Total Sheets: 34

PROJECT NUMBER: STP-S-C007(179)--5E-07

November 17, 2026

HMA Pavement - Full Depth Reclamation

BLACK HAWK COUNTY

TRAFFIC CONTROL:
Washburn Road shall be closed to thru traffic during construction. Local and Emergency access shall be provided at all times.
Refer to traffic control plan and proposed detour route on Sheet J.01.

105_04
4/16/24

STANDARD ROAD PLANS

The following Standards apply to construction work on this project.

As Outline in Standards Tabulation 105_04 on Sheet C.09.

101-4
04-30-02

DESIGN DATA RURAL

2021 AADT	1,600	V.P.D.
2041 AADT	1,699	V.P.D.
2051 DHV		V.P.D.
TRUCKS	20	%
Total		
Design ESALs	663,298	

IOWA DOT
HIGHWAY DIVISION

PLANS OF PROPOSED IMPROVEMENT ON THE

FARM TO MARKET SYSTEM

STP-S-C007(179)--5E-07

BLACK HAWK COUNTY

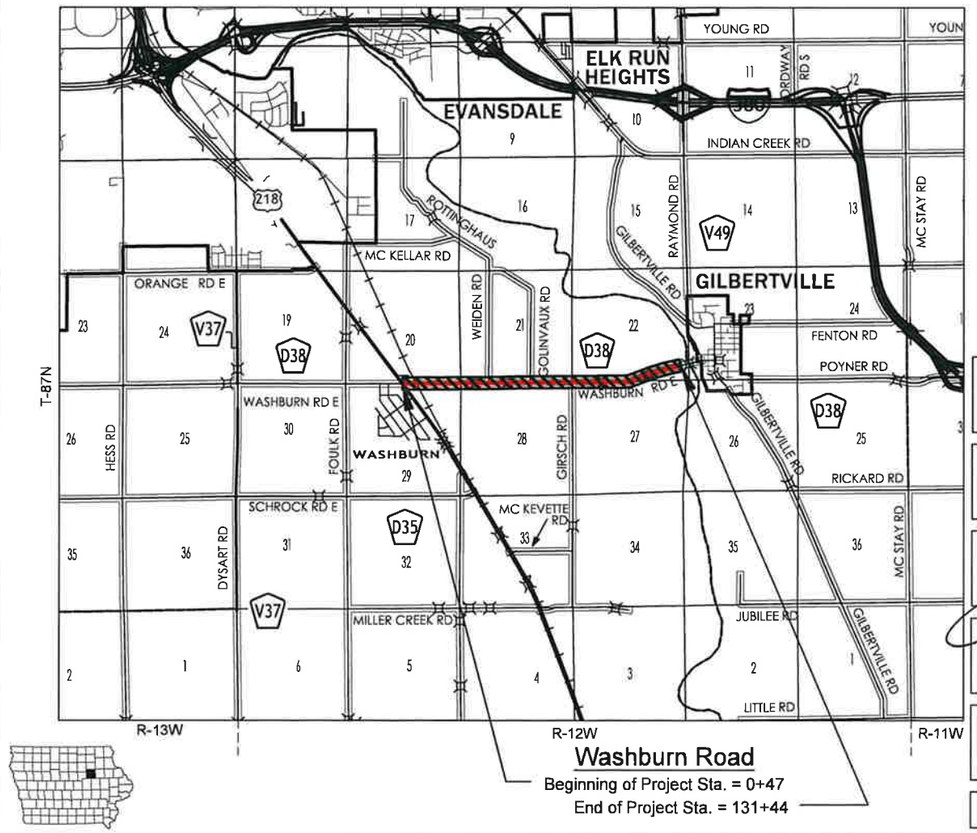
Washburn Road

HMA Pavement - Full Depth Reclamation

On Washburn Road (D38), from U.S. Highway 218, east to the City of Gilbertville

Scales: As Noted

Refer to the Proposal Form for list of applicable specifications.



Location Map
"Not to Scale"

Washburn Road
Beginning of Project Sta. = 0+47
End of Project Sta. = 131+44

IOWA ONE CALL
1-800-292-8989
www.iowaonecall.com
811

Approved by: Black Hawk County Board of Supervisors

105-3
10-18-05

INDEX OF SHEETS

Number	Description
A.01	Title Sheet
B.01 - B.03	Typical Cross Section Details
B.04	Reclamation Header and Shoulder Details
B.05	Entrance Fillet Details
B.06	Non-Paved Side Road Details - Mill and Fill Area
B.07	Non-Paved Side Road Details - Full Depth Reclam Area
B.08	Paved Side Road Details - Full Depth Reclam Area
B.09	Milled Edge Line Rumble Strip Details
C.01 - C.03	Estimated Project Quantities & Est. Reference Notes
C.04 - C.08	Tabulations
C.09	General Notes, Standard Road Plans, & Utility Tab.
D.01 - D.10	Plan and Profile Sheets
D.11	Plan Sheet in Gilbertville
G.01	Horizontal Centerline Alignment Reports
J.01	Traffic Control Plan and Proposed Detour Route
S.01	Recreational Trail Details
S.02	Recreational Trail Existing Elevations and Grades

105-1
09-27-94

MILEAGE SUMMARY

Div.	Location	Lin. Ft.	Miles
	0+47 to 6+21 RR Header	574	0.11
	RR Header 6+32 to 6+74 RR Header	42	0.01
	RR Header 6+85 to 32+88 Bridge Appr.	2,603	0.49
	Bridge Appr. 34+82 to 131+44	9,662	1.83
	Project Total:	12,881	2.44

111_25
4/2/24

INDEX OF TABULATIONS

Line No.	Tabulation	Tabulation Title	Sheet No.
1	100_01A	Estimated Project Quantities	C.01
2	100_01D	Project Description	C.09
3	100_04A	Estimate Reference Information	C.01 - C.03
4	101-4	Design Data Rural	A.01
5	102_05	Existing Pavement	C.05
6	105-1	Mileage Summary	A.01
7	105-3	Index of Sheets	A.01
8	105_04	Standard Road Plans	C.09
9	108_22	Pavement Marking Line Types	C.08
10	108_23A	Traffic Control Plan	J.01
11	108_29	Pavement Marking Symbols and Legends	C.08
12	110_08	Removal of Concrete Drives	C.07
13	111_25	Index of Tabulations	A.01
14	112_10	Milled Rumble Strips	C.07
15	Bhco-Class 13	Class 13 Excavation	C.05
16	Bhco-Shldr	Shoulders	C.07
17	Bhco-HMA	H.M.A. Placement (Road Mainline)	C.05
18	Bhco-PaveDrive	Paved Points of Access	C.06
19	Bhco-PaveScarify	Pavement Scarification	C.04
20	Bhco-Reclamation	Full Depth Reclamation	C.05
21	Bhco-RecTrail	Recreational Trail Quantities	C.07
22	Bhco-SideRoad	Side Road Quantities	C.07
23	Bhco-Smoothness	Pavement Smoothness	C.08
24	Bhco-Utilities	Tabulation of Utilities	C.09
25	Bhco-SpecialNote	Special Notes	C.09

LICENSED PROFESSIONAL ENGINEER
CATHERINE FREET NICHOLAS
18815
IOWA

I hereby certify that this engineering document was prepared by me or under my direct personal supervision and that I am a duly licensed Professional Engineer under the laws of the State of Iowa.

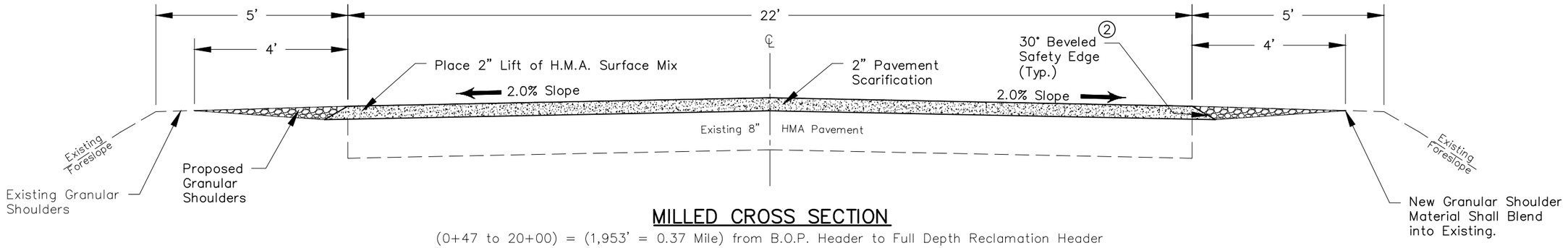
Signature 8-3-26 Date

CATHERINE FREET NICHOLAS, P.E. #18815
Printed or Typed Name
My license renewal date is December 31, 2027

Pages or sheets covered by this seal: **All sheets per index above.**

DESIGN TEAM: CN, CW	DRAWING DATE: 9/12/2025	BLACK HAWK COUNTY	HMA Pavement – Full Depth Reclamation	PROJECT NUMBER: STP-S-C007(179)--5E-07	SHEET: A.01

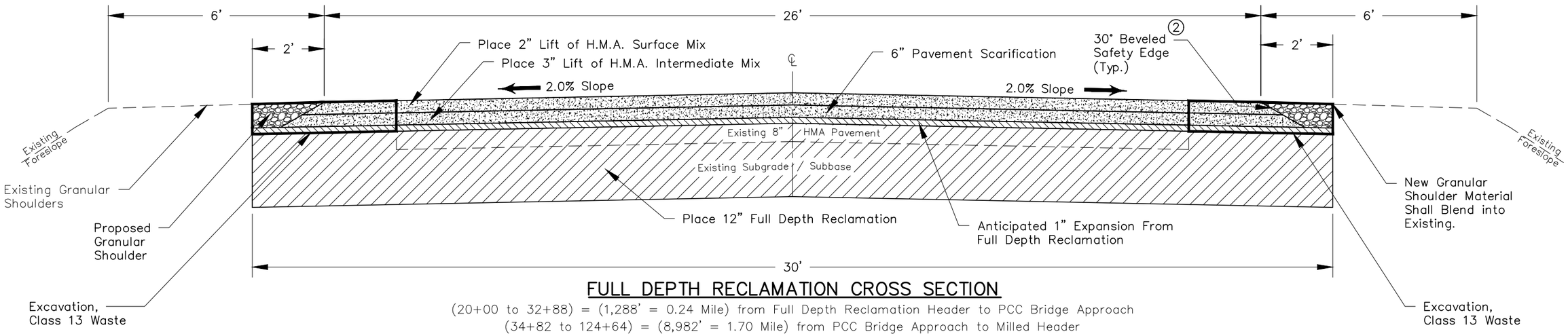
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MILLED CROSS SECTION

(0+47 to 20+00) = (1,953' = 0.37 Mile) from B.O.P. Header to Full Depth Reclamation Header

EXISTING 22' x 8" H.M.A. PAVEMENT
(To be Scarified 2" and Resurfaced with a 2" lift of H.M.A. Surface Mix)



FULL DEPTH RECLAMATION CROSS SECTION

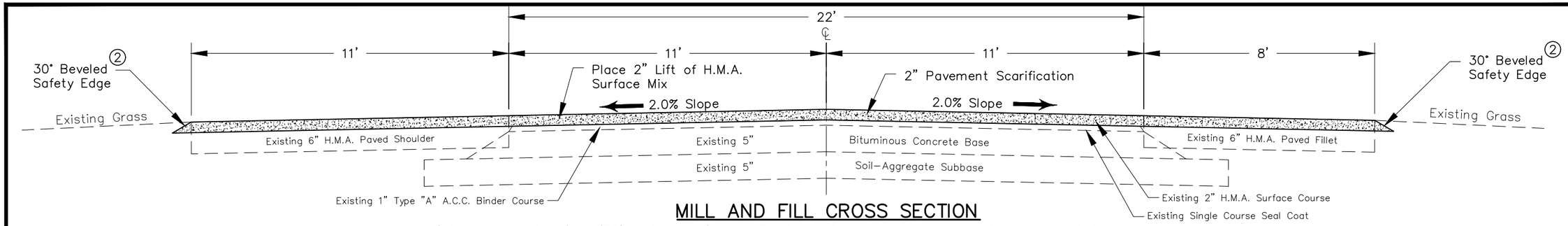
(20+00 to 32+88) = (1,288' = 0.24 Mile) from Full Depth Reclamation Header to PCC Bridge Approach
(34+82 to 124+64) = (8,982' = 1.70 Mile) from PCC Bridge Approach to Milled Header

EXISTING 22' x 8" H.M.A. PAVEMENT
(To be Scarified 6", Full Depth Reclamation 12", and Resurfaced with a 3" lift of H.M.A. Intermediate Mix and a 2" lift of H.M.A. Surface Mix)
(1" Expansion Factor Anticipated During the Full Depth Reclamation Process)

② A 30° beveled safety edge will be incorporated into all outside faces of H.M.A. paving. All cost associated with the safety edge shall be included with the appropriate H.M.A. bid item. Refer to General Specification 2305 and Standard Road Plan PV-3 for more details.

TYPICAL CROSS SECTION DETAILS

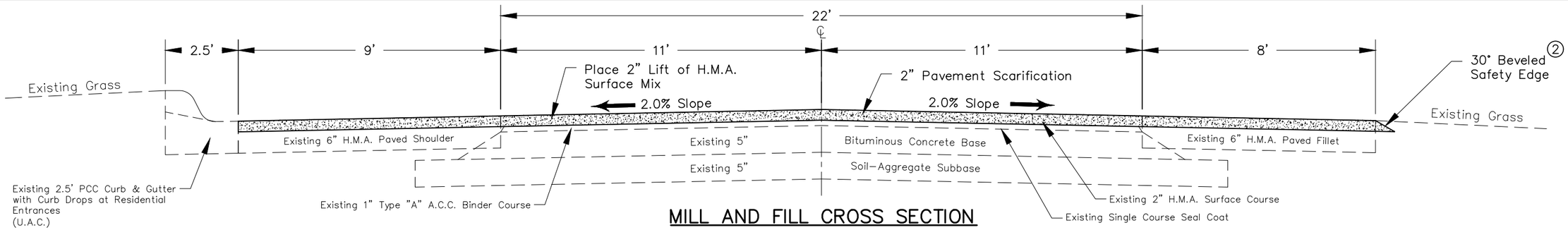
DESIGN TEAM: CN, CW	Drawing Date: 9/10/2025	BLACK HAWK COUNTY	HMA Pavement – Full Depth Reclamation	PROJECT NUMBER: STP-S-C007(179)--5E-07	SHEET: B.01



MILL AND FILL CROSS SECTION

(124+64 to 125+41) = (77' = 0.01 Mile) from Full Depth Reclamation Header to Beginning of P.C.C. Curb & Gutter

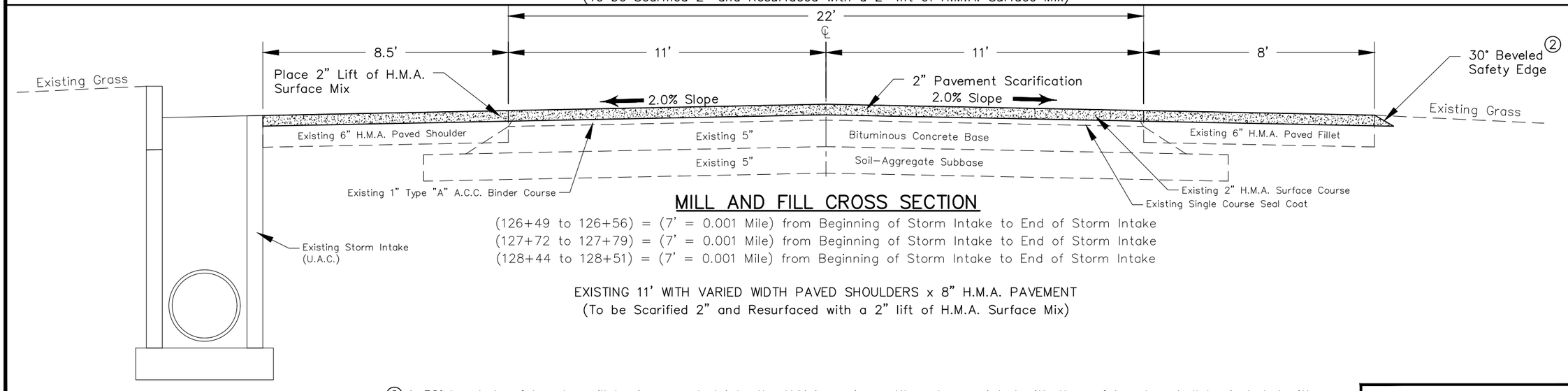
EXISTING 11' WITH VARIED WIDTH PAVED SHOULDERS x 8" H.M.A. PAVEMENT
(To be Scarified 2" and Resurfaced with a 2" lift of H.M.A. Surface Mix)



MILL AND FILL CROSS SECTION

(125+41 to 126+49) = (78' = 0.01 Mile) from Beginning of PCC Curb & Gutter to Beginning of Storm Intake
(126+56 to 127+72) = (116' = 0.02 Mile) from End of Storm Intake to Beginning of Storm Intake
(127+79 to 128+44) = (65' = 0.01 Mile) from End of Storm Intake to Beginning of Storm Intake

EXISTING 11' WITH VARIED WIDTH PAVED SHOULDERS x 8" H.M.A. PAVEMENT
(To be Scarified 2" and Resurfaced with a 2" lift of H.M.A. Surface Mix)



MILL AND FILL CROSS SECTION

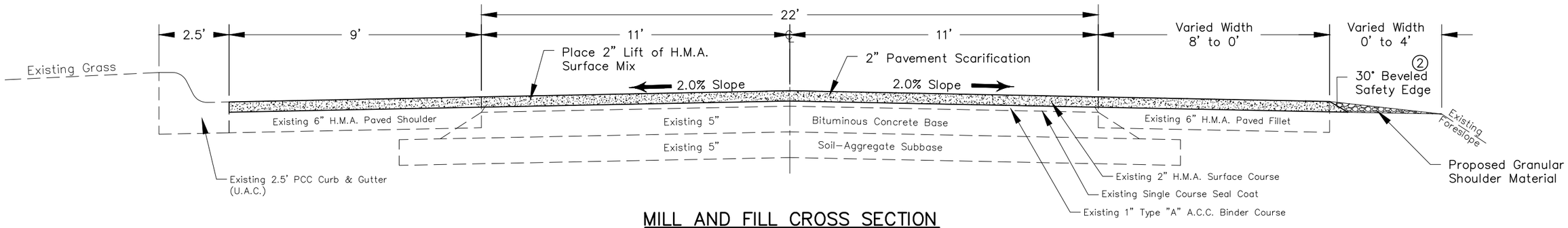
(126+49 to 126+56) = (7' = 0.001 Mile) from Beginning of Storm Intake to End of Storm Intake
(127+72 to 127+79) = (7' = 0.001 Mile) from Beginning of Storm Intake to End of Storm Intake
(128+44 to 128+51) = (7' = 0.001 Mile) from Beginning of Storm Intake to End of Storm Intake

EXISTING 11' WITH VARIED WIDTH PAVED SHOULDERS x 8" H.M.A. PAVEMENT
(To be Scarified 2" and Resurfaced with a 2" lift of H.M.A. Surface Mix)

② A 30° beveled safety edge will be incorporated into the H.M.A. paving. All cost associated with the safety edge shall be included with the appropriate H.M.A. bid item.
Refer to General Specification 2305 and Standard Road Plan PV-3 for more details.

TYPICAL CROSS SECTION DETAILS

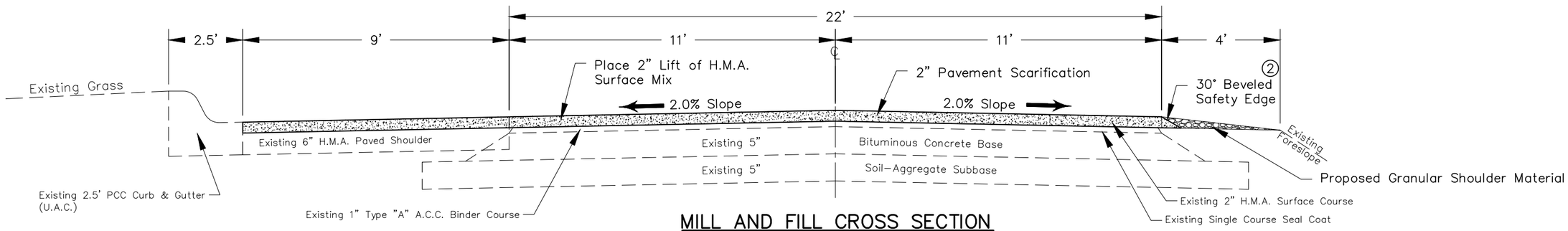
DESIGN TEAM: CN, CW	Drawing Date: 9/10/2025	BLACK HAWK COUNTY	HMA Pavement – Full Depth Reclamation	PROJECT NUMBER: STP-S-C007(179)--5E-07	SHEET: B.02



MILL AND FILL CROSS SECTION

(128+51 to 128+66) = (272' = 0.05 Mile) from End of Storm Intake to End of Paved Tapered Shoulder

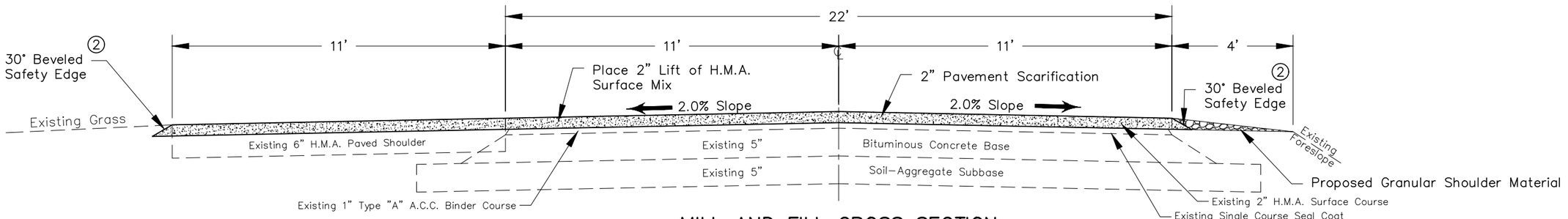
EXISTING 11' WITH VARIED WIDTH PAVED SHOULDERS x 8" H.M.A. PAVEMENT
(To be Scarified 2" and Resurfaced with a 2" lift of H.M.A. Surface Mix)



MILL AND FILL CROSS SECTION

(128+66 to 129+36) = (70' = 0.01 Mile) from End of Paved Tapered Shoulder to End of PCC Curb & Gutter

EXISTING 11' WITH VARIED WIDTH PAVED SHOULDERS x 8" H.M.A. PAVEMENT
(To be Scarified 2" and Resurfaced with a 2" lift of H.M.A. Surface Mix)



MILL AND FILL CROSS SECTION

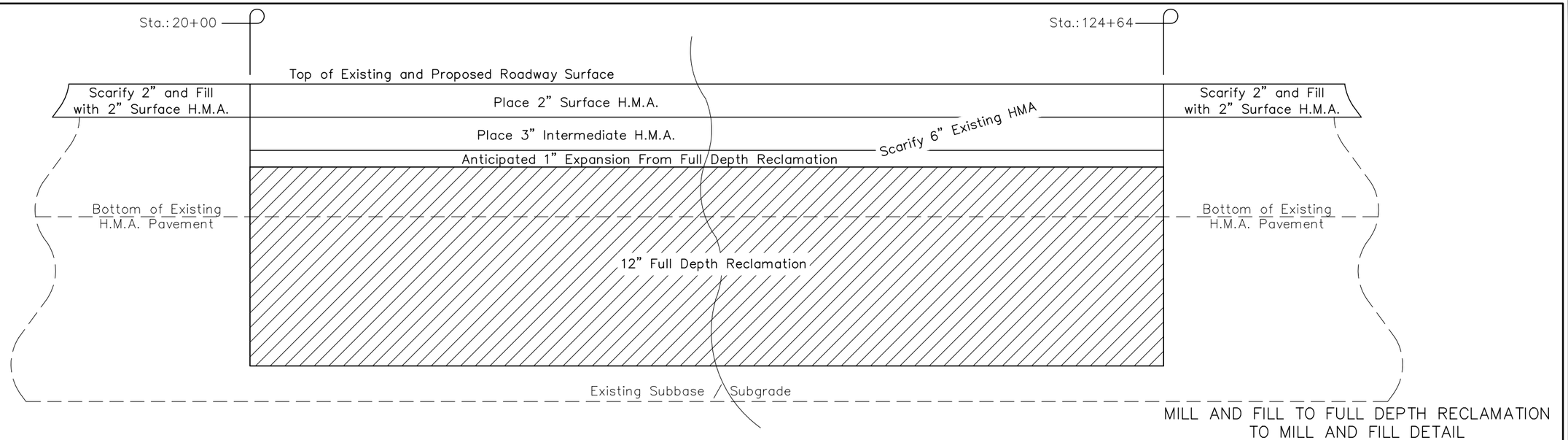
(129+36 to 131+44) = (208' = 0.04 Mile) from End of PCC Curb & Gutter to E.O.P. Header at PCC Bridge Approach

EXISTING 11' WITH VARIED WIDTH PAVED SHOULDERS x 8" H.M.A. PAVEMENT
(To be Scarified 2" and Resurfaced with a 2" lift of H.M.A. Surface Mix)

② A 30° beveled safety edge will be incorporated into the H.M.A. paving. All cost associated with the safety edge shall be included with the appropriate H.M.A. bid item. Refer to General Specification 2305 and Standard Road Plan PV-3 for more details.

TYPICAL CROSS SECTION DETAILS

DESIGN TEAM: CN, CW	Drawing Date: 9/10/2025	BLACK HAWK COUNTY	HMA Pavement – Full Depth Reclamation	PROJECT NUMBER: STP-S-C007(179)--5E-07	SHEET: B.03

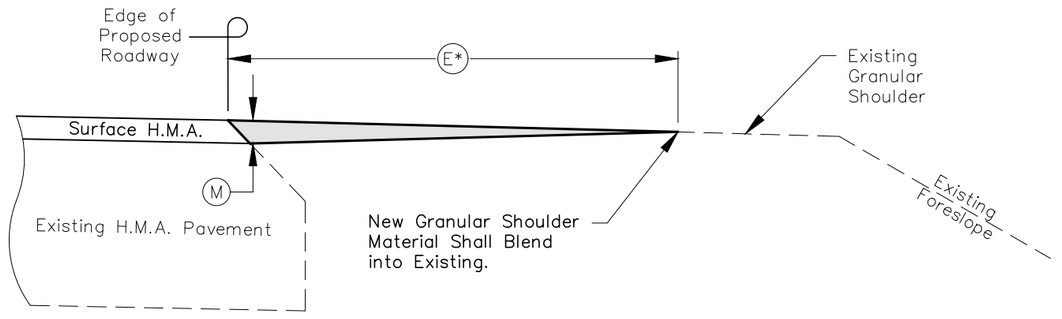


MILL AND FILL TO FULL DEPTH RECLAMATION
TO MILL AND FILL DETAIL

Mainline Location Design Quantities

Location			Length	(E)	(M)	Side	Area	Tons
Road Identification	Station	to Station		FT	IN		Sq. Ft.	
Washburn Road	0+47	20+00	1,953	4	2	Both	0.31*	2.17*
Washburn Road	128+51	131+44	293	4	2	Rt.	0.31*	2.17*

(* per station per side)

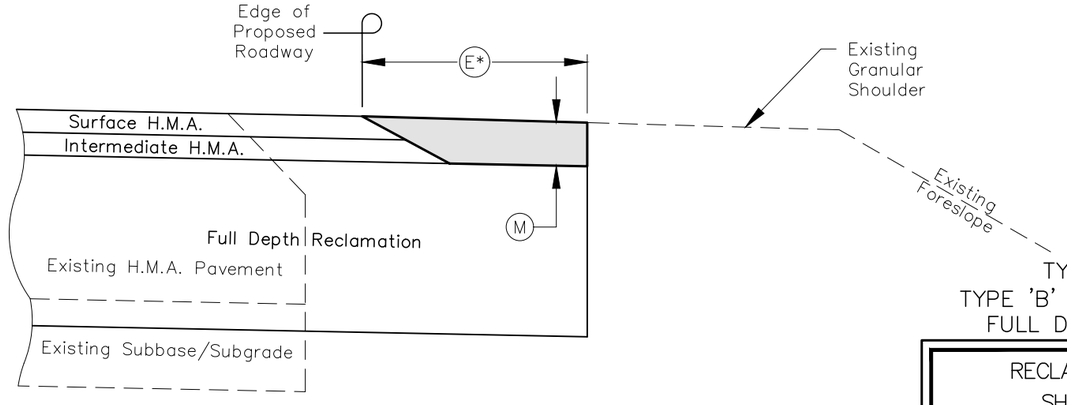


TYPICAL SECTION
TYPE 'B' GRANULAR SHOULDER
MILL AND FILL

Mainline Location Design Quantities

Location			Length	(E)	(M)	Side	Area	Tons
Road Identification	Station	to Station		FT	IN		Sq. Ft.	
Washburn Road	20+00	124+64	10,464	2	5	Both	0.6722*	4.7*

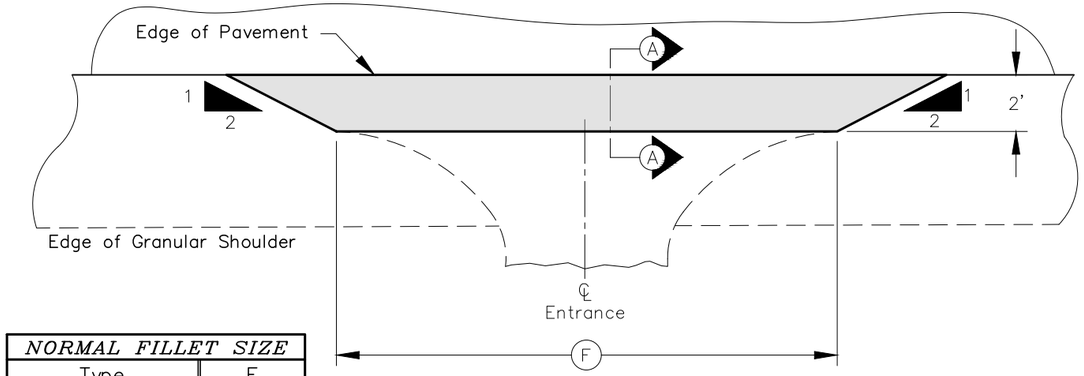
(* per station per side)



TYPICAL SECTION
TYPE 'B' GRANULAR SHOULDER
FULL DEPTH RECLAMATION

RECLAMATION HEADER &
SHOULDER DETAILS

DESIGN TEAM: CN, CW	Drawing Date: 9/10/2025	BLACK HAWK COUNTY	HMA Pavement – Full Depth Reclamation	PROJECT NUMBER: STP-S-C007(179)--5E-07	SHEET: B.04



PLAN

NORMAL FILLET SIZE	
Type	F
Res. Entrance	40'
Farm Entrance	60'
Commercial Ent.	80'

Normal Fillet Size Note:

- Fillet sizes as listed in the table are recommended and shall be used for design and estimating purposes.
- The Engineer shall establish the size of each individual fillet at the time of construction to accommodate conditions on the site.
- Special shaping of the existing surface prior to placement of the residential entrance fillet may be required. Any required work shall be included with either H.M.A. or Driveway Surfacing bid items.

Mailbox Turnout Note:

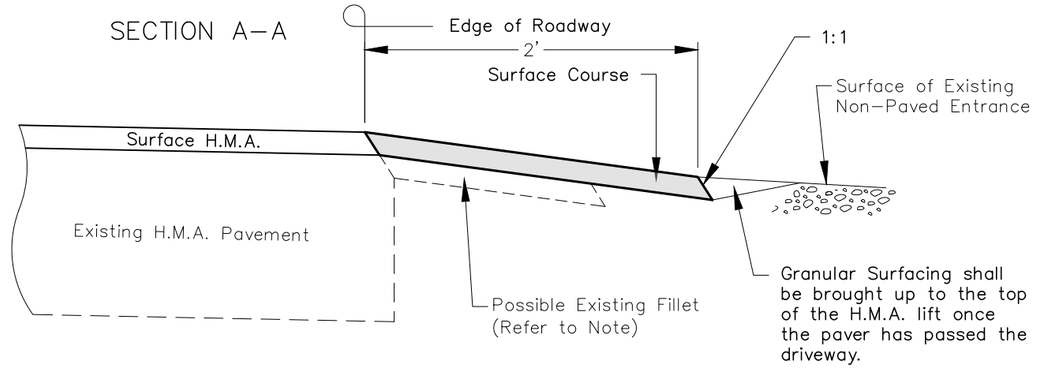
No mailbox fillets will be placed on this project. All existing mailbox fillets will be scarified and will then have granular shoulders placed over them.

All Entrance Fillet Note:

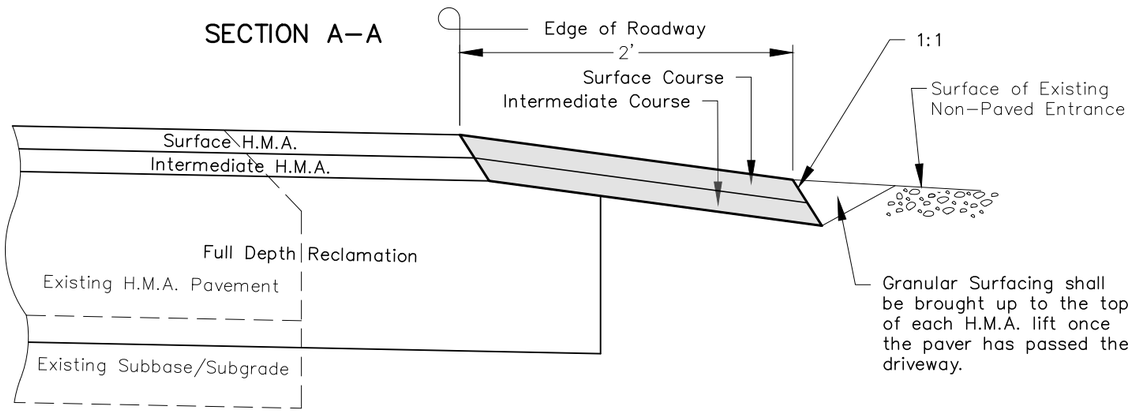
- Granular surfacing material shall be placed in driveways prior to any resurfacing work.
- After each lift of H.M.A. is placed, the granular surfacing material shall be pushed up to the new H.M.A. surfacing to prevent any vertical drop off.
- Driveways may require more granular surfacing once the final H.M.A. surfacing is placed – this material shall be placed during the granular shouldering process.

Residential Fillet Note:

- Only residential driveways will receive an asphalt fillet. All existing field entrance driveways will be scarified and receive granular surfacing up to the edge of proposed roadway asphalt.
- If an existing residential driveway fillet is present, the entire fillet shall be scarified, broomed, tacked and resurfaced. If no residential driveway fillet is present, the existing granular material shall be removed ahead of the paving operation to allow the full proposed mainline paving thickness to be placed for the fillet.
- Driveways that are to receive asphalt fillets will be field marked at the time of construction by the Engineering staff.
- H.M.A. material for the fillets shall be placed with the roadway resurfacing H.M.A. as the paver passes the fillet.
- Any and all operations to accomplish the above mentioned work shall be included with the H.M.A. bid items for the project.



NON–PAVED RESIDENTIAL ENTRANCES
MILL AND FILL SECTION

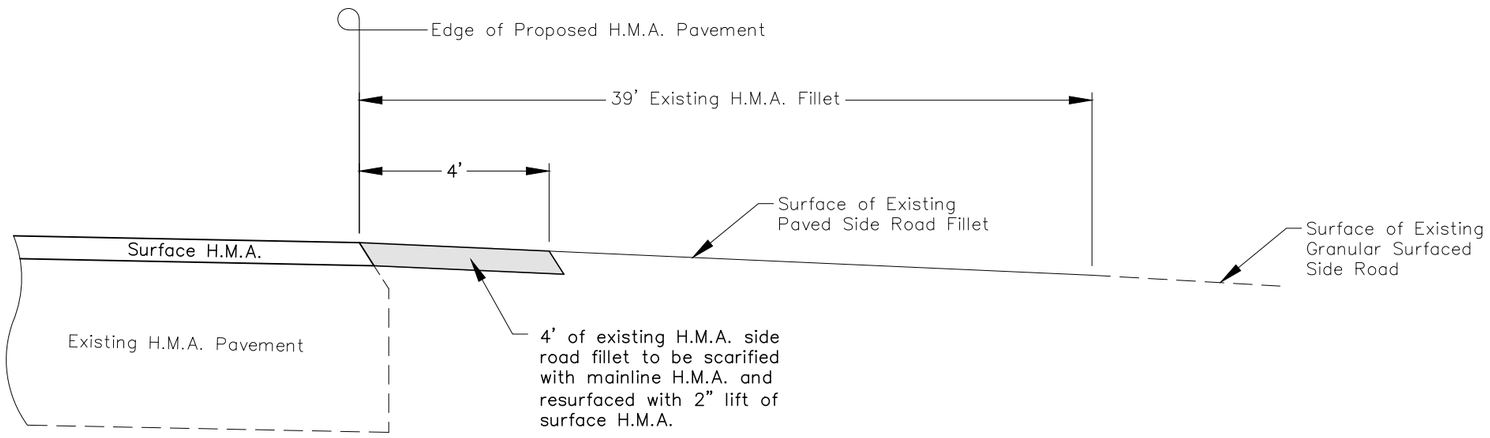


NON–PAVED RESIDENTIAL ENTRANCES
FULL DEPTH RECLAMATION SECTION

ENTRANCE FILLET DETAILS

DESIGN TEAM: CN, CW	Drawing Date: 9/10/2025	BLACK HAWK COUNTY	HMA Pavement – Full Depth Reclamation	PROJECT NUMBER: STP–S–C007(179)––5E–07	SHEET: B.05

TYPICAL PAVED APPROACHES FOR NON–PAVED SIDE ROAD INTERSECTION

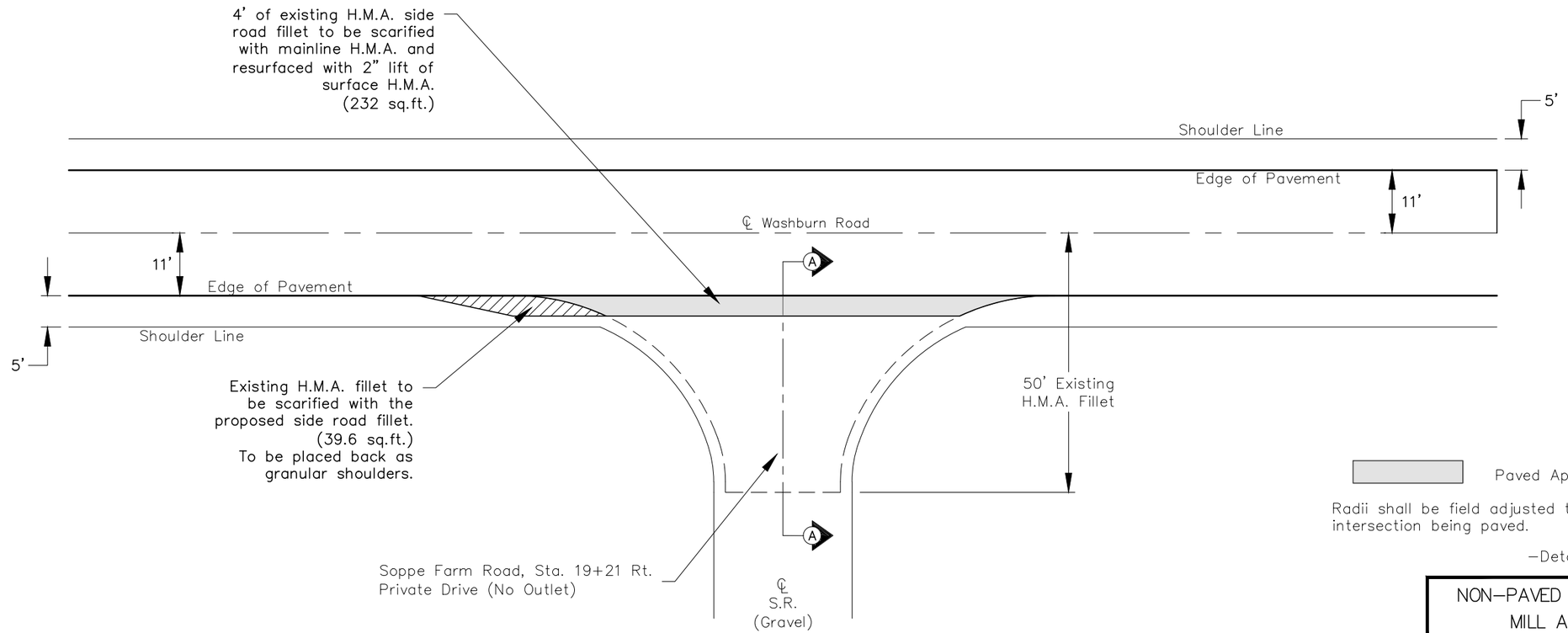


SECTION A–A

Tack coat estimated for 1 application at 0.05 gal./sq. yd. The tack coat for side road fillets may be modified or eliminated when so directed by Black Hawk County.

The existing side road fillet shall be scarified, broomed, tacked and resurfaced with surface H.M.A. mix at the time of mainline paving.

* Refer to Side Road Quantities Tabulation on Sheet C.07 for fillet length and thickness differences at each side road location.



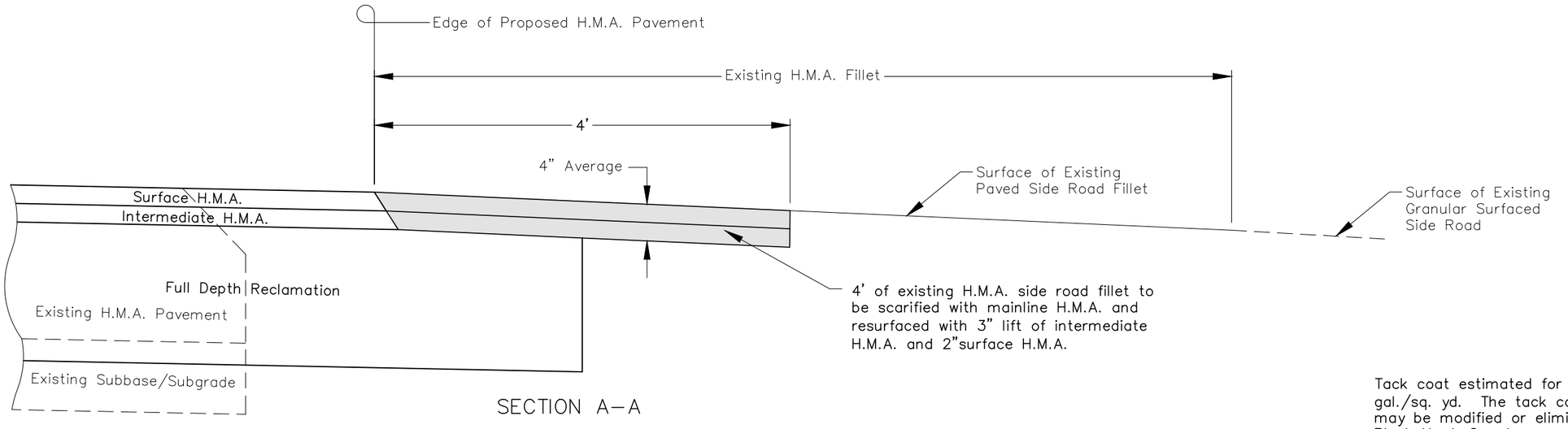
Radii shall be field adjusted to best fit current intersection being paved.

–Detail not to Scale–

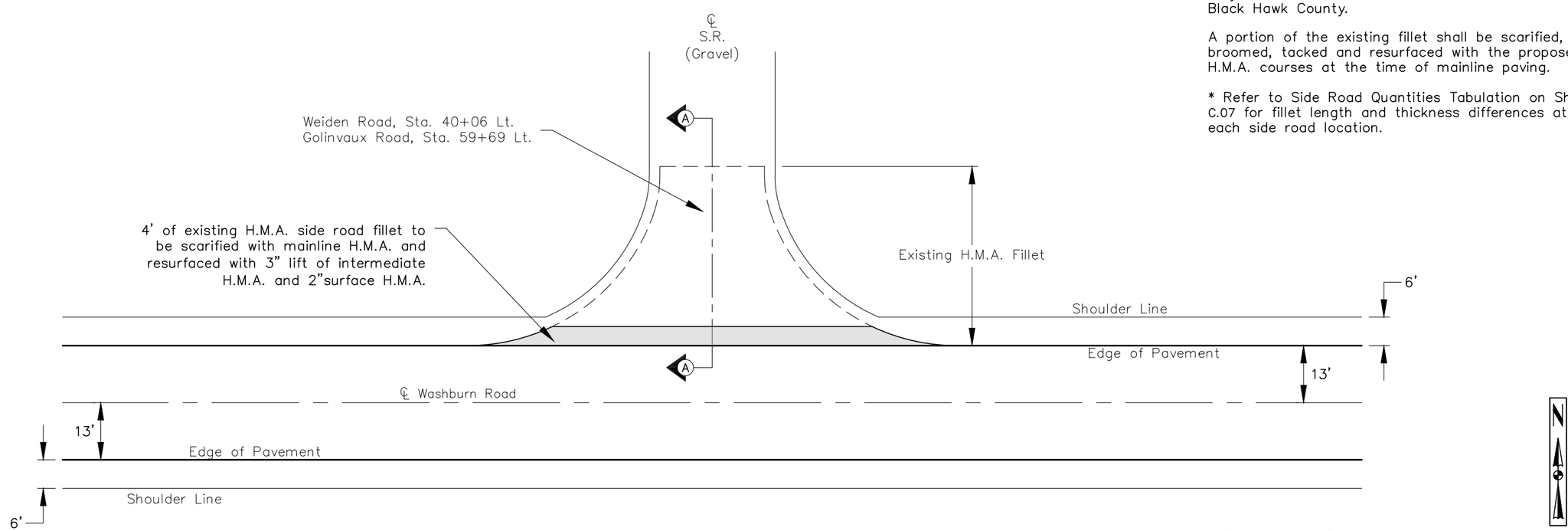
NON–PAVED SIDE ROAD DETAILS
MILL AND FILL AREA

DESIGN TEAM: CN, CW	Drawing Date: 9/10/2025	BLACK HAWK COUNTY	HMA Pavement – Full Depth Reclamation	PROJECT NUMBER: STP–S–C007(179)––5E–07	SHEET: B.06

TYPICAL PAVED APPROACHES FOR NON–PAVED SIDE ROAD INTERSECTIONS



SECTION A–A



Tack coat estimated for 2 applications at 0.05 gal./sq. yd. The tack coat for side road fillets may be modified or eliminated when so directed by Black Hawk County.

A portion of the existing fillet shall be scarified, broomed, tacked and resurfaced with the proposed H.M.A. courses at the time of mainline paving.

* Refer to Side Road Quantities Tabulation on Sheet C.07 for fillet length and thickness differences at each side road location.

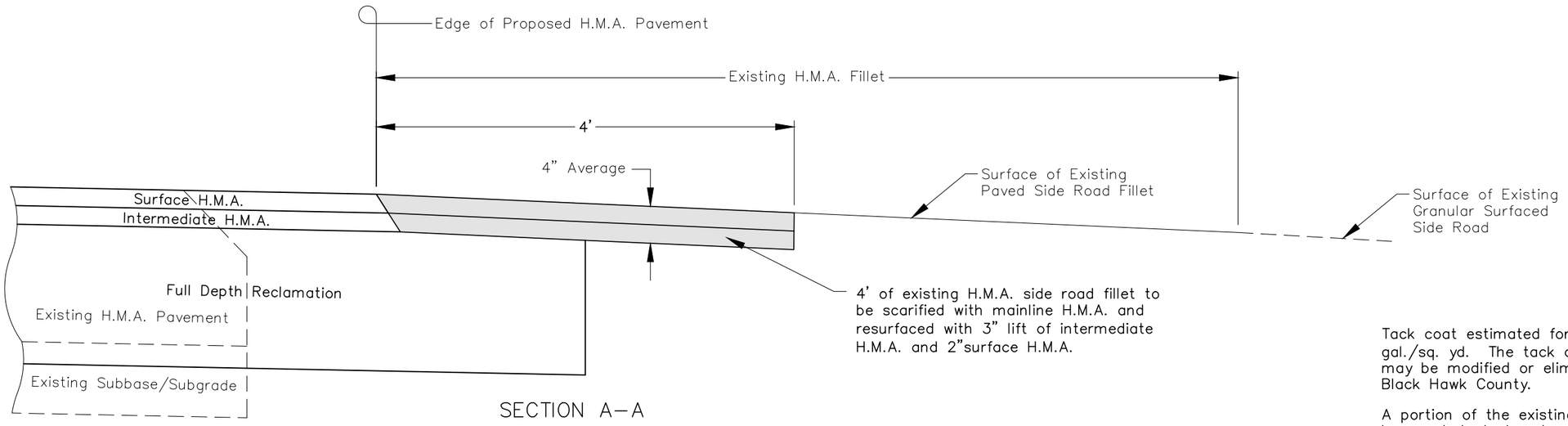
Radii shall be field adjusted to best fit current intersection being paved.

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NON–PAVED SIDE ROAD DETAILS
FULL DEPTH RECLAMATION AREA

DESIGN TEAM: CN, CW	Drawing Date: 9/10/2025	BLACK HAWK COUNTY	HMA Pavement – Full Depth Reclamation	PROJECT NUMBER: STP–S–C007(179)––5E–07	SHEET: B.07

TYPICAL PAVED APPROACHES FOR PAVED SIDE ROAD INTERSECTION

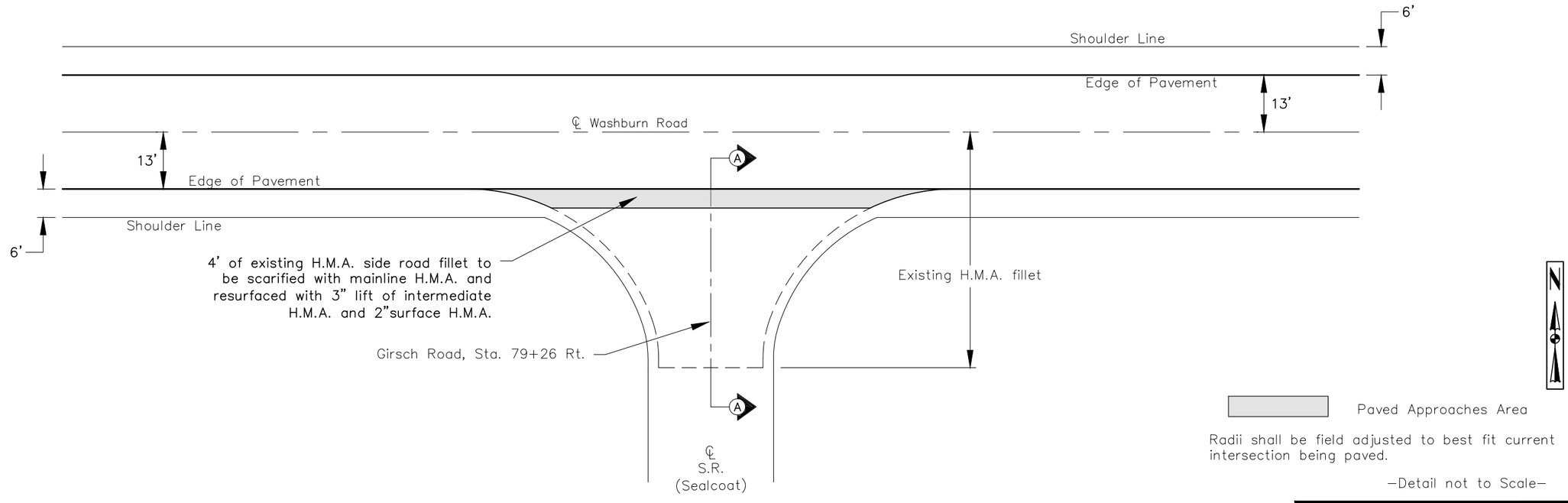


SECTION A–A

Tack coat estimated for 2 applications at 0.05 gal./sq. yd. The tack coat for side road fillets may be modified or eliminated when so directed by Black Hawk County.

A portion of the existing fillet shall be scarified, broomed, tacked and resurfaced with the proposed H.M.A. courses at the time of mainline paving.

* Refer to Side Road Quantities Tabulation on Sheet C.07 for fillet length and thickness differences at each side road location.



Radii shall be field adjusted to best fit current intersection being paved.

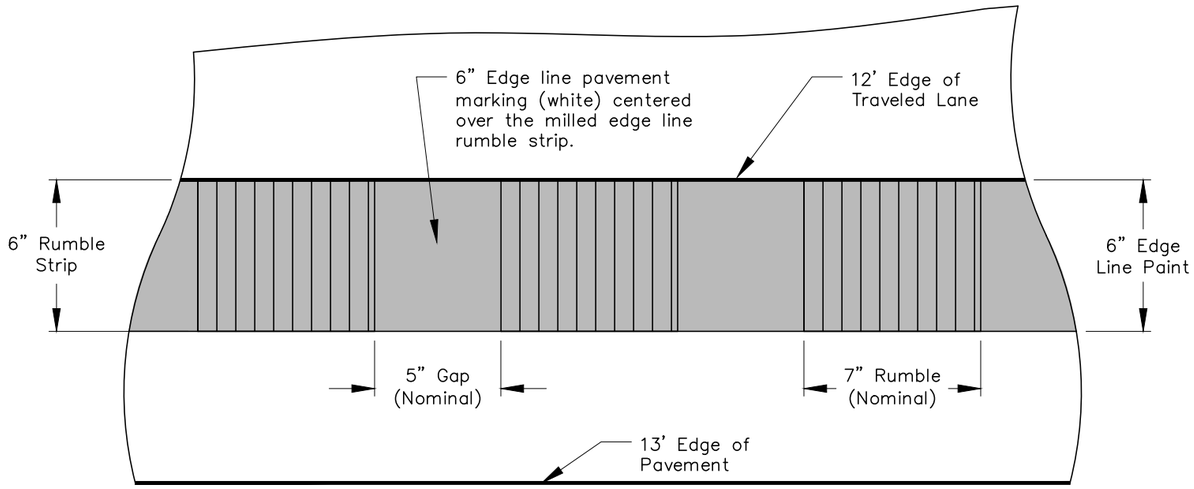
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PAVED SIDE ROAD DETAILS
FULL DEPTH RECLAMATION AREA

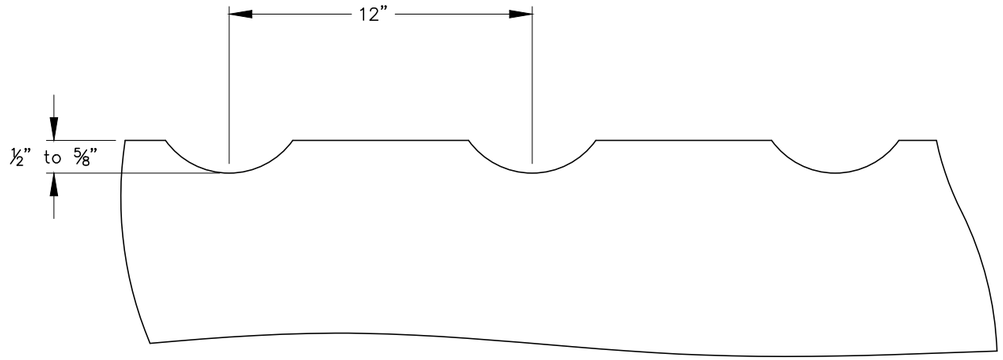
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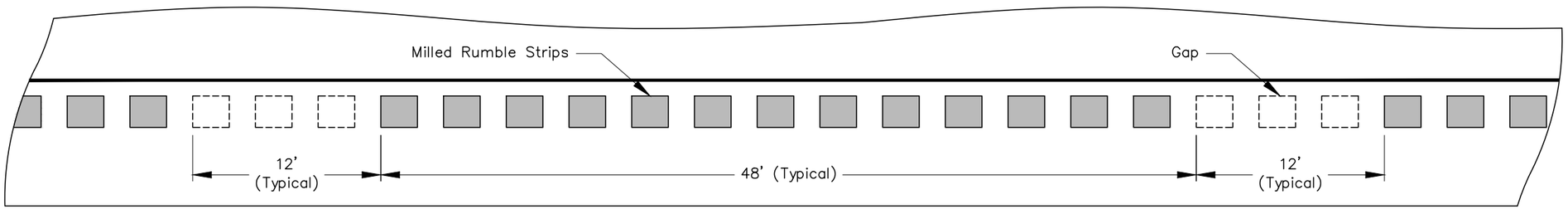
BHco–EdgeRumble
06–19–18



PLAN



RUMBLE SECTION

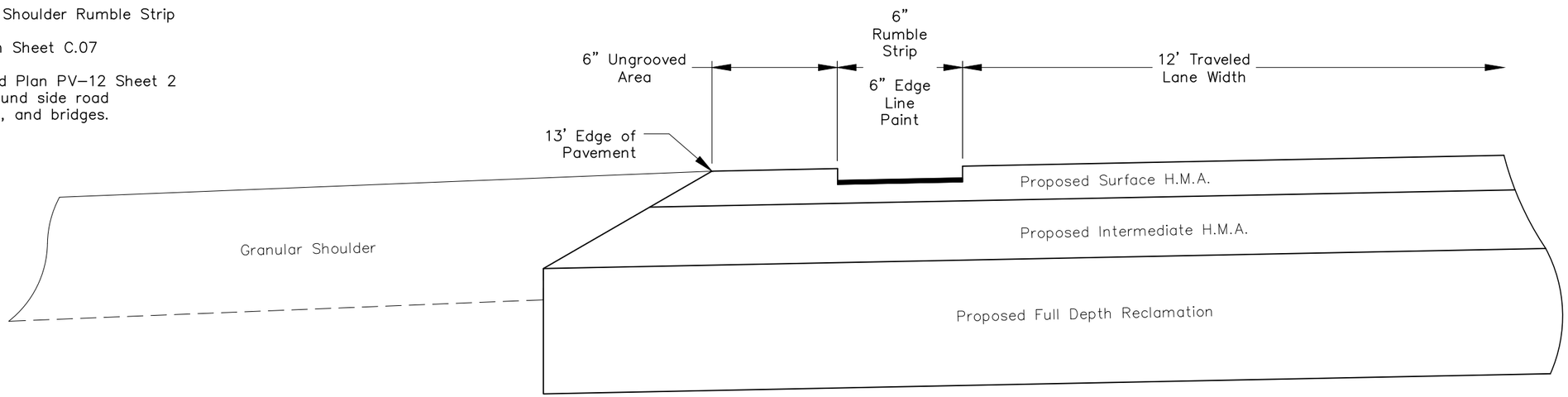


GAP DETAILS

Notes:
Contract Item: Milled Shoulder Rumble Strip

Tabulation: 112_10 on Sheet C.07

Refer to Standard Road Plan PV–12 Sheet 2 for location details around side road intersections, driveways, and bridges.



ROAD SECTION

MILLED EDGE LINE RUMBLE STRIP DETAILS

DESIGN TEAM: CN, CW	Drawing Date: 9/12/2025	BLACK HAWK COUNTY	HMA Pavement – Full Depth Reclamation	PROJECT NUMBER: STP–S–C007(179)––5E–07	SHEET: B.09

7/20/2026 10:17:44 AM; G:\ADSK Civil\Civil3D Projects\PAV–Washburn Road (218 to Cedar River Bridge)–5026\5026_SHT_Bs.dwg

ESTIMATED PROJECT QUANTITIES

100_01A
9/20/22

Division 1 is Federally Participating
Division 2 is Federally Non-Participating

Line No.	Item No.	Item Code	Item	Unit	Div. 1	Div. 2
1	1	2102-2713090	EXCAVATION, CLASS 13, WASTE	CY	1521.48	
2	2	2116-0000100	FULL DEPTH RECLAMATION	SY	34099.99	
3	3	2116-0000300	MINERAL STABILIZING AGENT	TON	1160	
4	4	2121-7425020	GRANULAR SHOULDERS, TYPE B	TON	1300	
5	5	2214-5145152	PAVEMENT SCARIFICATION, CROSS SLOPE	SY	33651.8	
6	6	2303-1032500	HOT MIX ASPHALT STANDARD TRAFFIC, INTERMEDIATE COURSE, 1/2 IN.	TON	5600	
7	7	2303-1033500	HOT MIX ASPHALT STANDARD TRAFFIC, SURFACE COURSE, 1/2 IN. MIX, NO SPECIAL FRICTION REQUIREMENT	TON	4575	
8	8	2303-1258283	ASPHALT BINDER, PG 58-28S, STANDARD TRAFFIC	TON	611	
9	9	2303-6911000	HOT MIX ASPHALT PAVEMENT SAMPLES	LS	1	
10	10	2303-7000610	PAYMENT ADJUSTMENT INCENTIVE/DISINCENTIVE FOR HMA MIXTURE LABORATORY VOIDS (FORMULA - BY PAY FACTOR)	EACH	30000	
11	11	2303-7000620	PAYMENT ADJUSTMENT INCENTIVE/DISINCENTIVE FOR HMA MIXTURE FIELD VOIDS (FORMULA - BY PAY FACTOR)	EACH	30000	
12	12	2315-8275025	SURFACING, DRIVEWAY, CLASS A CRUSHED STONE	TON	400	
13	13	2317-7000120	PAYMENT ADJUSTMENT INCENTIVE/DISINCENTIVE FOR HMA PAVEMENT SMOOTHNESS (BY SCHEDULE)	EACH	10800	
14	14	2511-0300000	REMOVAL OF RECREATIONAL TRAIL	SY	22.4	
15	15	2511-0301200	RECREATIONAL TRAIL, HOT MIX ASPHALT, 2 IN.	SY	47.6	
16	16	2511-0302600	RECREATIONAL TRAIL, PORTLAND CEMENT CONCRETE, 6 IN.	SY	22.4	
17	17	2511-7528101	DETECTABLE WARNINGS	SF	40.4	
18	18	2515-6745600	REMOVAL OF PAVED DRIVEWAY	SY	14.2	
19	19	2526-8285010	CONSTRUCTION SURVEY, MONUMENT PRESERVATION	LS	1	
20	20	2526-8285040	CONSTRUCTION SURVEY, LOCATION SURVEY	LS	1	
21	21	2527-9263137	PAINTED SYMBOLS AND LEGENDS, WATERBORNE OR SOLVENT-BASED	EACH	2	
22	22	2527-9263209	PAINTED PAVEMENT MARKING, WATERBORNE OR SOLVENT-BASED	STA	327	
23	23	2528-2518000	SAFETY CLOSURE	EACH	2	
24	24	2528-8445110	TRAFFIC CONTROL	LS	1	
25	25	2528-8445113	FLAGGERS	EACH	25	
26	26	2533-4980005	MOBILIZATION	LS	1	
27	27	2548-0000100	MILLED SHOULDER RUMBLE STRIPS, HMA SURFACE	STA	185.5	
28	28	2595-0005120	RAILROAD PROTECTIVE LIABILITY INSURANCE FOR CHICAGO, CENTRAL AND PACIFIC RR / CEDAR RIVER RR / IOWA NORTHERN RAILWAY	LS		1
29	29	2599-9999010	VIBRATION MONITORING	LS	1	

ESTIMATE REFERENCE INFORMATION

100_04A
6/2/23

LINE NO.	ITEM NO.	ITEM CODE	DESCRIPTION
	1	2102–2713090	**Excavation, Class 13 Waste** This bid item includes the excavation of all existing material from between the existing 11' roadway edge out to the proposed 15' full depth reclamation edge. This material shall be excavated, loaded directly onto trucks, and shall become property of the Contractor and removed from the site. Refer to Sheet B.01 for the typical cross section and the "Class 13 Excavation" Tabulation on Sheet C.05 for stationing and quantity breakdown.
	2	2116–0000100	**Full Depth Reclamation** Overall mainline dimensions of full depth reclamation shall be 12" deep and 30' wide. Ensure cross slope and roadway profile is held per Iowa DOT Specification. One inch (1") of expansion thickness has been estimated for the reclamation process. Reclaimed grade shall be covered by the first lift of H.M.A. within one week of the completion of the full depth reclamation process. This bid item also includes any preparation of the existing site prior to the reclamation process. Refer to Sheet B.01 for the typical cross section and the "Full Depth Reclamation" Tabulation on Sheet C.05 for stationing and quantity breakdown.

CONTINUED

ESTIMATE REFERENCE INFORMATION

100_04A
6/2/23

LINE NO.	ITEM NO.	ITEM CODE	DESCRIPTION
	2	2116–0000100	**Full Depth Reclamation** The project has 4 existing drainage structures along the route that the Contractor shall ensure are protected during the Full Depth Reclamation process. Refer to the D Sheets for specific stations and depths. One structure will need to be skipped over due to not having enough cover to FDR over. The Contractor shall be responsible for all required material / lab testing which shall include, but not limited to, the moisture and density testing on site.
	3	2116–0000300	**Mineral Stabilizing Agent** Mineral stabilizing agent shall be Portland Cement Type 1L(10). The estimated cement content is 6% based on dry soil weight. An average Proctor value of 126.0 pcf at an optimum moisture content of 8.6% should be utilized. Based on this information, an application rate of 7.5 pounds per square foot (at 12" thick lift) or 68.0 pounds per square yard should be utilized. Refer to Sheet B.01 for the typical cross section and the "Full Depth Reclamation" Tabulation on Sheet C.05 for stationing and quantity breakdown.
	4	2121–7425020	**Granular Shoulders, Type B** Bid price to include furnishing and delivery of material; also includes placing, compacting, final finishing of the shoulder, and brooming of the finished paved roadway. Refer to Sheet B.04 for details and the "Shoulders" Tabulation on Sheet C.07 for stationing and quantity breakdown. The contractor shall note there are 2 different depths of granular shouldering as well as varying widths. Material density of 140 pcf was used to calculate tonnage. Estimated project quantity includes an additional 20% for any cross section irregularities along the project. This 20% is not an assured amount and will only be used if necessary. Engineering staff will be present in the field at time of placement and determine if any irregularities exist and if any additional tonnage is required during placement.
	5	2214–5145152	**Pavement Scarification, Cross Slope** This item shall include the scarification of the existing H.M.A. surface along the entire project route. The contractor shall note there are 2 different depths of pavement scarification as well as varying widths. All headers shall maintain the proposed full depth along their entire face. This may require a "notch joint" to be milled in a separate operation. Refer to Sheets B.01 – B.03 for typical cross sections, Sheet B.04 regarding the depth change from the mill and fill cross section to the full depth reclamation cross section, Sheet B.05 for driveway fillet details, and Sheets B.06 – B.08 for side road details. Also refer to the "Pavement Scarification" Tabulation on Sheet C.04 for location and quantity breakdowns. Care shall be taken around the railroad headers, the bridge approach headers, the existing curb and gutter, the Cedar Valley Nature Trail tie–ins, and the intakes along the project route. Scarified material to be loaded directly into trucks and shall become property of the Contractor and removed from the site. The scarification shall be completed so no vertical drop–off at the roadway center line is left overnight. Immediately following the scarification of roadway header locations, the Contractor shall place a wedge of millings along the headers to maintain traffic and to protect the edges of the adjacent roadway.

ESTIMATED PROJECT QUANTITIES

ESTIMATE REFERENCE INFORMATION

100_04A
6/2/23

LINE NO.	ITEM NO.	ITEM CODE	DESCRIPTION
	6 7 8	2303-1032500 2303-1033500 2303-1258283	HMA Standard Traffic, Intermediate Course, 1/2 inch Mix HMA Standard Traffic Surface Course, 1/2 inch Mix, No Friction Asphalt Binder, PG 58-28S, Standard Traffic PWL (Percent Within Limits) is being included on this project for the mainline asphalt pavement. Design weight of 145 lbs. per cu. ft. Estimated project quantity includes an additional 10% for any cross section irregularities along the project. This 10% is not an assured amount and will only be used if necessary. Engineering staff will be present in the field at time of placement and determine if any irregularities exist and if any additional tonnage is required during placement. Refer to Sheets B.01 – B.03 for typical cross sections. Refer to the "HMA Placement (Road Mainline)" Tabulation on Sheet C.05 for location and quantity breakdowns of mainline placement. Refer to the "Paved Points of Access" Tabulation on Sheet C.06 for paved drive location and breakdowns. Refer to the "Side Road Quantities" Tabulation on Sheet C.07 for location and quantity breakdowns of side road fillets. Refer to the "Shoulders" Tabulation on Sheet C.07 for paved shoulder location and breakdowns. Bid price shall include full Quality Control, Quality Assurance, and Plant Inspection for all H.M.A. mix. All cost associated with the testing and inspection of the H.M.A. is to be considered included in accordance with the current Iowa DOT Standard Specifications. Material for drives & intersections were estimated using the pavement scarification measurements obtained by survey. Also note that no mailbox or field entrance fillets will be required on this project. Asphalt Cement shall be PG 58-28S. Quantities based on 6% by weight.
	10 11	2303-7000610 2303-7000620	Pay Adj. I/D-HMA Mixture Laboratory Voids Pay Adj. I/D-HMA Mixture Field Voids PWL "Percent within Limits" is being required on this project.
	12	2315-8275025	Surfacing, Driveway, Class A Crushed Stone Granular surfacing shall consist of Class "A" crushed stone. This bid item includes granular surfacing for driveways, field entrances and side road intersections. Since this project is considered an "inlay", this material is intended to be used to fill in any voids between the newly placed H.M.A. and the existing driveway. Not all driveways, field entrances, or side road intersections will require driveway surfacing. Bid price to include furnishing, delivery, placing, compaction rolling, and brooming for each area of placement. Final road surface will need to be broomed upon completion of the driveway surfacing.
	13	2317-7000120	Pay Adj. I/D-HMA Smoothness (By Schedule) Pavement Smoothness Specification Section 2317 is being required on this project and is classified as a Non-Primary Roadway. Refer to "Pavement Smoothness" Tabulation on Sheet C.08 for location and quantity breakdown.
	14	2511-0300000	Removal of Recreational Trail This bid item refers to existing H.M.A. to be removed from the recreational trail in order to make room for the placement of concrete panel with detectable warnings. The existing trail shall be saw cut full depth on each end of the removal and cleanly removed according to the detail on Sheet S.01. All material removed shall become the property of the contractor and shall be removed from the site. Any required saw cutting shall be included with this bid item. Also, any required core out of subbase/subgrade shall be included with this bid item as well. Refer to the "Recreational Trail Quantities" Tabulation on Sheet C.07 for location and quantity breakdowns. Existing trail material is estimated at 4" thick.

ESTIMATE REFERENCE INFORMATION

100_04A
6/2/23

LINE NO.	ITEM NO.	ITEM CODE	DESCRIPTION
	15	2511-0301200	Recreational Trail, Hot Mix Asphalt, 2 In. This bid item refers to the new H.M.A. to be placed from the concrete detectable warning P.C.C. panel to the edge of the proposed roadway. This mix shall be the same mix as used on the roadway resurfacing. The contractor shall ensure new asphalt surfacing matches existing grades and slopes in order to conform to ADA requirements. Refer to the "Recreational Trail Quantities" Tabulation on Sheet C.07 for location and quantity breakdowns. Also refer to Sheet S.01 for details and measurements and Sheet S.02 for existing elevations and grades.
	16	2511-0302600	Recreational Trail, Portland Cement Concrete, 6 In. This bid item refers to the new P.C.C. panels to be placed. The contractor shall ensure new concrete surfacing matches existing grades and slopes in order to conform to ADA requirements. Refer to Sheet S.02 for existing grades and slopes. A class C concrete with a minimum class 2 durability aggregate shall be used. Refer to the "Recreational Trail Quantities" Tabulation on Sheet C.07 for location and quantity breakdowns. Also refer to Sheet S.01 for details and measurements. The contractor shall ensure the freshly placed concrete is protected from pedestrian traffic until it is fully set. This can be accomplished by having a person watching the locations, or by the area being encompassed by safety/security fencing. This recreation trail area receives a large amount of pedestrian traffic and the County wants to ensure no one bikes or walks through the freshly placed concrete. Any such protection shall be included in the bid price for this item. Bid price shall include full Quality Control, Quality Assurance, and Plant Inspection.
	17	2511-7528101	Detectable Warnings This bid item refers to the new detectable warnings to be placed in the new P.C.C. recreational trail panels. In order to match the other detectable warnings along the rest of the existing recreational trail, the detectable warnings shall be manufactured by the Neenah Foundry Company and shall have a red brick power coated finish. This will allow easier maintenance for Black Hawk County Conservation, as well as allowing them to keep the same materials stocked on-hand in case of future replacement needs. The contractor is required to submit shop drawings to the County Engineer for the detectable warnings they propose to use prior to the start of the project. The shop drawings will need to be approved by the Engineer prior to their use. Refer to the "Recreational Trail Quantities" Tabulation on Sheet C.07 for location and quantity breakdowns. Also refer to Sheet S.01 for details and measurements and Sheet S.02 for existing elevations and grades.
	18	2515-6745600	Removal of Paved Driveway This bid item refers to P.C.C. driveway material to be removed and hauled off site. The driveway removal is necessary to allow the full depth reclamation process to be uniform along the entire roadway. Any required saw cutting shall be included with this bid item. The P.C.C. driveway material shall be saw cut and removed prior to the full depth reclamation process. Once removed, driveway surfacing material shall be placed in the removed section to allow access to the property. When this material needs to be removed prior to full depth reclamation, it shall be spread out on the existing granular shoulders. Refer to the "Removal of Concrete Drives" Tabulation on Sheet C.07 for location and quantity breakdowns of the concrete driveways on this project. Existing driveway material is estimated at 6" thick.

ESTIMATED PROJECT QUANTITIES

ESTIMATE REFERENCE INFORMATION

100_04A
6/2/23

LINE NO.	ITEM NO.	ITEM CODE	DESCRIPTION
	19	2526–8285010	**Construction Survey, Monument Preservation** The Contractor shall preserve all existing monuments that are disturbed due to construction activities.
	20	2526–8285040	**Construction Survey, Location Survey** The Contractor shall provide a proposed design profile grade and cross slope that matches the existing roadway. The contractor shall supply the proposed design to the County Engineer at least 2 weeks prior to any work being performed on the roadway. The Engineer will review the design. If not approved, the Contractor will be required to re–summit a revised design that addresses the Engineer's concerns. The Contractor must ensure the roadway is built to the existing proposed profile grade and cross slope during construction.
	21	2527–9263137	**Painted Symbols and Legends, Waterborne or Solvent–Based** Refer to the "Pavement Marking Symbols and Legends" Tabulation on Sheet C.08 for locations and quantity breakdowns. This item is for (2) railroad crossing symbol sets.
	22	2527–9263209	**Painted Pavement Markings, Waterborne/Solvent** Locations and quantities are estimated. Actual lengths will be field measured by the Engineering staff once the pavement markings have been placed. A two gun system following the current Standard Specifications and Standard Road Plans shall be used on all pavement markings. Refer to the "Pavement Marking Line Types" Tabulation on Sheet C.08 for location and quantity breakdowns. All centerline pavement markings shall be 4" wide. All edge line pavement markings shall be 6" wide. Refer to the milled edge line rumble strip detail on Sheet B.09 for more information regarding the placement of the edge line paint.
	23	2528–2518000	**Safety Closure** This bid item shall be used during the full depth reclamation process to ensure no traffic is allowed to interfere with the work. This is an estimated quantity. The actual quantity used will be the quantity paid for.
	24	2528–8445110	**Traffic Control** Traffic Control shall also include all provisions for work under the Traffic Control Plan on Sheet J.01. Residential and emergency access shall be maintained at all times during the project. Pedestrian traffic for the Cedar Valley Nature Trail will need to be addressed during this project as well. The Contractor shall ensure trail traffic is informed and protected during all phases of construction that affect the trail.
	25	2528–8445113	**Flaggers** Flagger quantities are being included on this project as an estimate to use during key construction activities and/or if the local traffic becomes an issue to control with only signage. Usage shall be agreed upon between the Contractor and the Engineer prior to using. The actual number of flaggers used will be the quantity paid for.
	26	2533–4980005	**Mobilization** Bid item includes requirements under Iowa DOT Developmental Specification for Construction Progress Schedule work.

ESTIMATE REFERENCE INFORMATION

100_04A
6/2/23

LINE NO.	ITEM NO.	ITEM CODE	DESCRIPTION
	27	2548–0000100	**Milled Shoulder Rumble Strips, H.M.A. Surface** Milled shoulder rumble strips are to be placed on both outside edges of the proposed roadway along the project. Rumble strips shall be placed prior to the pavement markings being placed. Refer to the "Milled Shoulder Rumble Strips" Tabulation on Sheet C.07 for estimated locations and quantity breakdowns. Also refer to Sheet B.09 for details and Standard Road Plan PV–12 for more information.
	28	2595–0005140	**Railroad Protective Liability Insurance for Chicago, Central & Pacific RR / Cedar River RR / Iowa Northern Railway** Refer to Developmental Specification in the bid documents for the requirements and more information regarding this bid item.
	29	2599–9999010	**Vibration Monitoring** Refer to Special Provisions for Vibration Monitoring to Protect Historic Structures in the bid documents for the requirements and more information regarding this bid item.

ESTIMATED PROJECT QUANTITIES

PAVEMENT SCARIFICATION

Bhco-PaveScarify
11/21/24

Refer to Tabulation 102-5 or 102-5A

Line No.	Road Identification	Station From	Station To	Side	Length (LF)	Width (LF)	Depth (IN)	Area (SY)	Remarks
	Washburn Road	0+47		Rt.			2	12.1	Hwy. 218 right radius.
	Washburn Road	0+47	6+21	Both	574	22.0	2	1,403.1	Hwy. 218 to the railroad header.
	Washburn Road	6+32	6+74	Both	42	22.0	2	102.7	Railroad header to railroad header.
	Washburn Road	6+85	20+00	Both	1,315	22.0	2	3,214.4	Railroad header to full depth reclamation header.
	Washburn Road	20+00	32+88	Both	1,288	22.0	6	3,148.4	Full depth reclamation header to bridge approach header.
	Washburn Road	34+82	124+64	Both	8,982	22.0	6	21,956.0	Bridge approach header to full depth reclamation header.
	Washburn Road	124+64	131+44	Both	680	22.0	2	1,662.2	Full depth reclamation header to the end of project.
							Mainline Total:	31,498.9	
	Washburn Road	124+73	128+66	Rt.	393	8.0	2	349.3	8' H.M.A. paved shoulder.
	Washburn Road	124+85	125+41	Lt.	56	11.0	2	68.4	11' H.M.A. paved shoulder.
	Washburn Road	125+41	129+36	Lt.	395	9.0	2	395.0	9' H.M.A. paved shoulder.
	Washburn Road	129+36	131+44	Lt.	208	11.0	2	254.2	11' H.M.A. paved shoulder.
							Paved Shoulder Total:	1,066.9	
	Washburn Road	2+08		Rt.	42	3.2	2	14.6	Existing residential rock driveway fillet. 2' fillet paved back.
	Washburn Road	3+62		Rt.	45	3.2	2	16.0	Existing residential rock driveway fillet. 2' fillet paved back.
	Washburn Road	5+88		Rt.	82	3.1	2	28.3	Existing business rock driveway fillet. 2' fillet paved back.
	Washburn Road	7+12		Lt.	86	2.1	2	20.2	Existing residential rock driveway fillet. 2' fillet paved back.
	Washburn Road	8+57		Lt.	54	2.0	2	12.1	Existing residential rock driveway fillet. 2' fillet paved back.
	Washburn Road	12+31 - 12+58		Rt.	127	2.6	2	37.0	Existing residential rock driveway fillet. 2' fillet paved back.
	Washburn Road	13+63		Lt.	83	3.5	2	31.8	Existing residential rock driveway fillet. 2' fillet paved back.
	Washburn Road	14+91		Rt.	60	3.4	2	22.2	Existing residential rock driveway fillet. 2' fillet paved back.
	Washburn Road	15+67		Rt.	53	2.8	2	16.6	Existing residential rock driveway fillet. 2' fillet paved back.
	Washburn Road	32+53		Rt.	57	3.2	6	20.2	Existing residential rock driveway fillet. 2' fillet paved back.
	Washburn Road	38+18		Rt.	59	3.1	6	20.1	Existing residential rock driveway fillet. 2' fillet paved back.
	Washburn Road	40+16		Rt.	54	3.4	6	21.0	Existing residential rock driveway fillet. 2' fillet paved back.
	Washburn Road	40+73		Lt.	30	3.7	6	12.1	Existing residential rock driveway fillet. 2' fillet paved back.
	Washburn Road	42+68		Rt.	85	3.3	6	31.1	Existing residential rock driveway fillet. 2' fillet paved back.
	Washburn Road	45+25		Rt.	36	3.5	6	14.0	Existing residential rock driveway fillet. 2' fillet paved back.
	Washburn Road	46+29		Lt.	45	3.5	6	17.3	Existing residential rock driveway fillet. 2' fillet paved back.
	Washburn Road	47+62		Rt.	84	3.5	6	32.1	Existing residential rock driveway fillet. 2' fillet paved back.
	Washburn Road	51+25		Lt.	37	3.6	6	14.7	Existing residential rock driveway fillet. 2' fillet paved back.
	Washburn Road	51+55		Rt.	45	3.3	6	16.3	Existing residential rock driveway fillet. 2' fillet paved back.
	Washburn Road	52+67		Lt.	30	3.5	6	11.6	Existing residential rock driveway fillet. 2' fillet paved back.
	Washburn Road	52+90		Rt.	30	3.4	6	11.1	Existing residential rock driveway fillet. 2' fillet paved back.
	Washburn Road	54+83		Lt.	62	3.8	6	26.0	Existing business rock driveway fillet. 2' fillet paved back.
	Washburn Road	56+03		Rt.	76	3.4	6	28.1	Existing residential rock driveway fillet. 2' fillet paved back.
	Washburn Road	72+57		Rt.	59	3.5	6	22.9	Existing residential rock driveway fillet. 2' fillet paved back.
	Washburn Road	79+26		Lt.	53	3.2	6	18.9	Existing field entrance rock driveway fillet. No fillet paved back.
	Washburn Road	81+83		Rt.	54	3.5	6	20.6	Existing residential rock driveway fillet. 2' fillet paved back.
	Washburn Road	91+25		Lt.	50	3.5	6	19.3	Existing field entrance rock driveway fillet. No fillet paved back.
	Washburn Road	92+92		Rt.	60	3.6	6	23.7	Existing residential rock driveway fillet. 2' fillet paved back.
	Washburn Road	95+85		Lt.	54	3.5	6	20.3	Existing residential rock driveway fillet. 2' fillet paved back.
	Washburn Road	95+91		Rt.	43	3.5	6	16.8	Existing field entrance rock driveway fillet. No fillet paved back.
	Washburn Road	106+08		Rt.	59	2.9	6	20.4	Existing residential rock driveway fillet. 2' fillet paved back.
	Washburn Road	106+26		Lt.	51	3.4	6	18.6	Existing field entrance rock driveway fillet. No fillet paved back.
	Washburn Road	123+67		Rt.	31	2.7	6	9.6	Existing field entrance rock driveway fillet. No fillet paved back.
	Washburn Road	129+24		Rt.	46	3.2	2	16.4	Existing field entrance rock driveway fillet. No fillet paved back.
							Existing Drive Fillet Total:	682.0	
							Side Road Total (Refer to Sheet C.07):	202.4	
							Paved Points of Access Total (Refer to Sheet C.06):	154.0	
							Recreational Trail Total (Refer to Sheet C.07):	47.6	
							Project Total:	33,651.8	

Length and Width of Existing Driveway Fillets is an Average Dimension. The Areas were Calculated by CAD Polygons From Survey Shots.
Refer to Side Road Quantities Tabulation on Sheet C.07 for More Information Regarding Side Road Scarification.
Refer to Paved Points of Access Tabulation on Sheet C.06 for More Information Regarding Paved Driveway Scarification.
Refer to Recreational Trail Quantities Tabulation on Sheet C.07 for More Information Regarding Recreational Trail Scarification.

TABULATIONS

EXISTING PAVEMENT

Line No.	County	Route	Direction of Travel	Begin Ref. Location Sign	End Ref. Location Sign	Year	Type	Project Number	Surface Type	Surface Depth (IN)	Base Type	Base Depth (IN)	Subbase Type	Subbase Depth (IN)	Remarks
1	Black Hawk	D38	EB / WB	0+12	129+92.6		ACC Surf.	S.N. 438	Single Course Seal Coat		Asphaltic Base	5.0	Soil	5.0	Placed a Single Sealcoat on 5" Asphaltic Base
2	Black Hawk	D38	EB / WB	0+12	132+03.0	1974	ACC Resurf.	L-974--73-07			ACC Binder	2.0			Placed 2" Type 'A' Asphaltic Concrete Binder
3	Black Hawk	D38	EB / WB	0+12	132+03.0	1974	ACC Resurf.	L-974--73-07	ACC	1.0					Placed 1" Type 'A' Asphaltic Concrete Surface
4	Black Hawk	D38	EB / WB	0+00	124+60.0	2009	HMA Resurf.	ER-C007(115)--58-07	HMA	2.0					2" Mill and Fill with 1/2" Surface HMA Mix

Bhco-Reclamation
9/12/25

FULL DEPTH RECLAMATION

Line No.	Station From	Station To	Side	Length (FT)	Width (FT)	Depth (IN)	Area (SY)	Material Type	Quantity (TON)	Remarks
	20+00	32+88	Both	1,288	30	12.00	4,293.33	Cement	162	Full Depth Reclamation Header to Bridge Approach Header.
	34+82	48+80	Both	1,398	30	12.00	4,660.00	Cement	176	Bridge Approach Header to RCB Header.
	48+80	49+25	Both	45	30	9.00	150.00	Cement	6	Over Triple RCB.
	49+25	83+18	Both	3,393	30	12.00	11,310.00	Cement	428	RCB Header to RCP Header.
	83+18	83+30	Both	12	30	6.00	40.00	Cement	2	Over 30" RCP.
	83+30	93+75	Both	1,045	30	12.00	3,483.33	Cement	132	RCP Header to RCB Header.
	93+75	94+20	Both	45	30	12.00	150.00	Cement	6	Over Triple RCB.
	94+20	115+50	Both	2,130	30	12.00	7,100.00	Cement	268	RCB Header to RCB Header.
	115+90	124+64	Both	874	30	12.00	2,913.33	Cement	110	RCB Header to Full Depth Reclamation Header.
						Total:	34,099.99		1,290	

Bhco-HMA
4/1/22

HMA PLACEMENT (ROAD MAINLINE)

Line No.	Station From	Station To	Side	Length (LF)	Average Thickness (IN)	Lane Top Width (LF)	Average Lane Width (Yield Width)	Area per Lane Width (SF)	Area (SF)	HMA (TON/STA/SIDE)	HMA (TON)	Remarks
	Intermediate Course											
	20+00	32+88	Rt.	1,288	3.00	13.29	13.50	3.3755		24.47	315.16	Full Depth Reclamation Area.
	34+82	124+64	Rt.	8,982	3.00	13.29	13.50	3.3755		24.47	2,197.78	Full Depth Reclamation Area.
	20+00	32+88	Lt.	1,288	3.00	13.29	13.50	3.3755		24.47	315.16	Full Depth Reclamation Area.
	34+82	124+64	Lt.	8,982	3.00	13.29	13.50	3.3755		24.47	2,197.78	Full Depth Reclamation Area.
	20+00	124+64	Both		3.00				2,682		48.61	Driveway Fillets.
										Intermediate Total:	5,074.49	@ 100%
	Surface Course											
	0+47		Rt.		2.00				109		1.32	Hwy. 218 Radius.
	0+47	6+21	Rt.	574	2.00	11.00	11.15	1.86		13.47	77.33	Hwy. 218 to Railroad Tracks.
	6+32	6+74	Rt.	42	2.00	11.00	11.15	1.86		13.47	5.66	Railroad Tracks to Full Depth Reclamation Header.
	6+85	20+00	Rt.	1,315	2.00	11.00	11.15	1.86		13.47	177.17	Railroad Tracks to Full Depth Reclamation Header.
	20+00	32+88	Rt.	1,288	2.00	13.00	13.15	2.19		15.88	204.66	Full Depth Reclamation Area.
	34+82	124+64	Rt.	8,982	2.00	13.00	13.15	2.19		15.88	1,427.20	Full Depth Reclamation Area.
	124+64	131+44	Rt.	680	2.00	11.00	11.15	1.86		13.47	91.62	Full Depth Reclamation Header to End of Project.
	0+47	6+21	Lt.	574	2.00	11.00	11.15	1.86		13.47	77.33	Hwy. 218 to Railroad Tracks.
	6+32	6+74	Lt.	42	2.00	11.00	11.15	1.86		13.47	5.66	Railroad Tracks to Full Depth Reclamation Header.
	6+85	20+00	Lt.	1,315	2.00	11.00	11.15	1.86		13.47	177.17	Railroad Tracks to Full Depth Reclamation Header.
	20+00	32+88	Lt.	1,288	2.00	13.00	13.15	2.19		15.88	204.66	Full Depth Reclamation Area.
	34+82	124+64	Lt.	8,982	2.00	13.00	13.15	2.19		15.88	1,427.20	Full Depth Reclamation Area.
	124+64	131+44	Lt.	680	2.00	11.00	11.15	1.86		13.47	91.62	Full Depth Reclamation Header to End of Project.
	0+00	131+44	Both		2.00				2,682		32.41	Driveway Fillets.
										Surface Total:	4,001.01	@ 100%
										Project Total:	9,075.50	@ 100%

Bhco-Class13
1/26/26

CLASS 13 EXCAVATION

Station From	Station To	Side	Length (LF)	Thickness (IN)	Width (LF)	Class 13 Waste (CF)	Class 13 Waste (CY)	Remarks
20+00	32+88	Rt.	1,288.00	6	4	2,576.00	95.41	Area between existing 11' roadway and proposed 15' full depth reclamation.
34+82	124+64	Rt.	8,982.00	6	4	17,964.00	665.33	Area between existing 11' roadway and proposed 15' full depth reclamation.
20+00	32+88	Lt.	1,288.00	6	4	2,576.00	95.41	Area between existing 11' roadway and proposed 15' full depth reclamation.
34+82	124+64	Lt.	8,982.00	6	4	17,964.00	665.33	Area between existing 11' roadway and proposed 15' full depth reclamation.
				Project Total:		41,080.00	1,521.48	

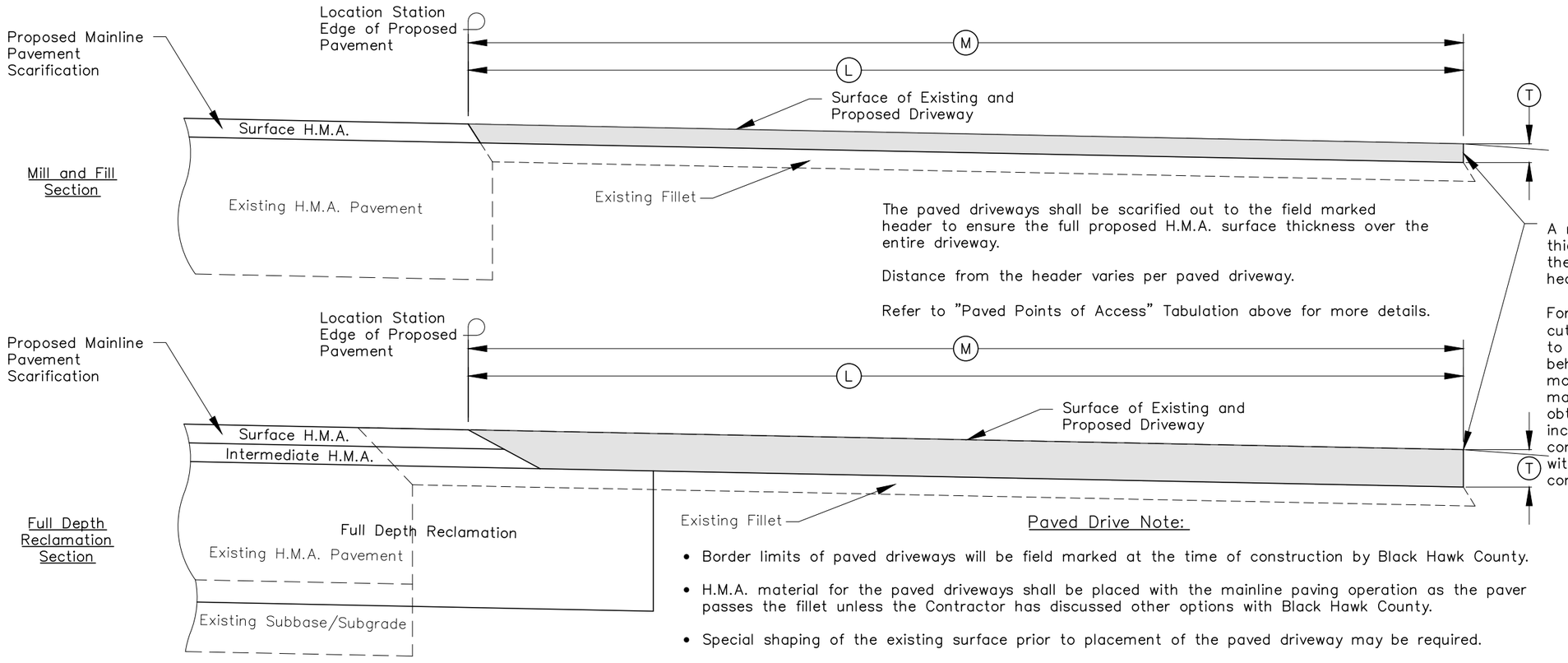
TABULATIONS

DESIGN TEAM: CN, CW	Drawing Date: 9/12/2025	BLACK HAWK COUNTY	HMA Pavement – Full Depth Reclamation	PROJECT NUMBER: STP-S-C007(179)--5E-07	SHEET: C.05

PAVED POINTS OF ACCESS

Line No.	Station	Side	Driveway Type	Current Driveway Surfacing	Tie-In Offset from Edge of Roadway (L) (LF)	Pavement Scarification Length (M) (LF)	Proposed Driveway Resurface Area (SF)	Estimated Removal Area (SY)	Estimated Pavement Scarification (SY)	* Estimated H.M.A. Intermediate Material (TON)	* Estimated H.M.A. Surface Material (TON)	Approximate Proposed Slope %	Remarks
	5+04	Rt.	Residential	H.M.A.	3.1	3.1	112		12.4		1.36	Existing	Full 2" mill depth shall be held through the entire driveway.
	7+69	Rt.	Business	H.M.A.	2.0	2.0	214		23.8		2.59	Existing	Full 2" mill depth shall be held through the entire driveway.
	10+04	Rt.	Residential	P.C.C.	3.6	3.6	71		7.9		0.86	Existing	Full 2" mill depth shall be held through the entire driveway.
	10+46	Rt.	Residential	P.C.C.	3.6	3.6	152		16.9		1.84	Existing	Full 2" mill depth shall be held through the entire driveway.
	13+71	Rt.	Residential	P.C.C.	3.0	3.0	73		15.9		0.88	Existing	Full 2" mill depth shall be held through the entire driveway.
	16+56	Rt.	Residential	H.M.A.	3.5	3.5	104		19.8		1.26	Existing	Full 2" mill depth shall be held through the entire driveway.
	17+80	Rt.	Residential	H.M.A.	2.9	2.9	93		19.0		1.13	Existing	Full 2" mill depth shall be held through the entire driveway.
	39+26	Lt.	Residential	P.C.C.	2.0	2.0	77		16.2	0.93	0.93	Existing	Full 6" mill depth shall be held through the entire driveway.
	44+41	Rt.	Residential	P.C.C.	2.0	2.0	70		22.1	0.85	0.85	Existing	Full 6" mill depth shall be held through the entire driveway.
	46+28	Rt.	Residential	P.C.C.	3.0		81	14.2		0.98	0.98	Existing	Full removal due to reclamation process (1' wider than reclamation).
						Total:	1,047	14.2	154.0	2.76	12.68		

The purpose of this table is to show the current paved driveways that will be encountered during the project.
These drives shall be protected during the construction process and no construction vehicles or equipment shall be driven or parked in any driveway that has a paved surface.
The paved driveway to roadway connection shall be field verified to ensure a proper and gradual taper. The tie in location of the new surfacing will be marked by the Engineer at the time of construction.
All paved driveways in mill and fill area will require a 2" notch header be placed to allow the new paving material to tie into the existing paved driveway surface at depth instead of tapering out to 0".
*Average 2" HMA thickness was used to calculated estimated tonnage in mill and fill area.
All paved driveways in the full depth reclamation area will require a full removal of the existing P.C.C. material next to the roadway.
*Average 4" HMA thickness was used to calculated estimated tonnage in full depth reclamation area.
All work involved in placing the new H.M.A. drive material will be paid for using the appropriate bid item for the lift being placed.



Paved Drive Note:

- Border limits of paved driveways will be field marked at the time of construction by Black Hawk County.
- H.M.A. material for the paved driveways shall be placed with the mainline paving operation as the paver passes the fillet unless the Contractor has discussed other options with Black Hawk County.
- Special shaping of the existing surface prior to placement of the paved driveway may be required.
- Any and all operations to accomplish the above mentioned work shall be included with the H.M.A. bid items for the project.

–Detail not to Scale–

TABULATIONS

DESIGN TEAM: CN, CW	Drawing Date: 9/12/2025	BLACK HAWK COUNTY	HMA Pavement – Full Depth Reclamation	PROJECT NUMBER: STP–S–C007(179)––5E–07	SHEET: C.06

Bhco-RecTrail
10/01/25

RECREATIONAL TRAIL QUANTITIES

Line No.	Intersecting Road Name	Station	Offset	Side	Current Surfacing	Pavement Scarification (SY)	Removal of Recreational Trail (SY)	Recreational Trail P.C.C. (SY)	Recreational Trail H.M.A. (SY)	Detectable Warnings (SF)	Remarks
	Washburn Road	124+67.3		Rt.	H.M.A.	32.5	10.8	10.8	32.5	19.6	Refer to Sheet S.01 for more information and details.
	Washburn Road	124+74.5		Lt.	H.M.A.	15.1	11.6	11.6	15.1	20.8	Refer to Sheet S.01 for more information and details.
					Total:	47.6	22.4	22.4	47.6	40.4	

112_10
4/15/25

MILLED RUMBLE STRIPS

* Calculated at 18" width for Shoulder.
** For use with penetrating Engineered Fog Seal. Calculated at 2" wider than rumble strips.

Line No.	Road Identification	Station From	Station To	Shoulder Pavement Type	Rumble Strip Lane	Rumble Strip Type	Fog Seal Type	L (IN)	PCC Length (STA)	HMA Length (STA)	Fog Seal* Shoulder (GAL)	Fog Seal (SY)**	Effective Shoulder Width PCC (FT)	Effective Shoulder Width HMA (FT)	Effective Shoulder Width Granular/Earth (FT)	Remarks
	Washburn Road	24+12	116+87	H.M.A.	Rt.	Shoulder		6		92.75				1	6	45 mph to 45 mph speed zone.
	Washburn Road	24+12	116+87	H.M.A.	Lt.	Shoulder		6		92.75				1	6	45 mph to 45 mph speed zone.
								Total:		185.5						

Bhco-Shldr
09/11/25

SHOULDERS

Line No.	Station From	Station To	Side	Length (LF)	Average Thickness (IN)	Width (LF)	Area (SF)	Hot Mix Asphalt Material (TON/STA/SIDE)	Hot Mix Asphalt Material (TON)	Paved Shoulder (SY)	Granular Shoulder Material (TON/STA/SIDE)	Granular Shoulder Material (TON)	Remarks
HMA Shoulders													
	124+73	128+66	Rt.	393	2.00	8	3,144		37.99	349.33			
	124+85	125+41	Lt.	56	2.00	11	616		7.44	68.44			
	125+41	129+36	Lt.	395	2.00	9	3,555		42.96	395.00			
	129+36	131+44	Lt.	208	2.00	11	2,288		27.65	254.22			
Granular Shoulders													
	0+47	20+00	Rt.	1,953	2.00	4					2.17	42.38	
	0+47	20+00	Lt.	1,953	2.00	4					2.17	42.38	
	20+00	124+64	Rt.	10,464	5.00	2					4.70	491.81	
	20+00	124+64	Lt.	10,464	5.00	2					4.70	491.81	
	128+51	131+44	Rt.	293	2.00	4					2.17	6.36	
								Total:	116.04	1,066.99		1,074.74	@ 100%

Bhco-Side Road
4/25/13

SIDE ROAD QUANTITIES

Line No.	Side Road Name	Station	Side	Current Surfacing	Resurface Area (SF)	Pavement Scarification (SY)	HMA Interm. (TON)	HMA Surface (TON)	Excavation Class 13 Waste (CY)	Granular Surfacing (TON)	Remarks
	Soppe Farm Road	19+21	Rt.	HMA Fillet	232	33.7		3			Private road (no outlet). Gravel surfaced with existing H.M.A. fillet.
	Weiden Road	40+06	Lt.	HMA Fillet	350	55.2	5	5			County road. Gravel surfaced with existing H.M.A. fillet.
	Golinvaux Road	59+69	Lt.	HMA Fillet	367	61.7	5	5			County road. Gravel surfaced with existing H.M.A. fillet.
	Girsch Road	79+26	Rt.	HMA Fillet	303	51.8	4	4			County road. Seal coat surfaced with existing H.M.A. fillet.
					Total:	202.4	14	17			

110_08
8/15/22

REMOVAL OF CONCRETE DRIVES

* Not a Bid Item

Line No.	Station	Side	Area (SY)	Saw Cut* (LF)	Remarks
	46+28	Rt.	14.2	26.0	Remove average 4.5' width x 28' approx. length. Estimated 6" depth.
		Total:			

TABULATIONS

DESIGN TEAM: CN, CW	Drawing Date: 9/12/2025	BLACK HAWK COUNTY	HMA Pavement – Full Depth Reclamation	PROJECT NUMBER: STP-S-C007(179)--5E-07	SHEET: C.07

Bhco-Smoothness
09/12/25

PAVEMENT SMOOTHNESS

Line No.	Road Identification	Station From	Station To	Side	Length (LF)	ALR Speed 35 - 45 MPH	Segments (EACH)	MRI Speed Over 45 MPH	Segments (EACH)	Remarks
	Washburn Road	9+25	24+12	Both	1,487	X	6			35 mph speed zone to 45 mph speed zone.
	Washburn Road	24+12	32+68	Both	856			X	4	45 mph speed zone to bridge approach.
	Washburn Road	35+02	116+87	Both	8,185			X	32	Bridge Approach to 45 mph speed zone.
	Washburn Road	116+87	123+91	Both	704	X	4			45 mph speed zone to 35 mph speed zone.
			Total:		11,232		10		36	

108_22
10/21/25

PAVEMENT MARKING LINE TYPES

Line factors based on 6 inch wide continuous line.
*BCY4 - Place on the same side of the roadway to match existing markings near the project.
**NPY4 - For estimating purposes only. No Passing Zone Lines will be located in the field.

BCY4: Broken Centerline (Yellow) @ 0.17
DCY4: Double Centerline (Yellow) @ 1.34
NPY4: No Passing Zone Line (Yellow) @ 0.84
ELW6: Edge Line (White) @ 1.00
SLW2: Stop Line (White) @ 4.00

Line No.	Road ID	Station From	Station To	Lane	Marking Type	Left	Center	Right	Groove Marking Needed?	Groove Qty. (STA)	BCY4* Factored (STA)	DCY4 Factored (STA)	NPY4** Factored (STA)	ELW6 Factored (STA)	SLW2 Factored (STA)		Remarks
	Washburn Road	0+10	6+19	BOTH	Waterborne/Solvent Paint	X		X	No			8.16					
	Washburn Road	6+33	6+72	BOTH	Waterborne/Solvent Paint	X		X	No			0.52					
	Washburn Road	6+86	7+50	BOTH	Waterborne/Solvent Paint	X		X	No			0.86					
	Washburn Road	7+50	11+71	WB	Waterborne/Solvent Paint	X			No				3.54				
	Washburn Road	11+71	98+00	CL	Waterborne/Solvent Paint		X		No		14.67						
	Washburn Road	98+00	104+52	EB	Waterborne/Solvent Paint			X	No				5.48				
	Washburn Road	104+52	107+16	CL	Waterborne/Solvent Paint		X		No		0.45						
	Washburn Road	107+16	108+92	WB	Waterborne/Solvent Paint	X			No				1.48				
	Washburn Road	108+92	131+44	BOTH	Waterborne/Solvent Paint	X		X	No			30.18					
	Washburn Road	0+00		EB	Waterborne/Solvent Paint			X	No					0.76			
	Washburn Road	0+70	6+25	EB	Waterborne/Solvent Paint			X	No					5.55			
	Washburn Road	6+40	6+80	EB	Waterborne/Solvent Paint			X	No					0.40			
	Washburn Road	6+90	18+85	EB	Waterborne/Solvent Paint			X	No					11.95			
	Washburn Road	19+55	78+75	EB	Waterborne/Solvent Paint			X	No					59.20			
	Washburn Road	79+70	131+44	EB	Waterborne/Solvent Paint			X	No					51.74			
	Washburn Road	0+00		WB	Waterborne/Solvent Paint	X			No					0.78			
	Washburn Road	0+30	6+15	WB	Waterborne/Solvent Paint	X			No					5.85			
	Washburn Road	6+25	6+70	WB	Waterborne/Solvent Paint	X			No					0.45			
	Washburn Road	6+80	39+60	WB	Waterborne/Solvent Paint	X			No					32.80			
	Washburn Road	40+50	59+10	WB	Waterborne/Solvent Paint	X			No					18.60			
	Washburn Road	60+25	131+44	WB	Waterborne/Solvent Paint	X			No					71.19			
	Washburn Road	0+10		WB	Waterborne/Solvent Paint	X			No						0.64		
	Washburn Road	6+07		EB	Waterborne/Solvent Paint			X	No						0.44		
	Washburn Road	7+00		WB	Waterborne/Solvent Paint	X			No						0.44		
									Totals:		15.12	39.72	10.50	259.27	1.52		
Plan Temporary Paint Total:			Stations		Plan Permanent Paint Total:				326.13	Stations			Plan Total Paint:		326.13	Stations	

108_29
8/15/22

PAVEMENT MARKING SYMBOLS AND LEGENDS

Refer to PM-111

Line No.	Roadway Identification	Station	Side	Pavement Symbol	Quantity (EA)	Remarks
	Washburn Road	2+60	Rt.	RRCW	1	Railroad Crossing Symbol per PM-111.
	Washburn Road	11+34	Lt.	RRCW	1	Railroad Crossing Symbol per PM-111.
				Total	2	

TABULATIONS

DESIGN TEAM: CN, CW	Drawing Date: 9/12/2025	BLACK HAWK COUNTY	HMA Pavement – Full Depth Reclamation	PROJECT NUMBER: STP–S–C007(179)––5E–07	SHEET: C.08

100_01D
8/15/22

PROJECT DESCRIPTION

This construction project is located on Washburn Road (D38), from Hwy. 218 east to the City of Gilbertville.

This project includes two sections of roadway receiving 2" pavement scarification with a 2" surface lift of H.M.A. and one section of roadway receiving 6" pavement scarification, 12" full depth reclamation, H.M.A. resurfacing with a 3" intermediate lift of H.M.A., and a 2" surface lift of H.M.A. followed by pavement markings and edge line rumble strips.

Also includes work on a recreational trail that crosses the roadway.

The project shall be CLOSED to through traffic during the construction, however, local and emergency traffic will need to be maintained during all phases and at all times during construction.

Refer to Sheet J.01 for the traffic control plan and the proposed detour route provided by Black Hawk County.

No storm water permit 404 or Iowa DNR floodplain construction permit is required.

Section number references within these plans refer to the Current Iowa D.O.T. Standard Specifications for Highway and Bridge Construction.

105_04
10/20/26

STANDARD ROAD PLANS

The following Standards apply to construction work on this project.

Number	Date	Title
MI-220	04-15-25	Detectable Warnings and Pedestrian Ramp
PM-110	10-15-24	Line Types
PM-111	04-21-20	Symbols and Legends
PM-120	10-15-24	Stop Lines and Islands
PM-240	10-15-24	Railroad Crossing on Two-Lane Roadway
PM-420	10-20-26	Two-Lane Roadway with No Turn Lanes (One-Way Stop Condition)
PR-202	10-21-14	Notches for Resurfacing (With or Without Runout)
PV-3	10-15-24	Safety Edge
PV-12	10-20-26	Shoulder Rumble Strips
PV-202	04-21-20	Hot Mix Asphalt Resurfacing
SI-881	04-16-19	Special Signs for Workzones
TC-212	04-18-23	Spot Location Lane Closure with Flaggers
TC-232	10-21-14	Shoulder Rumble Strip Operations
TC-233	10-17-17	Pavement Marking Operations
TC-252	10-20-26	Routes Closed to Traffic

Bhco-Utilities
3/31/22

TABULATION OF UTILITIES

Company	Contact Person	Contact Number	
Iowa One-Call		1-800-292-8989	www.iowaonecall.com
(INS) Aureon Network Services	Jeff Klocko	1-515-830-0445	jeff.klocko@aureon.com
(CTLIA01) CenturyLink	Sadie Hull	1-918-547-0147	sadie.hull@lumen.com
(FM8) Farmers Mutual Telephone	Devin Kuenstling	1-319-827-1151	devin.kuenstling@heartlandtechnology.com
(GLC) Gilbertville, City of	Barbara K Doubek	1-319-296-1822	BarbDoubek@aol.com
(ICN) Iowa Communications Network	Dave Augspurger	1-515-725-4604	icnoutsideplantiowaonecall@iowa.gov
(LTC) LaPorte City Telephone Co.	Chris Hopp	1-563-245-4480	chris@alpine-communications.com
(AT6) Mediacom	Scott Lagow	1-845-544-9655	clagow@mediacomcc.com
(M27E) MidAmerican-Electric	Jordyn Weber	1-319-291-4728	jlweber@midamerican.com
(M58E) MidAmerican-Electric	Jordyn Weber	1-319-291-4728	jlweber@midamerican.com
(M27G) MidAmerican-Gas	Jordyn Weber	1-319-291-4728	jlweber@midamerican.com
(BED) Urban Services, LLC	Benjamin Delagardelle	1-319-240-3967	bdel471@gmail.com
(WWW) Waterloo Water Works	Chad Coon	1-232-628-5013	Chad.Coon@waterloo-ia.org
(CLECIA) Windstream Enterprise	CLEC Locate Desk	1-800-941-3430	wci.clec.locate@windstream.com

Bhco_SpecialNote
12/12/25

SPECIAL NOTES

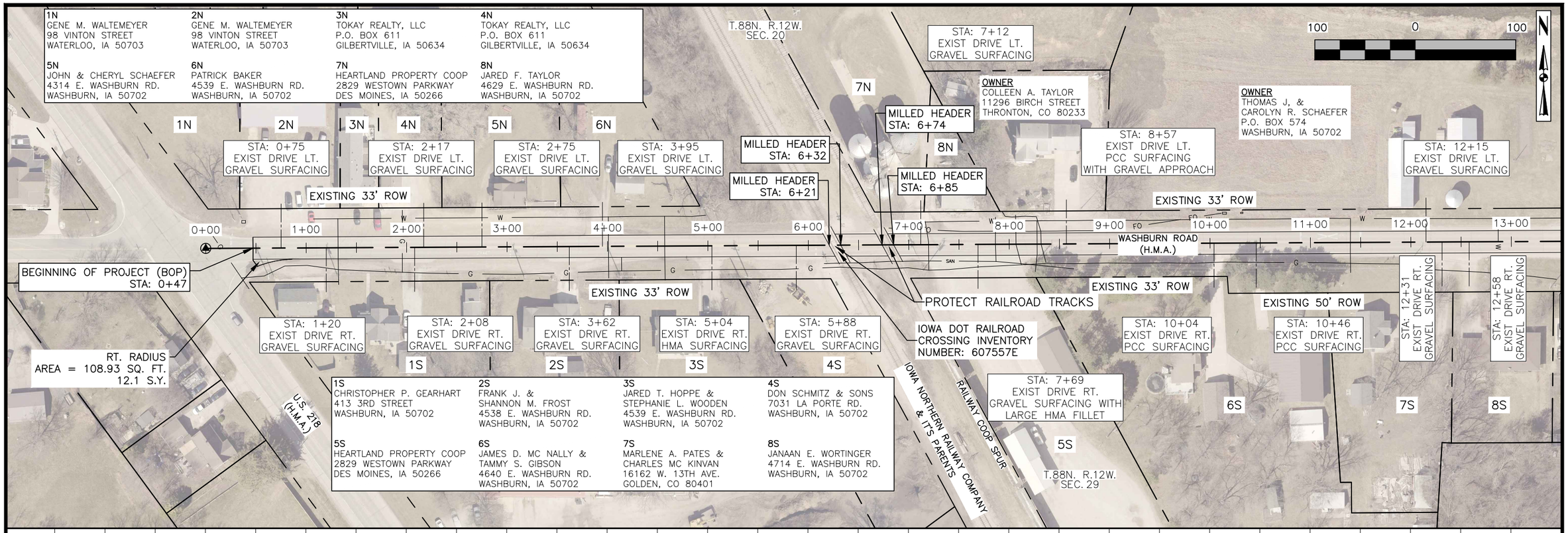
Railway:

This project crosses the Iowa Northern Railway Company and it's Parents in the City of Washburn. Please refer to Developmental Specification for Construction or Maintenance Work on Railroad Right-Of-Way (Chicago, Central, and Pacific Railroad Company, Cedar River Railroad Company, and Iowa Northern Railway Company) for more information. Also refer to bid item #28 for Railroad Protective Liability Insurance. The Iowa DOT Railroad Crossing Inventory Number for this crossing is: 607557E.

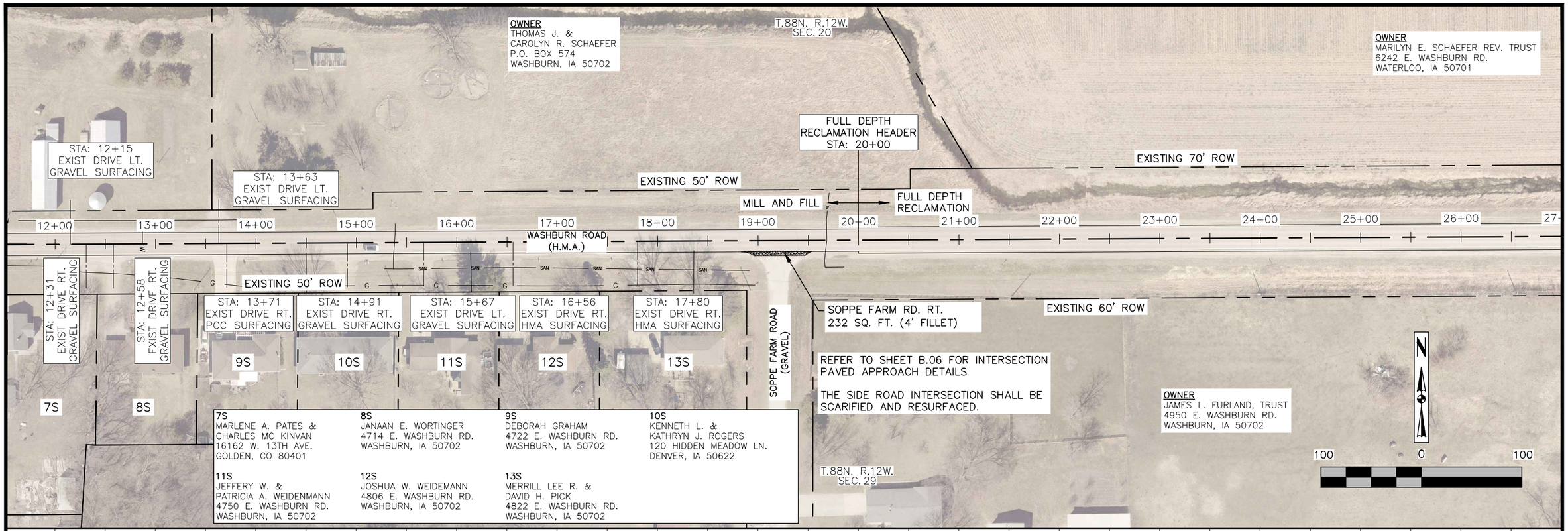
Vibration Monitoring of the Depot in Gilbertville:

The Depot is a historic structure that is located beyond the north R.O.W. in the City of Gilbertville. This structure will require a pre-construction inspection, vibration monitoring during the project, and a post construction inspection. Refer to Special Provisions for Vibration Monitoring to Protect Historic Structures in the bid documents for more information.

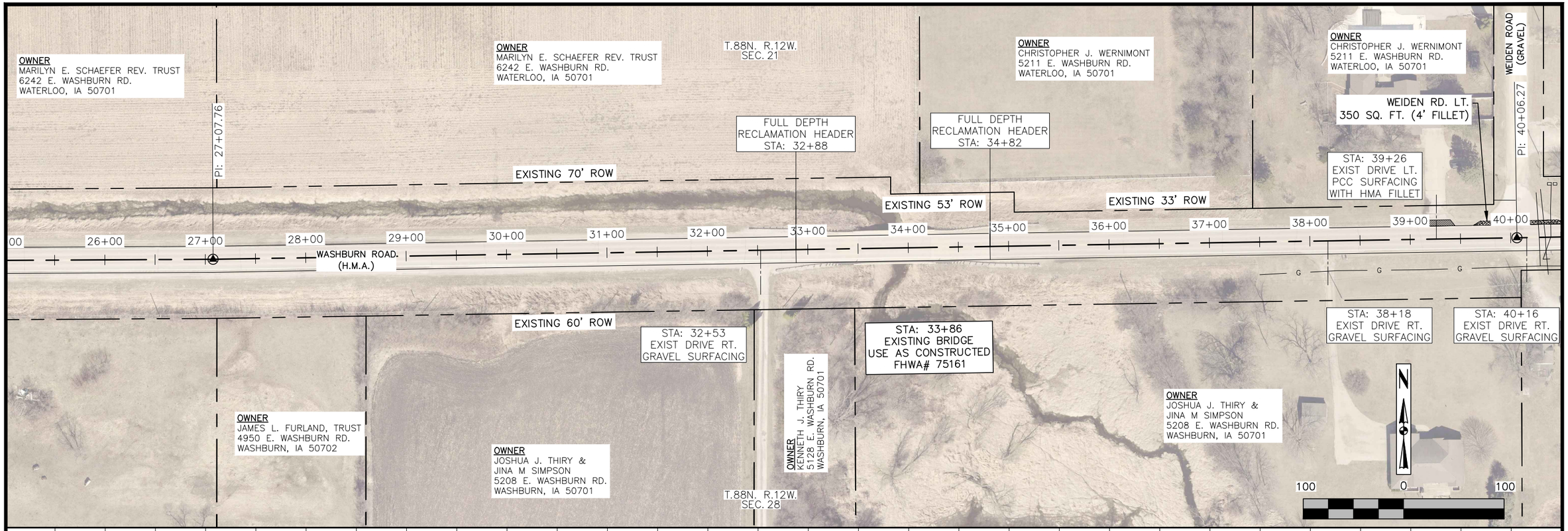
GENERAL NOTES, STANDARD ROAD PLANS, & TABULATION OF UTILITIES



DESIGN TEAM: CN, CW	DRAWING DATE: 9/8/2025	BLACK HAWK COUNTY	HMA Pavement – Full Depth Reclamation	PROJECT NUMBER: STP–S–C007(179)––5E–07	SHEET: D.01

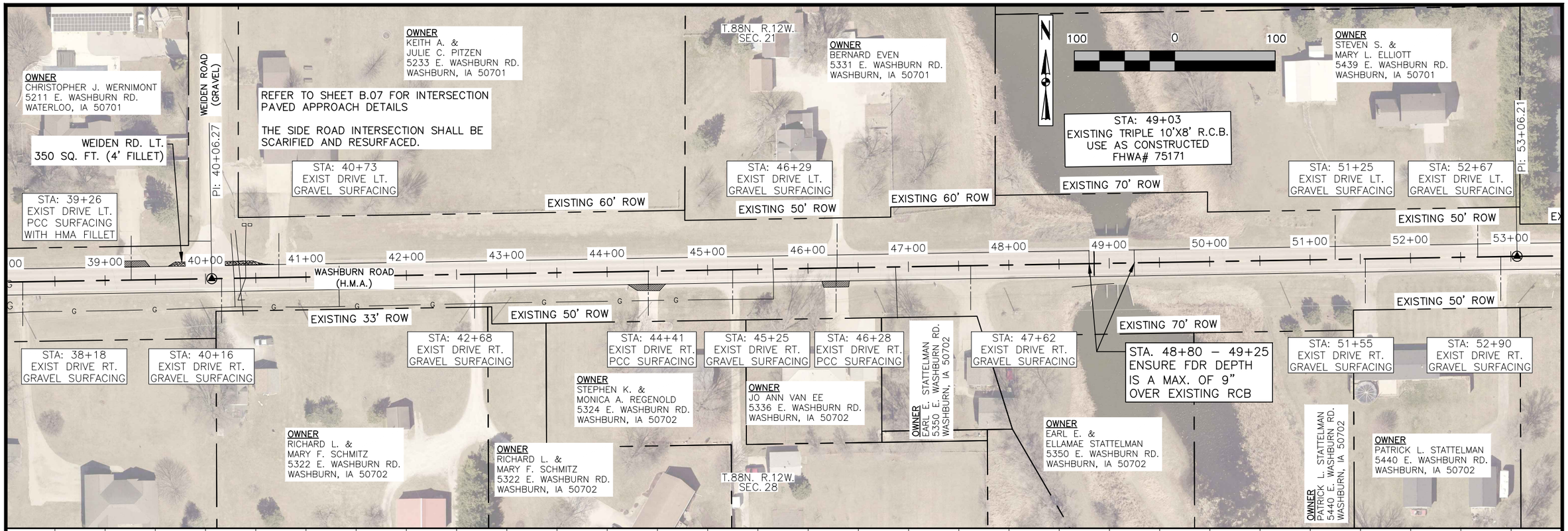


DESIGN TEAM: CN, CW	DRAWING DATE: 9/8/2025	BLACK HAWK COUNTY	HMA Pavement – Full Depth Reclamation	PROJECT NUMBER: STP-S-C007(179)--5E-07	SHEET: D.02



NOTE:
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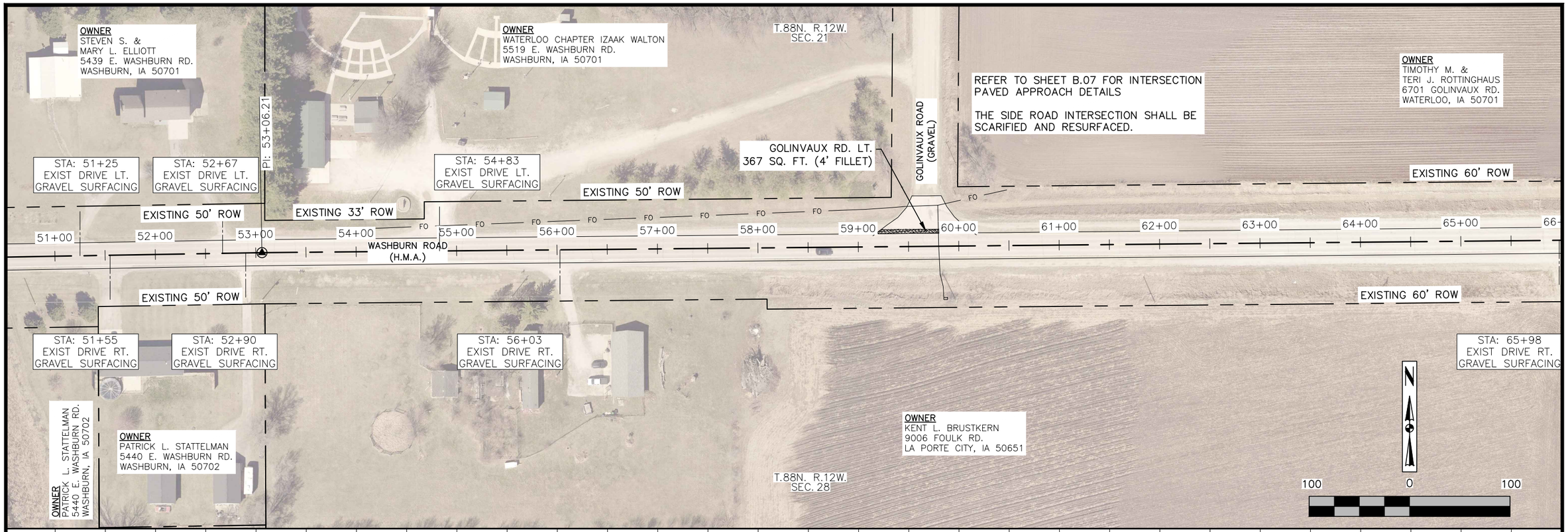
DESIGN TEAM: CN, CW	DRAWING DATE: 9/8/2025	BLACK HAWK COUNTY	HMA Pavement – Full Depth Reclamation	PROJECT NUMBER: STP-S-C007(179)--5E-07	SHEET: D.03

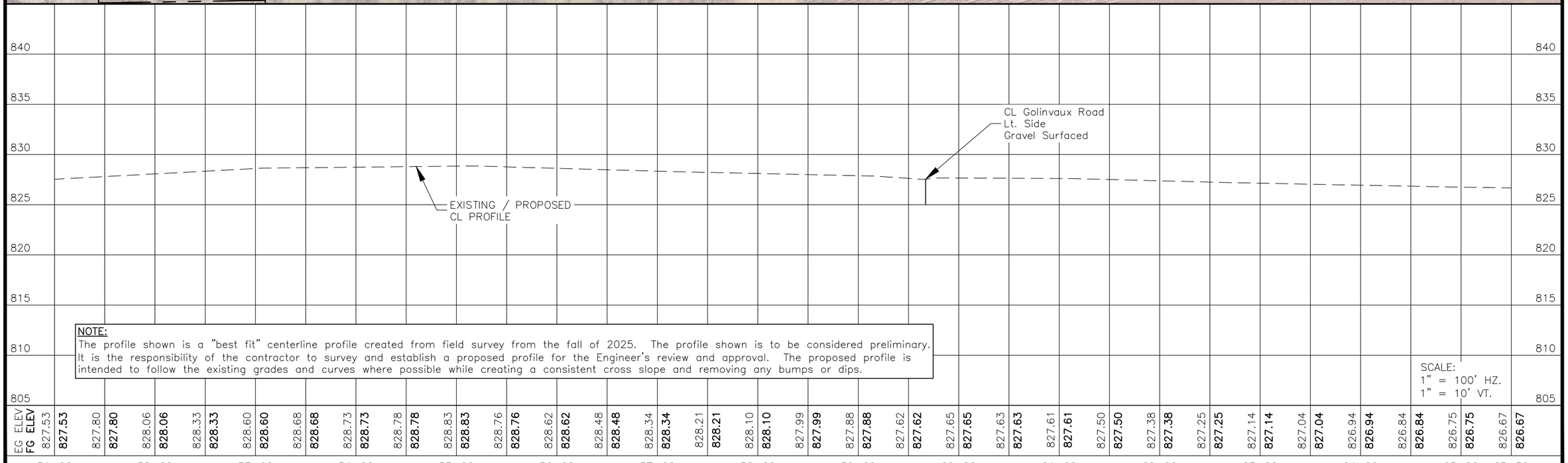


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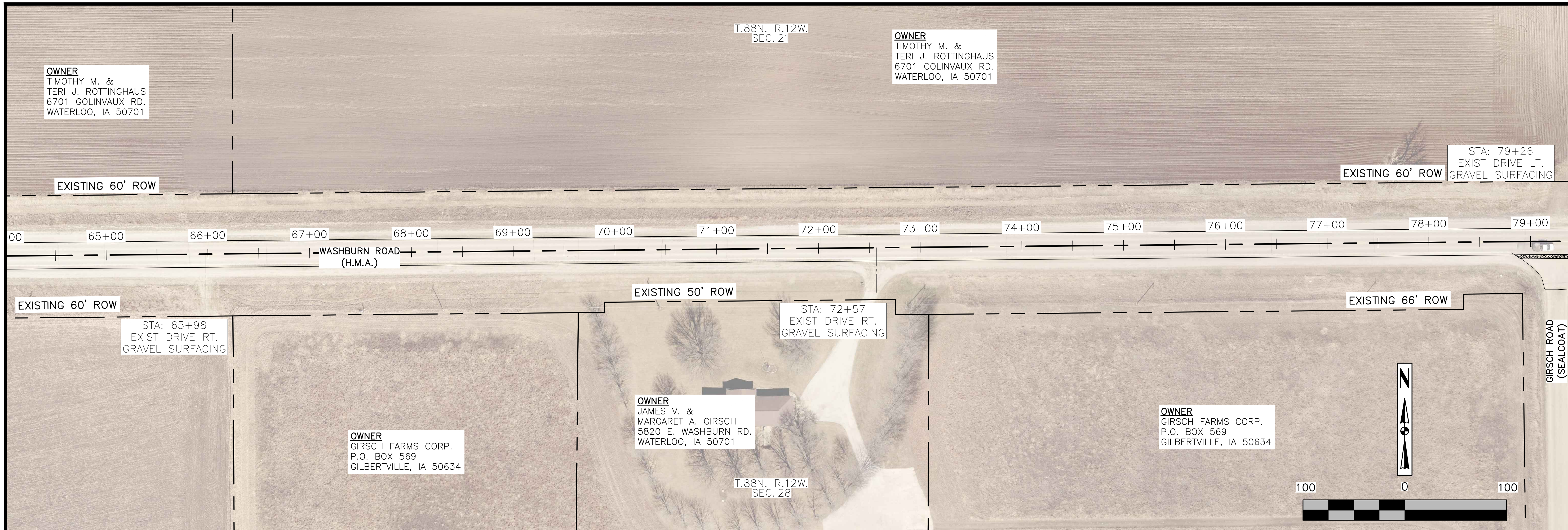
SCALE:
1" = 100' HZ.
1" = 10' VT.

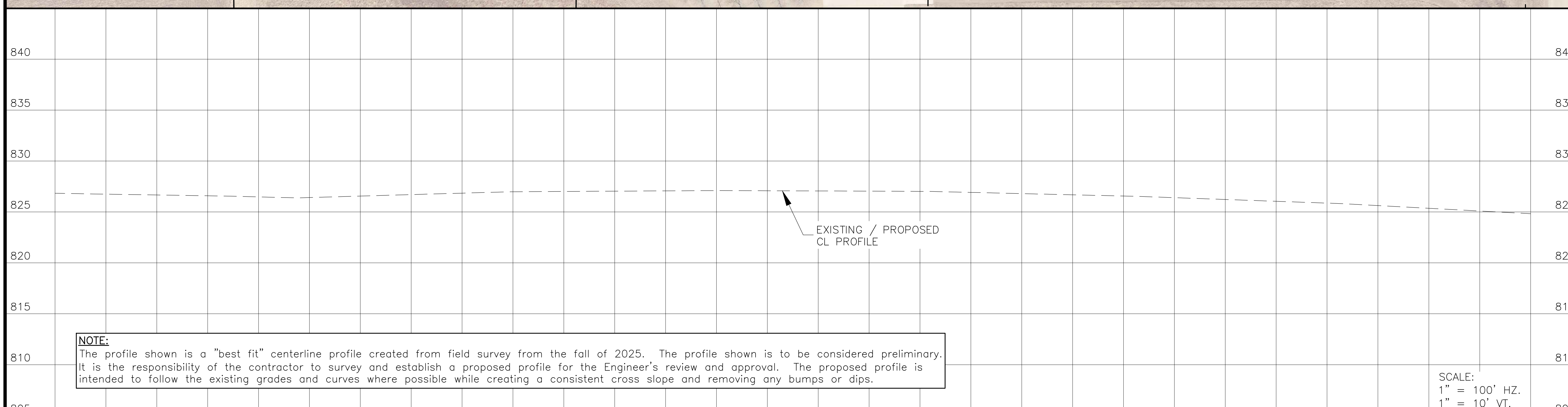
DESIGN TEAM: CN, CW	DRAWING DATE: 9/8/2025	BLACK HAWK COUNTY	HMA Pavement – Full Depth Reclamation	PROJECT NUMBER: STP–S–C007(179)––5E–07	SHEET: D.04





DESIGN TEAM: CN, CW	DRAWING DATE: 9/8/2025	BLACK HAWK COUNTY	HMA Pavement – Full Depth Reclamation	PROJECT NUMBER: STP-S-C007(179)--5E-07	SHEET: D.05

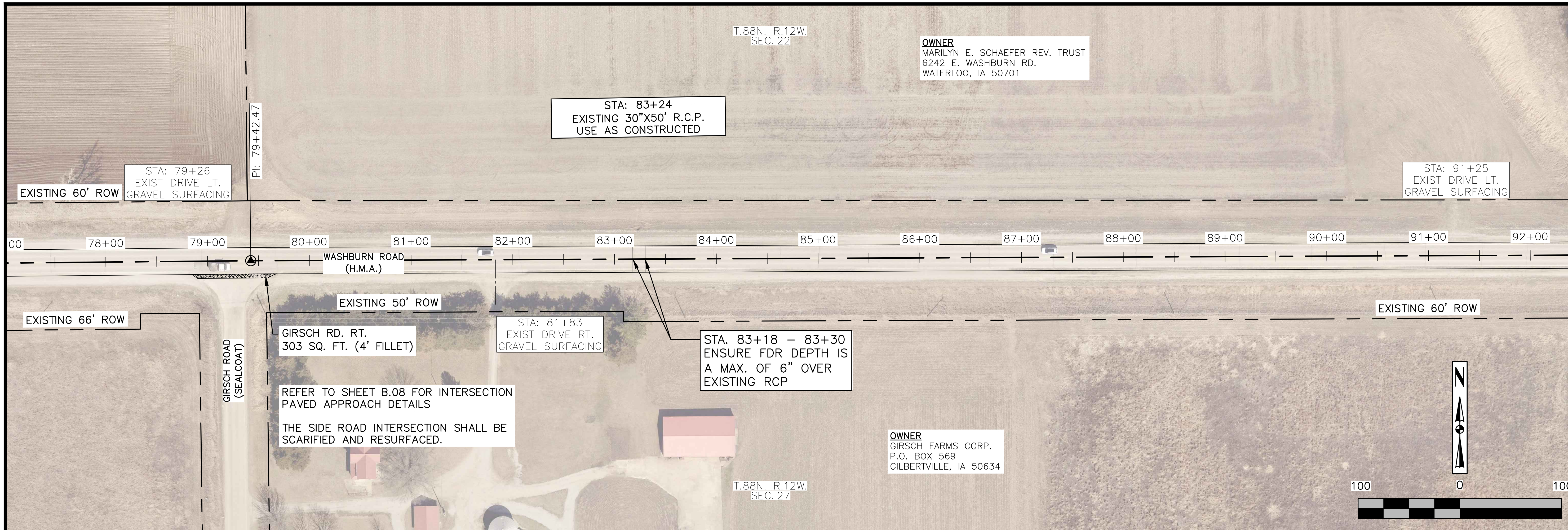


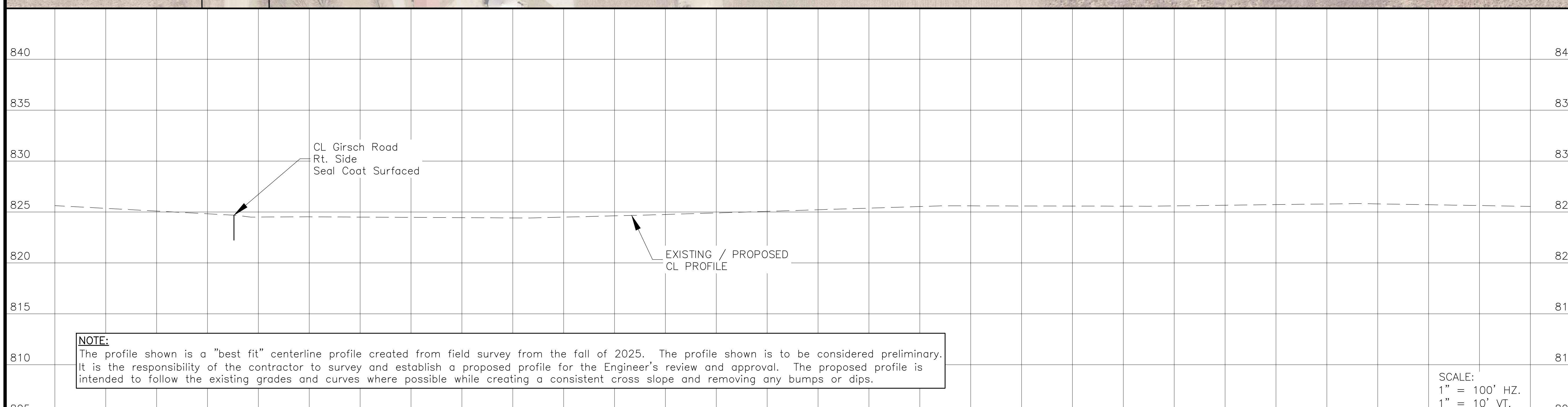


NOTE:
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Station	EG ELEV	FG ELEV
64+50	826.84	826.84
65+00	826.75	826.75
	826.67	826.67
66+00	826.59	826.59
	826.48	826.48
67+00	826.41	826.41
	826.56	826.56
68+00	826.70	826.70
	826.85	826.85
69+00	826.98	826.98
	827.01	827.01
70+00	827.04	827.04
	827.07	827.07
71+00	827.10	827.10
	827.08	827.08
72+00	827.06	827.06
	827.04	827.04
73+00	827.02	827.02
	826.92	826.92
74+00	826.80	826.80
	826.68	826.68
75+00	826.56	826.56
	826.40	826.40
76+00	826.22	826.22
	826.05	826.05
77+00	825.87	825.87
	825.63	825.63
78+00	825.36	825.36
	825.09	825.09
79+00	824.83	824.83

DESIGN TEAM: CN, CW	DRAWING DATE: 9/8/2025	BLACK HAWK COUNTY	HMA Pavement – Full Depth Reclamation	PROJECT NUMBER: STP–S–C007(179)––5E–07	SHEET: D.06



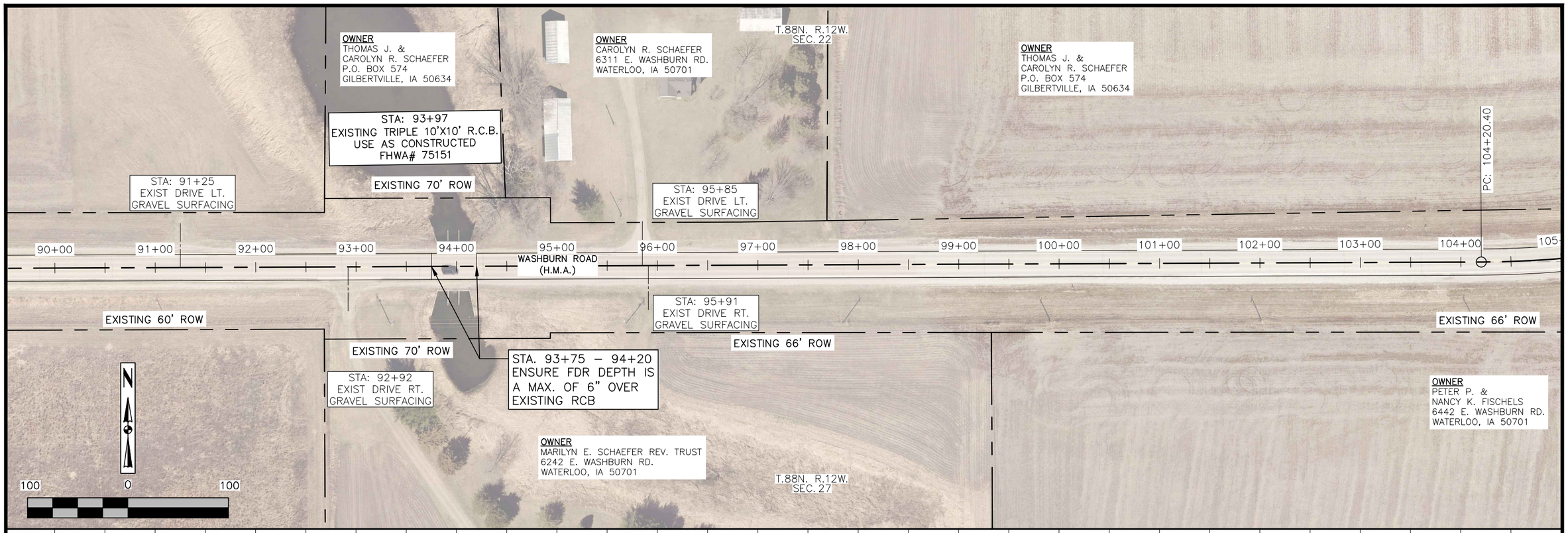


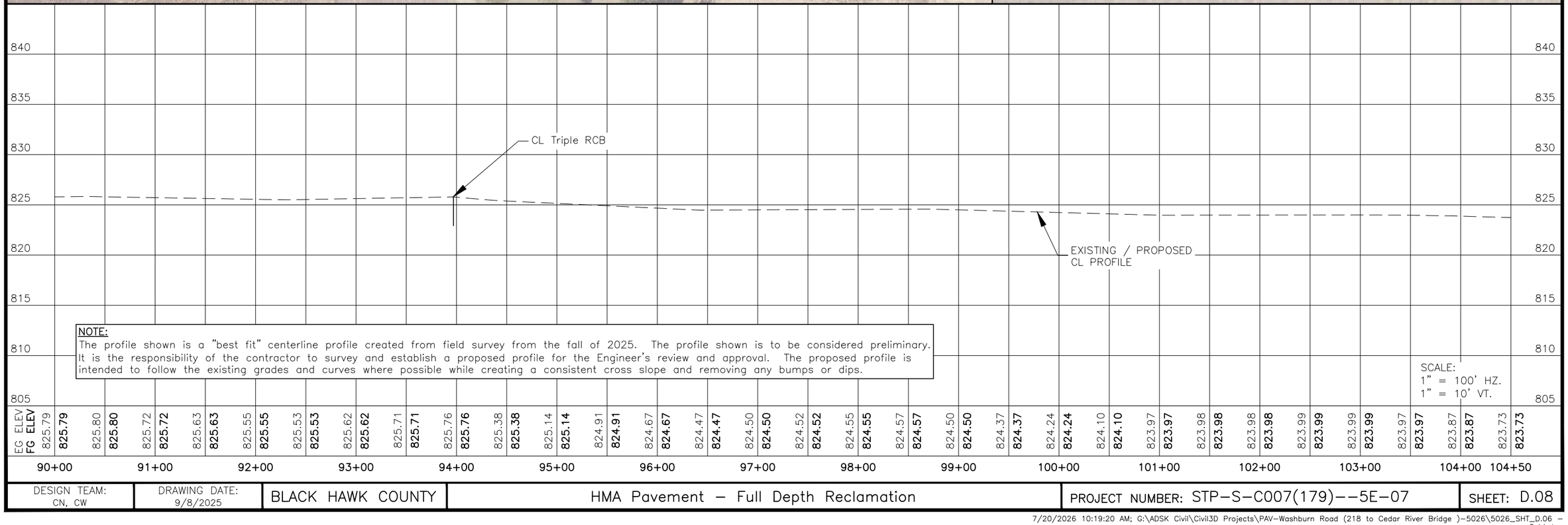
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EG ELEV	825.63	825.36	825.09	824.83	824.50	824.53	824.50	824.47	824.45	824.42	824.50	824.62	824.76	824.91	825.07	825.22	825.38	825.54	825.60	825.59	825.58	825.58	825.60	825.66	825.73	825.79	825.80	825.72	825.63	825.55
FG ELEV	825.63	825.36	825.09	824.83	824.50	824.53	824.50	824.47	824.45	824.42	824.50	824.62	824.76	824.91	825.07	825.22	825.38	825.54	825.60	825.59	825.58	825.58	825.60	825.66	825.73	825.79	825.80	825.72	825.63	825.55

77+50 78+00 79+00 80+00 81+00 82+00 83+00 84+00 85+00 86+00 87+00 88+00 89+00 90+00 91+00 92+00

DESIGN TEAM: CN, CW	DRAWING DATE: 9/8/2025	BLACK HAWK COUNTY	HMA Pavement – Full Depth Reclamation	PROJECT NUMBER: STP–S–C007(179)––5E–07	SHEET: D.07

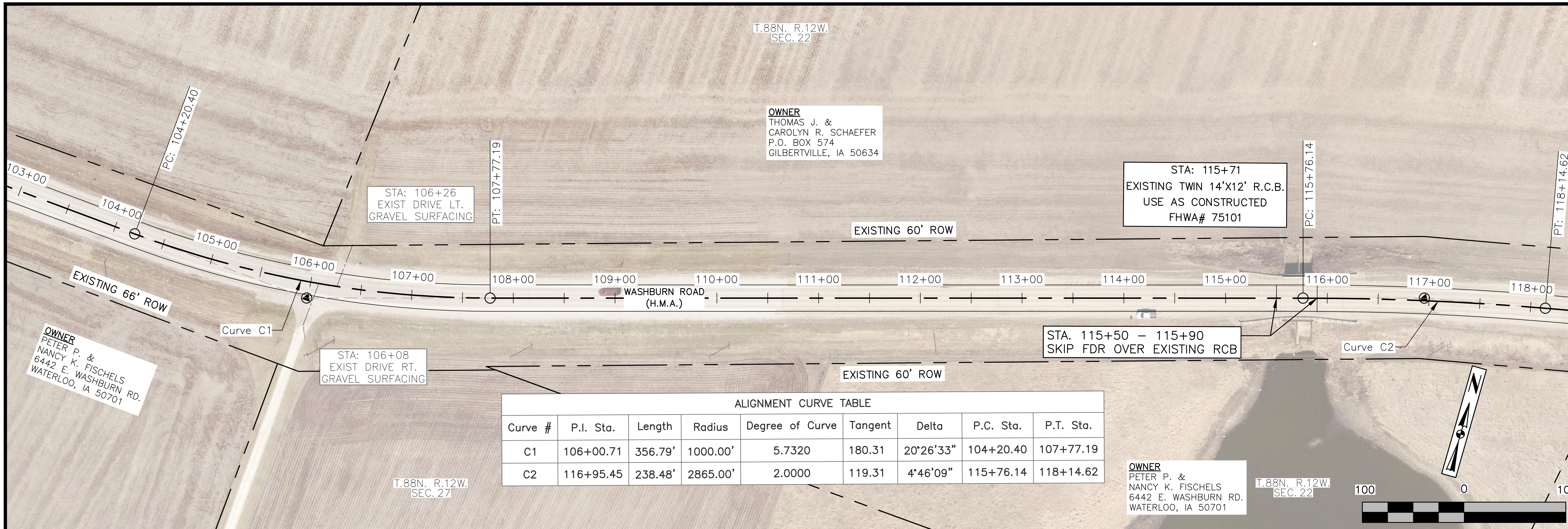




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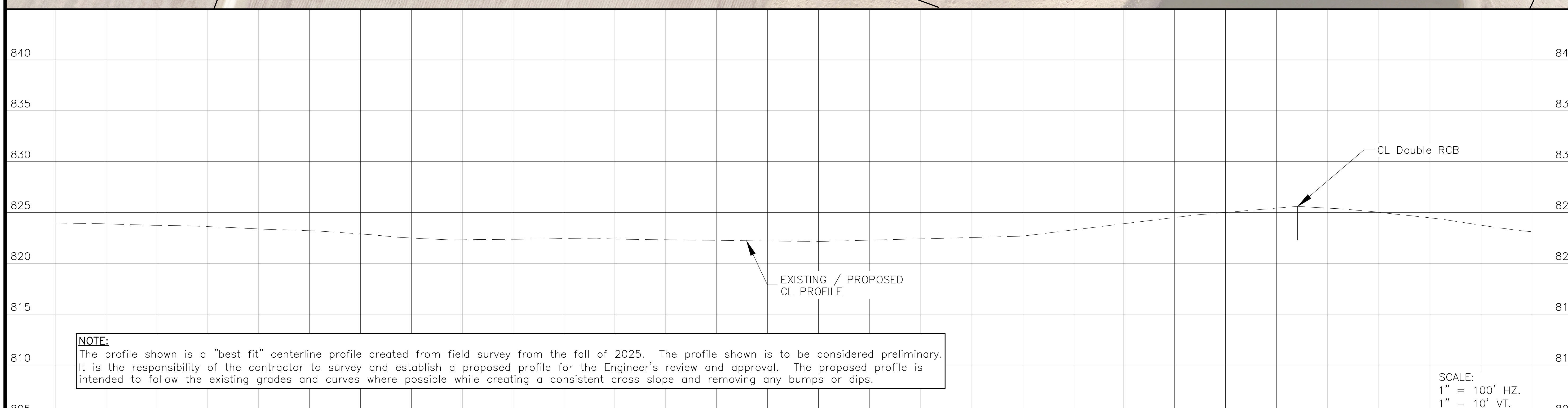
SCALE:
1" = 100' HZ.
1" = 10' VT.

DESIGN TEAM: CN, CW	DRAWING DATE: 9/8/2025	BLACK HAWK COUNTY	HMA Pavement – Full Depth Reclamation	PROJECT NUMBER: STP-S-C007(179)--5E-07	SHEET: D.08



ALIGNMENT CURVE TABLE

Curve #	P.I. Sta.	Length	Radius	Degree of Curve	Tangent	Delta	P.C. Sta.	P.T. Sta.
C1	106+00.71	356.79'	1000.00'	5.7320	180.31	20°26'33"	104+20.40	107+77.19
C2	116+95.45	238.48'	2865.00'	2.0000	119.31	4°46'09"	115+76.14	118+14.62



NOTE:
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SCALE:
1" = 100' HZ.
1" = 10' VT.

Station	EG ELEV	FG ELEV
103+50	823.97	823.97
104+00	823.87	823.87
	823.73	823.73
105+00	823.61	823.61
	823.38	823.38
106+00	823.21	823.21
	822.89	822.89
107+00	822.48	822.48
	822.31	822.31
108+00	822.36	822.36
	822.44	822.44
109+00	822.37	822.37
	822.31	822.31
110+00	822.26	822.26
	822.20	822.20
111+00	822.14	822.14
	822.27	822.27
112+00	822.40	822.40
	822.54	822.54
113+00	822.67	822.67
	823.28	823.28
114+00	823.89	823.89
	824.50	824.50
115+00	825.00	825.00
	825.42	825.42
116+00	825.43	825.43
	825.02	825.02
117+00	824.48	824.48
	823.76	823.76
118+00	823.11	823.11

DESIGN TEAM: CN, CW	DRAWING DATE: 9/8/2025	BLACK HAWK COUNTY	HMA Pavement – Full Depth Reclamation	PROJECT NUMBER: STP-S-C007(179)--5E-07	SHEET: D.09

100 0 100

N

T.88N. R.12W.
SEC. 22

ALIGNMENT CURVE TABLE								
Curve #	P.I. Sta.	Length	Radius	Degree of Curve	Tangent	Delta	P.C. Sta.	P.T. Sta.
C3	126+90.84	313.23'	3800.00'	1.5078	156.70	4°43'22"	125+34.14	128+47.37
C4	131+12.02	81.46'	2800.00'	2.0464	40.73	1°40'01"	130+71.29	131+52.75

OWNER
THOMAS J. &
CAROLYN R. SCHAEFER
P.O. BOX 574
GILBERTVILLE, IA 50634

PT: 118+14.62

EXISTING 60' ROW

118+00 119+00 120+00 121+00 122+00 123+00 124+00 125+00 126+00 127+00 128+00 129+00 130+00 131+00 131+95

WASHBURN ROAD
(H.M.A.)

STA: 123+67
EXIST DRIVE RT.
GRAVEL SURFACING

EXISTING 60' ROW

OWNER
TIMOTHY D. YOUNGBLUT
6830 E. WASHBURN RD.
WATERLOO, IA 50701

OWNER
PETER P. & NANCY K. FISCHELS
6442 E. WASHBURN RD.
WATERLOO, IA 50701

T.88N. R.12W.
SEC. 22

14S

CEDAR VALLEY NATURE TRAIL

15S

OWNER
THOMAS J. &
CAROLYN R. SCHAEFER
P.O. BOX 574
GILBERTVILLE, IA 50634

FULL DEPTH
RECLAMATION HEADER
STA: 124+64

FULL DEPTH
RECLAMATION

MILL AND FILL

STA: 124+71
EXIST DRIVE .
GRAVEL SURFACING

PC: 125+34.14

STA: 125+60
EXIST DRIVE .
GRAVEL SURFACING

9N 10N 11N 12N 13N 14N 15N

STA: 125+63
EXIST DRIVE .
GRAVEL SURFACING

Curve C3

STA: 126+72
EXIST DRIVE .
GRAVEL SURFACING

STA: 126+78
EXIST DRIVE .
GRAVEL SURFACING

PT: 128+47.37

STA: 128+09
EXIST DRIVE .
GRAVEL SURFACING

STA: 128+16
EXIST DRIVE LT.
GRAVEL SURFACING

STA: 129+24
EXIST DRIVE .
GRASS SURFACING

PC: 130+71.29

Curve C4

PT: 131+52.75

END OF PROJECT (EOP)
STA: 131+44

16S 17S 18S

9N
BLACK HAWK COUNTY
CONSERVATION
1346 AIRLINE HWY
WATERLOO, IA 50703

10N
JAMES D. &
VICTORIA M. LUCK
6831 E. WASHBURN RD.
WATERLOO, IA 50701

11N
JAMES D. &
VICTORIA M. LUCK
6831 E. WASHBURN RD.
WATERLOO, IA 50701

12N
SCOTT &
CARMEN STARR
6837 E. WASHBURN RD.
WATERLOO, IA 50701

13N
DANIEL T. &
STEPHANIE A. SCHULTE
6843 E. WASHBURN RD.
WATERLOO, IA 50701

14N
TIMOTHY D. YOUNGBLUT
TRUST
6830 E. WASHBURN RD.
WATERLOO, IA 50701

15N
TIMOTHY D. YOUNGBLUT
6830 E. WASHBURN RD.
WATERLOO, IA 50701

14S
BLACK HAWK COUNTY
CONSERVATION
1346 AIRLINE HWY
WATERLOO, IA 50703

15S
TIMOTHY D. YOUNGBLUT
TRUST
6830 E. WASHBURN RD.
WATERLOO, IA 50701

16S
THARP INVESTMENTS LLC
6423 GILBERTVILLE RD.
LA PORTE CITY, IA 50651

17S
DENISE BUMGARNER
6882 E. WASHBURN RD.
WATERLOO, IA 50701

18S
TIMOTHY D. YOUNGBLUT
TRUST
6830 E. WASHBURN RD.
WATERLOO, IA 50701

840 835 830 825 820 815 810 805

CL Cedar Valley
Nature Trail
HMA Surfaced

EXISTING / PROPOSED
CL PROFILE

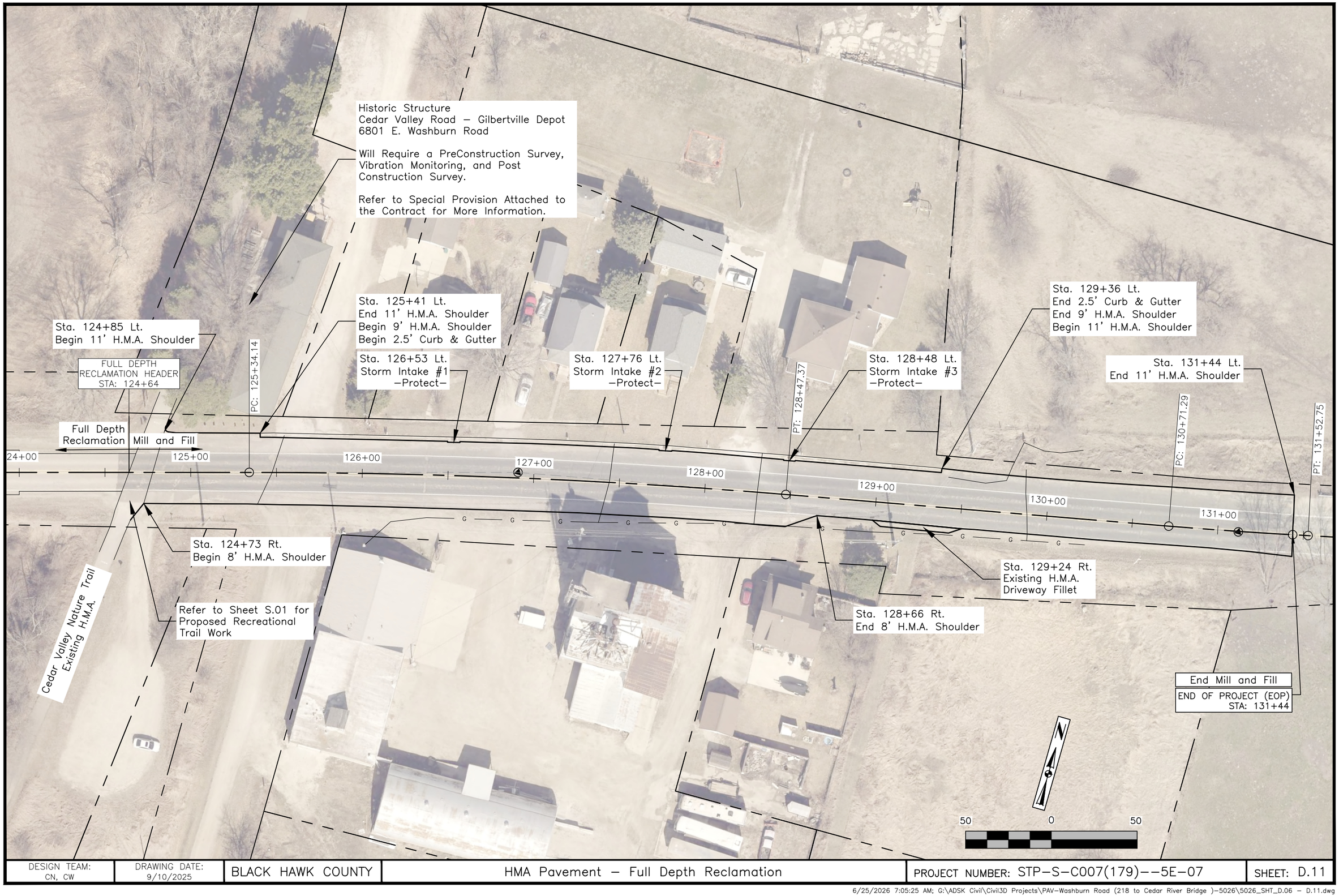
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SCALE:
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1" = 10' VT.

	118+00	119+00	120+00	121+00	122+00	123+00	124+00	125+00	126+00	127+00	128+00	129+00	130+00	131+00	132+00	132+50
EG ELEV	823.11	822.76	822.45	822.27	822.21	822.25	822.36	822.42	822.67	823.10	823.67	824.39	824.96	825.34	825.37	824.64
FG ELEV	823.11	822.76	822.45	822.27	822.21	822.25	822.36	822.42	822.67	823.10	823.67	824.39	824.96	825.34	825.37	824.64

	823.97	823.54	823.30	823.21	823.25	823.57	824.07	824.83	825.66	826.42	827.07	828.04
	823.97	823.54	823.30	823.21	823.25	823.57	824.07	824.83	825.66	826.42	827.07	828.04

DESIGN TEAM:	DRAWING DATE:			
CN, CW	9/8/2025	BLACK HAWK COUNTY	HMA Pavement – Full Depth Reclamation	PROJECT NUMBER: STP-S-C007(179)--5E-07	SHEET: D.10



DESIGN TEAM: CN, CW	DRAWING DATE: 9/10/2025	BLACK HAWK COUNTY	HMA Pavement – Full Depth Reclamation	PROJECT NUMBER: STP–S–C007(179)––5E–07	SHEET: D.11

Note:

Land corner and GPS monument documents can be found on the Black Hawk County website at the following address: https://www.blackhawkcounty.iowa.gov/238/Historical-Records

Alignment PI Station Report
Alignment Name: Washburn Rd-CL
Station Range: Start: 0+00.00, End: 131+95.40

PI Station	Northing	Easting	Distance	Direction
0+00.00	3,616,246.2240'	5,253,650.3760'		
			2,707.76'	N89°42'02"E
27+07.76	3,616,260.3730'	5,256,358.1030'		
			1,298.51'	N89°03'12"E
40+06.27	3,616,281.8290'	5,257,656.4360'		
			1,299.94'	N89°01'06"E
53+06.21	3,616,304.0990'	5,258,956.1820'		
			2,636.26'	N89°27'19"E
79+42.47	3,616,329.1660'	5,261,592.3180'		
			2,658.25'	N89°45'22"E
106+00.71	3,616,340.4764'	5,264,250.5391'		
			1,098.57'	N69°18'49"E
116+95.45	3,616,728.5490'	5,265,278.2840'		
			995.53'	N74°04'58"E
126+90.84	3,617,001.5703'	5,266,235.6433'		
			421.36'	N78°48'20"E
131+12.02	3,617,083.3725'	5,266,648.9875'		
			83.39'	N77°08'19"E
131+95.40	3,617,101.9336'	5,266,730.2820'		

Horizontal Alignment Report
****
Alignment Name: Washburn Rd-CL
Station Range: Start: 0+00.00, End: 131+95.40
****

Begin Washburn Rd-CL
N 3,616,246.2240 E5,253,650.3760 0+00.00

Line (1)
N89°42'02"E 2,707.76'
N 3,616,260.3730 E5,256,358.1030 27+07.76

Line (2)
N89°03'12"E 1,298.51'
N 3,616,281.8290 E5,257,656.4360 40+06.27

Line (3)
N89°01'06"E 1,299.94'
N 3,616,304.0990 E5,258,956.1820 53+06.21

Line (4)
N89°27'19"E 2,636.26'
N 3,616,329.1660 E5,261,592.3180 79+42.47

Line (5)
N89°45'22"E 2,477.93'
N 3,616,339.7092 E5,264,070.2289 104+20.40

Curve (6)
BC N 3,616,339.7092 E5,264,070.2289 104+20.40
CTR N 3,617,339.7001 E5,264,065.9740
PI N 3,616,340.4764 E5,264,250.5391

Direction Back N89°45'22"E
Radius 1,000.00'
Delta 20°26'33"(LT)
Length 356.79'
Tangent 180.31'
Chord Direction N79°32'06"E Distance 354.90'
Direction Ahead N69°18'49"E
EC N 3,616,404.1719 E5,264,419.2260 107+77.19

Line (7)
N69°18'49"E 798.95'
N 3,616,686.4036 E5,265,166.6689 115+76.14

Curve (8)
BC N 3,616,686.4036 E5,265,166.6689 115+76.14
CTR N 3,614,006.1152 E5,266,178.7359
PI N 3,616,728.5490 E5,265,278.2840

Direction Back N69°18'49"E
Radius 2,865.00'
Delta 4°46'09"(RT)
Length 238.48'
Tangent 119.31'
Chord Direction N71°41'54"E Distance 238.41'
Direction Ahead N74°04'58"E
EC N 3,616,761.2687 E5,265,393.0167 118+14.62

Line (9)
N74°04'58"E 719.52'
N 3,616,958.5950 E5,266,084.9487 125+34.14

Curve (10)
BC N 3,616,958.5950 E5,266,084.9487 125+34.14
CTR N 3,613,304.2902 E5,267,127.0893
PI N 3,617,001.5703 E5,266,235.6433

Direction Back N74°04'58"E
Radius 3,800.00'
Delta 4°43'22"(RT)
Length 313.23'
Tangent 156.70'
Chord Direction N76°26'39"E Distance 313.14'
Direction Ahead N78°48'20"E
EC N 3,617,031.9923 E5,266,389.3647 128+47.37

Line (11)
N78°48'20"E 223.93'
N 3,617,075.4647 E5,266,609.0295 130+71.29

Curve (12)
BC N 3,617,075.4647 E5,266,609.0295 130+71.29
CTR N 3,619,822.1925 E5,266,065.4429
PI N 3,617,083.3725 E5,266,648.9875

Direction Back N78°48'20"E
Radius 2,800.00'
Delta 1°40'01"(LT)
Length 81.46'
Tangent 40.73'
Chord Direction N77°58'20"E Distance 81.46'
Direction Ahead N77°08'19"E
EC N 3,617,092.4393 E5,266,688.6985 131+52.75

Line (13)
N77°08'19"E 42.65'
N 3,617,101.9336 E5,266,730.2820 131+95.40
End Washburn Rd-CL
****
Alignment Length: 13,195.40'
****

CENTERLINE ALIGNMENT REPORTS

DESIGN TEAM: CN, CW	Drawing Date: 3/3/2026	BLACK HAWK COUNTY	HMA Pavement – Full Depth Reclamation	PROJECT NUMBER: STP-S-C007(179)--5E-07	SHEET: G.01

108_23A
8/15/22

Traffic Control Plan

Traffic control devices, procedures, layouts, signing, and pavement markings installed within the limits of this project shall conform to the Manual on Uniform Traffic Control Devices for Streets and Highways, as adopted by the Department per 761 of the Iowa Administrative Code (IAC), Chapter 130.

Traffic control on this project shall be in accordance with the Iowa Department of Transportation Standard Road Plans. For additional information, refer to the current Standard Specifications for Traffic Control.

This project shall be CLOSED to thru traffic during all phases of construction. The Contractor is responsible for all traffic control in accordance with Road Standard TC–252, Situation 6, and any general notes that apply.

The Contractor shall maintain access to the project at all times for local and emergency traffic. The City of Gilbertville Fire and Rescue will need to be kept up to date with roadway conditions and closures so they can plan their response routes. The primary contact will be the Fire Chief Curt Bovy at (319) 239–4632. The Contractor will be responsible for keeping in contact with the Fire Chief during construction.

Immediately prior to pavement scarification, the Contractor shall place bump signs at each direction of travel at all scarified header locations to warn traffic of the milled header. The signs shall be left in place until the bumps have been removed. Two (2) signs shall be placed at each header location (facing each direction).

A marked detour shall be established, maintained, and removed by Black Hawk County. A minimum of 5 days notice shall be given to the County prior to the start of the project, any changes to the detour, and/or the completion of the project in order to allow the County to schedule the required detour work.

The Contractor shall also be required to provide any applicable special signs for work zones as part of Standard Road Plan SI–881 at all access points for this project.

When work disrupts the Cedar Valley Nature Trail, the Contractor shall place proper barricades and signage to inform/protect pedestrian traffic from the construction activities. Any such signing shall be included in the traffic control bid item.

As directed by the Engineer, the Contractor shall cover all signing that is not in use.

Storage of equipment by the Contractor during non–working hours will not be allowed within the R.O.W. limits. If the Contractor needs to have equipment parked on site, it is their responsibility to find an area away from the traveled portion of the roadway.

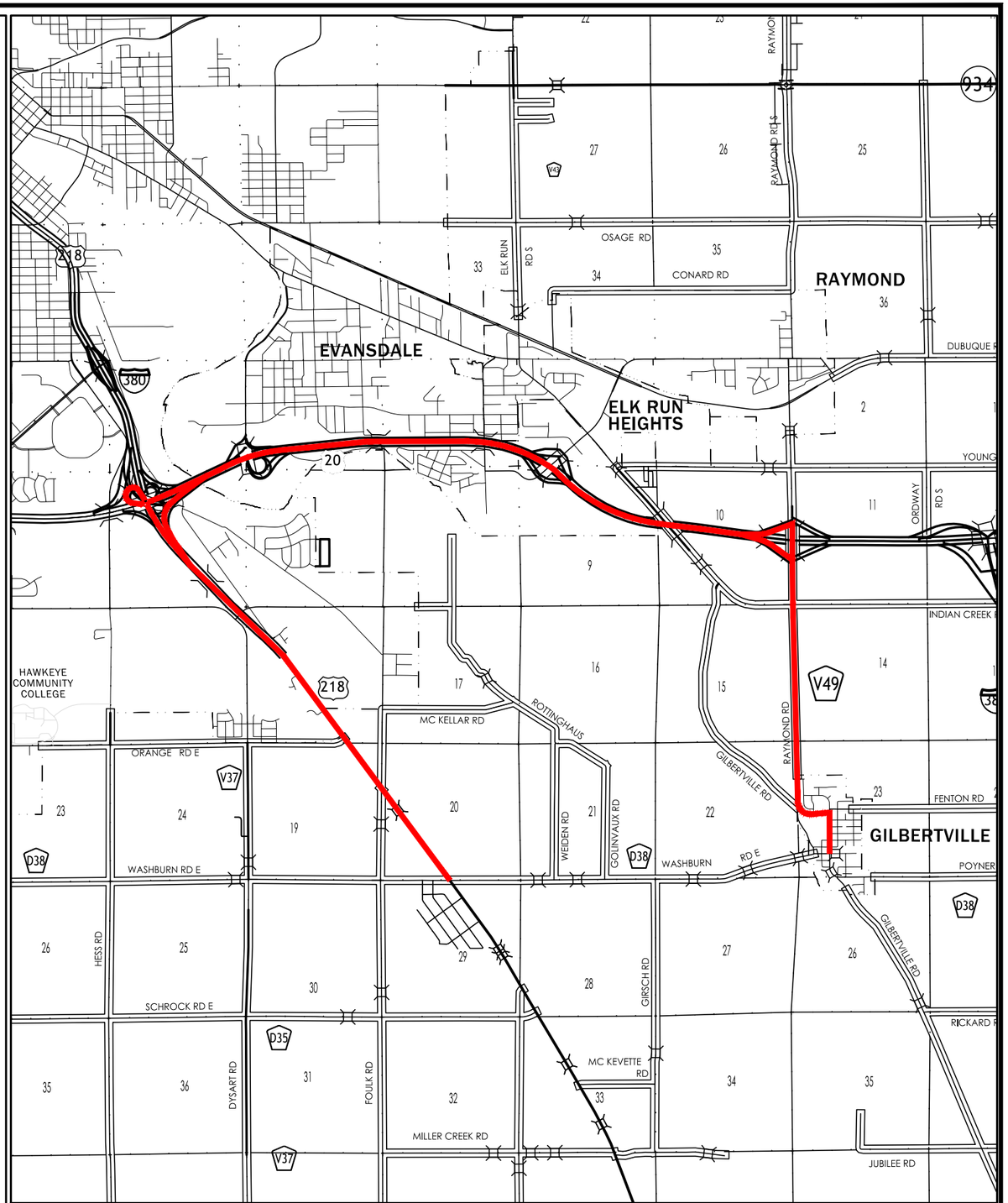
The Contractor shall be responsible for all installation, preservation, maintenance, and removal of necessary safety devices per these plans.

Proposed sign spacing may be modified as approved by the Engineer, to meet existing field restrictions or to prevent obstruction of the motorist's view of permanent signing.

Proposed changes in the traffic control plan, (including layout sheets) shall be reviewed with the County Engineer before the changes are made.

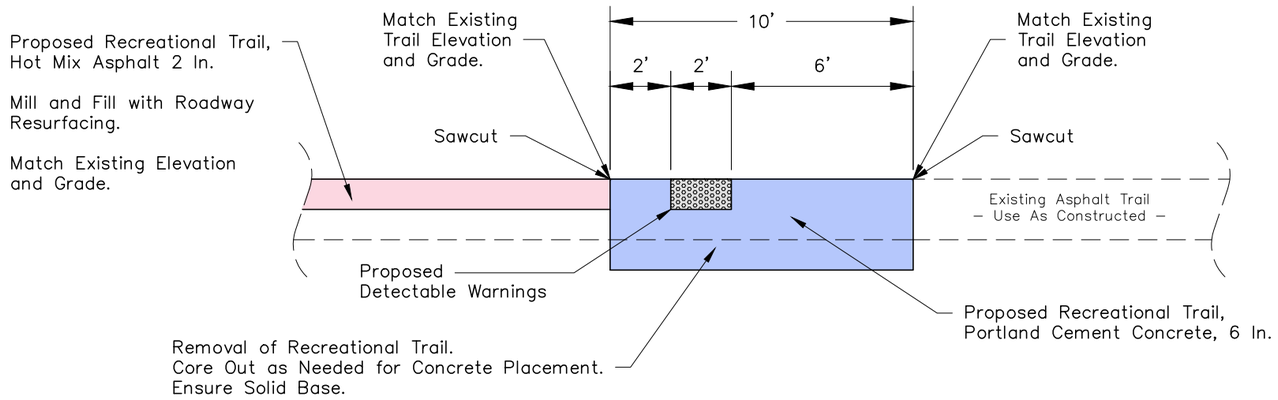
A written traffic control plan shall be submitted to the Engineer in order to coordinate construction. The proposed traffic control plan will be due on or before the pre–construction meeting. If the Contractor has proposed changes to any phase of work, they shall submit a traffic control plan revision to the Engineer prior to starting field work.

The Prime Contractor shall be responsible for the daily traffic control diary and have the appropriate certified staff to accomplish monitoring the traffic control.

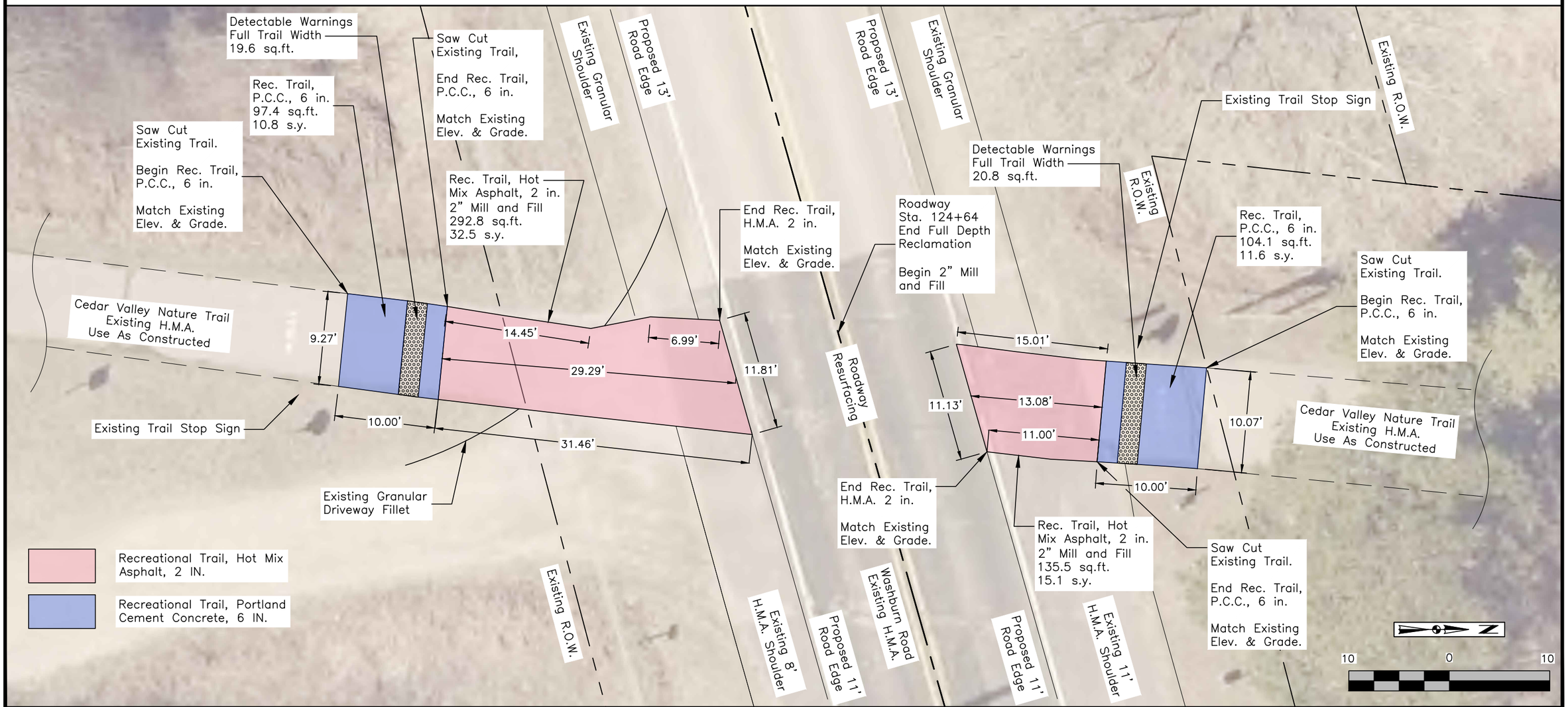


TRAFFIC CONTROL PLAN
AND DETOUR ROUTE

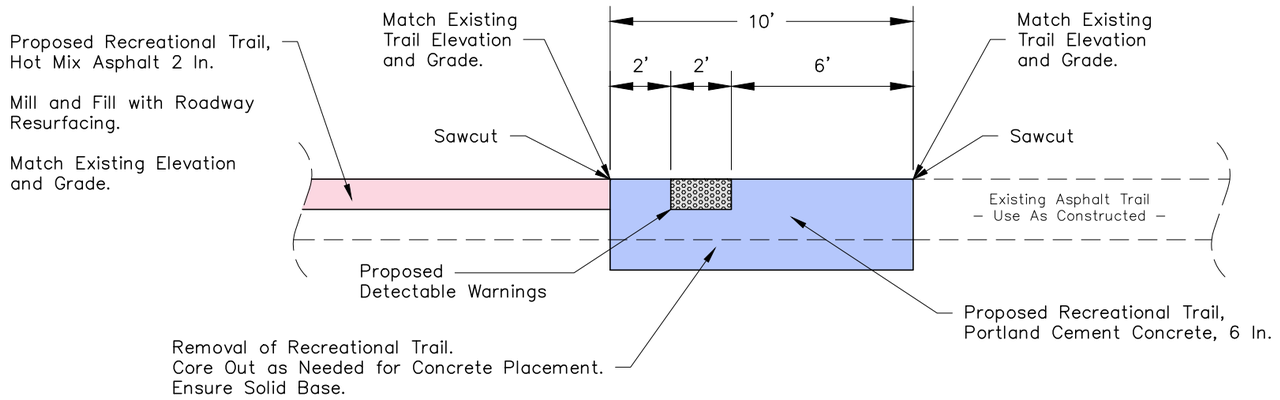
DESIGN TEAM: CN, CW	Drawing Date: 12/12/2025	BLACK HAWK COUNTY	HMA Pavement – Full Depth Reclamation	PROJECT NUMBER: STP–S–C007(179)––5E–07	SHEET: J.01

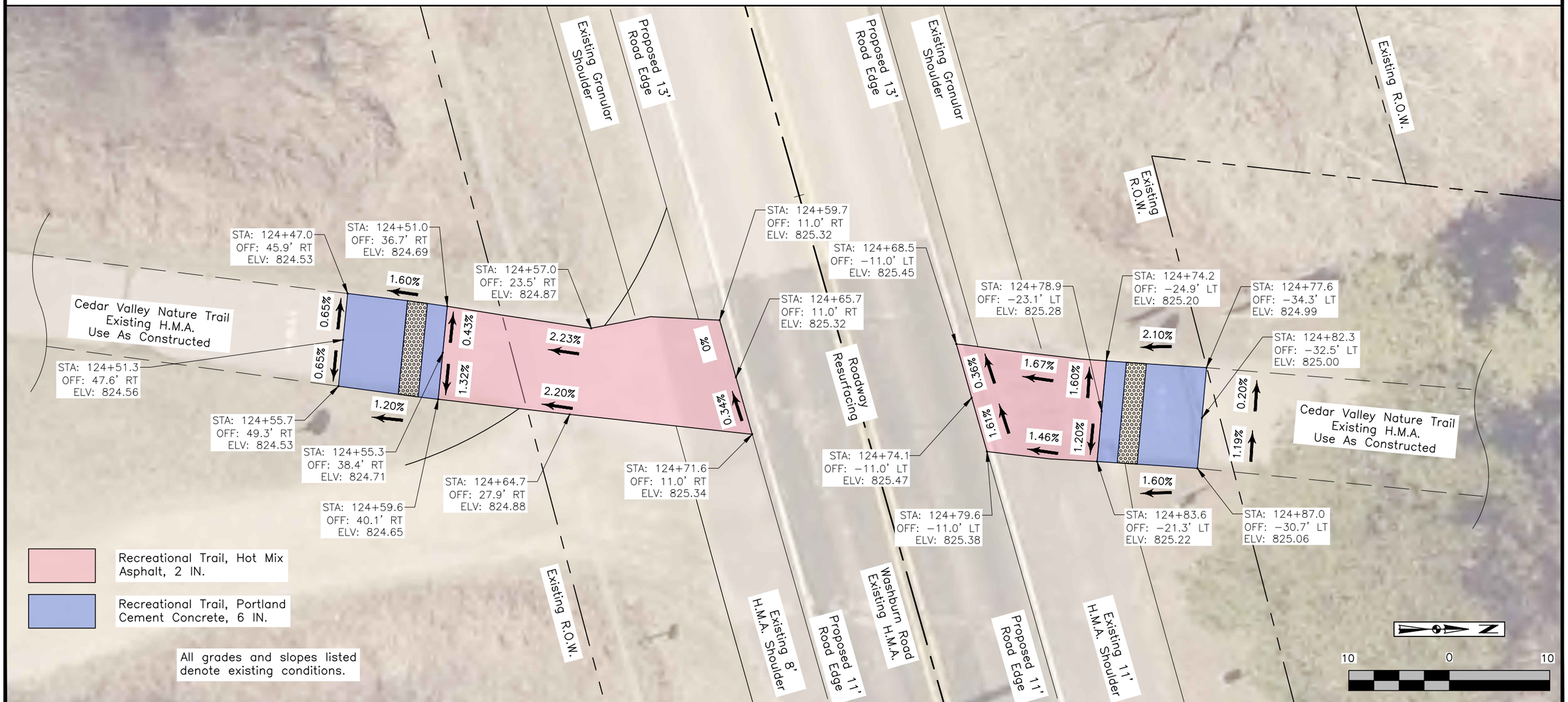


Refer to Sheet S.02 for Existing Slopes, Grades, and Elevations.



DESIGN TEAM: CN, CW	DRAWING DATE: 10/1/2025	BLACK HAWK COUNTY	HMA Pavement – Full Depth Reclamation	PROJECT NUMBER: STP–S–C007(179)––5E–07	SHEET: S.01





DESIGN TEAM: CN, CW	DRAWING DATE: 10/1/2025	BLACK HAWK COUNTY	HMA Pavement – Full Depth Reclamation	PROJECT NUMBER: STP–S–C007(179)––5E–07	SHEET: S.02