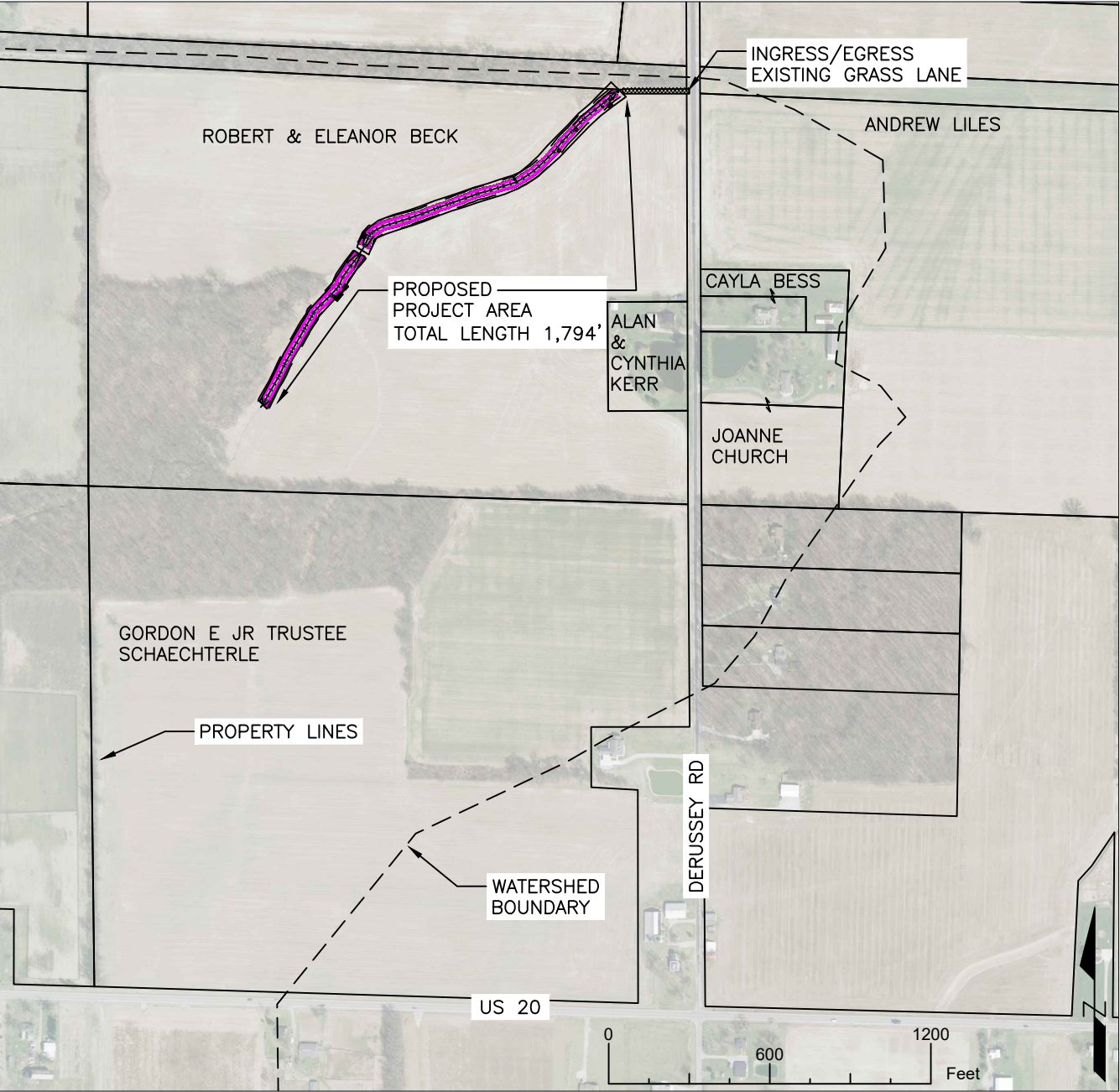


H2Ohio Beck Ditch Project
Townsend Township, Huron County, Ohio



NOTICE TO EXCAVATOR

EXCAVATOR MUST NOTIFY ALL UTILITIES AT LEAST 48 HOURS, AND NOT MORE THAN 10 DAYS PRIOR TO THE PLANNED COMMENCEMENT OF EXCAVATION.

UTILITIES WILL BE CONTACTED BY CALLING OHIO811 AT 800-362-2764 OR 811.

SELF-FORMING DITCH DESIGN INFORMATION:
DITCH LENGTH.....1,794 FT.
DISTURBANCE AREA.....2.1 AC.
SHAPE.....TRAPEZOIDAL
WATERSHED AREA.....406 AC.

CONTACT ERIE SWCD OFFICE AT 419-626-5211
AT LEAST 2 WORKING DAYS PRIOR TO CONSTRUCTION FOR PRE-CONSTRUCTION CONFERENCE

REVISIONS		
DATE	EMPLOYEE	DESCRIPTION
5/23/2025	E. FARAHAY	Updated plan to show existing rock protection (erosion control) and include change of location and restoration

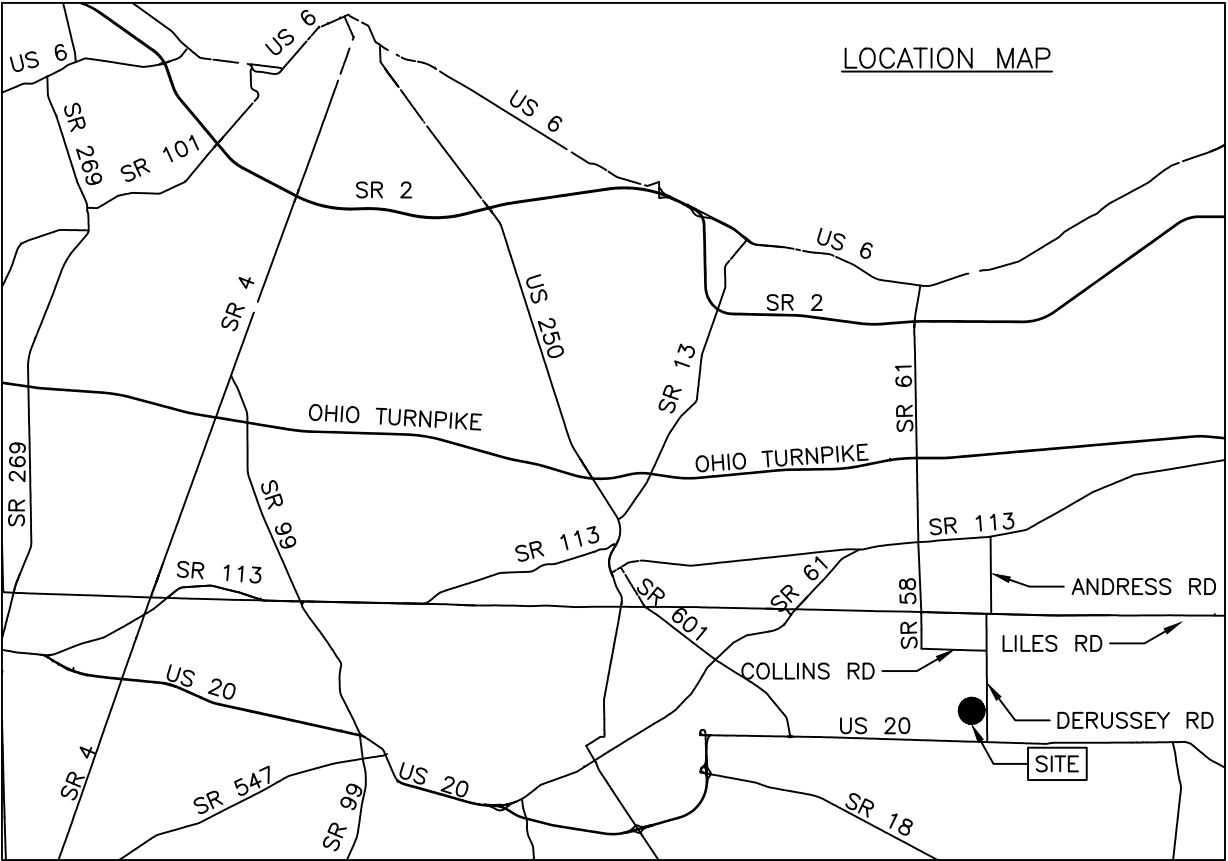
SITE SOIL:
Crd1B1 – CARDINGTON SILT LOAM, 2 TO 6% SLOPES
BgA – BENNINGTON SILT LOAM, 0 TO 2% SLOPES

BENCHMARK:
BM#1 – DIVOT ON TOP OF SW CULVERT CROSSING (BLUE PAINT)
ELEV. 881.83' (SEE SHEET 6)

INDEX TO SHEETS

1. TITLE SHEET
2. GENERAL NOTES & QUANTITIES
3. PLAN VIEW
4. NORTH DITCH SEGMENT
5. SOUTH DITCH SEGMENT
6. EXISTING CROSSING DETAIL
7. PROJECT TERMINI DETAILS
8. PROFILE
- 9-10. CROSS SECTIONS
11. SPOILS
12. WATERSHED

UNDERGROUND UTILITIES AT EXCAVATION SITE				
OHIO811 I.D.# A507102256-00A				
UTILITY INFORMATION 1/				OHIO811 MEMBER & LIMITED BASIS PARTICIPANT
NAME	ADDRESS	PHONE NO.	NO REPLY	
BUCKEYE PIPELINE	4002 OH-4, Bellevue, OH	330-221-3813		
ENERGEX POWER INC	353 Lincoln Hwy E, Coatesville, PA	724-622-0093	X	
HURON COUNTY ENGINEER	150 Jefferson St. Norwalk, OH	419-668-1997		
FRONTIER COM	401 Merritt 7, Norwalk, CT	800-921-8101		
OHIO EDISON	3647 Brecksville Rd, Richfield, OH	330-733-9393		
1/ IF NO UTILITIES ARE IDENTIFIED IN THE AREA, CHECK THIS BOX. ----> <input type="checkbox"/>				



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Erie Soil & Water
Conservation District
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Sandusky, OH 44870
Phone 419.626.5211
Fax 419.609.9707

Title
Sheet

Drawing No.

Name	Date
E. Farahay/R. Hoffman	08-2024
E. Farahay	10-2024
E. Farahay	04-2025
K. Libben	05-2025
Survey	
Designed	
Drawing	
Checked	
Approved	

ESTIMATED QUANTITIES		
QTY	UNIT	DESCRIPTION
2200	Cu. Yd.	Channel Excavation (Cut)
25	Cu. Yd.	Channel Excavation (Fill)
40	Cu. Yd.	ODOT Type C Rock
13	Cu. Yd.	No. 57 Stone
104	Lbs. (PLS)	Turf Type Tall Fescue
52	Lbs. (PLS)	Kentucky Bluegrass
65	Lbs. (PLS)	Perennial Ryegrass
390	Lbs.	19–19–19 Fertilizer or Equivalent Analysis Mix
21,528 (BANKS ONLY)	Sq. Ft.	Erosion Control Blanket – Overlap Not Included
57,408 (BANKS+BUFFER IF NEEDED)		
As Needed	Each	Tile Modification

SELF-FORMING DITCH DESIGN DATA			
Starting Station	0+15	3+50	7+18
Ending Station	3+50	6+82	18+45
Slope (%)	0.45	0.55	0.2
Shape	TRAPEZOIDAL		
Length (Ft.)	335	332	1,127
Seeding Width (Ft.) Per Side	~16		
Seeding Area (Sq. Ft.)	10,720	10,624	36,064
Seeding Area (Acres)	0.25	0.24	0.83

*SEEDING WIDTH INCLUDES THE DITCH BANKS AND AN ADDITIONAL 10’ BUFFER ON EITHER SIDE OF THE DITCH

SEEDING				
(1.3ac Total Seeding Area)				
All disturbed areas shall be seeded and mulched according to NRCS specifications at the following rates per acre before construction approval can be made.				
MATERIALS	TYPE	RATE (Pure Live Seed)	% of Mix	TOTAL Lbs.
Seed Mixture	KY 31 Tall Fescue	80 Lb. / Acre	47	104
	Kentucky Bluegrass	40 Lb. / Acre	23	52
	Perennial Ryegrass	50 Lb. / Acre	30	65
Endophyte Free Seed Mixture	Turf Type Tall Fescue	80 Lb. / Acre	47	104
	Kentucky Bluegrass	40 Lb. / Acre	23	52
	Perennial Ryegrass	50 Lb. / Acre	30	65
Fertilizer	19–19–19 or Equivalent	300 Lb. / Acre	390	
Lime	Ag Lime	As Req'd by Soil Test (or) 6000 Lb. / Acre	As Req'd	

PERMANENT SEEDING AND EROSION CONTROL:

ANY DISTURBED AREA, EXCEPT THE DITCH BOTTOM, MUST BE REGRADED, SEEDED, AND MULCHED.

CONTRACTOR SHALL SEED AND MULCH (STRAW MAT/EROSION CONTROL BLANKET PREFERRED) DITCH BANKS AND DISTURBED BUFFER AREAS AS SOON AS POSSIBLE OR WITHIN 2 DAYS OF REACHING FINAL GRADE TO REDUCE/PREVENT EROSION OF WORK AREA.

CONTRACTOR SHALL INCLUDE COSTS FOR EROSION AND SEDIMENT CONTROL MEASURES NEEDED DURING CONSTRUCTION PROCESS IN CONSTRUCTION ESTIMATE.

EROSION CONTROL MEASURES SHALL BE ESTABLISHED IN CONFORMANCE WITH THE LATEST VERSION OF THE OHIO RAINWATER AND LAND DEVELOPMENT MANUAL AVAILABLE AT EPA.OHIO.GOV

INSPECTION OF WORK AREA:

AT MINIMUM, THE WORK AREA MUST BE INSPECTED FOR ANY EROSION/SEDIMENT CONCERNS ONCE EVERY SEVEN (7) CALENDAR DAYS AND WITHIN 24 HOURS AFTER ANY STORM EVENT GREATER THAN 0.5 INCHES OF RAIN PER 24 HOUR PERIOD. CONTRACTOR SHALL PROVIDE PHOTO DOCUMENTATION TO THE DISTRICT UPON COMPLETION OF PROJECT. INSPECTION RECORDS MUST BE RETAINED FOR THREE YEARS AFTER COMPLETION OF THE PROJECT.

SPOIL DISPOSAL:

CONSTRUCTION SPOIL SHOULD BE SPREAD ONSITE AFTER COORDINATION WITH LANDOWNER, DISTRICT STAFF, AND RESEARCH TEAM.

THE SEEDING TABLE TO THE LEFT REFLECTS DOUBLE THE STANDARD TOTAL POUNDS OF SEED TO PRODUCE A BETTER STAND. THE APPLICABLE SEEDING PERIOD FOR THESE SPECIES IS MARCH 15 TO MAY 31 AND AUGUST 1 TO SEPTEMBER 15.

THE DORMANT SEEDING PERIOD IS DECEMBER 1 TO MARCH 14.

** SEEDING MAY BE CONSIDERED FROM JUNE 1 THRU JULY 31 IF THE AREA IS MULCHED WITH 95–100% COVER (APPROX. 3 TONS/ACRE OF STRAW).

** SEEDING MAY ALSO BE CONSIDERED BETWEEN SEPTEMBER 16 AND OCTOBER 15; USE SEEDING AND MULCHING RATES LISTED IN ABOVE TABLE.

** BOTH OF THESE PERIODS ARE CONSIDERED "OUTSIDE THE SEEDING WINDOW" AND WILL NEED TO BE EVALUATED FOR ADEQUATE ESTABLISHMENT PRIOR TO FINAL APPROVAL.

SEEDING BETWEEN OCTOBER 15 AND DECEMBER 1 IS NOT RECOMMENDED.

PREPARE A FIRM SEEDBED WITH A DISK OR SIMILAR EQUIPMENT. WORK SEEDBED TO A DEPTH OF THREE (3) INCHES ON ALL AREAS ACCESSIBLE TO EQUIPMENT. OTHER AREAS NOT ACCESSIBLE TO EQUIPMENT SHALL BE WORKED BY HAND TOOLS TO A DEPTH OF ONE (1) INCH. LIME AND FERTILIZER SHALL BE INCORPORATED INTO THE SEED BED PRIOR TO SEEDING.

CALIBRATE DRILL AND SEED 1/4 TO 1/2 INCH DEEP FOR COOL SEASON GRASSES AND LEGUMES. WHEN BROADCAST SEEDING METHOD IS USED, CULTIPACK OR LIGHTLY DRAG/HARROW TO ACHIEVE SEED COVERAGE AND SEED TO SOIL CONTACT.

GENERAL NOTES:

ALL WORK AND MATERIALS, UNLESS OTHERWISE NOTED, SHALL BE IN ACCORDANCE WITH THE CURRENT STATE OF OHIO DEPARTMENT OF TRANSPORTATION CONSTRUCTION AND MATERIAL SPECIFICATIONS INCLUDING ALL SUPPLEMENTS THERETO.

ALL TRAFFIC CONTROL DEVICES, SIGNS AND MARKINGS SHALL CONFORM TO THE CURRENT OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES.

ALL TOPSOIL REMOVED DURING EXCAVATION SHALL BE REPLACED ALONG WITH SEEDING AND MULCH ACCORDING TO NRCS CPS 342 CRITICAL AREA PLANTING, AND NRCS CPS 484 MULCHING.

MODIFICATIONS:
ANY MODIFICATIONS TO THE WORK AS SHOWN ON THE DRAWINGS MUST HAVE PRIOR WRITTEN APPROVAL OF THE ENGINEER, OWNER AND OWNER'S ENGINEER, AS APPLICABLE.

UTILITIES ADJUSTMENT:
ANY AND ALL WORK REQUIRED FOR THE ADJUSTMENT OF PUBLIC AND PRIVATE UTILITIES SHALL BE DONE AT THE EXPENSE OF THE CONTRACTOR, INCLUDING ERIE COUNTY UTILITIES WHICH SHALL BE ADJUSTED BY CONTRACTOR WITH THE PROJECT.

CALCULATION OF QUANTITIES:
PAYMENT FOR ALL WORK UNDER THIS CONTRACT SHALL BE ON A LUMP SUM PRICE BASIS FOR WORK SHOWN ON THE PLANS AND DESCRIBED IN THE PLANS AND SPECIFICATIONS.

CLEARING AND GRUBBING:
ANY CLEARING AND GRUBBING SHALL BE INCIDENTAL TO EXCAVATION AND EMBANKMENT FOR THE PROJECT AND INCLUDED IN THE COST THEREOF.

REMOVALS:
ANY REMOVALS OF EXISTING PIPE, TILE, OR STRUCTURES SHALL BE INCLUDED IN THE VARIOUS ITEMS AND INCLUDED IN THE COST THEREOF.

UNDERGROUND UTILITIES:
THE LOCATION OF THE UTILITIES SHOWN ON THE PLANS WAS ESTABLISHED FROM RECORDS AND/OR FIELD SURVEY OF ABOVE GROUND FACILITIES. CONTRACTOR SHALL INVESTIGATE AND LOCATE ALL EXISTING UTILITIES WITHIN THE WORK AREA, WHETHER OR NOT SAID UTILITIES ARE SHOWN OR INDICATED ON THESE PLANS, AND TAKE ALL NECESSARY PRECAUTIONS TO PROTECT SAID UTILITIES. CONTRACTOR ACKNOWLEDGES AND FURTHER AGREES BY CONTRACTING FOR THE WORK SHOWN ON THESE PLANS TO INDEMNIFY THE OWNER AND ENGINEER IN HIS CAPACITY TO PROVIDE DESIGN, SURVEYING AND CONSTRUCTION LAYOUT, AGAINST ANY AND ALL CLAIMS ARISING FROM DAMAGE TO EXISTING UTILITIES, ABOVE OR BELOW GROUND, CAUSED BY THE CONTRACTOR OR SUBCONTRACTORS. THE OUPS TICKET IS FOR DESIGN, NOT MARKING.

UTILITIES NOTIFICATION:

AT LEAST TWO WORKING DAYS PRIOR TO COMMENCING CONSTRUCTION OPERATIONS, THE CONTRACTOR SHALL NOTIFY THE ERIE SWCD, THE REGISTERED UTILITY PROTECTION SERVICE, AND THE OWNERS OF EACH UNDERGROUND AND OVERHEAD UTILITY FACILITY SHOWN ON THE PLAN OR EXISTING PROPERTY.

THE OWNERS OF THE UNDERGROUND UTILITY FACILITIES SHALL, WITHIN 48 HOURS, EXCLUDING SATURDAYS, SUNDAYS AND LEGAL HOLIDAYS, AFTER NOTICE IS RECEIVED, STAKE, MARK, OR OTHERWISE DESIGNATE THE LOCATION OF THE UNDERGROUND UTILITY FACILITIES IN THE CONSTRUCTION AREA IN SUCH A MANNER AS TO INDICATE THEIR COURSE TOGETHER WITH THE APPROXIMATE DEPTH AT WHICH THEY WERE INSTALLED. THE MARKING OR LOCATION SHALL BE COORDINATED TO STAY APPROXIMATELY TWO DAYS AHEAD OF THE PLANNED CONSTRUCTION.

Date

08-2024

Name

E. Farahy/B. Hohman

Survey

Designed

Drawing

Checked

Approved

H2Ohio

Beck Ditch Project

Townsend Township, Huron County, Ohio

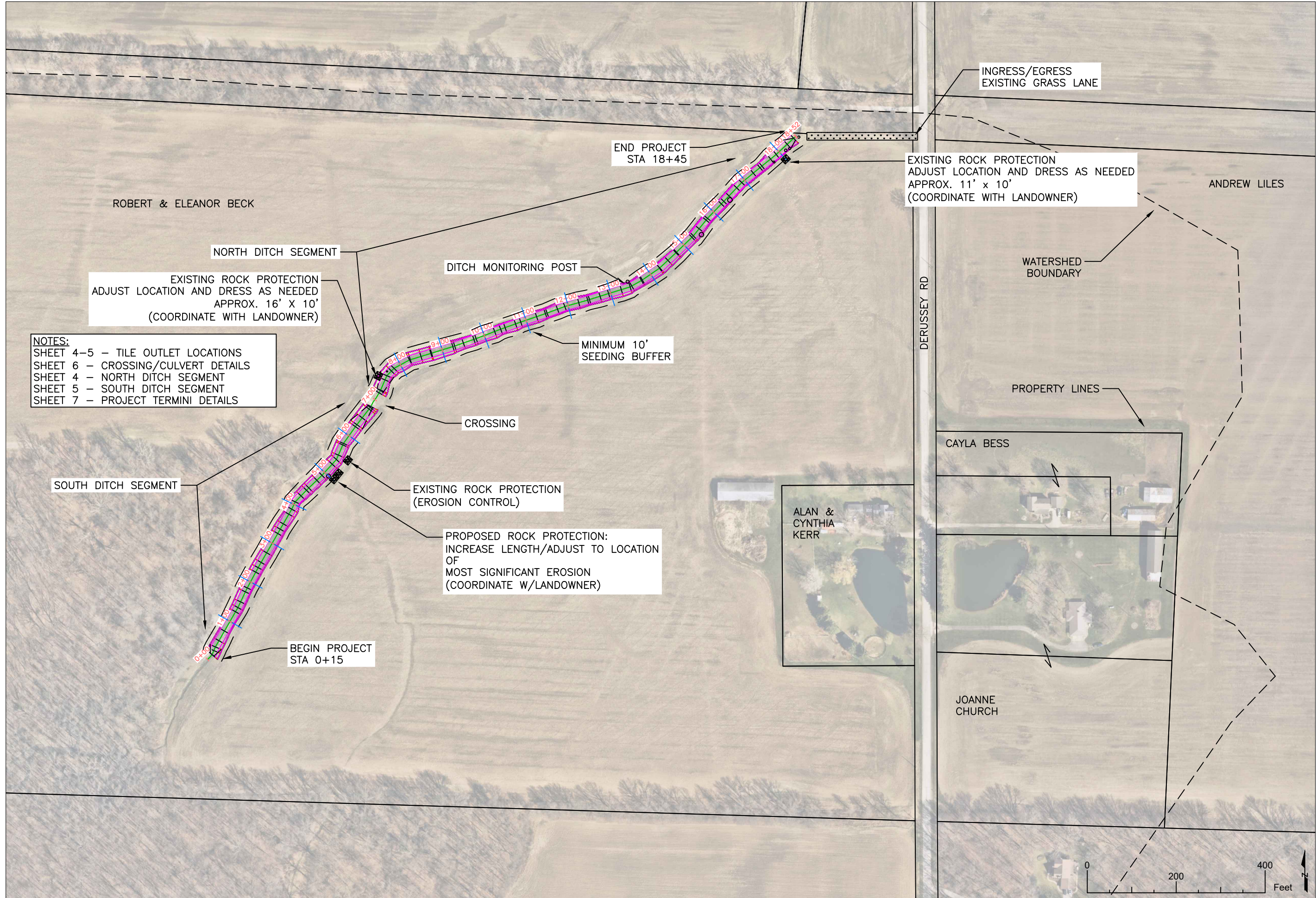
Erie Soil & Water Conservation District

2900 Columbus Ave., Rm 131
Sandusky, OH 44870
Phone 419.626.5211
Fax 419.609.9707

Notes & Quan.

Drawing No.

Sheet 2 of 12



Survey	Designed	Drawing	Checked	Approved
<i>E. Farahy/B. Holman</i>	<i>E. Farahy</i>	<i>E. Farahy</i>	<i>K. Libben</i>	
Date	08-2024	10-2024	04-2025	05-2025

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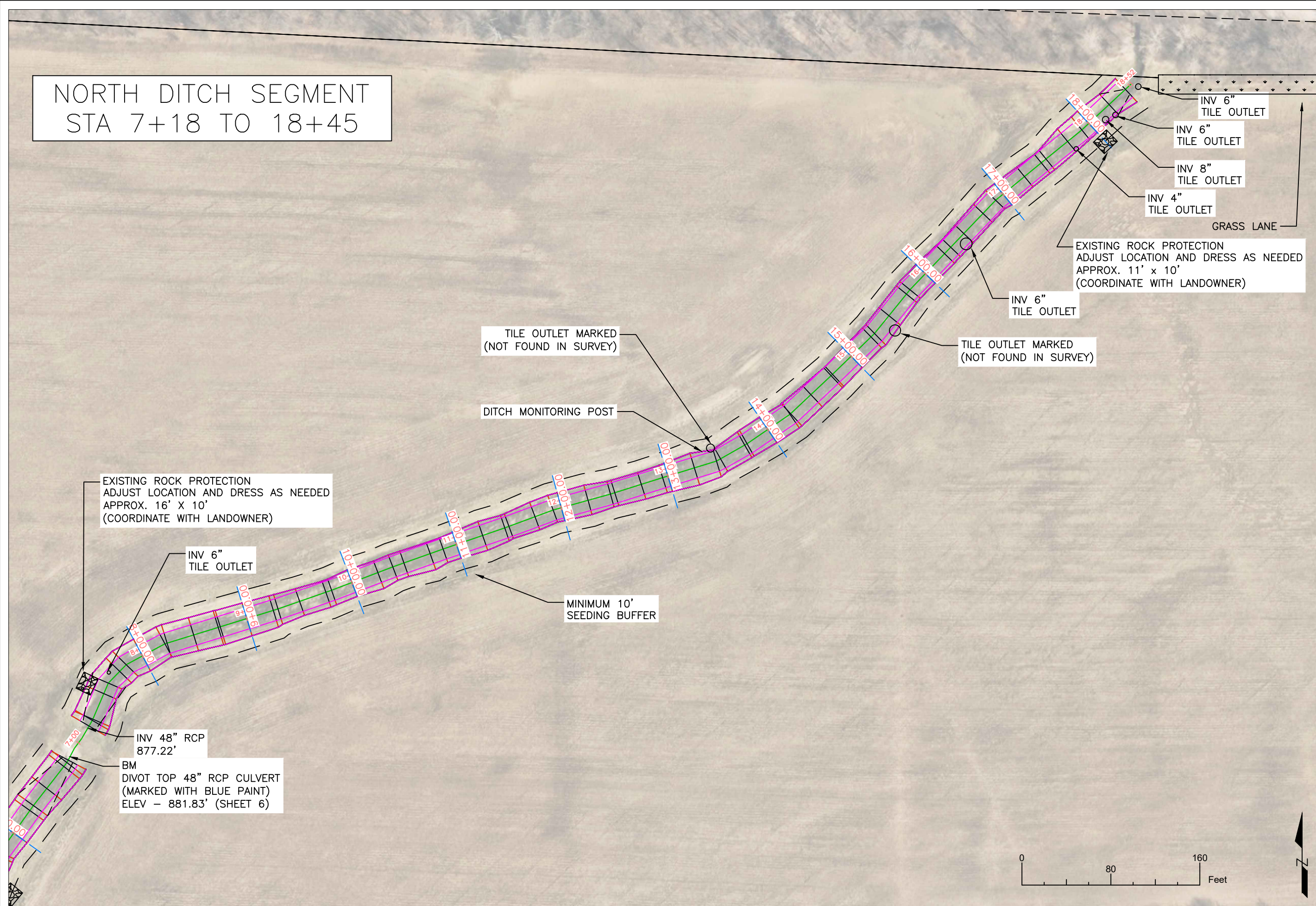


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**PLAN
VIEW**


Drawing No.

NORTH DITCH SEGMENT
STA 7+18 TO 18+45



Name	Date
E. Farahy/B. Holman	08-2024
E. Farahy	10-2024
E. Farahy	04-2025
K. Libben	05-2025
Survey	Designed
Designed	Drawing
Drawing	Checked
Checked	Approved

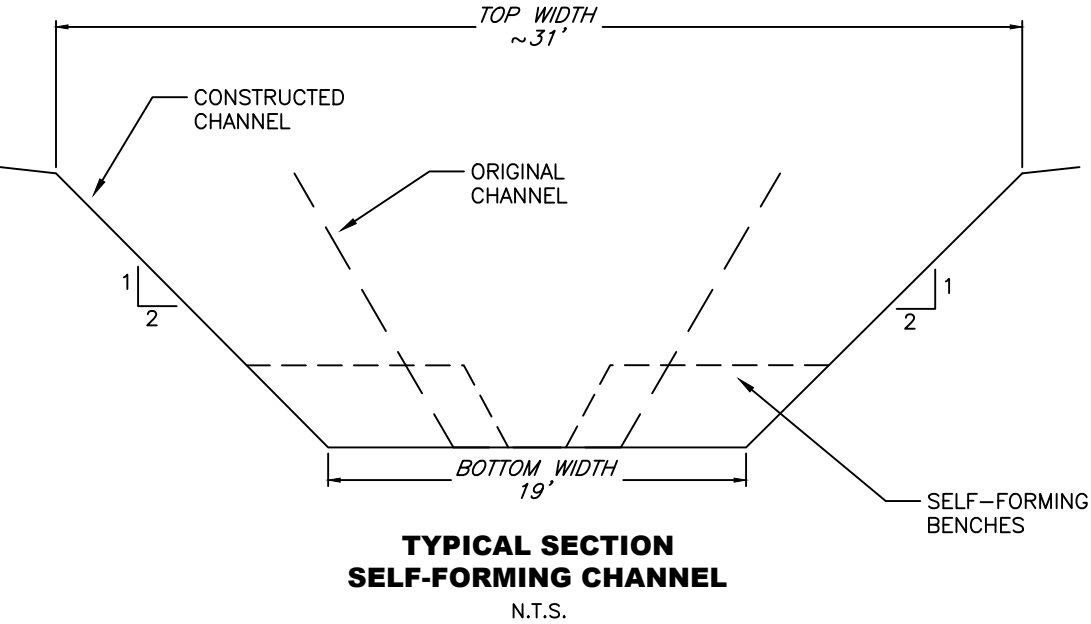
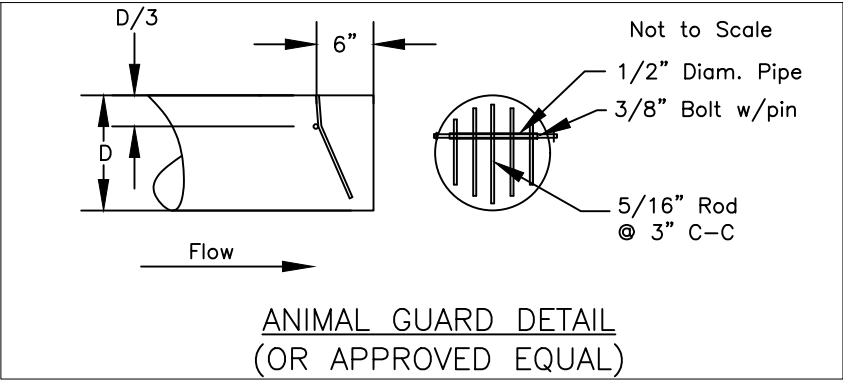
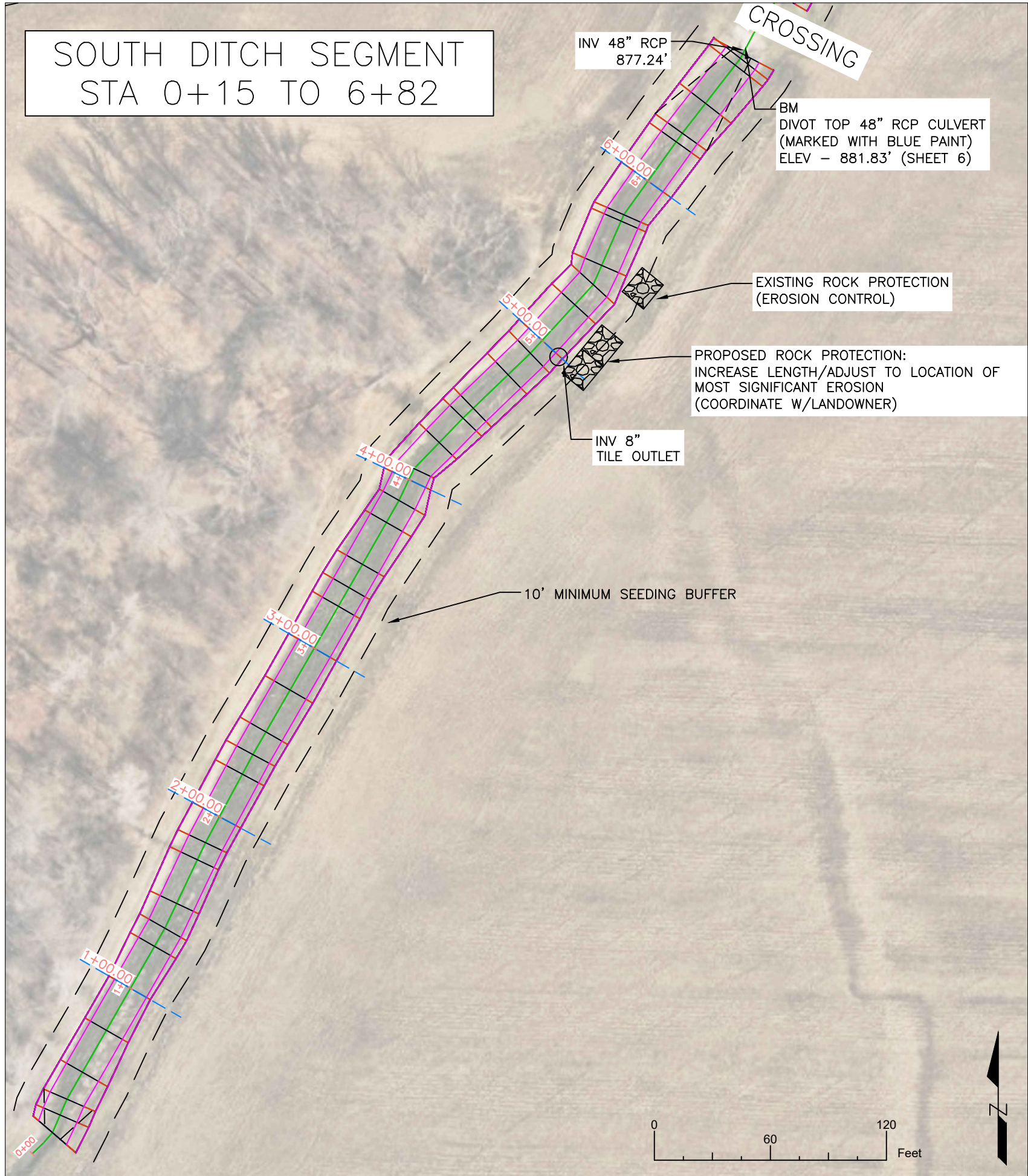
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**NORTH
DITCH
SEGMENT**

Drawing No.

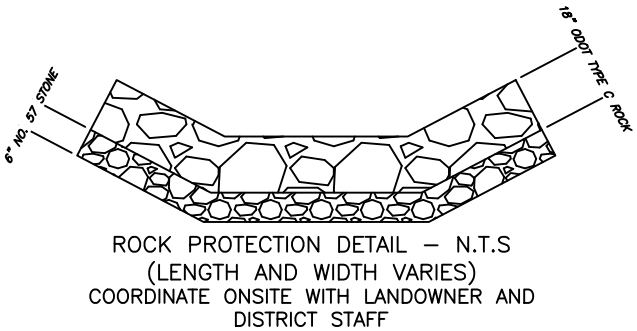
Sheet 4 of 12



DESIGN METHOD:
AGRICULTURAL DITCHES (IN, MI, OH)
REGIONAL CURVE

DRAINAGE AREA: 0.63 SQ MI
FP RATIO 3:1 = 13.6
FP RATIO 4:1 = 19.3
FP RATIO 5:1 = 25.0

USE: 19' BOTTOM WIDTH



Name	Date
E. Farahy/B. Holman	08-2024
E. Farahy	10-2024
E. Farahy	04-2025
K. Libben	05-2025
Survey	Designed
Drawing	Checked
Approved	

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Townsend Township, Huron County, Ohio

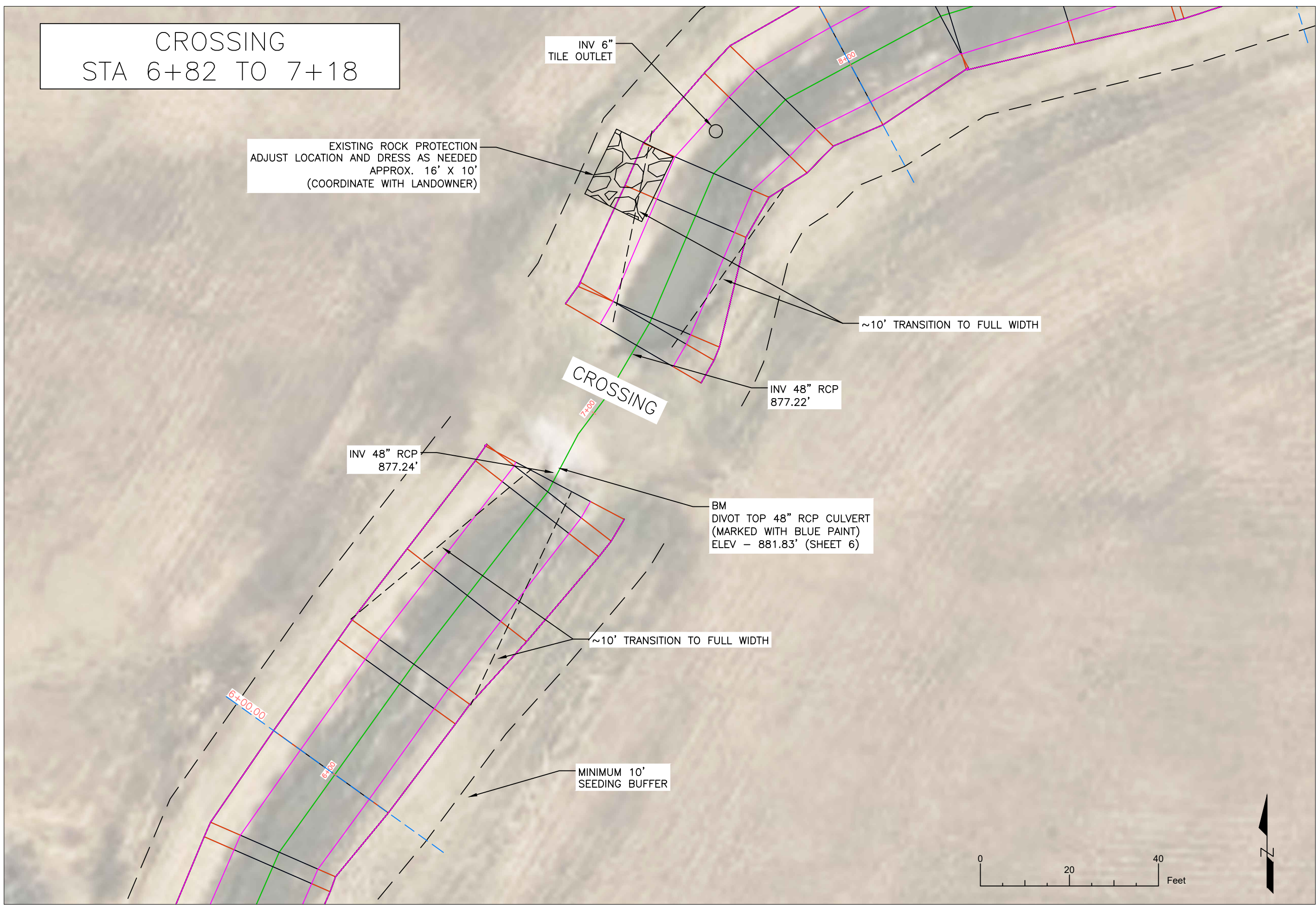


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**SOUTH
DITCH
SEGMENT**

Drawing No.


Sheet 5 of 12



Survey	Designed	Drawing	Checked	Approved
E. Farahy/B. Holman	E. Farahy	E. Farahy	K. Libben	

Name	Date
E. Farahy/B. Holman	08-2024
E. Farahy	10-2024
E. Farahy	04-2025
K. Libben	05-2025

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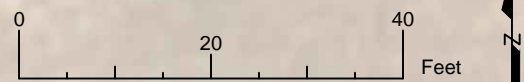
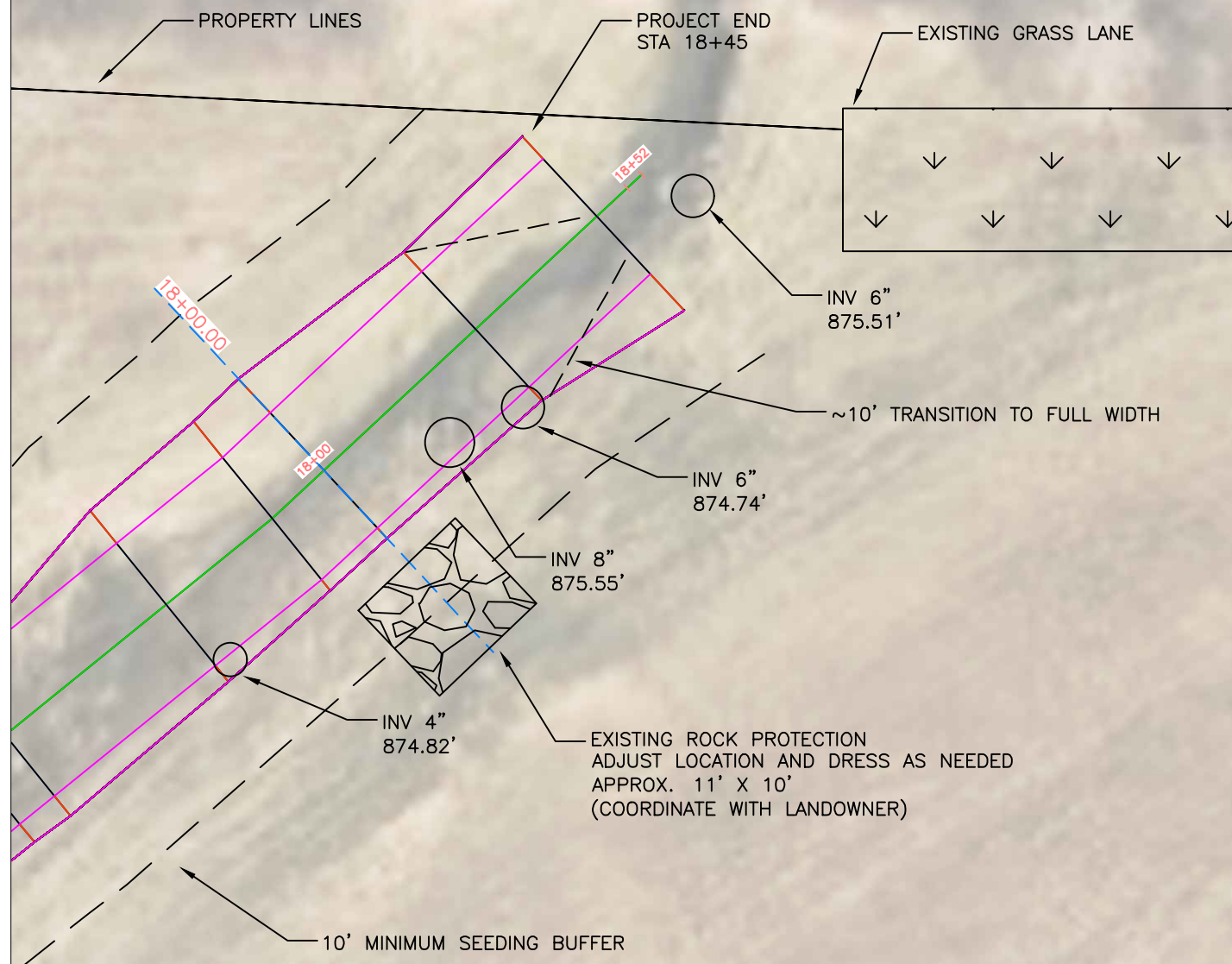


Erie Conservation District

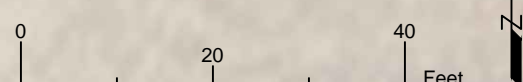
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Conservation District
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**CULVERT
CROSSING**

NORTH PROJECT TERMINUS



SOUTH PROJECT TERMINUS



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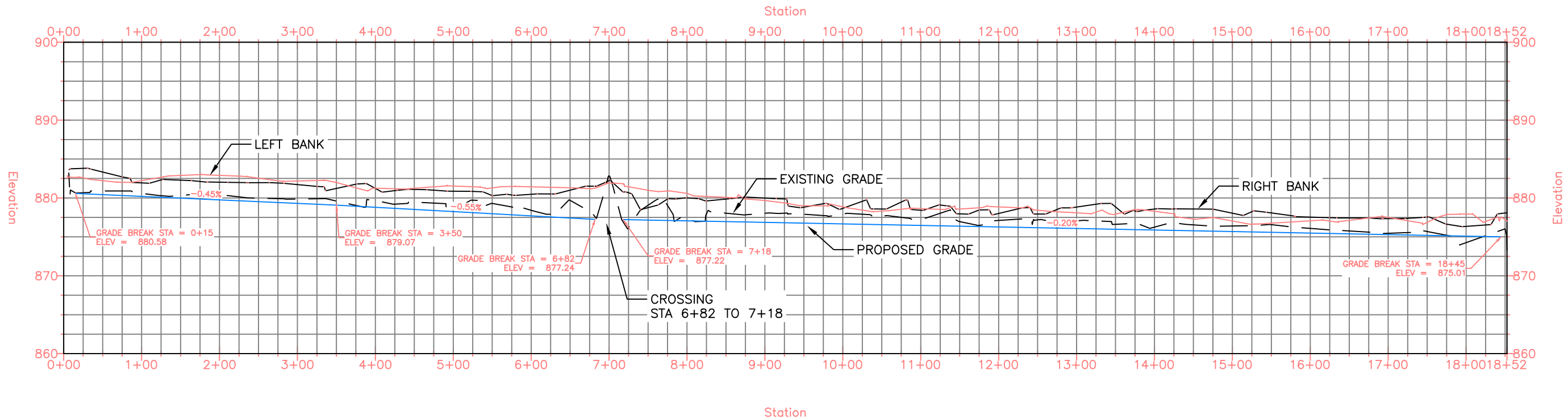
PROJECT
TERMINI

Drawing No.

Sheet 7 of 12

Survey	Designed	Drawing	Checked	Approved
E. Farahy/B. Holman	E. Farahy	E. Farahy	K. Libben	
08-2024	10-2024	04-2025	05-2025	

DITCH PROFILE



NOTE:
PROJECT WAS ORIGINALLY CONSTRUCTED IN 2013 AS A TWO-STAGE DITCH.
BOTTOM WIDTH WAS 17' AND 19' WITH 3:1 SIDE SLOPES.
THIS PROJECT WILL CONVERT THE ORIGINAL TWO-STAGE DESIGN TO A SELF-FORMING DESIGN.

Survey	Designed	Drawing	Checked	Approved
E. Farahy/B. Holman	E. Farahy	E. Farahy	K. Libben	
08-2024	10-2024	04-2025	05-2025	

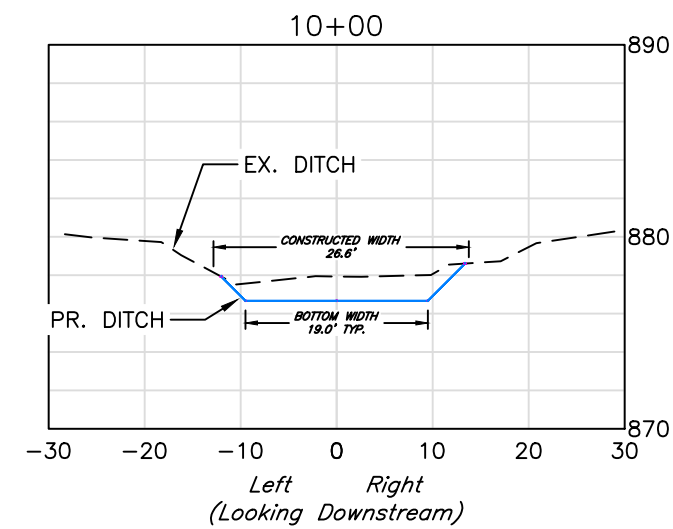
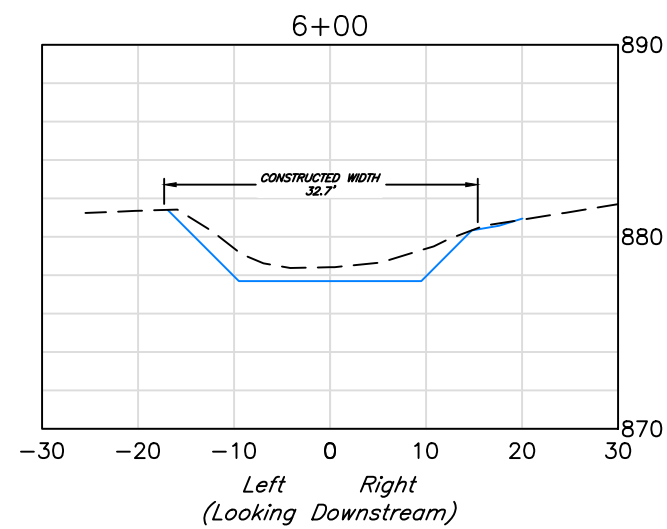
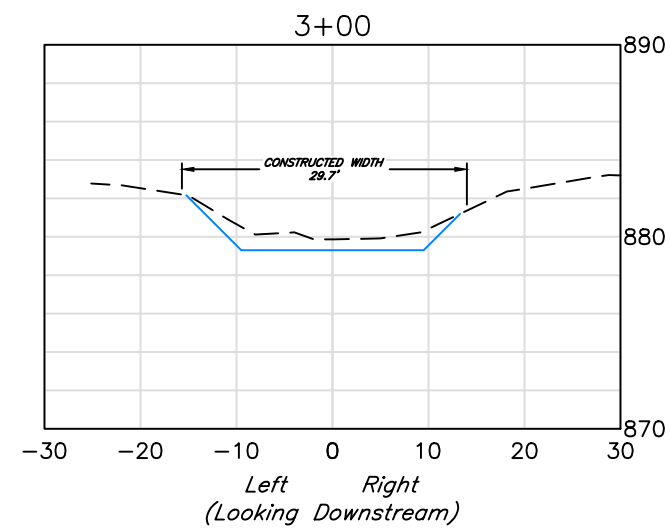
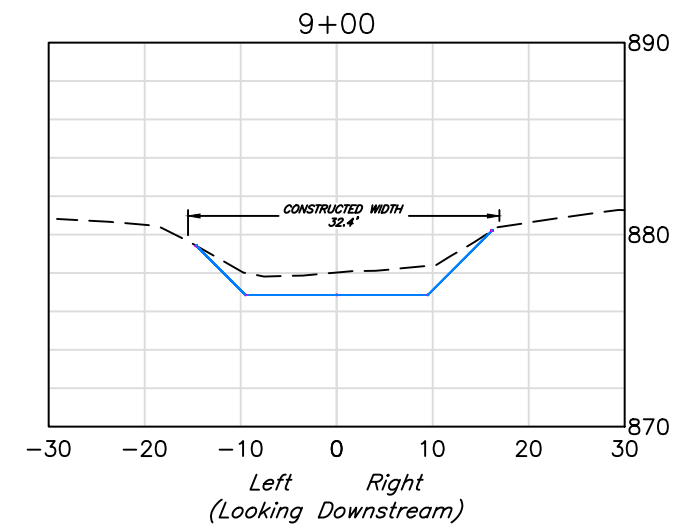
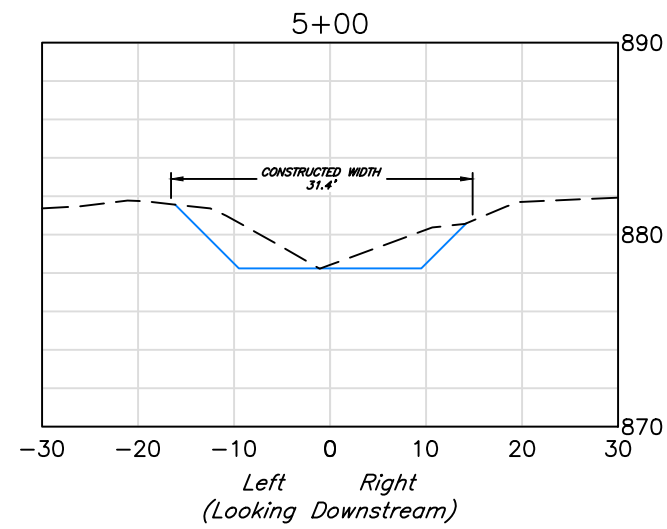
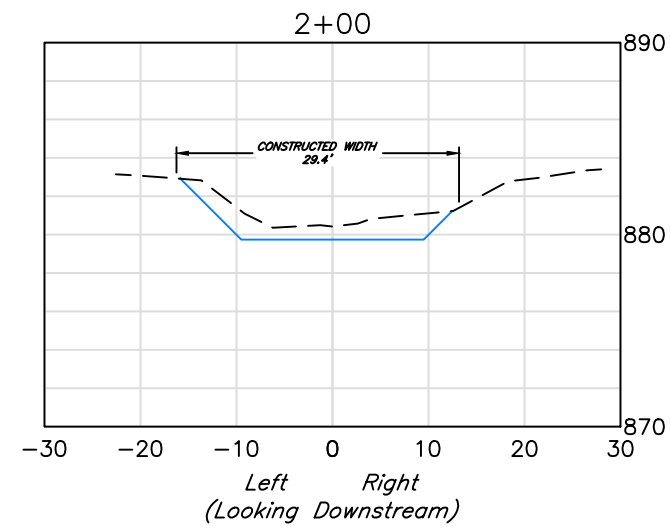
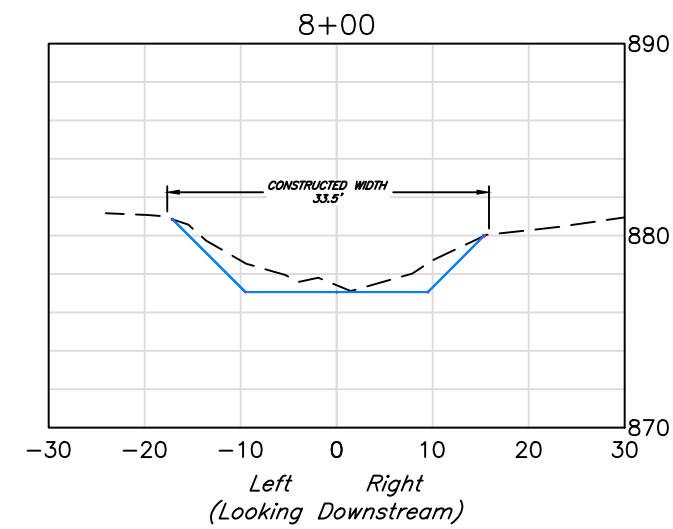
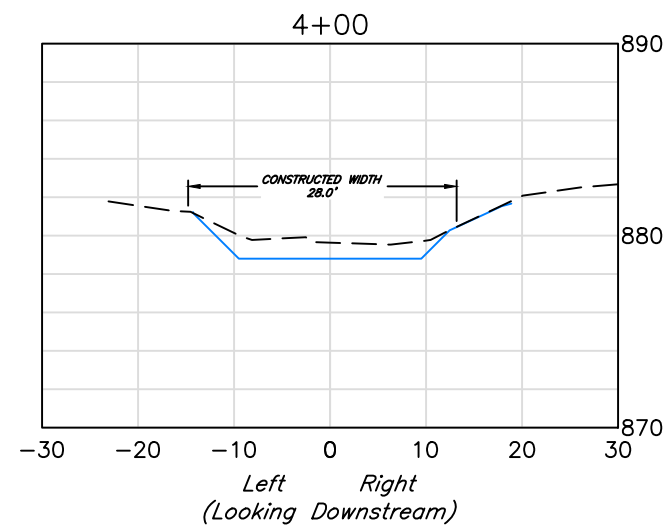
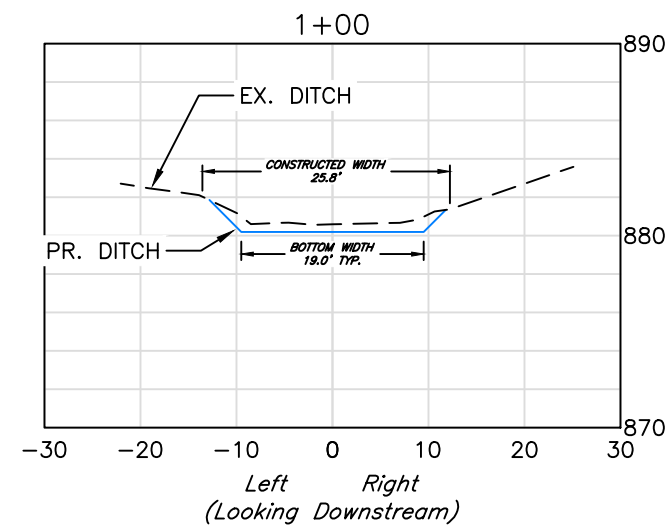
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Townsend Township, Huron County, Ohio



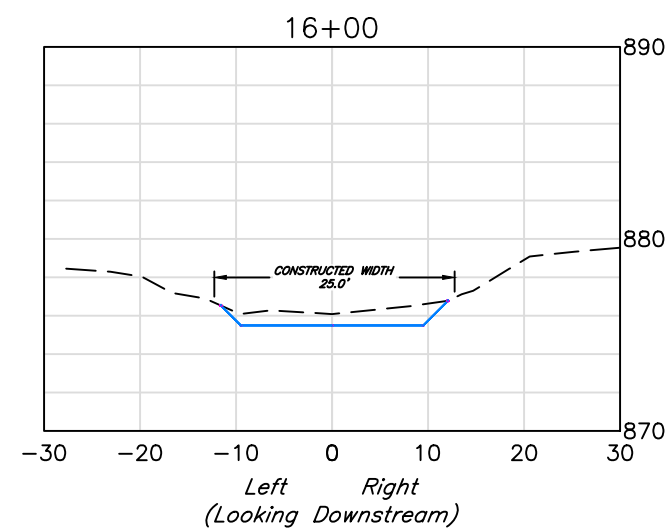
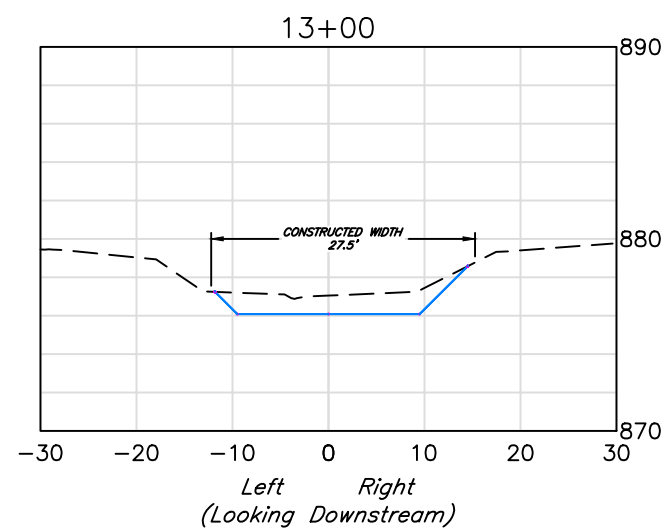
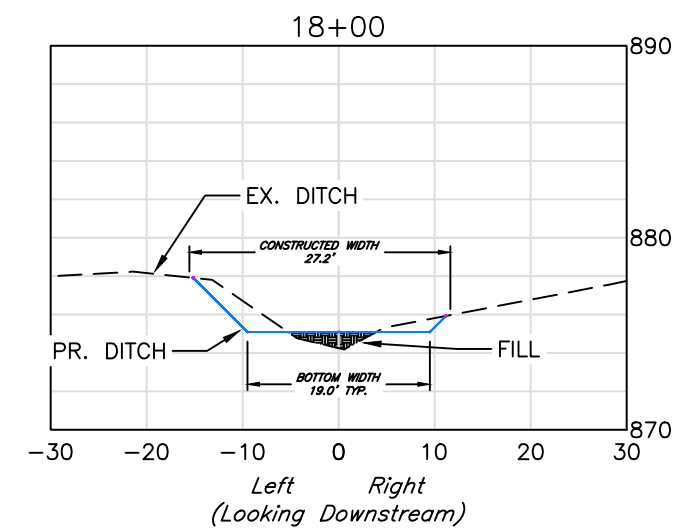
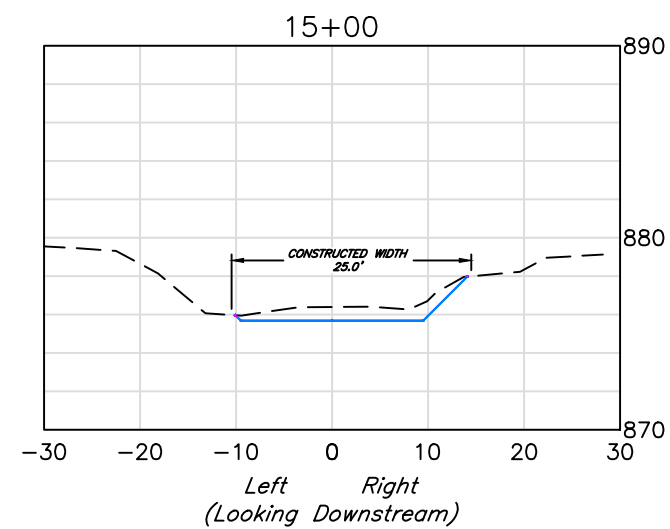
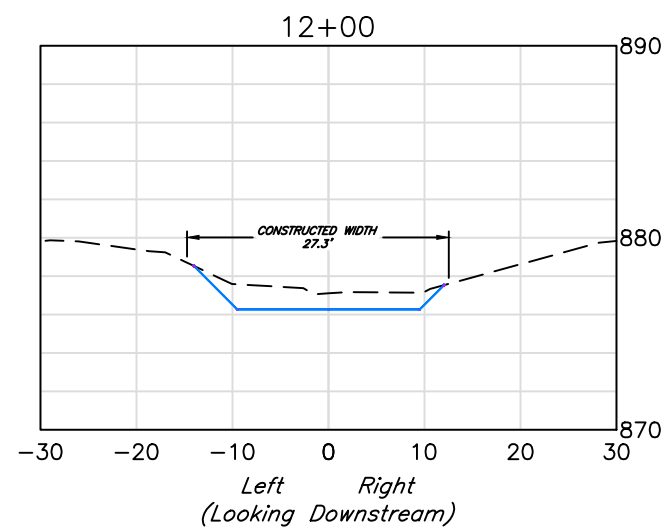
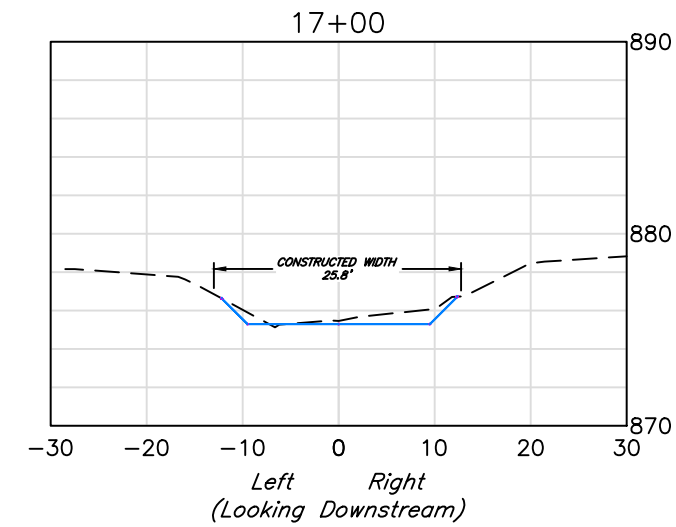
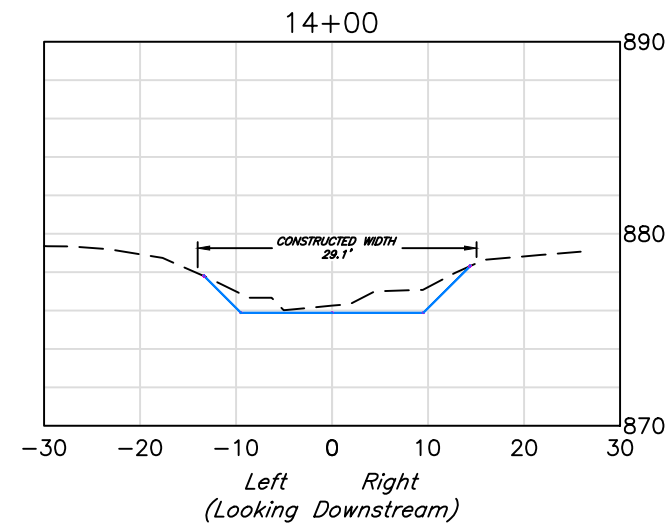
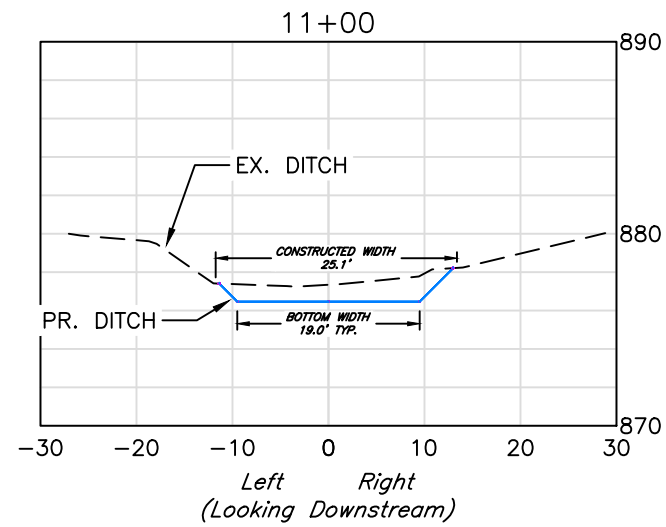
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PROFILE
VIEW

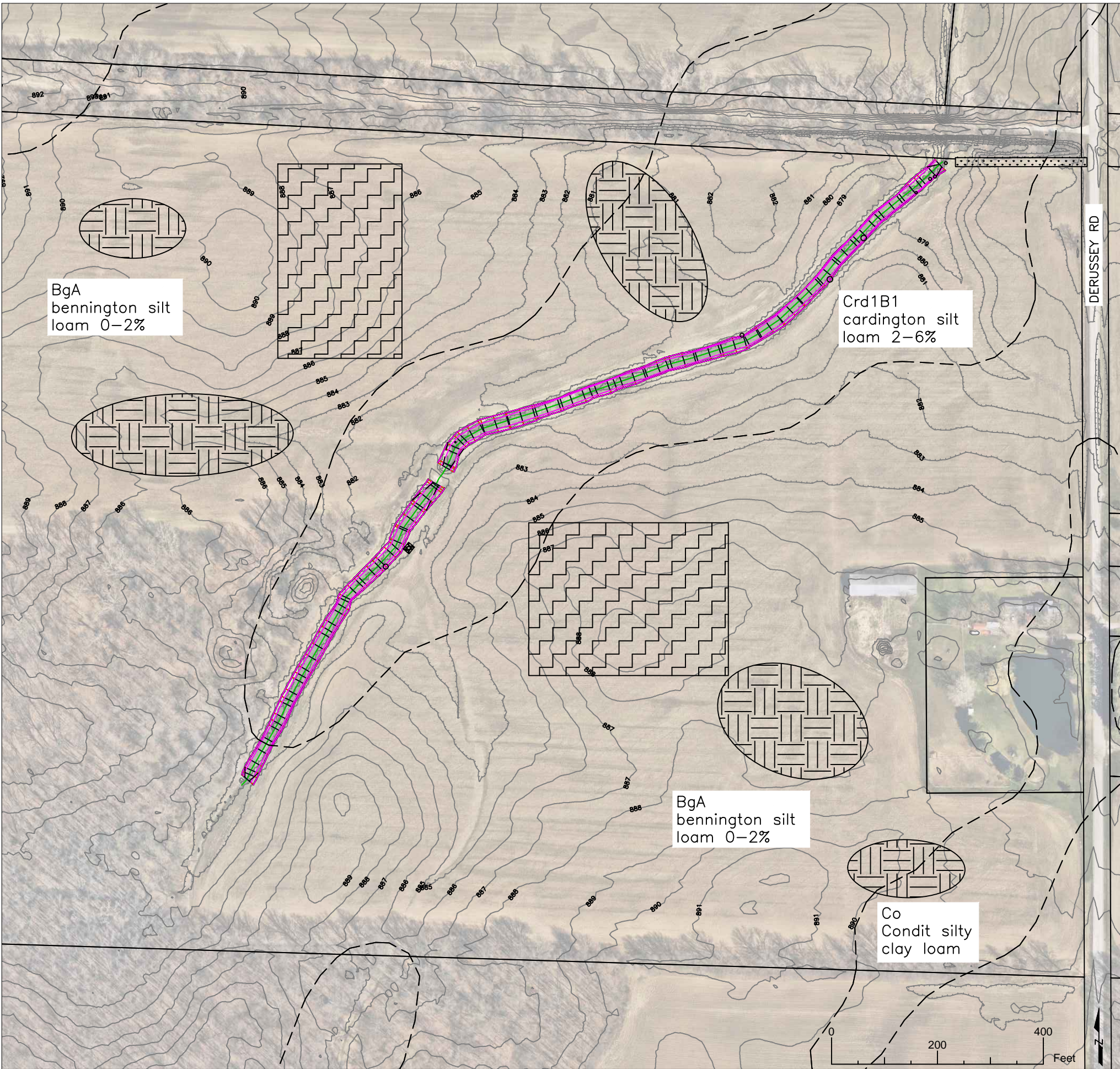
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Survey	Name	Date
Designed	<i>E. Farahy</i>	08-2024
Drawing	<i>E. Farahy</i>	10-2024
Checked	<i>K. Libben</i>	04-2025
Approved		05-2025



Survey	Name	Date
Survey	<i>E. Farahay/R. Hahn</i>	<i>08-2024</i>
Designed	<i>E. Farahay</i>	<i>10-2024</i>
Drawing	<i>E. Farahay</i>	<i>04-2025</i>
Checked	<i>K. Libben</i>	<i>05-2025</i>
Approved		



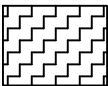
PROJECT SPOILS

THIS CONSTRUCTION PROJECT IS IN PARTNERSHIP WITH A RESEARCH PROJECT TO SPREAD PROJECT SPOILS ON THE ADJACENT FARM FIELDS AND MEASURE CROP YIELD RESPONSE.

SPOIL USAGE METHODS:

1. APPLIED AT A DEPTH OF 2" TO THE ADJACENT FARM FIELD FOR RESEARCH STUDY PLOTS
2. SPREAD ON ADJACENT FIELD TO FILL LOW SPOTS (COORDINATE WITH LANDOWNER)

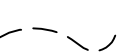
CONSERVATION DISTRICT STAFF AND RESEARCHERS WILL COORDINATE WITH THE CONTRACTOR AND LANDOWNER BEFORE AND DURING CONSTRUCTION TO DETERMINE THE EXACT LOCATION OF SPOILS ONSITE.



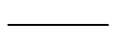
PROPOSED GENERAL LOCATION OF RESEARCH PLOTS



PROPOSED GENERAL LOCATION OF ADDITIONAL SPOIL AREAS




SOIL TYPE BOUNDARIES



PROPERTY LINES

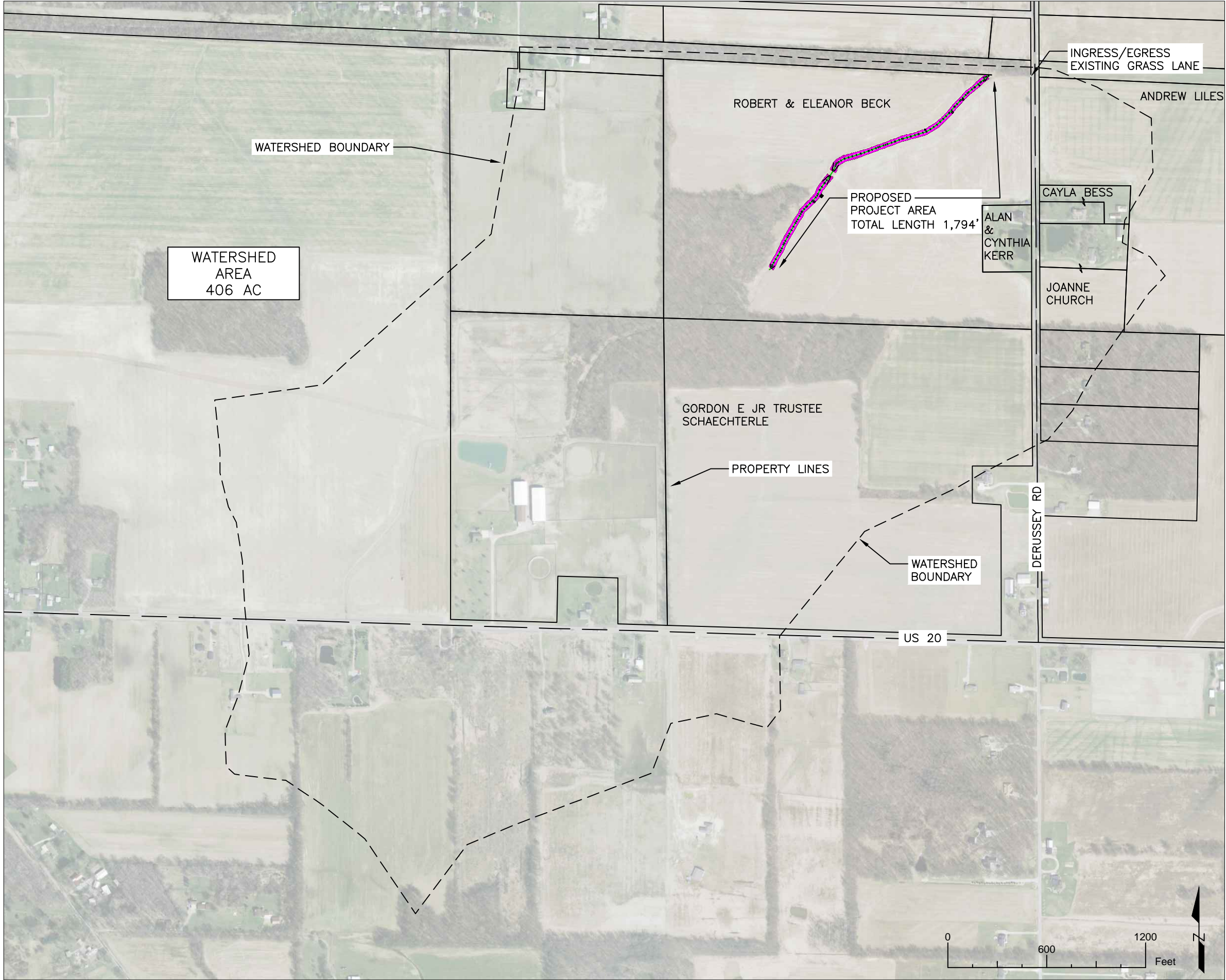
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E. Farahy/B. Holman		08-2024	
E. Farahy		10-2024	
E. Farahy		04-2025	
K. Libben		06-2025	
Survey	Designed	Drawing	Checked
			Approved

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Beck Ditch Project
Townsend Township, Huron County, Ohio


Erie Soil & Water
Conservation District
2900 Columbus Ave, Rm 131
Sandusky, OH 44870
Phone 419.626.5211
Fax 419.609.9707

Drawing No.

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Watershed Map

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H2Ohio Beck Ditch Project Townsend Township, Huron County, Ohio

Survey	Designed	Drawing	Checked	Approved
<i>E. Farahay/E. Hahman</i>	<i>E. Farahay</i>	<i>E. Farahay</i>	<i>K. Libben</i>	
08-2024	10-2024	04-2025	05-2025	

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