

**WATERSHED AND LOCATION MAP**  
 NO SCALE  
 LATITUDE: N 37°47'45"    LONGITUDE: W 89°19'00"  
 DISTURBED AREA = 4.4 AC.  
 CONTRACTOR DISTURBED AREA = 4.9 AC.

PORTION TO BE IMPROVED   

TOWNSHIP ROAD   

COUNTY ROAD   

# OFFICE OF THE FRANKLIN COUNTY DRAINAGE ENGINEER DEVER PETITIONED DRAINAGE IMPROVEMENT PLAN

**FRANKLIN COUNTY, OHIO  
 BROWN TOWNSHIP**

**INDEX OF SHEETS**

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**PROJECT DESCRIPTION**

This project will involve the new construction of 3942' of drainage swale and the installation of 4010' drain tile.

**SPECIFICATIONS**

The 2023 Standard Specifications of the State of Ohio, Department of Transportation, including changes and supplemental specifications listed in the proposal shall govern this improvement unless noted otherwise.

Signatures below signify only concurrence with the general purpose and general location of the project. All technical details remain the responsibility of the engineer preparing the plans.

I approve these plans and declare that the making of this improvement will not require the closing to traffic of the highway and that provisions for the maintenance and safety of traffic will be as set forth in the plans and estimates.

**FRANKLIN COUNTY APPROVALS**

JRR APPROVED Brad Foster  
 DATE 6/25/2024 FRANKLIN COUNTY ENGINEER

APPROVED W. King Crosier  
 DATE 6/24/2024 FRANKLIN COUNTY CHIEF DEPUTY ENGINEER

JRR APPROVED Brad Foster  
 DATE 6/25/2024 FRANKLIN COUNTY DRAINAGE ENGINEER

We, the Commissioners of Franklin County in formal session, hereby approve these plans.

APPROVED \_\_\_\_\_  
 DATE \_\_\_\_\_ FRANKLIN COUNTY COMMISSIONER

APPROVED \_\_\_\_\_  
 DATE \_\_\_\_\_ FRANKLIN COUNTY COMMISSIONER

APPROVED \_\_\_\_\_  
 DATE \_\_\_\_\_ FRANKLIN COUNTY COMMISSIONER



STANDARD CONSTRUCTION DRAWINGS		SUPPLEMENTAL SPECIFICATIONS	SPECIAL PROVISIONS
ODOT			
CB 2-2B		832 7-15-22	FRANKLIN COUNTY SECTION 100 GEN. PROVISIONS DATED 4-17-23
CB 2-3			
MH-3			
HW-2.2			
DM-4.4			
MT-97.10			
MT-97.11			
MT-101.60			
MT-101.70			
MT-101.90			
		PERMITS	

**MOODY ENGINEERING**  
 300 SPRUCE STREET  
 SUITE 200  
 COLUMBUS, OHIO 43215  
 P: 614 280 8999  
 MOODY-ENG.COM



Mark Larrimer    6/17/2024  
 REGISTERED ENGINEER    No. E69331

R E V I S I O N S			
REV.	DESCRIPTION	INITIAL	DATE

DESIGN SERVICES WORK ID: 082420-024

ENGINEER'S ESTIMATE NO.: 2023-11

PROJECT NO.: 9013

RAILROAD INVOLVEMENT: NONE

**DEVER DRAINAGE IMPROVEMENT**

1  
27

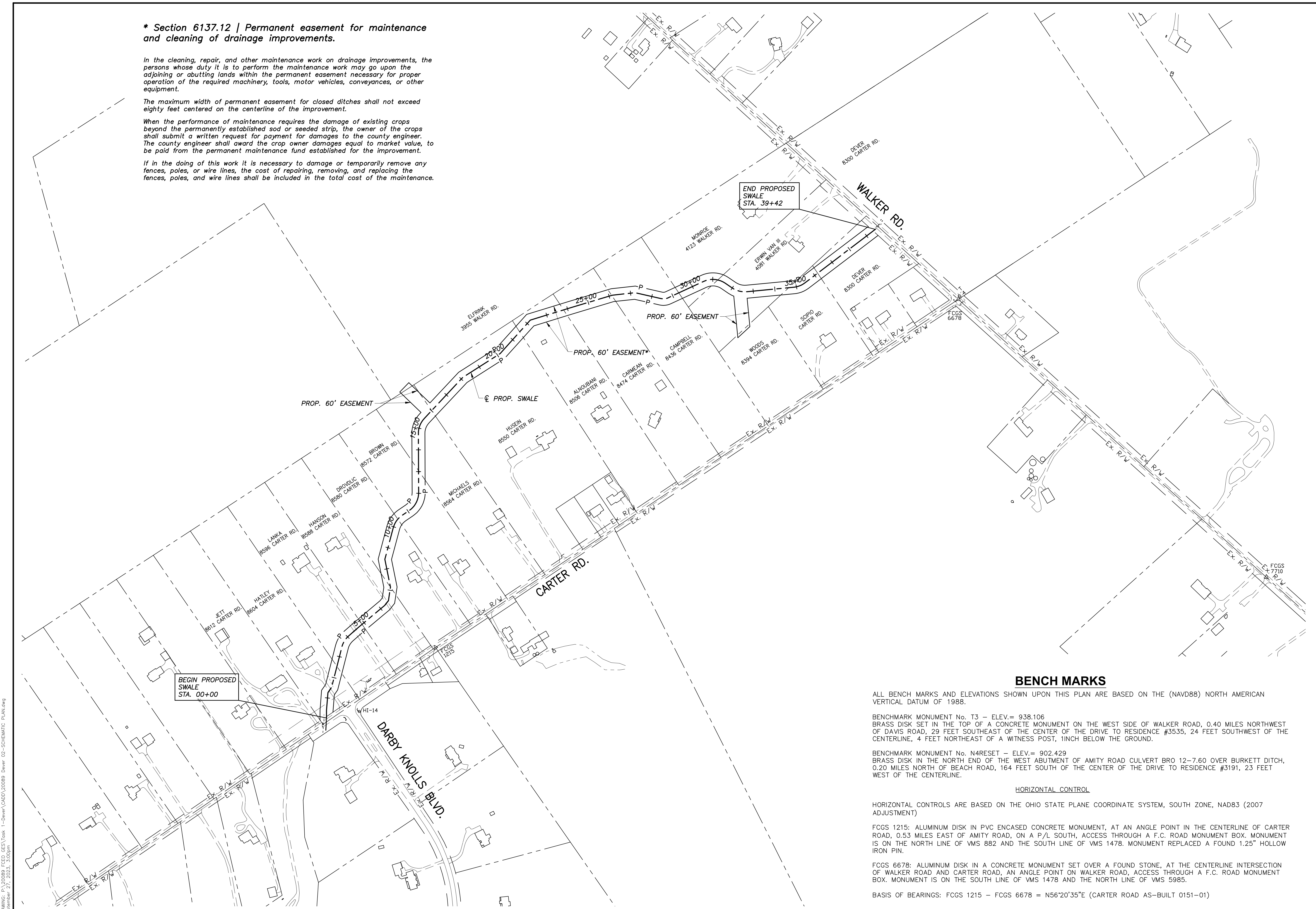
**\* Section 6137.12 | Permanent easement for maintenance and cleaning of drainage improvements.**

In the cleaning, repair, and other maintenance work on drainage improvements, the persons whose duty it is to perform the maintenance work may go upon the adjoining or abutting lands within the permanent easement necessary for proper operation of the required machinery, tools, motor vehicles, conveyances, or other equipment.

The maximum width of permanent easement for closed ditches shall not exceed eighty feet centered on the centerline of the improvement.

When the performance of maintenance requires the damage of existing crops beyond the permanently established sod or seeded strip, the owner of the crops shall submit a written request for payment for damages to the county engineer. The county engineer shall award the crop owner damages equal to market value, to be paid from the permanent maintenance fund established for the improvement.

If in the doing of this work it is necessary to damage or temporarily remove any fences, poles, or wire lines, the cost of repairing, removing, and replacing the fences, poles, and wire lines shall be included in the total cost of the maintenance.



CALCULATED  
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0 200 400  
HORIZONTAL SCALE IN FEET

**SCHEMATIC PLAN**

**DEVER DRAINAGE IMPROVEMENT**

BEGIN PROPOSED SWALE STA. 00+00

END PROPOSED SWALE STA. 39+42

**BENCH MARKS**

ALL BENCH MARKS AND ELEVATIONS SHOWN UPON THIS PLAN ARE BASED ON THE (NAVD88) NORTH AMERICAN VERTICAL DATUM OF 1988.

BENCHMARK MONUMENT No. T3 - ELEV.= 938.106  
BRASS DISK SET IN THE TOP OF A CONCRETE MONUMENT ON THE WEST SIDE OF WALKER ROAD, 0.40 MILES NORTHWEST OF DAVIS ROAD, 29 FEET SOUTHEAST OF THE CENTER OF THE DRIVE TO RESIDENCE #3535, 24 FEET SOUTHWEST OF THE CENTERLINE, 4 FEET NORTHEAST OF A WITNESS POST, 1 INCH BELOW THE GROUND.

BENCHMARK MONUMENT No. N4RESET - ELEV.= 902.429  
BRASS DISK IN THE NORTH END OF THE WEST ABUTMENT OF AMITY ROAD CULVERT BRO 12-7.60 OVER BURKETT DITCH, 0.20 MILES NORTH OF BEACH ROAD, 164 FEET SOUTH OF THE CENTER OF THE DRIVE TO RESIDENCE #3191, 23 FEET WEST OF THE CENTERLINE.

HORIZONTAL CONTROL

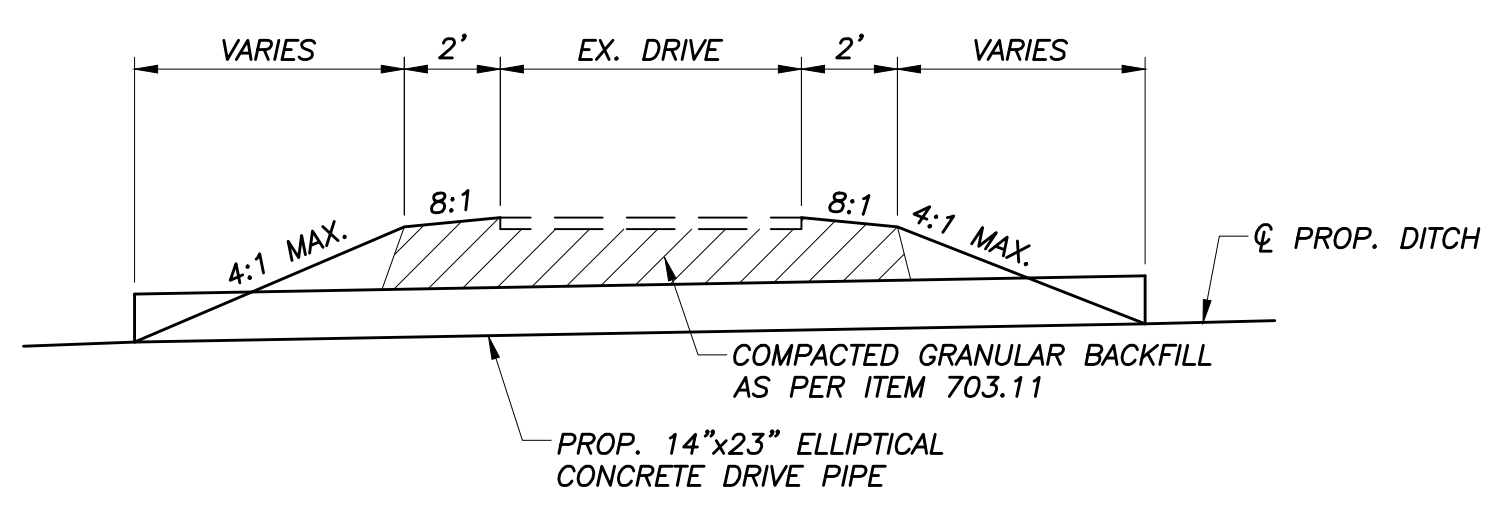
HORIZONTAL CONTROLS ARE BASED ON THE OHIO STATE PLANE COORDINATE SYSTEM, SOUTH ZONE, NAD83 (2007 ADJUSTMENT)

FCGS 1215: ALUMINUM DISK IN PVC ENCASED CONCRETE MONUMENT, AT AN ANGLE POINT IN THE CENTERLINE OF CARTER ROAD, 0.53 MILES EAST OF AMITY ROAD, ON A P/L SOUTH, ACCESS THROUGH A F.C. ROAD MONUMENT BOX. MONUMENT IS ON THE NORTH LINE OF VMS 882 AND THE SOUTH LINE OF VMS 1478. MONUMENT REPLACED A FOUND 1.25" HOLLOW IRON PIN.

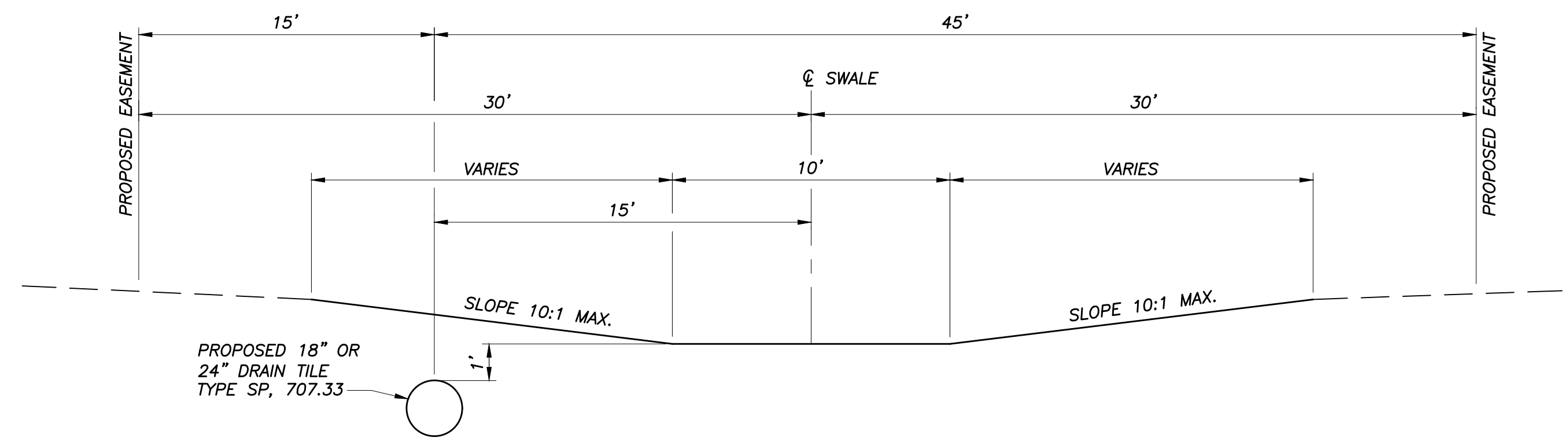
FCGS 6678: ALUMINUM DISK IN A CONCRETE MONUMENT SET OVER A FOUND STONE, AT THE CENTERLINE INTERSECTION OF WALKER ROAD AND CARTER ROAD, AN ANGLE POINT ON WALKER ROAD, ACCESS THROUGH A F.C. ROAD MONUMENT BOX. MONUMENT IS ON THE SOUTH LINE OF VMS 1478 AND THE NORTH LINE OF VMS 5985.

BASIS OF BEARINGS: FCGS 1215 - FCGS 6678 = N56°20'35"E (CARTER ROAD AS-BUILT 0151-01)

DRAWING: P:\20088\_FCGS\_GES\Task\_1-Dever\CAD\20088 Dever 02-SCHEMATIC PLAN.dwg  
September 27, 2023, 3:09pm

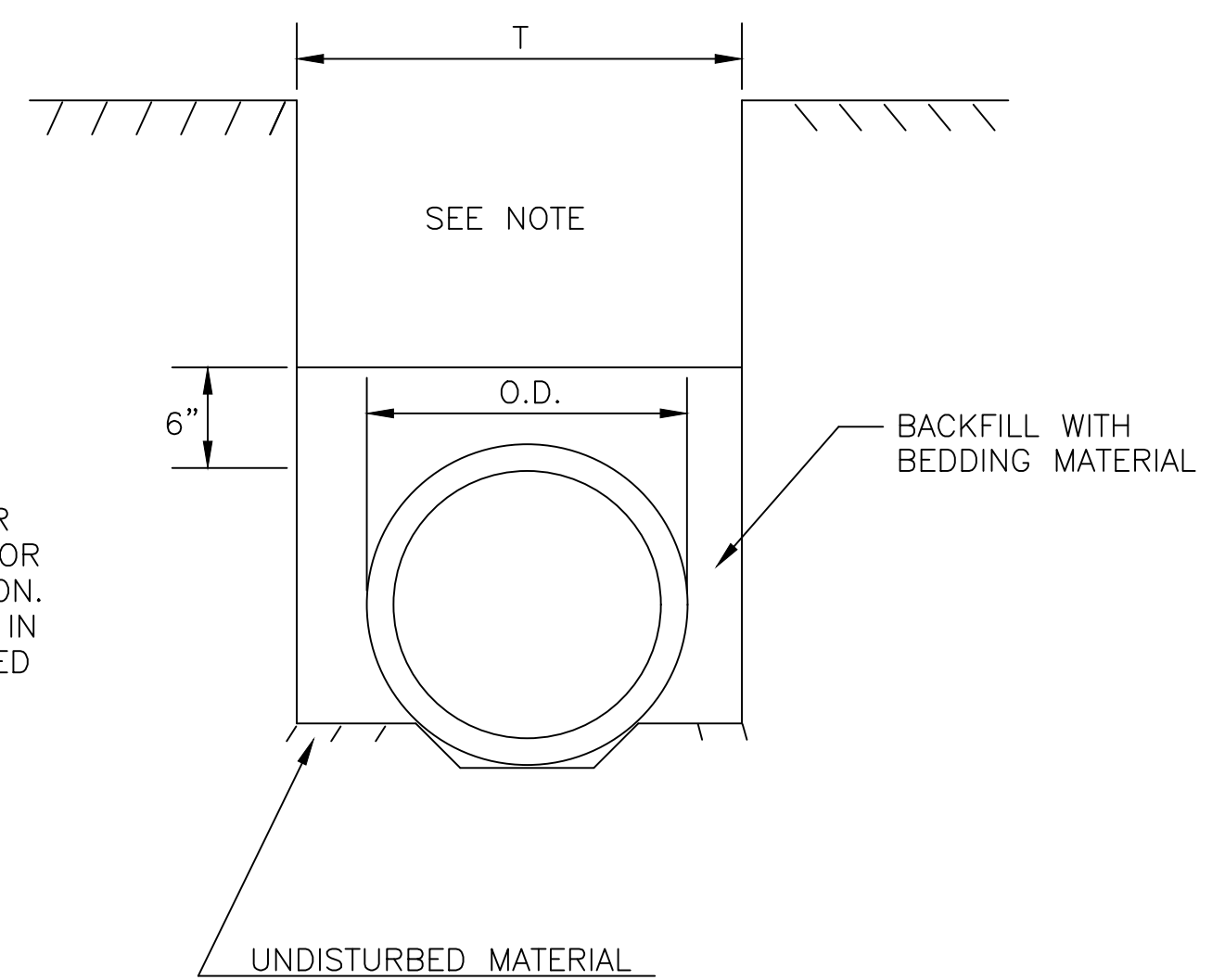


**DRIVE PIPE TYPICAL SECTION**  
NO SCALE



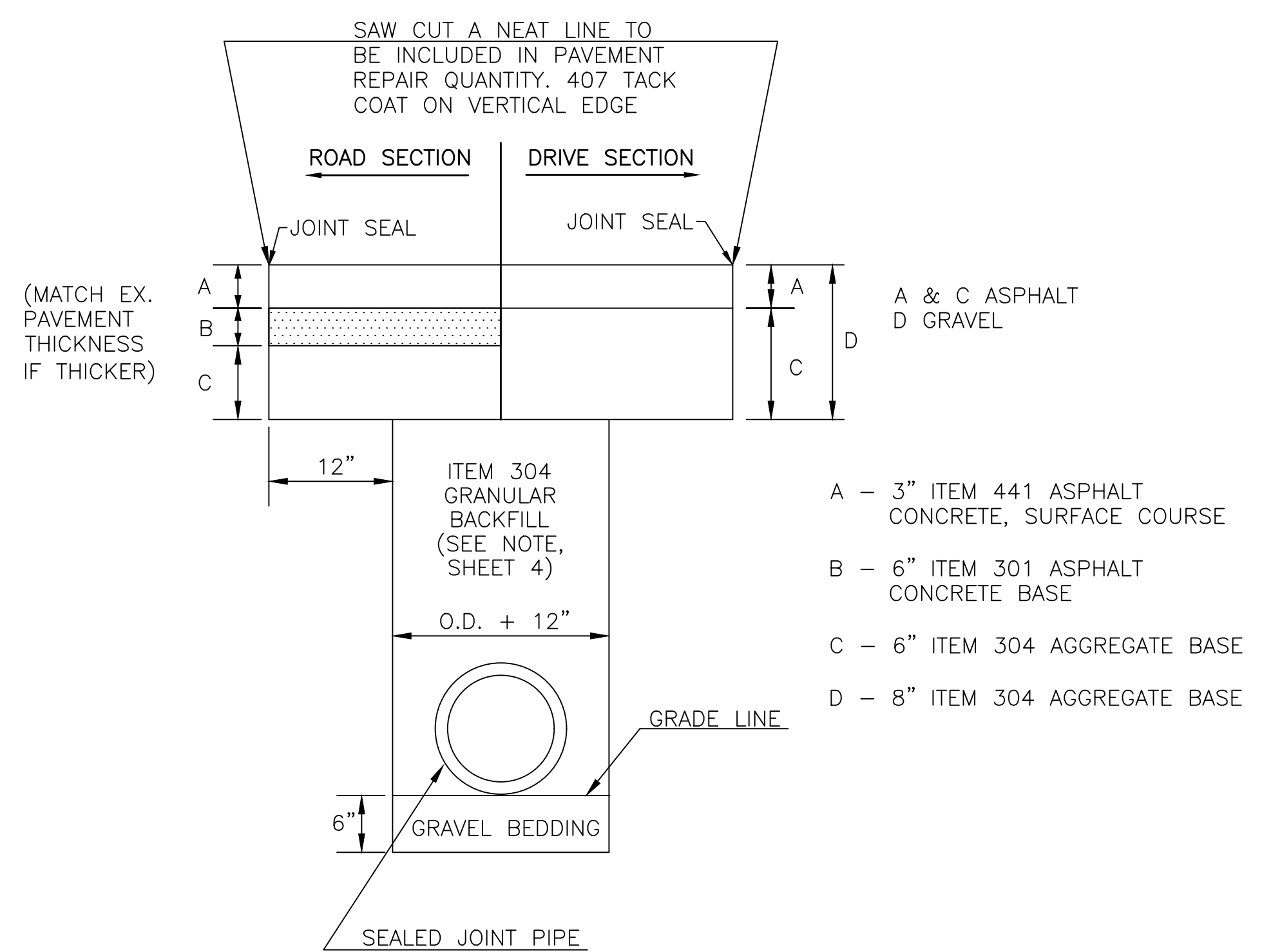
**SWALE TYPICAL SECTION**  
STA. 00+00 TO STA. 39+42  
NO SCALE

NOTE:  
CONTRACTOR TO SEPARATE  
EXISTING TOPSOIL FROM OTHER  
SOILS INTO SEPARATE PILES FOR  
BACKFILLING DURING EXCAVATION.  
ALL WORK WILL BE INCLUDED IN  
THE PRICE BID FOR ASSOCIATED  
DRAIN INSTALLATION



10 INCH DIAMETER OR LARGER  
DRAIN TUBING TO HAVE TRAPEZOIDAL  
OR SIMI CIRCULAR GROVE  
T = O.D. + 6" IN FINE  
GRAINED FRIABLE OR  
SANDY SOILS  
T = O.D. + 12 INCHES IN  
CLODDY SOILS

**TYPICAL SUBSURFACE DRAIN INSTALLATION**



**TYPICAL ROAD/DRIVE CUT**



**SPECIFICATIONS**

The 2023 Construction and Material Specifications of the State of Ohio, Department of Transportation, including changes and Supplemental Specifications listed in the proposal, shall govern this improvement, except where noted otherwise.

**WORK LIMITS**

The work limits shown on these plans are for physical construction only. Provide the installation and operation of all work zone traffic control and work zone traffic control devices required by these plans whether inside or outside these work limits.

**HOURS OF OPERATION**

Contractor's work hours shall be limited to 7:00 A.M. to 7:00 P.M. Monday through Saturday, unless permission is granted by the Engineer in writing. The Contractor shall be required to adhere to all local noise ordinances.

**PRECONSTRUCTION MEETING AND EEO-PREVAILING WAGE SESSION**

The contractor shall meet for a preconstruction meeting scheduled by the County as per Franklin County General Provision 108.02. An EEO-prevaling wage session will be held in conjunction with the general preconstruction meeting discussion of contract documents, affected third party concerns, schedule, proposed subcontractors-suppliers submittals, and possible pre-award safety meeting etc. Prevaling wage coordinator Ronni Nimps 614-525-5123.

**STORM SEWER, WATERLINE & SANITARY SEWER BACKFILL**

Trench backfill under all pavements (roadways, driveways, and sidewalks) and under influence lines of said pavements shall be Item 304 or Low Strength Mortar Backfill (LSMB). Recycled 304 may be used as per ODOT CMS 703.11 where permissible for trench backfill only; recycled material cannot be used as 304 Aggregate Base. LSMB shall follow the mix proportioning in ODOT CMS 613.03 Type III. All pipe to be subject to 611 performance inspection.

Backfill shall be placed as follows:

The minimum trench width shall be 3' to allow room for mechanical compaction equipment: hoe tamps, jumping jacks, etc.

Provide compaction equipment that compacts the material under the haunch of the pipe. Use shovel slicing and spud bars in conjunction with the compaction operations to compact the material and to manipulate the material under the haunch of the pipe.

Item 304 shall be used as the granular material and shall extend up to the bottom of the roadway subgrade. Except as noted below.

Where the new storm sewer, waterline, or sanitary sewer crosses under an existing utility line, No. 57 Stone or LSMB shall be used vertically from the bottom of the new trench to 6" above the top of the existing utility and horizontally 5' on each side of the existing utility (10' total).

The granular backfill shall be placed and compacted in lifts not to exceed 8" for 304 and 24" for No. 57 Stone.

Watering devices shall be onsite and used on 304 that has moisture content below optimum, as directed by the backfill inspector.

For trenches deeper than 10' use LSMB in the bottom of the trench to a point such that the compacted granular backfill the rest of the way up is no deeper than 10'.

All costs for ITEM 304, NO. 57 STONE, and LSMB backfill shall be included in the unit bid prices of the associated pipe.

**EXPOSE NOTE**

Where plans provide for a proposed conduit, storm sewer, waterline, or other construction to cross over or under an existing sewer or underground utility, the contractor shall locate the existing pipes or utilities both as to line and grade before starting to lay the proposed conduit, storm sewer, waterline, or other construction. If it is determined that the existing conduit or existing appurtenance to be connected differs from the plan elevation or results in a change in the planned work, the engineer shall be notified before starting construction of any portion of the proposed work which will be affected by the variance in the existing elevations. Payment for all the operations described above shall be included in the contract price for the pertinent items.

**OVERNIGHT TRENCH CLOSING**

Should work require that trenches remain open during non-work hours, the contractor shall use stone wedges and PCB per SCD MT-101.90 and MT 101.70 accordingly. When the pavement is removed and the contractor is unable to complete the required replacement in time for it to be opened to traffic as indicated in the specifications, the excavation shall be filled with a bituminous patch material with a durable surface or properly plated (as per City of Columbus standard drawing 1441, sheet 7). The contractor will be required to maintain these patches while they are in service. The cost of placing, maintaining, removing and disposing of the temporary patches or plates will be at the contractor's expense.

**EXISTING TOPSOIL**

The Contractor to remove and replace 6" minimum topsoil in excavated areas.

**SAFETY REQUIREMENTS AND RESPONSIBILITIES**

The contractor is responsible for ensuring that all work under this contract meets or exceeds the Occupational Safety & Health Administration (OSHA) standards in addition to complying with the recognized best practice within the construction industry.

**1.0 Certification Requirements**

The manufacturer of safety systems (shoring, protective systems, fall protection) or a professional engineer (PE) must certify that the design of major or critical facilities, equipment, support structures, or systems, embankments, shoring systems, and formwork (false work) is structurally suitable for the intended use. This certification must be in writing and submitted to the FCEO Project Manager before construction or use of such facilities, equipment, or support systems.

**2.0 Required Safety Programs and MSDS Submittals**

The contractor must submit a comprehensive written safety program covering all aspects of onsite and applicable offsite operations and activities associated with the contract. In addition, the contractor shall submit Material Safety Data Sheets (MSDS) prior to bringing chemicals on site. The Contractor Written Safety Program will be used to evaluate compliance and ensure that the contractor has a program in place to deal with all safety and health related requirements. The contractor is fully responsible for its content and implementation. Onsite work must not begin until the FCEO Project Manager has received the program or appropriate supplementary submittals. The submission of the program in no ways relieves the contractor of the responsibility for providing employees with a safe and healthful work environment or compliance with OSHA standards.

**3.0 Required Safety Meetings**

**3.1 Pre-Construction Safety Program Review**

The contractor shall submit the Written Safety Program for review at a Pre-Construction Meeting prior to starting any site activities. The contractor must be prepared to discuss in detail the procedures to control the hazards likely to happen during major phases of the work, and the organizational assignments involved in administering the safety program.

**3.2 Progress Meeting Safety**

The FCEO Project Manager, the contractor's principal onsite representative, and designated members of respective staffs responsible for safety will review site safety concerns at the Progress Meetings. The safety segment of the meeting will review the contractor's safety effort, resolve health and safety problems relating to current operations, and provide a forum for planning safe future activities.

**4.0 Safety and Health Responsibility**

The contractor must designate, in writing, a Safety Coordinator to administer the safety program on site and who has supervisory authority over the general contractor, subcontractors, and suppliers. This person shall have responsibility of site safety and worker health, and shall have the authority to correct deficiencies and stop work, if necessary, until deficiencies are corrected.

**5.0 Accident and Incident Investigating and Reporting**

The contractor's Safety Coordinator shall report all injury accidents and incidents to the FCEO Project Manager as they occur. If a death or injury involving a serious medical condition occurs, the incident shall be reported to the FCEO Project Manager and next of kin within 30 minutes by the contractor's Safety Coordinator. Results of accident investigations and corrective actions shall be provided to FCEO Project Manager as soon as practical following the investigation.

**6.0 Safety Orientation.**

The contractor must give employees training containing pertinent provisions of the site safety and health program. Additionally, all sub-contractor and their employees are required to have training before working on the site. The contractor is responsible for the content of the training and shall make available the training for FCEO review.

**7.0 Refusal to Comply With Occupational Safety and Health Requirements**

The contractor must remove employees who refuse or repeatedly fail to comply with safe work practices and standards, or supervisors who fail to enforce compliance, from the associated work assignments.

**ITEM 653, TOPSOIL FURNISHED & PLACED, AS PER PLAN**

Contractor to separate topsoil during excavation. Contractor to place topsoil as final lift during backfill procedure. Contractor to have rockhound / soil condition ran over before topsoil and/or seeding and mulching is placed. Payment for ITEM 653, TOPSOIL FURNISHED AND PLACED, AS PER PLAN, shall be the unit price bid per cubic yard 6" depth, and shall include any necessary excavation to place the topsoil and any incidentals necessary to complete the work. This material shall be pulverized topsoil meeting ODOT CMS 653.02 and manufactured at a processing plant. Onsite processing operations will not be allowed. Topsoil Furnished and Placed shall be measured by the number of cubic yards furnished after compaction.

**ITEM 659 SEEDING AND MULCHING, AS PER PLAN and ITEM 659 WATER, AS PER PLAN**

The Contractor shall maintain all seeded areas until the Engineer accepts a vigorous grass grown area. This includes protection of the area from wind and fire. The areas shall be watered every other day (rain or shine) for three weeks after seeding. Work for eroded areas due to no fault of the Contractor shall be performed as stated in the ODOT-CMS SECTION 659. No payment shall be made for ITEM 659, SEEDING AND MULCHING, AS PER PLAN unless all the watering applications specified herein are made and until the grass exhibits a vigorous growth. Only when all of the above criteria are met, will payment be made for ITEM 659, SEEDING AND MULCHING, AS PER PLAN. All watering costs to be paid under the ITEM 659, WATER, AS PER PLAN.

Seed certification of grass seed shall be provided by seed vendor for each grass-seed mixture stating the botanical and common name, percentage by weight of each species and variety; and percentage of purity, germination, and weed seed. Include the year of production and date of packaging. Furnish National Turfgrass Evaluation Program (NTEP) data for each species to be used. A NTEP score of 6.0 or higher should be used for all turf tall fescue, a NTEP score of 5.8 or higher should be used for all Kentucky Blue Grass and a NTEP score of 6.0 or higher should be used for Perennial Rye Grass.

Grass seed must be fresh, clean, dry, new-crop seed complying with the A.O.S.A. "Journal of Seed Technology" rules for testing seeds for purity and germination tolerances.

Seed species shall be as follows, with not less than 90 percent germination, not less than 90 percent pure seed, and not more than 0.5 percent weed seed. for Kentucky Blue Grass a germination of, not less than 85 percent. The seed used should be a proprietary cultivar of a turf seed producer.

An example of a proprietary cultivar turfgrass seed mix proportioned by weight:

- A. ~40% Jamboree Turf Tall Fescue
- B. ~35% Essential Turf Tall Fescue
- C. ~12.5% Katie Kentucky Blue
- D. ~12.5% All\* Star 3 Perennial Rye

All proprietary cultivar turfgrass seed mixes shall be approved by the Engineer before seeding and mulching takes place.

Contractor to run a rockhound / soil on any native soil prior to seeding.

SEEDING. Sow seed at a total rate of 7-9 lb. / 1,000 s.f. with a spreader or seeding machine. Rake seed lightly into top 1/8 inch of soil, roll lightly, and water with fine spray.

HYDRO-MULCHING. The use of hydro-mulch (seeding, fertilizer, mulch, and water together) applications may be used only if straw is applied on top of the hydro-mulch at the rate as per ODOT-CMS 659 at no additional cost to the County. The contractor is totally responsible to ensure vigorous growth of the hydro-mulch at his/her own expense.

TURF MAINTENANCE. Maintain and establish turf by watering, fertilizing, weeding, mowing, trimming, and replanting to establish healthy, viable turf. Roll, regrade, and replant bare or eroded areas and remulch to produce a uniformly smooth turf. Provide the same materials and installation as those used in the original installation.

Mow turfgrass seed mix areas as soon as top growth is tall enough to cut. REPEAT Mowing to maintain specified height without cutting more than 1/3 of grass height. Mow areas to a height of 2 to 3 inches.

**DRAINAGE CONNECTIONS**

All conduits paid for under this item shall be considered and bid as an "As Per Plan" item. See note below.

All drains, which are encountered during construction, shall be provided with unobstructed outlets. Existing drains which are located below the roadway ditch elevation, and which cross the roadway, shall be replaced within construction limits using Item 611 Conduit, Type B, one commercial size larger than the existing conduit.

Existing collectors and isolated farm drains, which are encountered above the elevation of roadway ditches, shall be outletted into the roadway ditch by Item 611 Type C Conduit. The optimum outlet elevation shall be 12" above the flow line elevation of the ditch.

All lateral connections outside the road ROW should be performed under NRCS 606 using ODOT 707.33 pipe material (N-12).

The location, type, size and grade of replacements shall be determined by the Engineer and payment shall be made on final measurements.

Tie-ins to existing conduits shall use a rubber boot connection and hardware as approved by the Engineer. All conduits shall be Schedule 40 Polyvinyl Chloride Plastic Pipe (PVC). Blind tap connections and cutting into curb or drainage structures shall be included in the linear foot price bid for each item.

Erosion control pads and animal guards shall be provided at the outlet end of all drains as per Standard Construction Drawing DM-1.1M, except when they outlet into a drainage structure. Payment for the erosion control pads and animal guards shall be included for payment in the pertinent conduit items.

The following estimated quantities have been included in the General Summary for the work noted above

- ITEM 611 4" CONDUIT, TYPE C, SCHEDULE 40 PVC, AS PER PLAN 50 LIN FT
- ITEM 611 6" CONDUIT, TYPE C, SCHEDULE 40 PVC, AS PER PLAN 50 LIN FT
- ITEM 611 8" CONDUIT, TYPE C, SCHEDULE 40 PVC, AS PER PLAN 50 LIN FT

Necessary bends, branches and rubber boot connectors shall be included in the price bid for each item. The Contractor shall not order any of the above materials unless approved by the Engineer.

Contractor to provide northing and easting for all tie-ins to the new main. Will also denote type and size of pipe. Price to be included in the price bid with the associated LF of item used.

All bends and fittings shall be included in the price bid for Item 611, Conduit

**ITEM 201, CLEARING AND GRUBBING**

All trees, fence posts, rocks, brush, stumps and fence within the construction limits of this project shall be removed unless marked "Do Not Disturb". Unless itemized separately, all of these items shall be removed under the lump sum price bid for Item 201, Clearing and Grubbing. Items within the construction limits that are marked "Do Not Disturb" or "DND" shall not be removed or damaged. The County reserve the right to order the removal of trees or stumps outside of the limits of the right-of-way and/or easement lines but within the work limits. Payment for the removal of these trees or stumps shall be included in the lump sum price bid for Item 201, Clearing and Grubbing.

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GENERAL NOTES

DEVER DRAINAGE  
IMPROVEMENT

**UTILITIES**

The identity and location of existing underground utilities located in and around the construction area have been shown and labeled on the plans by using information provided by the respective utility owners. The county and the consulting engineer will not assume responsibility for the accuracy of location or depth of existing underground utilities as shown on the plan.

Support and protection of all utilities and appurtenances shall be the responsibility of the contractor. Costs for the repair and restoration of existing utilities damaged by the contractor shall be the responsibility of the contractor. The contractor is responsible for locating all service laterals and lines. Costs associated with the above work and responsibilities shall be included in the price bid for various items.

Prior to excavation, the contractor shall give a 48-hour notice to the Ohio Utilities Protection Service (OUPS) by calling (800) 362-2764 and 811. A 48-hour notice shall also be given to the owners of underground utilities shown on the plans who are not members of a registered underground protection service.

Listed below are utility companies that have facilities located within the work limits of this project and subscribe to OUPS.

Columbia Gas  
Mike Sucharski  
3350 Johnny Appleseed Ct.  
Columbus, OH 43231  
Office: 614-818-2104  
Customer Service: 800-344-4077  
Damage Prevention: 866-632-6243

AT&T  
Kevin Glaser  
111 North 4th Street  
Columbus, OH 43215  
Office: 614-208-9312  
Repair Service: 888-611-4466  
Prompt #1 then #5

American Electric Power  
Paul Paxton  
850 Tech Center Drive  
Gahanna, OH 43230  
740-348-5322  
Solution Center: 800-277-2177

Charter Comm (Spectrum/Time Warner)  
Anthony Adams  
3760 Interchange Road  
Columbus, OH 43204  
614-827-7971

Marathon Petroleum  
Blake A. Ross  
Heath Area  
Operations ROW Technician  
blakeaross@marathonpetroleum.com  
614-633-8678

Storm Sewer  
Franklin County Engineer  
Steve Buskirk  
970 Dublin Road  
Columbus, OH 43215  
614-525-3063

**Marathon Pipe Line Requirements:**

A Marathon pipeline high pressure petroleum pipeline is within the limits of this project along Carter Road. Marathon requires their personnel be on site for any work within 50' of the pipeline. Contractor shall contact Blake Ross at (614) 633-8678 to coordinate excavation schedule and on site representation by Marathon for the duration of proposed work within the 50' limits.

**ITEM SPECIAL, HYDRO-EXCAVATING UTILITY EXPOSURE**

The Contractor shall expose utilities as directed by the Engineer utilizing Hydro-Excavating methods. The unit price bid for this pay item shall include all costs for labor, equipment, backfill of the exposure holes utilizing Flowable Controlled Density Fill as per Columbus 2012 CMS 613.04 Type I or Type III, and any incidentals necessary to complete the work.

This is a special pay item to be used as directed by the Engineer and not to be used for usual utility exposures associated with OHIO811 excavation tickets and general construction of the project. Costs to expose utilities associated with OHIO811 excavation tickets and general construction of the project shall be included in the unit bid prices for the items of work affected. The Contractor is reminded to keep their OHIO811 excavation ticket updated according to industry practices.

A contingency quantity of: ITEM SPECIAL HYDRO-EXCAVATION UTILITY EXPOSURE 5 each

**EXISTING/UNIDENTIFIED STORM SEWERS**

If any existing storm sewers or field tiles are encountered during construction, leave exposed and contact the Engineer/Inspector to have the existing tile's size, composition, horizontal location, and flowline recorded in the asbuilt plan.

**UNTREATED SEPTIC CONNECTIONS**

This plan makes no provision for connecting, nor shall the Engineer or contractor connect, any untreated septic drainage into the highway drainage system. Any pipe possibly carrying untreated septic flow shall be left exposed. Call Franklin County Health Dept. at (614) 525-3909 and the Franklin County Drainage Engineer's Office at (614) 525-7318 or (614) 525-2787 for direction on whether or not to tie the pipe into the highway drainage system or plug the pipe at R/W line w/ Class C concrete. Payment for plugging shall be included in contract price for the pertinent 202 or 203 item.

**ITEM 832, STORM WATER POLLUTION PREVENTION PLAN and ITEM 832, EROSION CONTROL**

This contract is subject to National Pollutant Discharge Elimination System (NPDES) and specifically the Ohio EPA Authorization for Storm Water Discharge Associated with Construction Activity under NPDES. Additionally, federal, state, and local regulations pertaining to storm water pollution prevention shall also apply.

An officer of the Contractor's company will be required to co-sign the Ohio EPA permit and Notice of Intent (NOI) as per NPDES requirements (if required). The Contractor shall have a supervisory employee onsite who is competent in proper, current erosion control practices during all earth disturbing activities. It is the Contractor's responsibility to notify his subcontractors of the Ohio EPA requirements, have them sign affidavits that they understand those requirements, and furnish copies to the Franklin County Engineer's Office (FCEO) before their associated work begins.

Once the apparent low bidder has been determined in writing in the form of a letter from the Franklin County Engineer, the Contractor shall submit a Storm Water Pollution Prevention Plan (SWP3) within 15 working days for approval by FCEO. The SWP3 shall be prepared, stamped, and signed by a Professional Engineer experienced and competent in the design and implementation of standard erosion and sediment controls and storm water management practices addressing all phases of construction. The officer of the Contractor's company, who signs the NOI, as mentioned above, shall also sign the SWP3. Submit five half size sets and one electronic PDF set of plans for review to FCEO. FCEO will review/approve or review/return comments within 10 working days. If comments are returned to the Contractor, they shall be incorporated and resubmitted for approval within 5 working days. FCEO will back check the SWP3 within 5 working days and ask for additional changes or approve the SWP3.

The SWP3 shall incorporate at a minimum the following:

- "Part III, Section G SWP3 Requirements of the Ohio EPA, Authorization for Storm Water Discharge Associated with Construction Activity under National Pollutant Discharge Elimination System (NPDES)."
- Current edition of ODNr's Rainwater & Land Development Manual.
- Detailed description and drawings of all Best Management Practices (BMP's) including plan views, section views, legend, and installation practices the Contractor plans to use.
- Procedure for self-reporting verbally and in writing to FCEO and OEPA when the contractor learns of actual or potential violations.
- Methods the contractor will use to train or inform all of the contractor's employees, subcontractors, and other persons affected by the SWP3 of the requirements of the plan including methods and techniques to be used to ensure implementation of the plan. As stated above, it is the Contractor's responsibility to notify his subcontractors of the Ohio EPA requirements, have them sign affidavits that they understand those requirements, and furnish copies to the Franklin County Engineer's Office (FCEO) before their associated work begins.
- Emergency contact information, the general permit number, a copy of the NOI (if required), and a copy of the approval letter from OEPA (if required).
- Listing of subcontractors and co-permittees.
- Schedule which describes the sequence of major earth moving construction operations; the implementation of erosion, sediment, and storm water management practices; and the removal of During Construction BMP's upon project completion.
- Locations of concrete truck washouts; construction entrances; material storage areas; solid, construction, and hazardous waste storage areas; vehicle maintenance and fueling areas; onsite overburden, borrow, and stockpile areas; stream, creek, or channel crossings; sediment and storm water management basins including their sediment settling volume and contributing drainage area; open burning locations; etc.
- Estimate of BMP's including type and quantities.
- Detailed dewatering plans.

Upon approval, submit five half size sets and one electronic PDF set of the SWP3 to FCEO. No commencement of construction will be allowed until the SWP3 has been approved. The co-permittee/Contractor shall inform FCEO in writing of all amended activities to the SWP3 whenever there is a change in design, construction, operation, or maintenance that has a significant effect on the potential for the discharge of pollutants to Ohio waters or if the SWP3 proves to be ineffective in achieving the general objectives of controlling pollutants in storm water. It is the responsibility of the co-permittee/Contractor to evaluate all sediment and erosion control activities to ensure that no turbid discharge is released to the waters of the State of Ohio. The co-permittee/Contractor shall update the SWP3's at his/her cost as construction progresses to reflect changing conditions and work areas.

The co-permittee/Contractor shall be fully responsible for all compliance activities for all areas outside of the designed FCEO construction site. These areas include locations where soils are stockpiled, excavated for the purpose of fill, or disposed of as fill outside of the work limits in the construction plans. The co-permittee/Contractor shall file an NOI with Ohio EPA regarding these off-project areas and furnish copies to FCEO.

FCEO will closely monitor the implementation of the SWP3 with emphasis on construction and continued maintenance of BMP's. FCEO will provide the co-permittee/Contractor notice of any deficiencies found during required inspections as required by the general permit. The Contractor shall install a rain gauge close to the Field Office, as directed by the engineer. FCEO stipulates the co-permittee/Contractor to make repairs within 24 hours of notification of deficiencies. If the contractor fails to remedy unsatisfactory sediment control and dewatering practices within 24 hours after receipt of such notice, FCEO may invoke the provision of ODOT CMS Section 105.15, correct the problem areas, and deduct the entire cost of the correction from monies due or to become due the contractor on the contract. Failure of the contractor to take corrective measures may result in enforcement actions and penalties as provided by NPDES, federal, state, and local laws. Any fines for non-compliance will be passed onto the contractor.

The Contractor shall submit to FCEO a description of the BMP's that will be employed prior to work beginning, and FCEO reserves the right to deny implementation of any BMP that is determined to be non-effective prior to or during construction activities.

The stipulations of ODOT SS 832 shall apply. The SWP3 for this project will not be Non-Performed and is required before construction can begin. If an SWP3 is required for off-project EDA, then it shall be furnished by the Contractor prior to off-project EDA at no cost to FCEO. Payment for all work associated with EROSION AND SEDIMENT CONTROL for on-project EDA shall follow ODOT SS 832 and will be paid for by FCEO based on field measurements. Work associated with erosion and sediment control for off-project EDA will not be paid for by FCEO.

The Contractor is hereby advised that stricter pollution control standards and enforcement have been imposed by the Ohio EPA since March 10, 2003 and with a revision in April 2018. Also, many private citizen environmental groups, who have been known to file civil legal actions, are present in the area and observe all construction operations. The pay items (silt fences, check dams, sediment basins, etc.) set-up in the contract shall be used to control silt pollution as shown in the plans, directed by the Engineer, and/or ordered by the Ohio EPA.

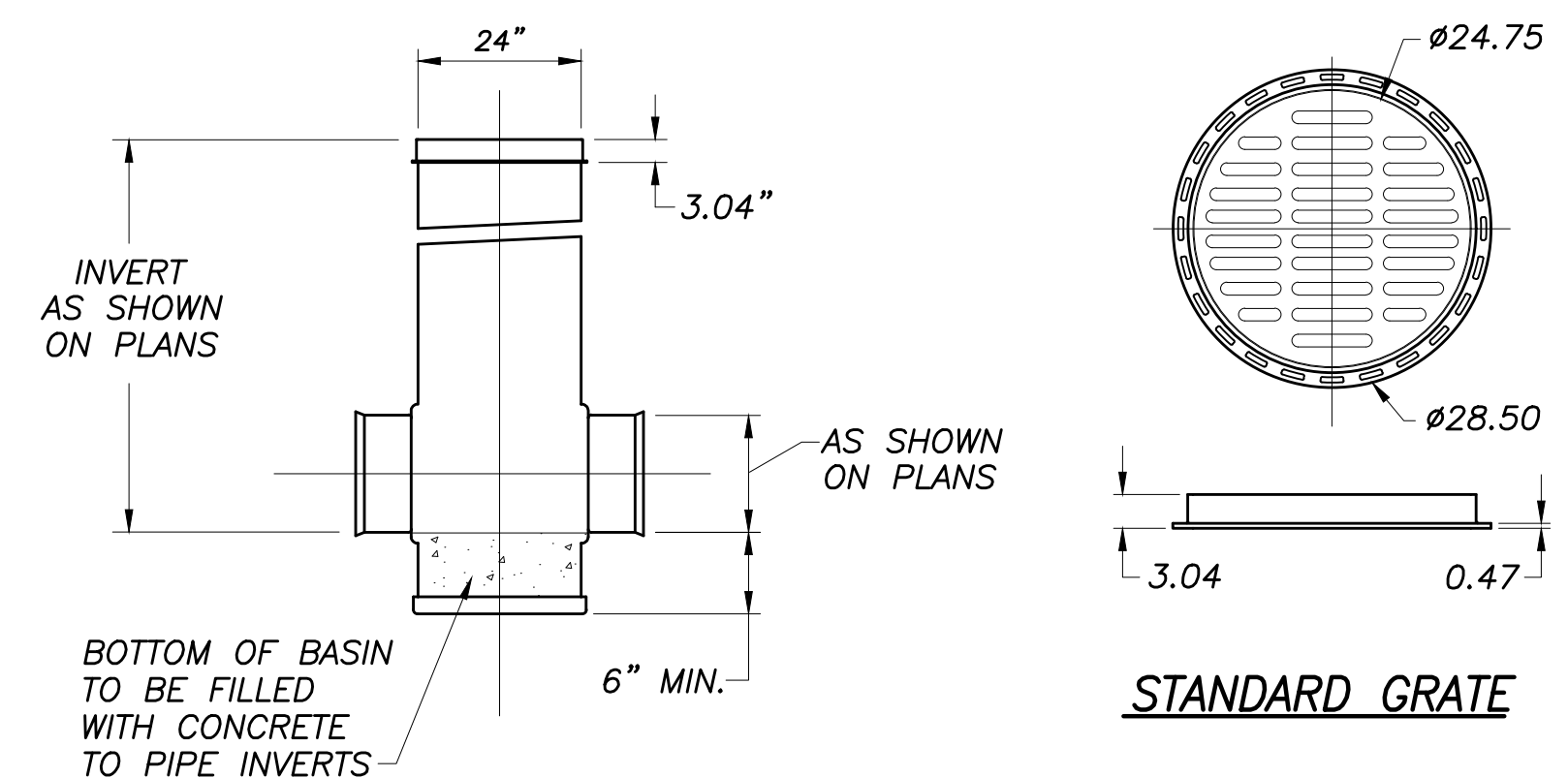
When a Contractor needs to dam any waterway for dewatering purposes, any dikes placed in the stream must be of clean non-erodible materials. Dams constructed of soil in the stream are not acceptable, even if the stream work area is cordoned off or by-passed. Dams in the stream shall be of durable bags filled with coarse granular sand or clean stone (such as #57 or #2) or other methods acceptable to the EPA that prevent pollution. The labor and material used to install bags of sand or stone for stream dewatering purposes shall be included in the bid price for COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN.

The Contractor will be required to build sediment basins or use equal methods to detain and clean water to acceptable EPA standards before releasing the water back into the stream. Sediment basin(s) shall be detailed in the SWP3 and are a listed item within the Erosion Control pay item.

Stone used for check dams for dewatering purposes in the stream shall be the ROCK CHANNEL PROTECTION (RCP) contingency set-up in the Erosion Controls pay item, the #2 Stone contingency set-up in the Erosion Controls pay item, or a combination of the RCP and #2 Stone contingency. Payment using the RCP and/or the #2 Stone contingency shall be at the measured quantity at the unit bid price for these items.

It is preferred to use permanent erosion control items as shown in the plans to control construction pollution when possible.

All items are to be maintained as per ODOT SS 832. Requirements to maintain sediment and erosion control items will be STRICTLY ENFORCED.



**24" DRAIN BASIN DETAIL**

BY ADS OR APPROVED EQUAL  
NO SCALE

**GENERAL NOTES**

**DEVER DRAINAGE IMPROVEMENT**



**ITEM 614 MAINTAINING TRAFFIC, AS PER PLAN**

These plans provide a suggested method of maintaining traffic for this project. The Contractor may submit an alternate MOT plan at the preconstruction meeting showing how they plan to maintain traffic in accordance with the OMUTCD and these traffic maintenance notes. These plans will need to be reviewed and approved by the Franklin County Engineer's Office. The Contractor will be advised as to the review results in writing within thirty (30) days.

A minimum of two 10' lanes (one lane of traffic in each direction) shall be maintained on all roads during non-working hours and peak periods (7am-9am and 4pm-6pm). If this requirement cannot be met, traffic shall be detoured using ODOT Standard Construction Drawing MT-101.60 and OMUTCD Chapter 6H (Figure 6H-20).

Two-way one-lane traffic is permitted during working non-peak hours (9am-4pm) in accordance with ODOT Standard Construction Drawing MT-97.10 or MT-97.11.

The Contractor shall notify the County Engineer's Mobility Department at 614-525-6036 two weeks prior to beginning work, and weekly thereafter, to discuss any changes to the maintenance of traffic plan and/or completion date. Before work is started on this project the Contractor shall submit a written schedule of operation and a traffic maintenance control plan for approval. No work will be started that will restrict any lane usage unless it is the intent of the Contractor to work full time with a full force in order to complete the work without unnecessary delays.

The following devices must meet NCHRP 350 or MASH-08 before the devices are installed on the project: drums, cones, vertical panels and the panel support, portable sign supports, temporary impact attenuators, temporary concrete barrier, and barricades.

All construction signing shall be installed and covered before construction begins. After construction sign installation, the Contractor shall notify the Franklin County Engineer's Office Mobility Department at 614-525-6036 three working days before work begins and request an inspection of all signing.

Faces of construction signs and reflective sheeting on barricades shall be Type H (VIP). All orange construction signs shall be fluorescent orange. All sheeting will be tested for reflectivity per ODOT 730.192. Vertical panels and drum bands shall be reflectorized with Type G (high intensity) sheeting complying with the requirements of 730.19. All signs and barricades, vertical panels, and drums will be like new and in good condition in conformance with "Quality Guidelines for Temporary Traffic Control Devices and Features" published by ATSSA.

Maintenance of all Contractor-supplied signs, barricades, vertical panels and drums is the Contractor's responsibility. If the Contractor fails to correct deficiencies within four hours of notification, Franklin County shall correct or hire someone to correct the deficiencies. The Contractor shall then be back charged per ODOT Specification 614. In the case that back charging the Contractor is not applicable, the County will rescind and withhold all permits issued to the Contractor to work within County right-of-way until the issue is settled. These provisions shall not in any way relieve the Contractor of any of their legal responsibilities or liabilities for the safety of the public.

All barricades at closures shall have yellow Type A low intensity flashing warning lights and two flags. Reflective material is required on both sides of all barricades.

Cones are approved for daytime use only. Drums shall be used at night and have yellow Type C steady burn lights. Cones and Drums shall be placed as follows: 25' c/c on tangents, 15' c/c on tapers, and 8' c/c in radii, or as specified in MT-97.10 or MT-95.30.

All signs nine square feet (36" x 36") and over shall have yellow Type A low intensity flashing warning lights and two flags.

All work and traffic control devices shall be in accordance with ODOT CMS 614 and other applicable portions of the specifications, as well as the latest version of the OMUTCD. Payment for all labor, equipment and materials shall be included in the lump sum contract price for Item 614, Maintaining Traffic, as Per Plan, unless separately itemized in the plan.

**LOCAL ACCESS**

Ingress and egress shall be maintained to all residential and commercial properties. Driveway closures may be necessary to enable work on, or in front of, a drive. The Contractor will be responsible for notifying owners, residents, or business operators, in writing, at least 7 days, prior to closure per ORC 61.31.47. The Engineer shall be given a list of the persons that were given notices with the date of notice included. Closure is permitted only during work hours and access must be returned at the end of each working day. Properties with multiple drives may have one drive closed at a time, while work is performed in the area of the closed drive.

Individual drive closures shall be kept to the minimum time needed for construction activities. Every effort must be made to accommodate the owner's need for access. No weekend closures.

**EXISTING TRAFFIC SIGN MAINTENANCE**

Special care shall be taken to maintain existing street name signs and stop signs. If necessary, the Contractor shall relocate these signs out of the way of construction, but in conformance with OMUTCD. Any damaged sign shall be replaced at the expense of the Contractor.

CALCULATED  
MAB  
CHECKED  
MSL

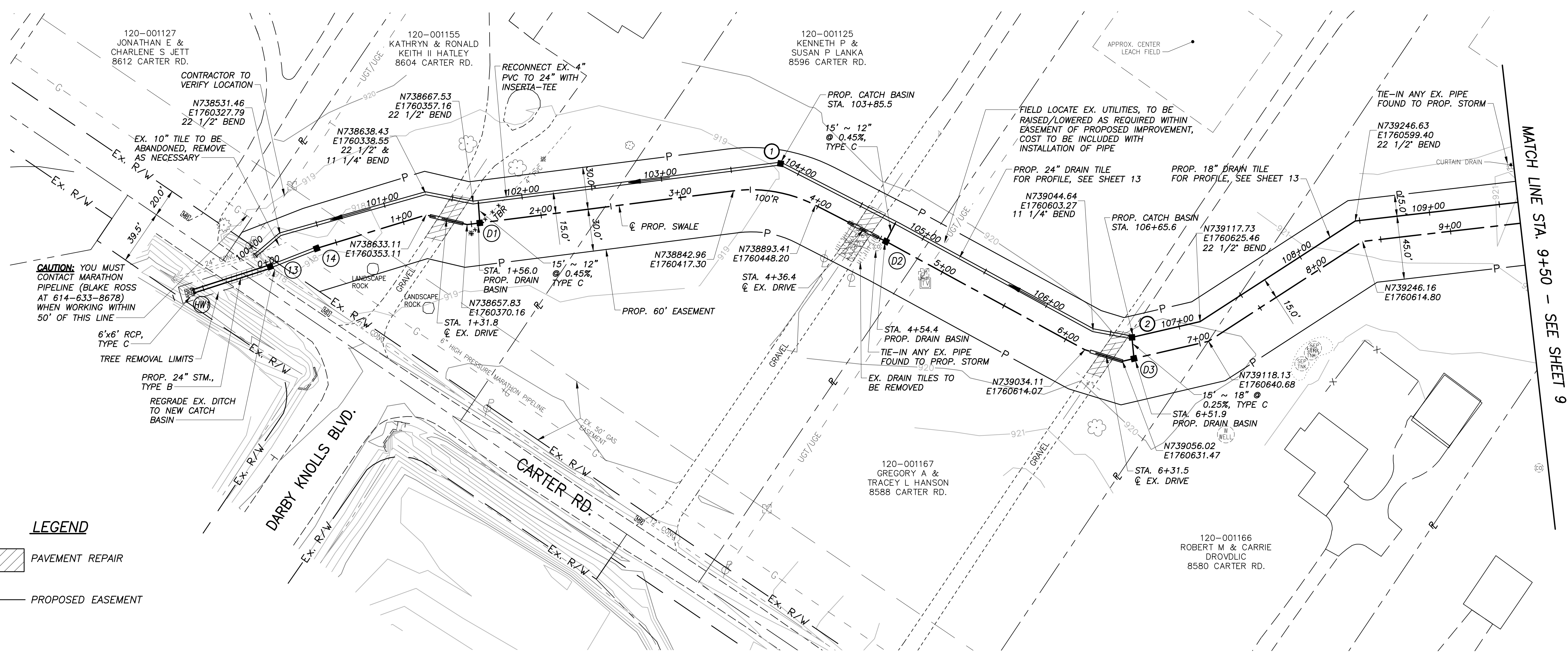
**MAINTENANCE OF TRAFFIC NOTES**

**DEVER DRAINAGE  
IMPROVEMENT**

GENERAL SUMMARY			
ITEM	QUANTITY	UNIT	DESCRIPTION
<b>ROADWAY</b>			
201	1	L.S.	CLEARING AND GRUBBING
202	37	FT.	PIPE REMOVED 30"
202	95	FT.	FENCE REMOVED AND REPLACED
203	4818	C.Y.	EXCAVATION
203	200	C.Y.	EXCAVATION (USED AS DIRECTED BY ENGINEER)
203	20	C.Y.	EMBANKMENT
203	100	C.Y.	EMBANKMENT (USED AS DIRECTED BY ENGINEER)
203	50	C.Y.	EMBANKMENT #2 STONE (USED AS DIRECTED BY ENGINEER)
203	50	C.Y.	EMBANKMENT #57 STONE (USED AS DIRECTED BY ENGINEER)
653	24	C.Y.	TOPSOIL FURNISHED AND PLACED, AS PER PLAN
SPEC	5	EACH	HYDRO EXCAVATING UTILITY EXPOSURE (USED AS DIRECTED BY ENGINEER)
<b>EROSION CONTROL</b>			
601	2	C.Y.	ROCK CHANNEL PROTECTION, TYPE C WITH FILTER
659	21374	S.Y.	SEEDING AND MULCHING, AS PER PLAN
659	115	M.GAL.	WATER, AS PER PLAN
832	15000	EACH	EROSION CONTROL
SPEC	1	L.S.	SWPPP
<b>DRAINAGE</b>			
602	1.41	C.Y.	CONCRETE MASONRY
611	359	FT.	12" CONDUIT, TYPE C, 707.33
611	46	FT.	18" CONDUIT, TYPE B, 707.33
611	3301	FT.	18" CONDUIT, TYPE C PERFORATED (707.33, TYPE SP)
611	15	FT.	18" CONDUIT, TYPE C, 707.33
611	643	FT.	24" CONDUIT, TYPE C PERFORATED (707.33, TYPE SP)
611	59	FT.	24" CONDUIT, TYPE B, 706.02
611	60	FT.	24" CONDUIT, TYPE C, SDR 35
611	37	FT.	30" CONDUIT, TYPE A, 706.02
611	72	FT.	14"x23" CONDUIT, TYPE D, 706.04
611	10	EACH	CATCH BASIN (CB 2-2B)
611	5	EACH	CATCH BASIN (CB 2-3)
SPEC.	3	EACH	DRAIN BASIN, AS PER PLAN, SHEET 5
611	50	FT.	4" CONDUIT, TYPE C, SCHEDULE 40 PVC, AS PER PLAN
611	50	FT.	6" CONDUIT, TYPE C, SCHEDULE 40 PVC, AS PER PLAN
611	50	FT.	8" CONDUIT, TYPE C, SCHEDULE 40 PVC, AS PER PLAN
<b>PAVEMENT</b>			
253	62	S.Y.	PAVEMENT REPAIR (ROADWAY), AS PER PLAN, SHEET 3
253	143	S.Y.	PAVEMENT REPAIR (DRIVES), AS PER PLAN, SHEET 3
<b>INCIDENTALS</b>			
614	1	L.S.	MAINTAINING TRAFFIC, AS PER PLAN
623	1	L.S.	CONSTRUCTION LAYOUT STAKES AND SURVEYING
624	1	L.S.	MOBILIZATION

**GENERAL SUMMARY**

**DEVER DRAINAGE IMPROVEMENT**



**LEGEND**

PAVEMENT REPAIR

PROPOSED EASEMENT

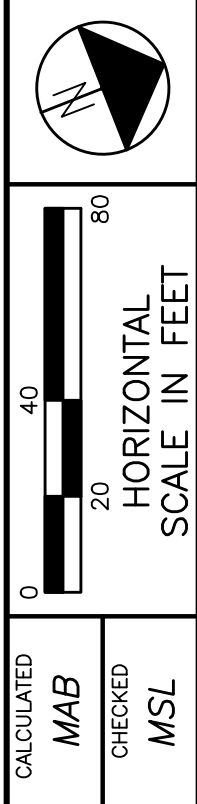
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6'x6' RCP, TYPE C

TREE REMOVAL LIMITS

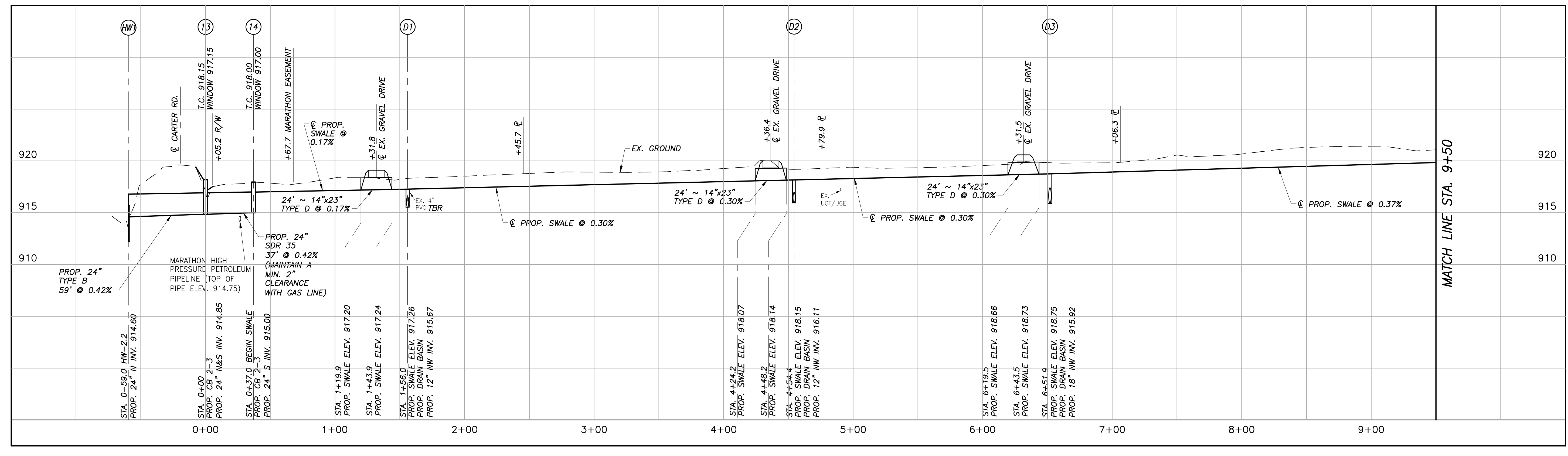
PROP. 24" STM., TYPE B

REGRADE EX. DITCH TO NEW CATCH BASIN



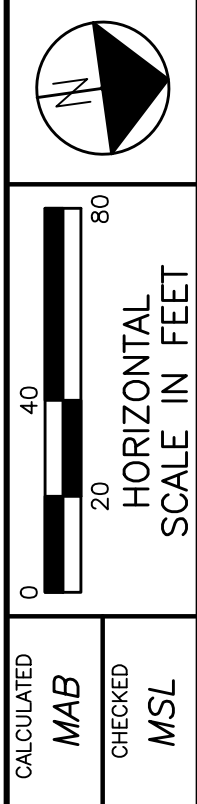
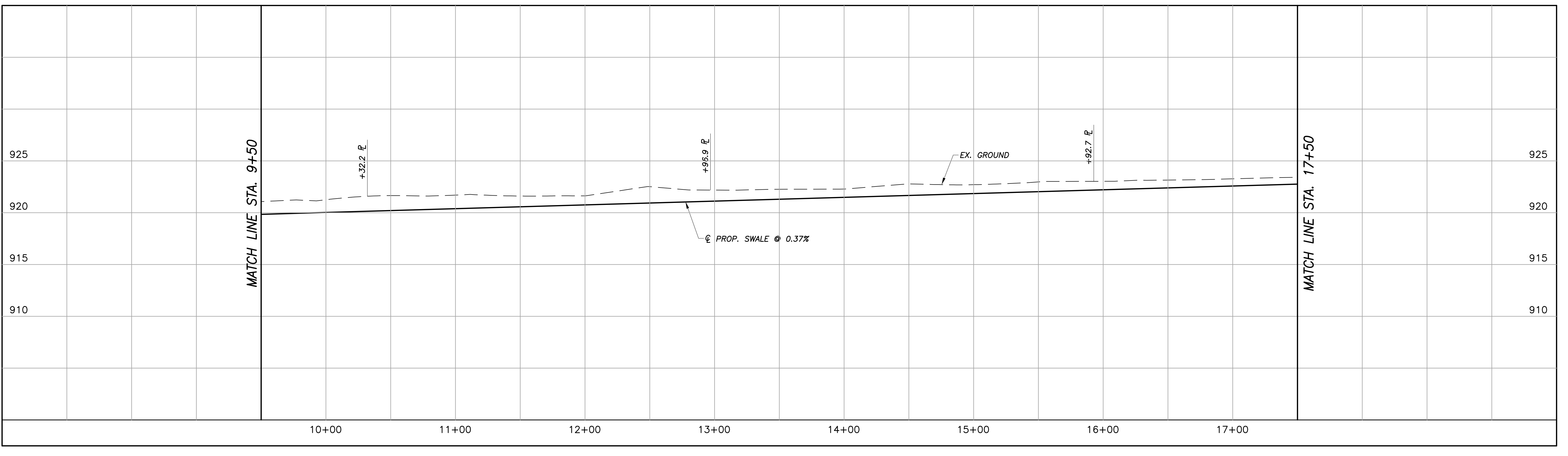
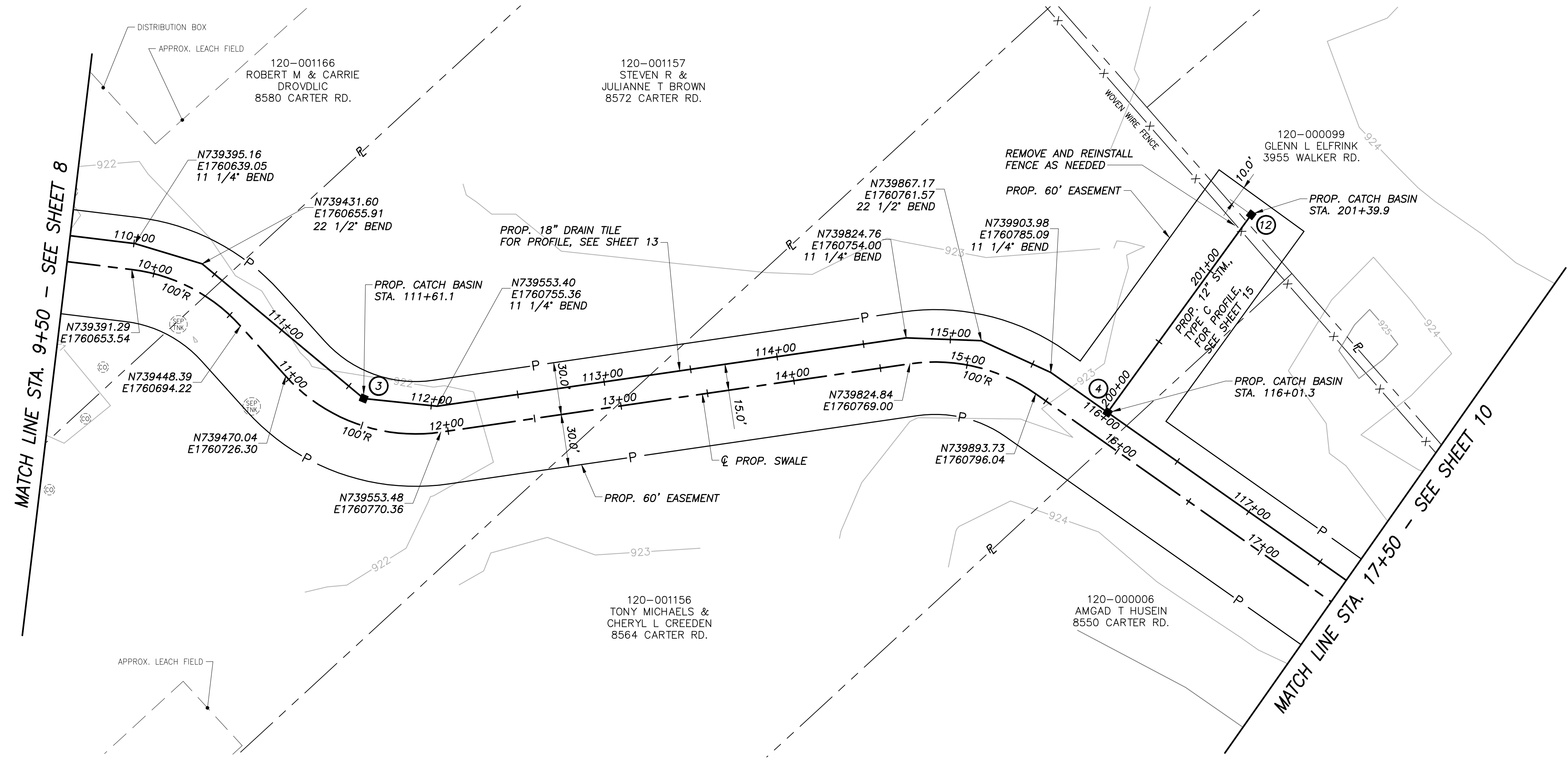
**PLAN AND PROFILE**  
**STA. 0+00 TO STA. 9+50**

**DEVER DRAINAGE IMPROVEMENT**



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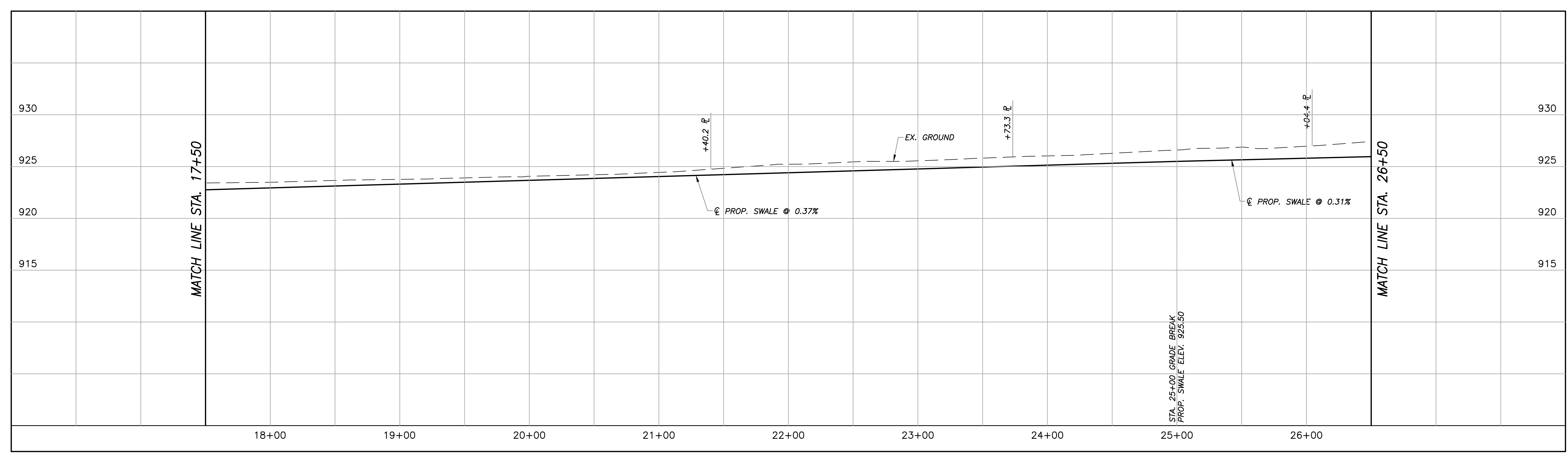
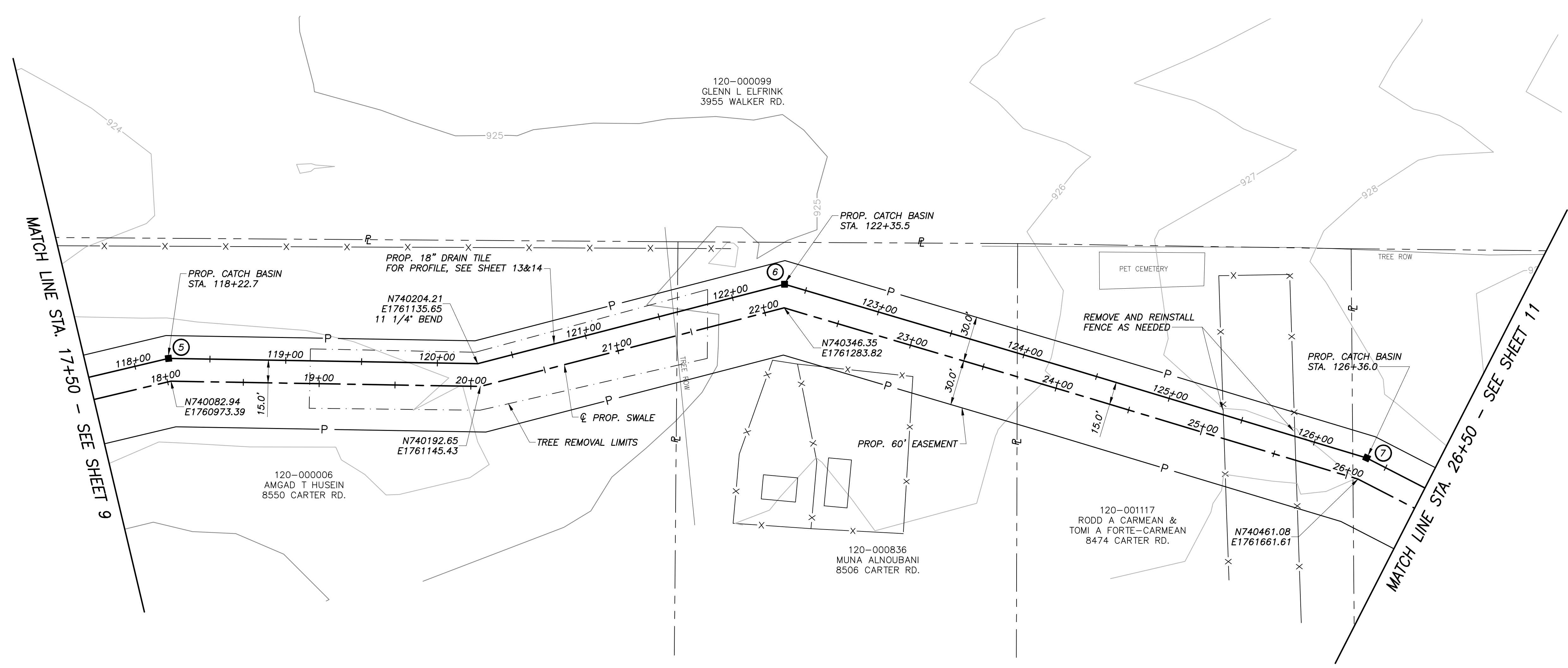


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 CHECKED MSL

**PLAN AND PROFILE  
 STA. 9+50 TO STA. 17+50**

**DEVER DRAINAGE  
 IMPROVEMENT**

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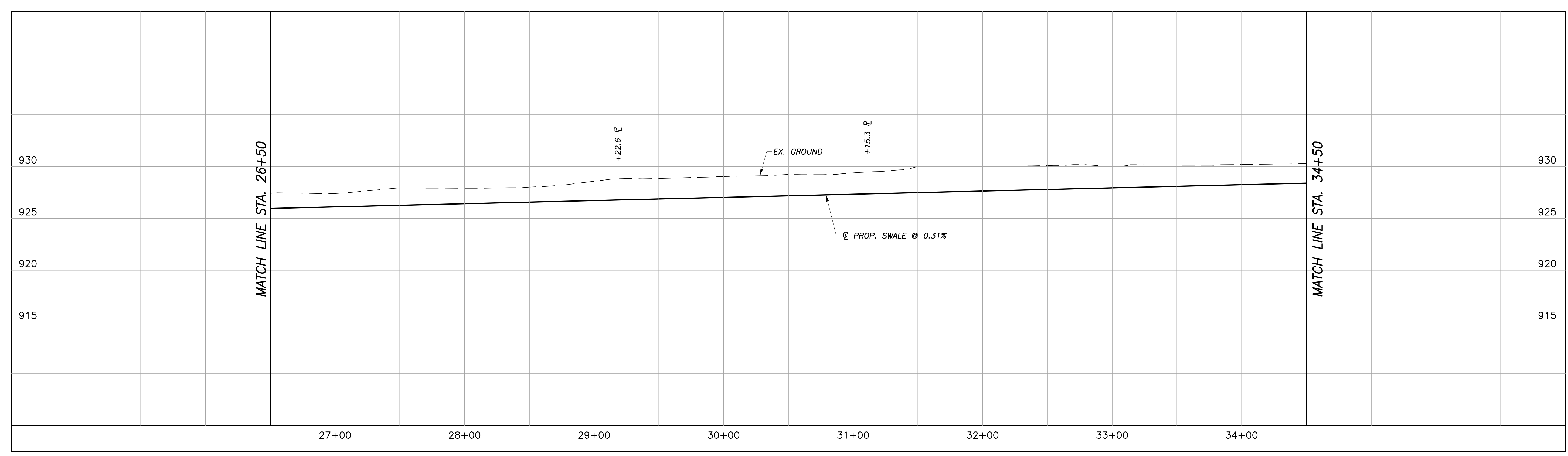
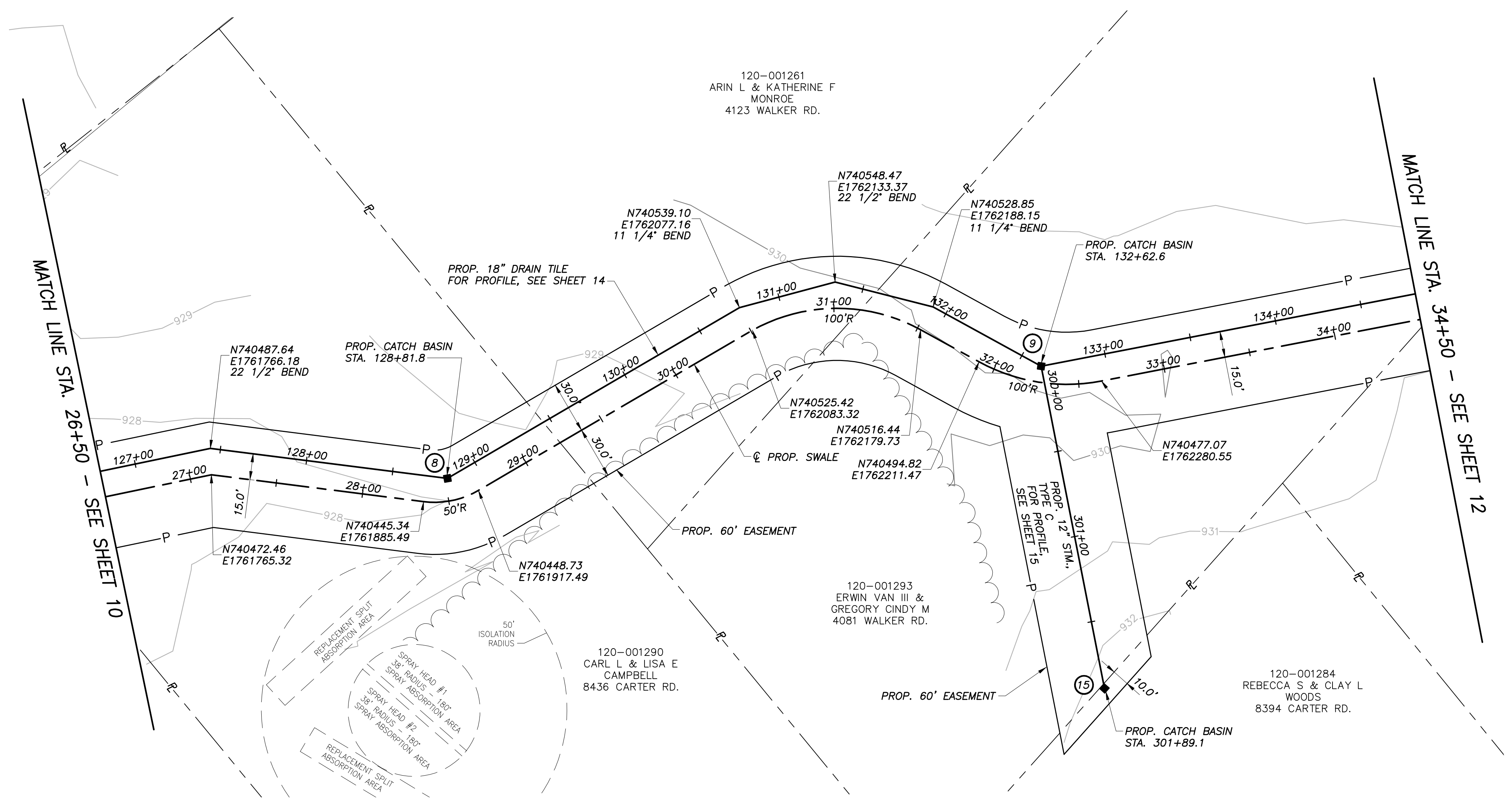


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CHECKED MSJ

**PLAN AND PROFILE  
STA. 17+50 TO STA. 26+50**

**DEVER DRAINAGE  
IMPROVEMENT**

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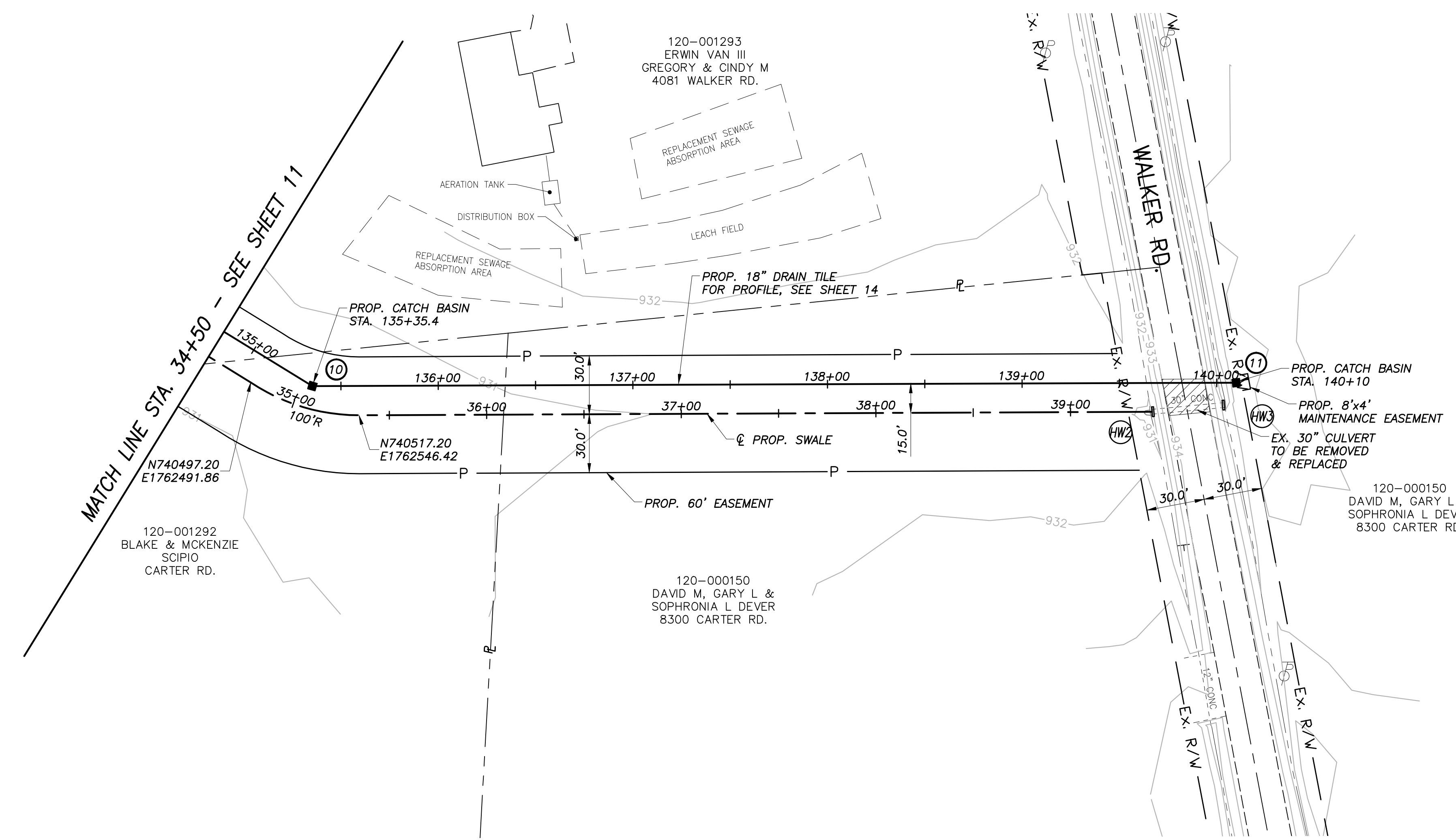
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**PLAN AND PROFILE  
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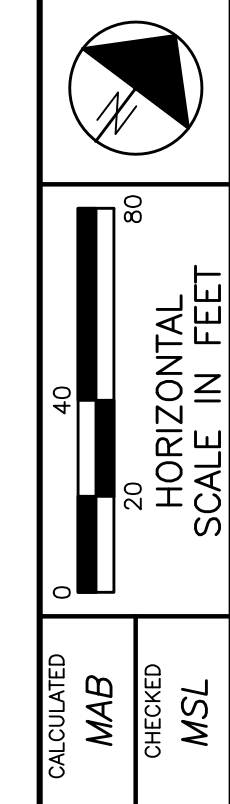
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IMPROVEMENT**

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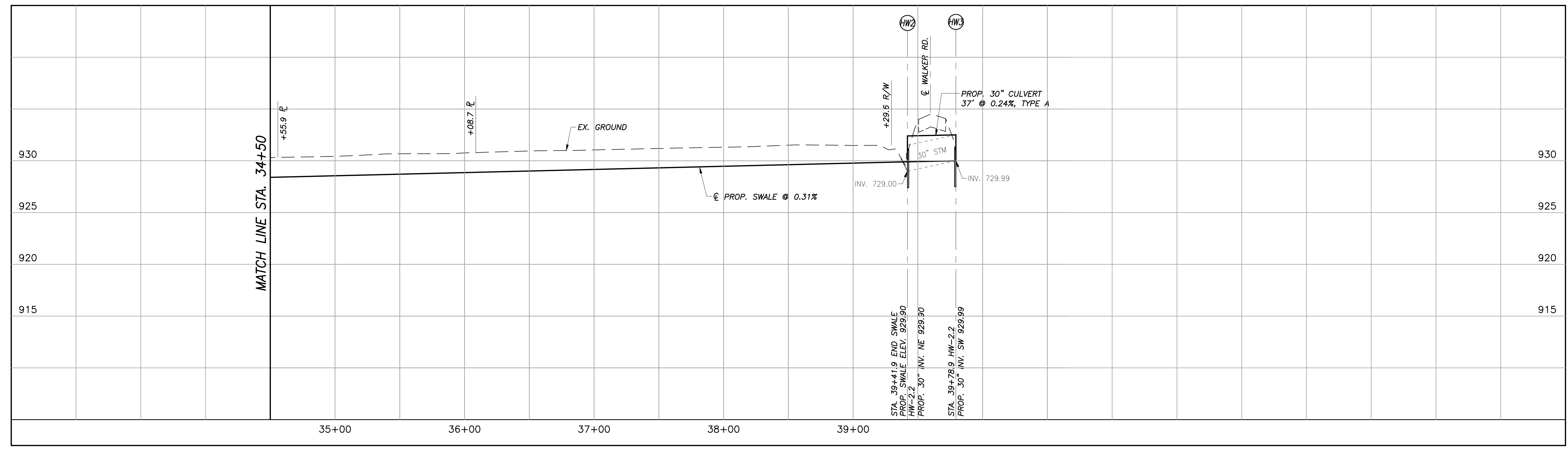




STORM SEWER MANHOLE GROUND COORDINATES BASED ON NAD83 OHIO SOUTH (NSRS 2007)				
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D2	738930.63	1760490.56		
D3	739064.33	1760632.70		
HW1	738459.18	1760342.96		
HW3	740789.02	1762898.41		
HW2	740763.86	1762870.76		
1	738881.17	1760411.54		
2	739068.52	1760618.16		
3	739512.45	1760745.14		
4	739933.02	1760812.31		
5	740094.57	1760963.73		
6	740359.47	1761275.45		
7	740475.84	1761658.60		
8	740457.35	1761900.40		
9	740488.92	1762246.77		
10	740514.77	1762518.29		
11	740801.79	1762896.32		
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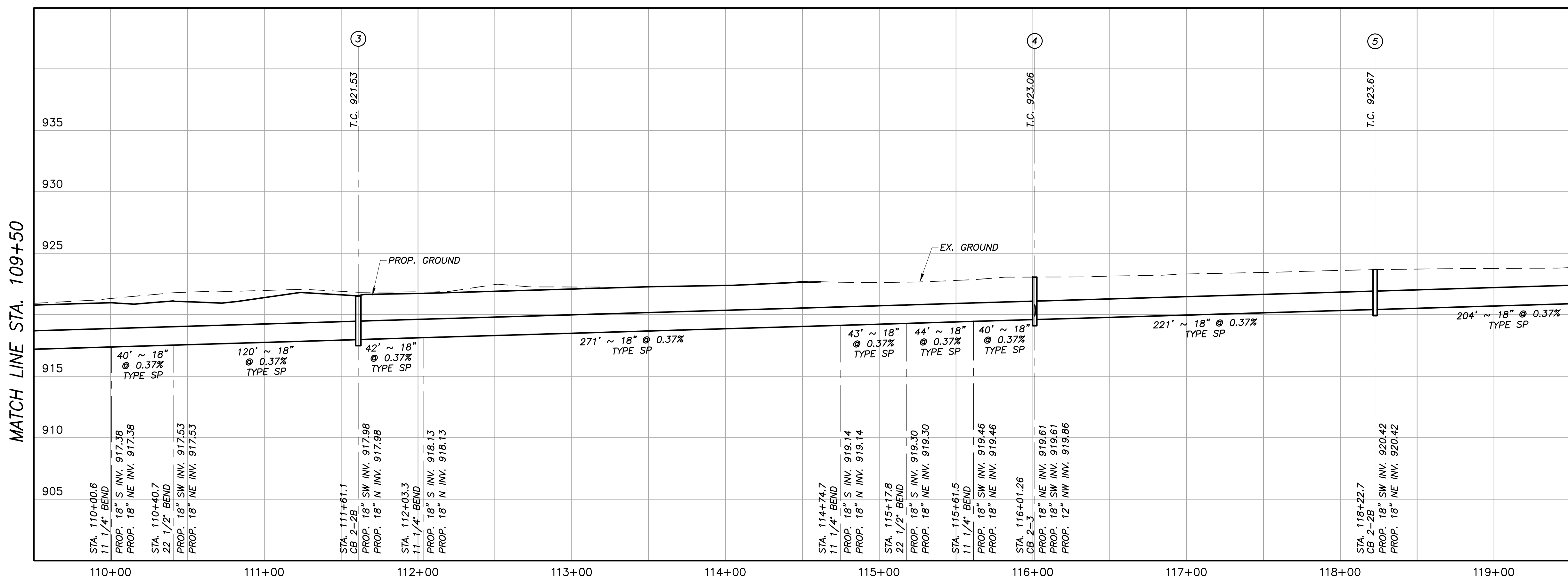
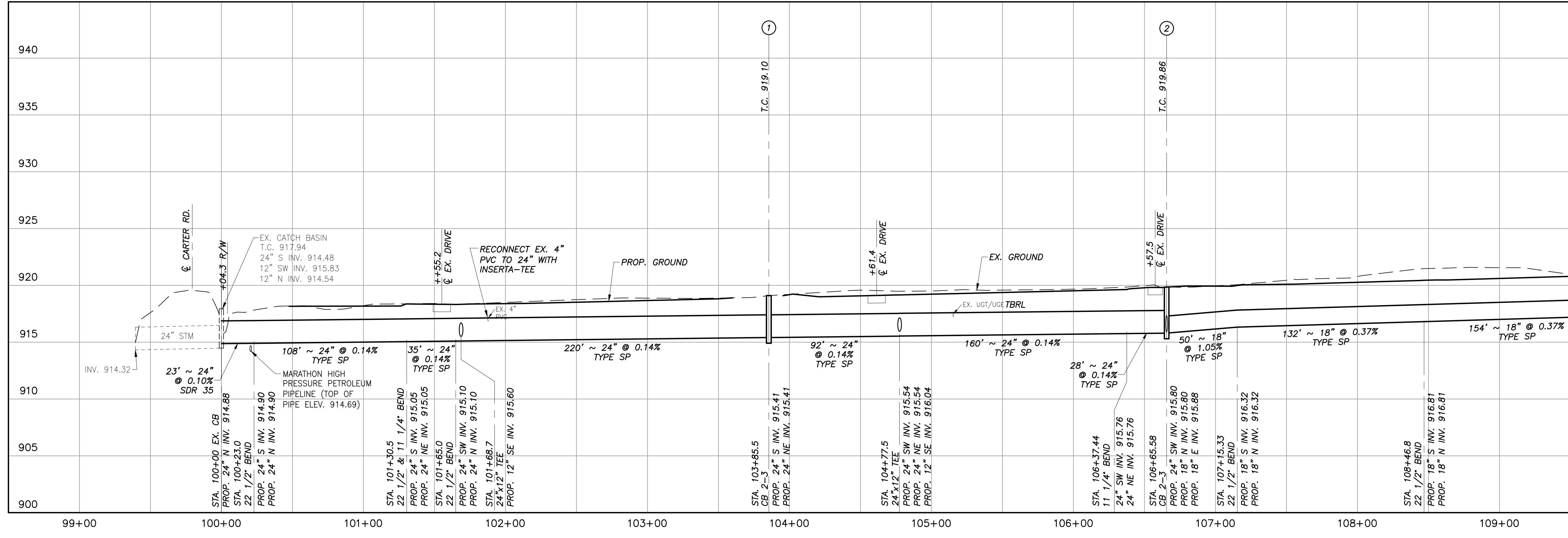
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**DEVER DRAINAGE  
IMPROVEMENT**

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August 03, 2023, 10:23am



MATCH LINE STA. 109+50

MATCH LINE STA. 119+50, SHEET 14

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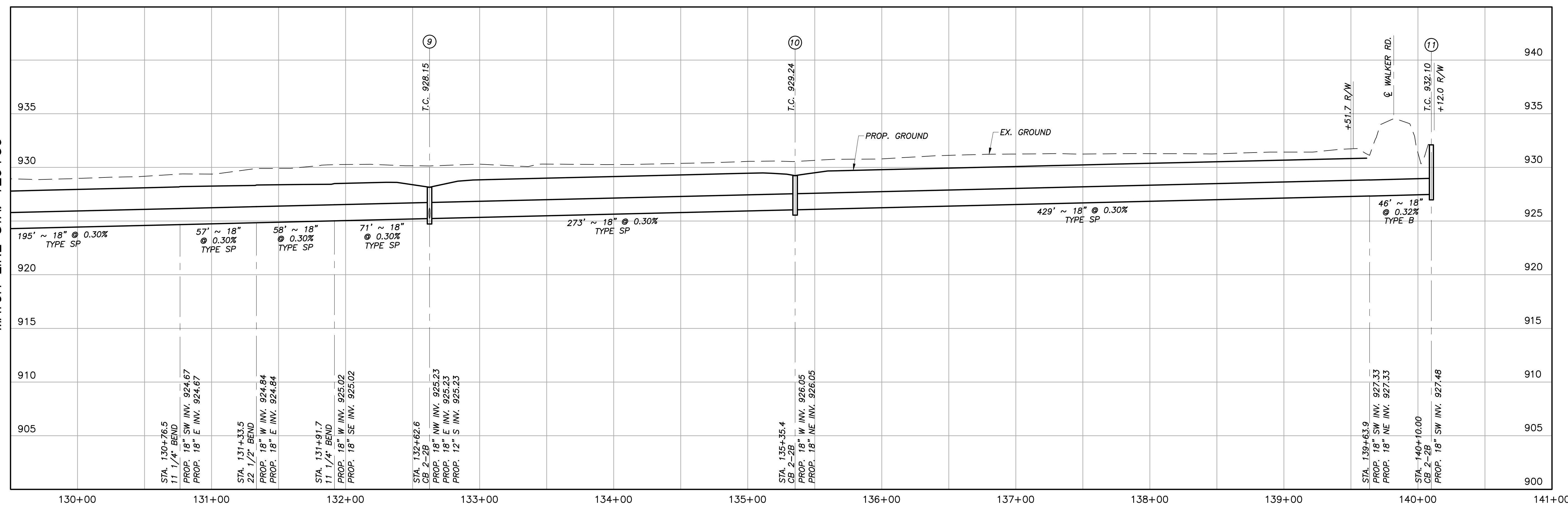
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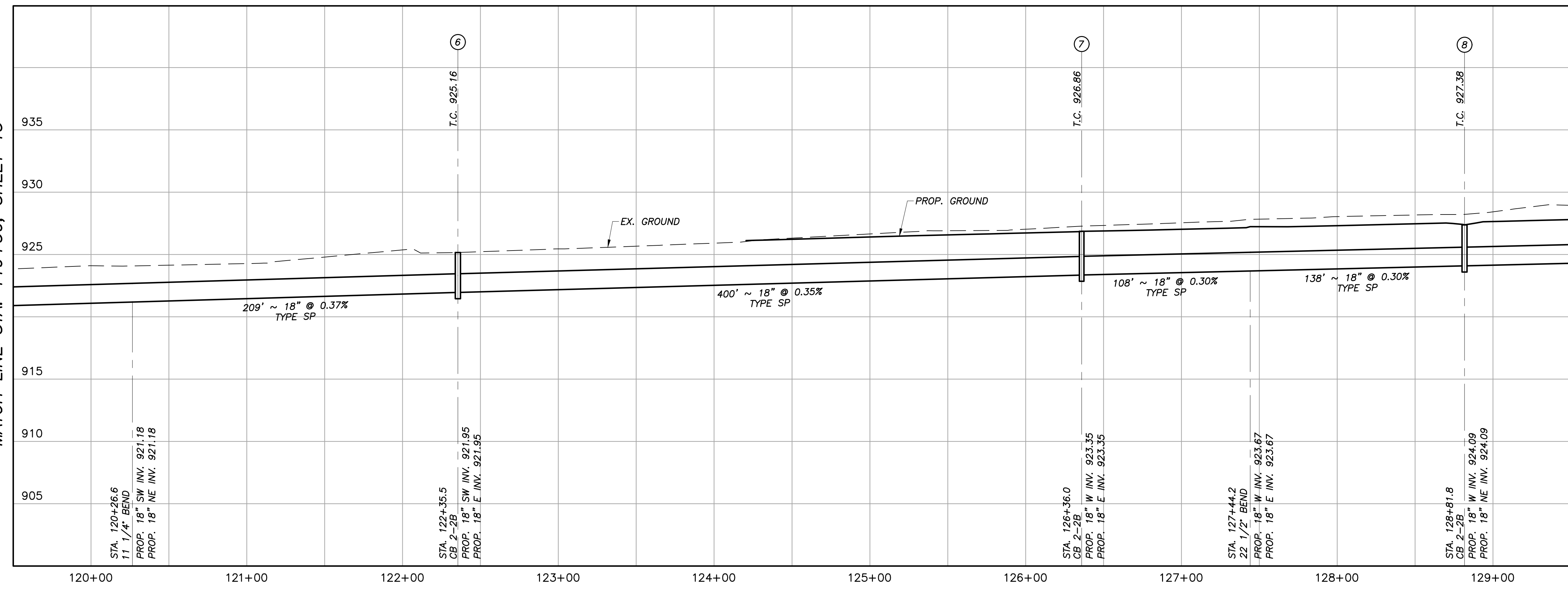


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MATCH LINE STA. 129+50



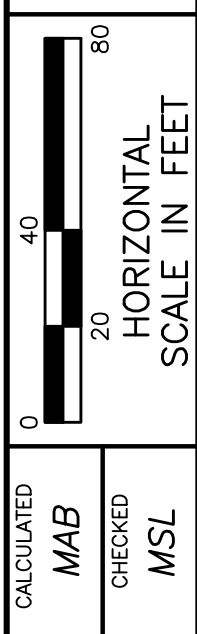
MATCH LINE STA. 119+50, SHEET 13



MATCH LINE STA. 129+50

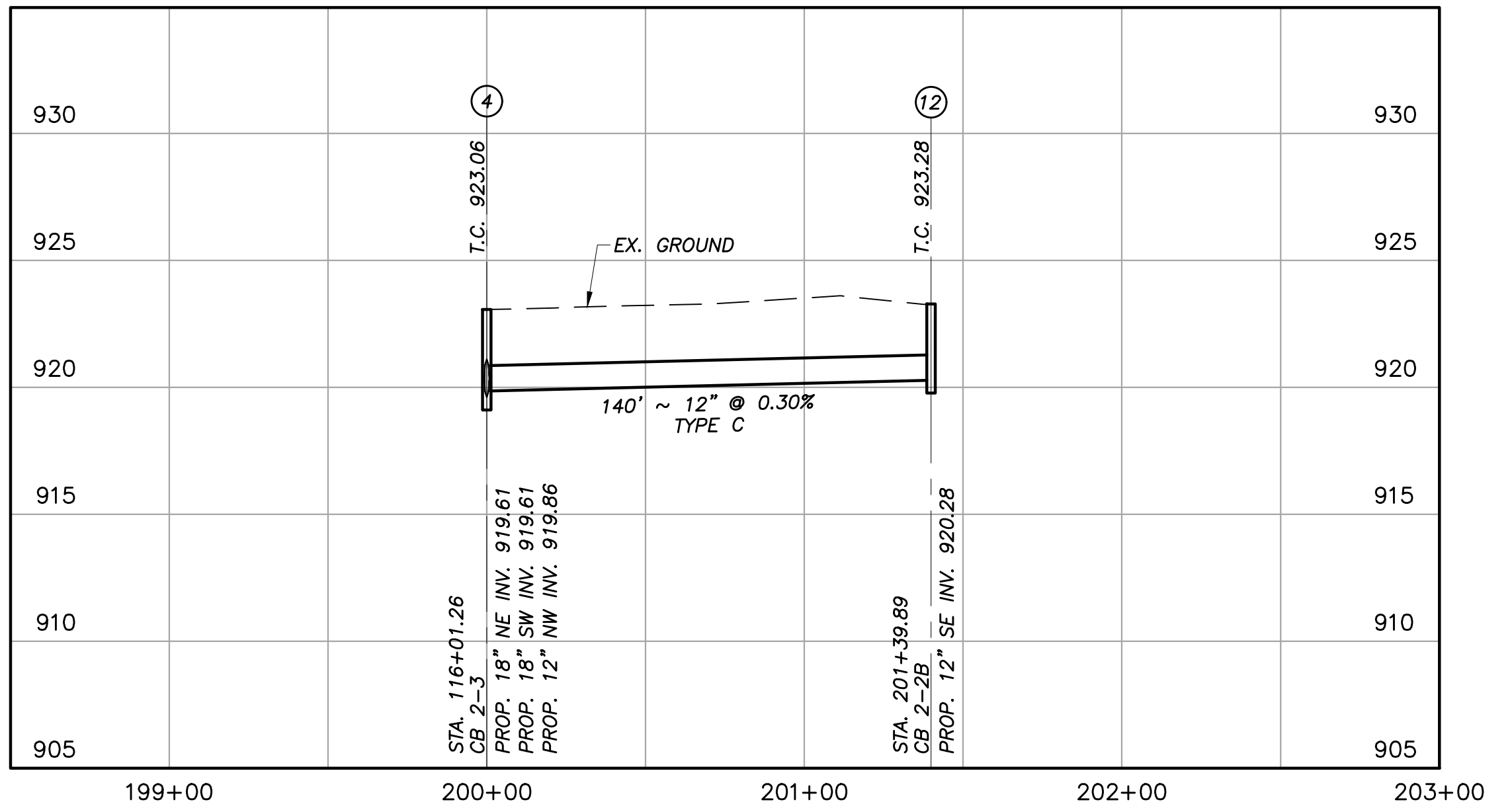
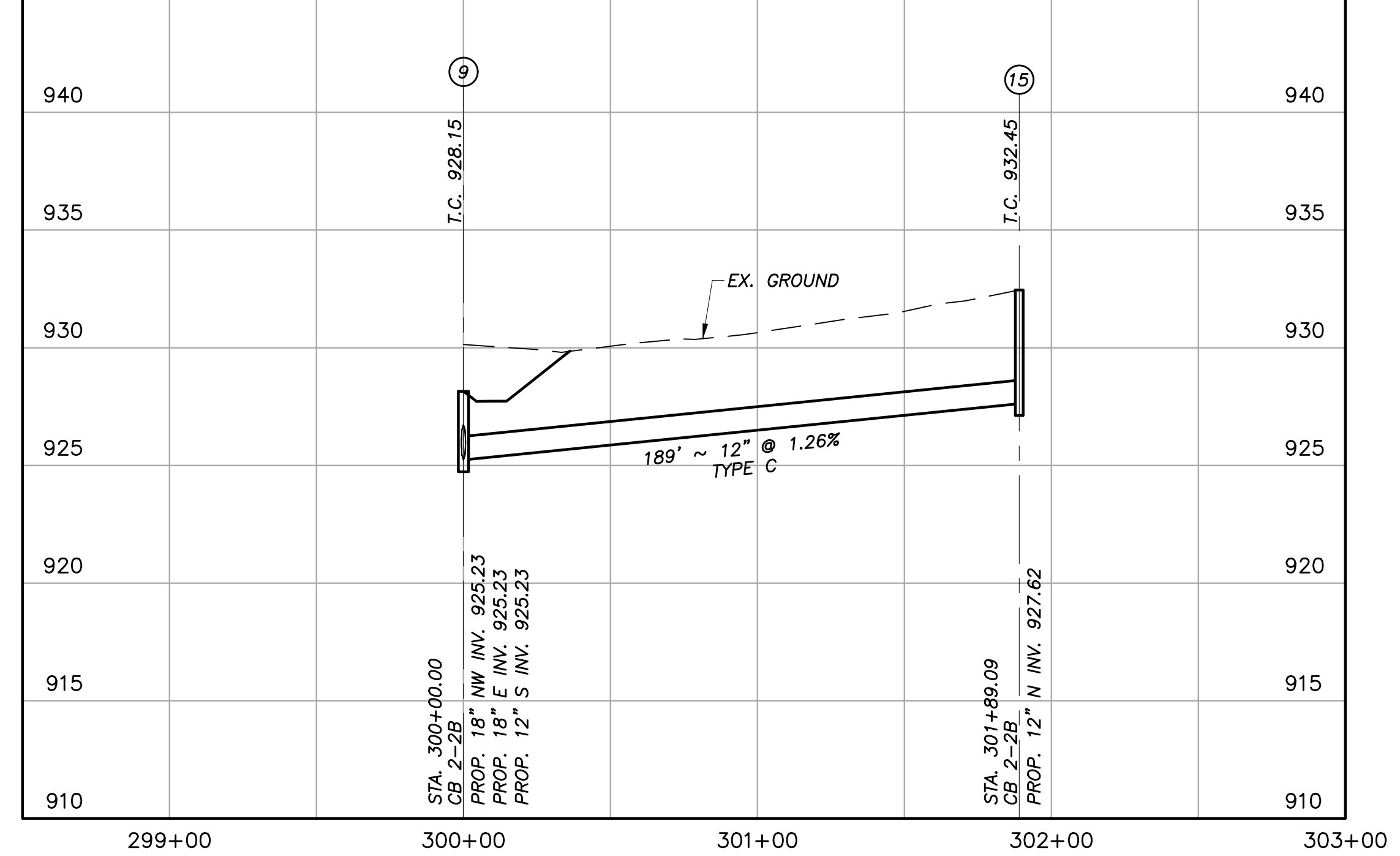
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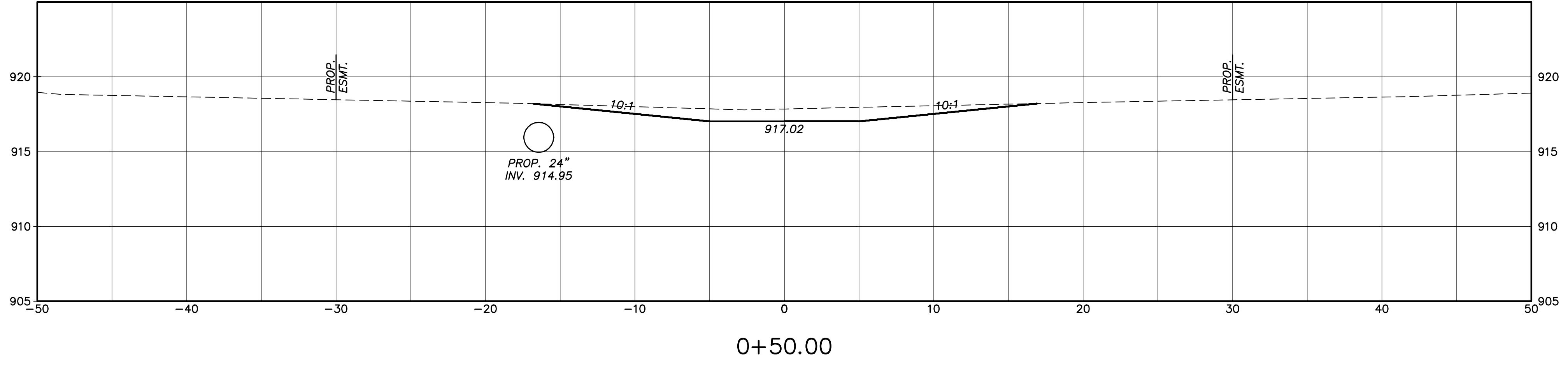
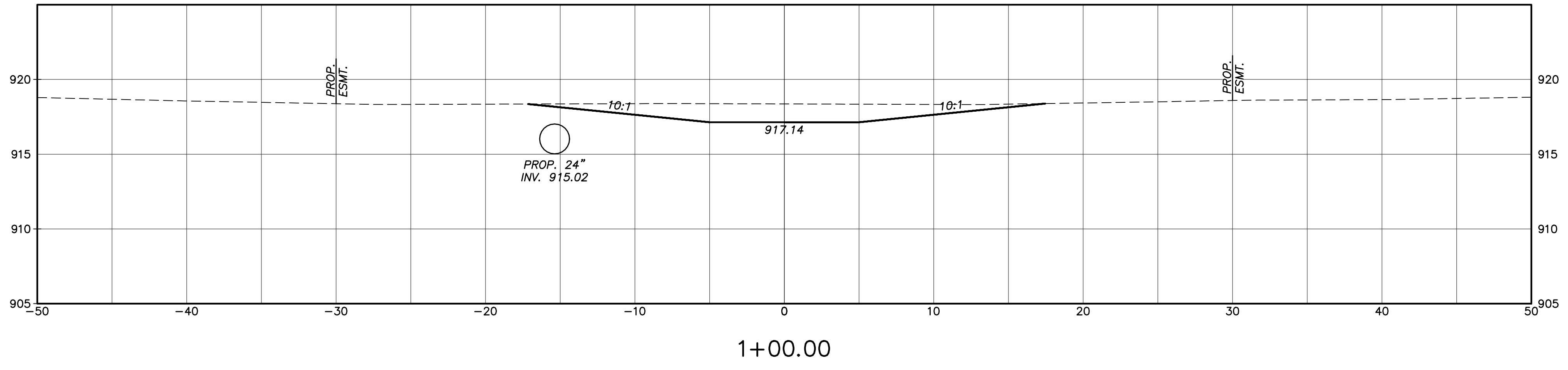
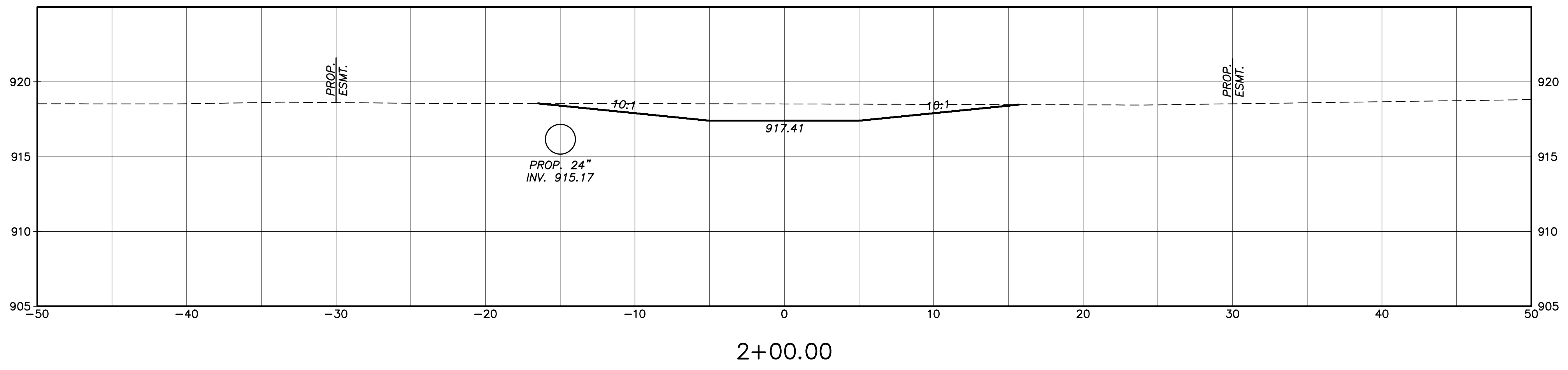
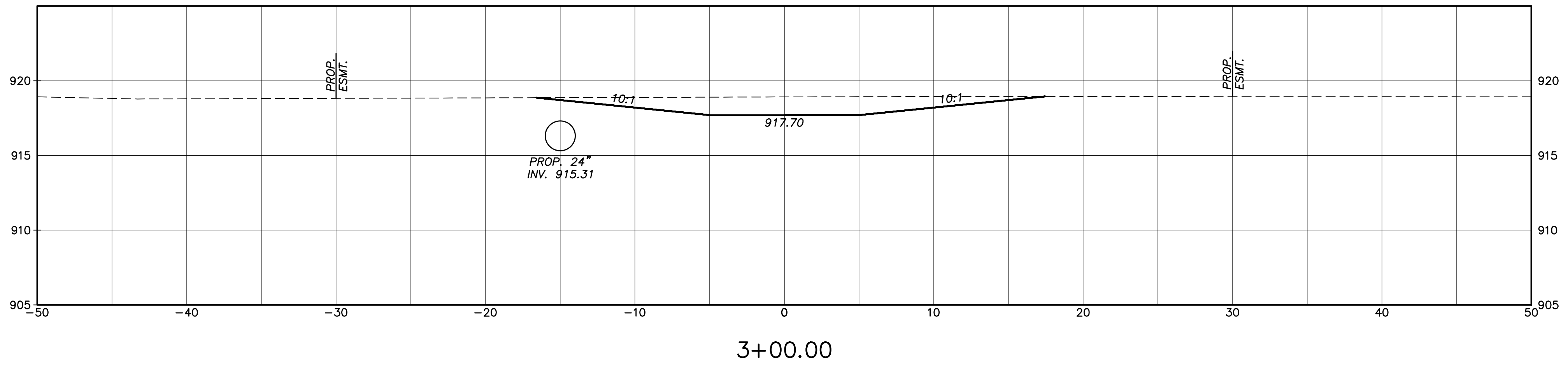
STORM PROFILES





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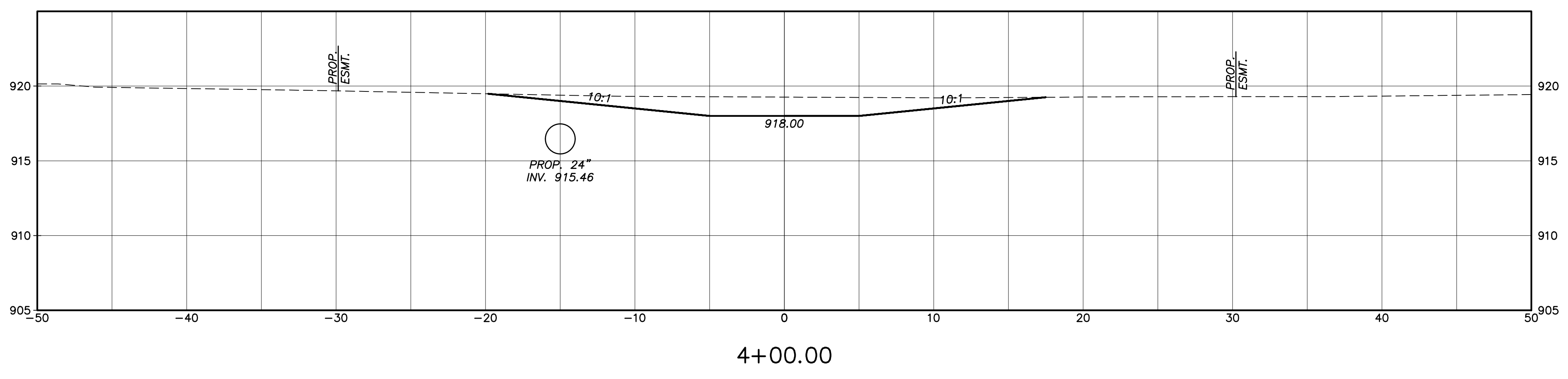
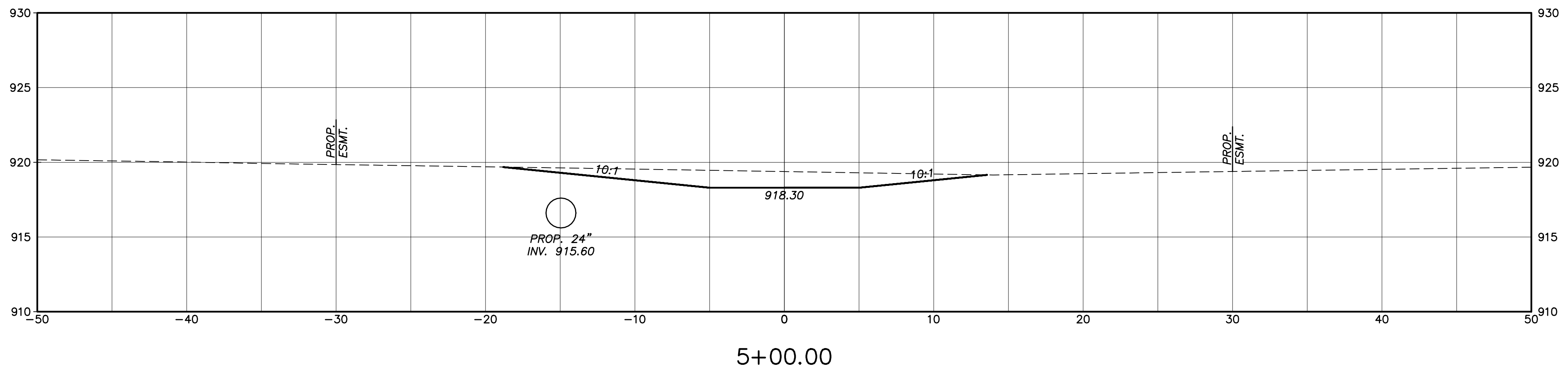
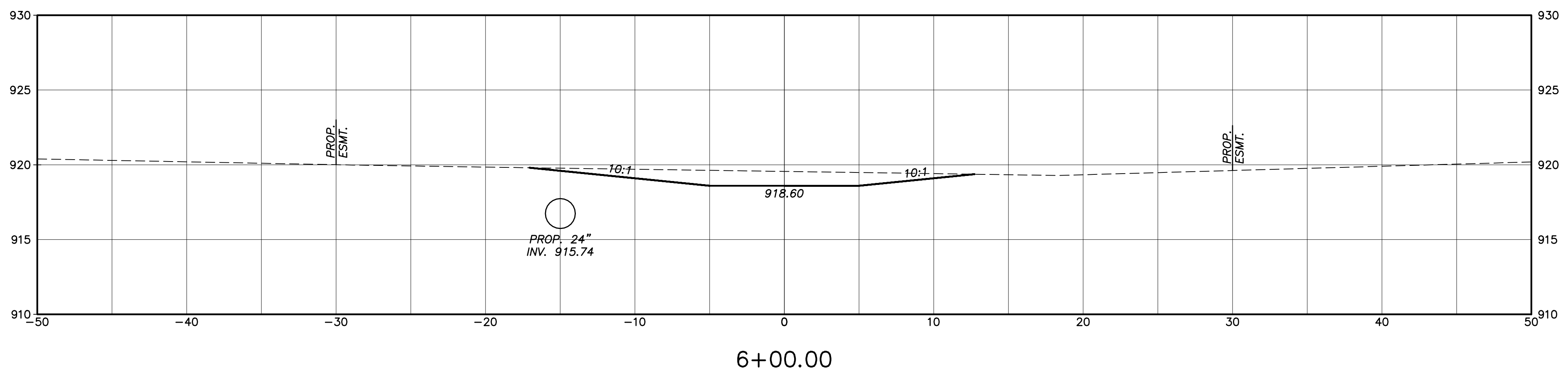
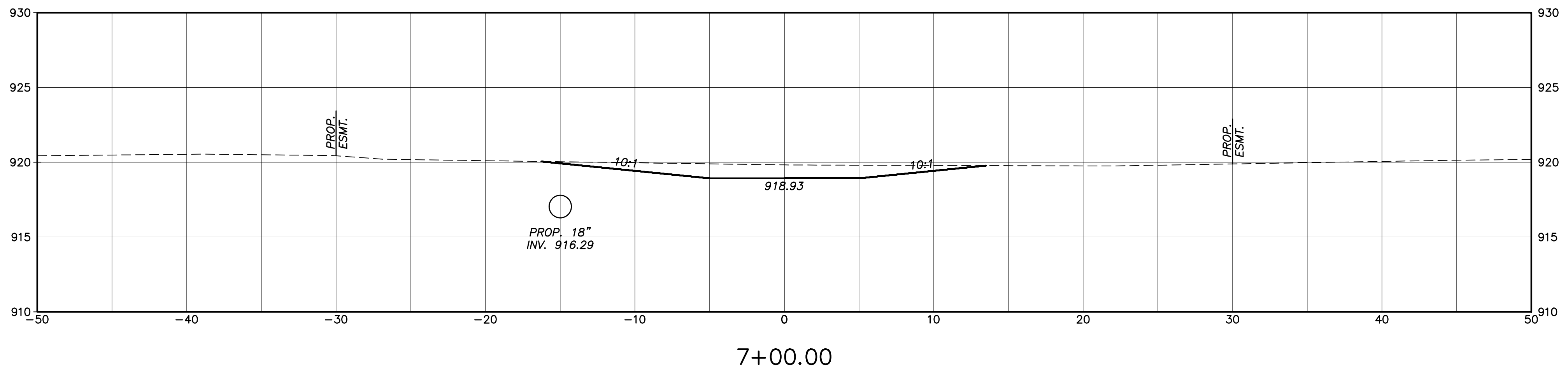


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MSL

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**CROSS SECTIONS  
STA. 0+50 TO STA. 3+00**

**DEVER DRAINAGE  
IMPROVEMENT**



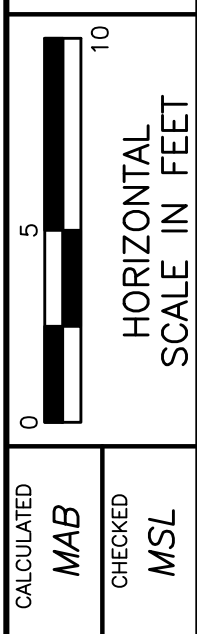
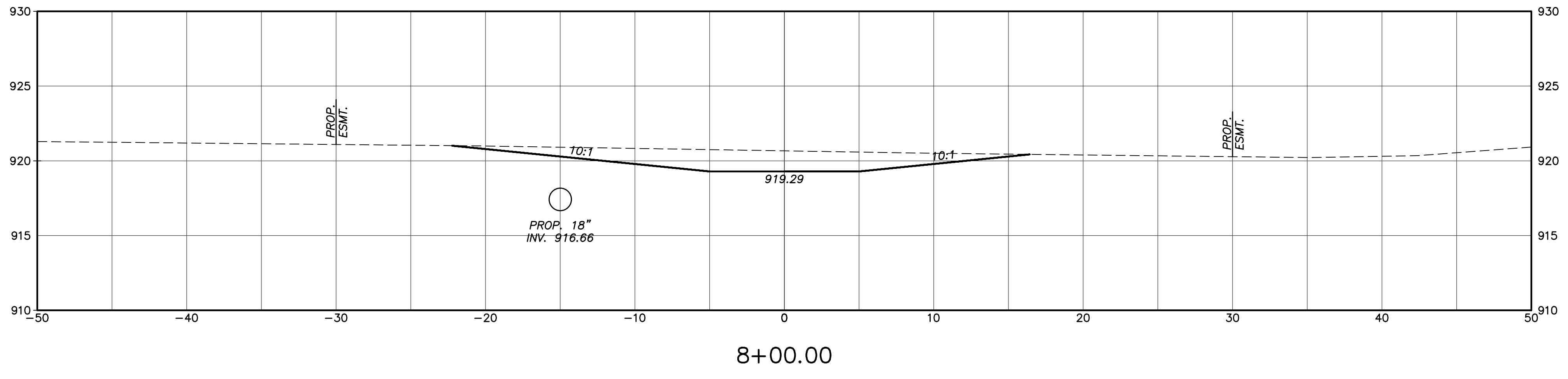
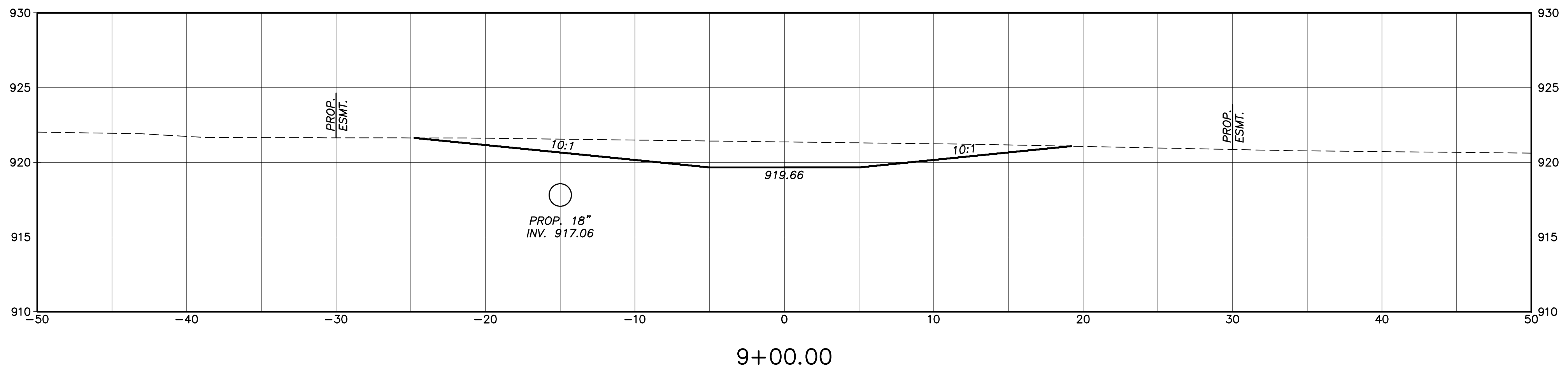
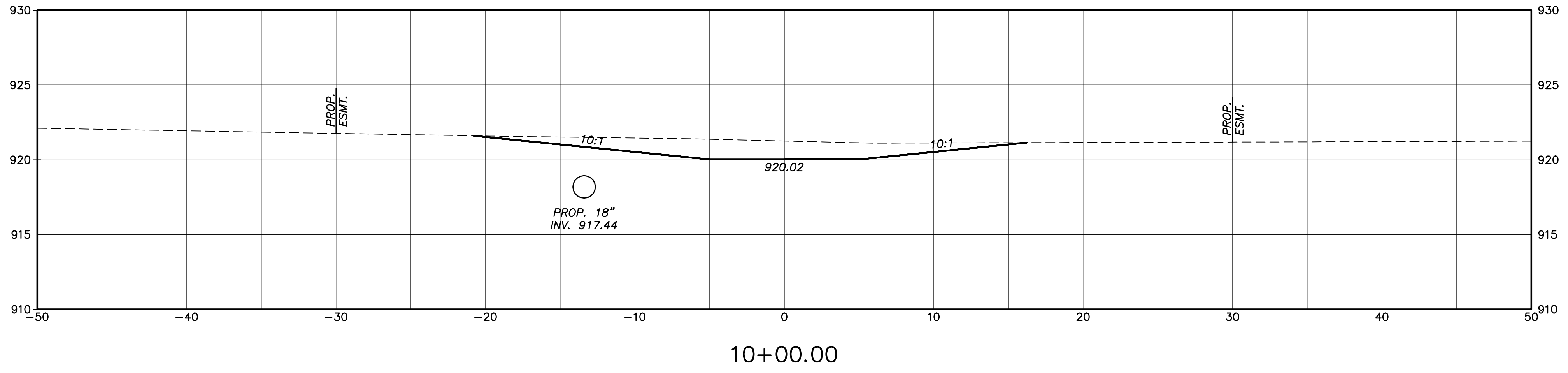
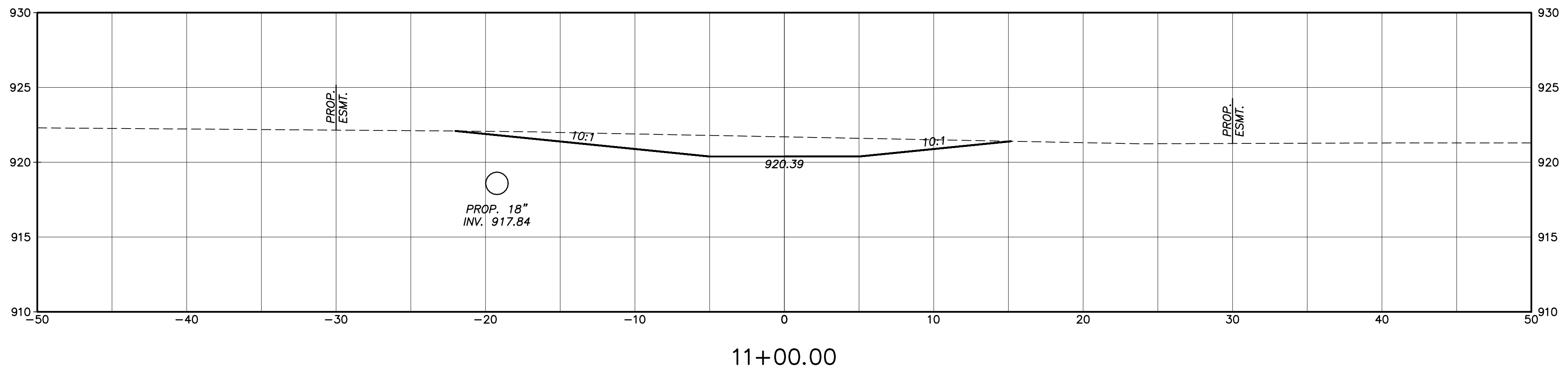
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**CROSS SECTIONS  
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**DEVER DRAINAGE  
IMPROVEMENT**

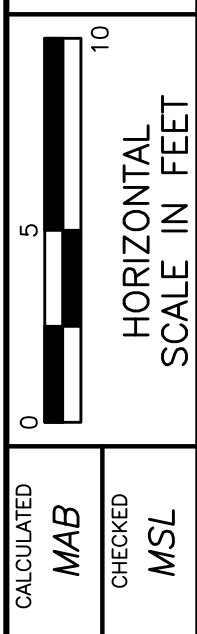
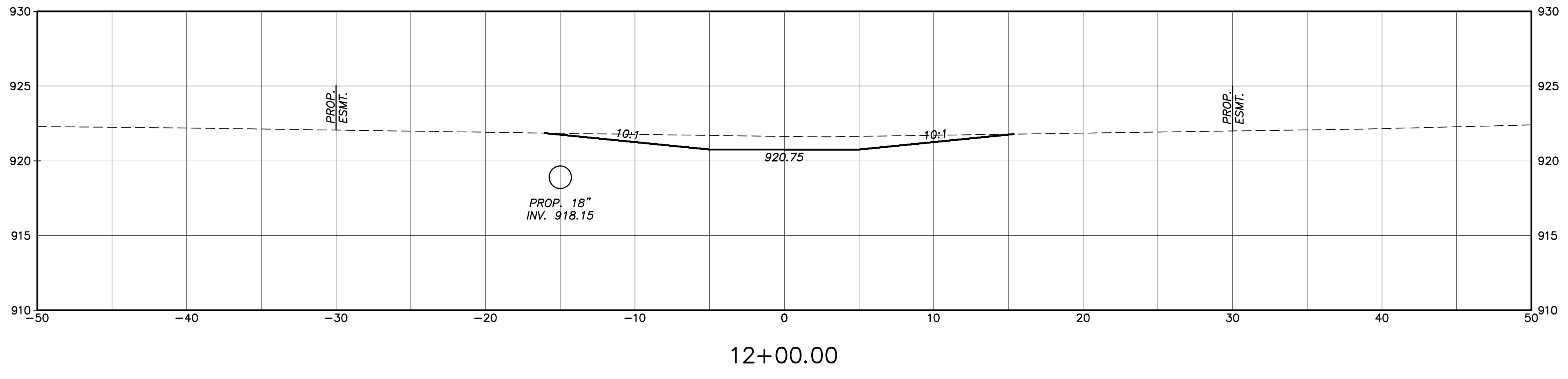
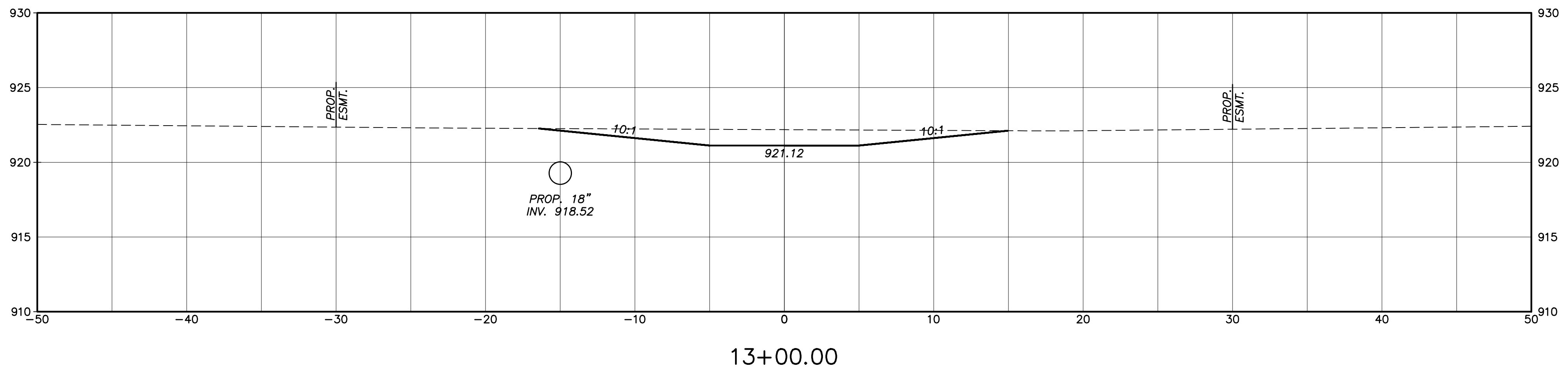
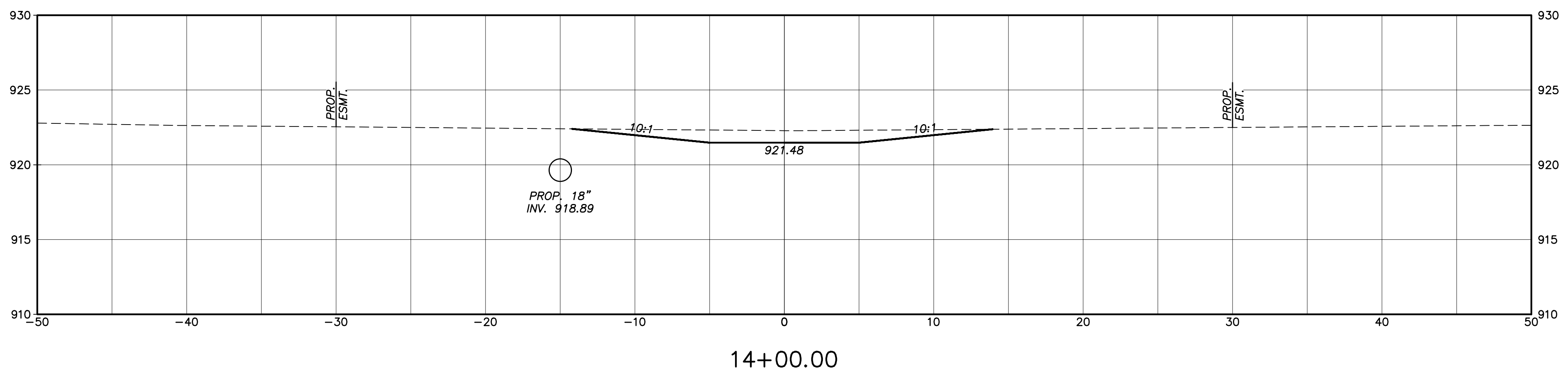
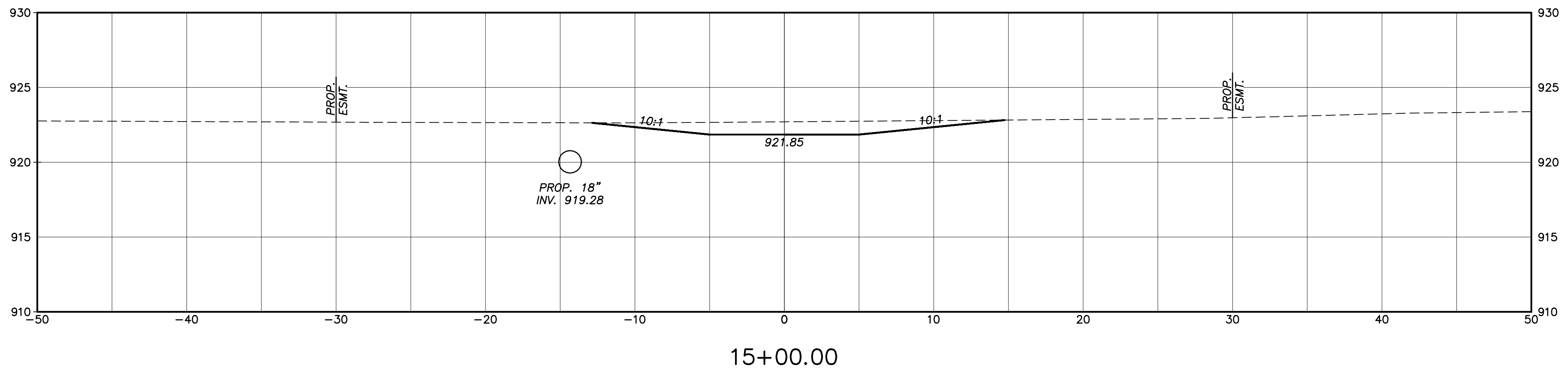




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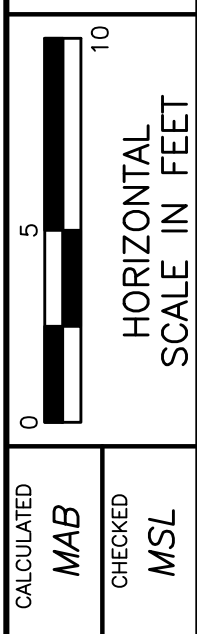
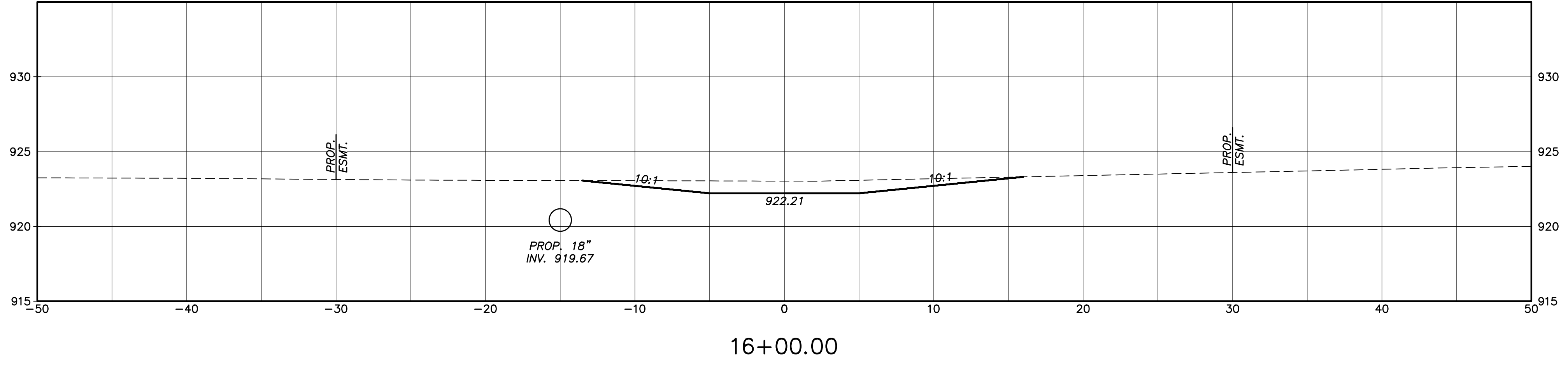
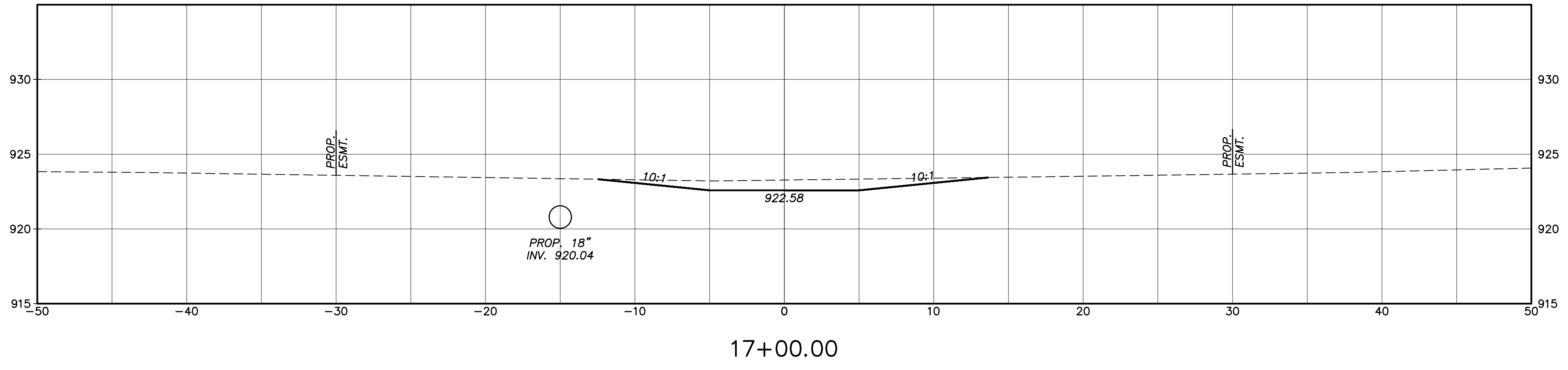
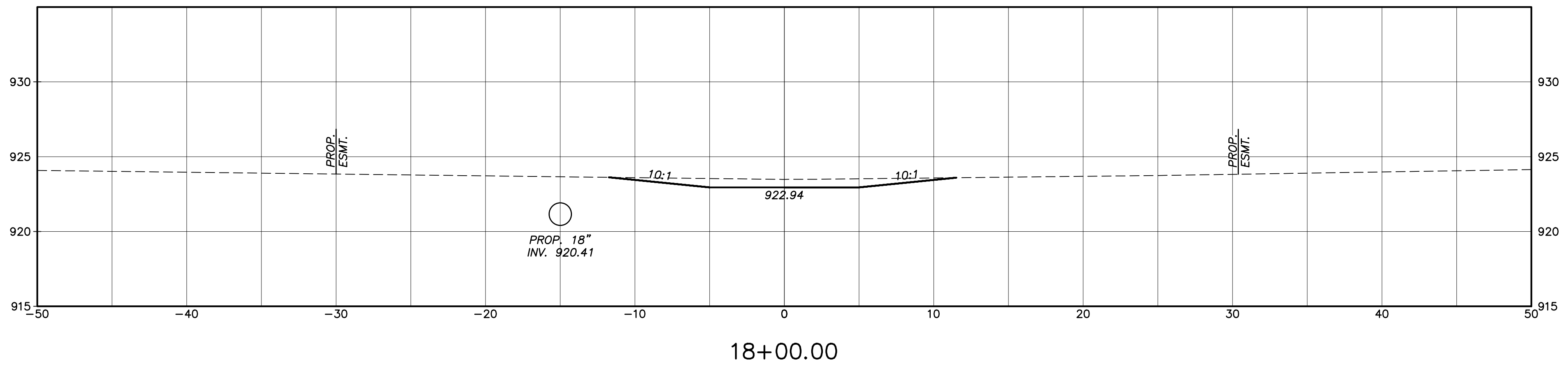
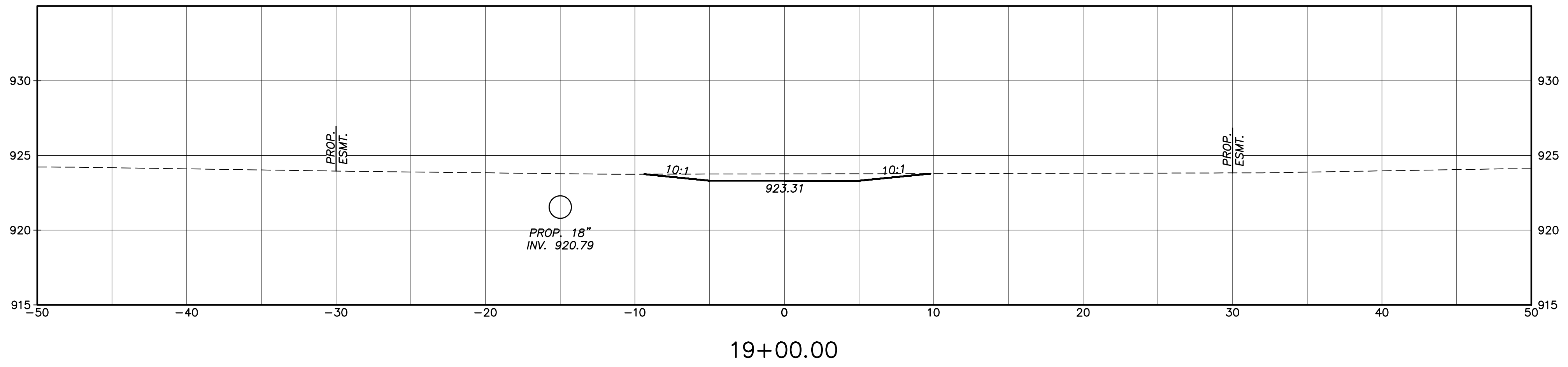
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IMPROVEMENT**

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September 27, 2023, 9:46am



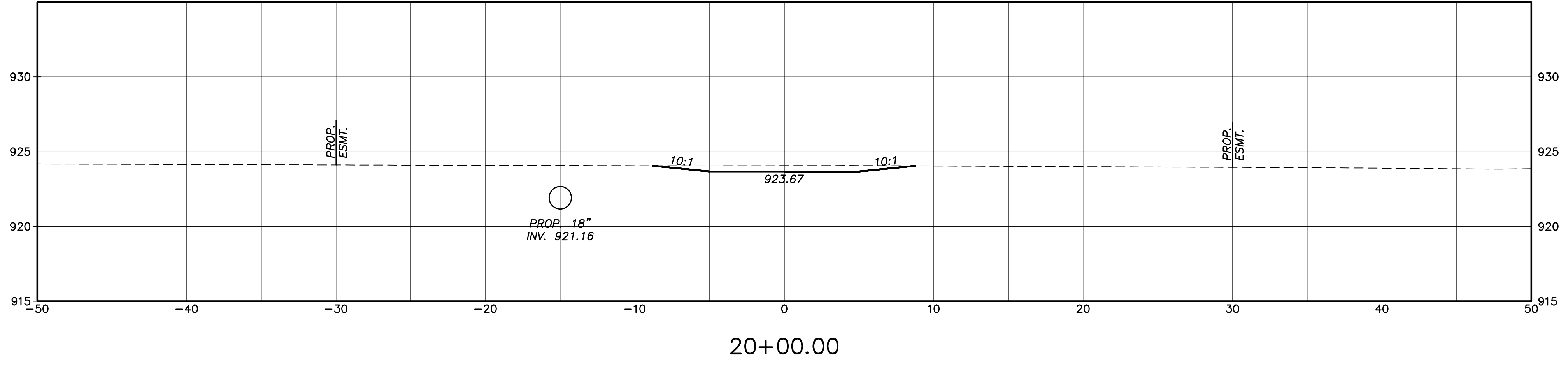
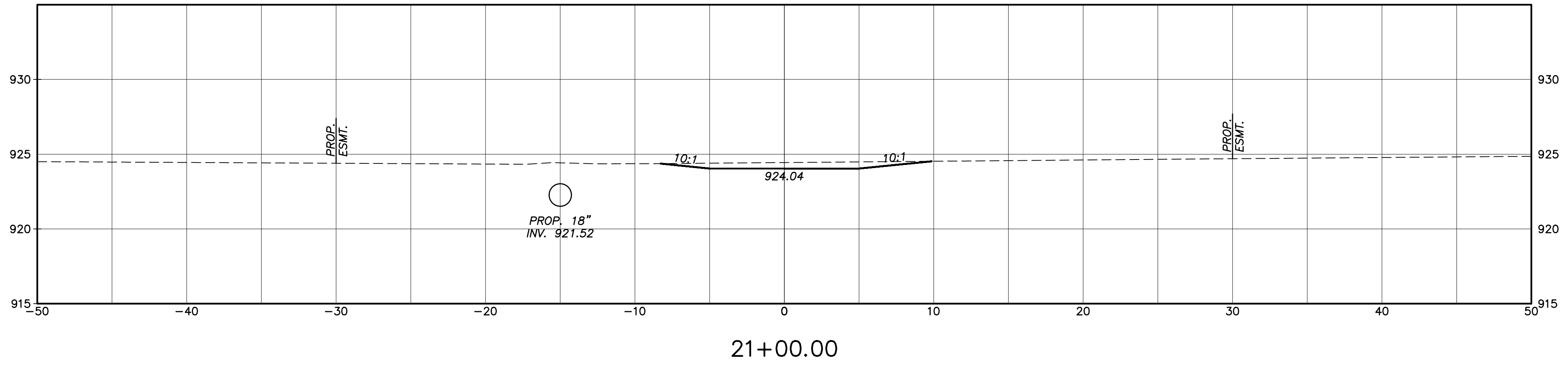
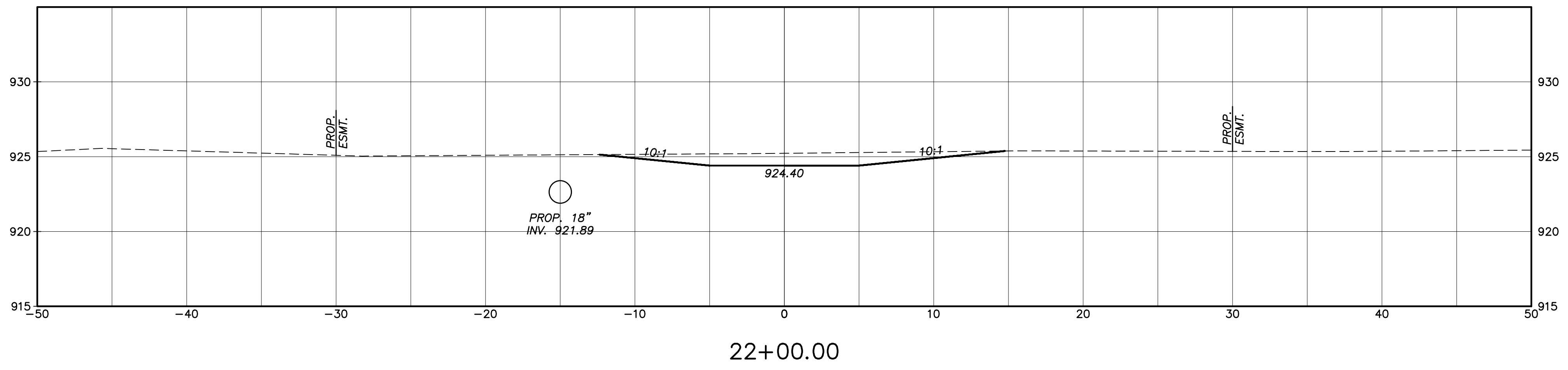
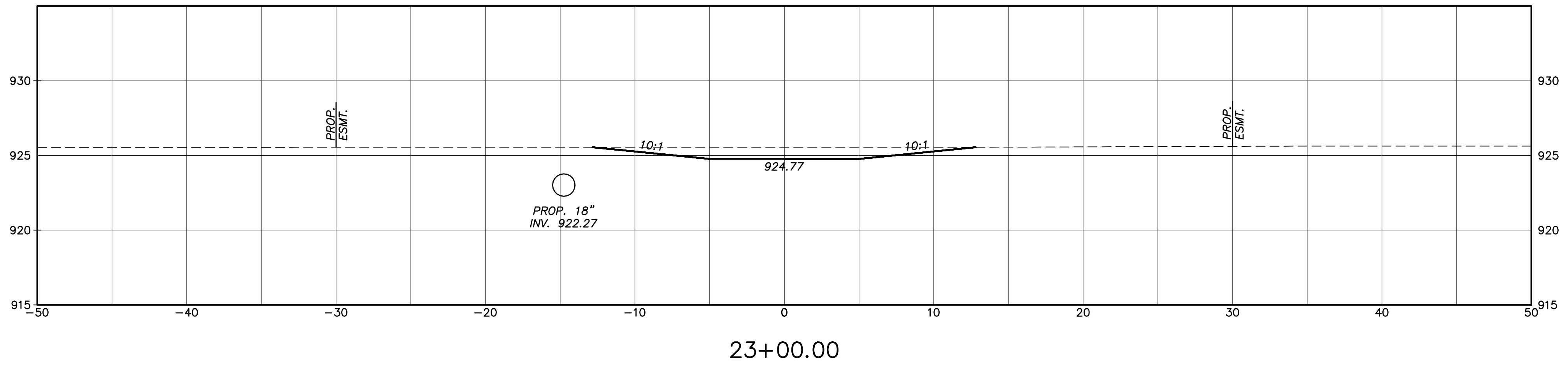
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**DEVER DRAINAGE  
IMPROVEMENT**



**CROSS SECTIONS  
STA. 16+00 TO STA. 19+00**

**DEVER DRAINAGE  
IMPROVEMENT**



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CHECKED MSJ

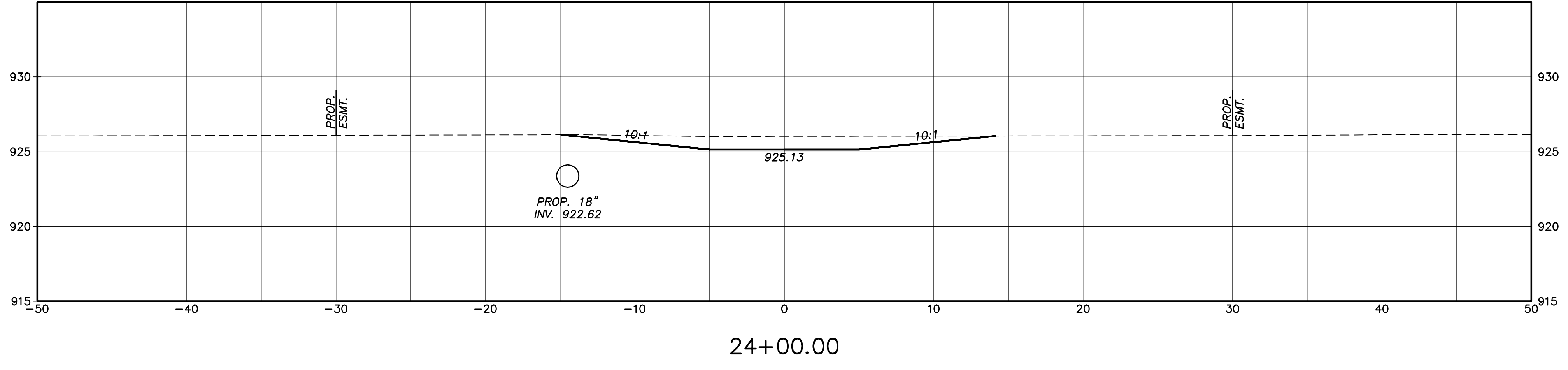
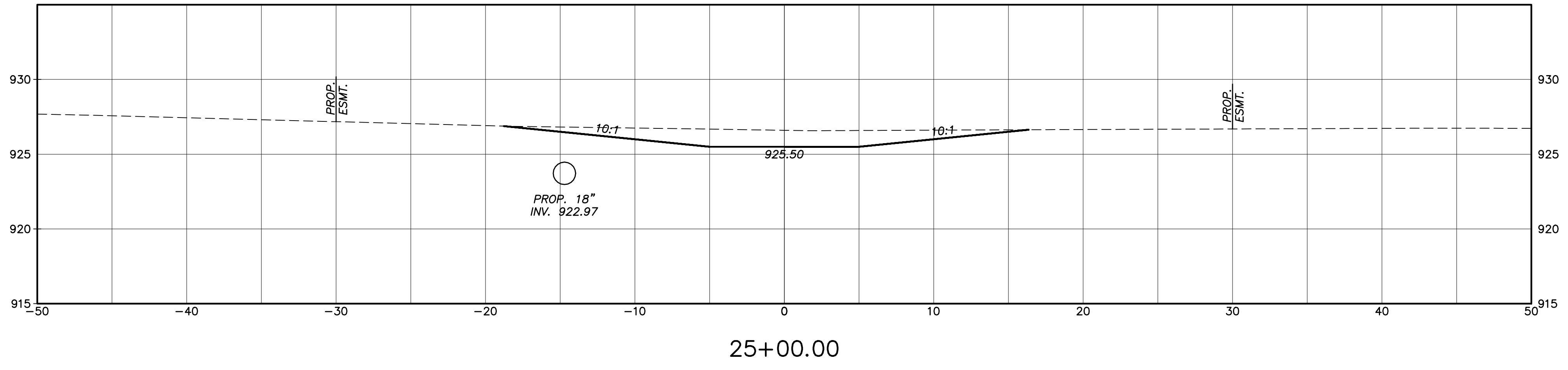
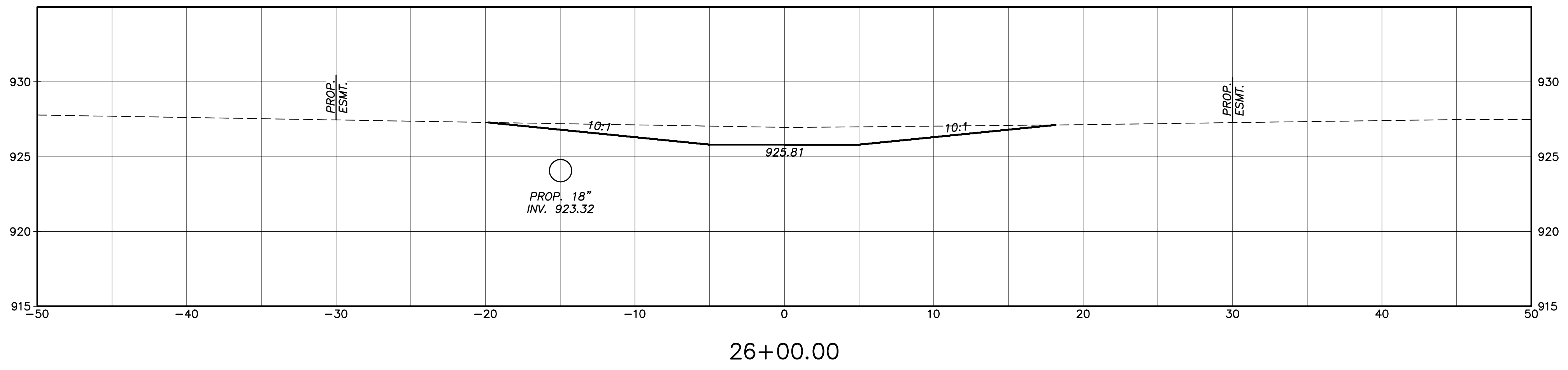
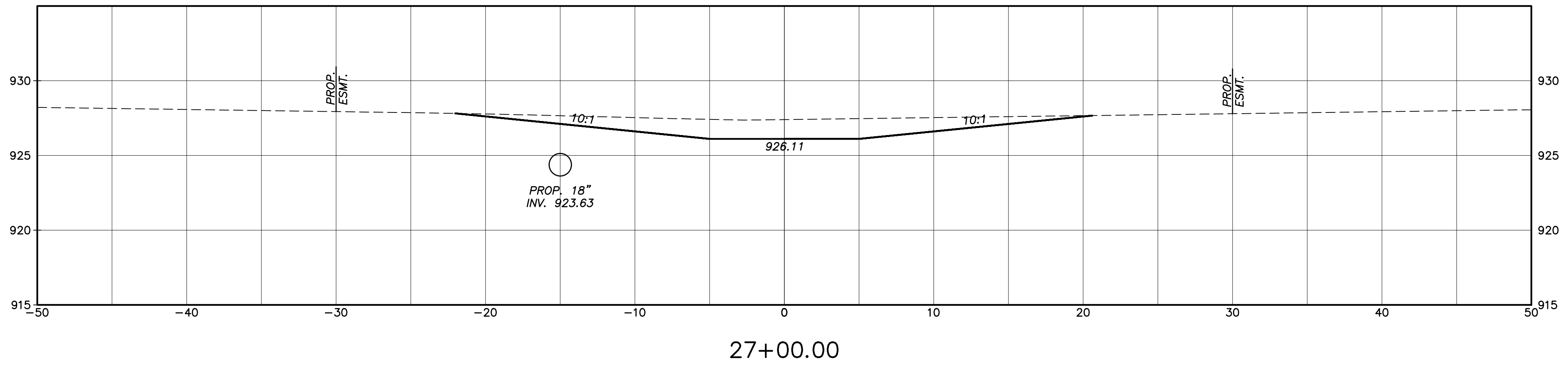
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**CROSS SECTIONS  
STA. 20+00 TO STA. 23+00**

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IMPROVEMENT**

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September 27, 2023, 9:37am





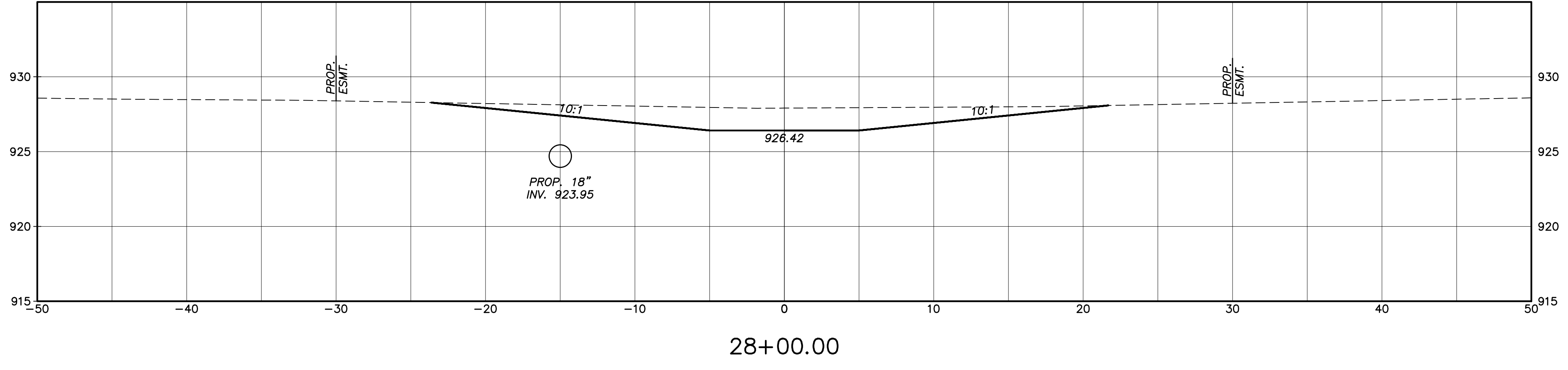
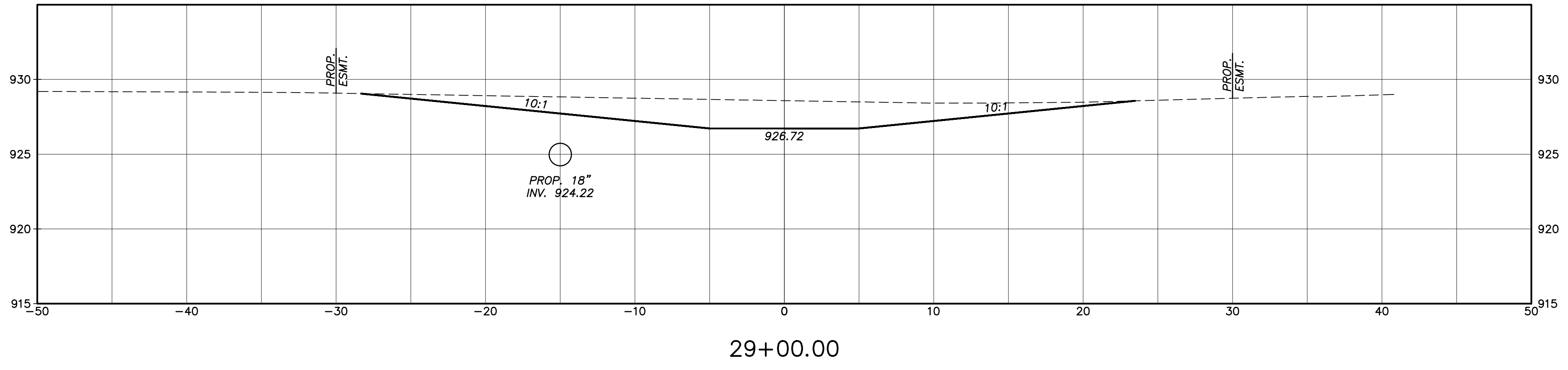
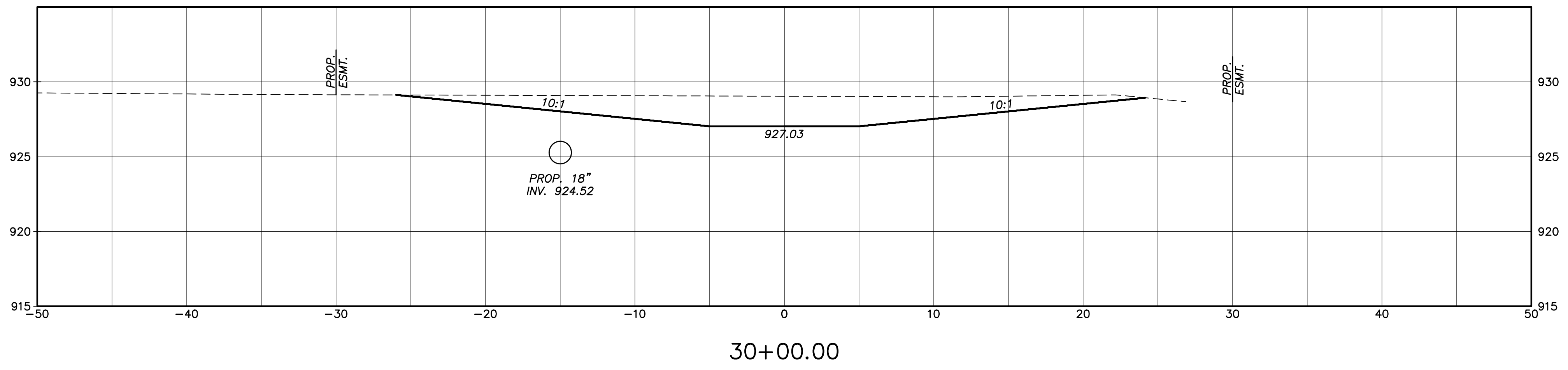
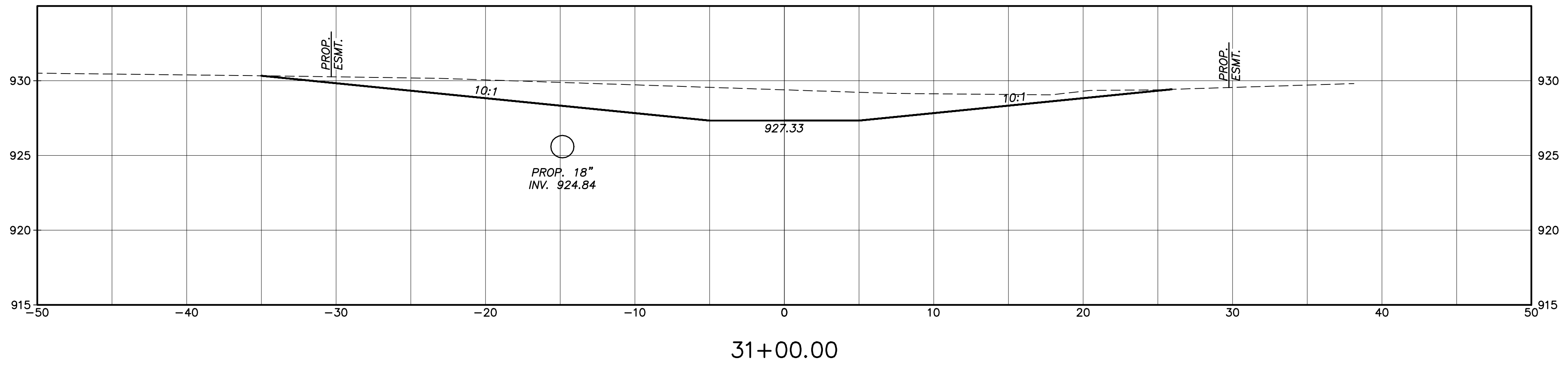
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**CROSS SECTIONS  
STA. 24+00 TO STA. 27+00**

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IMPROVEMENT**

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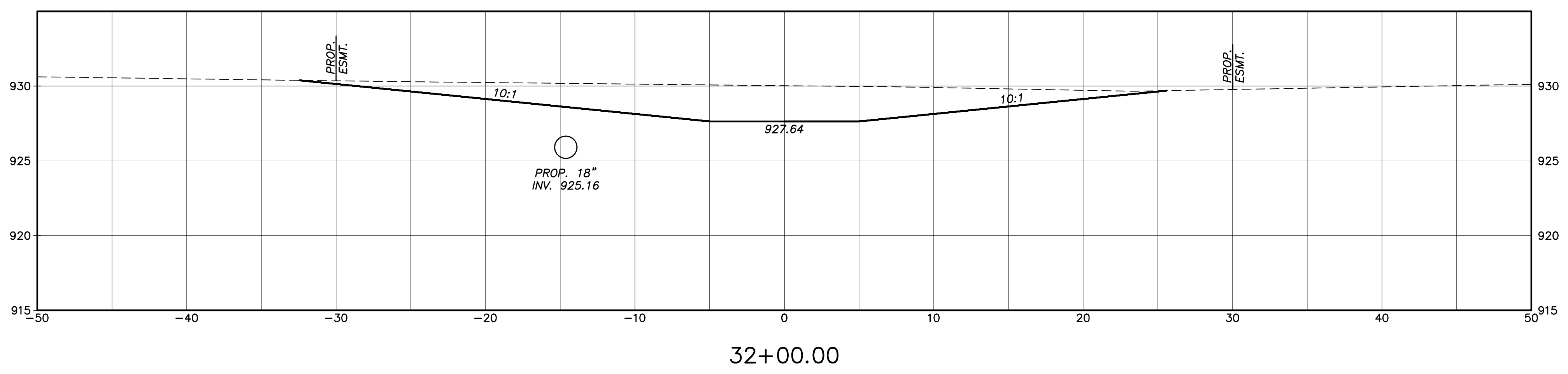
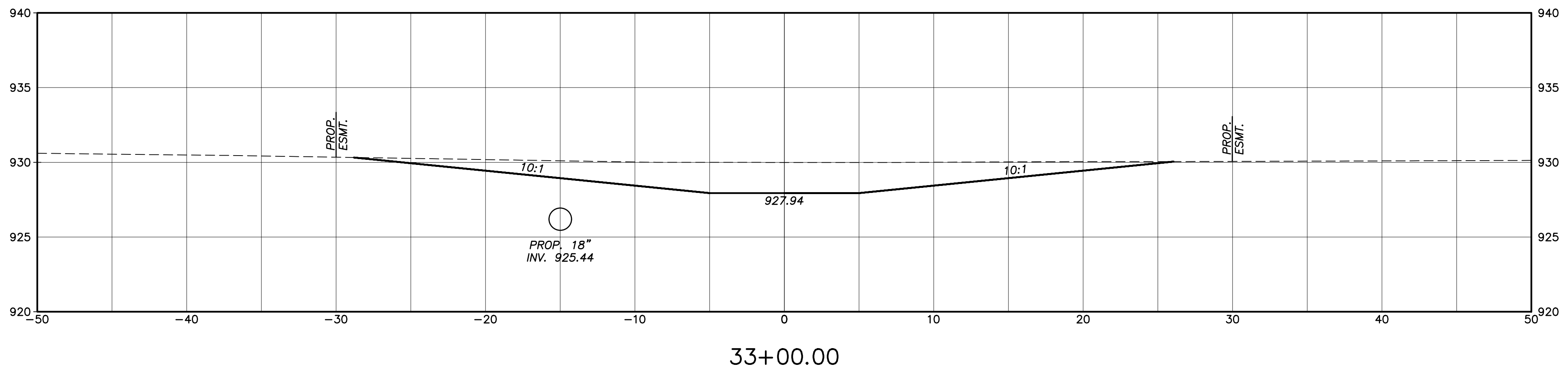
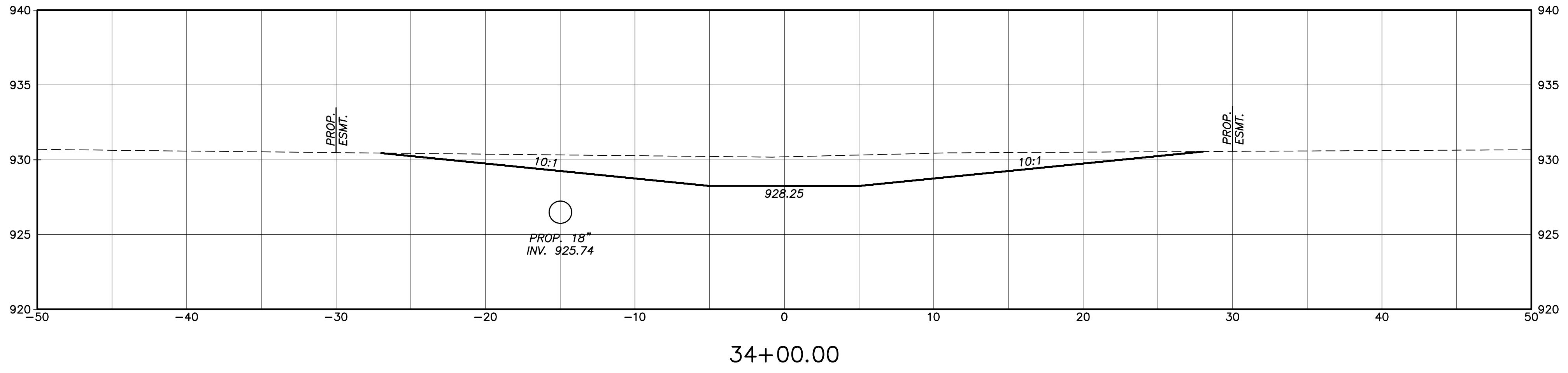
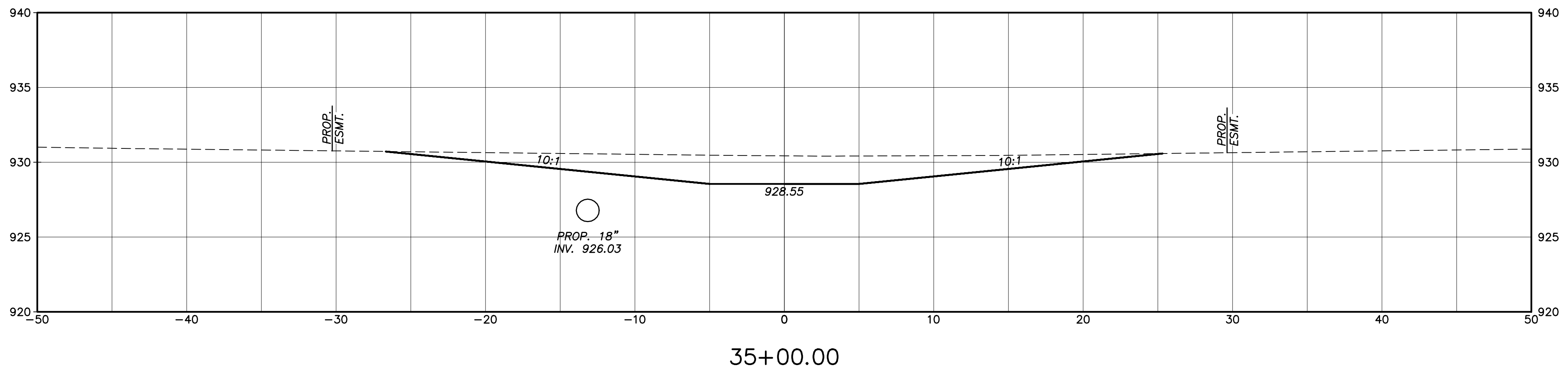
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**CROSS SECTIONS  
 STA. 28+00 TO STA. 31+00**

**DEVER DRAINAGE  
 IMPROVEMENT**

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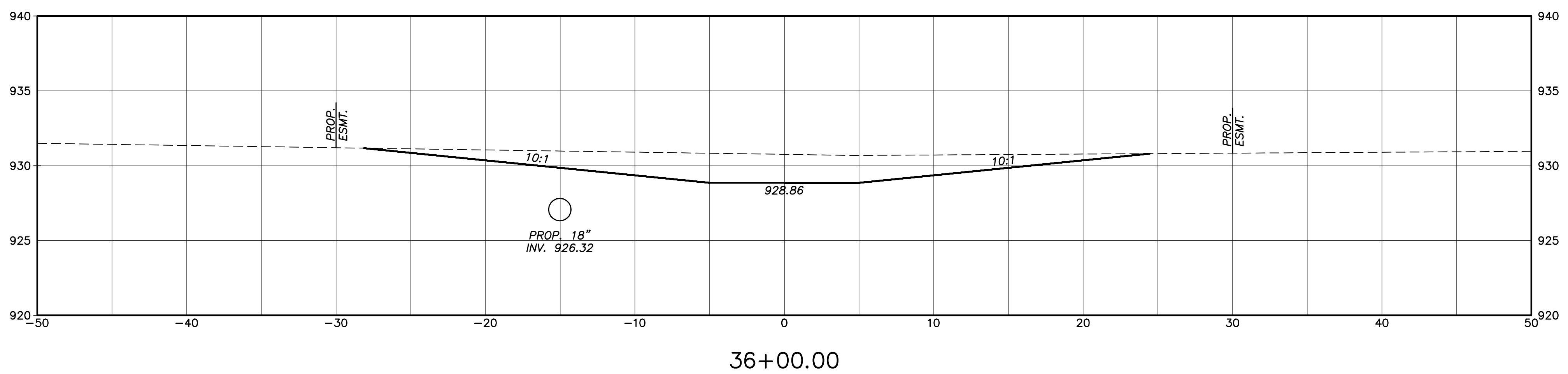
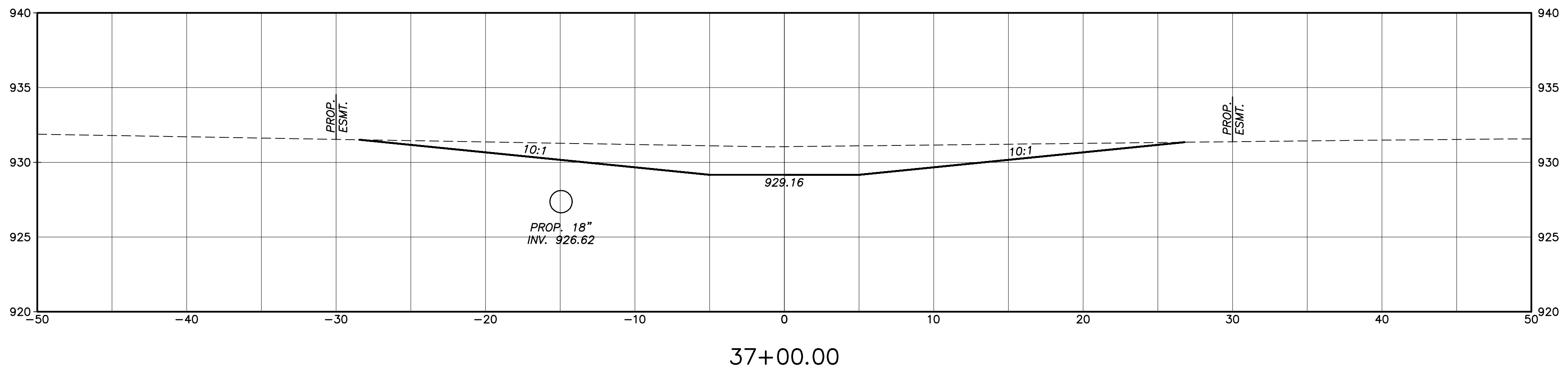
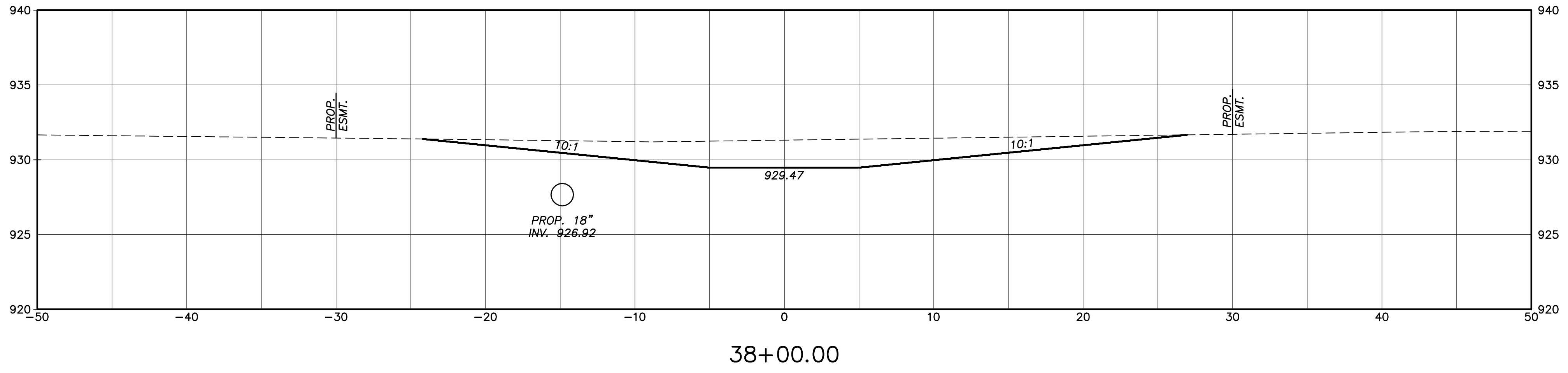
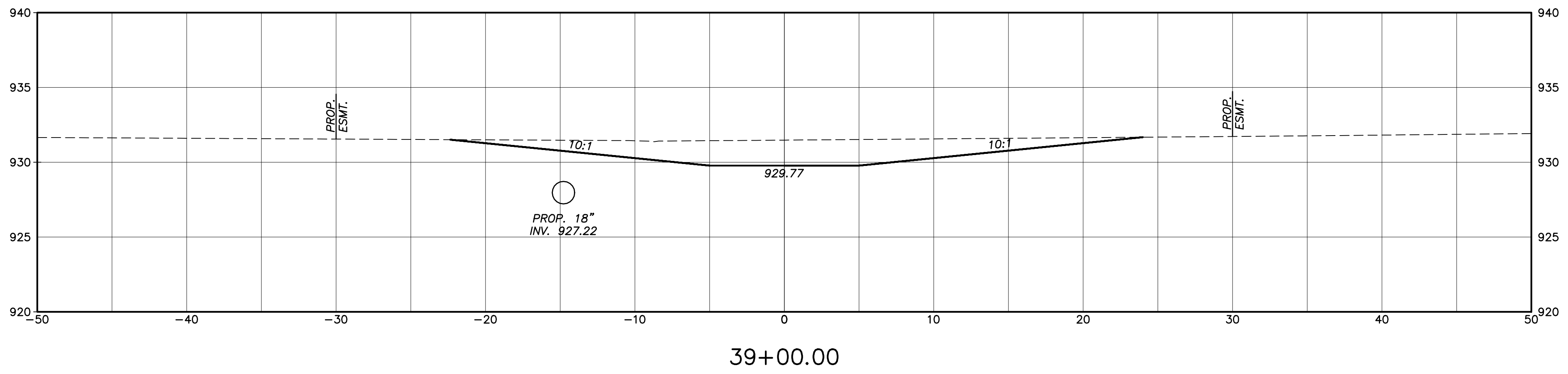
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CHECKED	MSL

0 5 10  
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**CROSS SECTIONS  
STA. 32+00 TO STA. 35+00**

**DEVER DRAINAGE  
IMPROVEMENT**

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September 27, 2023, 9:28am



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CHECKED	MSL

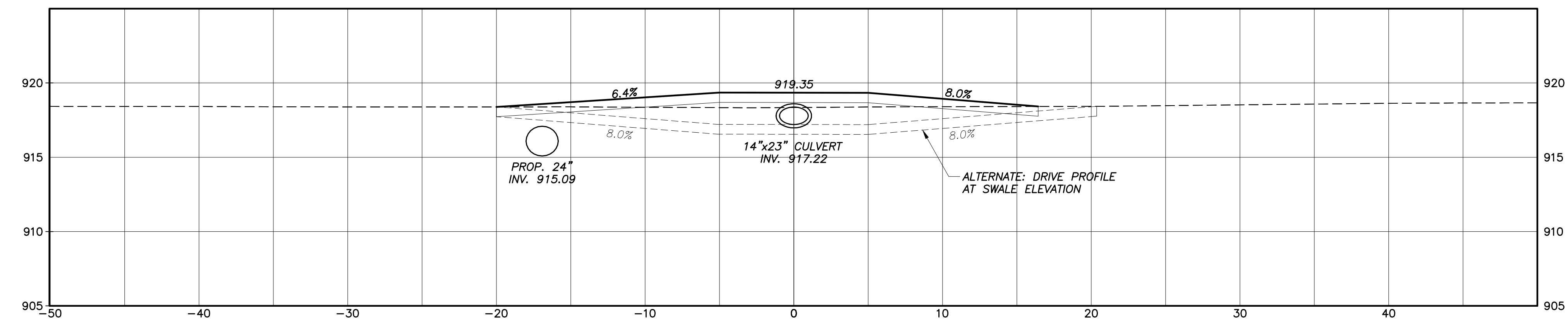
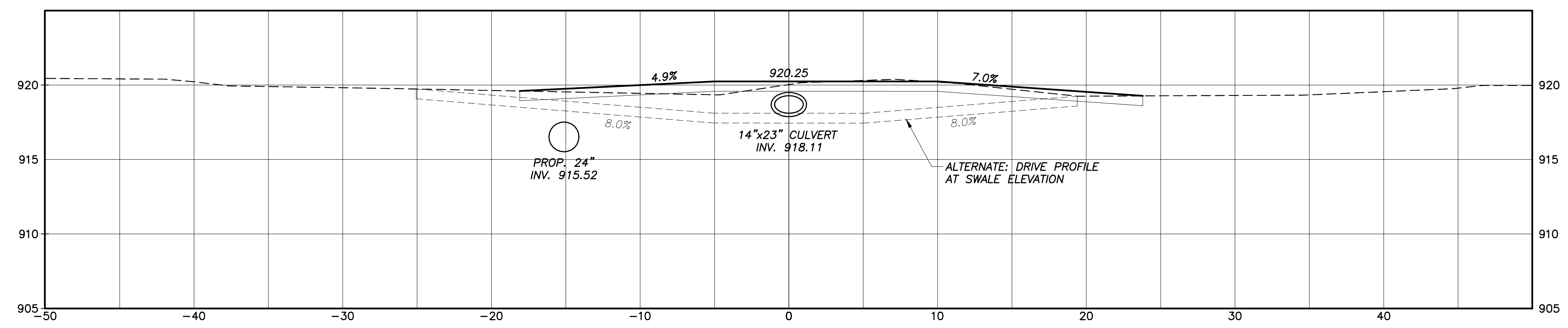
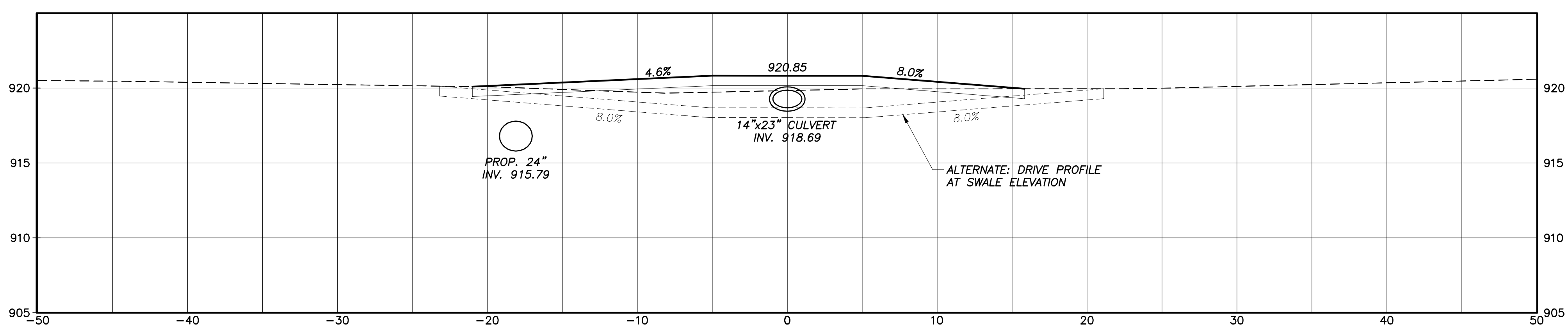
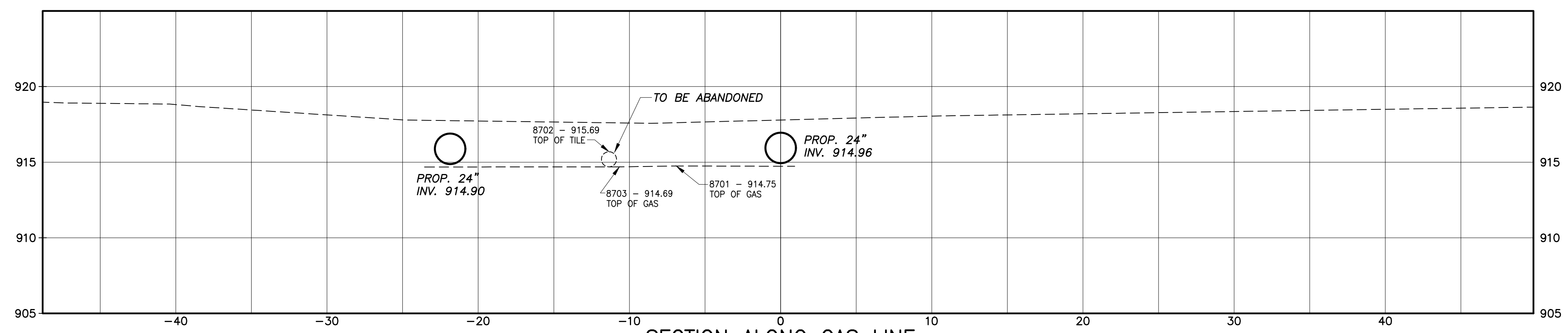
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**CROSS SECTIONS  
STA. 36+00 TO STA. 39+00**

**DEVER DRAINAGE  
IMPROVEMENT**

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September 27, 2023, 9:26am





CALCULATED  
MAB  
CHECKED  
MSL

DRIVE SECTIONS  
GAS LINE SECTION

DEVER DRAINAGE  
IMPROVEMENT

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August 03, 2023, 1:11:00pm

**SEDIMENT AND EROSION CONTROL NARRATIVE**

PLAN ENGINEER: MOODY ENGINEERING  
300 SPRUCE STREET, SUITE 200  
COLUMBUS, OHIO 43215  
PHONE (614) 280-8999

PROJECT BY: FRANKLIN COUNTY ENGINEER'S OFFICE  
DEVELOPER: 970 DUBLIN RD.  
COLUMBUS, OH 43215  
CONTACT: JAMES RAMSEY, PE  
PHONE: (614) 525-7469  
EMAIL: JRAMSEY@FRANKLINCOUNTYENGINEER.ORG

PROJECT DESCRIPTION: INSTALLATION OF PETITION DRAINAGE IMPROVEMENTS

EXISTING SITE DRAINAGE CONDITION: RURAL RESIDENTIAL AND AGRICULTURAL

WATERSHED: BIG DARBY

ADJACENT AREAS: THE SITE IS BORDERED BY WALKER ROAD TO THE EAST, CARTER ROAD TO THE SOUTHWEST, RESIDENTIAL PROPERTY TO THE SOUTH, AND AGRICULTURAL FIELD TO THE NORTH

CRITICAL AREAS: THE EXCAVATED SWALE SHALL BE STABILIZED AFTER EACH SEGMENT OF INSTALLATION IS COMPLETED. MATING AND STRAW WATTLES ARE TO BE INSTALLED AFTER EVERY 150 FEET.

EROSION & SEDIMENT CONTROL MEASURES: PROPOSED CONSTRUCTION WILL REQUIRE SEDIMENT & EROSION RUNOFF PROTECTION WITH THE USE OF STRAW WATTLES, INLET PROTECTION, CONSTRUCTION ENTRANCE & CONCRETE WASHOUT AREA.

MAINTENANCE: MAINTENANCE OF THE EROSION & SEDIMENT CONTROL ITEMS SHALL BE IN ACCORDANCE WITH THE NOTES LISTED ON THIS SHEET.

EARTH DISTURBED AREA: 4.90 ACRES

OHIO EPA NOI: PENDING

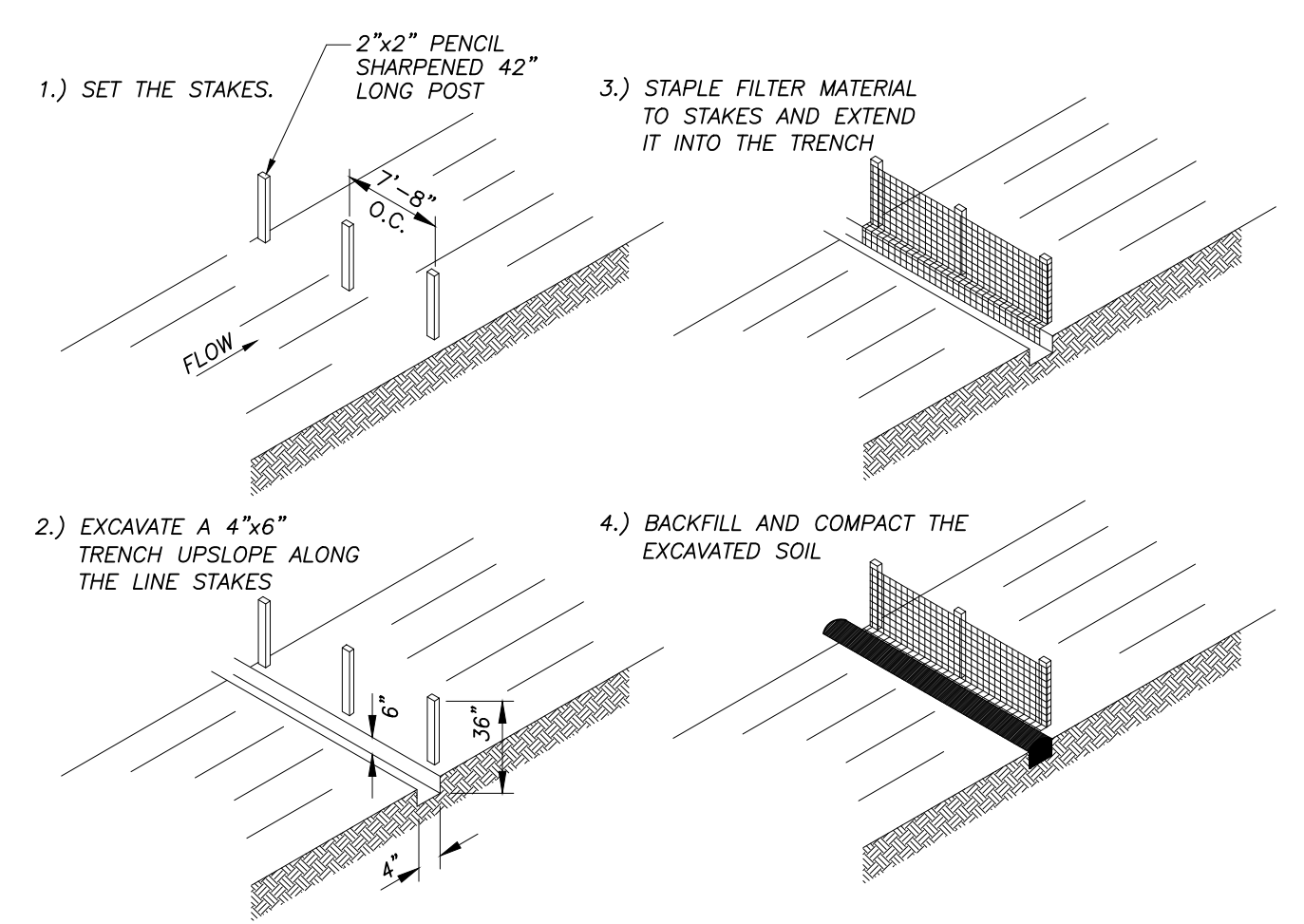
**SEDIMENT AND EROSION CONTROL STANDARDS AND CRITERIA**

IN ORDER TO CONTROL SEDIMENT POLLUTION OF WATER RESOURCES THE OWNER OR PERSON RESPONSIBLE FOR THE DEVELOPMENT AREA SHALL USE CONSERVATION PLANNING AND PRACTICES TO MAINTAIN THE LEVEL OF CONSERVATION ESTABLISHED BY THE FOLLOWING STANDARDS.

- TIMING OF SEDIMENT-CONTROL PRACTICES: SEDIMENT CONTROL PRACTICES SHALL BE FUNCTIONAL THROUGHOUT EARTH-DISTURBING ACTIVITY.
- EROSION CONTROL MEASURES INCLUDING EROSION MATTING AND STRAW WATTLE DITCH CHECKS SHALL BE IMPLEMENTED WITHIN SEVEN DAYS FROM THE START OF GRUBBING. NEW CHECKS SHALL BE INSTALLED AT THE COMPLETION OF EACH DAYS GRADING ACTIVITY AND THEY SHALL CONTINUE TO FUNCTION UNTIL THE UPSLOPE DEVELOPMENT AREA IS RESTABILIZED. AT NO TIME SHALL THE SWALE BE LEFT DISTURBED WITHOUT STRAW WATTLES IN PLACE.
- STABILIZATION OF DENUDED AREA: DENUDED AREAS SHALL HAVE SOIL STABILIZATION APPLIED WITHIN SEVEN DAYS IF THEY ARE TO REMAIN DORMANT FOR MORE THAN FOURTEEN DAYS. PERMANENT OR TEMPORARY SOIL STABILIZATION SHALL BE APPLIED TO DENUDED AREAS WITHIN SEVEN DAYS AFTER FINAL GRADE IS REACHED ON ANY PORTION OF THE SITE, AND SHALL ALSO BE APPLIED WITHIN SEVEN DAYS TO DENUDED AREAS WHICH MAY NOT BE AT FINAL GRADE, BUT WILL REMAIN DORMANT (UNDISTURBED) FOR LONGER THAN FOURTEEN DAYS.
- SEDIMENT BARRIER: STREET FLOW RUNOFF FROM DENUDED AREAS SHALL BE FILTERED OR DIVERTED TO A SETTLING FACILITY.
- STORM SEWER INLET PROTECTION: ALL STORM SEWER INLETS WHICH ARE INSTALLED WITH OR ACCEPT WATER RUNOFF FROM THE DISTURBED AREA SHALL BE PROTECTED SO THAT SEDIMENT-LADEN WATER WILL NOT ENTER THE STORM SEWER SYSTEM WITHOUT FIRST BEING FILTERED OR OTHERWISE TREATED TO REMOVE SEDIMENT..
- CONSTRUCTION ACCESS ROUTES: MEASURES SHALL BE TAKEN TO PREVENT SOIL TRANSPORT ONTO SURFACES WHERE RUNOFFS NOT CHECKED BY SEDIMENT CONTROLS, OR ONTO PUBLIC ROADS. THIS INCLUDES INSTALLATION OF TEMPORARY CONSTRUCTION ENTRANCE AND AGGREGATE AS REQUIRED TO ELIMINATE SEDIMENT TRACKING.
- STABILIZATION OF OUTFALLS AND CHANNELS: OUTFALLS AND CONSTRUCTION OR MODIFIED CHANNELS SHALL BE DESIGNED AND CONSTRUCTED TO WITHSTAND THE EXPECTED VELOCITY OF FLOW FROM A POST-DEVELOPMENT, TEN-YEAR FREQUENCY STORM WITHOUT ERODING.
- ESTABLISHMENT OF PERMANENT VEGETATION: A PERMANENT VEGETATION SHALL NOT BE CONSIDERED ESTABLISHED UNTIL GROUND COVER IS ACHIEVED WHICH, IN THE OPINION OF THE APPROVING AGENCY IS CONSIDERED SATISFACTORY.

**SOIL EROSION NOTES CONSTRUCTION SEQUENCE**

- INSTALL SEDIMENT CONTROL MEASURES
  - INSTALL STABILIZED CONSTRUCTION ACCESS ROADS (OR ENTRANCES) SEDIMENT BARRIER AROUND STOCKPILE
  - INSTALL INLET CONTROLS
  - INSTALL PERIMETER SEDIMENT CONTROLS
- INSTALL PROPOSED STORM SEWER AND SWALE
- INSTALL STRAW WATTLES AND SEEDING
- PERFORM CONTINUING MAINTENANCE.
- MAINTAIN SITE UNTIL VEGETATION IS FULLY ESTABLISHED



**NON-SEDIMENT POLLUTION CONTROL**

- CONSTRUCTION PERSONNEL, INCLUDING SUBCONTRACTORS WHO MAY USE OR HANDLE HAZARDOUS OR TOXIC MATERIALS, SHALL BE MADE AWARE OF THE FOLLOWING GUIDELINES:
 

**DISPOSAL AND HANDLING OF HAZARDOUS AND OTHER CONSTRUCTION WASTE**

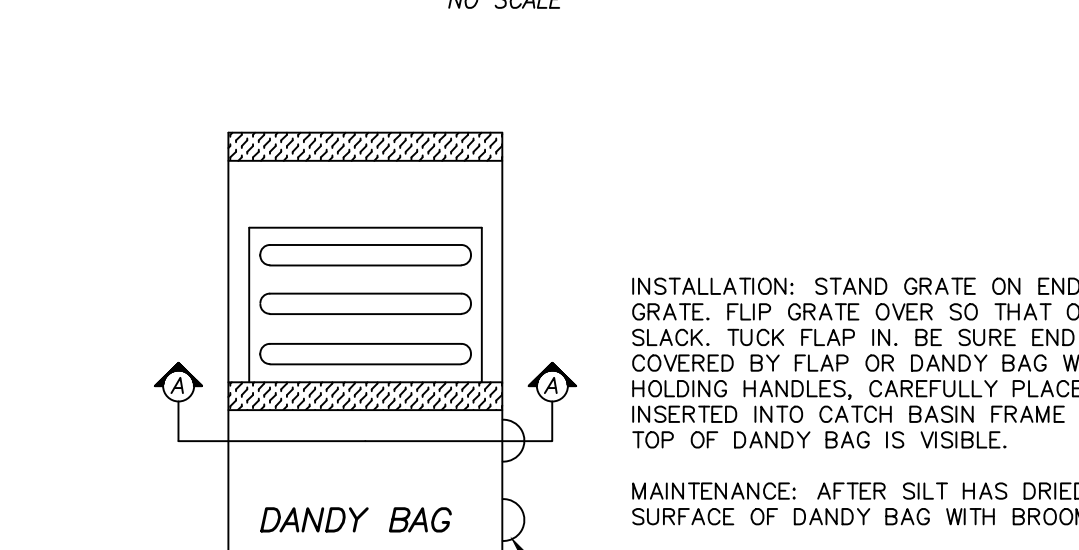
**DO:**

  - PREVENT SPILLS
  - USE PRODUCTS UP
  - FOLLOW LABEL DIRECTIONS FOR DISPOSAL
  - REMOVE LIDS FROM EMPTY BOTTLES AND CANS WHEN DISPOSING IN TRASH
  - RECYCLE WASTES WHENEVER POSSIBLE

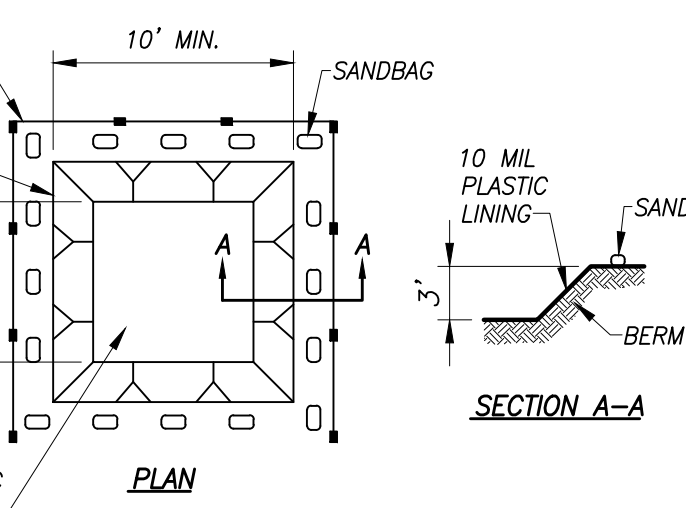
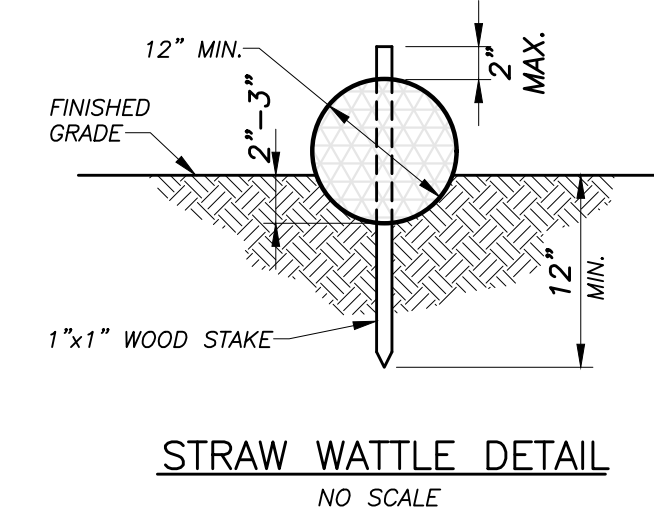
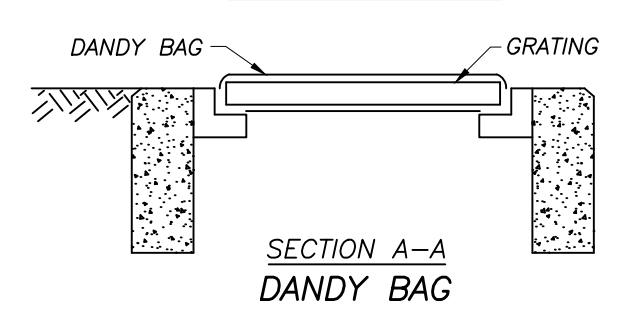
**DON'T:**

  - DON'T POUR INTO WATERWAYS, STORM DRAINS OR ONTO THE GROUND
  - DON'T POUR DOWN THE SINK, FLOOR DRAIN OR SEPTIC TANKS
  - DON'T BURY CHEMICALS OR CONTAINERS
  - DON'T BURN CHEMICALS OR CONTAINERS
  - DON'T MIX CHEMICALS TOGETHER
- CONTAINERS SHALL BE PROVIDED FOR COLLECTION OF ALL WASTE MATERIAL INCLUDING CONSTRUCTION DEBRIS, TRASH, PETROLEUM PRODUCTS AND ANY HAZARDOUS MATERIALS TO BE USED ON-SITE. ALL WASTE MATERIAL SHALL BE DISPOSED OF AT FACILITIES APPROVED FOR THAT MATERIAL.
- NO WASTE MATERIALS SHALL BE BURIED ON-SITE. SITE PERSONNEL, INCLUDING SUBCONTRACTORS SHALL BE NOTIFIED THAT NO CONSTRUCTION-RELATED MATERIALS ARE TO BE BURIED ON-SITE.
- MIXING, PUMPING, TRANSFERRING OR OTHERWISE HANDLING CONSTRUCTION CHEMICALS SUCH AS FERTILIZER, LIME, ASPHALT, CONCRETE DRYING COMPOUNDS, AND ALL OTHER POTENTIALLY HAZARDOUS MATERIALS SHALL BE PERFORMED IN AN AREA AWAY FROM ANY WATERCOURSE, DITCH OR STORM DRAIN.
- EQUIPMENT FUELING AND MAINTENANCE, OIL CHANGING, ETC., SHALL BE PERFORMED AWAY FROM WATERCOURSES, DITCHES OR STORM DRAINS, IN AN AREA DESIGNATED FOR THAT PURPOSE. THE DESIGNATED AREA SHALL BE EQUIPPED FOR RECYCLING OIL AND CATCHING SPILLS.
- CONCRETE WASH WATER SHALL NOT BE ALLOWED TO FLOW TO STREAMS, DITCHES, STORM DRAINS, OR ANY OTHER WATER CONVEYANCE. A SUMP OR PIT SHALL BE CONSTRUCTED TO CONTAIN CONCRETE WASH WATER.
- IF HAZARDOUS SUBSTANCES SUCH AS OIL, DIESEL FUEL, HYDRAULIC FLUID, ANTIFREEZE, ETC. ARE SPILLED, LEAKED, OR RELEASED ONTO THE SOIL, THE SOIL SHOULD BE DUG UP AND DISPOSED OF WITH THE TRASH AT A LICENSED SANITARY LANDFILL (NOT A CONSTRUCTION/DEMOLITION DEBRIS LANDFILL). SPILLS ON PAVEMENT SHALL BE ABSORBED WITH SAWDUST OR KITTY LITTER AND DISPOSED OF WITH THE TRASH AT A LICENSED SANITARY LANDFILL. HAZARDOUS OR INDUSTRIAL WASTES SUCH AS MOST SOLVENTS, GASOLINE, OIL-BASED PAINTS, AND CEMENT CURING COMPOUNDS REQUIRE SPECIAL HANDLING. CONTACT OHIO EPA (1-800-282-9378).
- SPILLS OF 25 GAL. OR MORE OF PETROLEUM PRODUCTS SHALL BE REPORTED TO OHIO EPA (1-800-282-9378), THE LOCAL FIRE DEPARTMENT, AND THE LOCAL EMERGENCY PLANNING COMMITTEE WITHIN 30 MIN. OF THE DISCOVERY OF THE RELEASE.

**FABRIC FILTER BARRIER**



**CATCH BASIN PROTECTION**



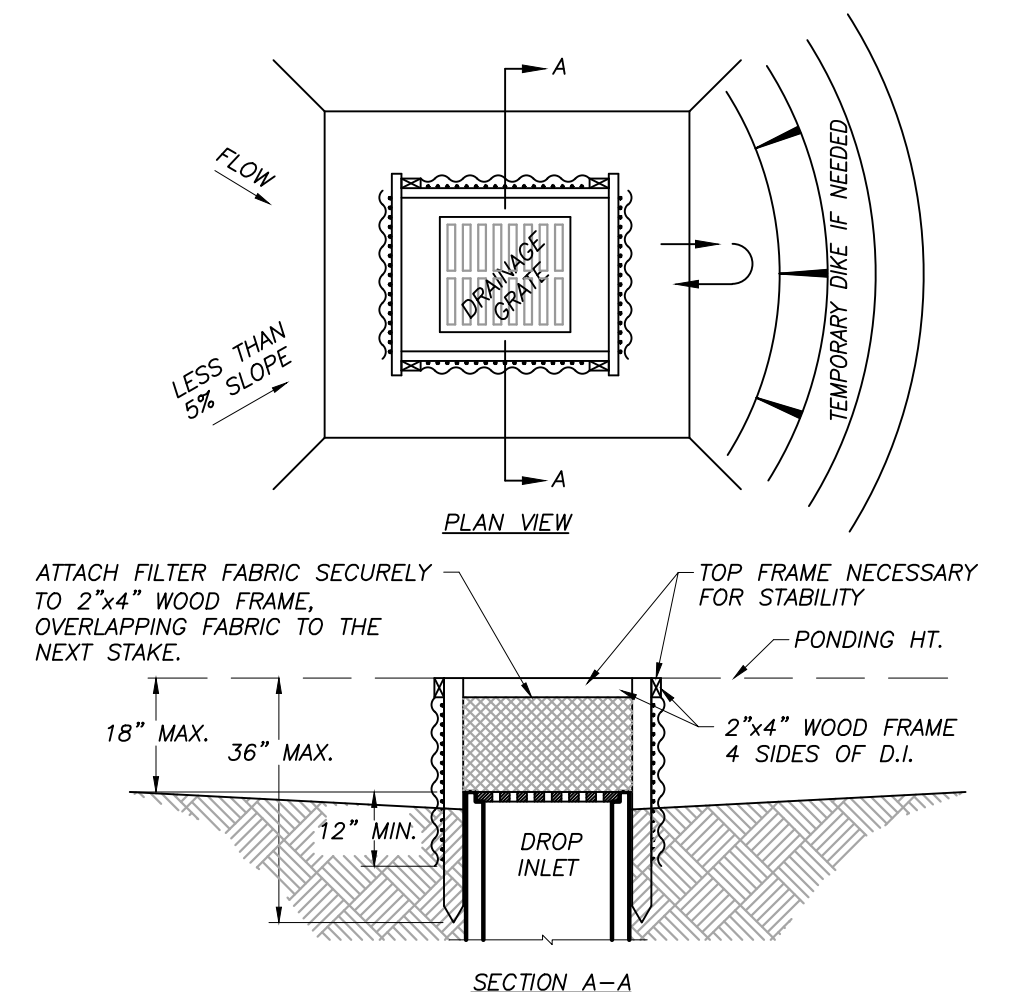
**TEMPORARY CONCRETE WASHOUT FACILITY (TYPE BELOW GRADE)**

TEMPORARY CONCRETE WASHOUT FACILITY (TYPE BELOW GRADE) SHOULD BE CONSTRUCTED AS SHOWN ON THE DETAIL, WITH A RECOMMENDED MINIMUM LENGTH AND MINIMUM WIDTH OF 10 FEET. THE QUANTITY AND VOLUME SHOULD BE SUFFICIENT TO CONTAIN ALL LIQUID AND CONCRETE WASTE GENERATED BY WASHOUT OPERATIONS.

LATH AND FLAGGING SHOULD BE COMMERCIAL TYPE.

PLASTIC LINING MATERIAL SHOULD BE A MINIMUM OF 10 MIL POLYETHYLENE SHEETING AND SHOULD BE FREE OF HOLES, TEARS, OR OTHER DEFECTS THAT COMPROMISE THE IMPERMEABILITY OF THE MATERIAL.

COORDINATE LOCATION IN THE FIELD WITH PROJECT MANAGER.



- NOTES:
- DROP INLET SEDIMENT BARRIERS ARE TO BE USED FOR SMALL, NEARLY LEVEL DRAINAGE AREAS. (LESS THAN 5%)
  - USE 2"x4" WOOD OR EQUIVALENT METAL STAKES, 3' MIN. LENGTH.
  - INSTALL 2"x4" WOOD TOP FRAME TO INSURE STABILITY.
  - THE TOP OF THE FRAME (PONDING HEIGHT) MUST BE WELL BELOW THE GROUND ELEVATION DOWN SLOPE TO PREVENT RUNOFF FROM BYPASSING INLET. TEMPORARY DIKE MAY BE NECESSARY ON THE DOWN SLOPE SIDE OF THE STRUCTURE.

**SILT FENCE DROP INLET SEDIMENT BARRIER**

**MAINTENANCE**

SILT FENCES AND FILTER BARRIERS SHALL BE INSPECTED IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL. ANY REQUIRED REPAIRS SHALL BE MADE IMMEDIATELY.

SHOULD THE FABRIC ON A FENCE OR FILTER BARRIER DECOMPOSE OR BECOME INEFFECTIVE PRIOR TO THE END OF THE EXPECTED USABLE LIFE AND THE BARRIER IS STILL NECESSARY, THE FABRIC SHALL BE REPLACED PROMPTLY.

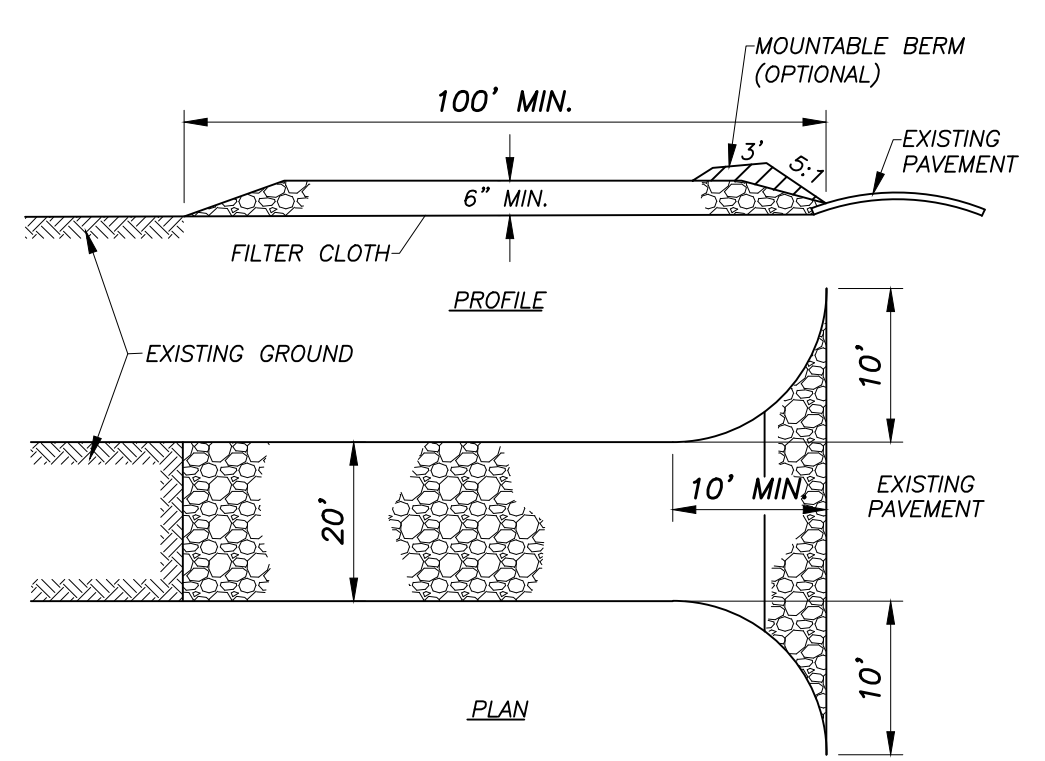
SEDIMENT DEPOSITS SHOULD BE REMOVED AFTER EACH STORM EVENT. THEY MUST BE REMOVED WHEN DEPOSITS REACH APPROXIMATELY ONE-HALF THE HEIGHT OF THE BARRIER.

ANY SEDIMENT DEPOSITS REMAINING IN PLACE AFTER THE FENCE OR FILTER BARRIER IS NO LONGER REQUIRED SHALL BE DRESSED TO CONFORM WITH THE EXISTING GRADE PREPARED AND SEEDED.

**SEDIMENTATION AND EROSION CONTROL**

PRIOR TO CONSTRUCTION OPERATIONS IN A PARTICULAR AREA ALL SEDIMENTATION AND EROSION CONTROL FEATURES SHALL BE IN PLACE. FIELD ADJUSTMENTS WITH RESPECT TO LOCATION AND DIMENSIONS MAY BE MADE BY THE ENGINEER AS REQUIRED.

IT MAY BECOME NECESSARY TO REMOVE PORTIONS OF THE BARRIER DURING CONSTRUCTION TO FACILITATE THE GRADING OPERATIONS IN CERTAIN AREAS. HOWEVER, THE BARRIER SHALL BE IN PLACE IN THE EVENING OR DURING ANY INCLEMENT WEATHER.



**STABILIZED CONSTRUCTION ENTRANCE**

NO SCALE

**CONSTRUCTION SPECIFICATIONS**

- STONE SIZE - USE 2" STONE, OR RECLAIMED OR RECYCLED CONCRETE EQUIVALENT. ITEM 304 SHALL NOT BE ADDED TO THE STONE.
- LENGTH - ONE HUNDRED (100) FEET MINIMUM.
- THICKNESS - NOT LESS THAN SIX (6) INCHES.
- WIDTH - TWENTY (20) FEET MINIMUM, BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS OR EGRESS OCCURS.
- FILTER CLOTH - WILL BE PLACED OVER ENTIRE AREA PRIOR TO PLACING OF STONE.
- SURFACE WATER - ALL SURFACE WATER FLOWING OR DIVERTED TOWARD CONSTRUCTION ENTRANCES SHALL BE PIPED ACROSS THE ENTRANCE. IF PIPING IS IMPRACTICAL, A MOUNTABLE BERM WITH 6:1 SLOPES WILL BE PERMITTED. COST OF PIPE SHALL BE INCLUDED IN THE PRICE BID FOR THE STABILIZED CONSTRUCTION ENTRANCE.
- MAINTENANCE - THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHT-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHTS-OF-WAY MUST BE REMOVED IMMEDIATELY.
- WASHING - WHEELS SHALL BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO PUBLIC RIGHT-OF-WAYS. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH STONE AND WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE. MANNED WHEEL WASH STATIONS MAY BE REQUIRED.
- PERIODIC INSPECTION AND NEEDED MAINTENANCE SHALL BE PROVIDED AFTER EACH RAIN. VACUUM STREET SWEEPING FOR THE PUBLIC STREETS TO BE PERFORMED ROUTINELY AND WHEN REQUIRED BY THE COUNTY ENGINEER.

**TEMPORARY SEEDING REQUIREMENTS**

SEEDING DATES	SPECIES	LB./1000 FT <sup>2</sup>	LB./ACRE	
MARCH 1 TO AUGUST 15	OATS	3	128 (4 DUSHEL)	
	TALL FESCUE	1	40	
	ANNUAL RYEGRASS	1	40	
	PERENNIAL RYEGRASS	1	40	
	TALL FESCUE	1	40	
	ANNUAL RYEGRASS	1	40	
	ANNUAL RYEGRASS	1.25	55	
	PERENNIAL RYEGRASS	3.25	142	
	CREEPING RED FESCUE	0.4	17	
	KENTUCKY BLUEGRASS	0.4	17	
AUGUST 16 TO OCTOBER 30	OATS	3	128 (3 BUSHSEL)	
	TALL FESCUE	1	40	
	ANNUAL RYEGRASS	1	40	
	RYE	3	112 (2 BUSHSEL)	
	TALL FESCUE	1	40	
	ANNUAL RYEGRASS	1	40	
	WHEAT	3	120 (2BUSHSEL)	
	TALL FESCUE	1	40	
	ANNUAL RYEGRASS	1	40	
	PERENNIAL RYE	1	40	
NOVEMBER 1 TO FEBRUARY 29	ANNUAL RYEGRASS	1.25	40	
	PERENNIAL RYEGRASS	3.25	40	
	CREEPING RED FESCUE	0.4	40	
	KENTUCKY BLUEGRASS	0.4	40	
	USE MULCH ONLY OR DORMANT SEEDING			

**PERMANENT SEEDING REQUIREMENTS**

MIXTURE	FORMULA	LB./1000 FT <sup>2</sup>	LB./ACRE	TIME	MOWING
CREEPING RED FESCUE RYEGRASS KENTUCKY BLUEGRASS	10-10-10	12	500	FALL, YEARLY OR AS NEEDED	NOT CLOSER THAN 3"
TALL FESCUE	10-10-10	12	500		NOT CLOSER THAN 4"
TURF TYPE FESCUE	10-10-10	12	500		
CROWN VETCH FESCUE	0-20-20	10	400	SPRING, YEARLY FOLLOWING ESTABLISHMENT AND EVERY 4-7 YEARS THEREAFTER	DO NOT MOW
FLAT PEA FESCUE	0-20-20	10	400		DO NOT MOW

DETAILS

DEVER DRAINAGE IMPROVEMENT