

INDEX OF SHEETS



BIG BEAR FARMS & GOLF VILLAGE DRAINAGE IMPROVEMENT PROJECT

DELAWARE COUNTY
LIBERTY TOWNSHIP

ESTIMATED QUANTITIES			
Item	Description	Quantity	Unit
ODOT 611	12" Pipe (707.33) w/soil bedding and soil backfill	407	Lineal Feet
ODOT 209	Linear Grading	520	Lineal Feet
ODOT 611	2-2b Catch Basin (DCED-S133B)	1	Each
ODOT 611	Half height headwall (DCED-S169)	1	Each
ODOT 202	Catch Basin Removal and Disposal	2	Each
Special	Spoil Disposal Offsite	LUMP	
ODOT 670	Turf Reinforced Matting (InstaTurf Shear Force 10 or equivalent)	90	Square Yards
ODOT 601	Tied Concrete Block Matting	45	Square Yards
ODOT 659	Seeding & Mulching	3100	Square Yards

PROJECT DESCRIPTION

This project will include the construction of surface drainage swale, the installation of subsurface drain tile and drainage structures, and the taking of temporary and permanent easements.

This project/improvement is being done pursuant to Ohio Revised Code Sections 6131 and 6137.

2023 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. English units shall govern. Where noted, specifications of the USDA Natural Resources Conservation Service shall supplement the ODOT specifications.

BENCHMARK DESCRIPTION

BM#1
Top of the top bolt of a hydrant located on the west side of Wayne Brown Dr approximately 35' south of Seldom Seen Rd.

Elevation: 938.62'
Northing: 183922.613'
Easting: 1801378.68'

(Coordinates are NAD1983 Ohio State Plane North)



UNDERGROUND UTILITIES

 **TWO WORKING DAYS** 

BEFORE YOU DIG

CALL 1-800-362-2764 (TOLL FREE)

OHIO UTILITIES PROTECTION SERVICE

NON-MEMBERS

MUST BE CALLED DIRECTLY

PLAN JOINTLY PREPARED BY:

**DELAWARE SOIL AND WATER
CONSERVATION DISTRICT**
1610 STATE ROUTE 521
DELAWARE, OHIO 43015
PHONE: (740) 368-1921

DELAWARE COUNTY ENGINEER'S OFFICE
1610 STATE ROUTE 521
DELAWARE, OHIO 43015
PHONE: (740) 833-2400

<i>CONSTRUCTION & MATERIAL SPECIFICATIONS</i>						SUPPLEMENTAL SPECIFICATIONS
<i>OHIO DEPARTMENT OF TRANSPORTATION</i>			<i>USDA NATURAL RESOURCES CONSERVATION SERVICE</i>			
<i>DELAWARE COUNTY ENGINEER</i>						
		<i>CONSTRUCTION</i>				
202	Removal of Structures & Obstructions					
209	Lineal Grading					
601	Slope & Channel Protection					
611	Pipe Culverts, Sewers, Drains, & Structures					
659	Seeding & Mulching					
670	Erosion Control					
						<i>SPECIAL PROVISIONS</i>
						<i>Title Connection</i>

BIG BEAR FARMS & GOLF VILLAGE
DRAINAGE IMPROVEMENT PROJECT

DELAWARE COUNTY ENGINEER
DELAWARE COUNTY, OH

APPROVED  _____
DATE 4/17/20 COUNTY ENGINEER

APPROVED _____
DATE _____ COUNTY COMMISSIONER

APPROVED _____
DATE _____ COUNTY COMMISSIONER

APPROVED _____
DATE _____ COUNTY COMMISSIONER

DESIGNED BY DB 1/25 CHECKED

DRAWN BPB 1/25 REVIEWED

NONE

GOLF VILLAGE

 $\frac{1}{5}$

DETAILS & NOTES

GENERAL CONSTRUCTION NOTES

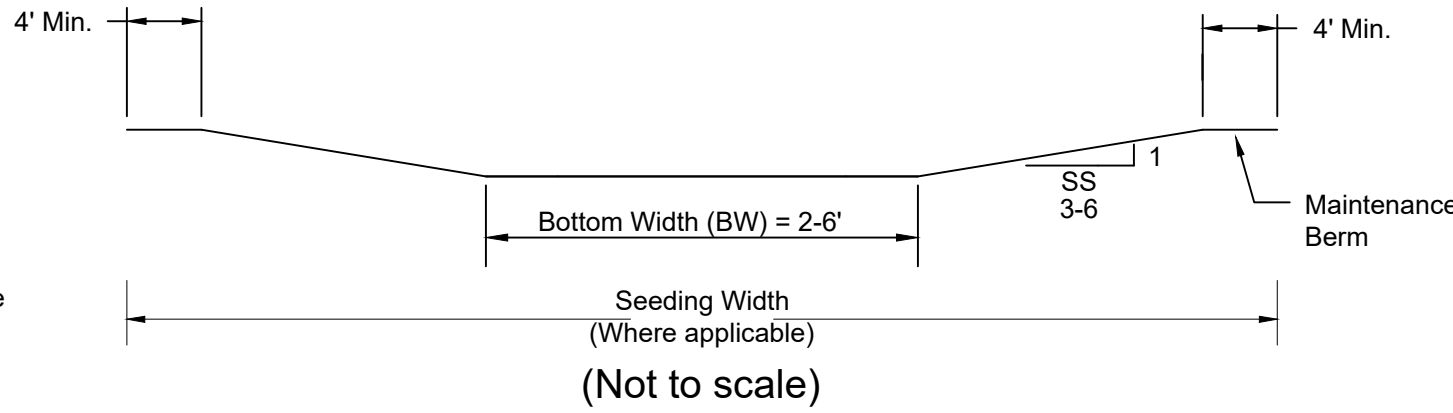
1. The construction right-of-way for this project will be 95' right and left of the project centerline unless otherwise marked by the Construction Inspector. Certain items of work may require an extended right-of-way in order to properly complete them. This work should not be done without prior consent of the construction inspector., and any consent given will be specific to a particular item of work. Additional right-of-way for construction access may be identified and approved by the construction inspector as deemed necessary for the completion of the project. All areas disturbed by the construction activities which are outside of the critical path including but not limited to area used for staging, stockpiling of materials, and access will be cleaned and returned to its pre-construction state at the sole responsibility of the contractor as per the requirements of ODOT CMS 104.04.
2. The contractor will be responsible for ensuring that all relevant OSHA regulations are met prior to beginning any construction activities.
3. Temporary easements for construction access may be identified and approved by the construction inspector as deemed necessary for the completion of the project. Any access easement not connected to the work limits of the project will be returned to its pre-construction state at the sole responsibility of the contractor.
4. All ground disturbed by excavation shall be returned to its pre-construction vegetative state and grade unless otherwise directed by the plans and/or the construction inspector.
5. Spoil from excavation of the surface drain (NRCS #608) construction shall be exported from the site at the expense of the contractor. The contractor is free to negotiate with landowners to dispose of spoil and debris materials on-site provided that any disposal site is outside of the work limits for this project. Delaware County will not be considered party to any such agreements made between the contractor and landowners.
6. Unless otherwise noted on these plans or instructed by the construction inspector, debris from clearing and snagging within the typical cross sections is to be disposed of off-site by the contractor. Payment for hauling and disposal shall be considered part of payment for NRCS #328-Clearing and Snagging. Alternatively, logs may be stacked onsite at a minimum of 25 feet from the top of bank. For the purposes of on-site disposal, a log will be defined as "a section of a tree bole (the main trunk of the tree) at least 8 feet long, not containing a fork, sufficiently straight and sound enough to yield at least an 8-foot board. Anything not considered a log by the above definition will be considered brush. Mowing, mulching, and/or grinding onsite, within the clearing limits, of small brush and trees (<6" diameter) will be permitted. Residual mulch and other material shall be uniformly spread according to the direction of the Construction Inspector.
7. Pipe quantities listed on the Plan and Profile views represent cumulative quantities for both perforated and non-perforated pipe. The quantity table shall be the reference for the specific amounts of perforated and non-perforated pipe. The applicable specification and the instructions of the construction inspector will govern the placement of each type of pipe. All lineal quantities of pipe shall be considered to be inclusive of all necessary elbows, couplers, and other fittings unless otherwise stated by these plans and/or the bid documents.
8. All lateral tile cut by the installation of the new tile shall be reconnected to the new tile at the point where they are cut or collected with a submain (size to be determined) and outletted into the new tile at the next downstream breather as specified by the construction inspector and per the requirements of NRCS #606-Subsurface Drain. Any connections made to any tile included on the Drainage Maintenance Program after completion of the project will require the approval of the Drainage Maintenance Department.

9. Seeding and Mulching will be done as per the specifications of ODOT #659 with the following stipulations/exceptions:
- Seed mixture to be used will be Class-Type #1.
 - Soil testing will not be required.
 - Liming will not be required.
 - Compost will not be required.
 - The use of straw mulch will be acceptable for the entire project.
 - Watering will not be required.
 - Mulch anchoring will not be required except where specified.
10. Linear alignments of all surface and subsurface features may be modified to fit site specific conditions at the discretion of the construction inspector.
11. The contractor shall contact the Delaware County Engineer's Office and Liberty Township a minimum of seven (7) working days prior to beginning any work within the road right-of-way. It will be the sole responsibility of the contractor to secure any permits necessary for work within the road right-of-way.
12. Scale bars as shown on the Plan Views shall be considered to be accurate for surveyed features including, but not necessarily limited to, project centerline, tile lines, and benchmark locations. Property lines, drive centerlines, building footprints, and road centerlines as shown on the Plan Views were derived from other sources and are shown for general reference only and should not be used to scale the location of any constructed feature.
14. Excavation will be required to verify design elevations including, but not limited to, existing subsurface drain inverts. These excavations will be considered incidental to the overall construction of the project per ODOT CMS 105.02.
15. Turf Reinforced Matting will be installed per the specifications of InstaTurf Shear Force 10 or equivalent and meet the following requirements:
- Opening Size: 16" x 16"
 - Shear Stress: 10 lbs/sf
 - Roll Width: 6'
- Matting shall be installed 45' long x 18' wide.

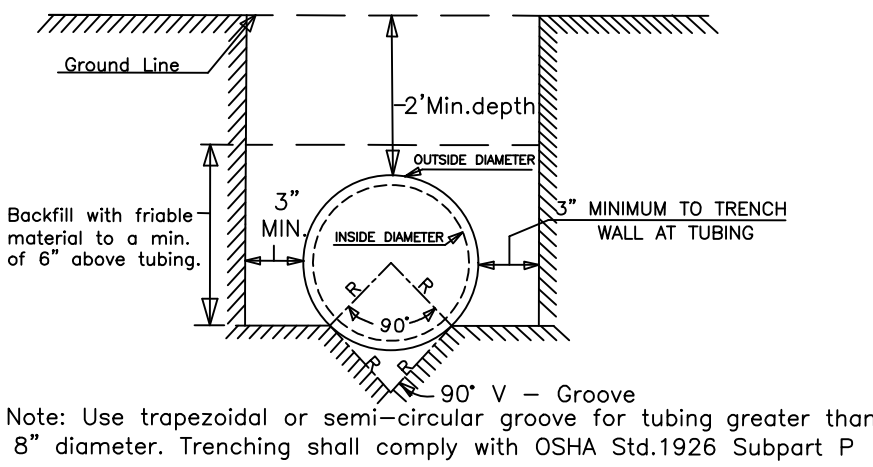
NOTES:

1. Where specified on the plans, the surface drain is to be seeded as stated in the construction notes and ODOT Specification #659. Any modifications to this seed mixture as stated in this Specification must be approved by the construction inspector prior to seed application.
2. Side slopes may be modified to fit site specific conditions at the discretion of the construction inspector.
3. All spoil from within the typical surface drain cross section shall be disposed offsite at a location to be determined by the contractor.

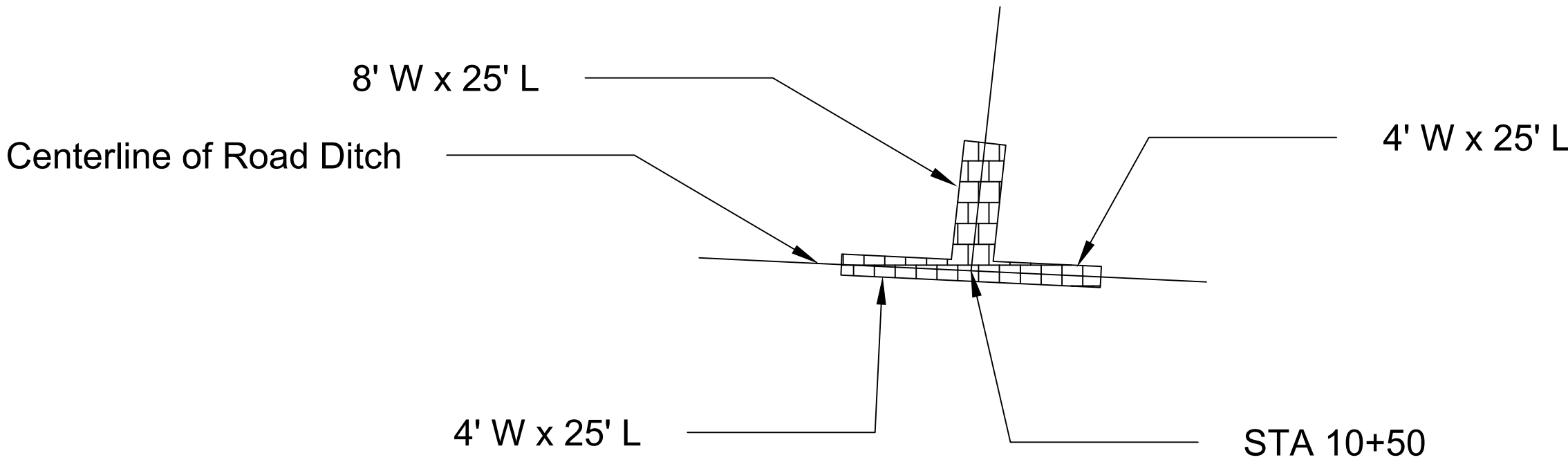
TYPICAL SURFACE DRAIN SWALE CROSS SECTION



PIPE INSTALLATION DETAIL

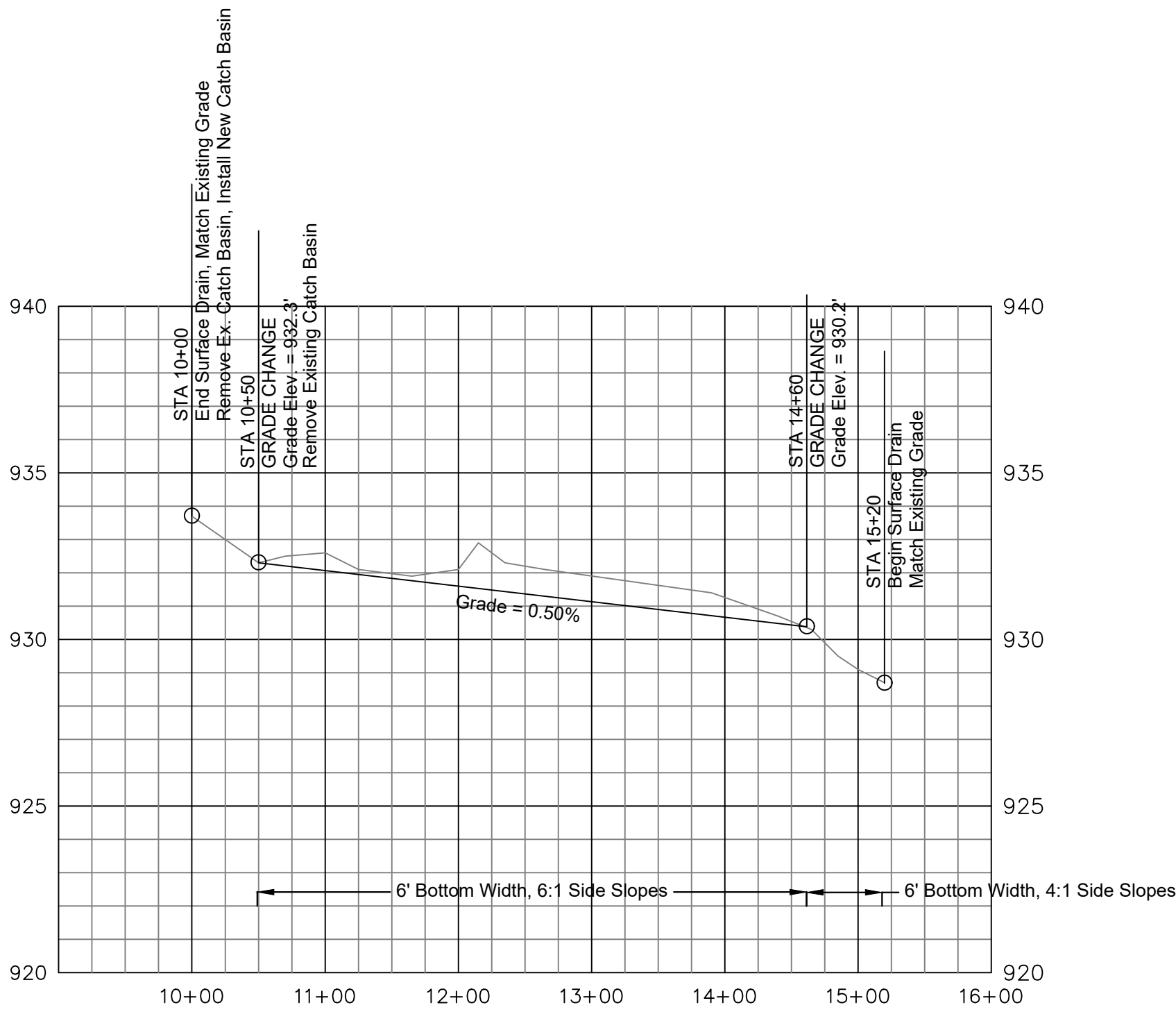


TIED CONCRETE BLOCK MATTING DETAILS



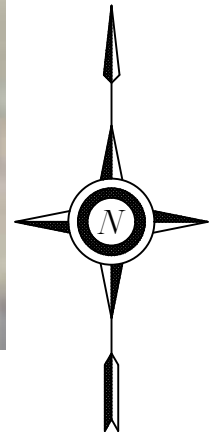
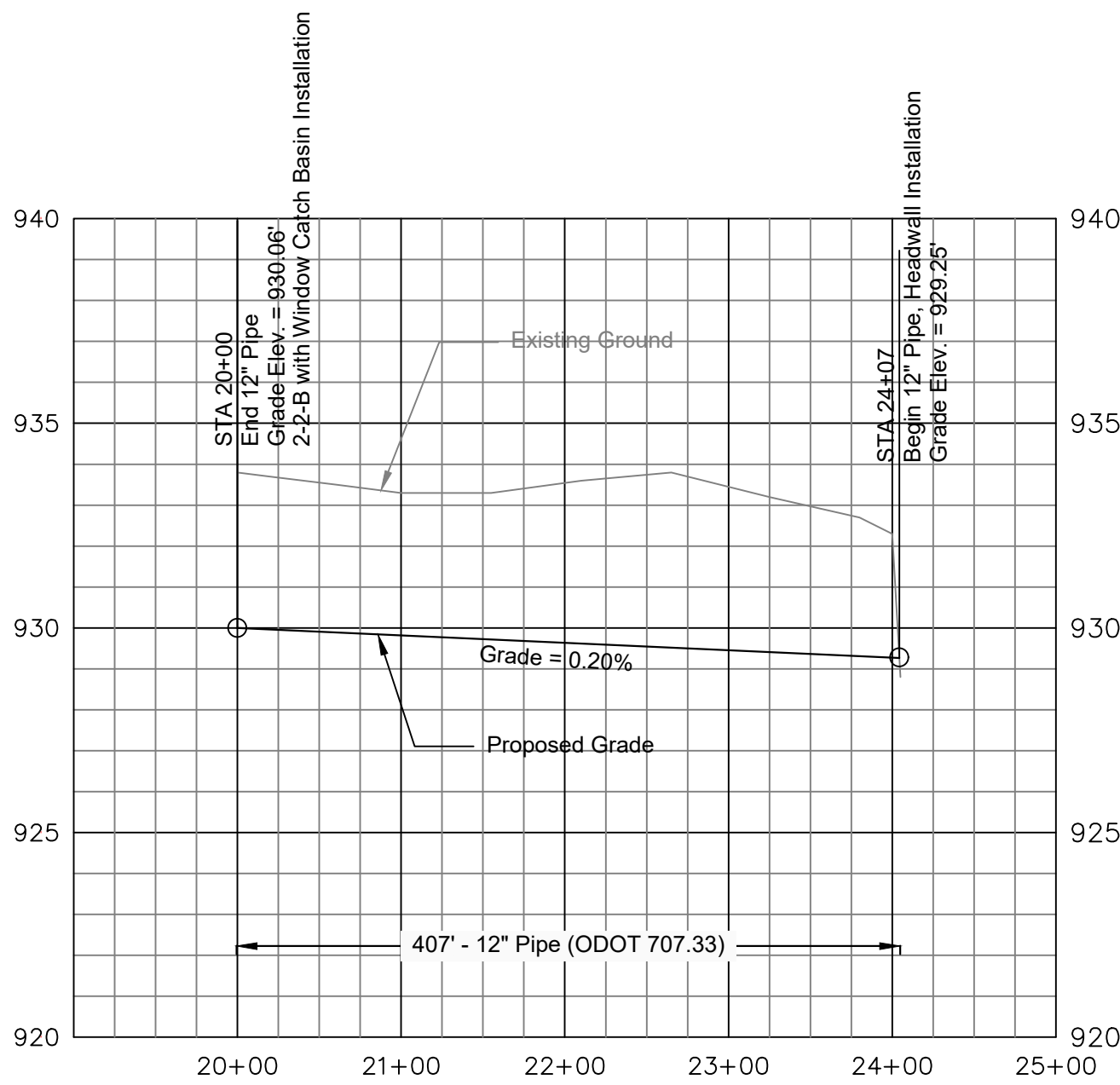


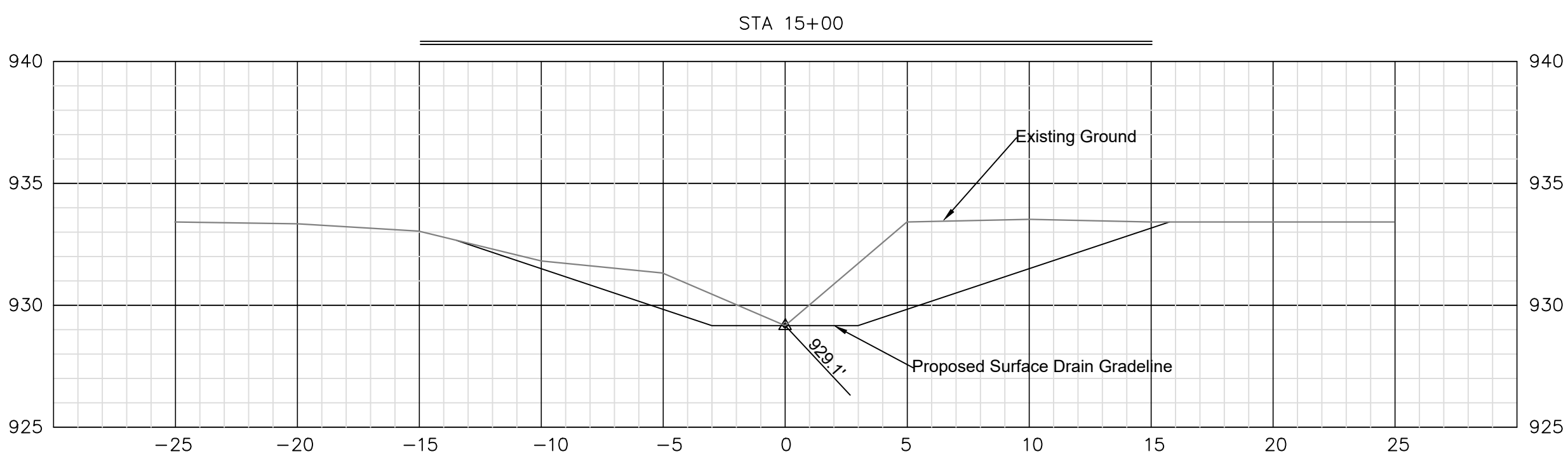
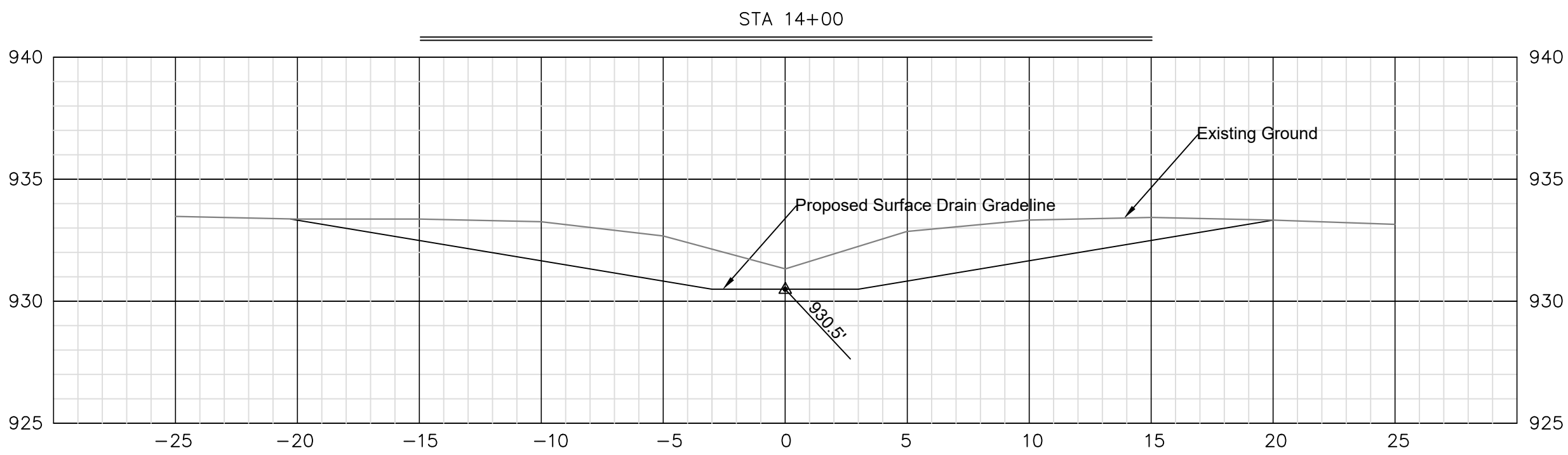
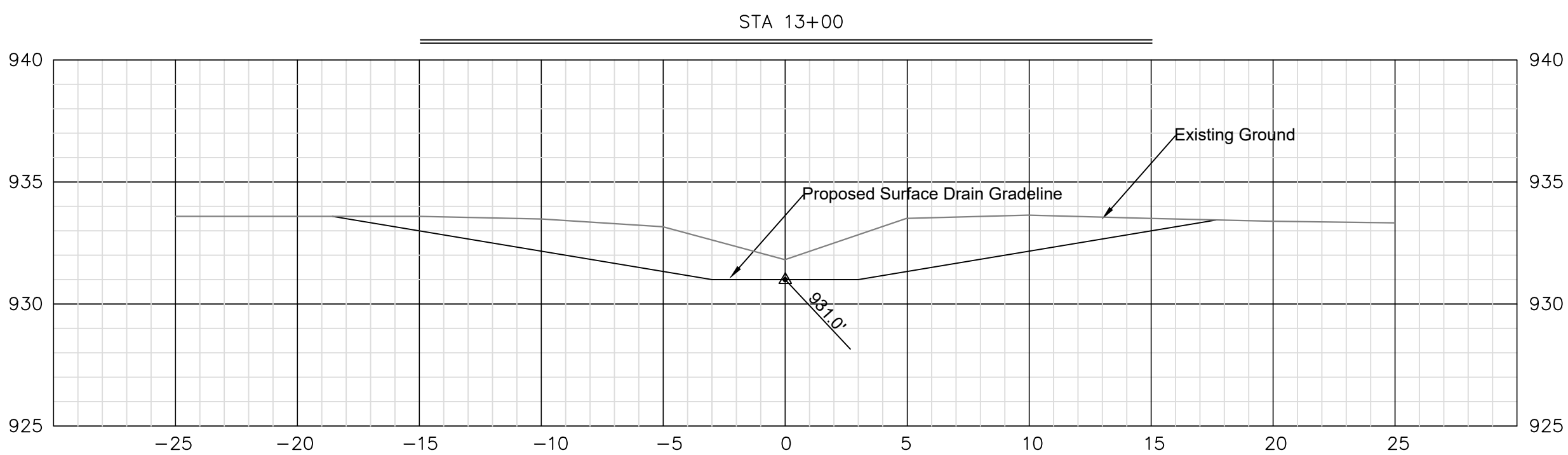
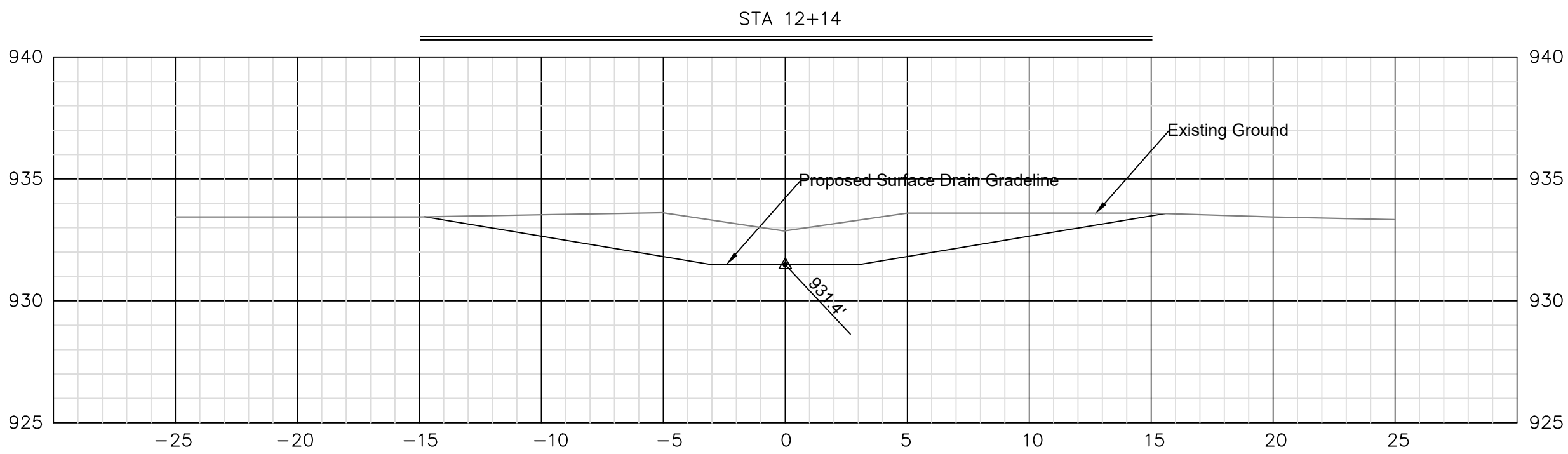
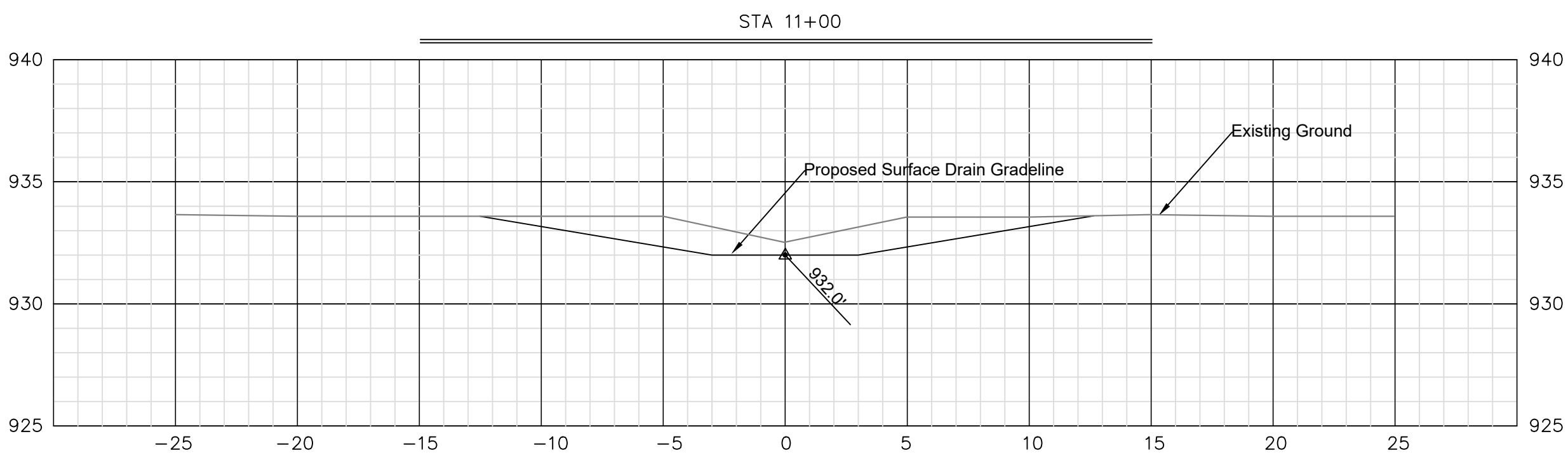
Surface Drain Profile

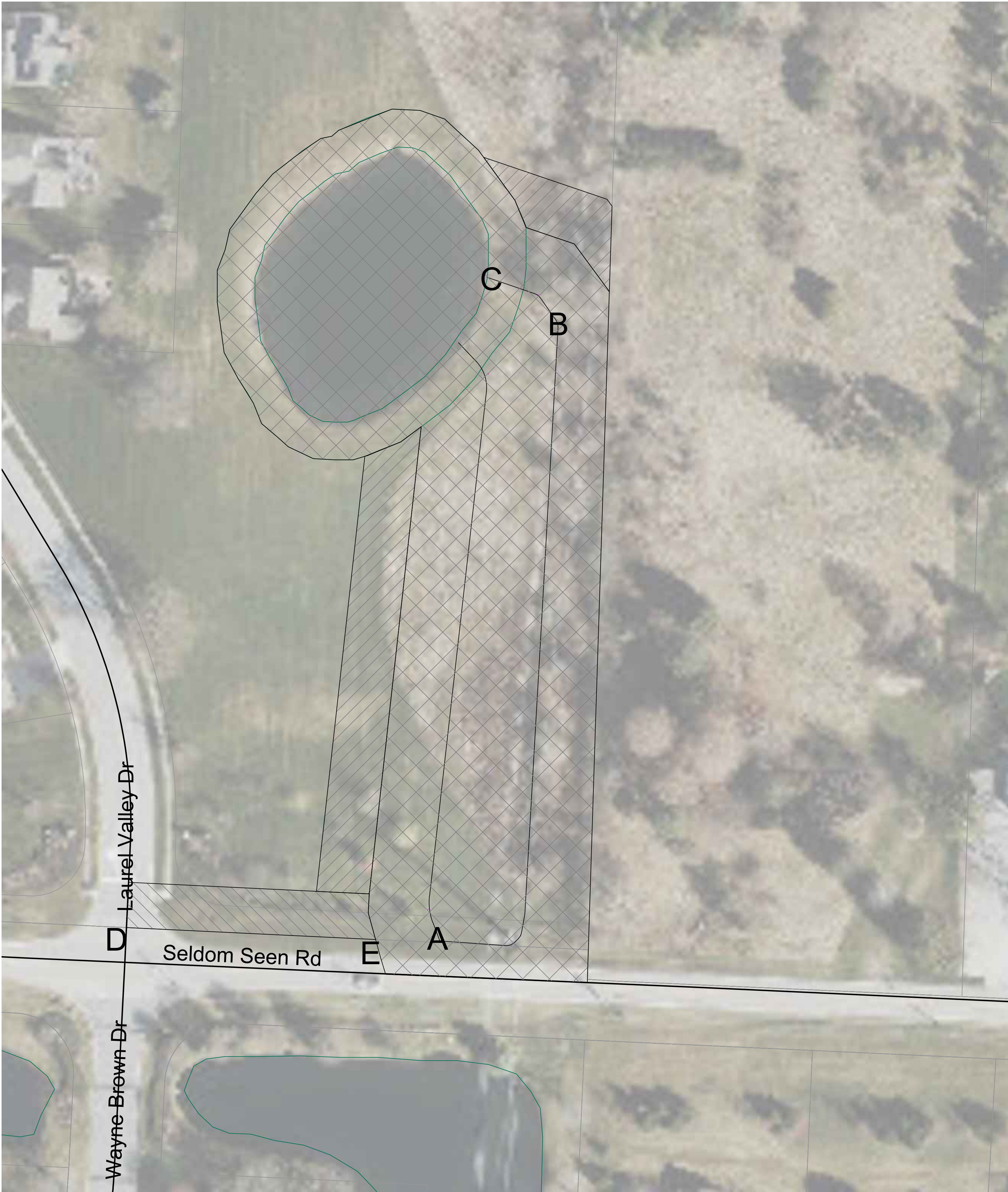


ODOT 2-2b Catch Basin Details (DCED-S133B)	
Top of Grate:	934.5'
Window Flowline:	934.0'
12" Inlet South Side:	931.5'
12" Outlet North Side:	930.1'
Bottom of Casting:	929.6'

Subsurface Drain Pipe Profile







PERMANENT EASEMENT DESCRIPTION

A to B
Right to the property line
40 feet left of the subsurface drain

B to C
25 feet right of top of bank
40 feet left of subsurface drain

C
25 feet from top of bank of retention pond

ACCESS EASEMENT DESCRIPTION

D to E
30 feet north of the Seldom Seen Road right-of-way

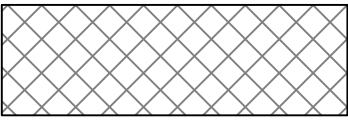
CONSTRUCTION EASEMENT DESCRIPTION

75 feet right of surface drain centerline limited by the property line
75 feet left of subsurface drain centerline

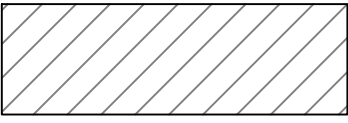
NOTE: Final permanent easement will be recorded upon final acceptance of the contract work. Actual location of the final easement may be modified based on the constructed location of project features.

KEY

Permanent Easement



Construction Easement



Access Easement

