

8b
9/17/24

HMA RESURFACING AND COLD-IN-PLACE RECYCLING
PROJECT NO: FM-C097(152)-55-97
WOODBURY COUNTY
Letting Date DECEMBER 17, 2024



Project Development Division
PLANS OF PROPOSED IMPROVEMENT ON THE
FARM-TO-MARKET SYSTEM
WOODBURY COUNTY
HMA RESURFACING/
COLD-IN-PLACE RECYCLING
PROJECT NO: FM-C097(152)--55-97

REFER TO THE PROPOSAL FORM FOR LIST OF APPLICABLE SPECIFICATIONS.

ON D38, FROM COUNTY ROAD K84
E 10.3 MILES TO IA HWY 31

REFER TO SHEET 2 FOR LOCATION MAP

TRAFFIC CONTROL PLAN

THIS ROAD WILL BE OPENED UNDER FLAGGER AND PILOT CAR OPERATIONS FOR THROUGH TRAFFIC DURING HMA CONSTRUCTION. TRAFFIC ROUTES ADJACENT TO PROPERTIES WILL BE MAINTAINED AS PROVIDED FOR ARTICLE 1107.03 OF THE CURRENT STANDARD SPECIFICATIONS. TRAFFIC CONTROL DEVICES, PROCEDURES, LAYOUTS, SIGNING, AND PAVEMENT MARKINGS INSTALLED WITHIN THE LIMITS OF THIS PROJECT SHALL CONFORM TO THE "MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS" AS ADOPTED BY THE DEPARTMENT PER 761 OF THE IOWA ADMINISTRATIONS CODE (IAC) CHAPTER 130.

MAINTENANCE OF SIGNS AND BARRICADES AS STATED IN ARTICLE 1107.03 SHALL APPLY ON THIS PROJECT.

SIGNING ON THIS PROJECT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE IN ACCORDANCE WITH ROAD STANDARD TC-202, TC-212, AND TC-214

Approved
Board of Supervisors

Project Number: FM-C097(152)-55-97

INDEX OF SHEETS

No.	Description
1	TITLE SHEET
2	LOCATION MAP
3	ESTIMATE OF QUANTITIES AND GENERAL NOTES
4	ESTIMATE REFERENCE INFORMATION
5	TYPICAL SECTION AND DETAILS
6	TYPICAL DETAILS
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ROAD STANDARD PLANS

The following Road Standards shall be considered applicable to construction work on this project.

Description	Date	Identification	Date	Identification	Date
PM-110	10-15-24				
PM-120	10-15-24				
PV-10	04-21-20				
TC-202	04-18-23				
TC-212	04-18-23				
TC-214	04-18-23				

MILEAGE SUMMARY

DIV.	LOCATION	LIN. FT.	MILES
1	SEC "A" - STA. 0+11.0 TO STA. 557+42.65	55,731.65	
1	DEDUCT BRIDGE AND APPROACH AT STA 113+30.0	-343.00	
1	DEDUCT BRIDGE AND APPROACH AT STA. 222+27	-271.00	
1	TOTAL LENGTH	55,117.65	10.4



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 Date

Mark J. Nahra
Printed or Typed Name

My license renewal date is December 31, 2024
Pages or sheets covered by this seal:
Pages 1 thru 7

ESTIMATED QUANTITIES

No.	ITEM CODE	ITEM	UNIT	TOTAL
1.	2102-2710070	EXCAVATION, CLASS 10, ROADWAY AND BORROW	CU. YDS.	650
2.	2121-7425020	GRANULAR SHOULDERS, TYPE B	TON	7,060
3.	2214-5145150	PAVEMENT SCARIFICATION	SQ. YDS.	134,740
4.	2303-1032500	HOT MIX ASPHALT STANDARD TRAFFIC, INTERMEDIATE COURSE 1/2 IN. MIX	TON	13,980
5.	2303-1033500	HOT MIX ASPHALT STANDARD TRAFFIC, SURFACE COURSE, 1/2 IN. MIX NO SPECIAL FRICTION REQUIREMENT	TON	12,970
6.	2303-1258343	ASPHALT BINDER, PG 58-34S, STANDARD TRAFFIC	TON	1,617
7.	2303-6911000	HOT MIX ASPHALT PAVEMENT SAMPLES	LUMP SUM	1
8.	2303-7000610	PAYMENT ADJUSTMENT INCENTIVE/DISCENTIVE FOR HMA MIXTURE LAB VOIDS (FORMULA-BY PAY FACTOR)	EACH	8,000
9.	2303-7000620	PAYMENT ADJUSTMENT INCENTIVE/DISINCENTIVE FOR HMA MIXTURE FIELD VOIDS (FORMULA-BY PAY FACTOR)	EACH	8,000
10.	2303-9091010	RUMBLE STRIP PANEL (HMA SURFACE)	EACH	2
11.	2317-7000120	PAYMENT ADJUSTMENT INCENTIVE/DISINCENTIVE FOR HMA PAVEMENT SMOOTHNESS (BY SCHEDULE)	EACH	13,750
12.	2318-1001100	COLD-IN-PLACE RECYCLED ASPHALT PAVEMENT	SQ. YDS.	134,740
13.	2318-1001220	ASPHALT STABILIZING AGENT (FOAMED ASPHALT)	TON	590
14.	2527-9263209	PAINTED PAVEMENT MARKINGS, WATERBORNE OR SOLVENT-BASED	STA'S	1159.38
15.	2528-8445110	TRAFFIC CONTROL	LUMP SUM	1
16.	2528-8445113	FLAGGERS	EACH	PROPOSAL
17.	2528-8445115	PILOT CARS	EACH	PROPOSAL
18.	2533-4980005	MOBILIZATION	LUMP SUM	1

GENERAL NOTES

THE IOWA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS, HIGHWAY DIVISION SERIES OF 2023, PLUS ALL CURRENT SUPPLEMENTAL SPECIFICATIONS AND SPECIAL PROVISIONS TO DATE SHALL APPLY TO ALL WORK ON THIS PROJECT

CLEAN AND PREPARE SCARIFIED H.M.A. BASE IN ACCORDANCE WITH SECTION 2212

A TACK COAT OF 0.63 GAL. PER SQ. YD. REQUIRED.

THIS PROJECT WILL BE A OMA PROJECT IN ACCORDANCE WITH STANDARD SPECS. CONTRACTOR WILL SUBMIT TO THE COUNTY ENGINEER THE JOB MIX FORMULA AND BEGINNING AC% FOR ACCEPTANCE BEFORE ANY OPERATION INVOLVING THAT PARTICULAR JOB MIX FORMULA BEGINS.

CERTIFIED PLANT INSPECTION REQUIRED ON ALL HMA PLACED ON PROJECT.

WOODBURY COUNTY
ENGINEERS OFFICE

DESIGNED BY	CHECKED BY	DATE
DRAWN BY	REVISION BY	REVISION
JSG	JSG	

PROJECT DESCRIPTION: D38 HMA RESURFACING AND COLD-IN-PLACE RECYCLING K64 E. 10.4 MILES TO IA HWY 31
 SHEET DESCRIPTION: ESTIMATE OF QUANTITIES AND GENERAL NOTES

PROJECT NO
 FM-CO97(152)-65-97
 SHEET
3

ESTIMATE REFERENCE INFORMATION		ESTIMATE REFERENCE INFORMATION	
1.	This item includes the core out of intersection roads at Sta. 105+74. Lt. Sta. 158+51 Lt and Rt., Sta. 209+56 Rt and Lt. Sta. 261+82 Rt. and Lt., Sta. 288+50 Lt and Rt., Sta. 367-75 Rt. and Lt., Sta. 420+61 Rt. and Lt., Sta. 447+08 Rt. The core out will generate 650 CY. All excess material shall be hauled off the project and disposed of by the contractor. Full depth saw cuts are required at the fillet to create a vertical face. The cost of the saw cuts are incidental to bid item. Payment shall be by plan quantity.	8.	Density samples in accordance with article 2303 of the current Iowa Department of Transportation Standard Specifications. Woodbury County shall supply a Plant Monitor. The contractor shall supply plant inspection and supply transportation of samples to the District 3 lab in Sioux City.
2.	The price bid for this item shall be full compensation for furnishing and placing Type B shoulder the entire length of the project including intersection radius and all driveways. The nominal depth shall be approximately 3" and a width of 2'-6". All granular driveways shall have a 20' taper with this material from the driveway fillet. Quantity of material estimated based on a unit weight of 128 Lbs/cf. The material shall be placed with an approved shouldering machine and compacted with a smooth drum roller. Shoulder material may utilize material from item 3. All recycled material shall be screened through a 1.5" screen. This material shall have no other gradation requirement, except the minus 1.5"	10.	Rumble strips shall be added at Sta. 10+04 and Sta. 15+39.
3.	This item shall include milling a depth of 2" the entire project length, forming a joint at the PCC concrete at the beginning, at the beginning and end of the bridge approaches, on each side of the PCC patch at Station 134+14, and all fillets. Scarified material to be loaded directly into trucks and shall become property of the contractor. The material may be utilized for item 2, granular shoulders. Following the scarification of roadway header locations, the contractor shall place a wedge of millings along the headers, driveways, entrances and intersections to maintain traffic and to protect the edges of the adjacent roadway. See sheet 6 for details.	11.	Section 2316 of the Current Standard Specifications shall apply. HMA Pavement Smoothness (Schedule A) Incentive/Disincentive (Each) = 110 segments @ \$125 max per segment.
4.	Asphaltic cement shall be grade PG 58-34S for this mixture per section 2303 Asphaltic cement totals based on 6.00% content. Final determination to be based on mix design. This mixture may include recycled asphalt. Material shall be placed in one nominal 1 1/2" lift in the roadway. For the intersections and new fillets. 2-3" lifts with the final 1-2" lift coming from item 5. Certified Plant Inspection shall apply.	12.	Work shall consist of the Cold-in-Place Recycling of the top 4" of the existing pavement by milling, injection foamed asphalt, placing, and compacting the mixture. Work shall be accomplished in a continuous operation of milling, injection, placing, and compacting. Recycled asphalt must be placed with a single lane, pick-up paver equipped with automatic screed control. A floating screed attached to the recycling machine will not be allowed. The contractor is to ensure no vegetation or debris from the existing shoulder is used in the CIPR mixture. This may require blading ahead of the CIPR operation.
5.	Asphaltic cement shall be grade PG 58-34S per section 2303 Asphaltic cement totals based on 6.00% content. Final determination to be based on mix design. Includes material for intersection and new fillets. Surface course shall not include recycled asphalt. Material shall be placed in one nominal 1 1/2" lift in the roadway, and 1-2" lift in the fillets and intersecting roadways. Certified Plant Inspection shall apply.	13.	Shall be Foamed Asphalt PG 52-34 at the application rate of .0011 (tons/yd2/in).
		14.	See tabulation on sheet 7. The contractor shall use a 2 gun painting system.
		15.	Contractor shall be responsible for signing, marking and maintaining all project signs. Signs and barricades shall be furnished and placed by the contractor. Roadway shall be open to traffic for all operations. The project shall be signed according to operation and lane closure.
		15,17.	Pilot car and flaggers will be utilized for any lane closure activity.

JSC	DATE
DRAWN BY	REVISION
JSC	
DESIGNED BY	
MJN	
APPROVED BY	

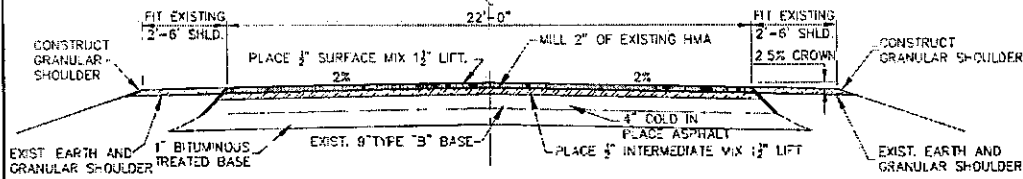
PROJECT DESCRIPTION: D38 HMA RESURFACING AND COLD-IN-PLACE RECYCLING K64 E. 10.4 MILES TO IA HWY 31

SHEET DESCRIPTION: ESTIMATE REFERENCE INFORMATION

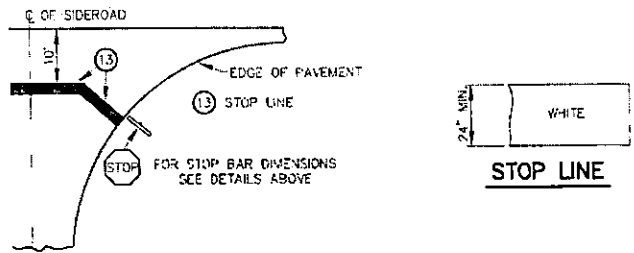
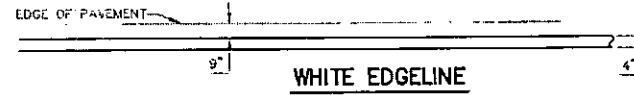
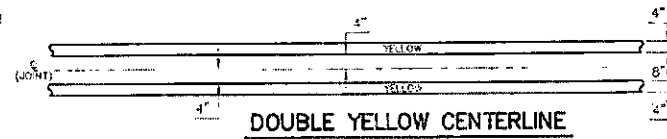
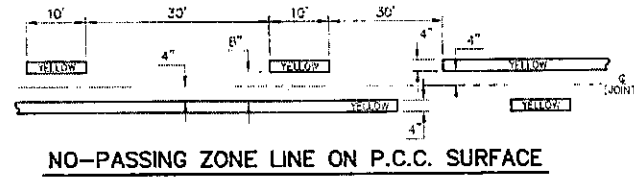
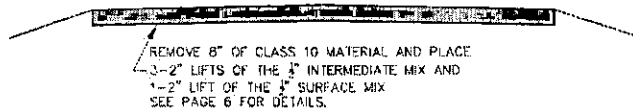
PROJECT NO.
FM-CO97(152)-55-97

SHEET
4

**TYPICAL CROSS SECTION
STA. 00+11.00 TO 557+42.65**



**TYPICAL GRAVEL AND DIRT INTERSECTION PAVING
STA. 105+74, 158+51, 209+56, 261+82, 288+50
367+75, 420+61, 447+08**

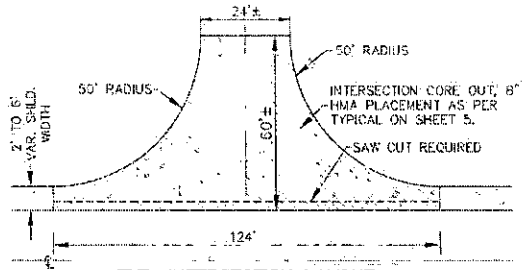


**PAVEMENT MARKINGS STOP LINES DIV 1 STA. 00+84,
159+00, AND 556+80**

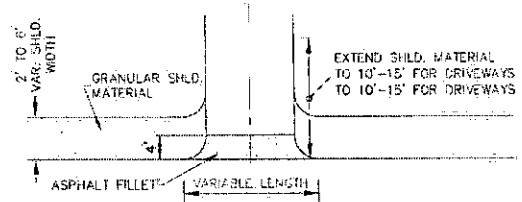
DATE	2/11/97
DESIGNED BY	J.S.C.
CHECKED BY	M.J.N.
APPROVED BY	J.T.
SCALE	AS SHOWN

PROJECT DESCRIPTION: D38 HMA RESURFACING AND COLD-IN-PLACE RECYCLING K64 E. 10.4 MILES TO IA HWY 31

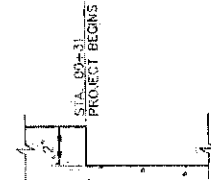
SHEET DESCRIPTION: TYPICAL SECTIONS AND DETAILS



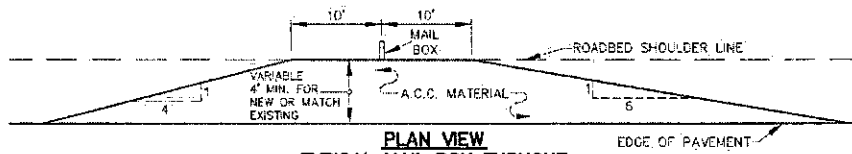
**TYP. INTERSECTION LAYOUT
ACTUAL PLACEMENT DIMENSIONS
MAY VARY BY LOCATION**



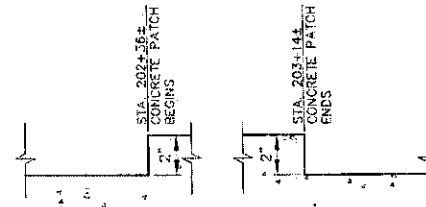
DETAILS OF NEW DRIVEWAY AND FIELD ENT. FILLET



BEGINNING OF PROJECT MILLING



**PLAN VIEW
TYPICAL MAIL BOX TURNOUT**



**BEGINNING AND END
OF CONCRETE PATCH
AND BRIDGE APPROACH**

WOODBURY COUNTY
ENGINEERS OFFICE

DATE	DATE
DESIGNED BY	DESIGNED BY
CHECKED BY	CHECKED BY
APPROVED BY	APPROVED BY

PROJECT DESCRIPTION: D38 HMA RESURFACING AND COLD-IN-PLACE RECYCLING K64 E. 10.3 MILES TO IA HWY 31

SHEET DESCRIPTION: TYPICAL DETAILS

PROJECT NO.
FM-CO97(152)-55-97

SHEET

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TABULATION OF PAVEMENT MARKINGS							
LOCATION	SIDE			LENGTH IN STATIONS			
	LT.	CL.	RT.	SOLID WHITE EDGE LINE	YELLOW CENTER LINE BROKEN	YELLOW CENTER LINE SOLID	STOP BAR SOLID WHITE LINE
STA. 00+11.0 TO 557+42.65	X			537.31			
STA. 00+11.0 TO 557+42.65		X			447	502	
STA. 00+11.0 TO 557+42.65			X	537.31			
WIDTH FACTORS				0.67	0.17	0.67	
TOTALS				747.05	75.99	336.34	0
							1159.38

TABULATION OF NEW DRIVEWAY AND FIELD ENTRANCE FILLETS							
LOCATION		SIDE		LOCATION		SIDE	
STATION	LT.	RT.	STATION	LT.	RT.	STATION	RT.
126+70		X	217+63		X		
138+45	X		347+64		X		

TABULATION OF UTILITIES
NO UTILITIES ARE EXPECTED TO BE ENCOUNTERED OR MOVED BUT CONTRACTOR SHALL DO ONE CALL 30 DAYS PRIOR TO CONSTRUCTION

DRAWN BY: _____
 DESIGNED BY: _____
 APPROVED BY: _____
 DATE: _____
 REVISION: _____

PROJECT DESCRIPTION: D38 HMA RESURFACING AND COLD-IN-PLACE RECYCLING K64 E. 10.4 MILES TO IA HWY 31
 SHEET DESCRIPTION: TABULATIONS

PROJECT NO. FM-CO97(152)-55-97
 SHEET 7