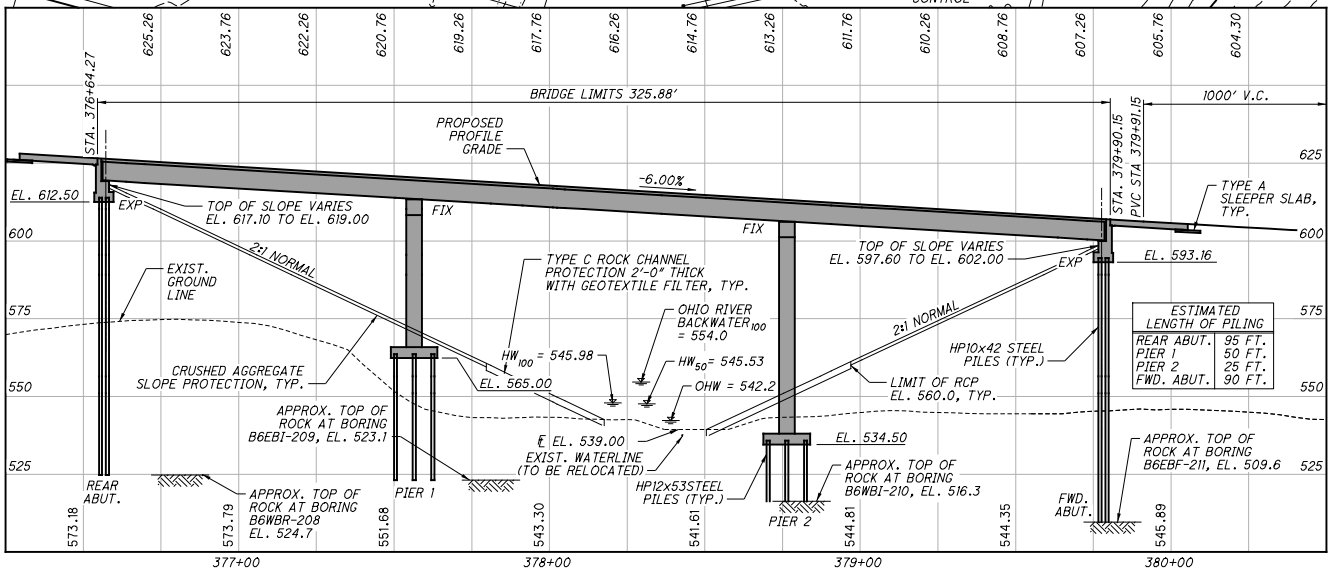
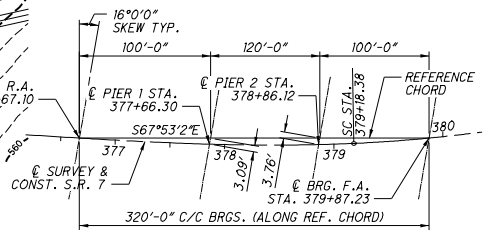




PROFILE ALONG S.R. 7 PROFILE GRADE



GEOMETRIC LAYOUT

BENCHMARK DATA

BM #1 STA. 394+68.00, EL. 590.43 , OFFSET 0.00 ,
BM #2 STA. 407+19.64, EL. 608.57 , OFFSET 65.06', RT.

FOR ADDITIONAL BENCHMARK INFORMATION. SEE ROADWAY PLAN SHEET

NOTES

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

DESIGN TRAFFIC:
2028 ADT = 7,102 2028 ADTT = 781
2048 ADT = 9,275 2048 ADTT = 1,020
EASTBOUND TRAFFIC

LEGEND

PROJECT BORING LOCATION

HYDRAULIC DATA

DRAINAGE AREA = 1.74 SQ. MILES
Q (50) = 954 CFS V (50) = 4.23 FT/S
Q (100) = 1160 CFS V (100) = 4.46 FT/S
STRUCTURE CLEARS THE 50 YEAR DESIGN HW BY 53.51 FEET.

CURVE DATA (S.R. 7 CURVE NO. 9)

P.I. STA. 387+47.15	E = 136.98'	LT = 200.04'
Δ = 46° 04' 34" (LT)	TS STA. 376+18.38	ST = 100.04'
Dc = 2° 29' 28"	SC STA. 379+18.38	e_{max} = 6.20%
R = 2,300.00'	θs = 3° 44' 12"	CS STA. 394+68.00
T = 805.51'	Ls = 300.00'	ST STA. 397+68.00
L = 1,549.62'	Ts = 1,128.77'	

PROPOSED STRUCTURE

TYPE: PRESTRESSED CONCRETE I-BEAMS (66" AASHTO MODIFIED TYPE 4) WITH COMPOSITE CONCRETE SLAB SUPPORTED BY STUB TYPE ABUTMENTS AND CAP & COLUMN PIERS ON PILES
SPANS: 98'-11", 117'-10", 98'-11" C/C BEARINGS (MEASURED ALONG REFERENCE CHORD)
ROADWAY: 42'-0" TOE/TOE PARAPET
LOADING: HL-93 AND 60 PSF FUTURE WEARING SURFACE
WEARING SURFACE: 1" MONOLITHIC WEARING SURFACE
SKEW: 16°0'0" LF (MEASURED WITH RESPECT TO REFERENCE CHORD)
APPROACH SLABS: AS-1-15 & AS-2-15, 25' LONG (MODIFIED)
ALIGNMENT: 03°44'12" SPIRAL AND 02°29'28" CURVE LEFT
SUPERELEVATION: VARIES (.062 MAX)
COORDINATES: LATITUDE 38° 26' 56.16"
LONGITUDE -82° 22' 44.88"
DECK AREA: 14,655 SF

DESIGN AGENCY: Stantec, 1500 Lake Shore Dr., Columbus, OH 43204, (614) 486-4383
DESIGNED MRS | DRAWN LBA | REVIEWED BSM | DATE 5/2021
CHECKED EDA | REVISED | STRUCTURE FILE NUMBER 4400526

LAWRENCE COUNTY
STA. 376+64.27
STA. 379+90.15

SITE PLAN
BRIDGE NO. LAW-7-0713 R
S.R. 7 OVER LITTLE PADDY CREEK

LAW-7-2.17
PID No. 75923

1 / 26

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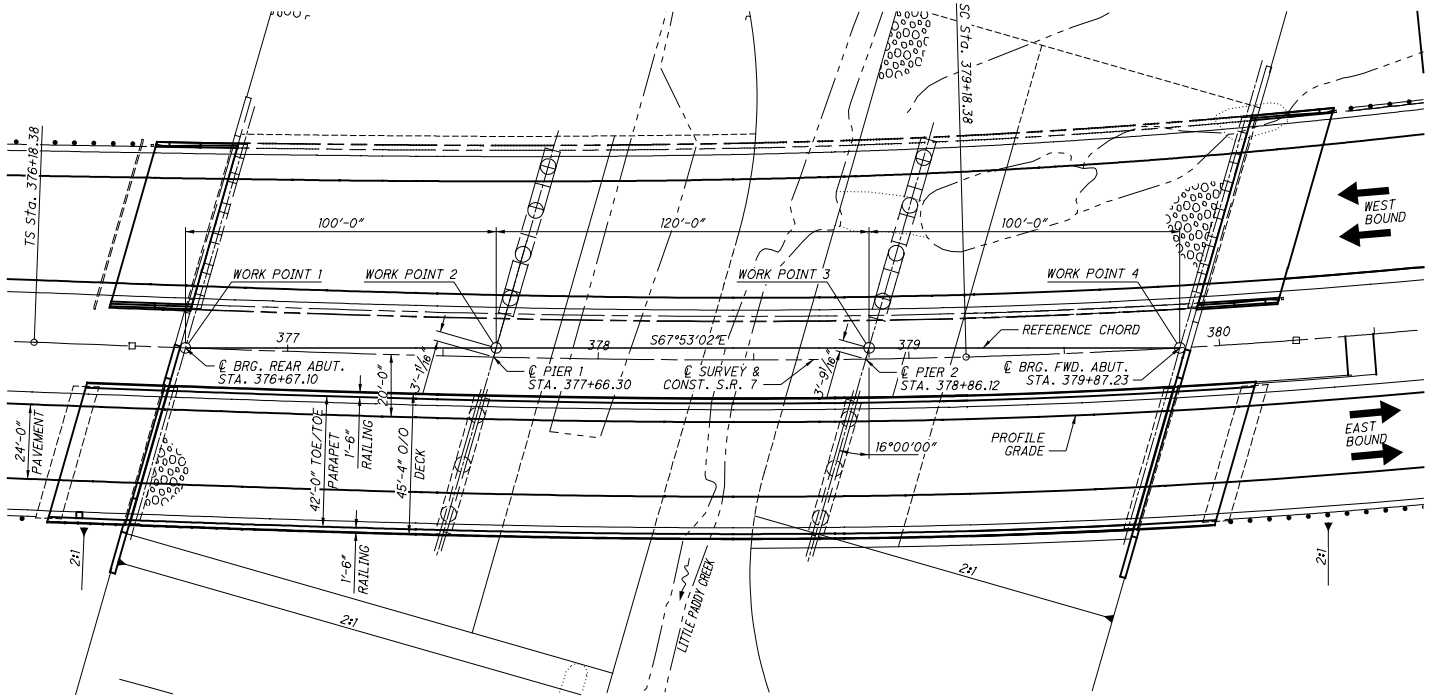
CURVE DATA
S.R. 7
CURVE NO. 9

P.I. STA. 387+47.15
Δ = 46° 04′ 34″ (LT)
Dc = 2° 29′ 28″
R = 2,300.00′
T = 805.51′
L = 1,549.62′
E = 136.98′
TS STA. 376+18.38
SC STA. 379+18.38

θs = 3° 44′ 12″
Ls = 300.00′
Ts = 1,128.77′
LT = 200.04′
ST = 100.04′
e_{max} = 6.20%
CS STA. 394+68.00
ST STA. 397+68.00



PLAN

DESIGNED MRS
DRAWN ALH
REVIEWED BSM
DATE 5/2021
CHECKED EDA
REVISED
STRUCTURE FILE NUMBER 4400526

DESIGN AGENCY
Stantec
1500 Lake Shore Dr.
Columbus, OH 43204
(614) 486-4383

GENERAL PLAN
BRIDGE NO. LAW-7-0713 R
S.R. 7 OVER LITTLE PADDY CREEK

LAW-7-2.17
PID No. 75923

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STANDARD DRAWINGS AND SUPPLEMENTAL SPECIFICATIONS

REFER TO THE FOLLOWING STANDARD BRIDGE DRAWING(S):

AS-1-15	REVISED	07-17-15
AS-2-15	REVISED	01-18-19
EXJ-6-17	REVISED	01-15-21
PSID-1-13	REVISED	07-20-18
SBR-1-20	DATED	01-17-20

AND TO THE FOLLOWING SUPPLEMENTAL SPECIFICATION

800 DATED 01-15-21

DESIGN SPECIFICATIONS

THIS STRUCTURE CONFORMS TO THE "LRFD BRIDGE DESIGN SPECIFICATIONS" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 9TH EDITION AND THE ODOT BRIDGE DESIGN MANUAL, 2021.

OPERATIONAL IMPORTANCE

A LOAD MODIFIER OF 1.0 HAS BEEN ASSUMED FOR THE DESIGN OF THIS STRUCTURE IN ACCORDANCE WITH THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, ARTICLE 1.3.5 AND THE ODOT BRIDGE DESIGN MANUAL, 2020

DESIGN LOADING

DESIGN LOADING: HL-93

FUTURE WEARING SURFACE (FWS) OF 0.060 KIPS/SQ.FT.

DESIGN DATA

CONCRETE CLASS QC2 WITH QC/QA
-COMPRESSIVE STRENGTH 4.5 KSI (SUPERSTRUCTURE)

CONCRETE CLASS QC1 WITH QC/QA
-COMPRESSIVE STRENGTH 4.0 KSI (SUBSTRUCTURE)

CONCRETE CLASS QC4 MASS CONCRETE WITH QC/QA
-COMPRESSIVE STRENGTH 4.0 KSI (PIER CAPS AND COLUMNS)

REINFORCING STEEL
-MINIMUM YIELD STRENGTH 60 KSI

STEEL H-PILES - ASTM A572 - YIELD STRENGTH 50 KSI

CONCRETE FOR PRESTRESSED BEAMS:
COMPRESSIVE STRENGTH (FINAL) - 7 KSI
COMPRESSIVE STRENGTH (RELEASE) - 6 KSI

WELDED WIRE FABRIC:
YIELD STRENGTH - 70 KSI

PRESTRESSING STRAND:
AREA = 0.217 SQ.IN.
ULTIMATE STRENGTH = 270 KSI
INITIAL STRESS = 202.5 KSI
(LOW RELAXATION STRANDS)

DECK PROTECTION METHOD

EPOXY COATED REINFORCING STEEL

2.5" CONCRETE COVER

MONOLITHIC WEARING SURFACE

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

PILE DRIVING CONSTRAINTS

PRIOR TO DRIVING PILES, CONSTRUCT THE SPILL THROUGH SLOPES AND THE BRIDGE APPROACH EMBANKMENT BEHIND THE ABUTMENTS UP TO THE LEVEL OF THE SUBGRADE ELEVATION FOR A MINIMUM DISTANCE OF 200 FEET BEHIND EACH ABUTMENT. DO NOT BEGIN THE EXCAVATION FOR THE ABUTMENT AND PIER FOOTINGS AND THE INSTALLATION OF THE ABUTMENT AND PIER 1 AND 2 PILES UNTIL AFTER THE ABOVE REQUIRED EMBANKMENT HAS BEEN CONSTRUCTED AND A 180 CALENDAR DAY WAITING PERIOD HAS ELAPSED. THE ENGINEER MAY ADJUST THE LENGTH OF THE WAITING PERIOD BASED ON SETTLEMENT PLATFORM READINGS. AFTER THE SPECIFIED WAITING PERIOD HAS ELAPSED, DRIVE THE ABUTMENT AND PIER 1 AND 2 PILES TO REFUSAL ON BEDROCK.

PILES TO BEDROCK

DRIVE PILES TO REFUSAL ON BEDROCK THE DEPARTMENT WILL CONSIDER REFUSAL TO BE OBTAINED WHEN THE PILE PENETRATION IS AN INCH OR LESS AFTER RECEIVING AT LEAST 20 BLOWS FROM THE PILE HAMMER. SELECT THE HAMMER SIZE TO ACHIEVE THE REQUIRED DEPTH TO BEDROCK AND REFUSAL.

THE TOTAL FACTORED LOAD IS 250 KIPS PER PILE FOR THE ABUTMENT PILES. NO ADDITIONAL LOADING DUE TO DOWNDRAG IS ANTICIPATED AS LONG AS THE WAITING PERIOD FOR THE APPROACH EMBANKMENTS IS OBSERVED. THE TOTAL FACTORED LOAD IS 322 KIPS PER PILE FOR THE PIER 1 PILES AND 319 KIPS PER PILE FOR THE PIER 2 PILES .

REAR ABUTMENT PILES:
HP 10X42 PILES 100 FEET LONG, ORDER LENGTH

PIER 1 PILES:
HP 12X53 PILES 55 FEET LONG, ORDER LENGTH

PIER 2 PILES:
HP 12X53 PILES 30 FEET LONG, ORDER LENGTH

FORWARD ABUTMENT PILES:
HP 10X42 PILES 95 FEET LONG, ORDER LENGTH

PILE SPLICES

IN LIEU OF USING THE FULL PENETRATION BUTT WELDS SPECIFIED IN CMS 507.09 TO SPLICE STEEL H-PILES, THE CONTRACTOR MAY USE A MANUFACTURED H-PILE SPLICER. FURNISH SPLICERS FROM THE FOLLOWING MANUFACTURER:

ASSOCIATED PILE AND FITTING CORPORATION
8 WOOD HOLLOW RD. PLAZA 1
PARSIPPANY, NEW JERSEY 07054

INSTALL AND WELD THE SPLICER TO THE PILE SECTIONS IN ACCORDANCE WITH THE MANUFACTURER'S WRITTEN ASSEMBLY PROCEDURE SUPPLIED TO THE ENGINEER BEFORE THE WELDING IS PERFORMED.

PILE DRIVING:

THE MINIMUM RATED ENERGY OF THE HAMMER USED TO INSTALL THE PILES SHALL BE 20,100 FOOT-POUNDS. ENSURE THAT STRESSES IN THE PILES DURING DRIVING DO NOT EXCEED 45,000 POUNDS PER SQUARE INCH.

DECK PLACEMENT DESIGN ASSUMPTIONS

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

AN EIGHT WHEEL FINISHING MACHINE WITH A MAXIMUM WHEEL LOAD OF 2.4 KIPS.

A MINIMUM OUT-TO-OUT WHEEL SPACING AT EACH END OF THE MACHINE OF 103".

A MAXIMUM SPACING OF OVERHANG FALSEWORK BRACKETS OF 48 IN.

A MAXIMUM DISTANCE FROM THE CENTERLINE OF THE FASCIA GIRDER TO THE FACE OF THE SAFETY HANDRAIL OF 65".

APPROACH EMBANKMENT CONSTRUCTION:

THE APPROACH EMBANKMENTS SHALL BE CONSTRUCTED AND THEN UNDERGO AN ESTIMATED WAITING PERIOD OF 180 DAYS PRIOR TO DRIVING PILES.

REFER TO SHEETS XX FOR DETAILS AND NOTES REGARDING REINFORCED SLOPE AND EMBANKMENT CONSTRUCTION.

ACCORDINGLY, MULTIPLE APPLICATIONS OF SIGNIFICANT QUANTITIES OF WATER AS WELL AS CONSIDERABLE EFFORT WILL BE REQUIRED TO PROPERLY BREAK DOWN AND MOISTURE CONDITION THE SHALE FOR USE IN EMBANKMENT CONSTRUCTION.

ABBREVIATIONS:

ABUT	-	ABUTMENT
APPROX.	-	APPROXIMATE
BM	-	BENCHMARK
BRG.	-	BEARING
B/	-	BOTTOM OF
℄	-	CENTERLINE
CONC.	-	CONCRETE
CLR.	-	CLEARANCE
CONST.	-	CONSTRUCTION
DIA.	-	DIAMETER
EF	-	EACH FACE
EL.	-	ELEVATION
EQ.	-	EQUAL
EST.	-	ESTIMATED
EXIST.	-	EXISTING
EXP.	-	EXPANSION
F.A.	-	FORWARD ABUTMENT
FF	-	FAR FACE
FNDN.	-	FOUNDATION
FTG.	-	FOOTING
FWD.	-	FORWARD
F/F	-	FACE TO FACE
JT.	-	JOINT
LT.	-	LEFT
MAX.	-	MAXIMUM
MIN.	-	MINIMUM
NF	-	NEAR FACE
O/O	-	OUT TO OUT
PAVT.	-	PAVEMENT
PEJF	-	PREFORMED EXPANSION JOINT FILLER
R.A.	-	REAR ABUTMENT
REF.	-	REFERENCE
RF	-	RIGHT FORWARD
REINF.	-	REINFORCED
RT.	-	RIGHT
SP.	-	SETTLEMENT PLATFORM
SPA.	-	SPACE
S.R.	-	STATE ROUTE
STA.	-	STATION
TYP.	-	TYPICAL
T/	-	TOP OF
T/T	-	TOE TO TOE
T&B	-	TOP AND BOTTOM
VAR.	-	VARIES
REQ'D	-	REQUIRED

DESIGN AGENCY
Stantec
1500 Lake Shore Dr.
Columbus, OH 43204
(614) 486-4383

DESIGNED	DRAWN	REVIEWED	DATE
MRS	ALH	BSM	5/2021
CHECKED	REVISED		STRUCTURE FILE NUMBER
EDA			4400526

GENERAL NOTES
BRIDGE NO. LAW-7-0713 R
S.R. 7 OVER LITTLE PADDY CREEK

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ITEM SPECIAL - SETTLEMENT PLATFORM:

DESCRIPTION: THIS ITEM CONSISTS OF FURNISHING, CONSTRUCTING, AND MAINTAINING SETTLEMENT PLATFORMS AND OBTAINING SETTLEMENT READINGS AS REQUIRED BY THE PLANS OR AS DIRECTED BY THE ENGINEER. SEE SETTLEMENT PLATFORM DETAIL THIS SHEET. AT THE OPTION AND EXPENSE OF THE CONTRACTOR, ADDITIONAL SETTLEMENT PLATFORMS MAY BE INSTALLED AT LOCATIONS APPROVED BY THE ENGINEER. SETTLEMENT READINGS SHALL BE TAKEN WEEKLY DURING CONSTRUCTION AND DURING THE SPECIFIED WAITING PERIOD BEGINNING WITH THE FIRST WEEK FOLLOWING PLACEMENT OF EACH PLATFORM. THE READINGS SHALL BE PLOTTED ON GRAPH PAPER PRESENTING DEFORMATION (ON THE NEGATIVE Y-AXIS) AND FILL HEIGHT (ON THE POSITIVE Y-AXIS) VERSUS TIME (ON THE X-AXIS). A COPY OF EACH CUMULATIVE PLOT SHALL BE SENT TO ODOT, CO, CONSTRUCTION MANAGEMENT/CONSTRUCTION ADMINISTRATION, GEOTECHNICAL AND EARTHWORK ENGINEER AND ODOT, CO, OFFICE OF GEOTECHNICAL ENGINEERING, FOUNDATIONS AND RETAINING WALLS ENGINEER, AFTER EACH SETTLEMENT READING IS RECORDED.

MATERIAL: SOUND LUMBER SUCH AS ¾" EXTERIOR GRADE PLYWOOD SHALL BE USED FOR THE BASE. THE PIPE SHALL BE 2½" STANDARD BLACK PIPE WITH THREADED FITTINGS AS SHOWN ON THE PLANS. A STEEL PLATE 36" X 36" X ⅛" MAY BE SUBSTITUTED FOR THE LUMBER FOR THE PLATFORMS, AT THE CONTRACTOR'S OPTION.

CONSTRUCTION METHODS: THE PLATFORM SHALL CONFORM TO THE SETTLEMENT PLATFORM DETAILS SHOWN ON THIS SHEET. THE PLATFORM SHALL BE SET ON A LEVEL SURFACE. THE PIPE SHALL BE FIRMLY SECURED TO THE PLATFORM AND SHALL BE MAINTAINED IN A PLUMB POSITION DURING THE PLACEMENT OF THE EMBANKMENT. THE PIPE SHALL BE MARKED AT INTERVALS TO FACILITATE MEASUREMENT OF THE DEPTH OF FILL. THE CONTRACTOR SHALL STOP WORK IN ANY LOCATION WHERE THE SETTLEMENT PLATFORM HAS BEEN DISTURBED OR DAMAGED. PLATFORMS OR PIPES DAMAGED OR DISPLACED DURING CONSTRUCTION SHALL BE RESTORED TO THEIR PROPER CONDITION AT THE CONTRACTOR'S EXPENSE.

SETTLEMENT PLATFORMS SHALL BE PLACED AT THE FOLLOWING LOCATIONS:

I.D.	*STATION*	*OFFSET*
SP1	*376+50*	*0'*
SP2	*380+25*	*0'*
SP3	*376+35*	*55'*

PRIOR TO PAVING, THE TOP OF THE SETTLEMENT PLATFORM PIPE SHALL BE CUT OFF TWO FEET BELOW THE FINISHED SURFACE OF THE SUBGRADE OR FINISHED GROUND SURFACE, WHICHEVER IS APPLICABLE.

REFER TO ODOT GEOTECHNICAL BULLETIN GB4 "GUIDELINES FOR THE USE OF GEOTECHNICAL INSTRUMENTATION" FOR ADDITIONAL INSTALLATION AND MONITORING INSTRUCTION.

WAITING PERIOD CRITERIA:
THE ENGINEER WILL CONSIDER THE WAITING PERIOD COMPLETE WHEN CONSECUTIVE SETTLEMENT READINGS, RECORDED AFTER EMBANKMENT CONSTRUCTION IS COMPLETE AND AT LEAST ONE WEEK (168 HOURS) APART, RESULT IN ELEVATION DIFFERENCES EQUAL TO OR LESS THAN ⅛ INCH. THE MINIMUM WAITING PERIOD IS 90 CALENDAR DAYS.

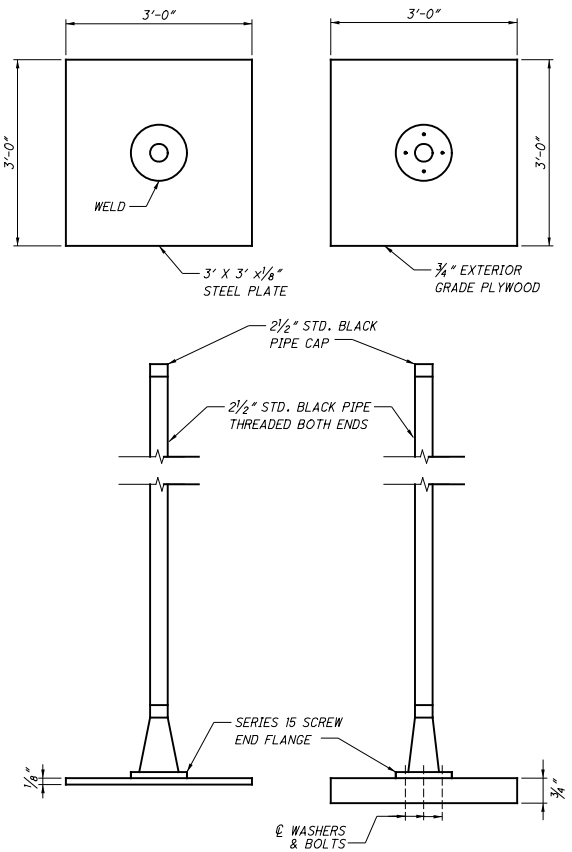
IF SETTLEMENT RATES EXCEED ¾ INCH PER MONTH AFTER EMBANKMENT CONSTRUCTION HAS BEEN COMPLETE FOR 45 CALENDAR DAYS, REMAINING CONSTRUCTION, INCLUDING ANY NECCESARY CORRECTIVE MEASURES, MAY PROCEED ONLY AT THE DIRECTION OF THE ENGINEER.

THE DEPARTMENT WILL CONSIDER VIBRATING WIRE SETTLEMENT MONITORING PLATFORMS IN LIEU OF THE CONVENTIONAL SETTLEMENT PLATFORMS. THE CONTRACTOR SHOULD PROVIDE DETAILS OF THE PROPOSED VIBRATING WIRE SETTLEMENT PLATFORMS AS WELL AS DESIGN DRAWINGS OF THE PROPOSED 30 DAYS PRIOR TO CONSTRUCTION. THE DEPARTMENT WILL REQUIRE 10 WORKING DAYS FOR REVIEW AND APPROVAL. THE DESIGN DRAWINGS SHOULD ILLUSTRATE THE LOCATIONS WITH ALL EXISTING AND PROPOSED SITE FEATURES TO VERIFY THE PROPOSED CABLING WILL NOT CONFLICT WITH EXISTING FACILITIES, PROPOSED FACILITIES OR UTILITIES. NO ADDITIONAL PAYMENT WILL BE PROVIDED IF THE CONTRACTOR ELECTS TO UTILIZE VIBRATING WIRE SETTLEMENT PLATFORMS.

MORE INFORMATION PERTAINING TO EMBANKMENT CONSTRUCTION AND CONTROLLED RATES OF FILL ARE PROVIDED IN THE ROADWAY PLANS.

METHOD OF MEASUREMENT, THE NUMBER OF SETTLEMENT PLATFORMS TO BE PAID FOR SHALL BE THE ACTUAL NUMBER OF SETTLEMENT PLATFORMS COMPLETED, MAINTAINED, AND ACCEPTED BY THE ENGINEER.

BASIS OF PAYMENT: PAYMENT SHALL BE MADE AT THE CONTRACT UNIT PRICE EACH FOR "ITEM SPECIAL - SETTLEMENT PLATFORM" WHICH IS COMPENSATION FOR CONSTRUCTING, MAINTAINING, AND MONITORING THE SETTLEMENT PLATFORMS INCLUDING FURNISHING ALL LABOR, EQUIPMENT, MATERIALS, AND INCIDENTALS NECESSARY TO COMPLETE THE WORK. PAYMENT SHALL NOT BE MADE FOR SETTLEMENT PLATFORMS WHICH BECOME USELESS DUE TO DAMAGE CAUSED BY THE CONTRACTOR'S OPERATIONS. SEE DETAIL THIS SHEET.



SETTLEMENT PLATFORM

(NOT TO SCALE)

NOTES:

1. SETTLEMENT PLATFORMS SHALL BE ANCHORED BY STAKES DRIVEN AT EACH CORNER TO PREVENT OVERTURNING.

DESIGN AGENCY: Stantec, 1500 Lake Shore Dr., Columbus, OH 43204, (614) 486-4383
DESIGNED MRS | DRAWN ALH | REVIEWED BSM | DATE 5/2021
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GENERAL NOTES
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LAW-SR 7-2.17 (Phases 2A and 2B), PID 75923
8/4/2023
Combined 404/401 Individual Permit
LAW-SR 7-2.17 (Phases 2A and 2B), PID 75923
10/21/2023

TABLE D. STREAM DISCHARGE AND FILL QUANTITIES

Stream	Station	Description of Impacts	Length (LF)	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 or DEP			Proposed Earthen, Granular, or Embankment Fill			Proposed Other (Steel, Etc.)									
						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 1	STA 124+50 to 128+00	Embankment/grading + TAF	526	3	0.5	0	0.000	0.00	0	0.000	0.00	478	0.033	26.56	0	0.000	0.00	478	0.033	26.56	140	0.010	7.78	478
Stream 2	STA 158+00	Embankment/grading + TAF	445	2	0.5	0	0.000	0.00	0	0.000	0.00	224	0.011	8.30	0	0.000	0.00	224	0.011	8.30	50	0.002	1.85	224
Stream 3	STA 161+00 to 164+25	New culvert, embankment/grading, scour protection + TAF	741	9	1	6	0.001	2.00	38	0.008	12.67	487	0.101	162.33	46	0.010	15.33	577	0.119	192.33	130	0.027	43.33	617
Stream 3a	STA 161+50 to 164.75	Embankment/grading + TAF	343	5.5	1	0	0.000	0.00	0	0.000	0.00	343	0.043	69.87	0	0.000	0.00	343	0.043	69.87	50	0.006	10.19	343
Stream 4	STA 1416+60	Grading, scour protection, (culvert replacement) + TAF	110	3.5	1	0	0.000	0.00	10	0.001	1.30	10	0.001	1.30	0	0.000	0.00	20	0.002	2.59	30	0.002	3.89	30
Stream 5	STA 183+60 to 184+90	Embankment/grading, + TAF	528	4	1	0	0.000	0.00	0	0.000	0.00	527	0.048	78.07	0	0.000	0.00	527	0.048	78.07	130	0.012	19.26	527
Stream 6	STA 189+00 to 192+50	Embankment/grading, scour protection + TAF	458	2	0.5	0	0.000	0.00	30	0.001	1.11	402	0.018	14.89	0	0.000	0.00	432	0.020	16.00	70	0.003	2.59	452
Stream 7	STA 193+00 to 200+00	Embankment/grading, scour protection + TAF	916	3.5	0.5	0	0.000	0.00	16	0.001	1.04	806	0.065	52.24	0	0.000	0.00	822	0.066	53.28	90	0.008	5.84	822
Stream 8	STA 200+75 to 202+00	Embankment/grading, + TAF	261	2	1	0	0.000	0.00	0	0.000	0.00	192	0.009	14.22	0	0.000	0.00	192	0.009	14.22	58	0.003	4.30	250
Stream 9	STA 218+50 to 230+20	New culvert, embankment/grading, scour protection + TAF	1688	7.5	1	14	0.003	3.89	36	0.006	10.00	1,456	0.251	404.44	8	0.001	2.22	1,514	0.261	420.56	110	0.019	30.56	1,544
Stream 9a	STA 228+80 to 229+70	Embankment/grading, scour protection + TAF	400	3	0.5	40	0.003	2.22	0	0.000	0.00	321	0.022	17.83	0	0.000	0.00	361	0.025	20.06	20	0.001	1.11	361
Stream 10	STA 238+00 to 270+50	Embankment/grading, scour protection + TAF	4092	5.5	0.5	15	0.002	1.60	91	0.012	9.20	3,979	0.502	405.27	0	0.000	0.00	4,085	0.516	416.06	170	0.021	17.31	4,085
Stream 10a	STA 241+45 to 242+00	Embankment/grading, scour protection + TAF	194	2.5	0.5	0	0.000	0.00	16	0.001	0.74	48	0.003	2.22	0	0.000	0.00	64	0.004	2.96	20	0.001	0.93	84
Stream 10b	STA 247+90 to 248+45	Embankment/grading, scour protection + TAF	233	2.5	0.5	0	0.000	0.00	25	0.001	1.16	132	0.008	6.11	0	0.000	0.00	157	0.009	7.27	70	0.004	3.24	177
Stream 10c	STA 261+75	Embankment/grading, scour protection + TAF	300	3	0.5	0	0.000	0.00	15	0.001	0.83	233	0.016	12.94	0	0.000	0.00	248	0.017	13.78	20	0.001	1.11	248
Stream 11	STA 270+00 to 270+75	Embankment/grading, scour protection + TAF	287	3	0.5	0	0.000	0.00	20	0.001	1.11	256	0.018	14.22	0	0.000	0.00	276	0.019	15.33	70	0.005	3.89	276
Stream 12	STA 227+80 to 278+40	Embankment/grading + TAF	349	2.5	0.5	0	0.000	0.00	0	0.000	0.00	337	0.019	16.00	0	0.000	0.00	337	0.019	16.00	70	0.004	3.24	337
Stream 13	STA 320+50 to 323+25	New culvert, embankment/grading, scour protection + TAF	913	6	0.5	0	0.000	0.00	47	0.006	5.22	720	0.099	80.00	0	0.000	0.00	767	0.106	85.22	130	0.018	14.44	787
Stream 13a	STA 319+90 to 322+25	Embankment/grading, + TAF	703	5.5	0.5	0	0.000	0.00	0	0.000	0.00	654	0.083	66.61	0	0.000	0.00	654	0.083	66.61	70	0.009	7.13	674
Stream 13a1	STA 317+75 to 319+90	Embankment/grading scour protection + TAF	346	5	1	0	0.000	0.00	5	0.001	0.93	297	0.034	55.00	0	0.000	0.00	303	0.035	56.11	70	0.008	12.96	323
Stream 13a2	STA. 319+50 to 320+10	Embankment/grading, scour protection + TAF	162	1.5	0.5	0	0.000	0.00	5	0.001	0.02	114	0.004	3.30	0	0.000	0.00	119	0.005	3.31	20	0.001	0.56	139
Stream 13a3	STA 321+00	Embankment/grading, scour protection + TAF	56	1.5	1	0	0.000	0.00	5	0.001	0.28	32	0.001	1.78	0	0.000	0.00	37	0.002	2.06	20	0.001	1.11	57

TABLE D. STREAM DISCHARGE AND FILL QUANTITIES

Stream	Station	Description of Impacts	Length (LF)	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 or DEP			Proposed Earthen, Granular, or Embankment Fill			Proposed Other (Steel, Etc.)									
						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 14	STA 337+00 to 339+80	New culvert, embankment/grading, scour protection + TAF	1199	4.5	1	12	0.001	2.00	27	0.003	4.50	968	0.100	161.33	168	0.017	28.00	1,175	0.121	195.83	150	0.015	25.00	1,195
Stream 14a	STA 338+65 to 340+25	Embankment/grading	160	2.5	0.5	0	0.000	0.00	0	0.000	0.00	160	0.009	7.41	0	0.000	0.00	160	0.009	7.41	0	0.000	0.00	160
Stream 14b	STA 339+90 to 340+60	Embankment/grading	109	2.5	0.5	0	0.000	0.00	0	0.000	0.00	85	0.005	3.94	0	0.000	0.00	85	0.005	3.94	0	0.000	0.00	85
Stream 15	STA 355+00 to 356+50	Excavation +TAF	392	2.5	0.5	0	0.000	0.00	0	0.000	0.00	209	0.012	9.68	0	0.000	0.00	209	0.012	9.68	20	0.001	0.93	229
Stream 15a	STA 353+00	TAF	74	2	0.5	0	0.000	0.00	0	0.000	0.00	0	0.000	0.00	0	0.000	0.00	0	0.000	0.00	20	0.001	1.48	20
Stream 15b	STA 349+00	TAF	31	2	0.5	0	0.000	0.00	0	0.000	0.00	0	0.000	0.00	0	0.000	0.00	0	0.000	0.00	20	0.001	1.48	20
Stream 16	STA 366+50 to 377+00	Embankment/grading, scour protection + TAF	1876	6	0.5	60	0.008	6.67	0	0.000	0.00	1,646	0.227	182.89	0	0.000	0.00	1,706	0.235	189.56	160	0.022	17.78	1,746
Stream 16a	STA 364+80 to 374+00	Embankment/grading + TAF	1075	4	0.5	0	0.000	0.00	0	0.000	0.00	1,075	0.099	79.63	0	0.000	0.00	1,075	0.099	79.63	70	0.006	5.19	1,075
Stream 16a1	STA 363+25 to 365+25	Embankment/grading	230	3	0.5	0	0.000	0.00	0	0.000	0.00	230	0.016	12.78	0	0.000	0.00	230	0.016	12.78	0	0.000	0.00	230
Stream 17	STA 379+75 to 385.75	Embankment/grading, scour protection + TAF	776	2	0.5	0	0.000	0.00	10	0.000	0.37	766	0.035	28.37	0	0.000	0.00	776	0.036	28.74	50	0.002	1.85	776
Stream 18	STA 69+69L of SR 775	scour protection	244	2	0.5	0	0.000	0.00	5	0.001	0.19	0	0.000	0.00	0	0.000	0.00	5	0.001	0.19	0	0.000	0.00	5
Symmes Creek 2	STA 134+00	Piers (new bridge) + TAF	400	90	10	50	0.002	360.00	0	0.000	0.00	0	0.000	0.00	0	0.000	0.00	50	0.002	360.00	100	0.200	1,807.41	100
Symmes Creek 3	STA 200+50	Piers (new bridge), grading + TAF	475	75	8	35	0.004	185.00	0	0.000	0.00	35	0.004	35.00	0	0.000	0.00	35	0.008	220.00	100	0.220	1,444.44	100
Bear Creek	STA 299+00	Embankment/grading, scour protection + TAF	147	14	2.5	0	0.000	0.00	16	0.001	3.00	25	0.008	33.00	0	0.000	0.00	41	0.009	36.00	20	0.001	3.70	41
Bent Creek	STA 270+00 to 274+75	New culvert, embankment/ grading, scour protection + TAF	1421	13	2	45	0.013	44.00	10	0.002	10.00	1,140	0.340	1097.00	50	0.013	48.00	1,245	0.368	1199.00	210	0.062	202.00	1,245
Indian Guyan Creek	STA 299+40	Piers (new bridge), scour protection, grading + TAF	368	44	4	50	0.005	74.00	58	0.004	20.30	58	0.002	8.70	0	0.000	0.00	58	0.011	103.00	100	0.111	488.00	100
Little Paddy Creek	STA 378+50	TAF	1996	13	3	0	0.000	0.00	0	0.000	0.00	0	0.000	0.00	0	0.000	0.00	0	0.000	0.00	180	0.049	260.00	180
Little Paddy Creek – Ramp I	STA 378+00	TAF	1996	13	3	0	0.000	0.00	0	0.000	0.00	0	0.000	0.00	0	0.000	0.00	0	0.000	0.00	85	0.025	122.00	85
					SUM:	327	0.043	681.38	485	0.054	83.95	18,445	2.245	3,173.23	272	0.041	93.56	19,387	2.382	4,032.29	2,893	0.885	4,577.88	20,227

LF = linear feet; AC = acres; CY = cubic yards; TAF= Temporary Access Fill; RCP = rock channel protection or the like; DEP = Ditch Erosion Protection; NA = Not Applicable

Combined 404/401 Individual Permit
LAW-SR 7-2.17 (Phases 2A and 2B), PID 75923
10/21/2023

TABLE E. WETLAND DISCHARGE AND FILL QUANTITIES

Wetland	Station	Description of Impacts	Acreage (AC)	Depth (LF)	Permanent Fill Within Wetland Boundary								Total Permanent Fill		Total Impact Acreage
					Proposed Concrete (Includes Culvert, Piers, Walls, Abutments, etc.)		Proposed RCP or DEP		Proposed Earthen, Granular, or Embankment Fill		Proposed Other (Steel, Etc.)				
					Area (AC)	Volume (CY)	Area (AC)	Volume (CY)	Area (AC)	Volume (CY)	Area (AC)	Volume (CY)	Area (AC)	Volume (CY)	Area (AC)
Wetland A	STA 117+90 to 120+40	Embankment/grading, scour protection, new culvert	0.79	1	0.001	1.61	0.026	41.95	0.082	132.29	0.001	1.61	0.11	177.47	0.11
Wetland B	STA 125+25 to 126+60	Embankment/grading	0.12	1	0.000	0.00	0.000	0.00	0.120	193.60	0.000	0.00	0.12	193.60	0.12
Wetland C	STA 141+75	Embankment/grading	0.03	1	0.000	0.00	0.000	0.00	0.030	48.40	0.000	0.00	0.03	48.40	0.03
Wetland D	STA 145+90 to 149+50	Embankment/grading	1.77	1	0.000	0.00	0.000	0.00	0.070	112.93	0.000	0.00	0.07	112.93	0.07
Wetland E	STA 146+00 to 154+40	Embankment/grading, scour protection	0.71	1	0.000	0.00	0.032	51.63	0.558	900.24	0.000	0.00	0.59	951.87	0.59
Wetland F	STA 203+50 to 204+50	Embankment/grading, scour protection	0.55	1	0.000	0.00	0.020	32.26	0.530	855.07	0.000	0.00	0.55	887.33	0.55
Wetland G	STA 216+50 to 217+15	Excavation/grading	0.01	1	0.000	0.00	0.000	0.00	0.010	16.13	0.000	0.00	0.01	16.13	0.01
Wetland H	STA 229+25	Embankment/grading, scour protection	0.1	1	0.001	1.61	0.000	0.00	0.099	159.72	0.000	0.00	0.10	161.33	0.10
Wetland I	STA 288+50 to 292+50	Embankment/grading	0.6	1	0.000	0.00	0.000	0.00	0.600	968.00	0.000	0.00	0.60	968.00	0.60
Wetland K	STA 316+50	Embankment/grading	0.02	1	0.000	0.00	0.000	0.00	0.020	32.27	0.000	0.00	0.02	32.27	0.02
Wetland L	STA 324+25 to 325+50	Embankment/grading	0.13	1	0.000	0.00	0.000	0.00	0.130	209.73	0.000	0.00	0.13	209.73	0.13
Wetland M	STA 326+50 to 328+50	Embankment/grading	0.26	1	0.000	0.00	0.000	0.00	0.210	338.80	0.000	0.00	0.21	338.80	0.21
Wetland N	STA 377+75 to 381+25	Embankment/grading, bridge constructon, culverts	4.78	1	0.120	183.00	0.640	1033.00	1.780	2882.00	0.000	0.00	2.54	4,098.00	2.54
Wetland P	SR 775 STA 62+00	Embankment/grading	0.06	1	0.000	0.00	0.000	0.00	0.060	96.80	0.000	0.00	0.06	96.80	0.06
Wetland Q	STA 389+25 to 396+40	Excavation/grading	0.27	1	0.000	0.00	0.000	0.00	0.130	209.73	0.000	0.00	0.13	209.73	0.13
Wetland R	STA 395+50	Embankment/grading	0.02	1	0.000	0.00	0.000	0.00	0.020	32.27	0.000	0.00	0.02	32.27	0.02
Wetland S	STA 397+50	Embankment/grading, scour protection	0.03	1	0.000	0.00	0.007	11.29	0.023	37.11	0.000	0.00	0.03	48.40	0.03
Wetland T	STA 318+50 to 319+50	Embankment/grading	0.34	1	0.000	0.00	0.000	0.00	0.180	290.40	0.000	0.00	0.18	290.40	0.18
				SUM:	0.122	186.23	0.725	1,170.13	4.652	7,515.50	0.001	1.61	5.50	8,873.47	5.50

LF = linear feet; AC = acres; CY = cubic yards; RCP = rock channel protection or the like; DEP = Ditch Erosion Protection; NA = Not Applicable

Department of Transportation
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Mike DeWine, *Governor*
Jon Husted, *Lt. Governor*
Pamela Boratyn, *Director*

12/4/2024

Project 240512 **Addendum No. 5**
PID No. 75923
LAW-SR 7-02.17 Phase 2
New Construction
Letting: December 12, 2024

Notice to all Bidders and Suppliers to please be advised of the attached Proposal Addendum.

The Department utilizes Bid Express (http://www.bidx.com) as the official medium for electronic bid submittal. All bidders must prepare bids and submit them online via Bid Express using AASHTOWare Project Bids software.

Addenda amendments must be acknowledged in the miscellaneous section of the Project Bids file and all amendments loaded in order for your bid to be considered for award of this project. Bid express will not accept bids that do not have amendments incorporated. Failure to incorporate changed quantities or items in your Project Bids submissions will result in the rejection of your bid.

1980 West Broad Street
Columbus, OH 43223 U.S.A.

614 | 466 7170
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PROPOSAL ADDENDUM-004
FOR
PROJECT: 240512 | **CRS:** LAW-7-2.17 | **PID:** 75923

MODIFICATIONS

REVISED COMPLETION DATE	No
REPLACE/ADD PLAN SHEETS	No

ADDED NOTES

The DBE Goal is revised to 6.5%.

Department of Transportation
transportation.ohio.gov

Mike DeWine, *Governor*
Jon Husted, *Lt. Governor*
Pamela Boratyn, *Director*

12/5/2024

Project 240512 **Addendum No. 6**
PID No. 75923
LAW-SR 7-02.17 Phase 2
New Construction
Letting: December 12, 2024

Notice to all Bidders and Suppliers to please be advised of the attached Proposal Addendum.

The Department utilizes Bid Express (http://www.bidx.com) as the official medium for electronic bid submittal. All bidders must prepare bids and submit them online via Bid Express using AASHTOWare Project Bids software.

Addenda amendments must be acknowledged in the miscellaneous section of the Project Bids file and all amendments loaded in order for your bid to be considered for award of this project. Bid express will not accept bids that do not have amendments incorporated. Failure to incorporate changed quantities or items in your Project Bids submissions will result in the rejection of your bid.

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PROPOSAL ADDENDUM-006
FOR
PROJECT: 240512 | **CRS:** LAW-7-2.17 | **PID:** 75923

MODIFICATIONS

REVISED COMPLETION DATE	N/A
REPLACE/ADD PLAN SHEETS	N/A

ADDED NOTES

1. The Department has received the final signed waterway permit and this includes a Construction Certificate that needs to be executed at the end of the work. This is the only change to the Special Provision – Waterway Permits Conditions – November 27, 2024 issued with this Addendum, other than a slight note change to Item #13 which also refers to the Construction Certificate.

2. The Department has made final utility relocation arrangements for the project and the Final Utility Note is attached to this Addendum. The Department will also, as a courtesy, publish a comparison Word document to the Reference Files so that bidders to see the changes since the draft version was released. Relocation completion dates have been extended for several of the utilities compared to the draft version.

FOR REFERENCE ONLY

PRE-BID QUESTIONS

The inclusion of the question(s) that accompany answer(s) in this addendum is provided for reference only and the question(s) shall not be construed as a contract modification or change.

Question Submitted: 12/4/2024 2:03:57 PM

Does the department still plan on changing the quantity for Line 0305, 616E10000, Water? It was not changed by addendum #4

Answer: The Department is planning on making all the known plan changes and this will be available by Addendum this Friday 12/6/2024 or Monday. Most of the planned changes have been addressed by previous pre-bid questions. Also, we anticipate a revised Utility Note to be published tomorrow 12/5/2024.

Question Submitted: 12/4/2024 8:40:52 AM

Regarding the PBQ submitted on 11/20/2024 8:29:19 AM, does Ref No. 465 represent the waterproofing needed for 22’ diameter multiplate? If it does, will the Department please clarify if the Contractor shall

waterproof per 611.09 or 512.08.D (Type A Waterproofing)? If Ref No. 465 does not represent waterproofing for the 22’ diameter multiplate, should it be included in with Ref No. 472?

Answer: The Department concurs there is a conflict. The 22' diameter multiplate bridge LAW-7-0510 over Bent Creek will be coated per 611.09 and the 611.09 waterproofing will be included in the unit price bid for the Item 611 Conduit, Misc.: 22’DIA, TYPE A 707.03 (WT:35) (Proposal Ref No 472). These changes and Proposal Reference No. 465 will be removed from the proposal and plan by Addendum.

Question Submitted: 12/4/2024 8:31:51 AM

There are conflicting answers to previous pre-bid questions regarding the required waterproofing for Bridge LAW-7-0510 over Bent Creek. On 11/14/2024 the state responded that Waterproofing per CMS 611.09 is required for the Corrugated Steel Structural Plate Culvert. On 11/20/2024 the state responded that Type A waterproofing is required. The waterproofing requirements per 611.09 differ from the requirements of 512.08 Type A waterproofing. Typically, 611.09 is followed for waterproofing steel Structural Plate pipe culverts in the field. Which specification is to be followed for the Waterproofing material and installation? Furthermore, as an alternate, will the state allow or prefer a full bituminous coating per the requirements of AASHTO M-190 to be done in a shop facility owned and operated by the corrugated steel structural plate manufacturer?

Answer: The Department concurs there is a conflict. The 22' diameter multiplate bridge LAW-7-0510 over Bent Creek will be coated per 611.09 and the 611.09 waterproofing will be included in the unit price bid for the Item 611 Conduit, Misc.: 22’DIA, TYPE A 707.03 (WT:35) (Proposal Ref No 472). These changes and Proposal Reference No. 465 will be removed from the proposal and plan by Addendum. Regarding the shop application of the coating, the Department would allow that method provided AASHTO M 243 is used for the seams, bolts and any damage to the coating during installation.

Question Submitted: 12/2/2024 5:54:41 PM

Does ODOT have any additional geotechnical investigation for the provided borrow near Sta. 190+00+/- ? As shown, there is not enough information to determine if any durable material is present.

Answer: No other geotechnical information is available as the geotechnical investigation program was focused on the mainline and not excess parcels. A boring near the station requested is Boring No. R-216-0-99, drilled at Station 187+65, 54’ Lt. (shown on geotechnical profile, sheet 1093/1247), which indicates a sandstone seam from Elev. 646 to 655 (approx.).

Question Submitted: 12/2/2024 11:28:17 AM

Department asked Prebid Question The Department has replaced the utility relocation plans for AEP and Buckeye Rural Electric in the Reference Files and anticipates slight revisions to Frontier and Armstrong. Changes are not anticipated to the underground utility relocation plans. The revised utility note will be included by Addendum and is anticipated late this week.

Question Submitted: 12/2/2024 8:41:31 AM

The typical sections for the Noise Wall show no underdrain at the base of the Wall. Usually Noise walls have a 6" underdrain as part of the item. Will underdrains be required at base of the wall?

Answer: Drainage is provided via the variable depth aggregate base which is sloped towards the underdrain at the edge of shoulder.

Question Submitted: 11/30/2024 5:03:58 PM

We believe the quantity for 42" Type C Conduit is wrong. Sheet 645 lists a 73 LF section of 42" Type C Between Structures 37 & 36. Combined with the 3 additional runs on this sheet (309', 318' & 267') we believe the total of 42" Type C should be 967LF.

Answer: The Department has confirmed that the quantity should be 967 ft and will be updated by Addendum.

Question Submitted: 11/27/2024 12:51:07 PM

Department asked Prebid Question As a result of the waterway permitting process, a new environmental commitment is required related to recreational boating on Symmes Creek and Indian Guyan Creek. The commitment includes the contractor providing signage and portage at each stream crossing location when the stream is blocked to recreational boating. This commitment will be added to the plans via Addendum next week and work is incidental to other bid items.

Question Submitted: 11/26/2024 1:09:26 PM

Can ODOT provide a width dimension for the steel load plate that welds to the precast on bridge 7-0563.Page 920/1247 also shows the bearings getting welded 100%, is this correct as this is the only bridge on the project that requires it?

Answer: Steel load plate size will be PL 1-1/2x11x1'-11" and will not require a field weld all around and will match other bridges. The details will be updated with the forthcoming addendum. While investigating this question we have determined that the bearing pad size should be 1'-11"x11"x2.803" and this correction will also be included in the forthcoming addendum.

Question Submitted: 11/22/2024 3:06:42 PM

As the bid date approaches it is becoming more and more apparent that there is a lack of DBE interest in the project. The location of the project is the biggest concern when talking to DBE contractor's. The matchmaker for the project did not provide nearly enough options for bidding prime contractors. Please consider adding a proposal note similar to a Design Build Project. Compiling good faith paperwork has not shown to be successful in the past.

Answer: **The DBE goal will be revised by a forthcoming Addendum.**

SPECIAL PROVISIONS

WATERWAY PERMITS CONDITIONS

C-R-S: LAW-7-2.17

PID: 75923

Date: November 27, 2024

1. Waterway Permits Time Restrictions:

A Section 404 Individual Permit (404 IP) from the U.S. Army Corps of Engineers (USACE) has been authorized for LAW-7-2.17, PID 75923. A copy of the Section 404 Permit authorization letter (LRH-2022-00165-OHR – Symmes Creek) shall be kept at the work site at all times and made available to all contractors and subcontractors. The permit is effective starting: November 27, 2024. The permit expires: December 31, 2030.

A Section 401 Water Quality Certification (401 WQC) from the Ohio Environmental Protection Agency (OEPA) is authorized for LAW-7-2.17, PID 75923. A copy of the authorization letter (Ohio EPA ID No. 238961A) shall be kept at the work site at all times and made available to all contractors and subcontractors. The permit is effective starting: November 27, 2024. The permit expires: December 31, 2030.

For authorized work 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:

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 Section 404 IP and Section 401 WQC applications 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 1	STA 124+50 to 128+00	none
Stream 2	STA 158+00	none
Stream 3	STA 161+00 to 164+25	none
Stream 3a	STA 161+50 to 164.75	none
Stream 4	STA 1416+60	none
Stream 5	STA 183+60 to 184+90	none
Stream 6	STA 189+00 to 192+50	none
Stream 7	STA 193+00 to 200+00	none
Stream 8	STA 200+75 to 202+00	none
Stream 9	STA 218+50 to 230+20	none
Stream 9a	STA 228+80 to 229+70	none
Stream 10	STA 238+00 to 270+50	none
Stream 10a	STA 241+45 to 242+00	none
Stream 10b	STA 247+90 to 248+45	none
Stream 10c	STA 261+75	none
Stream 11	STA 270+00 to 270+75	none
Stream 12	STA 227+80 to 278+40	none
Stream 13	STA 320+50 to 323+25	none
Stream 13a	STA 319+90 to 322+25	none
Stream 13a1	STA 317+75 to 319+90	none
Stream 13a2	STA 319+50 to 320+10	none
Stream 13a3	STA 321+00	none
Stream 14	STA 337+00 to 339+80	none
Stream 14a	STA 338+65 to 340+25	none
Stream 14b	STA 339+90 to 340+60	none
Stream 15	STA 355+00 to 356+50	none
Stream 15a	STA 353+00	none
Stream 15b	STA 349+00	none
Stream 16	STA 366+50 to 377+00	none
Stream 16a	STA 364+80 to 374+00	none
Stream 16a1	STA 363+25 to 365+25	none
Stream 17	STA 379+75 to 385+75	none
Stream 18	STA 69+69L of SR 775	none
Symmes Creek2	STA 134+00	April 15 to June 30

Stream Name/ Description	Location	Work Restriction dates (No In-stream work permitted)
Symmes Creek3	STA 200+50	April 15 to June 30
Bear Creek	STA 299+00	none
Bent Creek	STA 270+00 to 274+75	none
Indian Guyan Creek	STA 299+40	April 15 to June 30
Little Paddy Creek	STA 378+50	none
Little Paddy Creek – Ramp I	STA 378+00	none

*Restriction dates do not apply if the stream has been dewatered prior to April 15.

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 Lawrence County Sheriff's Office at (740) 532-3525.

6. Aquatic Resource Demarcation:

Tables D and E (attached) include detailed fill quantities authorized within the aquatic resources. Aquatic resources not authorized 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:

Streams without StreamStats data (Streams 1, 2, 3a, 4, 5, 6, 7, 8, 10a, 10b, 10c, 12, 13a, 13a1, 13a2, 13a3, 15, 15a, 15b, 16a, 17) shall adhere to this condition of the Special Provisions for Temporary Access Fills (TAFs). All remaining streams with TAFs shall adhere to condition 11 of the Special Provisions.

Special Provisions Notes:

Definitions:

Normal Flow
Normal flow is the flow necessary to maintain chemical, physical, and biological integrity of the waterway. Normal flows for this type of waterway may vary during the year. It is anticipated that the Normal Flow is less than the flow producing an elevation equal to the OHWM but greater than zero. The Contractor's means and methods may vary depending on the time of year the work is active.

Temporary Access Fills (TAFs)
Include, but are not limited to, dewatering fills, causeways, cofferdams, access pads, and temporary bridges below the OHWM.

Requirements

7 calendar days prior to the initiation of any in-stream work, provide the Engineer with a written plan that includes the following:

- Plan view drawing showing the location of all TAFs proposed for use on the project.

- 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.
- 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 TAFs.

Do not begin in-stream work until the Engineer has accepted the written plan. Submit any changes to the planned TAF to the Engineer for acceptance a minimum of 7 days prior to performing any instream work.

The design 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.

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

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. Minimize clearing, grubbing, and excavation of waterway banks, and approach sections. Construct the TAFs as to not cause erosion or allow sediment deposits in the waterway.

Prior to the installation of any work in the waterway, establish a visual monument upstream of the proposed TAF. Maintain the monument throughout the project. Provide a visual mark on the monument that identifies the elevation of the OHWM.

Construct the TAFs to a water elevation at least 1 foot (0.3 m) above the OHWM. Use TAFs to dewater sections of the waterway for accessing proposed work areas only. Provide diversion ditches, conduits, pumps or other methods to maintain normal flows to the downstream waterway. Passing normal flows through active work areas of the waterway is prohibited. Ensure that any ponding of water behind the TAFs will not damage property, flood roadways, or threaten human health and safety.

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, as specified in C&MS 703.19.B.

When the work requiring TAF is complete, all portions of the TAF (including all rock and temporary diversions) 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 waterway 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. Temporary Access Fills:

Streams that have StreamStats data (Streams 3, 9, 9a, 10, 11, 13, 14, 16, Symmes Creek, Bear Creek, Bent Creek, Indian Guyan Creek, and Little Paddy Creek) shall adhere to this condition of the Special Provisions for Temporary Access Fills (TAFs). All remaining streams with TAFs shall adhere to condition 10 of the Special Provisions.

Special Provisions Notes:

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.

12. 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 jurisdictional waters of the U.S. 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.

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 has been attached to these Special Provisions.

14. Demolition Debris:

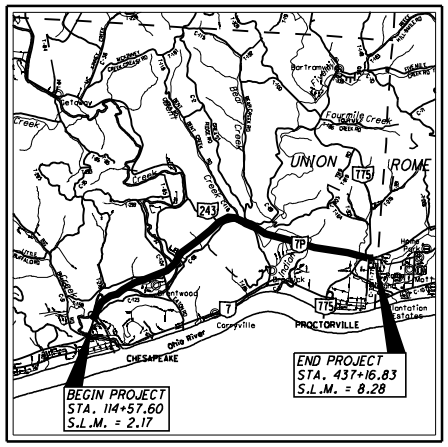
The intentional discharge of demolition debris from any structure (including but not limited to bridges, culverts, abutments, wing walls, piers) is not authorized for this project. If any demolition debris inadvertently falls into aquatic resources, it must be removed immediately. Notify the Engineer 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.

Version: July 2020

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION

LAW-7-2.17-PHASE 2A

VILLAGE OF CHESAPEAKE
VILLAGE OF PROCTORVILLE
UNION TOWNSHIP
ROME TOWNSHIP
LAWRENCE COUNTY


UNION
ROME
PROCTORVILLE
CHESAPEAKE
Ohio River
Coal Run
Symmes Creek
Storms Creek
Guyandotte River
Ironton
Coalton
Centerville
Hartwood
Bartramville
Hanging Rock
Hecla Park
Hecla
Rome Beach
Rome Hollow
Plantation Estates
Lawrence Co Home
Lawrence Co Fairgrounds
Ohio Valley Speedway
Ohio Valley Raceway
Ohio Valley Mall
Ohio Valley Medical Center
Ohio Valley Industrial Park
Ohio Valley Industrial & Business Park
Ohio Valley Industrial & Business Park
Ohio Valley Industrial & Business

CURVE DATA
S.R. 7
CURVE NO. 1

P.I. STA. 138+60.99
Δ = 53° 33' 53" (RT)
Dc = 1° 27' 15"
R = 3,940.00'
T = 1,880.13'
L = 3,508.44'
E = 425.60'
TS STA. 117+84.61
SC STA. 119+59.61

θs = 1° 16' 21"
Ls = 175.00'
Ts = 2,076.38'
LT = 116.67'
ST = 58.34'
e_{max} = 4.00%
CS STA. 154+68.05
ST STA. 156+43.05

CURVE DATA
S.R. 7
CURVE NO. 2

P.I. STA. 182+06.44
Δ = 24° 16' 14" (LT)
Dc = 2° 10' 43"
R = 2,630.00'
T = 423.13'
L = 839.08'
E = 33.82'
TS STA. 175+03.18
SC STA. 177+78.18

θs = 2° 59' 44"
Ls = 275.00'
Ts = 703.26'
LT = 183.36'
ST = 91.69'
e_{max} = 5.51%
CS STA. 186+17.26
ST STA. 188+92.26

CURVE DATA
S.R. 7
CURVE NO. 3

P.I. STA. 205+33.31
Δ = 27° 30' 45" (RT)
Dc = 1° 45' 00"
R = 3,274.04'
T = 683.24'
L = 1,347.14'
E = 70.53'
TS STA. 196+19.13
SC STA. 198+44.13

θs = 1° 58' 07"
Ls = 225.00'
Ts = 914.18'
LT = 150.01'
ST = 75.01'
e_{max} = 4.60%
CS STA. 211+91.27
ST STA. 214+16.27

CURVE DATA
S.R. 7
CURVE NO. 4

P.I. STA. 232+01.52
Δ = 34° 12' 59" (LT)
Dc = 4° 45' 00"
R = 1,206.23'
T = 161.12'
L = 320.35'
E = 10.71'
TS STA. 226+28.73
SC STA. 230+28.73

θs = 9° 30' 00"
Ls = 400.00'
Ts = 572.79'
LT = 267.05'
ST = 133.68'
e_{max} = 8.00%
CS STA. 233+49.08
ST STA. 237+49.08

CURVE DATA
S.R. 7
CURVE NO. 5

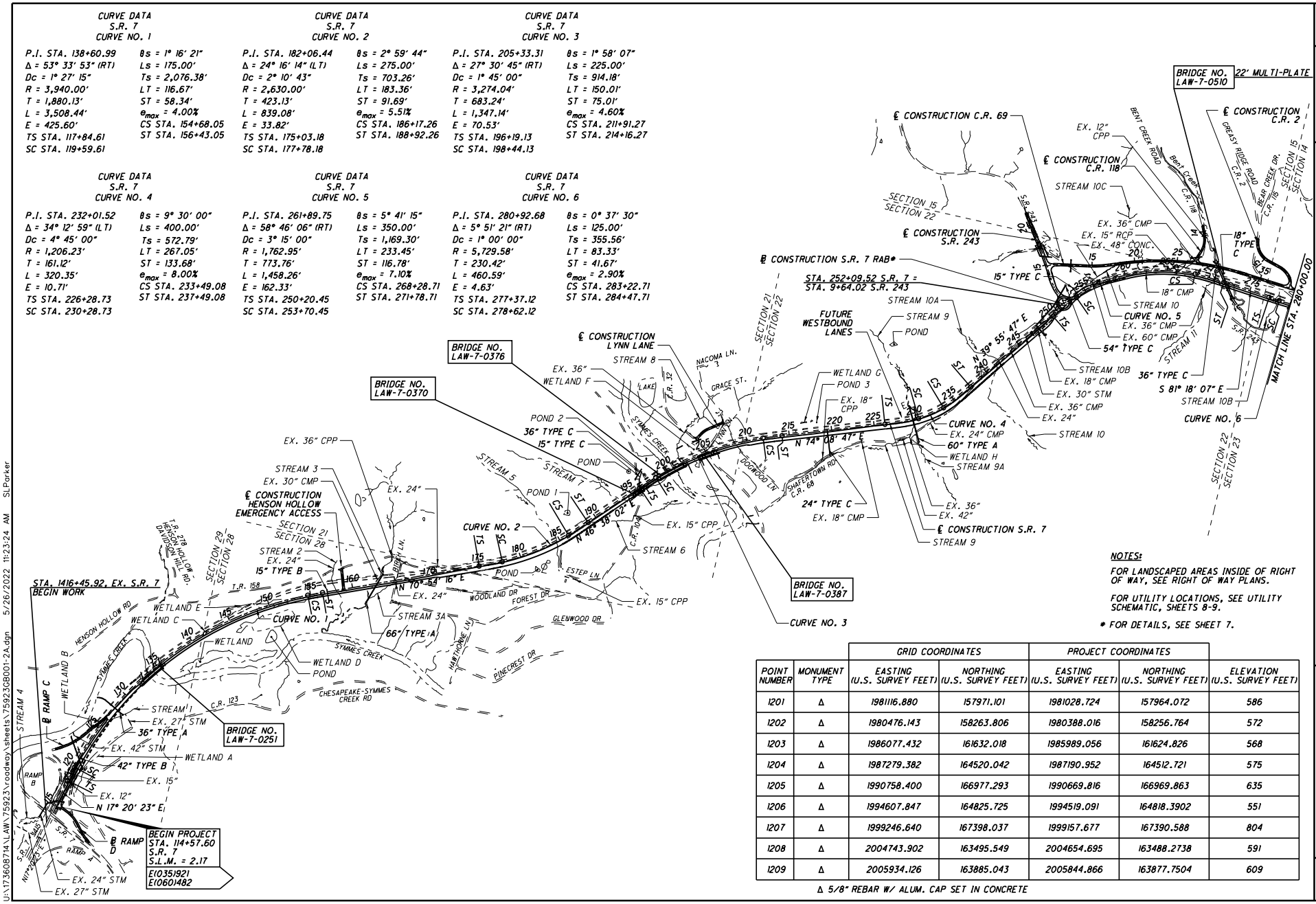
P.I. STA. 261+89.75
Δ = 58° 46' 06" (RT)
Dc = 3° 15' 00"
R = 1,762.95'
T = 773.76'
L = 1,458.26'
E = 162.33'
TS STA. 250+20.45
SC STA. 253+70.45

θs = 5° 41' 15"
Ls = 350.00'
Ts = 1,169.30'
LT = 233.45'
ST = 116.78'
e_{max} = 7.10%
CS STA. 268+28.71
ST STA. 271+78.71

CURVE DATA
S.R. 7
CURVE NO. 6

P.I. STA. 280+92.68
Δ = 5° 51' 21" (RT)
Dc = 1° 00' 00"
R = 5,729.58'
T = 230.42'
L = 460.59'
E = 4.63'
TS STA. 277+37.12
SC STA. 278+62.12

θs = 0° 37' 30"
Ls = 125.00'
Ts = 355.56'
LT = 83.33'
ST = 41.67'
e_{max} = 2.90%
CS STA. 283+22.71
ST STA. 284+47.71



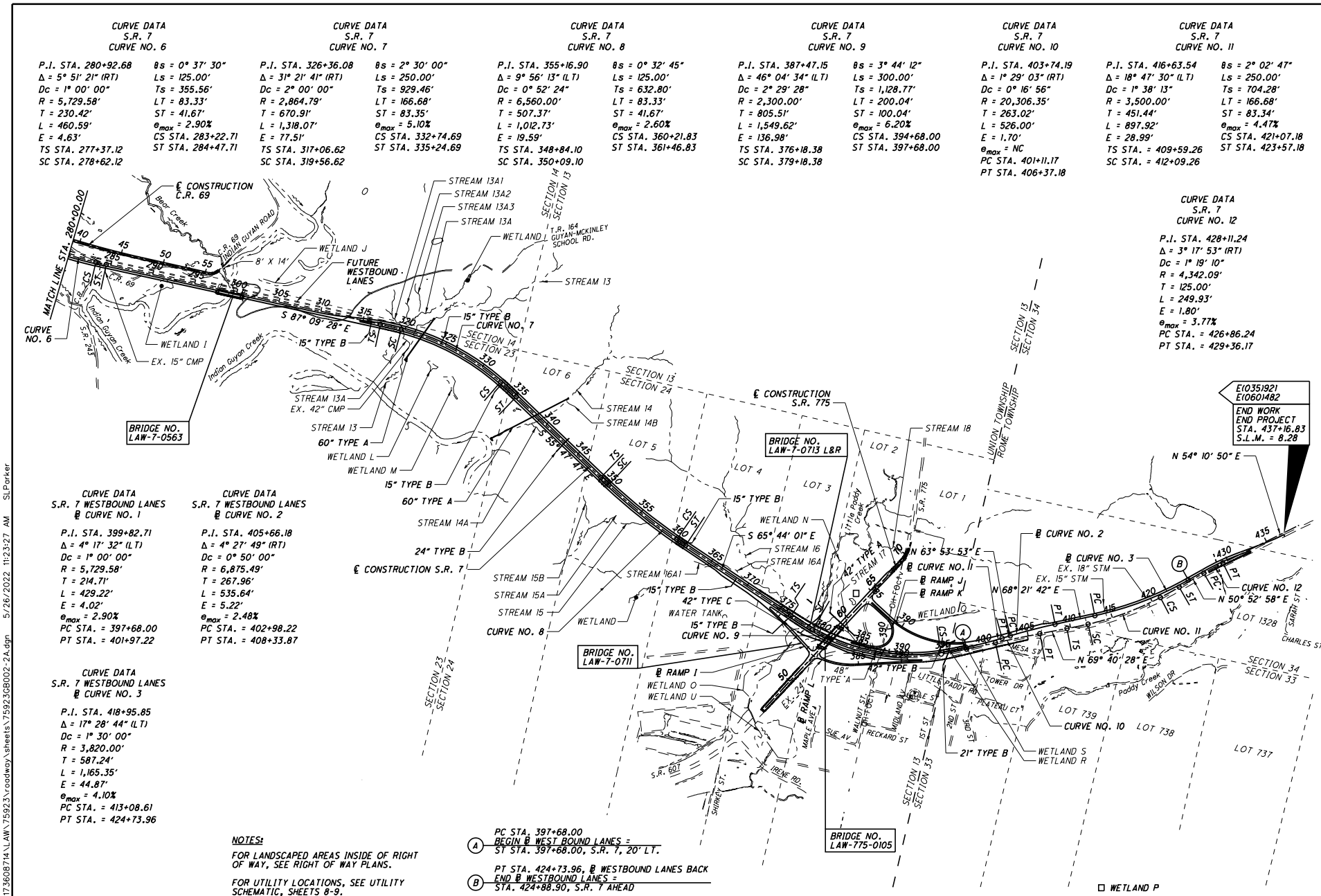
POINT NUMBER	MONUMENT TYPE	GRID COORDINATES EASTING (U.S. SURVEY FEET)	GRID COORDINATES NORTHING (U.S. SURVEY FEET)	PROJECT COORDINATES EASTING (U.S. SURVEY FEET)	PROJECT COORDINATES NORTHING (U.S. SURVEY FEET)	ELEVATION (U.S. SURVEY FEET)
1201	Δ	1981116.880	157971.101	1981028.724	157964.072	586
1202	Δ	1980476.143	158263.806	1980388.016	158256.764	572
1203	Δ	1986077.432	161632.018	1985989.056	161624.826	568
1204	Δ	1987279.382	164520.042	1987190.952	164512.721	575
1205	Δ	1990758.400	166977.293	1990669.816	166969.863	635
1206	Δ	1994607.847	164825.725	1994519.091	164818.3902	551
1207	Δ	1999246.640	167398.037	1999157.677	167390.588	804
1208	Δ	2004743.902	163495.549	2004654.695	163488.2738	591
1209	Δ	2005934.126	163885.043	2005844.866	163877.7504	609

Δ 5/8" REBAR W/ ALUM. CAP SET IN CONCRETE

SCHEMATIC PLAN

LAW-7-2.17

U:\1736087\4\LAW\75923\roadway\sheets\75923GB001-2A.dgn 5/26/2022 11:23:24 AM SLParker


CURVE DATA
S.R. 7
CURVE NO. 6
P.I. STA. 280+92.68
Δ = 5° 51' 21" (RT)
Dc = 1° 00' 00"
R = 5,729.58'
T = 230.42'
L = 460.59'
E = 4.63'
TS STA. 277+37.12
SC STA. 278+62.12
θs = 0° 37' 30"
Ls = 125.00'
Ts = 355.56'
LT = 83.33'
ST = 41.67'
emax = 2.90%
CS STA. 283+22.71
ST STA. 284+47.71
CURVE DATA
S.R. 7
CURVE NO. 7
P.I. STA. 326+36.08
Δ = 31° 21' 41" (RT)
Dc = 2° 00' 00"
R = 2,864.79'
T = 670.91'
L = 1,318.07'
E = 77.51'
TS STA. 317+06.62
SC STA. 319+56.62
θs = 2° 30' 00"
Ls = 250.00'
Ts = 929.46'
LT = 166.68'
ST = 83.35'
emax = 5.10%
CS STA. 332+74.69
ST STA. 335+24.69
CURVE DATA
S.R. 7
CURVE NO. 8
P.I. STA. 355+16.90
Δ = 9° 56' 13" (LT)
Dc = 0° 52' 24"
R = 6,560.00'
T = 507.37'
L = 1,012.73'
E = 19.59'
TS STA. 348+84.10
SC STA. 350+09.10
θs = 0° 32' 45"
Ls = 125.00'
Ts = 632.80'
LT = 83.33'
ST = 41.67'
emax = 2.60%
CS STA. 360+21.83
ST STA. 361+46.83
CURVE DATA
S.R. 7
CURVE NO. 9
P.I. STA. 387+47.15
Δ = 46° 04' 34" (LT)
Dc = 2° 29' 28"
R = 2,300.00'
T = 805.51'
L = 1,549.62'
E = 136.98'
TS STA. 376+18.38
SC STA. 379+18.38
θs = 3° 44' 12"
Ls = 300.00'
Ts = 1,128.77'
LT = 200.04'
ST = 100.04'
emax = 6.20%
CS STA. 394+68.00
ST STA. 397+68.00
CURVE DATA
S.R. 7
CURVE NO. 10
P.I. STA. 403+74.19
Δ = 1° 29' 03" (RT)
Dc = 0° 16' 56"
R = 20,306.35'
T = 263.02'
L = 526.00'
E = 1.70'
emax = NC
PC STA. 401+11.17
PT STA. 406+37.18
CURVE DATA
S.R. 7
CURVE NO. 11
P.I. STA. 416+63.54
Δ = 18° 47' 30" (LT)
Dc = 1° 38' 13"
R = 3,500.00'
T = 451.44'
L = 897.92'
E = 28.99'
TS STA. = 409+59.26
SC STA. = 412+09.26
θs = 2° 02' 47"
Ls = 250.00'
Ts = 704.28'
LT = 166.68'
ST = 83.34'
emax = 4.47%
CS STA. 421+07.18
ST STA. 423+57.18
CURVE DATA
S.R. 7
CURVE NO. 12
P.I. STA. 428+11.24
Δ = 3° 17' 53" (RT)
Dc = 1° 19' 10"
R = 4,342.09'
T = 125.00'
L = 249.93'
E = 1.80'
emax = 3.77%
PC STA. = 426+86.24
PT STA. = 429+36.17
CURVE DATA
S.R. 7 WESTBOUND LANES
@ CURVE NO. 1
P.I. STA. 399+82.71
Δ = 4° 17' 32" (LT)
Dc = 1° 00' 00"
R = 5,729.58'
T = 214.71'
L = 429.22'
E = 4.02'
emax = 2.90%
PC STA. = 397+68.00
PT STA. = 401+97.22
CURVE DATA
S.R. 7 WESTBOUND LANES
@ CURVE NO. 2
P.I. STA. 405+66.18
Δ = 4° 27' 49" (RT)
Dc = 0° 50' 00"
R = 6,875.49'
T = 267.96'
L = 535.64'
E = 5.22'
emax = 2.48%
PC STA. = 402+98.22
PT STA. = 408+33.87
CURVE DATA
S.R. 7 WESTBOUND LANES
@ CURVE NO. 3
P.I. STA. 418+95.85
Δ = 17° 28' 44" (LT)
Dc = 1° 30' 00"
R = 3,820.00'
T = 587.24'
L = 1,165.35'
E = 44.87'
emax = 4.10%
PC STA. = 413+08.61
PT STA. = 424+73.96
NOTES:
FOR LANDSCAPED AREAS INSIDE OF RIGHT OF WAY, SEE RIGHT OF WAY PLANS.
FOR UTILITY LOCATIONS, SEE UTILITY SCHEMATIC, SHEETS 8-9.
A PC STA. 397+68.00 BEGIN @ WEST BOUND LANES = ST STA. 397+68.00, S.R. 7, 20' LT.
B PT STA. 424+73.96, @ WESTBOUND LANES BACK END @ WESTBOUND LANES = STA. 424+88.90, S.R. 7 AHEAD
BRIDGE NO. LAW-7-0563
BRIDGE NO. LAW-7-0713 L&R
BRIDGE NO. LAW-7-0711
BRIDGE NO. LAW-775-0105
E(035)921
E(060)482
END WORK
END PROJECT
STA. 437+16.83
S.L.M. = 8.28
N 54° 10' 50" E
N 63° 53' 53" E
N 68° 21' 42" E
N 50° 52' 58" E
N 69° 40' 28" E
S 87° 09' 28" E
S 65° 44' 01" E
S 55° 47' 47" E
MATCH LINE STA. 280+00.00
℄ CONSTRUCTION C.R. 69
℄ CONSTRUCTION S.R. 775
℄ CONSTRUCTION S.R. 7
C.R. 69 INDIAN GUYAN ROAD
T.R. 164 GUYAN-MCKINLEY SCHOOL RD.
S.R. 743
Bear Creek
Indian Guyan Creek
Little Paddy Creek
Paddy Creek
FUTURE WESTBOUND LANES
8' X 14'
EX. 15" CMP
EX. 42" CMP
15" TYPE B
60" TYPE A
24" TYPE B
42" TYPE C
48" TYPE A
42" TYPE B
21" TYPE B
WATER TANK
CURVE NO. 1
CURVE NO. 2
CURVE NO. 3
CURVE NO. 7
CURVE NO. 8
CURVE NO. 9
CURVE NO. 10
CURVE NO. 11
CURVE NO. 12
@ RAMP I
@ RAMP J
@ RAMP K
@ RAMP L
EX. 18" STM
EX. 15" STM
EX. 24" STM
WETLAND I
WETLAND J
WETLAND L
WETLAND M
WETLAND N
WETLAND O
WETLAND P
WETLAND R
WETLAND S
WETLAND U
STREAM 13A1
STREAM 13A2
STREAM 13A3
STREAM 13A
STREAM 13
STREAM 14
STREAM 14A
STREAM 14B
STREAM 15
STREAM 15A
STREAM 15B
STREAM 16
STREAM 16A
STREAM 16A1
STREAM 17
STREAM 18
SECTION 13 SECTION 34
SECTION 14 SECTION 23
SECTION 13 SECTION 24
SECTION 23 SECTION 24
SECTION 13 SECTION 33
SECTION 34 SECTION 33
LOT 1
LOT 2
LOT 3
LOT 4
LOT 5
LOT 6
LOT 737
LOT 738
LOT 739
LOT 1328
UNION TOWNSHIP
ROME TOWNSHIP
MESA ST
LITTLE PADDY RD
TOWER DR
PLATEAU CT
WILSON DR
CHARLES ST
SARAH ST
MAPLE AVE
WALNUT ST
MIDLAND AV
RECKARD ST
IRENE RD
SHIRKEY ST
S.R. 601
1ST ST
2ND ST
3RD ST
SLE AV
OH-FOCFV
HORIZONTAL SCALE IN FEET
0
250
500
1000
SCHEMATIC PLAN
LAW-7-2.17
4
297
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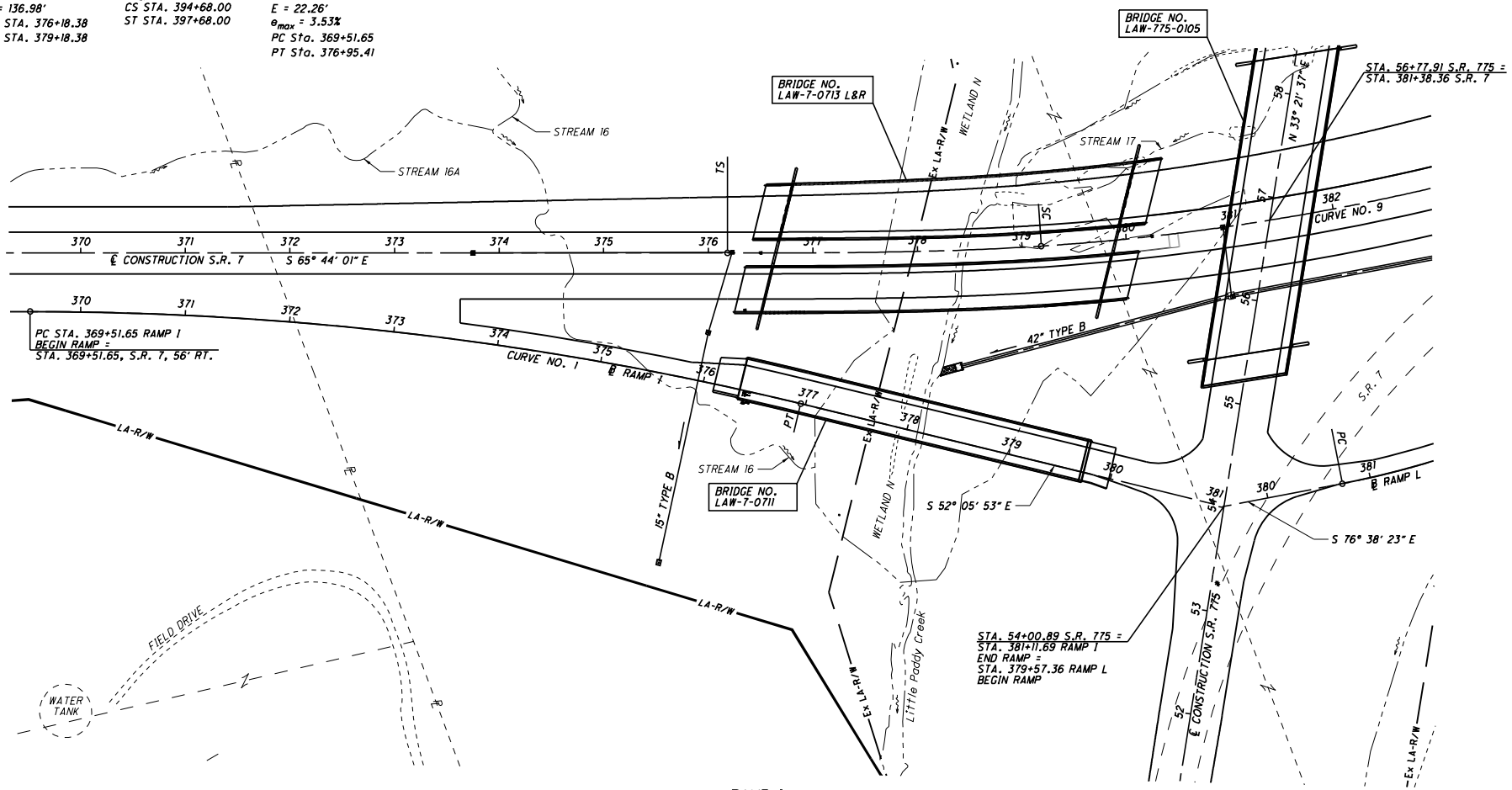
CURVE DATA
S.R. 7
CURVE NO. 9

P.I. STA. 387+47.15
Δ = 46° 04' 34" (LT)
Dc = 2° 29' 28"
R = 2,300.00'
T = 805.51'
L = 1,549.62'
E = 136.98'
TS STA. 376+18.38
SC STA. 379+18.38

θs = 3° 44' 12"
Ls = 300.00'
Ts = 1,128.77'
LT = 200.04'
ST = 100.04'
e_{max} = 6.20%
CS STA. 394+68.00
ST STA. 397+68.00

CURVE DATA
RAMP I
CURVE NO. 1

P.I. Sta. 373+25.29
Δ = 13° 38' 08" (RT)
Dc = 1° 50' 00"
R = 3,125.22'
T = 373.64'
L = 743.76'
E = 22.26'
e_{max} = 3.53%
PC Sta. 369+51.65
PT Sta. 376+95.41



RAMP I

NOTES:

FOR LANDSCAPED AREAS INSIDE OF RIGHT OF WAY, SEE RIGHT OF WAY PLANS.

FOR UTILITY LOCATIONS, SEE UTILITY SCHEMATIC, SHEETS 8-9.

HORIZONTAL SCALE IN FEET
0 25 50 100

SCHEMATIC PLAN

LAW-7-2.17

5
297

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P.I. STA. 11+53.11
Δ = 2° 41' 45"
NO CURVE

P.I. STA. 14+07.46
Δ = 2° 39' 07"
NO CURVE

P.I. STA. 16+72.90
Δ = 4° 02' 33"
NO CURVE

P.I. STA. 10+98.09
Δ = 9° 00' 49"
NO CURVE

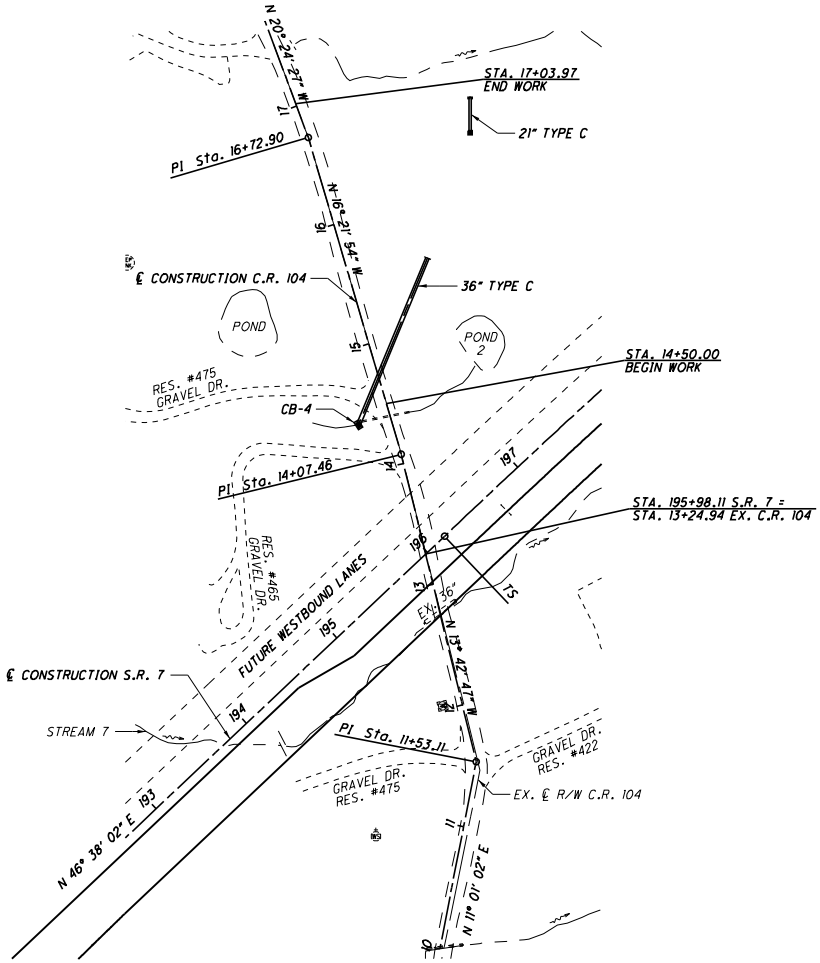
P.I. STA. 11+92.44
Δ = 5° 16' 18"
NO CURVE

P.I. STA. 12+33.35
Δ = 4° 36' 08"
NO CURVE

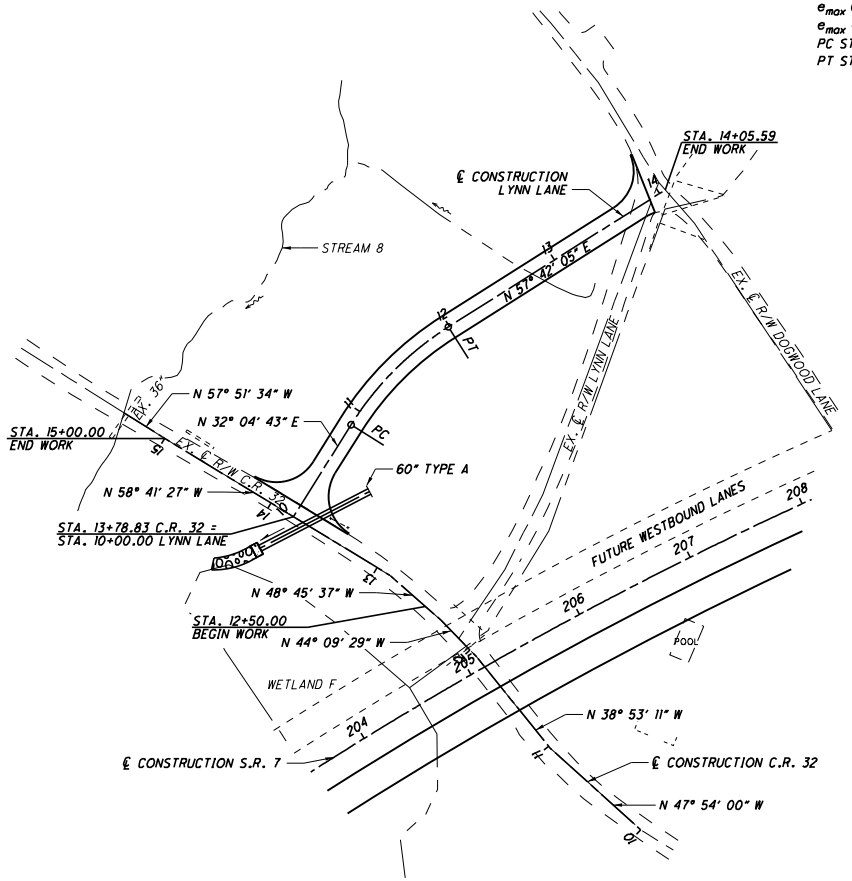
P.I. STA. 12+87.96
Δ = 9° 55' 50"
NO CURVE

P.I. STA. 15+02.34
Δ = 0° 49' 53"
NO CURVE

CURVE DATA
LYNN LANE
P.I. STA. 11+44.17
Δ = 25° 37' 23" (RT)
Dc = 22° 55' 06"
R = 250.00'
T = 56.85'
L = 111.80'
E = 6.38'
e_{max} (N.D.C.) = 8.00%
e_{max} = NC
PC STA. 10+87.32
PT STA. 11+99.12



C.R. 104



LYNN LANE & C.R. 32

NOTES:

FOR LANDSCAPED AREAS INSIDE OF RIGHT OF WAY, SEE RIGHT OF WAY PLANS.

FOR UTILITY LOCATIONS, SEE UTILITY SCHEMATIC, SHEETS 8-9.

HORIZONTAL SCALE IN FEET
0 25 50 100

SCHEMATIC PLAN

LAW-7-2.17

6
297

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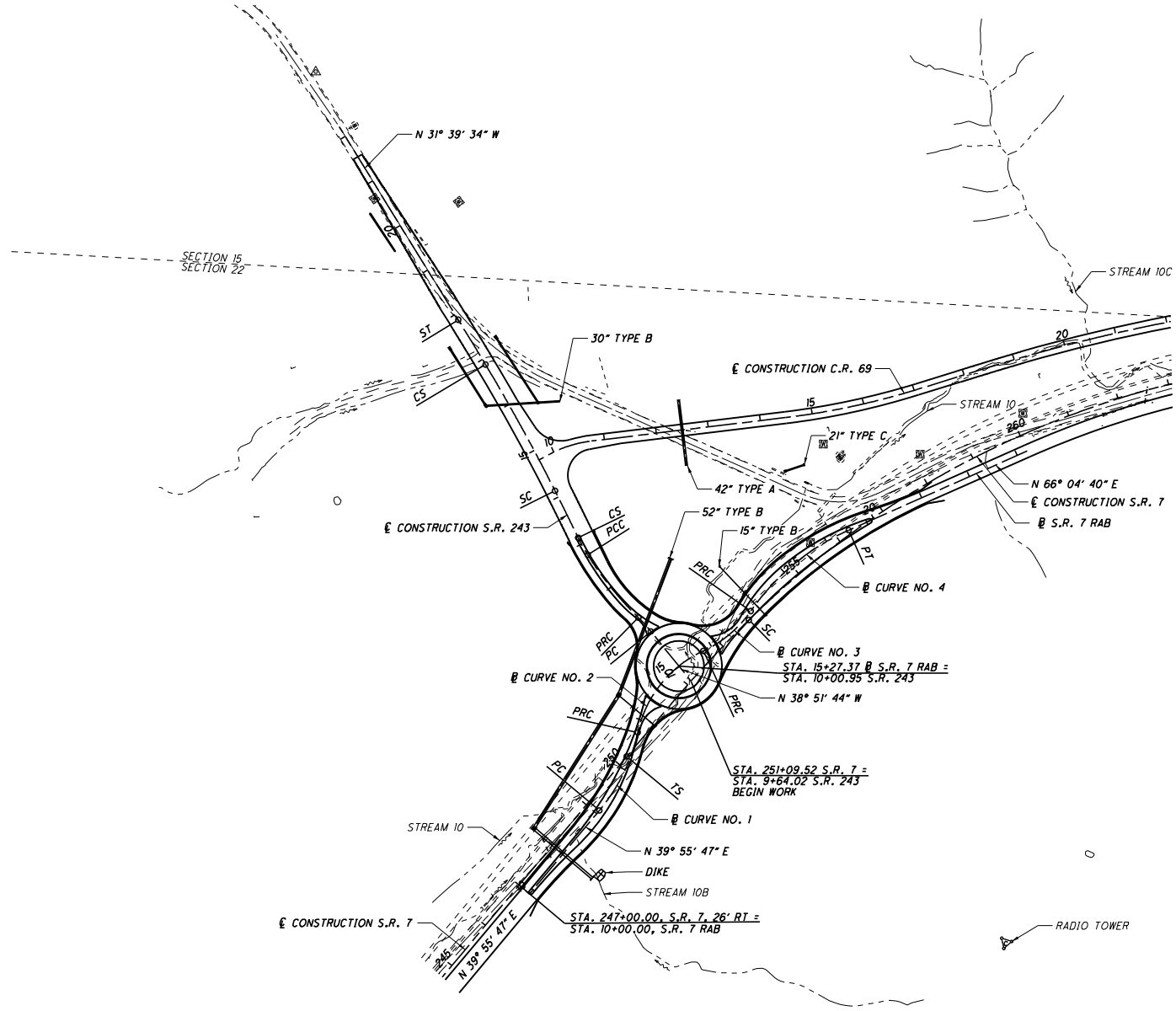

CURVE DATA
℄ S.R. 7 RAB
CURVE NO. 1

P.I. Sta. 12+93.43
Δ = 27° 26' 21" (LT)
Dc = 16° 22' 13"
R = 350.00'
T = 85.45'
L = 167.62'
E = 10.28'
PC Sta. 12+07.99
PRC Sta. 13+75.60

CURVE DATA
℄ S.R. 7 RAB
CURVE NO. 2

P.I. Sta. 14+87.13
Δ = 52° 43' 55" (RT)
Dc = 25° 27' 53"
R = 225.00'
T = 111.52'
L = 207.08'
E = 26.12'
PRC Sta. 13+75.60
PRC Sta. 15+82.68

CURVE DATA
℄ S.R. 7 RAB
CURVE NO. 3

P.I. Sta. 16+43.83
Δ = 30° 24' 24" (LT)
Dc = 25° 27' 53"
R = 225.00'
T = 61.15'
L = 119.41'
E = 8.16'
PRC Sta. 15+82.68
PRC Sta. 17+02.09

CURVE DATA
℄ S.R. 7 RAB
CURVE NO. 4

P.I. Sta. 18+27.99
Δ = 31° 15' 43" (RT)
Dc = 12° 43' 57"
R = 450.00'
T = 125.90'
L = 245.53'
E = 17.28'
PRC Sta. 17+02.09
PT Sta. 19+47.62

HORIZONTAL SCALE IN FEET
0 50 100 200

SCHEMATIC PLAN

LAW-7-2.17

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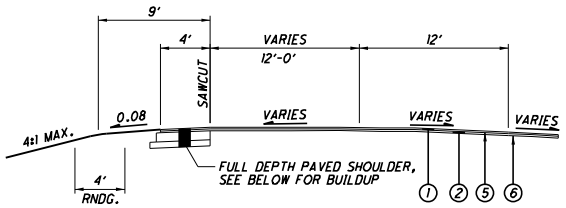
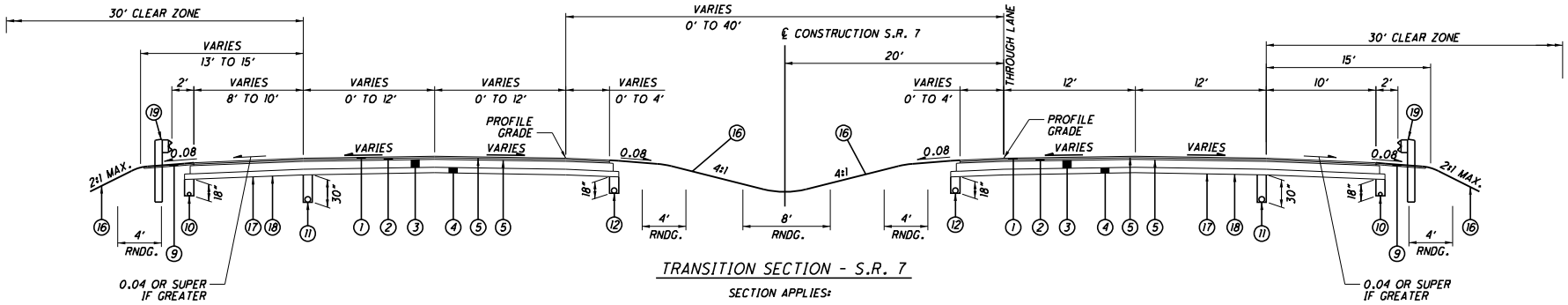


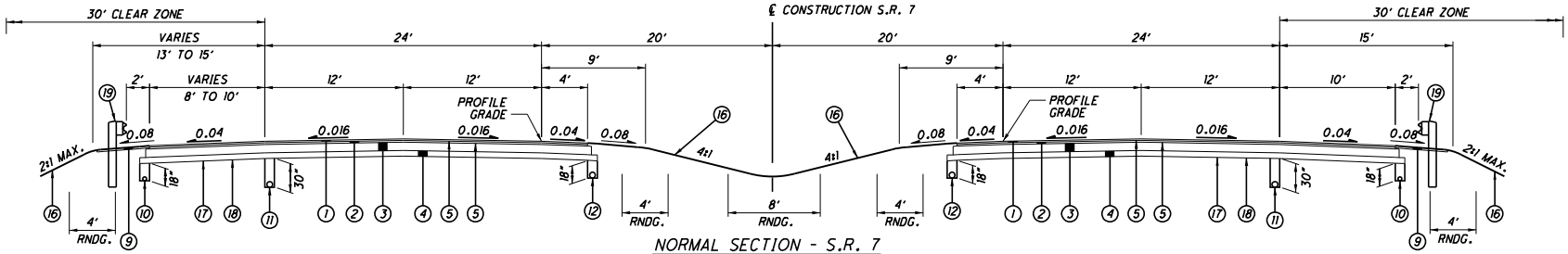
OVERLAY SECTION - S.R. 7

SECTION APPLIES:
STA. 427+42.37 TO STA. 437+16.83



TRANSITION SECTION - S.R. 7

SECTION APPLIES:
STA. 309+49.89 TO STA. 319+56.62
STA. 424+88.90 TO STA. 437+16.83



NORMAL SECTION - S.R. 7

SECTION APPLIES:
STA. 335+67.69 TO STA. 348+41.10
STA. 361+89.83 TO STA. 375+75.38

NOTES:
SUPERELEVATION TO BE OPPOSITE HAND TO TYPICAL SHOWN.
FOR LEGEND, SEE SHEET 10.
FOR DITCH DETAILS, SEE SHEET 16.
FOR EDGE COURSE DETAILS, SEE SHEET 17.
FOR SUPERELEVATED SHOULDER DETAILS, SEE DETAIL A, SHEET 17.

PAVEMENT AREA SHOWN FOR
INFORMATION ONLY. AREA TO BE
SEEDED AND MULCHED.

TYPICAL SECTION - S.R. 7

LAW-7-2.17

11
297

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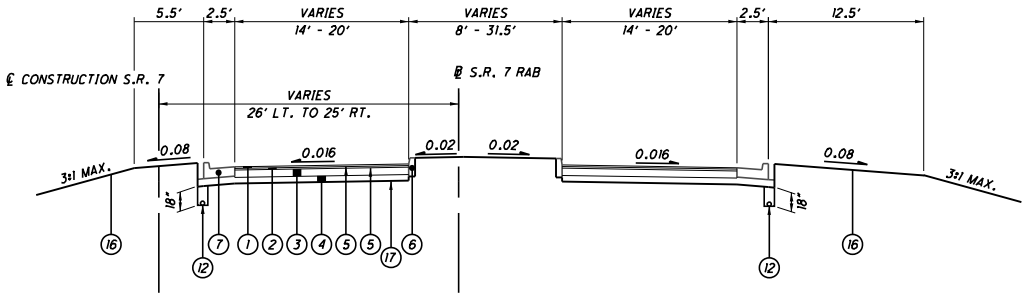

NORMAL SECTION - S.R. 7 RAB

SECTION APPLIES:
S.R. 7 STA. 247+00.00 TO STA. 251+00.00

PAVEMENT AREA SHOWN FOR INFORMATION ONLY. AREA TO BE SEEDED AND MULCHED.

NOTES:
TYPICAL SHOWN FOR INFORMATION ONLY.

PAVEMENT BUILDUP IS THE SAME FOR BOTH SIDES OF ℄.
SEE PAVEMENT DETAILS FOR LIMITS OF CONCRETE MEDIAN.

FOR LEGEND, SEE SHEET 10.

TYPICAL SECTION - S.R. 7

LAW-7-2.17

12
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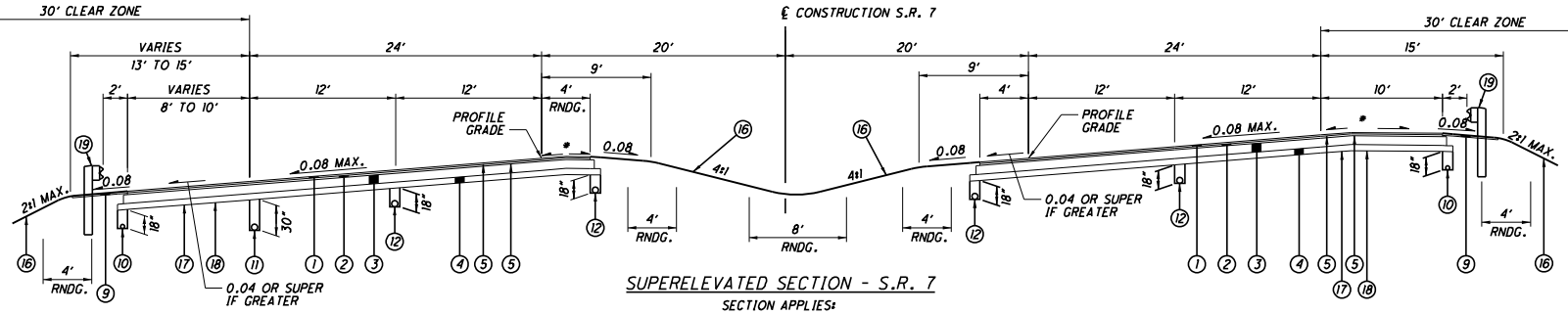


SUPERELEVATED SECTION - S.R. 7

SECTION APPLIES:

+ STA. 319+56.52 TO STA. 335+67.69
STA. 348+41.10 TO STA. 361+89.83
STA. 375+75.38 TO STA. 397+68.00

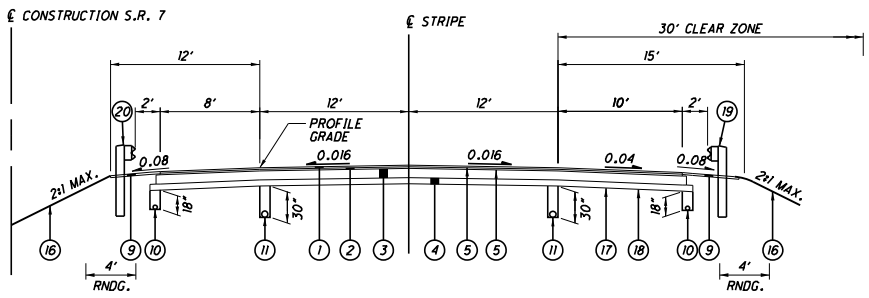
PAVEMENT AREA SHOWN FOR INFORMATION ONLY. AREA TO BE SEEDED AND MULCHED.

NOTES:

+ SUPERELEVATION TO BE OPPOSITE HAND TO TYPICAL SHOWN.
FOR LEGEND, SEE SHEET 10.
FOR DITCH DETAILS, SEE SHEET 16.
FOR EDGE COURSE DETAILS, SEE SHEET 17.
* FOR SUPERELEVATED SHOULDER DETAILS, SEE DETAIL A, SHEET 17.

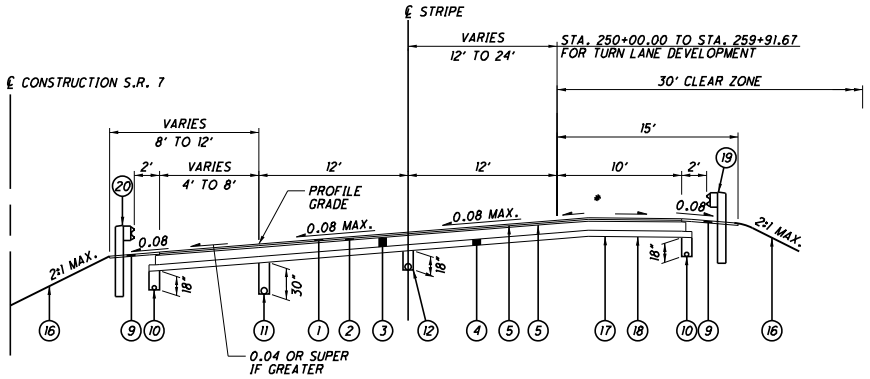
TYPICAL SECTION - S.R. 7

LAW-7-2.17



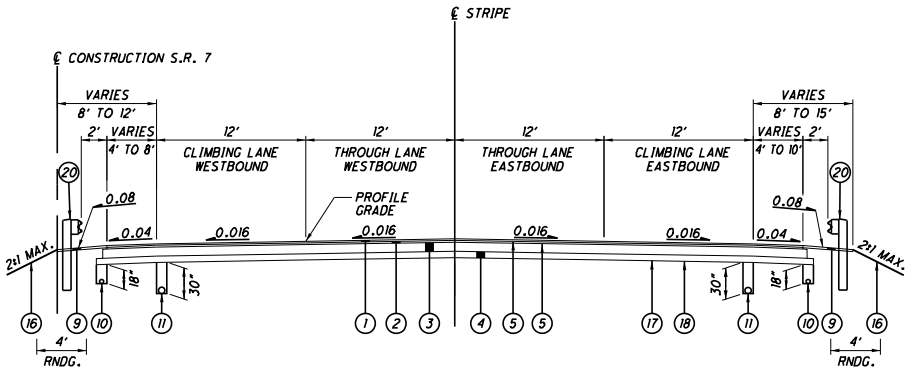
NORMAL SECTION - S.R. 7

SECTION APPLIES:
STA. 156+86.05 TO STA. 167+72.52
STA. 195+00.00 TO STA. 195+76.13
STA. 272+21.71 TO STA. 276+94.12
STA. 284+90.71 TO STA. 309+49.89



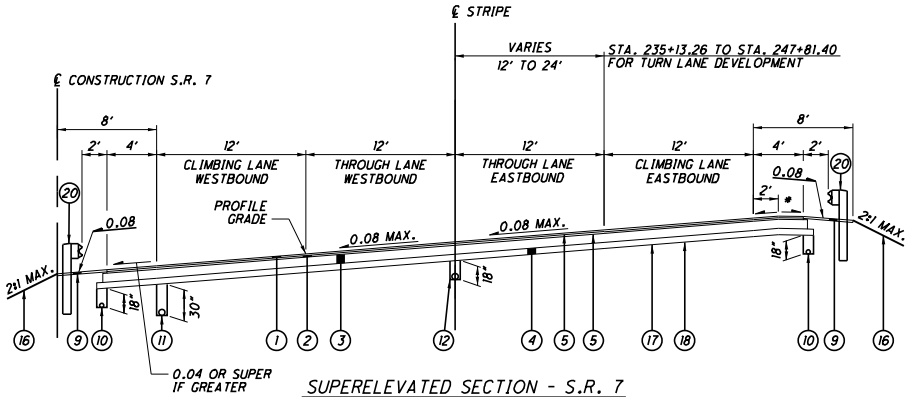
SUPERELEVATED SECTION - S.R. 7

SECTION APPLIES:
+ STA. 120+56.37 TO STA. 156+86.05
STA. 195+76.13 TO STA. 209+79.72
+ STA. 250+00.00 TO STA. 272+21.71
STA. 276+94.12 TO STA. 284+90.71
STA. 376+00.00 TO STA. 390+75.00



NORMAL SECTION - S.R. 7
WITH CLIMBING LANES

SECTION APPLIES:
STA. 167+72.52 TO STA. 174+60.18
STA. 189+35.26 TO STA. 195+00.00
STA. 214+59.27 TO STA. 225+85.73
STA. 237+92.08 TO STA. 247+00.00



SUPERELEVATED SECTION - S.R. 7
WITH CLIMBING LANES

SECTION APPLIES:
STA. 174+60.18 TO STA. 189+35.26
+ STA. 209+79.72 TO STA. 214+59.27
STA. 225+85.73 TO STA. 237+92.08

PAVEMENT AREA SHOWN FOR INFORMATION ONLY. AREA TO BE SEEDED AND MULCHED.

NOTES:
+ SUPERELEVATION TO BE OPPOSITE HAND TO TYPICAL SHOWN.
FOR LEGEND, SEE SHEET 10.
FOR DITCH DETAILS, SEE SHEET 16.
FOR EDGE COURSE DETAILS, SEE SHEET 17.
* FOR SUPERELEVATED SHOULDER DETAILS, SEE DETAIL A, SHEET 17.

TYPICAL SECTION - S.R. 7

LAW-7-2.17

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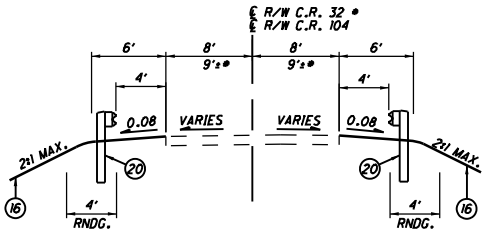
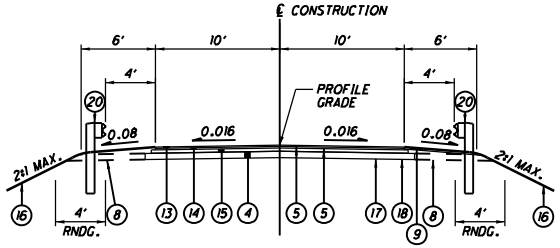


NORMAL SECTION - SIDE ROADS

SECTION APPLIES
C.R. 104
STA. 14+50.00 TO STA. 17+03.97
C.R. 32
STA. 12+50.00 TO STA. 15+00.00



NORMAL SECTION - SIDE ROADS

SECTION APPLIES
LYNN LANE
STA. 10+10.00 TO STA. 13+90.68

NOTES:
FOR LEGEND, SEE SHEET 10
FOR DITCH DETAILS, SEE SHEET 16
FOR EDGE COURSE DETAILS, SEE SHEET 17

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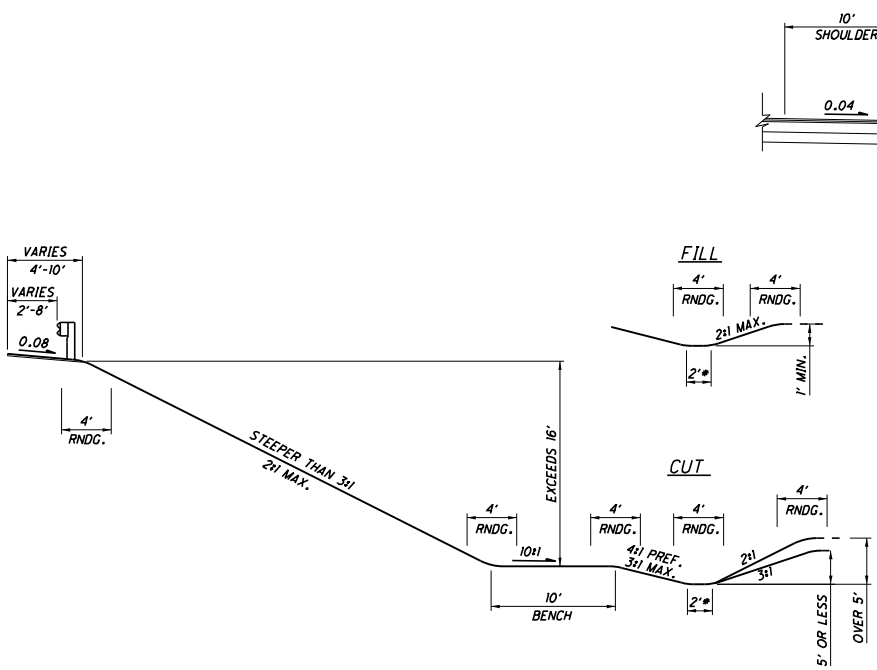
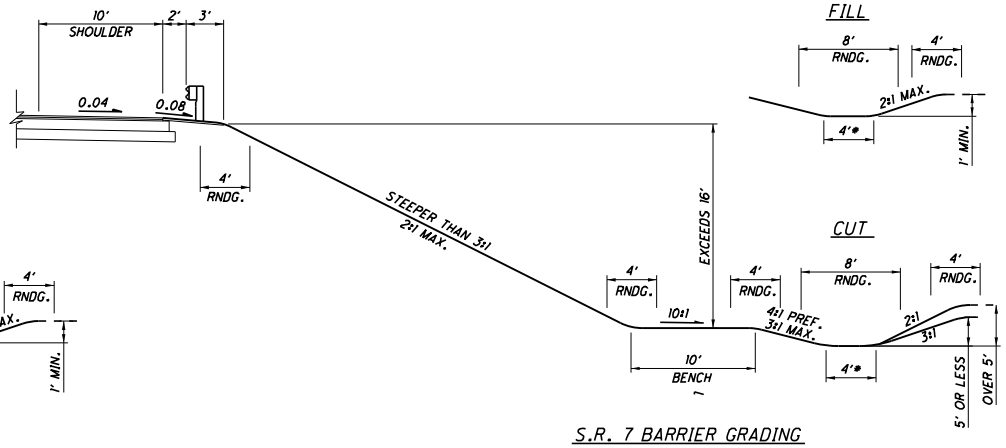
TYPICAL SECTIONS - COUNTY ROADS AND SIDE ROADS

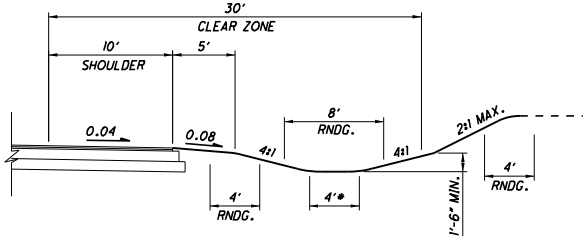
LAW-7-2.17



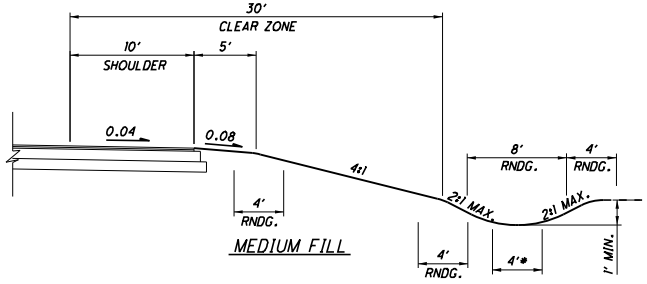
SIDE ROAD BARRIER GRADING



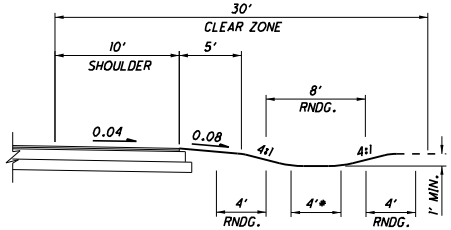
S.R. 7 BARRIER GRADING



CUT SECTION



MEDIUM FILL



LOW FILL

NOTES:
* SEE CROSS SECTIONS FOR POST CONSTRUCTION ENHANCED BANKFULL WIDTHS
ROUNDING SHALL BE 4' WIDER THAN DITCH WIDTH SHOWN

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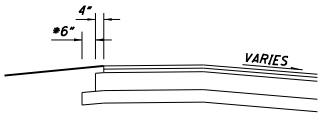
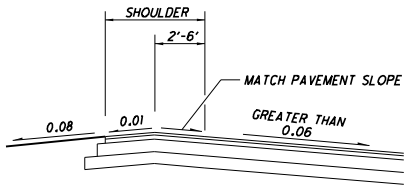
TYPICAL SECTIONS - DITCH DETAILS

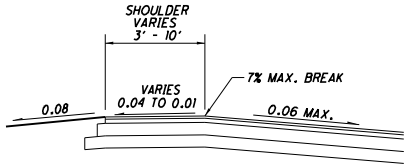
LAW-7-2.17

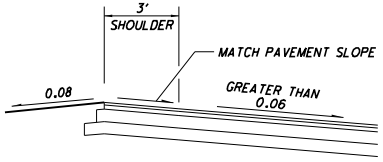


EDGE COURSE DETAIL
FOR ALL TYPICALS

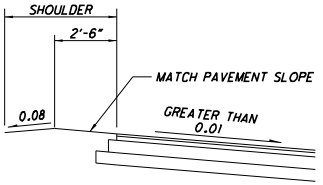
* 6" OR THE THICKNESS OF OVERLYING LIFT, WHICHEVER IS GREATER.

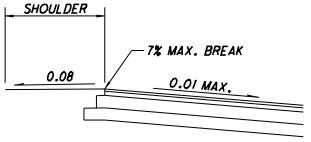






DETAIL A
PAVED SHOULDERS





DETAIL B
TURF SHOULDERS

TYPICAL SECTIONS - MISCELLANEOUS DETAILS

LAW-7-2.17

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ROUNDING

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

UTILITIES

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

FRONTIER COMMUNICATIONS
(FORMERLY VERIZON)
1315 SLPERT STREET
PORTSMOUTH, OHIO 45662
PHONE: (740) 354-0512
MR. PAUL MONTAVON

COLUMBIA GAS OF OHIO (KENTUCKY)
P.O. BOX 14241
LEXINGTON, KENTUCKY 40512
PHONE: (859) 288-0225
MR. GARY SULLIVAN

AMERICAN ELECTRIC POWER
(DISTRIBUTION)
850 TECH CENTER DRIVE
GAHANNA, OHIO 43230
PHONE: (614) 883-6831
MR. PAUL PAXTON

ARMSTRONG CABLE SERVICES
9651 COUNTY ROAD 1
SOUTH POINT, OHIO 45680
PHONE: (740) 894-6357
MR. LEONARD HARVEY

AMERICAN ELECTRIC POWER
(TRANSMISSION)
700 MORRISON ROAD
GAHANNA, OHIO 43230
PHONE: (614) 552-1801
MS. TINA HAIRSTON

TIME WARNER CABLE
225 RUSSELL ROAD
ASHLAND, KENTUCKY 41101
PHONE: (606) 326-6803
MR. MIKE JONES

BUCKEYE RURAL ELECTRIC CO-OP
P.O. BOX 200
RIO GRANDE, OHIO 45674
PHONE: (740) 379-2025
MR. JEFF TACKETT

HECLA WATER ASSOCIATION
3190 SR 141
IRONTON, OHIO 45638
PHONE: (740) 533-0526
MR. TIM DALTON

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.

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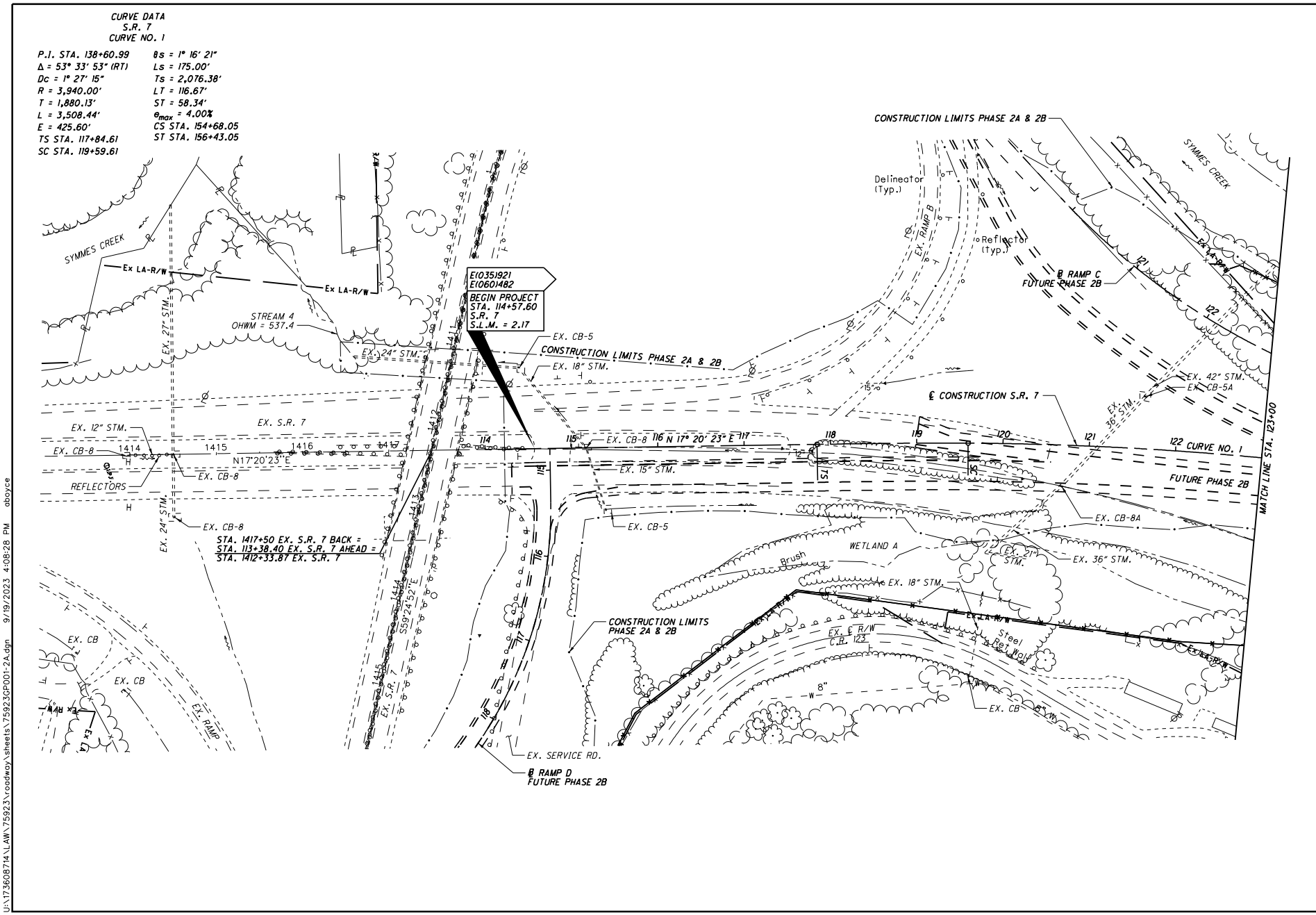
CALCULATED SLP CHECKED ALB

GENERAL NOTES

LAW-7-2.17



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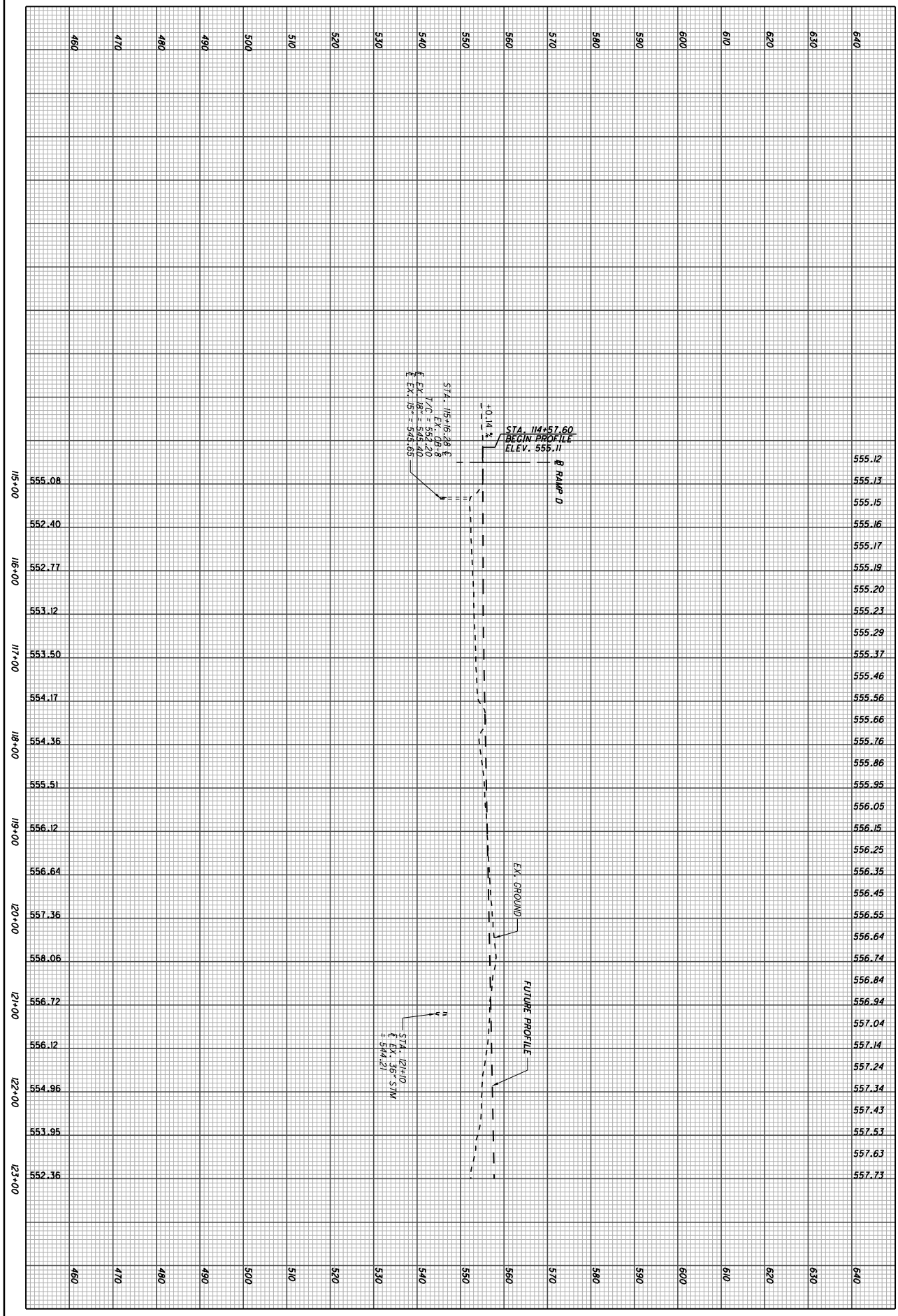
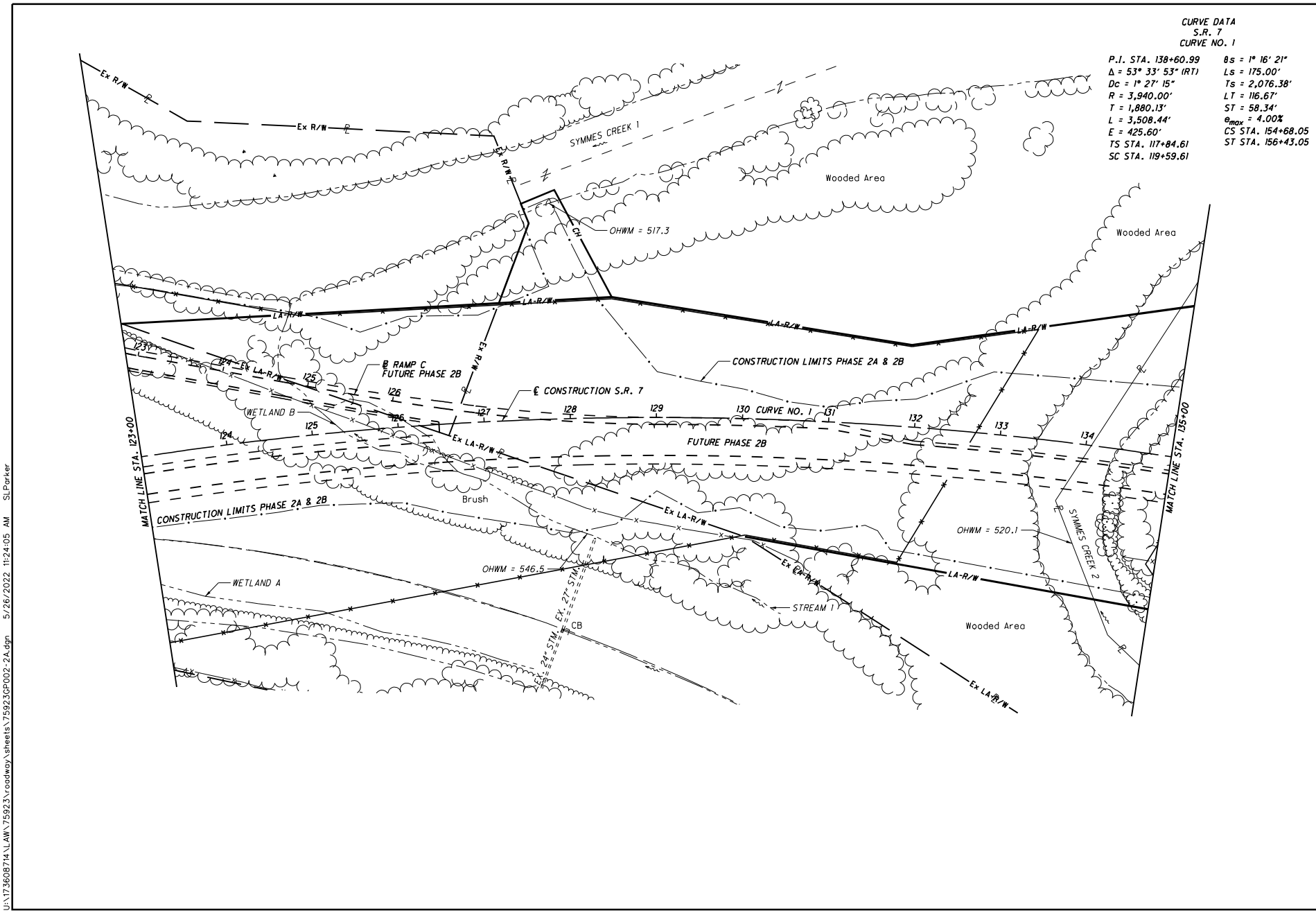


24 / 297	LAW-7-2.17	PROFILE - S.R. 7 STA. 114+57.60 TO STA. 123+00	CALCULATED ALB CHECKED TCM



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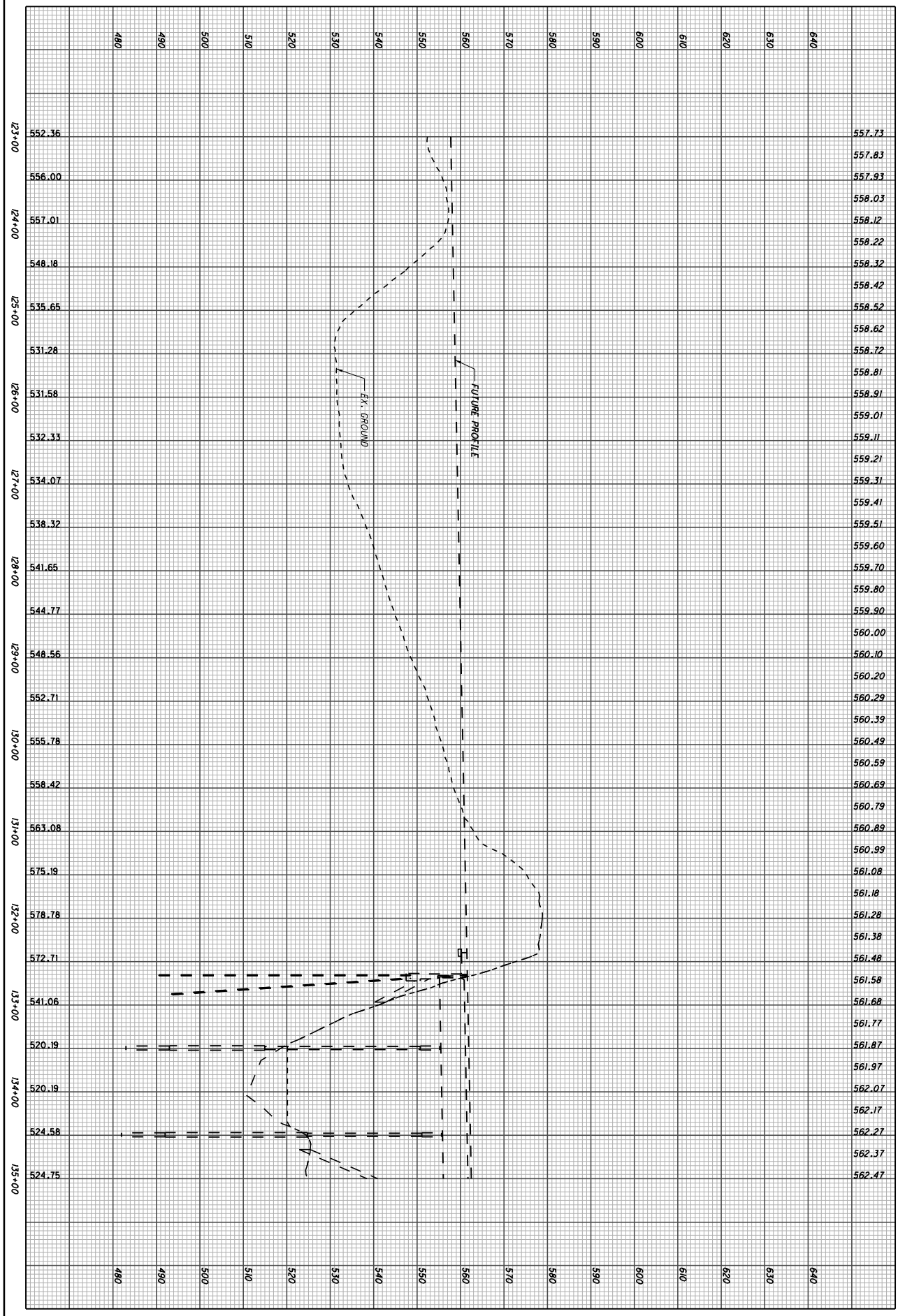
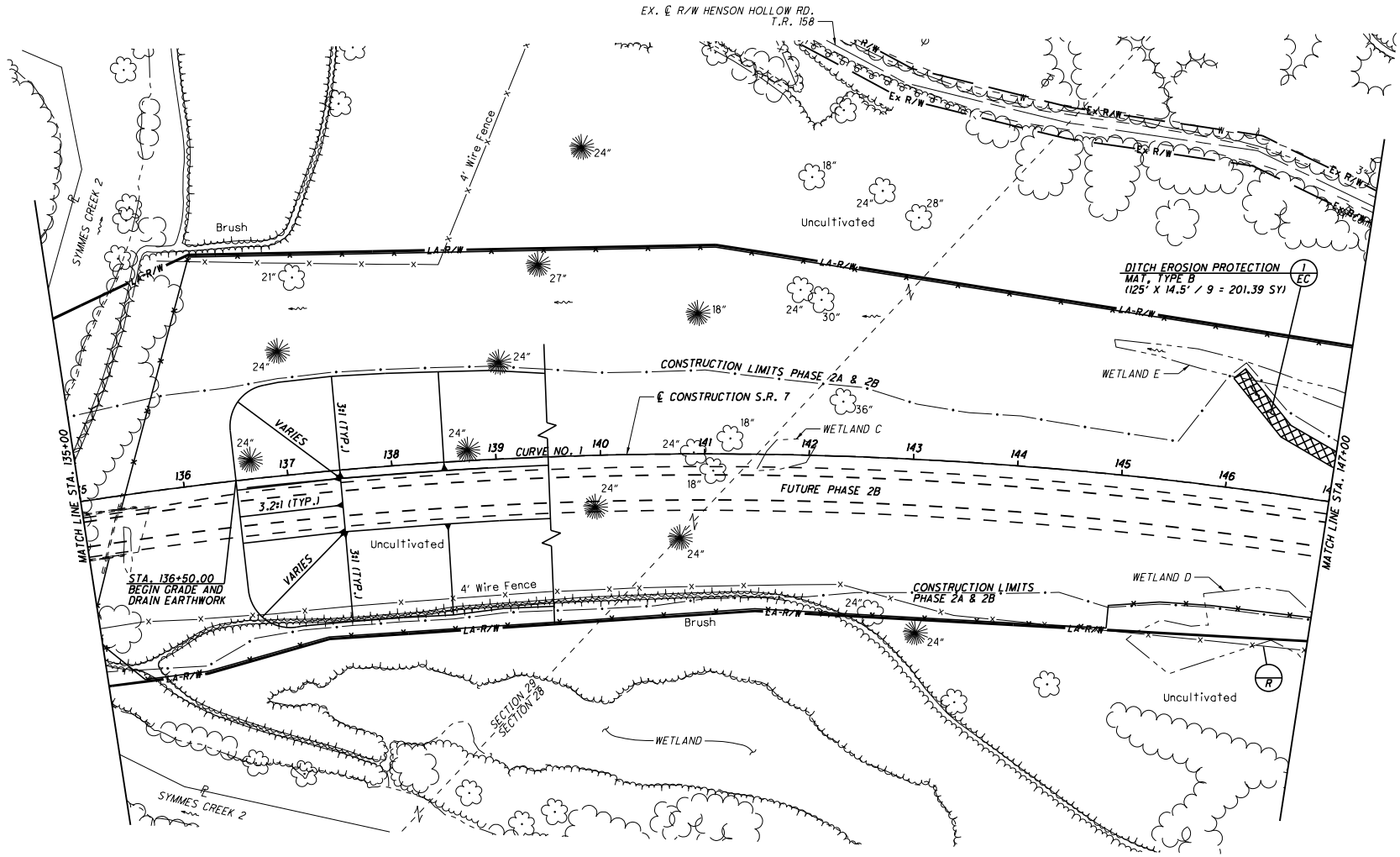


26 / 297	LAW-7-2.17	PROFILE - S.R. 7 STA. 123+00 TO STA. 135+00	CALCULATED ALB CHECKED TCM



CURVE DATA
S.R. 7
CURVE NO. 1

P.I. STA. 138+60.99
Δ = 53° 33' 53" (RT)
Dc = 1° 27' 15"
R = 3,940.00'
T = 1,880.13'
L = 3,508.44'
E = 425.60'
TS STA. 117+84.61
SC STA. 119+59.61

θs = 1° 16' 21"
Ls = 175.00'
Ts = 2,076.38'
LT = 116.67'
ST = 58.34'
e_{max} = 4.00%
CS STA. 154+68.05
ST STA. 156+43.05

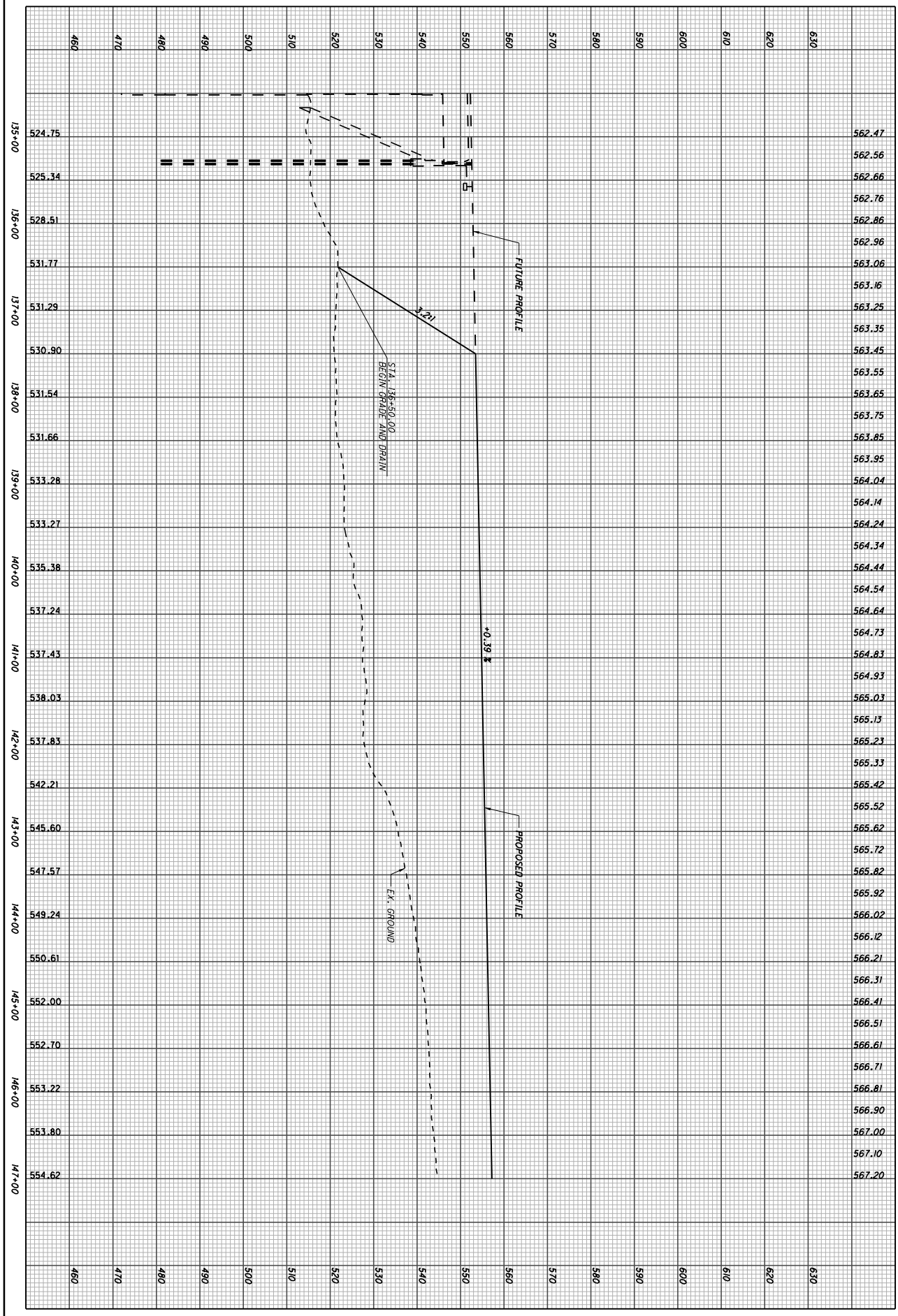
FOR PROFILE, SEE SHEET 28

HORIZONTAL SCALE IN FEET
0 25 50 100
CALCULATED SLP
CHECKED ALB

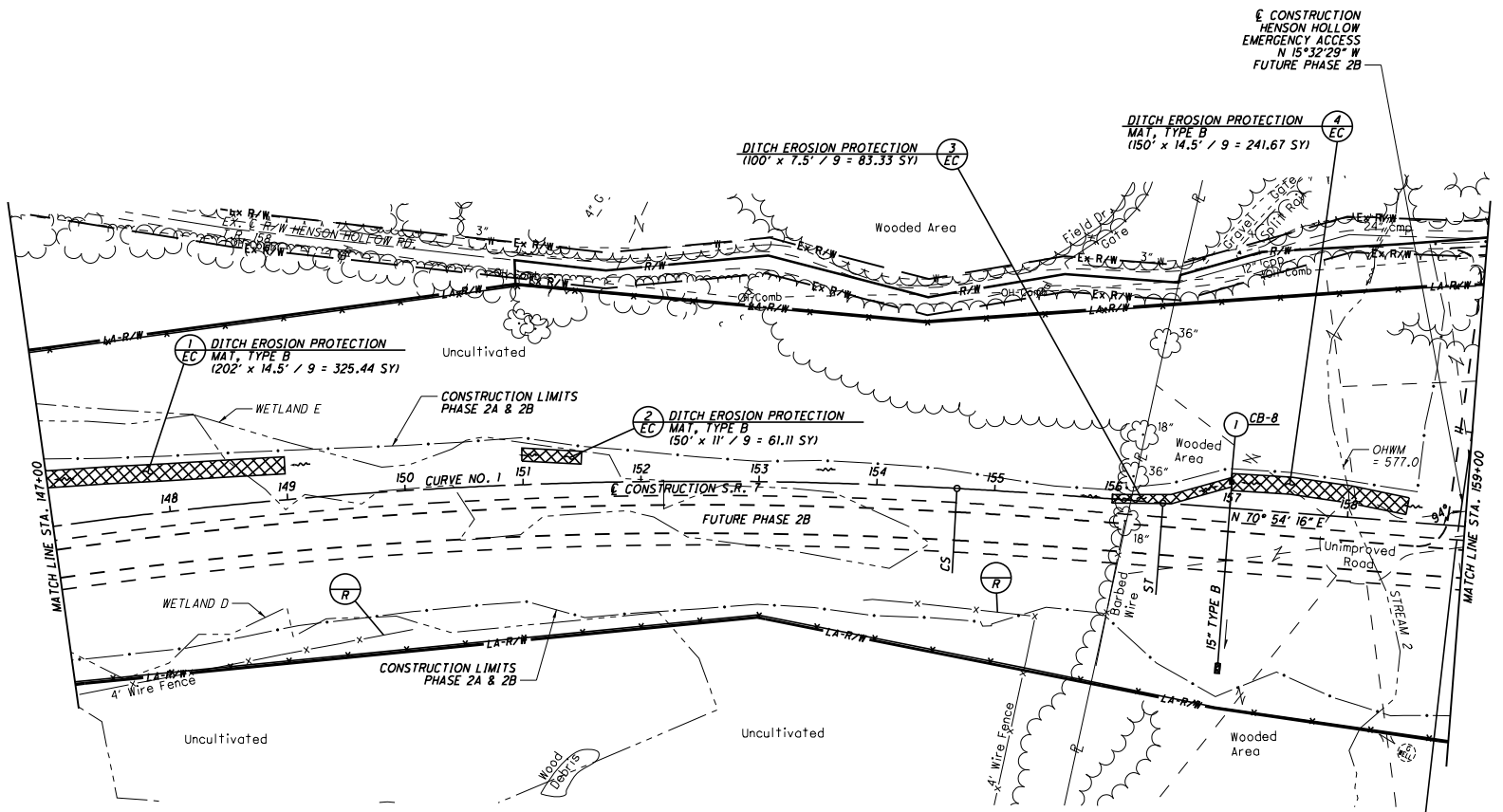
PLAN - S.R. 7
STA. 135+00 TO STA. 147+00

LAW-7-2.17

27
297



28 / 297	LAW-7-2.17	PROFILE - S.R. 7 STA. 135+00 TO STA. 147+00	CALCULATED ALB CHECKED TCM



CURVE DATA
S.R. 7
CURVE NO. 1

P.I. STA. 138+60.99	θs = 1° 16' 21"
Δ = 53° 33' 53" (RT)	Ls = 175.00'
Dc = 1° 27' 15"	Ts = 2,076.38'
R = 3,940.00'	LT = 116.67'
T = 1,880.13'	ST = 58.34'
L = 3,508.44'	e_{max} = 4.00%
E = 425.60'	CS STA. 154+68.05
TS STA. 117+84.61	ST STA. 156+43.05
SC STA. 119+59.61	

FOR PROFILE, SEE SHEET 30
FOR STORM SEWER PROFILE, SEE SHEET 97

CALCULATED SLP
CHECKED ALB

HORIZONTAL SCALE IN FEET
0 25 50 100

PLAN - S.R. 7
STA. 147+00 TO STA. 159+00

LAW-7-2.17

29
297

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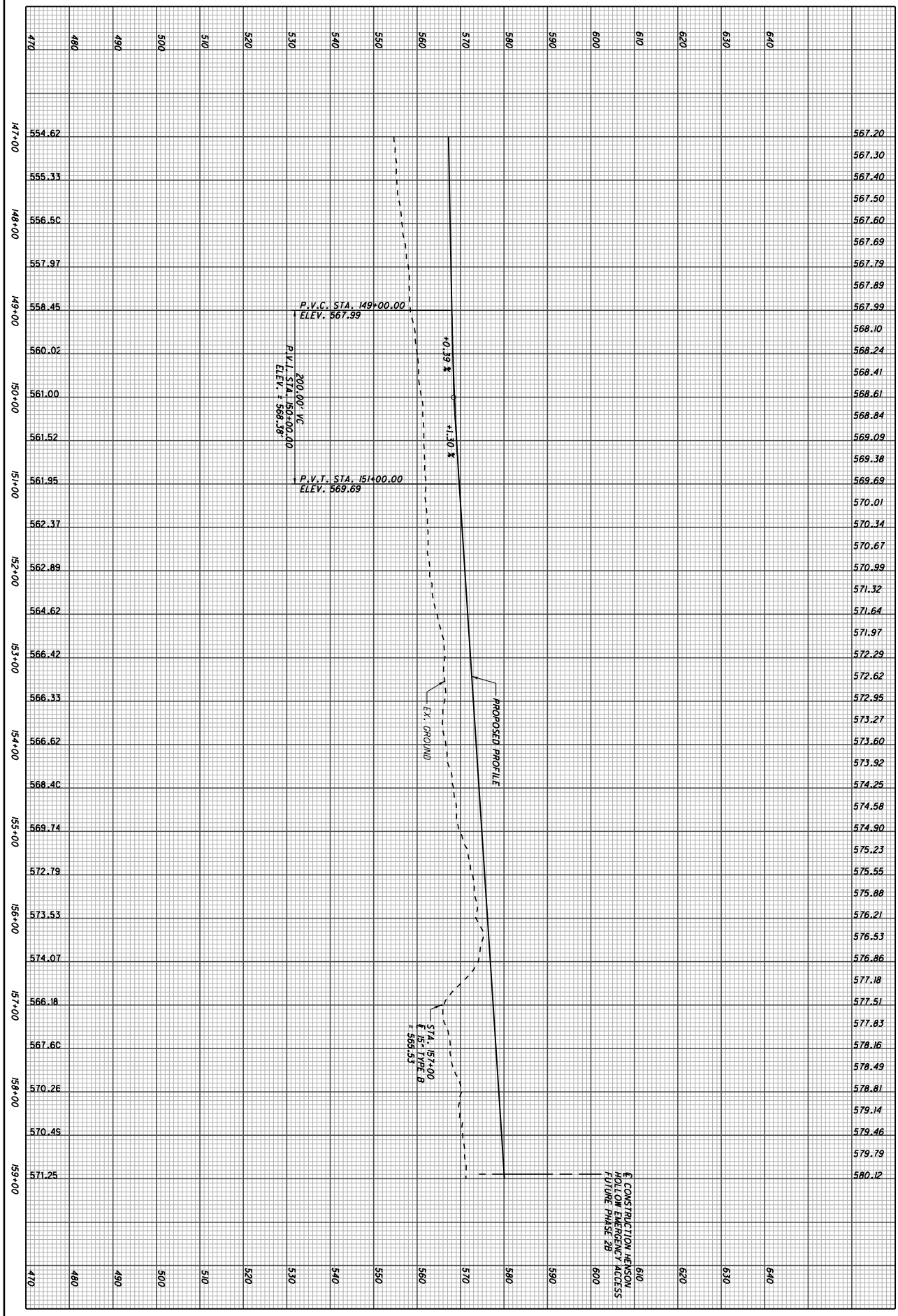
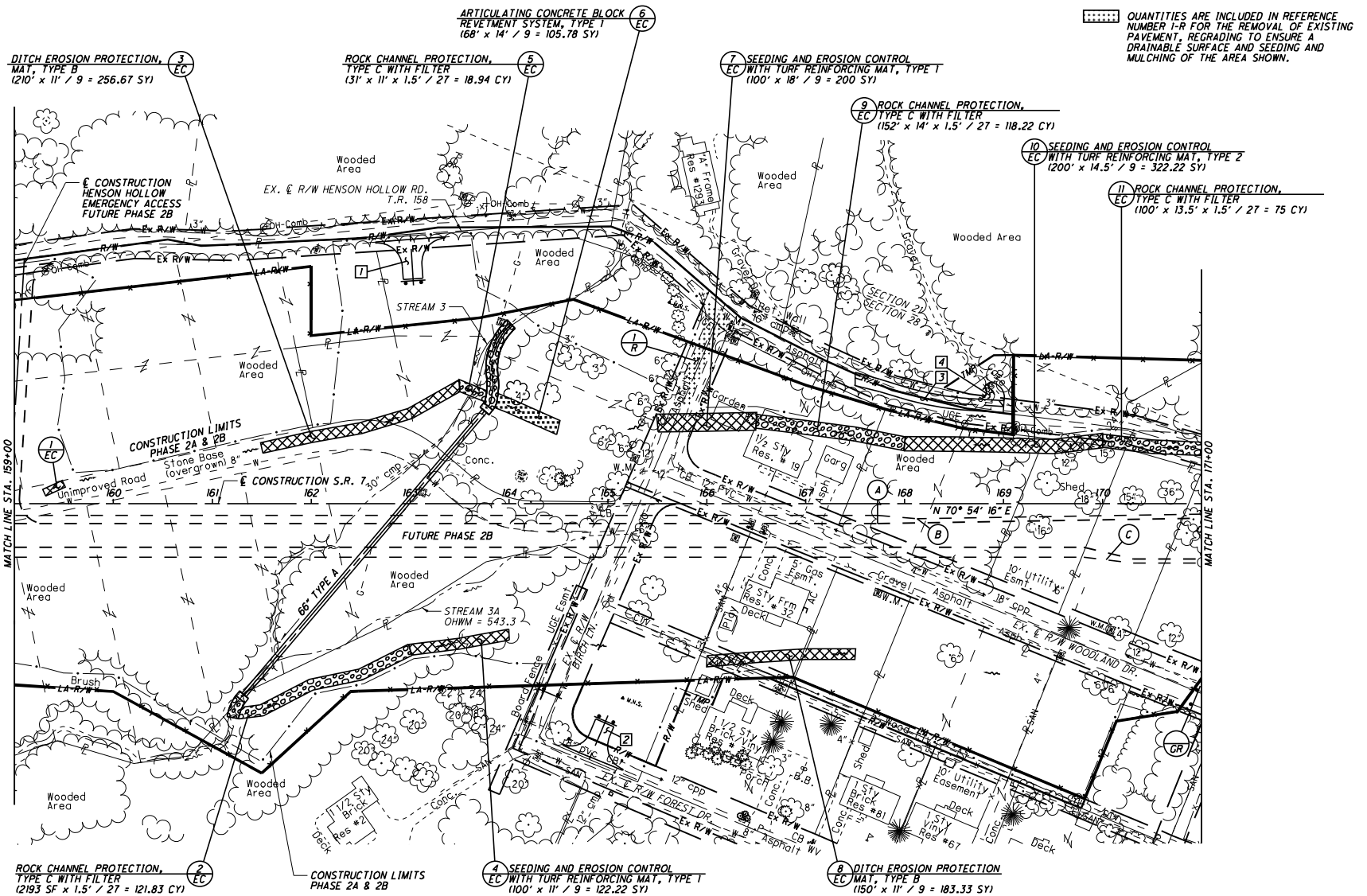


30 / 297	LAW-7-2.17	PROFILE - S.R. 7 STA. 147+00 TO STA. 159+00	CALCULATED ALB CHECKED TCM



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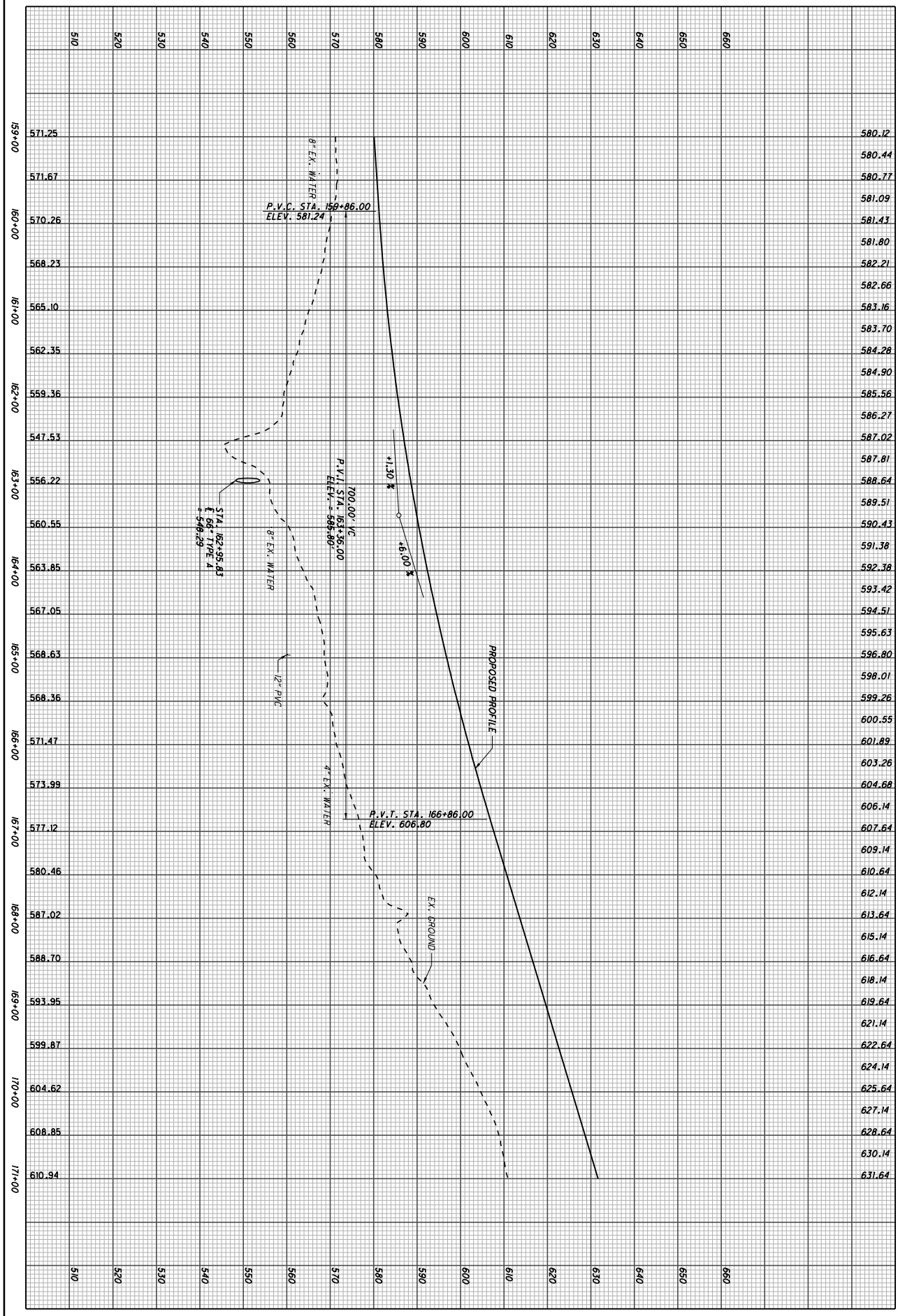
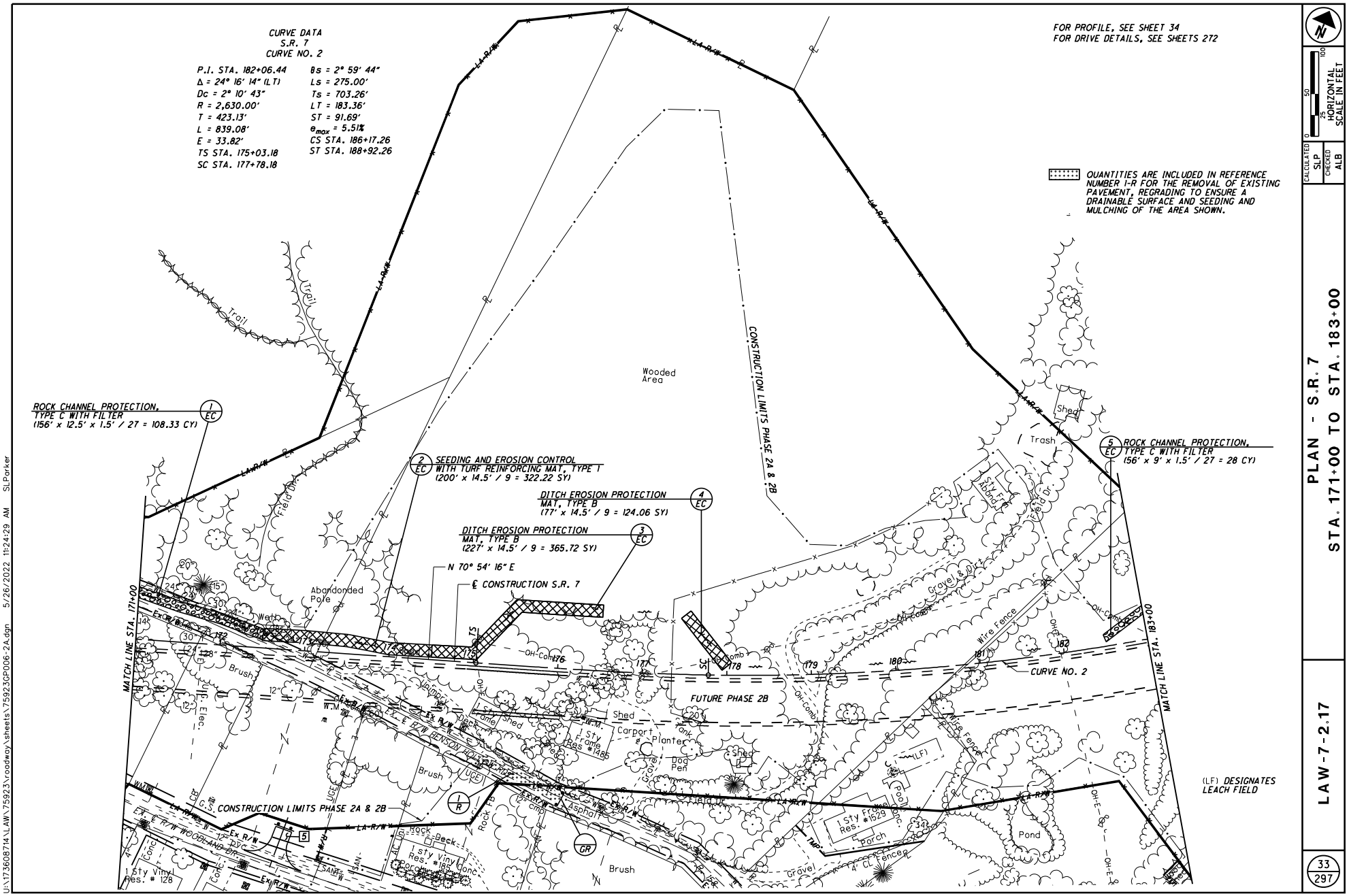


32 / 297	LAW-7-2.17	PROFILE - S.R. 7 STA. 159+00 TO STA. 171+00	CALCULATED ALB CHECKED TCM

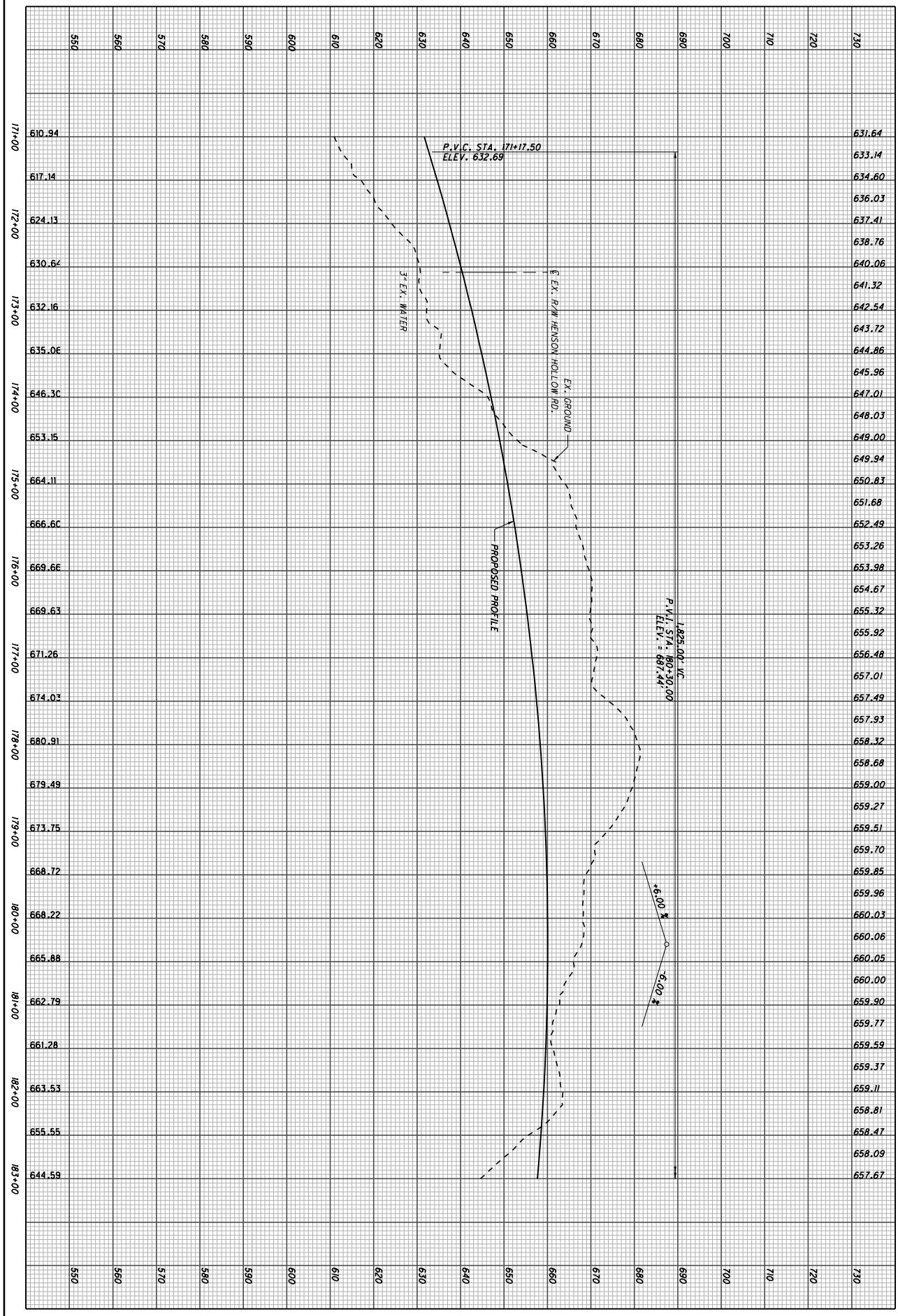


CALCULATED SLP
CHECKED ALB

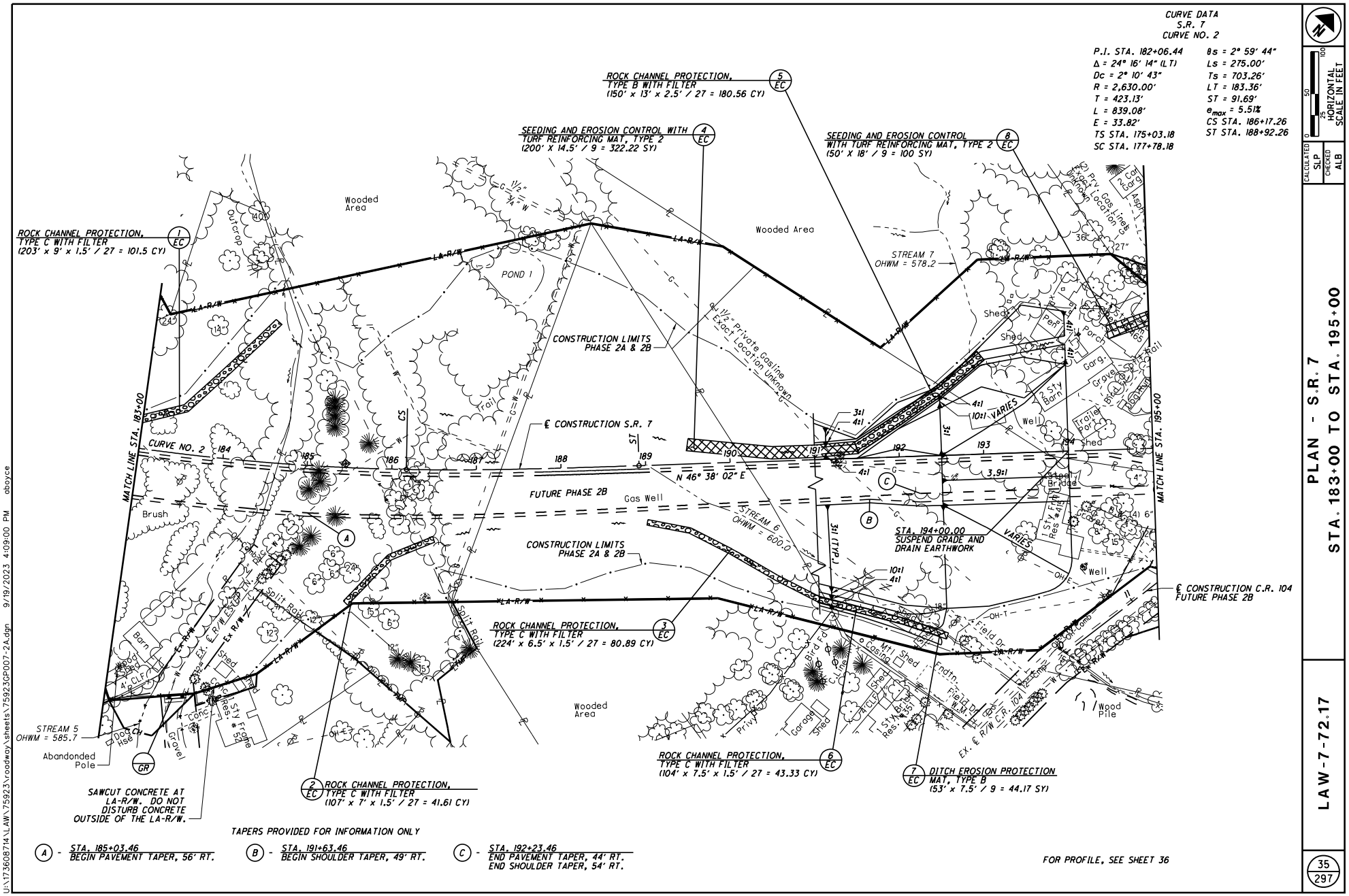
HORIZONTAL SCALE IN FEET
0 25 50 100

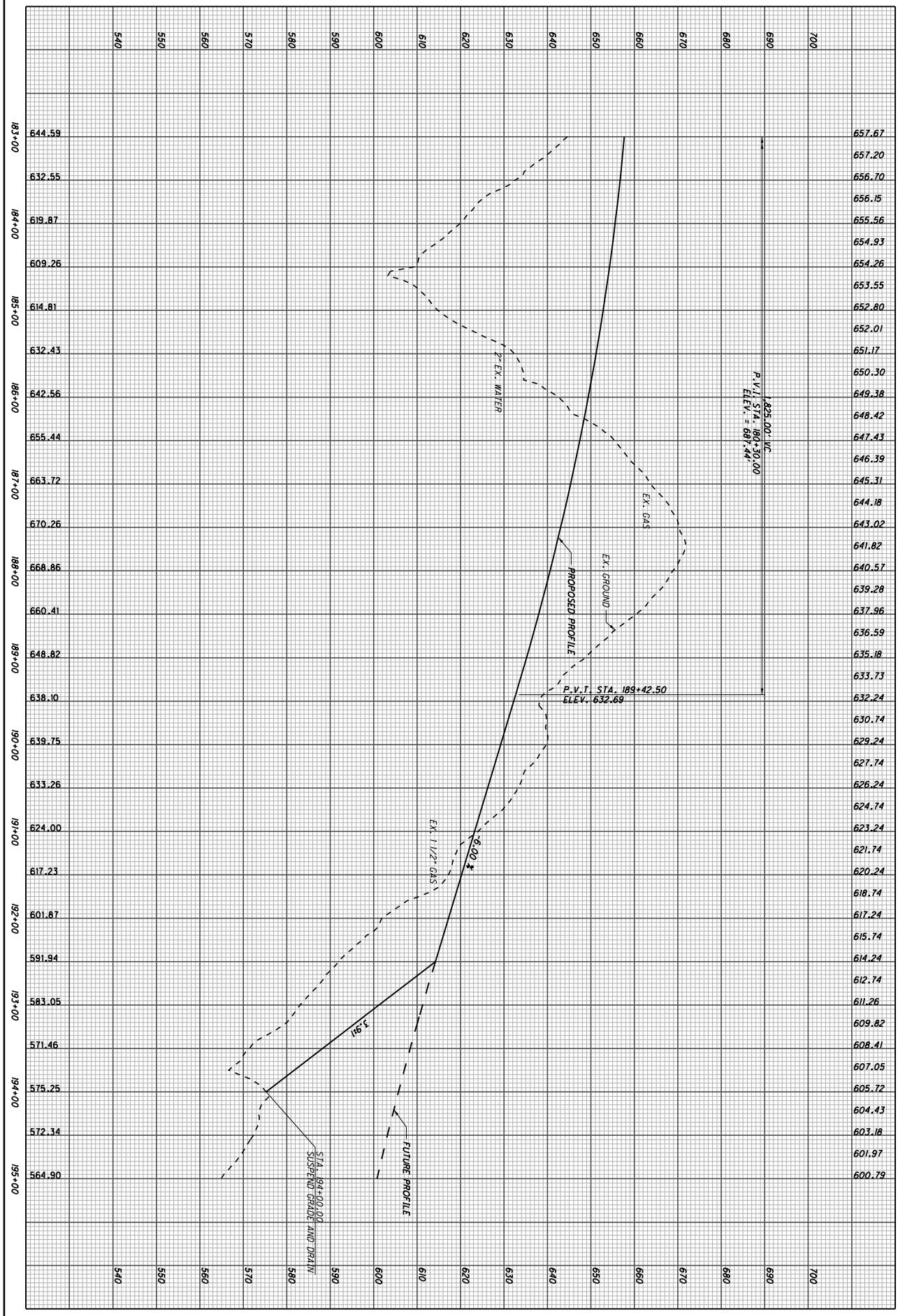
PLAN - S.R. 7
STA. 171+00 TO STA. 183+00

LAW-7-2.17

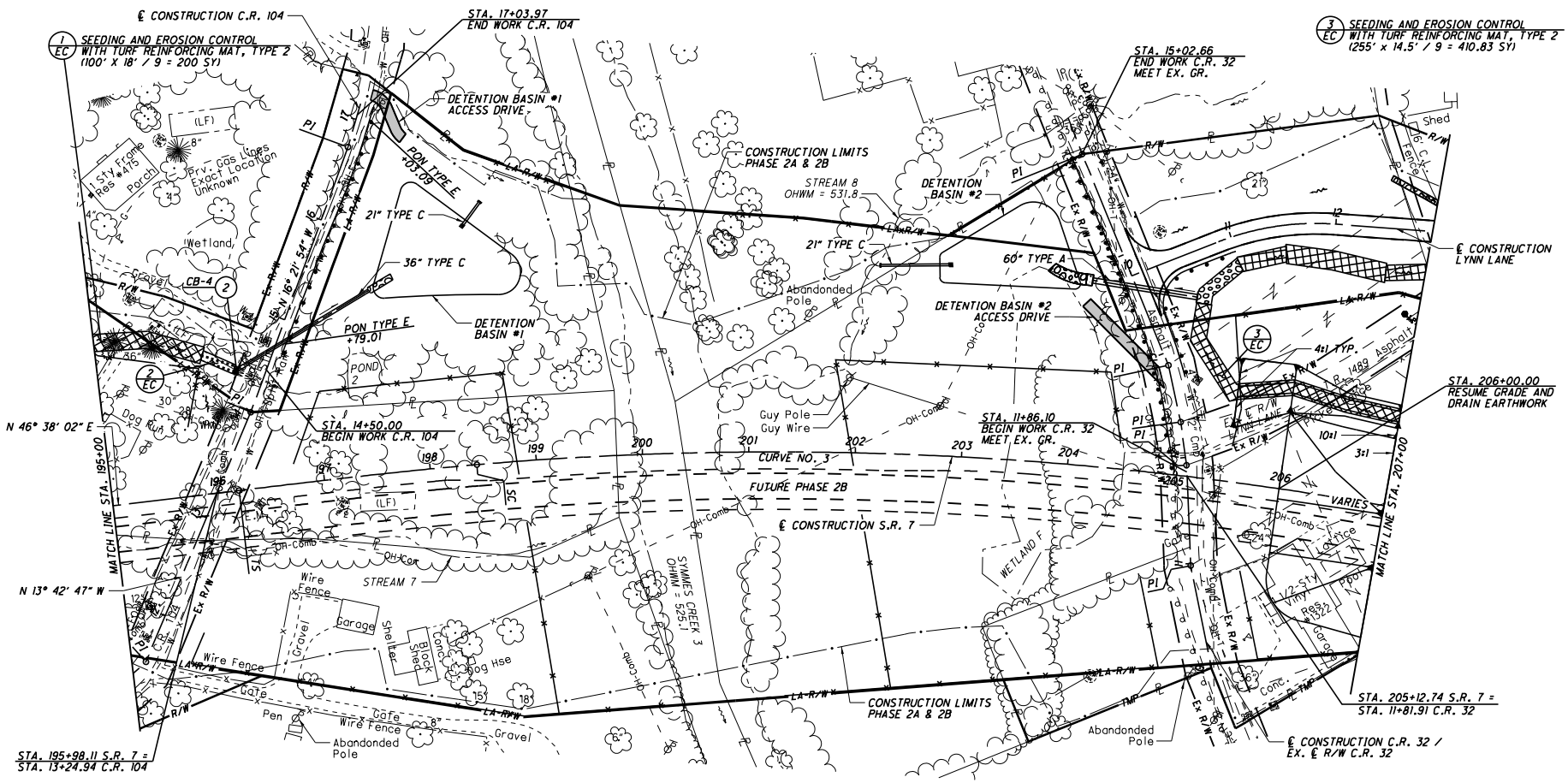


34 / 297	LAW-7-2.17	PROFILE - S.R. 7 STA. 171+00 STA. 183+00	CALCULATED ALB CHECKED TCM


CURVE DATA
S.R. 7
CURVE NO. 2
P.I. STA. 182+06.44
Δ = 24° 16' 14" (LT)
Dc = 2° 10' 43"
R = 2,630.00'
T = 423.13'
L = 839.08'
E = 33.82'
TS STA. 175+03.18
SC STA. 177+78.18
θs = 2° 59' 44"
Ls = 275.00'
Ts = 703.26'
LT = 183.36'
ST = 91.69'
e max = 5.51%
CS STA. 186+17.26
ST STA. 188+92.26
ROCK CHANNEL PROTECTION, TYPE C WITH FILTER (203' x 9' x 1.5' / 27 = 101.5 CY)
ROCK CHANNEL PROTECTION, TYPE B WITH FILTER (150' x 13' x 2.5' / 27 = 180.56 CY)
SEEDING AND EROSION CONTROL WITH TURF REINFORCING MAT, TYPE 2 (200' X 14.5' / 9 = 322.22 SY)
SEEDING AND EROSION CONTROL WITH TURF REINFORCING MAT, TYPE 2 (50' X 18' / 9 = 100 SY)
CONSTRUCTION LIMITS PHASE 2A & 2B
℄ CONSTRUCTION S.R. 7
FUTURE PHASE 2B
CONSTRUCTION LIMITS PHASE 2A & 2B
ROCK CHANNEL PROTECTION, TYPE C WITH FILTER (224' x 6.5' x 1.5' / 27 = 80.89 CY)
ROCK CHANNEL PROTECTION, TYPE C WITH FILTER (107' x 7' x 1.5' / 27 = 41.61 CY)
ROCK CHANNEL PROTECTION, TYPE C WITH FILTER (104' x 7.5' x 1.5' / 27 = 43.33 CY)
DITCH EROSION PROTECTION MAT, TYPE B (53' x 7.5' / 9 = 44.17 SY)
STA. 194+00.00 SUSPEND GRADE AND DRAIN EARTHWORK
℄ CONSTRUCTION C.R. 104 FUTURE PHASE 2B
SAWCUT CONCRETE AT LA-R/W. DO NOT DISTURB CONCRETE OUTSIDE OF THE LA-R/W.
TAPERS PROVIDED FOR INFORMATION ONLY
A - STA. 185+03.46 BEGIN PAVEMENT TAPER, 56' RT.
B - STA. 191+63.46 BEGIN SHOULDER TAPER, 49' RT.
C - STA. 192+23.46 END PAVEMENT TAPER, 44' RT. END SHOULDER TAPER, 54' RT.
FOR PROFILE, SEE SHEET 36
MATCH LINE STA. 183+00
MATCH LINE STA. 195+00
STREAM 5 OHWM = 585.7
STREAM 7 OHWM = 578.2
STREAM 6 OHWM = 600.0
POND 1
Wooded Area
Brush
Gas Well
Abandonded Pole
Dog Ch Hse
Gravel
Conc
Sty Frame Res. #52
Barn
Shed
Wood Pile
Trailer
Porch
Garage
Well
Bird Fd
Mail Shed
Fndtn
Field Dr
Pvt Comb
Pvt Gas Lines Unknown
1½" Private Gasline Exact Location Unknown
Split Rail
Fence
Trail
Outcrop
Asph
Gravel Drive
Shed
Porch
Garg.
Trailer Pad
Well
Shed
Shed
Shed



36 / 297	LAW-7-2.17	PROFILE - S.R. 7 STA. 183+00 TO STA. 195+00	CALCULATED ALB CHECKED TCM


2 EC ARTICULATING CONCRETE BLOCK REVETMENT SYSTEM, TYPE 1 (30' X 9' / 9 = 30 SY)
3 EC SEEDING AND EROSION CONTROL WITH TURF REINFORCING MAT, TYPE 2 (255' X 14.5' / 9 = 410.83 SY)
1 EC SEEDING AND EROSION CONTROL WITH TURF REINFORCING MAT, TYPE 2 (100' X 18' / 9 = 200 SY)
℄ CONSTRUCTION C.R. 104
STA. 17+03.97 END WORK C.R. 104
DETENTION BASIN #1 ACCESS DRIVE
PON TYPE E +103.09
21" TYPE C
36" TYPE C
PON TYPE E +79.01
DETENTION BASIN #1
POND 2
CB-4
Wetland
1 Sty Frame Res #475 Porch
Prv. Gas Lines Exact Location Unknown
Gravel
Dog Run
Shed
Wire Fence
Garage
Shelter
Block Shed
Conc.
Dog Hse
Gate
Pen
Abandonded Pole
Guy Pole
Guy Wire
Abandonded Pole
CONSTRUCTION LIMITS PHASE 2A & 2B
STREAM 8 OHWM = 531.8
DETENTION BASIN #2
21" TYPE C
60" TYPE A
DETENTION BASIN #2 ACCESS DRIVE
STA. 15+02.66 END WORK C.R. 32 MEET EX. GR.
℄ CONSTRUCTION LYNN LANE
Abandonded Pole
STA. 11+86.10 BEGIN WORK C.R. 32 MEET EX. GR.
STA. 206+00.00 RESUME GRADE AND DRAIN EARTHWORK
4:1 TYP.
10:1
3:1
VARIES
Asphalt
Res #322
Vinyl
Porch
Carport
Conc.
Lattice
Pool
STA. 14+50.00 BEGIN WORK C.R. 104
N 46° 38' 02" E
N 13° 42' 47" W
MATCH LINE STA. 195+00
MATCH LINE STA. 207+00
CURVE NO. 3
FUTURE PHASE 2B
℄ CONSTRUCTION S.R. 7
STREAM 7
SYMMES CREEK 3 OHWM = 525.1
WETLAND F
CONSTRUCTION LIMITS PHASE 2A & 2B
STA. 205+12.74 S.R. 7 = STA. 11+81.91 C.R. 32
℄ CONSTRUCTION C.R. 32 / EX. ℄ R/W C.R. 32
STA. 195+98.11 S.R. 7 = STA. 13+24.94 C.R. 104
N 16° 21' 54" W
Ex R/W
LA-R/W
Ex C.L.
Ex Ditch
Ex Fence
Ex Guard Rail
Ex Asphalt
Ex Gravel
Ex Conc.
Ex Gate
Ex Wire Fence
Ex Shed
Ex Garage
Ex Shelter
Ex Block Shed
Ex Dog Hse
Ex Pen
Ex Abandonded Pole
Ex Guy Pole
Ex Guy Wire
Ex Lattice
Ex Pool
Ex Carport
Ex Conc. Pad
Ex Vinyl Porch
Ex Res #322
Ex Res #475
Ex Gas Lines
Ex Dog Run
Ex Wetland
Ex Trees
Ex Shrubs
Ex Stone Wall
Ex Stone Pile
Ex Stone Retaining Wall
Ex Stone Rip Rap
Ex Stone Rip Rap Wall
Ex Stone Rip Rap Wall with Fence
Ex Stone Rip Rap Wall with Gate
Ex Stone Rip Rap Wall with Pen
Ex Stone Rip Rap Wall with Shed
Ex Stone Rip Rap Wall with Garage
Ex Stone Rip Rap Wall with Shelter
Ex Stone Rip Rap Wall with Block Shed
Ex Stone Rip Rap Wall with Conc.
Ex Stone Rip Rap Wall with Dog Hse
Ex Stone Rip Rap Wall with Pen
Ex Stone Rip Rap Wall with Abandonded Pole
Ex Stone Rip Rap Wall with Guy Pole
Ex Stone Rip Rap Wall with Guy Wire
Ex Stone Rip Rap Wall with Lattice
Ex Stone Rip Rap Wall with Pool
Ex Stone Rip Rap Wall with Carport
Ex Stone Rip Rap Wall with Conc. Pad
Ex Stone Rip Rap Wall with Vinyl Porch
Ex Stone Rip Rap Wall with Res #322
Ex Stone Rip Rap Wall with Res #475
Ex Stone Rip Rap Wall with Gas Lines
Ex Stone Rip Rap Wall with Dog Run
Ex Stone Rip Rap Wall with Wetland
Ex Stone Rip Rap Wall with Trees
Ex Stone Rip Rap Wall with Shrubs
Ex Stone Rip Rap Wall with Stone Wall
Ex Stone Rip Rap Wall with Stone Pile
Ex Stone Rip Rap Wall with Stone Retaining Wall
Ex Stone Rip Rap Wall with Stone Rip Rap
Ex Stone Rip Rap Wall with Stone Rip Rap Wall
Ex Stone Rip Rap Wall with Stone Rip Rap Wall with Fence
Ex Stone Rip Rap Wall with Stone Rip Rap Wall with Gate
Ex Stone Rip Rap Wall with Stone Rip Rap Wall with Pen
Ex Stone Rip Rap Wall with Stone Rip Rap Wall with Shed
Ex Stone Rip Rap Wall with Stone Rip Rap Wall with Garage
Ex Stone Rip Rap Wall with Stone Rip Rap Wall with Shelter
Ex Stone Rip Rap Wall with Stone Rip Rap Wall with Block Shed
Ex Stone Rip Rap Wall with Stone Rip Rap Wall with Conc.
Ex Stone Rip Rap Wall with Stone Rip Rap Wall with Dog Hse
Ex Stone Rip Rap Wall with Stone Rip Rap Wall with Pen
Ex Stone Rip Rap Wall with Stone Rip Rap Wall with Abandonded Pole
Ex Stone Rip Rap Wall with Stone Rip Rap Wall with Guy Pole
Ex Stone Rip Rap Wall with Stone Rip Rap Wall with Guy Wire
Ex Stone Rip Rap Wall with Stone Rip Rap Wall with Lattice
Ex Stone Rip Rap Wall with Stone Rip Rap Wall with Pool
Ex Stone Rip Rap Wall with Stone Rip Rap Wall with Carport
Ex Stone Rip Rap Wall with Stone Rip Rap Wall with Conc. Pad
Ex Stone Rip Rap Wall with Stone Rip Rap Wall with Vinyl Porch
Ex Stone Rip Rap Wall with Stone Rip Rap Wall with Res #322
Ex Stone Rip Rap Wall with Stone Rip Rap Wall with Res #475
Ex Stone Rip Rap Wall with Stone Rip Rap Wall with Gas Lines
Ex Stone Rip Rap Wall with Stone Rip Rap Wall with Dog Run
Ex Stone Rip Rap Wall with Stone Rip Rap Wall with Wetland
Ex Stone Rip Rap Wall with Stone Rip Rap Wall with Trees
Ex Stone Rip Rap Wall with Stone Rip Rap Wall with Shrubs
Ex Stone Rip Rap Wall with Stone Rip Rap Wall with Stone Wall
Ex Stone Rip Rap Wall with Stone Rip Rap Wall with Stone Pile
Ex Stone Rip Rap Wall with Stone Rip Rap Wall with Stone Retaining Wall
Ex Stone Rip Rap Wall with Stone Rip Rap Wall with Stone Rip Rap
Ex Stone Rip Rap Wall with

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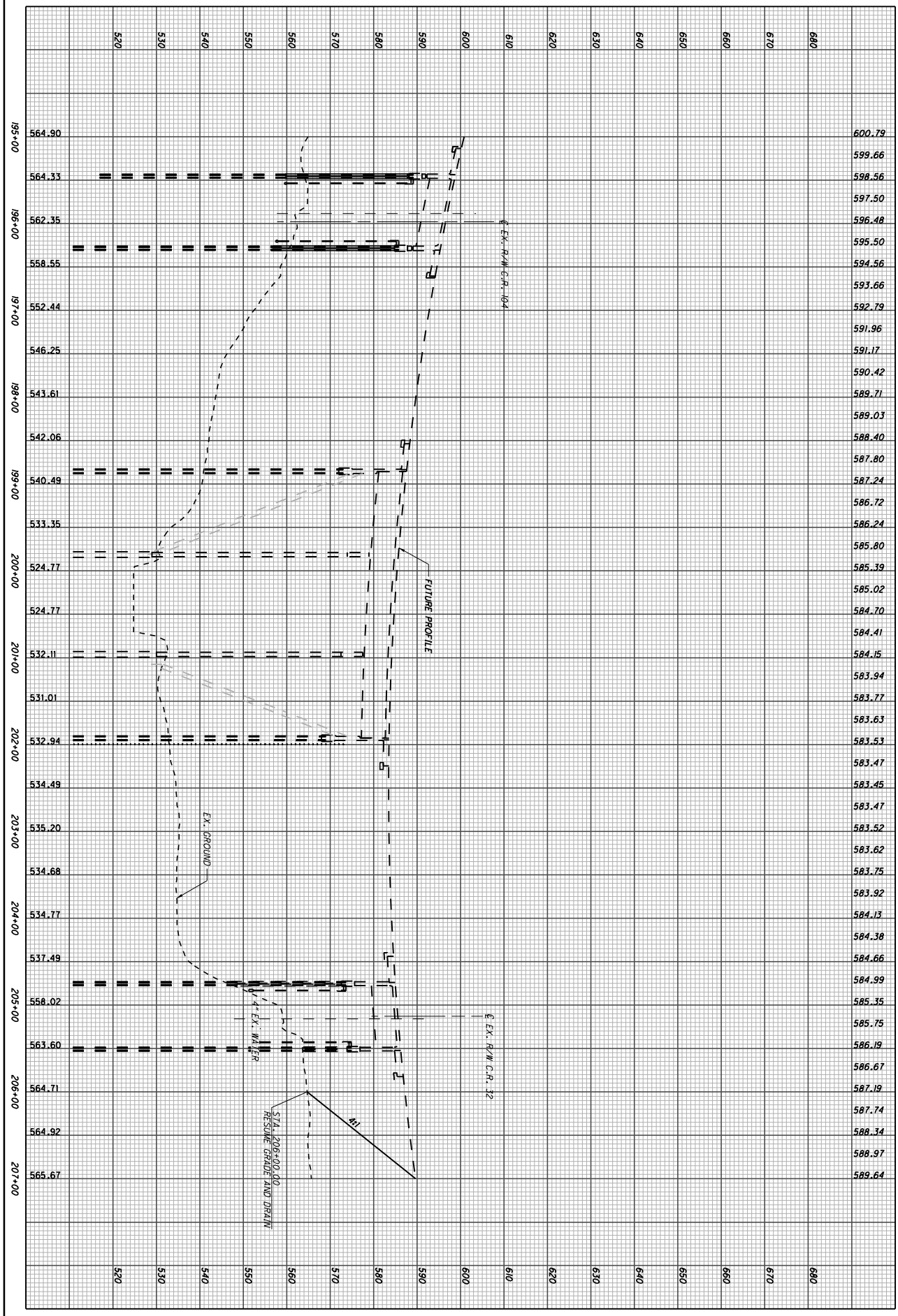
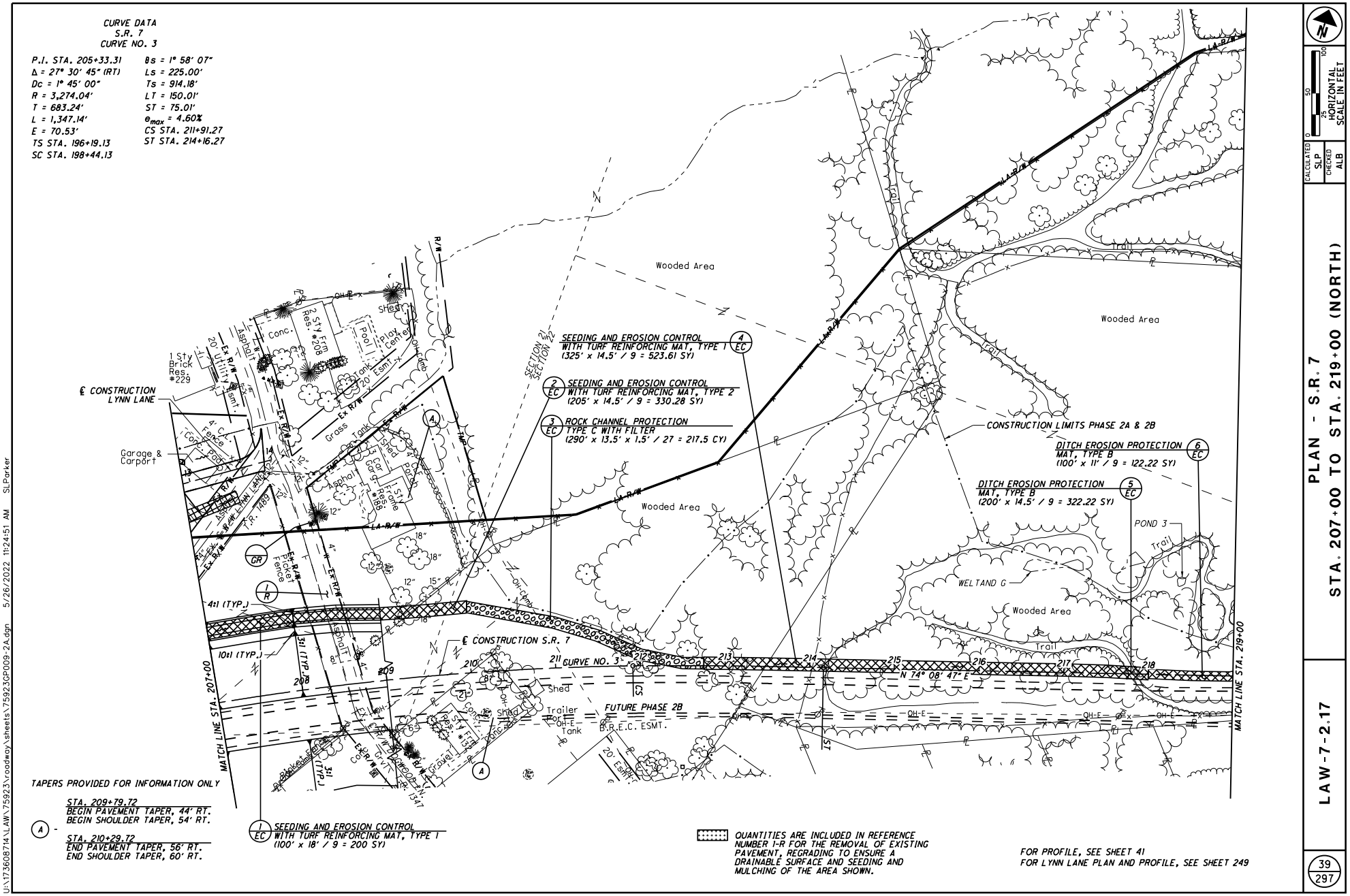


38 / 297	LAW-7-2.17	PROFILE - S.R. 7 STA. 195+00 STA. 207+00	CALCULATED ALB CHECKED TCM



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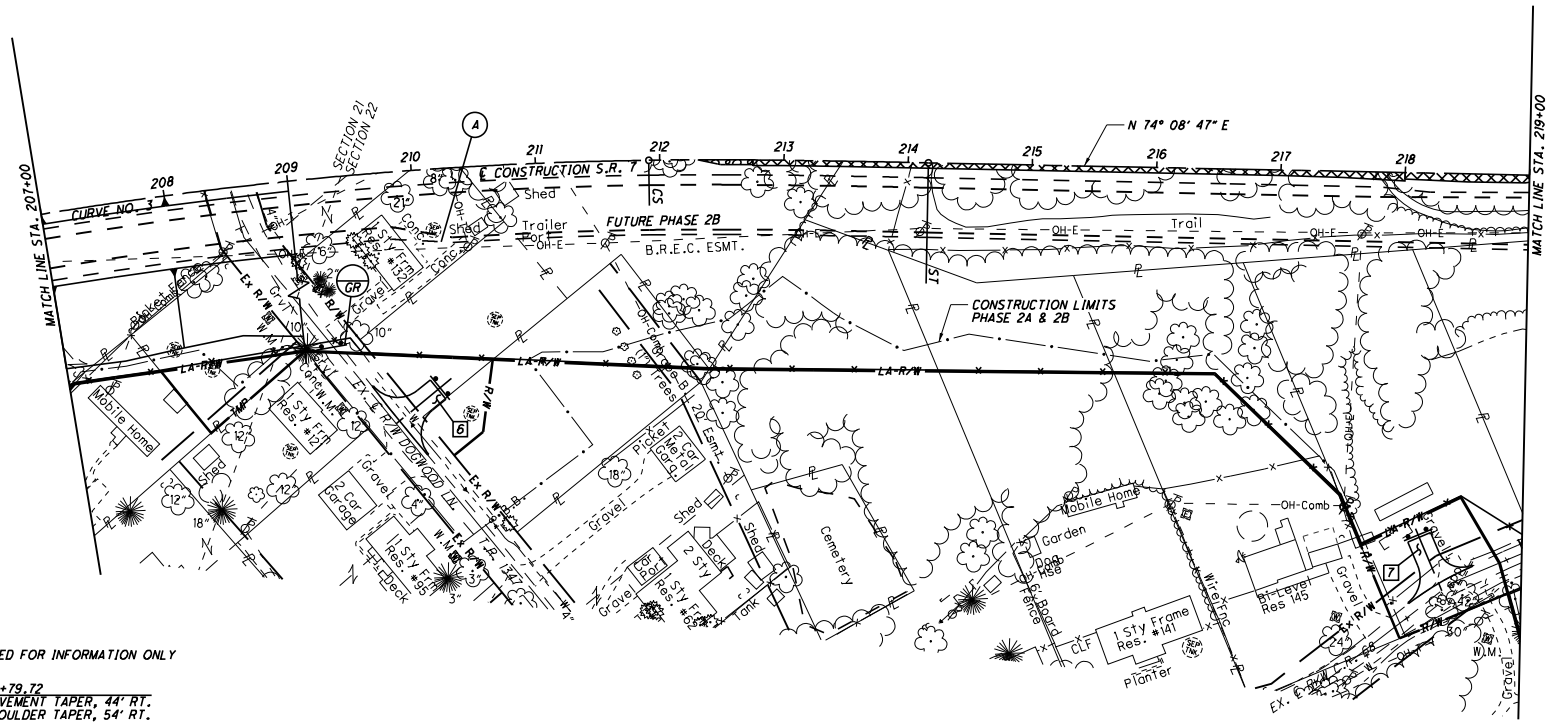
CURVE DATA
S.R. 7
CURVE NO. 3

P.I. STA. 205+33.31
Δ = 27° 30' 45" (RT)
Dc = 1° 45' 00"
R = 3,274.04'
T = 683.24'
L = 1,347.14'
E = 70.53'
TS STA. 196+19.13
SC STA. 198+44.13

θs = 1° 58' 07"
Ls = 225.00'
Ts = 914.18'
LT = 150.01'
ST = 75.01'
e_{max} = 4.60%
CS STA. 211+91.27
ST STA. 214+16.27



TAPERS PROVIDED FOR INFORMATION ONLY

(A) -
STA. 209+79.72
BEGIN PAVEMENT TAPER, 44' RT.
BEGIN SHOULDER TAPER, 54' RT.

STA. 210+29.72
END PAVEMENT TAPER, 56' RT.
END SHOULDER TAPER, 60' RT.

FOR PROFILE, SEE SHEET 41
FOR DRIVE DETAILS, SEE SHEETS 272-273

HORIZONTAL SCALE IN FEET
0 25 50 100
CALCULATED SLP
CHECKED ALB

PLAN - S.R. 7
STA. 207+00 TO STA. 219+00 (SOUTH)

LAW-7-2.17

40
297

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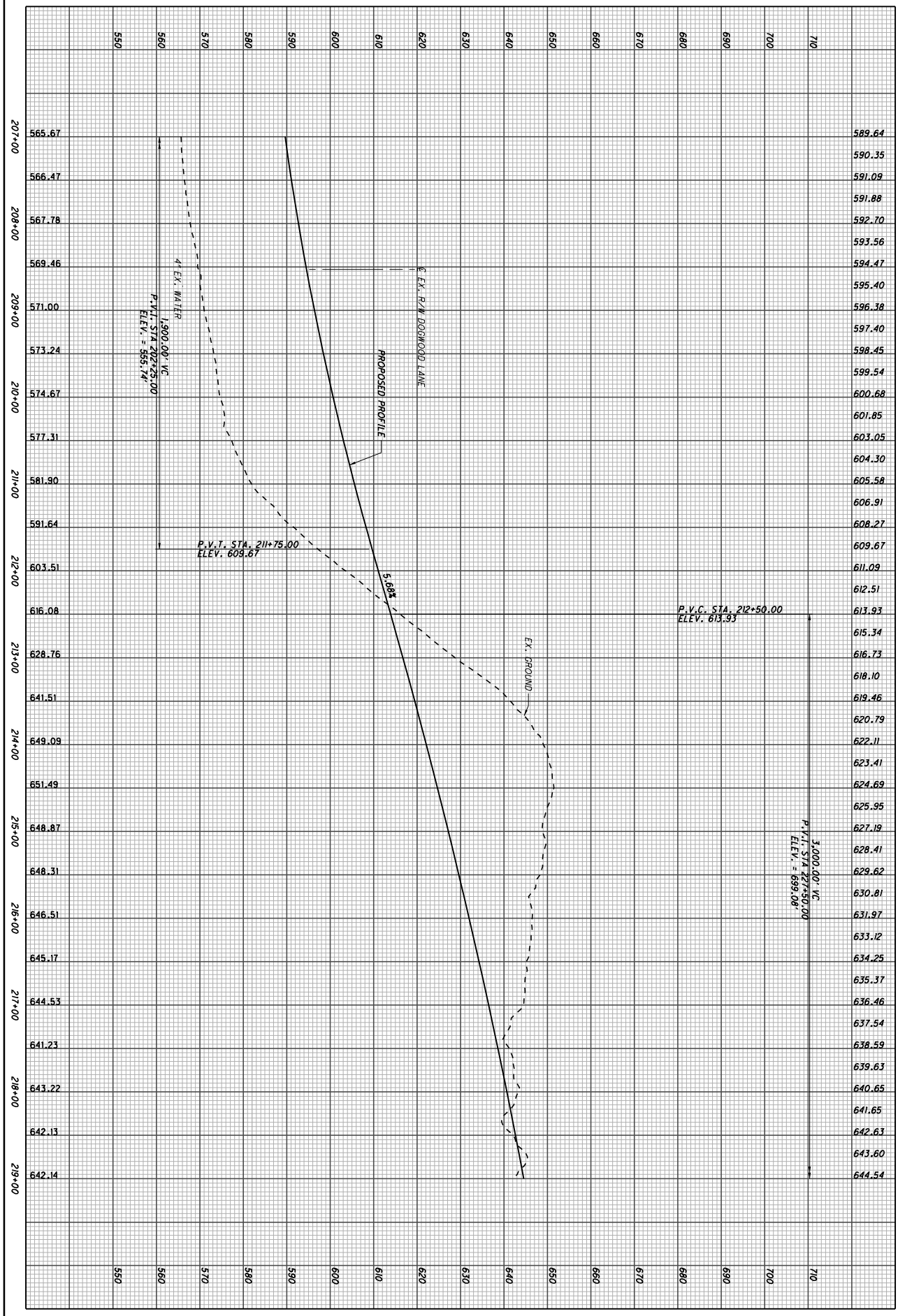
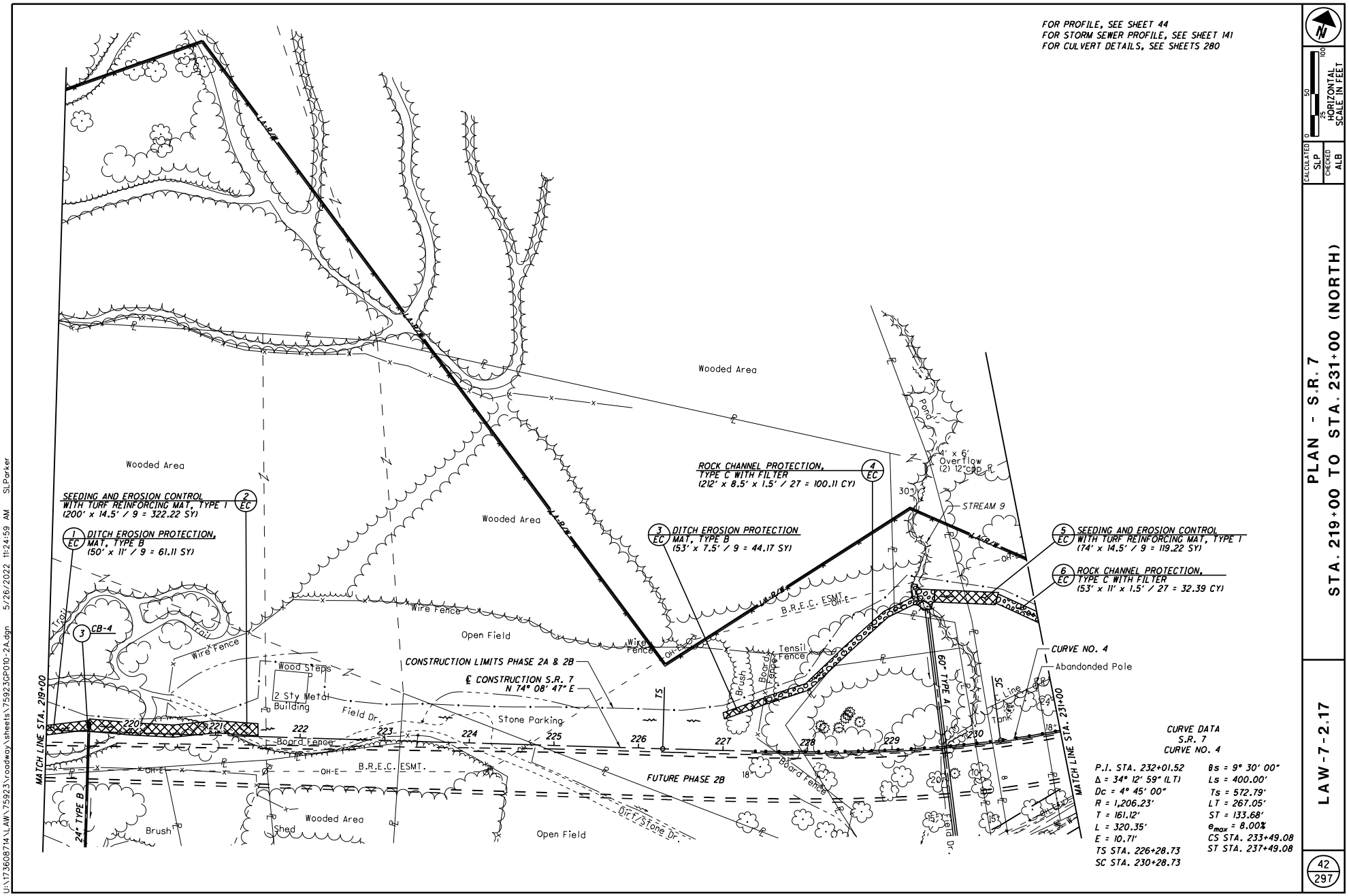


41 / 297	LAW-7-2.17	PROFILE - S.R. 7 STA. 207+00 TO STA. 219+00	CALCULATED ALB CHECKED TCM



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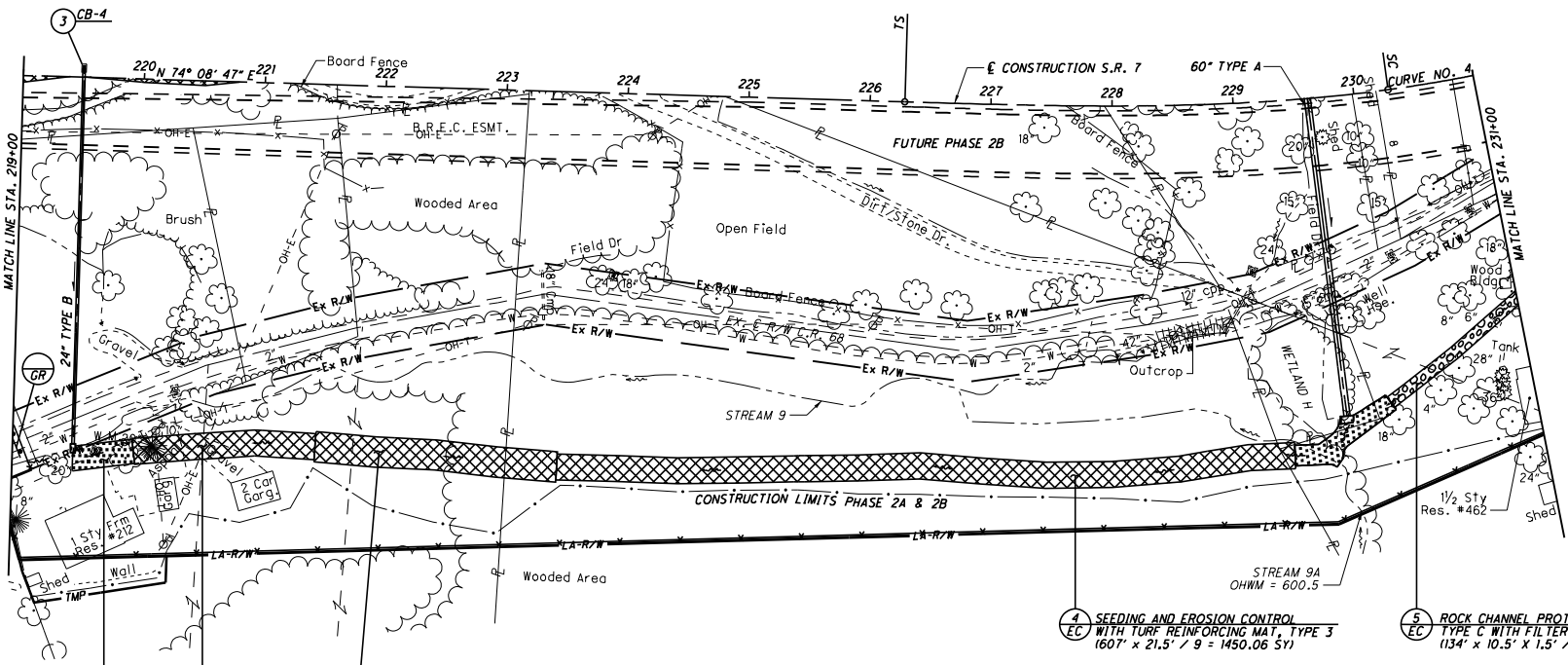
CALCULATED SLP
CHECKED ALB

HORIZONTAL SCALE IN FEET
0 25 50 100

PLAN - S.R. 7
STA. 219+00 TO STA. 231+00 (NORTH)

LAW-7-2.17



CURVE DATA
S.R. 7
CURVE NO. 4

P.I. STA. 232+01.52
Δ = 34° 12' 59" (LT)
Dc = 4° 45' 00"
R = 1,206.23'
T = 161.12'
L = 320.35'
E = 10.71'
TS STA. 226+28.73
SC STA. 230+28.73

θs = 9° 30' 00"
Ls = 400.00'
Ts = 572.79'
LT = 267.05'
ST = 133.68'
e_{max} = 8.00%
CS STA. 233+49.08
ST STA. 237+49.08

1 EC ARTICULATING CONCRETE BLOCK REVETMENT SYSTEM, TYPE 1
(50' x 20' / 9 = 111.11 SY)

2 EC SEEDING AND EROSION CONTROL WITH TURF REINFORCING MAT, TYPE 3
(151' x 21.5' / 9 = 360.72 SY)

3 EC SEEDING AND EROSION CONTROL WITH TURF REINFORCING MAT, TYPE 1
(200' x 25' / 9 = 555.56 SY)

4 EC SEEDING AND EROSION CONTROL WITH TURF REINFORCING MAT, TYPE 3
(607' x 21.5' / 9 = 1450.06 SY)

5 EC ROCK CHANNEL PROTECTION, TYPE C WITH FILTER
(134' x 10.5' x 1.5' / 27 = 78.17 CY)

FOR PROFILE, SEE SHEET 44
FOR STORM SEWER PROFILE, SEE SHEET 141
FOR CULVERT DETAILS, SEE SHEETS 280

HORIZONTAL SCALE IN FEET
0 25 50 100

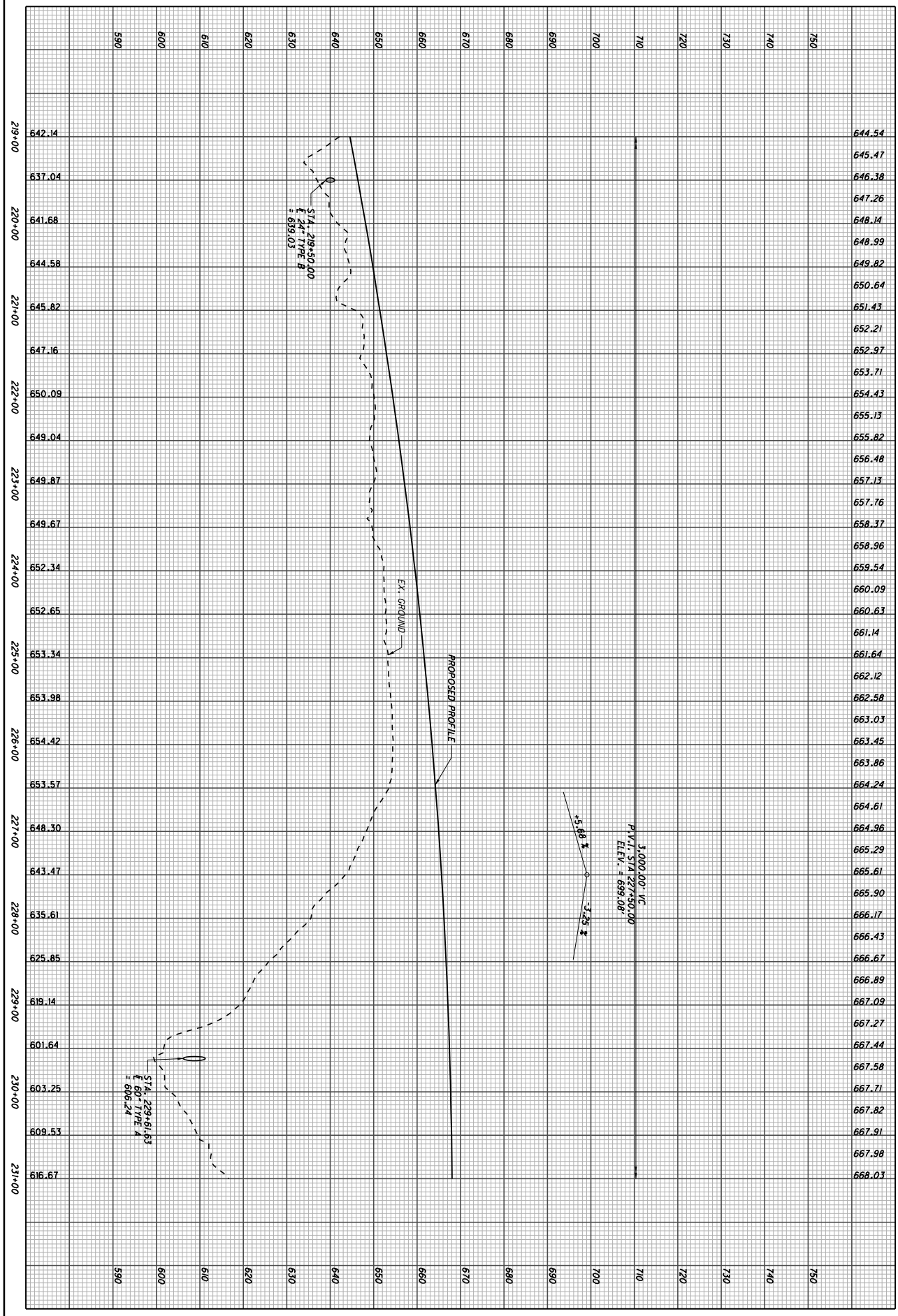
CALCULATED SLP
CHECKED ALB

PLAN - S.R. 7
STA. 219+00 TO STA. 231+00 (SOUTH)

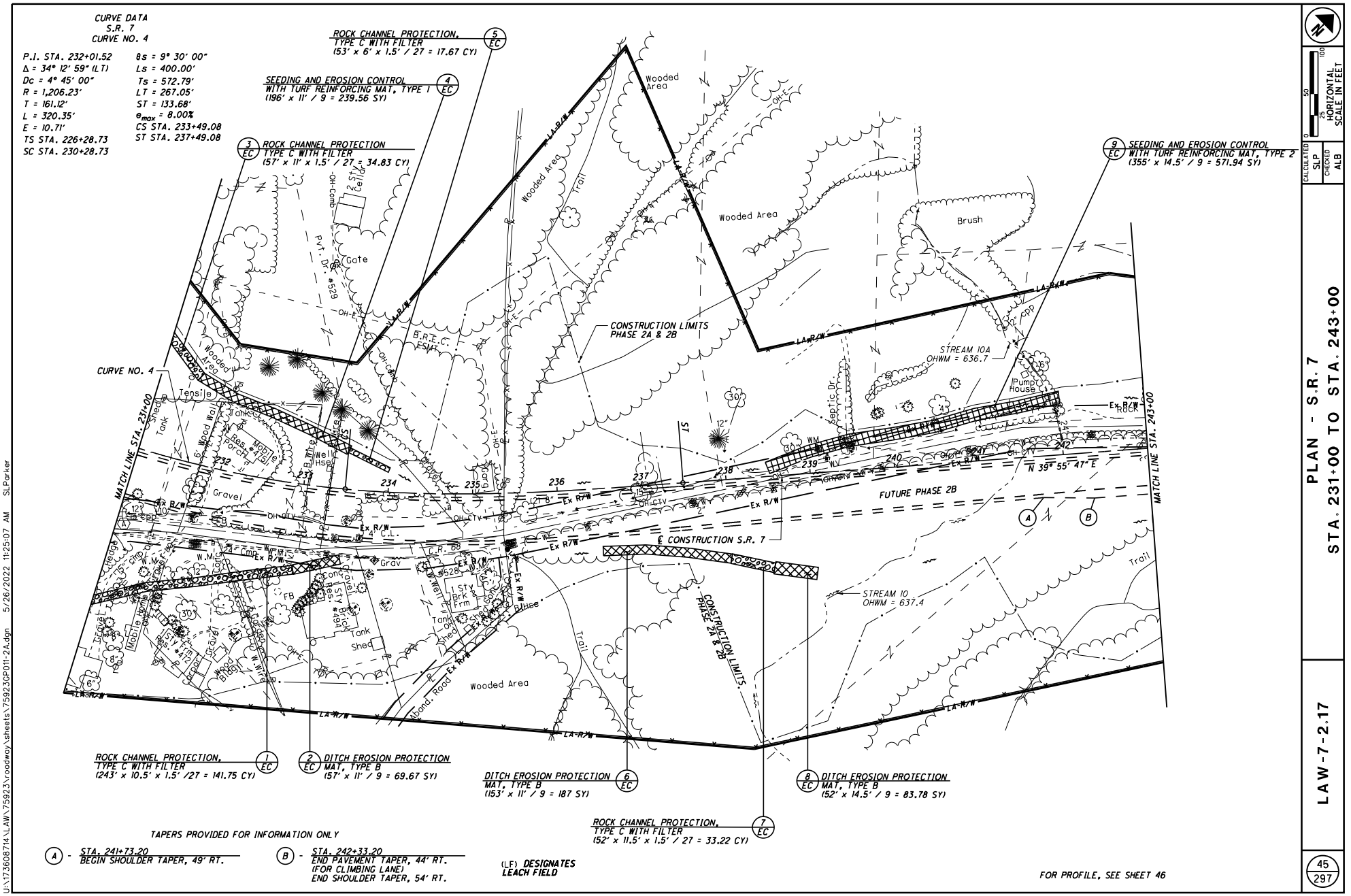
LAW-7-2.17

43
297

U:\1736087\4\LAW\75923\roadway\sheets\75923GP010A-2A.dgn 9/19/2023 4:09:22 PM aboyce



44 / 297	LAW-7-2.17	PROFILE - S.R. 7 STA. 219+00 TO STA. 231+00	CALCULATED ALB CHECKED TCM



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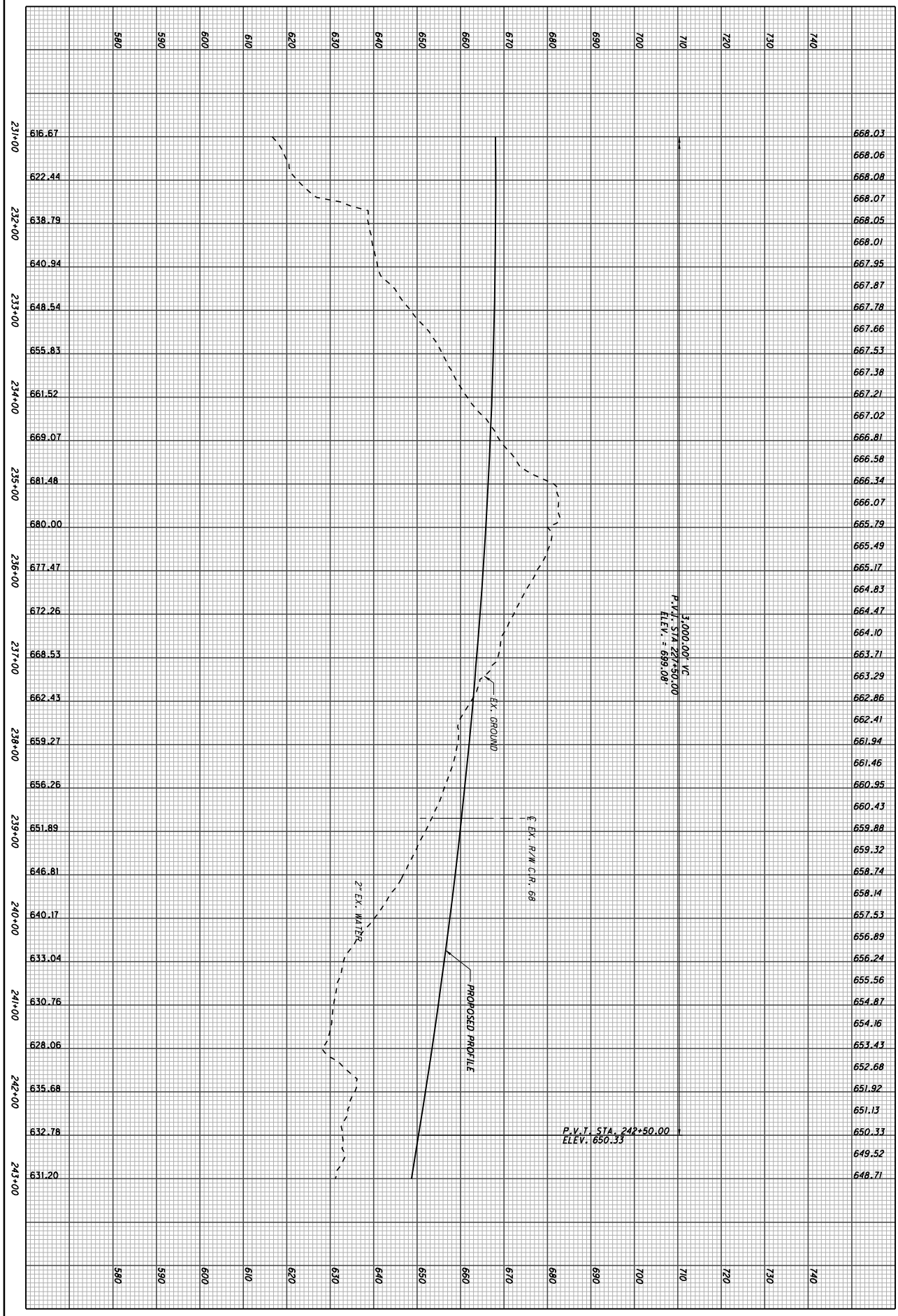
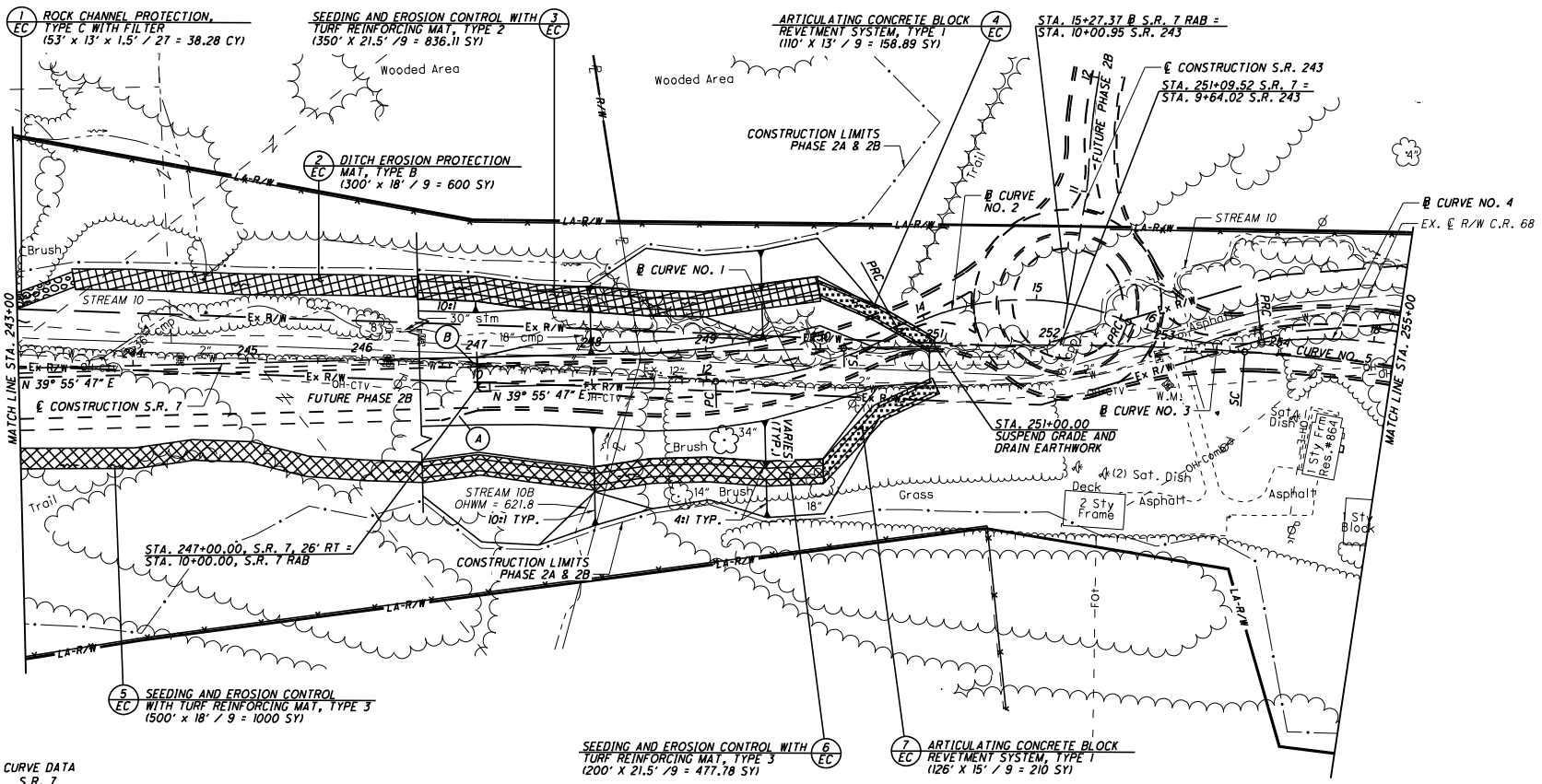


46 / 297	LAW-7-2.17	PROFILE - S.R. 7 STA. 231+00 TO STA. 243+00	CALCULATED ALB CHECKED TCM

CURVE DATA @ S.R. 7 RAB CURVE NO. 1	CURVE DATA @ S.R. 7 RAB CURVE NO. 2	CURVE DATA @ S.R. 7 RAB CURVE NO. 3	CURVE DATA @ S.R. 7 RAB CURVE NO. 4
P.I. Sta. 12+93.43	P.I. Sta. 14+87.13	P.I. Sta. 16+43.83	P.I. Sta. 18+27.99
Δ = 27° 26' 21" (LT)	Δ = 52° 43' 55" (RT)	Δ = 30° 24' 24" (LT)	Δ = 31° 15' 43" (RT)
Dc = 16° 22' 13"	Dc = 25° 27' 53"	Dc = 25° 27' 53"	Dc = 12° 43' 57"
R = 350.00'	R = 225.00'	R = 225.00'	R = 450.00'
T = 85.45'	T = 111.52'	T = 61.15'	T = 125.90'
L = 167.62'	L = 207.08'	L = 119.41'	L = 245.53'
E = 10.28'	E = 26.12'	E = 8.16'	E = 17.28'
PC Sta. 12+07.99	PRC Sta. 13+75.60	PRC Sta. 15+82.68	PRC Sta. 17+02.09
PRC Sta. 13+75.60	PRC Sta. 15+82.68	PRC Sta. 17+02.09	PT Sta. 19+47.62



CURVE DATA
S.R. 7
CURVE NO. 5

P.I. STA. 261+89.75	θs = 5° 41' 15"
Δ = 58° 46' 06" (RT)	Ls = 350.00'
Dc = 3° 15' 00"	Ts = 1,169.30'
R = 1,762.95'	LT = 233.45'
T = 773.76'	ST = 116.78'
L = 1,458.26'	e_{max} = 7.10%
E = 162.33'	CS STA. 268+28.71
TS STA. 250+20.45	ST STA. 271+78.71
SC STA. 253+70.45	

TAPERS PROVIDED FOR INFORMATION ONLY

(A) - STA. 246+68.00 BEGIN SHOULDER TAPER, 54' RT.
STA. 247+00.00 END SHOULDER TAPER, 58' RT.

(B) - STA. 246+92.00 BEGIN SHOULDER TAPER, 4' LT.
STA. 247+00.00 END SHOULDER TAPER, 6' LT.

FOR PROFILE, SEE SHEET 48-49

HORIZONTAL SCALE IN FEET 0 25 50 100

CALCULATED SLP CHECKED ALB

PLAN - S.R. 7
STA. 243+00 TO STA. 255+00 (NORTH)

LAW-7-2.17

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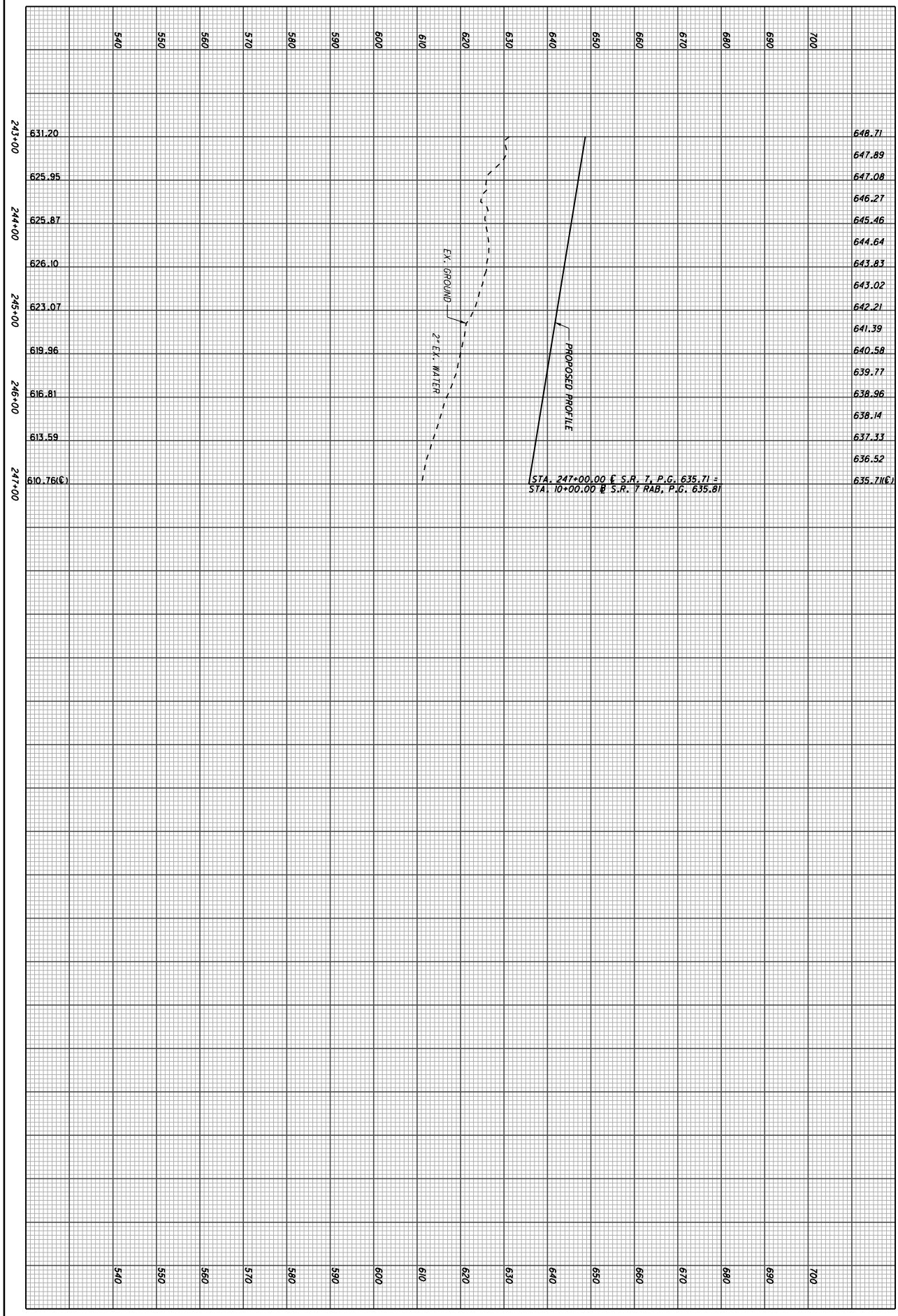

48 / 297	LAW-7-2.17	PROFILE - S.R. 7 STA. 243+000 TO STA. 247+00	CALCULATED ALB CHECKED TCM

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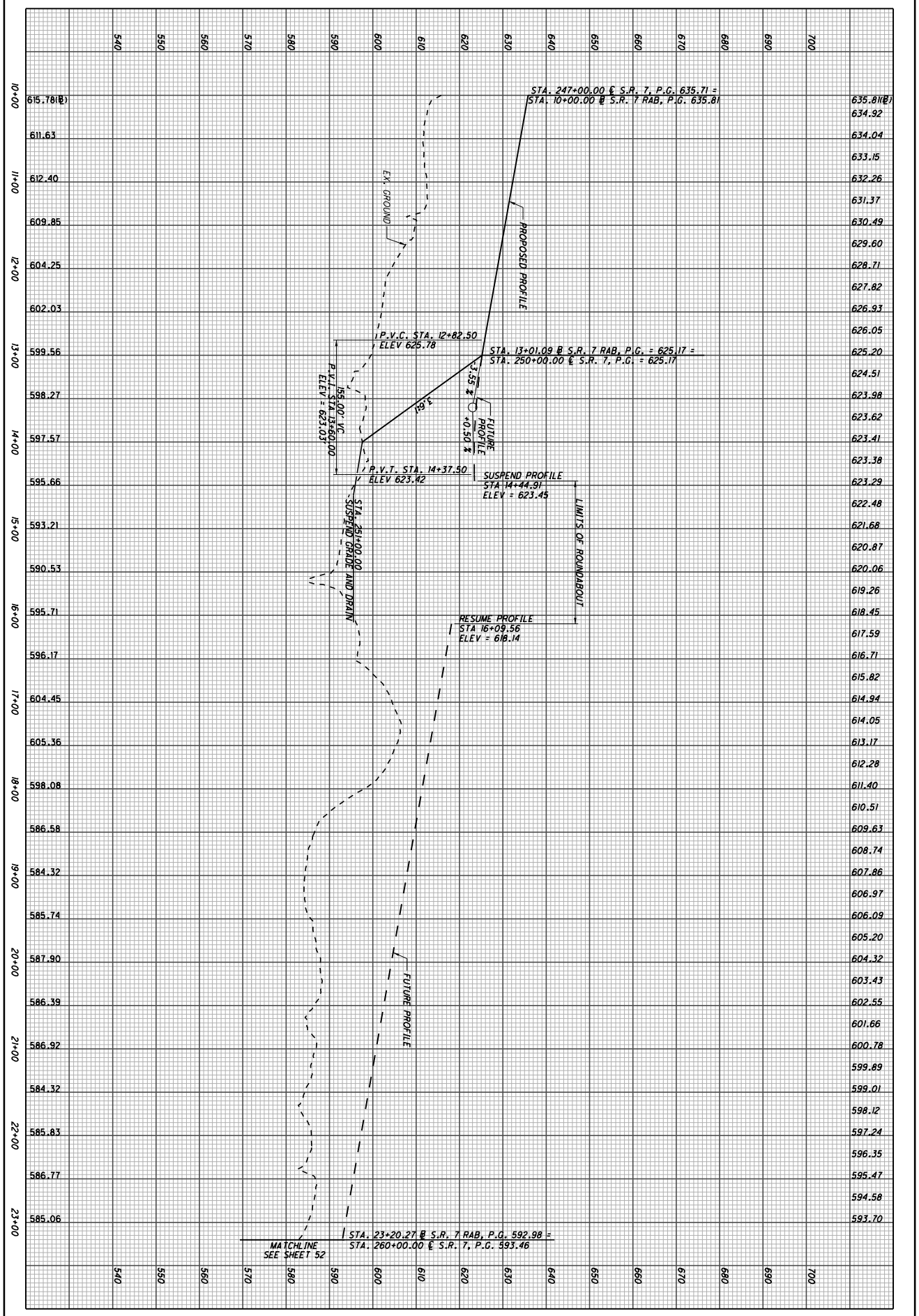
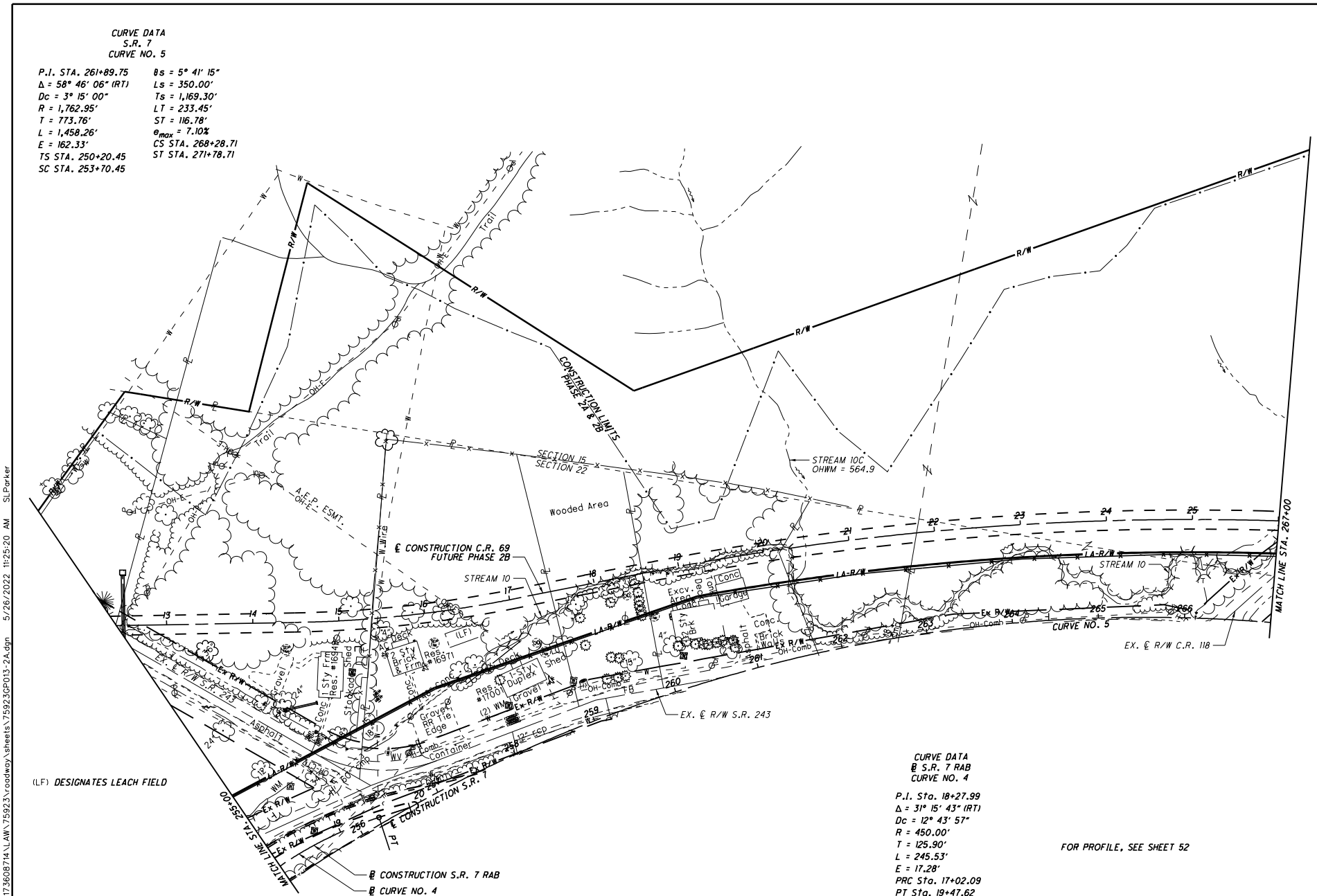


49 297	LAW-7-2.17	PROFILE - S.R. 7 RAB STA. 10+00 TO STA. 23+20.27	CALCULATED ALB CHECKED TCM



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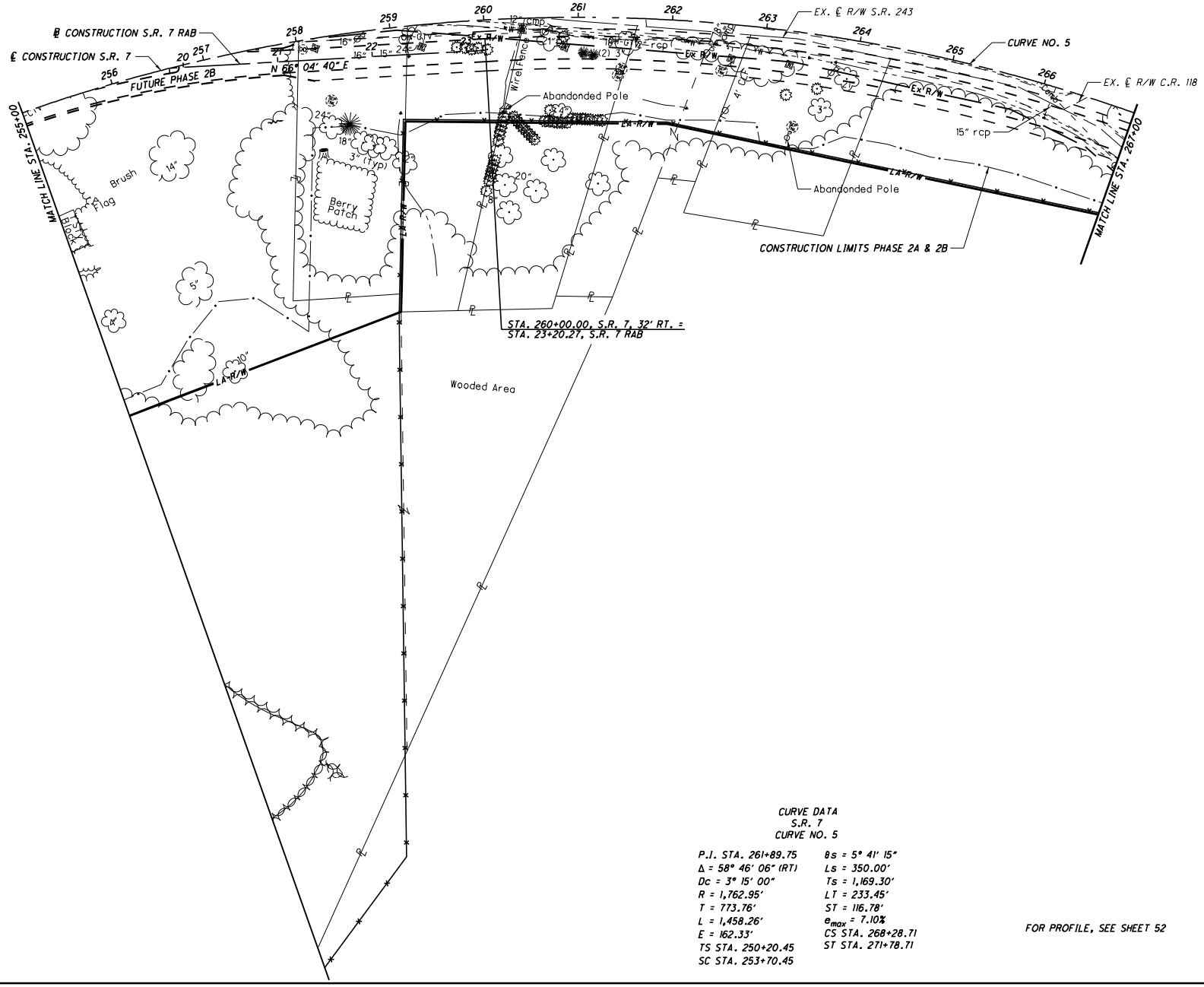

CURVE DATA
S.R. 7
CURVE NO. 5

P.I. STA. 261+89.75	Bs = 5° 41' 15"
Δ = 58° 46' 06" (RT)	Ls = 350.00'
Dc = 3° 15' 00"	Ts = 1,169.30'
R = 1,762.95'	LT = 233.45'
T = 773.76'	ST = 116.78'
L = 1,458.26'	e_{max} = 7.10%
E = 162.33'	CS STA. 268+28.71
TS STA. 250+20.45	ST STA. 271+78.71
SC STA. 253+70.45	

FOR PROFILE, SEE SHEET 52

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED SLP
CHECKED ALB

PLAN - S.R. 7
STA. 255+00 TO STA. 267+00 (SOUTH)

LAW-7-2.17

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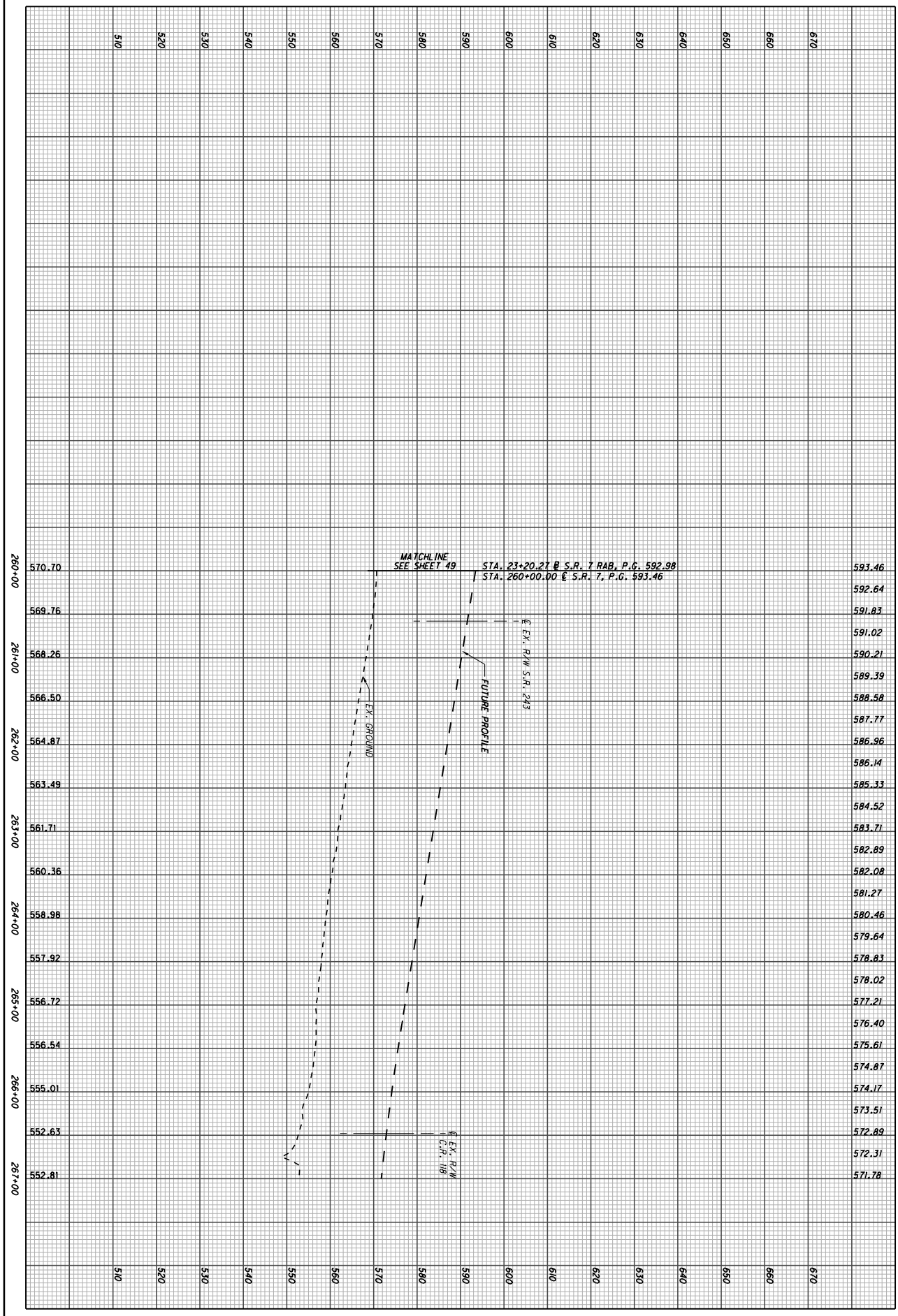
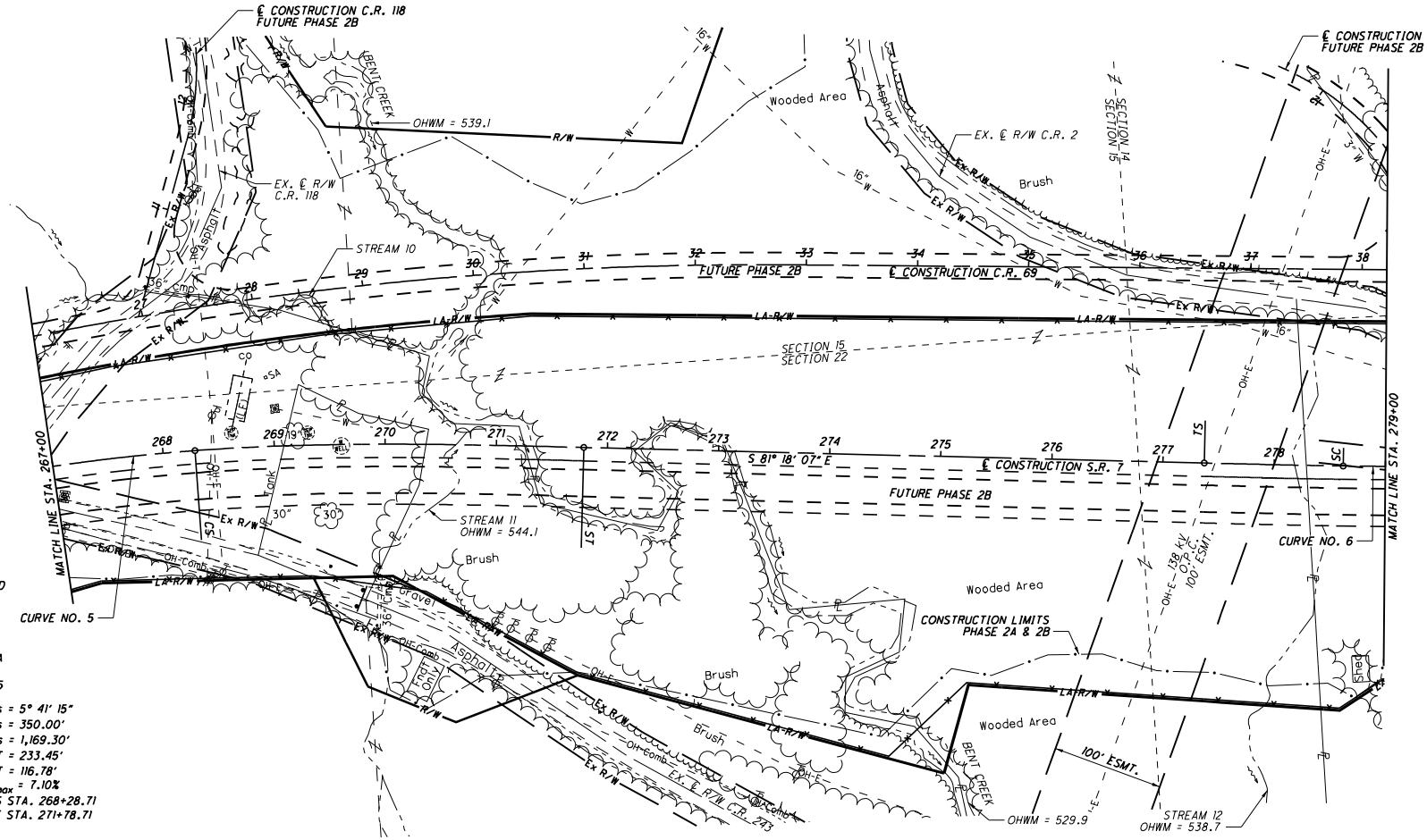


52 / 297	LAW-7-2.17	PROFILE - S.R. 7 STA. 260+00 TO 267+00	CALCULATED ALB CHECKED TCM



(LF) *DESIGNATES LEACH FIELD*

CURVE DATA
S.R. 7
CURVE NO. 5

P.I. STA. 261+89.75	θs = 5° 41' 15"
Δ = 58° 46' 06" (RT)	Ls = 350.00'
Dc = 3° 15' 00"	Ts = 1,169.30'
R = 1,762.95'	LT = 233.45'
T = 773.76'	ST = 116.78'
L = 1,458.26'	e_{max} = 7.10%
E = 162.33'	CS STA. 268+28.71
TS STA. 250+20.45	ST STA. 271+78.71
SC STA. 253+70.45	

CURVE DATA
S.R. 7
CURVE NO. 6

P.I. STA. 280+92.68	θs = 0° 37' 30"
Δ = 5° 51' 21" (RT)	Ls = 125.00'
Dc = 1° 00' 00"	Ts = 355.56'
R = 5,729.58'	LT = 83.33'
T = 230.42'	ST = 41.67'
L = 460.59'	e_{max} = 2.90%
E = 4.63'	CS STA. 283+22.71
TS STA. 277+37.12	ST STA. 284+47.71
SC STA. 278+62.12	

N

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED SLP
CHECKED ALB

PLAN - S.R. 7
STA. 267+00 TO STA. 279+00

LAW-7-2.17

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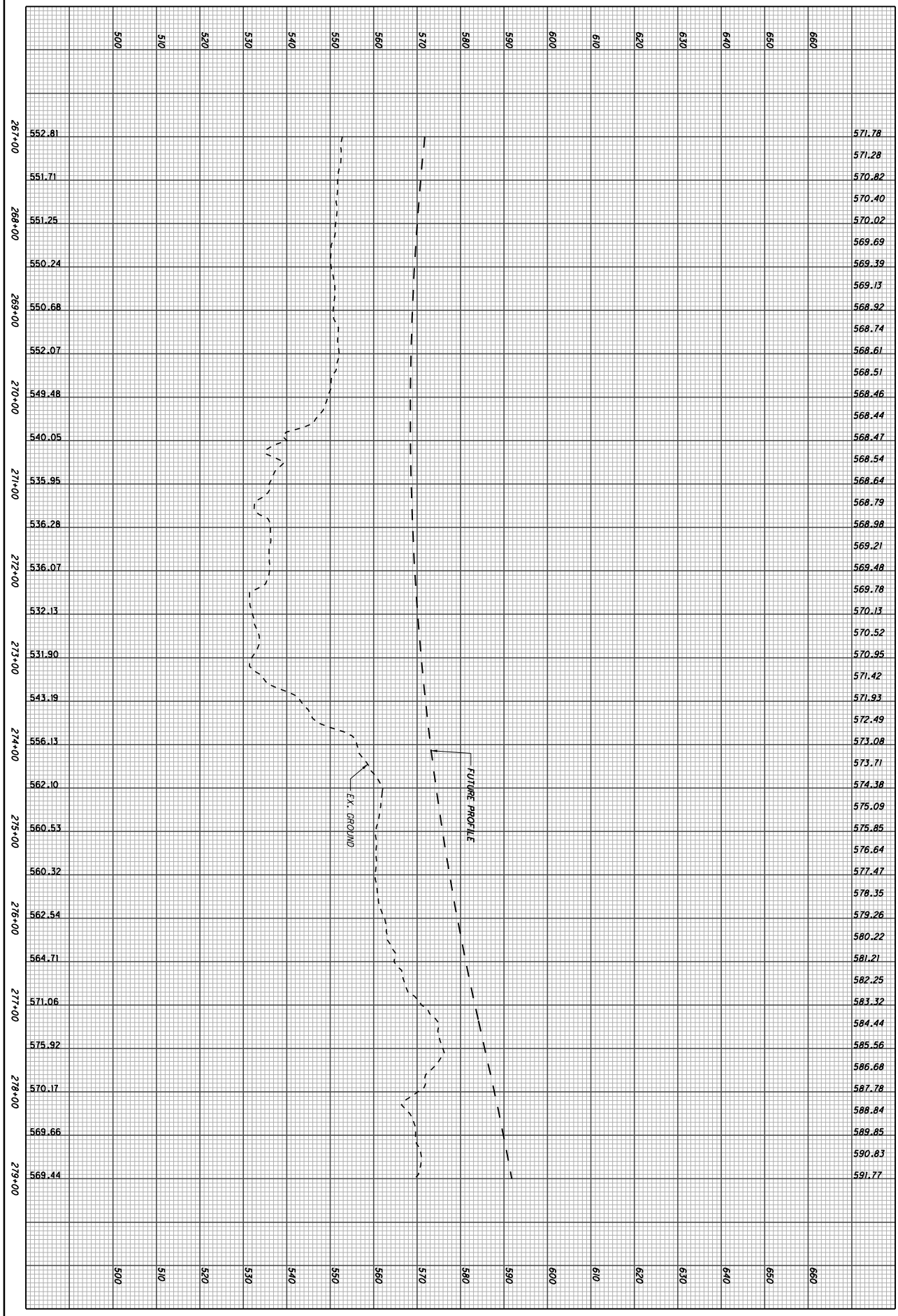
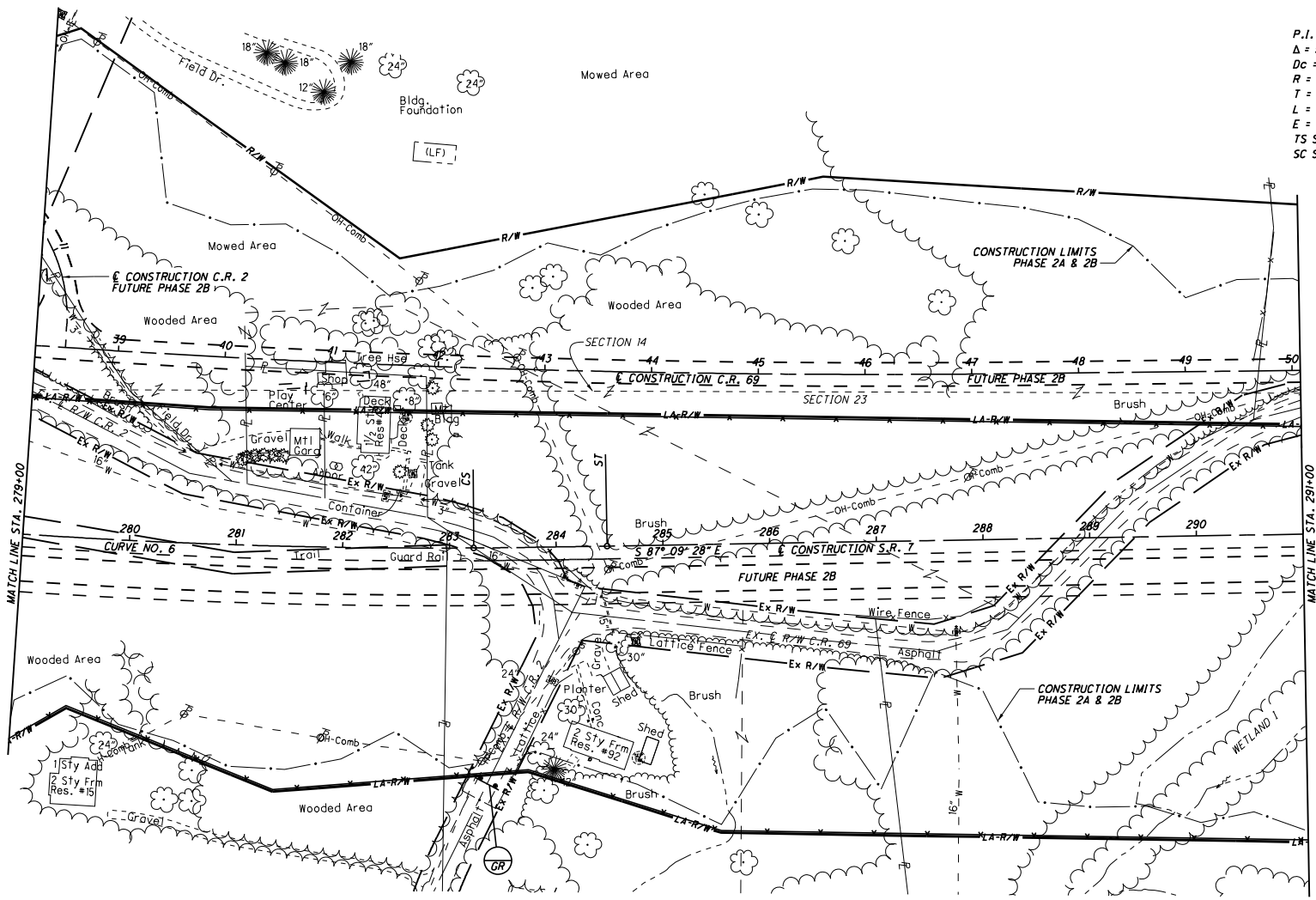


54 / 297	LAW-7-2.17	PROFILE - S.R. 7 STA. 267+00 TO STA. 279+00	CALCULATED ALB CHECKED TCM



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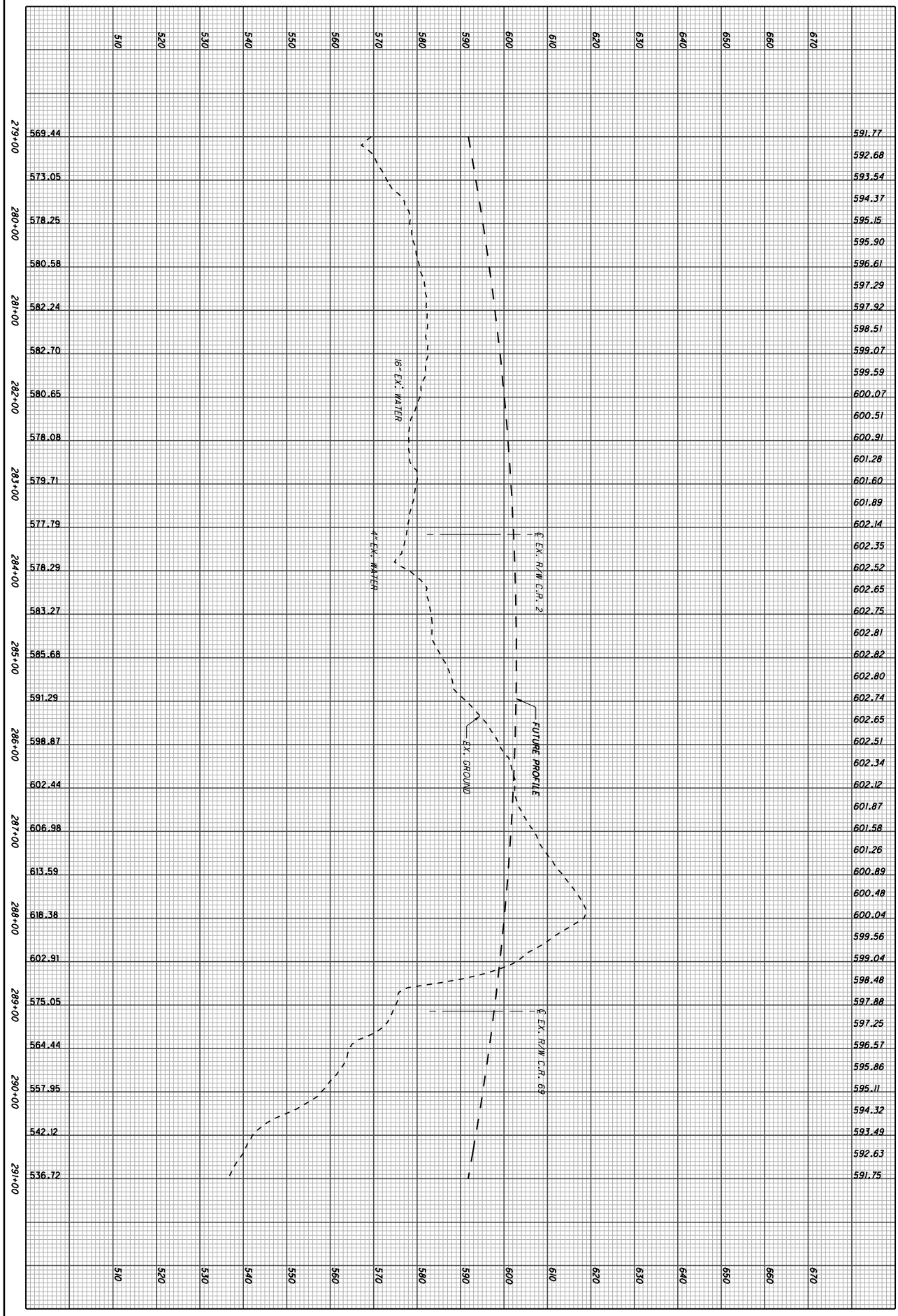
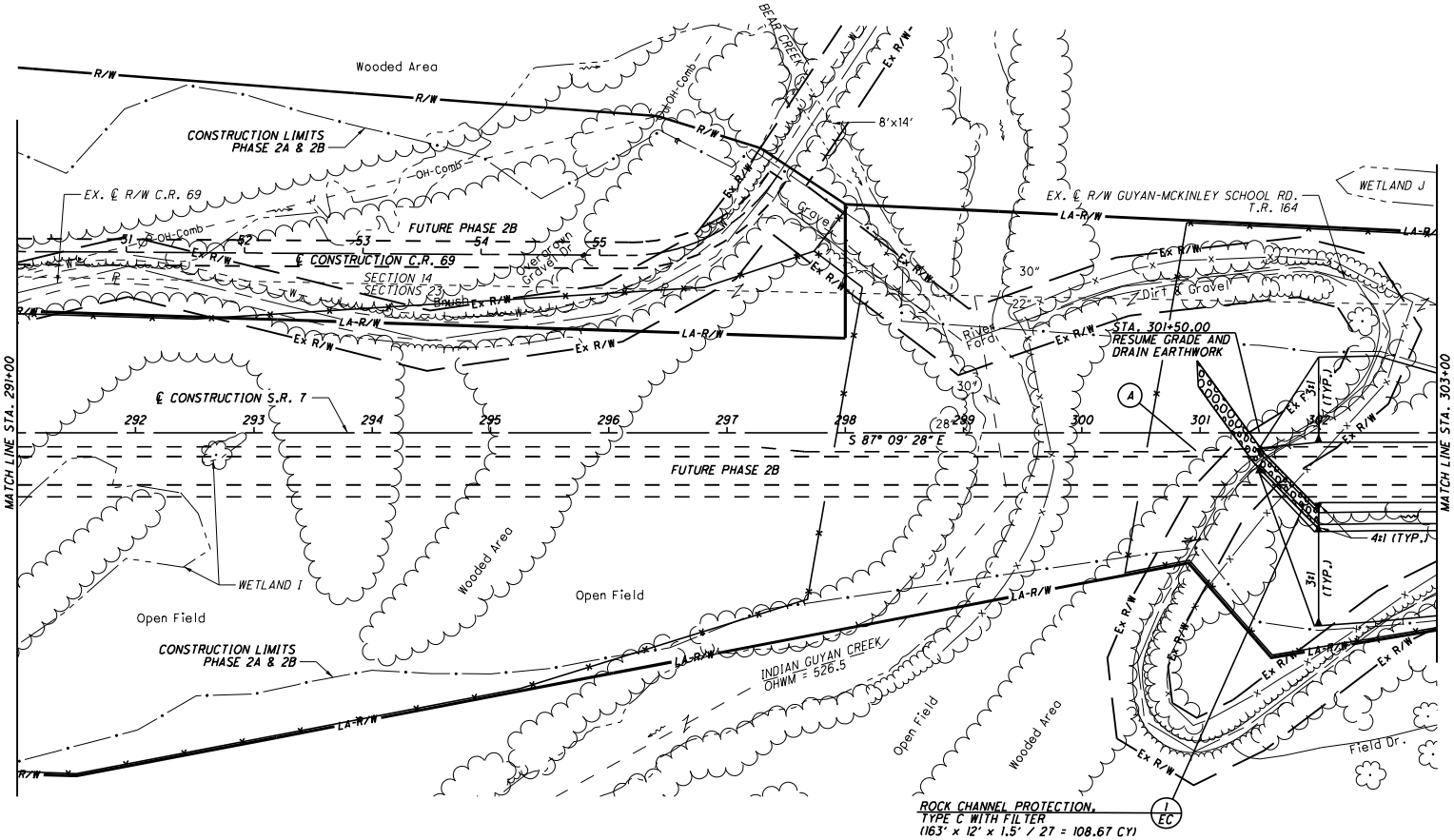


56 / 297	LAW-7-2.17	PROFILE - S.R. 7 STA. 279+00 TO STA. 291+00	CALCULATED ALB CHECKED TCM



TAPERS PROVIDED FOR INFORMATION ONLY

(A) - STA. 300+78.70
BEGIN SHOULDER TAPER, 16' RT.

STA. 301+78.70
END SHOULDER TAPER, 12' RT.

FOR PROFILE, SEE SHEET 58

N

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED SLP
CHECKED ALB

PLAN - S.R. 7
STA. 291+00 TO 303+00

LAW-7-2.17

57
297

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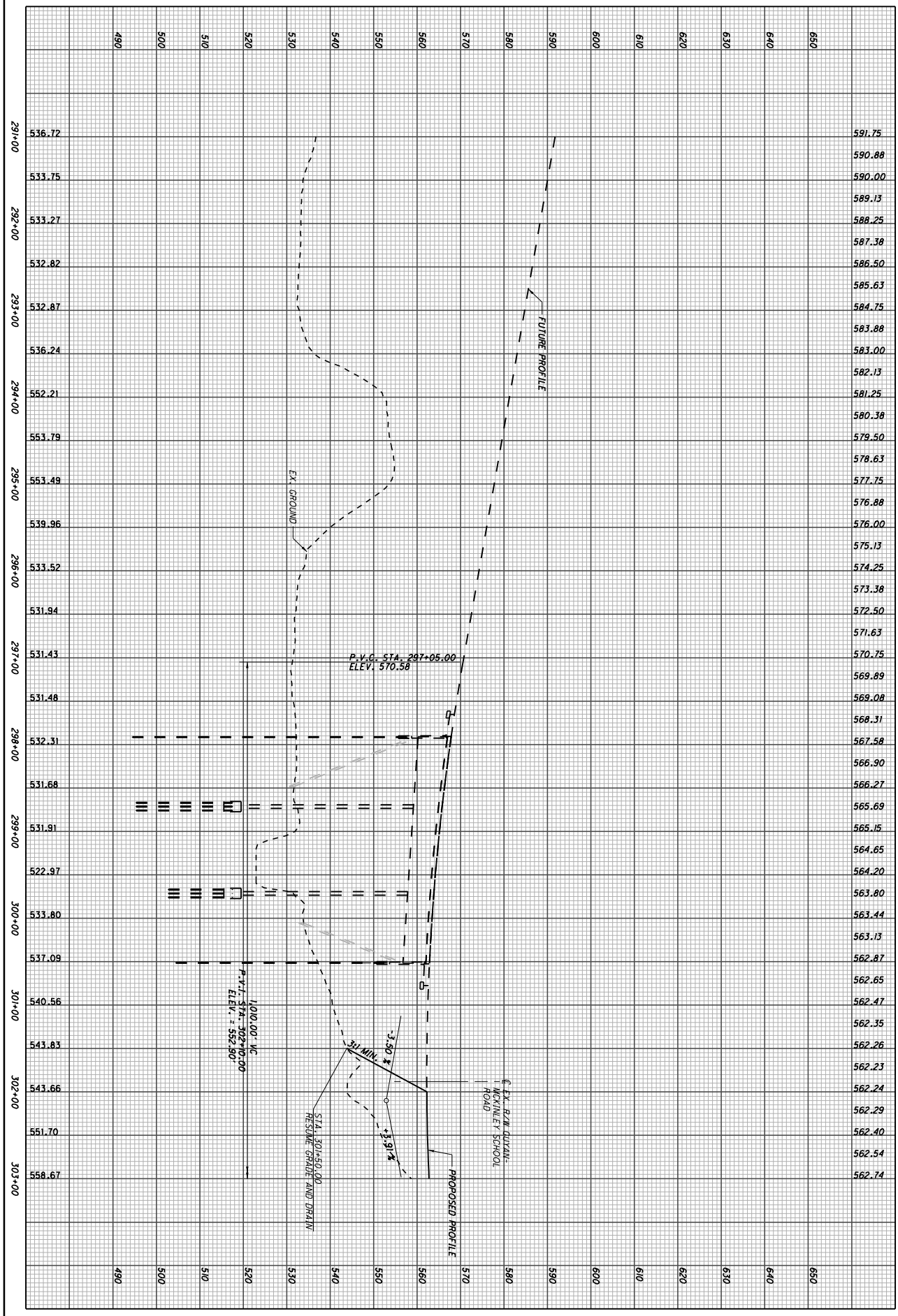
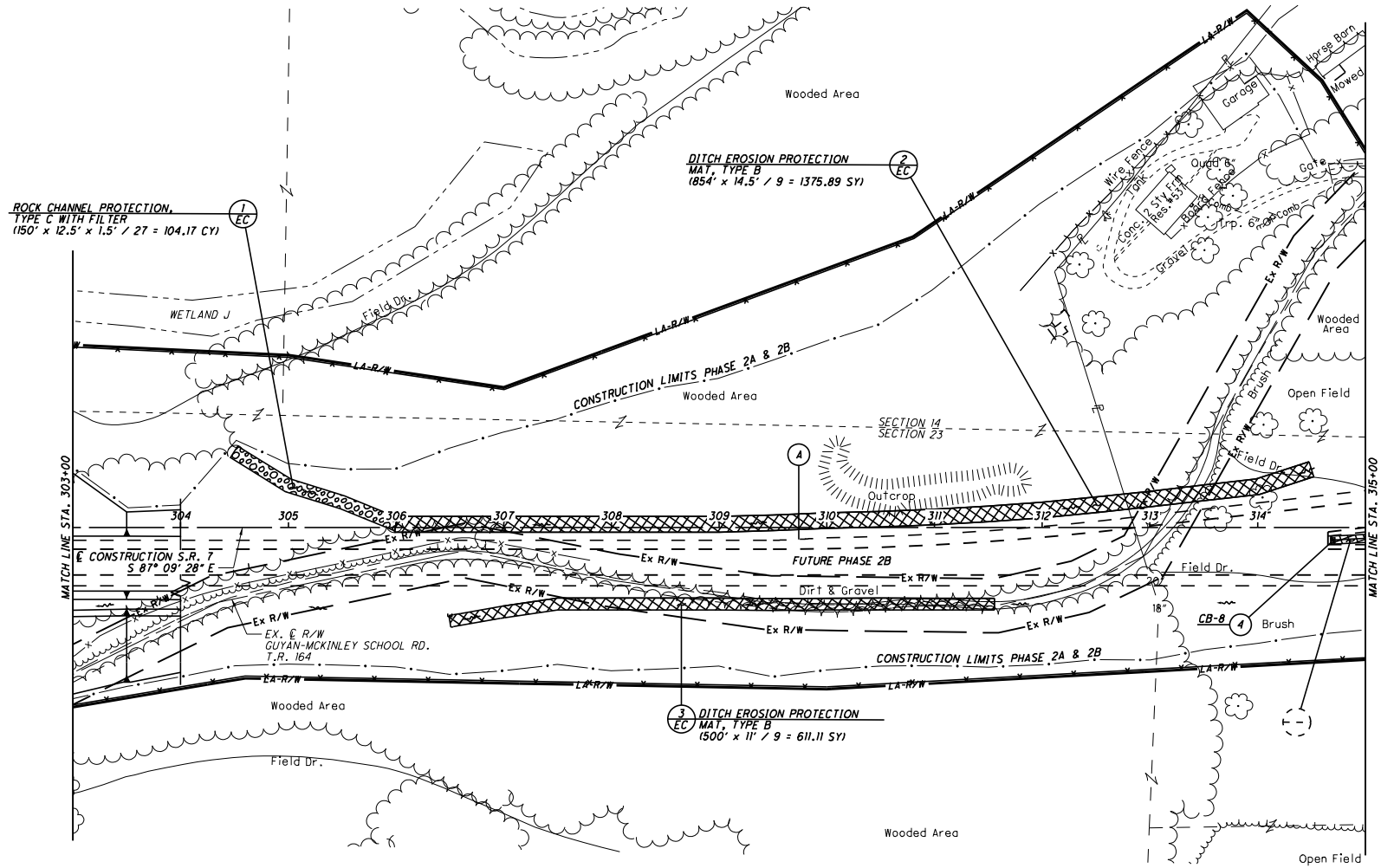


58 / 297	LAW-7-2.17	PROFILE - S.R. 7 STA. 291+00 TO STA. 303+00	CALCULATED ALB CHECKED TCM



CURVE DATA
S.R. 7 LANE TRANSITION
TRANSITION CURVE NO. 1
(FOR HORIZONTAL LAYOUT ONLY)

P.I. Sta. 311+12.46, S.R. 7, 20' RT.
Δ = 6° 29' 46" (LT)
Dc = 2° 00' 00"
R = 2,864.79'
T = 162.58'
L = 324.81'
E = 4.61'
e_{max} = NC
PC STA. = 309+49.89, S.R. 7, 20' RT.
PT STA. = 312+74.00, S.R. 7, 1.61' RT.

TAPERS PROVIDED FOR INFORMATION ONLY

(A) - STA. 309+49.89
BEGIN SHOULDER TAPER, 12' RT.

STA. 309+99.71
END SHOULDER TAPER, 9.57' RT.

FOR PROFILE, SEE SHEET 60
FOR STORM SEWER PROFILE, SEE SHEET 274

N

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED SLP
CHECKED ALB

PLAN - S.R. 7
STA. 303+00 TO STA. 315+00

LAW-7-2.17

59
297

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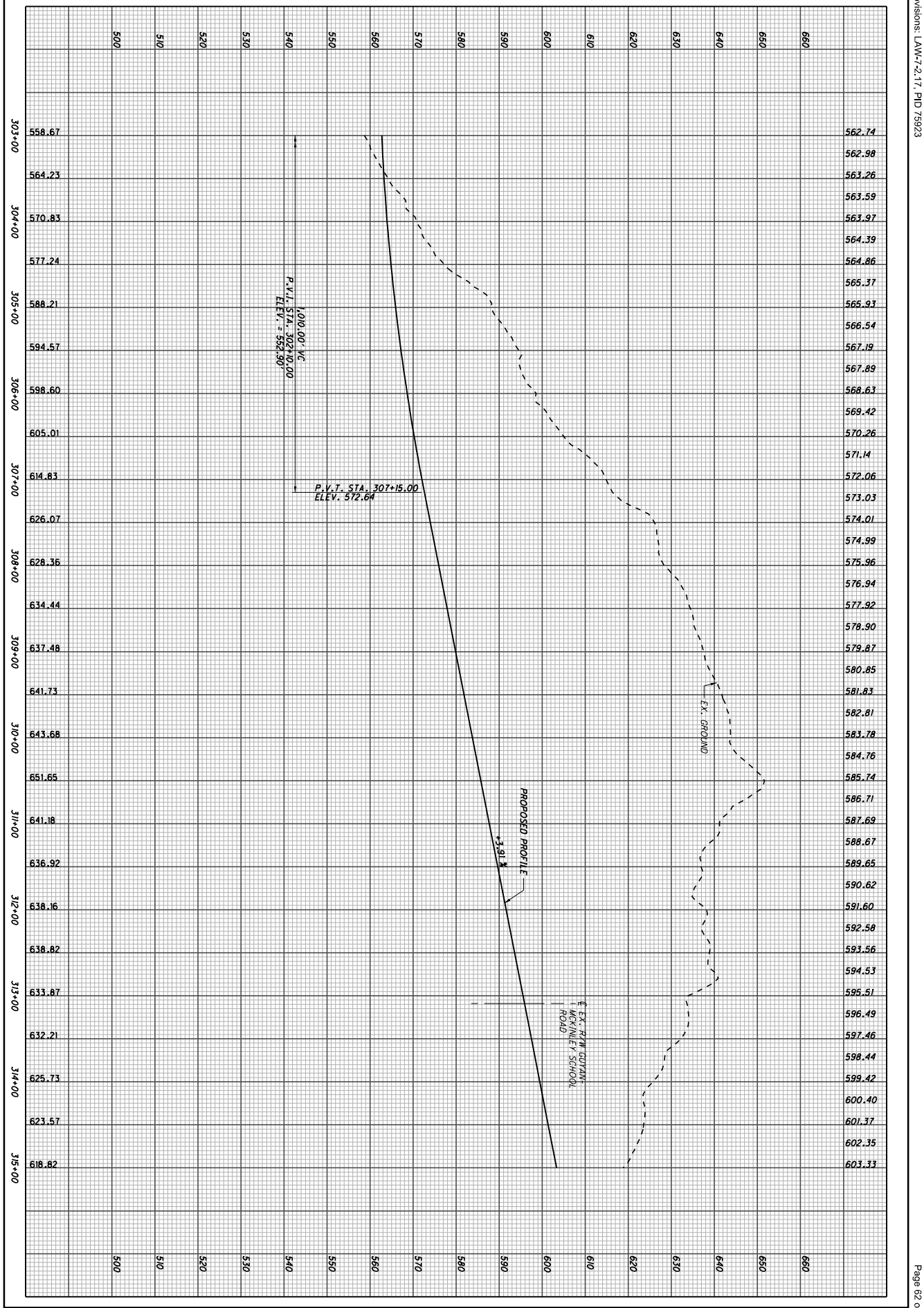
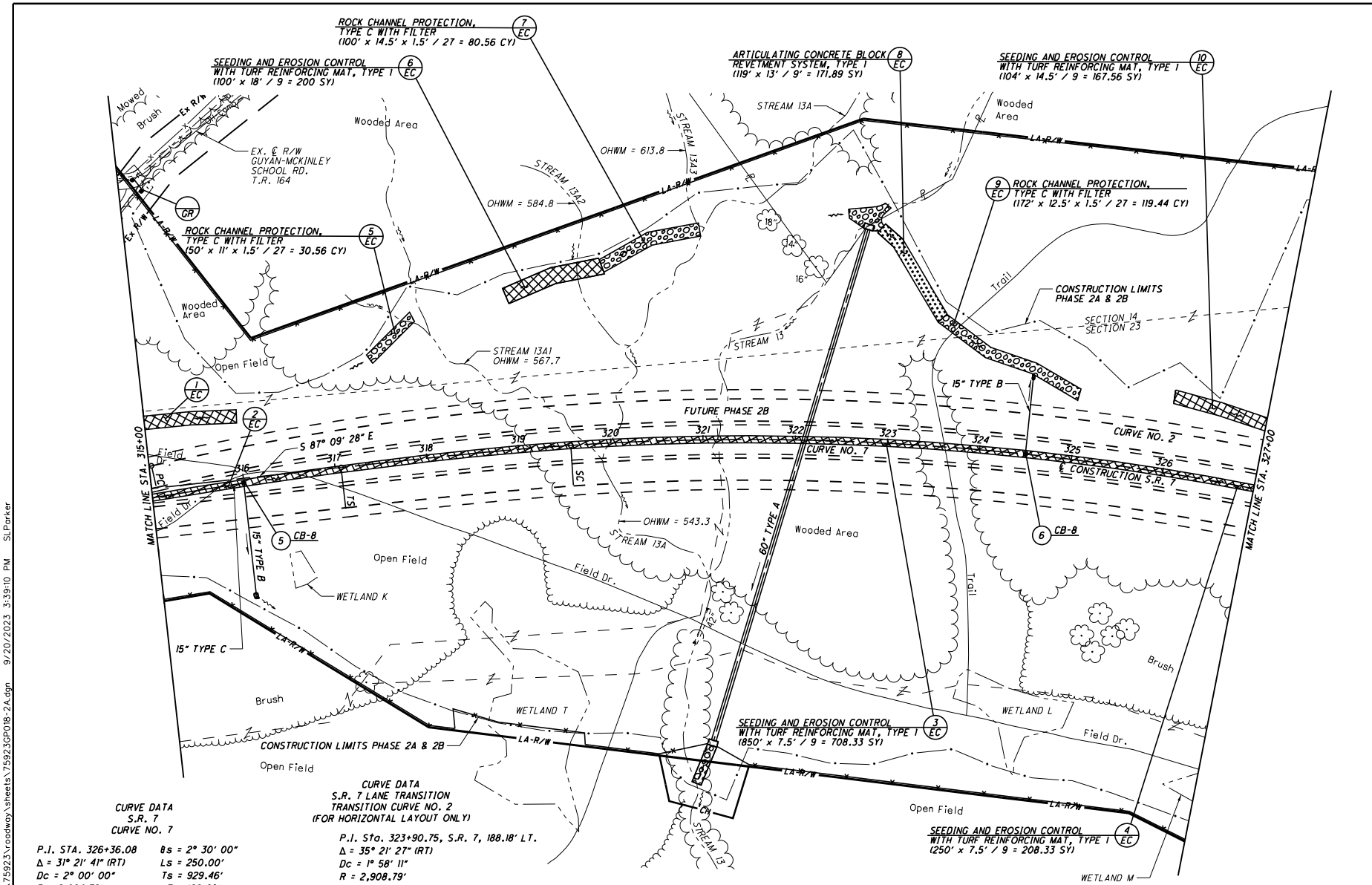


60 297	LAW-7-2.17	PROFILE - S.R. 7 STA. 303+00 TO STA. 315+00	CALCULATED ALB CHECKED TCM


ROCK CHANNEL PROTECTION, TYPE C WITH FILTER (100' x 14.5' x 1.5' / 27 = 80.56 CY)
7 EC
SEEDING AND EROSION CONTROL WITH TURF REINFORCING MAT, TYPE 1 (100' x 18' / 9 = 200 SY)
6 EC
ARTICULATING CONCRETE BLOCK REVETMENT SYSTEM, TYPE 1 (119' x 13' / 9 = 171.89 SY)
8 EC
SEEDING AND EROSION CONTROL WITH TURF REINFORCING MAT, TYPE 1 (104' x 14.5' / 9 = 167.56 SY)
10 EC
ROCK CHANNEL PROTECTION, TYPE C WITH FILTER (50' x 11' x 1.5' / 27 = 30.56 CY)
5 EC
ROCK CHANNEL PROTECTION, TYPE C WITH FILTER (172' x 12.5' x 1.5' / 27 = 119.44 CY)
9 EC
SEEDING AND EROSION CONTROL WITH TURF REINFORCING MAT, TYPE 1 (850' x 7.5' / 9 = 708.33 SY)
3 EC
SEEDING AND EROSION CONTROL WITH TURF REINFORCING MAT, TYPE 1 (250' x 7.5' / 9 = 208.33 SY)
4 EC
1 EC DITCH EROSION PROTECTION (VBF) (50' x 14.5' / 9 = 80.56 SY)
2 EC DITCH EROSION PROTECTION (130' x 7.5' / 9 = 108.33 SY)
(VBF) DENOTES LOCATION OF VEGETATED BIOFILTER.
FOR PROFILE, SEE SHEET 62
FOR STORM SEWER PROFILE, SEE SHEETS 189
FOR CULVERT DETAILS, SEE SHEETS 281-282
CURVE DATA S.R. 7 CURVE NO. 7
P.I. STA. 326+36.08
Δ = 31° 21' 41" (RT)
Dc = 2° 00' 00"
R = 2,864.79'
T = 670.91'
L = 1,318.07'
E = 77.51'
TS STA. 317+06.62
SC STA. 319+56.62
θs = 2° 30' 00"
Ls = 250.00'
Ts = 929.46'
LT = 166.68'
ST = 83.35'
e_max = 5.10%
CS STA. 332+74.69
ST STA. 335+24.69
CURVE DATA S.R. 7 LANE TRANSITION TRANSITION CURVE NO. 2 (FOR HORIZONTAL LAYOUT ONLY)
P.I. Sta. 323+90.75, S.R. 7, 188.18' LT.
Δ = 35° 21' 27" (RT)
Dc = 1° 58' 11"
R = 2,908.79'
T = 927.12'
L = 1,795.03'
E = 144.18'
e_max = 5.10%
PC STA. = 315+02.52, S.R. 7, 24.41' LT.
PT STA. = 332+74.69, S.R. 7, 44' LT.
PLAN - S.R. 7
STA. 315+00 TO STA. 327+00
LAW-7-2.17
CALCULATED SLP
CHECKED ALB
HORIZONTAL SCALE IN FEET
0 25 50 100
61
297
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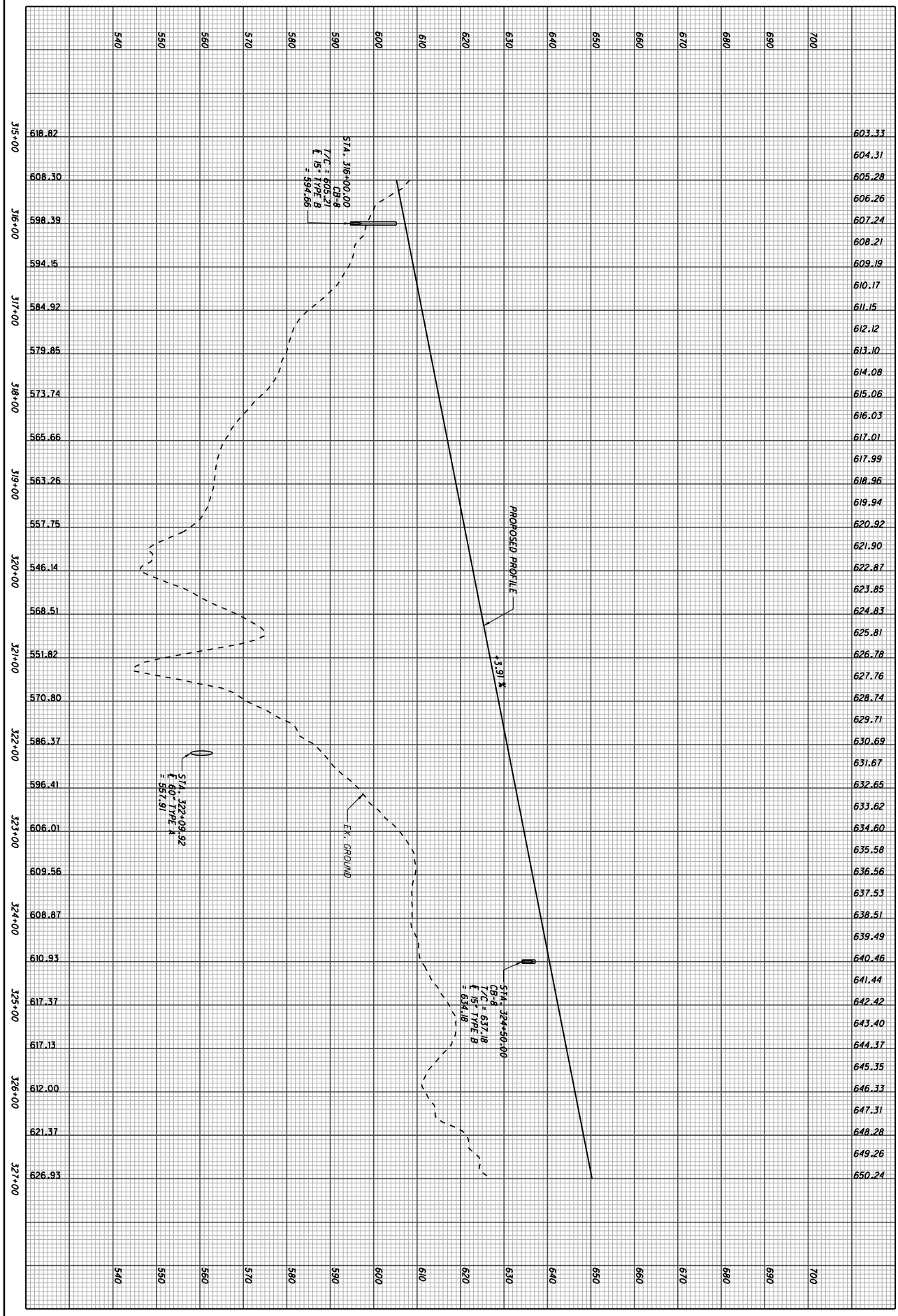
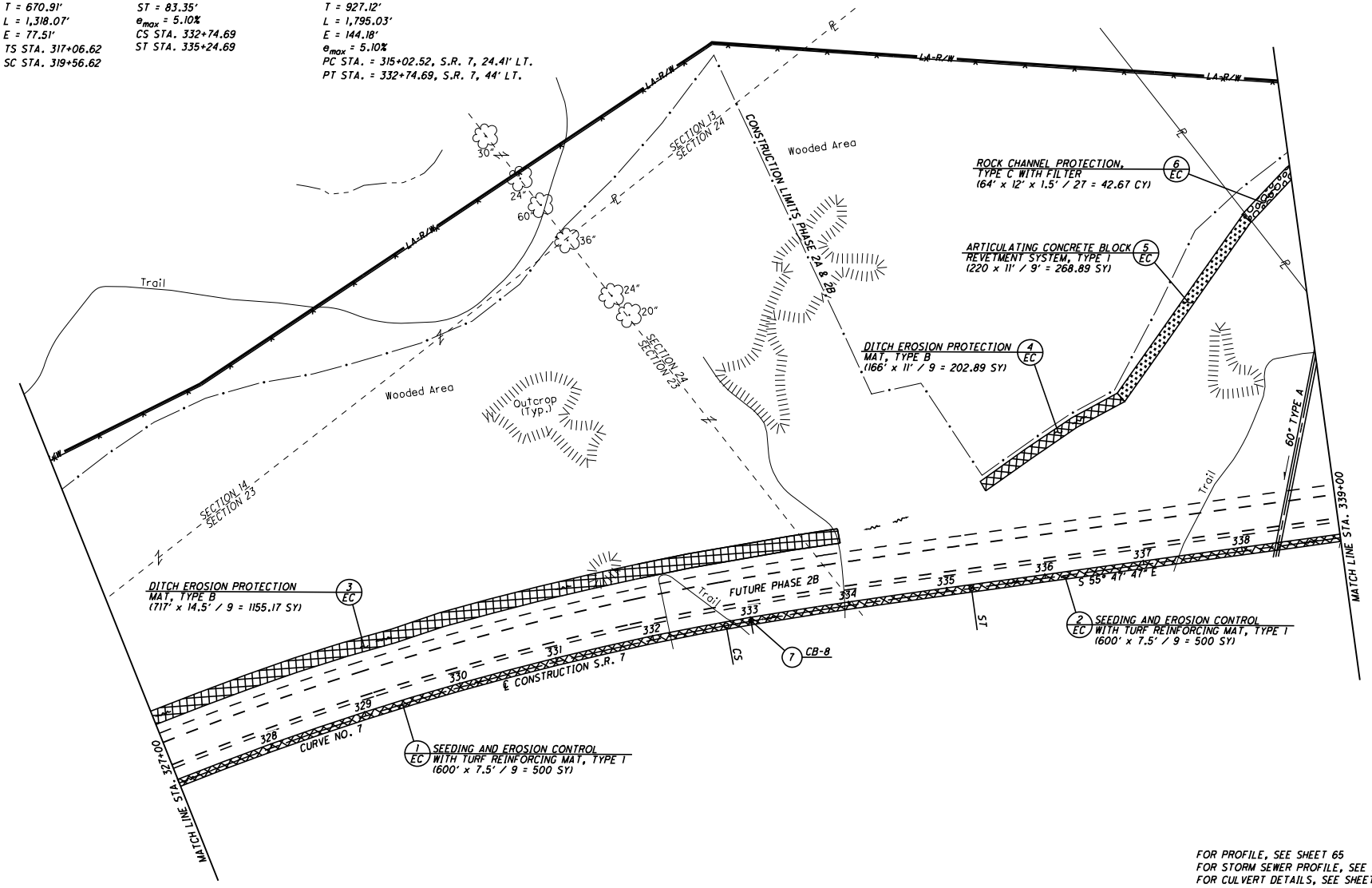


62 / 297	LAW-7-2.17	PROFILE - S.R. 7 STA. 315+00 TO STA. 327+00	CALCULATED ALB CHECKED TCM



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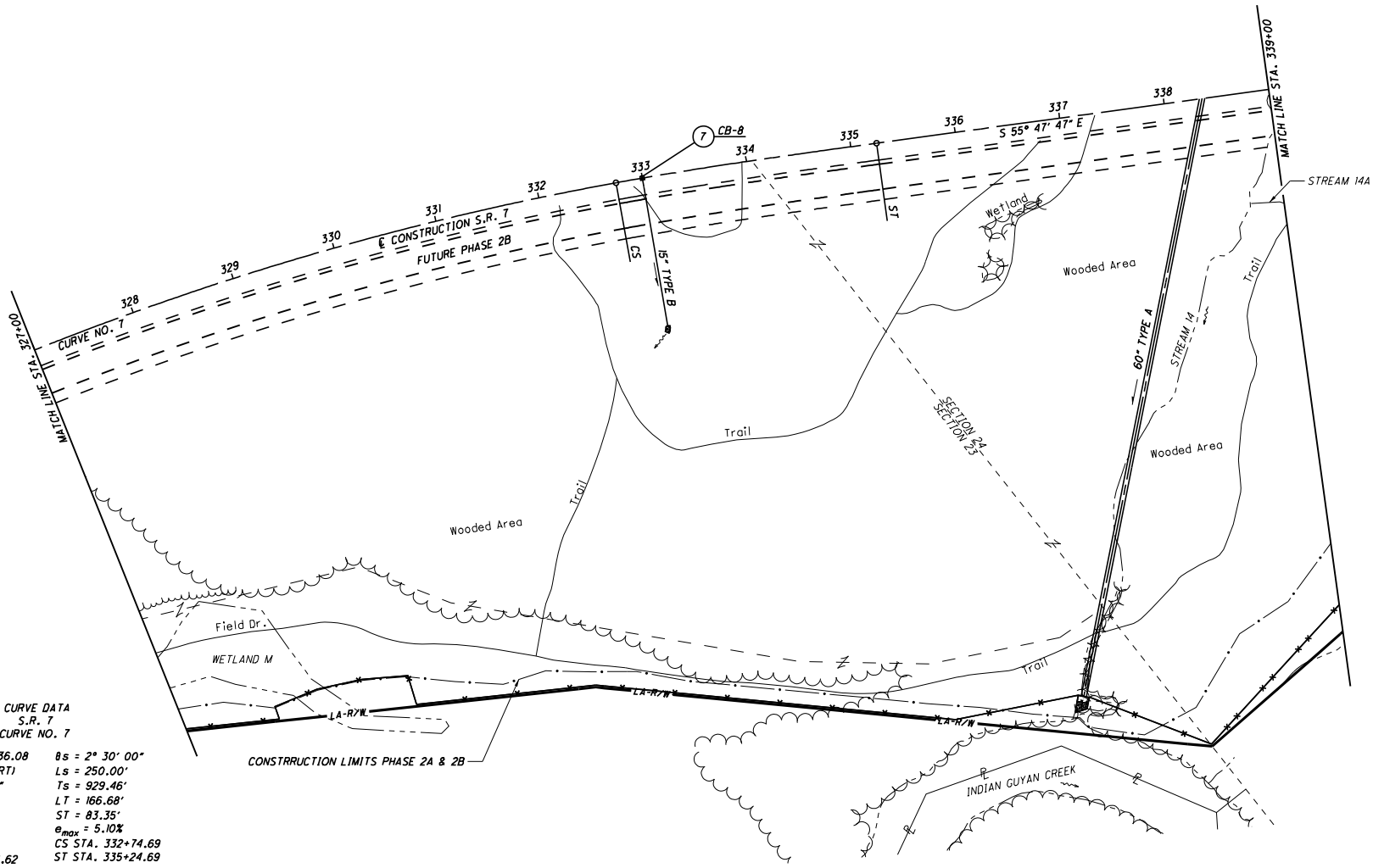
HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED SLP
CHECKED ALB

PLAN - S.R. 7
STA. 327+00 TO STA. 339+00 (NORTH)

LAW-7-2.17

63
297



CURVE DATA
S.R. 7
CURVE NO. 7

P.I. STA. 326+36.08	θs = 2° 30' 00"
Δ = 31° 21' 41" (RT)	Ls = 250.00'
Dc = 2° 00' 00"	Ts = 929.46'
R = 2,864.79'	LT = 166.68'
T = 670.91'	ST = 83.35'
L = 1,318.07'	e_{max} = 5.10%
E = 77.51'	CS STA. 332+74.69
TS STA. 317+06.62	ST STA. 335+24.69
SC STA. 319+56.62	

FOR PROFILE, SEE SHEET 65
FOR STORM SEWER PROFILE, SEE SHEET 204
FOR CULVERT DETAILS, SEE SHEETS 283-284

CALCULATED SLP
CHECKED ALB

HORIZONTAL SCALE IN FEET
0 25 50 100

PLAN - S.R. 7
STA. 327+00 TO STA. 339+00 (SOUTH)

LAW-7-2.17

64
297

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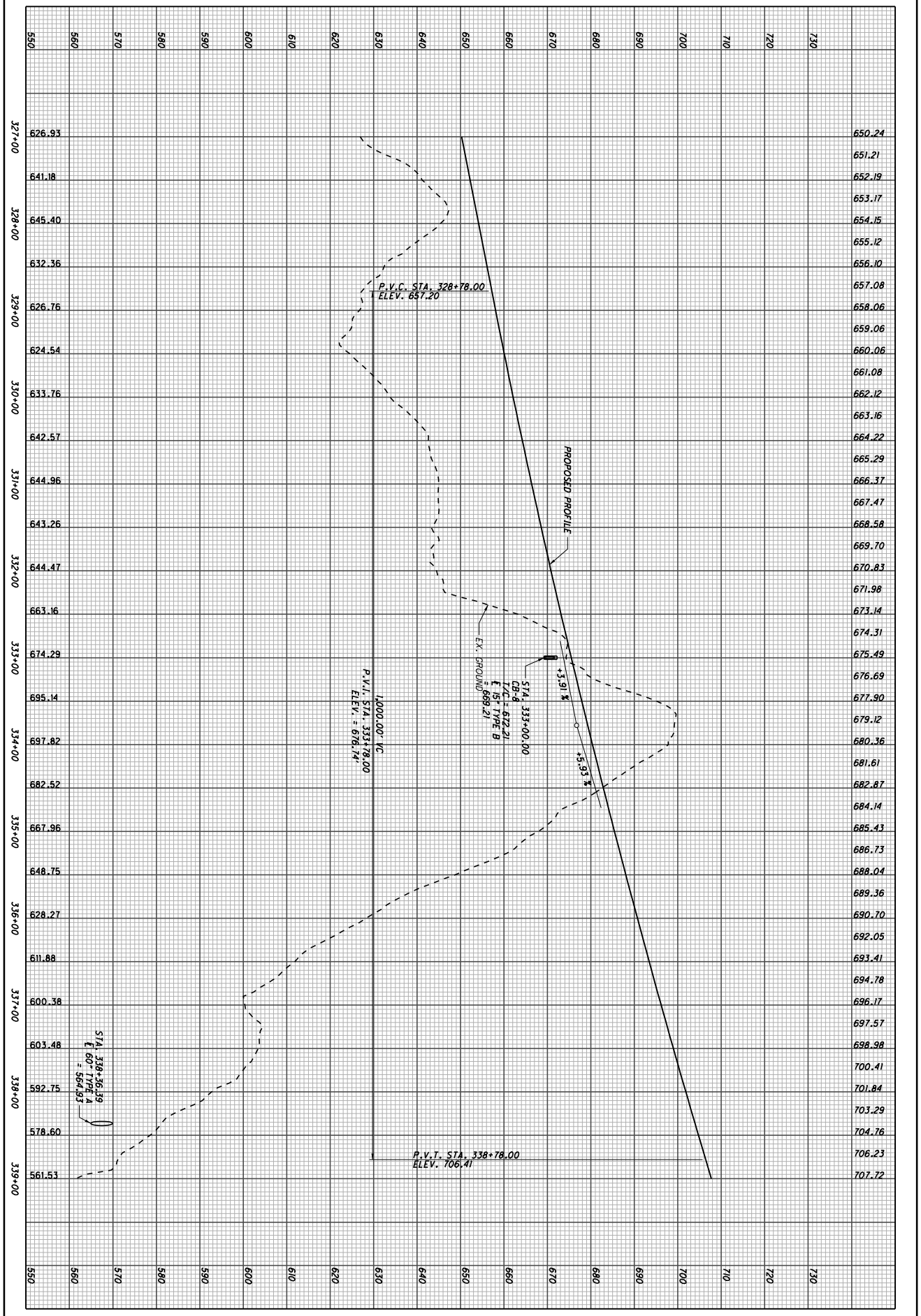
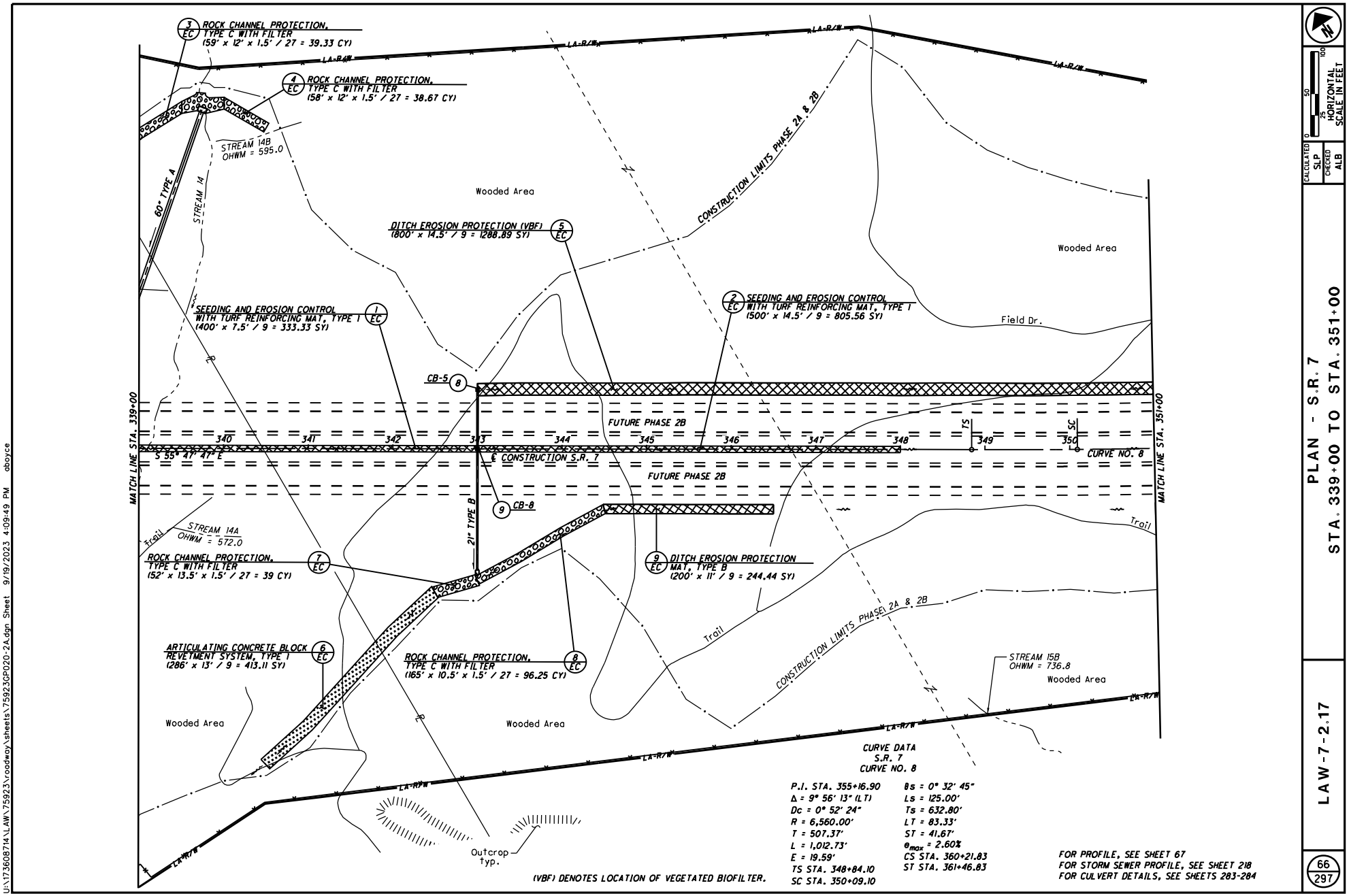


65/297	LAW-7-2.17	PROFILE - S.R. 7 STA. 327+00 TO STA. 339+00	CALCULATED ALB CHECKED TCM



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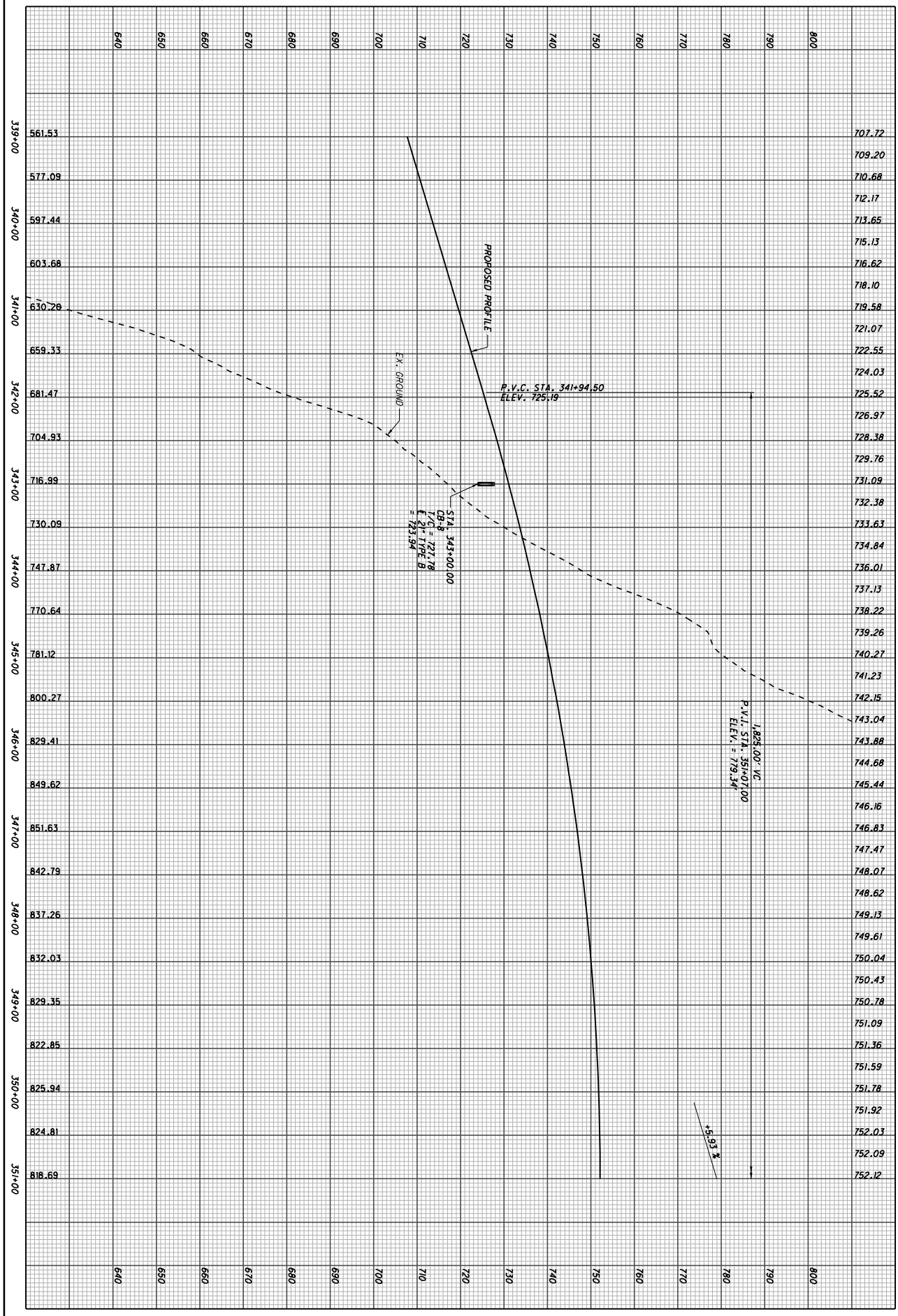
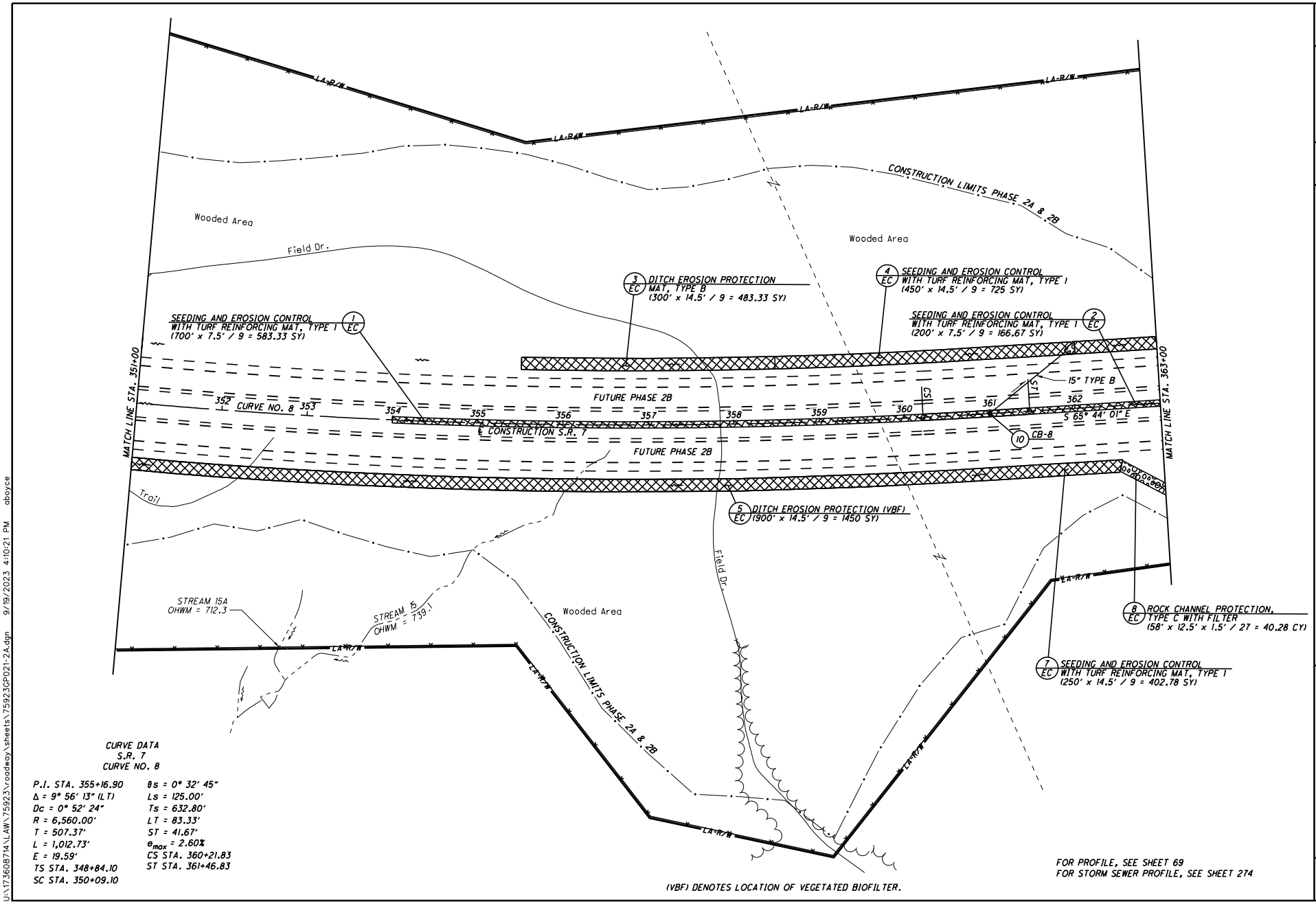


67 / 297	LAW-7-2.17	PROFILE - S.R. 7 STA. 339+00 STA. 351+00	CALCULATED ALB CHECKED TCM



CURVE DATA
S.R. 7
CURVE NO. 8

P.I. STA. 355+16.90	θs = 0° 32' 45"
Δ = 9° 56' 13" (LT)	Ls = 125.00'
Dc = 0° 52' 24"	Ts = 632.80'
R = 6,560.00'	LT = 83.33'
T = 507.37'	ST = 41.67'
L = 1,012.73'	e_{max} = 2.60%
E = 19.59'	CS STA. 360+21.83
TS STA. 348+84.10	ST STA. 361+46.83
SC STA. 350+09.10	

(VBF) DENOTES LOCATION OF VEGETATED BIOFILTER.

FOR PROFILE, SEE SHEET 69
FOR STORM SEWER PROFILE, SEE SHEET 274

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED SLP
CHECKED ALB

PLAN - S.R. 7
STA. 351+00 TO STA. 363+00

LAW-7-2.17

68
297

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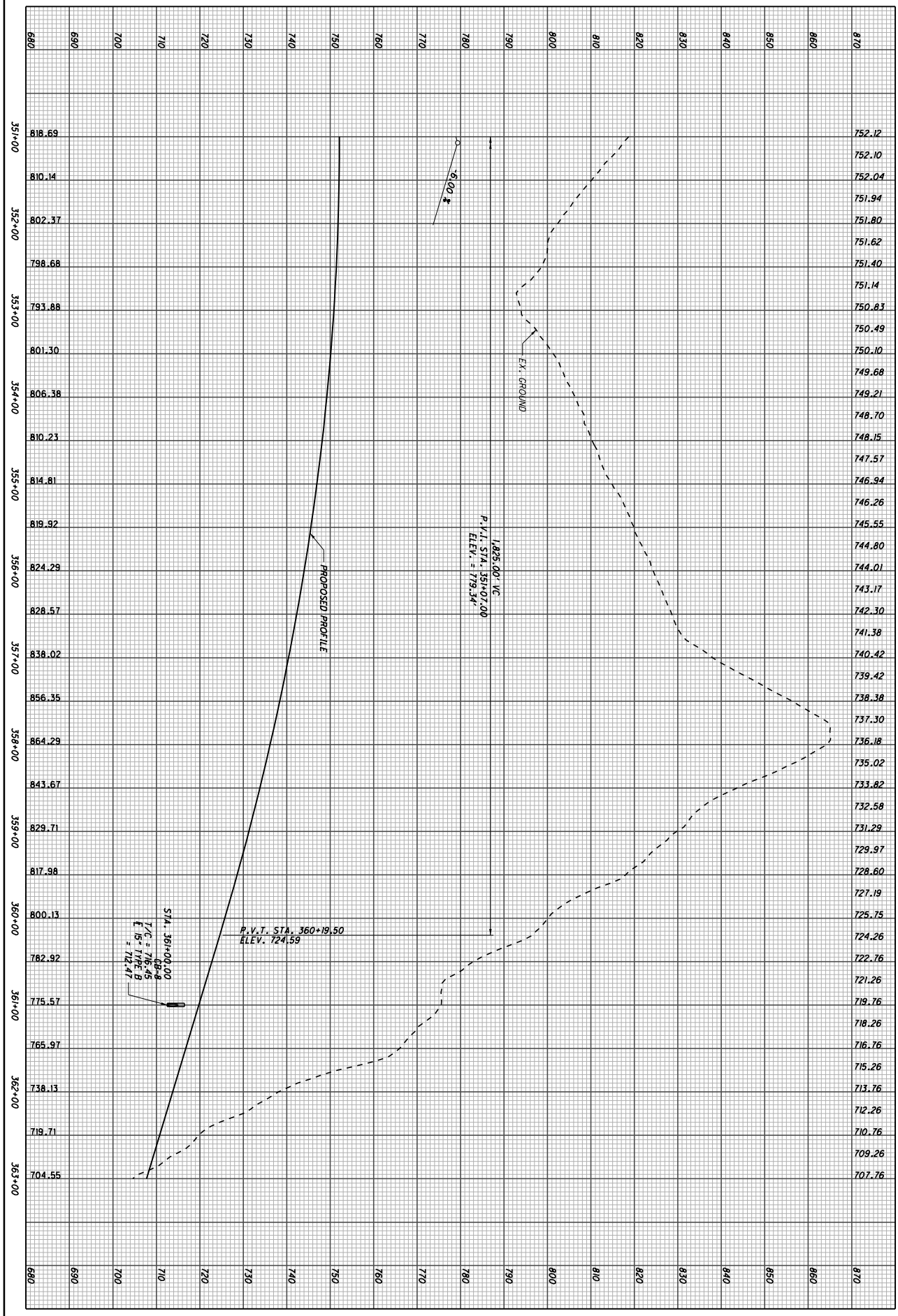
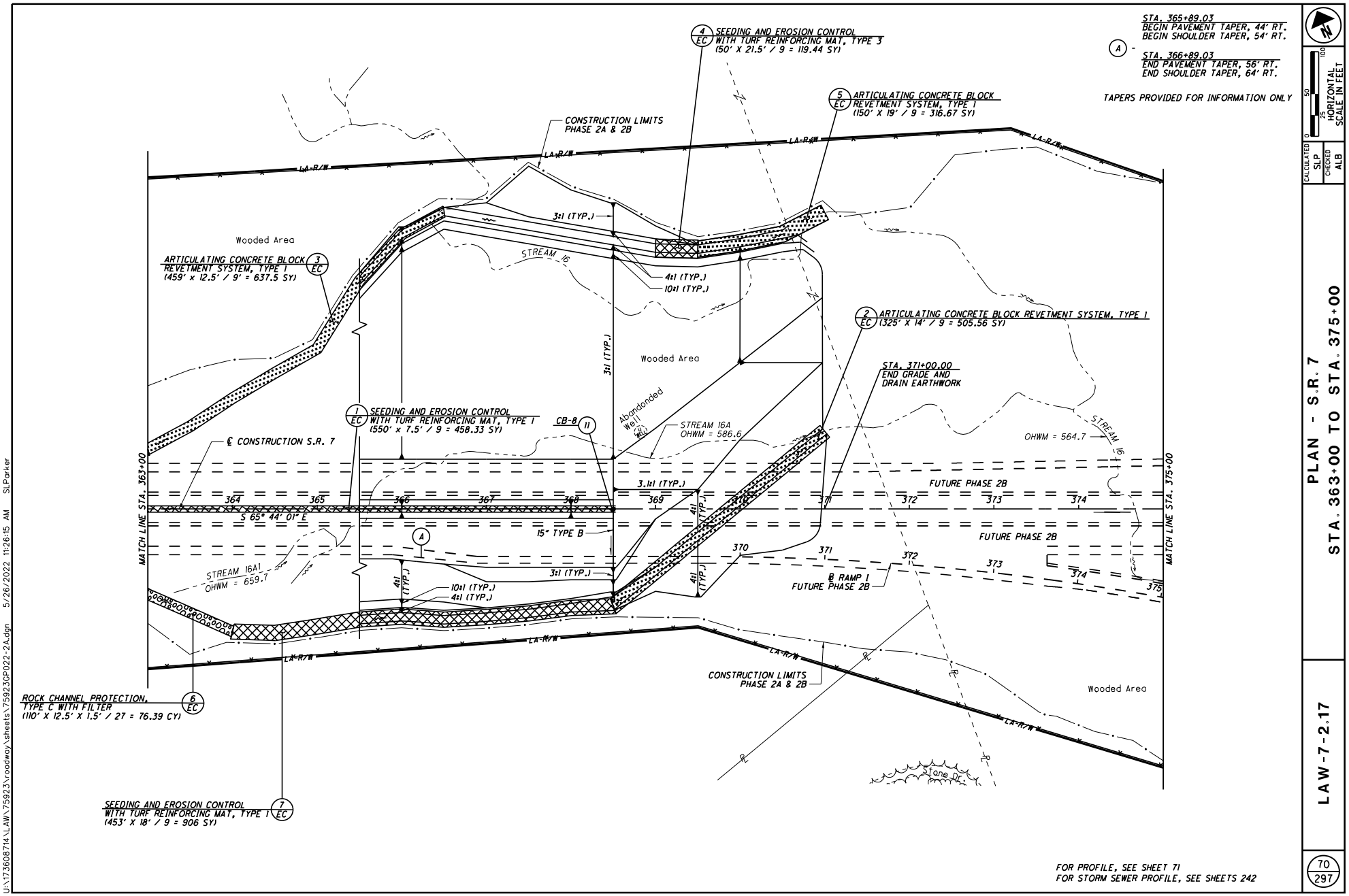


69 / 297	LAW-7-2.17	PROFILE - S.R. 7 STA. 351+00 TO STA. 363+00	CALCULATED ALB CHECKED TCM



HORIZONTAL SCALE IN FEET 0 25 50 100

CALCULATED SLP CHECKED ALB

PLAN - S.R. 7
STA. 363+00 TO STA. 375+00

LAW-7-2.17

70
297

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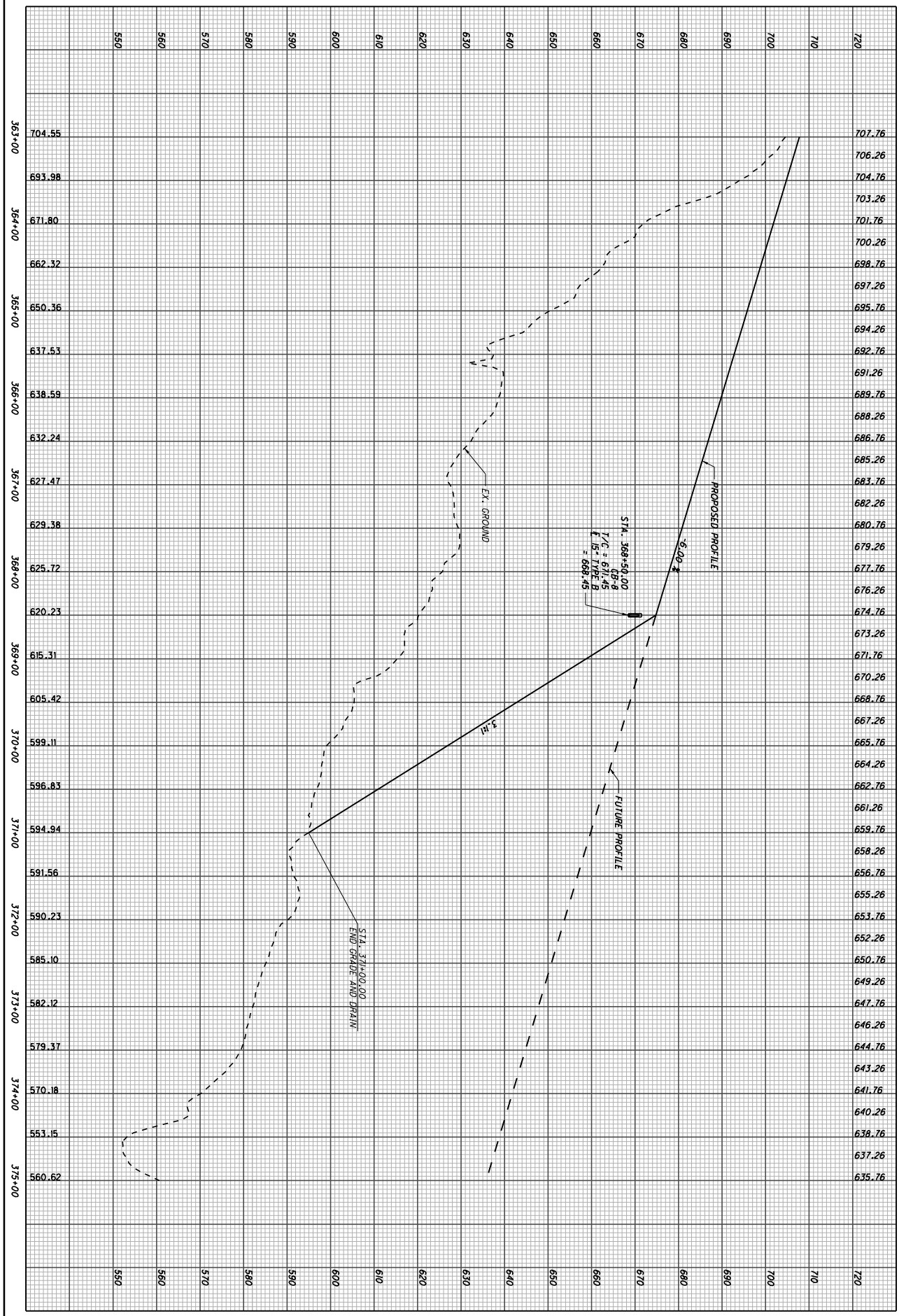
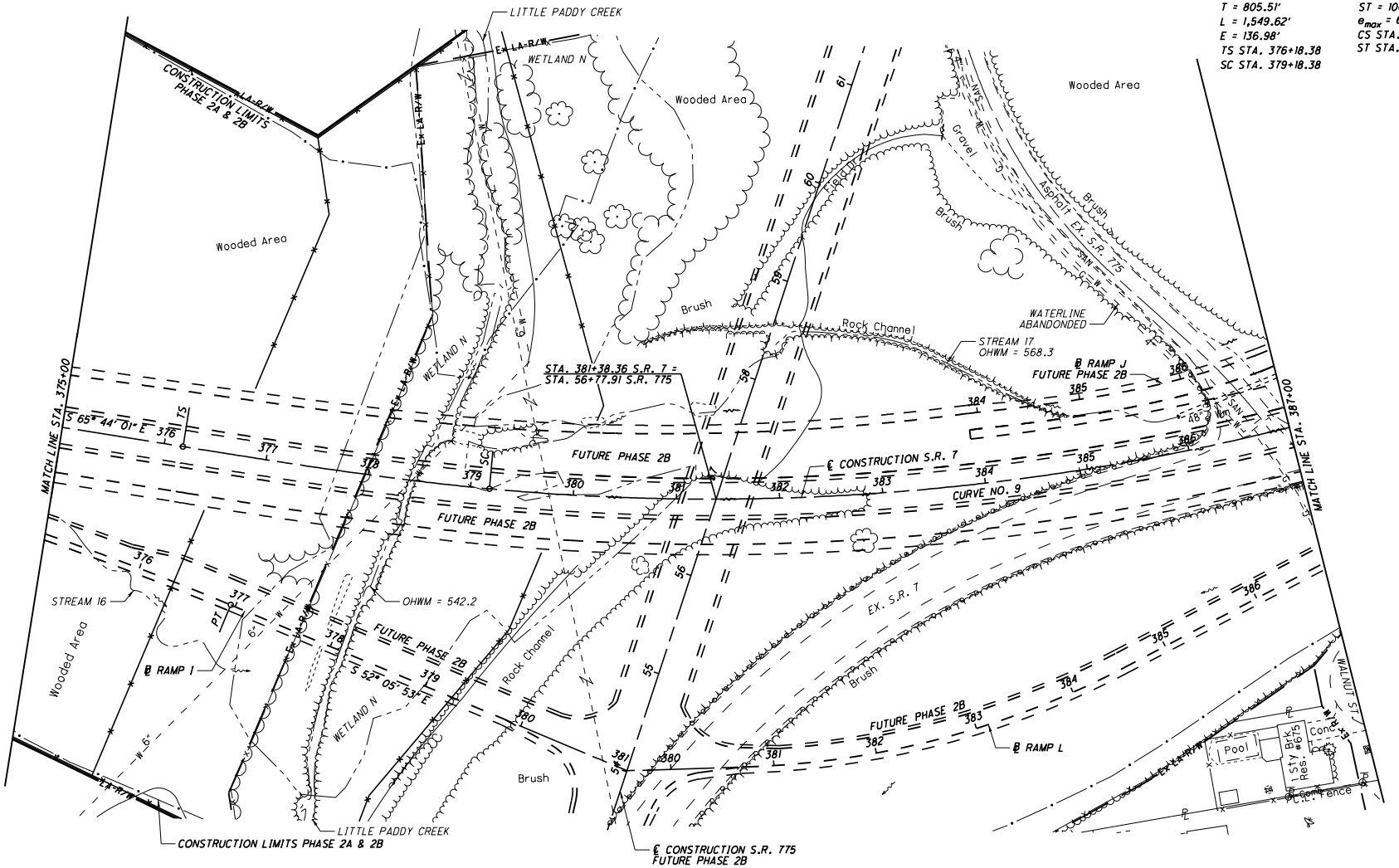


71 / 297	LAW-7-2.17	PROFILE - S.R. 7 STA. 363+00 TO STA. 375+00	CALCULATED ALB CHECKED TCM



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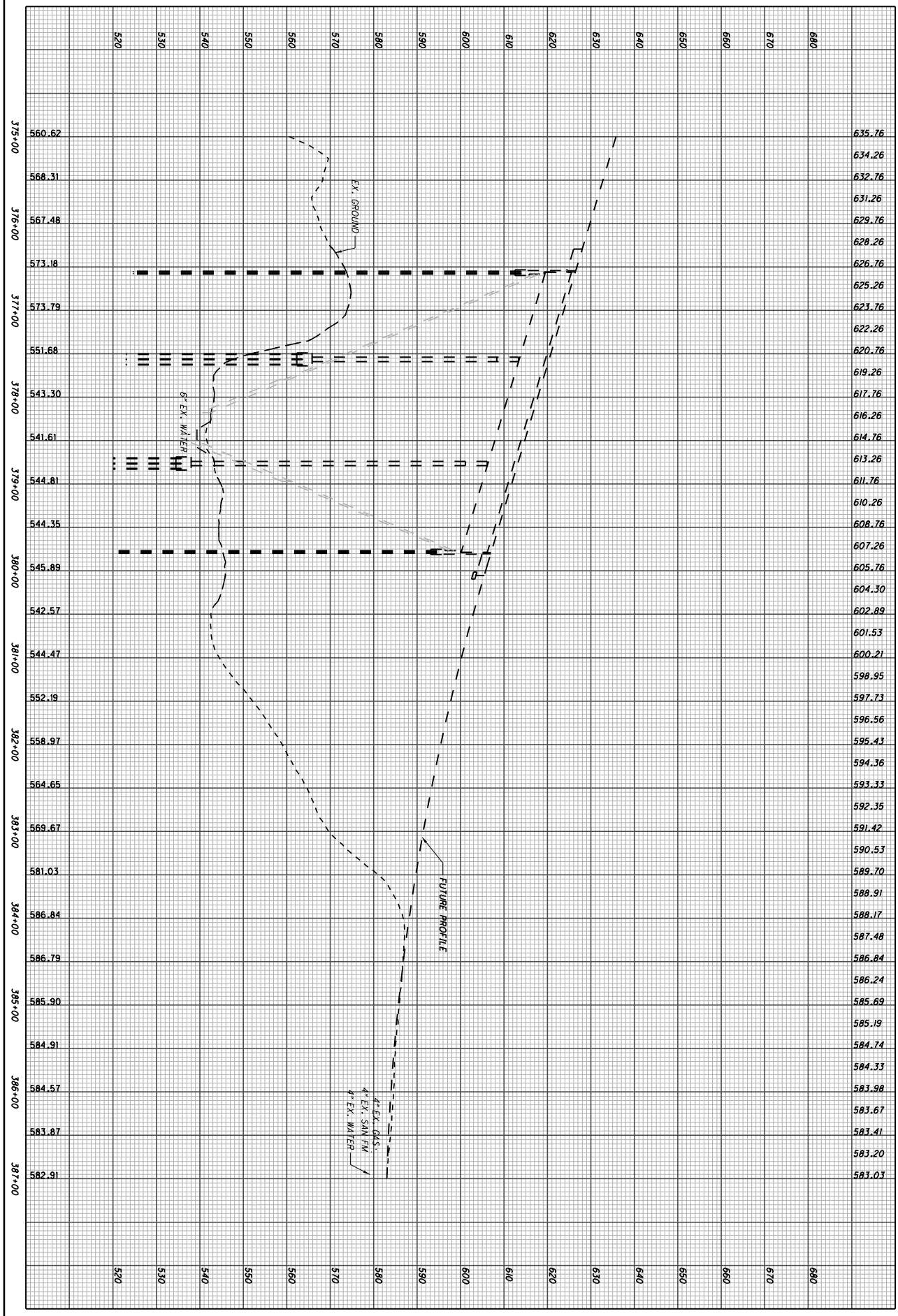
HORIZONTAL SCALE IN FEET
0 25 50 100

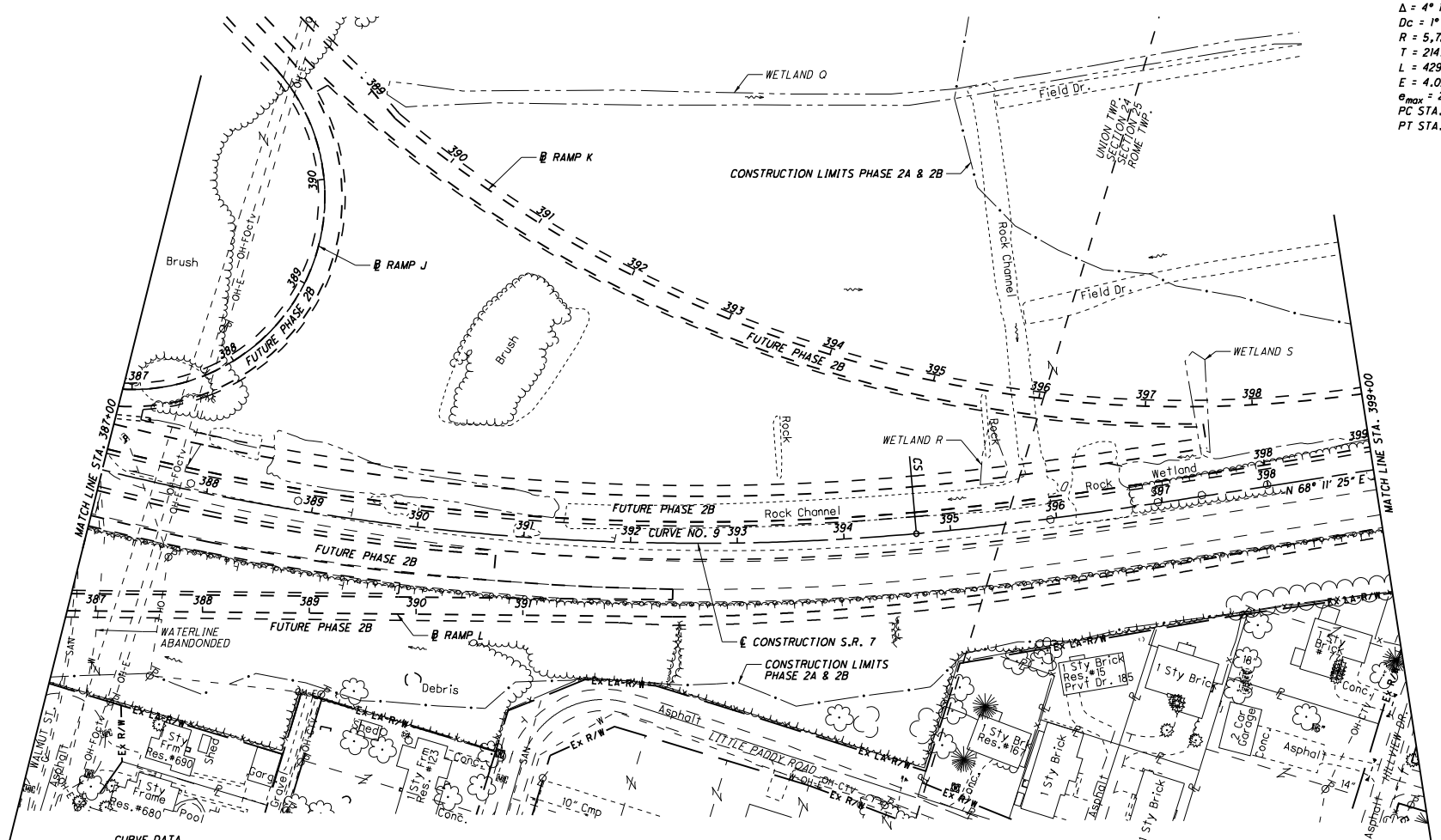
CALCULATED SLP
CHECKED ALB

PLAN - S.R. 7
STA. 375+00 TO STA. 387+00

LAW-7-2.17



173/297	LAW-7-2.17	PROFILE - S.R. 7 STA. 375+00 TO STA. 387+00	CALCULATED ALB CHECKED TCM



CURVE DATA
S.R. 7 WESTBOUND LANES
℄ CURVE NO. 1

P.I. STA. 399+82.71
Δ = 4° 17' 32" (LT)
Dc = 1° 00' 00"
R = 5,729.58'
T = 214.71'
L = 429.22'
E = 4.02'
e_{max} = 2.90%
PC STA. = 397+68.00
PT STA. = 401+97.22

CURVE DATA
S.R. 7
CURVE NO. 9

P.I. STA. 387+47.15
Δ = 46° 04' 34" (LT)
Dc = 2° 29' 28"
R = 2,300.00'
T = 805.51'
L = 1,549.62'
E = 136.98'
TS STA. 376+18.38
SC STA. 379+18.38

θs = 3° 44' 12"
Ls = 300.00'
Ts = 1,128.77'
LT = 200.04'
ST = 100.04'
e_{max} = 6.20%
CS STA. 394+68.00
ST STA. 397+68.00

HORIZONTAL SCALE IN FEET
0 25 50 100
CALCULATED SLP
CHECKED ALB

PLAN - S.R. 7
STA. 387+00 STA. 399+00

LAW-7-2.17

74
297

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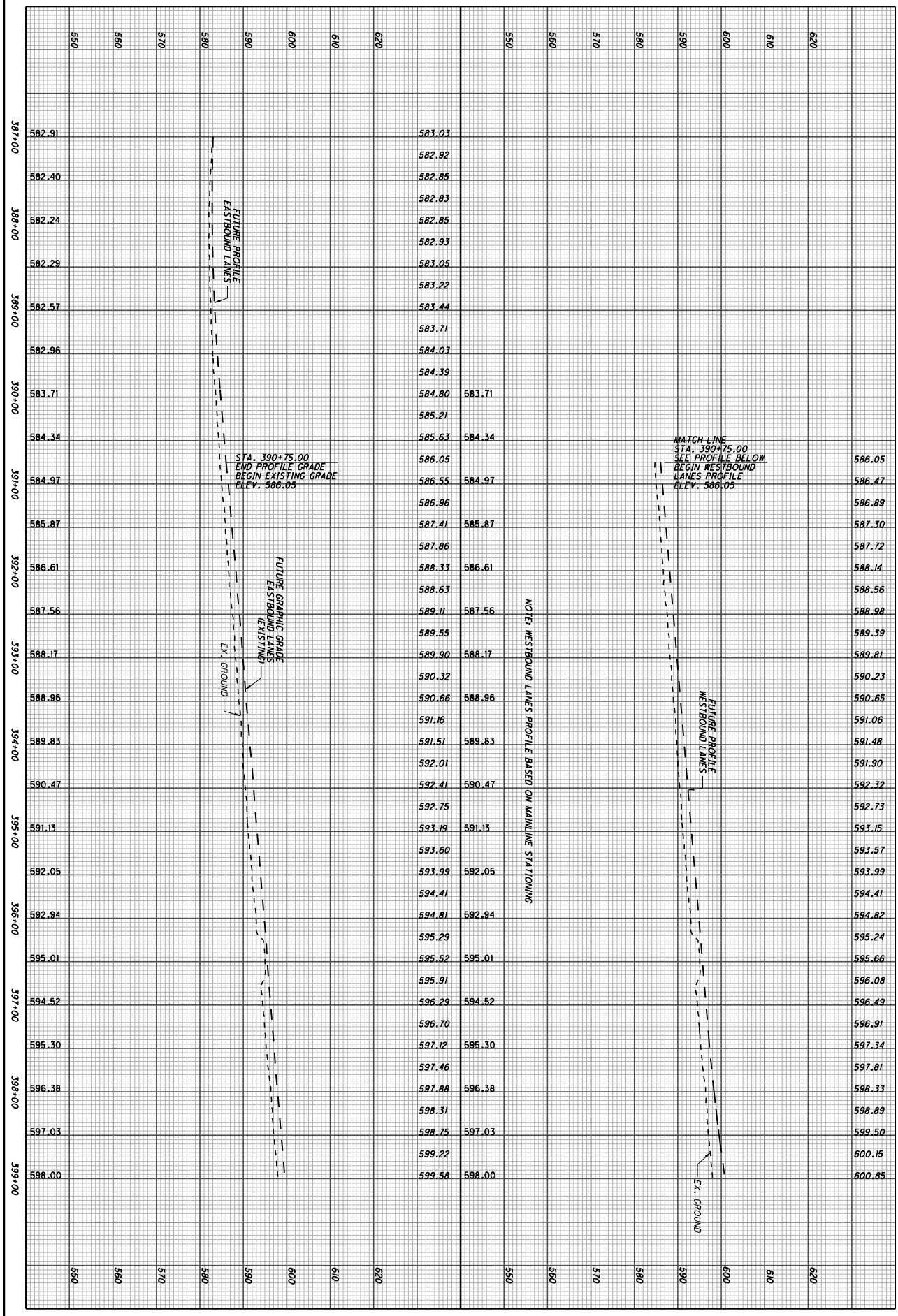


75 297	LAW-7-2.17	PROFILE - S.R. 7 STA. 387+00 TO STA. 399+00	CALCULATED ALB CHECKED TCM

CURVE DATA
S.R. 7
CURVE NO. 10

P.I. STA. 403+74.19
Δ = 1° 29' 03" (RT)
Dc = 0° 16' 56"
R = 20,306.35'
T = 263.02'
L = 526.00'
E = 1.70'
e_{max} = NC
PC STA. 401+11.17
PT STA. 406+37.18

CURVE DATA
S.R. 7
CURVE NO. 11

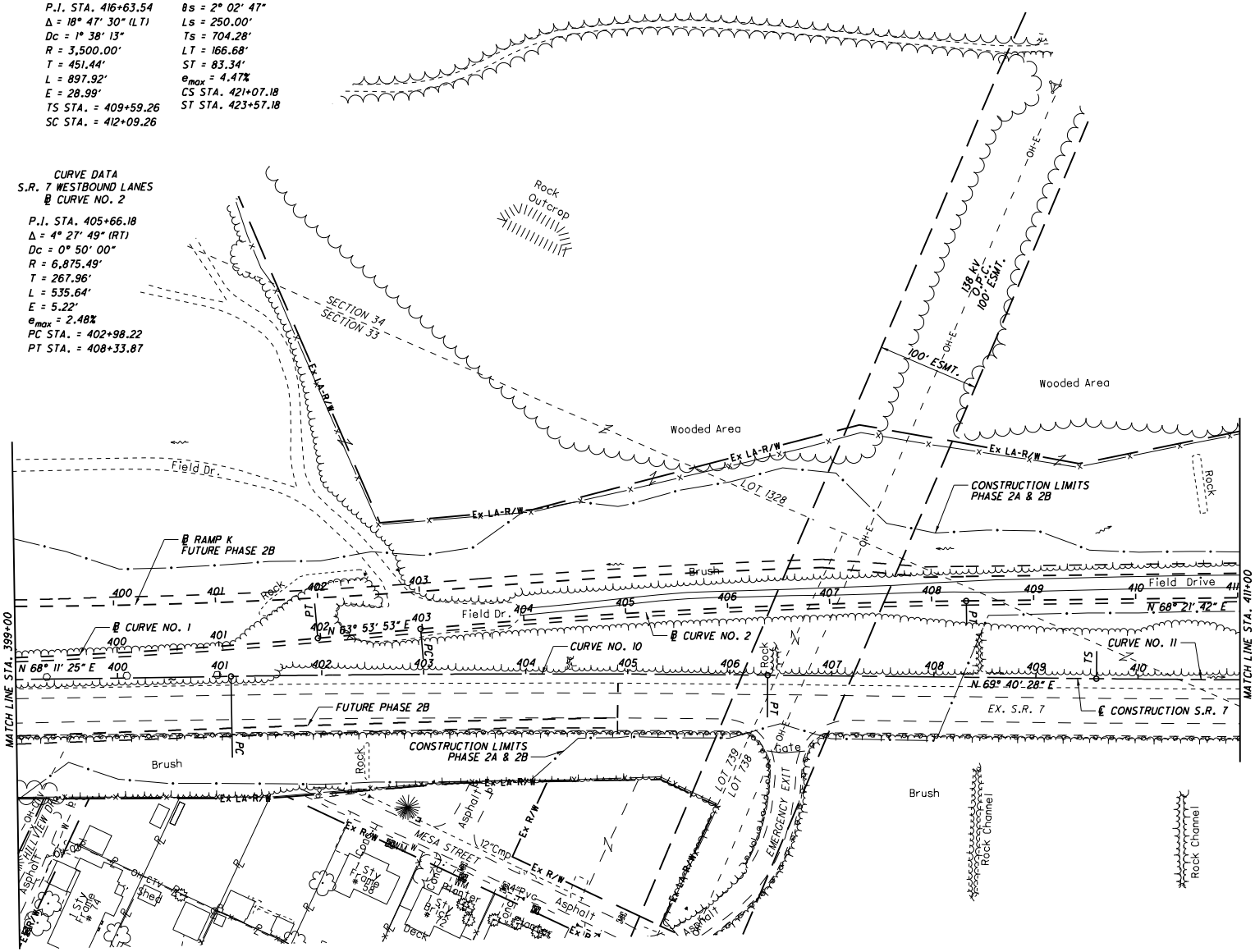
P.I. STA. 416+63.54
Δ = 18° 47' 30" (LT)
Dc = 1° 38' 13"
R = 3,500.00'
T = 451.44'
L = 897.92'
E = 28.99'
TS STA. = 409+59.26
SC STA. = 412+09.26
Bs = 2° 02' 47"
Ls = 250.00'
Ts = 704.28'
LT = 166.68'
ST = 83.34'
e_{max} = 4.47%
CS STA. 421+07.18
ST STA. 423+57.18

CURVE DATA
S.R. 7 WESTBOUND LANES
℄ CURVE NO. 1

P.I. STA. 399+82.71
Δ = 4° 17' 32" (LT)
Dc = 1° 00' 00"
R = 5,729.58'
T = 214.71'
L = 429.22'
E = 4.02'
e_{max} = 2.90%
PC STA. = 397+68.00
PT STA. = 401+97.22

CURVE DATA
S.R. 7 WESTBOUND LANES
℄ CURVE NO. 2

P.I. STA. 405+66.18
Δ = 4° 27' 49" (RT)
Dc = 0° 50' 00"
R = 6,875.49'
T = 267.96'
L = 535.64'
E = 5.22'
e_{max} = 2.48%
PC STA. = 402+98.22
PT STA. = 408+33.87



PLAN - S.R. 7
STA. 399+00 TO STA. 411+00

LAW-7-2.17

CALCULATED SLP
CHECKED ALB

HORIZONTAL SCALE IN FEET
0 25 50 100

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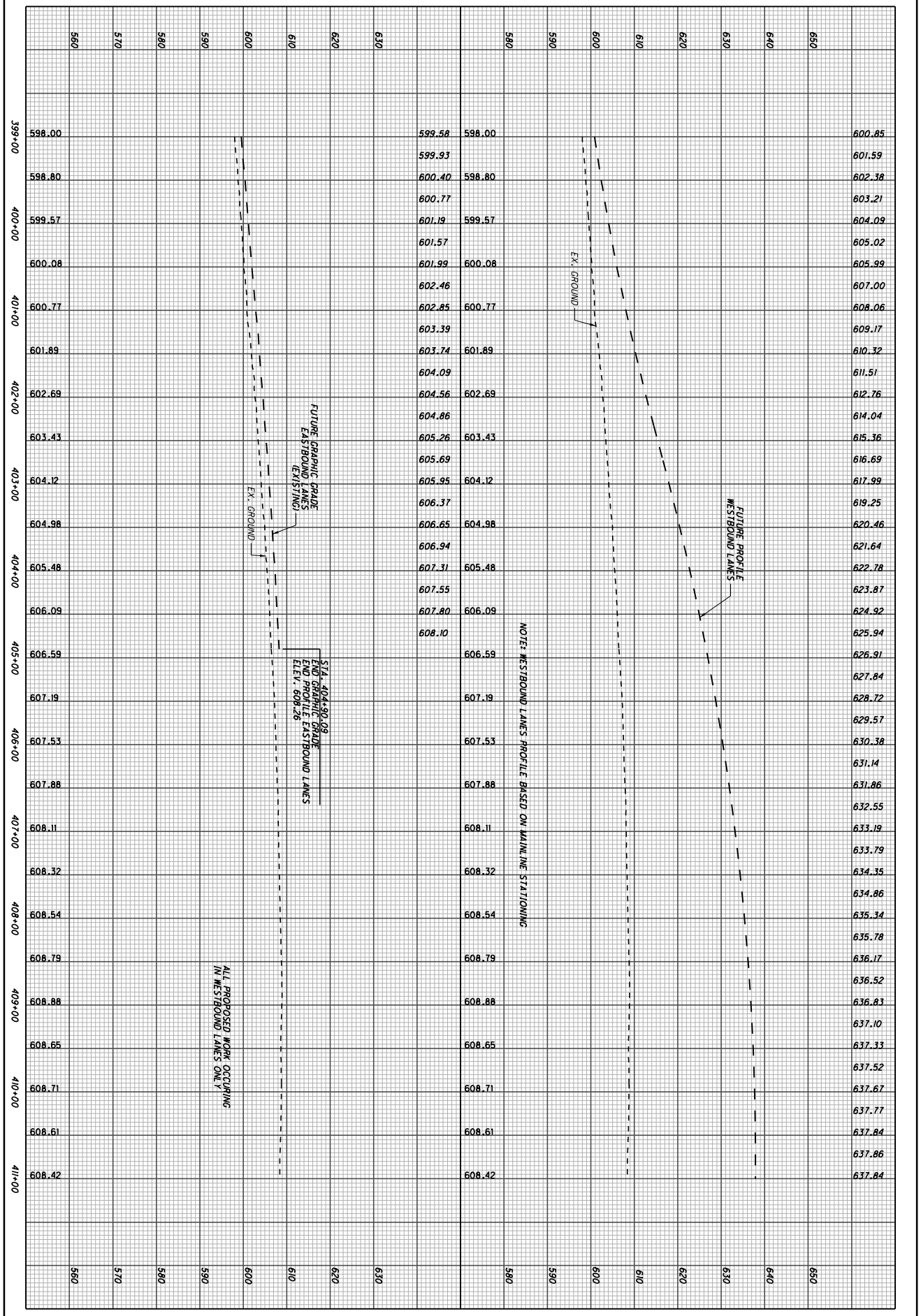


77 / 297	LAW-7-2.17	PROFILE - S.R. 7 STA. 399+00 TO 411+00	CALCULATED ALB CHECKED TCM

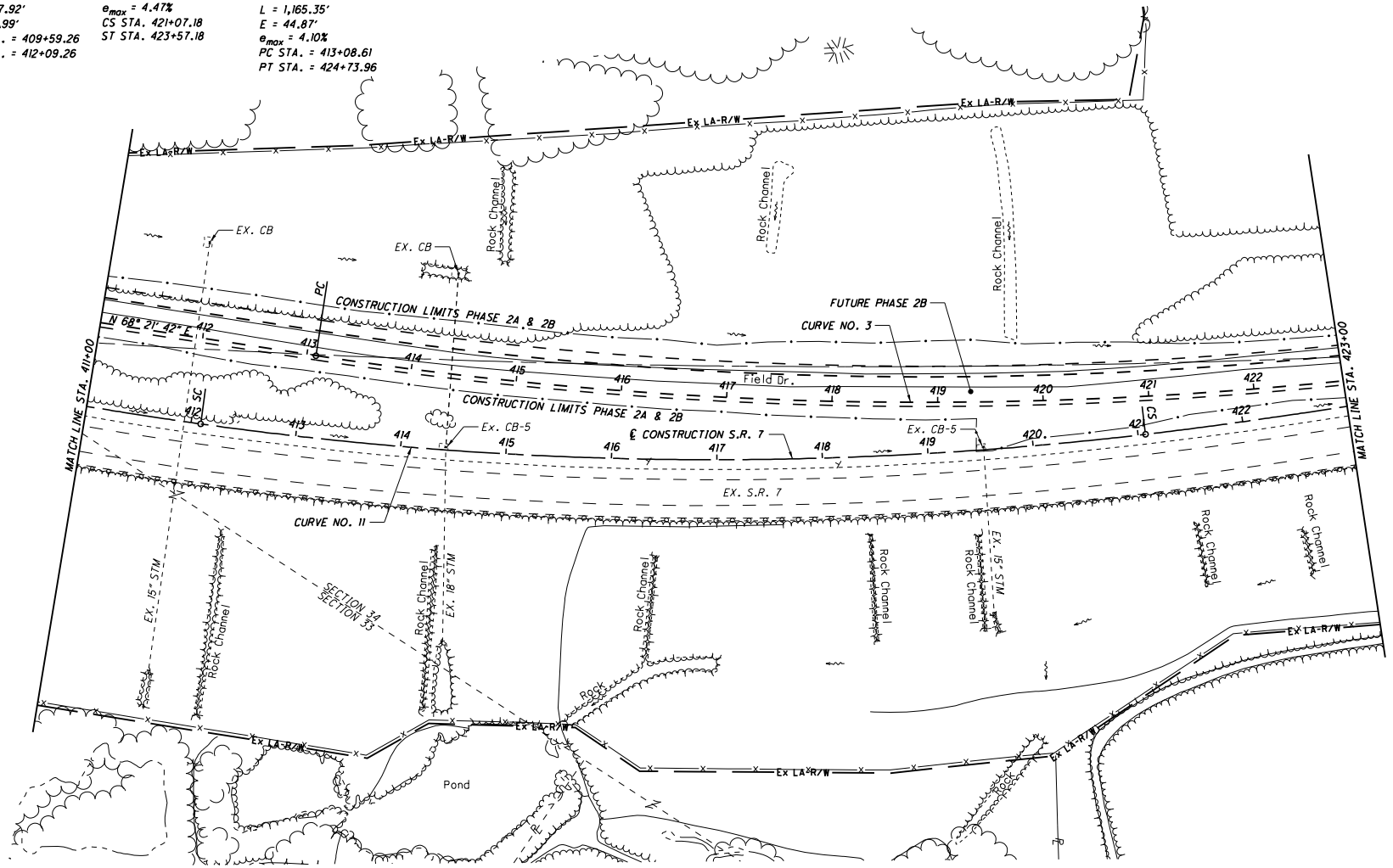
CURVE DATA
S.R. 7
CURVE NO. 11

P.I. STA. 416+63.54
Δ = 18° 47' 30" (LT)
Dc = 1° 38' 13"
R = 3,500.00'
T = 451.44'
L = 897.92'
E = 28.99'
TS STA. = 409+59.26
SC STA. = 412+09.26

θs = 2° 02' 47"
Ls = 250.00'
Ts = 704.28'
LT = 166.68'
ST = 83.34'
e_{max} = 4.47%
CS STA. 421+07.18
ST STA. 423+57.18

CURVE DATA
S.R. 7 WESTBOUND LANES
℄ CURVE NO. 3

P.I. STA. 418+95.85
Δ = 17° 28' 44" (LT)
Dc = 1° 30' 00"
R = 3,820.00'
T = 587.24'
L = 1,165.35'
E = 44.87'
e_{max} = 4.10%
PC STA. = 413+08.61
PT STA. = 424+73.96



CALCULATED SLP
CHECKED ALB

HORIZONTAL SCALE IN FEET
0 25 50 100

PLAN - S.R. 7
STA. 411+00 TO STA. 423+00

LAW-7-2.17

78
297

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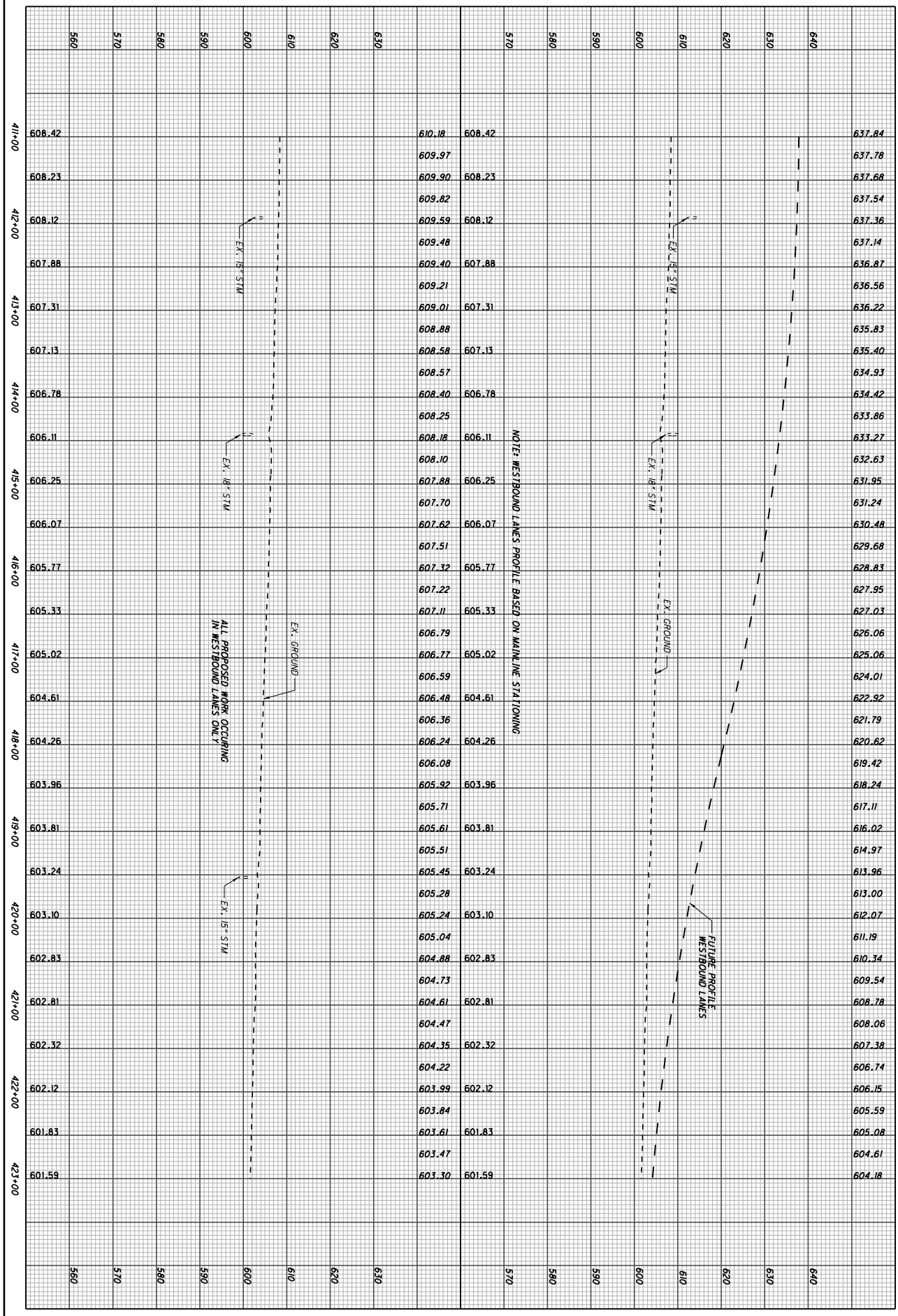


79 / 297	LAW-7-2.17	PROFILE - S.R. 7 STA. 411+00 TO STA. 423+00	CALCULATED ALB CHECKED TCM

CURVE DATA
S.R. 7
CURVE NO. 11

P.I. STA. 416+63.54
Δ = 18° 47' 30" (LT)
Dc = 1° 38' 13"
R = 3,500.00'
T = 451.44'
L = 897.92'
E = 28.99'
TS STA. = 409+59.26
SC STA. = 412+09.26

θs = 2° 02' 47"
Ls = 250.00'
Ts = 704.28'
LT = 166.68'
ST = 83.34'
e_{max} = 4.47%
CS STA. 421+07.18
ST STA. 423+57.18

CURVE DATA
S.R. 7
CURVE NO. 12

P.I. STA. 428+11.24
Δ = 3° 17' 53" (RT)
Dc = 1° 19' 10"
R = 4,342.09'
T = 125.00'
L = 249.93'
E = 1.80'
e_{max} = 3.77%
PC STA. = 426+86.24
PT STA. = 429+36.17

CURVE DATA
S.R. 7
@ WESTBOUND LANES
CURVE NO. 3

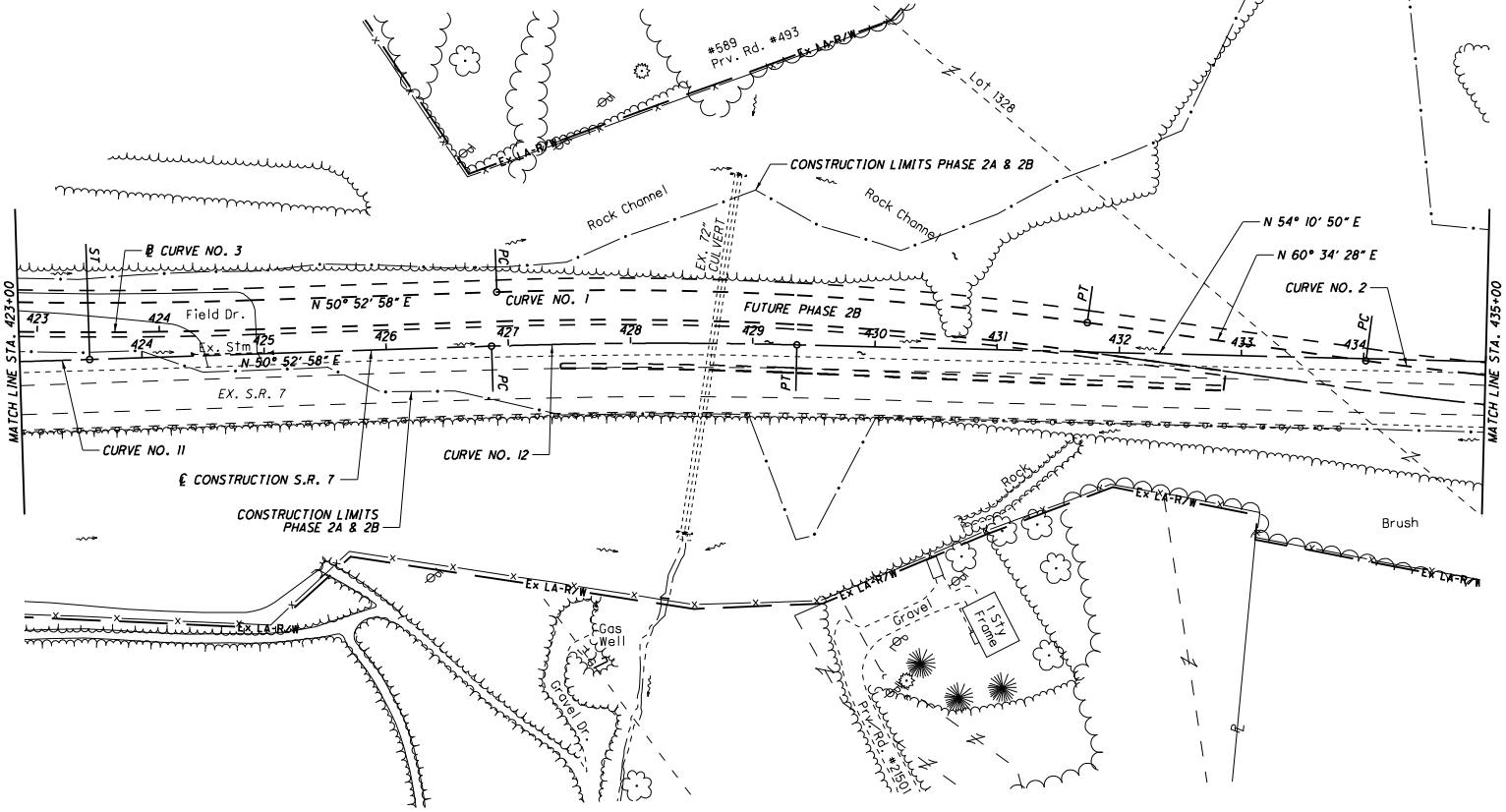
P.I. STA. 418+95.85
Δ = 17° 28' 44" (LT)
Dc = 1° 30' 00"
R = 3,820.00'
T = 587.24'
L = 1,165.35'
E = 44.87'
e_{max} = 4.10%
PC STA. 413+08.61
PT STA. 424+73.96

CURVE DATA
S.R. 7 LANE TRANSITION
TRANSITION CURVE NO. 1
(FOR HORIZONTAL LAYOUT ONLY)

P.I. STA. 429+32.01, S.R. 7, 51.04' LT.
Δ = 9° 41' 31" (RT)
Dc = 2° 00' 00"
R = 2,864.79'
T = 242.88'
L = 484.59'
E = 10.28'
e_{max} = 5.10%
PC STA. 426+91.84, S.R. 7, 44' LT.
PT STA. 431+73.33, S.R. 7, 23.99' LT.

CURVE DATA
S.R. 7 LANE TRANSITION
TRANSITION CURVE NO. 2
(FOR HORIZONTAL LAYOUT ONLY)

P.I. STA. 435+58.87, S.R. 7, 19.22' RT.
Δ = 6° 18' 42" (LT)
Dc = 2° 00' 00"
R = 2,864.79'
T = 157.95'
L = 315.59'
E = 4.35'
e_{max} = NC
PC STA. 434+01.90, S.R. 7, 1.63' RT.
PT STA. 437+16.83, S.R. 7, 19.44' RT.



HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED SLP
CHECKED ALB

PLAN - S.R. 7
STA. 423+00 TO STA. 435+00

LAW-7-2.17

80
297

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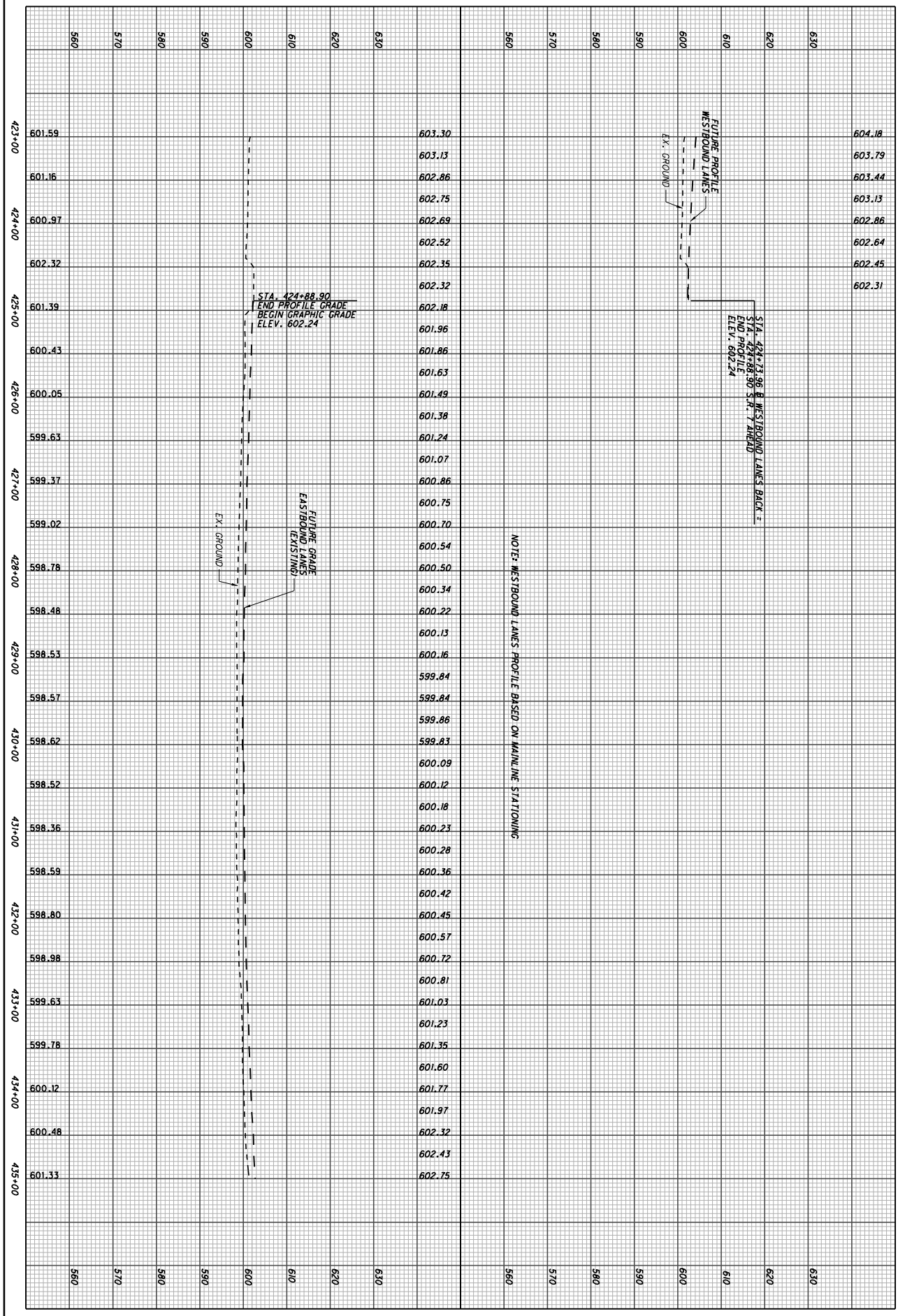
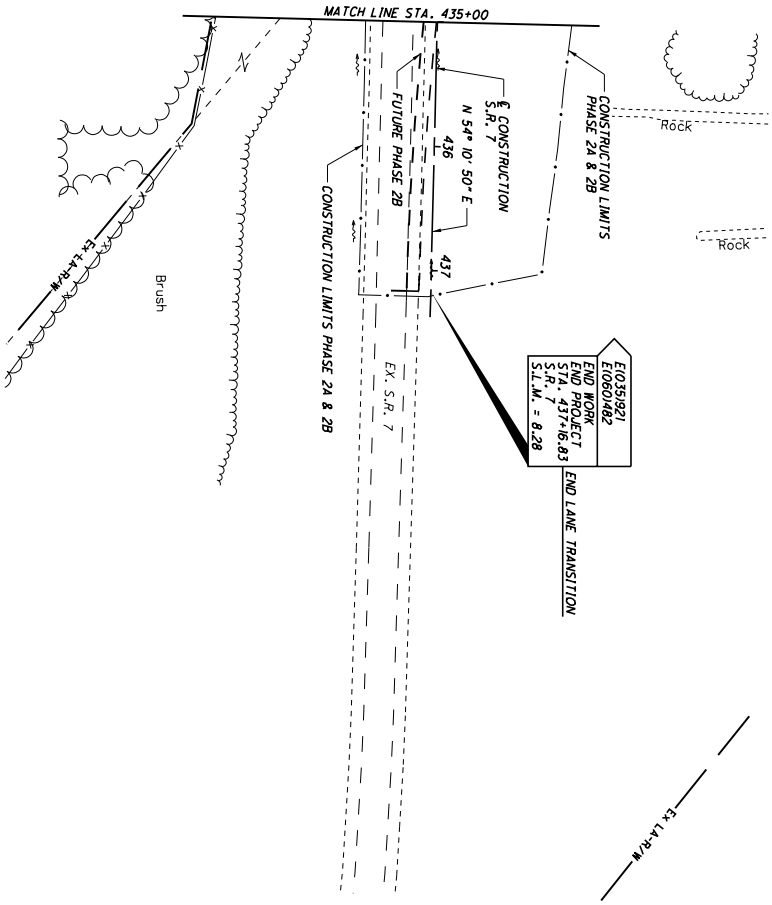
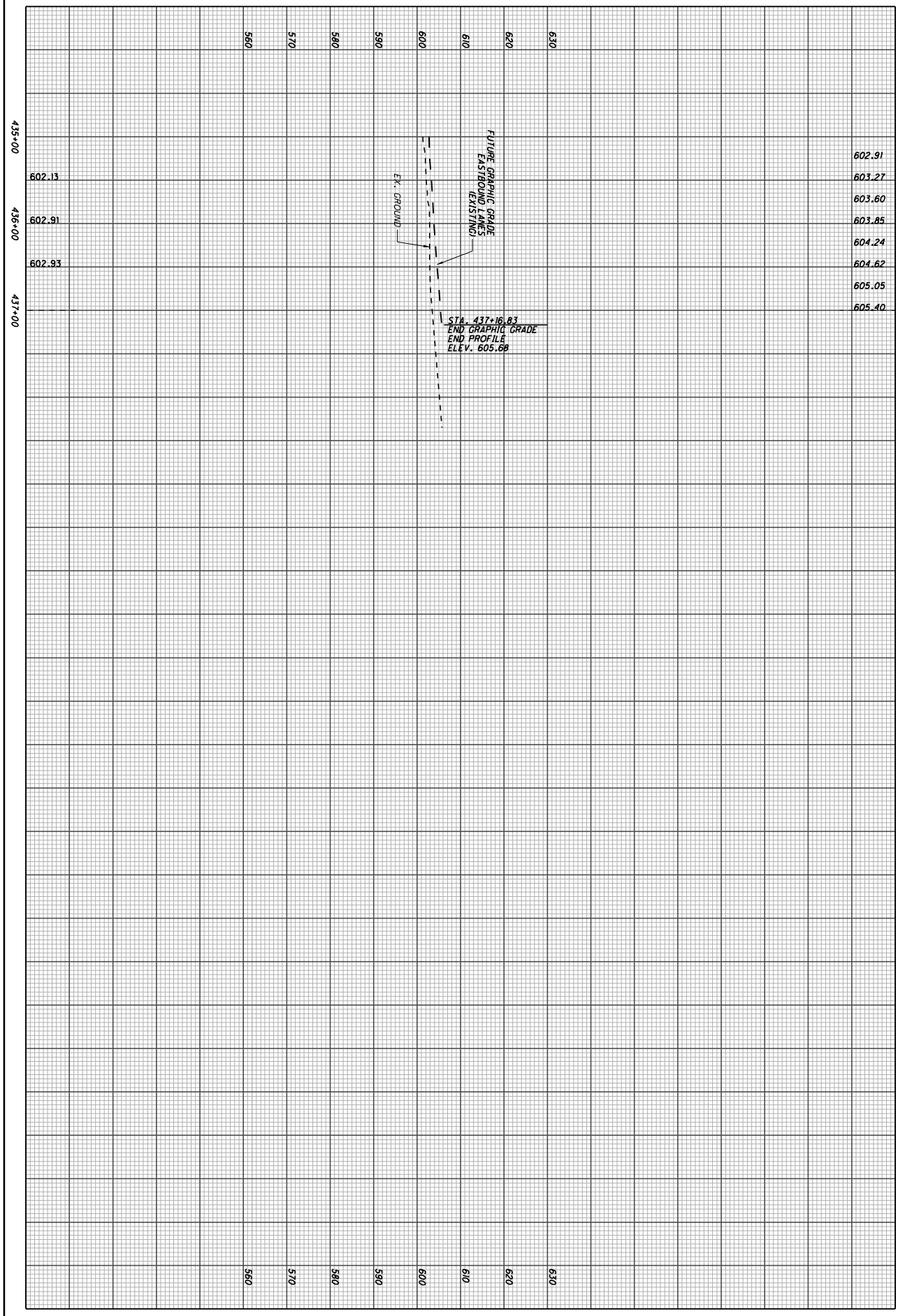


81 / 297	LAW-7-2.17	PROFILE - S.R. 7 STA. 423+00 TO 435+00	CALCULATED ALB CHECKED TCM

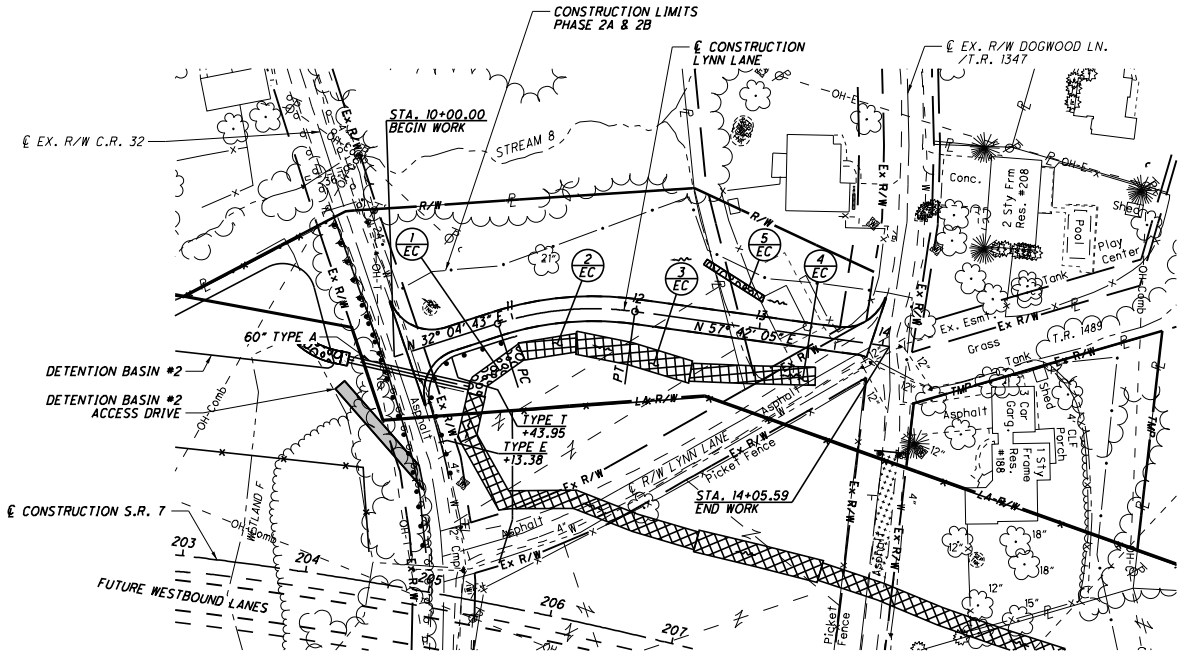


82 / 297	LAW-7-2.17	PLAN - S.R. 7 STA. 435+00 TO STA. 437+16.83	CALCULATED SLP CHECKED ALB	0 50 25 100 HORIZONTAL SCALE IN FEET



83 / 297	LAW-7-2.17	PROFILE - S.R. 7 STA. 435+00 TO 437+16.83	CALCULATED ALB CHECKED TCM

CURVE DATA
LYNN LANE
P.I. STA. 11+44.17
Δ = 25° 37' 23" (RT)
Dc = 22° 55' 06"
R = 250.00'
T = 56.85'
L = 111.80'
E = 6.38'
e_{max} (N.D.C.) = 8.00%
e_{max} = NC
PC STA. 10+87.32
PT STA. 11+99.12



1 EC ROCK CHANNEL PROTECTION
TYPE C WITH FILTER
(69) SF x 1.5' / 27 = 38.39 CY)

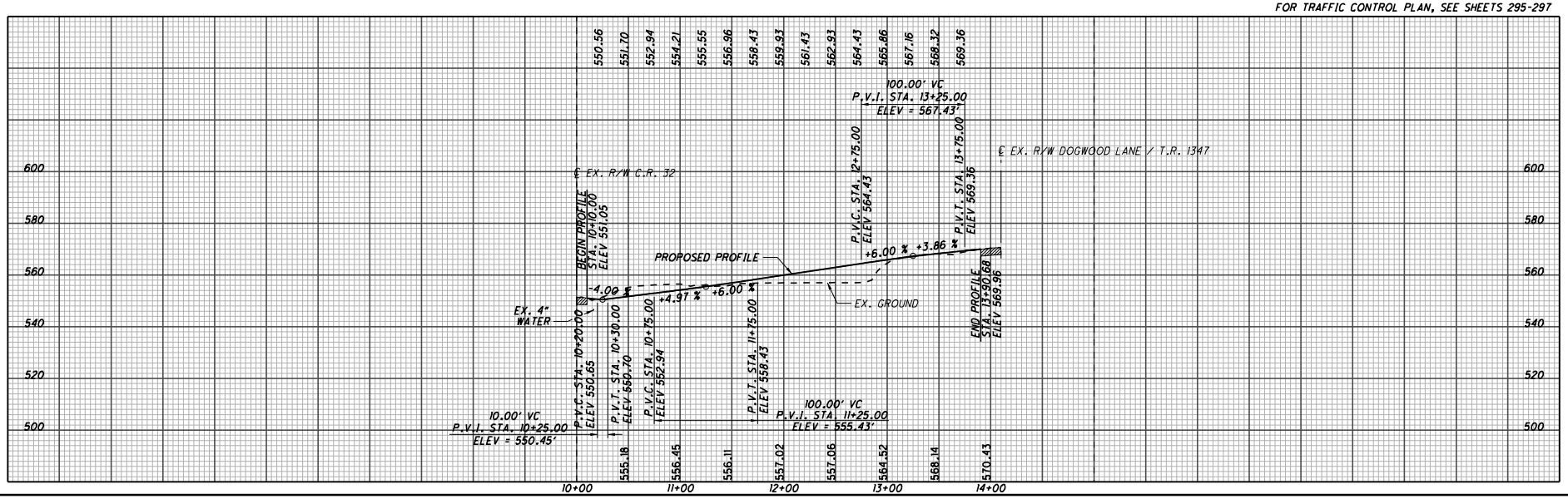
2 EC SEEDING AND EROSION CONTROL
WITH TURF REINFORCING MAT, TYPE 1
(45' x 14.5' / 9 = 72.50 SY)

3 EC DITCH EROSION PROTECTION
MAT, TYPE B
(95' x 18' / 9 = 190 SY)

4 EC SEEDING AND EROSION CONTROL
WITH TURF REINFORCING MAT, TYPE 2
(101' x 14.5' / 9 = 162.72 SY)

5 EC ROCK CHANNEL PROTECTION,
TYPE C WITH FILTER
(55' x 5' x 1.5' / 27 = 15.28 CY)

FOR S.R. 7 PLAN & PROFILE, SEE SHEETS 37-40
FOR INTERSECTION DETAILS, SEE SHEET 268
FOR CULVERT DETAILS, SEE SHEET 279
FOR DETENTION BASIN DETAILS, SEE SHEETS 293-294
FOR TRAFFIC CONTROL PLAN, SEE SHEETS 295-297



CALCULATED SLP
CHECKED ALB

HORIZONTAL SCALE IN FEET
0 25 50 100

PLAN AND PROFILE
LYNN LANE

LAW-7-2.17

249
297

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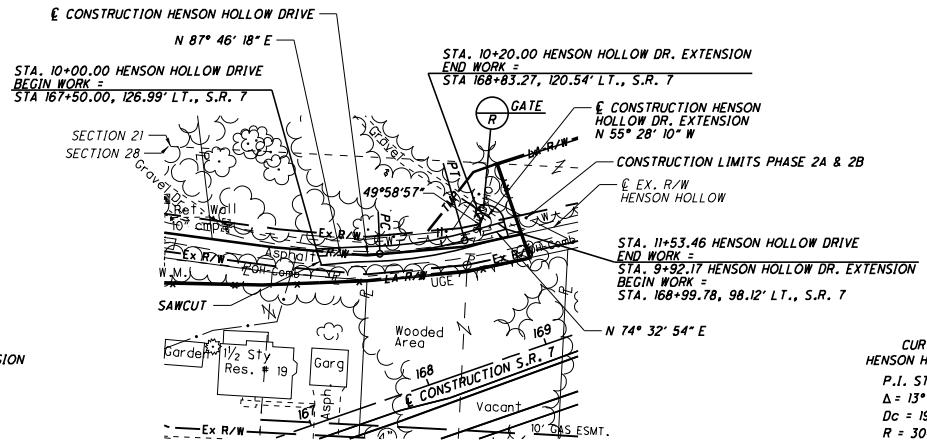
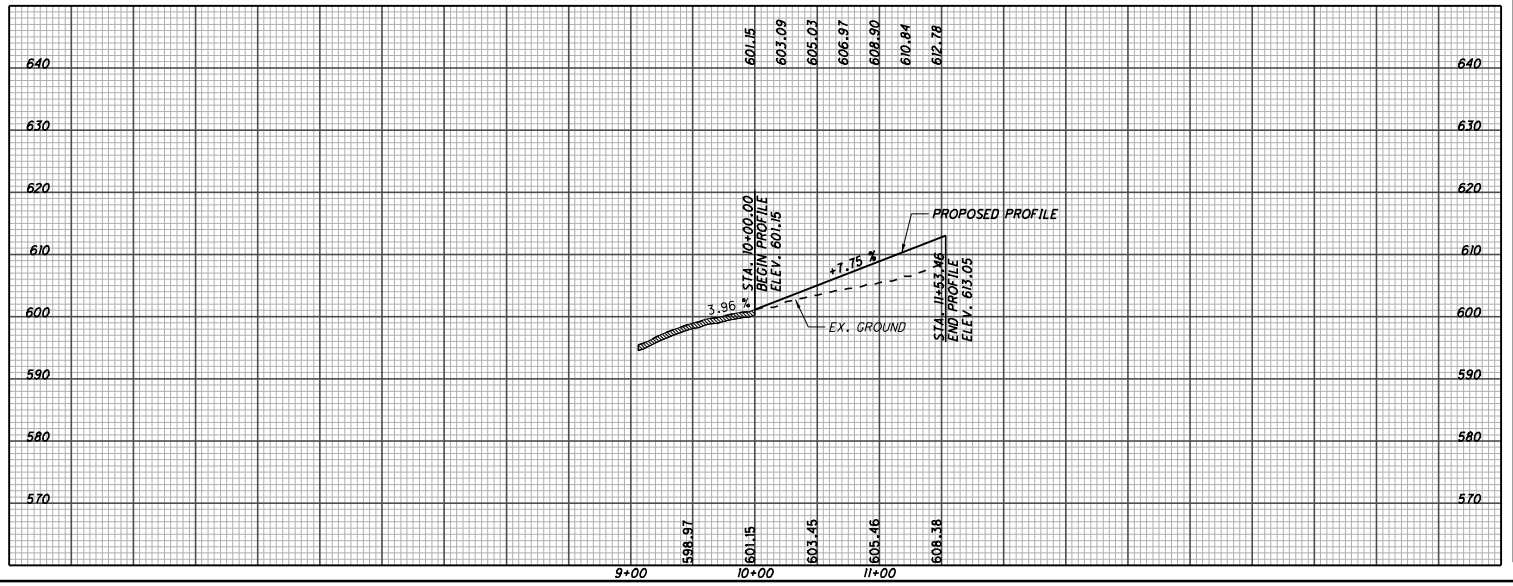


HENSON HOLLOW DRIVE EXTENSION
LEFT E/P RETURN DATA
- Δ = 130° 42' 18"
- R = 8.00'
- T = 17.44'
- L = 18.25'
- R.P. STA. 11+27.27, 14' LT., HENSON HOLLOW DR.
- P.C. STA. 11+27.27, 6' LT., HENSON HOLLOW DR.
- P.T. STA. 10+19.68, 2.89' LT., HENSON HOLLOW DR. EXTENSION

HENSON HOLLOW DRIVE EXTENSION
RIGHT E/P RETURN DATA
- Δ = 102° 28' 43"
- R = 15.00'
- T = 18.68'
- L = 26.83'
- R.P. STA. 11+38.66, 8.47' LT., HENSON HOLLOW DR.
- P.C. STA. 11+53.46, 6' LT., HENSON HOLLOW DR.
- P.T. STA. 10+20.00, 3.32' RT., HENSON HOLLOW DR. EXTENSION

CURVE DATA
HENSON HOLLOW DRIVE
- P.I. STA. 10+84.31
- Δ = 13° 13' 25" (LT)
- Dc = 19° 05' 55"
- R = 300.00'
- T = 34.77'
- L = 69.24'
- E = 2.01'
- PC STA. 10+49.54
- PT STA. 11+18.78

HENSON HOLLOW DRIVE - 3
HENSON HOLLOW DRIVE EXTENSION - 4



REF NO.	STATION FROM	STATION TO	SIDE

TOTALS CARRIED TO GENERAL SUMMARY

CALCULATED SLP
CHECKED ALB

HORIZONTAL SCALE IN FEET
0 25 50 100

PLAN AND PROFILE
HENSON HOLLOW DRIVE

LAW-7-2.17

271
297

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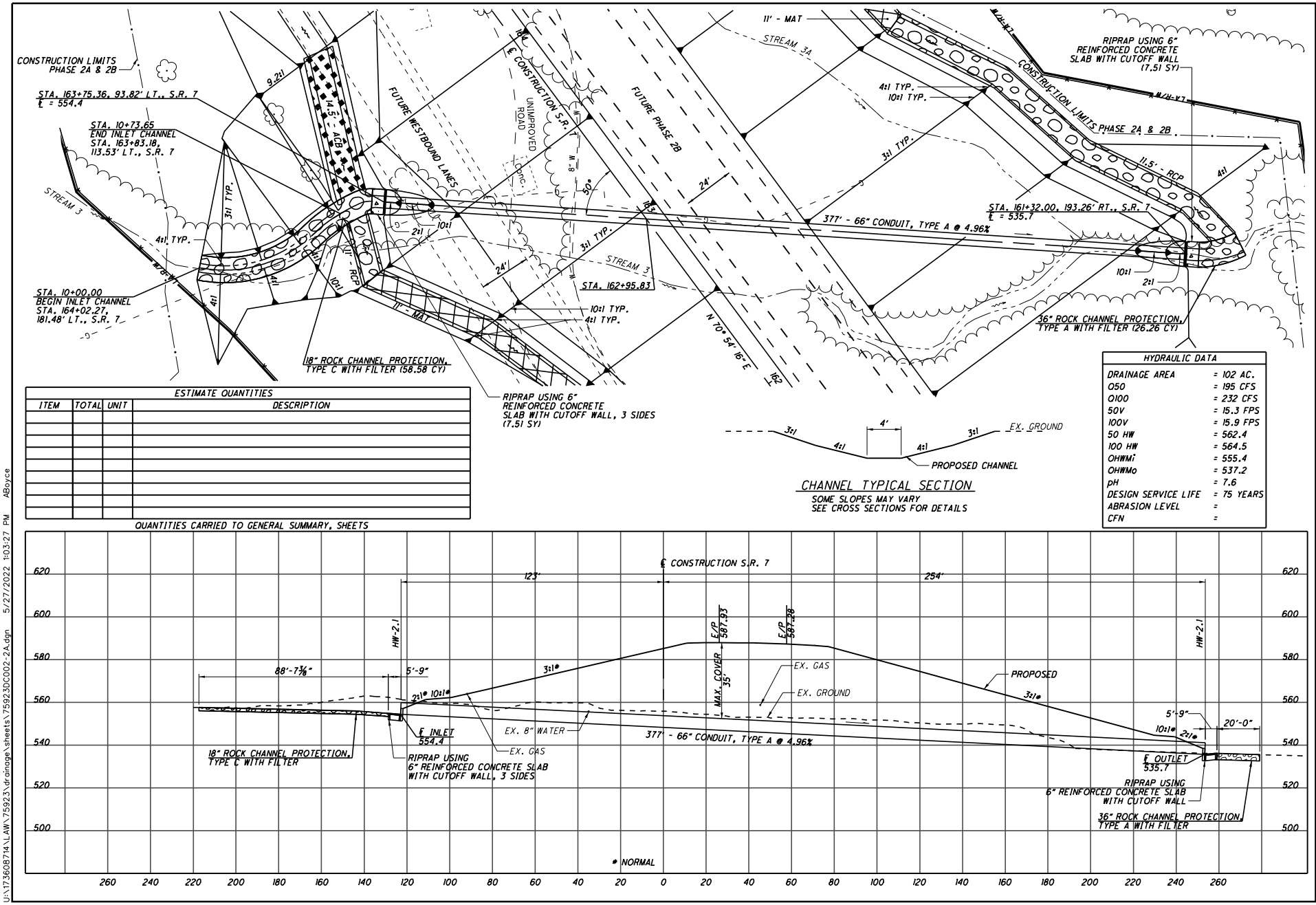

HYDRAULIC DATA	
DRAINAGE AREA	= 102 AC.
Q50	= 195 CFS
Q100	= 232 CFS
50V	= 15.3 FPS
100V	= 15.9 FPS
50 HW	= 562.4
100 HW	= 564.5
OHWMi	= 555.4
OHWMo	= 537.2
pH	= 7.6
DESIGN SERVICE LIFE	= 75 YEARS
ABRASION LEVEL	=
CFN	=

ESTIMATE QUANTITIES			
ITEM	TOTAL	UNIT	DESCRIPTION

QUANTITIES CARRIED TO GENERAL SUMMARY, SHEETS

CULVERT DETAIL
S.R. 7 STA. 162+95.83

LAW-7-2.17

CALCULATED SLP
CHECKED ALB

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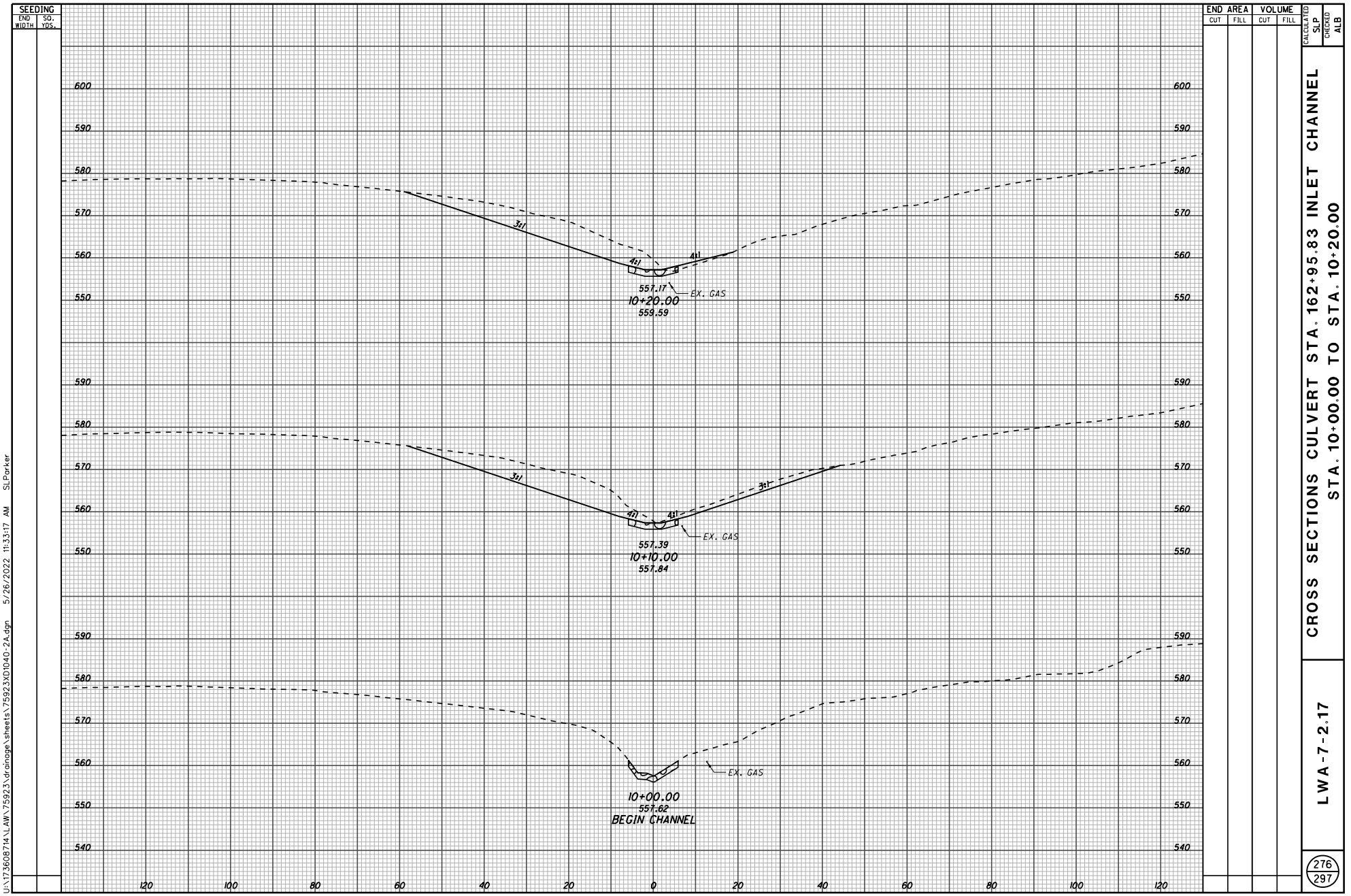
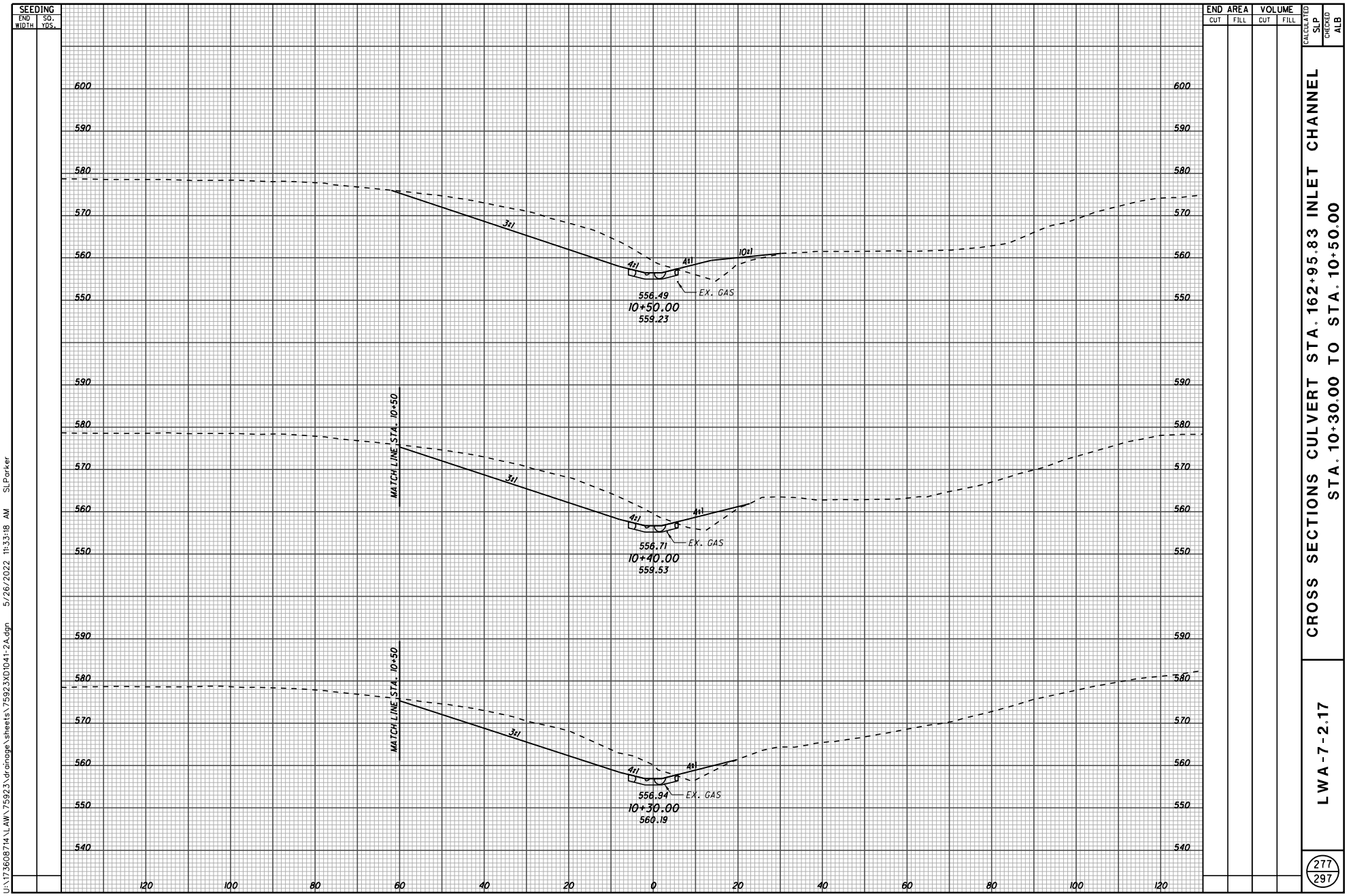


CROSS SECTIONS CULVERT STA. 162+95.83 INLET CHANNEL
STA. 10+00.00 TO STA. 10+20.00

LWA-7-2.17

276
297

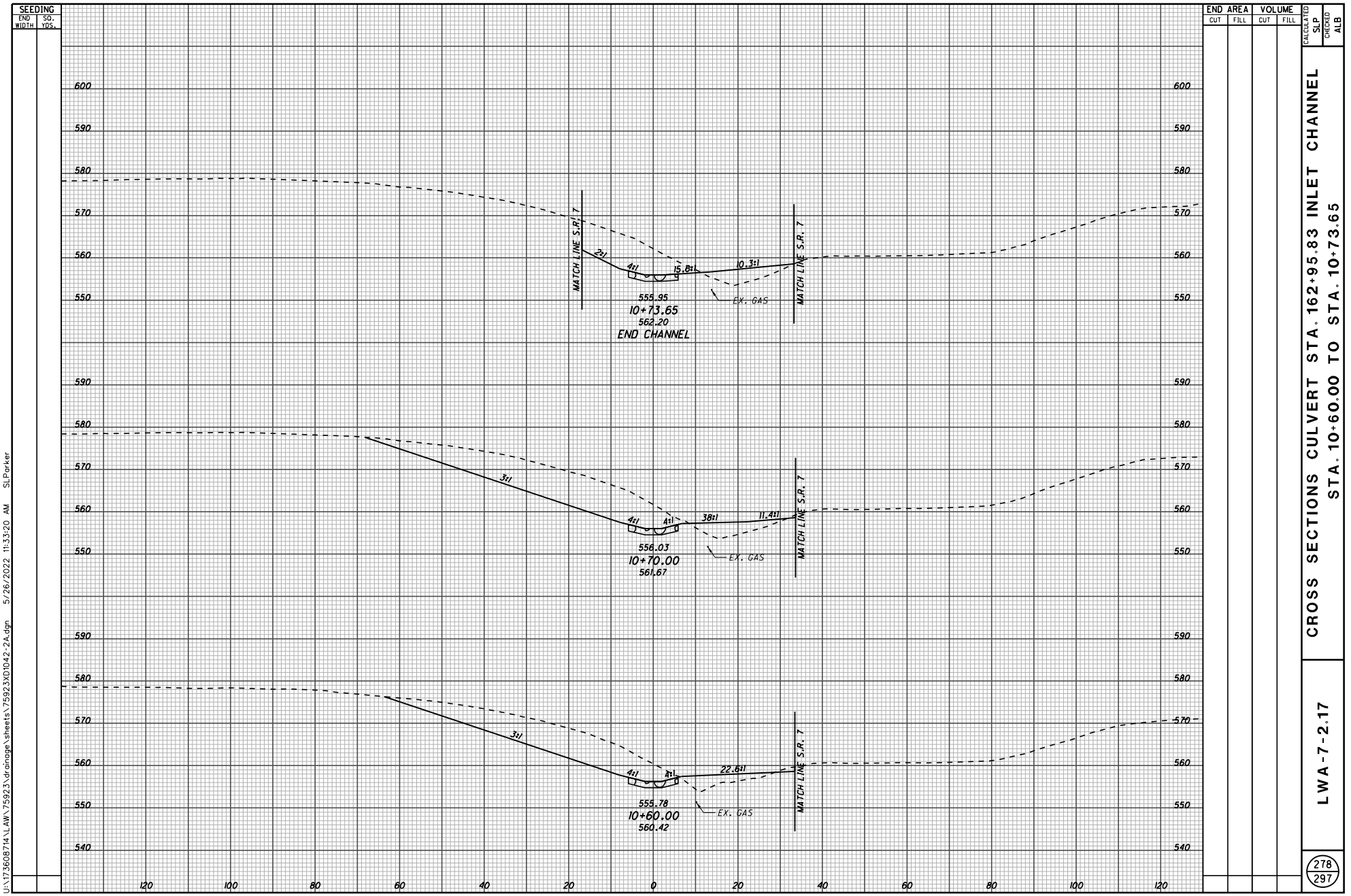
U:\1736087\4\LAW\75923\drainage\sheets\75923XD1040-2A.dgn 5/26/2022 11:33:17 AM SLPorter



CROSS SECTIONS CULVERT STA. 162+95.83 INLET CHANNEL STA. 10+30.00 TO STA. 10+50.00

LWA-7-2.17

U:\173608714\LAW\75923\drainage\sheets\75923XD1041-2A.dgn 5/26/2022 11:33:18 AM SLParker



CROSS SECTIONS CULVERT STA. 162+95.83 INLET CHANNEL STA. 10+60.00 TO STA. 10+73.65

LWA-7-2.17

278
297

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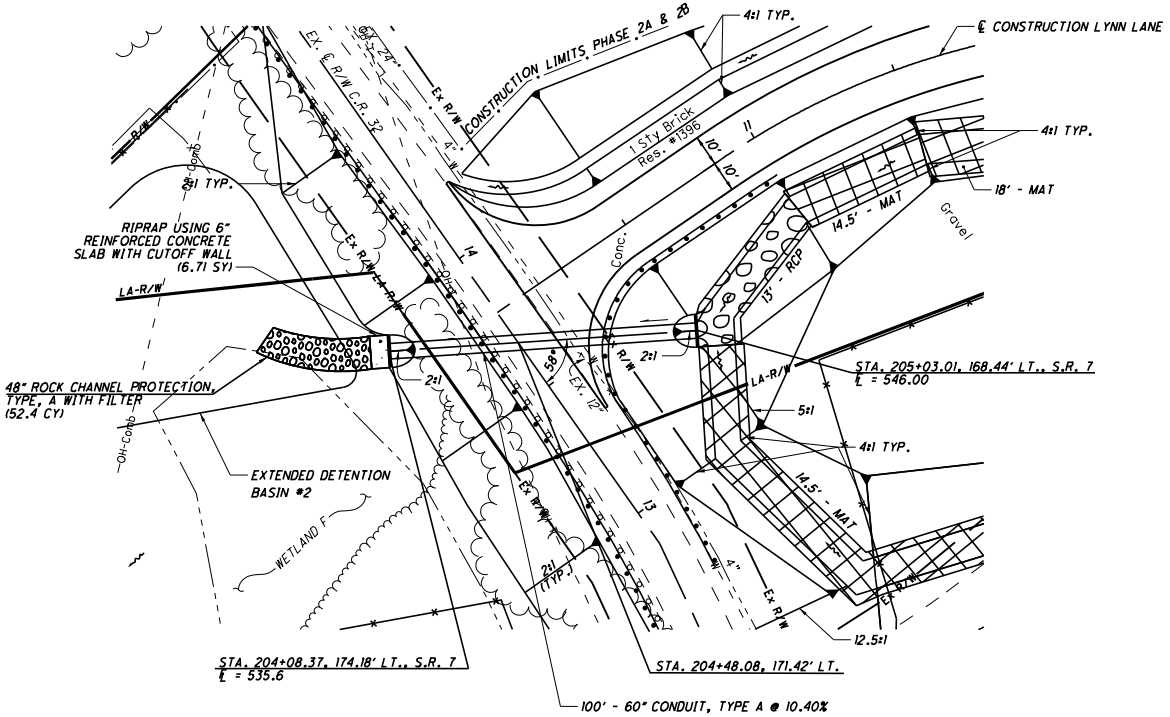
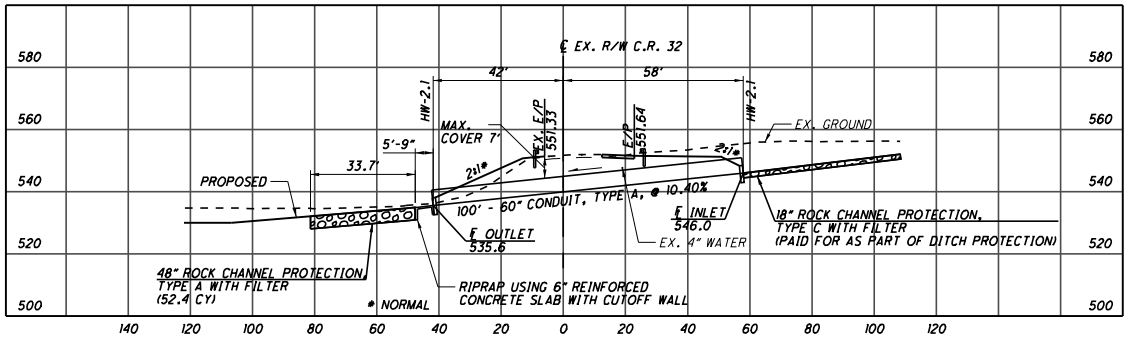




HYDRAULIC DATA	
DRAINAGE AREA	= 29 AC.
Q25	= 98 CFS
Q100	= 133 CFS
25V	= 16.9 FPS
100V	= 18.4 FPS
25 HW	= 550.3
100 HW	= 551.4
OHWMi	= 547.9
OHWMo	= 536.2
pH	= 7.6
DESIGN SERVICE LIFE	= 75 YEARS
ABRASION LEVEL	=
CFN	=

ESTIMATE QUANTITIES			
ITEM	TOTAL	UNIT	DESCRIPTION

QUANTITIES CARRIED TO GENERAL SUMMARY, SHEETS

N

HORIZONTAL SCALE IN FEET
0 10 20 40

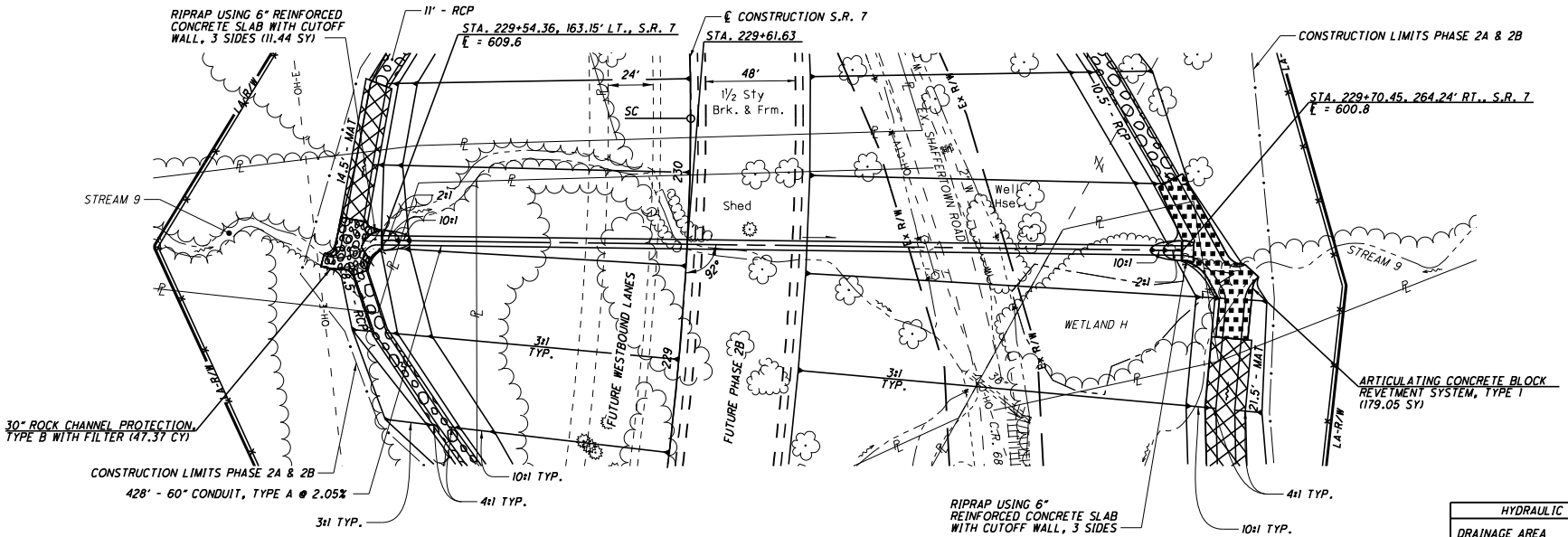
CALCULATED SLP
CHECKED ALB

CULVERT DETAIL
S.R. 7 STA. 204+48.08

LAW-7-2.17

279
297

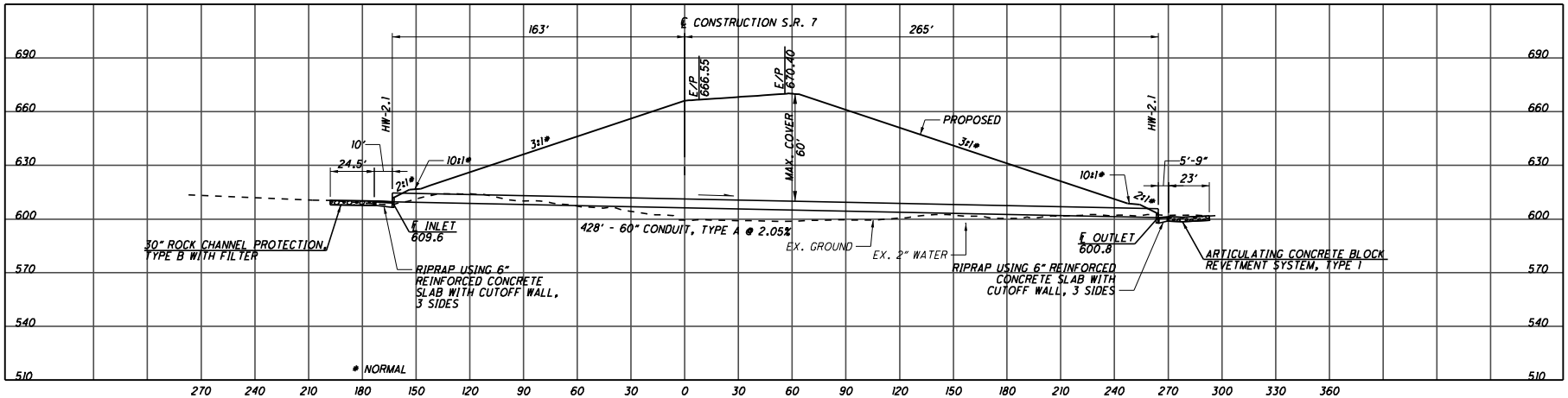
U:\1736087\4\LAW\75923\drainage\sheets\75923DC010-2A.dgn 6/1/2022 1:36:37 PM ABoyce



ESTIMATE QUANTITIES			
ITEM	TOTAL	UNIT	DESCRIPTION

QUANTITIES CARRIED TO GENERAL SUMMARY, SHEETS

HYDRAULIC DATA	
DRAINAGE AREA	= 80 AC.
Q50	= 147 CFS
Q100	= 175 CFS
50V	= 9.8 FPS
100V	= 11.7 FPS
50 HW	= 617.9
100 HW	= 623.4
OHWMi	= 610.5
OHWMo	= 601.1
pH	= 7.6
DESIGN SERVICE LIFE	= 75 YEARS
ABRASION LEVEL	=
CFN	=



HORIZONTAL SCALE IN FEET
0 15 30 60
CALCULATED SLP
CHECKED ALB

CULVERT DETAIL
S.R. 7 STA. 229+61.63

LAW-7-2.17

280
297

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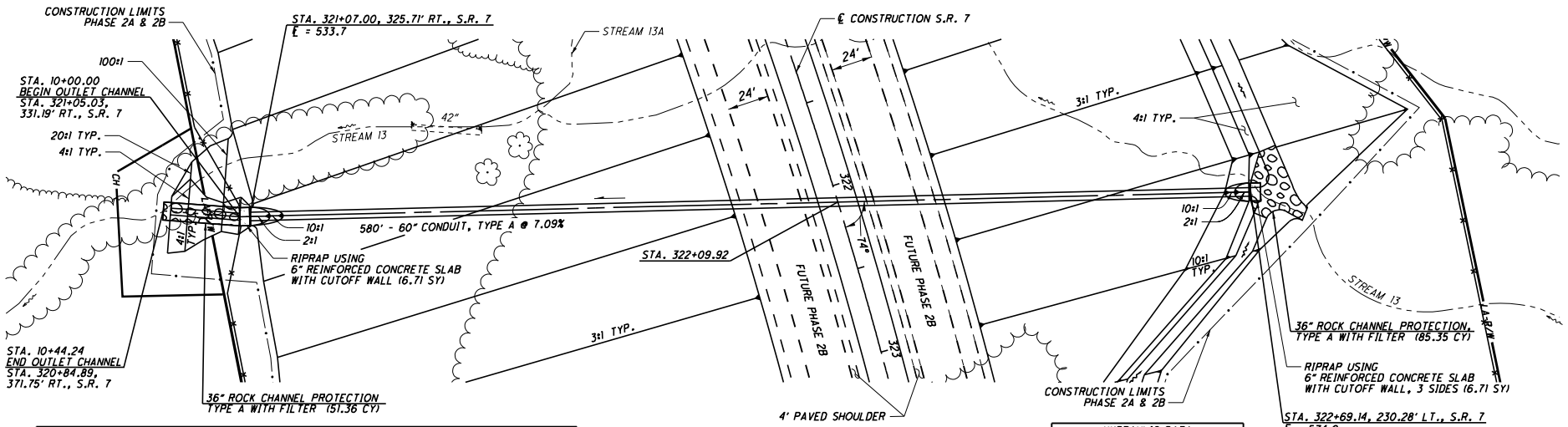
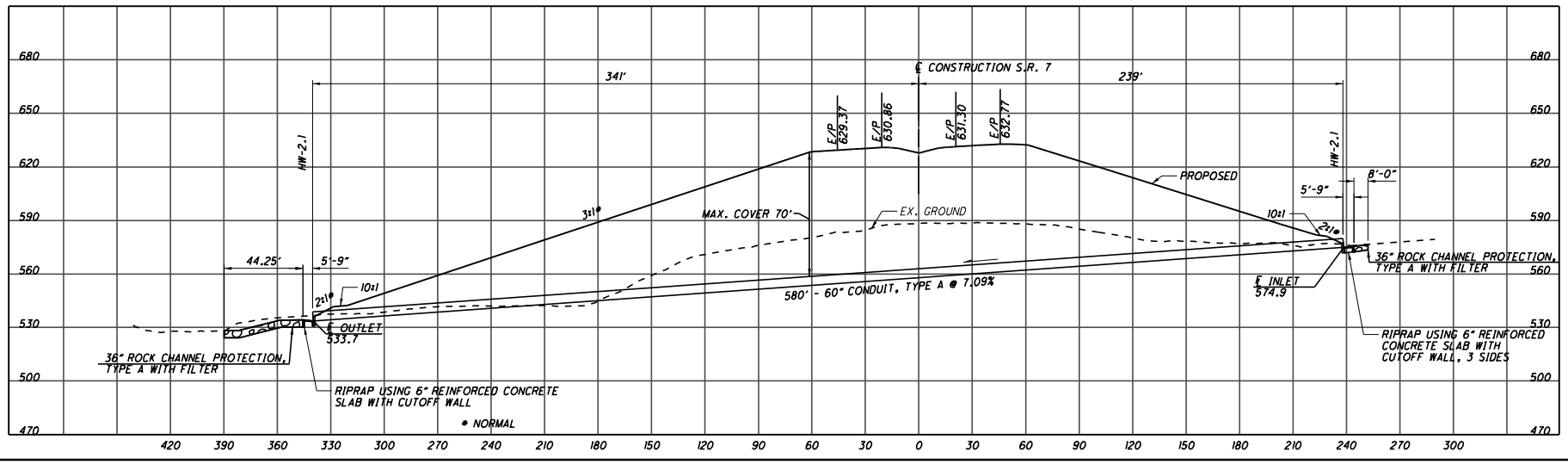


ESTIMATE QUANTITIES			
ITEM	TOTAL	UNIT	DESCRIPTION

QUANTITIES CARRIED TO GENERAL SUMMARY, SHEETS

HYDRAULIC DATA	
DRAINAGE AREA	= 81 AC.
Q50	= 166 CFS.
Q100	= 198 CFS
50V	= 16.8 FPS
100V	= 17.4 FPS
50 HW	= 583.1
100 HW	= 585.4
OHWMi	= 575.4
OHWMo	= 534.3
pH	= 7.6
DESIGN SERVICE LIFE	= 75 YEARS
ABRASION LEVEL	=
CFN	=



HORIZONTAL SCALE IN FEET 0 15 30 60

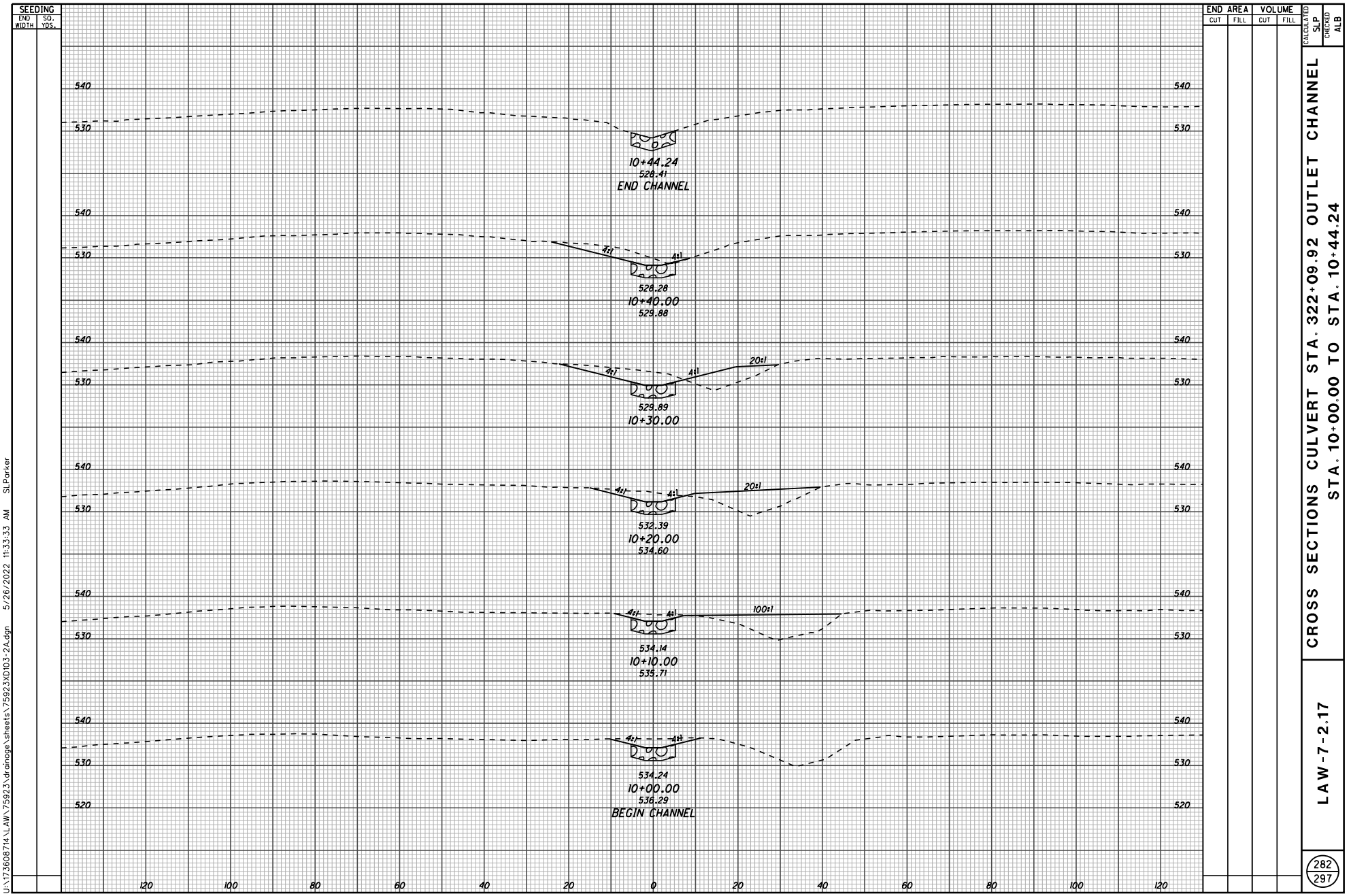
CALCULATED SLP CHECKED ALB

CULVERT DETAIL
S.R. 7 STA. 322+09.92

LAW-7-2.17

281
297

U:\1736087\4\LAW\75923\drainage\sheets\75923DC006-2A.dgn 5/27/2022 1:11:14 PM ABoyce

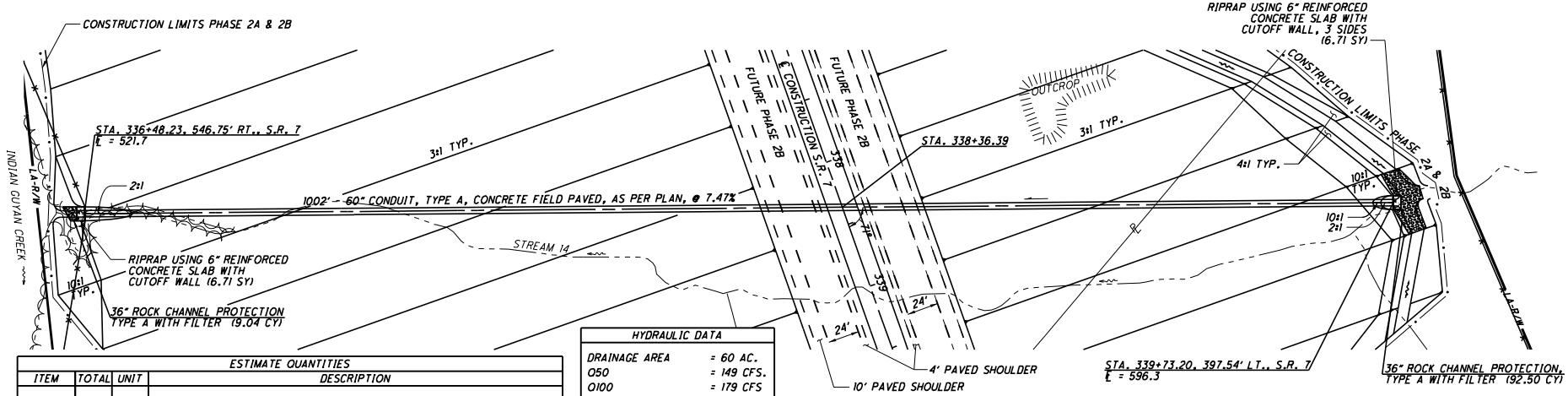


CROSS SECTIONS CULVERT STA. 322+09.92 OUTLET CHANNEL
STA. 10+00.00 TO STA. 10+44.24

LAW-7-2.17

282
297

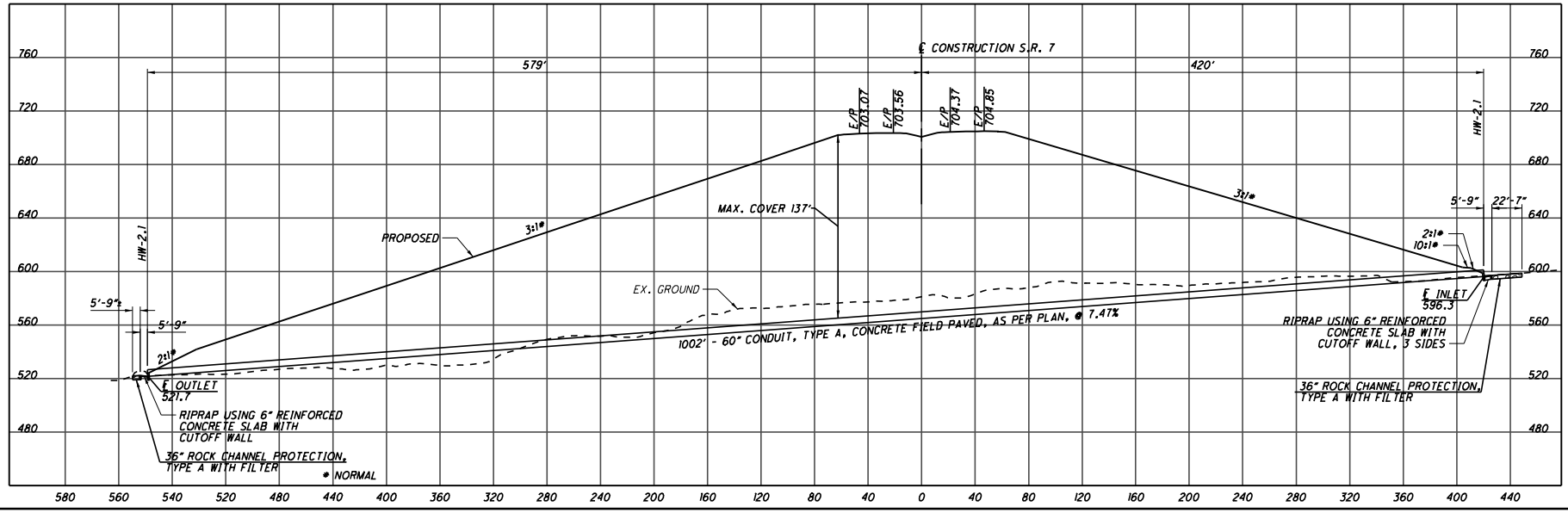
U:\1736087\4\LAW\75923\drainage\sheets\75923XD103-2A.dgn 5/26/2022 11:33:33 AM SLParker



ESTIMATE QUANTITIES			
ITEM	TOTAL	UNIT	DESCRIPTION

QUANTITIES CARRIED TO GENERAL SUMMARY, SHEETS

HYDRAULIC DATA	
DRAINAGE AREA	= 60 AC.
Q50	= 149 CFS.
Q100	= 179 CFS
50V	= 16.7 FPS
100V	= 17.4 FPS
50 HW	= 603.5
100 HW	= 605.5
OHWMi	= 597.3
OHWMo	= 522.8
pH	= 7.6
DESIGN SERVICE LIFE	= 75 YEARS
ABRASION LEVEL	=
CFN	=



HORIZONTAL SCALE IN FEET
0 20 40 80

CALCULATED ALB
CHECKED TCM

CULVERT DETAIL
S.R. 7 STA. 338+36.39

LAW-7-2.17

283
297

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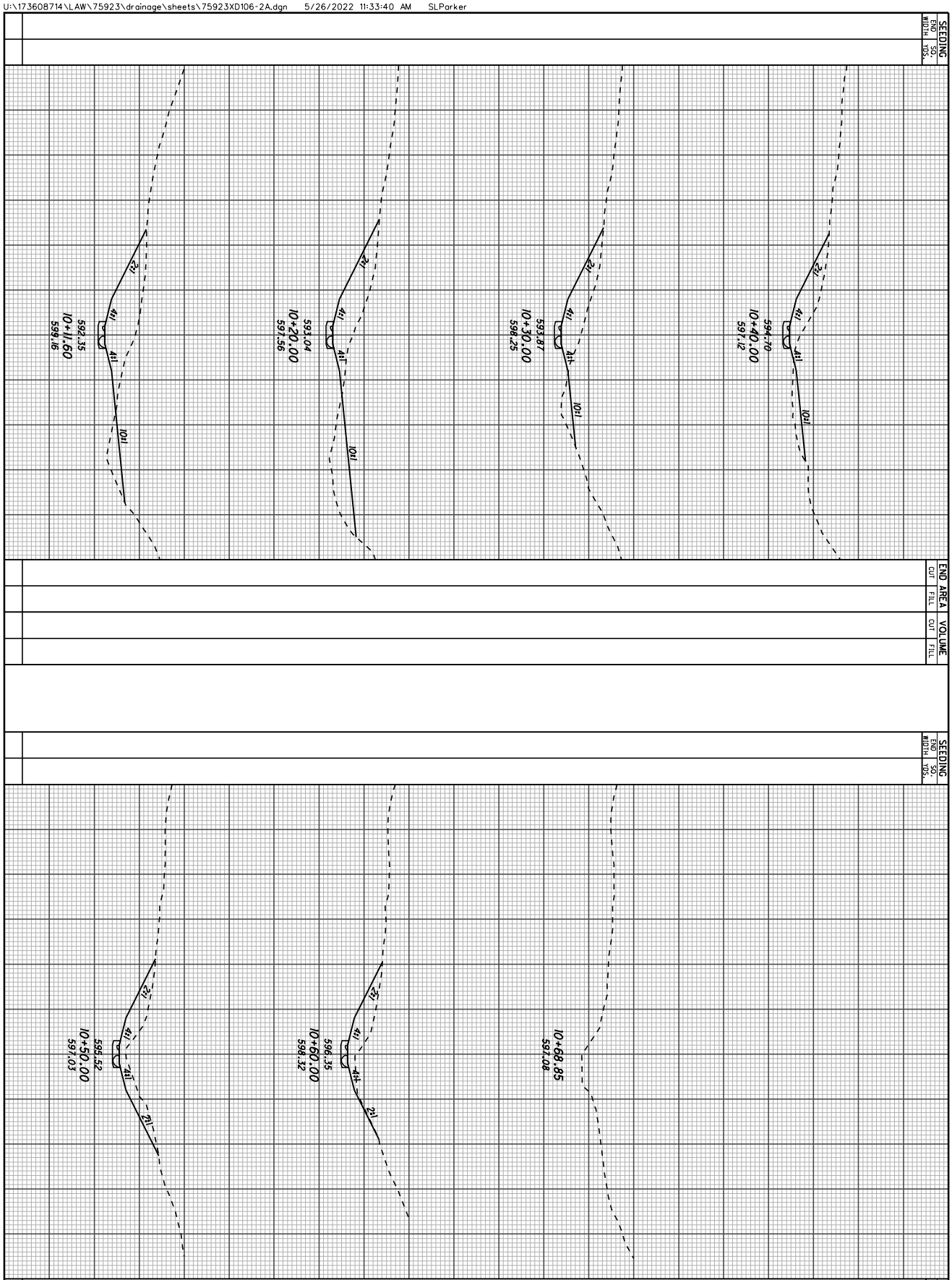


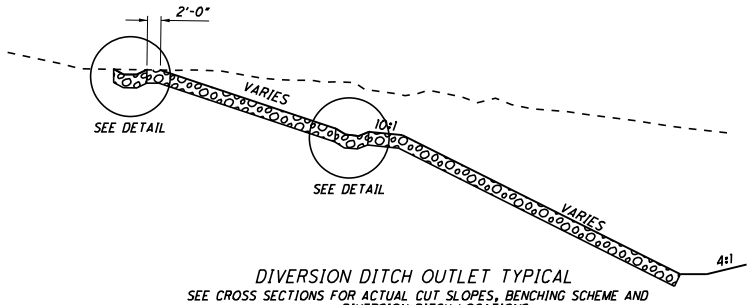
284/297	LAW-7-2.17	CROSS SECTIONS CULVERT STA. 338+36.39 INLET CHANEL STA. 10+11.60 TO STA. 10+68.85	CALCULATED ALB / CHECKED TCM

DIVERSION DITCH

THE CONTRACTOR IS TO PROVIDE A DIVERSION DITCH AS DETAILED ON THIS SHEET AND AS SHOWN IN THE CROSS SECTIONS. THE FOLLOWING QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY FOR THE PLACEMENT OF THE DIVERSION DITCH.

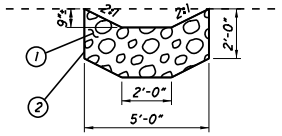
ITEM 203 - EXCAVATION (FOR OUTLET CHANNELS ONLY)	XX CU YD
ITEM 204 - GEOTEXTILE FABRIC	XX SQ YD
ITEM 601 - ROCK CHANNEL PROTECTION, TYPE D WITH FILTER	XX CU YD

EARTHWORK QUANTITIES FOR THE DIVERSION DITCHES HAVE BEEN INCLUDED IN THE CROSS SECTIONS.



DIVERSION DITCH OUTLET TYPICAL

SEE CROSS SECTIONS FOR ACTUAL CUT SLOPES, BENCHING SCHEME AND DIVERSION DITCH LOCATIONS



DIVERSION DETAIL TYPICAL

(1) - ITEM 601 - ROCK CHANNEL PROTECTION, TYPE D WITH FILTER

(2) - ITEM 204 - GEOTEXTILE FABRIC

N

HORIZONTAL SCALE IN FEET: 0, 25, 50, 100

CALCULATED: SLP

CHECKED: ALB

DRAINAGE DETAILS

DIVERSION DITCH LOCATION AND DETAILS

LAW-7-2.17

285
297

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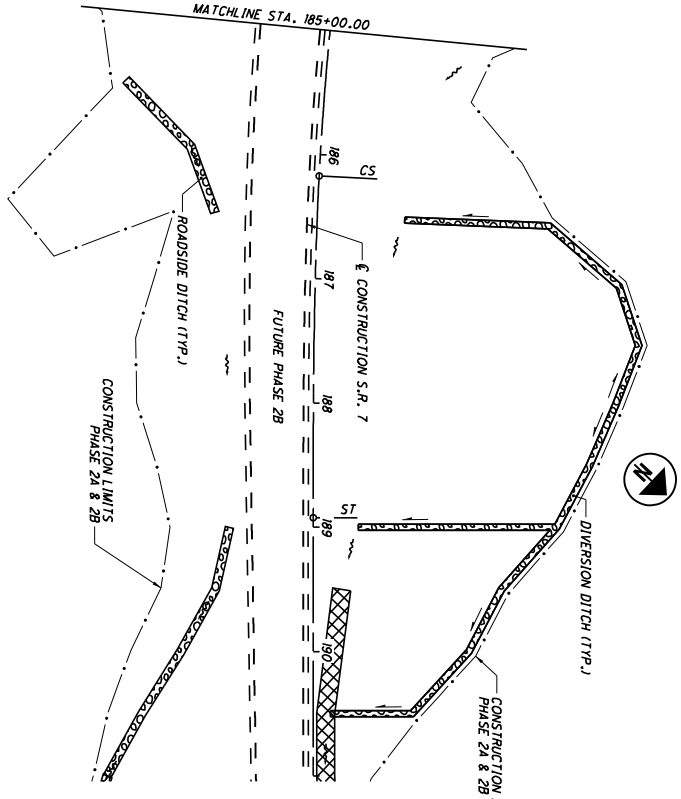
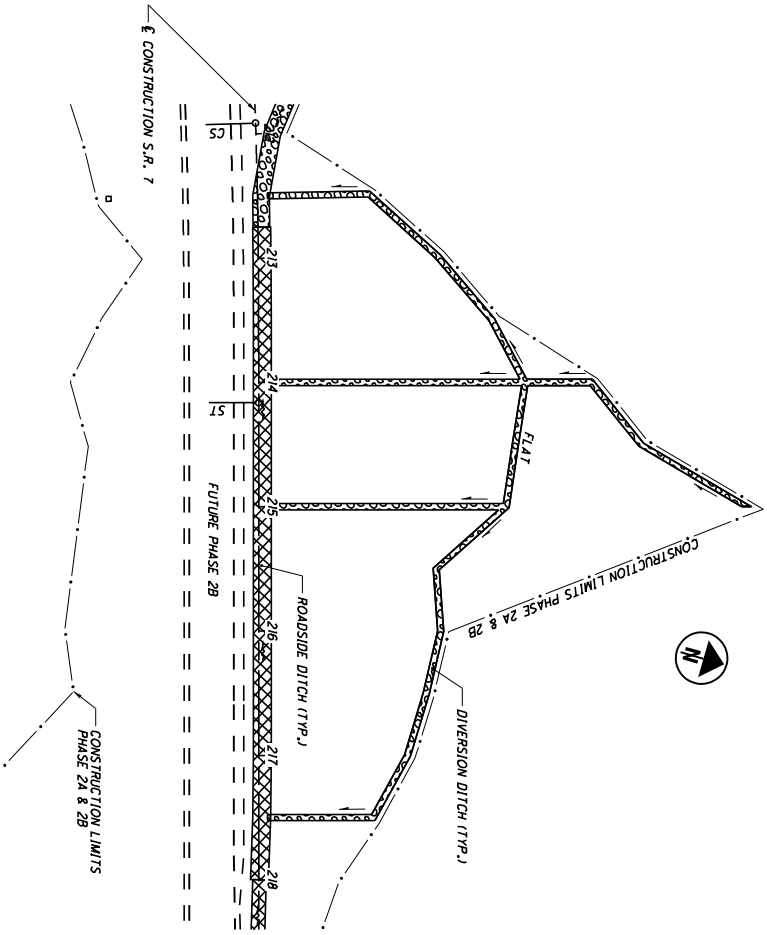




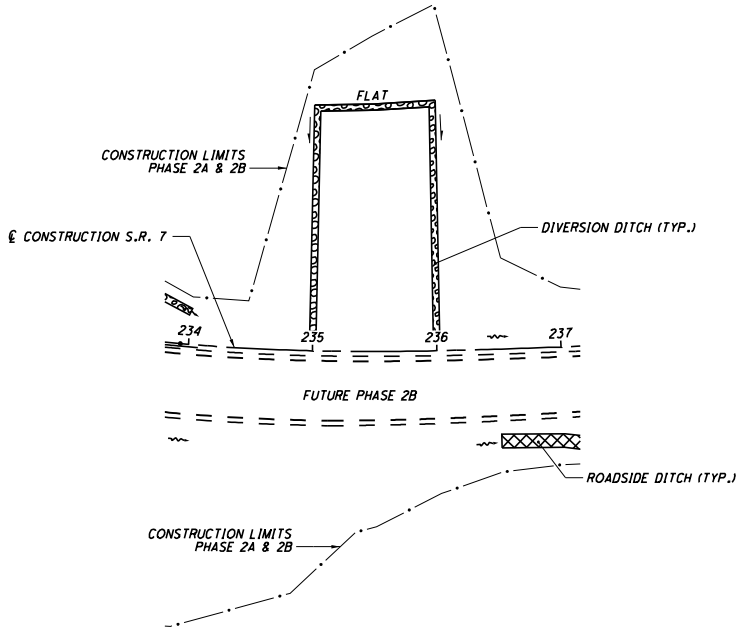
286/297

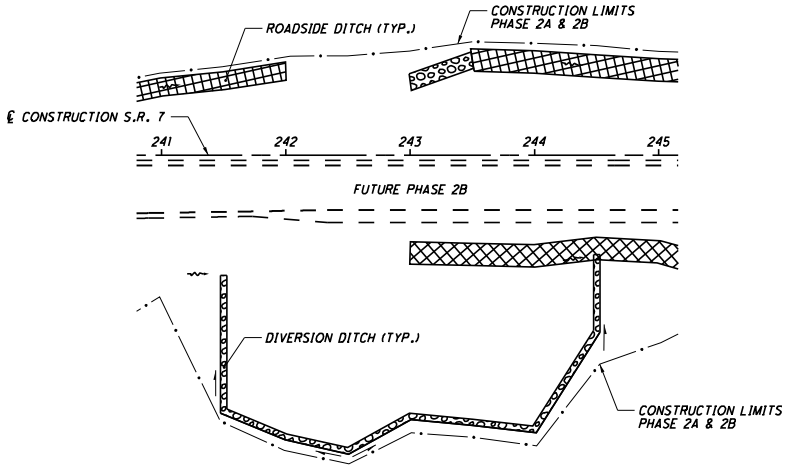
LAW-7-2.17

DRAINAGE DETAILS
DIVERSION DITCH LOCATION AND DETAILS

CALCULATED SLP
CHECKED ALB

0 25 50 100
HORIZONTAL SCALE IN FEET





HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED SLP
CHECKED ALB

DRAINAGE DETAILS
DIVERSION DITCH LOCATION AND DETAILS

LAW-7-2.17

287
297

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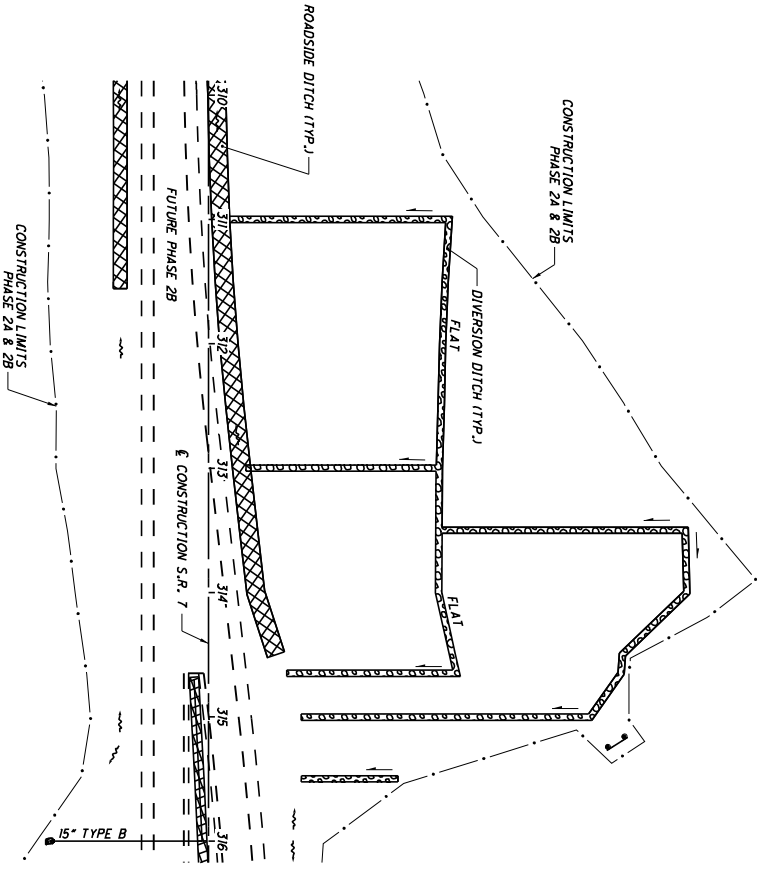
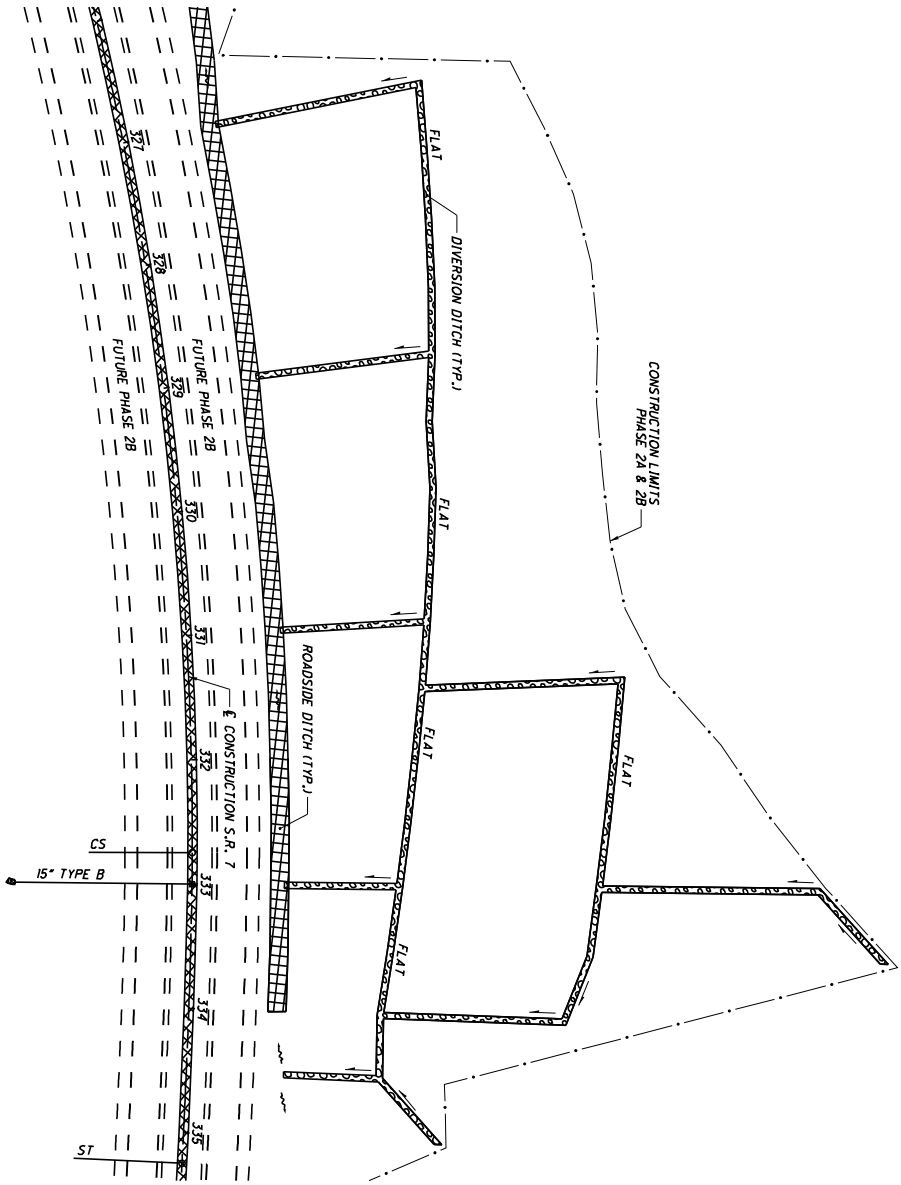
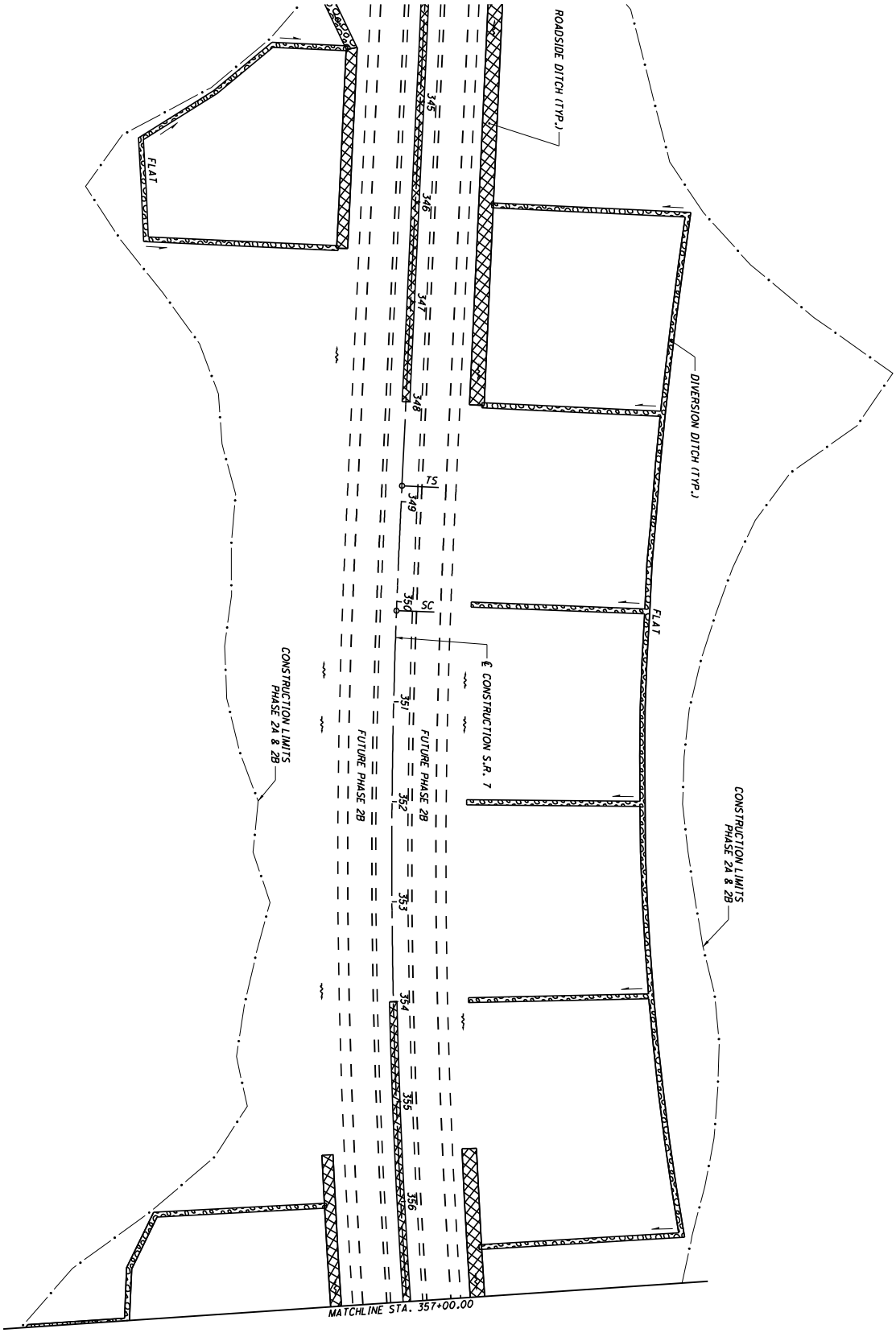


288/297	LAW-7-2.17	DRAINAGE DETAILS DIVERSION DITCH LOCATION AND DETAILS	CALCULATED SLP CHECKED SLP	0 50 25 100 HORIZONTAL SCALE IN FEET



289/297	LAW-7-2.17	DRAINAGE DETAILS DIVERSION DITCH LOCATION AND DETAILS	CALCULATED SLP CHECKED ALB	0 50 25 100 HORIZONTAL SCALE IN FEET



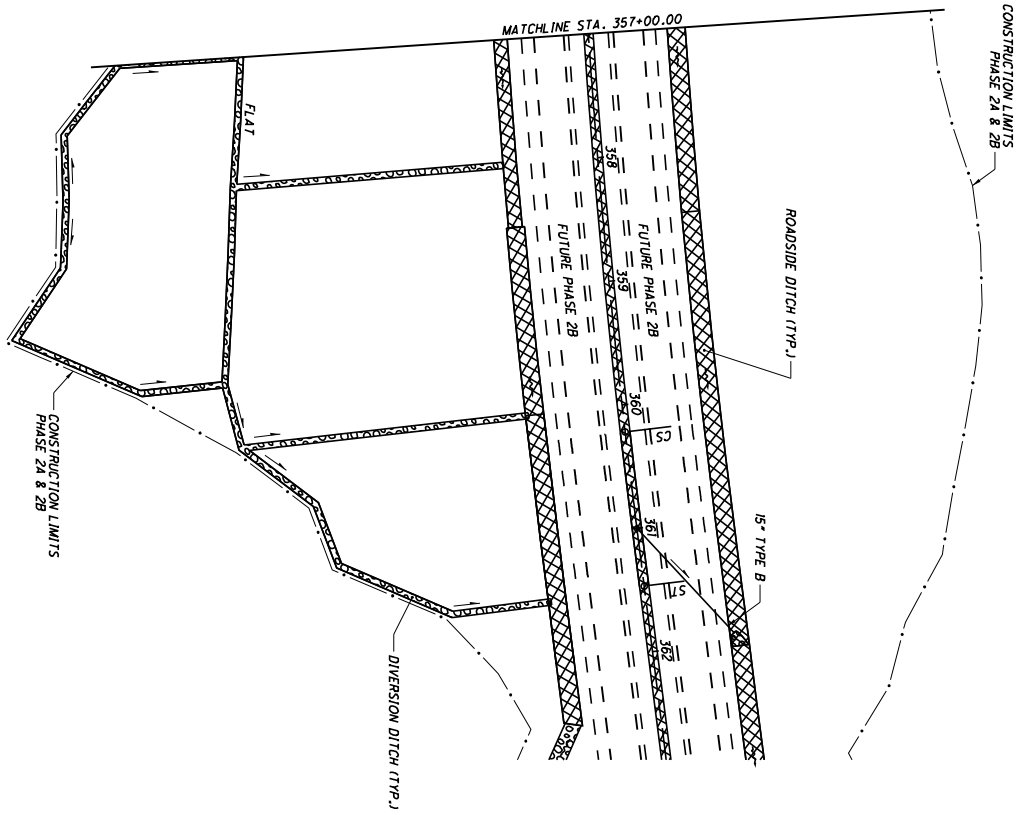
LAW-7-2.17

DRAINAGE DETAILS
DIVERSION DITCH LOCATION AND DETAILS

CALCULATED SLP
CHECKED ALB

0 25 50 100
HORIZONTAL SCALE IN FEET

N

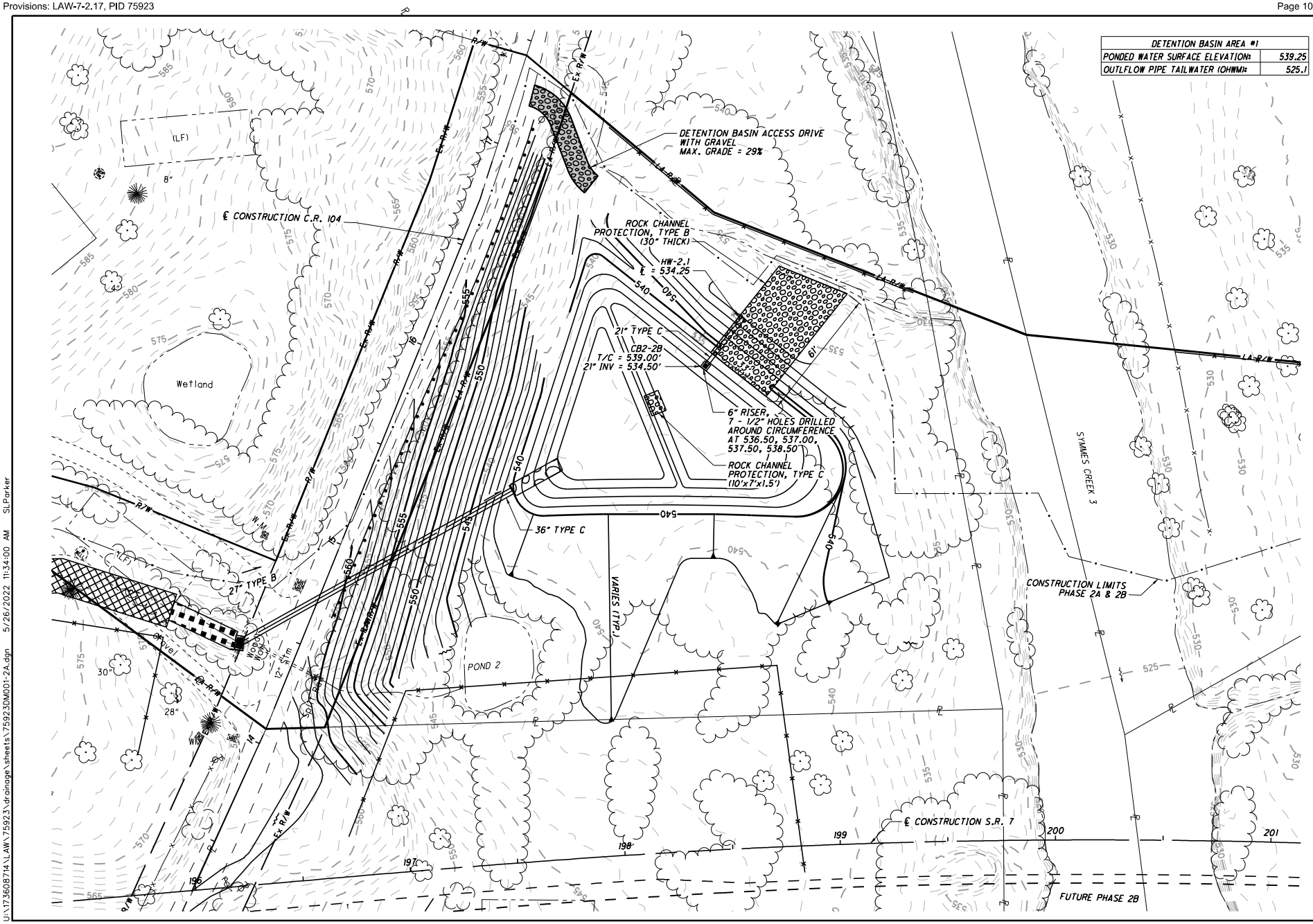


LAW-7-2.17

DRAINAGE DETAILS
DIVERSION DITCH LOCATION AND DETAILS

CALCULATED SLP
CHECKED ALB

0 25 50 100
HORIZONTAL SCALE IN FEET



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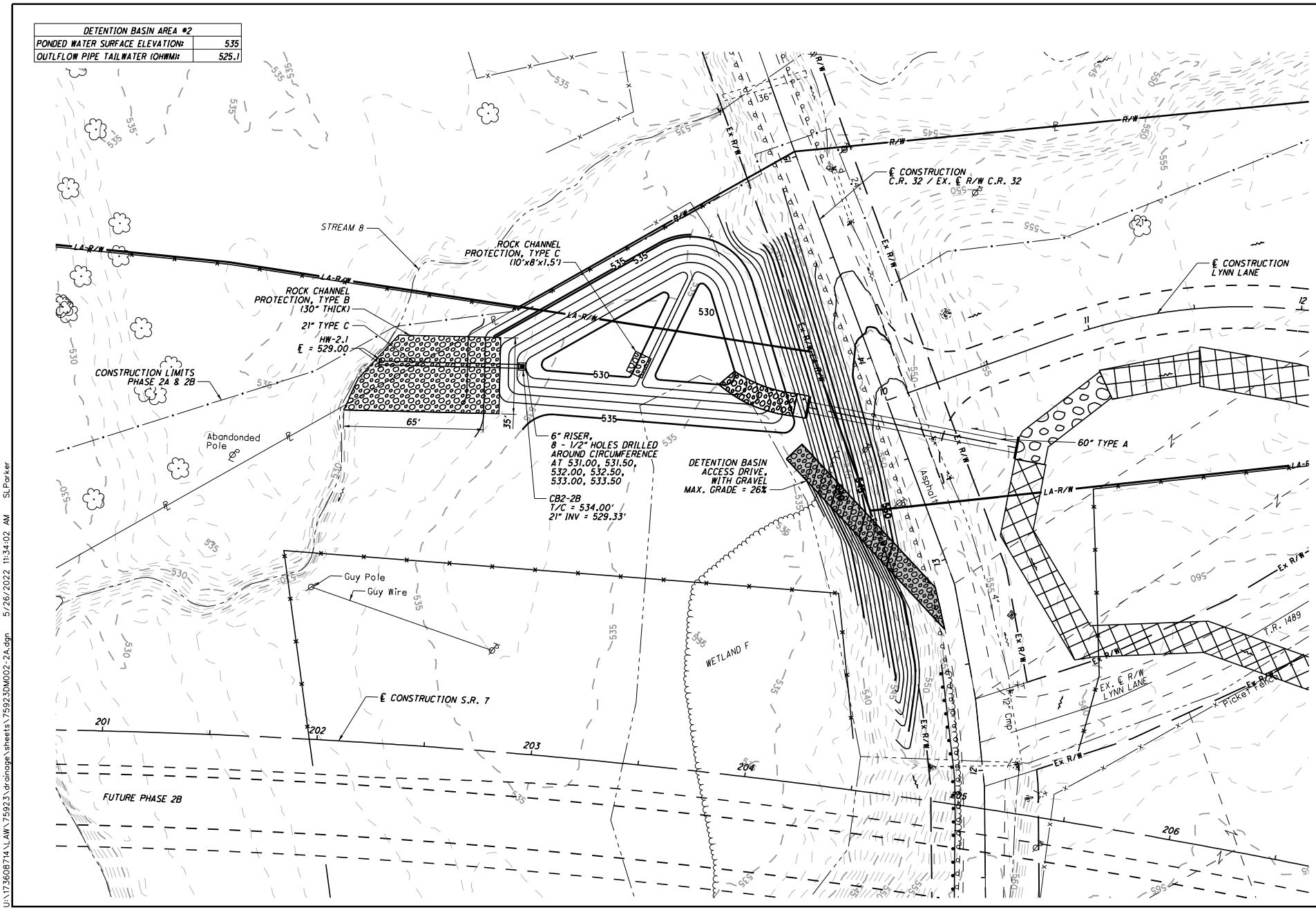

CALCULATED EDA
CHECKED ALB

HORIZONTAL SCALE IN FEET
0 25 50 100

DRAINAGE DETAILS
DETENTION BASIN #2

LAW-7-2.17

293
297

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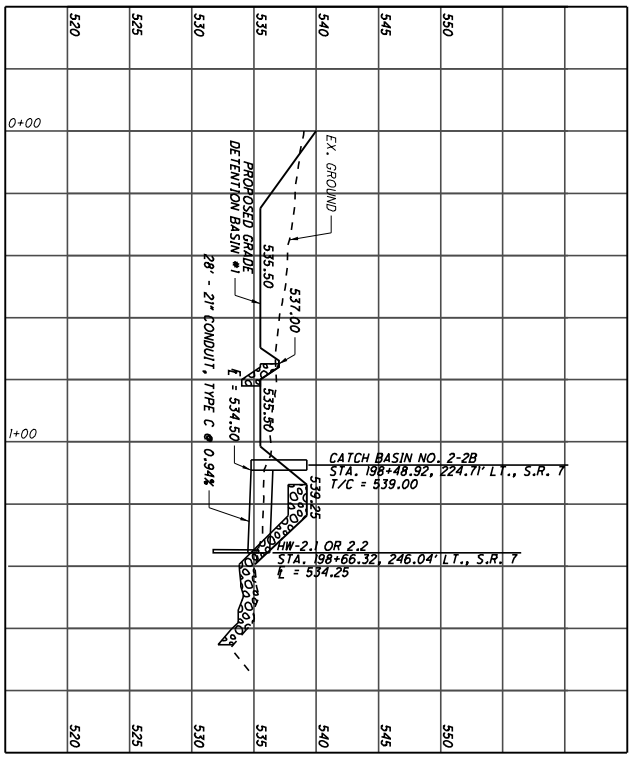
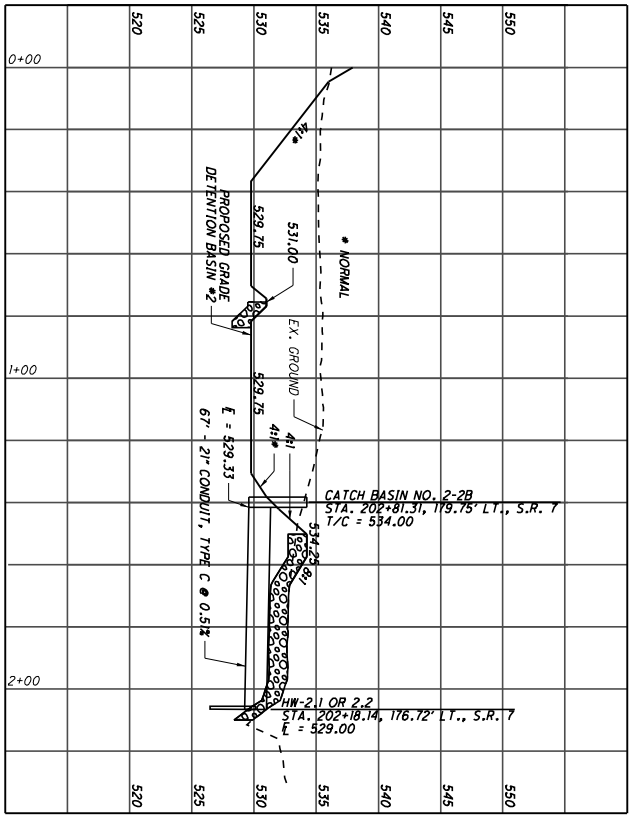




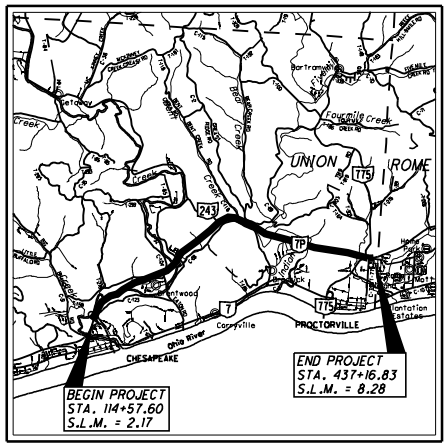
294
297

LAW-7-2.17

DRAINAGE DETAILS
DETENTION BASIN PROFILES

CALCULATED EDA
CHECKED ALB

0 20 40
SCALE IN FEET


UNION
ROME
PROCTORVILLE
CHESAPEAKE
Ohio River
Coal Run
Creek
Creek
Creek

CURVE DATA
S.R. 7
CURVE NO. 1

P.I. STA. 138+60.99
Δ = 53° 33' 53" (RT)
Dc = 1° 27' 15"
R = 3,940.00'
T = 1,880.13'
L = 3,508.44'
E = 425.60'
TS STA. 117+84.61
SC STA. 119+59.61

θs = 1° 16' 21"
Ls = 175.00'
Ts = 2,076.38'
LT = 116.67'
ST = 58.34'
e_{max} = 4.00%
CS STA. 154+68.05
ST STA. 156+43.05

CURVE DATA
S.R. 7
CURVE NO. 2

P.I. STA. 182+06.44
Δ = 24° 16' 14" (LT)
Dc = 2° 10' 43"
R = 2,630.00'
T = 423.13'
L = 839.08'
E = 33.82'
TS STA. 175+03.18
SC STA. 177+78.18

θs = 2° 59' 44"
Ls = 275.00'
Ts = 703.26'
LT = 183.36'
ST = 91.69'
e_{max} = 5.51%
CS STA. 186+17.26
ST STA. 188+92.26

CURVE DATA
S.R. 7
CURVE NO. 3

P.I. STA. 205+33.31
Δ = 27° 30' 45" (RT)
Dc = 1° 45' 00"
R = 3,274.04'
T = 683.24'
L = 1,347.14'
E = 70.53'
TS STA. 196+19.13
SC STA. 198+44.13

θs = 1° 58' 07"
Ls = 225.00'
Ts = 914.18'
LT = 150.01'
ST = 75.01'
e_{max} = 4.60%
CS STA. 211+91.27
ST STA. 214+16.27

CURVE DATA
S.R. 7
CURVE NO. 4

P.I. STA. 232+01.52
Δ = 34° 12' 59" (LT)
Dc = 4° 45' 00"
R = 1,206.23'
T = 161.12'
L = 320.35'
E = 10.71'
TS STA. 226+28.73
SC STA. 230+28.73

θs = 9° 30' 00"
Ls = 400.00'
Ts = 572.79'
LT = 267.05'
ST = 133.68'
e_{max} = 8.00%
CS STA. 233+49.08
ST STA. 237+49.08

CURVE DATA
S.R. 7
CURVE NO. 5

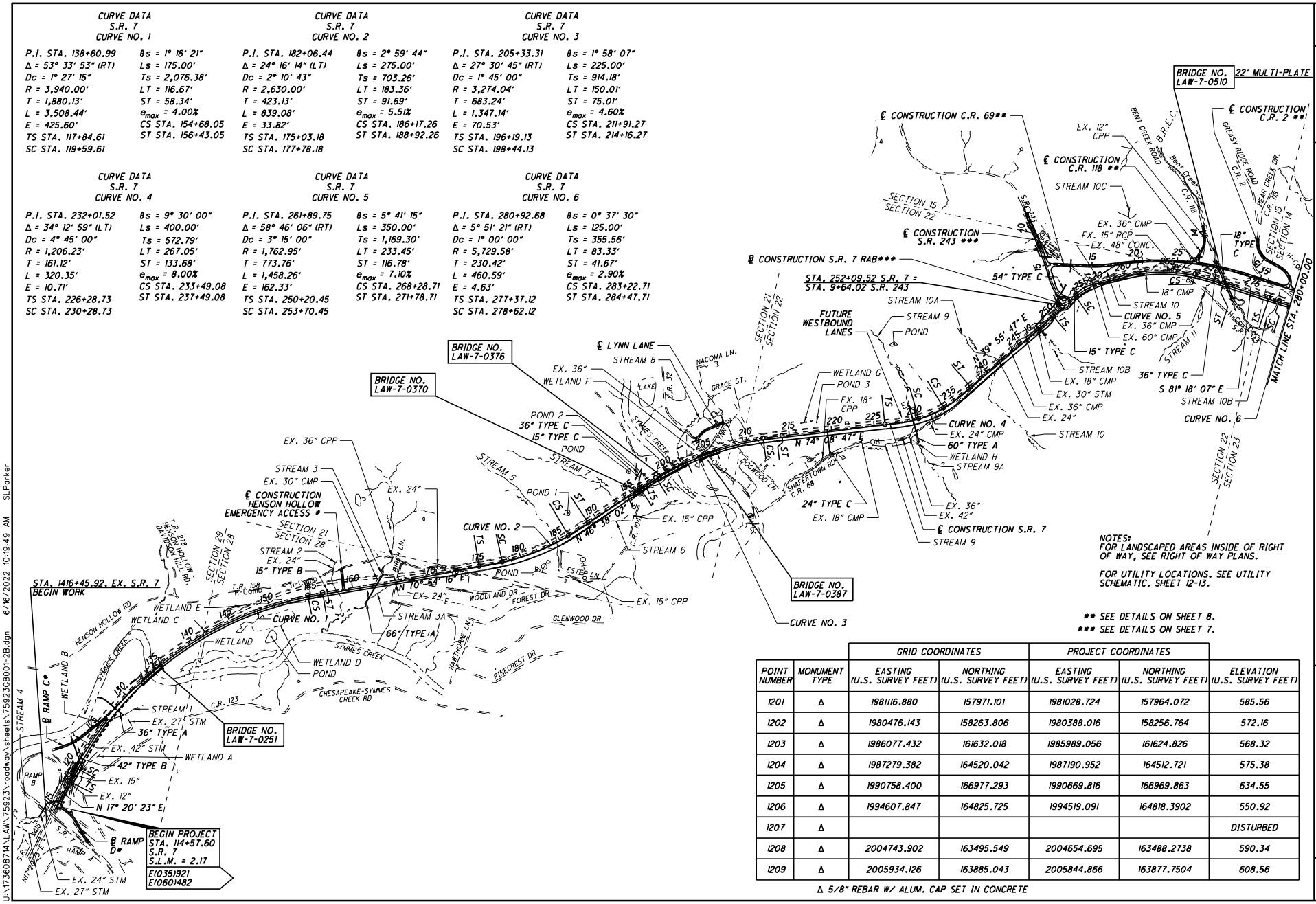
P.I. STA. 261+89.75
Δ = 58° 46' 06" (RT)
Dc = 3° 15' 00"
R = 1,762.95'
T = 773.76'
L = 1,458.26'
E = 162.33'
TS STA. 250+20.45
SC STA. 253+70.45

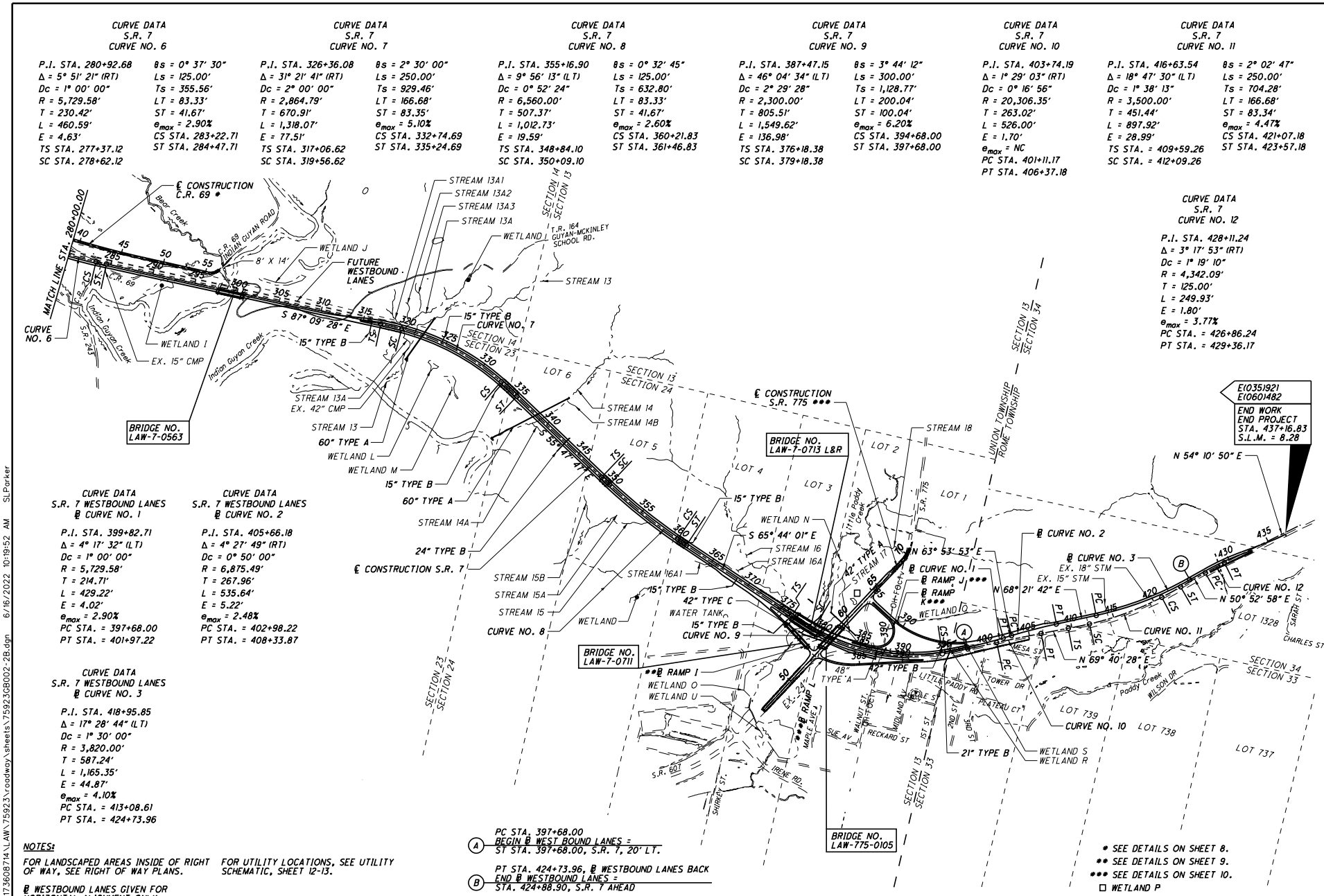
θs = 5° 41' 15"
Ls = 350.00'
Ts = 1,169.30'
LT = 233.45'
ST = 116.78'
e_{max} = 7.10%
CS STA. 268+28.71
ST STA. 271+78.71

CURVE DATA
S.R. 7
CURVE NO. 6

P.I. STA. 280+92.68
Δ = 5° 51' 21" (RT)
Dc = 1° 00' 00"
R = 5,729.58'
T = 230.42'
L = 460.59'
E = 4.63'
TS STA. 277+37.12
SC STA. 278+62.12

θs = 0° 37' 30"
Ls = 125.00'
Ts = 355.56'
LT = 83.33'
ST = 41.67'
e_{max} = 2.90%
CS STA. 283+22.71
ST STA. 284+47.71


BEGIN PROJECT
STA. 114+57.60
S.R. 7
S.L.M. = 2.17
E(035)921
E(060)482
STA. 1416+45.92, EX. S.R. 7
BEGIN WORK
BRIDGE NO. LAW-7-0251
BRIDGE NO. LAW-7-0370
BRIDGE NO. LAW-7-0376
BRIDGE NO. LAW-7-0387
BRIDGE NO. LAW-7-0510 22' MULTI-PLATE
MATCH LINE STA. 280+00.00
FUTURE WESTBOUND LANES
℄ CONSTRUCTION S.R. 7 RAB***
STA. 252+09.52 S.R. 7 = STA. 9+64.02 S.R. 243
℄ CONSTRUCTION HENSON HOLLOW EMERGENCY ACCESS *
℄ CONSTRUCTION C.R. 69**
℄ CONSTRUCTION C.R. 118 **
℄ CONSTRUCTION S.R. 243 ***
℄ CONSTRUCTION C.R. 2 **
℄ LYNN LANE
℄ CONSTRUCTION S.R. 7
CURVE NO. 1
CURVE NO. 2
CURVE NO. 3
CURVE NO. 4
CURVE NO. 5
CURVE NO. 6
66" TYPE A
42" TYPE B
36" TYPE A
36" TYPE C
24" TYPE C
60" TYPE A
54" TYPE C
18" TYPE C
15" TYPE B
15" TYPE C
HENSON HOLLOW RD
DAVIDSON HILL RD.
BENT CREEK ROAD
GREASY RIDGE ROAD C.R. 2
BEAR CREEK DR.
LYNN LANE
NACOMA LN.
GRACE ST.
WOODLAND DR
FOREST DR
GLENWOOD DR
ESTER LN
HAWTHORNE LN
PINECREST DR
SHAFFERTOWN RD C.R. 68
CHESAPEAKE-SYMMES CREEK RD
SYMMES CREEK
WETLAND A
WETLAND B
WETLAND C
WETLAND D
WETLAND E
WETLAND F
WETLAND G
WETLAND H
POND
POND 1
POND 2
POND 3
STREAM 1
STREAM 2
STREAM 3
STREAM 4
STREAM 5
STREAM 6
STREAM 7
STREAM 8
STREAM 9
STREAM 10
STREAM 10A
STREAM 10B
STREAM 11
STREAM 3A
STREAM 9A
SECTION 15 SECTION 22
SECTION 21 SECTION 22
SECTION 21 SECTION 28
SECTION 29 SECTION 28
SECTION 22 SECTION 23
SECTION 15 SECTION 14
N 74° 08' 47" E
N 39° 55' 47" E
S 81° 18' 07" E
N 46° 38' 02" E
N 10° 54' 16" E
N 17° 20' 23" E
EX. 36" CPP
EX. 24"
EX. 30" CMP
EX. 15" CPP
EX. 18" CPP
EX. 36" CMP
EX. 15" RCP
EX. 48" CONC.
EX. 12" CPP
EX. 18" CMP
EX. 30" STM
EX. 24" CMP
EX. 42"
EX. 27" STM
EX. 42" STM
EX. 15"
EX. 12"
EX. 24" STM
EX. 27" STM
CS 05
CS 06
CS 07
CS 08
CS 09
CS 10
CS 11
CS 12
CS 13
CS 14
CS 15
CS 16
CS 17
CS 18
CS 19
CS 20
CS 21
CS 22
CS 23
CS 24
CS



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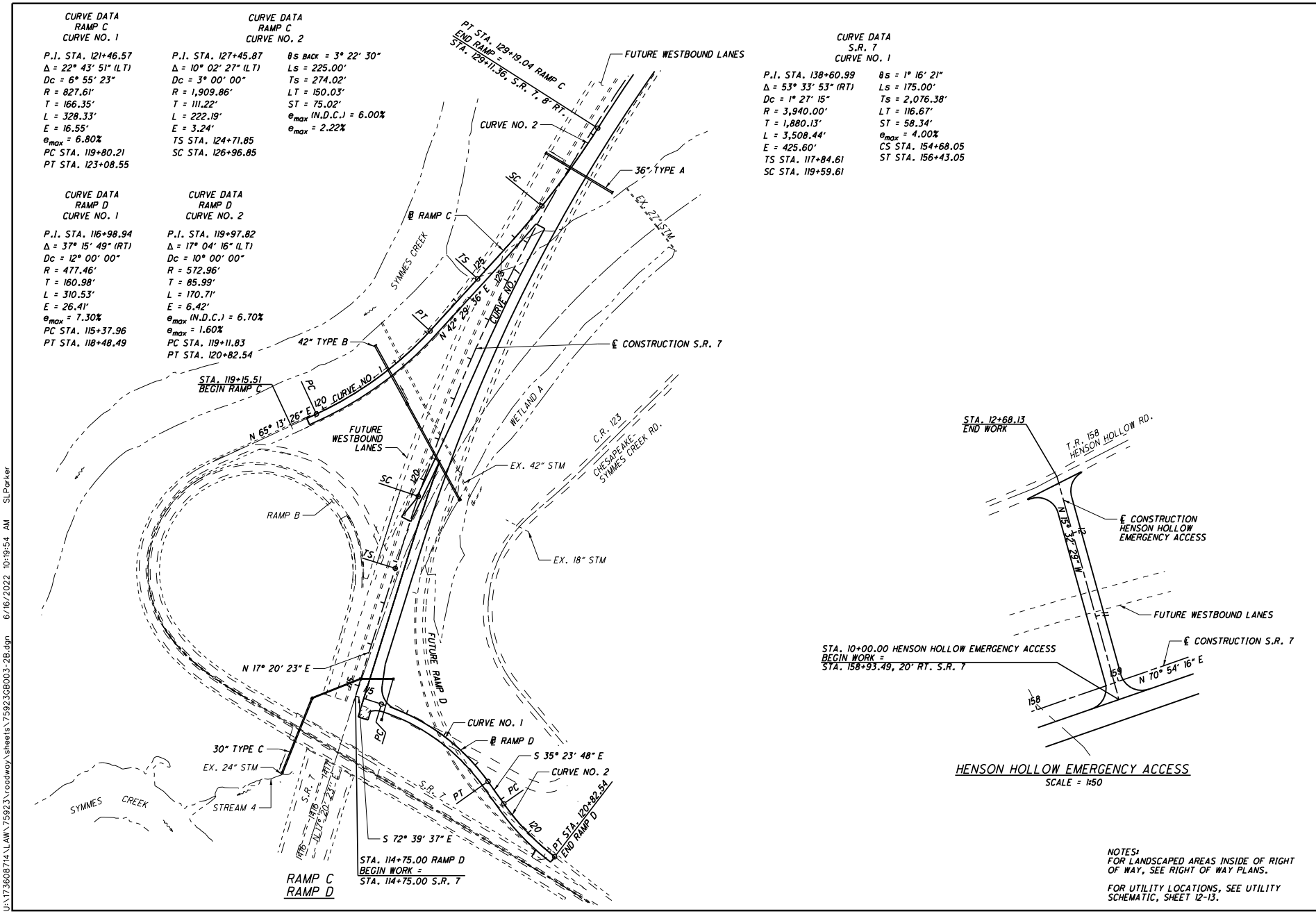

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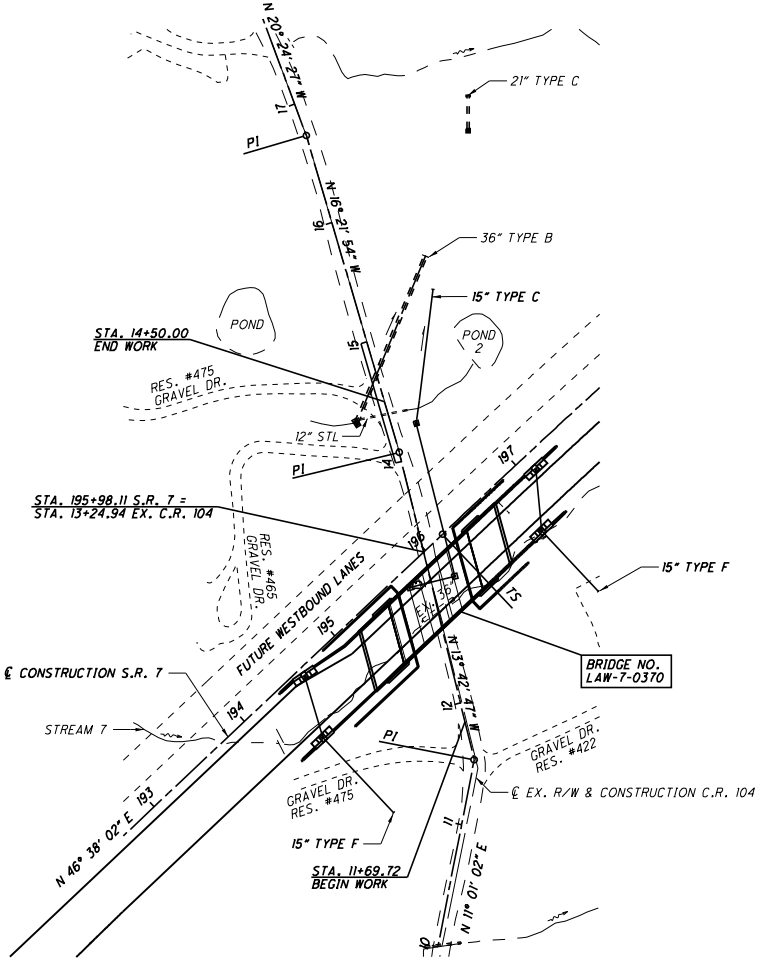
EX. C.R. 104

P.I. STA. 11+53.11
Δ = 2° 41' 45" (LT)
NO CURVE

P.I. STA. 14+07.46
Δ = 2° 39' 07" (LT)
NO CURVE

P.I. STA. 16+72.90
Δ = 4° 02' 33" (LT)
NO CURVE



C.R. 104

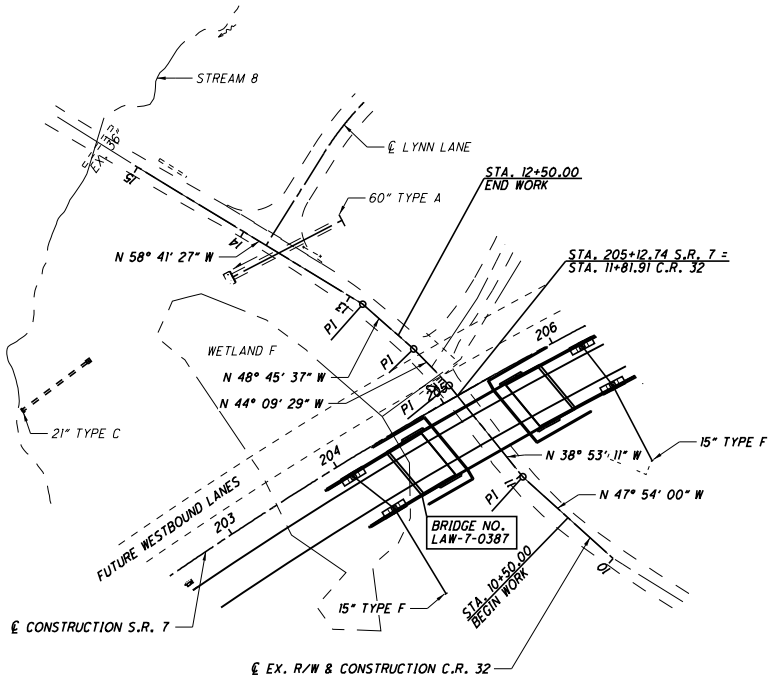
EX. C.R. 32

P.I. STA. 10+98.09
Δ = 9° 00' 49" (RT)
NO CURVE

P.I. STA. 11+92.44
Δ = 5° 16' 19" (LT)
NO CURVE

P.I. STA. 12+33.35
Δ = 4° 36' 07" (LT)
NO CURVE

P.I. STA. 12+87.96
Δ = 9° 55' 50" (LT)
NO CURVE



C.R. 32

NOTES:

FOR LANDSCAPED AREAS INSIDE OF RIGHT OF WAY, SEE RIGHT OF WAY PLANS.

FOR UTILITY LOCATIONS, SEE UTILITY SCHEMATIC, SHEETS 12-13.

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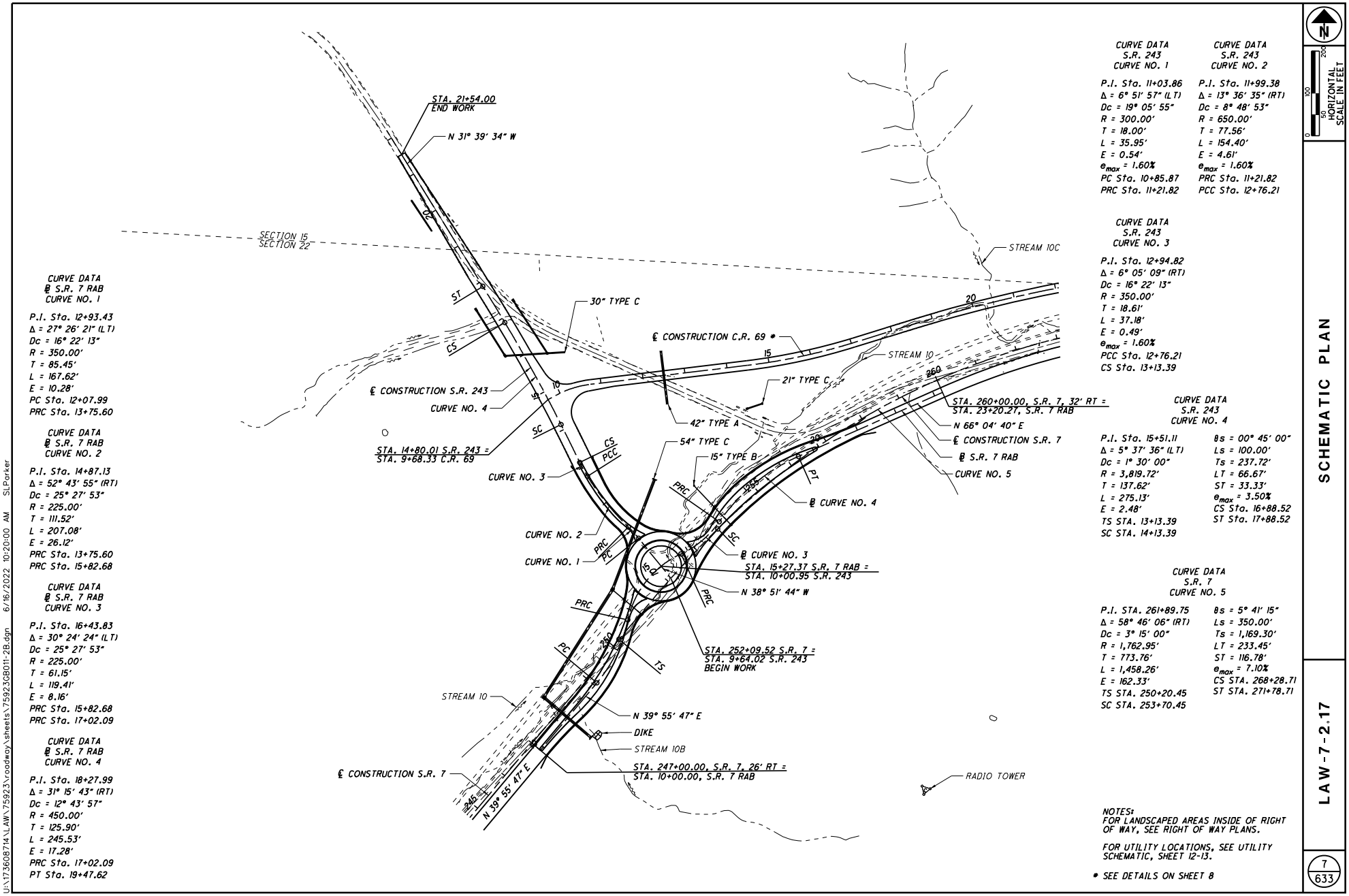
HORIZONTAL SCALE IN FEET
0 25 50 100

SCHEMATIC PLAN

LAW-7-2.17



CURVE DATA
℄ S.R. 7 RAB
CURVE NO. 1

P.I. Sta. 12+93.43
Δ = 27° 26' 21" (LT)
Dc = 16° 22' 13"
R = 350.00'
T = 85.45'
L = 167.62'
E = 10.28'
PC Sta. 12+07.99
PRC Sta. 13+75.60

CURVE DATA
℄ S.R. 7 RAB
CURVE NO. 2

P.I. Sta. 14+87.13
Δ = 52° 43' 55" (RT)
Dc = 25° 27' 53"
R = 225.00'
T = 111.52'
L = 207.08'
E = 26.12'
PRC Sta. 13+75.60
PRC Sta. 15+82.68

CURVE DATA
℄ S.R. 7 RAB
CURVE NO. 3

P.I. Sta. 16+43.83
Δ = 30° 24' 24" (LT)
Dc = 25° 27' 53"
R = 225.00'
T = 61.15'
L = 119.41'
E = 8.16'
PRC Sta. 15+82.68
PRC Sta. 17+02.09

CURVE DATA
℄ S.R. 7 RAB
CURVE NO. 4

P.I. Sta. 18+27.99
Δ = 31° 15' 43" (RT)
Dc = 12° 43' 57"
R = 450.00'
T = 125.90'
L = 245.53'
E = 17.28'
PRC Sta. 17+02.09
PT Sta. 19+47.62

CURVE DATA
S.R. 243
CURVE NO. 1

P.I. Sta. 11+03.86
Δ = 6° 51' 57" (LT)
Dc = 19° 05' 55"
R = 300.00'
T = 18.00'
L = 35.95'
E = 0.54'
e_{max} = 1.60%
PC Sta. 10+85.87
PRC Sta. 11+21.82

CURVE DATA
S.R. 243
CURVE NO. 2

P.I. Sta. 11+99.38
Δ = 13° 36' 35" (RT)
Dc = 8° 48' 53"
R = 650.00'
T = 77.56'
L = 154.40'
E = 4.61'
e_{max} = 1.60%
PRC Sta. 11+21.82
PCC Sta. 12+76.21

CURVE DATA
S.R. 243
CURVE NO. 3

P.I. Sta. 12+94.82
Δ = 6° 05' 09" (RT)
Dc = 16° 22' 13"
R = 350.00'
T = 18.61'
L = 37.18'
E = 0.49'
e_{max} = 1.60%
PCC Sta. 12+76.21
CS Sta. 13+13.39

CURVE DATA
S.R. 243
CURVE NO. 4

P.I. Sta. 15+51.11
Δ = 5° 37' 36" (LT)
Dc = 1° 30' 00"
R = 3,819.72'
T = 137.62'
L = 275.13'
E = 2.48'
TS STA. 13+13.39
SC STA. 14+13.39
θs = 00° 45' 00"
Ls = 100.00'
Ts = 237.72'
LT = 66.67'
ST = 33.33'
e_{max} = 3.50%
CS Sta. 16+88.52
ST Sta. 17+88.52

CURVE DATA
S.R. 7
CURVE NO. 5

P.I. STA. 261+89.75
Δ = 58° 46' 06" (RT)
Dc = 3° 15' 00"
R = 1,762.95'
T = 773.76'
L = 1,458.26'
E = 162.33'
TS STA. 250+20.45
SC STA. 253+70.45
θs = 5° 41' 15"
Ls = 350.00'
Ts = 1,169.30'
LT = 233.45'
ST = 116.78'
e_{max} = 7.10%
CS STA. 268+28.71
ST STA. 271+78.71

NOTES:
FOR LANDSCAPED AREAS INSIDE OF RIGHT OF WAY, SEE RIGHT OF WAY PLANS.

FOR UTILITY LOCATIONS, SEE UTILITY SCHEMATIC, SHEET 12-13.

* SEE DETAILS ON SHEET 8

HORIZONTAL SCALE IN FEET
0 50 100 200

SCHEMATIC PLAN

LAW-7-2.17

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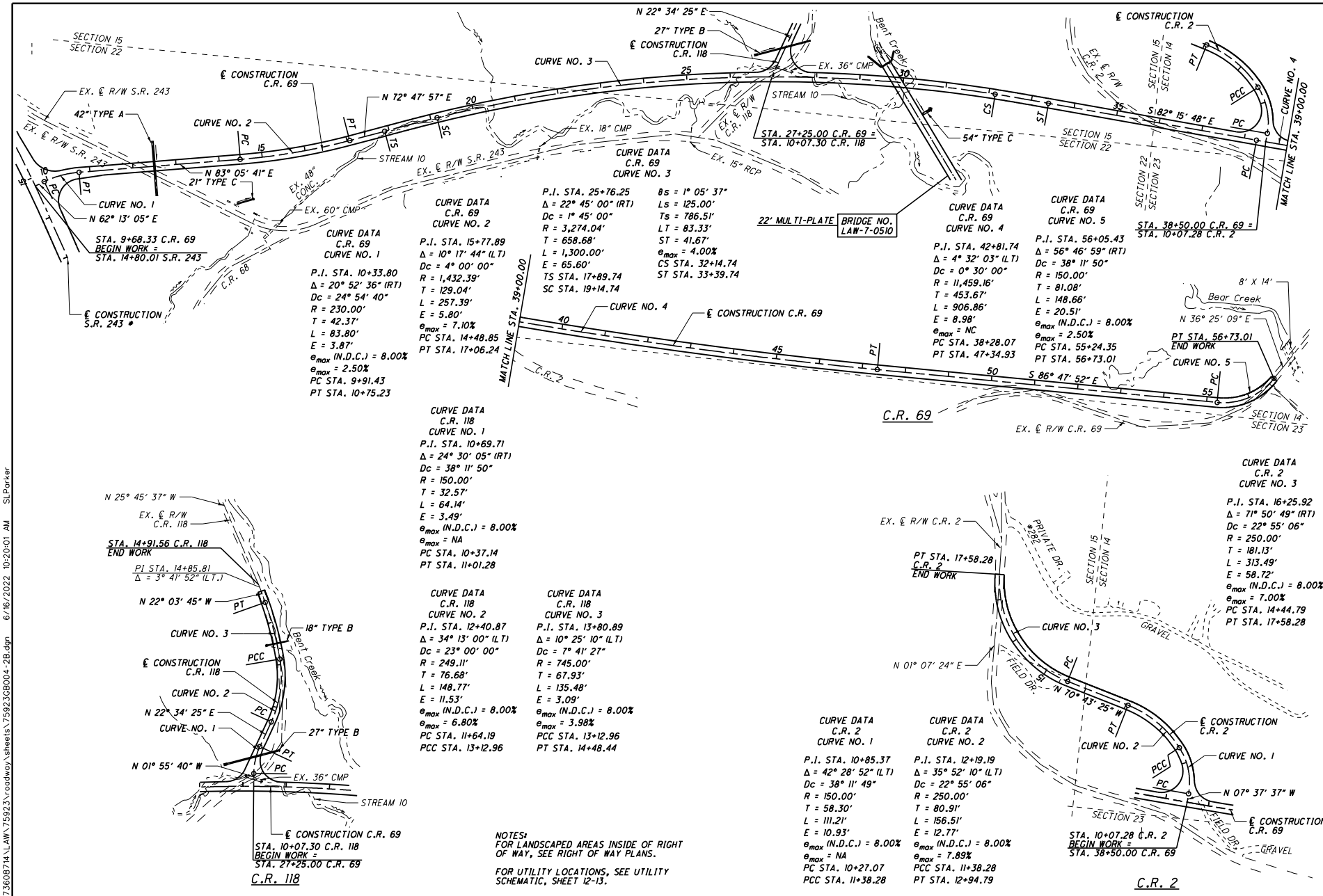

CURVE DATA
C.R. 69
CURVE NO. 1

P.I. STA. 10+33.80
Δ = 20° 52' 36" (RT)
Dc = 24° 54' 40"
R = 230.00'
T = 42.37'
L = 83.80'
E = 3.87'
e_{max} (N.D.C.) = 8.00%
e_{max} = 2.50%
PC STA. 9+91.43
PT STA. 10+75.23

CURVE DATA
C.R. 69
CURVE NO. 2

P.I. STA. 15+77.89
Δ = 10° 17' 44" (LT)
Dc = 4° 00' 00"
R = 1,432.39'
T = 129.04'
L = 257.39'
E = 5.80'
e_{max} = 7.10%
PC STA. 14+48.85
PT STA. 17+06.24

CURVE DATA
C.R. 69
CURVE NO. 3

P.I. STA. 25+76.25
Δ = 22° 45' 00" (RT)
Dc = 1° 45' 00"
R = 3,274.04'
T = 658.68'
L = 1,300.00'
E = 65.60'
TS STA. 17+89.74
SC STA. 19+14.74
θs = 1° 05' 37"
Ls = 125.00'
Ts = 786.51'
LT = 83.33'
ST = 41.67'
e_{max} = 4.00%
CS STA. 32+14.74
ST STA. 33+39.74

CURVE DATA
C.R. 69
CURVE NO. 4

P.I. STA. 42+81.74
Δ = 4° 32' 03" (LT)
Dc = 0° 30' 00"
R = 11,459.16'
T = 453.67'
L = 906.86'
E = 8.98'
e_{max} = NC
PC STA. 38+28.07
PT STA. 47+34.93

CURVE DATA
C.R. 69
CURVE NO. 5

P.I. STA. 56+05.43
Δ = 56° 46' 59" (RT)
Dc = 38° 11' 50"
R = 150.00'
T = 81.08'
L = 148.66'
E = 20.51'
e_{max} (N.D.C.) = 8.00%
e_{max} = 2.50%
PC STA. 55+24.35
PT STA. 56+73.01

CURVE DATA
C.R. 118
CURVE NO. 1

P.I. STA. 10+69.71
Δ = 24° 30' 05" (RT)
Dc = 38° 11' 50"
R = 150.00'
T = 32.57'
L = 64.14'
E = 3.49'
e_{max} (N.D.C.) = 8.00%
e_{max} = NA
PC STA. 10+37.14
PT STA. 11+01.28

CURVE DATA
C.R. 118
CURVE NO. 2

P.I. STA. 12+40.87
Δ = 34° 13' 00" (LT)
Dc = 23° 00' 00"
R = 249.11'
T = 76.68'
L = 148.77'
E = 11.53'
e_{max} (N.D.C.) = 8.00%
e_{max} = 6.80%
PC STA. 11+64.19
PCC STA. 13+12.96

CURVE DATA
C.R. 118
CURVE NO. 3

P.I. STA. 13+80.89
Δ = 10° 25' 10" (LT)
Dc = 7° 41' 27"
R = 745.00'
T = 67.93'
L = 135.48'
E = 3.09'
e_{max} (N.D.C.) = 8.00%
e_{max} = 3.98%
PCC STA. 13+12.96
PT STA. 14+48.44

CURVE DATA
C.R. 2
CURVE NO. 3

P.I. STA. 16+25.92
Δ = 71° 50' 49" (RT)
Dc = 22° 55' 06"
R = 250.00'
T = 181.13'
L = 313.49'
E = 58.72'
e_{max} (N.D.C.) = 8.00%
e_{max} = 7.00%
PC STA. 14+44.79
PT STA. 17+58.28

CURVE DATA
C.R. 2
CURVE NO. 1

P.I. STA. 10+85.37
Δ = 42° 28' 52" (LT)
Dc = 38° 11' 49"
R = 150.00'
T = 58.30'
L = 111.21'
E = 10.93'
e_{max} (N.D.C.) = 8.00%
e_{max} = NA
PC STA. 10+27.07
PCC STA. 11+38.28

CURVE DATA
C.R. 2
CURVE NO. 2

P.I. STA. 12+19.19
Δ = 35° 52' 10" (LT)
Dc = 22° 55' 06"
R = 250.00'
T = 80.91'
L = 156.51'
E = 12.77'
e_{max} (N.D.C.) = 8.00%
e_{max} = 7.89%
PCC STA. 11+38.28
PT STA. 12+94.79

NOTES:
FOR LANDSCAPED AREAS INSIDE OF RIGHT OF WAY, SEE RIGHT OF WAY PLANS.

FOR UTILITY LOCATIONS, SEE UTILITY SCHEMATIC, SHEET 12-13.

* FOR DETAILS, SEE SHEET 7

SCHEMATIC PLAN

LAW-7-2.17

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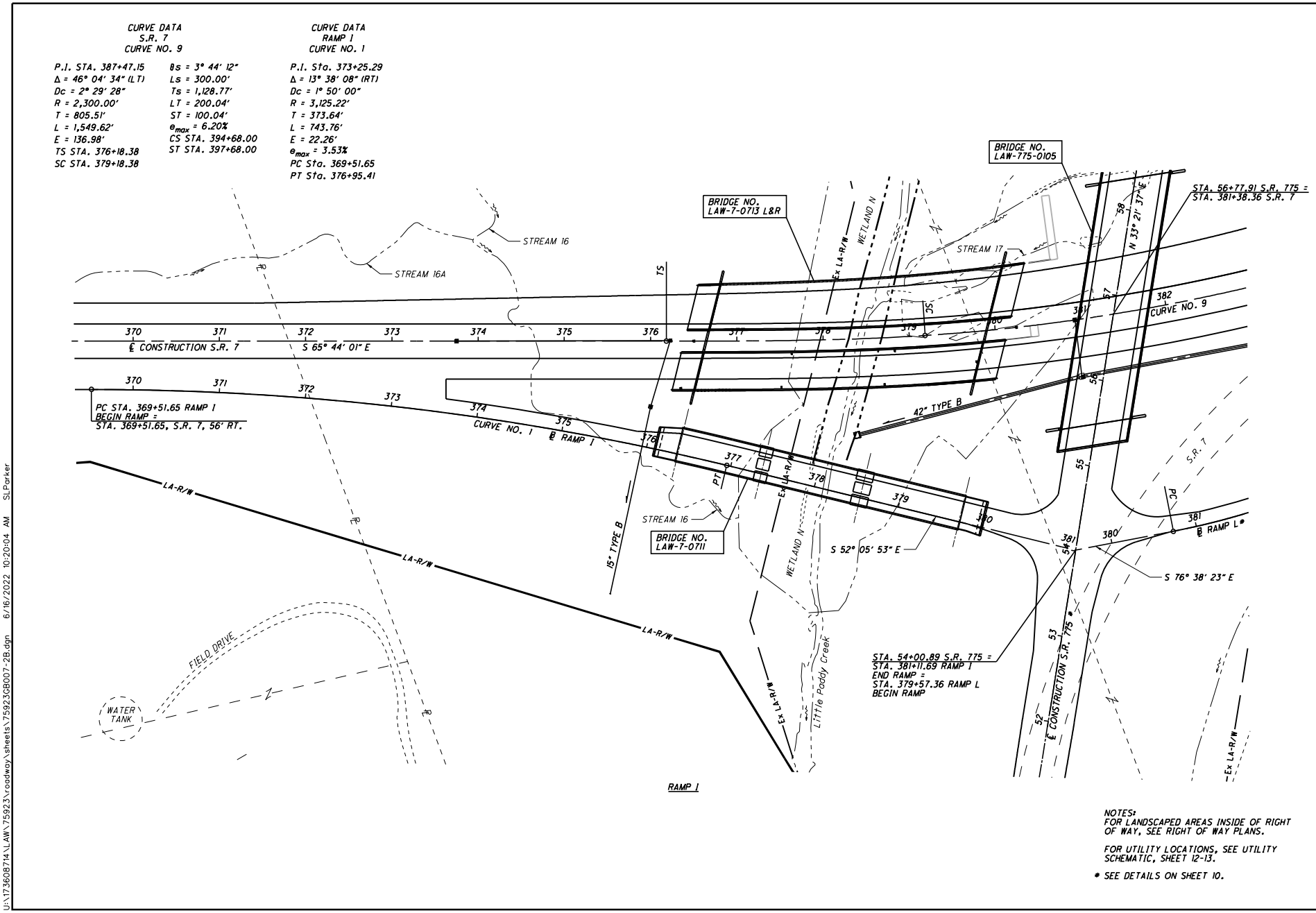

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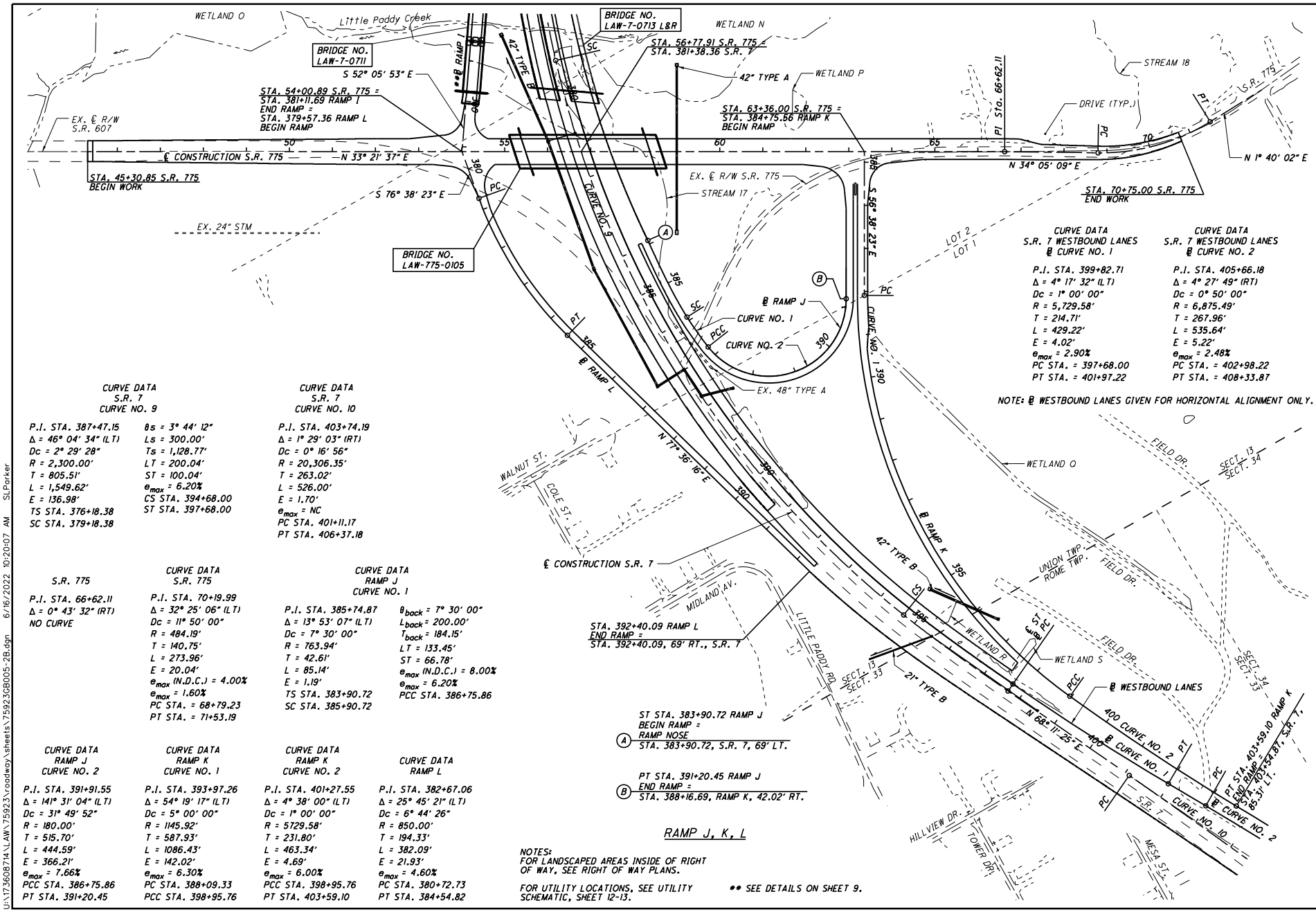


CURVE DATA
S.R. 7 WESTBOUND LANES
℄ CURVE NO. 1

P.I. STA. 399+82.71
Δ = 4° 17' 32" (LT)
Dc = 1° 00' 00"
R = 5,729.58'
T = 214.71'
L = 429.22'
E = 4.02'
e_{max} = 2.90%
PC STA. = 397+68.00
PT STA. = 401+97.22

CURVE DATA
S.R. 7 WESTBOUND LANES
℄ CURVE NO. 2

P.I. STA. 405+66.18
Δ = 4° 27' 49" (RT)
Dc = 0° 50' 00"
R = 6,875.49'
T = 267.96'
L = 535.64'
E = 5.22'
e_{max} = 2.48%
PC STA. = 402+98.22
PT STA. = 408+33.87

NOTE: ℄ WESTBOUND LANES GIVEN FOR HORIZONTAL ALIGNMENT ONLY.

CURVE DATA
S.R. 7
CURVE NO. 9

P.I. STA. 387+47.15
Δ = 46° 04' 34" (LT)
Dc = 2° 29' 28"
R = 2,300.00'
T = 805.51'
L = 1,549.62'
E = 136.98'
TS STA. 376+18.38
SC STA. 379+18.38
θs = 3° 44' 12"
Ls = 300.00'
Ts = 1,128.77'
LT = 200.04'
ST = 100.04'
e_{max} = 6.20%
CS STA. 394+68.00
ST STA. 397+68.00

CURVE DATA
S.R. 7
CURVE NO. 10

P.I. STA. 403+74.19
Δ = 1° 29' 03" (RT)
Dc = 0° 16' 56"
R = 20,306.35'
T = 263.02'
L = 526.00'
E = 1.70'
e_{max} = NC
PC STA. 401+11.17
PT STA. 406+37.18

S.R. 775

P.I. STA. 66+62.11
Δ = 0° 43' 32" (RT)
NO CURVE

CURVE DATA
S.R. 775

P.I. STA. 70+19.99
Δ = 32° 25' 06" (LT)
Dc = 11° 50' 00"
R = 484.19'
T = 140.75'
L = 273.96'
E = 20.04'
e_{max} (N.D.C.) = 4.00%
e_{max} = 1.60%
PC STA. = 68+79.23
PT STA. = 71+53.19

CURVE DATA
RAMP J
CURVE NO. 1

P.I. STA. 385+74.87
Δ = 13° 53' 07" (LT)
Dc = 7° 30' 00"
R = 763.94'
T = 42.61'
L = 85.14'
E = 1.19'
TS STA. 383+90.72
SC STA. 385+90.72
$θ_{back}$ = 7° 30' 00"
L_{back} = 200.00'
T_{back} = 184.15'
LT = 133.45'
ST = 66.78'
e_{max} (N.D.C.) = 8.00%
e_{max} = 6.20%
PCC STA. 386+75.86

CURVE DATA
RAMP J
CURVE NO. 2

P.I. STA. 391+91.55
Δ = 141° 31' 04" (LT)
Dc = 31° 49' 52"
R = 180.00'
T = 515.70'
L = 444.59'
E = 366.21'
e_{max} = 7.66%
PCC STA. 386+75.86
PT STA. 391+20.45

CURVE DATA
RAMP K
CURVE NO. 1

P.I. STA. 393+97.26
Δ = 54° 19' 17" (LT)
Dc = 5° 00' 00"
R = 1145.92'
T = 587.93'
L = 1086.43'
E = 142.02'
e_{max} = 6.30%
PC STA. 388+09.33
PCC STA. 398+95.76

CURVE DATA
RAMP K
CURVE NO. 2

P.I. STA. 401+27.55
Δ = 4° 38' 00" (LT)
Dc = 1° 00' 00"
R = 5729.58'
T = 231.80'
L = 463.34'
E = 4.69'
e_{max} = 6.00%
PCC STA. 398+95.76
PT STA. 403+59.10

CURVE DATA
RAMP L

P.I. STA. 382+67.06
Δ = 25° 45' 21" (LT)
Dc = 6° 44' 26"
R = 850.00'
T = 194.33'
L = 382.09'
E = 21.93'
e_{max} = 4.60%
PC STA. 380+72.73
PT STA. 384+54.82

NOTES:
FOR LANDSCAPED AREAS INSIDE OF RIGHT OF WAY, SEE RIGHT OF WAY PLANS.

FOR UTILITY LOCATIONS, SEE UTILITY SCHEMATIC, SHEET 12-13.

** SEE DETAILS ON SHEET 9.

HORIZONTAL SCALE IN FEET
0 50 100 200

SCHEMATIC PLAN

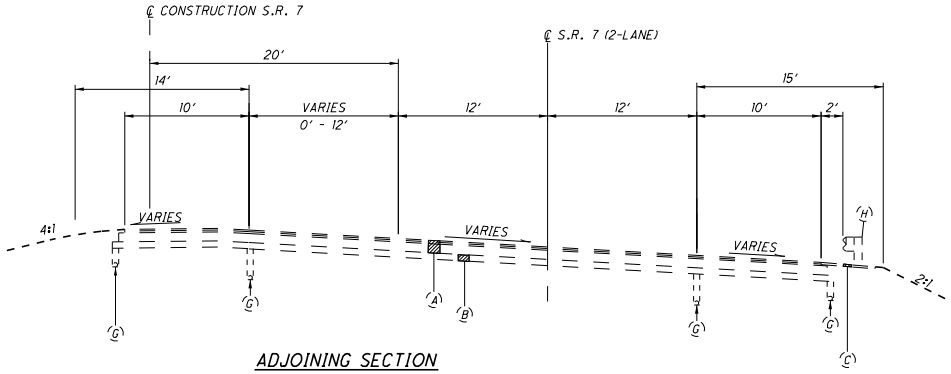
LAW-7-2.17

10
633

LEGEND

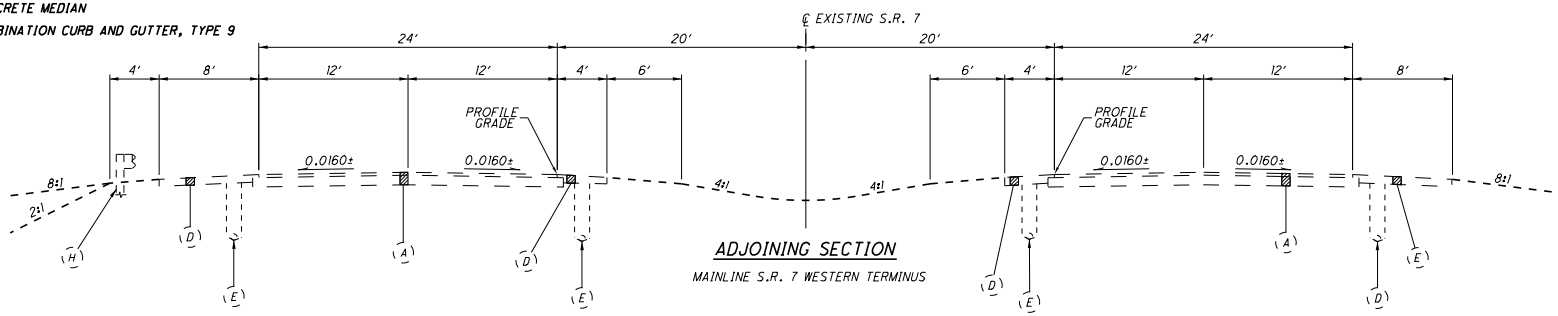
1. ITEM 442 - 1 1/2" ASPHALT CONCRETE SURFACE COURSE, 12.5MM, TYPE A (446)
2. ITEM 442 - 1 3/4" ASPHALT CONCRETE INTERMEDIATE COURSE, 12.5MM, TYPE A (446)
3. ITEM 302 - 7" ASPHALT CONCRETE BASE, PG64-22, (449)
4. ITEM 304 - 6" AGGREGATE BASE
5. ITEM 407 - TACK COAT
6. ITEM 609 - CURB, TYPE 6
7. ITEM 609 - COMBINATION CURB AND GUTTER, TYPE 2
8. ITEM 605 - AGGREGATE DRAIN (SLOPE @ 0.04 MIN., 0.08 DESIRABLE)
9. ITEM 441 - 2" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, (449), (UNDER GUARDRAIL), AS PER PLAN
10. ITEM 605 - 4" BASE PIPE UNDERDRAIN
11. ITEM 605 - 6" SHALLOW PIPE UNDERDRAIN
12. ITEM 605 - 6" BASE PIPE UNDERDRAIN
13. ITEM 441 - 1 1/4" ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (449), PG64-22
14. ITEM 441 - 1 3/4" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, (449)
15. ITEM 301 - 3" ASPHALT CONCRETE BASE PG64-22, (449)
16. ITEM 659 - SEEDING AND MULCHING
17. ITEM 204 - SUBGRADE COMPACTION
18. ITEM 204 - PROOF ROLLING
19. ITEM 606 - GUARDRAIL, TYPE MGS
20. ITEM 606 - GUARDRAIL, TYPE MGS WITH LONG POSTS
21. ITEM 609 - CONCRETE MEDIAN
22. ITEM 609 - COMBINATION CURB AND GUTTER, TYPE 9

(A) EX. 12"± ASPHALT CONCRETE
(B) EX. 6"± SUBBASE
(C) 2" ASPHALT CONCRETE
(D) ASPHALT CONCRETE BERM
(E) UNDERDRAIN
(F) GUARDRAIL, TYPE 5



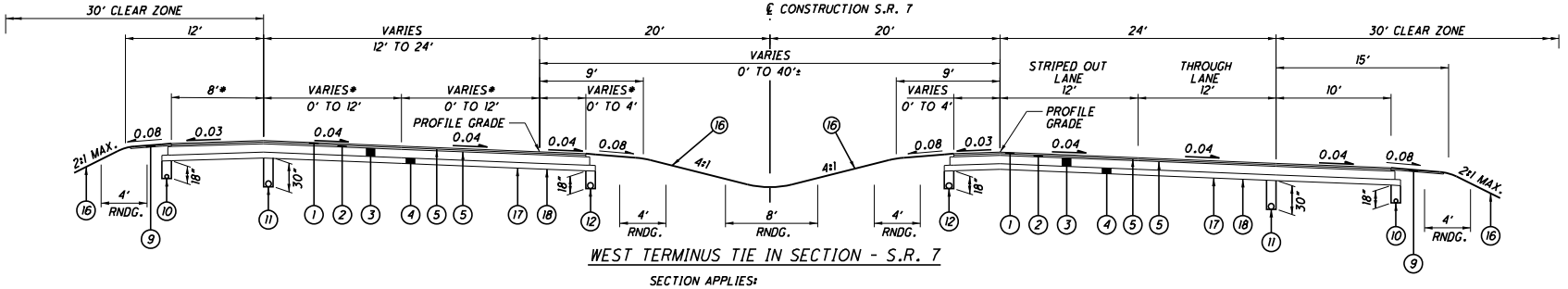
ADJOINING SECTION

MAINLINE S.R. 7 EASTERN TERMINUS



ADJOINING SECTION

MAINLINE S.R. 7 WESTERN TERMINUS



WEST TERMINUS TIE IN SECTION - S.R. 7

SECTION APPLIES:

STA. 114+30.42 TO STA. 120+56.37

* MILL/FILL EXISTING SECTION FROM STA. 114+30.42 TO STA. 118+99.14

NOTES:

FOR DITCH DETAILS, SEE SHEET 23

FOR EDGE COURSE DETAILS, SEE SHEET 24

FOR EXACT LOCATION OF UNDERDRAINS, SEE UNDERDRAIN TABLE SHEETS 579-583

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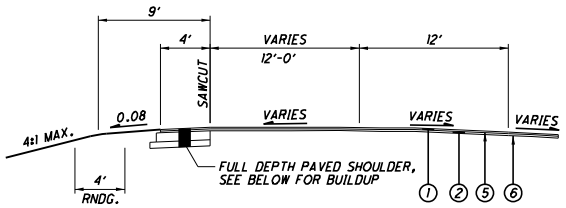
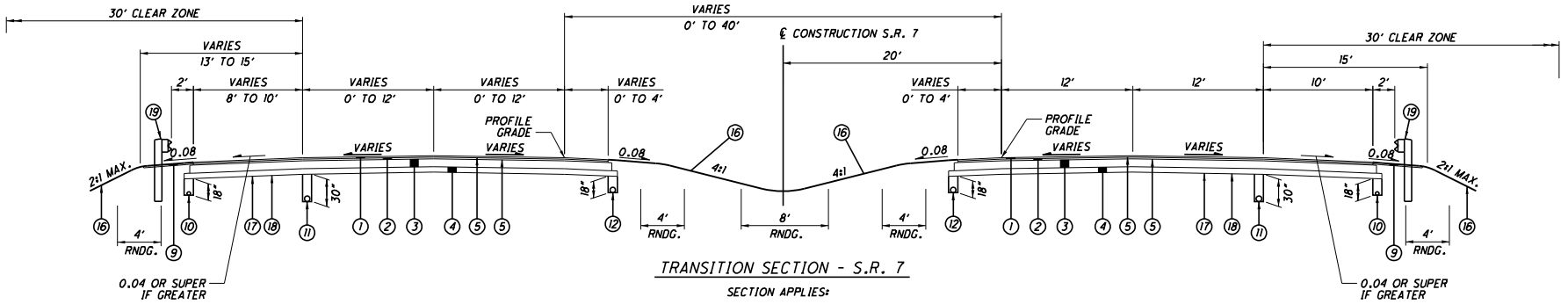
TYPICAL SECTIONS - S.R. 7

LAW-7-2.17



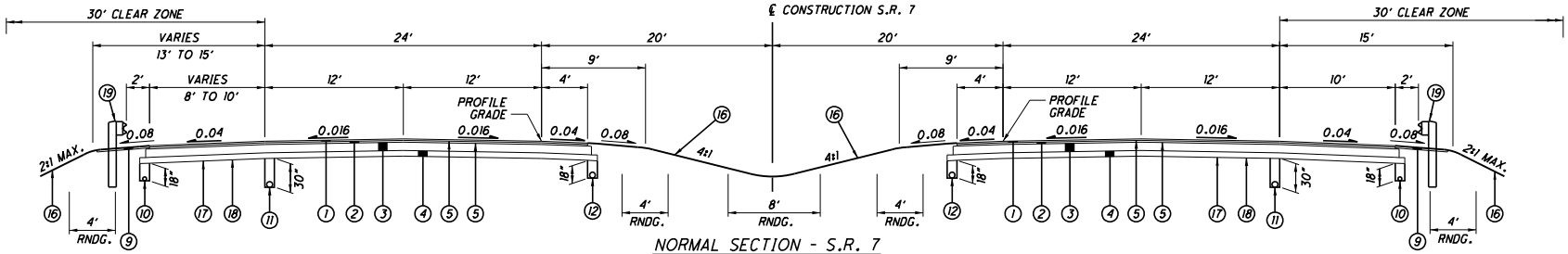
OVERLAY SECTION - S.R. 7

SECTION APPLIES:
STA. 427+42.37 TO STA. 437+16.83



TRANSITION SECTION - S.R. 7

SECTION APPLIES:
STA. 309+49.89 TO STA. 319+56.62
STA. 424+88.90 TO STA. 437+16.83



NORMAL SECTION - S.R. 7

SECTION APPLIES:
STA. 335+67.69 TO STA. 348+41.10
STA. 361+89.83 TO STA. 375+75.38

NOTES:
- SUPERELEVATION TO BE OPPOSITE HAND TO TYPICAL SHOWN
- FOR LEGEND, SEE SHEET 14
- FOR DITCH DETAILS, SEE SHEET 23
- FOR EDGE COURSE DETAILS, SEE SHEET 24
- FOR SUPERELEVATED SHOULDER DETAILS, SEE DETAIL A, SHEET 24
- FOR EXACT LOCATION OF UNDERDRAINS, SEE UNDERDRAIN TABLE SHEETS 579-583

TYPICAL SECTION - S.R. 7

LAW-7-2.17

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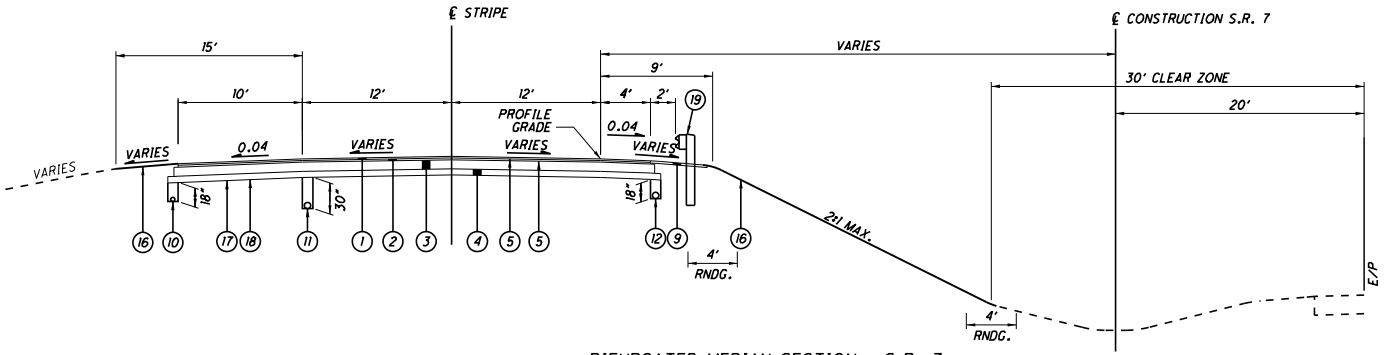
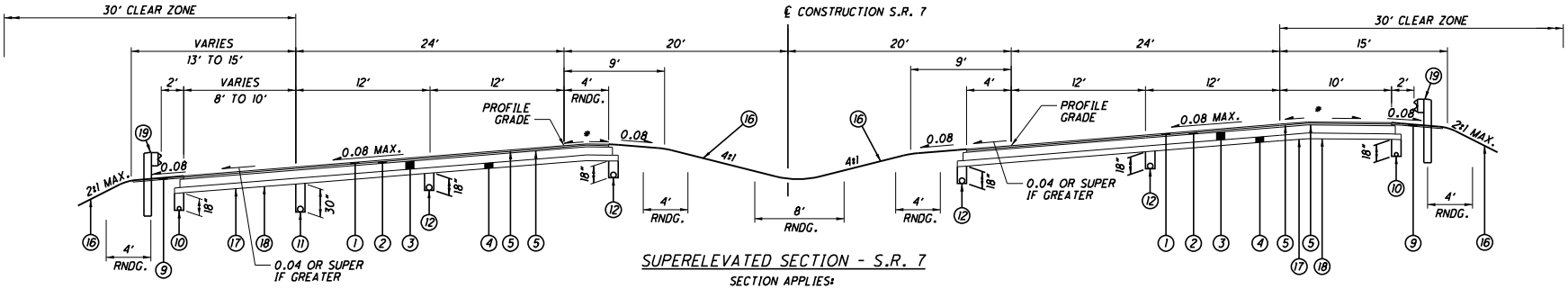


BIFURCATED MEDIAN SECTION - S.R. 7

SECTION APPLIES:
STA. 397+68.00 TO STA. 424+88.90



SUPERELEVATED SECTION - S.R. 7

SECTION APPLIES:
+ STA. 319+56.52 TO STA. 335+67.69
STA. 348+41.10 TO STA. 361+89.83
STA. 375+75.38 TO STA. 397+68.00

NOTES:
+ SUPERELEVATION TO BE OPPOSITE HAND TO TYPICAL SHOWN
FOR LEGEND, SEE SHEET 14
FOR DITCH DETAILS, SEE SHEET 23
FOR EDGE COURSE DETAILS, SEE SHEET 24
* FOR SUPERELEVATED SHOULDER DETAILS, SEE DETAIL A, SHEET 24
FOR EXACT LOCATION OF UNDERDRAINS, SEE UNDERDRAIN TABLE SHEETS 579-583

TYPICAL SECTION - S.R. 7

LAW-7-2.17

16
633

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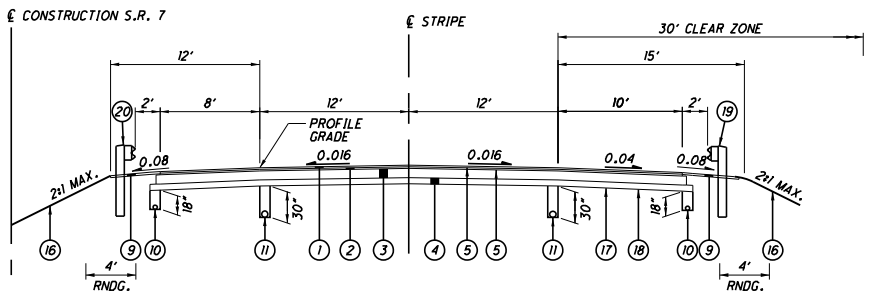
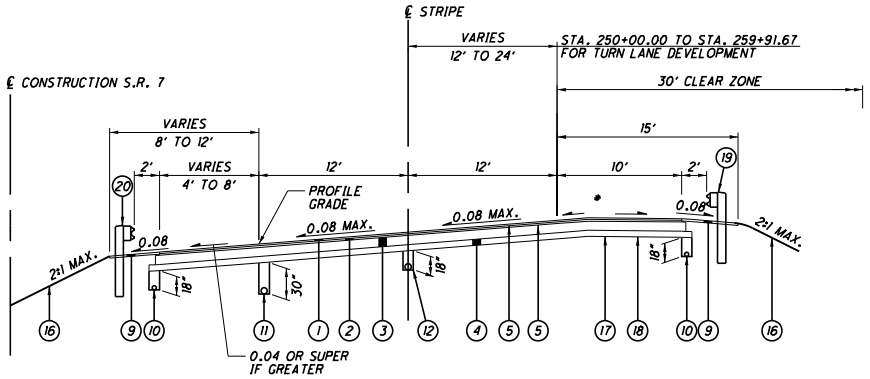


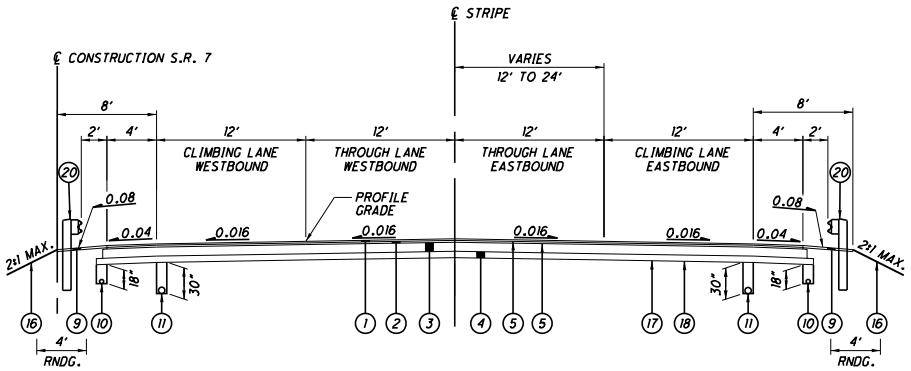
NORMAL SECTION - S.R. 7

SECTION APPLIES:
STA. 156+86.05 TO STA. 167+72.52
STA. 195+00.00 TO STA. 195+76.13
STA. 272+21.71 TO STA. 276+94.12
STA. 284+90.71 TO STA. 309+49.89



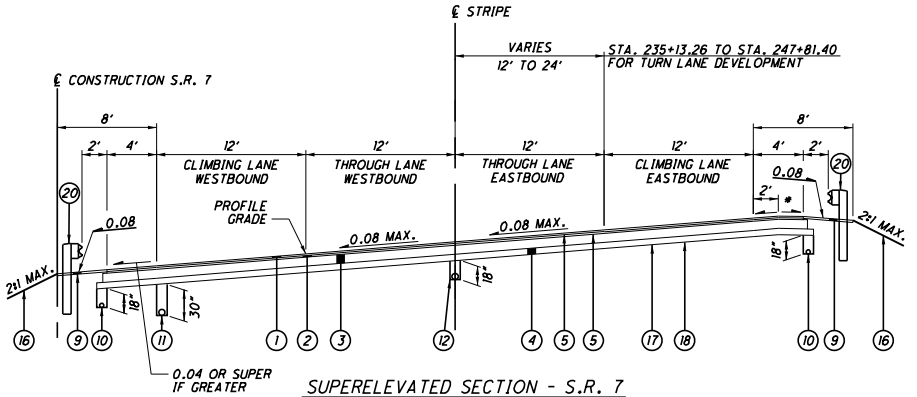
SUPERELEVATED SECTION - S.R. 7

SECTION APPLIES:
+ STA. 120+56.37 TO STA. 156+86.05
STA. 195+76.13 TO STA. 209+79.72
+ STA. 257+84.54 TO STA. 272+21.71
STA. 276+94.12 TO STA. 284+90.71
STA. 376+00.00 TO STA. 390+75.00



NORMAL SECTION - S.R. 7
WITH CLIMBING LANES

SECTION APPLIES:
STA. 167+72.52 TO STA. 174+60.18
STA. 189+35.26 TO STA. 195+00.00
STA. 214+59.27 TO STA. 225+85.73
STA. 237+92.08 TO STA. 247+00.00



SUPERELEVATED SECTION - S.R. 7
WITH CLIMBING LANES

SECTION APPLIES:
STA. 174+60.18 TO STA. 189+35.26
+ STA. 209+79.72 TO STA. 214+59.27
STA. 225+85.73 TO STA. 237+92.08

NOTES:
+ SUPERELEVATION TO BE OPPOSITE HAND TO TYPICAL SHOWN
FOR LEGEND, SEE SHEET 14
FOR DITCH DETAILS, SEE SHEET 23
FOR EDGE COURSE DETAILS, SEE SHEET 24
* FOR SUPERELEVATED SHOULDER DETAILS, SEE DETAIL A, SHEET 24
FOR EXACT LOCATION OF UNDERDRAINS, SEE UNDERDRAIN TABLE SHEETS 579-583

TYPICAL SECTION - S.R. 7

LAW-7-2.17

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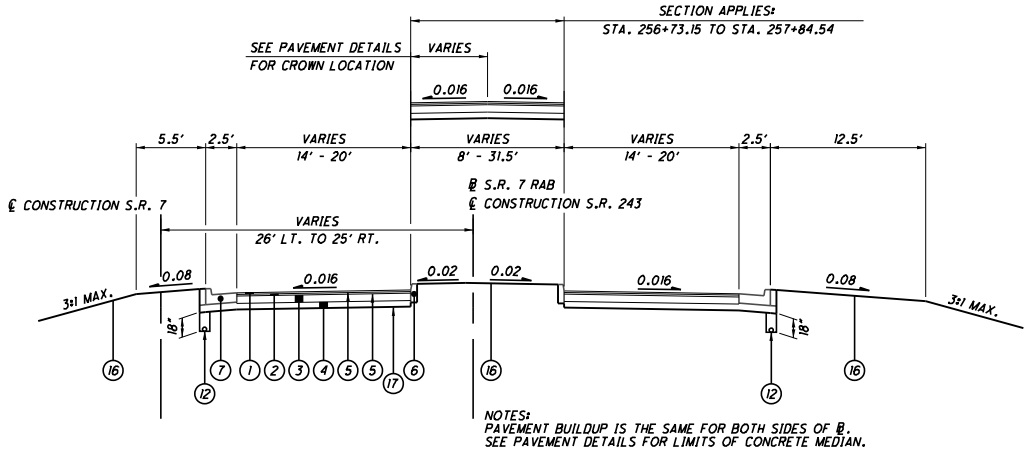
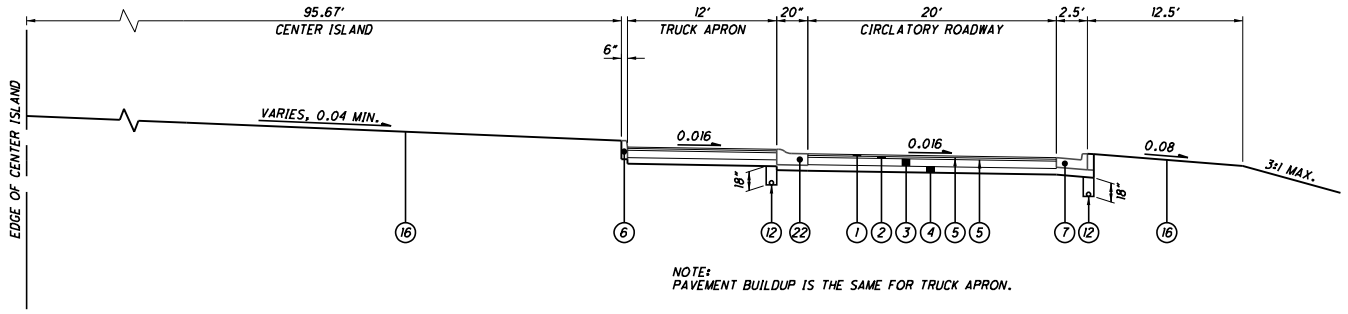


NOTES:
PAVEMENT BUILDUP IS THE SAME FOR BOTH SIDES OF ℄.
SEE PAVEMENT DETAILS FOR LIMITS OF CONCRETE MEDIAN.

NORMAL SECTION - S.R. 7 RAB & S.R. 243

SECTION APPLIES:
S.R. 7 STA. 247+00.00 TO STA. 251+00.00
S.R. 7 STA. 253+00.00 TO STA. 257+84.54
S.R. 243 STA. 11+00.00 TO STA. 13+07.05



NOTE:
PAVEMENT BUILDUP IS THE SAME FOR TRUCK APRON.

ROUNDABOUT SECTION

NOTES:
FOR DITCH DETAILS, SEE SHEET 23
FOR EDGE COURSE DETAILS, SEE SHEET 24
FOR EXACT LOCATION OF UNDERDRAINS, SEE UNDERDRAIN TABLE SHEETS 579-583

TYPICAL SECTION - S.R. 7

LAW-7-2.17

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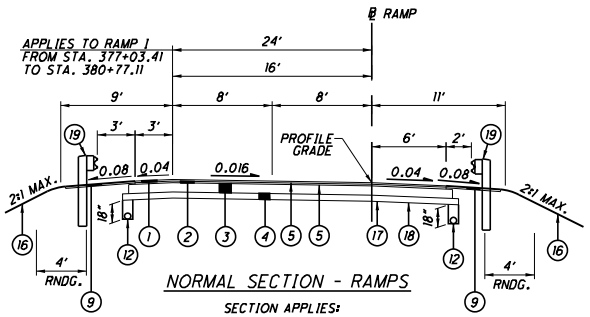
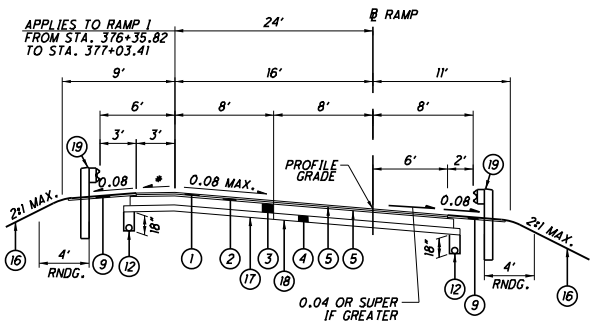


NORMAL SECTION - RAMPS

SECTION APPLIES:

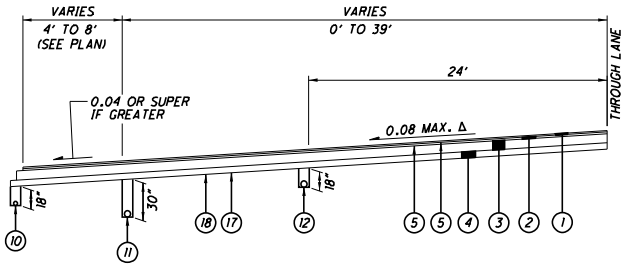
RAMPS C & D @ WESTERN TERMINUS
RAMPS I, J, K & L @ S.R. 775



SUPERELEVATED SECTION - RAMPS

SECTION APPLIES:

RAMPS C & D @ WESTERN TERMINUS
RAMPS I, J, K & L @ S.R. 775



SPEED LANE CHANGE

SECTION APPLIES:

STA. 126+47.37 TO STA. 132+00.00

NOTES:

PROFILE GRADE ON RIGHT SIDE OF DIRECTION OF TRAVEL
\+ SUPERELEVATION TO BE OPPOSITE HAND TO TYPICAL SHOWN
FOR LEGEND, SEE SHEET 14
FOR DITCH DETAILS, SEE SHEET 23
FOR EDGE COURSE DETAILS, SEE SHEET 24
* FOR SUPERELEVATED SHOULDER DETAILS, SEE DETAIL A, SHEET 24
FOR EXACT LOCATION OF UNDERDRAINS, SEE UNDERDRAIN TABLE SHEETS 579-583
Δ DENOTES MAXIMUM FOR ENTIRE PROJECT, FOR SPECIFIC CURVE SUPERELEVATION, SEE PLANS

TYPICAL SECTIONS - RAMPS

LAW-7-2.17

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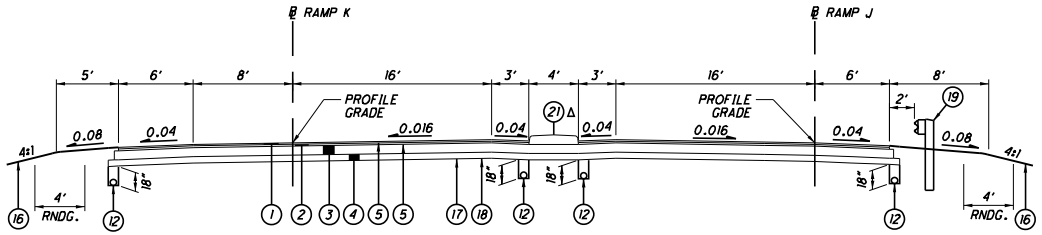
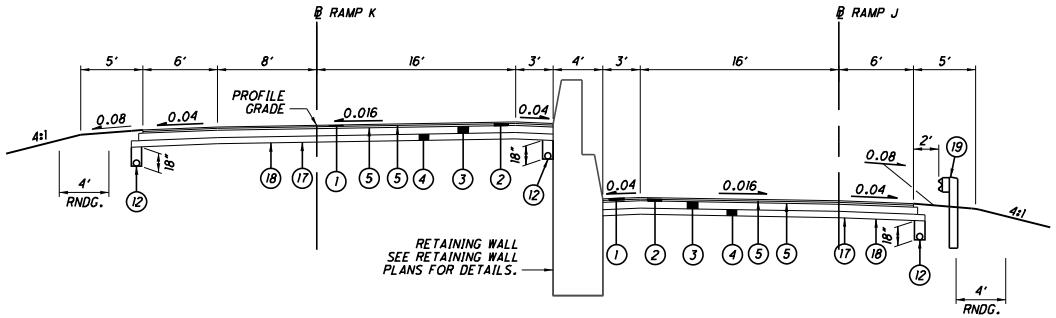


NORMAL SECTION - RAMPS J & K CONCRETE MEDIAN

SECTION APPLIES:

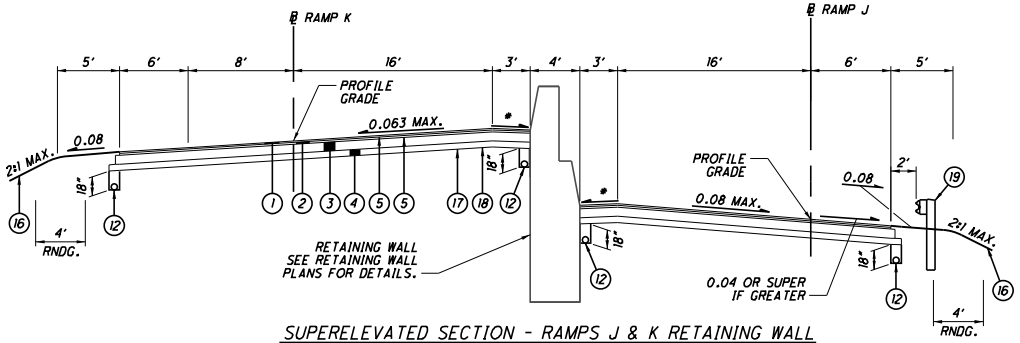
STA. 384+75.56 TO STA. 385+75.77
Δ STA. 385+48.00 TO STA. 385+75.77



NORMAL SECTION - RAMPS

SECTION APPLIES:

STA. 385+75.77 TO STA. 387+63.83



SUPERELEVATED SECTION - RAMPS J & K RETAINING WALL

SECTION APPLIES:

STA. 387+63.83 TO STA. 388+64.51

NOTES:

+ SUPERELEVATION TO BE OPPOSITE HAND TO TYPICAL SHOWN
FOR LEGEND, SEE SHEET 14
FOR DITCH DETAILS, SEE SHEET 23
FOR EDGE COURSE DETAILS, SEE SHEET 24
* FOR SUPERELEVATED SHOULDER DETAILS, SEE DETAIL A, SHEET 24
FOR EXACT LOCATION OF UNDERDRAINS, SEE UNDERDRAIN TABLE SHEETS 579-583

TYPICAL SECTIONS - RAMPS

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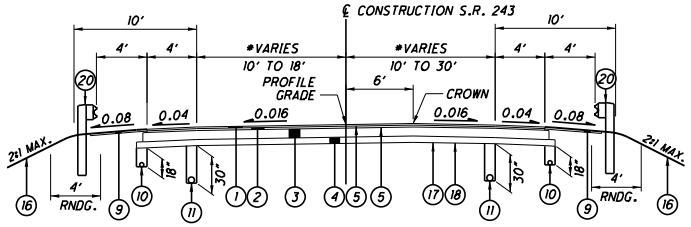
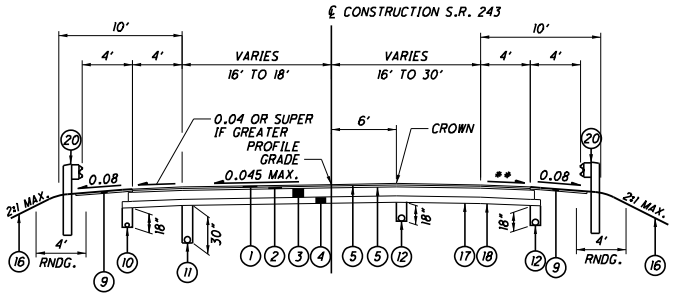


NORMAL SECTION - S.R. 243

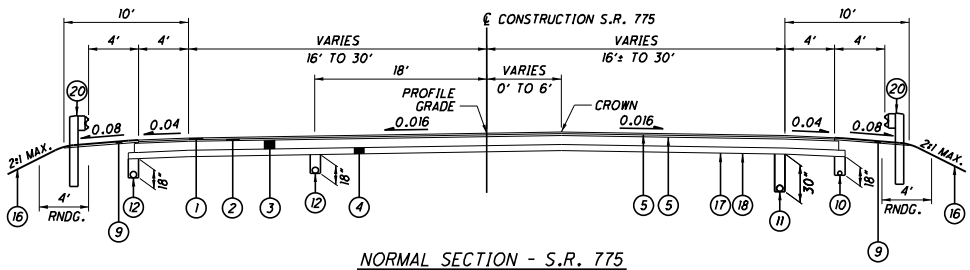
SECTION APPLIES:
STA. 12+51.68 TO STA. 12+67.39
STA. 18+34.52 TO STA. 21+54.00

* OVERLAY EXISTING SECTION FROM STA. 19+05.08 TO STA. 21+54.00



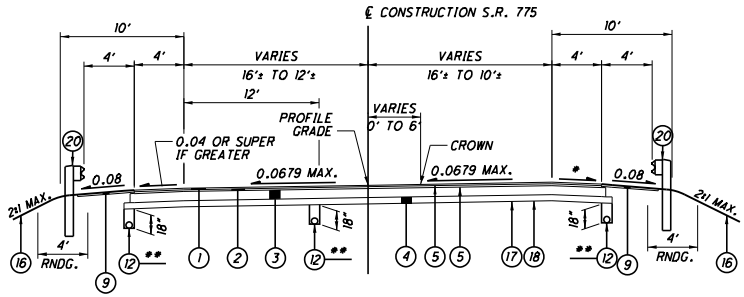
SUPERELEVATED SECTION - S.R. 243

SECTION APPLIES:
+ STA. 9+36.00 TO STA. 12+51.68
STA. 12+67.39 TO STA. 18+34.52



NORMAL SECTION - S.R. 775

SECTION APPLIES:
STA. 45+42.93 TO STA. 68+10.76



SUPERELEVATED SECTION - S.R. 775

SECTION APPLIES:
STA. 68+10.76 TO STA. 70+75.00

** AGGREGATE DRAINS TO BE USED
FROM STA. 65+50.37 TO STA. 70+75.00.

NOTES:
+ SUPERELEVATION TO BE OPPOSITE HAND TO TYPICAL SHOWN
FOR LEGEND, SEE SHEET 14
FOR DITCH DETAILS, SEE SHEET 23
FOR EDGE COURSE DETAILS, SEE SHEET 24
* FOR SUPERELEVATED SHOULDER DETAILS, SEE DETAIL A, SHEET 24
FOR EXACT LOCATION OF UNDERDRAINS, SEE UNDERDRAIN TABLE SHEETS 579-583

TYPICAL SECTIONS - S.R. 243 & S.R. 775

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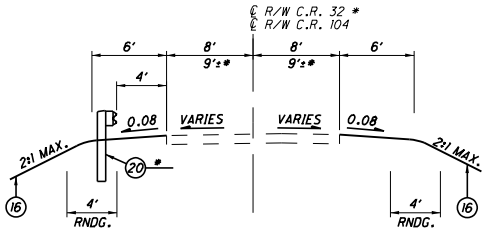
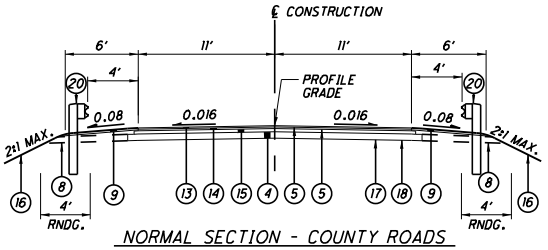


NORMAL SECTION - SIDE ROADS

SECTION APPLIES

C.R. 104
C.R. 32

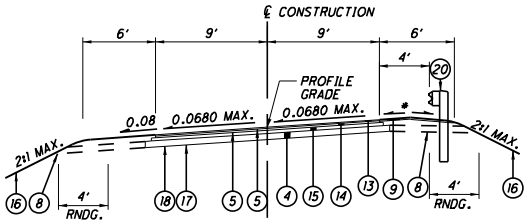


NORMAL SECTION - COUNTY ROADS

SECTION APPLIES:

C.R. 69

STA. 9+90.51 TO STA. 13+27.35
STA. 33+77.74 TO STA. 54+56.85

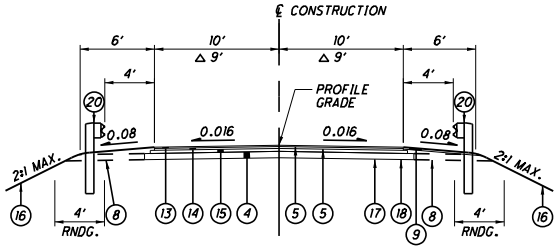


SUPERELEVATED SECTION - SIDE ROADS

SECTION APPLIES

C.R. 118

STA. 10+99.19 TO STA. 14+76.01



NORMAL SECTION - SIDE ROADS

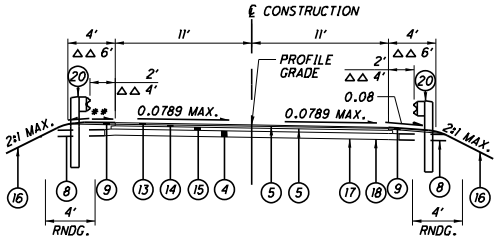
SECTION APPLIES

HENSON HOLLOW EMERGENCY ACCESS

STA. 10+00.00 TO STA. 12+60.04

△ C.R. 118

STA. 10+18.30 TO STA. 10+99.19



SUPERELEVATED SECTION - COUNTY ROADS

SECTION APPLIES:

△△ C.R. 69

STA. 13+27.35 TO STA. 33+77.74
STA. 54+56.85 TO STA. 56+73.01

C.R. 2

+ STA. 10+28.28 TO STA. 12+40.34
STA. 12+40.34 TO STA. 17+58.28

NOTES:

+ SUPERELEVATION TO BE OPPOSITE HAND TO TYPICAL SHOWN
FOR LEGEND, SEE SHEET 14
FOR DITCH DETAILS, SEE SHEET 23
FOR EDGE COURSE DETAILS, SEE SHEET 24
* FOR SUPERELEVATED SHOULDER DETAILS, SEE DETAIL A, SHEET 24
FOR EXACT LOCATION OF UNDERDRAINS, SEE UNDERDRAIN TABLE SHEETS 579-583

TYPICAL SECTIONS - COUNTY ROADS AND SIDE ROADS

LAW-7-2.17

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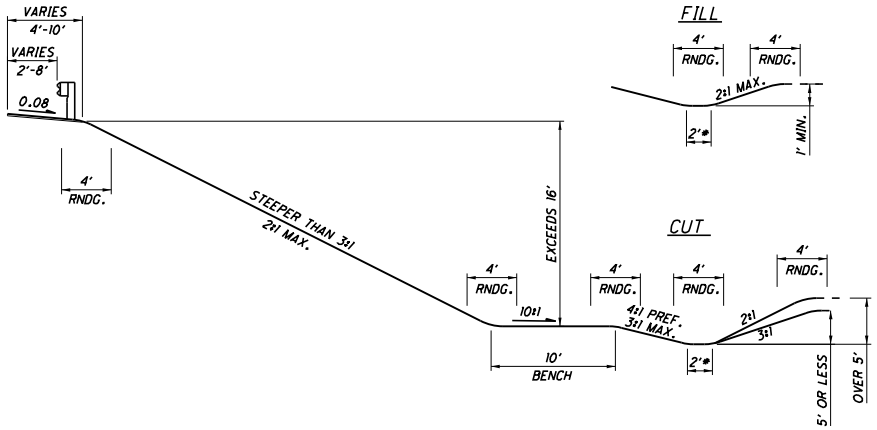
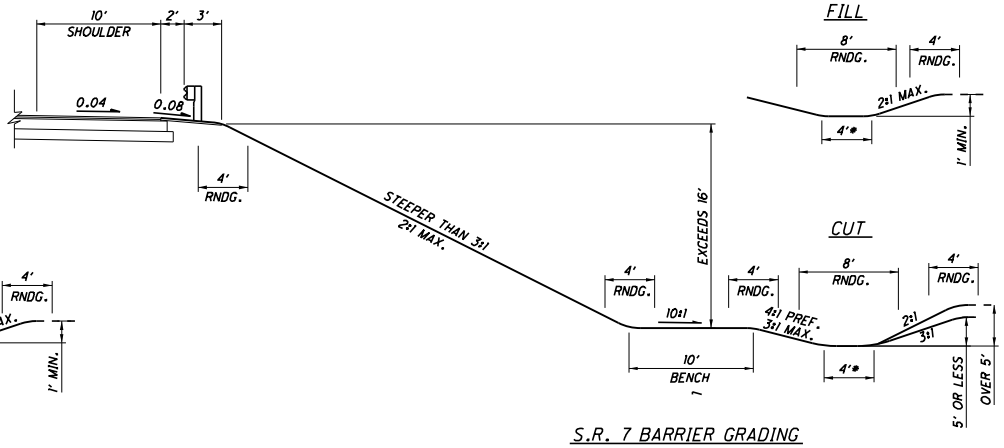
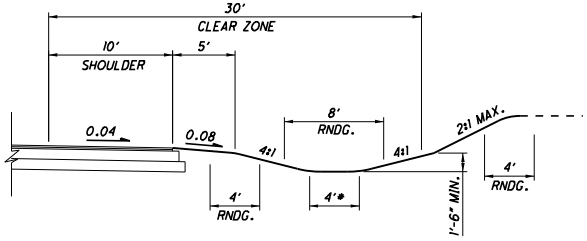


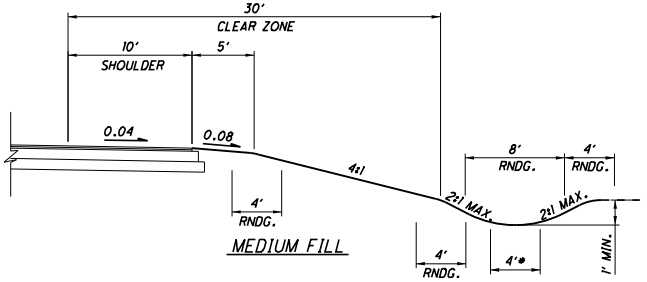
SIDE ROAD BARRIER GRADING



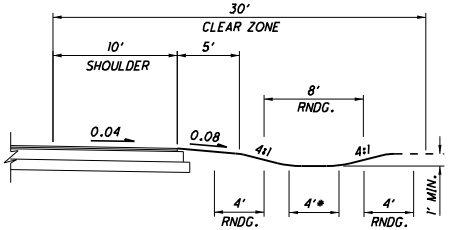
S.R. 7 BARRIER GRADING



CUT SECTION



MEDIUM FILL



LOW FILL

NOTES:
* SEE CROSS SECTIONS FOR POST CONSTRUCTION ENHANCED BANKFULL WIDTHS
ROUNDING SHALL BE 4' WIDER THAN DITCH WIDTH SHOWN

TYPICAL SECTIONS - DITCH DETAILS

LAW-7-2.17

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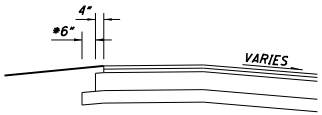
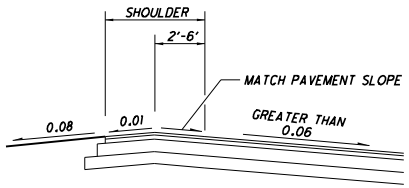
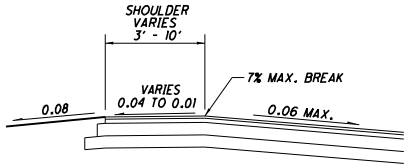
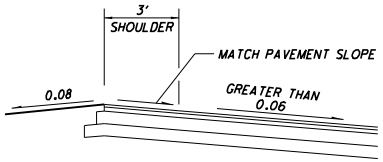


EDGE COURSE DETAIL
FOR ALL TYPICALS

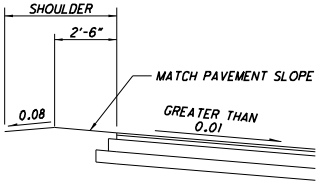
* 6" OR THE THICKNESS OF OVERLYING LIFT, WHICHEVER IS GREATER.

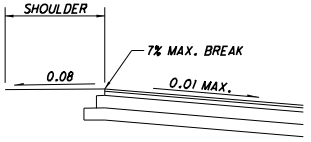






DETAIL A
PAVED SHOULDERS





DETAIL B
TURF SHOULDERS

TYPICAL SECTIONS - MISCELLANEOUS DETAILS

LAW-7-2.17

24
633

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ROUNDING

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

UTILITIES

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

FRONTIER COMMUNICATIONS
1315 ALBERT STREET
PORTSMOUTH, OHIO 45662
PHONE: (740) 354-0521
MS. DENA MARTIN

AMERICAN ELECTRIC POWER (DISTRIBUTION)
38831 STATE ROUTE 7
REEDSVILLE, OHIO 45772
PHONE: (740) 985-3054
MR. CLARKE SAUNDERS

AMERICAN ELECTRIC POWER (TRANSMISSION)
8600 SMITHS HILL ROAD
NEW ALBANY, OHIO 43054
PHONE: (380) 205-5072
MR. MICHAEL CARR

BUCKEYE RURAL ELECTRIC CO-OP, INC.
P.O. BOX 200
RIO GRANDE, OHIO 45674
PHONE: (740) 379-9658
MS. MARTINE-DENISE LONG

HECLA WATER ASSOCIATION, INC.
3190 SR 141
IRONTON, OHIO 45638
PHONE: (740) 533-0526, EXT. 5
MR. TIM DALTON

AQUA OHIO (FORMERLY OHIO-AMERICAN WATER COMPANY)
6650 SOUTH AVENUE
BOARDMAN, OHIO 44512
PHONE: (330) 397-0776
MR. ANDY HIPPLEY

COLUMBIA GAS OF OHIO
843 PIATT AVENUE
CHILLICOTHE, OHIO 45601
PHONE: (740) 656-7401
MR. JOSEPH DiBENEDETTO

MYERS DRILLING COMPANY
P.O. BOX 290
BARBOURSVILLE, WV. 25504
PHONE: (304) 736-7431
MR. JOHN DIAL

ARMSTRONG CABLE SERVICES
9651 COUNTY ROAD 1
SOUTH POINT, OHIO 45680
PHONE: (740) 451-1833
MR. NATHAN ITTIG

UNION-ROME TOWNSHIPS
SUBSEWER DISTRICT
P.O. BOX 430
CHESAPEAKE, OHIO 45619
PHONE: (740) 867-8700
MR. JAROD LEFFINGWELL

CHARTER COMMUNICATIONS
(AKA SPECTRUM FKA TIME WARNER CABLE)
1617 FOXHAVEN DRIVE
RICHMOND, KENTUCKY 40475
PHONE: (859) 626-4899
MR. MARK HARLOW

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

SURVEYING PARAMETERS

PRIMARY PROJECT CONTROL MONUMENTS GOVERN ALL POSITIONING ON ODOT PROJECTS. SEE TABLE CONTAINING PROJECT CONTROL INFORMATION.

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

PROJECT CONTROL

POSITIONING METHOD: STATIC GPS (2011)
MONUMENT TYPE: TYPE A

VERTICAL POSITIONING

ORTHOMETRIC HEIGHT DATUM:	NAVD88
GEOID:	GEOID09

HORIZONTAL POSITIONING

REFERENCE FRAME:	NAD83 (CORS 96)
ELLIPSOID:	GRS80
MAP PROJECTION:	LAMBERT CONFORMAL CONIC
COORDINATE SYSTEM:	OHIO STATE PLANE, SOUTH ZONE
COMBINED SCALE FACTOR:	1.000044500000 (FROM GROUND TO SPC)
ORIGIN OF COORDINATE SYSTEM:	0,0

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

UNITS ARE IN U.S. SURVEY FEET.

CALCULATED SLP
CHECKED ALB

GENERAL NOTES

LAW-7-2.17

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633

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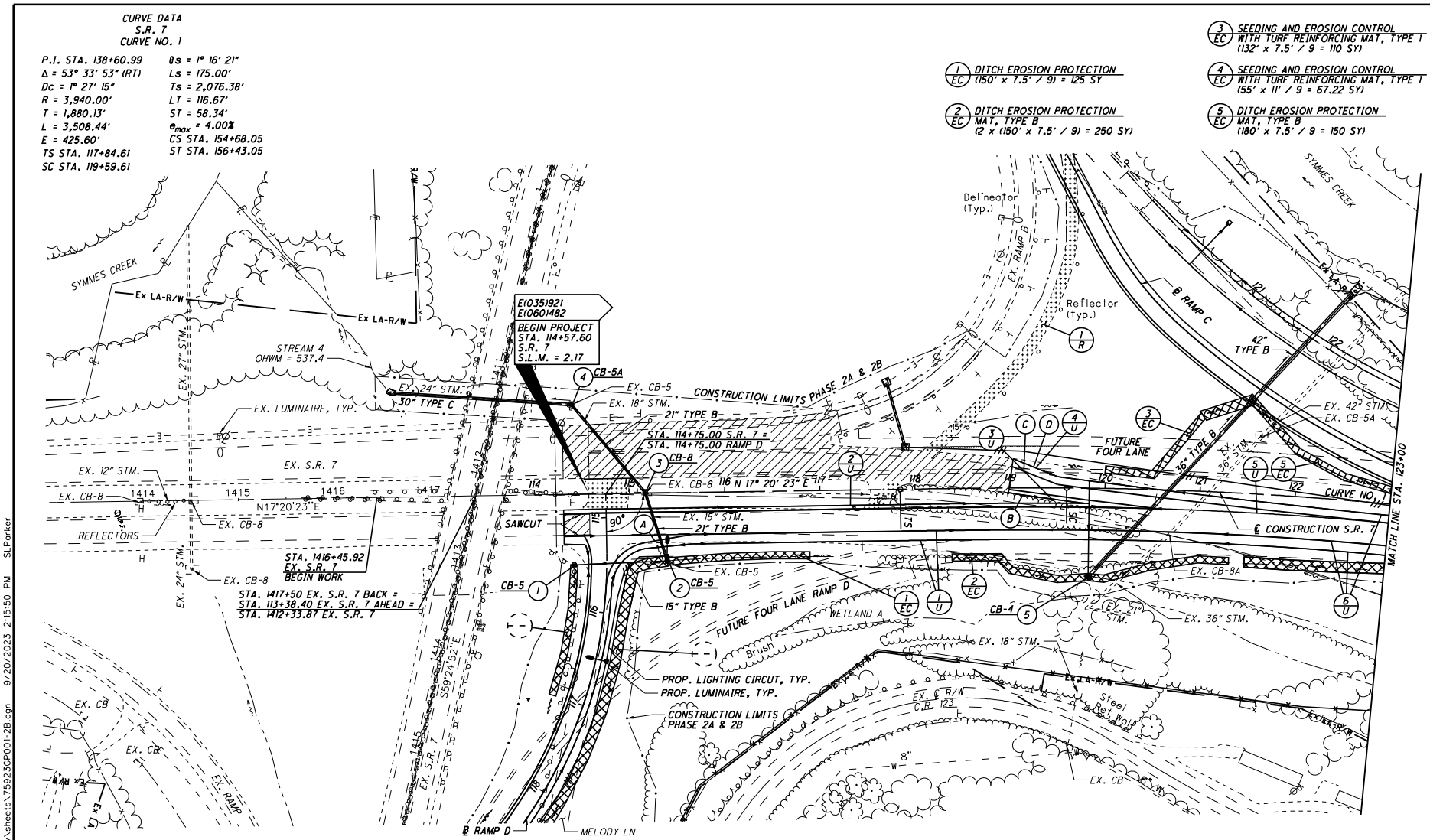

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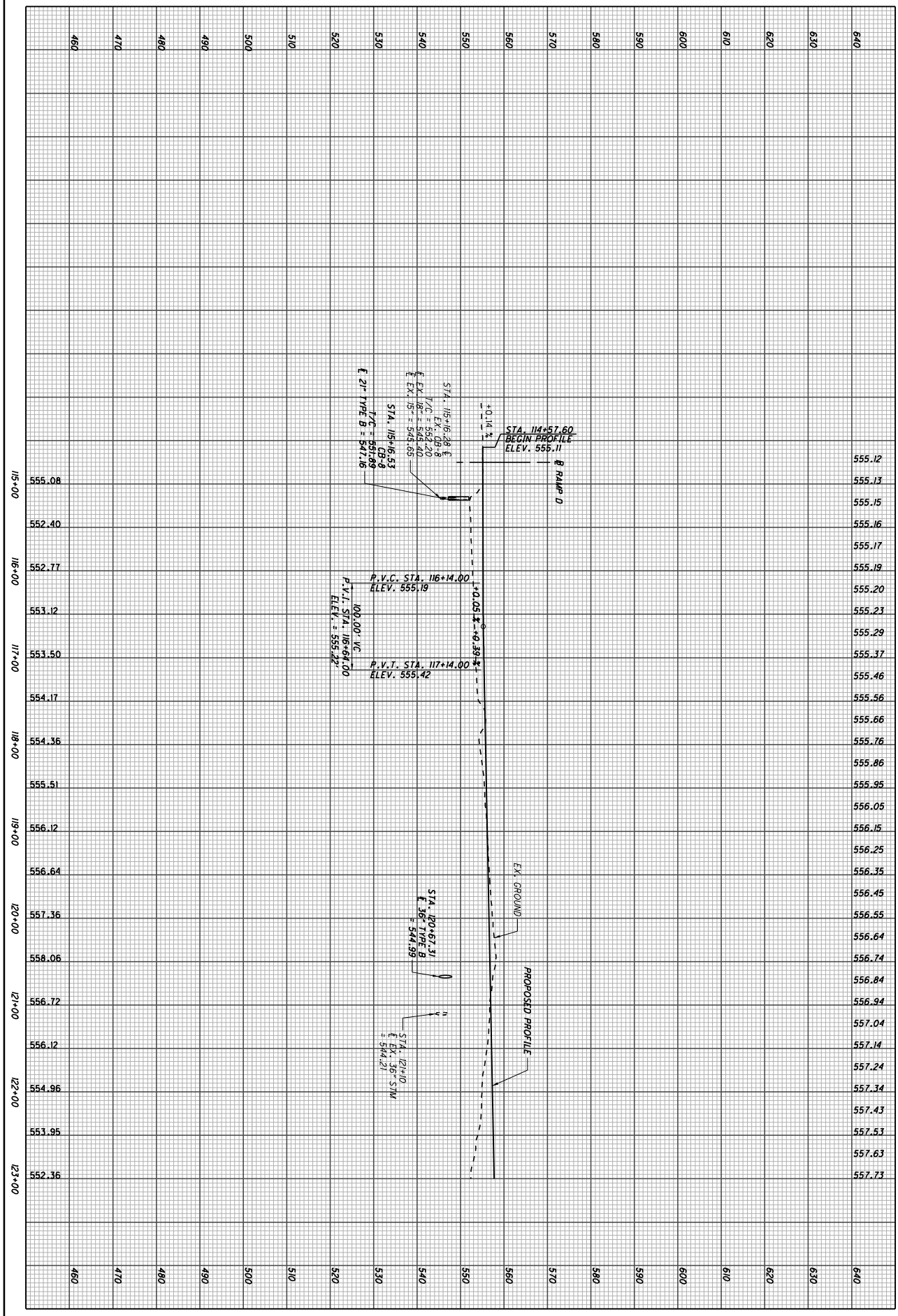
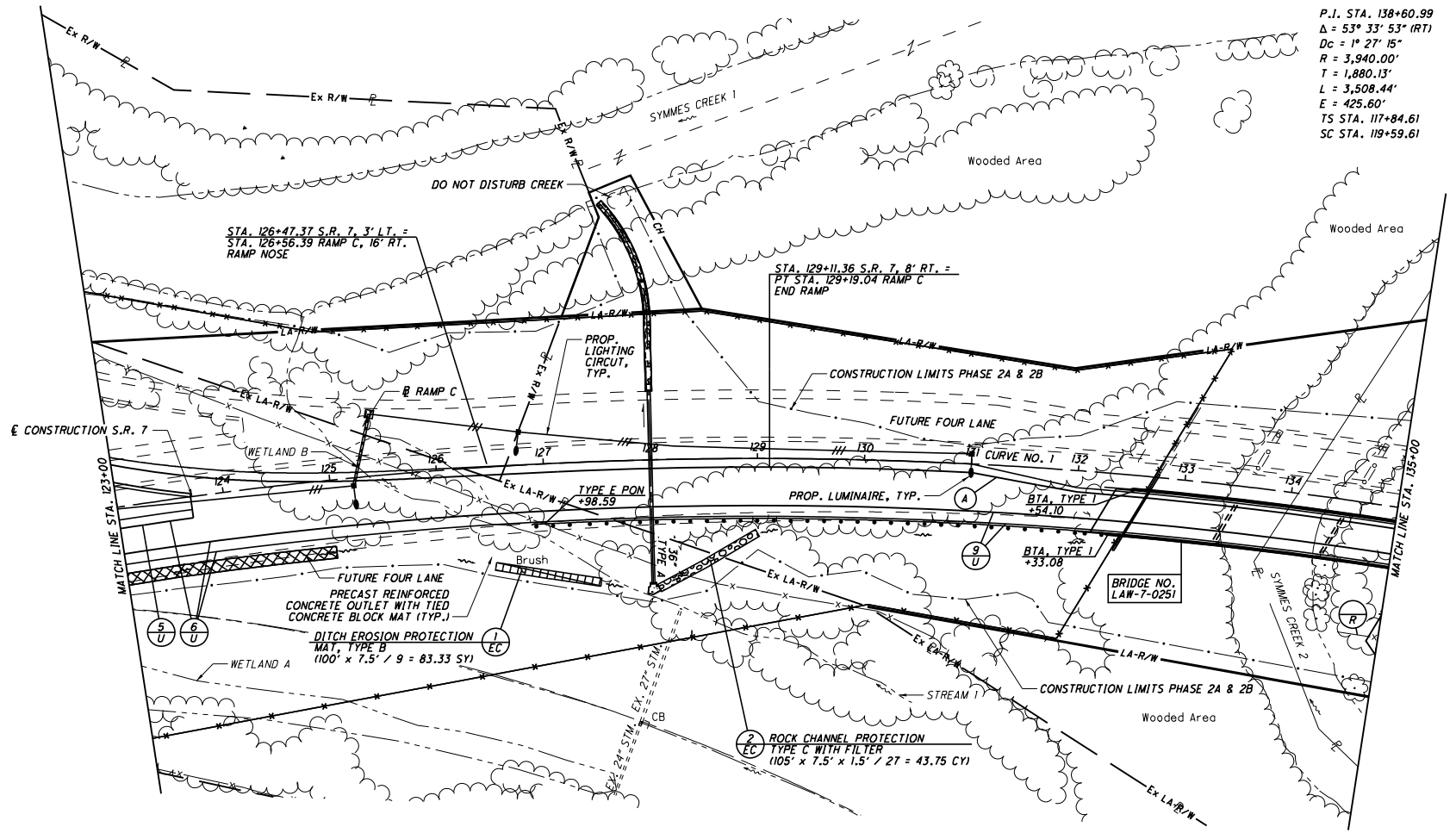


47 / 633	LAW-7-2.17	PROFILE - S.R. 7 STA. 114+57.60 TO STA. 123+00	CALCULATED SLP CHECKED ALB



CURVE DATA
S.R. 7
CURVE NO. 1

P.I. STA. 138+60.99
Δ = 53° 33' 53" (RT)
Dc = 1° 27' 15"
R = 3,940.00'
T = 1,880.13'
L = 3,508.44'
E = 425.60'
TS STA. 117+84.61
SC STA. 119+59.61

θs = 1° 16' 21"
Ls = 175.00'
Ts = 2,076.38'
LT = 116.67'
ST = 58.34'
e_{max} = 4.00%
CS STA. 154+68.05
ST STA. 156+43.05

(A) -
STA. 131+00.00
BEGIN PAVEMENT TAPER, 8' RT.
BEGIN SHOULDER TAPER, 0' RT./LT.

STA. 132+00.00
END PAVEMENT TAPER, 20' RT.
END SHOULDER TAPER, 16' RT.

(VBF) DENOTES LOCATION OF VEGETATED BIOFILTER

FOR PROFILE, SEE SHEET 49
FOR RAMP C PLAN & PROFILE, SEE SHEET 367
FOR PAVEMENT DETAILS, SEE SHEET 532
FOR INTERCHANGE DETAILS, SEE SHEETS 543-548
FOR CULVERT DETAILS, SEE SHEETS 568-570
FOR UNDERDRAIN TABLES, SEE SHEETS 581-585
FOR TRAFFIC CONTROL PLAN, SEE SHEETS 589-619
1

HORIZONTAL SCALE IN FEET
0 25 50 100
CALCULATED SLP
CHECKED ALB

PLAN - S.R. 7
STA. 123+00 TO STA. 135+00

LAW-7-2.17

48
635

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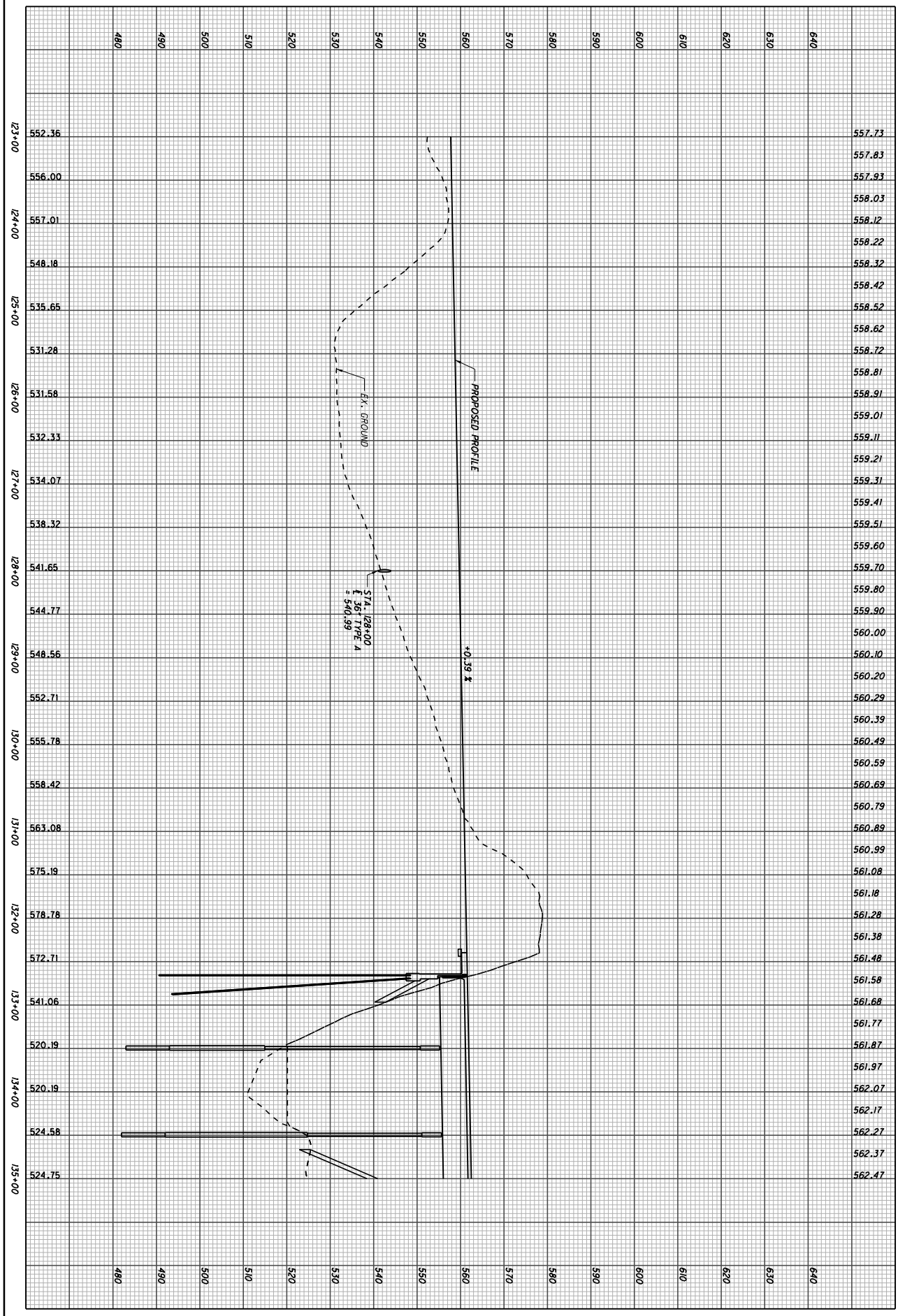
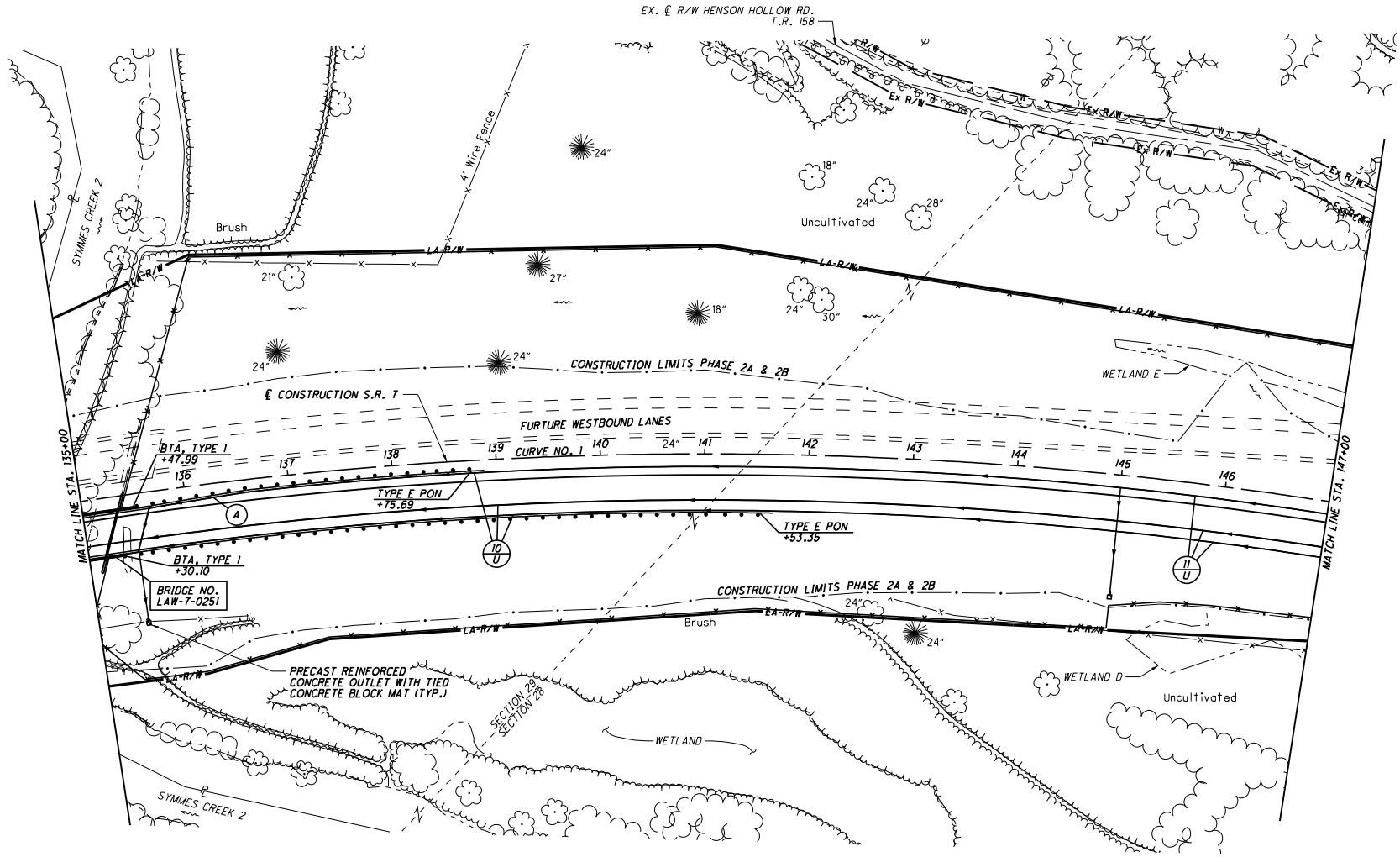


49 / 633	LAW-7-2.17	PROFILE - S.R. 7 STA. 123+00 TO STA. 135+00	CALCULATED SLP CHECKED ALB



CURVE DATA
S.R. 7
CURVE NO. 1

P.I. STA. 138+60.99	θs = 1° 16' 21"
Δ = 53° 33' 53" (RT)	Ls = 175.00'
Dc = 1° 27' 15"	Ts = 2,076.38'
R = 3,940.00'	LT = 116.67'
T = 1,880.13'	ST = 58.34'
L = 3,508.44'	e_{max} = 4.00%
E = 425.60'	CS STA. 154+68.05
TS STA. 117+84.61	ST STA. 156+43.05
SC STA. 119+59.61	

(A) - STA. 135+59.43
BEGIN SHOULDER TAPER, 16' RT.
STA. 136+59.43
END SHOULDER TAPER, 12' RT.

FOR PROFILE, SEE SHEET 51
FOR UNDERDRAIN TABLES, SEE SHEETS 581-585
FOR TRAFFIC CONTROL PLAN, SEE SHEETS 589-619
FOR STRUCTURES 20' AND OVER, SEE SHEETS XXX-XXX

HORIZONTAL SCALE IN FEET
0 25 50 100
CALCULATED SLP
CHECKED ALB

PLAN - S.R. 7
STA. 135+00 TO STA. 147+00

LAW-7-2.17

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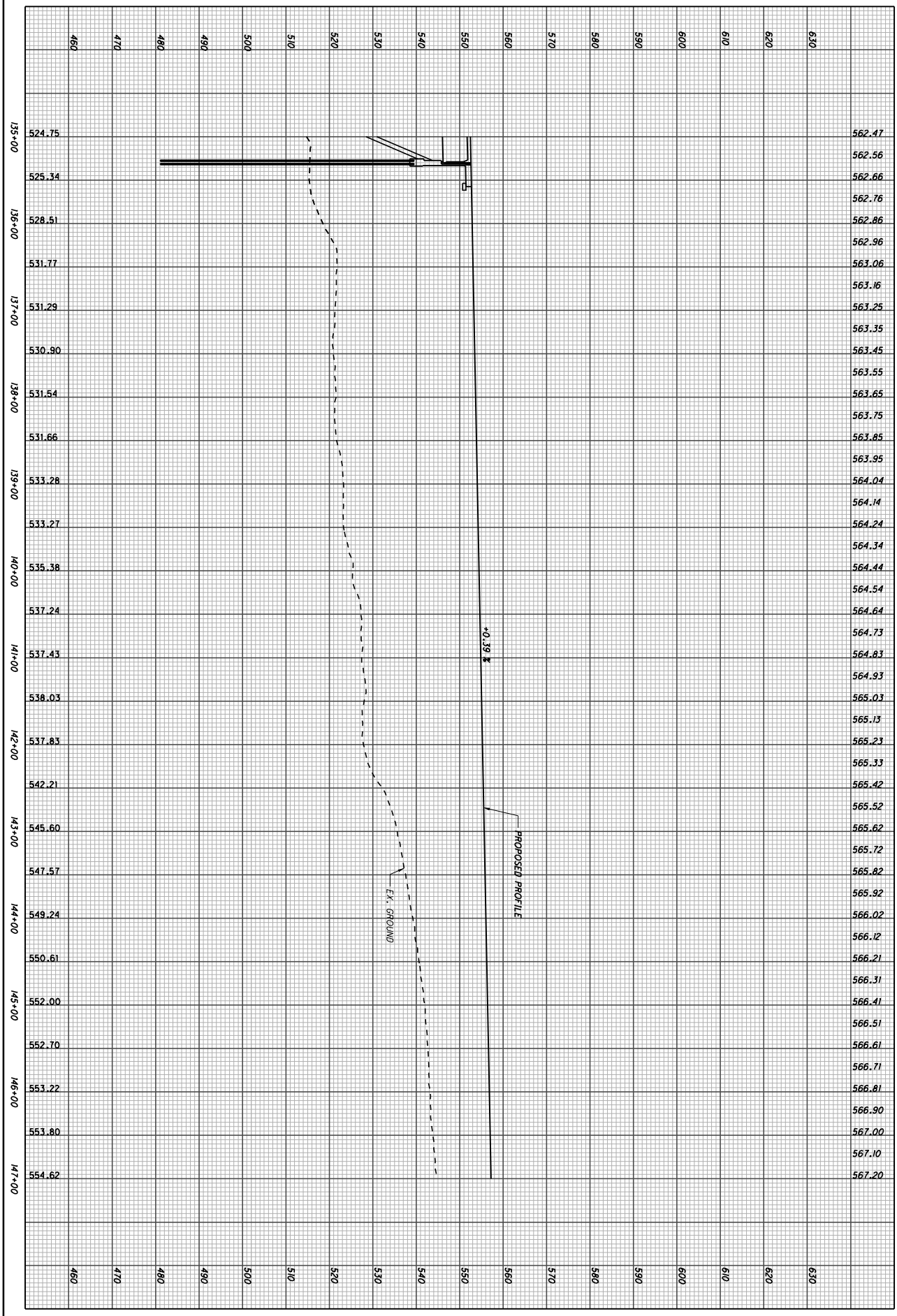
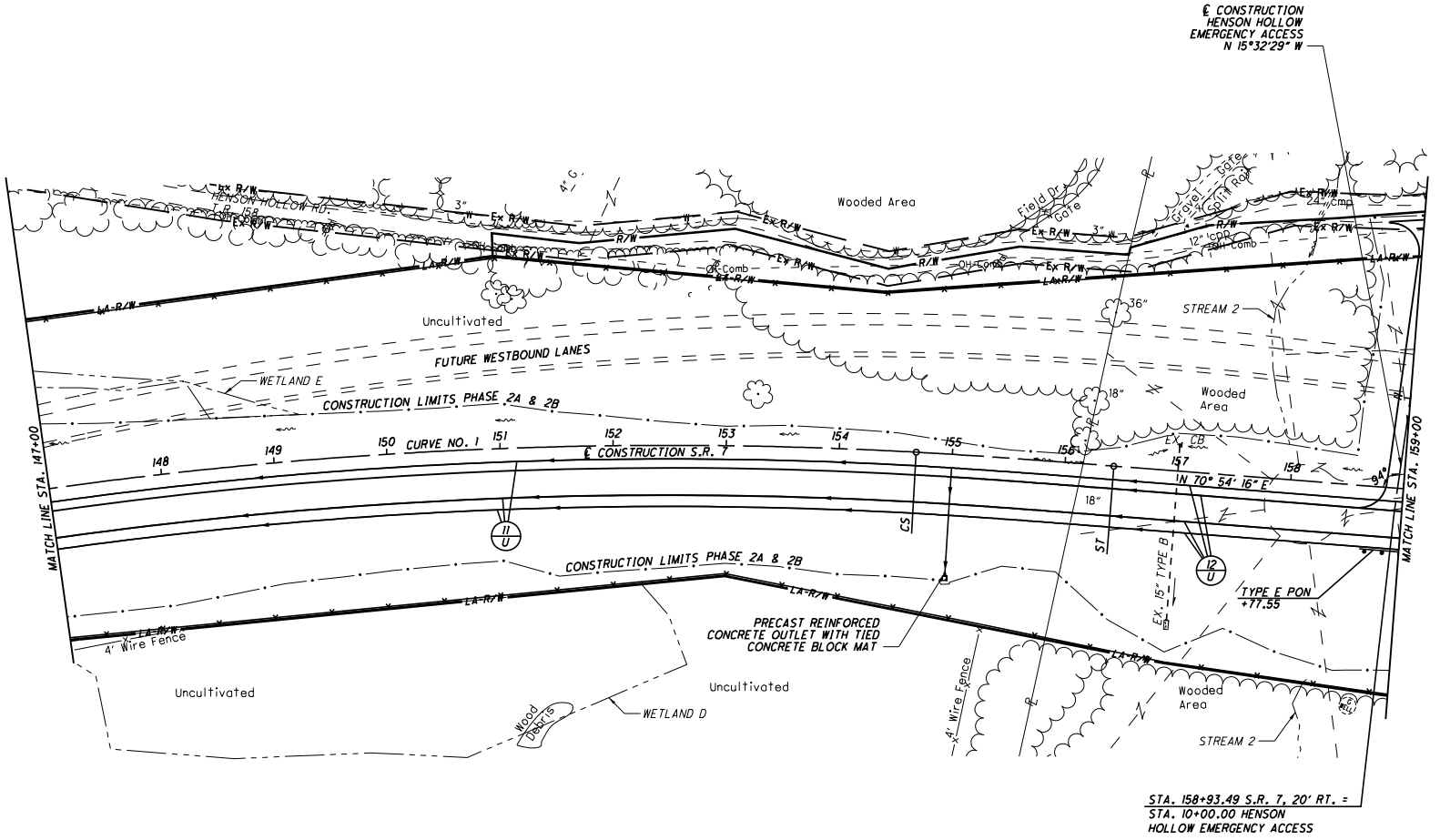


51 / 633	LAW-7-2.17	PROFILE - S.R. 7 STA. 135+00 TO STA. 147+00	CALCULATED SLP CHECKED ALB



CURVE DATA
S.R. 7
CURVE NO. 1

P.I. STA. 138+60.99	θs = 1° 16' 21"
Δ = 53° 33' 53" (RT)	Ls = 175.00'
Dc = 1° 27' 15"	Ts = 2,076.38'
R = 3,940.00'	LT = 116.67'
T = 1,880.13'	ST = 58.34'
L = 3,508.44'	e_{max} = 4.00%
E = 425.60'	CS STA. 154+68.05
TS STA. 117+84.61	ST STA. 156+43.05
SC STA. 119+59.61	

FOR PROFILE, SEE SHEET 53
FOR STORM SEWER PROFILE, SEE SHEET 135
FOR UNDERDRAIN TABLES, SEE SHEETS 579-583
FOR TRAFFIC CONTROL PLAN, SEE SHEETS 589-619

HORIZONTAL SCALE IN FEET
0 25 50 100
CALCULATED SLP
CHECKED ALB

PLAN - S.R. 7
STA. 147+00 TO STA. 159+00

LAW-7-2.17

52
633

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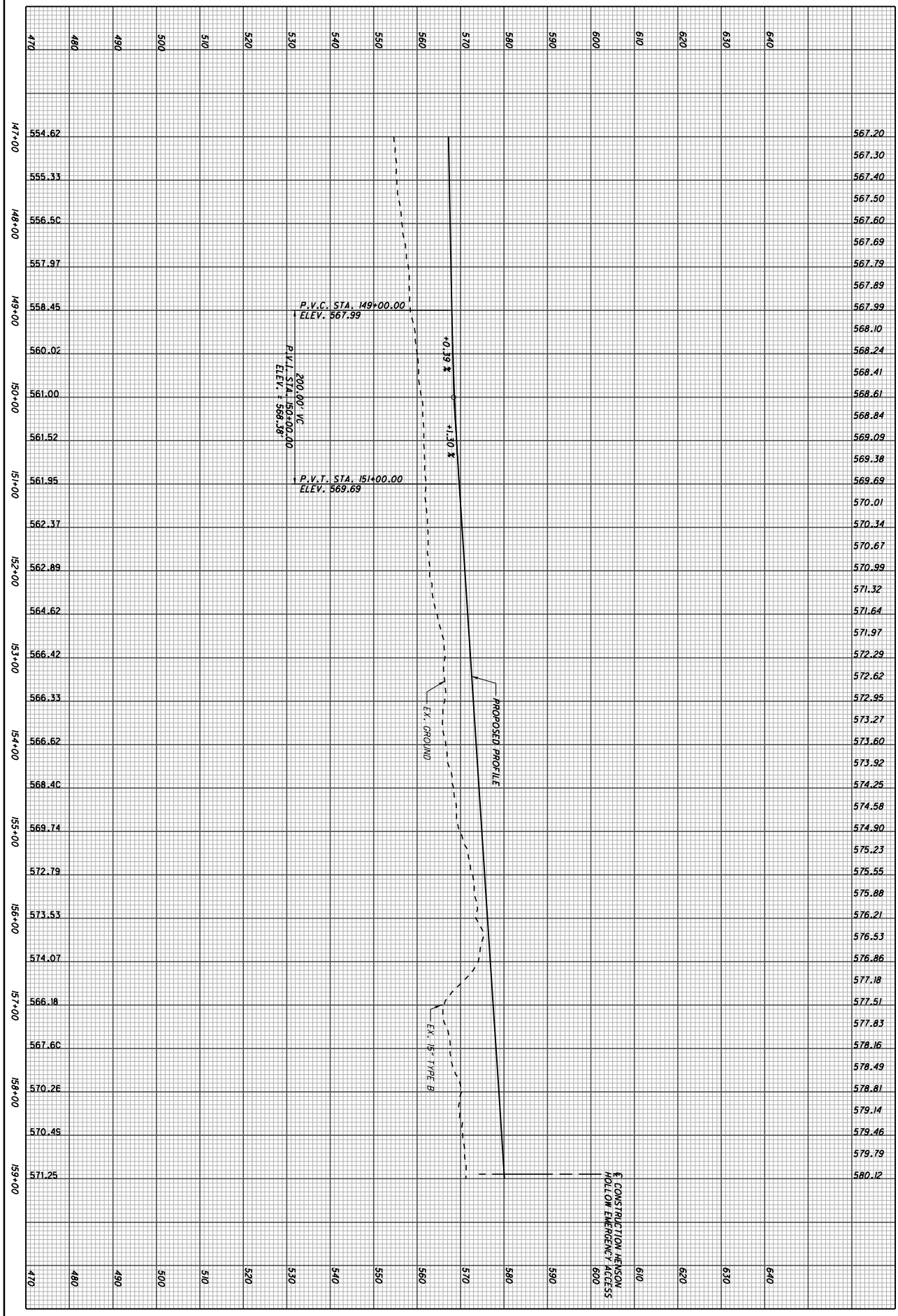
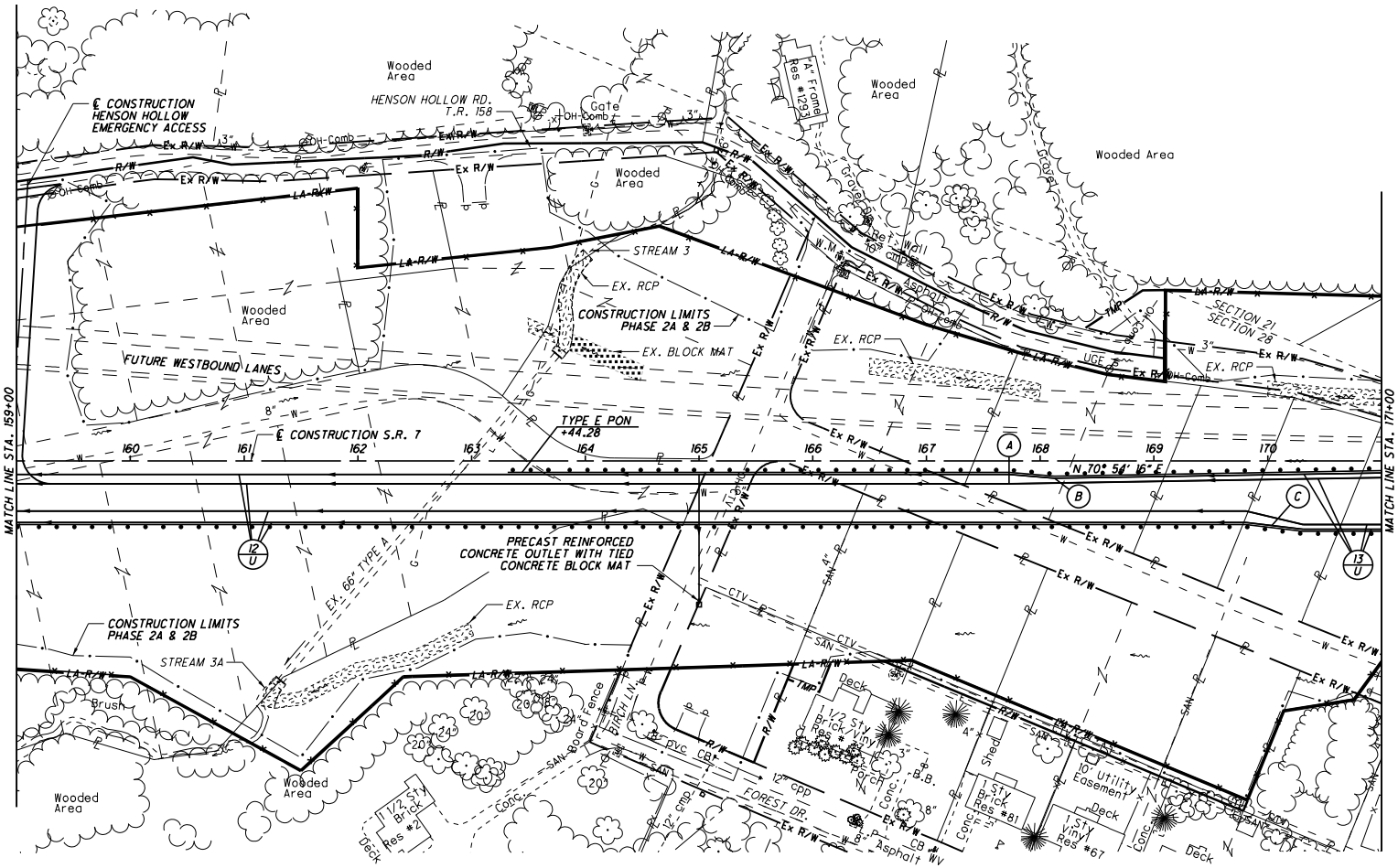


53 / 633	LAW-7-2.17	PROFILE - S.R. 7 STA. 147+00 TO STA. 159+00	CALCULATED SLP CHECKED ALB



(A) - STA. 167+72.52
BEGIN PAVEMENT TAPER, 20' RT.
BEGIN SHOULDER TAPER, 12' RT.

(B) - STA. 168+12.52
END SHOULDER TAPER, 15.33' RT.

(C) - STA. 169+80.98
BEGIN PAVEMENT TAPER, 44' RT.
BEGIN SHOULDER TAPER, 54' RT.

STA. 170+30.98
END PAVEMENT TAPER, 56' RT.
END SHOULDER TAPER, 60' RT.

FOR PROFILE, SEE SHEET 55
FOR DRIVE DETAILS, SEE SHEETS 553-557
FOR UNDERDRAIN TABLES, SEE SHEETS 579-583
FOR TRAFFIC CONTROL PLAN, SEE SHEETS 589-619

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED SLP
CHECKED ALB

PLAN - S.R. 7
STA. 159+00 TO STA. 171+00

LAW-7-2.17

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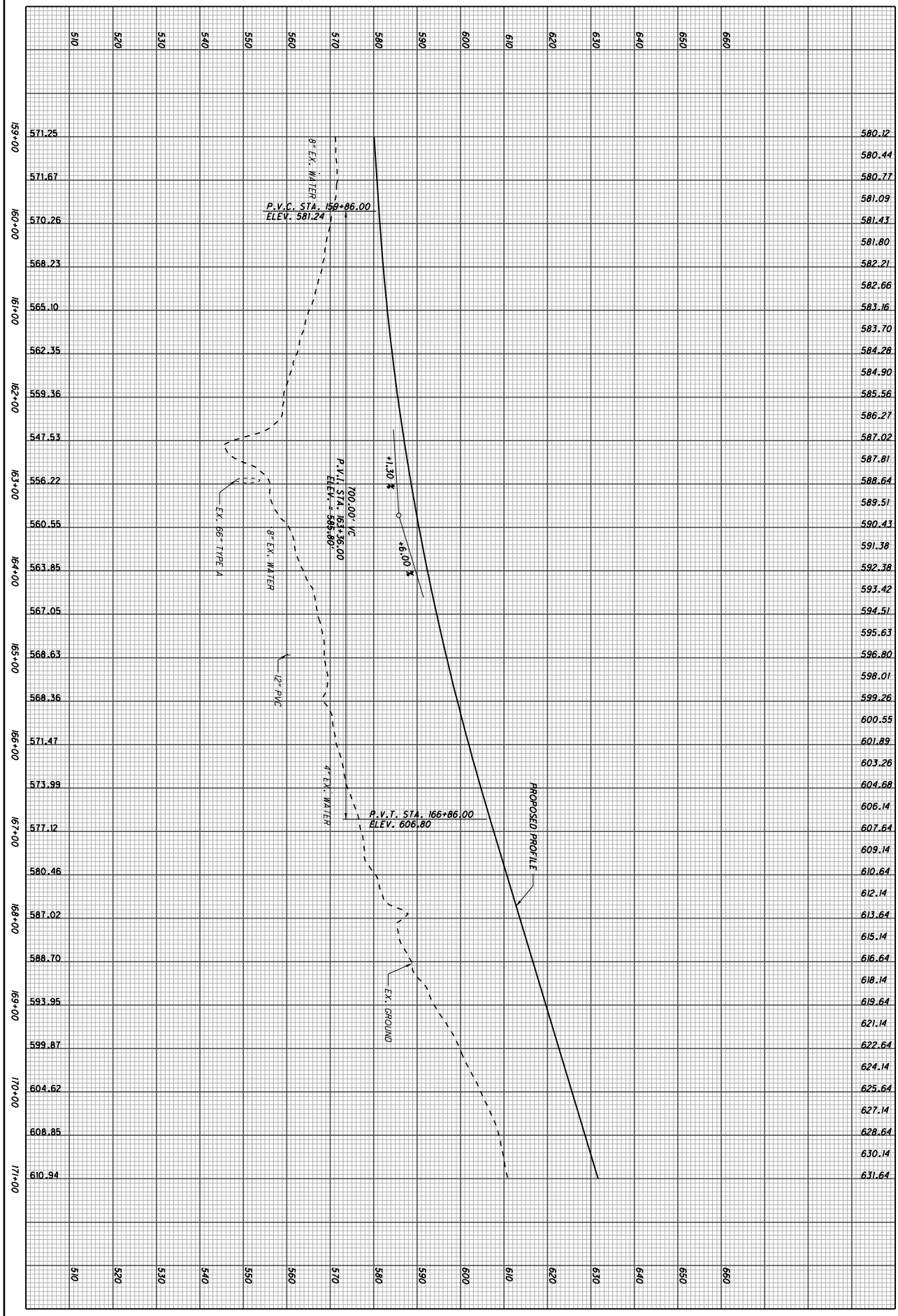
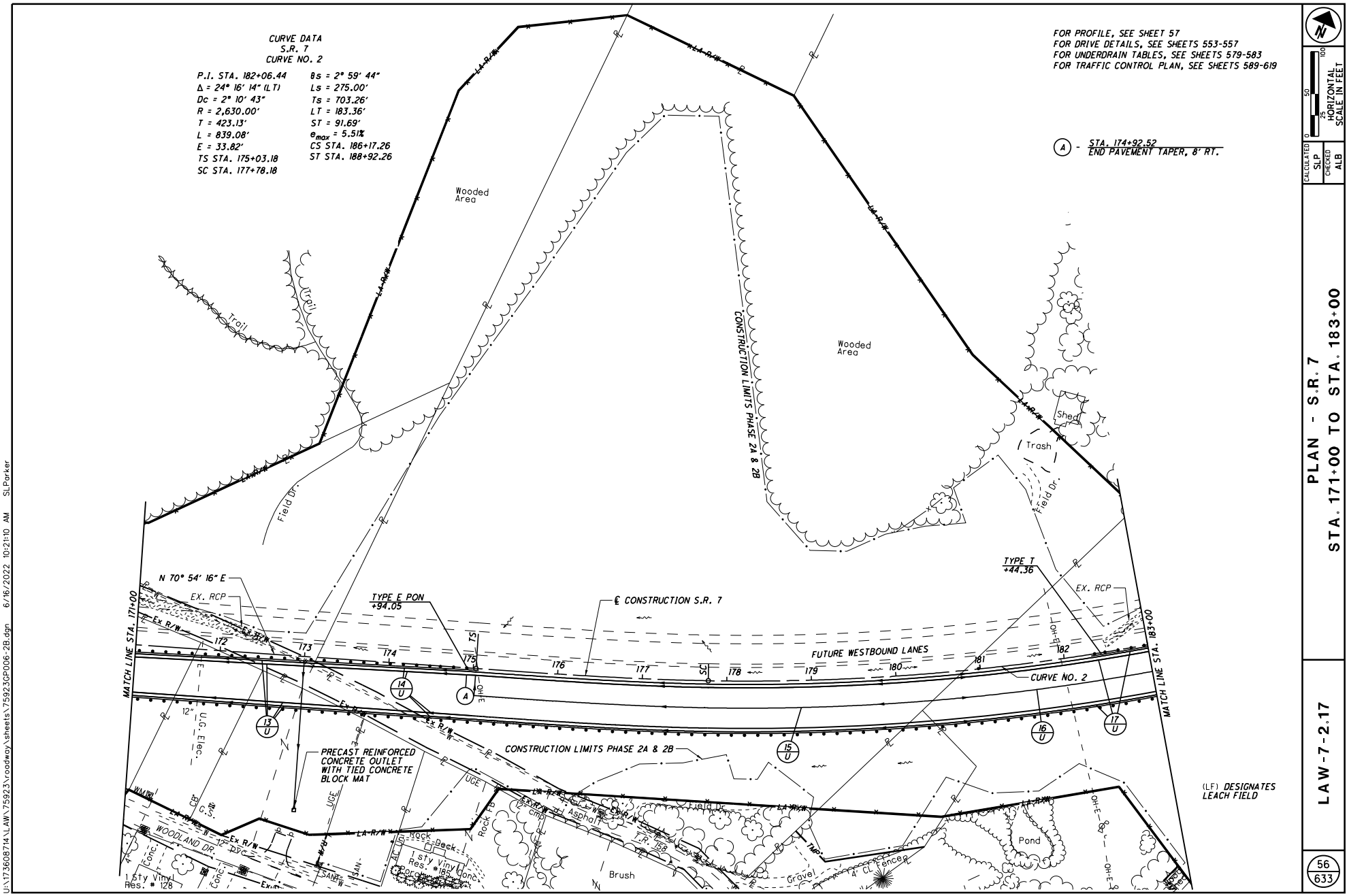


55 / 633	LAW-7-2.17	PROFILE - S.R. 7 STA. 159+00 TO STA. 171+00	CALCULATED SLP CHECKED ALB



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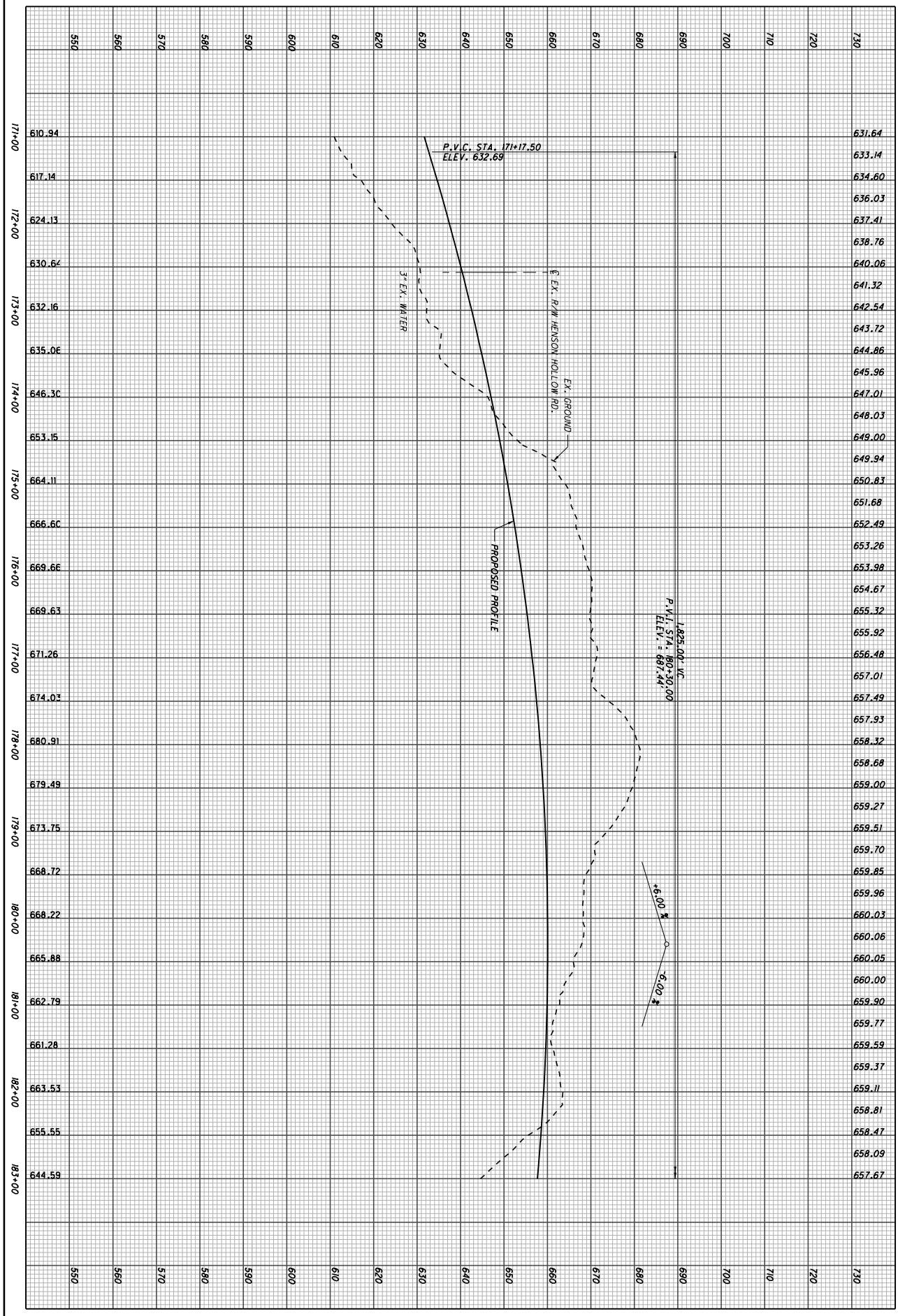
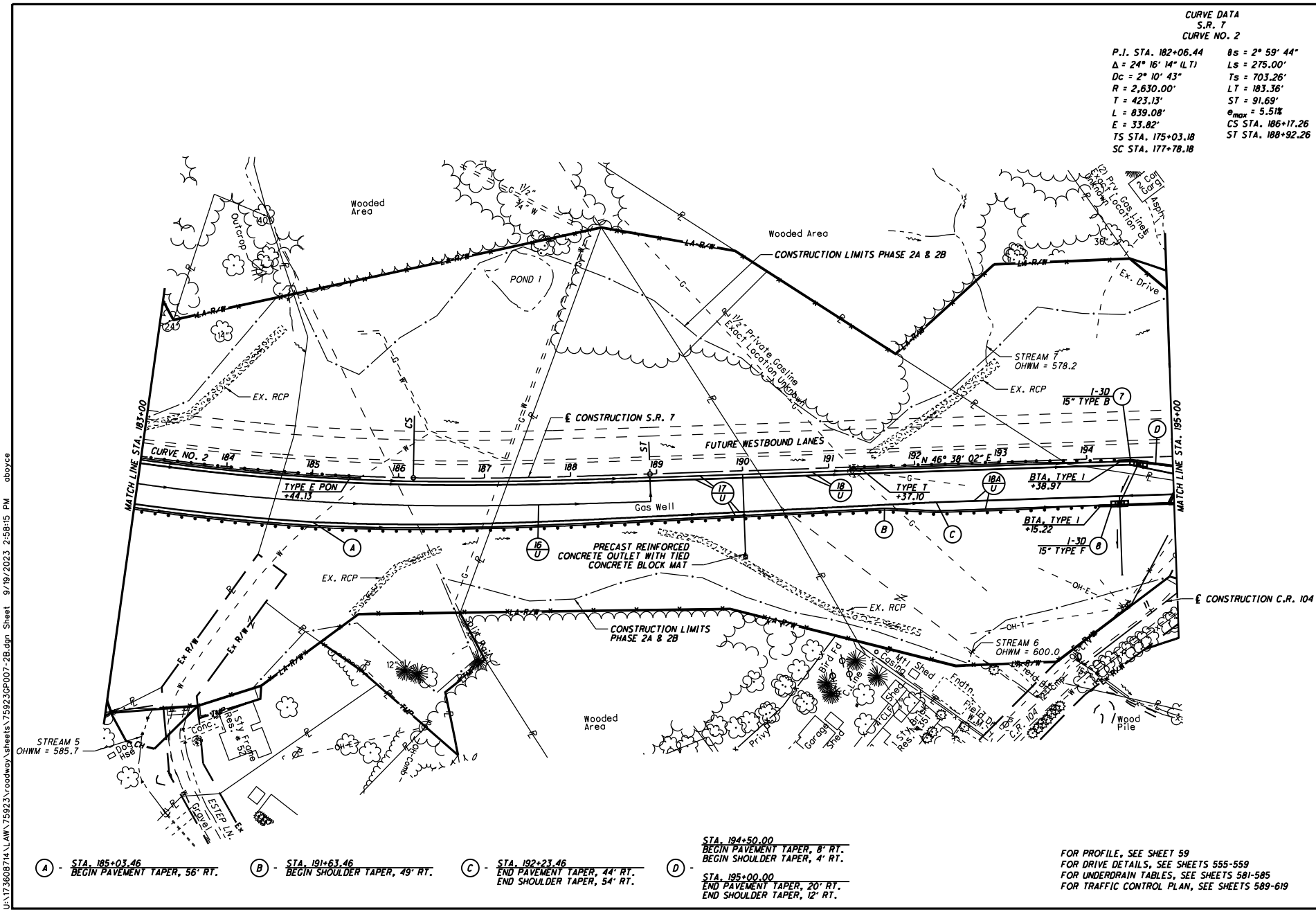


57 / 633	LAW-7-2.17	PROFILE - S.R. 7 STA. 171+00 STA. 183+00

CALCULATED SLP
CHECKED ALB



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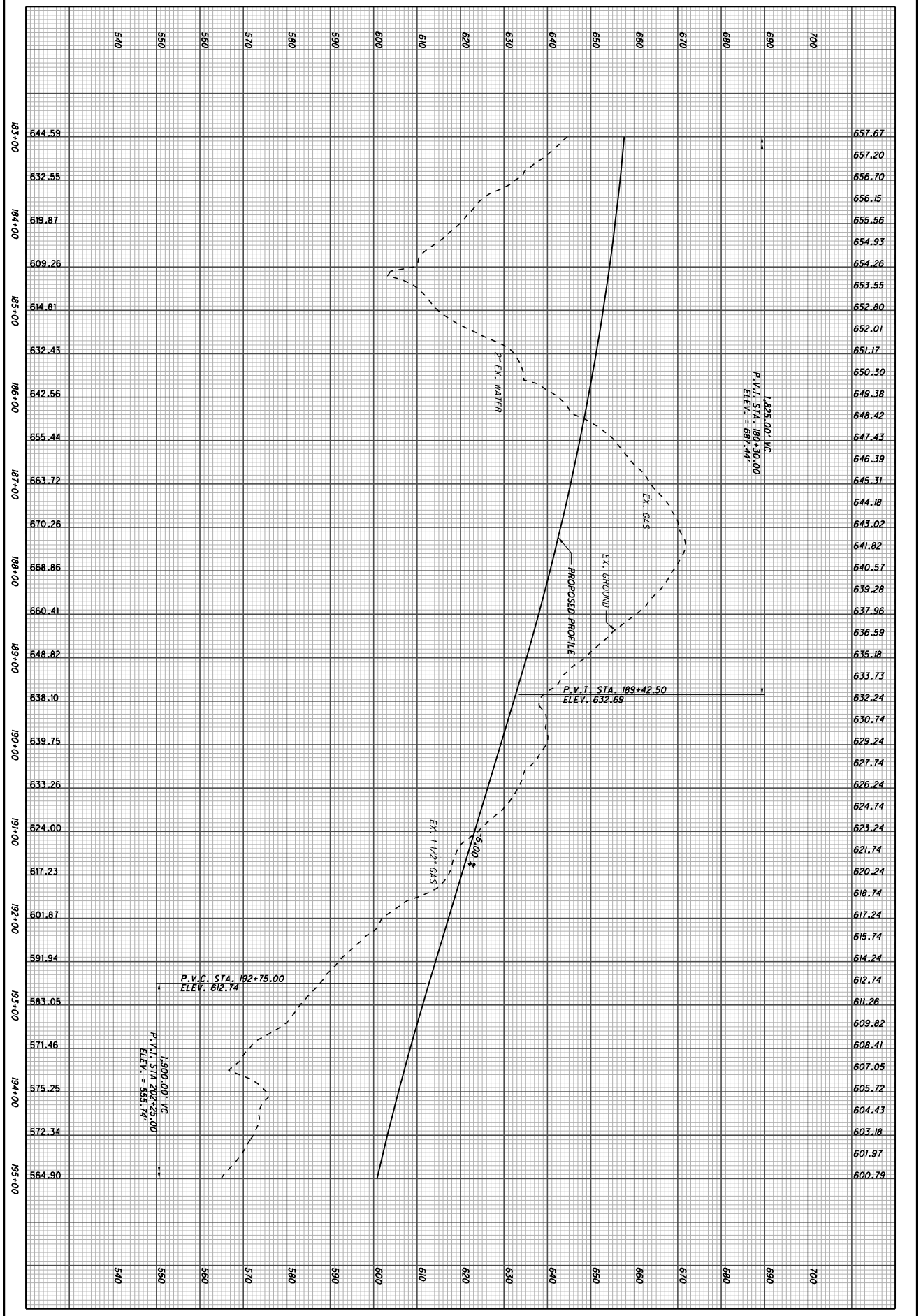
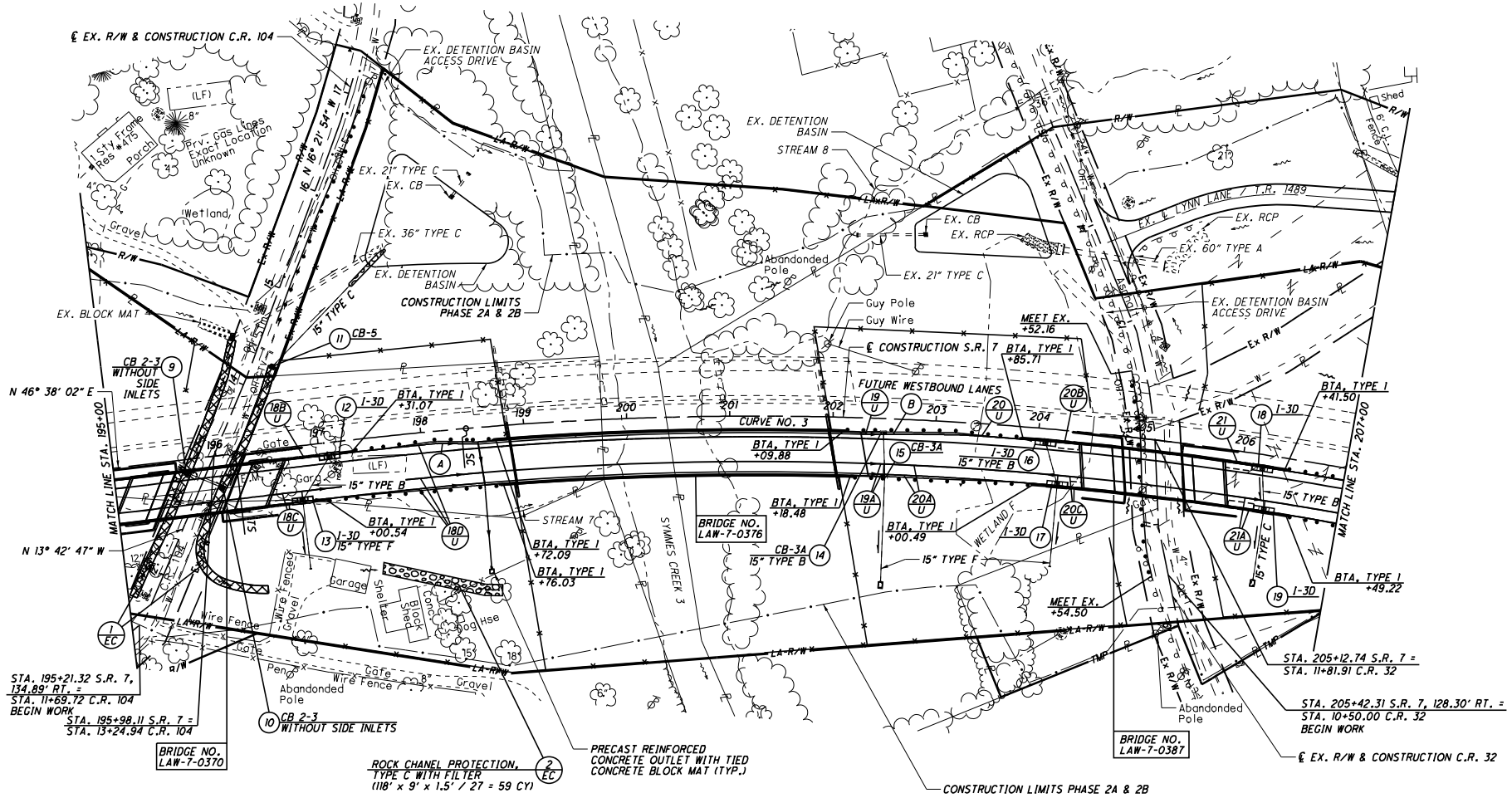


59 633	LAW-7-2.17	PROFILE - S.R. 7 STA. 183+00 TO STA. 195+00	CALCULATED SLP CHECKED ALB



CURVE DATA
S.R. 7
CURVE NO. 3

P.I. STA. 205+33.31
Δ = 27° 30' 45" (RT)
Dc = 1° 45' 00"
R = 3,274.04'
T = 683.24'
L = 1,347.14'
E = 70.53'
TS STA. 196+19.13
SC STA. 198+44.13
Bs = 1° 58' 07"
Ls = 225.00'
Ts = 914.18'
LT = 150.01'
ST = 75.01'
e_{max} = 4.60%
CS STA. 211+91.27
ST STA. 214+16.27

(1 EC) DITCH EROSION PROTECTION
(231' x 7.5' / 9 = 192.5 SY) LT.
(277' x 7.5' / 9 = 230.83 SY) RT.

(A) - STA. 198+14.83 BEGIN SHOULDER TAPER, 12' RT.
STA. 198+54.83 END SHOULDER TAPER, 16' RT.

(B) - STA. 202+27.86 BEGIN SHOULDER TAPER, 16' RT.
STA. 203+27.86 BEGIN SHOULDER TAPER, 12' RT.

(LF) DESIGNATES LEACH FIELD

FOR PROFILE, SEE SHEET 61
FOR STORM SEWER PROFILE, SEE SHEET 563
FOR UNDERDRAIN TABLES, SEE SHEETS 579-583
FOR TRAFFIC CONTROL PLAN, SEE SHEETS 589-619

HORIZONTAL SCALE IN FEET
0 25 50 100
CALCULATED SLP
CHECKED ALB

PLAN - S.R. 7
STA. 195+00 TO STA. 207+00

LAW-7-2.17

60
633

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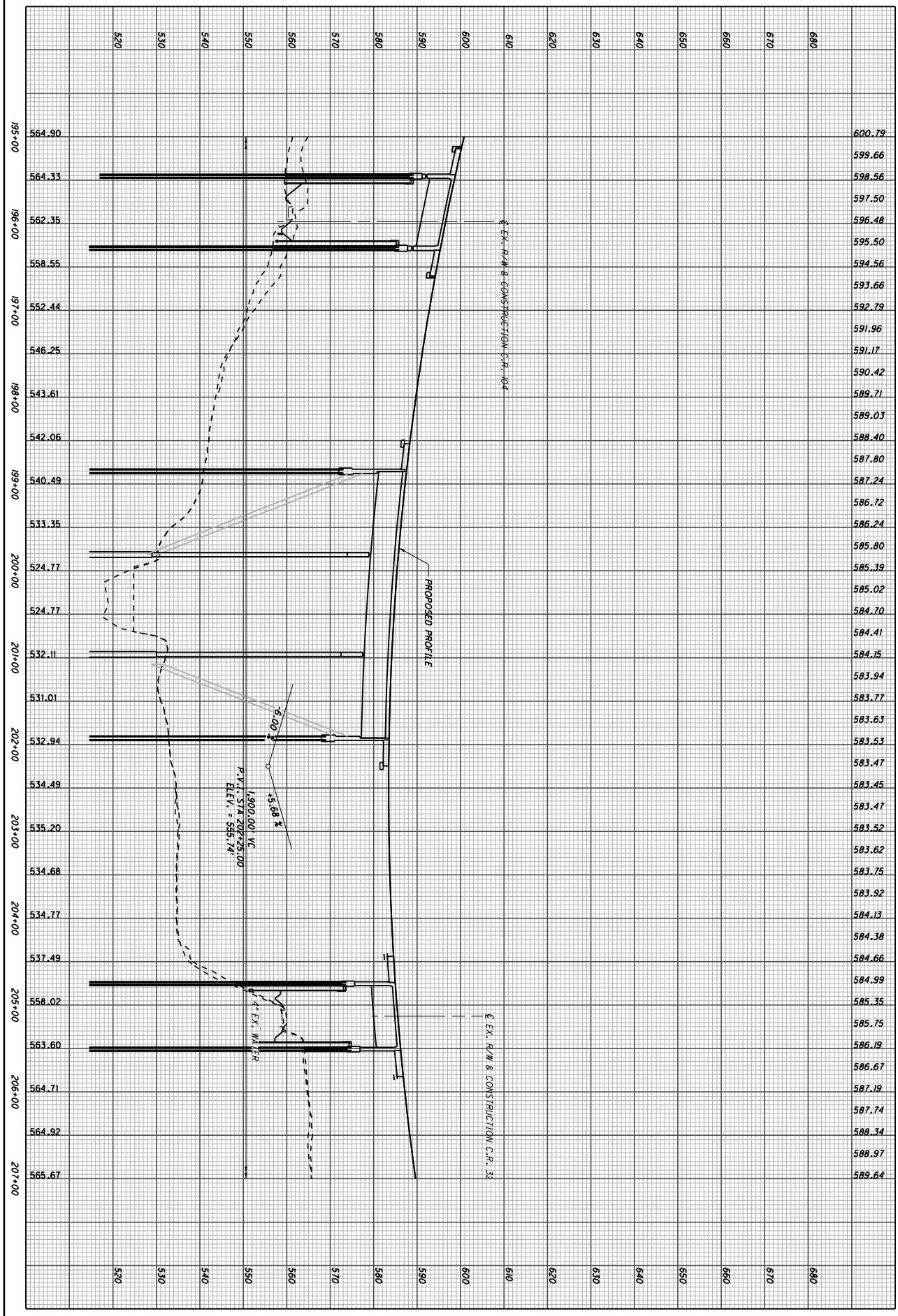
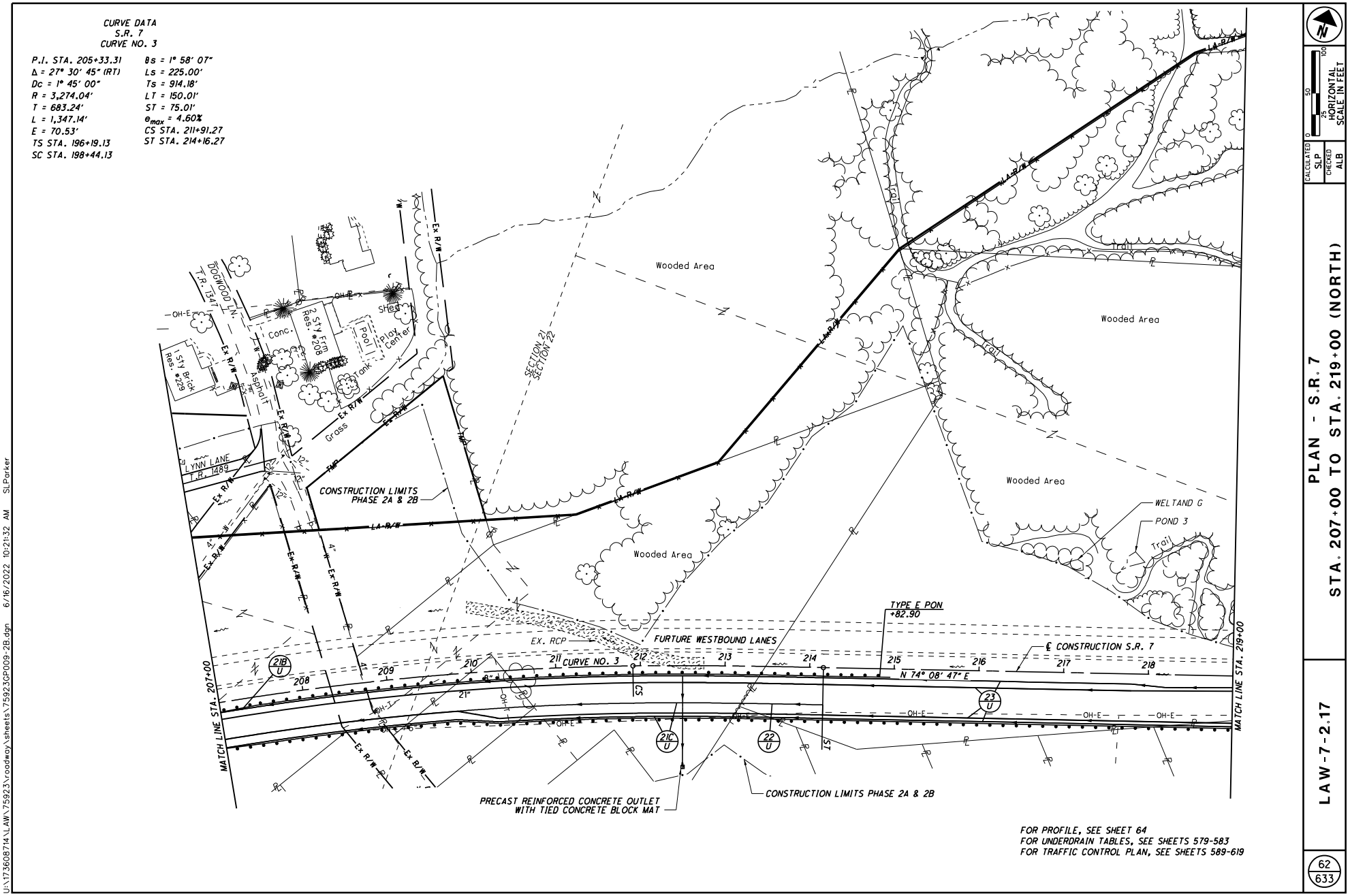


61 / 633	LAW-7-2.17	PROFILE - S.R. 7 STA. 195+00 STA. 207+00	CALCULATED SLP CHECKED ALB



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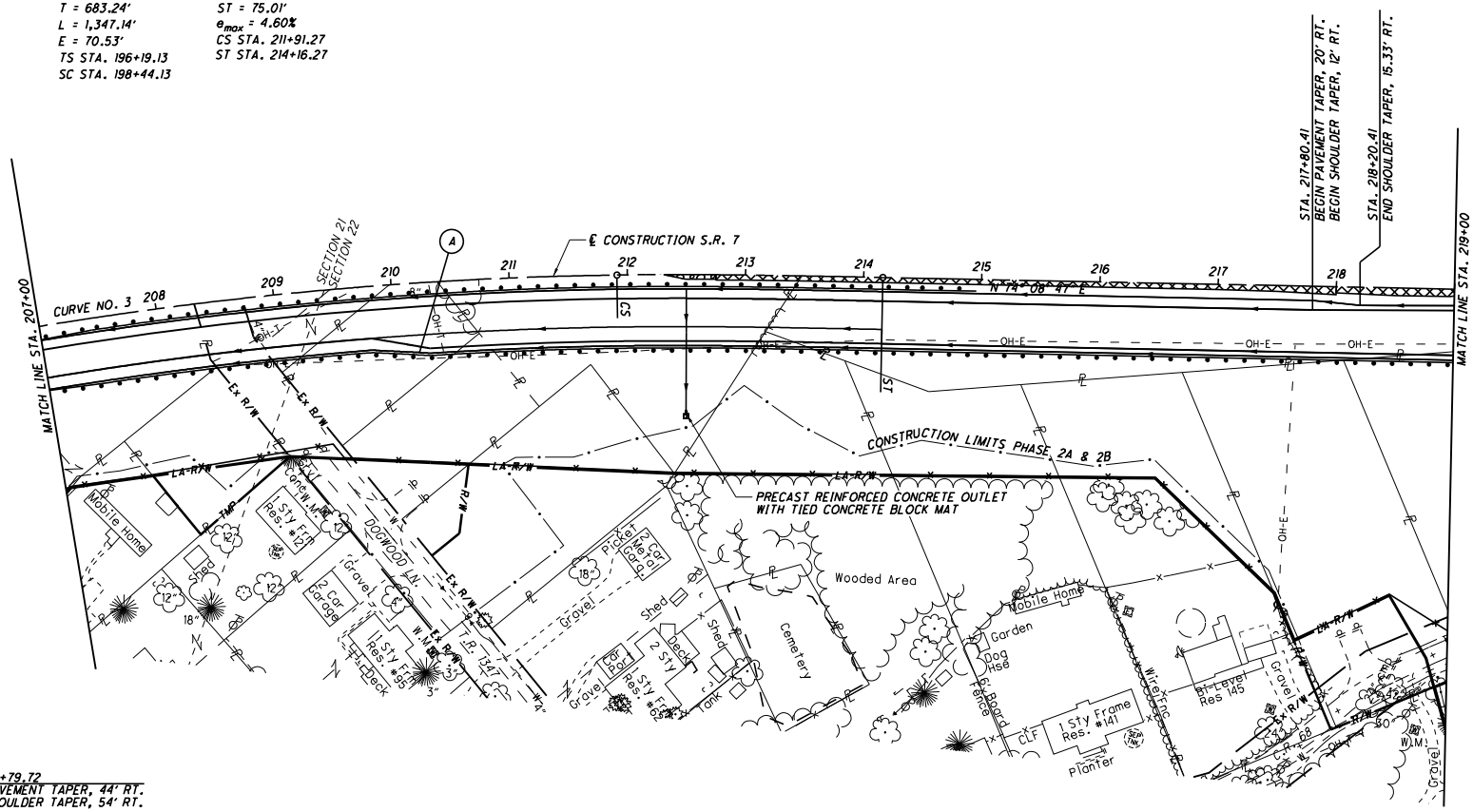
CURVE DATA
S.R. 7
CURVE NO. 3

P.I. STA. 205+33.31
Δ = 27° 30' 45" (RT)
Dc = 1° 45' 00"
R = 3,274.04'
T = 683.24'
L = 1,347.14'
E = 70.53'
TS STA. 196+19.13
SC STA. 198+44.13

θs = 1° 58' 07"
Ls = 225.00'
Ts = 914.18'
LT = 150.01'
ST = 75.01'
e_{max} = 4.60%
CS STA. 211+91.27
ST STA. 214+16.27



(A) -
STA. 209+79.72
BEGIN PAVEMENT TAPER, 44' RT.
BEGIN SHOULDER TAPER, 54' RT.

STA. 210+29.72
END PAVEMENT TAPER, 56' RT.
END SHOULDER TAPER, 60' RT.

FOR PROFILE, SEE SHEET 64
FOR UNDERDRAIN TABLES, SEE SHEETS 579-583
FOR TRAFFIC CONTROL PLAN, SEE SHEETS 589-619

CALCULATED SLP
CHECKED ALB

HORIZONTAL SCALE IN FEET
0 25 50 100

PLAN - S.R. 7
STA. 207+00 TO STA. 219+00 (SOUTH)

LAW-7-2.17

63
633

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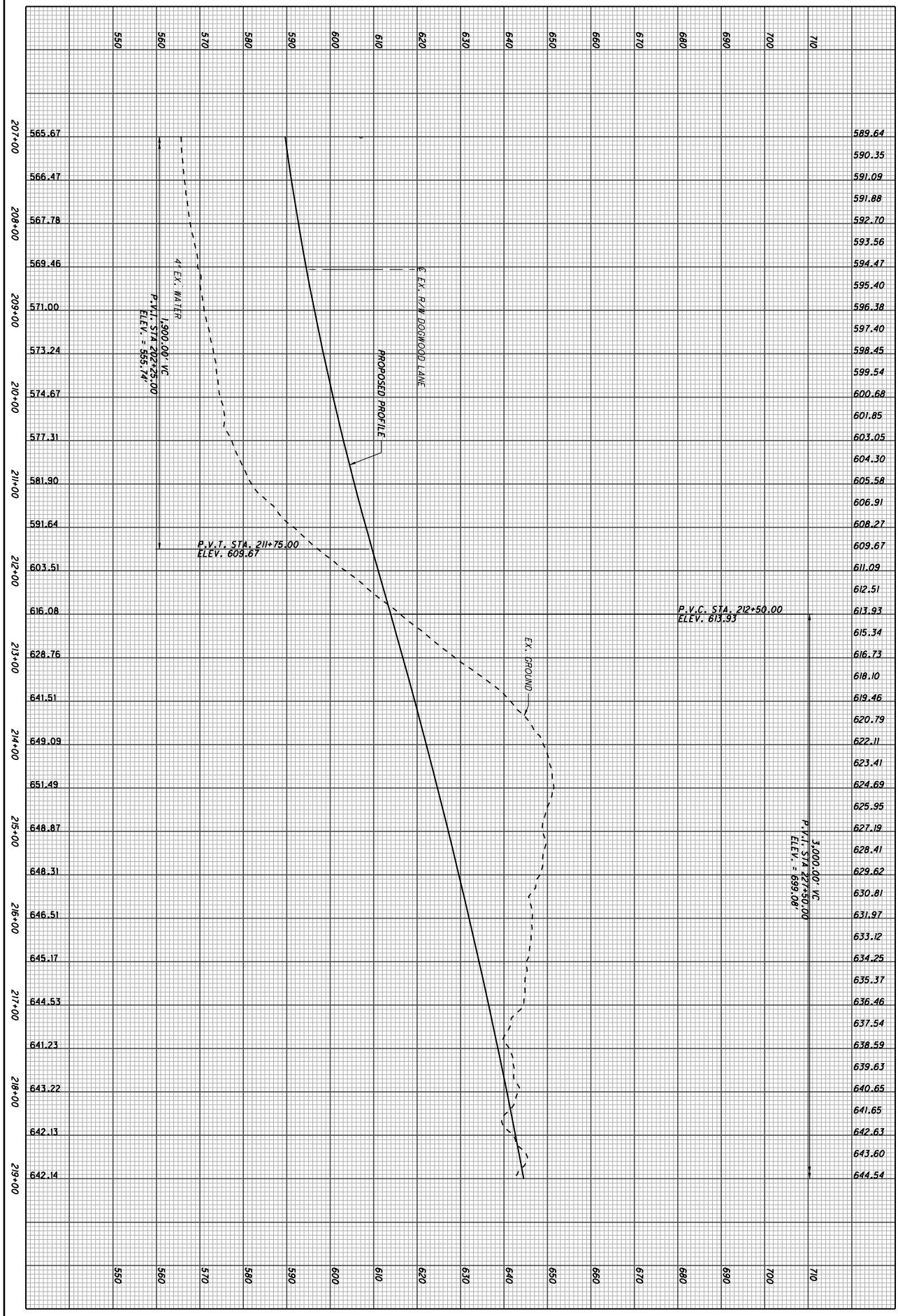
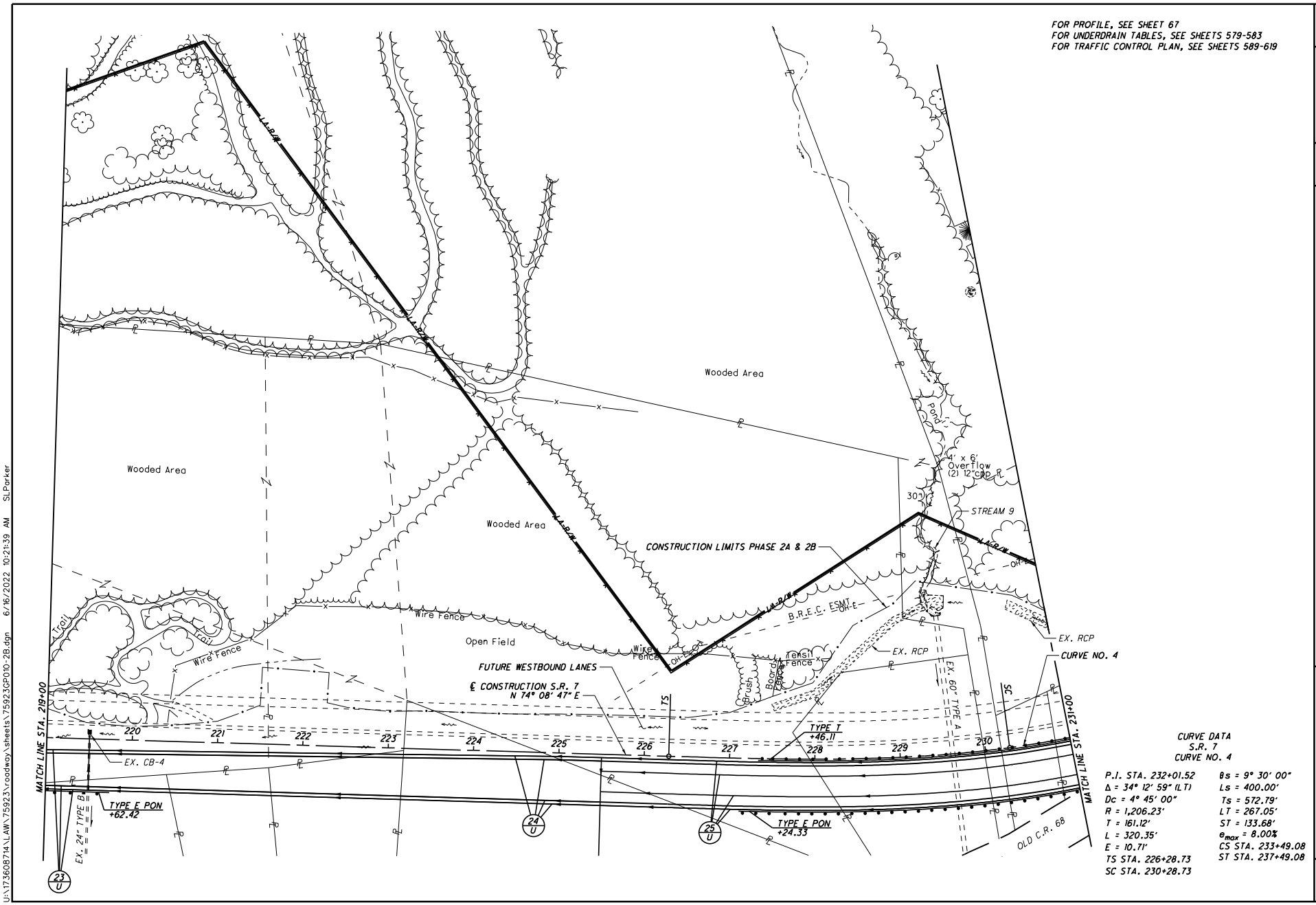


64 / 633	LAW-7-2.17	PROFILE - S.R. 7 STA. 207+00 TO STA. 219+00	CALCULATED SLP CHECKED ALB



CURVE DATA
S.R. 7
CURVE NO. 4

P.I. STA. 232+01.52	Bs = 9° 30' 00"
Δ = 34° 12' 59" (LT)	Ls = 400.00'
Dc = 4° 45' 00"	Ts = 572.79'
R = 1,206.23'	LT = 267.05'
T = 161.12'	ST = 133.68'
L = 320.35'	e_{max} = 8.00%
E = 10.71'	CS STA. 233+49.08
TS STA. 226+28.73	ST STA. 237+49.08
SC STA. 230+28.73	

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED SLP
CHECKED ALB

PLAN - S.R. 7
STA. 219+00 TO STA. 231+00 (NORTH)

LAW-7-2.17

65
633

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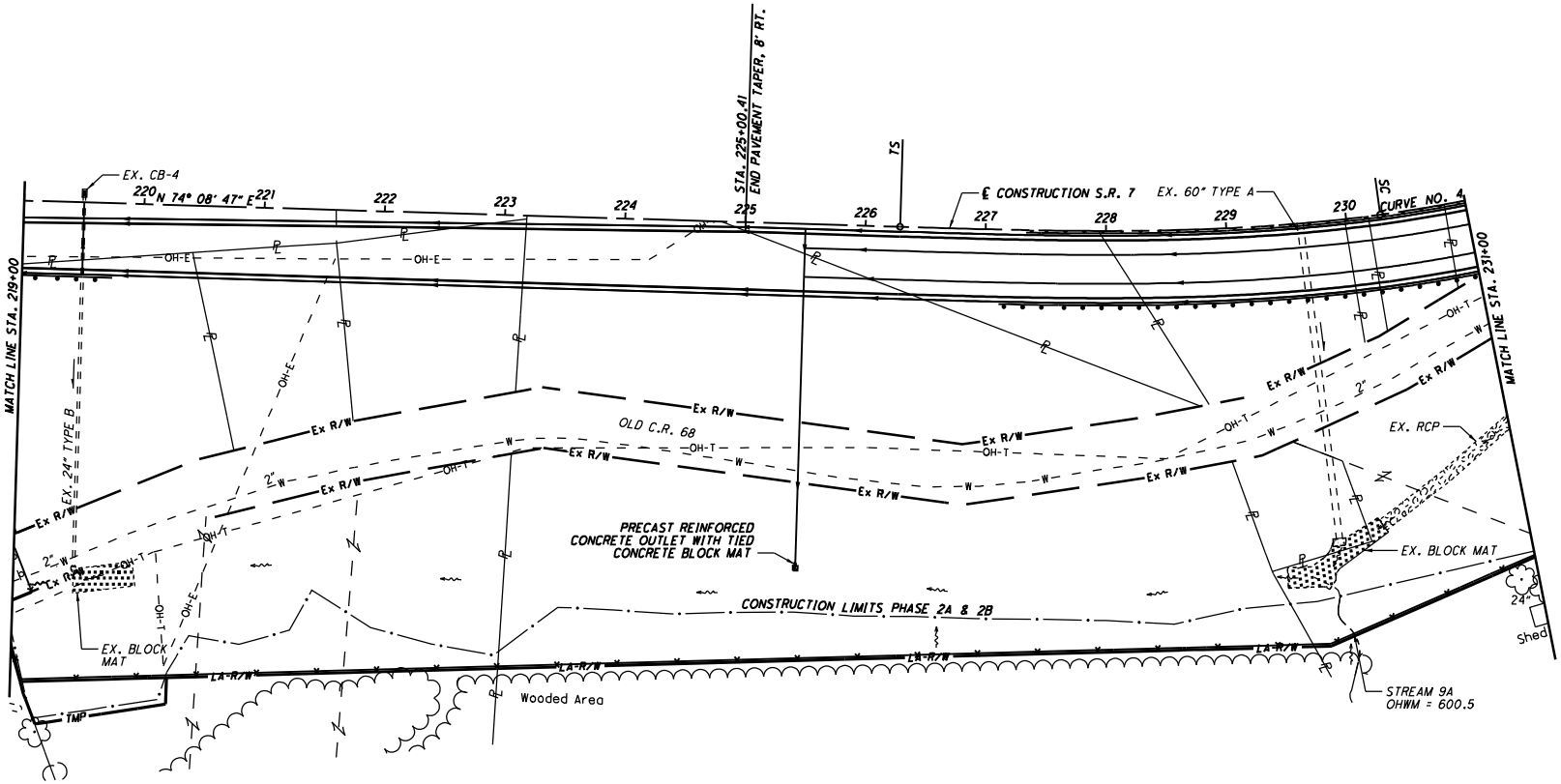
CURVE DATA
S.R. 7
CURVE NO. 4

P.I. STA. 232+01.52	θs = 9° 30' 00"
Δ = 34° 12' 59" (LT)	Ls = 400.00'
Dc = 4° 45' 00"	Ts = 572.79'
R = 1,206.23'	LT = 267.05'
T = 161.12'	ST = 133.68'
L = 320.35'	e_{max} = 8.00%
E = 10.71'	CS STA. 233+49.08
TS STA. 226+28.73	ST STA. 237+49.08
SC STA. 230+28.73	



FOR PROFILE, SEE SHEET 67
FOR UNDERDRAIN TABLES, SEE SHEETS 581-585
FOR TRAFFIC CONTROL PLAN, SEE SHEETS 589-619

0 25 50 100
HORIZONTAL SCALE IN FEET

CALCULATED SLP
CHECKED ALB

PLAN - S.R. 7
STA. 219+00 TO STA. 231+00 (SOUTH)

LAW-7-2.17

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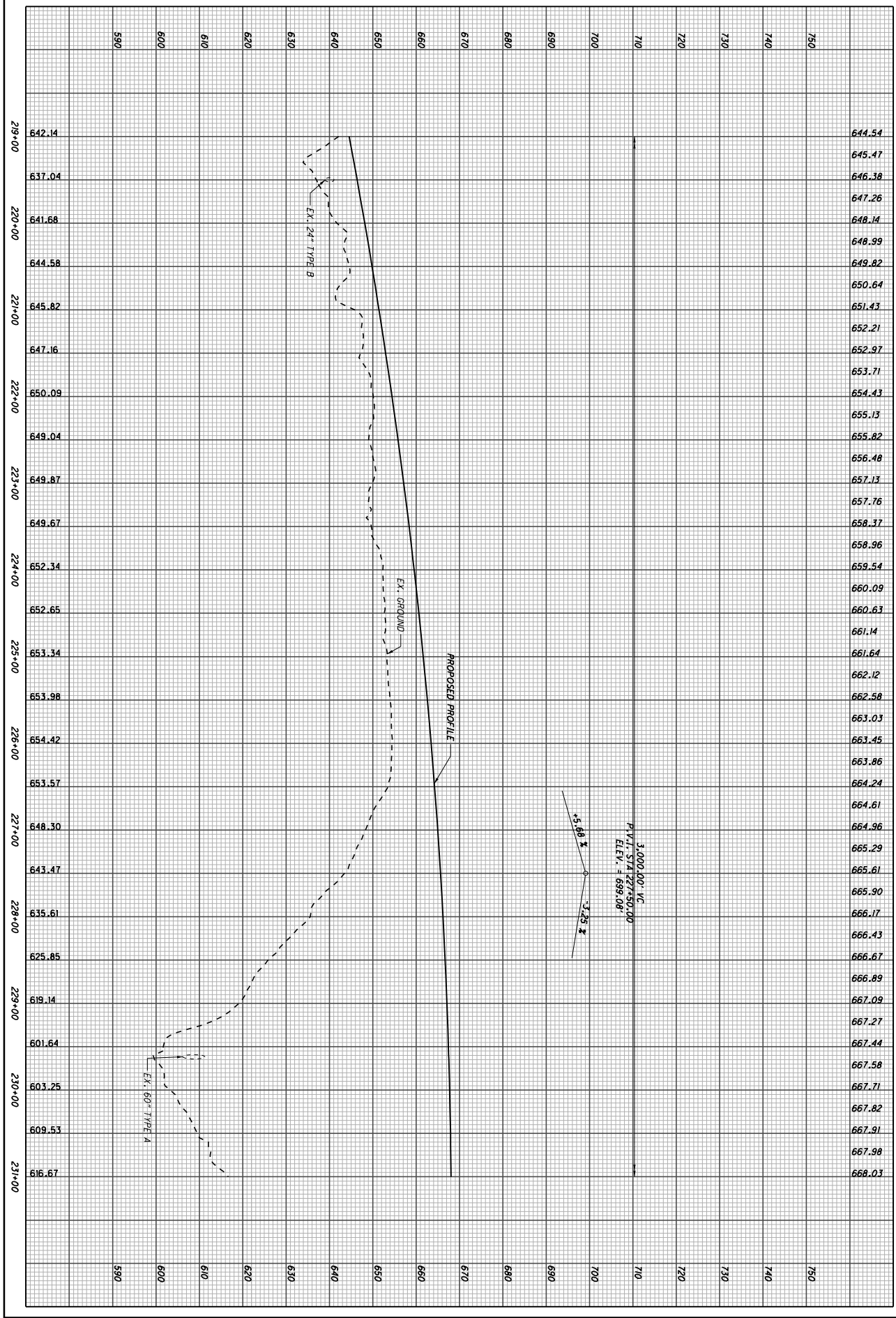
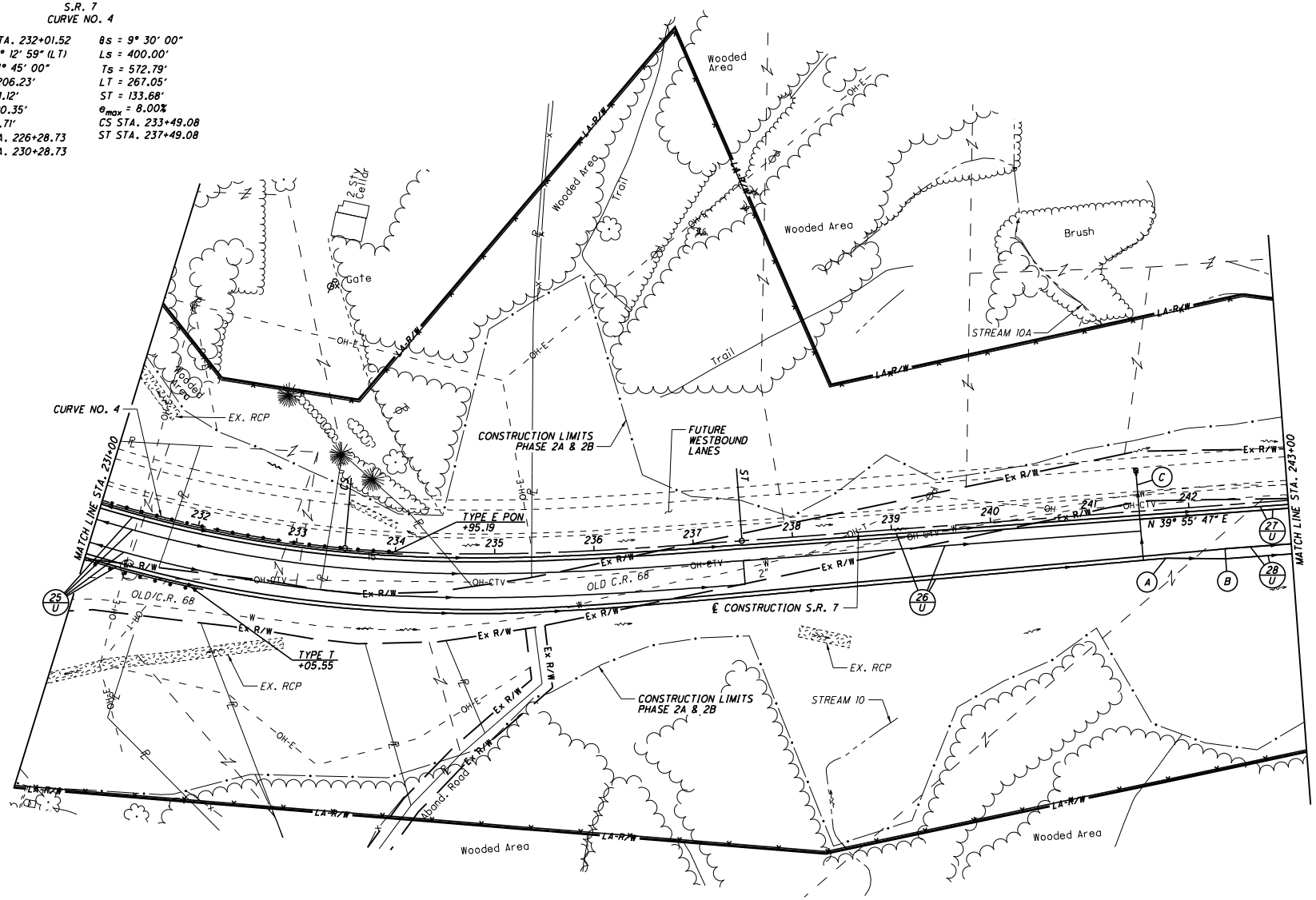


67 / 633	LAW-7-2.17	PROFILE - S.R. 7 STA. 219+00 TO STA. 231+00	CALCULATED SLP CHECKED ALB

CURVE DATA
S.R. 7
CURVE NO. 4

P.I. STA. 232+01.52
Δ = 34° 12' 59" (LT)
Dc = 4° 45' 00"
R = 1,206.23'
T = 161.12'
L = 320.35'
E = 10.71'
TS STA. 226+28.73
SC STA. 230+28.73

θs = 9° 30' 00"
Ls = 400.00'
Ts = 572.79'
LT = 267.05'
ST = 133.68'
e_{max} = 8.00%
CS STA. 233+49.08
ST STA. 237+49.08



(A) - STA. 241+73.20
BEGIN SHOULDER TAPER, 49' RT.

(B) - STA. 242+33.20
END PAVEMENT TAPER, 44' RT.
(FOR CLIMBING LANE)
END SHOULDER TAPER, 54' RT.

(C) - PRECAST REINFORCED OUTLET WITH TIED CONCRETE BLOCK MAT

(LF) DESIGNATES LEACH FIELD

FOR PROFILE, SEE SHEET 69
FOR UNDERDRAIN TABLES, SEE SHEETS 579-583
FOR TRAFFIC CONTROL PLAN, SEE SHEETS 589-619

HORIZONTAL SCALE IN FEET
0 25 50 100
CALCULATED SLP
CHECKED ALB

PLAN - S.R. 7
STA. 231+00 TO STA. 243+00

LAW-7-2.17

68
633

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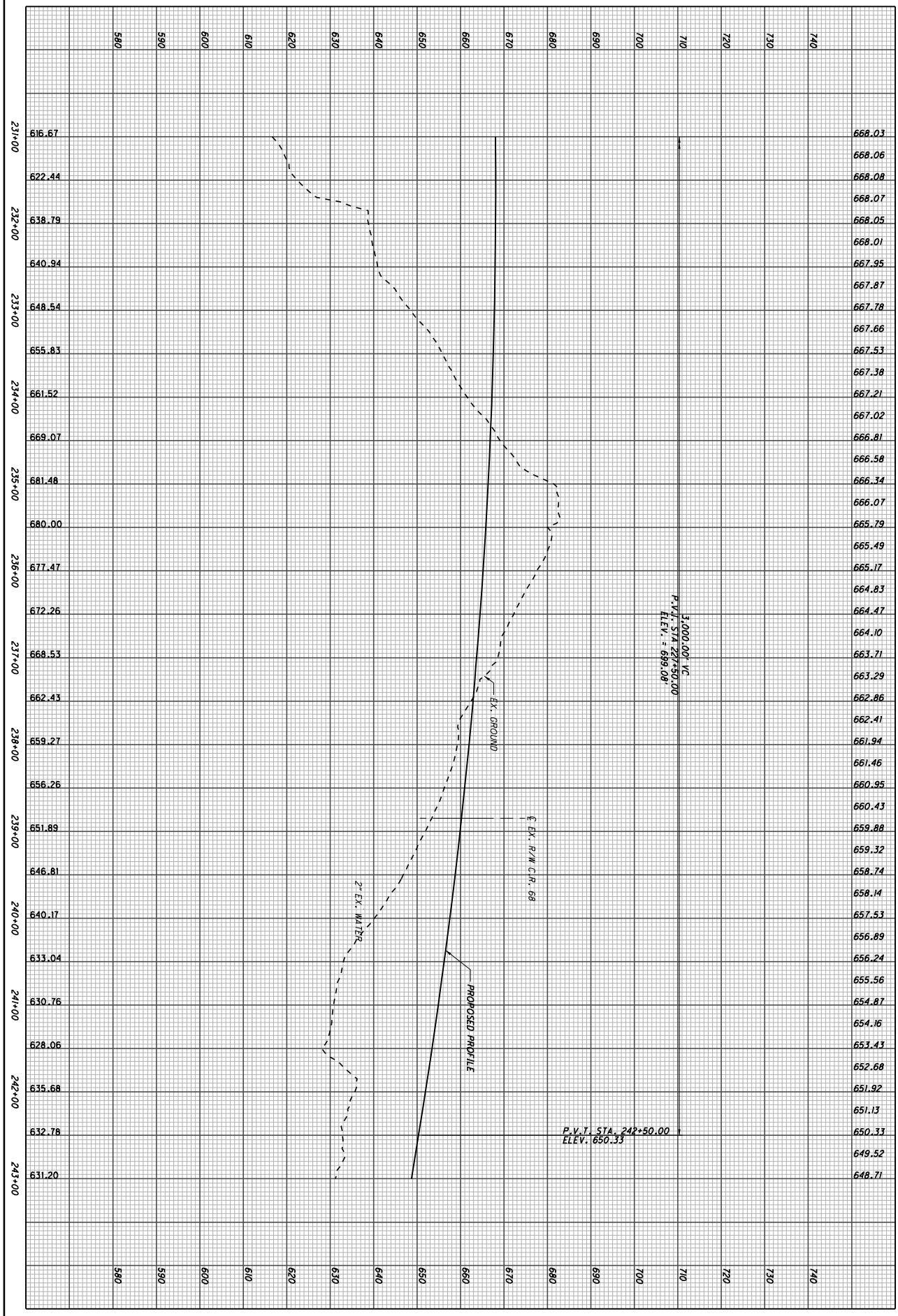
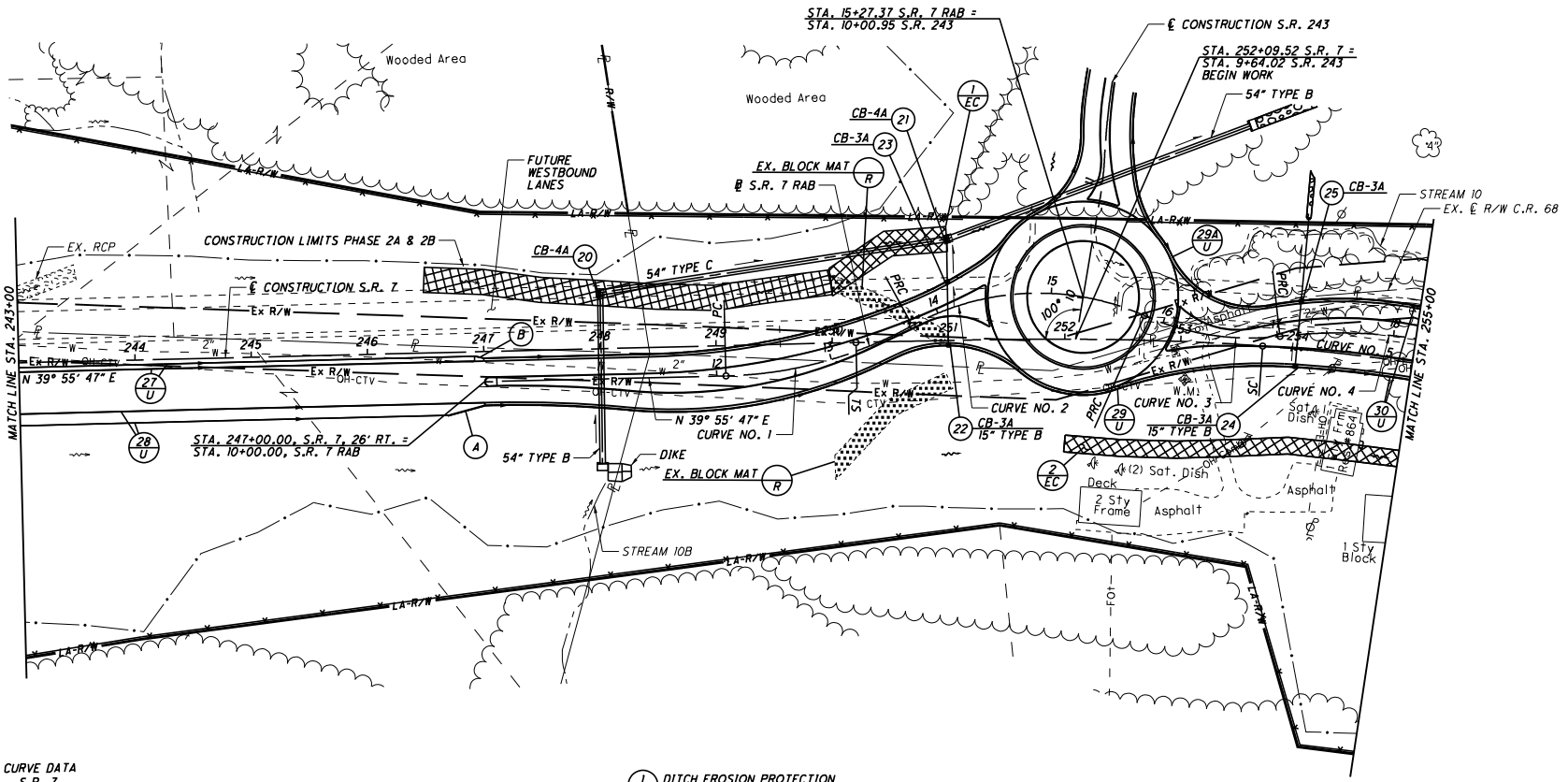


69 / 633	LAW-7-2.17	PROFILE - S.R. 7 STA. 231+00 TO STA. 243+00	CALCULATED SLP CHECKED ALB

CURVE DATA @ S.R. 7 RAB CURVE NO. 1	CURVE DATA @ S.R. 7 RAB CURVE NO. 2	CURVE DATA @ S.R. 7 RAB CURVE NO. 3	CURVE DATA @ S.R. 7 RAB CURVE NO. 4
P.I. Sta. 12+93.43	P.I. Sta. 14+87.13	P.I. Sta. 16+43.83	P.I. Sta. 18+27.99
Δ = 27° 26' 21" (LT)	Δ = 52° 43' 55" (RT)	Δ = 30° 24' 24" (LT)	Δ = 31° 15' 43" (RT)
Dc = 16° 22' 13"	Dc = 25° 27' 53"	Dc = 25° 27' 53"	Dc = 12° 43' 57"
R = 350.00'	R = 225.00'	R = 225.00'	R = 450.00'
T = 85.45'	T = 111.52'	T = 61.15'	T = 125.90'
L = 167.62'	L = 207.08'	L = 119.41'	L = 245.53'
E = 10.28'	E = 26.12'	E = 8.16'	E = 17.28'
PC Sta. 12+07.99	PRC Sta. 13+75.60	PRC Sta. 15+82.68	PRC Sta. 17+02.09
PRC Sta. 13+75.60	PRC Sta. 15+82.68	PRC Sta. 17+02.09	PT Sta. 19+47.62



CURVE DATA S.R. 7 CURVE NO. 5	
P.I. STA. 261+89.75	θs = 5° 41' 15"
Δ = 58° 46' 06" (RT)	Ls = 350.00'
Dc = 3° 15' 00"	Ts = 1,169.30'
R = 1,762.95'	LT = 233.45'
T = 773.76'	ST = 116.78'
L = 1,458.26'	e_{max} = 7.10%
E = 162.33'	CS STA. 268+28.71
TS STA. 250+20.45	ST STA. 271+78.71
SC STA. 253+70.45	

* (A) - STA. 246+68.00 BEGIN SHOULDER TAPER, 54' RT. / STA. 247+00.00 END SHOULDER TAPER, 58' RT.

* (B) - STA. 246+92.00 BEGIN SHOULDER TAPER, 4' LT. / STA. 247+00.00 END SHOULDER TAPER, 6' LT.

(1 EC) DITCH EROSION PROTECTION (100' X 21.5' /9 = 238.89 SY)

(2 EC) SEEDING AND EROSION CONTROL WITH TURF REINFORCING MAT, TYPE 1 (288' x 14.5' / 9 = 464 SY)

* USE TYPE 6 CURB TO TAPER SHOULDER. TAPER CURB HEIGHT FROM 0" TO 6" IN 10'.

FOR PROFILE, SEE SHEETS 71 & 75
FOR S.R. 243 PLAN AND PROFILE, SEE SHEETS 418-418A
FOR STORM SEWER PROFILES, SEE SHEETS 207 & 564
FOR UNDERDRAIN TABLES, SEE SHEETS 579-583
FOR TRAFFIC CONTROL PLAN, SEE SHEETS 589-619

HORIZONTAL SCALE IN FEET 0 25 50 100

CALCULATED SLP CHECKED ALB

PLAN - S.R. 7
STA. 243+00 TO STA. 255+00

LAW-7-2.17

70
633

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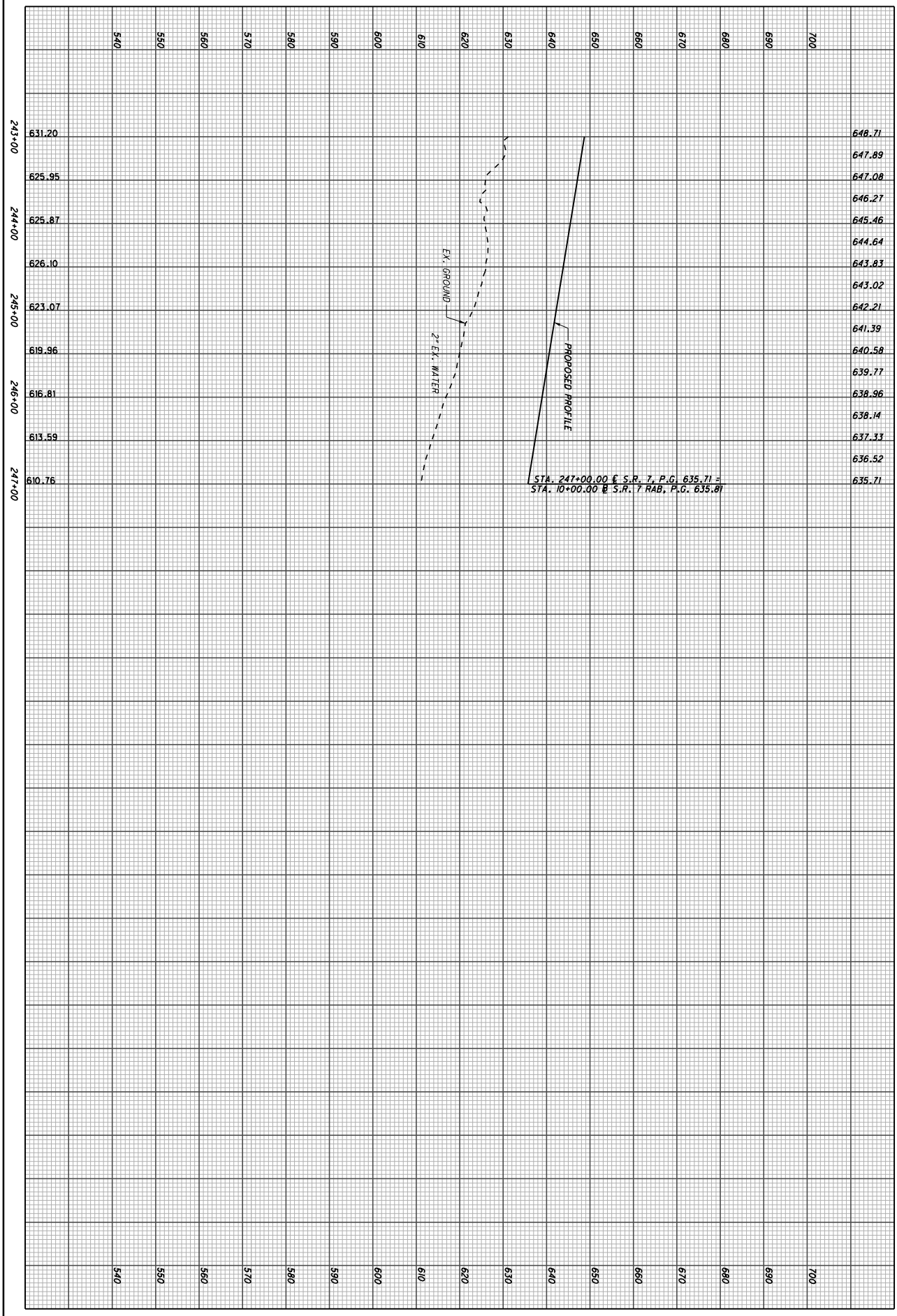

71 / 633	LAW-7-2.17	PROFILE - S.R. 7 STA. 243+00.00 TO STA. 247+00.00	CALCULATED SLP CHECKED ALB

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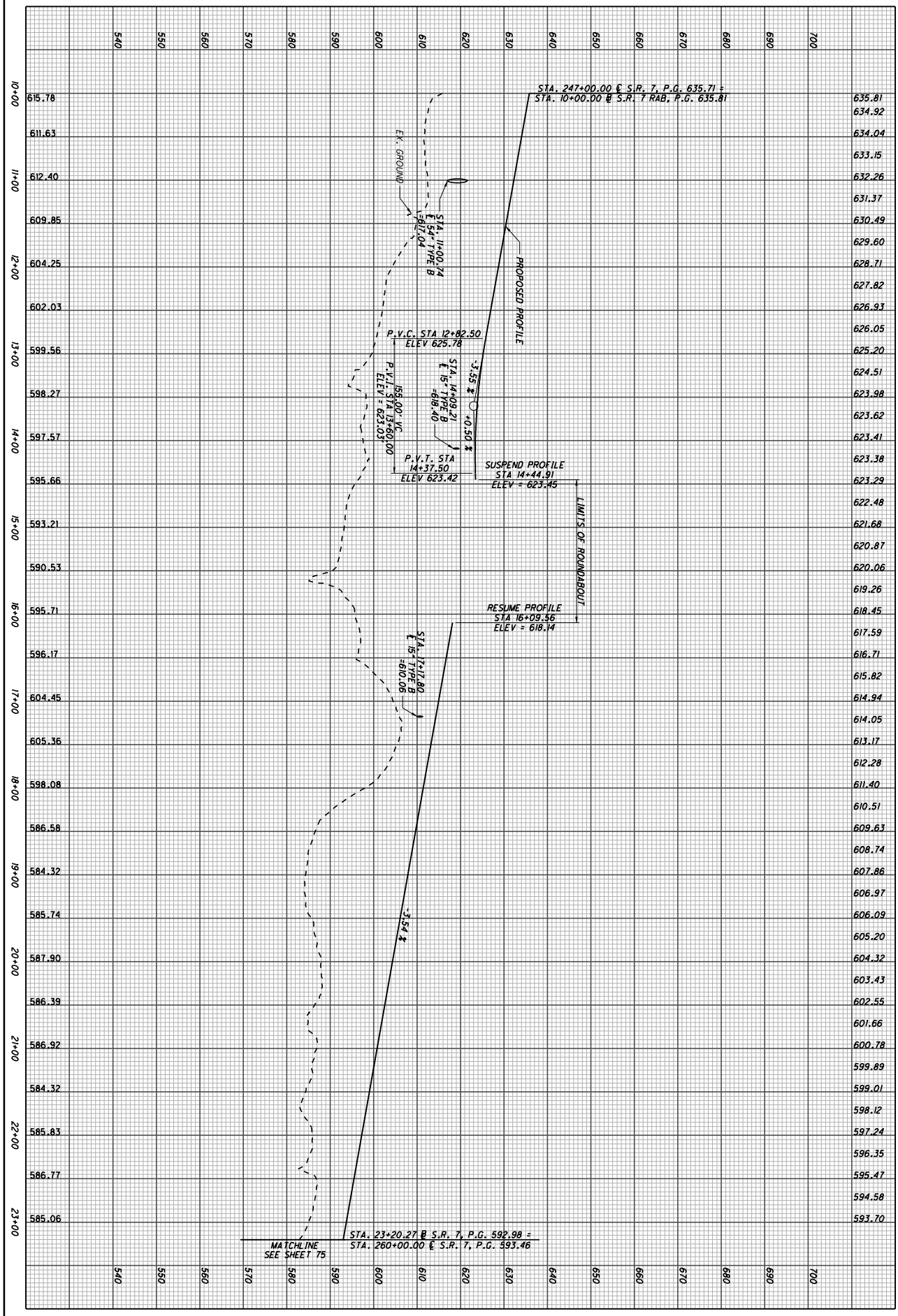
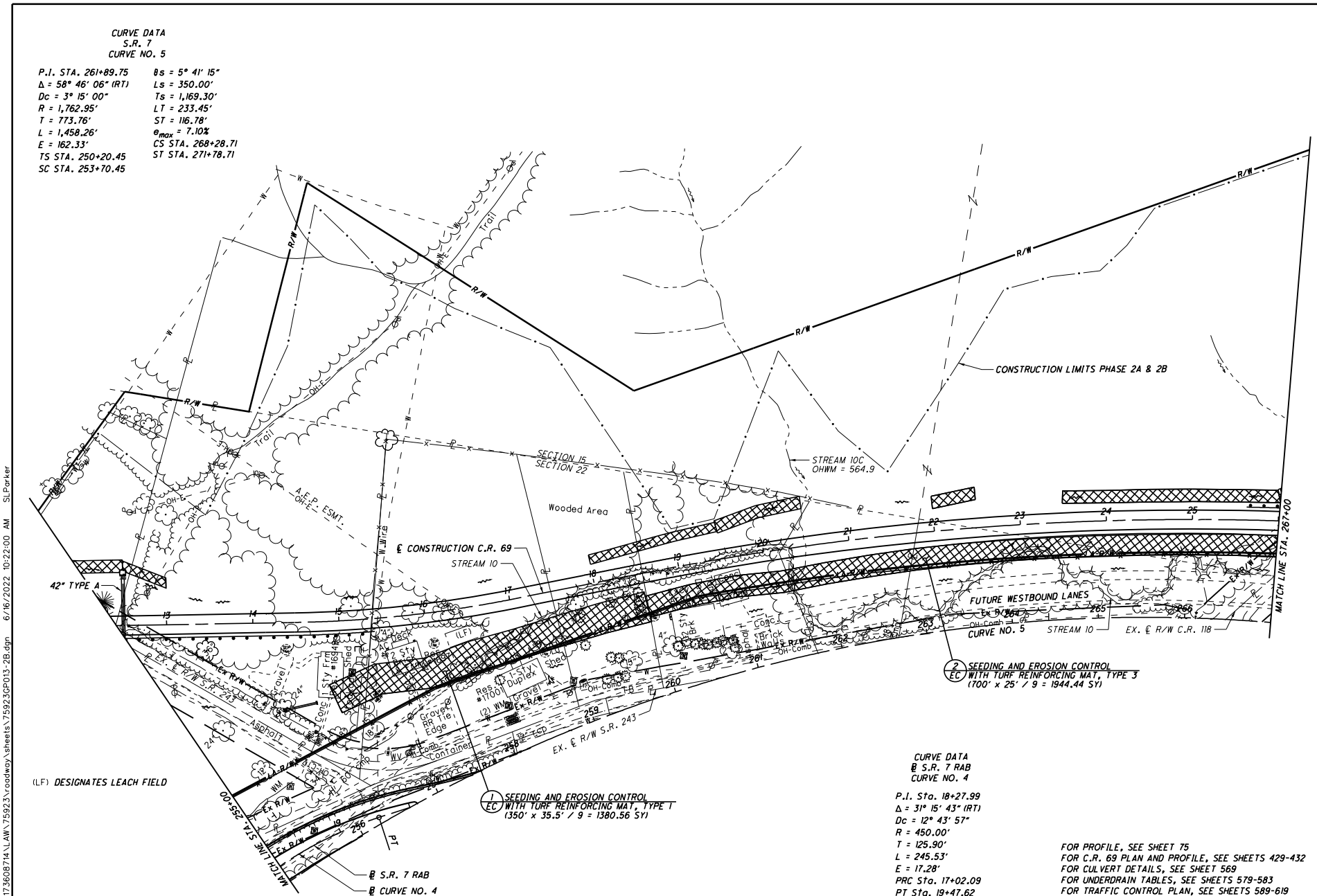


72 / 633	LAW-7-2.17	PROFILE - S.R. 7 RAB STA. 10+00 TO STA. 23+20.27	CALCULATED SLP CHECKED ALB



N

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED SLP
CHECKED ALB

PLAN - S.R. 7
STA. 255+00 TO STA. 267+00 (NORTH)

LAW-7-2.17

73
633

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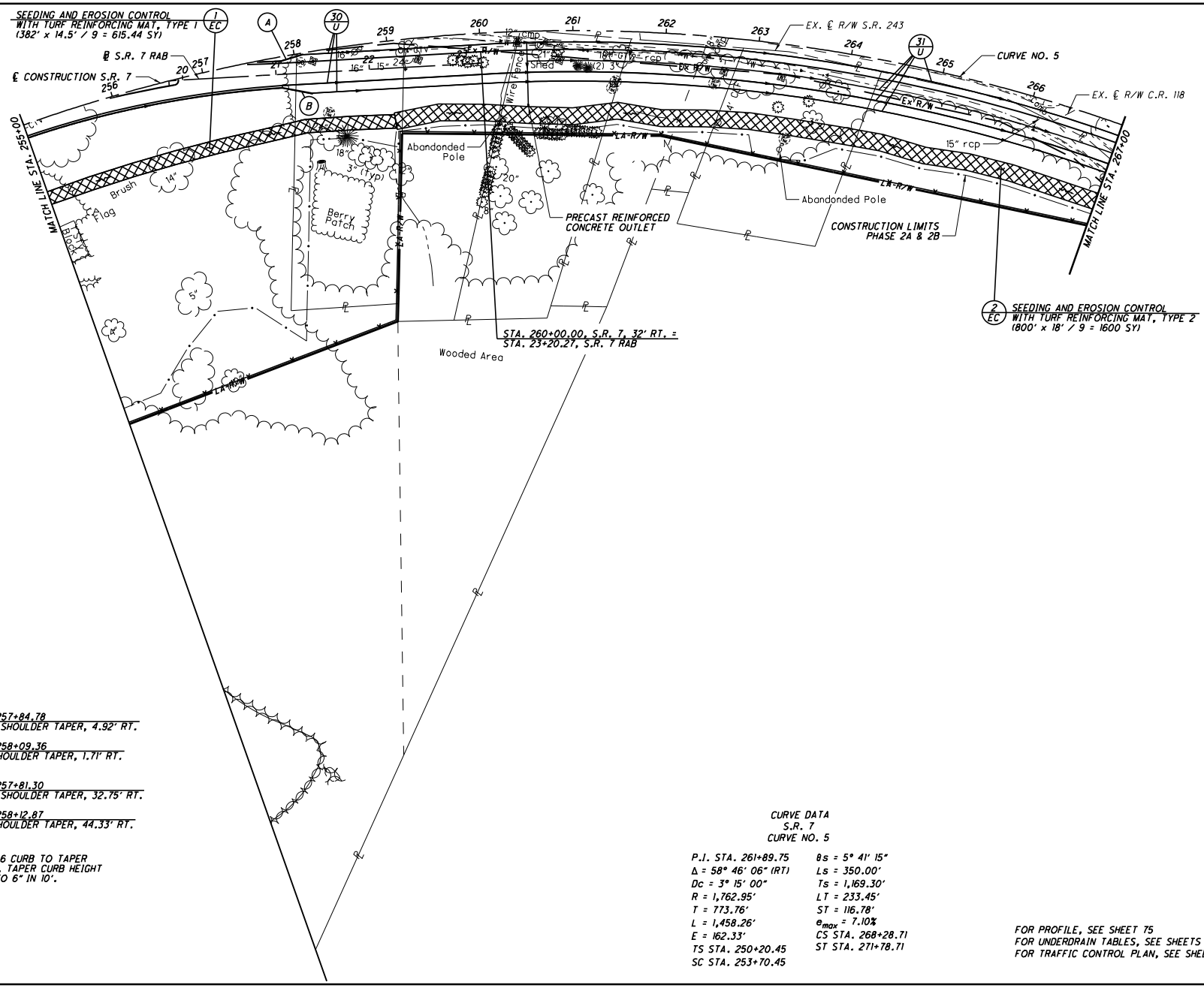

* (A) -
STA. 257+84.78
BEGIN SHOULDER TAPER, 4.92' RT.
STA. 258+09.36
END SHOULDER TAPER, 1.71' RT.

* (B) -
STA. 257+81.30
BEGIN SHOULDER TAPER, 32.75' RT.
STA. 258+12.87
END SHOULDER TAPER, 44.33' RT.

* USE TYPE 6 CURB TO TAPER SHOULDER. TAPER CURB HEIGHT FROM 0" TO 6" IN 10'.

CURVE DATA
S.R. 7
CURVE NO. 5

P.I. STA. 261+89.75	Bs = 5° 41' 15"
Δ = 58° 46' 06" (RT)	Ls = 350.00'
Dc = 3° 15' 00"	Ts = 1,169.30'
R = 1,762.95'	LT = 233.45'
T = 773.76'	ST = 116.78'
L = 1,458.26'	e_{max} = 7.10%
E = 162.33'	CS STA. 268+28.71
TS STA. 250+20.45	ST STA. 271+78.71
SC STA. 253+70.45	

FOR PROFILE, SEE SHEET 75
FOR UNDERDRAIN TABLES, SEE SHEETS 579-583
FOR TRAFFIC CONTROL PLAN, SEE SHEETS 589-619

HORIZONTAL SCALE IN FEET
0 25 50 100
CALCULATED SLP
CHECKED ALB

PLAN - S.R. 7
STA. 255+00 TO STA. 267+00 (SOUTH)

LAW-7-2.17

74
633

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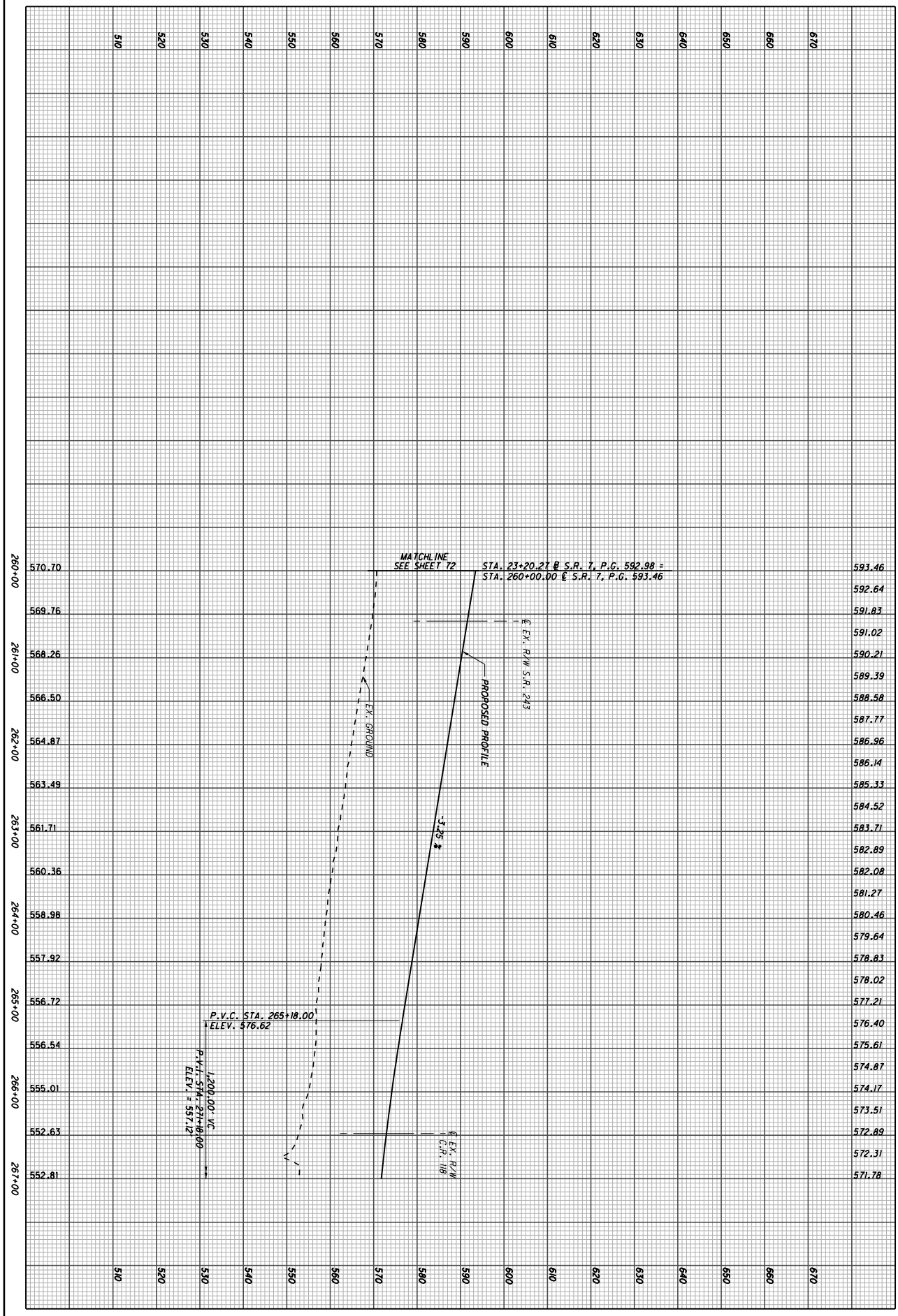
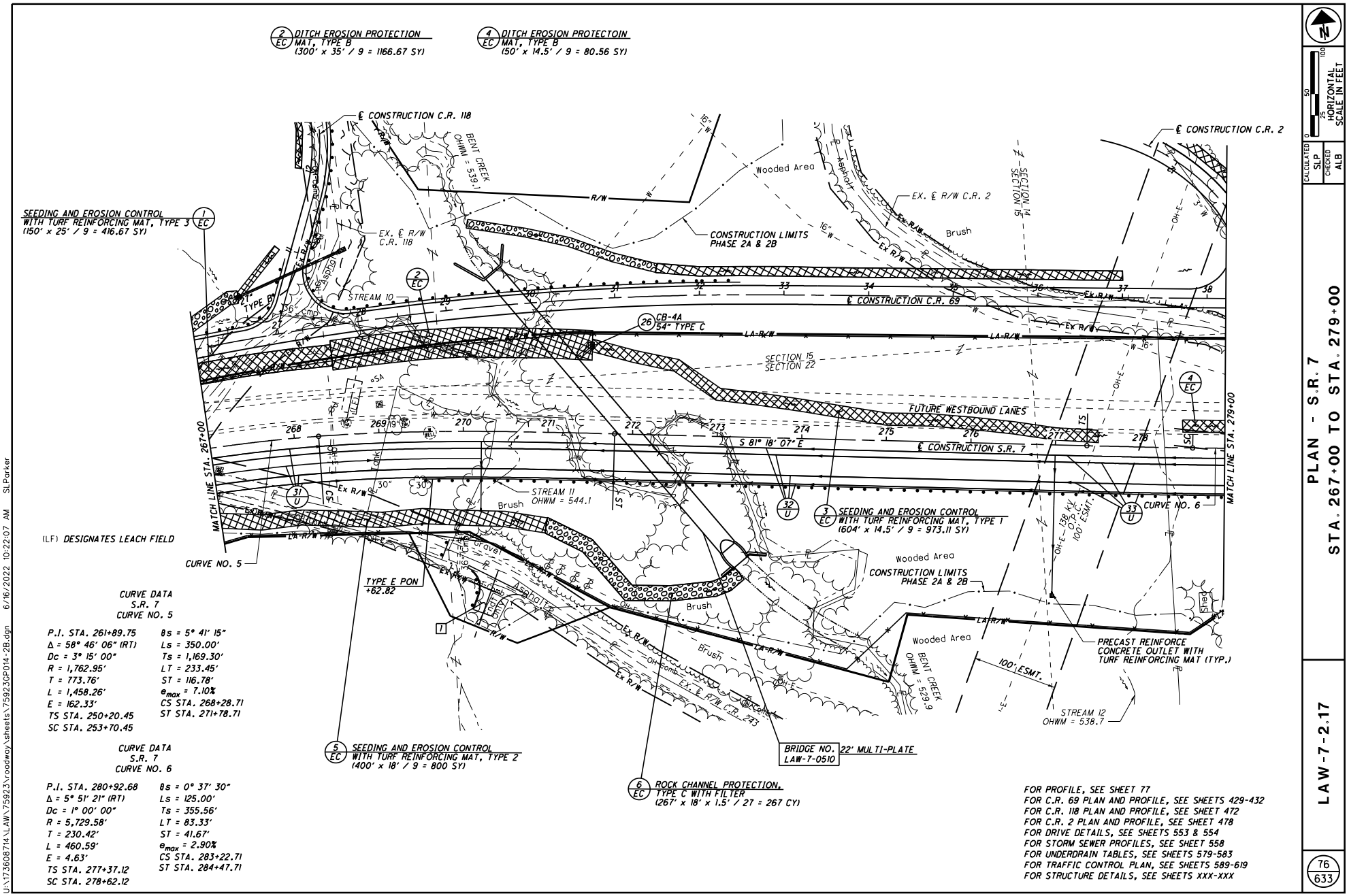


75 633	LAW-7-2.17	PROFILE - S.R. 7 STA. 260+00 TO 267+00	CALCULATED SLP CHECKED ALB



CURVE DATA
S.R. 7
CURVE NO. 5

P.I. STA. 261+89.75	Bs = 5° 41' 15"
Δ = 58° 46' 06" (RT)	Ls = 350.00'
Dc = 3° 15' 00"	Ts = 1,169.30'
R = 1,762.95'	LT = 233.45'
T = 773.76'	ST = 116.78'
L = 1,458.26'	e_{max} = 7.10%
E = 162.33'	CS STA. 268+28.71
TS STA. 250+20.45	ST STA. 271+78.71
SC STA. 253+70.45	

CURVE DATA
S.R. 7
CURVE NO. 6

P.I. STA. 280+92.68	Bs = 0° 37' 30"
Δ = 5° 51' 21" (RT)	Ls = 125.00'
Dc = 1° 00' 00"	Ts = 355.56'
R = 5,729.58'	LT = 83.33'
T = 230.42'	ST = 41.67'
L = 460.59'	e_{max} = 2.90%
E = 4.63'	CS STA. 283+22.71
TS STA. 277+37.12	ST STA. 284+47.71
SC STA. 278+62.12	

FOR PROFILE, SEE SHEET 77
FOR C.R. 69 PLAN AND PROFILE, SEE SHEETS 429-432
FOR C.R. 118 PLAN AND PROFILE, SEE SHEET 472
FOR C.R. 2 PLAN AND PROFILE, SEE SHEET 478
FOR DRIVE DETAILS, SEE SHEETS 553 & 554
FOR STORM SEWER PROFILES, SEE SHEET 558
FOR UNDERDRAIN TABLES, SEE SHEETS 579-583
FOR TRAFFIC CONTROL PLAN, SEE SHEETS 589-619
FOR STRUCTURE DETAILS, SEE SHEETS XXX-XXX

HORIZONTAL SCALE IN FEET
0 25 50 100
CALCULATED SLP
CHECKED ALB

PLAN - S.R. 7
STA. 267+00 TO STA. 279+00

LAW-7-2.17

76
633

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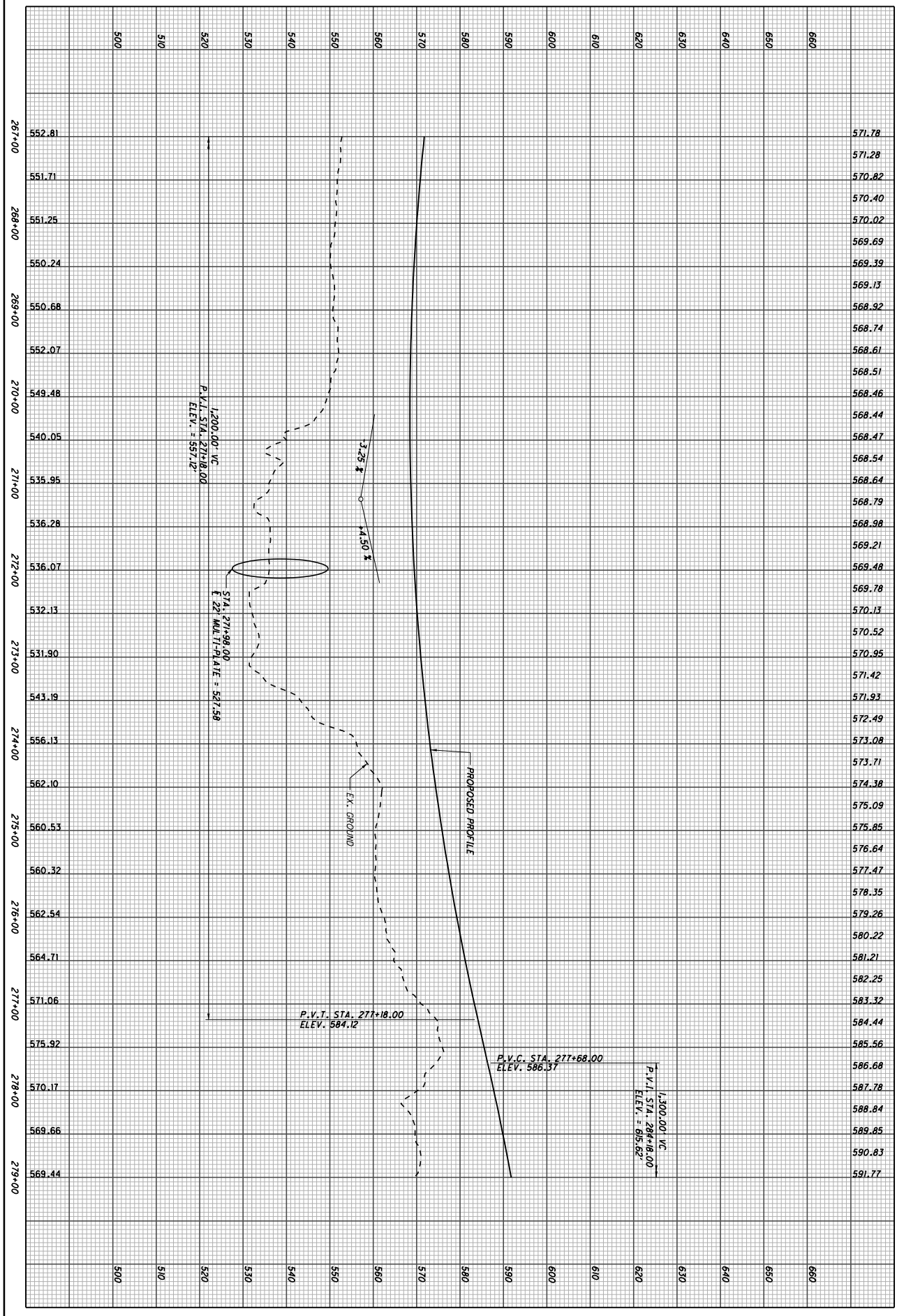
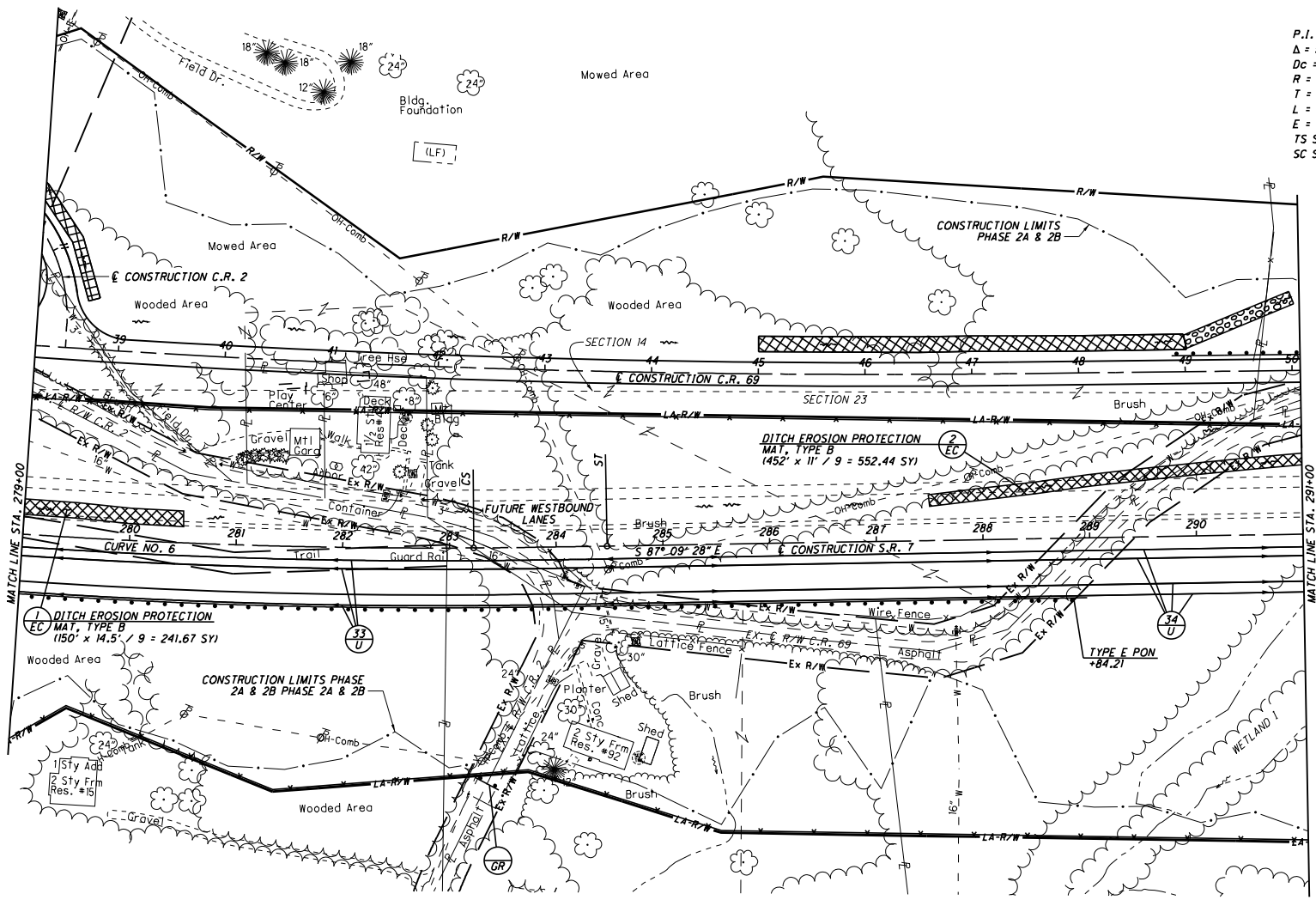


77 / 633	LAW-7-2.17	PROFILE - S.R. 7 STA. 267+00 TO STA. 279+00	CALCULATED SLP CHECKED ALB



HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED SLP
CHECKED ALB

PLAN - S.R. 7
STA. 279+00 TO STA. 291+00

LAW-7-2.17

78
633

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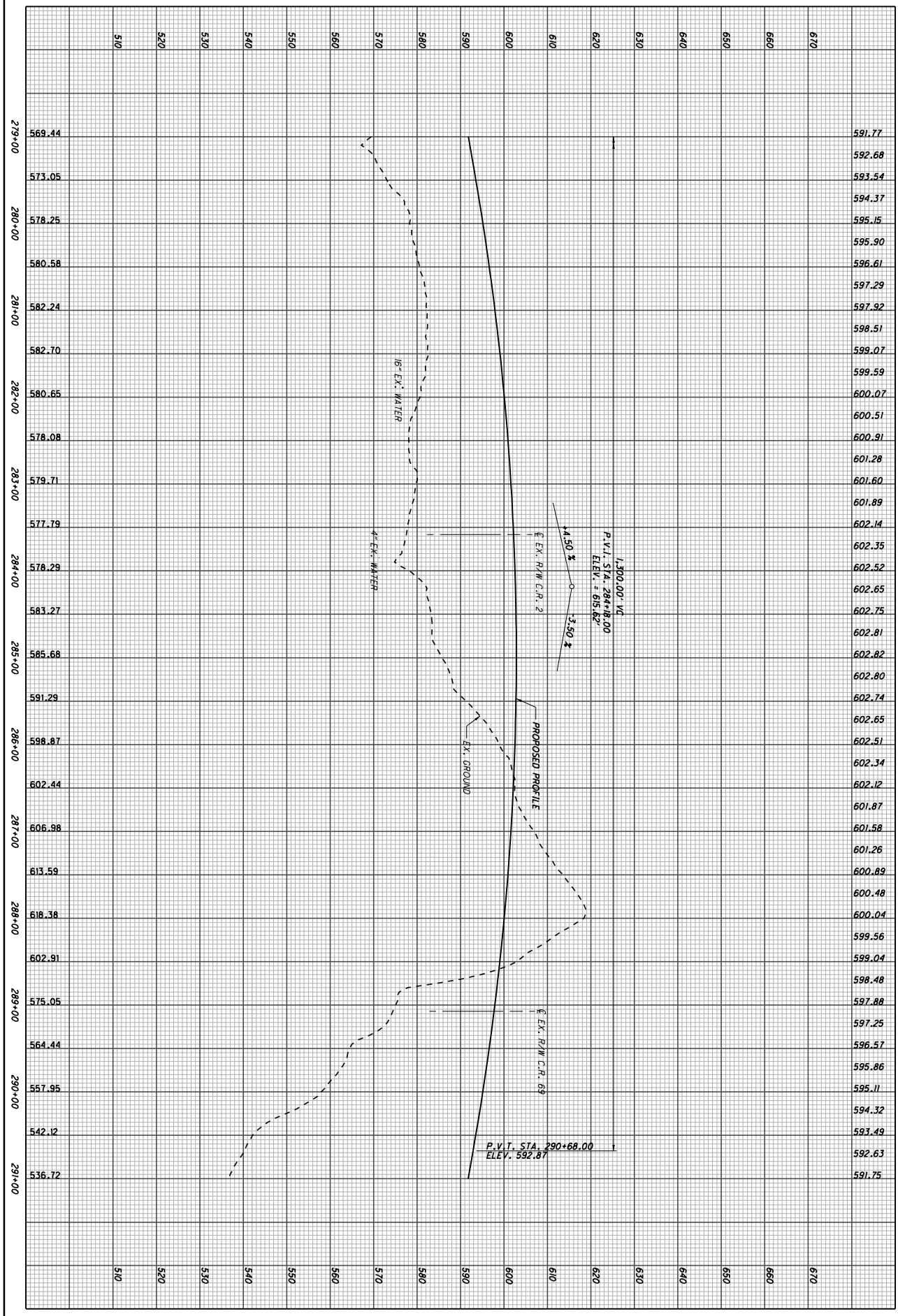
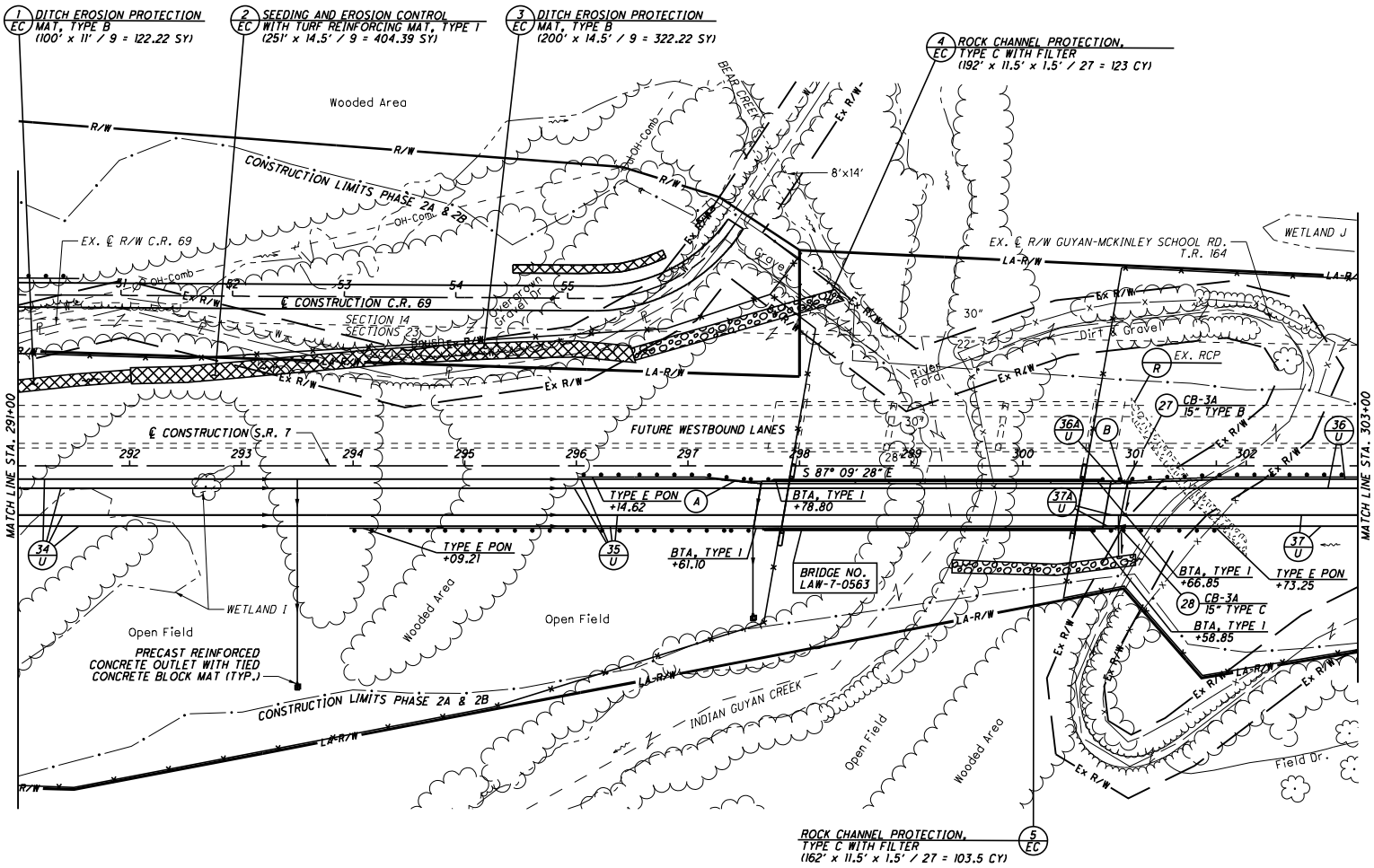


79 633	LAW-7-2.17	PROFILE - S.R. 7 STA. 279+00 TO STA. 291+00	CALCULATED SLP CHECKED ALB



(A) - STA. 297+25.66 BEGIN SHOULDER TAPER, 12' RT.
STA. 297+65.66 END SHOULDER TAPER, 16' RT.

(B) - STA. 300+78.70 BEGIN SHOULDER TAPER, 16' RT.
STA. 301+78.70 END SHOULDER TAPER, 12' RT.

FOR PROFILE, SEE SHEET 81
FOR C.R. 69 PLAN AND PROFILE, SEE SHEETS 429-432
FOR UNDERDRAIN TABLES, SEE SHEETS 579-583
FOR TRAFFIC CONTROL PLAN, SEE SHEETS 589-619

N

HORIZONTAL SCALE IN FEET 0 25 50 100

CALCULATED SLP CHECKED ALB

PLAN - S.R. 7
STA. 291+00 TO 303+00

LAW-7-2.17

80
633

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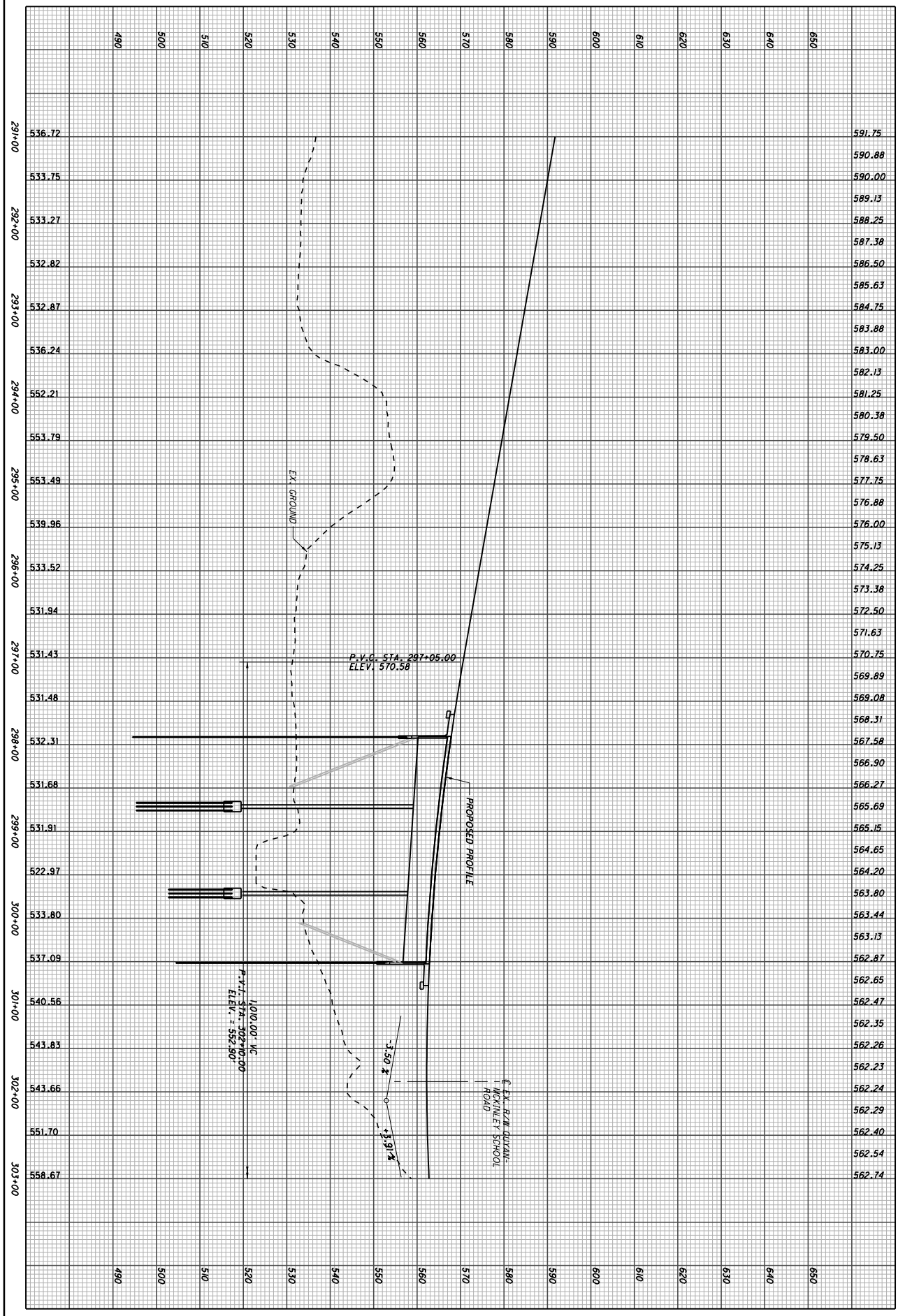
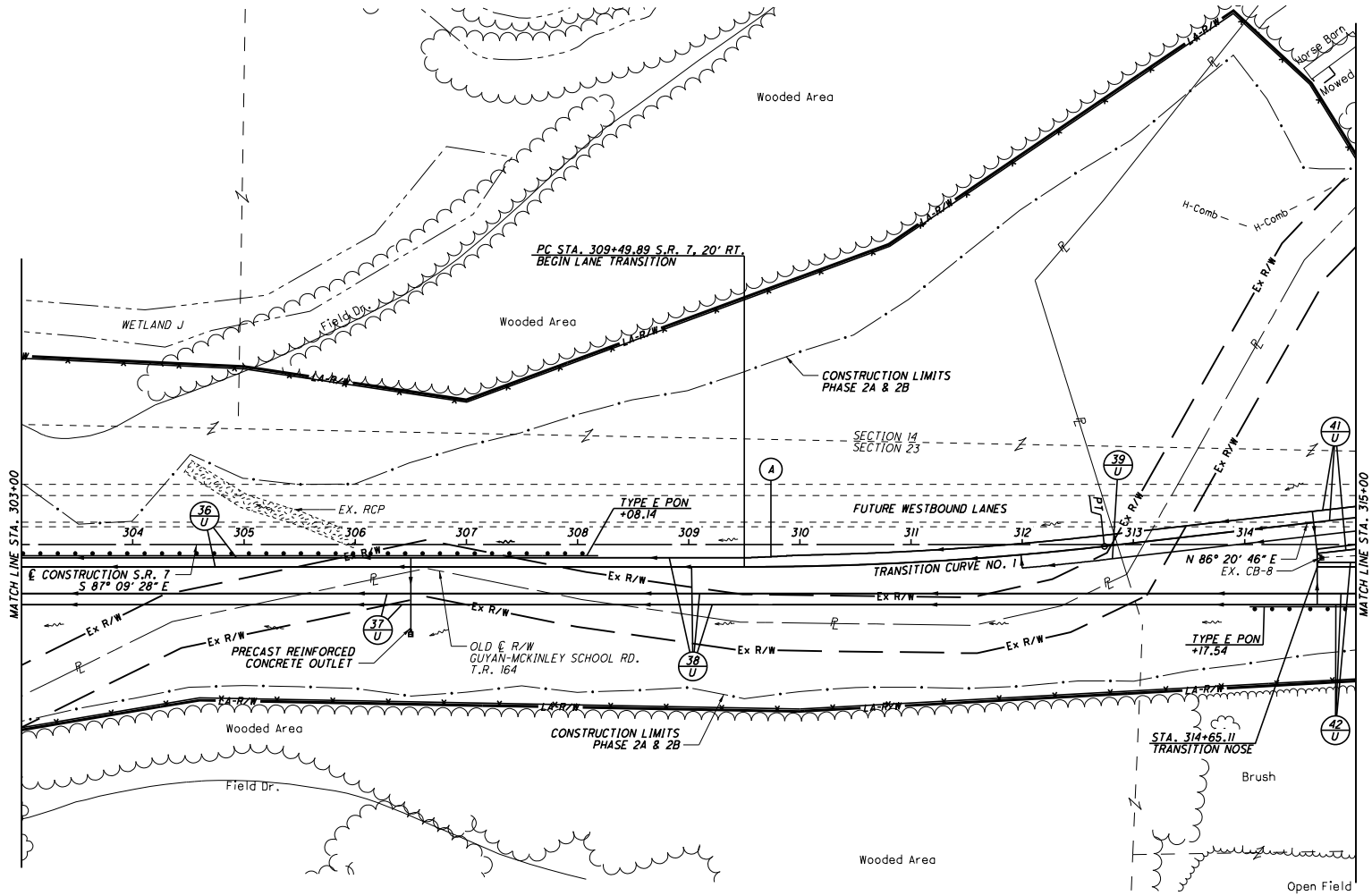


81 / 633	LAW-7-2.17	PROFILE - S.R. 7 STA. 291+00 TO STA. 303+00	CALCULATED SLP CHECKED ALB



CURVE DATA
S.R. 7 LANE TRANSITION
TRANSITION CURVE NO. 1
(FOR HORIZONTAL LAYOUT ONLY)

P.I. Sta. 311+12.46, S.R. 7, 20' RT.
Δ = 6° 29' 46" (LT)
Dc = 2° 00' 00"
R = 2,864.79'
T = 162.58'
L = 324.81'
E = 4.61'
e_{max} = NC
PC STA. = 309+49.89, S.R. 7, 20' RT.
PT STA. = 312+74.00, S.R. 7, 1.61' RT.

(A) - STA. 309+49.89
BEGIN SHOULDER TAPER, 12' RT.

STA. 309+99.71
END SHOULDER TAPER, 9.57' RT.

FOR PROFILE, SEE SHEET 83
FOR UNDERDRAIN TABLES, SEE SHEETS 579-583
FOR TRAFFIC CONTROL PLAN, SEE SHEETS 589-619

N

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED SLP
CHECKED ALB

PLAN - S.R. 7
STA. 303+00 TO STA. 315+00

LAW-7-2.17

82
633

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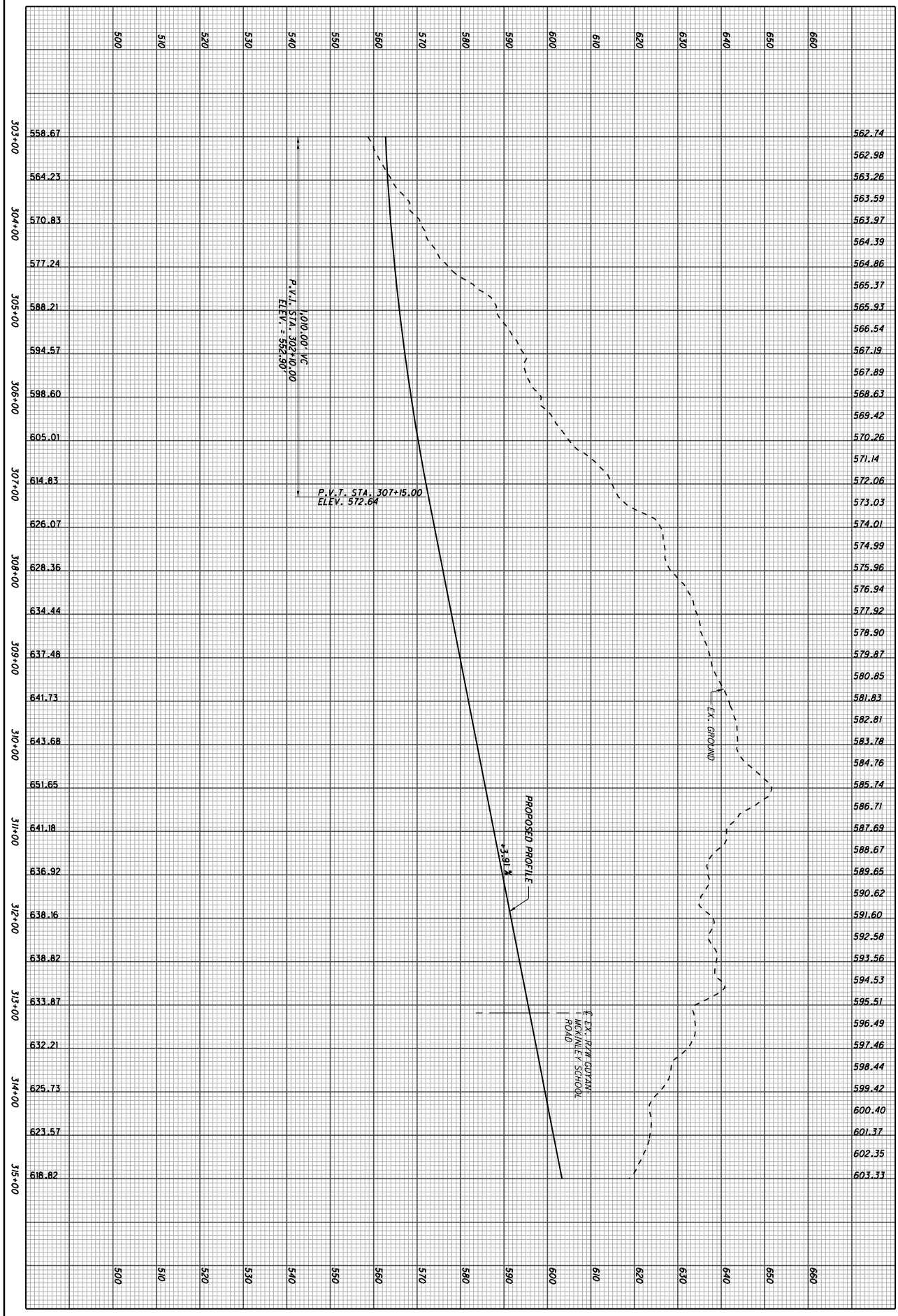
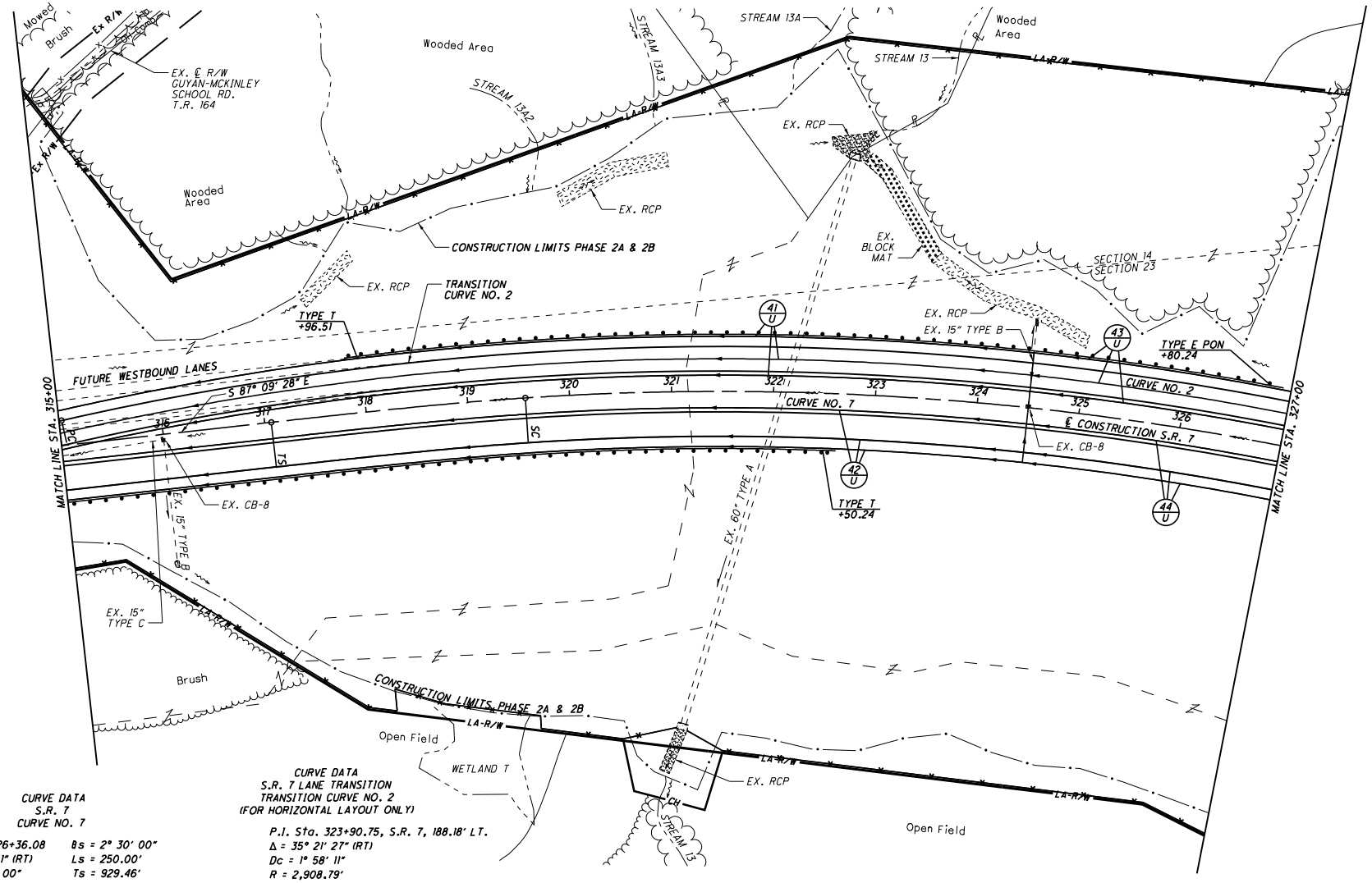


83 / 633	LAW-7-2.17	PROFILE - S.R. 7 STA. 303+00 TO STA. 315+00	CALCULATED SLP CHECKED ALB



CURVE DATA
S.R. 7
CURVE NO. 7

P.I. STA. 326+36.08
Δ = 31° 21' 41" (RT)
Dc = 2° 00' 00"
R = 2,864.79'
T = 670.91'
L = 1,318.07'
E = 77.51'
TS STA. 317+06.62
SC STA. 319+56.62
θs = 2° 30' 00"
Ls = 250.00'
Ts = 929.46'
LT = 166.68'
ST = 83.35'
e_{max} = 5.10%
CS STA. 332+74.69
ST STA. 335+24.69

CURVE DATA
S.R. 7 LANE TRANSITION
TRANSITION CURVE NO. 2
(FOR HORIZONTAL LAYOUT ONLY)

P.I. Sta. 323+90.75, S.R. 7, 188.18' LT.
Δ = 35° 21' 27" (RT)
Dc = 1° 58' 11"
R = 2,908.79'
T = 927.12'
L = 1,795.03'
E = 144.18'
e_{max} = 5.10%
PC STA. = 315+02.52, S.R. 7, 24.41' LT.
PT STA. = 332+74.69, S.R. 7, 44' LT.

FOR PROFILE, SEE SHEET 85
FOR UNDERDRAIN TABLES, SEE SHEETS 581-585
FOR TRAFFIC CONTROL PLAN, SEE SHEETS 589-619

CALCULATED SLP
CHECKED ALB
HORIZONTAL SCALE IN FEET 0 25 50 100

PLAN - S.R. 7
STA. 315+00 TO STA. 327+00

LAW-7-2.17

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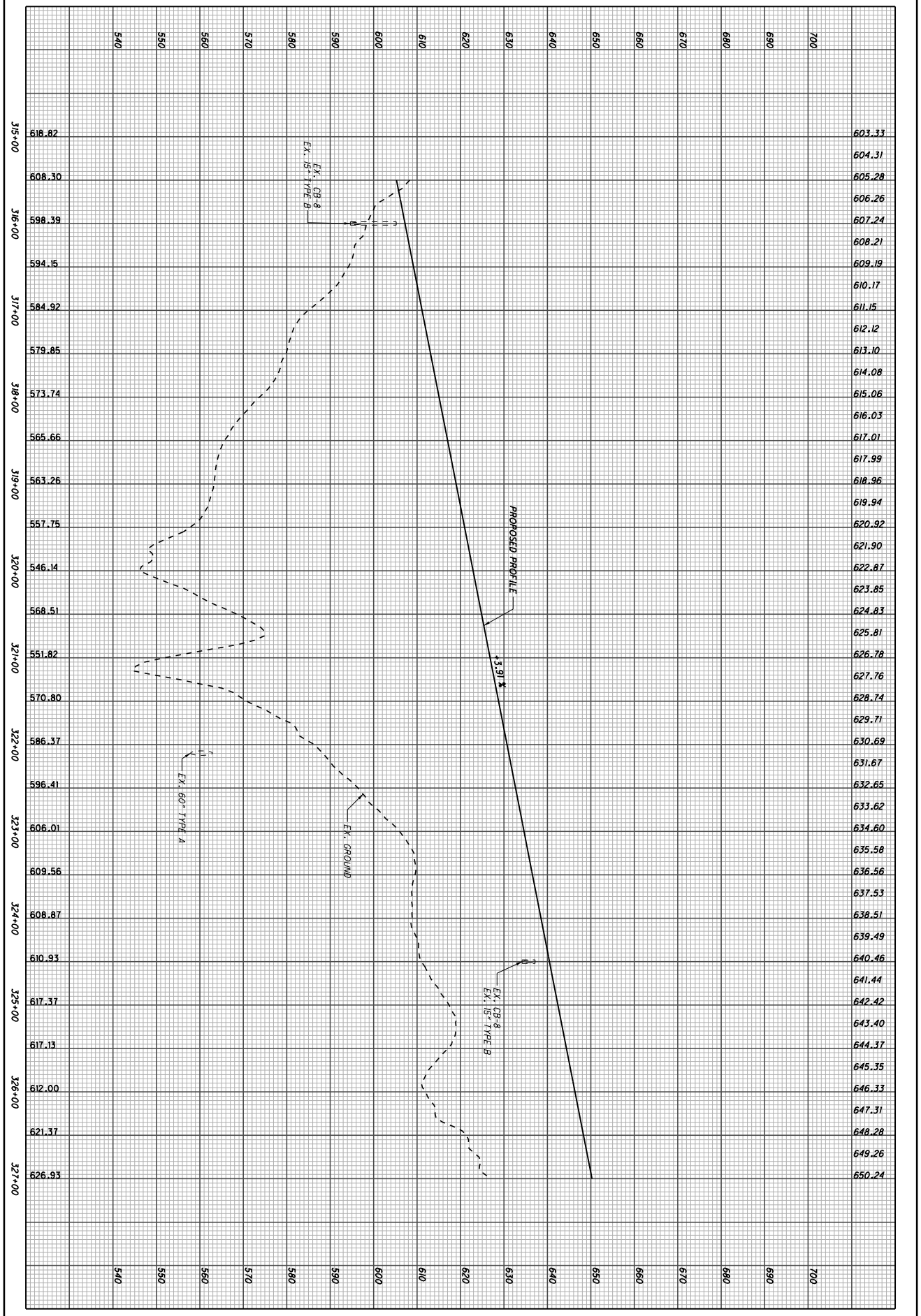


85 / 633	LAW-7-2.17	PROFILE - S.R. 7 STA. 315+00 TO STA. 327+00

CALCULATED SLP
CHECKED ALB

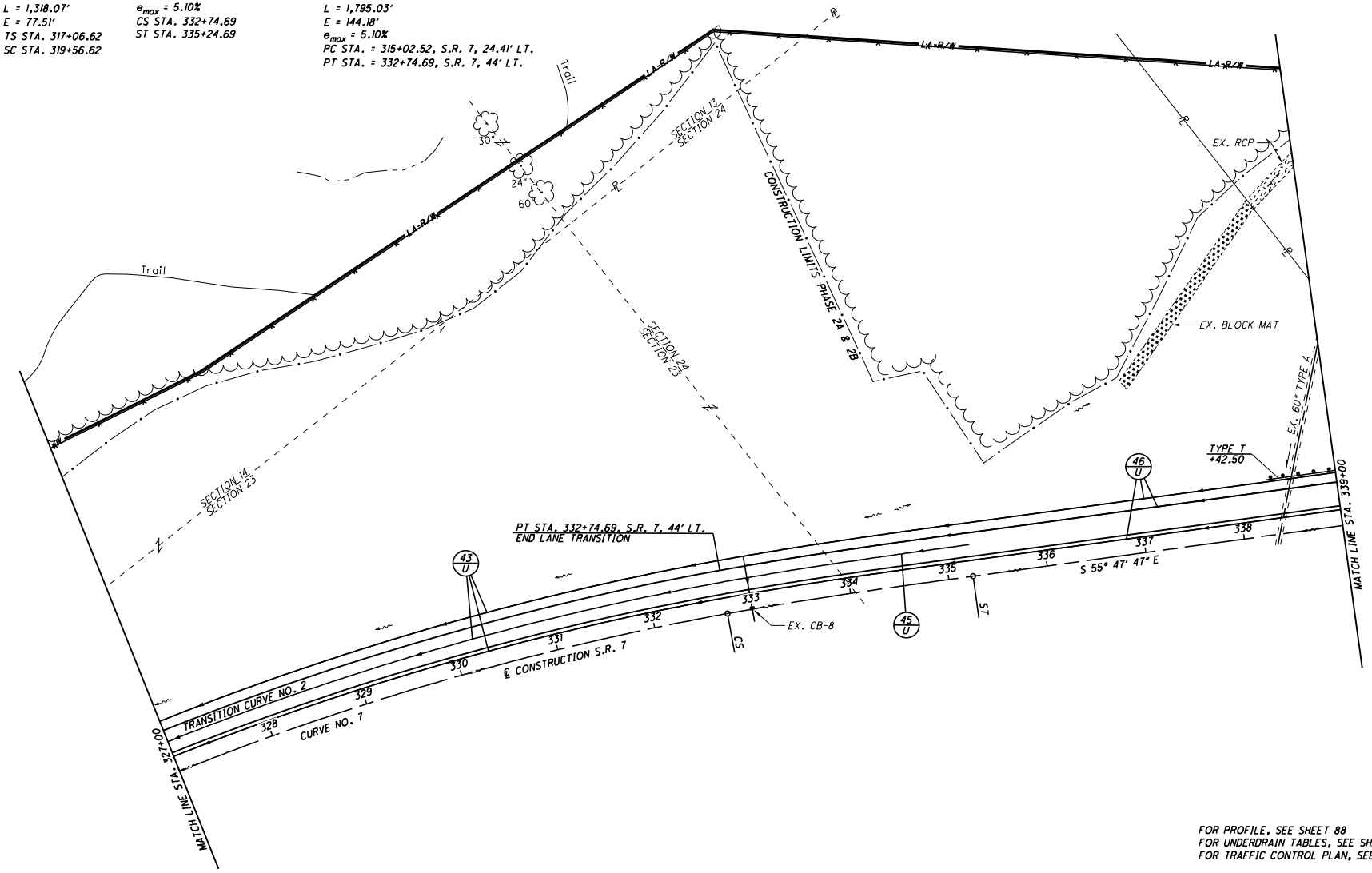
CURVE DATA
S.R. 7
CURVE NO. 7

P.I. STA. 326+36.08
Δ = 31° 21' 41" (RT)
Dc = 2° 00' 00"
R = 2,864.79'
T = 670.91'
L = 1,318.07'
E = 77.51'
TS STA. 317+06.62
SC STA. 319+56.62

θs = 2° 30' 00"
Ls = 250.00'
Ts = 929.46'
LT = 166.68'
ST = 83.35'
e_{max} = 5.10%
CS STA. 332+74.69
ST STA. 335+24.69

CURVE DATA
S.R. 7 LANE TRANSITION
TRANSITION CURVE NO. 2
(FOR HORIZONTAL LAYOUT ONLY)

P.I. STA. 323+90.75, S.R. 7, 188.18' LT.
Δ = 35° 21' 27" (RT)
Dc = 1° 58' 11"
R = 2,908.79'
T = 927.12'
L = 1,795.03'
E = 144.18'
e_{max} = 5.10%
PC STA. = 315+02.52, S.R. 7, 24.41' LT.
PT STA. = 332+74.69, S.R. 7, 44' LT.



FOR PROFILE, SEE SHEET 88
FOR UNDERDRAIN TABLES, SEE SHEETS 579-583
FOR TRAFFIC CONTROL PLAN, SEE SHEETS 589-619

HORIZONTAL SCALE IN FEET
0 25 50 100
CALCULATED SLP
CHECKED ALB

PLAN - S.R. 7
STA. 327+00 TO STA. 339+00 (NORTH)

LAW-7-2.17

86
633

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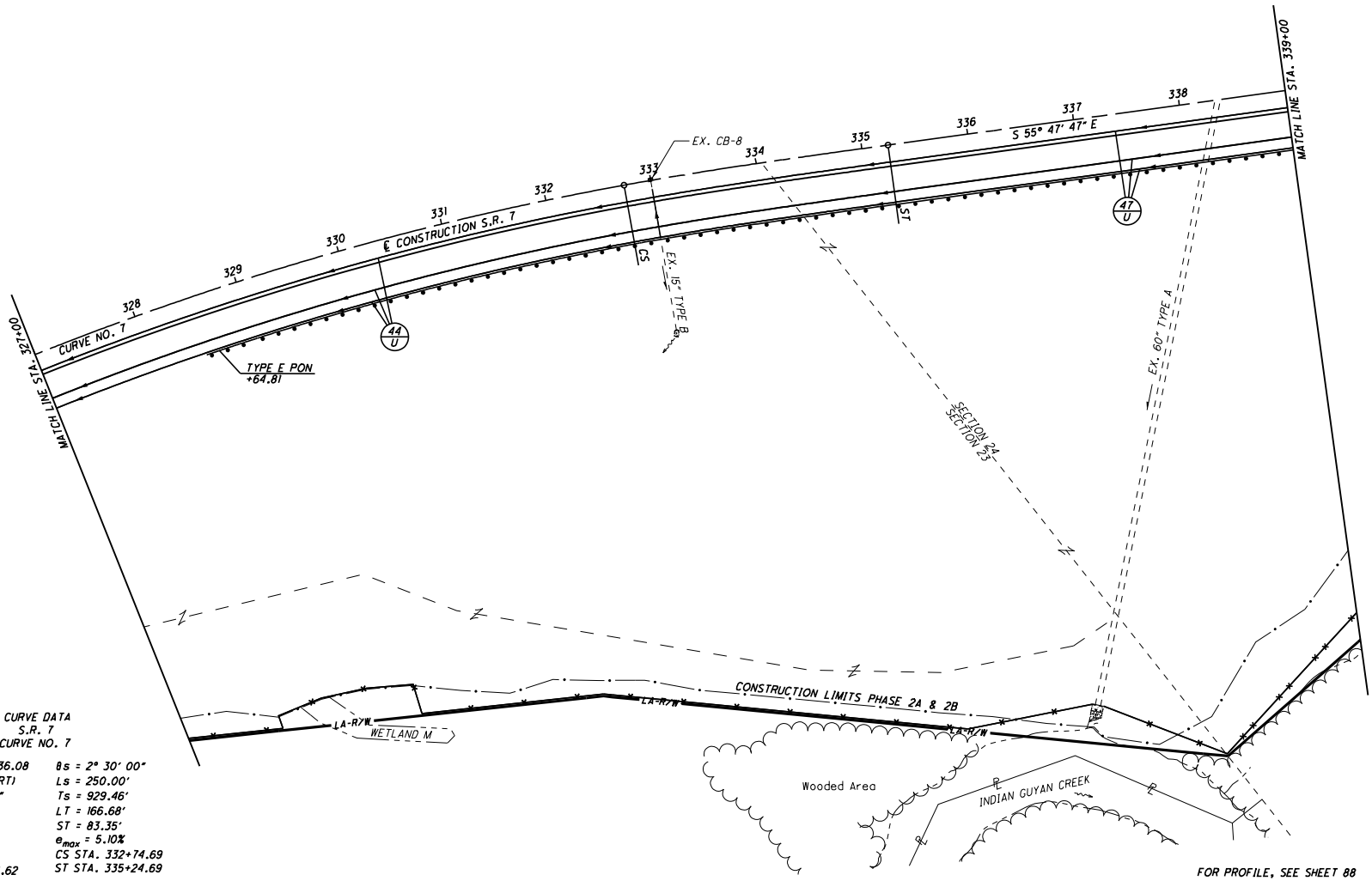

CURVE DATA
S.R. 7
CURVE NO. 7

P.I. STA. 326+36.08	θs = 2° 30' 00"
Δ = 31° 21' 41" (RT)	Ls = 250.00'
Dc = 2° 00' 00"	Ts = 929.46'
R = 2,864.79'	LT = 166.68'
T = 670.91'	ST = 83.35'
L = 1,318.07'	e_{max} = 5.10%
E = 77.51'	CS STA. 332+74.69
TS STA. 317+06.62	ST STA. 335+24.69
SC STA. 319+56.62	

FOR PROFILE, SEE SHEET 88
FOR UNDERDRAIN TABLES, SEE SHEETS 581-585
FOR TRAFFIC CONTROL PLAN, SEE SHEETS 589-619

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED SLP
CHECKED ALB

PLAN - S.R. 7
STA. 327+00 TO STA. 339+00 (SOUTH)

LAW-7-2.17

87
635

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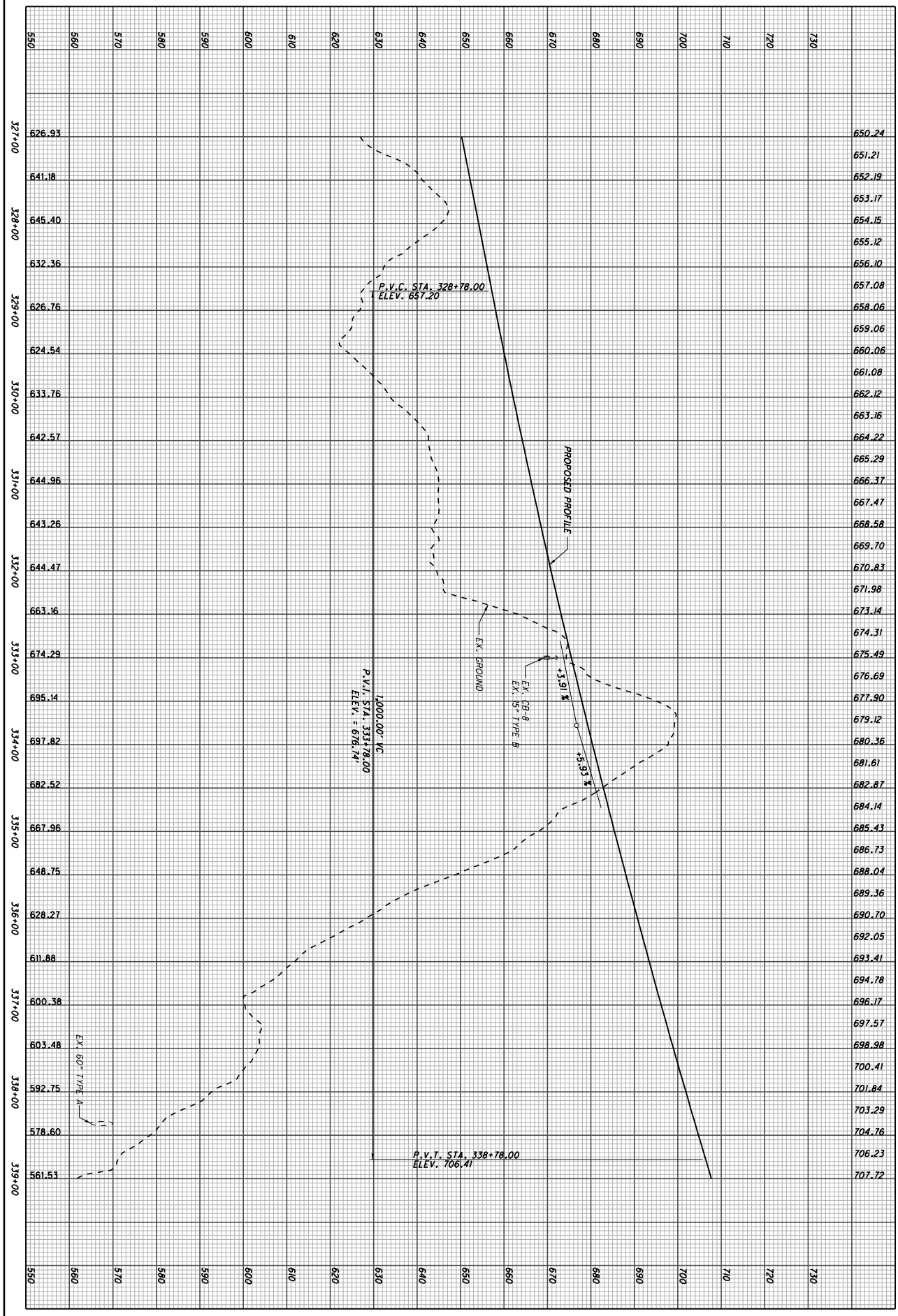
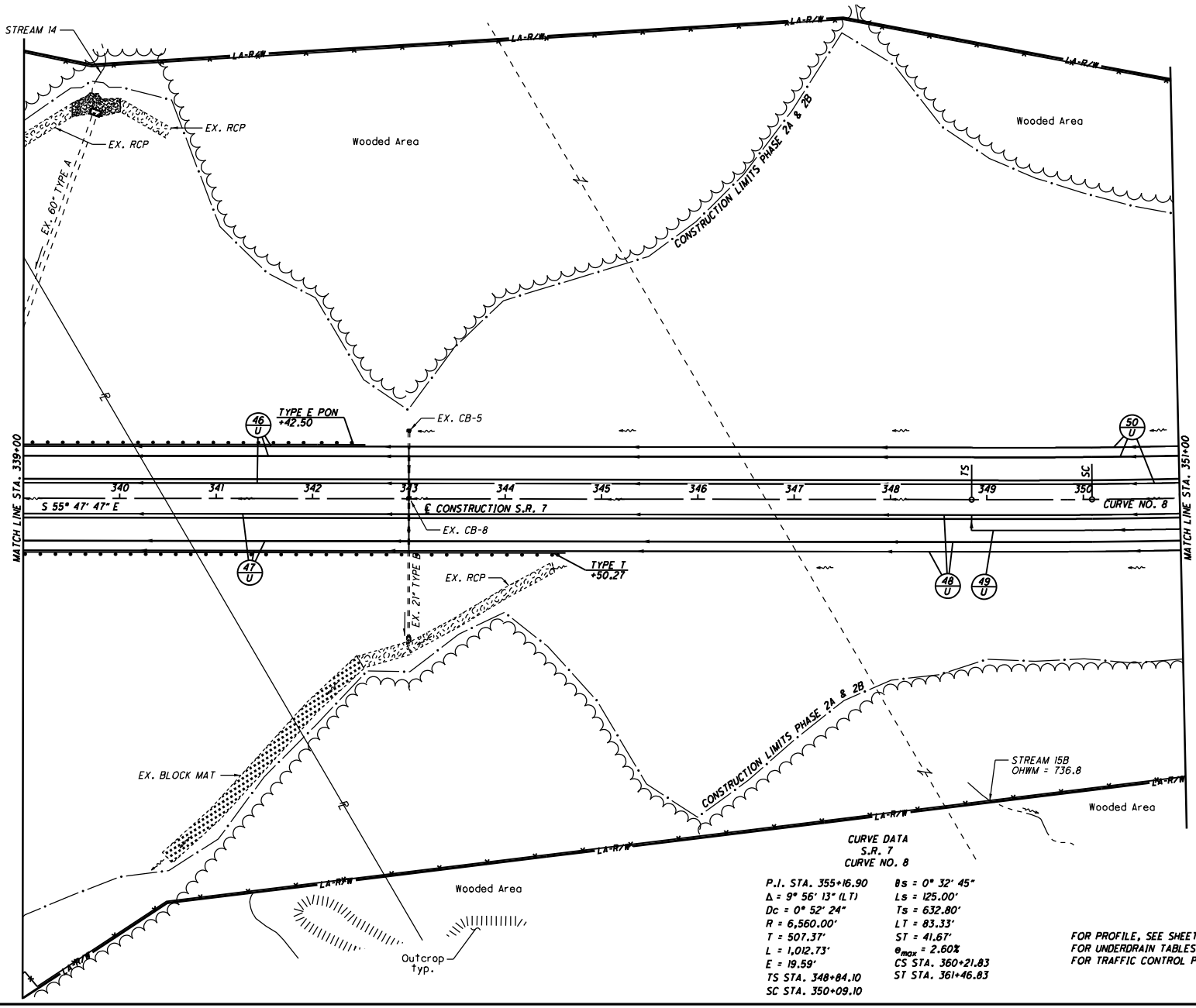


88 / 633	LAW-7-2.17	PROFILE - S.R. 7 STA. 327+00 TO STA. 339+00	CALCULATED SLP CHECKED ALB



CURVE DATA
S.R. 7
CURVE NO. 8

P.I. STA. 355+16.90	Bs = 0° 32' 45"
Δ = 9° 56' 13" (LT)	Ls = 125.00'
Dc = 0° 52' 24"	Ts = 632.80'
R = 6,560.00'	LT = 83.33'
T = 507.37'	ST = 41.67'
L = 1,012.73'	e_{max} = 2.60%
E = 19.59'	CS STA. 360+21.83
TS STA. 348+84.10	ST STA. 361+46.83
SC STA. 350+09.10	

FOR PROFILE, SEE SHEET 90
FOR UNDERDRAIN TABLES, SEE SHEETS 581-585
FOR TRAFFIC CONTROL PLAN, SEE SHEETS 589-619

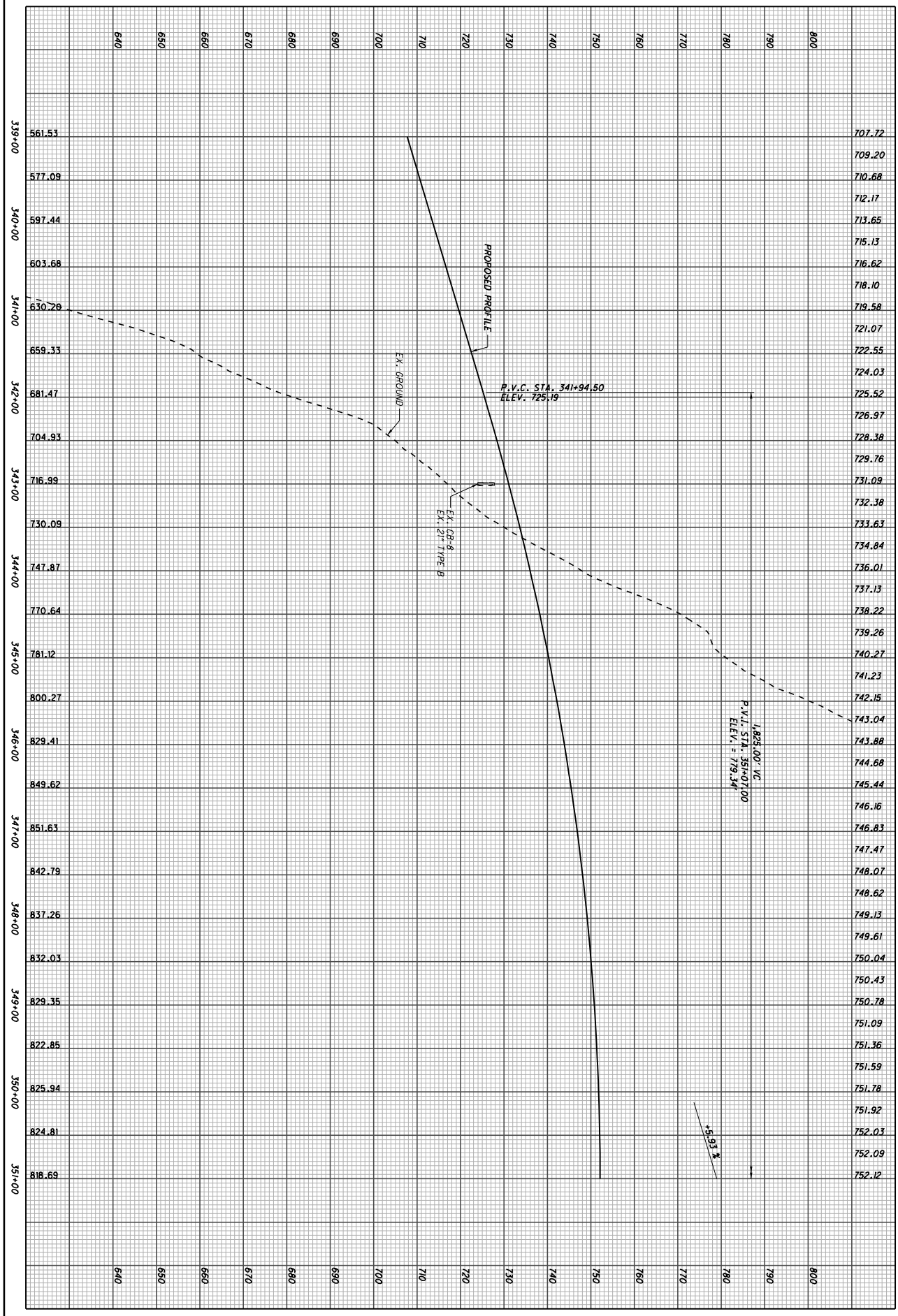
HORIZONTAL SCALE IN FEET
0 25 50 100
CALCULATED SLP
CHECKED ALB

PLAN - S.R. 7
STA. 339+00 TO STA. 351+00

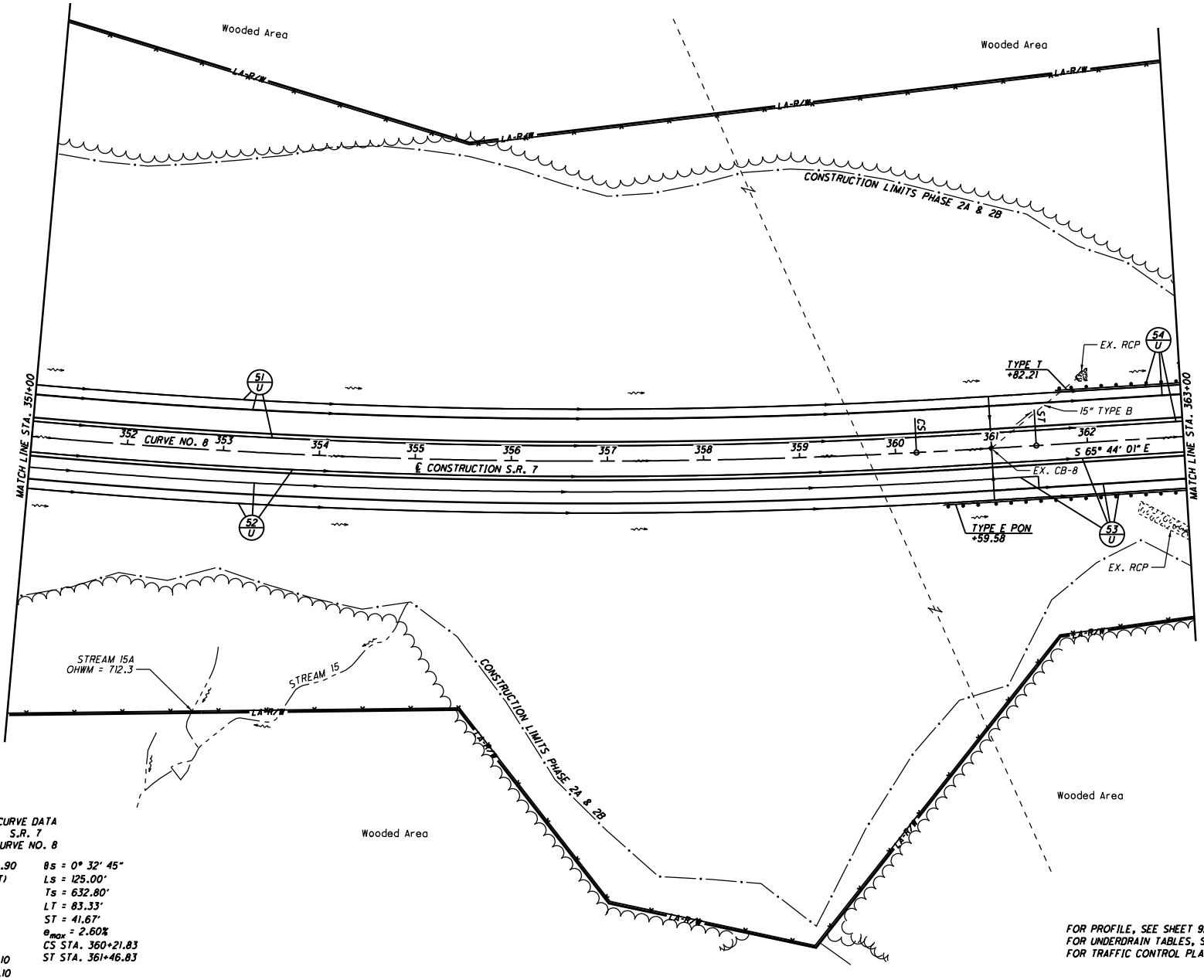
LAW-7-2.17

89
635

U:\1736087\4\LAW\75923\roadway\sheets\75923GP020-28.dgn Sheet 9/19/2023 4:04:39 PM aboyce



90 / 633	LAW-7-2.17	PROFILE - S.R. 7 STA. 339+00 STA. 351+00	CALCULATED SLP CHECKED ALB



CURVE DATA
S.R. 7
CURVE NO. 8

P.I. STA. 355+16.90
Δ = 9° 56' 13" (LT)
Dc = 0° 52' 24"
R = 6,560.00'
T = 507.37'
L = 1,012.73'
E = 19.59'
TS STA. 348+84.10
SC STA. 350+09.10

θs = 0° 32' 45"
Ls = 125.00'
Ts = 632.80'
LT = 83.33'
ST = 41.67'
e_{max} = 2.60%
CS STA. 360+21.83
ST STA. 361+46.83

FOR PROFILE, SEE SHEET 92
FOR UNDERDRAIN TABLES, SEE SHEETS 581-585
FOR TRAFFIC CONTROL PLAN, SEE SHEETS 589-619

HORIZONTAL SCALE IN FEET
0 25 50 100
CALCULATED SLP
CHECKED ALB

PLAN - S.R. 7
STA. 351+00 TO STA. 363+00

LAW-7-2.17

91
635

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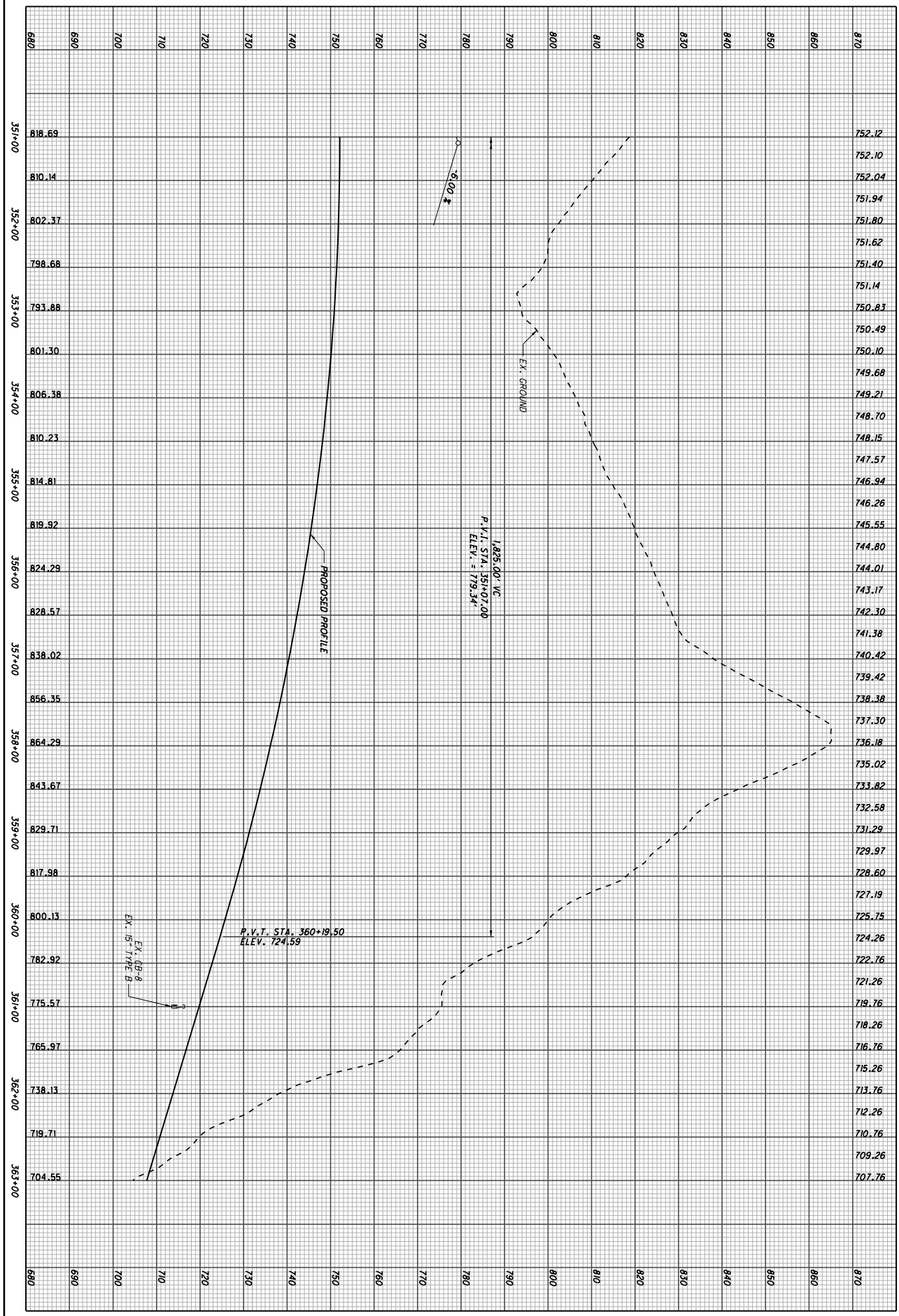
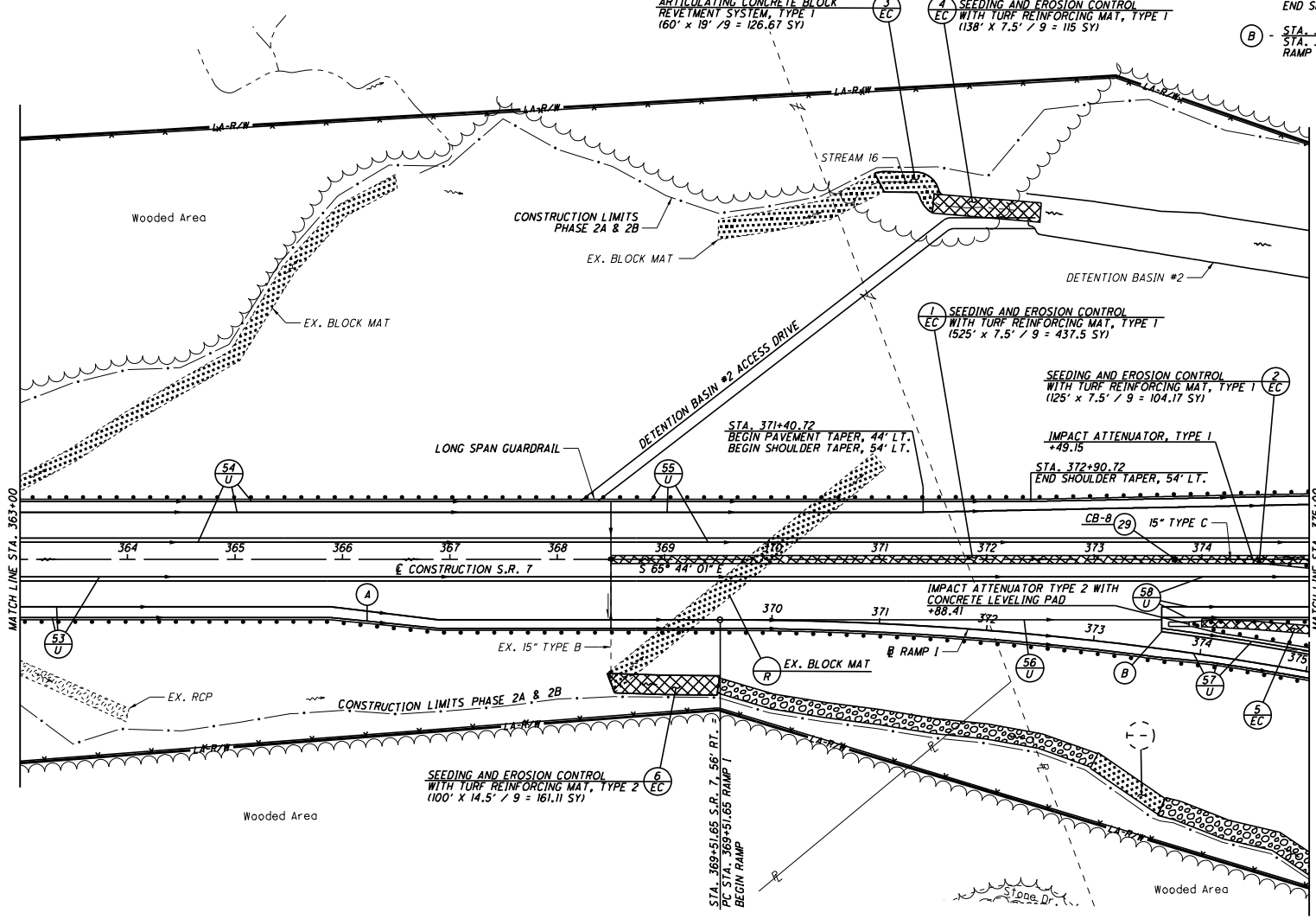


92 / 633	LAW-7-2.17	PROFILE - S.R. 7 STA. 351+00 TO STA. 363+00	CALCULATED SLP CHECKED ALB



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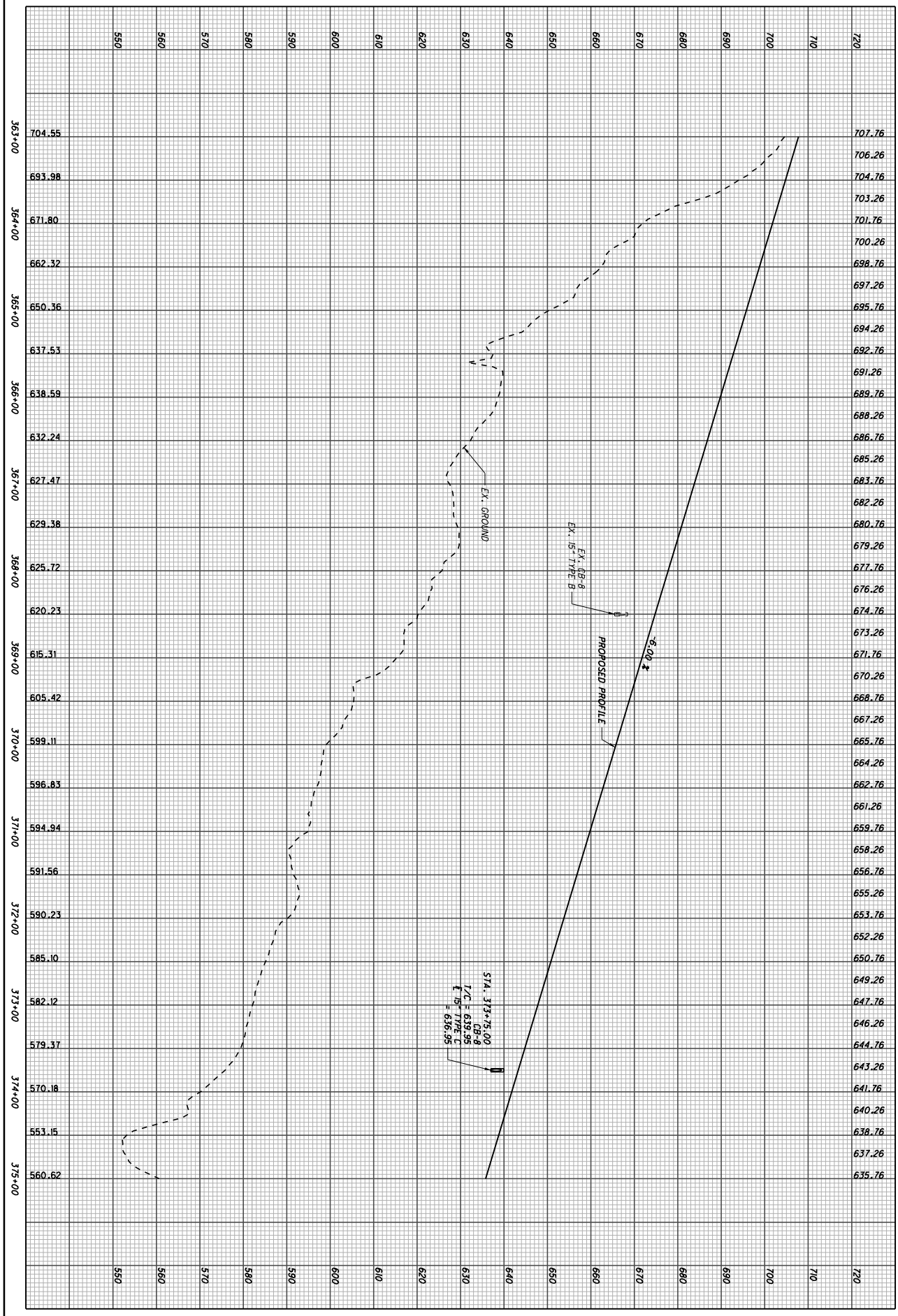
HORIZONTAL SCALE IN FEET
0 25 50 100
CALCULATED SLP
CHECKED ALB

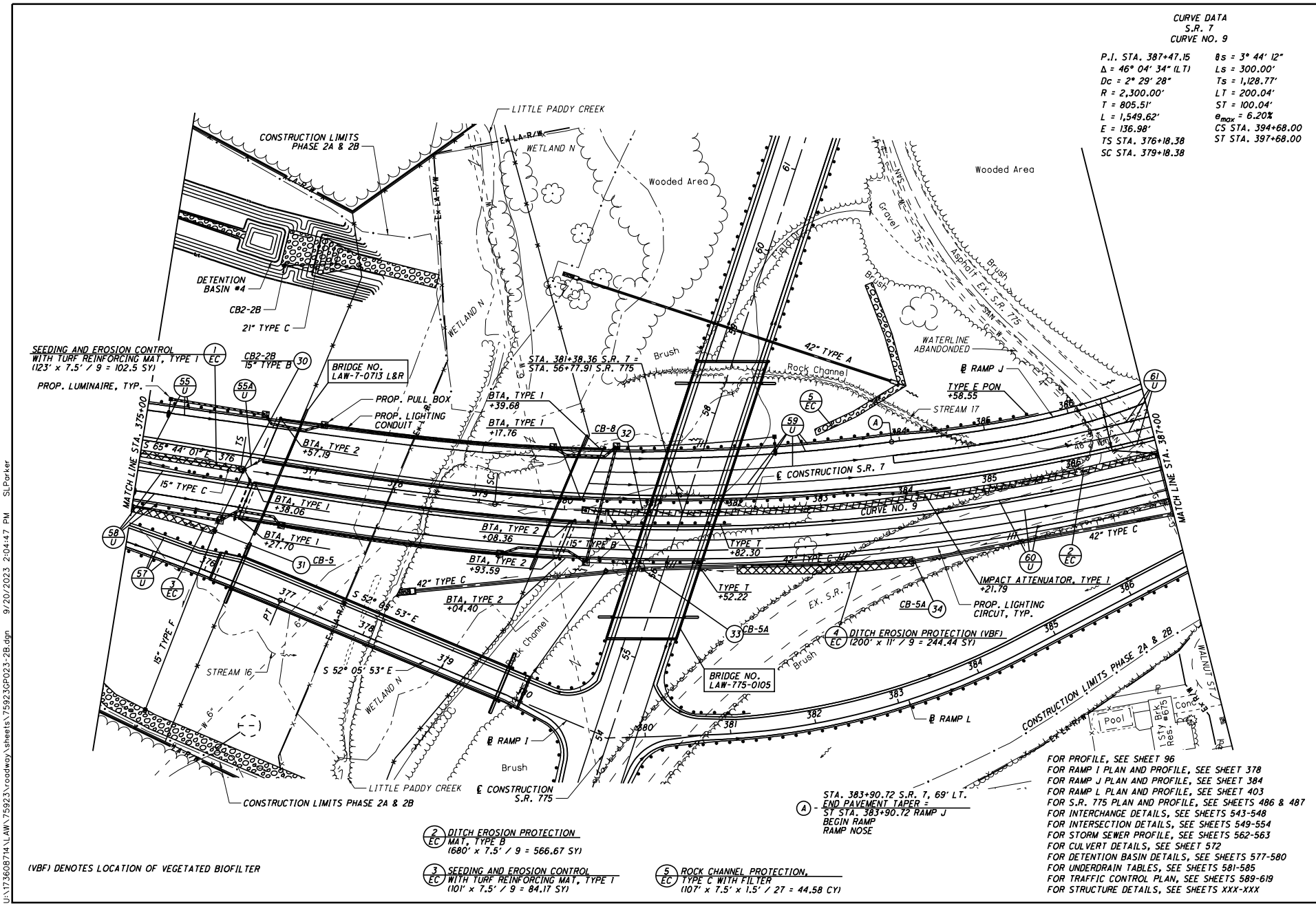
PLAN - S.R. 7
STA. 363+00 TO STA. 375+00

LAW-7-2.17



94 / 633	LAW-7-2.17	PROFILE - S.R. 7 STA. 363+00 TO STA. 375+00

CALCULATED SLP
CHECKED ALB



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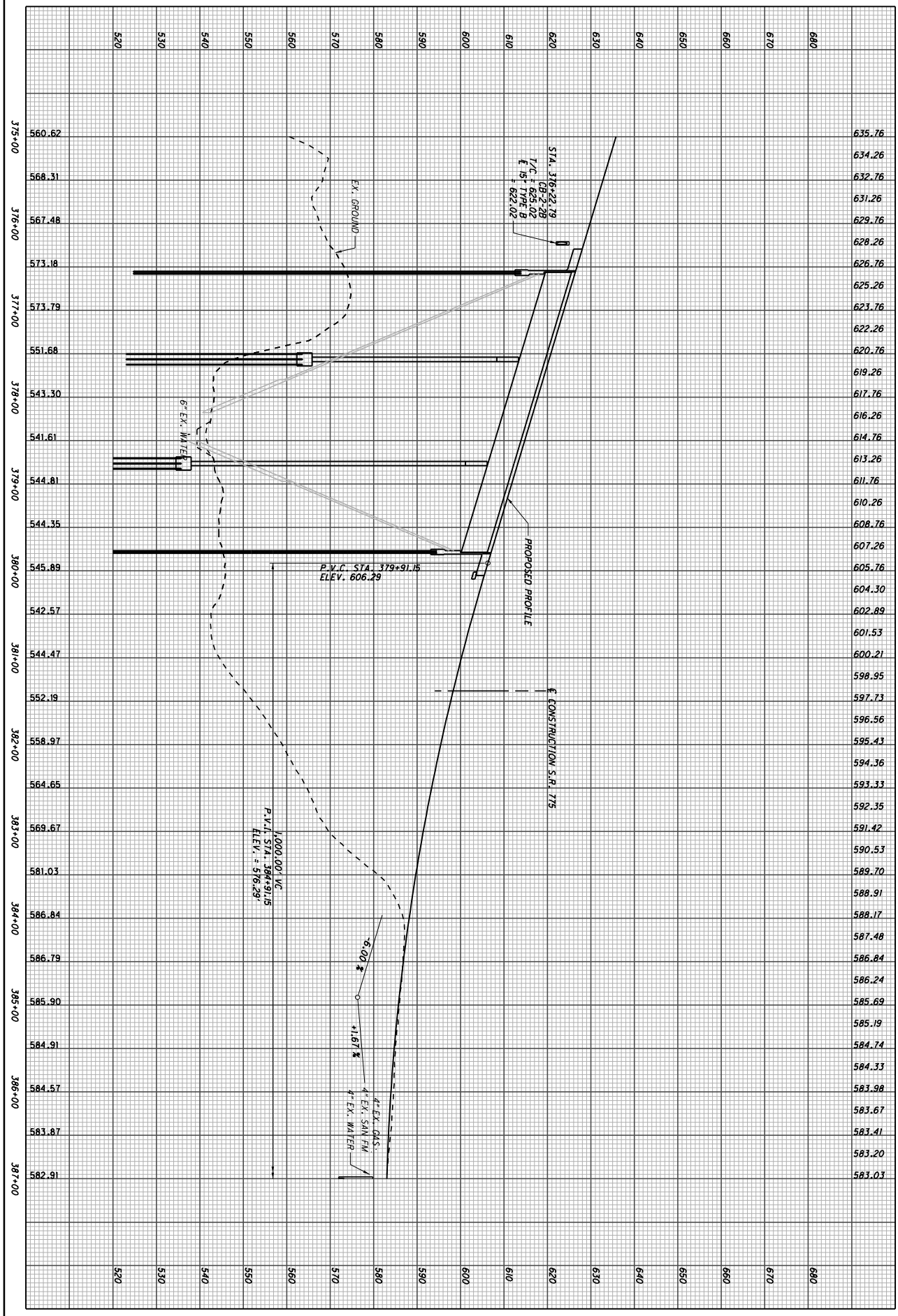
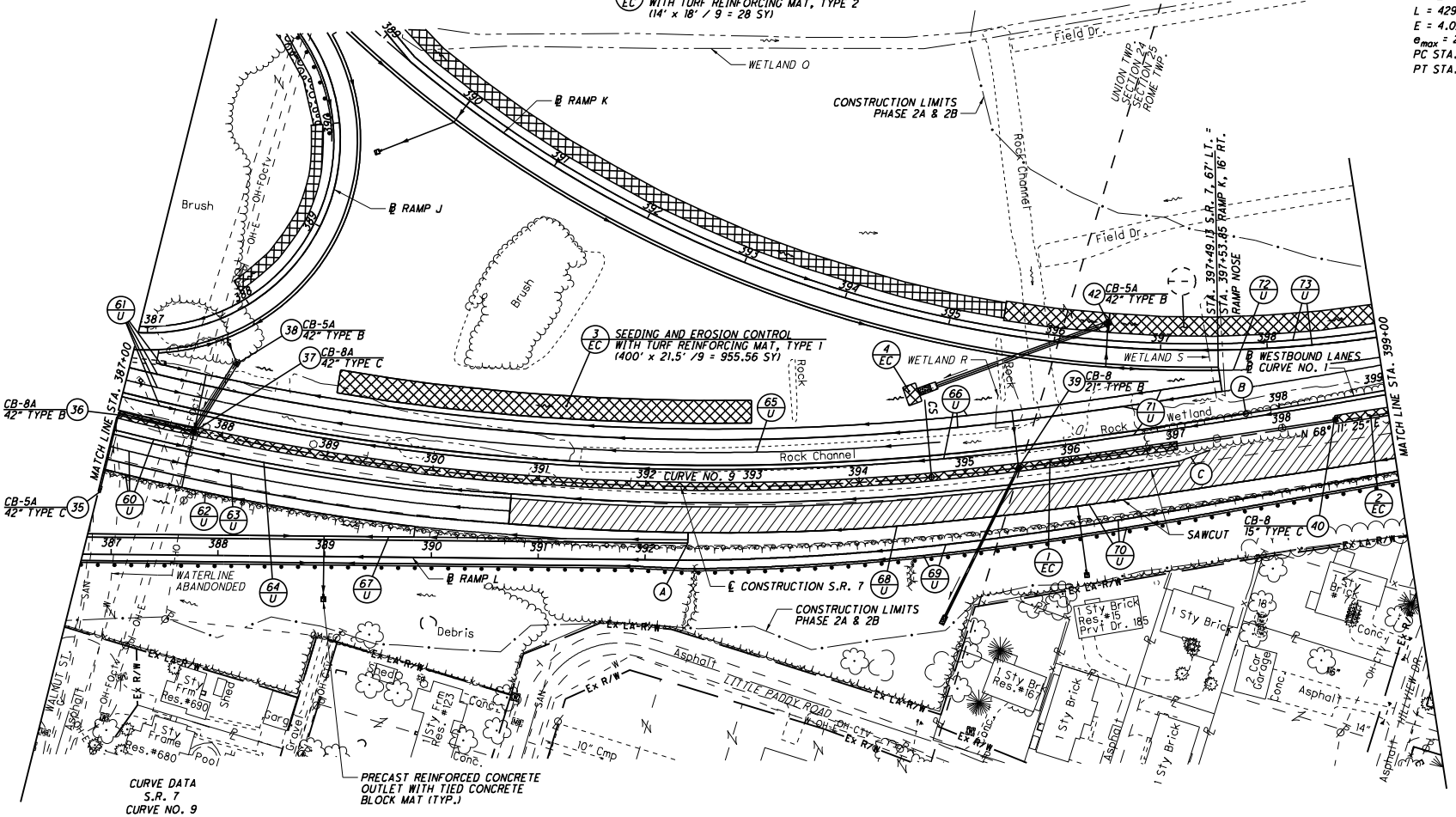


96 / 633	LAW-7-2.17	PROFILE - S.R. 7 STA. 375+00 TO STA. 387+00	CALCULATED SLP CHECKED ALB



CURVE DATA
S.R. 7 WESTBOUND LANES
℄ CURVE NO. 1

P.I. STA. 399+82.71
Δ = 4° 17' 32" (LT)
Dc = 1° 00' 00"
R = 5,729.58'
T = 214.71'
L = 429.22'
E = 4.02'
e_{max} = 2.90%
PC STA. = 397+68.00
PT STA. = 401+97.22

CURVE DATA
S.R. 7
CURVE NO. 9

P.I. STA. 387+47.15
Δ = 46° 04' 34" (LT)
Dc = 2° 29' 28"
R = 2,300.00'
T = 805.51'
L = 1,549.62'
E = 136.98'
TS STA. 376+18.38
SC STA. 379+18.38
θs = 3° 44' 12"
Ls = 300.00'
Ts = 1,128.77'
LT = 200.04'
ST = 100.04'
e_{max} = 6.20%
CS STA. 394+68.00
ST STA. 397+68.00

(A) - STA. 392+40.09 S.R. 7 BEGIN PAVEMENT TAPER, 69' RT. = STA. 392+40.09 RAMP L RAMP NOSE END RAMP

(B) - P.C. STA. 397+68.00 BEGIN ℄ WESTBOUND LANES = S.T. STA. 397+68.00, S.R. 7, 20' LT.

(C) - 5:1 SAWCUT TAPER TO MEET EXISTING SHOULDER WIDTH.

3-1/4" MILL/FILL

NOTE: ℄ WESTBOUND LANES SHOWN FOR HORIZONTAL ALIGNMENT ONLY

FOR PROFILE, SEE SHEET 98
FOR RAMP J PLAN & PROFILE, SEE SHEET 384
FOR RAMP K PLAN & PROFILE, SEE SHEET 389-390
FOR RAMP L PLAN & PROFILE, SEE SHEET 403
FOR INTERCHANGE DETAILS, SEE SHEETS 544-546
FOR STORM SEWER PROFILE, SEE SHEETS 561-562
FOR UNDERDRAIN TABLES, SEE SHEETS 579-583
FOR TRAFFIC CONTROL PLAN, SEE SHEETS 589-619

HORIZONTAL SCALE IN FEET
0 25 50 100
CALCULATED SLP
CHECKED ALB

PLAN - S.R. 7
STA. 387+00 STA. 399+00

LAW-7-2.17

97
633

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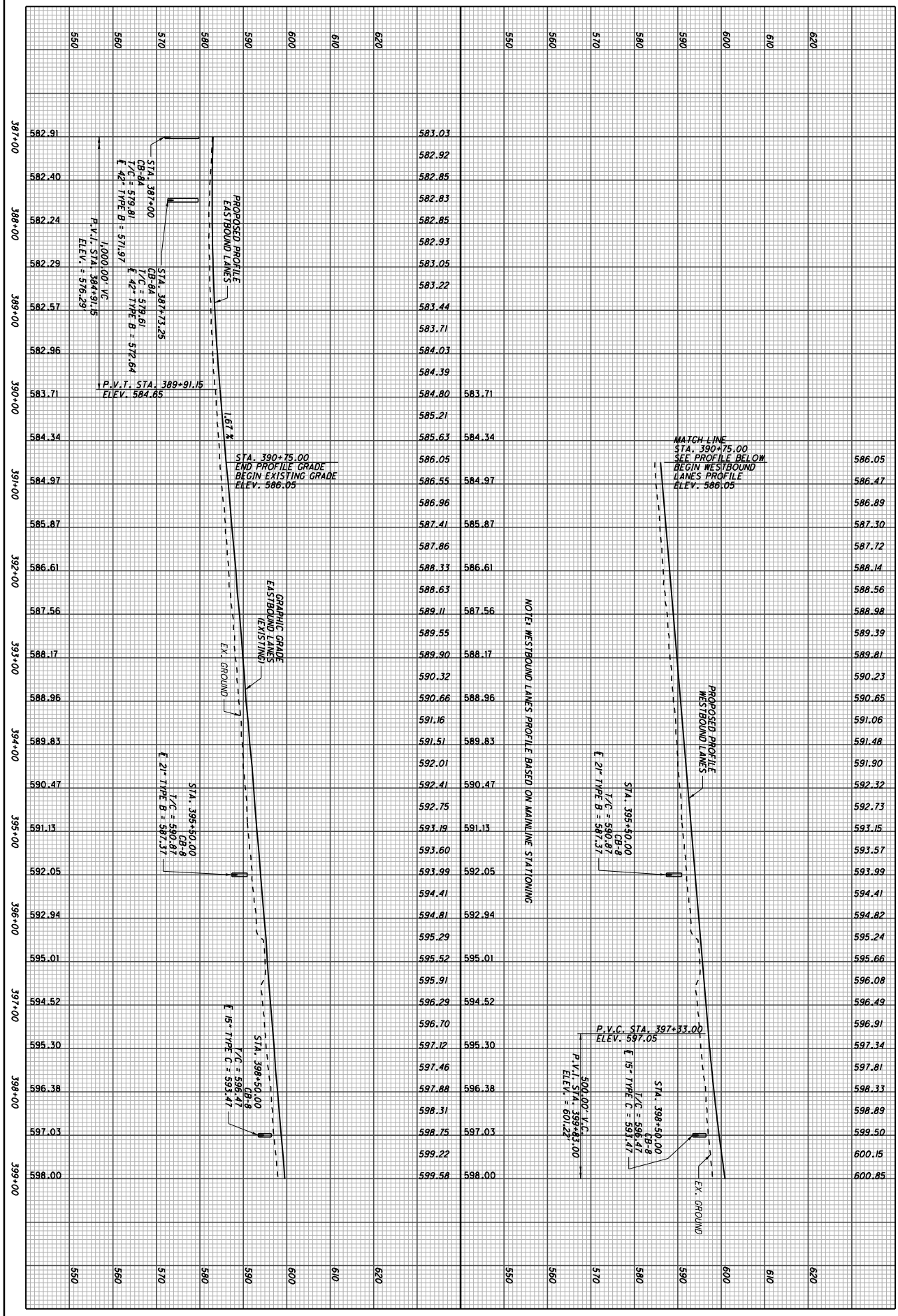


98 / 633	LAW-7-2.17	PROFILE - S.R. 7 STA. 387+00 TO STA. 399+00	CALCULATED SLP CHECKED ALB

CURVE DATA
S.R. 7
CURVE NO. 10

P.I. STA. 403+74.19
Δ = 1° 29' 03" (RT)
Dc = 0° 16' 56"
R = 20,306.35'
T = 263.02'
L = 526.00'
E = 1.70'
e_{max} = NC
PC STA. 401+11.17
PT STA. 406+37.18

CURVE DATA
S.R. 7
CURVE NO. 11

P.I. STA. 416+63.54
Δ = 18° 47' 30" (LT)
Dc = 1° 38' 13"
R = 3,500.00'
T = 451.44'
L = 897.92'
E = 28.99'
TS STA. = 409+59.26
SC STA. = 412+09.26
θs = 2° 02' 47"
Ls = 250.00'
Ts = 704.28'
LT = 166.68'
ST = 83.34'
e_{max} = 4.47%
CS STA. 421+07.18
ST STA. 423+57.18

CURVE DATA
S.R. 7 WESTBOUND LANES
℄ CURVE NO. 1

P.I. STA. 399+82.71
Δ = 4° 17' 32" (LT)
Dc = 1° 00' 00"
R = 5,729.58'
T = 214.71'
L = 429.22'
E = 4.02'
e_{max} = 2.90%
PC STA. = 397+68.00
PT STA. = 401+97.22

CURVE DATA
S.R. 7 WESTBOUND LANES
℄ CURVE NO. 2

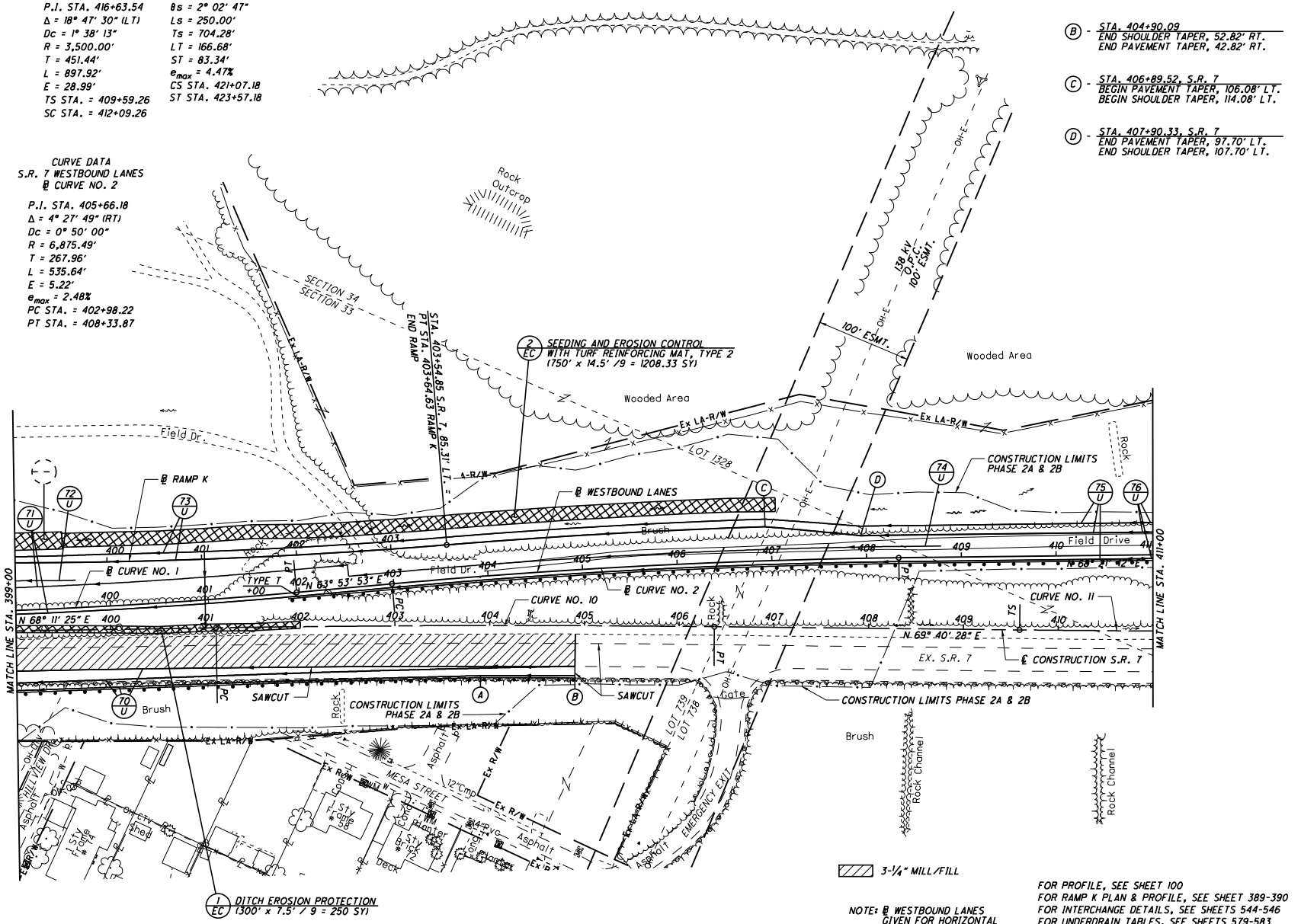
P.I. STA. 405+66.18
Δ = 4° 27' 49" (RT)
Dc = 0° 50' 00"
R = 6,875.49'
T = 267.96'
L = 535.64'
E = 5.22'
e_{max} = 2.48%
PC STA. = 402+98.22
PT STA. = 408+33.87

Ⓐ - STA. 403+90.09
BEGIN SHOULDER TAPER, 52.91' RT.

Ⓑ - STA. 404+90.09
END SHOULDER TAPER, 52.82' RT.
END PAVEMENT TAPER, 42.82' RT.

Ⓒ - STA. 406+89.52, S.R. 7
BEGIN PAVEMENT TAPER, 106.08' LT.
BEGIN SHOULDER TAPER, 114.08' LT.

Ⓓ - STA. 407+90.33, S.R. 7
END PAVEMENT TAPER, 97.70' LT.
END SHOULDER TAPER, 107.70' LT.



NOTE: ℄ WESTBOUND LANES GIVEN FOR HORIZONTAL ALIGNMENT ONLY.

FOR PROFILE, SEE SHEET 100
FOR RAMP K PLAN & PROFILE, SEE SHEET 389-390
FOR INTERCHANGE DETAILS, SEE SHEETS 544-546
FOR UNDERDRAIN TABLES, SEE SHEETS 579-583
FOR TRAFFIC CONTROL PLAN, SEE SHEETS 589-619

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED SLP
CHECKED ALB

PLAN - S.R. 7
STA. 399+00 TO STA. 411+00

LAW-7-2.17

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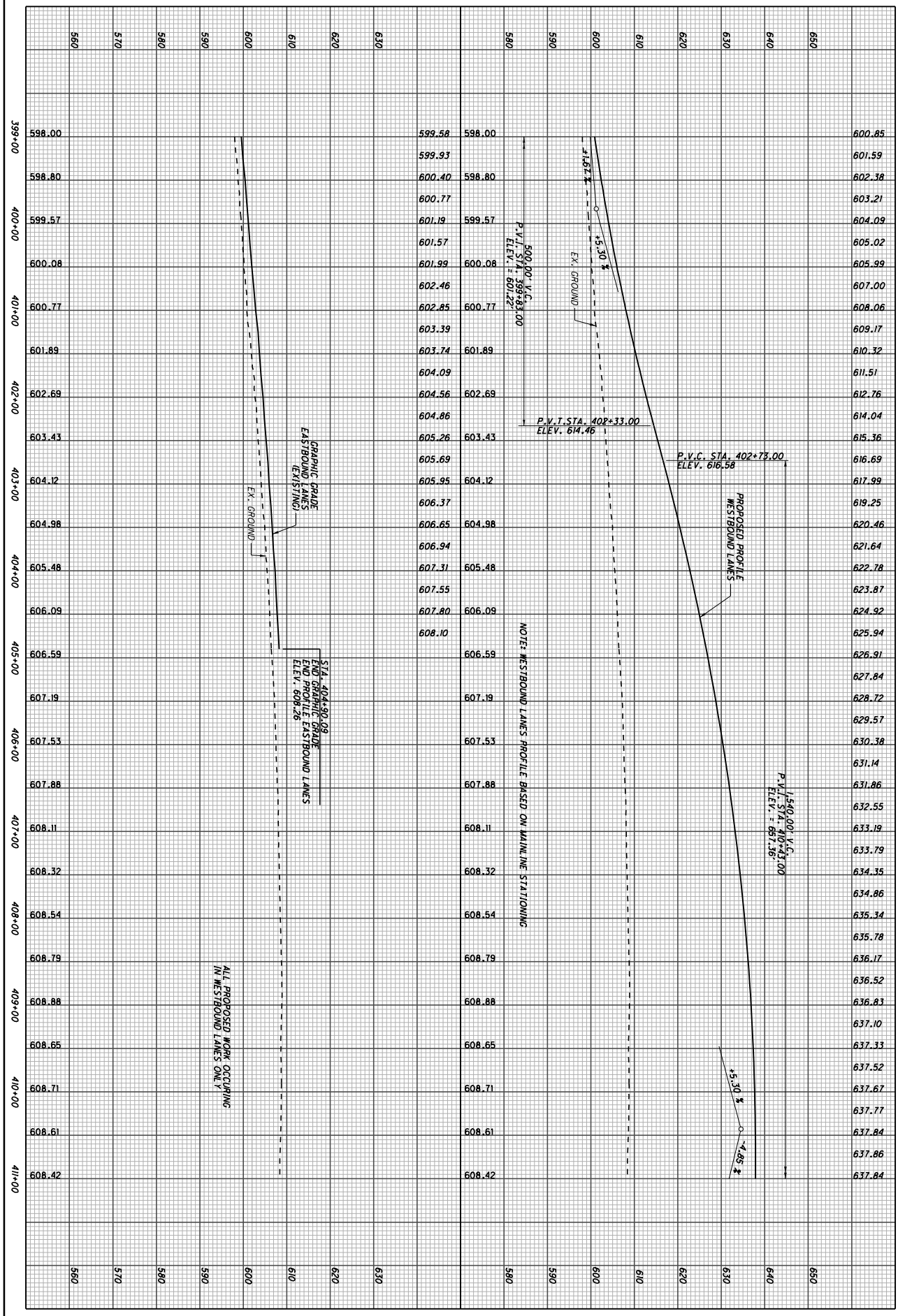


100 / 633	LAW-7-2.17	PROFILE - S.R. 7 STA. 399+00 TO 411+00	CALCULATED SLP CHECKED ALB

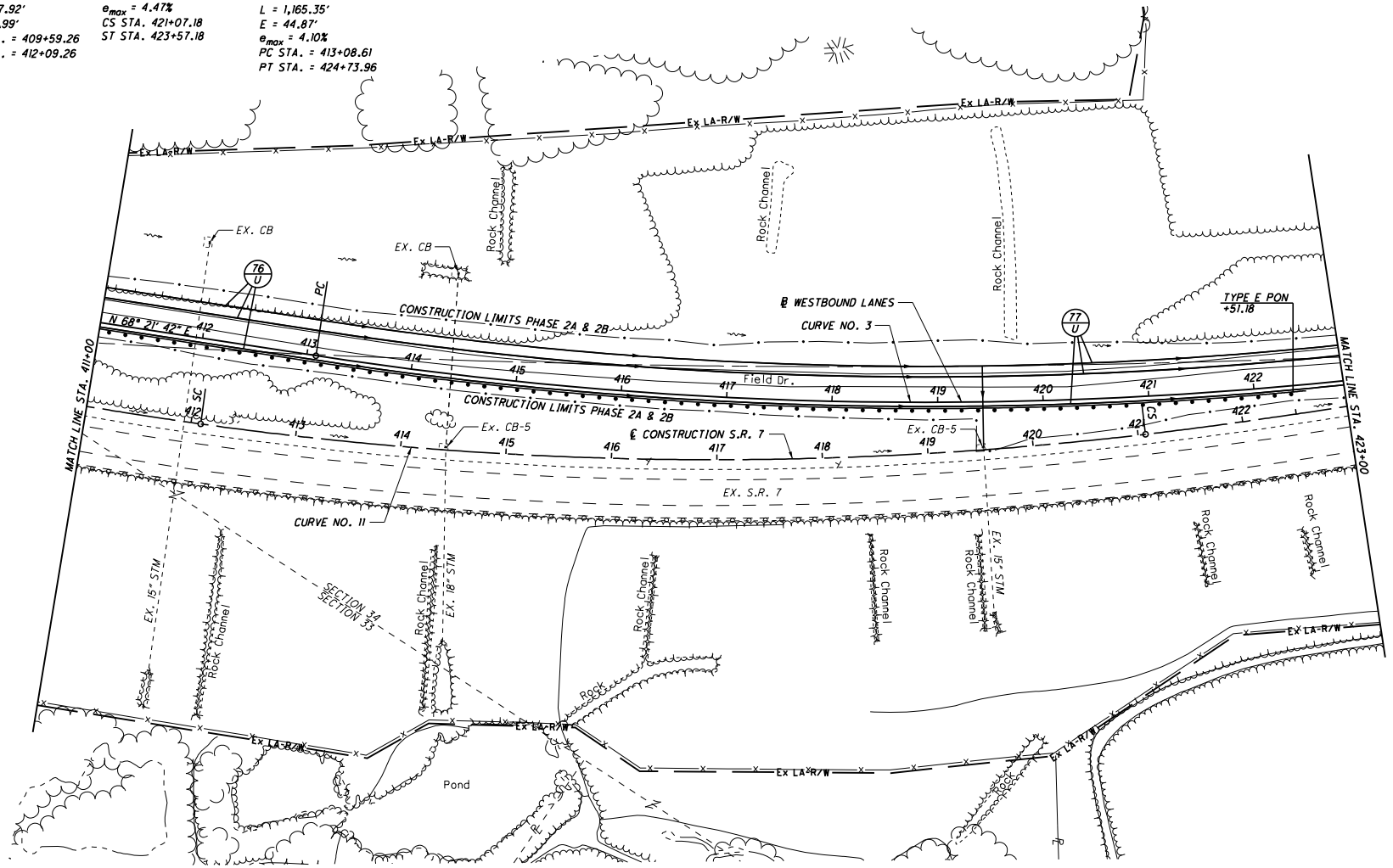
CURVE DATA
S.R. 7
CURVE NO. 11

P.I. STA. 416+63.54
Δ = 18° 47' 30" (LT)
Dc = 1° 38' 13"
R = 3,500.00'
T = 451.44'
L = 897.92'
E = 28.99'
TS STA. = 409+59.26
SC STA. = 412+09.26

θs = 2° 02' 47"
Ls = 250.00'
Ts = 704.28'
LT = 166.68'
ST = 83.34'
e_{max} = 4.47%
CS STA. 421+07.18
ST STA. 423+57.18

CURVE DATA
S.R. 7 WESTBOUND LANES
℄ CURVE NO. 3

P.I. STA. 418+95.85
Δ = 17° 28' 44" (LT)
Dc = 1° 30' 00"
R = 3,820.00'
T = 587.24'
L = 1,165.35'
E = 44.87'
e_{max} = 4.10%
PC STA. = 413+08.61
PT STA. = 424+73.96



NOTE: ℄ WESTBOUND LANES GIVEN FOR HORIZONTAL ALIGNMENT ONLY.

FOR PROFILE, SEE SHEET 102
FOR UNDERDRAIN TABLES, SEE SHEETS 579-583
FOR TRAFFIC CONTROL PLAN, SEE SHEETS 589-619

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED SLP
CHECKED ALB

PLAN - S.R. 7
STA. 411+00 TO STA. 423+00

LAW-7-2.17

101
633

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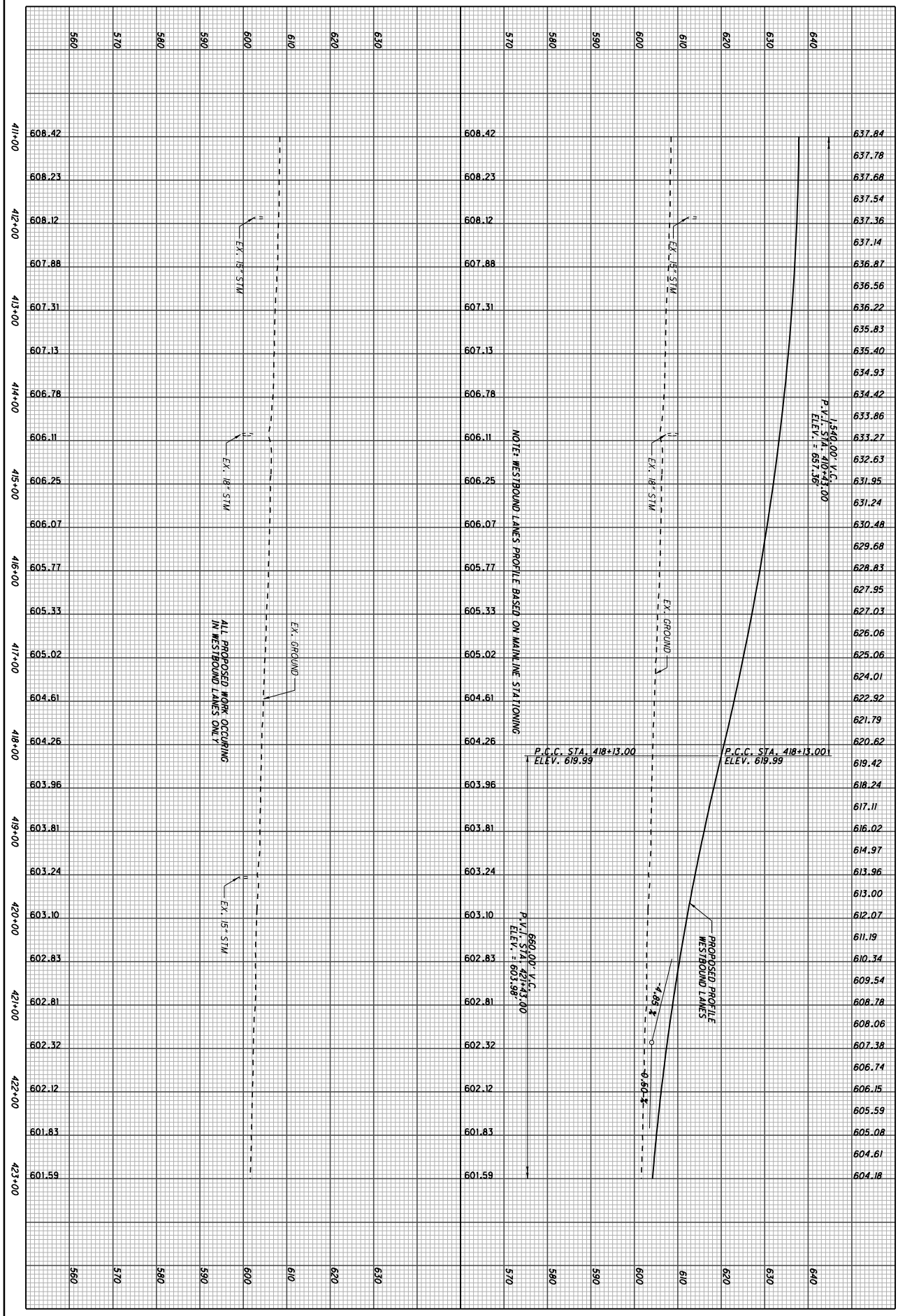


102 / 633	LAW-7-2.17	PROFILE - S.R. 7 STA. 411+00 TO STA. 423+00	CALCULATED SLP CHECKED ALB

CURVE DATA
S.R. 7
CURVE NO. 11

P.I. STA. 416+63.54
Δ = 18° 47' 30" (LT)
Dc = 1° 38' 13"
R = 3,500.00'
T = 451.44'
L = 897.92'
E = 28.99'
TS STA. = 409+59.26
SC STA. = 412+09.26

Bs = 2° 02' 47"
Ls = 250.00'
Ts = 704.28'
LT = 166.68'
ST = 83.34'
e_{max} = 4.47%
CS STA. 421+07.18
ST STA. 423+57.18

CURVE DATA
S.R. 7
CURVE NO. 12

P.I. STA. 428+11.24
Δ = 3° 17' 53" (RT)
Dc = 1° 19' 10"
R = 4,342.09'
T = 125.00'
L = 249.93'
E = 1.80'
e_{max} = 3.77%
PC STA. = 426+86.24
PT STA. = 429+36.17

CURVE DATA
S.R. 7
℄ WESTBOUND LANES
CURVE NO. 3

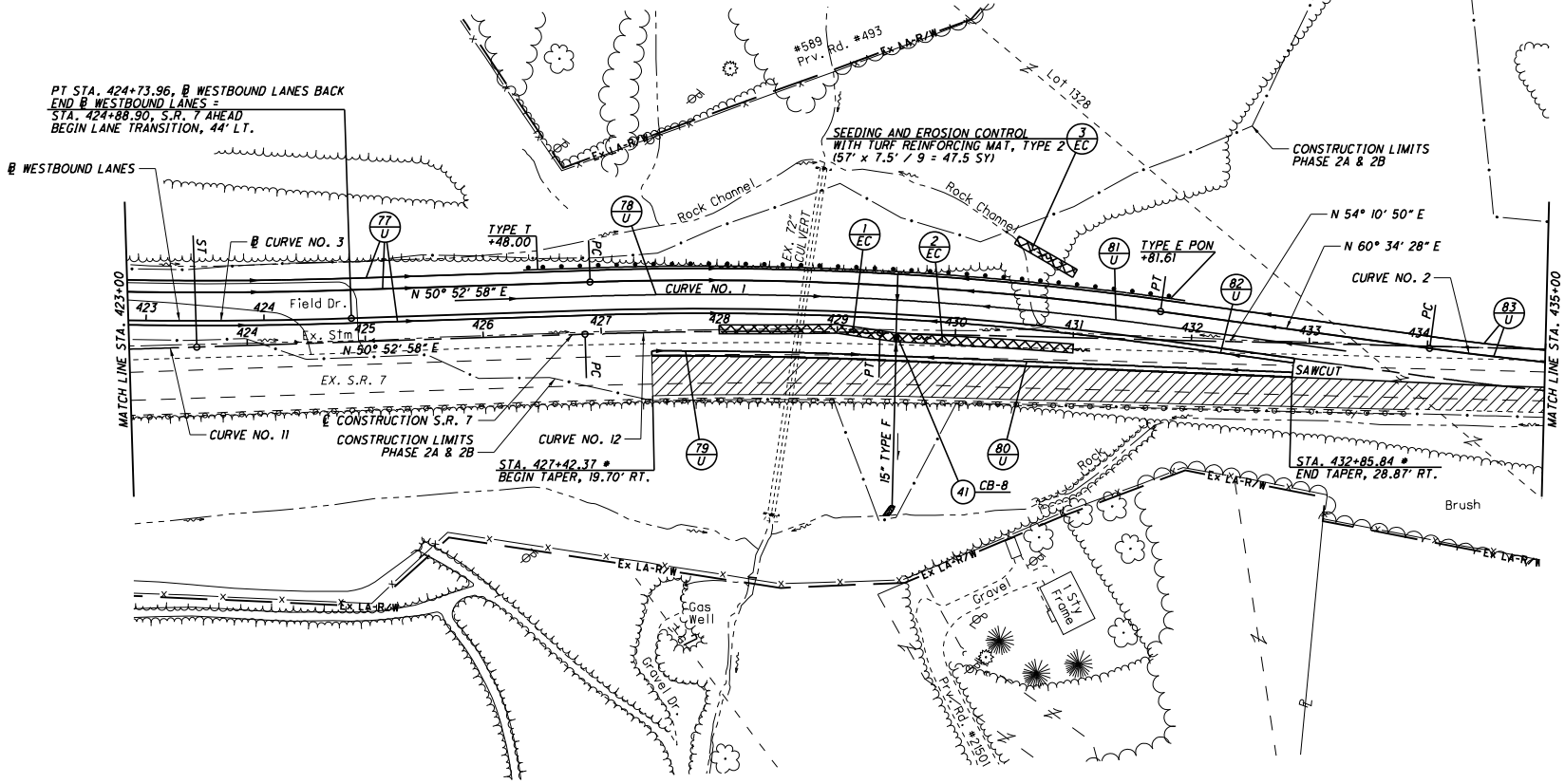
P.I. STA. 418+95.85
Δ = 17° 28' 44" (LT)
Dc = 1° 30' 00"
R = 3,820.00'
T = 587.24'
L = 1,165.35'
E = 44.87'
e_{max} = 4.10%
PC STA. 413+08.61
PT STA. 424+73.96

CURVE DATA
S.R. 7 LANE TRANSITION
TRANSITION CURVE NO. 1
(FOR HORIZONTAL LAYOUT ONLY)

P.I. STA. 429+32.01, S.R. 7, 51.04' LT.
Δ = 9° 41' 31" (RT)
Dc = 2° 00' 00"
R = 2,864.79'
T = 242.88'
L = 484.59'
E = 10.28'
e_{max} = 5.10%
PC STA. 426+91.84, S.R. 7, 44' LT.
PT STA. 431+73.33, S.R. 7, 23.99' LT.

CURVE DATA
S.R. 7 LANE TRANSITION
TRANSITION CURVE NO. 2
(FOR HORIZONTAL LAYOUT ONLY)

P.I. STA. 435+58.87, S.R. 7, 19.22' RT.
Δ = 6° 18' 42" (LT)
Dc = 2° 00' 00"
R = 2,864.79'
T = 157.95'
L = 315.59'
E = 4.35'
e_{max} = NC
PC STA. 434+01.90, S.R. 7, 1.63' RT.
PT STA. 437+16.83, S.R. 7, 19.44' RT.



1 EC SEEDING AND EROSION CONTROL WITH TURF REINFORCING MAT, TYPE 1 (150' x 7.5' / 9 = 125 SY)

2 EC DITCH EROSION PROTECTION (150' x 7.5' / 9 = 125 SY)

3-¼" MILL/FILL

* - SEE TRAFFIC CONTROL PLAN SHEET XXX FOR FULL TAPER LENGTH.

NOTE: ℄ WESTBOUND LANES GIVEN FOR HORIZONTAL ALIGNMENT ONLY.

FOR PROFILE, SEE SHEET 104
FOR STORM SEWER PROFILE, SEE SHEET 360
FOR PAVEMENT DETAILS, SEE SHEET 540
FOR UNDERDRAIN TABLES, SEE SHEETS 579-583
FOR TRAFFIC CONTROL PLAN, SEE SHEETS 589-619

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED SLP
CHECKED ALB

PLAN - S.R. 7
STA. 423+00 TO STA. 435+00

LAW-7-2.17

103
633

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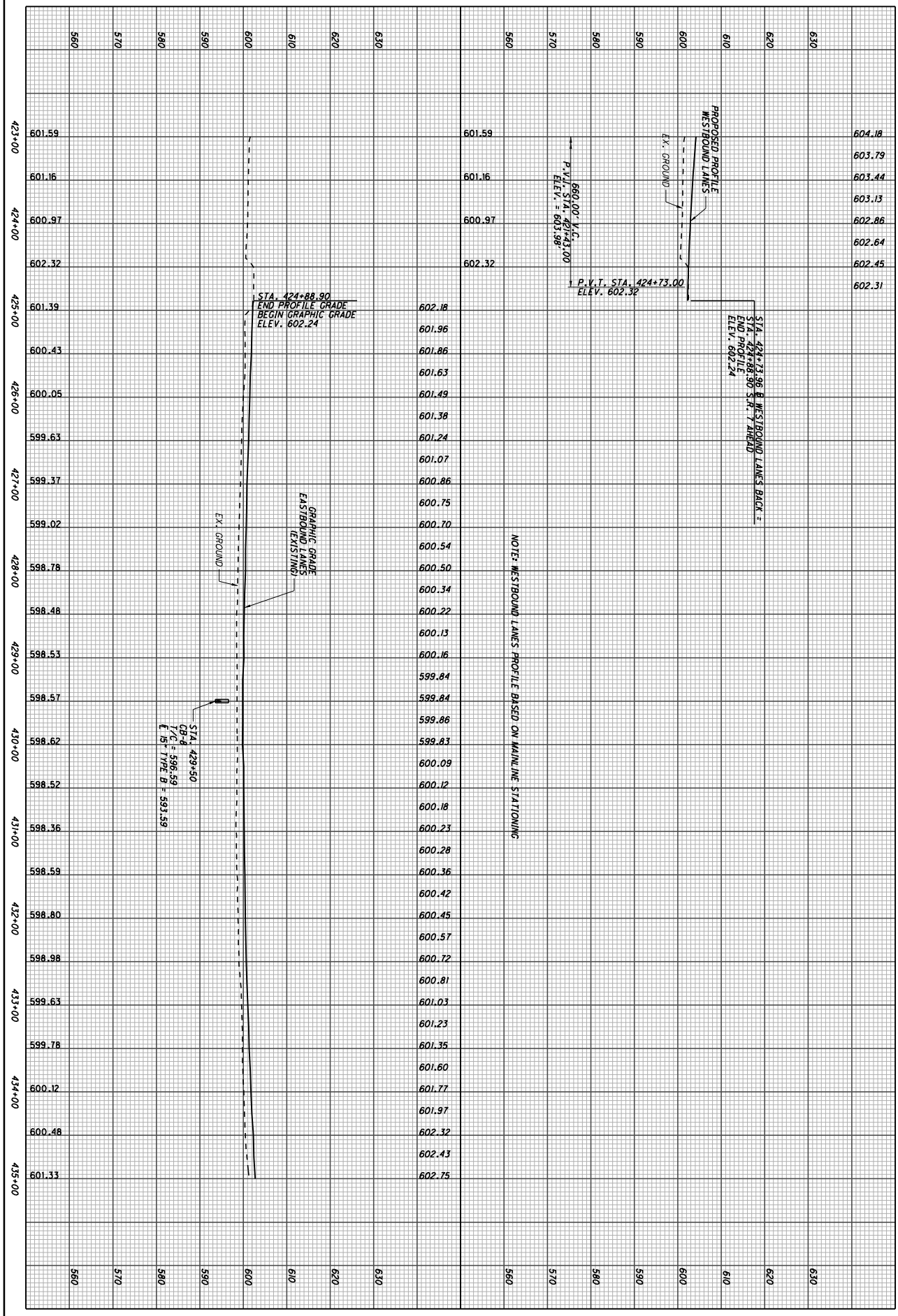
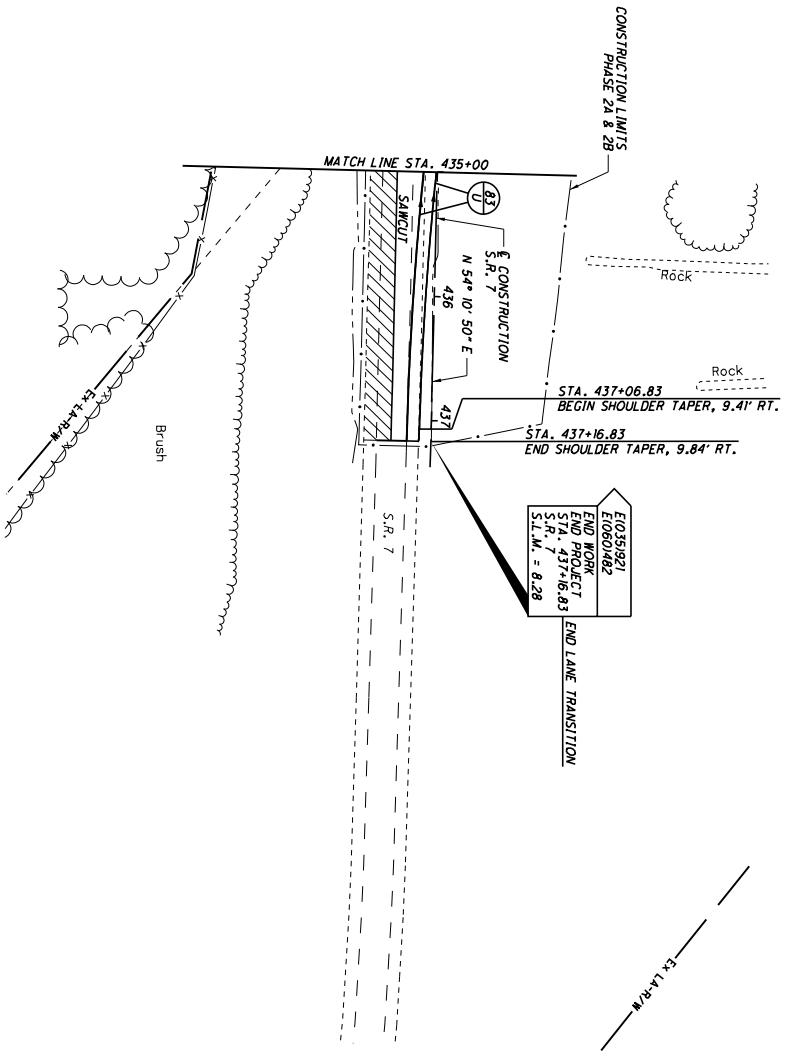


104 / 633	LAW-7-2.17	PROFILE - S.R. 7 STA. 423+00 TO 435+00	CALCULATED SLP CHECKED ALB



3-1/4" MILL/FILL

FOR PROFILE, SEE SHEET 106
FOR PAVEMENT DETAILS, SEE SHEET 540
FOR UNDERDRAIN TABLES, SEE SHEETS 579-583
FOR TRAFFIC CONTROL PLAN, SEE SHEETS 589-619

105 / 633	LAW-7-2.17	PLAN - S.R. 7 STA. 435+00 TO STA. 437+16.83	CALCULATED SLP CHECKED ALB	0 50 25 100 HORIZONTAL SCALE IN FEET

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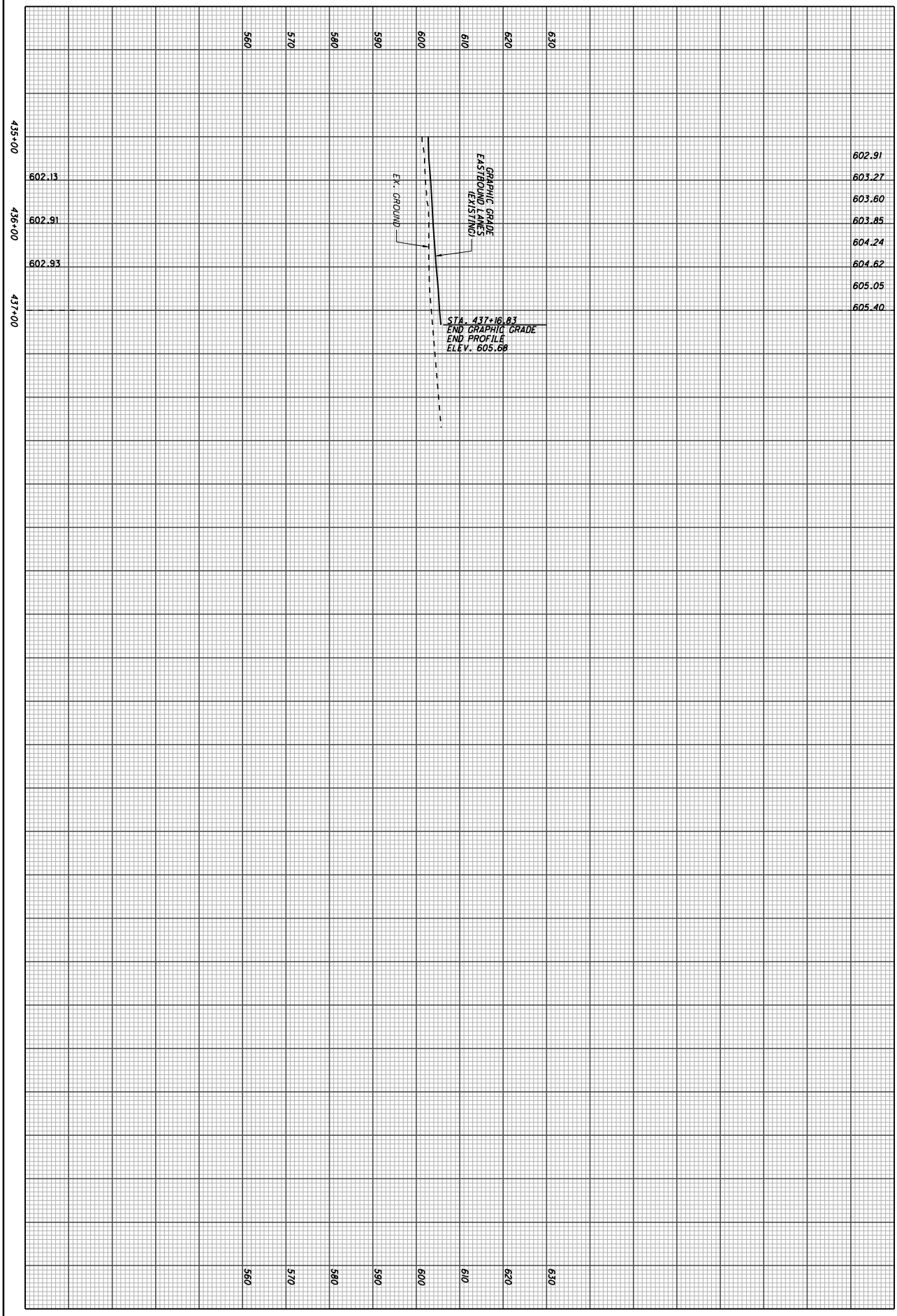
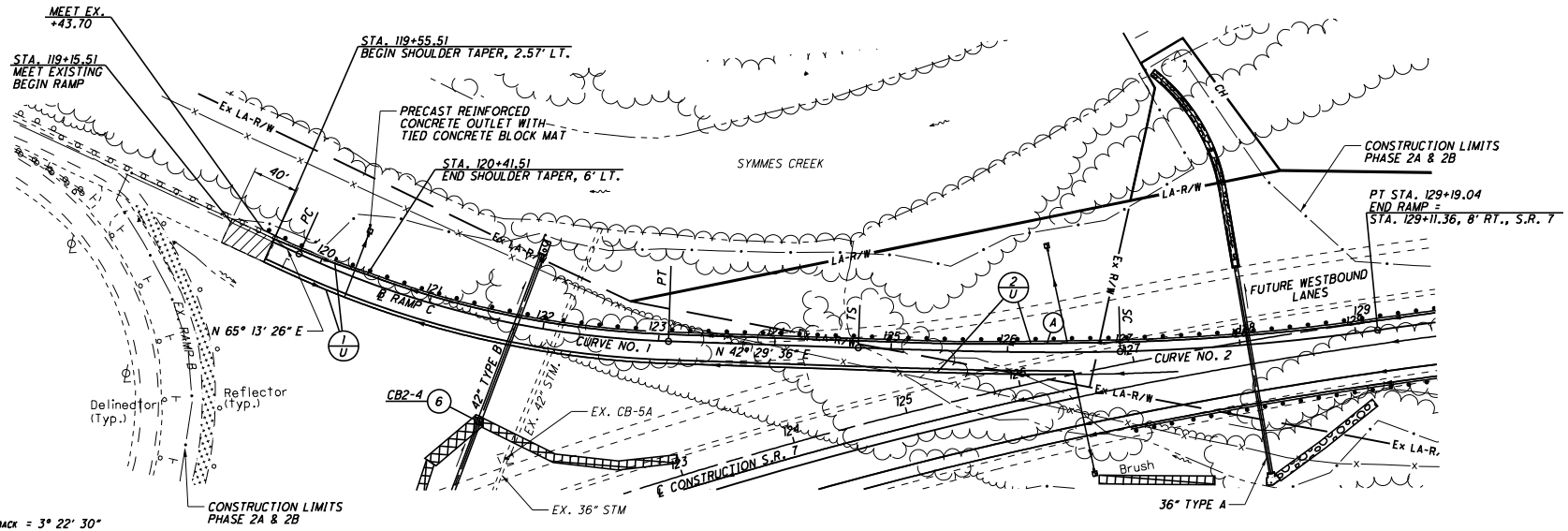


106 / 633	LAW-7-2.17	PROFILE - S.R. 7 STA. 435+00 TO 437+16.83	CALCULATED SLP CHECKED ALB



CURVE DATA
RAMP C
CURVE NO. 1

P.I. STA. 121+46.57
Δ = 22° 43' 51" (LT)
Dc = 6° 55' 23"
R = 827.61'
T = 166.35'
L = 328.33'
E = 16.55'
e_{max} = 6.80%
PC STA. 119+80.21
PCC STA. 123+08.55

CURVE DATA
RAMP C
CURVE NO. 2

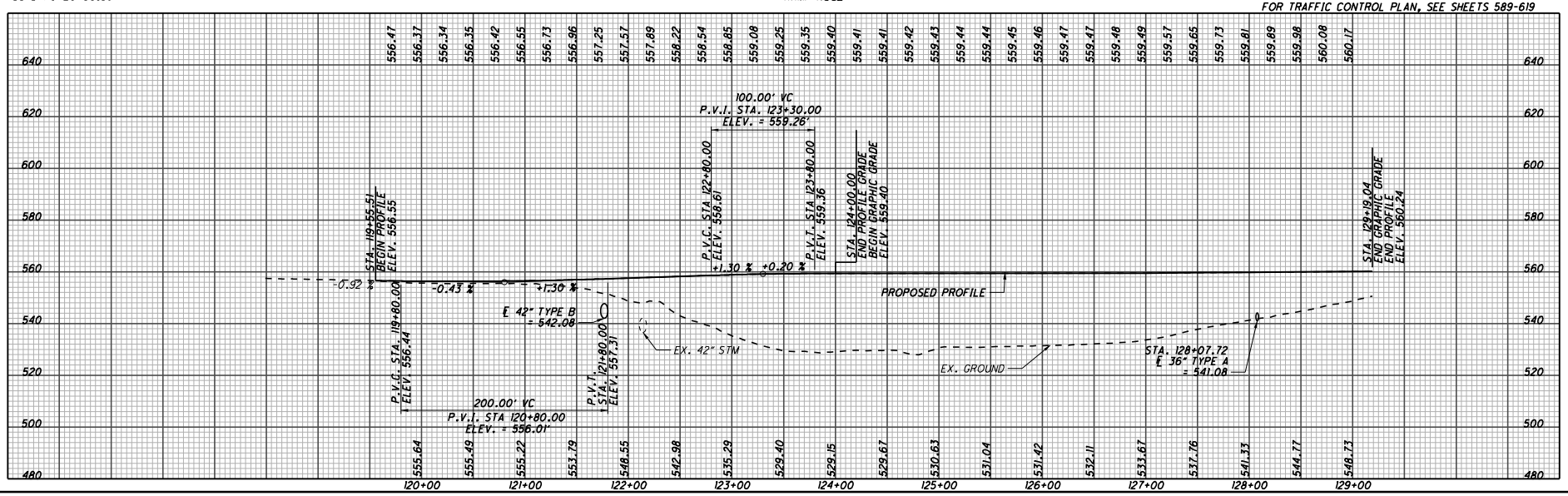
P.I. STA. 127+45.87
Δ = 10° 02' 27" (LT)
Dc = 3° 00' 00"
R = 1,909.86'
T = 111.22'
L = 222.19'
E = 3.24'
TS STA. 124+71.85
SC STA. 126+96.85

θs BACK = 3° 22' 30"
Ls = 225.00'
Ts = 274.02'
LT = 150.03'
ST = 75.02'
e_{max} (N.D.C.) = 6.00%
e_{max} = 2.22%

PAVEMENT REMOVED
3-1/4" MILL/FILL

(A) - STA. 125+56.39 BEGIN SHOULDER TAPER, 6' LT.
STA. 126+56.39 END SHOULDER TAPER, 8' LT. RAMP NOSE

FOR S.R. 7 PLAN AND PROFILE, SEE SHEETS 46-49
FOR PAVEMENT DETAILS, SEE SHEETS 539
FOR INTERCHANGE DETAILS, SEE SHEETS 541-543
FOR STORM SEWER PROFILES, SEE SHEET 559
FOR CULVERT DETAILS, SEE SHEET 566
FOR UNDERDRAIN TABLES, SEE SHEETS 579-583
FOR TRAFFIC CONTROL PLAN, SEE SHEETS 589-619



HORIZONTAL SCALE IN FEET 0 25 50 100

CALCULATED SLP
CHECKED ALB

PLAN AND PROFILE RAMP C

LAW-7-2.17

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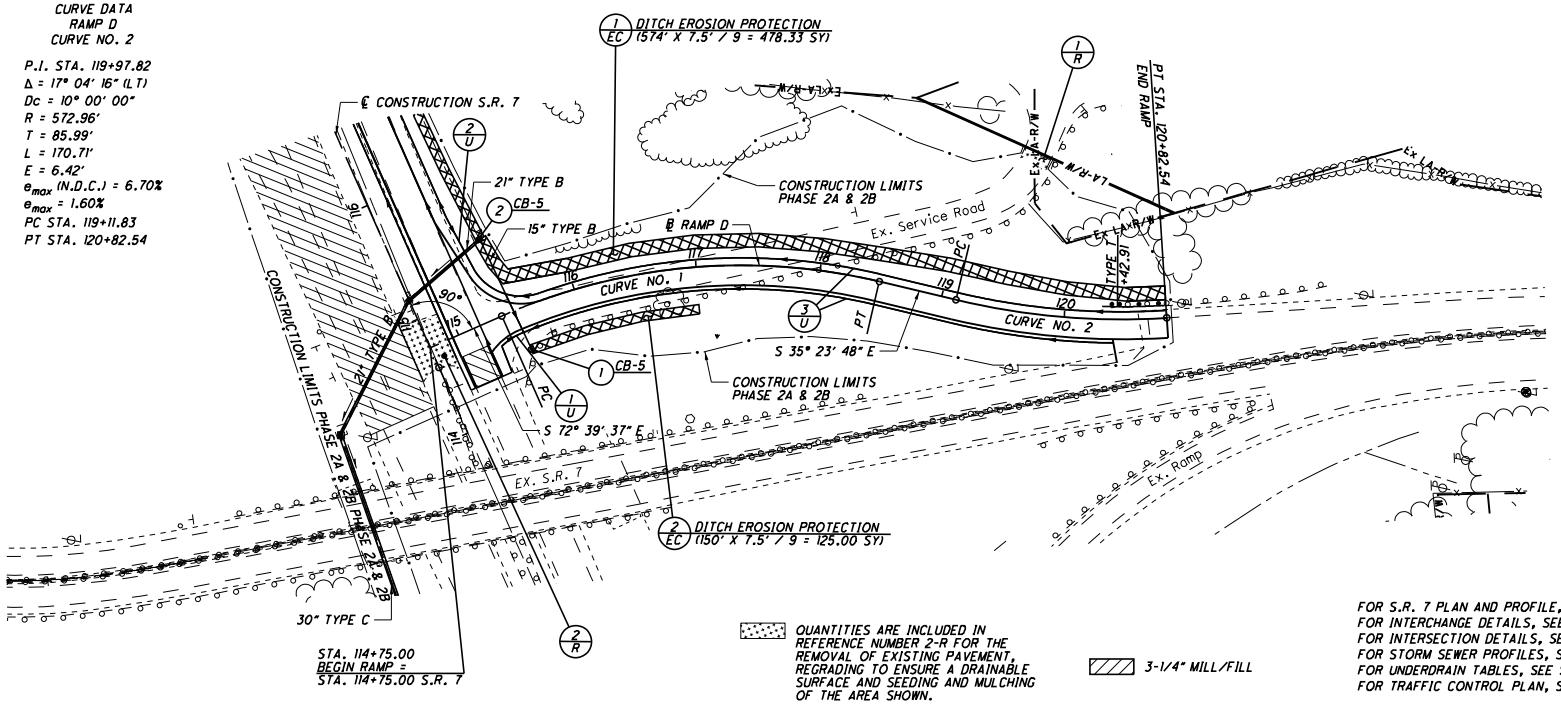
CURVE DATA
RAMP D
CURVE NO. 1

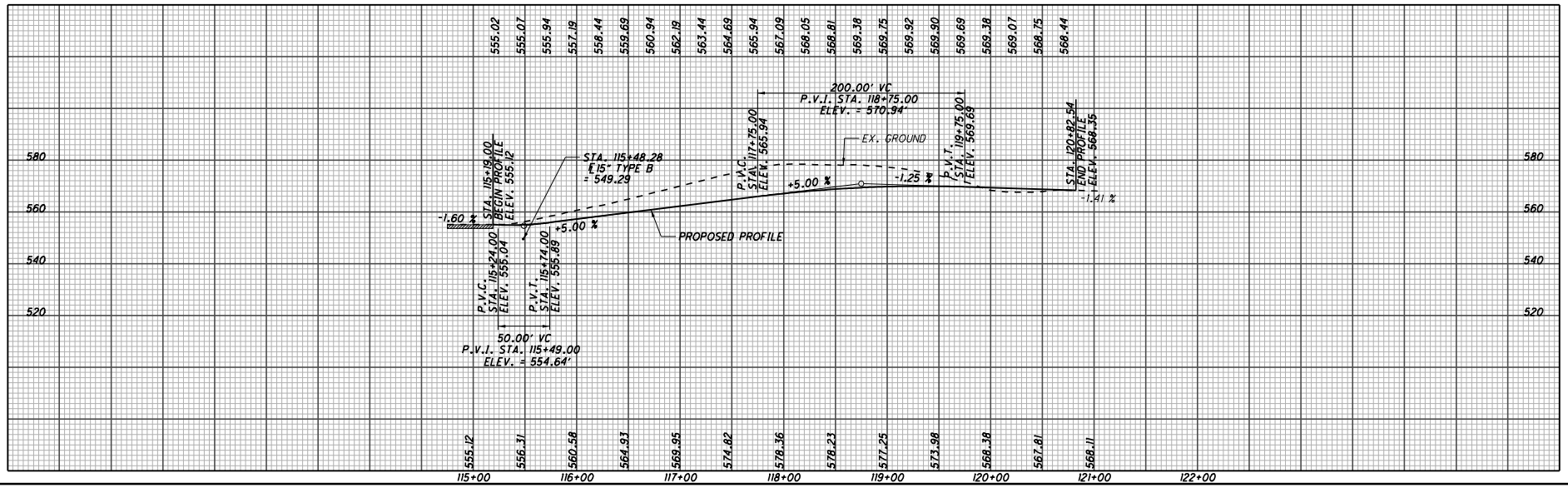
P.I. STA. 116+98.94
Δ = 37° 15' 49" (RT)
Dc = 12° 00' 00"
R = 477.46'
T = 160.98'
L = 310.53'
E = 26.41'
e_{max} = 7.30%
PC STA. 115+37.96
PT STA. 118+48.49

CURVE DATA
RAMP D
CURVE NO. 2

P.I. STA. 119+97.82
Δ = 17° 04' 16" (LT)
Dc = 10° 00' 00"
R = 572.96'
T = 85.99'
L = 170.71'
E = 6.42'
e_{max} (N.D.C.) = 6.70%
e_{max} = 1.60%
PC STA. 119+11.83
PT STA. 120+82.54



FOR S.R. 7 PLAN AND PROFILE, SEE SHEETS 46-47
FOR INTERCHANGE DETAILS, SEE SHEETS 541-543
FOR INTERSECTION DETAILS, SEE SHEET 547
FOR STORM SEWER PROFILES, SEE SHEET 559
FOR UNDERDRAIN TABLES, SEE SHEETS 579-583
FOR TRAFFIC CONTROL PLAN, SEE SHEETS 589-619



CALCULATED SLP
CHECKED ALB

HORIZONTAL SCALE IN FEET
0 25 50 100

PLAN AND PROFILE
RAMP D

LAW-7-2.17

373
633

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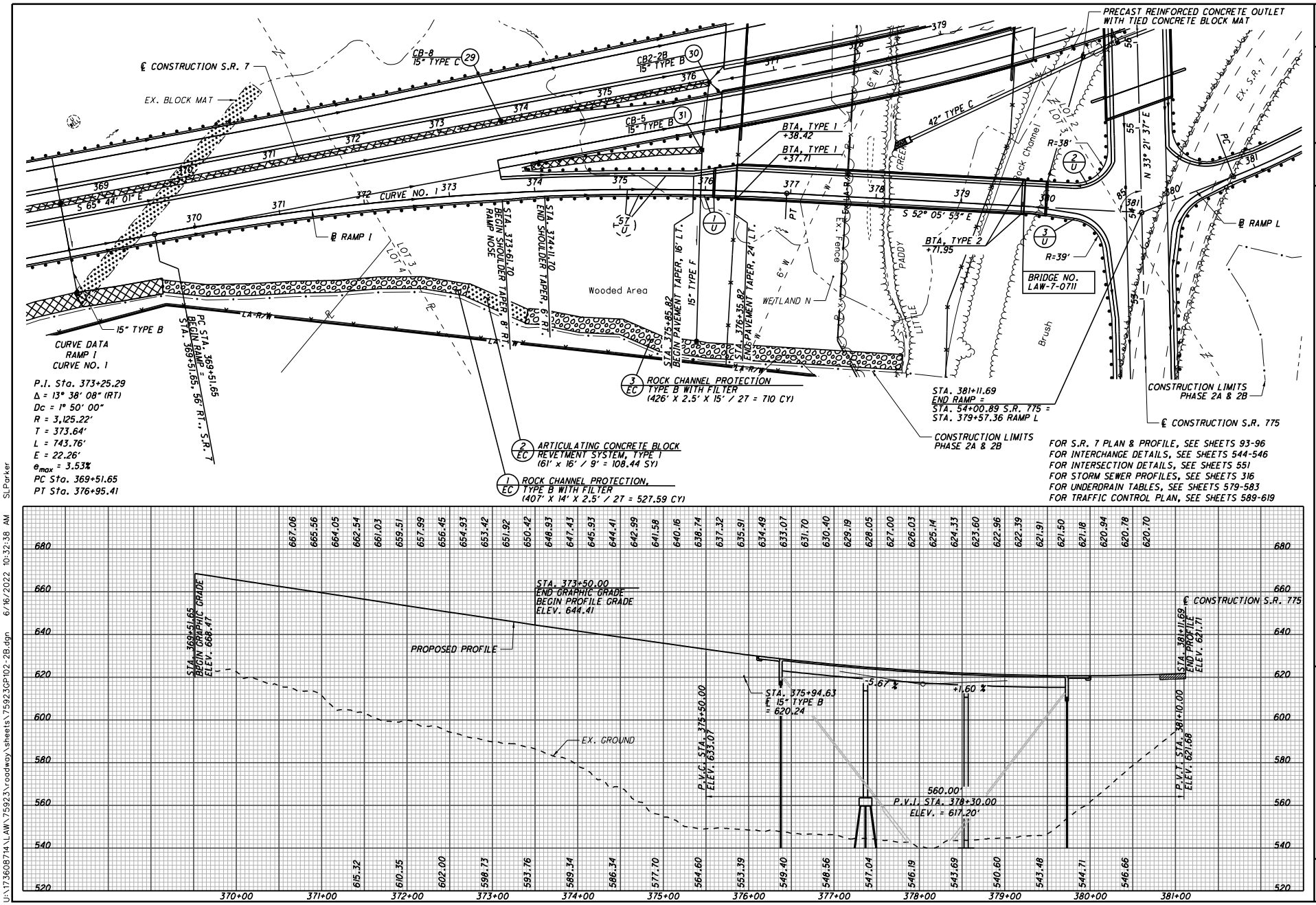

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CALCULATED SLP
CHECKED ALB

0 25 50 100
HORIZONTAL SCALE IN FEET

PLAN AND PROFILE
RAMP I

LAW-7-2.17

CURVE DATA
RAMP J
CURVE NO. 1

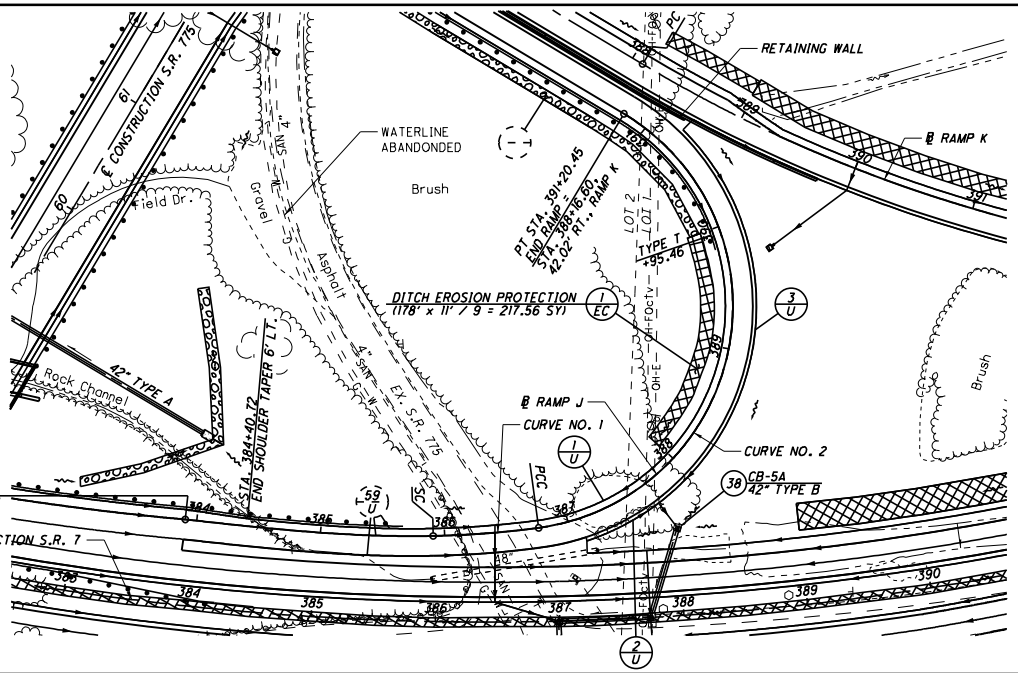
P.I. STA. 385+74.87
Δ = 13° 53' 07" (LT)
Dc = 7° 30' 00"
R = 763.94'
T = 42.61'
L = 85.14'
E = 1.19'
TS STA. 383+90.72
SC STA. 385+90.72

θ_{back} = 7° 30' 00"
L_{back} = 200.00'
T_{back} = 184.15'
LT = 133.45'
ST = 66.78'
e_{max} (N.D.C.) = 8.00%
e_{max} = 6.20%
PCC STA. 386+75.86

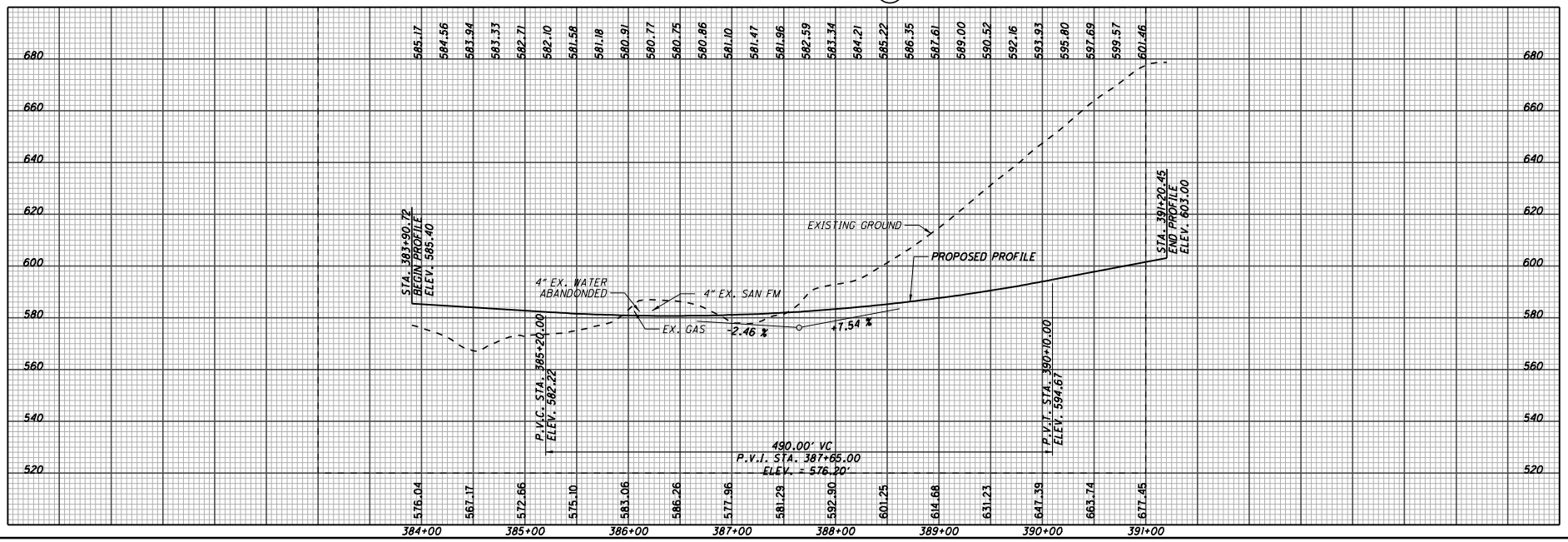
CURVE DATA
RAMP J
CURVE NO. 2

P.I. STA. 391+91.55
Δ = 141° 31' 04" (LT)
Dc = 31° 49' 52"
R = 180.00'
T = 515.70'
L = 444.59'
E = 366.21'
e_{max} = 7.66%
PCC STA. 386+75.86
PT STA. 391+20.45

ST STA. 383+90.72
BEGIN SHOULDER TAPER, 8' LT.
BEGIN RAMP
RAMP NOSE =
STA. 383+90.72, 69' LT., S.R. 7



FOR S.R. 7 PLAN & PROFILE, SEE SHEETS 95-98
FOR RAMP K PLAN AND PROFILE, SEE SHEETS 389-390
FOR S.R. 775 PLAN & PROFILE, SEE SHEET 484-485
FOR INTERCHANGE DETAILS, SEE SHEETS 546-403
FOR STORM SEWER PROFILE, SEE SHEET 561
FOR CULVERT DETAILS, SEE SHEET 570
FOR UNDERDRAIN TABLES, SEE SHEETS 579-583
FOR RETAINING WALL DETAILS, SEE SHEETS 584-588
FOR TRAFFIC CONTROL PLAN, SEE SHEETS 589-619



CALCULATED SLP
CHECKED ALB

HORIZONTAL SCALE IN FEET
0 25 50 100

PLAN AND PROFILE
RAMP J

LAW-7-2.17

384
633

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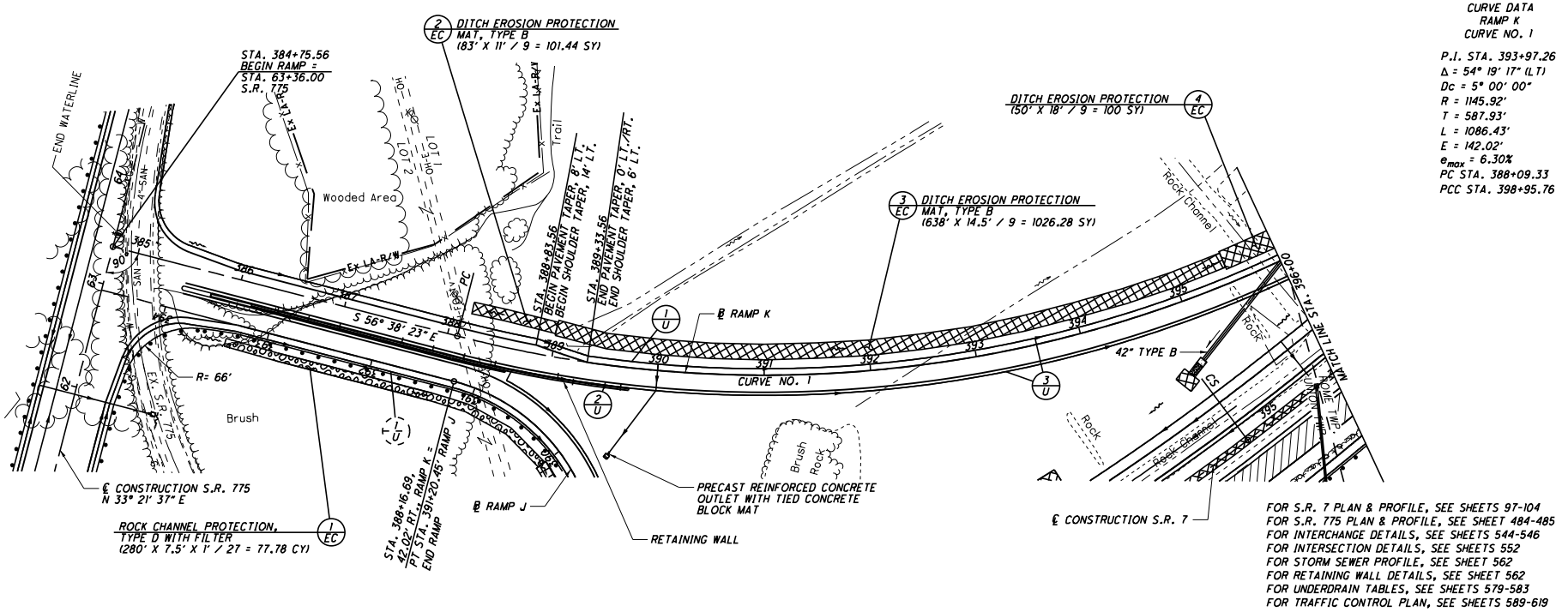

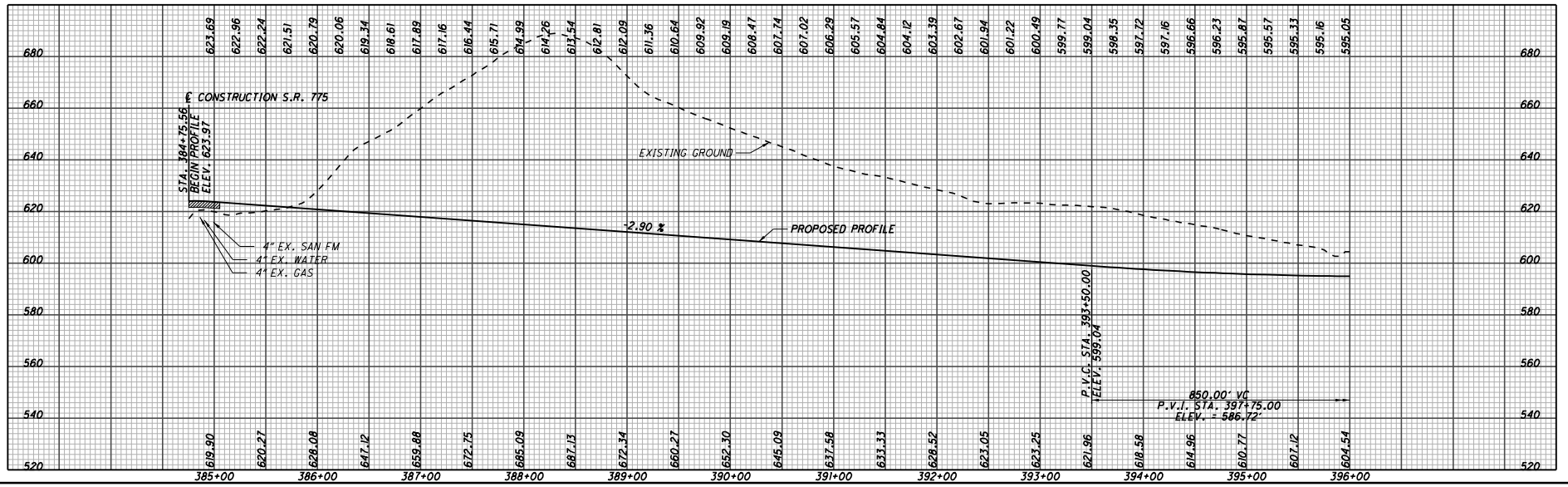

PLAN AND PROFILE - RAMP K
STA. 384+75.56 TO STA. 396+00.00

CALCULATED SLP
CHECKED ALB

HORIZONTAL SCALE IN FEET
0 25 50 100

LAW-7-2.17

389
633

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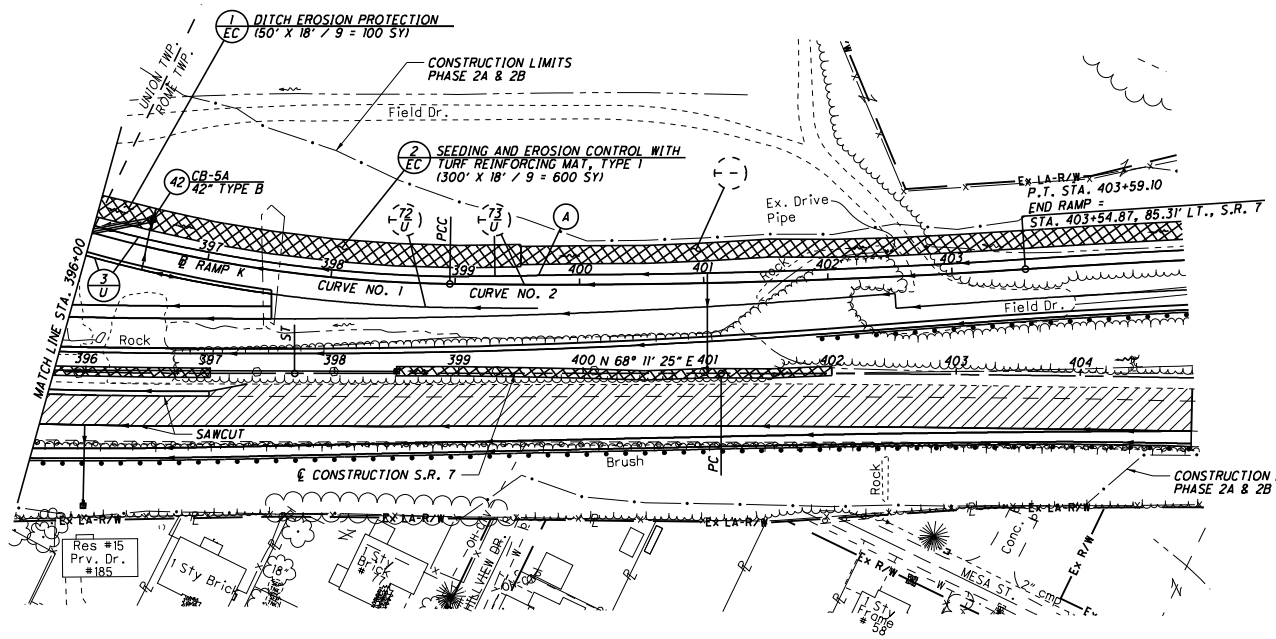


CURVE DATA
RAMP K
CURVE NO. 1

P.I. STA. 393+97.26
Δ = 54° 19' 17" (LT)
Dc = 5° 00' 00"
R = 1145.92'
T = 587.93'
L = 1086.43'
E = 142.02'
e_{max} = 6.30%
PC STA. 388+09.33
PCC STA. 398+95.76

CURVE DATA
RAMP K
CURVE NO. 2

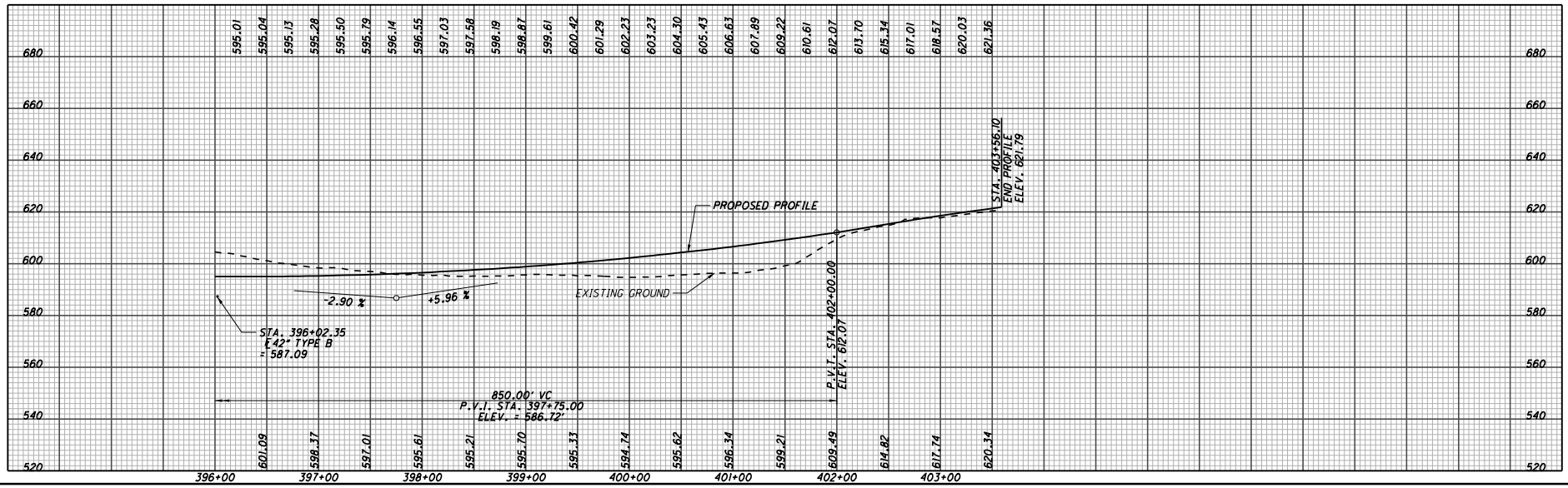
P.I. STA. 401+27.55
Δ = 4° 38' 00" (LT)
Dc = 1° 00' 00"
R = 5729.58'
T = 231.80'
L = 463.34'
E = 4.69'
e_{max} = 2.10%
PCC STA. 398+95.76
PT STA. 403+59.10

(A) - STA. 398+95.76
BEGIN SHOULDER TAPER, 6' LT.

STA. 399+95.76
END SHOULDER TAPER, 8' LT.

3-¼" MILL/FILL

FOR S.R. 7 PLAN & PROFILE, SEE SHEETS 97-100
FOR PAVEMENT DETAILS, SEE SHEET 538
FOR INTERCHANGE DETAILS, SEE SHEETS 544-546
FOR STORM SEWER PROFILE, SEE SHEET 562
FOR UNDERDRAIN TABLES, SEE SHEETS 579-583
FOR TRAFFIC CONTROL PLAN, SEE SHEETS 589-619



PLAN AND PROFILE - RAMP K
STA. 396+00.00 TO STA. 403+59.10

LAW-7-2.17

390
633

CALCULATED SLP
CHECKED ALB

HORIZONTAL SCALE IN FEET
0 25 50 100

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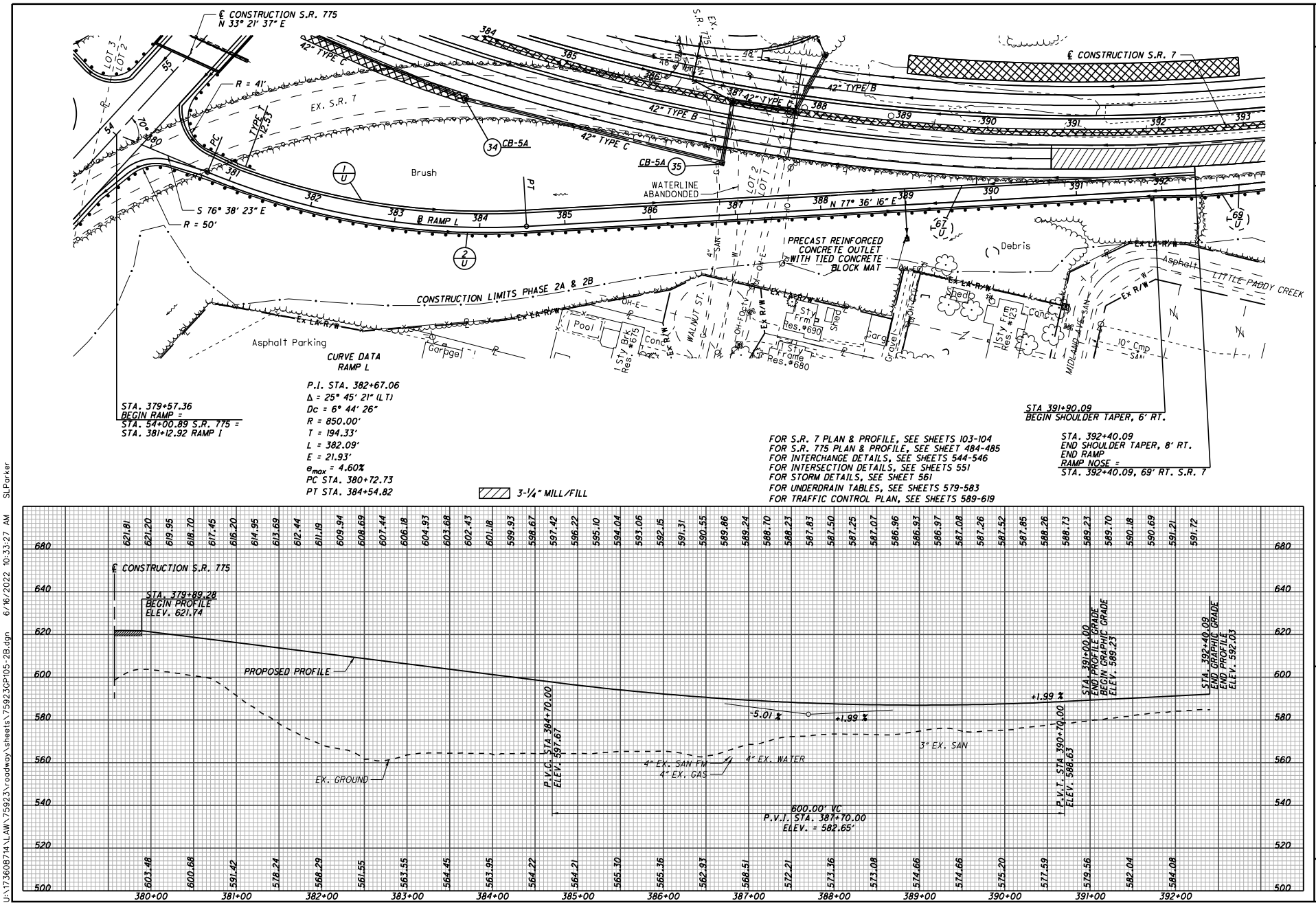

PLAN AND PROFILE
RAMP L

LAW-7-2.17

403
633

CALCULATED SLP
CHECKED ALB

HORIZONTAL SCALE IN FEET
0 25 50 100

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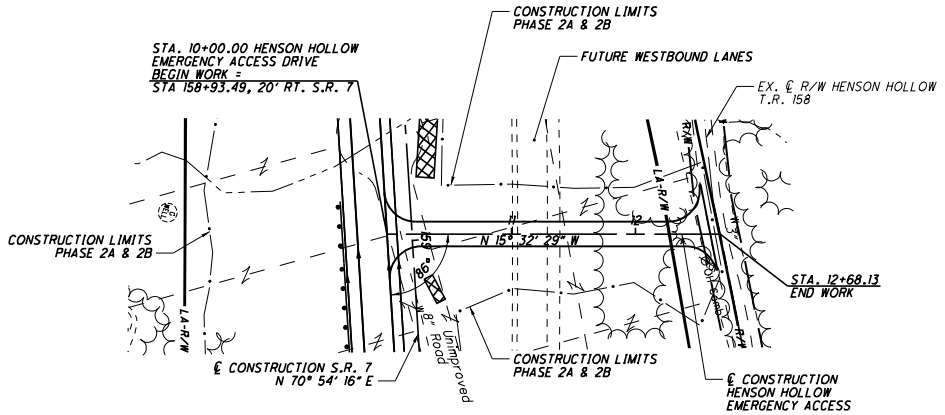
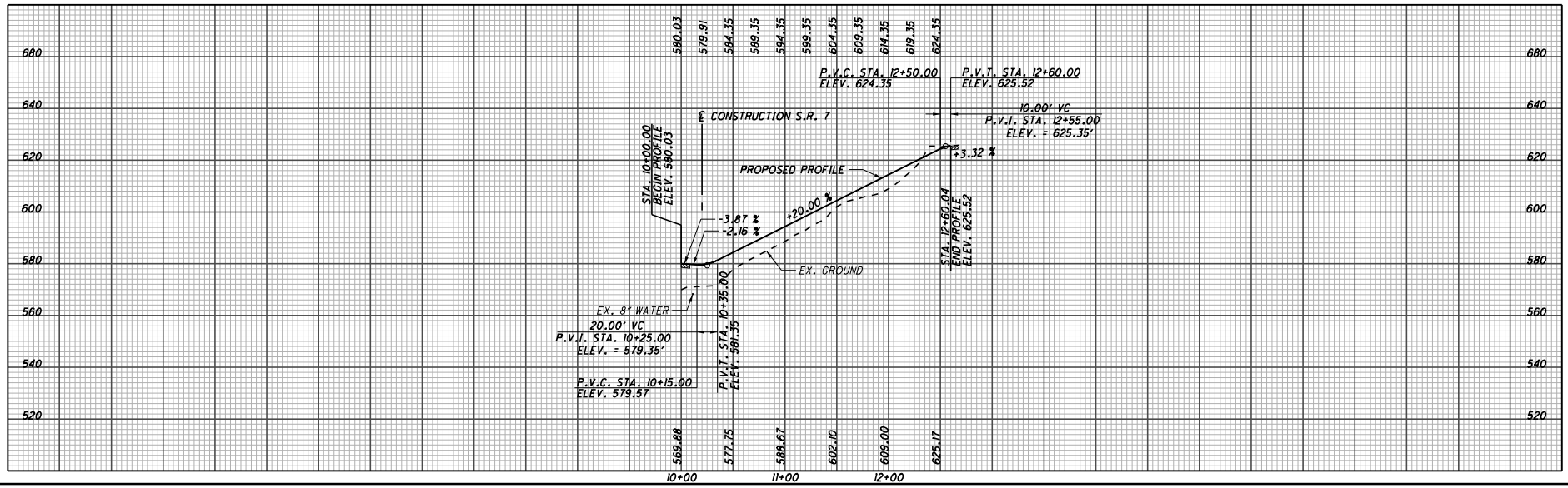


FOR S.R. 7 PLAN & PROFILE, SEE SHEETS 52-55
FOR INTERSECTION DETAILS, SEE SHEETS 548
FOR TRAFFIC CONTROL PLAN, SEE SHEETS 589-619



PLAN AND PROFILE
HENSON HOLLOW EMERGENCY ACCESS

LAW-7-2.17

CALCULATED SLP
CHECKED ALB

HORIZONTAL SCALE IN FEET
0 25 50 100

411
633

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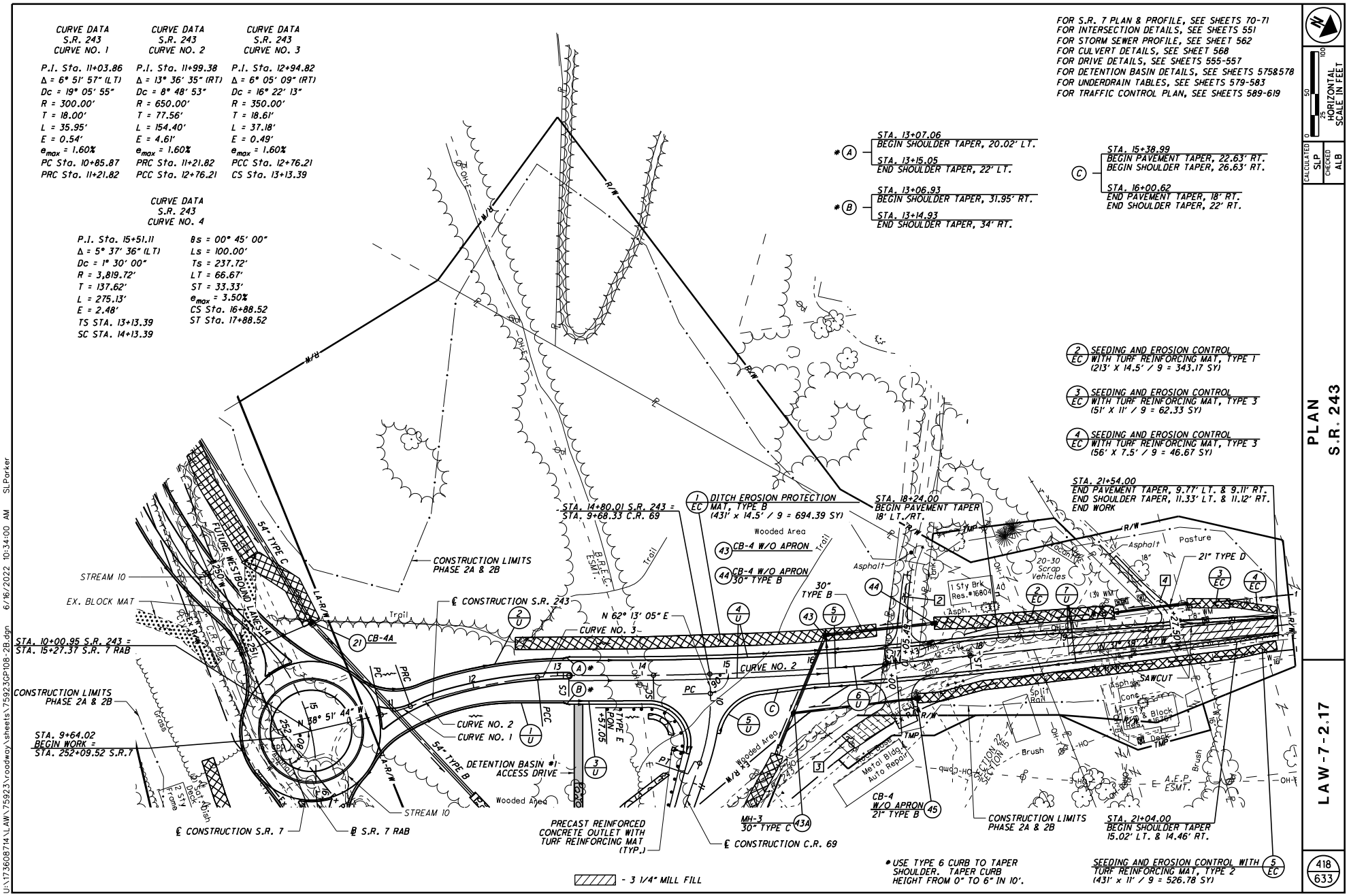

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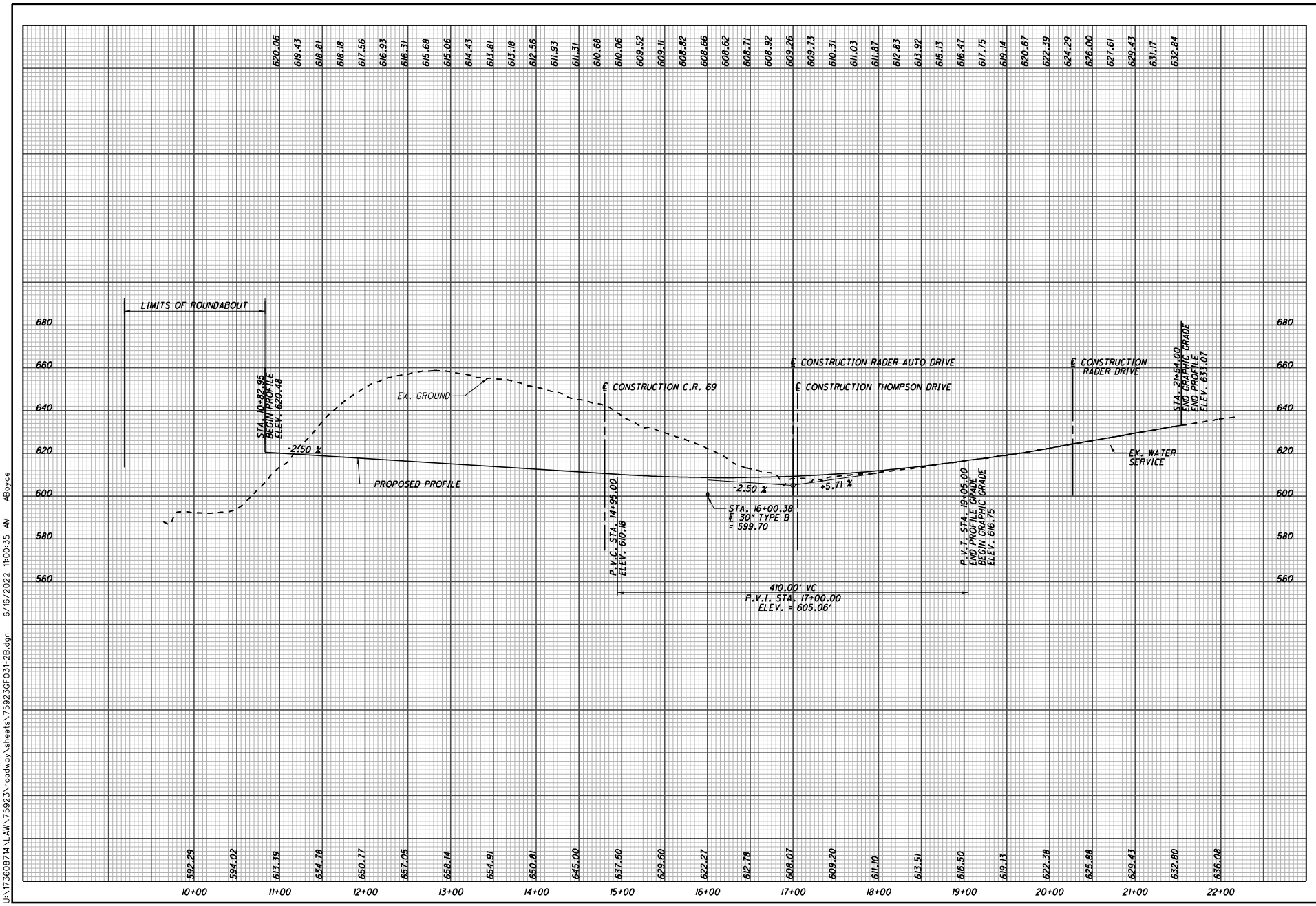


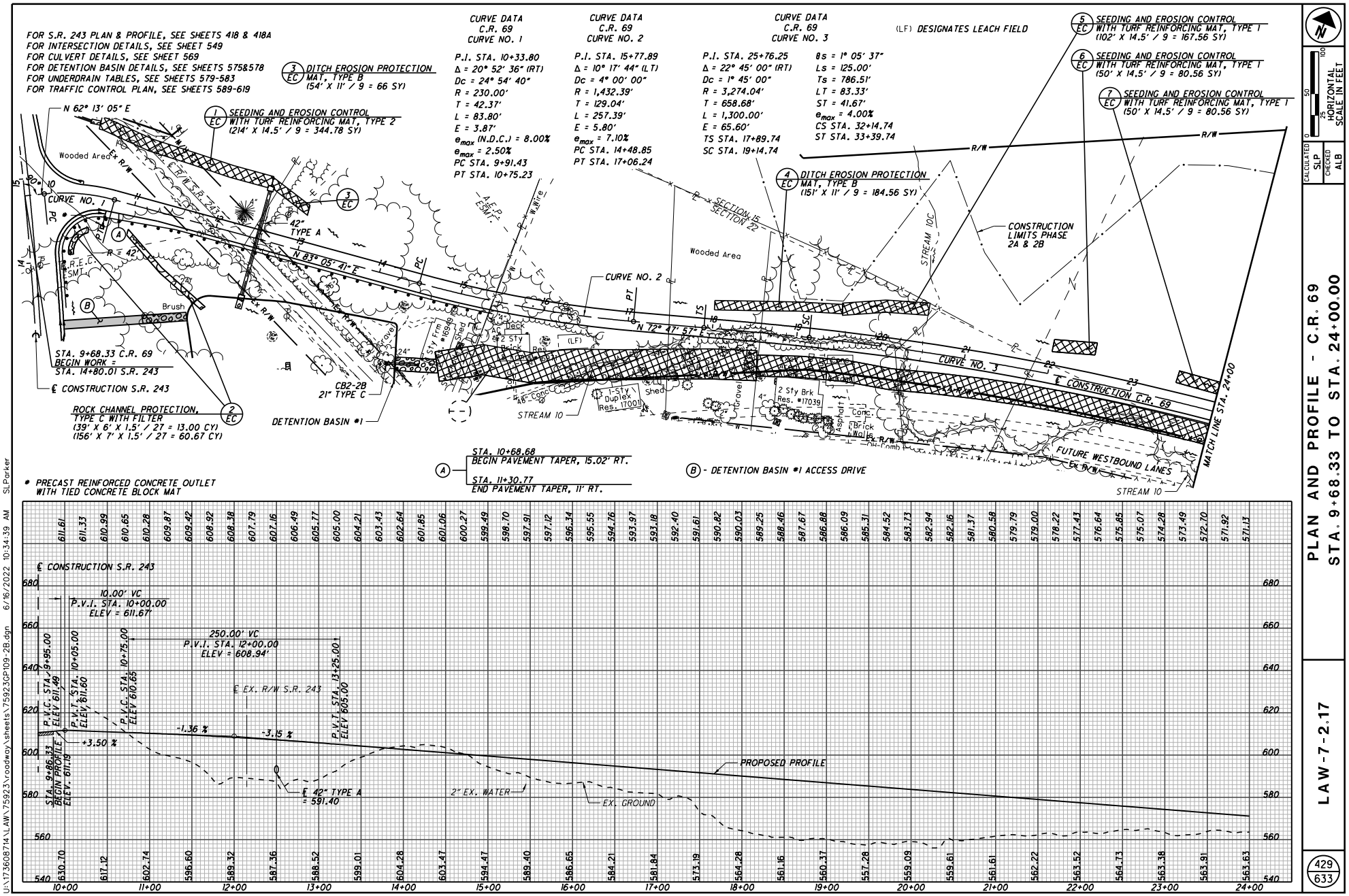
U:\1736087\4\LAW\75923\roadway\sheets\75923GF031-2B.dgn 6/16/2022 11:00:35 AM ABoyce

CALCULATED SLP
CHECKED ALB

PROFILE
S.R. 243

LAW-7-2.17

418A
633



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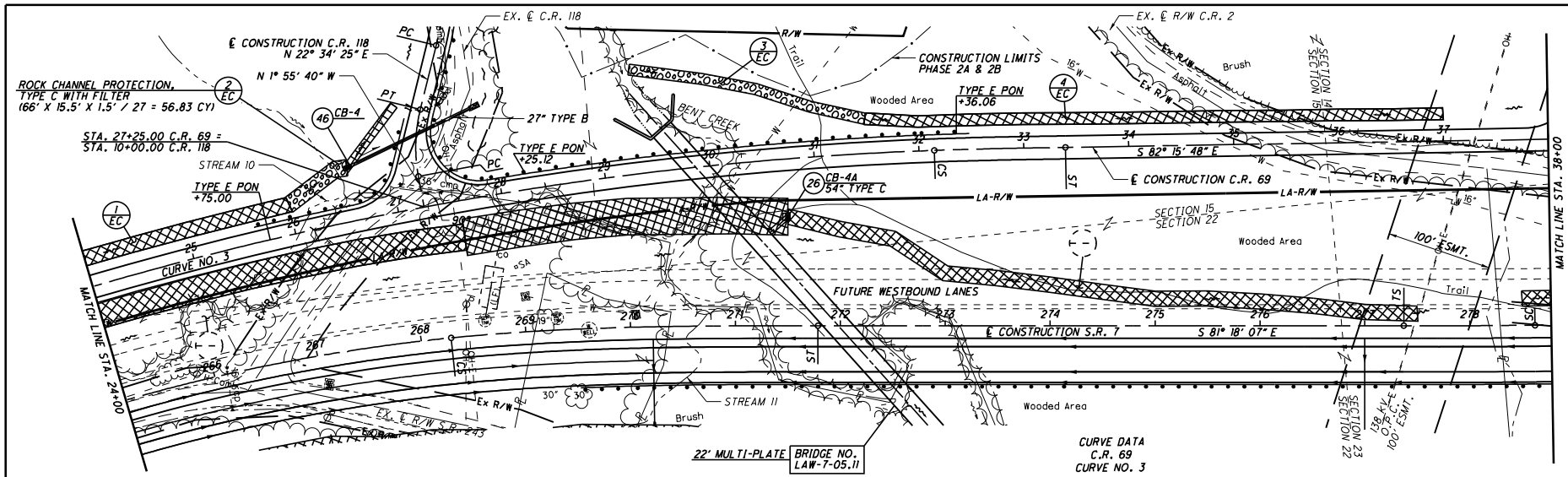


1 EC SEEDING AND EROSION CONTROL WITH TURF REINFORCING MAT, TYPE I (202' X 14.5' / 9 = 325.44 SY)

3 EC ROCK CHANNEL PROTECTION, TYPE C WITH FILTER (231' X 10.5' X 1.5' / 27 = 134.75 CY)

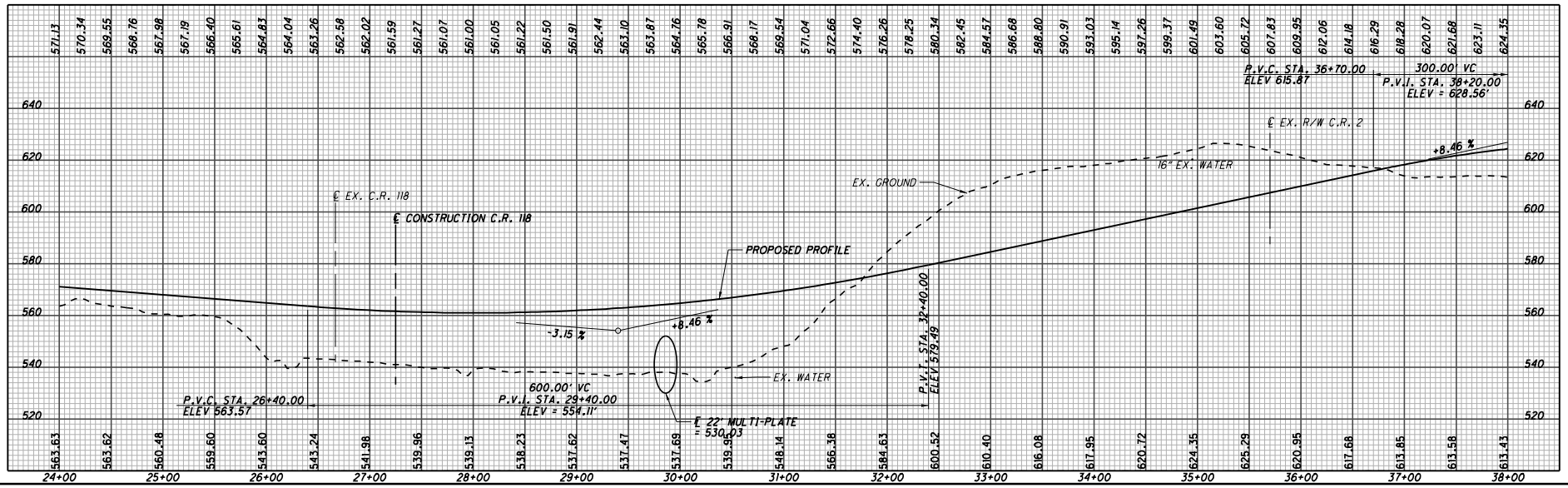
4 EC SEEDING AND EROSION CONTROL WITH TURF REINFORCING MAT, TYPE I (551' X 11' / 9 = 673.44 SY)

CURVE DATA
C.R. 69
CURVE NO. 3

P.I. STA. 25+76.25
Δ = 22° 45' 00" (RT)
Dc = 1° 45' 00"
R = 3,274.04'
T = 658.68'
L = 1,300.00'
E = 65.60'
TS STA. 17+89.74
SC STA. 19+14.74

θs = 1° 05' 37"
Ls = 125.00'
Ts = 786.51'
LT = 83.33'
ST = 41.67'
e_{max} = 4.00%
CS STA. 32+14.74
ST STA. 33+39.74

FOR S.R. 7 PLAN & PROFILE, SEE SHEETS 76-77
FOR C.R. 118 PLAN AND PROFILE, SEE SHEET 472
FOR INTERSECTION DETAILS, SEE SHEET 550
FOR STORM SEWER PROFILE, SEE SHEET 563
FOR TRAFFIC CONTROL PLAN, SEE SHEETS 589-619
FOR STRUCTURE DETAILS, SEE SHEETS XXX-XXX



HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED SLP
CHECKED ALB

PLAN AND PROFILE - C.R. 69
STA. 24+00.00 TO STA. 38+00.00

LAW-7-2.17

430
633

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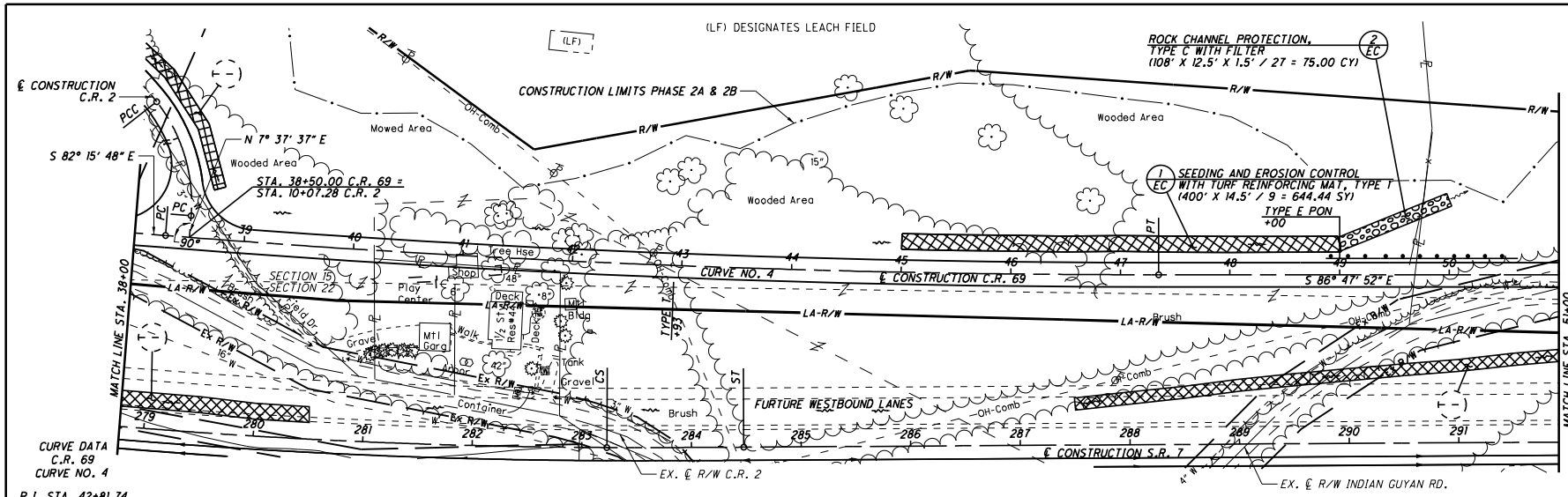
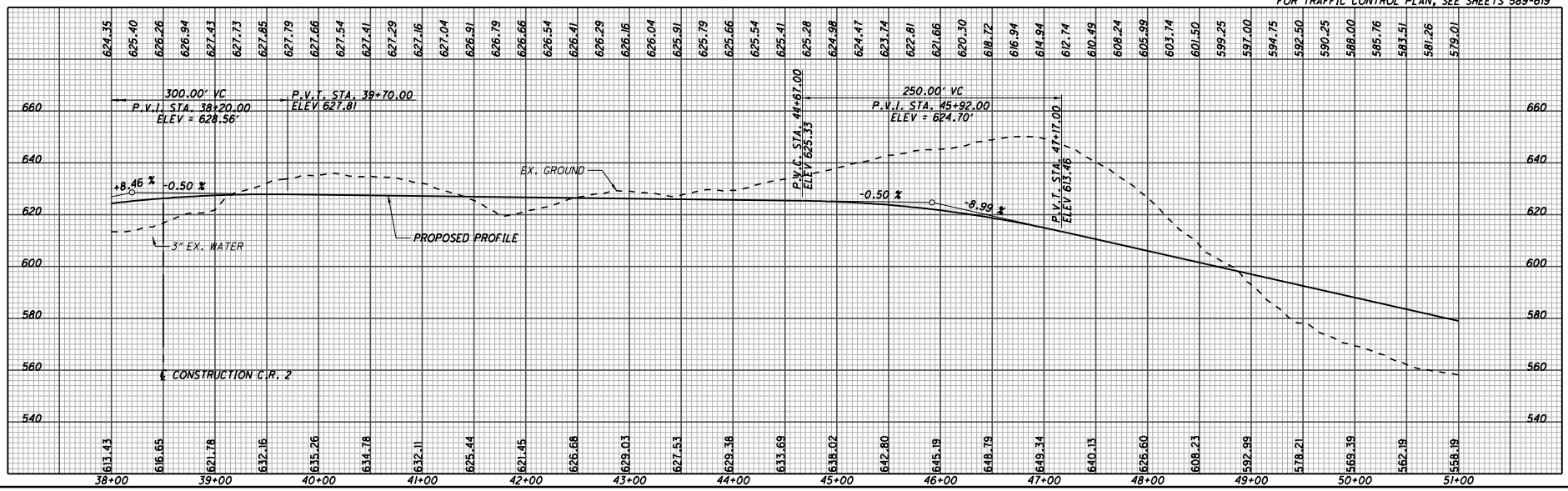


FOR S.R. 7 PLAN & PROFILE, SEE SHEETS 78-79
FOR C.R. 2 PLAN AND PROFILE, SEE SHEET 478
FOR INTERSECTION DETAILS, SEE SHEET 550
FOR TRAFFIC CONTROL PLAN, SEE SHEETS 589-619



HORIZONTAL SCALE IN FEET: 0, 25, 50, 100

CALCULATED: SLP

CHECKED: ALB

PLAN AND PROFILE - C.R. 69
STA. 38+00.00 TO STA. 51+00.00

LAW-7-2.17

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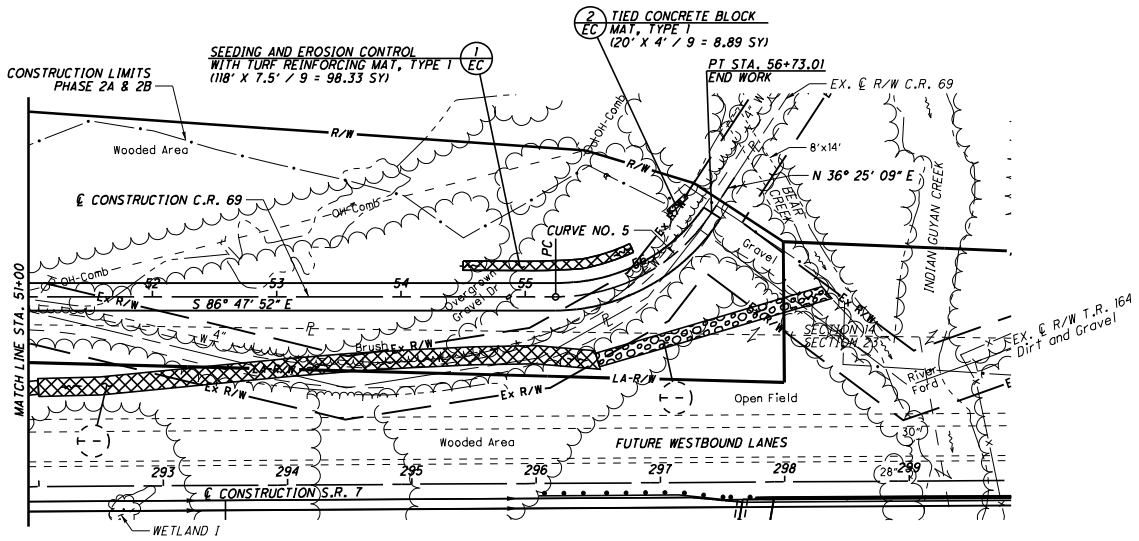
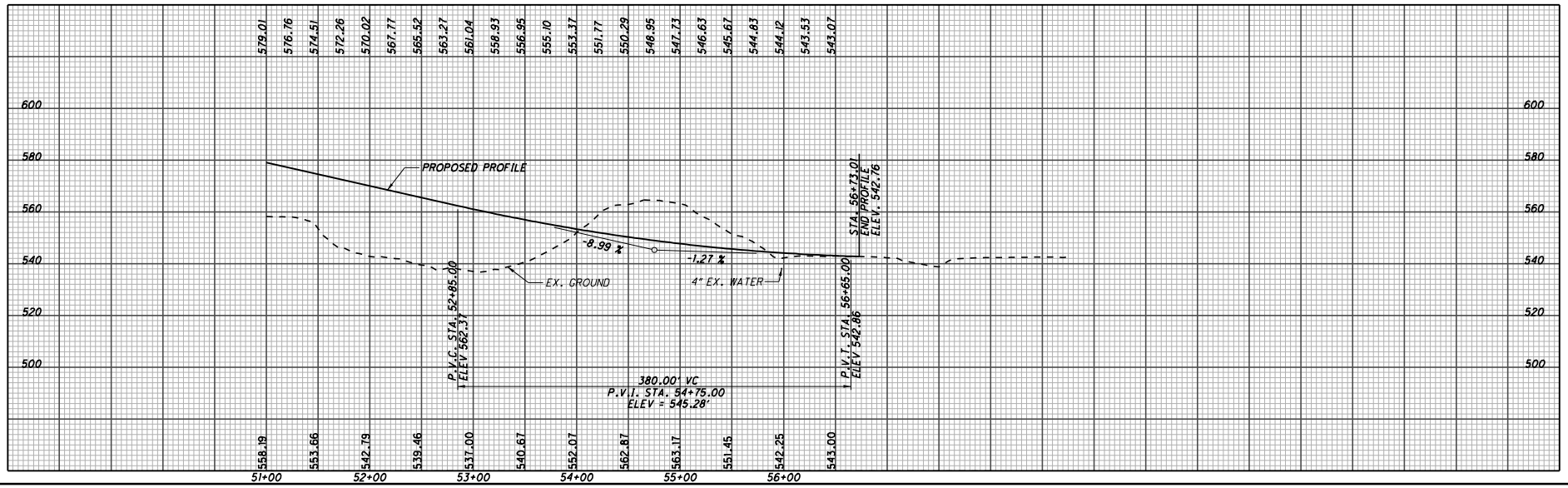


CURVE DATA
C.R. 69
CURVE NO. 5

P.I. STA. 56+05.43
Δ = 56° 46' 59" (RT)
Dc = 38° 11' 50"
R = 150.00'
T = 81.08'
L = 148.66'
E = 20.51'
e_{max} (N.D.C.) = 8.00%
e_{max} = 2.50%
PC STA. 55+24.35
PT STA. 56+73.01

FOR S.R. 7 PLAN & PROFILE, SEE SHEETS 80-81
FOR TRAFFIC CONTROL PLAN, SEE SHEETS 589-619



N

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED SLP
CHECKED ALB

PLAN AND PROFILE - C.R. 69
STA. 51+00.00 TO STA. 56+73.01

LAW-7-2.17

432
633

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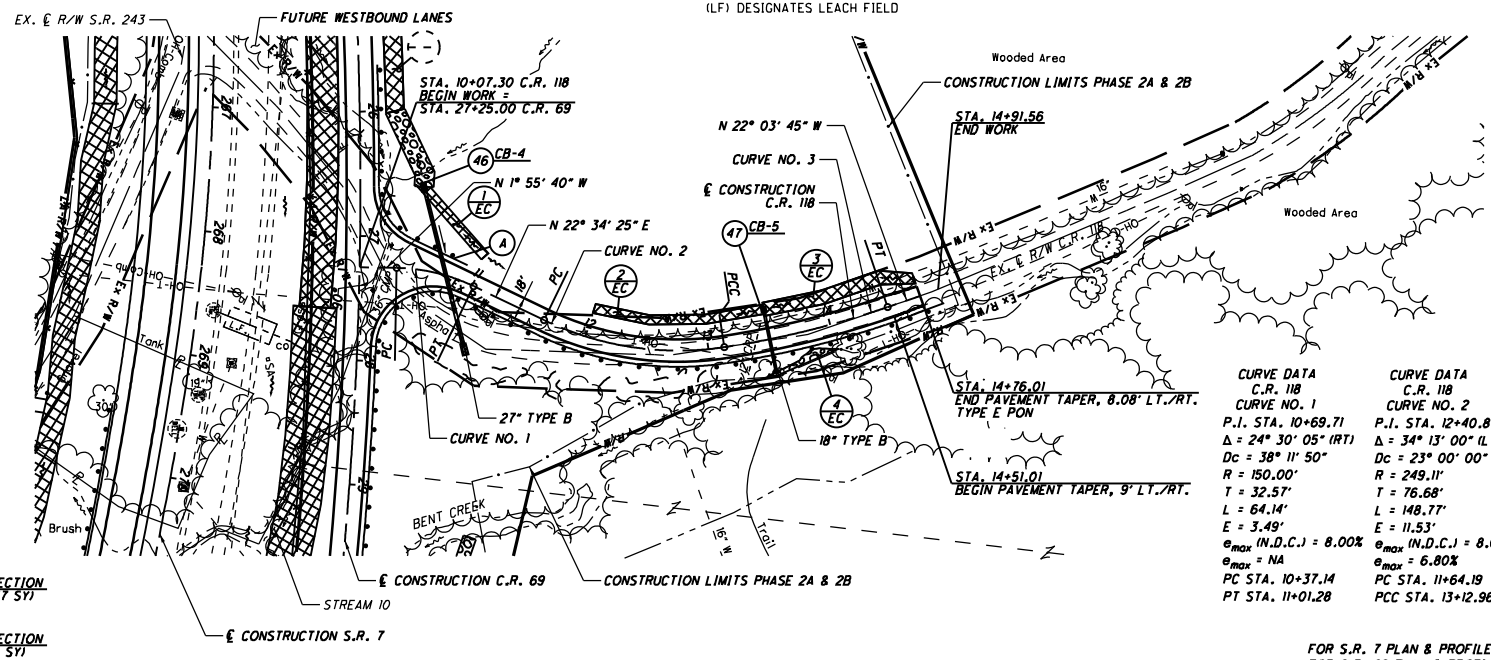
(LF) DESIGNATES LEACH FIELD



CURVE DATA C.R. 118 CURVE NO. 1	CURVE DATA C.R. 118 CURVE NO. 2	CURVE DATA C.R. 118 CURVE NO. 3
P.I. STA. 10+69.71	P.I. STA. 12+40.87	P.I. STA. 13+80.89
Δ = 24° 30' 05" (RT)	Δ = 34° 13' 00" (LT)	Δ = 10° 25' 10" (LT)
Dc = 38° 11' 50"	Dc = 23° 00' 00"	Dc = 7° 41' 27"
R = 150.00'	R = 249.11'	R = 745.00'
T = 32.57'	T = 76.68'	T = 67.93'
L = 64.14'	L = 148.77'	L = 135.48'
E = 3.49'	E = 11.53'	E = 3.09'
e_{max} (N.D.C.) = 8.00%	e_{max} (N.D.C.) = 8.00%	e_{max} (N.D.C.) = 8.00%
e_{max} = NA	e_{max} = 6.80%	e_{max} = 3.98%
PC STA. 10+37.14	PC STA. 11+64.19	PCC STA. 13+12.96
PT STA. 11+01.28	PCC STA. 13+12.96	PT STA. 14+48.44

1 EC DITCH EROSION PROTECTION (114' X 7.5' / 9 = 61.67 SY)

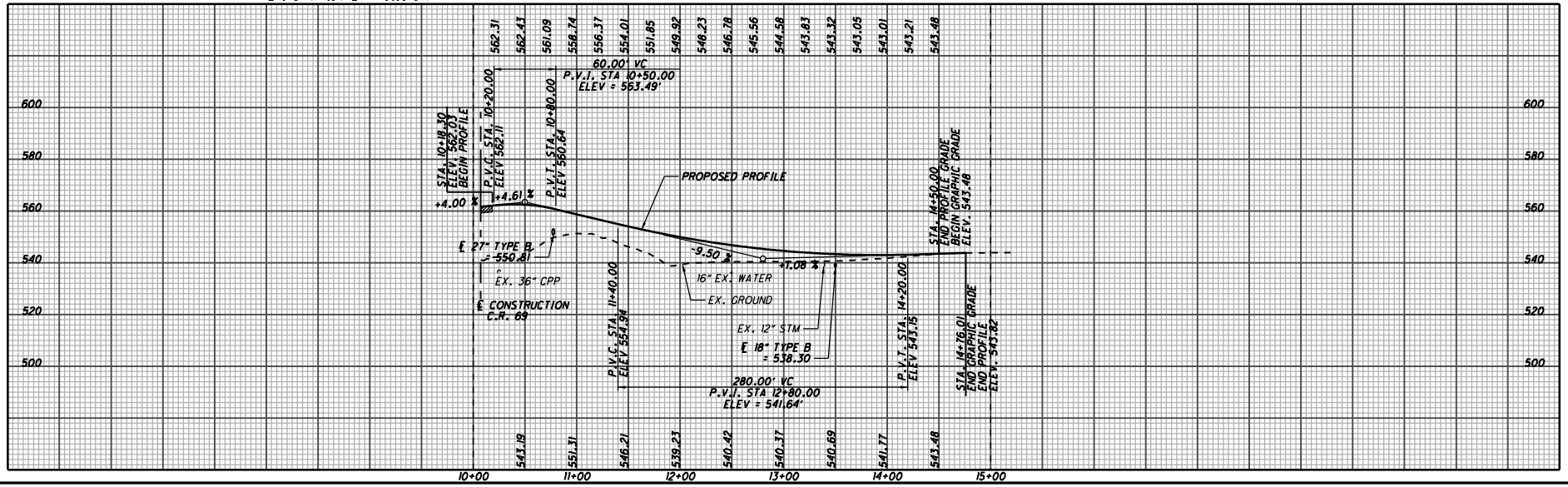
2 EC DITCH EROSION PROTECTION (150' X 7.5' / 9 = 125 SY)

3 EC DITCH EROSION PROTECTION (126' X 11' / 9 = 154 SY)

4 EC ROCK CHANNEL PROTECTION, TYPE C WITH FILTER (249 SF x 1.5' / 27 = 13.83 CY)

A TYPE E PON +79.16

FOR S.R. 7 PLAN & PROFILE, SEE SHEETS 76-77
FOR C.R. 69 PLAN & PROFILE, SEE SHEETS 429-434
FOR INTERSECTION DETAILS, SEE SHEET 552
FOR STORM SEWER PROFILE, SEE SHEET 565
FOR TRAFFIC CONTROL PLAN, SEE SHEETS 589-619



N

0 25 50 100 HORIZONTAL SCALE IN FEET

CALCULATED SLP CHECKED ALB

PLAN AND PROFILE
C.R. 118

LAW-7-2.17

474
635

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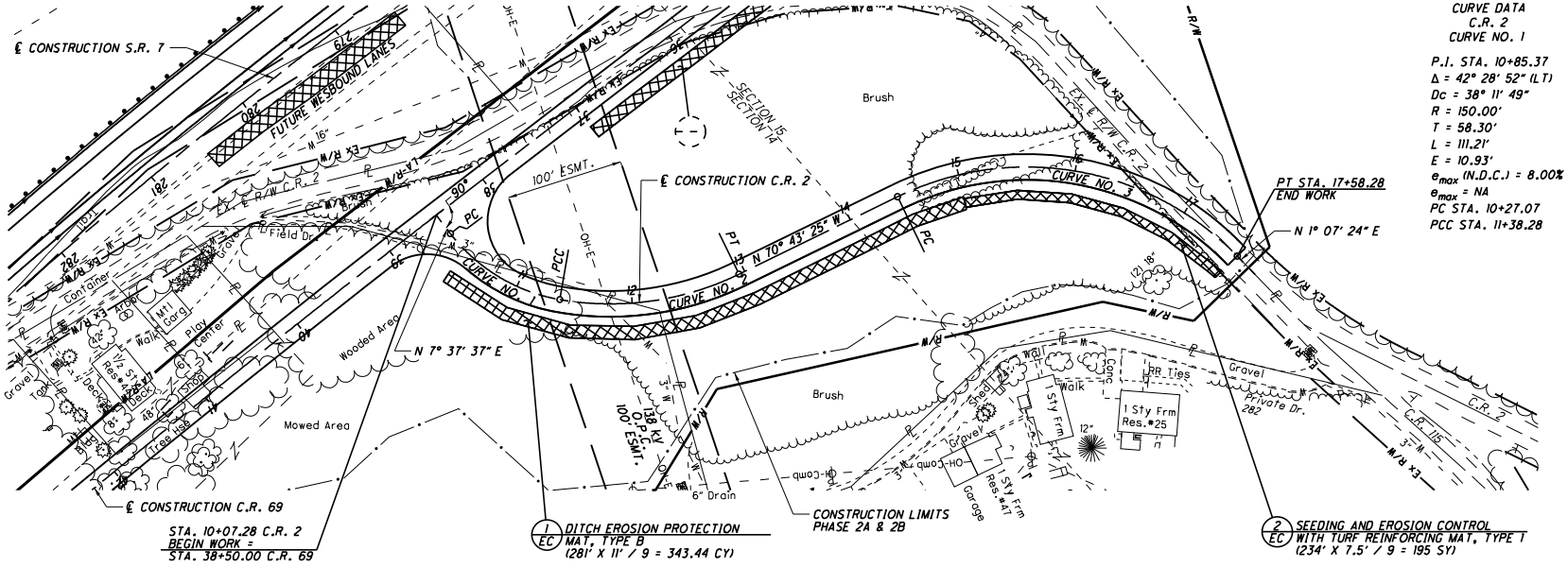
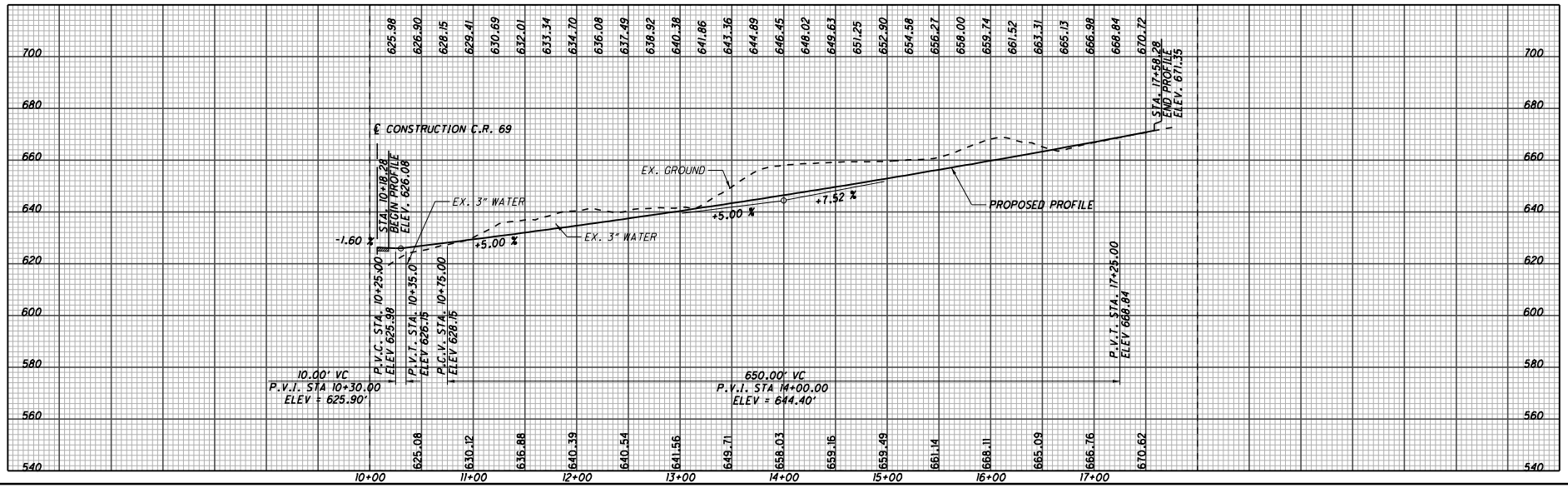


FOR S.R. 7 PLAN & PROFILE, SEE SHEETS 78-79
FOR C.R. 69 PLAN & PROFILE, SEE SHEETS 429-432
FOR INTERSECTION DETAILS, SEE SHEET 550
FOR TRAFFIC CONTROL PLAN, SEE SHEETS 589-619



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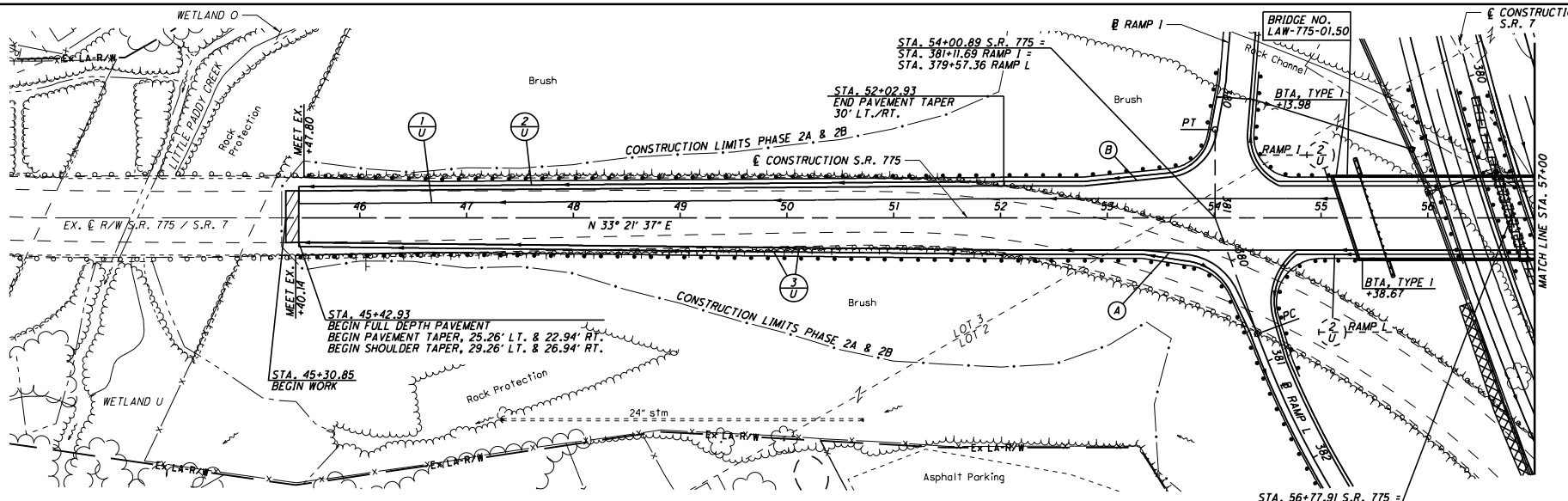
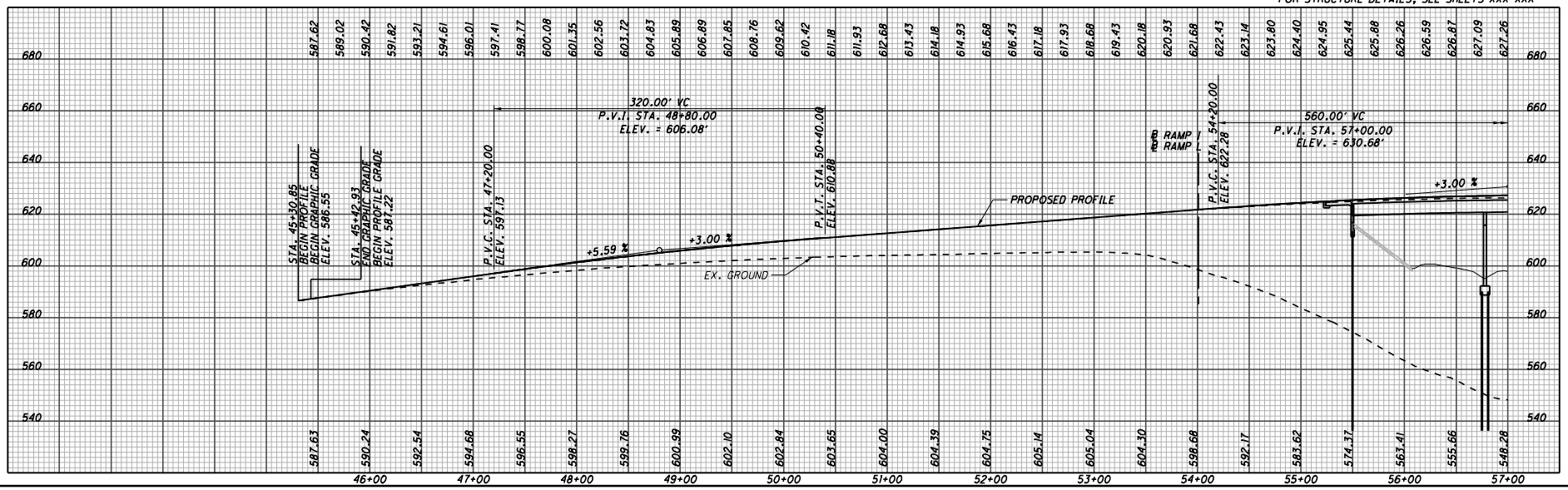
HORIZONTAL SCALE IN FEET
0 25 50 100
CALCULATED SLP
CHECKED ALB

PLAN AND PROFILE
C.R. 2

LAW-7-2.17





CALCULATED SLP
CHECKED ALB

HORIZONTAL SCALE IN FEET
0 25 50 100

PLAN AND PROFILE - S.R. 775
STA. 45+30.85 TO STA. 57+00.00

LAW-7-2.17

484
633

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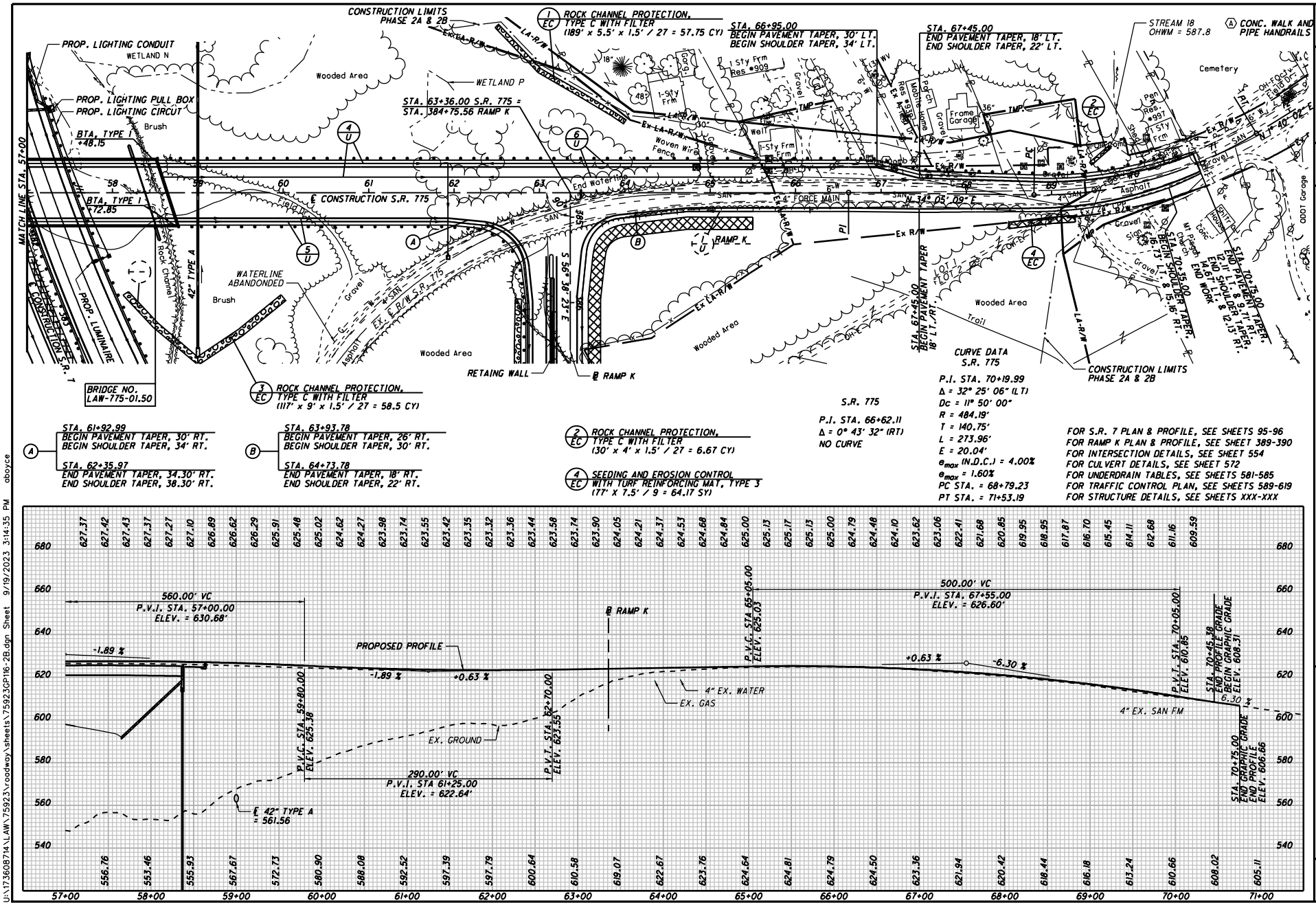

PLAN AND PROFILE - S.R. 775
STA. 57+00.00 TO STA. 70+75.00

LAW-7-2.17

CALCULATED SLP
CHECKED ALB

HORIZONTAL SCALE IN FEET
0 25 50 100

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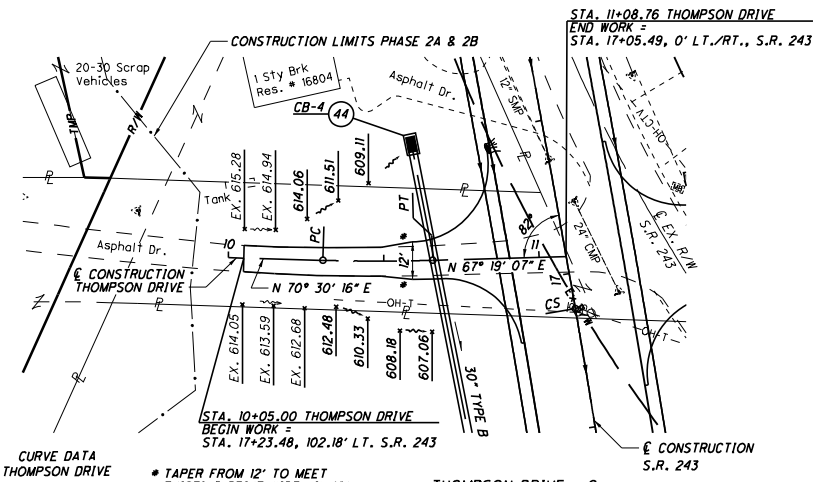
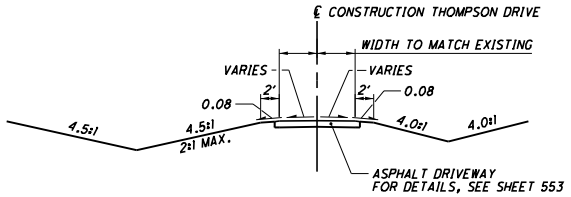




TYPICAL SECTION - THOMPSON DRIVE
NOT TO SCALE

CURVE DATA
THOMPSON DRIVE
P.I. STA. 10+48.13
Δ = 3° 11' 08" (LT)
Dc = 9° 01' 23"
R = 635.00'
T = 17.66'
L = 35.31'
E = 0.25'
e_{max} = NA
PC STA. 10+30.48
PT STA. 10+65.78

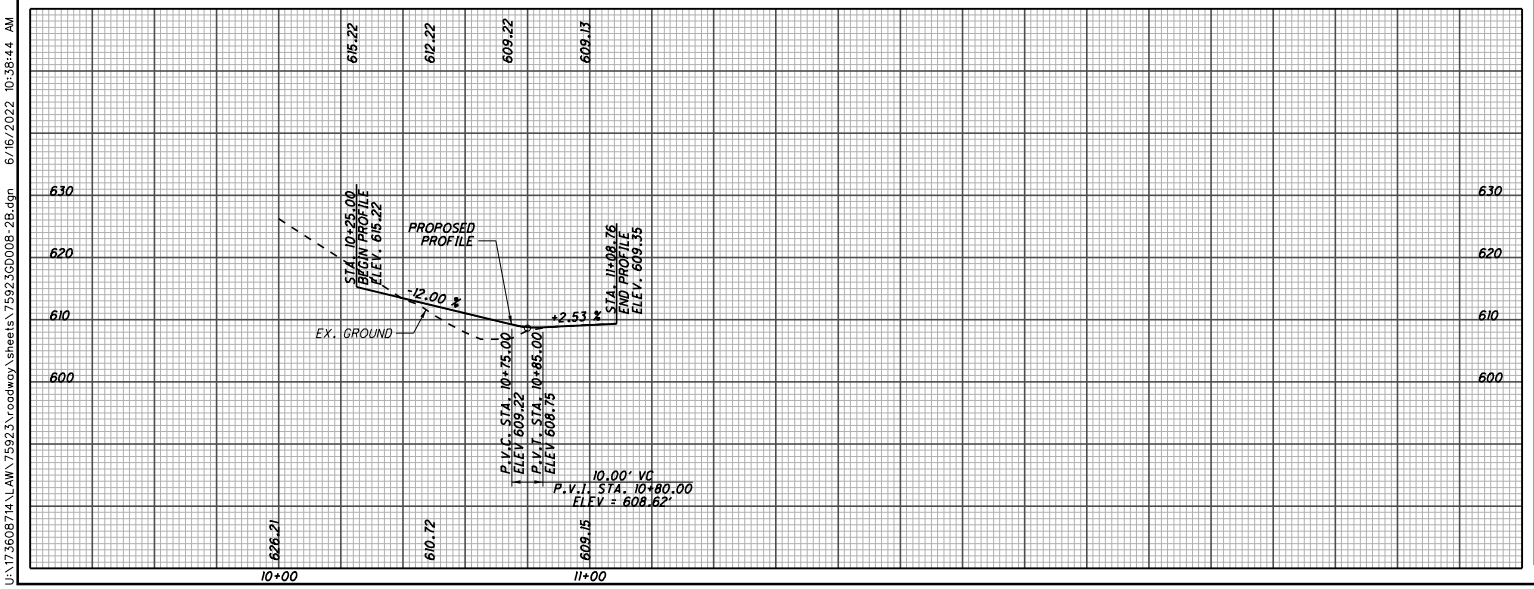
* TAPER FROM 12' TO MEET EXISTING DRIVE WIDTH IN 10'.

THOMPSON DRIVE - 2

LEFT E/P RETURN DATA
Δ = 99° 25' 18"
R = 25.00'
T = 29.49'
L = 43.38'
R.P. STA. 17+43.71, 41' LT., S.R. 243
P.C. STA. 17+43.71, 19' LT., S.R. 243
P.T. STA. 10+59.20, 6' LT., THOMPSON DRIVE

RIGHT E/P RETURN DATA
Δ = 81° 53' 36"
R = 25.00'
T = 21.69'
L = 35.73'
R.P. STA. 10+68.81, 31' RT., THOMPSON DRIVE
P.C. STA. 10+68.81, 6' RT., THOMPSON DRIVE
P.T. STA. 16+80.43, 19' LT., S.R. 243

FOR STORM SEWER PROFILE, SEE SHEET 564



REF NO.	STATION FROM	STATION TO	SIDE

TOTALS CARRIED TO GENERAL SUMMARY

CALCULATED SLP
CHECKED ALB

HORIZONTAL SCALE IN FEET
0 10 20 40

PLAN AND PROFILE
THOMPSON DRIVE

LAW-7-2.17

555
633

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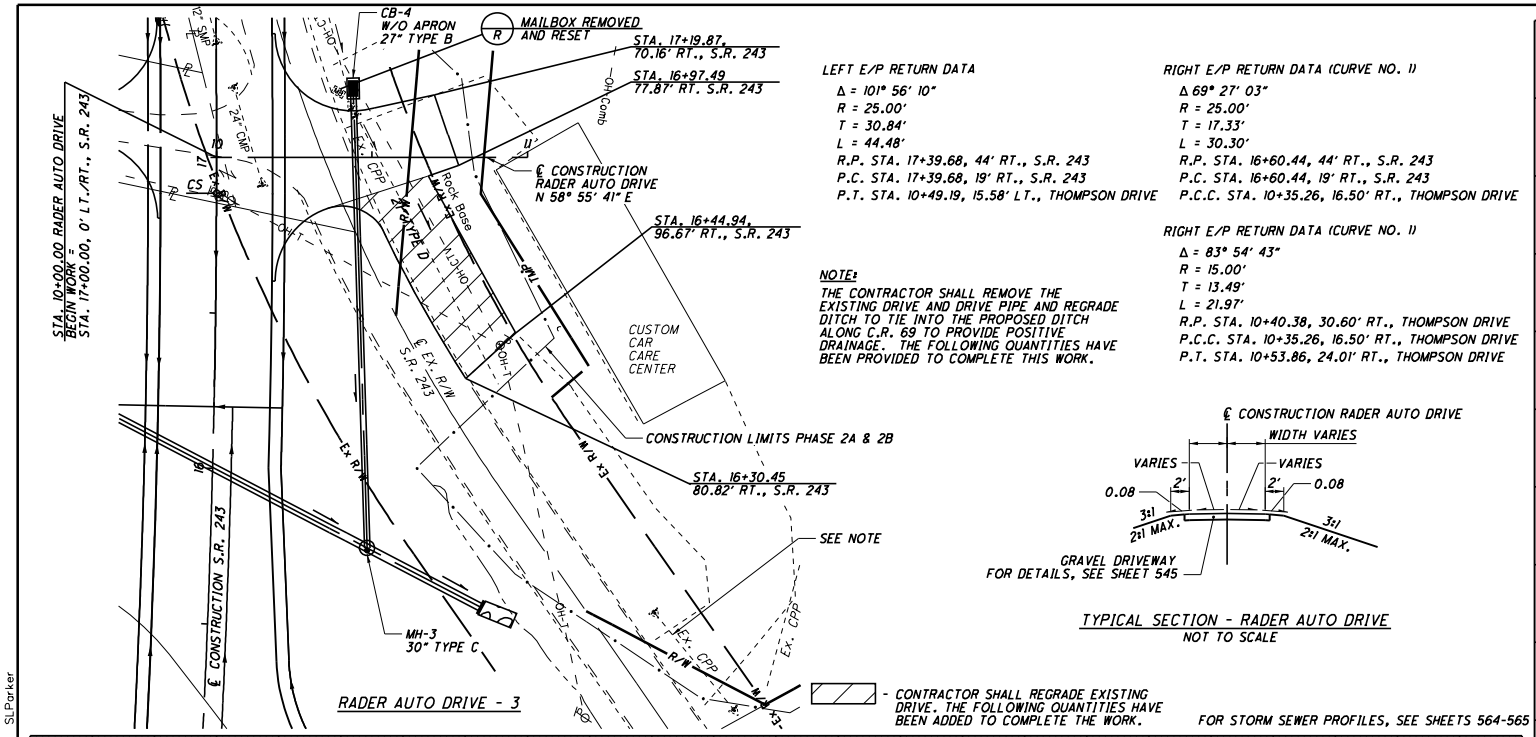


LEFT E/P RETURN DATA

Δ = 101° 56' 10"
R = 25.00'
T = 30.84'
L = 44.48'
R.P. STA. 17+39.68, 44' RT., S.R. 243
P.C. STA. 17+39.68, 19' RT., S.R. 243
P.T. STA. 10+49.19, 15.58' LT., THOMPSON DRIVE

RIGHT E/P RETURN DATA (CURVE NO. 1)

Δ 69° 27' 03"
R = 25.00'
T = 17.33'
L = 30.30'
R.P. STA. 16+60.44, 44' RT., S.R. 243
P.C. STA. 16+60.44, 19' RT., S.R. 243
P.C.C. STA. 10+35.26, 16.50' RT., THOMPSON DRIVE

RIGHT E/P RETURN DATA (CURVE NO. 1)

Δ = 83° 54' 43"
R = 15.00'
T = 13.49'
L = 21.97'
R.P. STA. 10+40.38, 30.60' RT., THOMPSON DRIVE
P.C.C. STA. 10+35.26, 16.50' RT., THOMPSON DRIVE
P.T. STA. 10+53.86, 24.01' RT., THOMPSON DRIVE

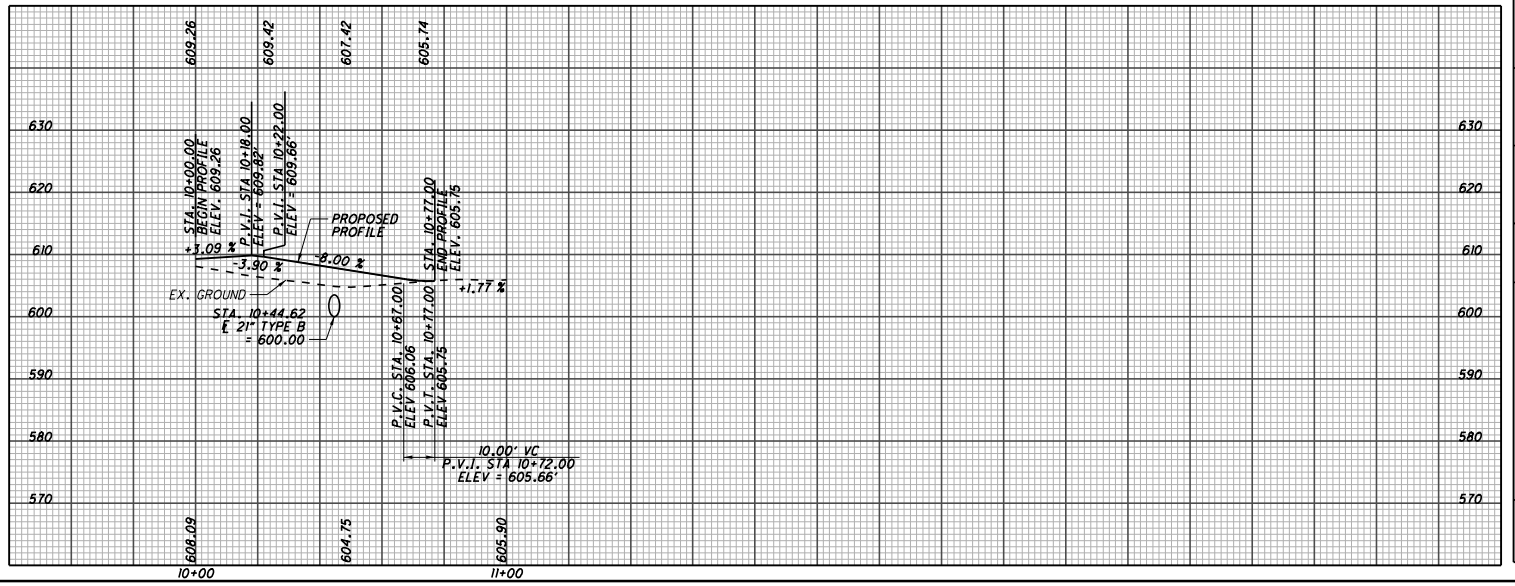
NOTE:

THE CONTRACTOR SHALL REMOVE THE EXISTING DRIVE AND DRIVE PIPE AND REGRADE DITCH TO TIE INTO THE PROPOSED DITCH ALONG C.R. 69 TO PROVIDE POSITIVE DRAINAGE. THE FOLLOWING QUANTITIES HAVE BEEN PROVIDED TO COMPLETE THIS WORK.

TYPICAL SECTION - RADER AUTO DRIVE
NOT TO SCALE

- CONTRACTOR SHALL REGRADE EXISTING DRIVE. THE FOLLOWING QUANTITIES HAVE BEEN ADDED TO COMPLETE THE WORK.

FOR STORM SEWER PROFILES, SEE SHEETS 564-565



REF NO.	STATION FROM	STATION TO	SIDE

TOTALS CARRIED TO GENERAL SUMMARY

CALCULATED SLP
CHECKED ALB

HORIZONTAL SCALE IN FEET
0 10 20 40

PLAN AND PROFILE
RADER AUTO DRIVE

LAW-7-2.17

556
633

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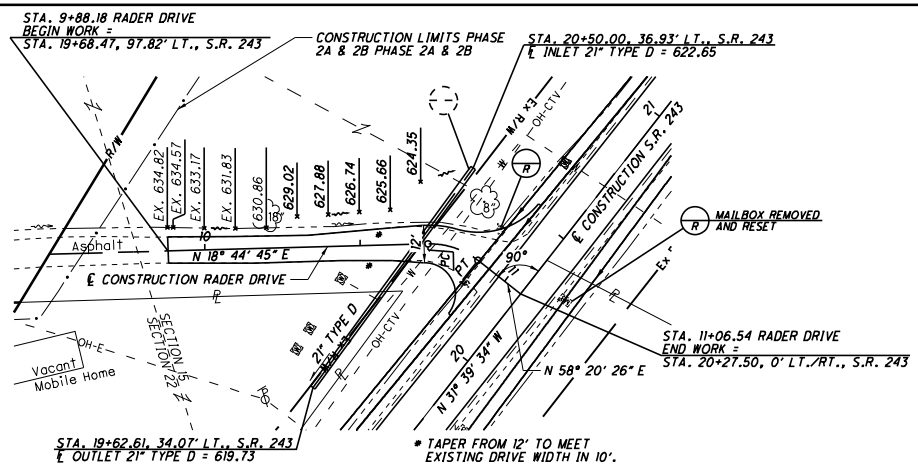
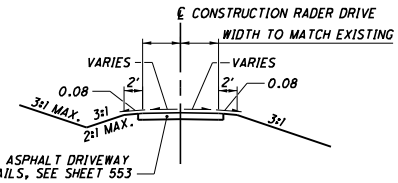




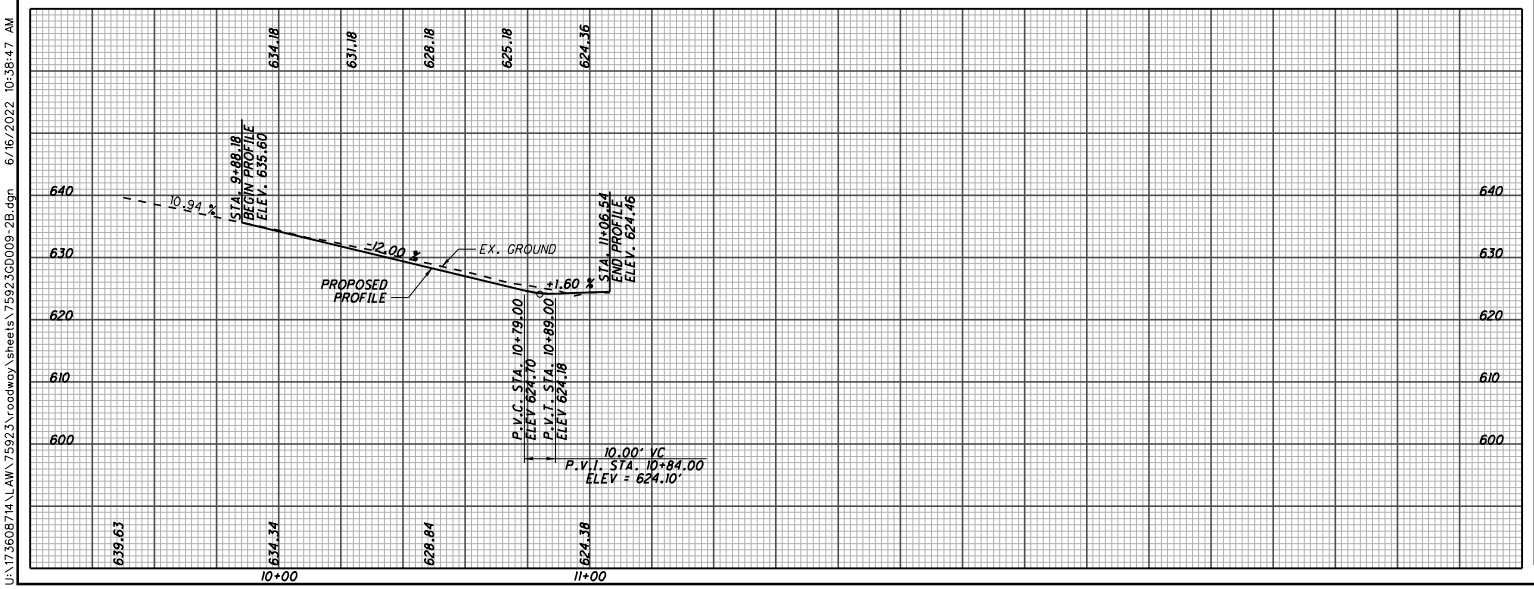
TYPICAL SECTION - RADER DRIVE
NOT TO SCALE

RADER DRIVE - 4

CURVE DATA
RADER DRIVE
P.I. STA. 10+80.82
Δ = 39° 35' 40" (RT)
Dc = 229° 10' 59"
R = 25.00'
T = 9.00'
L = 17.28'
E = 1.57'
e_{max} = NA
PC STA. 10+71.82
PT STA. 10+89.09

LEFT E/P RETURN DATA
Δ = 66° 44' 56"
R = 25.00'
T = 16.47'
L = 29.12'
R.P. STA. 10+79.57, 31' LT., RADER DRIVE
P.C. STA. 20+53.87, 13.27' LT., S.R. 243
P.T. STA. 10+79.57, 6' LT., RADER DRIVE

RIGHT E/P RETURN DATA
Δ = 131° 01' 25"
R = 10.00'
T = 21.95'
L = 22.87'
R.P. STA. 10+70.23, 16' RT., RADER DRIVE
P.C. STA. 10+70.23, 6' RT., RADER DRIVE
P.T. STA. 20+08.18, 14.41' LT., S.R. 243



REF NO.	STATION FROM	STATION TO	SIDE

TOTALS CARRIED TO GENERAL SUMMARY

N

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED SLP
CHECKED ALB

PLAN AND PROFILE
RADER DRIVE

LAW-7-2.17

557
633

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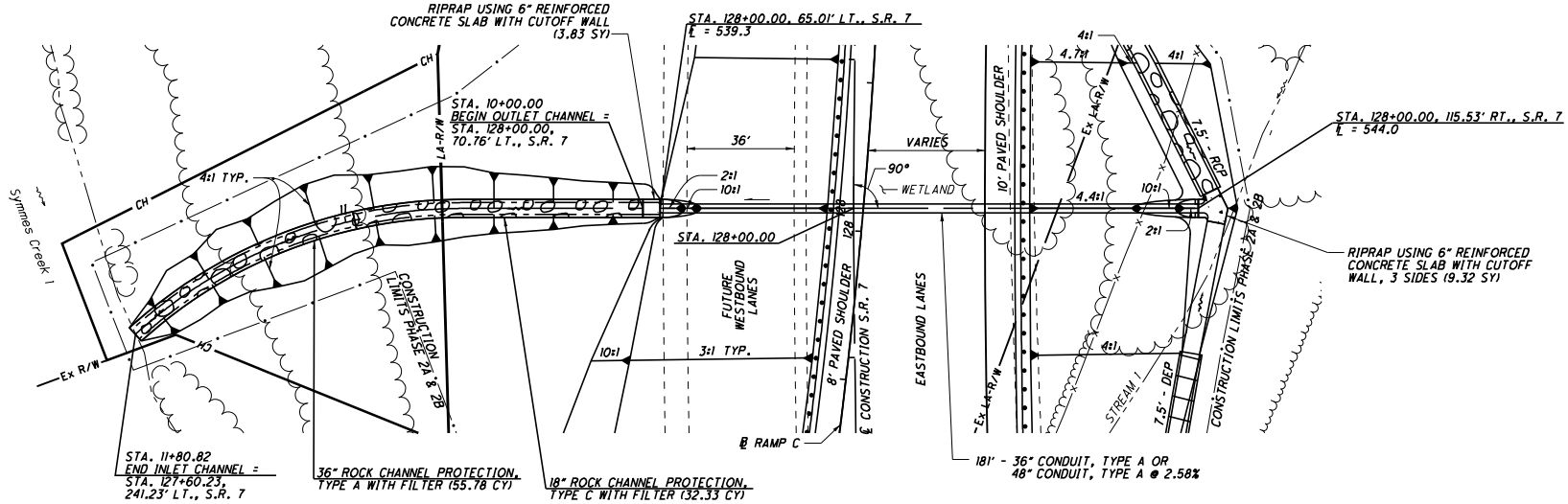
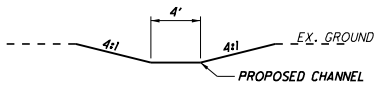


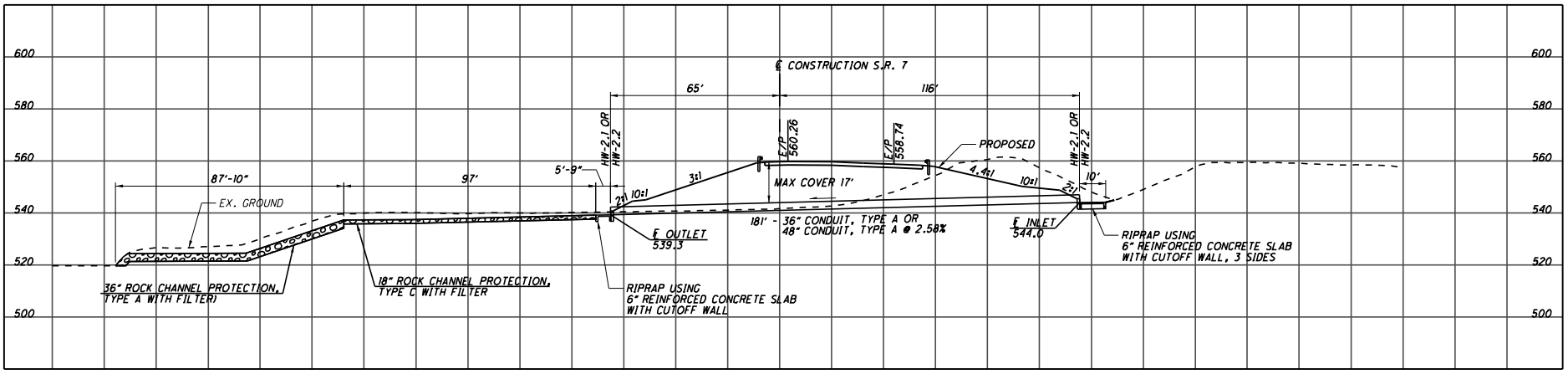
ESTIMATE QUANTITIES			
ITEM	TOTAL	UNIT	DESCRIPTION

QUANTITIES CARRIED TO GENERAL SUMMARY, SHEETS



CHANNEL TYPICAL SECTION

HYDRAULIC DATA	
DRAINAGE AREA	= 15 AC.
Q50	= 56 CFS
Q100	= 64 CFS
50V	= 7.92 FPS
100V	= 9.05 FPS
50 HW	= 548.5
100 HW	= 549.2
OHWMi	= 546.5
OHWMo	= 517.3
pH	= 7.6
DESIGN SERVICE LIFE	= 75 YEARS
ABRASION LEVEL	=
CFN	=



HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED SLP
CHECKED ALB

CULVERT DETAIL
S.R. 7 STA. 128+00.00

LAW-7-2.17

566
633

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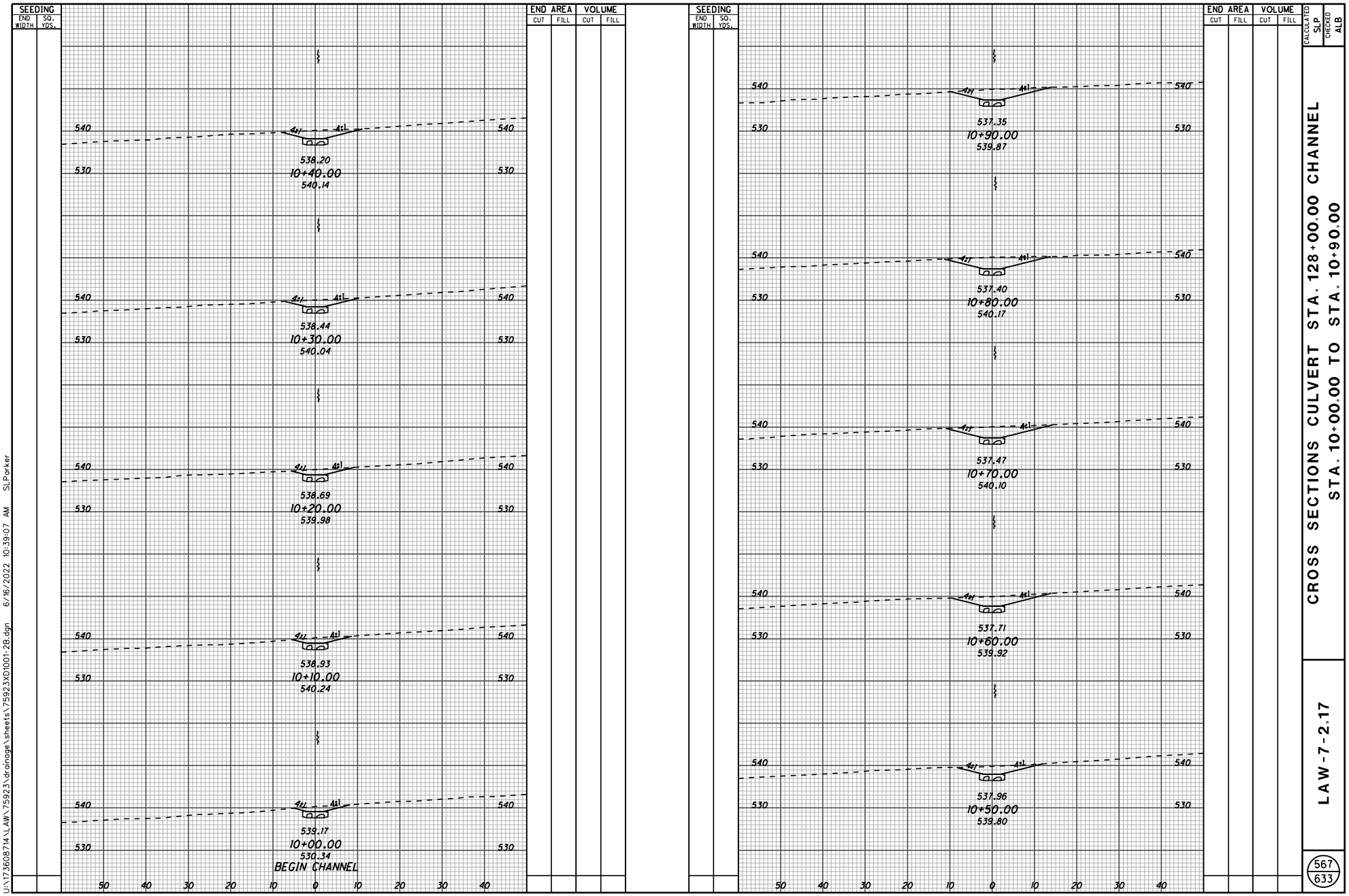

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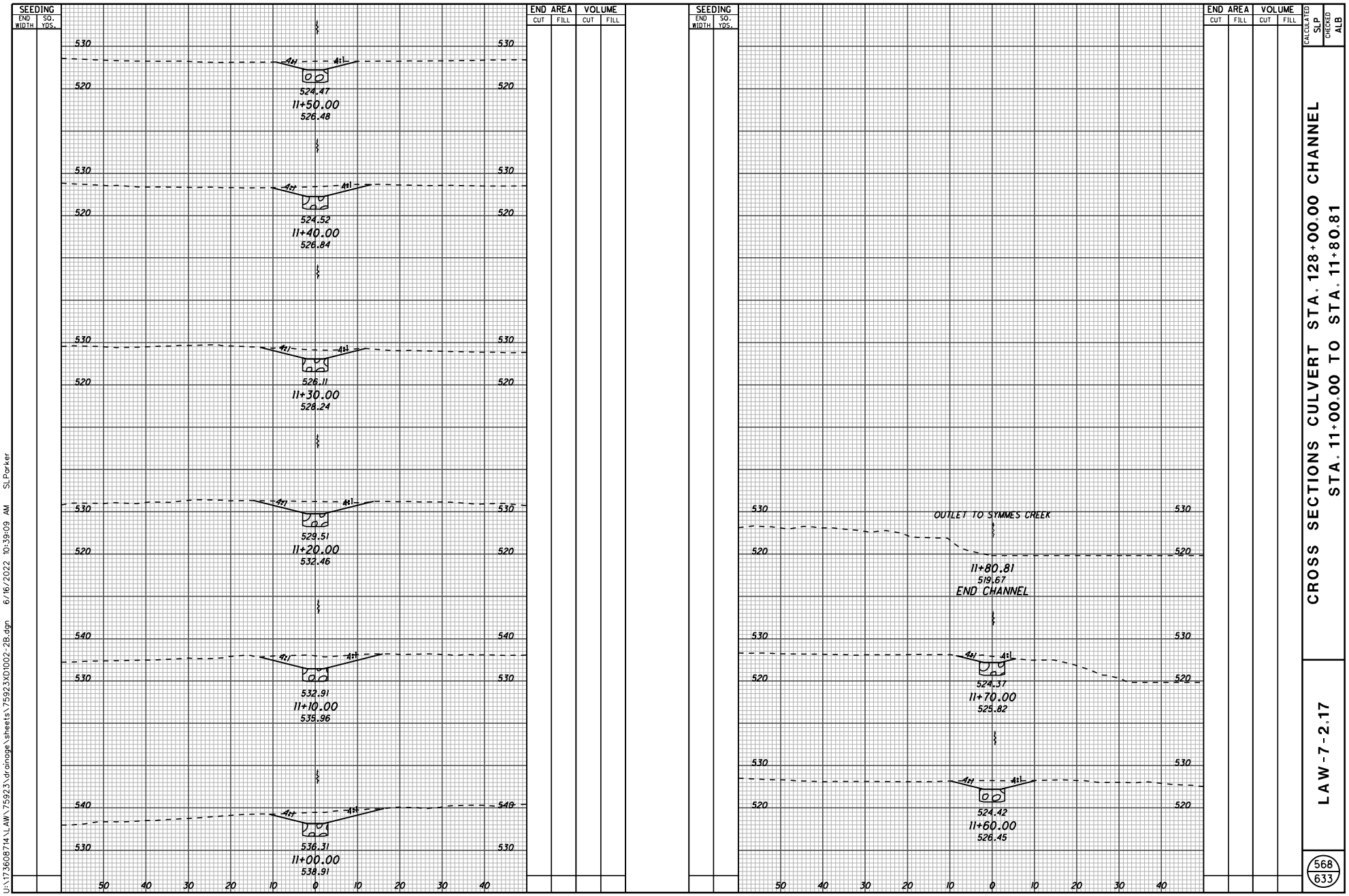
CALCULATED SLP
CHECKED ALB

CROSS SECTIONS CULVERT STA. 128+00.00 CHANNEL
STA. 10+00.00 TO STA. 10+90.00

LAW-7-2.17



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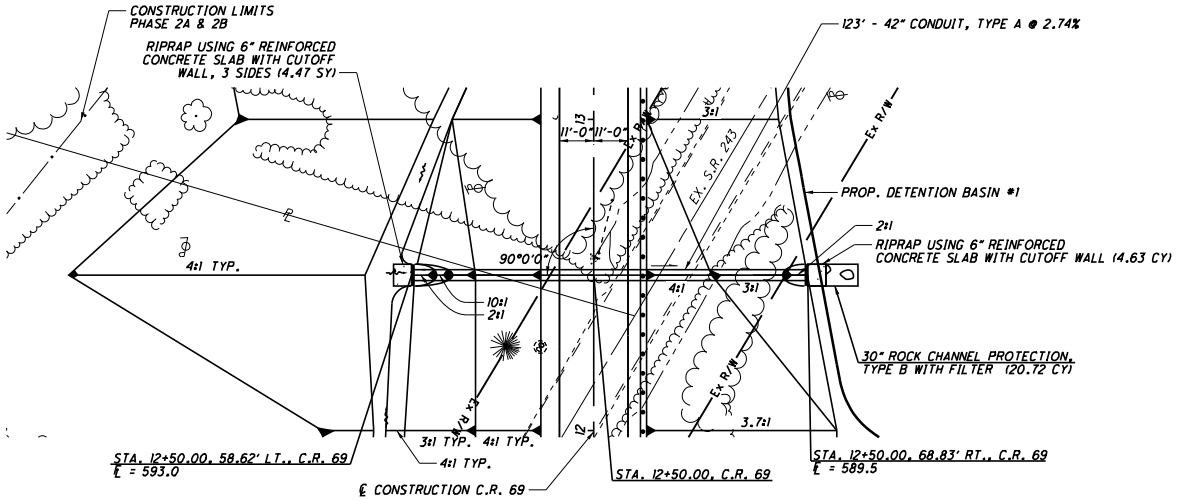

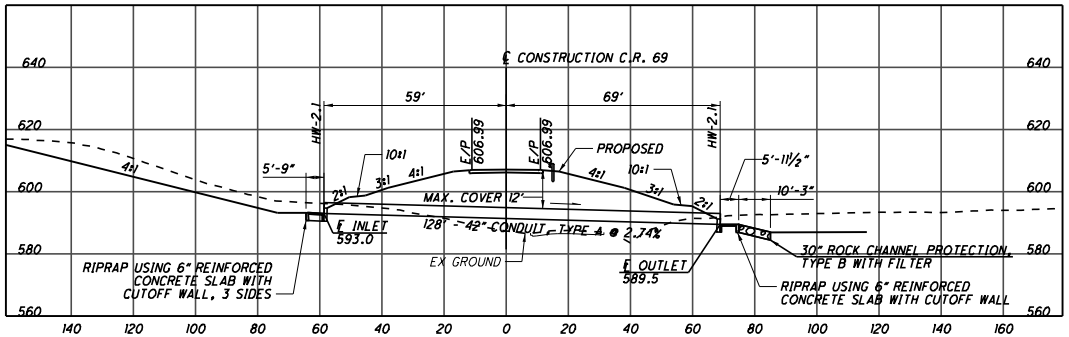

HYDRAULIC DATA	
DRAINAGE AREA	= 41 AC.
Q25	= 84 CFS
Q100	= 102 CFS
25V	= 10.8 FPS
100V	= 10.6 FPS
25 HW	= 599.0
100 HW	= 600.8
OHWMi	= 586.5
OHWMo	= 585.1
pH	= 7.6
DESIGN SERVICE LIFE	= 75 YEARS
ABRASION LEVEL	=
CFN	=

ESTIMATE QUANTITIES

ITEM	TOTAL	UNIT	DESCRIPTION

QUANTITIES CARRIED TO GENERAL SUMMARY, SHEETS

CULVERT DETAIL
C.R. 69 STA. 12+50.00

LAW-7-2.17

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED SLP
CHECKED ALB

569
633

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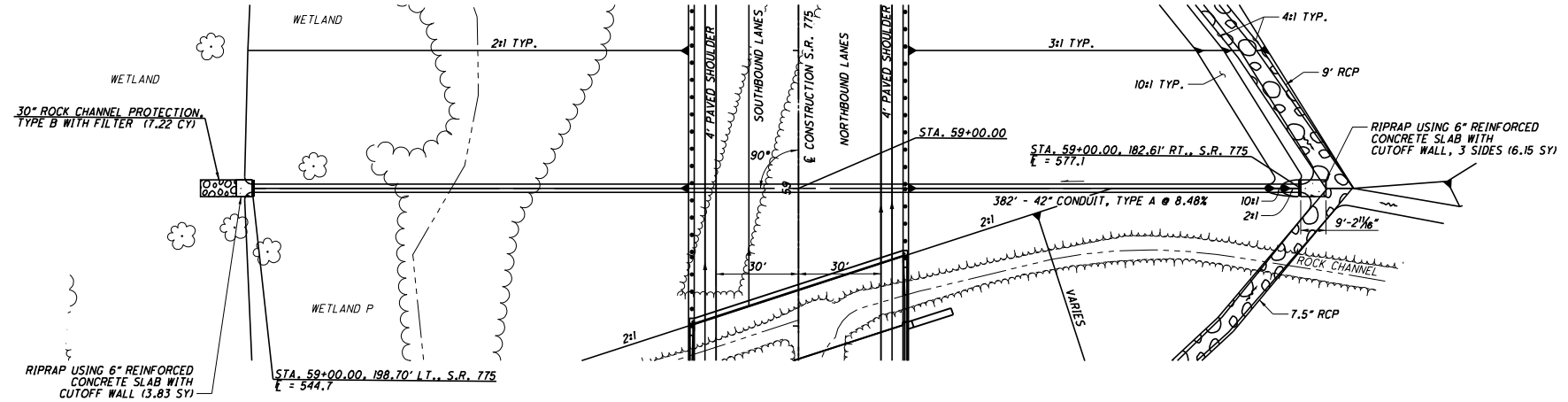
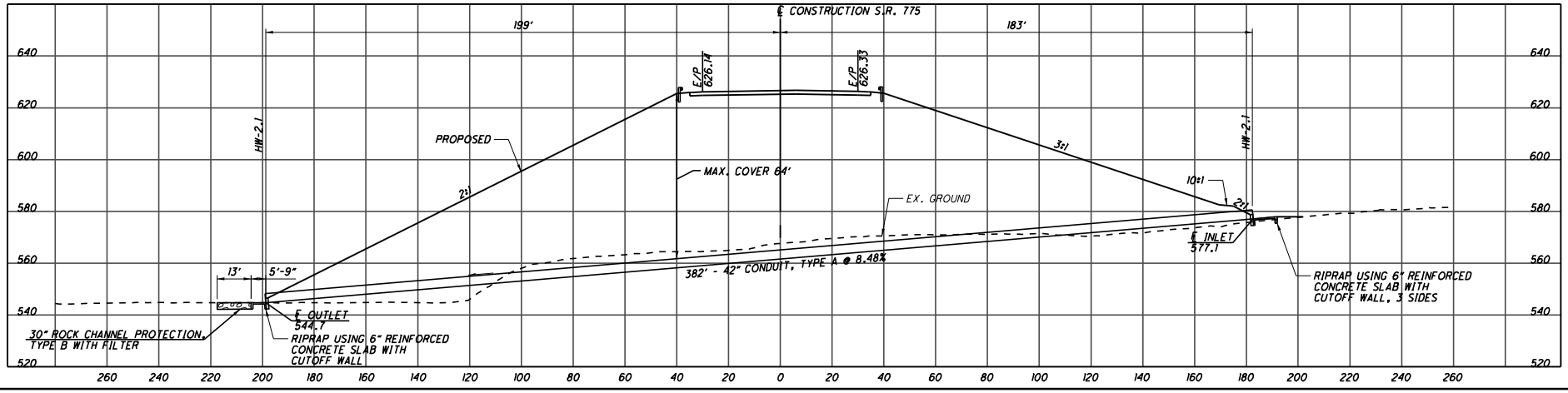


ESTIMATE QUANTITIES			
ITEM	TOTAL	UNIT	DESCRIPTION

QUANTITIES CARRIED TO GENERAL SUMMARY, SHEETS

HYDRAULIC DATA	
DRAINAGE AREA	= 8 AC.
Q50	= 22 CFS
Q100	= 23 CFS
50V	= 11.7 FPS
100V	= 11.9 FPS
50 HW	= 579.4
100 HW	= 579.4
OHWMi	= 578.70
OHWMo	= 545.51
pH	= 7.6
DESIGN SERVICE LIFE	= 75 YEARS
ABRASION LEVEL	=
CFN	=



HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED SLP
CHECKED ALB

CULVERT DETAIL
S.R. 775 STA. 59+00.00

LAW-7-2.17

570
633

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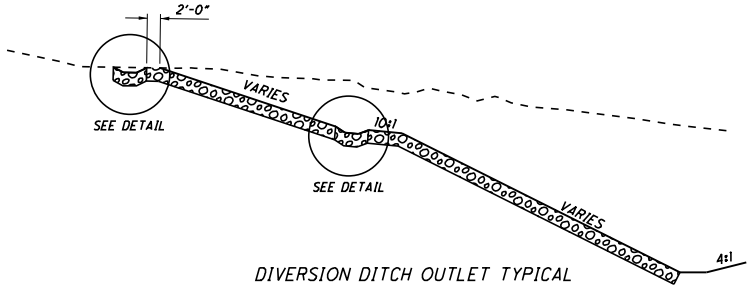
DIVERSION DITCH

THE CONTRACTOR IS TO PROVIDE A DIVERSION DITCH AS DETAILED ON THIS SHEET AND AS SHOWN IN THE CROSS SECTIONS. THE FOLLOWING QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY FOR THE PLACEMENT OF THE DIVERSION DITCH.

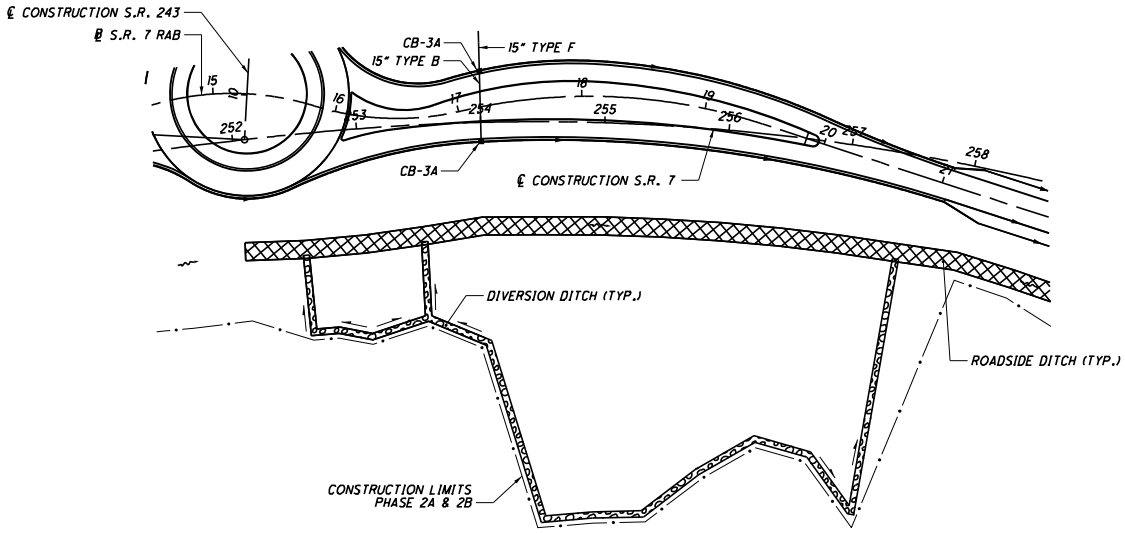
ITEM 203 - EXCAVATION (FOR OUTLET CHANNELS ONLY)	*XX CU YD*
ITEM 204 - GEOTEXTILE FABRIC	*XX SQ YD*
ITEM 601 - ROCK CHANNEL PROTECTION, TYPE D WITH FILTER	*XX CU YD*

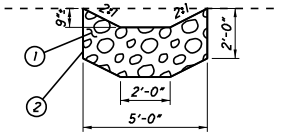
EARTHWORK QUANTITIES FOR THE DIVERSION DITCHES HAVE BEEN INCLUDED IN THE CROSS SECTIONS.



DIVERSION DITCH OUTLET TYPICAL

SEE CROSS SECTIONS FOR ACTUAL CUT SLOPES, BENCHING SCHEME AND DIVERSION DITCH LOCATIONS





DIVERSION DETAIL TYPICAL

(1) - ITEM 601 - ROCK CHANNEL PROTECTION, TYPE D WITH FILTER

(2) - ITEM 204 - GEOTEXTILE FABRIC

DRAINAGE DETAILS

DIVERSION DITCH LOCATION AND DETAILS

LAW-7-2.17

CALCULATED SLP CHECKED ALB

HORIZONTAL SCALE IN FEET 0 25 50 100

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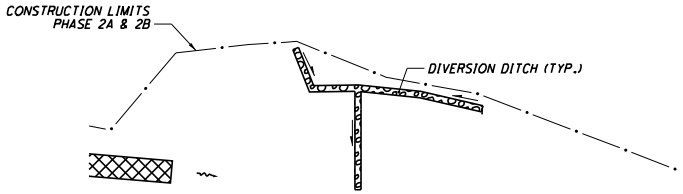

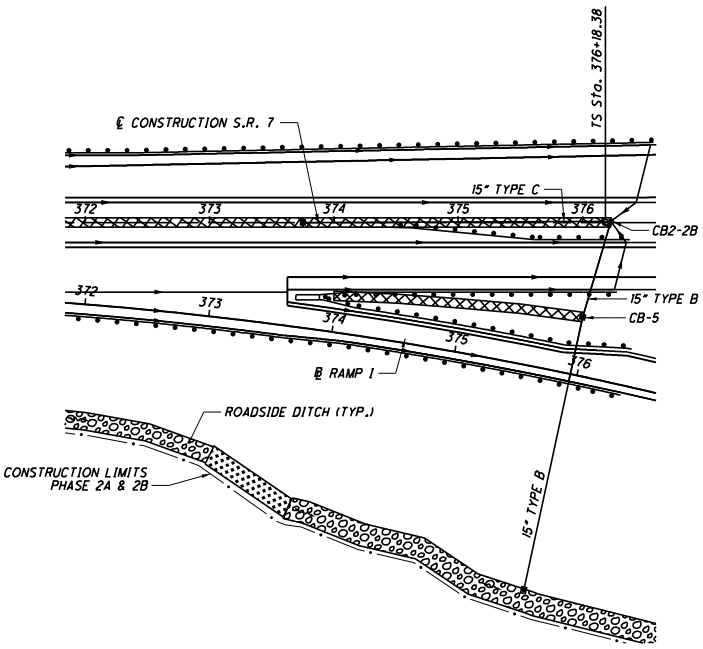

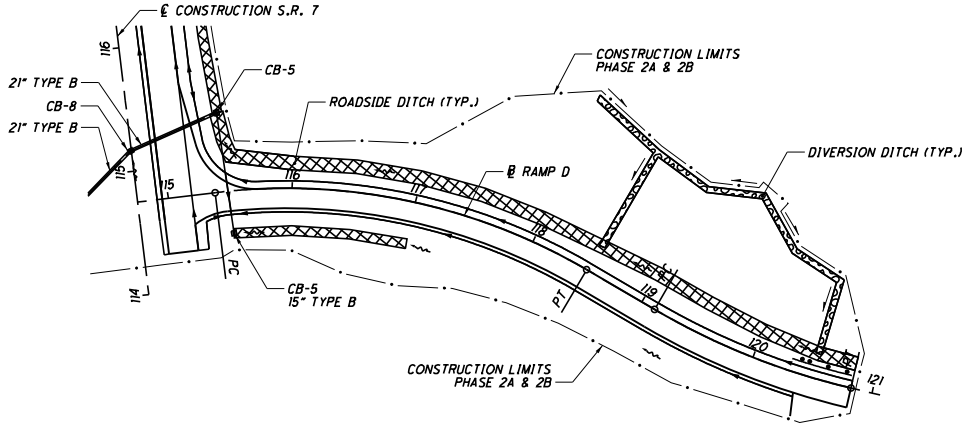

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HORIZONTAL SCALE IN FEET
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CALCULATED SLP
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DRAINAGE DETAILS
DIVERSION DITCH LOCATION AND DETAILS

LAW-7-2.17

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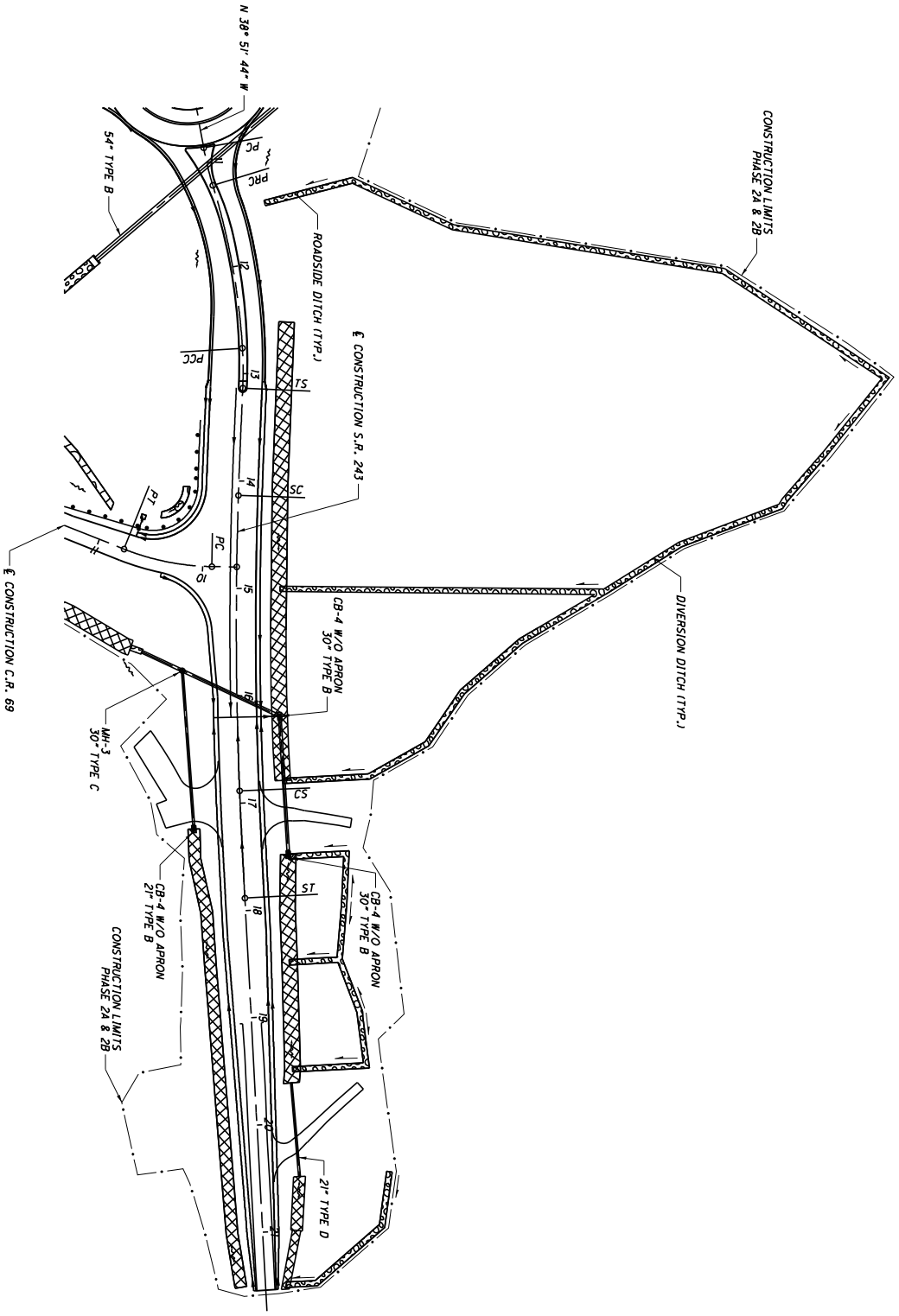
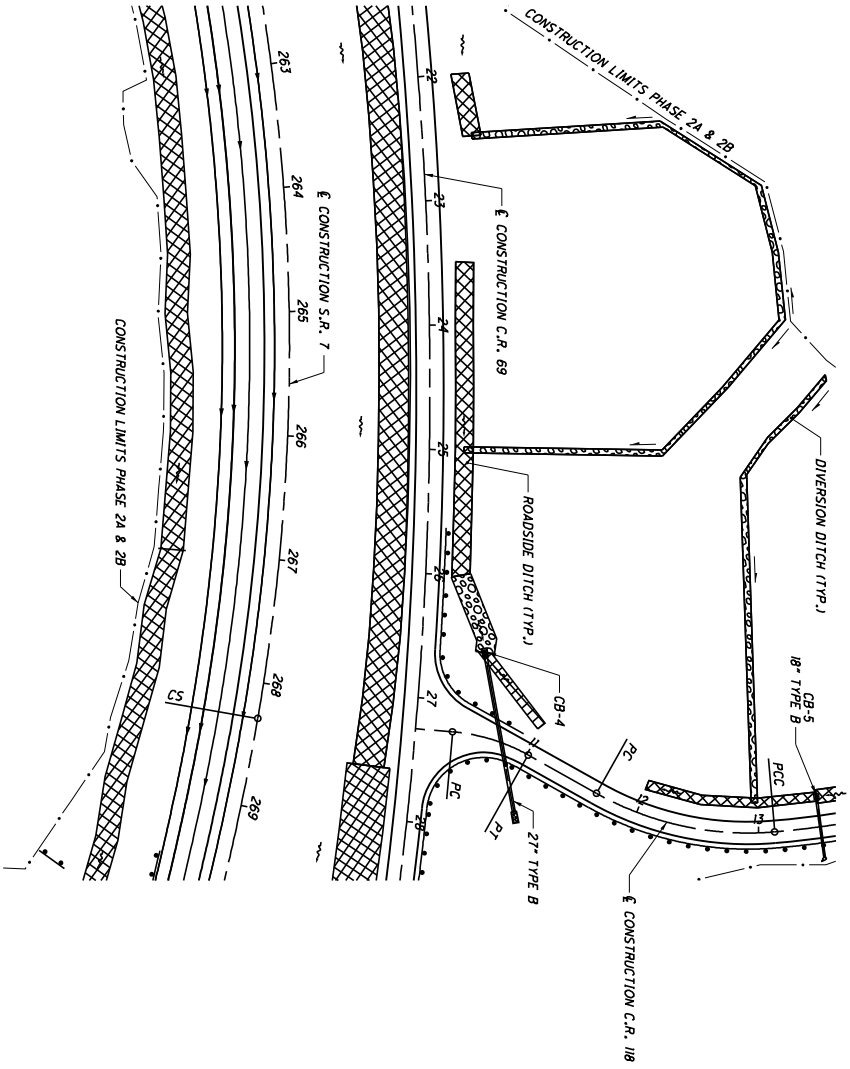
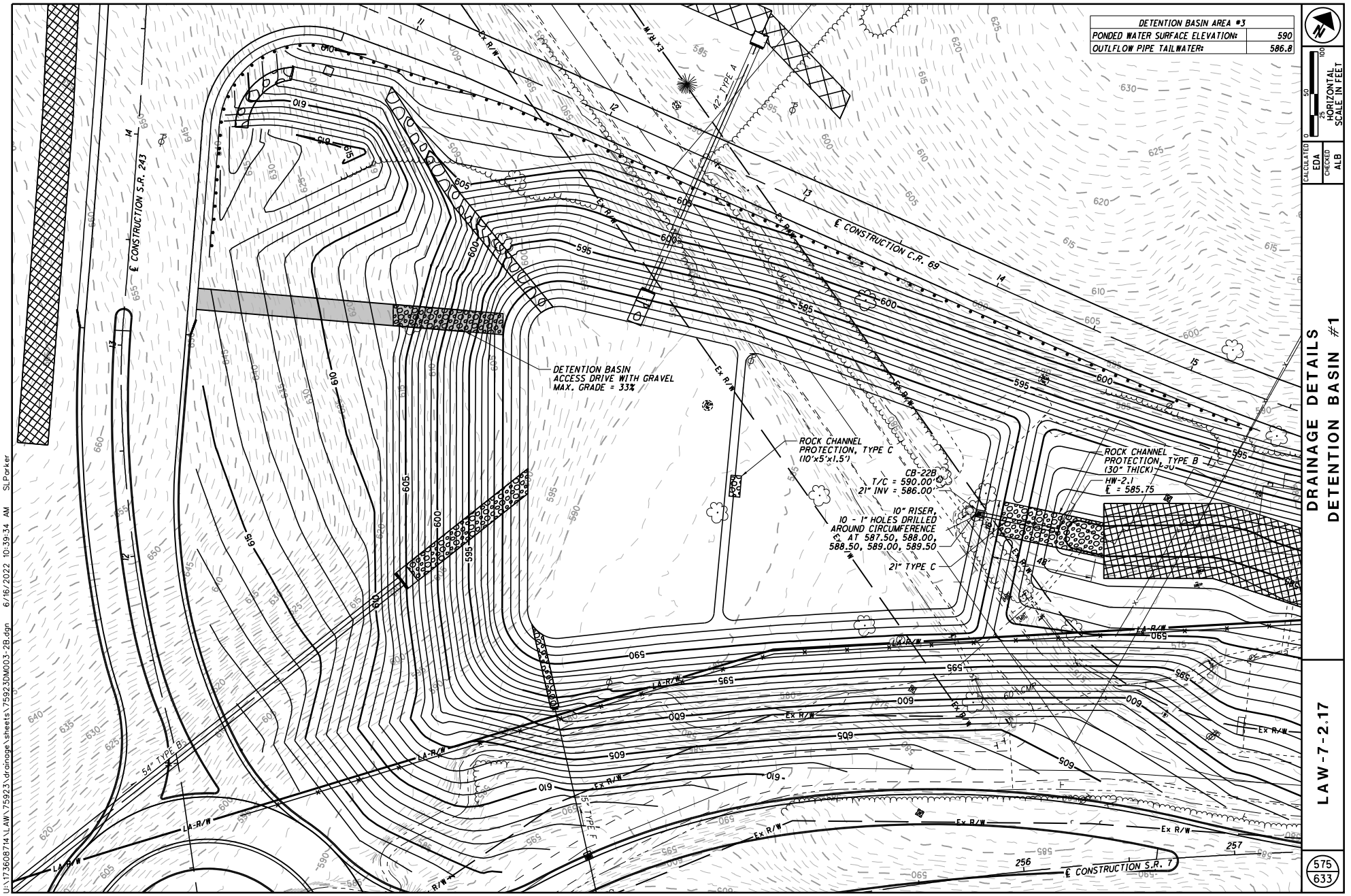


573/633	LAW-7-2.17	DRAINAGE DETAILS DIVERSION DITCH LOCATION AND DETAILS	CALCULATED SLP CHECKED ALB	0 50 25 100 HORIZONTAL SCALE IN FEET



574 / 633	LAW-7-2.17	DRAINAGE DETAILS DIVERSION DITCH LOCATION AND DETAILS	CALCULATED SLP CHECKED ALB	0 50 25 100 HORIZONTAL SCALE IN FEET



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CALCULATED EDA
CHECKED ALB

HORIZONTAL SCALE IN FEET
0 25 50 100

DRAINAGE DETAILS
DETENTION BASIN #2

LAW-7-2.17

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633

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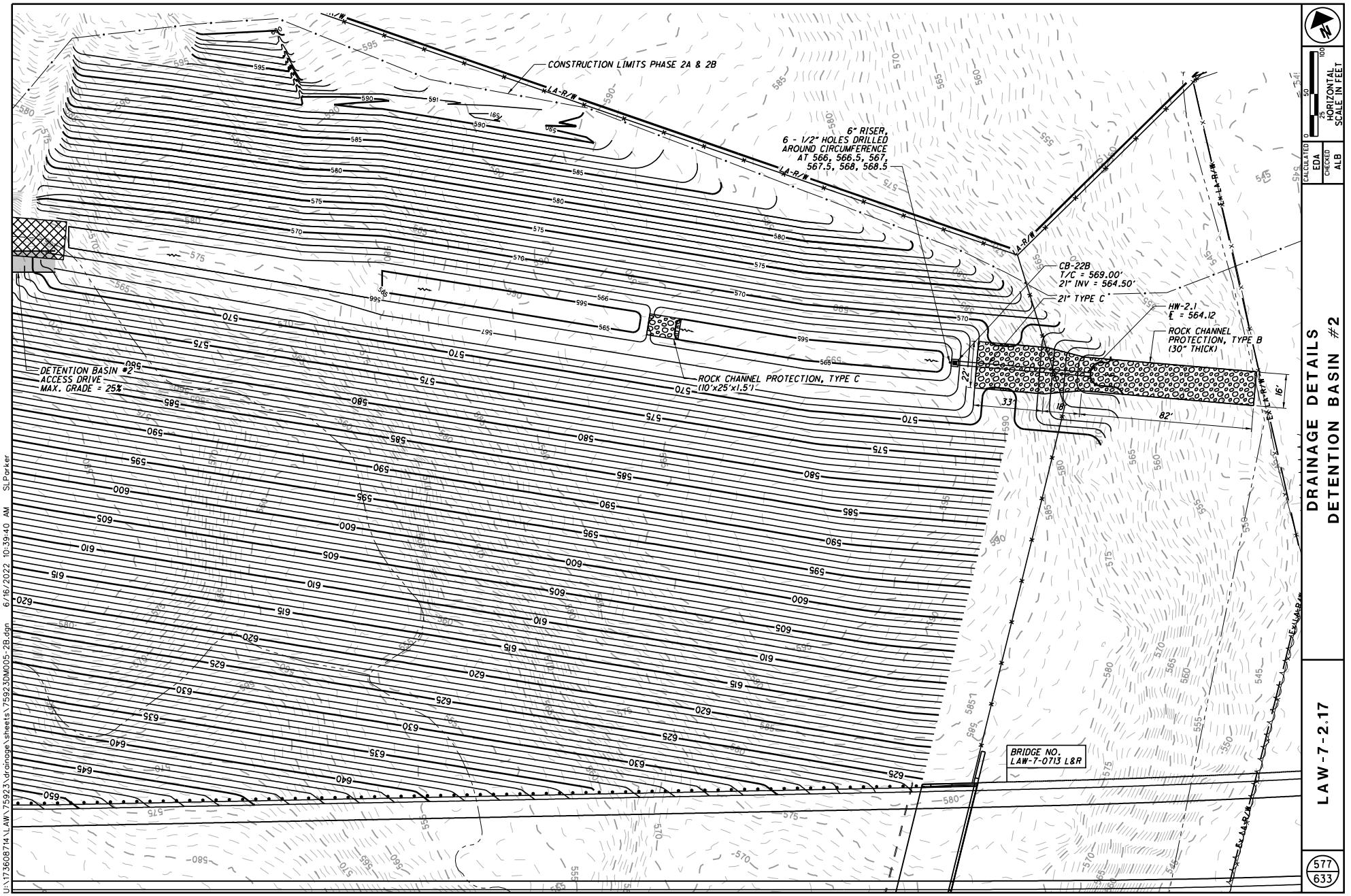

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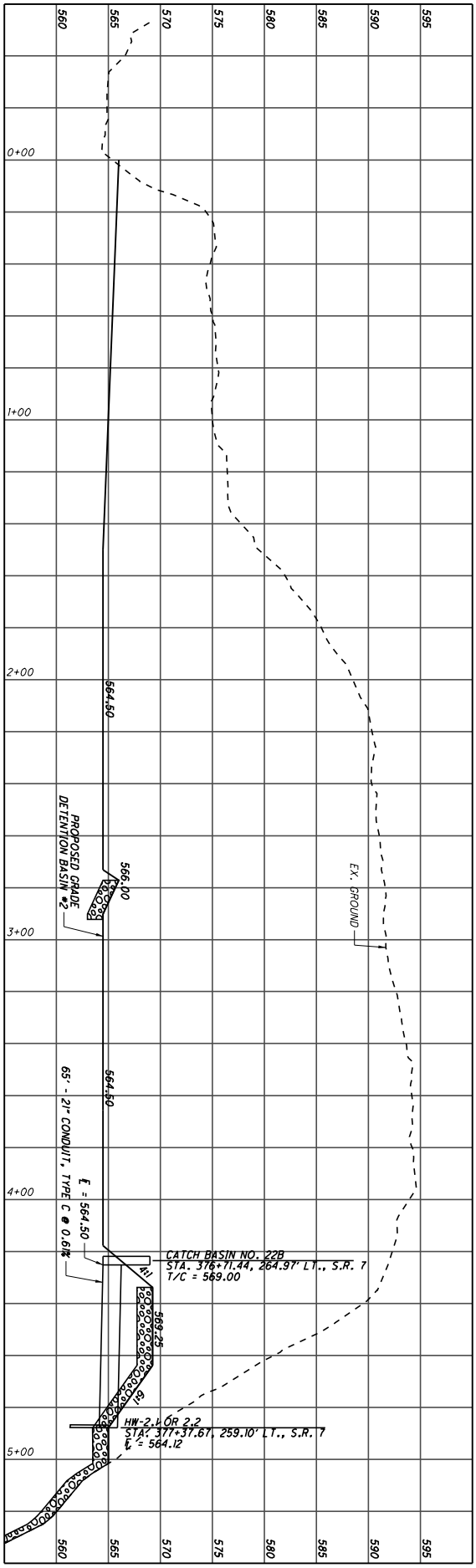

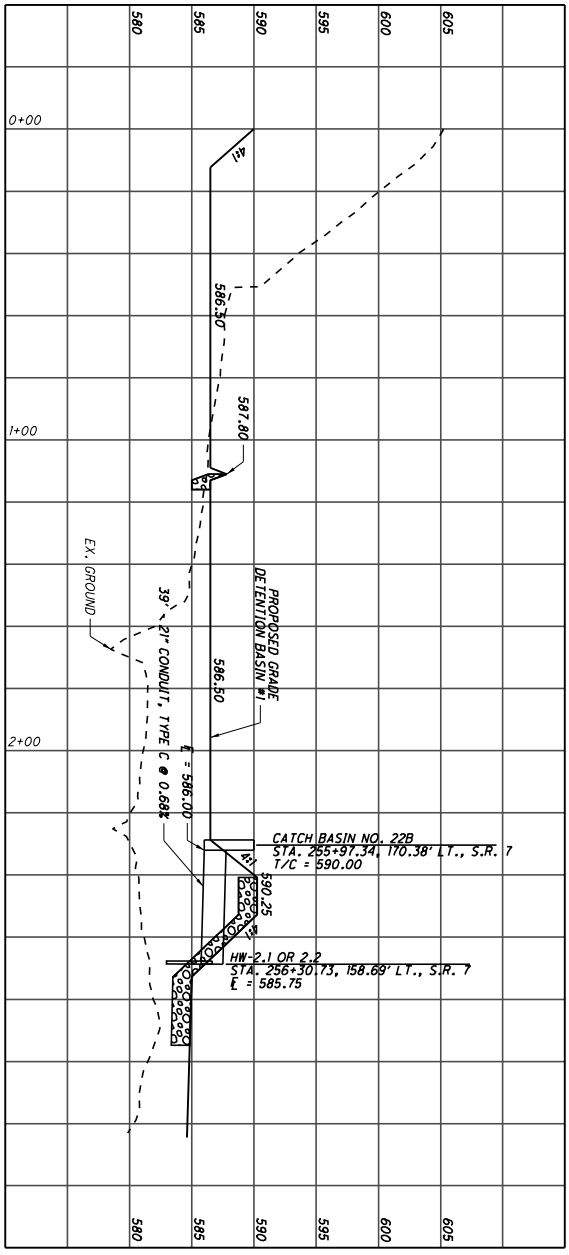

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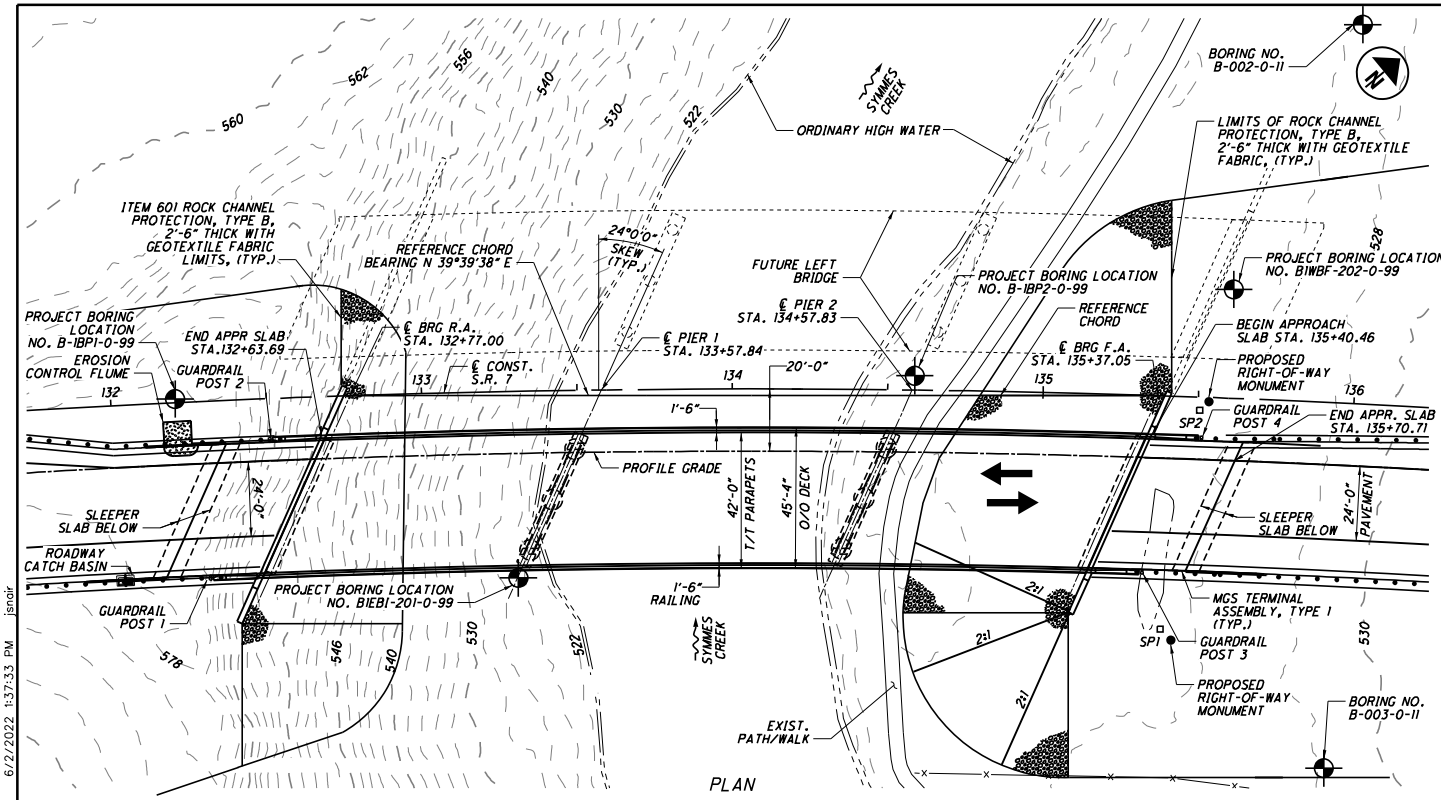
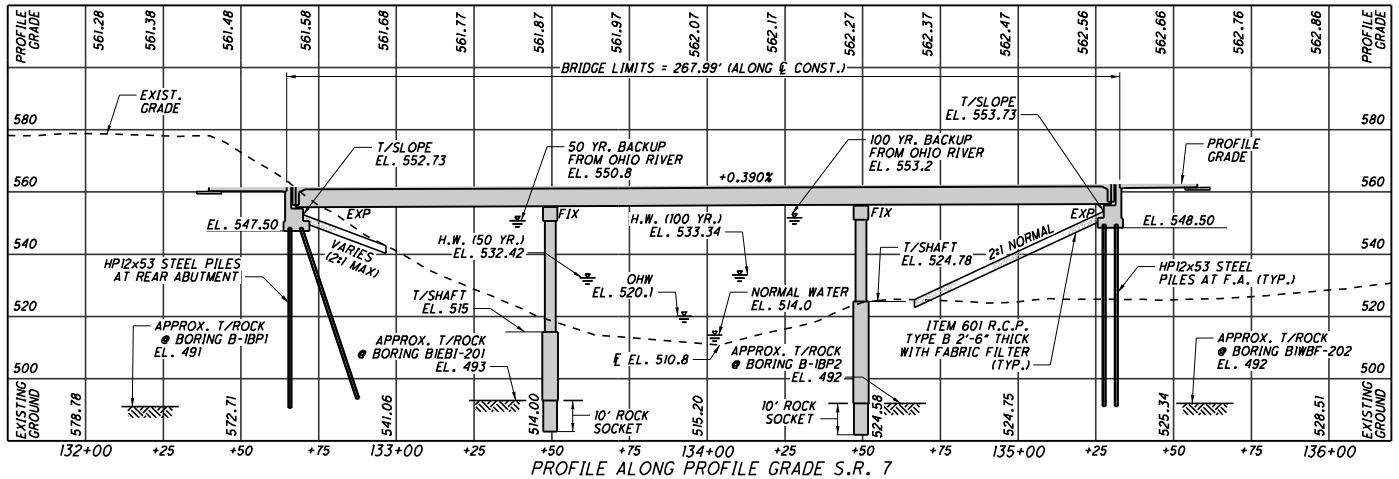
LAW-7-2.17

DETENTION BASIN PROFILES

CALCULATED EDA
CHECKED ALB

0 20 40
SCALE IN FEET





NOTES

1. EARTHWORK LIMITS SHOWN ARE APPROXIMATE. ACTUAL SLOPES SHALL CONFORM TO PLAN CROSS SECTIONS.
2. FOR PRIMARY PROJECT CONTROL INFORMATION TABLE SEE ROADWAY GENERAL NOTES.
3. BRIDGE DECK DRAINAGE IS CONTROLLED BY ROADWAY CURBS EXTENDING OFF THE EAST END OF THE BRIDGE TO ROADWAY CATCH BASINS.
4. FOR LIST OF ABBREVIATIONS SEE SHEET 4/25.

DESIGN TRAFFIC:
2015 ADT = 10,300 2015 ADTT = 1,133
2035 ADT = 21,400 2035 ADTT = 2,354
DIRECTIONAL DISTRIBUTION = 69/31

LEGEND

- PROJECT BORING LOCATION
- SETTLEMENT PLATFORM
- PROPOSED RIGHT-OF-WAY MONUMENT

HYDRAULIC DATA

DRAINAGE AREA = 351.7 SQ. MILES
Q (50) = 17,000 CFS V (50) = 8.67 FT/S EL. (50) = 532.42
Q (100) = 19,100 CFS V (100) = 9.06 FT/S EL. (100) = 533.34
STRUCTURE CLEARS THE 50 YEAR DESIGN HW BY 23.2 FEET.

ESTIMATED PILE LENGTHS

REAR ABUTMENT HP12x53 = 60 FT.
FORWARD ABUTMENT HP12x53 = 60 FT.

S.R. 7 CURVE NO. 1 DATA		
P.I. STA. 138+60.99	L = 3,508.44'	Ts = 2,076.38'
Δ = 53° 33' 53" (RT)	E = 425.60'	LT = 116.67'
Dc = 1° 27' 15"	TS STA. = 117+84.61	ST = 58.34'
R = 3,940.00'	SC STA. = 119+59.61	e_{max} = 4.00%
T = 1,880.13'	θs = 1° 16' 21"	CS STA. 154+68.05
	Ls = 175.00'	ST STA. 156+43.05

POST NUMBER	FIRST GUARDRAIL POST	STATION
1	EASTBOUND R.A.	132+28.76
2	WESTBOUND R.A.	132+50.63
3	EASTBOUND F.A.	135+33.61
4	WESTBOUND F.A.	135+51.46

PROPOSED STRUCTURE

TYPE: 3-SPAN PRESTRESSED CONCRETE I-BEAMS (60" MODIFIED TYPE 4) COMPOSITE WITH REINFORCED CONCRETE DECK ON CAP & COLUMN PIERS ON DRILLED SHAFTS & STUB TYPE ABUTMENTS ON STEEL HP PILES

SPANS: 78.93', 97.83', 78.91' C/C BRGS (MEASURED ALONG REF. CHORD)

ROADWAY: 42'-0" TOE/TOE PARAPETS

LOADING: HL-93 AND 60 LBS/FT² FUTURE WEARING SURFACE

WEARING SURFACE: 1" MONOLITHIC WEARING SURFACE

SKEW: 24°00'00" L.F. FROM PERPENDICULAR TO REF. CHORD

APPROACH SLABS: AS-1-15 AND APPLICABLE DETAILS FROM AS-2-15, 30'-0" LONG

ALIGNMENT: 01°27'15" CURVE RIGHT

SUPERELEVATION: 0.0400 FT. PER FT.

COORDINATES: LATITUDE 38° 26' 20.82" N
LONGITUDE 82° 27' 16.08" W

DESIGN AGENCY: Stantec, 1500 Lake Shore Dr., Columbus, OH 43204, (614) 486-4383
DATE: 11/3/2017
REVIEWED: MRS
DRAWN: JWS
DESIGNED: BSM
CHECKED: EER
REVISED:
STRUCTURE FILE NUMBER: 4400070

LAWRENCE COUNTY
STA. 132+63.69
STA. 135+40.46

SITE PLAN
BRIDGE NO. LAW-7-0251
S.R. 7 OVER SYMMES CREEK

LAW-7-2.17
PID No. 75923

1/25

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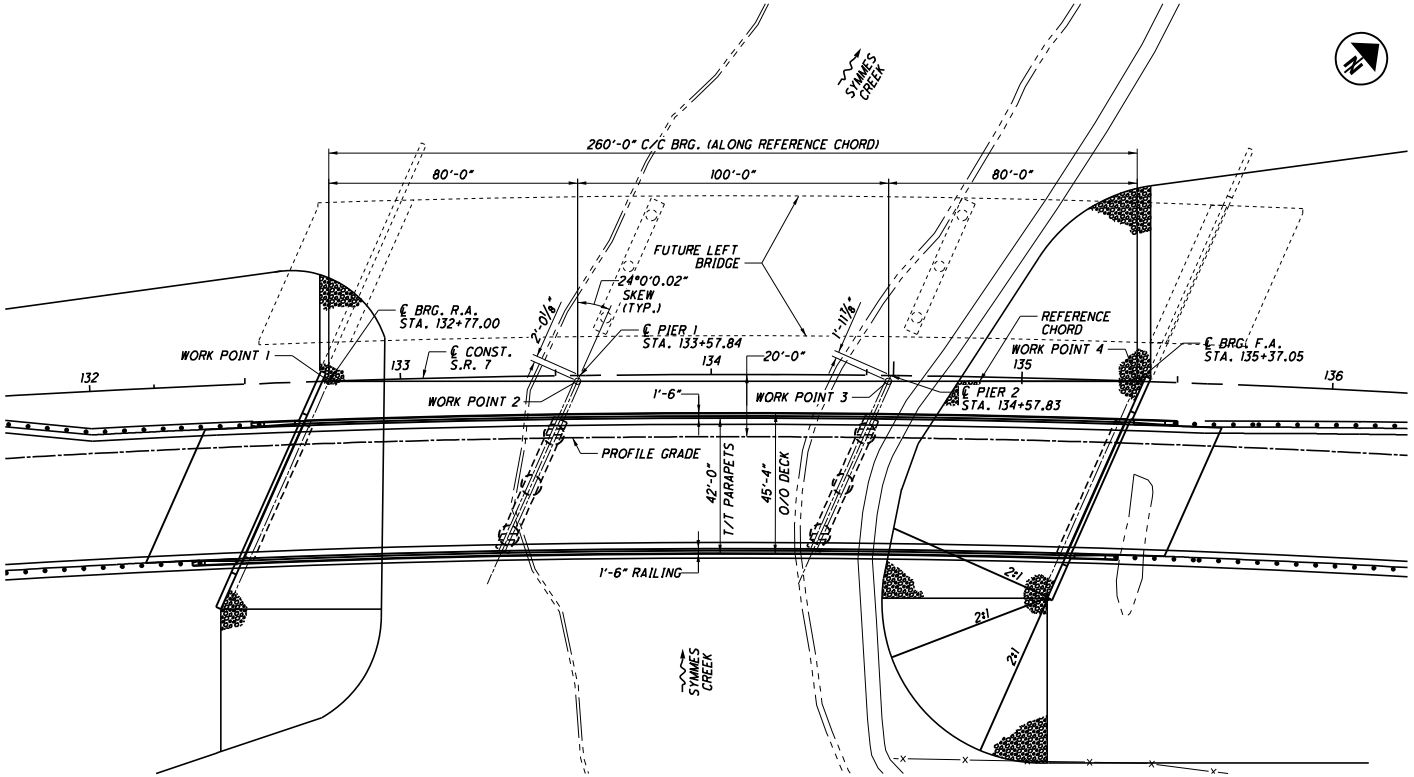

PLAN

S.R. 7 CURVE NO. 1

P.I. STA. 138+60.99
Δ = 53° 33' 53" (RT)
Dc = 1° 27' 15"
R = 3,940.00'
T = 1,880.13'
L = 3,508.44'
E = 425.60'
e_{max} = 4.00%
SC STA. 119+59.61
CS STA. 154+68.05

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DESIGN AGENCY: Stantec, 1500 Lake Shore Dr., Columbus, OH 43204, (614) 486-4383

DESIGNED	DRAWN	REVIEWED	DATE
BSM	JWS	MRS	11/3/2017
CHECKED	REVISED	STRUCTURE FILE NUMBER	
EER		4400070	

GENERAL PLAN
BRIDGE NO. LAW-7-0251
S.R. 7 OVER SYMMES CREEK

LAW-7-2.17
PID No. 75923

2 / 25

REFER TO THE FOLLOWING STANDARD BRIDGE DRAWINGS:

AS-1-15	REVISED	07-17-15
AS-2-15	REVISED	01-18-19
DM-4.1	REVISED	01-15-16
EXJ-6-17	DATED	01-15-21
PSID-1-13	REVISED	01-15-21
SBR-1-20	REVISED	07-17-20

AND TO THE FOLLOWING SUPPLEMENTAL SPECIFICATION:

800	DATED	07-16-21
832	DATED	10-19-18

DESIGN SPECIFICATIONS:

THIS STRUCTURE CONFORMS TO THE 9TH EDITION OF "LRFD BRIDGE DESIGN SPECIFICATIONS" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 2000 AND THE ODOT BRIDGE DESIGN MANUAL, 2020.

DESIGN LOADING:

HL-93

FUTURE WEARING SURFACE (FWS) OF 0.060 KIPS/FT²

OPERATIONAL IMPORTANCE:

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

DESIGN DATA:

CONCRETE CLASS QC2	- COMPRESSIVE STRENGTH 4.5 KSI (SUPERSTRUCTURE)
CONCRETE CLASS QC1	- COMPRESSIVE STRENGTH 4.0 KSI (SUBSTRUCTURE)
CONCRETE CLASS QC5	- WITH 1-IN MAX. AGGREGATE SIZE - COMPRESSIVE STRENGTH 4.5 KSI (DRILLED SHAFT)
REINFORCING STEEL	- MINIMUM YIELD STRENGTH 60 KSI

STEEL H-PILES - A572 - YIELD STRENGTH 50 KSI

CONCRETE FOR PRESTRESSED BEAMS:

COMPRESSIVE STRENGTH (FINAL) = 7 KSI

COMPRESSIVE STRENGTH (RELEASE) = 6 KSI

WELDED WIRE FABRIC - YIELD STRENGTH = 70 KSI

PRESTRESSING STRAND:

AREA = 0.217 SQ. IN.

ULTIMATE STRENGTH = 270 K.S.I.

INITIAL STRESS = 202.5 K.S.I.

(LOW RELAXATION STRANDS)

DECK PROTECTION METHOD:

EPOXY COATED REINFORCING STEEL

2-1/2" CONCRETE COVER

MONOLITHIC WEARING SURFACE:

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

PILE DRIVING CONSTRAINTS:

PRIOR TO DRIVING PILES, CONSTRUCT THE SPILL THROUGH SLOPES AND THE BRIDGE APPROACH EMBANKMENT BEHIND THE ABUTMENTS UP TO THE LEVEL OF THE SUBGRADE ELEVATION FOR A MINIMUM DISTANCE OF 200 FEET BEHIND EACH ABUTMENT (SEE FORWARD APPROACH EMBANKMENT CONSTRUCTION THIS SHEET). DO NOT BEGIN THE EXCAVATION FOR THE ABUTMENT FOOTINGS AND THE INSTALLATION OF THE ABUTMENT PILES UNTIL AFTER THE ABOVE REQUIRED EMBANKMENT HAS BEEN CONSTRUCTED.

PILES TO BEDROCK:

DRIVE PILES THROUGH THE EMBANKMENT REINFORCING. DRIVE PILES TO REFUSAL ON BEDROCK. THE DEPARTMENT WILL CONSIDER REFUSAL TO BE OBTAINED WHEN THE PILE PENETRATION IS AN INCH OR LESS AFTER RECIEVING AT LEAST 20 BLOWS FROM THE PILE HAMMER. SELECT THE HAMMER SIZE TO ACHIEVE THE REQUIRED DEPTH TO BEDROCK AND REFUSAL.

THE TOTAL FACTORED LOAD IS 210.6 KIPS PER PILE FOR THE REAR ABUTMENT PILES.

THE TOTAL FACTORED LOAD IS 206.5 KIPS PER PILE FOR THE FORWARD ABUTMENT PILES.

REAR ABUTMENT PILES:

20 PILES 65 FEET LONG, ORDER LENGTH

FORWARD ABUTMENT PILES:

28 PILES 65 FEET LONG, ORDER LENGTH

PILE SPLICES:

IN LIEU OF USING THE FULL PENETRATION BUTT WELDS SPECIFIED IN CMS 507.09 TO SPLICE STEEL H-PILES, THE CONTRACTOR MAY USE A MANUFACTURED H-PILE SPLICER. FURNISH SPLICERS FROM THE FOLLOWING MANUFACTURER:

ASSOCIATED PILE AND FITTING CORPORATION
8 WOOD HOLLOW RD. PLAZA 1
PARSIPPANY, NEW JERSEY 07054

INSTALL AND WELD THE SPLICER TO THE PILE SECTIONS IN ACCORDANCE WITH THE MANUFACTURER'S WRITTEN ASSEMBLY PROCEDURE SUPPLIED TO THE ENGINEER BEFORE THE WELDING IS PERFORMED.

DRILLED SHAFTS:

PIER 1

THE MAXIMUM FACTORED LOAD TO BE SUPPORTED BY EACH DRILLED SHAFT IS 1,061 KIPS AT THE PIERS. THIS LOAD IS RESISTED BY TIP RESISTANCE. ROCK SOCKET DEPTH PROVIDED FOR LATERAL SUPPORT.

PIER 2

THE MAXIMUM FACTORED LOAD TO BE SUPPORTED BY EACH DRILLED SHAFT IS 1,080 KIPS AT THE PIERS. THIS LOAD IS RESISTED BY TIP RESISTANCE. ROCK SOCKET DEPTH PROVIDED FOR LATERAL SUPPORT.

ITEM 623 - RIGHT-OF-WAY MONUMENT, AS PER PLAN:

IN ADDITION TO THE PROVISIONS OF ITEM 623, PLACE RIGHT-OF-WAY MONUMENTS WITHIN 5 FEET OF SETTLEMENT PLATFORMS AFTER REACHING FINISHED GRADE ELEVATIONS.

DECK PLACEMENT DESIGN ASSUMPTIONS:

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

AN EIGHT WHEEL FINISHING MACHINE WITH A MAXIMUM WHEEL LOAD OF 2.44 KIPS.

A MINIMUM OUT-TO-OUT WHEEL SPACING AT EACH END OF THE MACHINE OF 103".

A MAXIMUM SPACING OF OVERHANG FALSEWORK BRACKETS OF 48 IN.

A MAXIMUM DISTANCE FROM THE CENTERLINE OF THE FASCIA GIRDER TO THE FACE OF THE SAFETY HANDRAIL OF 65".

SCOUR ELEVATIONS

THE DESIGN FLOOD AND CHECK FLOOD SCOUR ELEVATIONS ARE PROVIDED BELOW:

	REAR ABUTMENT	PIER 1	PIER 2	FORWARD ABUTMENT
DESIGN FLOOD	----------	----------	----------	----------
CHECK FLOOD	----------	----------	----------	----------

APPROACH EMBANKMENT CONSTRUCTION:

THE APPROACH EMBANKMENTS SHALL BE CONSTRUCTED AND THEN UNDERGO AN ESTIMATED WAITING PERIOD OF 180 DAYS PRIOR TO DRIVING PILES.

REFER TO SHEETS XX FOR DETAILS AND NOTES REGARDING REINFORCED SLOPE AND EMBANKMENT CONSTRUCTION.

DESIGN AGENCY
Stantec
1500 Lake Shore Dr.
Columbus, OH 43204
(614) 486-4383

DESIGNED	DRAWN	REVIEWED	DATE
BSM	JWS	MRS	11/3/2017
CHECKED	REVISED	STRUCTURE FILE NUMBER	
EER		4400070	

GENERAL NOTES

BRIDGE NO. LAW-7-0251

S.R. 7 OVER SYMMES CREEK

LAW-7-2.17

PID No. 75923

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ITEM SPECIAL - SETTLEMENT PLATFORM:

DESCRIPTION: THIS ITEM CONSISTS OF FURNISHING, CONSTRUCTING, AND MAINTAINING SETTLEMENT PLATFORMS AND OBTAINING SETTLEMENT READINGS AS REQUIRED BY THE PLANS OR AS DIRECTED BY THE ENGINEER. SEE SETTLEMENT PLATFORM DETAIL THIS SHEET. AT THE OPTION AND EXPENSE OF THE CONTRACTOR, ADDITIONAL SETTLEMENT PLATFORMS MAY BE INSTALLED AT LOCATIONS APPROVED BY THE ENGINEER. SETTLEMENT READINGS SHALL BE TAKEN WEEKLY DURING CONSTRUCTION AND DURING THE SPECIFIED WAITING PERIOD BEGINNING WITH THE FIRST WEEK FOLLOWING PLACEMENT OF EACH PLATFORM. THE READINGS SHALL BE PLOTTED ON GRAPH PAPER PRESENTING DEFORMATION (ON THE NEGATIVE Y-AXIS) AND FILL HEIGHT (ON THE POSITIVE Y-AXIS) VERSUS TIME (ON THE X-AXIS). A COPY OF EACH CUMULATIVE PLOT SHALL BE SENT TO ODOT, CO, CONSTRUCTION MANAGEMENT/CONSTRUCTION ADMINISTRATION, GEOTECHNICAL AND EARTHWORK ENGINEER AND ODOT, CO, OFFICE OF GEOTECHNICAL ENGINEERING, FOUNDATIONS AND RETAINING WALLS ENGINEER, AFTER EACH SETTLEMENT READING IS RECORDED.

MATERIAL: SOUND LUMBER SUCH AS ¾" EXTERIOR GRADE PLYWOOD SHALL BE USED FOR THE BASE. THE PIPE SHALL BE 2½" STANDARD BLACK PIPE WITH THREADED FITTINGS AS SHOWN ON THE PLANS. A STEEL PLATE 36" X 36" X ⅛" MAY BE SUBSTITUTED FOR THE LUMBER FOR THE PLATFORMS, AT THE CONTRACTOR'S OPTION.

CONSTRUCTION METHODS: THE PLATFORM SHALL CONFORM TO THE SETTLEMENT PLATFORM DETAILS SHOWN ON THIS SHEET. THE PLATFORM SHALL BE SET ON A LEVEL SURFACE. THE PIPE SHALL BE FIRMLY SECURED TO THE PLATFORM AND SHALL BE MAINTAINED IN A PLUMB POSITION DURING THE PLACEMENT OF THE EMBANKMENT. THE PIPE SHALL BE MARKED AT INTERVALS TO FACILITATE MEASUREMENT OF THE DEPTH OF FILL. THE CONTRACTOR SHALL STOP WORK IN ANY LOCATION WHERE THE SETTLEMENT PLATFORM HAS BEEN DISTURBED OR DAMAGED. PLATFORMS OR PIPES DAMAGED OR DISPLACED DURING CONSTRUCTION SHALL BE RESTORED TO THEIR PROPER CONDITION AT THE CONTRACTOR'S EXPENSE.

SETTLEMENT PLATFORMS SHALL BE PLACED AT THE FOLLOWING LOCATIONS:

I.D.	STATION	OFFSET
SP1	135+40	75' RT.
SP2	135+60	10' RT

PRIOR TO PAVING, THE TOP OF THE SETTLEMENT PLATFORM PIPE SHALL BE CUT OFF TWO FEET BELOW THE FINISHED SURFACE OF THE SUBGRADE OR FINISHED GROUND SURFACE, WHICHEVER IS APPLICABLE.

REFER TO ODOT GEOTECHNICAL BULLETIN GB4 "GUIDELINES FOR THE USE OF GEOTECHNICAL INSTRUMENTATION" FOR ADDITIONAL INSTALLATION AND MONITORING INSTRUCTION.

WAITING PERIOD CRITERIA:
THE ENGINEER WILL CONSIDER THE WAITING PERIOD COMPLETE WHEN CONSECUTIVE SETTLEMENT READINGS, RECORDED AFTER EMBANKMENT CONSTRUCTION IS COMPLETE AND AT LEAST ONE WEEK (168 HOURS) APART, RESULT IN ELEVATION DIFFERENCES EQUAL TO OR LESS THAN ⅛ INCH. THE MINIMUM WAITING PERIOD IS 90 CALENDAR DAYS.

IF SETTLEMENT RATES EXCEED ¼ INCH PER MONTH AFTER EMBANKMENT CONSTRUCTION HAS BEEN COMPLETE FOR 45 CALENDAR DAYS, REMAINING CONSTRUCTION, INCLUDING ANY NECCESARY CORRECTIVE MEASURES, MAY PROCEED ONLY AT THE DIRECTION OF THE ENGINEER.

THE DEPARTMENT WILL CONSIDER VIBRATING WIRE SETTLEMENT MONITORING PLATFORMS IN LIEU OF THE CONVENTIONAL SETTLEMENT PLATFORMS. THE CONTRACTOR SHOULD PROVIDE DETAILS OF THE PROPOSED VIBRATING WIRE SETTLEMENT PLATFORMS AS WELL AS DESIGN DRAWINGS OF THE PROPOSED 30 DAYS PRIOR TO CONSTRUCTION. THE DEPARTMENT WILL REQUIRE 10 WORKING DAYS FOR REVIEW AND APPROVAL. THE DESIGN DRAWINGS SHOULD ILLUSTRATE THE LOCATIONS WITH ALL EXISTING AND PROPOSED SITE FEATURES TO VERIFY THE PROPOSED CABLING WILL NOT CONFLICT WITH EXISTING FACILITIES, PROPOSED FACILITIES OR UTILITIES. NO ADDITIONAL PAYMENT WILL BE PROVIDED IF THE CONTRACTOR ELECTS TO UTILIZE VIBRATING WIRE SETTLEMENT PLATFORMS.

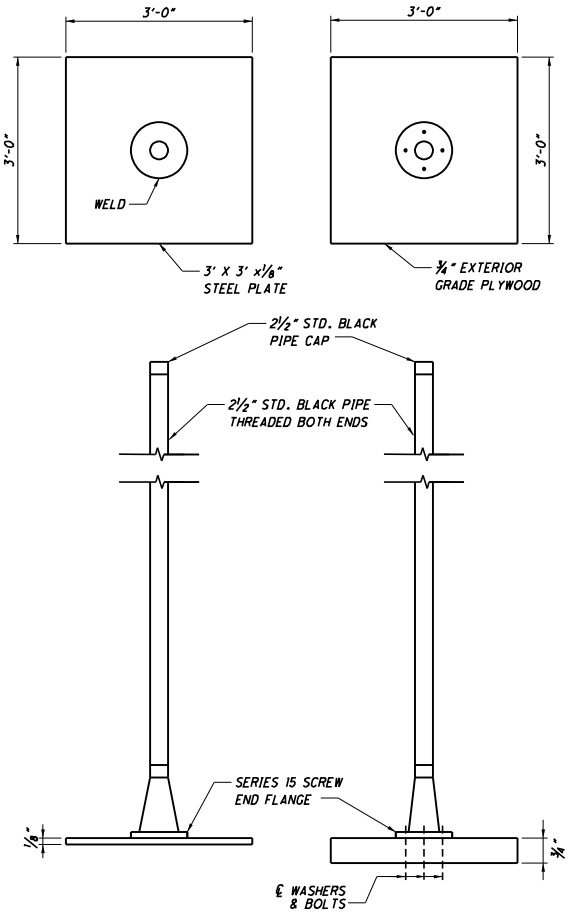
MORE INFORMATION PERTAINING TO EMBANKMENT CONSTRUCTION AND CONTROLLED RATES OF FILL ARE PROVIDED IN THE ROADWAY PLANS.

METHOD OF MEASUREMENT, THE NUMBER OF SETTLEMENT PLATFORMS TO BE PAID FOR SHALL BE THE ACTUAL NUMBER OF SETTLEMENT PLATFORMS COMPLETED, MAINTAINED, AND ACCEPTED BY THE ENGINEER.

BASIS OF PAYMENT: PAYMENT SHALL BE MADE AT THE CONTRACT UNIT PRICE EACH FOR "ITEM SPECIAL - SETTLEMENT PLATFORM" WHICH IS COMPENSATION FOR CONSTRUCTING, MAINTAINING, AND MONITORING THE SETTLEMENT PLATFORMS INCLUDING FURNISHING ALL LABOR, EQUIPMENT, MATERIALS, AND INCIDENTALS NECESSARY TO COMPLETE THE WORK. PAYMENT SHALL NOT BE MADE FOR SETTLEMENT PLATFORMS WHICH BECOME USELESS DUE TO DAMAGE CAUSED BY THE CONTRACTOR'S OPERATIONS. SEE DETAIL THIS SHEET.

ABBREVIATIONS

APPROX.	- APPROXIMATELY
BRG.	- BEARING
℄	- CENTERLINE
CLR.	- CLEAR
CONST.	- CONSTRUCTION
DWG.	- DRAWING
EF	- EACH FACE
EL.	- ELEVATION
EQ.	- EQUAL
EXIST.	- EXISTING
F.A.	- FORWARD ABUTMENT
℄	- FLOW LINE
H.W.	- HIGH WATER
NO.	- NUMBER
OHW	- ORDINARY HIGH WATER MARK
R.A.	- REAR ABUTMENT
SP	- SETTLEMENT PLATFORM
SPA.	- SPACE
STA.	- STATION
STD.	- STANDARD
T/	- TOP OF
TYP.	- TYPICAL
YR.	- YEAR



SETTLEMENT PLATFORM

(NOT TO SCALE)

NOTES:

1. SETTLEMENT PLATFORMS SHALL BE ANCHORED BY STAKES DRIVEN AT EACH CORNER TO PREVENT OVERTURNING.

DESIGN AGENCY: Stantec, 1500 Lake Shore Dr., Columbus, OH 43204, (614) 486-4383

DESIGNED BSM | DRAWN JWS | REVIEWED MRS | DATE 11/3/2017

CHECKED EER | REVISED | STRUCTURE FILE NUMBER 4400070

GENERAL NOTES 2

BRIDGE NO. LAW-7-0251

S.R. 7 OVER SYMMES CREEK

LAW-7-2.17

PID No. 75923

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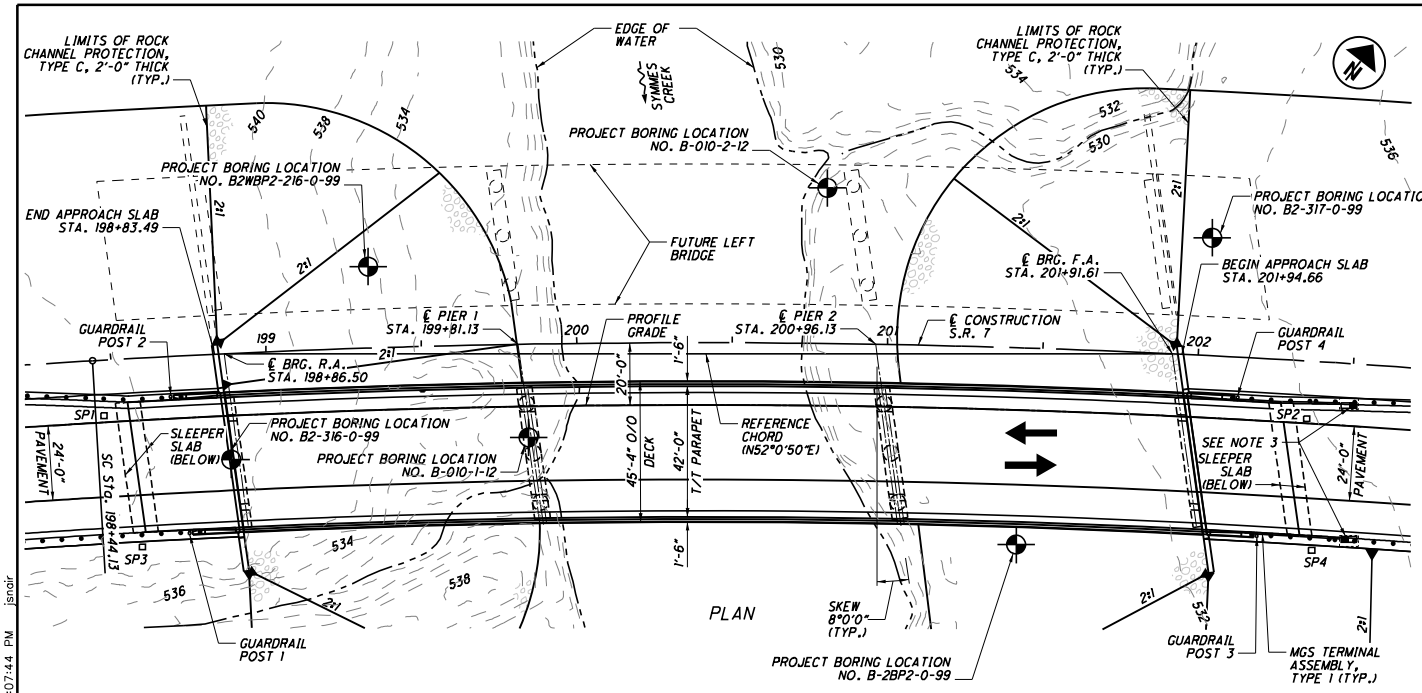

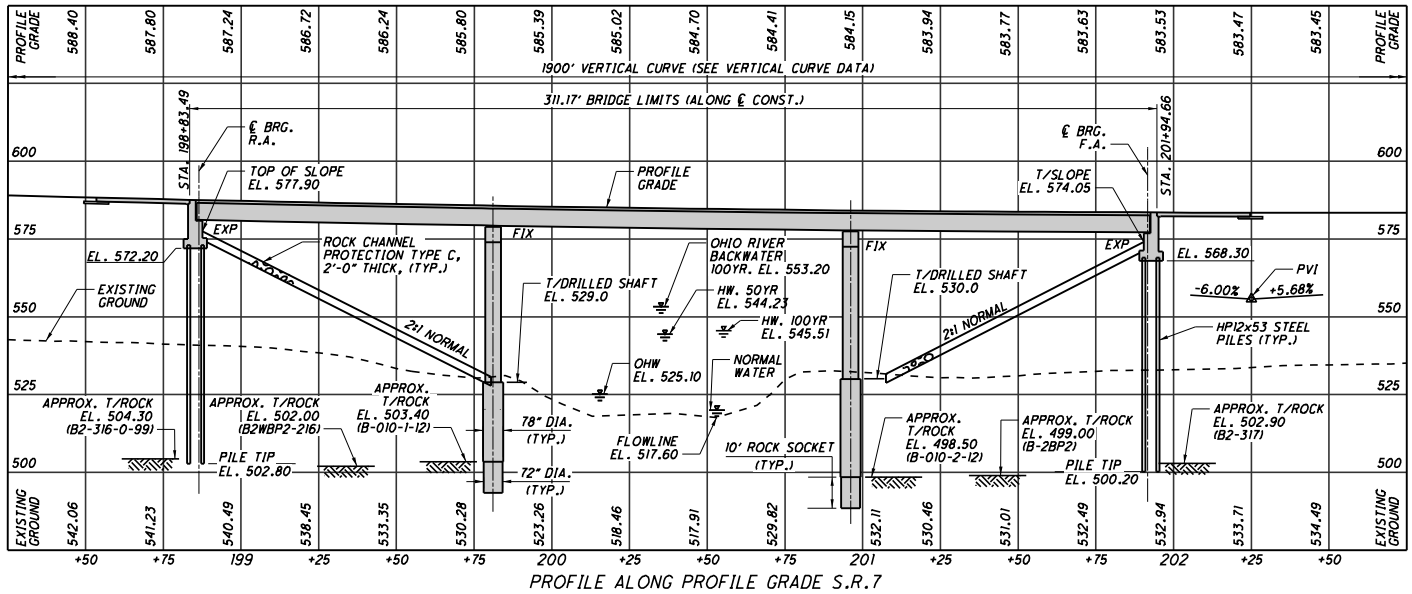

PROFILE ALONG PROFILE GRADE S.R.7

NOTES

1. EARTHWORK LIMITS SHOWN ARE APPROXIMATE. ACTUAL SLOPES SHALL CONFORM TO PLAN CROSS SECTIONS.
2. FOR PRIMARY PROJECT CONTROL INFORMATION TABLE SEE ROADWAY GENERAL NOTES.
3. BRIDGE DECK DRAINAGE IS CONTROLLED BY 1 BRIDGE SCUPPER, (SEE ITEM 518 NOTE ON SHEET 3/25) AND DIRECTED BY ROADWAY CURBS EXTENDING OFF THE EAST END OF THE BRIDGE TO ROADWAY CATCH BASINS.

DESIGN TRAFFIC:
2015 ADT = 10,300 2015 ADTT = 1,133
2035 ADT = 21,400 2035 ADTT = 2,354
DIRECTIONAL DISTRIBUTION = 69/31

LEGEND

PROJECT BORING LOCATION ◻ SETTLEMENT PLATFORM

HYDRAULIC DATA

DRAINAGE AREA = 350.3 SQ. MILES
Q (50) = 17,000 CFS V (50) = 6.46 FT/S DESIGN YEAR
Q (100) = 19,100 CFS V (100) = 6.67 FT/S
STRUCTURE CLEARS THE 50 YEAR DESIGN HW BY 31.22 FEET.

ESTIMATED PILE LENGTHS

REAR ABUTMENT HP12x53 = 75 FT
FORWARD ABUTMENT HP12x53 = 70 FT

ADDITIONAL PROJECT BORING LOCATIONS		
BORING NUMBER	STATION	OFFSET
B-010-0-11	197+89.00	183' LEFT
B-011-0-11	202+02.00	232' LEFT
B-012-0-11	201+90.00	197' RIGHT

S.R. 7 CURVE NO. 3 DATA		
P.I. STA. 205+33.31	L = 1,347.14'	Ts = 914.18'
Δ = 27° 30' 45" (RT)	E = 70.53'	LT = 150.01'
Dc = 1° 45' 00"	TS STA. = 196+19.13	ST = 75.01'
R = 3,274.04'	SC STA. = 198+44.13	e_{max} = 4.60%
T = 683.24'	θs = 1° 58' 07"	CS STA. 211+91.27
	Ls = 225.00'	ST STA. 214+16.27

POST NUMBER	FIRST POST GUARDRAIL	STATION
1	EASTBOUND R.A.	198+72.52
2	WESTBOUND R.A.	198+68.62
3	EASTBOUND F.A.	202+22.03
4	WESTBOUND F.A.	202+13.35

VERTICAL CURVE DATA

LENGTH = 1900'
PVC STA. = 192+75.00 PVC ELEV. = 612.74
PVI STA. = 202+25.00 PVI ELEV. = 555.74
PVT STA. = 211+75.00 PVT ELEV. = 609.67
G1 = -6.00% G2 = 5.68%

PROPOSED STRUCTURE

TYPE: 3-SPAN PRESTRESSED CONCRETE I-BEAM (66" MODIFIED TYPE 4) WITH COMPOSITE REINFORCED CONCRETE DECK SUPPORTED BY STUB TYPE ABUTMENTS ON STEEL PILES AND CAP & COLUMN PIERS ON DRILLED SHAFTS

SPANS: 93.92'-112.83'-93.92', c/c BRGS. (MEASURED ALONG REFERENCE CHORD)

ROADWAY: 42'-0" TOE/TOE PARAPETS

LOADING: HL-93 AND 60 PSF FUTURE WEARING SURFACE

WEARING SURFACE: 1" MONOLITHIC WEARING SURFACE

SKEW: 8°00'00" R.F. FROM PERP. TO REFERENCE CHORD

APPROACH SLABS: AS-1-15, 30'-0" LONG (MODIFIED)

ALIGNMENT: 01°45'00" CURVE RT.

SUPERELEVATION: 0.0460 FT/FT

COORDINATES: LATITUDE 38°26'53.65" N
LONGITUDE 82°26'05.44" W

DESIGN AGENCY: Stantec, 1500 Lake Shore Dr., Columbus, OH 43204, (614) 486-4383
DATE: 12/15/17
REVIEWED: MRS
DRAWN: JWS
DESIGNED: BSM
CHECKED: EER
REVISED
STRUCTURE FILE NUMBER: 4400224

LAWRENCE COUNTY
STA. 198+83.49
STA. 201+94.66

SITE PLAN
BRIDGE NO. LAW-7-0376
S.R. 7 OVER SYMMES CREEK

LAW-7-2.17
PID No. 75923

1 / 25

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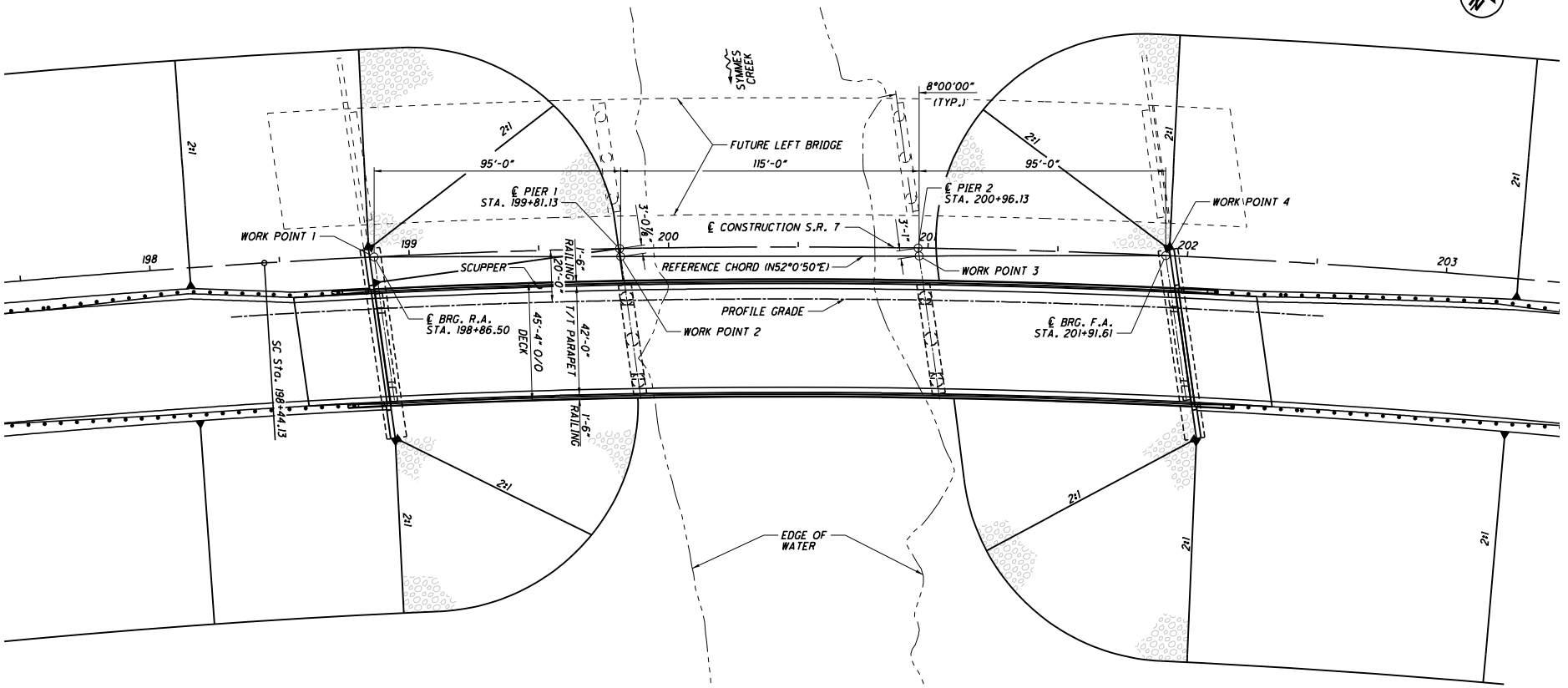

PLAN

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DESIGN AGENCY: Stantec, 1500 Lake Shore Dr., Columbus, OH 43204, (614) 486-4383

DESIGNED	DRAWN	REVIEWED	DATE:
BSM	JWS	MRS	12/15/17
CHECKED	REVISED	STRUCTURE FILE NUMBER	
EER		4400224	

GENERAL PLAN
BRIDGE NO. LAW-7-0376
S.R. 7 OVER SYMMES CREEK

LAW-7-2.17
PID No. 75923

2 / 25

REFER TO THE FOLLOWING STANDARD BRIDGE DRAWINGS:

AS-1-15	REVISED	07-17-15
AS-2-15	REVISED	01-18-19
EXJ-6-17	DATED	01-15-21
GSD-1-96	REVISED	01-15-21
PSID-1-13	REVISED	01-15-21
SBR-1-20	REVISED	07-17-21

AND TO THE FOLLOWING SUPPLEMENTAL SPECIFICATIONS:

800	DATED	07-16-21
832	DATED	10-19-18

DESIGN SPECIFICATIONS:
THIS STRUCTURE CONFORMS TO THE "LRFD BRIDGE DESIGN SPECIFICATIONS" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 2014 INCLUDING THE 2015 AND 2016 INTERIM SPECIFICATIONS AND THE ODOT BRIDGE DESIGN MANUAL, 2007.

DESIGN LOADING:
HL-93
FUTURE WEARING SURFACE (FWS) OF 0.060 KIPS/FT²

OPERATIONAL IMPORTANCE:
A LOAD MODIFIER OF 1.00 HAS BEEN ASSUMED FOR THE DESIGN OF THIS STRUCTURE IN ACCORDANCE WITH THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, ARTICLE 1.3.5 AND THE ODOT BRIDGE DESIGN MANUAL, 2007.

DESIGN DATA:
CONCRETE CLASS QC2 - COMPRESSIVE STRENGTH 4.5 K.S.I. (SUPERSTRUCTURE)
CONCRETE CLASS QC1 - COMPRESSIVE STRENGTH 4.0 K.S.I. (SUBSTRUCTURE)
CONCRETE CLASS QC5 - WITH 1-IN MAX. AGGREGATE SIZE - COMPRESSIVE STRENGTH 4.5 KSI (DRILLED SHAFT)

REINFORCING STEEL - MINIMUM YIELD STRENGTH 60 K.S.I.

STEEL H-PILES - A572 - YIELD STRENGTH 50 K.S.I.

CONCRETE FOR PRESTRESSED BEAMS:
COMPRESSIVE STRENGTH (FINAL) = 7000 P.S.I.
COMPRESSIVE STRENGTH (RELEASE) = 6000 P.S.I.

PRESTRESSING STRAND:
AREA = 0.217 SQ. IN.
ULTIMATE STRENGTH = 270 K.S.I.
INITIAL STRESS = 202.5 K.S.I.
(LOW RELAXATION STRANDS)

WELDED WIRE FABRIC
YIELD STRENGTH - 70 K.S.I.

DECK PROTECTION METHOD:
2-1/2" CONCRETE COVER
EPOXY COATED REINFORCING STEEL

MONOLITHIC WEARING SURFACE:
MONOLITHIC WEARING SURFACE IS ASSUMED, FOR DESIGN PURPOSES, TO BE 1 INCH THICK.

NOISE BARRIER:
DUE TO THE POTENTIAL FUTURE CONSTRUCTION OF A 12 FOOT TALL NOISE BARRIER ALONG THE RIGHT SIDE OF THE BRIDGE THE PRECAST CONCRETE BEAMS AND CONCRETE DECK HAVE BOTH BEEN DESIGNED TO INCLUDE THE VERTICAL AND LATERAL LOAD CONTRIBUTION DUE TO THE NOISE BARRIER. THE ESTIMATED VERTICAL DEAD LOAD WAS SET AS 167 POUNDS PER FOOT. THE CENTER OF GRAVITY FOR THE NOISE BARRIER WAS SET AT 11 INCHES FROM THE BACK EDGE OF THE STANDARD ODOT SINGLE SLOPE BRIDGE RAILING. LATERAL LOADING ASSUMED, WIND LOAD EQUAL TO 30 POUNDS PER SQUARE FOOT OR A VEHICULAR COLLISION FORCE PER AASHTO SECTION 15.8.4.

THE SINGLE SLOPE BRIDGE RAILING SHOWN IN THE PLANS HAS NOT BEEN MODIFIED FROM THE ODOT STANDARD DRAWINGS AND IS NOT DESIGNED TO SUPPORT THE ABOVE DESCRIBED NOISE BARRIER. IF THE NOISE BARRIER IS CONSTRUCTED IN THE FUTURE THE BRIDGE RAILING WILL NEED TO BE REMOVED AND REPLACED WITH A RAILING THAT IS DESIGNED TO SUPPORT A NOISE BARRIER AND PROPERLY TRANSFER ALL LOADS TO THE EXISTING CONCRETE BRIDGE DECK.

PILE DRIVING CONSTRAINTS:
PRIOR TO DRIVING PILES, CONSTRUCT THE SPILL THROUGH SLOPES AND THE BRIDGE APPROACH EMBANKMENT BEHIND THE ABUTMENTS UP TO THE LEVEL OF THE SUBGRADE ELEVATION FOR A MINIMUM DISTANCE OF 200 FEET BEHIND EACH ABUTMENT (SEE FORWARD AND REAR APPROACH EMBANKMENT CONSTRUCTION THIS SHEET). DO NOT BEGIN THE EXCAVATION FOR THE ABUTMENT FOOTINGS AND THE INSTALLATION OF THE ABUTMENT PILES UNTIL AFTER THE ABOVE REQUIRED EMBANKMENT HAS BEEN CONSTRUCTED.

THE APPROACH EMBANKMENT SHALL BE CONSTRUCTED AND THEN UNDERGO A WAITING PERIOD OF 163 DAYS PRIOR TO DRIVING PILES.

PILES TO BEDROCK:
DRIVE PILES TO REFUSAL ON BEDROCK. THE DEPARTMENT WILL CONSIDER REFUSAL TO BE OBTAINED WHEN THE PILE PENETRATION IS AN INCH OR LESS AFTER RECEIVING AT LEAST 20 BLOWS FROM THE PILE HAMMER. SELECT THE HAMMER SIZE TO ACHIEVE THE REQUIRED DEPTH TO BEDROCK AND REFUSAL.

THE TOTAL FACTORED LOAD IS 188 KIPS PER PILE FOR THE REAR ABUTMENT PILES.

THE TOTAL FACTORED LOAD IS 185 KIPS PER PILE FOR THE FORWARD ABUTMENT PILES.

ABUTMENT PILES:
HP12x53 PILES 80 FEET LONG, ORDER LENGTH, REAR ABUTMENT
HP12x53 PILES 75 FEET LONG, ORDER LENGTH, FORWARD ABUTMENT

PILE SPLICES:
IN LIEU OF USING THE FULL PENETRATION BUTT WELDS SPECIFIED IN CMS 507.09 TO SPLICE STEEL H-PILES, THE CONTRACTOR MAY USE A MANUFACTURED H-PILE SPLICER. FURNISH SPLICERS FROM THE FOLLOWING MANUFACTURER:

ASSOCIATED PILE AND FITTING CORPORATION
8 WOOD HOLLOW RD. PLAZA 1
PARSIPPANY, NEW JERSEY 07054

INSTALL AND WELD THE SPLICER TO THE PILE SECTIONS IN ACCORDANCE WIHT THE MANUFACTURER'S WRITTEN ASSEMBLY PROCEDURE SUPPLIED TO THE ENGINEER BEFORE THE WELDING IS PERFORMED.

DRILLED SHAFTS:
PIER 1
THE MAXIMUM FACTORED LOAD TO BE SUPPORTED BY EACH DRILLED SHAFT IS 1610 KIPS AT THE PIERS. THIS LOAD IS RESISTED BY SIDE RESISTANCE WITHIN A PORTION OF THE BEDROCK SOCKET AND ALSO BY TIP RESISTANCE. THE FACTORED RESISTANCE DEVELOPED BY SIDE RESISTANCE IS 680.1 KIPS, ASSUMED TO ACT ALONG THE BOTTOM 8 FEET OF THE BEDROCK SOCKET FOR THE PIERS. THE FACTORED RESISTANCE PROVIDED BY THE DRILLED SHAFT TIP IS 929.9 KIPS.

PIER 2
THE MAXIMUM FACTORED LOAD TO BE SUPPORTED BY EACH DRILLED SHAFT IS 1612 KIPS AT THE PIERS. THIS LOAD IS RESISTED BY SIDE RESISTANCE WITHIN A PORTION OF THE BEDROCK SOCKET AND ALSO BY TIP RESISTANCE. THE FACTORED RESISTANCE DEVELOPED BY SIDE RESISTANCE IS 680.1 KIPS, ASSUMED TO ACT ALONG THE BOTTOM 8 FEET OF THE BEDROCK SOCKET FOR THE PIERS. THE FACTORED RESISTANCE PROVIDED BY THE DRILLED SHAFT TIP IS 931.9 KIPS.

ITEM 509 - EPOXY COATED REINFORCING STEEL, AS PER PLAN:
IN ADDITION TO THE PROVISIONS OF ITEM 509, FIELD BEND AND/OR FIELD CUT THE REINFORCING STEEL DESIGNATED IN THE PLANS, AS NECESSARY, IN ORDER TO MAINTAIN THE REQUIRED CLEARANCES AND BAR SPACINGS. REPAIR ALL DAMAGE TO THE EPOXY COATING, AS A RESULT OF THIS WORK, ACCORDING TO 709.00.

ITEM 518 - SCUPPERS, INCLUDING SUPPORTS, AS PER PLAN:
REFER TO SHEET 18/25 FOR SCUPPER LOCATION AND SHEET 19/25 FOR DETAILS AND NOTES.

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

AN EIGHT WHEEL FINISHING MACHINE WITH A MAXIMUM WHEEL LOAD OF 2.32 KIPS.

A MINIMUM OUT-TO-OUT WHEEL SPACING AT EACH END OF THE MACHINE OF 103".

A MAXIMUM SPACING OF OVERHANG FALSEWORK BRACKETS OF 48 IN.

A MAXIMUM DISTANCE FROM THE CENTERLINE OF THE FASCIA GIRDER TO THE FACE OF THE SAFETY HANDRAIL OF 65".

FORWARD AND REAR APPROACH EMBANKMENT CONSTRUCTION:
THE APPROACH EMBANKMENTS SHALL BE CONSTRUCTED AND THEN UNDERGO A WAITING PERIOD OF 90 DAYS PRIOR TO DRIVING PILES.

APPROACH EMBANKMENTS SHALL BE REINFORCED WITH PRIMARY INTERNAL REINFORCEMENT FOR STABILIZATION. SEE ROADWAY AND SLOPE REINFORCEMENT PLANS FOR DETAILS AND NOTES REGARDING EMBANKMENT CONSTRUCTION.

MSE (MECHANICALLY STABILIZED EARTH) WALLS SHALL NOT BE PROPOSED AS AN ALTERNATIVE DESIGN IN ANY VALUE ENGINEERING STUDY DUE TO GEOTECHNICAL CONCERNS.

THE CONTRACTOR SHALL REVIEW THE BORING LOGS, SUBSURFACE INVESTIGATION, AND THE ROADWAY GENERAL NOTES PRIOR TO COMMENCING WORK ON THE BRIDGE.

IN ORDER TO MINIMIZE SIGNIFICANT DAMAGE TO THE FILL EMBANKMENT REINFORCEMENT DURING THE DRIVING OF ABUTMENT PILES H-PILES, A SINGLE-SHEET "PUNCHED" TYPE REINFORCEMENT SHALL BE USED. THIS TYPE OF REINFORCEMENT WILL BE EASILY PENETRATED WITH A DRIVEN PILE, WHEREAS A WELDED TYPE REINFORCEMENT WILL BE SIGNIFICANTLY DAMAGED DURING PILE DRIVING.

THE CONTRACTOR SHALL SUBMIT PILE DRIVING HAMMER SPECIFICATIONS TO THE GEOTECHNICAL ENGINEER OF RECORD, PRIOR TO PILE INSTALLATION FOR THE ENGINEER'S APPROVAL. IN ACCORDANCE WITH ODOT ITEM 507, THE PILE HAMMER SHALL BE OF ADEQUATE SIZE TO DRIVE THE PILES THROUGH THE INTERNALLY REINFORCED COMPACTED EMBANKMENT AND AT THE SAME TIME NOT TO DAMAGE THE PILES DURING DRIVING OR RETAPPING.

THE MATERIAL THAT WILL BE USED FOR EMBANKMENT FILL CONSTRUCTION WILL BE COMPOSED OF THE SOIL AND ROCK REMOVED FROM THE LARGE CUT SECTIONS. BASED ON THE BORINGS PERFORMED IN THE PROPOSED CUT AREAS, THIS MATERIAL WILL CONSIST PRIMARILY OF NON-DURABLE SHALE, AND TO A MUCH LESSER EXTENT, DURABLE SHALE, SANDSTONE AND SILTSTONE. WHERE PILES ARE TO BE DRIVEN THROUGH THE EMBANKMENT, THE EMBANKMENT FILL MATERIAL SHALL BE CLEAN OF DURABLE ROCK THAT MAY IMPEDE PILE DRIVING. THE EMBANKMENT FILL MATERIAL SHALL BE COMPACTED IN ACCORDANCE WITH ODOT ITEM 203. THE USE OF WATER TO AID IN BREAKING DOWN LARGE PARTICLES FOR NON-DURABLE SHALE WILL BE REQUIRED AS PER ODOT ITEM 203.06 B.

DESIGN AGENCY
Stantec
1500 Lake Shore Dr.
Columbus, OH 43204
(614) 486-4383

DESIGNED BSM | DRAWN JWS | REVIEWED MRS | DATE: 12/15/17
CHECKED EER | REVISED | STRUCTURE FILE NUMBER 4400224

GENERAL NOTES 1
BRIDGE NO. LAW-7-0376
S.R. 7 OVER SYMMES CREEK

LAW-7-2.17
PID No. 75923

3 / 25

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ITEM SPECIAL - SETTLEMENT PLATFORM:

DESCRIPTION: THIS ITEM CONSISTS OF FURNISHING, CONSTRUCTING, AND MAINTAINING SETTLEMENT PLATFORMS AND OBTAINING SETTLEMENT READINGS AS REQUIRED BY THE PLANS OR AS DIRECTED BY THE ENGINEER. SEE SETTLEMENT PLATFORM DETAIL THIS SHEET. AT THE OPTION AND EXPENSE OF THE CONTRACTOR, ADDITIONAL SETTLEMENT PLATFORMS MAY BE INSTALLED AT LOCATIONS APPROVED BY THE ENGINEER. SETTLEMENT READINGS SHALL BE TAKEN WEEKLY BEGINNING WITH THE FIRST WEEK FOLLOWING PLACEMENT OF EACH PLATFORM AND DURING ANY SPECIFIED WAITING PERIOD. READINGS SHALL BE TAKEN MONTHLY DURING ANY CONSOLIDATION OR OFF-SEASON TIMES. THE READINGS SHALL BE PLOTTED ON GRAPH PAPER PRESENTING DEFORMATION (ON THE NEGATIVE Y-AXIS) AND FILL HEIGHT (ON THE POSITIVE Y-AXIS) VERSUS TIME (ON THE X-AXIS). A COPY OF EACH CUMULATIVE PLOT SHALL BE SENT TO ODOT, CO, CONSTRUCTION MANAGEMENT/CONSTRUCTION ADMINISTRATION, GEOTECHNICAL AND EARTHWORK ENGINEER AND ODOT, CO, OFFICE OF GEOTECHNICAL ENGINEERING, FOUNDATIONS AND RETAINING WALLS ENGINEER, AFTER EACH SETTLEMENT READING IS RECORDED.

MATERIAL: SOUND LUMBER SUCH AS ¾" EXTERIOR GRADE PLYWOOD SHALL BE USED FOR THE BASE. THE PIPE SHALL BE 2½" STANDARD BLACK PIPE WITH THREADED FITTINGS AS SHOWN ON THE PLANS. A STEEL PLATE 36" X 36" X ⅛" MAY BE SUBSTITUTED FOR THE LUMBER FOR THE PLATFORMS, AT THE CONTRACTOR'S OPTION.

CONSTRUCTION METHODS: THE PLATFORM SHALL CONFORM TO THE SETTTLEMENT PLATFORM DETAILS SHOWN ON THIS SHEET. THE PLATFORM SHALL BE SET ON A LEVEL SURFACE. THE PIPE SHALL BE FIRMLY SECURED TO THE PLATFORM AND SHALL BE MAINTAINED IN A PLUMB POSITION DURING THE PLACEMENT OF THE EMBANKMENT. THE PIPE SHALL BE MARKED AT INTERVALS TO FACILITATE MEASUREMENT OF THE DEPTH OF FILL. THE CONTRACTOR SHALL STOP WORK IN ANY LOCATION WHERE THE SETTLEMENT PLATFORM HAS BEEN DISTURBED OR DAMAGED. PLATFORMS OR PIPES DAMAGED OR DISPLACED DURING CONSTRUCTION SHALL BE RESTORED TO THEIR PROPER CONDITION AT THE CONTRACTOR'S EXPENSE.

SETTLEMENT PLATFORMS SHALL BE PLACED AT THE FOLLOWING LOCATIONS:

I.D.	STATION	OFFSET
SP1	198+47	18' RT.
SP2	202+35	19' RT.
SP3	198+56	61' RT.
SP4	202+40	61' RT.

PRIOR TO PAVING, THE TOP OF THE SETTLEMENT PLATFORM PIPE SHALL BE CUT OFF TWO FEET BELOW THE FINISHED SURFACE OF THE SUBGRADE OR FINISHED GROUND SURFACE, WHICHEVER IS APPLICABLE.

REFER TO ODOT GEOTECHNICAL BULLETIN GB4 "GUIDELINES FOR THE USE OF GEOTECHNICAL INSTRUMENTATION" FOR ADDITIONAL INSTALLATION AND MONITORING INSTRUCTION.

WAITING PERIOD CRITERIA:
THE ENGINEER WILL CONSIDER THE WAITING PERIOD COMPLETE WHEN CONSECUTIVE SETTLEMENT READINGS, RECORDED AFTER EMBANKMENT CONSTRUCTION IS COMPLETE AND AT LEAST ONE WEEK (168 HOURS) APART, RESULT IN ELEVATION DIFFERENCES EQUAL TO OR LESS THAN ⅛ INCH. THE MINIMUM WAITING PERIOD IS 90 CALENDAR DAYS.

IF SETTLEMENT RATES EXCEED ¾ INCH PER MONTH AFTER EMBANKMENT CONSTRUCTION HAS BEEN COMPLETE FOR 45 CALENDAR DAY, REMAINING CONSTRUCTION, INCLUDING ANY NECCESARY CORRECTIVE MEASURES, MAY PROCEED ONLY AT THE DIRECTION OF THE ENGINEER.

THE DEPARTMENT WILL CONSIDER VIBRATING WIRE SETTLEMENT MONITORING PLATFORMS IN LIEU OF THE CONVENTIONAL SETTLEMENT PLATFORMS. THE CONTRACTOR SHOULD PROVIDE DETAILS OF THE PROPOSED VIBRATING WIRE SETTLEMENT PLATFORMS AS WELL AS DESIGN DRAWINGS OF THE PROPOSED 30 DAYS PRIOR TO CONSTRUCTION. THE DEPARTMENT WILL REQUIRE 10 WORKING DAYS FOR REVIEW AND APPROVAL. THE DESIGN DRAWINGS SHOULD ILLUSTRATE THE LOCATIONS WITH ALL EXISTING AND PROPOSED SITE FEATURES TO VERIFY THE PROPOSED CABLING WILL NOT CONFLICT WITH EXISITING FACILITIES, PROPOSED FACILITIES OR UTILITIES. NO ADDITIONAL PAYMENT WILL BE PROVIDED IF THE CONTRACTOR ELECTS TO UTILIZE VIBRATING WIRE SETTLEMENT PLATFORMS.

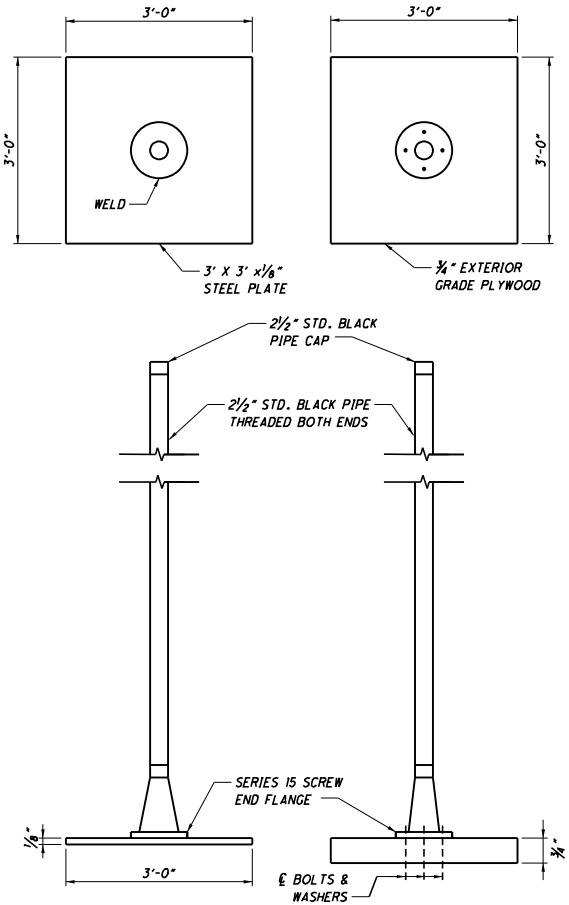
MORE INFORMATION PERTAINING TO EMBANKMENT CONSTRUCTION AND CONTROLLED RATES OF FILL ARE PROVIDED IN THE ROADWAY PLANS.

METHOD OF MEASUREMENT, THE NUMBER OF SETTLEMENT PLATFORMS TO BE PAID FOR SHALL BE THE ACTUAL NUMBER OF SETTLEMENT PLATFORMS COMPLETED, MAINTAINED, AND ACCEPTED BY THE ENGINEER.

BASIS OF PAYMENT: PAYMENT SHALL BE MADE AT THE CONTRACT UNIT PRICE EACH FOR "ITEM SPECIAL - SETTLEMENT PLATFORM" WHICH IS COMPENSATION FOR CONSTRUCTING, MAINTAINING, AND MONITORING THE SETTLEMENT PLATFORMS INCLUDING FURNISHING ALL LABOR, EQUIPMENT, MATERIALS, AND INCIDENTALS NECESSARY TO COMPLETE THE WORK. PAYMENT SHALL NOT BE MADE FOR SETTLEMENT PLATFORMS WHICH BECOME USELESS DUE TO DAMAGE CAUSED BY THE CONTRACTOR'S OPERATIONS. SEE DETAIL THIS SHEET.

ABBREVIATIONS:

℄	- CENTERLINE
ABUT.	- ABUTMENTS
BF	- BACK FACE
BOT.	- BOTTOM
BRG.	- BEARINGS
CIP	- CAST IN PLACE
CJ	- CONSTRUCTION JOINT
CONT.	- CONTINUED
EF	- EACH FACE
EQ.	- EQUAL
F.A.	- FORWARD ABUTMENT
FF	- FRONT FACE
GFRP	- GLASS FIBER REINFORCED POLYMER
LT	- LEFT
M.C.	- MECHANICAL CONNECTOR
NPCPP	- NON -PERFORATED CORRUGATED PLASTIC PIPE
PCPP	- PERFORATED CORRUGATED PLASTIC PIPE
R.A.	- REAR ABUTMENT
RCP	- ROCK CHANNEL PROTECTION
RT.	- RIGHT
SPA.	- STATION
SP	- SETTLEMENT PLATFORM
STA.	- STATION
STR	- STRAIGHT
T/	- TOP OF
T&B	- TOP AND BOTTOM
TYP.	- TYPICAL
U.N.O.	- UNLESS NOTED OTHERWISE



SETTLEMENT PLATFORM

(NOT TO SCALE)

NOTE:

1. SETTLEMENT PLATFORMS SHALL BE ANCHORED BY STAKES DRIVEN AT EACH CORNER TO PREVENT OVERTURNING.

GENERAL NOTES 2
BRIDGE NO. LAW-7-0376
S.R. 7 OVER SYMMES CREEK

LAW-7-2.17
PID No. 75923

4 / 25

DESIGN AGENCY: Stantec, 1500 Lake Shore Dr. Columbus, OH 43204, (614) 486-4383
DATE: 12/15/17
REVIEWED: MRS
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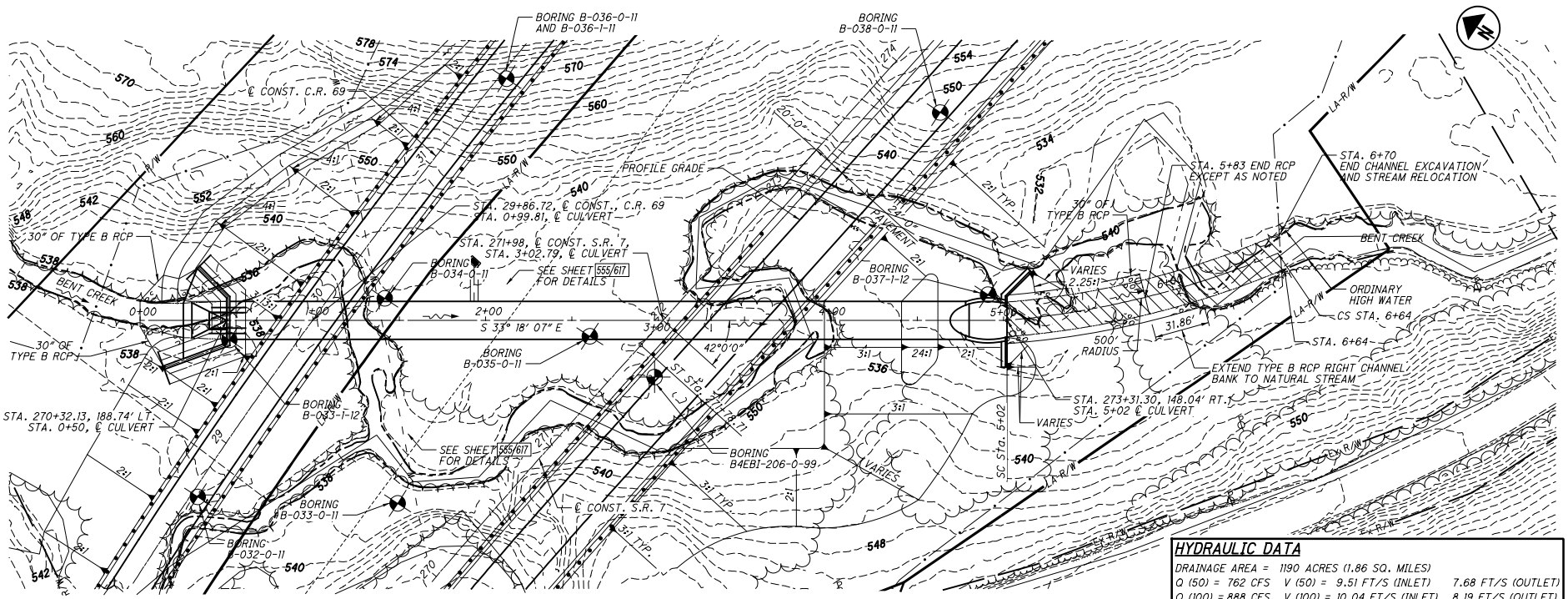
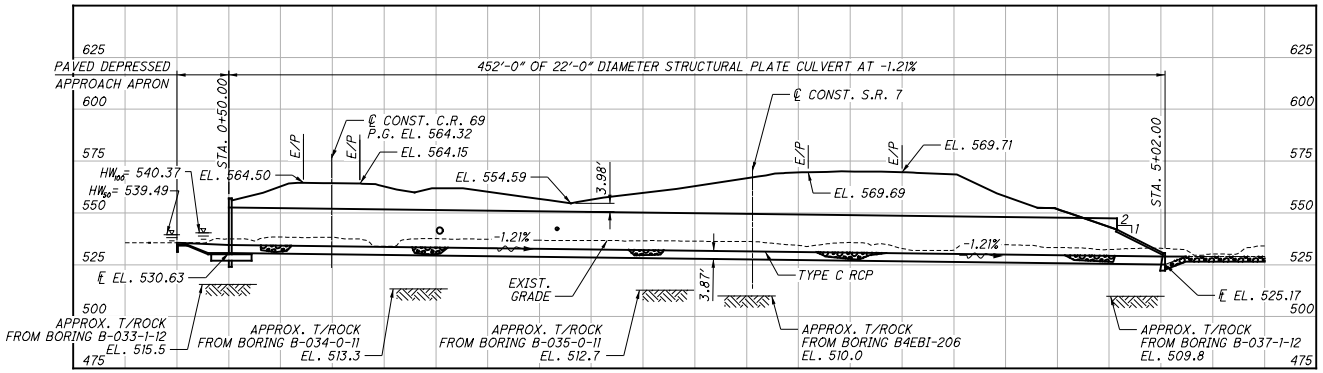


PLAN



PROFILE ALONG ℄ CULVERT

HYDRAULIC DATA

DRAINAGE AREA = 1190 ACRES (1.86 SQ. MILES)
Q (50) = 762 CFS V (50) = 9.51 FT/S (INLET) 7.68 FT/S (OUTLET)
Q (100) = 888 CFS V (100) = 10.04 FT/S (INLET) 8.19 FT/S (OUTLET)
ORDINARY HIGH WATER MARK= 532.7'
PH: 7.6
ABRASIVE: YES

NOTES

1. EARTHWORK LIMITS SHOWN ARE APPROXIMATE. ACTUAL SLOPES SHALL CONFORM TO PLAN CROSS SECTIONS.
2. SEE SHEET 6/8 FOR STREAM EXCAVATION DETAILS.

DESIGN TRAFFIC:
2015 ADT = 10,300 2015 ADTT = 1,133
2035 ADT = 21,400 2035 ADTT = 2,354
DIRECTIONAL DISTRIBUTION = 61/31

LEGEND

PROJECT BORING LOCATION
- CHANNEL EXCAVATION

PROPOSED STRUCTURE

TYPE: 22' DIA. STRUCUTRAL PLATE (MIN. 8 GAGE) PIPE CULVERT WITH REINFORCED CONCRETE HEADWALLS
SPANS: 22'-0"
ROADWAY: 42' EDGE TO EDGE OF SHOULDER
LOADING: HL-93 AND FWS (60 PSF)
SKEW: 42°0'0" RF
APPROACH SLABS: NONE
COORDINATES: LATITUDE 38°27'25.92"
LONGITUDE 82°24'49.82"

DESIGN AGENCY: Stantec, 1500 Lake Shore Dr., Columbus, OH 43204, (614) 486-4383
DESIGNED EDA | DRAWN JWS | REVIEWED EER | DATE: 3/8/18
CHECKED MRS | REVISED | STRUCTURE FILE NUMBER 4400348

SITE PLAN
LAW-7-0510
S.R. 7 OVER BENT CREEK

LAW-7-2.17
PID No. 75923

1/8

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ESTIMATED QUANTITIES

CALCULATED BY: EDA 3/7/2018
CHECKED BY: ALH 3/7/2018

ITEM	EXTENSION	TOTAL	UNIT	DESCRIPTION	GEN.	SEE SHEET
203	10000	589	CY	EXCAVATION		
503	21100	940	CY	UNCLASSIFIED EXCAVATION		
509	10000	97638	LB	EPOXY COATED REINFORCING STEEL		
511	46010	150	CY	CLASS QC1 CONCRETE, RETAINING/WINGWALL NOT INCLUDING FOOTING		
511	46510	219	CY	CLASS QC1 CONCRETE, FOOTING		
512	33000	16	SY	TYPE 2 WATERPROOFING		
512	10100	155	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)		
518	21200	84	CY	POROUS BACKFILL WITH GEOTEXTILE FABRIC		
518	40000	72	FT	6" PERFORATED CORRUGATED PLASTIC PIPE		
518	40010	30	FT	6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS		
601	11001	108	SY	RIPRAP, TYPE D, AS PER PLAN		
601	32104	290	CY	ROCK CHANNEL PROTECTION, TYPE B WITH GEOTEXTILE FABRIC		
601	34200	820	CY	ROCK CHANNEL PROTECTION, TYPE C WITHOUT FILTER		
611	97400	452	FT	CONDUIT, MISC.: 22' DIA., TYPE A, 707.03, AS PER PLAN		

GENERAL NOTES

DESIGN SPECIFICATIONS:
THIS STRUCTURE CONFORMS TO THE "LRFD BRIDGE DESIGN SPECIFICATIONS" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 2014, INCLUDING 2015 AND 2016 INTERIM SPECIFICATIONS AND THE ODOT BRIDGE DESIGN MANUAL, 2007.

OPERATIONAL IMPORTANCE:
A LOAD MODIFIER OF 1.0 HAS BEEN ASSUMED FOR THE DESIGN OF THIS STRUCTURE IN ACCORDANCE WITH THE AASHTO LRFD BRIDGE DESING SPECIFICATIONS, ARTICLE 1.3.5 AND THE ODOT BRIDGE DESIGN MANUAL, 2007.

DESIGN DATA:
CONCRETE CLASS QC1 - COMPRESSIVE STRENGTH 4.0 K.S.I.
(SUBSTRUCTURE)

REINFORCING STEEL - MINIMUM YIELD STRENGTH 60 K.S.I.

DESIGN LOADING:
HL-93
FUTURE WEARING SURFACE (FWS) OF 0.060 KIPS/FT²

FOUNDATION BEARING RESISTANCE:
HEADWALL FOOTINGS, AS DESIGNED, PRODUCE A MAXIMUM SERVICE LOAD PRESSURE OF 3.021 KIPS PER SQUARE FOOT AND A MAXIMUM STRENGTH LOAD PRESSURE OF 4.256 KIPS PER SQUARE FOOT. THE BEARING RESISTANCE IS 3.025 KIPS PER SQUARE FOOT FOR SERVICE AND 5.5 KIPS PER SQUARE FOOT FOR STRENGTH.

ITEM 511 CLASS QC1 CONC. MISC. PAVED INLET:
THE ITEM INCLUDES ALL MATERIAL, LABOR, AND ACCESSORIES NECESSARY TO FURNISH AND PLACE THE PAVED CONCRETE INLET AND CUTOFF WALLS.
ITEM 601 RIPRAP, TYPE D, AS PER PLAN:
CONSTRUCT A RIPRAP CUTOFF WALL AS DETAILED ON SHEET 4/7 .

ITEM 611 22'-0" CONDUIT, TYPE A, AS PER PLAN:
WORK SHALL CONFORM TO ITEM 611 PIPE CULVERTS, SEWERS, DRAINS, AND DRAINAGE STRUCTURES. STEEL STRUCTURAL PLATE (707.03) WITH MINIMUM 8 GA. THICKNESS PER ODOT DURABILITY DESIGN SPREAD SHEET, THE PAVED INVERT SPECIFIED BY THE DURABILITY DESIGN SPREADSHEET SHALL BE OMITTED AS THE CULVERT INVERT IS FILLED WITH TYPE C ROCK CHANNEL PROTECTION.

ANCHOR BOLTS FOR ANCHORING BOTH ENDS OF THE METAL PIPE, MEETING ASTM A307 AND GALVANIZED ACCORDING TO ASTM A153, SHALL BE INCLUDED IN THE PRICE BID PER FOOT OF ITEM 611 22'-0" CONDUIT, TYPE A, 707.03, AS PER PLAN.

ABBREVIATIONS:

APPROX. - APPROXIMATELY
ABUT. - ABUTMENTS
BF - BACK FACE
B/ - BOTTOM OF
BRG. - BEARINGS
℄ - CENTERLINE
CJ - CONSTRUCTION JOINT
CLR. - CLEAR
CONC. - CONCRETE
CONST. - CONSTRUCTION
CONT. - CONTINUED
DIA. - DIAMETER
DWG. - DRAWING
EF - EACH FACE
EL. - ELEVATION
EQ. - EQUAL
EXIST. - EXISTING
℄ - FLOW LINE
FF - FRONT FACE
GFRP - GLASS FIBER REINFORCED POLYMER
H.W. - HIGH WATER
LT - LEFT
MAX. - MAXIMUM
M.C. - MECHANICAL CONNECTOR
MISC. - MISCELLANEOUS
NO. - NUMBER
NPCPP - NON-PERFORATED CORRUGATED PLASTIC PIPE
OHWM - ORDINARY HIGH WATER MARK
PCPP - PERFORATED CORRUGATED PLASTIC PIPE
RCP - ROCK CHANNEL PROTECTION
RT. - RIGHT
SPA. - SPACE
SP - SETTLEMENT PLATFORM
STA. - STATION
STD. - STANDARD
STR - STRAIGHT
T/ - TOP OF
T&B - TOP AND BOTTOM
TYP. - TYPICAL
U.N.O. - UNLESS NOTED OTHERWISE
YR. - YEAR

DESIGN AGENCY: Stantec, 1500 Lake Shore Dr., Columbus, OH 43204, (614) 486-4383

DESIGNED	DRAWN	REVIEWED	DATE
EDA	JWS	EER	3/8/18
CHECKED	REVISED	STRUCTURE FILE NUMBER	
MRS		4400348	

GENERAL NOTES & ESTIMATED QUANTITIES
LAW-7-0510
S.R. 7 OVER BENT CREEK

LAW-7-2.17
PID No. 75923

2 / 8

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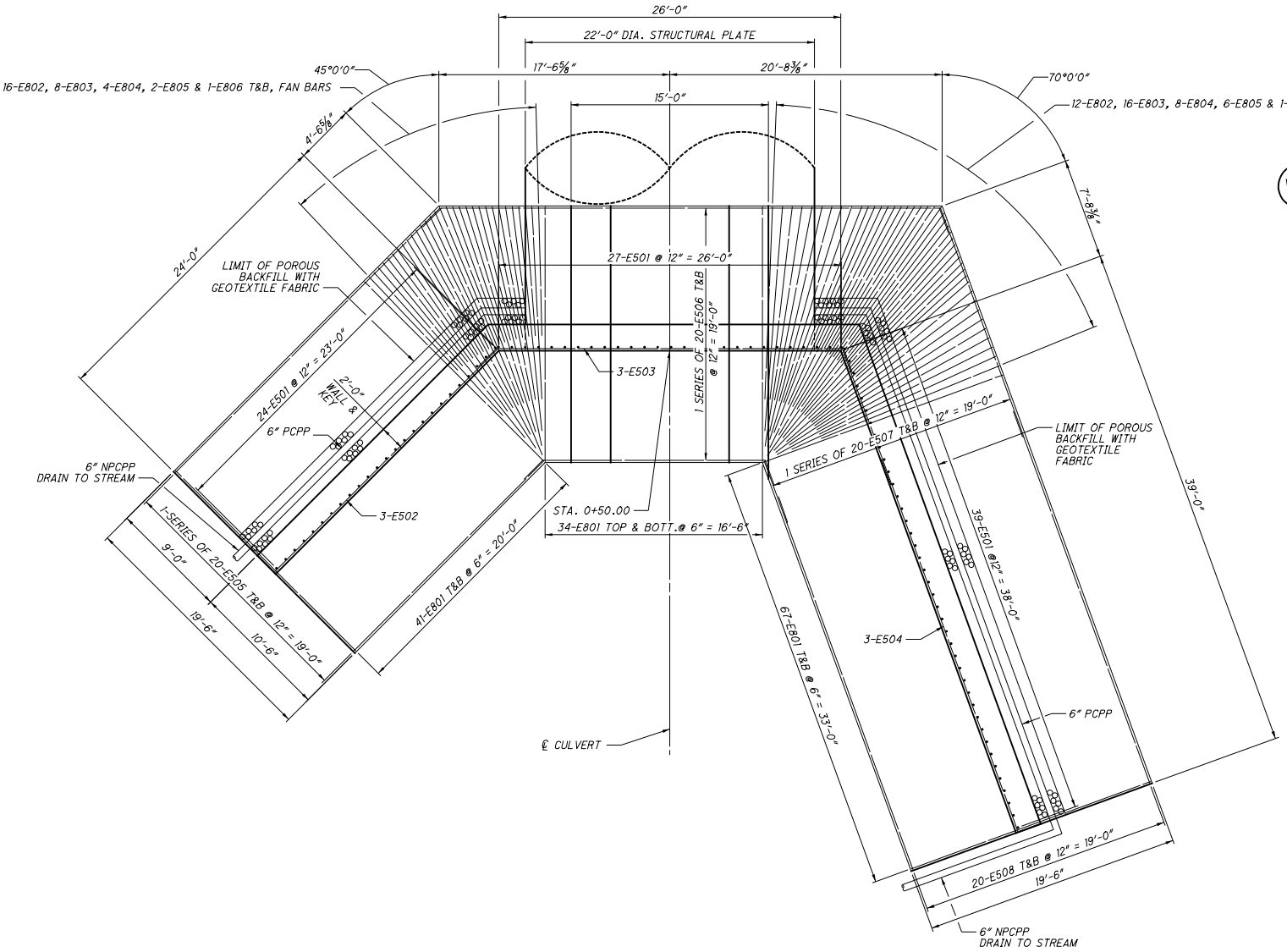

INLET FOOTING PLAN

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

NOTE:
FOR WALL REINFORCING, SEE SHEET 4/8 .

DESIGN AGENCY
Stantec
1500 Lake Shore Dr.
Columbus, OH 43204
(614) 486-4383

DESIGNED	DRAWN	REVIEWED	DATE
EDA	JWS	EER	3/8/18
CHECKED	REVISED	STRUCTURE FILE NUMBER	
MRS		4400348	

INLET FOOTING PLAN
LAW-7-0510
S.R. 7 OVER BENT CREEK

LAW-7-2.17
PID No. 75923

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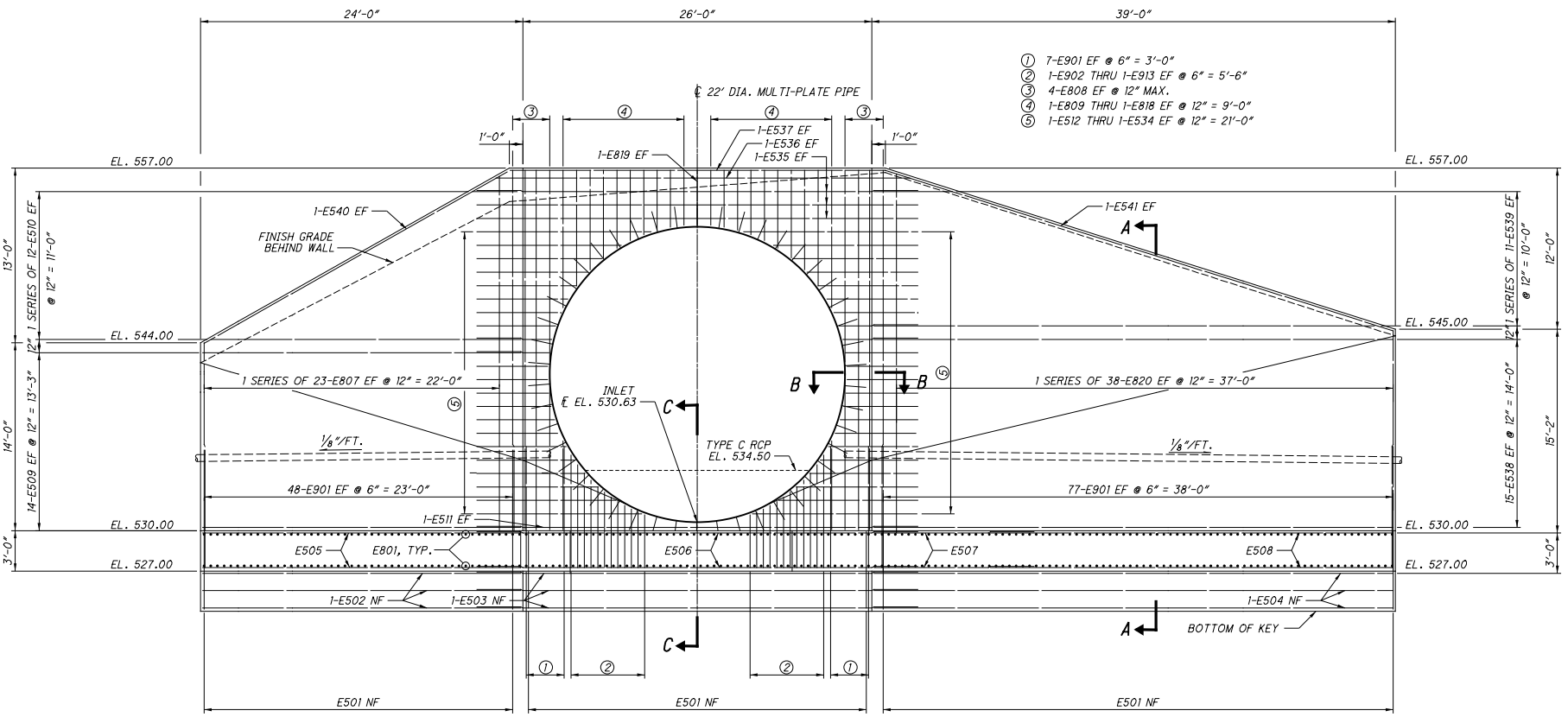

INLET HEADWALL
(DEVELOPED VIEW)

LAP LENGTHS:
#5 BARS = 3'-3"

NOTES:
1. ANCHORS AROUND CIRCUMFERENCE OF PIPE AT HEADWALL 18" ON CENTER SHALL BE 3#4" DIA. x 19"x5" HOOK BOLTS. HOOK SHALL BE CUT OFF AS NECESSARY TO ACCOMODATE THE HEADWALL FOOTING NEAR THE INVERT OF THE PIPE. DOUBLE NUT EACH BOLT.
2. FOR SECTIONS A-A, B-B AND C-C, SEE SHEET 5/8 .

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DESIGN AGENCY
Stantec
1500 Lake Shore Dr.
Columbus, OH 43204
(614) 486-4383

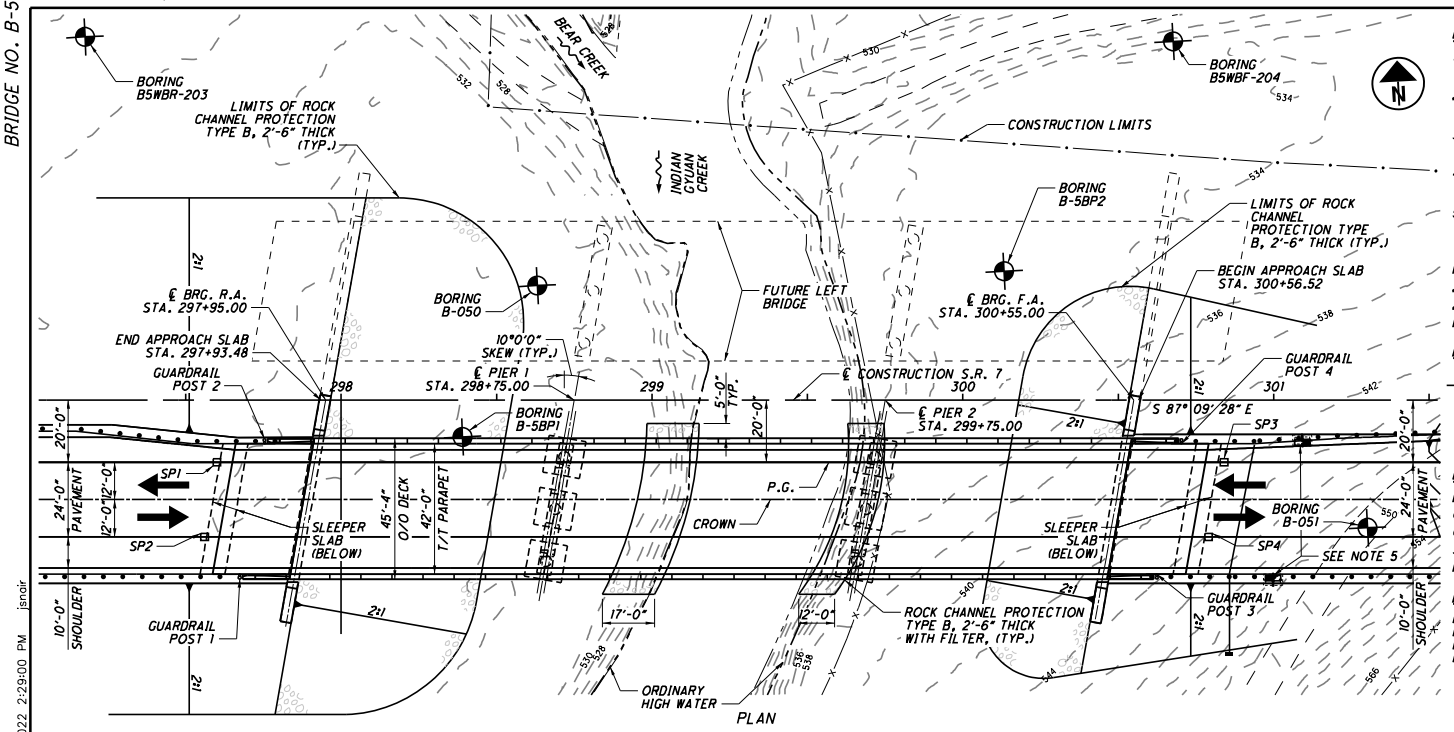
DESIGNED	DRAWN	REVIEWED	DATE
EDA	JWS	EER	3/8/18
CHECKED	REVISED	STRUCTURE FILE NUMBER	
MRS		4400348	

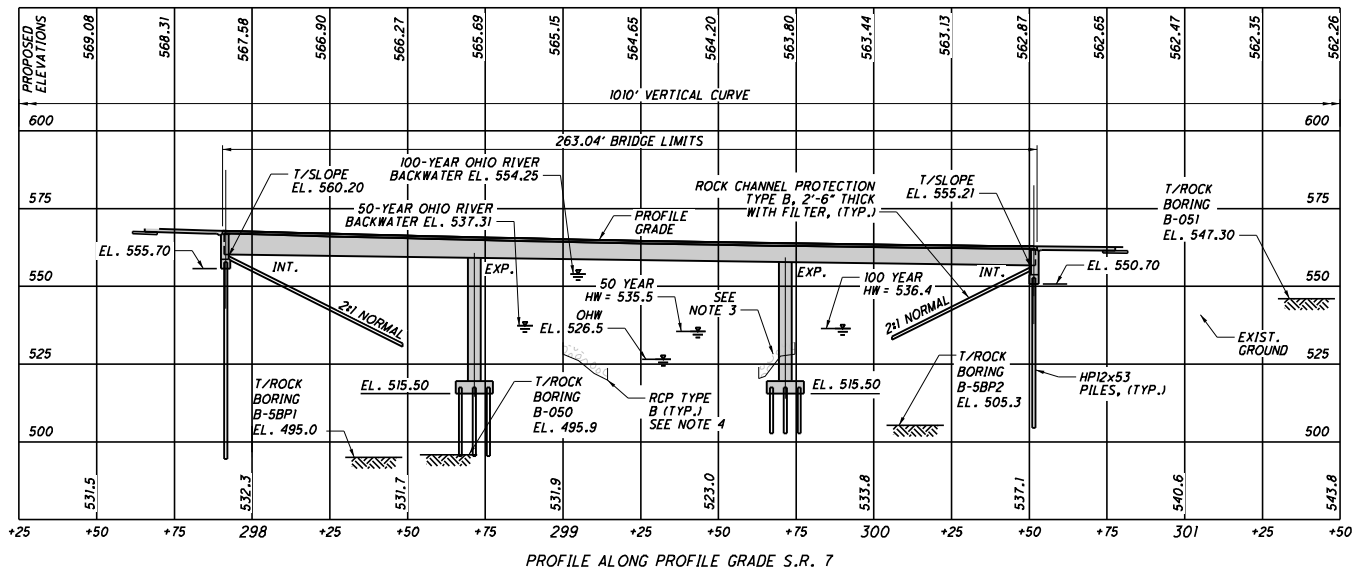
INLET HEADWALL ELEVATION
LAW-7-0510
S.R. 7 OVER BENT CREEK

LAW-7-2.17
PID No. 75923

4 / 8

BRIDGE NO. B-5





NOTES

1. EARTHWORK LIMITS SHOWN ARE APPROXIMATE. ACTUAL SLOPES SHALL CONFORM TO PLAN CROSS SECTIONS.
2. FOR PRIMARY PROJECT CONTROL INFORMATION TABLE SEE ROADWAY GENERAL NOTES.
3. RESTORE EXISTING GROUND AT PIER 2 INCORPORATING ROCK CHANNEL PROTECTION SHOWN IN THE PLAN AND PROFILE.
4. PLACE ROCK CHANNEL PROTECTION AT THE WEST BANK AS SHOWN IN THE PLAN AND PROFILE.
5. BRIDGE DECK DRAINAGE IS CONTROLLED BY 2 SCUPPERS ALONG THE LEFT TOE OF PARAPET. TOTAL DECK FLOW IS CONTROLLED BY CATCH BASIN INLETS OFF THE BRIDGE AT THE EAST END.

DESIGN TRAFFIC:
2015 ADT = 10,300 2015 ADTT = 1,133
2035 ADT = 21,400 2035 ADTT = 2,354
DIRECTIONAL DISTRIBUTION = 69/31

LEGEND

PROJECT BORING LOCATION
SETTLEMENT PLATFORM

HYDRAULIC DATA

DRAINAGE AREA = 75.2 SQ. MILES
Q (50) = 7050 CFS V (50) = 8.1 FT/S
Q (100) = 8010 CFS V (100) = 8.5 FT/S
STRUCTURE CLEARS THE 50 YEAR
DESIGN HW BY 21.2 FEET.

ESTIMATED PILE LENGTHS

REAR ABUTMENT HP12x53 = 65 FT.
PIER 1 HP12x53 = 25 FT.
PIER 2 HP12x53 = 25 FT.
FORWARD ABUTMENT HP12x53 = 50 FT.

POST NUMBER	FIRST POST GUARDRAIL	STATION
1	EASTBOUND R.A.	297+67.35
2	WESTBOUND R.A.	297+75.34
3	EASTBOUND F.A.	300+62.31
4	WESTBOUND F.A.	300+70.31

VERTICAL CURVE DATA

LENGTH = 1010'
PVC STA. = 297+05.00 PVC ELEV. = 570.58
PVI STA. = 302+10.00 PVI ELEV. = 552.90
PVT STA. = 307+15.00 PVT ELEV. = 572.65
G1 = -3.50% G2 = 3.91%

PROPOSED STRUCTURE

TYPE: 3 SPAN PRESTRESSED CONCRETE I-BEAM (60" MODIFIED TYPE 4) WITH COMPOSITE REINFORCED CONCRETE DECK SUPPORTED ON INTEGRAL ABUTMENTS ON STEEL HP PILES AND CAP & COLUMN PIERS ON STEEL HP PILES.

SPANS: 78.92', 97.833', 78.92' C/C BRGS. (ALONG ℄ CONST.)

ROADWAY: 42'-0" TOE/TOE PARAPET

LOADING: HL-93 AND 60 LBS/FT² FUTURE WEARING SURFACE

WEARING SURFACE: 1" MONOLITHIC WEARING SURFACE

SKEW: 10° LT. FWD.

APPROACH SLABS: AS-1-15 AND APPLICABLE DETAILS FROM AS-2-15, 25'-0" LONG

ALIGNMENT: TANGENT

CROWN: 0.016 FT/FT

COORDINATES: LATITUDE 38° 27' 23.09" N
LONGITUDE 82° 24' 15.61" W

DESIGN AGENCY: Stantec, 1500 Lake Shore Dr., Columbus, OH 43204, (614) 486-4383
DATE: 3/26/18
REVIEWED: MRS
STRUCTURE FILE NUMBER: 4400372
DRAWN: JWS
REVISED:
DESIGNED: BSM
CHECKED: EER

LAWRENCE COUNTY
STA. 297+93.47
STA. 300+56.52

SITE PLAN
BRIDGE NO. LAW-7-0563
S.R. 7 OVER INDIAN GUYAN CREEK

LAW-7-2.17
PID No. 75923

1/24

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REFER TO THE FOLLOWING STANDARD BRIDGE DRAWINGS:

AS-1-15	REVISED	07-17-15
AS-2-15	REVISED	07-17-15
PSID-1-13	REVISED	10-18-13
SBR-1-13	REVISED	01-17-14

AND TO THE FOLLOWING SUPPLEMENTAL SPECIFICATION:

800	DATED	01-19-18
832	DATED	10-17-14

DESIGN SPECIFICATIONS:
THIS STRUCTURE CONFORMS TO THE "LRFD BRIDGE DESIGN SPECIFICATIONS" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 2014 INCLUDING THE 2015 AND 2016 INTERIM SPECIFICATIONS AND THE ODOT BRIDGE DESIGN MANUAL, 2007.

DESIGN LOADING:
HL-93
FUTURE WEARING SURFACE (FWS) OF 0.060 KIPS/FT²

OPERATIONAL IMPORTANCE:
A LOAD MODIFIER OF 1.00 HAS BEEN ASSUMED FOR THE DESIGN OF THIS STRUCTURE IN ACCORDANCE WITH THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, ARTICLE 1.3.5 AND THE ODOT BRIDGE DESIGN MANUAL, 2007.

DESIGN DATA:
CONCRETE CLASS QC2 - COMPRESSIVE STRENGTH 4.5 K.S.I. (SUPERSTRUCTURE)
CONCRETE CLASS QC1 - COMPRESSIVE STRENGTH 4.0 K.S.I. (SUBSTRUCTURE)

REINFORCING STEEL - MINIMUM YIELD STRENGTH 60 K.S.I.

STEEL H-PILES - A572 - YIELD STRENGTH 50 K.S.I.

CONCRETE FOR PRESTRESSED BEAMS:
COMPRESSIVE STRENGTH (FINAL) = 7000 P.S.I.
COMPRESSIVE STRENGTH (RELEASE) = 6000 P.S.I.

PRESTRESSING STRAND:
AREA = 0.217 SQ. IN.
ULTIMATE STRENGTH = 270 K.S.I.
INITIAL STRESS = 202.5 K.S.I.
(LOW RELAXATION STRANDS)

WELDED WIRE FABRIC:
YIELD STRENGTH = 70 K.S.I.

DECK PROTECTION METHOD:
2-1/2" CONCRETE COVER
EPOXY COATED REINFORCING STEEL

MONOLITHIC WEARING SURFACE:
MONOLITHIC WEARING SURFACE IS ASSUMED, FOR DESIGN PURPOSES, TO BE 1 INCH THICK.

PILE DRIVING CONSTRAINTS:
PRIOR TO DRIVING PILES, CONSTRUCT THE SPILL THROUGH SLOPES AND THE BRIDGE APPROACH EMBANKMENT BEHIND THE ABUTMENTS UP TO THE LEVEL OF THE SUBGRADE ELEVATION FOR A MINIMUM DISTANCE OF 200 FEET BEHIND EACH ABUTMENT (SEE FORWARD AND REAR APPROACH EMBANKMENT CONSTRUCTION THIS SHEET). DO NOT BEGIN THE EXCAVATION FOR THE ABUTMENT FOOTINGS AND THE INSTALLATION OF THE ABUTMENT PILES UNTIL AFTER THE ABOVE REQUIRED EMBANKMENT HAS BEEN CONSTRUCTED.

THE APPROACH SLAB EMBANKMENT SHALL BE CONSTRUCTED AND THEN UNDERGO A WAITING PERIOD OF 133 DAYS.

PILES TO BEDROCK:
DRIVE PILES TO REFUSAL ON BEDROCK. THE DEPARTMENT WILL CONSIDER REFUSAL TO BE OBTAINED WHEN THE PILE PENETRATION IS AN INCH OR LESS AFTER RECIEVING AT LEAST 20 BLOWS FROM THE PILE HAMMER. SELECT THE HAMMER SIZE TO ACHIEVE THE REQUIRED DEPTH TO BEDROCK AND REFUSAL.

THE TOTAL FACTORED LOAD IS 226 KIPS PER PILE FOR THE REAR ABUTMENT PILES.
THE TOTAL FACTORED LOAD IS 238 KIPS PER PILE FOR THE FORWARD ABUTMENT PILES.

THE TOTAL FACTORED LOAD IS 243 KIPS PER PILE FOR THE PIER 1 PILES.
THE TOTAL FACTORED LOAD IS 238 KIPS PER PILE FOR THE PIER 2 PILES.

ABUTMENT PILES:
REAR ABUTMENT PILES:
10 PILES 70 FEET LONG, ORDER LENGTH.

FORWARD ABUTMENT PILES:
10 PILES 55 FEET LONG, ORDER LENGTH.

PIER PILES:
27 PILES 30 FEET LONG, ORDER LENGTH AT PIER 1.
27 PILES 30 FEET LONG, ORDER LENGTH AT PIER 2.

PILE SPLICES:
IN LIEU OF USING THE FULL PENETRATION BUTT WELDS SPECIFIED IN CMS 507.09 TO SPLICE STEEL H-PILES, THE CONTRACTOR MAY USE A MANUFACTURED H-PILE SPLICER. FURNISH SPLICERS FROM THE FOLLOWING MANUFACTURER:

ASSOCIATED PILE AND FITTING CORPORATION
8 WOOD HOLLOW RD. PLAZA 1
PARSIPPANY, NEW JERSEY 07054

INSTALL AND WELD THE SPLICER TO THE PILE SECTIONS IN ACCORDANCE WITH THE MANUFACTURER'S WRITTEN ASSEMBLY PROCEDURE SUPPLIED TO THE ENGINEER BEFORE THE WELDING IS PERFORMED.

ITEM 509 - EPOXY COATED REINFORCING STEEL, AS PER PLAN:
IN ADDITION TO THE PROVISIONS OF ITEM 509, FIELD BEND AND/OR FIELD CUT THE REINFORCING STEEL DESIGNATED IN THE PLANS, AS NECESSARY, IN ORDER TO MAINTAIN THE REQUIRED CLEARENCES AND BAR SPACING. REPAIR ALL DAMAGE TO EPOXY COATING, AS A RESULT OF THIS WORK, ACCORDING TO 709.00.

ITEM 511 - CLASS QC2 CONCRETE WITH QC/QA, SUPERSTRUCTURE, AS PER PLAN:
FURNISH POLYSTYRENE MATERIAL MEETING THE REQUIRMENTS OF ASTM C578 TYPE IV. NEATLY CUT MATERIAL AS NECESSARY TO ALLOW FOR PROPER INSTALLATION. JOINTS AT ABUTTING PIECES SHALL BE SEALED WITH DUCT TAPE.

ITEM 518 - SCUPPERS, INCLUDING SUPPORTS, AS PER PLAN:
REFER TO SHEET 17/24 FOR SCUPPER LOCATIONS AND SHEET 18/24 FOR DETAILS AND NOTES.

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

AN EIGHT WHEEL FINISHING MACHINE WITH A MAXIMUM WHEEL LOAD OF 2.37 KIPS.

A MINIMUM OUT-TO-OUT WHEEL SPACING AT EACH END OF THE MACHINE OF 103".

A MAXIMUM SPACING OF OVERHANG FALSEWORK BRACKETS OF 48 IN.

A MAXIMUM DISTANCE FROM THE CENTERLINE OF THE FASCIA GIRDER TO THE FACE OF THE SAFETY HANDRAIL OF 65".

FORWARD AND REAR APPROACH EMBANKMENT CONSTRUCTION:
THE APPROACH EMBANKMENTS SHALL BE CONSTRUCTED AND THEN UNDERGO A WAITING PERIOD OF 133 DAYS PRIOR TO DRIVING PILES.

APPROACH EMBANKMENTS SHALL BE REINFORCED WITH PRIMARY INTERNAL REINFORCEMENT FOR STABILIZATION AS PER RECOMMENDATIONS BY STANTEC.

SEE ROADWAY AND SLOPE REINFORCEMENT PLANS FOR DETAILS AND NOTES REGARDING EMBANKMENT CONSTRUCTION.

MSE (MECHANICALLY STABILIZED EARTH) WALLS SHALL NOT BE PROPOSED AS AN ALTERNATIVE DESIGN IN ANY VALUE ENGINEERING STUDY DUE TO GEOTECHNICAL CONCERNS.

THE CONTRACTOR SHALL REVIEW THE BORING LOGS, SUBSURFACE INVESTIGATION, AND THE ROADWAY GENERAL NOTES PRIOR TO COMMENCING WORK ON THE BRIDGE.

IN ORDER TO MINIMIZE SIGNIFICANT DAMAGE TO THE FILL EMBANKMENT REINFORCEMENT DURING THE DRIVING OF ABUTMENT PILES H-PILES, A SINGLE-SHEET "PUNCHED" TYPE REINFORCEMENT SHALL BE USED. THIS TYPE OF REINFORCEMENT WILL BE EASILY PENETRATED WITH A DRIVEN PILE, WHEREAS A WELDED TYPE REINFORCEMENT WILL BE SIGNIFICANTLY DAMAGED DURING PILE DRIVING.

THE CONTRACTOR SHALL SUBMIT PILE DRIVING HAMMER SPECIFICATIONS TO THE GEOTECHNICAL ENGINEER OF RECORD, PRIOR TO PILE INSTALLATION FOR THE ENGINEER'S APPROVAL. IN ACCORDANCE WITH ODOT ITEM 507, THE PILE HAMMER SHALL BE OF ADEQUATE SIZE TO DRIVE THE PILES THROUGH THE INTERNALLY REINFORCED COMPACTED EMBANKMENT AND AT THE SAME TIME NOT TO DAMAGE THE PILES DURING DRIVING OR RETAPPING.

THE MATERIAL THAT WILL BE USED FOR EMBANKMENT FILL CONSTRUCTION WILL BE COMPOSED OF THE SOIL AND ROCK REMOVED FROM THE LARGE CUT SECTIONS. BASED ON THE BORINGS PERFORMED IN THE PROPOSED CUT AREAS, THIS MATERIAL WILL CONSIST PRIMARILY OF NON-DURABLE SHALE, AND TO A MUCH LESSER EXTENT, DURABLE SHALE, SANDSTONE AND SILTSTONE. WHERE PILES ARE TO BE DRIVEN THROUGH THE EMBANKMENT, THE EMBANKMENT FILL MATERIAL SHALL BE CLEAN OF DURABLE ROCK THAT MAY IMPEDE PILE DRIVING. THE EMBANKMENT FILL MATERIAL SHALL BE COMPACTED IN ACCORDANCE WITH ODOT ITEM 203. THE USE OF WATER TO AID IN BREAKING DOWN LARGE PARTICLES FOR NON-DURABLE SHALE WILL BE REQUIRED AS PER ODOT ITEM 203.06 B.

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DESIGN AGENCY: Stantec, 1500 Lake Shore Dr. Columbus, OH 43204, (614) 486-4383
DESIGNED: BSM
DRAWN: JWS
REVIEWED: MRS
DATE: 3/26/18
CHECKED: EER
REVISED:
STRUCTURE FILE NUMBER: 4400372

GENERAL NOTES 1
BRIDGE NO. LAW-7-0563
S.R. 7 OVER INDIAN GUYAN CREEK

LAW-7-2.17
PID No. 75923

2/24

ITEM SPECIAL - SETTLEMENT PLATFORM:

DESCRIPTION: THIS ITEM CONSISTS OF FURNISHING, CONSTRUCTING, AND MAINTAINING SETTLEMENT PLATFORMS AND OBTAINING SETTLEMENT READINGS AS REQUIRED BY THE PLANS OR AS DIRECTED BY THE ENGINEER. SEE SETTLEMENT PLATFORM DETAIL THIS SHEET. AT THE OPTION AND EXPENSE OF THE CONTRACTOR, ADDITIONAL SETTLEMENT PLATFORMS MAY BE INSTALLED AT LOCATIONS APPROVED BY THE ENGINEER. SETTLEMENT READINGS SHALL BE TAKEN WEEKLY BEGINNING WITH THE FIRST WEEK FOLLOWING PLACEMENT OF EACH PLATFORM AND DURING ANY SPECIFIED WAITING PERIOD. READINGS SHALL BE TAKEN MONTHLY DURING ANY CONSOLIDATION OR OFF-SEASON TIMES. THE READINGS SHALL BE PLOTTED ON GRAPH PAPER PRESENTING DEFORMATION (ON THE NEGATIVE Y-AXIS) AND FILL HEIGHT (ON THE POSITIVE Y-AXIS) VERSUS TIME (ON THE X-AXIS). A COPY OF EACH CUMULATIVE PLOT SHALL BE SENT TO ODOT, CO, CONSTRUCTION MANAGEMENT/CONSTRUCTION ADMINISTRATION, GEOTECHNICAL AND EARTHWORK ENGINEER AND ODOT, CO, OFFICE OF GEOTECHNICAL ENGINEERING, FOUNDATIONS AND RETAINING WALLS ENGINEER, AFTER EACH SETTLEMENT READING IS RECORDED.

MATERIAL: SOUND LUMBER SUCH AS ¾" EXTERIOR GRADE PLYWOOD SHALL BE USED FOR THE BASE. THE PIPE SHALL BE 2½" STANDARD BLACK PIPE WITH THREADED FITTINGS AS SHOWN ON THE PLANS. A STEEL PLATE 36" X 36" X ⅛" MAY BE SUBSTITUTED FOR THE LUMBER FOR THE PLATFORMS, AT THE CONTRACTOR'S OPTION.

CONSTRUCTION METHODS: THE PLATFORM SHALL CONFORM TO THE SETTTLEMENT PLATFORM DETAILS SHOWN ON THIS SHEET. THE PLATFORM SHALL BE SET ON A LEVEL SURFACE. THE PIPE SHALL BE FIRMLY SECURED TO THE PLATFORM AND SHALL BE MAINTAINED IN A PLUMB POSITION DURING THE PLACEMENT OF THE EMBANKMENT. THE PIPE SHALL BE MARKED AT INTERVALS TO FACILITATE MEASUREMENT OF THE DEPTH OF FILL. THE CONTRACTOR SHALL STOP WORK IN ANY LOCATION WHERE THE SETTLEMENT PLATFORM HAS BEEN DISTURBED OR DAMAGED. PLATFORMS OR PIPES DAMAGED OR DISPLACED DURING CONSTRUCTION SHALL BE RESTORED TO THEIR PROPER CONDITION AT THE CONTRACTOR'S EXPENSE.

SETTLEMENT PLATFORMS SHALL BE PLACED AT THE FOLLOWING LOCATIONS:

I.D.	STATION	OFFSET
SP1	297+60	20' RT.
SP2	297+56	44' RT.
SP3	300+84	20' RT.
SP4	300+79	44' RT.

PRIOR TO PAVING, THE TOP OF THE SETTLEMENT PLATFORM PIPE SHALL BE CUT OFF TWO FEET BELOW THE FINISHED SURFACE OF THE SUBGRADE OR FINISHED GROUND SURFACE, WHICHEVER IS APPLICABLE.

REFER TO ODOT GEOTECHNICAL BULLETIN GB4 "GUIDELINES FOR THE USE OF GEOTECHNICAL INSTRUMENTATION" FOR ADDITIONAL INSTALLATION AND MONITORING INSTRUCTION.

WAITING PERIOD CRITERIA: THE ENGINEER WILL CONSIDER THE WAITING PERIOD COMPLETE WHEN CONSECUTIVE SETTLEMENT READINGS, RECORDED AFTER EMBANKMENT CONSTRUCTION IS COMPLETE AND AT LEAST ONE WEEK (168 HOURS) APART, RESULT IN ELEVATION DIFFERENCES EQUAL TO OR LESS THAN ⅛ INCH. THE ANTICIPATED WAITING PERIOD IS 133 CALENDAR DAYS.

IF SETTLEMENT RATES EXCEED ¾ INCH PER MONTH AFTER EMBANKMENT CONSTRUCTION HAS BEEN COMPLETE FOR 45 CALENDAR DAYS. REMAINING CONSTRUCTION, INCLUDING ANY NECESSARY CORRECTIVE MEASURES, MAY PROCEED ONLY AT THE DIRECTION OF THE ENGINEER.

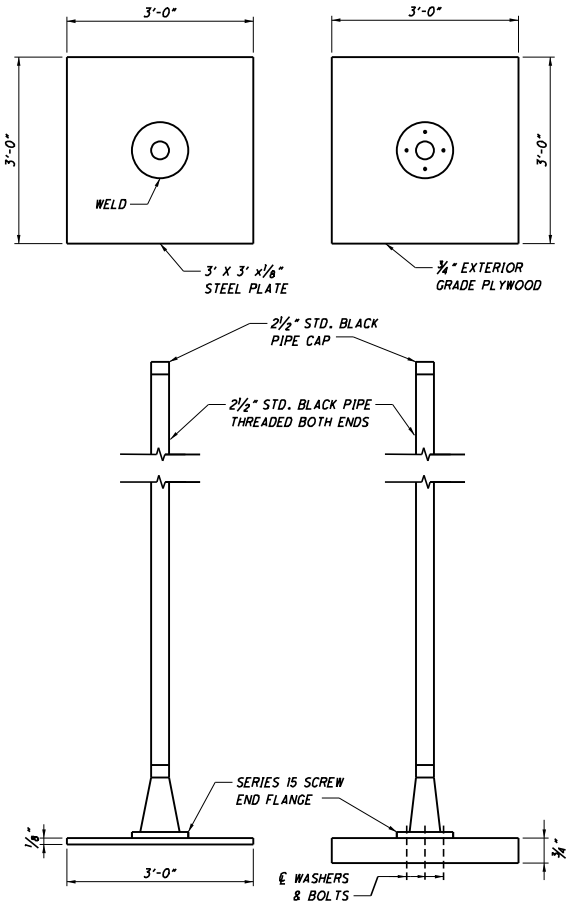
METHOD OF MEASUREMENT, THE NUMBER OF SETTLEMENT PLATFORMS TO BE PAID FOR SHALL BE THE ACTUAL NUMBER OF SETTLEMENT PLATFORMS COMPLETED, MAINTAINED, AND ACCEPTED BY THE ENGINEER.

THE DEPARTMENT WILL CONSIDER VIBRATING WIRE SETTLEMENT MONITORING PLATFORMS IN LIEU OF THE CONVENTIONAL SETTLEMENT PLATFORMS. THE CONTRACTOR SHOULD PROVIDE DETAILS OF THE PROPOSED VIBRATING WIRE SETTLEMENT PLATFORMS AS WELL AS DESIGN DRAWINGS OF THE PROPOSED PLATFORM AND CABLING LAYOUT TO THE ENGINEER AT LEAST 30 DAYS PRIOR TO CONSTRUCTION. THE DEPARTMENT WILL REQUIRE 10 WORKING DAYS FOR REVIEW AND APPROVAL. THE DESIGN DRAWINGS SHOULD ILLUSTRATE THE PROPOSED SETTLEMENT VIBRATING WIRE SETTLEMENT PLATFORM LOCATIONS WITH ALL EXISTING AND PROPOSED SITE FEATURES TO VERIFY THE PROPOSED CABLING WILL NOT CONFLICT WITH EXISTING FACILITIES, PROPOSED FACILITIES OR UTILITIES. NO ADDITIONAL PAYMENT WILL BE PROVIDED IF THE CONTRACTOR ELECTS TO UTILIZE VIBRATING WIRE SETTLEMENT PLATFORMS.

BASIS OF PAYMENT: PAYMENT SHALL BE MADE AT THE CONTRACT UNIT PRICE EACH FOR "ITEM SPECIAL - SETTLEMENT PLATFORM" WHICH IS COMPENSATION FOR CONSTRUCTING, MAINTAINING, AND MONITORING THE SETTLEMENT PLATFORMS INCLUDING FURNISHING ALL LABOR, EQUIPMENT, MATERIALS, AND INCIDENTALS NECESSARY TO COMPLETE THE WORK. PAYMENT SHALL NOT BE MADE FOR SETTLEMENT PLATFORMS WHICH BECOME USELESS DUE TO DAMAGE CAUSED BY THE CONTRACTOR'S OPERATIONS. SEE DETAIL THIS SHEET.

ABBREVIATIONS:

℄	- CENTERLINE
ABUT.	- ABUTMENTS
BF	- BACK FACE
BOT.	- BOTTOM
BRG.	- BEARING
CIP	- CAST IN PLACE
CJ	- CONSTRUCTION JOINT
CONT.	- CONTINUED
CONST.	- CONSTRUCTION
DIA.	- DIAMETER
EF	- EACH FACE
EL.	- ELEVATION
EQ.	- EQUAL
EXIST.	- EXISTING
EXP.	- EXPANSION
F.A.	- FORWARD ABUTMENT
FF	- FRONT FACE
INT.	- INTERMEDIATE
JT.	- JOINT
LT	- LEFT
M.C.	- MECHANICAL CONNECTOR
NPCPP	- NON - PERFORATED CORRUGATED PLASTIC PIPE
PCPP	- PERFORATED CORRUGATED PLASTIC PIPE
P.G.	- PROFILE GRADE
R.A.	- REAR ABUTMENT
RCP	- ROCK CHANNEL PROTECTION
RT.	- RIGHT
SPA.	- STATION
SP	- SETTLEMENT PLATFORM
STA.	- STATION
STR	- STRAIGHT
T/	- TOP OF
T/T	- TOE TO TOE
T&B	- TOP AND BOTTOM
TYP.	- TYPICAL
U.N.O.	- UNLESS NOTED OTHERWISE



NOTES:

1. SETTLEMENT PLATFORMS SHALL BE PLACED AT THE LOCATION INDICATED IN THE PLANS, UNLESS ORTHERWISE DIRECT BY THE ENGINEER.

SETTLEMENT PLATFORM

(NOT TO SCALE)

DESIGN AGENCY: Stantec, 1500 Lake Shore Dr., Columbus, OH 43204, (614) 486-4383

DATE: 3/26/18

REVIEWED: MRS

STRUCTURE FILE NUMBER: 4400372

DRAWN: JWS

REVISED:

DESIGNED: BSM

CHECKED: EER

GENERAL NOTES 2

BRIDGE NO. LAW-7-0563

S.R. 7 OVER INDIAN GUYAN CREEK

LAW-7-2.17

PID No. 75923

3 / 24

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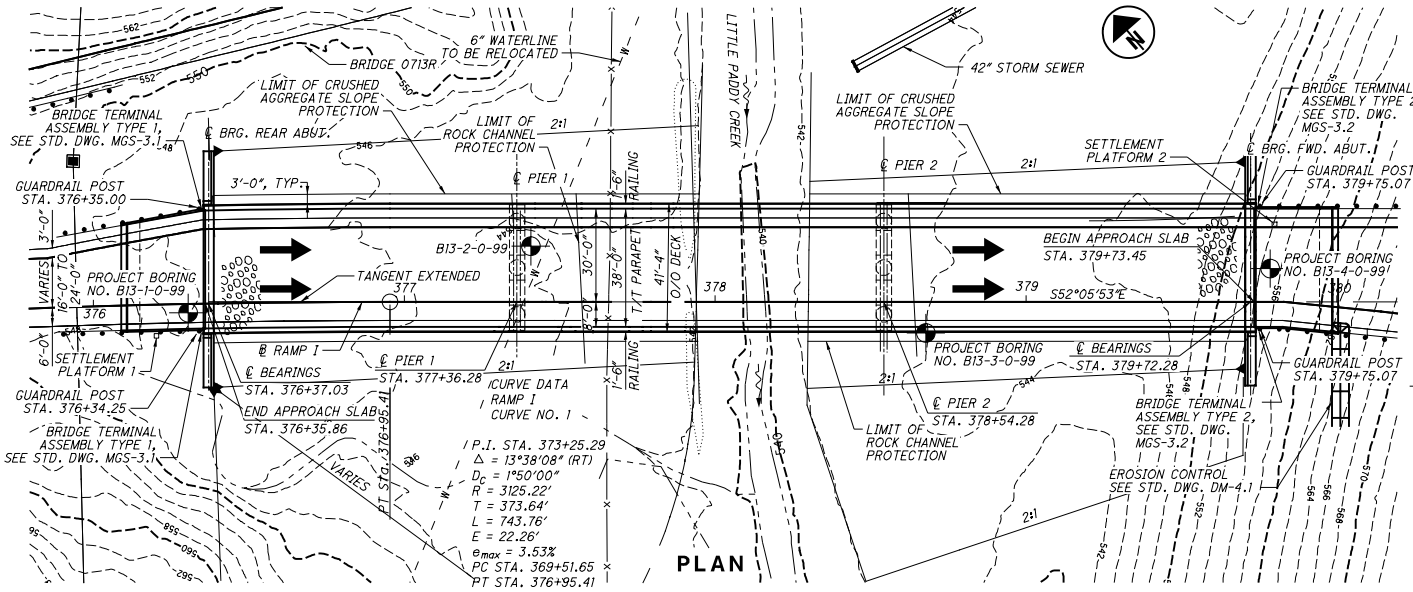
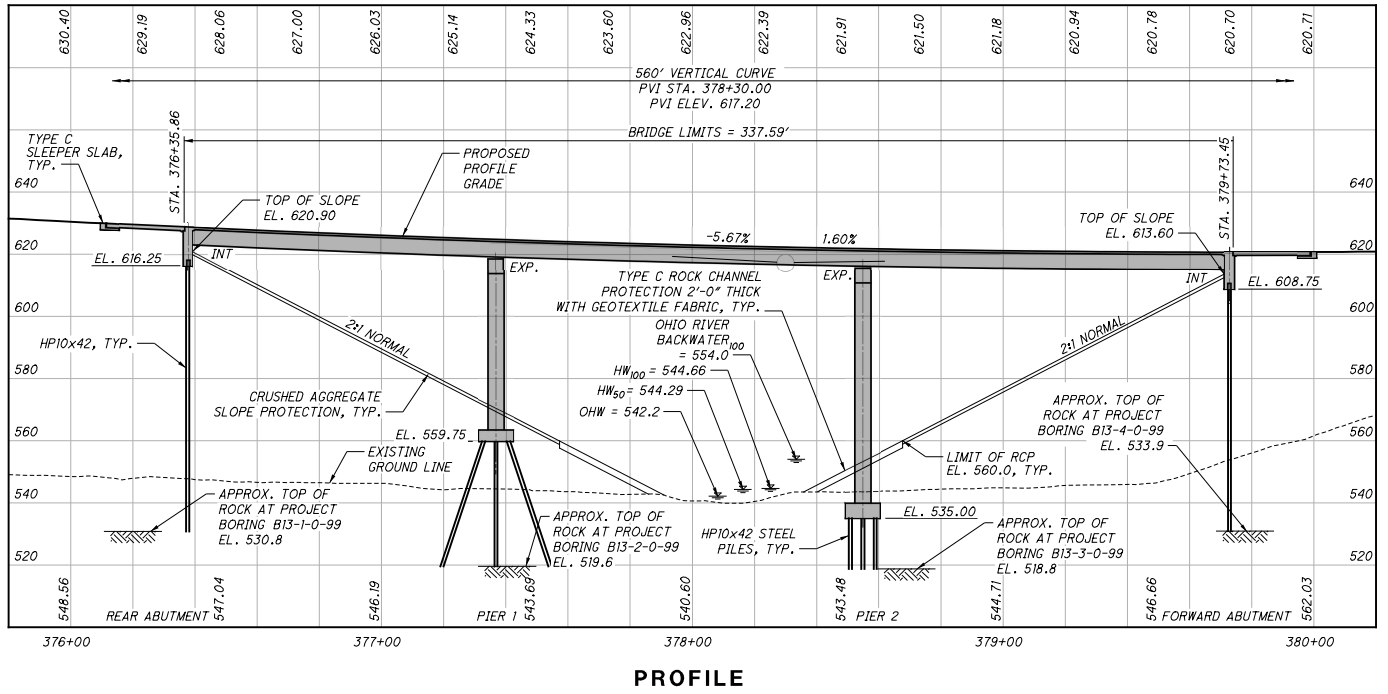




BENCHMARK DATA

	EASTING	NORTHING	ELEVATION
BM #1	1999157.677	167390.5880	804.00
BM #2	2004654.695	163488.2738	951.00

FOR ADDITIONAL BENCHMARK INFORMATION. SEE ROADWAY PLAN SHEET ⊖

NOTES

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

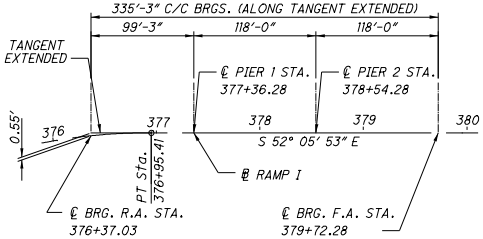
DESIGN TRAFFIC:
2028 ADT = 3,300 2028 ADTT = 231
2048 ADT = 5,100 2048 ADTT = 357
ALL TRAFFIC EASTBOUND ON THIS EXIT RAMP

LEGEND

PROJECT BORING LOCATION

HYDRAULIC DATA

DRAINAGE AREA = 1.74 SQ. MILES
Q (50) = 954 CFS V (50) = 5.42 FT/S
Q (100) = 1160 CFS V (100) = 5.87 FT/S
STRUCTURE CLEARS THE 50 YEAR
DESIGN HW BY 70.81 FEET.



GEOMETRIC LAYOUT

ESTIMATED LENGTH OF PILING	
REAR ABUT.	90 FT.
PIER 1	50 FT.
PIER 2	25 FT.
FWD. ABUT.	80 FT.

PROPOSED STRUCTURE

TYPE: PRESTRESSED CONCRETE I-BEAMS (WF54-49) WITH COMPOSITE CONCRETE SLAB SUPPORTED BY INTEGRAL ABUTMENTS AND CAP & COLUMN PIERS ON PILES
SPANS: 98'-2", 115'-10", 116'-11" C/C BEARINGS (MEASURED ALONG TANGENT EXTENDED)
ROADWAY: 38'-0" TOE/TOE BRIDGE RAILING
VEHICULAR LIVE LOAD: HL-93
SKEW: 0°00'00" (WITH RESPECT TO TANGENT EXTENDED)
FUTURE WEARING SURFACE: 0.060 KIP/FT^2
APPROACH SLABS: 25' LONG (T=15") AS-1-15 (MODIFIED) & AS-2-15, TYPE C
ALIGNMENT: 1°50'00" CURVE (RT) - TANGENT
SUPERELEVATION: VARIES (.0353 MAX)
COORDINATES: LATITUDE N 38° 26' 56.01"
LONGITUDE W 82° 22' 47.56"
DECK AREA: 13,954 SF

DESIGN AGENCY
Stantec Consulting Services Inc.
1500 Lake Shore Drive, Suite 100
Columbus, Ohio 43204
(614) 486-4383

DESIGNED	DRAWN	REVIEWED	DATE
EDA	ALH	BSM	5/18/2022
CHECKED	REVISED	STRUCTURE FILE NUMBER	
MRS	XXX	4400496	

LAWRENCE COUNTY
STA. 376+35.86
STA. 379+73.45

SITE PLAN
BRIDGE NO. LAW-7-0711P
RAMP I OVER LITTLE PADDY CREEK

LAW-7-2.17
PID No. 75923

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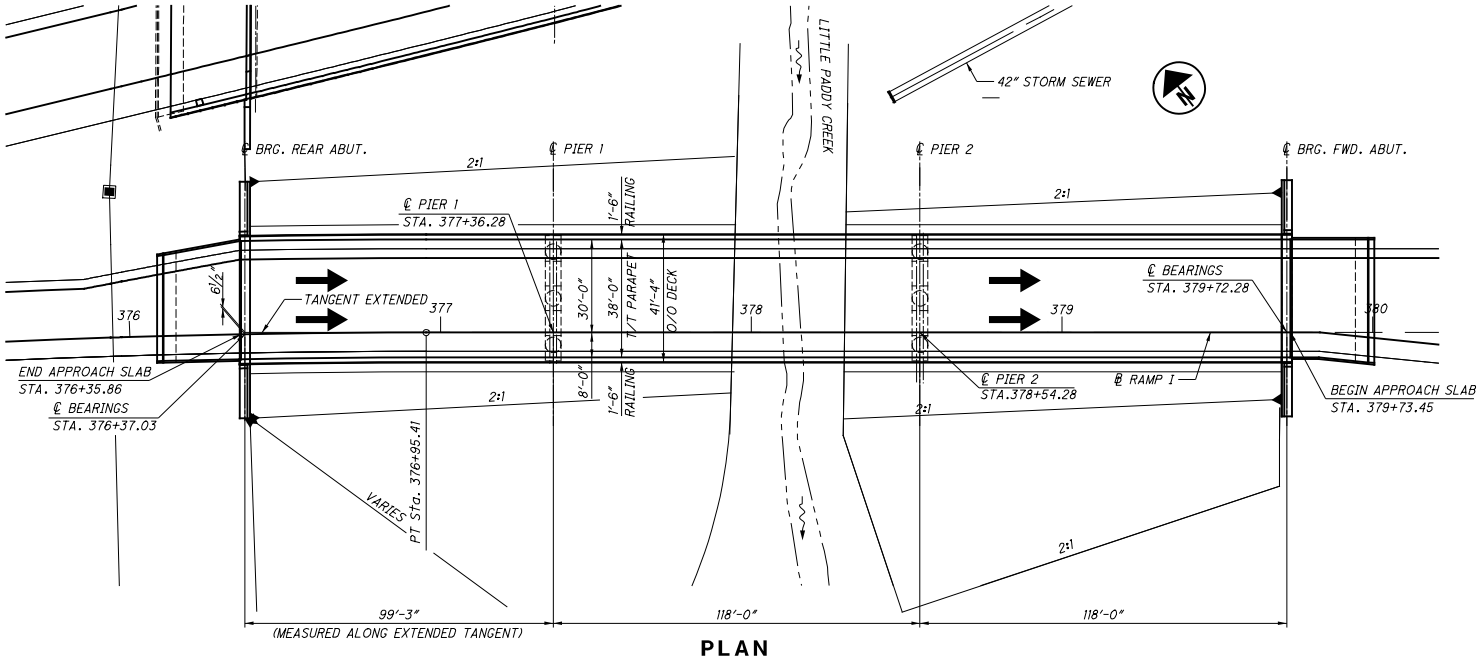

PLAN

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DESIGN AGENCY
Stantec Consulting Services Inc.
1500 Lake Shore Drive, Suite 100
Columbus, Ohio 43204
(614) 486-4383

DESIGNED	DRAWN	REVIEWED	DATE
EDA	ALH	BSM	5/18/2022
CHECKED	REVISED	STRUCTURE FILE NUMBER	
MRS	XXX	4400496	

GENERAL PLAN
BRIDGE NO. LAW-7-0711
RAMP I OVER LITTLE PADDY CREEK

LAW-7-2.17
PID No. 75923

2 / 30

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STANDARD DRAWINGS AND SUPPLEMENTAL SPECIFICATIONS

REFER TO THE FOLLOWING STANDARD BRIDGE DRAWING(S):

AS-1-15	REVISED	07-17-15
AS-2-15	REVISED	01-18-19
PSID-1-13	REVISED	01-15-21
SBR-1-20	DATED	01-17-20

AND TO THE FOLLOWING SUPPLEMENTAL SPECIFICATION

800	DATED	01-15-21

DESIGN SPECIFICATIONS

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

OPERATIONAL IMPORTANCE

A LOAD MODIFIER OF 1.0 HAS BEEN ASSUMED FOR THE DESIGN OF THIS STRUCTURE IN ACCORDANCE WITH THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, ARTICLE 1.3.5 AND THE ODOT BRIDGE DESIGN MANUAL, 2020

DESIGN LOADING

DESIGN LOADING: HL-93

FUTURE WEARING SURFACE (FWS) OF 0.060 KIPS/SQ.FT.

DESIGN DATA

CONCRETE CLASS QC2 WITH QC/QA
-COMPRESSIVE STRENGTH 4.5 KSI (SUPERSTRUCTURE)

CONCRETE CLASS QC1 WITH QC/QA
-COMPRESSIVE STRENGTH 4.0 KSI (PIERS)

CONCRETE CLASS QC4 WITH QC/QA
-COMPRESSIVE STRENGTH 4.0 KSI (SUBSTRUCTURE)

REINFORCING STEEL
-MINIMUM YIELD STRENGTH 60 KSI

STEEL H-PILES - ASTM A572 - YIELD STRENGTH 50 KSI

STRUCTURAL STEEL - ASTM A709 GRADE 50
-YIELD STRENGTH 50 KSI

CONCRETE FOR PRESTRESSED BEAMS:
COMPRESSIVE STRENGTH (FINAL) - 7 KSI
COMPRESSIVE STRENGTH (RELEASE) - 6 KSI

WELDED WIRE FABRIC:
YIELD STRENGTH - 70 KSI

PRESTRESSING STRAND:
AREA = 0.217 SQ.IN.
ULTIMATE STRENGTH = 270 KSI
INITIAL STRESS = 202.5 KSI (LOW RELAXATION STRANDS)

MONOLITHIC WEARING SURFACE

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

PILE DRIVING CONSTRAINTS

PRIOR TO DRIVING PILES, CONSTRUCT THE SPILL THROUGH SLOPES AND THE BRIDGE APPROACH EMBANKMENT BEHIND THE ABUTMENTS UP TO THE LEVEL OF THE SUBGRADE ELEVATION FOR A MINIMUM DISTANCE OF 200 FEET BEHIND EACH ABUTMENT. DO NOT BEGIN THE EXCAVATION FOR THE ABUTMENT AND PIER FOOTINGS AND THE INSTALLATION OF THE ABUTMENT AND PIER PILES UNTIL AFTER THE ABOVE REQUIRED EMBANKMENT HAS BEEN CONSTRUCTED AND A 128 CALENDAR DAY WAITING PERIOD HAS ELAPSED. THE ENGINEER MAY ADJUST THE LENGTH OF THE WAITING PERIOD BASED ON SETTLEMENT PLATFORM READINGS. AFTER THE SPECIFIED WAITING PERIOD HAS ELAPSED, DRIVE THE ABUTMENT AND PIER 1 AND 2 PILES TO REFUSAL ON BEDROCK.

PILES TO BEDROCK

DRIVE PILES TO REFUSAL ON BEDROCK THE DEPARTMENT WILL CONSIDER REFUSAL TO BE OBTAINED WHEN THE PILE PENETRATION IS AN INCH OR LESS AFTER RECEIVING AT LEAST 20 BLOWS FROM THE PILE HAMMER. SELECT THE HAMMER SIZE TO ACHIEVE THE REQUIRED DEPTH TO BEDROCK AND REFUSAL.

THE TOTAL FACTORED LOAD IS 177 KIPS PER PILE FOR THE REAR ABUTMENT PILES AND 203 KIPS PER PILE FOR THE FORWARD ABUTMENT PILES. NO ADDITIONAL LOADING DUE TO DOWNDRAG IS ANTICIPATED AS LONG AS THE WAITING PERIOD FOR THE APPROACH EMBANKMENTS IS OBSERVED. THE TOTAL FACTORED LOAD IS 181 KIPS PER PILE FOR THE PIER 1 PILES AND 230 KIPS PER PILE FOR THE PIER 2 PILES .

REAR ABUTMENT PILES:
10 HP 10X42 PILES 95 FEET LONG, ORDER LENGTH

PIER 1 PILES:
27 HP 10X42 PILES 55 FEET LONG, ORDER LENGTH

PIER 2 PILES:
27 HP 10X42 PILES 30 FEET LONG, ORDER LENGTH

FORWARD ABUTMENT PILES:
10 HP 10X42 PILES 85 FEET LONG, ORDER LENGTH

PILE SPLICES

IN LIEU OF USING THE FULL PENETRATION BUTT WELDS SPECIFIED IN CMS 507.09 TO SPLICE STEEL H-PILES, THE CONTRACTOR MAY USE A MANUFACTURED H-PILE SPLICER. FURNISH SPLICERS FROM THE FOLLOWING MANUFACTURER:

ASSOCIATED PILE AND FITTING CORPORATION
8 WOOD HOLLOW RD. PLAZA 1
PARSIPPANY, NEW JERSEY 07054

INSTALL AND WELD THE SPLICER TO THE PILE SECTIONS IN ACCORDANCE WITH THE MANUFACTURER'S WRITTEN ASSEMBLY PROCEDURE SUPPLIED TO THE ENGINEER BEFORE THE WELDING IS PERFORMED.

DECK PLACEMENT DESIGN ASSUMPTIONS

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

AN EIGHT WHEEL FINISHING MACHINE WITH A MAXIMUM WHEEL LOAD OF 2.4 KIPS.

A MINIMUM OUT-TO-OUT WHEEL SPACING AT EACH END OF THE MACHINE OF 103".

A MAXIMUM SPACING OF OVERHANG FALSEWORK BRACKETS OF 48 IN.

A MAXIMUM DISTANCE FROM THE CENTERLINE OF THE FASCIA GIRDER TO THE FACE OF THE SAFETY HANDRAIL OF 65".

APPROACH EMBANKMENT CONSTRUCTION:

THE APPROACH EMBANKMENTS SHALL BE CONSTRUCTED AND THEN UNDERGO A WAITING PERIOD OF 128 DAYS PRIOR TO DRIVING PILES.

SEE SHEETS XX FOR SLOPE REINFORCEMENT DETAILS AND NOTES REGARDING EMBANKMENT CONSTRUCTION.

ABBREVIATIONS:

ABUT	-	ABUTMENT
APPROX.	-	APPROXIMATE
BM	-	BENCHMARK
BRG.	-	BEARING
B/	-	BOTTOM OF
℄	-	CENTERLINE
CONC.	-	CONCRETE
CLR.	-	CLEARANCE
CONST.	-	CONSTRUCTION
DIA.	-	DIAMETER
DWG.	-	DRAWING
EF	-	EACH FACE
EL.	-	ELEVATION
EQ.	-	EQUAL
EST.	-	ESTIMATED
EXIST.	-	EXISTING
EXP.	-	EXPANSION
F.A.	-	FORWARD ABUTMENT
FF	-	FAR FACE
FNDN.	-	FOUNDATION
FTG.	-	FOOTING
FWD.	-	FORWARD
F/F	-	FACE TO FACE
HLMR	-	HIGH LOAD MULTI-ROTATIONAL BEARINGS
JT.	-	JOINT
LT.	-	LEFT
MAX.	-	MAXIMUM
MIN.	-	MINIMUM
NF	-	NEAR FACE
NO.	-	NUMBER
O/O	-	OUT TO OUT
PAVT.	-	PAVEMENT
PEJF	-	PREFORMED EXPANSION JOINT FILLER
R.A.	-	REAR ABUTMENT
REF.	-	REFERENCE
RF	-	RIGHT FORWARD
REINF.	-	REINFORCED
RT.	-	RIGHT
SP.	-	SETTLEMENT PLATFORM
SPA.	-	SPACE
S.R.	-	STATE ROUTE
STA.	-	STATION
STD.	-	STANDARD
TYP.	-	TYPICAL
T/	-	TOP OF
T/T	-	TOE TO TOE
T&B	-	TOP AND BOTTOM
VAR.	-	VARIES
REQ'D	-	REQUIRED

DESIGN AGENCY
Stantec Consulting Services Inc.
1500 Lake Shore Drive, Suite 100
Columbus, Ohio 43204
(614) 486-4383

DESIGNED EDA | DRAWN ALH | REVIEWED BSM | DATE 5/18/2022
CHECKED MRS | REVISED | STRUCTURE FILE NUMBER 44004961

GENERAL NOTES
BRIDGE NO. LAW-7-0711
RAMP I OVER LITTLE PADDY CREEK

LAW-7-2.17
PID No. 75923

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ITEM SPECIAL - SETTLEMENT PLATFORM:

DESCRIPTION: THIS ITEM CONSISTS OF FURNISHING, CONSTRUCTING, AND MAINTAINING SETTLEMENT PLATFORMS AND OBTAINING SETTLEMENT READINGS AS REQUIRED BY THE PLANS OR AS DIRECTED BY THE ENGINEER. SEE SETTLEMENT PLATFORM DETAIL THIS SHEET. AT THE OPTION AND EXPENSE OF THE CONTRACTOR, ADDITIONAL SETTLEMENT PLATFORMS MAY BE INSTALLED AT LOCATIONS APPROVED BY THE ENGINEER. SETTLEMENT READINGS SHALL BE TAKEN WEEKLY BEGINNING WITH THE FIRST WEEK FOLLOWING PLACEMENT OF EACH PLATFORM. THE READINGS SHALL BE PLOTTED ON GRAPH PAPER PRESENTING DEFORMATION (ON THE NEGATIVE Y-AXIS) AND FILL HEIGHT (ON THE POSITIVE Y-AXIS) VERSUS TIME (ON THE X-AXIS). A COPY OF EACH CUMULATIVE PLOT SHALL BE SENT TO ODOT, CO, CONSTRUCTION MANAGEMENT/CONSTRUCTION ADMINISTRATION, GEOTECHNICAL AND EARTHWORK ENGINEER AND ODOT, CO, OFFICE OF GEOTECHNICAL ENGINEERING, FOUNDATIONS AND RETAINING WALLS ENGINEER, AFTER EACH SETTLEMENT READING IS RECORDED.

MATERIAL: SOUND LUMBER SUCH AS ¾" EXTERIOR GRADE PLYWOOD SHALL BE USED FOR THE BASE. THE PIPE SHALL BE 2½" STANDARD BLACK PIPE WITH THREADED FITTINGS AS SHOWN ON THE PLANS. A STEEL PLATE 36" X 36" X ⅛" MAY BE SUBSTITUTED FOR THE LUMBER FOR THE PLATFORMS, AT THE CONTRACTOR'S OPTION.

CONSTRUCTION METHODS: THE PLATFORM SHALL CONFORM TO THE SETTLEMENT PLATFORM DETAILS SHOWN ON THIS SHEET. THE PLATFORM SHALL BE SET ON A LEVEL SURFACE. THE PIPE SHALL BE FIRMLY SECURED TO THE PLATFORM AND SHALL BE MAINTAINED IN A PLUMB POSITION DURING THE PLACEMENT OF THE EMBANKMENT. THE PIPE SHALL BE MARKED AT INTERVALS TO FACILITATE MEASUREMENT OF THE DEPTH OF FILL. THE CONTRACTOR SHALL STOP WORK IN ANY LOCATION WHERE THE SETTLEMENT PLATFORM HAS BEEN DISTURBED OR DAMAGED. PLATFORMS OR PIPES DAMAGED OR DISPLACED DURING CONSTRUCTION SHALL BE RESTORED TO THEIR PROPER CONDITION AT THE CONTRACTOR'S EXPENSE.

SETTLEMENT PLATFORMS SHALL BE PLACED AT THE FOLLOWING LOCATIONS:

I.D.	STATION	OFFSET
SP1	376+20	10' RIGHT
SP2	379+80	25' LEFT

PRIOR TO PAVING, THE TOP OF THE SETTLEMENT PLATFORM PIPE SHALL BE CUT OFF TWO FEET BELOW THE FINISHED SURFACE OF THE SUBGRADE OR FINISHED GROUND SURFACE, WHICHEVER IS APPLICABLE.

REFER TO ODOT GEOTECHNICAL BULLETIN GB4 "GUIDELINES FOR THE USE OF GEOTECHNICAL INSTRUMENTATION" FOR ADDITIONAL INSTALLATION AND MONITORING INSTRUCTION.

WAITING PERIOD CRITERIA:
THE ENGINEER WILL CONSIDER THE WAITING PERIOD COMPLETE WHEN CONSECUTIVE SETTLEMENT READINGS, RECORDED AFTER EMBANKMENT CONSTRUCTION IS COMPLETE AND AT LEAST ONE WEEK (168 HOURS) APART, RESULT IN ELEVATION DIFFERENCES EQUAL TO OR LESS THAN ⅛ INCH.

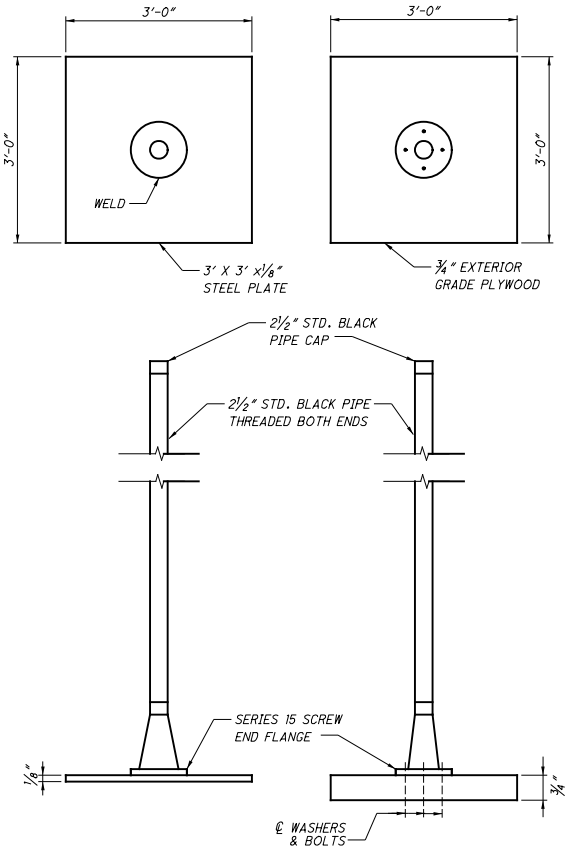
IF SETTLEMENT RATES EXCEED ¾ INCH PER MONTH AFTER EMBANKMENT CONSTRUCTION HAS BEEN COMPLETE FOR 128 CALENDAR DAYS, REMAINING CONSTRUCTION, INCLUDING ANY NECCESARY CORRECTIVE MEASURES, MAY PROCEED ONLY AT THE DIRECTION OF THE ENGINEER.

THE DEPARTMENT WILL CONSIDER VIBRATING WIRE SETTLEMENT MONITORING PLATFORMS IN LIEU OF THE CONVENTIONAL SETTLEMENT PLATFORMS. THE CONTRACTOR SHOULD PROVIDE DETAILS OF THE PROPOSED VIBRATING WIRE SETTLEMENT PLATFORMS AS WELL AS DESIGN DRAWINGS OF THE PROPOSED 30 DAYS PRIOR TO CONSTRUCTION. THE DEPARTMENT WILL REQUIRE 10 WORKING DAYS FOR REVIEW AND APPROVAL. THE DESIGN DRAWINGS SHOULD ILLUSTRATE THE LOCATIONS WITH ALL EXISTING AND PROPOSED SITE FEATURES TO VERIFY THE PROPOSED CABLING WILL NOT CONFLICT WITH EXISTING FACILITIES, PROPOSED FACILITIES OR UTILITIES. NO ADDITIONAL PAYMENT WILL BE PROVIDED IF THE CONTRACTOR ELECTS TO UTILIZE VIBRATING WIRE SETTLEMENT PLATFORMS.

MORE INFORMATION PERTAINING TO EMBANKMENT CONSTRUCTION AND CONTROLLED RATES OF FILL ARE PROVIDED IN THE ROADWAY PLANS.

METHOD OF MEASUREMENT, THE NUMBER OF SETTLEMENT PLATFORMS TO BE PAID FOR SHALL BE THE ACTUAL NUMBER OF SETTLEMENT PLATFORMS COMPLETED, MAINTAINED, AND ACCEPTED BY THE ENGINEER.

BASIS OF PAYMENT: PAYMENT SHALL BE MADE AT THE CONTRACT UNIT PRICE EACH FOR "ITEM SPECIAL - SETTLEMENT PLATFORM" WHICH IS COMPENSATION FOR CONSTRUCTING, MAINTAINING, AND MONITORING THE SETTLEMENT PLATFORMS INCLUDING FURNISHING ALL LABOR, EQUIPMENT, MATERIALS, AND INCIDENTALS NECESSARY TO COMPLETE THE WORK. PAYMENT SHALL NOT BE MADE FOR SETTLEMENT PLATFORMS WHICH BECOME USELESS DUE TO DAMAGE CAUSED BY THE CONTRACTOR'S OPERATIONS. SEE DETAIL THIS SHEET.



SETTLEMENT PLATFORM

(NOT TO SCALE)

NOTES:

1. SETTLEMENT PLATFORMS SHALL BE ANCHORED BY STAKES DRIVEN AT EACH CORNER TO PREVENT OVERTURNING.

DESIGN AGENCY
Stantec Consulting Services Inc.
1500 Lake Shore Drive, Suite 100
Columbus, Ohio 43204
(614) 486-4383

DESIGNED EDA | DRAWN ALH | REVIEWED BSM | DATE 5/18/2022
CHECKED MRS | REVISED | STRUCTURE FILE NUMBER 4400496

GENERAL NOTES
BRIDGE NO. LAW-7-0711
RAMP I OVER LITTLE PADDY CREEK

LAW-7-2.17
PID No. 75923

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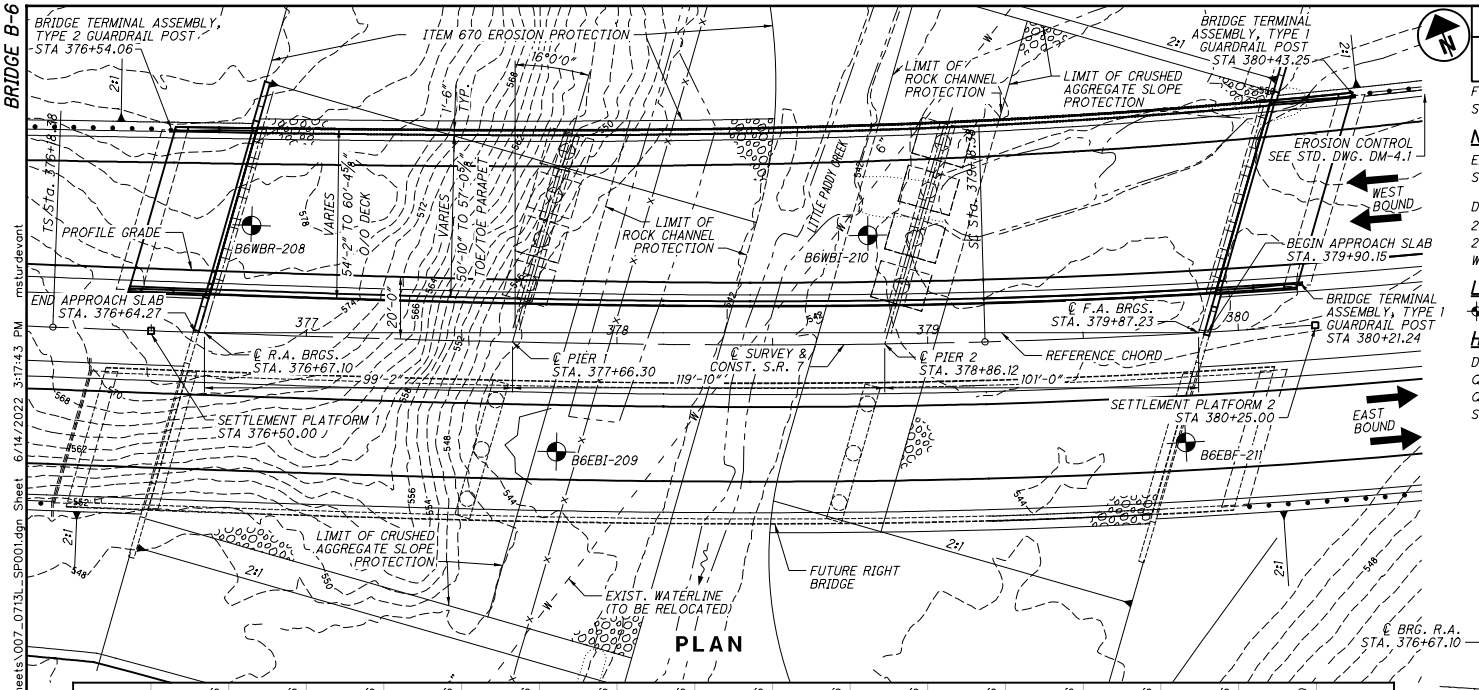
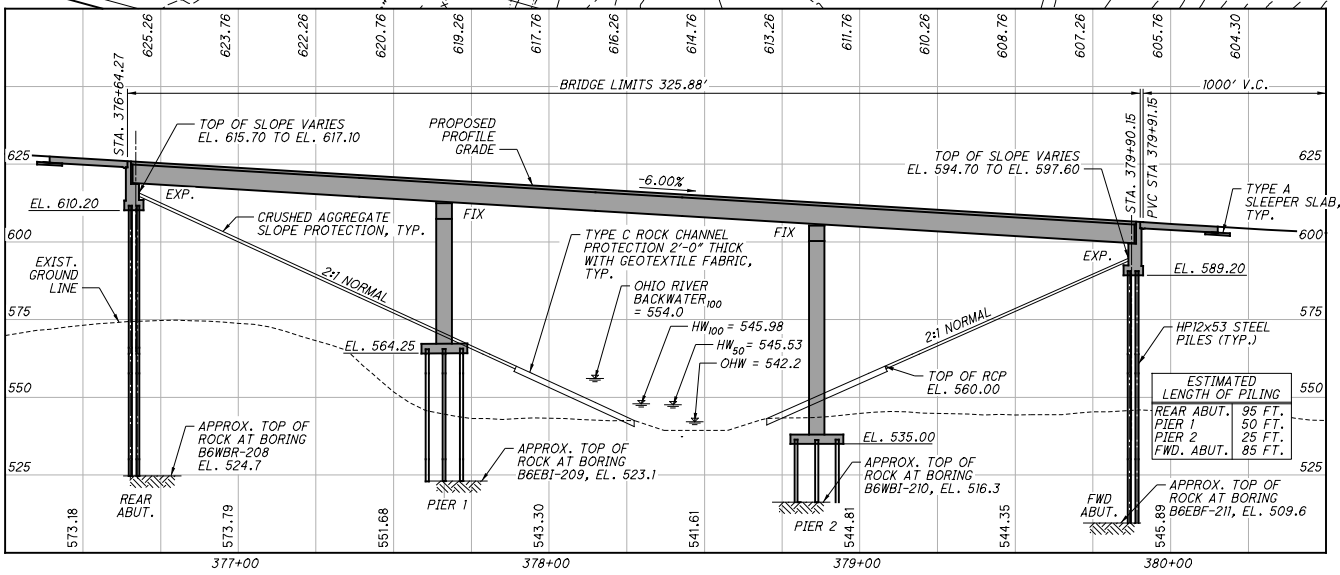
BRIDGE B-6





PROFILE ALONG S.R. 7 PROFILE GRADE

BENCHMARK DATA

BM #1 STA. 394+68.00, EL. 590.43, OFFSET 0.00,
BM #2 STA. 407+19.64, EL. 608.57, OFFSET 65.06,

FOR ADDITIONAL BENCHMARK INFORMATION. SEE ROADWAY PLAN SHEET ⊕

NOTES

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

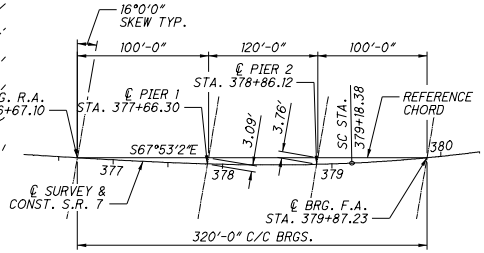
DESIGN TRAFFIC:
2028 ADT = 6,298 2028 ADTT = 693
2048 ADT = 8,225 2048 ADTT = 905
WESTBOUND TRAFFIC

LEGEND

PROJECT BORING LOCATION

HYDRAULIC DATA

DRAINAGE AREA = 1.74 SQ. MILES
Q (50) = 954 CFS V (50) = 4.23 FT/S EL. = 545.53
Q (100) = 1160 CFS V (100) = 4.46 FT/S EL. = 545.98
STRUCTURE CLEARS THE 50 YEAR DESIGN HW BY 50.61 FEET.



GEOMETRIC LAYOUT

CURVE DATA (S.R. 7 CURVE NO. 9)

P.I. STA. 387+47.15	E = 136.98'	LT = 200.04'
Δ = 46° 04' 34" (LT)	TS STA. 376+18.38	ST = 100.04'
Dc = 2° 29' 28"	SC STA. 379+18.38	e_{max} = 6.20%
R = 2,300.00'	θs = 3° 44' 12"	CS STA. 394+68.00
T = 805.51'	Ls = 300.00'	ST STA. 397+68.00
L = 1,549.62'	Ts = 1,128.77'	

PROPOSED STRUCTURE

TYPE: PRESTRESSED CONCRETE I-BEAMS (66" AASHTO MODIFIED TYPE 4) WITH COMPOSITE CONCRETE SLAB SUPPORTED BY STUB TYPE ABUTMENTS AND CAP & COLUMN PIERS ON PILES
SPANS: 98'-11", 117'-10", 98'-11" C/C BEARINGS MEASURED ALONG REFERENCE CHORD
ROADWAY: VARIES FROM 50'-9½" TO 57'-0½"
LOADING: HL-93 AND 60 LBS/FT² FUTURE WEARING SURFACE
WEARING SURFACE: 1" MONOLITHIC WEARING SURFACE
SKEW: 16°00'00" LF MEASURED TO REFERENCE CHORD
APPROACH SLABS: AS-1-15 & AS-2-15, 25' LONG (MODIFIED)
ALIGNMENT: 03°44'12" SPIRAL AND 02°29'28" CURVE LEFT
SUPERELEVATION: VARIES (.062 MAX)
COORDINATES: LATITUDE N 38° 26' 56.76"
LONGITUDE W 82° 22' 44.29"
DECK AREA: 18,860 SF

DESIGN AGENCY: Stantec, 1500 Lake Shore Dr. Columbus, OH 43204, (614) 486-4383
DATE: 5/2021
REVIEWED: BSM
STRUCTURE FILE NUMBER: 4400534
DRAWN: JWS
REVISED:
DESIGNED: MRS
CHECKED: EDA

LAWRENCE COUNTY
STA. 376+64.27
STA. 379+90.15

SITE PLAN
BRIDGE NO. LAW-7-0713 L
S.R. 7 OVER LITTLE PADDY CREEK

LAW-7-2.17
PID No. 75923

1/27

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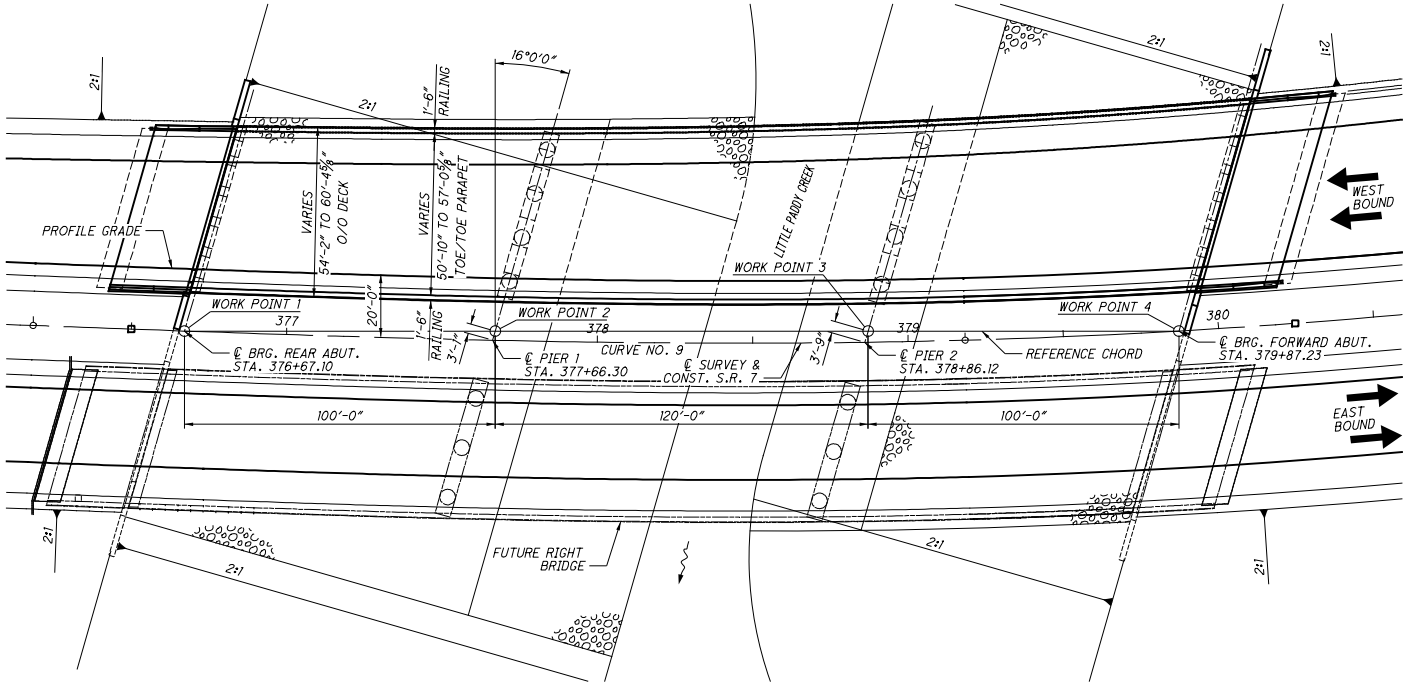
CURVE DATA
S.R. 7
CURVE NO. 9

P.I. STA. 387+47.15
Δ = 46° 04′ 34″ (LT)
Dc = 2° 29′ 28″
R = 2,300.00′
T = 805.51′
L = 1,549.62′
E = 136.98′
TS STA. 376+18.38
SC STA. 379+18.38

θs = 3° 44′ 12″
Ls = 300.00′
Ts = 1,128.77′
LT = 200.04′
ST = 100.04′
e_{max} = 6.20%
CS STA. 394+68.00
ST STA. 397+68.00



PLAN

GENERAL PLAN
BRIDGE NO. LAW-7-0713 L
S.R. 7 OVER LITTLE PADDY CREEK

LAW-7-2.17
PID No. 75923

2 / 27

DESIGNED MRS
DRAWN JWS
REVIEWED BSM
DATE 5/2021
CHECKED EDA
REVISED
STRUCTURE FILE NUMBER 4400534

DESIGN AGENCY
Stantec
1500 Lake Shore Dr.
Columbus, OH 43204
(614) 486-4383

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STANDARD DRAWINGS AND SUPPLEMENTAL SPECIFICATIONS

REFER TO THE FOLLOWING STANDARD BRIDGE DRAWING(S):

AS-1-15	REVISED	07-17-15
AS-2-15	REVISED	01-18-19
EXJ-6-17	REVISED	01-15-21
PSID-1-13	REVISED	07-20-18
SBR-1-20	DATED	01-17-20

AND TO THE FOLLOWING SUPPLEMENTAL SPECIFICATION

800 DATED 01-15-21

DESIGN SPECIFICATIONS

THIS STRUCTURE CONFORMS TO THE "LRFD BRIDGE DESIGN SPECIFICATIONS" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 9TH EDITION AND THE ODOT BRIDGE DESIGN MANUAL, 2021.

OPERATIONAL IMPORTANCE

A LOAD MODIFIER OF 1.0 HAS BEEN ASSUMED FOR THE DESIGN OF THIS STRUCTURE IN ACCORDANCE WITH THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, ARTICLE 1.3.5 AND THE ODOT BRIDGE DESIGN MANUAL, 2020

DESIGN LOADING

DESIGN LOADING: HL-93

FUTURE WEARING SURFACE (FWS) OF 0.060 KIPS/SQ.FT.

DESIGN DATA

CONCRETE CLASS QC2 WITH QC/QA
-COMPRESSIVE STRENGTH 4.5 KSI (SUPERSTRUCTURE)

CONCRETE CLASS QC1 WITH QC/QA
-COMPRESSIVE STRENGTH 4.0 KSI (SUBSTRUCTURE)

CONCRETE CLASS QC4 MASS CONCRETE WITH QC/QA
-COMPRESSIVE STRENGTH 4.0 KSI (PIER CAPS AND COLUMNS)

REINFORCING STEEL
-MINIMUM YIELD STRENGTH 60 KSI

STEEL H-PILES - ASTM A572 - YIELD STRENGTH 50 KSI

CONCRETE FOR PRESTRESSED BEAMS:
COMPRESSIVE STRENGTH (FINAL) - 7 KSI
COMPRESSIVE STRENGTH (RELEASE) - 6 KSI

WELDED WIRE FABRIC:
YIELD STRENGTH - 70 KSI

PRESTRESSING STRAND:
AREA = 0.217 SQ.IN.
ULTIMATE STRENGTH = 270 KSI
INITIAL STRESS = 202.5 KSI
(LOW RELAXATION STRANDS)

DECK PROTECTION METHOD

EPOXY COATED REINFORCING STEEL

2.5" CONCRETE COVER

MONOLITHIC WEARING SURFACE

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

PILE DRIVING CONSTRAINTS

PRIOR TO DRIVING PILES, CONSTRUCT THE SPILL THROUGH SLOPES AND THE BRIDGE APPROACH EMBANKMENT BEHIND THE ABUTMENTS UP TO THE LEVEL OF THE SUBGRADE ELEVATION FOR A MINIMUM DISTANCE OF 200 FEET BEHIND EACH ABUTMENT. DO NOT BEGIN THE EXCAVATION FOR THE ABUTMENT AND PIER FOOTINGS AND THE INSTALLATION OF THE ABUTMENT AND PIER 1 AND 2 PILES UNTIL AFTER THE ABOVE REQUIRED EMBANKMENT HAS BEEN CONSTRUCTED AND A 180 CALENDAR DAY WAITING PERIOD HAS ELAPSED. THE ENGINEER MAY ADJUST THE LENGTH OF THE WAITING PERIOD BASED ON SETTLEMENT PLATFORM READINGS. AFTER THE SPECIFIED WAITING PERIOD HAS ELAPSED, DRIVE THE ABUTMENT AND PIER 1 AND 2 PILES TO REFUSAL ON BEDROCK.

PILES TO BEDROCK

DRIVE PILES TO REFUSAL ON BEDROCK THE DEPARTMENT WILL CONSIDER REFUSAL TO BE OBTAINED WHEN THE PILE PENETRATION IS AN INCH OR LESS AFTER RECEIVING AT LEAST 20 BLOWS FROM THE PILE HAMMER. SELECT THE HAMMER SIZE TO ACHIEVE THE REQUIRED DEPTH TO BEDROCK AND REFUSAL.

THE TOTAL FACTORED LOAD IS 125 KIPS PER PILE FOR THE ABUTMENT PILES. NO ADDITIONAL LOADING DUE TO DOWNDRAG IS ANTICIPATED AS LONG AS THE WAITING PERIOD FOR THE APPROACH EMBANKMENTS IS OBSERVED. THE TOTAL FACTORED LOAD IS 322 KIPS PER PILE FOR THE PIER 1 PILES AND 319 KIPS PER PILE FOR THE PIER 2 PILES .

REAR ABUTMENT PILES:
34 HP 12X53 PILES 100 FEET LONG, ORDER LENGTH

PIER 1 PILES:
36 HP 12X53 PILES 55 FEET LONG, ORDER LENGTH

PIER 2 PILES:
36 HP 12X53 PILES 30 FEET LONG, ORDER LENGTH

REAR ABUTMENT PILES:
36 HP 12X53 PILES 90 FEET LONG, ORDER LENGTH

PILE SPLICES

IN LIEU OF USING THE FULL PENETRATION BUTT WELDS SPECIFIED IN CMS 507.09 TO SPLICE STEEL H-PILES, THE CONTRACTOR MAY USE A MANUFACTURED H-PILE SPLICER. FURNISH SPLICERS FROM THE FOLLOWING MANUFACTURER:

ASSOCIATED PILE AND FITTING CORPORATION
8 WOOD HOLLOW RD. PLAZA 1
PARSIPPANY, NEW JERSEY 07054

INSTALL AND WELD THE SPLICER TO THE PILE SECTIONS IN ACCORDANCE WITH THE MANUFACTURER'S WRITTEN ASSEMBLY PROCEDURE SUPPLIED TO THE ENGINEER BEFORE THE WELDING IS PERFORMED.

PILE DRIVING:

THE MINIMUM RATED ENERGY OF THE HAMMER USED TO INSTALL THE PILES SHALL BE 20,100 FOOT-POUNDS. ENSURE THAT STRESSES IN THE PILES DURING DRIVING DO NOT EXCEED 45,000 POUNDS PER SQUARE INCH.

DECK PLACEMENT DESIGN ASSUMPTIONS

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

AN EIGHT WHEEL FINISHING MACHINE WITH A MAXIMUM WHEEL LOAD OF 2.4 KIPS.

A MINIMUM OUT-TO-OUT WHEEL SPACING AT EACH END OF THE MACHINE OF 103".

A MAXIMUM SPACING OF OVERHANG FALSEWORK BRACKETS OF 48 IN.

A MAXIMUM DISTANCE FROM THE CENTERLINE OF THE FASCIA GIRDER TO THE FACE OF THE SAFETY HANDRAIL OF 65".

APPROACH EMBANKMENT CONSTRUCTION:

THE APPROACH EMBANKMENTS SHALL BE CONSTRUCTED AND THEN UNDERGO AN ESTIMATED WAITING PERIOD OF 180 DAYS PRIOR TO DRIVING PILES.

REFER TO SHEETS XX FOR DETAILS AND NOTES REGARDING REINFORCED SLOPE AND EMBANKMENT CONSTRUCTION.

ACCORDINGLY, MULTIPLE APPLICATIONS OF SIGNIFICANT QUANTITIES OF WATER AS WELL AS CONSIDERABLE EFFORT WILL BE REQUIRED TO PROPERLY BREAK DOWN AND MOISTURE CONDITION THE SHALE FOR USE IN EMBANKMENT CONSTRUCTION.

ABBREVIATIONS:

ABUT	-	ABUTMENT
APPROX.	-	APPROXIMATE
BM	-	BENCHMARK
BRG.	-	BEARING
B/	-	BOTTOM OF
℄	-	CENTERLINE
CONC.	-	CONCRETE
CLR.	-	CLEARANCE
CONST.	-	CONSTRUCTION
DIA.	-	DIAMETER
EF	-	EACH FACE
EL.	-	ELEVATION
EQ.	-	EQUAL
EST.	-	ESTIMATED
EXIST.	-	EXISTING
EXP.	-	EXPANSION
F.A.	-	FORWARD ABUTMENT
FF	-	FAR FACE
FNDN.	-	FOUNDATION
FTG.	-	FOOTING
FWD.	-	FORWARD
F/F	-	FACE TO FACE
JT.	-	JOINT
LT.	-	LEFT
MAX.	-	MAXIMUM
MIN.	-	MINIMUM
NF	-	NEAR FACE
O/O	-	OUT TO OUT
PAVT.	-	PAVEMENT
PEJF	-	PREFORMED EXPANSION JOINT FILLER
R.A.	-	REAR ABUTMENT
REF.	-	REFERENCE
RF	-	RIGHT FORWARD
REINF.	-	REINFORCED
RT.	-	RIGHT
SP.	-	SETTLEMENT PLATFORM
SPA.	-	SPACE
S.R.	-	STATE ROUTE
STA.	-	STATION
TYP.	-	TYPICAL
T/	-	TOP OF
T/T	-	TOE TO TOE
T&B	-	TOP AND BOTTOM
VAR.	-	VARIES
REQ'D	-	REQUIRED

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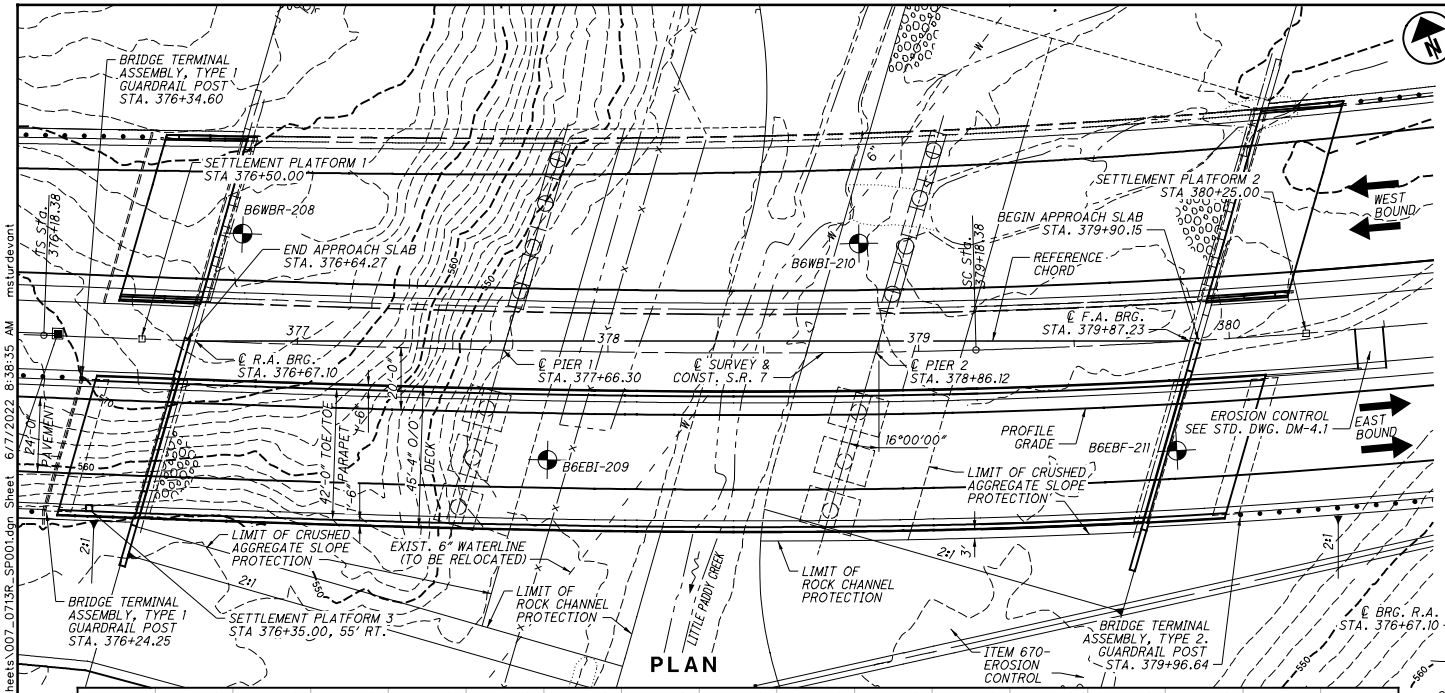
DESIGN AGENCY: Stantec, 1500 Lake Shore Dr. Columbus, OH 43204 (614) 486-4383

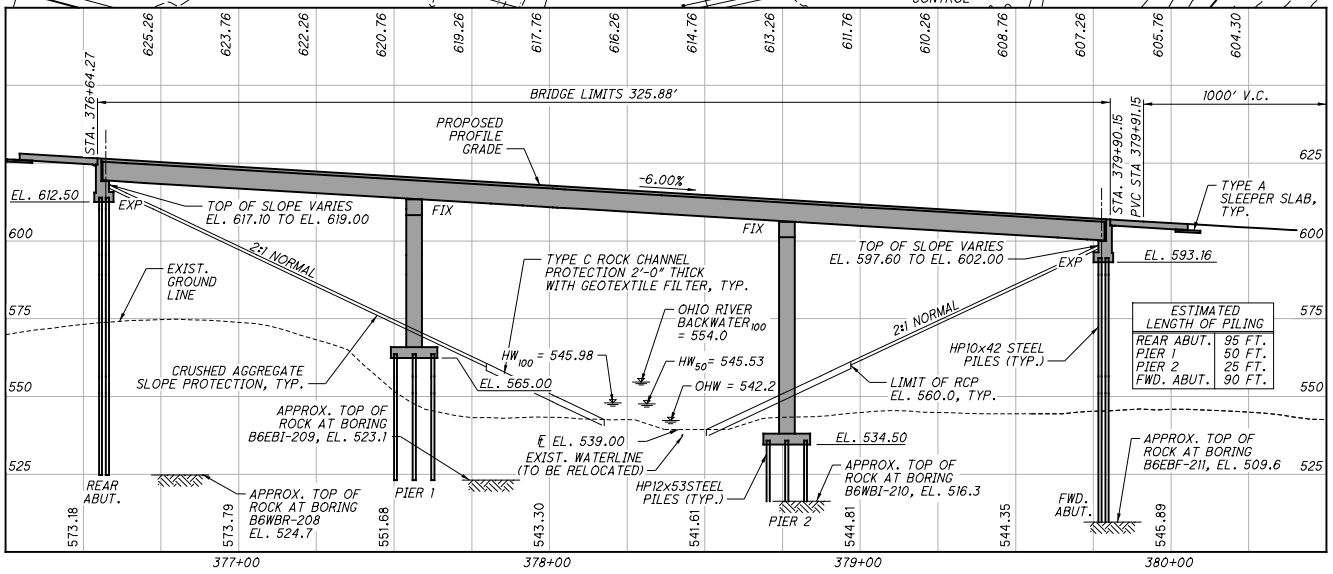
DESIGNED	DRAWN	REVIEWED	DATE
MRS	JWS	BSM	5/2021
CHECKED	REVISED	STRUCTURE FILE NUMBER	
EDA		4400534	

GENERAL NOTES

BRIDGE NO. LAW-7-0713 L
S.R. 7 OVER LITTLE PADDY CREEK

LAW-7-2.17
PID No. 75923





PROFILE ALONG S.R. 7 PROFILE GRADE

BENCHMARK DATA

BM #1 STA. 394+68.00, EL. 590.43 , OFFSET 0.00 ,
BM #2 STA. 407+19.64, EL. 608.57 , OFFSET 65.06', RT.

FOR ADDITIONAL BENCHMARK INFORMATION. SEE ROADWAY PLAN SHEET ⊖

NOTES

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

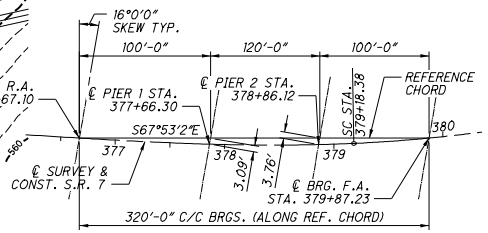
DESIGN TRAFFIC:
2028 ADT = 7,102 2028 ADTT = 781
2048 ADT = 9,275 2048 ADTT = 1,020
EASTBOUND TRAFFIC

LEGEND

PROJECT BORING LOCATION

HYDRAULIC DATA

DRAINAGE AREA = 1.74 SQ. MILES
Q (50) = 954 CFS V (50) = 4.23 FT/S
Q (100) = 1160 CFS V (100) = 4.46 FT/S
STRUCTURE CLEARS THE 50 YEAR DESIGN HW BY 53.51 FEET.



GEOMETRIC LAYOUT

CURVE DATA (S.R. 7 CURVE NO. 9)

P.I. STA. 387+47.15	E = 136.98'	LT = 200.04'
Δ = 46° 04' 34" (LT)	TS STA. 376+18.38	ST = 100.04'
Dc = 2° 29' 28"	SC STA. 379+18.38	e_{max} = 6.20%
R = 2,300.00'	θs = 3° 44' 12"	CS STA. 394+68.00
T = 805.51'	Ls = 300.00'	ST STA. 397+68.00
L = 1,549.62'	Ts = 1,128.77'	

PROPOSED STRUCTURE

TYPE: PRESTRESSED CONCRETE I-BEAMS (66" AASHTO MODIFIED TYPE 4) WITH COMPOSITE CONCRETE SLAB SUPPORTED BY STUB TYPE ABUTMENTS AND CAP & COLUMN PIERS ON PILES
SPANS: 98'-11", 117'-10", 98'-11" C/C BEARINGS (MEASURED ALONG REFERENCE CHORD)
ROADWAY: 42'-0" TOE/TOE PARAPET
LOADING: HL-93 AND 60 PSF FUTURE WEARING SURFACE
WEARING SURFACE: 1" MONOLITHIC WEARING SURFACE
SKEW: 16°0'0" LF (MEASURED WITH RESPECT TO REFERENCE CHORD)
APPROACH SLABS: AS-1-15 & AS-2-15, 25' LONG (MODIFIED)
ALIGNMENT: 03°44'12" SPIRAL AND 02°29'28" CURVE LEFT
SUPERELEVATION: VARIES (.062 MAX)
COORDINATES: LATITUDE 38° 26' 56.16"
LONGITUDE -82° 22' 44.88"
DECK AREA: 14,655 SF

DESIGN AGENCY: Stantec, 1500 Lake Shore Dr., Columbus, OH 43204, (614) 486-4383
DESIGNED MRS | DRAWN LBA | REVIEWED BSM | DATE 5/2021
CHECKED EDA | REVISED | STRUCTURE FILE NUMBER 4400526

LAWRENCE COUNTY
STA. 376+64.27
STA. 379+90.15

SITE PLAN
BRIDGE NO. LAW-7-0713 R
S.R. 7 OVER LITTLE PADDY CREEK

LAW-7-2.17
PID No. 75923

1 / 26

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CURVE DATA
S.R. 7
CURVE NO. 9

P.I. STA. 387+47.15
Δ = 46° 04′ 34″ (LT)
Dc = 2° 29′ 28″
R = 2,300.00′
T = 805.51′
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SC STA. 379+18.38

θs = 3° 44′ 12″
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LT = 200.04′
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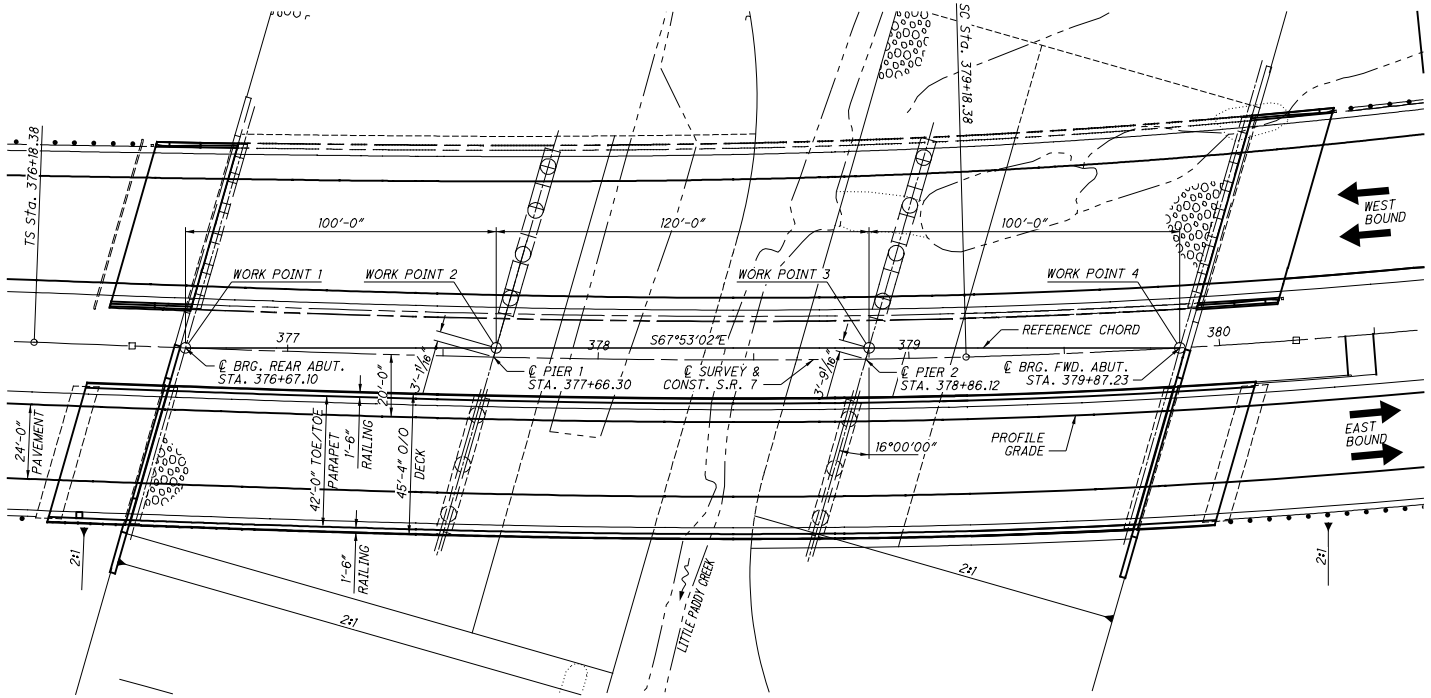
CS STA. 394+68.00
ST STA. 397+68.00



PLAN

DESIGN AGENCY
Stantec
1500 Lake Shore Dr.
Columbus, OH 43204
(614) 486-4383

DESIGNED	DRAWN	REVIEWED	DATE
MRS	ALH	BSM	5/2021
CHECKED	REVISED	STRUCTURE FILE NUMBER	
EDA		4400526	

GENERAL PLAN
BRIDGE NO. LAW-7-0713 R
S.R. 7 OVER LITTLE PADDY CREEK

LAW-7-2.17
PID No. 75923

2 / 26

STANDARD DRAWINGS AND SUPPLEMENTAL SPECIFICATIONS

REFER TO THE FOLLOWING STANDARD BRIDGE DRAWING(S):

AS-1-15	REVISED	07-17-15
AS-2-15	REVISED	01-18-19
EXJ-6-17	REVISED	01-15-21
PSID-1-13	REVISED	07-20-18
SBR-1-20	DATED	01-17-20

AND TO THE FOLLOWING SUPPLEMENTAL SPECIFICATION

800 DATED 01-15-21

DESIGN SPECIFICATIONS

THIS STRUCTURE CONFORMS TO THE "LRFD BRIDGE DESIGN SPECIFICATIONS" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 9TH EDITION AND THE ODOT BRIDGE DESIGN MANUAL, 2021.

OPERATIONAL IMPORTANCE

A LOAD MODIFIER OF 1.0 HAS BEEN ASSUMED FOR THE DESIGN OF THIS STRUCTURE IN ACCORDANCE WITH THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, ARTICLE 1.3.5 AND THE ODOT BRIDGE DESIGN MANUAL, 2020

DESIGN LOADING

DESIGN LOADING: HL-93

FUTURE WEARING SURFACE (FWS) OF 0.060 KIPS/SQ.FT.

DESIGN DATA

CONCRETE CLASS QC2 WITH QC/QA
-COMPRESSIVE STRENGTH 4.5 KSI (SUPERSTRUCTURE)

CONCRETE CLASS QC1 WITH QC/QA
-COMPRESSIVE STRENGTH 4.0 KSI (SUBSTRUCTURE)

CONCRETE CLASS QC4 MASS CONCRETE WITH QC/QA
-COMPRESSIVE STRENGTH 4.0 KSI (PIER CAPS AND COLUMNS)

REINFORCING STEEL
-MINIMUM YIELD STRENGTH 60 KSI

STEEL H-PILES - ASTM A572 - YIELD STRENGTH 50 KSI

CONCRETE FOR PRESTRESSED BEAMS:
COMPRESSIVE STRENGTH (FINAL) - 7 KSI
COMPRESSIVE STRENGTH (RELEASE) - 6 KSI

WELDED WIRE FABRIC:
YIELD STRENGTH - 70 KSI

PRESTRESSING STRAND:
AREA = 0.217 SQ.IN.
ULTIMATE STRENGTH = 270 KSI
INITIAL STRESS = 202.5 KSI
(LOW RELAXATION STRANDS)

DECK PROTECTION METHOD

EPOXY COATED REINFORCING STEEL

2.5" CONCRETE COVER

MONOLITHIC WEARING SURFACE

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

PILE DRIVING CONSTRAINTS

PRIOR TO DRIVING PILES, CONSTRUCT THE SPILL THROUGH SLOPES AND THE BRIDGE APPROACH EMBANKMENT BEHIND THE ABUTMENTS UP TO THE LEVEL OF THE SUBGRADE ELEVATION FOR A MINIMUM DISTANCE OF 200 FEET BEHIND EACH ABUTMENT. DO NOT BEGIN THE EXCAVATION FOR THE ABUTMENT AND PIER FOOTINGS AND THE INSTALLATION OF THE ABUTMENT AND PIER 1 AND 2 PILES UNTIL AFTER THE ABOVE REQUIRED EMBANKMENT HAS BEEN CONSTRUCTED AND A 180 CALENDAR DAY WAITING PERIOD HAS ELAPSED. THE ENGINEER MAY ADJUST THE LENGTH OF THE WAITING PERIOD BASED ON SETTLEMENT PLATFORM READINGS. AFTER THE SPECIFIED WAITING PERIOD HAS ELAPSED, DRIVE THE ABUTMENT AND PIER 1 AND 2 PILES TO REFUSAL ON BEDROCK.

PILES TO BEDROCK

DRIVE PILES TO REFUSAL ON BEDROCK THE DEPARTMENT WILL CONSIDER REFUSAL TO BE OBTAINED WHEN THE PILE PENETRATION IS AN INCH OR LESS AFTER RECEIVING AT LEAST 20 BLOWS FROM THE PILE HAMMER. SELECT THE HAMMER SIZE TO ACHIEVE THE REQUIRED DEPTH TO BEDROCK AND REFUSAL.

THE TOTAL FACTORED LOAD IS 250 KIPS PER PILE FOR THE ABUTMENT PILES. NO ADDITIONAL LOADING DUE TO DOWNDRAG IS ANTICIPATED AS LONG AS THE WAITING PERIOD FOR THE APPROACH EMBANKMENTS IS OBSERVED. THE TOTAL FACTORED LOAD IS 322 KIPS PER PILE FOR THE PIER 1 PILES AND 319 KIPS PER PILE FOR THE PIER 2 PILES .

REAR ABUTMENT PILES:
HP 10X42 PILES 100 FEET LONG, ORDER LENGTH

PIER 1 PILES:
HP 12X53 PILES 55 FEET LONG, ORDER LENGTH

PIER 2 PILES:
HP 12X53 PILES 30 FEET LONG, ORDER LENGTH

FORWARD ABUTMENT PILES:
HP 10X42 PILES 95 FEET LONG, ORDER LENGTH

PILE SPLICES

IN LIEU OF USING THE FULL PENETRATION BUTT WELDS SPECIFIED IN CMS 507.09 TO SPLICE STEEL H-PILES, THE CONTRACTOR MAY USE A MANUFACTURED H-PILE SPLICER. FURNISH SPLICERS FROM THE FOLLOWING MANUFACTURER:

ASSOCIATED PILE AND FITTING CORPORATION
8 WOOD HOLLOW RD. PLAZA 1
PARSIPPANY, NEW JERSEY 07054

INSTALL AND WELD THE SPLICER TO THE PILE SECTIONS IN ACCORDANCE WITH THE MANUFACTURER'S WRITTEN ASSEMBLY PROCEDURE SUPPLIED TO THE ENGINEER BEFORE THE WELDING IS PERFORMED.

PILE DRIVING:

THE MINIMUM RATED ENERGY OF THE HAMMER USED TO INSTALL THE PILES SHALL BE 20,100 FOOT-POUNDS. ENSURE THAT STRESSES IN THE PILES DURING DRIVING DO NOT EXCEED 45,000 POUNDS PER SQUARE INCH.

DECK PLACEMENT DESIGN ASSUMPTIONS

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

AN EIGHT WHEEL FINISHING MACHINE WITH A MAXIMUM WHEEL LOAD OF 2.4 KIPS.

A MINIMUM OUT-TO-OUT WHEEL SPACING AT EACH END OF THE MACHINE OF 103".

A MAXIMUM SPACING OF OVERHANG FALSEWORK BRACKETS OF 48 IN.

A MAXIMUM DISTANCE FROM THE CENTERLINE OF THE FASCIA GIRDER TO THE FACE OF THE SAFETY HANDRAIL OF 65".

APPROACH EMBANKMENT CONSTRUCTION:

THE APPROACH EMBANKMENTS SHALL BE CONSTRUCTED AND THEN UNDERGO AN ESTIMATED WAITING PERIOD OF 180 DAYS PRIOR TO DRIVING PILES.

REFER TO SHEETS XX FOR DETAILS AND NOTES REGARDING REINFORCED SLOPE AND EMBANKMENT CONSTRUCTION.

ACCORDINGLY, MULTIPLE APPLICATIONS OF SIGNIFICANT QUANTITIES OF WATER AS WELL AS CONSIDERABLE EFFORT WILL BE REQUIRED TO PROPERLY BREAK DOWN AND MOISTURE CONDITION THE SHALE FOR USE IN EMBANKMENT CONSTRUCTION.

ABBREVIATIONS:

ABUT	-	ABUTMENT
APPROX.	-	APPROXIMATE
BM	-	BENCHMARK
BRG.	-	BEARING
B/	-	BOTTOM OF
℄	-	CENTERLINE
CONC.	-	CONCRETE
CLR.	-	CLEARANCE
CONST.	-	CONSTRUCTION
DIA.	-	DIAMETER
EF	-	EACH FACE
EL.	-	ELEVATION
EQ.	-	EQUAL
EST.	-	ESTIMATED
EXIST.	-	EXISTING
EXP.	-	EXPANSION
F.A.	-	FORWARD ABUTMENT
FF	-	FAR FACE
FNDN.	-	FOUNDATION
FTG.	-	FOOTING
FWD.	-	FORWARD
F/F	-	FACE TO FACE
JT.	-	JOINT
LT.	-	LEFT
MAX.	-	MAXIMUM
MIN.	-	MINIMUM
NF	-	NEAR FACE
O/O	-	OUT TO OUT
PAVT.	-	PAVEMENT
PEJF	-	PREFORMED EXPANSION JOINT FILLER
R.A.	-	REAR ABUTMENT
REF.	-	REFERENCE
RF	-	RIGHT FORWARD
REINF.	-	REINFORCED
RT.	-	RIGHT
SP.	-	SETTLEMENT PLATFORM
SPA.	-	SPACE
S.R.	-	STATE ROUTE
STA.	-	STATION
TYP.	-	TYPICAL
T/	-	TOP OF
T/T	-	TOE TO TOE
T&B	-	TOP AND BOTTOM
VAR.	-	VARIES
REQ'D	-	REQUIRED

DESIGN AGENCY
Stantec
1500 Lake Shore Dr.
Columbus, OH 43204
(614) 486-4383

DESIGNED	DRAWN	REVIEWED	DATE
MRS	ALH	BSM	5/2021
CHECKED	REVISED		STRUCTURE FILE NUMBER
EDA			4400526

GENERAL NOTES
BRIDGE NO. LAW-7-0713 R
S.R. 7 OVER LITTLE PADDY CREEK

LAW-7-2.17
PID No. 75923

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ITEM SPECIAL - SETTLEMENT PLATFORM:

DESCRIPTION: THIS ITEM CONSISTS OF FURNISHING, CONSTRUCTING, AND MAINTAINING SETTLEMENT PLATFORMS AND OBTAINING SETTLEMENT READINGS AS REQUIRED BY THE PLANS OR AS DIRECTED BY THE ENGINEER. SEE SETTLEMENT PLATFORM DETAIL THIS SHEET. AT THE OPTION AND EXPENSE OF THE CONTRACTOR, ADDITIONAL SETTLEMENT PLATFORMS MAY BE INSTALLED AT LOCATIONS APPROVED BY THE ENGINEER. SETTLEMENT READINGS SHALL BE TAKEN WEEKLY DURING CONSTRUCTION AND DURING THE SPECIFIED WAITING PERIOD BEGINNING WITH THE FIRST WEEK FOLLOWING PLACEMENT OF EACH PLATFORM. THE READINGS SHALL BE PLOTTED ON GRAPH PAPER PRESENTING DEFORMATION (ON THE NEGATIVE Y-AXIS) AND FILL HEIGHT (ON THE POSITIVE Y-AXIS) VERSUS TIME (ON THE X-AXIS). A COPY OF EACH CUMULATIVE PLOT SHALL BE SENT TO ODOT, CO, CONSTRUCTION MANAGEMENT/CONSTRUCTION ADMINISTRATION, GEOTECHNICAL AND EARTHWORK ENGINEER AND ODOT, CO, OFFICE OF GEOTECHNICAL ENGINEERING, FOUNDATIONS AND RETAINING WALLS ENGINEER, AFTER EACH SETTLEMENT READING IS RECORDED.

MATERIAL: SOUND LUMBER SUCH AS ¾" EXTERIOR GRADE PLYWOOD SHALL BE USED FOR THE BASE. THE PIPE SHALL BE 2½" STANDARD BLACK PIPE WITH THREADED FITTINGS AS SHOWN ON THE PLANS. A STEEL PLATE 36" X 36" X ⅛" MAY BE SUBSTITUTED FOR THE LUMBER FOR THE PLATFORMS, AT THE CONTRACTOR'S OPTION.

CONSTRUCTION METHODS: THE PLATFORM SHALL CONFORM TO THE SETTLEMENT PLATFORM DETAILS SHOWN ON THIS SHEET. THE PLATFORM SHALL BE SET ON A LEVEL SURFACE. THE PIPE SHALL BE FIRMLY SECURED TO THE PLATFORM AND SHALL BE MAINTAINED IN A PLUMB POSITION DURING THE PLACEMENT OF THE EMBANKMENT. THE PIPE SHALL BE MARKED AT INTERVALS TO FACILITATE MEASUREMENT OF THE DEPTH OF FILL. THE CONTRACTOR SHALL STOP WORK IN ANY LOCATION WHERE THE SETTLEMENT PLATFORM HAS BEEN DISTURBED OR DAMAGED. PLATFORMS OR PIPES DAMAGED OR DISPLACED DURING CONSTRUCTION SHALL BE RESTORED TO THEIR PROPER CONDITION AT THE CONTRACTOR'S EXPENSE.

SETTLEMENT PLATFORMS SHALL BE PLACED AT THE FOLLOWING LOCATIONS:

I.D.	*STATION*	*OFFSET*
SP1	*376+50*	*0'*
SP2	*380+25*	*0'*
SP3	*376+35*	*55'*

PRIOR TO PAVING, THE TOP OF THE SETTLEMENT PLATFORM PIPE SHALL BE CUT OFF TWO FEET BELOW THE FINISHED SURFACE OF THE SUBGRADE OR FINISHED GROUND SURFACE, WHICHEVER IS APPLICABLE.

REFER TO ODOT GEOTECHNICAL BULLETIN GB4 "GUIDELINES FOR THE USE OF GEOTECHNICAL INSTRUMENTATION" FOR ADDITIONAL INSTALLATION AND MONITORING INSTRUCTION.

WAITING PERIOD CRITERIA:
THE ENGINEER WILL CONSIDER THE WAITING PERIOD COMPLETE WHEN CONSECUTIVE SETTLEMENT READINGS, RECORDED AFTER EMBANKMENT CONSTRUCTION IS COMPLETE AND AT LEAST ONE WEEK (168 HOURS) APART, RESULT IN ELEVATION DIFFERENCES EQUAL TO OR LESS THAN ⅛ INCH. THE MINIMUM WAITING PERIOD IS 90 CALENDAR DAYS.

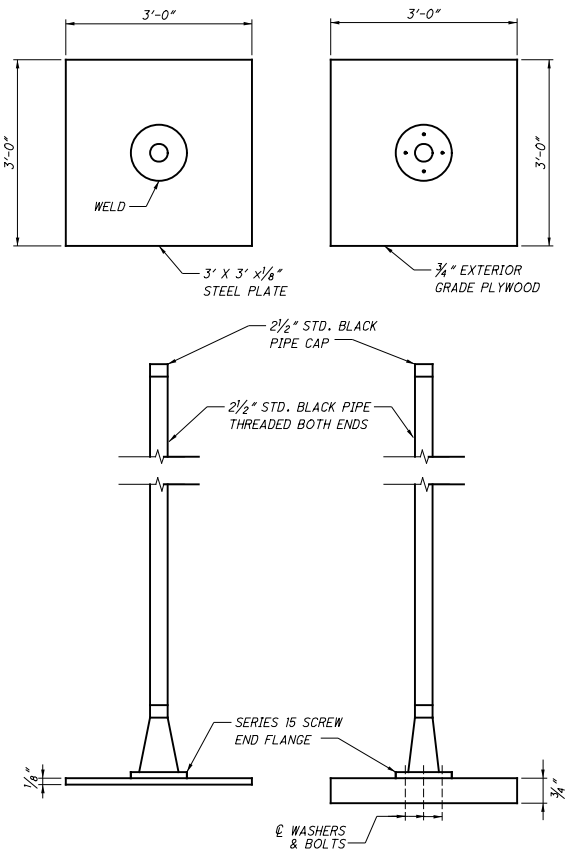
IF SETTLEMENT RATES EXCEED ¾ INCH PER MONTH AFTER EMBANKMENT CONSTRUCTION HAS BEEN COMPLETE FOR 45 CALENDAR DAYS, REMAINING CONSTRUCTION, INCLUDING ANY NECCESARY CORRECTIVE MEASURES, MAY PROCEED ONLY AT THE DIRECTION OF THE ENGINEER.

THE DEPARTMENT WILL CONSIDER VIBRATING WIRE SETTLEMENT MONITORING PLATFORMS IN LIEU OF THE CONVENTIONAL SETTLEMENT PLATFORMS. THE CONTRACTOR SHOULD PROVIDE DETAILS OF THE PROPOSED VIBRATING WIRE SETTLEMENT PLATFORMS AS WELL AS DESIGN DRAWINGS OF THE PROPOSED 30 DAYS PRIOR TO CONSTRUCTION. THE DEPARTMENT WILL REQUIRE 10 WORKING DAYS FOR REVIEW AND APPROVAL. THE DESIGN DRAWINGS SHOULD ILLUSTRATE THE LOCATIONS WITH ALL EXISTING AND PROPOSED SITE FEATURES TO VERIFY THE PROPOSED CABLING WILL NOT CONFLICT WITH EXISTING FACILITIES, PROPOSED FACILITIES OR UTILITIES. NO ADDITIONAL PAYMENT WILL BE PROVIDED IF THE CONTRACTOR ELECTS TO UTILIZE VIBRATING WIRE SETTLEMENT PLATFORMS.

MORE INFORMATION PERTAINING TO EMBANKMENT CONSTRUCTION AND CONTROLLED RATES OF FILL ARE PROVIDED IN THE ROADWAY PLANS.

METHOD OF MEASUREMENT, THE NUMBER OF SETTLEMENT PLATFORMS TO BE PAID FOR SHALL BE THE ACTUAL NUMBER OF SETTLEMENT PLATFORMS COMPLETED, MAINTAINED, AND ACCEPTED BY THE ENGINEER.

BASIS OF PAYMENT: PAYMENT SHALL BE MADE AT THE CONTRACT UNIT PRICE EACH FOR "ITEM SPECIAL - SETTLEMENT PLATFORM" WHICH IS COMPENSATION FOR CONSTRUCTING, MAINTAINING, AND MONITORING THE SETTLEMENT PLATFORMS INCLUDING FURNISHING ALL LABOR, EQUIPMENT, MATERIALS, AND INCIDENTALS NECESSARY TO COMPLETE THE WORK. PAYMENT SHALL NOT BE MADE FOR SETTLEMENT PLATFORMS WHICH BECOME USELESS DUE TO DAMAGE CAUSED BY THE CONTRACTOR'S OPERATIONS. SEE DETAIL THIS SHEET.



SETTLEMENT PLATFORM

(NOT TO SCALE)

NOTES:

1. SETTLEMENT PLATFORMS SHALL BE ANCHORED BY STAKES DRIVEN AT EACH CORNER TO PREVENT OVERTURNING.

DESIGN AGENCY: Stantec, 1500 Lake Shore Dr., Columbus, OH 43204, (614) 486-4383

DESIGNED	DRAWN	REVIEWED	DATE
MRS	ALH	BSM	5/2021
CHECKED	REVISED	STRUCTURE FILE NUMBER	
EDA		4400526	

GENERAL NOTES

BRIDGE NO. LAW-7-0713 R

S.R. 7 OVER LITTLE PADDY CREEK

LAW-7-2.17

PID No. 75923

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LAW-SR 7-2.17 (Phases 2A and 2B), PID 75923
8/4/2023
Combined 404/401 Individual Permit
LAW-SR 7-2.17 (Phases 2A and 2B), PID 75923
10/21/2023

TABLE D. STREAM DISCHARGE AND FILL QUANTITIES

Stream	Station	Description of Impacts	Length (LF)	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 or DEP			Proposed Earthen, Granular, or Embankment Fill			Proposed Other (Steel, Etc.)									
						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 1	STA 124+50 to 128+00	Embankment/grading + TAF	526	3	0.5	0	0.000	0.00	0	0.000	0.00	478	0.033	26.56	0	0.000	0.00	478	0.033	26.56	140	0.010	7.78	478
Stream 2	STA 158+00	Embankment/grading + TAF	445	2	0.5	0	0.000	0.00	0	0.000	0.00	224	0.011	8.30	0	0.000	0.00	224	0.011	8.30	50	0.002	1.85	224
Stream 3	STA 161+00 to 164+25	New culvert, embankment/grading, scour protection + TAF	741	9	1	6	0.001	2.00	38	0.008	12.67	487	0.101	162.33	46	0.010	15.33	577	0.119	192.33	130	0.027	43.33	617
Stream 3a	STA 161+50 to 164.75	Embankment/grading + TAF	343	5.5	1	0	0.000	0.00	0	0.000	0.00	343	0.043	69.87	0	0.000	0.00	343	0.043	69.87	50	0.006	10.19	343
Stream 4	STA 1416+60	Grading, scour protection, (culvert replacement) + TAF	110	3.5	1	0	0.000	0.00	10	0.001	1.30	10	0.001	1.30	0	0.000	0.00	20	0.002	2.59	30	0.002	3.89	30
Stream 5	STA 183+60 to 184+90	Embankment/grading, + TAF	528	4	1	0	0.000	0.00	0	0.000	0.00	527	0.048	78.07	0	0.000	0.00	527	0.048	78.07	130	0.012	19.26	527
Stream 6	STA 189+00 to 192+50	Embankment/grading, scour protection + TAF	458	2	0.5	0	0.000	0.00	30	0.001	1.11	402	0.018	14.89	0	0.000	0.00	432	0.020	16.00	70	0.003	2.59	452
Stream 7	STA 193+00 to 200+00	Embankment/grading, scour protection + TAF	916	3.5	0.5	0	0.000	0.00	16	0.001	1.04	806	0.065	52.24	0	0.000	0.00	822	0.066	53.28	90	0.008	5.84	822
Stream 8	STA 200+75 to 202+00	Embankment/grading, + TAF	261	2	1	0	0.000	0.00	0	0.000	0.00	192	0.009	14.22	0	0.000	0.00	192	0.009	14.22	58	0.003	4.30	250
Stream 9	STA 218+50 to 230+20	New culvert, embankment/grading, scour protection + TAF	1688	7.5	1	14	0.003	3.89	36	0.006	10.00	1,456	0.251	404.44	8	0.001	2.22	1,514	0.261	420.56	110	0.019	30.56	1,544
Stream 9a	STA 228+80 to 229+70	Embankment/grading, scour protection + TAF	400	3	0.5	40	0.003	2.22	0	0.000	0.00	321	0.022	17.83	0	0.000	0.00	361	0.025	20.06	20	0.001	1.11	361
Stream 10	STA 238+00 to 270+50	Embankment/grading, scour protection + TAF	4092	5.5	0.5	15	0.002	1.60	91	0.012	9.20	3,979	0.502	405.27	0	0.000	0.00	4,085	0.516	416.06	170	0.021	17.31	4,085
Stream 10a	STA 241+45 to 242+00	Embankment/grading, scour protection + TAF	194	2.5	0.5	0	0.000	0.00	16	0.001	0.74	48	0.003	2.22	0	0.000	0.00	64	0.004	2.96	20	0.001	0.93	84
Stream 10b	STA 247+90 to 248+45	Embankment/grading, scour protection + TAF	233	2.5	0.5	0	0.000	0.00	25	0.001	1.16	132	0.008	6.11	0	0.000	0.00	157	0.009	7.27	70	0.004	3.24	177
Stream 10c	STA 261+75	Embankment/grading, scour protection + TAF	300	3	0.5	0	0.000	0.00	15	0.001	0.83	233	0.016	12.94	0	0.000	0.00	248	0.017	13.78	20	0.001	1.11	248
Stream 11	STA 270+00 to 270+75	Embankment/grading, scour protection + TAF	287	3	0.5	0	0.000	0.00	20	0.001	1.11	256	0.018	14.22	0	0.000	0.00	276	0.019	15.33	70	0.005	3.89	276
Stream 12	STA 227+80 to 278+40	Embankment/grading + TAF	349	2.5	0.5	0	0.000	0.00	0	0.000	0.00	337	0.019	16.00	0	0.000	0.00	337	0.019	16.00	70	0.004	3.24	337
Stream 13	STA 320+50 to 323+25	New culvert, embankment/grading, scour protection + TAF	913	6	0.5	0	0.000	0.00	47	0.006	5.22	720	0.099	80.00	0	0.000	0.00	767	0.106	85.22	130	0.018	14.44	787
Stream 13a	STA 319+90 to 322+25	Embankment/grading, + TAF	703	5.5	0.5	0	0.000	0.00	0	0.000	0.00	654	0.083	66.61	0	0.000	0.00	654	0.083	66.61	70	0.009	7.13	674
Stream 13a1	STA 317+75 to 319+90	Embankment/grading scour protection + TAF	346	5	1	0	0.000	0.00	5	0.001	0.93	297	0.034	55.00	0	0.000	0.00	303	0.035	56.11	70	0.008	12.96	323
Stream 13a2	STA. 319+50 to 320+10	Embankment/grading, scour protection + TAF	162	1.5	0.5	0	0.000	0.00	5	0.001	0.02	114	0.004	3.30	0	0.000	0.00	119	0.005	3.31	20	0.001	0.56	139
Stream 13a3	STA 321+00	Embankment/grading, scour protection + TAF	56	1.5	1	0	0.000	0.00	5	0.001	0.28	32	0.001	1.78	0	0.000	0.00	37	0.002	2.06	20	0.001	1.11	57

TABLE D. STREAM DISCHARGE AND FILL QUANTITIES

Stream	Station	Description of Impacts	Length (LF)	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 or DEP			Proposed Earthen, Granular, or Embankment Fill			Proposed Other (Steel, Etc.)									
						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 14	STA 337+00 to 339+80	New culvert, embankment/grading, scour protection + TAF	1199	4.5	1	12	0.001	2.00	27	0.003	4.50	968	0.100	161.33	168	0.017	28.00	1,175	0.121	195.83	150	0.015	25.00	1,195
Stream 14a	STA 338+65 to 340+25	Embankment/grading	160	2.5	0.5	0	0.000	0.00	0	0.000	0.00	160	0.009	7.41	0	0.000	0.00	160	0.009	7.41	0	0.000	0.00	160
Stream 14b	STA 339+90 to 340+60	Embankment/grading	109	2.5	0.5	0	0.000	0.00	0	0.000	0.00	85	0.005	3.94	0	0.000	0.00	85	0.005	3.94	0	0.000	0.00	85
Stream 15	STA 355+00 to 356+50	Excavation +TAF	392	2.5	0.5	0	0.000	0.00	0	0.000	0.00	209	0.012	9.68	0	0.000	0.00	209	0.012	9.68	20	0.001	0.93	229
Stream 15a	STA 353+00	TAF	74	2	0.5	0	0.000	0.00	0	0.000	0.00	0	0.000	0.00	0	0.000	0.00	0	0.000	0.00	20	0.001	1.48	20
Stream 15b	STA 349+00	TAF	31	2	0.5	0	0.000	0.00	0	0.000	0.00	0	0.000	0.00	0	0.000	0.00	0	0.000	0.00	20	0.001	1.48	20
Stream 16	STA 366+50 to 377+00	Embankment/grading, scour protection + TAF	1876	6	0.5	60	0.008	6.67	0	0.000	0.00	1,646	0.227	182.89	0	0.000	0.00	1,706	0.235	189.56	160	0.022	17.78	1,746
Stream 16a	STA 364+80 to 374+00	Embankment/grading + TAF	1075	4	0.5	0	0.000	0.00	0	0.000	0.00	1,075	0.099	79.63	0	0.000	0.00	1,075	0.099	79.63	70	0.006	5.19	1,075
Stream 16a1	STA 363+25 to 365+25	Embankment/grading	230	3	0.5	0	0.000	0.00	0	0.000	0.00	230	0.016	12.78	0	0.000	0.00	230	0.016	12.78	0	0.000	0.00	230
Stream 17	STA 379+75 to 385.75	Embankment/grading, scour protection + TAF	776	2	0.5	0	0.000	0.00	10	0.000	0.37	766	0.035	28.37	0	0.000	0.00	776	0.036	28.74	50	0.002	1.85	776
Stream 18	STA 69+69L of SR 775	scour protection	244	2	0.5	0	0.000	0.00	5	0.001	0.19	0	0.000	0.00	0	0.000	0.00	5	0.001	0.19	0	0.000	0.00	5
Symmes Creek 2	STA 134+00	Piers (new bridge) + TAF	400	90	10	50	0.002	360.00	0	0.000	0.00	0	0.000	0.00	0	0.000	0.00	50	0.002	360.00	100	0.200	1,807.41	100
Symmes Creek 3	STA 200+50	Piers (new bridge), grading + TAF	475	75	8	35	0.004	185.00	0	0.000	0.00	35	0.004	35.00	0	0.000	0.00	35	0.008	220.00	100	0.220	1,444.44	100
Bear Creek	STA 299+00	Embankment/grading, scour protection + TAF	147	14	2.5	0	0.000	0.00	16	0.001	3.00	25	0.008	33.00	0	0.000	0.00	41	0.009	36.00	20	0.001	3.70	41
Bent Creek	STA 270+00 to 274+75	New culvert, embankment/ grading, scour protection + TAF	1421	13	2	45	0.013	44.00	10	0.002	10.00	1,140	0.340	1097.00	50	0.013	48.00	1,245	0.368	1199.00	210	0.062	202.00	1,245
Indian Guyan Creek	STA 299+40	Piers (new bridge), scour protection, grading + TAF	368	44	4	50	0.005	74.00	58	0.004	20.30	58	0.002	8.70	0	0.000	0.00	58	0.011	103.00	100	0.111	488.00	100
Little Paddy Creek	STA 378+50	TAF	1996	13	3	0	0.000	0.00	0	0.000	0.00	0	0.000	0.00	0	0.000	0.00	0	0.000	0.00	180	0.049	260.00	180
Little Paddy Creek – Ramp I	STA 378+00	TAF	1996	13	3	0	0.000	0.00	0	0.000	0.00	0	0.000	0.00	0	0.000	0.00	0	0.000	0.00	85	0.025	122.00	85
					SUM:	327	0.043	681.38	485	0.054	83.95	18,445	2.245	3,173.23	272	0.041	93.56	19,387	2.382	4,032.29	2,893	0.885	4,577.88	20,227

LF = linear feet; AC = acres; CY = cubic yards; TAF= Temporary Access Fill; RCP = rock channel protection or the like; DEP = Ditch Erosion Protection; NA = Not Applicable

Combined 404/401 Individual Permit
LAW-SR 7-2.17 (Phases 2A and 2B), PID 75923
10/21/2023

TABLE E. WETLAND DISCHARGE AND FILL QUANTITIES

Wetland	Station	Description of Impacts	Acreage (AC)	Depth (LF)	Permanent Fill Within Wetland Boundary								Total Permanent Fill		Total Impact Acreage
					Proposed Concrete (Includes Culvert, Piers, Walls, Abutments, etc.)		Proposed RCP or DEP		Proposed Earthen, Granular, or Embankment Fill		Proposed Other (Steel, Etc.)				
					Area (AC)	Volume (CY)	Area (AC)	Volume (CY)	Area (AC)	Volume (CY)	Area (AC)	Volume (CY)	Area (AC)	Volume (CY)	Area (AC)
Wetland A	STA 117+90 to 120+40	Embankment/grading, scour protection, new culvert	0.79	1	0.001	1.61	0.026	41.95	0.082	132.29	0.001	1.61	0.11	177.47	0.11
Wetland B	STA 125+25 to 126+60	Embankment/grading	0.12	1	0.000	0.00	0.000	0.00	0.120	193.60	0.000	0.00	0.12	193.60	0.12
Wetland C	STA 141+75	Embankment/grading	0.03	1	0.000	0.00	0.000	0.00	0.030	48.40	0.000	0.00	0.03	48.40	0.03
Wetland D	STA 145+90 to 149+50	Embankment/grading	1.77	1	0.000	0.00	0.000	0.00	0.070	112.93	0.000	0.00	0.07	112.93	0.07
Wetland E	STA 146+00 to 154+40	Embankment/grading, scour protection	0.71	1	0.000	0.00	0.032	51.63	0.558	900.24	0.000	0.00	0.59	951.87	0.59
Wetland F	STA 203+50 to 204+50	Embankment/grading, scour protection	0.55	1	0.000	0.00	0.020	32.26	0.530	855.07	0.000	0.00	0.55	887.33	0.55
Wetland G	STA 216+50 to 217+15	Excavation/grading	0.01	1	0.000	0.00	0.000	0.00	0.010	16.13	0.000	0.00	0.01	16.13	0.01
Wetland H	STA 229+25	Embankment/grading, scour protection	0.1	1	0.001	1.61	0.000	0.00	0.099	159.72	0.000	0.00	0.10	161.33	0.10
Wetland I	STA 288+50 to 292+50	Embankment/grading	0.6	1	0.000	0.00	0.000	0.00	0.600	968.00	0.000	0.00	0.60	968.00	0.60
Wetland K	STA 316+50	Embankment/grading	0.02	1	0.000	0.00	0.000	0.00	0.020	32.27	0.000	0.00	0.02	32.27	0.02
Wetland L	STA 324+25 to 325+50	Embankment/grading	0.13	1	0.000	0.00	0.000	0.00	0.130	209.73	0.000	0.00	0.13	209.73	0.13
Wetland M	STA 326+50 to 328+50	Embankment/grading	0.26	1	0.000	0.00	0.000	0.00	0.210	338.80	0.000	0.00	0.21	338.80	0.21
Wetland N	STA 377+75 to 381+25	Embankment/grading, bridge constructon, culverts	4.78	1	0.120	183.00	0.640	1033.00	1.780	2882.00	0.000	0.00	2.54	4,098.00	2.54
Wetland P	SR 775 STA 62+00	Embankment/grading	0.06	1	0.000	0.00	0.000	0.00	0.060	96.80	0.000	0.00	0.06	96.80	0.06
Wetland Q	STA 389+25 to 396+40	Excavation/grading	0.27	1	0.000	0.00	0.000	0.00	0.130	209.73	0.000	0.00	0.13	209.73	0.13
Wetland R	STA 395+50	Embankment/grading	0.02	1	0.000	0.00	0.000	0.00	0.020	32.27	0.000	0.00	0.02	32.27	0.02
Wetland S	STA 397+50	Embankment/grading, scour protection	0.03	1	0.000	0.00	0.007	11.29	0.023	37.11	0.000	0.00	0.03	48.40	0.03
Wetland T	STA 318+50 to 319+50	Embankment/grading	0.34	1	0.000	0.00	0.000	0.00	0.180	290.40	0.000	0.00	0.18	290.40	0.18
				SUM:	0.122	186.23	0.725	1,170.13	4.652	7,515.50	0.001	1.61	5.50	8,873.47	5.50

LF = linear feet; AC = acres; CY = cubic yards; RCP = rock channel protection or the like; DEP = Ditch Erosion Protection; NA = Not Applicable

US Army Corps of Engineers
Huntington District

Permit Number: 2022-00165-OHR

Name of Permittee: Ohio Department of Transportation

Date of Issuance: December 2, 2024

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

Final Utility Note
LAW-7-2.17, PID 75923

Bidders are advised that the following utility facilities will not be cleared from the construction area at the time of award of contract. These utilities facilities will remain in place or be relocated within the construction limits of the project as set out below. All station locations are approximate and are based upon the proposed baselines of State Route 7 or the various side roads, as noted below and shown on the project construction plans.

AMERICAN ELECTRIC POWER (TRANSMISSION)

The company owns and operates an existing 138 kV overhead power transmission facility, known as the North Proctorville-East Huntington Line, consisting of existing towers located outside of the project construction limits, together with multiple connecting parallel overhead lines through the construction limits, which cross above the proposed baseline of State Route 7 near station 277+45. This existing overhead power transmission facility will remain in place and active during project construction.

The company also owns and operates an existing 138 kV overhead power transmission facility, known as the Darrah-North Proctorville Line, consisting of existing towers located outside of the project construction limits, together with multiple connecting parallel overhead lines through the construction limits, which cross above the proposed baseline of State Route 7 near station 406+75. This existing overhead power transmission facility will remain in place and active during project construction.

AMERICAN ELECTRIC POWER (DISTRIBUTION)

The company owns and operates multiple existing aerial power distribution facilities within and adjacent to the project construction limits, which will be relocated as follows:

	Pole Location		Disposition
SR 7	Station 161+53, 280 feet left		Remain
	Station 164+68, 304 feet left		Remain
	Station 166+25, 169 feet left		Remain
	Station 167+76, 105 feet left		Remain/Add Guys
	Station 168+22, 173 feet left	Service Pole	Remain
	Station 170+25, 64 feet left		Detach Lines
	Station 170+32, 89 feet left	Guy Pole	Remove Pole
	Station 171+80, 12 feet left		Detach Lines
	Station 173+15, 48 feet right	Light Pole	Remove Pole
	Station 173+74, 69 feet right		Remove Pole
	Station 175+16, 122 feet right		Remove Pole
	Station 194+66, 86 feet left	Service Pole	Remove Pole
	Station 195+19, 104 feet left	Frontier Pole	Detach
	Station 196+14, 60 feet left	Frontier Pole	Detach
	Station 196+21, 1 foot right	Frontier Pole	Detach
	Station 197+10, 31 feet right	Light Pole	Remove Pole
	Station 197+29, 355 feet left		Install
	Station 197+85, 344 feet left	Frontier Pole	Detach
	Station 197+85, 344 feet left		Install New 45’ Pole/Add Guys
	Station 253+59, 84 feet right	Service Pole	Detach
	Station 254+32, 14 feet right		Detach
	Station 255+69, 461 feet left	Service Pole	Remove Pole

AMERICAN ELECTRIC POWER (DISTRIBUTION), Cont.

	Pole Location		Disposition
SR 7	Station 256+80, 457 feet left	Buckeye Pole	Detach
	Station 256+92, 56 feet left		Detach
	Station 256+93, 421 feet left		Remove Pole
	Station 258+41, 712 feet left		Install
	Station 258+85, 41 feet left		Detach
	Station 259+16, 557 feet left		Install
	Station 259+27, 15 feet right	Guy Pole	Remove Pole
	Station 259+74, 453 feet left		Install
	Station 260+16, 97 feet right		Remove Pole
	Station 260+49, 17 feet left		Detach
	Station 260+36, 352 feet left		Install
	Station 262+28, 10 feet left		Detach
	Station 262+90, 390 feet left		Install
	Station 264+35, 433 feet left		Install
	Station 264+12, 2 feet left		Detach
	Station 265+26, 169 feet right		Install
	Station 265+74, 491 feet left		Install
	Station 265+84, 7 feet left		Detach
	Station 266+99, 59 feet right		Detach
	Station 267+16, 568 feet left		Install New 50’ Pole
	Station 268+49, 660 feet left		Install New 50’ Pole
	Station 268+34, 117 feet right	Frontier Pole	Detach
	Station 268+46, 31 feet left		Detach
	Station 269+02, 479 feet left		Install New 50’ Pole
	Station 269+65, 298 feet left		Install New 50’ Pole
	Station 271+02, 158 feet right		Remain
	Station 271+18, 163 feet right		Remain
	Station 271+33, 172 feet right		Remain
	Station 271+47, 180 feet right		Remain
	Station 273+73, 289 feet right		Remain
	Station 279+45, 465 feet left		Remain
	Station 280+03, 186 feet right	Service Pole	Install
	Station 280+57, 160 feet right	Frontier Pole	Detach
	Station 281+26, 351 feet left	Frontier Pole	Detach
	Station 281+26, 351 feet left		Install New 45’ Pole
	Station 281+37, 300 feet right	Service Pole	Install
	Station 281+83, 179 feet right	Frontier Pole	Detach
	Station 282+07, 309 feet right	Service Pole	Install
	Station 282+66, 331 feet left		Install
	Station 282+70, 281 feet left		Install New 50’ Pole w/UG
	Station 282+71, 250 feet left	Frontier Pole	Detach
	Station 282+82, 294 feet right		Install
	Station 283+01, 238 feet right		Install New 50’ Pole w/U/G
	Station 283+29, 200 feet right	Frontier Pole	Detach
	Station 283+66, 178 feet left	Frontier Pole	Detach
	Station 284+48, 22 feet right	Frontier Pole	Detach

AMERICAN ELECTRIC POWER (DISTRIBUTION), Cont.

	Pole Location		Disposition
SR 7	Station 285+31, 363 feet left		Install
	Station 287+53, 344 feet left		Install
	Station 287+87, 59 feet left	Frontier Pole	Detach
	Station 289+75, 324 feet left		Install
	Station 291+98, 305 feet left		Install
	Station 292+06, 161 feet left	Frontier Pole	Detach
	Station 294+20, 286 feet left		Install
	Station 296+42, 266 feet left	Frontier Pole	Detach
	Station 296+42, 266 feet left		Install New 45’ Pole
	Station 314+09, 284 feet left	Frontier Pole	Detach
	Station 385+44, 139 feet left		Install New 60’ Pole
	Station 385+63, 149 feet left	Brace Pole	Install
	Station 387+55, 210 feet right		Remain
	Station 426+32, 188 feet right		Remain
	Station 427+40, 167 feet left		Remain
SR 775	Station 61+00, 101 feet right		Install New 65’ Pole
	Station 61+14, 115 feet right	Brace Pole	Install
	Station 63+51, 154 feet left		Install New 70’ Pole
	Station 65+36, 85 feet left	Service Pole	Detach
	Station 65+45, 25 feet left		Detach
	Station 65+73, 193 feet left		Install
	Station 66+43, 30 feet left		Detach
	Station 66+96, 129 feet left	Service Pole	Remove Pole
	Station 67+39, 40 feet left		Detach
	Station 67+50, 171 feet left		Install
	Station 68+08, 82 feet right		Detach
	Station 68+87, 54 feet left		Detach
	Station 69+19, 67 feet left		Install New 60’ Pole
	Station 70+77, 31 feet left		Remain
	Station 70+87, 40 feet right	Service Pole	Remove Pole
	Station 70+93, 48 feet right		Install New 60’ Pole
Ramp K	Station 387+19, 187 feet left		Detach
	Station 388+03, 33 feet left		Detach
SR 243	Station 17+35, 330 feet right		Remain
	Station 18+76, 241 feet left		Remain
	Station 19+50, 44 feet left		Remove Pole
	Station 19+56, 172 feet right		Replace w/50’ Pole
	Station 19+58, 186 feet right	Brace Pole	Replace
	Station 19+58, 138 feet left		Install New 50’ Pole

The existing American Electric Power skewed overhead crossings of proposed State Route 7 at baseline stations 172+10, 196+20, 255+00, 259+10, 260+43, 265+95, 268+42, 284+40, 285+35 and 387+70 will be removed and will be replaced by new American Electric Power skewed overhead crossings of proposed State Route 7 to be constructed at baseline stations 261+67 and 386+31. The existing American Electric Power skewed overhead crossing of proposed State Route 7 at baseline station 426+92 will remain in place and active during project construction.

AMERICAN ELECTRIC POWER (DISTRIBUTION), Cont.

The existing American Electric Power skewed overhead crossings of proposed County Road 69 at centerline stations 16+35, 42+80 and 50+82 will be removed and will be replaced by a new American Electric Power skewed overhead crossing of proposed County Road 69 to be constructed at centerline station 19+87.

The existing American Electric Power skewed overhead crossings of proposed Ramp J at baseline stations 387+72 and 390+90, Ramp K at baseline station 388+22 and Ramp L at baseline station 387+38 will be removed. New skewed overhead crossings of Ramps J and L will be constructed at stations 385+82 and 386+90, respectively.

The existing American Electric Power skewed overhead crossings of proposed State Route 775 at centerline stations 69+43 and 70+82 will be removed and will be replaced by new American Electric Power skewed overhead crossings of proposed State Route 775 to be constructed at centerline stations 62+00, 70+40, 70+83 and 71+90.

The existing American Electric Power skewed overhead crossing of proposed State Route 243 at centerline station 19+51 will be removed and will be replaced by a new American Electric Power skewed overhead crossing of proposed State Route 243 to be constructed at centerline station 19+57.

All new American Electric Power overhead road crossings will provide a minimum of 23 feet of vertical clearance between the proposed pavement and the lowest conductor.

The company also owns and operates multiple existing underground electric distribution facilities within and adjacent to the project construction limits, which are located as follow:

The first existing underground electric distribution facility enters the project construction limits at State Route 7 station 164+67, 183 feet right and continues northwardly, along the west side of existing Birch Lane to an existing splice box at station 164+67, 94 feet right, turns and continues eastwardly, crossing Birch Lane, to an existing splice box at station 165+95, 147 feet right and continues to exit the construction limits at station 166+48, 173 feet right.

This first existing underground electric distribution facility will be abandoned in place throughout the entirety of the project construction limits and may be severed wherever encountered within those limits. The existing splice boxes will be removed.

The second existing underground electric distribution facility is a service line to the existing residence at 185 Woodland Drive, which begins at the existing pole at State Route 7 station 175+16, 122 feet right and continues southwardly, outside of the project construction limits, to exit the Limited Access right of way at station 174+95, 190 feet right.

This second existing underground electric distribution facility will be abandoned in place and may be severed wherever encountered within those limits. Electric service to the residence will be re-established from outside of the project construction limits.

The company will also install a new underground electric distribution facility in a 6-inch conduit, through the project construction limits, which will begin at the proposed pole at State Route 7 station 269+65, 298 feet left and continue southwardly, by directional bore, crossing the proposed baseline of State Route 7 at station 270+25 to end at the existing pole at station 271+02, 158 feet right. This new underground facility will be installed at a minimum depth of 5 feet below all grades required by the project.

AMERICAN ELECTRIC POWER (DISTRIBUTION), Cont.

The company will also install a new underground electric distribution facility in a 3-inch conduit, through the project construction limits, which will begin at the proposed pole at State Route 7 station 283+01, 238 feet right and continue northwardly, by directional bore, crossing the proposed baseline of State Route 7 at station 282+88 and the proposed centerline of County Road 69 at station 41+87, to end at the proposed pole at station 282+70, 281 feet left. This new underground facility will be installed at a minimum depth of 5 feet below all grades required by the project.

American Electric Power will have their relocation work completed from State Route 7 stations 160+00 through 200+00, from stations 253+00 through 272+00, including the adjacent portions of State Route 243 and County Roads 69 and 118, by April 1st, 2025. American Electric Power will have their relocation work completed from State Route 243 stations 18+00 through 21+00 by April 1st, 2025. American Electric Power will have their relocation work completed from State Route 7 stations 272+00 through 315+00, including the adjacent portions of County Roads 2 and 69, by July 1st, 2025. American Electric Power will have their relocation work completed from State Route 7 stations 366+00 through 436+00 and from State Route 775 stations 45+00 through 71+00 by July 1st, 2025.

The contact person for American Electric Power is Mr. Clarke Saunders, 740-985-3054.

BUCKEYE RURAL ELECTRIC CO-OPERATIVE, INC.

The company owns and operates multiple existing aerial power distribution facilities within and adjacent to the project construction limits, which will be relocated as follows:

	Pole Location		Disposition
SR 7	Station 173+35, 52 feet left	Abandoned Pole	Remove Pole
	Station 175+00, 26 feet left		Detach
	Station 177+01, 5 feet right		Detach
	Station 178+50, 31 feet left		Detach
	Station 179+47, 123 feet right	Service Pole	Remove Pole
	Station 180+37, 68 feet left		Detach
	Station 181+90, 86 feet left		Detach
	Station 182+18, 203 feet right	Service Pole	Remove Pole
	Station 183+09, 262 feet right	Abandoned Pole	Remove Pole
	Station 183+52, 34 feet right		Detach
	Station 185+72, 220 feet right		Detach
	Station 192+92, 305 feet right		Remain
	Station 193+38, 124 feet right	Service Pole	Remove Pole
	Station 194+37, 173 feet right		Remain
	Station 196+30, 165 feet right		Install
	Station 198+25, 215 feet right		Install
	Station 199+45, 112 feet right		Remove Pole
	Station 199+85, 250 feet right		Install
	Station 200+20, 277 feet right		Remove Pole
	Station 202+78, 47 feet left		Remove Pole
	Station 203+90, 340 feet left		Remain
	Station 204+72, 284 feet left		Remain

BUCKEYE RURAL ELECTRIC CO-OPERATIVE, INC., Cont.

	Pole Location		Disposition
SR 7	Station 205+38, 15 feet right		Detach
	Station 205+73, 223 feet right		Remain
	Station 207+10, 140 feet right	Service Pole	Install
	Station 207+62, 102 feet right	Service Pole	Detach
	Station 208+43, 52 feet right		Detach
	Station 209+43, 458 feet left		Remain
	Station 210+22, 190 feet left		Install New 55’ Pole w/U/G
	Station 210+32, 162 feet left		Detach
	Station 210+43, 64 feet right		Detach
	Station 211+53, 66 feet right		Detach
	Station 212+18, 175 feet right		Install New 55’ Pole w/U/G
	Station 212+53, 255 feet right	Service Pole	Detach
	Station 214+10, 57 feet right		Remove Pole
	Station 217+55, 269 feet right		Remove Pole
	Station 217+67, 50 feet right		Remove Pole
	Station 218+62, 300 feet right		Install
	Station 220+26, 383 feet right	Service Pole	Remove Pole
	Station 220+32, 415 feet right		Install New 65’ Pole
	Station 221+61, 40 feet right		Remove Pole
	Station 221+66, 99 feet left		Install New 65’ Pole
	Station 224+20, 109 feet left		Install
	Station 224+22, 35 feet right		Remove Pole
	Station 226+58, 128 feet left		Remain
	Station 231+38, 215 feet left		Remain
	Station 231+42, 155 feet right		Detach
	Station 231+75, 238 feet right	Service Pole	Detach
	Station 231+98, 97 feet left	Service Pole	Remove Pole
	Station 232+12, 55 feet left	Service Pole	Remove Pole
	Station 232+56, 162 feet right		Detach
	Station 233+00, 260 feet left		Remain
	Station 233+42, 218 feet right		Remove Pole
	Station 234+00, 142 feet left	Service Pole	Remove Pole
	Station 234+27, 185 feet right		Remove Pole
	Station 235+10, 173 feet left		Remain
	Station 235+36, 10 feet left	Service Pole	Remove Pole
	Station 235+36, 115 feet right	Service Pole	Remove Pole
	Station 236+78, 292 feet left		Remain
	Station 238+10, 380 feet left		Remain
	Station 246+76, 470 feet left		Remain
	Station 247+62, 463 feet left		Install
	Station 248+00, 395 feet left		Install
	Station 248+35, 125 feet left		Install New 60‘ Pole
	Station 248+39, 205 feet right		Install New 60’ Pole
	Station 248+67, 450 feet left		Remove Pole
	Station 250+30, 436 feet left		Remove Pole

BUCKEYE RURAL ELECTRIC CO-OPERATIVE, INC., Cont.

	Pole Location		Disposition
SR 7	Station 251+10, 277 feet right		Install
	Station 252+97, 420 feet left		Remove Pole
	Station 254+35, 350 feet right		Install
	Station 255+38, 370 feet left		Remove Pole
	Station 256+55, 453 feet left		Remove Pole
	Station 256+80, 457 feet left		Remove Pole
	Station 258+68, 517 feet left		Remove Pole
	Station 258+73, 310 feet right		Install
	Station 259+16, 557 feet left	New AEP Pole	Attach
	Station 259+73, 453 feet left		Remain
	Station 260+36, 352 feet left	New AEP Pole	Attach
	Station 261+78, 141 feet right		Install

The existing Buckeye Rural Electric Co-operative, Inc. skewed overhead crossings of proposed State Route 7 at baseline stations 175+05, 176+68, 177+13, 178+66, 181+95, 183+10, 201+90, 204+62, 211+18, 224+68 and 231+40 will be removed and will be replaced by new Buckeye Rural Electric Co-operative, Inc. skewed overhead crossings of proposed State Route 7 to be constructed at baseline stations 221+40 and 248+37, together with a joint American Electric Power crossing at station 261+67.

The existing Buckeye Rural Electric Co-operative, Inc. skewed overhead crossing of proposed State Route 243 at centerline station 13+92 will be removed.

The existing Buckeye Rural Electric Co-operative, Inc. skewed overhead crossing of proposed County Road 69 at centerline station 12+10 will be removed and will be replaced by a new Buckeye Rural Electric Co-operative, Inc. skewed overhead crossing of proposed County Road 69 to be constructed jointly with American Electric Power at centerline station 19+87.

All new Buckeye Rural Electric Co-Operative, Inc. overhead road crossings will provide a minimum of 25 feet of vertical clearance between the proposed pavement and the lowest conductor.

The company will also install a new underground electric distribution facility, a 6-inch conduit in an 8-inch casing, through the project construction limits, which will begin at the proposed pole at State Route 7 station 210+22, 190 feet left and continue southeastwardly, crossing the proposed baseline of State Route 7 at station 211+28, to end at the proposed pole at station 212+18, 175 feet right. This underground facility will be installed at a minimum depth of 6 feet below the existing ground elevation.

The relocated Buckeye Rural Electric Co-Operative, Inc. overhead electric distribution lines crossing the proposed baseline of State Route 7 at station 221+40 can be temporarily de-energized during construction of the proposed noise barrier. If necessary, the project contractor shall contact and provide the company with a minimum of one months' prior notice to coordinate the needed outages.

Buckeye Rural Electric Co-operative, Inc. will have their relocation work completed from State Route 7 stations 160+00 through 200+00 completed by April 1st, 2025. Buckeye Rural Electric Co-operative, Inc. will have their relocation work completed from State Route 7 stations 200+00 through 253+00 completed by July 1st, 2025.

BUCKEYE RURAL ELECTRIC CO-OPERATIVE, INC., Cont.

Buckeye Rural Electric Co-operative, Inc. cannot complete their relocation work from State Route 7 stations 253+00 through 272+00 and the adjacent portion of State Route 243 until American Electric Power has completed their relocation work in these areas. Upon notification that the American Electric Power relocation work in these areas has been completed, Buckeye Rural Electric Co-operative, Inc. will require an additional 60 calendar days to complete these portions of their relocation work.

The contact person for Buckeye Rural Electric Co-operative, Inc. is Mr. Weston Clary, 740-379-9659.

FRONTIER COMMUNICATIONS

The company owns and operates multiple existing aerial telecommunication facilities within and adjacent to the project construction limits, in part, in joint use on existing American Electric Power and Buckeye Rural Electric Co-Operative, Inc. owned poles, which will be relocated as follows:

	Pole Location		Disposition
SR 7	Station 161+53, 280 feet left	AEP Pole	Remain
	Station 164+68, 304 feet left	AEP Pole	Detach
	Station 164+97, 102 feet right	Frontier Pole	Remove Pole
	Station 165+25, 248 feet left	Frontier Pole	Remove Pole
	Station 166+25, 169 feet left	AEP Pole	Detach
	Station 167+76, 105 feet left	AEP Pole	Detach
	Station 168+61, 80 feet left	Armstrong Pole	Remove Pole
	Station 170+25, 64 feet left	AEP Pole	Remove Pole
	Station 171+80, 12 feet left	AEP Pole	Remove Pole
	Station 175+00, 26 feet left	BREC Pole	Remove Pole
	Station 177+01, 5 feet right	BREC Pole	Remove Pole
	Station 178+50, 31 feet left	BREC Pole	Remove Pole
	Station 180+37, 68 feet left	BREC Pole	Remove Pole
	Station 181+90, 86 feet left	BREC Pole	Remove Pole
	Station 183+52, 34 feet right	BREC Pole	Remove Pole
	Station 185+72, 220 feet right	BREC Pole	Remove Pole
	Station 192+58, 198 feet right	Frontier Pole	Remove Pole
	Station 192+92, 305 feet right	BREC Pole	Remain
	Station 194+37, 173 feet right	BREC Pole	Detach
	Station 195+19, 104 feet left	Frontier Pole	Remove Pole
	Station 196+14, 60 feet left	Frontier Pole	Remove Pole
	Station 196+21, 1 feet right	Frontier Pole	Remove Pole
	Station 197+85, 344 feet left	Frontier Pole	Remove Pole
	Station 203+90, 340 feet left	BREC Pole	Remain
	Station 204+10, 295 feet left	Frontier Pole	Remain
	Station 204+34, 158 feet left	Frontier Pole	Remove Pole
	Station 205+03, 48 feet right	Frontier Pole	Remove Pole
	Station 205+38, 15 feet right	BREC Pole	Remove Pole
	Station 206+53, 290 feet right	BREC Pole	Remain
	Station 207+62, 102 feet right	BREC Pole	Remove Pole

FRONTIER COMMUNICATIONS, Cont.

	Pole Location		Disposition
SR 7	Station 208+43, 52 feet right	BREC Pole	Remove Pole
	Station 209+43, 458 feet left	BREC Pole	Detach
	Station 210+30, 22 feet left	Frontier Pole	Remove Pole
	Station 210+32, 162 feet left	BREC Pole	Remove Pole
	Station 210+43, 64 feet right	BREC Pole	Remove Pole
	Station 211+53, 66 feet right	BREC Pole	Remove Pole
	Station 212+53, 255 feet right	BREC Pole	Remove Pole
	Station 218+65, 354 feet right	Frontier Pole	Remain
	Station 220+17, 290 feet right	Frontier Pole	Remove Pole
	Station 223+22, 192 feet right	Frontier Pole	Remove Pole
	Station 226+07, 184 feet right	Frontier Pole	Remove Pole
	Station 228+47, 190 feet right	Frontier Pole	Remove Pole
	Station 231+42, 155 feet right	BREC Pole	Remove Pole
	Station 231+75, 238 feet right	BREC Pole	Remove Pole
	Station 231+83, 60 feet right	Frontier Pole	Remove Pole
	Station 232+56, 162 feet right	BREC Pole	Remove Pole
	Station 233+62, 33 feet right	Frontier Pole	Remove Pole
	Station 235+40, 30 feet right	Frontier Pole	Remove Pole
	Station 238+16, 17 feet right	Frontier Pole	Remove Pole
	Station 240+67, 8 feet left	Frontier Pole	Remove Pole
	Station 242+90, 4 feet left	Frontier Pole	Remove Pole
	Station 246+32, 21 feet right	Frontier Pole	Remove Pole
	Station 250+28, 48 feet right	Frontier Pole	Remove Pole
	Station 253+59, 84 feet right	AEP Pole	Remove Pole
	Station 254+32, 14 feet right	AEP Pole	Remove Pole
	Station 255+08, 257 feet left	Frontier Pole	Remove Pole
	Station 256+31, 32 feet left	Frontier Pole	Remove Pole
	Station 256+92, 56 feet left	AEP Pole	Remove Pole
	Station 258+41, 712 feet left	New AEP Pole	Attach
	Station 258+64, 7 feet right	Frontier Pole	Remove
	Station 258+85, 41 feet left	AEP Pole	Remove Pole
	Station 259+16, 557 feet left	New AEP Pole	Attach
	Station 259+74, 423 feet left	New AEP Pole	Attach
	Station 260+36, 352 feet left	New AEP Pole	Attach
	Station 260+49, 17 feet left	AEP Pole	Remove Pole
	Station 260+63, 15 feet right	Frontier Pole	Remove Pole
	Station 262+28, 10 feet left	AEP Pole	Remove Pole
	Station 262+91, 390 feet left	New AEP Pole	Attach
	Station 262+38, 32 feet right	Frontier Pole	Remove Pole
	Station 263+72, 38 feet right	Frontier Pole	Remove Pole
	Station 264+12, 2 feet left	AEP Pole	Remove Pole
	Station 264+35, 433 feet left	New AEP Pole	Attach
	Station 265+74, 491 feet left	New AEP Pole	Attach
	Station 265+84, 7 feet left	AEP Pole	Remove Pole
	Station 266+99, 59 feet right	AEP Pole	Remove Pole

FRONTIER COMMUNICATIONS, Cont.

	Pole Location		Disposition
SR 7	Station 267+16, 568 feet left	New AEP Pole	Attach
	Station 268+34, 117 feet right	Frontier Pole	Remove Pole
	Station 268+40, 112 feet right	Frontier Pole	Remove Pole
	Station 268+46, 31 feet left	AEP Pole	Remove Pole
CR 118	Station 11+00, 60 feet right		Install New 50’ Pole
	Station 11+14, 12 feet right	Frontier Pole	Remove Pole
	Station 11+19, 18 feet right	Frontier Pole	Remove Pole
	Station 13+90, 33 feet right	Frontier Pole	Remain
SR 7	Station 269+33, 140 feet right	Frontier Pole	Replace w/New 50’ Pole
	Station 271+03, 215 feet right	Frontier Pole	Remain
	Station 273+40, 317 feet right	Frontier Pole	Remain
	Station 279+45, 465 feet left	AEP Pole	Remain
	Station 280+57, 160 feet right	FTR Pole	Remove Pole
	Station 281+26, 351 feet left	New AEP Pole	Attach
	Station 281+26, 351 feet left	Frontier Pole	Remove Pole
	Station 281+83, 179 feet right	Frontier Pole	Remove Pole
	Station 282+66, 331 feet left	New AEP Pole	Attach
	Station 282+70, 281 feet left	New AEP Pole	Attach w/U/G
	Station 282+71, 250 feet left	Frontier Pole	Remove Pole
	Station 282+82, 294 feet right	New AEP Pole	Attach
	Station 283+01, 238 feet right	New AEP Pole	Attach
	Station 283+29, 200 feet right	Frontier Pole	Remove Pole
	Station 283+66, 178 feet left	Frontier Pole	Remove Pole
	Station 284+48, 22 feet right	Frontier Pole	Remove Pole
	Station 285+31, 363 feet left	New AEP Pole	Attach
	Station 287+53, 344 feet left	New AEP Pole	Attach
	Station 287+87, 59 feet left	Frontier Pole	Remove Pole
	Station 289+75, 324 feet left	New AEP Pole	Attach
	Station 291+98, 305 feet left	New AEP Pole	Attach
	Station 292+06, 161 feet left	Frontier Pole	Remove Pole
	Station 294+20, 286 feet left	New AEP Pole	Attach
	Station 296+42, 266 feet left	New AEP Pole	Attach
	Station 296+42, 266 feet left	Frontier Pole	Remove Pole
	Station 314+09, 284 feet left	Frontier Pole	Remove Pole
	Station 385+44, 139 feet left	New AEP Pole	Attach
	Station 387+55, 210 feet right	AEP Pole	Remain
	Station 387+87, 153 feet left	Frontier Pole	Remove Pole
	Station 426+32, 188 feet right	AEP Pole	Remain
	Station 426+60, 158 feet left	Frontier Pole	Remain
SR 775	Station 61+00, 101 feet right	New AEP Pole	Attach
	Station 63+51, 154 feet left	New AEP Pole	Attach
	Station 65+36, 85 feet left	AEP Pole	Remove Pole
	Station 65+45, 25 feet left	AEP Pole	Remove Pole
	Station 65+73, 193 feet left	New AEP Pole	Attach

FRONTIER COMMUNICATIONS, Cont.

	Pole Location		Disposition
SR 775	Station 66+43, 30 feet left	AEP Pole	Remove Pole
	Station 67+39, 40 feet left	AEP Pole	Remove Pole
	Station 67+50, 171 feet left	New AEP Pole	Attach
	Station 68+08, 82 feet right	AEP Pole	Remove Pole
	Station 68+87, 54 feet left	AEP Pole	Remove Pole
	Station 69+19, 67 feet left	New AEP Pole	Attach
	Station 70+77, 31 feet left	AEP Pole	Remain
	Station 70+93, 48 feet right	New AEP Pole	Attach
Ramp K	Station 387+19, 187 feet left	AEP Pole	Remove Pole
	Station 388+03, 33 feet left	AEP Pole	Remove Pole
SR 243	Station 15+25, 123 feet right	Frontier Pole	Remove Pole
	Station 16+42, 92 feet right	Frontier Pole	Remove Pole
	Station 16+87, 5 feet right	Frontier Pole	Remove Pole
	Station 17+35, 330 feet right	AEP Pole	Attach
	Station 18+47, 20 feet left	Frontier Pole	Remove Pole
	Station 19+40, 75 feet right		Install
	Station 19+56, 172 feet right	New AEP Pole	Attach
	Station 21+17, 27 feet left	Frontier Pole	Remove Pole
	Station 21+70, 45 feet right		Install
	Station 21+70, 33 feet left		Install

The existing Frontier skewed overhead crossings of proposed State Route 7 at baseline stations 165+42, 176+68, 177+13, 183+10, 196+20, 204+85, 209+73, 210+33, 239+90, 243+70, 255+00, 258+00, 258+67, 260+55, 265+95, 268+44, 284+40, 285+35 and 387+70 will be removed and will be replaced by new Frontier skewed overhead crossings of proposed State Route 7 to be constructed at baseline stations 261+67, 269+10 and 386+31. The existing Frontier skewed overhead crossing of proposed State Route 7 at baseline station 426+50 will remain in place and active during project construction.

The existing Frontier skewed overhead crossings of proposed County Road 69 at centerline stations 11+80, 27+55, 42+80 and 50+82 will be removed and will be replaced by new Frontier skewed overhead crossings of proposed County Road 69 to be constructed at centerline stations 19+87 and 27+95.

The existing Frontier skewed overhead crossings of proposed Ramp J at baseline stations 387+72 and 390+90, Ramp K at baseline station 388+22 and Ramp L at baseline station 387+38 will be removed and will be replaced by new Frontier skewed overhead crossings of Ramps J and L to be constructed at stations 385+82 and 386+90, respectively.

The existing Frontier skewed overhead crossings of proposed State Route 775 at centerline stations 69+43 and 70+82 will be removed and will be replaced by new Frontier skewed overhead crossings of proposed State Route 775 to be constructed at centerline stations 62+00, 70+40 and 70+83.

The existing Frontier skewed overhead crossings of proposed State Route 243 at centerline station 18+05 will be removed and will be replaced by a new Frontier skewed overhead crossing of proposed State Route 243 to be constructed at centerline station 21+70.

FRONTIER COMMUNICATIONS, Cont.

All new overhead road crossings will provide a minimum of 17 feet of vertical clearance between the proposed pavement and the lowest conductor.

The company also owns and operates an existing underground telecommunication facility within the project construction limits, which begins at the existing pole and pedestal, on the east side of existing Birch Lane, at State Route 7 station 164+97, 102 feet right and continues eastwardly, to an existing pedestal at station 165+92, 143 feet right and continues to exit the construction limits at station 166+48, 173 feet right.

This existing underground telecommunication facility will be abandoned in place throughout the entirety of the project construction limits and may be severed wherever encountered within those limits. The existing pedestals will be removed.

Frontier Communications needs to maintain the continuity of their existing telecommunication facilities through the project construction limits along existing County Road 32 (Eaton Road) and will be relocating their facilities through this area as follows:

The company will install a new underground 32 pair copper telecommunication facility along the east side of existing County Road 32, through the project construction limits, which will begin at the existing Buckeye Rural Electric pole at State Route 7 station 206+53, 290 feet right (County Road 32 station 8+60, 17 feet right) and continue northwardly, to enter the construction limits at station 9+40, 18 feet right, continue to station 10+00, 22 feet right, continue to station 11+00, 23 feet right, continue, crossing the proposed baseline of State Route 7 at station 205+25, to station 12+88, 23 feet right and continue to end at the existing Frontier pole at station 14+90, 23 feet right (State Route 7 station 204+10, 290 feet left), from where the facility will continue aerially.

This new underground facility will be installed at a minimum depth of 3 feet below all grades required by the project.

Frontier Communications also needs to maintain the continuity of their existing telecommunication facilities through the project construction limits along existing County Road 2 (Greasy Ridge Road) and will be relocating their facilities through this area as follows:

The company will also install a new underground copper telecommunication facility through the project construction limits, which will begin at the proposed American Electric Power pole at State Route 7 station 283+01, 238 feet right and continue northwardly, by directional bore, crossing the proposed baseline of State Route 7 at station 282+88 and the proposed centerline of County Road 69 at station 41+87, to end at the proposed American Electric Power pole at station 282+70, 281 feet left, from where the facility will continue aerially.

This new underground facility will be installed at a minimum depth of 5 feet below all grades required by the project.

Frontier Communications will have their relocation work completed from State Route 7 stations 160+00 through 200+00 completed by May 1st, 2025. Frontier Communications will have their relocation work completed from State Route 7 stations 200+00 through 253+00 completed by August 1st, 2025. Frontier Communications cannot complete their relocation work from State Route 7 stations 253+00 through 272+00 and along State Route 243 until both American Electric Power and Buckeye Rural Electric Co-operative, Inc. have completed their relocation work in these areas. Upon notification that the American Electric Power and Buckeye Rural Electric Co-operative, Inc. relocation work in these areas has been completed, Frontier Communications will require an

FRONTIER COMMUNICATIONS, Cont.

additional 30 calendar days to complete this portion of their relocation work. Frontier Communications cannot complete their relocation work from State Route 7 stations 272+00 through 315+00, from State Route 7 stations 366+00 through 436+00 and from State Route 775 stations 45+00 through 71+00 until American Electric Power has completed their relocation work in these areas. Upon notification that the American Electric Power relocation work in these areas has been completed, Frontier Communications will require an additional 60 calendar days to complete these portions of their relocation work.

The contact person for Frontier Communications is Ms. Dena Martin, 740-354-0521.

ARMSTRONG CABLE SERVICES

The company owns and operates multiple existing aerial telecommunication facilities within and adjacent to the project construction limits, in joint use on existing American Electric Power, Buckeye Rural Electric Co-Operative, Inc. and Frontier Communications owned poles, which will be relocated as follows:

	Pole Location		Disposition
SR 7	Station 161+53, 280 feet left	AEP Pole	Remain
	Station 164+68, 304 feet left	AEP Pole	Remain
	Station 164+97, 102 feet right	Frontier Pole	Detach
	Station 166+25, 169 feet left	AEP Pole	Detach
	Station 167+76, 105 feet left	AEP Pole	Detach
	Station 168+61, 80 feet left	Armstrong Pole	Detach
	Station 170+25, 64 feet left	AEP Pole	Detach
	Station 171+80, 12 feet left	AEP Pole	Detach
	Station 173+74, 69 feet right	AEP Pole	Detach
	Station 175+00, 26 feet left	BREC Pole	Detach
	Station 175+16, 122 feet right	AEP Pole	Detach
	Station 177+01, 5 feet right	BREC Pole	Detach
	Station 178+50, 31 feet left	BREC Pole	Detach
	Station 179+47, 123 feet right	BREC Pole	Detach
	Station 180+37, 68 feet left	BREC Pole	Detach
	Station 181+90, 86 feet left	BREC Pole	Detach
	Station 183+52, 34 feet right	BREC Pole	Detach
	Station 185+72, 220 feet right	BREC Pole	Detach
	Station 192+92, 305 feet right	BREC Pole	Remain
	Station 194+37, 173 feet right	BREC Pole	Remain
	Station 195+19, 104 feet left	AEP Pole	Detach
	Station 196+14, 60 feet left	AEP Pole	Detach
	Station 196+30, 165 feet right	New BREC Pole	Attach
	Station 197+85, 344 feet left	Frontier Pole	Detach
	Station 198+25, 215 feet right	New BREC Pole	Attach
	Station 199+45, 112 feet right	BREC Pole	Detach
	Station 199+85, 250 feet right	New BREC Pole	Attach
	Station 200+20, 277 feet right	BREC Pole	Detach
	Station 202+78, 47 feet left	BREC Pole	Detach

ARMSTRONG CABLE SERVICES, Cont.

	Pole Location		Disposition
SR 7	Station 203+90, 340 feet left	BREC Pole	Remain
	Station 205+38, 15 feet right	BREC Pole	Detach
	Station 205+73, 223 feet right	BREC Pole	Remain
	Station 207+10, 140 feet right	New BREC Pole	Attach
	Station 207+62, 102 feet right	BREC Pole	Detach
	Station 208+43, 52 feet right	BREC Pole	Detach
	Station 209+43, 458 feet left	BREC Pole	Detach
	Station 210+22, 190 feet left	New BREC Pole	Attach
	Station 210+30, 22 feet left	Frontier Pole	Detach
	Station 210+32, 162 feet left	BREC Pole	Detach
	Station 210+43, 64 feet right	BREC Pole	Detach
	Station 211+53, 66 feet right	BREC Pole	Detach
	Station 212+18, 175 feet right	New BREC Pole	Attach
	Station 212+53, 255 feet right	BREC Pole	Detach
	Station 217+55, 269 feet right	BREC Pole	Detach
	Station 218+65, 354 feet right	Frontier Pole	Remain
	Station 220+17, 290 feet right	Frontier Pole	Detach
	Station 220+26, 383 feet right	BREC Pole	Detach
	Station 223+22, 192 feet right	Frontier Pole	Detach
	Station 226+07, 184 feet right	Frontier Pole	Detach
	Station 228+47, 190 feet right	Frontier Pole	Detach
	Station 231+42, 155 feet right	BREC Pole	Detach
	Station 231+83, 60 feet right	Frontier Pole	Detach
	Station 233+62, 33 feet right	Frontier Pole	Detach
	Station 235+40, 30 feet right	Frontier Pole	Detach
	Station 238+16, 17 feet right	Frontier Pole	Detach
	Station 240+67, 8 feet left	Frontier Pole	Detach
	Station 242+90, 4 feet left	Frontier Pole	Detach
	Station 246+32, 21 feet right	Frontier Pole	Detach
	Station 250+28, 48 feet right	Frontier Pole	Detach
	Station 254+32, 14 feet right	AEP Pole	Detach
	Station 255+08, 257 feet left	Frontier Pole	Detach
	Station 256+31, 32 feet left	Frontier Pole	Detach
	Station 256+92, 56 feet left	AEP Pole	Detach
	Station 258+41, 712 feet left	New AEP Pole	Attach
	Station 258+85, 41 feet left	AEP Pole	Detach
	Station 259+16, 557 feet left	New AEP Pole	Attach
	Station 259+74, 453 feet left	New AEP Pole	Attach
	Station 260+49, 17 feet left	AEP Pole	Detach
	Station 260+36, 352 feet left	New AEP Pole	Attach
	Station 262+28, 10 feet left	AEP Pole	Detach
	Station 262+90, 390 feet left	New AEP Pole	Attach
	Station 264+35, 175 433 feet left	New AEP Pole	Attach
	Station 264+12, 2 feet left	AEP Pole	Detach
	Station 265+74, 491 feet left	New AEP Pole	Attach

ARMSTRONG CABLE SERVICES, Cont.

	Pole Location		Disposition
SR 7	Station 265+84, 7 feet left	AEP Pole	Detach
	Station 266+99, 59 feet right	AEP Pole	Detach
	Station 267+16, 568 feet left	New AEP Pole	Attach
	Station 268+34, 117 feet right	Frontier Pole	Detach
	Station 268+40, 112 feet right	Frontier Pole	Detach
	Station 268+46, 31 feet left	AEP Pole	Detach
	Station 269+65, 298 feet left	New AEP Pole	Attach
CR 118	Station 11+00, 60 feet right	New Frontier Pole	Attach
	Station 11+14, 12 feet right	Frontier Pole	Detach
	Station 13+90, 33 feet right	Frontier Pole	Remain
SR 7	Station 271+02, 158 feet right	AEP Pole	Remain
	Station 273+73, 289 feet right	AEP Pole	Remain
	Station 279+45, 465 feet left	AEP Pole	Remain
	Station 281+26, 351 feet left	Frontier Pole	Remain
	Station 282+66, 331 feet left	New AEP Pole	Attach
	Station 282+70, 281 feet left	New AEP Pole	Attach
	Station 282+71, 250 feet left	Frontier Pole	Detach
	Station 282+82, 294 feet right	New AEP Pole	Attach
	Station 283+01, 238 feet right	New AEP Pole	Attach
	Station 283+29, 200 feet right	Frontier Pole	Detach
	Station 283+66, 178 feet left	Frontier Pole	Detach
	Station 284+48, 22 feet right	Frontier Pole	Detach
	Station 385+44, 139 feet left	New AEP Pole	Attach
	Station 387+55, 210 feet right	AEP Pole	Remain
	Station 387+87, 153 feet left	Frontier Pole	Detach
SR 775	Station 61+00, 101 feet right	New AEP Pole	Attach
	Station 63+51, 154 feet left	New AEP Pole	Attach
	Station 65+45, 25 feet left	AEP Pole	Detach
	Station 65+73, 193 feet left	New AEP Pole	Attach
	Station 66+43, 30 feet left	AEP Pole	Detach
	Station 66+96, 129 feet left	AEP Pole	Detach
	Station 67+39, 40 feet left	AEP Pole	Detach
	Station 67+50, 171 feet left	New AEP Pole	Attach
	Station 68+08, 82 feet right	AEP Pole	Detach
	Station 68+87, 54 feet left	AEP Pole	Detach
	Station 69+19, 67 feet left	New AEP Pole	Attach
	Station 70+77, 31 feet left	AEP Pole	Remain
	Station 70+87, 40 feet right	AEP Pole	Detach
	Station 70+93, 48 feet right	New AEP Pole	Attach
Ramp K	Station 387+19, 187 feet left	AEP Pole	Detach
	Station 388+03, 33 feet left	AEP Pole	Detach
SR 243	Station 15+25, 123 feet right	Frontier Pole	Detach
	Station 16+42, 92 feet right	Frontier Pole	Detach
	Station 16+87, 5 feet right	Frontier Pole	Detach
	Station 17+35, 330 feet right	AEP Pole	Attach

ARMSTRONG CABLE SERVICES, Cont.

	Pole Location		Disposition
SR 243	Station 18+47, 20 feet left	Frontier Pole	Detach
	Station 19+56, 172 feet right	New AEP Pole	Attach
	Station 19+58, 138 feet left	New AEP Pole	Attach
	Station 21+17, 27 feet left	Frontier Pole	Detach

The existing Armstrong Cable Services skewed overhead crossings of proposed State Route 7 at baseline stations 165+42, 172+10, 176+68, 177+13, 178+66, 183+10, 195+70, 201+90, 204+62, 209+73, 210+33, 211+18, 231+95, 239+90, 255+00, 265+95, 268+44, 284+40 and 387+70 will be removed and will be replaced by new Armstrong skewed overhead crossings of proposed State Route 7 to be constructed at baseline stations 261+67, 269+10 and 386+31.

The existing Armstrong Cable Services skewed overhead crossings of proposed County Road 69 at centerline stations 11+80, 27+55 and 42+80 will be removed and will be replaced by new Armstrong skewed overhead crossings of proposed County Road 69 to be constructed at centerline stations 19+87 and 27+95.

The existing Armstrong Cable Services skewed overhead crossings of proposed Ramp J at baseline stations 387+72 and 390+90, Ramp K at baseline station 388+22 and Ramp L at baseline station 387+38 will be removed and will be replaced by new Armstrong skewed overhead crossings of Ramps J and L to be constructed at stations 385+82 and 386+90, respectively.

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The existing Armstrong Cable Services skewed overhead crossings of proposed State Route 775 at centerline stations 69+43 and 70+82 will be removed and will be replaced by new Armstrong skewed overhead crossings of proposed State Route 775 to be constructed at centerline stations 62+00, 70+40 and 70-83.

The existing Armstrong Cable Services skewed overhead crossings of proposed State Route 243 at centerline stations 16+88 and 18+05 will be removed and will be replaced by a new Armstrong skewed overhead crossing of proposed State Route 243 to be constructed at centerline station 19+57.

All new Armstrong Cable Services overhead road crossings will provide a minimum of 17 feet of vertical clearance between the proposed pavement and the lowest conductor.

The company also owns and operates multiple existing underground telecommunication facilities within and adjacent to the project construction limits, which are located as follow:

The first existing underground telecommunication facility enters the project construction limits at State Route 7 station 164+67, 183 feet right and continues northwardly, along the west side of existing Birch Lane to an existing splice box at station 164+67, 94 feet right, turns and continues eastwardly, crossing Birch Lane, to the existing Frontier pole on the east side of Birch Lane, at station 164+97, 102 feet right, from where existing Armstrong aerial facilities become buried and join with this underground facility and continue eastwardly, to an existing pedestal at station 165+92, 143 feet right and continues to exit the construction limits at station 166+48, 173 feet right.

This first existing underground telecommunication facility will be abandoned in place throughout the entirety of the project construction limits and may be severed wherever encountered within those limits. The existing splice box and pedestal will be removed.

ARMSTRONG CABLE SERVICES, Cont.

The second existing underground telecommunication facility is a service line to the existing residence at 185 Woodland Drive, which begins at the existing pole at State Route 7 station 175+16, 122 feet right and continues southwardly, outside of the project construction limits, to exit the Limited Access right of way at station 174+95, 190 feet right.

This second existing underground telecommunication facility will be abandoned in place and may be severed wherever encountered within those limits. Service to the residence will be re-established from outside of the project construction limits.

Armstrong Cable Services needs to maintain the continuity of their existing telecommunication facilities through the project construction limits across proposed State Route 7, near Dogwood Lane (TR 1347) and will be relocating their facilities through this area as follows:

The company will install a new underground telecommunication facility, in 4-inch conduit, through the project construction limits, which will begin at the proposed Buckeye pole at State Route 7 station 210+22, 190 feet left and continue southeastwardly, by bury, crossing the proposed baseline of State Route 7 at station 211+28, to end at the proposed Buckeye pole at station 212+18, 175 feet right. This new underground facility will be installed at a minimum depth of 5 feet below the existing ground elevation.

Armstrong Cable Services also needs to maintain the continuity of their existing telecommunication facilities through the project construction limits along existing County Road 2 (Greasy Ridge Road) and will be relocating their facilities through this area as follows:

The company will install a new underground telecommunication facility, in 4-inch conduit, through the project construction limits, which will begin at the proposed American Electric Power pole at State Route 7 station 283+01, 238 feet right and continue northwardly, by directional bore, crossing the proposed baseline of State Route 7 at station 282+88 and the proposed centerline of County Road 69 at station 41+87, to end at the proposed American Electric Power pole at station 282+70, 281 feet left, from where the facility will continue aerially. This new underground facility will be installed at a minimum depth of 5 feet below all grades required by the project.

The company will install a new underground telecommunication facility, in 4-inch conduit, through the project construction limits, which will begin at the proposed American Electric Power pole at State Route 7 station 269+65, 298 feet left and continue southwardly, by directional bore, crossing the proposed baseline of State Route 7 at station 270+25 to end at the proposed American Electric Power pole at station 271+02, 158 feet right from where the facility will continue aerially. This new underground facility will be installed at a minimum depth of 5 feet below all grades required by the project.

Armstrong Cable Services cannot complete their relocation work from State Route 7 stations 160+00 through 253+00 until Buckeye Rural Electric Co-operative, Inc. has completed their relocation work in this area. Upon notification that Buckeye Rural Electric Co-operative, Inc. relocation work in this area has been completed, Armstrong Cable Services will require an additional 30 calendar days to complete this portion of their relocation work. Armstrong Cable Services cannot complete their relocation work from State Route 7 stations 253+00 through 272+00 and along State Route 243 until American Electric Power, Buckeye Rural Electric Co-operative, Inc. and Frontier Communications have completed their relocation work in these areas. Upon notification that the American Electric Power, Buckeye Rural Electric Co-operative, Inc. and Frontier Communications relocation work in these areas has been completed, Armstrong Cable Services will require an additional 30 calendar days to complete this portion of their relocation work. Armstrong Cable Services cannot complete their relocation work

ARMSTRONG CABLE SERVICES, Cont.

from State Route 7 stations 366+00 through 436+00 and from State Route 775 stations 45+00 through 71+00 until American Electric Power and Frontier have completed their relocation work in these areas. Upon notification that the American Electric Power relocation work in these areas has been completed, Armstrong Cable Services will require an additional 30 calendar days to complete these portions of their relocation work.

The contact person for Armstrong Cable Services is Mr. Jaran Bartoe, 304-634-8200.

HECLA WATER ASSOCIATION, INC.

The company owns and operates multiple existing underground water distribution facilities within and adjacent to the project construction limits, which are located as follow:

The first existing underground water facility is a 3-inch line, which runs west to east along the north side of existing Township Road 158 (Henson Hollow Road) and continues eastwardly from an existing 4-inch tee at State Route 7 station 166+33, 205 feet left, continues to enter the construction limits at station 167+42, 147 feet left, continues to station 167+93, 125 feet left, continues to station 168+63, 105 feet left, continues to exit the construction limits at station 169+23, 98 feet left, continues to station 170+20, 90 feet left, continues to re-enter the construction limits at station 170+90, 72 feet left, continues, crossing the proposed baseline of State Route 7 at station 172+90, to station 173+40, 22 feet right, continues to an existing 4-inch tee at station 176+00, 135 feet right and continues to exit the construction limits at station 176+23, 146 feet right.

This first existing water facility will be relocated as follows:

New valves will be installed at State Route 7 stations 168+78, 104 feet left and 176+23, 146 feet right. A new tee and hydrant will be installed at station 168+63, 105 feet left. The existing facility will be cut and capped at stations 168+86, 103 feet left and 176+10, 143 feet right to be abandoned in place and may be severed wherever encountered within these limits. The portions of the first existing facility within the construction limits, from station 167+42, 147 feet left through station 168+86, 103 feet left and from station 176+10, 143 feet right through station 176+23, 146 feet right will remain in place and active during project construction.

The second existing underground water facility is a 4-inch line, which begins at the existing tee of the first facility, on the north side of existing Township Road 158, at State Route 7 station 166+33, 205 feet left, and continues southwardly, crossing Township Road 158, to enter the construction limits at station 166+26, 190 feet left, continues to an existing valve at station 166+22, 180 feet left, continues southwardly, along the east side of existing Birch Lane, to station 165+68, 40 feet left, turns and continues eastwardly, along the north side of existing Woodland Drive, crossing the proposed baseline of State Route 7 at station 166+55, to station 170+10, 147 feet right, continues to station 171+50, 200 feet right, continues to station 172+90, 245 feet right, continues to exit the construction limits at station 173+30, 257 feet right, continues to station 175+53, 318 feet right, turns and continues northwardly, to re-enter the construction limits at station 175+93, 155 feet right and continues, crossing Township Road 158, to end at the existing tee of the first facility, at station 176+00, 135 feet right.

This second existing water facility will be relocated in two parts, as follow:

The existing valve at station 166+22, 180 feet left will remain in place and be closed. A new valve will be installed at station 171+36, 197 feet right. A new tee and hydrant will be installed at station 171+49, 199 feet right.

HECLA WATER ASSOCIATION, INC., Cont.

A new 4-inch water facility will be constructed outside of the project construction limits, to replace a portion of the existing second facility, which will be tied into the second existing facility at State Route 7 station 175+51, 317 feet right and continue northwardly, parallel with the existing facility, to station 175+85, 178 feet right, turn and

continue northeastwardly, to station 176+15, 171 feet right and turn and continue northwardly, crossing Township Road 158, to be tied into the first existing facility at a proposed tee at station 176+35, 147 feet right.

The first portion of the second existing water facility will be cut and capped at stations 166+19, 168 feet left and 171+35, 193 feet right to be abandoned in place and may be severed wherever encountered within these limits. The second portion of the second existing water facility, from station 175+93, 155 feet right through the existing tee at station 176+00, 135 feet right will also be abandoned in place and may be severed wherever encountered within these limits. The portions of the second existing water facility within the construction limits from station 166+26, 190 feet left through the existing valve at station 166+22, 180 feet left and from station 171+35, 193 feet right through station 173+30, 257 feet right will remain in place and active during project construction.

The third existing underground water facility is a 2-inch line, which enters the construction limits along the west side of existing Township Road 388 (Estep Lane) at State Route 7 station 183+70, 282 feet right and continues northwardly, to station 184+75, 262 feet right, continues to station 184+77, 82 feet right, continues to the proposed baseline of State Route 7 at station 185+55, 0 feet right, continues to an existing tee at station 186+34, 53 feet left, turns and continues eastwardly, to station 187+22, 22 feet left and turns and continues northwardly, to exit the construction limits at station 188+12, 247 feet left.

The fourth existing underground water facility is a 2-inch line, which begins at the existing tee of the third facility at State Route 7 station 186+34, 53 feet left and continues northwestwardly, to exit the construction limits at station 185+83, 150 feet left.

These third and fourth existing water facilities will be abandoned in place throughout the entirety of the project construction limits and may be severed wherever encountered within these limits, as the third existing water facility will be cut and capped outside of the construction limits at station 183+70, 289 feet right and a new valve will be installed at station 183+70, 302 feet right.

The fifth existing underground water facility is a 3-inch line, which enters the construction limits on the east side of existing County Road 104 (Booth- Eaton Road) at State Route 7 station 195+17, 163 feet right (CR 104 station 11+42, 12 feet right) and continues northwardly, along the east side of County Road 104, to an existing tee and valve at SR 7 station 195+80, 60 feet right (CR 104 station 12+63, 12 feet right), turns and continues northeastwardly, to SR 7 station 196+02, 60 feet right (CR 104 station 12+75, 32 feet right, turns and continues northwardly, along the east side of County Road 104, crossing the proposed baseline of State Route 7 at station 196+35, to SR 7 station 196+83, 95 feet left (CR 104 station 14+50, 32 feet right), continues to SR 7 station 197+81, 300 feet left (CR 104 station 16+78, 32 feet right) and continues to exit the construction limits at SR 7 station 197+96, 348 feet left (CR 104 station 17+32, 37 feet right).

This fifth existing water facility will be relocated as follows:

A new 3-inch water facility will be constructed, which will be tied into the fifth existing facility at a proposed tee at CR 104 station 11+42, 12 feet right (SR 7 station 195+17, 163 feet right) and continue northwardly, to a proposed bend at station 11+53, 20 feet right, continue along the east side of existing County Road 104, to a proposed valve

HECLA WATER ASSOCIATION, INC., Cont.

at station 11+61, 19 feet right, continue to a proposed 4-inch tee at station 11+67, 19 feet right (SR 7 station 195+37, 143 feet right), continue to a proposed valve at station 11+77, 20 feet right, continue to station 11+95, 19 feet right, from where the new facility will continue in casing, crossing the proposed baseline of State Route 7 at station 196+12, to station 13+84, 12 feet right, continue to the end of casing at station 14+25, 10 feet right,

continue to station 14+60, 8 feet right, continue to station 17+13, 10 feet right, continue to exit the construction limits at station 17+40, 9 feet right and continue to be tied into the fifth existing facility at a proposed tee at station 17+63, 7 feet right.

This new water facility will be constructed at a minimum depth of 3 feet below all grades required by the project and 18 inches below all proposed storm sewer crossings.

The fifth existing water facility will be abandoned in place throughout the entirety of the project construction limits and may be severed wherever encountered within these limits. The existing valve at SR 7 station 195+80, 60 feet right (CR 104 station 12+63, 12 feet right) will be removed.

The sixth existing underground water facility is a 4-inch line, which begins in the project construction limits, at the existing tee of the fifth facility, on the east side of existing County Road 104 (Booth-Eaton Road), at State Route 7 station 195+80, 60 feet right, and continues northeastwardly, to an existing valve at station 196+28, 62 feet right, continues to station 198+38, 66 feet right, continues, crossing Symmes Creek, to station 201+00, 67 feet right, turns and continues northwardly, crossing the proposed baseline of State Route 7 at station 202+17, to station 202+72, 35 feet left, turns and continues northeastwardly, to station 204+08, 27 feet left, turns and continues southeastwardly, re-crossing the proposed baseline of State Route 7 at station 204+22, to station 204+97, 158 feet right, turns and continues northeastwardly, crossing the centerline of County Road 32 (Eaton Road) at station 10+32, to end at an existing tee at station 205+62, 140 feet right.

This sixth existing water facility will be relocated as follows:

A new 4-inch water facility will be constructed, which will begin at the proposed tee of the relocated fifth facility at State Route 7 station 195+37, 143 feet right (CR 104 station 11+67, 19 feet right) and continue eastwardly, parallel with and 10 feet within the proposed southerly Limited Access right of way, to station 198+78, 230 feet right, turn and continue northeastwardly, crossing Symmes Creek, parallel with and 10 feet within the proposed Limited Access right of way, to station 204+74, 177 feet right and turn and continue to be tied into the sixth existing facility at a proposed tee at station 204+97, 158 feet right.

The sixth existing water facility, from station 195+88, 60 feet right through station 204+97, 158 feet right, will be cut, capped and abandoned in place and may be severed wherever encountered within these limits. The portion of the sixth existing facility, from station 204+97, 158 feet right through station 205+62, 140 feet right will remain in place and active during project construction. The existing valve at station 196+28, 62 feet right will be removed.

Hecla Water Association, Inc. will have their relocation/abandonment work for these first through sixth existing water facilities completed by August 1st, 2025.

The seventh existing underground water facility is a 4-inch line, which enters the construction limits on the east side of existing County Road 32 (Eaton Road) at State Route 7 station 206+02, 220 feet right (CR 32 station 9+40, 15 feet right) and continues northwardly, along the east side of County Road 32, to an existing 4-inch tee at SR 7 station 205+62, 140 feet right (CR 32 station 10+33, 12 feet right), continues to SR 7 station 205+38, 70 feet right

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(CR 32 station 11+08, 13 feet right), continues, crossing the proposed baseline of State Route 7 at station 205+27, to an existing valve and hydrant at SR 7 station 205+32, 8 feet left (CR 32 station 11+66, 16 and 20 feet right), continues to an existing tee at SR 7 station 205+29, 27 feet left (CR 32 station 12+04, 18 feet right), continues to SR 7 station 205+07, 82 feet left (CR 32 station 12+62, 14 feet right), continues to SR 7 station 204+88, 125 feet left (CR 32 station 13+08, 14 feet right) and continues to exit the construction limits at SR 7 station 204+03, 304 feet left (CR 32 station 15+08, 13 feet right).

This seventh existing water facility will be relocated as follows:

A new 4-inch water facility will be constructed along the east side of County Road 32, which will be tied into the seventh existing facility at a proposed tee at State Route 7 station 205+07, 82 feet left (CR 32 station 12+62, 14 feet right and continue northwardly, to station 12+70, 18 feet right, turn and continue northwestwardly, along the northeast side of County Road 32, to a top of pipe elevation of 541.5 at station 13+42, 22 feet right, continue at elevation 541.5 to station 13+70, 22 feet right, and turn and continue to be tied into the seventh existing facility at a proposed tee at station 13+76, 16 feet right.

The seventh existing water facility, from station 12+62, 14 feet right through station 13+76, 16 feet right, will be cut, capped and abandoned in place and may be severed wherever encountered within these limits. The portions of the seventh existing water facility, from station 9+40, 15 feet right through station 12+62, 14 feet right and from station 13+76, 16 feet right through station 15+08, 13 feet right will remain in place and active during project construction. The existing valve and hydrant at SR 7 station 205+32, 8 feet left (CR 32 station 11+66, 16 and 20 feet right) will be removed.

The eighth existing underground water facility is a 4-inch line, which begins in the project construction limits, at the existing tee of the seventh facility, along the northeast side of County Road 32, at State Route 7 station 205+29, 27 feet left (CR 32 station 12+04, 18 feet right) and continues northwardly, along the east side of existing Township Road 1489 (Lynn Lane), to SR 7 station 205+83, 58 feet left, continues to station 207+00, 162 feet left, continues to station 207+57, 225 feet left, continues northwardly, crossing existing Township Road 1347 (Dogwood Lane), to an existing tee at station 208+13, 285 feet left, turns and continues northwestwardly, along the east side of Township Road 1347, to exit the construction limits at station 208+10, 313 feet left.

This eighth existing water facility will be relocated as follows:

A new 4-inch water facility will be constructed, which will be tied into the seventh existing facility at a proposed tee on the east side of County Road 32, at CR 32 station 14+28, 15 feet right (Relocated Lynn Lane station 10+14, 49 feet left) and continue northwestwardly, along the north side of relocated Lynn Lane, to a proposed tee and hydrant at Relocated Lynn Lane station 10+30, 49 feet left, continue to station 10+70, 41 feet left, continue to station 11+43, 40 feet left, continue to station 11+94, 40 feet left and continue to be tied into the eighth existing facility at a proposed tee at station 14+21, 40 feet left (SR 7 station 208+10, 315 feet left).

The eighth existing water facility will be cut and capped at SR 7 station 205+35, 30 feet left (CR 32 station 12+05, 30 feet right) and at SR 7 station 208+12, 290 feet left (Relocated Lynn Lane station 14+19, 16 feet left) to be abandoned in place and may be severed wherever encountered within these limits. The portions of the eighth existing facility, from SR 7 station 205+29, 27 feet left (CR 32 station 12+04, 22 feet right) through SR 7 station 205+36, 32 feet left (CR 32 station 12+05, 30 feet right) and from SR 7 station 208+12, 290 feet left (Relocated Lynn Lane station 14+19, 16 feet left) through SR 7 station 208+10, 313 feet left will remain in place and active during project construction.

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The ninth existing underground water facility is a 4-inch line, which begins in the project construction limits, at the existing tee of the eighth facility, on the east side of existing Township Road 1347 (Dogwood Lane), at State Route 7 station 208+13, 285 feet left and continues southwardly, along the east side of existing Township Road 1347, to

station 208+30, 245 feet left, continues, crossing the proposed baseline of State Route 7 at station 208+72, to station 208+80, 32 feet right, turns and continues southeastwardly, along the east side of existing Township Road 1347, to exit the construction limits at station 210+57, 285 feet right.

This ninth existing water facility will be cut and capped at station 209+42, 155 feet right. A new valve will be installed at station 209+47, 162 feet right. The portion of the ninth existing facility, from State Route 7 station 208+13, 285 feet left through station 209+42, 155 feet right, will be abandoned in place and may be severed wherever encountered within these limits. The portion of the ninth existing facility within the construction limits, from station 209+42, 155 feet right through station 210+57, 285 feet right will remain in place and active during project construction.

The tenth existing underground water facility is a 2-inch line, which enters the construction limits along the southeasterly side of existing County Road 68 (Shafer Town Road) at State Route 7 station 218+08, 373 feet right and continues northeastwardly, along the southeast side of County Road 68, to station 220+10, 267 feet right, continues to station 221+20, 230 feet right, continues, to station 223+33, 185 feet right, continues to station 226+57, 217 feet right, continues to station 228+52, 190 feet right, continues to station 229+88, 147 feet right, continues to station 231+32, 95 feet right, continues to station 233+62, 80 feet right, continues to station 235+20, 65 feet right, continues to station 237+92, 20 feet right, continues, crossing the proposed baseline of State Route 7 at station 240+00, to station 240+85, 13 feet left, continues along the southeast side of County Road 68, to station 242+40, 20 feet left, continues, re-crossing the proposed baseline of State Route 7 at station 245+60, to station 248+17, 17 feet right, continues to station 250+20, 33 feet right, continues to station 252+12, 30 feet right, continues, re-crossing the proposed baseline of State Route 7 at station 253+15, to station 254+22, 35 feet left, continues along the southeast side of County Road 68, to station 255+30, 47 feet left, continues to an existing tee on the south side of existing State Route 243 at station 256+40, 35 feet left, turns and continues northwardly, crossing existing State Route 243, to an existing tee at station 256+60, 70 feet left, continues to an existing valve at station 256+90, 140 feet left, continues to an existing valve at station 256+92, 145 feet left, continues, crossing the proposed centerline of County Road 69 at station 15+45, to station 257+35, 220 feet left, continues to station 257+93, 320 feet left and continues to exit the construction limits at station 258+95, 530 feet left.

This tenth existing water facility will be abandoned in place throughout the entirety of the project construction limits via the installation of new valves, outside of the construction limits, at station 217+95, 386 feet right and at station 259+15, 580 feet left. This tenth existing water facility may be severed wherever encountered within the project construction limits. The existing valves will be removed.

Hecla Water Association, Inc. will have their relocation/abandonment work for these seventh through tenth existing water facilities completed by October 1st, 2025.

The eleventh existing underground water facility is a 2-inch line, which begins in the project construction limits, at the existing tee of the tenth facility, on the south side of existing State Route 243, at State Route 7 station 256+40, 35 feet left and continues eastwardly, along the south side of existing State Route 243, to station 258+65, 7 feet left, continues, crossing the proposed baseline of State Route 7 at station 259+30, to station 259+82, 7 feet right, continues to station 262+45, 20 feet right and continues to end at station 263+33, 25 feet right.

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This eleventh existing water facility will be abandoned in place throughout the entirety of the project construction limits and may be severed wherever encountered within the construction limits.

The twelfth existing underground water facility is a 2-inch line, which begins in the project construction limits, at the existing tee of the tenth facility, on the north side of existing State Route 243, at State route 7 station 256+60, 70 feet left and continues eastwardly, along the north side of existing State Route 243, to an existing valve at station 256+72, 68 feet left, continues to station 258+90, 56 feet left, continues to station 2259+50, 38 feet left and continues to end at station 260+20, 22 feet left.

This twelfth existing water facility will be abandoned in place throughout the entirety of the project construction limits and may be severed wherever encountered within the construction limits. The existing valve will be removed.

Hecla Water Association, Inc. will have their relocation/abandonment work for these eleventh and twelfth existing water facilities completed by July 1st, 2025.

The thirteenth existing underground water facility is a 16-inch ductile iron mainline, which enters the project construction limits on the west side of existing County Road 118 (Bent Creek Road) at proposed County Road 118 station 15+05, 20 feet left and continues southwardly, along the west side of existing County Road 118, to station 14+35, 19 feet left, continues to station 13+50, 16 feet left, continues to station 12+45, 11 feet left, turns and continues eastwardly, crossing the proposed centerline of County Road 118 at station 12+52, to exit the construction limits at station 12+67, 35 feet right, continues to an existing bend at proposed State Route 7 station 271+13, 525 feet left, continues southeastwardly, to an existing service tee at station 272+76, 367 feet left, continues to re-enter the construction limits at station 273+25, 320 feet left, continues to station 274+00, 255 feet left, continues eastwardly, along the south side of existing County Road 2 (Greasy Ridge Road) and crossing the proposed centerline of County Road 69 at station 34+95, to station 276+22, 148 feet left, continues to station 277+58, 128 feet left, continues to station 280+72, 35 feet left, continues to station 282+13, 15 feet left, continues, crossing the proposed baseline of State Route 7 at station 282+80 and existing County Road 2, to an existing 3-inch tee and valve at station 284+08, 30 feet right, continues to an existing valve at station 284+20, 35 feet right, continues eastwardly, and along the north side of existing County Road 69 (Indian Guyan Road), to station 284+72, 52 feet right, continues to an existing tee and valve at station 287+74, 85 feet right, turns and continues southwardly, crossing existing County Road 69, to exit the construction limits at station 287+75, 132 feet right.

This thirteenth existing water facility will be relocated, as follows:

A new 16-inch ductile iron water facility will be constructed, which will be tied into the thirteenth existing facility at a proposed tee at the existing bend of the thirteenth facility at State Route 7 station 271+13, 525 feet left and continue eastwardly, outside of the project construction limits, to a proposed valve at station 271+25, 535 feet left, continue to relocated County Road 2 (Greasy Ridge Road) station 17+76, 47 feet left, continue, crossing existing County Road 2 in casing, to station 17+77, 68 feet right, continue to station 16+70, 112 feet right, continue to station 14+45, 142 feet right, continue to a proposed tee at station 12+35, 185 feet right, continue to station 12+21, 195 feet right (SR 7 station 279+23, 520 feet left), turn and continue southeastwardly, to enter the construction limits at State Route 7 station 283+65, 275 feet left, continue to station 284+32, 233 feet left, from where the new waterline will turn and continue southwardly, by bore, generally perpendicular to proposed County Road 69 and State Route 7, crossing below the proposed centerline of County Road 69 at station 43+34, in casing for 20 feet each side of centerline at a top of casing elevation of 622, continue down to begin a second casing at

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the northerly Limited Access right of way line, at a top of casing elevation of 596 and continue downward, at a continuous grade, crossing the proposed baseline of State Route 7 at station 284+30, exiting the construction limits at station 284+29, 205 feet right, to the southerly Limited Access right of way line at station 284+29, 226 feet right, at a proposed top end of casing elevation of 530, turn and continue southeastwardly, outside of the project construction limits, to station 284+67, 306 feet right, turn and continue eastwardly, to be tied into the thirteenth existing facility at station 287+80, 322 feet right.

This thirteenth existing water facility will be cut and capped outside of the project construction limits at SR 7 station 271+18, 520 feet left and at SR 7 station 287+80, 285 feet right, to be abandoned in place and may be severed wherever encountered within these limits. The existing valves will be removed. The portion of the thirteenth existing facility within the project construction limits, from County Road 118 station 15+05, 20 feet left through CR 118 station 12+67, 35 feet right will remain in place and active during project construction.

The fourteenth existing underground water facility is an abandoned 3/4-inch service line, which begins at the existing service tee of the thirteenth existing facility at station State Route 7 station 272+76, 367 feet left and continues southwestwardly, to enter the project construction limits at station 271+63, 223 feet left, continues, crossing the proposed centerline of County Road 69 at station 30+40, to station 270+05, 12 feet left, turns and continues westwardly, to end at station 269+02, 35 feet left.

This fourteenth existing water facility is abandoned and may be severed wherever encountered within the construction limits.

Hecla Water Association, Inc. will have their relocation/abandonment work for fourteen existing water facilities completed by July 1st, 2025.

The fifteenth existing underground water facility is a 3-inch line, which enters the project construction limits along the north side of proposed County Road 2 (Greasy Ridge Road) at CR 2 station 12+20, 115 feet right and continues southwardly, to station 12+20, 52 feet right, continues, crossing the proposed centerline of County Road 2 at station 11+80, to station 11+62, 16 feet left, turns and continues southeastwardly, re-crossing the proposed centerline of County Road 2 at station 10+37 and crossing the proposed centerline of County Road 69 at station 38+80, to State Route 7 station 280+03, 128 feet left, continues to SR 7 station 280+52, 88 feet left, turns and continues eastwardly, along the north side of existing County Road 2, to station 281+17, 72 feet left, continues to station 283+00, 40 feet left, continues to station 283+70, 12 feet left, continues, crossing the proposed baseline of

State Route 7 at station 283+83, to end at the existing valve and tee of the thirteenth existing facility at station 284+08, 30 feet right.

This fifteenth existing water facility will be abandoned in place throughout the entirety of the project construction limits and may be severed wherever encountered within the construction limits.

The sixteenth existing underground water facility is a 4-inch line, which begins in the project construction limits, on the north side of existing County Road 69 (Indian Guyan Road), at the existing tee and valve of the thirteenth existing facility at State Route 7 station 287+74, 85 feet right and continues northeastwardly, along the northwest side of existing County Road 69, to station 288+20, 65 feet right, continues, crossing the proposed baseline of State Route 7 at station 288+85, to station 289+75, 75 feet left, continues along the northwest side of existing County Road 69, to station 290+70, 125 feet left, continues to station 291+95, 147 feet left, continues to station 294+25, 97 feet left, continues to station 295+67, 107 feet left, continues to station 296+40, 135 feet left, continues, crossing the proposed centerline of County Road 69 at station 55+95, to station 297+12, 195 feet left and continues to exit the construction limits at station 297+38, 230 feet left.

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This sixteenth existing water facility will be abandoned in place throughout the entirety of the project construction limits and may be severed wherever encountered within the construction limits.

Hecla Water Association, Inc. will have their relocation/abandonment work for these thirteen, fifteen, and sixteenth existing water facilities completed by October 1st, 2025.

The seventeenth existing underground water facility is a 6-inch line, which enters the project construction limits at State Route 7 station 376+02, 330 feet right and continues northeastwardly, crossing the proposed baselines of Ramp I at station 377+37 and State Route 7 at station 378+43, to station 379+50, 125 feet left, turns and continues northwardly, to exit the construction limits at station 378+78, 330 feet left, continues northwardly and eastwardly, outside of the project construction limits, to re-enter the construction limits along the west side of existing State Route 775 at station 67+20, 55 feet left and continues eastwardly, to an existing tee beneath the southbound lane of existing SR 775 at station 67+29, 8 feet left, turns and continues northwardly, beneath the southbound lane of existing SR 775, to station 69+00, 8 feet left, continues to station 70+00, 10 feet left and continues to exit the construction limits at station 70+80, 14 feet left.

This seventeenth existing water facility will be cut and capped outside of the project construction limits, at State Route 7 station 373+88, 631 feet right and inside the project construction limits at proposed State Route 775 station 70+59, 13 feet left. This seventeenth existing water facility will be abandoned in place and may be severed wherever encountered within these limits. The portion of the seventeenth existing water facility within the project construction limits, from SR 775 station 70+59, 13 feet left through station 70+80, 14 feet left will remain in place and active during project construction.

The eighteenth existing underground water facility is a combination of an abandoned 4-inch line and abandoned and active portions of a 6-inch lines, which enters the project construction limits as an abandoned 4-inch line at State Route 7 station 387+32, 190 feet right and continues northwardly, to station 387+28, 145 feet right, continues, crossing the proposed baseline of Ramp L at station 387+02, to station 387+15, 57 feet right, continues, crossing the proposed baseline of SR 7 at station 386+92, to station 386+85, 20 feet left, turns and continues westwardly, to station 386+55, 5 feet left, where the facility becomes an abandoned 6-inch line, turns and continues northwardly, along the west side of existing State Route 775, crossing the proposed baseline of Ramp J at station 386+11, to station 385+30, 195 feet left, continues along the west side of existing SR 775, to proposed

State Route 775 station 61+00, 132 feet right, continues to station 62+00, 63 feet right, continues to station 63+00, 24 feet right, continues to where the 6-inch facility becomes active, at an existing tee and valve at station 63+47, 12 feet right and 5 feet right, continues, crossing the proposed centerline of SR 775 at station 64+20, to station 65+00, 6 feet left and continues to end at the existing tee of the seventeenth existing facility at station 67+29, 8 feet left.

This eighteenth existing water facility will be abandoned in place throughout the entirety of the project construction limits and may be severed wherever encountered within the construction limits.

These seventeenth and eighteenth existing water facilities will be replaced by the construction of a new 6-inch water facility, which will be tied into an existing 6-inch facility, located outside of the project construction limits, in the cul-de-sac of Walnut Street, at a proposed valve at State Route 7 station 387+37, 217 feet right and continue westwardly, to station 387+32, 217 feet right, from where the new facility will turn and continue northwardly, in casing by continuous bore, at a top of casing elevation of 558, upward, at a continuous grade, to enter the

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construction limits at station 387+20, 195 feet right, cross below the proposed baseline of Ramp L at station 386+89, the proposed baseline of SR 7 at station 386+95 and the proposed baseline of Ramp J at station 386+81, to the end of the casing at SR 7 station 386+89, 113 feet left, at a top elevation of 577, continue along the east side of existing State Route 775, to SR 7 station 385+70, 188 feet left, continue to proposed State Route 775 station 61+24, 159 feet right, continue along the east side of existing SR 775, to station 62+18, 91 feet right, from where the new facility will continue in casing by bore, at a top of casing elevation of 606, upward, at a continuous grade, cross below the proposed baselines of Ramps J and K at stations 393+90 and 385+28, to the end of the casing at station 63+97, 41 feet right, at a top elevation of 612, continue to station 64+34, 32 feet right, continue along the east side of existing and proposed SR 775, to a proposed air release valve at station 65+09, 27 feet right, continue to station 69+22, 25 feet right, from where the new facility will turn and continue westwardly, in casing by bore, at a top of casing elevation of 610, cross below the proposed centerline of proposed SR 775 at station 69+22, to the end of the casing at station 69+21, 24 feet left, at a top elevation of 610, turn and continue northwardly, along the west side of proposed SR 775, to station 69+88, 27 feet left, continue to a proposed valve at station 70+36, 26 feet left, continue to a proposed tee and hydrant at station 70+45, 25 feet and 30 feet left, continue to a proposed bend at station 70+53, 26 feet left and turn and continue to be tied into the existing 6-inch seventeenth facility at station 70+64, 14 feet left.

This proposed facility will be installed at a minimum depth of 3.0 feet below all grades required by the project.

Hecla Water Association, Inc. will have their relocation/abandonment work for these seventeenth and eighteenth existing water facilities completed by October 1st, 2025.

The nineteenth existing underground water facility is a 16-inch asbestos cement mainline, which enters the project construction limits on the east side of State Route 243, at station 20+89, 56 feet right, continues southwestwardly, to an existing service tee at station 20+88, 50 feet right, continues to station 20+87, 42 feet right, turns and continues northwestwardly, along the east side of SR 243, to exit the construction limits at station 21+55, 32 feet right.

This nineteenth existing water facility will be relocated as follows:

A new 16-inch ductile iron water facility will be constructed, which will be tied into the nineteenth existing facility, outside of the project construction limits, at station 20+87, 94 feet right and continue westwardly, to station 20+98, 86 feet right, turn and continue southwestwardly, parallel to the existing nineteenth facility, to the edge of the project construction limits at station 20+96, 50 feet right, turn and continue northwestwardly, along the east side of SR 243 and the edge of the construction limits, to a proposed service tee at station 21+60, 40 feet right, continue to station 21+68, 41 feet right and turn and continue to be tied into the nineteenth existing facility at a proposed tee at station 21+72, 33 feet right.

This nineteenth existing water facility will be abandoned in place throughout the entirety of the project construction limits and may be severed wherever encountered within the construction limits.

The twentieth existing underground water facility is a 1-inch service line, which begins in the project construction limits, at the existing service tee of the nineteenth existing facility, on the east side of State Route 243, at station 20+88, 50 feet right and continues southeastwardly, to station 20+75, 50 feet right, turns and continues southwestwardly, crossing the proposed centerline of SR 243 at station 20+71, to an existing meter at station 20+69, 15 feet left, turns and continues southwardly, to existing meters at stations 19+77, 47 feet left and 19+69, 47 feet left.

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The twenty-first existing underground water facility is a 3/4-inch service line, which begins at the existing meter of the twentieth facility at station 20+69, 15 feet left and continues southwestwardly, to station 20+67, 30 feet left, turns and continues southeastwardly, to station 19+99, 33 feet left, turns and continues southwestwardly, to an existing meter at station 19+96, 48 feet left.

These twentieth and twenty-first existing water facilities will be replaced by the construction of a new 1-inch service line, which will begin at the proposed service tee of the relocated nineteenth facility at station 21+60, 40 feet right and continue southwestwardly, cross the proposed centerline of SR 243 at station 21+57, to station 21+48, 101 feet left, turn and continue southwardly, to station 20+46, 133 feet left, turn and continue southeastwardly, to a proposed meter at station 19+65, 122 feet left, at where the existing service line of the twenty-first facility will be intercepted and reconnected, continue to proposed meters at station 19+37, 113 feet left, at where the existing service lines of the twenty-first facility will be intercepted and reconnected.

The twentieth and twenty-first existing water facilities will be abandoned in place throughout the entirety of the project construction limits and may be severed wherever encountered within these limits. The existing meters will be removed. The existing service lines between the existing meters and the proposed meters will also be abandoned in place and may be severed wherever encountered within the project construction limits.

The twenty-second existing underground water facility is an abandoned 3/4-inch service line, which enters the project construction limits along the left side of proposed County Road 69 at station 12+30, 225 feet left and continues southwestwardly, to end at station 11+82, 155 feet left.

This twenty-second existing water facility is abandoned and may be severed wherever encountered within the project construction limits.

Hecla Water Association, Inc. will have their relocation/abandonment work for these nineteenth through twenty-first existing water facilities completed by July 1st, 2025.

The contact person for Hecla Water Association, Inc. is Mr. Tim Dalton, 740-533-0526, ext. 5.

POTENTIAL UNCLAIMED WATER FACILITY

The project plans show an underground 8-inch water facility within the project construction limits, which begins at State Route 7 station 158+90, 10 feet right and continues northeastwardly, crossing the baseline of State Route 7 at station 159+38, to station 162+10, 55 feet left, continues to station 162+73, 50 feet left, turns and continues eastwardly, re-crossing the baseline of State Route 7 at station 163+48, to station 163+80, 20 feet right, continues, crossing existing Birch Lane, to station 165+23, 28 feet right, turns and continues southwardly, along the east side of Birch Lane, to station 164+52, 195 feet right, turns and continues westwardly, re-crossing Birch Lane, to exit the construction limits at an existing valve at station 164+28,187 feet right.

This water facility may or may not exist, as both Hecla Water Association, Inc. and Aqua Ohio have denied ownership and claim to have no records of a waterline being installed at this location.

COLUMBIA GAS OF OHIO

The company owns and operates an existing underground 4-inch natural gas distribution facility within and adjacent to the project construction limits, which enters the project construction limits at proposed State Route 7 station 386+60, 215 feet right and continues northwestwardly, crossing the baseline of proposed Ramp L at station 385+73, to station 385+43, 95 feet right, turns and continues northwardly, crossing the baseline of proposed SR 7

at station 385+30 and crossing the baseline of proposed Ramp J at station 385+20, to an existing bend at station 385+16, 122 feet left, turns and continues eastwardly, to station 385+85, 130 feet left, turns and continues northwestwardly, along the west side of existing State Route 775, to proposed State Route 775 station 60+45, 185 feet right, continues to station 60+63, 145 feet right, turns and continues northwardly, to station 61+28, 80 feet right, continues to station 62+00, 55 feet right, continues to station 63+00, 20 feet right, continues, crossing the proposed centerline of SR 775 at station 63+90, to station 65+00, 10 feet left, continues to station 66+00, 12 feet left, continues to station 69+00, 12 feet left, continues to station 70+00, 14 feet left and continues to exit the construction limits at station 70+80, 18 feet left.

This existing gas facility will be relocated as follows:

A new 4-inch gas facility will be constructed, which will be tied into the existing facility at a proposed tee at the existing bend at State Route 7 station 385+16, 122 feet left and continue northwardly by bore, along the west side of existing State Route 775, to a top of pipe elevation of 602 at proposed State Route 775 station 61+72, 147 feet right, turn and continue eastwardly in an 8-inch casing, to cross existing State Route 775, to a top of pipe elevation of 602 at the end of the casing at station 61+00, 176 feet right, turn and continue northwardly, along the east side of existing State Route 775, to a top of pipe elevation of 605.3 at station 61+30, 148 feet right, continue to a top of pipe elevation of 612 at station 62+59, 64 feet right, from where the new facility will continue in an 8-inch casing, crossing beneath the baselines of proposed Ramps J and K, to top of pipe elevation of 615 at station 63+36, 60 feet right, continue in casing to a top of pipe elevation of 615 at the end of the casing at station 64+00, 56 feet right, continue to a top of pipe elevation of 622 at station 64+73, 48 feet right, continue to a top of pipe elevation of 620 at station 65+08, 46 feet right, continue to a top of pipe elevation of 620 at station 66+00, 42 feet right, continue to a top of pipe elevation of 618.5 at station 66+75, 34 feet right, continue to a top of pipe elevation of 618 at station 67+50, 31 feet right, continue to a top of pipe elevation of 614 at station 68+25, 30 feet right, continue to a top of pipe elevation of 612 at station 69+00, 26 feet right, continue to a top of pipe elevation of 608.5 at station 69+50, 26 feet right, continue to a top of pipe elevation of 606 at station 70+00, 25 feet right, continue to exit the construction limits at a top of pipe elevation of 603 at station 70+75, 20 feet right, continue to station 71+00, 19 feet right and turn and continue, crossing existing State Route 775 in an 8-inch casing, to be tied into the existing facility at station 71+00, 18 feet left.

The portion of the existing gas facility from proposed State Route 7 station 386+60, 215 feet right through station 385+16, 122 feet left will remain in place and active during project construction. The portion of the existing gas facility from proposed State Route 7 station 385+16, 122 feet left through proposed State Route 775 station 71+00, 18 feet left will be abandoned in place and may be severed wherever encountered within these limits.

Columbia Gas of Ohio will have their relocation work completed by October 1st, 2025.

The contact person for Columbia Gas of Ohio is Ms. Tori Pierce, 740-513-8529.

AQUA OHIO/UNION-ROME TOWNSHIP SUB-SEWER DISTRICT

The company owns and operates multiple existing underground sewer facilities within and adjacent to the project construction limits, which are located as follow:

The first existing underground sewer facility is a 4-inch service lateral that begins at the tee of the existing 8-inch mainline at State Route 7 station 165+93, 153 feet right and continues northwardly, through the construction limits, crossing the State Route 7 baseline at station 166+55, to end at station 166+68, 35 feet left.

The second existing underground sewer facility is a 4-inch service lateral that begins at the tee of the existing 8-inch mainline at State Route 7 station 166+80, 191 feet right and continues northwardly, through the construction limits, to end at station 167+07, 128 feet right.

The third existing underground sewer facility is a 4-inch service lateral that begins at the tee of the existing 8-inch mainline at State Route 7 station 168+30, 253 feet right and continues northwardly, through the construction limits, to end at station 168+55, 188 feet right.

The fourth existing underground sewer facility is a 4-inch service lateral that begins at the tee of the existing 8-inch mainline at State Route 7 station 169+05, 286 feet right and continues northwardly, through the construction limits, to end at station 169+80, 82 feet right.

These first four existing underground sewer facilities will be cut and capped at the 8-inch mainline, abandoned in place and may be severed wherever encountered within the project construction limits.

Aqua Ohio/Union-Rome Township Sub-Sewer District will have this portion of their relocation work completed by June 1st, 2025.

The fifth existing underground sewer facility is a 4-inch pressure sewer facility, which enters the project construction limits at proposed State Route 7 station 387+12, 195 feet right and continues northwardly, crossing the baseline of proposed Ramp L at station 386+82, to station 387+05, 110 feet right, continues northwestwardly, to station 386+85, 30 feet right, continues, crossing the baseline of proposed SR 7 at station 386+68, to station 386+55, 25 feet left, continues, crossing the baseline of proposed Ramp J at station 386+23, to station 386+08, 100 feet left, continues to station 385+27, 212 feet left, continues along the west side of existing State Route 775, to proposed State Route 775 station 60+50, 202 feet right, continues to station 61+00, 143 feet right, continues northwardly, to station 62+00, 72 feet right, continues to station 63+00, 32 feet right, continues, crossing the proposed centerline of Ramp K at station 384+95, to station 64+00, 12 feet right, continues to station 65+00, 3 feet right, continues to station 69+00, 1 feet right, continues, crossing the proposed centerline of SR 775 at station 69+50, to station 70+00, 1 feet left and continues to exit the construction limits at station 70+80, 4 feet left.

This existing underground pressure sewer facility will be relocated as follows:

A new 4-inch pressure sewer facility will be constructed, which will be tied into the existing facility outside of the project construction limits at State Route 7 station 387+14, 242 feet right and continue northwardly, to station 387+14, 229 feet right, continue to enter the construction limits at station 387+26, 194 feet right, continue to station 387+38, 160 feet right, continue in a 12-inch steel casing, at a top of casing elevation of 560.3, to cross beneath the baseline of proposed Ramp L at station 387+07, to the end of the casing, at a top of casing elevation of 560.3, at station 387+23, 90 feet right, continue upward to the beginning of another 12-inch steel casing, at a top of casing elevation of 569.6 at station 387+20, 80 feet right, continue, to cross beneath the baseline of

AQUA OHIO/UNION-ROME TOWNSHIP SUB-SEWER DISTRICT, Cont.

proposed State Route 7 at station 387+14 and cross beneath the baseline of proposed Ramp J at station 387+00, to the end of the casing, at a top of casing elevation of 569.6, at station 387+07, 101 feet left, turn and continue northwestwardly, along the east side of existing State Route 775, to proposed State Route 775 station 60+23, 334 feet right, continue to station 60+31, 310 feet right, continue to station 60+56, 268 feet right, continue northwardly, to station 60+87, 228 feet right, continue to station 61+17, 188 feet right, continue to station 61+52, 152 feet right, continue to a top of pipe elevation of 608 at station 61+93,124 feet right, continue to a top of pipe elevation of 609 at station 62+36, 99 feet right, continue to the beginning of another 12-inch steel casing, at a top

of casing elevation of 609.8 at station 62+76, 85 feet right, turn and continue northeastwardly, to cross beneath the baselines of proposed Ramps J and K, to the end of the casing, at a top of casing elevation of 609.8, at station 63+79, 85 feet right, turn and continue northwardly, to a top of pipe elevation of 613.6 at station 64+18, 47 feet right, turn and continue northeastwardly, to a top of pipe elevation of 618 at station 65+17, 38 feet right, continue to a top of pipe elevation of 618 at station 66+17, 38 feet right, continue to a top of pipe elevation of 616 at station 67+80, 36 feet right, turn and continue northwardly, to station 68+33, 5 feet right and continue to be tied into the existing facility at station 68+52, 2 feet right.

The portion of the fifth existing sewer facility from proposed State Route 775 station 68+52 through station 70+80 will remain in place and active during project construction. The portion of the fifth existing sewer facility from proposed State Route 7 station 387+12, 195 feet right through proposed State Route 775 station 68+52 will be abandoned in place and may be severed wherever encountered within these limits.

Aqua Ohio/Union-Rome Township Sub-Sewer District will have this portion of their relocation work completed by October 1st, 2025.

The Union-Rome Township Sub-Sewer District is managed by Aqua Ohio. The contact person for Aqua Ohio is Mr. Vinny Lupica, 614-882-6586, ext. 50546.

GENERAL COMMENTS

Bidders are advised that the utility relocation plans are on file and may be reviewed at the District 9 Utilities Office.

Department of Transportation
transportation.ohio.gov

Mike DeWine, *Governor*
Jon Husted, *Lt. Governor*
Pamela Boratyn, *Director*

12/6/2024

Project 240512 **Addendum No. 7**
PID No. 75923
LAW-SR 7-02.17 Phase 2
New Construction
Letting: December 12, 2024

Notice to all Bidders and Suppliers to please be advised of the attached Proposal Addendum.

For internet access to information referenced in this addendum, please see the ODOT web site at: https://ftp.dot.state.oh.us/pub/Contracts/Attach/LAW-75923/

The Department utilizes Bid Express (http://www.bidx.com) as the official medium for electronic bid submittal. All bidders must prepare bids and submit them online via Bid Express using AASHTOWare Project Bids software.

Addenda amendments must be acknowledged in the miscellaneous section of the Project Bids file and all amendments loaded in order for your bid to be considered for award of this project. Bid express will not accept bids that do not have amendments incorporated. Failure to incorporate changed quantities or items in your Project Bids submissions will result in the rejection of your bid.

1980 West Broad Street
Columbus, OH 43223 U.S.A.

614 | 466 7170
transportation.ohio.gov

The State of Ohio is an Equal Opportunity Employer and Provider of ADA Services

PROPOSAL ADDENDUM-007
FOR
PROJECT: 240512 | **CRS:** LAW-7-2.17 | **PID:** 75923

MODIFICATIONS

REVISED COMPLETION DATE	N/A
REPLACE/ADD PLAN SHEETS	1A, 3, 5, 15, 22A, 22B, 22C, 22D, 22E, 22F, 22H, 22I, 22J, 22K, 22L, 22M, 22N, 22P, 22O, 22R, 22S, 22T, 22U, 22V, 22W, 22X, 22Y, 22Z, 22AA, 22BB, 22CC, 22DD, 22EE, 22FF, 22GG, 22HH, 22II, 22JJ, 34, 37A, 38, 42, 43, 45, 47, 51, 54, 54A, 67, 68, 69, 74, 79, 80, 87, 95, 117, 425, 427, 430, 617, 622, 639, 656, 677, 678, 817, 820, 821, 822, 823, 824, 825, 831, 834, 835, 838, 839, 840, 841, 842, 843, 870, 873, 874, 875, 876, 877, 878, 884, 891, 893, 894, 895, 896, 899, 910, 920, 1024

CONTRACT (PAY) ITEM MODIFICATIONS

REVISED

REF. NO.	ITEM	DESCRIPTION	TOTAL QTY.	UNIT	SECTION
0013	**203E07510**	**SPECIAL - PIEZOMETER**	12	EACH	0001
0014	203E10000	EXCAVATION	**4,929,854**	CY	0001
0015	203E20000	EMBANKMENT	**4,531,429**	CY	0001
0049	**863E00801**	**REINFORCED EMBANKMENT, AS PER PLAN**	524,387	CY	0001
0056	601E32000	ROCK CHANNEL PROTECTION, TYPE A WITH FILTER	**525**	CY	0002
0082	602E20000	CONCRETE MASONRY	**37.6**	CY	0003
0090	611E00510	6" CONDUIT, TYPE F FOR UNDERDRAIN OUTLETS	**3567**	FT	0003
0096	611E05900	15" CONDUIT, TYPE B	**1476**	FT	0003
0100	611E07400	18" CONDUIT, TYPE B	**125**	FT	0003
0102	611E08900	21" CONDUIT, TYPE B	**392**	FT	0003
0112	611E12100	27" CONDUIT, TYPE C	**405**	FT	0003
0116	611E13600	30" CONDUIT, TYPE C	**240**	FT	0003
0123	611E19600	42" CONDUIT, TYPE C	**967**	FT	0003
0135	611E98300	CATCH BASIN, NO. 5	**8**	EACH	0003
0137	611E98350	CATCH BASIN, NO. 5A, AS PER PLAN	**3**	EACH	0003
0144	611E99574	MANHOLE, NO. 3	**2**	EACH	0003
0305	616E10000	WATER	**20,000**	MGAL	0011
0352	507E00100	STEEL PILES HP10X42, FURNISHED	**1815**	FT	0014
0353	507E00150	STEEL PILES HP10X42, DRIVEN	**1705**	FT	0014
0354	509E10000	EPOXY COATED STEEL REINFORCEMENT	**71810**	LB	0014
0359	511E43512	CLASS QC1 CONCRETE WITH QC/QA, ABUTMENT INCLUDING FOOTING	**146**	CY	0014
0360	512E10100	SEALING OF CONCRETE SURFACES (EPOXY URETHANE)	**494**	SY	0014
0364	516E13900	2" PREFORMED EXPANSION JOINT FILLER	**266**	SF	0014
0367	518E21200	POROUS BACKFILL WITH GEOTEXTILE FABRIC	**98**	CY	0014
0368	518E40000	6" PERFORATED CORRUGATED PLASTIC PIPE	**134**	FT	0014
0424	507E00100	STEEL PILES HP10X42, FURNISHED	**1980**	FT	0016
0425	507E00150	STEEL PILES HP10X42, DRIVEN	**1870**	FT	0016

0426	509E10000	EPOXY COATED STEEL REINFORCEMENT	**58350**	LB	0016
0431	511E43512	CLASS QC1 CONCRETE WITH QC/QA, ABUTMENT INCLUDING FOOTING	**151**	CY	0016
0432	512E10100	SEALING OF CONCRETE SURFACES (EPOXY URETHANE)	**463**	SY	0016
0436	516E13900	2" PREFORMED EXPANSION JOINT FILLER	**270**	SF	0016
0439	518E21200	POROUS BACKFILL WITH GEOTEXTILE FABRIC	**90**	CY	0016
0440	518E40000	6" PERFORATED CORRUGATED PLASTIC PIPE	**126**	FT	0016
0472	611E97400	**CONDUIT, MISC.: 22' DIA., TYPE A, 707.03, AS PER PLAN**	452	FT	0017
0493	516E44100	**ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), 1'-11"x11"x2.803"**	20	EA	0018
0494	516E44101	**ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), AS PER PLAN, 1'-11"x11"x2.803"**	10	EA	0018

DELETED

REF. NO.	ITEM	DESCRIPTION	TOTAL QTY.	UNIT	SECTION
0465	512E33000	TYPE A WATERPROOFING	2868	SY	0017

ADDED NOTES

1. Bidders should note that the changes to the Tree Clearing sheets (sheet numbers 22A- 22JJ) were to make corrections to the constructed elements shown and work limits so that they match the other construction drawings. In previous versions of the plan set, the work limits were incorrect on these sheets and some of the elements of construction did not match the highway construction plans.

FOR REFERENCE ONLY

PRE-BID QUESTIONS

The inclusion of the question(s) that accompany answer(s) in this addendum is provided for reference only and the question(s) shall not be construed as a contract modification or change.

Question Submitted: 12/5/2024 9:55:10 AM

Can durable shale, as defined by CMS 703.16-D, be used for Item 203 - Embankment, APP (Type C)?

Answer: CMS 703.16-D refers to the bucket test for classification of durable shales to be used as embankment. The Item 203 – Embankment, As Per Plan (Type C) plan note requires Slake Durability Index (SDI) testing, so this material needs to be tested to ensure durability by the SDI method indicated, not the bucket test. Durable shale/siltstone that meets the minimum Slake Durability Index requirement can be used for this item.

Question Submitted: 12/5/2024 6:10:39 AM

It has come to our attention that a previous project in the District (LAW US 52 11.75 PID 104167) was required to do mist net surveys prior to the contractor clearing trees in an adjacent waste/borrow area. Typically, the contractor is permitted to remove trees from

October 1 to March 31 and the mist net surveys cannot take place until after April 1st. Will the contractor be required to do mist net surveys for borrow/waste areas prior to removal of trees on this project per the Amended Programmatic Biological Opinion on the Federally Endangered Indiana Bat and Federally Endangered Northern Long-eared Bat? If mist net surveys are required, this will add a year to the project schedule with the delay in clearing to the next season.

Answer: The Contractor will need to follow ODOT CMS 107.10 and obtain all environmental clearances and permits prior to the beginning of work when utilizing the available excess parcels for staging, waste, or borrow. Through this process, the Contractor will use environmental contractor(s) prequalified by ODOT to review the ecological resources and coordinate with the U.S. Fish and Wildlife Service (USFWS) and the Ohio Department of Natural Resources (ODNR) if habitats for state or federally listed species is present and will be impacted. This would include impacts to suitable wooded/forested habitat (trees) for state and federally listed bats. The use of the excess parcels or other areas outside of the work limits of the project by a Contractor is not part of ODOT's coordination and consultation for the project, and therefore, ODOT's Amended Programmatic Biological Opinion on the Federally Endangered Indiana Bat and Federally Endangered Northern Long-eared Bat is not applicable to the Contractor's actions on the excess parcels or other areas. Any requirements on the on the timing of the removal of suitable wooded habitat for listed bat species will need to be determined through coordination between the Contractor, the USFWS, and ODNR.

While ODOT will not be involved in this coordination process, in our experience the Contractor's direct coordination with the USFWS and ODNR would likely result in the need to implement avoidance and/or minimization measures to obtain approvals from those agencies. As noted in the question, typical avoidance and minimization measures for bat species would include cutting suitable wooded habitat for those species when the bats would not be using the trees for roosting. The resource agencies typically request that the removal of suitable wooded habitat occur between the dates of October 1 and March 31 to avoid direct impacts if no site-specific survey has been completed to confirm absence of listed bat species. If these dates cannot be followed, then the resource agencies may request a survey to confirm the presence or absence of listed bat species. This could include a mist-net or acoustic call survey following the USFWS and ODNR approved survey guidelines. If absence is confirmed using a valid survey, then cutting of suitable wooded habitat may be authorized by the resource agencies to occur at any time. If presence of listed bats is confirmed by a survey, then the resource agencies may require seasonal removal of suitable wooded habitat or may allow for tree clearing during the active roosting season (April 1 through September 30) if certain conservation or mitigation measures are implemented to account for species impacts (such as mitigation at an approved bat conservation area).

Question Submitted: 12/4/2024 5:51:28 PM

Is the pay item for pneumatic piezometers correct? The plan notes only refer to piezometers. Pneumatic piezometers have largely been replaced with vibrating wire piezometers. The notes are also not clear as to who is taking readings and how often?

Answer: The reference to Pneumatic Piezometer (Item 20307500) will be changed to Item 20307510 – Piezometer in the next plan release. There will also be plan note edits included in the next release that specify following Section 502 of the Specifications for Geotechnical Explorations (SGE) rather than the Geotechnical Design Manual (GDM) and that the Contractor will be responsible for installation, daily monitoring during embankment construction, and weekly (minimum) reporting of readings to the Engineer.

Question Submitted: 12/4/2024 2:56:08 PM

Bid Item 16, Embankment, As Per Plan (Type C) includes 582,155 Cubic Yards of providing and placement of a rock embankment drainage layer using the best on-site sandstone or siltstone rock that has a slake durability index greater than 90 percent according to ASTM D4644-87. Without the ability for a Bidder to collect a representative number of samples prior to the bid to test a significant portion of the rock excavation materials, the Bidders cannot reasonably determine the amount of on-site sandstone or siltstone that will pass the slake durability test and be acceptable according to the requirements of the General Note. Furthermore, the plan Geotechnical report by Stantec performed 40 slake durability tests with samples from 5 borings and only 10 samples passed the test. The information provided in the plans and reference files is insufficient to price this item of work. If the intent is to utilize the best available on-site sandstone or siltstone, would the Department consider removing the slake durability test requirement and consider using visual inspection for designating the best rock to be used? If there is not enough on-site material that satisfies the slake durability testing, will the department add an item of work for off-site import of borrow material meeting the requirements?

Answer: The question addresses on-site materials that can be used. Off-site materials that meets the plan note criteria can also be used for this bid item. The existing plan note requires the material to meet slake durability index (SDI) greater than 90 percent according to ASTM D4644-87. However, the Department will be adjusting the plan note to reflect that Sandstone and Siltstone with SDI values of at least 90% are acceptable as well as Sandstone and Siltstone with SDI values from 85%-90% if the retained material after SDI testing is classified as Type 1.

The Department will not be removing the SDI testing requirement for this pay item nor will another item of work be added for off-site borrow. As mentioned, this Item 203 Embankment, As Per Plan (Type C) can include both on-site and off-site sources of material. The Department will be making plan note changes in the next Addendum to include the revised SDI criteria cited in this response.

12/10/2024

Project 240512 **Addendum No. 8**
PID No. 75923
LAW-SR 7-02.17 Phase 2
New Construction
Letting: December 12, 2024

Notice to all Bidders and Suppliers to please be advised of the attached Proposal Addendum.

For internet access to information referenced in this addendum, please see the ODOT web site at: https://ftp.dot.state.oh.us/pub/Contracts/Attach/LAW-75923/

The Department utilizes Bid Express (http://www.bidx.com) as the official medium for electronic bid submittal. All bidders must prepare bids and submit them online via Bid Express using AASHTOWare Project Bids software.

Addenda amendments must be acknowledged in the miscellaneous section of the Project Bids file and all amendments loaded in order for your bid to be considered for award of this project. Bid express will not accept bids that do not have amendments incorporated. Failure to incorporate changed quantities or items in your Project Bids submissions will result in the rejection of your bid.

PROPOSAL ADDENDUM
FOR
PROJECT: 240512 | **CRS:** LAW-7-2.17 | **PID:** 75923

MODIFICATIONS

REVISED COMPLETION DATE	N/A
REPLACE/ADD PLAN SHEETS	38, 764, 766, 767, 893, 894

CONTRACT (PAY) ITEM MODIFICATIONS

ADDED

REF. NO.	ITEM	DESCRIPTION	TOTAL QTY.	UNIT	SECTION
0716	809E69123	ATC CONTROLLER, AS PER PLAN	2	EACH	0007

PRE-BID QUESTIONS

The inclusion of the question(s) that accompany answer(s) in this addendum is provided for reference only and the question(s) shall not be construed as a contract modification or change.

Question Submitted: 12/6/2024 4:52:42 PM

PBQ 11/7/24 regarding MSE walls says the Department has no objection to changing the annular space between the wire walls and MSE panels from 3' of select granular backfill (SGB) to a 10" cast-in-place concrete closure pour, provided the MSE wall and panels can perform as intended. As this concrete is required by MSE wall design, will the Department pay for this change to a 10"cast-in-place concrete closure as a Change Order, or will the contractor be required to carry the additional cost of this reinforced concrete in their bid? If the contractor is required to carry this cost, please confirm that the Department will not reduce the pay qty of SGB in the 3' annular space, as shown per plan.

Answer: The Department cannot pay for materials not used. Any additional costs for changing the closure pour material should be included in the MSE wall cost by the contractor. SGB will be paid based on measurements/delivered and placed quantities.

Question Submitted: 12/6/2024 4:47:45 PM

For Ref #184 - What size junction box is required for this reference number? Is a barrier junction box 14x14x10 correct? (HL-30.41)

Answer: The junction box size is defined per the Standard Construction Drawing HL-30.31 and the box sized proposed in the question is correct.

Question Submitted: 12/6/2024 4:06:53 PM

I am looking at the letting and it shows an Impact Attenuator Type II Bidirectional and I cannot locate it on the Plans sheets.

Answer: This quantity comes from the Ramp K plan and profile sheet 442.

Question Submitted: 12/6/2024 3:15:49 PM

Pay item # 265 is for a TS-2 cabinet, but the plans do controller have a pay item for a controller for this cabinet. Is a controller needed or is the state providing a controller that will need programmed. Can an addendum be issued for a pay item for either of these items to be included id needed?

Answer: A pay item for Item 809 – ATC Controller, As per plan was missed and will be added to the next addendum.

Question Submitted: 12/6/2024 2:19:12 PM

Please refer to Bridge LAW-775-0105, plan sheet 1027 of 1247 regarding the HLMR bearings at the Pier. Please provide the required HLMR bearing type, i.e. guided expansion or unguided expansion. And please provide the required design movements for the HLMR bearings.

Answer: The HLMR bearings should be guided expansion, allowing movement parallel to the centerline of the bridge. Based on setting the bearings at 60 degrees Fahrenheit, the anticipated movement is 0.3 inches in each direction.

Question Submitted: 12/6/2024 1:23:08 PM

Preliminary design from an MSE supplier is requiring significantly more Select Granular Backfill for the wire wall/MSE design. If more SGB is required than plan quantity due to the design, will plan reference item quantities be extended to compensate the contractor per CY? If not, where should the contractor bid cost for additional material required?

Answer: The Department provides quantities in the plans for SGB based on the minimum length required for the soil reinforcement lengths. If the Contractor is using an approved MSE wall system listed in SS 840.02 and the SGB passes the tests in 840.03.E and the design requirements in 840.04 show a need of additional SGB then the Department would extend the quantities after the Engineers review and approval of an acceptable and reasonable design meeting normal industry standards.

Question Submitted: 12/6/2024 12:16:14 PM

Can ODOT please provide an updated RELOCATION SEQUENCE AND DATES schematic to the Reference Folder?

Answer: The Department initially prepared this exhibit to visually show the bidders the overall sequence of planned utility relocation, however, it was general in nature and the Utility Note has the details needed, therefore the Department won't be updating this exhibit.

July 23, 2024

O.D.O.T. - District 9
Paul Maravy
650 Eastern Ave
Chillicothe OH 45601

Re: Approval Under Ohio EPA National Pollutant Discharge Elimination System (NPDES) – Construction Site Stormwater General Permit – OHC000006

Dear Applicant,

Your NPDES Notice of Intent (NOI) application is approved for the following facility/site. Please use your Ohio EPA Facility Permit Number in all future correspondence.

Facility Name:	LAW-7-2.17 PID 75923
Facility Location:	NE of Chesapeake and NW of Proctorville
City:	Chesapeake
County:	Lawrence
Ohio EPA Facility Permit Number:	0GC04496*AG
Permit Effective Date:	July 23, 2024
Permit Expiration Date:	April 22, 2028

Please read and review the permit carefully. The permit contains requirements and prohibitions with which you must comply. A copy of the general permit may be viewed or downloaded from here. Coverage under this permit will remain in effect until a renewal of the permit is issued by the Ohio EPA.

If more than one operator (defined in the permit) will be engaged at the site, each operator shall seek coverage under the general permit. Additional operator(s) shall submit a Co-Permittee NOI to be covered under this permit. There is no fee associated with the Co-Permittee NOI form.

Please be aware that this letter only authorizes discharges in accordance with the above referenced General Permit. The placement to fill into regulated waters of the state may require a 401 Water Quality Certification and/or Isolated Wetlands Permit from Ohio EPA. Failure to obtain the required permits in advance is a violation of Ohio Revised Code 6111 and potentially subjects you to enforcement and civil penalties.

If you need assistance or have questions, please call (614) 644-2001 and ask for Construction Site Stormwater General Permit support or visit our website at epa.ohio.gov.

Sincerely,

Anne M Vogel

Anne M. Vogel
Director

Division of Surface Water - Notice of Intent (NOI) For Coverage Under Ohio *Environmental Protection Agency General NPDES Permit*

(Read accompanying instructions carefully before completing this form.)

Submission of this NOI constitutes notice that the party identified in Section I of this form intends to be authorized to discharge into state surface waters under Ohio EPA's NPDES general permit program. Becoming a permittee obligates a discharger to comply with the terms and conditions of the permit. Complete all required information as indicated by the instructions. Do not use correction fluid on this form. Forms transmitted by fax will not be accepted. A check for the proper amount must accompany this form and be made payable to "Treasurer, State of Ohio." (See the fee table in Attachment C of the NOI instructions for the appropriate processing fee.)

I. Applicant Information/Mailing Address

Company (Applicant) Name: O.D.O.T. - District 9

Mailing (Applicant) Address: 650 Eastern Ave

City: Chillicothe	**State :** OH	**Zip Code:** 45601

Country: USA

Contact Person: Paul Maravy	**Phone:** (740) 774-8838	**Fax:**

Contact E-mail Address: Paul.Maravy@dot.ohio.gov

II. Facility/Site Location Information

Facility/Site Name: LAW-7-2.17 PID 75923

Facility Address: NE of Chesapeake and NW of Proctorville

City: Chesapeake	**State:** OH	**Zip Code:** 45619

County: Lawrence	**Township:** Rome
County: Lawrence	**Township:** Union

Facility Contact Person: Paul Maravy	**Phone:** (740) 774-8838	**Fax:**

Facility Contact E-mail Address: Paul.Maravy@dot.ohio.gov

Latitude: 38.454444	**Longitude:** -82.421944	**Facility/Map Attachment** LAW_7_Location_Map.pdf

Receiving Stream or MS4: Symmes Creek, Indian Guyan Creek, Little Paddy Creek, Ohio River, Bear Creek, Bent Creek

III. General Permit Information

General Permit Number: OHC000006	**Coverage Type:** New
Type of Activity: Construction Site Stormwater General Permit	**SIC Code(s):**
Existing NPDES Facility Permit Number: 0GC04496*AG	**ODNR Coal Mining Application Number:**
If Household Sewage Treatment System, is system for:	**New Home Construction:** / **Replacement of failed existing system:**

Outfall	Design Flow (MGD):	Associated Permit Effluent Table:	Receiving Water :	Latitude	Longitude

Are These Permits Required?	**PTI:** NO	**Individual 401 Water Quality Certification:** PENDING
Individual NPDES: NO	**Isolated Wetland:** NO	**U.S. Army Corp Nationwide Permit:** NO
Proposed Project Start Date(if applicable): January 27, 2025		**Estimated Completion Date(if applicable):** November 01, 2028
Total Land Disturbance (Acres): 358.0000		**MS4 Drainage Area (Sq. Miles):**

SWP3 Attachment(s): <None>

IV. Payment Information

Check #:	**For Ohio EPA Use Only**
Check Amount:	**Check ID(OFA):**_____ **ORG #:**_____
Date of Check:	**Rev ID:**_____ **DOC #:**_____

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

Applicant Name: Paul Maravy	**Title:** District Construction Engineer
Signature: Electronically submitted by D09PM3	**Date:** Electronically submitted on 07/17/2024

ADDITIONAL INFORMATION

Please add any additional comments or attachments below.

Ohio EPA
General NOI Application Fee Invoice
Division of Surface Water

Environmental Protection Agency

Billed to Applicant:
O.D.O.T. - District 9
650 Eastern Ave
Chillicothe, OH 45601

Facility:
LAW-7-2.17 PID 75923
NE of Chesapeake and NW of Proctorville
Chesapeake, OH 45619

Transaction ID: 2285510
DATE: 07/17/2024
Payment Due: 08/16/2024
Revenue ID: 1643951

DESCRIPTION	AMOUNT
New / Construction Stormwater / OHC000006	$500.00

Your application will not be processed until the fee is paid in full by the due date indicated.

Balance Due **$500.00**

PAYMENT OPTIONS - Payment options for this invoice include the following:

Electronic Payment through Ohio EPA's eBusiness Center: To pay this invoice online, visit http://ebiz.epa.ohio.gov

Payment by Check: If paying by check, please send your check with the remittance advice outlined below.

You must write the Revenue ID (if shown below) on your check to ensure proper credit.

CUT OFF THIS STUB AND MAIL IT WITH YOUR CHECK. DO NOT MAIL TOP PORTION.

Pay to: **Treasurer, State of Ohio**. Please write the **Revenue ID** on your check. Please **send this stub** with your check. **DO NOT SEND LETTERS OR OTHER FORMS.**

Ohio EPA
PO Box 77005
Cleveland, OH 44194-7005

Due Date:	08/16/2024
Revenue ID:	1643951
Amount Due:	$500.00
Type Code:	APRON
Transaction ID:	2285510

1643951 0000050000 APR0N 000000000 0

US Army Corps of Engineers
Huntington District

Permit Number: 2022-00165-OHR

Name of Permittee: Ohio Department of Transportation

Date of Issuance: December 2, 2024

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

Barnett, Rosalie

From: Beck, Brandon
Sent: Thursday, February 6, 2025 6:15 PM
To: Barnett, Rosalie
Cc: Capper, Christopher
Subject: LAW-7-2.17 PID 75923 Environmental
Attachments: LAW-75923-Enviro.pdf; LAW-7 PID 75923 Waterway Permit Special Provisions.pdf

Hi Rosie,

I will not be available for the precon call tomorrow, as I will be on a plane to Utah at that time. I have discussed with Capper and I think it would be beneficial to set up a separate environmental precon with the contractor. I will be back the week of February 17, maybe we can schedule something after that.

Attached is the ECF and waterway permit Special Provisions (minus the plans). We are still waiting on additional testing for asbestos to come back. I will forward the results and asbestos demo forms for the remaining homes when they are available.

There are a large number of environmental commitments that I encourage the contractor to familiarize themselves with. We have also employed an environmental compliance monitor to ensure the contractor is abiding by the commitments. Here are a few highlights:

- **The project is located in a Surface Water Source Protection Area for the Ohio River/City of Ironton and is located adjacent to a Ground Water Source Protection Area for the Village of Proctorville. Use proper containment and diking in refueling areas. Do not store fuels, toxic/hazardous materials, and chemicals within 50 feet of drainage ways, ditches, or streams. Maintain a spill kit on-site throughout construction activities. Immediately mitigate any event, such as a spill of fuels, oils, or chemicals, that could threaten to contaminate the drinking water supply. If the spill is a reportable amount (per Ohio EPA's Release Reporting Requirements), contact the City of Ironton Fire Department (740-532-6463), the Chesapeake-Union Township Volunteer Fire Department (740-867-5988), the Proctorville Community Volunteer Fire and Rescue (740-886-8579), and/or the Rome Volunteer Fire Department (740-886-6770), and/or the Ohio EPA's Spills Hotline (1-800-282-9378) for cleanup of the spill**
- **To help protect undisturbed wetlands and streams, the contractor shall demarcate avoided areas in the field prior to construction**
- **To minimize impacts to state and federally listed bats, do not remove trees from April 1 through September 30. Perform all necessary tree removal from October 1 through March 31. Tree clearing activities shall commence between STA 307+00 and STA 348+00. The remaining areas of tree removal shall be conducted after tree clearing is completed between these stations. Demarcate clearing limits in the field to avoid any unauthorized tree clearing. 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**
- **Any necessary blasting and/or excavation work within areas identified as potential non-traditional hibernacula on the construction plans between STA 307+00 and 348+00 must occur between May 15 and September 30. Blasting can only be completed after all tree clearing has occurred near the potential hibernacula following the time of year restrictions in the tree clearing note. After the features in areas identified as potential non-traditional hibernacula are no longer present following disturbance, constraints on the timing of disruption of these areas will no longer apply**

- **The project designer shall incorporate conventional luminaires with Type III (forward throw) LED lighting to minimize back lighting as well as full cut off optics, to eliminate uplighting (i.e., light pollution) into the lighting plans.**
- **The USFWS wildlife biologist, Dr. Karen Hallberg (614-528-9697; karen_hallberg@fws.gov), must be invited to a pre-construction meeting with the contractor present and be notified of the project start date a minimum of one week prior to the commencement of work.**
- **If any human remains or Native American cultural items falling under the Native American Graves Protection and Repatriation Act (NAGPRA) or archaeological evidence is discovered during any phase of this project, the contractor shall stop work within 100 meters (~330 feet) of the site of discovery and avoid further disturbance. Construction personnel shall immediately contact Brandon Beck, ODOT District 9 Environmental Coordinator (740-774-8976) to initiate consultation. The discovering party must make a reasonable effort to protect and secure the remains and items. Construction shall not resume within 100 meters (~330 feet) around the discovery until a course of action is determined through consultation.**
- **Activities and land use adjacent to this project may be affected by construction noise. In order to minimize any adverse construction noise impacts, do not operate at any time any device in such a manner that noise created substantially exceeds the noise customarily and necessarily attendant to the reasonable and efficient performance of such equipment. Where construction activities are within 500 feet of residential areas, construction activities will be limited to daytime hours only. The following areas give locations where work shall be limited to daytime hours only:**
  Area 1: SR 7 Station 160+00 to Station 220+00
  Area 2: SR 7 Station 381+00 to Station 409+00
  Area 3: SR 775 Station 45+30 to Station 70+75
- **The Contractor shall be made aware of the possible presence of boating traffic ON both SYMMES CREEK locations and indian guyan creek and alert boaters via appropriate signage/markers.**

The Contractor shall place appropriate signage 300 feet upstream and downstream of each stream crossing location to alert paddlers/boaters of construction activity. Signage should also be coordinated with the Village of Chesapeake and placed at the Symmes Creek boat ramp.

The contractor shall provide notice 21 calendar days prior to the start of construction activities to the engineer. the Engineer shall notify ODNR at (kyla.maunz@dnr.ohio.gov) 14 calendar days prior to the start of construction activities to allow ODNR to post notice of the impending project construction on the appropriate ODNR webpages and associated online boating maps.

The contractor shall provide a portage for each location and accommodate safe travel through the construction area.

The waterway permits will expire on December 31, 2030. Please review the Special Provisions thoroughly and reach out to me with questions. Here are a few highlights:

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

Stream Name/ Description	Location	Work Restriction dates (No In-stream work permitted)
Stream 1	STA 124+50 to 128+00	none
Stream 2	STA 158+00	none
Stream 3	STA 161+00 to 164+25	none
Stream 3a	STA 161+50 to 164.75	none
Stream 4	STA 1416+60	none
Stream 5	STA 183+60 to 184+90	none
Stream 6	STA 189+00 to 192+50	none
Stream 7	STA 193+00 to 200+00	none
Stream 8	STA 200+75 to 202+00	none
Stream 9	STA 218+50 to 230+20	none
Stream 9a	STA 228+80 to 229+70	none
Stream 10	STA 238+00 to 270+50	none
Stream 10a	STA 241+45 to 242+00	none
Stream 10b	STA 247+90 to 248+45	none
Stream 10c	STA 261+75	none
Stream 11	STA 270+00 to 270+75	none
Stream 12	STA 227+80 to 278+40	none
Stream 13	STA 320+50 to 323+25	none
Stream 13a	STA 319+90 to 322+25	none
Stream 13a1	STA 317+75 to 319+90	none
Stream 13a2	STA 319+50 to 320+10	none
Stream 13a3	STA 321+00	none
Stream 14	STA 337+00 to 339+80	none
Stream 14a	STA 338+65 to 340+25	none
Stream 14b	STA 339+90 to 340+60	none
Stream 15	STA 355+00 to 356+50	none
Stream 15a	STA 353+00	none
Stream 15b	STA 349+00	none
Stream 16	STA 366+50 to 377+00	none
Stream 16a	STA 364+80 to 374+00	none
Stream 16a1	STA 363+25 to 365+25	none
Stream 17	STA 379+75 to 385+75	none
Stream 18	STA 69+69L of SR 775	none
Symmes Creek2	STA 134+00	April 15 to June 30

Stream Name/ Description	Location	Work Restriction dates (No In-stream work permitted)
Symmes Creek3	STA 200+50	April 15 to June 30
Bear Creek	STA 299+00	none
Bent Creek	STA 270+00 to 274+75	none
Indian Guyan Creek	STA 299+40	April 15 to June 30
Little Paddy Creek	STA 378+50	none
Little Paddy Creek - Ramp I	STA 378+00	none

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.

Aquatic resources not authorized for impacts must be demarcated in the field prior to site disturbance, and fencing shall remain in place and be maintained through construction.

A spill kit must be located within 150 feet of any equipment working in a stream or wetland. Please refer to Section 7 of the Special Provisions for details.

If temporary access fills are proposed to be used, please refer to Section 10 of the Special Provisions for details. Temporary access fills proposed in Streams 3, 9, 9a, 10, 11, 13, 14, 16, Symmes Creek. Bear Creek, Bent Creek, Indian Guyan Creek, and Little Paddy Creek should refer to Section 11.

Pages 11, 12, and 13 of the attached Special Provisions contain tables showing the impacts authorized by the waterway permits.

Brandon Beck
District Environmental Coordinator
ODOT District 9
650 Eastern Avenue, Chillicothe, Ohio 45601
(740) 774-8976
Transportation.ohio.gov

OHIO DEPARTMENT OF TRANSPORTATION

Ohio Department of Transportation
Environmental Consultation Form

County-Route-Section LAW-7-2.17 Phase 2 **PID** 75923

Funding Source(s): ☒ **Federal** ☐ **Non-Federal**

The environmental review, consultation, and other actions required by applicable Federal environmental laws for this project are being, or have been, carried-out by ODOT pursuant to 23 U.S.C. 327 and a Memorandum of Understanding dated December 14, 2020, and executed by FHWA and ODOT.

	Type of Environmental Document	Clearance Date:
☒	**NEPA Re-evaluation (if required)**	**8/8/2024**
☐	**C1**	
☐	**C2**	
☐	**D1**	
☐	**D2**	
☐	**D3**	
☐	**EA/FONSI**	
☒	**EIS/ROD**	**6/15/2001**

Commitments

Verify all environmental commitments and their disposition listed beginning on page 3

Yes	No	
☐	☒	Are there long-term commitments that would require federal authorization end date to be extended/revised?
☐	☐	If yes, has federal reimbursement end date been revised in Ellis?

Ohio Department of Transportation
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Permits and Required Agency Notifications:

Type of Permit	Required for this Project?		Obtained?		Approving Agency & Approval Date	Will be or has been incorporated into the Construction Contract?	
	Yes	No	Yes	No		Yes	No
USACE Clean Water Act 404 Nationwide Permit*		**X**					
USACE Clean Water Act 404 Regional General Permit*		**X**					
USACE Clean Water Act 404 individual*	**X**			**X**	**Will be obtained prior to construction**	**X**	
OEPA Individual 401 WQC*	**X**		**X**		**Ohio EPA; 7/19/2024**	**X**	
OEPA NPDES Stormwater Notice of Intent (NOI)	**X**		**X**		**Submitted 7/17/2024**	**X**	
OEPA Isolated Wetland Permit*		**X**					
OEPA 27-13 Landfill		**X**					
OEPA Demolition/Renovation Form*	**X**			**X**	**Contractor will submit demo forms for remaining houses prior to construction**	**X**	
USCG Section 9 of the Rivers and Harbors Act*		**X**					
USACE Section 10 of the Rivers and Harbors Act*		**X**					
Floodplain	**X**		**X**		**Eric Adkins; 3/5/2024**	**X**	
Other (Please list)		**X**					

*Incorporated into construction contract as a special provision

Is the ECF being used as the NEPA reevaluation document? ☐ Yes ☒ No

Disposition:

Based upon the information provided, the NEPA document remains valid and no further environmental documentation is required. The environmental review, consultation, and other actions required by applicable Federal environmental laws for this project are being, or have been, carried-out by ODOT pursuant to 23 U.S.C. 327 and a Memorandum of Understanding dated December 14, 2020, and executed by FHWA and ODOT. The ECF is confirmation that the proposed action will not result in environmental impacts not previously considered in the original NEPA document or re-evaluation. Furthermore, no new information or circumstances relevant to environmental concerns exist which would result in substantial environmental impacts.

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Prepared by: Brandon Beck Date: 8/21/2024

Approved by: Brandon Beck Date: 8/21/2024

District Environmental Coordinator

Commitments Made and Disposition

COMMITMENT	DISPOSITION
The Project Designer will design and incorporate project specific noise wall designs for Barriers B and D into the plans in accordance with and approval from ODOT's Office of Environmental Services. ODOT will have a conference call with the noise wall designer prior to commencing noise wall design.	
The Project Designer will provide Stage 3 noise wall construction plans to the Office of Environmental Services for review and approval in May 2024 prior to preparing final tracings in August 2024.	
ODOT will ensure that Noise Barriers B and D are installed per plan.	
The project engineer shall add the following plan note to the design plans: "The project is located in a Surface Water Source Protection Area for the Ohio River/City of Ironton and is located adjacent to a Ground Water Source Protection Area for the Village of Proctorville. Use proper containment and diking in refueling areas. Do not store fuels, toxic/hazardous materials, and chemicals within 50 feet of drainage ways, ditches, or streams. Maintain a spill kit on-site throughout construction activities. Immediately mitigate any event, such as a spill of fuels, oils, or chemicals, that could threaten to contaminate the drinking water supply. If the spill is a reportable amount (per Ohio EPA's Release Reporting Requirements), contact the City of Ironton Fire Department (740-532-6463), the Chesapeake-Union Township Volunteer Fire Department (740-867-5988), the Proctorville Community Volunteer Fire and Rescue (740-886-8579), and/or the Rome Volunteer Fire Department (740-886-6770), and/or the Ohio EPA's Spills Hotline (1-800-282-9378) for cleanup of the spill".	
ODOT will obtain all appropriate waterway permits prior to any work within the jurisdictional boundary of any waterway, including wetlands, and all Waterway	

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Permit Special Provisions will be noted under Special Provisions in the plans and adhered to during construction. The project engineer shall add the following plan note to the design plans: "The contractor shall not perform any work within the jurisdictional boundaries of any waterway, including wetlands, until ODOT obtains the necessary waterway permits. Work includes the placement of any temporary or permanent fills."	
ODOT will obtain all appropriate waterway permits prior to any work within the jurisdictional boundary of any waterway, including wetlands, and all Waterway Permit Special Provisions will be noted under Special Provisions in the plans and adhered to during construction. The project engineer shall add the following plan note to the design plans: "The contractor shall not perform any work within the jurisdictional boundaries of any waterway, including wetlands, until ODOT obtains the necessary waterway permits. Work includes the placement of any temporary or permanent fills."	
The project engineer shall add the following plan note to the design plans: "To help protect undisturbed wetlands and streams, the contractor shall demarcate avoided areas in the field prior to construction."	
The project engineer shall add the following plan note to the design plans: "To minimize impacts to state and federally listed bats, do not remove trees from April 1 through September 30. Perform all necessary tree removal from October 1 through March 31. Tree clearing activities shall commence between STA 307+00 and STA 348+00. The remaining areas of tree removal shall be conducted after tree clearing is completed between these stations. Demarcate clearing limits in the field to avoid any unauthorized tree clearing. 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."	
An abandoned well near STA 370+00 and a drainage system comprised of two catch basins and a pipe outfall to Symmes Creek near STA 120+00 have been identified	

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as potential non-traditional hibernacula. In the summer of 2024, ODOT-OES biologists will search these two man-made structures for evidence of roosting bats. The structures will be thoroughly inspected using a camera mounted on an extension pole. If no bats are found roosting in the well, a solid material will be secured across the well opening, leaving no crevices through which bats could enter. If no bats are found roosting in the drainage system, a mesh material will be placed securely over the catch basins and pipe outlet to exclude bats from entering the structures. **If bats are found roosting in any of the structures, ODOT-OES biologists will conduct an emergence survey at the identified structure and cap the openings immediately after the known number of roosting bats have been observed exiting. Once exclusion measures have been implemented, then no time of year restrictions will apply to these areas.**	
The project engineer shall add the following plan note to the design plans: **"Any necessary blasting and/or excavation work within areas identified as potential non-traditional hibernacula on the construction plans between STA 307+00 and 348+00 must occur between May 15 and September 30. Blasting can only be completed after all tree clearing has occurred near the potential hibernacula following the time of year restrictions in the tree clearing note. After the features in areas identified as potential non-traditional hibernacula are no longer present following disturbance, constraints on the timing of disruption of these areas will no longer apply."**	
ODOT-OES Ecological Unit will preserve 390.24 ac of bat habitat to offset the impacts to bats on the Chesapeake Bypass project. The land preserved will provide suitable summer roosting and foraging habitat for IBAT, NLEB, and TCB and will be preserved in perpetuity. All proposed habitat preservation sites/credits will be coordinated with the Service for their approval. ODOT will provide documents to the Service verifying the purchase(s) of property/credits, and the protected status of the mitigation acreage specifically for the benefit of one or all of the three bat species addressed in the BO/CO.	

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The project designer shall incorporate conventional luminaires with Type III (forward throw) LED lighting to minimize back lighting as well as full cut off optics, to eliminate uplighting (i.e., light pollution) into the lighting plans.	
ODOT District 9 will monitor this commitment and employ an Environmental Compliance Monitor (ECM) to help track compliance with construction related environmental commitments. The ECM will notify ODOT of any observed failure or inability to comply with construction related items listed in the "Reasonable and prudent measures" and/or "Terms and Conditions" of the BO/CO.	
ODOT will inform the USFWS of the date, time, and location of the Project pre-construction meeting to allow biologists from OHFO to attend. **The project engineer shall add the following plan note to the design plans:** **"The USFWS wildlife biologist, Dr. Karen Hallberg (614-528-9697; karen_hallberg@fws.gov), must be invited to a pre-construction meeting with the contractor present and be notified of the project start date a minimum of one week prior to the commencement of work."**	
ODOT will report to the Transportation Liaison at the USFWS Ohio Field Office via email when the schedule of construction activities has been finalized. Should any changes in the schedule occur which will result in an inability to meet environmental commitments agreed to by the USFWS and ODOT, additional coordination with USFWS will be required. Any project delays greater than a year will also be reported.	
ODOT must notify the Transportation Liaison at the USFWS Ohio Field Office within 24 hours of any tree clearing or blasting activities that have occurred outside the time frames defined in the plan notes.	
ODOT shall hire a professional, permitted malacologist will collect and relocate mussels from Symmes Creek at the proposed LAW-7-2.17 (Phase 2) crossing locations. The mussel survey/relocation will take place no earlier than six months prior to construction and no later than 15 days prior to construction. Changes to this schedule will be coordinated with USFWS prior to any relocation of mussels. Results of the relocation must be	

County-Route-Section LAW-7-2.17 Phase 2 **PID** 75923

coordinated with USFWS and ODNR, and concurrence on the relocation effort and approval to proceed with in-stream work must be received from the agencies before construction within Symmes Creek can begin.	
ODOT-OES will coordinate with the ODNR Division of Natural Areas and Preserves (DNAP) to relocate state listed plants prior to the project's construction. This relocation will focus primarily on the state threatened pink thoroughwort. Plants recovered will be moved with ODNR-DNAP to Compass Plant Prairie in Lawrence County.	
The project engineer shall add the following plan note to the design plans: "If any human remains or Native American cultural items falling under the Native American Graves Protection and Repatriation Act (NAGPRA) or archaeological evidence is discovered during any phase of this project, the contractor shall stop work within 100 meters (~330 feet) of the site of discovery and avoid further disturbance. Construction personnel shall immediately contact Brandon Beck, ODOT District 9 Environmental Coordinator (740-774-8976) to initiate consultation. The discovering party must make a reasonable effort to protect and secure the remains and items. Construction shall not resume within 100 meters (~330 feet) around the discovery until a course of action is determined through consultation."	
The project engineer shall add the following plan note to the design plans: "Activities and land use adjacent to this project may be affected by construction noise. In order to minimize any adverse construction noise impacts, do not operate at any time any device in such a manner that noise created substantially exceeds the noise customarily and necessarily attendant to the reasonable and efficient performance of such equipment. Where construction activities are within 500 feet of residential areas, construction activities will be limited to daytime hours only. The following areas give locations where work shall be limited to daytime hours only: Area 1: SR 7 Station 160+00 to Station 220+00 Area 2: SR 7 Station 381+00 to Station 409+00 Area 3: SR 775 Station 45+30 to Station 70+75"	

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The project engineer shall add the following plan note to the design plans: **"Throughout the duration of the project, the contractor shall notify the project engineer in writing of all traffic restrictions and upcoming maintenance of traffic changes. The contractor shall ensure the written notification is submitted in a timely manner to allow the project engineer to meet the required time frames set forth in the table below to inform the Office of Communications. This notification shall be received by the project engineer prior to the physical setup of any applicable signs or message boards. Information shall include, but is not limited to, all construction activities that impact or interfere with traffic and shall list the specific location, type of work, road status, date and time of restriction, duration of restriction, number of lanes maintained, number of lanes closed, detour routes, if applicable, and any other information requested by the project engineer."** **Item** **Duration of Closure** **Notice Due to the Office of Communications** **Ramp and Road Closures** **>= 2 Weeks** **21 Calendar Days Prior to Closure** **> 12 Hours & < 2 Weeks** **14 Days Prior to Closure** **< 12 Hours** **4 Business Days Prior to Closure** **Lane Closures and Restrictions** **>= 2 Weeks** **14 Calendar Days Prior to Closure** **< 2 Weeks** **2 Business Days Prior to Closure** **Start of Construction and Travel Pattern Changes** **14 Calendar Days Prior to Implementation**	

SPECIAL PROVISIONS

WATERWAY PERMITS CONDITIONS

C-R-S: LAW-7-2.17

PID: 75923

Date: November 27, 2024

1. Waterway Permits Time Restrictions:

A Section 404 Individual Permit (404 IP) from the U.S. Army Corps of Engineers (USACE) has been authorized for LAW-7-2.17, PID 75923. A copy of the Section 404 Permit authorization letter (LRH-2022-00165-OHR – Symmes Creek) shall be kept at the work site at all times and made available to all contractors and subcontractors. The permit is effective starting: November 27, 2024. The permit expires: December 31, 2030.

A Section 401 Water Quality Certification (401 WQC) from the Ohio Environmental Protection Agency (OEPA) is authorized for LAW-7-2.17, PID 75923. A copy of the authorization letter (Ohio EPA ID No. 238961A) shall be kept at the work site at all times and made available to all contractors and subcontractors. The permit is effective starting: November 27, 2024. The permit expires: December 31, 2030.

For authorized work 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:

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 Section 404 IP and Section 401 WQC applications 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 1	STA 124+50 to 128+00	none
Stream 2	STA 158+00	none
Stream 3	STA 161+00 to 164+25	none
Stream 3a	STA 161+50 to 164.75	none
Stream 4	STA 1416+60	none
Stream 5	STA 183+60 to 184+90	none
Stream 6	STA 189+00 to 192+50	none
Stream 7	STA 193+00 to 200+00	none
Stream 8	STA 200+75 to 202+00	none
Stream 9	STA 218+50 to 230+20	none
Stream 9a	STA 228+80 to 229+70	none
Stream 10	STA 238+00 to 270+50	none
Stream 10a	STA 241+45 to 242+00	none
Stream 10b	STA 247+90 to 248+45	none
Stream 10c	STA 261+75	none
Stream 11	STA 270+00 to 270+75	none
Stream 12	STA 227+80 to 278+40	none
Stream 13	STA 320+50 to 323+25	none
Stream 13a	STA 319+90 to 322+25	none
Stream 13a1	STA 317+75 to 319+90	none
Stream 13a2	STA 319+50 to 320+10	none
Stream 13a3	STA 321+00	none
Stream 14	STA 337+00 to 339+80	none
Stream 14a	STA 338+65 to 340+25	none
Stream 14b	STA 339+90 to 340+60	none
Stream 15	STA 355+00 to 356+50	none
Stream 15a	STA 353+00	none
Stream 15b	STA 349+00	none
Stream 16	STA 366+50 to 377+00	none
Stream 16a	STA 364+80 to 374+00	none
Stream 16a1	STA 363+25 to 365+25	none
Stream 17	STA 379+75 to 385+75	none
Stream 18	STA 69+69L of SR 775	none
Symmes Creek2	STA 134+00	April 15 to June 30

Stream Name/ Description	Location	Work Restriction dates (No In-stream work permitted)
Symmes Creek3	STA 200+50	April 15 to June 30
Bear Creek	STA 299+00	none
Bent Creek	STA 270+00 to 274+75	none
Indian Guyan Creek	STA 299+40	April 15 to June 30
Little Paddy Creek	STA 378+50	none
Little Paddy Creek – Ramp I	STA 378+00	none

*Restriction dates do not apply if the stream has been dewatered prior to April 15.

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 Lawrence County Sheriff's Office at (740) 532-3525.

6. Aquatic Resource Demarcation:

Tables D and E (attached) include detailed fill quantities authorized within the aquatic resources. Aquatic resources not authorized 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:

Streams without StreamStats data (Streams 1, 2, 3a, 4, 5, 6, 7, 8, 10a, 10b, 10c, 12, 13a, 13a1, 13a2, 13a3, 15, 15a, 15b, 16a, 17) shall adhere to this condition of the Special Provisions for Temporary Access Fills (TAFs). All remaining streams with TAFs shall adhere to condition 11 of the Special Provisions.

Special Provisions Notes:

Definitions:

Normal Flow
Normal flow is the flow necessary to maintain chemical, physical, and biological integrity of the waterway. Normal flows for this type of waterway may vary during the year. It is anticipated that the Normal Flow is less than the flow producing an elevation equal to the OHWM but greater than zero. The Contractor's means and methods may vary depending on the time of year the work is active.

Temporary Access Fills (TAFs)
Include, but are not limited to, dewatering fills, causeways, cofferdams, access pads, and temporary bridges below the OHWM.

Requirements

7 calendar days prior to the initiation of any in-stream work, provide the Engineer with a written plan that includes the following:

- Plan view drawing showing the location of all TAFs proposed for use on the project.

- 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.
- 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 TAFs.

Do not begin in-stream work until the Engineer has accepted the written plan. Submit any changes to the planned TAF to the Engineer for acceptance a minimum of 7 days prior to performing any instream work.

The design 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.

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

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. Minimize clearing, grubbing, and excavation of waterway banks, and approach sections. Construct the TAFs as to not cause erosion or allow sediment deposits in the waterway.

Prior to the installation of any work in the waterway, establish a visual monument upstream of the proposed TAF. Maintain the monument throughout the project. Provide a visual mark on the monument that identifies the elevation of the OHWM.

Construct the TAFs to a water elevation at least 1 foot (0.3 m) above the OHWM. Use TAFs to dewater sections of the waterway for accessing proposed work areas only. Provide diversion ditches, conduits, pumps or other methods to maintain normal flows to the downstream waterway. Passing normal flows through active work areas of the waterway is prohibited. Ensure that any ponding of water behind the TAFs will not damage property, flood roadways, or threaten human health and safety.

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, as specified in C&MS 703.19.B.

When the work requiring TAF is complete, all portions of the TAF (including all rock and temporary diversions) 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 waterway 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. Temporary Access Fills:

Streams that have StreamStats data (Streams 3, 9, 9a, 10, 11, 13, 14, 16, Symmes Creek, Bear Creek, Bent Creek, Indian Guyan Creek, and Little Paddy Creek) shall adhere to this condition of the Special Provisions for Temporary Access Fills (TAFs). All remaining streams with TAFs shall adhere to condition 10 of the Special Provisions.

Special Provisions Notes:

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.

12. 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 jurisdictional waters of the U.S. 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.

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 has been attached to these Special Provisions.

14. 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.

Version: July 2020

LAW-SR 7-2.17 (Phases 2A and 2B), PID 75923
8/4/2023
Combined 404/401 Individual Permit
LAW-SR 7-2.17 (Phases 2A and 2B), PID 75923
10/21/2023

TABLE D. STREAM DISCHARGE AND FILL QUANTITIES

Stream	Station	Description of Impacts	Length (LF)	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 or DEP			Proposed Earthen, Granular, or Embankment Fill			Proposed Other (Steel, Etc.)									
						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 1	STA 124+50 to 128+00	Embankment/grading + TAF	526	3	0.5	0	0.000	0.00	0	0.000	0.00	478	0.033	26.56	0	0.000	0.00	478	0.033	26.56	140	0.010	7.78	478
Stream 2	STA 158+00	Embankment/grading + TAF	445	2	0.5	0	0.000	0.00	0	0.000	0.00	224	0.011	8.30	0	0.000	0.00	224	0.011	8.30	50	0.002	1.85	224
Stream 3	STA 161+00 to 164+25	New culvert, embankment/grading, scour protection + TAF	741	9	1	6	0.001	2.00	38	0.008	12.67	487	0.101	162.33	46	0.010	15.33	577	0.119	192.33	130	0.027	43.33	617
Stream 3a	STA 161+50 to 164.75	Embankment/grading + TAF	343	5.5	1	0	0.000	0.00	0	0.000	0.00	343	0.043	69.87	0	0.000	0.00	343	0.043	69.87	50	0.006	10.19	343
Stream 4	STA 1416+60	Grading, scour protection, (culvert replacement) + TAF	110	3.5	1	0	0.000	0.00	10	0.001	1.30	10	0.001	1.30	0	0.000	0.00	20	0.002	2.59	30	0.002	3.89	30
Stream 5	STA 183+60 to 184+90	Embankment/grading, + TAF	528	4	1	0	0.000	0.00	0	0.000	0.00	527	0.048	78.07	0	0.000	0.00	527	0.048	78.07	130	0.012	19.26	527
Stream 6	STA 189+00 to 192+50	Embankment/grading, scour protection + TAF	458	2	0.5	0	0.000	0.00	30	0.001	1.11	402	0.018	14.89	0	0.000	0.00	432	0.020	16.00	70	0.003	2.59	452
Stream 7	STA 193+00 to 200+00	Embankment/grading, scour protection + TAF	916	3.5	0.5	0	0.000	0.00	16	0.001	1.04	806	0.065	52.24	0	0.000	0.00	822	0.066	53.28	90	0.008	5.84	822
Stream 8	STA 200+75 to 202+00	Embankment/grading, + TAF	261	2	1	0	0.000	0.00	0	0.000	0.00	192	0.009	14.22	0	0.000	0.00	192	0.009	14.22	58	0.003	4.30	250
Stream 9	STA 218+50 to 230+20	New culvert, embankment/grading, scour protection + TAF	1688	7.5	1	14	0.003	3.89	36	0.006	10.00	1,456	0.251	404.44	8	0.001	2.22	1,514	0.261	420.56	110	0.019	30.56	1,544
Stream 9a	STA 228+80 to 229+70	Embankment/grading, scour protection + TAF	400	3	0.5	40	0.003	2.22	0	0.000	0.00	321	0.022	17.83	0	0.000	0.00	361	0.025	20.06	20	0.001	1.11	361
Stream 10	STA 238+00 to 270+50	Embankment/grading, scour protection + TAF	4092	5.5	0.5	15	0.002	1.60	91	0.012	9.20	3,979	0.502	405.27	0	0.000	0.00	4,085	0.516	416.06	170	0.021	17.31	4,085
Stream 10a	STA 241+45 to 242+00	Embankment/grading, scour protection + TAF	194	2.5	0.5	0	0.000	0.00	16	0.001	0.74	48	0.003	2.22	0	0.000	0.00	64	0.004	2.96	20	0.001	0.93	84
Stream 10b	STA 247+90 to 248+45	Embankment/grading, scour protection + TAF	233	2.5	0.5	0	0.000	0.00	25	0.001	1.16	132	0.008	6.11	0	0.000	0.00	157	0.009	7.27	70	0.004	3.24	177
Stream 10c	STA 261+75	Embankment/grading, scour protection + TAF	300	3	0.5	0	0.000	0.00	15	0.001	0.83	233	0.016	12.94	0	0.000	0.00	248	0.017	13.78	20	0.001	1.11	248
Stream 11	STA 270+00 to 270+75	Embankment/grading, scour protection + TAF	287	3	0.5	0	0.000	0.00	20	0.001	1.11	256	0.018	14.22	0	0.000	0.00	276	0.019	15.33	70	0.005	3.89	276
Stream 12	STA 227+80 to 278+40	Embankment/grading + TAF	349	2.5	0.5	0	0.000	0.00	0	0.000	0.00	337	0.019	16.00	0	0.000	0.00	337	0.019	16.00	70	0.004	3.24	337
Stream 13	STA 320+50 to 323+25	New culvert, embankment/grading, scour protection + TAF	913	6	0.5	0	0.000	0.00	47	0.006	5.22	720	0.099	80.00	0	0.000	0.00	767	0.106	85.22	130	0.018	14.44	787
Stream 13a	STA 319+90 to 322+25	Embankment/grading, + TAF	703	5.5	0.5	0	0.000	0.00	0	0.000	0.00	654	0.083	66.61	0	0.000	0.00	654	0.083	66.61	70	0.009	7.13	674
Stream 13a1	STA 317+75 to 319+90	Embankment/grading scour protection + TAF	346	5	1	0	0.000	0.00	5	0.001	0.93	297	0.034	55.00	0	0.000	0.00	303	0.035	56.11	70	0.008	12.96	323
Stream 13a2	STA. 319+50 to 320+10	Embankment/grading, scour protection + TAF	162	1.5	0.5	0	0.000	0.00	5	0.001	0.02	114	0.004	3.30	0	0.000	0.00	119	0.005	3.31	20	0.001	0.56	139
Stream 13a3	STA 321+00	Embankment/grading, scour protection + TAF	56	1.5	1	0	0.000	0.00	5	0.001	0.28	32	0.001	1.78	0	0.000	0.00	37	0.002	2.06	20	0.001	1.11	57

TABLE D. STREAM DISCHARGE AND FILL QUANTITIES

Stream	Station	Description of Impacts	Length (LF)	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 or DEP			Proposed Earthen, Granular, or Embankment Fill			Proposed Other (Steel, Etc.)									
						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 14	STA 337+00 to 339+80	New culvert, embankment/grading, scour protection + TAF	1199	4.5	1	12	0.001	2.00	27	0.003	4.50	968	0.100	161.33	168	0.017	28.00	1,175	0.121	195.83	150	0.015	25.00	1,195
Stream 14a	STA 338+65 to 340+25	Embankment/grading	160	2.5	0.5	0	0.000	0.00	0	0.000	0.00	160	0.009	7.41	0	0.000	0.00	160	0.009	7.41	0	0.000	0.00	160
Stream 14b	STA 339+90 to 340+60	Embankment/grading	109	2.5	0.5	0	0.000	0.00	0	0.000	0.00	85	0.005	3.94	0	0.000	0.00	85	0.005	3.94	0	0.000	0.00	85
Stream 15	STA 355+00 to 356+50	Excavation +TAF	392	2.5	0.5	0	0.000	0.00	0	0.000	0.00	209	0.012	9.68	0	0.000	0.00	209	0.012	9.68	20	0.001	0.93	229
Stream 15a	STA 353+00	TAF	74	2	0.5	0	0.000	0.00	0	0.000	0.00	0	0.000	0.00	0	0.000	0.00	0	0.000	0.00	20	0.001	1.48	20
Stream 15b	STA 349+00	TAF	31	2	0.5	0	0.000	0.00	0	0.000	0.00	0	0.000	0.00	0	0.000	0.00	0	0.000	0.00	20	0.001	1.48	20
Stream 16	STA 366+50 to 377+00	Embankment/grading, scour protection + TAF	1876	6	0.5	60	0.008	6.67	0	0.000	0.00	1,646	0.227	182.89	0	0.000	0.00	1,706	0.235	189.56	160	0.022	17.78	1,746
Stream 16a	STA 364+80 to 374+00	Embankment/grading + TAF	1075	4	0.5	0	0.000	0.00	0	0.000	0.00	1,075	0.099	79.63	0	0.000	0.00	1,075	0.099	79.63	70	0.006	5.19	1,075
Stream 16a1	STA 363+25 to 365+25	Embankment/grading	230	3	0.5	0	0.000	0.00	0	0.000	0.00	230	0.016	12.78	0	0.000	0.00	230	0.016	12.78	0	0.000	0.00	230
Stream 17	STA 379+75 to 385.75	Embankment/grading, scour protection + TAF	776	2	0.5	0	0.000	0.00	10	0.000	0.37	766	0.035	28.37	0	0.000	0.00	776	0.036	28.74	50	0.002	1.85	776
Stream 18	STA 69+69L of SR 775	scour protection	244	2	0.5	0	0.000	0.00	5	0.001	0.19	0	0.000	0.00	0	0.000	0.00	5	0.001	0.19	0	0.000	0.00	5
Symmes Creek 2	STA 134+00	Piers (new bridge) + TAF	400	90	10	50	0.002	360.00	0	0.000	0.00	0	0.000	0.00	0	0.000	0.00	50	0.002	360.00	100	0.200	1,807.41	100
Symmes Creek 3	STA 200+50	Piers (new bridge), grading + TAF	475	75	8	35	0.004	185.00	0	0.000	0.00	35	0.004	35.00	0	0.000	0.00	35	0.008	220.00	100	0.220	1,444.44	100
Bear Creek	STA 299+00	Embankment/grading, scour protection + TAF	147	14	2.5	0	0.000	0.00	16	0.001	3.00	25	0.008	33.00	0	0.000	0.00	41	0.009	36.00	20	0.001	3.70	41
Bent Creek	STA 270+00 to 274+75	New culvert, embankment/ grading, scour protection + TAF	1421	13	2	45	0.013	44.00	10	0.002	10.00	1,140	0.340	1097.00	50	0.013	48.00	1,245	0.368	1199.00	210	0.062	202.00	1,245
Indian Guyan Creek	STA 299+40	Piers (new bridge), scour protection, grading + TAF	368	44	4	50	0.005	74.00	58	0.004	20.30	58	0.002	8.70	0	0.000	0.00	58	0.011	103.00	100	0.111	488.00	100
Little Paddy Creek	STA 378+50	TAF	1996	13	3	0	0.000	0.00	0	0.000	0.00	0	0.000	0.00	0	0.000	0.00	0	0.000	0.00	180	0.049	260.00	180
Little Paddy Creek – Ramp I	STA 378+00	TAF	1996	13	3	0	0.000	0.00	0	0.000	0.00	0	0.000	0.00	0	0.000	0.00	0	0.000	0.00	85	0.025	122.00	85
					SUM:	327	0.043	681.38	485	0.054	83.95	18,445	2.245	3,173.23	272	0.041	93.56	19,387	2.382	4,032.29	2,893	0.885	4,577.88	20,227

LF = linear feet; AC = acres; CY = cubic yards; TAF= Temporary Access Fill; RCP = rock channel protection or the like; DEP = Ditch Erosion Protection; NA = Not Applicable

Combined 404/401 Individual Permit
LAW-SR 7-2.17 (Phases 2A and 2B), PID 75923
10/21/2023

TABLE E. WETLAND DISCHARGE AND FILL QUANTITIES

Wetland	Station	Description of Impacts	Acreage (AC)	Depth (LF)	Permanent Fill Within Wetland Boundary								Total Permanent Fill		Total Impact Acreage
					Proposed Concrete (Includes Culvert, Piers, Walls, Abutments, etc.)		Proposed RCP or DEP		Proposed Earthen, Granular, or Embankment Fill		Proposed Other (Steel, Etc.)				
					Area (AC)	Volume (CY)	Area (AC)	Volume (CY)	Area (AC)	Volume (CY)	Area (AC)	Volume (CY)	Area (AC)	Volume (CY)	Area (AC)
Wetland A	STA 117+90 to 120+40	Embankment/grading, scour protection, new culvert	0.79	1	0.001	1.61	0.026	41.95	0.082	132.29	0.001	1.61	0.11	177.47	0.11
Wetland B	STA 125+25 to 126+60	Embankment/grading	0.12	1	0.000	0.00	0.000	0.00	0.120	193.60	0.000	0.00	0.12	193.60	0.12
Wetland C	STA 141+75	Embankment/grading	0.03	1	0.000	0.00	0.000	0.00	0.030	48.40	0.000	0.00	0.03	48.40	0.03
Wetland D	STA 145+90 to 149+50	Embankment/grading	1.77	1	0.000	0.00	0.000	0.00	0.070	112.93	0.000	0.00	0.07	112.93	0.07
Wetland E	STA 146+00 to 154+40	Embankment/grading, scour protection	0.71	1	0.000	0.00	0.032	51.63	0.558	900.24	0.000	0.00	0.59	951.87	0.59
Wetland F	STA 203+50 to 204+50	Embankment/grading, scour protection	0.55	1	0.000	0.00	0.020	32.26	0.530	855.07	0.000	0.00	0.55	887.33	0.55
Wetland G	STA 216+50 to 217+15	Excavation/grading	0.01	1	0.000	0.00	0.000	0.00	0.010	16.13	0.000	0.00	0.01	16.13	0.01
Wetland H	STA 229+25	Embankment/grading, scour protection	0.1	1	0.001	1.61	0.000	0.00	0.099	159.72	0.000	0.00	0.10	161.33	0.10
Wetland I	STA 288+50 to 292+50	Embankment/grading	0.6	1	0.000	0.00	0.000	0.00	0.600	968.00	0.000	0.00	0.60	968.00	0.60
Wetland K	STA 316+50	Embankment/grading	0.02	1	0.000	0.00	0.000	0.00	0.020	32.27	0.000	0.00	0.02	32.27	0.02
Wetland L	STA 324+25 to 325+50	Embankment/grading	0.13	1	0.000	0.00	0.000	0.00	0.130	209.73	0.000	0.00	0.13	209.73	0.13
Wetland M	STA 326+50 to 328+50	Embankment/grading	0.26	1	0.000	0.00	0.000	0.00	0.210	338.80	0.000	0.00	0.21	338.80	0.21
Wetland N	STA 377+75 to 381+25	Embankment/grading, bridge constructon, culverts	4.78	1	0.120	183.00	0.640	1033.00	1.780	2882.00	0.000	0.00	2.54	4,098.00	2.54
Wetland P	SR 775 STA 62+00	Embankment/grading	0.06	1	0.000	0.00	0.000	0.00	0.060	96.80	0.000	0.00	0.06	96.80	0.06
Wetland Q	STA 389+25 to 396+40	Excavation/grading	0.27	1	0.000	0.00	0.000	0.00	0.130	209.73	0.000	0.00	0.13	209.73	0.13
Wetland R	STA 395+50	Embankment/grading	0.02	1	0.000	0.00	0.000	0.00	0.020	32.27	0.000	0.00	0.02	32.27	0.02
Wetland S	STA 397+50	Embankment/grading, scour protection	0.03	1	0.000	0.00	0.007	11.29	0.023	37.11	0.000	0.00	0.03	48.40	0.03
Wetland T	STA 318+50 to 319+50	Embankment/grading	0.34	1	0.000	0.00	0.000	0.00	0.180	290.40	0.000	0.00	0.18	290.40	0.18
				SUM:	0.122	186.23	0.725	1,170.13	4.652	7,515.50	0.001	1.61	5.50	8,873.47	5.50

LF = linear feet; AC = acres; CY = cubic yards; RCP = rock channel protection or the like; DEP = Ditch Erosion Protection; NA = Not Applicable

US Army Corps of Engineers
Huntington District

Permit Number: 2022-00165-OHR

Name of Permittee: Ohio Department of Transportation

Date of Issuance: December 2, 2024

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

SPECIAL PROVISIONS

WATERWAY PERMITS CONDITIONS

C-R-S: LAW-7-2.17

PID: 75923/113211

Date: August 2, 2024

1. Waterway Permits Time Restrictions:

A Section 401 Water Quality Certification (Section 401 WQC) is authorized for LAW-7-2.17, PID 75923/113211 by the Ohio Environmental Protection Agency (OEPA). A copy of the authorization letter (Ohio EPA ID No. 238961A) shall be kept at the work site at all times and made available to all contractors and subcontractors. The certification is effective upon authorization of the Section 404 Individual Permit (Section 404 IP). The permit expires: **The 401 WQC expiration date will coincide with the expiration date of the pending 404 IP authorization.**

A Section 404 IP from the United States Army Corps of Engineers (USACE) is pending for LAW-7-2.17, PID 75923/113211. Temporary and permanent fill activities in aquatic resources are not authorized until the Section 404 IP is acquired. A copy of the Section 404 IP will be provided after it is issued and shall be kept at the work site at all times and made available to all contractors and subcontractors.

For authorized work 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 Section 404 IP is received, 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 Section 404 IP and Section 401 WQC applications 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 1	STA 124+50 to 128+00	none
Stream 2	STA 158+00	none
Stream 3	STA 161+00 to 164+25	none
Stream 3a	STA 161+50 to 164.75	none
Stream 4	STA 1416+60	none
Stream 5	STA 183+60 to 184+90	none
Stream 6	STA 189+00 to 192+50	none
Stream 7	STA 193+00 to 200+00	none
Stream 8	STA 200+75 to 202+00	none
Stream 9	STA 218+50 to 230+20	none
Stream 9a	STA 228+80 to 229+70	none
Stream 10	STA 238+00 to 270+50	none
Stream 10a	STA 241+45 to 242+00	none
Stream 10b	STA 247+90 to 248+45	none
Stream 10c	STA 261+75	none
Stream 11	STA 270+00 to 270+75	none
Stream 12	STA 227+80 to 278+40	none
Stream 13	STA 320+50 to 323+25	none
Stream 13a	STA 319+90 to 322+25	none
Stream 13a1	STA 317+75 to 319+90	none
Stream 13a2	STA 319+50 to 320+10	none
Stream 13a3	STA 321+00	none
Stream 14	STA 337+00 to 339+80	none
Stream 14a	STA 338+65 to 340+25	none
Stream 14b	STA 339+90 to 340+60	none
Stream 15	STA 355+00 to 356+50	none
Stream 15a	STA 353+00	none
Stream 15b	STA 349+00	none
Stream 16	STA 366+50 to 377+00	none
Stream 16a	STA 364+80 to 374+00	none
Stream 16a1	STA 363+25 to 365+25	none
Stream 17	STA 379+75 to 385+75	none
Stream 18	STA 69+69L of SR 775	none
Symmes Creek2	STA 134+00	April 15 to June 30

Stream Name/ Description	Location	Work Restriction dates (No In-stream work permitted)
Symmes Creek3	STA 200+50	April 15 to June 30
Bear Creek	STA 299+00	none
Bent Creek	STA 270+00 to 274+75	none
Indian Guyan Creek	STA 299+40	April 15 to June 30
Little Paddy Creek	STA 378+50	none
Little Paddy Creek – Ramp I	STA 378+00	none

*Restriction dates do not apply if the stream has been dewatered prior to April 15.

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 Lawrence County Sheriff's Office at (740) 532-3525.

6. Aquatic Resource Demarcation:

Tables D and E (attached) include detailed fill quantities authorized within the aquatic resources. Aquatic resources not authorized 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:

Streams without StreamStats data (Streams 1, 2, 3a, 4, 5, 6, 7, 8, 10a, 10b, 10c, 12, 13a, 13a1, 13a2, 13a3, 15, 15a, 15b, 16a, 17) shall adhere to this condition of the Special Provisions for Temporary Access Fills (TAFs). All remaining streams with TAFs shall adhere to condition 11 of the Special Provisions.

Special Provisions Notes:

Definitions:

Normal Flow
Normal flow is the flow necessary to maintain chemical, physical, and biological integrity of the waterway. Normal flows for this type of waterway may vary during the year. It is anticipated that the Normal Flow is less than the flow producing an elevation equal to the OHWM but greater than zero. The Contractor's means and methods may vary depending on the time of year the work is active.

Temporary Access Fills (TAFs)
Include, but are not limited to, dewatering fills, causeways, cofferdams, access pads, and temporary bridges below the OHWM.

Requirements

7 calendar days prior to the initiation of any in-stream work, provide the Engineer with a written plan that includes the following:

- Plan view drawing showing the location of all TAFs proposed for use on the project.

- 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.
- 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 TAFs.

Do not begin in-stream work until the Engineer has accepted the written plan. Submit any changes to the planned TAF to the Engineer for acceptance a minimum of 7 days prior to performing any instream work.

The design 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.

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

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. Minimize clearing, grubbing, and excavation of waterway banks, and approach sections. Construct the TAFs as to not cause erosion or allow sediment deposits in the waterway.

Prior to the installation of any work in the waterway, establish a visual monument upstream of the proposed TAF. Maintain the monument throughout the project. Provide a visual mark on the monument that identifies the elevation of the OHWM.

Construct the TAFs to a water elevation at least 1 foot (0.3 m) above the OHWM. Use TAFs to dewater sections of the waterway for accessing proposed work areas only. Provide diversion ditches, conduits, pumps or other methods to maintain normal flows to the downstream waterway. Passing normal flows through active work areas of the waterway is prohibited. Ensure that any ponding of water behind the TAFs will not damage property, flood roadways, or threaten human health and safety.

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, as specified in C&MS 703.19.B.

When the work requiring TAF is complete, all portions of the TAF (including all rock and temporary diversions) 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 waterway 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. Temporary Access Fills:

Streams that have StreamStats data (Streams 3, 9, 9a, 10, 11, 13, 14, 16, Symmes Creek, Bear Creek, Bent Creek, Indian Guyan Creek, and Little Paddy Creek) shall adhere to this condition of the Special Provisions for Temporary Access Fills. All remaining streams with TAFs shall adhere to condition 10 of the Special Provisions.

Special Provisions Notes:

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.

12. 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 jurisdictional waters of the U.S. 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.

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 upon receipt of the 404 permit.

14. Demolition Debris:

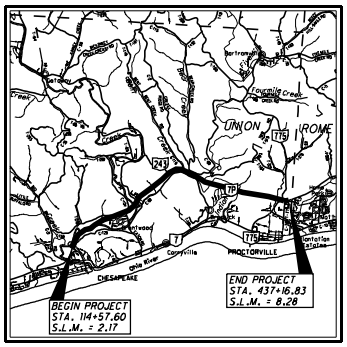
The intentional discharge of demolition debris from any structure (including but not limited to bridges, culverts, abutments, wing walls, piers) is not authorized for this project. If any demolition debris inadvertently falls into aquatic resources, it must be removed immediately. Notify the Engineer 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.

Version: July 2020

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION

LAW-7-2.17-PHASE 2A

VILLAGE OF CHESAPEAKE
VILLAGE OF PROCTORVILLE
UNION TOWNSHIP
ROME TOWNSHIP
LAWRENCE COUNTY



LOCATION MAP

LATITUDE: N 38°27'16" LONGITUDE: W 82°25'19"

SCALE IN MILES
0 1 2 3 4

PORTION TO BE IMPROVED
INTERSTATE HIGHWAY
FEDERAL ROUTES
STATE ROUTES
COUNTY & TOWNSHIP ROADS
OTHER ROADS

FOR DESIGN DESIGNATIONS AND DESIGN EXCEPTIONS, SEE SHEET 2.

INDEX OF SHEETS:

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UTILITY SCHEMATIC PLAN	8-9
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MAINTENANCE OF TRAFFIC	19-22
S.R. 7	
PLAN AND PROFILE	23-83
CROSS SECTIONS	84-244
C.R. 104 CROSS SECTIONS	245-246
C.R. 32 CROSS SECTIONS	247-248
LYNN LANE	
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PAVEMENT DETAILS	266-267
INTERSECTION DETAILS	268
DRIVEWAY AND TURNAROUND DETAILS	269-273
STORM SEWER PROFILES	274
CULVERT DETAILS	275-284
DRAINAGE DETAILS	285-294
TRAFFIC CONTROL PLAN	295-297
SOIL PROFILE	-

PROJECT DESCRIPTION

THIS PROJECT IS THE THIRD PHASE OF THE LAW-7-2.17 STATE ROUTE 7 RELOCATION PROJECT. THIS GRADE AND DRAIN PROJECT WILL CONSTRUCT THE EMBANKMENT AND NECESSARY DRAINAGE ITEMS FOR 3.26 MILES OF STATE ROUTE 7. ALSO INCLUDED IS THE CONSTRUCTION OF ROADWAY IMPROVEMENTS ALONG 0.5 MILES OF C.R. 104 AND C.R. 32. THE RELOCATION OF 0.08 MILES OF LYNN LANE WILL ALSO BE A PART OF THIS PROJECT. THE CONSTRUCTION OF SIX TURNAROUNDS, TWO DETENTION BASINS AND PERMANENT TRAFFIC CONTROL WILL ALSO BE INCLUDED WITH THIS PROJECT.

EARTH DISTURBED AREAS

PROJECT EARTH DISTURBED AREA: ACRES
ESTIMATED CONTRACTOR EARTH DISTURBED AREA: ACRES
NOTICE OF INTENT EARTH DISTURBED AREA: 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 CHANGES AND SUPPLEMENTAL SPECIFICATIONS 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 FOR THE SIDE ROADS AS DESCRIBED ON SHEETS 19-22 AND THAT PROVISIONS FOR THE MAINTENANCE AND SAFETY OF TRAFFIC WILL BE AS SET FORTH ON THE PLANS AND ESTIMATES.

APPROVED _____
DATE _____ DISTRICT DEPUTY DIRECTOR

APPROVED _____
DATE _____ DIRECTOR, DEPARTMENT OF TRANSPORTATION

UNDERGROUND UTILITIES
Contact Two Working Days Before You Dig
OHIO811.org Before You Dig
OHIO811. 8-1-1. or 1-800-362-2764
(Non-members must be called directly)

PLAN PREPARED BY:

Stantec
1500 Lake Shore Drive, Suite 100
Columbus, Ohio 43204
(614) 486-4383

OHIO DEPARTMENT OF TRANSPORTATION, DISTRICT NINE
650 EASTERN AVENUE, P.O. BOX 467
CHILLICOTHE, OHIO 45601

ENGINEERS SEAL:
SIGNED:
DATE:

ENGINEERS SEAL:
SIGNED:
DATE:

ENGINEERS SEAL:
SIGNED:
DATE:

STANDARD CONSTRUCTION DRAWINGS					SUPPLEMENTAL SPECIFICATIONS	SPECIAL PROVISIONS

FEDERAL PROJECT NO. E035(921) E060(482)
PID NO. 75923
CONSTRUCTION PROJECT NO.
RAILROAD INVOLVEMENT NONE
LAW-7-2.17
1-297

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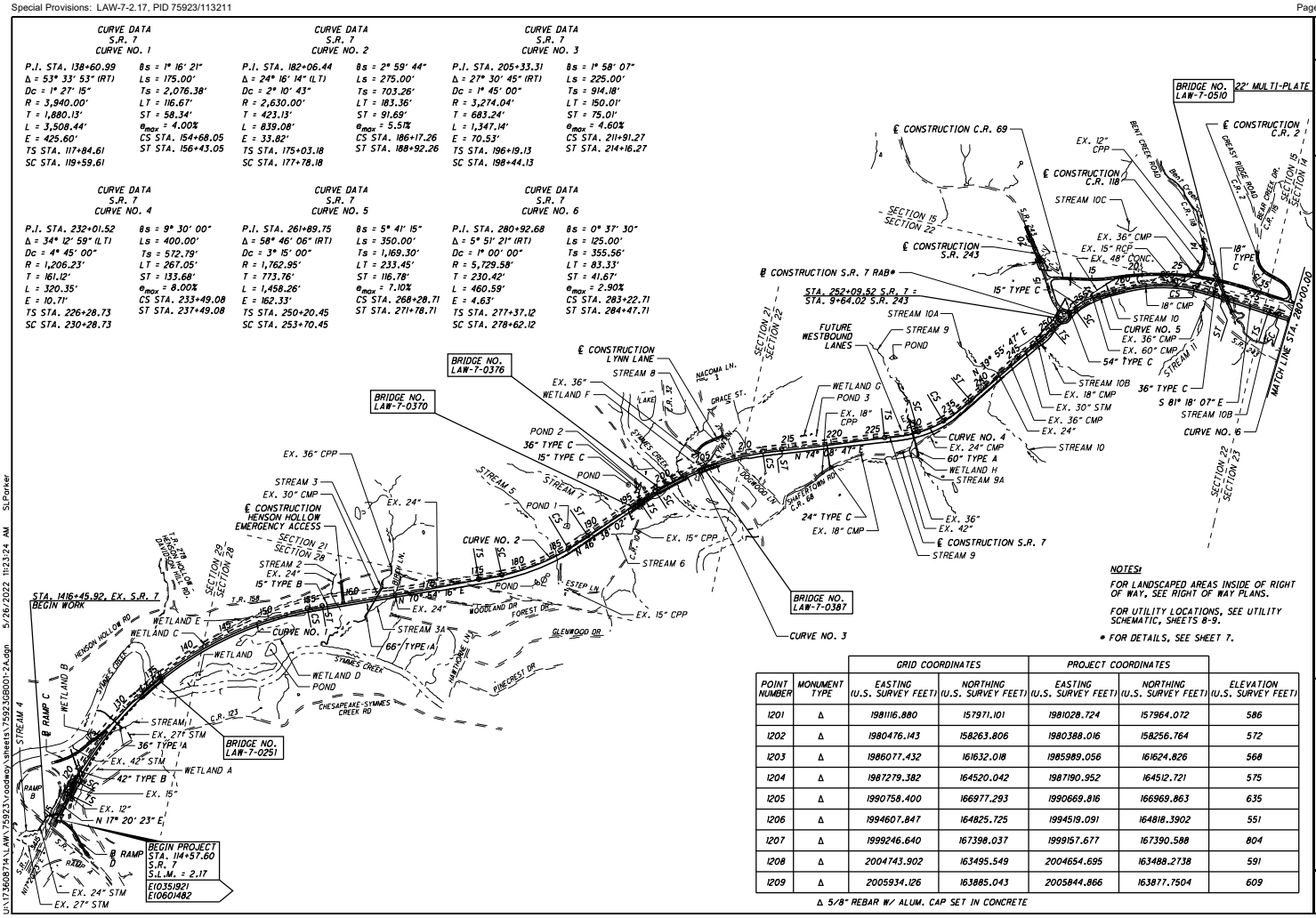

POINT NUMBER	MONUMENT TYPE	GRID COORDINATES EASTING (U.S. SURVEY FEET)	GRID COORDINATES NORTHING (U.S. SURVEY FEET)	PROJECT COORDINATES EASTING (U.S. SURVEY FEET)	PROJECT COORDINATES NORTHING (U.S. SURVEY FEET)	ELEVATION (U.S. SURVEY FEET)
1201	Δ	1981116.880	157971.101	1981028.724	157964.072	586
1202	Δ	1980476.143	158263.806	1980388.016	158256.764	572
1203	Δ	1986077.432	161632.018	1985989.056	161624.826	568
1204	Δ	1987279.382	164520.042	1987190.952	164512.721	575
1205	Δ	1990758.400	166977.293	1990669.816	166969.863	635
1206	Δ	1994607.847	164825.725	1994519.091	164818.3902	551
1207	Δ	1999246.640	167398.037	1999157.677	167390.588	804
1208	Δ	2004743.902	163495.549	2004654.695	163488.2738	591
1209	Δ	2005934.126	163885.043	2005844.866	163877.7504	609

Δ 5/8" REBAR W/ ALUM. CAP SET IN CONCRETE

SCHEMATIC PLAN

LAW-7-2.17

3
297

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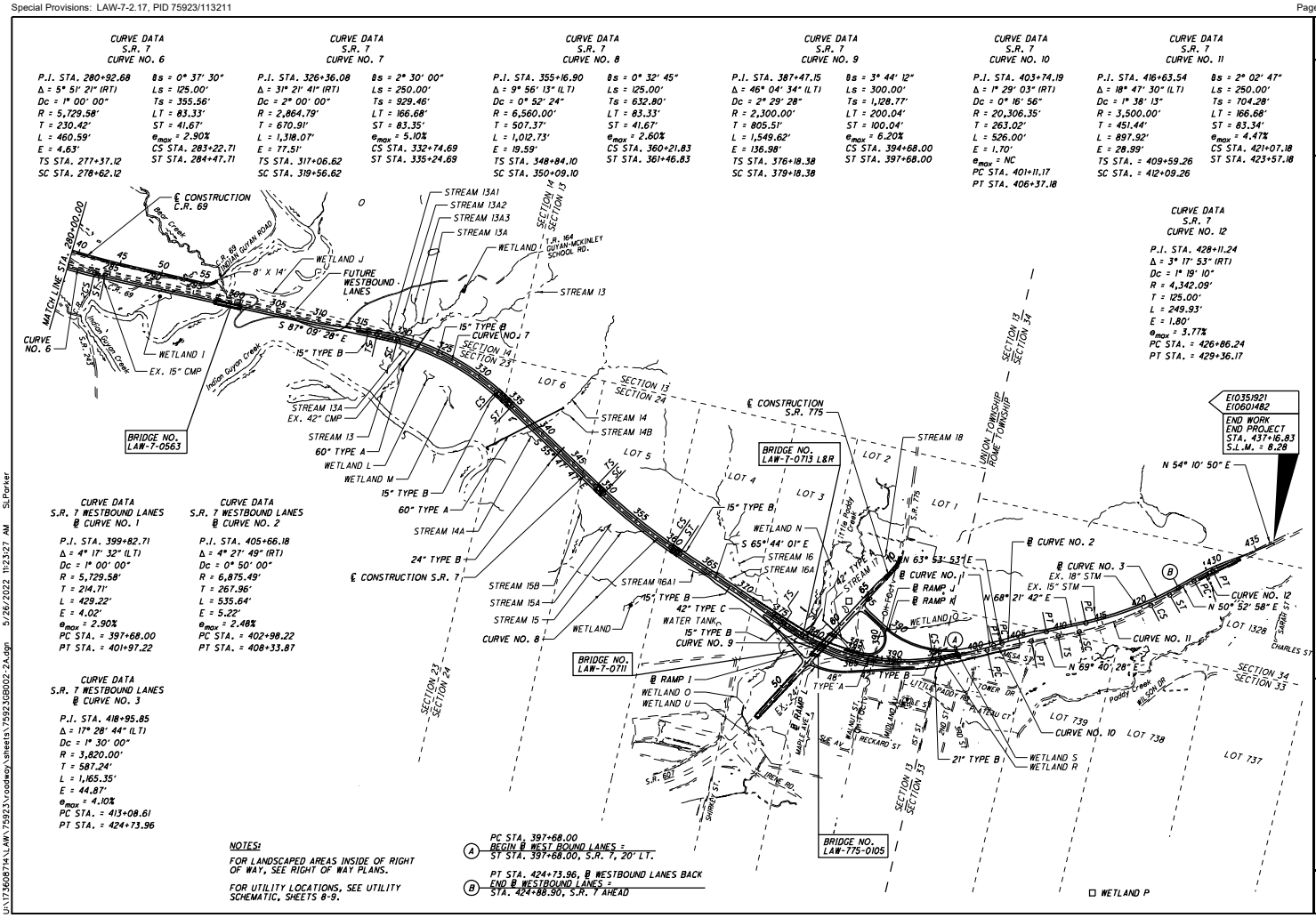
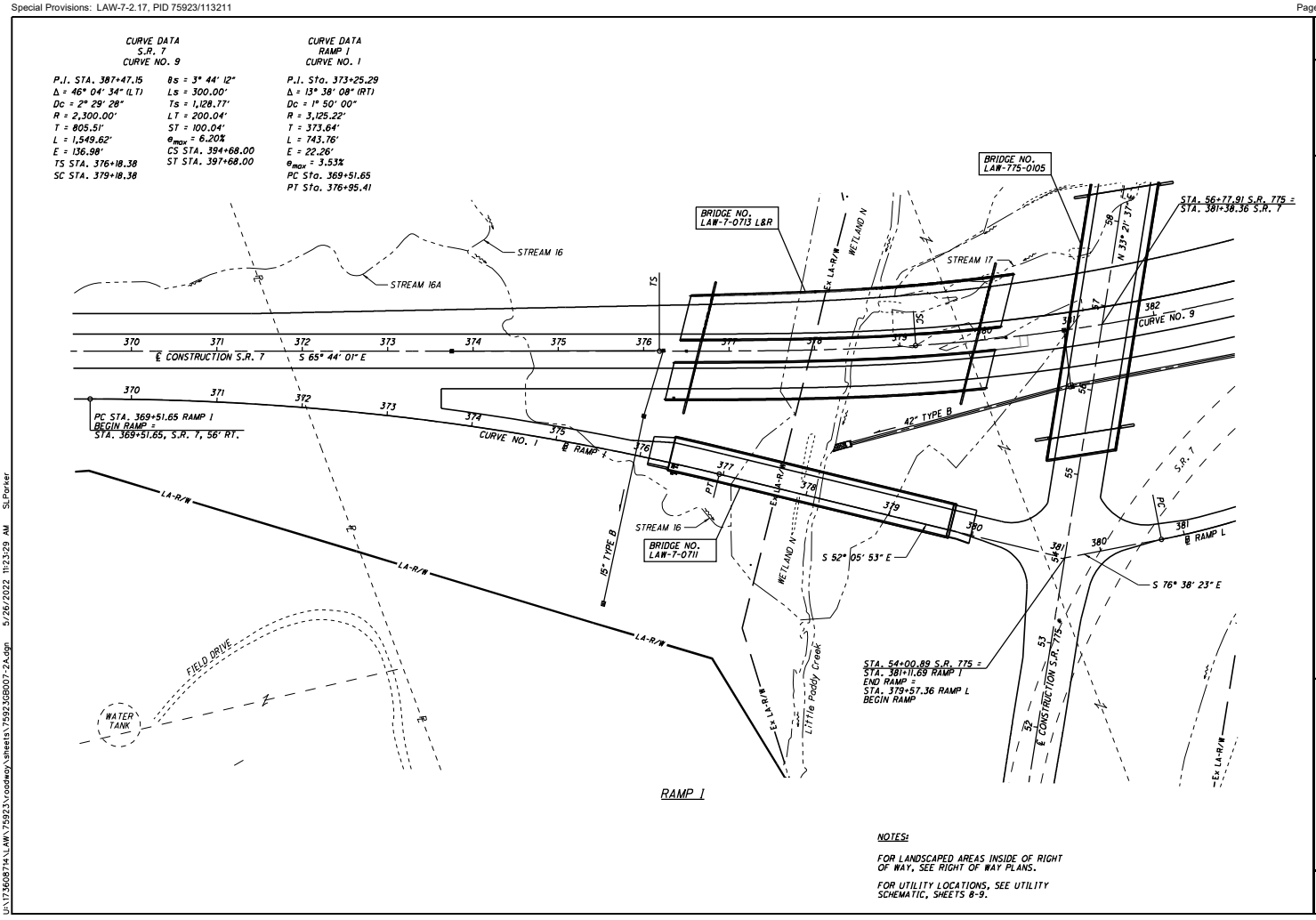

CURVE DATA S.R. 7 CURVE NO. 6
P.I. STA. 280+92.68
Δ = 5° 51' 21" (RT)
Dc = 1° 00' 00"
R = 5,729.58'
T = 230.42'
L = 460.59'
E = 4.63'
TS STA. 277+37.12
SC STA. 278+62.12
Bs = 0° 37' 30"
Ls = 125.00'
Ts = 355.56'
LT = 83.33'
ST = 41.67'
emax = 2.90%
CS STA. 283+22.71
ST STA. 284+47.71
CURVE DATA S.R. 7 CURVE NO. 7
P.I. STA. 326+36.08
Δ = 31° 21' 41" (RT)
Dc = 2° 00' 00"
R = 2,864.79'
T = 670.91'
L = 1,318.07'
E = 77.51'
TS STA. 317+06.62
SC STA. 319+56.62
Bs = 2° 30' 00"
Ls = 250.00'
Ts = 929.46'
LT = 166.68'
ST = 83.35'
emax = 5.10%
CS STA. 332+74.69
ST STA. 335+24.69
CURVE DATA S.R. 7 CURVE NO. 8
P.I. STA. 355+16.90
Δ = 9° 56' 13" (LT)
Dc = 0° 52' 24"
R = 6,560.00'
T = 507.37'
L = 1,012.73'
E = 19.59'
TS STA. 348+84.10
SC STA. 350+09.10
Bs = 0° 32' 45"
Ls = 125.00'
Ts = 632.80'
LT = 83.33'
ST = 41.67'
emax = 2.60%
CS STA. 360+21.83
ST STA. 361+46.83
CURVE DATA S.R. 7 CURVE NO. 9
P.I. STA. 387+47.15
Δ = 46° 04' 34" (LT)
Dc = 2° 29' 28"
R = 2,300.00'
T = 805.51'
L = 1,549.62'
E = 136.98'
TS STA. 376+18.38
SC STA. 379+18.38
Bs = 3° 44' 12"
Ls = 300.00'
Ts = 1,128.77'
LT = 200.04'
ST = 100.04'
emax = 6.20%
CS STA. 394+68.00
ST STA. 397+68.00
CURVE DATA S.R. 7 CURVE NO. 10
P.I. STA. 403+74.19
Δ = 1° 29' 03" (RT)
Dc = 0° 16' 56"
R = 20,306.35'
T = 263.02'
L = 526.00'
E = 1.70'
emax = NC
PC STA. 401+11.17
PT STA. 406+37.18
CURVE DATA S.R. 7 CURVE NO. 11
P.I. STA. 416+63.54
Δ = 18° 47' 30" (LT)
Dc = 1° 38' 13"
R = 3,500.00'
T = 451.44'
L = 897.92'
E = 28.99'
TS STA. = 409+59.26
SC STA. = 412+09.26
Bs = 2° 02' 47"
Ls = 250.00'
Ts = 704.28'
LT = 166.68'
ST = 83.34'
emax = 4.47%
CS STA. 421+07.18
ST STA. 423+57.18
CURVE DATA S.R. 7 CURVE NO. 12
P.I. STA. 428+11.24
Δ = 3° 17' 53" (RT)
Dc = 1° 19' 10"
R = 4,342.09'
T = 125.00'
L = 249.93'
E = 1.80'
emax = 3.77%
PC STA. = 426+86.24
PT STA. = 429+36.17
CURVE DATA S.R. 7 WESTBOUND LANES @ CURVE NO. 1
P.I. STA. 399+82.71
Δ = 4° 17' 32" (LT)
Dc = 1° 00' 00"
R = 5,729.58'
T = 214.71'
L = 429.22'
E = 4.02'
emax = 2.90%
PC STA. = 397+68.00
PT STA. = 401+97.22
CURVE DATA S.R. 7 WESTBOUND LANES @ CURVE NO. 2
P.I. STA. 405+66.18
Δ = 4° 27' 49" (RT)
Dc = 0° 50' 00"
R = 6,875.49'
T = 267.96'
L = 535.64'
E = 5.22'
emax = 2.48%
PC STA. = 402+98.22
PT STA. = 408+33.87
CURVE DATA S.R. 7 WESTBOUND LANES @ CURVE NO. 3
P.I. STA. 418+95.85
Δ = 17° 28' 44" (LT)
Dc = 1° 30' 00"
R = 3,820.00'
T = 587.24'
L = 1,165.35'
E = 44.87'
emax = 4.10%
PC STA. = 413+08.61
PT STA. = 424+73.96
NOTES:
FOR LANDSCAPED AREAS INSIDE OF RIGHT OF WAY, SEE RIGHT OF WAY PLANS.
FOR UTILITY LOCATIONS, SEE UTILITY SCHEMATIC, SHEETS 8-9.
A PC STA. 397+68.00 BEGIN @ WEST BOUND LANES = ST STA. 397+68.00, S.R. 7, 20' LT.
B PT STA. 424+73.96, @ WESTBOUND LANES BACK END @ WESTBOUND LANES = STA. 424+88.90, S.R. 7 AHEAD
BRIDGE NO. LAW-7-0563
BRIDGE NO. LAW-7-0711
BRIDGE NO. LAW-7-0713 L&R
BRIDGE NO. LAW-775-0105
℄ CONSTRUCTION S.R. 69
℄ CONSTRUCTION S.R. 7
℄ CONSTRUCTION S.R. 775
MATCH LINE STA. 280+00.00
CURVE NO. 6
CURVE NO. 7
CURVE NO. 8
CURVE NO. 9
CURVE NO. 10
CURVE NO. 11
CURVE NO. 12
@ CURVE NO. 1
@ CURVE NO. 2
@ CURVE NO. 3
@ RAMP I
@ RAMP J
@ RAMP N
@ RAMP L
S.R. 69
S.R. 7
S.R. 775
S.R. 154 CUYAN-MCKINLEY SCHOOL RD.
INDIAN GUYAN ROAD
Indian Guyan Creek
Little Poddy Creek
Poddy Creek
WETLAND I
WETLAND J
WETLAND L
WETLAND M
WETLAND N
WETLAND O
WETLAND P
WETLAND S
WETLAND R
WETLAND U
FUTURE WESTBOUND LANES
8' X 14'
EX. 15" CMP
EX. 42" CMP
15" TYPE B
60" TYPE A
24" TYPE B
42" TYPE C
48" TYPE A
21" TYPE B
STREAM 13A1
STREAM 13A2
STREAM 13A3
STREAM 13A
STREAM 13
STREAM 14
STREAM 14A
STREAM 14B
STREAM 15
STREAM 15A
STREAM 15B
STREAM 16
STREAM 16A
STREAM 16A1
STREAM 18
WATER TANK
LOT 1
LOT 2
LOT 3
LOT 4
LOT 5
LOT 6
LOT 738
LOT 739
LOT 1328
SECTION 13 SECTION 14
SECTION 14 SECTION 23
SECTION 23 SECTION 24
SECTION 13 SECTION 24
SECTION 13 SECTION 34
SECTION 34 SECTION 35
UNION TOWNSHIP FAIRFIELD COUNTY
UNION TOWNSHIP PERRY COUNTY
E10351921
E10601482
END WORK END PROJECT STA. 437+16.83 S.L.M. = 8.28
N 54° 10' 50" E
N 63° 53' 53" E
N 68° 21' 42" E
N 50° 52' 58" E
N 69° 40' 28" E
S 87° 09' 28" E
S 65° 44' 01" E
S 55° 41' 41" E
EX. 18" STM
EX. 15" STM
42" TYPE C
WATER TANK
CHARLES ST
HARRIS ST
BECKARD ST
1ST ST
2ND ST
3RD ST
PEANUT ST
IRENE RD
WILSON DR
SUE AV
SHIRLEY ST
LOWER DR
PLATEAU CT
UTILITY PADS
SCHEMATIC PLAN
LAW-7-2.17
4
297
HORIZONTAL SCALE IN FEET
0
500
1000
N



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P.I. STA. 11+53.11
Δ = 2° 41' 45"
NO CURVE

P.I. STA. 14+07.46
Δ = 2° 39' 07"
NO CURVE

P.I. STA. 16+72.90
Δ = 4° 02' 33"
NO CURVE

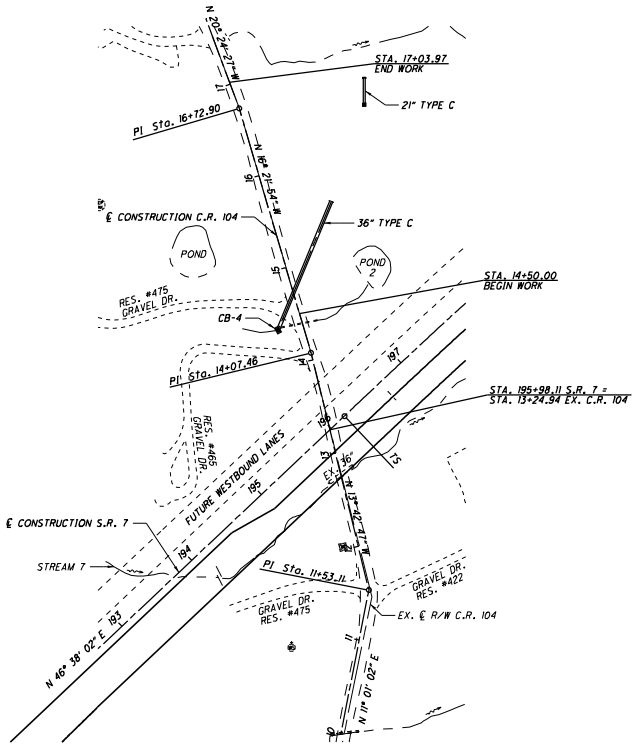
P.I. STA. 10+98.09
Δ = 9° 00' 49"
NO CURVE

P.I. STA. 11+92.44
Δ = 5° 16' 18"
NO CURVE

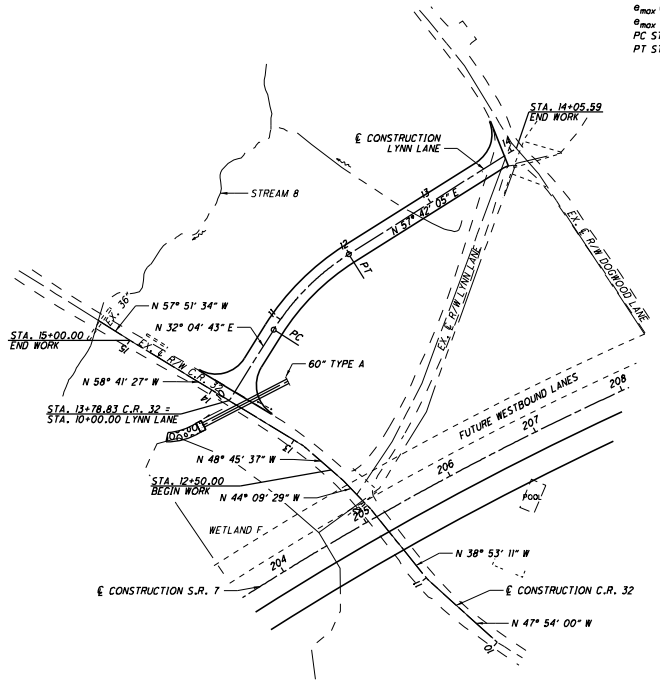
P.I. STA. 12+33.35
Δ = 4° 36' 08"
NO CURVE

P.I. STA. 12+87.96
Δ = 9° 55' 50"
NO CURVE

P.I. STA. 15+02.34
Δ = 0° 49' 53"
NO CURVE



C.R. 104



LYNN LANE & C.R. 32

NOTES:

FOR LANDSCAPED AREAS INSIDE OF RIGHT OF WAY, SEE RIGHT OF WAY PLANS.

FOR UTILITY LOCATIONS, SEE UTILITY SCHEMATIC, SHEETS 8-9.

N

HORIZONTAL SCALE IN FEET
0 50 100

SCHEMATIC PLAN

LAW-7-2.17

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297

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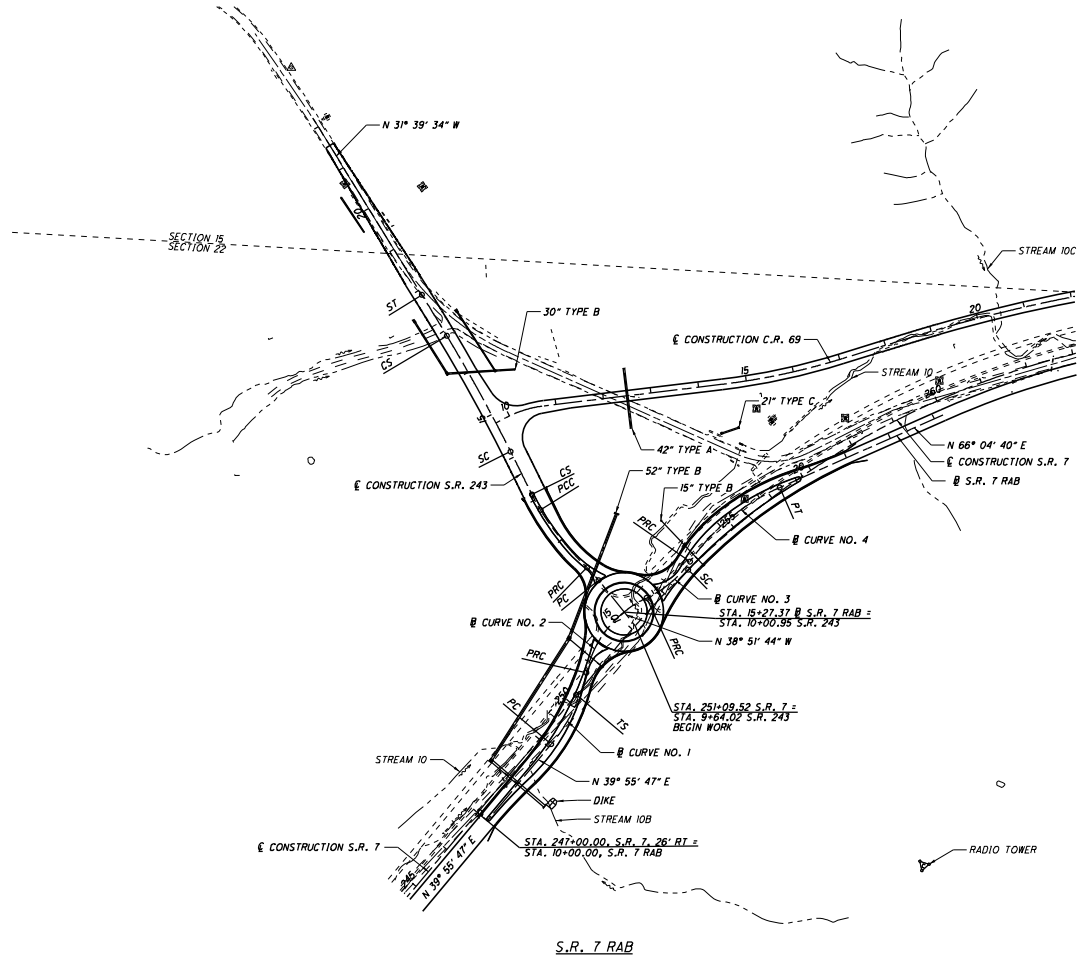

CURVE DATA
@ S.R. 7 RAB
CURVE NO. 1

P.I. Sta. 12+93.43
Δ = 27° 26' 21" (LT)
Dc = 16° 22' 13"
R = 350.00'
T = 85.45'
L = 167.62'
E = 10.28'
PC Sta. 12+07.99
PRC Sta. 13+75.60

CURVE DATA
@ S.R. 7 RAB
CURVE NO. 2

P.I. Sta. 14+87.13
Δ = 52° 43' 55" (RT)
Dc = 25° 27' 53"
R = 225.00'
T = 111.52'
L = 207.08'
E = 26.12'
PRC Sta. 13+75.60
PRC Sta. 15+82.68

CURVE DATA
@ S.R. 7 RAB
CURVE NO. 3

P.I. Sta. 16+43.83
Δ = 30° 24' 24" (LT)
Dc = 25° 27' 53"
R = 225.00'
T = 61.15'
L = 119.41'
E = 8.16'
PRC Sta. 15+82.68
PRC Sta. 17+02.09

CURVE DATA
@ S.R. 7 RAB
CURVE NO. 4

P.I. Sta. 18+27.99
Δ = 31° 15' 43" (RT)
Dc = 12° 43' 57"
R = 450.00'
T = 125.90'
L = 245.53'
E = 17.28'
PRC Sta. 17+02.09
PT Sta. 19+47.62

HORIZONTAL SCALE IN FEET
0 100 200

SCHEMATIC PLAN

LAW-7-2.17

7
297

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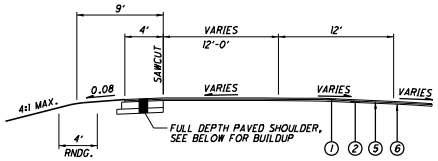
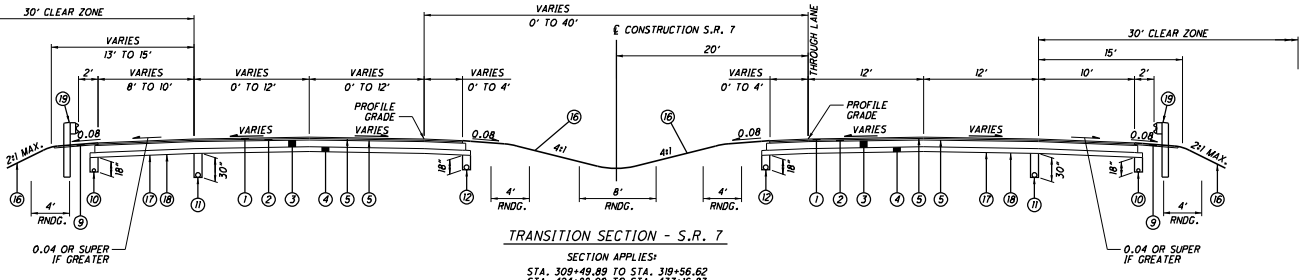


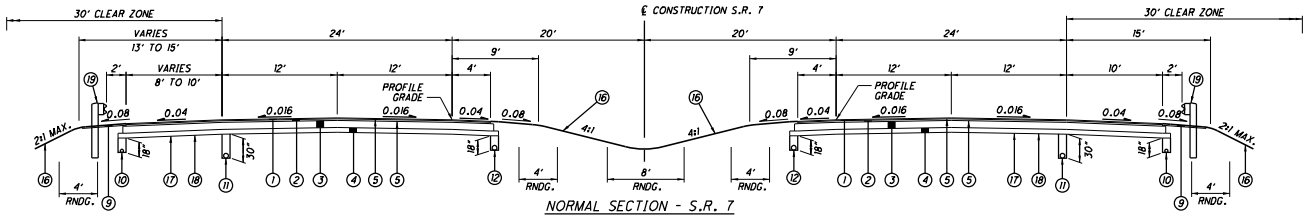
OVERLAY SECTION - S.R. 7

SECTION APPLIES:
STA. 427+42.37 TO STA. 437+16.83



TRANSITION SECTION - S.R. 7

SECTION APPLIES:
STA. 309+49.89 TO STA. 319+56.62
STA. 424+88.90 TO STA. 437+16.83



NORMAL SECTION - S.R. 7

SECTION APPLIES:
STA. 335+67.69 TO STA. 348+41.10
STA. 361+89.83 TO STA. 375+75.38

PAVEMENT AREA SHOWN FOR INFORMATION ONLY. AREA TO BE SEEDED AND MULCHED.

NOTES:
- SUPERELEVATION TO BE OPPOSITE HAND TO TYPICAL SHOWN.
- FOR LEGEND, SEE SHEET 10.
- FOR DITCH DETAILS, SEE SHEET 16.
- FOR EDGE COURSE DETAILS, SEE SHEET 17.
- FOR SUPERELEVATED SHOULDER DETAILS, SEE DETAIL A, SHEET 17.

TYPICAL SECTION - S.R. 7

LAW-7-2.17

11
297

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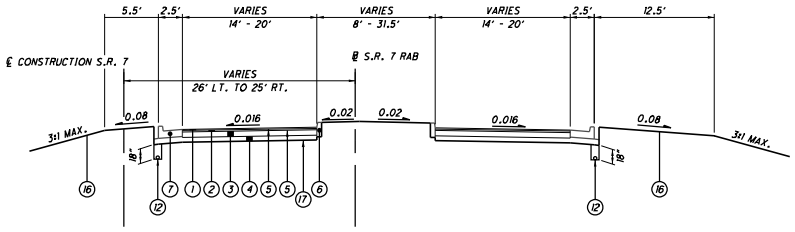

NORMAL SECTION - S.R. 7 RAB

SECTION APPLIES:
S.R. 7 STA. 247+00.00 TO STA. 251+00.00

PAVEMENT AREA SHOWN FOR INFORMATION ONLY. AREA TO BE SEEDED AND MULCHED.

NOTES:
TYPICAL SHOWN FOR INFORMATION ONLY.

PAVEMENT BUILDUP IS THE SAME FOR BOTH SIDES OF ℄.
SEE PAVEMENT DETAILS FOR LIMITS OF CONCRETE MEDIAN.

FOR LEGEND, SEE SHEET 10.

TYPICAL SECTION - S.R. 7

LAW-7-2.17

12
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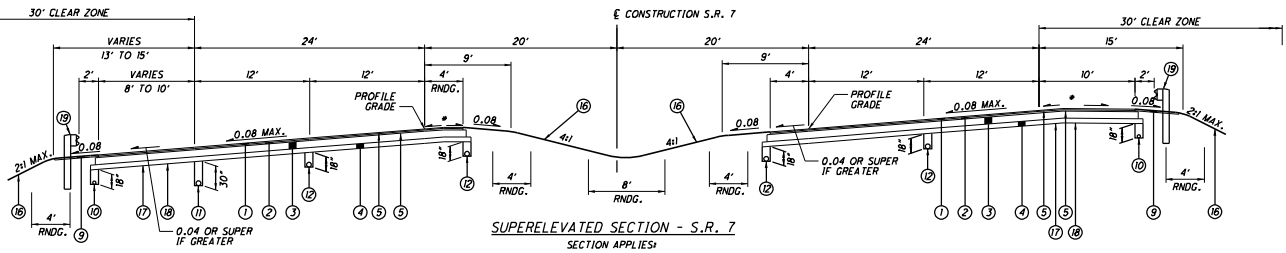


SUPERELEVATED SECTION - S.R. 7

SECTION APPLIES:

+ STA. 319+56.52 TO STA. 335+67.69
STA. 348+41.10 TO STA. 361+89.83
STA. 375+75.38 TO STA. 397+68.00

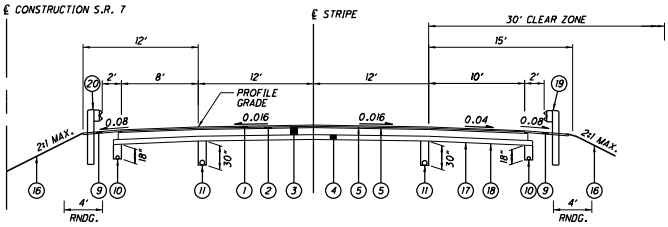
PAVEMENT AREA SHOWN FOR INFORMATION ONLY. AREA TO BE SEEDED AND MULCHED.

NOTES:

+ SUPERELEVATION TO BE OPPOSITE HAND TO TYPICAL SHOWN.
FOR LEGEND, SEE SHEET 10.
FOR DITCH DETAILS, SEE SHEET 16.
FOR EDGE COURSE DETAILS, SEE SHEET 17.
* FOR SUPERELEVATED SHOULDER DETAILS, SEE DETAIL A, SHEET 17.

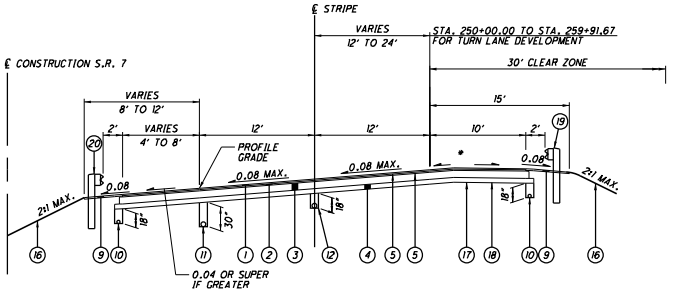
TYPICAL SECTION - S.R. 7

LAW-7-2.17



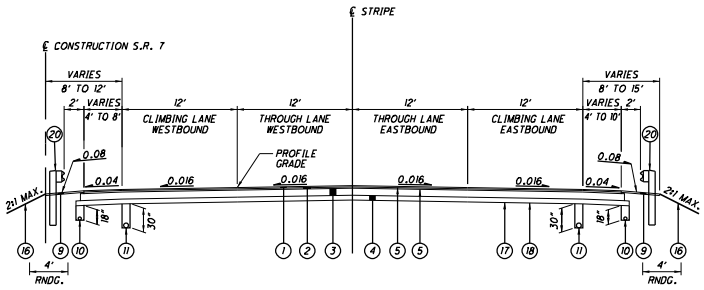
NORMAL SECTION - S.R. 7

SECTION APPLIES:
STA. 156+86.05 TO STA. 167+72.52
STA. 195+00.00 TO STA. 195+76.13
STA. 272+21.71 TO STA. 276+94.12
STA. 284+90.71 TO STA. 309+49.89



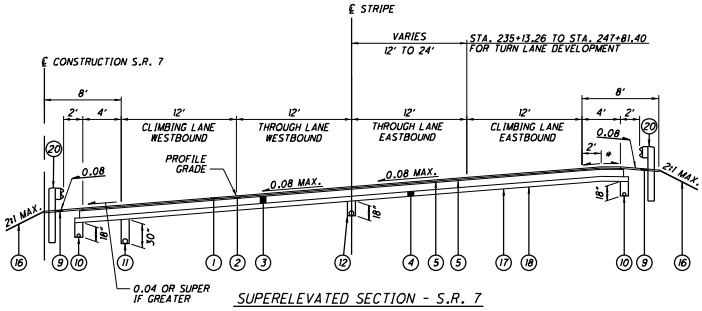
SUPERELEVATED SECTION - S.R. 7

SECTION APPLIES:
+ STA. 120+56.37 TO STA. 156+86.05
STA. 195+76.13 TO STA. 209+79.72
+ STA. 250+00.00 TO STA. 272+21.71
STA. 276+94.12 TO STA. 284+90.71
STA. 376+00.00 TO STA. 390+75.00



NORMAL SECTION - S.R. 7
WITH CLIMBING LANES

SECTION APPLIES:
STA. 167+72.52 TO STA. 174+60.18
STA. 189+35.26 TO STA. 195+00.00
STA. 214+59.27 TO STA. 225+85.73
STA. 237+92.08 TO STA. 247+00.00



SUPERELEVATED SECTION - S.R. 7
WITH CLIMBING LANES

SECTION APPLIES:
STA. 174+60.18 TO STA. 189+35.26
+ STA. 209+79.72 TO STA. 214+59.27
STA. 225+85.73 TO STA. 237+92.08

PAVEMENT AREA SHOWN FOR INFORMATION ONLY. AREA TO BE SEEDED AND MULCHED.

NOTES:
+ SUPERELEVATION TO BE OPPOSITE HAND TO TYPICAL SHOWN.
FOR LEGEND, SEE SHEET 10.
FOR DITCH DETAILS, SEE SHEET 16.
FOR EDGE COURSE DETAILS, SEE SHEET 17.
* FOR SUPERELEVATED SHOULDER DETAILS, SEE DETAIL A, SHEET 17.

TYPICAL SECTION - S.R. 7

LAW-7-2.17

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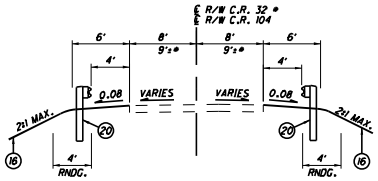
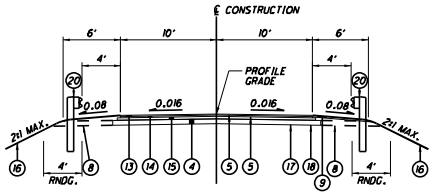


NORMAL SECTION - SIDE ROADS

SECTION APPLIES
C.R. 104
STA. 14+50.00 TO STA. 17+03.97
C.R. 32
STA. 12+50.00 TO STA. 15+00.00



NORMAL SECTION - SIDE ROADS

SECTION APPLIES
LYNN LANE
STA. 10+10.00 TO STA. 13+90.68

NOTES:
FOR LEGEND, SEE SHEET 10
FOR DITCH DETAILS, SEE SHEET 16
FOR EDGE COURSE DETAILS, SEE SHEET 17

TYPICAL SECTIONS - COUNTY ROADS AND SIDE ROADS

LAW-7-2.17

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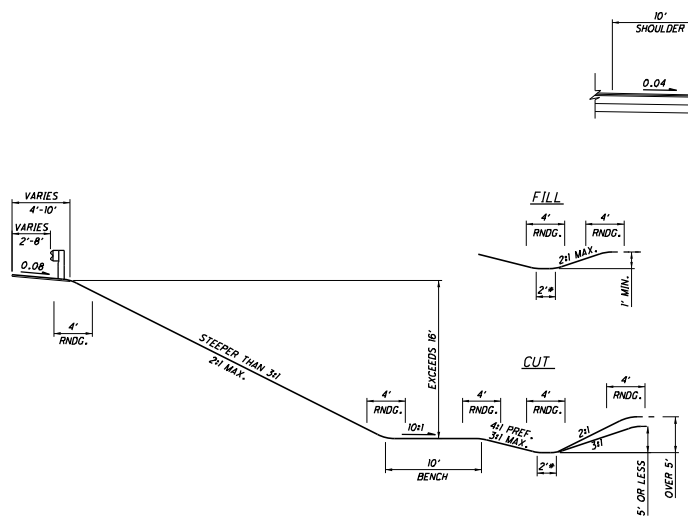
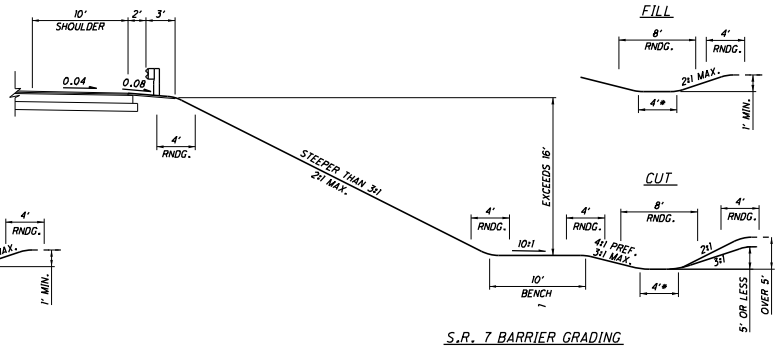
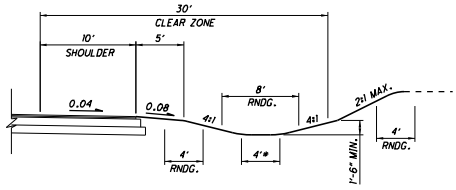


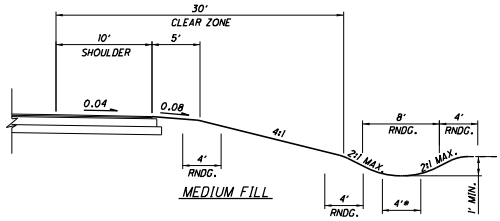
SIDE ROAD BARRIER GRADING



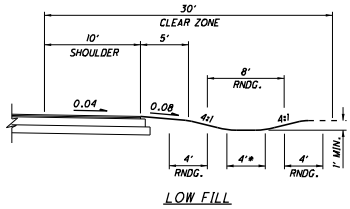
S.R. 7 BARRIER GRADING



CUT SECTION



MEDIUM FILL



LOW FILL

NOTES:
* SEE CROSS SECTIONS FOR POST CONSTRUCTION ENHANCED BANKFULL WIDTHS ROUNDING SHALL BE 4' WIDER THAN DITCH WIDTH SHOWN

TYPICAL SECTIONS - DITCH DETAILS

LAW-7-2.17

16
297

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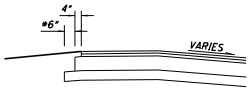
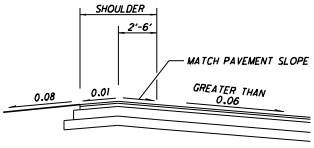
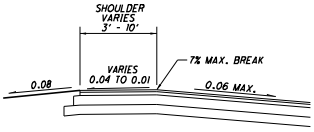
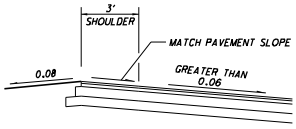


EDGE COURSE DETAIL
FOR ALL TYPICALS

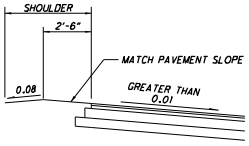
* 6" OR THE THICKNESS OF OVERLYING LIFT, WHICHEVER IS GREATER.

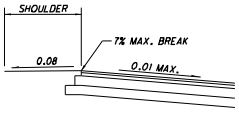






DETAIL A
PAVED SHOULDERS





DETAIL B
TURF SHOULDERS

TYPICAL SECTIONS - MISCELLANEOUS DETAILS

LAW-7-2.17

17
297

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ROUNDING

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

UTILITIES

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

FRONTIER COMMUNICATIONS
(FORMERLY VERIZON)
1315 SLPERT STREET
PORTSMOUTH, OHIO 45662
PHONE: (740) 354-0512
MR. PAUL MONTAVON

AMERICAN ELECTRIC POWER
(DISTRIBUTION)
850 TECH CENTER DRIVE
GAHANNA, OHIO 43230
PHONE: (614) 883-6831
MR. PAUL PAXTON

AMERICAN ELECTRIC POWER
(TRANSMISSION)
700 MORRISON ROAD
GAHANNA, OHIO 43230
PHONE: (614) 552-1801
MS. TINA HAIRSTON

BUCKEYE RURAL ELECTRIC CO-OP
P.O. BOX 200
RIO GRANDE, OHIO 45674
PHONE: (740) 379-2025
MR. JEFF TACKETT

HECLA WATER ASSOCIATION
3190 SR 141
IRONTON, OHIO 45638
PHONE: (740) 533-0526
MR. TIM DALTON

COLUMBIA GAS OF OHIO (KENTUCKY)
P.O. BOX 14241
LEXINGTON, KENTUCKY 40512
PHONE: (859) 288-0225
MR. GARY SULLIVAN

ARMSTRONG CABLE SERVICES
9651 COUNTY ROAD 1
SOUTH POINT, OHIO 45680
PHONE: (740) 894-6357
MR. LEONARD HARVEY

TIME WARNER CABLE
225 RUSSELL ROAD
ASHLAND, KENTUCKY 41101
PHONE: (606) 326-6803
MR. MIKE JONES

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.

CALCULATED SLP
CHECKED ALB

GENERAL NOTES

LAW-7-2.17

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297

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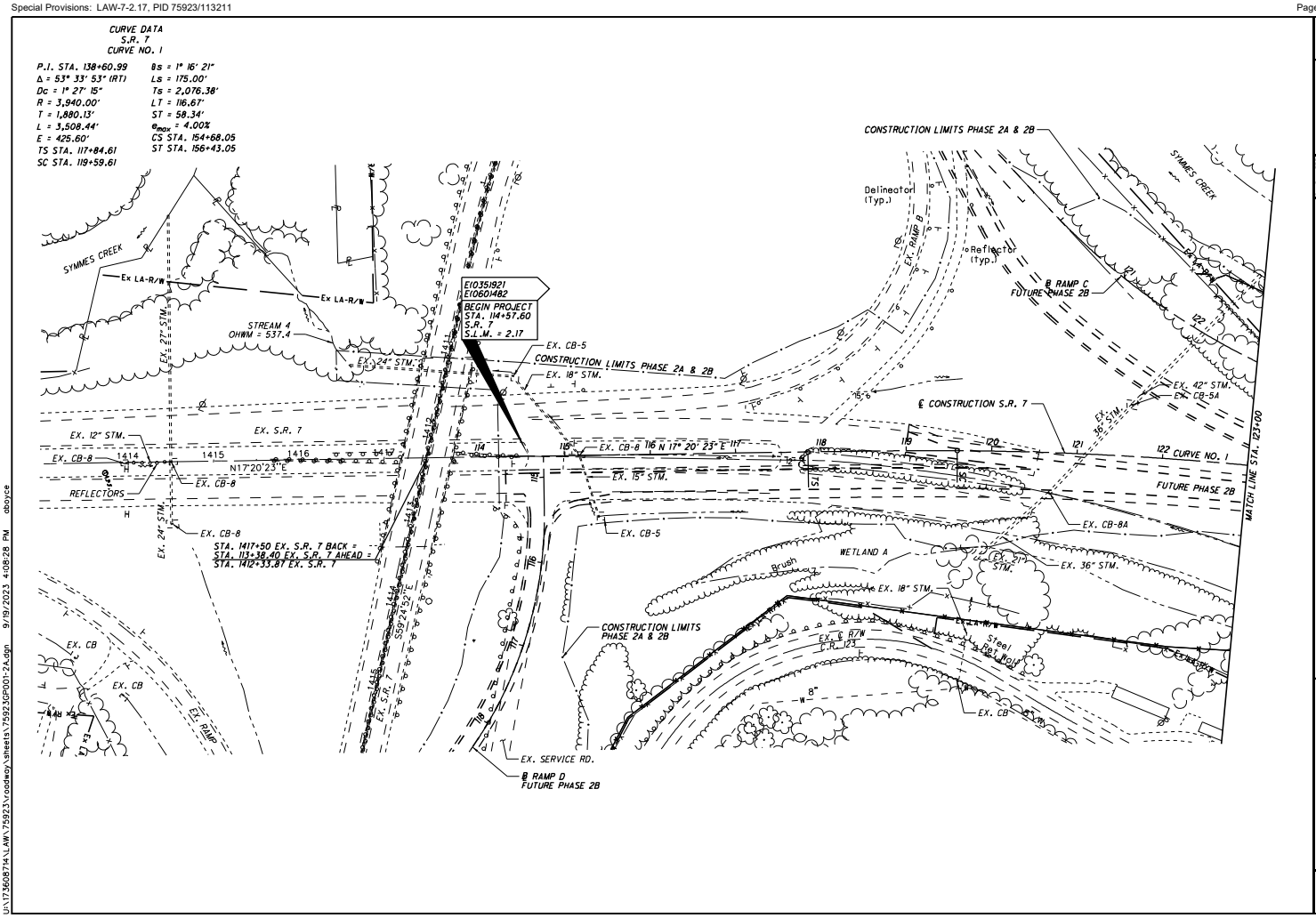
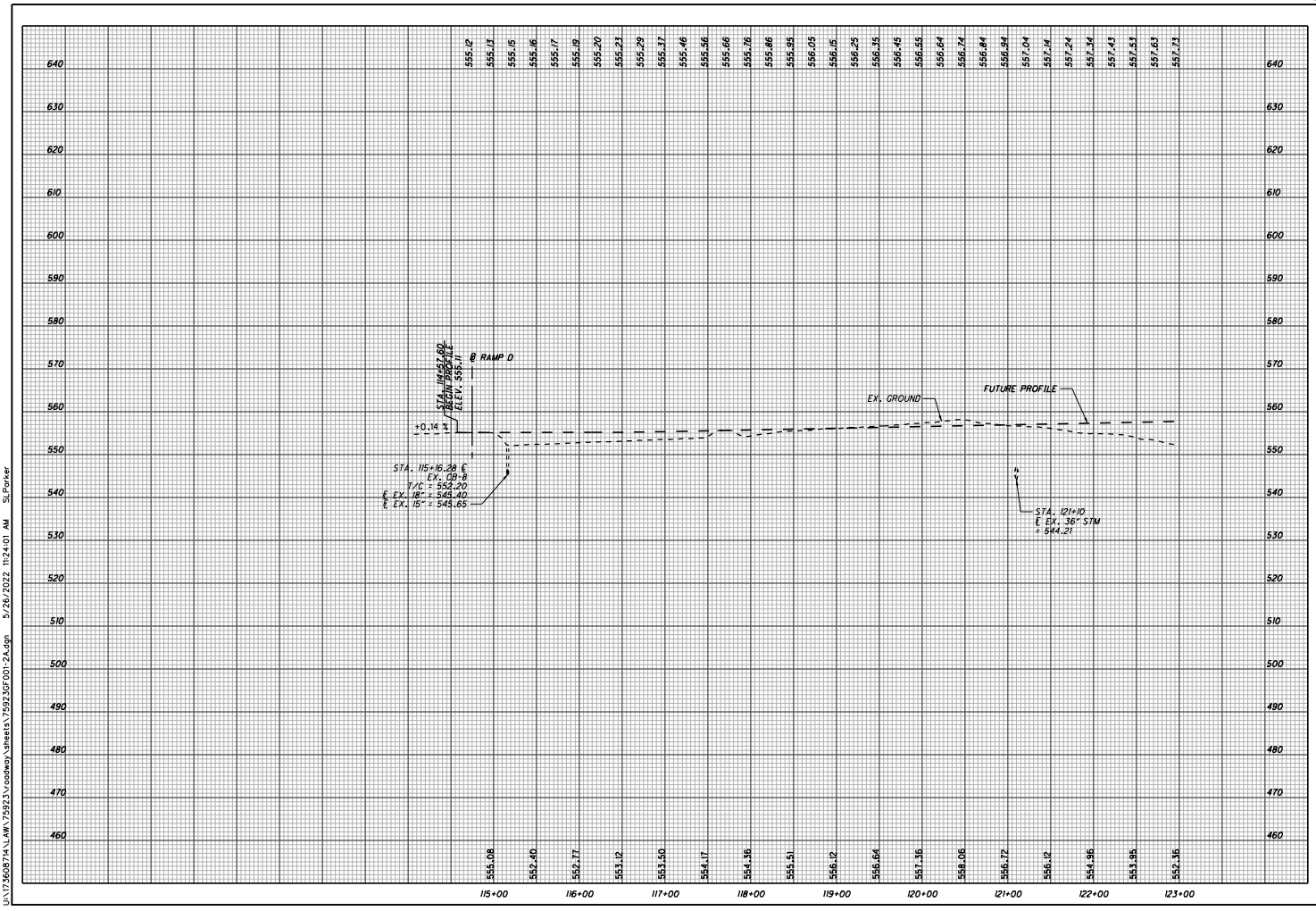

CURVE DATA
S.R. 7
CURVE NO. 1
P.I. STA. 138+60.99
Δ = 53° 33' 53" (RT)
Dc = 1° 27' 15"
R = 3,940.00'
T = 1,880.13'
L = 3,508.44'
E = 425.60'
TS STA. 117+84.61
SC STA. 119+59.61
θs = 1° 16' 21"
Ls = 175.00'
Ts = 2,076.38'
LT = 116.67'
ST = 58.34'
emax = 4.00%
CS STA. 154+68.05
ST STA. 156+43.05
CONSTRUCTION LIMITS PHASE 2A & 2B
SYMMES CREEK
Delineator (Typ.)
Reflector (Typ.)
EX. RAMP B
℄ RAMP C FUTURE PHASE 2B
Ex LA-R/W
STREAM 4 OHWM = 537.4
EX. 27" STM.
EX. 24" STM.
E10351921
E1060482
BEGIN PROJECT
STA. 114+57.60
S.R. 7
S.L.M. = 2.17
EX. CB-5
EX. 18" STM.
EX. 12" STM.
EX. S.R. 7
EX. CB-8
1414
1415
1416
N17°20'23"E
REFLECTORS
EX. CB-8 116 N 17° 20' 23" E 117
EX. 15" STM.
EX. CB-5
STA. 1417+50 EX. S.R. 7 BACK =
STA. 113+38.40 EX. S.R. 7 AHEAD =
STA. 1412+33.87 EX. S.R. 7
S59°24'52"E
WETLAND A
Brush
EX. 36" STM.
EX. 18" STM.
CONSTRUCTION LIMITS PHASE 2A & 2B
EX. CB
EX. RAMP
EX. SERVICE RD.
℄ RAMP D FUTURE PHASE 2B
℄ CONSTRUCTION S.R. 7
EX. 42" STM.
EX. CB-5A
122 CURVE NO. 1
FUTURE PHASE 2B
EX. CB-8A
MATCH LINE STA. 125+00
Steel Ret. Wall
EX. CB
EX. 8" W
EX. 8" W
EX. 8" W



PROFILE - S.R. 7

STA. 114+57.60 TO STA. 123+00

CALCULATED ALB

CHECKED TCM

LAW-7-2.17

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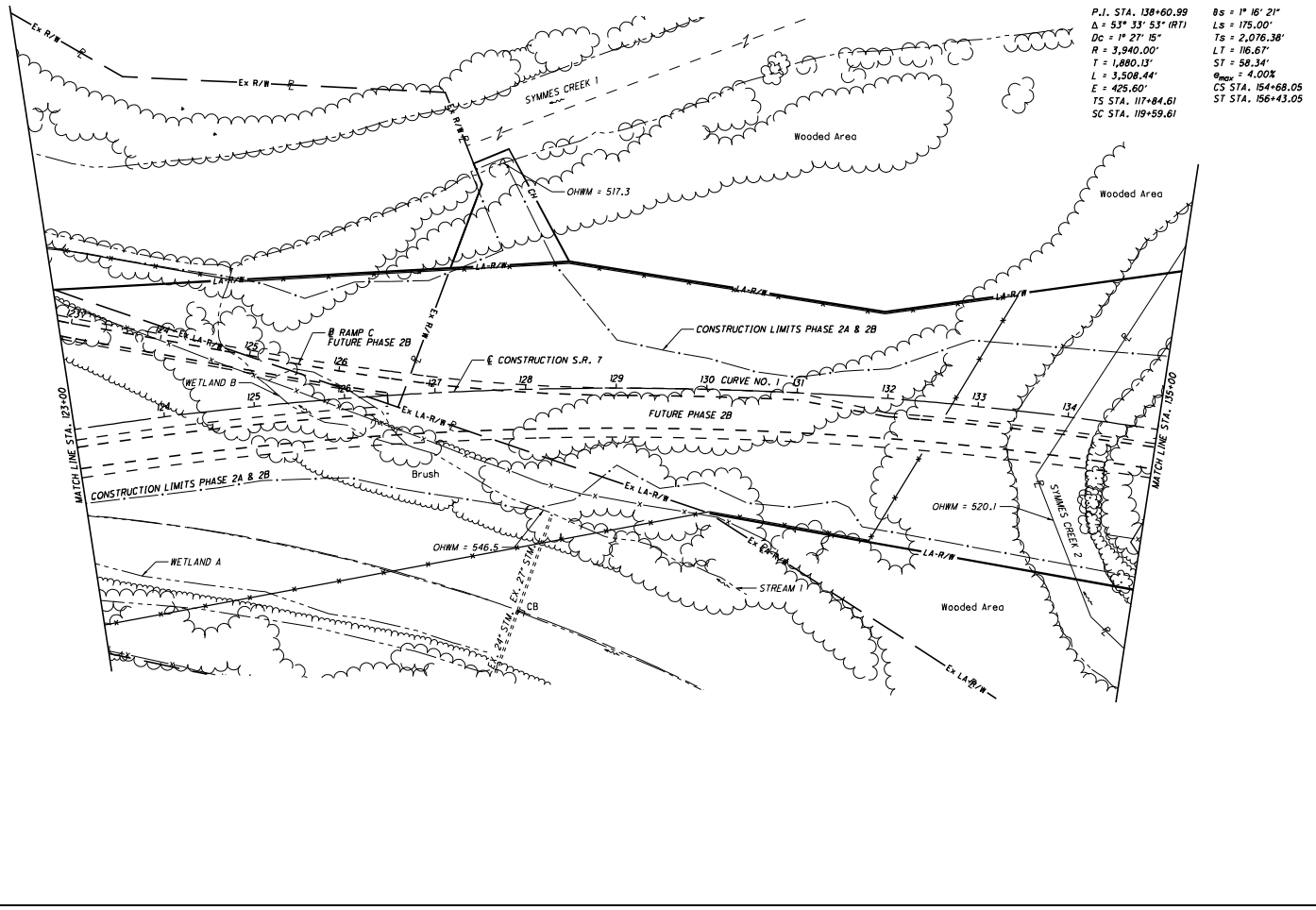

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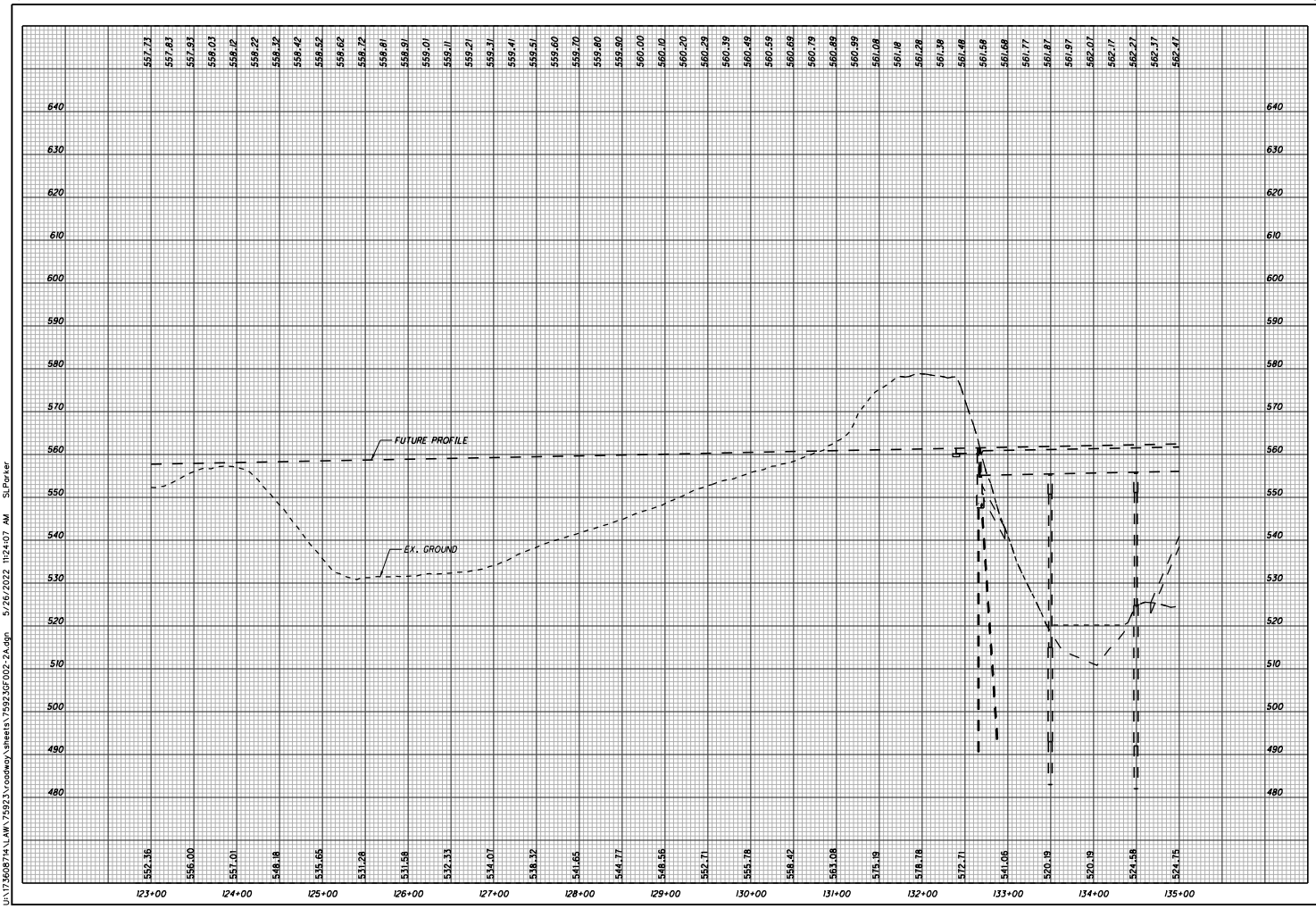

CALCULATED ALB
CHECKED TCM

PROFILE - S.R. 7
STA. 123+00 TO STA. 135+00

LAW-7-2.17

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297

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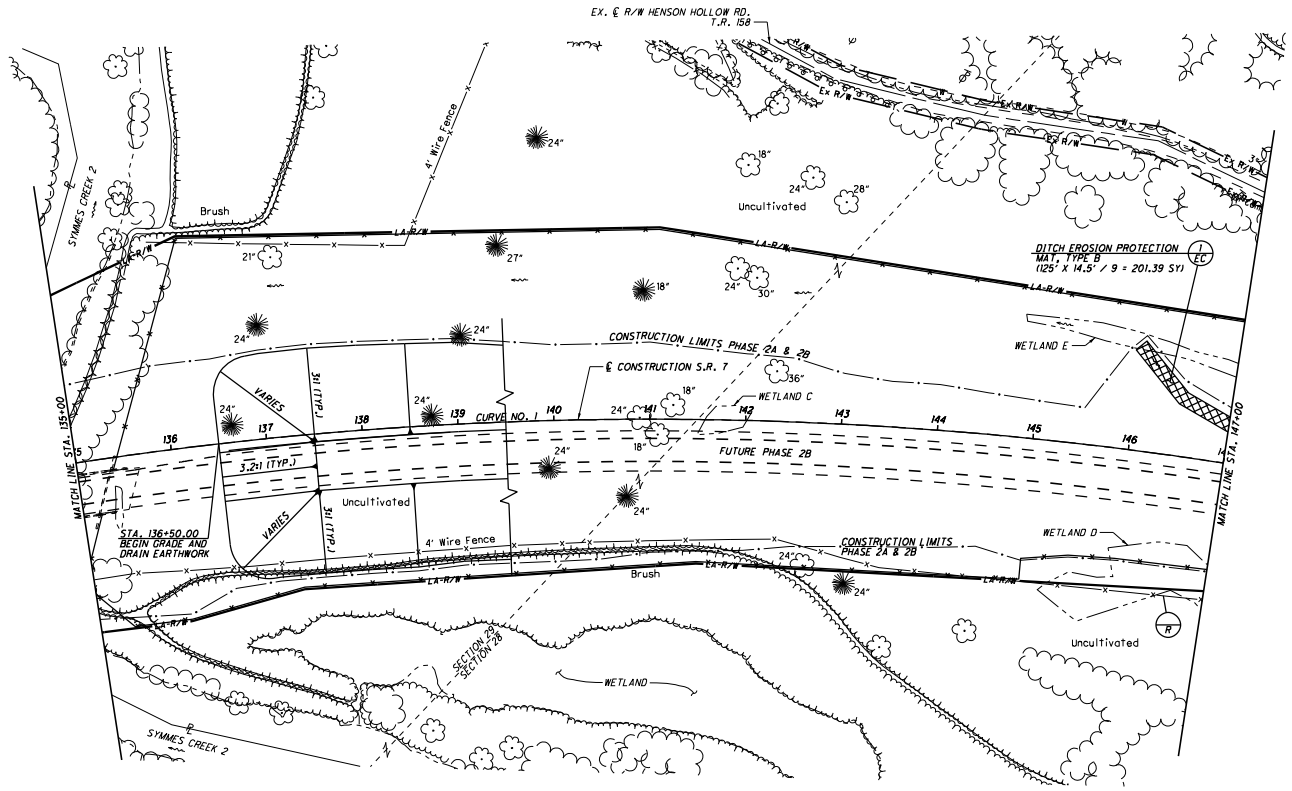

CURVE DATA
S.R. 7
CURVE NO. 1

P.I. STA. 138+60.99	θs = 1° 16' 21"
Δ = 53° 33' 53" (RT)	Ls = 175.00'
Dc = 1° 27' 15"	Ts = 2,076.38'
R = 3,940.00'	LT = 116.67'
T = 1,880.13'	ST = 58.34'
L = 3,508.44'	e_{max} = 4.00%
E = 425.60'	CS STA. 154+68.05
TS STA. 117+84.61	ST STA. 156+43.05
SC STA. 119+59.61	

FOR PROFILE, SEE SHEET 28

HORIZONTAL SCALE IN FEET
0 50 100
CALCULATED SLP
CHECKED ALB

PLAN - S.R. 7
STA. 135+00 TO STA. 147+00

LAW-7-2.17

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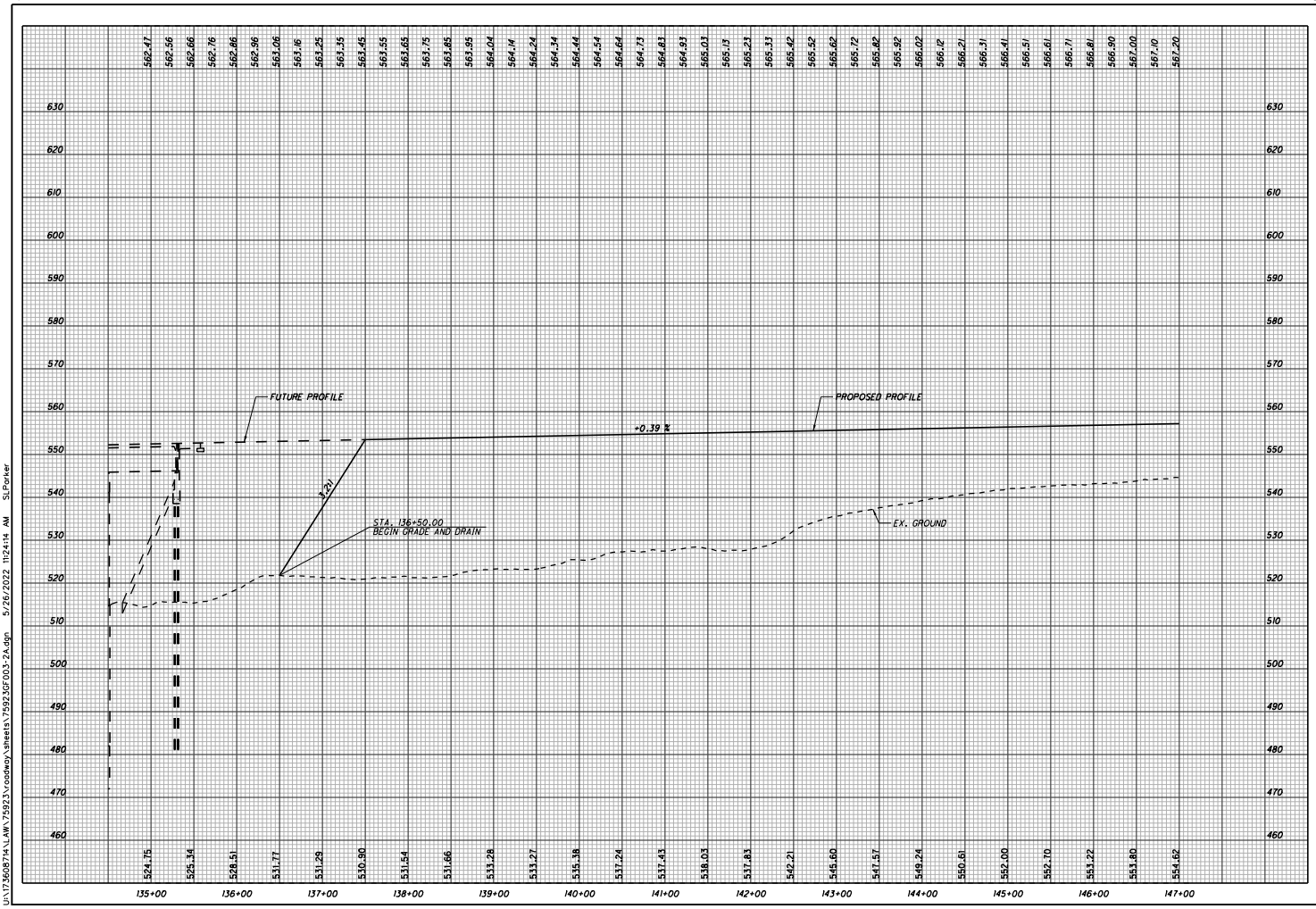

PROFILE - S.R. 7
STA. 135+00 TO STA. 147+00

CALCULATED ALB
CHECKED TCM

LAW-7-2.17

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297

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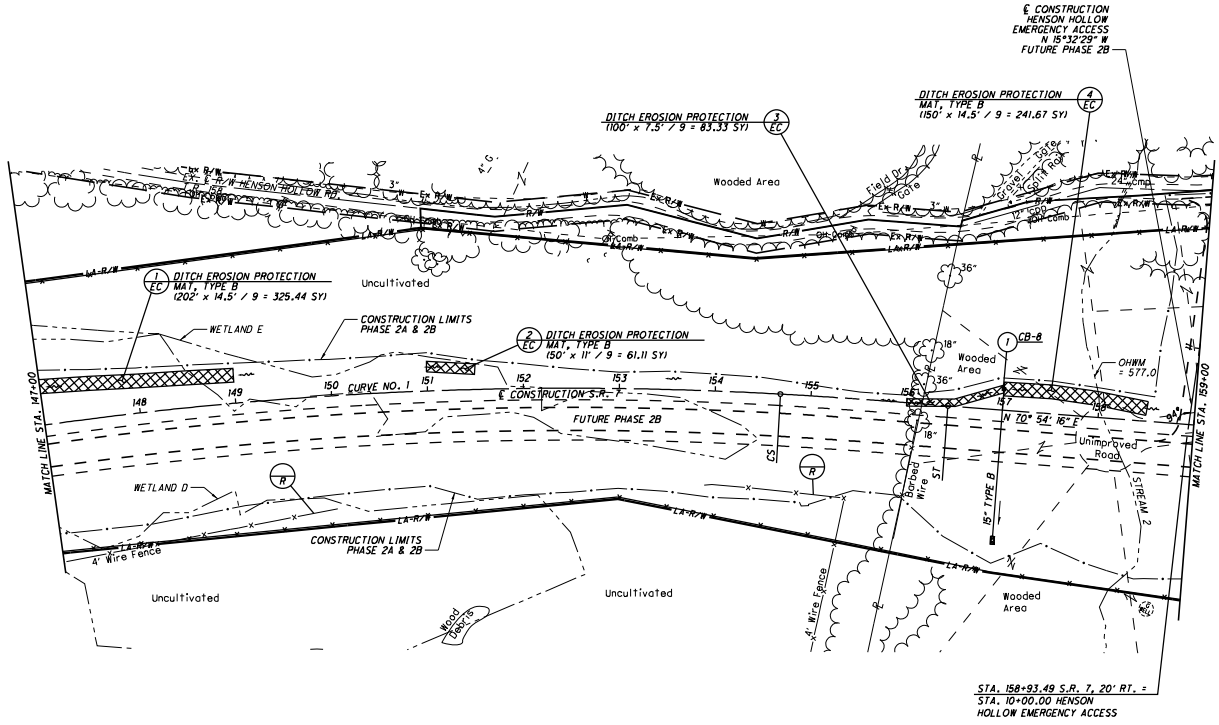

CURVE DATA
S.R. 7
CURVE NO. 1

P.I. STA. 138+60.99	Bs = 1° 16' 21"
Δ = 53° 33' 53" (RT)	Ls = 175.00'
Dc = 1° 27' 15"	Ts = 2,076.38'
R = 3,940.00'	LT = 116.67'
T = 1,880.13'	ST = 58.34'
L = 3,508.44'	e_{max} = 4.00%
E = 425.60'	CS STA. 154+68.05
TS STA. 117+84.61	ST STA. 156+43.05
SC STA. 119+59.61	

FOR PROFILE, SEE SHEET 30
FOR STORM SEWER PROFILE, SEE SHEET 97

HORIZONTAL SCALE IN FEET
0 50 100
CALCULATED SLP
CHECKED ALB

PLAN - S.R. 7
STA. 147+00 TO STA. 159+00

LAW-7-2.17

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297

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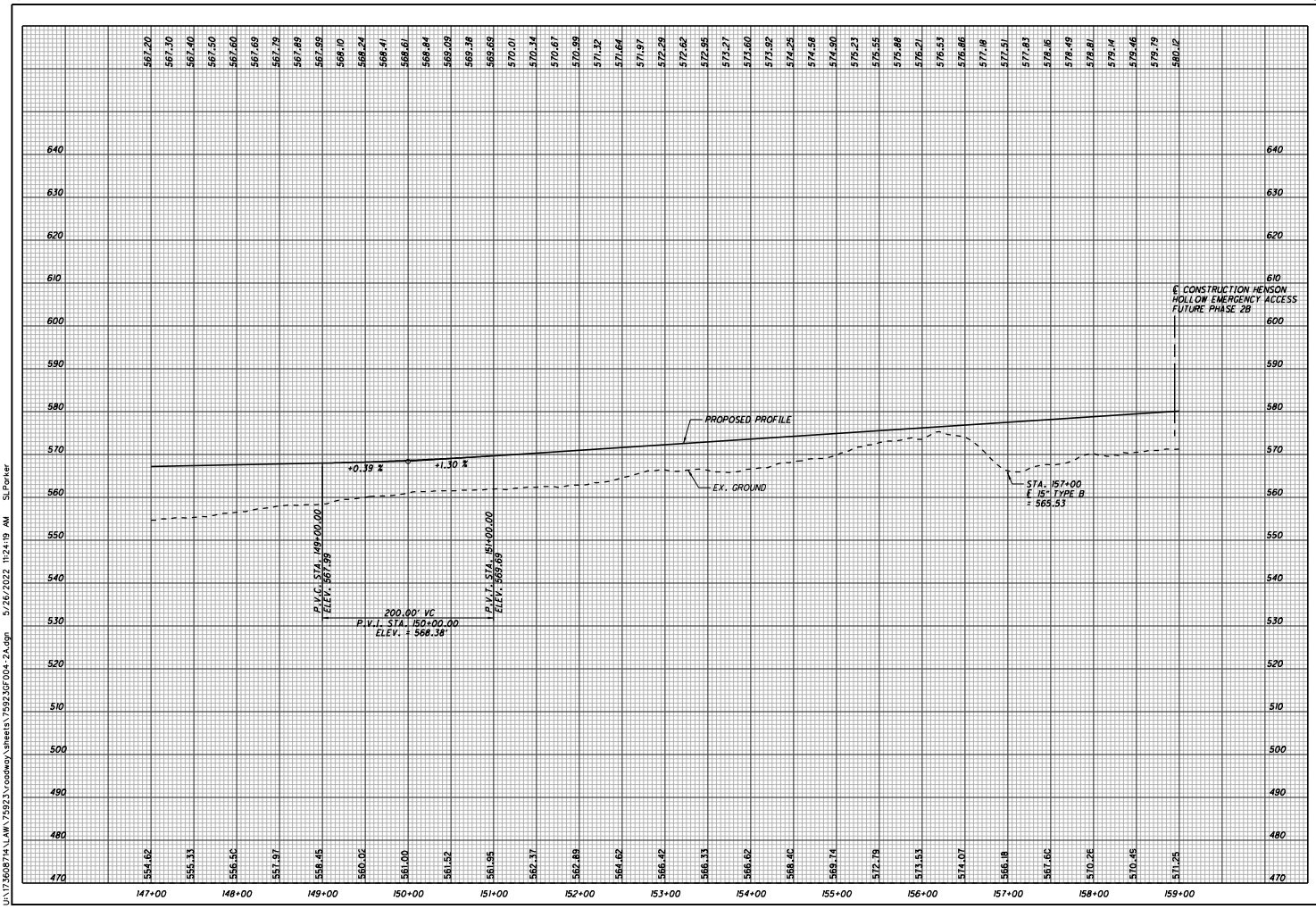

PROFILE - S.R. 7

STA. 147+00 TO STA. 159+00

CALCULATED ALB
CHECKED TCM

LAW-7-2.17

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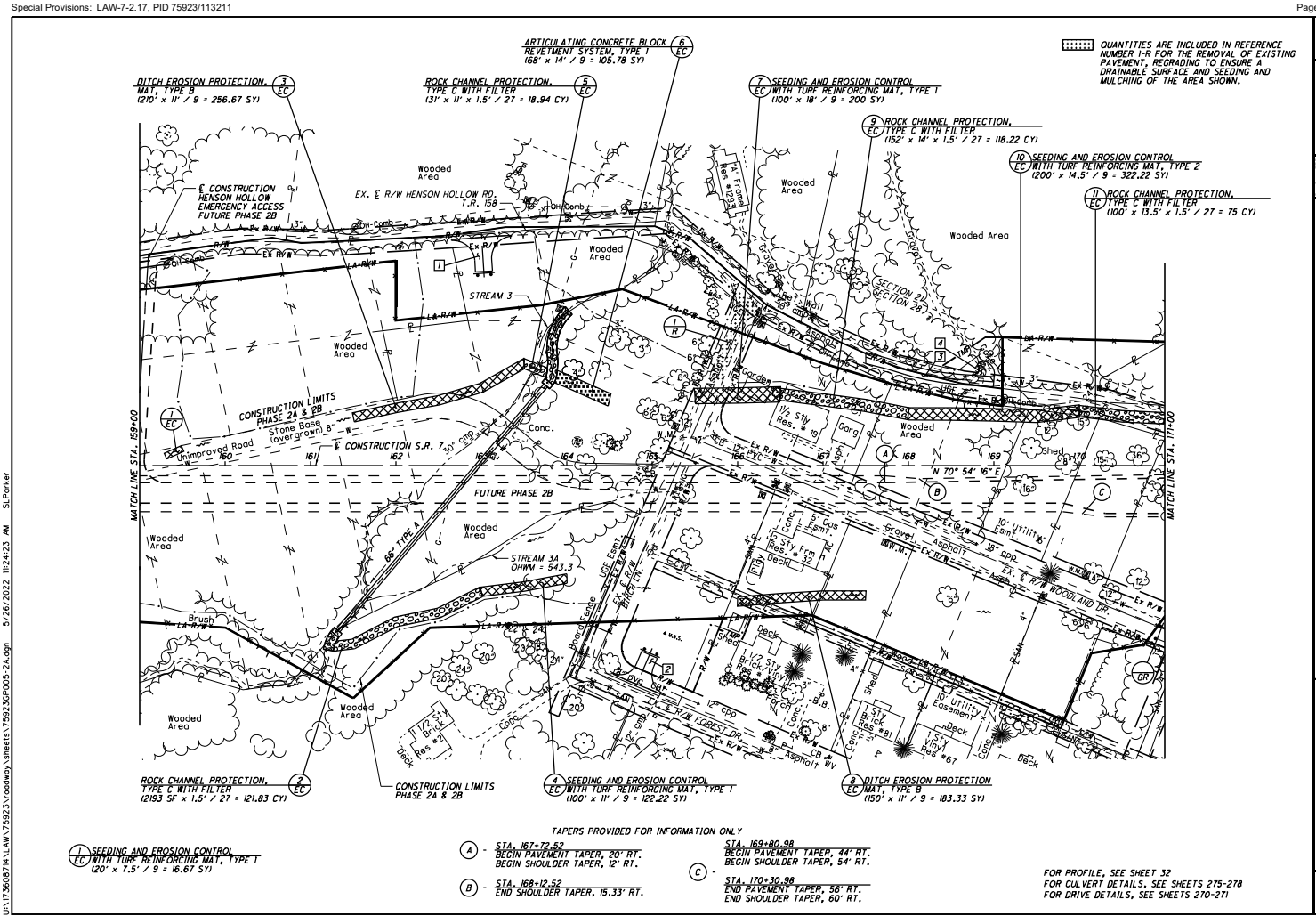

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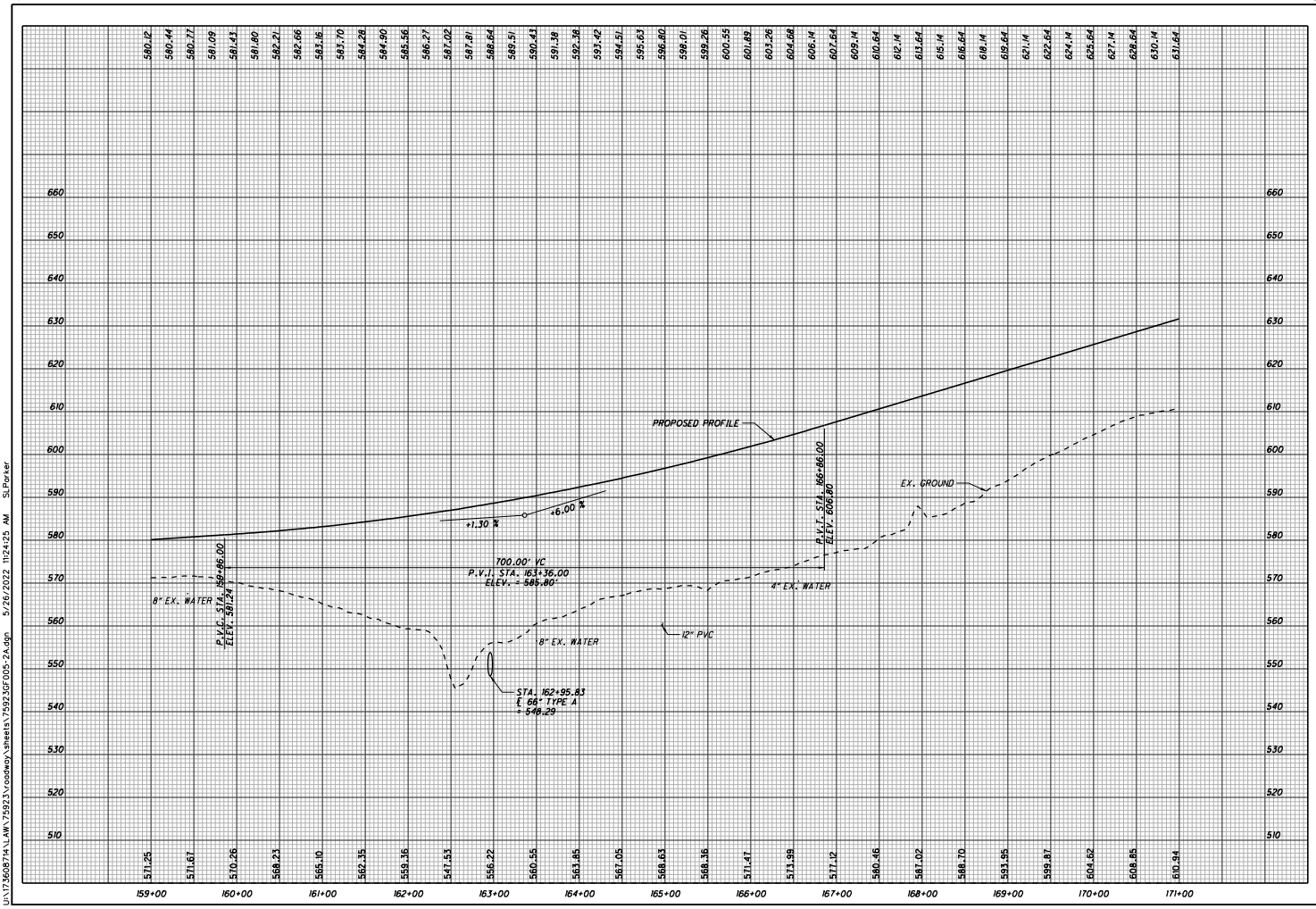

PROFILE - S.R. 7
STA. 159+00 TO STA. 171+00

CALCULATED ALB
CHECKED TCM

LAW-7-2.17

32
297

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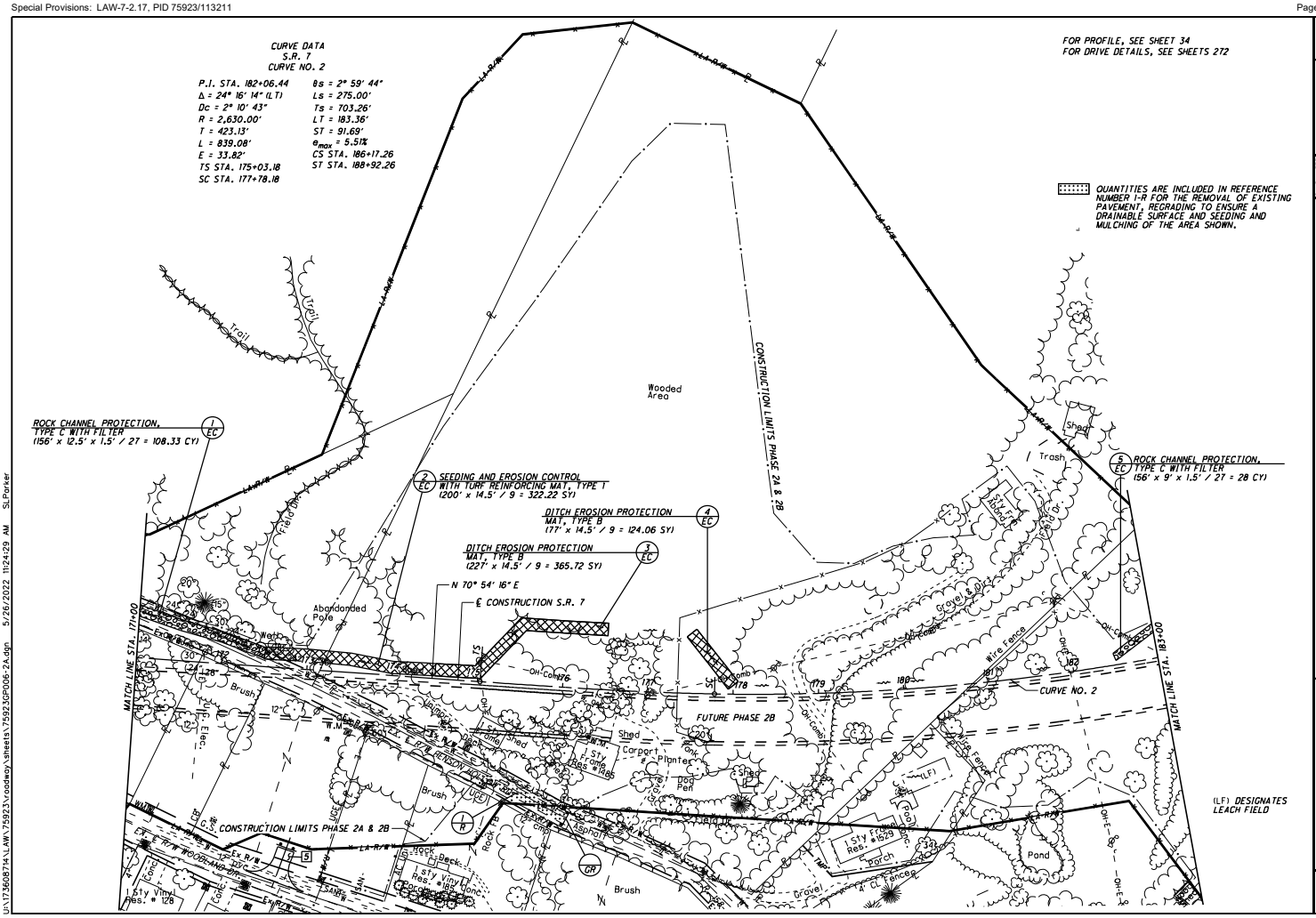
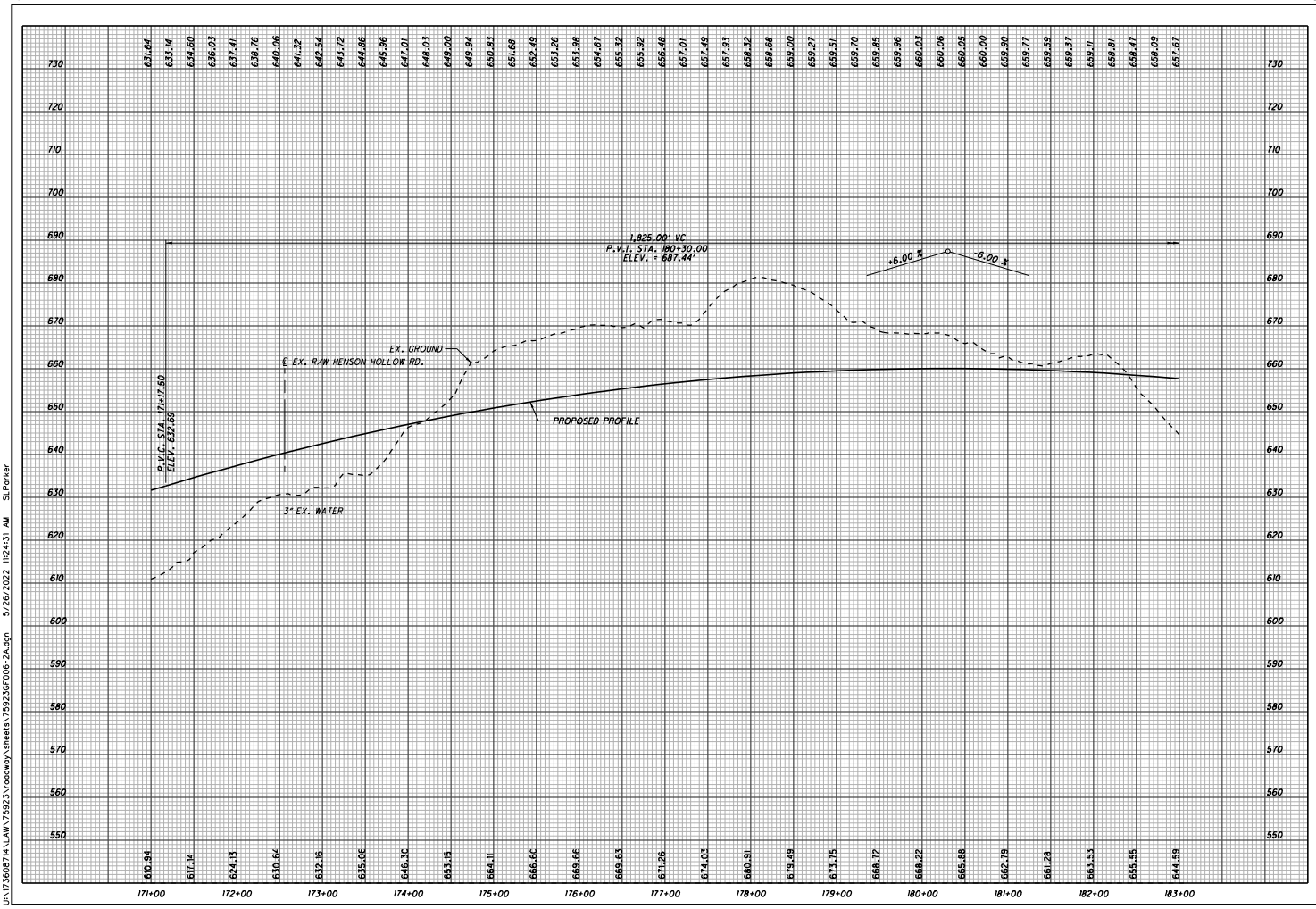

CURVE DATA
S.R. 7
CURVE NO. 2
P.I. STA. 182+06.44
Δ = 24° 16' 14" (LT)
Dc = 2° 10' 43"
R = 2,630.00'
T = 423.13'
L = 839.08'
E = 33.82'
TS STA. 175+03.18
SC STA. 177+78.18
Bs = 2° 59' 44"
Ls = 275.00'
Ts = 703.26'
LT = 183.36'
ST = 91.69'
e max = 5.51%
CS STA. 186+17.26
ST STA. 188+92.26
FOR PROFILE, SEE SHEET 34
FOR DRIVE DETAILS, SEE SHEETS 272
QUANTITIES ARE INCLUDED IN REFERENCE NUMBER 1-R FOR THE REMOVAL OF EXISTING PAVEMENT, REGRADING TO ENSURE A DRAINABLE SURFACE AND SEEDING AND MULCHING OF THE AREA SHOWN.
ROCK CHANNEL PROTECTION, TYPE C WITH FILTER (156' x 12.5' x 1.5' / 27 = 108.33 CY)
SEEDING AND EROSION CONTROL WITH TURF REINFORCING MAT, TYPE T (1200' x 14.5' / 9 = 322.22 SY)
DITCH EROSION PROTECTION MAT, TYPE B (77' x 14.5' / 9 = 124.06 SY)
DITCH EROSION PROTECTION MAT, TYPE B (227' x 14.5' / 9 = 365.72 SY)
ROCK CHANNEL PROTECTION, TYPE C WITH FILTER (56' x 9' x 1.5' / 27 = 28 CY)
CONSTRUCTION LIMITS PHASE 2A & 2B
CONSTRUCTION LIMITS PHASE 2A & 2B
CONSTRUCTION LIMITS PHASE 2A & 2B



PROFILE - S.R. 7
STA. 171+00 STA. 183+00

CALCULATED ALB
CHECKED TCM

LAW-7-2.17

34
297

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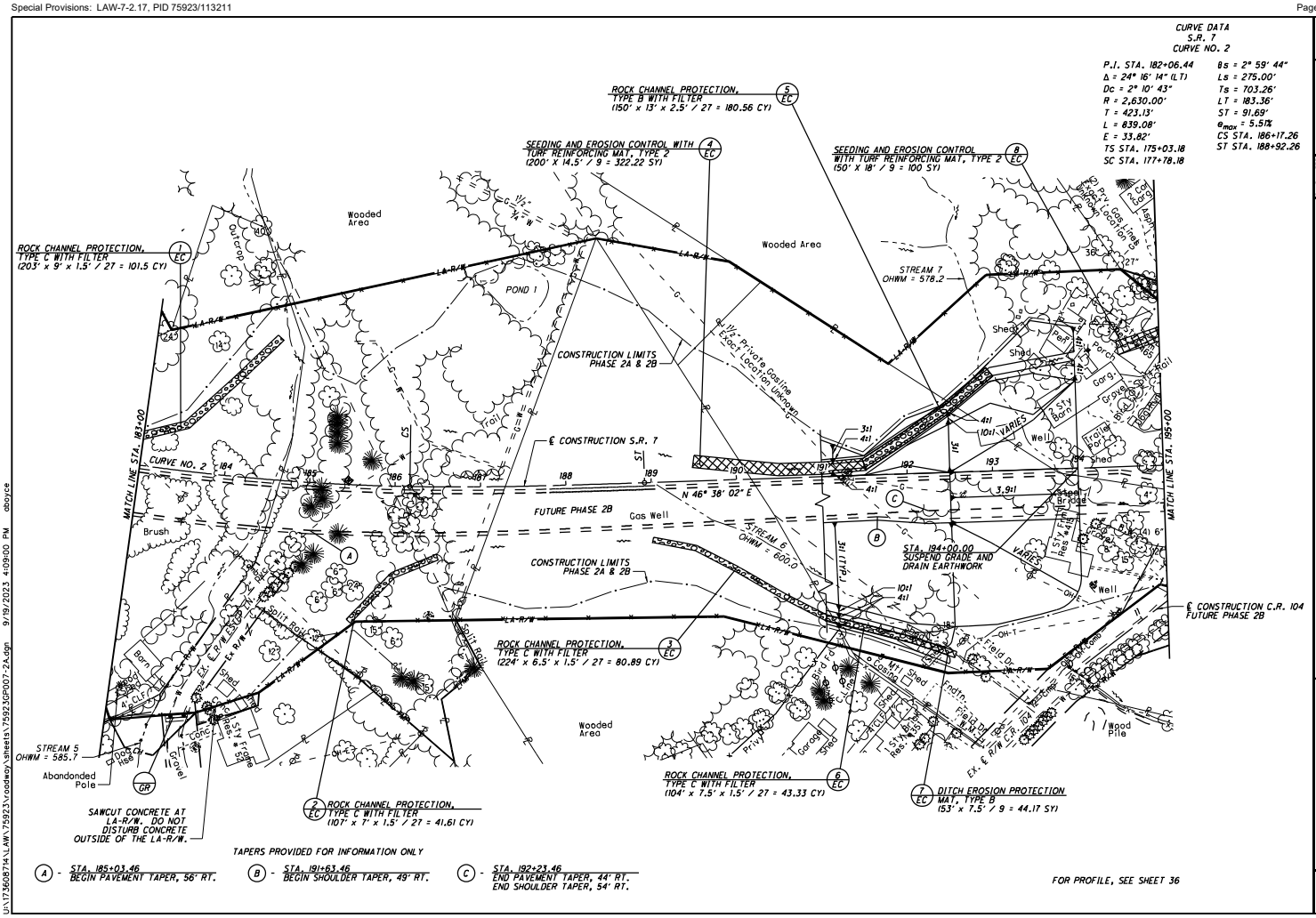

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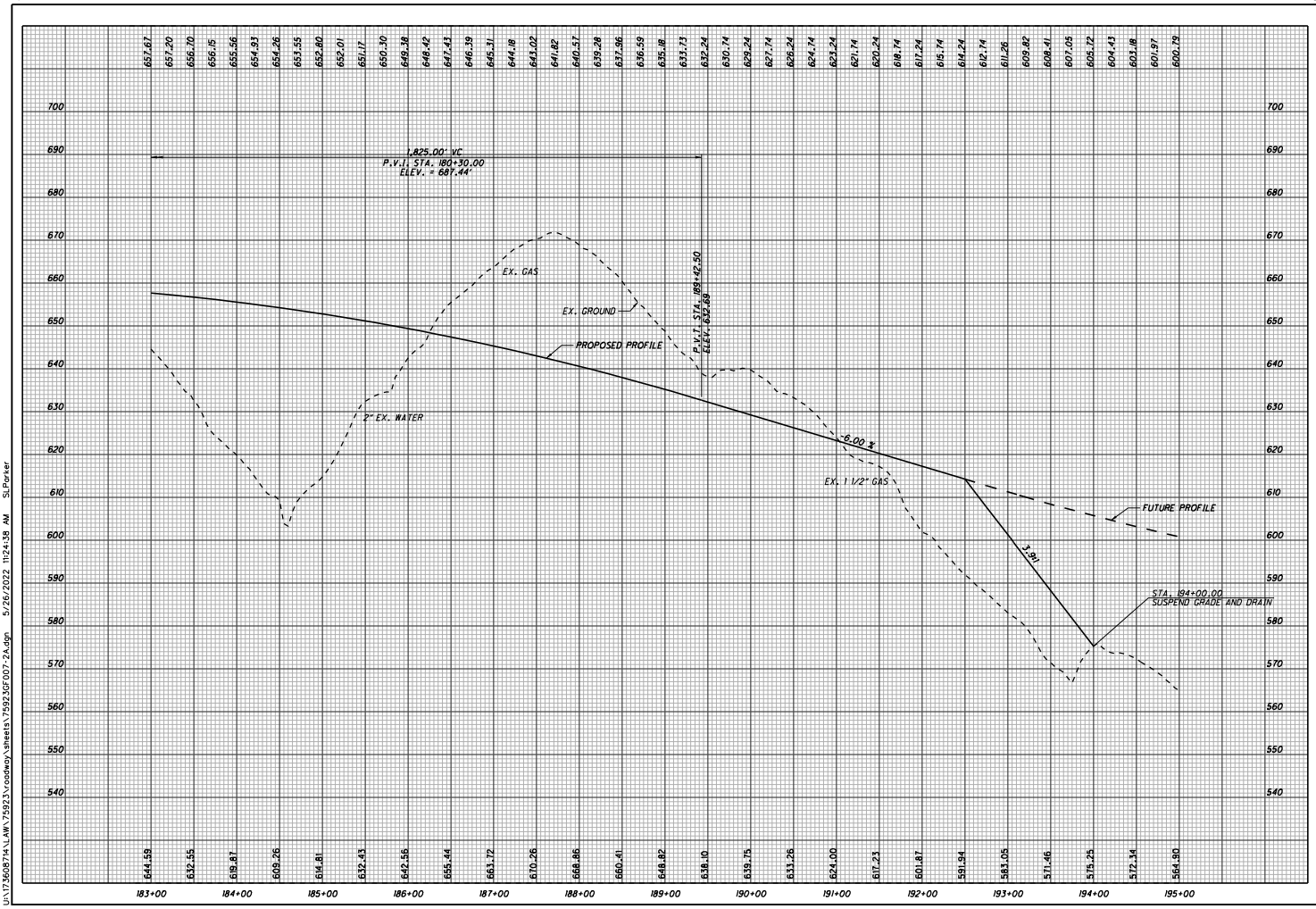

CALCULATED ALB
CHECKED TCM

PROFILE - S.R. 7
STA. 183+00 TO STA. 195+00

LAW-7-2.17

36
297

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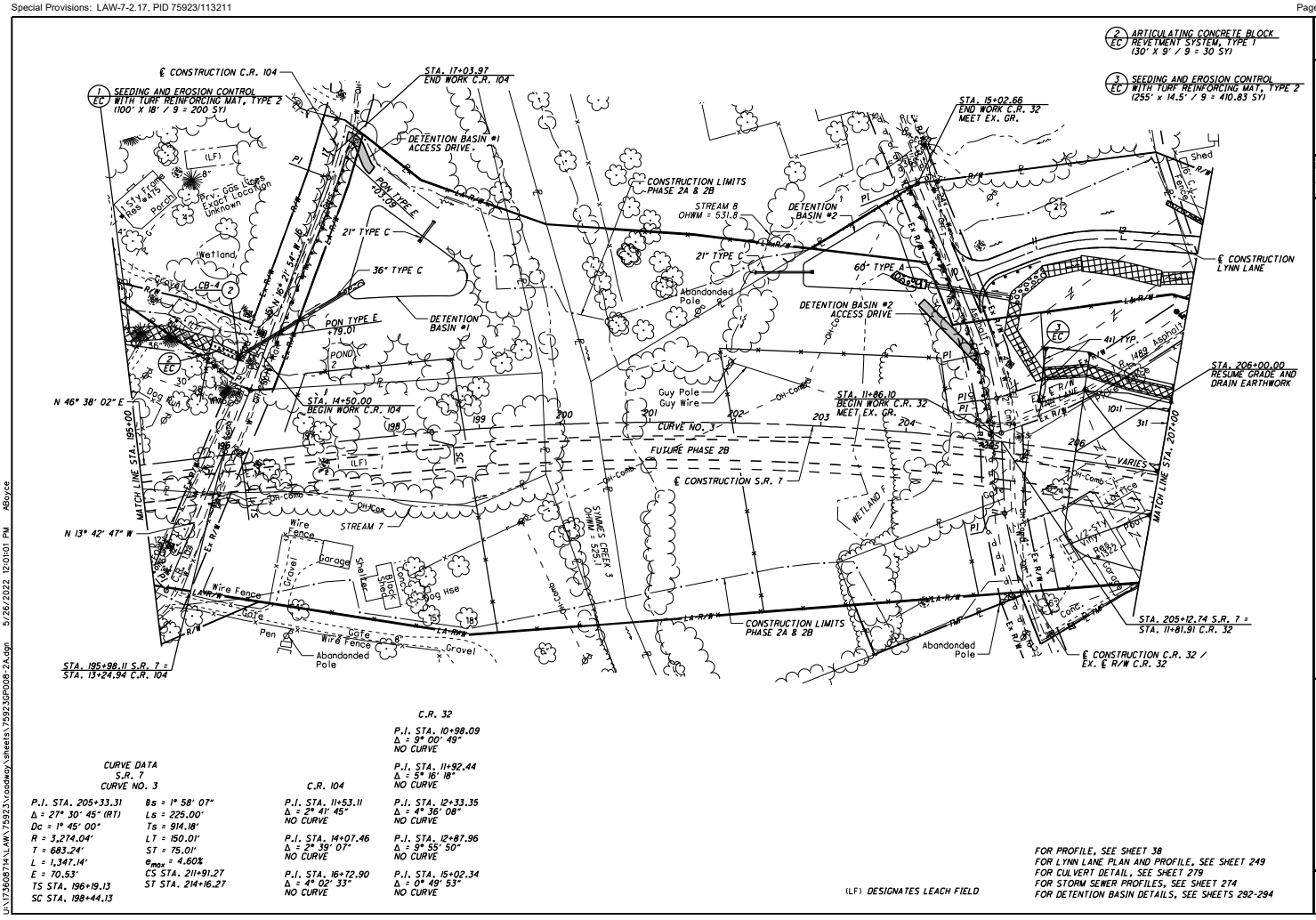
2 EC ARTICULATING CONCRETE BLOCK REVETMENT SYSTEM, TYPE 1 (30' X 9' / 9 = 30 SY)
3 EC SEEDING AND EROSION CONTROL WITH TURF REINFORCING MAT, TYPE 2 (255' x 14.5' / 9 = 410.83 SY)
1 EC SEEDING AND EROSION CONTROL WITH TURF REINFORCING MAT, TYPE 2 (100' x 18' / 9 = 200 SY)
℄ CONSTRUCTION C.R. 104
STA. 17+03.97 END WORK C.R. 104
DETENTION BASIN #1 ACCESS DRIVE
STA. 15+02.66 END WORK C.R. 32 MEET EX. GR.
CONSTRUCTION LIMITS PHASE 2A & 2B
STREAM 8 OHWM = 531.8
DETENTION BASIN #2
21" TYPE C
36" TYPE C
60" TYPE A
℄ CONSTRUCTION LYNN LANE
DETENTION BASIN #1
DETENTION BASIN #2 ACCESS DRIVE
STA. 206+00.00 RESUME GRADE AND DRAIN EARTHWORK
STA. 14+50.00 BEGIN WORK C.R. 104
STA. 11+86.10 BEGIN WORK C.R. 32 MEET EX. GR.
CURVE NO. 3
FUTURE PHASE 2B
℄ CONSTRUCTION S.R. 7
MATCH LINE STA. 195+00
MATCH LINE STA. 207+00
N 46° 38' 02" E
N 13° 42' 47" W
STREAM 7
SHAWES CREEK 3 OHWM = 525.1
WETLAND F
CONSTRUCTION LIMITS PHASE 2A & 2B
STA. 205+12.74 S.R. 7 = STA. 11+81.91 C.R. 32
℄ CONSTRUCTION C.R. 32 / EX. ℄ R/W C.R. 32
STA. 195+98.11 S.R. 7 = STA. 13+24.94 C.R. 104
Abandonded Pole
Guy Pole
Guy Wire
Wire Fence
Gate
Pen
Shed
Garage
Shelter
Barn
Hse
Silo
Gravel
Asphalt
Concr.
Wetland
Pond 1
Pond 2
POND TYPE E
VARIES
411 TYP.
1489
1011
311
206
204
203
202
201
200
199
198
197
196
C.R. 32
P.I. STA. 10+98.09
Δ = 9° 00' 49"
NO CURVE
P.I. STA. 11+92.44
Δ = 5° 16' 18"
NO CURVE
P.I. STA. 12+33.35
Δ = 4° 36' 08"
NO CURVE
P.I. STA. 12+87.96
Δ = 9° 55' 50"
NO CURVE
P.I. STA. 15+02.34
Δ = 0° 49' 53"
NO CURVE
CURVE DATA
S.R. 7
CURVE NO. 3
P.I. STA. 205+33.31
Δ = 27° 30' 45" (RT)
Dc = 1° 45' 00"
R = 3,274.04'
T = 683.24'
L = 1,347.14'
E = 70.53'
TS STA. 196+19.13
SC STA. 198+44.13
θs = 1° 58' 07"
Ls = 225.00'
Ts = 914.18'
LT = 150.01'
ST = 75.01'
e max = 4.60%
CS STA. 211+91.27
ST STA. 214+16.27
C.R. 104
P.I. STA. 11+53.11
Δ = 2° 41' 45"
NO CURVE
P.I. STA. 14+07.46
Δ = 2° 39' 07"
NO CURVE
P.I. STA. 16+72.90
Δ = 4° 02' 33"
NO CURVE
(LF) DESIGNATES LEACH FIELD
FOR PROFILE, SEE SHEET 38
FOR LYNN LANE PLAN AND PROFILE, SEE SHEET 249
FOR CULVERT DETAIL, SEE SHEET 279
FOR STORM SEWER PROFILES, SEE SHEET 274
FOR DETENTION BASIN DETAILS, SEE SHEETS 292-294
HORIZONTAL SCALE IN FEET
0 50 100
CALCULATED SLP
CHECKED ALB
PLAN - S.R. 7
STA. 195+00 TO STA. 207+00
LAW-7-2.17
37
297
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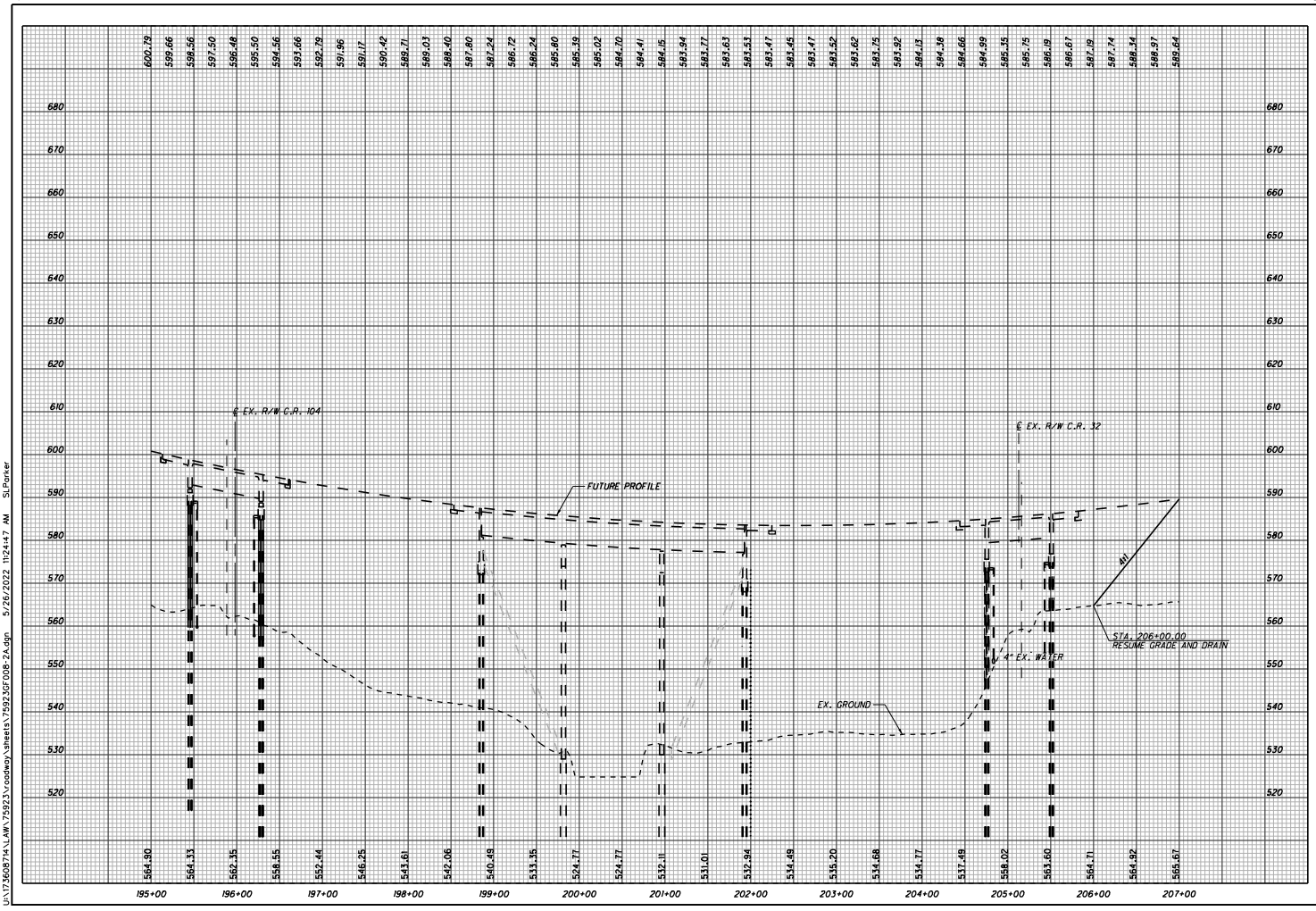

PROFILE - S.R. 7
STA. 195+00 STA. 207+00

CALCULATED ALB
CHECKED TCM

LAW-7-2.17

38
297

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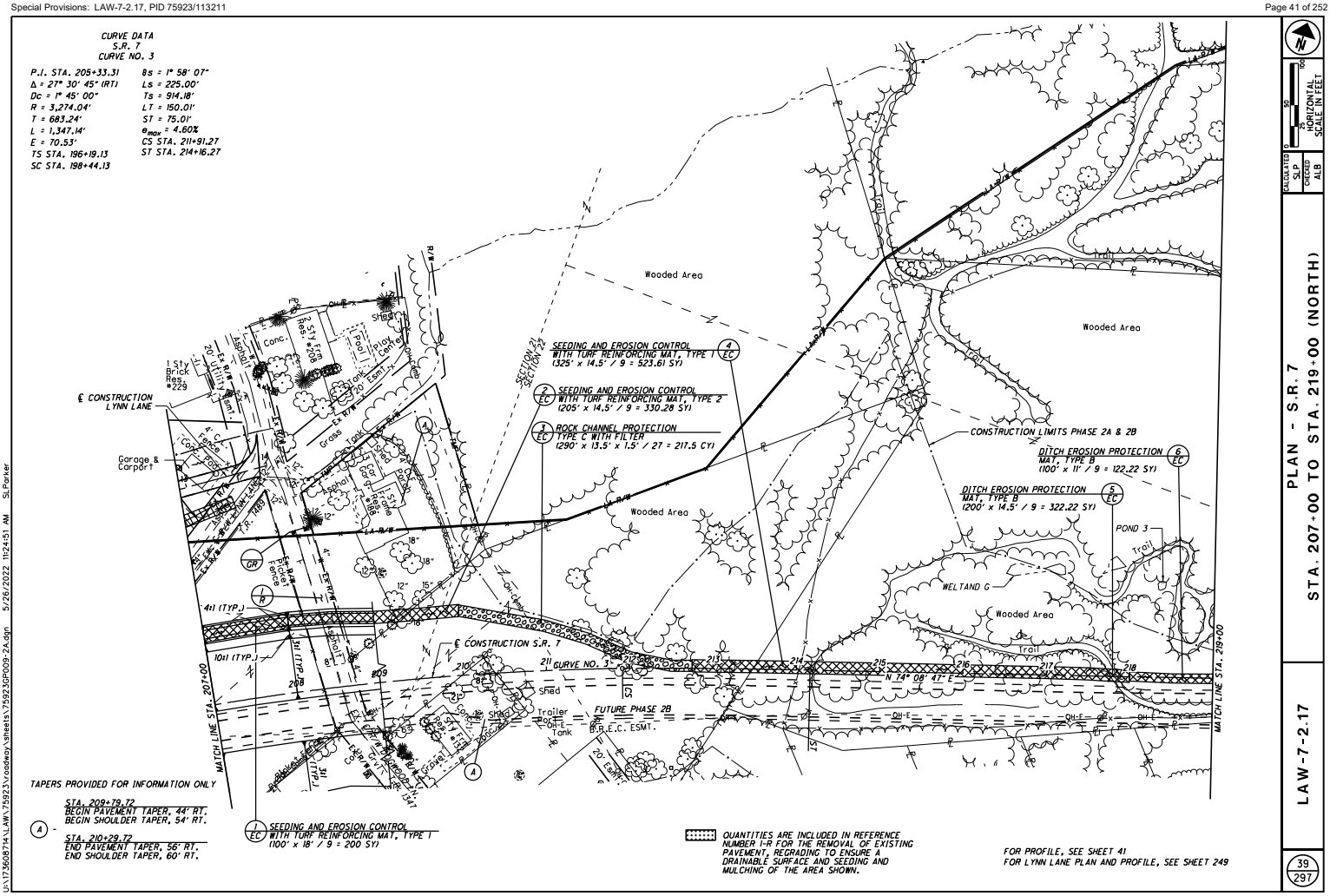

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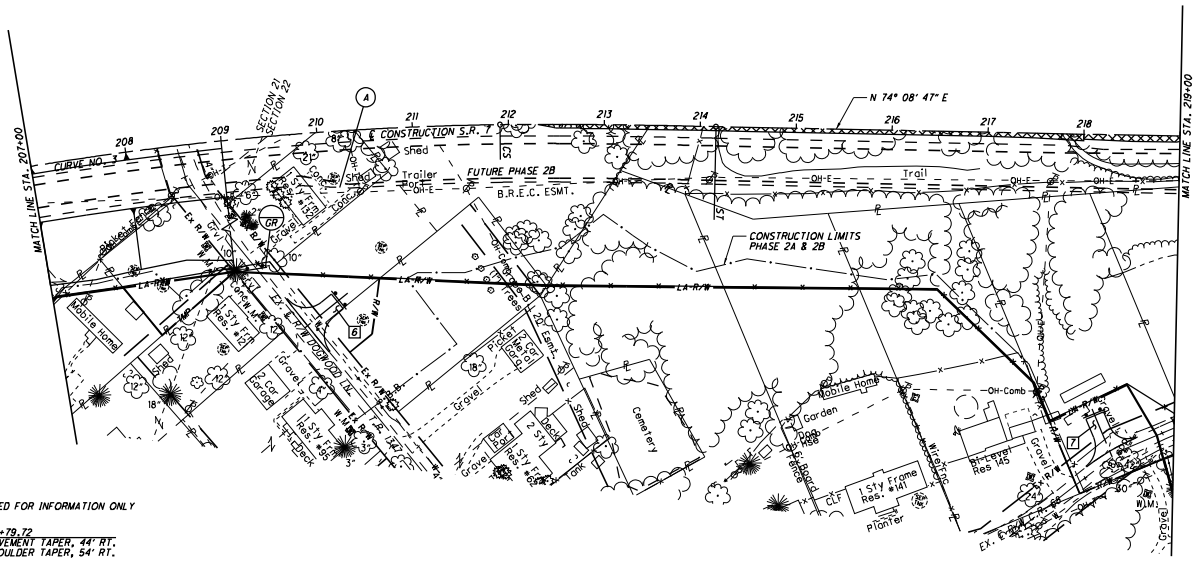
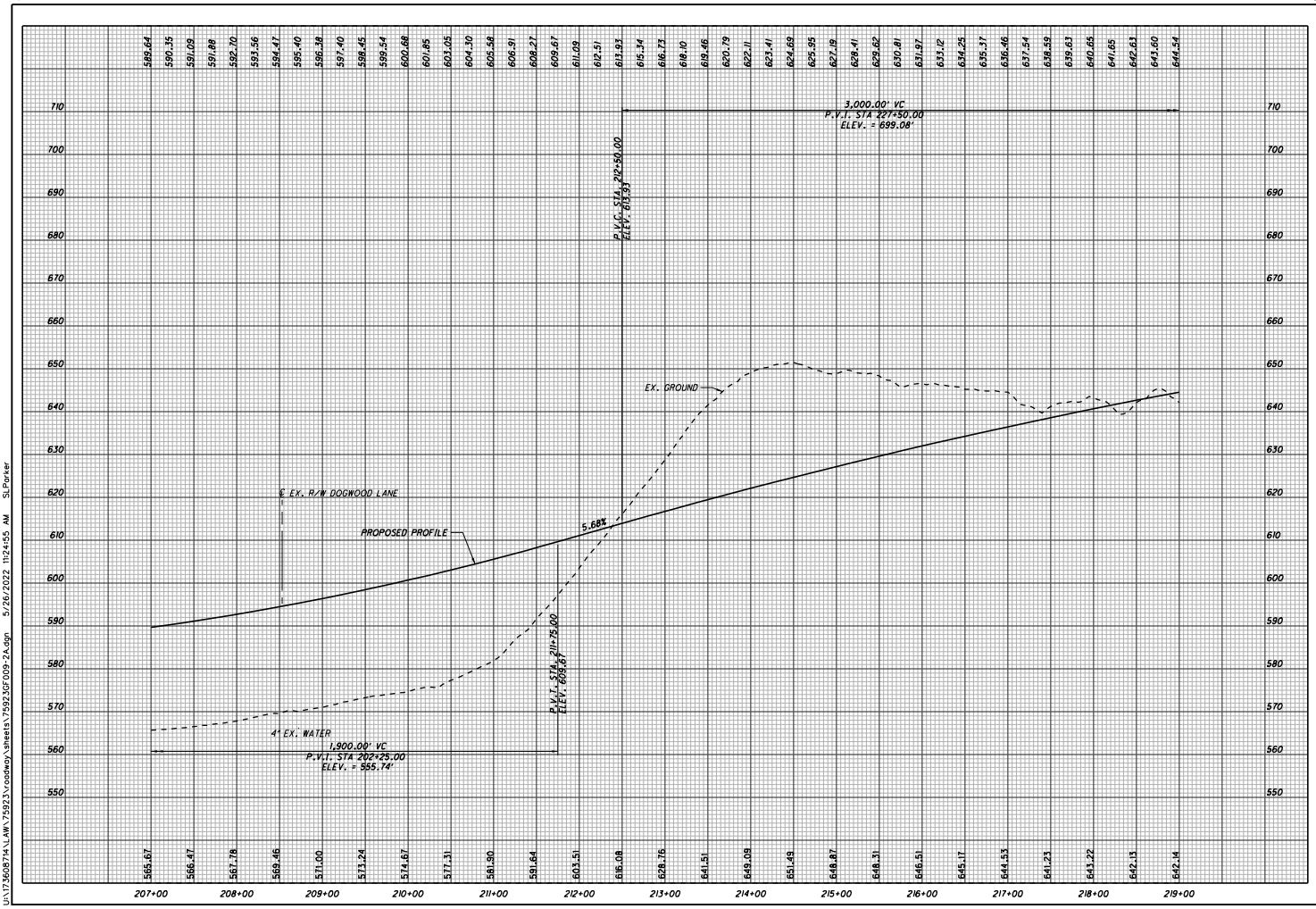
CURVE DATA
S.R. 7
CURVE NO. 3

P.I. STA. 205+33.31
Δ = 27° 30' 45" (RT)
Dc = 1° 45' 00"
R = 3,274.04'
T = 683.24'
L = 1,347.14'
E = 70.53'
TS STA. 196+19.13
SC STA. 198+44.13

θs = 1° 58' 07"
Ls = 225.00'
Ts = 914.18'
LT = 150.01'
ST = 75.01'
e_{max} = 4.60%
CS STA. 211+91.27
ST STA. 214+16.27


MATCH LINE STA. 207+00
MATCH LINE STA. 219+00
N 74° 08' 47" E
CURVE NO. 3
SECTION 21
SECTION 22
208
209
210
211
212
213
214
215
216
217
218
℄ CONSTRUCTION S.R. 7
FUTURE PHASE 2B
B.R.E.C. ESMT.
CONSTRUCTION LIMITS
PHASE 2A & 2B
Trail
Shed
Trailer
Mobile Home
Garden
Cemetery
Gravel
Pasture
Fence
Tank
Pond
Creek
Woods
Wire Fence
Pipeline
Pump
Well
Tree
Bush
Stump
Rock
Ditch
Culvert
Utility Pole
Guy Wire
Sign
Mailbox
Basketball Goal
Ice House
Ice Pad
Pavilion
Picnic Table
Grill
Swing
Slide
Sandbox
Monument
Flag Pole
Cell Tower
Transformer
Meter
Gas Valve
Water Valve
Manhole
Catch Basin
Inlet
Headwall
Guard Rail
Concrete Barrier
Chain Link Fence
Barbed Wire Fence
Wood Fence
Stone Wall
Brick Wall
Retaining Wall
Steps
Ramp
Curb
Gutter
Sidewalk
Crosswalk
Parking Lot
Driveway
Entrance
Exit
Ingress
Egress
Property Line
Right of Way
Easement
Building
Garage
Barn
Silo
Greenhouse
Shed
Deck
Porch
Patio
Pool
Fountain
Statue
Flagpole
Clothesline
Antenna
Satellite Dish
Solar Panel
Windmill
Water Tower
Gas Station
Pump Island
Canopy
Sign
Billboard
Fence
Gate
Hedge



PROFILE - S.R. 7
STA. 207+00 TO STA. 219+00

CALCULATED ALB
CHECKED TCM

LAW-7-2.17

2
297

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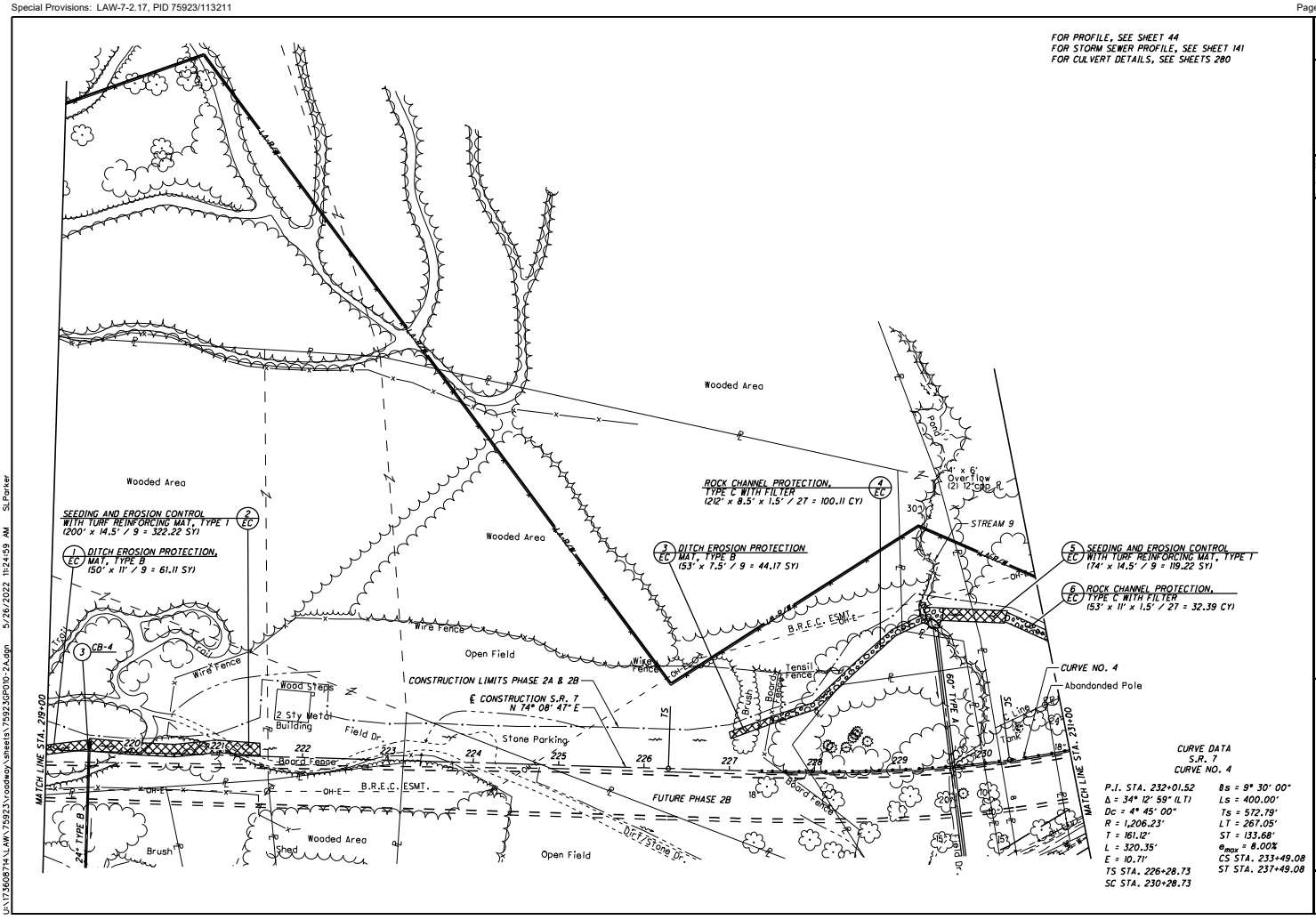

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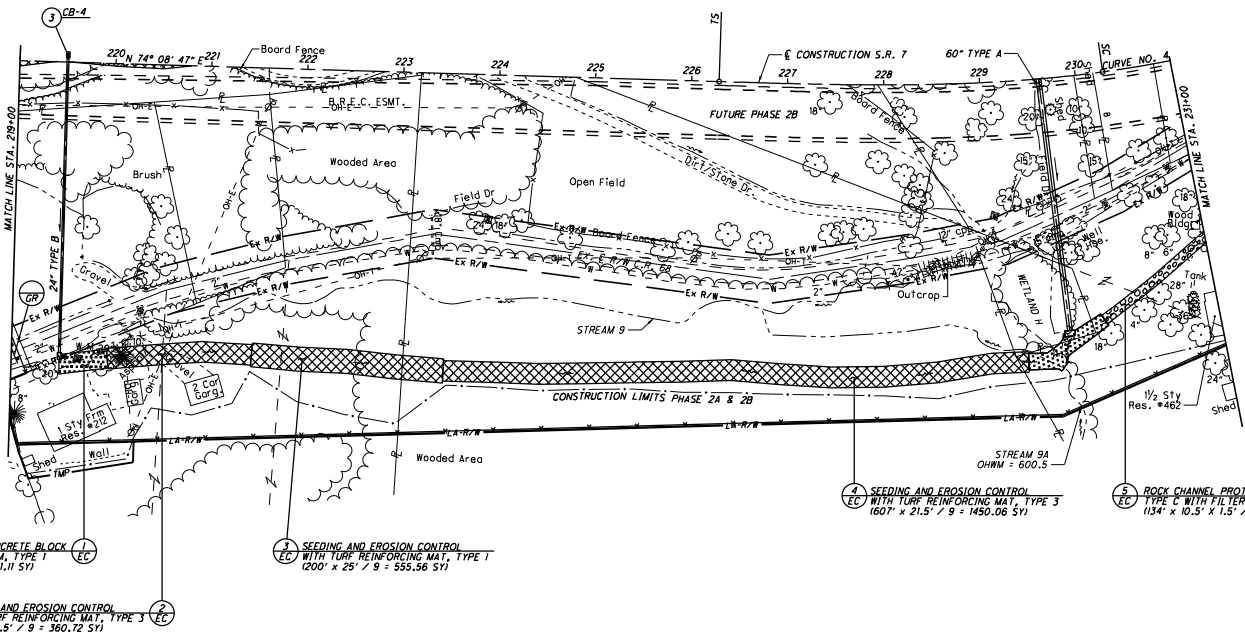

CURVE DATA
S.R. 7
CURVE NO. 4

P.I. STA. 232+01.52
Δ = 34° 12' 59" (LT)
Dc = 4° 45' 00"
R = 1,206.23'
T = 161.12'
L = 320.35'
E = 10.71'
TS STA. 226+28.73
SC STA. 230+28.73

Bs = 9° 30' 00"
Ls = 400.00'
Ts = 572.79'
LT = 267.05'
ST = 133.68'
e_{max} = 8.00%
CS STA. 233+49.08
ST STA. 237+49.08

HORIZONTAL SCALE IN FEET
0 50 100

CALCULATED SLP
CHECKED ALB

PLAN - S.R. 7
STA. 219+00 TO STA. 231+00 (SOUTH)

LAW-7-2.17

43
297

FOR PROFILE, SEE SHEET 44
FOR STORM SEWER PROFILE, SEE SHEET 141
FOR CULVERT DETAILS, SEE SHEETS 280

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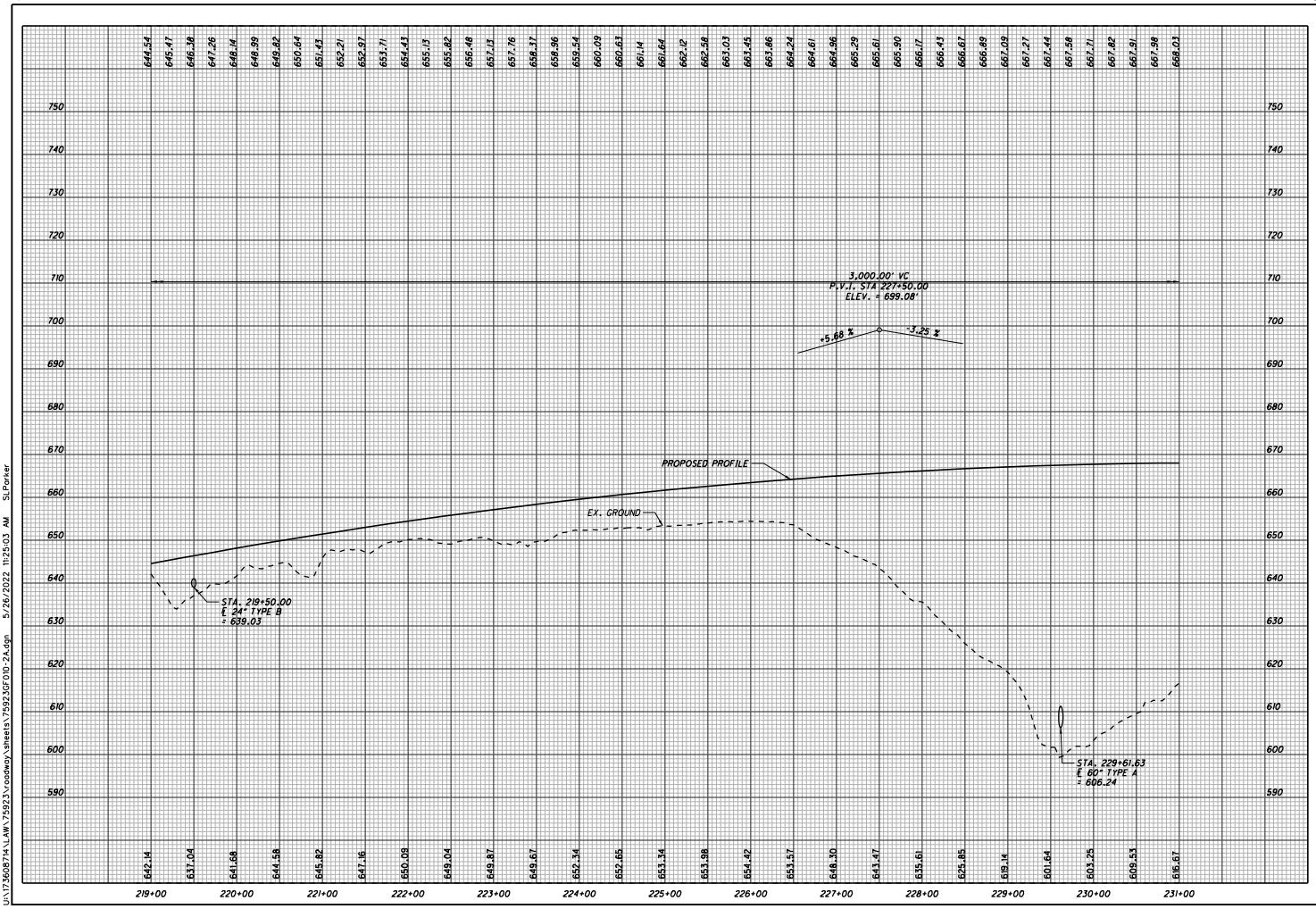

PROFILE - S.R. 7
STA. 219+00 TO STA. 231+00

CALCULATED ALB
CHECKED TCM

LAW-7-2.17

44
297

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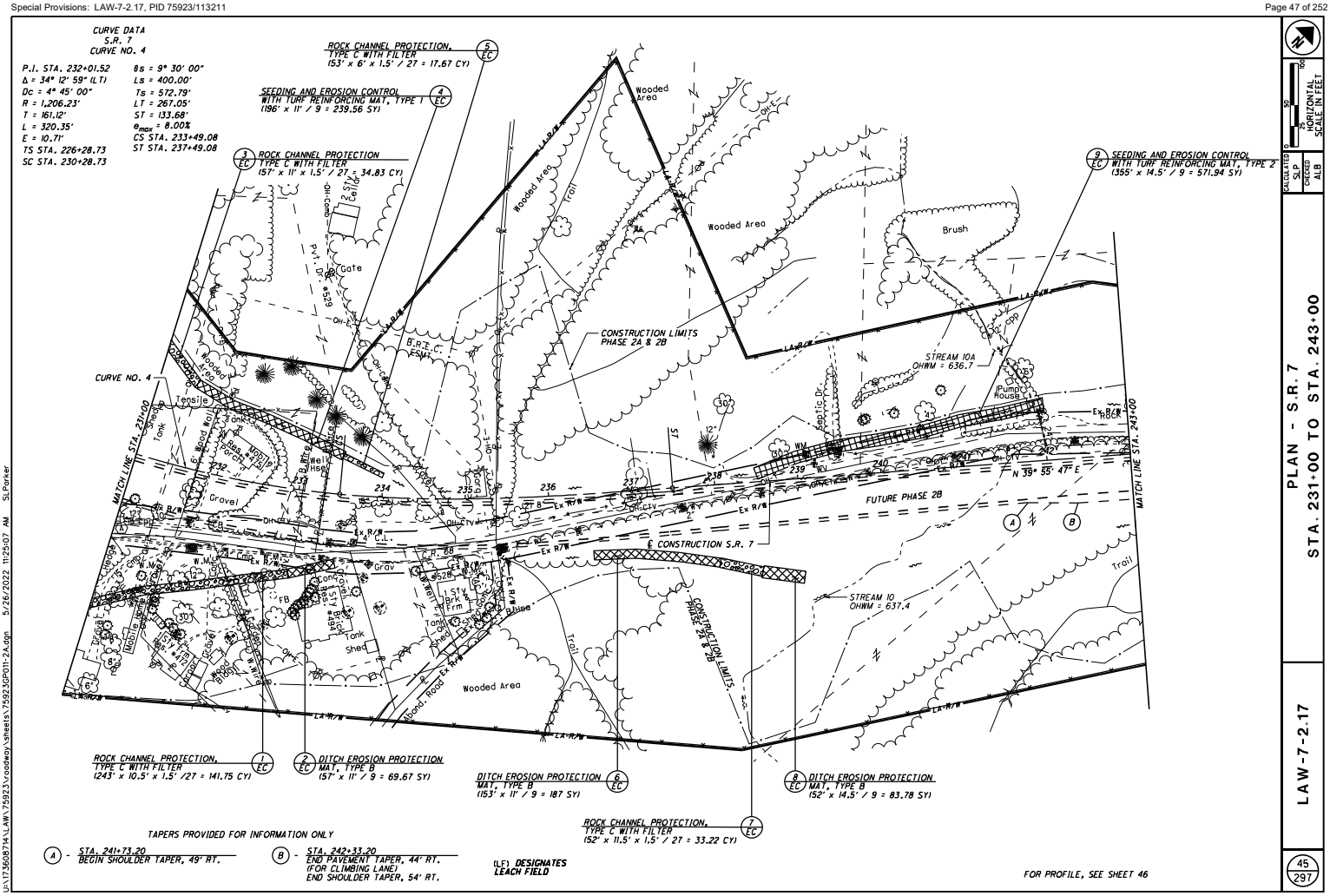

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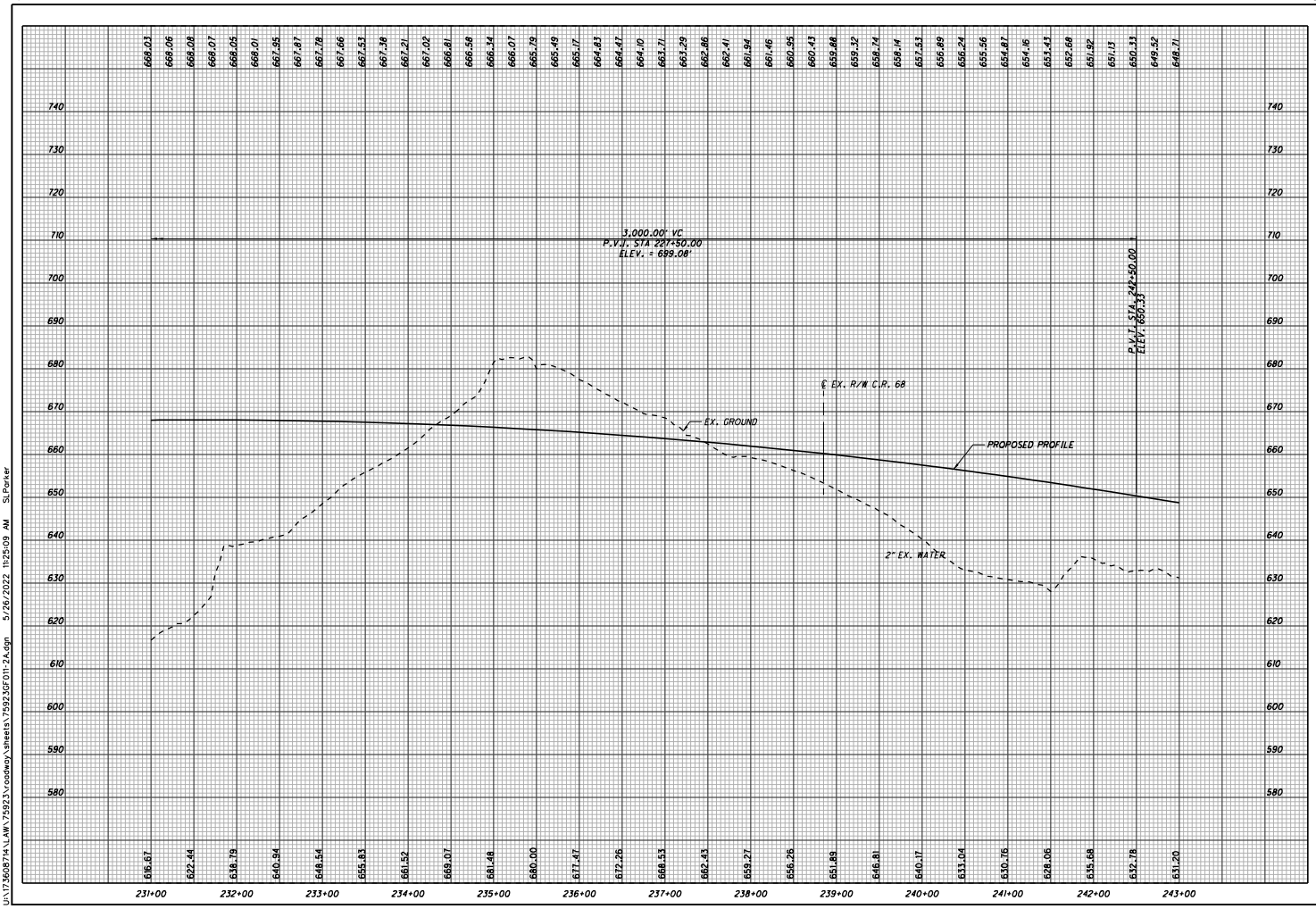

PROFILE - S.R. 7
STA. 231+00 TO STA. 243+00

CALCULATED ALB
CHECKED TCM

LAW-7-2.17

46
297

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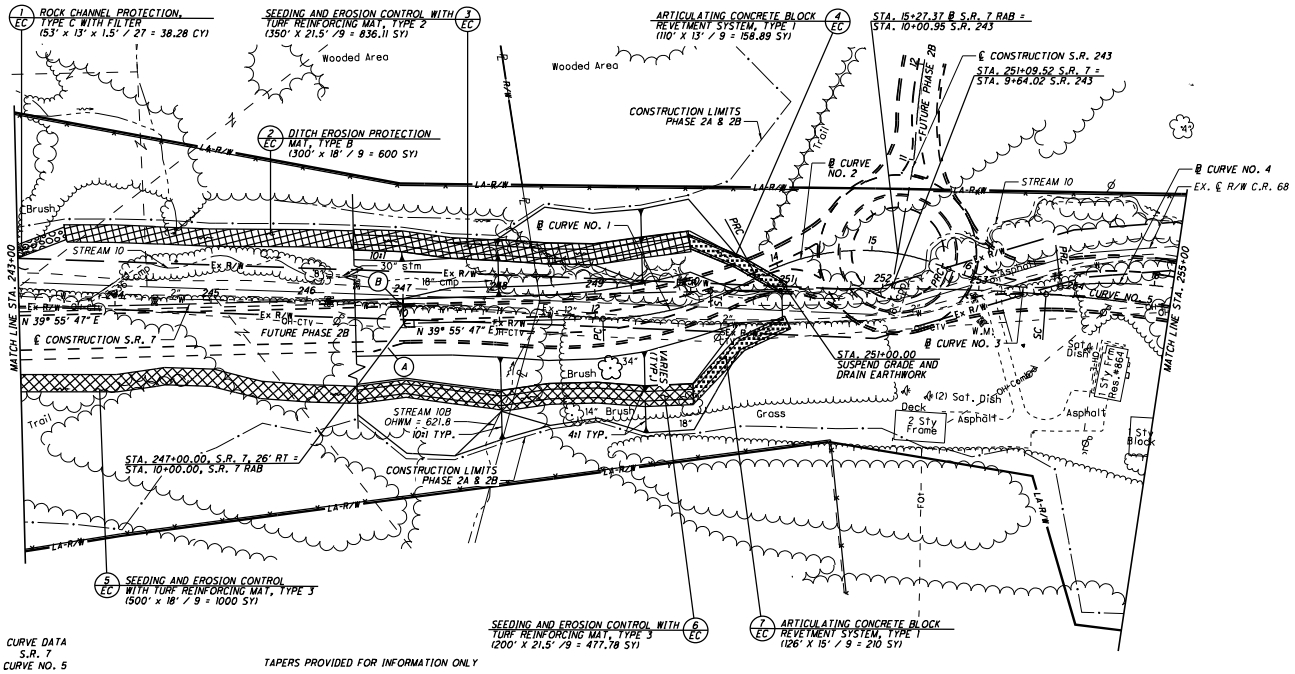
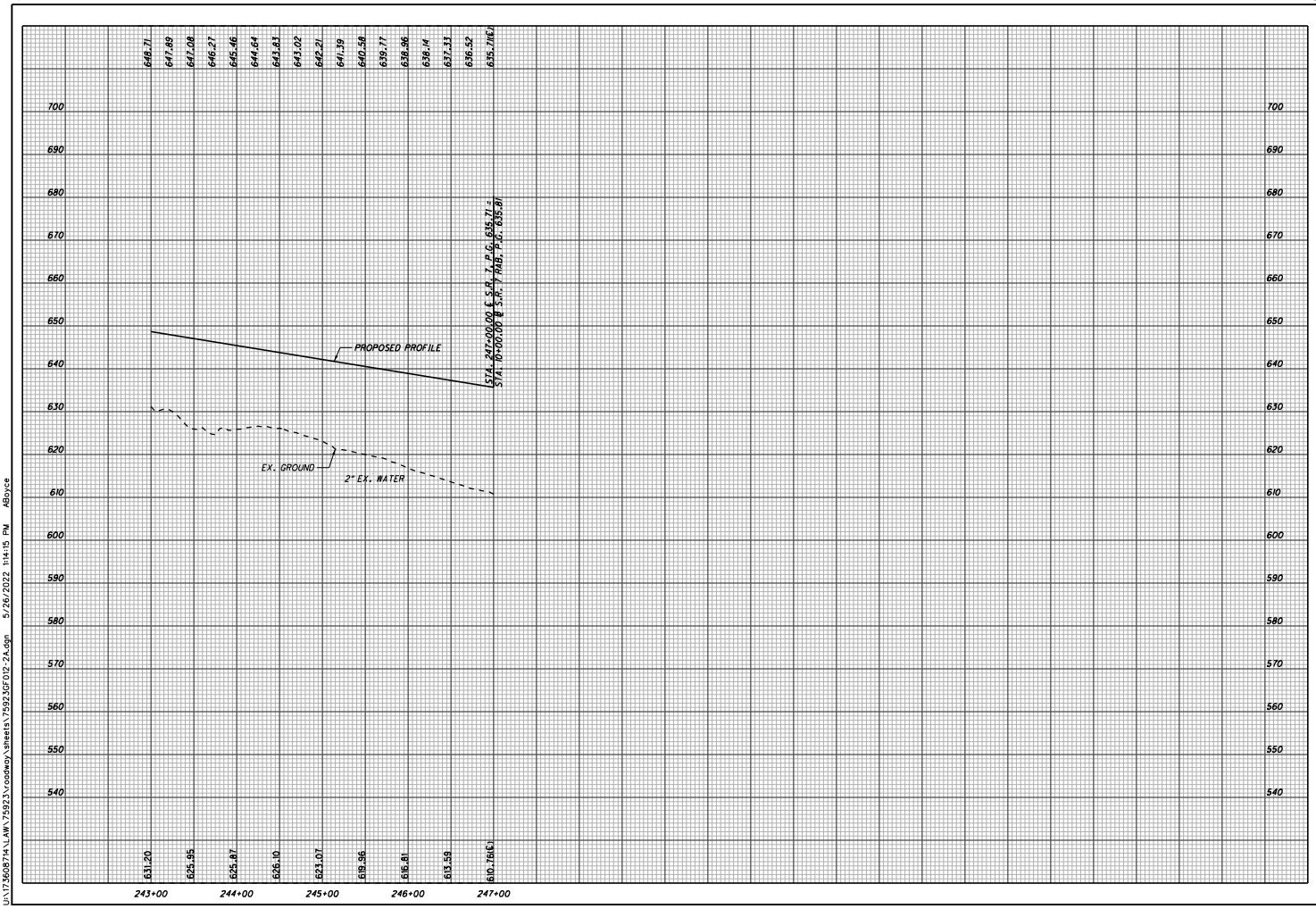
CURVE DATA @ S.R. 7 RAB CURVE NO. 1	CURVE DATA @ S.R. 7 RAB CURVE NO. 2	CURVE DATA @ S.R. 7 RAB CURVE NO. 3	CURVE DATA @ S.R. 7 RAB CURVE NO. 4
P.I. Sta. 12+93.43	P.I. Sta. 14+87.13	P.I. Sta. 16+43.83	P.I. Sta. 18+27.99
Δ = 27° 26' 21" (LT)	Δ = 52° 43' 55" (RT)	Δ = 30° 24' 24" (LT)	Δ = 31° 15' 43" (RT)
Dc = 16° 22' 13"	Dc = 25° 27' 53"	Dc = 25° 27' 53"	Dc = 12° 43' 57"
R = 350.00'	R = 225.00'	R = 225.00'	R = 450.00'
T = 85.45'	T = 111.52'	T = 61.15'	T = 125.90'
L = 167.62'	L = 207.08'	L = 119.41'	L = 245.53'
E = 10.28'	E = 26.12'	E = 8.16'	E = 17.28'
PC Sta. 12+07.99	PRC Sta. 13+75.60	PRC Sta. 15+82.68	PRC Sta. 17+02.09
PRC Sta. 13+75.60	PRC Sta. 15+82.68	PRC Sta. 17+02.09	PT Sta. 19+47.62


1 EC ROCK CHANNEL PROTECTION, TYPE C WITH FILTER (53' x 13' x 1.5' / 27 = 38.28 CY)
2 EC DITCH EROSION PROTECTION MAT, TYPE B (300' x 18' / 9 = 600 SY)
3 EC SEEDING AND EROSION CONTROL WITH TURF REINFORCING MAT, TYPE 2 (350' x 21.5' /9 = 836.11 SY)
4 EC ARTICULATING CONCRETE BLOCK REVETMENT SYSTEM, TYPE 1 (110' x 13' / 9 = 158.89 SY)
5 EC SEEDING AND EROSION CONTROL WITH TURF REINFORCING MAT, TYPE 3 (500' x 18' / 9 = 1000 SY)
6 EC SEEDING AND EROSION CONTROL WITH TURF REINFORCING MAT, TYPE 3 (200' X 21.5' /9 = 477.78 SY)
7 EC ARTICULATING CONCRETE BLOCK REVETMENT SYSTEM, TYPE 1 (126' X 15' / 9 = 210 SY)
STA. 15+27.37 @ S.R. 7 RAB = STA. 10+00.95 S.R. 243
℄ CONSTRUCTION S.R. 243 STA. 251+09.52 S.R. 7 = STA. 9+64.02 S.R. 243
CONSTRUCTION LIMITS PHASE 2A & 2B
FUTURE PHASE 2B
@ CURVE NO. 1
@ CURVE NO. 2
@ CURVE NO. 3
@ CURVE NO. 4
EX. ℄ R/W C.R. 68
STREAM 10
STREAM 10B OHWM = 621.8
Wooded Area
Brush
Trail
Grass
Asphalt
Deck
2 Sty Frame
(2) Sat. Dish
Shed
St. Block
Ex R/W
LA-R/W
MATCH LINE STA. 243+00
MATCH LINE STA. 255+00
N 39° 55' 47" E
℄ CONSTRUCTION S.R. 7
STA. 251+00.00 SUSPEND GRADE AND DRAIN EARTHWORK
STA. 247+00.00, S.R. 7, 26' RT = STA. 10+00.00, S.R. 7 RAB
30" stm
18" cmp
12" cmp
Ex. 12" W.M.
Ex. 8" W.M.
Ex. 6" W.M.
Ex. 8" SAN
Ex. 12" SAN
Ex. 8" GAS
Ex. 12" GAS
Ex. 6" GAS
Ex. 8" OHP
Ex. 12" OHP
Ex. 6" OHP
Ex. 8" UGP
Ex. 12" UGP
Ex. 6" UGP
Ex. 8" UGT
Ex. 12" UGT
Ex. 6" UGT
Ex. 8" UGE
Ex. 12" UGE
Ex. 6" UGE
Ex. 8" UGC
Ex. 12" UGC
Ex. 6" UGC
Ex. 8" UGW
Ex. 12" UGW
Ex. 6" UGW
Ex. 8" UGG
Ex. 12" UGG
Ex. 6" UGG
Ex. 8" UGS
Ex. 12" UGS
Ex. 6" UGS
Ex. 8" UGF
Ex. 12" UGF
Ex. 6" UGF



PROFILE - S.R. 7
STA. 243+000 TO STA. 247+00

CALCULATED ALB
CHECKED TCM

LAW-7-2.17

48
297

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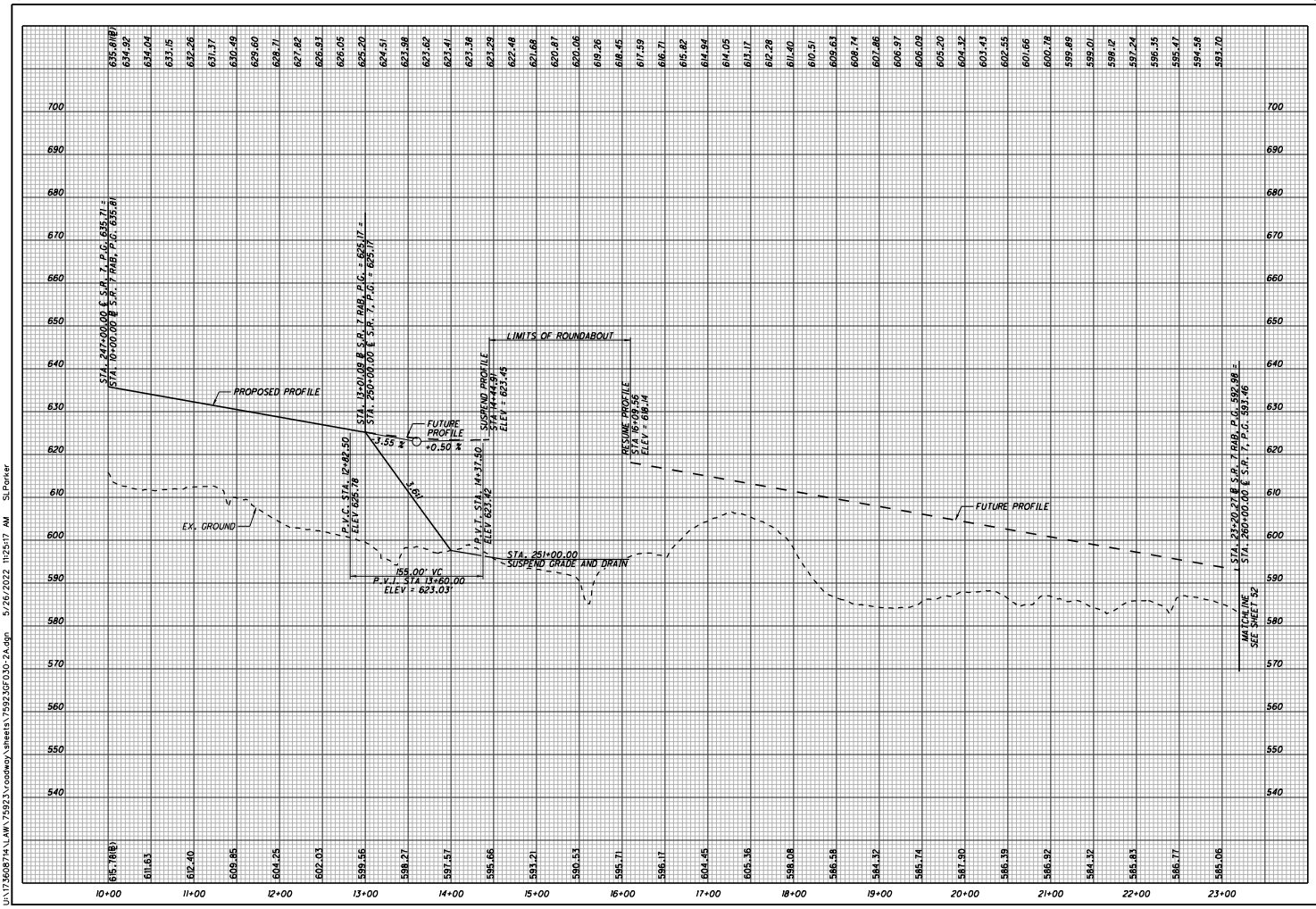

PROFILE - S.R. 7 RAB
STA. 10+00 TO STA. 23+20.27

CALCULATED ALB
CHECKED TCM

LAW-7-2.17

49
297

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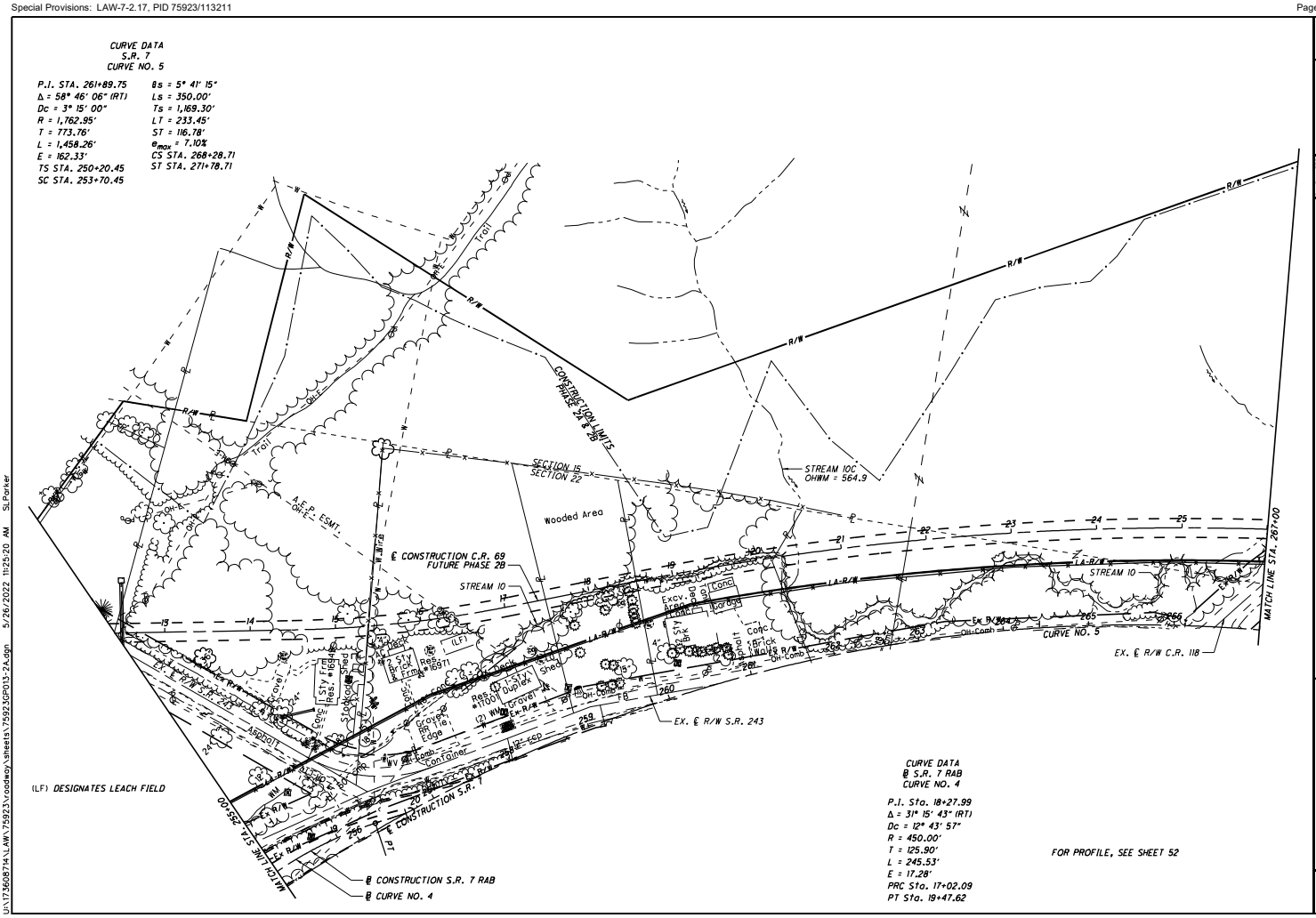

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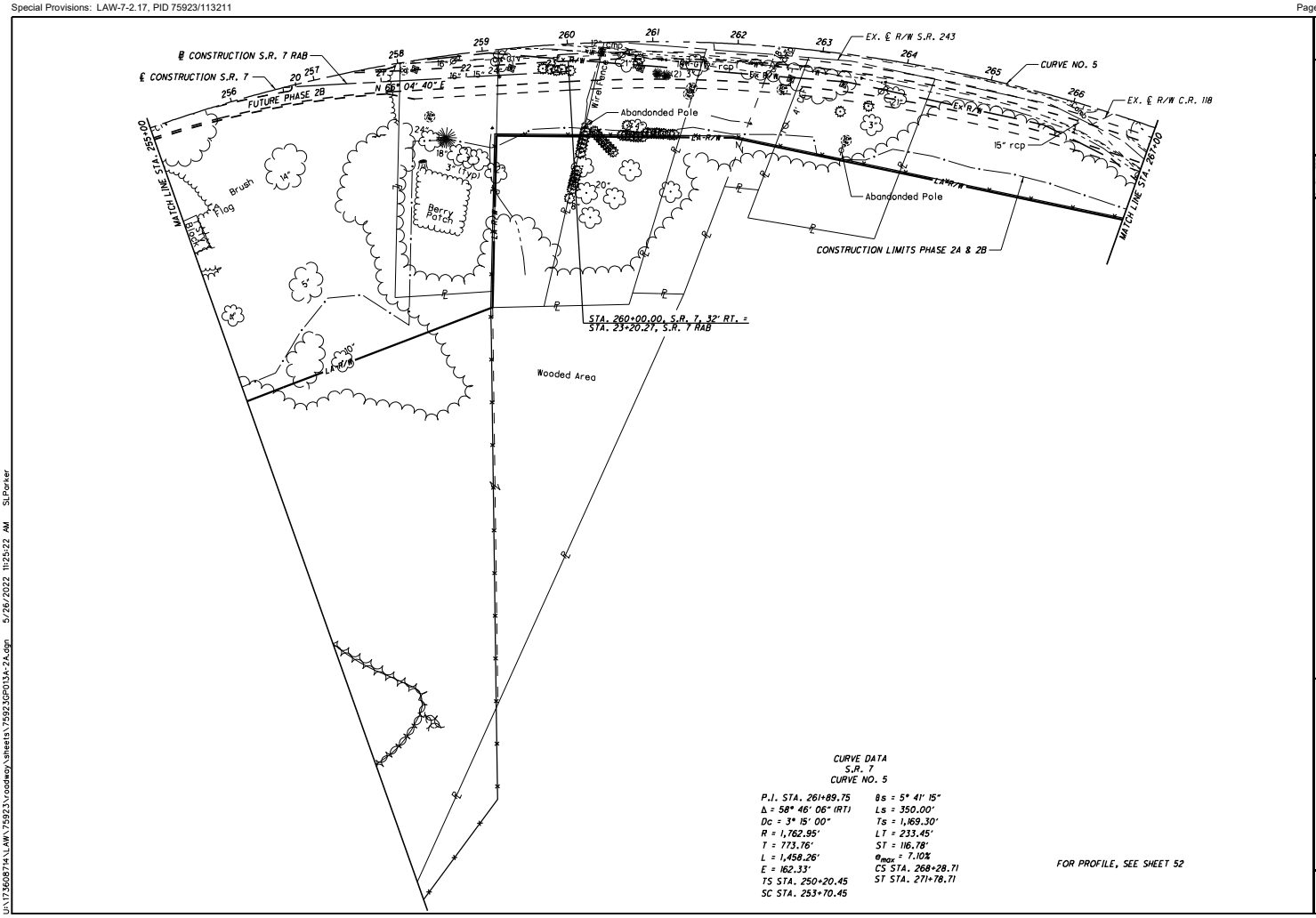

HORIZONTAL SCALE IN FEET
0 50 100
CALCULATED SLP
CHECKED ALB

PLAN - S.R. 7
STA. 255+00 TO STA. 267+00 (SOUTH)

LAW-7-2.17

51
297

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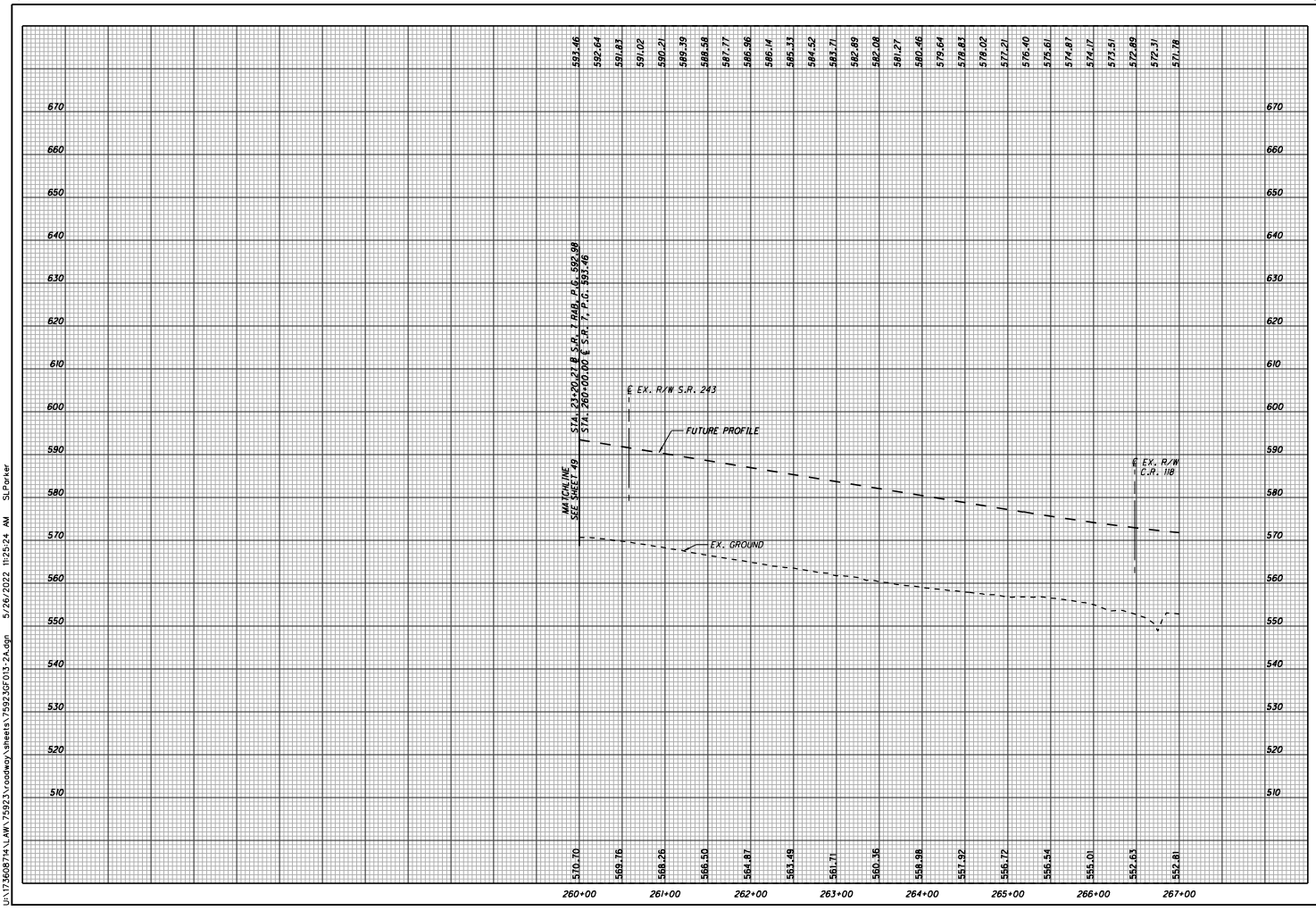
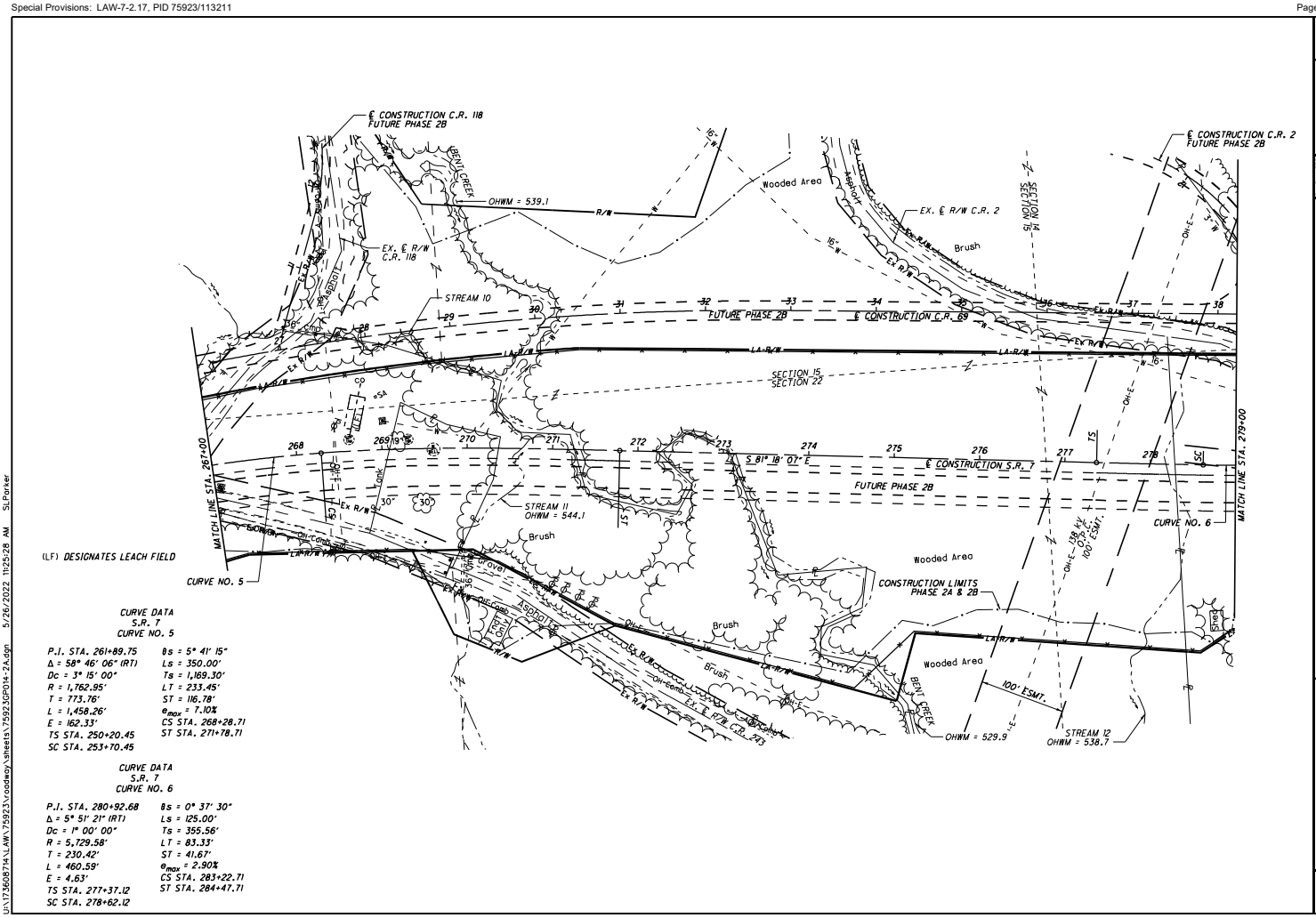


PROFILE - S.R. 7
STA. 260+00 TO 267+00

CALCULATED ALB
CHECKED TCM

LAW-7-2.17

U:\173608714\LAW\75923\roadway\sheets\75923GF013-2A.dgn 5/26/2022 11:25:24 AM SLParker



(LF) DESIGNATES LEACH FIELD

CURVE DATA
S.R. 7
CURVE NO. 5

P.I. STA. 261+89.75	Bs = 5° 41' 15"
Δ = 58° 46' 06" (RT)	Ls = 350.00'
Dc = 3° 15' 00"	Ts = 1,169.30'
R = 1,762.95'	LT = 233.45'
T = 773.76'	ST = 116.78'
L = 1,458.26'	e_{max} = 7.10%
E = 162.33'	CS STA. 268+28.71
TS STA. 250+20.45	ST STA. 271+78.71
SC STA. 253+70.45	

CURVE DATA
S.R. 7
CURVE NO. 6

P.I. STA. 280+92.68	Bs = 0° 37' 30"
Δ = 5° 51' 21" (RT)	Ls = 125.00'
Dc = 1° 00' 00"	Ts = 355.56'
R = 5,729.58'	LT = 83.33'
T = 230.42'	ST = 41.67'
L = 460.59'	e_{max} = 2.90%
E = 4.63'	CS STA. 283+22.71
TS STA. 277+37.12	ST STA. 284+47.71
SC STA. 278+62.12	

HORIZONTAL SCALE IN FEET
0 50 100

CALCULATED SLP
CHECKED ALB

PLAN - S.R. 7
STA. 267+00 TO STA. 279+00

LAW-7-2.17

53
297

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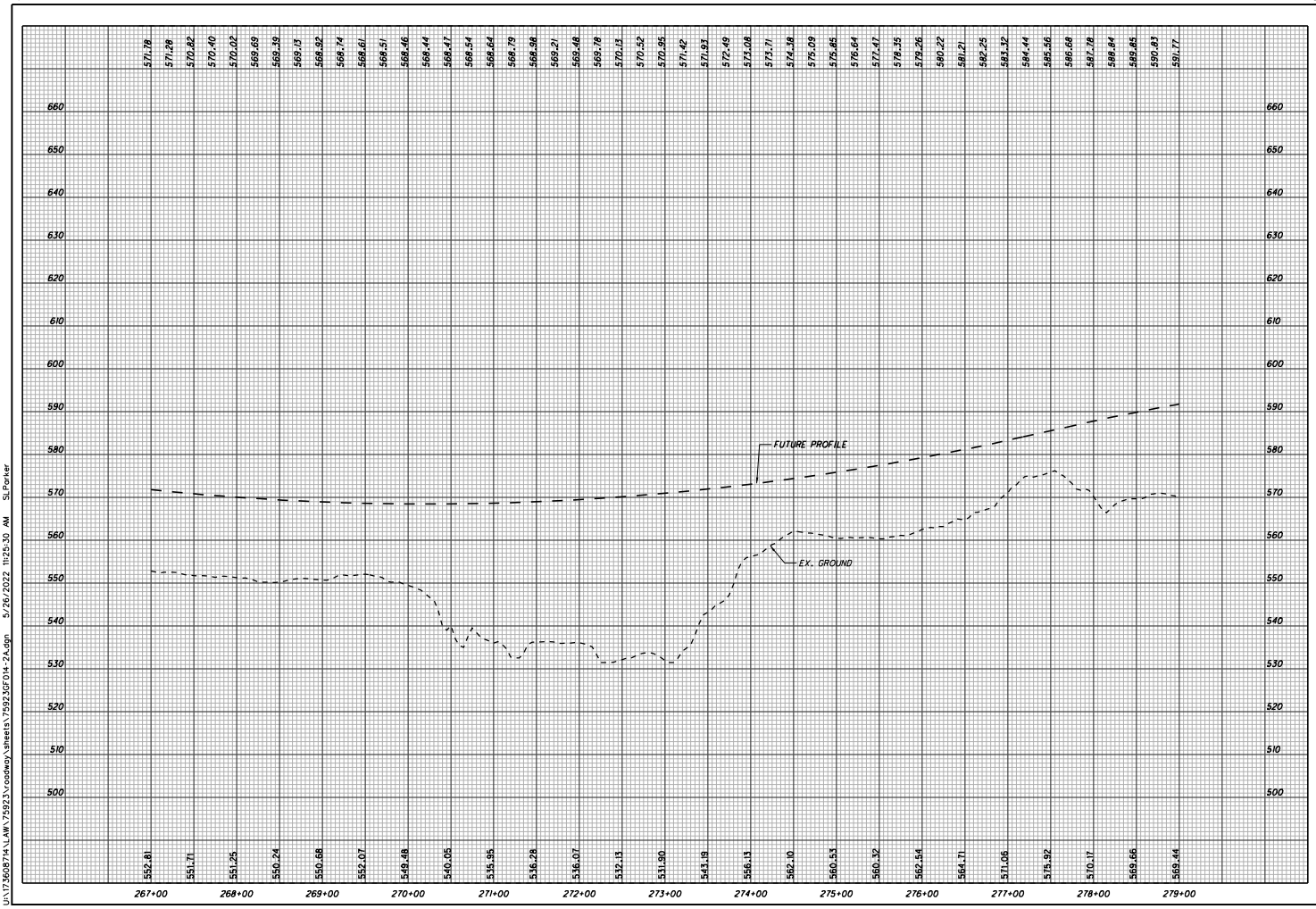

CALCULATED ALB
CHECKED TCM

PROFILE - S.R. 7
STA. 267+00 TO STA. 279+00

LAW-7-2.17

5A
297

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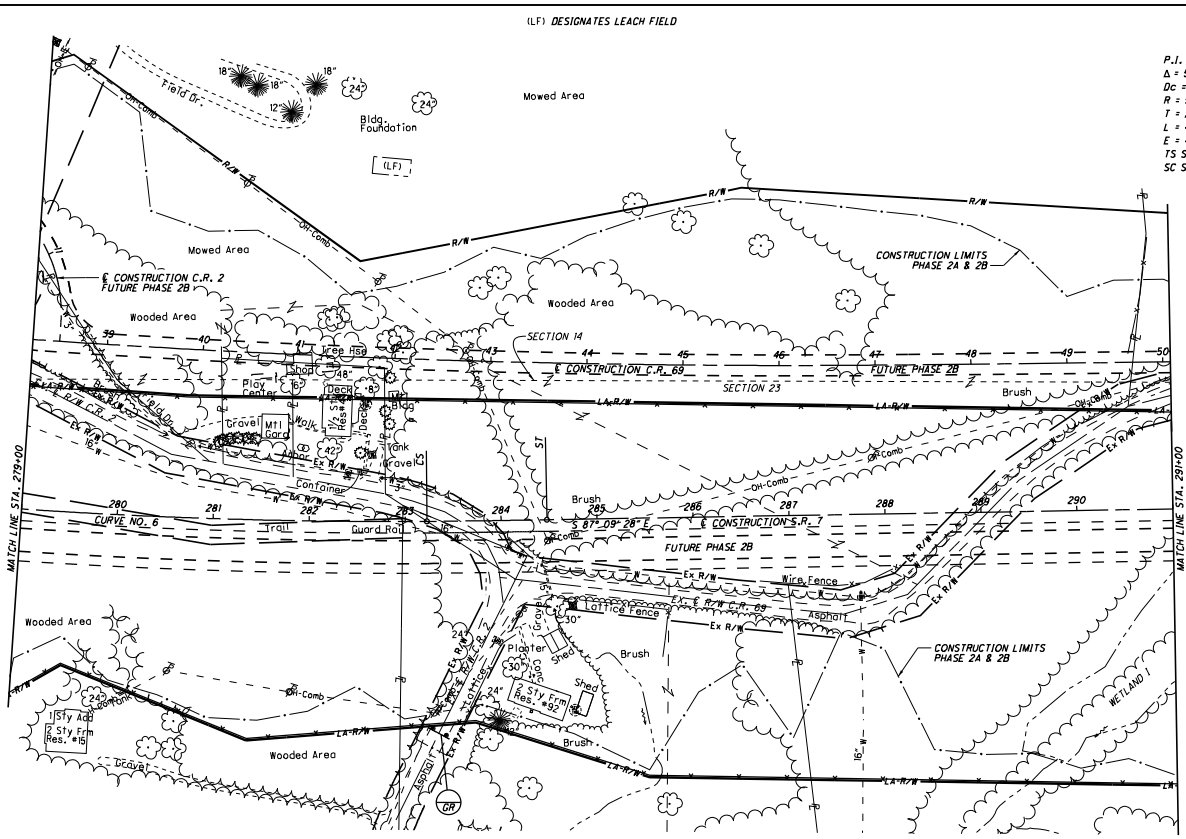


CALCULATED SLP
CHECKED ALB

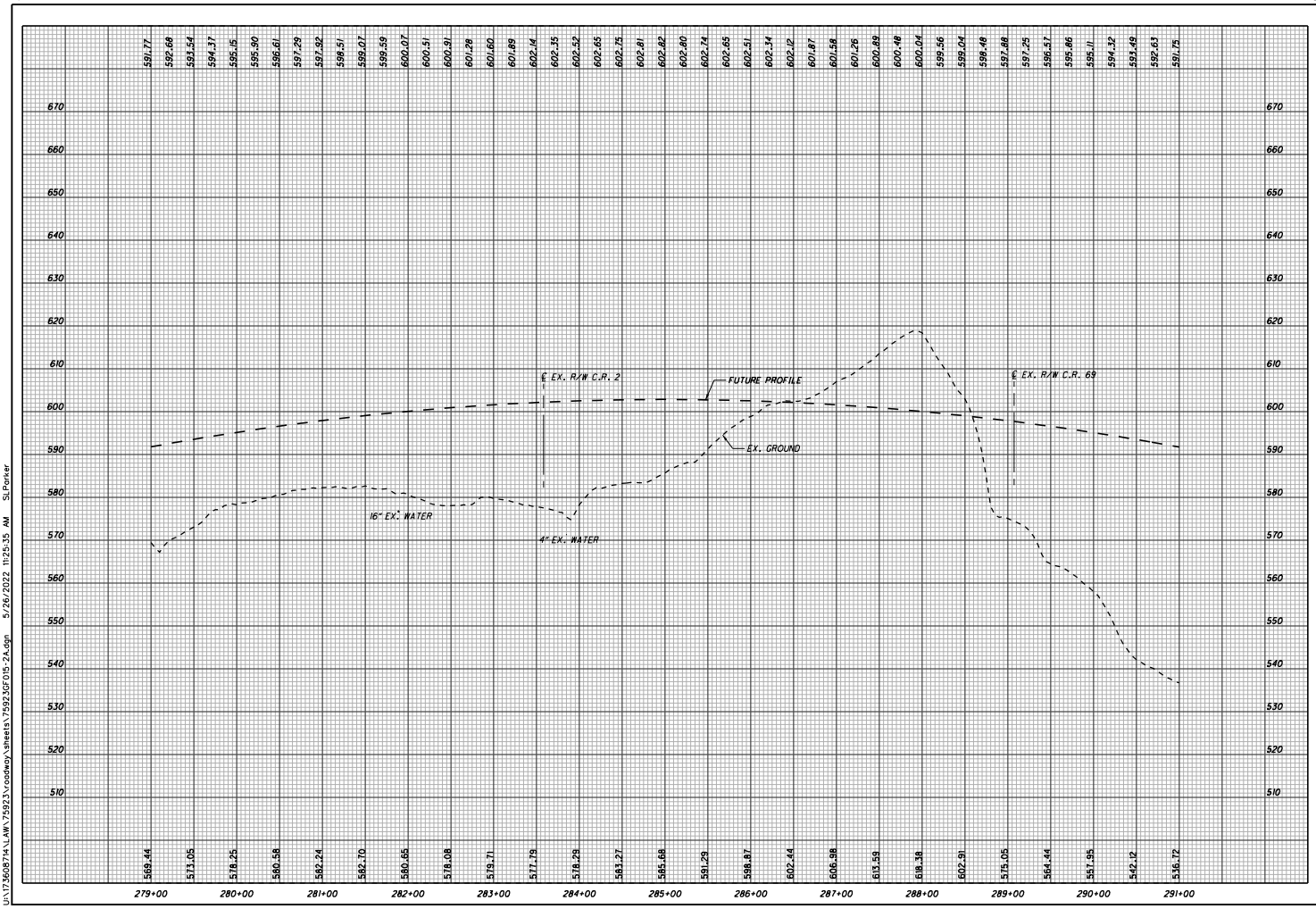
HORIZONTAL SCALE IN FEET
0 50 100

PLAN - S.R. 7
STA. 279+00 TO STA. 291+00

LAW-7-2.17

55
297

U:\173608714\LAW\75923\roadway\sheets\75923GP015-2A.dgn 5/26/2022 11:25:33 AM SLParker



PROFILE - S.R. 7
STA. 279+00 TO STA. 291+00

CALCULATED ALB
CHECKED TCM

LAW-7-2.17

56
297

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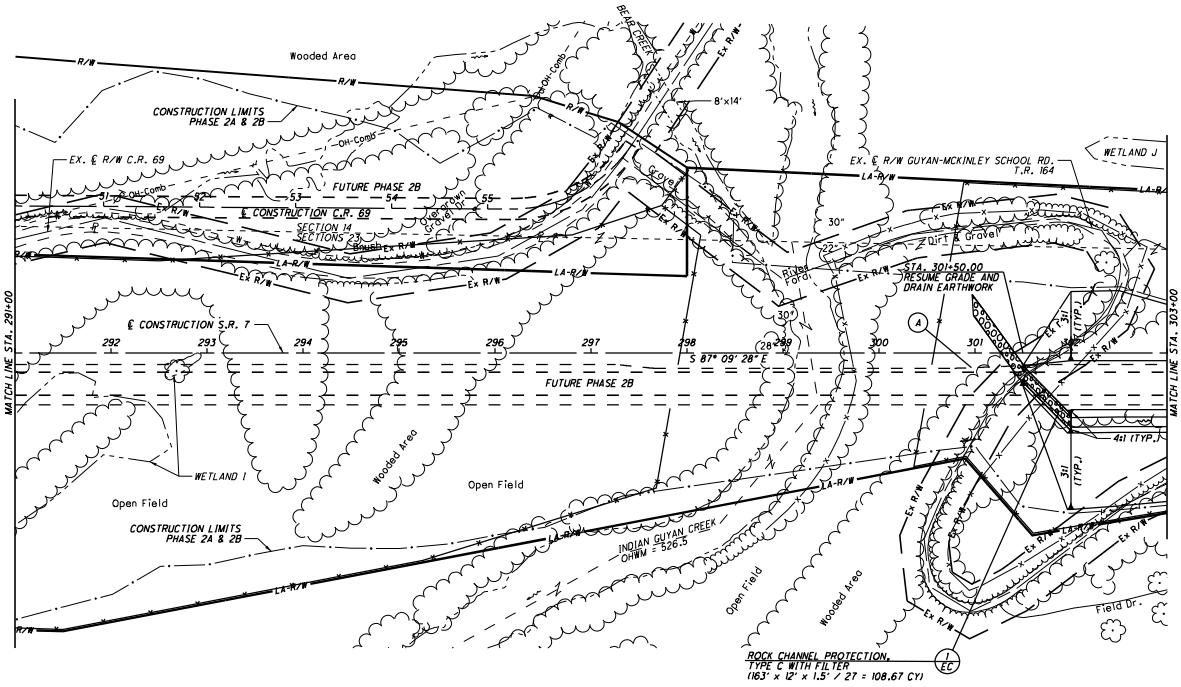

TAPERS PROVIDED FOR INFORMATION ONLY

(A) - STA. 300+78.70
BEGIN SHOULDER TAPER, 16' RT.

STA. 301+78.70
END SHOULDER TAPER, 12' RT.

HORIZONTAL SCALE IN FEET
0 50 100

CALCULATED SLP
CHECKED ALB

PLAN - S.R. 7
STA. 291+00 TO 303+00

LAW-7-2.17

57
297

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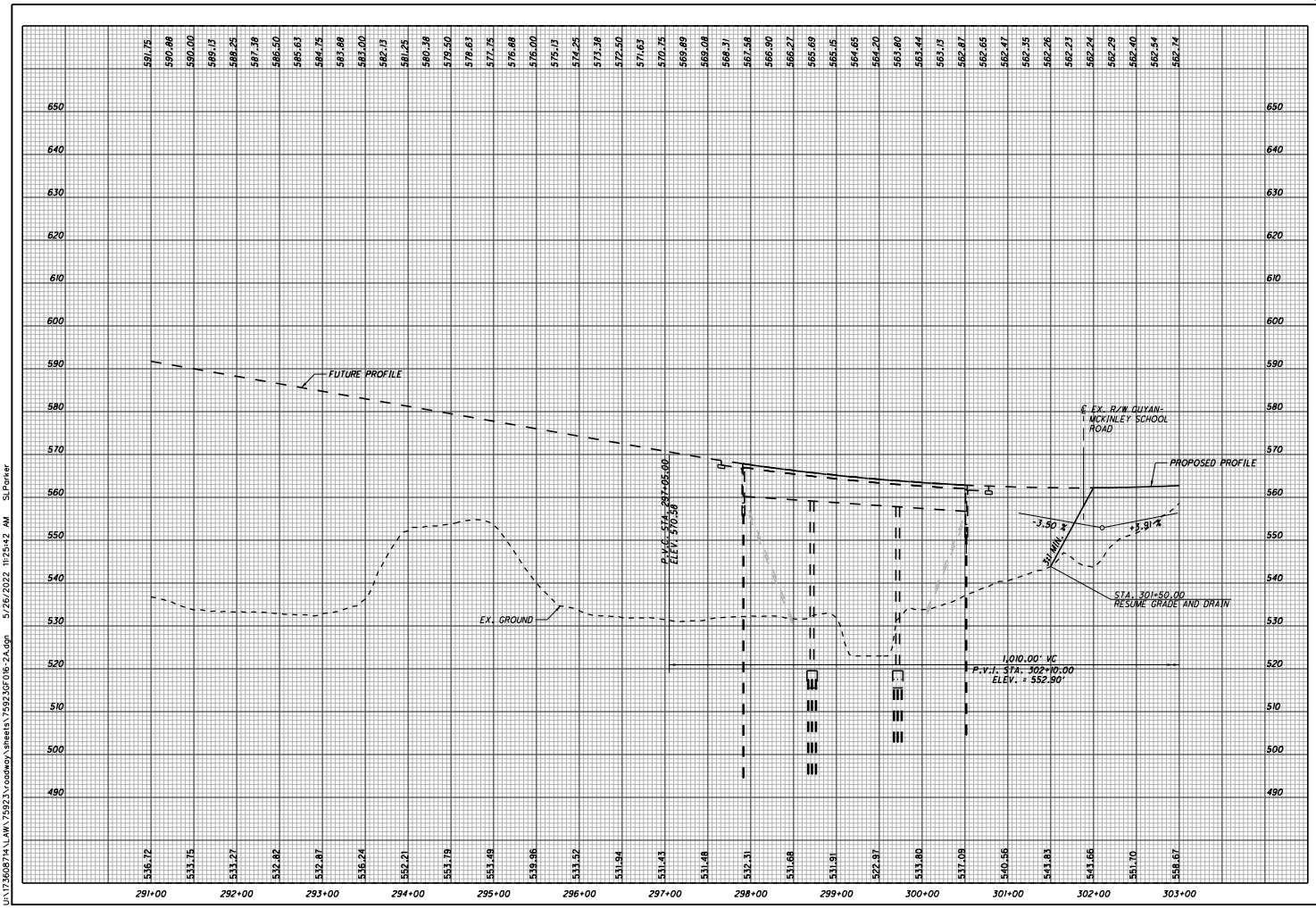

PROFILE - S.R. 7
STA. 291+00 TO STA. 303+00

CALCULATED ALB
CHECKED TCM

LAW-7-2.17

58
297

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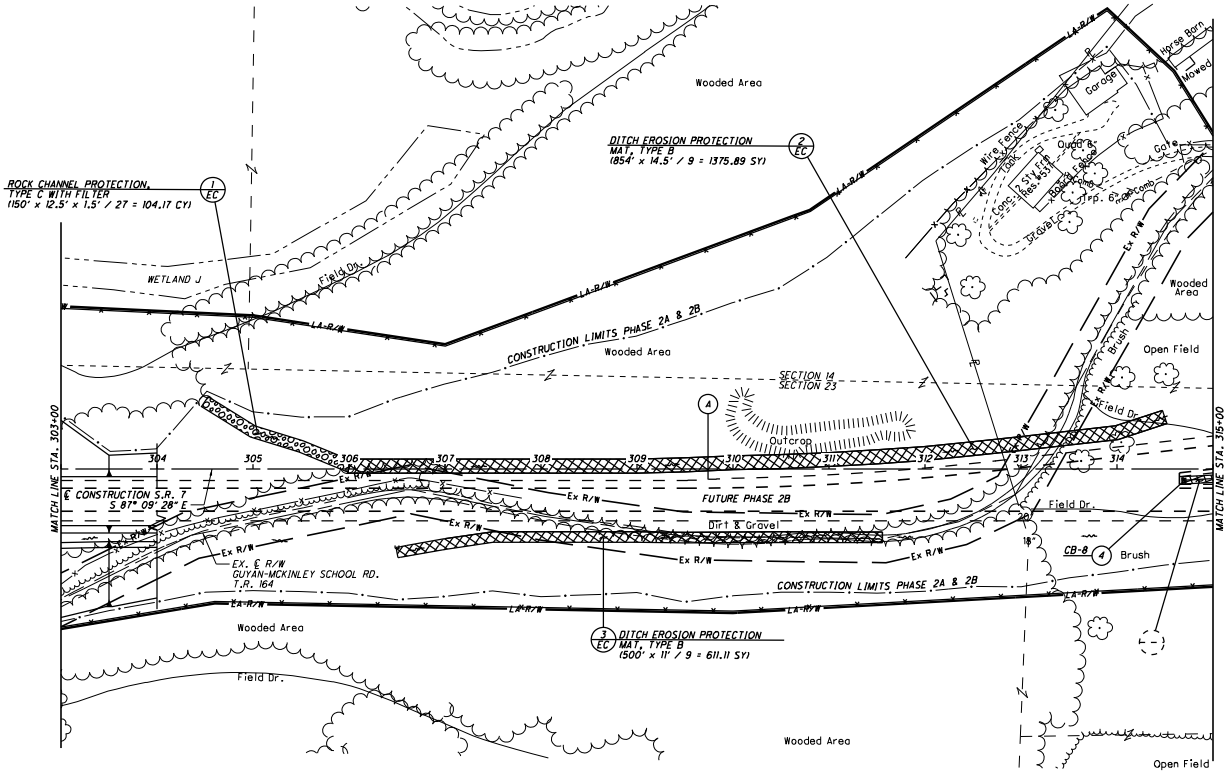


CURVE DATA
S.R. 7 LANE TRANSITION
TRANSITION CURVE NO. 1
(FOR HORIZONTAL LAYOUT ONLY)

P.I. Sta. 311+12.46, S.R. 7, 20' RT.
Δ = 6° 29' 46" (LT)
Dc = 2° 00' 00"
R = 2,864.79'
T = 162.58'
L = 324.81'
E = 4.61'
e_{max} = NC
PC STA. = 309+49.89, S.R. 7, 20' RT.
PT STA. = 312+74.00, S.R. 7, 1.61' RT.

TAPERS PROVIDED FOR INFORMATION ONLY

A - STA. 309+49.89
BEGIN SHOULDER TAPER, 12' RT.
STA. 309+99.71
END SHOULDER TAPER, 9.57' RT.

FOR PROFILE, SEE SHEET 60
FOR STORM SEWER PROFILE, SEE SHEET 274

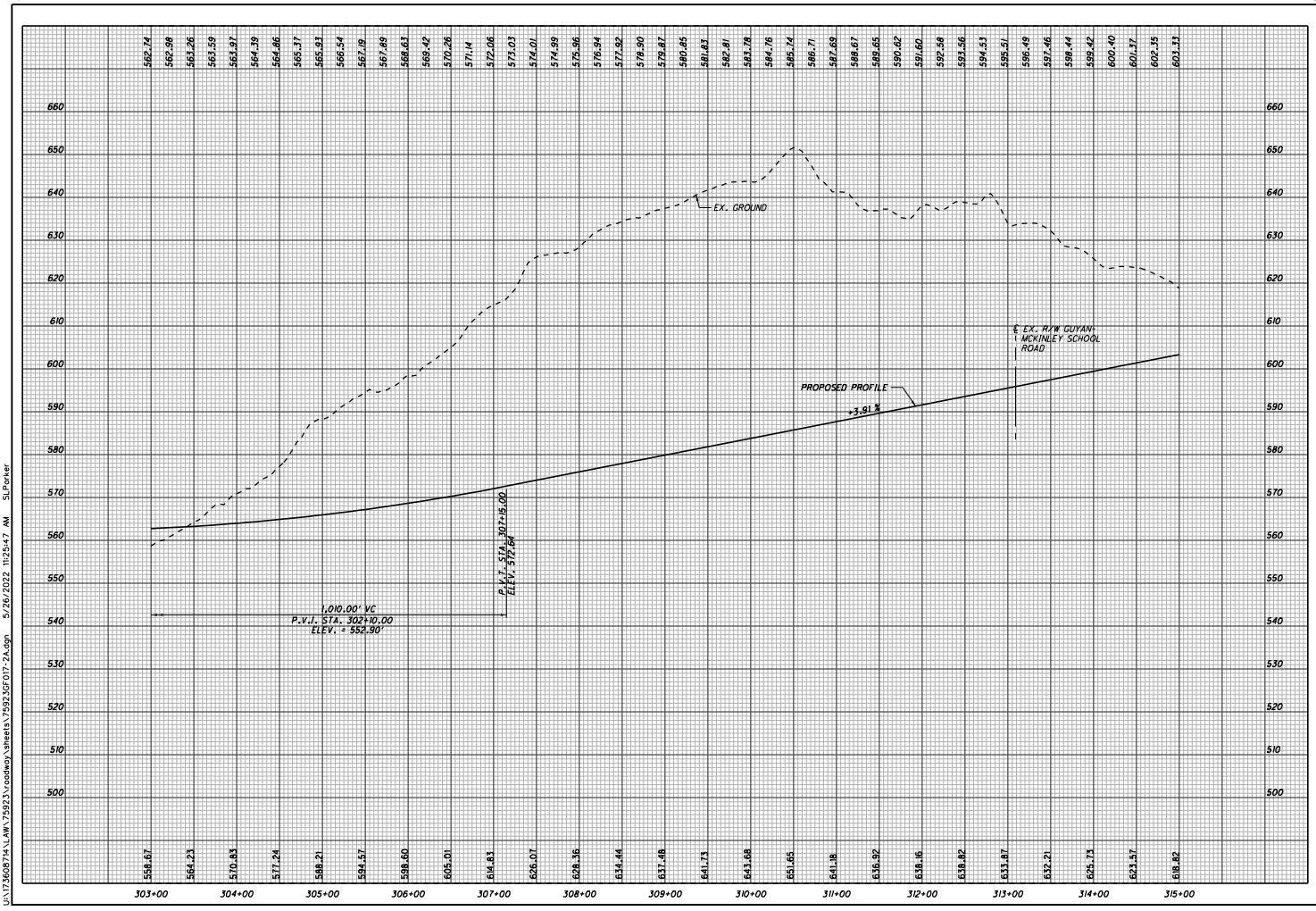
HORIZONTAL SCALE IN FEET
0 50 100
CALCULATED SLP
CHECKED ALB

PLAN - S.R. 7
STA. 303+00 TO STA. 315+00

LAW-7-2.17

59
297

U:\173608714\LAW\75923\roadway\sheets\75923GP017-2A.dgn 5/26/2022 11:25:45 AM SLParker



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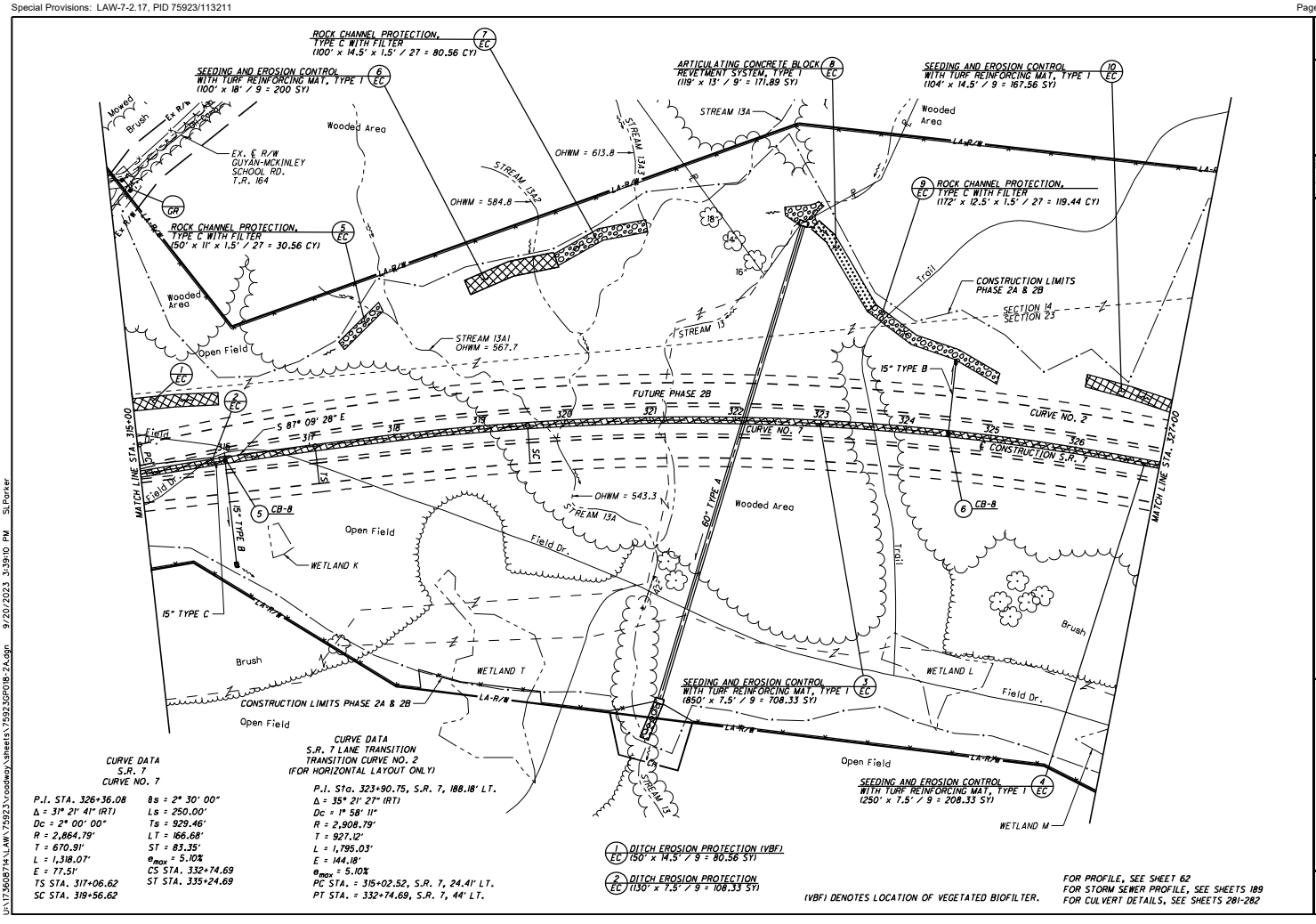
CALCULATED ALB
CHECKED TCM

PROFILE - S.R. 7
STA. 303+00 TO STA. 315+00

LAW-7-2.17



CURVE DATA
S.R. 7
CURVE NO. 7

P.I. STA. 326+36.08	θs = 2° 30' 00"
Δ = 31° 21' 41" (RT)	Ls = 250.00'
Dc = 2° 00' 00"	Ts = 929.46'
R = 2,864.79'	LT = 166.68'
T = 670.91'	ST = 83.35'
L = 1,318.07'	e_{max} = 5.10%
E = 77.51'	CS STA. 332+74.69
TS STA. 317+06.62	ST STA. 335+24.69
SC STA. 319+56.62	

CURVE DATA
S.R. 7 LANE TRANSITION
TRANSITION CURVE NO. 2
(FOR HORIZONTAL LAYOUT ONLY)

P.I. Sta. 323+90.75, S.R. 7, 188.18' LT.
Δ = 35° 21' 27" (RT)
Dc = 1° 58' 11"
R = 2,908.79'
T = 927.12'
L = 1,795.03'
E = 144.18'
e_{max} = 5.10%
PC STA. = 315+02.52, S.R. 7, 24.41' LT.
PT STA. = 332+74.69, S.R. 7, 44' LT.

HORIZONTAL SCALE IN FEET
0 50 100
CALCULATED SLP
CHECKED ALB

PLAN - S.R. 7
STA. 315+00 TO STA. 327+00

LAW-7-2.17

61
297

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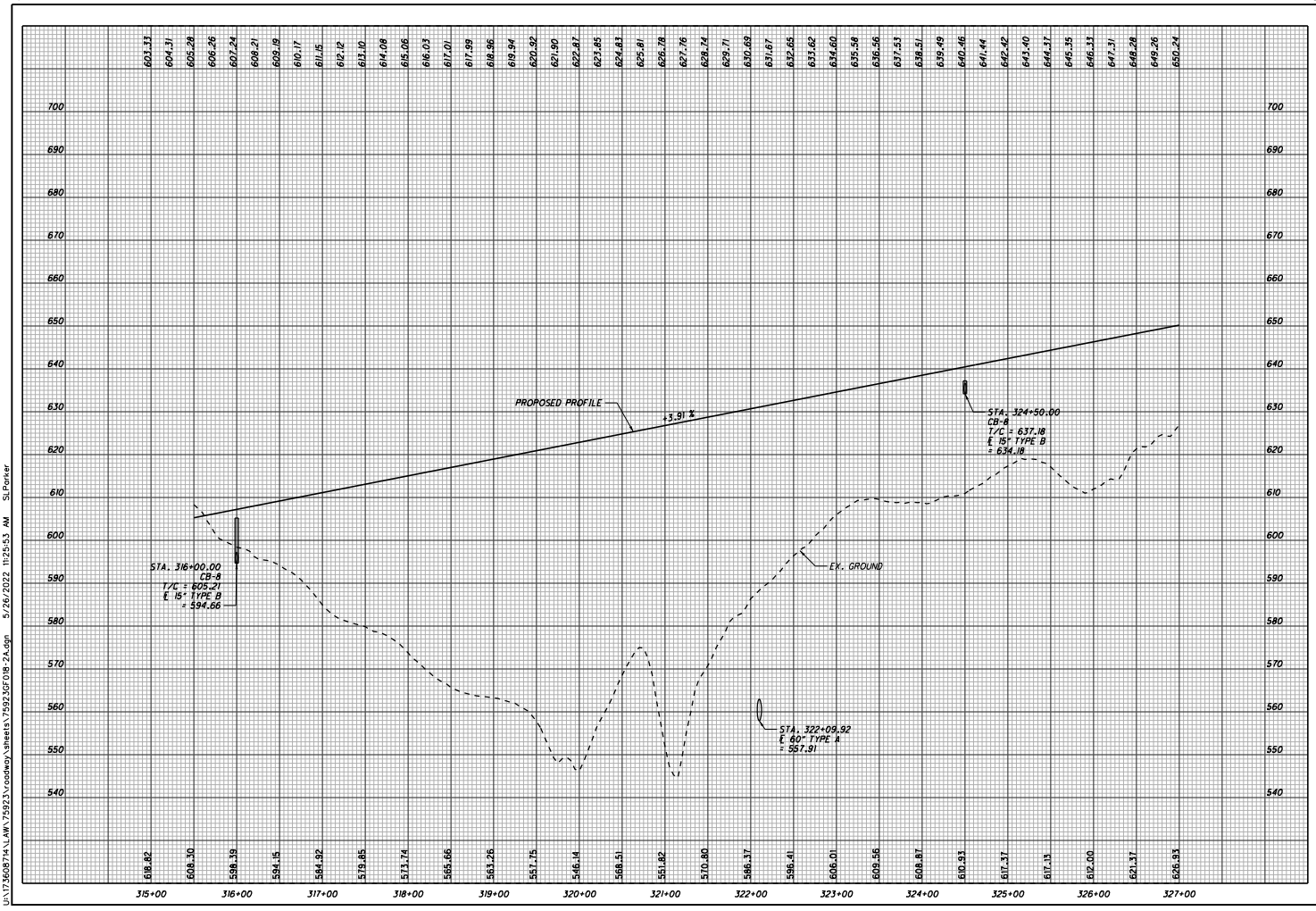

PROFILE - S.R. 7

STA. 315+00 TO STA. 327+00

CALCULATED ALB

CHECKED TCM

LAW-7-2.17

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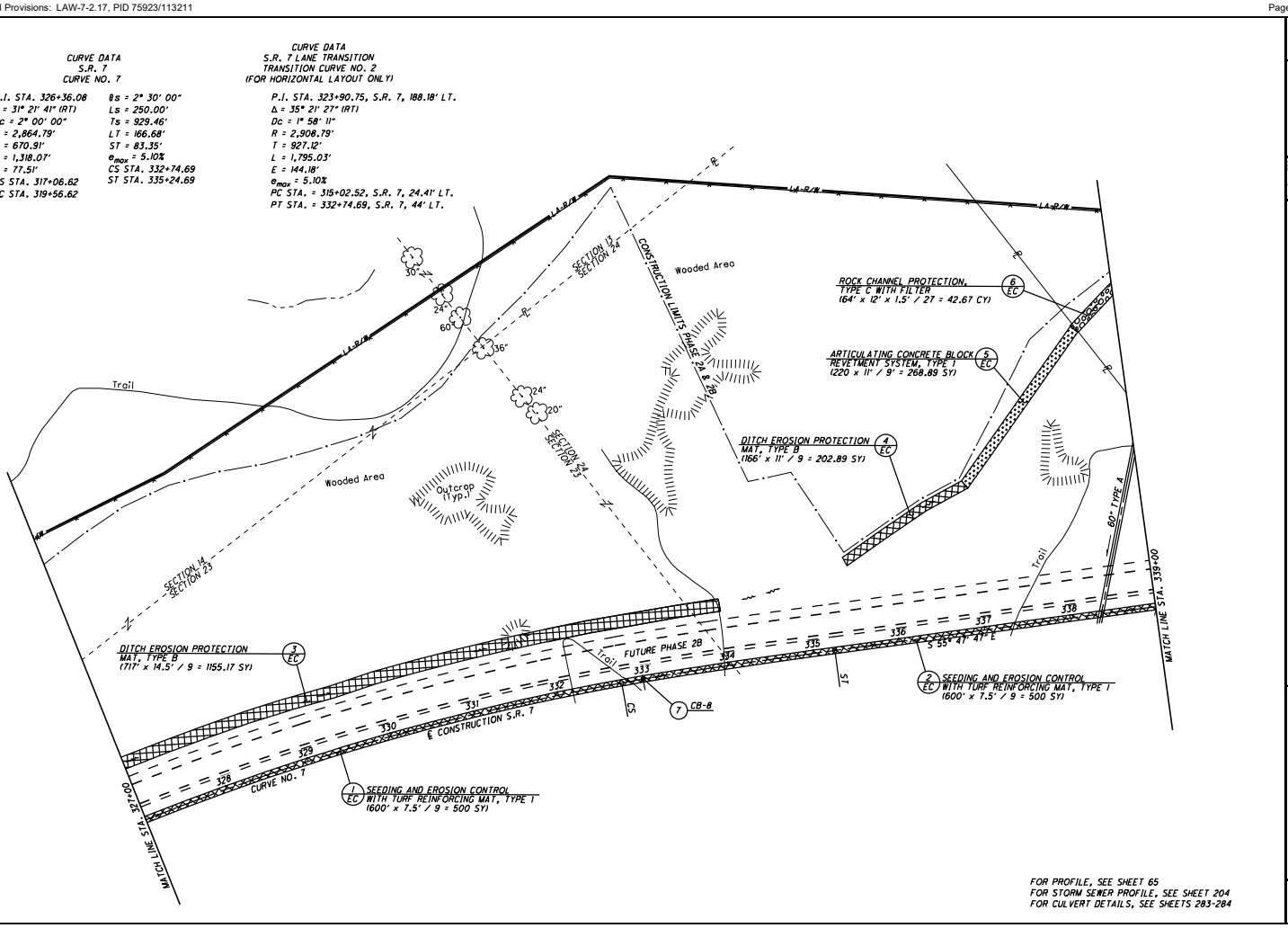

HORIZONTAL SCALE IN FEET
0 50 100
CALCULATED SLP
CHECKED ALB

PLAN - S.R. 7
STA. 327+00 TO STA. 339+00 (NORTH)

LAW-7-2.17

63
297

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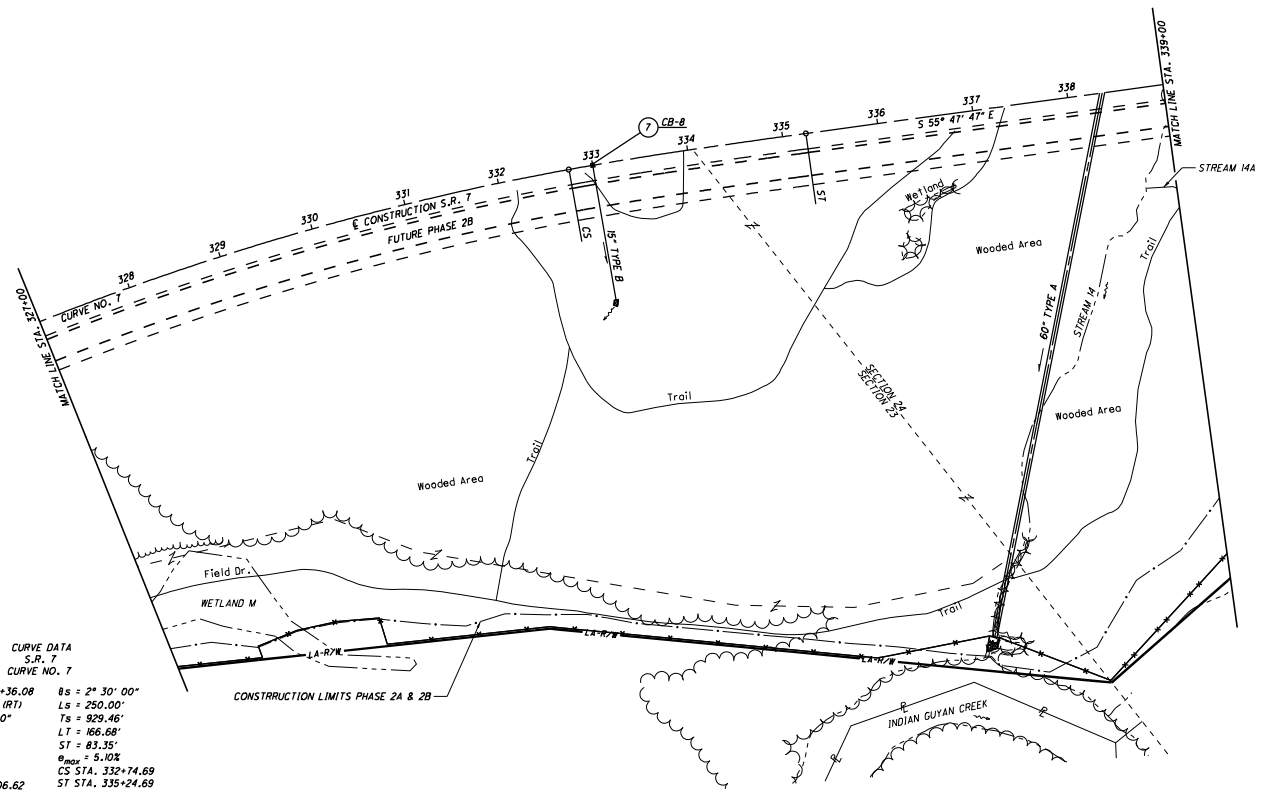


CURVE DATA
S.R. 7
CURVE NO. 7

P.I. STA. 326+36.08	θs = 2° 30' 00"
Δ = 31° 21' 41" (RT)	Ls = 250.00'
Dc = 2° 00' 00"	Ts = 929.46'
R = 2,864.79'	LT = 166.68'
T = 670.91'	ST = 83.35'
L = 1,318.07'	e_{max} = 5.10%
E = 77.51'	CS STA. 332+74.69
TS STA. 317+06.62	ST STA. 335+24.69
SC STA. 319+56.62	

FOR PROFILE, SEE SHEET 65
FOR STORM SEWER PROFILE, SEE SHEET 204
FOR CULVERT DETAILS, SEE SHEETS 283-284

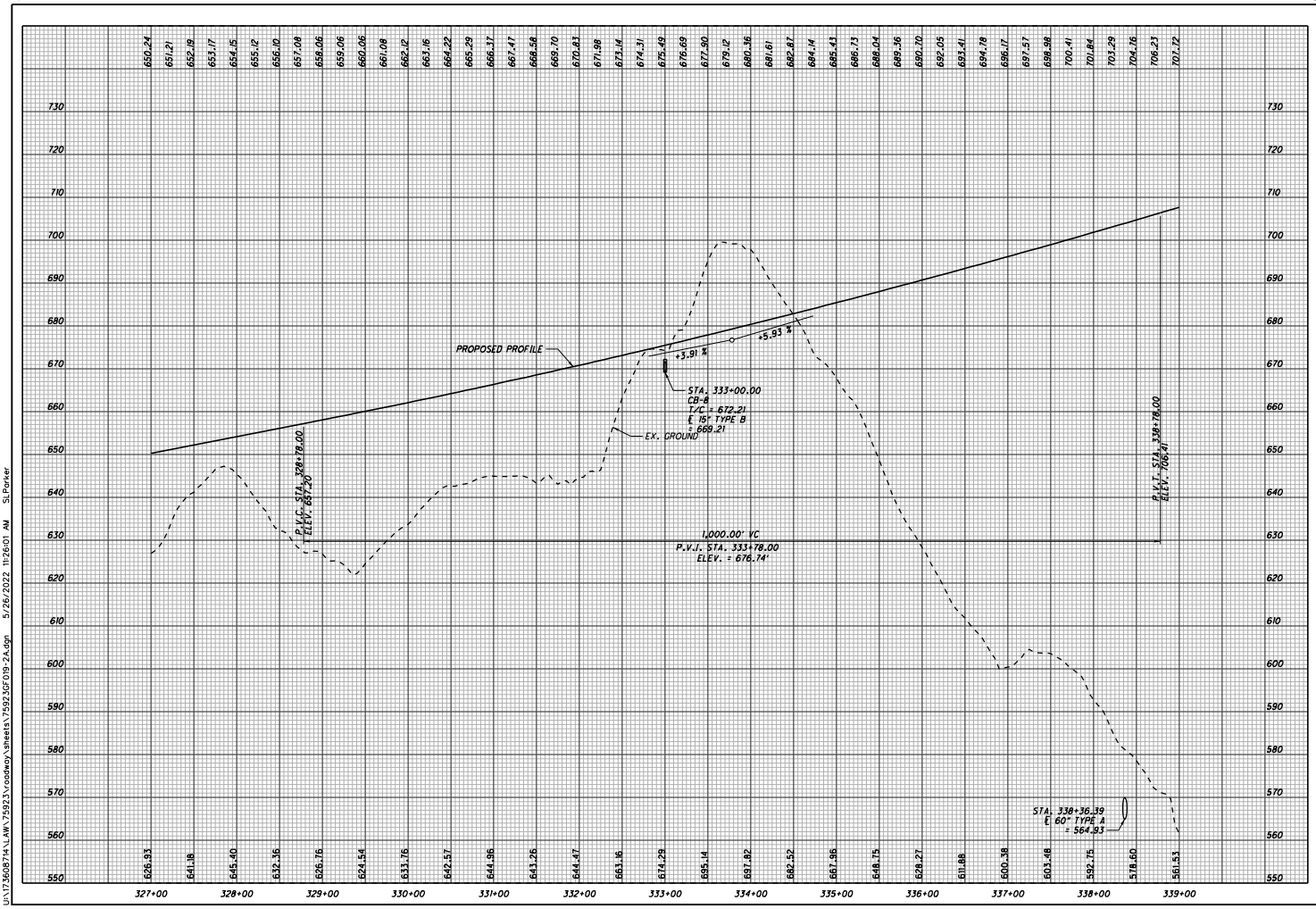
HORIZONTAL SCALE IN FEET
0 50 100
CALCULATED SLP
CHECKED ALB

PLAN - S.R. 7
STA. 327+00 TO STA. 339+00 (SOUTH)

LAW-7-2.17

64
297

U:\17\3608714\LAW\75923\roadway\sheets\75923GP019A-2A.dgn 9/20/2023 3:15:15 PM SLParker



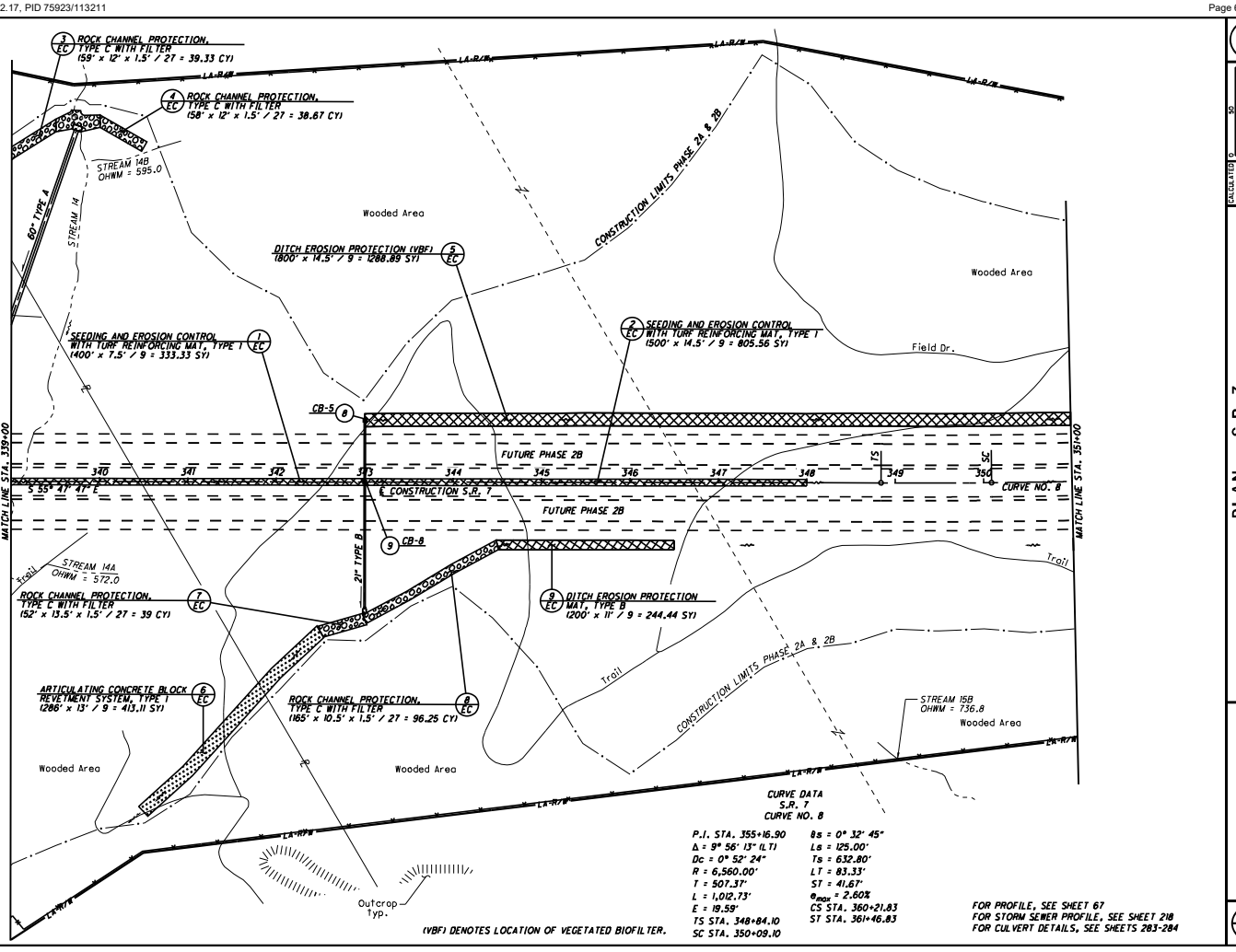
CALCULATED ALB
CHECKED TCM

PROFILE - S.R. 7
STA. 327+00 TO STA. 339+00

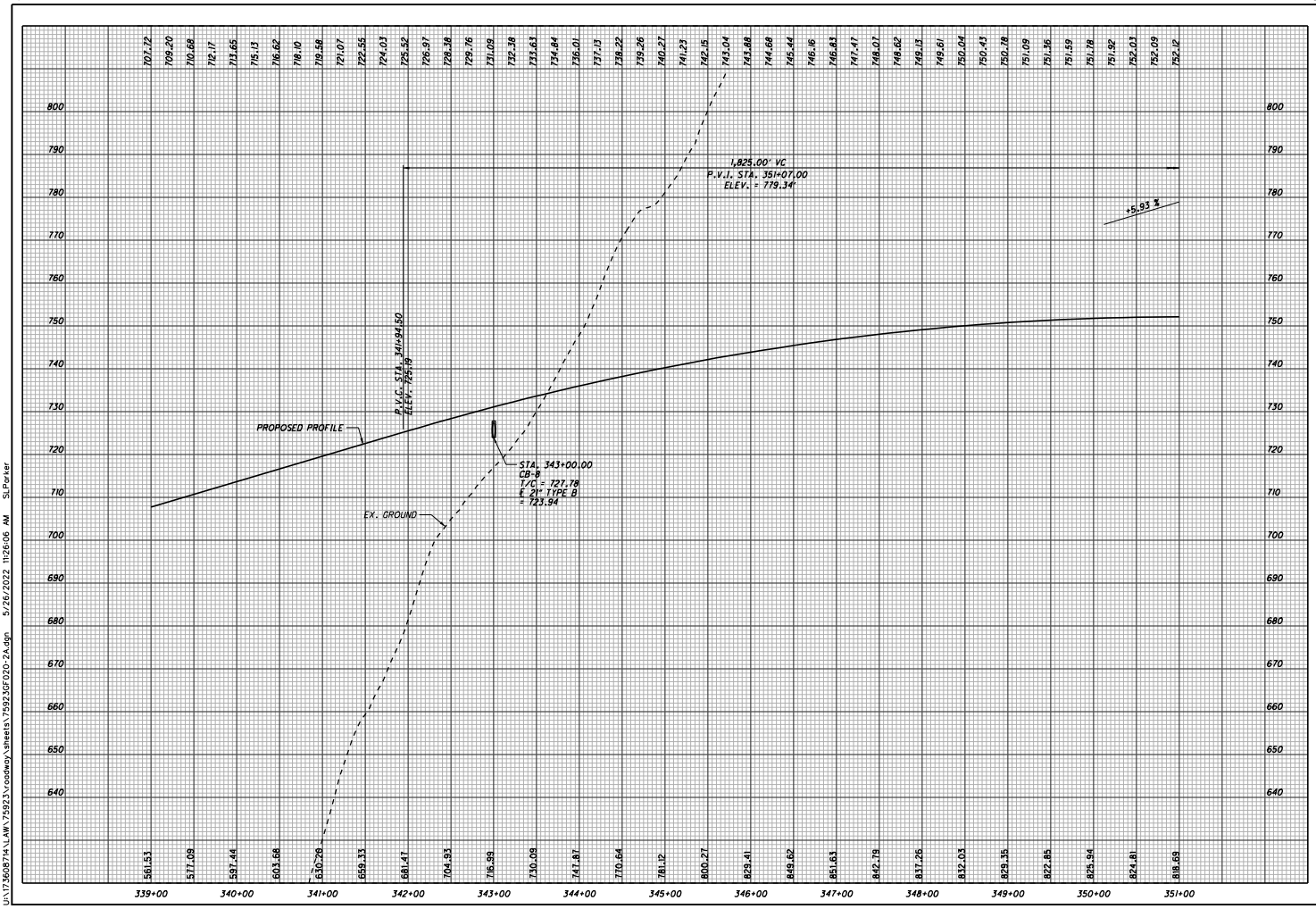
LAW-7-2.17

65
297

U:\173608714\LAW\75923\roadway\sheets\75923DF019-2A.dgn 5/26/2022 11:26:01 AM SLParker



U:\173608714\LAW\75923\roadway\sheets\75923GP020-2A.dgn Sheet 9/19/2023 4:09:49 PM aboyce



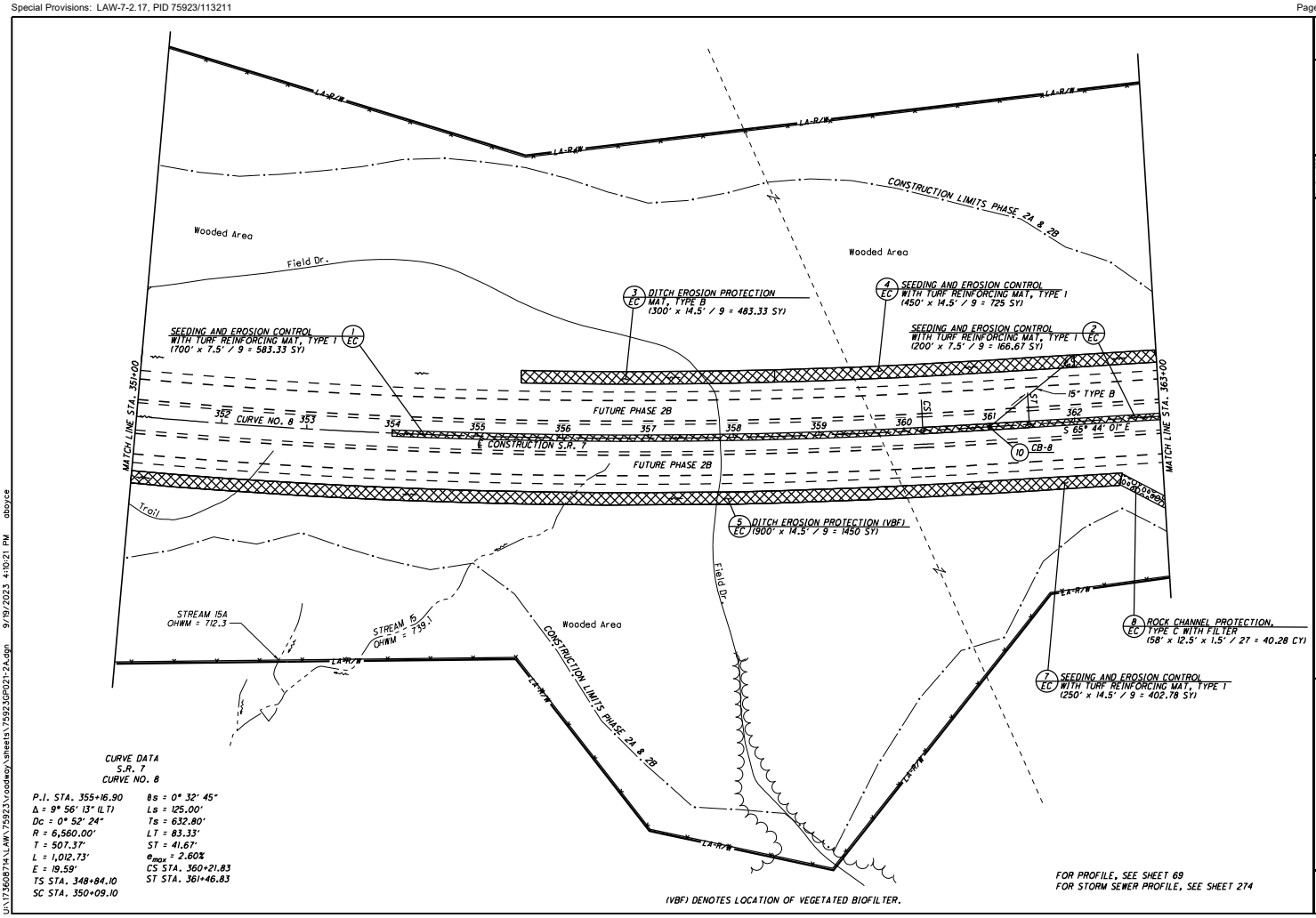
PROFILE - S.R. 7
STA. 339+00 STA. 351+00

CALCULATED ALB
CHECKED TCM

LAW-7-2.17

67
297

U:\173608714\LAW\75923\roadway\sheets\75923GF020-2A.dgn 5/26/2022 11:26:06 AM SLParker



CURVE DATA
S.R. 7
CURVE NO. 8

P.I. STA. 355+16.90	θs = 0° 32' 45"
Δ = 9° 56' 13" (LT)	Ls = 125.00'
Dc = 0° 52' 24"	Ts = 632.80'
R = 6,560.00'	LT = 83.33'
T = 507.37'	ST = 41.67'
L = 1,012.73'	e_{max} = 2.60%
E = 19.59'	CS STA. 360+21.83
TS STA. 348+84.10	ST STA. 361+46.83
SC STA. 350+09.10	

(VBF) DENOTES LOCATION OF VEGETATED BIOFILTER.

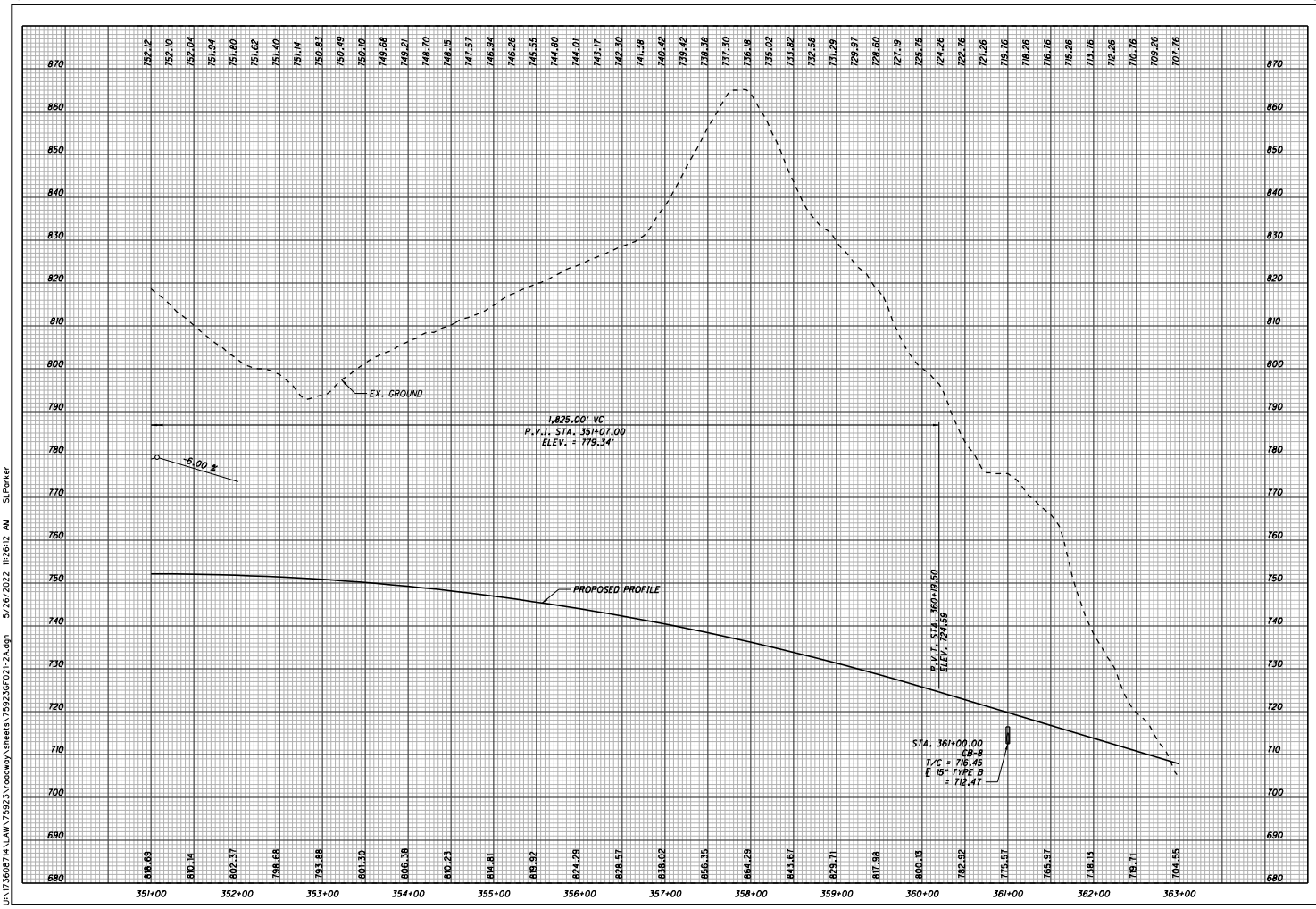
FOR PROFILE, SEE SHEET 69
FOR STORM SEWER PROFILE, SEE SHEET 274

HORIZONTAL SCALE IN FEET
0 50 100
CALCULATED SLP
CHECKED ALB

PLAN - S.R. 7
STA. 351+00 TO STA. 363+00

LAW-7-2.17

U:\173608714\LAW\75923\roadway\sheets\75923GP021-2A.dgn 9/19/2023 4:10:21 PM aboyce



PROFILE - S.R. 7

STA. 351+00 TO STA. 363+00

CALCULATED ALB
CHECKED TCM

LAW-7-2.17

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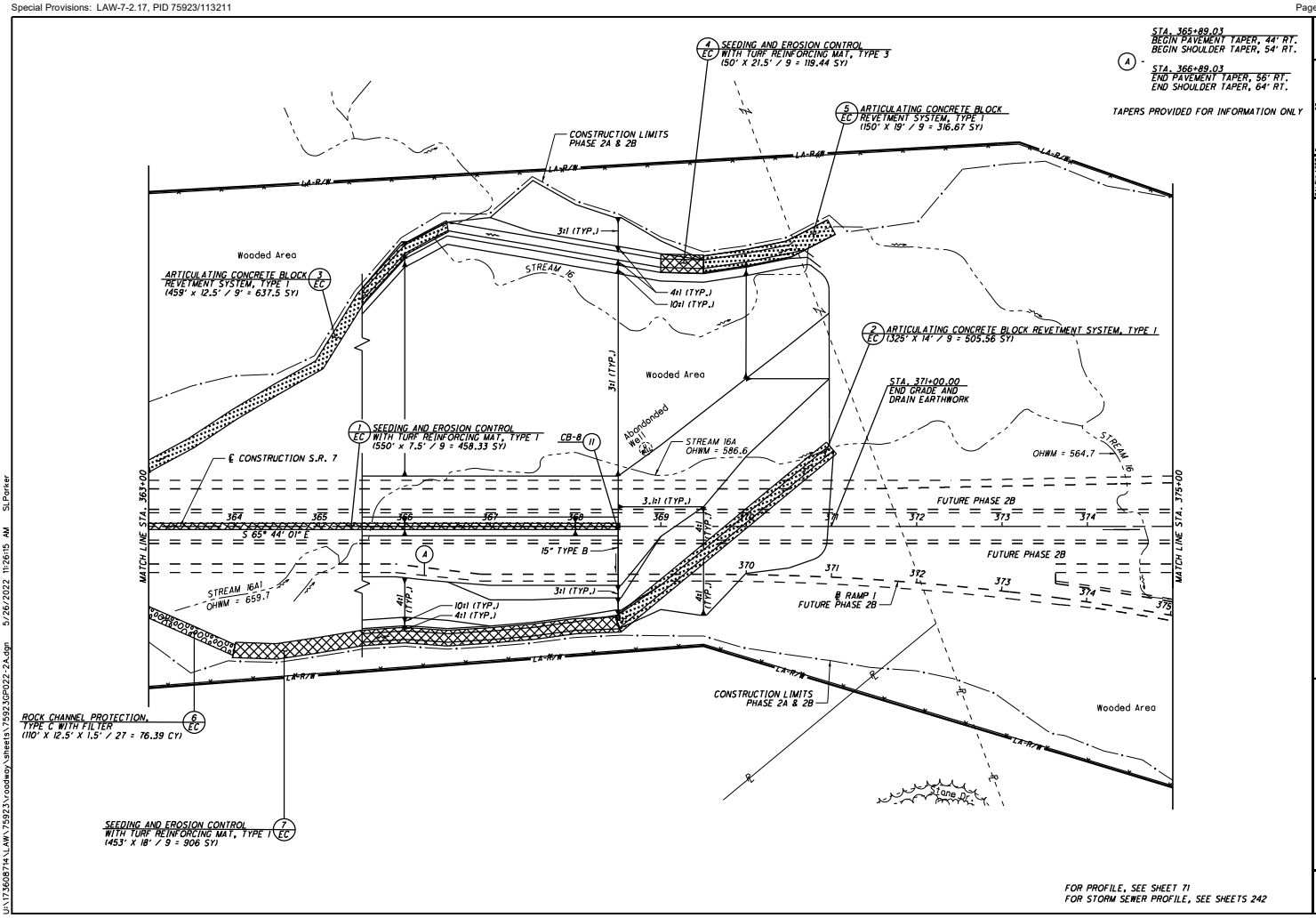

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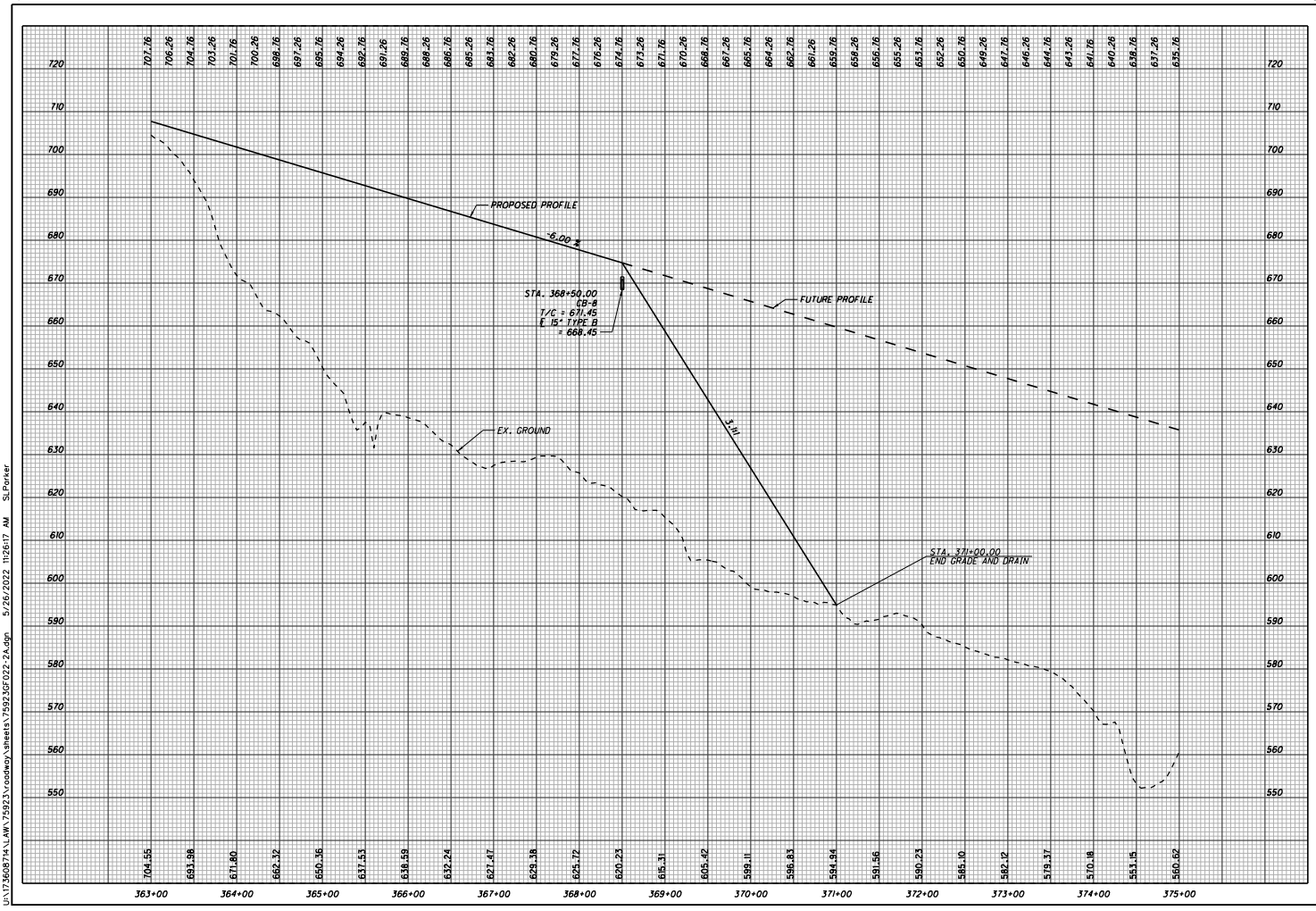
CALCULATED SLP CHECKED ALB

HORIZONTAL SCALE IN FEET 0 50 100

PLAN - S.R. 7
STA. 363+00 TO STA. 375+00

LAW-7-2.17

70 297



PROFILE - S.R. 7
STA. 363+00 TO STA. 375+00

CALCULATED ALB
CHECKED TCM

LAW-7-2.17

7
297

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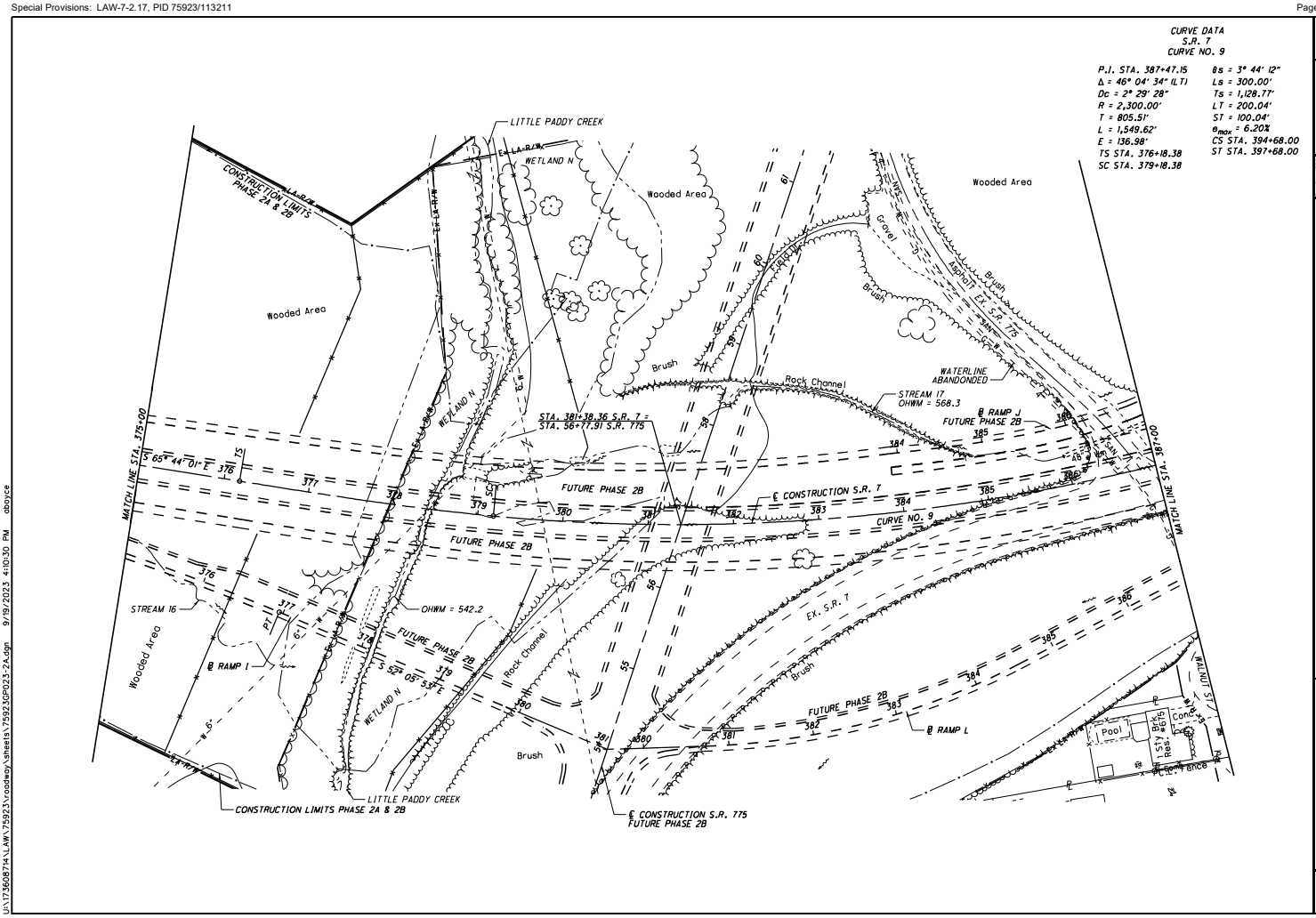
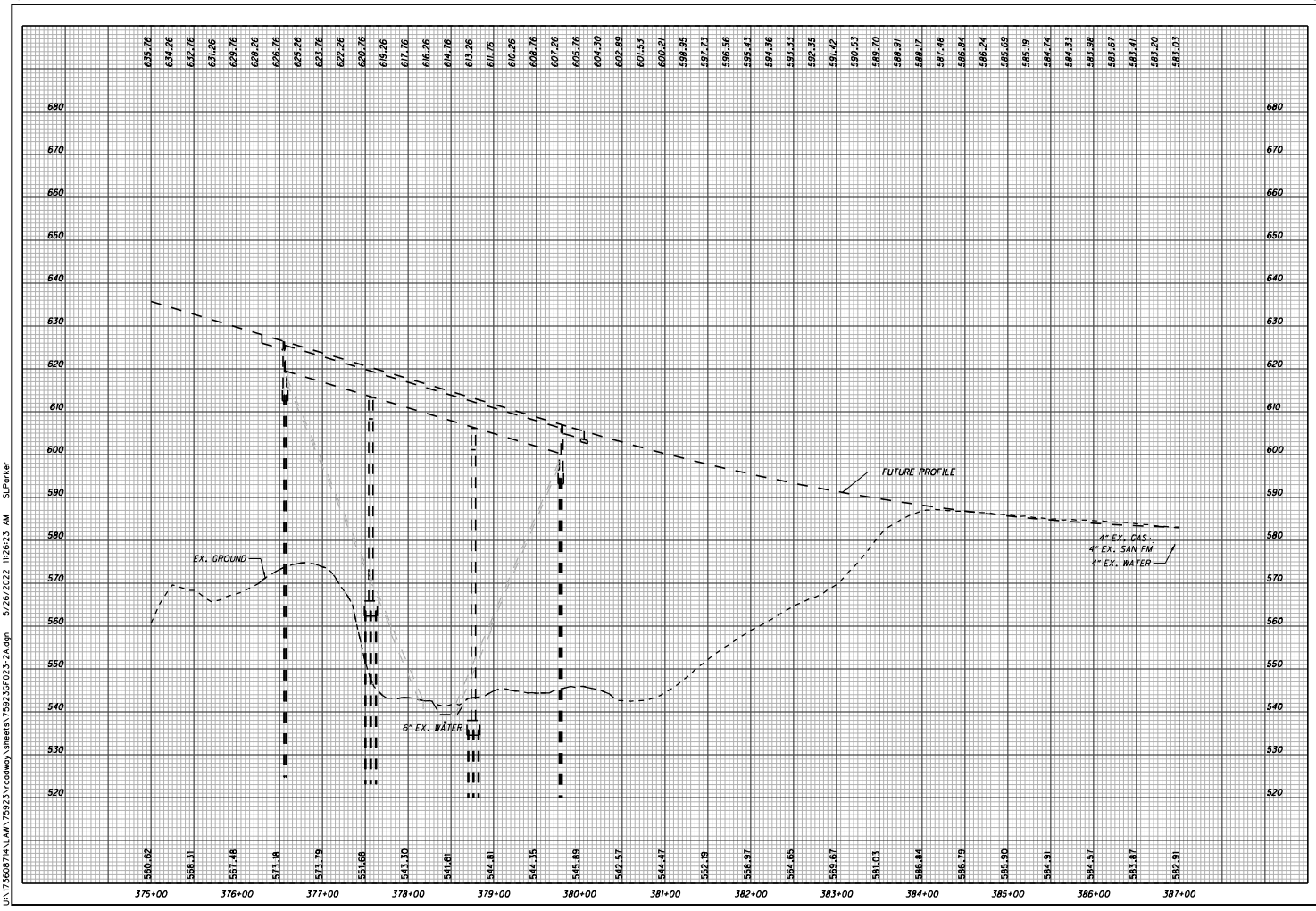


PLAN - S.R. 7
STA. 375+00 TO STA. 387+00

LAW-7-2.17

72
297

U:\173608714\LAW\75923\roadway\sheets\75923GP023-2A.dgn 9/19/2023 4:10:30 PM aboyce



PROFILE - S.R. 7
STA. 375+00 TO STA. 387+00

CALCULATED ALB
CHECKED TCM

LAW-7-2.17

73
297

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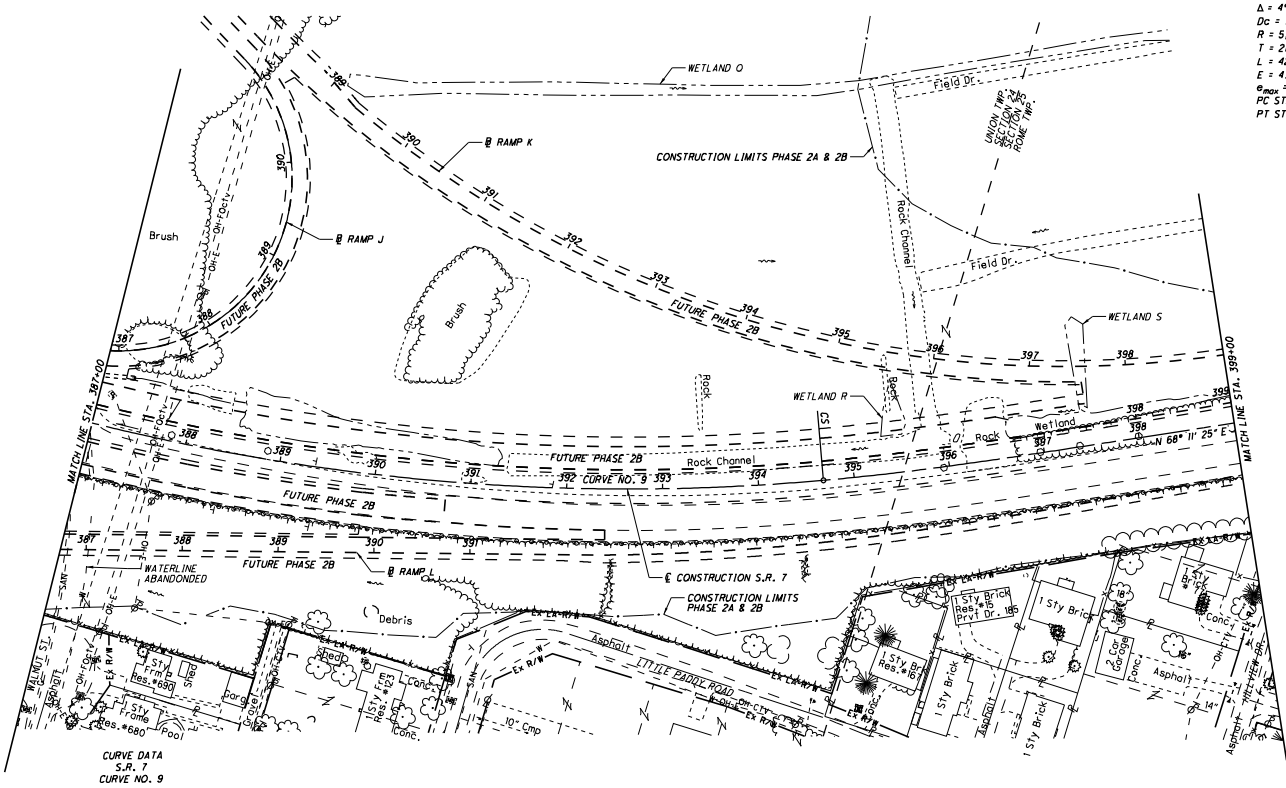

CURVE DATA
S.R. 7 WESTBOUND LANES
℄ CURVE NO. 1

P.I. STA. 399+82.71
Δ = 4° 17' 32" (LT)
Dc = 1° 00' 00"
R = 5,729.58'
T = 214.71'
L = 429.22'
E = 4.02'
e_{max} = 2.90%
PC STA. = 397+68.00
PT STA. = 401+97.22

CURVE DATA
S.R. 7
CURVE NO. 9

P.I. STA. 387+47.15
Δ = 46° 04' 34" (LT)
Dc = 2° 29' 28"
R = 2,300.00'
T = 805.51'
L = 1,549.62'
E = 136.98'
TS STA. 376+18.38
SC STA. 379+18.38

Bs = 3° 44' 12"
Ls = 300.00'
Ts = 1,128.77'
LT = 200.04'
ST = 100.04'
e_{max} = 6.20%
CS STA. 394+68.00
ST STA. 397+68.00

0 25 50 100
HORIZONTAL SCALE IN FEET

CALCULATED SLP
CHECKED ALB

PLAN - S.R. 7
STA. 387+00 STA. 399+00

LAW-7-2.17

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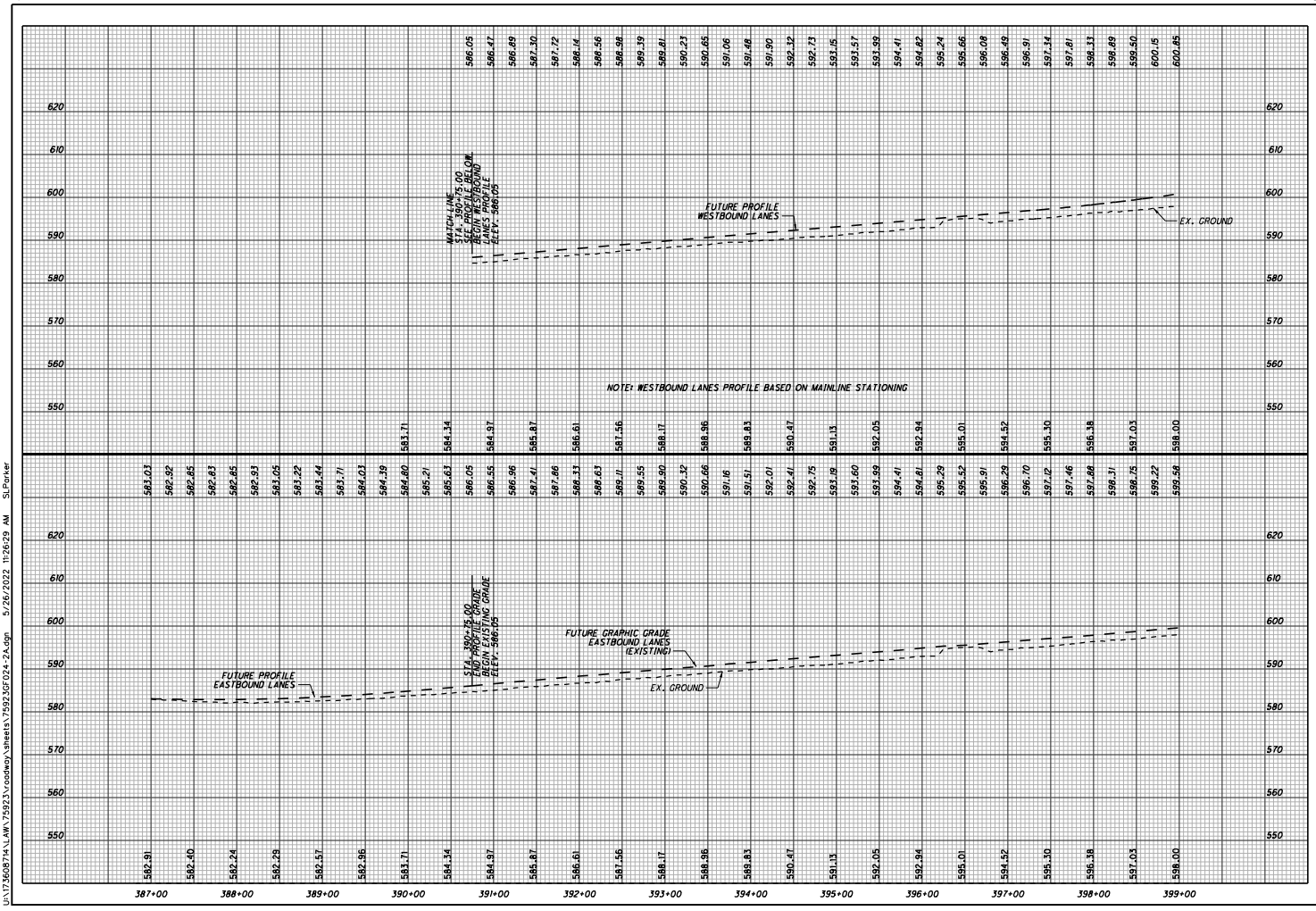


CALCULATED ALB
CHECKED TCM

PROFILE - S.R. 7
STA. 387+00 TO STA. 399+00

LAW-7-2.17

75
297

U:\17360874\LAW\75923\roadway\sheets\75923DF024-2A.dgn 5/26/2022 11:26:29 AM SLParker

CURVE DATA
S.R. 7
CURVE NO. 10

P.I. STA. 403+74.19
Δ = 1° 29' 03" (RT)
Dc = 0° 16' 56"
R = 20,306.35'
T = 263.02'
L = 526.00'
E = 1.70'
e_{max} = NC
PC STA. 401+11.17
PT STA. 406+37.18

CURVE DATA
S.R. 7
CURVE NO. 11

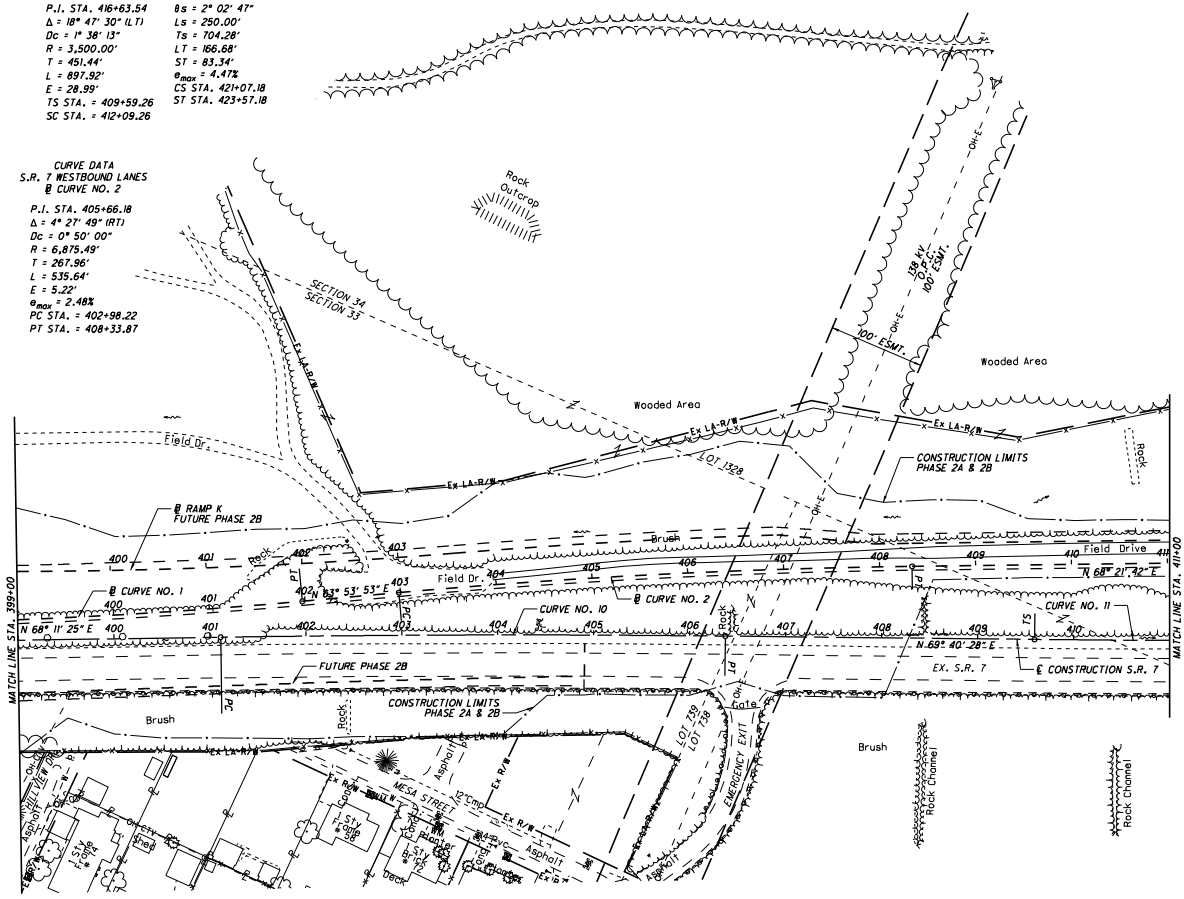
P.I. STA. 416+63.54
Δ = 18° 47' 30" (LT)
Dc = 1° 38' 13"
R = 3,500.00'
T = 451.44'
L = 897.92'
E = 28.99'
TS STA. = 409+59.26
SC STA. = 412+09.26
θs = 2° 02' 47"
Ls = 250.00'
Ts = 704.28'
LT = 166.68'
ST = 83.34'
e_{max} = 4.47%
CS STA. 421+07.18
ST STA. 423+57.18

CURVE DATA
S.R. 7 WESTBOUND LANES
@ CURVE NO. 1

P.I. STA. 399+82.71
Δ = 4° 17' 32" (LT)
Dc = 1° 00' 00"
R = 5,729.58'
T = 214.71'
L = 429.22'
E = 4.02'
e_{max} = 2.90%
PC STA. = 397+68.00
PT STA. = 401+97.22

CURVE DATA
S.R. 7 WESTBOUND LANES
@ CURVE NO. 2

P.I. STA. 405+66.18
Δ = 4° 27' 49" (RT)
Dc = 0° 50' 00"
R = 6,875.49'
T = 267.96'
L = 535.64'
E = 5.22'
e_{max} = 2.48%
PC STA. = 402+98.22
PT STA. = 408+33.87



PLAN - S.R. 7
STA. 399+00 TO STA. 411+00

LAW-7-2.17

HORIZONTAL SCALE IN FEET
0 50 100

CALCULATED SLP
CHECKED ALB

76
297

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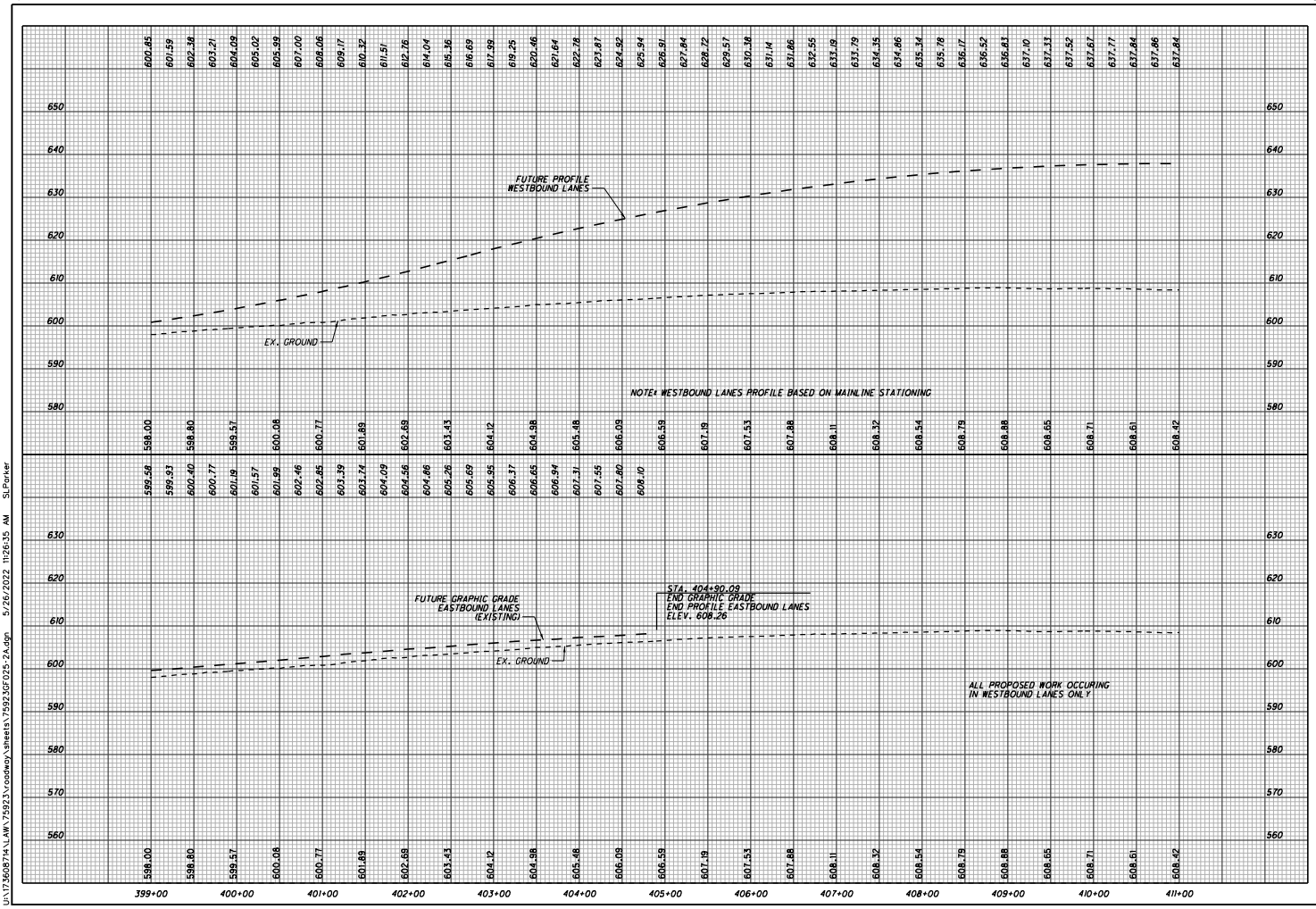

PROFILE - S.R. 7
STA. 399+00 TO 411+00

CALCULATED ALB
CHECKED TCM

LAW-7-2.17

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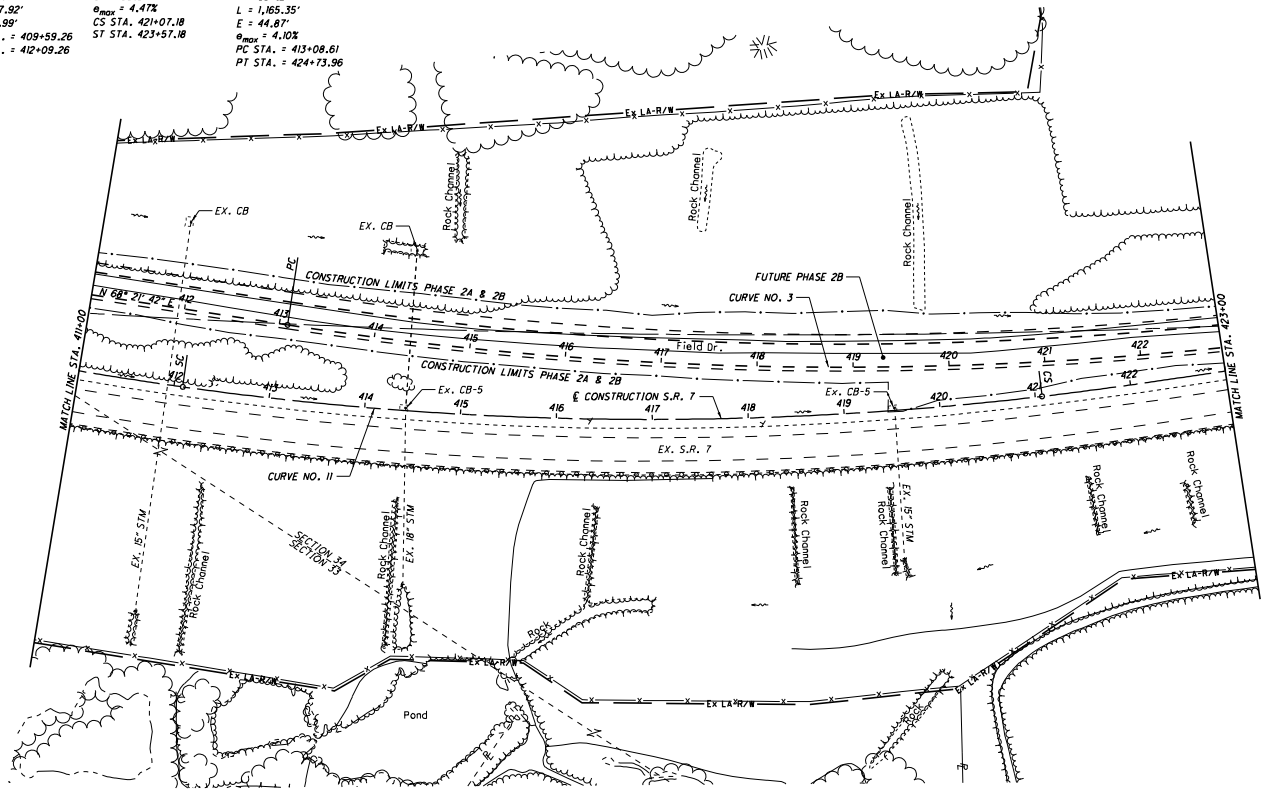
CURVE DATA
S.R. 7
CURVE NO. 11

P.I. STA. 416+63.54
Δ = 18° 47' 30" (LT)
Dc = 1° 38' 13"
R = 3,500.00'
T = 451.44'
L = 897.92'
E = 28.99'
TS STA. = 409+59.26
SC STA. = 412+09.26

Θs = 2° 02' 47"
Ls = 250.00'
Ts = 704.28'
LT = 166.68'
ST = 83.34'
e_{max} = 4.41%
CS STA. 421+07.18
ST STA. 423+57.18

CURVE DATA
S.R. 7 WESTBOUND LANES
@ CURVE NO. 3

P.I. STA. 418+95.85
Δ = 17° 28' 44" (LT)
Dc = 1° 30' 00"
R = 3,820.00'
T = 587.24'
L = 1,165.35'
E = 44.87'
e_{max} = 4.10%
PC STA. = 413+08.61
PT STA. = 424+73.96



PLAN - S.R. 7
STA. 411+00 TO STA. 423+00

LAW-7-2.17

78
297

CALCULATED SLP
CHECKED ALB

HORIZONTAL SCALE IN FEET
0 50 100

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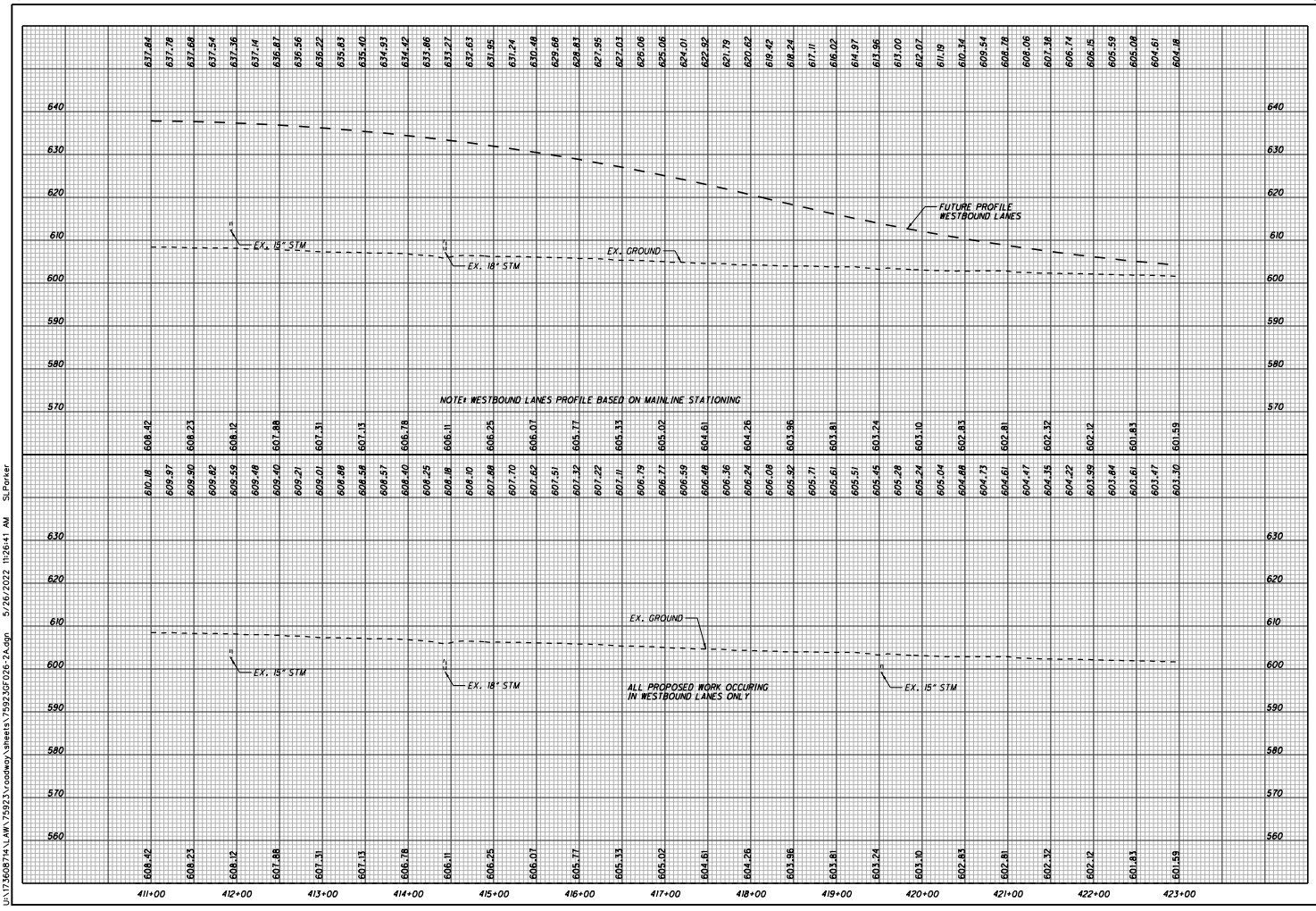

PROFILE - S.R. 7

STA. 411+00 TO STA. 423+00

CALCULATED ALB

CHECKED TCM

LAW-7-2.17

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CURVE DATA
S.R. 7
CURVE NO. 11

P.I. STA. 416+63.54
Δ = 18° 47' 30" (LT)
Dc = 1° 38' 13"
R = 3,500.00'
T = 451.44'
L = 897.92'
E = 28.99'
TS STA. = 409+59.26
SC STA. = 412+09.26
Bs = 2° 02' 47"
Ls = 250.00'
Ts = 704.28'
LT = 166.68'
ST = 83.34'
e_{max} = 4.47%
CS STA. 421+07.18
ST STA. 423+57.18

CURVE DATA
S.R. 7
CURVE NO. 12

P.I. STA. 428+11.24
Δ = 3° 17' 53" (RT)
Dc = 1° 19' 10"
R = 4,342.09'
T = 125.00'
L = 249.93'
E = 1.80'
e_{max} = 3.77%
PC STA. = 426+86.24
PT STA. = 429+36.17

CURVE DATA
S.R. 7
@ WESTBOUND LANES
CURVE NO. 3

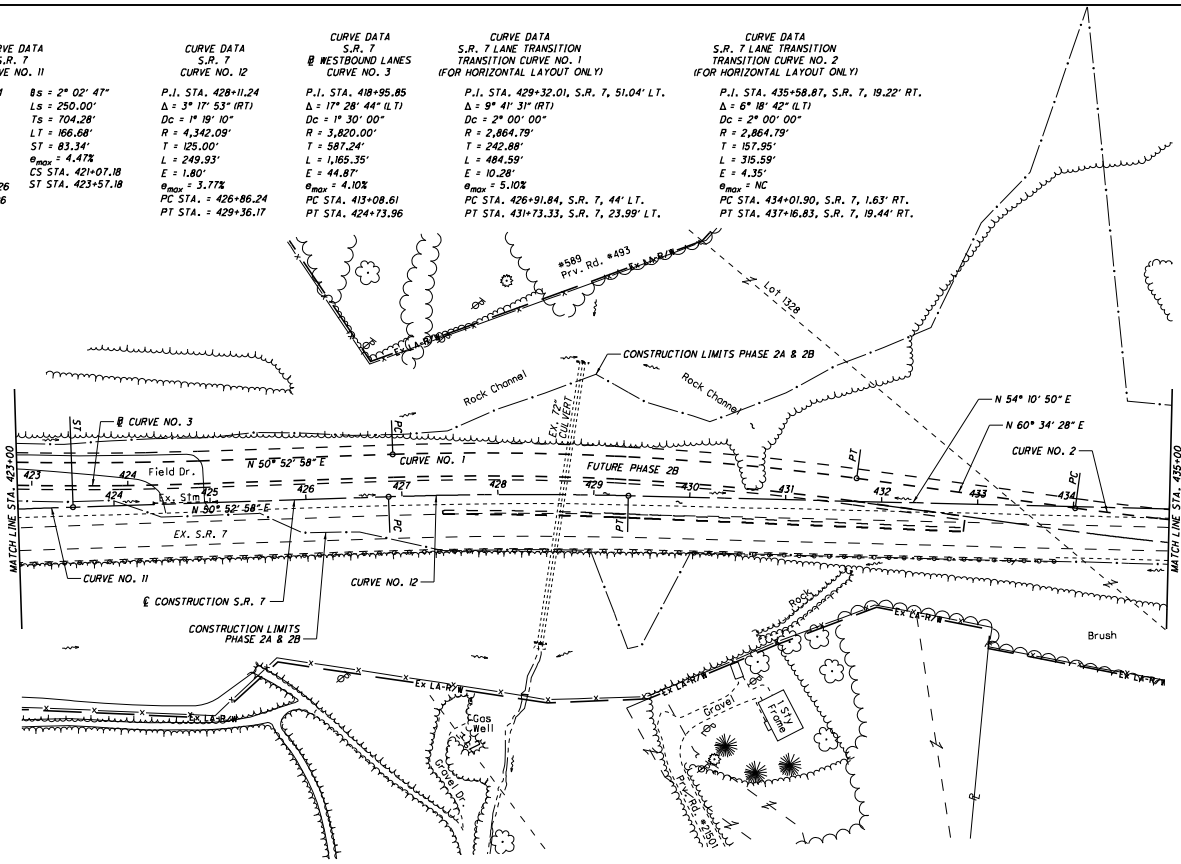
P.I. STA. 418+95.85
Δ = 17° 28' 44" (LT)
Dc = 1° 30' 00"
R = 3,820.00'
T = 587.24'
L = 1,165.35'
E = 44.87'
e_{max} = 4.10%
PC STA. 413+08.61
PT STA. 424+73.96

CURVE DATA
S.R. 7 LANE TRANSITION
TRANSITION CURVE NO. 1
(FOR HORIZONTAL LAYOUT ONLY)

P.I. STA. 429+32.01, S.R. 7, 51.04' LT.
Δ = 9° 41' 31" (RT)
Dc = 2° 00' 00"
R = 2,864.79'
T = 242.88'
L = 484.59'
E = 10.28'
e_{max} = 5.10%
PC STA. 426+91.84, S.R. 7, 44' LT.
PT STA. 431+73.33, S.R. 7, 23.99' LT.

CURVE DATA
S.R. 7 LANE TRANSITION
TRANSITION CURVE NO. 2
(FOR HORIZONTAL LAYOUT ONLY)

P.I. STA. 435+58.87, S.R. 7, 19.22' RT.
Δ = 6° 18' 42" (LT)
Dc = 2° 00' 00"
R = 2,864.79'
T = 157.95'
L = 315.59'
E = 4.35'
e_{max} = NC
PC STA. 434+01.90, S.R. 7, 1.63' RT.
PT STA. 437+16.83, S.R. 7, 19.44' RT.



HORIZONTAL SCALE IN FEET
0 50 100

CALCULATED SLP
CHECKED ALB

PLAN - S.R. 7
STA. 423+00 TO STA. 435+00

LAW-7-2.17

80
297

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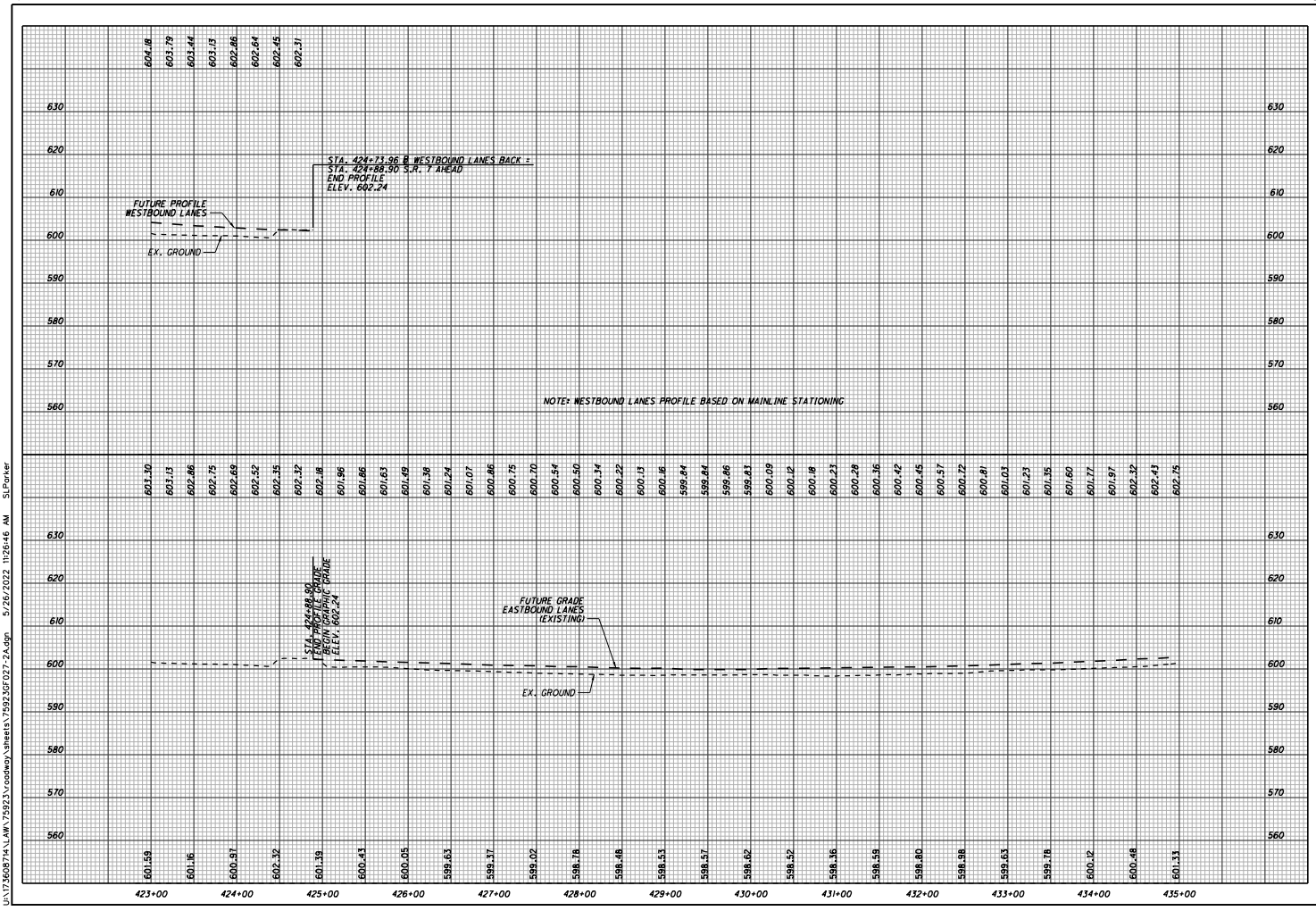

CALCULATED ALB
CHECKED TCM

PROFILE - S.R. 7
STA. 423+00 TO 435+00

LAW-7-2.17

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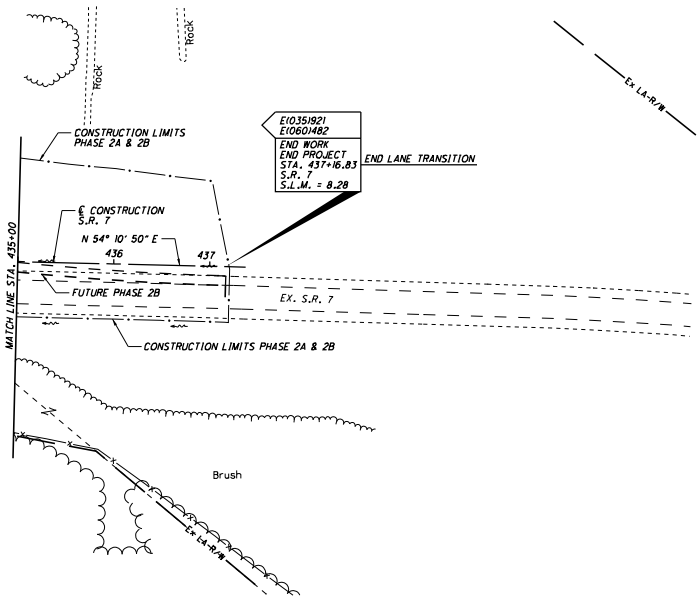

PLAN - S.R. 7
STA. 435+00 TO STA. 437+16.83

LAW-7-2.17

82
297

CALCULATED SLP
CHECKED ALB

0 50 100
HORIZONTAL SCALE IN FEET

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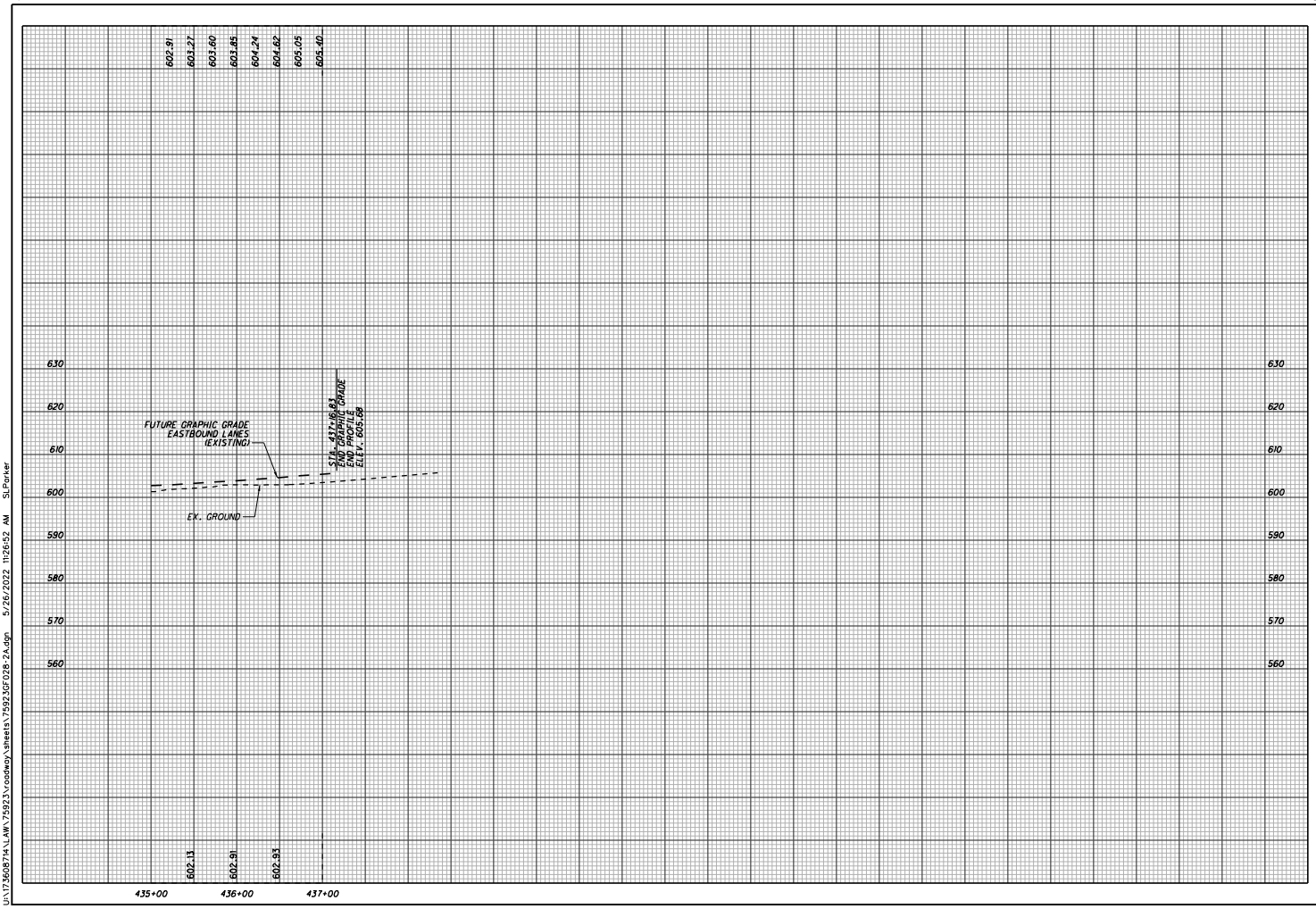

PROFILE - S.R. 7
STA. 435+00 TO 437+16.83

CALCULATED ALB
CHECKED TCM

LAW-7-2.17

83
297

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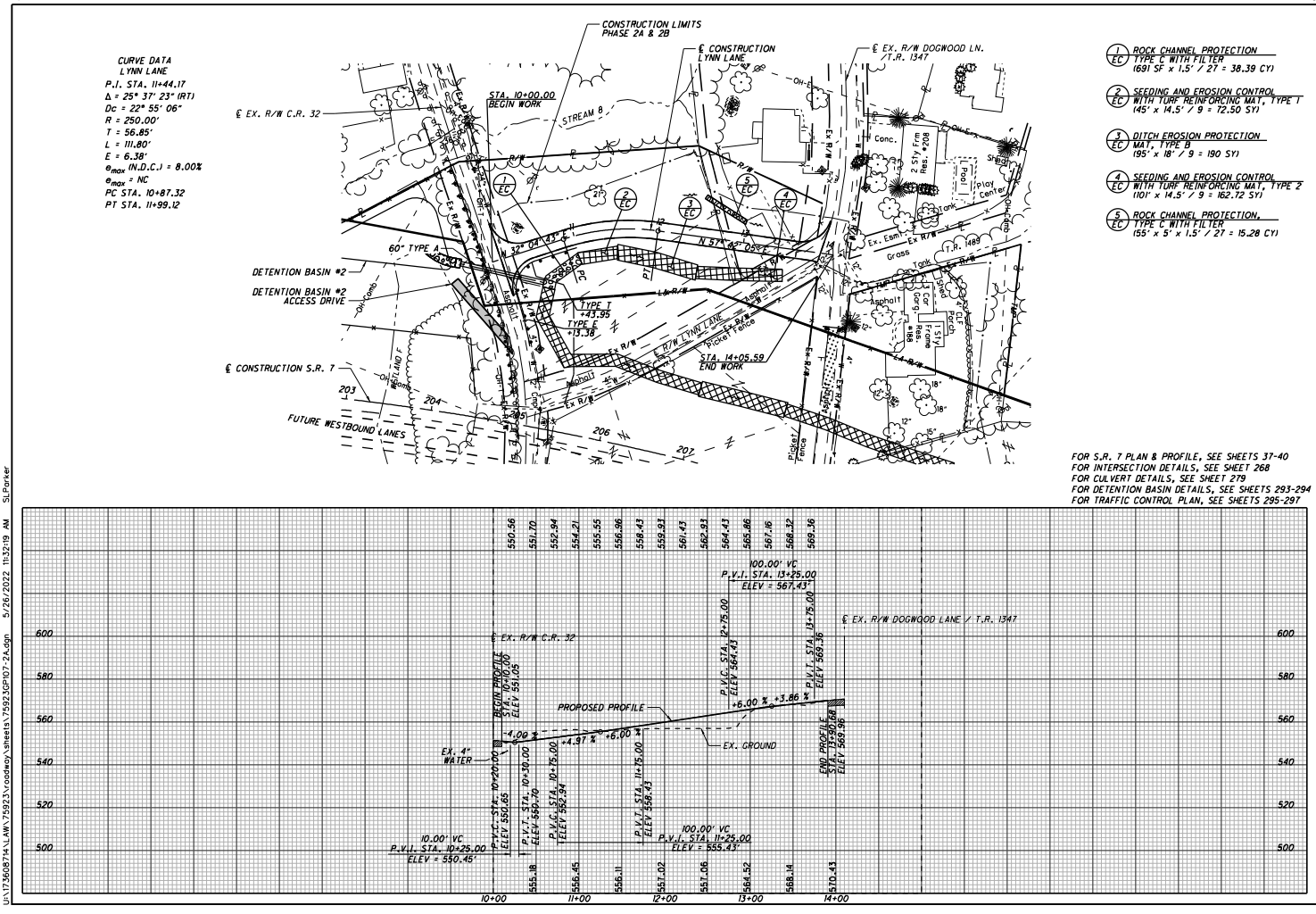

CURVE DATA
LYNN LANE
P.I. STA. 11+44.17
Δ = 25° 37' 23" (RT)
Dc = 22° 55' 06"
R = 250.00'
T = 56.85'
L = 111.80'
E = 6.38'
e_{max} (N.D.C.) = 8.00%
e_{max} = NC
PC STA. 10+87.32
PT STA. 11+99.12

1 EC ROCK CHANNEL PROTECTION
TYPE C WITH FILTER
(691 SF x 1.5' / 27 = 38.39 CY)

2 EC SEEDING AND EROSION CONTROL
WITH TURF REINFORCING MAT, TYPE T
(45' x 14.5' / 9 = 72.50 SY)

3 EC DITCH EROSION PROTECTION
MAT, TYPE B
(95' x 18' / 9 = 190 SY)

4 EC SEEDING AND EROSION CONTROL
WITH TURF REINFORCING MAT, TYPE 2
(101' x 14.5' / 9 = 162.72 SY)

5 EC ROCK CHANNEL PROTECTION,
TYPE C WITH FILTER
(55' x 5' x 1.5' / 27 = 15.28 CY)

FOR S.R. 7 PLAN & PROFILE, SEE SHEETS 37-40
FOR INTERSECTION DETAILS, SEE SHEET 268
FOR CULVERT DETAILS, SEE SHEET 279
FOR DETENTION BASIN DETAILS, SEE SHEETS 293-294
FOR TRAFFIC CONTROL PLAN, SEE SHEETS 295-297

HORIZONTAL SCALE IN FEET
0 50 100
CALCULATED SLP
CHECKED ALB

PLAN AND PROFILE
LYNN LANE

LAW-7-2.17

249
297

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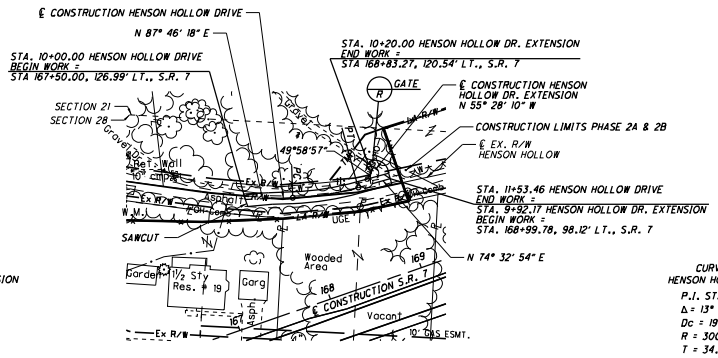
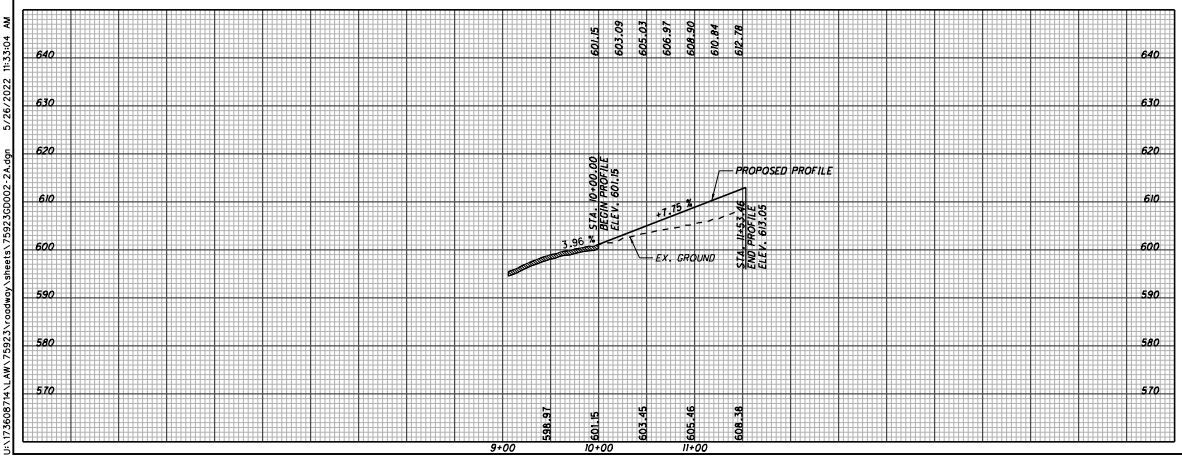
HENSON HOLLOW DRIVE EXTENSION
LEFT E/P RETURN DATA
Δ = 130° 42' 18"
R = 8.00'
T = 17.44'
L = 18.25'
R.P. STA. 11+27.27, 14' LT., HENSON HOLLOW DR.
P.C. STA. 11+27.27, 6' LT., HENSON HOLLOW DR.
P.T. STA. 10+19.68, 2.89' LT., HENSON HOLLOW DR. EXTENSION

HENSON HOLLOW DRIVE EXTENSION
RIGHT E/P RETURN DATA
Δ = 102° 28' 43"
R = 15.00'
T = 18.68'
L = 26.83'
R.P. STA. 11+38.66, 8.47' LT., HENSON HOLLOW DR.
P.C. STA. 11+53.46, 6' LT., HENSON HOLLOW DR.
P.T. STA. 10+20.00, 3.32' RT., HENSON HOLLOW DR. EXTENSION



CURVE DATA
HENSON HOLLOW DRIVE
P.I. STA. 10+84.31
Δ = 13° 13' 25" (LT)
Dc = 19° 05' 55"
R = 300.00'
T = 34.77'
L = 69.24'
E = 2.01'
PC STA. 10+49.54
PT STA. 11+18.78

HENSON HOLLOW DRIVE - 3
HENSON HOLLOW DRIVE EXTENSION - 4



REF NO.	STATION FROM	STATION TO	SIDE
TOTALS CARRIED TO GENERAL SUMMARY			

HORIZONTAL SCALE IN FEET
0 50 100

CALCULATED SLP
CHECKED ALB

PLAN AND PROFILE
HENSON HOLLOW DRIVE

LAW-7-2.17

271
297

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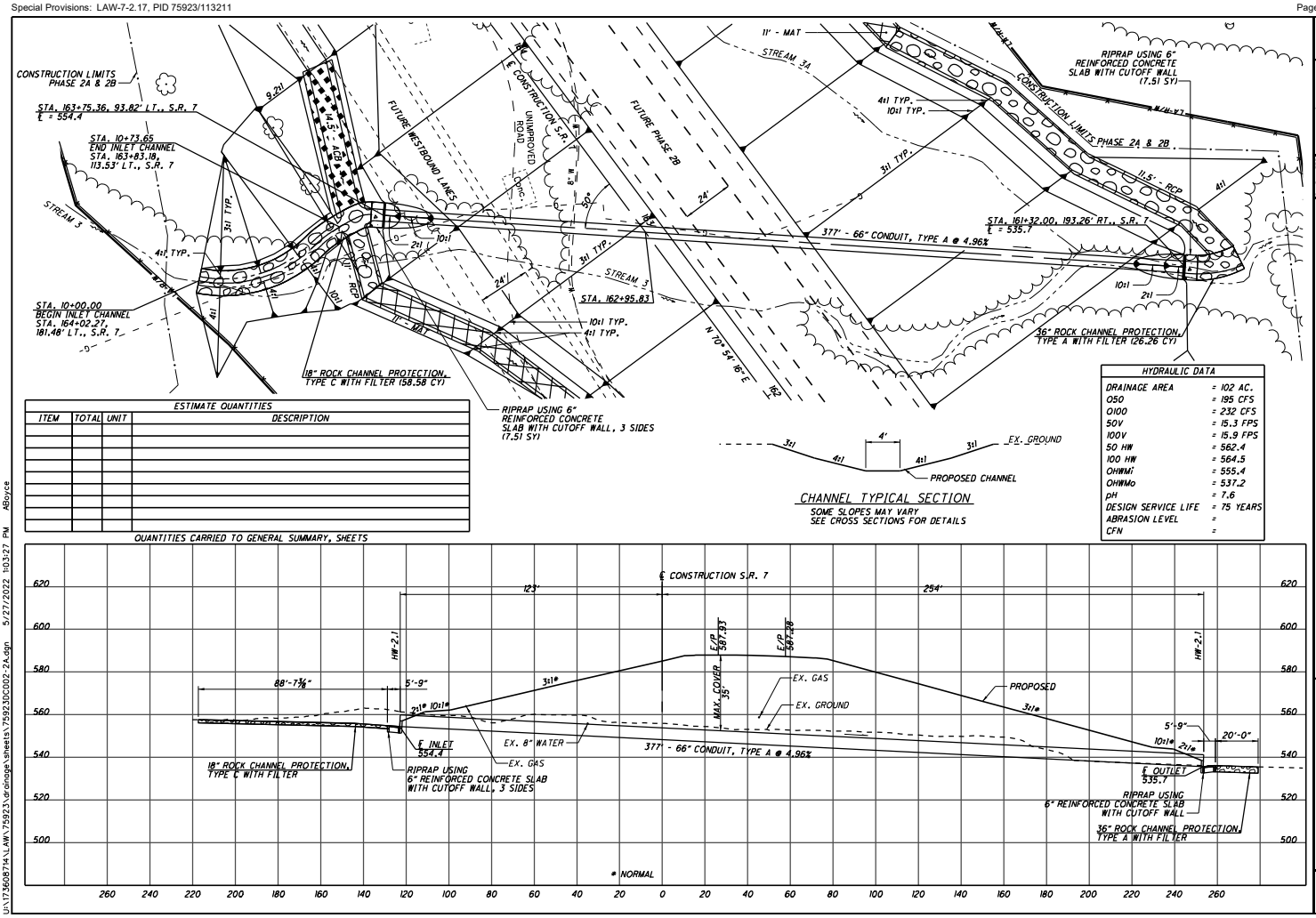

ESTIMATE QUANTITIES			
ITEM	TOTAL	UNIT	DESCRIPTION

QUANTITIES CARRIED TO GENERAL SUMMARY, SHEETS

HYDRAULIC DATA	
DRAINAGE AREA	= 102 AC.
Q50	= 195 CFS
Q100	= 232 CFS
50V	= 15.3 FPS
100V	= 15.9 FPS
50 HW	= 562.4
100 HW	= 564.5
OHWM:	= 555.4
OHWMo	= 537.2
pH	= 7.6
DESIGN SERVICE LIFE	= 75 YEARS
ABRASION LEVEL	=
CFN	=

CALCULATED SLP
CHECKED ALB

CULVERT DETAIL
S.R. 7 STA. 162+95.83

LAW-7-2.17

275
297

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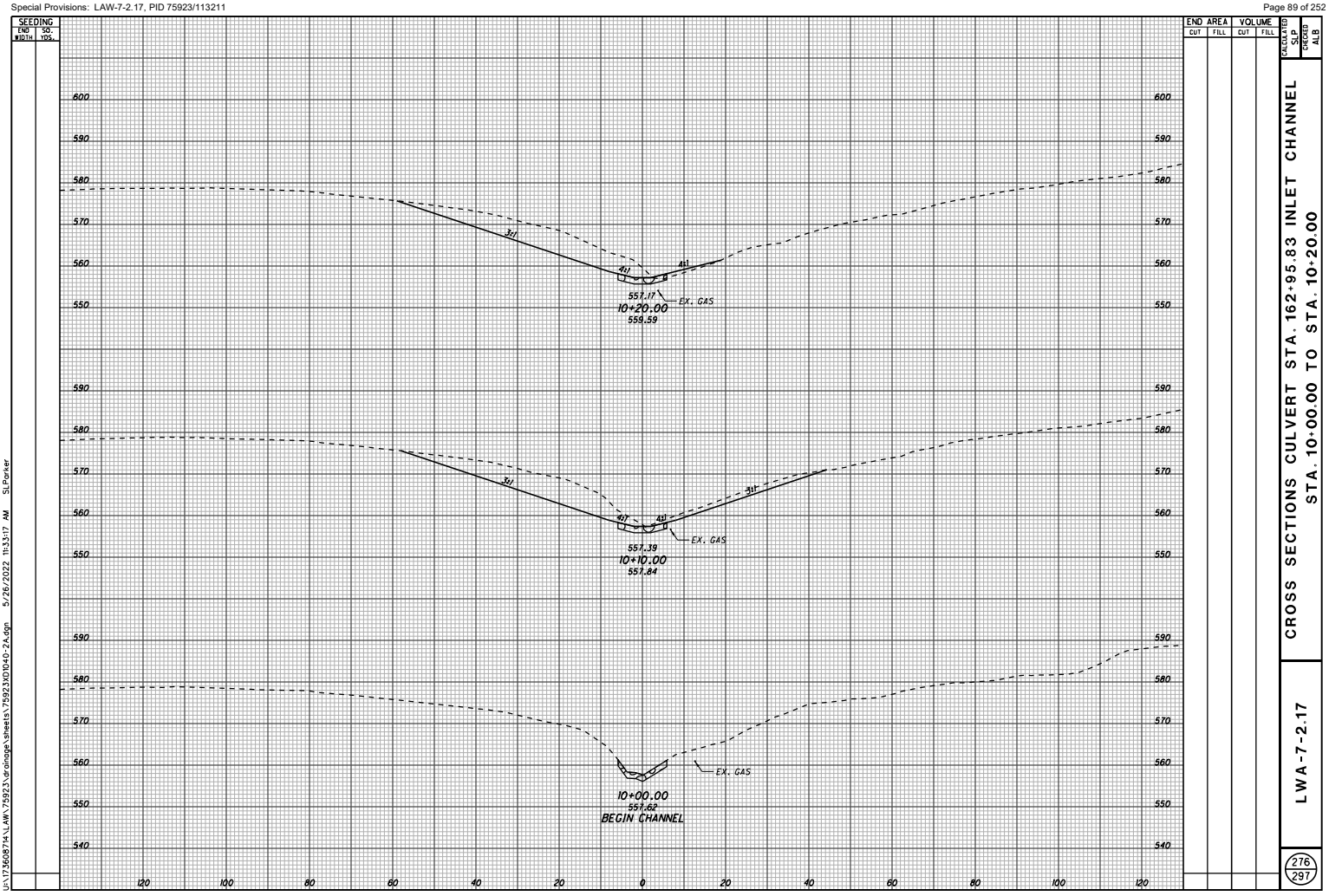

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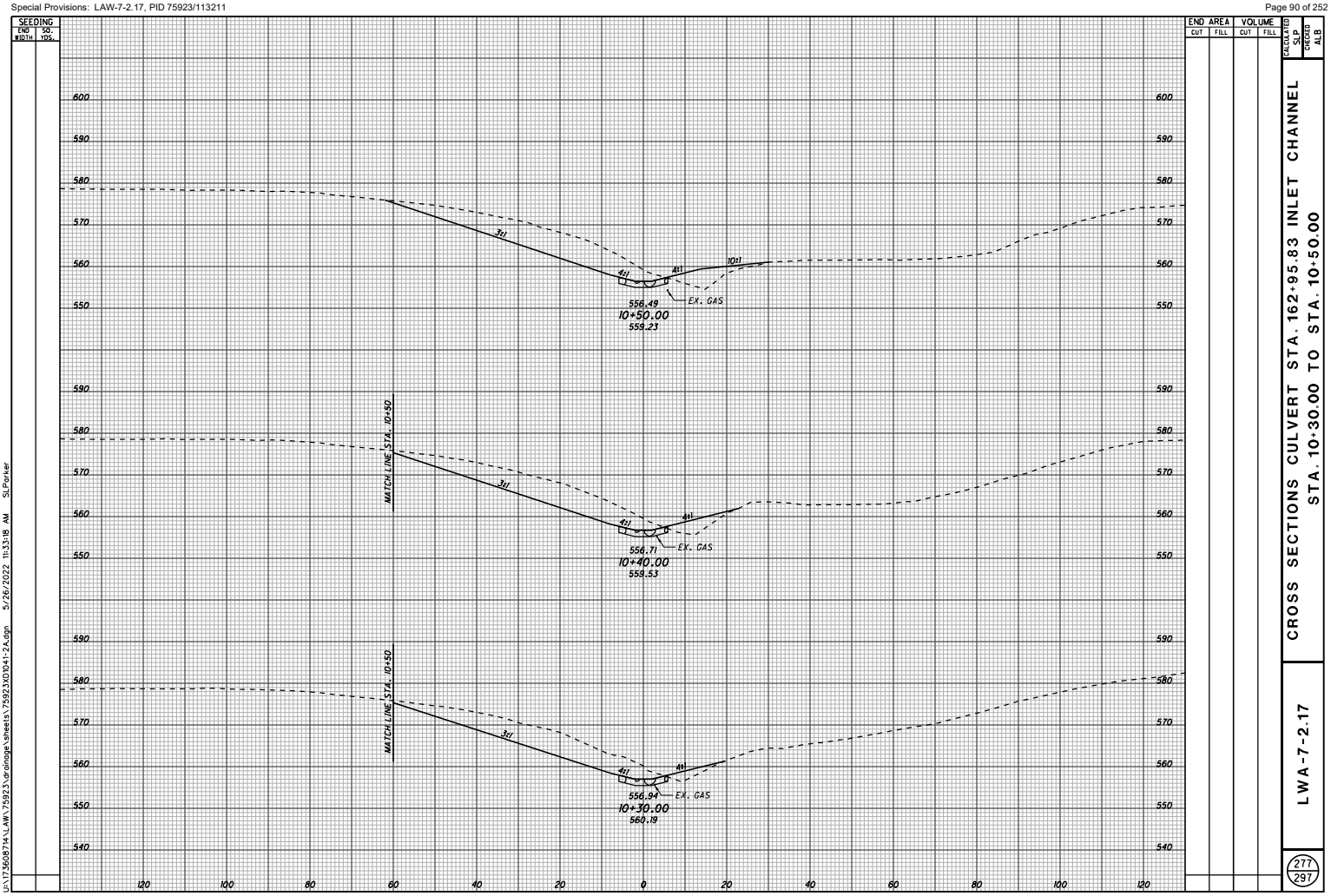

CALCULATED SLP
CHECKED ALB

CROSS SECTIONS CULVERT STA. 162+95.83 INLET CHANNEL STA. 10+30.00 TO STA. 10+50.00

LWA-7-2.17

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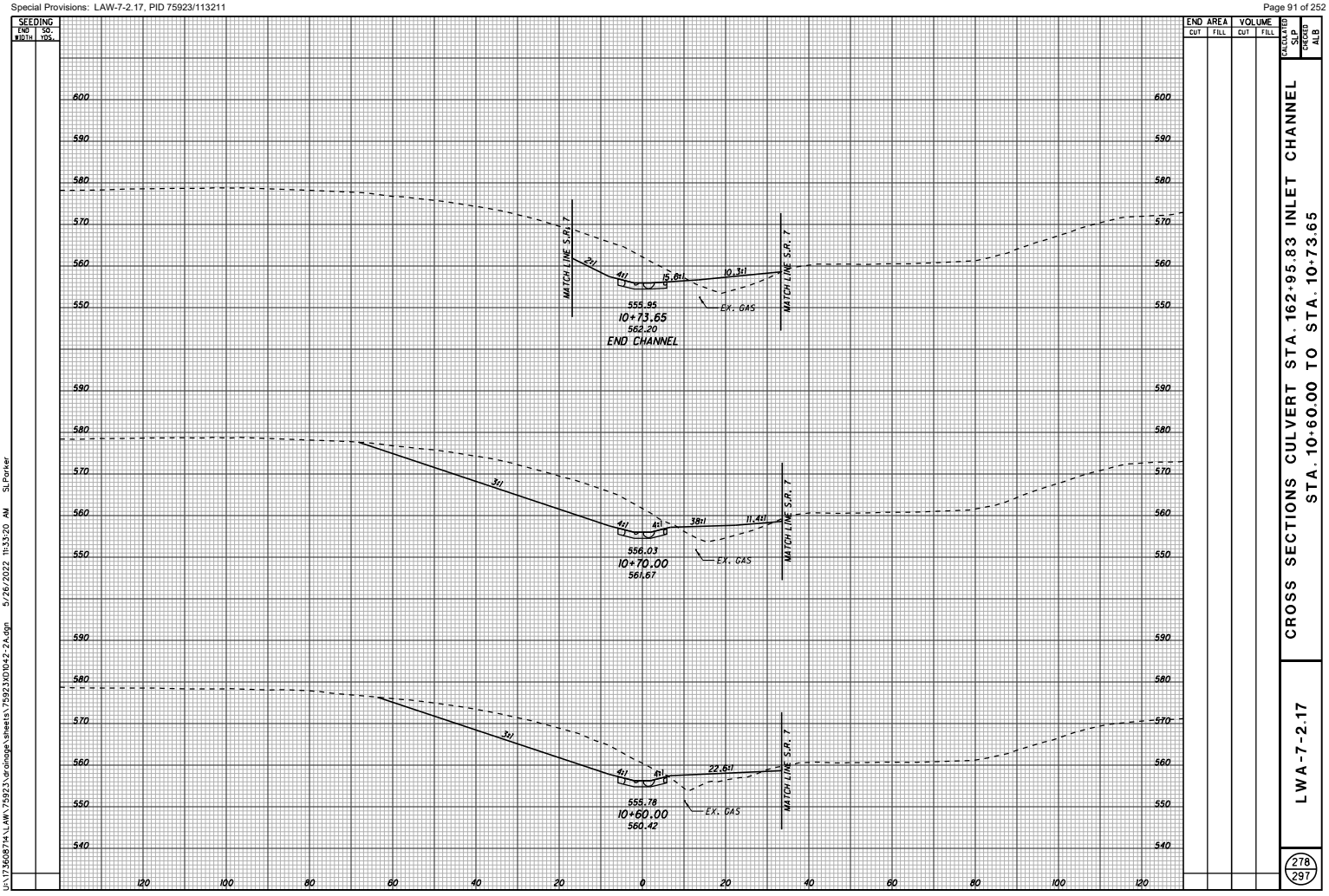

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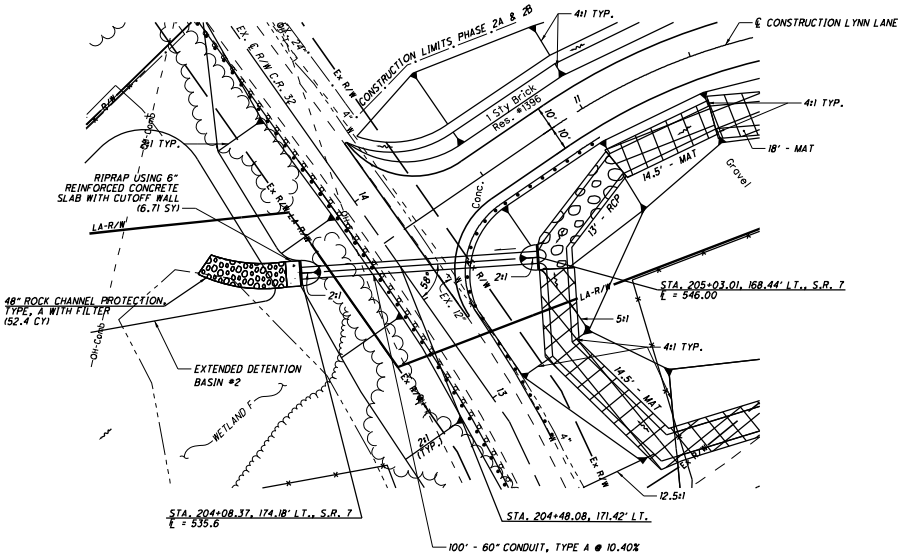
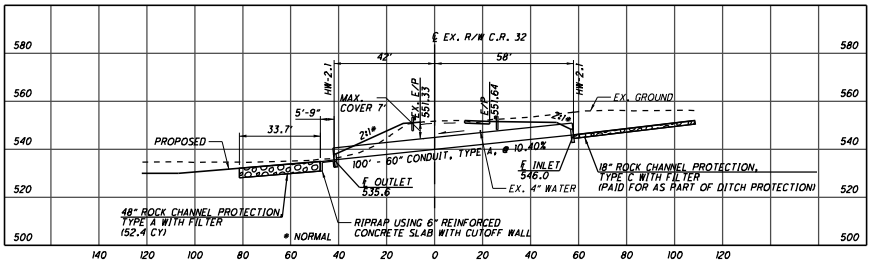
CROSS SECTIONS CULVERT STA. 162+95.83 INLET CHANNEL
STA. 10+60.00 TO STA. 10+73.65

LWA-7-2.17





HYDRAULIC DATA	
DRAINAGE AREA	= 29 AC.
Q25	= 98 CFS
Q100	= 133 CFS
25V	= 16.9 FPS
100V	= 18.4 FPS
25 HW	= 550.3
100 HW	= 551.4
OHWMi	= 547.9
OHWMo	= 536.2
pH	= 7.6
DESIGN SERVICE LIFE	= 75 YEARS
ABRASION LEVEL	=
CFN	=

ESTIMATE QUANTITIES			
ITEM	TOTAL	UNIT	DESCRIPTION

QUANTITIES CARRIED TO GENERAL SUMMARY, SHEETS

CALCULATED SLP CHECKED ALB

HORIZONTAL SCALE IN FEET 0 20 40

CULVERT DETAIL
S.R. 7 STA. 204+48.08

LAW-7-2.17

279
297

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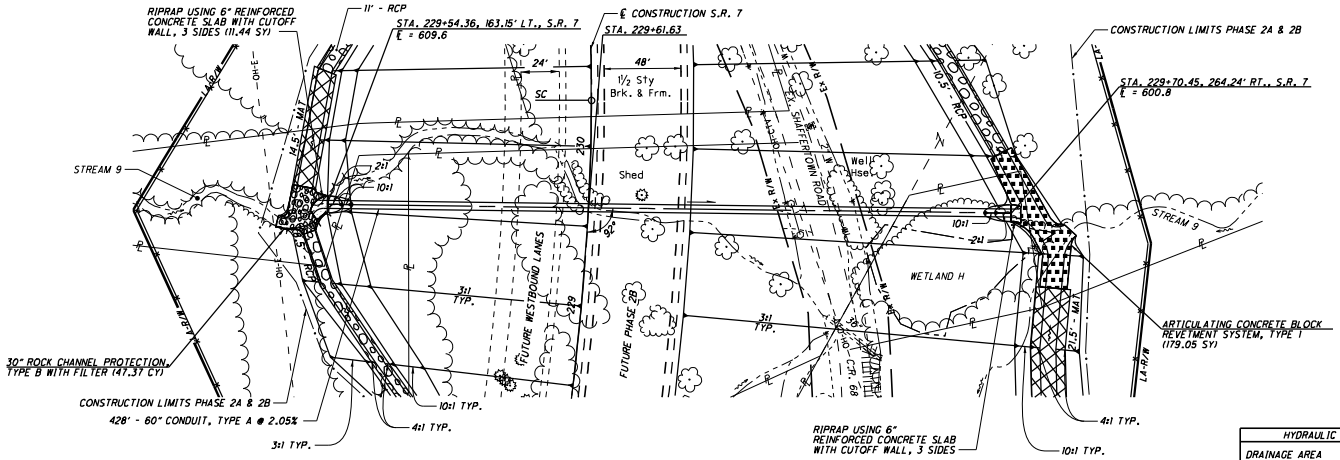
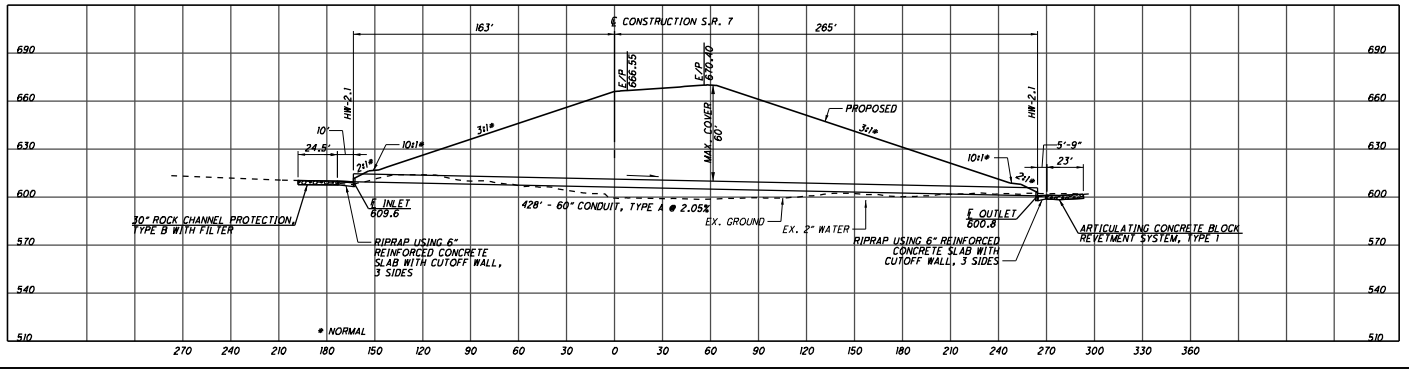


ESTIMATE QUANTITIES			
ITEM	TOTAL	UNIT	DESCRIPTION

QUANTITIES CARRIED TO GENERAL SUMMARY, SHEETS

HYDRAULIC DATA	
DRAINAGE AREA	= 80 AC.
Q50	= 147 CFS
Q100	= 175 CFS
50V	= 9.8 FPS
100V	= 11.7 FPS
50 HW	= 617.9
100 HW	= 623.4
OHWMT	= 610.5
OHWMo	= 601.1
pH	= 7.6
DESIGN SERVICE LIFE	= 75 YEARS
ABRASION LEVEL	=
CFN	=



CALCULATED SLP CHECKED ALB

HORIZONTAL SCALE IN FEET 0 30 60

CULVERT DETAIL
S.R. 7 STA. 229+61.63

LAW-7-2.17

280
297

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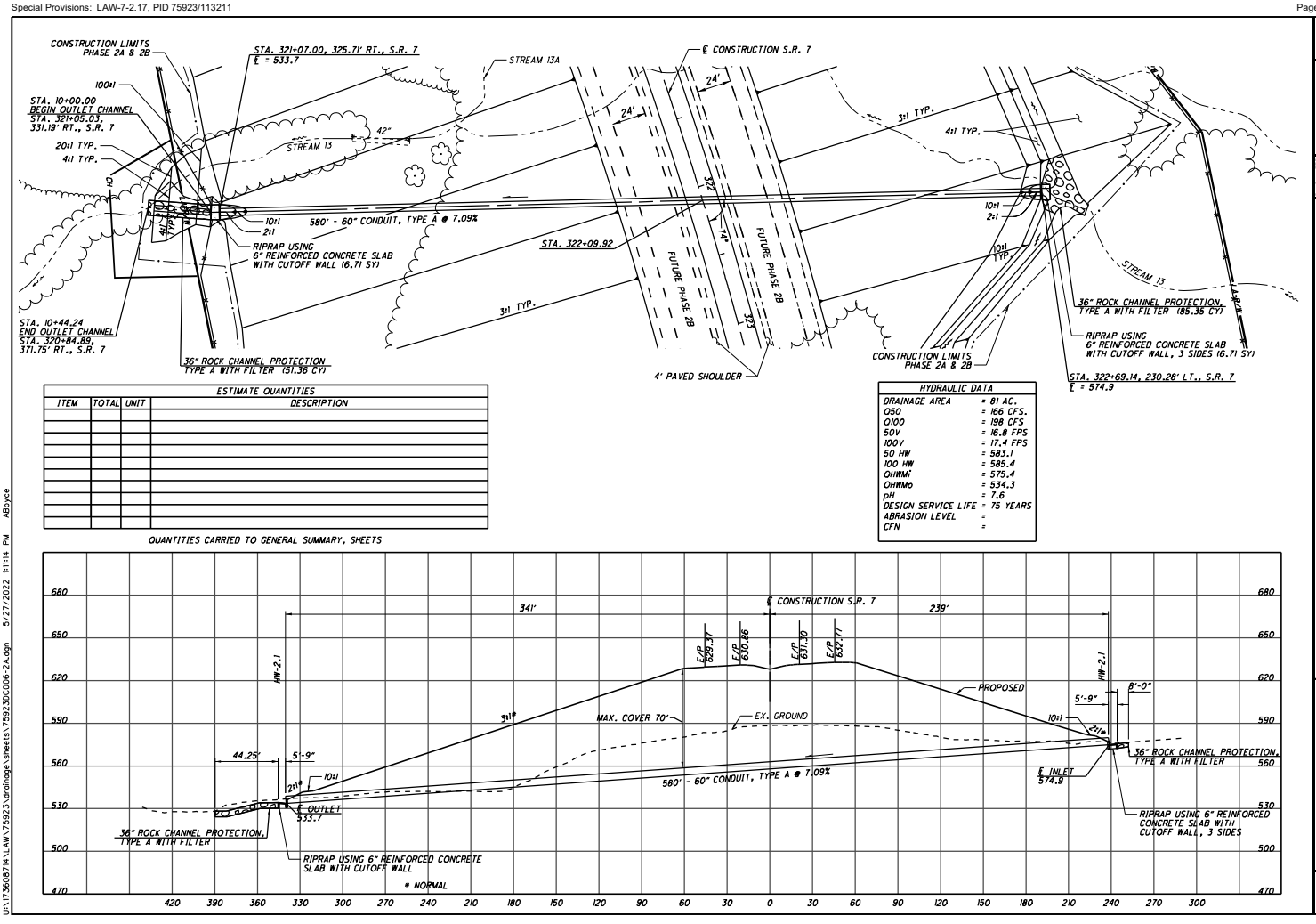

ESTIMATE QUANTITIES			
ITEM	TOTAL	UNIT	DESCRIPTION

QUANTITIES CARRIED TO GENERAL SUMMARY, SHEETS

HYDRAULIC DATA	
DRAINAGE AREA	= 81 AC.
Q50	= 166 CFS.
Q100	= 198 CFS
50V	= 16.8 FPS
100V	= 17.4 FPS
50 HW	= 583.1
100 HW	= 585.4
OHWMi	= 575.4
OHWMo	= 534.3
pH	= 7.6
DESIGN SERVICE LIFE	= 75 YEARS
ABRASION LEVEL	=
CFN	=

HORIZONTAL SCALE IN FEET
0 30 60

CALCULATED SLP
CHECKED ALB

CULVERT DETAIL
S.R. 7 STA. 322+09.92

LAW-7-2.17

281
297

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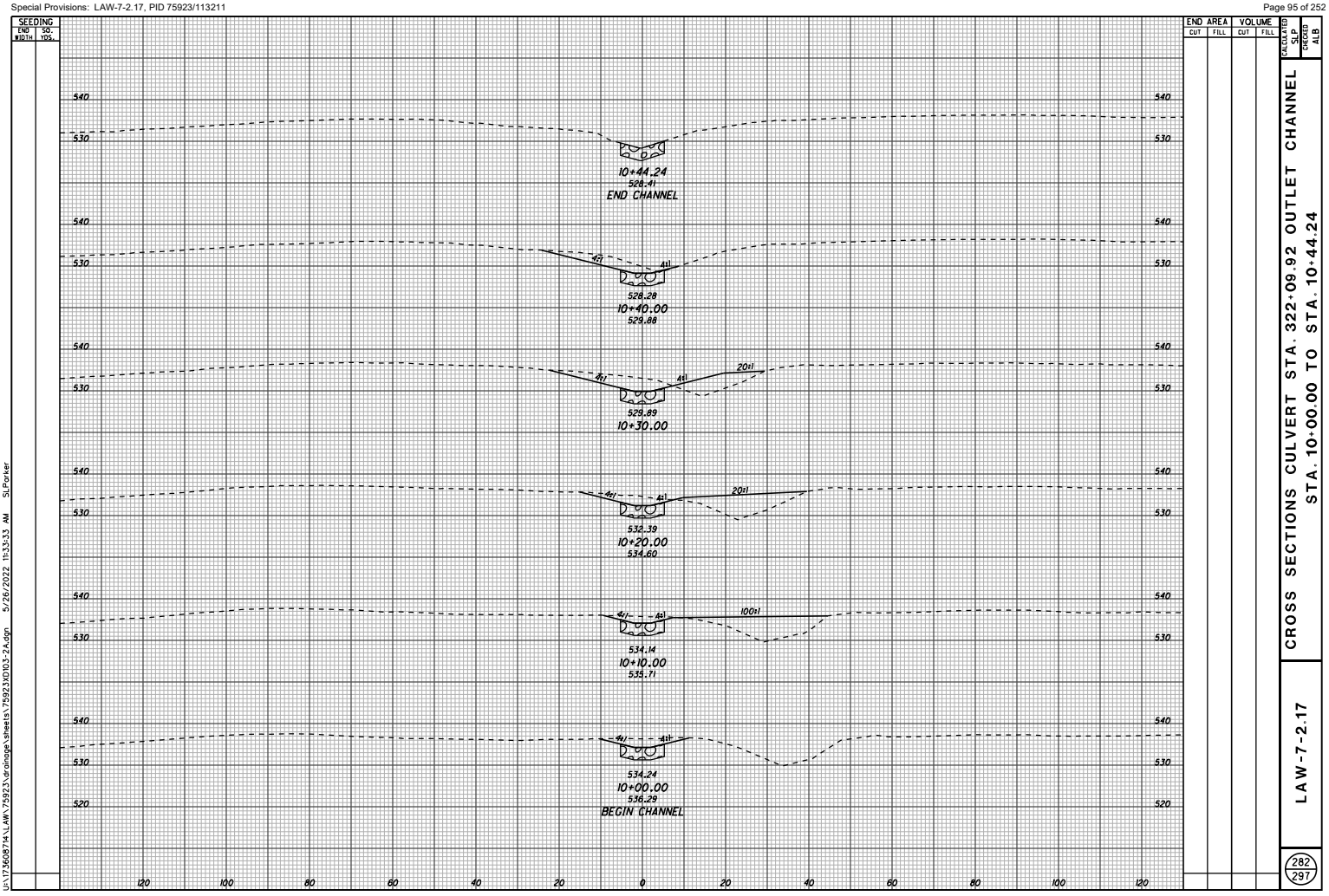
SEEDING
END WIDTH
SQ. YDS.
END AREA
CUT
FILL
VOLUME
CUT
FILL
CALCULATED SLP
CHECKED ALB
540
530
520
10+44.24
528.41
END CHANNEL
4:1
4:1
528.28
10+40.00
529.88
20:1
529.89
10+30.00
532.39
10+20.00
534.60
100:1
534.14
10+10.00
535.71
534.24
10+00.00
536.29
BEGIN CHANNEL
120
100
80
60
40
20
0
CROSS SECTIONS CULVERT STA. 322+09.92 OUTLET CHANNEL
STA. 10+00.00 TO STA. 10+44.24
LAW-7-2.17
282
297
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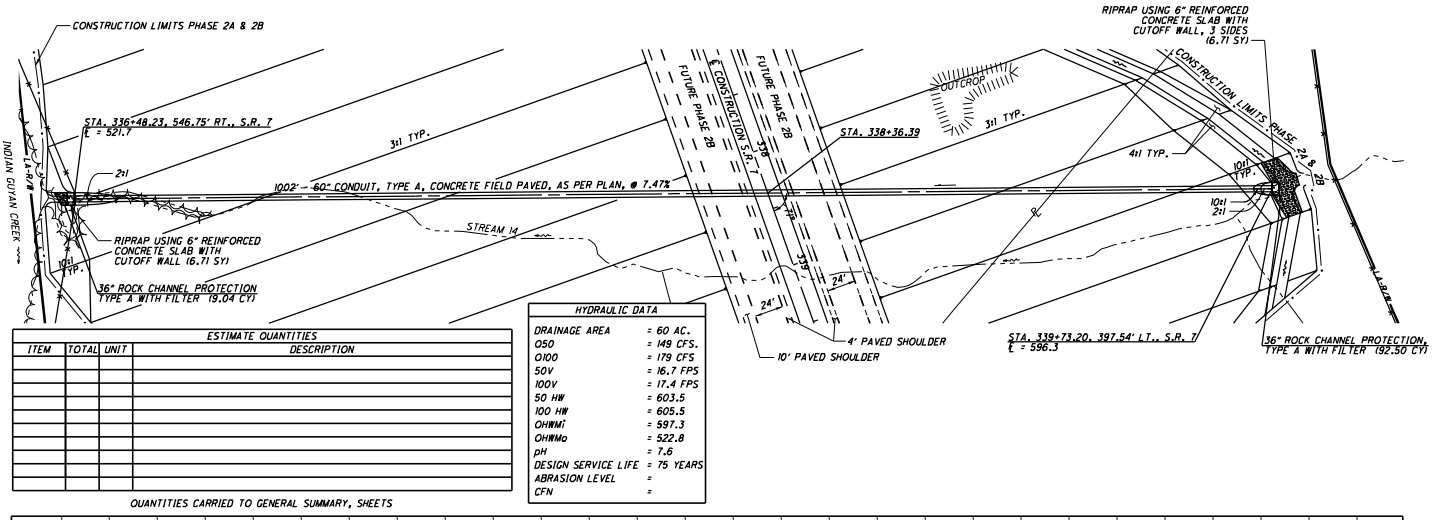
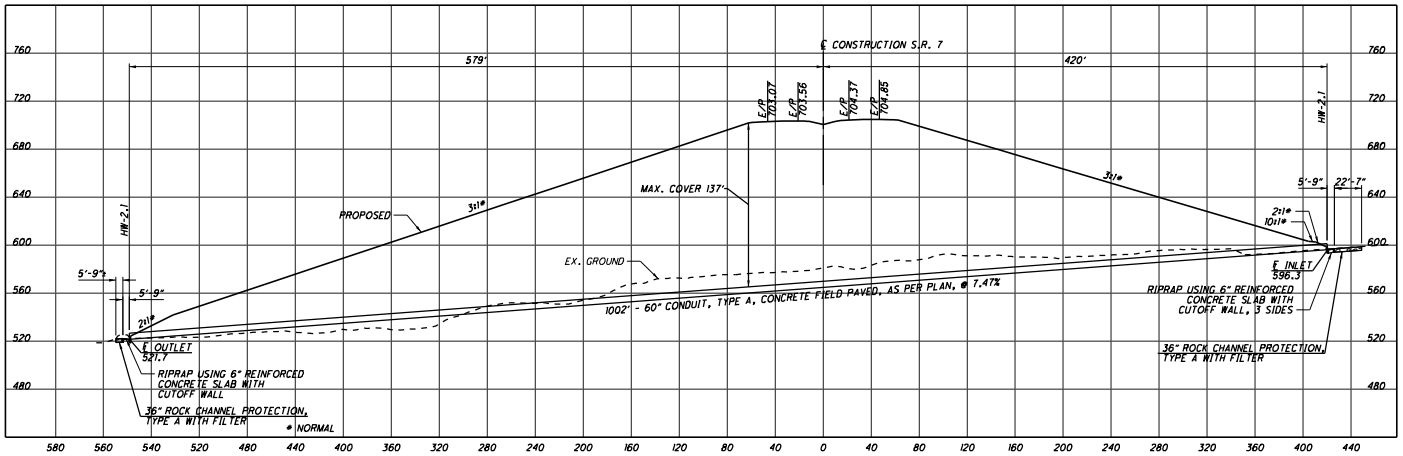


ESTIMATE QUANTITIES			
ITEM	TOTAL	UNIT	DESCRIPTION

QUANTITIES CARRIED TO GENERAL SUMMARY, SHEETS

HYDRAULIC DATA	
DRAINAGE AREA	= 60 AC.
Q50	= 149 CFS.
Q100	= 179 CFS
50V	= 16.7 FPS
100V	= 17.4 FPS
50 HW	= 603.5
100 HW	= 605.5
OHWMi	= 597.3
OHWMo	= 522.8
pH	= 7.6
DESIGN SERVICE LIFE	= 75 YEARS
ABRASION LEVEL	=
CFN	=



CALCULATED ALB
CHECKED TCM

HORIZONTAL SCALE IN FEET
0 40 80

CULVERT DETAIL
S.R. 7 STA. 338+36.39

LAW-7-2.17

283
297

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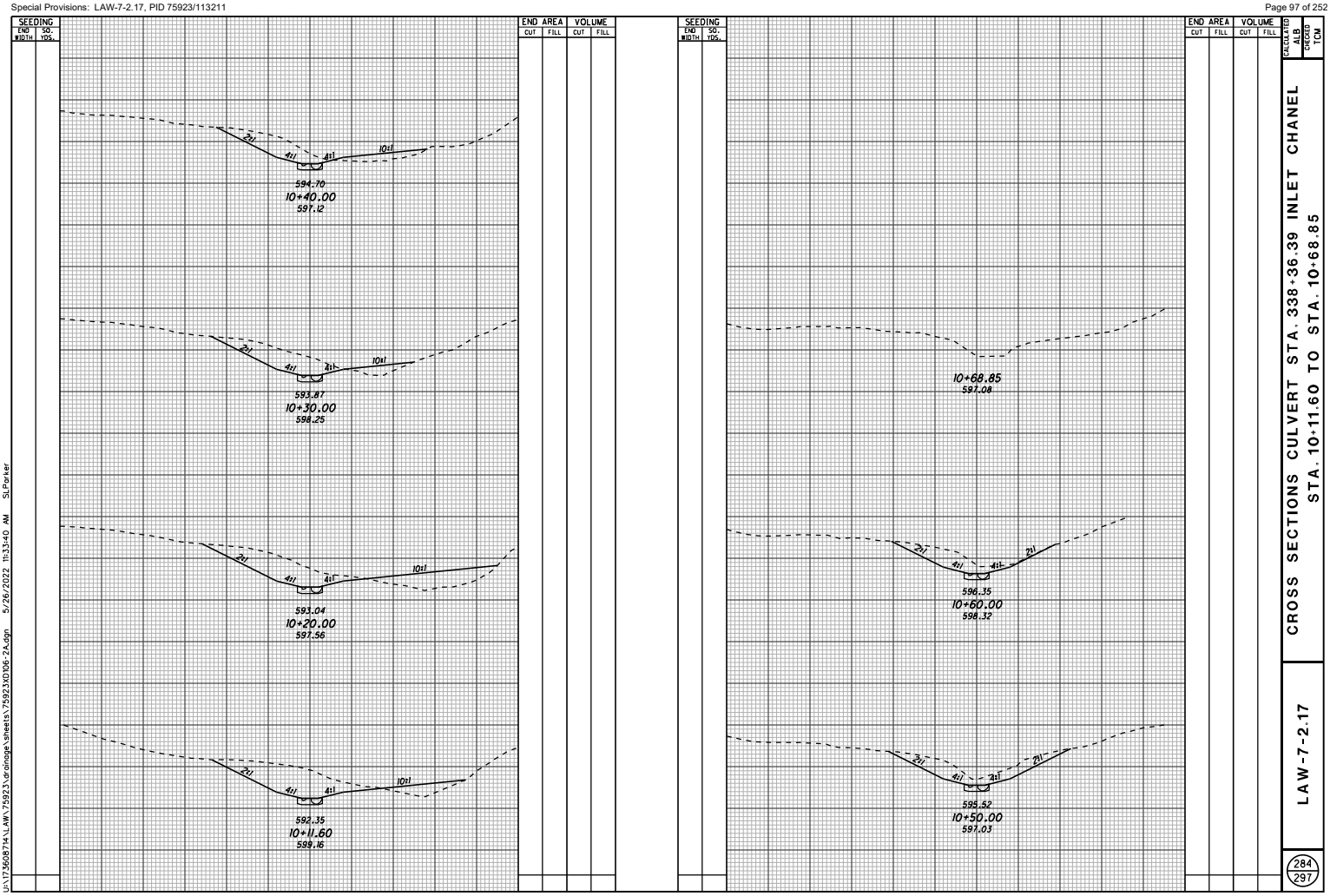

CALCULATED ALB
CHECKED TCM

CROSS SECTIONS CULVERT STA. 338+36.39 INLET CHANEL STA. 10+11.60 TO STA. 10+68.85

LAW-7-2.17

284
297

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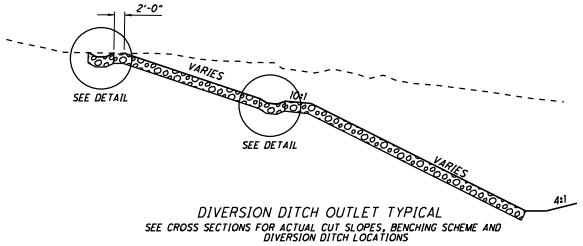
DIVERSION DITCH

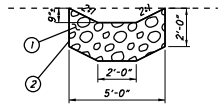
THE CONTRACTOR IS TO PROVIDE A DIVERSION DITCH AS DETAILED ON THIS SHEET AND AS SHOWN IN THE CROSS SECTIONS. THE FOLLOWING QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY FOR THE PLACEMENT OF THE DIVERSION DITCH.

ITEM 203 - EXCAVATION (FOR OUTLET CHANNELS ONLY)	XX CU YD
ITEM 204 - GEOTEXTILE FABRIC	XX SQ YD
ITEM 601 - ROCK CHANNEL PROTECTION, TYPE D WITH FILTER	XX CU YD

EARTHWORK QUANTITIES FOR THE DIVERSION DITCHES HAVE BEEN INCLUDED IN THE CROSS SECTIONS.



DIVERSION DITCH OUTLET TYPICAL
SEE CROSS SECTIONS FOR ACTUAL CUT SLOPES, BENCHING SCHEME AND DIVERSION DITCH LOCATIONS



DIVERSION DETAIL
TYPICAL

(1) - ITEM 601 - ROCK CHANNEL PROTECTION, TYPE D WITH FILTER
(2) - ITEM 204 - GEOTEXTILE FABRIC

DRAINAGE DETAILS
DIVERSION DITCH LOCATION AND DETAILS

HORIZONTAL SCALE IN FEET
0 50 100

CALCULATED SLP
CHECKED ALB

LAW-7-2.17

285
297

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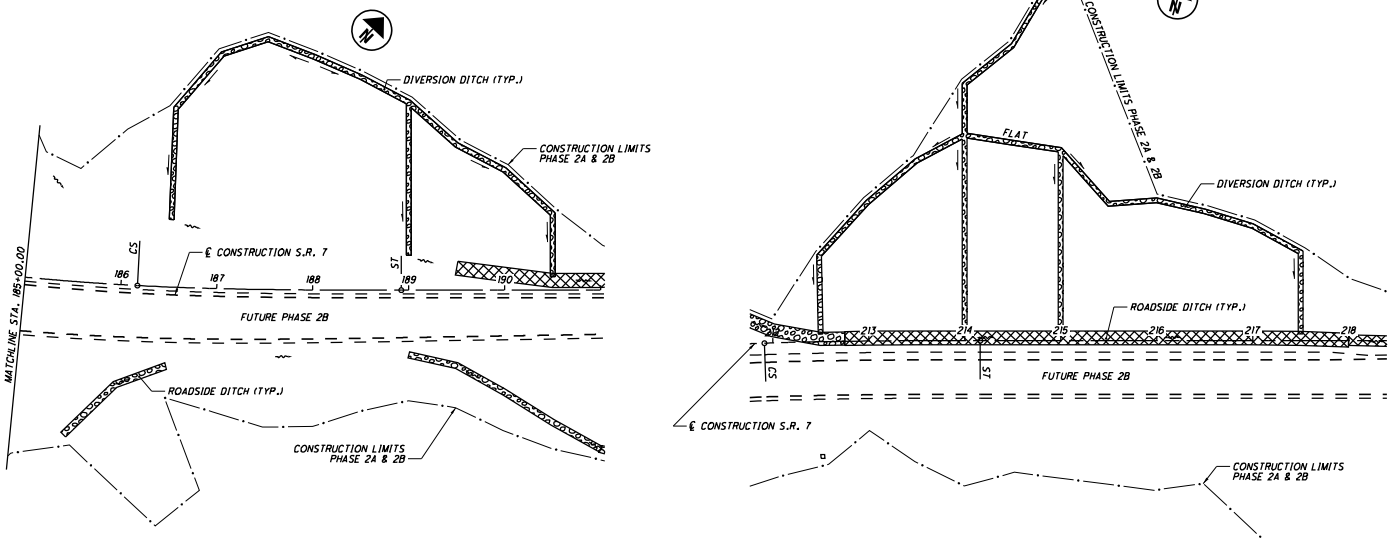

CALCULATED SLP
CHECKED ALB

HORIZONTAL SCALE IN FEET
0 50 100

DRAINAGE DETAILS

DIVERSION DITCH LOCATION AND DETAILS

LAW-7-2.17

286
297

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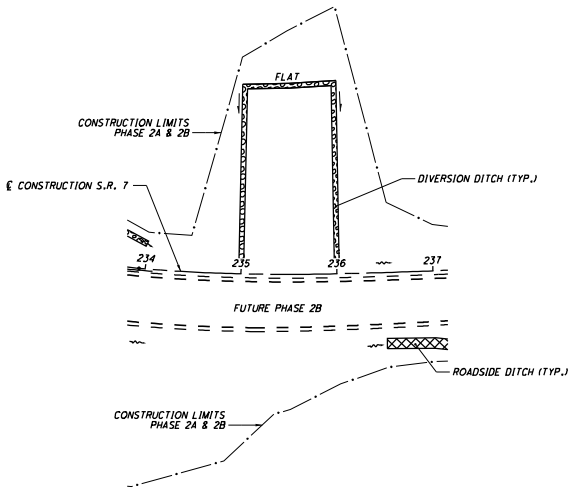

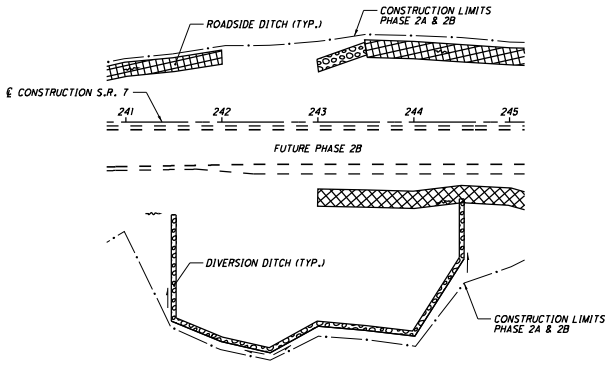

HORIZONTAL SCALE IN FEET
0 50 100

CALCULATED SLP
CHECKED ALB

DRAINAGE DETAILS
DIVERSION DITCH LOCATION AND DETAILS

LAW-7-2.17

287
297

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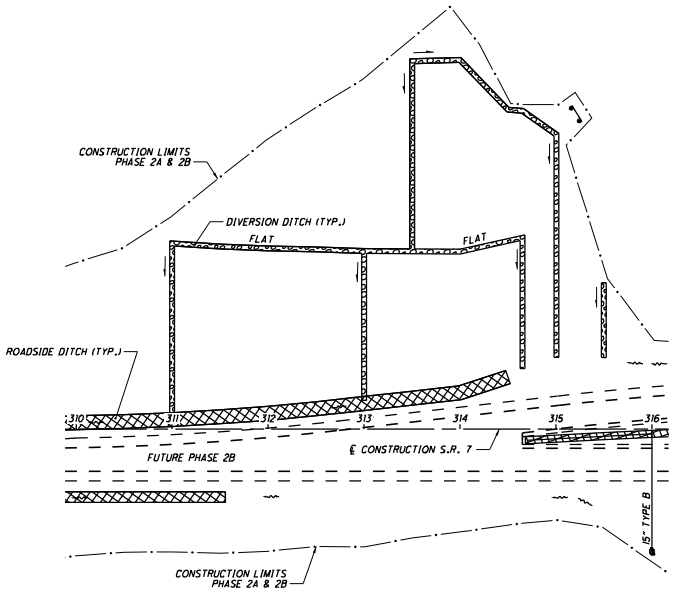

DRAINAGE DETAILS

DIVERSION DITCH LOCATION AND DETAILS

LAW-7-2.17

288
297

CALCULATED SLP
CHECKED SLP

HORIZONTAL SCALE IN FEET
0 50 100

N

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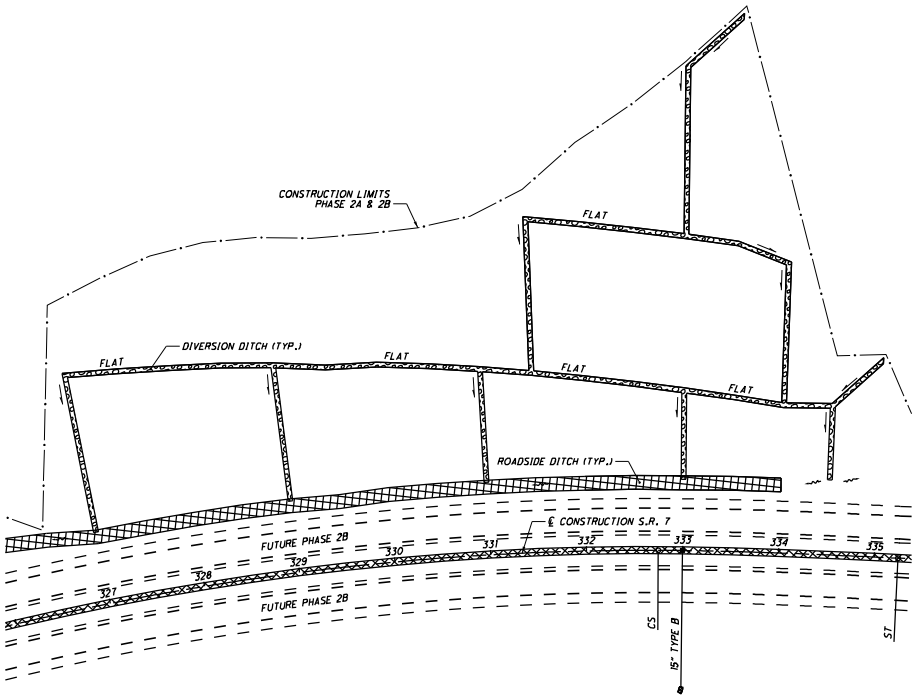

DRAINAGE DETAILS

DIVERSION DITCH LOCATION AND DETAILS

LAW-7-2.17

289
297

CALCULATED SLP
CHECKED ALB

HORIZONTAL SCALE IN FEET
0 50 100

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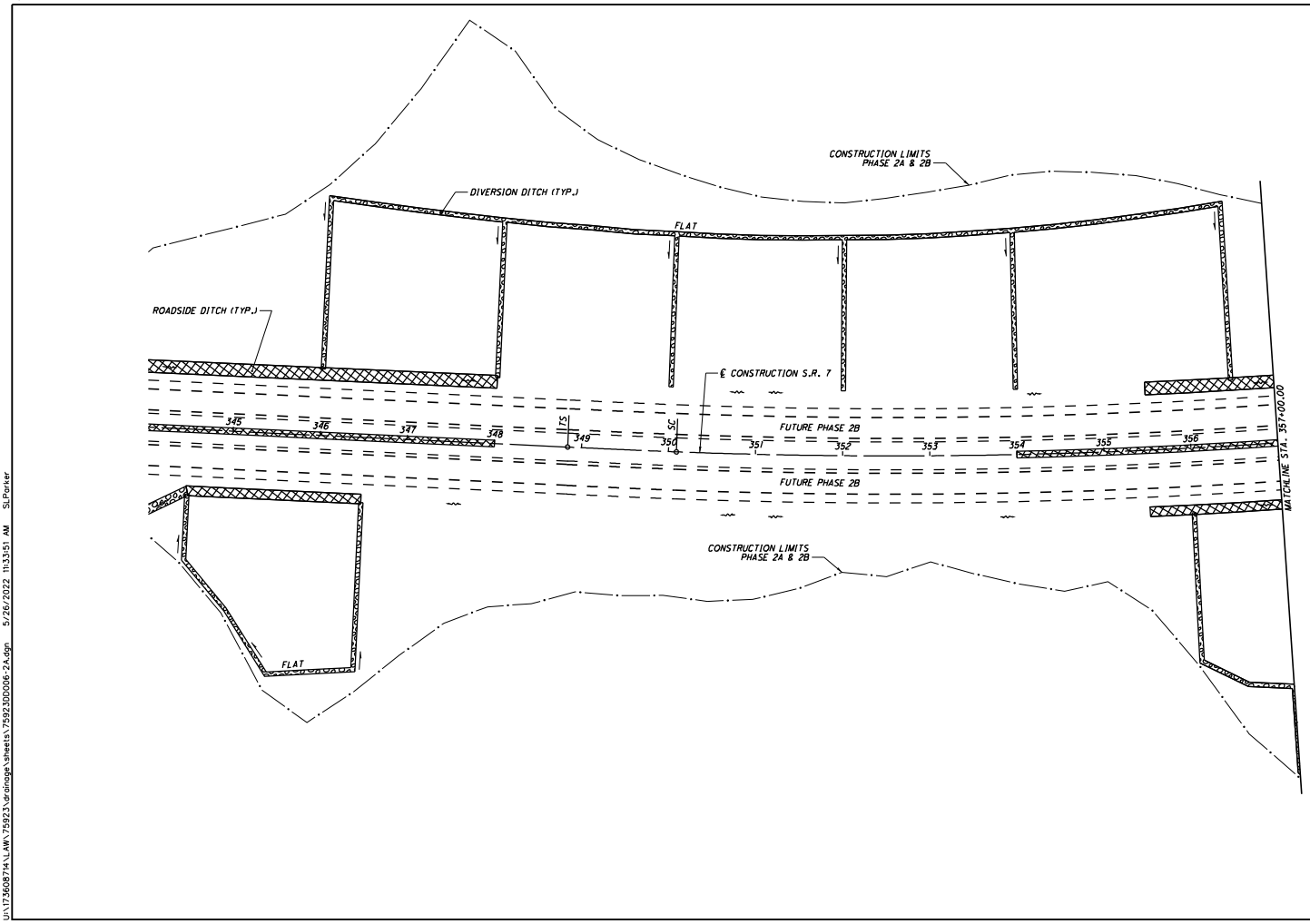

HORIZONTAL SCALE IN FEET
0 50 100
CALCULATED SLP
CHECKED ALB

DRAINAGE DETAILS
DIVERSION DITCH LOCATION AND DETAILS

LAW-7-2.17

290
297

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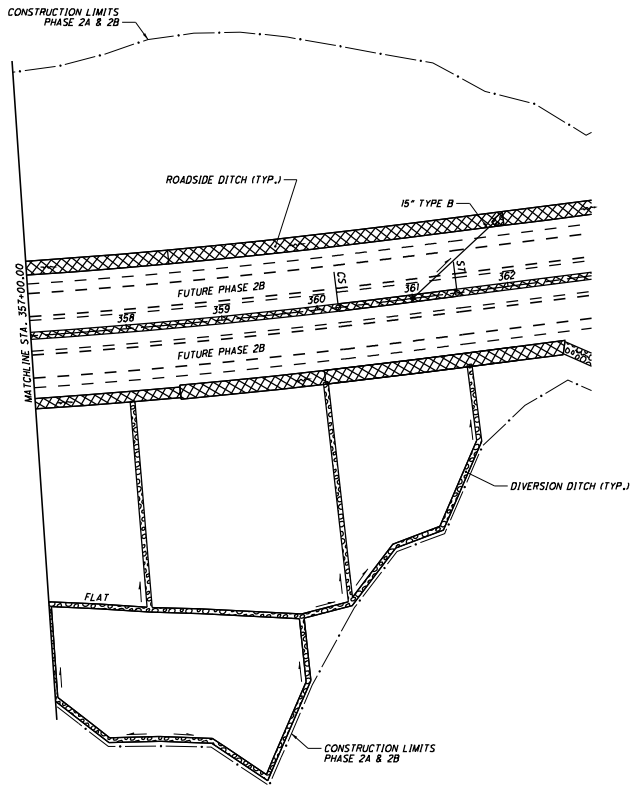

CALCULATED SLP
CHECKED ALB

HORIZONTAL SCALE IN FEET
0 50 100

DRAINAGE DETAILS
DIVERSION DITCH LOCATION AND DETAILS

LAW-7-2.17

291
297

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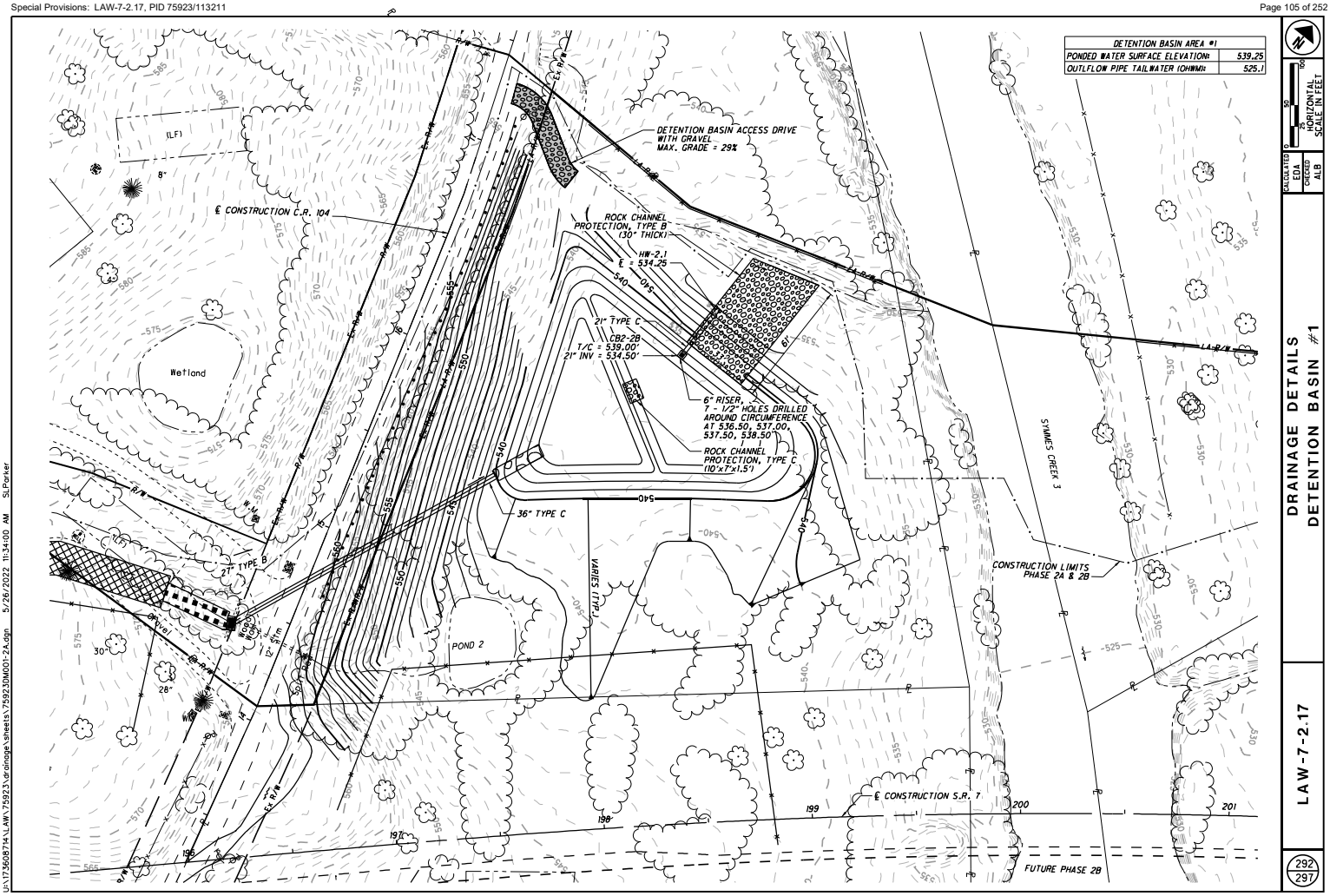

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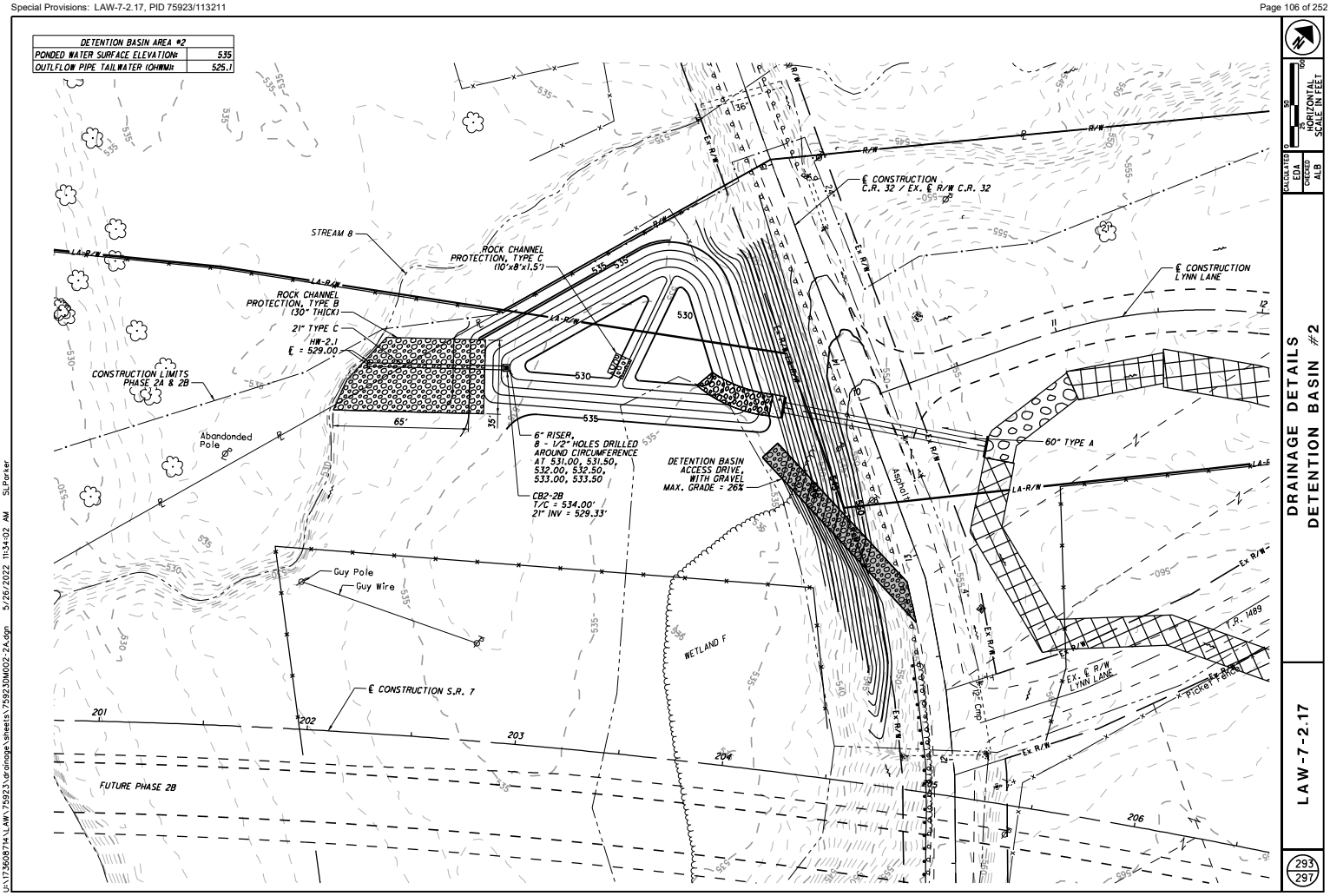

HORIZONTAL SCALE IN FEET
0 50 100

CALCULATED EDA
CHECKED ALB

DRAINAGE DETAILS
DETENTION BASIN #2

LAW-7-2.17

293
297

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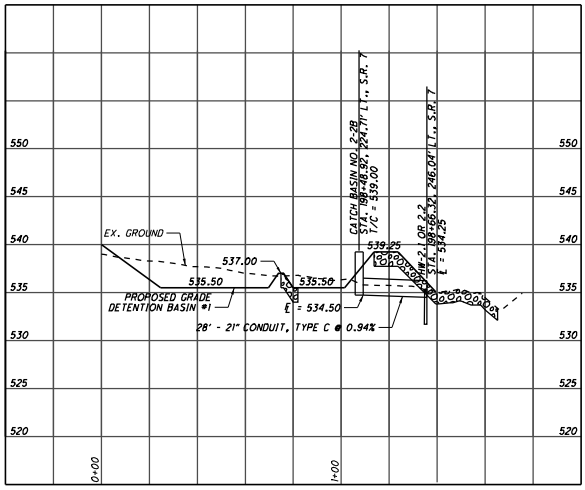
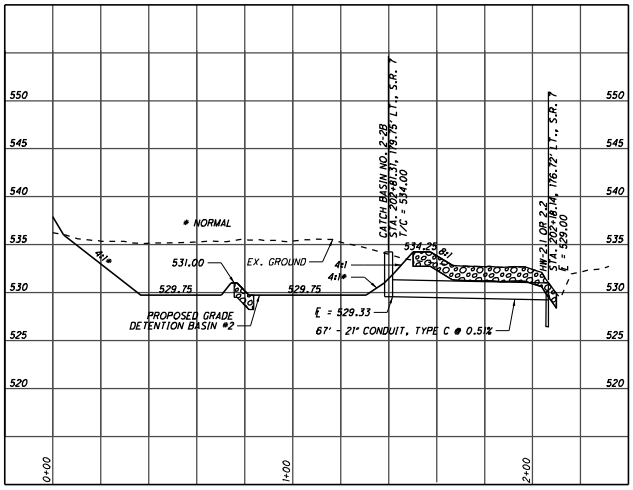




CALCULATED EDA
CHECKED ALB

SCALE IN FEET
0 20 40

DRAINAGE DETAILS
DETENTION BASIN PROFILES

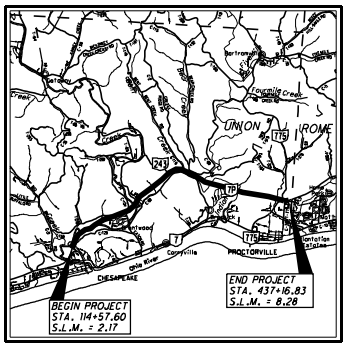
LAW-7-2.17

294
297

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION

LAW-7-2.17-PHASE 2B

VILLAGE OF CHESAPEAKE
VILLAGE OF PROCTORVILLE
UNION TOWNSHIP
ROME TOWNSHIP
LAWRENCE COUNTY



LOCATION MAP

LATITUDE: N 38°27'16" LONGITUDE: W 82°25'19"

SCALE IN MILES
0 1 2 3 4

PORTION TO BE IMPROVED
INTERSTATE HIGHWAY
FEDERAL ROUTES
STATE ROUTES
COUNTY & TOWNSHIP ROADS
OTHER ROADS

FOR DESIGN DESIGNATIONS AND DESIGN EXCEPTIONS, SEE SHEET 2.

UNDERGROUND UTILITIES
Contact Two Working Days Before You Dig
OHIO811.org Before You Dig
OHIO811. 8-1-1. or 1-800-362-2764
(Non-members must be called directly)

PLAN PREPARED BY:

Stantec
1500 Lake Shore Drive, Suite 100
Columbus, Ohio 43204
(614) 486-4383

OHIO DEPARTMENT OF TRANSPORTATION, DISTRICT NINE
650 EASTERN AVENUE, P.O. BOX 467
CHILLICOTHE, OHIO 45601

ENGINEERS SEAL:
SIGNED:
DATE:

ENGINEERS SEAL:
SIGNED:
DATE:

ENGINEERS SEAL:
SIGNED:
DATE:

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GEOMETRIC LAYOUT	11	CROSS SECTIONS - S.R. 775	486-504
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STANDARD CONSTRUCTION DRAWINGS	SUPPLEMENTAL SPECIFICATIONS	SPECIAL PROVISIONS

PROJECT DESCRIPTION

THIS PROJECT IS THE THIRD PHASE OF THE LAW-7-2.17 STATE ROUTE 7 RELOCATION PROJECT. THIS PROJECT WILL CONSTRUCT 6.11 MILES OF THE EASTBOUND LANES OF STATE ROUTE 7 BETWEEN STATE ROUTE 527 AND STATE ROUTE 607/775. THIS PROJECT ALSO INCLUDES A PARTIAL GRADE SEPARATED INTERCHANGE AT STATE ROUTE 527 AND A FULL INTERCHANGE AT STATE ROUTE 607/775. ALSO INCLUDED WITH THIS PROJECT IS THE CONSTRUCTION OF A ROUNDABOUT AT THE INTERSECTION OF STATE ROUTE 7 AND STATE ROUTE 243. THIS IMPROVEMENT INCLUDES THE RELOCATION OF 1.91 MILES OF STATE ROUTES, COUNTY AND TOWNSHIP ROADS AS WELL AS THE ADDITION OF 1.25 MILES OF RAMP AND TWELVE (12) CUL-DE-SACS AND DRIVES. A TOTAL OF NINE (9) STRUCTURES WILL BE DEVELOPED WHICH INCLUDE TRAFFIC OVERPASS AND STREAM CROSSING BRIDGES. WORK WILL INCLUDE NEW STORM SEWERS, CULVERTS, TRAFFIC CONTROL, PAVEMENT MARKING AND LIGHTING.

EARTH DISTURBED AREAS

PROJECT EARTH DISTURBED AREA:	ACRES
ESTIMATED CONTRACTOR EARTH DISTURBED AREA:	ACRES
NOTICE OF INTENT EARTH DISTURBED AREA:	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 CHANGES AND SUPPLEMENTAL SPECIFICATIONS 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 FOR THE SIDE ROADS AS DESCRIBED ON SHEETS XX-XX AND THAT PROVISIONS FOR THE MAINTENANCE AND SAFETY OF TRAFFIC WILL BE AS SET FORTH ON THE PLANS AND ESTIMATES.

APPROVED
DATE _____ DISTRICT DEPUTY DIRECTOR

APPROVED
DATE _____ DIRECTOR, DEPARTMENT OF TRANSPORTATION

FEDERAL PROJECT NO. E035(921) E060(482)
PID NO. 75923
CONSTRUCTION PROJECT NO.
RAILROAD INVOLVEMENT NONE
LAW-7-2.17
1 633

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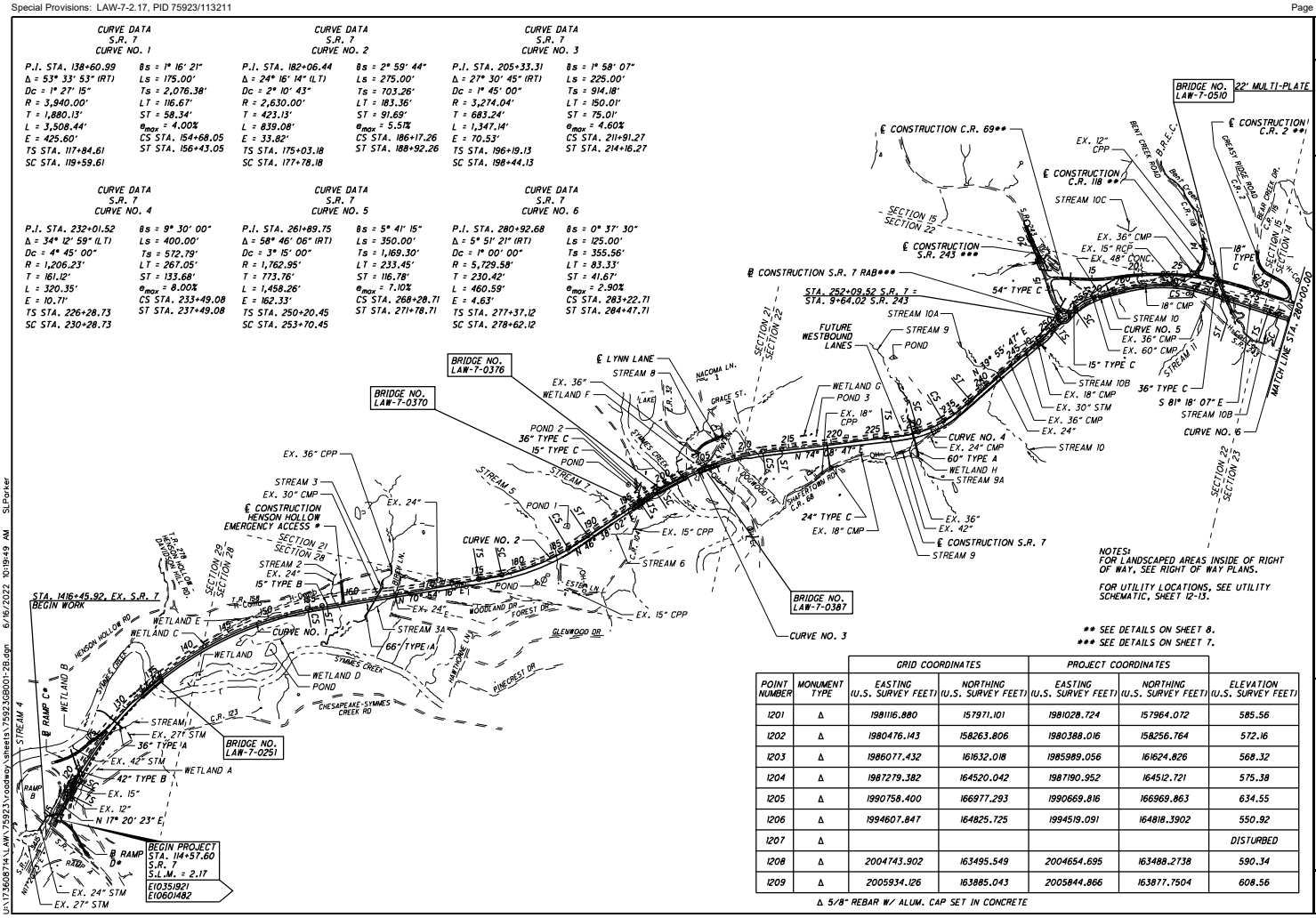

POINT NUMBER	MONUMENT TYPE	GRID COORDINATES EASTING (U.S. SURVEY FEET)	GRID COORDINATES NORTHING (U.S. SURVEY FEET)	PROJECT COORDINATES EASTING (U.S. SURVEY FEET)	PROJECT COORDINATES NORTHING (U.S. SURVEY FEET)	ELEVATION (U.S. SURVEY FEET)
1201	Δ	1981116.880	157971.101	1981028.724	157964.072	585.56
1202	Δ	1980476.143	158263.806	1980388.016	158256.764	572.16
1203	Δ	1986077.432	161632.018	1985989.056	161624.826	568.32
1204	Δ	1987279.382	164520.042	1987190.952	164512.721	575.38
1205	Δ	1990758.400	166977.293	1990669.816	166969.863	634.55
1206	Δ	1994607.847	164825.725	1994519.091	164818.3902	550.92
1207	Δ					DISTURBED
1208	Δ	2004743.902	163495.549	2004654.695	163488.2738	590.34
1209	Δ	2005934.126	163885.043	2005844.866	163877.7504	608.56

Δ 5/8" REBAR W/ ALUM. CAP SET IN CONCRETE

SCHEMATIC PLAN

LAW-7-2.17

3 633

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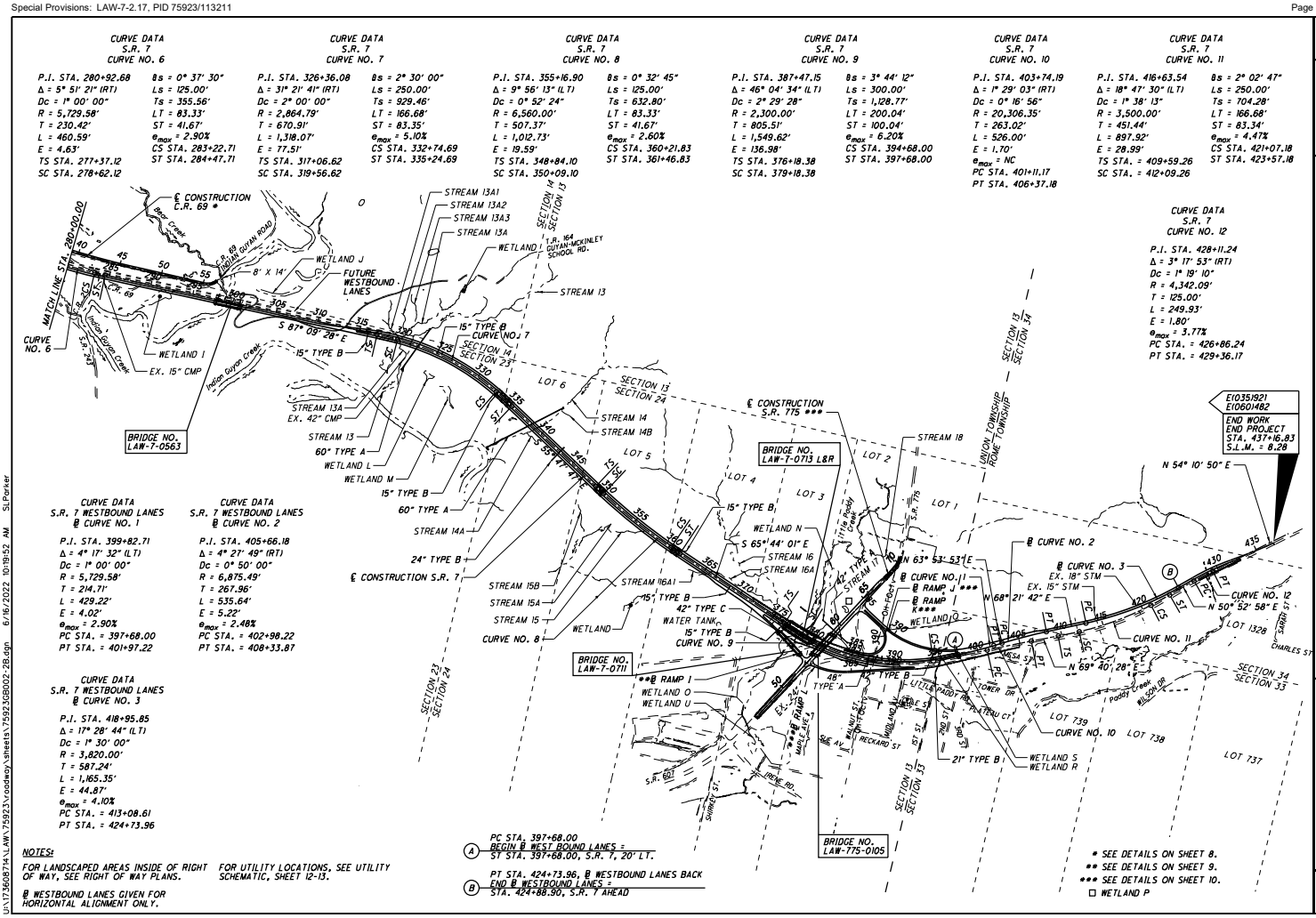

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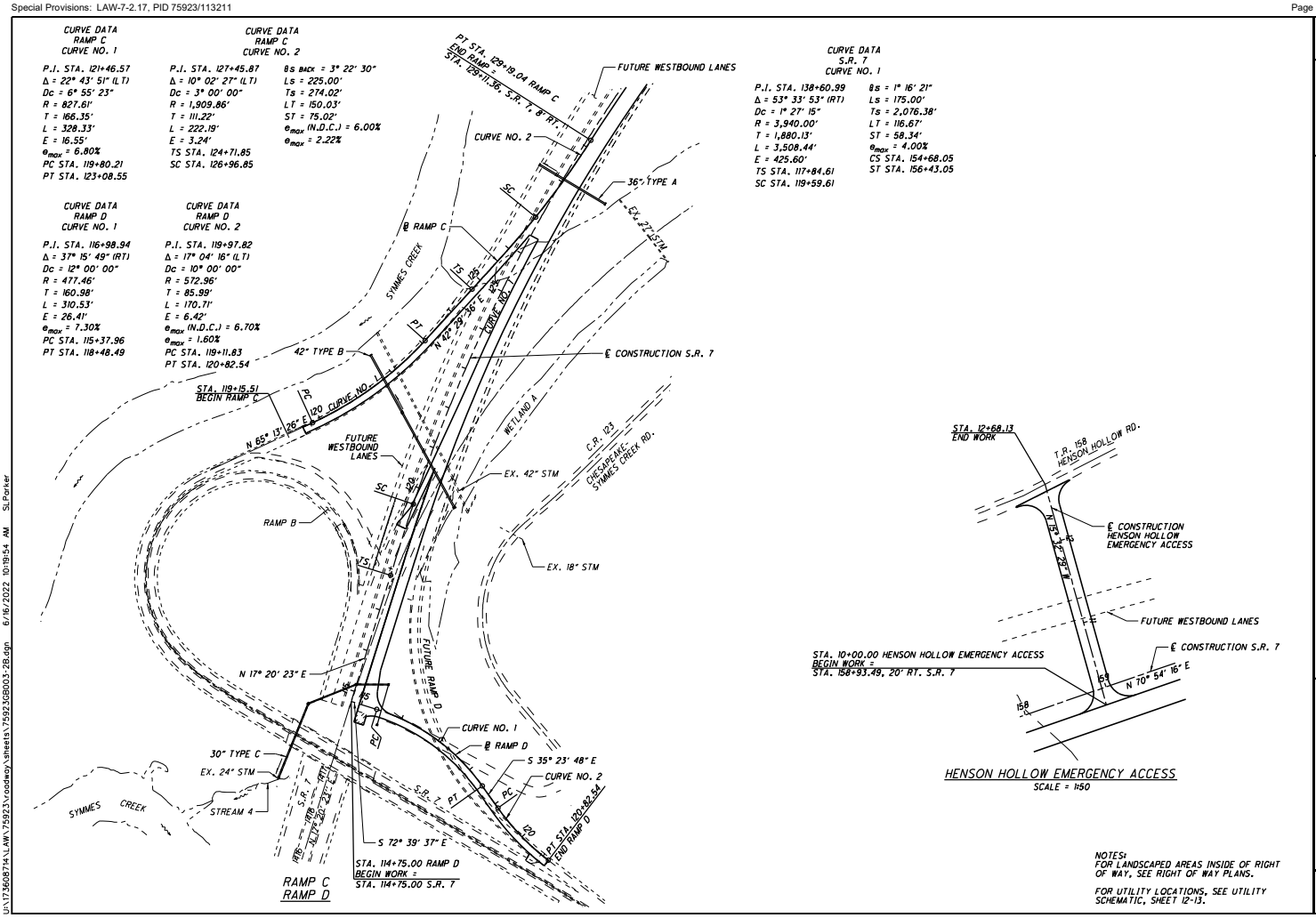

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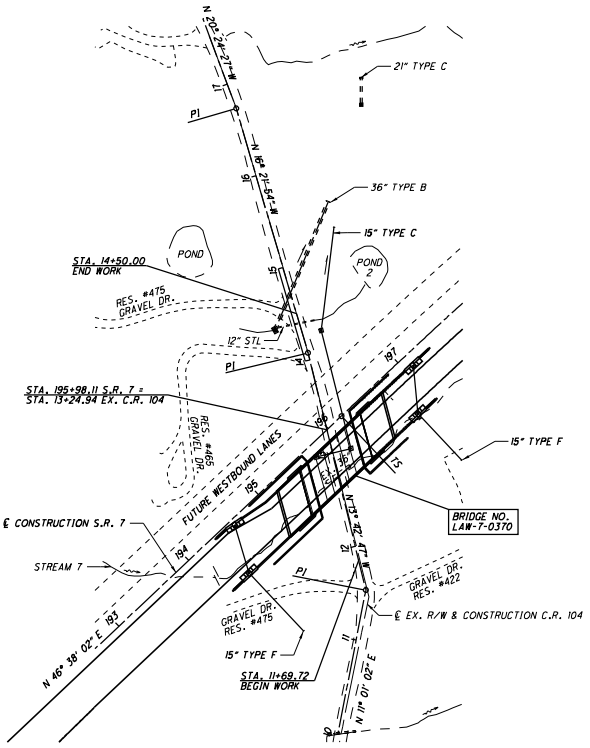
EX. C.R. 104

P.I. STA. 11+53.11
Δ = 2° 41' 45" (LT)
NO CURVE

P.I. STA. 14+07.46
Δ = 2° 39' 07" (LT)
NO CURVE

P.I. STA. 16+72.90
Δ = 4° 02' 33" (LT)
NO CURVE



C.R. 104

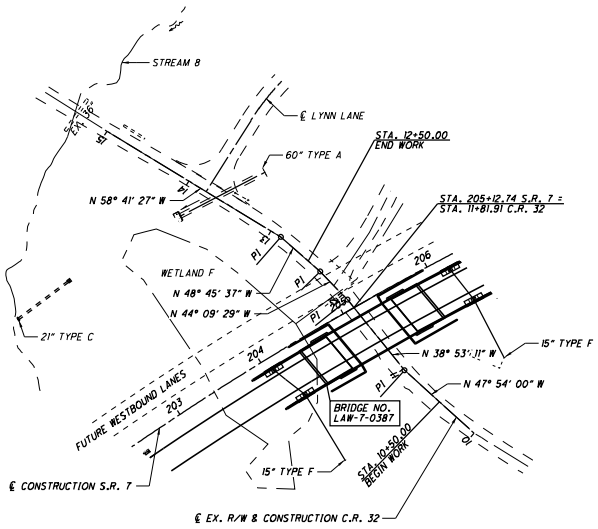
EX. C.R. 32

P.I. STA. 10+98.09
Δ = 9° 00' 49" (RT)
NO CURVE

P.I. STA. 11+92.44
Δ = 5° 16' 19" (LT)
NO CURVE

P.I. STA. 12+33.35
Δ = 4° 36' 07" (LT)
NO CURVE

P.I. STA. 12+87.96
Δ = 9° 55' 50" (LT)
NO CURVE



C.R. 32

NOTES:

FOR LANDSCAPED AREAS INSIDE OF RIGHT OF WAY, SEE RIGHT OF WAY PLANS.

FOR UTILITY LOCATIONS, SEE UTILITY SCHEMATIC, SHEETS 12-13.

HORIZONTAL SCALE IN FEET
0 50 100

SCHEMATIC PLAN

LAW-7-2.17

6
633

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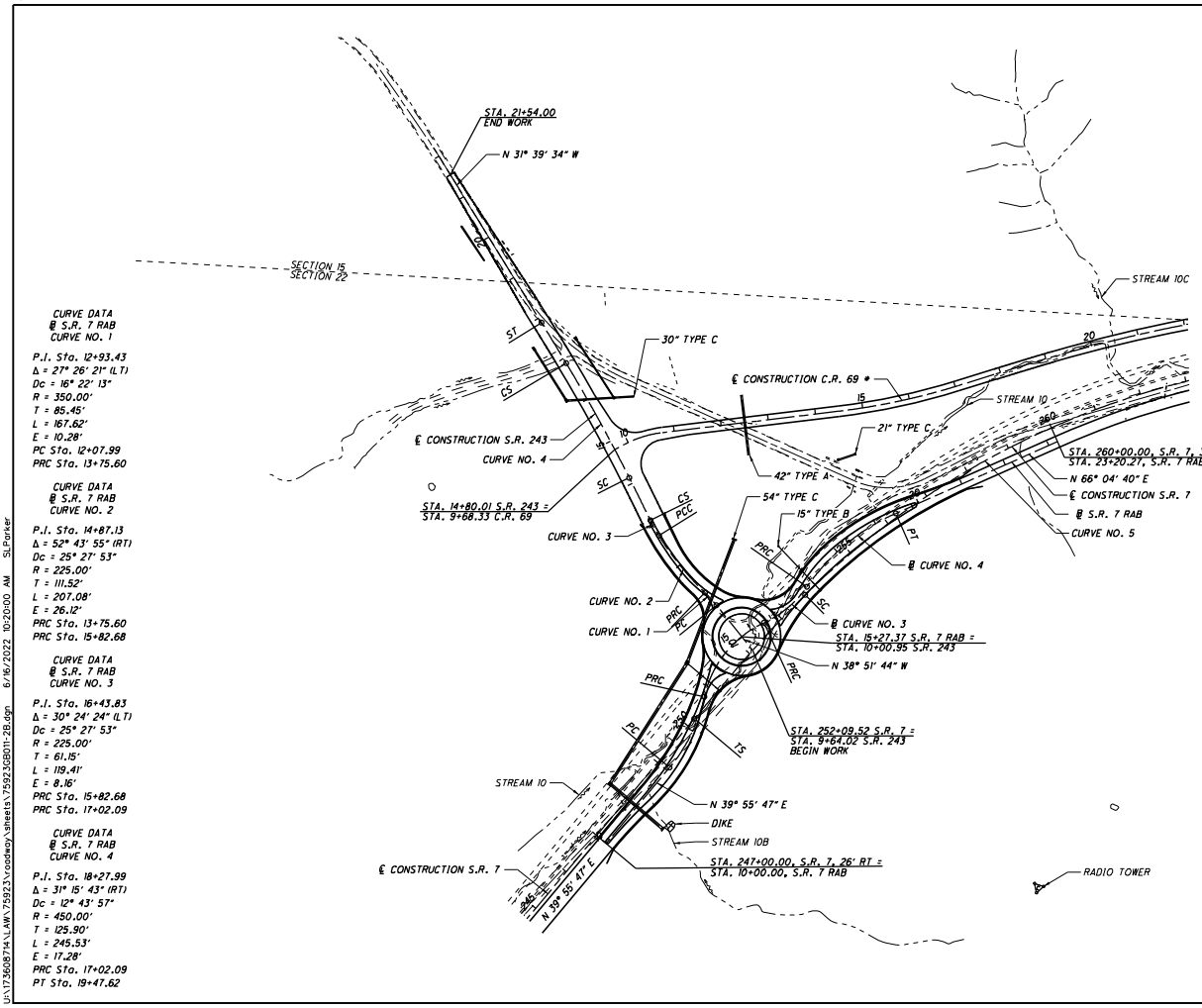

CURVE DATA @ S.R. 7 RAB CURVE NO. 1

P.I. Sta. 12+93.43
Δ = 27° 26' 21" (LT)
Dc = 16° 22' 13"
R = 350.00'
T = 85.45'
L = 167.62'
E = 10.28'
PC Sta. 12+07.99
PRC Sta. 13+75.60

CURVE DATA @ S.R. 7 RAB CURVE NO. 2

P.I. Sta. 14+87.13
Δ = 52° 43' 55" (RT)
Dc = 25° 27' 53"
R = 225.00'
T = 111.52'
L = 207.08'
E = 26.12'
PRC Sta. 13+75.60
PRC Sta. 15+82.68

CURVE DATA @ S.R. 7 RAB CURVE NO. 3

P.I. Sta. 16+43.83
Δ = 30° 24' 24" (LT)
Dc = 25° 27' 53"
R = 225.00'
T = 61.15'
L = 119.41'
E = 8.16'
PRC Sta. 15+82.68
PRC Sta. 17+02.09

CURVE DATA @ S.R. 7 RAB CURVE NO. 4

P.I. Sta. 18+27.99
Δ = 31° 15' 43" (RT)
Dc = 12° 43' 57"
R = 450.00'
T = 125.90'
L = 245.53'
E = 17.28'
PRC Sta. 17+02.09
PT Sta. 19+47.62

CURVE DATA S.R. 243 CURVE NO. 1

P.I. Sta. 11+03.86
Δ = 6° 51' 57" (LT)
Dc = 19° 05' 55"
R = 300.00'
T = 18.00'
L = 35.95'
E = 0.54'
e_{max} = 1.60%
PC Sta. 10+85.87
PRC Sta. 11+21.82

CURVE DATA S.R. 243 CURVE NO. 2

P.I. Sta. 11+99.38
Δ = 13° 36' 35" (RT)
Dc = 8° 48' 53"
R = 650.00'
T = 77.56'
L = 154.40'
E = 4.61'
e_{max} = 1.60%
PRC Sta. 11+21.82
PCC Sta. 12+76.21

CURVE DATA S.R. 243 CURVE NO. 3

P.I. Sta. 12+94.82
Δ = 6° 05' 09" (RT)
Dc = 16° 22' 13"
R = 350.00'
T = 18.61'
L = 37.18'
E = 0.49'
e_{max} = 1.60%
PCC Sta. 12+76.21
CS Sta. 13+13.39

CURVE DATA S.R. 243 CURVE NO. 4

P.I. Sta. 15+51.11
Δ = 5° 37' 36" (LT)
Dc = 1° 30' 00"
R = 3,819.72'
T = 137.62'
L = 275.13'
E = 2.48'
TS STA. 13+13.39
SC STA. 14+13.39
θs = 00° 45' 00"
Ls = 100.00'
Ts = 237.72'
LT = 66.67'
ST = 33.33'
e_{max} = 3.50%
CS Sta. 16+88.52
ST Sta. 17+88.52

CURVE DATA S.R. 7 CURVE NO. 5

P.I. STA. 261+89.75
Δ = 58° 46' 06" (RT)
Dc = 3° 15' 00"
R = 1,762.95'
T = 773.76'
L = 1,458.26'
E = 162.33'
TS STA. 250+20.45
SC STA. 253+70.45
θs = 5° 41' 15"
Ls = 350.00'
Ts = 1,169.30'
LT = 233.45'
ST = 116.78'
e_{max} = 7.10%
CS STA. 268+28.71
ST STA. 271+78.71

NOTES:
FOR LANDSCAPED AREAS INSIDE OF RIGHT OF WAY, SEE RIGHT OF WAY PLANS.

FOR UTILITY LOCATIONS, SEE UTILITY SCHEMATIC, SHEET 12-13.

* SEE DETAILS ON SHEET 8

HORIZONTAL SCALE IN FEET
0 100 200

SCHEMATIC PLAN

LAW-7-2.17

7
633

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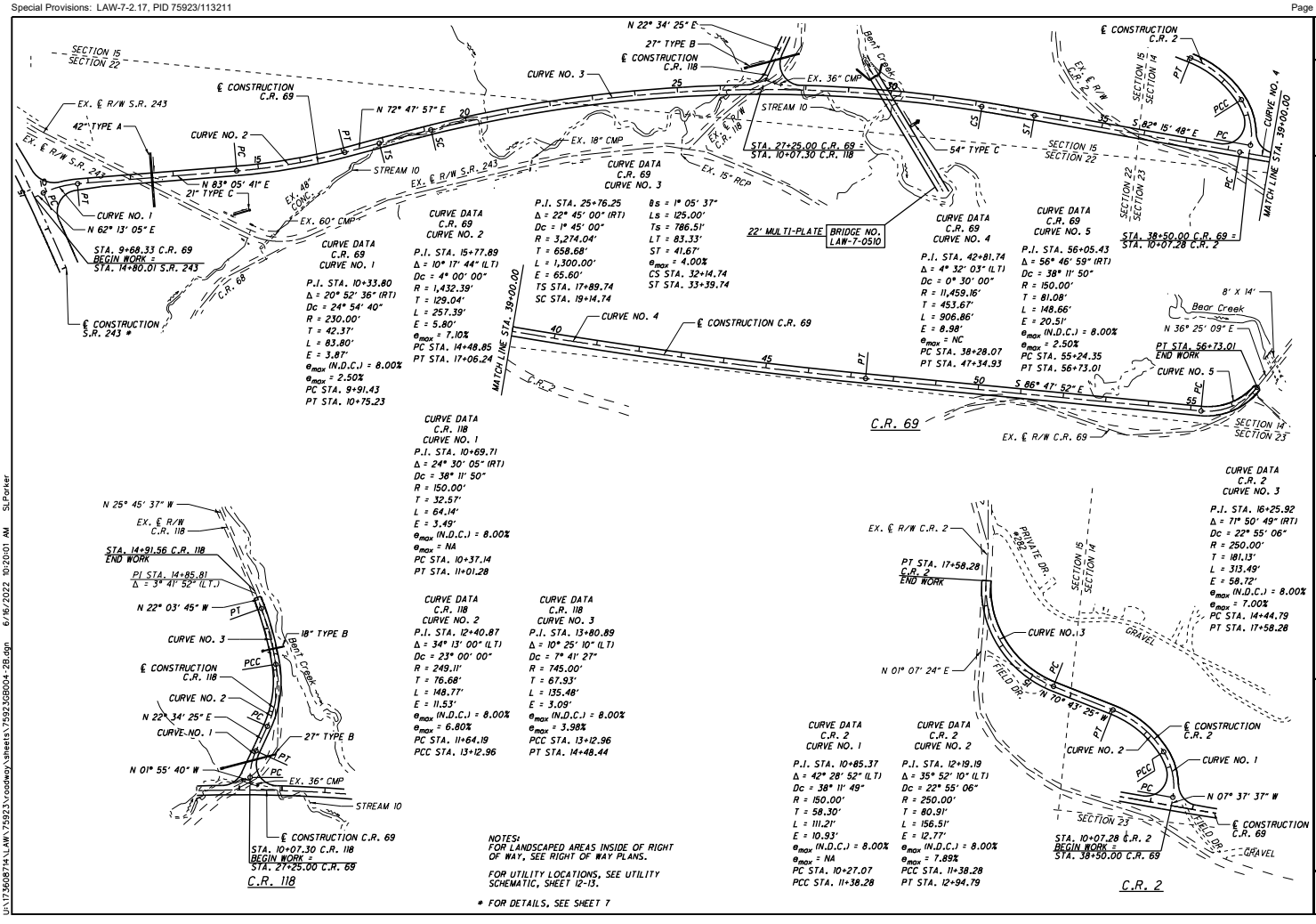

SCHEMATIC PLAN

LAW-7-2.17

HORIZONTAL SCALE IN FEET
0 100 200

8/633

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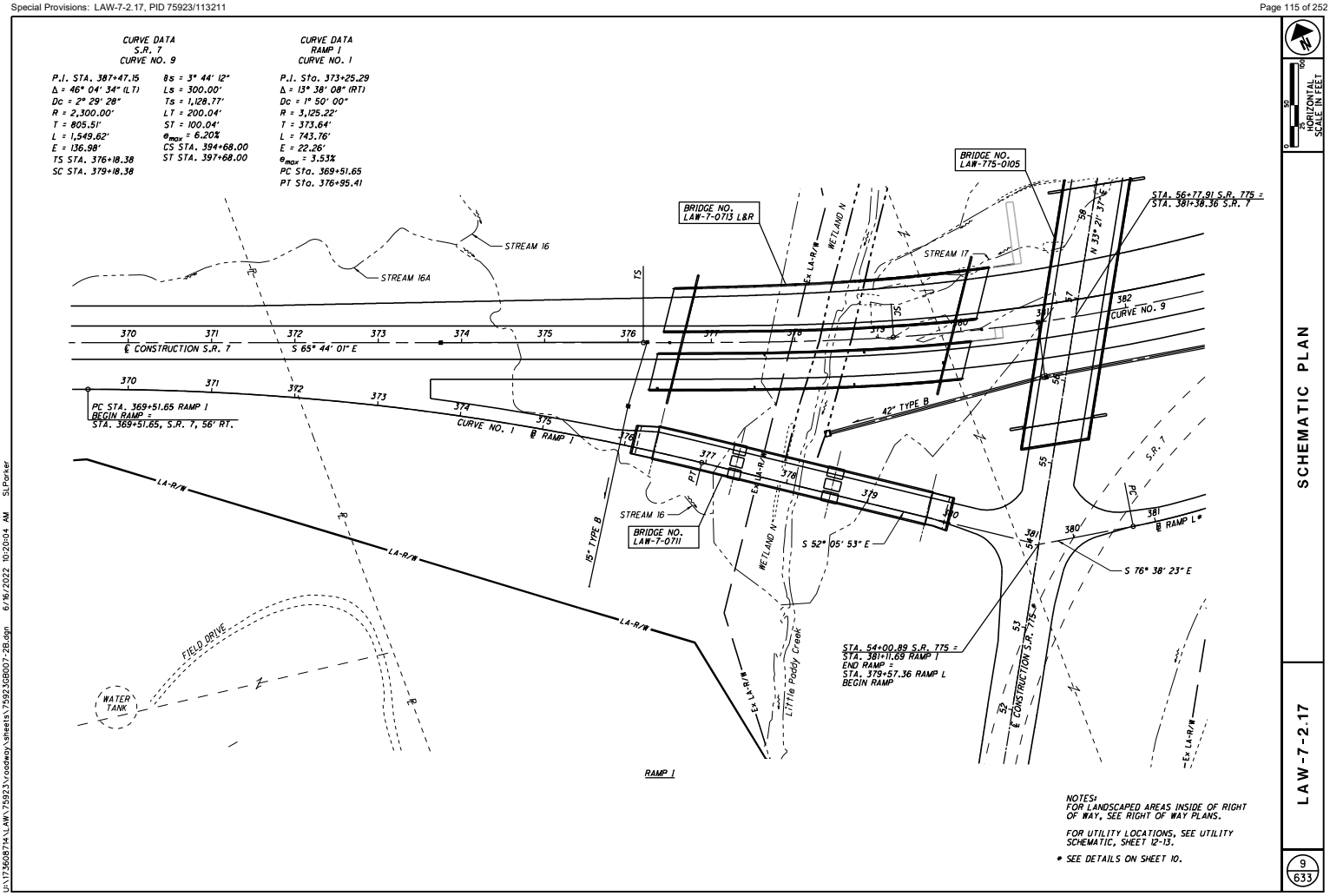

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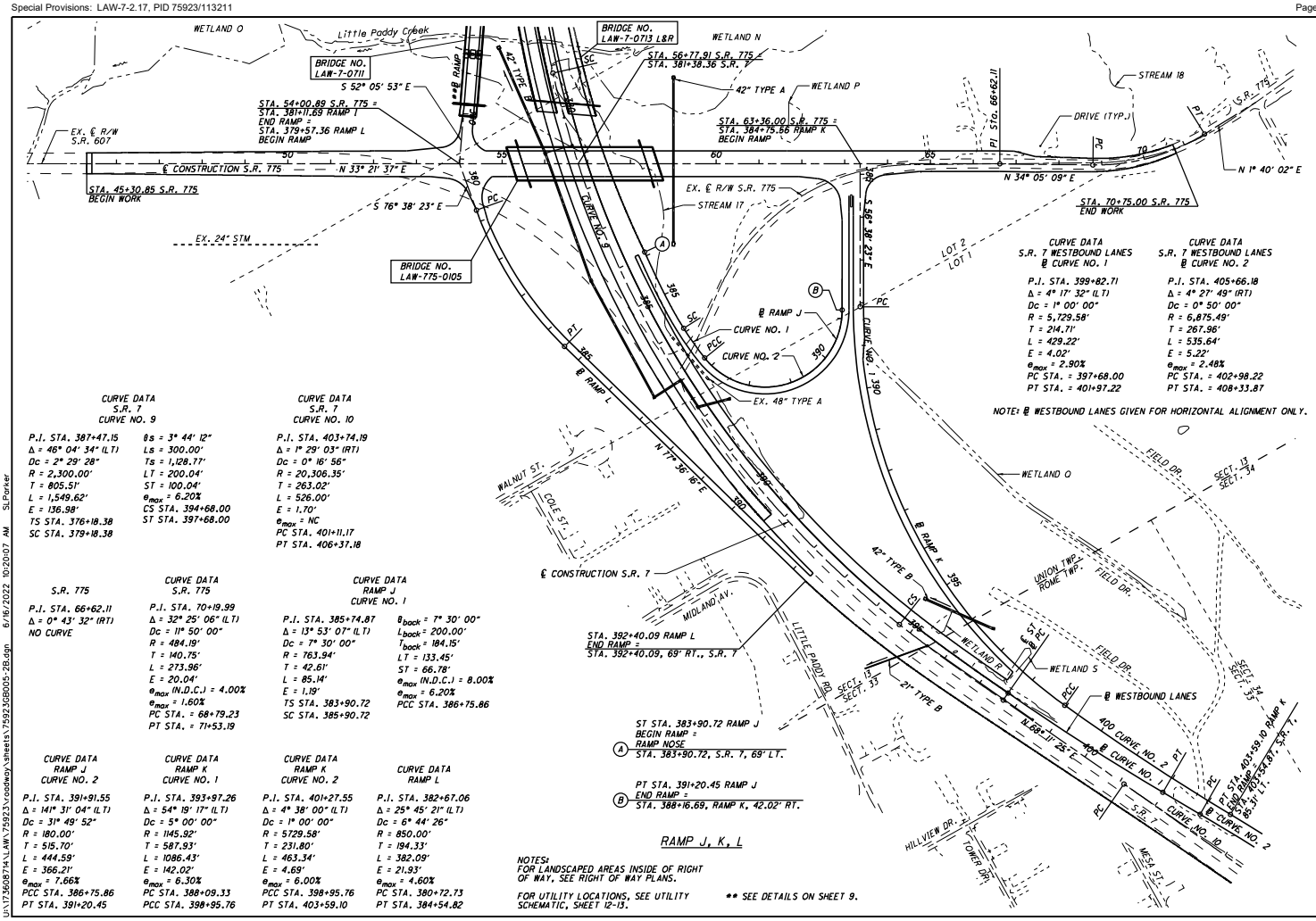

CURVE DATA
S.R. 7
CURVE NO. 9

P.I. STA. 387+47.15
Δ = 46° 04' 34" (LT)
Dc = 2° 29' 28"
R = 2,300.00'
T = 805.51'
L = 1,549.62'
E = 136.98'
TS STA. 376+18.38
SC STA. 379+18.38

θs = 3° 44' 12"
Ls = 300.00'
Ts = 1,128.77'
LT = 200.04'
ST = 100.04'
e_{max} = 6.20%
CS STA. 394+68.00
ST STA. 397+68.00

CURVE DATA
S.R. 7
CURVE NO. 10

P.I. STA. 403+74.19
Δ = 1° 29' 03" (RT)
Dc = 0° 16' 56"
R = 20,306.35'
T = 263.02'
L = 526.00'
E = 1.70'
e_{max} = NC
PC STA. 401+11.17
PT STA. 406+37.18

S.R. 775

P.I. STA. 66+62.11
Δ = 0° 43' 32" (RT)
NO CURVE

CURVE DATA
S.R. 775

P.I. STA. 70+19.99
Δ = 32° 25' 06" (LT)
Dc = 11° 50' 00"
R = 484.19'
T = 140.75'
L = 273.96'
E = 20.04'
e_{max} (N.D.C.) = 4.00%
e_{max} = 1.60%
PC STA. = 68+79.23
PT STA. = 71+53.19

CURVE DATA
RAMP J
CURVE NO. 1

P.I. STA. 385+74.87
Δ = 13° 53' 07" (LT)
Dc = 7° 30' 00"
R = 763.94'
T = 42.61'
L = 85.14'
E = 1.19'
TS STA. 383+90.72
SC STA. 385+90.72

θ_{back} = 7° 30' 00"
L_{back} = 200.00'
I_{back} = 184.15'
LT = 133.45'
ST = 66.78'
e_{max} (N.D.C.) = 8.00%
e_{max} = 6.20%
PCC STA. 386+75.86

CURVE DATA
RAMP J
CURVE NO. 2

P.I. STA. 391+91.55
Δ = 141° 31' 04" (LT)
Dc = 31° 49' 52"
R = 180.00'
T = 515.70'
L = 444.59'
E = 366.21'
e_{max} = 7.66%
PCC STA. 386+75.86
PT STA. 391+20.45

CURVE DATA
RAMP K
CURVE NO. 1

P.I. STA. 393+87.26
Δ = 54° 19' 17" (LT)
Dc = 5° 00' 00"
R = 1145.92'
T = 587.93'
L = 1086.43'
E = 142.02'
e_{max} = 6.30%
PC STA. 388+09.33
PCC STA. 398+95.76

CURVE DATA
RAMP K
CURVE NO. 2

P.I. STA. 401+27.55
Δ = 4° 38' 00" (LT)
Dc = 1° 00' 00"
R = 5729.58'
T = 231.80'
L = 463.34'
E = 4.69'
e_{max} = 6.00%
PCC STA. 398+95.76
PT STA. 403+59.10

CURVE DATA
RAMP L

P.I. STA. 382+67.06
Δ = 25° 45' 21" (LT)
Dc = 6° 44' 26"
R = 850.00'
T = 194.33'
L = 382.09'
E = 21.93'
e_{max} = 4.60%
PC STA. 380+72.73
PT STA. 384+54.82

CURVE DATA
S.R. 7 WESTBOUND LANES
@ CURVE NO. 1

P.I. STA. 399+82.71
Δ = 4° 17' 32" (LT)
Dc = 1° 00' 00"
R = 5,729.58'
T = 214.71'
L = 429.22'
E = 4.02'
e_{max} = 2.90%
PC STA. = 397+68.00
PT STA. = 401+97.22

CURVE DATA
S.R. 7 WESTBOUND LANES
@ CURVE NO. 2

P.I. STA. 405+66.18
Δ = 4° 27' 49" (RT)
Dc = 0° 50' 00"
R = 6,875.49'
T = 267.96'
L = 535.64'
E = 5.22'
e_{max} = 2.48%
PC STA. = 402+98.22
PT STA. = 408+33.87

NOTE: @ WESTBOUND LANES GIVEN FOR HORIZONTAL ALIGNMENT ONLY.

STA. 392+40.09 RAMP L
END RAMP =
STA. 392+40.09, 69' RT., S.R. 7

ST STA. 383+90.72 RAMP J
BEGIN RAMP =
RAMP NOSE
(A) STA. 383+90.72, S.R. 7, 69' LT.

PT STA. 391+20.45 RAMP J
END RAMP =
(B) STA. 388+16.69, RAMP K, 42.02' RT.

RAMP J, K, L

NOTES:
FOR LANDSCAPED AREAS INSIDE OF RIGHT OF WAY, SEE RIGHT OF WAY PLANS.

FOR UTILITY LOCATIONS, SEE UTILITY SCHEMATIC, SHEET 12-13.

** SEE DETAILS ON SHEET 9.

SCHEMATIC PLAN

LAW-7-2.17

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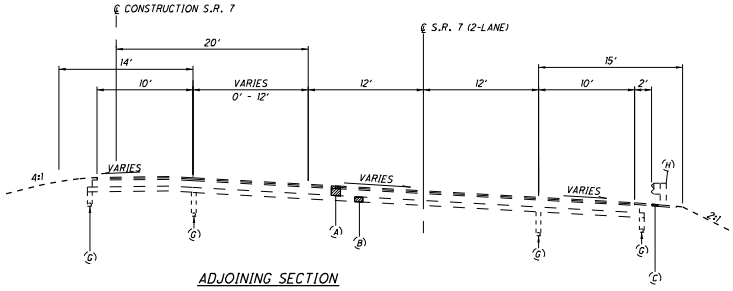
LEGEND

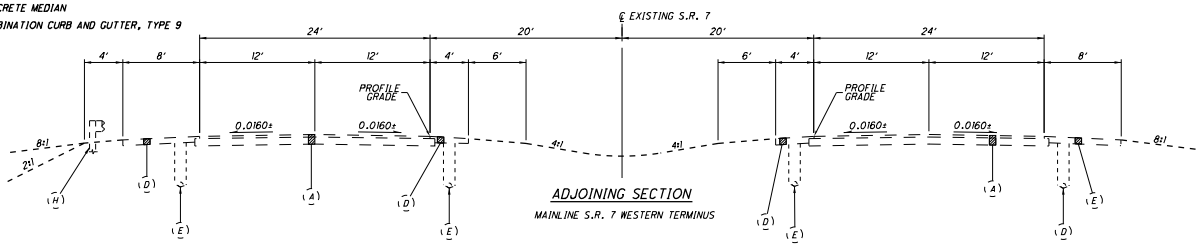
1. ITEM 442 - 1 1/2" ASPHALT CONCRETE SURFACE COURSE, 12.5MM, TYPE A (446)
2. ITEM 442 - 1 3/4" ASPHALT CONCRETE INTERMEDIATE COURSE, 12.5MM, TYPE A (446)
3. ITEM 302 - 7" ASPHALT CONCRETE BASE, PG64-22, (449)
4. ITEM 304 - 6" AGGREGATE BASE
5. ITEM 407 - TACK COAT
6. ITEM 609 - CURB, TYPE 6
7. ITEM 609 - COMBINATION CURB AND GUTTER, TYPE 2
8. ITEM 605 - AGGREGATE DRAIN (SLOPE @ 0.04 MIN., 0.08 DESIRABLE)
9. ITEM 441 - 2" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, (449), (UNDER GUARDRAIL), AS PER PLAN
10. ITEM 605 - 4" BASE PIPE UNDERDRAIN
11. ITEM 605 - 6" SHALLOW PIPE UNDERDRAIN
12. ITEM 605 - 6" BASE PIPE UNDERDRAIN
13. ITEM 441 - 1 1/4" ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (449), PG64-22
14. ITEM 441 - 1 3/4" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, (449)
15. ITEM 301 - 3" ASPHALT CONCRETE BASE PG64-22, (449)
16. ITEM 659 - SEEDING AND MULCHING
17. ITEM 204 - SUBGRADE COMPACTION
18. ITEM 204 - PROOF ROLLING
19. ITEM 606 - GUARDRAIL, TYPE MGS
20. ITEM 606 - GUARDRAIL, TYPE MGS WITH LONG POSTS
21. ITEM 609 - CONCRETE MEDIAN
22. ITEM 609 - COMBINATION CURB AND GUTTER, TYPE 9

(A) EX. 12"± ASPHALT CONCRETE
(B) EX. 6"± SUBBASE
(C) 2" ASPHALT CONCRETE
(D) ASPHALT CONCRETE BERM
(E) UNDERDRAIN
(F) GUARDRAIL, TYPE 5



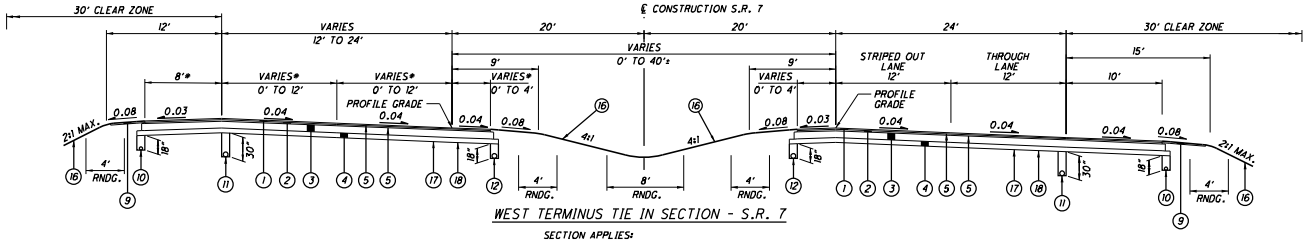
ADJOINING SECTION

MAINLINE S.R. 7 EASTERN TERMINUS



ADJOINING SECTION

MAINLINE S.R. 7 WESTERN TERMINUS



WEST TERMINUS TIE IN SECTION - S.R. 7

SECTION APPLIES:
STA. 114+30.42 TO STA. 120+56.37
* MILL/FILL EXISTING SECTION FROM STA. 114+30.42 TO STA. 118+99.14

NOTES:
FOR DITCH DETAILS, SEE SHEET 23
FOR EDGE COURSE DETAILS, SEE SHEET 24
FOR EXACT LOCATION OF UNDERDRAINS, SEE UNDERDRAIN TABLE SHEETS 579-583

TYPICAL SECTIONS - S.R. 7

LAW-7-2.17

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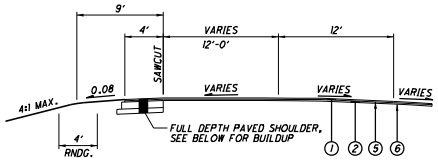
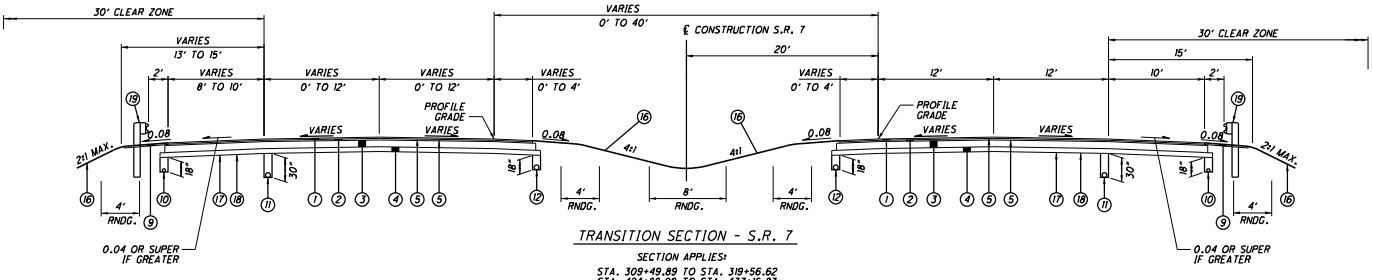


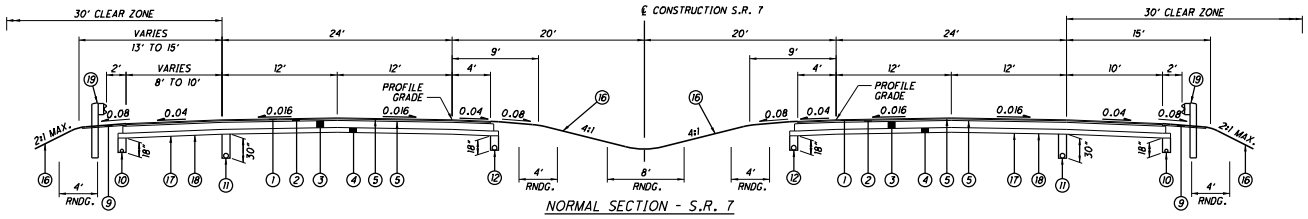
OVERLAY SECTION - S.R. 7

SECTION APPLIES:
STA. 427+42.37 TO STA. 437+16.83



TRANSITION SECTION - S.R. 7

SECTION APPLIES:
STA. 309+49.89 TO STA. 319+56.62
STA. 424+88.90 TO STA. 437+16.83



NORMAL SECTION - S.R. 7

SECTION APPLIES:
STA. 335+67.69 TO STA. 348+41.10
STA. 361+89.83 TO STA. 375+75.38

NOTES:
- SUPERELEVATION TO BE OPPOSITE HAND TO TYPICAL SHOWN
- FOR LEGEND, SEE SHEET 14
- FOR DITCH DETAILS, SEE SHEET 23
- FOR EDGE COURSE DETAILS, SEE SHEET 24
- FOR SUPERELEVATED SHOULDER DETAILS, SEE DETAIL A, SHEET 24
- FOR EXACT LOCATION OF UNDERDRAINS, SEE UNDERDRAIN TABLE SHEETS 579-583

TYPICAL SECTION - S.R. 7

LAW-7-2.17

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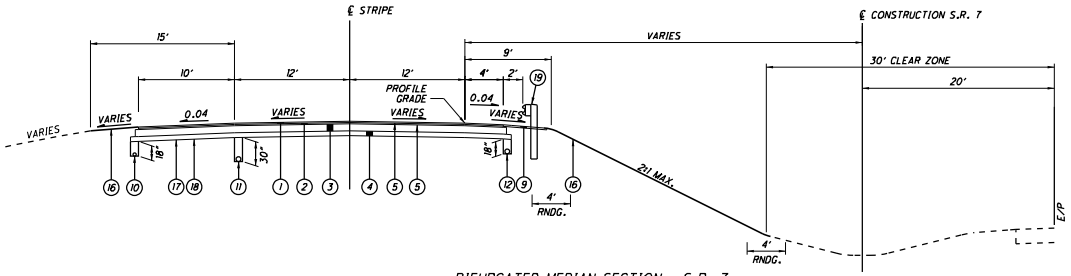
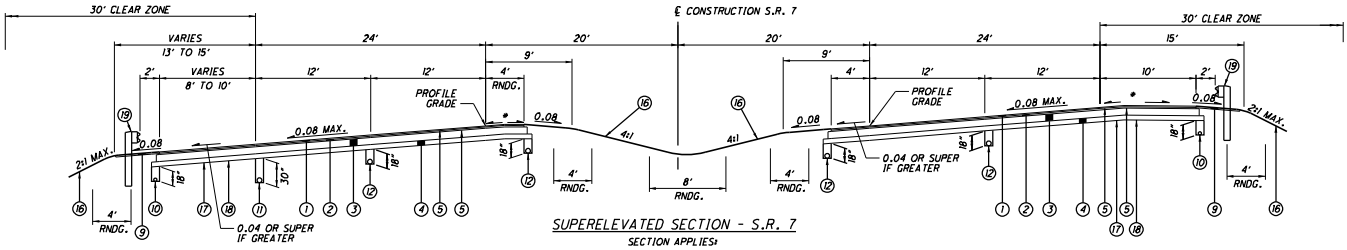


BIFURCATED MEDIAN SECTION - S.R. 7

SECTION APPLIES:
STA. 397+68.00 TO STA. 424+88.90



SUPERELEVATED SECTION - S.R. 7

SECTION APPLIES:
+ STA. 319+56.52 TO STA. 335+67.69
STA. 348+41.10 TO STA. 361+89.83
STA. 375+75.38 TO STA. 397+68.00

NOTES:
+ SUPERELEVATION TO BE OPPOSITE HAND TO TYPICAL SHOWN
FOR LEGEND, SEE SHEET 14
FOR DITCH DETAILS, SEE SHEET 23
FOR EDGE COURSE DETAILS, SEE SHEET 24
* FOR SUPERELEVATED SHOULDER DETAILS, SEE DETAIL A, SHEET 24
FOR EXACT LOCATION OF UNDERDRAINS, SEE UNDERDRAIN TABLE SHEETS 579-583

TYPICAL SECTION - S.R. 7

LAW-7-2.17

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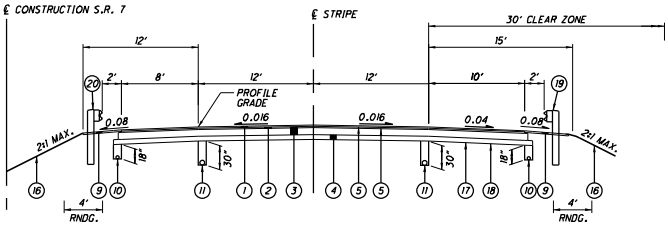
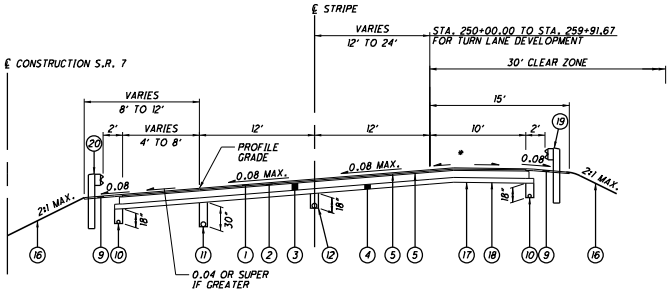


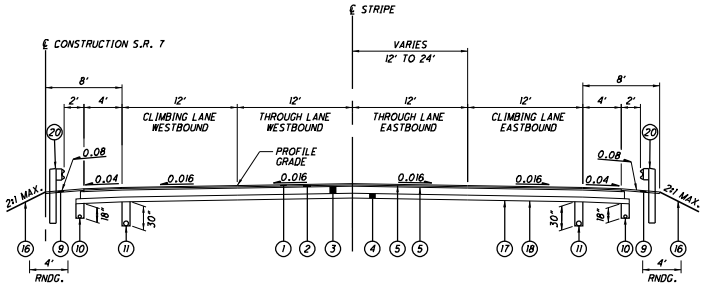
NORMAL SECTION - S.R. 7

SECTION APPLIES:
STA. 156+86.05 TO STA. 167+72.52
STA. 195+00.00 TO STA. 195+76.13
STA. 272+21.71 TO STA. 276+94.12
STA. 284+90.71 TO STA. 309+49.89



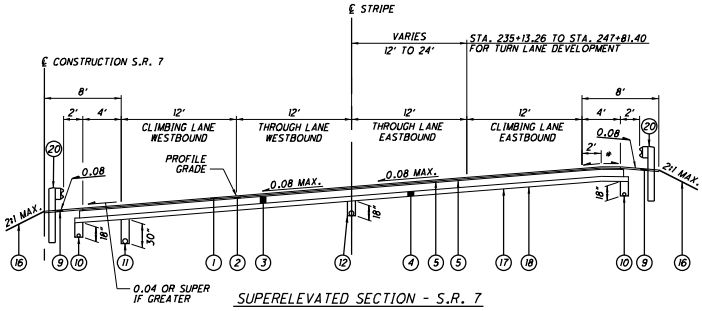
SUPERELEVATED SECTION - S.R. 7

SECTION APPLIES:
+ STA. 120+56.37 TO STA. 156+86.05
STA. 195+76.13 TO STA. 209+79.72
+ STA. 257+84.54 TO STA. 272+21.71
STA. 276+94.12 TO STA. 284+90.71
STA. 376+00.00 TO STA. 390+75.00



NORMAL SECTION - S.R. 7
WITH CLIMBING LANES

SECTION APPLIES:
STA. 167+72.52 TO STA. 174+60.18
STA. 189+35.26 TO STA. 195+00.00
STA. 214+59.27 TO STA. 225+85.73
STA. 237+92.08 TO STA. 247+00.00



SUPERELEVATED SECTION - S.R. 7
WITH CLIMBING LANES

SECTION APPLIES:
STA. 174+60.18 TO STA. 189+35.26
+ STA. 209+79.72 TO STA. 214+59.27
STA. 225+85.73 TO STA. 237+92.08

NOTES:
+ SUPERELEVATION TO BE OPPOSITE HAND TO TYPICAL SHOWN
FOR LEGEND, SEE SHEET 14
FOR DITCH DETAILS, SEE SHEET 23
FOR EDGE COURSE DETAILS, SEE SHEET 24
* FOR SUPERELEVATED SHOULDER DETAILS, SEE DETAIL A, SHEET 24
FOR EXACT LOCATION OF UNDERDRAINS, SEE UNDERDRAIN TABLE SHEETS 579-583

TYPICAL SECTION - S.R. 7

LAW-7-2.17

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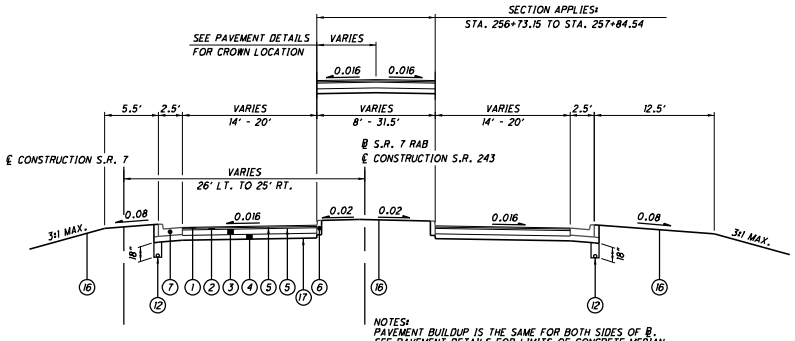
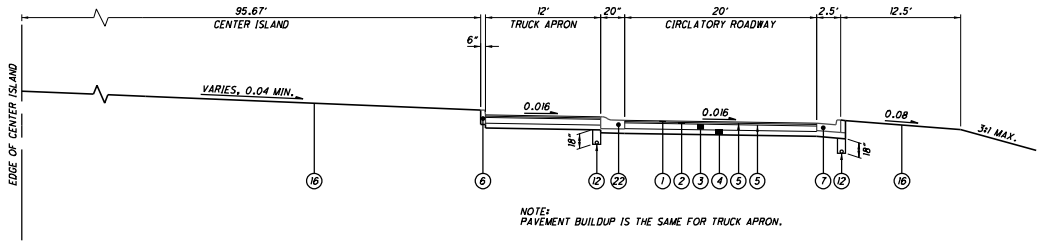


NORMAL SECTION - S.R. 7 RAB & S.R. 243

SECTION APPLIES:
S.R. 7 STA. 247+00.00 TO STA. 251+00.00
S.R. 7 STA. 253+00.00 TO STA. 257+84.54
S.R. 243 STA. 11+00.00 TO STA. 13+07.05



ROUNDABOUT SECTION

NOTES:
FOR DITCH DETAILS, SEE SHEET 23
FOR EDGE COURSE DETAILS, SEE SHEET 24
FOR EXACT LOCATION OF UNDERDRAINS, SEE UNDERDRAIN TABLE SHEETS 579-583

TYPICAL SECTION - S.R. 7

LAW-7-2.17

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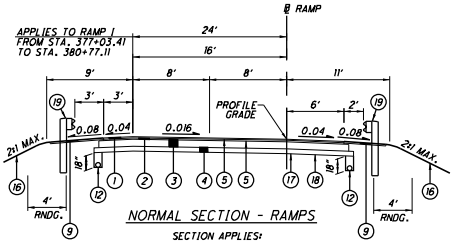
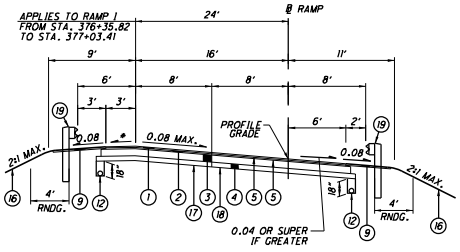


NORMAL SECTION - RAMPS

SECTION APPLIES:

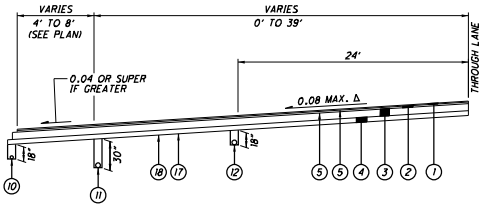
RAMPS C & D @ WESTERN TERMINUS
RAMPS I, J, K & L @ S.R. 775



SUPERELEVATED SECTION - RAMPS

SECTION APPLIES:

RAMPS C & D @ WESTERN TERMINUS
RAMPS I, J, K & L @ S.R. 775



SPEED LANE CHANGE

SECTION APPLIES:

STA. 126+47.37 TO STA. 132+00.00

NOTES:

PROFILE GRADE ON RIGHT SIDE OF DIRECTION OF TRAVEL
\+ SUPERELEVATION TO BE OPPOSITE HAND TO TYPICAL SHOWN
FOR LEGEND, SEE SHEET 14
FOR DITCH DETAILS, SEE SHEET 23
FOR EDGE COURSE DETAILS, SEE SHEET 24
* FOR SUPERELEVATED SHOULDER DETAILS, SEE DETAIL A, SHEET 24
FOR EXACT LOCATION OF UNDERDRAINS, SEE UNDERDRAIN TABLE SHEETS 579-583
Δ DENOTES MAXIMUM FOR ENTIRE PROJECT, FOR SPECIFIC CURVE SUPERELEVATION, SEE PLANS

TYPICAL SECTIONS - RAMPS

LAW-7-2.17

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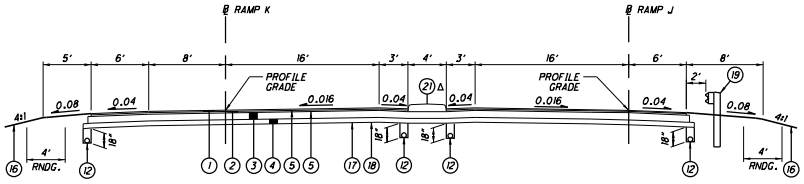
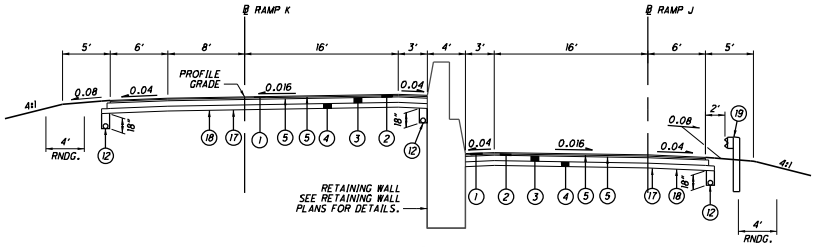


NORMAL SECTION - RAMPS J & K CONCRETE MEDIAN

SECTION APPLIES:

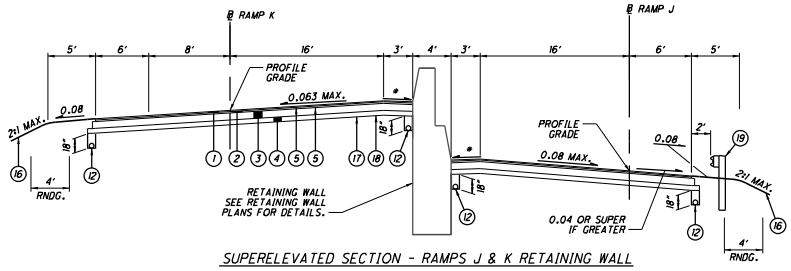
STA. 384+75.56 TO STA. 385+75.77
Δ STA. 385+48.00 TO STA. 385+75.77



NORMAL SECTION - RAMPS

SECTION APPLIES:

STA. 385+75.77 TO STA. 387+63.83



SUPERELEVATED SECTION - RAMPS J & K RETAINING WALL

SECTION APPLIES:

STA. 387+63.83 TO STA. 388+64.51

NOTES:

+ SUPERELEVATION TO BE OPPOSITE HAND TO TYPICAL SHOWN
FOR LEGEND, SEE SHEET 14
FOR DITCH DETAILS, SEE SHEET 23
FOR EDGE COURSE DETAILS, SEE SHEET 24
* FOR SUPERELEVATED SHOULDER DETAILS, SEE DETAIL A, SHEET 24
FOR EXACT LOCATION OF UNDERDRAINS, SEE UNDERDRAIN TABLE SHEETS 579-583

TYPICAL SECTIONS - RAMPS

LAW-7-2.17

20
633

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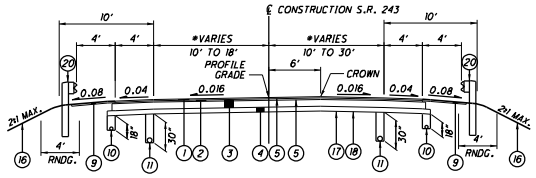
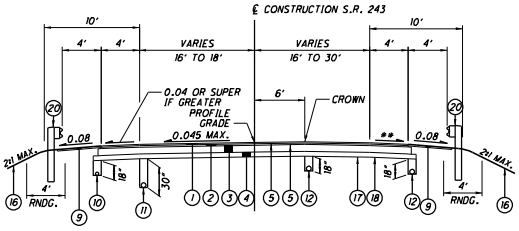


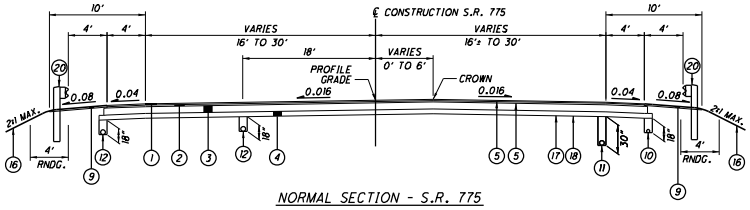
NORMAL SECTION - S.R. 243

SECTION APPLIES:
STA. 12+51.68 TO STA. 12+67.39
STA. 18+34.52 TO STA. 21+54.00
* OVERLAY EXISTING SECTION FROM STA. 19+05.08 TO STA. 21+54.00



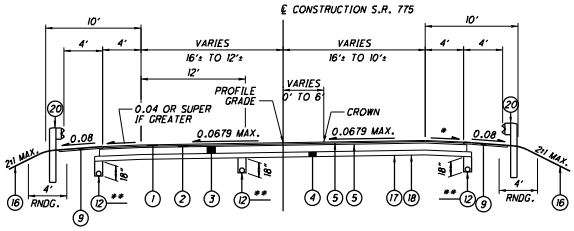
SUPERELEVATED SECTION - S.R. 243

SECTION APPLIES:
+ STA. 9+36.00 TO STA. 12+51.68
STA. 12+67.39 TO STA. 18+34.52



NORMAL SECTION - S.R. 775

SECTION APPLIES:
STA. 45+42.93 TO STA. 68+10.76



SUPERELEVATED SECTION - S.R. 775

SECTION APPLIES:
STA. 68+10.76 TO STA. 70+75.00

** AGGREGATE DRAINS TO BE USED FROM STA. 65+50.37 TO STA. 70+75.00.

NOTES:
+ SUPERELEVATION TO BE OPPOSITE HAND TO TYPICAL SHOWN
FOR LEGEND, SEE SHEET 14
FOR DITCH DETAILS, SEE SHEET 23
FOR EDGE COURSE DETAILS, SEE SHEET 24
* FOR SUPERELEVATED SHOULDER DETAILS, SEE DETAIL A, SHEET 24
FOR EXACT LOCATION OF UNDERDRAINS, SEE UNDERDRAIN TABLE SHEETS 579-583

TYPICAL SECTIONS - S.R. 243 & S.R. 775

LAW-7-2.17

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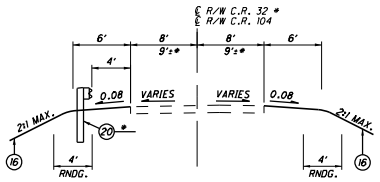
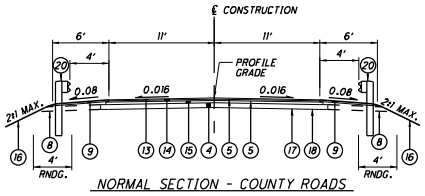


NORMAL SECTION - SIDE ROADS

SECTION APPLIES

C.R. 104
C.R. 32

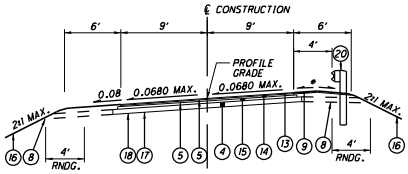


NORMAL SECTION - COUNTY ROADS

SECTION APPLIES:

C.R. 69

STA. 9+90.51 TO STA. 13+27.35
STA. 33+77.74 TO STA. 54+56.85

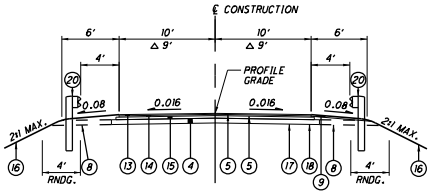


SUPERELEVATED SECTION - SIDE ROADS

SECTION APPLIES

C.R. 118

STA. 10+99.19 TO STA. 14+76.01



NORMAL SECTION - SIDE ROADS

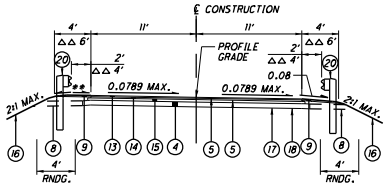
SECTION APPLIES

HENSON HOLLOW EMERGENCY ACCESS

STA. 10+00.00 TO STA. 12+60.04

△ C.R. 118

STA. 10+18.30 TO STA. 10+99.19



SUPERELEVATED SECTION - COUNTY ROADS

SECTION APPLIES:

△△ C.R. 69

STA. 13+27.35 TO STA. 33+77.74
STA. 54+56.85 TO STA. 56+73.01

C.R. 2

+ STA. 10+28.28 TO STA. 12+40.34
STA. 12+40.34 TO STA. 17+58.28

NOTES:

+ SUPERELEVATION TO BE OPPOSITE HAND TO TYPICAL SHOWN
FOR LEGEND, SEE SHEET 14
FOR DITCH DETAILS, SEE SHEET 23
FOR EDGE COURSE DETAILS, SEE SHEET 24
* FOR SUPERELEVATED SHOULDER DETAILS, SEE DETAIL A, SHEET 24
FOR EXACT LOCATION OF UNDERDRAINS, SEE UNDERDRAIN TABLE SHEETS 579-583

TYPICAL SECTIONS - COUNTY ROADS AND SIDE ROADS

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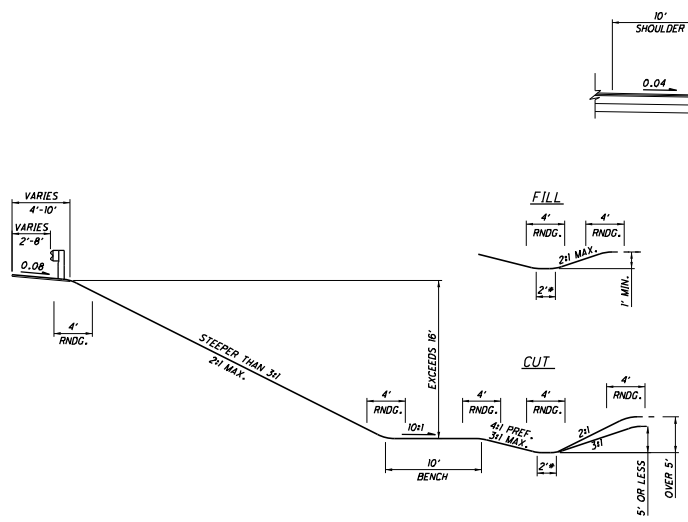
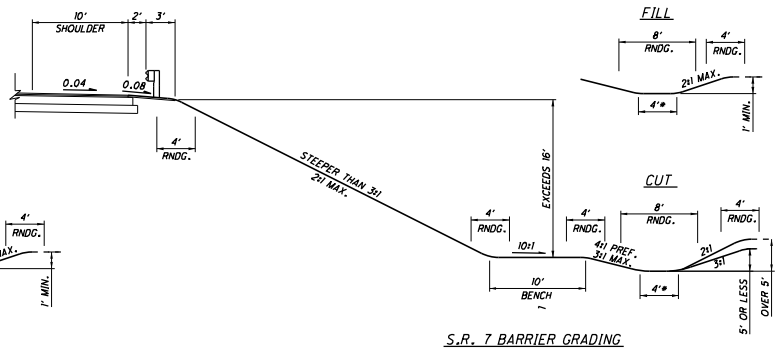
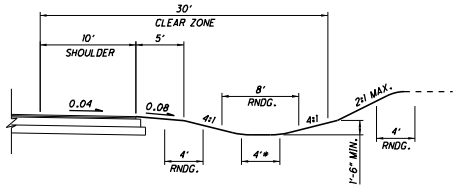


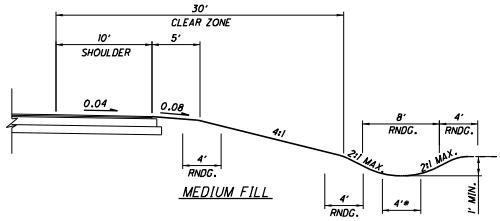
SIDE ROAD BARRIER GRADING



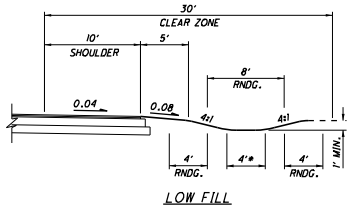
S.R. 7 BARRIER GRADING



CUT SECTION



MEDIUM FILL



LOW FILL

NOTES:
* SEE CROSS SECTIONS FOR POST CONSTRUCTION ENHANCED BANKFULL WIDTHS ROUNDING SHALL BE 4' WIDER THAN DITCH WIDTH SHOWN

TYPICAL SECTIONS - DITCH DETAILS

LAW-7-2.17

23
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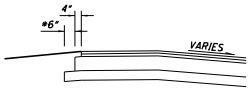
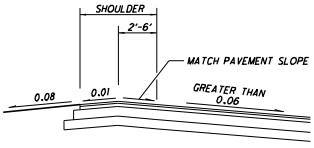
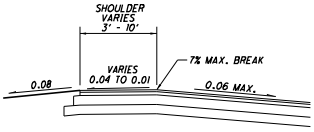
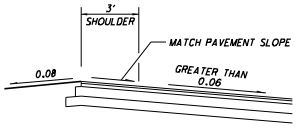


EDGE COURSE DETAIL
FOR ALL TYPICALS

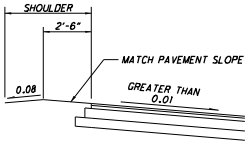
* 6" OR THE THICKNESS OF OVERLYING LIFT, WHICHEVER IS GREATER.

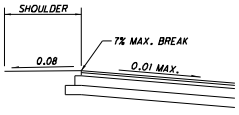






DETAIL A
PAVED SHOULDERS





DETAIL B
TURF SHOULDERS

TYPICAL SECTIONS - MISCELLANEOUS DETAILS

LAW-7-2.17

24
633

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ROUNDING

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

UTILITIES

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

FRONTIER COMMUNICATIONS
1315 ALBERT STREET
PORTSMOUTH, OHIO 45662
PHONE: (740) 354-0521
MS. DENA MARTIN

AMERICAN ELECTRIC POWER (DISTRIBUTION)
38831 STATE ROUTE 7
REEDSVILLE, OHIO 45772
PHONE: (740) 985-3054
MR. CLARKE SAUNDERS

AMERICAN ELECTRIC POWER (TRANSMISSION)
8600 SMITHS MILL ROAD
NEW ALBANY, OHIO 43054
PHONE: (380) 205-5072
MR. MICHAEL CARR

BUCKEYE RURAL ELECTRIC CO-OP, INC.
P.O. BOX 200
RIO GRANDE, OHIO 45674
PHONE: (740) 379-9658
MS. MARTINE-DENISE LONG

HECLA WATER ASSOCIATION, INC.
3190 SR 141
IRONTON, OHIO 45638
PHONE: (740) 533-0526, EXT. 5
MR. TIM DALTON

AQUA OHIO (FORMERLY OHIO-AMERICAN WATER COMPANY)
6650 SOUTH AVENUE
BOARDMAN, OHIO 44512
PHONE: (330) 397-0776
MR. ANDY HIPPLEY

COLUMBIA GAS OF OHIO
843 PIATT AVENUE
CHILLICOTHE, OHIO 45601
PHONE: (740) 656-7401
MR. JOSEPH DIBENEDETTO

MYERS DRILLING COMPANY
P.O. BOX 290
BARBOURSVILLE, WV. 25504
PHONE: (304) 736-7431
MR. JOHN DIAL

ARMSTRONG CABLE SERVICES
9651 COUNTY ROAD 1
SOUTH POINT, OHIO 45680
PHONE: (740) 451-1833
MR. NATHAN ITTIG

UNION-ROME TOWNSHIPS
SUBSEWER DISTRICT
P.O. BOX 430
CHESAPEAKE, OHIO 45619
PHONE: (740) 867-8700
MR. JAROD LEFFINGWELL

CHARTER COMMUNICATIONS
(AKA SPECTRUM FKA TIME WARNER CABLE)
1617 FOXHAVEN DRIVE
RICHMOND, KENTUCKY 40475
PHONE: (859) 626-4899
MR. MARK HARLOW

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

SURVEYING PARAMETERS

PRIMARY PROJECT CONTROL MONUMENTS GOVERN ALL POSITIONING ON ODOT PROJECTS. SEE TABLE CONTAINING PROJECT CONTROL INFORMATION.

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

PROJECT CONTROL

POSITIONING METHOD: STATIC GPS (2011)
MONUMENT TYPE: TYPE A

VERTICAL POSITIONING

ORTHOMETRIC HEIGHT DATUM:	NAVD88
GEOID:	GEOID09

HORIZONTAL POSITIONING

REFERENCE FRAME:	NAD83 (CORS 96)
ELLIPSOID:	GRS80
MAP PROJECTION:	LAMBERT CONFORMAL CONIC
COORDINATE SYSTEM:	OHIO STATE PLANE, SOUTH ZONE
COMBINED SCALE FACTOR:	1.000044500000 (FROM GROUND TO SPC)
ORIGIN OF COORDINATE SYSTEM:	0,0

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

UNITS ARE IN U.S. SURVEY FEET.

CALCULATED SLP
CHECKED ALB

GENERAL NOTES

LAW-7-2.17

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633

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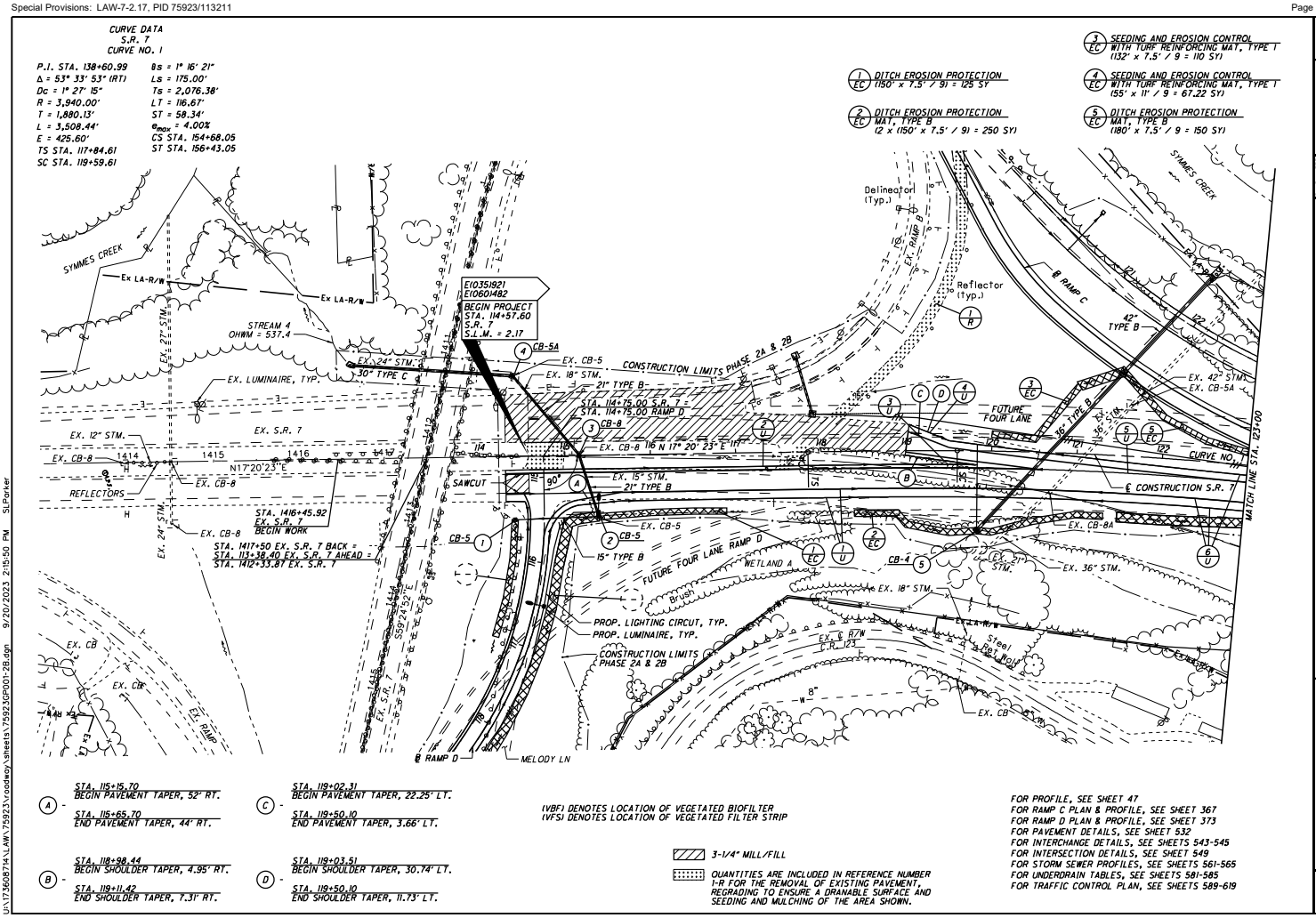

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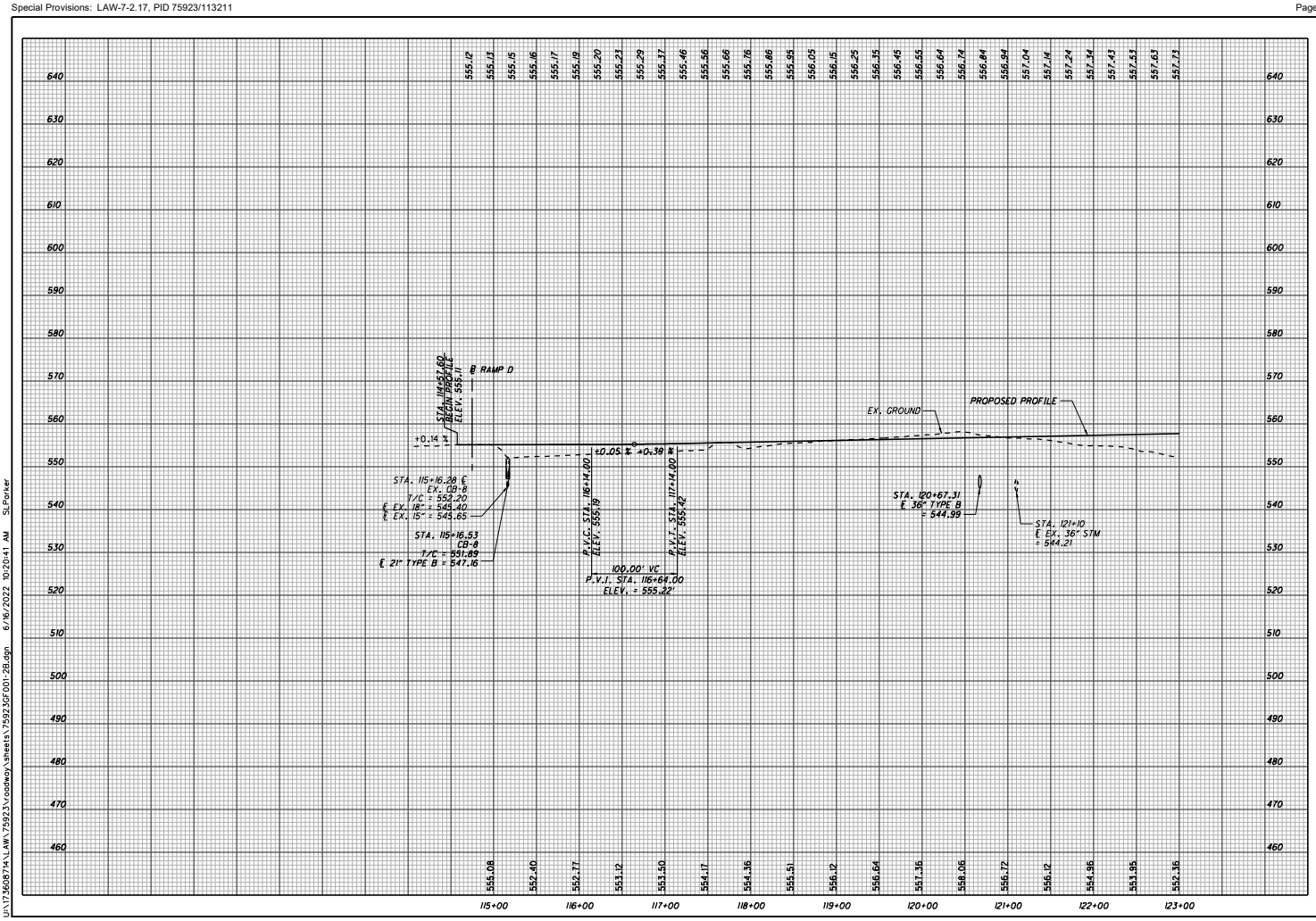
PROFILE - S.R. 7
STA. 114+57.60 TO STA. 123+00
LAW-7-2.17
CALCULATED SLP
CHECKED ALB
47
633
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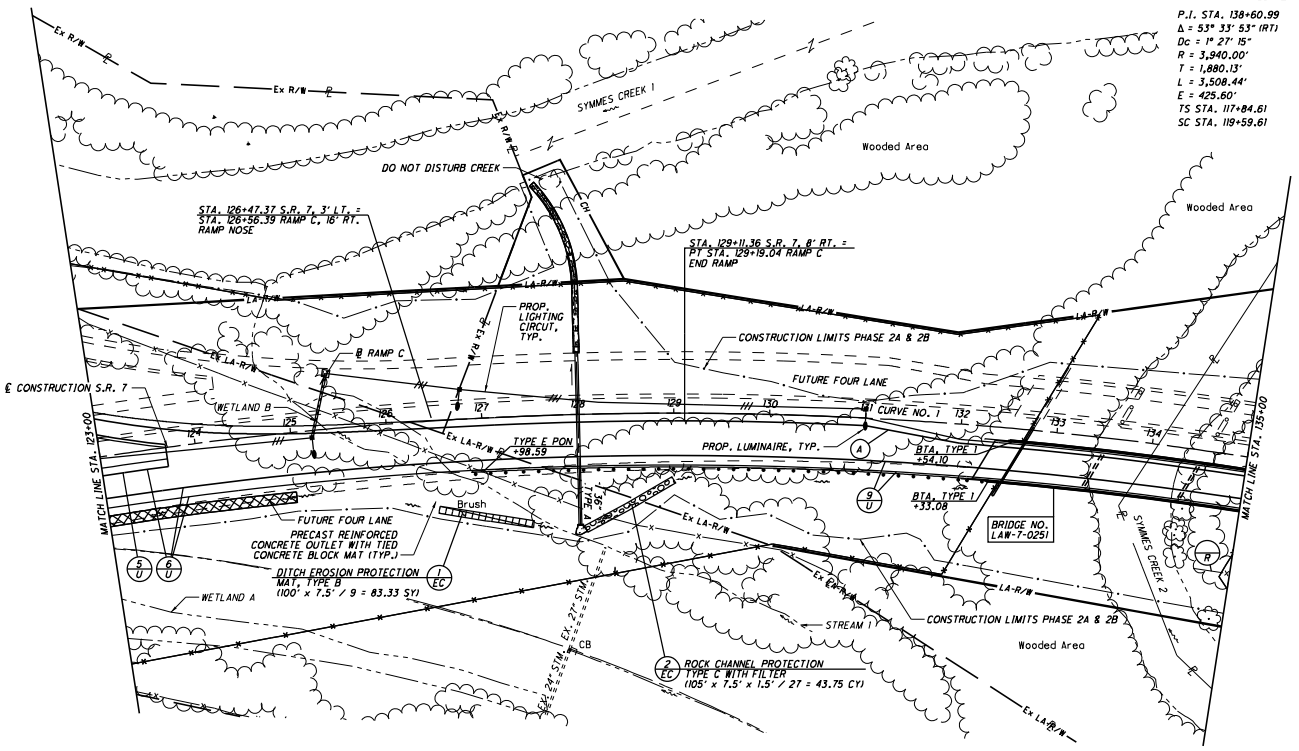
℄ RAMP D
STA. 114+57.60
BEGIN PROFILE
ELEV. 555.11
+0.14 %
-0.05 %
+0.39 %
EX. GROUND
PROPOSED PROFILE
STA. 115+16.28 ℄
EX. CB-8
T/C = 552.20
℄ EX. 18" = 549.40
℄ EX. 15" = 549.65
STA. 115+16.53
CB-8
T/C = 551.89
℄ 21" TYPE B = 547.16
P.V.C. STA. 116+14.00
ELEV. 555.19
P.V.T. STA. 117+14.00
ELEV. 555.42
100.00' VC
P.V.I. STA. 116+64.00
ELEV. = 555.32'
STA. 120+67.31
℄ 36" TYPE B
= 544.99
STA. 121+10
℄ EX. 36" STM
= 544.21
115+00
116+00
117+00
118+00
119+00
120+00
121+00
122+00
123+00



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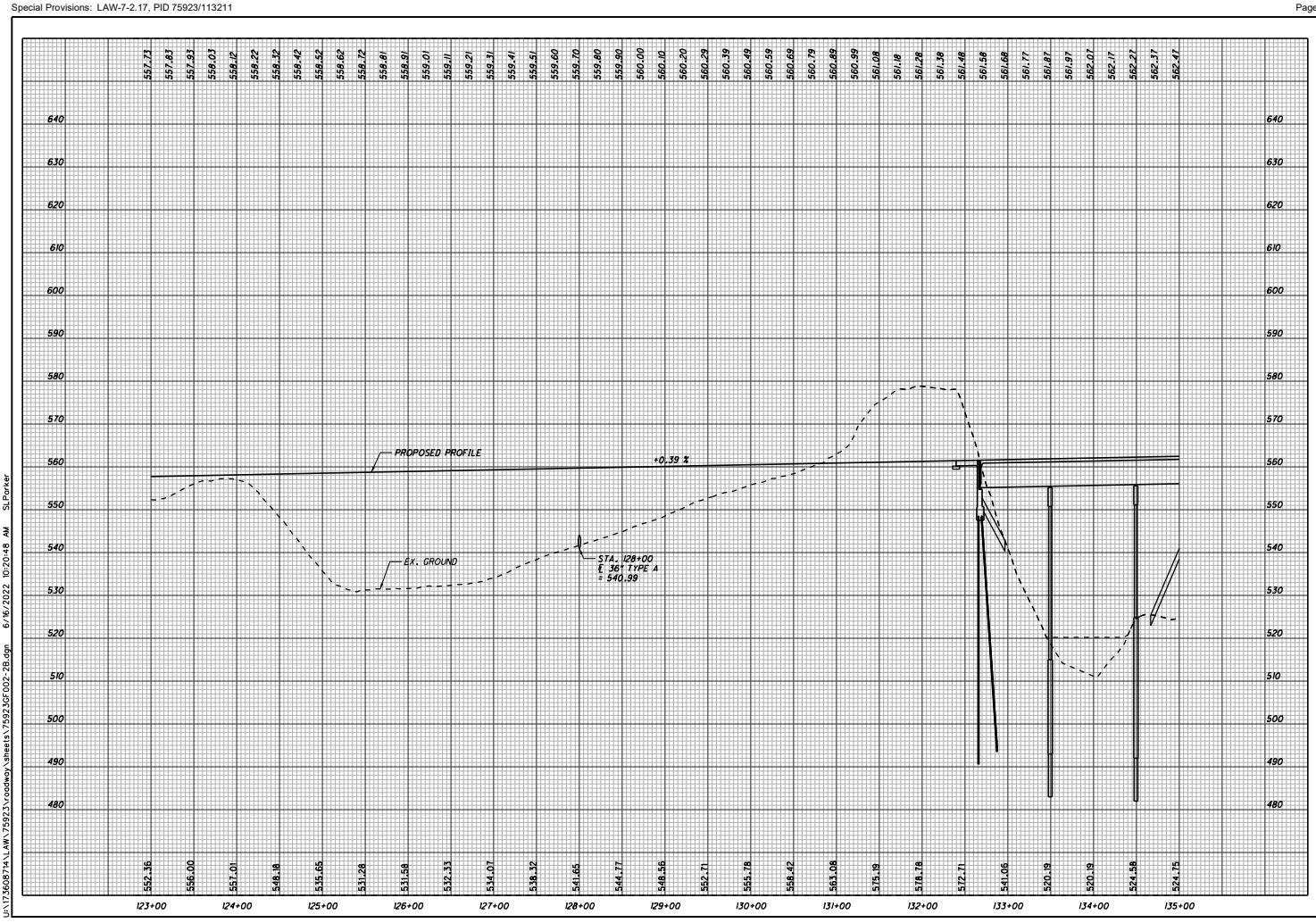

PROFILE - S.R. 7

STA. 123+00 TO STA. 135+00

CALCULATED SLP

CHECKED ALB

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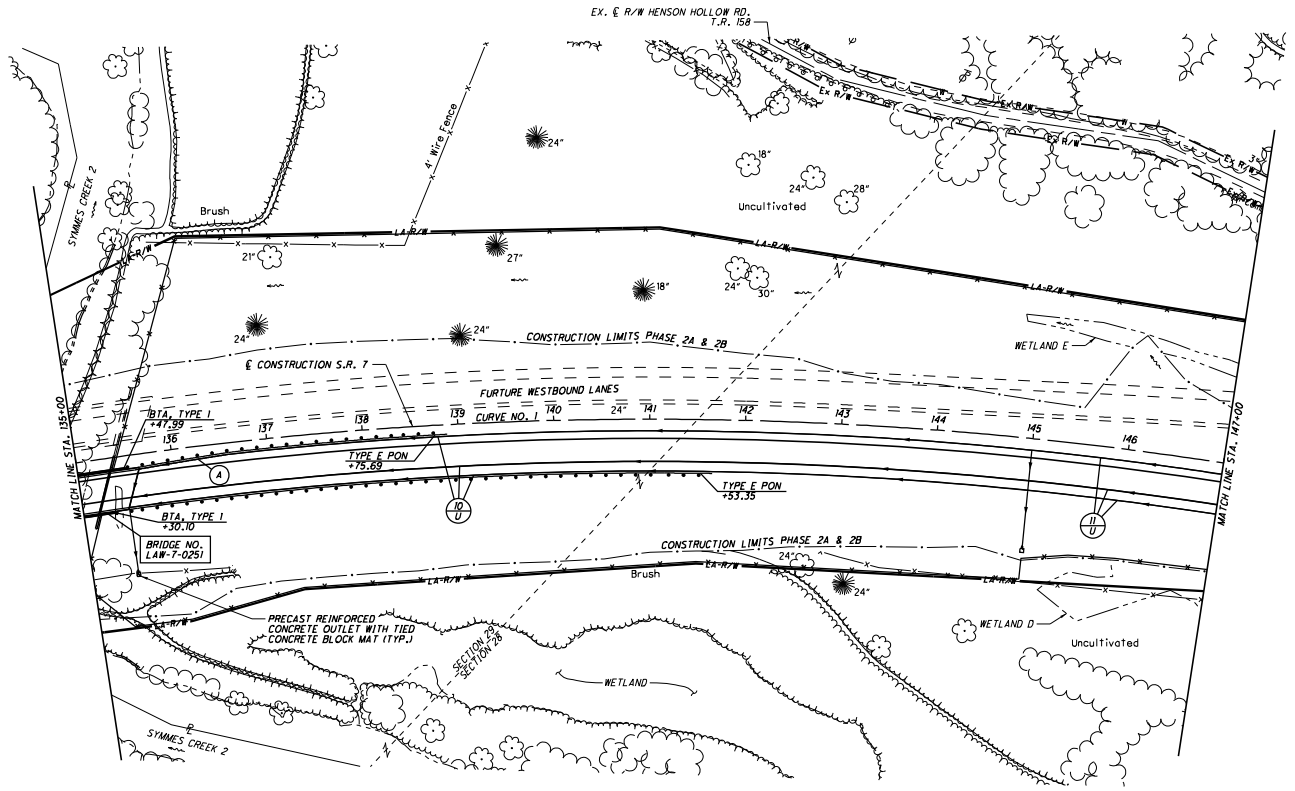

CURVE DATA
S.R. 7
CURVE NO. 1

P.I. STA. 138+60.99
Δ = 53° 33' 53" (RT)
Dc = 1° 27' 15"
R = 3,940.00'
T = 1,880.13'
L = 3,508.44'
E = 425.60'
TS STA. 117+84.61
SC STA. 119+59.61

θs = 1° 16' 21"
Ls = 175.00'
Ts = 2,076.38'
LT = 116.67'
ST = 58.34'
e_{max} = 4.00%
CS STA. 154+68.05
ST STA. 156+43.05

(A) - STA. 135+59.43
BEGIN SHOULDER TAPER, 16' RT.
STA. 136+59.43
END SHOULDER TAPER, 12' RT.

FOR PROFILE, SEE SHEET 51
FOR UNDERDRAIN TABLES, SEE SHEETS 581-585
FOR TRAFFIC CONTROL PLAN, SEE SHEETS 589-619
FOR STRUCTURES 20' AND OVER, SEE SHEETS XXX-XXX

HORIZONTAL SCALE IN FEET
0 50 100
CALCULATED SLP
CHECKED ALB

PLAN - S.R. 7
STA. 135+00 TO STA. 147+00

LAW-7-2.17

50
635

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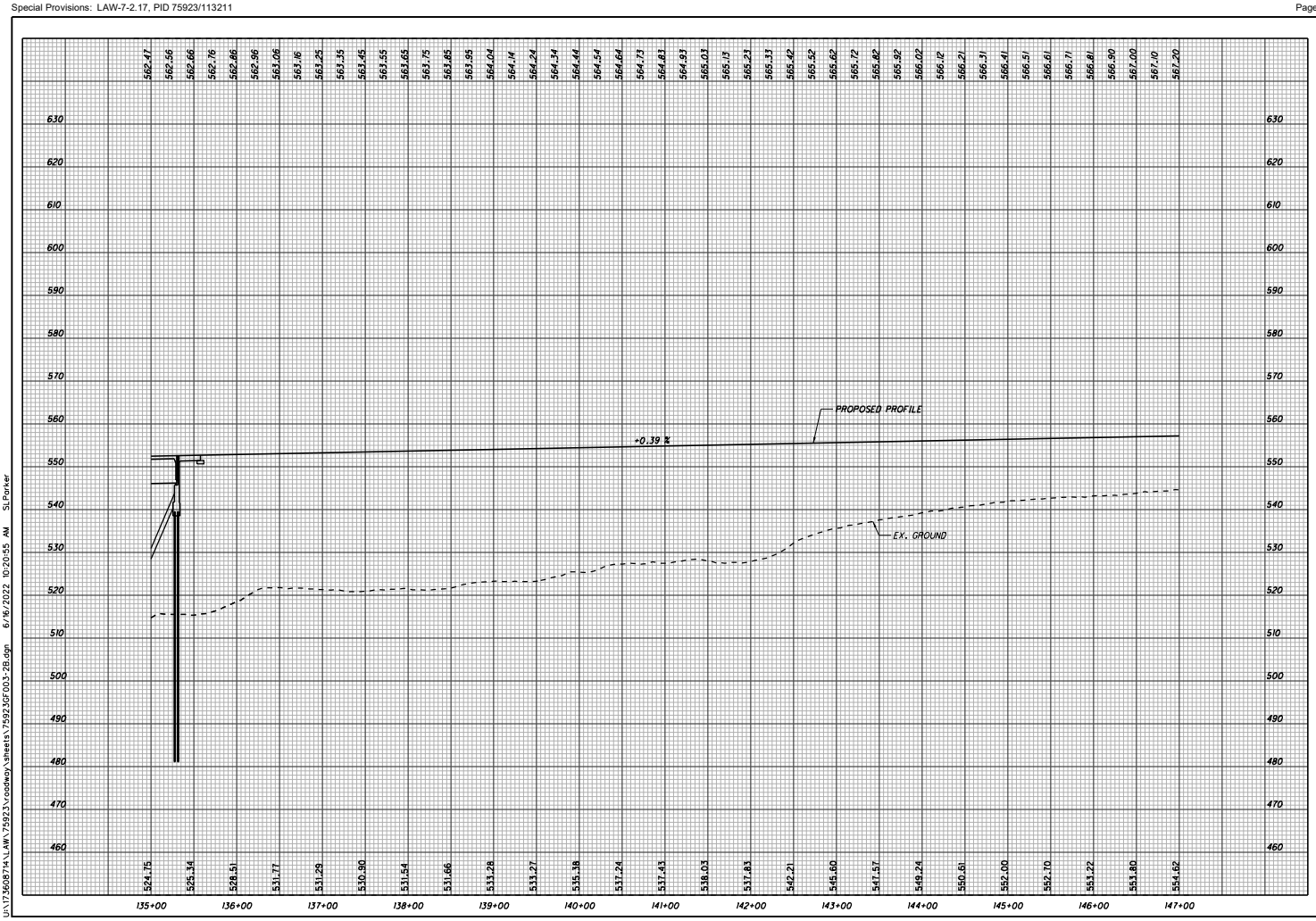

PROFILE - S.R. 7
STA. 135+00 TO STA. 147+00

CALCULATED SLP
CHECKED ALB

LAW-7-2.17

51
633

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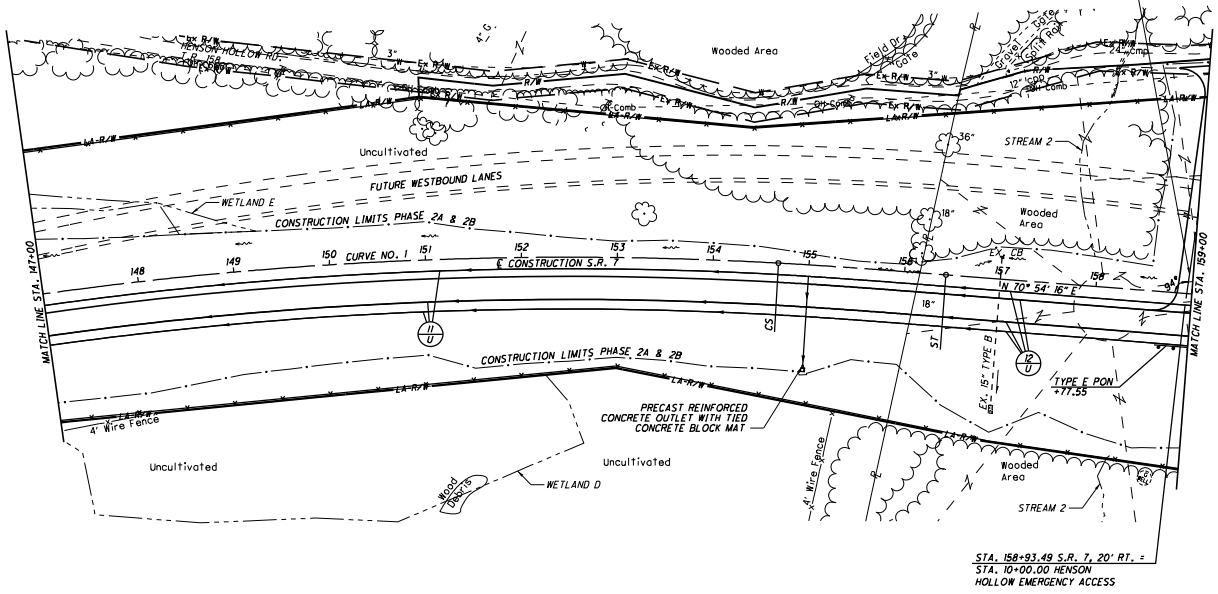
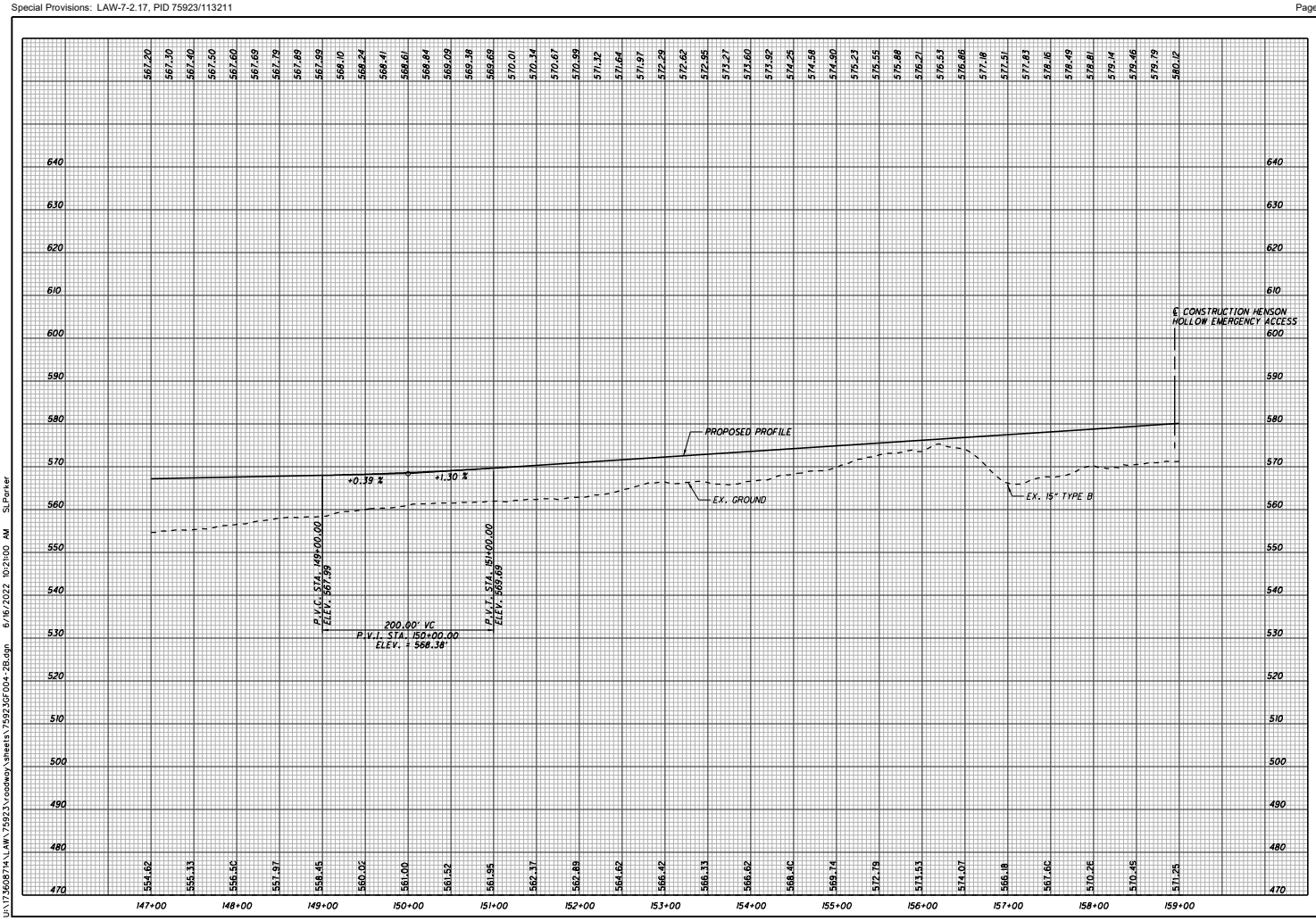

℄ CONSTRUCTION
HENSON HOLLOW
EMERGENCY ACCESS
N 15°32'29" W
Ex R/W
HENSON HOLLOW RD.
Ex R/W
Ex R/W
Wooded Area
Field Drive
Gravel Drive
Ex R/W
Ex R/W
3"
Ex R/W
R/W
Ex R/W
LA-R/W
Ex R/W
LA-R/W
Ex R/W
LA-



PROFILE - S.R. 7
STA. 147+00 TO STA. 159+00

CALCULATED SLP
CHECKED ALB

LAW-7-2.17

53
633

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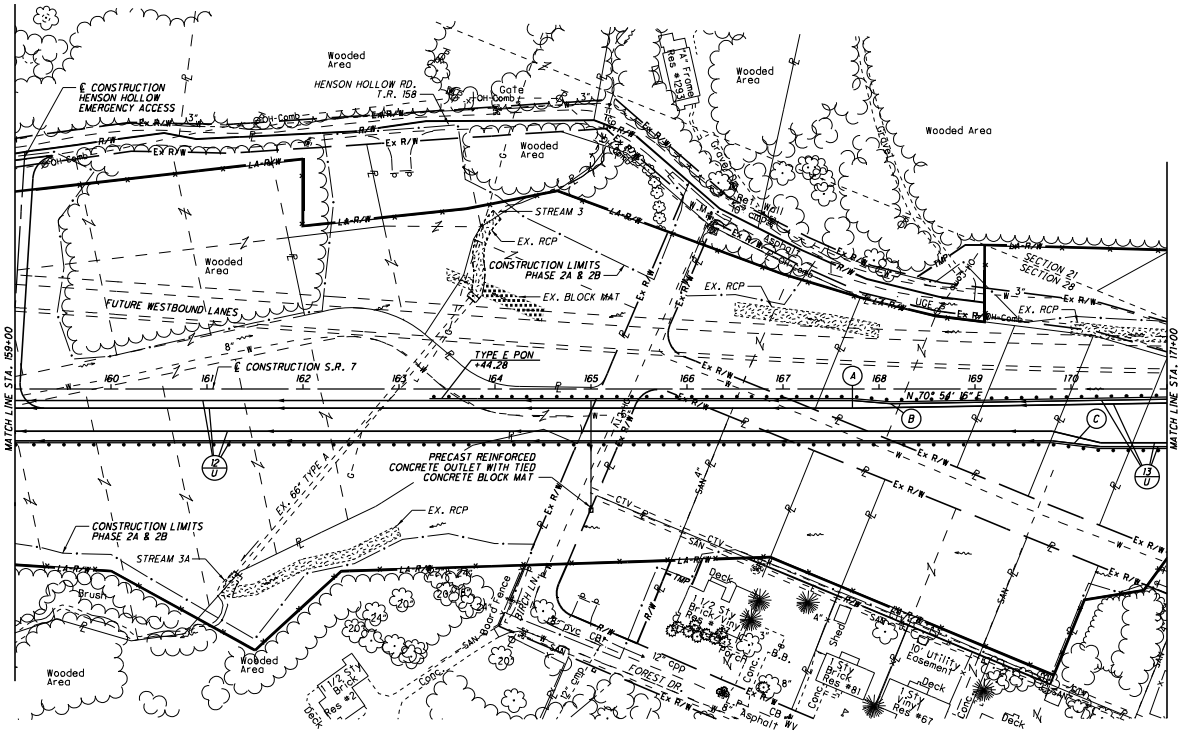
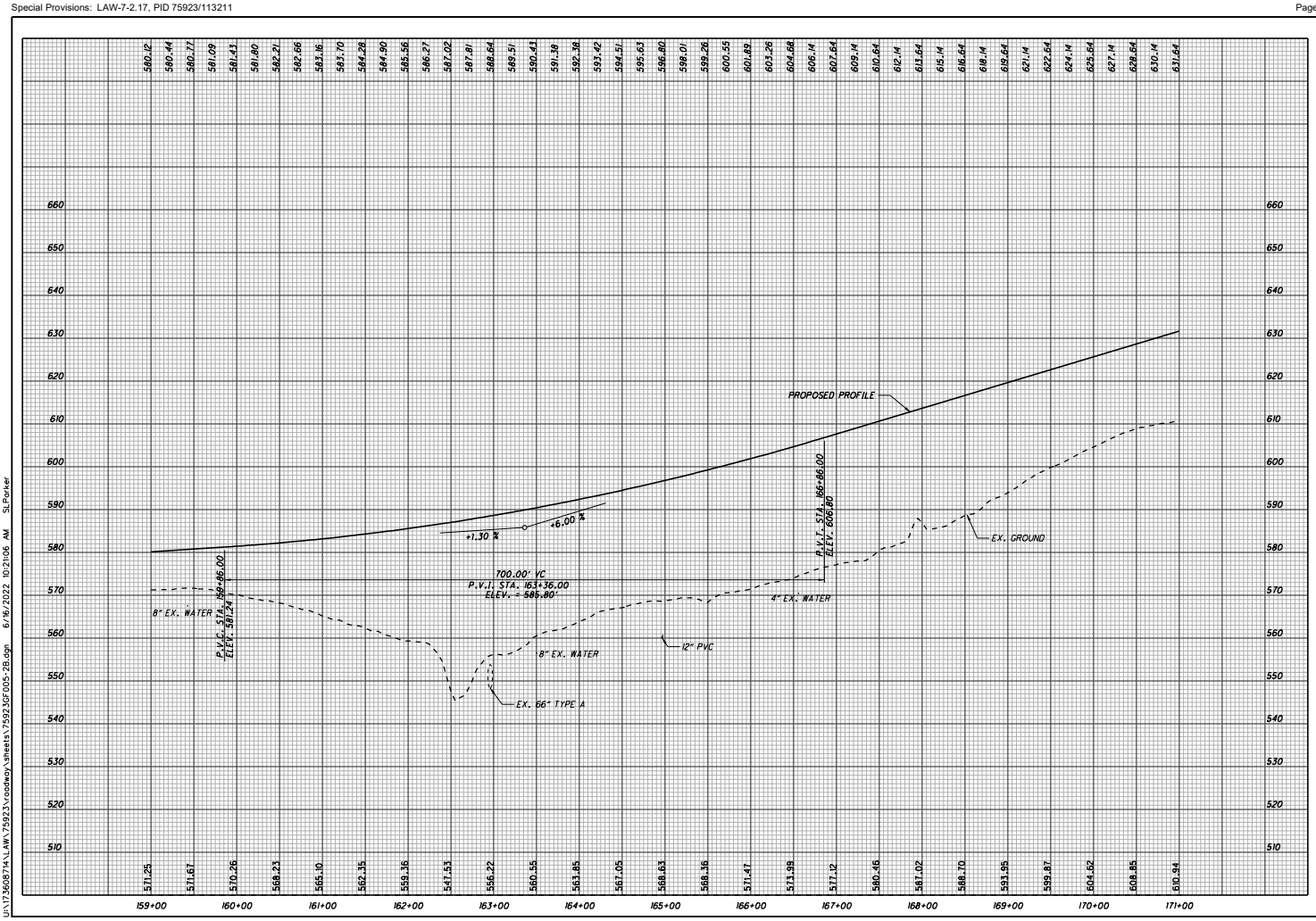

℄ CONSTRUCTION
HENSON HOLLOW
EMERGENCY ACCESS
HENSON HOLLOW RD.
T.R. 158
Wooded Area
Gate
Ex R/W
L4 R/W
STREAM 3
EX. RCP
CONSTRUCTION LIMITS
PHASE 2A & 2B
EX. BLOCK MAT
FUTURE WESTBOUND LANES
TYPE E PON
+44.28
℄ CONSTRUCTION S.R. 7
MATCH LINE STA. 159+00
MATCH LINE STA. 171+00
N 70° 54' 16" E
PRECAST REINFORCED
CONCRETE OUTLET WITH TIED
CONCRETE BLOCK MAT
EX. 66" TYPE A
STREAM 3A
Brush
Deck
Res #2
Res #81
Res #67
Shed
Utility Easement
Asphalt Wy
Conc.
SAN
CTV
FOREST DR.
12" cmp
12" pvc
Block Wall
Fence
SECTION 2A
SECTION 2B
UGE
OH-Comb
Ex R/W
Ex. RCP
Ex. 4" Force Main
Ex. 8" Water Line
Ex. 3" Gas Line
Ex. 12" Water Line
Ex. 6" Gas Line
Ex. 8" Gas Line
Ex. 4" Gas Line
Ex. 2" Gas Line
Ex. 6" Force Main
Ex. 8" Force Main
Ex. 12" Force Main
Ex. 16" Water Line
Ex. 24" Water Line
Ex. 30" Water Line
Ex. 36" Water Line
Ex. 42" Water Line
Ex. 48" Water Line
Ex. 54" Water Line
Ex. 60" Water Line
Ex. 66" Water Line
Ex. 72" Water Line
Ex. 78" Water Line
Ex.



PROFILE - S.R. 7
STA. 159+00 TO STA. 171+00

CALCULATED SLP
CHECKED ALB

LAW-7-2.17

55
633

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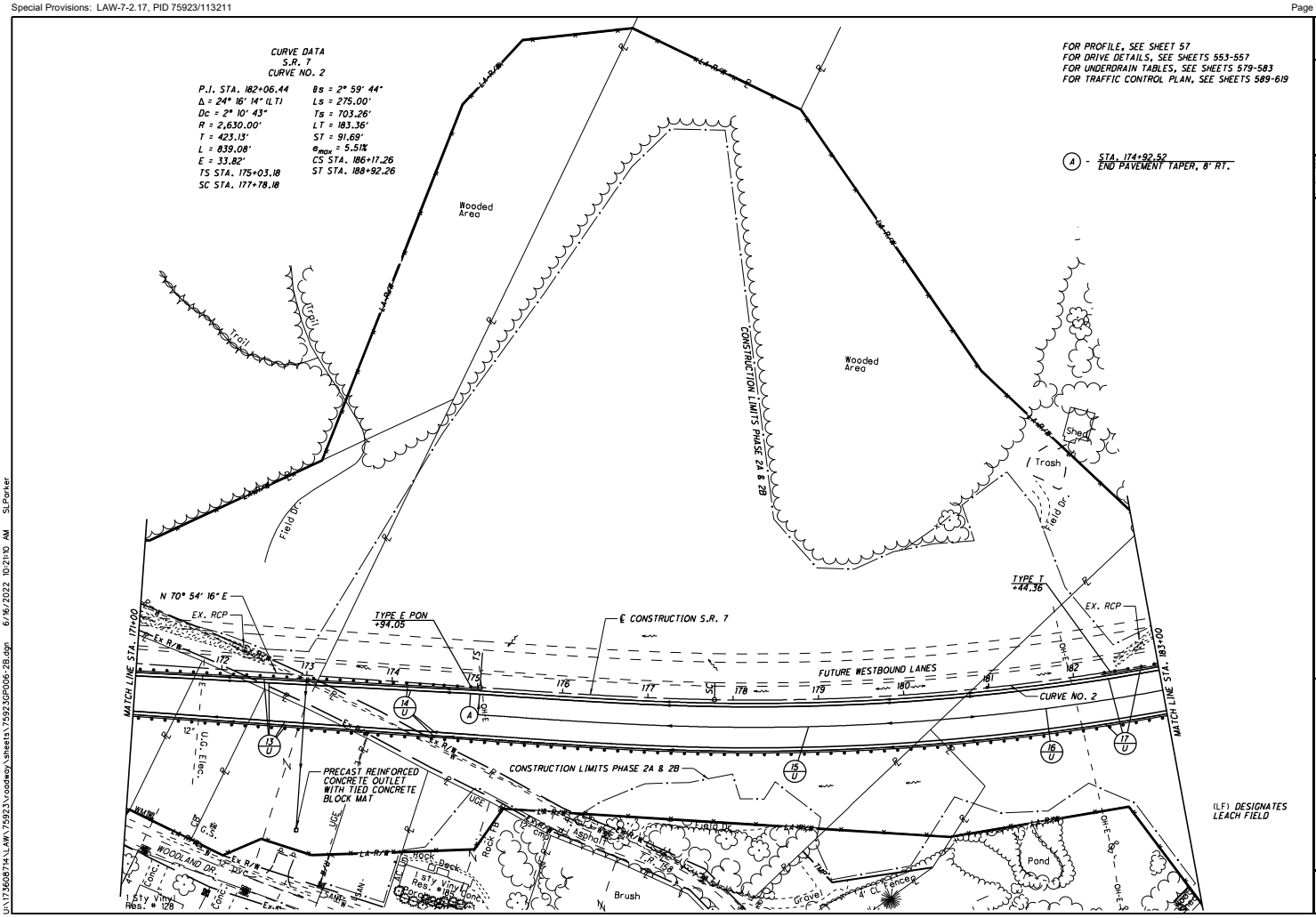
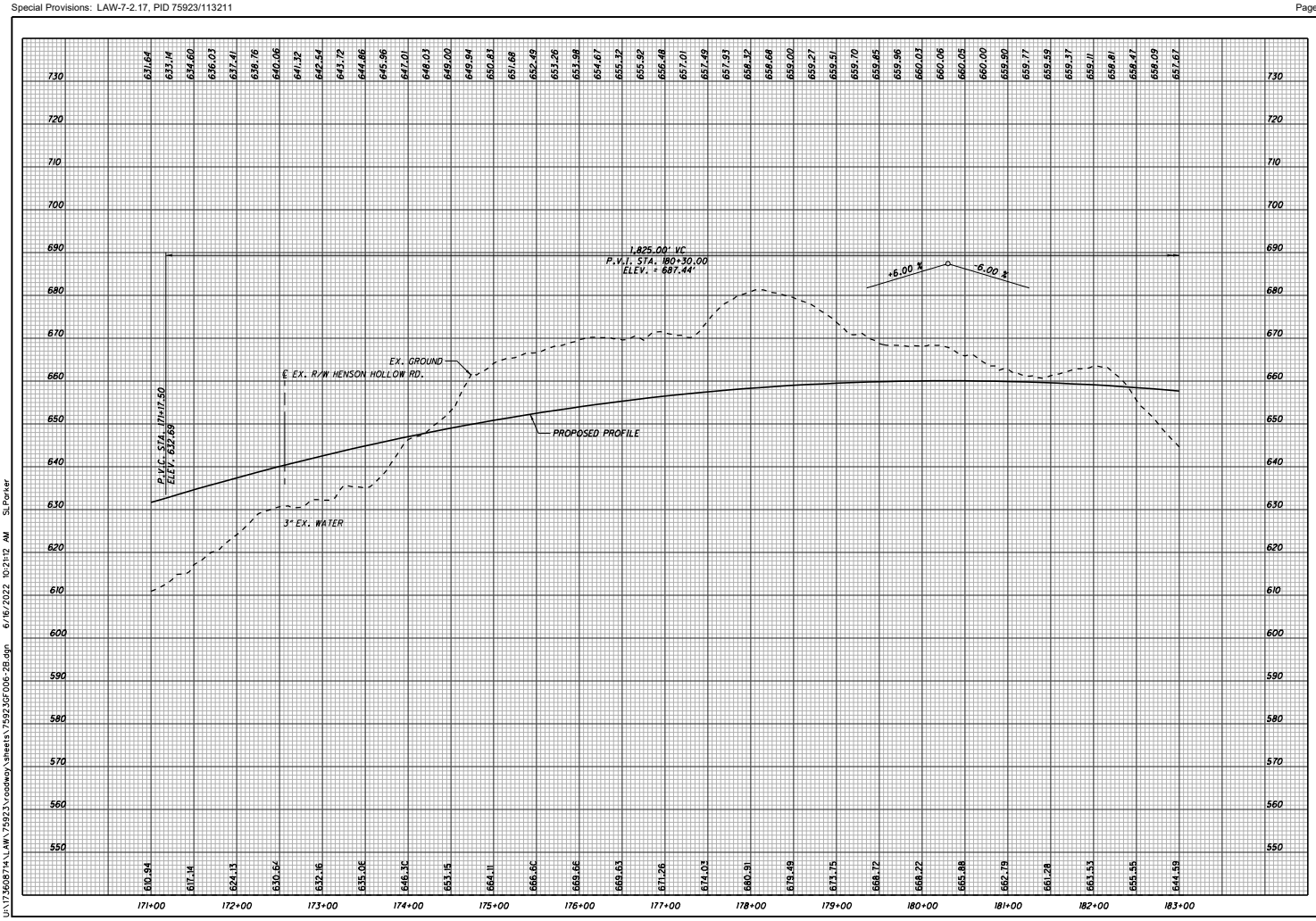

CURVE DATA
S.R. 7
CURVE NO. 2
P.I. STA. 182+06.44
Δ = 24° 16' 14" (LT)
Dc = 2° 10' 43"
R = 2,630.00'
T = 423.13'
L = 839.08'
E = 33.82'
TS STA. 175+03.18
SC STA. 177+78.18
Bs = 2° 59' 44"
Ls = 275.00'
Ts = 703.26'
LT = 183.36'
ST = 91.69'
e max = 5.51%
CS STA. 186+17.26
ST STA. 188+92.26
FOR PROFILE, SEE SHEET 57
FOR DRIVE DETAILS, SEE SHEETS 553-557
FOR UNDERDRAIN TABLES, SEE SHEETS 579-583
FOR TRAFFIC CONTROL PLAN, SEE SHEETS 589-619
(A) - STA. 174+92.52 END PAVEMENT TAPER, 8' RT.
Wooded Area
Wooded Area
Trail
Trail
Field Dr.
Field Dr.
Shed
Trash
CONSTRUCTION LIMITS PHASE 2A & 2B
℄ CONSTRUCTION S.R. 7
FUTURE WESTBOUND LANES
CURVE NO. 2
TYPE E POND +94.05
TYPE T +44.36
EX. RCP
EX. RCP
N 70° 54' 16" E
MATCH LINE STA. 171+00
MATCH LINE STA. 183+00
PRECAST REINFORCED CONCRETE OUTLET WITH TIED CONCRETE BLOCK MAT
CONSTRUCTION LIMITS PHASE 2A & 2B
(LF) DESIGNATES LEACH FIELD
WOODLAND DR.
1 sty Vinyl Res. # 128
1 sty Vinyl Res. # 130
1 sty Vinyl Res. # 132
Rock Pile
Rock Pile
Brush
Grove
4' Cl. Fence
Pond
Asphalt
Asphalt
Concrete
Concrete
Sand
Sand
Ex. R/W
LA-R/W
LA-R/W
Ex R/W
12" U.G. Elec.
U.G.E.
U.G.E.
W.M.
C.S.
S.S.
T.R.
T.R.
Ex. Pole
Ex. Pole
Ex. Pole



PROFILE - S.R. 7
STA. 171+00 STA. 183+00

CALCULATED SLP
CHECKED ALB

LAW-7-2.17

57
633

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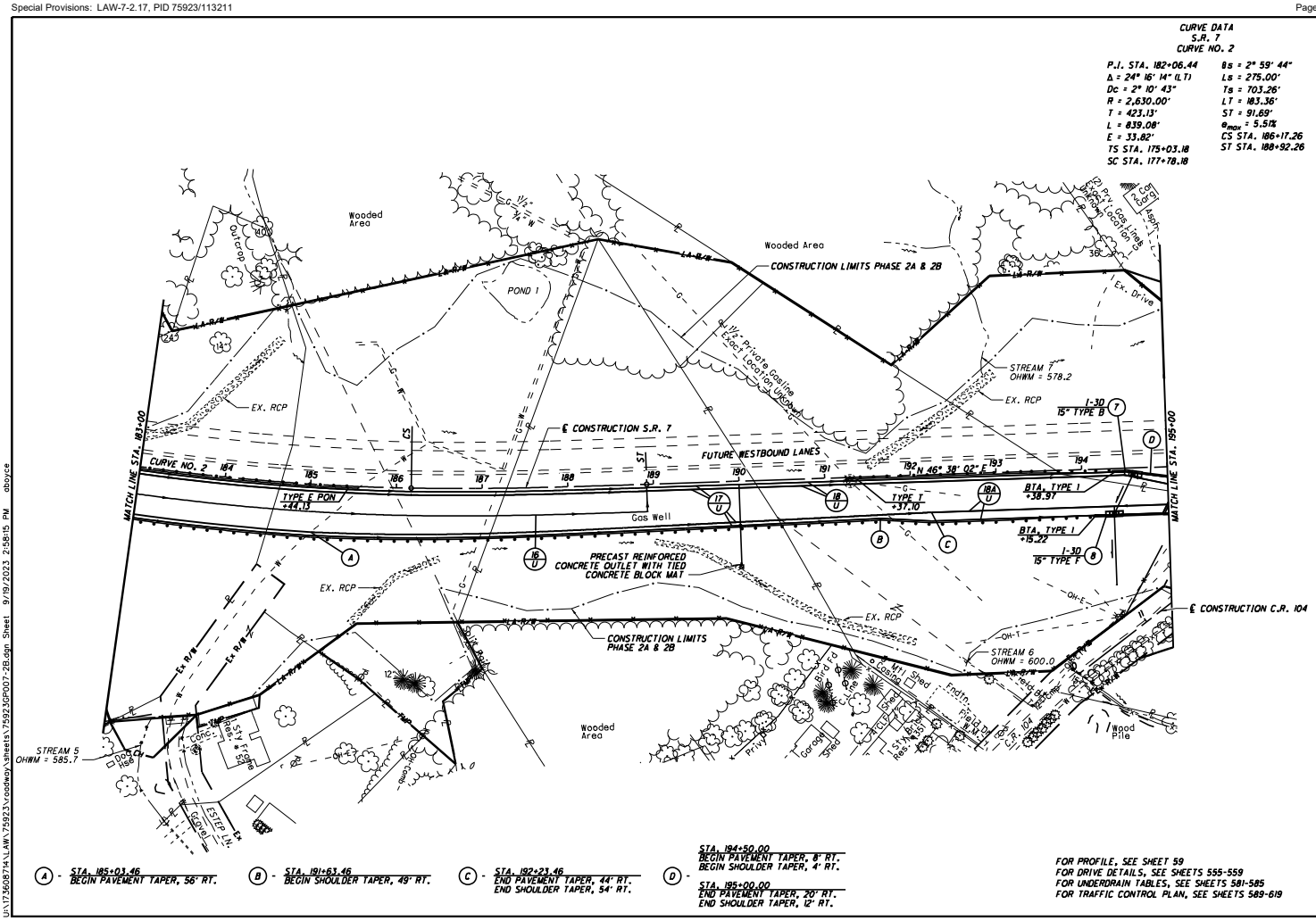
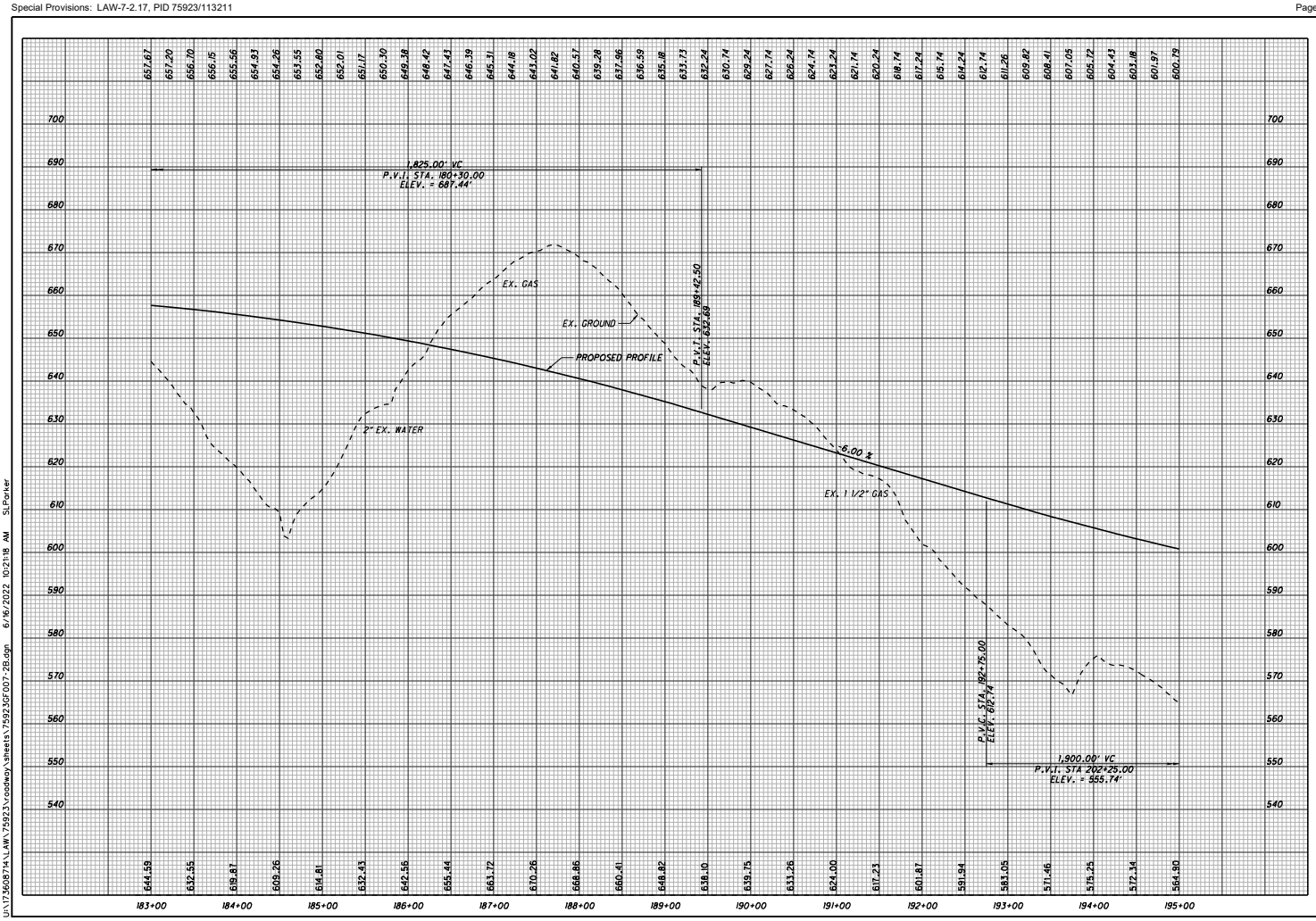

CURVE DATA
S.R. 7
CURVE NO. 2
P.I. STA. 182+06.44
Δ = 24° 16' 14" (LT)
Dc = 2° 10' 43"
R = 2,630.00'
T = 423.13'
L = 839.08'
E = 33.82'
TS STA. 175+03.18
SC STA. 177+78.18
θs = 2° 59' 44"
Ls = 275.00'
Ts = 703.26'
LT = 183.36'
ST = 91.69'
emax = 5.5%
CS STA. 186+17.26
ST STA. 188+92.26
HORIZONTAL SCALE IN FEET
CALCULATED SLP
CHECKED ALB
PLAN - S.R. 7
STA. 183+00 TO STA. 195+00
LAW-7-72.17
58
635
MATCH LINE STA. 183+00
MATCH LINE STA. 195+00
CURVE NO. 2
℄ CONSTRUCTION S.R. 7
FUTURE WESTBOUND LANES
CONSTRUCTION LIMITS PHASE 2A & 2B
TYPE E PON +44.15
TYPE I +37.10
BTA, TYPE I +38.97
BTA, TYPE I +15.22
I-30 15" TYPE B
I-30 15" TYPE I
PRECAST REINFORCED CONCRETE OUTLET WITH TIED CONCRETE BLOCK MAT
EX. RCP
Gas Well
POND 1
Wooded Area
STREAM 5 OHWM = 585.7
STREAM 7 OHWM = 578.2
STREAM 6 OHWM = 600.0
℄ CONSTRUCTION C.R. 104
Ex. Drive
Mt. Shed
Fodder
Field
Wood Pile
Garage
Shed
Ex. Pvt. Gas Line Location
Ex. Pvt. Gas Line Location Unknown
11½" Private Gasline Exact Location Unknown
Ex P/R
Ex P/R ℄
Ex. Pvt. Gas Line
Ex. Pvt. Gas Line ℄
Ex. Pvt. Gas Line Location Unknown
Ex. Pvt. Gas Line Location



CALCULATED SLP
CHECKED ALB

PROFILE - S.R. 7
STA. 183+00 TO STA. 195+00

LAW-7-2.17

59
633

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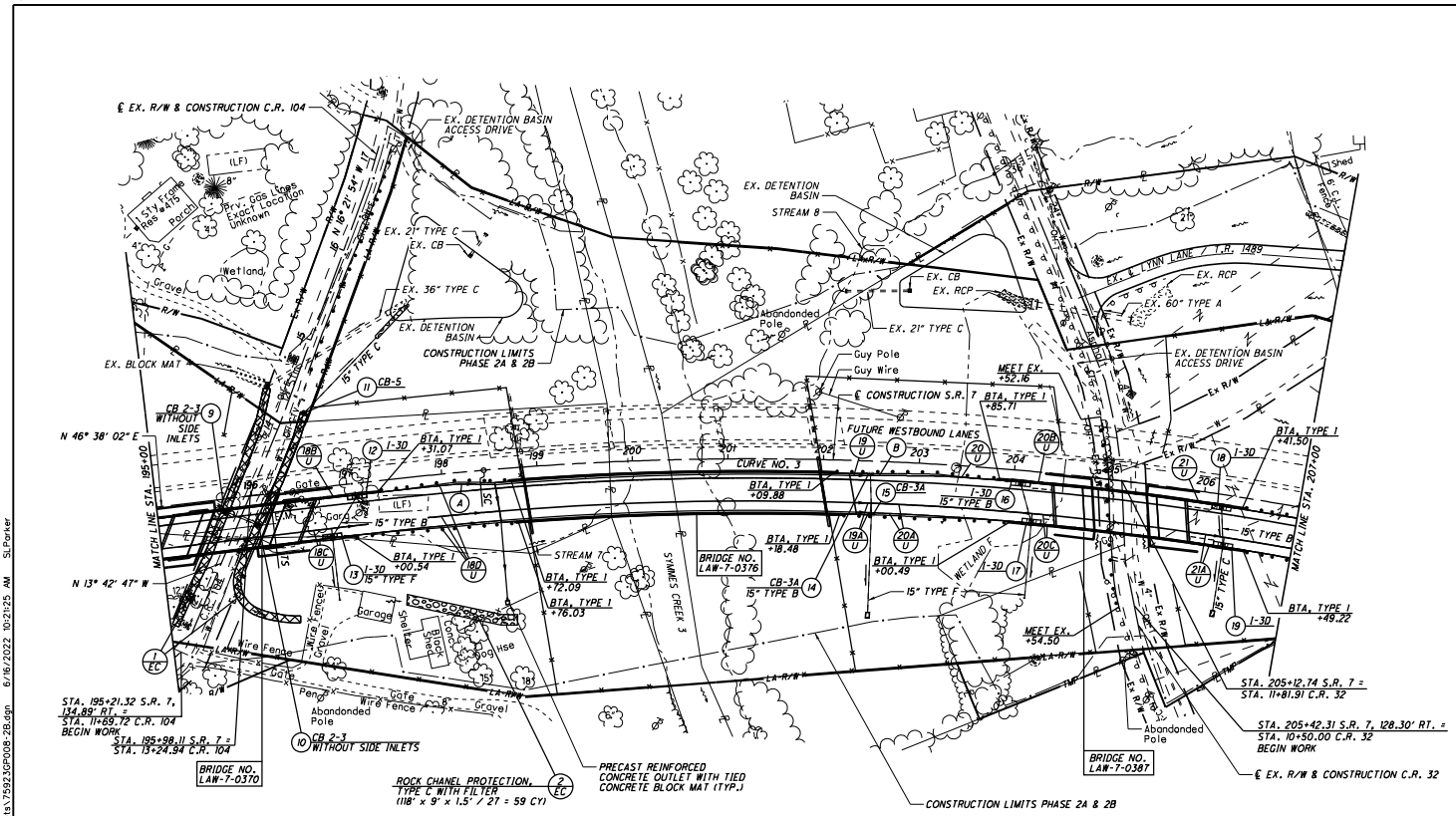

CURVE DATA
S.R. 7
CURVE NO. 3

P.I. STA. 205+33.31	θs = 1° 58' 07"
Δ = 27° 30' 45" (RT)	Ls = 225.00'
Dc = 1° 45' 00"	Ts = 914.18'
R = 3,274.04'	LT = 150.01'
T = 683.24'	ST = 75.01'
L = 1,347.14'	e_{max} = 4.60%
E = 70.53'	CS STA. 211+91.27
TS STA. 196+19.13	ST STA. 214+16.27
SC STA. 198+44.13	

1/EC DITCH EROSION PROTECTION
(231' x 7.5' / 9 = 192.5 SY) LT.
(277' x 7.5' / 9 = 230.83 SY) RT.

(A) - STA. 198+14.83 BEGIN SHOULDER TAPER, 12' RT.
STA. 198+54.83 END SHOULDER TAPER, 16' RT.

(B) - STA. 202+27.86 BEGIN SHOULDER TAPER, 16' RT.
STA. 203+27.86 BEGIN SHOULDER TAPER, 12' RT.

(LF) DESIGNATES LEACH FIELD

FOR PROFILE, SEE SHEET 61
FOR STORM SEWER PROFILE, SEE SHEET 563
FOR UNDERDRAIN TABLES, SEE SHEETS 579-583
FOR TRAFFIC CONTROL PLAN, SEE SHEETS 589-619

HORIZONTAL SCALE IN FEET
0 50 100
CALCULATED SLP
CHECKED ALB

PLAN - S.R. 7
STA. 195+00 TO STA. 207+00

LAW-7-2.17

60
633

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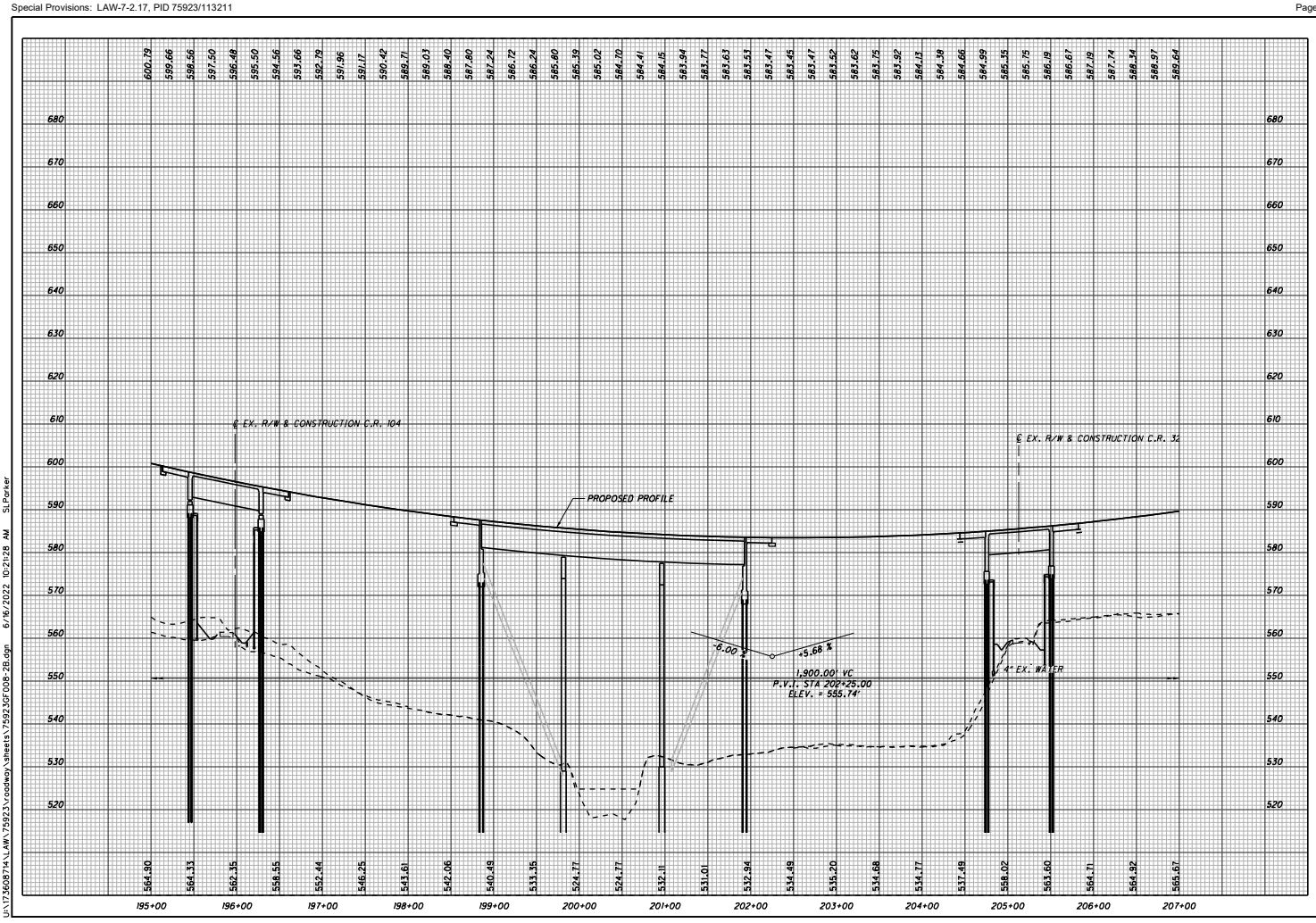

PROFILE - S.R. 7
STA. 195+00 STA. 207+00

CALCULATED SLP
CHECKED ALB

LAW-7-2.17

61
633

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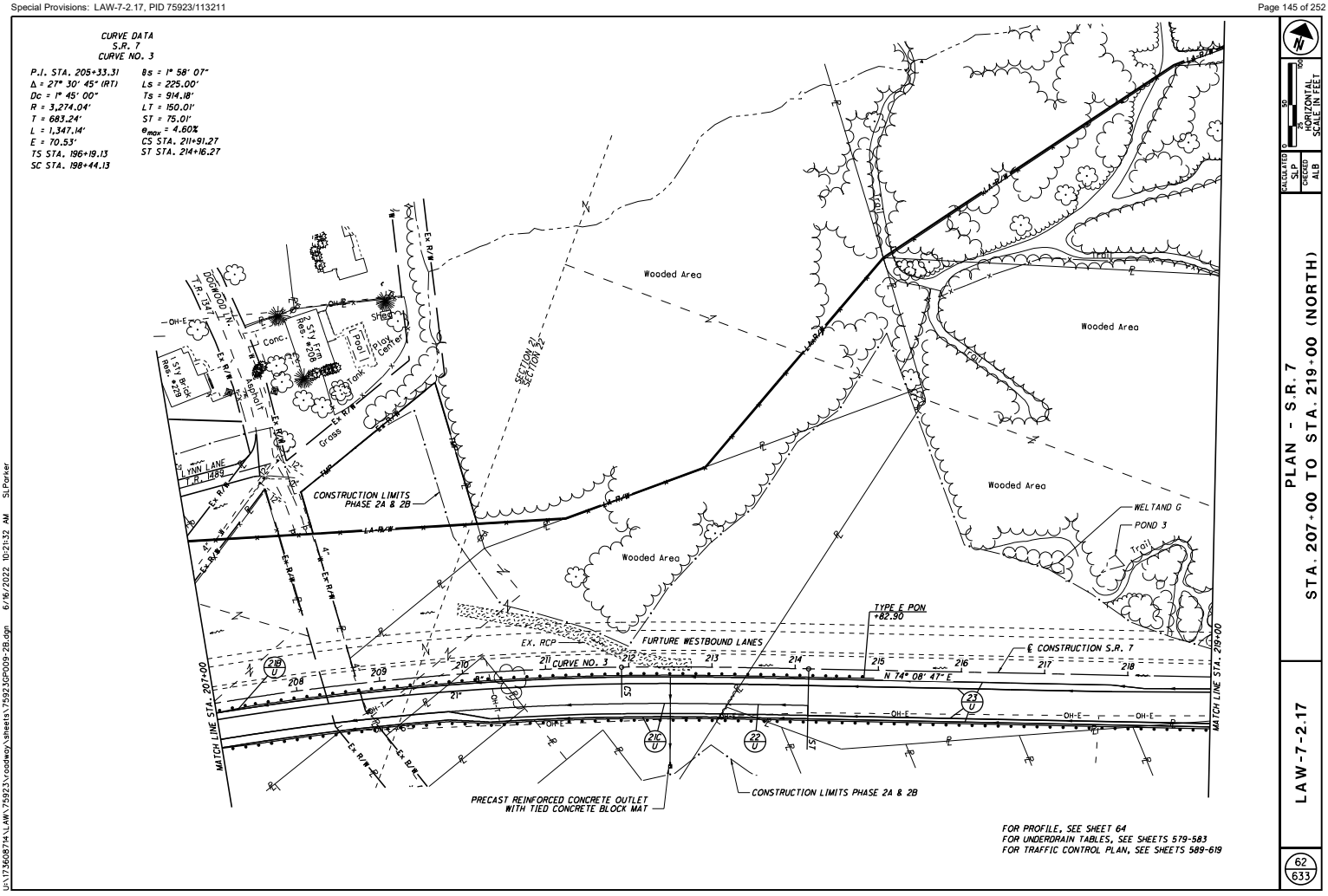

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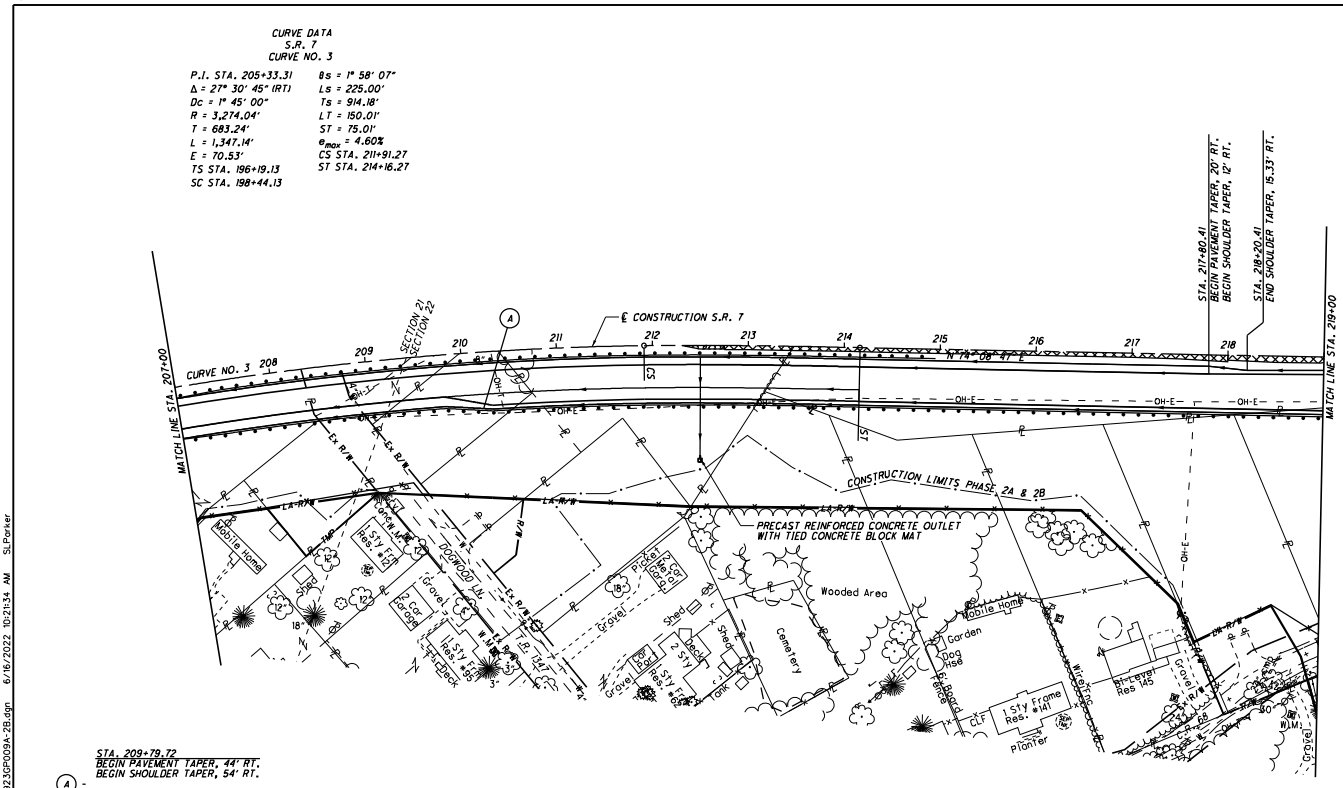

FOR PROFILE, SEE SHEET 64
FOR UNDERDRAIN TABLES, SEE SHEETS 579-583
FOR TRAFFIC CONTROL PLAN, SEE SHEETS 589-619

PLAN - S.R. 7
STA. 207+00 TO STA. 219+00 (SOUTH)

LAW-7-2.17

63
633

CALCULATED SLP
CHECKED ALB

HORIZONTAL SCALE IN FEET
0 50 100

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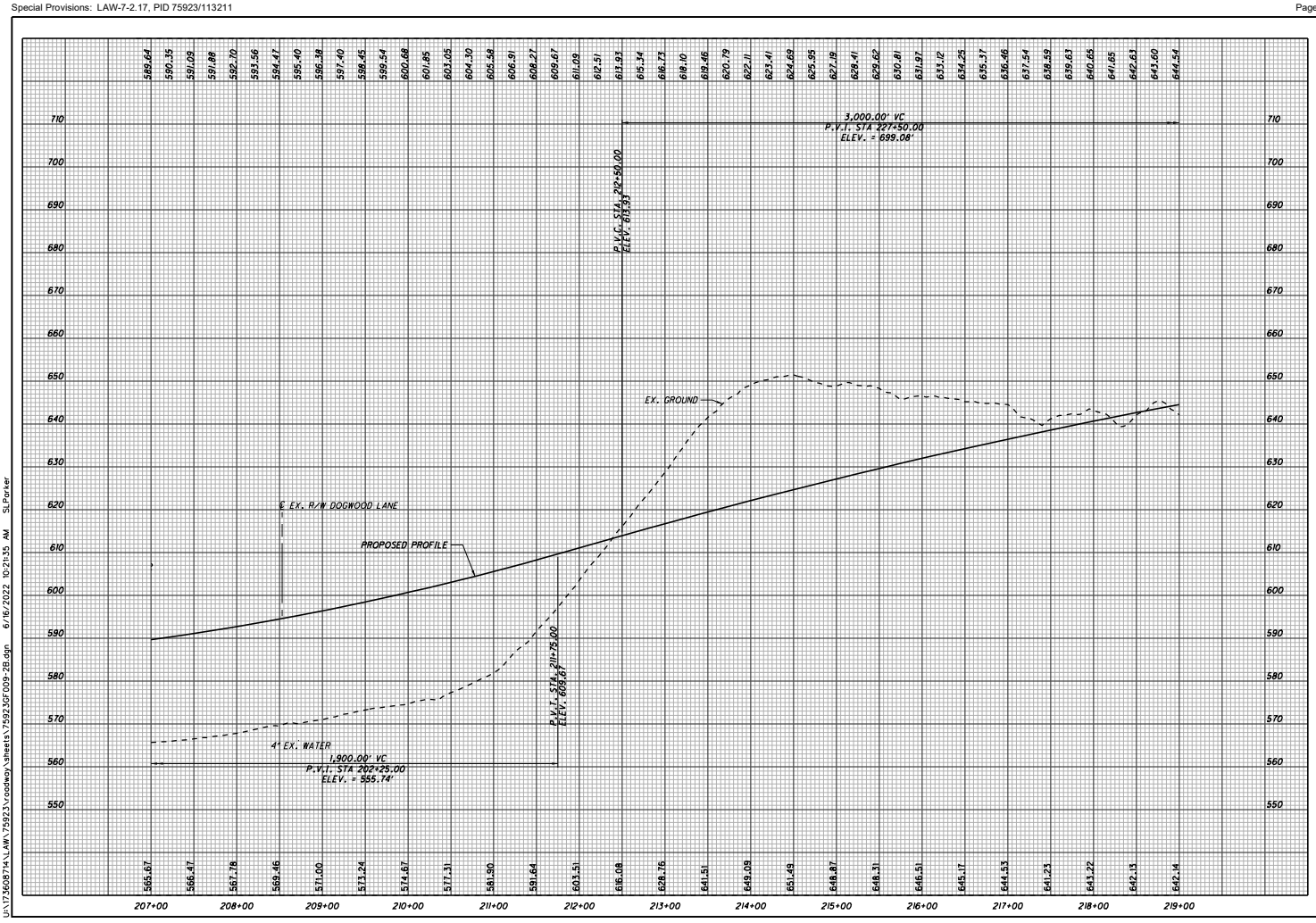

PROFILE - S.R. 7
STA. 207+00 TO STA. 219+00

CALCULATED SLP
CHECKED ALB

LAW-7-2.17

64
633

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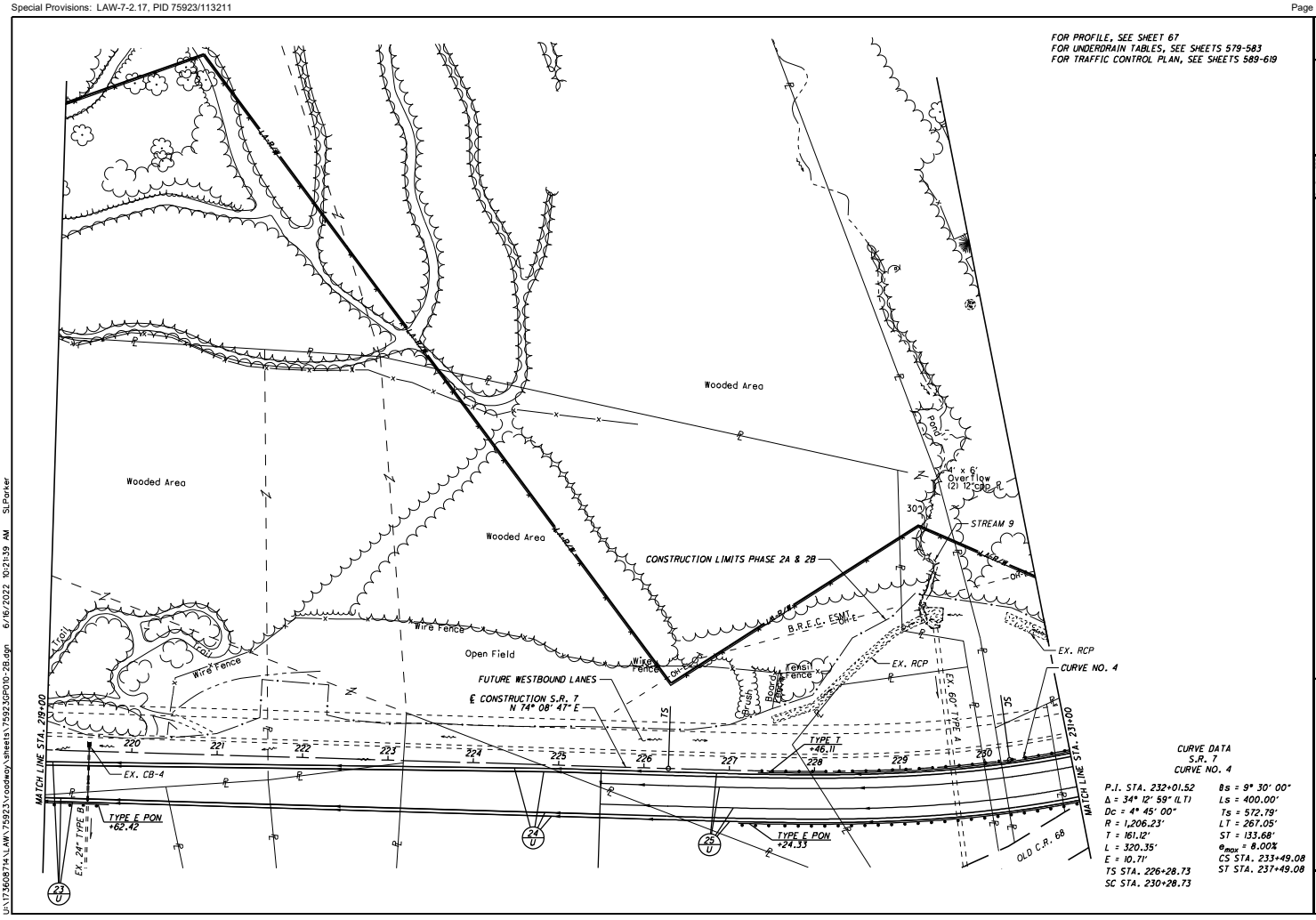

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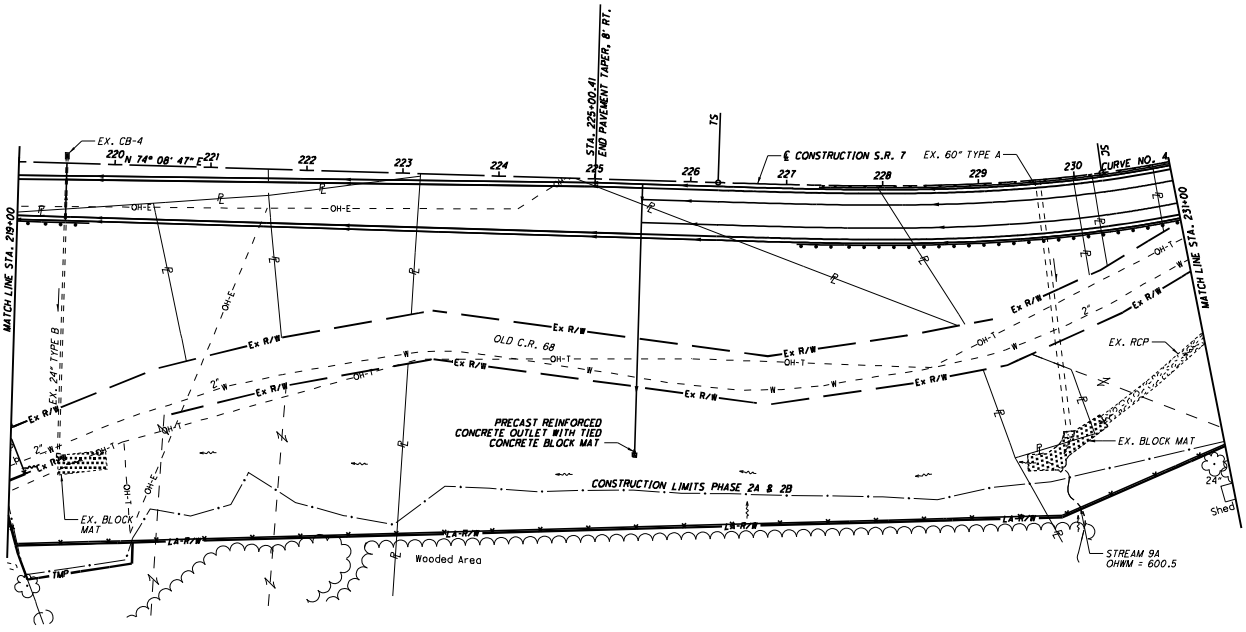

FOR PROFILE, SEE SHEET 67
FOR UNDERDRAIN TABLES, SEE SHEETS 581-585
FOR TRAFFIC CONTROL PLAN, SEE SHEETS 589-619

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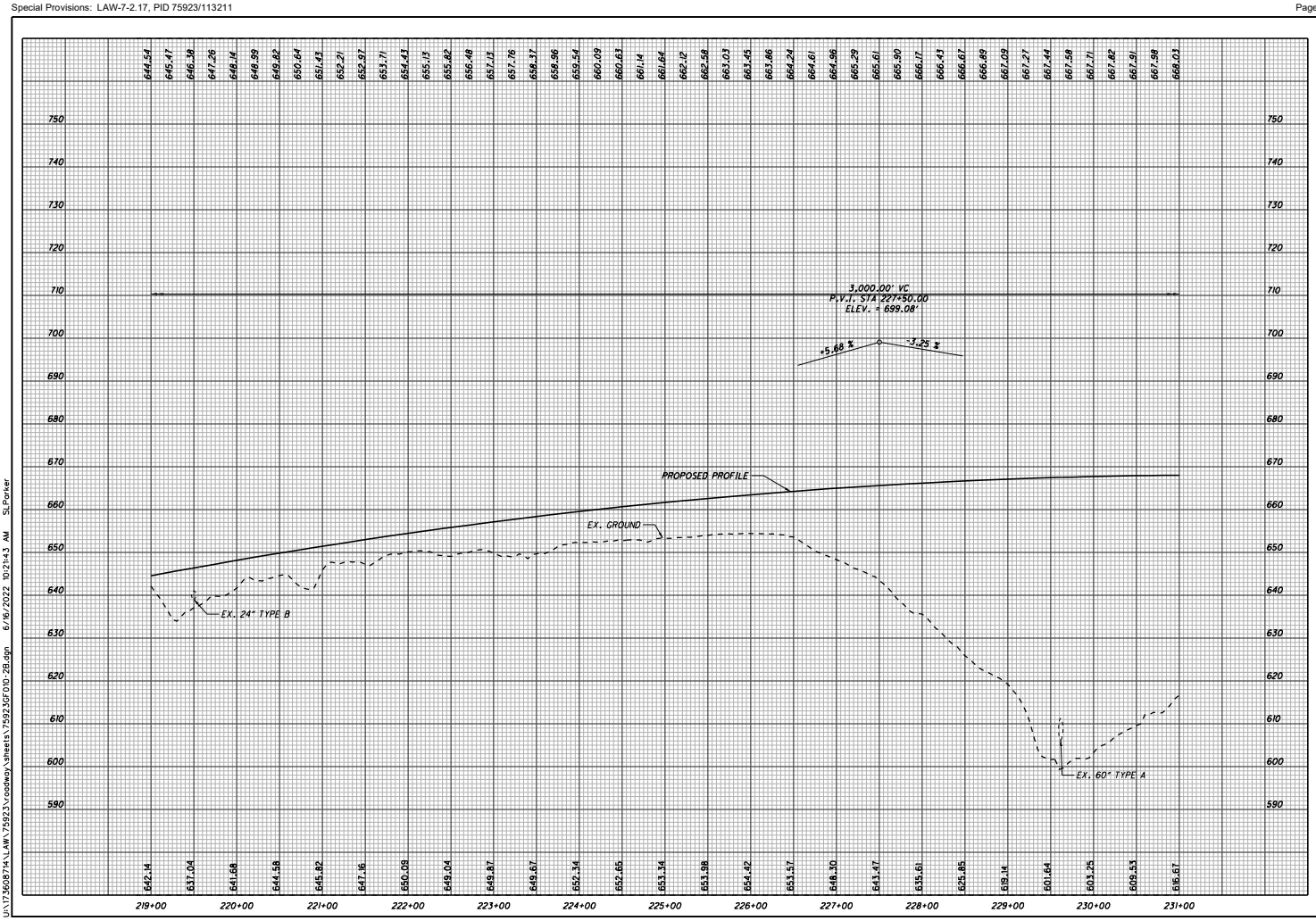

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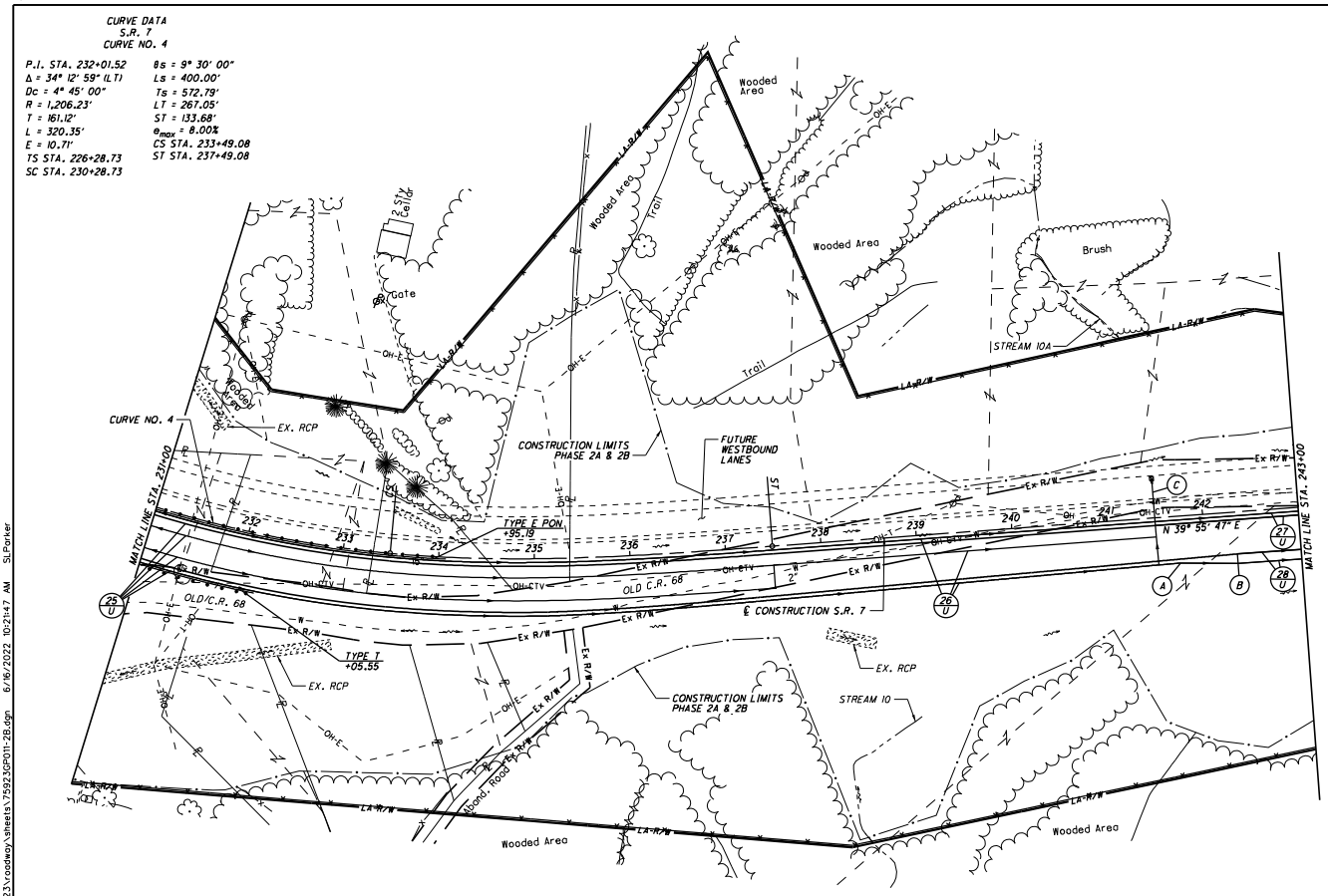
CALCULATED SLP
CHECKED ALB

PROFILE - S.R. 7
STA. 219+00 TO STA. 231+00

LAW-7-2.17



(A) - STA. 241+73.20
BEGIN SHOULDER TAPER, 49' RT.

(B) - STA. 242+33.20
END PAVEMENT TAPER, 44' RT.
(FOR CLIMBING LANE)
END SHOULDER TAPER, 54' RT.

(C) - PRECAST REINFORCED OUTLET WITH TIED CONCRETE BLOCK MAT

(LF) DESIGNATES LEACH FIELD

FOR PROFILE, SEE SHEET 69
FOR UNDERDRAIN TABLES, SEE SHEETS 579-583
FOR TRAFFIC CONTROL PLAN, SEE SHEETS 589-619

HORIZONTAL SCALE IN FEET
0 50 100
CALCULATED SLP
CHECKED ALB

PLAN - S.R. 7
STA. 231+00 TO STA. 243+00

LAW-7-2.17

68
633

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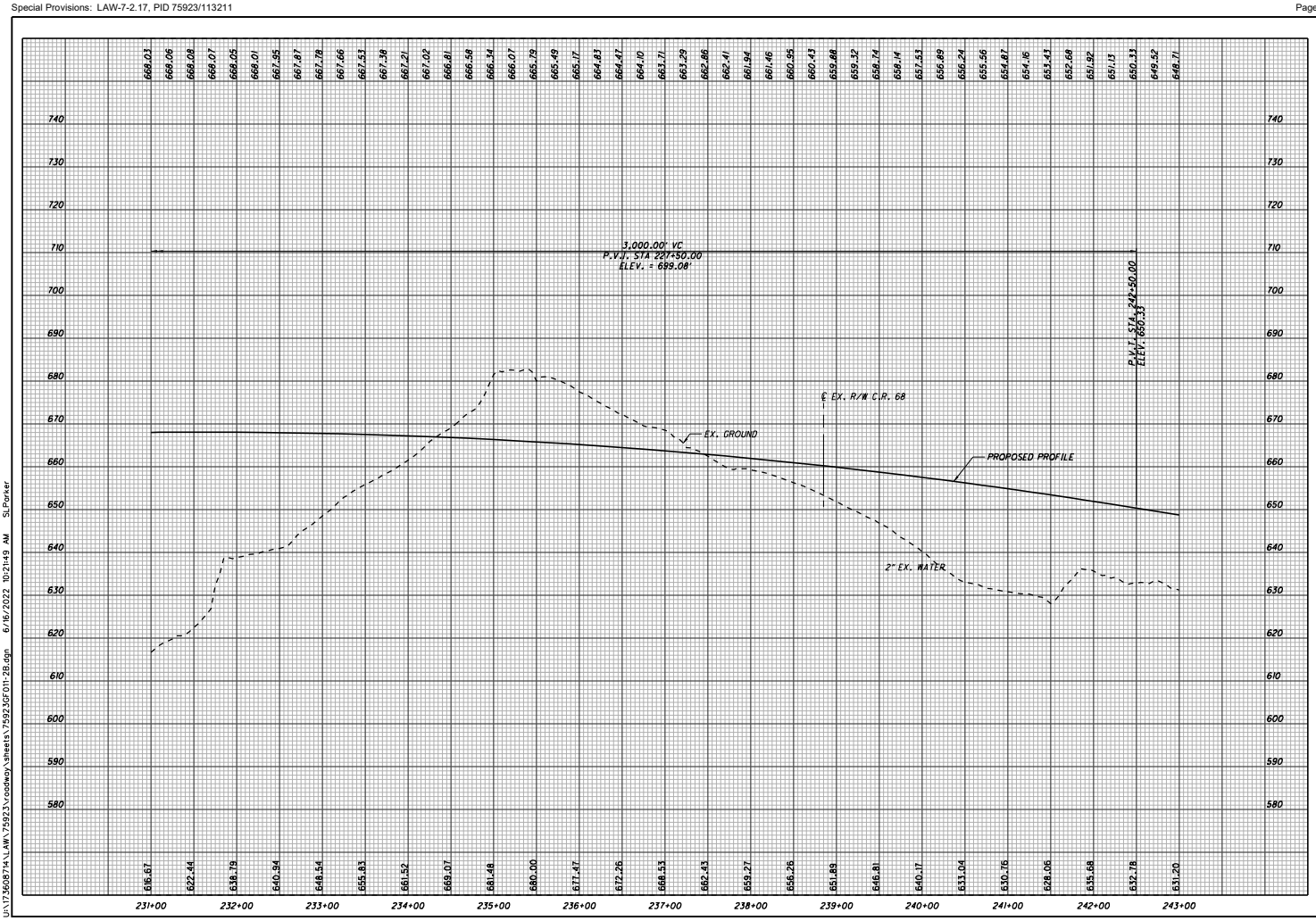

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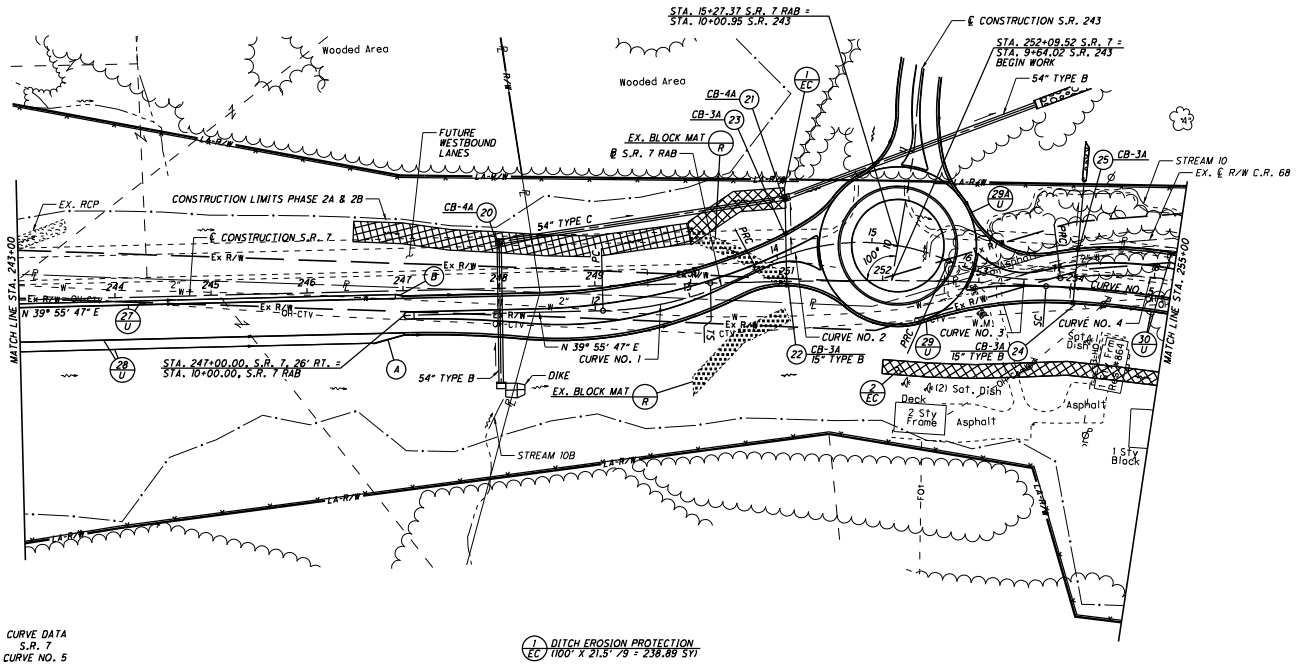
CALCULATED SLP
CHECKED ALB

PROFILE - S.R. 7
STA. 231+00 TO STA. 243+00

LAW-7-2.17

CURVE DATA @ S.R. 7 RAB CURVE NO. 1	CURVE DATA @ S.R. 7 RAB CURVE NO. 2	CURVE DATA @ S.R. 7 RAB CURVE NO. 3	CURVE DATA @ S.R. 7 RAB CURVE NO. 4
P.I. Sta. 12+93.43	P.I. Sta. 14+87.13	P.I. Sta. 16+43.83	P.I. Sta. 18+27.99
Δ = 27° 26' 21" (LT)	Δ = 52° 43' 55" (RT)	Δ = 30° 24' 24" (LT)	Δ = 31° 15' 43" (RT)
Dc = 16° 22' 13"	Dc = 25° 27' 53"	Dc = 25° 27' 53"	Dc = 12° 43' 57"
R = 350.00'	R = 225.00'	R = 225.00'	R = 450.00'
T = 85.45'	T = 111.52'	T = 61.15'	T = 125.90'
L = 167.62'	L = 207.08'	L = 119.41'	L = 245.53'
E = 10.28'	E = 26.12'	E = 8.16'	E = 17.28'
PC Sta. 12+07.99	PRC Sta. 13+75.60	PRC Sta. 15+82.68	PRC Sta. 17+02.09
PRC Sta. 13+75.60	PRC Sta. 15+82.68	PRC Sta. 17+02.09	PT Sta. 19+47.62



CURVE DATA S.R. 7 CURVE NO. 5	
P.I. STA. 261+89.75	Bs = 5° 41' 15"
Δ = 58° 46' 06" (RT)	Ls = 350.00'
Dc = 3° 15' 00"	Ts = 1,169.30'
R = 1,762.95'	LT = 233.45'
T = 773.76'	ST = 116.78'
L = 1,458.26'	e_{max} = 7.10%
E = 162.33'	CS STA. 268+28.71
TS STA. 250+20.45	ST STA. 271+78.71
SC STA. 253+70.45	

* (A) - STA. 246+68.00 BEGIN SHOULDER TAPER, 54" RT.
STA. 247+00.00 END SHOULDER TAPER, 58" RT.

* (B) - STA. 246+92.00 BEGIN SHOULDER TAPER, 4" LT.
STA. 247+00.00 END SHOULDER TAPER, 6" LT.

(1 EC) DITCH EROSION PROTECTION (100' X 21.5' /9 = 238.89 SY)

(2 EC) SEEDING AND EROSION CONTROL WITH TURF REINFORCING MAT, TYPE I (288' x 14.5' / 9 = 464 SY)

* USE TYPE 6 CURB TO TAPER SHOULDER. TAPER CURB HEIGHT FROM 0" TO 6" IN 10'.

FOR PROFILE, SEE SHEETS 71 & 75
FOR S.R. 243 PLAN AND PROFILE, SEE SHEETS 418-418A
FOR STORM SEWER PROFILES, SEE SHEETS 207 & 564
FOR UNDERDRAIN TABLES, SEE SHEETS 579-583
FOR TRAFFIC CONTROL PLAN, SEE SHEETS 589-619

HORIZONTAL SCALE IN FEET
0 50 100
CALCULATED SLP
CHECKED ALB

PLAN - S.R. 7
STA. 243+00 TO STA. 255+00

LAW-7-2.17

70
633

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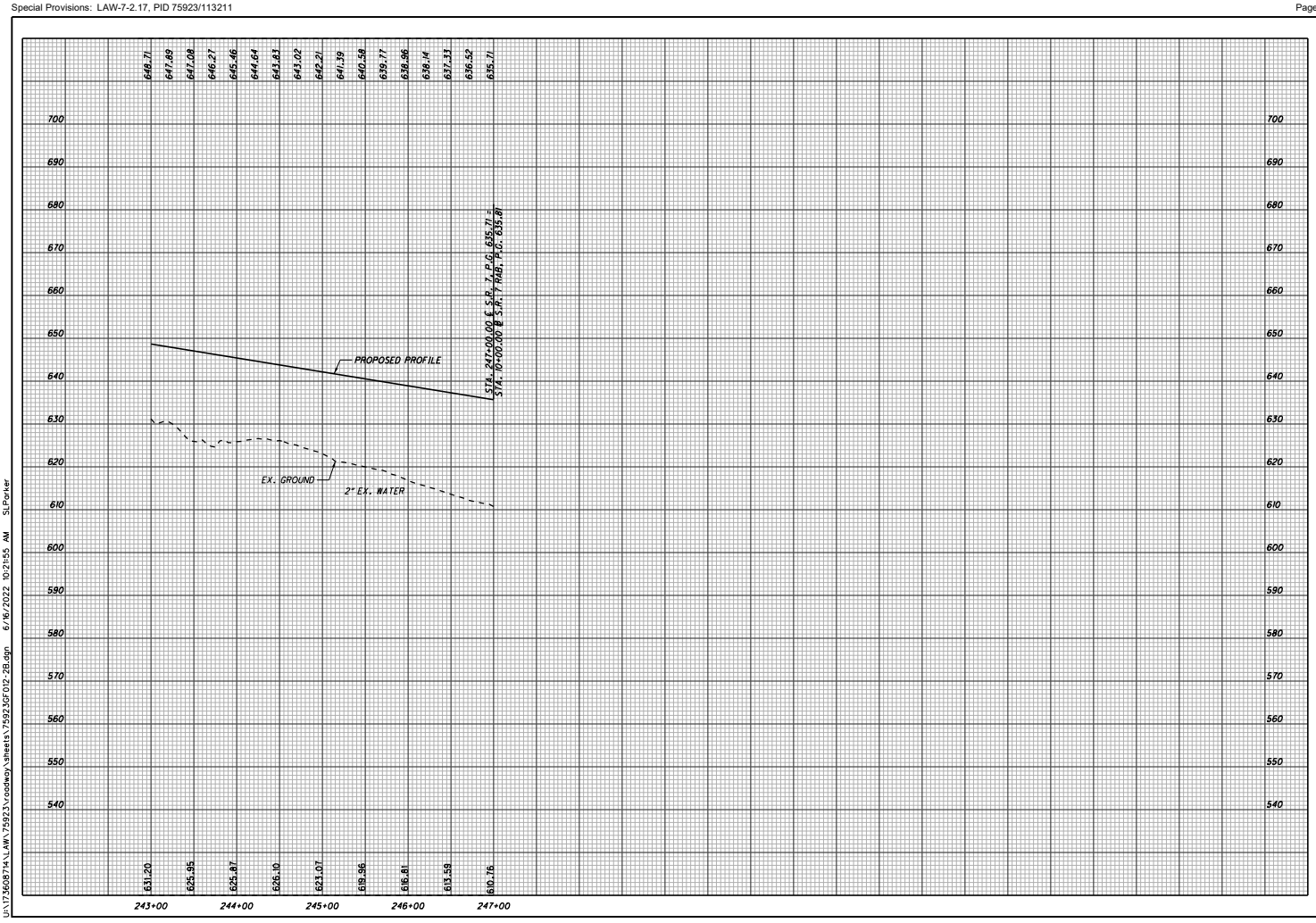

PROFILE - S.R. 7
STA. 243+00.00 TO STA. 247+00.00

LAW-7-2.17

CALCULATED SLP
CHECKED ALB

7
633

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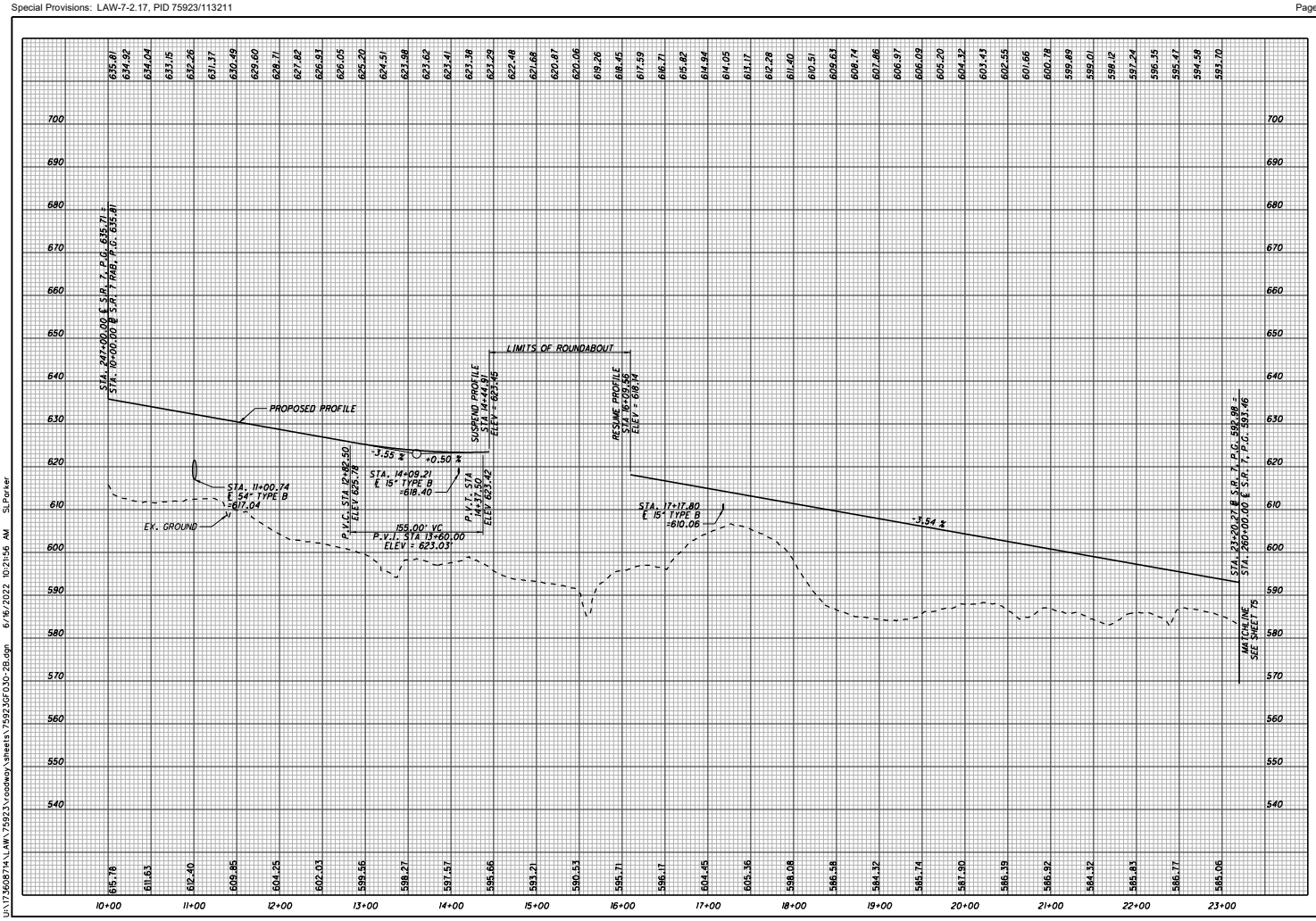

PROFILE - S.R. 7 RAB
STA. 10+00 TO STA. 23+20.27

CALCULATED SLP
CHECKED ALB

LAW-7-2.17

72
633

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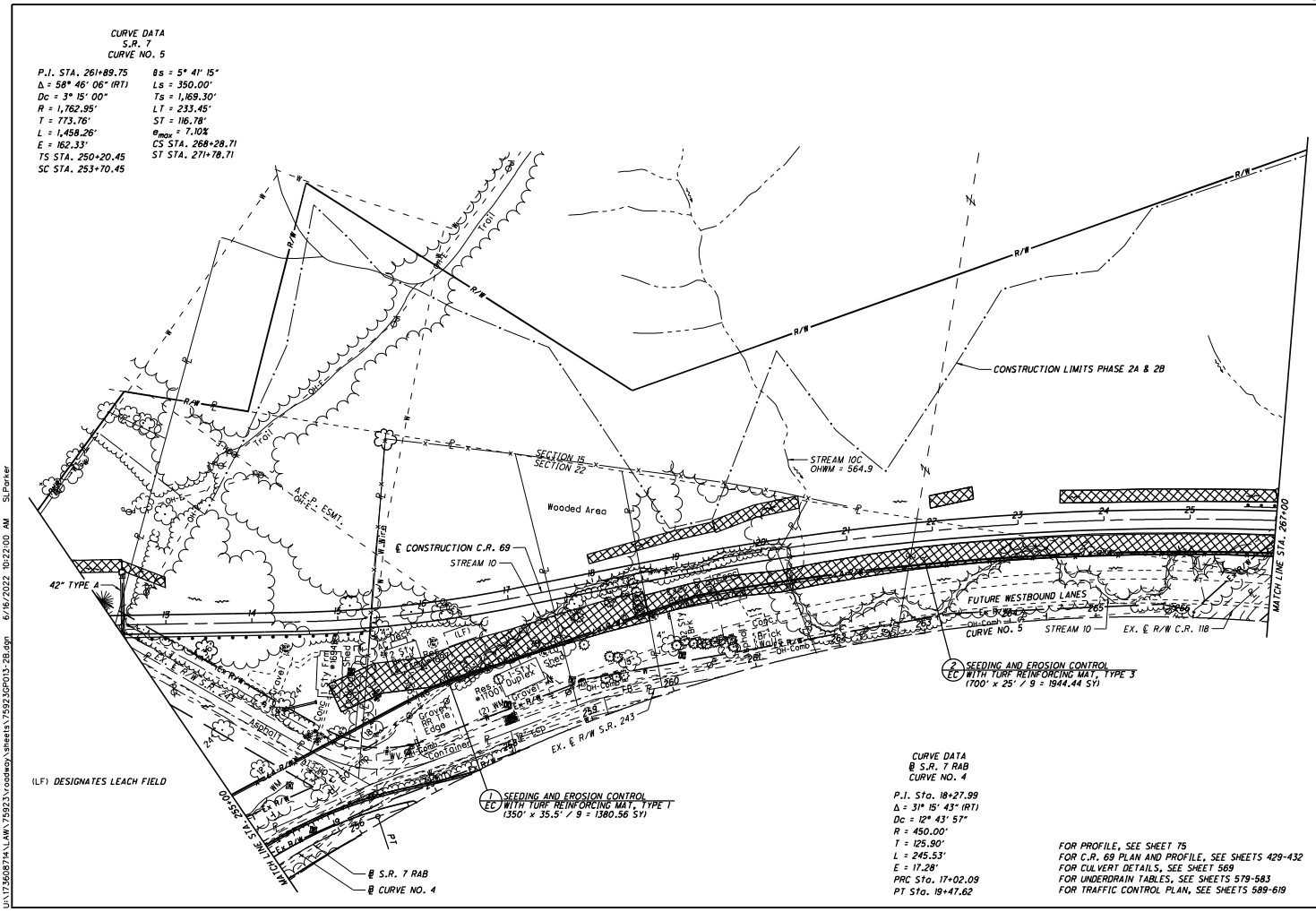

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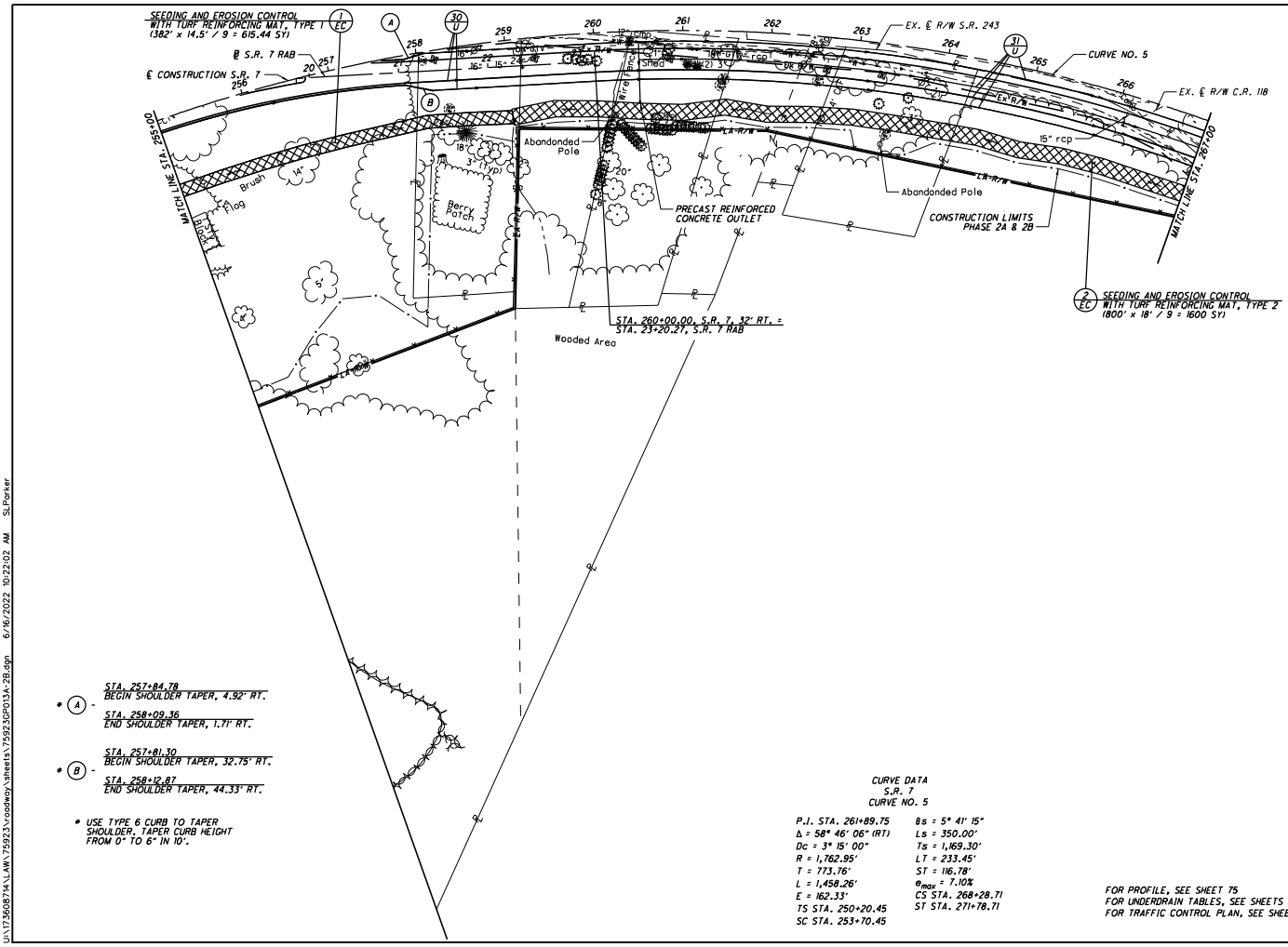


CURVE DATA
S.R. 7
CURVE NO. 5

P.I. STA. 261+89.75	θs = 5° 41' 15"
Δ = 58° 46' 06" (RT)	Ls = 350.00'
Dc = 3° 15' 00"	Ts = 1,169.30'
R = 1,762.95'	LT = 233.45'
T = 773.76'	ST = 116.78'
L = 1,458.26'	e_{max} = 7.10%
E = 162.33'	CS STA. 268+28.71
TS STA. 250+20.45	ST STA. 271+78.71
SC STA. 253+70.45	

FOR PROFILE, SEE SHEET 75
FOR UNDERDRAIN TABLES, SEE SHEETS 579-583
FOR TRAFFIC CONTROL PLAN, SEE SHEETS 589-619

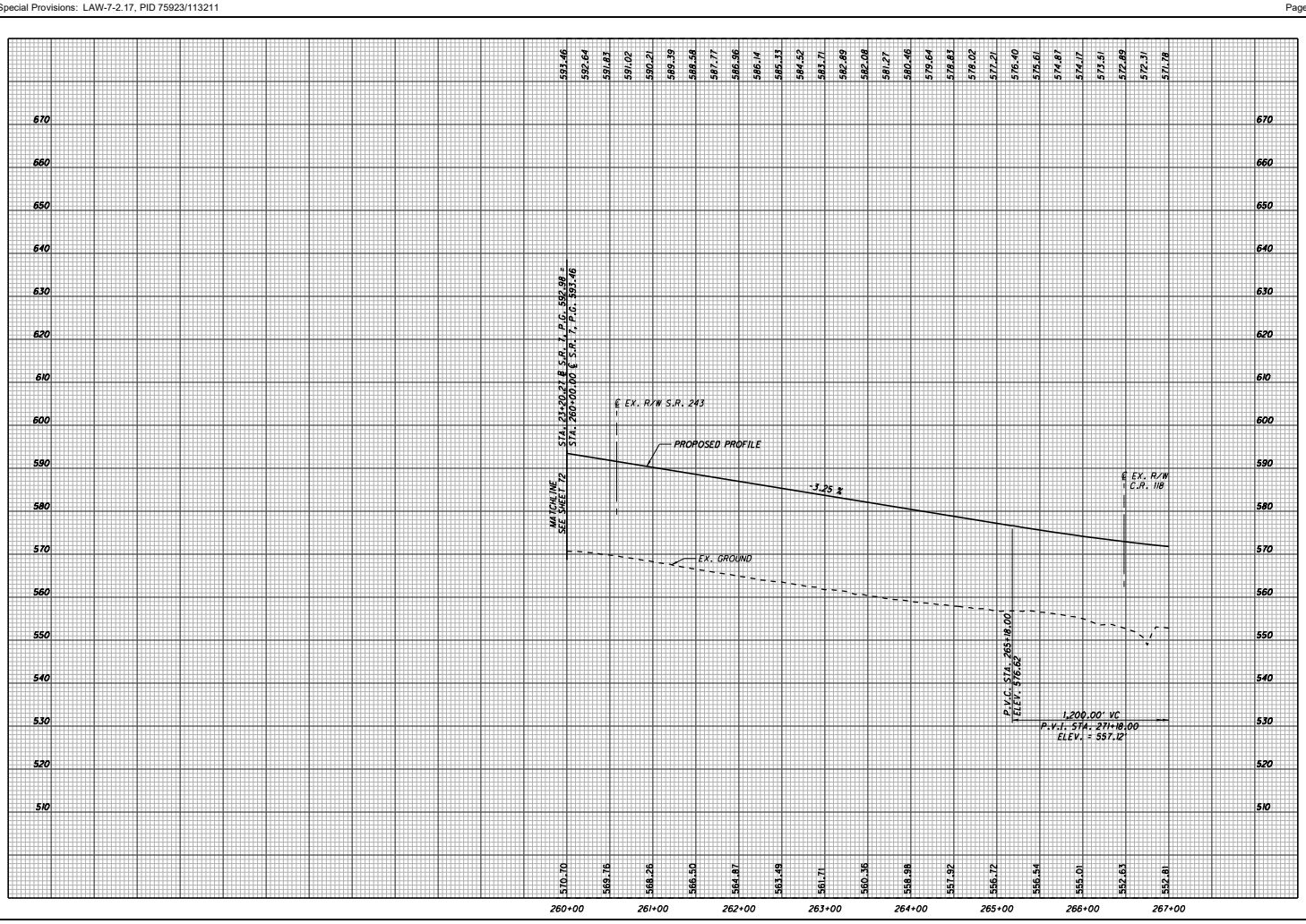
HORIZONTAL SCALE IN FEET
0 50 100
CALCULATED SLP
CHECKED ALB

PLAN - S.R. 7
STA. 255+00 TO STA. 267+00 (SOUTH)

LAW-7-2.17

74
633

U:\173608714\LAW\75923\roadway\sheets\75923GP013A-2B.dgn 6/16/2022 10:22:02 AM SLParker



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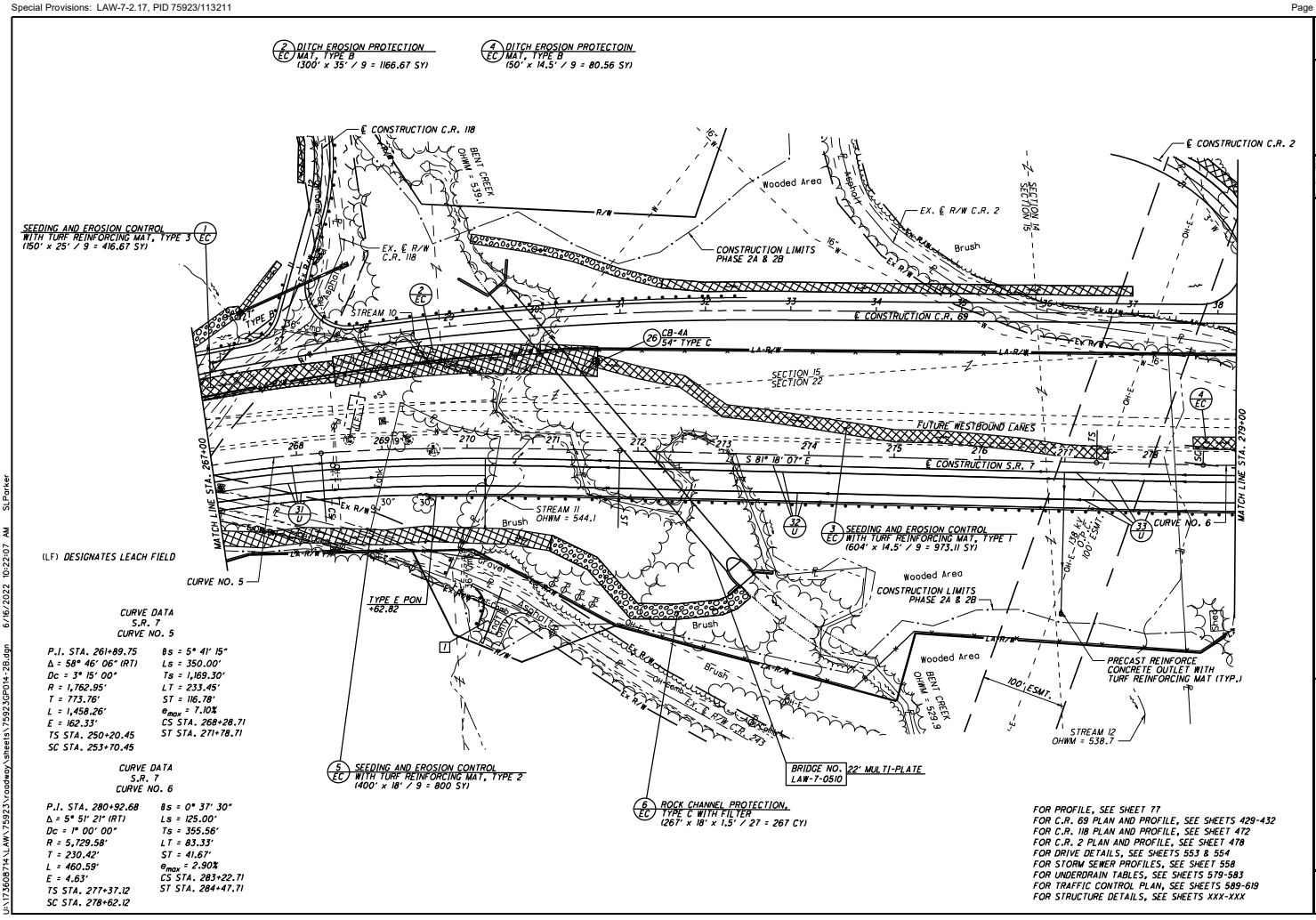

CURVE DATA
S.R. 7
CURVE NO. 5

P.I. STA. 261+89.75	Bs = 5° 41' 15"
Δ = 58° 46' 06" (RT)	Ls = 350.00'
Dc = 3° 15' 00"	Ts = 1,169.30'
R = 1,762.95'	LT = 233.45'
T = 773.76'	ST = 116.78'
L = 1,458.26'	e_{max} = 7.10%
E = 162.33'	CS STA. 268+28.71
TS STA. 250+20.45	ST STA. 271+78.71
SC STA. 253+70.45	

CURVE DATA
S.R. 7
CURVE NO. 6

P.I. STA. 280+92.68	Bs = 0° 37' 30"
Δ = 5° 51' 21" (RT)	Ls = 125.00'
Dc = 1° 00' 00"	Ts = 355.56'
R = 5,729.58'	LT = 83.33'
T = 230.42'	ST = 41.67'
L = 460.59'	e_{max} = 2.90%
E = 4.63'	CS STA. 283+22.71
TS STA. 277+37.12	ST STA. 284+47.71
SC STA. 278+62.12	

FOR PROFILE, SEE SHEET 77
FOR C.R. 69 PLAN AND PROFILE, SEE SHEETS 429-432
FOR C.R. 118 PLAN AND PROFILE, SEE SHEET 472
FOR C.R. 2 PLAN AND PROFILE, SEE SHEET 478
FOR DRIVE DETAILS, SEE SHEETS 553 & 554
FOR STORM SEWER PROFILES, SEE SHEET 558
FOR UNDERDRAIN TABLES, SEE SHEETS 579-583
FOR TRAFFIC CONTROL PLAN, SEE SHEETS 589-619
FOR STRUCTURE DETAILS, SEE SHEETS XXX-XXX

HORIZONTAL SCALE IN FEET
0 50 100
CALCULATED SLP
CHECKED ALB

PLAN - S.R. 7
STA. 267+00 TO STA. 279+00

LAW-7-2.17

76
633

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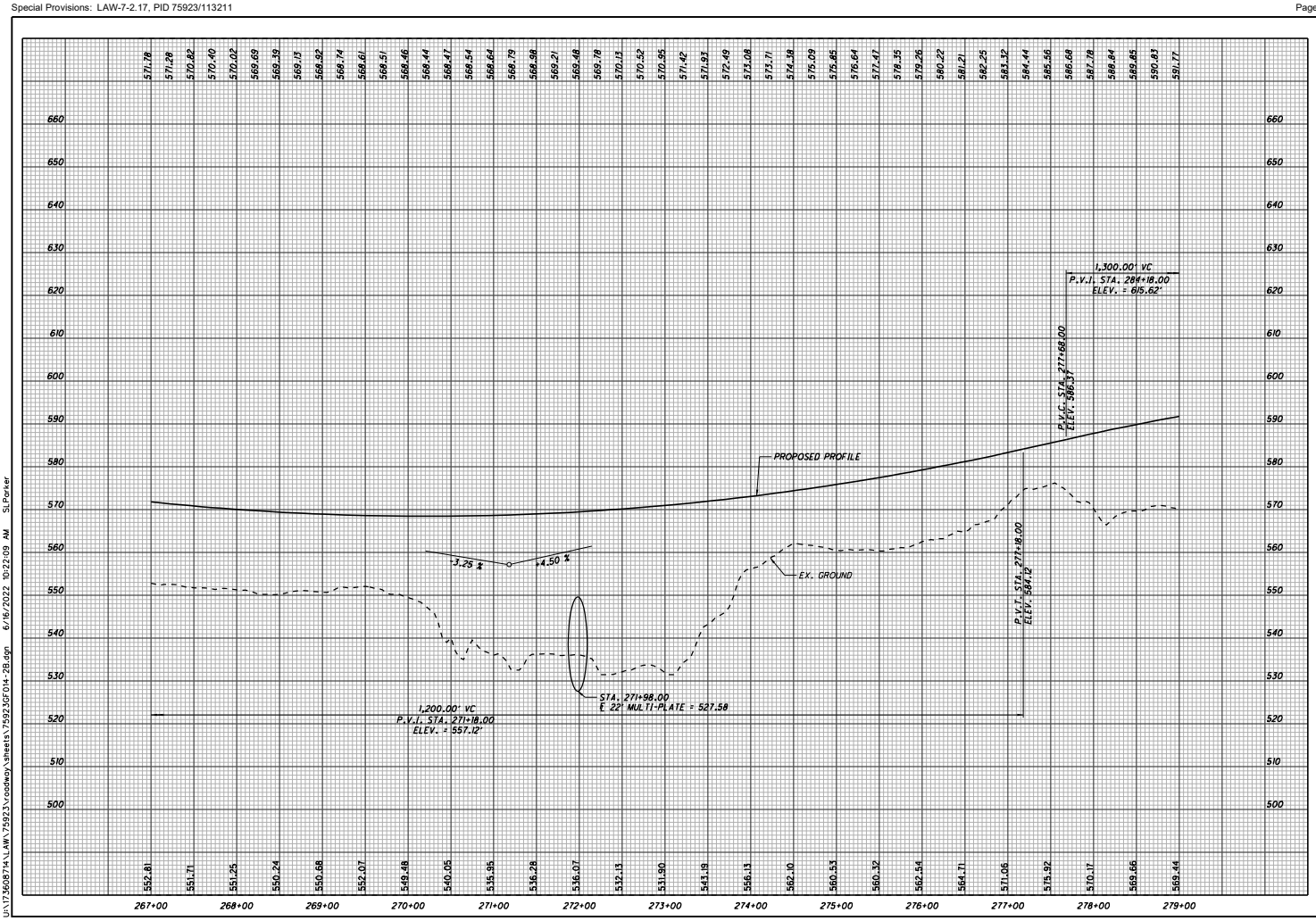

PROFILE - S.R. 7
STA. 267+00 TO STA. 279+00

CALCULATED SLP
CHECKED ALB

LAW-7-2.17

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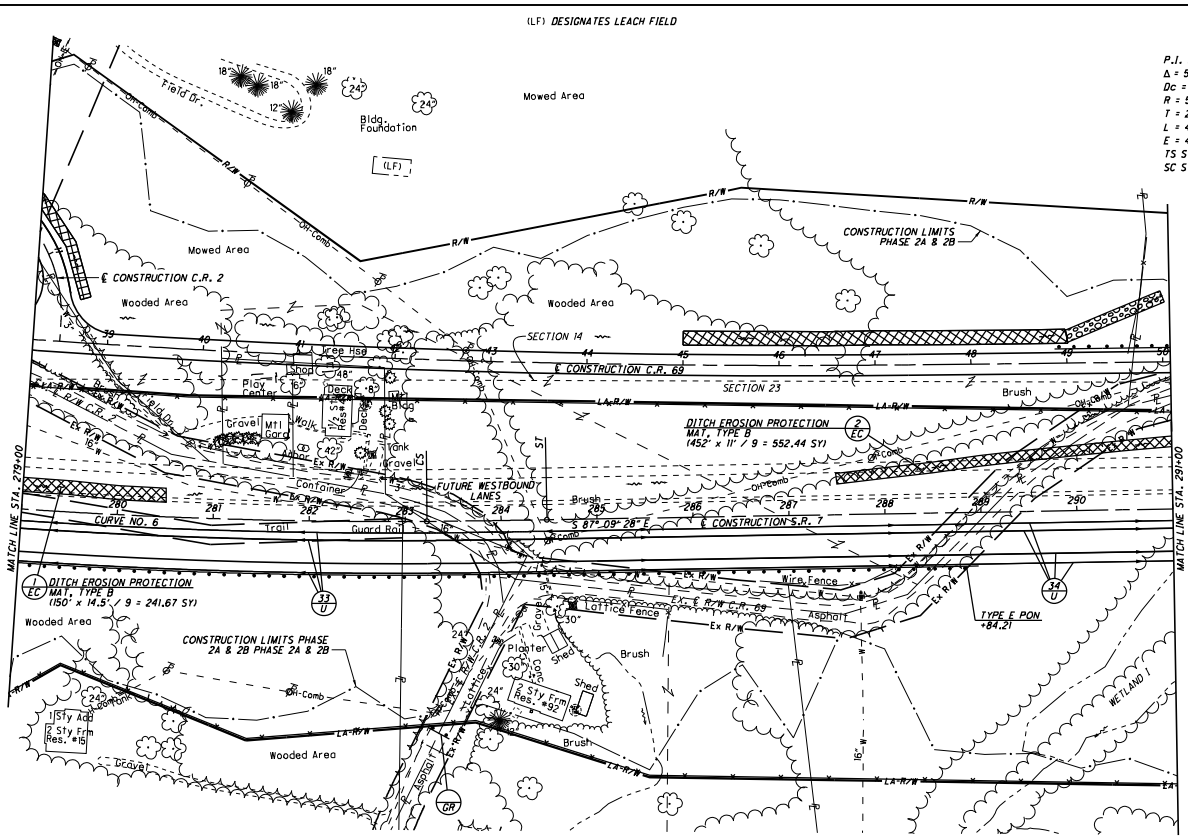
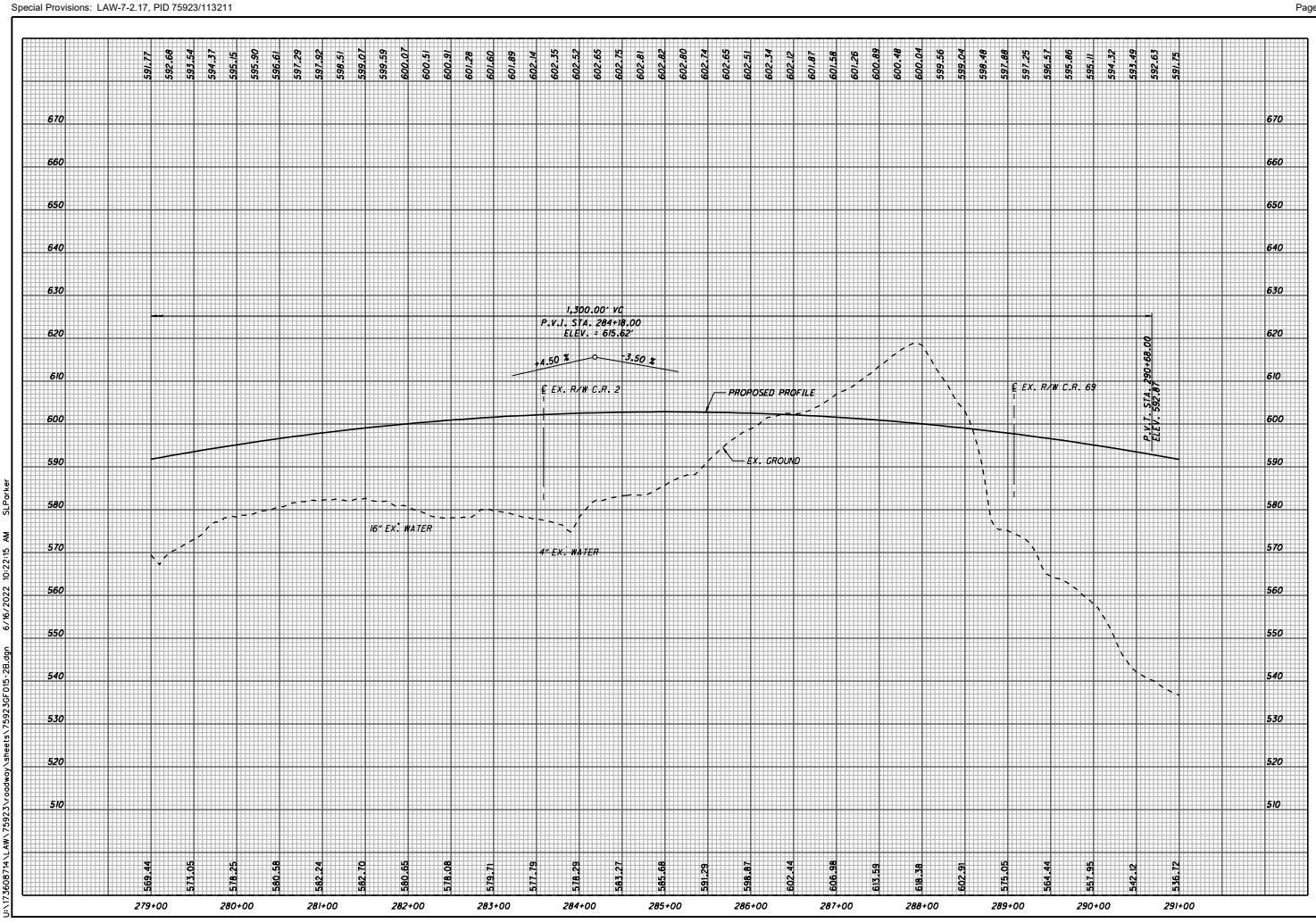

(LF) DESIGNATES LEACH FIELD
Mowed Area
Bldg. Foundation
Field Dr.
Dr. Comb
R/W
Wooded Area
℄ CONSTRUCTION C.R. 2
CONSTRUCTION LIMITS PHASE 2A & 2B
SECTION 14
SECTION 23
℄ CONSTRUCTION C.R. 69
Tree Hse
Shop
Play Center
Deck
Bldg
Gravel
Mtl Garage
Walk
Trailer
Container
Brush
DITCH EROSION PROTECTION MAT. TYPE B (452' x 11' / 9 = 552.44 SY)
FUTURE WESTBOUND LANES
CURVE NO. 6
Trail
Guard Rail
S 87° 09' 28" E
℄ CONSTRUCTION-S.R. 7
MATCH LINE STA. 279+00
MATCH LINE STA. 291+00
DITCH EROSION PROTECTION MAT. TYPE B (150' x 14.5' / 9 = 241.67 SY)
CONSTRUCTION LIMITS PHASE 2A & 2B PHASE 2A & 2B
Wire Fence
Office Fence
Ex R/W C.R. 69
Asphalt
TYPE E PON +84.21
Planter
Shed
Res. Sty Frm
Woodshed
Asphalt
WETLAND
1Sty Add
2 Sty Frm Res. #15
Gravel
Wooded Area
Brush
LA-R/W
Ex R/W
Ex ℄
Ex Ditch
Ex Comb
Ex Culv
Ex Inlet
Ex Fence
Ex Utility Pole
Ex Guard Rail
Ex Sign
Ex Tree
Ex Bldg
Ex Gravel
Ex Asphalt
Ex Woodshed
Ex Shed
Ex Planter
Ex Trailer
Ex Container
Ex Office Fence
Ex Wire Fence
Ex Walk
Ex Deck
Ex Play Center
Ex Tree Hse
Ex Shop
Ex Mtl Garage
Ex Res. Sty Frm
Ex 1Sty Add
Ex 2 Sty Frm Res. #15
Ex Woodshed
Ex Planter
Ex Office Fence
Ex Wire Fence
Ex Asphalt
Ex Gravel
Ex Trailer
Ex Container



PROFILE - S.R. 7
STA. 279+00 TO STA. 291+00

CALCULATED SLP
CHECKED ALB

LAW-7-2.17

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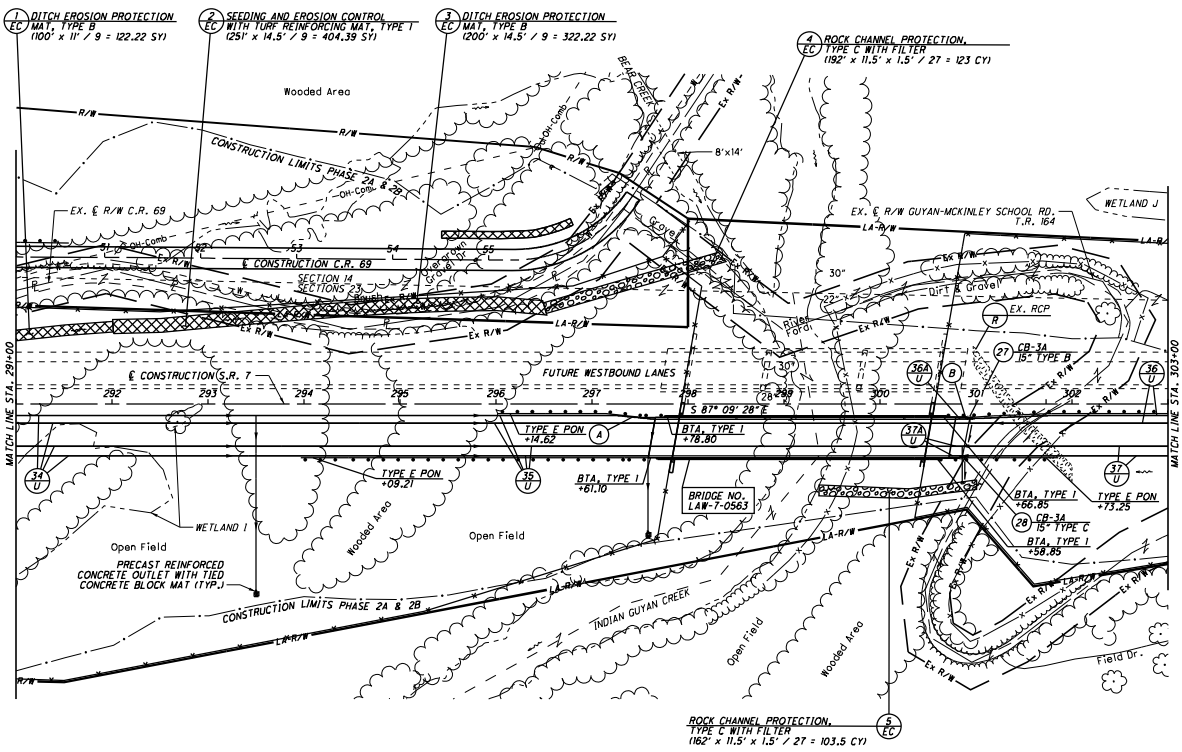

(A) - STA. 297+25.66 BEGIN SHOULDER TAPER, 12' RT.
STA. 297+65.66 END SHOULDER TAPER, 16' RT.

(B) - STA. 300+78.70 BEGIN SHOULDER TAPER, 16' RT.
STA. 301+78.70 END SHOULDER TAPER, 12' RT.

FOR PROFILE, SEE SHEET 81
FOR C.R. 69 PLAN AND PROFILE, SEE SHEETS 429-432
FOR UNDERDRAIN TABLES, SEE SHEETS 579-583
FOR TRAFFIC CONTROL PLAN, SEE SHEETS 589-619

HORIZONTAL SCALE IN FEET
0 50 100
CALCULATED SLP CHECKED ALB

PLAN - S.R. 7
STA. 291+00 TO 303+00

LAW-7-2.17

80
633

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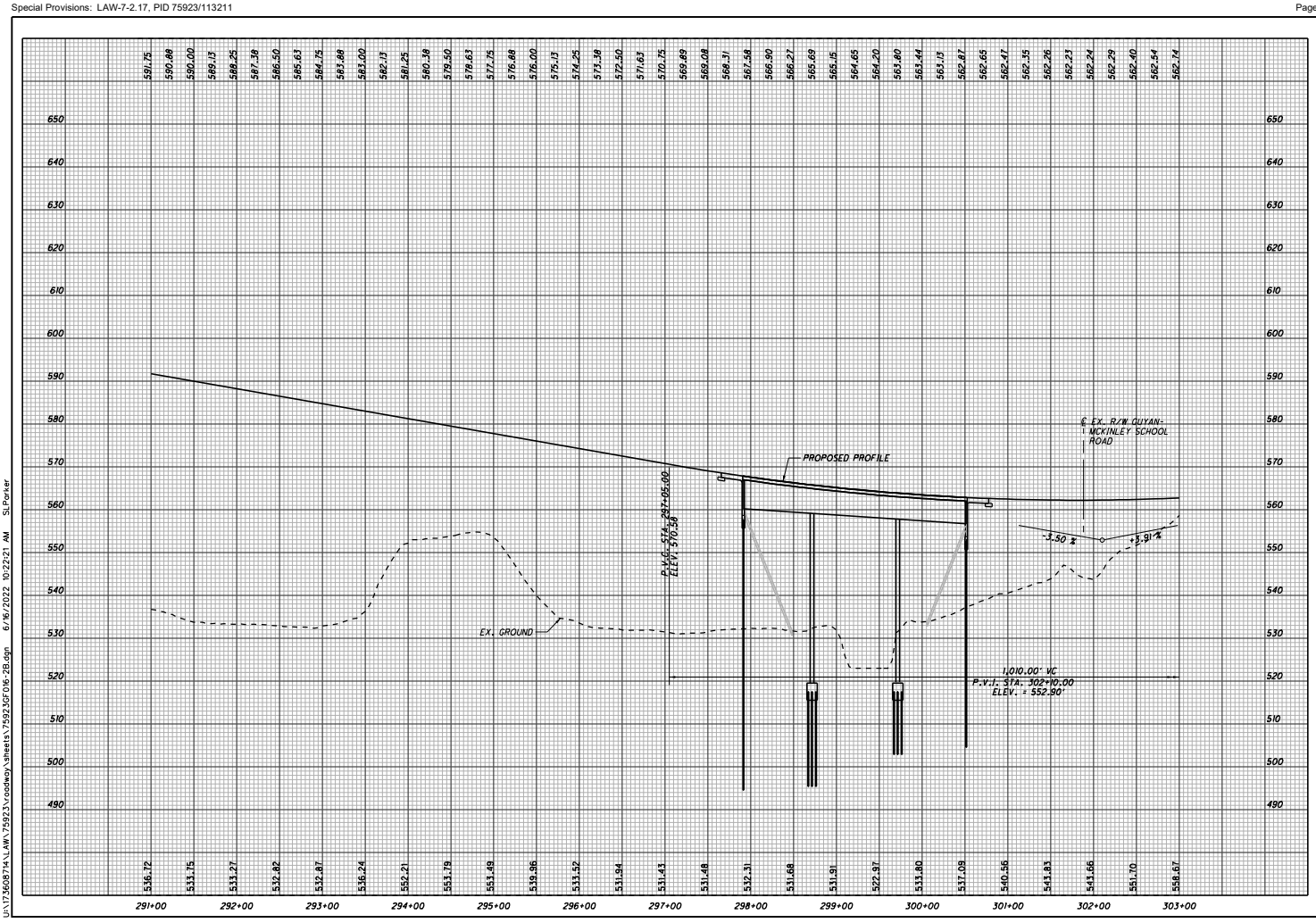

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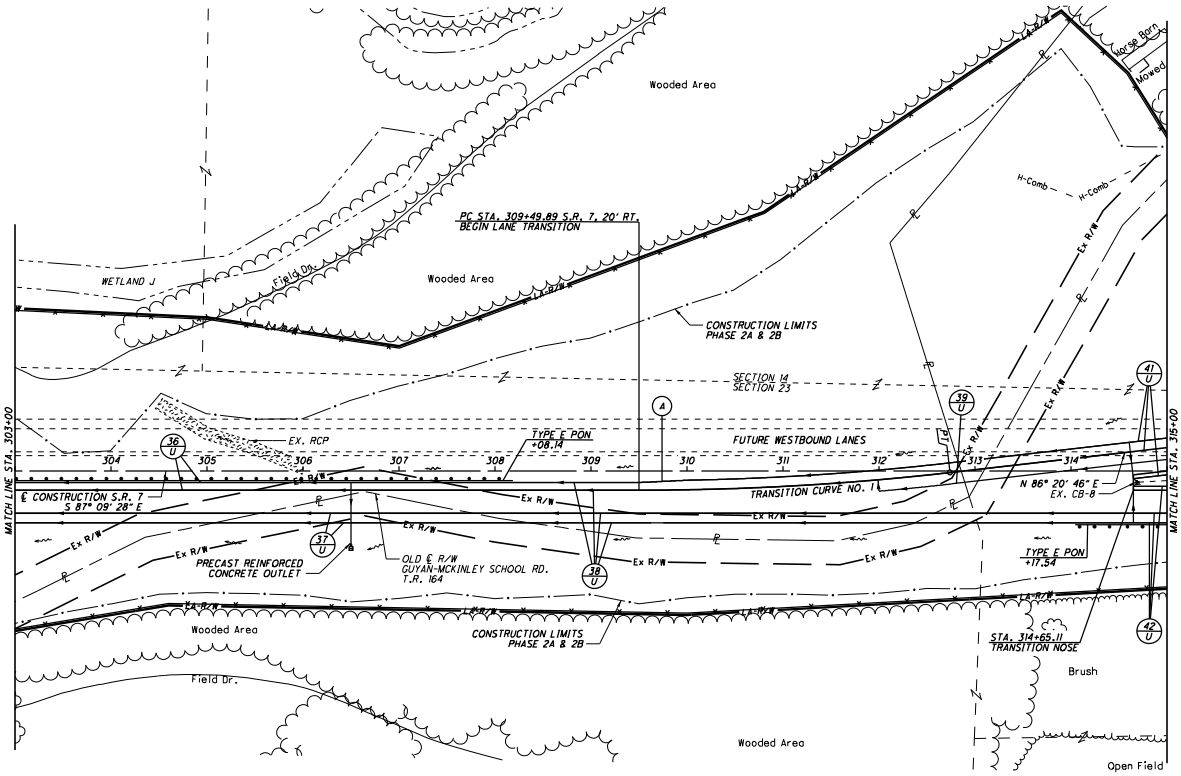

CURVE DATA
S.R. 7 LANE TRANSITION
TRANSITION CURVE NO. 1
(FOR HORIZONTAL LAYOUT ONLY)

P.I. Sta. 311+12.46, S.R. 7, 20' RT.
Δ = 6° 29' 46" (LT)
Dc = 2° 00' 00"
R = 2,864.79'
T = 162.58'
L = 324.81'
E = 4.61'
e_{max} = NC
PC STA. = 309+49.89, S.R. 7, 20' RT.
PT STA. = 312+74.00, S.R. 7, 1.61' RT.

(A) - STA. 309+49.89
BEGIN SHOULDER TAPER, 12' RT.
STA. 309+99.71
END SHOULDER TAPER, 9.57' RT.

FOR PROFILE, SEE SHEET 83
FOR UNDERDRAIN TABLES, SEE SHEETS 579-583
FOR TRAFFIC CONTROL PLAN, SEE SHEETS 589-619

HORIZONTAL SCALE IN FEET
0 50 100
CALCULATED SLP
CHECKED ALB

PLAN - S.R. 7
STA. 303+00 TO STA. 315+00

LAW-7-2.17

82
633

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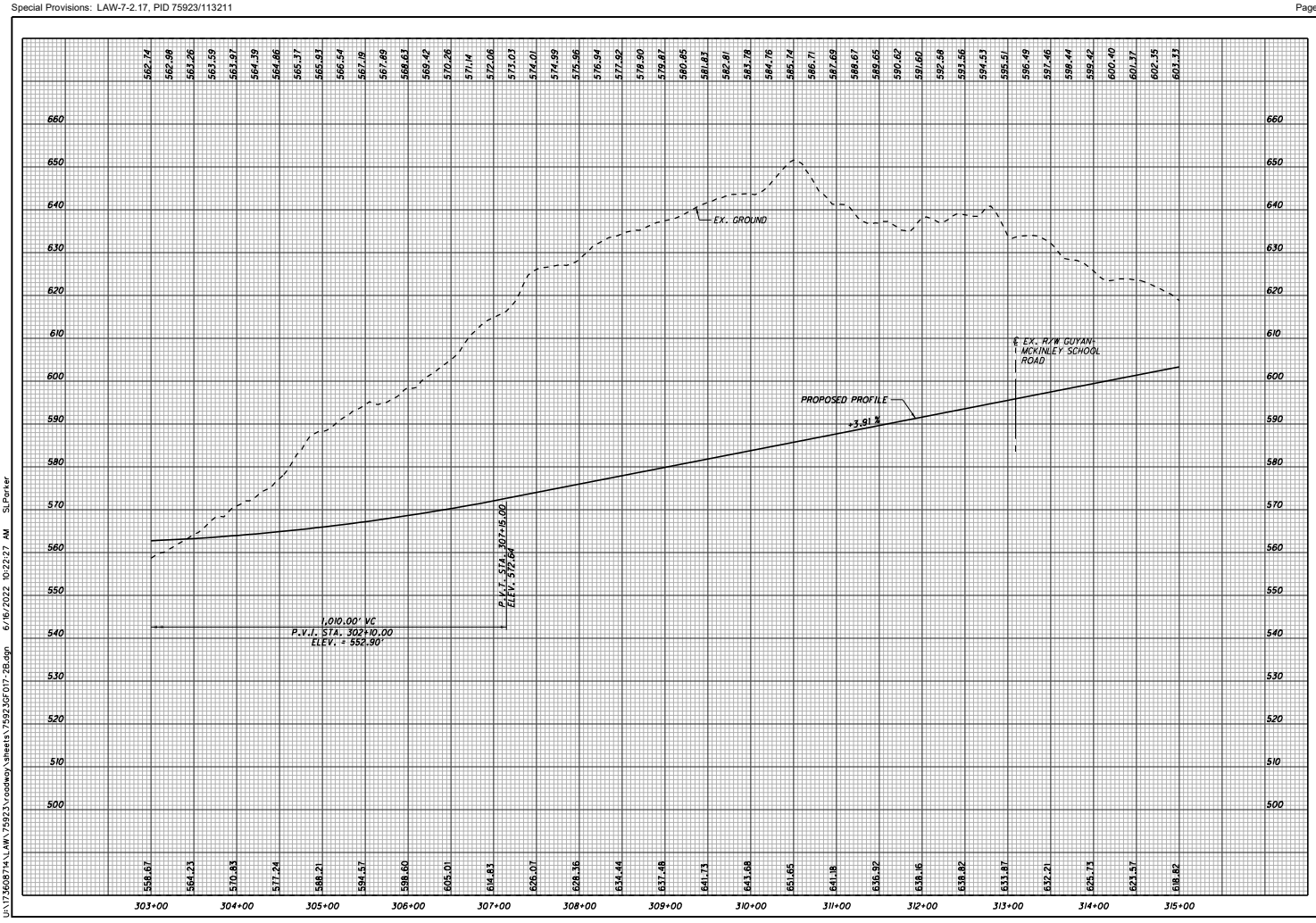

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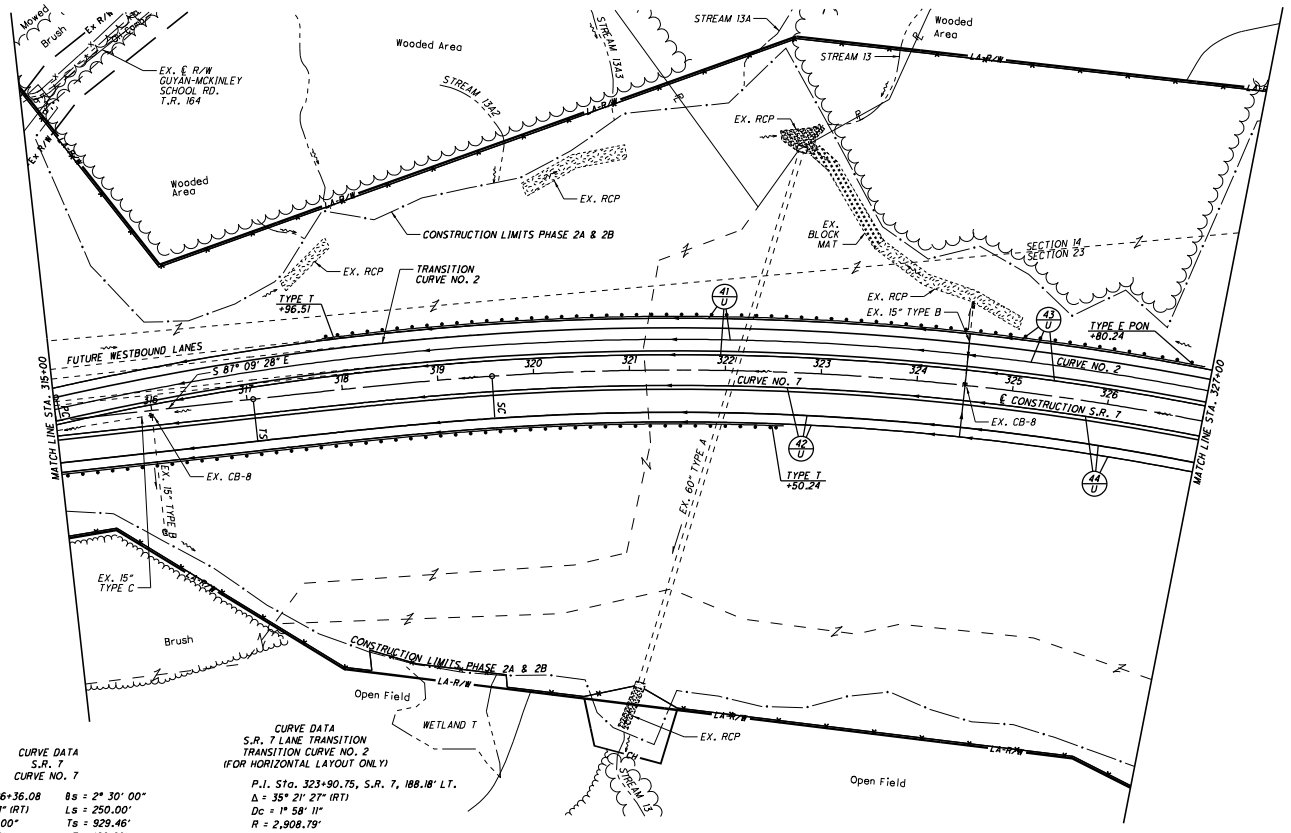
CALCULATED SLP
CHECKED ALB

PROFILE - S.R. 7
STA. 303+00 TO STA. 315+00

LAW-7-2.17



CURVE DATA
S.R. 7
CURVE NO. 7

P.I. STA. 326+36.08
Δ = 31° 21' 41" (RT)
Dc = 2° 00' 00"
R = 2,864.79'
T = 670.91'
L = 1,318.07'
E = 77.51'
TS STA. 317+06.62
SC STA. 319+56.62

θs = 2° 30' 00"
Ls = 250.00'
Ts = 929.46'
LT = 166.68'
ST = 83.35'
e_{max} = 5.10%
CS STA. 332+74.69
ST STA. 335+24.69

CURVE DATA
S.R. 7 LANE TRANSITION
TRANSITION CURVE NO. 2
(FOR HORIZONTAL LAYOUT ONLY)

P.I. Sta. 323+90.75, S.R. 7, 188.18' LT.
Δ = 35° 21' 27" (RT)
Dc = 1° 58' 11"
R = 2,908.79'
T = 927.12'
L = 1,795.03'
E = 144.18'
e_{max} = 5.10%
PC STA. = 315+02.52, S.R. 7, 24.41' LT.
PT STA. = 332+74.69, S.R. 7, 44' LT.

FOR PROFILE, SEE SHEET 85
FOR UNDERDRAIN TABLES, SEE SHEETS 581-585
FOR TRAFFIC CONTROL PLAN, SEE SHEETS 589-619

HORIZONTAL SCALE IN FEET
0 50 100
CALCULATED SLP
CHECKED ALB

PLAN - S.R. 7
STA. 315+00 TO STA. 327+00

LAW-7-2.17

84
635

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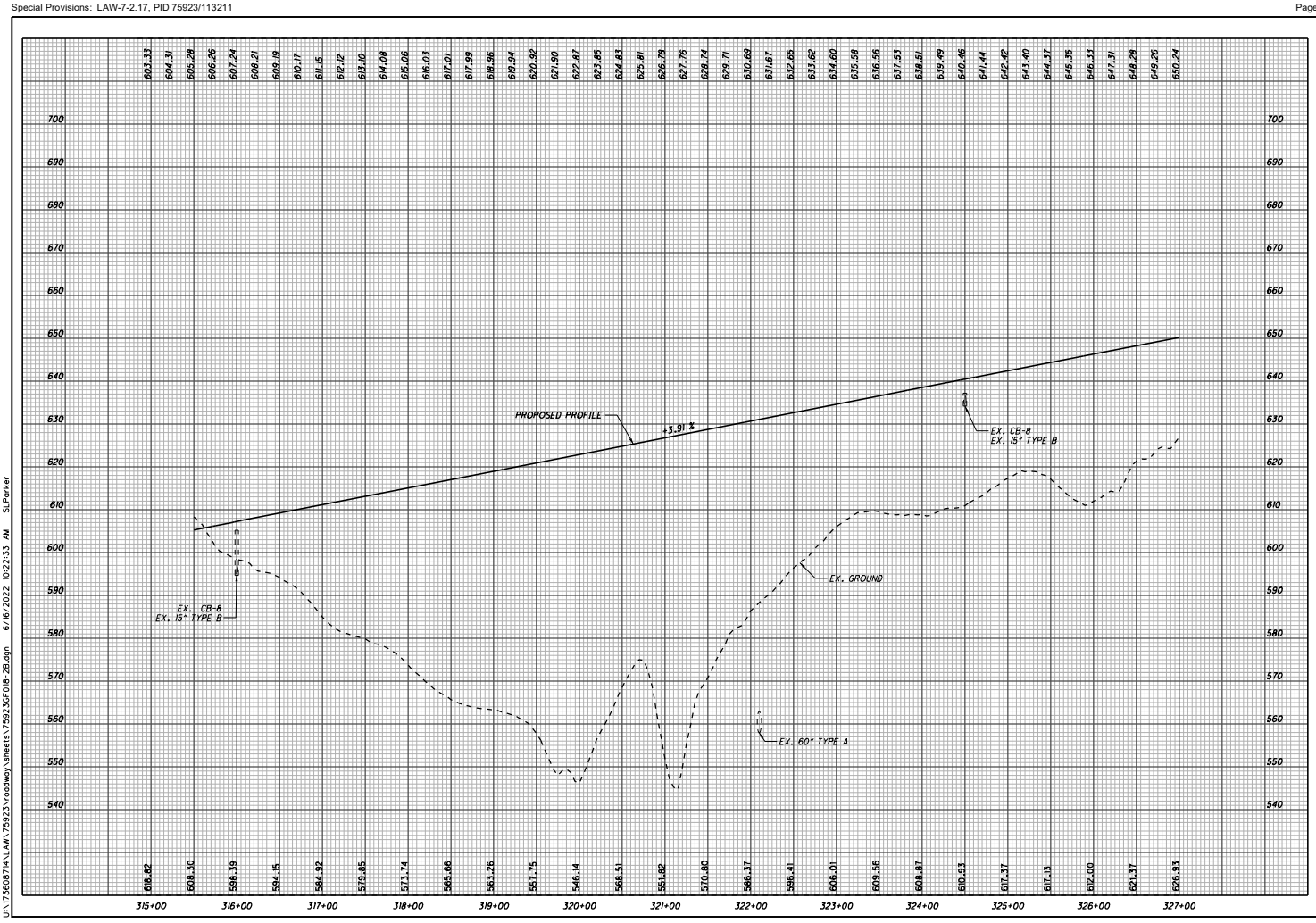

PROFILE - S.R. 7

STA. 315+00 TO STA. 327+00

CALCULATED SLP

CHECKED ALB

LAW-7-2.17

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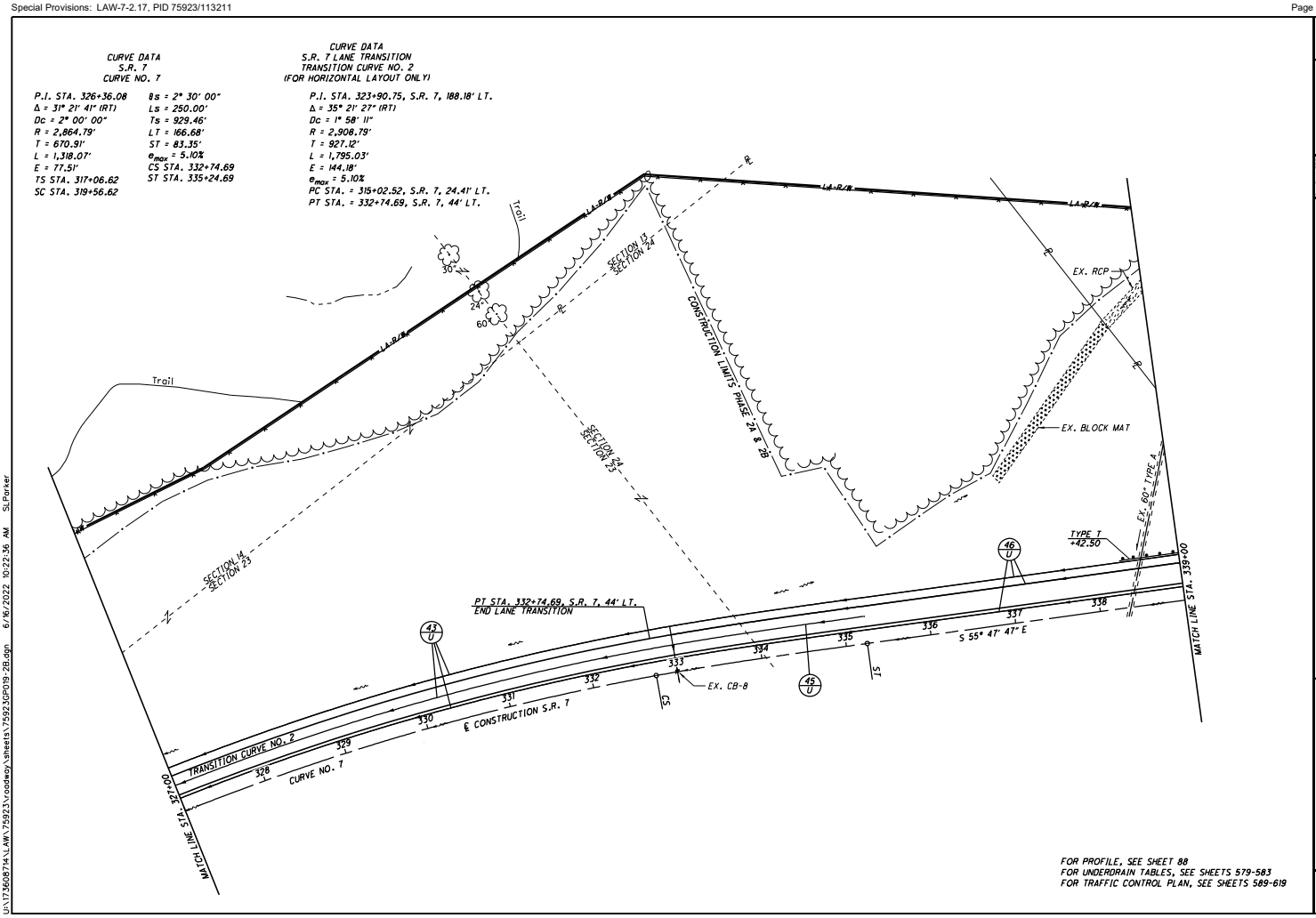

PLAN - S.R. 7
STA. 327+00 TO STA. 339+00 (NORTH)

LAW-7-2.17

HORIZONTAL SCALE IN FEET
0 50 100

CALCULATED SLP
CHECKED ALB

86
633

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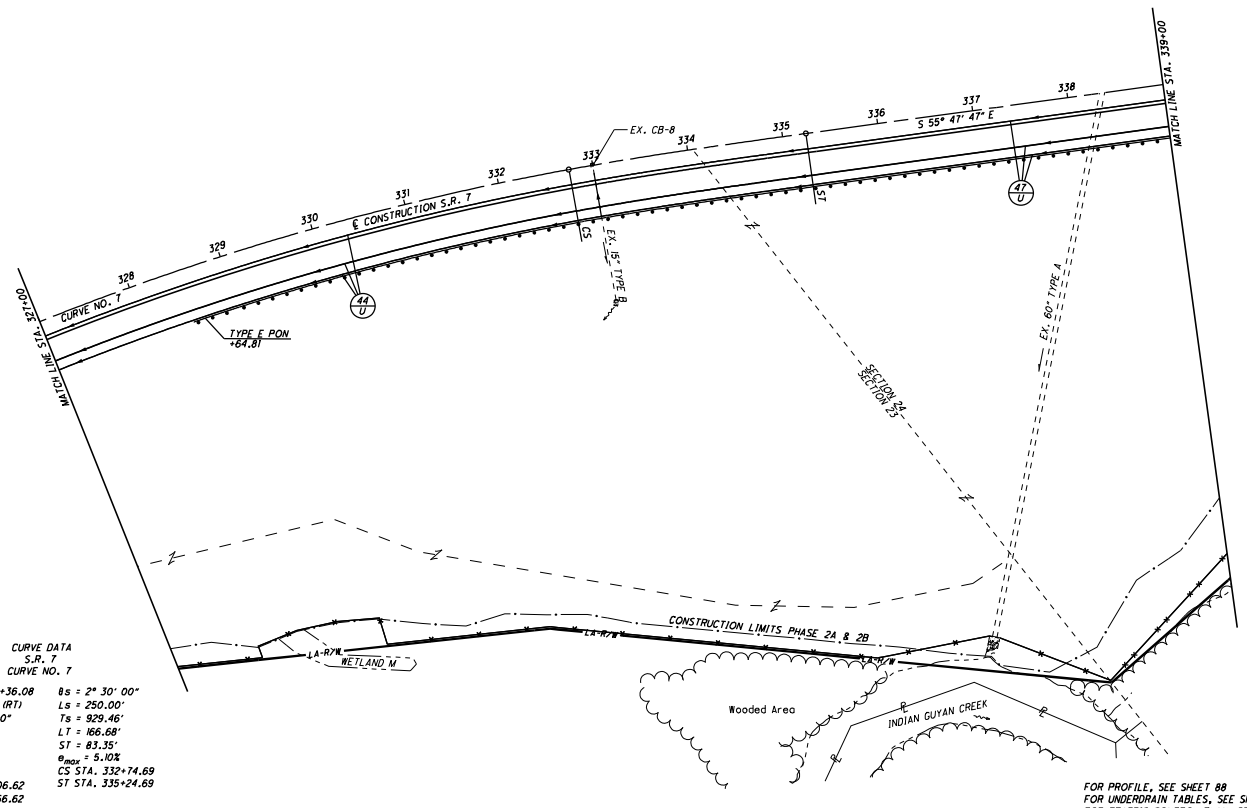

CURVE DATA
S.R. 7
CURVE NO. 7

P.I. STA. 326+36.08	θs = 2° 30' 00"
Δ = 31° 21' 41" (RT)	Ls = 250.00'
Dc = 2° 00' 00"	Ts = 929.46'
R = 2,864.79'	LT = 166.68'
T = 670.91'	ST = 83.35'
L = 1,318.07'	e_{max} = 5.10%
E = 77.51'	CS STA. 332+74.69
TS STA. 317+06.62	ST STA. 335+24.69
SC STA. 319+56.62	

FOR PROFILE, SEE SHEET 88
FOR UNDERDRAIN TABLES, SEE SHEETS 581-585
FOR TRAFFIC CONTROL PLAN, SEE SHEETS 589-619

HORIZONTAL SCALE IN FEET
0 50 100
CALCULATED SLP
CHECKED ALB

PLAN - S.R. 7
STA. 327+00 TO STA. 339+00 (SOUTH)

LAW-7-2.17

87
635

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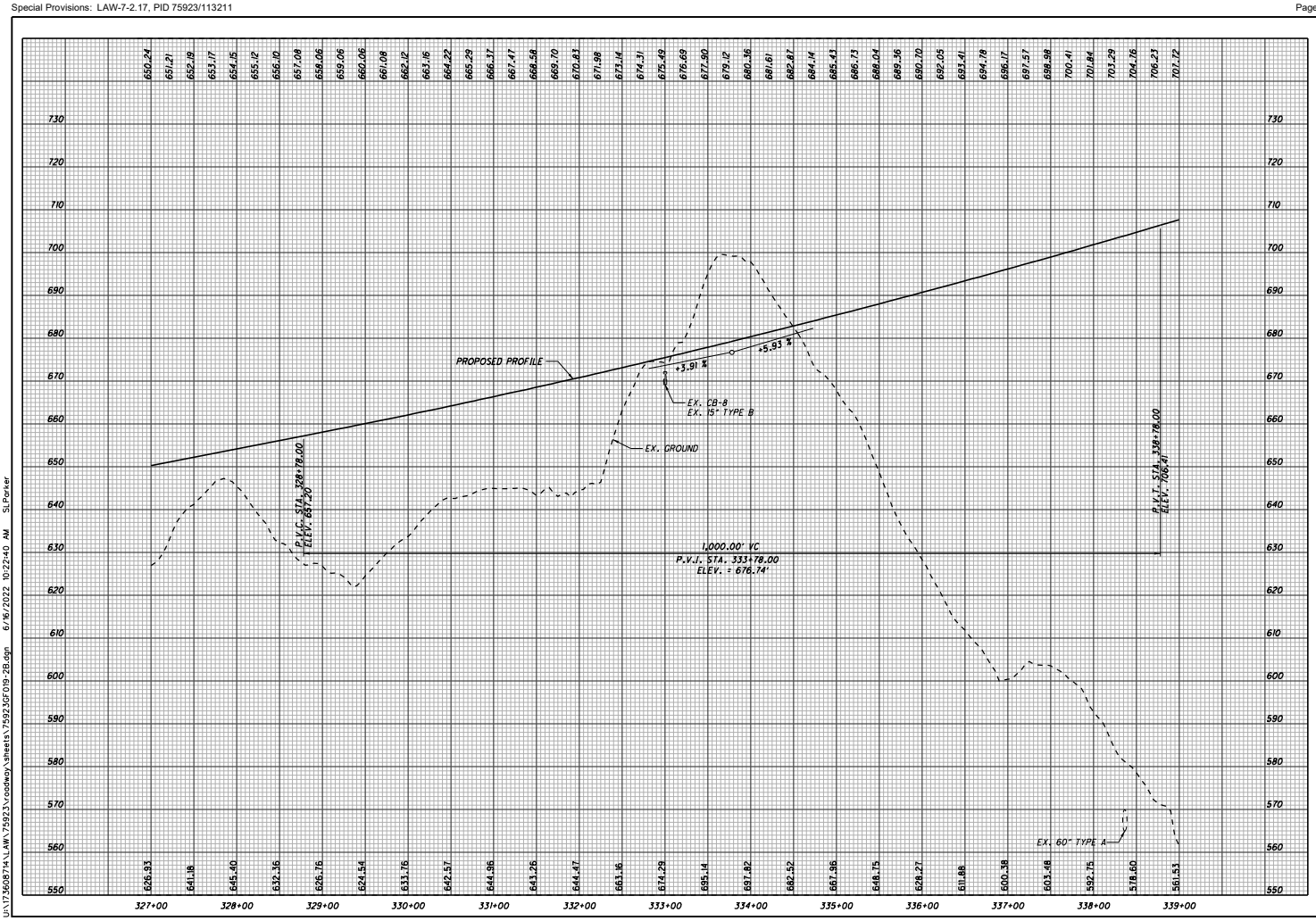

PROFILE - S.R. 7
STA. 327+00 TO STA. 339+00

CALCULATED SLP
CHECKED ALB

LAW-7-2.17

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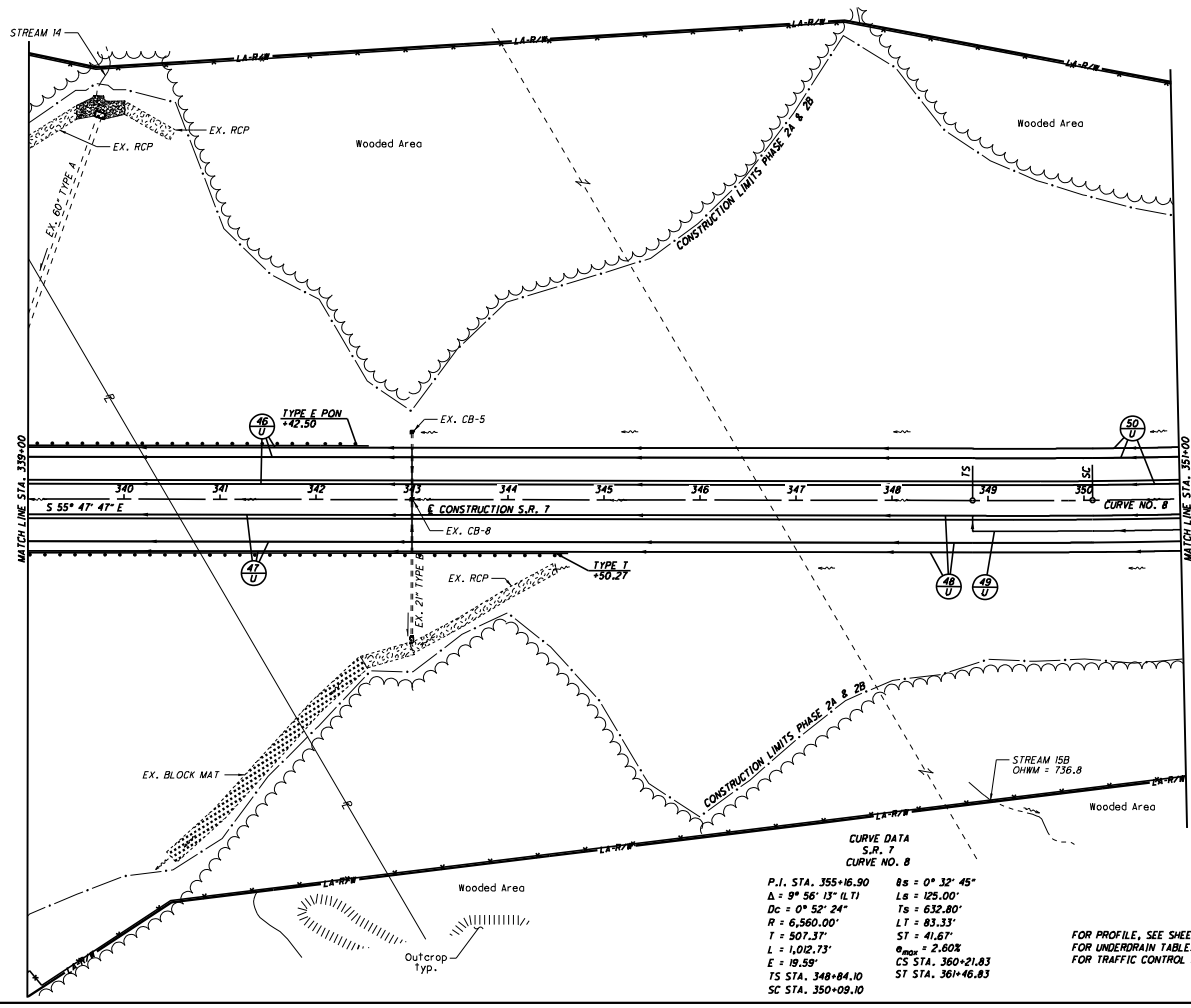


CURVE DATA
S.R. 7
CURVE NO. 8

P.I. STA. 355+16.90
Δ = 9° 56' 13" (LT)
Dc = 0° 52' 24"
R = 6,560.00'
T = 507.37'
L = 1,012.73'
E = 19.59'
TS STA. 348+84.10
SC STA. 350+09.10

θs = 0° 32' 45"
Ls = 125.00'
Ts = 632.80'
LT = 83.33'
ST = 41.67'
e_{max} = 2.60%
CS STA. 360+21.83
ST STA. 361+46.83

FOR PROFILE, SEE SHEET 90
FOR UNDERDRAIN TABLES, SEE SHEETS 581-585
FOR TRAFFIC CONTROL PLAN, SEE SHEETS 589-619

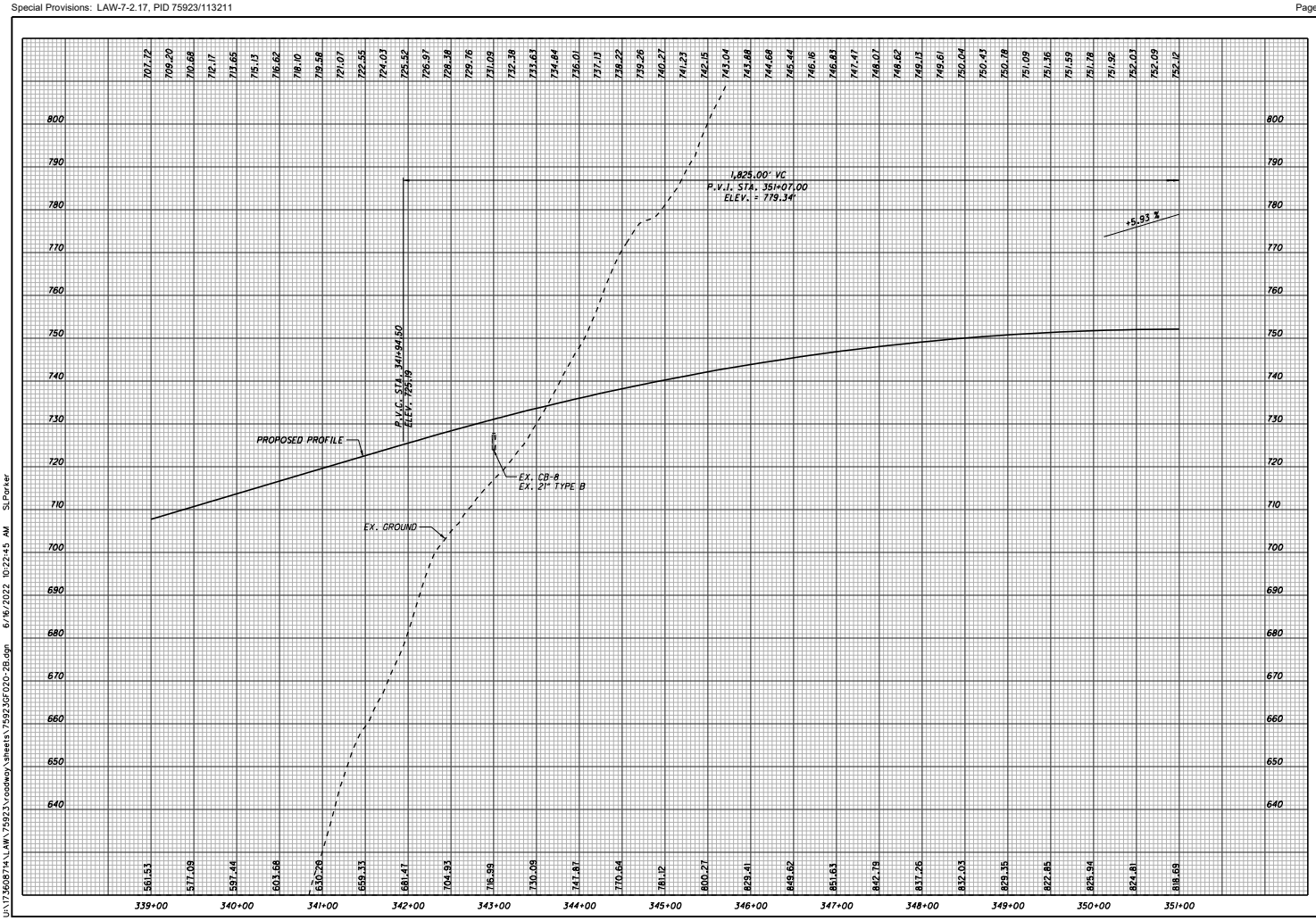
HORIZONTAL SCALE IN FEET
0 50 100
CALCULATED SLP
CHECKED ALB

PLAN - S.R. 7
STA. 339+00 TO STA. 351+00

LAW-7-2.17

89
635

U:\173608714\LAW\75923\roadway\sheets\75923GP020-2B.dgn Sheet 9/19/2023 4:04:39 PM oboyce



PROFILE - S.R. 7
STA. 339+00 STA. 351+00

CALCULATED SLP
CHECKED ALB

LAW-7-2.17

90
633

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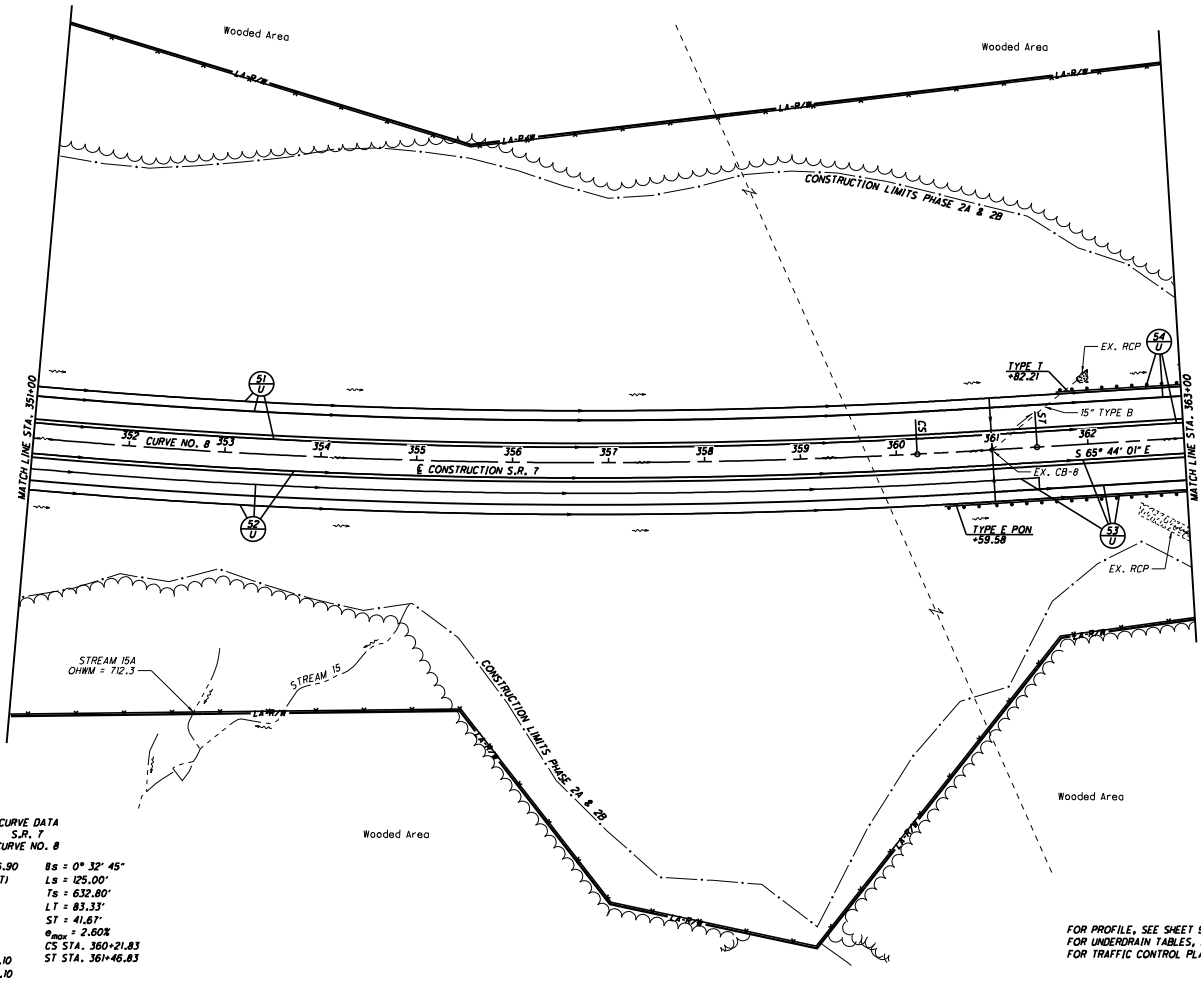


CURVE DATA
S.R. 7
CURVE NO. 8

P.I. STA. 355+16.90
Δ = 9° 56' 13" (LT)
Dc = 0° 52' 24"
R = 6,560.00'
T = 507.37'
L = 1,012.73'
E = 19.59'
TS STA. 348+84.10
SC STA. 350+09.10

θs = 0° 32' 45"
Ls = 125.00'
Ts = 632.80'
LT = 83.33'
ST = 41.67'
e max = 2.60%
CS STA. 360+21.83
ST STA. 361+46.83

FOR PROFILE, SEE SHEET 92
FOR UNDERDRAIN TABLES, SEE SHEETS 581-585
FOR TRAFFIC CONTROL PLAN, SEE SHEETS 589-619

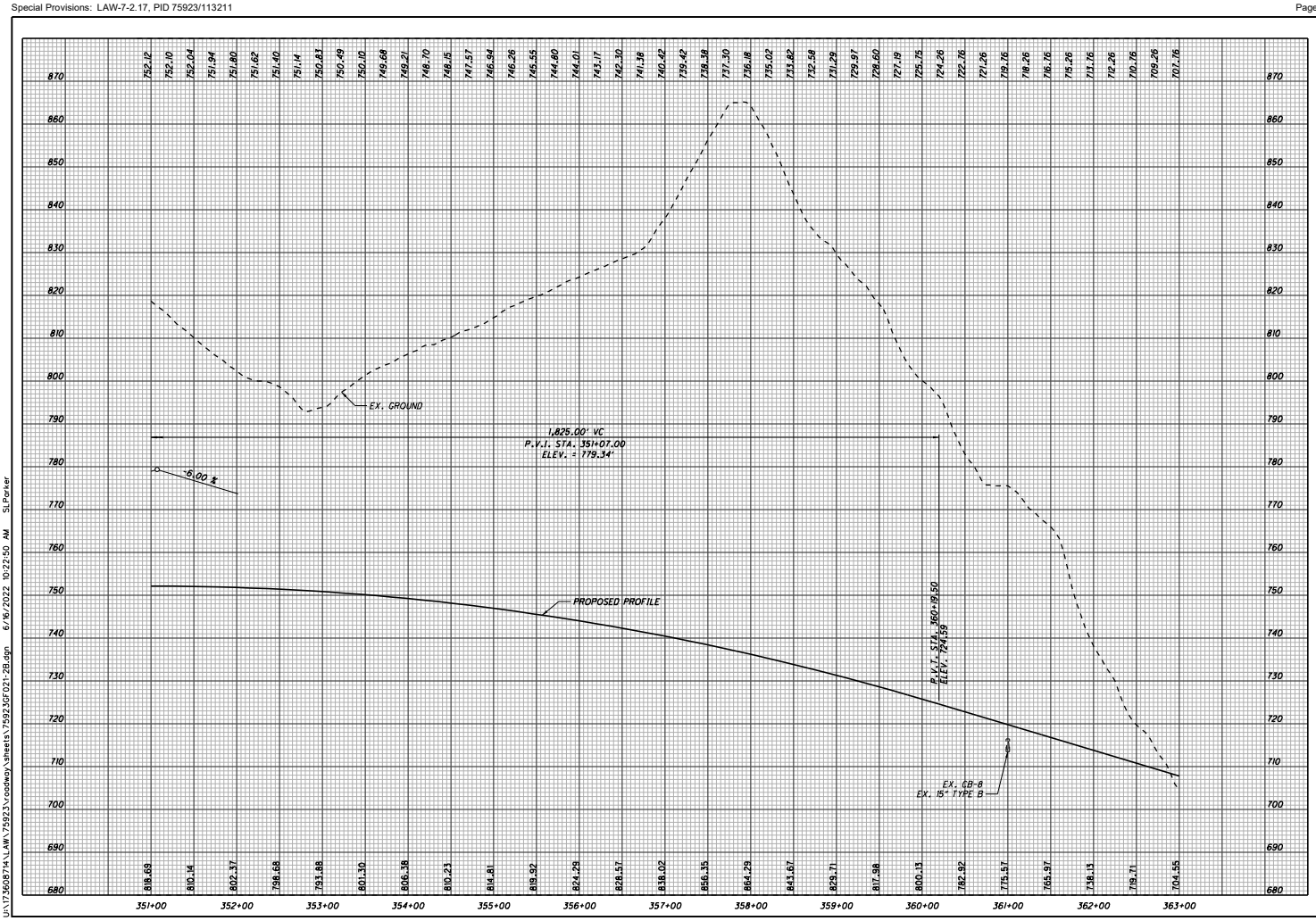
HORIZONTAL SCALE IN FEET
0 50 100
CALCULATED SLP
CHECKED ALB

PLAN - S.R. 7
STA. 351+00 TO STA. 363+00

LAW-7-2.17

91
635

U:\173608714\LAW\75923\roadway\sheets\75923GP021-28.dgn Sheet 9/19/2023 3:31:35 PM dboyce



PROFILE - S.R. 7

STA. 351+00 TO STA. 363+00

CALCULATED SLP
CHECKED ALB

LAW-7-2.17

92
633

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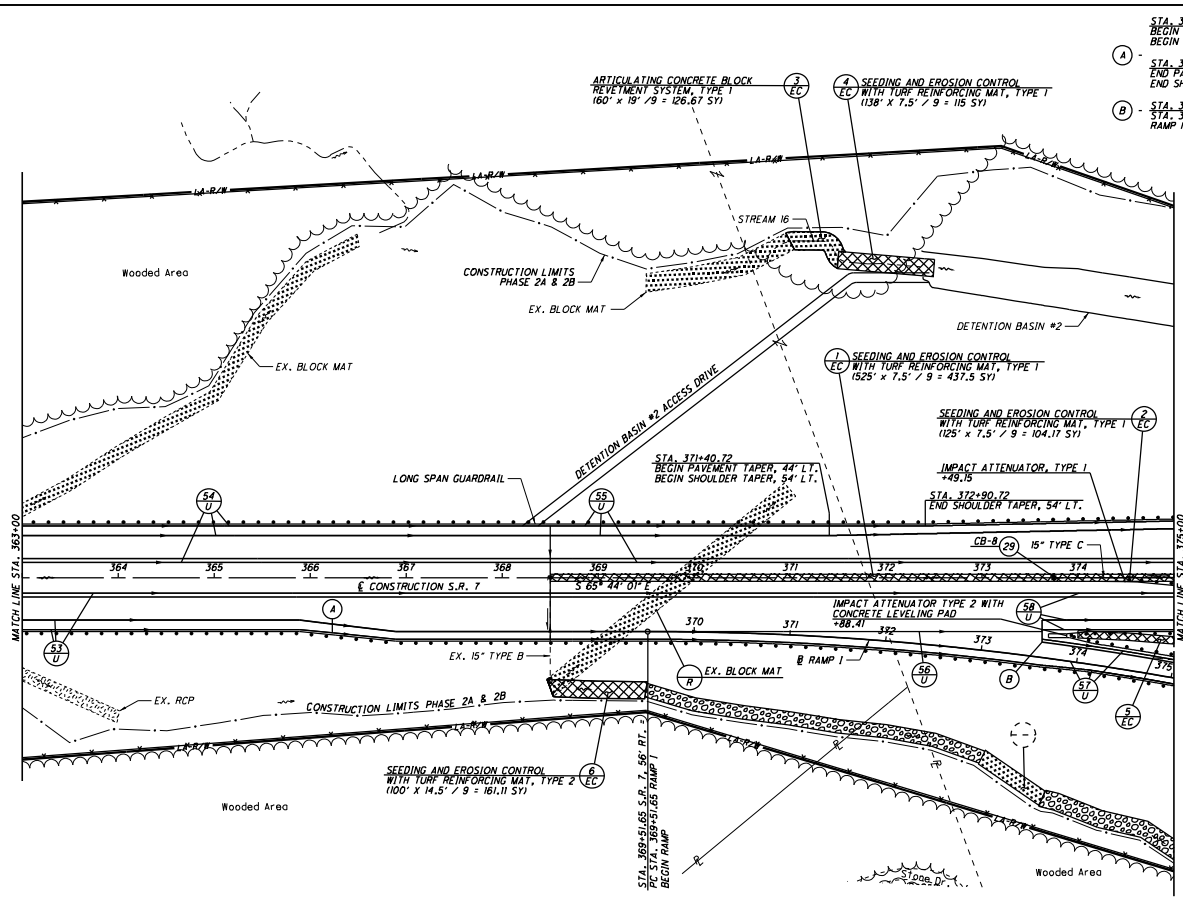

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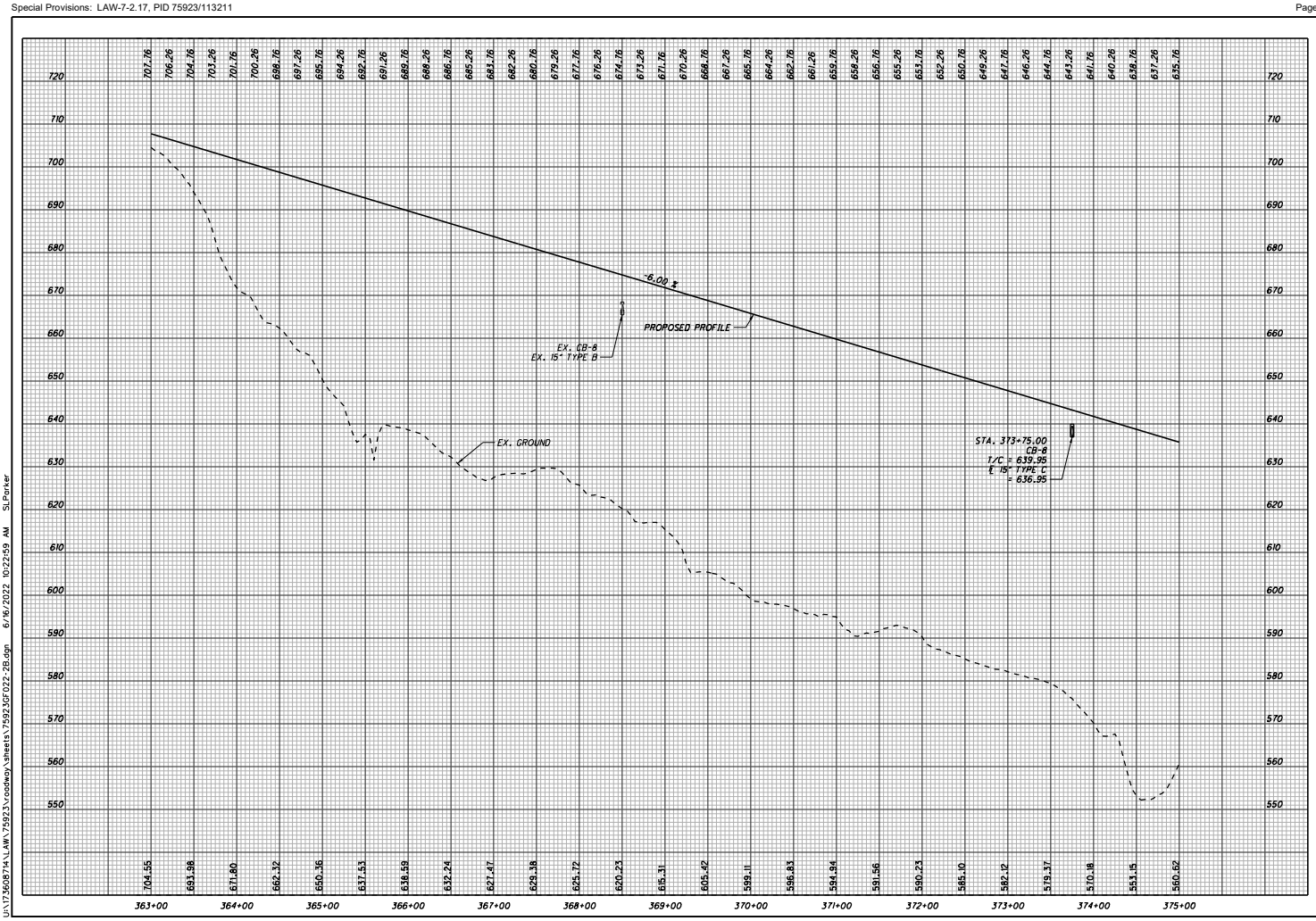


PROFILE - S.R. 7

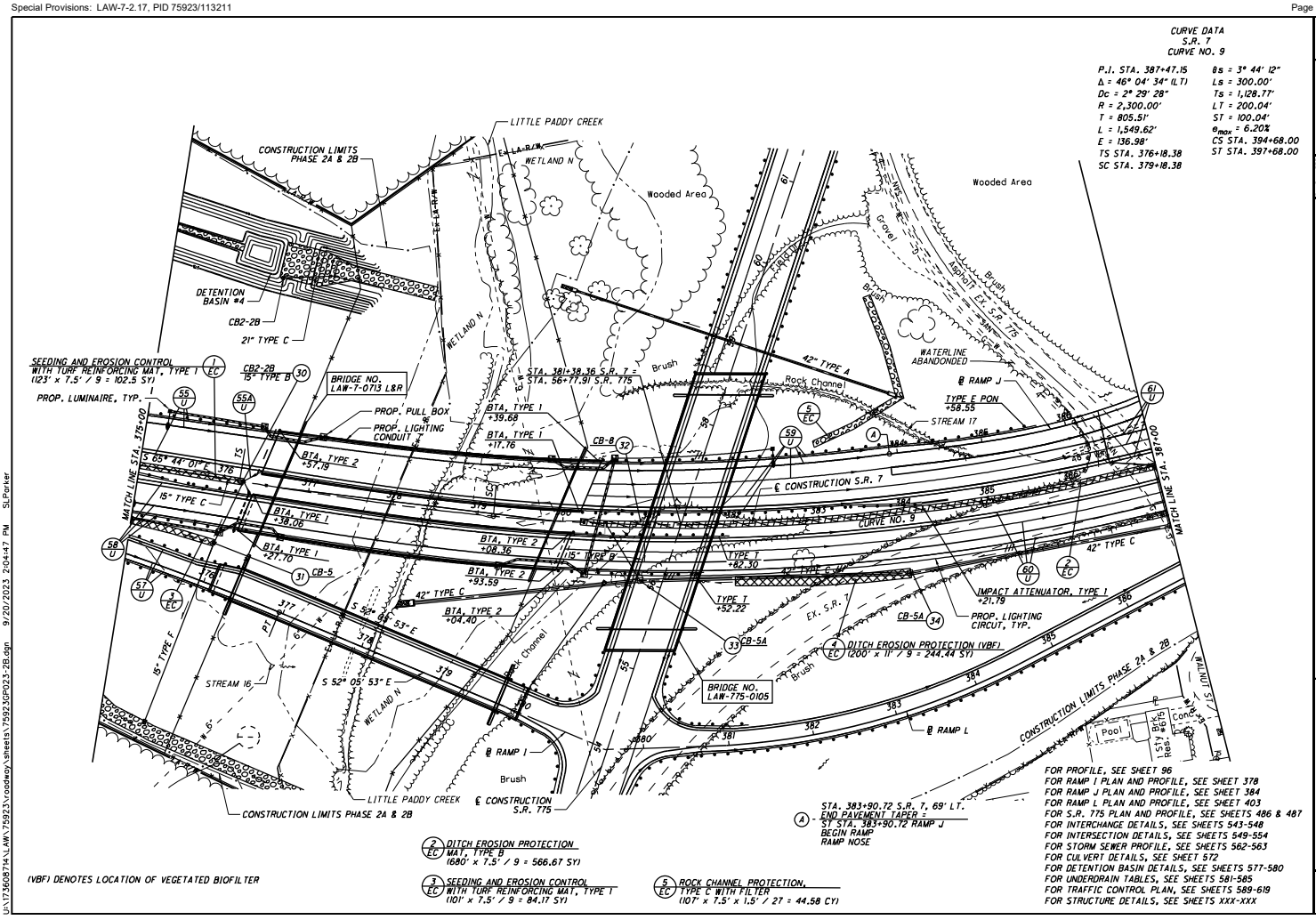
STA. 363+00 TO STA. 375+00

CALCULATED SLP
CHECKED ALB

LAW-7-2.17

94
633

U:\173608714\LAW\75923\roadway\sheets\75923GF022-2B.dgn 6/16/2022 10:22:59 AM SLParker



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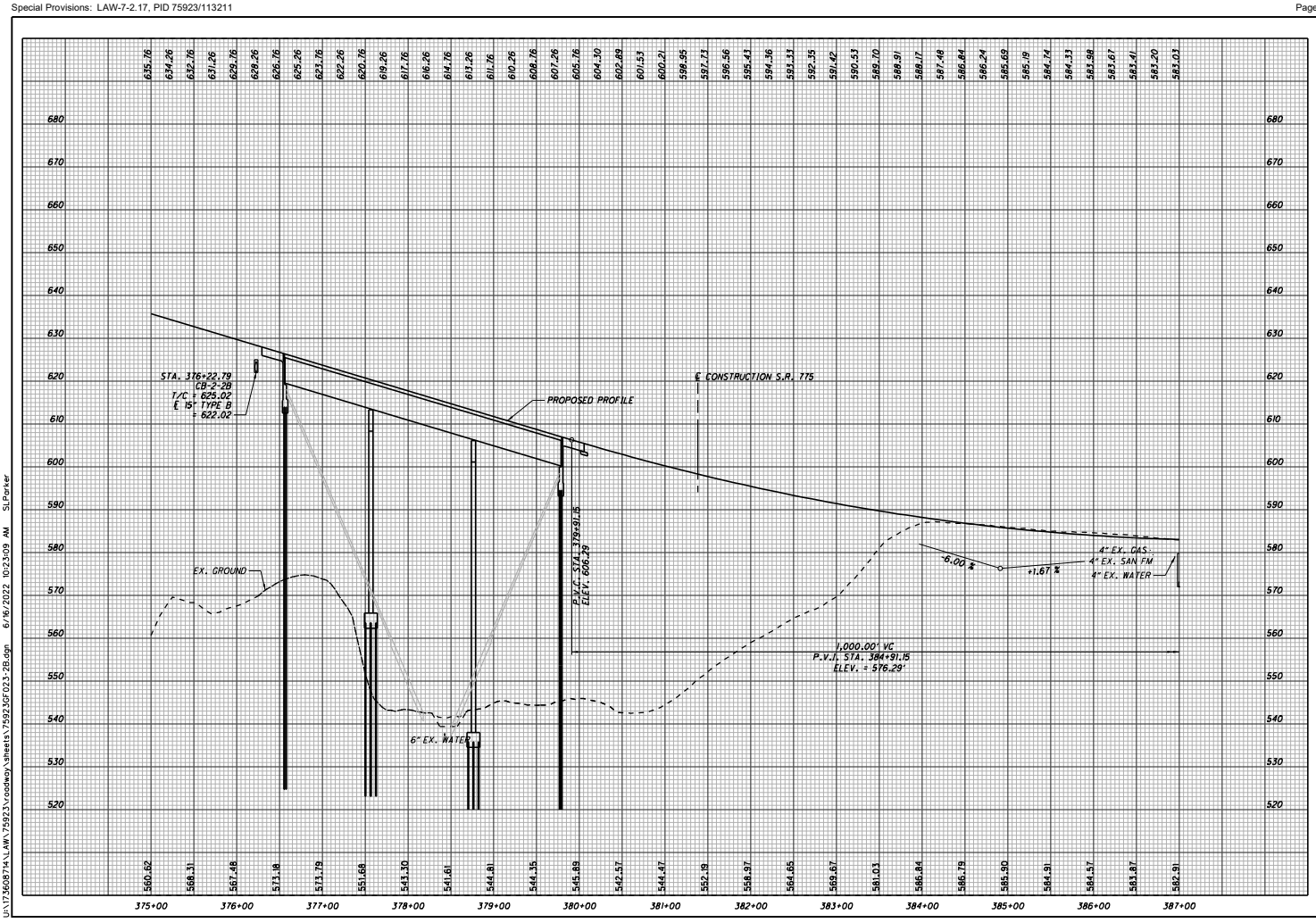


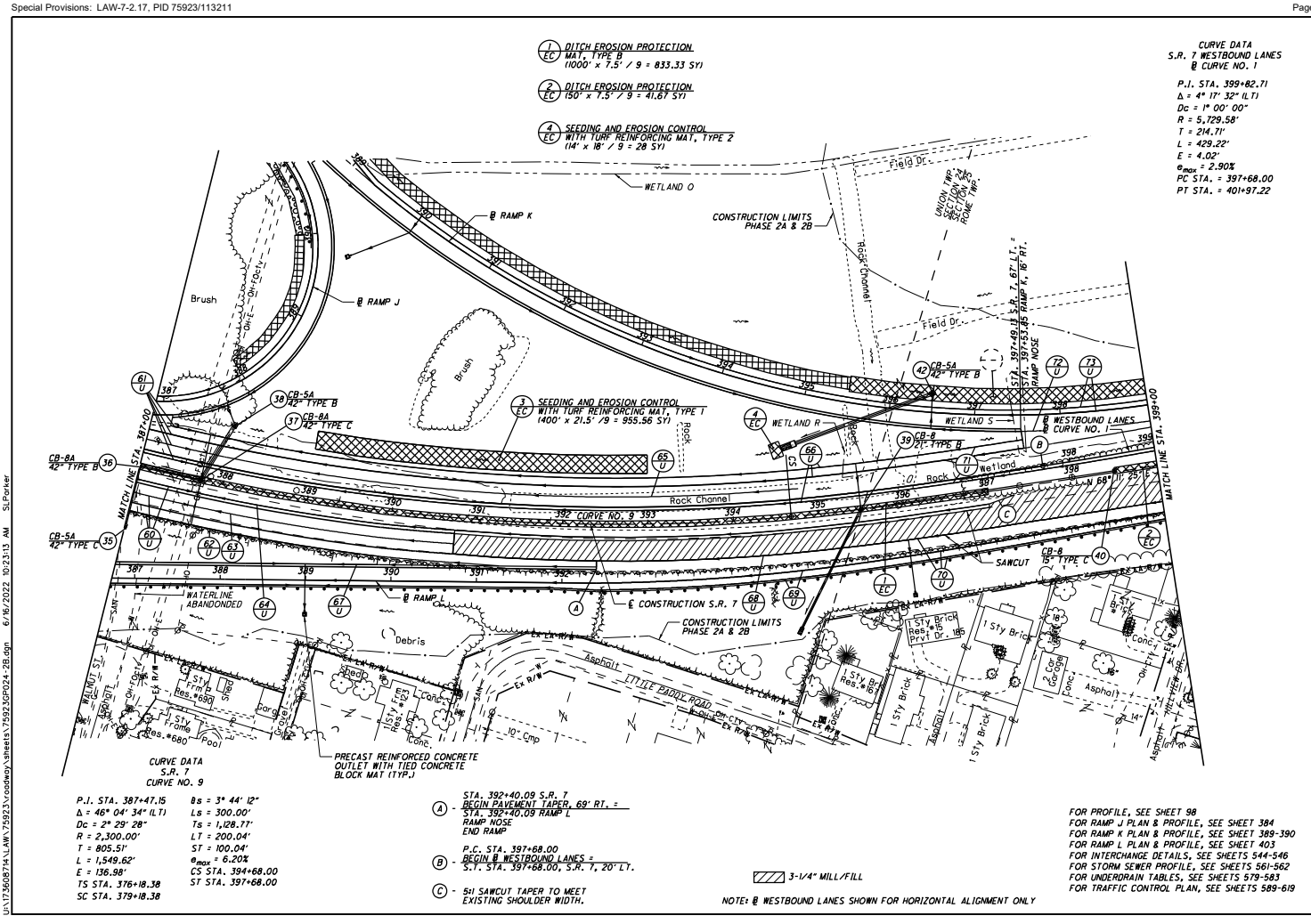
PROFILE - S.R. 7
STA. 375+00 TO STA. 387+00

CALCULATED SLP
CHECKED ALB

LAW-7-2.17

96
633

U:\173608714\LAW\75923\roadway\sheets\75923GF023-2B.dgn 6/16/2022 10:23:09 AM SLParker



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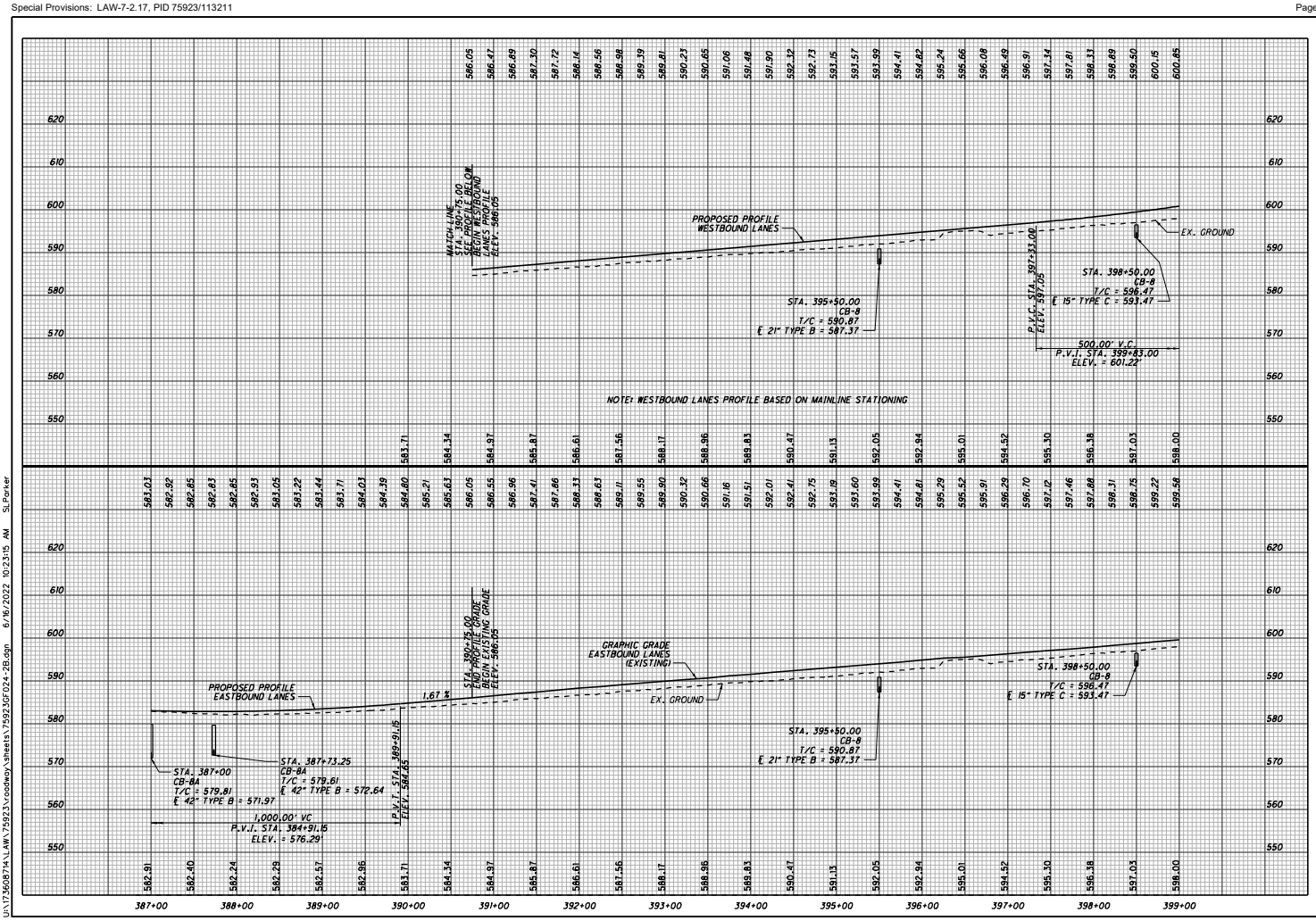

PROFILE - S.R. 7
STA. 387+00 TO STA. 399+00

CALCULATED SLP
CHECKED ALB

LAW-7-2.17

98
633

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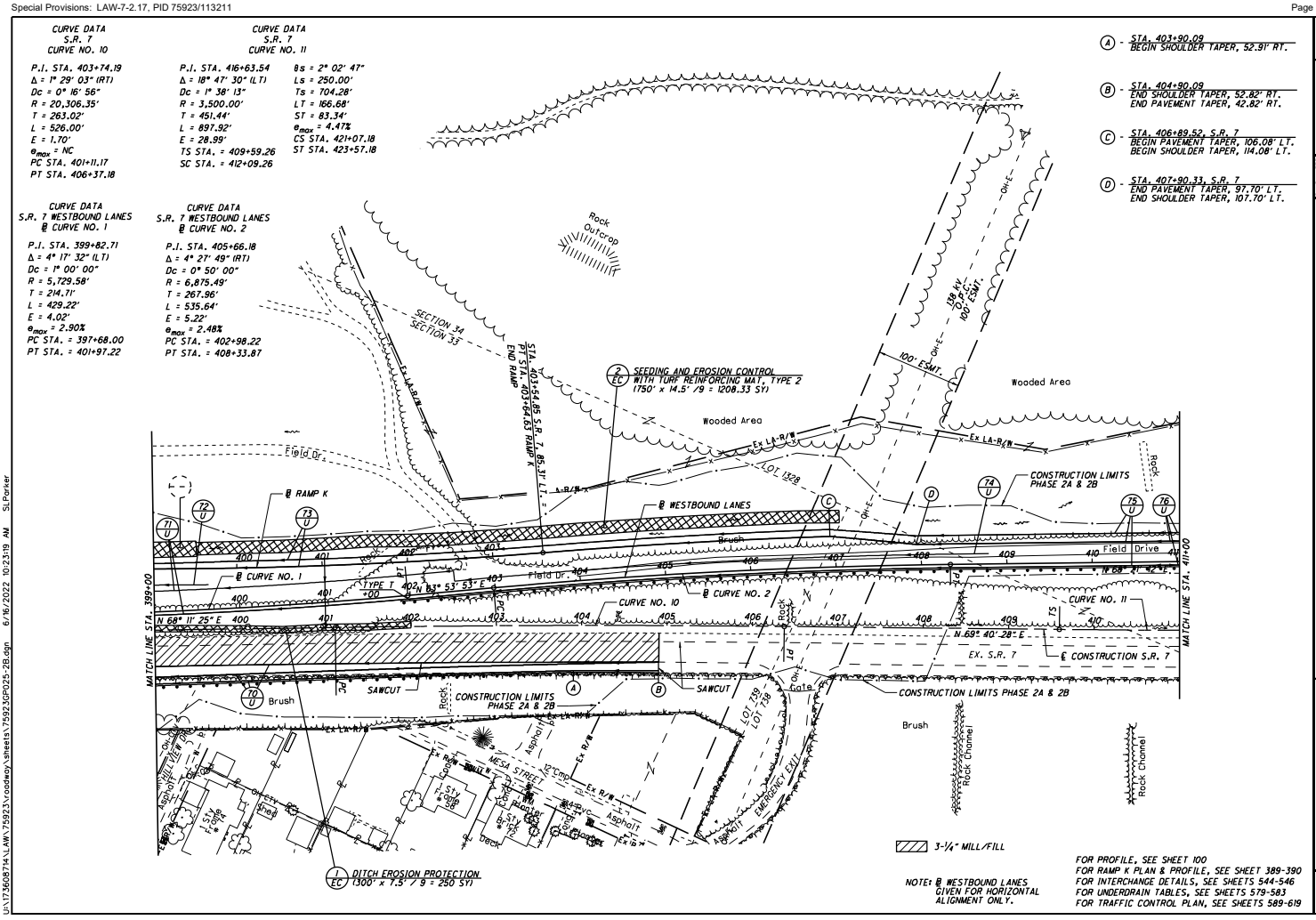
CURVE DATA
S.R. 7
CURVE NO. 10
P.I. STA. 403+74.19
Δ = 1° 29' 03" (RT)
Dc = 0° 16' 56"
R = 20,306.35'
T = 263.02'
L = 526.00'
E = 1.70'
e max = NC
PC STA. 401+11.17
PT STA. 406+37.18
CURVE DATA
S.R. 7
CURVE NO. 11
P.I. STA. 416+63.54
Δ = 18° 47' 30" (LT)
Dc = 1° 38' 13"
R = 3,500.00'
T = 451.44'
L = 897.92'
E = 28.99'
TS STA. = 409+59.26
SC STA. = 412+09.26
θs = 2° 02' 47"
Ls = 250.00'
Ts = 704.28'
LT = 166.68'
ST = 83.34'
e max = 4.47%
CS STA. 421+07.18
ST STA. 423+57.18
CURVE DATA
S.R. 7 WESTBOUND LANES
@ CURVE NO. 1
P.I. STA. 399+82.71
Δ = 4° 17' 32" (LT)
Dc = 1° 00' 00"
R = 5,729.58'
T = 214.71'
L = 429.22'
E = 4.02'
e max = 2.90%
PC STA. = 397+68.00
PT STA. = 401+97.22
CURVE DATA
S.R. 7 WESTBOUND LANES
@ CURVE NO. 2
P.I. STA. 405+66.18
Δ = 4° 27' 49" (RT)
Dc = 0° 50' 00"
R = 6,875.49'
T = 267.96'
L = 535.64'
E = 5.22'
e max = 2.48%
PC STA. = 402+98.22
PT STA. = 408+33.87
A - STA. 403+90.09
BEGIN SHOULDER TAPER, 52.81' RT.
B - STA. 404+90.09
END SHOULDER TAPER, 52.82' RT.
END PAVEMENT TAPER, 42.82' RT.
C - STA. 406+89.52, S.R. 7
BEGIN PAVEMENT TAPER, 106.08' LT.
BEGIN SHOULDER TAPER, 114.08' LT.
D - STA. 407+90.33, S.R. 7
END PAVEMENT TAPER, 97.70' LT.
END SHOULDER TAPER, 107.70' LT.
2 EC SEEDING AND EROSION CONTROL WITH TURF REINFORCING MAT, TYPE 2 (750' x 14.5' /9 = 1208.33 SY)
1 EC DITCH EROSION PROTECTION (300' x 7.5' / 9 = 250 SY)
3-1/4" MILL/FILL
NOTE: @ WESTBOUND LANES GIVEN FOR HORIZONTAL ALIGNMENT ONLY.
FOR PROFILE, SEE SHEET 100
FOR RAMP K PLAN & PROFILE, SEE SHEET 389-390
FOR INTERCHANGE DETAILS, SEE SHEETS 544-546
FOR UNDERDRAIN TABLES, SEE SHEETS 579-583
FOR TRAFFIC CONTROL PLAN, SEE SHEETS 589-619
PLAN - S.R. 7
STA. 399+00 TO STA. 411+00
LAW-7-2.17
99
633
HORIZONTAL SCALE IN FEET
CALCULATED SLP
CHECKED ALB
SLParker
6/16/2022 10:23:19 AM
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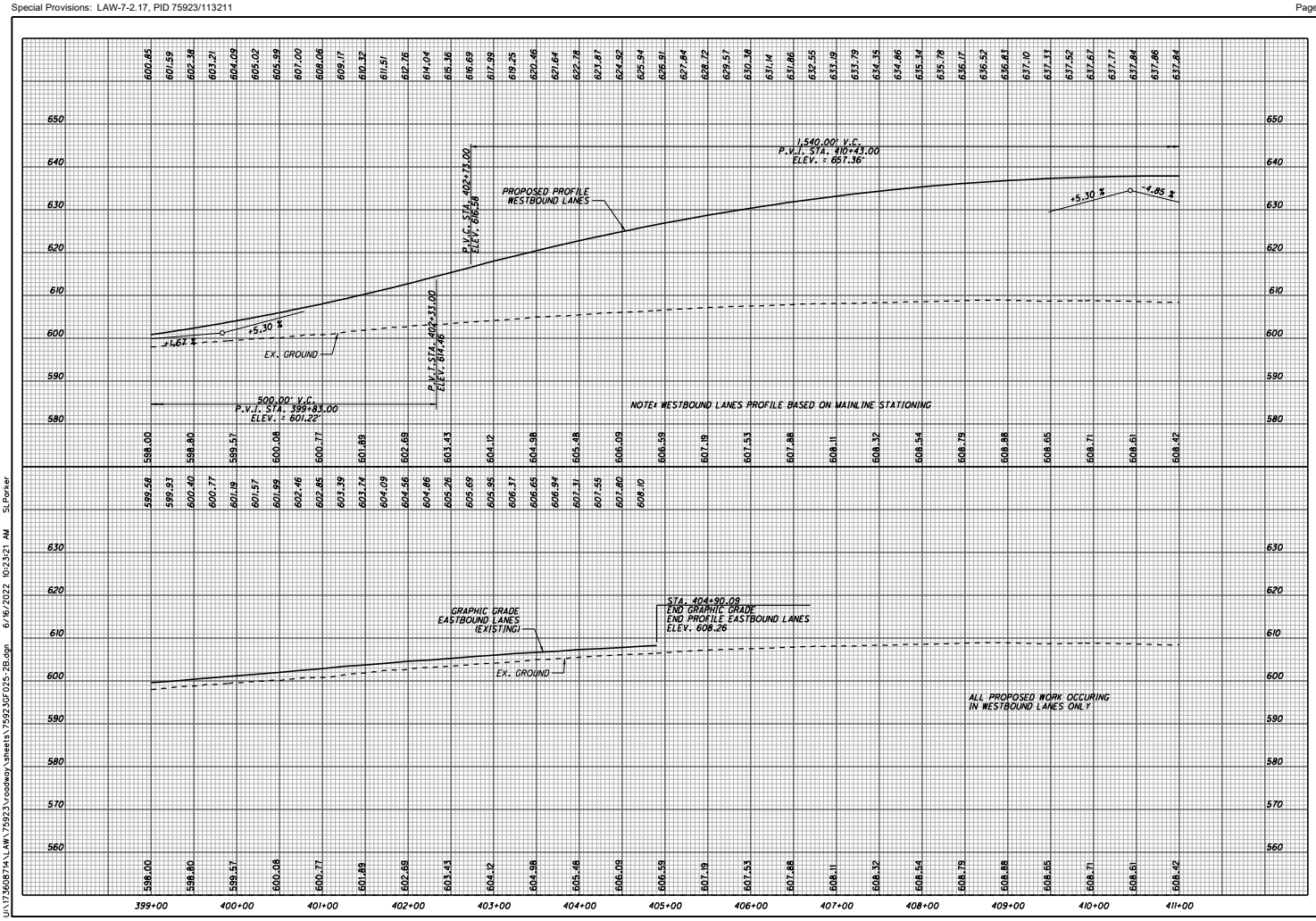

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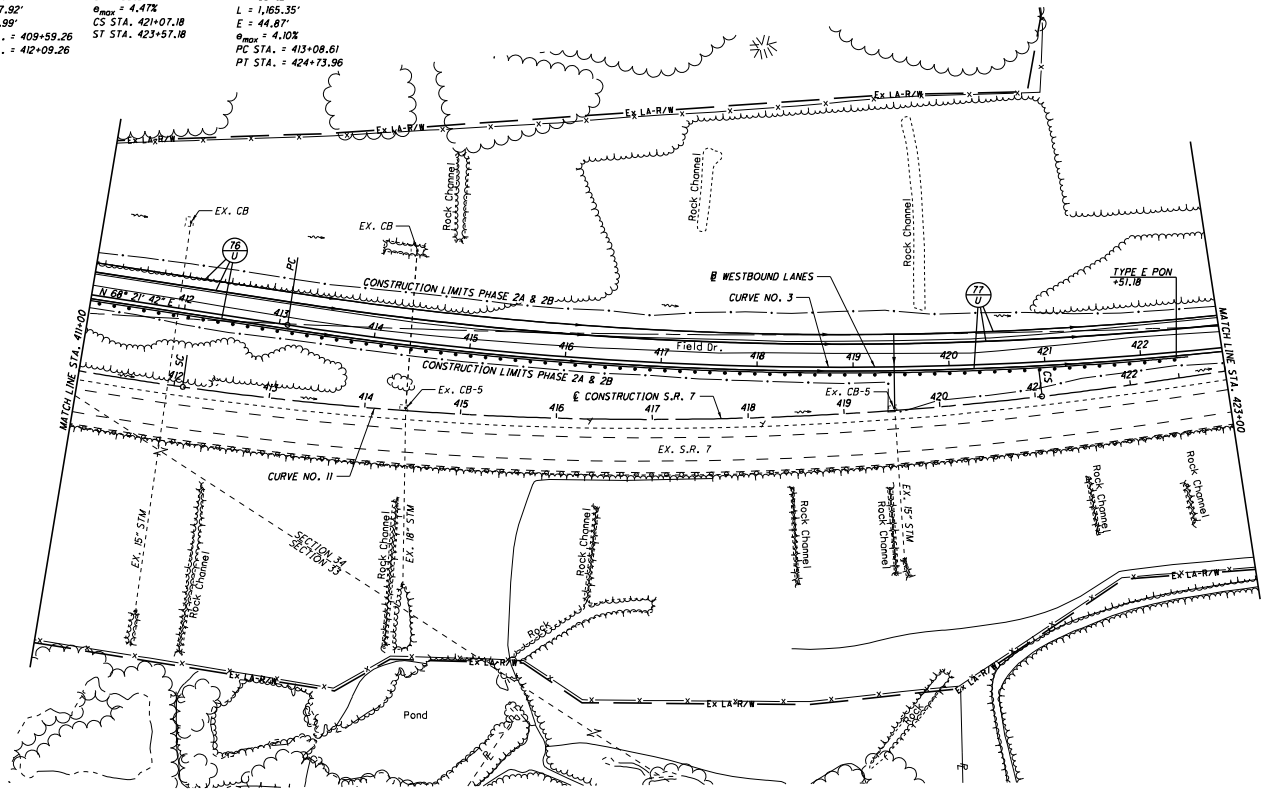
CURVE DATA
S.R. 7
CURVE NO. 11

P.I. STA. 416+63.54
Δ = 18° 47' 30" (LT)
Dc = 1° 38' 13"
R = 3,500.00'
T = 451.44'
L = 897.92'
E = 28.99'
TS STA. = 409+59.26
SC STA. = 412+09.26

θs = 2° 02' 47"
Ls = 250.00'
Ts = 704.28'
LT = 166.68'
ST = 83.34'
e_{max} = 4.41%
CS STA. 421+07.18
ST STA. 423+57.18

CURVE DATA
S.R. 7 WESTBOUND LANES
℄ CURVE NO. 3

P.I. STA. 418+95.85
Δ = 17° 28' 44" (LT)
Dc = 1° 30' 00"
R = 3,820.00'
T = 587.24'
L = 1,165.35'
E = 44.87'
e_{max} = 4.10%
PC STA. = 413+08.61
PT STA. = 424+73.96



NOTE: ℄ WESTBOUND LANES GIVEN FOR HORIZONTAL ALIGNMENT ONLY.

FOR PROFILE, SEE SHEET 102
FOR UNDERDRAIN TABLES, SEE SHEETS 579-583
FOR TRAFFIC CONTROL PLAN, SEE SHEETS 589-619

HORIZONTAL SCALE IN FEET
0 50 100
CALCULATED SLP
CHECKED ALB

PLAN - S.R. 7
STA. 411+00 TO STA. 423+00

LAW-7-2.17

101
633

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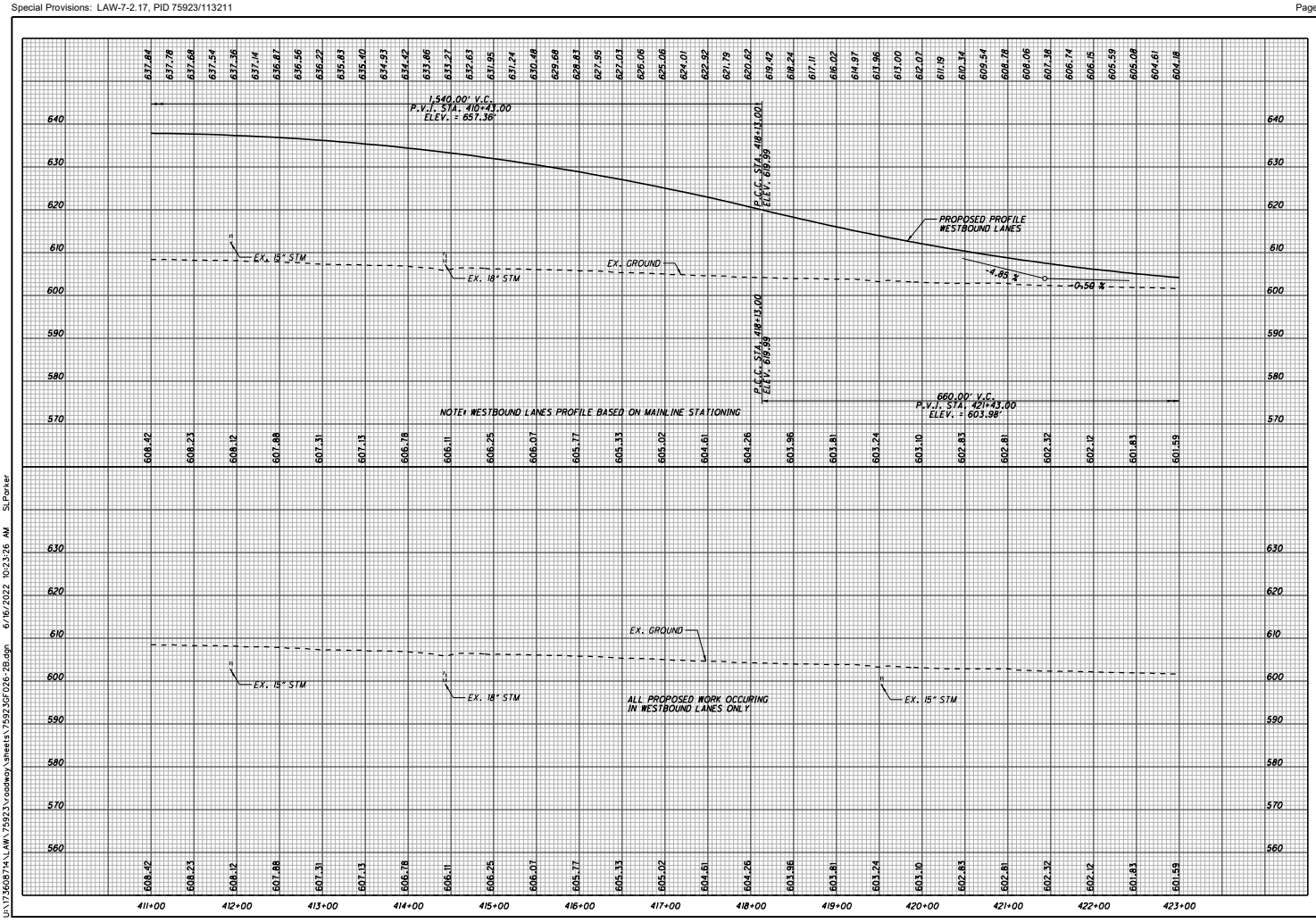

CALCULATED SLP
CHECKED ALB

PROFILE - S.R. 7
STA. 411+00 TO STA. 423+00

LAW-7-2.17

102
633

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CURVE DATA
S.R. 7
CURVE NO. 11

P.I. STA. 416+63.54
Δ = 18° 47' 30" (LT)
Dc = 1° 38' 13"
R = 3,500.00'
T = 451.44'
L = 897.92'
E = 28.99'
TS STA. = 409+59.26
SC STA. = 412+09.26
Bs = 2° 02' 47"
Ls = 250.00'
Ts = 704.28'
LT = 166.68'
ST = 83.34'
e_{max} = 4.47%
CS STA. 421+07.18
ST STA. 423+57.18

CURVE DATA
S.R. 7
CURVE NO. 12

P.I. STA. 428+11.24
Δ = 3° 17' 53" (RT)
Dc = 1° 19' 10"
R = 4,342.09'
T = 125.00'
L = 249.93'
E = 1.80'
e_{max} = 3.77%
PC STA. = 426+86.24
PT STA. = 429+36.17

CURVE DATA
S.R. 7
@ WESTBOUND LANES
CURVE NO. 3

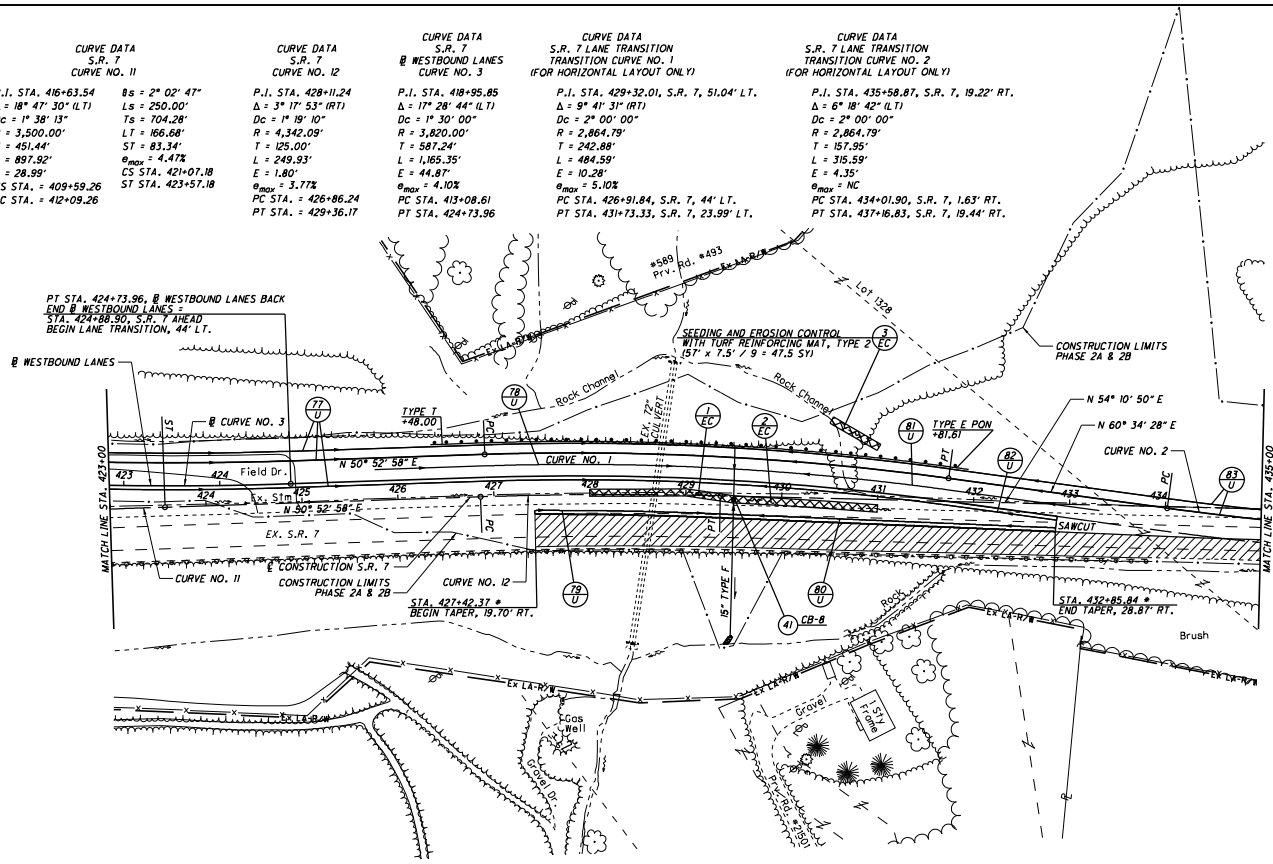
P.I. STA. 418+95.85
Δ = 17° 28' 44" (LT)
Dc = 1° 30' 00"
R = 3,820.00'
T = 587.24'
L = 1,165.35'
E = 44.87'
e_{max} = 4.10%
PC STA. 413+08.61
PT STA. 424+73.96

CURVE DATA
S.R. 7 LANE TRANSITION
TRANSITION CURVE NO. 1
(FOR HORIZONTAL LAYOUT ONLY)

P.I. STA. 429+32.01, S.R. 7, 51.04' LT.
Δ = 9° 41' 31" (RT)
Dc = 2° 00' 00"
R = 2,864.79'
T = 242.88'
L = 484.59'
E = 10.28'
e_{max} = 5.10%
PC STA. 426+91.84, S.R. 7, 44' LT.
PT STA. 431+73.33, S.R. 7, 23.99' LT.

CURVE DATA
S.R. 7 LANE TRANSITION
TRANSITION CURVE NO. 2
(FOR HORIZONTAL LAYOUT ONLY)

P.I. STA. 435+58.87, S.R. 7, 19.22' RT.
Δ = 6° 18' 42" (LT)
Dc = 2° 00' 00"
R = 2,864.79'
T = 157.95'
L = 315.59'
E = 4.35'
e_{max} = NC
PC STA. 434+01.90, S.R. 7, 1.63' RT.
PT STA. 437+16.83, S.R. 7, 19.44' RT.



(1 EC) SEEDING AND EROSION CONTROL WITH TURF REINFORCING MAT, TYPE 1 (150' x 7.5' / 9 = 125 SY)

(2 EC) DITCH EROSION PROTECTION (150' x 7.5' / 9 = 125 SY)

3-¼" MILL/FILL

* - SEE TRAFFIC CONTROL PLAN SHEET XXX FOR FULL TAPER LENGTH.

NOTE: @ WESTBOUND LANES GIVEN FOR HORIZONTAL ALIGNMENT ONLY.

FOR PROFILE, SEE SHEET 104
FOR STORM SEWER PROFILE, SEE SHEET 360
FOR PAVEMENT DETAILS, SEE SHEET 540
FOR UNDERDRAIN TABLES, SEE SHEETS 579-583
FOR TRAFFIC CONTROL PLAN, SEE SHEETS 589-619

HORIZONTAL SCALE IN FEET
0 50 100
CALCULATED SLP
CHECKED ALB

PLAN - S.R. 7
STA. 423+00 TO STA. 435+00

LAW-7-2.17

103
633

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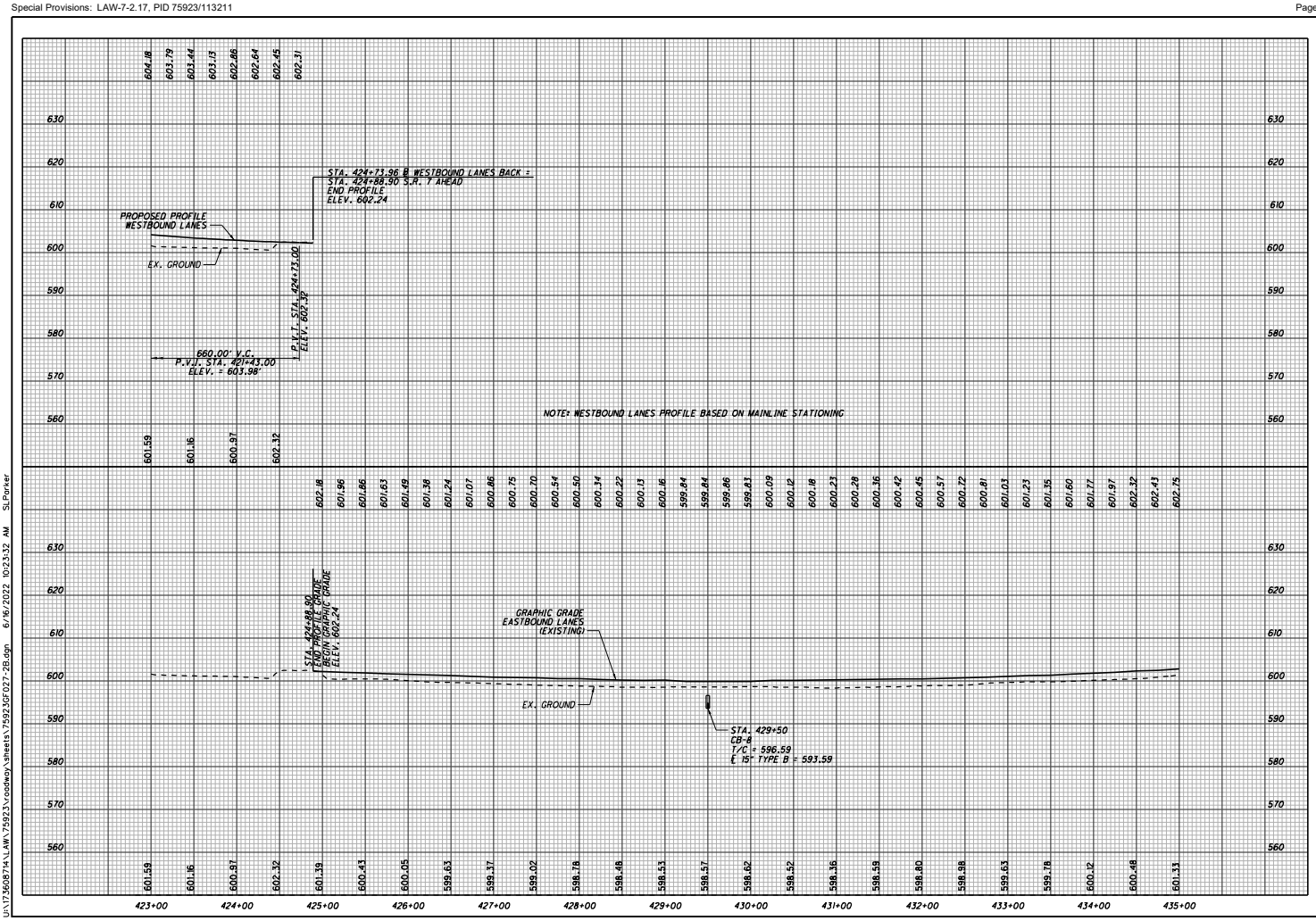

CALCULATED SLP
CHECKED ALB

PROFILE - S.R. 7
STA. 423+00 TO 435+00

LAW-7-2.17

104
633

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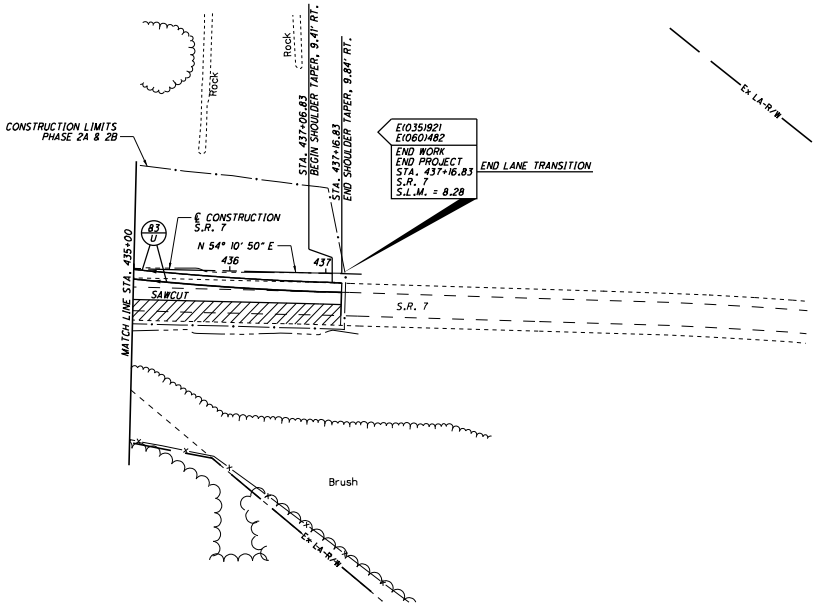

3-¼" MILL/FILL

FOR PROFILE, SEE SHEET 106
FOR PAVEMENT DETAILS, SEE SHEET 540
FOR UNDERDRAIN TABLES, SEE SHEETS 579-583
FOR TRAFFIC CONTROL PLAN, SEE SHEETS 589-619

HORIZONTAL SCALE IN FEET
0 50 100

CALCULATED SLP
CHECKED ALB

PLAN - S.R. 7
STA. 435+00 TO STA. 437+16.83

LAW-7-2.17

105
633

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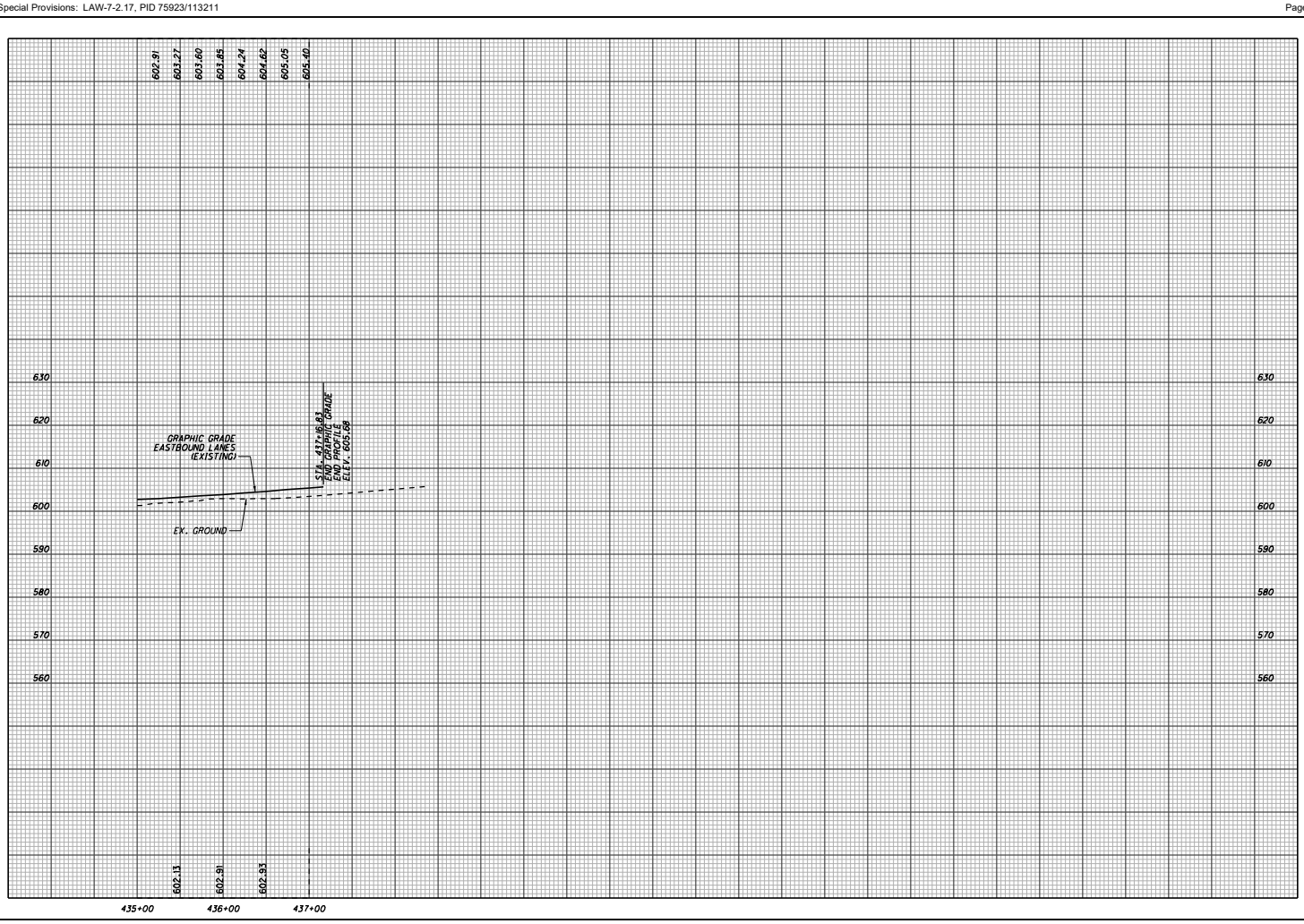

PROFILE - S.R. 7
STA. 435+00 TO 437+16.83

CALCULATED SLP
CHECKED ALB

LAW-7-2.17

106
633

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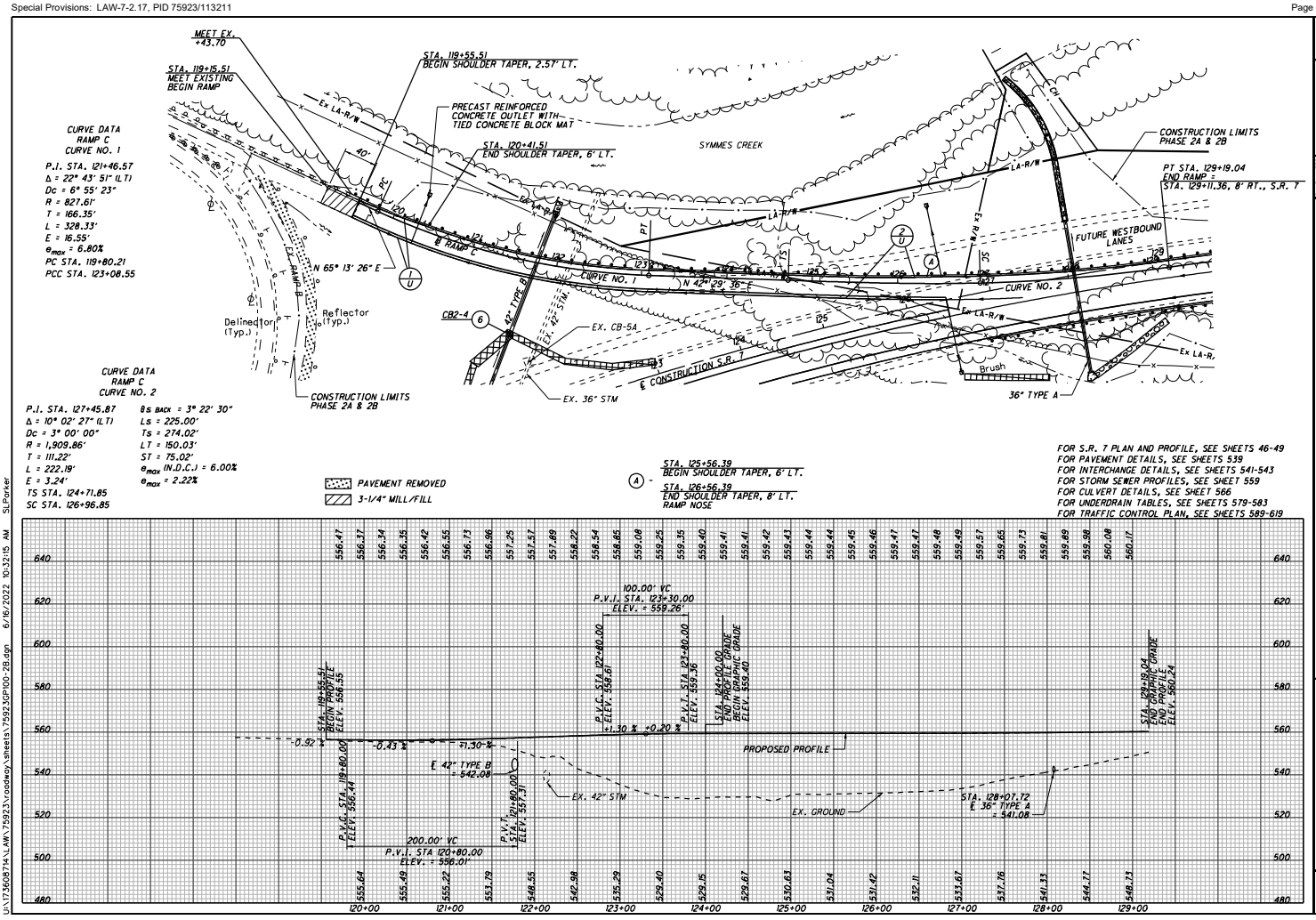

PLAN AND PROFILE
RAMP C

LAW-7-2.17

367
633

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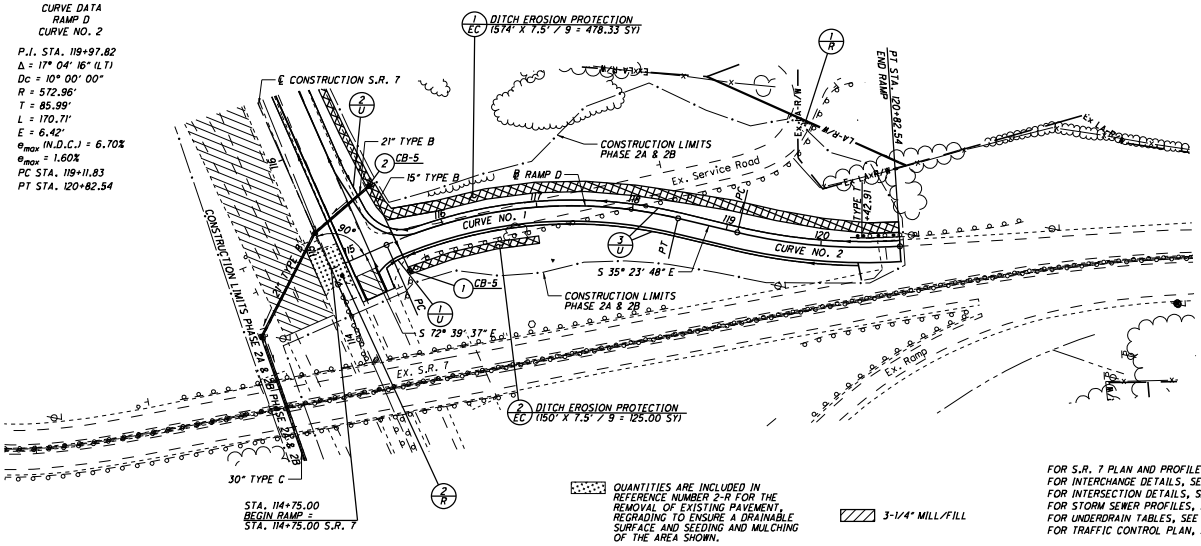
CURVE DATA
RAMP D
CURVE NO. 1

P.I. STA. 116+98.94
Δ = 37° 15' 49" (RT)
Dc = 12° 00' 00"
R = 477.46'
T = 160.98'
L = 310.53'
E = 26.41'
e_{max} = 7.30%
PC STA. 115+37.96
PT STA. 118+48.49

CURVE DATA
RAMP D
CURVE NO. 2

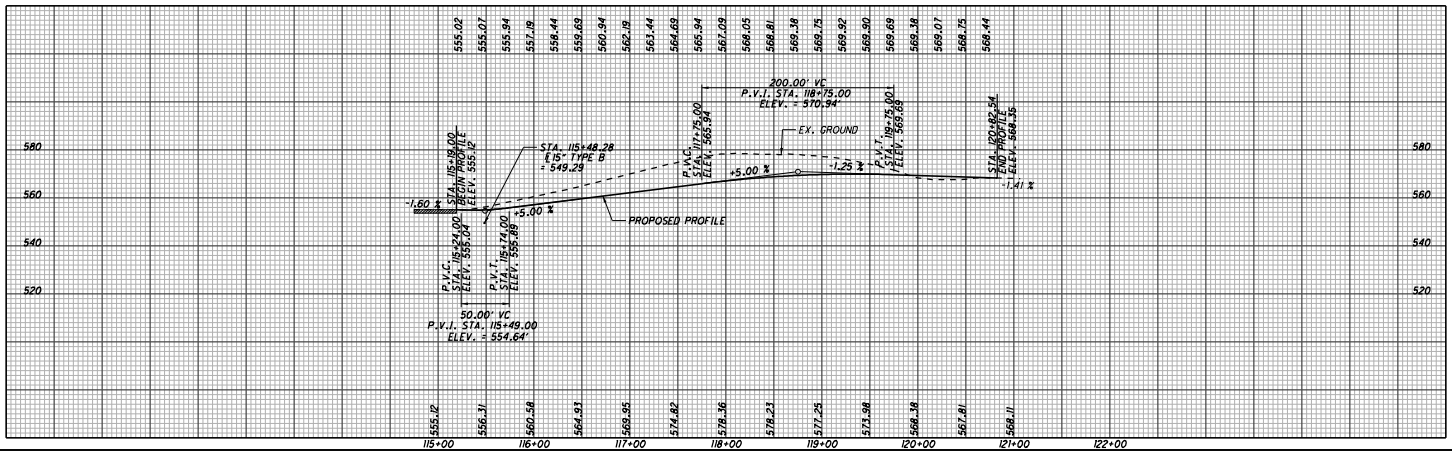
P.I. STA. 119+97.82
Δ = 17° 04' 16" (LT)
Dc = 10° 00' 00"
R = 572.96'
T = 85.99'
L = 170.71'
E = 6.42'
e_{max} (N.D.C.) = 6.70%
e_{max} = 1.60%
PC STA. 119+11.83
PT STA. 120+82.54



QUANTITIES ARE INCLUDED IN REFERENCE NUMBER 2-R FOR THE REMOVAL OF EXISTING PAVEMENT, REGRADING TO ENSURE A DRAINABLE SURFACE AND SEEDING AND MULCHING OF THE AREA SHOWN.

3-1/4" MILL/FILL

FOR S.R. 7 PLAN AND PROFILE, SEE SHEETS 46-47
FOR INTERCHANGE DETAILS, SEE SHEETS 541-543
FOR INTERSECTION DETAILS, SEE SHEET 547
FOR STORM SEWER PROFILES, SEE SHEET 559
FOR UNDERDRAIN TABLES, SEE SHEETS 579-583
FOR TRAFFIC CONTROL PLAN, SEE SHEETS 589-619



0 25 50 100
HORIZONTAL SCALE IN FEET

CALCULATED SLP
CHECKED ALB

PLAN AND PROFILE
RAMP D

LAW-7-2.17

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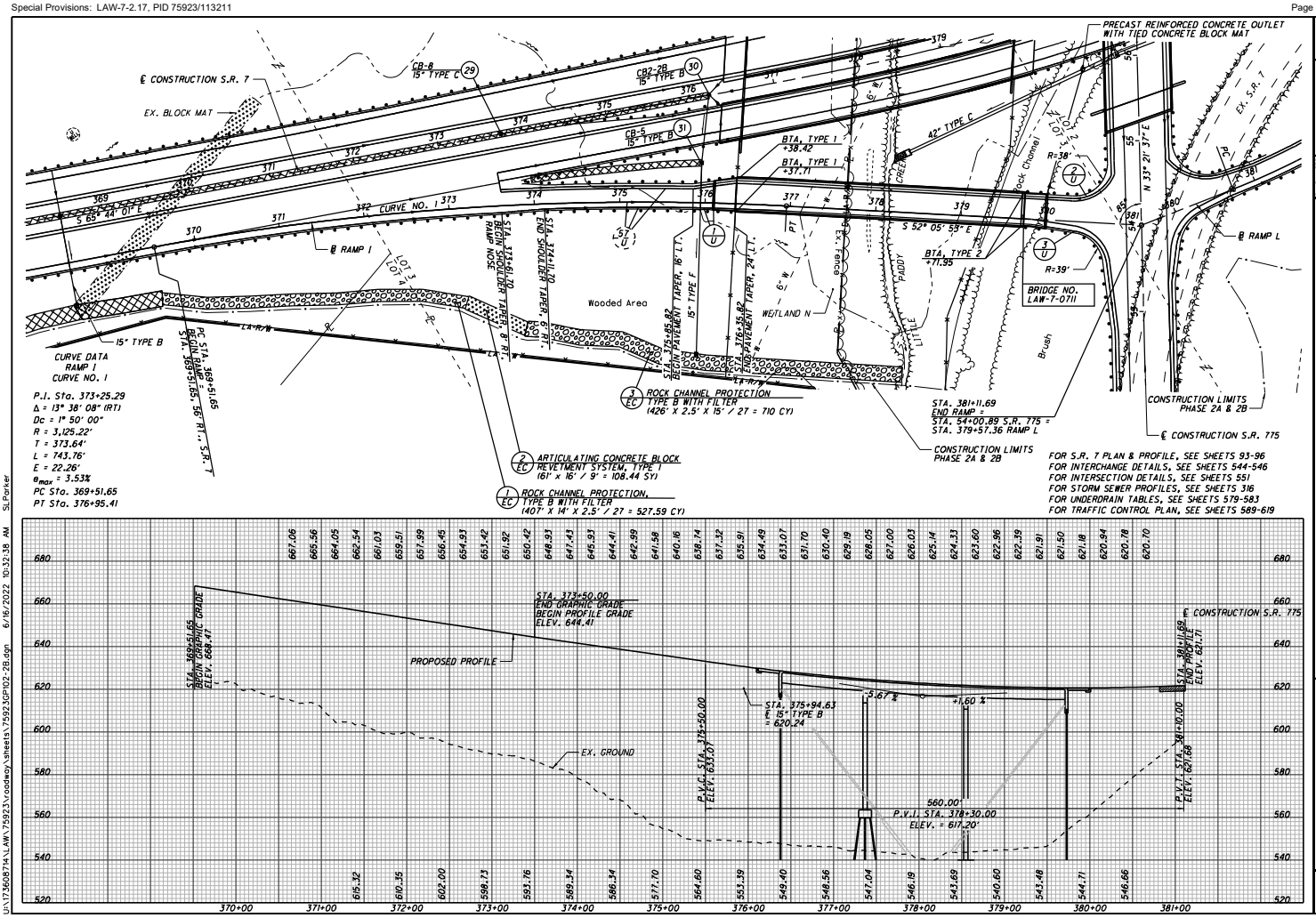

HORIZONTAL SCALE IN FEET 0 50 100
CALCULATED SLP CHECKED ALB

PLAN AND PROFILE RAMP I

LAW-7-2.17

378 / 633

SLParker 6/16/2022 10:32:38 AM
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CURVE DATA
RAMP J
CURVE NO. 1

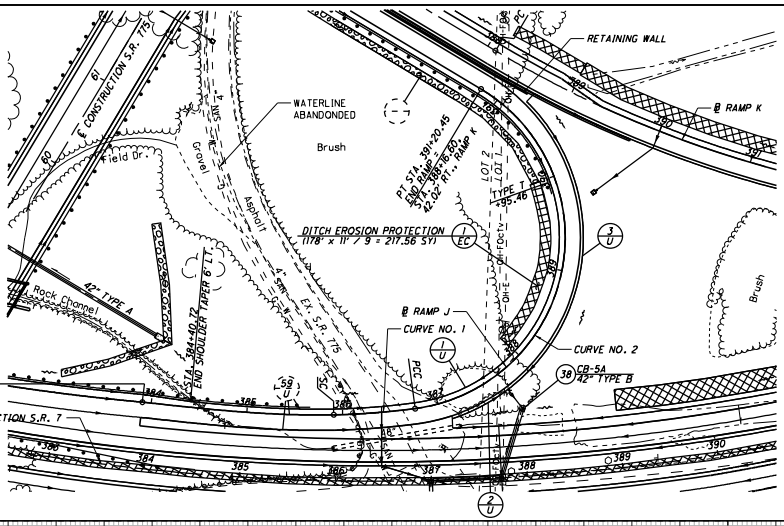
P.I. STA. 385+74.87
Δ = 13° 53' 07" (LT)
Dc = 7° 30' 00"
R = 763.94'
T = 42.61'
L = 85.14'
E = 1.19'
TS STA. 383+90.72
SC STA. 385+90.72

θ_{back} = 7° 30' 00"
L_{back} = 200.00'
T_{back} = 184.15'
LT = 133.45'
ST = 66.78'
e_{max} (N.D.C.) = 8.00%
e_{max} = 6.20%
PCC STA. 386+75.86

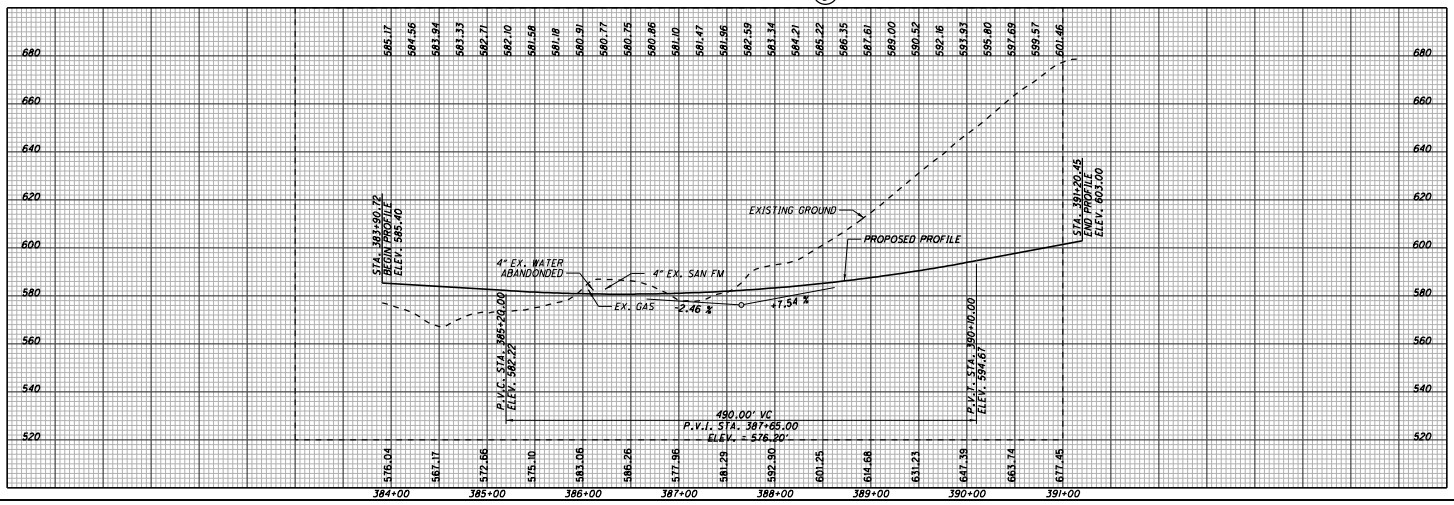
CURVE DATA
RAMP J
CURVE NO. 2

P.I. STA. 391+91.55
Δ = 141° 31' 04" (LT)
Dc = 31° 49' 52"
R = 180.00'
T = 515.70'
L = 444.59'
E = 366.21'
e_{max} = 7.66%
PCC STA. 386+75.86
PT STA. 391+20.45

ST STA. 383+90.72
BEGIN SHOULDER TAPER, 8' LT.
BEGIN RAMP
RAMP NOSE =
STA. 383+90.72, 69' LT., S.R. 7



FOR S.R. 7 PLAN & PROFILE, SEE SHEETS 95-98
FOR RAMP K PLAN AND PROFILE, SEE SHEETS 389-390
FOR S.R. 775 PLAN & PROFILE, SEE SHEET 484-485
FOR INTERCHANGE DETAILS, SEE SHEETS 546-403
FOR STORM SEWER PROFILE, SEE SHEET 561
FOR CULVERT DETAILS, SEE SHEET 570
FOR UNDERDRAIN TABLES, SEE SHEETS 579-583
FOR RETAINING WALL DETAILS, SEE SHEETS 584-588
FOR TRAFFIC CONTROL PLAN, SEE SHEETS 589-619



N
0 50 100
HORIZONTAL SCALE IN FEET
CALCULATED SLP
CHECKED ALB

PLAN AND PROFILE
RAMP J

LAW-7-2.17

384
633

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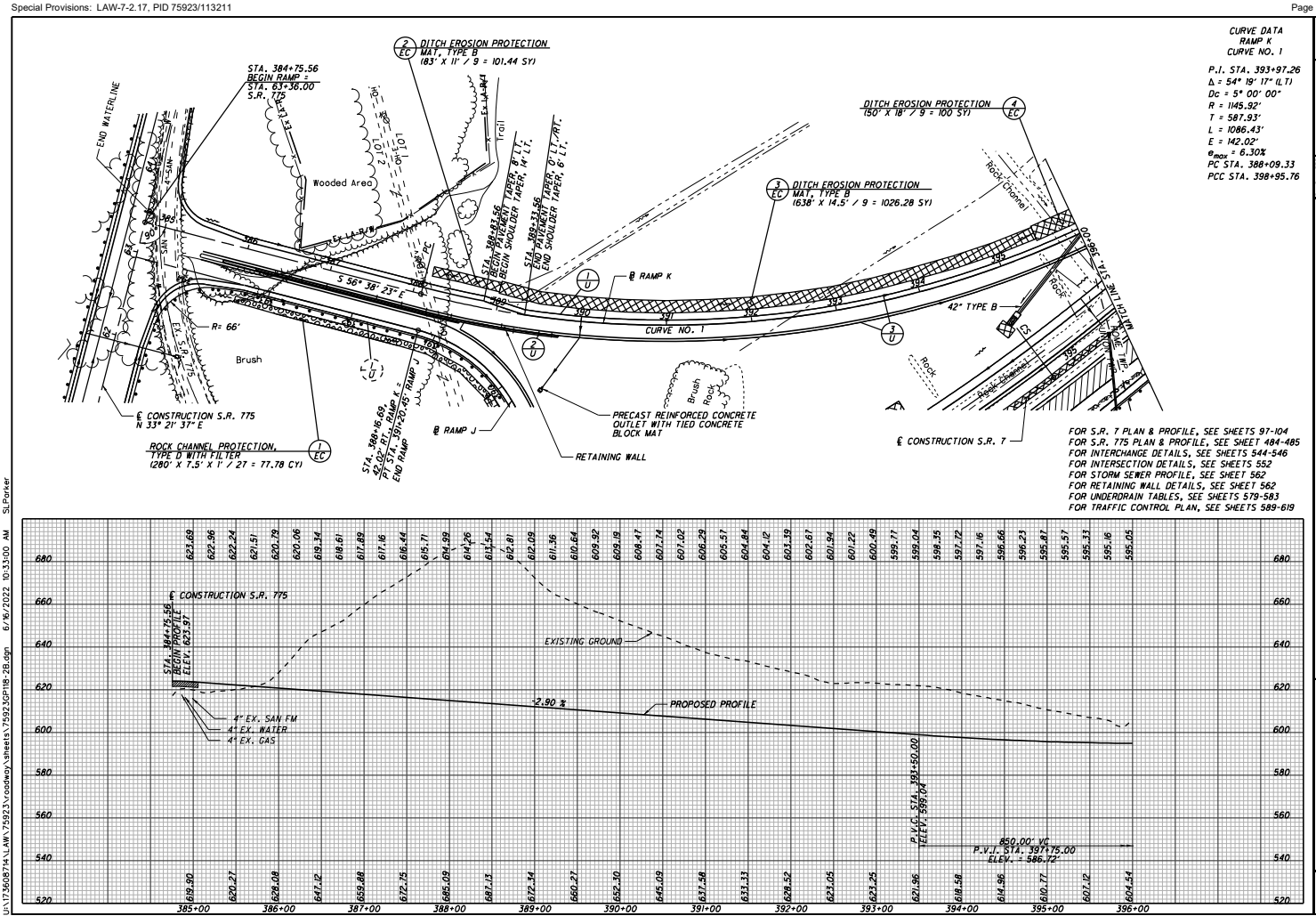

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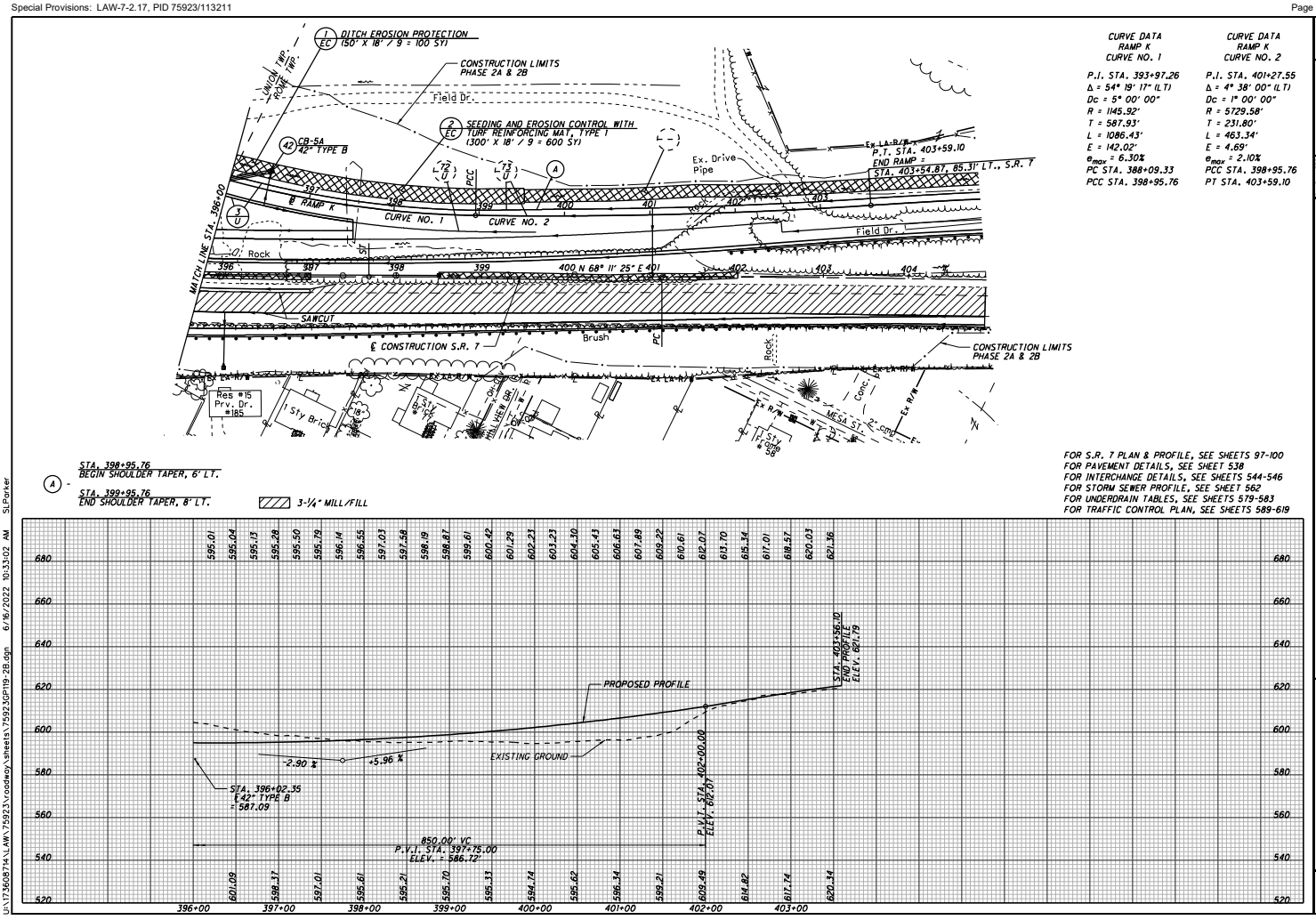

CURVE DATA RAMP K CURVE NO. 1	CURVE DATA RAMP K CURVE NO. 2
P.I. STA. 393+97.26	P.I. STA. 401+27.55
Δ = 54° 19' 17" (LT)	Δ = 4° 38' 00" (LT)
Dc = 5° 00' 00"	Dc = 1° 00' 00"
R = 1145.92'	R = 5729.58'
T = 587.93'	T = 231.80'
L = 1086.43'	L = 463.34'
E = 142.02'	E = 4.69'
e_{max} = 6.30%	e_{max} = 2.10%
PC STA. 388+09.33	PCC STA. 398+95.76
PCC STA. 398+95.76	PT STA. 403+59.10

FOR S.R. 7 PLAN & PROFILE, SEE SHEETS 97-100
FOR PAVEMENT DETAILS, SEE SHEET 538
FOR INTERCHANGE DETAILS, SEE SHEETS 544-546
FOR STORM SEWER PROFILE, SEE SHEET 562
FOR UNDERDRAIN TABLES, SEE SHEETS 579-583
FOR TRAFFIC CONTROL PLAN, SEE SHEETS 589-619

HORIZONTAL SCALE IN FEET 0 50 100
CALCULATED SLP
CHECKED ALB

PLAN AND PROFILE - RAMP K
STA. 396+00.00 TO STA. 403+59.10

LAW-7-2.17

390
633

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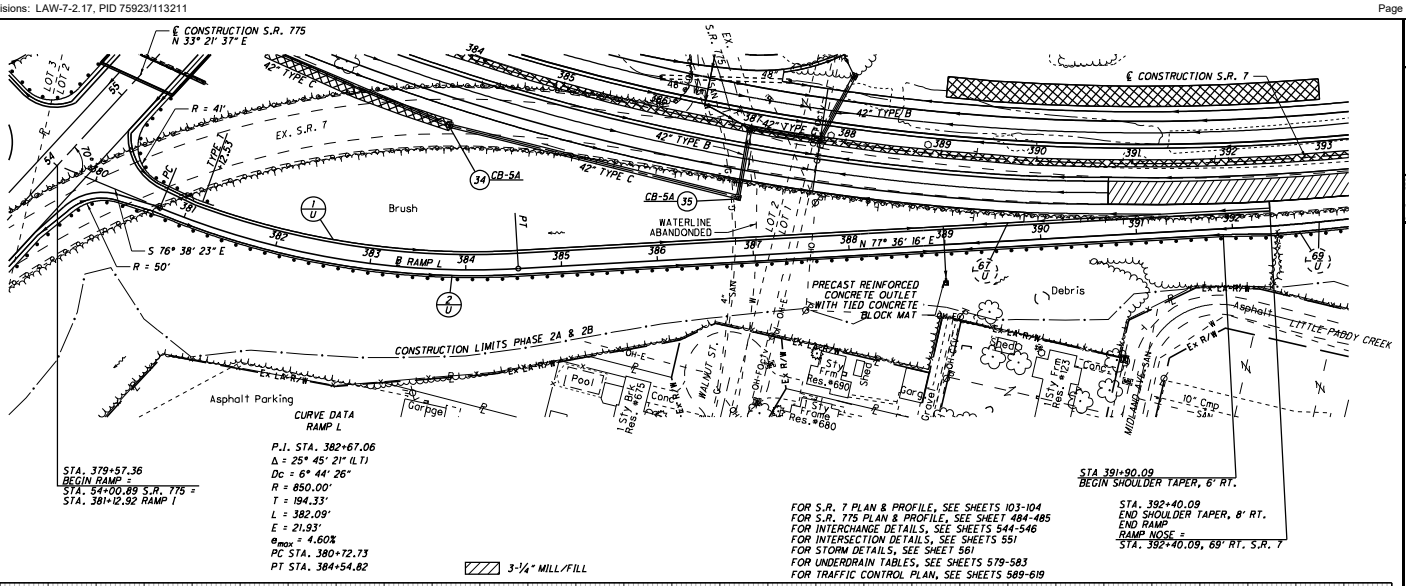

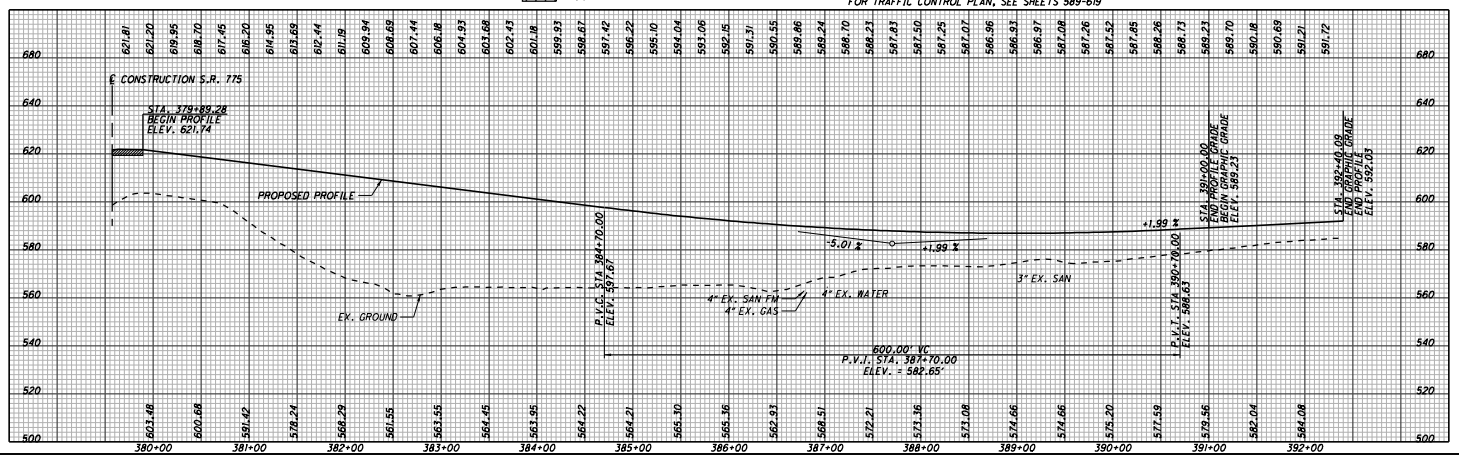

HORIZONTAL SCALE IN FEET
0 50 100
CALCULATED SLP
CHECKED ALB

PLAN AND PROFILE
RAMP L

LAW-7-2.17

403
633

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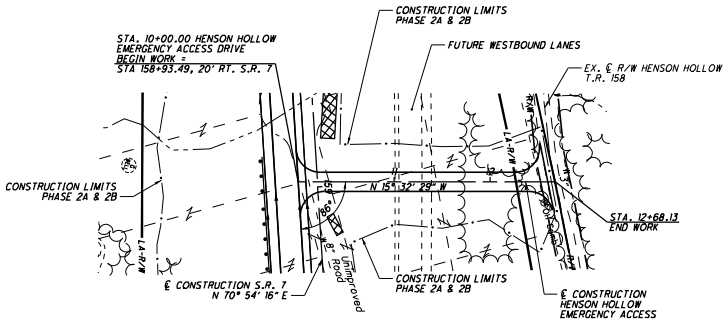
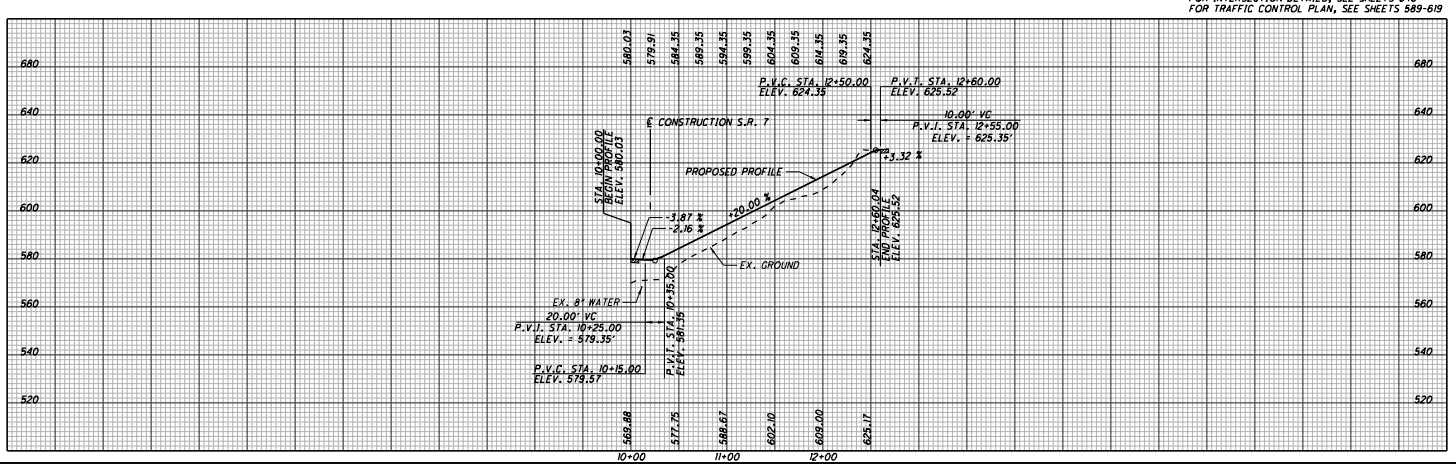


FOR S.R. 7 PLAN & PROFILE, SEE SHEETS 52-55
FOR INTERSECTION DETAILS, SEE SHEETS 548
FOR TRAFFIC CONTROL PLAN, SEE SHEETS 589-619



HORIZONTAL SCALE IN FEET
0 50 100
CALCULATED SLP
CHECKED ALB

PLAN AND PROFILE
HENSON HOLLOW EMERGENCY ACCESS

LAW-7-2.17

411
633

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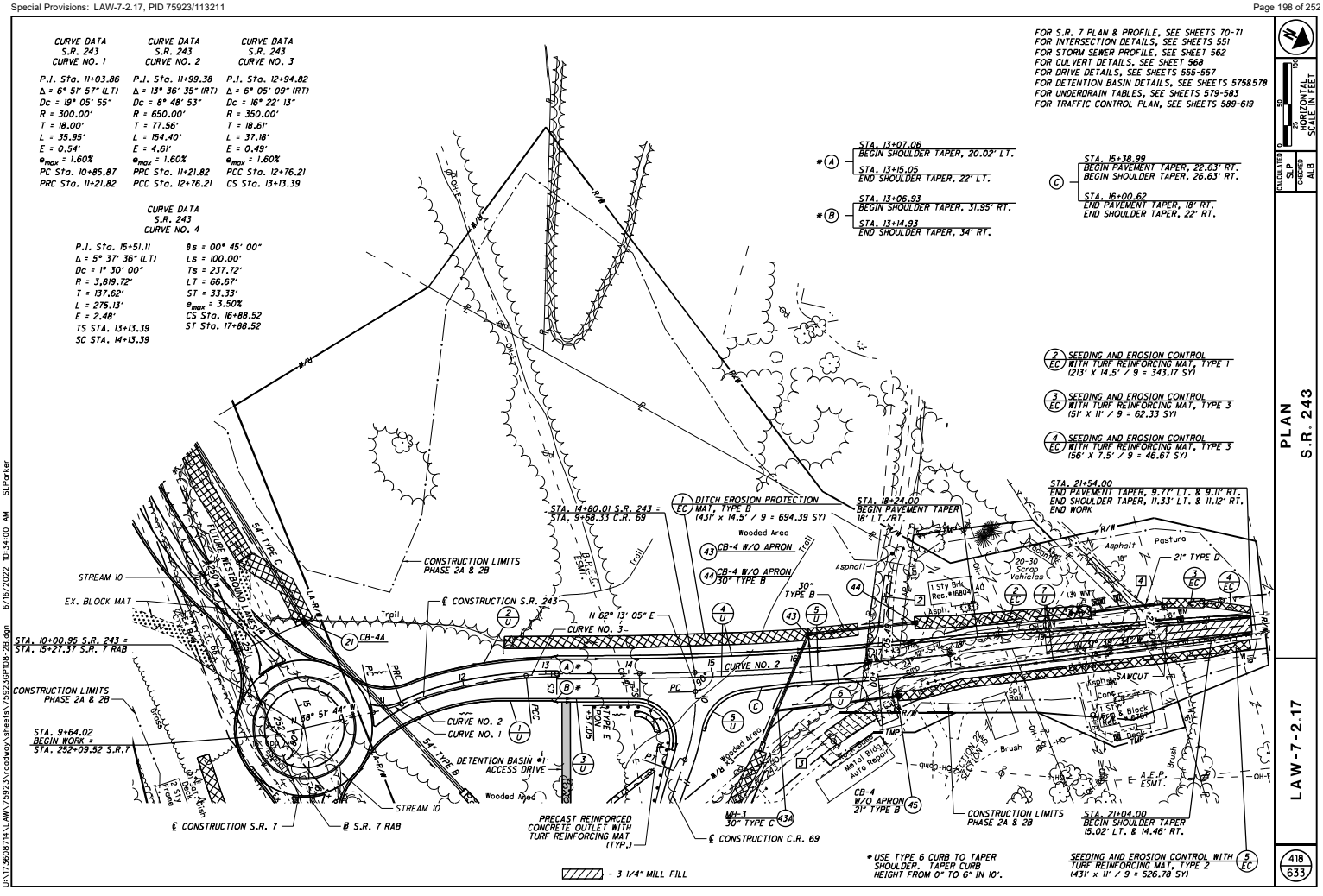

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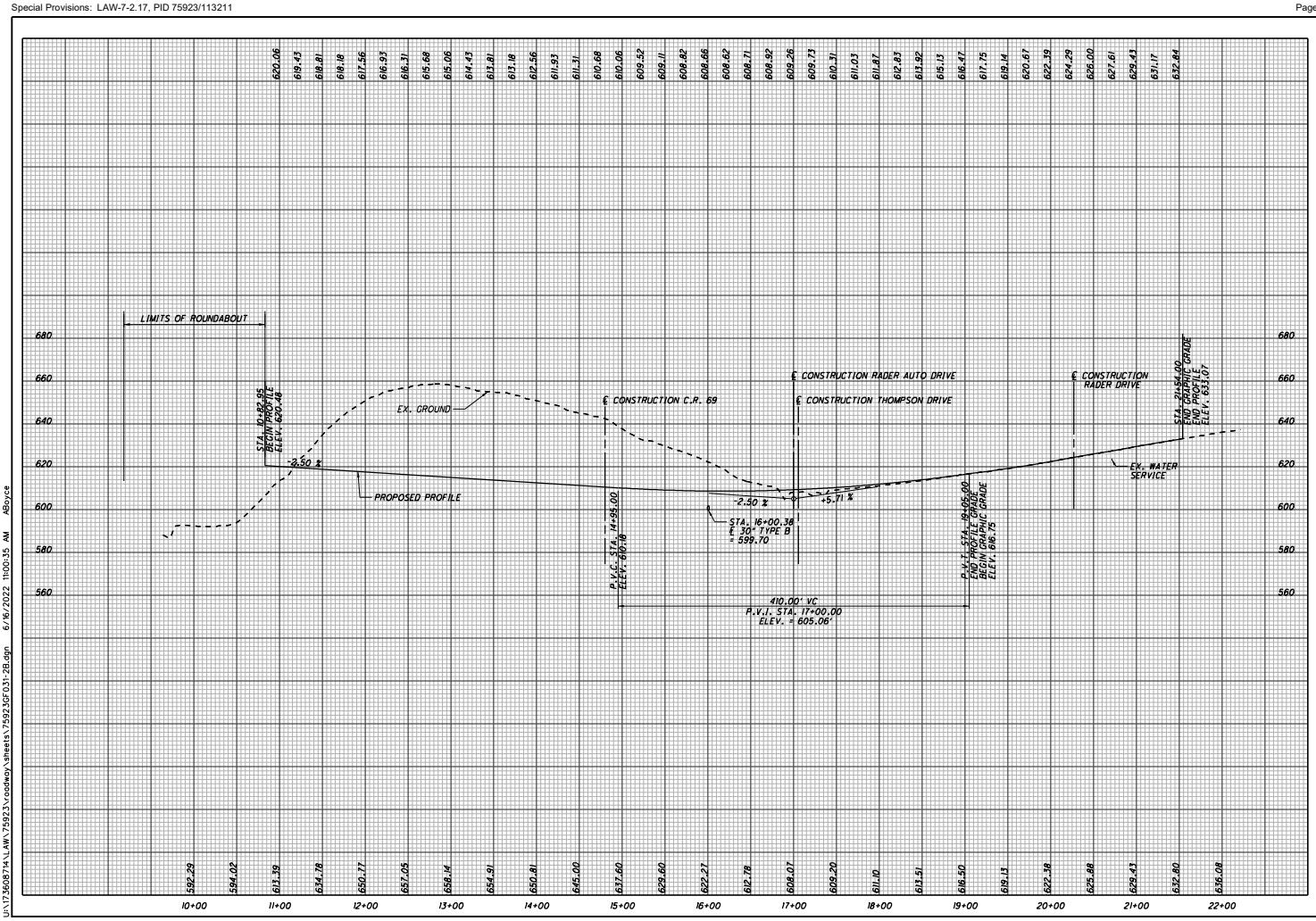


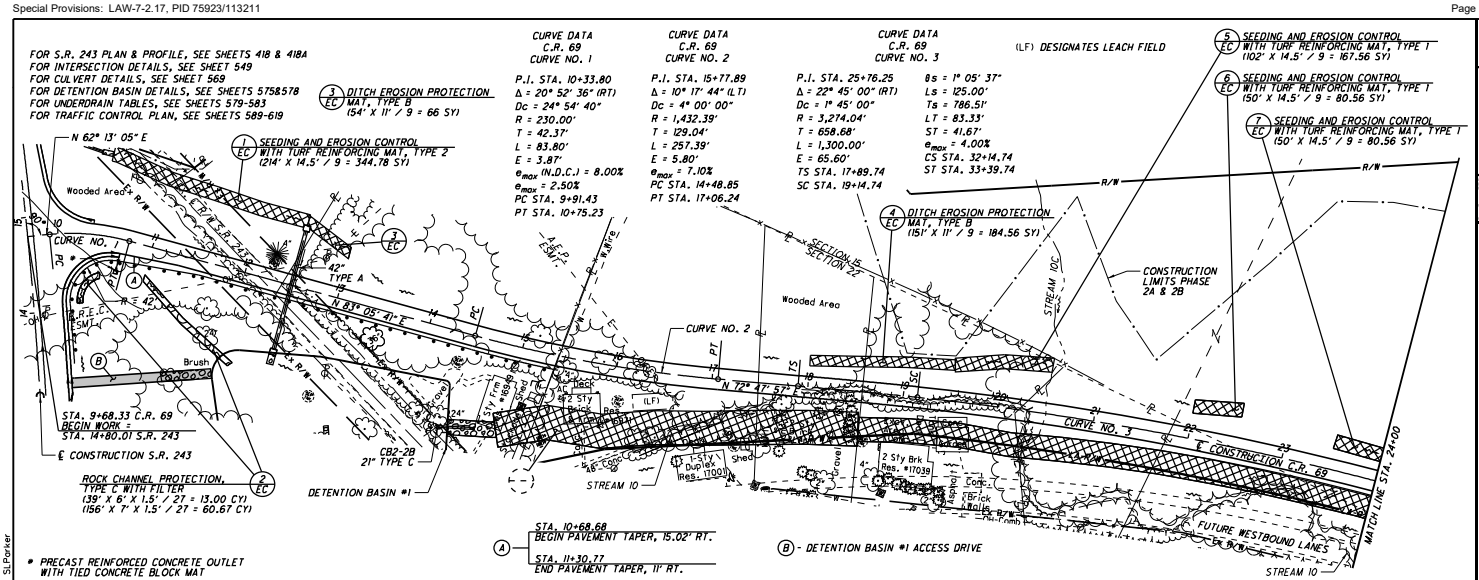
CALCULATED SLP
CHECKED ALB

PROFILE
S.R. 243

LAW-7-2.17

418A
633

U:\173608714\LAW\75923\roadway\sheets\75923GF031-2B.dgn 6/16/2022 11:00:35 AM ABoyce





PLAN AND PROFILE - C.R. 69
STA. 9+68.33 TO STA. 24+00.00

LAW-7-2.17

429
633

CALCULATED SLP
CHECKED ALB

0 50 100
HORIZONTAL SCALE IN FEET

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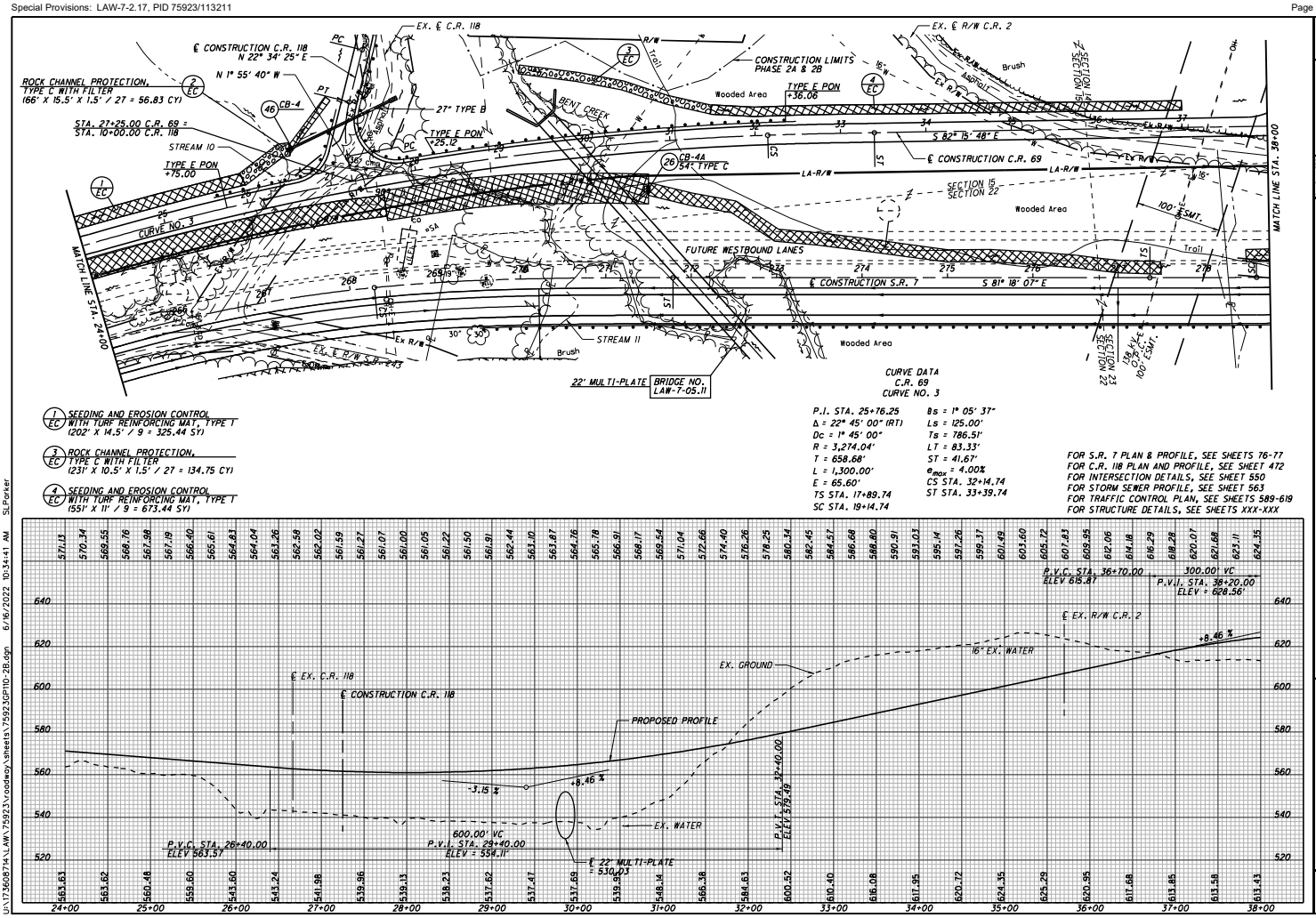

1 EC SEEDING AND EROSION CONTROL WITH TURF REINFORCING MAT, TYPE I (202' X 14.5' / 9 = 325.44 SY)

3 EC ROCK CHANNEL PROTECTION, TYPE C WITH FILTER (231' X 10.5' X 1.5' / 27 = 134.75 CY)

4 EC SEEDING AND EROSION CONTROL WITH TURF REINFORCING MAT, TYPE I (151' X 11' / 9 = 673.44 SY)

CURVE DATA
C.R. 69
CURVE NO. 3

P.I. STA. 25+76.25
Δ = 22° 45' 00" (RT)
Dc = 1° 45' 00"
R = 3,274.04'
T = 658.66'
L = 1,300.00'
E = 65.60'
TS STA. 17+89.74
SC STA. 19+14.74

θs = 1° 05' 37"
Ls = 125.00'
Ts = 786.51'
LT = 83.33'
ST = 41.67'
e_{max} = 4.00%
CS STA. 32+14.74
ST STA. 33+39.74

FOR S.R. 7 PLAN & PROFILE, SEE SHEETS 76-77
FOR C.R. 118 PLAN AND PROFILE, SEE SHEET 472
FOR INTERSECTION DETAILS, SEE SHEET 550
FOR STORM SEWER PROFILE, SEE SHEET 563
FOR TRAFFIC CONTROL PLAN, SEE SHEETS 589-619
FOR STRUCTURE DETAILS, SEE SHEETS XXX-XXX

PLAN AND PROFILE - C.R. 69
STA. 24+00.00 TO STA. 38+00.00

LAW-7-2.17

CALCULATED SLP
CHECKED ALB

HORIZONTAL SCALE IN FEET
0 50 100

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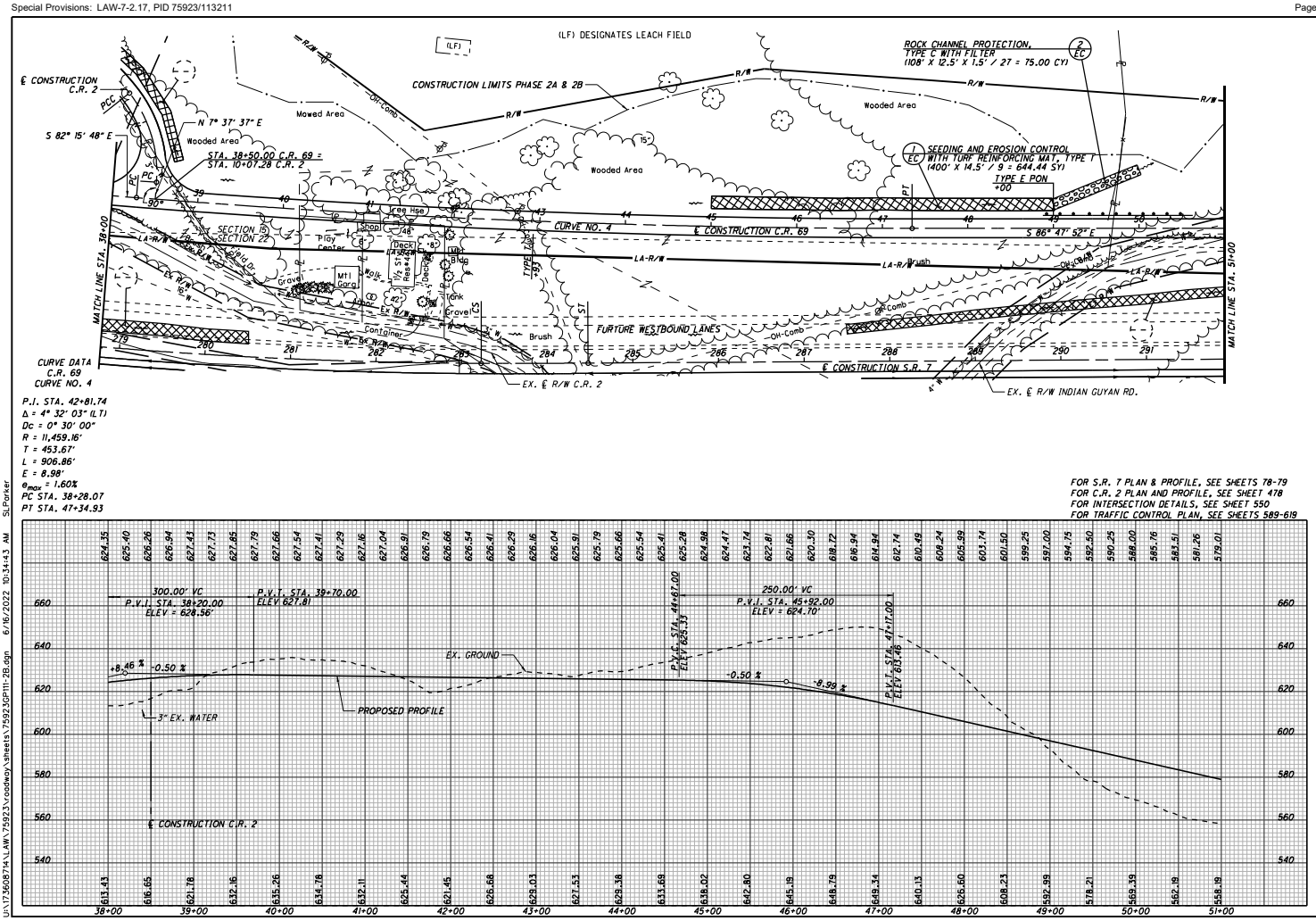

PLAN AND PROFILE - C.R. 69
STA. 38+00.00 TO STA. 51+00.00

LAW-7-2.17

CALCULATED SLP
CHECKED ALB

HORIZONTAL SCALE IN FEET

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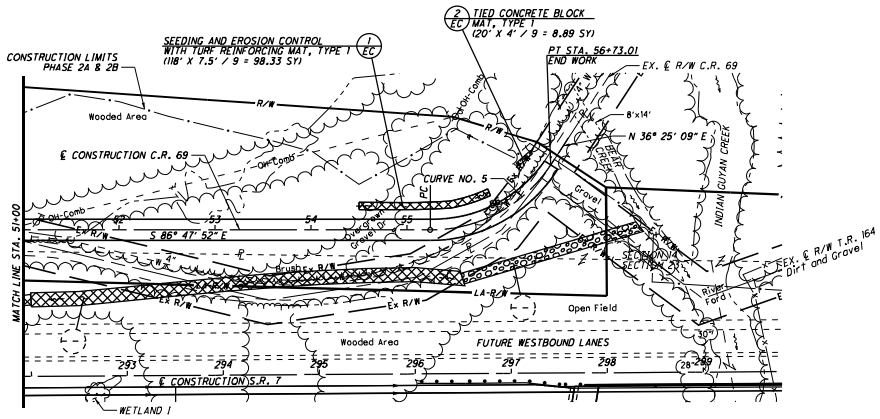
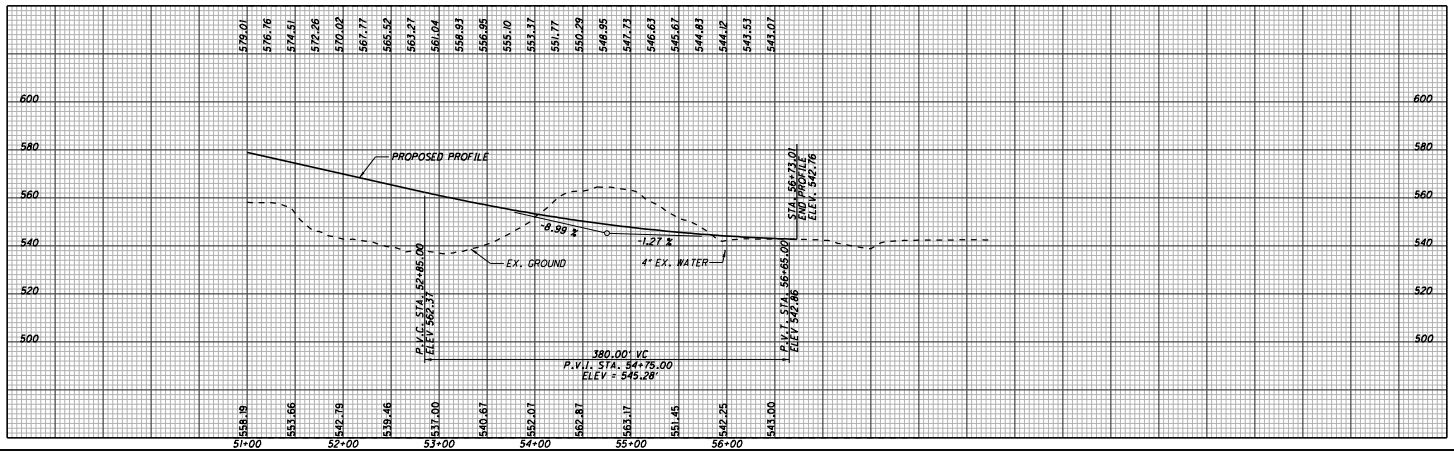


CURVE DATA
C.R. 69
CURVE NO. 5

P.I. STA. 56+05.43
Δ = 56° 46' 59" (RT)
Dc = 38° 11' 50"
R = 150.00'
T = 81.08'
L = 148.66'
E = 20.51'
e_{max} (N.D.C.) = 8.00%
e_{max} = 2.50%
PC STA. 55+24.35
PT STA. 56+73.01

FOR S.R. 7 PLAN & PROFILE, SEE SHEETS 80-81
FOR TRAFFIC CONTROL PLAN, SEE SHEETS 589-619



PLAN AND PROFILE - C.R. 69
STA. 51+00.00 TO STA. 56+73.01

LAW-7-2.17

CALCULATED SLP
CHECKED ALB

HORIZONTAL SCALE IN FEET
0 50 100

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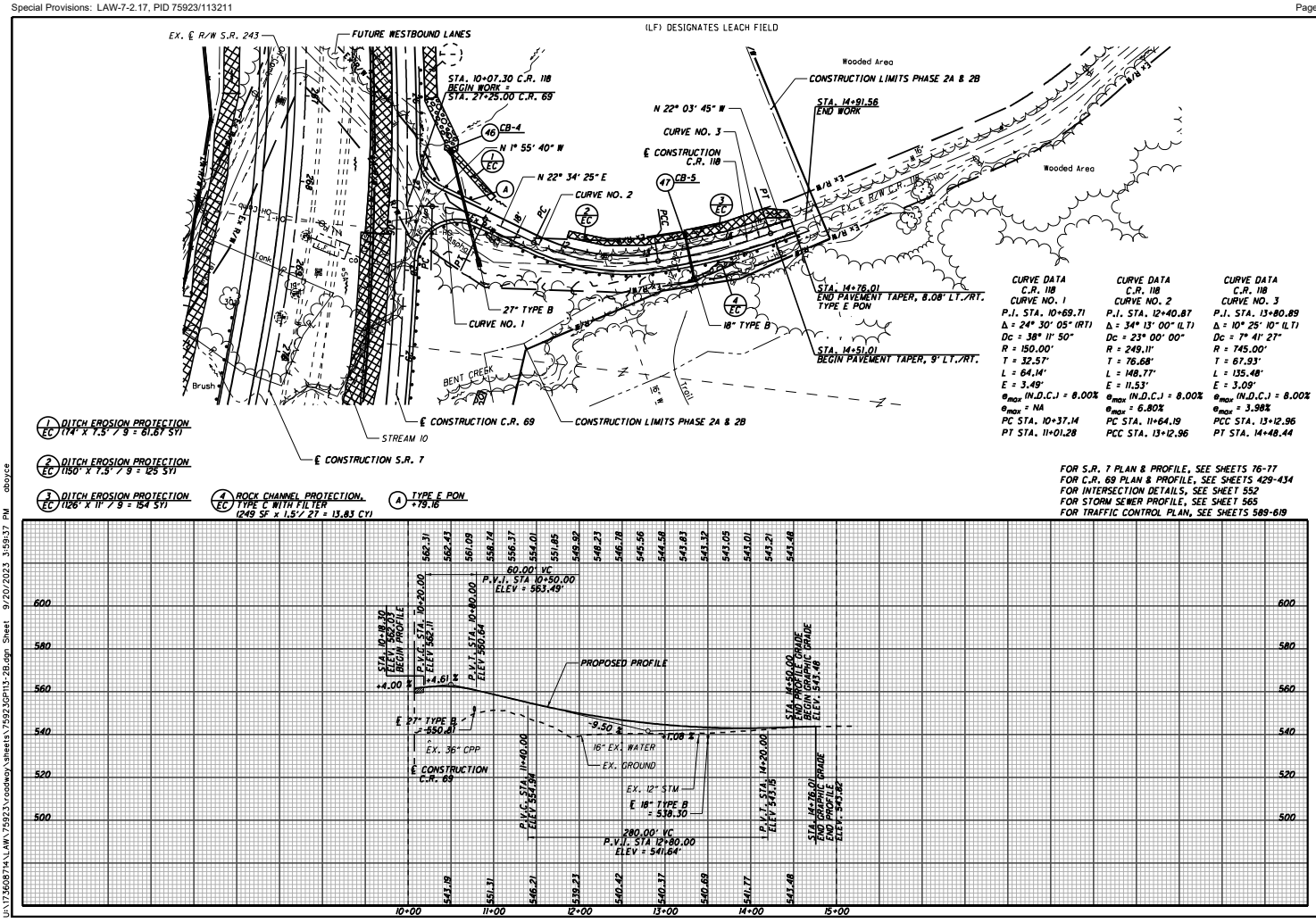

CURVE DATA C.R. 118 CURVE NO. 1	CURVE DATA C.R. 118 CURVE NO. 2	CURVE DATA C.R. 118 CURVE NO. 3
P.I. STA. 10+69.71	P.I. STA. 12+40.87	P.I. STA. 13+80.89
Δ = 24° 30' 05" (RT)	Δ = 34° 13' 00" (LT)	Δ = 10° 25' 10" (LT)
Dc = 38° 11' 50"	Dc = 23° 00' 00"	Dc = 7° 41' 27"
R = 150.00'	R = 249.11'	R = 745.00'
T = 32.57'	T = 76.68'	T = 67.93'
L = 64.14'	L = 148.77'	L = 135.48'
E = 3.49'	E = 11.53'	E = 3.09'
e_{max} (N.D.C.) = 8.00%	e_{max} (N.D.C.) = 8.00%	e_{max} (N.D.C.) = 8.00%
e_{max} = NA	e_{max} = 6.80%	e_{max} = 3.96%
PC STA. 10+37.14	PC STA. 11+64.19	PCC STA. 13+12.96
PT STA. 11+01.28	PCC STA. 13+12.96	PT STA. 14+48.44

FOR S.R. 7 PLAN & PROFILE, SEE SHEETS 76-77
FOR C.R. 69 PLAN & PROFILE, SEE SHEETS 429-434
FOR INTERSECTION DETAILS, SEE SHEET 552
FOR STORM SEWER PROFILE, SEE SHEET 565
FOR TRAFFIC CONTROL PLAN, SEE SHEETS 589-619

PLAN AND PROFILE
C.R. 118

LAW-7-2.17

474
635

CALCULATED SLP
CHECKED ALB

HORIZONTAL SCALE IN FEET
0 50 100

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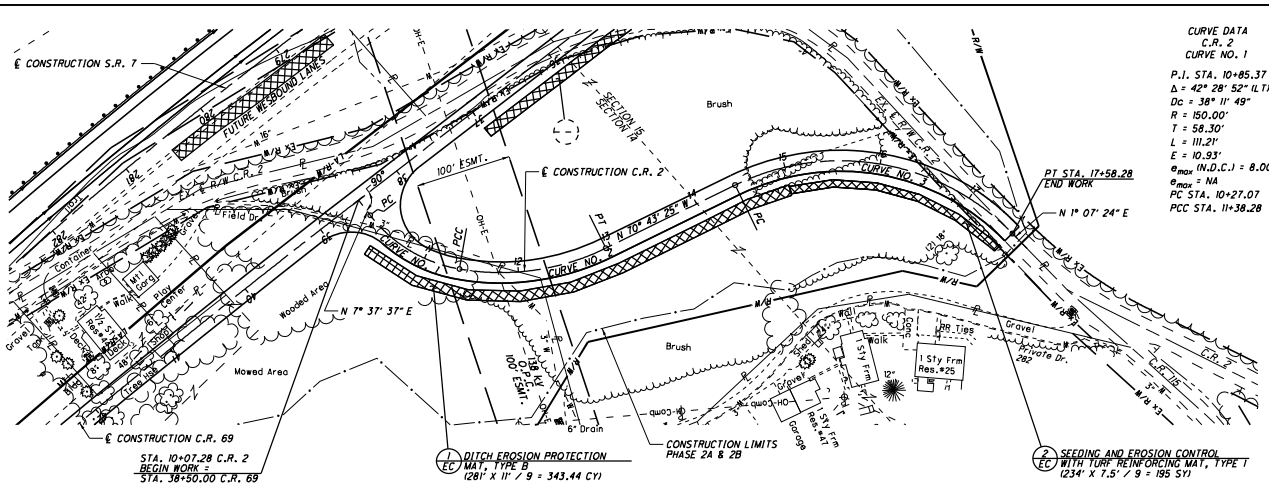


CURVE DATA C.R. 2 CURVE NO. 1

P.I. STA. 10+85.37
Δ = 42° 28' 52" (LT)
Dc = 38° 11' 49"
R = 150.00'
T = 58.30'
L = 111.21'
E = 10.93'
e_{max} (N.D.C.) = 8.00%
e_{max} = NA
PC STA. 10+27.07
PCC STA. 11+38.28

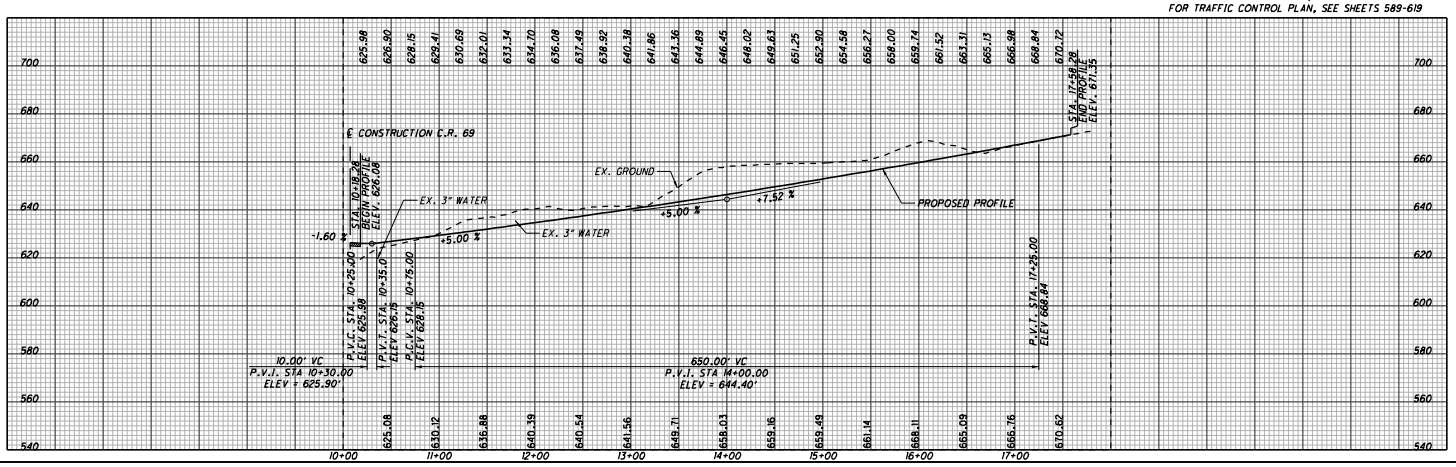
CURVE DATA C.R. 2 CURVE NO. 2

P.I. STA. 12+19.20
Δ = 35° 52' 10" (LT)
Dc = 22° 55' 06"
R = 250.00'
T = 80.91'
L = 156.51'
E = 12.77'
e_{max} (N.D.C.) = 8.00%
e_{max} = 7.89%
PCC STA. 11+38.28
PT STA. 12+94.79

CURVE DATA C.R. 2 CURVE NO. 3

P.I. STA. 16+25.92
Δ = 71° 50' 49" (RT)
Dc = 22° 55' 06"
R = 250.00'
T = 181.13'
L = 313.49'
E = 58.72'
e_{max} (N.D.C.) = 8.00%
e_{max} = 7.00%
PC STA. 14+44.79
PT STA. 17+58.28

FOR S.R. 7 PLAN & PROFILE, SEE SHEETS 78-79
FOR C.R. 69 PLAN & PROFILE, SEE SHEETS 429-432
FOR INTERSECTION DETAILS, SEE SHEET 550
FOR TRAFFIC CONTROL PLAN, SEE SHEETS 589-619



CALCULATED SLP
CHECKED ALB

HORIZONTAL SCALE IN FEET 0 50 100

PLAN AND PROFILE C.R. 2

LAW-7-2.17

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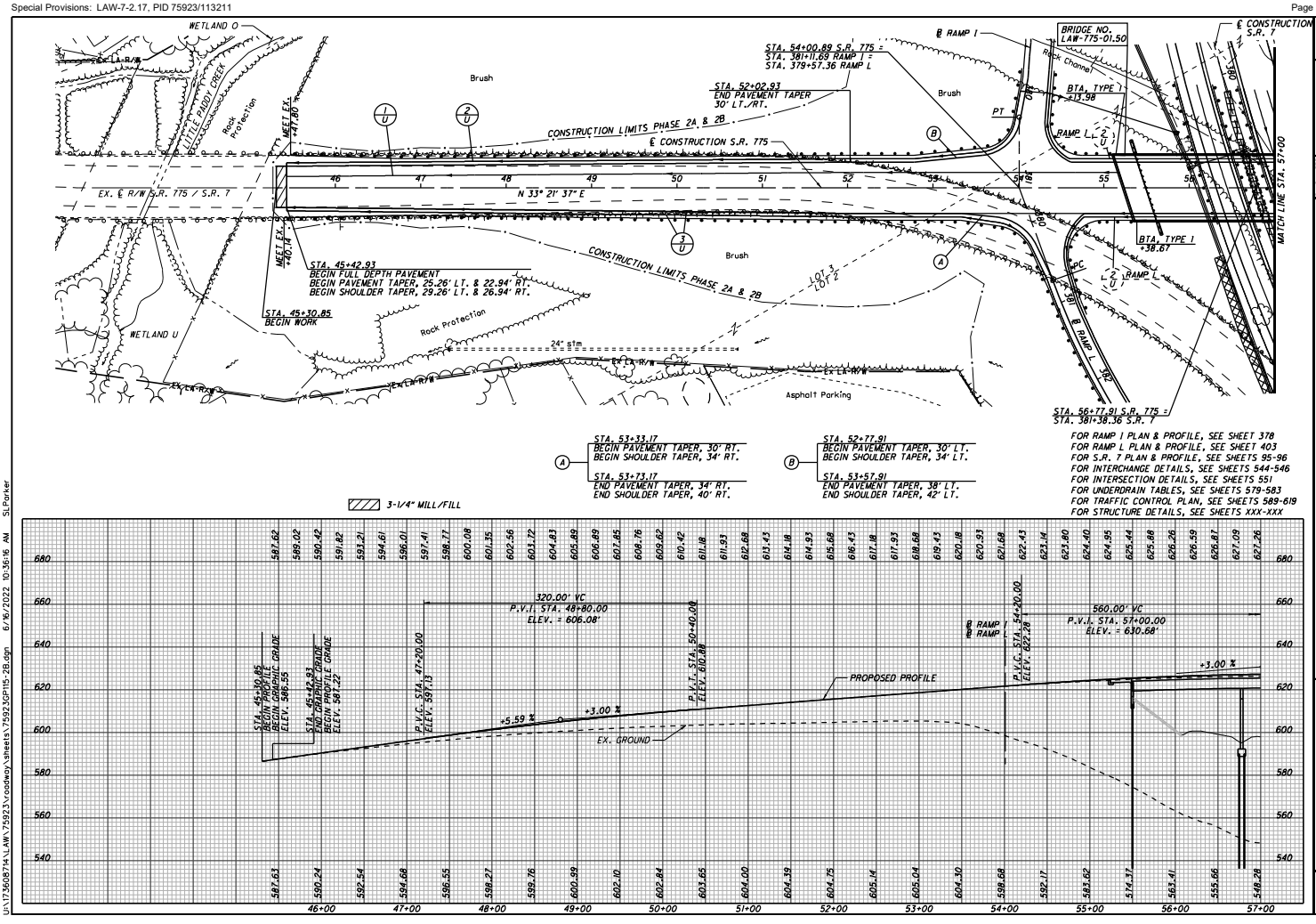


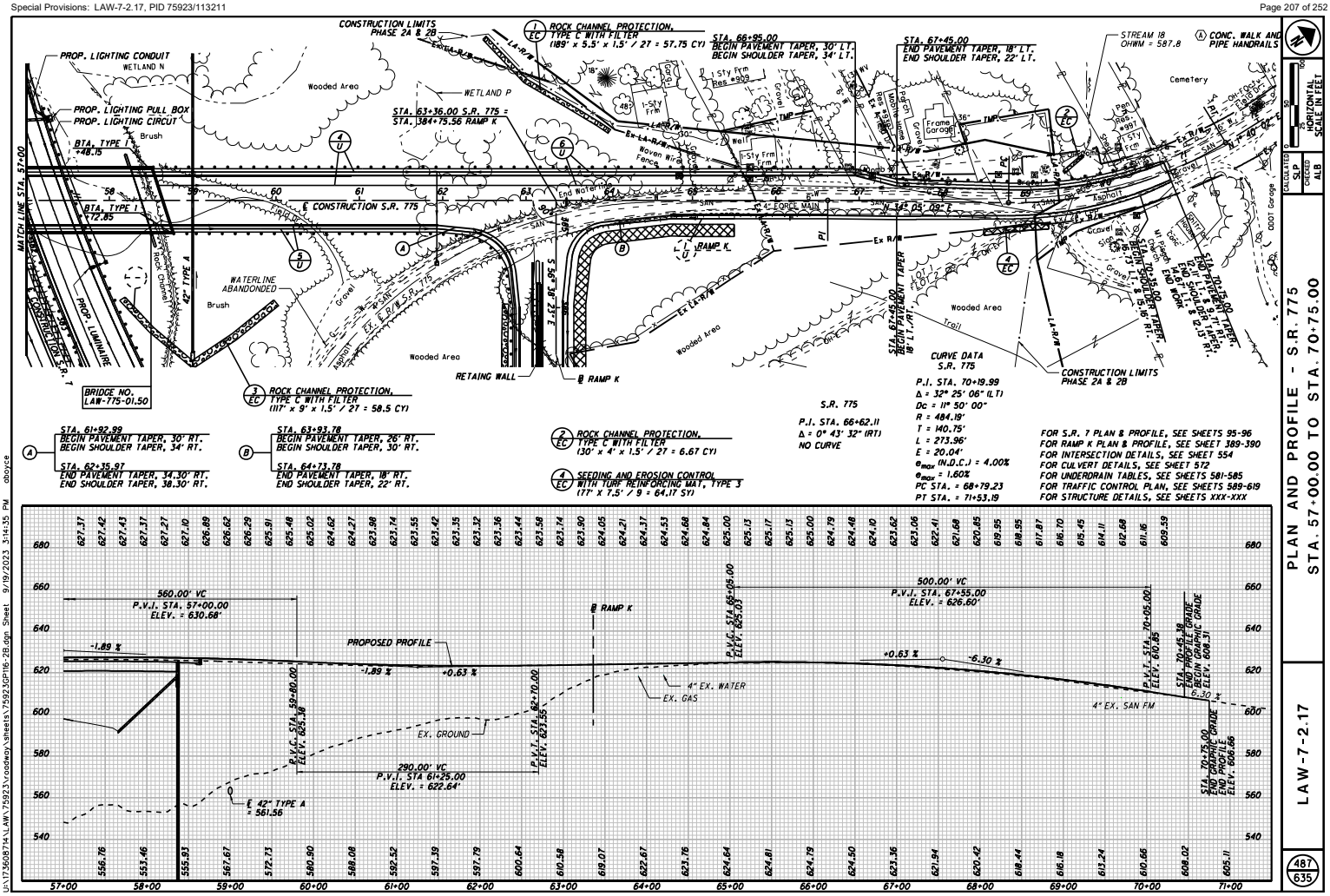
CALCULATED SLP
CHECKED ALB

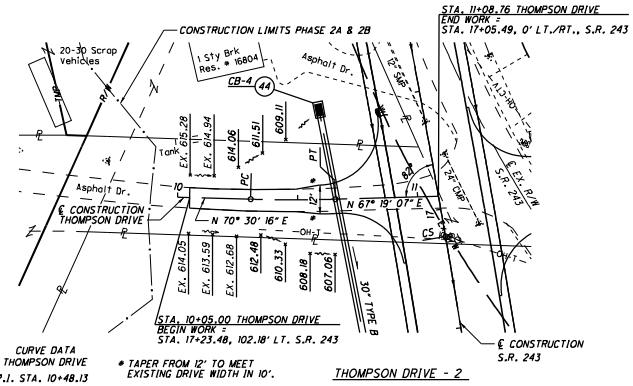
0 50 100
HORIZONTAL SCALE IN FEET

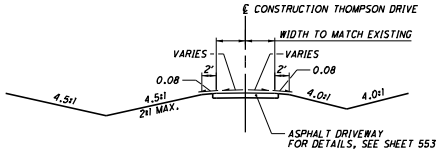
PLAN AND PROFILE - S.R. 775
STA. 45+30.85 TO STA. 57+00.00

LAW-7-2.17

484
633


CONSTRUCTION LIMITS PHASE 2A & 2B
1 EC ROCK CHANNEL PROTECTION, TYPE C WITH FILTER (189' x 5.5' x 1.5' / 27 = 57.75 CY)
STA. 66+95.00 BEGIN PAVEMENT TAPER, 30' LT. BEGIN SHOULDER TAPER, 34' LT.
STA. 67+45.00 END PAVEMENT TAPER, 18' LT. END SHOULDER TAPER, 22' LT.
STREAM 18 OHWM = 587.8
A CONC. WALK AND PIPE HANDRAILS
PROP. LIGHTING CONDUIT
WETLAND N
Wooded Area
WETLAND P
PROP. LIGHTING PULL BOX
PROP. LIGHTING CIRCUIT
Brush
STA. 63+36.00 S.R. 775 = STA. 384+75.56 RAMP K
Cemetery
BTA, TYPE 1 +48.15
BTA, TYPE 1 +72.85
MATCH LINE STA. 57+00
℄ CONSTRUCTION S.R. 775
℄ FORCE MAIN
℄ RAMP K
Ex R/W
Ex LA-R/W
PROP. LUMINAIRE
42" TYPE A
Rock Channel
WATERLINE ABANDONDED
Gravel
Asphalt
Ex. E.P./S.R. 775
RETAINING WALL
Trail
Fence
Woven Wire Fence
Chain Link Fence
Guiderail
Asphalt
Concrete
Gravel
Ex. Gravel Drive
Ex. Asphalt Drive
Ex. Concrete Drive





TYPICAL SECTION - THOMPSON DRIVE
NOT TO SCALE

CURVE DATA
THOMPSON DRIVE
P.I. STA. 10+48.13
Δ = 3° 11' 08" (LT)
Dc = 9° 01' 23"
R = 635.00'
T = 17.66'
L = 35.31'
E = 0.25'
e_{max} = NA
PC STA. 10+30.48
PT STA. 10+65.78

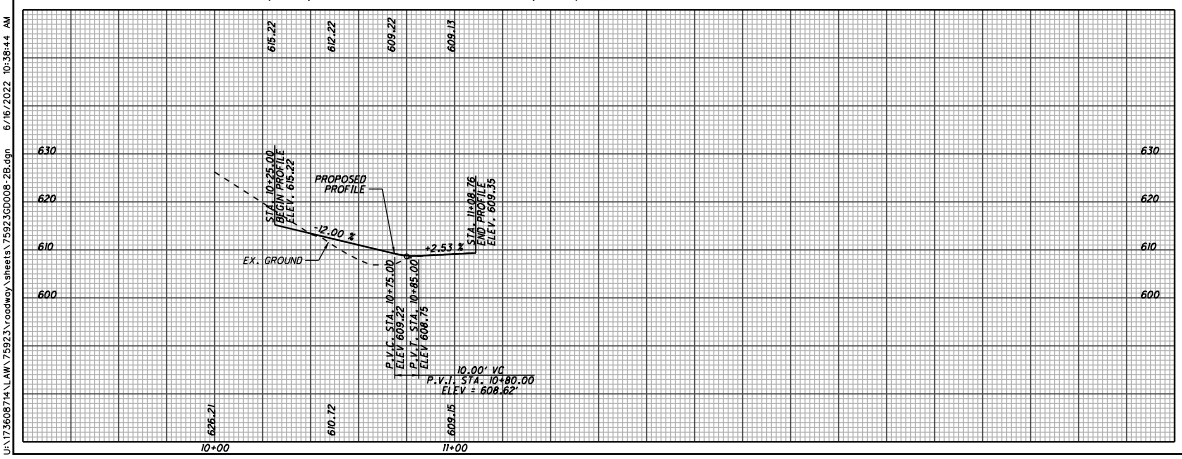
* TAPER FROM 12' TO MEET EXISTING DRIVE WIDTH IN 10'.

THOMPSON DRIVE - 2

LEFT E/P RETURN DATA
Δ = 99° 25' 18"
R = 25.00'
T = 29.49'
L = 43.38'
R.P. STA. 17+43.71, 41' LT., S.R. 243
P.C. STA. 17+43.71, 19' LT., S.R. 243
P.T. STA. 10+59.20, 6' LT., THOMPSON DRIVE

RIGHT E/P RETURN DATA
Δ = 81° 53' 36"
R = 25.00'
T = 21.69'
L = 35.73'
R.P. STA. 10+68.81, 31' RT., THOMPSON DRIVE
P.C. STA. 10+68.81, 6' RT., THOMPSON DRIVE
P.T. STA. 11+80.43, 19' LT., S.R. 243

FOR STORM SEWER PROFILE, SEE SHEET 564



REF NO.	STATION FROM	STATION TO	SIDE

TOTALS CARRIED TO GENERAL SUMMARY

HORIZONTAL SCALE IN FEET
0 20 40

CALCULATED SLP
CHECKED ALB

PLAN AND PROFILE
THOMPSON DRIVE

LAW-7-2.17

555
633

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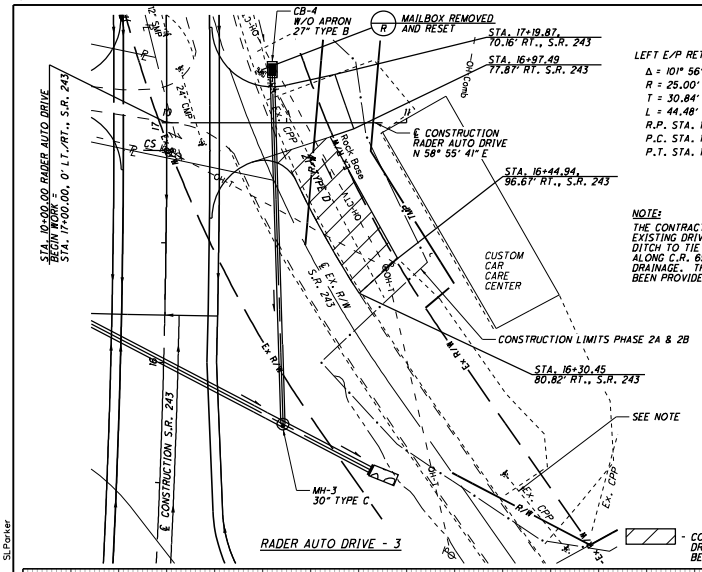
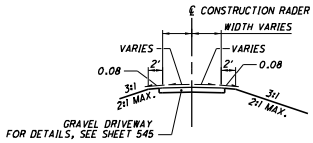


LEFT E/P RETURN DATA
- Δ = 101° 56' 10"
- R = 25.00'
- T = 30.84'
- L = 44.48'
- R.P. STA. 17+39.68, 44' RT., S.R. 243
- P.C. STA. 17+39.68, 19' RT., S.R. 243
- P.T. STA. 10+49.19, 15.58' LT., THOMPSON DRIVE

RIGHT E/P RETURN DATA (CURVE NO. 1)
- Δ 69° 27' 03"
- R = 25.00'
- T = 17.33'
- L = 30.30'
- R.P. STA. 16+60.44, 44' RT., S.R. 243
- P.C. STA. 16+60.44, 19' RT., S.R. 243
- P.C.C. STA. 10+35.26, 16.50' RT., THOMPSON DRIVE

RIGHT E/P RETURN DATA (CURVE NO. 1)
- Δ = 83° 54' 43"
- R = 15.00'
- T = 13.49'
- L = 21.97'
- R.P. STA. 10+40.38, 30.60' RT., THOMPSON DRIVE
- P.C.C. STA. 10+35.26, 16.50' RT., THOMPSON DRIVE
- P.T. STA. 10+53.86, 24.01' RT., THOMPSON DRIVE

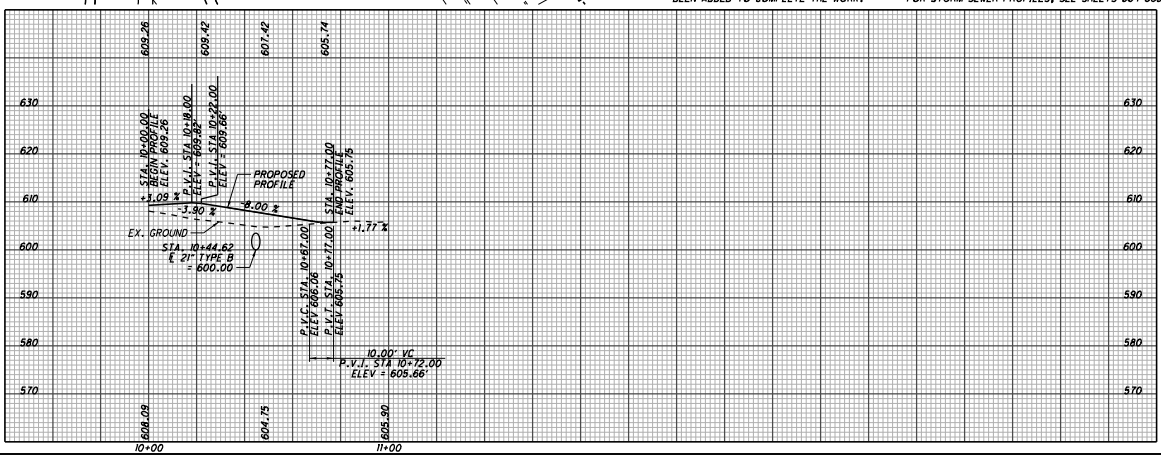
NOTE:
THE CONTRACTOR SHALL REMOVE THE EXISTING DRIVE AND DRIVE PIPE AND REGRADE DITCH TO TIE INTO THE PROPOSED DITCH ALONG C.R. 69 TO PROVIDE POSITIVE DRAINAGE. THE FOLLOWING QUANTITIES HAVE BEEN PROVIDED TO COMPLETE THIS WORK.



TYPICAL SECTION - RADER AUTO DRIVE
NOT TO SCALE

- CONTRACTOR SHALL REGRADE EXISTING DRIVE. THE FOLLOWING QUANTITIES HAVE BEEN ADDED TO COMPLETE THE WORK.

FOR STORM SEWER PROFILES, SEE SHEETS 564-565



REF NO.	STATION FROM	STATION TO	SIDE

TOTALS CARRIED TO GENERAL SUMMARY

HORIZONTAL SCALE IN FEET
0 20 40

CALCULATED SLP
CHECKED ALB

PLAN AND PROFILE
RADER AUTO DRIVE

LAW-7-2.17

556
633

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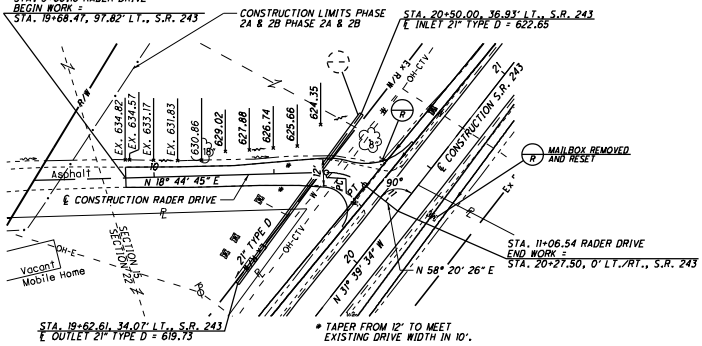
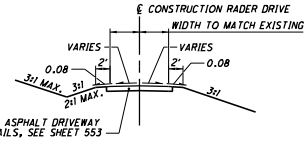




TYPICAL SECTION - RADER DRIVE
NOT TO SCALE

RADER DRIVE - 4

CURVE DATA
RADER DRIVE

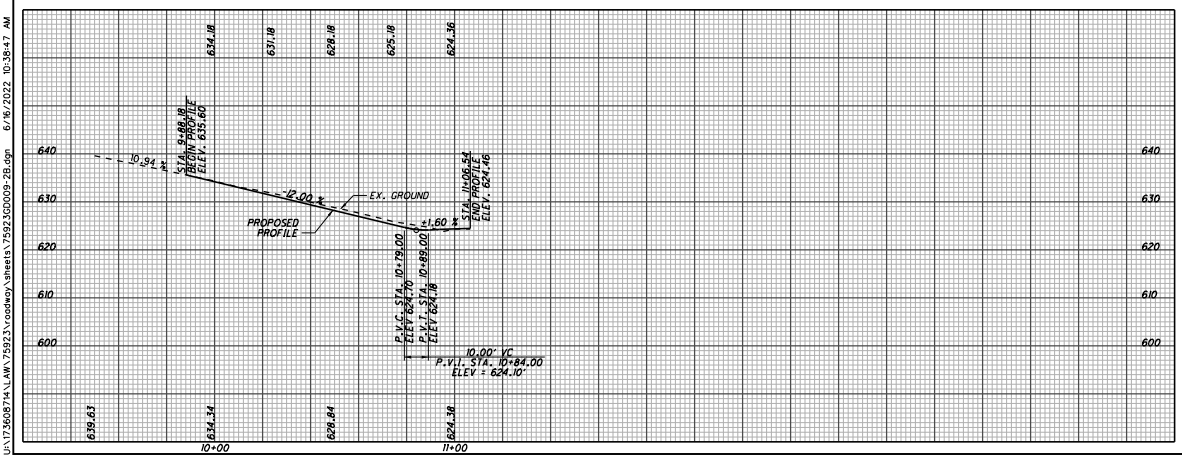
P.I. STA. 10+80.82
Δ = 39° 35' 40" (RT)
Dc = 229° 10' 59"
R = 25.00'
T = 9.00'
L = 17.28'
E = 1.57'
e_{max} = NA
PC STA. 10+71.82
PT STA. 10+89.09

LEFT E/P RETURN DATA

Δ = 66° 44' 56"
R = 25.00'
T = 16.47'
L = 29.12'
R.P. STA. 10+79.57, 31' LT., RADER DRIVE
P.C. STA. 20+53.87, 13.27' LT., S.R. 243
P.T. STA. 10+79.57, 6' LT., RADER DRIVE

RIGHT E/P RETURN DATA

Δ = 131° 01' 25"
R = 10.00'
T = 21.95'
L = 22.87'
R.P. STA. 10+70.23, 16' RT., RADER DRIVE
P.C. STA. 10+70.23, 6' RT., RADER DRIVE
P.T. STA. 20+08.18, 14.41' LT., S.R. 243



REF NO.	STATION FROM	STATION TO	SIDE

TOTALS CARRIED TO GENERAL SUMMARY

CALCULATED SLP
CHECKED ALB

HORIZONTAL SCALE IN FEET
0 20 40

PLAN AND PROFILE
RADER DRIVE

LAW-7-2.17

557
633

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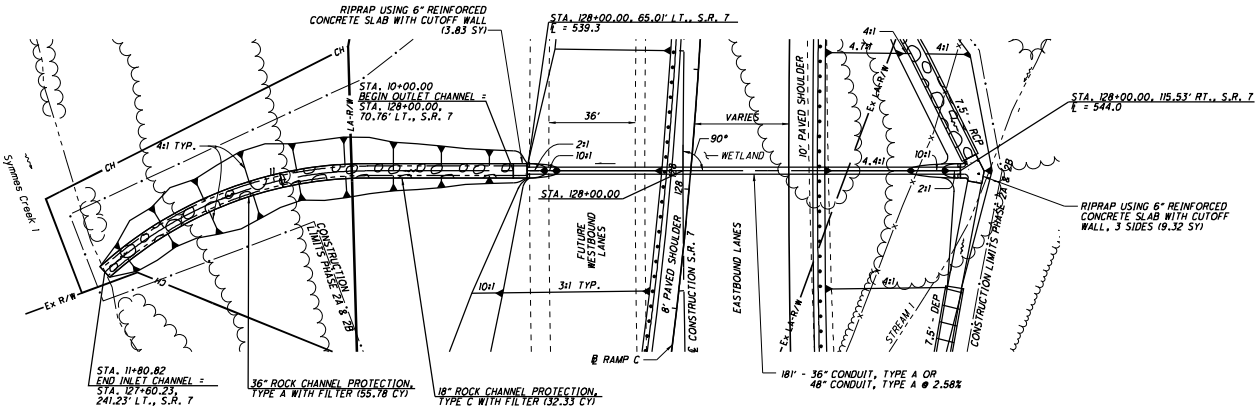
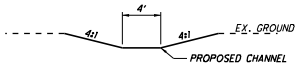


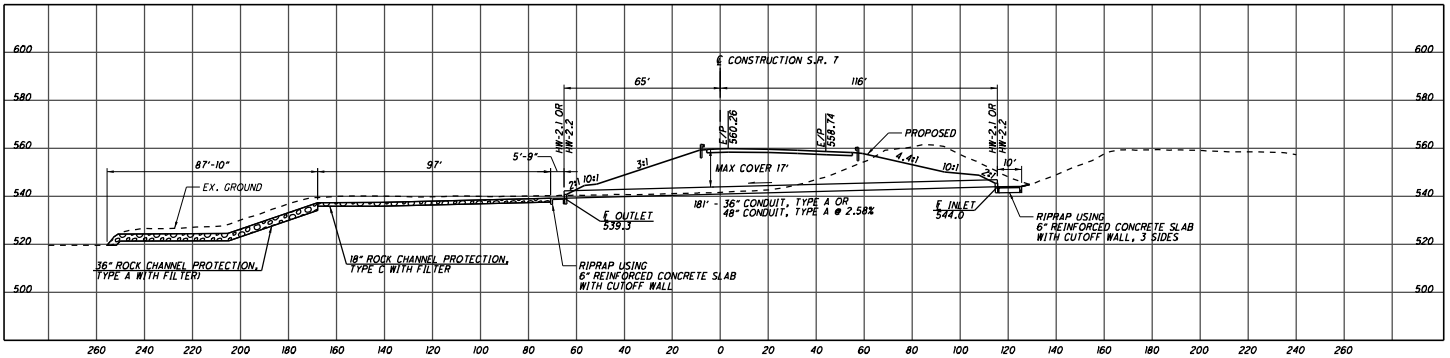
ESTIMATE QUANTITIES			
ITEM	TOTAL	UNIT	DESCRIPTION

QUANTITIES CARRIED TO GENERAL SUMMARY, SHEETS

HYDRAULIC DATA	
DRAINAGE AREA	= 15 AC.
Q50	= 56 CFS
Q100	= 64 CFS
50V	= 7.92 FPS
100V	= 9.05 FPS
50 HW	= 548.5
100 HW	= 549.2
OHWM1	= 546.5
OHWMo	= 517.3
pH	= 7.6
DESIGN SERVICE LIFE	= 75 YEARS
ABRASION LEVEL	=
CFN	=



CHANNEL TYPICAL SECTION



CALCULATED SLP
CHECKED ALB

0 20 40
HORIZONTAL SCALE IN FEET

CULVERT DETAIL
S.R. 7 STA. 128+00.00

LAW-7-2.17

566
633

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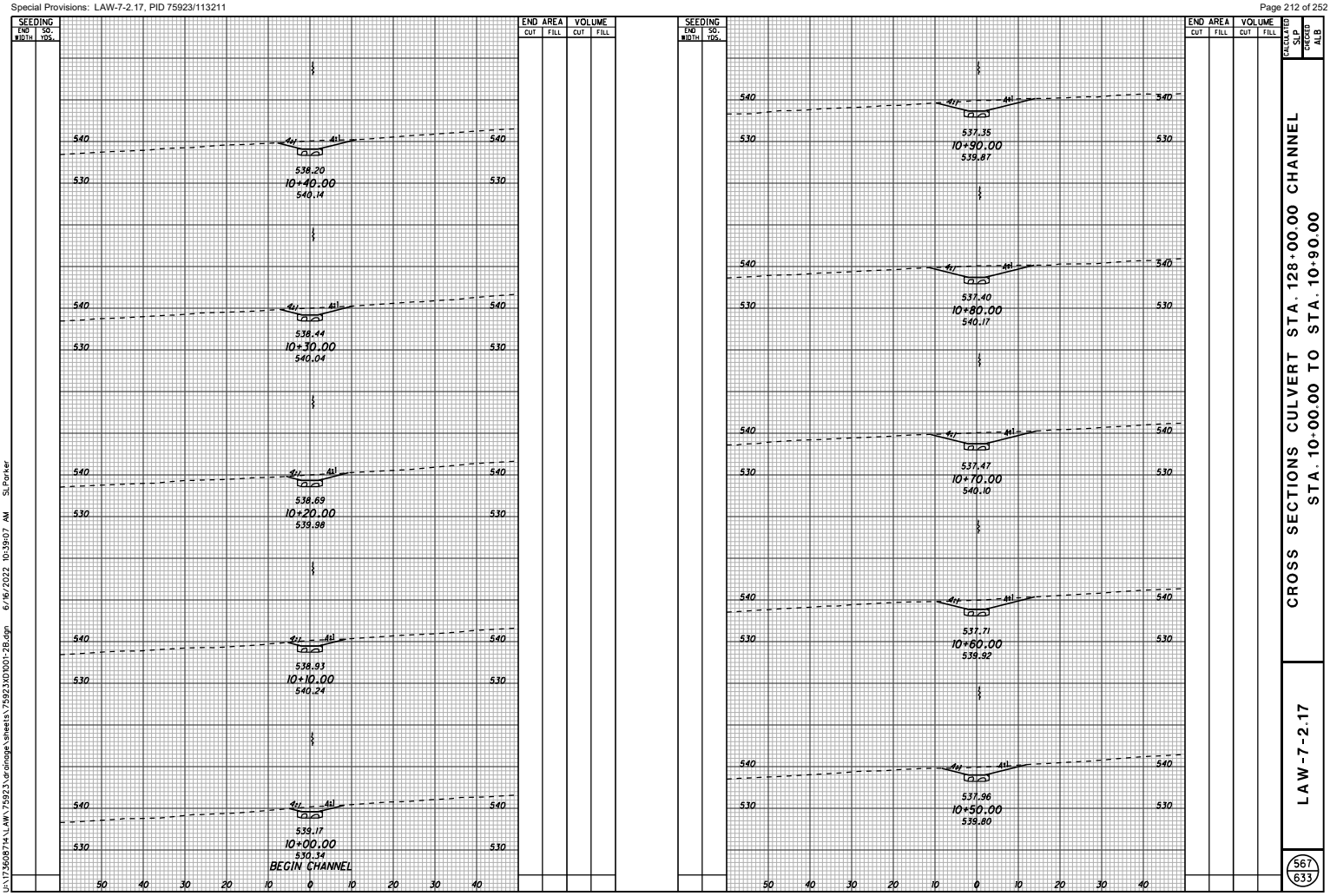

CALCULATED SLP
CHECKED ALB

CROSS SECTIONS CULVERT STA. 128+00.00 CHANNEL
STA. 10+00.00 TO STA. 10+90.00

LAW-7-2.17

567
633

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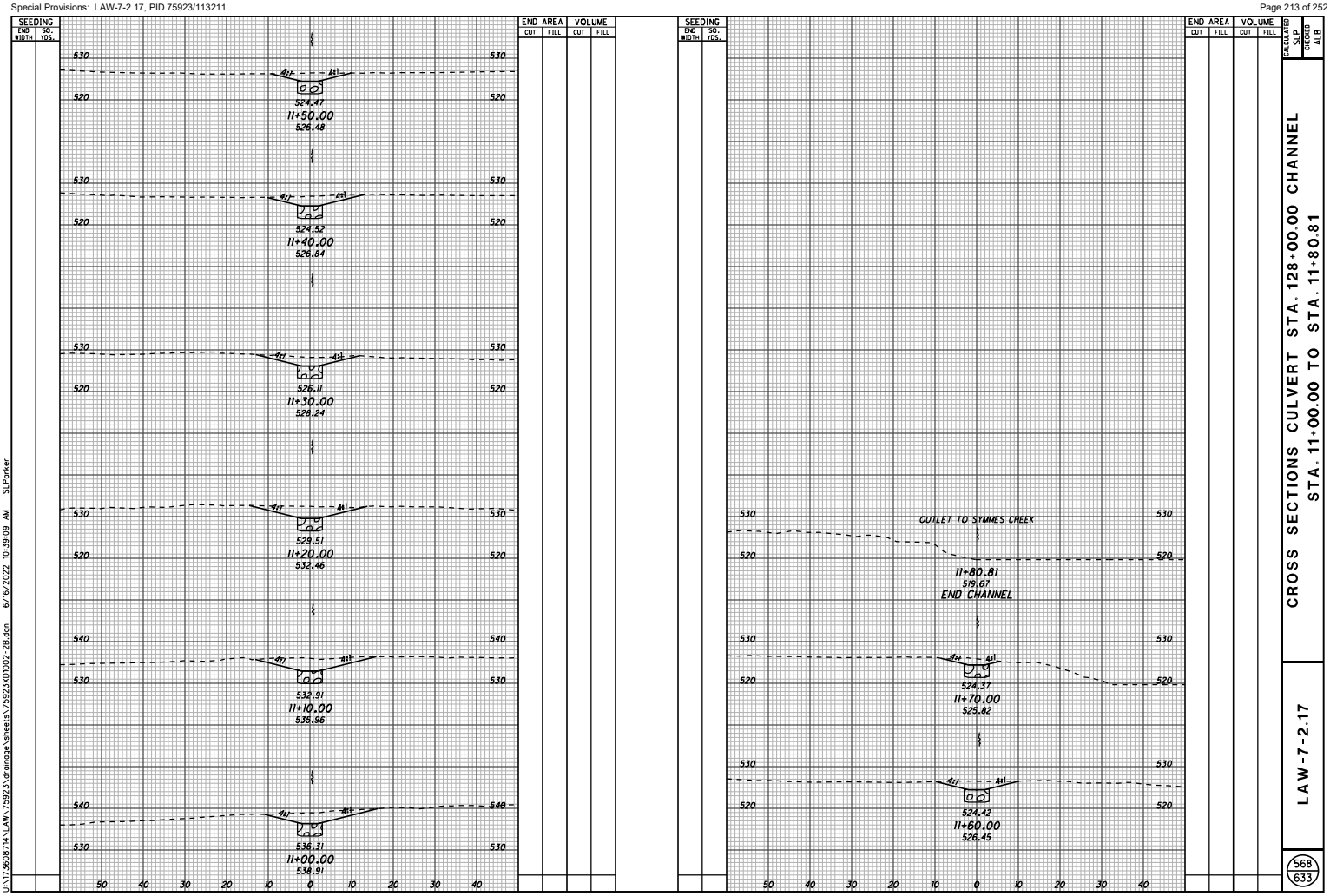

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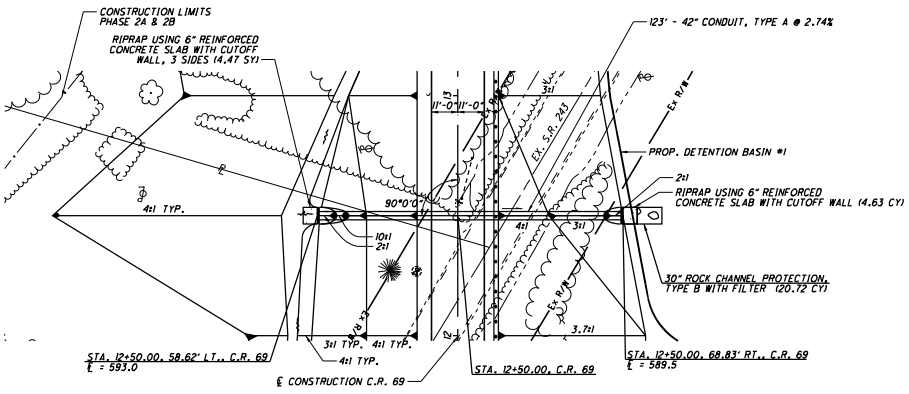
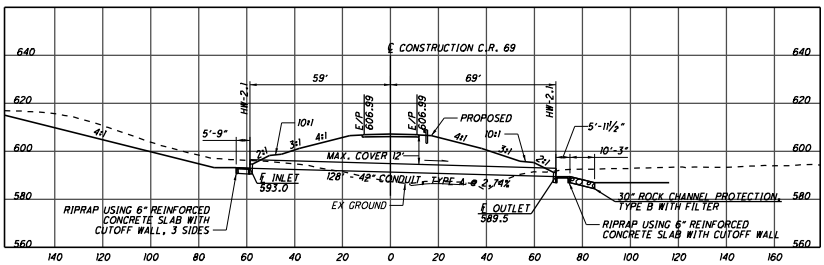
CALCULATED SLP
CHECKED ALB

CROSS SECTIONS CULVERT STA. 128+00.00 CHANNEL STA. 11+00.00 TO STA. 11+80.81

LAW-7-2.17





HYDRAULIC DATA	
DRAINAGE AREA	= 41 AC.
Q25	= 84 CFS
Q100	= 102 CFS
25V	= 10.8 FPS
100V	= 10.6 FPS
25 HW	= 599.0
100 HW	= 600.8
OHWMi	= 586.5
OHWMo	= 585.1
pH	= 7.6
DESIGN SERVICE LIFE	= 75 YEARS
ABRASION LEVEL	=
CFN	=

ESTIMATE QUANTITIES			
ITEM	TOTAL	UNIT	DESCRIPTION

QUANTITIES CARRIED TO GENERAL SUMMARY, SHEETS

HORIZONTAL SCALE IN FEET
0 20 40

CALCULATED SLP
CHECKED ALB

CULVERT DETAIL
C.R. 69 STA. 12+50.00

LAW-7-2.17

569
633

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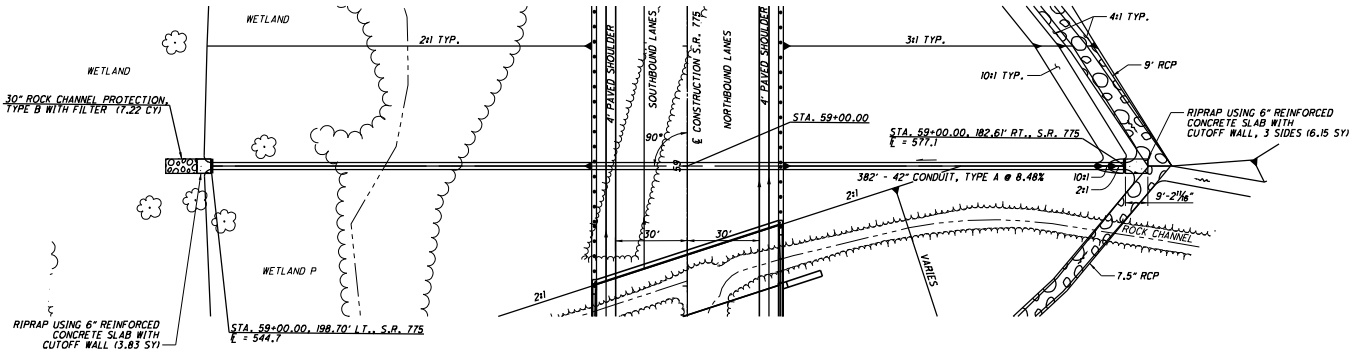
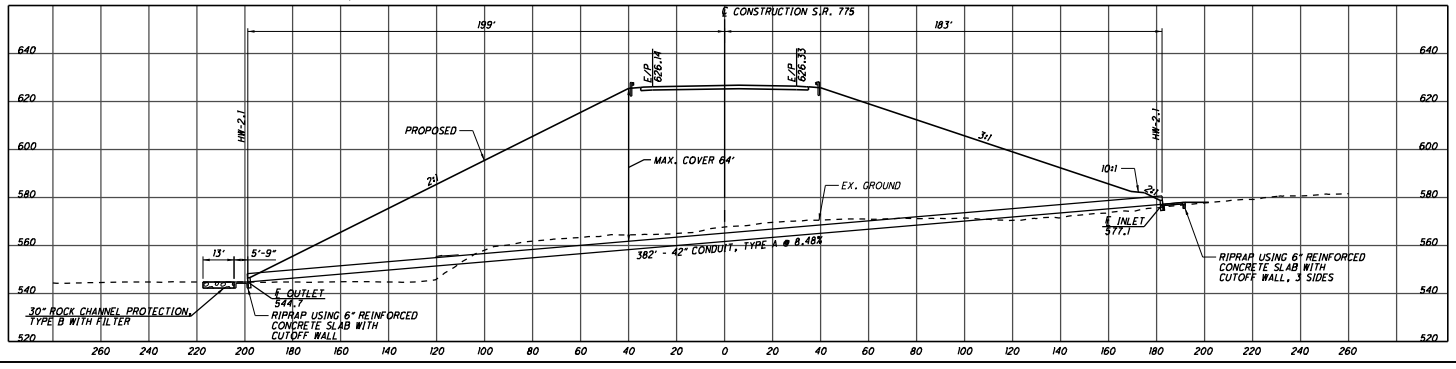


ESTIMATE QUANTITIES			
ITEM	TOTAL	UNIT	DESCRIPTION

QUANTITIES CARRIED TO GENERAL SUMMARY, SHEETS

HYDRAULIC DATA	
DRAINAGE AREA	= 8 AC.
Q50	= 22 CFS
Q100	= 23 CFS
50V	= 11.7 FPS
100V	= 11.9 FPS
50 HW	= 579.4
100 HW	= 579.4
OHWMi	= 578.70
OHWMo	= 545.51
pH	= 7.6
DESIGN SERVICE LIFE	= 75 YEARS
ABRASION LEVEL	=
CFN	=



HORIZONTAL SCALE IN FEET
0 20 40

CALCULATED SLP
CHECKED ALB

CULVERT DETAIL
S.R. 775 STA. 59+00.00

LAW-7-2.17

570
633

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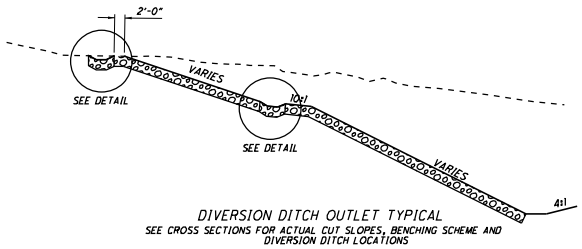
DIVERSION DITCH

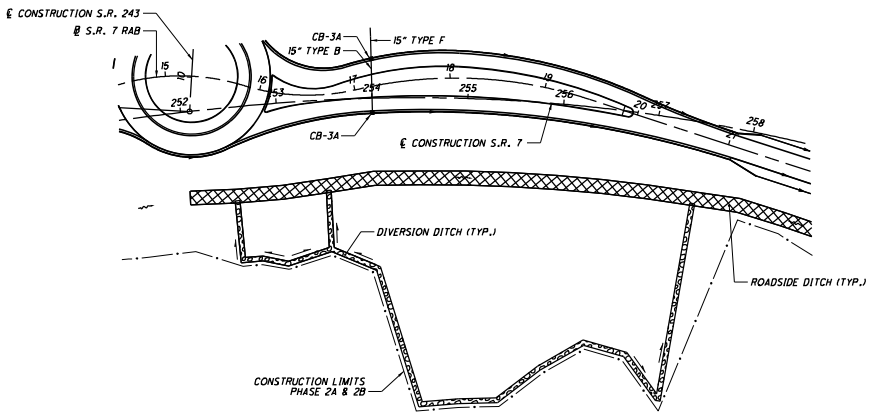
THE CONTRACTOR IS TO PROVIDE A DIVERSION DITCH AS DETAILED ON THIS SHEET AND AS SHOWN IN THE CROSS SECTIONS. THE FOLLOWING QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY FOR THE PLACEMENT OF THE DIVERSION DITCH.

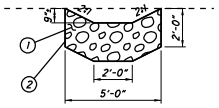
ITEM 203 - EXCAVATION (FOR OUTLET CHANNELS ONLY)	XX CU YD
ITEM 204 - GEOTEXTILE FABRIC	XX SQ YD
ITEM 601 - ROCK CHANNEL PROTECTION, TYPE D WITH FILTER	XX CU YD

EARTHWORK QUANTITIES FOR THE DIVERSION DITCHES HAVE BEEN INCLUDED IN THE CROSS SECTIONS.



DIVERSION DITCH OUTLET TYPICAL
SEE CROSS SECTIONS FOR ACTUAL CUT SLOPES, BENCHING SCHEME AND DIVERSION DITCH LOCATIONS





DIVERSION DETAIL
TYPICAL

(1) - ITEM 601 - ROCK CHANNEL PROTECTION, TYPE D WITH FILTER
(2) - ITEM 204 - GEOTEXTILE FABRIC

CALCULATED SLP CHECKED ALB

HORIZONTAL SCALE IN FEET 0 50 100

DRAINAGE DETAILS

DIVERSION DITCH LOCATION AND DETAILS

LAW-7-2.17

571 633

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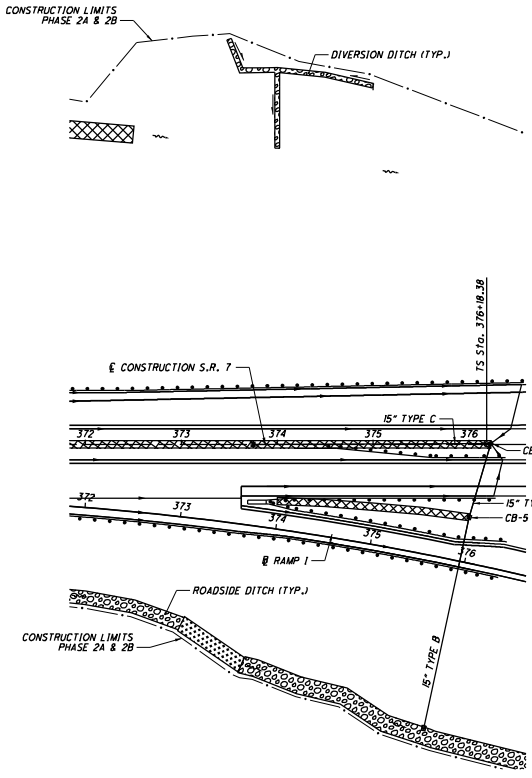

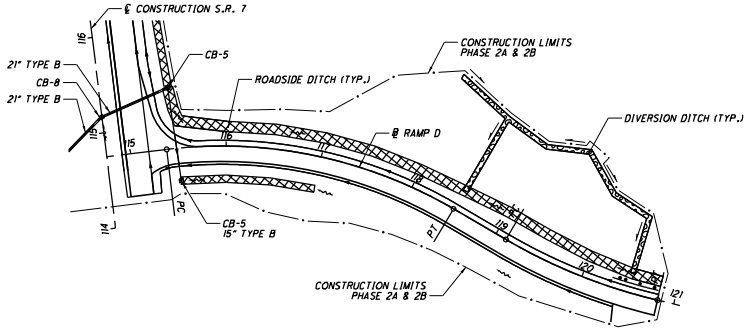

HORIZONTAL SCALE IN FEET
0 50 100
CALCULATED SLP
CHECKED ALB

DRAINAGE DETAILS
DIVERSION DITCH LOCATION AND DETAILS

LAW-7-2.17

572
633

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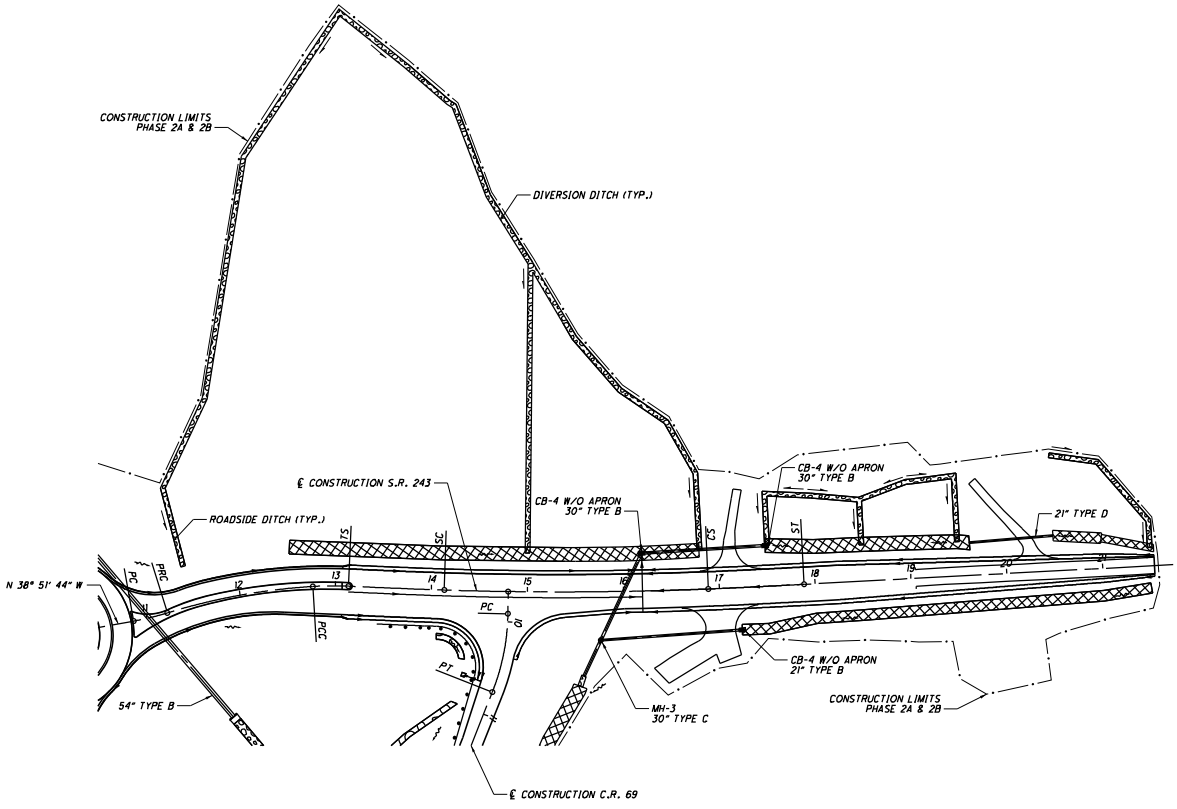

DRAINAGE DETAILS

DIVERSION DITCH LOCATION AND DETAILS

LAW-7-2.17

573
633

CALCULATED SLP
CHECKED ALB

0 50 100
HORIZONTAL SCALE IN FEET

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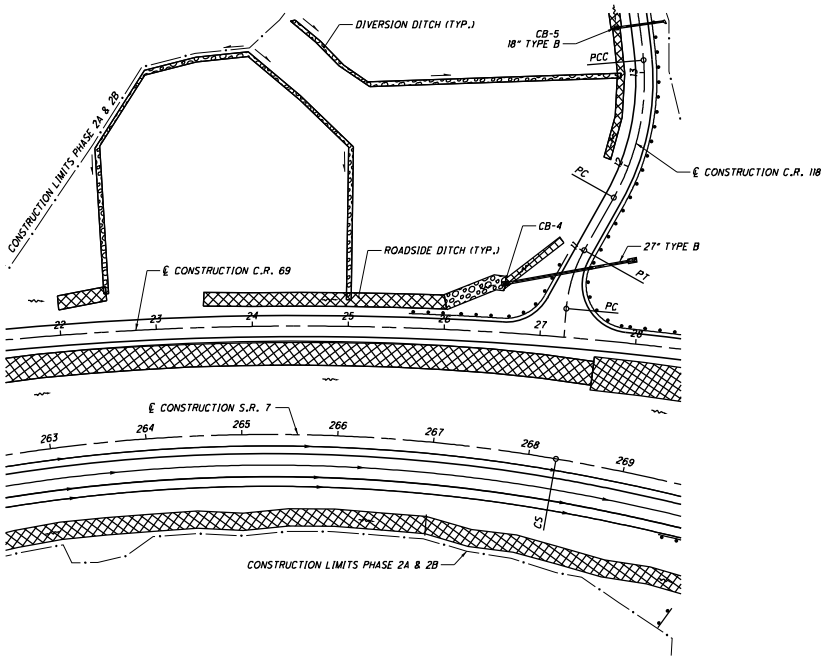

N

0 50 100
HORIZONTAL SCALE IN FEET

CALCULATED SLP
CHECKED ALB

DRAINAGE DETAILS
DIVERSION DITCH LOCATION AND DETAILS

LAW-7-2.17

574
633

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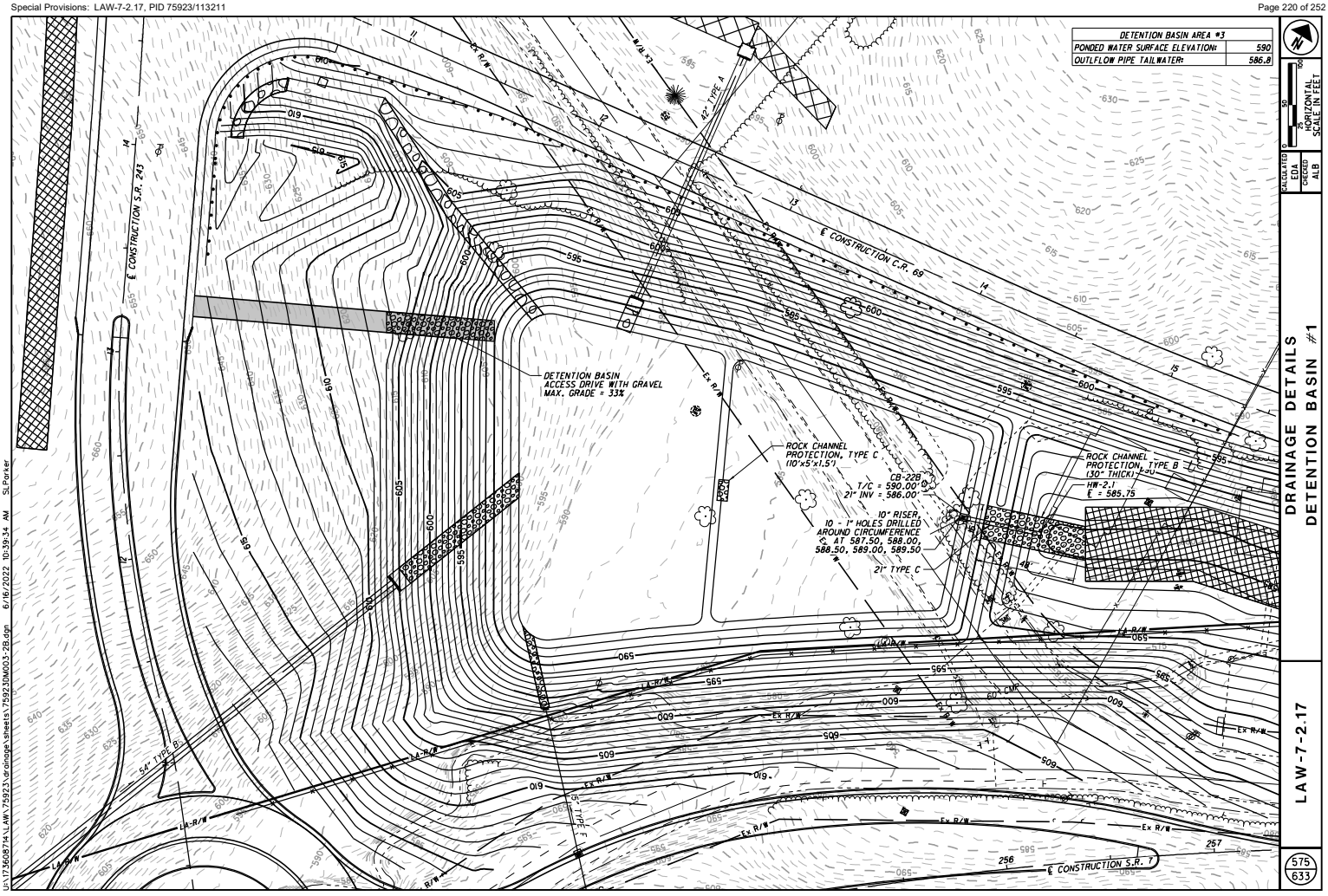

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DRAINAGE DETAILS
DETENTION BASIN #2

LAW-7-2.17

576
633

CALCULATED EDA
CHECKED ALB

HORIZONTAL SCALE IN FEET
0 50 100

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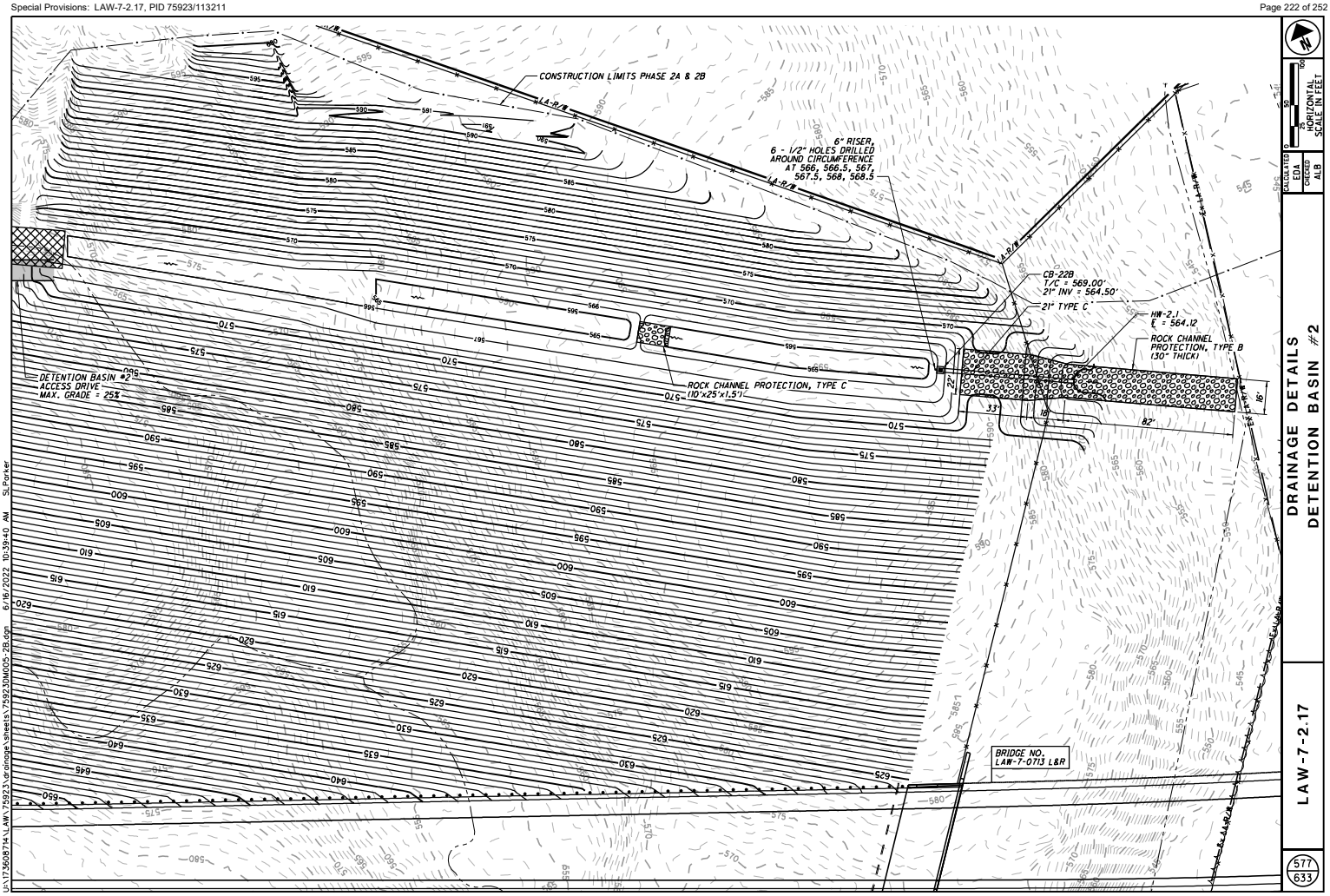
CONSTRUCTION LIMITS PHASE 2A & 2B
6" RISER,
6 - 1/2" HOLES DRILLED
AROUND CIRCUMFERENCE
AT 566, 566.5, 567,
567.5, 568, 568.5
CB-22B
T/C = 569.00'
21" INV = 564.50'
21" TYPE C
HW-2.1
℄ = 564.12
ROCK CHANNEL
PROTECTION, TYPE B
(30" THICK)
ROCK CHANNEL PROTECTION, TYPE C
(10'x25'x1.5')
DETENTION BASIN #2
ACCESS DRIVE
MAX. GRADE = 25%
BRIDGE NO.
LAW-7-0713 L&R
L-R/W
HORIZONTAL
SCALE IN FEET
CALCULATED
EDA
CHECKED
ALB
DRAINAGE DETAILS
DETENTION BASIN #2
LAW-7-2.17
577
633
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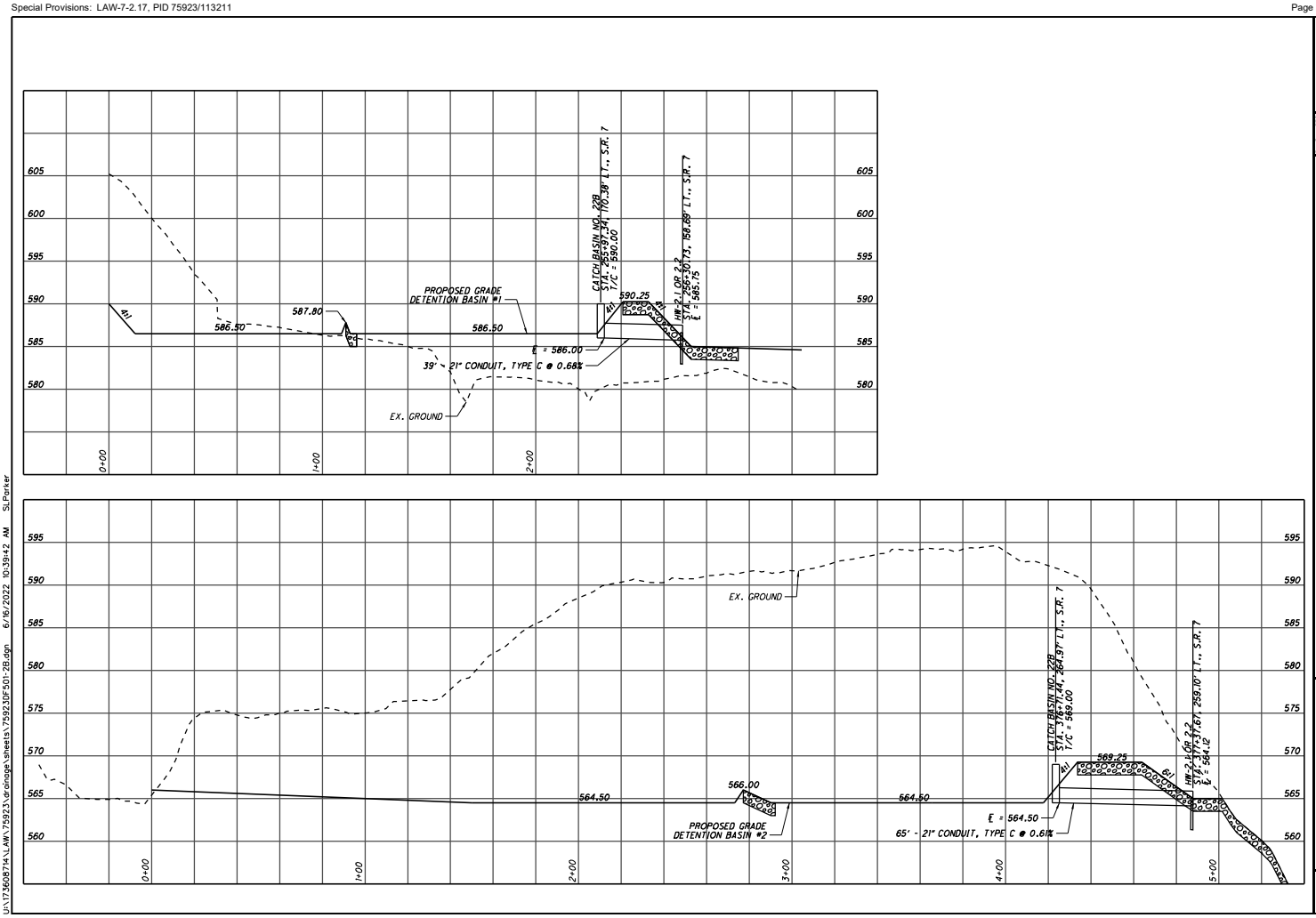

CALCULATED EDA
CHECKED ALB

SCALE IN FEET
0 20 40

DETENTION BASIN PROFILES

LAW-7-2.17

578
633

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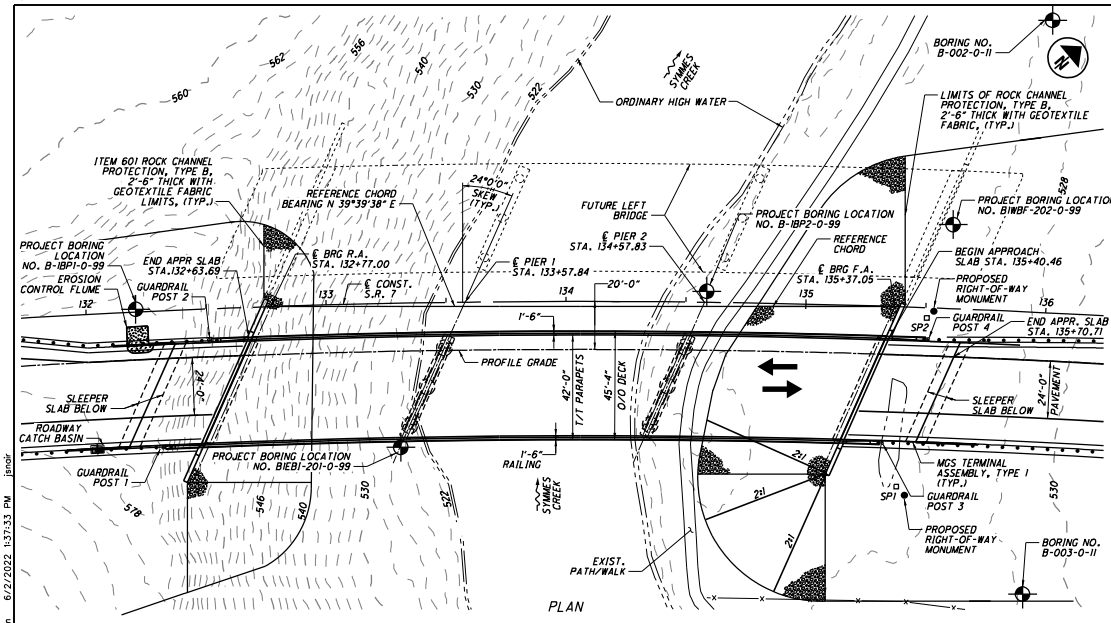

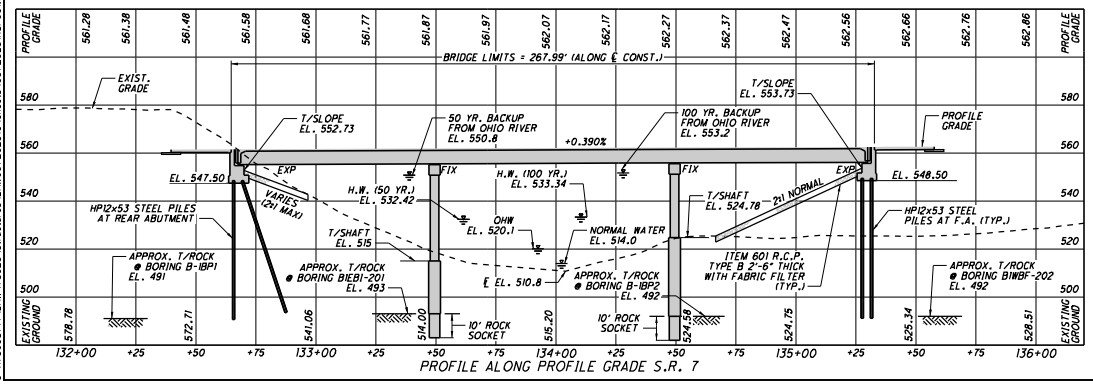

NOTES

1. EARTHWORK LIMITS SHOWN ARE APPROXIMATE. ACTUAL SLOPES SHALL CONFORM TO PLAN CROSS SECTIONS.
2. FOR PRIMARY PROJECT CONTROL INFORMATION TABLE SEE ROADWAY GENERAL NOTES.
3. BRIDGE DECK DRAINAGE IS CONTROLLED BY ROADWAY CURBS EXTENDING OFF THE EAST END OF THE BRIDGE TO ROADWAY CATCH BASINS.
4. FOR LIST OF ABBREVIATIONS SEE SHEET 4/25.

DESIGN TRAFFIC:
2015 ADT = 10,300 2015 ADTT = 1,133
2035 ADT = 21,400 2035 ADTT = 2,354
DIRECTIONAL DISTRIBUTION = 69/31

LEGEND

- PROJECT BORING LOCATION
- SETTLEMENT PLATFORM
- PROPOSED RIGHT-OF-WAY MONUMENT

HYDRAULIC DATA

DRAINAGE AREA = 351.7 SQ. MILES
Q (50) = 17,000 CFS V (50) = 8.67 FT/S EL. (50) = 532.42
Q (100) = 19,100 CFS V (100) = 9.06 FT/S EL. (100) = 533.34
STRUCTURE CLEARS THE 50 YEAR DESIGN HW BY 23.2 FEET.

ESTIMATED PILE LENGTHS

REAR ABUTMENT HP12x53 = 60 FT.
FORWARD ABUTMENT HP12x53 = 60 FT.

S.R. 7 CURVE NO. 1 DATA		
P.I. STA. 138+60.99	L = 3,508.44'	Ts = 2,076.38'
Δ = 53° 33' 53" (RT)	E = 425.60'	LT = 116.67'
Dc = 1° 27' 15"	TS STA. = 117+84.61	ST = 58.34'
R = 3,940.00'	SC STA. = 119+59.61	e_{max} = 4.00%
T = 1,880.13'	Rs = 1° 16' 21"	CS STA. 154+68.05
	Ls = 175.00'	ST STA. 156+43.05

POST NUMBER	FIRST GUARDRAIL POST	STATION
1	EASTBOUND R.A.	132+28.76
2	WESTBOUND R.A.	132+50.63
3	EASTBOUND F.A.	135+33.61
4	WESTBOUND F.A.	135+51.46

PROPOSED STRUCTURE

TYPE: 3-SPAN PRESTRESSED CONCRETE I-BEAMS (60" MODIFIED TYPE 4) COMPOSITE WITH REINFORCED CONCRETE DECK ON CAP & COLUMN PIERS ON DRILLED SHAFTS & STUB TYPE ABUTMENTS ON STEEL HP PILES

SPANS: 78.93', 97.83', 78.91' C/C BRGS (MEASURED ALONG REF. CHORD)

ROADWAY: 42'-0" TOE/TOE PARAPETS

LOADING: HL-93 AND 60 LBS/FT² FUTURE WEARING SURFACE

WEARING SURFACE: 1" MONOLITHIC WEARING SURFACE

SKEW: 24°00'00" L.F. FROM PERPENDICULAR TO REF. CHORD

APPROACH SLABS: AS-1-15 AND APPLICABLE DETAILS FROM AS-2-15, 30'-0" LONG

ALIGNMENT: 01°27'15" CURVE RIGHT

SUPERELEVATION: 0.0400 FT. PER FT.

COORDINATES: LATITUDE 38° 26' 20.82" N
LONGITUDE 82° 27' 16.08" W

DESIGN AGENCY: Stantec (550 Lakeview Drive, Suite 200, Chesapeake, OH 45619, 740-867-6299)

DESIGNED	DRAWN	REVIEWED	DATE
BSM	JWS	MRS	11/3/2017
CHECKED	REVISED		STRUCTURE FILE NUMBER
EER			4400070

LAWRENCE COUNTY
STA. 132+63.69
STA. 135+40.46

SITE PLAN
BRIDGE NO. LAW-7-0251
S.R. 7 OVER SYMMES CREEK

LAW-7-2.17
PID No. 75923

1 / 25

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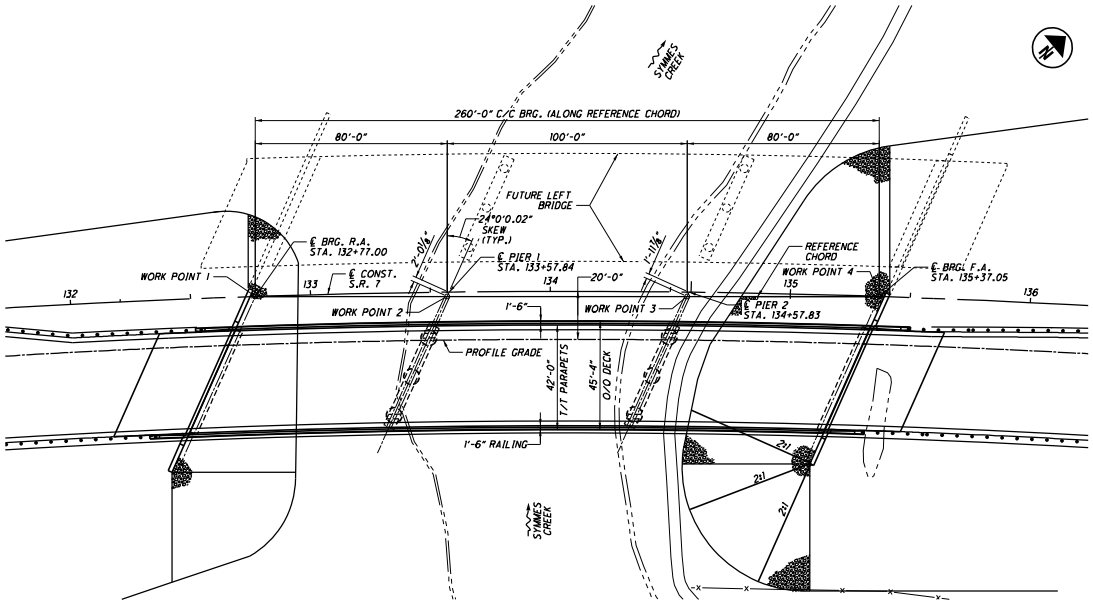

PLAN

S.R. 7 CURVE NO. 1

P.I. STA. 138+60.99
Δ = 53° 33' 53" (RT)
Dc = 1° 27' 15"
R = 3,940.00'
T = 1,880.13'
L = 3,508.44'
E = 425.60'
e_{max} = 4.00%
SC STA. 119+59.61
CS STA. 154+68.05

DESIGN AGENCY: Stantec, 1500 Lake Shore Dr., Columbus, OH 43204, (614) 486-4383

DESIGNED	DRAWN	REVIEWED	DATE
BSM	JWS	MRS	11/3/2017
CHECKED	REVISED	STRUCTURE FILE NUMBER	
EER		4400070	

GENERAL PLAN
BRIDGE NO. LAW-7-0251
S.R. 7 OVER SYMMES CREEK

LAW-7-2.17
PID No. 75923

2/25

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REFER TO THE FOLLOWING STANDARD BRIDGE DRAWINGS:

AS-1-15	REVISED	07-17-15
AS-2-15	REVISED	01-18-19
DM-4.1	REVISED	01-15-16
EXJ-6-17	DATED	01-15-21
PSID-1-13	REVISED	01-15-21
SBR-1-20	REVISED	07-17-20

AND TO THE FOLLOWING SUPPLEMENTAL SPECIFICATION:

800	DATED	07-16-21
832	DATED	10-19-18

DESIGN SPECIFICATIONS:
THIS STRUCTURE CONFORMS TO THE 9TH EDITION OF "LRFD BRIDGE DESIGN SPECIFICATIONS" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 2000 AND THE ODOT BRIDGE DESIGN MANUAL, 2020.

DESIGN LOADING:
HL-93
FUTURE WEARING SURFACE (FWS) OF 0.060 KIPS/FT²

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

DESIGN DATA:

CONCRETE CLASS QC2	- COMPRESSIVE STRENGTH 4.5 KSI (SUPERSTRUCTURE)
CONCRETE CLASS QC1	- COMPRESSIVE STRENGTH 4.0 KSI (SUBSTRUCTURE)
CONCRETE CLASS QC5	- WITH 1-IN MAX. AGGREGATE SIZE - COMPRESSIVE STRENGTH 4.5 KSI (DRILLED SHAFT)
REINFORCING STEEL	- MINIMUM YIELD STRENGTH 60 KSI

STEEL H-PILES - A572 - YIELD STRENGTH 50 KSI

CONCRETE FOR PRESTRESSED BEAMS:
COMPRESSIVE STRENGTH (FINAL) = 7 KSI
COMPRESSIVE STRENGTH (RELEASE) = 6 KSI
WELDED WIRE FABRIC - YIELD STRENGTH = 70 KSI

PRESTRESSING STRAND:
AREA = 0.217 SQ. IN.
ULTIMATE STRENGTH = 270 K.S.I.
INITIAL STRESS = 202.5 K.S.I.
(LOW RELAXATION STRANDS)

DECK PROTECTION METHOD:
EPOXY COATED REINFORCING STEEL
2-1/2" CONCRETE COVER

MONOLITHIC WEARING SURFACE:
MONOLITHIC WEARING SURFACE IS ASSUMED, FOR DESIGN PURPOSES, TO BE 1 INCH THICK.

PILE DRIVING CONSTRAINTS:
PRIOR TO DRIVING PILES, CONSTRUCT THE SPILL THROUGH SLOPES AND THE BRIDGE APPROACH EMBANKMENT BEHIND THE ABUTMENTS UP TO THE LEVEL OF THE SUBGRADE ELEVATION FOR A MINIMUM DISTANCE OF 200 FEET BEHIND EACH ABUTMENT (SEE FORWARD APPROACH EMBANKMENT CONSTRUCTION THIS SHEET). DO NOT BEGIN THE EXCAVATION FOR THE ABUTMENT FOOTINGS AND THE INSTALLATION OF THE ABUTMENT PILES UNTIL AFTER THE ABOVE REQUIRED EMBANKMENT HAS BEEN CONSTRUCTED.

PILES TO BEDROCK:
DRIVE PILES THROUGH THE EMBANKMENT REINFORCING. DRIVE PILES TO REFUSAL ON BEDROCK. THE DEPARTMENT WILL CONSIDER REFUSAL TO BE OBTAINED WHEN THE PILE PENETRATION IS AN INCH OR LESS AFTER RECIEVING AT LEAST 20 BLOWS FROM THE PILE HAMMER. SELECT THE HAMMER SIZE TO ACHIEVE THE REQUIRED DEPTH TO BEDROCK AND REFUSAL.

THE TOTAL FACTORED LOAD IS 210.6 KIPS PER PILE FOR THE REAR ABUTMENT PILES.

THE TOTAL FACTORED LOAD IS 206.5 KIPS PER PILE FOR THE FORWARD ABUTMENT PILES.

REAR ABUTMENT PILES:
20 PILES 65 FEET LONG, ORDER LENGTH

FORWARD ABUTMENT PILES:
28 PILES 65 FEET LONG, ORDER LENGTH

PILE SPLICES:
IN LIEU OF USING THE FULL PENETRATION BUTT WELDS SPECIFIED IN CMS 507.09 TO SPLICE STEEL H-PILES, THE CONTRACTOR MAY USE A MANUFACTURED H-PILE SPLICER. FURNISH SPLICERS FROM THE FOLLOWING MANUFACTURER:

ASSOCIATED PILE AND FITTING CORPORATION
8 WOOD HOLLOW RD. PLAZA 1
PARSIPPANY, NEW JERSEY 07054

INSTALL AND WELD THE SPLICER TO THE PILE SECTIONS IN ACCORDANCE WITH THE MANUFACTURER'S WRITTEN ASSEMBLY PROCEDURE SUPPLIED TO THE ENGINEER BEFORE THE WELDING IS PERFORMED.

DRILLED SHAFTS:
PIER 1
THE MAXIMUM FACTORED LOAD TO BE SUPPORTED BY EACH DRILLED SHAFT IS 1,061 KIPS AT THE PIERS. THIS LOAD IS RESISTED BY TIP RESISTANCE. ROCK SOCKET DEPTH PROVIDED FOR LATERAL SUPPORT.

PIER 2
THE MAXIMUM FACTORED LOAD TO BE SUPPORTED BY EACH DRILLED SHAFT IS 1,080 KIPS AT THE PIERS. THIS LOAD IS RESISTED BY TIP RESISTANCE. ROCK SOCKET DEPTH PROVIDED FOR LATERAL SUPPORT.

ITEM 623 - RIGHT-OF-WAY MONUMENT, AS PER PLAN:
IN ADDITION TO THE PROVISIONS OF ITEM 623, PLACE RIGHT-OF-WAY MONUMENTS WITHIN 5 FEET OF SETTLEMENT PLATFORMS AFTER REACHING FINISHED GRADE ELEVATIONS.

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

AN EIGHT WHEEL FINISHING MACHINE WITH A MAXIMUM WHEEL LOAD OF 2.44 KIPS.

A MINIMUM OUT-TO-OUT WHEEL SPACING AT EACH END OF THE MACHINE OF 103".

A MAXIMUM SPACING OF OVERHANG FALSEWORK BRACKETS OF 48 IN.

A MAXIMUM DISTANCE FROM THE CENTERLINE OF THE FASCIA GIRDER TO THE FACE OF THE SAFETY HANDRAIL OF 65".

SCOUR ELEVATIONS

THE DESIGN FLOOD AND CHECK FLOOD SCOUR ELEVATIONS ARE PROVIDED BELOW:

	REAR ABUTMENT	PIER 1	PIER 2	FORWARD ABUTMENT
DESIGN FLOOD	----------	----------	----------	----------
CHECK FLOOD	----------	----------	----------	----------

APPROACH EMBANKMENT CONSTRUCTION:

THE APPROACH EMBANKMENTS SHALL BE CONSTRUCTED AND THEN UNDERGO AN ESTIMATED WAITING PERIOD OF 180 DAYS PRIOR TO DRIVING PILES.

REFER TO SHEETS XX FOR DETAILS AND NOTES REGARDING REINFORCED SLOPE AND EMBANKMENT CONSTRUCTION.

DESIGN AGENCY: Stantec (550 Jim Dave Dr., Columbus, OH 43228, 614-486-4383)

DESIGNED BSM | DRAWN JWS | REVIEWED MPS | DATE 11/3/2017
CHECKED EER | REVISED | STRUCTURE FILE NUMBER 4400070

GENERAL NOTES
BRIDGE NO. LAW-7-0251
S.R. 7 OVER SYMMES CREEK

LAW-7-2.17
PID No. 75923

3 / 25

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ITEM SPECIAL - SETTLEMENT PLATFORM:

DESCRIPTION: THIS ITEM CONSISTS OF FURNISHING, CONSTRUCTING, AND MAINTAINING SETTLEMENT PLATFORMS AND OBTAINING SETTLEMENT READINGS AS REQUIRED BY THE PLANS OR AS DIRECTED BY THE ENGINEER. SEE SETTLEMENT PLATFORM DETAIL THIS SHEET. AT THE OPTION AND EXPENSE OF THE CONTRACTOR, ADDITIONAL SETTLEMENT PLATFORMS MAY BE INSTALLED AT LOCATIONS APPROVED BY THE ENGINEER. SETTLEMENT READINGS SHALL BE TAKEN WEEKLY DURING CONSTRUCTION AND DURING THE SPECIFIED WAITING PERIOD BEGINNING WITH THE FIRST WEEK FOLLOWING PLACEMENT OF EACH PLATFORM. THE READINGS SHALL BE PLOTTED ON GRAPH PAPER PRESENTING DEFORMATION (ON THE NEGATIVE Y-AXIS) AND FILL HEIGHT (ON THE POSITIVE Y-AXIS) VERSUS TIME (ON THE X-AXIS). A COPY OF EACH CUMULATIVE PLOT SHALL BE SENT TO ODOT, CO, CONSTRUCTION MANAGEMENT/CONSTRUCTION ADMINISTRATION, GEOTECHNICAL AND EARTHWORK ENGINEER AND ODOT, CO, OFFICE OF GEOTECHNICAL ENGINEERING, FOUNDATIONS AND RETAINING WALLS ENGINEER, AFTER EACH SETTLEMENT READING IS RECORDED.

MATERIAL: SOUND LUMBER SUCH AS ¾" EXTERIOR GRADE PLYWOOD SHALL BE USED FOR THE BASE. THE PIPE SHALL BE 2½" STANDARD BLACK PIPE WITH THREADED FITTINGS AS SHOWN ON THE PLANS. A STEEL PLATE 36" X 36" X ⅛" MAY BE SUBSTITUTED FOR THE LUMBER FOR THE PLATFORMS, AT THE CONTRACTOR'S OPTION.

CONSTRUCTION METHODS: THE PLATFORM SHALL CONFORM TO THE SETTLEMENT PLATFORM DETAILS SHOWN ON THIS SHEET. THE PLATFORM SHALL BE SET ON A LEVEL SURFACE. THE PIPE SHALL BE FIRMLY SECURED TO THE PLATFORM AND SHALL BE MAINTAINED IN A PLUMB POSITION DURING THE PLACEMENT OF THE EMBANKMENT. THE PIPE SHALL BE MARKED AT INTERVALS TO FACILITATE MEASUREMENT OF THE DEPTH OF FILL. THE CONTRACTOR SHALL STOP WORK IN ANY LOCATION WHERE THE SETTLEMENT PLATFORM HAS BEEN DISTURBED OR DAMAGED. PLATFORMS OR PIPES DAMAGED OR DISPLACED DURING CONSTRUCTION SHALL BE RESTORED TO THEIR PROPER CONDITION AT THE CONTRACTOR'S EXPENSE.

SETTLEMENT PLATFORMS SHALL BE PLACED AT THE FOLLOWING LOCATIONS:

I.D.	STATION	OFFSET
SP1	135+40	75' RT.
SP2	135+60	10' RT

PRIOR TO PAVING, THE TOP OF THE SETTLEMENT PLATFORM PIPE SHALL BE CUT OFF TWO FEET BELOW THE FINISHED SURFACE OF THE SUBGRADE OR FINISHED GROUND SURFACE, WHICHEVER IS APPLICABLE.

REFER TO ODOT GEOTECHNICAL BULLETIN GB4 "GUIDELINES FOR THE USE OF GEOTECHNICAL INSTRUMENTATION" FOR ADDITIONAL INSTALLATION AND MONITORING INSTRUCTION.

WAITING PERIOD CRITERIA:
THE ENGINEER WILL CONSIDER THE WAITING PERIOD COMPLETE WHEN CONSECUTIVE SETTLEMENT READINGS, RECORDED AFTER EMBANKMENT CONSTRUCTION IS COMPLETE AND AT LEAST ONE WEEK (168 HOURS) APART, RESULT IN ELEVATION DIFFERENCES EQUAL TO OR LESS THAN ⅛ INCH. THE MINIMUM WAITING PERIOD IS 90 CALENDAR DAYS.

IF SETTLEMENT RATES EXCEED ⅛ INCH PER MONTH AFTER EMBANKMENT CONSTRUCTION HAS BEEN COMPLETE FOR 45 CALENDAR DAYS, REMAINING CONSTRUCTION, INCLUDING ANY NECCESARY CORRECTIVE MEASURES, MAY PROCEED ONLY AT THE DIRECTION OF THE ENGINEER.

THE DEPARTMENT WILL CONSIDER VIBRATING WIRE SETTLEMENT MONITORING PLATFORMS IN LIEU OF THE CONVENTIONAL SETTLEMENT PLATFORMS. THE CONTRACTOR SHOULD PROVIDE DETAILS OF THE PROPOSED VIBRATING WIRE SETTLEMENT PLATFORMS AS WELL AS DESIGN DRAWINGS OF THE PROPOSED 30 DAYS PRIOR TO CONSTRUCTION. THE DEPARTMENT WILL REQUIRE 10 WORKING DAYS FOR REVIEW AND APPROVAL. THE DESIGN DRAWINGS SHOULD ILLUSTRATE THE LOCATIONS WITH ALL EXISTING AND PROPOSED SITE FEATURES TO VERIFY THE PROPOSED CABLING WILL NOT CONFLICT WITH EXISTING FACILITIES, PROPOSED FACILITIES OR UTILITIES. NO ADDITIONAL PAYMENT WILL BE PROVIDED IF THE CONTRACTOR ELECTS TO UTILIZE VIBRATING WIRE SETTLEMENT PLATFORMS.

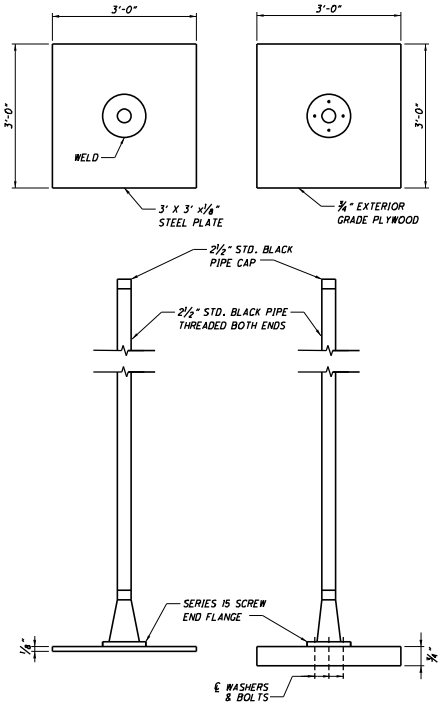
MORE INFORMATION PERTAINING TO EMBANKMENT CONSTRUCTION AND CONTROLLED RATES OF FILL ARE PROVIDED IN THE ROADWAY PLANS.

METHOD OF MEASUREMENT, THE NUMBER OF SETTLEMENT PLATFORMS TO BE PAID FOR SHALL BE THE ACTUAL NUMBER OF SETTLEMENT PLATFORMS COMPLETED, MAINTAINED, AND ACCEPTED BY THE ENGINEER.

BASIS OF PAYMENT: PAYMENT SHALL BE MADE AT THE CONTRACT UNIT PRICE EACH FOR "ITEM SPECIAL - SETTLEMENT PLATFORM" WHICH IS COMPENSATION FOR CONSTRUCTING, MAINTAINING, AND MONITORING THE SETTLEMENT PLATFORMS INCLUDING FURNISHING ALL LABOR, EQUIPMENT, MATERIALS, AND INCIDENTALS NECESSARY TO COMPLETE THE WORK. PAYMENT SHALL NOT BE MADE FOR SETTLEMENT PLATFORMS WHICH BECOME USELESS DUE TO DAMAGE CAUSED BY THE CONTRACTOR'S OPERATIONS. SEE DETAIL THIS SHEET.

ABBREVIATIONS

APPROX.	- APPROXIMATELY
BRG.	- BEARING
℄	- CENTERLINE
CLR.	- CLEAR
CONST.	- CONSTRUCTION
DWG.	- DRAWING
EF	- EACH FACE
EL.	- ELEVATION
EQ.	- EQUAL
EXIST.	- EXISTING
F.A.	- FORWARD ABUTMENT
℄	- FLOW LINE
H.W.	- HIGH WATER
NO.	- NUMBER
OHW	- ORDINARY HIGH WATER MARK
R.A.	- REAR ABUTMENT
SP	- SETTLEMENT PLATFORM
SPA.	- SPACE
STA.	- STATION
STD.	- STANDARD
T/	- TOP OF
TYP.	- TYPICAL
YR.	- YEAR



SETTLEMENT PLATFORM

(NOT TO SCALE)

NOTES:

1. SETTLEMENT PLATFORMS SHALL BE ANCHORED BY STAKES DRIVEN AT EACH CORNER TO PREVENT OVERTURNING.

DESIGN AGENCY: Stantec 1500 JAMES DRIVE, CARMEL, IN 46032 (317) 655-7111

DESIGNED BSM | DRAWN JWS | REVIEWED MRS | DATE 11/3/2017 | STRUCTURE FILE NUMBER 4400070

CHECKED EER | REVISED

GENERAL NOTES 2
BRIDGE NO. LAW-7-0251
S.R. 7 OVER SYMMES CREEK

LAW-7-2.17
PID No. 75923

4 / 25

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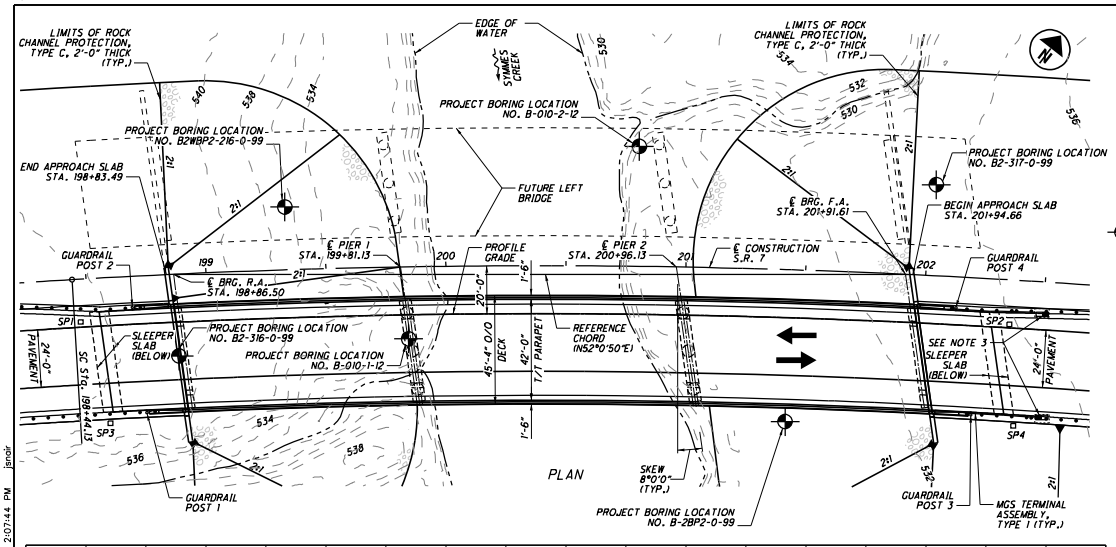

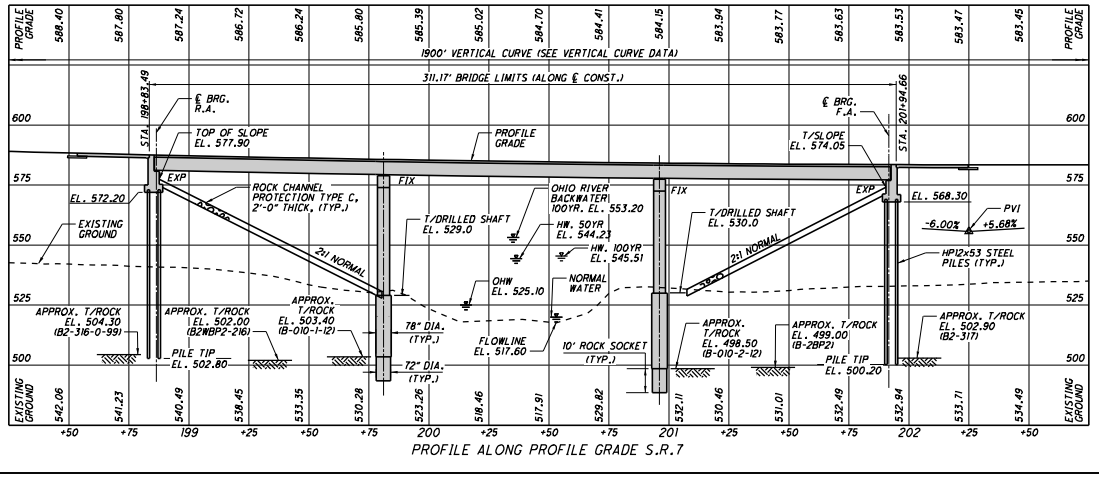

NOTES

1. EARTHWORK LIMITS SHOWN ARE APPROXIMATE. ACTUAL SLOPES SHALL CONFORM TO PLAN CROSS SECTIONS.
2. FOR PRIMARY PROJECT CONTROL INFORMATION TABLE SEE ROADWAY GENERAL NOTES.
3. BRIDGE DECK DRAINAGE IS CONTROLLED BY 1 BRIDGE SCUPPER, (SEE ITEM 518 NOTE ON SHEET 3/25) AND DIRECTED BY ROADWAY CURBS EXTENDING OFF THE EAST END OF THE BRIDGE TO ROADWAY CATCH BASINS.

DESIGN TRAFFIC:
2015 ADT = 10,300 2015 ADTT = 1,133
2035 ADT = 21,400 2035 ADTT = 2,354
DIRECTIONAL DISTRIBUTION = 69/31

LEGEND

PROJECT BORING LOCATION ◻ SETTLEMENT PLATFORM

HYDRAULIC DATA

DRAINAGE AREA = 350.3 SQ. MILES
Q (50) = 17,000 CFS V (50) = 6.46 FT/S DESIGN YEAR
Q (100) = 19,100 CFS V (100) = 6.67 FT/S
STRUCTURE CLEARS THE 50 YEAR DESIGN HW BY 31.22 FEET.

ESTIMATED PILE LENGTHS

REAR ABUTMENT HP12x53 = 75 FT
FORWARD ABUTMENT HP12x53 = 70 FT

ADDITIONAL PROJECT BORING LOCATIONS		
BORING NUMBER	STATION	OFFSET
B-010-0-11	197+89.00	183' LEFT
B-011-0-11	202+02.00	232' LEFT
B-012-0-11	201+90.00	197' RIGHT

S.R. 7 CURVE NO. 3 DATA		
P.I. STA. 205+33.31	L = 1,347.14'	Ts = 914.18'
Δ = 27° 30' 45" (RT)	E = 70.53'	LT = 150.01'
Dc = 1° 45' 00"	TS STA. = 196+19.13	ST = 75.01'
R = 3,274.04'	SC STA. = 198+44.13	θ_{max} = 4.60%
T = 683.24'	Bs = 1° 58' 07"	CS STA. 211+91.27
	Ls = 225.00'	ST STA. 214+16.27

POST NUMBER	FIRST POST GUARDRAIL	STATION
1	EASTBOUND R.A.	198+72.52
2	WESTBOUND R.A.	198+68.62
3	EASTBOUND F.A.	202+22.03
4	WESTBOUND F.A.	202+13.35

VERTICAL CURVE DATA

LENGTH = 1900'
PVC STA. = 192+75.00 PVC ELEV. = 612.74
PVI STA. = 202+25.00 PVI ELEV. = 555.74
PVT STA. = 211+75.00 PVT ELEV. = 609.67
G1 = -6.00% G2 = 5.68%

PROPOSED STRUCTURE

TYPE: 3-SPAN PRESTRESSED CONCRETE I-BEAM (66" MODIFIED TYPE 4) WITH COMPOSITE REINFORCED CONCRETE DECK SUPPORTED BY STUB TYPE ABUTMENTS ON STEEL PILES AND CAP & COLUMN PIERS ON DRILLED SHAFTS

SPANS: 93.92'-112.83'-93.92', c/c BRGS. (MEASURED ALONG REFERENCE CHORD)

ROADWAY: 42'-0" TOE/TOE PARAPETS
LOADING: HL-93 AND 60 PSF FUTURE WEARING SURFACE
WEARING SURFACE: 1" MONOLITHIC WEARING SURFACE
SKEW: 8°00'00" R.F. FROM PERP. TO REFERENCE CHORD
APPROACH SLABS: AS-1-15, 30'-0" LONG (MODIFIED)
ALIGNMENT: 01°45'00" CURVE RT.
SUPERELEVATION: 0.0460 FT/FT

COORDINATES: LATITUDE 38°26'53.65" N
LONGITUDE 82°26'05.44" W

DESIGN AGENCY: Stantec 1500 JAMES ADAMS CIRCLE, COLUMBUS, OH 43212 (614) 486-4383

DESIGNED	DRAWN	REVIEWED	DATE
BSM	JWS	MRS	12/15/17
CHECKED	REVISED	STRUCTURE FILE NUMBER	
EER		4400224	

LAWRENCE COUNTY
STA. 198+83.49
STA. 201+94.66

SITE PLAN
BRIDGE NO. LAW-7-0376
S.R. 7 OVER SYMMES CREEK

LAW-7-2.17
PID No. 75923

1 / 25

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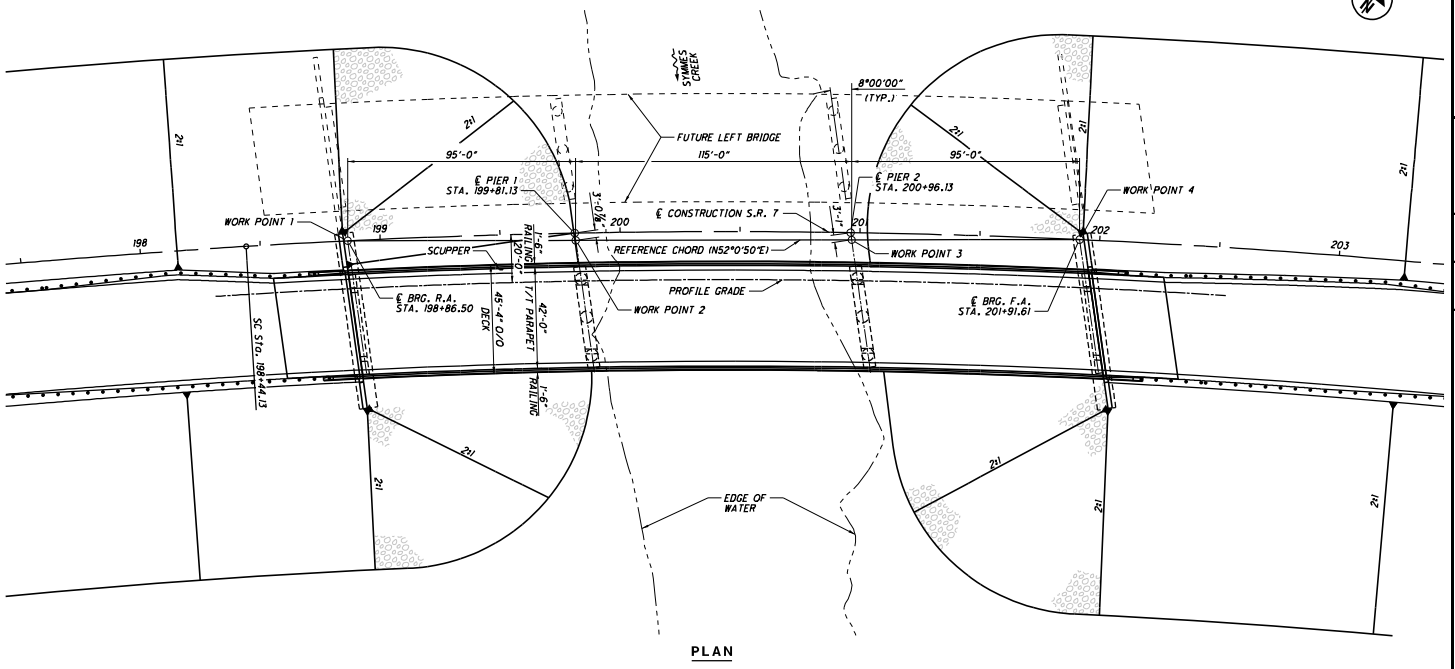

PLAN

S.R. 7 CURVE NO. 3

P.I. STA. 205+33.31
Δ = 27° 30' 45" (RT)
Dc = 1° 45' 00"
R = 3,274.04'
T = 683.24'
L = 1,347.14'
E = 70.53'
e_{max} = 4.60%
SC STA. 198+44.13
CS STA. 211+91.27

DESIGN AGENCY
Stantec
1500 Lake Shore Dr.
Columbus, OH 43204
(614) 486-4383

DESIGNED	DRAWN	REVIEWED	DATE
BSM	JWS	MRS	12/15/17
CHECKED	REVISED	STRUCTURE FILE NUMBER	
EER		4400224	

GENERAL PLAN
BRIDGE NO. LAW-7-0376
S.R. 7 OVER SYMMES CREEK

LAW-7-2.17
PID No. 75923

2/25

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REFER TO THE FOLLOWING STANDARD BRIDGE DRAWINGS:

AS-1-15	REVISED	07-17-15
AS-2-15	REVISED	01-18-19
EXJ-6-17	DATED	01-15-21
GSD-1-96	REVISED	01-15-21
PSID-1-13	REVISED	01-15-21
SBR-1-20	REVISED	07-17-21

AND TO THE FOLLOWING SUPPLEMENTAL SPECIFICATIONS:

800	DATED	07-16-21
832	DATED	10-19-18

DESIGN SPECIFICATIONS:
THIS STRUCTURE CONFORMS TO THE "LRFD BRIDGE DESIGN SPECIFICATIONS" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 2014 INCLUDING THE 2015 AND 2016 INTERIM SPECIFICATIONS AND THE ODOT BRIDGE DESIGN MANUAL, 2007.

DESIGN LOADING:
HL-93
FUTURE WEARING SURFACE (FWS) OF 0.060 KIPS/FT²

OPERATIONAL IMPORTANCE:
A LOAD MODIFIER OF 1.00 HAS BEEN ASSUMED FOR THE DESIGN OF THIS STRUCTURE IN ACCORDANCE WITH THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, ARTICLE 1.3.5 AND THE ODOT BRIDGE DESIGN MANUAL, 2007.

DESIGN DATA:
CONCRETE CLASS QC2 - COMPRESSIVE STRENGTH 4.5 K.S.I. (SUPERSTRUCTURE)
CONCRETE CLASS QC1 - COMPRESSIVE STRENGTH 4.0 K.S.I. (SUBSTRUCTURE)
CONCRETE CLASS QC5 - WITH 1-IN MAX. AGGREGATE SIZE - COMPRESSIVE STRENGTH 4.5 KSI (DRILLED SHAFT)

REINFORCING STEEL - MINIMUM YIELD STRENGTH 60 K.S.I.

STEEL H-PILES - A572 - YIELD STRENGTH 50 K.S.I.

CONCRETE FOR PRESTRESSED BEAMS:
COMPRESSIVE STRENGTH (FINAL) = 7000 P.S.I.
COMPRESSIVE STRENGTH (RELEASE) = 6000 P.S.I.

PRESTRESSING STRAND:
AREA = 0.217 SQ. IN.
ULTIMATE STRENGTH = 270 K.S.I.
INITIAL STRESS = 202.5 K.S.I.
(LOW RELAXATION STRANDS)

WELDED WIRE FABRIC
YIELD STRENGTH - 70 K.S.I.

DECK PROTECTION METHOD:
2-1/2" CONCRETE COVER
EPOXY COATED REINFORCING STEEL

MONOLITHIC WEARING SURFACE:
MONOLITHIC WEARING SURFACE IS ASSUMED, FOR DESIGN PURPOSES, TO BE 1 INCH THICK.

NOISE BARRIER:
DUE TO THE POTENTIAL FUTURE CONSTRUCTION OF A 12 FOOT TALL NOISE BARRIER ALONG THE RIGHT SIDE OF THE BRIDGE THE PRECAST CONCRETE BEAMS AND CONCRETE DECK HAVE BOTH BEEN DESIGNED TO INCLUDE THE VERTICAL AND LATERAL LOAD CONTRIBUTION DUE TO THE NOISE BARRIER. THE ESTIMATED VERTICAL DEAD LOAD WAS SET AS 167 POUNDS PER FOOT. THE CENTER OF GRAVITY FOR THE NOISE BARRIER WAS SET AT 11 INCHES FROM THE BACK EDGE OF THE STANDARD ODOT SINGLE SLOPE BRIDGE RAILING. LATERAL LOADING ASSUMED, WIND LOAD EQUAL TO 30 POUNDS PER SQUARE FOOT OR A VEHICULAR COLLISION FORCE PER AASHTO SECTION 15.8.4.

THE SINGLE SLOPE BRIDGE RAILING SHOWN IN THE PLANS HAS NOT BEEN MODIFIED FROM THE ODOT STANDARD DRAWINGS AND IS NOT DESIGNED TO SUPPORT THE ABOVE DESCRIBED NOISE BARRIER. IF THE NOISE BARRIER IS CONSTRUCTED IN THE FUTURE THE BRIDGE RAILING WILL NEED TO BE REMOVED AND REPLACED WITH A RAILING THAT IS DESIGNED TO SUPPORT A NOISE BARRIER AND PROPERLY TRANSFER ALL LOADS TO THE EXISTING CONCRETE BRIDGE DECK.

PILE DRIVING CONSTRAINTS:
PRIOR TO DRIVING PILES, CONSTRUCT THE SPILL THROUGH SLOPES AND THE BRIDGE APPROACH EMBANKMENT BEHIND THE ABUTMENTS UP TO THE LEVEL OF THE SUBGRADE ELEVATION FOR A MINIMUM DISTANCE OF 200 FEET BEHIND EACH ABUTMENT (SEE FORWARD AND REAR APPROACH EMBANKMENT CONSTRUCTION THIS SHEET). DO NOT BEGIN THE EXCAVATION FOR THE ABUTMENT FOOTINGS AND THE INSTALLATION OF THE ABUTMENT PILES UNTIL AFTER THE ABOVE REQUIRED EMBANKMENT HAS BEEN CONSTRUCTED.

THE APPROACH EMBANKMENT SHALL BE CONSTRUCTED AND THEN UNDERGO A WAITING PERIOD OF 163 DAYS PRIOR TO DRIVING PILES.

PILES TO BEDROCK:
DRIVE PILES TO REFUSAL ON BEDROCK. THE DEPARTMENT WILL CONSIDER REFUSAL TO BE OBTAINED WHEN THE PILE PENETRATION IS AN INCH OR LESS AFTER RECEIVING AT LEAST 20 BLOWS FROM THE PILE HAMMER. SELECT THE HAMMER SIZE TO ACHIEVE THE REQUIRED DEPTH TO BEDROCK AND REFUSAL.

THE TOTAL FACTORED LOAD IS 188 KIPS PER PILE FOR THE REAR ABUTMENT PILES.

THE TOTAL FACTORED LOAD IS 185 KIPS PER PILE FOR THE FORWARD ABUTMENT PILES.

ABUTMENT PILES:
HP12x53 PILES 80 FEET LONG, ORDER LENGTH, REAR ABUTMENT
HP12x53 PILES 75 FEET LONG, ORDER LENGTH, FORWARD ABUTMENT

PILE SPLICES:
IN LIEU OF USING THE FULL PENETRATION BUTT WELDS SPECIFIED IN CMS 507.09 TO SPLICE STEEL H-PILES, THE CONTRACTOR MAY USE A MANUFACTURED H-PILE SPLICER. FURNISH SPLICERS FROM THE FOLLOWING MANUFACTURER:

ASSOCIATED PILE AND FITTING CORPORATION
8 WOOD HOLLOW RD. PLAZA 1
PARSIPPANY, NEW JERSEY 07054

INSTALL AND WELD THE SPLICER TO THE PILE SECTIONS IN ACCORDANCE WIHT THE MANUFACTURER'S WRITTEN ASSEMBLY PROCEDURE SUPPLIED TO THE ENGINEER BEFORE THE WELDING IS PERFORMED.

DRILLED SHAFTS:
PIER 1
THE MAXIMUM FACTORED LOAD TO BE SUPPORTED BY EACH DRILLED SHAFT IS 1610 KIPS AT THE PIERS. THIS LOAD IS RESISTED BY SIDE RESISTANCE WITHIN A PORTION OF THE BEDROCK SOCKET AND ALSO BY TIP RESISTANCE. THE FACTORED RESISTANCE DEVELOPED BY SIDE RESISTANCE IS 680.1 KIPS, ASSUMED TO ACT ALONG THE BOTTOM 8 FEET OF THE BEDROCK SOCKET FOR THE PIERS. THE FACTORED RESISTANCE PROVIDED BY THE DRILLED SHAFT TIP IS 929.9 KIPS.

PIER 2
THE MAXIMUM FACTORED LOAD TO BE SUPPORTED BY EACH DRILLED SHAFT IS 1612 KIPS AT THE PIERS. THIS LOAD IS RESISTED BY SIDE RESISTANCE WITHIN A PORTION OF THE BEDROCK SOCKET AND ALSO BY TIP RESISTANCE. THE FACTORED RESISTANCE DEVELOPED BY SIDE RESISTANCE IS 680.1 KIPS, ASSUMED TO ACT ALONG THE BOTTOM 8 FEET OF THE BEDROCK SOCKET FOR THE PIERS. THE FACTORED RESISTANCE PROVIDED BY THE DRILLED SHAFT TIP IS 931.9 KIPS.

ITEM 509 - EPOXY COATED REINFORCING STEEL, AS PER PLAN:
IN ADDITION TO THE PROVISIONS OF ITEM 509, FIELD BEND AND/OR FIELD CUT THE REINFORCING STEEL DESIGNATED IN THE PLANS, AS NECESSARY, IN ORDER TO MAINTAIN THE REQUIRED CLEARANCES AND BAR SPACINGS. REPAIR ALL DAMAGE TO THE EPOXY COATING, AS A RESULT OF THIS WORK, ACCORDING TO 709.00.

ITEM 518 - SCUPPERS, INCLUDING SUPPORTS, AS PER PLAN:
REFER TO SHEET 18/25 FOR SCUPPER LOCATION AND SHEET 19/25 FOR DETAILS AND NOTES.

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

AN EIGHT WHEEL FINISHING MACHINE WITH A MAXIMUM WHEEL LOAD OF 2.32 KIPS.

A MINIMUM OUT-TO-OUT WHEEL SPACING AT EACH END OF THE MACHINE OF 103".

A MAXIMUM SPACING OF OVERHANG FALSEWORK BRACKETS OF 48 IN.

A MAXIMUM DISTANCE FROM THE CENTERLINE OF THE FASCIA GIRDER TO THE FACE OF THE SAFETY HANDRAIL OF 65".

FORWARD AND REAR APPROACH EMBANKMENT CONSTRUCTION:
THE APPROACH EMBANKMENTS SHALL BE CONSTRUCTED AND THEN UNDERGO A WAITING PERIOD OF 90 DAYS PRIOR TO DRIVING PILES.

APPROACH EMBANKMENTS SHALL BE REINFORCED WITH PRIMARY INTERNAL REINFORCEMENT FOR STABILIZATION. SEE ROADWAY AND SLOPE REINFORCEMENT PLANS FOR DETAILS AND NOTES REGARDING EMBANKMENT CONSTRUCTION.

MSE (MECHANICALLY STABILIZED EARTH) WALLS SHALL NOT BE PROPOSED AS AN ALTERNATIVE DESIGN IN ANY VALUE ENGINEERING STUDY DUE TO GEOTECHNICAL CONCERNS.

THE CONTRACTOR SHALL REVIEW THE BORING LOGS, SUBSURFACE INVESTIGATION, AND THE ROADWAY GENERAL NOTES PRIOR TO COMMENCING WORK ON THE BRIDGE.

IN ORDER TO MINIMIZE SIGNIFICANT DAMAGE TO THE FILL EMBANKMENT REINFORCEMENT DURING THE DRIVING OF ABUTMENT PILES H-PILES, A SINGLE-SHEET "PUNCHED" TYPE REINFORCEMENT SHALL BE USED. THIS TYPE OF REINFORCEMENT WILL BE EASILY PENETRATED WITH A DRIVEN PILE, WHEREAS A WELDED TYPE REINFORCEMENT WILL BE SIGNIFICANTLY DAMAGED DURING PILE DRIVING.

THE CONTRACTOR SHALL SUBMIT PILE DRIVING HAMMER SPECIFICATIONS TO THE GEOTECHNICAL ENGINEER OF RECORD, PRIOR TO PILE INSTALLATION FOR THE ENGINEER'S APPROVAL. IN ACCORDANCE WITH ODOT ITEM 507, THE PILE HAMMER SHALL BE OF ADEQUATE SIZE TO DRIVE THE PILES THROUGH THE INTERNALLY REINFORCED COMPACTED EMBANKMENT AND AT THE SAME TIME NOT TO DAMAGE THE PILES DURING DRIVING OR RETAPPING.

THE MATERIAL THAT WILL BE USED FOR EMBANKMENT FILL CONSTRUCTION WILL BE COMPOSED OF THE SOIL AND ROCK REMOVED FROM THE LARGE CUT SECTIONS. BASED ON THE BORINGS PERFORMED IN THE PROPOSED CUT AREAS, THIS MATERIAL WILL CONSIST PRIMARILY OF NON-DURABLE SHALE, AND TO A MUCH LESSER EXTENT, DURABLE SHALE, SANDSTONE AND SILTSTONE. WHERE PILES ARE TO BE DRIVEN THROUGH THE EMBANKMENT, THE EMBANKMENT FILL MATERIAL SHALL BE CLEAN OF DURABLE ROCK THAT MAY IMPEDE PILE DRIVING. THE EMBANKMENT FILL MATERIAL SHALL BE COMPACTED IN ACCORDANCE WITH ODOT ITEM 203. THE USE OF WATER TO AID IN BREAKING DOWN LARGE PARTICLES FOR NON-DURABLE SHALE WILL BE REQUIRED AS PER ODOT ITEM 203.06 B.

DESIGN AGENCY
Stantec
1500 LAKE SHORE DR.
COLUMBUS, OH 43204
TEL: 614.486.4383
FAX: 614.486.4384

DESIGNED	DRAWN	REVIEWED	DATE
BSM	JWS	MRS	12/15/17
CHECKED	REVISED	STRUCTURE FILE NUMBER	
EER		4400224	

GENERAL NOTES 1
BRIDGE NO. LAW-7-0376
S.R. 7 OVER SYMMES CREEK

LAW-7-2.17
PID No. 75923

3/25

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ITEM SPECIAL - SETTLEMENT PLATFORM:

DESCRIPTION: THIS ITEM CONSISTS OF FURNISHING, CONSTRUCTING, AND MAINTAINING SETTLEMENT PLATFORMS AND OBTAINING SETTLEMENT READINGS AS REQUIRED BY THE PLANS OR AS DIRECTED BY THE ENGINEER. SEE SETTLEMENT PLATFORM DETAIL THIS SHEET. AT THE OPTION AND EXPENSE OF THE CONTRACTOR, ADDITIONAL SETTLEMENT PLATFORMS MAY BE INSTALLED AT LOCATIONS APPROVED BY THE ENGINEER. SETTLEMENT READINGS SHALL BE TAKEN WEEKLY BEGINNING WITH THE FIRST WEEK FOLLOWING PLACEMENT OF EACH PLATFORM AND DURING ANY SPECIFIED WAITING PERIOD. READINGS SHALL BE TAKEN MONTHLY DURING ANY CONSOLIDATION OR OFF-SEASON TIMES. THE READINGS SHALL BE PLOTTED ON GRAPH PAPER PRESENTING DEFORMATION (ON THE NEGATIVE Y-AXIS) AND FILL HEIGHT (ON THE POSITIVE Y-AXIS) VERSUS TIME (ON THE X-AXIS). A COPY OF EACH CUMULATIVE PLOT SHALL BE SENT TO ODOT, CO, CONSTRUCTION MANAGEMENT/CONSTRUCTION ADMINISTRATION, GEOTECHNICAL AND EARTHWORK ENGINEER AND ODOT, CO, OFFICE OF GEOTECHNICAL ENGINEERING, FOUNDATIONS AND RETAINING WALLS ENGINEER, AFTER EACH SETTLEMENT READING IS RECORDED.

MATERIAL: SOUND LUMBER SUCH AS ¾" EXTERIOR GRADE PLYWOOD SHALL BE USED FOR THE BASE. THE PIPE SHALL BE 2½" STANDARD BLACK PIPE WITH THREADED FITTINGS AS SHOWN ON THE PLANS. A STEEL PLATE 36" X 36" X ⅛" MAY BE SUBSTITUTED FOR THE LUMBER FOR THE PLATFORMS, AT THE CONTRACTOR'S OPTION.

CONSTRUCTION METHODS: THE PLATFORM SHALL CONFORM TO THE SETTTLEMENT PLATFORM DETAILS SHOWN ON THIS SHEET. THE PLATFORM SHALL BE SET ON A LEVEL SURFACE. THE PIPE SHALL BE FIRMLY SECURED TO THE PLATFORM AND SHALL BE MAINTAINED IN A PLUMB POSITION DURING THE PLACEMENT OF THE EMBANKMENT. THE PIPE SHALL BE MARKED AT INTERVALS TO FACILITATE MEASUREMENT OF THE DEPTH OF FILL. THE CONTRACTOR SHALL STOP WORK IN ANY LOCATION WHERE THE SETTLEMENT PLATFORM HAS BEEN DISTURBED OR DAMAGED. PLATFORMS OR PIPES DAMAGED OR DISPLACED DURING CONSTRUCTION SHALL BE RESTORED TO THEIR PROPER CONDITION AT THE CONTRACTOR'S EXPENSE.

SETTLEMENT PLATFORMS SHALL BE PLACED AT THE FOLLOWING LOCATIONS:

I.D.	*STATION*	*OFFSET*
SP1	*198+47*	*18' RT.*
SP2	*202+35*	*19' RT.*
SP3	*198+56*	*61' RT.*
SP4	*202+40*	*61' RT.*

PRIOR TO PAVING, THE TOP OF THE SETTLEMENT PLATFORM PIPE SHALL BE CUT OFF TWO FEET BELOW THE FINISHED SURFACE OF THE SUBGRADE OR FINISHED GROUND SURFACE, WHICHEVER IS APPLICABLE.

REFER TO ODOT GEOTECHNICAL BULLETIN GB4 "GUIDELINES FOR THE USE OF GEOTECHNICAL INSTRUMENTATION" FOR ADDITIONAL INSTALLATION AND MONITORING INSTRUCTION.

WAITING PERIOD CRITERIA:
THE ENGINEER WILL CONSIDER THE WAITING PERIOD COMPLETE WHEN CONSECUTIVE SETTLEMENT READINGS, RECORDED AFTER EMBANKMENT CONSTRUCTION IS COMPLETE AND AT LEAST ONE WEEK (168 HOURS) APART, RESULT IN ELEVATION DIFFERENCES EQUAL TO OR LESS THAN 1/8 INCH. THE MINIMUM WAITING PERIOD IS 90 CALENDAR DAYS.

IF SETTLEMENT RATES EXCEED ⅛ INCH PER MONTH AFTER EMBANKMENT CONSTRUCTION HAS BEEN COMPLETE FOR 45 CALENDAR DAY, REMAINING CONSTRUCTION, INCLUDING ANY NECCESARY CORRECTIVE MEASURES, MAY PROCEED ONLY AT THE DIRECTION OF THE ENGINEER.

THE DEPARTMENT WILL CONSIDER VIBRATING WIRE SETTLEMENT MONITORING PLATFORMS IN LIEU OF THE CONVENTIONAL SETTLEMENT PLATFORMS. THE CONTRACTOR SHOULD PROVIDE DETAILS OF THE PROPOSED VIBRATING WIRE SETTLEMENT PLATFORMS AS WELL AS DESIGN DRAWINGS OF THE PROPOSED 30 DAYS PRIOR TO CONSTRUCTION. THE DEPARTMENT WILL REQUIRE 10 WORKING DAYS FOR REVIEW AND APPROVAL. THE DESIGN DRAWINGS SHOULD ILLUSTRATE THE LOCATIONS WITH ALL EXISTING AND PROPOSED SITE FEATURES TO VERIFY THE PROPOSED CABLING WILL NOT CONFLICT WITH EXISITING FACILITIES, PROPOSED FACILITIES OR UTILITIES. NO ADDITIONAL PAYMENT WILL BE PROVIDED IF THE CONTRACTOR ELECTS TO UTILIZE VIBRATING WIRE SETTLEMENT PLATFORMS.

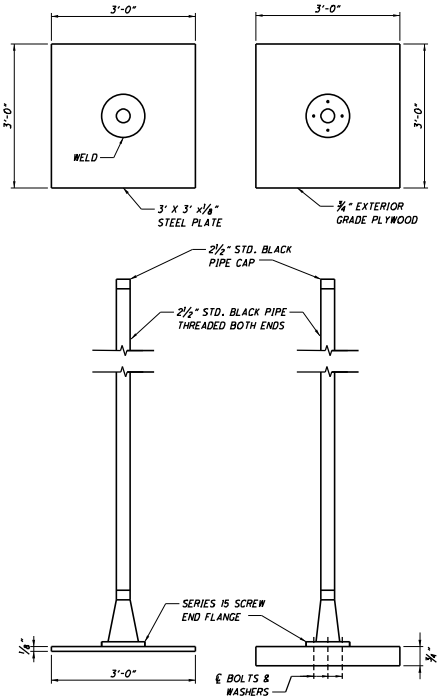
MORE INFORMATION PERTAINING TO EMBANKMENT CONSTRUCTION AND CONTROLLED RATES OF FILL ARE PROVIDED IN THE ROADWAY PLANS.

METHOD OF MEASUREMENT: THE NUMBER OF SETTLEMENT PLATFORMS TO BE PAID FOR SHALL BE THE ACTUAL NUMBER OF SETTLEMENT PLATFORMS COMPLETED, MAINTAINED, AND ACCEPTED BY THE ENGINEER.

BASIS OF PAYMENT: PAYMENT SHALL BE MADE AT THE CONTRACT UNIT PRICE EACH FOR "ITEM SPECIAL - SETTLEMENT PLATFORM" WHICH IS COMPENSATION FOR CONSTRUCTING, MAINTAINING, AND MONITORING THE SETTLEMENT PLATFORMS INCLUDING FURNISHING ALL LABOR, EQUIPMENT, MATERIALS, AND INCIDENTALS NECESSARY TO COMPLETE THE WORK. PAYMENT SHALL NOT BE MADE FOR SETTLEMENT PLATFORMS WHICH BECOME USELESS DUE TO DAMAGE CAUSED BY THE CONTRACTOR'S OPERATIONS. SEE DETAIL THIS SHEET.

ABBREVIATIONS:

℄	*- CENTERLINE*
ABUT.	*- ABUTMENTS*
BF	*- BACK FACE*
BOT.	*- BOTTOM*
BRG.	*- BEARINGS*
CIP	*- CAST IN PLACE*
CJ	*- CONSTRUCTION JOINT*
CONT.	*- CONTINUED*
EF	*- EACH FACE*
EQ.	*- EQUAL*
F.A.	*- FORWARD ABUTMENT*
FF	*- FRONT FACE*
GFRP	*- GLASS FIBER REINFORCED POLYMER*
LT	*- LEFT*
M.C.	*- MECHANICAL CONNECTOR*
NPCPP	*- NON -PERFORATED CORRUGATED PLASTIC PIPE*
PCPP	*- PERFORATED CORRUGATED PLASTIC PIPE*
R.A.	*- REAR ABUTMENT*
RCP	*- ROCK CHANNEL PROTECTION*
RT.	*- RIGHT*
SPA.	*- STATION*
SP	*- SETTLEMENT PLATFORM*
STA.	*- STATION*
STR	*- STRAIGHT*
T/	*- TOP OF*
T&B	*- TOP AND BOTTOM*
TYP.	*- TYPICAL*
U.N.O.	*- UNLESS NOTED OTHERWISE*



SETTLEMENT PLATFORM
(NOT TO SCALE)

NOTE:

1. SETTLEMENT PLATFORMS SHALL BE ANCHORED BY STAKES DRIVEN AT EACH CORNER TO PREVENT OVERTURNING.

DESIGN AGENCY: Stantec (100 Lake Shore Dr, Cincinnati, OH 45206, 513-842-8200)

DATE: 12/15/17
STRUCTURE FILE NUMBER: 4400224

DESIGNED	DRAWN	REVIEWED
BSM	JWS	MRS
CHECKED	REVISED	
EER		

GENERAL NOTES 2
BRIDGE NO. LAW-7-0376
S.R. 7 OVER SYMMES CREEK

LAW-7-2.17
PID No. 75923

4 / 25

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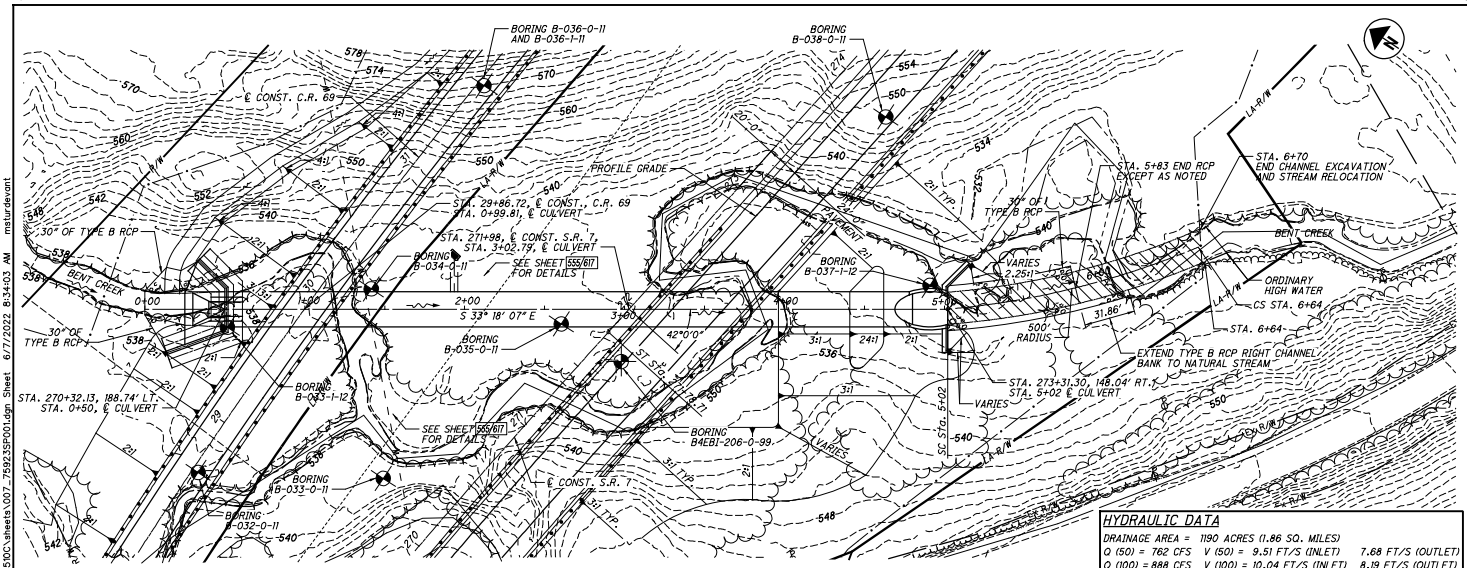
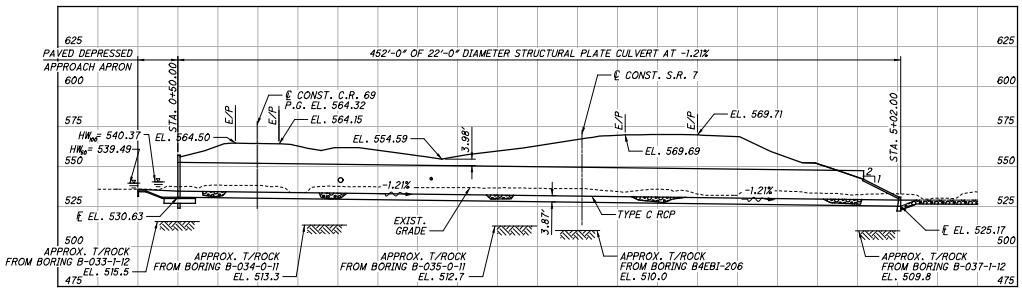


PLAN



PROFILE ALONG ℄ CULVERT

HYDRAULIC DATA

DRAINAGE AREA = 1190 ACRES (1.86 SQ. MILES)
Q (50) = 762 CFS V (50) = 9.51 FT/S (INLET) 7.68 FT/S (OUTLET)
Q (100) = 888 CFS V (100) = 10.04 FT/S (INLET) 8.19 FT/S (OUTLET)
ORDINARY HIGH WATER MARK= 532.7'
PH= 7.6
ABRASIVE: YES

NOTES

1. EARTHWORK LIMITS SHOWN ARE APPROXIMATE. ACTUAL SLOPES SHALL CONFORM TO PLAN CROSS SECTIONS.
2. SEE SHEET 6/8 FOR STREAM EXCAVATION DETAILS.

DESIGN TRAFFIC:
2015 ADT = 10,300 2015 ADTT = 1,133
2035 ADT = 21,400 2035 ADTT = 2,354
DIRECTIONAL DISTRIBUTION = 61/31

LEGEND

PROJECT BORING LOCATION
- CHANNEL EXCAVATION

PROPOSED STRUCTURE

TYPE: 22' DIA. STRUCUTRAL PLATE (MIN. 8 GAGE) PIPE CULVERT WITH REINFORCED CONCRETE HEADWALLS
SPANS: 22'-0"
ROADWAY: 42' EDGE TO EDGE OF SHOULDER
LOADING: HL-93 AND FWS (60 PSF)
SKEW: 42°0'0" RF
APPROACH SLABS: NONE
COORDINATES: LATITUDE 38°27'25.92"
LONGITUDE 82°24'49.82"

DESIGN AGENCY: Stantec
DATE: 3/8/18
REVIEWED: EER
STRUCTURE FILE NUMBER: 4400348
DRAWN: JWS
REVISED:
DESIGNED: EDA
CHECKED: MRS

SITE PLAN
LAW-7-0510
S.R. 7 OVER BENT CREEK

LAW-7-2.17
PID No. 75923

1 / 8

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ESTIMATED QUANTITIES

CALCULATED BY: EDA 3/7/2018
CHECKED BY: ALH 3/7/2018

ITEM	EXTENSION	TOTAL	UNIT	DESCRIPTION	GEN.	SEE SHEET
203	10000	589	CY	EXCAVATION		
503	21100	940	CY	UNCLASSIFIED EXCAVATION		
509	10000	97638	LB	EPOXY COATED REINFORCING STEEL		
511	46010	150	CY	CLASS QC1 CONCRETE, RETAINING/WINGWALL NOT INCLUDING FOOTING		
511	46510	219	CY	CLASS QC1 CONCRETE, FOOTING		
512	33000	16	SY	TYPE 2 WATERPROOFING		
512	10100	155	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)		
518	21200	84	CY	POROUS BACKFILL WITH GEOTEXTILE FABRIC		
518	40000	72	FT	6" PERFORATED CORRUGATED PLASTIC PIPE		
518	40010	30	FT	6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS		
601	11001	108	SY	RIPRAP, TYPE D, AS PER PLAN		
601	32104	290	CY	ROCK CHANNEL PROTECTION, TYPE B WITH GEOTEXTILE FABRIC		
601	34200	820	CY	ROCK CHANNEL PROTECTION, TYPE C WITHOUT FILTER		
611	97400	452	FT	CONDUIT, MISC.: 22' DIA., TYPE A, 707.03, AS PER PLAN		

GENERAL NOTES

DESIGN SPECIFICATIONS:
THIS STRUCTURE CONFORMS TO THE "LRFD BRIDGE DESIGN SPECIFICATIONS" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 2014, INCLUDING 2015 AND 2016 INTERIM SPECIFICATIONS AND THE ODOT BRIDGE DESIGN MANUAL, 2007.

OPERATIONAL IMPORTANCE:
A LOAD MODIFIER OF 1.0 HAS BEEN ASSUMED FOR THE DESIGN OF THIS STRUCTURE IN ACCORDANCE WITH THE AASHTO LRFD BRIDGE DESING SPECIFICATIONS, ARTICLE 1.3.5 AND THE ODOT BRIDGE DESIGN MANUAL, 2007.

DESIGN DATA:
CONCRETE CLASS QC1 - COMPRESSIVE STRENGTH 4.0 K.S.I.
(SUBSTRUCTURE)

REINFORCING STEEL - MINIMUM YIELD STRENGTH 60 K.S.I.

DESIGN LOADING:
HL-93
FUTURE WEARING SURFACE (FWS) OF 0.060 KIPS/FT²

FOUNDATION BEARING RESISTANCE:
HEADWALL FOOTINGS, AS DESIGNED, PRODUCE A MAXIMUM SERVICE LOAD PRESSURE OF 3.021 KIPS PER SQUARE FOOT AND A MAXIMUM STRENGTH LOAD PRESSURE OF 4.256 KIPS PER SQUARE FOOT. THE BEARING RESISTANCE IS 3.025 KIPS PER SQUARE FOOT FOR SERVICE AND 5.5 KIPS PER SQUARE FOOT FOR STRENGTH.

ITEM 511 CLASS QC1 CONC. MISC. PAVED INLET:
THE ITEM INCLUDES ALL MATERIAL, LABOR, AND ACCESSORIES NECESSARY TO FURNISH AND PLACE THE PAVED CONCRETE INLET AND CUTOFF WALLS.
ITEM 601 RIPRAP, TYPE D, AS PER PLAN:
CONSTRUCT A RIPRAP CUTOFF WALL AS DETAILED ON SHEET 4/7 .

ITEM 611 22'-0" CONDUIT, TYPE A, AS PER PLAN:
WORK SHALL CONFORM TO ITEM 611 PIPE CULVERTS, SEWERS, DRAINS, AND DRAINAGE STRUCTURES. STEEL STRUCTURAL PLATE (707.03) WITH MINIMUM 8 GA. THICKNESS PER ODOT DURABILITY DESIGN SPREAD SHEET, THE PAVED INVERT SPECIFIED BY THE DURABILITY DESIGN SPREADSHEET SHALL BE OMITTED AS THE CULVERT INVERT IS FILLED WITH TYPE C ROCK CHANNEL PROTECTION.

ANCHOR BOLTS FOR ANCHORING BOTH ENDS OF THE METAL PIPE, MEETING ASTM A307 AND GALVANIZED ACCORDING TO ASTM A153, SHALL BE INCLUDED IN THE PRICE BID PER FOOT OF ITEM 611 22'-0" CONDUIT, TYPE A, 707.03, AS PER PLAN.

ABBREVIATIONS:

APPROX.	- APPROXIMATELY
ABUT.	- ABUTMENTS
BF	- BACK FACE
B/	- BOTTOM OF
BRG.	- BEARINGS
℄	- CENTERLINE
CJ	- CONSTRUCTION JOINT
CLR.	- CLEAR
CONC.	- CONCRETE
CONST.	- CONSTRUCTION
CONT.	- CONTINUED
DIA.	- DIAMETER
DWG.	- DRAWING
EF	- EACH FACE
EL.	- ELEVATION
EQ.	- EQUAL
EXIST.	- EXISTING
℄	- FLOW LINE
FF	- FRONT FACE
GFRP	- GLASS FIBER REINFORCED POLYMER
H.W.	- HIGH WATER
LT	- LEFT
MAX.	- MAXIMUM
M.C.	- MECHANICAL CONNECTOR
MISC.	- MISCELLANEOUS
NO.	- NUMBER
NPCPP	- NON-PERFORATED CORRUGATED PLASTIC PIPE
OHWM	- ORDINARY HIGH WATER MARK
PCPP	- PERFORATED CORRUGATED PLASTIC PIPE
RCP	- ROCK CHANNEL PROTECTION
RT.	- RIGHT
SPA.	- SPACE
SP	- SETTLEMENT PLATFORM
STA.	- STATION
STD.	- STANDARD
STR	- STRAIGHT
T/	- TOP OF
T&B	- TOP AND BOTTOM
TYP.	- TYPICAL
U.N.O.	- UNLESS NOTED OTHERWISE
YR.	- YEAR

DESIGN AGENCY: Stantec (1901 Lake Shore Dr., Lorain, OH 44052, 440.458.6200)

DESIGNED EDA | DRAWN JWS | REVIEWED EER | DATE: 3/8/18
CHECKED MRS | REVISED | STRUCTURE FILE NUMBER 4400348

GENERAL NOTES & ESTIMATED QUANTITIES

LAW-7-0510
S.R. 7 OVER BENT CREEK

LAW-7-2.17
PID No. 75923

2 / 8

1

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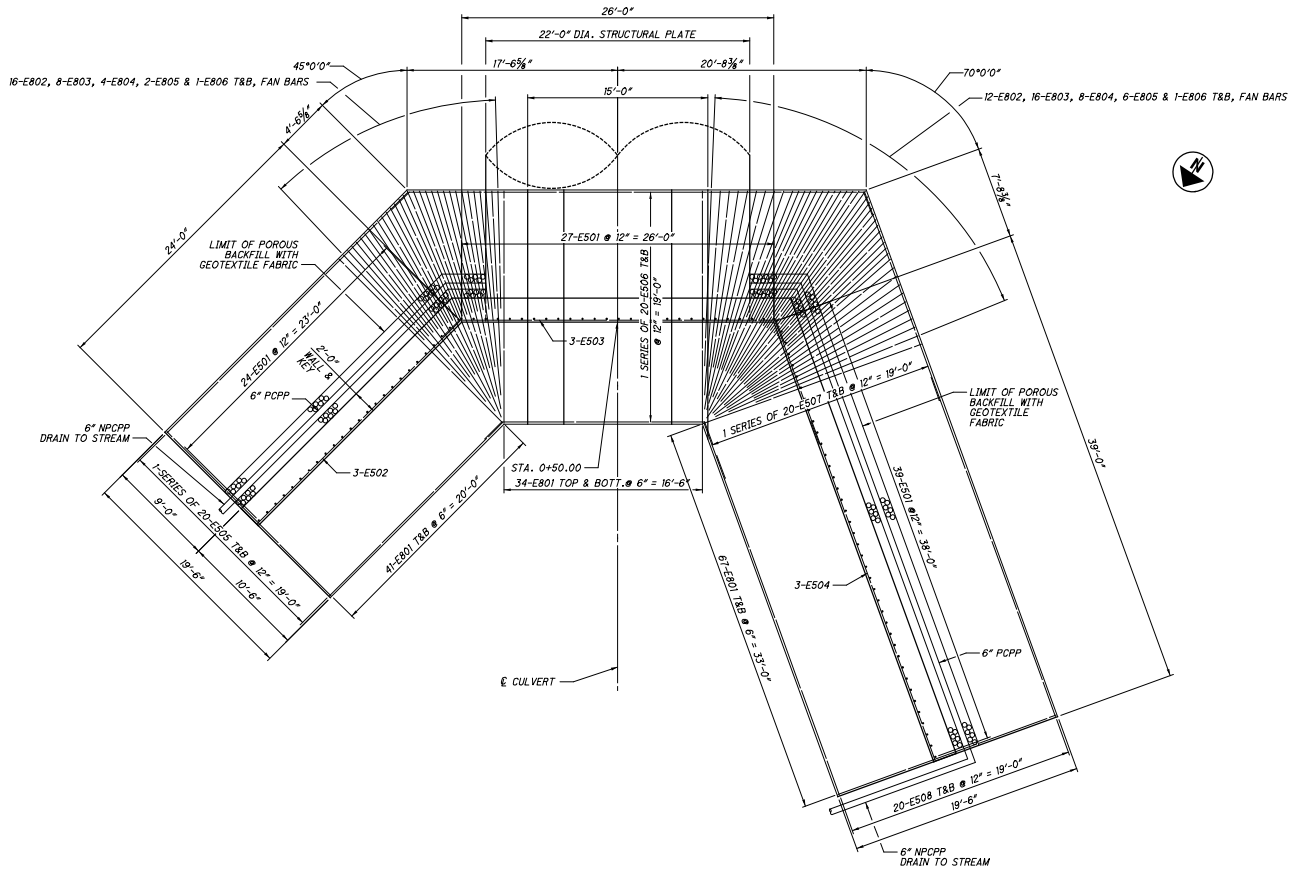

INLET FOOTING PLAN

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

NOTE:
FOR WALL REINFORCING, SEE SHEET 4/8 .

DESIGN AGENCY
Stantec
1901 Lake Shore Dr.
Columbus, OH 43204
(614) 486-1683

DESIGNED	DRAWN	REVIEWED	DATE
EDA	JWS	EER	3/8/18
CHECKED	REVISED	STRUCTURE FILE NUMBER	
MRS		4400348	

INLET FOOTING PLAN
LAW-7-0510
S.R. 7 OVER BENT CREEK

LAW-7-2.17
PID No. 75923

3/8

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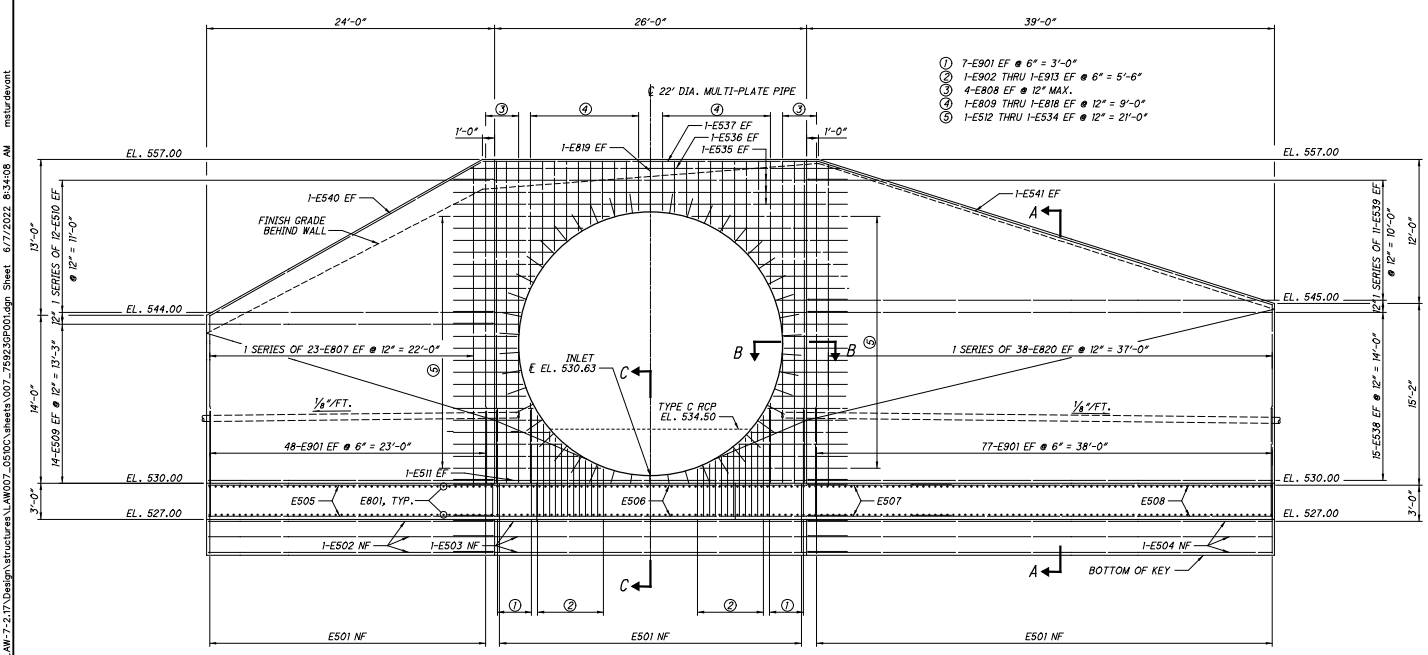


INLET HEADWALL
(DEVELOPED VIEW)

LAP LENGTHS:
#5 BARS = 3'-3"

NOTES:
1. *ANCHORS AROUND CIRCUMFERENCE OF PIPE AT HEADWALL 18" ON CENTER SHALL BE 3"#4" DIA. x 19"x5" HOOK BOLTS. HOOK SHALL BE CUT OFF AS NECESSARY TO ACCOMODATE THE HEADWALL FOOTING NEAR THE INVERT OF THE PIPE. DOUBLE NUT EACH BOLT.*
2. *FOR SECTIONS A-A, B-B AND C-C, SEE SHEET* 5/8 .

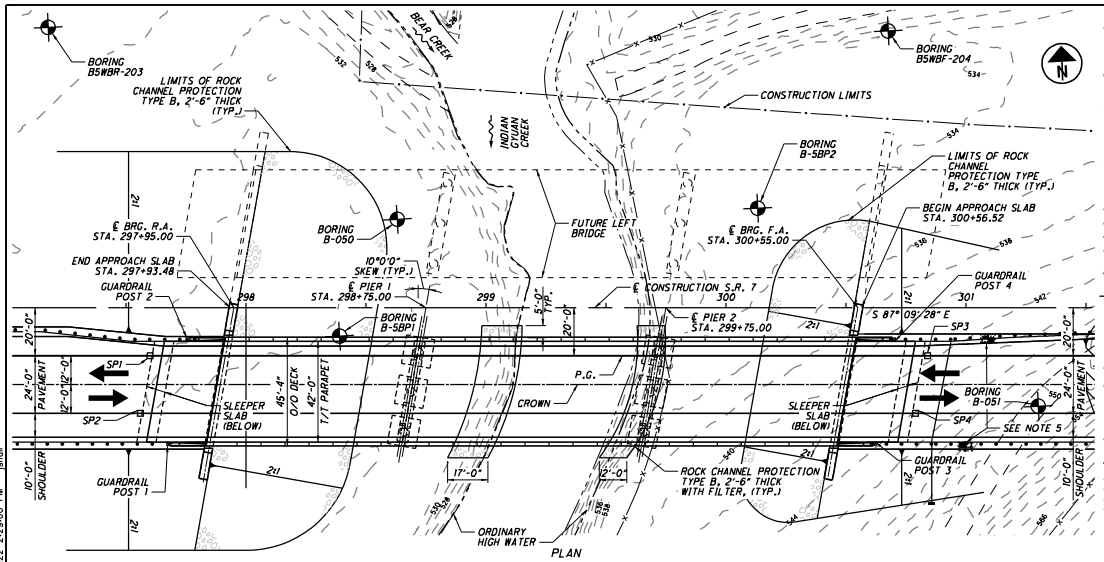
DESIGN AGENCY: Stantec (1901 Lake Shore Dr., Lorain Ohio 44052, 440.458.6200)

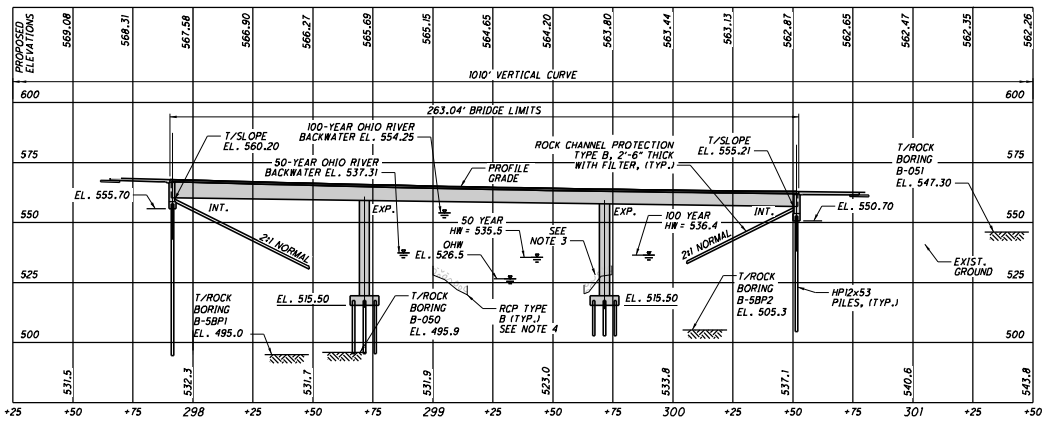
DESIGNED	DRAWN	REVIEWED	DATE
EDA	JWS	EER	3/8/18
CHECKED	REVISED	STRUCTURE FILE NUMBER	
MRS		400348	

INLET HEADWALL ELEVATION
LAW-7-0510
S.R. 7 OVER BENT CREEK

LAW-7-2.17
PID No. 75923

BRIDGE NO. B-5





NOTES

1. EARTHWORK LIMITS SHOWN ARE APPROXIMATE. ACTUAL SLOPES SHALL CONFORM TO PLAN CROSS SECTIONS.
2. FOR PRIMARY PROJECT CONTROL INFORMATION TABLE SEE ROADWAY GENERAL NOTES.
3. RESTORE EXISTING GROUND AT PIER 2 INCORPORATING ROCK CHANNEL PROTECTION SHOWN IN THE PLAN AND PROFILE.
4. PLACE ROCK CHANNEL PROTECTION AT THE WEST BANK AS SHOWN IN THE PLAN AND PROFILE.
5. BRIDGE DECK DRAINAGE IS CONTROLLED BY 2 SCUPPERS ALONG THE LEFT TOE OF PARAPET. TOTAL DECK FLOW IS CONTROLLED BY CATCH BASIN INLETS OFF THE BRIDGE AT THE EAST END.

DESIGN TRAFFIC:
2015 ADT = 10,300 2015 ADTT = 1,133
2035 ADT = 21,400 2035 ADTT = 2,354
DIRECTIONAL DISTRIBUTION = 69/31

LEGEND

PROJECT BORING LOCATION
SETTLEMENT PLATFORM

HYDRAULIC DATA

DRAINAGE AREA = 75.2 SQ. MILES
Q (50) = 7050 CFS V (50) = 8.1 FT/S
Q (100) = 8010 CFS V (100) = 8.5 FT/S
STRUCTURE CLEARS THE 50 YEAR
DESIGN HW BY 21.2 FEET.

ESTIMATED PILE LENGTHS

REAR ABUTMENT HP12x53 = 65 FT.
PIER 1 HP12x53 = 25 FT.
PIER 2 HP12x53 = 25 FT.
FORWARD ABUTMENT HP12x53 = 50 FT.

POST NUMBER	FIRST POST GUARDRAIL	STATION
1	EASTBOUND R.A.	297+67.35
2	WESTBOUND R.A.	297+75.34
3	EASTBOUND F.A.	300+62.31
4	WESTBOUND F.A.	300+70.31

VERTICAL CURVE DATA

LENGTH = 1010'
PVC STA. = 297+05.00 PVC ELEV. = 570.58
PVI STA. = 302+10.00 PVI ELEV. = 552.90
PVT STA. = 307+15.00 PVT ELEV. = 572.65
G1 = -3.50% G2 = 3.91%

PROPOSED STRUCTURE

TYPE: 3 SPAN PRESTRESSED CONCRETE I-BEAM (60" MODIFIED TYPE 4) WITH COMPOSITE REINFORCED CONCRETE DECK SUPPORTED ON INTEGRAL ABUTMENTS ON STEEL HP PILES AND CAP & COLUMN PIERS ON STEEL HP PILES.

SPANS: 78.92', 97.833', 78.92' C/C BRGS. (ALONG ℄ CONST.)

ROADWAY: 42'-0" TOE/TOE PARAPET

LOADING: HL-93 AND 60 LBS/FT² FUTURE WEARING SURFACE

WEARING SURFACE: 1" MONOLITHIC WEARING SURFACE

SKEW: 10° LT. FWD.

APPROACH SLABS: AS-1-15 AND APPLICABLE DETAILS FROM AS-2-15, 25'-0" LONG

ALIGNMENT: TANGENT

CROWN: 0.016 FT/FT

COORDINATES: LATITUDE 38° 27' 23.09" N
LONGITUDE 82° 24' 15.61" W

DESIGN AGENCY: Stantec, 1500 JAMBOREE, SUITE 360, TUSTIN, CALIFORNIA 92782, 714-668-1200

DATE: 3/26/18
STRUCTURE FILE NUMBER: 4400372

DRAWN	REVISED
JWS	MRS

DESIGNED	CHECKED
BSM	EER

LAWRENCE COUNTY
STA. 297+93.47
STA. 300+56.52

SITE PLAN
BRIDGE NO. LAW-7-0563
S.R. 7 OVER INDIAN GUYAN CREEK

LAW-7-2.17
PID No. 75923

1 / 24

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REFER TO THE FOLLOWING STANDARD BRIDGE DRAWINGS:

AS-1-15	REVISED	07-17-15
AS-2-15	REVISED	07-17-15
PSID-1-13	REVISED	10-18-13
SBR-1-13	REVISED	01-17-14

AND TO THE FOLLOWING SUPPLEMENTAL SPECIFICATION:

800	DATED	01-19-18
832	DATED	10-17-14

DESIGN SPECIFICATIONS:
THIS STRUCTURE CONFORMS TO THE "LRFD BRIDGE DESIGN SPECIFICATIONS" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 2014 INCLUDING THE 2015 AND 2016 INTERIM SPECIFICATIONS AND THE ODOT BRIDGE DESIGN MANUAL, 2007.

DESIGN LOADING:
HL-93
FUTURE WEARING SURFACE (FWS) OF 0.060 KIPS/FT²

OPERATIONAL IMPORTANCE:
A LOAD MODIFIER OF 1.00 HAS BEEN ASSUMED FOR THE DESIGN OF THIS STRUCTURE IN ACCORDANCE WITH THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, ARTICLE 1.3.5 AND THE ODOT BRIDGE DESIGN MANUAL, 2007.

DESIGN DATA:
CONCRETE CLASS QC2 - COMPRESSIVE STRENGTH 4.5 K.S.I. (SUPERSTRUCTURE)
CONCRETE CLASS QC1 - COMPRESSIVE STRENGTH 4.0 K.S.I. (SUBSTRUCTURE)

REINFORCING STEEL - MINIMUM YIELD STRENGTH 60 K.S.I.

STEEL H-PILES - A572 - YIELD STRENGTH 50 K.S.I.

CONCRETE FOR PRESTRESSED BEAMS:
COMPRESSIVE STRENGTH (FINAL) = 7000 P.S.I.
COMPRESSIVE STRENGTH (RELEASE) = 6000 P.S.I.

PRESTRESSING STRAND:
AREA = 0.217 SQ. IN.
ULTIMATE STRENGTH = 270 K.S.I.
INITIAL STRESS = 202.5 K.S.I.
(LOW RELAXATION STRANDS)

WELDED WIRE FABRIC:
YIELD STRENGTH = 70 K.S.I.

DECK PROTECTION METHOD:
2-1/2" CONCRETE COVER
EPOXY COATED REINFORCING STEEL

MONOLITHIC WEARING SURFACE:
MONOLITHIC WEARING SURFACE IS ASSUMED, FOR DESIGN PURPOSES, TO BE 1 INCH THICK.

PILE DRIVING CONSTRAINTS:
PRIOR TO DRIVING PILES, CONSTRUCT THE SPILL THROUGH SLOPES AND THE BRIDGE APPROACH EMBANKMENT BEHIND THE ABUTMENTS UP TO THE LEVEL OF THE SUBGRADE ELEVATION FOR A MINIMUM DISTANCE OF 200 FEET BEHIND EACH ABUTMENT (SEE FORWARD AND REAR APPROACH EMBANKMENT CONSTRUCTION THIS SHEET). DO NOT BEGIN THE EXCAVATION FOR THE ABUTMENT FOOTINGS AND THE INSTALLATION OF THE ABUTMENT PILES UNTIL AFTER THE ABOVE REQUIRED EMBANKMENT HAS BEEN CONSTRUCTED.

THE APPROACH SLAB EMBANKMENT SHALL BE CONSTRUCTED AND THEN UNDERGO A WAITING PERIOD OF 133 DAYS.

PILES TO BEDROCK:
DRIVE PILES TO REFUSAL ON BEDROCK. THE DEPARTMENT WILL CONSIDER REFUSAL TO BE OBTAINED WHEN THE PILE PENETRATION IS AN INCH OR LESS AFTER RECIEVING AT LEAST 20 BLOWS FROM THE PILE HAMMER. SELECT THE HAMMER SIZE TO ACHIEVE THE REQUIRED DEPTH TO BEDROCK AND REFUSAL.

THE TOTAL FACTORED LOAD IS 226 KIPS PER PILE FOR THE REAR ABUTMENT PILES.
THE TOTAL FACTORED LOAD IS 238 KIPS PER PILE FOR THE FORWARD ABUTMENT PILES.

THE TOTAL FACTORED LOAD IS 243 KIPS PER PILE FOR THE PIER 1 PILES.
THE TOTAL FACTORED LOAD IS 238 KIPS PER PILE FOR THE PIER 2 PILES.

ABUTMENT PILES:
REAR ABUTMENT PILES:
10 PILES 70 FEET LONG, ORDER LENGTH.

FORWARD ABUTMENT PILES:
10 PILES 55 FEET LONG, ORDER LENGTH.

PIER PILES:
27 PILES 30 FEET LONG, ORDER LENGTH AT PIER 1.
27 PILES 30 FEET LONG, ORDER LENGTH AT PIER 2.

PILE SPLICES:
IN LIEU OF USING THE FULL PENETRATION BUTT WELDS SPECIFIED IN CMS 507.09 TO SPLICE STEEL H-PILES, THE CONTRACTOR MAY USE A MANUFACTURED H-PILE SPLICER. FURNISH SPLICERS FROM THE FOLLOWING MANUFACTURER:

ASSOCIATED PILE AND FITTING CORPORATION
8 WOOD HOLLOW RD. PLAZA 1
PARSIPPANY, NEW JERSEY 07054

INSTALL AND WELD THE SPLICER TO THE PILE SECTIONS IN ACCORDANCE WITH THE MANUFACTURER'S WRITTEN ASSEMBLY PROCEDURE SUPPLIED TO THE ENGINEER BEFORE THE WELDING IS PERFORMED.

ITEM 509 - EPOXY COATED REINFORCING STEEL, AS PER PLAN:
IN ADDITION TO THE PROVISIONS OF ITEM 509, FIELD BEND AND/OR FIELD CUT THE REINFORCING STEEL DESIGNATED IN THE PLANS, AS NECESSARY, IN ORDER TO MAINTAIN THE REQUIRED CLEARENCES AND BAR SPACING. REPAIR ALL DAMAGE TO EPOXY COATING, AS A RESULT OF THIS WORK, ACCORDING TO 709.00.

ITEM 511 - CLASS QC2 CONCRETE WITH QC/QA, SUPERSTRUCTURE, AS PER PLAN:
FURNISH POLYSTYRENE MATERIAL MEETING THE REQUIRMENTS OF ASTM C578 TYPE IV. NEATLY CUT MATERIAL AS NECESSARY TO ALLOW FOR PROPER INSTALLATION. JOINTS AT ABUTTING PIECES SHALL BE SEALED WITH DUCT TAPE.

ITEM 518 - SCUPPERS, INCLUDING SUPPORTS, AS PER PLAN:
REFER TO SHEET 17/24 FOR SCUPPER LOCATIONS AND SHEET 18/24 FOR DETAILS AND NOTES.

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

AN EIGHT WHEEL FINISHING MACHINE WITH A MAXIMUM WHEEL LOAD OF 2.37 KIPS.

A MINIMUM OUT-TO-OUT WHEEL SPACING AT EACH END OF THE MACHINE OF 103".

A MAXIMUM SPACING OF OVERHANG FALSEWORK BRACKETS OF 48 IN.

A MAXIMUM DISTANCE FROM THE CENTERLINE OF THE FASCIA GIRDER TO THE FACE OF THE SAFETY HANDRAIL OF 65".

FORWARD AND REAR APPROACH EMBANKMENT CONSTRUCTION:
THE APPROACH EMBANKMENTS SHALL BE CONSTRUCTED AND THEN UNDERGO A WAITING PERIOD OF 133 DAYS PRIOR TO DRIVING PILES.

APPROACH EMBANKMENTS SHALL BE REINFORCED WITH PRIMARY INTERNAL REINFORCEMENT FOR STABILIZATION AS PER RECOMMENDATIONS BY STANTEC.

SEE ROADWAY AND SLOPE REINFORCEMENT PLANS FOR DETAILS AND NOTES REGARDING EMBANKMENT CONSTRUCTION.

MSE (MECHANICALLY STABILIZED EARTH) WALLS SHALL NOT BE PROPOSED AS AN ALTERNATIVE DESIGN IN ANY VALUE ENGINEERING STUDY DUE TO GEOTECHNICAL CONCERNS.

THE CONTRACTOR SHALL REVIEW THE BORING LOGS, SUBSURFACE INVESTIGATION, AND THE ROADWAY GENERAL NOTES PRIOR TO COMMENCING WORK ON THE BRIDGE.

IN ORDER TO MINIMIZE SIGNIFICANT DAMAGE TO THE FILL EMBANKMENT REINFORCEMENT DURING THE DRIVING OF ABUTMENT PILES H-PILES, A SINGLE-SHEET "PUNCHED" TYPE REINFORCEMENT SHALL BE USED. THIS TYPE OF REINFORCEMENT WILL BE EASILY PENETRATED WITH A DRIVEN PILE, WHEREAS A WELDED TYPE REINFORCEMENT WILL BE SIGNIFICANTLY DAMAGED DURING PILE DRIVING.

THE CONTRACTOR SHALL SUBMIT PILE DRIVING HAMMER SPECIFICATIONS TO THE GEOTECHNICAL ENGINEER OF RECORD, PRIOR TO PILE INSTALLATION FOR THE ENGINEER'S APPROVAL. IN ACCORDANCE WITH ODOT ITEM 507, THE PILE HAMMER SHALL BE OF ADEQUATE SIZE TO DRIVE THE PILES THROUGH THE INTERNALLY REINFORCED COMPACTED EMBANKMENT AND AT THE SAME TIME NOT TO DAMAGE THE PILES DURING DRIVING OR RETAPPING.

THE MATERIAL THAT WILL BE USED FOR EMBANKMENT FILL CONSTRUCTION WILL BE COMPOSED OF THE SOIL AND ROCK REMOVED FROM THE LARGE CUT SECTIONS. BASED ON THE BORINGS PERFORMED IN THE PROPOSED CUT AREAS, THIS MATERIAL WILL CONSIST PRIMARILY OF NON-DURABLE SHALE, AND TO A MUCH LESSER EXTENT, DURABLE SHALE, SANDSTONE AND SILTSTONE. WHERE PILES ARE TO BE DRIVEN THROUGH THE EMBANKMENT, THE EMBANKMENT FILL MATERIAL SHALL BE CLEAN OF DURABLE ROCK THAT MAY IMPEDE PILE DRIVING. THE EMBANKMENT FILL MATERIAL SHALL BE COMPACTED IN ACCORDANCE WITH ODOT ITEM 203. THE USE OF WATER TO AID IN BREAKING DOWN LARGE PARTICLES FOR NON-DURABLE SHALE WILL BE REQUIRED AS PER ODOT ITEM 203.06 B.

DESIGN AGENCY: Stantec 1500 JAMES DRIVE, CHARLESTON, WEST VIRGINIA 25311

DESIGNED BSM | DRAWN JWS | REVIEWED MRS | DATE 3/26/18
CHECKED EER | REVISED | STRUCTURE FILE NUMBER 4400372

GENERAL NOTES 1
BRIDGE NO. LAW-7-0563
S.R. 7 OVER INDIAN GUYAN CREEK

LAW-7-2.17
PID No. 75923

2/24

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ITEM SPECIAL - SETTLEMENT PLATFORM:

DESCRIPTION: THIS ITEM CONSISTS OF FURNISHING, CONSTRUCTING, AND MAINTAINING SETTLEMENT PLATFORMS AND OBTAINING SETTLEMENT READINGS AS REQUIRED BY THE PLANS OR AS DIRECTED BY THE ENGINEER. SEE SETTLEMENT PLATFORM DETAIL THIS SHEET. AT THE OPTION AND EXPENSE OF THE CONTRACTOR, ADDITIONAL SETTLEMENT PLATFORMS MAY BE INSTALLED AT LOCATIONS APPROVED BY THE ENGINEER. SETTLEMENT READINGS SHALL BE TAKEN WEEKLY BEGINNING WITH THE FIRST WEEK FOLLOWING PLACEMENT OF EACH PLATFORM AND DURING ANY SPECIFIED WAITING PERIOD. READINGS SHALL BE TAKEN MONTHLY DURING ANY CONSOLIDATION OR OFF-SEASON TIMES. THE READINGS SHALL BE PLOTTED ON GRAPH PAPER PRESENTING DEFORMATION (ON THE NEGATIVE Y-AXIS) AND FILL HEIGHT (ON THE POSITIVE Y-AXIS) VERSUS TIME (ON THE X-AXIS). A COPY OF EACH CUMULATIVE PLOT SHALL BE SENT TO ODOT, CO, CONSTRUCTION MANAGEMENT/CONSTRUCTION ADMINISTRATION, GEOTECHNICAL AND EARTHWORK ENGINEER AND ODOT, CO, OFFICE OF GEOTECHNICAL ENGINEERING, FOUNDATIONS AND RETAINING WALLS ENGINEER, AFTER EACH SETTLEMENT READING IS RECORDED.

MATERIAL: SOUND LUMBER SUCH AS ¾" EXTERIOR GRADE PLYWOOD SHALL BE USED FOR THE BASE. THE PIPE SHALL BE 2½" STANDARD BLACK PIPE WITH THREADED FITTINGS AS SHOWN ON THE PLANS. A STEEL PLATE 36" X 36" X ⅛" MAY BE SUBSTITUTED FOR THE LUMBER FOR THE PLATFORMS, AT THE CONTRACTOR'S OPTION.

CONSTRUCTION METHODS: THE PLATFORM SHALL CONFORM TO THE SETTTLEMENT PLATFORM DETAILS SHOWN ON THIS SHEET. THE PLATFORM SHALL BE SET ON A LEVEL SURFACE. THE PIPE SHALL BE FIRMLY SECURED TO THE PLATFORM AND SHALL BE MAINTAINED IN A PLUMB POSITION DURING THE PLACEMENT OF THE EMBANKMENT. THE PIPE SHALL BE MARKED AT INTERVALS TO FACILITATE MEASUREMENT OF THE DEPTH OF FILL. THE CONTRACTOR SHALL STOP WORK IN ANY LOCATION WHERE THE SETTLEMENT PLATFORM HAS BEEN DISTURBED OR DAMAGED. PLATFORMS OR PIPES DAMAGED OR DISPLACED DURING CONSTRUCTION SHALL BE RESTORED TO THEIR PROPER CONDITION AT THE CONTRACTOR'S EXPENSE.

SETTLEMENT PLATFORMS SHALL BE PLACED AT THE FOLLOWING LOCATIONS:

I.D.	STATION	OFFSET
SP1	297+60	20' RT.
SP2	297+56	44' RT.
SP3	300+84	20' RT.
SP4	300+79	44' RT.

PRIOR TO PAVING, THE TOP OF THE SETTLEMENT PLATFORM PIPE SHALL BE CUT OFF TWO FEET BELOW THE FINISHED SURFACE OF THE SUBGRADE OR FINISHED GROUND SURFACE, WHICHEVER IS APPLICABLE.

REFER TO ODOT GEOTECHNICAL BULLETIN GB4 "GUIDELINES FOR THE USE OF GEOTECHNICAL INSTRUMENTATION" FOR ADDITIONAL INSTALLATION AND MONITORING INSTRUCTION.

WAITING PERIOD CRITERIA: THE ENGINEER WILL CONSIDER THE WAITING PERIOD COMPLETE WHEN CONSECUTIVE SETTLEMENT READINGS, RECORDED AFTER EMBANKMENT CONSTRUCTION IS COMPLETE AND AT LEAST ONE WEEK (168 HOURS) APART, RESULT IN ELEVATION DIFFERENCES EQUAL TO OR LESS THAN ⅛ INCH. THE ANTICIPATED WAITING PERIOD IS 133 CALENDAR DAYS.

IF SETTLEMENT RATES EXCEED ¾ INCH PER MONTH AFTER EMBANKMENT CONSTRUCTION HAS BEEN COMPLETE FOR 45 CALENDAR DAYS. REMAINING CONSTRUCTION, INCLUDING ANY NECESSARY CORRECTIVE MEASURES, MAY PROCEED ONLY AT THE DIRECTION OF THE ENGINEER.

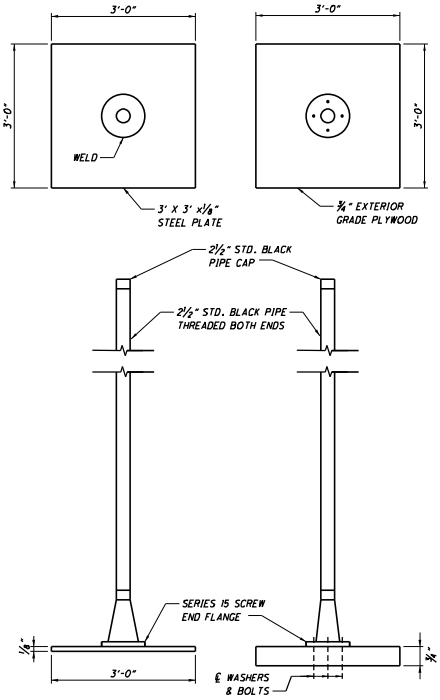
METHOD OF MEASUREMENT, THE NUMBER OF SETTLEMENT PLATFORMS TO BE PAID FOR SHALL BE THE ACTUAL NUMBER OF SETTLEMENT PLATFORMS COMPLETED, MAINTAINED, AND ACCEPTED BY THE ENGINEER.

THE DEPARTMENT WILL CONSIDER VIBRATING WIRE SETTLEMENT MONITORING PLATFORMS IN LIEU OF THE CONVENTIONAL SETTLEMENT PLATFORMS. THE CONTRACTOR SHOULD PROVIDE DETAILS OF THE PROPOSED VIBRATING WIRE SETTLEMENT PLATFORMS AS WELL AS DESIGN DRAWINGS OF THE PROPOSED PLATFORM AND CABLING LAYOUT TO THE ENGINEER AT LEAST 30 DAYS PRIOR TO CONSTRUCTION. THE DEPARTMENT WILL REQUIRE 10 WORKING DAYS FOR REVIEW AND APPROVAL. THE DESIGN DRAWINGS SHOULD ILLUSTRATE THE PROPOSED SETTLEMENT VIBRATING WIRE SETTLEMENT PLATFORM LOCATIONS WITH ALL EXISTING AND PROPOSED SITE FEATURES TO VERIFY THE PROPOSED CABLING WILL NOT CONFLICT WITH EXISTING FACILITIES, PROPOSED FACILITIES OR UTILITIES. NO ADDITIONAL PAYMENT WILL BE PROVIDED IF THE CONTRACTOR ELECTS TO UTILIZE VIBRATING WIRE SETTLEMENT PLATFORMS.

BASIS OF PAYMENT: PAYMENT SHALL BE MADE AT THE CONTRACT UNIT PRICE EACH FOR "ITEM SPECIAL - SETTLEMENT PLATFORM" WHICH IS COMPENSATION FOR CONSTRUCTING, MAINTAINING, AND MONITORING THE SETTLEMENT PLATFORMS INCLUDING FURNISHING ALL LABOR, EQUIPMENT, MATERIALS, AND INCIDENTALS NECESSARY TO COMPLETE THE WORK. PAYMENT SHALL NOT BE MADE FOR SETTLEMENT PLATFORMS WHICH BECOME USELESS DUE TO DAMAGE CAUSED BY THE CONTRACTOR'S OPERATIONS. SEE DETAIL THIS SHEET.

ABBREVIATIONS:

℄	-	CENTERLINE
ABUT.	-	ABUTMENTS
BF	-	BACK FACE
BOT.	-	BOTTOM
BRG.	-	BEARING
CIP	-	CAST IN PLACE
CJ	-	CONSTRUCTION JOINT
CONT.	-	CONTINUED
CONST.	-	CONSTRUCTION
DIA.	-	DIAMETER
EF	-	EACH FACE
EL.	-	ELEVATION
EQ.	-	EQUAL
EXIST.	-	EXISTING
EXP.	-	EXPANSION
F.A.	-	FORWARD ABUTMENT
FF	-	FRONT FACE
INT.	-	INTERMEDIATE
JT.	-	JOINT
LT	-	LEFT
M.C.	-	MECHANICAL CONNECTOR
NPCPP	-	NON - PERFORATED CORRUGATED PLASTIC PIPE
PCPP	-	PERFORATED CORRUGATED PLASTIC PIPE
P.G.	-	PROFILE GRADE
R.A.	-	REAR ABUTMENT
RCP	-	ROCK CHANNEL PROTECTION
RT.	-	RIGHT
SPA.	-	STATION
SP	-	SETTLEMENT PLATFORM
STA.	-	STATION
STR	-	STRAIGHT
T/	-	TOP OF
T/T	-	TOE TO TOE
T&B	-	TOP AND BOTTOM
TYP.	-	TYPICAL
U.N.O.	-	UNLESS NOTED OTHERWISE



NOTES:

1. SETTLEMENT PLATFORMS SHALL BE PLACED AT THE LOCATION INDICATED IN THE PLANS, UNLESS ORTHERWISE DIRECT BY THE ENGINEER.

SETTLEMENT PLATFORM
(NOT TO SCALE)

DESIGN AGENCY: Stantec 1500 JAMES DRIVE, CARROLL, OH 43112 TEL: 614-901-2238
DESIGNED BSM | DRAWN JWS | REVIEWED MRS | DATE 3/26/18
CHECKED EER | REVISED | STRUCTURE FILE NUMBER 4400372

GENERAL NOTES 2
BRIDGE NO. LAW-7-0563
S.R. 7 OVER INDIAN GUYAN CREEK

LAW-7-2.17
PID No. 75923

3 / 24

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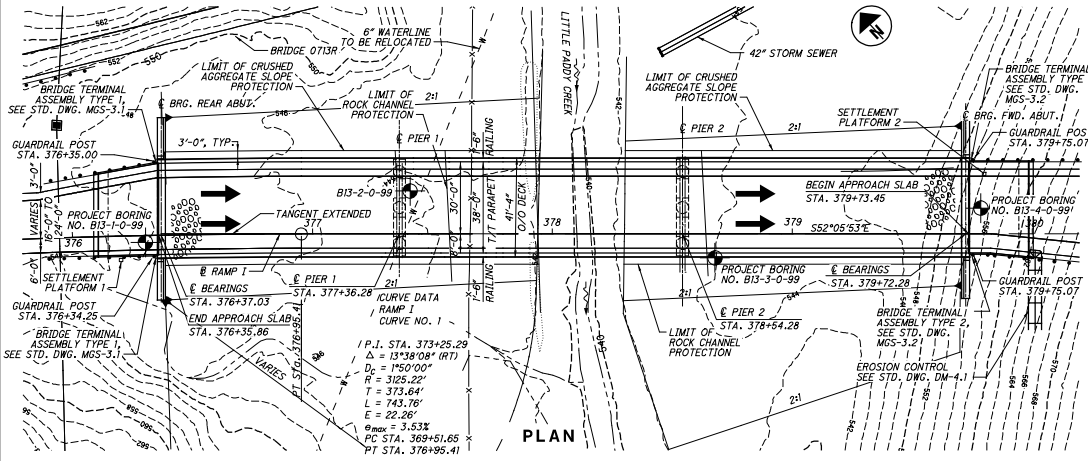
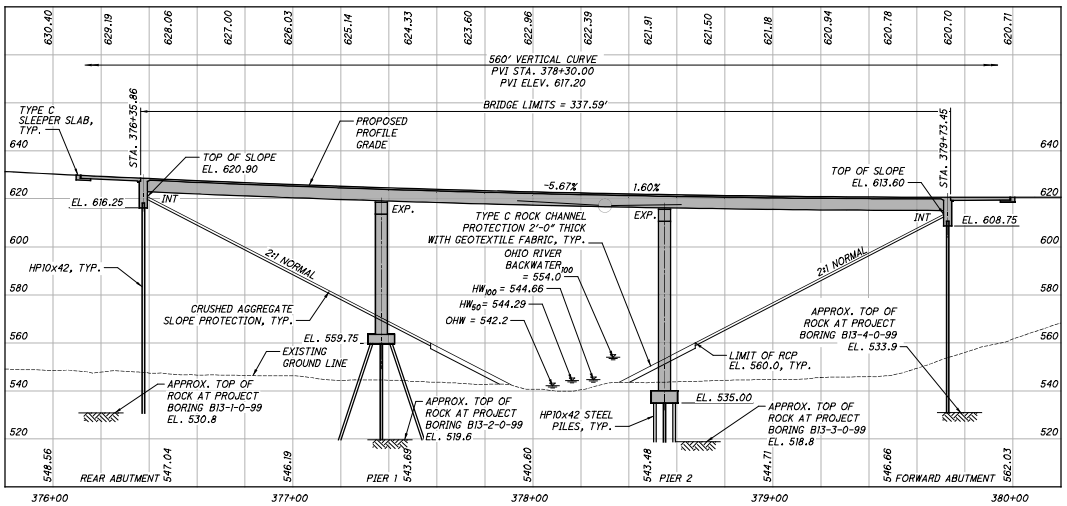




PROFILE

BENCHMARK DATA

	EASTING	NORTHING	ELEVATION
BM #1	1999157.677	167390.5880	804.00
BM #2	2004654.695	163488.2738	951.00

FOR ADDITIONAL BENCHMARK INFORMATION. SEE ROADWAY PLAN SHEET ⊕

NOTES

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

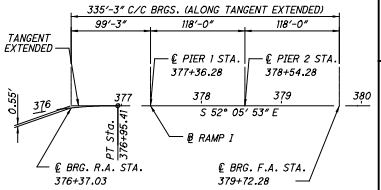
DESIGN TRAFFIC:
2028 ADT = 3,300 2028 ADTT = 231
2048 ADT = 5,100 2048 ADTT = 357
ALL TRAFFIC EASTBOUND ON THIS EXIT RAMP

LEGEND

⊕ PROJECT BORING LOCATION

HYDRAULIC DATA

DRAINAGE AREA = 1.74 SQ. MILES
Q (50) = 954 CFS V (50) = 5.42 FT/S
Q (100) = 1160 CFS V (100) = 5.87 FT/S
STRUCTURE CLEARS THE 50 YEAR
DESIGN HW BY 70.81 FEET.



GEOMETRIC LAYOUT

ESTIMATED LENGTH OF PILING	
REAR ABUT.	90 FT.
PIER 1	50 FT.
PIER 2	25 FT.
FWD. ABUT.	80 FT.

PROPOSED STRUCTURE

TYPE: PRESTRESSED CONCRETE I-BEAMS (WF54-49) WITH COMPOSITE CONCRETE SLAB SUPPORTED BY INTEGRAL ABUTMENTS AND CAP & COLUMN PIERS ON PILES
SPANS: 98'-2", 115'-10", 116'-11" C/C BEARINGS (MEASURED ALONG TANGENT EXTENDED)
ROADWAY: 38'-0" TOE/TOE BRIDGE RAILING
VEHICULAR LIVE LOAD: HL-93
SKEW: 0°00'00" (WITH RESPECT TO TANGENT EXTENDED)
FUTURE WEARING SURFACE: 0.060 KIP/FT²
APPROACH SLABS: 25' LONG (T=15") AS-1-15 (MODIFIED) & AS-2-15, TYPE C
ALIGNMENT: 1°50'00" CURVE (RT) - TANGENT
SUPERELEVATION: VARIES (.0353 MAX)
COORDINATES: LATITUDE N 38° 26' 56.01"
LONGITUDE W 82° 22' 47.56"
DECK AREA: 13,954 SF

DESIGN AGENCY: Stantec Consulting Services Inc. 1500 Lake Shore Drive, Suite 100 Columbus, Ohio 43204-3899 (614) 486-4383

DATE	REVIEWED	DRAWN	DESIGNED	CHECKED
5/18/2022	BSM	ALH	EDA	MRS
STRUCTURE FILE NUMBER 4400496	REVISED XXX			

LAWRENCE COUNTY
STA. 376+35.86
STA. 379+73.45

SITE PLAN
BRIDGE NO. LAW-7-0719P
RAMP 1 OVER LITTLE PADDY CREEK

LAW-7-2.17
PID No. 75923

1/30

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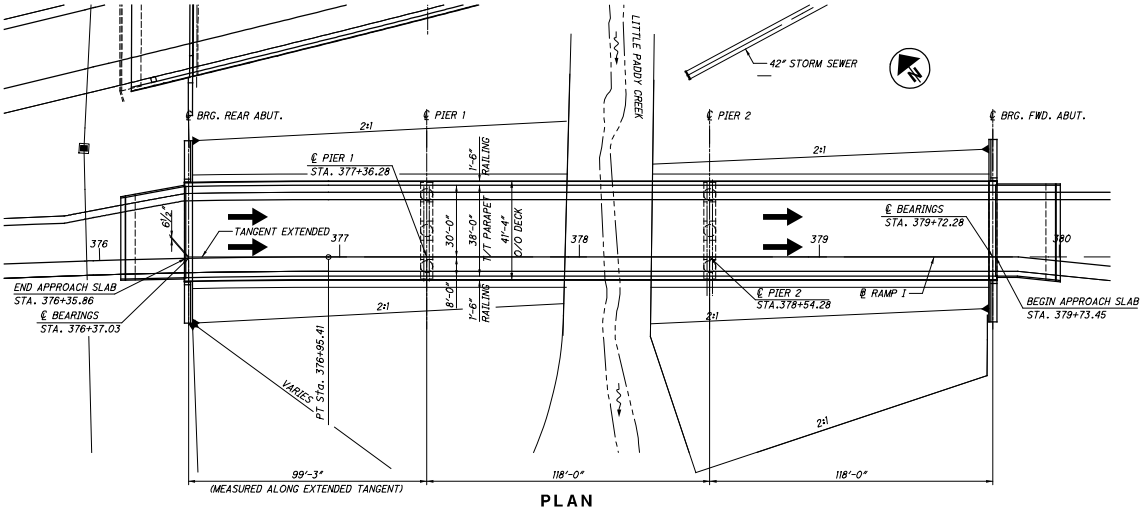

PLAN

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DESIGN AGENCY
Stantec Consulting Services Inc.
1500 Lake Shore Drive, Suite 100
Columbus, OH 43204
(614) 486-4383

DATE 5/18/2022
REVIEWED BSM
STRUCTURE FILE NUMBER 440496
DRAWN ALH
REVISED XXX
DESIGNED EDA
CHECKED MRS

GENERAL PLAN
BRIDGE NO. LAW-7-07.11
RAMP I OVER LITTLE PADDY CREEK

LAW-7-2.17
PID No. 75923

2 / 30

STANDARD DRAWINGS AND SUPPLEMENTAL SPECIFICATIONS

REFER TO THE FOLLOWING STANDARD BRIDGE DRAWING(S):

AS-1-15	REVISED	07-17-15
AS-2-15	REVISED	01-18-19
PSID-1-13	REVISED	01-15-21
SBR-1-20	DATED	01-17-20

AND TO THE FOLLOWING SUPPLEMENTAL SPECIFICATION

800	DATED	01-15-21

DESIGN SPECIFICATIONS

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

OPERATIONAL IMPORTANCE

A LOAD MODIFIER OF 1.0 HAS BEEN ASSUMED FOR THE DESIGN OF THIS STRUCTURE IN ACCORDANCE WITH THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, ARTICLE 1.3.5 AND THE ODOT BRIDGE DESIGN MANUAL, 2020

DESIGN LOADING

DESIGN LOADING: HL-93

FUTURE WEARING SURFACE (FWS) OF 0.060 KIPS/SQ.FT.

DESIGN DATA

CONCRETE CLASS QC2 WITH QC/QA
-COMPRESSIVE STRENGTH 4.5 KSI (SUPERSTRUCTURE)

CONCRETE CLASS QC1 WITH QC/QA
-COMPRESSIVE STRENGTH 4.0 KSI (PIERS)

CONCRETE CLASS QC4 WITH QC/QA
-COMPRESSIVE STRENGTH 4.0 KSI (SUBSTRUCTURE)

REINFORCING STEEL
-MINIMUM YIELD STRENGTH 60 KSI

STEEL H-PILES - ASTM A572 - YIELD STRENGTH 50 KSI

STRUCTURAL STEEL - ASTM A709 GRADE 50
-YIELD STRENGTH 50 KSI

CONCRETE FOR PRESTRESSED BEAMS:
COMPRESSIVE STRENGTH (FINAL) - 7 KSI
COMPRESSIVE STRENGTH (RELEASE) - 6 KSI

WELDED WIRE FABRIC:
YIELD STRENGTH - 70 KSI

PRESTRESSING STRAND:
AREA = 0.217 SQ.IN.
ULTIMATE STRENGTH = 270 KSI
INITIAL STRESS = 202.5 KSI (LOW RELAXATION STRANDS)

MONOLITHIC WEARING SURFACE

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

PILE DRIVING CONSTRAINTS

PRIOR TO DRIVING PILES, CONSTRUCT THE SPILL THROUGH SLOPES AND THE BRIDGE APPROACH EMBANKMENT BEHIND THE ABUTMENTS UP TO THE LEVEL OF THE SUBGRADE ELEVATION FOR A MINIMUM DISTANCE OF 200 FEET BEHIND EACH ABUTMENT. DO NOT BEGIN THE EXCAVATION FOR THE ABUTMENT AND PIER FOOTINGS AND THE INSTALLATION OF THE ABUTMENT AND PIER PILES UNTIL AFTER THE ABOVE REQUIRED EMBANKMENT HAS BEEN CONSTRUCTED AND A 128 CALENDAR DAY WAITING PERIOD HAS ELAPSED. THE ENGINEER MAY ADJUST THE LENGTH OF THE WAITING PERIOD BASED ON SETTLEMENT PLATFORM READINGS. AFTER THE SPECIFIED WAITING PERIOD HAS ELAPSED, DRIVE THE ABUTMENT AND PIER 1 AND 2 PILES TO REFUSAL ON BEDROCK.

PILES TO BEDROCK

DRIVE PILES TO REFUSAL ON BEDROCK THE DEPARTMENT WILL CONSIDER REFUSAL TO BE OBTAINED WHEN THE PILE PENETRATION IS AN INCH OR LESS AFTER RECEIVING AT LEAST 20 BLOWS FROM THE PILE HAMMER. SELECT THE HAMMER SIZE TO ACHIEVE THE REQUIRED DEPTH TO BEDROCK AND REFUSAL.

THE TOTAL FACTORED LOAD IS 177 KIPS PER PILE FOR THE REAR ABUTMENT PILES AND 203 KIPS PER PILE FOR THE FORWARD ABUTMENT PILES. NO ADDITIONAL LOADING DUE TO DOWNDRAG IS ANTICIPATED AS LONG AS THE WAITING PERIOD FOR THE APPROACH EMBANKMENTS IS OBSERVED. THE TOTAL FACTORED LOAD IS 181 KIPS PER PILE FOR THE PIER 1 PILES AND 230 KIPS PER PILE FOR THE PIER 2 PILES .

REAR ABUTMENT PILES:
10 HP 10X42 PILES 95 FEET LONG, ORDER LENGTH

PIER 1 PILES:
27 HP 10X42 PILES 55 FEET LONG, ORDER LENGTH

PIER 2 PILES:
27 HP 10X42 PILES 30 FEET LONG, ORDER LENGTH

FORWARD ABUTMENT PILES:
10 HP 10X42 PILES 85 FEET LONG, ORDER LENGTH

PILE SPLICES

IN LIEU OF USING THE FULL PENETRATION BUTT WELDS SPECIFIED IN CMS 507.09 TO SPLICE STEEL H-PILES, THE CONTRACTOR MAY USE A MANUFACTURED H-PILE SPLICER. FURNISH SPLICERS FROM THE FOLLOWING MANUFACTURER:

ASSOCIATED PILE AND FITTING CORPORATION
8 WOOD HOLLOW RD. PLAZA 1
PARSIPPANY, NEW JERSEY 07054

INSTALL AND WELD THE SPLICER TO THE PILE SECTIONS IN ACCORDANCE WITH THE MANUFACTURER'S WRITTEN ASSEMBLY PROCEDURE SUPPLIED TO THE ENGINEER BEFORE THE WELDING IS PERFORMED.

DECK PLACEMENT DESIGN ASSUMPTIONS

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

AN EIGHT WHEEL FINISHING MACHINE WITH A MAXIMUM WHEEL LOAD OF 2.4 KIPS.

A MINIMUM OUT-TO-OUT WHEEL SPACING AT EACH END OF THE MACHINE OF 103".

A MAXIMUM SPACING OF OVERHANG FALSEWORK BRACKETS OF 48 IN.

A MAXIMUM DISTANCE FROM THE CENTERLINE OF THE FASCIA GIRDER TO THE FACE OF THE SAFETY HANDRAIL OF 65".

APPROACH EMBANKMENT CONSTRUCTION:

THE APPROACH EMBANKMENTS SHALL BE CONSTRUCTED AND THEN UNDERGO A WAITING PERIOD OF 128 DAYS PRIOR TO DRIVING PILES.

SEE SHEETS XX FOR SLOPE REINFORCEMENT DETAILS AND NOTES REGARDING EMBANKMENT CONSTRUCTION.

ABBREVIATIONS:

ABUT	-	ABUTMENT
APPROX.	-	APPROXIMATE
BM	-	BENCHMARK
BRG.	-	BEARING
B/	-	BOTTOM OF
℄	-	CENTERLINE
CONC.	-	CONCRETE
CLR.	-	CLEARANCE
CONST.	-	CONSTRUCTION
DIA.	-	DIAMETER
DWG.	-	DRAWING
EF	-	EACH FACE
EL.	-	ELEVATION
EQ.	-	EQUAL
EST.	-	ESTIMATED
EXIST.	-	EXISTING
EXP.	-	EXPANSION
F.A.	-	FORWARD ABUTMENT
FF	-	FAR FACE
FNDN.	-	FOUNDATION
FTG.	-	FOOTING
FWD.	-	FORWARD
F/F	-	FACE TO FACE
HLMR	-	HIGH LOAD MULTI-ROTATIONAL BEARINGS
JT.	-	JOINT
LT.	-	LEFT
MAX.	-	MAXIMUM
MIN.	-	MINIMUM
NF	-	NEAR FACE
NO.	-	NUMBER
O/O	-	OUT TO OUT
PAVT.	-	PAVEMENT
PEJF	-	PREFORMED EXPANSION JOINT FILLER
R.A.	-	REAR ABUTMENT
REF.	-	REFERENCE
RF	-	RIGHT FORWARD
REINF.	-	REINFORCED
RT.	-	RIGHT
SP.	-	SETTLEMENT PLATFORM
SPA.	-	SPACE
S.R.	-	STATE ROUTE
STA.	-	STATION
STD.	-	STANDARD
TYP.	-	TYPICAL
T/	-	TOP OF
T/T	-	TOE TO TOE
T&B	-	TOP AND BOTTOM
VAR.	-	VARIES
REQ'D	-	REQUIRED

DESIGN AGENCY
Stantec Consulting Services Inc.
1500 Lake Shore Drive, Suite 100
Columbus, OH 43204
(614) 486-4383

DESIGNED	DRAWN	REVIEWED	DATE
EDA	ALH	BSM	5/18/2022
CHECKED	REVISED	STRUCTURE FILE NUMBER	
MRS		4400496	

GENERAL NOTES
BRIDGE NO. LAW-7-0711
RAMP I OVER LITTLE PADDY CREEK

LAW-7-2.17
PID No. 75923

3 / 30

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ITEM SPECIAL - SETTLEMENT PLATFORM:

DESCRIPTION: THIS ITEM CONSISTS OF FURNISHING, CONSTRUCTING, AND MAINTAINING SETTLEMENT PLATFORMS AND OBTAINING SETTLEMENT READINGS AS REQUIRED BY THE PLANS OR AS DIRECTED BY THE ENGINEER. SEE SETTLEMENT PLATFORM DETAIL THIS SHEET. AT THE OPTION AND EXPENSE OF THE CONTRACTOR, ADDITIONAL SETTLEMENT PLATFORMS MAY BE INSTALLED AT LOCATIONS APPROVED BY THE ENGINEER. SETTLEMENT READINGS SHALL BE TAKEN WEEKLY BEGINNING WITH THE FIRST WEEK FOLLOWING PLACEMENT OF EACH PLATFORM. THE READINGS SHALL BE PLOTTED ON GRAPH PAPER PRESENTING DEFORMATION (ON THE NEGATIVE Y-AXIS) AND FILL HEIGHT (ON THE POSITIVE Y-AXIS) VERSUS TIME (ON THE X-AXIS). A COPY OF EACH CUMULATIVE PLOT SHALL BE SENT TO ODOT, CO, CONSTRUCTION MANAGEMENT/CONSTRUCTION ADMINISTRATION, GEOTECHNICAL AND EARTHWORK ENGINEER AND ODOT, CO, OFFICE OF GEOTECHNICAL ENGINEERING, FOUNDATIONS AND RETAINING WALLS ENGINEER, AFTER EACH SETTLEMENT READING IS RECORDED.

MATERIAL: SOUND LUMBER SUCH AS ¾" EXTERIOR GRADE PLYWOOD SHALL BE USED FOR THE BASE. THE PIPE SHALL BE 2½" STANDARD BLACK PIPE WITH THREADED FITTINGS AS SHOWN ON THE PLANS. A STEEL PLATE 36" X 36" X ⅛" MAY BE SUBSTITUTED FOR THE LUMBER FOR THE PLATFORMS, AT THE CONTRACTOR'S OPTION.

CONSTRUCTION METHODS: THE PLATFORM SHALL CONFORM TO THE SETTLEMENT PLATFORM DETAILS SHOWN ON THIS SHEET. THE PLATFORM SHALL BE SET ON A LEVEL SURFACE. THE PIPE SHALL BE FIRMLY SECURED TO THE PLATFORM AND SHALL BE MAINTAINED IN A PLUMB POSITION DURING THE PLACEMENT OF THE EMBANKMENT. THE PIPE SHALL BE MARKED AT INTERVALS TO FACILITATE MEASUREMENT OF THE DEPTH OF FILL. THE CONTRACTOR SHALL STOP WORK IN ANY LOCATION WHERE THE SETTLEMENT PLATFORM HAS BEEN DISTURBED OR DAMAGED. PLATFORMS OR PIPES DAMAGED OR DISPLACED DURING CONSTRUCTION SHALL BE RESTORED TO THEIR PROPER CONDITION AT THE CONTRACTOR'S EXPENSE.

SETTLEMENT PLATFORMS SHALL BE PLACED AT THE FOLLOWING LOCATIONS:

I.D.	STATION	OFFSET
SP1	376+20	10' RIGHT
SP2	379+80	25' LEFT

PRIOR TO PAVING, THE TOP OF THE SETTLEMENT PLATFORM PIPE SHALL BE CUT OFF TWO FEET BELOW THE FINISHED SURFACE OF THE SUBGRADE OR FINISHED GROUND SURFACE, WHICHEVER IS APPLICABLE.

REFER TO ODOT GEOTECHNICAL BULLETIN GB4 "GUIDELINES FOR THE USE OF GEOTECHNICAL INSTRUMENTATION" FOR ADDITIONAL INSTALLATION AND MONITORING INSTRUCTION.

WAITING PERIOD CRITERIA:
THE ENGINEER WILL CONSIDER THE WAITING PERIOD COMPLETE WHEN CONSECUTIVE SETTLEMENT READINGS, RECORDED AFTER EMBANKMENT CONSTRUCTION IS COMPLETE AND AT LEAST ONE WEEK (168 HOURS) APART, RESULT IN ELEVATION DIFFERENCES EQUAL TO OR LESS THAN ⅛ INCH.

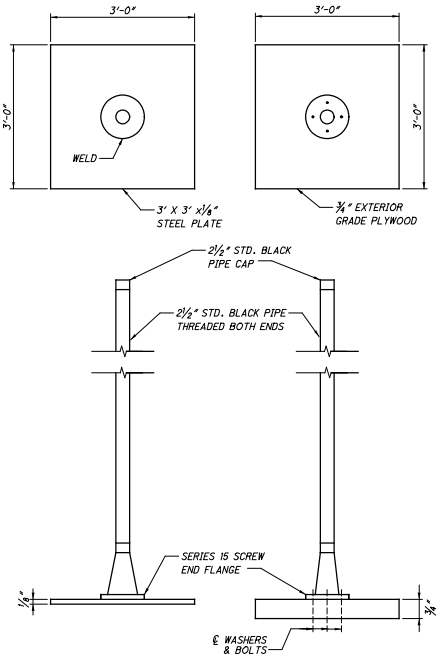
IF SETTLEMENT RATES EXCEED ¾ INCH PER MONTH AFTER EMBANKMENT CONSTRUCTION HAS BEEN COMPLETE FOR 128 CALENDAR DAYS, REMAINING CONSTRUCTION, INCLUDING ANY NECCESARY CORRECTIVE MEASURES, MAY PROCEED ONLY AT THE DIRECTION OF THE ENGINEER.

THE DEPARTMENT WILL CONSIDER VIBRATING WIRE SETTLEMENT MONITORING PLATFORMS IN LIEU OF THE CONVENTIONAL SETTLEMENT PLATFORMS. THE CONTRACTOR SHOULD PROVIDE DETAILS OF THE PROPOSED VIBRATING WIRE SETTLEMENT PLATFORMS AS WELL AS DESIGN DRAWINGS OF THE PROPOSED 30 DAYS PRIOR TO CONSTRUCTION. THE DEPARTMENT WILL REQUIRE 10 WORKING DAYS FOR REVIEW AND APPROVAL. THE DESIGN DRAWINGS SHOULD ILLUSTRATE THE LOCATIONS WITH ALL EXISTING AND PROPOSED SITE FEATURES TO VERIFY THE PROPOSED CABLING WILL NOT CONFLICT WITH EXISTING FACILITIES, PROPOSED FACILITIES OR UTILITIES. NO ADDITIONAL PAYMENT WILL BE PROVIDED IF THE CONTRACTOR ELECTS TO UTILIZE VIBRATING WIRE SETTLEMENT PLATFORMS.

MORE INFORMATION PERTAINING TO EMBANKMENT CONSTRUCTION AND CONTROLLED RATES OF FILL ARE PROVIDED IN THE ROADWAY PLANS.

METHOD OF MEASUREMENT, THE NUMBER OF SETTLEMENT PLATFORMS TO BE PAID FOR SHALL BE THE ACTUAL NUMBER OF SETTLEMENT PLATFORMS COMPLETED, MAINTAINED, AND ACCEPTED BY THE ENGINEER.

BASIS OF PAYMENT: PAYMENT SHALL BE MADE AT THE CONTRACT UNIT PRICE EACH FOR "ITEM SPECIAL - SETTLEMENT PLATFORM" WHICH IS COMPENSATION FOR CONSTRUCTING, MAINTAINING, AND MONITORING THE SETTLEMENT PLATFORMS INCLUDING FURNISHING ALL LABOR, EQUIPMENT, MATERIALS, AND INCIDENTALS NECESSARY TO COMPLETE THE WORK. PAYMENT SHALL NOT BE MADE FOR SETTLEMENT PLATFORMS WHICH BECOME USELESS DUE TO DAMAGE CAUSED BY THE CONTRACTOR'S OPERATIONS. SEE DETAIL THIS SHEET.



SETTLEMENT PLATFORM

(NOT TO SCALE)

NOTES:

1. SETTLEMENT PLATFORMS SHALL BE ANCHORED BY STAKES DRIVEN AT EACH CORNER TO PREVENT OVERTURNING.

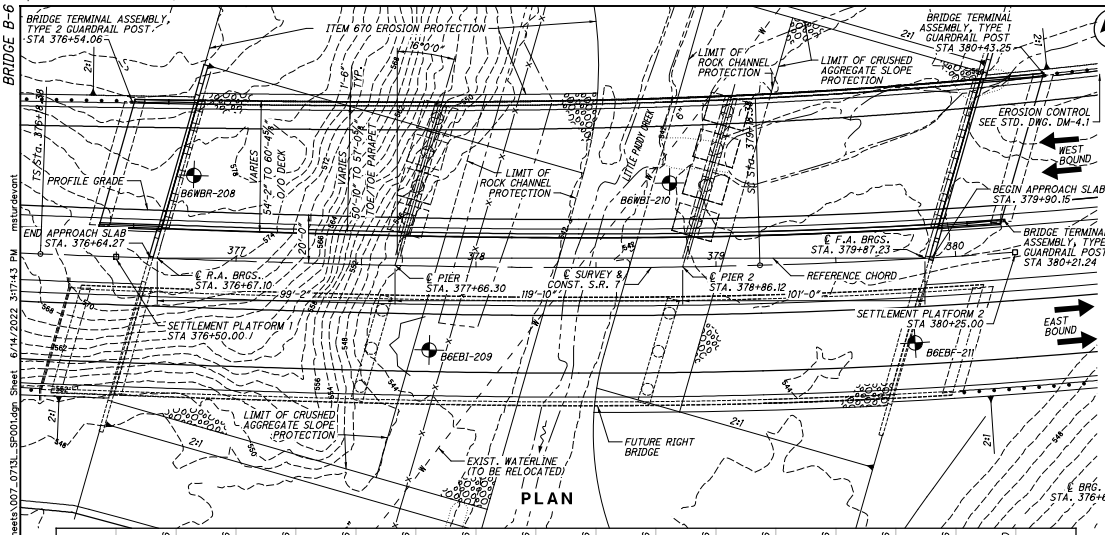
DESIGN AGENCY
Stantec Consulting Services Inc.
1500 Lake Shore Drive, Suite 100
Columbus, OH 43204
(614) 486-4383

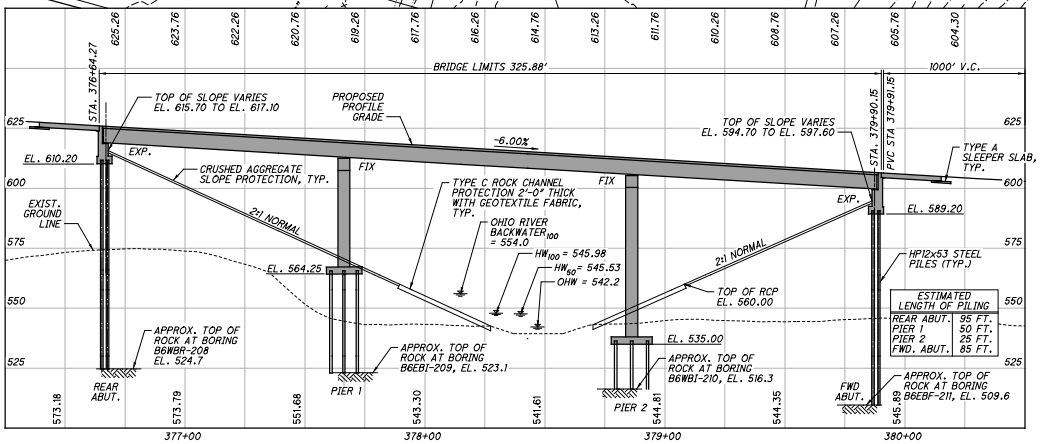
DESIGNED	DRAWN	REVIEWED	DATE
EDA	ALH	BSM	5/18/2022
CHECKED	REVISED	STRUCTURE FILE NUMBER	
MFS		4400496	

GENERAL NOTES
BRIDGE NO. LAW-7-0711
RAMP I OVER LITTLE PADDY CREEK

LAW-7-2.17
PID No. 75923

BRIDGE B-6





PROFILE ALONG S.R. 7 PROFILE GRADE

BENCHMARK DATA

BM #1 STA. 394+68.00, EL. 590.43, OFFSET 0.00,
BM #2 STA. 407+19.64, EL. 608.57, OFFSET 65.06,

FOR ADDITIONAL BENCHMARK INFORMATION. SEE ROADWAY PLAN SHEET

NOTES

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

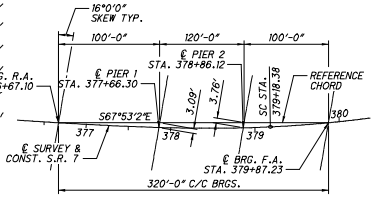
DESIGN TRAFFIC:
2028 ADT = 6,298 2028 ADTT = 693
2048 ADT = 8,225 2048 ADTT = 905
WESTBOUND TRAFFIC

LEGEND

PROJECT BORING LOCATION

HYDRAULIC DATA

DRAINAGE AREA = 1.74 SQ. MILES
Q (50) = 954 CFS V (50) = 4.23 FT/S EL. = 545.53
Q (100) = 1160 CFS V (100) = 4.46 FT/S EL. = 545.98
STRUCTURE CLEARS THE 50 YEAR DESIGN HW BY 50.61 FEET.



GEOMETRIC LAYOUT

CURVE DATA (S.R. 7 CURVE NO. 9)

P.I. STA. 387+47.15	E = 136.98'	LT = 200.04'
Δ = 46° 04' 34" (LT)	TS STA. 376+18.38	ST = 100.04'
Dc = 2° 29' 28"	SC STA. 379+18.38	e_{max} = 6.20%
R = 2,300.00'	θs = 3° 44' 12"	CS STA. 394+68.00
T = 805.51'	Ls = 300.00'	ST STA. 397+68.00
L = 1,549.62'	Ts = 1,128.77'	

PROPOSED STRUCTURE

TYPE: PRESTRESSED CONCRETE I-BEAMS (66" AASHTO MODIFIED TYPE 4) WITH COMPOSITE CONCRETE SLAB SUPPORTED BY STUB TYPE ABUTMENTS AND CAP & COLUMN PIERS ON PILES
SPANS: 98'-11", 117'-10", 98'-11" C/C BEARINGS MEASURED ALONG REFERENCE CHORD
ROADWAY: VARIES FROM 50'-9½" TO 57'-0½"
LOADING: HL-93 AND 60 LBS/FT FUTURE WEARING SURFACE
WEARING SURFACE: 1" MONOLITHIC WEARING SURFACE
SKEW: 16°00'00" LF MEASURED TO REFERENCE CHORD
APPROACH SLABS: AS-1-15 & AS-2-15, 25' LONG (MODIFIED)
ALIGNMENT: 03°44'12" SPIRAL AND 02°29'28" CURVE LEFT
SUPERELEVATION: VARIES (.062 MAX)
COORDINATES: LATITUDE N 38° 26' 56.76"
LONGITUDE W 82° 22' 44.29"
DECK AREA: 18,860 SF

DESIGN AGENCY: Stantec
DATE: 5/2021
REVIEWED BSM
DRAWN JWS
DESIGNED MRS
CHECKED EDA
REVISED
STRUCTURE FILE NUMBER 4600534

LAWRENCE COUNTY
STA. 376+64.27
STA. 379+90.15

SITE PLAN
BRIDGE NO. LAW-7-0713 L
S.R. 7 OVER LITTLE PADDY CREEK

LAW-7-2.17
PID No. 75923

1 / 27

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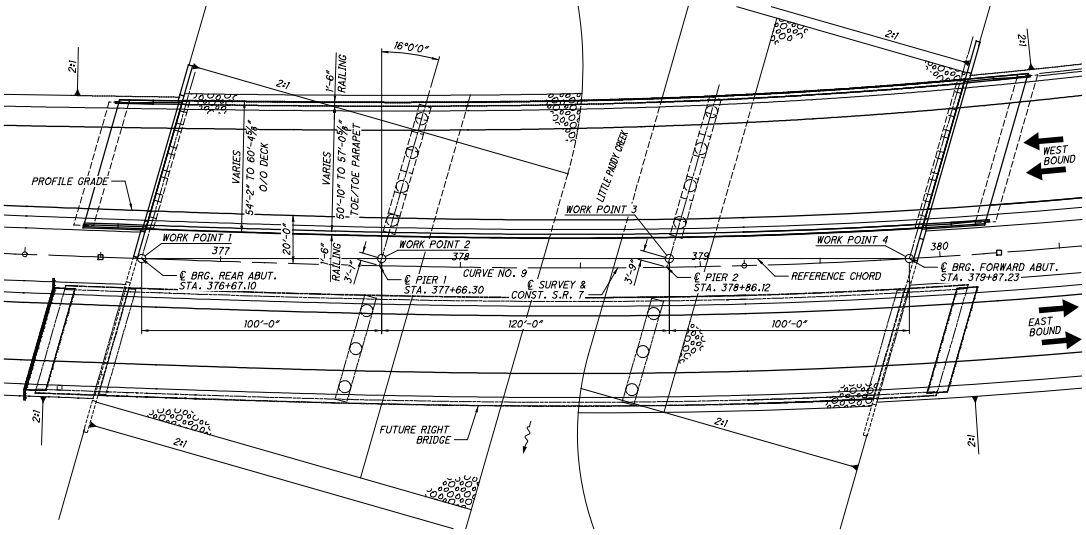
CURVE DATA
S.R. 7
CURVE NO. 9

P.I. STA. 387+47.15	θs = 3° 44′ 12″
Δ = 46° 04′ 34″ (LT)	Ls = 300.00′
Dc = 2° 29′ 28″	Ts = 1,128.77′
R = 2,300.00′	LT = 200.04′
T = 805.51′	ST = 100.04′
L = 1,549.62′	e_{max} = 6.20%
E = 136.98′	CS STA. 394+68.00
TS STA. 376+18.38	ST STA. 397+68.00
SC STA. 379+18.38	



PLAN

DESIGN AGENCY
Stantec
1303 Lake Shore Dr.
Columbus, OH 43204
(614) 486-4383

DESIGNED	DRAWN	REVIEWED	DATE
MRS	JWS	BSM	5/2021
CHECKED	REVISED	STRUCTURE FILE NUMBER	
EDA		4400534	

GENERAL PLAN
BRIDGE NO. LAW-7-0713 L
S.R. 7 OVER LITTLE PADDY CREEK

LAW-7-2.17
PID No. 75923

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STANDARD DRAWINGS AND SUPPLEMENTAL SPECIFICATIONS

REFER TO THE FOLLOWING STANDARD BRIDGE DRAWINGS:

AS-1-15	REVISED	07-17-15
AS-2-15	REVISED	01-18-19
EXJ-6-17	REVISED	01-15-21
PSID-1-13	REVISED	07-20-18
SBR-1-20	DATED	01-17-20

AND TO THE FOLLOWING SUPPLEMENTAL SPECIFICATION

800	DATED	01-15-21

DESIGN SPECIFICATIONS

THIS STRUCTURE CONFORMS TO THE "LRFD BRIDGE DESIGN SPECIFICATIONS" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 9TH EDITION AND THE ODOT BRIDGE DESIGN MANUAL, 2021.

OPERATIONAL IMPORTANCE

A LOAD MODIFIER OF 1.0 HAS BEEN ASSUMED FOR THE DESIGN OF THIS STRUCTURE IN ACCORDANCE WITH THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, ARTICLE 1.3.5 AND THE ODOT BRIDGE DESIGN MANUAL, 2020

DESIGN LOADING

DESIGN LOADING: HL-93

FUTURE WEARING SURFACE (FWS) OF 0.060 KIPS/SQ.FT.

DESIGN DATA

CONCRETE CLASS QC2 WITH QC/QA
-COMPRESSIVE STRENGTH 4.5 KSI (SUPERSTRUCTURE)

CONCRETE CLASS QC1 WITH QC/QA
-COMPRESSIVE STRENGTH 4.0 KSI (SUBSTRUCTURE)

CONCRETE CLASS QC4 MASS CONCRETE WITH QC/QA
-COMPRESSIVE STRENGTH 4.0 KSI (PIER CAPS AND COLUMNS)

REINFORCING STEEL
-MINIMUM YIELD STRENGTH 60 KSI

STEEL H-PILES - ASTM A572 - YIELD STRENGTH 50 KSI

CONCRETE FOR PRESTRESSED BEAMS:
COMPRESSIVE STRENGTH (FINAL) - 7 KSI
COMPRESSIVE STRENGTH (RELEASE) - 6 KSI

WELDED WIRE FABRIC:
YIELD STRENGTH - 70 KSI

PRESTRESSING STRAND:
AREA = 0.217 SQ.IN.
ULTIMATE STRENGTH = 270 KSI
INITIAL STRESS = 202.5 KSI
(LOW RELAXATION STRANDS)

DECK PROTECTION METHOD

EPOXY COATED REINFORCING STEEL

2.5" CONCRETE COVER

MONOLITHIC WEARING SURFACE

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

PILE DRIVING CONSTRAINTS

PRIOR TO DRIVING PILES, CONSTRUCT THE SPILL THROUGH SLOPES AND THE BRIDGE APPROACH EMBANKMENT BEHIND THE ABUTMENTS UP TO THE LEVEL OF THE SUBGRADE ELEVATION FOR A MINIMUM DISTANCE OF 200 FEET BEHIND EACH ABUTMENT. DO NOT BEGIN THE EXCAVATION FOR THE ABUTMENT AND PIER FOOTINGS AND THE INSTALLATION OF THE ABUTMENT AND PIER 1 AND 2 PILES UNTIL AFTER THE ABOVE REQUIRED EMBANKMENT HAS BEEN CONSTRUCTED AND A 180 CALENDAR DAY WAITING PERIOD HAS ELAPSED. THE ENGINEER MAY ADJUST THE LENGTH OF THE WAITING PERIOD BASED ON SETTLEMENT PLATFORM READINGS. AFTER THE SPECIFIED WAITING PERIOD HAS ELAPSED, DRIVE THE ABUTMENT AND PIER 1 AND 2 PILES TO REFUSAL ON BEDROCK.

PILES TO BEDROCK

DRIVE PILES TO REFUSAL ON BEDROCK THE DEPARTMENT WILL CONSIDER REFUSAL TO BE OBTAINED WHEN THE PILE PENETRATION IS AN INCH OR LESS AFTER RECEIVING AT LEAST 20 BLOWS FROM THE PILE HAMMER. SELECT THE HAMMER SIZE TO ACHIEVE THE REQUIRED DEPTH TO BEDROCK AND REFUSAL.

THE TOTAL FACTORED LOAD IS 125 KIPS PER PILE FOR THE ABUTMENT PILES. NO ADDITIONAL LOADING DUE TO DOWNDRAG IS ANTICIPATED AS LONG AS THE WAITING PERIOD FOR THE APPROACH EMBANKMENTS IS OBSERVED. THE TOTAL FACTORED LOAD IS 322 KIPS PER PILE FOR THE PIER 1 PILES AND 319 KIPS PER PILE FOR THE PIER 2 PILES .

REAR ABUTMENT PILES:
34 HP 12X53 PILES 100 FEET LONG, ORDER LENGTH

PIER 1 PILES:
36 HP 12X53 PILES 55 FEET LONG, ORDER LENGTH

PIER 2 PILES:
36 HP 12X53 PILES 30 FEET LONG, ORDER LENGTH

REAR ABUTMENT PILES:
36 HP 12X53 PILES 90 FEET LONG, ORDER LENGTH

PILE SPLICES

IN LIEU OF USING THE FULL PENETRATION BUTT WELDS SPECIFIED IN CMS 507.09 TO SPLICE STEEL H-PILES, THE CONTRACTOR MAY USE A MANUFACTURED H-PILE SPLICER. FURNISH SPLICERS FROM THE FOLLOWING MANUFACTURER:

ASSOCIATED PILE AND FITTING CORPORATION
8 WOOD HOLLOW RD. PLAZA 1
PARSIPPANY, NEW JERSEY 07054

INSTALL AND WELD THE SPLICER TO THE PILE SECTIONS IN ACCORDANCE WITH THE MANUFACTURER'S WRITTEN ASSEMBLY PROCEDURE SUPPLIED TO THE ENGINEER BEFORE THE WELDING IS PERFORMED.

PILE DRIVING:

THE MINIMUM RATED ENERGY OF THE HAMMER USED TO INSTALL THE PILES SHALL BE 20,100 FOOT-POUNDS. ENSURE THAT STRESSES IN THE PILES DURING DRIVING DO NOT EXCEED 45,000 POUNDS PER SQUARE INCH.

DECK PLACEMENT DESIGN ASSUMPTIONS

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

AN EIGHT WHEEL FINISHING MACHINE WITH A MAXIMUM WHEEL LOAD OF 2.4 KIPS.

A MINIMUM OUT-TO-OUT WHEEL SPACING AT EACH END OF THE MACHINE OF 103".

A MAXIMUM SPACING OF OVERHANG FALSEWORK BRACKETS OF 48 IN.

A MAXIMUM DISTANCE FROM THE CENTERLINE OF THE FASCIA GIRDER TO THE FACE OF THE SAFETY HANDRAIL OF 65".

APPROACH EMBANKMENT CONSTRUCTION:

THE APPROACH EMBANKMENTS SHALL BE CONSTRUCTED AND THEN UNDERGO AN ESTIMATED WAITING PERIOD OF 180 DAYS PRIOR TO DRIVING PILES.

REFER TO SHEETS XX FOR DETAILS AND NOTES REGARDING REINFORCED SLOPE AND EMBANKMENT CONSTRUCTION.

ACCORDINGLY, MULTIPLE APPLICATIONS OF SIGNIFICANT QUANTITIES OF WATER AS WELL AS CONSIDERABLE EFFORT WILL BE REQUIRED TO PROPERLY BREAK DOWN AND MOISTURE CONDITION THE SHALE FOR USE IN EMBANKMENT CONSTRUCTION.

ABBREVIATIONS:

ABUT	-	ABUTMENT
APPROX.	-	APPROXIMATE
BM	-	BENCHMARK
BRG.	-	BEARING
B/	-	BOTTOM OF
℄	-	CENTERLINE
CONC.	-	CONCRETE
CLR.	-	CLEARANCE
CONST.	-	CONSTRUCTION
DIA.	-	DIAMETER
EF	-	EACH FACE
EL.	-	ELEVATION
EQ.	-	EQUAL
EST.	-	ESTIMATED
EXIST.	-	EXISTING
EXP.	-	EXPANSION
F.A.	-	FORWARD ABUTMENT
FF	-	FAR FACE
FNDN.	-	FOUNDATION
FTG.	-	FOOTING
FWD.	-	FORWARD
F/F	-	FACE TO FACE
JT.	-	JOINT
LT.	-	LEFT
MAX.	-	MAXIMUM
MIN.	-	MINIMUM
NF	-	NEAR FACE
O/O	-	OUT TO OUT
PAVT.	-	PAVEMENT
PEJF	-	PREFORMED EXPANSION JOINT FILLER
R.A.	-	REAR ABUTMENT
REF.	-	REFERENCE
RF	-	RIGHT FORWARD
REINF.	-	REINFORCED
RT.	-	RIGHT
SP.	-	SETTLEMENT PLATFORM
SPA.	-	SPACE
S.R.	-	STATE ROUTE
STA.	-	STATION
TYP.	-	TYPICAL
T/	-	TOP OF
T/T	-	TOE TO TOE
T&B	-	TOP AND BOTTOM
VAR.	-	VARIES
REQ'D	-	REQUIRED

DESIGN AGENCY: Stantec (1501 Lake Shore Dr., Columbus, OH 43204, 614.486.4383)

DESIGNED	DRAWN	REVIEWED	DATE
MRS	JWS	BSM	5/2021
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EDA		4400534	

GENERAL NOTES
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3 / 27

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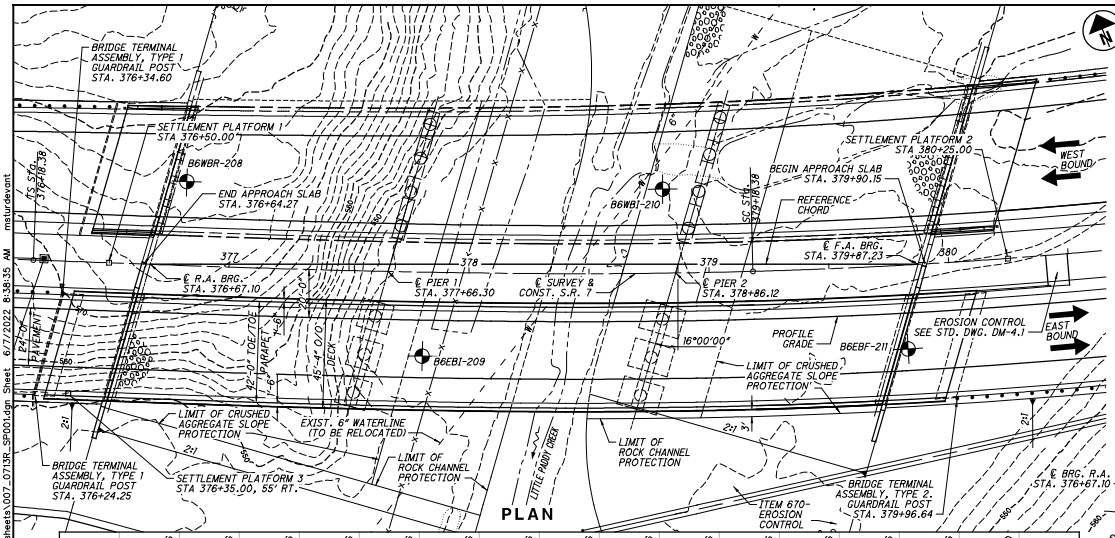
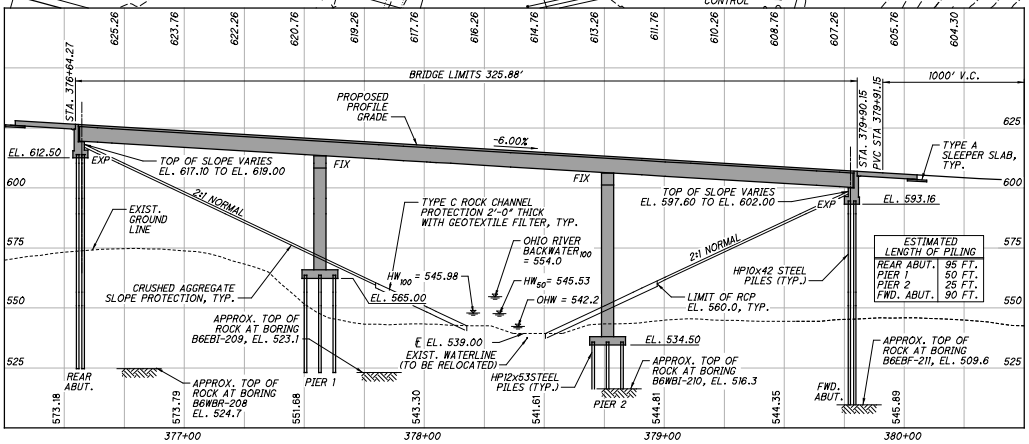




PROFILE ALONG S.R. 7 PROFILE GRADE

BENCHMARK DATA

BM #1 STA. 394+68.00, EL. 590.43 , OFFSET 0.00 ,
BM #2 STA. 407+19.64, EL. 608.57 , OFFSET 65.06', RT.

FOR ADDITIONAL BENCHMARK INFORMATION. SEE ROADWAY PLAN SHEET

NOTES

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

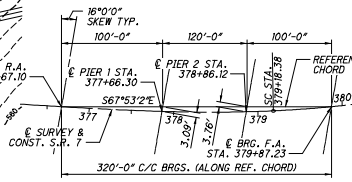
DESIGN TRAFFIC:
2028 ADT = 7,102 2028 ADTT = 781
2048 ADT = 9,275 2048 ADTT = 1,020
EASTBOUND TRAFFIC

LEGEND

PROJECT BORING LOCATION

HYDRAULIC DATA

DRAINAGE AREA = 1.74 SQ. MILES
Q (50) = 954 CFS V (50) = 4.23 FT/S
Q (100) = 1160 CFS V (100) = 4.46 FT/S
STRUCTURE CLEARS THE 50 YEAR DESIGN HW BY 53.51 FEET.



GEOMETRIC LAYOUT

CURVE DATA (S.R. 7 CURVE NO. 9)

P.I. STA. 387+47.15	E = 136.98'	LT = 200.04'
Δ = 46° 04' 34" (LT)	TS STA. 376+18.38	ST = 100.04'
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T = 805.51'	Ls = 300.00'	ST STA. 397+68.00
L = 1,549.62'	Ts = 1,128.77'	

PROPOSED STRUCTURE

TYPE: PRESTRESSED CONCRETE I-BEAMS (66" AASHTO MODIFIED TYPE 4) WITH COMPOSITE CONCRETE SLAB SUPPORTED BY STUB TYPE ABUTMENTS AND CAP & COLUMN PIERS ON PILES
SPANS: 98'-11", 117'-10", 98'-11" C/C BEARINGS (MEASURED ALONG REFERENCE CHORD)
ROADWAY: 42'-0" TOE/TOE PARAPET
LOADING: HL-93 AND 60 PSF FUTURE WEARING SURFACE
WEARING SURFACE: 1" MONOLITHIC WEARING SURFACE
SKEW: 16°0'0" LF (MEASURED WITH RESPECT TO REFERENCE CHORD)
APPROACH SLABS: AS-1-15 & AS-2-15, 25' LONG (MODIFIED)
ALIGNMENT: 03°44'12" SPIRAL AND 02°29'28" CURVE LEFT
SUPERELEVATION: VARIES (.062 MAX)
COORDINATES: LATITUDE 38° 26' 56.16"
LONGITUDE -82° 22' 44.88"
DECK AREA: 14,655 SF

DESIGN AGENCY: Stantec 500 Lake Front Dr. Columbus, OH 43206 614.486.4383
DATE: 5/2021
REVISED: BSM
STRUCTURE FILE NUMBER: 4400526
DRAWN: LBA
REVISED:
DESIGNED: MRS
CHECKED: EDA
LAWRENCE COUNTY
STA. 376+64.27
STA. 379+90.15
SITE PLAN
BRIDGE NO. LAW-7-0713 R
S.R. 7 OVER LITTLE PADDY CREEK
LAW-7-2.17
PID No. 75923
1 / 26

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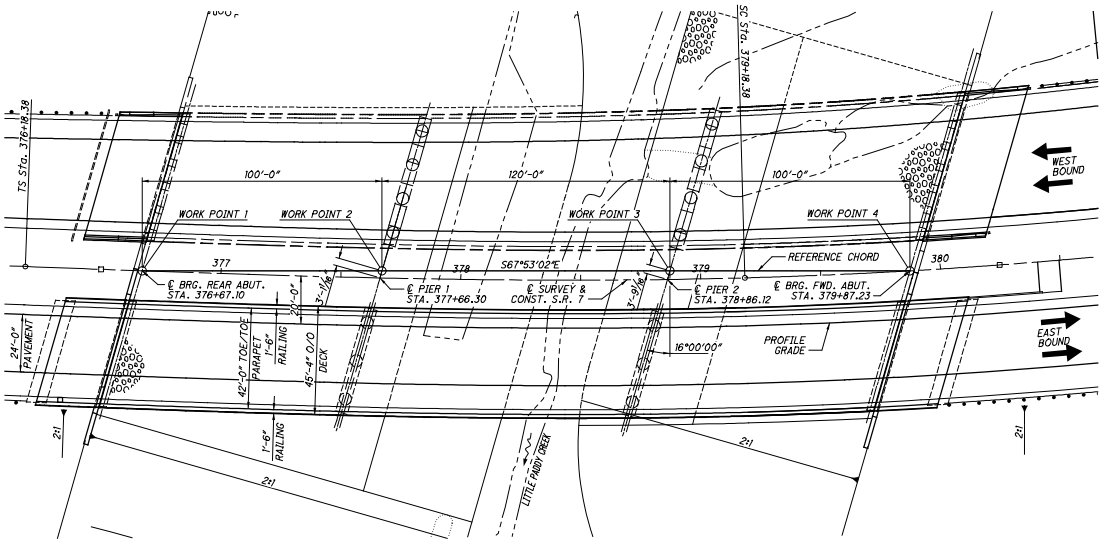
CURVE DATA
S.R. 7
CURVE NO. 9

P.I. STA. 387+47.15
Δ = 46° 04′ 34″ (LT)
Dc = 2° 29′ 28″
R = 2,300.00′
T = 805.51′
L = 1,549.62′
E = 136.98′
TS STA. 376+18.38
SC STA. 379+18.38

θs = 3° 44′ 12″
Ls = 300.00′
Ts = 1,128.77′
LT = 200.04′
ST = 100.04′
e_{max} = 6.20%
CS STA. 394+68.00
ST STA. 397+68.00



PLAN

DESIGN AGENCY
Stantec
1901 Lake Brook Dr.
Glen Allen, VA 23060
804.346.6900

DESIGNED	DRAWN	REVIEWED	DATE
MRS	ALH	BSM	5/2021
CHECKED	REVISED	STRUCTURE FILE NUMBER	
EDA		4400526	

GENERAL PLAN
BRIDGE NO. LAW-7-0713 R
S.R. 7 OVER LITTLE PADDY CREEK

LAW-7-2.17
PID No. 75923

2 / 26

STANDARD DRAWINGS AND SUPPLEMENTAL SPECIFICATIONS

REFER TO THE FOLLOWING STANDARD BRIDGE DRAWING(S):

AS-1-15	REVISED	07-17-15
AS-2-15	REVISED	01-18-19
EXJ-6-17	REVISED	01-15-21
PSID-1-13	REVISED	07-20-18
SBR-1-20	DATED	01-17-20

AND TO THE FOLLOWING SUPPLEMENTAL SPECIFICATION

800	DATED	01-15-21

DESIGN SPECIFICATIONS

THIS STRUCTURE CONFORMS TO THE "LRFD BRIDGE DESIGN SPECIFICATIONS" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 9TH EDITION AND THE ODOT BRIDGE DESIGN MANUAL, 2021.

OPERATIONAL IMPORTANCE

A LOAD MODIFIER OF 1.0 HAS BEEN ASSUMED FOR THE DESIGN OF THIS STRUCTURE IN ACCORDANCE WITH THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, ARTICLE 1.3.5 AND THE ODOT BRIDGE DESIGN MANUAL, 2020

DESIGN LOADING

DESIGN LOADING: HL-93

FUTURE WEARING SURFACE (FWS) OF 0.060 KIPS/SQ.FT.

DESIGN DATA

CONCRETE CLASS QC2 WITH QC/QA
-COMPRESSIVE STRENGTH 4.5 KSI (SUPERSTRUCTURE)

CONCRETE CLASS QC1 WITH QC/QA
-COMPRESSIVE STRENGTH 4.0 KSI (SUBSTRUCTURE)

CONCRETE CLASS QC4 MASS CONCRETE WITH QC/QA
-COMPRESSIVE STRENGTH 4.0 KSI (PIER CAPS AND COLUMNS)

REINFORCING STEEL
-MINIMUM YIELD STRENGTH 60 KSI

STEEL H-PILES - ASTM A572 - YIELD STRENGTH 50 KSI

CONCRETE FOR PRESTRESSED BEAMS:
COMPRESSIVE STRENGTH (FINAL) - 7 KSI
COMPRESSIVE STRENGTH (RELEASE) - 6 KSI

WELDED WIRE FABRIC:
YIELD STRENGTH - 70 KSI

PRESTRESSING STRAND:
AREA = 0.217 SQ.IN.
ULTIMATE STRENGTH = 270 KSI
INITIAL STRESS = 202.5 KSI
(LOW RELAXATION STRANDS)

DECK PROTECTION METHOD

EPOXY COATED REINFORCING STEEL

2.5" CONCRETE COVER

MONOLITHIC WEARING SURFACE

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

PILE DRIVING CONSTRAINTS

PRIOR TO DRIVING PILES, CONSTRUCT THE SPILL THROUGH SLOPES AND THE BRIDGE APPROACH EMBANKMENT BEHIND THE ABUTMENTS UP TO THE LEVEL OF THE SUBGRADE ELEVATION FOR A MINIMUM DISTANCE OF 200 FEET BEHIND EACH ABUTMENT. DO NOT BEGIN THE EXCAVATION FOR THE ABUTMENT AND PIER FOOTINGS AND THE INSTALLATION OF THE ABUTMENT AND PIER 1 AND 2 PILES UNTIL AFTER THE ABOVE REQUIRED EMBANKMENT HAS BEEN CONSTRUCTED AND A 180 CALENDAR DAY WAITING PERIOD HAS ELAPSED. THE ENGINEER MAY ADJUST THE LENGTH OF THE WAITING PERIOD BASED ON SETTLEMENT PLATFORM READINGS. AFTER THE SPECIFIED WAITING PERIOD HAS ELAPSED, DRIVE THE ABUTMENT AND PIER 1 AND 2 PILES TO REFUSAL ON BEDROCK.

PILES TO BEDROCK

DRIVE PILES TO REFUSAL ON BEDROCK THE DEPARTMENT WILL CONSIDER REFUSAL TO BE OBTAINED WHEN THE PILE PENETRATION IS AN INCH OR LESS AFTER RECEIVING AT LEAST 20 BLOWS FROM THE PILE HAMMER. SELECT THE HAMMER SIZE TO ACHIEVE THE REQUIRED DEPTH TO BEDROCK AND REFUSAL.

THE TOTAL FACTORED LOAD IS 250 KIPS PER PILE FOR THE ABUTMENT PILES. NO ADDITIONAL LOADING DUE TO DOWNDRAG IS ANTICIPATED AS LONG AS THE WAITING PERIOD FOR THE APPROACH EMBANKMENTS IS OBSERVED. THE TOTAL FACTORED LOAD IS 322 KIPS PER PILE FOR THE PIER 1 PILES AND 319 KIPS PER PILE FOR THE PIER 2 PILES .

REAR ABUTMENT PILES:
HP 10X42 PILES 100 FEET LONG, ORDER LENGTH

PIER 1 PILES:
HP 12X53 PILES 55 FEET LONG, ORDER LENGTH

PIER 2 PILES:
HP 12X53 PILES 30 FEET LONG, ORDER LENGTH

FORWARD ABUTMENT PILES:
HP 10X42 PILES 95 FEET LONG, ORDER LENGTH

PILE SPLICES

IN LIEU OF USING THE FULL PENETRATION BUTT WELDS SPECIFIED IN CMS 507.09 TO SPLICE STEEL H-PILES, THE CONTRACTOR MAY USE A MANUFACTURED H-PILE SPLICER. FURNISH SPLICERS FROM THE FOLLOWING MANUFACTURER:

ASSOCIATED PILE AND FITTING CORPORATION
8 WOOD HOLLOW RD. PLAZA 1
PARSIPPANY, NEW JERSEY 07054

INSTALL AND WELD THE SPLICER TO THE PILE SECTIONS IN ACCORDANCE WITH THE MANUFACTURER'S WRITTEN ASSEMBLY PROCEDURE SUPPLIED TO THE ENGINEER BEFORE THE WELDING IS PERFORMED.

PILE DRIVING:

THE MINIMUM RATED ENERGY OF THE HAMMER USED TO INSTALL THE PILES SHALL BE 20,100 FOOT-POUNDS. ENSURE THAT STRESSES IN THE PILES DURING DRIVING DO NOT EXCEED 45,000 POUNDS PER SQUARE INCH.

DECK PLACEMENT DESIGN ASSUMPTIONS

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

AN EIGHT WHEEL FINISHING MACHINE WITH A MAXIMUM WHEEL LOAD OF 2.4 KIPS.

A MINIMUM OUT-TO-OUT WHEEL SPACING AT EACH END OF THE MACHINE OF 103".

A MAXIMUM SPACING OF OVERHANG FALSEWORK BRACKETS OF 48 IN.

A MAXIMUM DISTANCE FROM THE CENTERLINE OF THE FASCIA GIRDER TO THE FACE OF THE SAFETY HANDRAIL OF 65".

APPROACH EMBANKMENT CONSTRUCTION:

THE APPROACH EMBANKMENTS SHALL BE CONSTRUCTED AND THEN UNDERGO AN ESTIMATED WAITING PERIOD OF 180 DAYS PRIOR TO DRIVING PILES.

REFER TO SHEETS XX FOR DETAILS AND NOTES REGARDING REINFORCED SLOPE AND EMBANKMENT CONSTRUCTION.

ACCORDINGLY, MULTIPLE APPLICATIONS OF SIGNIFICANT QUANTITIES OF WATER AS WELL AS CONSIDERABLE EFFORT WILL BE REQUIRED TO PROPERLY BREAK DOWN AND MOISTURE CONDITION THE SHALE FOR USE IN EMBANKMENT CONSTRUCTION.

ABBREVIATIONS:

ABUT	-	ABUTMENT
APPROX.	-	APPROXIMATE
BM	-	BENCHMARK
BRG.	-	BEARING
B/	-	BOTTOM OF
℄	-	CENTERLINE
CONC.	-	CONCRETE
CLR.	-	CLEARANCE
CONST.	-	CONSTRUCTION
DIA.	-	DIAMETER
EF	-	EACH FACE
EL.	-	ELEVATION
EQ.	-	EQUAL
EST.	-	ESTIMATED
EXIST.	-	EXISTING
EXP.	-	EXPANSION
F.A.	-	FORWARD ABUTMENT
FF	-	FAR FACE
FNDN.	-	FOUNDATION
FTG.	-	FOOTING
FWD.	-	FORWARD
F/F	-	FACE TO FACE
JT.	-	JOINT
LT.	-	LEFT
MAX.	-	MAXIMUM
MIN.	-	MINIMUM
NF	-	NEAR FACE
O/O	-	OUT TO OUT
PAVT.	-	PAVEMENT
PEJF	-	PREFORMED EXPANSION JOINT FILLER
R.A.	-	REAR ABUTMENT
REF.	-	REFERENCE
RF	-	RIGHT FORWARD
REINF.	-	REINFORCED
RT.	-	RIGHT
SP.	-	SETTLEMENT PLATFORM
SPA.	-	SPACE
S.R.	-	STATE ROUTE
STA.	-	STATION
TYP.	-	TYPICAL
T/	-	TOP OF
T/T	-	TOE TO TOE
T&B	-	TOP AND BOTTOM
VAR.	-	VARIES
REQ'D	-	REQUIRED

DESIGN AGENCY: Stantec (1901 Lake Shore Dr., Cuyahoga Falls, OH 44223, 330.923.0003)

DESIGNED	DRAWN	REVIEWED	DATE
MRS	ALH	BSM	5/2021
CHECKED	REVISED	STRUCTURE FILE NUMBER	
EDA		4400526	

GENERAL NOTES
BRIDGE NO. LAW-7-0713 R
S.R. 7 OVER LITTLE PADDY CREEK

LAW-7-2.17
PID No. 75923

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ITEM SPECIAL - SETTLEMENT PLATFORM:

DESCRIPTION: THIS ITEM CONSISTS OF FURNISHING, CONSTRUCTING, AND MAINTAINING SETTLEMENT PLATFORMS AND OBTAINING SETTLEMENT READINGS AS REQUIRED BY THE PLANS OR AS DIRECTED BY THE ENGINEER. SEE SETTLEMENT PLATFORM DETAIL THIS SHEET. AT THE OPTION AND EXPENSE OF THE CONTRACTOR, ADDITIONAL SETTLEMENT PLATFORMS MAY BE INSTALLED AT LOCATIONS APPROVED BY THE ENGINEER. SETTLEMENT READINGS SHALL BE TAKEN WEEKLY DURING CONSTRUCTION AND DURING THE SPECIFIED WAITING PERIOD BEGINNING WITH THE FIRST WEEK FOLLOWING PLACEMENT OF EACH PLATFORM. THE READINGS SHALL BE PLOTTED ON GRAPH PAPER PRESENTING DEFORMATION (ON THE NEGATIVE Y-AXIS) AND FILL HEIGHT (ON THE POSITIVE Y-AXIS) VERSUS TIME (ON THE X-AXIS). A COPY OF EACH CUMULATIVE PLOT SHALL BE SENT TO ODOT, CO, CONSTRUCTION MANAGEMENT/CONSTRUCTION ADMINISTRATION, GEOTECHNICAL AND EARTHWORK ENGINEER AND ODOT, CO, OFFICE OF GEOTECHNICAL ENGINEERING, FOUNDATIONS AND RETAINING WALLS ENGINEER, AFTER EACH SETTLEMENT READING IS RECORDED.

MATERIAL: SOUND LUMBER SUCH AS ¾" EXTERIOR GRADE PLYWOOD SHALL BE USED FOR THE BASE. THE PIPE SHALL BE 2½" STANDARD BLACK PIPE WITH THREADED FITTINGS AS SHOWN ON THE PLANS. A STEEL PLATE 36" X 36" X ⅛" MAY BE SUBSTITUTED FOR THE LUMBER FOR THE PLATFORMS, AT THE CONTRACTOR'S OPTION.

CONSTRUCTION METHODS: THE PLATFORM SHALL CONFORM TO THE SETTLEMENT PLATFORM DETAILS SHOWN ON THIS SHEET. THE PLATFORM SHALL BE SET ON A LEVEL SURFACE. THE PIPE SHALL BE FIRMLY SECURED TO THE PLATFORM AND SHALL BE MAINTAINED IN A PLUMB POSITION DURING THE PLACEMENT OF THE EMBANKMENT. THE PIPE SHALL BE MARKED AT INTERVALS TO FACILITATE MEASUREMENT OF THE DEPTH OF FILL. THE CONTRACTOR SHALL STOP WORK IN ANY LOCATION WHERE THE SETTLEMENT PLATFORM HAS BEEN DISTURBED OR DAMAGED. PLATFORMS OR PIPES DAMAGED OR DISPLACED DURING CONSTRUCTION SHALL BE RESTORED TO THEIR PROPER CONDITION AT THE CONTRACTOR'S EXPENSE.

SETTLEMENT PLATFORMS SHALL BE PLACED AT THE FOLLOWING LOCATIONS:

I.D.	*STATION*	*OFFSET*
SP1	*376+50*	*0'*
SP2	*380+25*	*0'*
SP3	*376+35*	*55'*

PRIOR TO PAVING, THE TOP OF THE SETTLEMENT PLATFORM PIPE SHALL BE CUT OFF TWO FEET BELOW THE FINISHED SURFACE OF THE SUBGRADE OR FINISHED GROUND SURFACE, WHICHEVER IS APPLICABLE.

REFER TO ODOT GEOTECHNICAL BULLETIN GB4 "GUIDELINES FOR THE USE OF GEOTECHNICAL INSTRUMENTATION" FOR ADDITIONAL INSTALLATION AND MONITORING INSTRUCTION.

WAITING PERIOD CRITERIA:
THE ENGINEER WILL CONSIDER THE WAITING PERIOD COMPLETE WHEN CONSECUTIVE SETTLEMENT READINGS, RECORDED AFTER EMBANKMENT CONSTRUCTION IS COMPLETE AND AT LEAST ONE WEEK (168 HOURS) APART, RESULT IN ELEVATION DIFFERENCES EQUAL TO OR LESS THAN ⅛ INCH. THE MINIMUM WAITING PERIOD IS 90 CALENDAR DAYS.

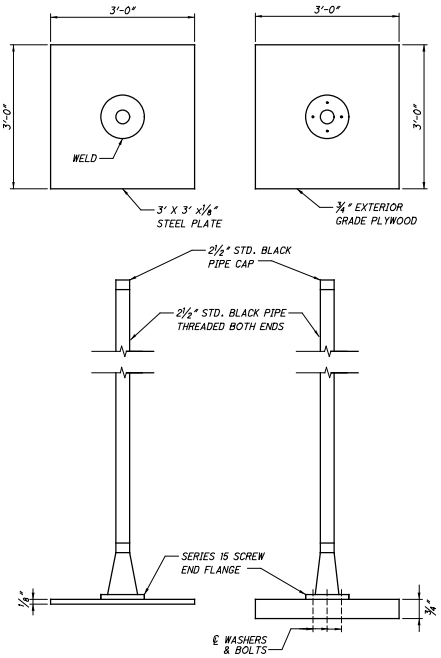
IF SETTLEMENT RATES EXCEED ¾ INCH PER MONTH AFTER EMBANKMENT CONSTRUCTION HAS BEEN COMPLETE FOR 45 CALENDAR DAYS, REMAINING CONSTRUCTION, INCLUDING ANY NECCESARY CORRECTIVE MEASURES, MAY PROCEED ONLY AT THE DIRECTION OF THE ENGINEER.

THE DEPARTMENT WILL CONSIDER VIBRATING WIRE SETTLEMENT MONITORING PLATFORMS IN LIEU OF THE CONVENTIONAL SETTLEMENT PLATFORMS. THE CONTRACTOR SHOULD PROVIDE DETAILS OF THE PROPOSED VIBRATING WIRE SETTLEMENT PLATFORMS AS WELL AS DESIGN DRAWINGS OF THE PROPOSED 30 DAYS PRIOR TO CONSTRUCTION. THE DEPARTMENT WILL REQUIRE 10 WORKING DAYS FOR REVIEW AND APPROVAL. THE DESIGN DRAWINGS SHOULD ILLUSTRATE THE LOCATIONS WITH ALL EXISTING AND PROPOSED SITE FEATURES TO VERIFY THE PROPOSED CABLING WILL NOT CONFLICT WITH EXISTING FACILITIES, PROPOSED FACILITIES OR UTILITIES. NO ADDITIONAL PAYMENT WILL BE PROVIDED IF THE CONTRACTOR ELECTS TO UTILIZE VIBRATING WIRE SETTLEMENT PLATFORMS.

MORE INFORMATION PERTAINING TO EMBANKMENT CONSTRUCTION AND CONTROLLED RATES OF FILL ARE PROVIDED IN THE ROADWAY PLANS.

METHOD OF MEASUREMENT, THE NUMBER OF SETTLEMENT PLATFORMS TO BE PAID FOR SHALL BE THE ACTUAL NUMBER OF SETTLEMENT PLATFORMS COMPLETED, MAINTAINED, AND ACCEPTED BY THE ENGINEER.

BASIS OF PAYMENT: PAYMENT SHALL BE MADE AT THE CONTRACT UNIT PRICE EACH FOR "ITEM SPECIAL - SETTLEMENT PLATFORM" WHICH IS COMPENSATION FOR CONSTRUCTING, MAINTAINING, AND MONITORING THE SETTLEMENT PLATFORMS INCLUDING FURNISHING ALL LABOR, EQUIPMENT, MATERIALS, AND INCIDENTALS NECESSARY TO COMPLETE THE WORK. PAYMENT SHALL NOT BE MADE FOR SETTLEMENT PLATFORMS WHICH BECOME USELESS DUE TO DAMAGE CAUSED BY THE CONTRACTOR'S OPERATIONS. SEE DETAIL THIS SHEET.



SETTLEMENT PLATFORM

(NOT TO SCALE)

NOTES:

1. SETTLEMENT PLATFORMS SHALL BE ANCHORED BY STAKES DRIVEN AT EACH CORNER TO PREVENT OVERTURNING.

DESIGN AGENCY: Stantec (1501 Lake Shore Dr., Columbus, OH 43204, 614.486.4383)

DESIGNED	DRAWN	REVIEWED	DATE
MRS	ALH	BSM	5/2021
CHECKED	REVISED	STRUCTURE FILE NUMBER	
EDA		4400526	

GENERAL NOTES
BRIDGE NO. LAW-7-0719 R
S.R. 7 OVER LITTLE PADDY CREEK

LAW-7-2.17
PID No. 75923

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LAW-SR 7-2.17 (Phases 2A and 2B), PID 75923
8/4/2023
Combined 404/401 Individual Permit
LAW-SR 7-2.17 (Phases 2A and 2B), PID 75923
10/21/2023

TABLE D. STREAM DISCHARGE AND FILL QUANTITIES

Stream	Station	Description of Impacts	Length (LF)	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 or DEP			Proposed Earthen, Granular, or Embankment Fill			Proposed Other (Steel, Etc.)									
						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 1	STA 124+50 to 128+00	Embankment/grading + TAF	526	3	0.5	0	0.000	0.00	0	0.000	0.00	478	0.033	26.56	0	0.000	0.00	478	0.033	26.56	140	0.010	7.78	478
Stream 2	STA 158+00	Embankment/grading + TAF	445	2	0.5	0	0.000	0.00	0	0.000	0.00	224	0.011	8.30	0	0.000	0.00	224	0.011	8.30	50	0.002	1.85	224
Stream 3	STA 161+00 to 164+25	New culvert, embankment/grading, scour protection + TAF	741	9	1	6	0.001	2.00	38	0.008	12.67	487	0.101	162.33	46	0.010	15.33	577	0.119	192.33	130	0.027	43.33	617
Stream 3a	STA 161+50 to 164.75	Embankment/grading + TAF	343	5.5	1	0	0.000	0.00	0	0.000	0.00	343	0.043	69.87	0	0.000	0.00	343	0.043	69.87	50	0.006	10.19	343
Stream 4	STA 1416+60	Grading, scour protection, (culvert replacement) + TAF	110	3.5	1	0	0.000	0.00	10	0.001	1.30	10	0.001	1.30	0	0.000	0.00	20	0.002	2.59	30	0.002	3.89	30
Stream 5	STA 183+60 to 184+90	Embankment/grading, + TAF	528	4	1	0	0.000	0.00	0	0.000	0.00	527	0.048	78.07	0	0.000	0.00	527	0.048	78.07	130	0.012	19.26	527
Stream 6	STA 189+00 to 192+50	Embankment/grading, scour protection + TAF	458	2	0.5	0	0.000	0.00	30	0.001	1.11	402	0.018	14.89	0	0.000	0.00	432	0.020	16.00	70	0.003	2.59	452
Stream 7	STA 193+00 to 200+00	Embankment/grading, scour protection + TAF	916	3.5	0.5	0	0.000	0.00	16	0.001	1.04	806	0.065	52.24	0	0.000	0.00	822	0.066	53.28	90	0.008	5.84	822
Stream 8	STA 200+75 to 202+00	Embankment/grading, + TAF	261	2	1	0	0.000	0.00	0	0.000	0.00	192	0.009	14.22	0	0.000	0.00	192	0.009	14.22	58	0.003	4.30	250
Stream 9	STA 218+50 to 230+20	New culvert, embankment/grading, scour protection + TAF	1688	7.5	1	14	0.003	3.89	36	0.006	10.00	1,456	0.251	404.44	8	0.001	2.22	1,514	0.261	420.56	110	0.019	30.56	1,544
Stream 9a	STA 228+80 to 229+70	Embankment/grading, scour protection + TAF	400	3	0.5	40	0.003	2.22	0	0.000	0.00	321	0.022	17.83	0	0.000	0.00	361	0.025	20.06	20	0.001	1.11	361
Stream 10	STA 238+00 to 270+50	Embankment/grading, scour protection + TAF	4092	5.5	0.5	15	0.002	1.60	91	0.012	9.20	3,979	0.502	405.27	0	0.000	0.00	4,085	0.516	416.06	170	0.021	17.31	4,085
Stream 10a	STA 241+45 to 242+00	Embankment/grading, scour protection + TAF	194	2.5	0.5	0	0.000	0.00	16	0.001	0.74	48	0.003	2.22	0	0.000	0.00	64	0.004	2.96	20	0.001	0.93	84
Stream 10b	STA 247+90 to 248+45	Embankment/grading, scour protection + TAF	233	2.5	0.5	0	0.000	0.00	25	0.001	1.16	132	0.008	6.11	0	0.000	0.00	157	0.009	7.27	70	0.004	3.24	177
Stream 10c	STA 261+75	Embankment/grading, scour protection + TAF	300	3	0.5	0	0.000	0.00	15	0.001	0.83	233	0.016	12.94	0	0.000	0.00	248	0.017	13.78	20	0.001	1.11	248
Stream 11	STA 270+00 to 270+75	Embankment/grading, scour protection + TAF	287	3	0.5	0	0.000	0.00	20	0.001	1.11	256	0.018	14.22	0	0.000	0.00	276	0.019	15.33	70	0.005	3.89	276
Stream 12	STA 227+80 to 278+40	Embankment/grading + TAF	349	2.5	0.5	0	0.000	0.00	0	0.000	0.00	337	0.019	16.00	0	0.000	0.00	337	0.019	16.00	70	0.004	3.24	337
Stream 13	STA 320+50 to 323+25	New culvert, embankment/grading, scour protection + TAF	913	6	0.5	0	0.000	0.00	47	0.006	5.22	720	0.099	80.00	0	0.000	0.00	767	0.106	85.22	130	0.018	14.44	787
Stream 13a	STA 319+90 to 322+25	Embankment/grading, + TAF	703	5.5	0.5	0	0.000	0.00	0	0.000	0.00	654	0.083	66.61	0	0.000	0.00	654	0.083	66.61	70	0.009	7.13	674
Stream 13a1	STA 317+75 to 319+90	Embankment/grading scour protection + TAF	346	5	1	0	0.000	0.00	5	0.001	0.93	297	0.034	55.00	0	0.000	0.00	303	0.035	56.11	70	0.008	12.96	323
Stream 13a2	STA. 319+50 to 320+10	Embankment/grading, scour protection + TAF	162	1.5	0.5	0	0.000	0.00	5	0.001	0.02	114	0.004	3.30	0	0.000	0.00	119	0.005	3.31	20	0.001	0.56	139
Stream 13a3	STA 321+00	Embankment/grading, scour protection + TAF	56	1.5	1	0	0.000	0.00	5	0.001	0.28	32	0.001	1.78	0	0.000	0.00	37	0.002	2.06	20	0.001	1.11	57

TABLE D. STREAM DISCHARGE AND FILL QUANTITIES

Stream	Station	Description of Impacts	Length (LF)	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 or DEP			Proposed Earthen, Granular, or Embankment Fill			Proposed Other (Steel, Etc.)									
						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 14	STA 337+00 to 339+80	New culvert, embankment/grading, scour protection + TAF	1199	4.5	1	12	0.001	2.00	27	0.003	4.50	968	0.100	161.33	168	0.017	28.00	1,175	0.121	195.83	150	0.015	25.00	1,195
Stream 14a	STA 338+65 to 340+25	Embankment/grading	160	2.5	0.5	0	0.000	0.00	0	0.000	0.00	160	0.009	7.41	0	0.000	0.00	160	0.009	7.41	0	0.000	0.00	160
Stream 14b	STA 339+90 to 340+60	Embankment/grading	109	2.5	0.5	0	0.000	0.00	0	0.000	0.00	85	0.005	3.94	0	0.000	0.00	85	0.005	3.94	0	0.000	0.00	85
Stream 15	STA 355+00 to 356+50	Excavation +TAF	392	2.5	0.5	0	0.000	0.00	0	0.000	0.00	209	0.012	9.68	0	0.000	0.00	209	0.012	9.68	20	0.001	0.93	229
Stream 15a	STA 353+00	TAF	74	2	0.5	0	0.000	0.00	0	0.000	0.00	0	0.000	0.00	0	0.000	0.00	0	0.000	0.00	20	0.001	1.48	20
Stream 15b	STA 349+00	TAF	31	2	0.5	0	0.000	0.00	0	0.000	0.00	0	0.000	0.00	0	0.000	0.00	0	0.000	0.00	20	0.001	1.48	20
Stream 16	STA 366+50 to 377+00	Embankment/grading, scour protection + TAF	1876	6	0.5	60	0.008	6.67	0	0.000	0.00	1,646	0.227	182.89	0	0.000	0.00	1,706	0.235	189.56	160	0.022	17.78	1,746
Stream 16a	STA 364+80 to 374+00	Embankment/grading + TAF	1075	4	0.5	0	0.000	0.00	0	0.000	0.00	1,075	0.099	79.63	0	0.000	0.00	1,075	0.099	79.63	70	0.006	5.19	1,075
Stream 16a1	STA 363+25 to 365+25	Embankment/grading	230	3	0.5	0	0.000	0.00	0	0.000	0.00	230	0.016	12.78	0	0.000	0.00	230	0.016	12.78	0	0.000	0.00	230
Stream 17	STA 379+75 to 385.75	Embankment/grading, scour protection + TAF	776	2	0.5	0	0.000	0.00	10	0.000	0.37	766	0.035	28.37	0	0.000	0.00	776	0.036	28.74	50	0.002	1.85	776
Stream 18	STA 69+69L of SR 775	scour protection	244	2	0.5	0	0.000	0.00	5	0.001	0.19	0	0.000	0.00	0	0.000	0.00	5	0.001	0.19	0	0.000	0.00	5
Symmes Creek 2	STA 134+00	Piers (new bridge) + TAF	400	90	10	50	0.002	360.00	0	0.000	0.00	0	0.000	0.00	0	0.000	0.00	50	0.002	360.00	100	0.200	1,807.41	100
Symmes Creek 3	STA 200+50	Piers (new bridge), grading + TAF	475	75	8	35	0.004	185.00	0	0.000	0.00	35	0.004	35.00	0	0.000	0.00	35	0.008	220.00	100	0.220	1,444.44	100
Bear Creek	STA 299+00	Embankment/grading, scour protection + TAF	147	14	2.5	0	0.000	0.00	16	0.001	3.00	25	0.008	33.00	0	0.000	0.00	41	0.009	36.00	20	0.001	3.70	41
Bent Creek	STA 270+00 to 274+75	New culvert, embankment/ grading, scour protection + TAF	1421	13	2	45	0.013	44.00	10	0.002	10.00	1,140	0.340	1097.00	50	0.013	48.00	1,245	0.368	1199.00	210	0.062	202.00	1,245
Indian Guyan Creek	STA 299+40	Piers (new bridge), scour protection, grading + TAF	368	44	4	50	0.005	74.00	58	0.004	20.30	58	0.002	8.70	0	0.000	0.00	58	0.011	103.00	100	0.111	488.00	100
Little Paddy Creek	STA 378+50	TAF	1996	13	3	0	0.000	0.00	0	0.000	0.00	0	0.000	0.00	0	0.000	0.00	0	0.000	0.00	180	0.049	260.00	180
Little Paddy Creek – Ramp I	STA 378+00	TAF	1996	13	3	0	0.000	0.00	0	0.000	0.00	0	0.000	0.00	0	0.000	0.00	0	0.000	0.00	85	0.025	122.00	85
					SUM:	327	0.043	681.38	485	0.054	83.95	18,445	2.245	3,173.23	272	0.041	93.56	19,387	2.382	4,032.29	2,893	0.885	4,577.88	20,227

LF = linear feet; AC = acres; CY = cubic yards; TAF= Temporary Access Fill; RCP = rock channel protection or the like; DEP = Ditch Erosion Protection; NA = Not Applicable

Combined 404/401 Individual Permit
LAW-SR 7-2.17 (Phases 2A and 2B), PID 75923
10/21/2023

TABLE E. WETLAND DISCHARGE AND FILL QUANTITIES

Wetland	Station	Description of Impacts	Acreage (AC)	Depth (LF)	Permanent Fill Within Wetland Boundary								Total Permanent Fill		Total Impact Acreage
					Proposed Concrete (Includes Culvert, Piers, Walls, Abutments, etc.)		Proposed RCP or DEP		Proposed Earthen, Granular, or Embankment Fill		Proposed Other (Steel, Etc.)				
					Area (AC)	Volume (CY)	Area (AC)	Volume (CY)	Area (AC)	Volume (CY)	Area (AC)	Volume (CY)	Area (AC)	Volume (CY)	Area (AC)
Wetland A	STA 117+90 to 120+40	Embankment/grading, scour protection, new culvert	0.79	1	0.001	1.61	0.026	41.95	0.082	132.29	0.001	1.61	0.11	177.47	0.11
Wetland B	STA 125+25 to 126+60	Embankment/grading	0.12	1	0.000	0.00	0.000	0.00	0.120	193.60	0.000	0.00	0.12	193.60	0.12
Wetland C	STA 141+75	Embankment/grading	0.03	1	0.000	0.00	0.000	0.00	0.030	48.40	0.000	0.00	0.03	48.40	0.03
Wetland D	STA 145+90 to 149+50	Embankment/grading	1.77	1	0.000	0.00	0.000	0.00	0.070	112.93	0.000	0.00	0.07	112.93	0.07
Wetland E	STA 146+00 to 154+40	Embankment/grading, scour protection	0.71	1	0.000	0.00	0.032	51.63	0.558	900.24	0.000	0.00	0.59	951.87	0.59
Wetland F	STA 203+50 to 204+50	Embankment/grading, scour protection	0.55	1	0.000	0.00	0.020	32.26	0.530	855.07	0.000	0.00	0.55	887.33	0.55
Wetland G	STA 216+50 to 217+15	Excavation/grading	0.01	1	0.000	0.00	0.000	0.00	0.010	16.13	0.000	0.00	0.01	16.13	0.01
Wetland H	STA 229+25	Embankment/grading, scour protection	0.1	1	0.001	1.61	0.000	0.00	0.099	159.72	0.000	0.00	0.10	161.33	0.10
Wetland I	STA 288+50 to 292+50	Embankment/grading	0.6	1	0.000	0.00	0.000	0.00	0.600	968.00	0.000	0.00	0.60	968.00	0.60
Wetland K	STA 316+50	Embankment/grading	0.02	1	0.000	0.00	0.000	0.00	0.020	32.27	0.000	0.00	0.02	32.27	0.02
Wetland L	STA 324+25 to 325+50	Embankment/grading	0.13	1	0.000	0.00	0.000	0.00	0.130	209.73	0.000	0.00	0.13	209.73	0.13
Wetland M	STA 326+50 to 328+50	Embankment/grading	0.26	1	0.000	0.00	0.000	0.00	0.210	338.80	0.000	0.00	0.21	338.80	0.21
Wetland N	STA 377+75 to 381+25	Embankment/grading, bridge constructon, culverts	4.78	1	0.120	183.00	0.640	1033.00	1.780	2882.00	0.000	0.00	2.54	4,098.00	2.54
Wetland P	SR 775 STA 62+00	Embankment/grading	0.06	1	0.000	0.00	0.000	0.00	0.060	96.80	0.000	0.00	0.06	96.80	0.06
Wetland Q	STA 389+25 to 396+40	Excavation/grading	0.27	1	0.000	0.00	0.000	0.00	0.130	209.73	0.000	0.00	0.13	209.73	0.13
Wetland R	STA 395+50	Embankment/grading	0.02	1	0.000	0.00	0.000	0.00	0.020	32.27	0.000	0.00	0.02	32.27	0.02
Wetland S	STA 397+50	Embankment/grading, scour protection	0.03	1	0.000	0.00	0.007	11.29	0.023	37.11	0.000	0.00	0.03	48.40	0.03
Wetland T	STA 318+50 to 319+50	Embankment/grading	0.34	1	0.000	0.00	0.000	0.00	0.180	290.40	0.000	0.00	0.18	290.40	0.18
				SUM:	0.122	186.23	0.725	1,170.13	4.652	7,515.50	0.001	1.61	5.50	8,873.47	5.50

LF = linear feet; AC = acres; CY = cubic yards; RCP = rock channel protection or the like; DEP = Ditch Erosion Protection; NA = Not Applicable

SPECIAL PROVISIONS

OEPA Notification of Demolition and Renovation/Abatement Form

C-R-S: LAW-7-2.17

PID: 75923

Date: 8/2/2024

The following is an example of the OEPA Notification of Demolition and Renovation/Abatement form that will be completed partially by the Department and provided to the contractor for each removal item. A copy of the form and instructions is also attached.

After the Department completes its' portion of the form, the Contractor will then complete the form and submit the form and payment of fees 10 days prior to the start of demolition for that parcel/removal item. The fees are incidental to Item 202 Building Demolished, As Per Plan.

The fully completed form and payment must be submitted at least 10 working days in advance of the start of demolition.

The form must be submitted to the address below or online at:
ebiz.epa.ohio.gov

Asbestos Program
Ohio EPA, DAPC
P.O. Box 1049
Columbus, OH 43216-1049

EXAMPLE OEPA NOTIFICATION FORM

Notification of Demolition and Renovation/Abatement form

Guidance

7/1/2023

This guidance has been developed to aid in the completion of the Ohio EPA Notification of Demolition and Renovation/Abatement form. Ohio EPA brought to ODOT's attention that past submissions of this form have been incomplete when forms are submitted in hard copy to the agency. This guidance shows the OEPA form and what information needs to be completed and by whom.

Section 1

Ohio Environmental Protection Agency

Notification of Demolition and Renovation/Abatement

Section 1: General Information

Division of Air Pollution Control

Work on projects cannot begin until 10 working days after a COMPLETE original notification form, **including payment**, is submitted to Ohio EPA. Instructions and a worksheet for fee calculation are available at ***epa.ohio.gov/asbestos***. This form can be completed, and payment made, at ***ebiz.epa.ohio.gov***. Questions? ***asbestos@epa.ohio.gov*** or (614) 466-0061.

Ohio EPA Use Only	Notification #:	Postmarked: / /	Received: / /	☐ Hand Delivered

1) Notification Information (Check all that apply)

☑ Original	☐ Revision # (count):	☐ Installation	☐ Emergency	☐ Annual	☐ Cancellation	**Project County:**
☐ NESHAP Residential Exemption						

Section 1 Part 1 – Notification Information - Most ODOT projects will check the "Original" box, very seldom will any other box be checked. The "Project County" should be filled in for the county where the project is located.

2) Owner, Asbestos Abatement Contractor, Billing and Fire Department Information Revised? ☐

Owner		
Name:		Is this a company? ☑ Yes ☐ No
Address:	Contact Person:	
City:	State:	Zip: -
Email:	Phone: (-	Fax: ( ) -

Section 1 Part 2 – Owner, Asbestos Abatement Contractor, Billing and Fire Department Information - This part is completed by the contractor. If the form is completed by an ODOT employee for a non-project related demolition, then Part 2 should be filled out for the district carrying out the demolition. The "Contact Person"

should be the Contractor, Project Engineer, or District Environmental Coordinator along with their information.

Asbestos Abatement Contractor (if applicable)		
Name:	License #: AC	Expiration Date: / /
Address:	Contact Person:	
City:	State:	Zip: -
Email:	Phone: ( ) -	Fax: ( ) -

Section 1 Part 2 – Asbestos Abatement Contractor – This part is completed by the contractor if abatement is required.

Billing Contact (Entity paying for original notification)		
Is this contact associated with the ☐ Owner, ☐ Asbestos Abatement Contractor, or ☑ Demolition Contractor (if not installation)?		
Address:	Contact Person:	
City:	State:	Zip: -
Email:	Phone: ( ) -	Fax: ( ) -
Fire Department (if applicable)		
Name:		
Address:	Contact Person:	
City:	State:	Zip: -
Email:	Phone: ( ) -	Fax: ( ) -

Section 1 Part 2 – Billing Contact - This part is completed by the contractor for billing purposes. For non-road construction project related demolition where an ODOT employee if filling out the information this should be the district where the work is originating.

3) Ohio Asbestos Hazard Evaluation Specialist and Evaluation Procedure **Revised?** ☐

Evaluation Specialist:	Certification #: ES	Expiration Date: / /
Procedure, including analytical methods, employed to detect the presence of and to estimate the quantity of regulated asbestos-containing material (RACM) and Category I and Category II non-friable asbestos-containing material: ☐ PLM ☐ Point Count ☐ TEM ☐ Other Method (Explain Below):		

Section 1 Part 3 – Ohio Asbestos Hazard Evaluation Specialist and Evaluation Procedures - This Part is completed by the Asbestos Evaluation Specialist who conducts the asbestos inspection. The AES will indicate the type of testing conducted on the samples collected.

4) **Procedures to be followed should unexpected RACM be discovered (check all that apply)** Revised? ☐

☑ Stop work and keep wet	☑ Evacuate area	☑ Demarcate area	☑ Contact licensed abatement contractor
☑ Contact district office/local air authority			
☐ Other (Explain):			

Section 1 Part 4 - Procedures to be followed should unexpected RACM be discovered – This part may be filled out by the Asbestos Hazard Evaluation Specialist or by the ODOT Environmental Coordinator during review. Basically, all boxes will be checked except for the "Other" box.

5) **Planned Demolition (check all that apply)** Revised? ☐

Describe demolition work to be performed and method(s) to be employed, including demolition techniques to be used: ☐ Implosion ☐ Fire Training ☐ Wet Methods ☐ Manual Demolition ☑ Mechanical Demolition ☐ Other (Explain):
Description of affected facility components (include attachment if necessary):

Section 1 Part 5 - Planned Demolition - The contractor checks the "Mechanical Demolition" box for ODOT projects. The affected facility components should be identified (Bridge, Culvert, building. Etc.). If no asbestos is present type: "No affected components".

6) **Asbestos Description and Engineering Controls (if asbestos is being abated)** Revised? ☐

For the material listed in each project, describe the type(s) of ACM to be abated, engineering controls and work practices to be used to minimize emissions and ensure proper waste handling:					
Type of ACM to be abated:	☐ Surfacing	☐ Mechanical	☐ Other		
Engineering Controls:	☐ Wet Methods	☐ Glove Bag	☐ NPE	☐ AFD	☐ Other:
Work Practices:	☐ Intact Removal	☐ Manual	☐ Mechanical	☐ Other:	

7) **Asbestos Waste Transporter (if applicable)** Revised? ☐

Transporter #1 Name:		
Address:	Contact Person:	
City:	State:	Zip: -
Email:	Phone: ( ) -	Fax: ( ) -
Transporter #2 Name (if applicable):		
Address:	Contact Person:	
City:	State:	Zip: -
Email:	Phone: ( ) -	Fax: ( ) -

8) **Asbestos Waste Disposal Site (if applicable)** Revised? ☐

Name:		
Address:	Contact Person:	
City:	State:	Zip: -
Email:	Phone: ( ) -	Fax: ( ) -

9) Emergency Demolition (complete if you checked "Emergency" above and "Demolition" for any project) **Revised?** ☐

A copy of the issued order, including the following information, **must be attached** to this notification.	
Government Official Issuing Order:	Title:
Agency:	Authority of Order (Citation of Code):
Date of Order: / /	Demolition Date: / /

10) Emergency Renovation/Abatement (complete if you checked "Emergency" above and "Renovation/Abatement" for any project) **Revised?** ☐

Date of Emergency: / /	Time of Emergency: : ☐ a.m. ☐ p.m.
Description of Sudden, Unexpected Event:	
Explanation of how the event caused unsafe conditions or equipment damage:	

Section 1 Parts 6,7,8, 9, and 10 will only be filled out by the contactor if asbestos is present and requires abatement.

11) Attestation **Revised?** ☐

In accordance with Ohio Administrative Code rule 3745-20-03(A)(4)(p), I certify that at least one person trained as required by paragraph (B) of rule 3745-20-04 of the Administrative Code will supervise the stripping and removal described by this notification. I acknowledge that the submission of false or misleading statements is prohibited by law and I certify that facts contained in this notification are true, accurate, and complete.	
Signature:	Date: / /
Name:	Title:
Organization:	

Section 1 Part 11 – Attestation - This section is completed and signed by the contractor prior to submission to the Ohio Environmental Protection Agency (OEPA)

SECTION 2

Ohio Environmental Protection Agency

Notification of Demolition and Renovation/Abatement

Section 2: Project Address Specific Information

Division of Air Pollution Control

Please complete Section 2 for the address included with this notification. If the project is an "Installation" per OAC 3745-20, complete a separate Section 2 page for each address associated with this notification.

Ohio EPA Use Only	Project ID #:

A. Facility Description **Revised?** ☐

Building Name (if applicable):	Site Location (specific):		
Address:			
City:	State: OH	Zip: -	
Building Size (square feet):	No. of Floors:	Age:	
Present Use:	Prior Use:		

Section 2 Part A – Facility Description – This section may be filled out by the Asbestos Evaluation Specialist or contractor and checked by the District Environmental Coordinator. The "Building Name" should be the county/route/section for the project. The "Site Location" should be a descriptor of the specific bridge or building (for example "SR229 Bridge over Alum Creek"). The "Address" should be the street address of the building or in the case of a bridge it should be the LAT/LON. The "City" should be the nearest town within the zip code of the project is located. The "Building Size" should be the building in square feet or bridge surface in square feet. The "Number of Floors" should be the number of floors of the building or number of bridge decks which will be in most cases (1). Only a couple bridges in Ohio have more than one deck. The "Present Use" for buildings would be identified by the last business/residence, abandoned, or bridge. The "Prior Use" would be the last use of the structure.

B. Type of Operation (check all that apply)						Revised? ☐
☑ Demolition	☐ Renovation/Abatement – Type:	☐ Removal	☐ Repair	☐ Encapsulation	☐ Enclosure	

Section 2 Part B – Type of Operation - This section will be completed by the Asbestos Evaluation Specialist and should be reviewed by the District Environmental Coordinator for completion.

For all ODOT projects Check "Demolition". The other options are for the abatement of asbestos.

C. Asbestos Present (check one)				Revised? ☐
☐ Yes	☐ No	☐ No, previously abated	Year Abated:	

Section 2 Part C – Asbestos Present - This section will be completed by the Asbestos Evaluation Specialist who will check "YES" or "NO" depending on whether asbestos is present on the structure. This section should be reviewed by the District Environmental Coordinator for completion.

D. Approximate Amount of Asbestos-Containing Materials (complete table below and Section 1 #6 if asbestos is present) Revised? ☐

	Material to be Removed			Material NOT to be Removed	
		Non-friable Asbestos-Containing Material		Non-friable Asbestos-Containing Material	
	RACM	Category I	Category II	Category I	Category II
Pipes (linear feet)					
Surface area on other facility components (ft^2)					
Volume if length or area cannot be measured (ft^3)					

Section 2 Part D – Approximate Amount of Asbestos Containing Materials – This part is completed by the Asbestos Hazard Evaluation Specialist. The type of asbestos, category, quantity, and whether it will be removed or not. This information should be the same as what is reported in the asbestos survey report.

E. Asbestos Abatement Schedule and Abatement Specialist (original notification is required 10 working days prior to the start of work) Revised? ☐

Setup Date: / /		Abatement Date: / /			Complete Date: / /		
(Shift 1) Time start/end on site	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Abatement Specialist Name:			Certification #: AS			Expiration Date: / /	
(Shift 2) Time start/end on site	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Abatement Specialist Name:			Certification #: AS			Expiration Date: / /	

Section 2 Part E – Asbestos Abatement Schedule and Abatement Specialist – This part is completed by the contractor if asbestos abatement will be required.

F. Demolition Contractor (if applicable) Revised? ☐

Name:		
Address:	Contact Person:	
City:	State:	Zip: -
Email:	Phone: ( ) -	Fax: ( ) -

Section 2 Part F – Demolition Contractor – This part is completed by the contactor with the same information documented in **Section 1 Part 2 – Billing Contact**.

G. Demolition Schedule (original notification is required 10 working days prior to the start of work) Revised? ☐

Start Date: / /	Complete Date: / /

Section 2 Part G – Demolition Schedule – This part is completed by the contractor with the start and end date of the demolition.

H. Project Hold Revised? ☐

Asbestos Abatement Offsite/On Hold as of Date: / /	Asbestos Abatement On Site/Off Hold, Work Resume Date: / /
Demolition Offsite/On Hold as of Date: / /	Demolition On Site/Off Hold, Work Resume Date: / /

Section 2 Part H - Project Hold – This part is completed by the contractor if there is a hold on the project if unknown asbestos is found during demolition and there is a hold on the project. A hold will usually be required if the project is paused for asbestos abatement.

Color Coding

We have added color coding to the form to assist in identification of those responsible for each section and part:

- Asbestos Hazard Evaluation Specialist or District Environmental Coordinator
- Demolition Contractor
- Asbestos Hazard Evaluation Specialist

OEPA NOTIFICATION FORM AND INSTRUCTIONS

Notification of Demolition and Renovation/Abatement

Section 1: General Information

Division of Air Pollution Control

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Ohio EPA Use Only	Notification #:	Postmarked: / /	Received: / /	☐ Hand-Delivered

1) Notification Information (Check all that apply)

☐ Original	☐ Revision # (count):	☐ Installation	☐ Emergency	☐ Annual	☐ Cancellation	**Project County:**
☐ NESHAP Residential Exemption						

2) Owner, Asbestos Abatement Contractor, Billing and Fire Department Information **Revised?** ☐

Owner		
Name:		Is this a company? ☐ Yes ☐ No
Address:	Contact Person:	
City:	State:	Zip: -
Email:	Phone: ( ) -	Fax: ( ) -
Asbestos Abatement Contractor (if applicable)		
Name:	License #: AC	Expiration Date: / /
Address:	Contact Person:	
City:	State:	Zip: -
Email:	Phone: ( ) -	Fax: ( ) -
Billing Contact (Entity paying for original notification)		
Is this contact associated with the ☐ Owner, ☐ Asbestos Abatement Contractor, or ☐ Demolition Contractor (if not installation)?		
Address:	Contact Person:	
City:	State:	Zip: -
Email:	Phone: ( ) -	Fax: ( ) -
Fire Department (if applicable)		
Name:		
Address:	Contact Person:	
City:	State:	Zip: -
Email:	Phone: ( ) -	Fax: ( ) -

3) Ohio Asbestos Hazard Evaluation Specialist and Evaluation Procedure **Revised?** ☐

Evaluation Specialist:	Certification #: ES	Expiration Date: / /
Procedure, including analytical methods, employed to detect the presence of and to estimate the quantity of regulated asbestos-containing material (RACM) and Category I and Category II non-friable asbestos-containing material: ☐ PLM ☐ Point Count ☐ TEM ☐ Other Method (Explain Below):		

4) Procedures to be followed should unexpected RACM be discovered (check all that apply) **Revised?** ☐

☐ Stop work and keep wet	☐ Evacuate area	☐ Demarcate area	☐ Contact licensed abatement contractor
☐ Contact district office/local air authority			
☐ Other (Explain):			

5) Planned Demolition (check all that apply) **Revised?** ☐

Describe demolition work to be performed and method(s) to be employed, including demolition techniques to be used: ☐ Implosion ☐ Fire Training ☐ Wet Methods ☐ Manual Demolition ☐ Mechanical Demolition ☐ Other (Explain):
Description of affected facility components (include attachment if necessary):

Mail completed form and payment to:
Ohio EPA, DAPC – Asbestos
P.O. Box 1049, Columbus, OH 43216-1049

Notification of Demolition and Renovation/Abatement

Section 1: General Information

Continued

6) Asbestos Description and Engineering Controls (if asbestos is being abated) **Revised?** ☐

For the material listed in each project, describe the type(s) of ACM to be abated, engineering controls and work practices to be used to minimize emissions and ensure proper waste handling:					
Type of ACM to be abated:	☐ Surfacing	☐ Mechanical	☐ Other		
Engineering Controls:	☐ Wet Methods	☐ Glove Bag	☐ NPE	☐ AFD	☐ Other:
Work Practices:	☐ Intact Removal	☐ Manual	☐ Mechanical	☐ Other:	

7) Asbestos Waste Transporter (if applicable) **Revised?** ☐

Transporter #1 Name:		
Address:	Contact Person:	
City:	State:	Zip: -
Email:	Phone: ( ) -	Fax: ( ) -
Transporter #2 Name (if applicable):		
Address:	Contact Person:	
City:	State:	Zip: -
Email:	Phone: ( ) -	Fax: ( ) -

8) Asbestos Waste Disposal Site (if applicable) **Revised?** ☐

Name:		
Address:	Contact Person:	
City:	State:	Zip: -
Email:	Phone: ( ) -	Fax: ( ) -

9) Emergency Demolition (complete if you checked "Emergency" above and "Demolition" for any project) **Revised?** ☐

A copy of the issued order, including the following information, **must be attached** to this notification.	
Government Official Issuing Order:	Title:
Agency:	Authority of Order (Citation of Code):
Date of Order: / /	Demolition Date: / /

10) Emergency Renovation/Abatement (complete if you checked "Emergency" above and "Renovation/Abatement" for any project) **Revised?** ☐

Date of Emergency: / /	Time of Emergency: : ☐ a.m. ☐ p.m.
Description of Sudden, Unexpected Event:	
Explanation of how the event caused unsafe conditions or equipment damage:	

11) Attestation **Revised?** ☐

In accordance with Ohio Administrative Code rule 3745-20-03(A)(4)(p), I certify that at least one person trained as required by paragraph (B) of rule 3745-20-04 of the Administrative Code will supervise the stripping and removal described by this notification. I acknowledge that the submission of false or misleading statements is prohibited by law and I certify that facts contained in this notification are true, accurate, and complete.	
Signature:	Date: / /
Name:	Title:
Organization:	

Notification of Demolition and Renovation/Abatement
Section 2: Project Address Specific Information
Division of Air Pollution Control

Please complete Section 2 for the address included with this notification. If the project is an "Installation" per OAC 3745-20, complete a separate Section 2 page for each address associated with this notification.

Ohio EPA Use Only	Project ID #:

A. Facility Description **Revised?** ☐

Building Name (if applicable):	Site Location (specific):	
Address:		
City:	State: OH	Zip: -
Building Size (square feet):	No. of Floors:	Age:
Present Use:	Prior Use:	

B. Type of Operation (check all that apply) **Revised?** ☐

☐ Demolition	☐ Renovation/Abatement – Type: ☐ Removal ☐ Repair ☐ Encapsulation ☐ Enclosure

C. Asbestos Present (check one) **Revised?** ☐

☐ Yes	☐ No	☐ No, previously abated	Year Abated:

D. Approximate Amount of Asbestos-Containing Materials (complete table below and Section 1 #6 if asbestos is present) **Revised?** ☐

	Material to be Removed			Material NOT to be Removed	
		Non-friable Asbestos-Containing Material		Non-friable Asbestos-Containing Material	
	RACM	Category I	Category II	Category I	Category II
Pipes (linear feet)					
Surface area on other facility components (ft^2)					
Volume if length or area cannot be measured (ft^3)					

E. Asbestos Abatement Schedule and Abatement Specialist (original notification is required 10 working days prior to the start of work) **Revised?** ☐

Setup Date: / /		Abatement Date: / /			Complete Date: / /		
(Shift 1) Time start/end on site	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Abatement Specialist Name:			Certification #: AS			Expiration Date: / /	
(Shift 2) Time start/end on site	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Abatement Specialist Name:			Certification #: AS			Expiration Date: / /	

F. Demolition Contractor (if applicable) **Revised?** ☐

Name:		
Address:	Contact Person:	
City:	State:	Zip: -
Email:	Phone: ( ) -	Fax: ( ) -

G. Demolition Schedule (original notification is required 10 working days prior to the start of work) **Revised?** ☐

Start Date: / /	Complete Date: / /

H. Project Hold **Revised?** ☐

Asbestos Abatement Offsite/On Hold as of Date: / /	Asbestos Abatement On Site/Off Hold, Work Resume Date: / /
Demolition Offsite/On Hold as of Date: / /	Demolition On Site/Off Hold, Work Resume Date: / /

OHIO ENVIRONMENTAL PROTECTION AGENCY
INSTRUCTIONS FOR COMPLETING
NOTIFICATION OF DEMOLITION AND RENOVATION/ABATEMENT FORM

General Information

These directions are for submitting hardcopy notifications to the Ohio EPA. Ohio EPA strongly encourages notifications to be submitted electronically via the Ohio EPA eBusiness Center located at ebiz.epa.ohio.gov.

Who must submit this notification? *[OAC 3745-20-03 and OAC 3745-22-04(C)(4)]*

- The owner or operator means any person who leases, operates, controls, or supervises the facility being demolished or renovated, or any person who owns, leases, operates, controls or supervises the demolition or renovation (activity), or both.
- Asbestos Abatement Contractor means a contractor who is currently licensed by the Ohio EPA as an Asbestos Hazard Abatement Contractor.

The Ohio EPA notification of demolition and renovation form is required for:

- Every demolition of a facility, regardless of whether asbestos is involved. This includes all structures that will be intentionally burned for fire training purposes.
- A renovation when the amount of regulated asbestos-containing material (RACM) stripped, removed, dislodged, cut, drilled, or similarly disturbed exceeds 260 linear feet on pipes or 160 square feet on other facility components or 35 cubic feet off facility components.
- An abatement when the activity involves the removal, renovation, enclosure, repair or encapsulation of friable asbestos-containing material in an amount greater than 50 linear feet on pipes or 50 square feet on other facility components.

When must I submit this notification?

ORIGINAL: The original notification must be **postmarked** or **hand delivered** to the Ohio EPA Central Office at least 10 working days (Monday-Friday excluding weekends) before operations begin. Please see example table below to help determine when to submit the original notification.
E-mail or FAX is not acceptable for original notification.

July

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
	1	2	3 day 1	4 day 2	5 day 3	6
7	8 day 4	9 day 5	10 day 6	11 day 7	12 day 8	13
14	15 day 9	16 day 10	17 *	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

Post mark date (and Day 1 of 10-day clock): July 3rd.
Note: Holidays are counted when they fall on a working day.
Completion of 10-day prior notification period: July 16th.
* First day work can commence (day following the 10th working day): July 17th.

REVISIONS: A revised notification must be submitted if there is any change in the notification which renders information in the notification no longer accurate. Examples of changes include but are not limited to: if the amount of RACM changes by at least 20 percent, any changes in work schedules (dates or hours), any change in owner or operator, a change in the asbestos hazard abatement specialist onsite, or any change in the name or location of selected waste disposal site. A revised notification may be initiated by phone, however, must be followed in writing by either email or fax. Revisions shall be submitted as soon as possible but not later than one working day following discovery of the change.

EMERGENCY DEMOLITION OR RENOVATIONS: The notification must be submitted as early as possible before, but not later than, the following working day from start of demolition or renovation/abatement activities. The notification must include the supplemental information required in Sections 9 or 10.

Where do I send my notification?

Send the notification to: Ohio EPA Central Office, Division of Air Pollution Control, P.O. Box 1049, Columbus, Ohio 43216-1049.

How does Ohio EPA assess fees? [*ORC 3745.11(G) and OAC 3745-22-04(C)*]

Per ORC 3745.11(G), an owner or operator who is responsible for an asbestos demolition or renovation/abatement project regulated under OAC Chapter 3745-20, shall pay the fees set forth in the following schedule. This applies when thresholds are greater than or equal to: 260 linear feet; 160 square feet; or 35 cubic feet.

- Each notification $75 plus,
- Asbestos removal $3/unit (1 unit = any combination of linear feet or square feet equal to fifty) and/or
- Asbestos cleanup $4/cubic yard

Per OAC 3745-22-04(C), if the renovation/abatement project involves removal, encapsulation, enclosure or repair of greater than 50 square feet or 50 linear feet of RACM, the Ohio EPA licensed asbestos hazard abatement contractor is responsible for paying the fees set forth in the following schedule.

- If notification is not an installation, $65 fee, or
- If notification is an installation, $65 fee for each address where RACM exceeds 50 square feet or 50 linear feet.

The fees shall be submitted with the original notification. Check or Money Order shall be made payable to: Treasurer, Sate of Ohio. Projects may be subject to both regulatory fee requirements above. Please be aware that some local air agencies may have additional fees.

Who can help answer questions about completing this notification?

Contact the Ohio EPA Central Office at 614-466-0061 or by email at asbestos@epa.ohio.gov.

Line-by-line Instructions

[Below listed instructions are for hardcopy form submission only]

Section 1: General Information

1. Check the type of notification (all that apply):

- "Original" is the first notification submitted for a project; hardcopy is required to be post-marked or hand-delivered 10 working-days prior to start of work.

- "Revision" is any notification submitted after the original due to any change which renders information on the form no longer accurate. Examples of changes requiring a revision include but are not limited to: if the amount of RACM changes by at least 20 percent, any changes in work schedules (dates or hours), any change in owner or operator, a change in the asbestos hazard abatement specialist onsite, or any change in the name or location of selected waste disposal site. Revisions shall be numbered chronologically with Revision #1 being the first time any items on the notification form were changed. If revision is marked, please include the Revision # and check the "Revised" box for each section where information is revised. A "Revised" box is located near the upper right hand side of each section throughout the form.

- "Installation" means any building or structure or any group of buildings or structures at a single demolition or renovation/abatement site that are under the control of the same owner or operator, or owner or operator under common control. This would include projects where multiple addresses are included in a common project, have the same owner, and are being completed in the same county (i.e. land banks, residential cooperatives, highway projects involving multiple facility demolitions, etc.). If the project includes more than one structure or address, be sure to complete a separate "Section 2: Project Address Specific Information" page for each address.

- "Emergency" includes emergency demolitions and emergency renovation/abatement operations. Emergency demolition means any demolition operation conducted under a written order issued by a state or local

governmental agency because a facility is structurally unsound and in danger of imminent collapse. Emergency renovation/abatement means a renovation/abatement operation that was not planned but results from a sudden, unexpected event that, if not immediately attended to, presents a safety or public health hazard, is necessary to protect equipment from damage, or is necessary to avoid imposing an unreasonable financial burden. This term includes operations necessitated by non-routine failures of equipment, by actions of fire or emergency medical personnel pursuant to duties within their official capacities, or by significantly damaged friable asbestos-containing material causing an environmental health hazard (as assessed by an asbestos hazard evaluation specialist). The notification must be submitted as early as possible before, but not later than, the following working day from start of demolition or renovation/abatement activities. The notification must include the supplemental information required in Sections 9 or 10.

- "Annual" refers to planned renovation operations over a calendar year involving a series of non-scheduled operations that are collectively greater than the threshold limits; these notifications must be submitted in the month prior to the beginning of the calendar year. See separate guidance document or contact Ohio EPA Central Office to determine if the project will meet Annual notification requirements.

- "Cancellation" is submitted to indicate a project has been cancelled and work will not be completed.

- "County" is for listing the County in which the project will occur.

- "NESHAP Residential Exemption" is for a project that meets the residential building exemption requirements of OAC 3745-20 rules, however, a notification is still required due to OAC 3745-22 rules (RACM exceeds 50 square feet or 50 linear feet). Checking this box will indicated that the $65 notification fee per OAC 3745-22-04(C) still applies, however, the $75 notification fee + RACM fees per ORC 3745.11(G) will <u>not</u> apply.

2. Provide owner, asbestos abatement contractor, billing, fire department Information (all that apply):

- In the "Owner" line, list the property owner [individual(s) who own(s) the property at the time of demolition/renovation (Note, this may be a government or private entity)] or list the Coordinating Entity (i.e., land bank, municipality, etc.) if the facility is part of a larger project or installation. Include address, contact person, phone, fax, and email for the listed Owner.

- Specify the name, address, contact person, phone, fax, email, and Ohio Environmental Protection Agency license number (ACXXXX) for the "Asbestos Abatement Contractor" (if regulated asbestos containing material(s) is being abated).

- Specify the billing contact for the project notification fees, either the Owner, the Asbestos Abatement Contractor, or the Demolition Contractor (if project is not an installation).

- Specify the name, address, contact person, phone, fax, email, for the "Fire Department" (if demolition of a facility is by intentional burning).

3. For any project subject to OAC 3745-20, include the Asbestos Hazard "Evaluation Specialist" Name, "Certification # (ESXXXX)", and "procedure used to detect and analyze asbestos". Analytical methods could include the collection of samples and sample analyses by polarized light microscopy (PLM) with dispersion staining. For samples that test under 10% asbestos content: An owner or operator may (a) elect to assume material to be greater than 1% asbestos, or, (b) require verification by point counting in which the point counting result will supersede the PLM estimation; Both choice and result should be stated on the notification. Explain any other method(s) used. All owners/operators should have the records of the asbestos assessment and analyses (inspection/survey report) on-site during active operations for reference and inspection. Such records would include a list of materials assessed, locations sampled and the sample results; this information can be found within the asbestos inspection report.

4. Describe the specific procedures to be followed in the event unexpected regulated asbestos-containing material (RACM) is found or non-friable asbestos-containing material becomes friable RACM.

<u>Examples:</u>

A. Stop work, evacuate area, and demarcate the area.

B. Wetting of ACM with amended water and using wet cleaning methods.

Should the discovery of unexpected RACM change the original amount of asbestos to be abated by 20 percent or more, you

must submit a revised notification pursuant to OAC 3745-20-03. A revised notification must reflect the change in the amount of affected asbestos-containing material. The revised notification must also reflect the new asbestos removal start date, if applicable.

5. Select the appropriate box (*Implosion, Fire Training, Wet Methods, Manual Demolition, Mechanical Demolition or Other*). Underneath the check boxes, write a brief summary of the specific method to be used on this project. In the box *Description of affected facility components*, include detailed information for each component where RACM is being removed. "Fire Training" refers to the demolition of a facility by intentional burning. All asbestos containing material, including Category I and Category II non-friable ACM, must be removed in accordance with OAC 3745-20 before burning. Additional requirements also apply; please contact the Ohio EPA District Office or Local Air Agency with jurisdiction for additional information (See attached map).

6. For the materials listed in each project, on the line for *Type of ACM to be abated*, check the appropriate box (*Surfacing, Mechanical or Other*). If "*Other"* is selected, specify what the asbestos material is. At least one box must be checked, but if multiple types of asbestos are being removed, multiple boxes may be checked. On the line for *Engineering Controls*, select the appropriate box (*Wet Methods, Glove Bag, NPE, AFD or Other*). If "*Other"* is selected, specify the method(s) to be used. At least one type of engineering control must be selected, but multiple methods may be selected. On the line for *Work Practices*, select the appropriate box (*Intact Removal, Manual, Mechanical or Other*). If "*Other"* is selected, specify what the work practice method is. At least one work practice box must be selected but more than one may be selected.

7. Please complete the information for this section if asbestos containing material is being removed. On the name line, enter the name of the transporter company (example: *Jones Waste Hauler*) and complete the other fields in accordance to the information relating to this company. If more than one transporter is being used, complete the information for the second transporter in this same manner. **NOTE: you must also complete a Waste Shipment Record prior to consigning any asbestos containing waste materials (ACWM).**

8. Enter the name of the waste disposal site and complete all the other fields based on the physical location of the site. Check the following Ohio EPA website for an updated list of approved asbestos accepting waste disposal sites: https://epa.ohio.gov/divisions-and-offices/air-pollution-control/asbestos-abatement-and-demolition/resources

9. This section must be completed for emergency demolitions that meet the definitions and requirements of the regulation. If a facility is not in imminent danger of collapse, it is not an emergency demolition even though it may be ordered to be demolished due to hazardous conditions. Provide the name, title and agency of the state or local governmental representative who has ordered the demolition. The Authority of Order is the applicable state or local regulation under which the demolition order has been issued. **You must attach a copy of the demolition order to the notification.**

10. This section shall be completed for emergency renovations/abatement that meet criteria described in OAC 3745-20-01 and OAC 3745-22-03(H). **You must provide detail on the four items listed in this section, including a description of how the project meets the "emergency" requirements of OAC 3745-22-03(H). A separate sheet may be needed.**

11. The person signing this notification is attesting to the fact that in accordance with Ohio Administrative Code rule 3745-20-03(A)(4)(p), they are certifying that at least one person trained as required by paragraph (B) of rule 3745-20-04 of the Administrative Code will supervise the stripping and removal described by this notification, and are acknowledging that the submission of false or misleading statements is prohibited by law and certifying that facts contained in this notification are true, accurate, and complete.

Section 2: Project Address Specific Information

Please complete Section 2 for the address included with this notification. If the project is an "Installation" per OAC 3745-20, complete a separate Section 2 page for each address associated with this notification.

A. Describe the building(s) or structure(s) affected by the operations. Include building size in square feet, specific site location, number of floors, and age in years. Also include the present and prior use (i.e., industrial, commercial, institutional, residential, vacant, etc.) of the building(s).

B. Identify the type of operation. Definitions of these terms can be found in OAC 3745-20-01.

- "Demolition" means the wrecking, or taking out of any load-supporting structural member of a facility together with any related handling operations or the intentional burning of any facility.

- "Renovation" means altering a facility or one or more facility components in any way, including the stripping or removal of regulated asbestos-containing material in an amount greater than 260 linear feet, 160 square feet, or 35 cubic feet from a facility component. Operations in which load-supporting structural members are wrecked or taken out are demolitions.

- "Abatement" refers to any Asbestos hazard abatement activity involving the removal, renovation, enclosure, repair, or encapsulation of reasonably related friable asbestos-containing materials in an amount greater than 50 linear feet or 50 square feet. Asbestos hazard abatement activity also includes any such activity involving such asbestos-containing materials in an amount of 50 linear or 50 square feet or less if, when combined with any other reasonably related activity in terms of time and location of the activity, the total amount is in an amount greater than 50 linear or 50 square feet.

C. Declare whether or not asbestos is present in any quantity. This includes assumed asbestos containing materials such as roofing and flooring. Also specify if the facility was previously abated and year when previous asbestos abatement occurred (if applicable).

D. Specify the amount of regulated asbestos-containing material (RACM) to be removed as follows: linear feet on pipes, square feet (surface area) on facility components, and total cubic feet (volume) on or off all facility components. Asbestos containing demolition debris and related materials shall be quantified in cubic feet (volume) Convert any cubic yardage measurements to cubic feet (1 cubic yard = 27 cubic feet). Estimate the approximate amount of Category I and Category II non-friable asbestos-containing material in the affected part of the facility that will be removed before demolition. Estimate the approximate amount of Category I and Category II non-friable asbestos-containing material in good condition in the affected part of the facility that will not be removed before demolition.

E. Specify the scheduled dates for asbestos removal, the hours of operation, and the days of the week that asbestos removal operations will be active onsite. Please note, the setup date must be at least 10 working-days after postmark or hand-deliver date. Also include the name, certification number, and expiration date of the asbestos hazard abatement specialist scheduled to be onsite in charge of the asbestos abatement project. Additional boxes have been provided in the event the project involves more than one shift.

F. Specify the name, address, contact person, phone, fax, and email for the Demolition Contractor, if applicable.

G. Specify the starting and ending dates for demolition even when no asbestos-containing materials are present. Should the demolition not begin on the start date listed, a revised notification form shall be submitted prior to the listed start date. Please note the start date must be at least 10 working-days after postmark or hand-deliver date.

H. If a project is being placed on hold, specify the dates as follows:

- "Hold Begin Date" indicate date that the regularly scheduled demolition or renovation/abatement operations will be put on hold at the facility.

- "Work Resume Date" indicate date that the regularly scheduled demolition or renovation/abatement operations will resume at the facility. If a project was previously placed "On Hold", the Ohio EPA must receive notification of returning to the project at least one (1) working day prior to resuming demolition and/or renovation/abatement activities.

Be sure to indicate the correct page numbers across the bottom of the notification once all the pages are complete.

The asbestos regulations, notification forms, guidance, local contacts, and other information can be found on Ohio EPA's asbestos program web site at https://epa.ohio.gov/asbestos

SPECIAL PROVISIONS

OIL AND GAS WELL

C-R-S: LAW-7-2.17

PID: 75923

Date: 8/2/2024

OIL AND GAS WELL

SPECIAL PROVISION

Contents:

1. Well Log – Active Well API # 34087601320000
2. Preliminary Well Plugging Plan for Active Well API # 34087601320000
3. Well Log – Active Well API # 34087601020000
4. Preliminary Well Plugging Plan for Active Well API # 34087601020000
5. Well Log - Abandoned Well API # 34087600970000
6. Well Log - Abandoned Well API # 34087601070000
7. Schematic Plans with Well Locations

Well Log – Active Well API # 34087601320000

WELL SUMMARY

ODNR DIVISION OF OIL & GAS RESOURCES MANAGEMENT

API Well Number	34087601320000					Permit Issued	12/31/1932
Well Name	EATON	Acres		Well No.	3	Date Commenced	1/5/1933
Owner	MYERS DRILLING COMPANY INC			Well No.		Date Total Depth Reached	2/20/1933
Logging Co.		Core No.		Sample No.			
County	LAWRENCE	Township	UNION	Quadrangle	HUNTINGTON	Zone	S
Section	28	Lot	Tract	Twp. Qtr.	Surface Location:	Lat 38.442252	Lon -82.447177
					Heel/Entry Last Take:	Lat	Lon
Measured					Toe First Take:	Lat	Lon
					Target Location (TD):	Lat	Lon
					Prop TD	Class	Tool
GL	530	DF	KB	LTD	DTD	2759	PB Depth	Date PB
TD Form.				Prod. Form.		Status	Producing
IP Natural	1 MCF	IP AT	350 MCF		Initial Rock Pressure		Date Abandoned
Perforations	PI: 2216-2759PI: 1646-2189						
Stimulations	SI: 0-0, Type: NOT, Vol: 3600 Lbs						
Casing Record							
Log Types							

Formations

Formation	Top	Bottom	Source	Prod.	Non-Standard	Remarks
SALT SAND	850	990	Card	No		
BIG LIME	990	1035	Card	No		
BIG INJUN SAND	1105	1165	Card	No		
BEREA SANDSTONE	1715	1725	Card	No		
SHALE	2120	2200	Card	No		1ST
SHALE	2275	2552	Card	No		2ND
SHALE	2715	2754	Card	No		3RD
LIME	2754	2759	Card	No		NIAGRA, T.D.

Annual Production

Year	Quarter	Source	Oil (Barrels)	Gas (MCF)	Water (Barrels)	Remarks
2009	N\A	RBDMS	0	920	0	
2010	N\A	RBDMS	0	1013	0	
2011	N\A	RBDMS	0	1187	0	
2012	N\A	RBDMS	0	1389	0	
2013	N\A	RBDMS	0	1545	0	
2014	N\A	RBDMS	0	1120	0	
2015	N\A	RBDMS	0	1413	0	
2016	N\A	RBDMS	0	1262	0	
2017	N\A	RBDMS	0	1663	0	
2018	N\A	RBDMS	0	1032	0	
2019	N\A	RBDMS	0	1311	0	
2020	N\A	RBDMS	0	1248	0	
2021	N\A	RBDMS	0	1201	0	
2022	N\A	RBDMS	0	904	0	

Preliminary Well Plugging Plan for Active Well

API # 34087601320000

PRELIMINARY - TO BE FINALIZED WITH ODNR

OHIO DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL & GAS RESOURCES MANAGEMENT
2045 Morse Road, Bldg. F2 • Columbus, OH 43229-6693

Well Plugging Plan (Form 1-PP)

API WELL NUMBER: 34-087-6-0132-0000

Owner:

Address:

Well Name: Eaton **Well Number:** 3

County: Lawerence **Civil Twp:** Union **City/Village:**

Sec: 28 **Lot:**

Total Measured Depth: 3,079.0 ft **If Known, Total Vertical Depth:** ft

Tool Type: Choose one. **Completion Date:** 02/20/1933 *MM/DD/YYYY* **Date of Last Production:** 06/03/2024 *MM/DD/YYYY*

Amount of Last Production… **Oil:** 0 **Gas:** 904 **Brine:** 0

24-Hour Emergency Contact for Plugging Operations

Name: **24-hour Phone Number:**

Title: **Email:**

Authorized Representatives on Location During Plugging Operations

Name:		**Entity:**	
Name:		**Entity:**	
Name:		**Entity:**	
Name:		**Entity:**	

Borehole/Casing Record[1]

Casing String Type	Casing Wellbore Size (in)	Casing Outer Diameter (in)	Casing Top (ft)	Casing Bottom (ft)	Casing Weight[2] (lbs/ft)	Top/Bottom of Cemented Intervals (ft)	Proposed to be Recovered	Proposed Shot / Rip Depth (ft)
Drive Pipe	12	10	0	14		/	☐ Yes	/
Conductor						/	☐ Yes	/
Mine String						/	☐ Yes	/
Surface	10	8 1/4	0	482		/	☐ Yes	42/
Intermediate 1						/	☐ Yes	/
Intermediate 2						/	☐ Yes	/
Production	8	6 1/4	0	2,081		/	☑ Yes	/
Liner						/	☐ Yes	/
Tubing						/	☐ Yes	/
Open Hole		N/A	N/A	N/A	N/A	N/A	N/A	N/A
Other						/	☐ Yes	/

[1]If the exact casing and cement information is not known at the time of application, casing data shall be estimated using offset wells, geophysical logging, and/or other approved methods to evaluate the proposed plugging plan. If estimates have been used, please indicate that below, describe the methods used to estimate casing data, and attach any supporting documentation:

[2]If casing weight is unknown, please reference the lowest weight by diameter.

PRELIMINARY - TO BE FINALIZED WITH ODNR

Well Plugging Plan (Form 1-

Proposed Plugs *List plugs in depth order, with #1 being the deepest. Attach a separate document describing additional plugs if needed.*

Plug #1

Geologic Formation Name	Formation Bottom	Formation Top
Ohio Shale	3,036 ft	2,665 ft

Plug Material	Plug Bottom	Plug Top	Bridge Plug Proposed Set Depth
Cement	3,079.00 ft	2,579 ft	ft

Clay	Cement Class	Yield	Density Weight
tons	Class A	91.0 sacks	15.60 lbs/gal

Spacer Type	Viscosity	Weight	Displacement Volume
Gel		12.00 lbs/gal	10.25 Bbls

Plug #2

Geologic Formation Name	Formation Bottom	Formation Top
Berea	2,055 ft	2,075 ft

Plug Material	Plug Bottom	Plug Top	Bridge Plug Proposed Set Depth
Cement	2,450.00 ft	1,950 ft	ft

Clay	Cement Class	Yield	Density Weight
tons	Class A	91.0 sacks	15.60 lbs/gal

Spacer Type	Viscosity	Weight	Displacement Volume
Gel		12.00 lbs/gal	7.75 Bbls

Plug #3

Geologic Formation Name	Formation Bottom	Formation Top
Big Injun	1,170 ft	1,200 ft

Plug Material	Plug Bottom	Plug Top	Bridge Plug Proposed Set Depth
Cement	1,250.00 ft	990 ft	ft

Clay	Cement Class	Yield	Density Weight
tons	Class A	75.0 sacks	15.60 lbs/gal

Spacer Type	Viscosity	Weight	Displacement Volume
Freshwater		8.33 lbs/gal	4.00 Bbls

Plug #4

Geologic Formation Name	Formation Bottom	Formation Top
Bottom of surface	482 ft	ft

Plug Material	Plug Bottom	Plug Top	Bridge Plug Proposed Set Depth
Cement	635.00 ft	380 ft	ft

Clay	Cement Class	Yield	Density Weight
tons	Class A	84.0 sacks	15.60 lbs/gal

Spacer Type	Viscosity	Weight	Displacement Volume
Freshwater		8.33 lbs/gal	1.50 Bbls

Plug #5

Geologic Formation Name	Formation Bottom	Formation Top
Surface	250 ft	0 ft

Plug Material	Plug Bottom	Plug Top	Bridge Plug Proposed Set Depth
Cement	250.00 ft	0 ft	ft

Clay	Cement Class	Yield	Density Weight
tons	Class A	116.0 sacks	15.60 lbs/gal

Spacer Type	Viscosity	Weight	Displacement Volume
Freshwater		8.33 lbs/gal	0.00 Bbls

Plug #6

Geologic Formation Name	Formation Bottom	Formation Top
	ft	ft

Plug Material	Plug Bottom	Plug Top	Bridge Plug Proposed Set Depth
Clay	ft	ft	ft

Clay	Cement Class	Yield	Density Weight
tons		sacks	lbs/gal

Spacer Type	Viscosity	Weight	Displacement Volume
Freshwater		lbs/gal	Bbls

PRELIMINARY - TO BE FINALIZED WITH ODNR

Well Plugging Plan (Form 1-P

Production & Annular Pressures

	Pressure (psi)	Casing String	H_2S Encountered [3]
Annular Space 1			◯ Yes ◯ No
Annular Space 2			◯ Yes ◯ No
Annular Space 3			◯ Yes ◯ No
Production		N/A	◯ Yes ◯ No
Tubing		N/A	◯ Yes ◯ No

[3]If H_2S is encountered during the plugging of the well, please describe the control and monitoring procedures to be used:

Additional Plugging Information

Deepest Underground Source of Drinking Water (USDW)

Geologic Formation Name _____ **USDW Depth Top** _____ ft **USDW Depth Base** _____ ft

☐ Not Mapped ☐ Unknown

Mineable Coal

Seam 1 Top _____ ft **Seam 1 Bottom** _____ ft ☐ No mineable coal seam 1/Not applicable

Seam 2 Top _____ ft **Seam 2 Bottom** _____ ft ☐ No mineable coal seam 2/Not applicable

Karst Void

Top _____ ft **Bottom** _____ ft ☐ No additional karst/Not applicable

Lost Hole

Lost Obstruction Depth/Tool Depth _____ ft ☐ Not applicable

Dry Hole: ◯ Yes ◯ No

What supporting documents are attached?

Comments

LCM used in plugs. Must tag bottom plug because of shot hole. May need additional cement. Bond, gamma and depth log ran prior to cementing will help determine the shot for parting 6 5/8 casing. May need to perf and squeeze if adequate amount of 6 5/8 inch casing not recovered.

I, the undersigned, being first duly sworn, depose and state under penalties of law that all of the information contained above is true, correct, and complete to the best of my knowledge and that this form was prepared by me or someone under my supervision and direction. In compliance with Section 1501:9-11-02 of the Administrative Code, I, as the owner of the above-identified well, will attempt to notify, by certified mail, all persons identified in the rule of the intention to plug the above-identified well and of any issuance date and expiration date of a plugging permit.

_____ SIGNATURE OWNER NAME/AUTHORIZED AGENT[4]

_____ PRINTED NAME

_____ TITLE

[4]Pursuant to ORC 1509.13(B)(2), if the person signing is an authorized agent of the owner, please attach a certified copy of agent's appointment.

Sworn to and subscribed before me this the

____ day of _____ , 20 ____

(seal)

_____ NOTARY PUBLIC

_____ DATE MY COMMISSION EXPIRES

Well Log – Active Well API # 34087601020000

WELL SUMMARY

ODNR DIVISION OF OIL & GAS RESOURCES MANAGEMENT

API Well Number	34087601020000					Permit Issued	
Well Name	BOOTH		Acres	Well No.	1	Date Commenced	1/1/1900
Owner	MYERS DRILLING COMPANY INC			Well No.		Date Total Depth Reached	5/16/1935
Logging Co.		Core No.		Sample No.			
County	LAWRENCE	Township	UNION	Quadrangle	HUNTINGTON	Zone	S
Section	21 Lot	Tract		Twp. Qtr.	Surface Location: Lat 38.446081 Lon -82.437758		
					Heel/Entry Last Take: Lat Lon		
Measured					Toe First Take: Lat Lon		
					Target Location (TD): Lat Lon		
					Prop TD	Class	Tool
GL	630 DF	KB	LTD	DTD	2843 PB Depth	Date PB	
TD Form.			Prod. Form.	OHIO SHALE		Status	Producing
IP Natural	1 MCF	IP AT			Initial Rock Pressure	Date Abandoned	

Perforations

Stimulations

Casing Record

Log Types

Formations

Formation	Top	Bottom	Source	Prod.	Non-Standard	Remarks
UNKNOWN	0	20	Card	No	SURFACE	
SHALE	20	30	Card	No		
SANDSTONE	30	50	Card	No		
SANDSTONE	50	785	Card	No		RED ROCK
UNKNOWN	785	915	Card	No	LS. & SHELL	HARD
SALT SAND	915	1042	Card	No		HFW 950
BIG LIME	1042	1175	Card	No		
UNKNOWN	1175	1230	Card	No	INJUN SS.	
UNKNOWN	1230	1795	Card	No	SH. & SHELLS	
BEREA SANDSTONE	1795	1805	Card	No		
UNKNOWN	1805	1950	Card	No	SH. & SHELLS	
SHELL	1950	1960	Card	No		DARK
SHALE	1960	1970	Card	No		WHITE
SHELL	1970	1990	Card	No		BROWN
SHALE	1990	2065	Card	No		WHITE
COFFEE	2065	2080	Card	No		BE-1195
COFFEE	2080	2247	Card	No		
SHALE	2247	2280	Card	No		BLACK
SHALE	2280	2310	Card	No		WHITE
SHALE	2310	2640	Card	No		BROWN
SHALE	2640	2800	Card	No		WHITE
SHALE	2800	2840	Card	No		HARD, BLACK
LIME	2840	2843	Card	No		TD.

Annual Production

Year	Quarter	Source	Oil (Barrels)	Gas (MCF)	Water (Barrels)	Remarks
2010	N\A	RBDMS	0	1013	0	
2011	N\A	RBDMS	0	1187	0	
2012	N\A	RBDMS	0	1389	0	
2013	N\A	RBDMS	0	1545	0	
2014	N\A	RBDMS	0	1120	0	

2015	N\A	RBDMS	0	1413	0
2016	N\A	RBDMS	0	984	0
2017	N\A	RBDMS	0	1663	0
2018	N\A	RBDMS	0	1032	0
2020	N\A	RBDMS	0	1248	0
2021	N\A	RBDMS	0	1201	0
2022	N\A	RBDMS	0	904	0

Preliminary Well Plugging Plan for Active Well

API # 34087601020000

OHIO DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL & GAS RESOURCES MANAGEMENT
2045 Morse Road, Bldg. F2 • Columbus, OH 43229-6693

PRELIMINARY - TO BE FINALIZED WITH ODNR

Well Plugging Plan (Form 1-PP)

API WELL NUMBER: 34-087-6-0102-0000

Owner:

Address:

Well Name: Booth #1 **Well Number:** 1

County: Lawerence **Civil Twp:** Union **City/Village:**

Sec: 21 **Lot:**

Total Measured Depth: 2,875.0 ft **If Known, Total Vertical Depth:** ft

Tool Type: Cable Too **Completion Date:** 05/16/1935 *MM/DD/YYYY* **Date of Last Production:** 06/03/2024 *MM/DD/YYYY*

Amount of Last Production… **Oil:** 0 **Gas:** 904 **Brine:** 0

24-Hour Emergency Contact for Plugging Operations

Name: **24-hour Phone Number:**

Title: **Email:**

Authorized Representatives on Location During Plugging Operations

Name:		**Entity:**	
Name:		**Entity:**	
Name:		**Entity:**	
Name:		**Entity:**	

Borehole/Casing Record[1]

Casing String Type	Casing Wellbore Size (in)	Casing Outer Diameter (in)	Casing Top (ft)	Casing Bottom (ft)	Casing Weight[2] (lbs/ft)	Top/Bottom of Cemented Intervals (ft)	Proposed to be Recovered	Proposed Shot / Rip Depth (ft)
Drive Pipe	12	10	0	61	38	/	☐ Yes	/
Conductor						/	☐ Yes	/
Mine String						/	☐ Yes	/
Surface	10	8 1/4	0	405	24	/	☐ Yes	348/
Intermediate 1	8	6 5/8	0	1,844	24	/	☑ Yes	/
Intermediate 2						/	☐ Yes	/
Production						/	☐ Yes	/
Liner	6 1/4	5 3/16	1,824	2,378		/	☐ Yes	/
Tubing	2		0	2,875	4.5	/	☑ Yes	/
Open Hole		N/A	N/A	N/A	N/A	N/A	N/A	N/A
Other						/	☐ Yes	/

[1]If the exact casing and cement information is not known at the time of application, casing data shall be estimated using offset wells, geophysical logging, and/or other approved methods to evaluate the proposed plugging plan. If estimates have been used, please indicate that below, describe the methods used to estimate casing data, and attach any supporting documentation:

Total depth will be checked with logging wire line crew and the point at which the 8 1/4 inch will be recovered will also be determined by the bond log

[2]If casing weight is unknown, please reference the lowest weight by diameter.

PRELIMINARY - TO BE FINALIZED WITH ODNR

Well Plugging Plan (Form 1-PP)

Proposed Plugs *List plugs in depth order, with #1 being the deepest. Attach a separate document describing additional plugs if needed.*

Plug #1

Geologic Formation Name	Formation Bottom	Formation Top
Ohio Shale	2,875 ft	2,800 ft

Plug Material	Plug Bottom	Plug Top	Bridge Plug Proposed Set Depth
Cement	2,875.00 ft	2,000 ft	ft

Clay	Cement Class	Yield	Density Weight
tons	Class A	158.0 sacks	15.60 lbs/gal

Spacer Type	Viscosity	Weight	Displacement Volume
Gel		12.00 lbs/gal	8.00 Bbls

Plug #2

Geologic Formation Name	Formation Bottom	Formation Top
Berea	1,805 ft	1,795 ft

Plug Material	Plug Bottom	Plug Top	Bridge Plug Proposed Set Depth
Cement	1,855.00 ft	1,690 ft	ft

Clay	Cement Class	Yield	Density Weight
tons	Class A	52.0 sacks	15.60 lbs/gal

Spacer Type	Viscosity	Weight	Displacement Volume
Gel		12.00 lbs/gal	6.50 Bbls

Plug #3

Geologic Formation Name	Formation Bottom	Formation Top
Cow Run	1,048 ft	915 ft

Plug Material	Plug Bottom	Plug Top	Bridge Plug Proposed Set Depth
Cement	1,100.00 ft	800 ft	ft

Clay	Cement Class	Yield	Density Weight
tons	Class A	94.0 sacks	15.60 lbs/gal

Spacer Type	Viscosity	Weight	Displacement Volume
Freshwater		8.33 lbs/gal	3.00 Bbls

Plug #4

Geologic Formation Name	Formation Bottom	Formation Top
Top of Surface	250 ft	0 ft

Plug Material	Plug Bottom	Plug Top	Bridge Plug Proposed Set Depth
Cement	250.00 ft	0 ft	ft

Clay	Cement Class	Yield	Density Weight
tons	Class A	116.0 sacks	lbs/gal

Spacer Type	Viscosity	Weight	Displacement Volume
Freshwater		8.33 lbs/gal	0.00 Bbls

Plug #5

Geologic Formation Name	Formation Bottom	Formation Top
	ft	ft

Plug Material	Plug Bottom	Plug Top	Bridge Plug Proposed Set Depth
Clay	ft	ft	ft

Clay	Cement Class	Yield	Density Weight
tons		sacks	lbs/gal

Spacer Type	Viscosity	Weight	Displacement Volume
Freshwater		lbs/gal	Bbls

Plug #6

Geologic Formation Name	Formation Bottom	Formation Top
	ft	ft

Plug Material	Plug Bottom	Plug Top	Bridge Plug Proposed Set Depth
Clay	ft	ft	ft

Clay	Cement Class	Yield	Density Weight
tons		sacks	lbs/gal

Spacer Type	Viscosity	Weight	Displacement Volume
Freshwater		lbs/gal	Bbls

PRELIMINARY - TO BE FINALIZED WITH ODNR

Well Plugging Plan (Form 1-PP

Production & Annular Pressures

	Pressure (psi)	Casing String	H_2S Encountered [3]
Annular Space 1			◯ Yes ◯ No
Annular Space 2			◯ Yes ◯ No
Annular Space 3			◯ Yes ◯ No
Production		N/A	◯ Yes ◯ No
Tubing		N/A	◯ Yes ◯ No

[3]If H_2S is encountered during the plugging of the well, please describe the control and monitoring procedures to be used:

Additional Plugging Information

Deepest Underground Source of Drinking Water (USDW)

Geologic Formation Name _____ **USDW Depth Top** _____ ft **USDW Depth Base** _____ ft

☐ Not Mapped ☐ Unknown

Mineable Coal

Seam 1 Top _____ ft **Seam 1 Bottom** _____ ft ☐ No mineable coal seam 1/Not applicable

Seam 2 Top _____ ft **Seam 2 Bottom** _____ ft ☐ No mineable coal seam 2/Not applicable

Karst Void

Top _____ ft **Bottom** _____ ft ☐ No additional karst/Not applicable

Lost Hole

Lost Obstruction Depth/Tool Depth _____ ft ☐ Not applicable

Dry Hole: ◯ Yes ◯ No

What supporting documents are attached?

Comments

LCM used in plugs. Must tag bottom plug because of shot hole. May need additional cement. Bond, gamma and depth log ran prior to cementing will help determine the shot for parting 6 5/8 casing. May need to perf and squeeze if adequate amount of 6 5/8 inch casing not recovered. Shoot tubing off at 2000 feet.

I, the undersigned, being first duly sworn, depose and state under penalties of law that all of the information contained above is true, correct, and complete to the best of my knowledge and that this form was prepared by me or someone under my supervision and direction. In compliance with Section 1501:9-11-02 of the Administrative Code, I, as the owner of the above-identified well, will attempt to notify, by certified mail, all persons identified in the rule of the intention to plug the above-identified well and of any issuance date and expiration date of a plugging permit.

_____ SIGNATURE OWNER NAME/AUTHORIZED AGENT[4]

_____ PRINTED NAME

_____ TITLE

[4]Pursuant to ORC 1509.13(B)(2), if the person signing is an authorized agent of the owner, please attach a certified copy of agent's appointment.

Sworn to and subscribed before me this the

____ day of _____ , 20 ____

(seal)

_____ NOTARY PUBLIC

_____ DATE MY COMMISSION EXPIRES

Well Log - Abandoned Well API # 34087600970000

WELL SUMMARY

ODNR DIVISION OF OIL & GAS RESOURCES MANAGEMENT

API Well Number	34087600970000					Permit Issued	
Well Name	PRATT P& Z		Acres	Well No. 1		Date Commenced	1/1/1900
Owner	FRANKLIN & WOLFE OFG?			Well No.		Date Total Depth Reached	4/15/1933
Logging Co.		Core No.		Sample No.			
County	LAWRENCE	Township UNION		Quadrangle	HUNTINGTON	Zone	S
Section	14 Lot	Tract	Twp. Qtr.	Surface Location:	Lat 38.457105	Lon -82.408853	
				Heel/Entry Last Take:	Lat	Lon	
Measured				Toe First Take:	Lat	Lon	
				Target Location (TD):	Lat	Lon	
				Prop TD	Class	Tool	
GL	664 DF 668	KB	LTD	DTD 3024	PB Depth	Date PB	
TD Form.	LITTLE SHELL		Prod. Form.	OHIO SHALE	Status	Plugged and Abandoned	
IP Natural	106 MCF	IP AT			Initial Rock Pressure	Date Abandoned	5/23/1952

Perforations

Stimulations SI: 0-0, Type: GEL, Vol: 4000 Lbs

Casing Record

Log Types

Formations

Formation	Top	Bottom	Source	Prod.	Non-Standard	Remarks
UNKNOWN	0	5	Card	No	SURFACE	
UNKNOWN	5	29	Card	No	RR	
SLATE	29	85	Card	No		BLUE
UNKNOWN	85	100	Card	No	RR	
SLATE	100	145	Card	No		BLUE
UNKNOWN	145	150	Card	No	RR	
SLATE	150	175	Card	No		BLUE
SANDSTONE	175	180	Card	No		
SLATE	180	260	Card	No		BLUE
SANDSTONE	260	265	Card	No		
SLATE	265	285	Card	No		BLUE
SANDSTONE	285	295	Card	No		
SLATE	295	315	Card	No		BLUE
SANDSTONE	315	320	Card	No		
SLATE	320	360	Card	No		WH.
SANDSTONE	360	395	Card	No		
SLATE	395	410	Card	No		BLUE
SALT SAND	410	495	Card	No		
SLATE	495	570	Card	No		WH.
SANDSTONE	570	620	Card	No		
SLATE	620	640	Card	No		
SANDSTONE	640	650	Card	No		
SLATE	650	690	Card	No		WH.
SANDSTONE	690	710	Card	No		
SLATE	710	770	Card	No		WH.
SANDSTONE	770	785	Card	No		
SLATE	785	855	Card	No		BLK.
SANDSTONE	855	890	Card	No		
SLATE	890	915	Card	No		BLK.
SANDSTONE	915	935	Card	No		
UNKNOWN	935	960	Card	No	SLATE & SHELLS	

SANDSTONE	960	965	Card	No		
SLATE	965	1020	Card	No		BLK.
MAXTON SAND	1020	1100	Card	No		
SLATE	1100	1105	Card	No		BLK.
LITTLE SHELL	1110	1124	Card	No		
UNKNOWN	1124	1125	Card	No	CAVE	
BIG LIME	1125	1308	Card	No		
SLATE	1308	1310	Card	No		
KEENER SAND	1310	1335	Card	No		
SLATE	1335	1350	Card	No		
SLATE	1348	1400	Card	No		
BIG INJUN SAND	1350	1348	Card	No		
BIG INJUN SAND	1400	1450	Card	No		
UNKNOWN	1450	1840	Card	No	SLATE & SHELL	
SANDSTONE	1840	1865	Card	No		
SLATE	1865	1906	Card	No		
SLATE	1906	1911	Card	No		BLK.
BEREA SANDSTONE	1911	1921	Card	No		
SLATE	1921	1930	Card	No		WH.
SHELL	1930	1932	Card	No		
UNKNOWN	1932	1985	Card	No	SL. & SHELLS	
SHALE	1985	2080	Card	No		BLK.
SLATE	2080	2370	Card	No		WH.
SHALE	2370	2450	Card	No		BRN.
SLATE	2430	2445	Card	No		WH.
SLATE	2445	2580	Card	No		BLK.
SHALE	2580	2600	Card	No		WH.
SHALE	2600	2645	Card	No		BRN.
SHALE	2645	2675	Card	No		WH, SDY.
SHALE	2675	2815	Card	No		BRN.
SLATE	2815	2975	Card	No		WH.
SLATE	2975	3024	Card	No		BLK.

Annual Production

Year	Quarter	Source	Oil (Barrels)	Gas (MCF)	Water (Barrels)	Remarks

Well Log - Abandoned Well API # 34087601070000

WELL SUMMARY

ODNR DIVISION OF OIL & GAS RESOURCES MANAGEMENT

API Well Number	34087601070000							Permit Issued	
Well Name	WHITELEY			Acres		Well No.	1	Date Commenced	1/1/1900
Owner	CHARTIERS					Well No.		Date Total Depth Reached	7/2/1933
Logging Co.			Core No.		Sample No.				
County	LAWRENCE	Township	UNION		Quadrangle	HUNTINGTON		Zone	S
Section	23 Lot	Tract		Twp. Qtr.		Surface Location:	Lat 38.455225	Lon -82.396414	
						Heel/Entry Last Take:	Lat	Lon	
Measured						Toe First Take:	Lat	Lon	
						Target Location (TD):	Lat	Lon	
						Prop TD	Class	Tool	
GL	571 DF	KB	LTD		DTD	3015	PB Depth	Date PB	
TD Form.				Prod. Form.	DEVONIAN		Status	Plugged and Abandoned	
IP Natural	115 MCF	IP AT				Initial Rock Pressure		Date Abandoned	10/24/1940

Perforations

Stimulations

Casing Record

Log Types

Formations

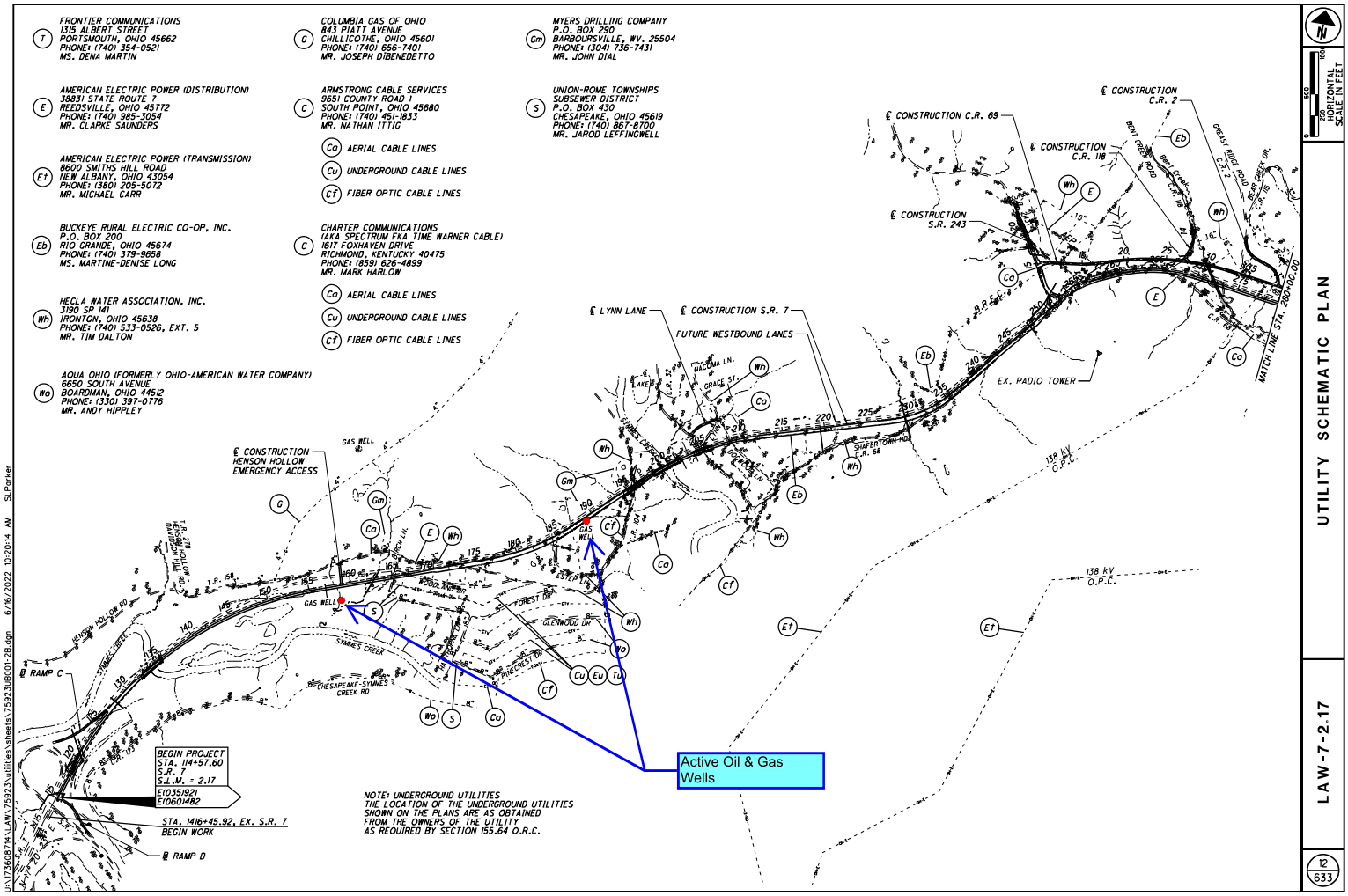
Formation	Top	Bottom	Source	Prod.	Non-Standard	Remarks
UNKNOWN	0	16	Card	No	SURFACE	
UNKNOWN	16	40	Card	No	RED ROCK	
SHALE	40	80	Card	No		WHITE
UNKNOWN	80	100	Card	No	RED ROCK	
SHALE	100	110	Card	No		WHITE
SANDSTONE	110	120	Card	No		
SHALE	120	135	Card	No		
SANDSTONE	135	145	Card	No		
SHALE	145	180	Card	No		
SANDSTONE	180	225	Card	No		
SHALE	225	250	Card	No		WHITE
UNKNOWN	250	569	Card	No	SS. & SH.	1/2 BAILER/SCREW AT 400'
COAL - GENERIC	569	571	Card	No		
UNKNOWN	571	613	Card	No	SS. & SH.	1 BAILER WATER/SCREW AT 580
UNKNOWN	613	702	Card	No	SH. & SS.	
UNKNOWN	702	1048	Card	No	SS. & SH.	HFW 990
SHALE	1048	1061	Card	No		BLACK
LITTLE SHELL	1061	1078	Card	No		
SHALE	1078	1082	Card	No		
BIG LIME	1082	1259	Card	No		
SHALE	1259	1285	Card	No		WHITE
UNKNOWN	1285	1332	Card	No	SS. & SH.	
BIG INJUN SAND	1332	1410	Card	No		
SHALE	1410	1616	Card	No		WHITE
SHELL	1616	1620	Card	No		
SHALE	1620	1783	Card	No		
UNKNOWN	1783	1798	Card	No	LS. SHELL	
SHALE	1798	1810	Card	No		
UNKNOWN	1810	1818	Card	No	LS. SHELL	
SHALE	1818	1837	Card	No		
SHALE	1837	1867	Card	No		BLACK

BEREA SANDSTONE	1867	1875	Card	No		GRIT
SHALE	1875	1879	Card	No		
LIME	1879	1884	Card	No		SDY.
UNKNOWN	1884	1920	Card	No	SH. & SHELLS	
SHALE	1920	1930	Card	No		WHITE
SHALE	1930	1980	Card	No		BROWN
SHALE	1980	2040	Card	No		WHITE
LIME	2040	2060	Card	No		
SHALE	2060	2134	Card	No		WHITE
SHELL	2134	2138	Card	No		
SHALE	2138	2415	Card	No		WHITE
SHALE	2415	2635	Card	Yes		BROWN, 115 M GAS AT 2665
SHALE	2635	2640	Card	No		WHITE
SHALE	2640	2793	Card	No		BROWN
SHALE	2690	3000	Card	No		BROWN
SHALE	2793	2690	Card	No		WHITE
UNKNOWN	3000	3015	Card	No	NIAGRA. LS.	T. D.

Annual Production

Year	Quarter	Source	Oil (Barrels)	Gas (MCF)	Water (Barrels)	Remarks

Schematic Plans with Well Locations



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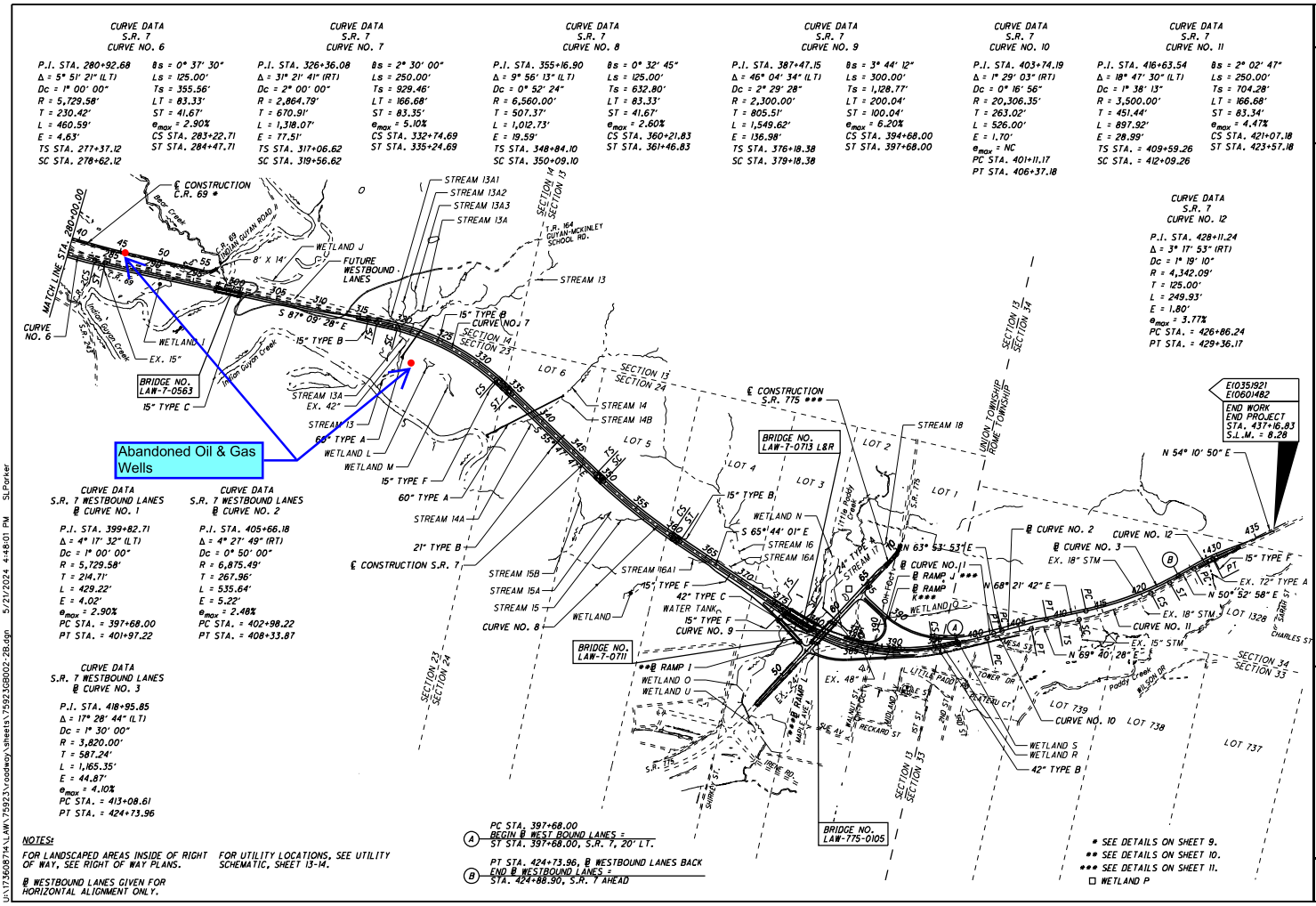
CURVE DATA
S.R. 7
CURVE NO. 6
P.I. STA. 280+92.68
Δ = 5° 51' 21" (LT)
Dc = 1° 00' 00"
R = 5,729.58'
T = 230.42'
L = 460.59'
E = 4.63'
TS STA. 277+37.12
SC STA. 278+62.12
Ls = 125.00'
Ts = 355.56'
LT = 83.33'
ST = 41.67'
emax = 2.90%
CS STA. 283+22.71
ST STA. 284+47.71
CURVE DATA
S.R. 7
CURVE NO. 7
P.I. STA. 326+36.08
Δ = 31° 21' 41" (RT)
Dc = 2° 00' 00"
R = 2,864.79'
T = 670.91'
L = 1,318.07'
E = 77.51'
TS STA. 317+06.62
SC STA. 319+56.62
Ls = 250.00'
Ts = 929.46'
LT = 166.68'
ST = 83.35'
emax = 5.10%
CS STA. 332+74.69
ST STA. 335+24.69
CURVE DATA
S.R. 7
CURVE NO. 8
P.I. STA. 355+16.90
Δ = 9° 56' 13" (LT)
Dc = 0° 52' 24"
R = 6,560.00'
T = 507.37'
L = 1,012.73'
E = 19.59'
TS STA. 348+84.10
SC STA. 350+09.10
Ls = 125.00'
Ts = 632.80'
LT = 83.33'
ST = 41.67'
emax = 2.60%
CS STA. 360+21.83
ST STA. 361+46.83
CURVE DATA
S.R. 7
CURVE NO. 9
P.I. STA. 387+47.15
Δ = 46° 04' 34" (LT)
Dc = 2° 29' 28"
R = 2,300.00'
T = 805.51'
L = 1,549.62'
E = 136.98'
TS STA. 376+18.38
SC STA. 379+18.38
Ls = 300.00'
Ts = 1,128.77'
LT = 200.04'
ST = 100.04'
emax = 6.20%
CS STA. 394+68.00
ST STA. 397+68.00
CURVE DATA
S.R. 7
CURVE NO. 10
P.I. STA. 403+74.19
Δ = 1° 29' 03" (RT)
Dc = 0° 16' 56"
R = 20,306.35'
T = 263.02'
L = 526.00'
E = 1.70'
emax = NC
PC STA. 401+11.17
PT STA. 406+37.18
CURVE DATA
S.R. 7
CURVE NO. 11
P.I. STA. 416+63.54
Δ = 18° 47' 30" (LT)
Dc = 1° 38' 13"
R = 3,500.00'
T = 451.44'
L = 897.92'
E = 28.99'
TS STA. = 409+59.26
SC STA. = 412+09.26
Ls = 250.00'
Ts = 704.28'
LT = 166.68'
ST = 83.34'
emax = 4.47%
CS STA. 421+07.18
ST STA. 423+57.18
CURVE DATA
S.R. 7
CURVE NO. 12
P.I. STA. 428+11.24
Δ = 3° 17' 53" (RT)
Dc = 1° 19' 10"
R = 4,342.09'
T = 125.00'
L = 249.93'
E = 1.80'
emax = 3.77%
PC STA. = 426+86.24
PT STA. = 429+36.17
CURVE DATA
S.R. 7 WESTBOUND LANES
@ CURVE NO. 1
P.I. STA. 399+82.71
Δ = 4° 17' 32" (LT)
Dc = 1° 00' 00"
R = 5,729.58'
T = 214.71'
L = 429.22'
E = 4.02'
emax = 2.90%
PC STA. = 397+68.00
PT STA. = 401+97.22
CURVE DATA
S.R. 7 WESTBOUND LANES
@ CURVE NO. 2
P.I. STA. 405+66.18
Δ = 4° 27' 49" (RT)
Dc = 0° 50' 00"
R = 6,875.49'
T = 267.96'
L = 535.64'
E = 5.22'
emax = 2.48%
PC STA. = 402+98.22
PT STA. = 408+33.87
CURVE DATA
S.R. 7 WESTBOUND LANES
@ CURVE NO. 3
P.I. STA. 418+95.85
Δ = 17° 28' 44" (LT)
Dc = 1° 30' 00"
R = 3,820.00'
T = 587.24'
L = 1,165.35'
E = 44.87'
emax = 4.10%
PC STA. = 413+08.61
PT STA. = 424+73.96
Abandoned Oil & Gas Wells
MATCH LINE STA. 280+00.00
CURVE NO. 6
S 87° 09' 28" E
BRIDGE NO. LAW-7-0563
BRIDGE NO. LAW-7-0711
BRIDGE NO. LAW-7-0713 L&R
BRIDGE NO. LAW-775-0105
CURVE NO. 8
CURVE NO. 9
CURVE NO. 10
CURVE NO. 11
CURVE NO. 12
N 63° 53' 53" E
N 68° 21' 42" E
N 54° 10' 50" E
N 50° 52' 58" E
N 69° 40' 28" E
E1035192.1
E1060148.2
END WORK
END PROJECT
STA. 437+16.83
S.L.M. = 8.28
PC STA. 397+68.00
BEGIN @ WEST BOUND LANES =
ST STA. 397+68.00, S.R. 7, 20' LT.
PT STA. 424+73.96, @ WESTBOUND LANES BACK
END @ WESTBOUND LANES =
STA. 424+88.90, S.R. 7 AHEAD
* SEE DETAILS ON SHEET 9.
** SEE DETAILS ON SHEET 10.
*** SEE DETAILS ON SHEET 11.
WETLAND P
NOTES:
FOR LANDSCAPED AREAS INSIDE OF RIGHT OF WAY, SEE RIGHT OF WAY PLANS.
@ WESTBOUND LANES GIVEN FOR HORIZONTAL ALIGNMENT ONLY.
FOR UTILITY LOCATIONS, SEE UTILITY SCHEMATIC, SHEET 13-14.
HORIZONTAL SCALE IN FEET
SCHEMATIC PLAN
LAW-7-2.17
4
1247
U:\173608714\LAW\75923\roadway\sheets\75923GB002-2B.dgn 5/21/2024 4:48:01 PM SLParker

kokosing
CONSTRUCTION COMPANY, INC.
6235 WESTERVILLE RD | WESTERVILLE, OH 43081
PHONE 614.228.1029

February 7th 2025

Mr. Michael Dombrowski
District Deputy Director
Ohio Department of Transportation - District 9
650 Eastern Avenue
Chillicothe, OH 45601

Attn: Mr. Chris Capper, P.E.
Area Engineer

Letter No. 16752-001

Re: ODOT 240512 - LAW-7-02.17
PID: 75923
Emergency Contacts

Dear Mr. Capper:

The following will be the 24-Hour Emergency Contacts for this project:

Joseph Baker –	419-512-9957
Andrew Simon –	304-641-5770
Seth Hoyt –	304-703-5357
Jason Jackson –	304-661-6587
Andy Rhodes –	740-225-1072

Additional Emergency Contacts may be submitted at a later date.

If you have any questions or additional comments, please contact me at (304) 703-5357.

Sincerely,
KOKOSING CONSTRUCTION COMPANY, INC.

Seth Hoyt
Lead Project Engineer

cc: Sharepoint
KCC Field Office

kokosing
CONSTRUCTION COMPANY, INC.
6235 WESTERVILLE RD | WESTERVILLE, OH 43081
PHONE 614.228.1029

February 7th 2025

Mr. Michael Dombrowski
District Deputy Director
Ohio Department of Transportation - District 9
650 Eastern Avenue
Chillicothe, OH 45601

Attn: Mr. Chris Capper, P.E.
Area Engineer

Letter No. 16752-002

Re: ODOT 240512 - LAW-7-02.17
PID: 75923
Subcontractor List

Dear Mr. Capper:

Per ODOT C&MS 108.02.A, the following is a list of proposed Subcontractors on the above referenced project:

Subcontractor	**Type of Work**
Marlo Construction Services	Clearing & Grubbing
Tri-State Pumping	Concrete Pumping
PDK Construction	Guardrail
Follow the River (DBE)	SWPPP, Seeding, Erosion Control
Shelly Co.	Asphalt Paving
Wampum Hardware	Blasting
Geoscan	Blasting Monitoring
Dave Smith	Pre-blast Survey
GDF Consulting	Hydrologist
T.C. Randal (DBE)	Boring, Directional Drilling
Lawhon	Environmental Consultant
Keller	Drilled Shafts
GRL Engineers	T.I.P. Testing
Lake Erie Construction	Fencing & Signs
DOT Diamond	Grooving, Grinding, Sawing

A&A Safety	MOT, PCB, RPMs, Striping
CTL Engineering	Piezometers
J&B Steel	Rebar
BOCA Construction	Rumble Strips
Heavy Highway Construction (DBE)	Concrete Sealing
Intertek PSI	Concrete Testing
DHDC (DBE)	Inspection & Compaction Testing
Stones Trucking	Trucking

If you have any questions or additional comments, please contact me at (304) 703-5357.

Sincerely,
KOKOSING CONSTRUCTION COMPANY, INC.

Seth Hoyt
Lead Project Engineer

cc: Sharepoint
KCC Field Office

kokosing
CONSTRUCTION COMPANY, INC.
6235 WESTERVILLE RD | WESTERVILLE, OH 43081
PHONE 614.228.1029

February 7th 2025

Mr. Michael Dombrowski
District Deputy Director
Ohio Department of Transportation - District 9
650 Eastern Avenue
Chillicothe, OH 45601

Attn: Mr. Chris Capper, P.E.
Area Engineer

Letter No. 16752-003

Re: ODOT 240512 - LAW-7-02.17
PID: 75923
Material Supplier List

Dear Mr. Capper:

Per ODOT C&MS 108.02.A, the following is a list of proposed Material Suppliers on the above referenced project:

Supplier	**Material**
Stones Trucking	Aggregates
Mountain Aggregates	Aggregates (DRG, Type C Gran., MSE Sand)
Hays Fabrication	Steel Diaphragms, Scuppers
Baseline Supply (DBE)	Laminated Bearings, H-Piling
ConServ	HLMR Bearings
Heidelberg	Ready Mix Concrete
GRL Engineers	T.I.P. Testing Materials
Zaymat	Type A,B,D Fabric
Meredith Brothers, Inc.	Tur. Reinf. Anchors/Pins/Fabric
Hanes	Tied Concrete Block Mats, Drain Board
Contech	Articulated Concrete Mats
Site Supply	Geogrids
Graybar	Electrical Conduit
Path Master	Light Poles, Luminaires, Signal Misc.
Loeb Electric	Junction Boxes, Misc. Electric, Wire
Iron Armor	Radar Detection
Ohio Traffic & Lighting	Strain Poles
Storm Water Simplified	SWPPP Track

Susan R. Bauer	Expansion Joints
R.J. Watson	Armorless Seal
State Highway Supply	Fiber Expansion, Neoprene Seal, Waterproofing
SSL	MSE Wall
Faddis Concrete	Noise Barrier
EJ USA	Castings
Mack Industries	Precast Drainage
Beagle Hill (DBE)	Plastic Pipe, CMP, Multiplate
Foundation Technologies	Yellow Jackets
Prestress Services	Concrete Beams
CMC Rebar	Rebar Material
Stupp Bridge	Steel Girders
Benchmark Biodiesel (DBE)	Blended Biodiesel

If you have any questions or additional comments, please contact me at (304) 703-5357.

Sincerely,
KOKOSING CONSTRUCTION COMPANY, INC.

Seth Hoyt
Lead Project Engineer

cc: Sharepoint
KCC Field Office

kokosing
CONSTRUCTION COMPANY, INC.
6235 WESTERVILLE RD | WESTERVILLE, OH 43081
PHONE 614.228.1029

February 7th 2025

Mr. Michael Dombrowski
District Deputy Director
Ohio Department of Transportation - District 9
650 Eastern Avenue
Chillicothe, OH 45601

Attn: Mr. Chris Capper, P.E.
Area Engineer

Letter No. 16752-005

Re: ODOT 240512 - LAW-7-02.17
PID: 75923
Storm Water Pollution Prevention Plan

Dear Mr. Capper:

Per ODOT SS832, the Storm Water Pollution Prevention Plan (SWPPP) for the above referenced project is currently being developed. Upon completion, it will be submitted for review and approval.

Please be advised that it is our intent to implement a storm water pollution and prevention plan as required by the contract and for any work done prior to the approval of the SWPPP, we will install erosion control devices at access points as required by the contract or directed by the Department.

If you have any questions or additional comments, please contact me at (304) 703-5357.

Sincerely,
KOKOSING CONSTRUCTION COMPANY, INC.

Seth Hoyt
Lead Project Engineer

cc: Sharepoint
KCC Field Office

I BUILD AMERICA
AN EQUAL OPPORTUNITY EMPLOYER
Contractors Association of West Virginia

kokosing
CONSTRUCTION COMPANY, INC.
6235 WESTERVILLE RD | WESTERVILLE, OH 43081
PHONE 614.228.1029

February 7th 2025

Mr. Michael Dombrowski
District Deputy Director
Ohio Department of Transportation - District 9
650 Eastern Avenue
Chillicothe, OH 45601

Attn: Mr. Chris Capper, P.E.
Area Engineer

Letter No. 16752-006

Re: ODOT 240512 - LAW-7-02.17
PID: 75923
Proposed Haul Roads

Dear Mr. Capper:

In accordance with ODOT C&MS 105.13, please find the list below of Kokosing's proposed haul roads for the above referenced project.

CR31- Big Branch Road
TR158 - Henson Hollow Road
SR7 – Chesapeake West End & Proctorville East End
CR32 - Eaton Road
CR104 - Boothe Eaton Road
Brentwood Drives:

- Woodland Drive
- Forest Drive
- Glenwood Drive
- Pinecrest Drive
- Pvt Drive 227

CR68 - Shafertown Road
SR 243- Old SR7 to Intersection with CR32
CR69 – Indian Guyan Road
CR2 - Greasy Ridge Road
SR775 – New SR7 to Intersection with CR69

If you have any questions or additional comments, please contact me at (304) 703-5357.

Sincerely,
KOKOSING CONSTRUCTION COMPANY, INC.

Seth Hoyt
Lead Project Engineer

cc: Sharepoint
KCC Field Office

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Contractors Association of West Virginia

kokosing
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6235 WESTERVILLE RD | WESTERVILLE, OH 43081
PHONE 614.228.1029

February 7th 2025

Mr. Michael Dombrowski
District Deputy Director
Ohio Department of Transportation - District 9
650 Eastern Avenue
Chillicothe, OH 45601

Attn: Mr. Chris Capper, P.E.
Area Engineer

Letter No. 16752-007

Re: ODOT 240512 - LAW-7-02.17
PID: 75923
EEO & Prevailing Wage Contacts

Dear Mr. Capper:

Robin Kaufman is our E.E.O. officer. She can be reached at 740-848-4923 or by email at rjk@kokosing.biz

Ashley Neer is our contact for Prevailing Wages. She can be reached at 740-848-4801 or by email at aneer@kokosing.biz

If you have any questions or additional comments, please contact me at (304) 703-5357.

Sincerely,
KOKOSING CONSTRUCTION COMPANY, INC.

Seth Hoyt
Lead Project Engineer

cc: Sharepoint
KCC Field Office

kokosing
CONSTRUCTION COMPANY, INC.
6235 WESTERVILLE RD | WESTERVILLE, OH 43081
PHONE 614.228.1029

February 7th 2025

Mr. Michael Dombrowski
District Deputy Director
Ohio Department of Transportation - District 9
650 Eastern Avenue
Chillicothe, OH 45601

Attn: Mr. Chris Capper, P.E.
Area Engineer

Letter No. 16752-008

Re: ODOT 240512 - LAW-7-02.17
PID: 75923
Supervision of Survey Work

Dear Mr. Capper:

Per Section 623.02 of the ODOT C&MS, the following person will be supervising the survey work for the above referenced project:

Bill Clifford, P.S., License No. 8010

If you have any questions or additional comments, please contact me at (304) 703-5357.

Sincerely,
KOKOSING CONSTRUCTION COMPANY, INC.

Seth Hoyt
Lead Project Engineer

cc: Sharepoint
KCC Field Office

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Contractors Association of West Virginia

kokosing
CONSTRUCTION COMPANY, INC.
6235 WESTERVILLE RD | WESTERVILLE, OH 43081
PHONE 614.228.1029

February 7th 2025

Mr. Michael Dombrowski
District Deputy Director
Ohio Department of Transportation - District 9
650 Eastern Avenue
Chillicothe, OH 45601

Attn: Mr. Chris Capper, P.E.
Area Engineer

Letter No. 16752-010

Re: ODOT 240512 - LAW-7-02.17
PID: 75923
Worksite Traffic Supervisor (WTS)

Dear Mr. Capper:

Per ODOT C&MS 614.03.A, the following person is being submitted for the Worksite Traffic Supervisor on the above referenced project. Additional names will be added to this list as the project develops further and additional supervision joins the team.

Joseph Baker – 419-512-9957

If you have any questions or additional comments, please contact me at (304) 703-5357.

Sincerely,
KOKOSING CONSTRUCTION COMPANY, INC.

Seth Hoyt
Lead Project Engineer

cc: Sharepoint
KCC Field Office

kokosing
CONSTRUCTION COMPANY, INC.
6235 WESTERVILLE RD | WESTERVILLE, OH 43081
PHONE 614.228.1029

February 7th 2025

Mr. Michael Dombrowski
District Deputy Director
Ohio Department of Transportation - District 9
650 Eastern Avenue
Chillicothe, OH 45601

Attn: Mr. Chris Capper, P.E.
Area Engineer

Letter No. 16752-011

Re: ODOT 240512 - LAW-7-02.17
PID: 75923
Selected Steel Fabricators and Precast Concrete Fabricators

Dear Mr. Capper:

Per ODOT C&MS 501.03, listed below are the proposed fabricators for the steel girders and precast concrete beams on the above referenced project:

Prestress Services	Concrete Beams
Stupp Bridge	Steel Girders

If you have any questions or additional comments, please contact me at (304) 703-5357.

Sincerely,
KOKOSING CONSTRUCTION COMPANY, INC.

Seth Hoyt
Lead Project Engineer

cc: Sharepoint
KCC Field Office

kokosing
CONSTRUCTION COMPANY, INC.
6235 WESTERVILLE RD | WESTERVILLE, OH 43081
PHONE 614.228.1029

February 7th 2025

Mr. Michael Dombrowski
District Deputy Director
Ohio Department of Transportation - District 9
650 Eastern Avenue
Chillicothe, OH 45601

Attn: Mr. Chris Capper, P.E.
Area Engineer

Letter No. 16752-012

Re: ODOT 240512 - LAW-7-02.17
PID: 75923
Contractor Signature Authorization

Dear Mr. Capper:

Attached please find the signed CAD10 form.

If you have any questions or additional comments, please contact me at (304) 703-5357.

Sincerely,
KOKOSING CONSTRUCTION COMPANY, INC.

Seth Hoyt
Lead Project Engineer

cc: Sharepoint
KCC Field Office

State of Ohio
Department of Transportation
Contractor Signature Authorization

CONTID	LAW75923	**County/Route/Section**	LAW-SR-7-02.17 Phase 2
ALTID	240512 Lawrence	**Federal Project Number**	E035(921); E060(482)
CONTRACTOR	Kokosing Construction Company, Incorporated		

****

Progress Payments Authorization (previously CA-D-10A)

I, Kevin Ohl (Print Name), Senior Vice President, Engineering & Estimating (Print Title)
(Must be an Officer of the Prime Contractor's Company), do hereby authorize

Ryan Cocco (Print Name), Regional Vice President (Print Title)
Or
_____ (Print Name), _____ (Print Title)

with authority to sign his/her name to all ***Contractor Progress Payment Certification*** documents pertaining to this project.

This authorization shall remain in effect for the duration of this project, or until revoked.

****

Change Orders Authorization (previously CA-D-10B)

I, Kevin Ohl (Print Name), Senior Vice President, Engineering & Estimating (Print Title)
(Must be an Officer of the Prime Contractor's Company), do hereby authorize

Ryan Cocco (Print Name), Regional Vice President (Print Title)
Or
_____ (Print Name), _____ (Print Title)

with authority to sign his/her name to ***all change order documents*** pertaining to this project.

This authorization shall remain in effect for the duration of this project, or until revoked.

State of Ohio
Department of Transportation
Contractor Signature Authorization

****

Certified Payrolls Authorization (previously CA-D-10C)

I, Kevin Ohl (Print Name), Senior Vice President, Engineering & Estimating (Print Title)
(Must be an Officer of the Prime Contractor's Company), do hereby authorize

Ryan Cocco (Print Name), Regional Vice President (Print Title)

Or

_____ (Print Name), _____ (Print Title)

with authority to sign his/her name to all ***certified payroll documents*** pertaining to this project.

This authorization shall remain in effect for the duration of this project, or until revoked.

	Senior Vice President, Engineering & Estimating	1/28/2025
Contractor signature (Officer)	Title	Date
Contractor signature (Project Representative)	Regional Vice Pres.	1/28/2025
	Title	Date

Rev. 01/05/23

kokosing
CONSTRUCTION COMPANY, INC.
6235 WESTERVILLE RD | WESTERVILLE, OH 43081
PHONE 614.228.1029

February 7th 2025

Mr. Michael Dombrowski
District Deputy Director
Ohio Department of Transportation - District 9
650 Eastern Avenue
Chillicothe, OH 45601

Attn: Mr. Chris Capper, P.E.
Area Engineer

Letter No. 16752-004

Re: ODOT 240512 - LAW-7-02.17
PID: 75923
Initial Progress Schedule

Dear Mr. Capper:

Per ODOT C&MS 108.02.A, attached please find a 6-week look-ahead schedule. We will follow up with either an Initial CPM schedule or Baseline CPM Schedule for review and approval per ODOT PN107 prior to the physical start of construction.

If you have any questions or additional comments, please contact me at (304) 703-5357.

Sincerely,
KOKOSING CONSTRUCTION COMPANY, INC.

Seth Hoyt
Lead Project Engineer

cc: Sharepoint
KCC Field Office

ODOT 240512 - LAW-7-02.17
Contract ID: LAW75923
PID: 75923

6 Week Look Ahead Schedule

KOKOSING CONSTRUCTION COMPANY, INC.		February 10, 2025							February 17, 2025							February 24, 2025							March 3, 2025							March 10, 2025							March 17, 2025						
ACTIVITIES	ESTIMATED START	10 M	11 T	12 W	13 T	14 F	15 S	16 S	17 M	18 T	19 W	20 T	21 F	22 S	23 S	24 M	25 T	26 W	27 T	28 F	1 S	2 S	3 M	4 T	5 W	6 T	7 F	8 S	9 S	10 M	11 T	12 W	13 T	14 F	15 S	16 S	17 M	18 T	19 W	20 T	21 F	22 S	23 S
ADMIN.																																												
CPM Schedule Development	2/10/25																																											
Subcontract/Vendor Execution	2/10/25																																											
SWPPP Development	2/10/25																																											
CONSTRUCTION																																												
Mobilization - Clearing	2/24/25																																											
Clearing and Grubbing	3/3/25																																											
Install Work Zone Marking Signs	3/3/25																																											
Install Initial Erosion & Sediment Controls	3/3/25																																											

For Information Only

kokosing
CONSTRUCTION COMPANY, INC.
6235 WESTERVILLE RD | WESTERVILLE, OH 43081
PHONE 614.228.1029

February 7th 2025

Mr. Michael Dombrowski
District Deputy Director
Ohio Department of Transportation - District 9
650 Eastern Avenue
Chillicothe, OH 45601

Attn: Mr. Chris Capper, P.E.
Area Engineer

Letter No. 16752-009

Re: ODOT 240512 - LAW-7-02.17
PID: 75923
Blasting Related Resumes

Gentlemen:

In accordance with ODOT C&MS 208.12, 208.15, 208.16 and 208.17 attached please find resumes for proposed subcontractors and consultants for blasting related items on the above referenced project. Regarding ODOT C&MS 208.13, A blasting consultant has not been selected at this time. We will provide the selected consultant's resume at a later date.

If you have any questions or additional comments, please contact me at (304) 703-5357.

Sincerely,
KOKOSING CONSTRUCTION COMPANY, INC.

Seth Hoyt
Lead Project Engineer

cc: Sharepoint
KCC Field Office

WAMPUM HARDWARE CO.
SINCE 1904

Distributors of Explosives

60711 Dynamite Road
Salesville, Ohio 43778
Business Phone:
(740) 685-2585
FAX (740) 685-6268

Joe Forshey
60711 Dynamite Road
Salesville, Ohio 43778

Education & Training
Blasting Safety (RAM) (Salesville, Ohio) 2013
Ohio Drilling & Blasters Conference (Columbus, Oh.) 2015
Blasting Safety (RAM) (Salesville, OH) 2015
Kentucky Blasting Conference (Lexington, Kentucky) 2016
Blasting Safety (RAM) (Salesville, OH) 2018
Blasting Safety (RAM) (Salesville, OH) 2019
Blasting Safety (RAM) (Salesville, OH) 2020
Blasting Safety (RAM) (Salesville, OH) 2021
International Society of Explosives Conferences (Las Vegas, NV) 2022

Current Job Title
Surface Mine Blaster 1988 – 2015
Field Blaster Coordinator 2002 – 2024
Employment
1988 – 2025 – 37 yrs.

Experience
Subcontracted for Kokosing Construction on Rt. 33 Nelsonville Ohio Road project phase ll. Production, blasting and presplit work was performed on 7 different cuts in 3 miles of four lane highway. The most critical area being within 100 feet of an occupied dwelling.
Subcontracted for Kokosing Construction on Rt. 77 near Parkersburg West Virginia on the Little Kanawha River. Blasting for bridge piers 8ft. from an existing pier that could not be damaged.
Subcontracted for Beaver Excavating Production, blasting for a 6½ acre lake.
Gavin Power Plant Cheshire, Ohio - blasting for fly ash pit development.
Kokosing Construction development of cell for Tunnel Hill Landfill.
Beaver Excavating – Carroll County Energy project – Carrollton Ohio. Blasting was done for storm drain pond and storm drain trench blasting. Closest structure was concrete Knee Wall at 400 ft. and existing Rex energy gas well at 560 ft. Started project 6/26/15.
Connersville Ohio on A.E.P. property – contractor
Headwaters Plant Services – contact: Ray Cook
Creating safe slopes on old high wall for ash fill.
Nearest structure: monitoring wells 245 ft. Residents home
Subcontracted for Kokosing Construction on Rt. 460 Elkhorn City Ky. Road project. Production, blasting, and presplit work was performed on 3 different cuts in 1½ miles of four lane highway. The most critical area being within 600 feet of an occupied dwelling.
Subcontracted for Enact, LLC at the AEP-Big Sandy Project.
Subcontracted for Kokosing, Jeffersonville IN – Data Center project - 2024

WAMPUM HARDWARE CO.
SINCE 1904

Distributors of Explosives

60711 Dynamite Road
Salesville, Ohio 43778

Business Phone:
(740) 685-2585
FAX (740) 685-6268

General Duties

Responsible for training of new blaster candidates.
Continuously communicate pertinent technical product information and application techniques to our blasters, drivers, assistants, and customers. Continuously assess and upgrade the level of technical competence of our staff.
Act as a liaison between customers and Wampum in product application and safety.
Help develop good working relationships with regulatory officers and contractor's personnel.
Help train contractor's personnel in blasting technique and safety.
Design shot plans, maintains project schedules, and co-ordinates subcontractors.

References

BEAVER EXCAVATING
JUSTIN HITCHEN, SUPERINTENDANT (330) 478-2151
SHELLY & SANDS
ANDY LEFFER, AREA MANAGER (330) 351-6262
WASTE MANAGEMENT
RON LOTT, GENERAL SUPERINTENDANT (304) 834-0264
ASCENT RESOURCES
ASHLEY COWAN, PROJECT MANAGER - Cell: 254-485-6226
HIGH POINT CONSTRUCTION
TRAVIS SHAW, OWNER - Cell: 304-439-5295
KOKOSING
ALEX BRUNNER, SUPERINTENDANT - Cell: 937-369-4780

WAMPUM HARDWARE CO.
SINCE 1904

Distributors of Explosives

60711 Dynamite Road
Salesville, Ohio 43778
Business Phone:
(740) 685-2585
FAX (740) 685-6268

David Lucas – Blast Manager
60711 Dynamite Road
Salesville, Ohio 43778

Education & Training

International Society of Explosives Conferences (New Orleans, La.) 2015
International Society of Explosives Conferences (Las Vegas, Nevada.) 2016
Kentucky Blasting Conference (Lexington, Kentucky) 2016
Ohio Drilling & Blasters Conference (Columbus, Oh.) 2017
Blasting Safety (RAM) (Salesville, OH) 2018
International Society of Explosives Conferences (Sanatoria, Texas.) 2018
International Society of Explosives Conferences (Nashville, Tenn.) 2019
International Society of Explosives Conferences (Denver, Co.) 2020
International Society of Explosives Conferences (San Antonio, Texas.) 2022
International Society of Explosives Conferences (Savannah, Ga .) 2024

Current Job Title

Technical Advisor 1990 – 2025
Sales Manager 2002 – 2025

Blasting 42 years' experience

2015-Subcontracted for Beaver Excavating Drilling and Blasting for Carroll Combined Cycle Power Plant Trench Blasting, and Manholes near Carrollton, Ohio.
Subcontracted for Kokosing Construction on the Tunnel Hill Landfill approximately 1,000,000 yards of rock.
Subcontracted for DMG Inc. Production, blasting on State Rt. 327 slip repair one homes very closes with in 80 ft. of the blasting.
Subcontracted for Beaver Excavating on Gavin Power Plant project. Production, blasting on 4 faces, work was performed for Reclamation work.
2016-Subcontracted for Kokosing Construction on Rt. 460 Elkhorn City Ky. Road project. Production, blasting, and presplit work was performed on 3 different cuts in 1½ miles of four lane highway. The most critical area being within 600 feet of an occupied dwelling. This job should finish this year.
2017-Subcontracted for Kokosing Industrial, Inc –Springfield, Ohio. The job is Erie Interceptor Express Sewer, the work consisted of blasting within 65 ft. of Interstate 68, within 30 ft. of residential homes, 50 ft. from a railroad track, gas propane line, and a fiber optics line.
Subcontracted for D.G.M. Inc. on a St. Rt. 35 project in Jackson County, Ohio to clean up a slip area. Production, blasting on 1 face, work was performed to Ohio, ODOT State specks.
Subcontracted for D.G.M. Inc. on a St. Rt. 56 project in Athens County, Ohio to clean up a slip area. Production, blasting on 1 face, work was performed to Ohio, ODOT State specks.
Subcontracted for Beaver Excavating the Job consisted of Drilling and Blasting on the Lone Oak Compressor Station Plant Mass blasting, Trench Blasting, and Manholes. Time schedule was very tight. 2 shifts were used to meet production requirements. In Marshall County, West Virginia.

60711 Dynamite Road
Salesville, Ohio 43778
Business Phone:
(740) 685-2585
FAX (740) 685-6268

2018-Subcontracted for Enact, LLC on AEP project to dewater sludge impoundment pounds. Production, blasting on 1 face, work was performed for Reclamation. Job was in Louisa Kentucky.

2019-Subcontracted for Wood LPC, Dayton Airport project building 4. Production blasting (mass blasting) for water retention ponds along with sewer and drainage ditches. Close utilities included fiber-optics and 6" gas line and highway 50 ft from blast. Dayton Ohio.
2019-Subcontractor for Savko for the Hoover Farms Housing Project. Blasting consisted of a several hundred feet of deep trench (35') along with pump stations. 35 feet from highway and 150' from several houses. Columbus Ohio.
2019 to 2020-Subcontractor for Kokosing Construction at the Amazon Building in Florence KY. All our blasting was trench shooting. Trenches were of variable widths and depths. Blasting was as close as 25ft from ongoing new construction for the Amazon Hub building. Blasting was also close to highway and the airport runway. Daily communications with the air tower were especially important to the safe operation of this project.
2020-Subcontractor for the Savko River Bluff Project and The Home Road Project. Blasting consisted of mass blasting as well as trenching. Blasting was close to highway and several businesses and homes. Delaware Ohio.
2020-Subcontractor for Webbland Farms in Wilmington Ohio for housing project. Blasting consisted of trench blasting for sewers.
2021-Subcontractor for Principle Real Estate Development. Blasting consisted of 30' + deep sewer lines and shallow laterals.
2021-Subcontractor for Tug Hill Operating. Blasting consisted of access road and an 11 acre well pad.
2023 – Subcontractor for Kokosing – Jefferson Rd – Charelston WVA.
2024 – Subcontracted for Kokosing – Jeffersonville IN.

General Duties

Responsible for training of new blaster candidates.
Continuously communicate pertinent technical product information and application techniques to our blasters, drivers, assistants, and customers. Continuously assess and upgrade the level of technical competence of staff.
Act as a liaison between customers and Wampum in product application and safety.
Help develop good working relationships with state and contractor's personnel.
Help train contractor's personnel in blasting technique and safety.
Design shot plans, maintains project schedules, and co-ordinates subcontractors.

WAMPUM HARDWARE CO.
SINCE 1904

Distributors of Explosives

60711 Dynamite Road
Salesville, Ohio 43778
Business Phone:
(740) 685-2585
FAX (740) 685-6268

References

BEAVER EXCAVATING (330) 478-2151
JUSTIN HITCHEN, SUPERINTENDANT of Oil Pad Construction
SHELLY & SANDS
ANDY LEFFER, AREA MANAGER (330) 351-6262
CCU MINING
JEFF WILLIAMS, GENERAL SUPERINTENDANT (740) 359-0923
CHUCK HOTHEM, GENERAL SUPERINTENDANT (740) 294-9823
JEFF YOHO, GENERAL SUPERINTENDANT (740) 294-3050
ASCENT RESOURCES
ASHLEY COWAN, PROJECT MANAGER - Cell: 254-485-6226
HIGH POINT CONSTRUCTION
TRAVIS SHAW, Owner - Cell: 304-439-5295
HILLSDALE CONSTRUCTION CO. INC.
RYAN FRANTZ, OWNER - Cell: 814-243-6724
AARON LIMERICK, WORKING FORMAN -724-840-3269
Kokosing
ANDY RHODES, MANAGER - Cell: 740-225-1072

Geoscan
Seismic Services, Inc.

Overview/Experience/Employees

Geo Scan has been in the seismic consulting and vibration monitoring business since 2006 and has gained a reputation in the industry for professionalism and excellence with the experience in blasting that sets us apart from most third-party seismic companies. As an unbiased third party, Geo Scan specializes in a broad range of seismic services designed to ensure compliance and optimize performance associated with blasting activities in the mining, aggregates and construction industries. With our extensive knowledge of blasting, we're able to make recommendations to lessen the perception of blasting operations (vibration and air overpressure) and in most cases reduce the total Peak Particle Velocity from a blast. With personnel located throughout the Appalachian region we provide very quick turnaround times for everything related to our business together.

Clinton Evans:

Geo Scan began operations in Grundy, VA 2006 and was founded by owner Clinton Evans. Clinton has been in the blasting industry for 47+ years and has been a certified blaster since 1977. He was the Regional Manager for Dyno Nobel, Inc. for 20 years, that included the territories of Virginia, Kentucky, West Virginia and Tennessee; He then became the Chief Operations Officer of a large drilling and blasting company before founding Geo Scan. Clinton has conducted hands-on shot design for blasting and drilling operation in both coal and no-coal mining, quarry, and close-in construction all over the United States. He has blasted all over the world with all types of blasting operations, especially coal mining, construction and quarry blasting, has attended the best technical blasting classes in the nation and has taught several of them in recent years. He is widely known as one of the most experienced and knowledgeable blasters in the eastern United Sates. Clinton is one of a hand full of people in Kentucky currently approved to teach the Basic Blaster 30-hour class. He has been a presenter multiple times at the West Virginia Office of Explosives and Blasting Conference in Charleston, WB and the Kentucky Blasting Conference in Lexington, KY. He is a blasting educator specializing in teaching advanced blasting operations that helps increase fragmentation and helps decrease vibration and the perception of blasting operations.

Brandon Evans:

Geo Scan's Co-Owner and President is Brandon Evans. Brandon received a Bachelor of Science degree in Business and Accounting from Emory & Henry College. He went on to receive a Masters in Business Administration from King College, and has been a major part of targeting new business opportunities and demonstrating competitively priced products and quality services. He is involved in all aspects of planning, growth and development of new and existing customers in the Central Appalachian region. He has been able to use his knowledge of management, organization development, inventory distribution, financial planning, and strategic planning to contribute to the growth of the company's revenues. Brandon has eight years of blasting experience and has been a co-owner of Geo Scan since its beginning in 2006. Brandon has personally overseen the deployment, event analysis, maintenance, and residence relations for approximately 80% of the seismographs that have been deployed over Geo Scan existence.

Greg Charles:

Greg Charles joined Geo Scan early in 2012 and has brought his knowledge of blasting and regulations governing the explosive industry to assist Geo Scan and its clients to increase productivity while maintaining safety and public relations. Greg is a graduate of Pikeville College with a degree in Mining Technology. Greg served as a regulator for the Division of Mine Reclamation and Enforcement for twenty-one years. During this time, he was a Mine Inspector, Blasting Inspector, Supervisor, and Blasting Supervisor being one of the first blasting inspectors chosen when the department first implemented specialized blasting inspection. Greg is also a certified instructor for MSHA training.

With Geo Scan you get more than just a seismograph. Any company can set a seismograph but what distinguishes us from other companies is our extensive experience in the blasting industry, which adds significant value beyond the graph. With our knowledge of what the blaster needs we can make recommendations, if requested, for site specific procedures to alter the blast, to lessen the air over pressure, and decrease vibration perceptions through the pattern and timing sequence at or near residential structures and businesses. In the past we have worked with customers in resolving dust related issues from blasting activities in nearby communities and have headed up community meetings, for all residents that would be interested, to provide an educational workshop on vibration, air overpressure, along with the blasting process. We can assist in addressing numerous litigation situations as an expert witness. We take a personal and professional approach to every job and all citizens that are encountered. That means timely, accurate documentation, personal service and the knowledge that we will be here years down the road with all the needed records of compliance should you ever need them. We're here to provide solutions before they become problems and if problems ever arise, we're here to quickly and proficiently eliminate the problem and recommend procedures to avoid the problem arising again.

References

Culhayne Nickles
Kentucky DMRE
Explosives & Blasting Branch Supervisor
Cell: 606-312-2895
Email: culhayne.nickles@ky.gov

Dave Smith
Smith Adjusting
Cell: (606) 922-1798
Email: dasmith@smithadjusting.com

Jonny Sexton
Sales Representative at Austin Powder Company
Cell: 276-971-4478
Email: Jonathan.Sexton@austinpowder.com

David A. Smith

2931 Hultz Road
Catlettsburg, Kentucky 41129
(606) 928-0399 ext. 224
(606) 922-1798 cell
www.smithadjusting.com

Professional Objective:

Continue utilization of skills related to pre and post-blasting surveys, claims handling and public relations for clients who seek professional, consistent quality in claims handling and adjustments.

I have 30+ years as an adjuster, investigator and negotiator.

Education:

1970 - 1972 Ashland Community College – Associate Degree
1972 – 1974 Marshall University – Bachelor – Business Administration
Minor – Marketing/Finance

Ongoing:

- Annual Conference: National Association of Independent Insurance Adjusters; Annual Symposium with West Virginia Coal Association; Annual Symposium with Ohio Blasting Association; Mining Engineering; International Society Explosive Engineers; Kentucky Bluegrass Society of Explosive Engineers; Bluegrass Claims Association; Mining Safety Health Administration

Associations: International Society of Explosive Engineers; Bluegrass Chapter of Explosive Engineers; National Association of Independent Insurance Adjusters; Kentucky Claims Association; Kentucky Association of Highway Contractors; Kentucky Crushed Stone Association; West Virginia Coal Association

Trial testimony preparation on pre and post-blasting survey inspections, documenting and verifying structural defects on both residential and commercial properties, including but not limited to blasting investigation services, adjusting liability exposures and observations and findings on claim investigations.

Specialize in management of casualty auto physical damage and liability, general liability, physical damage appraisals on automobiles, heavy equipment, long-haul truck and mobile homes, homeowners, fire (residential, small and large commercial burglary, theft, jewelry, catastrophe, national flood insurance providers, blasting claims, trial preparations, surveillance, mine subsidence claims and investigations.

Responsible for overseeing corporate and/or public meetings and providing leadership and decision making for the corporation. Responsible for promoting and marketing business and potential clients and business. Responsible for company correspondence outlining file status reports, etc.

Interpreting seismic events, operations that use explosives and vibration, as well as to property/structure owners subject to vibration.

Dave regularly attends courses and seminars offered by professional societies, state and federal agencies in physics, seismology, geology, blasting, etc., as well as classes at University of Kentucky, Kentucky Mining Engineering, Blasting Conferences, ISEE, West Virginia Coal Association, Kentucky Claims Association.

Professional Registration & Education

- Business Administration – Finance & Marketing, Marshall University
- Licensed Professional Adjuster, Kentucky #351663
- Licensed Professional Adjuster, West Virginia #61815
- Approved as a pre-blast inspector by WVDEP/Office of Explosives & Blasting

Employment History:

Smith Adjusting, Inc. August, 1997 - Current
2931 Hultz Road
Catlettsburg, Kentucky 41129

- August, 1997 - Current President/Owner
  Manager of an independent insurance claims adjusting firm and blasting consultant operation which serves a multitude of clients including construction companies, coal operators, utilities, insurance companies, private self-insured organizations and corporations.

Adjusting, Inc. 1996-1997
429-13th Street
Ashland, KY 41101

- 1996-1997 Co-Owner
  This organization was an independent adjusting company serving insurance companies, self-insureds, mining companies, road construction throughout eastern Kentucky, southern West Virginia and southeastern Ohio.

Gay & Taylor, Inc. 1976 - 1996
1800 Central Avenue
Ashland, KY 41101

- 1976-1997 Multi-line General Adjuster
  AIC

Handled major fire losses, preparation of reconstruction estimates for numerous insurance companies and self-insureds, conducted pre and post-blasting inspections in addition to road construction and mining blasting liability investigations in handling losses in excess of $1m.

Also, road construction, mining equipment and heavy truck losses for various organizations.

CERTIFICATIONS & UPDATED CEU's ATTACHED

GDF Consulting

Greg Fowler
1405 Letart Road
Point Pleasant, WV 25550
304-593-0072

Hydrology Resume

208.17 - Before or at the preconstruction conference, submit a resume of the credentials of the proposed hydrologist. Include in the resume a list of at least five heavy/highway projects on which the hydrologist was responsibly in charge of monitoring water quality and quantities. List a description of the projects, with details of the water monitoring or modeling made on the projects. List the names and telephone numbers of project owners with sufficient knowledge of the projects to verify the submitted information.

Summary of Qualifications:

Certified Pre-blast and pre-subsidence surveyor
Proficient in performing surveys to include groundwater and well sampling
Proficient in groundwater pond and creek sampling and stream delineations
Proficient in managing water systems
15 years of experience doing pre blast surveys, groundwater monitoring/sampling/reporting in West Virginia and Ohio
Proficient in working with WV DEP and Ohio DNR and ODOT for survey and water sampling approval
Proficient in dealing with individuals

Project Summary:

Meigs County ODOT project 090338, performed groundwater survey, pre blast surveys, well monitoring and sampling and reporting. Igel Co. - Jon Pulcheon, 614-915-7004
Gallia County ODOT project 116045, performed groundwater survey, well monitoring and sampling and reporting. Igel Co. - Jon Pulcheon, 614-915-7004
State Route 7 ODOT project 127004, performed groundwater survey, hydrology and final report, Beaver Excavating Company – Ted Wellman – 330-353-3741
State Route 39 ODOT project, in hold, performed groundwater survey and well list, Ruhlin Company, Rod White – 330-239-2800
ODOT project 120173, SR 646, cancelled, performed groundwater survey. Matt Nardi - 740.922.5801
ODOT# 130321 Lancaster SR 158 Project, performed groundwater survey, hydrology and pre-blast surveys, Brent Poston - 614.246.2314.
ODOT # 127004, Jackson County Route 35 project. Performed groundwater survey, hydrology and pre-blast surveys. Stan Allen, 330-353-3703.
ODOT # 89400, Jackson County Route327project. Performed hydrology and pre blast surveys. Seth Salisbury, 740-728-1022

ODOT # 150017, Monroe County Route 800 project. Performed hydrology and pre blast surveys. Curt Beyers, 740-754-6133
ODOT 140570, Belmont County, Performed hydrology and pre blast surveys. Brendan Kokinda, 740-819-4301
ODOT 150029, Jefferson County, performing hydrology, Mike Yadlosky, 724-745-6430
ODOT 160047 – Route 170, East Palistine, OH – performed pre blast surveys and well sampling and monitoring. - Jim Demuth, 330-339-4935
ODOT 16700, Kokosing, performed well sampling and monitoring.
ODOT 190253, Rt 52, Kanawha Stone, Hydrology, ground water survey
DNR 170050, Portage Lake, Beaver, pre construction surveys and hydrology – Joe Brown, 330-413-1972
ODOT 210274, Monroe County, hydrology. Zach Bazell, 740-516-4942
ODOT 22-0035 Morgan county, hydrology
ODOT WAS 77 17.13, Washington County, Allen Stone Company,
Current, in prgress
Gatling, Ohio – daily/weekly monitoring of sample points including wells, springs, ponds, streams. Collect water data, analyze results and prepare weekly/monthly reports. Performed pre blast surveys, GPS locating, mapping, etc. Reference – Shawn Ray, 304-593-2839

Have coordinated and performed pre blast surveys and water sampling and monitoring with Ohio Department of Natural Resources in New Philadelphia. Reference – Mike Mann, 330-284-8400

Ohio American Energy – performed pre-blast surveys, well monitoring and sampling. Reference – Paul Moore, 740-598-4325

Oxford Resources – performed pre-blast surveys, well monitoring and sampling, groundwater surveys and sampling. Reference – Dick Smith, 740-502-5493

Gatling WV – Big River Mine Startup and operation – daily/weekly monitoring of sample points including wells, springs, ponds, streams. Collect water data, analyze results and prepare weekly/monthly reports. Performed pre blast surveys and pre subsidence surveys. GPS locating, mapping, etc.
Reference – Shawn Ray, 304-593-2839

Pocahontas Coal – performed well sampling and monitoring.
Reference – Frank Rose, 304-543-3993

Environmental Permitting Services – daily/weekly monitoring of sample points including wells, springs, ponds, streams. Collect water data, analyze results and prepare weekly/monthly reports. GPS locating, mapping, stream delineations, etc.of various projects. Reference – Brad Scott, 304-763-0251

B&N Coal – performed pre blast surveys, well sampling and monitoring. Reference – Greg Deval, 740-783-3675

Murray Energy - Perform hydrology and pre-mine surveys. Reference Neil Fowkes, 304-238-8887
Marion Coal Company – Perform pre mine surveys and well sampling. Reference Richard Walton, 304-534-4765

GDF Consulting

Greg Fowler
1405 Letart Road
Point Pleasant, WV 25550
304-593-0072

240512 ODOT Project Monitoring Plan

February 3, 2025

- **A review has been conducted to obtain information and identify the geology of water supplies within 1500 feet of the project area.**
- **A groundwater survey is being performed to determine the locations of wells and springs. Any active well within 1500 feet of the blasting area will be designated for monitoring throughout the project.**
- **A well depth sounder will be used to measure static water level on well.**
- **Any well within the project area will be tested twice a week for 2 weeks prior to the project, twice each week of the project and twice a week for 2 weeks following the conclusion of major excavation/blasting of the project.**
- **Ream and Haager Laboratory in New Philadelphia, OH will be used to test the well samples and provide analysis. pH, e-coli, specific conductivity, turbidity, sulfur and iron tests will be performed.**
- **GDF Consulting will maintain records and data associated with each sample. That data will be compared with each testing for any abnormal results. Any large fluctuation of results or static water levels will result in immediate action to determine the cause.**
- **A final report will be provided detailing the testing and monitoring.**
- **GDF Consulting will meet with the project engineer as necessary to coordinate this work, provide input and discuss the project progress.**

Thanks,

Greg Fowler

Ohio Department of Transportation

Emergency Contact Form

Contractor: Kokosing Construction Inc.

Project Number: E035(921)/E060(482) PID No. 75923

County/Route/Section: Lawrence/SR7

Primary Contact	[Primary Phone]	[Alternate Phone]
Joe Baker	419-512-9957	
Secondary Contact		
Andrew Simon	304-641-5770	
Additional Contacts		
Seth Hoyt	304-703-5357	

PRELIMINARY CONSTRUCTION MEETING
TEAMS
2/7/25

CONTRACT ID: LAW75923

PROJECT NUMBER: 240512 Lawrence

C-R-S: LAW-7-2.17-Phase 2

TYPE: New Construction

DESCRIPTION:

THIS PROJECT IS THE THIRD PHASE OF THE LAW-7-2.17 STATE ROUTE 7 RELOCATION PROJECT. THIS PROJECT WILL CONSTRUCT 6.11 MILES OF THE EASTBOUND LANES OF STATE ROUTE 7 BETWEEN STATE ROUTE 527 AND STATE ROUTE 775. THIS PROJECT ALSO INCLUDES A PARTIAL GRADE SEPARATED INTERCHANGE AT STATE ROUTE 527 AND A FULL INTERCHANGE AT STATE ROUTE 775. ALSO INCLUDED WITH THIS PROJECT IS THE CONSTRUCTION OF A ROUNDABOUT AT THE INTERSECTION OF STATE ROUTE 7 AND STATE ROUTE 243. THIS IMPROVEMENT INCLUDES THE RELOCATION OF 1.98 MILES OF STATE ROUTES, COUNTY AND TOWNSHIP ROADS AS WELL AS THE ADDITION OF 1.28 MILES OF RAMP AND ELEVEN (11) DRIVES. A TOTAL OF TEN (10) STRUCTURES WILL BE DEVELOPED WHICH INCLUDE TRAFFIC OVERPASS AND STREAM CROSSING BRIDGES. WORK WILL INCLUDE NEW STORM SEWERS, CULVERTS, NOISE AND RETAINING WALLS, TRAFFIC CONTROL, PAVEMENT MARKING AND LIGHTING.

CONTRACTOR:

Kokosing Construction Company, Inc.
3802 N. Dents Run Road
Morgantown, West Virginia 26501

SUPERVISION:

ODOT Area Engineer:	**Chris Capper**
ODOT Project Engineer:	**Eric McLaughlin/Nathan Wagner**

ODOT Project Inspector(s):	**GPI – Mike Warnock**
Designer of Record:	**Stantec**
Design Project Manager:	**Tom Barnitz**
Contractor's Project Manager:	Jason Jackson
Contractor's Superintendent:	Joe Baker,
Work Zone Emergency Contact:	**Joe Baker 419-512-9957**
Asphalt Field Quality Control Supervisor:	(Not provided at meeting)
Local Agency:	**Villages of Proctorville & Chesapeake**

TOTAL CONTRACT AMOUNT: $128,588,034.98

CONTRACT DATES:

Award Date:	12/19/24
Contract Signed:	1/9/25
Completion Date:	11/1/28
Interim Completion Date:	11/15/2025 (Step 1), 7/15/2026 (Step 2)
Worker's Compensation Expires*:	6/1/25
Estimated Project Begin Date:	3/3/2025
Hours of Work:	7:00am - 5:30pm Monday-Friday
Progress Meetings:	Monthly

*****Worker's Compensation renewal certificates are to be sent to the District Construction Office, Attention: RoseAnne Barnett.

PREQUALIFICATION: Prime is not prequalified to perform 37 Fence, 41 Raised Pavement Markers, 42 Signing, & 57 Sealing of Concrete Surfaces with Epoxy, for a total of $1,932,727.74 or 1.50% of the work.

Subs:

AWP Report

OHIO DEPARTMENT OF TRANSPORTATION
OFFICE OF CONSTRUCTION ADMINISTRATION

List of Subs for Project 240512

Sub Nbr	Sub Name	Total Sub d	Parent Sub Nbr	Sub Appr	Work Start	Work Stop	Prog Type
00000002	Follow the River Designs, LLC	$172,600.00					DBE
00000003	Marlo Construction Solutions, LLC	$1,545,040.94		1/24/2025			

Run Date 1/29/2025 12:35:03 PM

Page 1 Of 1

EE0 AND CERTIFIED PAYROLLS—9.5% DBE GOAL: Sabrina Bell, EEO Contract Compliance Officer

- Payrolls must be submitted no later than 3 weeks following work.
- Delinquent Payrolls
  - The Department will withhold the dollar amount of the missing payrolls times 2 on the next estimate for the work performed by the contractor with the delinquent payroll.
- The bulletin board **must** be up on project by the first day of work.
- Reminder: C-92's and payrolls are required for both concrete pumping and crane companies.

REAL ESTATE: There are no restrictions relative to entry upon the subject project since all work will be performed within the newly acquired right of way.

ASSET MANAGEMENT: Michael Sherron will be attending this meeting. Coordination of BMP and underdrain inspections. Photos when collected.

UTILITES: Matt Hauck will be attending this meeting and discussing utilities too.

ENVIRONMENTAL: Brandon Beck, Environmental Specialist, will not be attending this meeting. Matt Hauck will cover environmental commitments.

- 107.10: Protection and Restoration of Property.
- 107.19: Environmental Protection.
- Special Provisions Waterway Permit
- SWPPPtrack
- US Army Corp Permit

PUBLIC RELATIONS: Mikaela Bruning, Public Information Officer (PIO)

- Contractor's Point of Contact for any claims that may arise during a project (damage to vehicles, property, etc.)

Name:	Andrew Simon
Phone Number:	304-641-5770
Email:	asimon@kokosing.biz

MAINTENANCE OF TRAFFIC: All MOT Must Adhere to the OMUTCD and with the Plans.

- Temporary Signals Must Rest on Red
- Flagging Operations Require Cones Throughout Zone

SAFETY: Other than hard hats and safety vests, does the contractor require any additional safety apparel and personal protective equipment for this job? Long pants, work boots

- **614.03.C. Conspicuity.** Equip all vehicles with photo strobe lights, LED warning lights, or rotating beacons…
- **OMUTCD 6D.03.04**

All workers, including emergency responders, within the right-of-way who are exposed either to traffic (vehicles using the highway for purposes of travel) or to work vehicles and construction equipment within the TTC zone shall wear high-visibility safety apparel that meets the Performance Class 2 or 3 requirements of the ANSI/ISEA 107–2004 publication entitled "American National Standard for High-Visibility Safety Apparel and Headwear" (see Section 1A.11), or equivalent revisions, and labeled as meeting the ANSI 107-2004 standard performance for Class 2 or 3 risk exposure, except as provided in Paragraph 5. A person designated by the employer to be responsible for worker safety shall make the selection of the appropriate class of garments.

MATERIALS:

- Will you be utilizing HaulHub?
- CML will need to be updated whenever a material changes or is added. Updated copies are to be placed on the SharePoint project site.
- Test Lab Letter Attached

PRECONSTRUCTION DOCUMENTS: The contractor has submitted the following for acceptance*:

☑ Progress Schedule
☑ Subcontractors
☐ Equipment Lists
☑ Material/Supplier Lists

☑ Haul Roads
☐ Borrow/Waste Sites
☐ Beneficial Reuse Form
☑ Contractor's Material Log (CML)
☐ MOT Device Manufacturer Certification Letters (NCHRP 350/MASH 3)
☑ CA-D-10

*If the above items have not been previously submitted, they must be submitted and accepted prior to the first day of work.

PAYMENT: Estimates will be generated every 15 days while work is active. The bid price for the contract bond will be released on the first estimate submitted for the project.

SUBMITTALS, TIME EXTENSION REQUESTS, WEATHER DAYS, AND REQUESTS FOR INFORMATION (RFI): Submit to PE/PS Eric Mclaughlin and Nathan Wagner and AE Chris Capper

CONTRACT DOCUMENTS (105.04):

DigitalPaper XE® (state.oh.us)

Construction Administration | Ohio Department of Transportation

ADDENDA: There are eight [8] addendums for this project.

SPECIFICATIONS: 2023 CM&S with SS 800 dated 7/19/24

- **105.05 Cooperation by Contractor.** Provide the constant attention necessary to progress the Work according to the Contract Documents.
- **108.02.G: Dispute Resolution and Administrative Claims Process.**
- **109.05: Changes and Extra Work.**
  - Contract Limits**:** $100,000

PLANS/PROPOSAL NOTES:

PN 034 – 07/19/2024 – SUPPLEMENTAL SPECIFICATION 832 COMPENSATION

PN 107 - 10/19/2018 - CRITICAL PATH METHOD PROGRESS SCHEDULE FOR MULTI-SEASON PROJECTS

PN 108 – 10/21/2022 DISPUTE RESOLUTION BOARD PROCESS

PN 110 - 10/15/2011 - ESCROW BID DOCUMENTS

PN 111 - 10/21/2022 FACILITATED PARTNERING

PN 121 - 01/18/2019 - INCENTIVE/DISINCENTIVE CONTRACT

PN 150 - 04/21/2023 - DIGITAL DATA FOR MATERIAL TICKETING UTILIZING E-TICKETING PORTAL

PN 420 – 1/20/2023 - SURFACE SMOOTHNESS REQUIREMENTS FOR PAVEMENTS

PN 520 - 07/15/2022 - FUEL PRICE ADJUSTMENT

PN 525 – 07/19/2024 - STEEL PRICE ADJUSTMENT

PN 534 - 01/21/2022 - ASPHALT BINDER PRICE ADJUSTMENT

PN 555 - 01/15/2021 - SURFACE SMOOTHNESS FOR BRIDGES AND APPROACHES

GENERAL DISCUSSION: Department owned property outside of cleared area (pg 37A). Durable Material (pg 37A). Embankment, APP Type C (pg 38).

INFORMAL PARTNERING:

Project Level	**PE/PS** Chris Capper	**Supt.** Joe Baker	Report Due **5** Days
Administrative Level	**DCE** Paul Maravy	**Mgr.** Jason Jackson	Report Due **10** Days
Executive Level	**DDD** Michael L. Dombrowski	**Exec.** Ryan Cocco	Report Due **30** Days