HMA Resurfacing/Cold-in-Place Recycling
NHSX-330-2(102)--3H-64

LETTING DATE 12-15-2026

MARSHALL COUNTY

INDEX OF SHEETS	
No.	DESCRIPTION
A Sheets	**Title Sheets**
* A.1	Title Sheet
* A.2	Project Location Map
B Sheets	**Typical Cross Sections and Details**
B.1 - 4	Typical Cross Sections and Details
C Sheets	**Quantities and General Information**
C.1 - 2	Estimated Project Quantities
C.1 - 2	Estimate Reference Information
C.3	Project Description
C.3	Standard Road Plans
C.3	Index of Tabulations
C.3	General Notes
C.3 - 8	Tabulations
D Sheets	**Mainline Plan and Profile Sheets**
* D.1	Plan & Profile Legend & Symbol Information Sheet
* D.2 - 7	IA 330 (SB)
J Sheets	**Traffic Control and Staging Sheets**
J.1	Traffic Control Plan
U Sheets	**500 Series, Mod.Stds. and Detail Sheets**
U.1	Milling Typical at North Timber Creek
	* Color Plan Sheets

IOWA DOT

PLANS OF PROPOSED IMPROVEMENT ON THE

PRIMARY ROAD SYSTEM

MARSHALL COUNTY

HMA Resurfacing/Cold-in-Place Recycling

Melbourne to US 30 (SB)

SCALES: As Noted

Refer to the Proposal Form for list of applicable specifications.

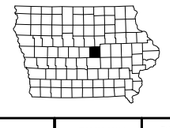
Value Engineering Saves. Refer to Article 1105.13 of the Specifications.

IOWA ONE CALL
1-800-292-8989
www.iowaonecall.com
811 Know what's below. Call before you dig.

REVISIONS

	TOTAL
	23
PROJECT IDENTIFICATION NUMBER	
20-64-330-010	
PROJECT NUMBER	
NHSX-330-2(102)--3H-64	
R.O.W. PROJECT NUMBER	
--	

Project Location Map on Sheet A.2



DESIGN DATA RURAL			
2026	AADT	8,700	V.P.D.
2046	AADT	10,400	V.P.D.
20 –	DHV	–	V.P.H.
TRUCKS		11	%
Total Design ESALs		5,510,007	

INDEX OF SEALS

SHEET NO.	NAME	TYPE	BID QUANTITY SHEETS
A.1	Jeremey Vortherms	Primary Signature Block	C.1

LICENSED PROFESSIONAL ENGINEER
Jeremey J. Vortherms
15310
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 6-17-26 Date

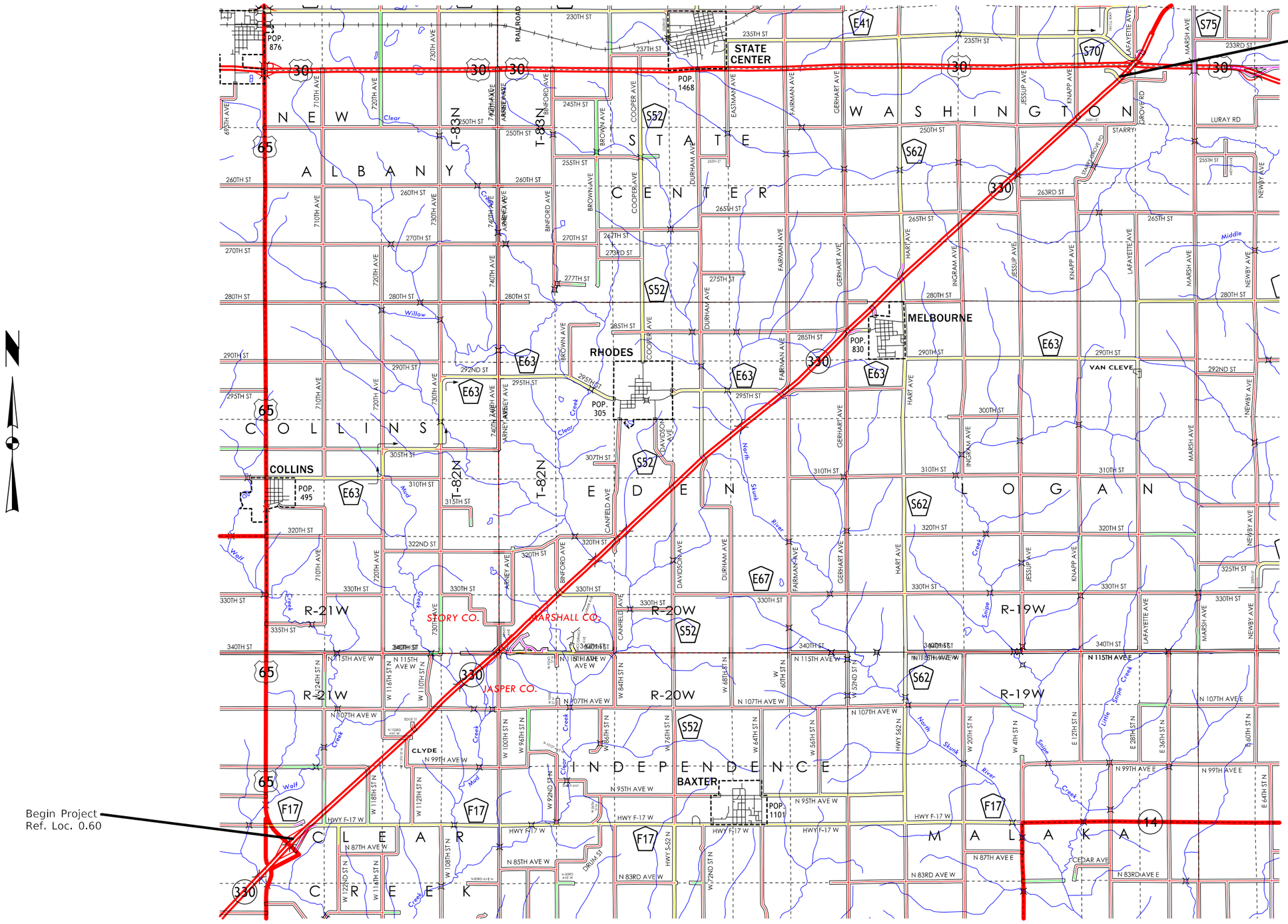
Jeremey J. Vortherms
Printed or Typed Name

My license renewal date is December 31, 20 26

Pages or sheets covered by this seal:
A.1-2, B.1-4, C.1-8, D.1-7, J.1, U.1

FILE NO.	ENGLISH	DESIGN TEAM Vortherms\Tamrakar\Vais	MARSHALL COUNTY	PROJECT NUMBER NHSX-330-2(102)--3H-64	SHEET NUMBER A.1

6:34:49 AM 10/1/2026 mvais pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6433001020\DistrictDesign\NHSX-330-2(102)--3H-64\64330102_A1.dgn



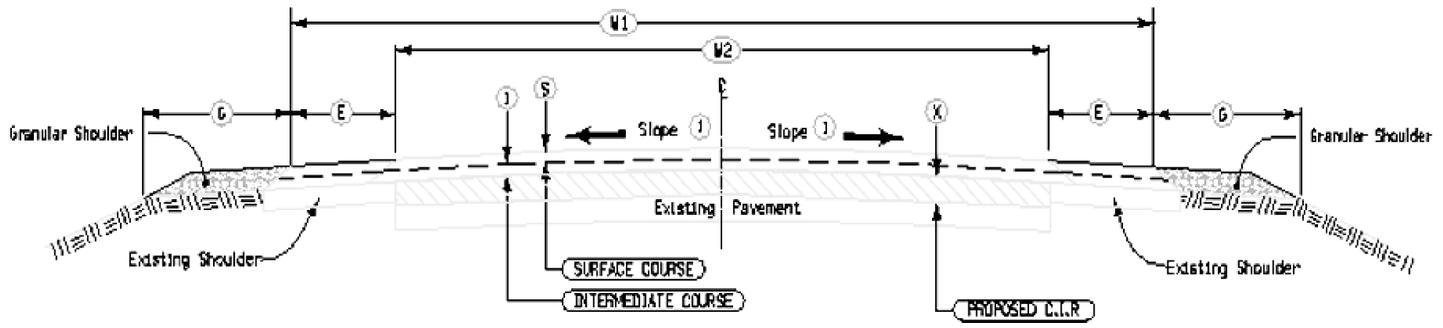
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6:34:52 AM 10/1/2026 mvais pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6433001020\DistrictDesign\NHSX-330-2(102)--3H-64\64330102_A1.dgn

2602-B
Modified

HMA RESURFACING

C.I.R. (Cold In-Place Recycling)



Notes:

(J) Match finished slope to existing pavement, except that the maximum allowable slope is 3.0 %. Minimum allowable slope is 2.0 %. Section may be modified as directed by the Engineer through areas of special shaping.

Refer to tabulation listing of superelevated curves and Standard Road Plans for additional requirements through superelevated curves.

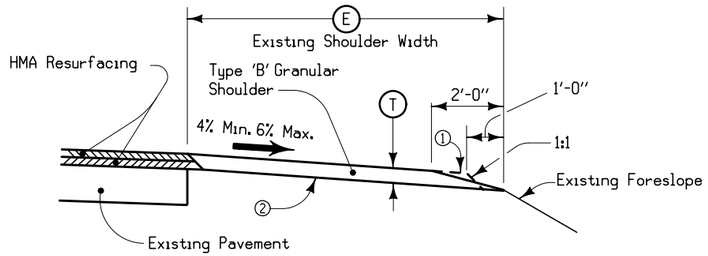
(E) HMA and tack coat quantities for shoulders included with mainline quantities.

LOCATION				HMA Resurfacing				Cold In-place Recycling			
ROAD IDENTIFICATION	DIR.	STATION TO STATION		(S) Inches	(I) Inches	(W1) Feet	(E) Feet	(W2) Feet	(X) Inches	CIPR SY	Stabilizing Agent Tons
IA 330	SB	466+62.19	514+54.13	1.5	1.5	32	4	24	3	12778.51	42.2
IA 330	SB	514+57.05	637+14.83	1.5	1.5	32	4	24	3	32687.41	107.9
IA 330	SB	637+14.68	637+21.64	1.5	1.5	32	4	24	3	18.56	0.1
IA 330	SB	640+30.90	770+73.11	1.5	1.5	32	4	24	3	34779.23	114.8
										0.00	0.0
							Totals			**80263.71**	**264.9**

FILE NO. | ENGLISH | DESIGN TEAM Vortherms\Tamrakar\Vais | MARSHALL COUNTY | PROJECT NUMBER NHSX-330-2(102)--3H-64 | SHEET NUMBER B.1

2:33:22 PM 10/15/2026 mvais pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6433001020\DistrictDesign\NHSX-330-2(102)--3H-64\64330102_B1.dgn

7135
10-15-13



① Place and compact material to the dashed lines; then blade and shape to foreslope that portion above the solid line in the outer 2' and roll with loaded truck tire.

② Existing shoulder surface to be shaped to a uniform cross slope prior to placing granular shoulder material. Shape to ensure the thickness of the granular shoulder material is not less than the thickness of the resurfacing.

LOCATION				T	E
ROAD IDENTIFICATION	STATION TO STATION		SIDE	Inches	Feet
IA 330 (SB)	466+62.19	514+54.13	Rt	3	6
	514+57.05	637+14.83	Rt	3	6
	637+14.68	770+73.11	Rt	3	6

TYPICAL SECTION FOR TYPE 'B' GRANULAR SHOULDER

ADJACENT TO HOT MIX ASPHALT RESURFACING

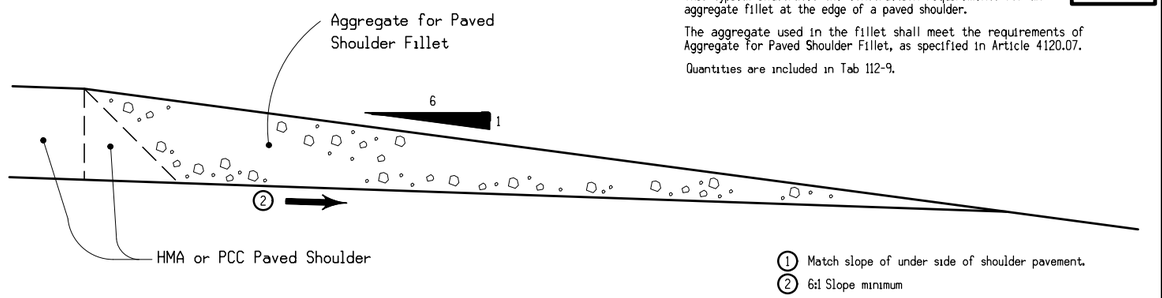
7145
MODIFIED

Notes:

This typical illustrates the construction requirements for an aggregate fillet at the edge of a paved shoulder.

The aggregate used in the fillet shall meet the requirements of Aggregate for Paved Shoulder Fillet, as specified in Article 4120.07.

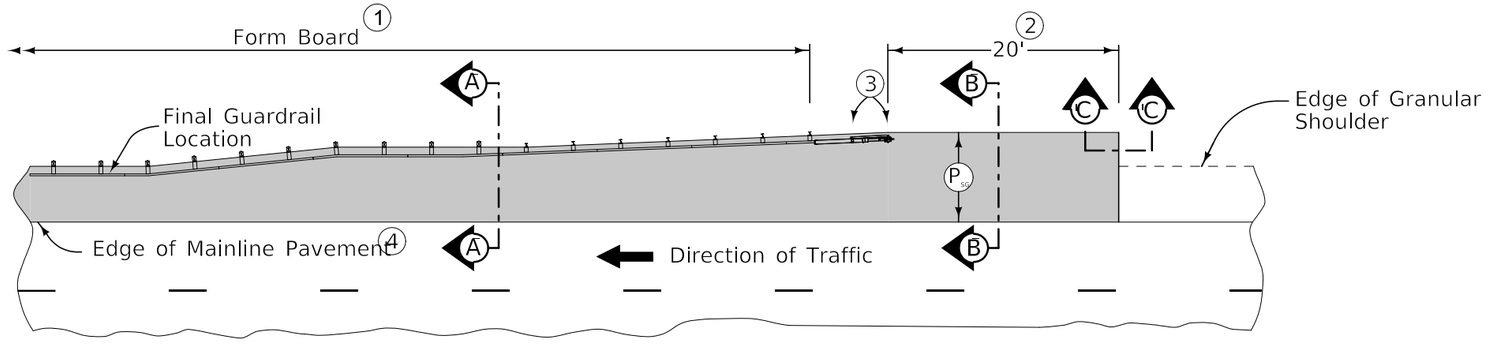
Quantities are included in Tab 112-9.



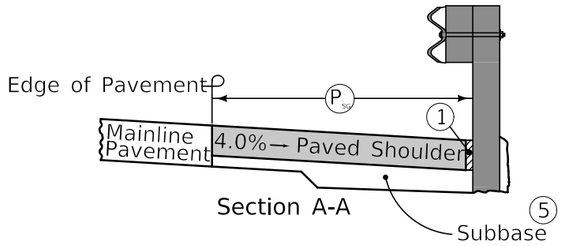
① Match slope of under side of shoulder pavement.

② 6:1 Slope minimum

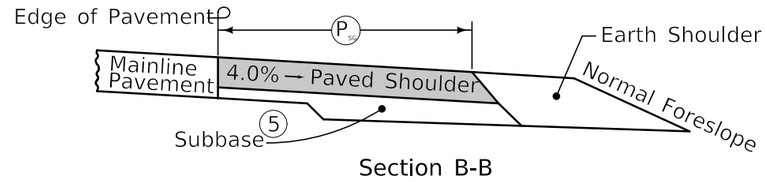
AGGREGATE FOR PAVED SHOULDER FILLET



PLAN VIEW

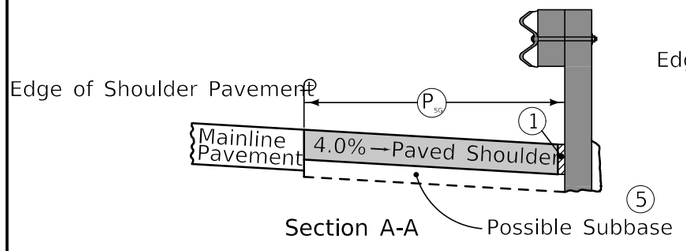


Section A-A

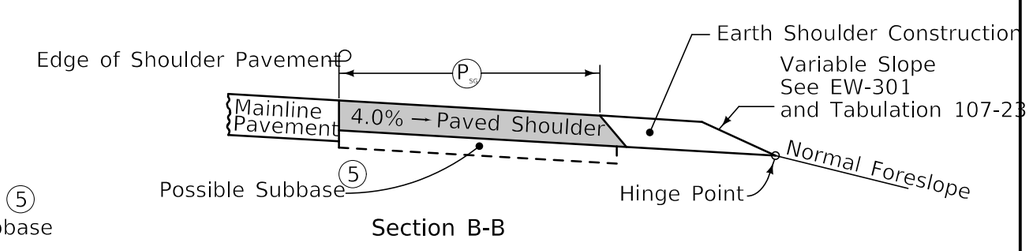


Section B-B

NEW CONSTRUCTION



Section A-A



Section B-B

EXISTING SHOULDER

7156
10-21-25

9" HMA Paved Shoulder at guardrail. 8" PCC may be substituted with the following jointing layout:

Match mainline pavement joint spacing. When mainline pavement is 8" or greater in thickness, place additional transverse 'C' joints in shoulder at mid-panel of the mainline pavement. Place longitudinal 'C' joint at P/2 from edge of mainline pavement when P is greater than 10' wide. Terminate longitudinal joint at transverse joint less than 10' in length.

Compaction of HMA is required to face of guardrail post. Hand compaction will be allowed under guardrail. Removal and reinstallation of guardrail will be allowed with no additional payment.

Refer to Tabulation 112-9 for shoulder quantities.

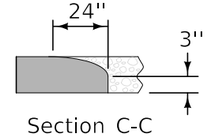
(1) PCC option only: When guardrail posts are installed prior to construction of PCC paved shoulder, fasten form board to the face of guardrail posts for the length shown.

(2) Continue paved shoulder 20 feet beyond the center of the first post.

(3) Shoulder may be notched for first 2 posts or post sleeves may be installed through pavement. Do not drive posts through pavement.

(4) 'BT' joint (per PV-101) for PCC shoulder.
'B' joint (per PV-101) for HMA shoulder.

(5) Refer to other details in the plan.

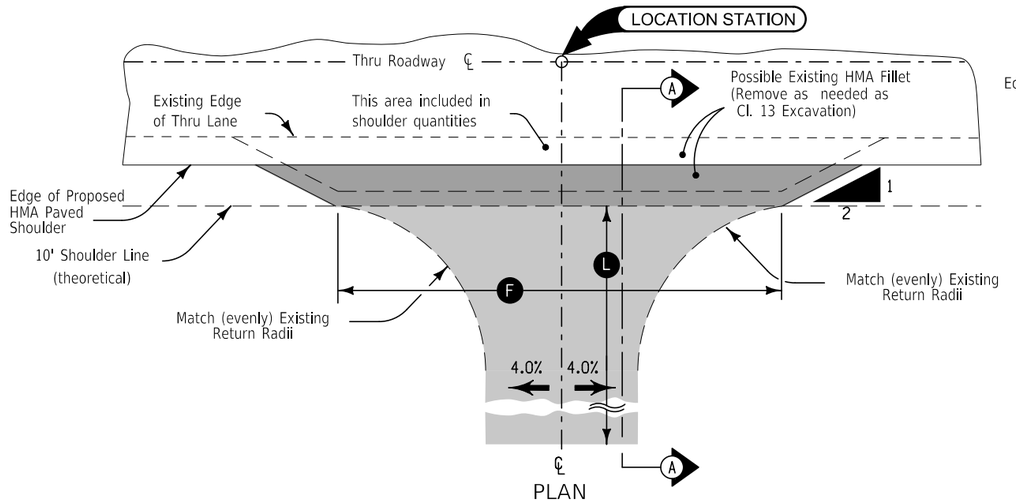


Section C-C

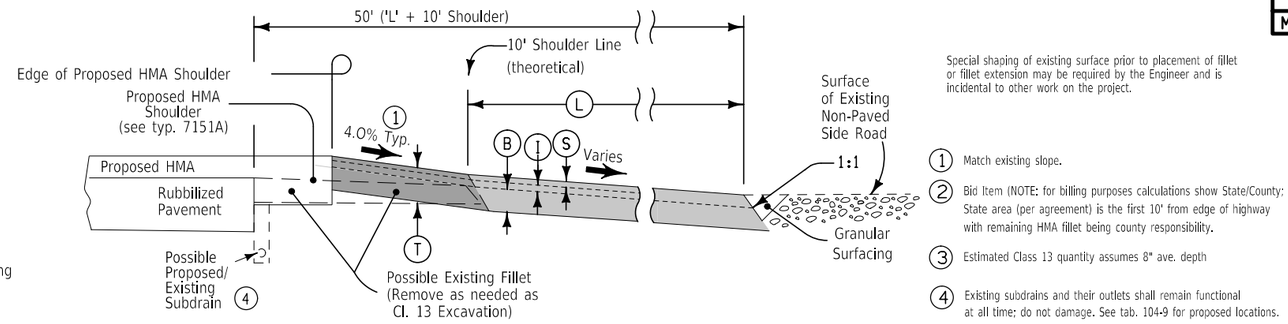
Roll down at granular shoulder or earth.

PAVED SHOULDER AT GUARDRAIL
(GRANULAR SHOULDER ADJACENT TO MAINLINE)

7149
Modified



PLAN



SECTION A-A

Special shaping of existing surface prior to placement of fillet or fillet extension may be required by the Engineer and is incidental to other work on the project.

1. Match existing slope.
2. Bid Item (NOTE: for billing purposes calculations show State/County; State area (per agreement) is the first 10' from edge of highway with remaining HMA fillet being county responsibility.
3. Estimated Class 13 quantity assumes 8" ave. depth
4. Existing subdrains and their outlets shall remain functional at all time; do not damage. See tab. 104-9 for proposed locations.

Proposed HMA Area (100% County Paid)

Proposed HMA Area (100% State Paid)

HMA estimated @ 147 #/cu.ft.
Binder estimated 6% of HMA tons

Location				④ (F)	(I)	(S)	(T) (Ave.)	(L)	HMA Fillet Extension (County)	HMA Fillet Extention (State)	Intermediate Course HMA (State/County)	Surface Course HMA (State/County)	Binder (State/County)	Class 13 Excavation (County)	Remarks
Rd. ID	Station	Side Road	Side	Feet	Inches	Inches	Inches	Feet	Sq. Ft.	Sq. Ft.	② Tons	② Tons	② Tons	②Cu.Yds.③	
IA 330	572+77.93	Ingram Ave.	Rt	87	1.5	1.5	6.5	40	1934.34	1105.10	10/17.5	10/17.5	1.2/2.1	38.8	Marshall Co.
IA 330	587+99.99	265th St.	Rt	131	1.5	1.5	6.5	40	2696.87	1622.22	14.7/24.4	14.7/24.4	1.8/2.9	54.1	Marshall Co.
IA 330	643+72.72	Jessup Ave.	Rt	134	1.5	1.5	6.5	40	3407.16	1562.36	14.2/30.9	14.2/30.9	1.7/3.7	68.4	Marshall Co.
IA 330	705+64.31	250th St.	Rt	129	1.5	1.5	6.5	40	2902	1560.27	14.1/26.3	14.1/26.3	1.7/3.2	58.2	Marshall Co.
IA 330	716+39.18	Knapp Ave.	Rt	73	1.5	1.5	6.5	40	1657.85	920.51	8.3/15	8.3/15	1/1.8	33.3	Marshall Co.
										Totals	61.3/114.1	61.3/114.1	7.4/13.7	252.8	

DIVISION 2 -100% REIMBURSEMENT-Marshall Co.

TYPICAL SECTION FOR
FILLET EXTENSION FOR
NON-PAVED SIDE ROADS
(ADJACENT TO HMA RESURFACING)

FILE NO.	ENGLISH	DESIGN TEAM Vortherms\Tamrakar\Vais	MARSHALL COUNTY	PROJECT NUMBER NHSX-330-2(102)--3H-64	SHEET NUMBER B.4

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ESTIMATED PROJECT QUANTITIES AND REFERENCE NOTES

Roadway Items : Roadway Items
Marshall County : 100% County funded

Item no.	Item Code	Item	Unit	Quantities			Estimate Reference Notes
				Estimated			
				Roadway Items	Marshall County	Total	
1	2102-2713070	EXCAVATION, CLASS 13, ROADWAY AND BORROW	CY		252.8	252.8	Refer to Typical 7149 in B sheets.
2	2121-7425020	GRANULAR SHOULDERS, TYPE B	TON	4,281.7		4,281.7	Refer to Typicals 3145 & 7145 and Tabulation 112-9. Includes quantity for median side rock.
3	2122-5500090	PAVED SHOULDER, HOT MIX ASPHALT MIXTURE, 9 IN.	SY	393.3		393.3	Refer to Tab 112-9 in C sheets.
4	2212-5070310	PATCHES, FULL-DEPTH REPAIR	SY	375		375	Refer to Tab 102-6C in C sheets.
5	2212-5070330	PATCHES BY COUNT (REPAIR)	EACH	28		28	
6	2214-5145150	PAVEMENT SCARIFICATION, NOMINAL THICKNESS	SY	2,543.3		2,543.3	Refer to Tab 102-16 in C sheets.
7	2303-0001000	HOT MIX ASPHALT MIXTURE, WEDGE, LEVELING OR STRENGTHENING COURSE	TON	254.5		254.5	Refer to Tab 106-2 in C sheets. Estimated average lift of 1 in. thick.
8	2303-1042500	HOT MIX ASPHALT HIGH TRAFFIC, INTERMEDIATE COURSE, 1/2 IN. MIX	TON	9,433.4	114.1	9,547.5	Refer to typical 7149 in B sheets and Tab 100-25 in C sheets. Note: The intermediate lift shall be placed within 5 days of the CIP cure. Refer to Typical 7149 in B sheets.
9	2303-1043502	HOT MIX ASPHALT HIGH TRAFFIC, SURFACE COURSE, 1/2 IN. MIX, FRICTION L-2	TON	9,433.4	114.1	9,547.5	Refer to typical 7149 in B sheets and Tab 100-25 in C sheets. Refer to Typical 7149 in B sheets.
10	2303-1258284	ASPHALT BINDER, PG 58-28H, HIGH TRAFFIC	TON	1,132	13.7	1,145.7	
11	2303-6911000	HOT MIX ASPHALT PAVEMENT SAMPLES	LS	1		1	
12	2303-7000610	PAYMENT ADJUSTMENT INCENTIVE/DISINCENTIVE FOR HMA MIXTURE LABORATORY VOIDS (FORMULA - BY PAY FACTOR)	EACH	18,866.8		18,866.8	Refer to Design Manual 1G-14 1*(total HMA mix)
13	2303-7000620	PAYMENT ADJUSTMENT INCENTIVE/DISINCENTIVE FOR HMA MIXTURE FIELD VOIDS (FORMULA - BY PAY FACTOR)	EACH	18,866.8		18,866.8	

Item no.	Item Code	Item	Unit	Quantities			Estimate Reference Notes
				Estimated			
				Roadway Items	Marshall County	Total	
14	2308-1000000	ASPHALT EMULSION FOR FOG SEAL (SHOULDERS)	GAL	1,378.2		1,378.2	Refer to Tab 112-10B in C sheets.
15	2317-7000120	PAYMENT ADJUSTMENT INCENTIVE/DISINCENTIVE FOR HMA PAVEMENT SMOOTHNESS (BY SCHEDULE)	EACH	27,202.32		27,202.32	Refer to Design Manual 1G-14. 0.24*(SY of final lift mix)
16	2318-1001100	COLD IN-PLACE RECYCLED ASPHALT PAVEMENT	SY	80,263.71		80,263.71	Refer to typical 2602-B in B sheets.
17	2318-1001220	ASPHALT STABILIZING AGENT (FOAMED ASPHALT)	TON	264.9		264.9	
18	2502-8215804	SUBDRAIN, TILE, 4 IN. DIA.	LF	69,237.8		69,237.8	Refer to Tab 104-9 in C sheets.
19	2502-8221306	SUBDRAIN OUTLET, DR-306	EACH	307		307	
20	2527-9263209	PAINTED PAVEMENT MARKINGS, WATERBORNE OR SOLVENT-BASED	STA	2,178.96		2,178.96	Refer to Tab 108-22 in C sheets.
21	2527-9270112	GROOVES CUT FOR PAVEMENT MARKINGS	STA	726.32		726.32	
22	2528-8445110	TRAFFIC CONTROL	LS	1		1	Refer to Traffic Control Plan on J sheets.
23	2528-9290050	PORTABLE DYNAMIC MESSAGE SIGN (PDMS)	CDAY	0		0	See Proposal.
24	2529-2242304	CD JOINT ASSEMBLY	EACH	3		3	Refer to Tab 102-6C in C sheets.
25	2533-4980005	MOBILIZATION	LS	1		1	- -
26	2548-0000100	MILLED SHOULDER RUMBLE STRIPS, HMA SURFACE	STA	601.84		601.84	Refer to Tab 112-10 in C sheets.
27	2548-0000110	ASPHALT EMULSION FOR FOG SEAL (SHOULDER RUMBLE STRIPS)	GAL	652.2		652.2	

100-1D
10-18-05

PROJECT DESCRIPTION

This project involves 3” of cold-in-place recycling and 3” of HMA resurfacing on IA 330 southbound from Melbourne to US 30.
The project also involves fog sealing the shoulders only from 188+00 to 423+11.82 southbound.

105-4
10-18-11

STANDARD ROAD PLANS

The following Standard Road Plans apply to construction work on this project.

DR-306	10/17/23	DR-306 Precast Concrete Headwall for Subdrain Outlets
PM-110	10/15/24	Line Types
PM-116	4/16/24	Grooving for Symbols and Legends
PM-210	10/15/24	Separation in Two-Lane Roadway
PM-220	10/15/24	Passing Lane
PM-562	10/15/24	Divided Multi-Lane Roadway with Left Turn Lanes
PM-620	10/15/24	Two-Lane Roadway with no Turn Lanes (Four-Way Stop Condition)
PR-103	10/17/23	Full Depth PCC Patch with Dowels
PR-202	10/21/14	Notches for Resurfacing (with or without Runout)
PV-12	4/16/24	Milled Shoulder Rumble Strips
PV-202	4/21/20	Hot Mix Asphalt Resurfacing
SI-211	10/18/22	Object Marker and Delineator Placement with Guardrail
TC-1	10/15/19	Work Not Affecting Traffic (Two-Lane or Multi-Lane)
TC-402	4/18/23	Work Within 15 ft of Traveled Way
TC-418	4/18/23	Lane Closure on Divided Highway
TC-421	4/16/24	Lane Closure with TBR
TC-432	10/17/17	Shoulder Rumble Strip Operations
TC-433	10/17/17	Pavement Marking Operations
TC-482	4/19/22	Uneven Lanes

111-25
10-18-11

INDEX OF TABULATIONS

Tabulation	Tabulation Title	Sheet No.
C Sheets		
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100-25	HMA PAVEMENT	C.4
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102-6C	FULL-DEPTH PATCHES	C.6
102-16	NOTCHES AND RUNOUTS FOR RESURFACING	C.3
104-9	LONGITUDINAL SUBDRAIN SHOULDER AND BACKSLOPE	C.9 - C.13
106-2	LEVELING COURSES	C.6
108-22	PAVEMENT MARKING LINE TYPES	C.7 - C.8
111-25	INDEX OF TABULATIONS	C.3
112-9	SHOULDERS	C.5
112-10	MILLED RUMBLE STRIPS	C.4
112-10B	SHOULDER FOG SEAL	C.5

102-16
10-21-14

NOTCHES AND RUNOUTS FOR RESURFACING

Refer to PR-201 and PR-202.

(1) Bid item. Applies only to Types 'N1' and 'N3' on PR-202. Refer to 100-25 for remaining values.

Location Station	Type of Notch or Runout	S	I	DI	L	M	Pavement Scarification (1)	Remarks
		IN	IN	IN	FT	IN	SY	
466+62.19	Type 'N3'	1.5	1.5		150.0		266.7	
489+49.78	Type 'N3'	1.5	1.5		30.0		241.7	
489+76.44	Type 'N3'	1.5	1.5		30.0		95.0	
499+60.00	Type 'N3'	1.5	1.5		30.0		88.3	
499+60.00	Type 'N3'	1.5	1.5		30.0		120.0	
572+10.62	Type 'N3'	1.5	1.5		30.0		80.0	
588+77.73	Type 'N3'	1.5	1.5		30.0		138.3	
637+29.35	Type 'N3'	1.5	1.5		150.0		266.7	
640+21.69	Type 'N3'	1.5	1.5		150.0		266.7	
642+85.01	Type 'N3'	1.5	1.5		30.0		138.3	
706+23.98	Type 'N3'	1.5	1.5		30.0		190.0	
716+53.20	Type 'N3'	1.5	1.5		30.0		91.7	
767+31.48	Type 'N3'	1.5	1.5		30.0		143.3	
767+31.48	Type 'N3'	1.5	1.5		30.0		150.0	
770+73.11	Type 'N3'	1.5	1.5		150.0		266.7	
							2543.3	

102-5
04-18-17

EXISTING PAVEMENT

No.	Location					Year	Type	Project Number	Surface		Base		Subbase		Removal		Coarse Aggregate			Reinforcement	Remarks
	County	Route	Dir. of Travel	Begin Ref. Loc. Sign	End Ref. Loc. Sign				Type	Depth	Type	Depth	Type	Depth	Type	Depth	Source	Type	Durability Class	Type	
	64	IA-330	2	20.03	21.05	2006		NHSN-330-2(72)--2R-69	PCC	10	GSB	10.5					FERGUSON	C.LST.	I		
	64	IA-330	2	14.29	20.03	2006		NHSN-330-1(24)--2R-50	HMA	1.5	HMA	1.5					LEGRAND/FERGUSON	C.LST.			
	64	IA-330	2	14.29	20.03	2006	W	NHSN-330-1(24)--2R-50	HMA	1.5	HMA	1.5	HMA	3			LEGRAND/FERGUSON	C.LST.		4' BOTH SIDES	
	64	IA-330	2	14.29	20.03	1983		F-330-2(20)--20-64	PCC	9.5							FERGUSON	C.LST.	3		

112-10
10-20-20

MILLED RUMBLE STRIPS

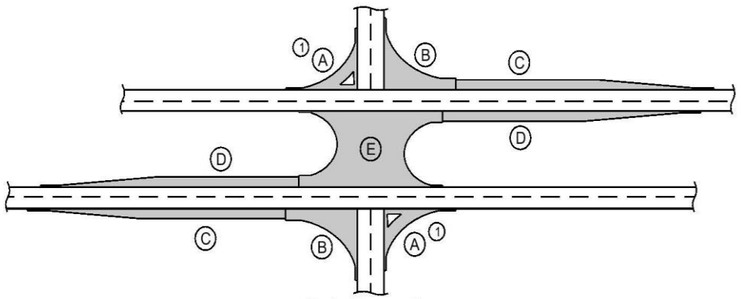
See PV-12 and PV-13

* Calculated at 18" width for Shoulder.

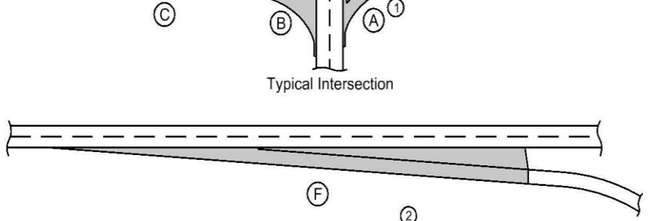
Location						Installation Length		Fog Seal* (Milled Rumble Strip)	Effective Shoulder Width			Remarks
Road Identification	Station to Station		Shoulder Pavement Type	Rumble Strip Type (Centerline, Rt or Lt Shoulder)	(L)	PCC	HMA	Shoulder	PCC Paved	HMA Paved	Granular\ Earth	
					IN	STA	STA	GAL	FT	FT	FT	
IA 330	466+62.19	514+54.13	HMA	Left Shoulder	6"		47.92	52.0				
IA 330	466+62.19	514+54.13	HMA	Right Shoulder	6"		47.92	52.0				
IA 330	514+57.05	637+14.83	HMA	Left Shoulder	6"		122.58	132.8				
IA 330	514+57.05	637+14.83	HMA	Right Shoulder	6"		122.58	132.8				
IA 330	640+30.81	770+73.11	HMA	Left Shoulder	6"		130.42	141.3				
IA 330	640+30.81	770+73.11	HMA	Right Shoulder	6"		130.42	141.3				
				Totals		**PCC**	**HMA**	**Fog Seal**				
				HMA Shoulders			**601.84**	**652.2**				

100-25
04-21-15

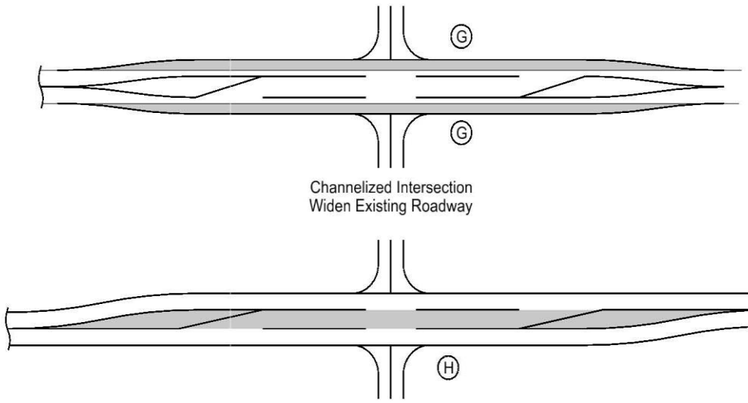
HMA PAVEMENT



Typical Intersection



Ramp or Loop Taper (2)



Channelized Intersection
Widen Existing Roadway

Channelized Intersection
Reconstructed Roadway

(1) Does not include raised island area or curb. Refer to tabulation 112-4 for quantities.

(2) Refer to PV-410, PV-411, PV-412, and PV-414.

(3) Quantity includes Pavement Header.

Calculations assume a surface course unit weight (lbs/cf) of 147, an intermediate course unit weight (lbs/cf) of 147, a base course unit weight (lbs/cf) of 0, and a special backfill unit weight (lbs/cf) of 140.

Location				Mainline			Area (3)								Bid Items: Hot Mix Asphalt Pavement						Bid Items: Binder			Special Backfill	Modified Subbase	Granular Subbase	Pavement Scarification	Remarks
Road Identification	Direction of Travel	Station to Station		Width	Length	Area	(A) (1)	(B)	(C)	(D)	(E)	(F) (2)	(G)	(H)	Surface		Intermediate		Base		Surface	Intermediate	Base					
				FT	FT	SY	SY	SY	SY	SY	SY	SY	SY	SY	TONS	SY	TONS	SY	TONS	SY	TONS	TONS	TONS	TONS	CY	SY	SY	
IA 330	SB	466+62.19	514+54.13	32.0	4791.9	17038.0									1408.8	17038.0	1408.8	17038.0			84.5	84.5						
IA 330	SB	488+35.69	490+42.10		206.4			194.2							16.1	194.2	16.1	194.2			1.0	1.0						
IA 330	SB	489+23.33	490+19.10		95.8						250.3				20.7	250.3	20.7	250.3			1.2	1.2						
IA 330	SB	497+36.35	508+61.67		1125.3						1924.1				159.1	1924.1	159.1	1924.1			9.5	9.5						
IA 330	SB	498+67.68	500+27.73		160.1			475.7							39.3	475.7	39.3	475.7			2.4	2.4						
IA 330	SB	514+57.05	637+14.83	32.0	12257.8	43583.2									3603.8	43583.2	3603.8	43583.2			216.2	216.2						
IA 330	SB	571+10.88	575+53.03		442.2						663.5				54.9	663.5	54.9	663.5			3.3	3.3						
IA 330	SB	587+69.78	592+00.94		431.2						736.3				60.9	736.3	60.9	736.3			3.7	3.7						
IA 330	SB	637+14.68	637+20.82	32.0	6.1	21.8									1.8	21.8	1.8	21.8			0.1	0.1						
IA 330	SB	640+30.81	644+66.34	24.0	435.5	1161.4									96.0	1161.4	96.0	1161.4			5.8	5.8						
IA 330	SB	640+30.81	642+01.30		170.5								234.5		19.4	234.5	19.4	234.5			1.2	1.2						
IA 330	SB	640+30.81	642+88.54		257.7								378.5		31.3	378.5	31.3	378.5			1.9	1.9						
IA 330	SB	642+01.30	645+69.97		368.7						694.6				57.4	694.6	57.4	694.6			3.4	3.4						
IA 330	SB	644+66.34	645+69.97	28.0	103.6	322.4									26.7	322.4	26.7	322.4			1.6	1.6						
IA 330	SB	645+69.97	770+73.11	32.0	12503.1	44455.6									3675.9	44455.6	3675.9	44455.6			220.6	220.6						
IA 330	SB	705+36.96	709+61.64		424.7						739.8				61.2	739.8	61.2	739.8			3.7	3.7						
IA 330	SB	716+05.87	717+03.68		97.8						237.4				19.6	237.4	19.6	237.4			1.2	1.2						
IA 330	SB	766+55.14	767+89.79		134.6			120.6							10.0	120.6	10.0	120.6			0.6	0.6						
IA 330	SB	766+69.75	767+83.31		113.6			111.1							9.2	111.1	9.2	111.1			0.6	0.6						
															9372.0	**113343.0**	**9372.0**	**113343.0**			**562.3**	**562.3**						

SHOULDERS

(1) Lane(s) to which the shoulder is adjacent.
(2) See Typ. 7156, 7157, or 7158.
(3) Bid Item.
(4) Applies only for Paved Shoulders constructed on project with existing granular shoulders.
(5) Bid Item. Typ. 7156, 7157, or 7158.
(6) Does not include shrink.

Calculations assume a HMA unit weight (lbs/cf) of 0, a Special Backfill unit weight (lbs/cf) of 140, and a Granular Shoulder unit weight (lbs/cf) of 140.

Location					Quantities																	
Road Identification	(1) Direction Of Traffic	Station to Station		Side	(P) Width	(P_{SG}) Width	(G) Width	(L) Length	Class 13 (4) Excavation	Hot Mix Asphalt		Binder	Paved Shoulder	9" Paved Shoulder at Guardrail	Reinforced Paved Shoulder	Special Backfill				Subbase	Granular Shoulder		Earth Shoulder Construction Alternates			Remarks
																HMA Alternate		PCC Alternate					HMA	PCC	
					FT	FT (2)	FT	FT	CY (3)	TON	TON/STA	TONS	SY (3)	SY (5)	SY (3)	TON (3)	TON/STA	TON (3)	TON/STA	CY (3)	TON (3)	TON/STA	STA (3)	CY (6)	CY (6)	
IA 330	SB	466+62.19	488+61.20	Rt			6.0	2199.0													304.8	13.9				
IA 330	SB	490+29.81	495+85.94	Rt			6.0	556.1													77.1	13.9				
IA 330	SB	500+21.49	514+54.13	Rt			6.0	1432.6													198.6	13.9				
IA 330	SB	514+57.05	572+49.22	Rt			6.0	5792.2													802.8	13.9				
IA 330	SB	573+38.32	587+25.24	Rt			6.0	1386.9													192.2	13.9				
IA 330	SB	588+57.26	633+11.27	Rt			6.0	4454.0													617.3	13.9				
IA 330	SB	644+66.34	704+87.30	Rt			6.0	6021.0													834.5	13.9				
IA 330	SB	706+16.46	716+07.38	Rt			6.0	990.9													137.3	13.9				
IA 330	SB	716+80.64	766+81.67	Rt			6.0	5001.0													693.1	13.9				
IA 330	SB	767+78.84	770+73.11	Rt			6.0	294.3													40.8	13.9				
IA 330	SB	466+62.19	770+73.11	Med			varies	30410.9													383.2	1.3				
IA 330	SB	641+07.10	641+45.01	Lt		9.3-10.7		37.9																		
IA 330	SB	641+45.01	641+75.41	Lt		1.7		30.4																		
IA 330	NB	636+25.12	636+45.11	Lt		8.0		20.0						17.8												
IA 330	NB	636+45.11	636+55.40	Lt		8.0		10.3						9.1												
IA 330	NB	636+55.40	636+93.29	Lt		8.0-7.2		37.9						32.0												
IA 330	NB	636+93.29	638+16.70	Lt		7.2-7.3		123.4						99.4												
IA 330	NB	638+16.70	638+16.70	Lt		7.3-1.3		0.0						0.0												
IA 330	NB	638+16.70	638+77.77	Lt		1.3		61.1						8.8												
IA 330	NB	636+90.44	637+10.43	Rt		16.3		20.0						36.2												
IA 330	NB	637+10.43	637+16.32	Rt		16.3		5.9						10.7												
IA 330	NB	637+16.32	637+54.72	Rt		16.3-13.4		38.4						63.4												
IA 330	NB	637+54.72	638+17.01	Rt		13.4-12.5		62.3						89.6												
IA 330	NB	638+17.01	638+17.01	Rt		12.5-3.6		0.0						0.0												
IA 330	NB	638+17.01	638+42.21	Rt		3.6		25.2						10.1												
IA 330	NB	638+42.21	638+67.14	Rt		3.6-1.6		24.9						7.2												
IA 330	NB	638+67.14	639+17.62	Rt		1.6		50.5						9.0												
														393.3							**3898.5**	**139.9**	**Outside shoulder Qty.**			
																					383.2		**Median Side Shoulder Qty.**			
																					4281.7		**Total**			

SHOULDER FOG SEAL

See PV-12 and PV-13

* Calculated at 18" width for Shoulder.

Location							Fog Seal* (Milled Rumble Strip)	Effective Shoulder Width			Remarks
Road Identification	Station to Station		Shoulder Pavement Type	Rumble Strip Type (Centerline, Rt or Lt Shoulder)	(L)	Installation Length					
						PCC	HMA	Shoulder	PCC Paved	HMA Paved	Granular\ Earth	
					IN	STA	STA	GAL	FT	FT	FT	
IA 330 SB	188+00.00	201+31.15	HMA	Right Shoulder			13.31	14.5		4.0	6.0	
IA 330 SB	188+00.00	282+06.51	HMA	Left Shoulder			94.07	102.0		4.0	0.0	
IA 330 SB	207+44.85	441+42.53	HMA	Right Shoulder			233.98	253.5		4.0	6.0	
IA 330 SB	286+88.93	327+79.48	HMA	Left Shoulder			40.91	44.4		4.0	0.0	
IA 330 SB	333+06.44	365+50.91	HMA	Left Shoulder			32.44	35.2		4.0	0.0	
IA 330 SB	370+50.23	441+42.53	HMA	Left Shoulder			70.92	76.9		4.0	0.0	
IA 330 SB	1+29.40	301+99.97	HMA	Right Shoulder			300.71	325.8		4.0	6.0	
IA 330 SB	1+29.40	6+34.67	HMA	Left Shoulder			5.05	5.5		4.0	0.0	
IA 330 SB	11+14.39	21+74.06	HMA	Left Shoulder			10.60	11.5		4.0	0.0	
IA 330 SB	26+66.52	79+16.31	HMA	Left Shoulder			52.50	56.9		4.0	0.0	
IA 330 SB	84+82.47	150+42.74	HMA	Left Shoulder			65.60	71.1		4.0	0.0	
IA 330 SB	155+36.44	218+57.96	HMA	Left Shoulder			63.22	68.5		4.0	0.0	
IA 330 SB	223+33.17	257+27.85	HMA	Left Shoulder			33.95	36.8		4.0	0.0	
IA 330 SB	262+00.24	301+99.77	HMA	Left Shoulder			40.00	43.4		4.0	0.0	
IA 330 SB	308+04.60	348+12.12	HMA	Right Shoulder			40.08	43.5		4.0	6.0	
IA 330 SB	308+31.30	348+84.28	HMA	Left Shoulder			40.53	44.0		4.0	0.0	
IA 330 SB	359+11.01	423+11.82	HMA	Right Shoulder			64.01	69.4		4.0	6.0	
	353+62.16	423+11.82	HMA	Left Shoulder			69.50	75.3		4.0	0.0	
								1378.2				**Total**

FULL-DEPTH PATCHES

Possible Standards: PR-101, PR-102, PR-103, PR-104, PR-105, and PR-140.

Location				Dimension			PCC Patches													
Count	Station	Reference Location Sign	Lane	Length	Width	Patch Thickness	With Dowels	Without Dowels	C R C	Ramp with Dowels	HMA Patches	Composite HMA	Subbase Patches	Subbase Patch w/ 'EF' Joint	Patch Subdrain	'CD' Joints	'CT' Joints	'EF' Joints	Anchor Lugs Removal	Remarks
							PR-103	PR-102	PR-104	PR-105			PR-140	PR-101	PR-101 or PR-140			PR-101		
			L, R, or B	FT	FT	IN	SY	SY	SY	SY	SY	TON	SY	SY	No.	No.	No.	No.	No.	
1		19.8	RT	6.0	12.0	15.5	8.0													
1		19.61	RT	6.0	12.0	15.5	8.0													
1		19.69	LT	6.0	12.0	15.5	8.0													
1		19.44	RT	6.0	12.0	15.5	8.0													
1		19.27	LT	6.0	12.0	15.5	8.0													
1		19.97	RT	6.0	12.0	15.5	8.0													
1		18.94	LT	6.0	12.0	15.5	8.0													
1		18.83	RT	6.0	12.0	15.5	8.0													
1		18.63	RT	6.0	12.0	15.5	8.0													
1		18.51	LT	6.0	12.0	15.5	8.0													
1		18.44	RT	6.0	12.0	15.5	8.0													
1		18.4	LT	6.0	12.0	15.5	8.0													
1		18.352	LT	6.0	12.0	15.5	8.0													
1		18.348	RT	6.0	12.0	15.5	8.0													
1		17.755	RT	20.0	12.0	15.5	26.7									1				
1		17.602	LT	6.0	12.0	15.5	8.0													
1		17.558	RT	6.0	12.0	15.5	8.0													
1		17.558	LT	6.0	12.0	15.5	8.0													
1		16.856	RT	6.0	12.0	15.5	8.0													
1		16.856	LT	6.0	12.0	15.5	8.0													
1		16.257	RT	6.0	12.0	15.5	8.0													
1		16.257	LT	6.0	12.0	15.5	8.0													
1		15.1	LT	6.0	12.0	15.5	8.0													
1		14.857	STOP ISLAND			15.5	95.0													
1		14.75	LT	6.0	12.0	15.5	8.0													
1		14.4	LT	6.0	12.0	15.5	8.0													
1		14.255	LT	40.0	12.0	15.5	53.3									2				
1		14.205	RT	6.0	12.0	15.5	8.0													
28							**375.0**									**3**				

LEVELING COURSES

Location				Hot Mix Asphalt Pavement		Remarks
Begin Ref. Location Sign	End Ref. Location Sign	Begin Station	End Station	Average Thickness	Tons	
				Inches		
		638+10.00	639+01.12	1.0	254.498	NB Bridge Approach at North Timber Creek

PAVEMENT MARKING LINE TYPES

See PM-110

*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.
***MNY4 - Factor of 1.00 as value includes number of 4-inch passes to cover median nose area.

BLW6: Broken Lane Line (White) @ 0.25
ELW6: Edge Line Right (White) @ 1.00
CHW10: Channelizing Line (White) @ 1.67
DCY6: Double Centerline (Yellow) @ 2.00
SLW2: Stop Line (White) @ 4.00
ELY6: Edge Line Left (Yellow) @ 1.00
CHY10: Channelizing Line (Yellow) @ 1.67

Location					Length by Line Type (Unfactored)															Remarks
Road ID	Station to Station		Dir. of Travel	Marking Type	Side			BLW6	ELW6	CHW10	DCY6	SLW2	ELY6	CHY10							
					L	C	R	STA	STA	STA	STA	STA	STA	STA	STA	STA	STA	STA	STA	STA	STA	
After CIPR																						
IA 330	466+62.19	514+54.13	SB	PAINTED PAVEMENT MARKING, WATERBORNE OR SOLVENT-BASED	X								47.92									
IA 330	466+62.19	514+54.13	SB	PAINTED PAVEMENT MARKING, WATERBORNE OR SOLVENT-BASED			X		47.92													
IA 330	466+62.19	514+54.13	SB	PAINTED PAVEMENT MARKING, WATERBORNE OR SOLVENT-BASED		X		47.92														
IA 330	489+74.83	490+65.00	SB	PAINTED PAVEMENT MARKING, WATERBORNE OR SOLVENT-BASED		X					0.90											
IA 330	489+74.83	489+85.00	SB	PAINTED PAVEMENT MARKING, WATERBORNE OR SOLVENT-BASED			X					0.10										
IA 330	499+57.00	500+47.00	SB	PAINTED PAVEMENT MARKING, WATERBORNE OR SOLVENT-BASED		X					0.90											
IA 330	499+57.00	499+67.00	SB	PAINTED PAVEMENT MARKING, WATERBORNE OR SOLVENT-BASED			X					0.10										
IA 330	499+60.85	499+71.00	SB	PAINTED PAVEMENT MARKING, WATERBORNE OR SOLVENT-BASED			X					0.10										
IA 330	499+45.30	499+95.00	SB	PAINTED PAVEMENT MARKING, WATERBORNE OR SOLVENT-BASED			X			0.50												
IA 330	499+94.26	506+43.00	SB	PAINTED PAVEMENT MARKING, WATERBORNE OR SOLVENT-BASED			X			6.49												
IA 330	514+57.05	637+14.83	SB	PAINTED PAVEMENT MARKING, WATERBORNE OR SOLVENT-BASED	X								122.58									
IA 330	514+57.05	637+14.83	SB	PAINTED PAVEMENT MARKING, WATERBORNE OR SOLVENT-BASED			X		122.58													
IA 330	514+57.05	637+14.83	SB	PAINTED PAVEMENT MARKING, WATERBORNE OR SOLVENT-BASED		X		122.58														
IA 330	572+33.90	572+44.00	SB	PAINTED PAVEMENT MARKING, WATERBORNE OR SOLVENT-BASED			X					0.10										
IA 330	572+41.35	574+54.31	SB	PAINTED PAVEMENT MARKING, WATERBORNE OR SOLVENT-BASED			X			2.13												
IA 330	588+62.72	588+73.00	SB	PAINTED PAVEMENT MARKING, WATERBORNE OR SOLVENT-BASED			X					0.10										
IA 330	588+57.27	589+47.00	SB	PAINTED PAVEMENT MARKING, WATERBORNE OR SOLVENT-BASED		X					0.90											
IA 330	588+81.89	591+15.78	SB	PAINTED PAVEMENT MARKING, WATERBORNE OR SOLVENT-BASED			X			2.34												
IA 330	637+14.68	770+73.11	SB	PAINTED PAVEMENT MARKING, WATERBORNE OR SOLVENT-BASED	X								133.58									
IA 330	637+14.68	770+73.11	SB	PAINTED PAVEMENT MARKING, WATERBORNE OR SOLVENT-BASED			X		133.58													
IA 330	637+14.68	770+73.11	SB	PAINTED PAVEMENT MARKING, WATERBORNE OR SOLVENT-BASED		X		133.58														
IA 330	642+96.95	643+06.95	SB	PAINTED PAVEMENT MARKING, WATERBORNE OR SOLVENT-BASED			X					0.10										
IA 330	642+95.00	643+85.00	SB	PAINTED PAVEMENT MARKING, WATERBORNE OR SOLVENT-BASED		X					0.90											
IA 330	643+30.17	644+95.00	SB	PAINTED PAVEMENT MARKING, WATERBORNE OR SOLVENT-BASED			X			1.65												
IA 330	706+09.81	706+99.81	SB	PAINTED PAVEMENT MARKING, WATERBORNE OR SOLVENT-BASED		X					0.90											
IA 330	706+09.81	706+19.81	SB	PAINTED PAVEMENT MARKING, WATERBORNE OR SOLVENT-BASED			X					0.10										
IA 330	706+86.50	708+75.60	SB	PAINTED PAVEMENT MARKING, WATERBORNE OR SOLVENT-BASED			X			1.89												
IA 330	767+27.07	768+17.07	SB	PAINTED PAVEMENT MARKING, WATERBORNE OR SOLVENT-BASED		X					0.90											
IA 330	767+27.07	767+37.07	SB	PAINTED PAVEMENT MARKING, WATERBORNE OR SOLVENT-BASED			X					0.10										
IA 330	767+76.00	769+61.40	SB	PAINTED PAVEMENT MARKING, WATERBORNE OR SOLVENT-BASED			X			1.85												
After First L																						
IA 330	466+62.19	514+54.13	SB	PAINTED PAVEMENT MARKING, WATERBORNE OR SOLVENT-BASED	X								47.92									
IA 330	466+62.19	514+54.13	SB	PAINTED PAVEMENT MARKING, WATERBORNE OR SOLVENT-BASED			X		47.92													
IA 330	466+62.19	514+54.13	SB	PAINTED PAVEMENT MARKING, WATERBORNE OR SOLVENT-BASED		X		47.92														
IA 330	489+74.83	490+65.00	SB	PAINTED PAVEMENT MARKING, WATERBORNE OR SOLVENT-BASED		X					0.90											
IA 330	489+74.83	489+85.00	SB	PAINTED PAVEMENT MARKING, WATERBORNE OR SOLVENT-BASED			X					0.10										
IA 330	499+57.00	500+47.00	SB	PAINTED PAVEMENT MARKING, WATERBORNE OR SOLVENT-BASED		X					0.90											
IA 330	499+57.00	499+67.00	SB	PAINTED PAVEMENT MARKING, WATERBORNE OR SOLVENT-BASED			X					0.10										
IA 330	499+60.85	499+71.00	SB	PAINTED PAVEMENT MARKING, WATERBORNE OR SOLVENT-BASED			X					0.10										
IA 330	499+45.30	499+95.00	SB	PAINTED PAVEMENT MARKING, WATERBORNE OR SOLVENT-BASED			X			0.50												
IA 330	499+94.26	506+43.00	SB	PAINTED PAVEMENT MARKING, WATERBORNE OR SOLVENT-BASED			X			6.49												
IA 330	514+57.05	637+14.83	SB	PAINTED PAVEMENT MARKING, WATERBORNE OR SOLVENT-BASED	X								122.58									
IA 330	514+57.05	637+14.83	SB	PAINTED PAVEMENT MARKING, WATERBORNE OR SOLVENT-BASED			X		122.58													
IA 330	514+57.05	637+14.83	SB	PAINTED PAVEMENT MARKING, WATERBORNE OR SOLVENT-BASED		X		122.58														
IA 330	572+33.90	572+44.00	SB	PAINTED PAVEMENT MARKING, WATERBORNE OR SOLVENT-BASED			X					0.10										
IA 330	572+41.35	574+54.31	SB	PAINTED PAVEMENT MARKING, WATERBORNE OR SOLVENT-BASED			X			2.13												
IA 330	588+62.72	588+73.00	SB	PAINTED PAVEMENT MARKING, WATERBORNE OR SOLVENT-BASED			X					0.10										
IA 330	588+57.27	589+47.00	SB	PAINTED PAVEMENT MARKING, WATERBORNE OR SOLVENT-BASED		X					0.90											
IA 330	588+81.89	591+15.78	SB	PAINTED PAVEMENT MARKING, WATERBORNE OR SOLVENT-BASED			X			2.34												
IA 330	637+14.68	770+73.11	SB	PAINTED PAVEMENT MARKING, WATERBORNE OR SOLVENT-BASED	X								133.58									
IA 330	637+14.68	770+73.11	SB	PAINTED PAVEMENT MARKING, WATERBORNE OR SOLVENT-BASED			X		133.58													
IA 330	637+14.68	770+73.11	SB	PAINTED PAVEMENT MARKING, WATERBORNE OR SOLVENT-BASED		X		133.58														
IA 330	642+96.95	643+06.95	SB	PAINTED PAVEMENT MARKING, WATERBORNE OR SOLVENT-BASED			X					0.10										
IA 330	642+95.00	643+85.00	SB	PAINTED PAVEMENT MARKING, WATERBORNE OR SOLVENT-BASED		X					0.90											
IA 330	643+30.17	644+95.00	SB	PAINTED PAVEMENT MARKING, WATERBORNE OR SOLVENT-BASED			X			1.65												
IA 330	706+09.81	706+99.81	SB	PAINTED PAVEMENT MARKING, WATERBORNE OR SOLVENT-BASED		X					0.90											
IA 330	706+09.81	706+19.81	SB	PAINTED PAVEMENT MARKING, WATERBORNE OR SOLVENT-BASED			X					0.10										
IA 330	706+86.50	708+75.60	SB	PAINTED PAVEMENT MARKING, WATERBORNE OR SOLVENT-BASED			X			1.89												
IA 330	767+27.07	768+17.07	SB	PAINTED PAVEMENT MARKING, WATERBORNE OR SOLVENT-BASED		X					0.90											
IA 330	767+27.07	767+37.07	SB	PAINTED PAVEMENT MARKING, WATERBORNE OR SOLVENT-BASED			X					0.10										
IA 330	767+76.00	769+61.40	SB	PAINTED PAVEMENT MARKING, WATERBORNE OR SOLVENT-BASED			X			1.85												
Final																						
IA 330	466+62.19	514+54.13	SB	PAINTED PAVEMENT MARKING, WATERBORNE OR SOLVENT-BASED	X								47.92									
IA 330	466+62.19	514+54.13	SB	PAINTED PAVEMENT MARKING, WATERBORNE OR SOLVENT-BASED			X		47.92													
IA 330	466+62.19	514+54.13	SB	PAINTED PAVEMENT MARKING, WATERBORNE OR SOLVENT-BASED		X		47.92														
IA 330	489+74.83	490+65.00	SB	PAINTED PAVEMENT MARKING, WATERBORNE OR SOLVENT-BASED		X					0.90											
IA 330	489+74.83	489+85.00	SB	PAINTED PAVEMENT MARKING, WATERBORNE OR SOLVENT-BASED			X					0.10										
IA 330	499+57.00	500+47.00	SB	PAINTED PAVEMENT MARKING, WATERBORNE OR SOLVENT-BASED		X					0.90											
IA 330	499+57.00	499+67.00	SB	PAINTED PAVEMENT MARKING, WATERBORNE OR SOLVENT-BASED			X					0.10										
IA 330	499+60.85	499+71.00	SB	PAINTED PAVEMENT MARKING, WATERBORNE OR SOLVENT-BASED			X					0.10										
IA 330	499+45.30	499+95.00	SB	PAINTED PAVEMENT MARKING, WATERBORNE OR SOLVENT-BASED			X			0.50												
IA 330	499+94.26	506+43.00	SB	PAINTED PAVEMENT MARKING, WATERBORNE OR SOLVENT-BASED			X			6.49												
IA 330	514+57.05	637+14.83	SB	PAINTED PAVEMENT MARKING, WATERBORNE OR SOLVENT-BASED	X								122.58									
IA 330	514+57.05	637+14.83	SB	PAINTED PAVEMENT MARKING, WATERBORNE OR SOLVENT-BASED			X		122.58													
IA 330	514+57.05	637+14.83	SB	PAINTED PAVEMENT MARKING, WATERBORNE OR SOLVENT-BASED		X		122.58														

PAVEMENT MARKING LINE TYPES

See PM-110

*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.
***MNY4 - Factor of 1.00 as value includes number of 4-inch passes to cover median nose area.

BLW6: Broken Lane Line (White) @ 0.25
ELW6: Edge Line Right (White) @ 1.00
CHW10: Channelizing Line (White) @ 1.67
DCY6: Double Centerline (Yellow) @ 2.00
SLW2: Stop Line (White) @ 4.00
ELY6: Edge Line Left (Yellow) @ 1.00
CHY10: Channelizing Line (Yellow) @ 1.67

Location								Length by Line Type (Unfactored)														Remarks
Road ID	Station to Station		Dir. of Travel	Marking Type	Side			BLW6	ELW6	CHW10	DCY6	SLW2	ELY6	CHY10								
					L	C	R	STA	STA	STA	STA	STA	STA	STA	STA	STA	STA	STA	STA	STA	STA	
IA 330	572+33.90	572+44.00	SB	PAINTED PAVEMENT MARKING, WATERBORNE OR SOLVENT-BASED			X					0.10										
IA 330	572+41.35	574+54.31	SB	PAINTED PAVEMENT MARKING, WATERBORNE OR SOLVENT-BASED			X			2.13												
IA 330	588+62.72	588+73.00	SB	PAINTED PAVEMENT MARKING, WATERBORNE OR SOLVENT-BASED			X					0.10										
IA 330	588+57.27	589+47.00	SB	PAINTED PAVEMENT MARKING, WATERBORNE OR SOLVENT-BASED		X					0.90											
IA 330	588+81.89	591+15.78	SB	PAINTED PAVEMENT MARKING, WATERBORNE OR SOLVENT-BASED			X			2.34												
IA 330	637+14.68	770+73.11	SB	PAINTED PAVEMENT MARKING, WATERBORNE OR SOLVENT-BASED	X								133.58									
IA 330	637+14.68	770+73.11	SB	PAINTED PAVEMENT MARKING, WATERBORNE OR SOLVENT-BASED			X		133.58													
IA 330	637+14.68	770+73.11	SB	PAINTED PAVEMENT MARKING, WATERBORNE OR SOLVENT-BASED		X		133.58														
IA 330	642+96.95	643+06.95	SB	PAINTED PAVEMENT MARKING, WATERBORNE OR SOLVENT-BASED			X					0.10										
IA 330	642+95.00	643+85.00	SB	PAINTED PAVEMENT MARKING, WATERBORNE OR SOLVENT-BASED		X					0.90											
IA 330	643+30.17	644+95.00	SB	PAINTED PAVEMENT MARKING, WATERBORNE OR SOLVENT-BASED			X			1.65												
IA 330	706+09.81	706+99.81	SB	PAINTED PAVEMENT MARKING, WATERBORNE OR SOLVENT-BASED		X					0.90											
IA 330	706+09.81	706+19.81	SB	PAINTED PAVEMENT MARKING, WATERBORNE OR SOLVENT-BASED			X					0.10										
IA 330	706+86.50	708+75.60	SB	PAINTED PAVEMENT MARKING, WATERBORNE OR SOLVENT-BASED			X			1.89												
IA 330	767+27.07	768+17.07	SB	PAINTED PAVEMENT MARKING, WATERBORNE OR SOLVENT-BASED		X					0.90											
IA 330	767+27.07	767+37.07	SB	PAINTED PAVEMENT MARKING, WATERBORNE OR SOLVENT-BASED			X					0.10										
IA 330	767+76.00	769+61.40	SB	PAINTED PAVEMENT MARKING, WATERBORNE OR SOLVENT-BASED			X			1.85												
Grooves																						
IA 330	466+62.19	514+54.13	SB	GROOVES CUT FOR PAVEMENT MARKINGS	X								47.92									
IA 330	466+62.19	514+54.13	SB	GROOVES CUT FOR PAVEMENT MARKINGS			X		47.92													
IA 330	466+62.19	514+54.13	SB	GROOVES CUT FOR PAVEMENT MARKINGS		X		47.92														
IA 330	489+74.83	490+65.00	SB	GROOVES CUT FOR PAVEMENT MARKINGS		X					0.90											
IA 330	489+74.83	489+85.00	SB	GROOVES CUT FOR PAVEMENT MARKINGS			X					0.10										
IA 330	499+57.00	500+47.00	SB	GROOVES CUT FOR PAVEMENT MARKINGS		X					0.90											
IA 330	499+57.00	499+67.00	SB	GROOVES CUT FOR PAVEMENT MARKINGS			X					0.10										
IA 330	499+60.85	499+71.00	SB	GROOVES CUT FOR PAVEMENT MARKINGS			X					0.10										
IA 330	499+45.30	499+95.00	SB	GROOVES CUT FOR PAVEMENT MARKINGS			X			0.50												
IA 330	499+94.26	506+43.00	SB	GROOVES CUT FOR PAVEMENT MARKINGS			X			6.49												
IA 330	514+57.05	637+14.83	SB	GROOVES CUT FOR PAVEMENT MARKINGS	X								122.58									
IA 330	514+57.05	637+14.83	SB	GROOVES CUT FOR PAVEMENT MARKINGS			X		122.58													
IA 330	514+57.05	637+14.83	SB	GROOVES CUT FOR PAVEMENT MARKINGS		X		122.58														
IA 330	572+33.90	572+44.00	SB	GROOVES CUT FOR PAVEMENT MARKINGS			X					0.10										
IA 330	572+41.35	574+54.31	SB	GROOVES CUT FOR PAVEMENT MARKINGS			X			2.13												
IA 330	588+62.72	588+73.00	SB	GROOVES CUT FOR PAVEMENT MARKINGS			X					0.10										
IA 330	588+57.27	589+47.00	SB	GROOVES CUT FOR PAVEMENT MARKINGS		X					0.90											
IA 330	588+81.89	591+15.78	SB	GROOVES CUT FOR PAVEMENT MARKINGS			X			2.34												
IA 330	637+14.68	770+73.11	SB	GROOVES CUT FOR PAVEMENT MARKINGS	X								133.58									
IA 330	637+14.68	770+73.11	SB	GROOVES CUT FOR PAVEMENT MARKINGS			X		133.58													
IA 330	637+14.68	770+73.11	SB	GROOVES CUT FOR PAVEMENT MARKINGS		X		133.58														
IA 330	642+96.95	643+06.95	SB	GROOVES CUT FOR PAVEMENT MARKINGS			X					0.10										
IA 330	642+95.00	643+85.00	SB	GROOVES CUT FOR PAVEMENT MARKINGS		X					0.90											
IA 330	643+30.17	644+95.00	SB	GROOVES CUT FOR PAVEMENT MARKINGS			X			1.65												
IA 330	706+09.81	706+99.81	SB	GROOVES CUT FOR PAVEMENT MARKINGS		X					0.90											
IA 330	706+09.81	706+19.81	SB	GROOVES CUT FOR PAVEMENT MARKINGS			X					0.10										
IA 330	706+86.50	708+75.60	SB	GROOVES CUT FOR PAVEMENT MARKINGS			X			1.89												
IA 330	767+27.07	768+17.07	SB	GROOVES CUT FOR PAVEMENT MARKINGS		X					0.90											
IA 330	767+27.07	767+37.07	SB	GROOVES CUT FOR PAVEMENT MARKINGS			X					0.10										
IA 330	767+76.00	769+61.40	SB	GROOVES CUT FOR PAVEMENT MARKINGS			X			1.85												
				Factored Total: PAINTED PAVEMENT MARKING, WATERBORNE OR SOLVENT-BASED				228.06	912.24	84.42	32.40	9.60	912.24	-	-	-	-	-	-	-	-	-	
				Factored Total: GROOVES CUT FOR PAVEMENT MARKINGS				76.02	304.08	28.14	10.80	3.20	304.08	-	-	-	-	-	-	-	-	-	
				Bid Quantity: 2527-9263209 - PAINTED PAVEMENT MARKING, WATERBORNE OR SOLVENT-BASED							**2178.96**												
				Bid Quantity: 2527-9270112 - GROOVES CUT FOR PAVEMENT MARKINGS							**726.32**												

LONGITUDINAL SUBDRAIN SHOULDER AND BACKSLOPE

Refer to Soils Sheets

* Not a bid item. Bridge berm quantities assume a trench depth of 24 inches.

Location						Longitudinal Subdrain (DR-303)							Subdrain Outlet		Porous* Backfill	Class "A"* Crushed Stone	Remarks
Line No.	Road or Lane Identification	Station to Station		Side	Depth (D)	Shoulder		Backslope		Bridge Berm (EW-203 or EW-204)			DR-303, DR-305 or DR-306				
						Size	Length	Size	Length	Standard Road Plan and Type	Size	Length	Station	Standard Road Plan and Type			
					IN	IN	FT	IN	FT		IN	FT			CY	CY	
1	IA 330 SB	466+62.19	470+00.00	LT	42.0	4.0	397.8						466+62.19	DR-306	36.8		
													470+00.00	DR-306			
2	IA 330 SB	470+00.00	474+25.00	LT	42.0	4.0	485.0						470+00.00	DR-306	44.9		
													474+25.00	DR-306			
3	IA 330 SB	475+25.00	479+00.00	LT	42.0	4.0	435.0						475+25.00	DR-306	40.3		
													479+00.00	DR-306			
4	IA 330 SB	479+00.00	483+25.00	LT	42.0	4.0	485.0						479+00.00	DR-306	44.9		
													483+25.00	DR-306			
5	IA 330 SB	483+25.00	487+00.00	LT	42.0	4.0	435.0						483+25.00	DR-306	40.3		
													487+00.00	DR-306			
6	IA 330 SB	487+00.00	491+75.00	LT	42.0	4.0	535.0						487+00.00	DR-306	49.5		
													491+75.00	DR-306			
7	IA 330 SB	491+75.00	495+00.00	LT	42.0	4.0	385.0						491+75.00	DR-306	35.6		
													495+00.00	DR-306			
8	IA 330 SB	495+00.00	499+25.00	LT	42.0	4.0	485.0						495+00.00	DR-306	44.9		
													499+25.00	DR-306			
9	IA 330 SB	499+25.00	503+00.00	LT	42.0	4.0	435.0						499+25.00	DR-306	40.3		
													503+00.00	DR-306			
10	IA 330 SB	503+00.00	507+35.00	LT	42.0	4.0	495.0						503+00.00	DR-306	45.8		
													507+35.00	DR-306			
11	IA 330 SB	507+35.00	511+25.00	LT	42.0	4.0	450.0						507+35.00	DR-306	41.7		
													511+25.00	DR-306			
12	IA 330 SB	511+25.00	514+54.13	LT	42.0	4.0	389.1						511+25.00	DR-306	36.0		
													514+54.13	DR-306			
13	IA 330 SB	514+57.05	518+25.00	LT	42.0	4.0	427.9						514+57.05	DR-306	39.6		
													518+25.00	DR-306			
14	IA 330 SB	518+25.00	522+50.00	LT	42.0	4.0	485.0						518+25.00	DR-306	44.9		
													522+50.00	DR-306			
15	IA 330 SB	522+50.00	526+00.00	LT	42.0	4.0	410.0						522+50.00	DR-306	38.0		
													526+00.00	DR-306			
16	IA 330 SB	526+00.00	530+00.00	LT	42.0	4.0	460.0						526+00.00	DR-306	42.6		
													530+00.00	DR-306			
17	IA 330 SB	530+00.00	534+65.00	LT	42.0	4.0	525.0						530+00.00	DR-306	48.6		
													534+65.00	DR-306			
18	IA 330 SB	534+65.00	538+00.00	LT	42.0	4.0	395.0						534+65.00	DR-306	36.6		
													538+00.00	DR-306			
19	IA 330 SB	538+00.00	542+25.00	LT	42.0	4.0	485.0						538+00.00	DR-306	44.9		
													542+25.00	DR-306			
20	IA 330 SB	542+25.00	546+50.00	LT	42.0	4.0	485.0						542+25.00	DR-306	44.9		
													546+50.00	DR-306			
21	IA 330 SB	546+50.00	550+00.00	LT	42.0	4.0	410.0						546+50.00	DR-306	38.0		
													550+00.00	DR-306			
22	IA 330 SB	550+00.00	554+40.00	LT	42.0	4.0	500.0						550+00.00	DR-306	46.3		
													554+40.00	DR-306			
23	IA 330 SB	554+40.00	558+50.00	LT	42.0	4.0	470.0						554+40.00	DR-306	43.5		
													558+50.00	DR-306			
24	IA 330 SB	558+50.00	561+75.00	LT	42.0	4.0	385.0						558+50.00	DR-306	35.6		
													561+75.00	DR-306			
25	IA 330 SB	561+75.00	565+25.00	LT	42.0	4.0	410.0						561+75.00	DR-306	38.0		
													565+25.00	DR-306			
26	IA 330 SB	565+25.00	569+15.00	LT	42.0	4.0	450.0						565+25.00	DR-306	41.7		
													569+15.00	DR-306			
27	IA 330 SB	569+15.00	572+50.00	LT	42.0	4.0	395.0						569+15.00	DR-306	36.6		
													572+50.00	DR-306			
28	IA 330 SB	572+50.00	576+75.00	LT	42.0	4.0	485.0						572+50.00	DR-306	44.9		
													576+75.00	DR-306			
29	IA 330 SB	576+75.00	580+00.00	LT	42.0	4.0	385.0						576+75.00	DR-306	35.6		
													580+00.00	DR-306			
30	IA 330 SB	580+00.00	584+40.00	LT	42.0	4.0	500.0						580+00.00	DR-306	46.3		
													584+40.00	DR-306			
31	IA 330 SB	584+40.00	585+00.00	LT	42.0	4.0	120.0						584+40.00	DR-306	11.1		
													585+00.00	DR-306			
32	IA 330 SB	585+00.00	589+40.00	LT	42.0	4.0	500.0						585+00.00	DR-306	46.3		
													589+40.00	DR-306			
33	IA 330 SB	589+40.00	592+00.00	LT	42.0	4.0	320.0						589+40.00	DR-306	29.6		
													592+00.00	DR-306			
34	IA 330 SB	592+00.00	595+75.00	LT	42.0	4.0	435.0						592+00.00	DR-306	40.3		
													595+75.00	DR-306			
35	IA 330 SB	595+75.00	600+00.00	LT	42.0	4.0	485.0						595+75.00	DR-306	44.9		
													600+00.00	DR-306			
36	IA 330 SB	600+00.00	604+25.00	LT	42.0	4.0	485.0						600+00.00	DR-306	44.9		
													604+25.00	DR-306			
37	IA 330 SB	604+25.00	608+00.00	LT	42.0	4.0	435.0						604+25.00	DR-306	40.3		
													608+00.00	DR-306			
38	IA 330 SB	608+00.00	612+25.00	LT	42.0	4.0	485.0						608+00.00	DR-306	44.9		
													612+25.00	DR-306			
39	IA 330 SB	612+25.00	616+75.00	LT	42.0	4.0	510.0						612+25.00	DR-306	47.2		
													616+75.00	DR-306			

LONGITUDINAL SUBDRAIN SHOULDER AND BACKSLOPE

Refer to Soils Sheets

* Not a bid item. Bridge berm quantities assume a trench depth of 24 inches.

Location						Longitudinal Subdrain (DR-303)							Subdrain Outlet		Porous* Backfill	Class "A"* Crushed Stone	Remarks
Line No.	Road or Lane Identification	Station to Station		Side	Depth (D)	Shoulder		Backslope		Bridge Berm (EW-203 or EW-204)			DR-303, DR-305 or DR-306				
						Size	Length	Size	Length	Standard Road Plan and Type	Size	Length	Station	Standard Road Plan and Type			
					IN	IN	FT	IN	FT		IN	FT			CY	CY	
40	IA 330 SB	616+75.00	620+00.00	LT	42.0	4.0	385.0						616+75.00	DR-306	35.6		
													620+00.00	DR-306			
41	IA 330 SB	620+00.00	624+50.00	LT	42.0	4.0	510.0						620+00.00	DR-306	47.2		
													624+50.00	DR-306			
42	IA 330 SB	624+50.00	628+00.00	LT	42.0	4.0	410.0						624+50.00	DR-306	38.0		
													628+00.00	DR-306			
43	IA 330 SB	628+00.00	632+00.00	LT	42.0	4.0	460.0						628+00.00	DR-306	42.6		
													632+00.00	DR-306			
44	IA 330 SB	632+00.00	635+00.00	LT	42.0	4.0	360.0						632+00.00	DR-306	33.3		
													635+00.00	DR-306			
45	IA 330 SB	635+00.00	637+14.83	LT	42.0	4.0	274.8						635+00.00	DR-306	25.4		
													637+14.83	DR-306			
46	IA 330 SB	637+14.68	637+21.64	LT	42.0	4.0	67.0						637+14.68	DR-306	6.2		
													637+21.64	DR-306			
47	IA 330 SB	640+30.90	644+25.00	LT	42.0	4.0	454.1						640+30.90	DR-306	42.0		
													644+25.00	DR-306			
48	IA 330 SB	644+25.00	648+50.00	LT	42.0	4.0	485.0						644+25.00	DR-306	44.9		
													648+50.00	DR-306			
49	IA 330 SB	648+50.00	652+75.00	LT	42.0	4.0	485.0						648+50.00	DR-306	44.9		
													652+75.00	DR-306			
50	IA 330 SB	652+75.00	656+75.00	LT	42.0	4.0	460.0						652+75.00	DR-306	42.6		
													656+75.00	DR-306			
51	IA 330 SB	656+75.00	661+40.00	LT	42.0	4.0	525.0						656+75.00	DR-306	48.6		
													661+40.00	DR-306			
52	IA 330 SB	661+40.00	665+00.00	LT	42.0	4.0	420.0						661+40.00	DR-306	38.9		
													665+00.00	DR-306			
53	IA 330 SB	665+00.00	670+25.00	LT	42.0	4.0	585.0						665+00.00	DR-306	54.2		
													670+25.00	DR-306			
54	IA 330 SB	670+25.00	674+25.00	LT	42.0	4.0	460.0						670+25.00	DR-306	42.6		
													674+25.00	DR-306			
55	IA 330 SB	674+25.00	679+00.00	LT	42.0	4.0	535.0						674+25.00	DR-306	49.5		
													679+00.00	DR-306			
56	IA 330 SB	679+00.00	683+25.00	LT	42.0	4.0	485.0						679+00.00	DR-306	44.9		
													683+25.00	DR-306			
57	IA 330 SB	683+25.00	687+50.00	LT	42.0	4.0	485.0						683+25.00	DR-306	44.9		
													687+50.00	DR-306			
58	IA 330 SB	687+50.00	691+45.00	LT	42.0	4.0	455.0						687+50.00	DR-306	42.1		
													691+45.00	DR-306			
59	IA 330 SB	691+45.00	695+25.00	LT	42.0	4.0	440.0						691+45.00	DR-306	40.7		
													695+25.00	DR-306			
60	IA 330 SB	695+25.00	700+00.00	LT	42.0	4.0	535.0						695+25.00	DR-306	49.5		
													700+00.00	DR-306			
61	IA 330 SB	700+00.00	704+75.00	LT	42.0	4.0	535.0						700+00.00	DR-306	49.5		
													704+75.00	DR-306			
62	IA 330 SB	704+75.00	710+00.00	LT	42.0	4.0	585.0						704+75.00	DR-306	54.2		
													710+00.00	DR-306			
63	IA 330 SB	710+00.00	714+75.00	LT	42.0	4.0	535.0						710+00.00	DR-306	49.5		
													714+75.00	DR-306			
64	IA 330 SB	714+75.00	718+25.00	LT	42.0	4.0	410.0						714+75.00	DR-306	38.0		
													718+25.00	DR-306			
65	IA 330 SB	718+25.00	722+50.00	LT	42.0	4.0	485.0						718+25.00	DR-306	44.9		
													722+50.00	DR-306			
66	IA 330 SB	722+50.00	727+00.00	LT	42.0	4.0	510.0						722+50.00	DR-306	47.2		
													727+00.00	DR-306			
67	IA 330 SB	727+00.00	731+00.00	LT	42.0	4.0	460.0						727+00.00	DR-306	42.6		
													731+00.00	DR-306			
68	IA 330 SB	731+00.00	734+25.00	LT	42.0	4.0	385.0						731+00.00	DR-306	35.6		
													734+25.00	DR-306			
69	IA 330 SB	734+25.00	738+00.00	LT	42.0	4.0	435.0						734+25.00	DR-306	40.3		
													738+00.00	DR-306			
70	IA 330 SB	738+00.00	742+25.00	LT	42.0	4.0	485.0						738+00.00	DR-306	44.9		
													742+25.00	DR-306			
71	IA 330 SB	742+25.00	746+00.00	LT	42.0	4.0	435.0						742+25.00	DR-306	40.3		
													746+00.00	DR-306			
72	IA 330 SB	746+00.00	750+40.00	LT	42.0	4.0	500.0						746+00.00	DR-306	46.3		
													750+40.00	DR-306			
73	IA 330 SB	750+40.00	750+50.00	LT	42.0	4.0	70.0						750+40.00	DR-306	6.5		
													750+50.00	DR-306			
74	IA 330 SB	750+50.00	754+75.00	LT	42.0	4.0	485.0						750+50.00	DR-306	44.9		
													754+75.00	DR-306			
75	IA 330 SB	754+75.00	758+25.00	LT	42.0	4.0	410.0						754+75.00	DR-306	38.0		
													758+25.00	DR-306			
76	IA 330 SB	758+25.00	762+75.00	LT	42.0	4.0	510.0						758+25.00	DR-306	47.2		
													762+75.00	DR-306			
77	IA 330 SB	762+75.00	770+73.11	LT	42.0	4.0	858.1						762+75.00	DR-306	79.5		
													770+73.11	DR-306			
78	IA 330 SB	466+62.19	470+00.00	RT	42.0	4.0	397.8						466+62.19	DR-306	36.8		
													470+00.00	DR-306			

LONGITUDINAL SUBDRAIN SHOULDER AND BACKSLOPE

Refer to Soils Sheets

* Not a bid item. Bridge berm quantities assume a trench depth of 24 inches.

Location						Longitudinal Subdrain (DR-303)							Subdrain Outlet		Porous* Backfill	Class "A"* Crushed Stone	Remarks
Line No.	Road or Lane Identification	Station to Station		Side	Depth (D)	Shoulder		Backslope		Bridge Berm (EW-203 or EW-204)			DR-303, DR-305 or DR-306				
						Size	Length	Size	Length	Standard Road Plan and Type	Size	Length	Station	Standard Road Plan and Type			
					IN	IN	FT	IN	FT		IN	FT			CY	CY	
79	IA 330 SB	470+00.00	474+25.00	RT	42.0	4.0	485.0						470+00.00	DR-306	44.9		
													474+25.00	DR-306			
80	IA 330 SB	475+25.00	479+00.00	RT	42.0	4.0	435.0						475+25.00	DR-306	40.3		
													479+00.00	DR-306			
81	IA 330 SB	479+00.00	483+25.00	RT	42.0	4.0	485.0						479+00.00	DR-306	44.9		
													483+25.00	DR-306			
82	IA 330 SB	483+25.00	487+00.00	RT	42.0	4.0	435.0						483+25.00	DR-306	40.3		
													487+00.00	DR-306			
83	IA 330 SB	487+00.00	491+75.00	RT	42.0	4.0	535.0						487+00.00	DR-306	49.5		
													491+75.00	DR-306			
84	IA 330 SB	491+75.00	495+00.00	RT	42.0	4.0	385.0						491+75.00	DR-306	35.6		
													495+00.00	DR-306			
85	IA 330 SB	495+00.00	499+25.00	RT	42.0	4.0	485.0						495+00.00	DR-306	44.9		
													499+25.00	DR-306			
86	IA 330 SB	499+25.00	503+00.00	RT	42.0	4.0	435.0						499+25.00	DR-306	40.3		
													503+00.00	DR-306			
87	IA 330 SB	503+00.00	507+35.00	RT	42.0	4.0	495.0						503+00.00	DR-306	45.8		
													507+35.00	DR-306			
88	IA 330 SB	507+35.00	511+25.00	RT	42.0	4.0	450.0						507+35.00	DR-306	41.7		
													511+25.00	DR-306			
89	IA 330 SB	511+25.00	514+54.13	RT	42.0	4.0	389.1						511+25.00	DR-306	36.0		
													514+54.13	DR-306			
90	IA 330 SB	514+57.05	518+25.00	RT	42.0	4.0	427.9						514+57.05	DR-306	39.6		
													518+25.00	DR-306			
91	IA 330 SB	518+25.00	522+50.00	RT	42.0	4.0	485.0						518+25.00	DR-306	44.9		
													522+50.00	DR-306			
92	IA 330 SB	522+50.00	526+00.00	RT	42.0	4.0	410.0						522+50.00	DR-306	38.0		
													526+00.00	DR-306			
93	IA 330 SB	526+00.00	530+00.00	RT	42.0	4.0	460.0						526+00.00	DR-306	42.6		
													530+00.00	DR-306			
94	IA 330 SB	530+00.00	534+65.00	RT	42.0	4.0	525.0						530+00.00	DR-306	48.6		
													534+65.00	DR-306			
95	IA 330 SB	534+65.00	538+00.00	RT	42.0	4.0	395.0						534+65.00	DR-306	36.6		
													538+00.00	DR-306			
96	IA 330 SB	538+00.00	542+25.00	RT	42.0	4.0	485.0						538+00.00	DR-306	44.9		
													542+25.00	DR-306			
97	IA 330 SB	542+25.00	546+50.00	RT	42.0	4.0	485.0						542+25.00	DR-306	44.9		
													546+50.00	DR-306			
98	IA 330 SB	546+50.00	550+00.00	RT	42.0	4.0	410.0						546+50.00	DR-306	38.0		
													550+00.00	DR-306			
99	IA 330 SB	550+00.00	554+40.00	RT	42.0	4.0	500.0						550+00.00	DR-306	46.3		
													554+40.00	DR-306			
100	IA 330 SB	554+40.00	558+50.00	RT	42.0	4.0	470.0						554+40.00	DR-306	43.5		
													558+50.00	DR-306			
101	IA 330 SB	558+50.00	561+75.00	RT	42.0	4.0	385.0						558+50.00	DR-306	35.6		
													561+75.00	DR-306			
102	IA 330 SB	561+75.00	565+25.00	RT	42.0	4.0	410.0						561+75.00	DR-306	38.0		
													565+25.00	DR-306			
103	IA 330 SB	565+25.00	569+15.00	RT	42.0	4.0	450.0						565+25.00	DR-306	41.7		
													569+15.00	DR-306			
104	IA 330 SB	569+15.00	572+50.00	RT	42.0	4.0	395.0						569+15.00	DR-306	36.6		
													572+50.00	DR-306			
105	IA 330 SB	572+50.00	576+75.00	RT	42.0	4.0	485.0						572+50.00	DR-306	44.9		
													576+75.00	DR-306			
106	IA 330 SB	576+75.00	580+00.00	RT	42.0	4.0	385.0						576+75.00	DR-306	35.6		
													580+00.00	DR-306			
107	IA 330 SB	580+00.00	584+40.00	RT	42.0	4.0	500.0						580+00.00	DR-306	46.3		
													584+40.00	DR-306			
108	IA 330 SB	584+40.00	585+00.00	RT	42.0	4.0	120.0						584+40.00	DR-306	11.1		
													585+00.00	DR-306			
109	IA 330 SB	585+00.00	589+40.00	RT	42.0	4.0	500.0						585+00.00	DR-306	46.3		
													589+40.00	DR-306			
110	IA 330 SB	589+40.00	592+00.00	RT	42.0	4.0	320.0						589+40.00	DR-306	29.6		
													592+00.00	DR-306			
111	IA 330 SB	592+00.00	595+75.00	RT	42.0	4.0	435.0						592+00.00	DR-306	40.3		
													595+75.00	DR-306			
112	IA 330 SB	595+75.00	600+00.00	RT	42.0	4.0	485.0						595+75.00	DR-306	44.9		
													600+00.00	DR-306			
113	IA 330 SB	600+00.00	604+25.00	RT	42.0	4.0	485.0						600+00.00	DR-306	44.9		
													604+25.00	DR-306			
114	IA 330 SB	604+25.00	608+00.00	RT	42.0	4.0	435.0						604+25.00	DR-306	40.3		
													608+00.00	DR-306			
115	IA 330 SB	608+00.00	612+25.00	RT	42.0	4.0	485.0						608+00.00	DR-306	44.9		
													612+25.00	DR-306			
116	IA 330 SB	612+25.00	616+75.00	RT	42.0	4.0	510.0						612+25.00	DR-306	47.2		
													616+75.00	DR-306			
117	IA 330 SB	616+75.00	620+00.00	RT	42.0	4.0	385.0						616+75.00	DR-306	35.6		
													620+00.00	DR-306			

LONGITUDINAL SUBDRAIN SHOULDER AND BACKSLOPE

Refer to Soils Sheets

* Not a bid item. Bridge berm quantities assume a trench depth of 24 inches.

Location						Longitudinal Subdrain (DR-303)							Subdrain Outlet		Porous* Backfill	Class "A"* Crushed Stone	Remarks
Line No.	Road or Lane Identification	Station to Station		Side	Depth (D)	Shoulder		Backslope		Bridge Berm (EW-203 or EW-204)			DR-303, DR-305 or DR-306				
						Size	Length	Size	Length	Standard Road Plan and Type	Size	Length	Station	Standard Road Plan and Type			
					IN	IN	FT	IN	FT		IN	FT			CY	CY	
118	IA 330 SB	620+00.00	624+50.00	RT	42.0	4.0	510.0						620+00.00	DR-306	47.2		
													624+50.00	DR-306			
119	IA 330 SB	624+50.00	628+00.00	RT	42.0	4.0	410.0						624+50.00	DR-306	38.0		
													628+00.00	DR-306			
120	IA 330 SB	628+00.00	632+00.00	RT	42.0	4.0	460.0						628+00.00	DR-306	42.6		
													632+00.00	DR-306			
121	IA 330 SB	632+00.00	635+00.00	RT	42.0	4.0	360.0						632+00.00	DR-306	33.3		
													635+00.00	DR-306			
122	IA 330 SB	635+00.00	637+14.83	RT	42.0	4.0	274.8						635+00.00	DR-306	25.4		
													637+14.83	DR-306			
123	IA 330 SB	637+14.68	637+21.64	RT	42.0	4.0	67.0						637+14.68	DR-306	6.2		
													637+21.64	DR-306			
124	IA 330 SB	640+30.90	644+25.00	RT	42.0	4.0	454.1						640+30.90	DR-306	42.0		
													644+25.00	DR-306			
125	IA 330 SB	644+25.00	648+50.00	RT	42.0	4.0	485.0						644+25.00	DR-306	44.9		
													648+50.00	DR-306			
126	IA 330 SB	648+50.00	652+75.00	RT	42.0	4.0	485.0						648+50.00	DR-306	44.9		
													652+75.00	DR-306			
127	IA 330 SB	652+75.00	656+75.00	RT	42.0	4.0	460.0						652+75.00	DR-306	42.6		
													656+75.00	DR-306			
128	IA 330 SB	656+75.00	661+40.00	RT	42.0	4.0	525.0						656+75.00	DR-306	48.6		
													661+40.00	DR-306			
129	IA 330 SB	661+40.00	665+00.00	RT	42.0	4.0	420.0						661+40.00	DR-306	38.9		
													665+00.00	DR-306			
130	IA 330 SB	665+00.00	670+25.00	RT	42.0	4.0	585.0						665+00.00	DR-306	54.2		
													670+25.00	DR-306			
131	IA 330 SB	670+25.00	674+25.00	RT	42.0	4.0	460.0						670+25.00	DR-306	42.6		
													674+25.00	DR-306			
132	IA 330 SB	674+25.00	679+00.00	RT	42.0	4.0	535.0						674+25.00	DR-306	49.5		
													679+00.00	DR-306			
133	IA 330 SB	679+00.00	683+25.00	RT	42.0	4.0	485.0						679+00.00	DR-306	44.9		
													683+25.00	DR-306			
134	IA 330 SB	683+25.00	687+50.00	RT	42.0	4.0	485.0						683+25.00	DR-306	44.9		
													687+50.00	DR-306			
135	IA 330 SB	687+50.00	691+45.00	RT	42.0	4.0	455.0						687+50.00	DR-306	42.1		
													691+45.00	DR-306			
136	IA 330 SB	691+45.00	695+25.00	RT	42.0	4.0	440.0						691+45.00	DR-306	40.7		
													695+25.00	DR-306			
137	IA 330 SB	695+25.00	700+00.00	RT	42.0	4.0	535.0						695+25.00	DR-306	49.5		
													700+00.00	DR-306			
138	IA 330 SB	700+00.00	704+75.00	RT	42.0	4.0	535.0						700+00.00	DR-306	49.5		
													704+75.00	DR-306			
139	IA 330 SB	704+75.00	710+00.00	RT	42.0	4.0	585.0						704+75.00	DR-306	54.2		
													710+00.00	DR-306			
140	IA 330 SB	710+00.00	714+75.00	RT	42.0	4.0	535.0						710+00.00	DR-306	49.5		
													714+75.00	DR-306			
141	IA 330 SB	714+75.00	718+25.00	RT	42.0	4.0	410.0						714+75.00	DR-306	38.0		
													718+25.00	DR-306			
142	IA 330 SB	718+25.00	722+50.00	RT	42.0	4.0	485.0						718+25.00	DR-306	44.9		
													722+50.00	DR-306			
143	IA 330 SB	722+50.00	727+00.00	RT	42.0	4.0	510.0						722+50.00	DR-306	47.2		
													727+00.00	DR-306			
144	IA 330 SB	727+00.00	731+00.00	RT	42.0	4.0	460.0						727+00.00	DR-306	42.6		
													731+00.00	DR-306			
145	IA 330 SB	731+00.00	734+25.00	RT	42.0	4.0	385.0						731+00.00	DR-306	35.6		
													734+25.00	DR-306			
146	IA 330 SB	734+25.00	738+00.00	RT	42.0	4.0	435.0						734+25.00	DR-306	40.3		
													738+00.00	DR-306			
147	IA 330 SB	738+00.00	742+25.00	RT	42.0	4.0	485.0						738+00.00	DR-306	44.9		
													742+25.00	DR-306			
148	IA 330 SB	742+25.00	746+00.00	RT	42.0	4.0	435.0						742+25.00	DR-306	40.3		
													746+00.00	DR-306			
149	IA 330 SB	746+00.00	750+40.00	RT	42.0	4.0	500.0						746+00.00	DR-306	46.3		
													750+40.00	DR-306			
150	IA 330 SB	750+40.00	750+50.00	RT	42.0	4.0	70.0						750+40.00	DR-306	6.5		
													750+50.00	DR-306			
151	IA 330 SB	750+50.00	754+75.00	RT	42.0	4.0	485.0						750+50.00	DR-306	44.9		
													754+75.00	DR-306			
152	IA 330 SB	754+75.00	758+25.00	RT	42.0	4.0	410.0						754+75.00	DR-306	38.0		
													758+25.00	DR-306			
153	IA 330 SB	758+25.00	762+75.00	RT	42.0	4.0	510.0						758+25.00	DR-306	47.2		
													762+75.00	DR-306			
154	IA 330 SB	762+75.00	770+73.11	RT	42.0	4.0	858.1						762+75.00	DR-306	79.5		
Totals							69237.8		0.0					DR-306 = 307	6410.2		

LONGITUDINAL SUBDRAIN SHOULDER AND BACKSLOPE

Refer to Soils Sheets

* Not a bid item. Bridge berm quantities assume a trench depth of 24 inches.

Location				Longitudinal Subdrain (DR-303)							Subdrain Outlet		Porous* Backfill	Class "A"* Crushed Stone	Remarks
Line No.	Road or Lane Identification	Station to Station	Side	Depth (D)	Shoulder		Backslope		Bridge Berm (EW-203 or EW-204)			DR-303, DR-305 or DR-306			
					Size	Length	Size	Length	Standard Road Plan and Type	Size	Length	Station	Standard Road Plan and Type		
				IN	IN	FT	IN	FT		IN	FT			CY	CY	
NOTE: Subdrains may be adjusted both vertically and horizontally in the field as necessary.															
Any existing longitudinal subdrains encountered during construction that are not removed shall remain functioning.															

SURVEY SYMBOLS

- Interstate Highway Symbol
- U.S. Highway Symbol
- Iowa Highway Symbol
- County Road Highway Symbol
- Evergreen Tree
- Deciduous Tree
- Fruit Tree
- Shrub (Bushes)
- Timber
- Hedge
- Stump
- Swamp
- Rock Outcrop
- Broken Concrete
- Revetment (Rip Rap)
- Cemetery
- Grave
- Cave
- Sink Hole
- Board Fence
- Chain Link or Security Fence
- Wire Fence
- Terrace
- Earth Dam or Dike (Existing)
- Tile Outlet
- Edge of Water
- Existing Drainage
- Right of Way Rail or Lot Corner
- Concrete Monument
- Well
- Windmill
- Beehive Intake
- Existing Intake
- Existing Utility Access (Manhole)
- Fire Hydrant
- WH Water Hydrant (Rural)
- ST Septic Tank
- C Cistern
- LP L.P. Gas Tank (No Footing)
- UST Underground Storage Tank
- Latrine
- Satellite TV Dish
- WHU Water Hook Up
- RT Radio Tower
- TA Tower Anchor
- Guardrail (Beam or Cable)
- GP Guard Post (one or two)
- Guard Post (over two)
- FP Filler Pipe
- GV Gas Valve
- WV Water Valve
- SL Speed Limit Sign
- MM Mile Marker Post
- SIGN Sign
- TCB Traffic Signal Control Box
- RRB Rail Road Signal Control Box
- TSB Telephone Switch Box
- EB Electric Box

UTILITY LEGEND

PLAN VIEW COLOR LEGEND OF PLAN AND PROFILE SHEETS

LINEWORK	Design Color No.		
Green	(2)		Existing Topographic Features and Labels
Blue	(1)		Proposed Alignment, Stationing, Tic Marks, and Alignment Annotation
Magenta	(5)		Existing Utilities
SHADING	**Design Color No.**		**Transparency**
Pink, Dark	(13)		Temporary Pavement Shading 50%
Yellow	(4)		Proposed Pavement Shading 50%
Orange	(6)		Proposed Granular Shading 50%
Orange	(70)		Proposed Shoulder Granular Shading 50%
Yellow	(68)		Proposed Shoulder Paved Full Depth Shading 50%
Yellow	(132)		Proposed Shoulder Paved Partial Depth Shading 50%
Brown, Light	(236)		Grading Shading 50%
Orange, Light	(134)		Proposed Granular Entrance Shading 50%
Yellow	(220)		Proposed Paved Entrance Shading 50%
Tan	(8)		Proposed Sidewalk Shading 50%
Blue, Light	(230)		Proposed Sidewalk Landing Shading 50%
Pink	(11)		Proposed Sidewalk Ramp Shading 50%
Red	(3)		Proposed Structure Shading 50%
Red	(3)		Delineates Restricted Areas 0%

PROFILE VIEW COLOR LEGEND OF PLAN AND PROFILE SHEETS

LINEWORK	Design Color No.	
Green	(10)	Existing Ground Line Profile
Blue	(1)	Proposed Profile and Annotation
Magenta	(5)	Existing Utilities
Blue, Light	(230)	Proposed Ditch Grades, Left
Black	(0)	Proposed Ditch Grades, Median
Rust	(14)	Proposed Ditch Grades, Right

- Reference Point
- Station
- Survey Line
- Section Corner
- Ground Line Intercept
- Saw Cut
- Guardrail
- Trench Drain
- HighTension Cable Guardrail
- Sheet Pile
- Pavement Removal
- Clearing & Grubbing Area

RIGHT-OF-WAY LEGEND

- Proposed Right-of-Way Symbol
- Proposed Right-of-Way Line
- Existing Right of Way
- Existing and Proposed Right-of-Way
- Easement and Existing Right-of-Way
- Easement (Temporary) Symbol
- Easement (Temporary) Line
- Easement
- C/A Access Control
- Property Line Symbol
- Property Line

PLAN AND PROFILE LEGEND AND SYMBOL INFORMATION SHEET

(COVERS SHEET SERIES D, E, F, & K)

FILE NO.	ENGLISH	DESIGN TEAM Vortherms\Tamrakar\Vais	MARSHALL COUNTY	PROJECT NUMBER NHSX-330-2(102)--3H-64	SHEET NUMBER D.1

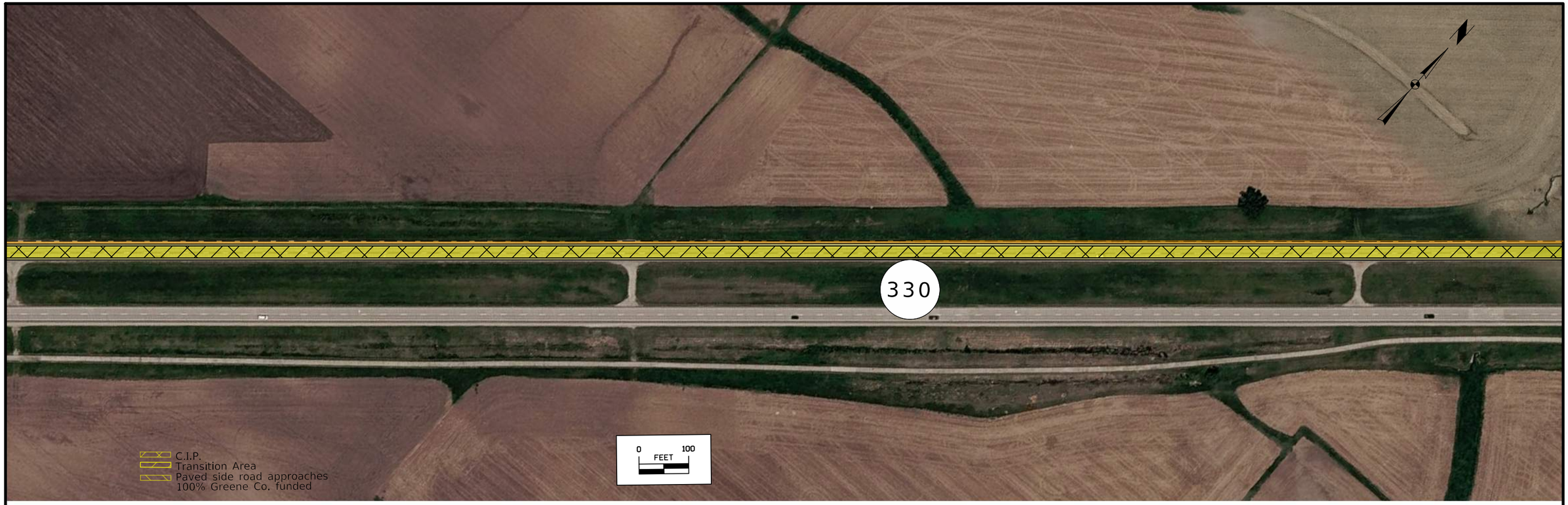
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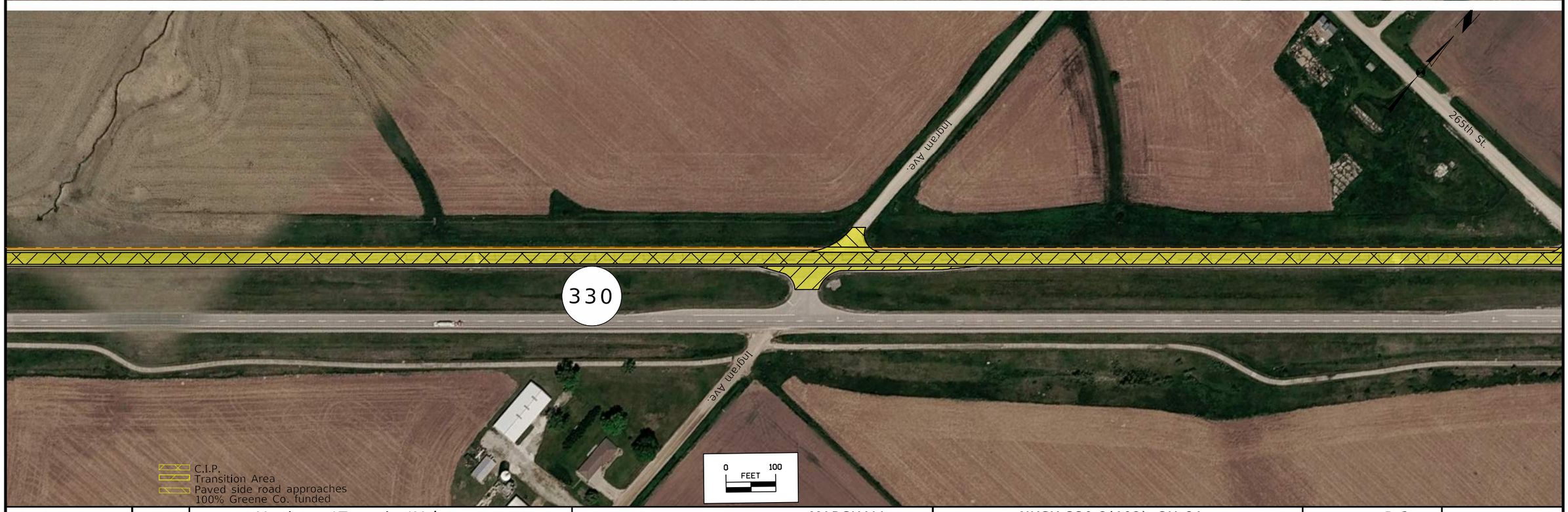


FILE NO.	ENGLISH	DESIGN TEAM Vortherms\Tamrakar\Vais	MARSHALL COUNTY	PROJECT NUMBER NHSX-330-2(102)--3H-64	SHEET NUMBER D.2	

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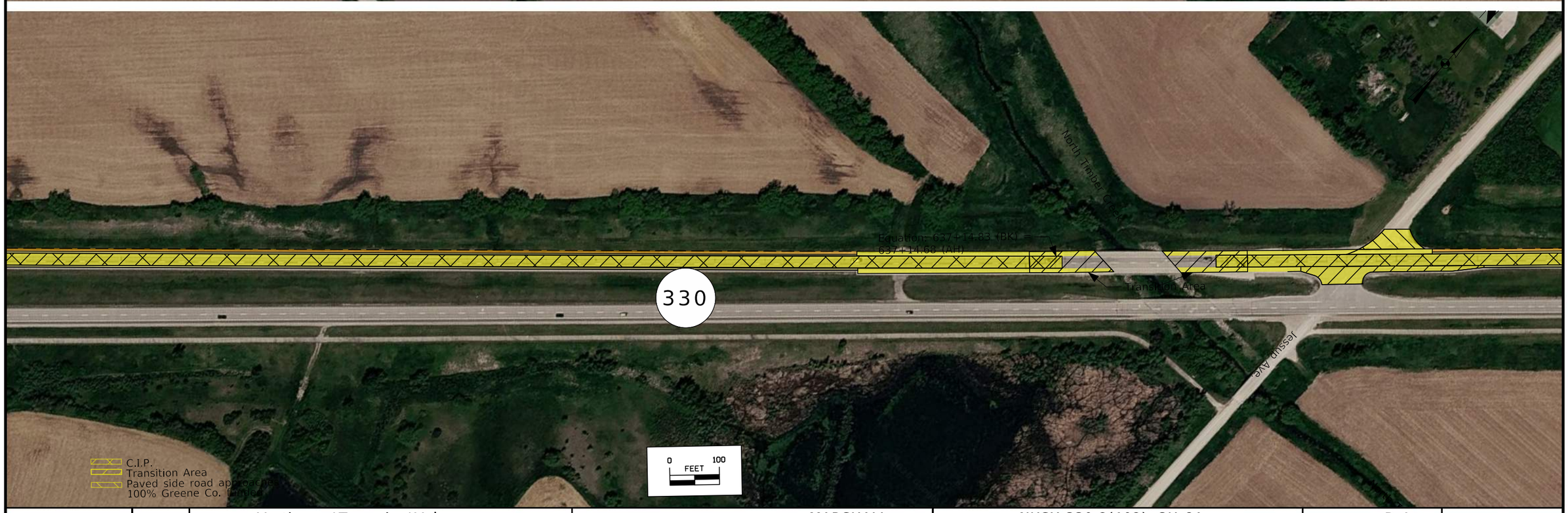


FILE NO.	ENGLISH	DESIGN TEAM Vortherms\Tamrakar\Vais	MARSHALL COUNTY	PROJECT NUMBER NHSX-330-2(102)--3H-64	SHEET NUMBER D.3	

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FILE NO.	ENGLISH	DESIGN TEAM Vortherms\Tamrakar\Vais	MARSHALL COUNTY	PROJECT NUMBER NHSX-330-2(102)--3H-64	SHEET NUMBER D.4

10:35:17 AM 9/21/2026 mvais pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\6433001020\DistrictDesign\NHSX-330-2(102)--3H-64\64330102_D2.dgn

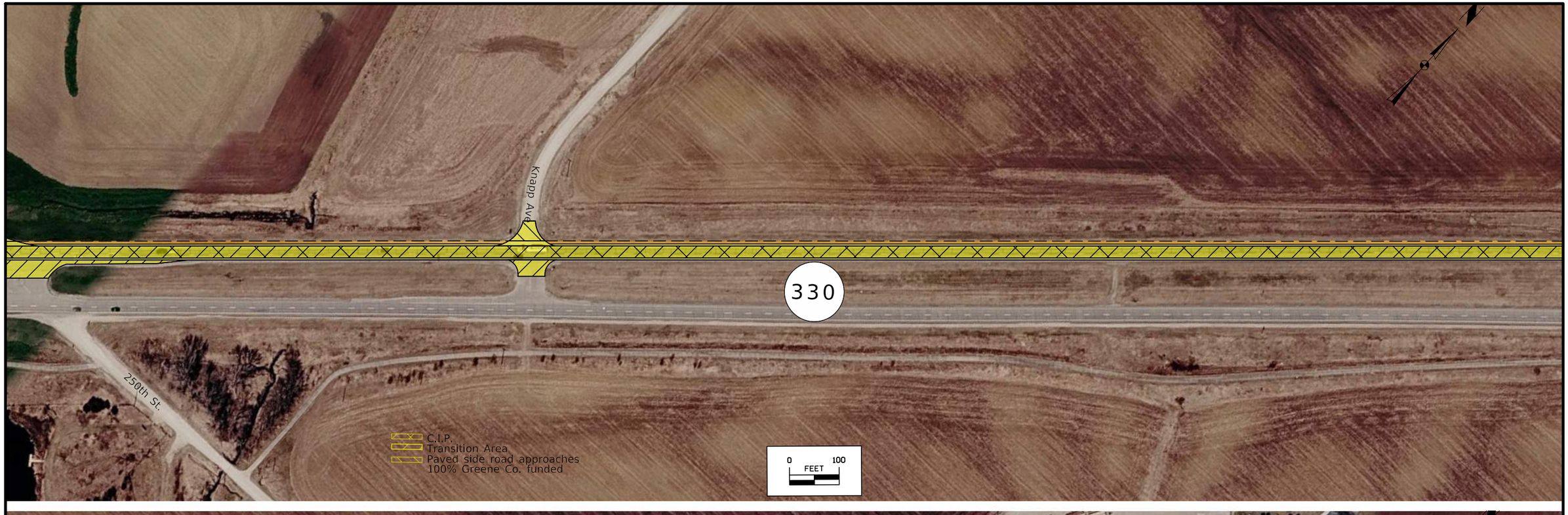
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FILE NO.	ENGLISH	DESIGN TEAM Vortherms\Tamrakar\Vais	MARSHALL COUNTY	PROJECT NUMBER NHSX-330-2(102)--3H-64	SHEET NUMBER D.5	

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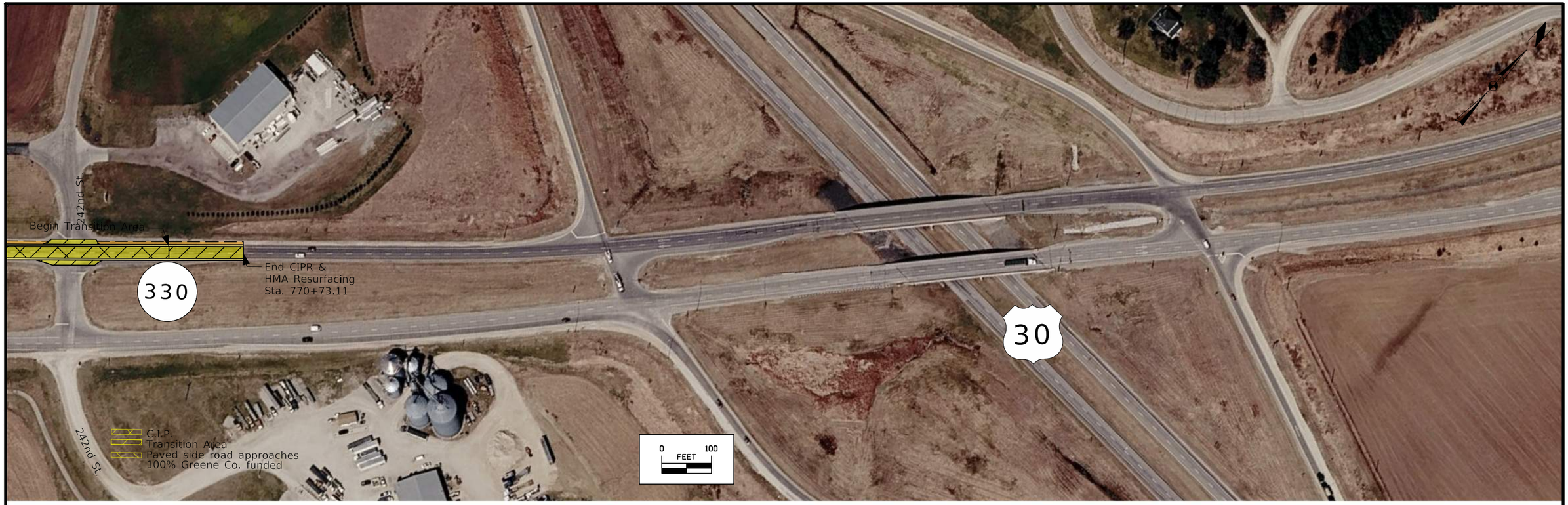
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FILE NO.	ENGLISH	DESIGN TEAM Vortherms\Tamrakar\Vais	MARSHALL COUNTY	PROJECT NUMBER NHSX-330-2(102)--3H-64	SHEET NUMBER D.6	

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FILE NO.	ENGLISH	DESIGN TEAM Vortherms\Tamrakar\Vais	MARSHALL COUNTY	PROJECT NUMBER NHSX-330-2(102)--3H-64	SHEET NUMBER D.7	

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108-23A
08-01-08

TRAFFIC CONTROL PLAN

Traffic shall be maintained at all times on IA 330 and all side roads per TC 418.

111-01
04-17-12

COORDINATED OPERATIONS

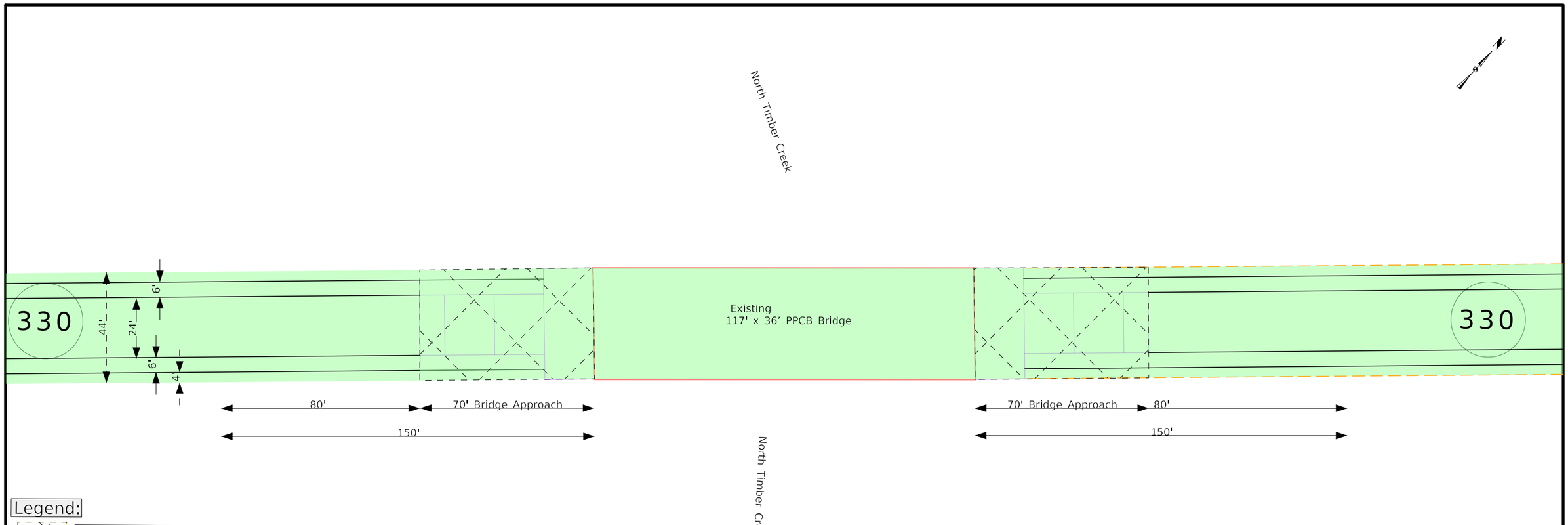
Other work in progress during the same period of time will include the construction of the projects listed. Coordinate operations with those of other contractors working within the same area.

Project	Type of Work
BRF-330-2(098)--38-64	Bridge deck overlay

108-25
10-21-14

511 TRAVEL RESTRICTIONS

Route	Direction	County	Location Description	Feature Crossed	Object Type	Maint. Bridge No., Structure ID, or FHWA No.	Type of Restriction	Existing Measurement	Construction Measurement	Construction Measurement as Signed	Projected As Built Measurement	Remarks
IA 330	NB	Marshall	Within project limits		Traffic Control Device		Horizontal	24'	12'			



FILE NO.	ENGLISH	DESIGN TEAM Vortherms/Tamrakar/Vais	MARSHALL COUNTY	PROJECT NUMBER NHSX-330-2(102)--3H-64	SHEET NUMBER U.1

SYSTEMTIME SYSTEMDATE USERNAME DGNSPEC