

# Memorandum

**To:** Honorable Mayor and City Council  
**From:** Daniel Boggs, P.E., City Engineer  
**Date:** October 31, 2013  
**Re:** **Proposed Iowa Highway 1 Improvements**

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The Iowa Department of Transportation District 6 office has submitted preliminary plans for resurfacing work from Palisades Road to Third Street South and from Third Street North to the UPRR tracks. The proposed scope of the IDOT work is the necessary full depth pavement patching, milling and resurfacing of the existing asphalt surface and minimum necessary curb repair, only where absolutely needed.

Any work above and beyond this proposed project scope would be the financial burden of the City. Some of these items include:

Install curb and gutter where none presently exists on the westerly side of the Highway 1 pavement just south of Cass Street.

P.C.C. patching due to City owned utility issues.

City owned utility repairs which may be discovered during construction.

The basic project scope will be 2" milling then a 2" H.M.A. surface course and also any necessary full depth patching.

The project is scheduled to be let during the January IDOT bid opening.

The Project is scheduled to be completed in the 2014 construction season.

The approximate cost to the City of Mount Vernon due to known issues is about \$26,000.00.



# Iowa Department of Transportation

## Highway Division

PLANS OF PROPOSED IMPROVEMENT ON THE

### PRIMARY ROAD SYSTEM

# LINN COUNTY

## HMA RESURFACING WITH MILLING

In Mount Vernon, from US 30 northeasterly to the Union Pacific Railroad

SCALES: As Noted

Refer to the Proposal Form for list of applicable specifications.

Value Engineering Saves. Refer to Article 1105.15 of the Specifications.

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

REVISIONS

TOTAL

14

PROJECT IDENTIFICATION NUMBER

13-57-001-010

PROJECT NUMBER

STPN-1-6(29)--2J-57

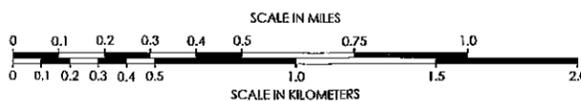
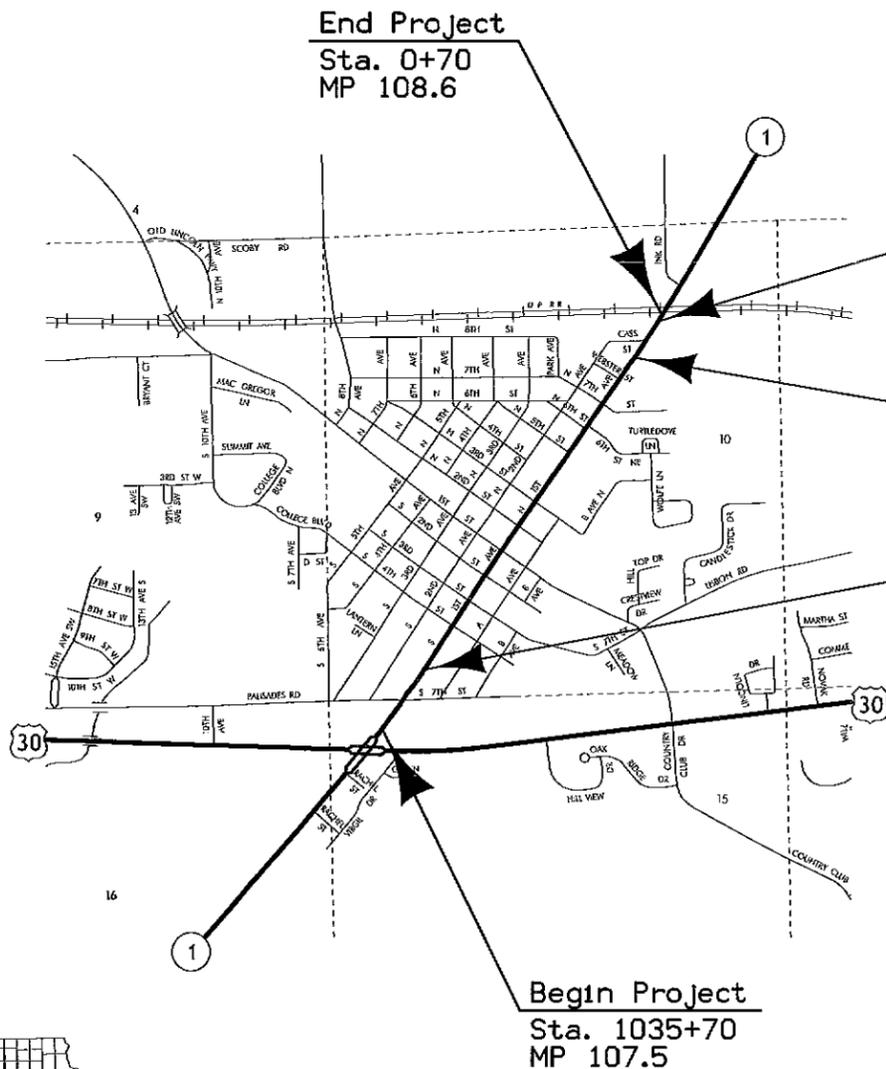
R.O.W. PROJECT NUMBER

### INDEX OF SHEETS

A.1	TITLE SHEET
B.1- B.2	TYPICAL CROSS SECTIONS AND DETAILS
C.1- C.9	ESTIMATE OF QUANTITIES, REFERENCE NOTES, AND TABULATIONS
S.1- S.2	SIDEWALK SHEETS

### MILEAGE SUMMARY

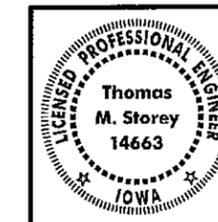
Div.	Location	Lin. Ft.	Miles
	Sta. 1035+70 to Sta. 1043+35(1/2) Equation: Sta. 1043+35(1/2) (Bk) = Sta. 0+00 (Ah)	765.00	
	Sta. 0+00 to Sta. 42+91.65 Equation: Sta. 42+94.65 (Bk) = Sta. 994+50 (Ah)	4291.65	
	Sta. 994+50 to Sta. 1000+00 Equation: Sta. 1000+00 (Bk) = Sta. 0+00 (Ah)	550.00	
	Sta. 0+00 to Sta. 0+70	70.00	
Total Length Project		5676.65	1.075



HIGHWAY AND STREET MAP  
OF  
MOUNT VERNON  
IOWA

### DESIGN DATA URBAN

2012 AADT	7,400	V.P.D.
20-- AADT	--	V.P.D.
20-- DHV	--	V.P.H.
TRUCKS	4 %	
Total Design ESALs	3,000,000	



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 \_\_\_\_\_

Printed or Typed Name Thomas M. Storey

My license renewal date is December 31, 20 14

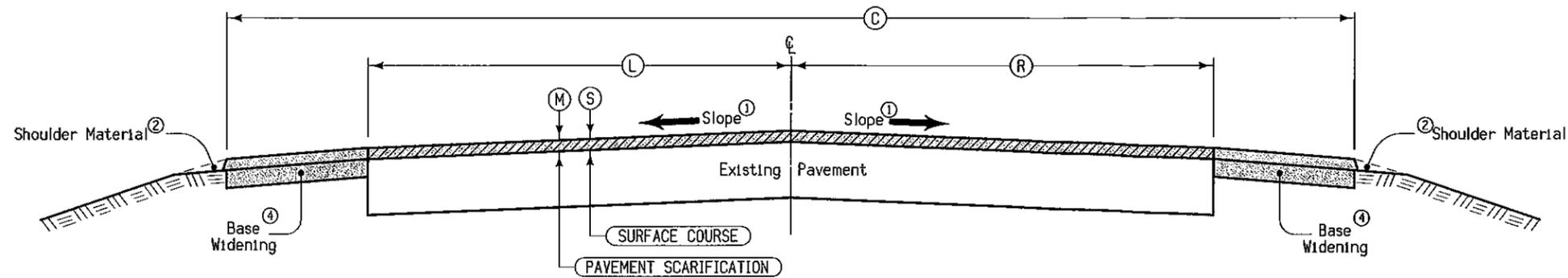
Pages or sheets covered by this seal: ALL

LETTING DATE  
01-22-14

HMA RESURFACING WITH MILLING  
STPN-1-6(29)--2J-57

LINN COUNTY

= HMA Resurfacing and Paved Shoulder  
 = Pavement Scarification



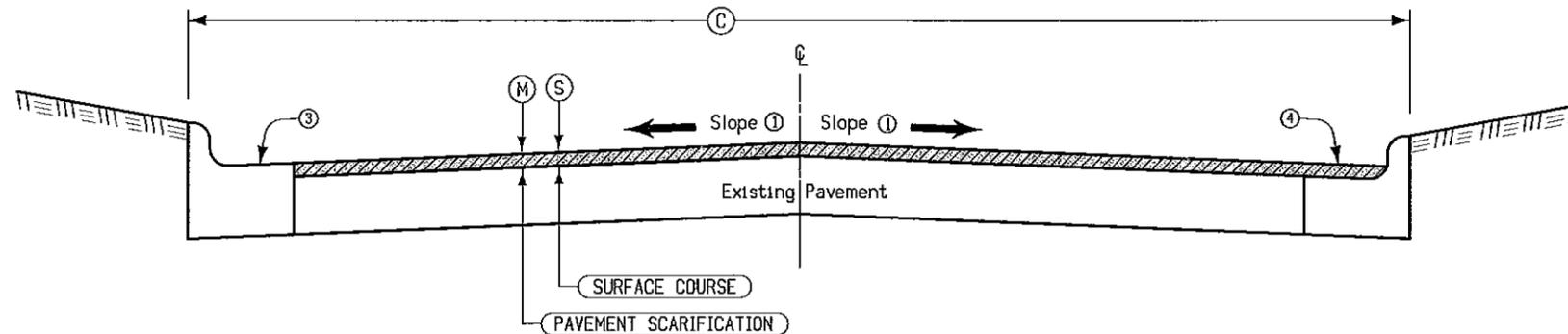
- ① Finished slope shall match existing pavement, except that the maximum allowable slope is 3.0%, minimum allowable slope is 2.0%.
- ② Refer to Typ. 7135 or Typ. 7145.
- ③ Tack Coat estimated for 1 application. Not a bid item.
- ④ Base widening quantities are not included with resurfacing quantities. Refer to Typ. 7151.
- ⑤ All location stations are (%).

Design Rates	
Item	Rate
Surface Course	155 lbs./cu. ft.
Tack Coat	0.05 gal./sq. yd.

Location ⑤		S	M	C	L	R	Resurfacing Quantities ④ Per Station				Remarks	
Road Id	Station To Station						Inches	Inches	Feet	Feet		Feet
Iowa 1	1035+70 1039+20	2.0	2.0	57	22.5	22.5	31.7	4.42	73.6	---	633	

**TYPICAL CROSS SECTION  
HMA RESURFACING WITH MILLING**

= HMA Resurfacing  
 = Pavement Scarification



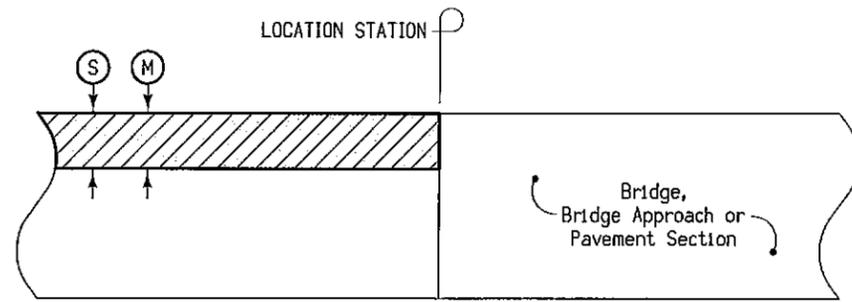
- ① Finished slope shall match existing pavement, except that the maximum allowable slope is 3.0%, minimum allowable slope is 2.0%.
- ② Tack Coat estimated for 1 application. Not a bid item.
- ③ Where the existing HMA surface abuts the gutter, the proposed HMA surface shall also abut the gutter.
- ④ Where the existing HMA surface abuts the face of curb, the proposed HMA surface shall also abut the face of curb.
- ⑤ All location stations are (%).
- ⑥ End 70' (¾) south of the centerline of the southerly railroad track.

Design Rates	
Item	Rate
Surface Course	155 lbs./cu. ft.
Tack Coat	0.05 gal./sq. yd.

Location ⑤		S	M	C	Resurfacing Quantities ④ Per Station				Remarks	
Road Id	Station To Station				Inches	Inches	Feet	Tack Coat ③ Gallons		Asphalt Binder Tons
Iowa 1	1039+20 1039+70	2.0	2.0	45	24.4	3.41	56.8	---	489	
Iowa 1	1039+70 1040+90	2.0	2.0	45-35	21.7	3.02	50.4	---	433	
Iowa 1	1040+90 1043+35 (Bk)	2.0	2.0	35	18.9	2.63	43.9	---	378	
Iowa 1	0+00 (Ah) 0+50	2.0	2.0	35	18.9	2.63	43.9	---	378	
Iowa 1	0+50 1+60	2.0	2.0	35-25	16.1	2.25	37.5	---	322	
Iowa 1	1+60 8+67	2.0	2.0	25	13.3	1.86	31.0	---	267	
Iowa 1	23+57 42+91.65 (Bk)	2.0	2.0	25	13.3	1.86	31.0	---	267	
Iowa 1	994+50 (Ah) 1000+00 (Bk)	2.0	2.0	28	13.3	1.86	31.0	---	267	
Iowa 1	0+00 (Ah) 0+70	2.0	2.0	28	13.3	1.86	31.0	---	267	⑥

**TYPICAL CROSS SECTION  
HMA RESURFACING WITH MILLING**

7305  
10-15-13

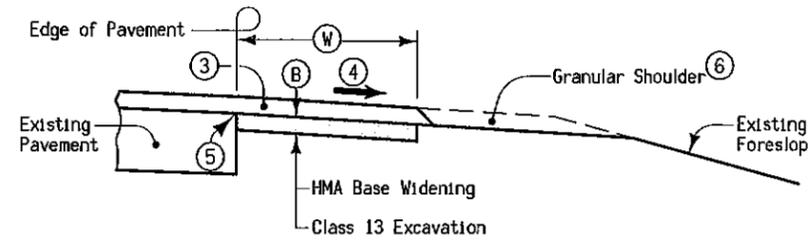


(S) Surface Course  
(M) Milling (Avg. Depth)

**NOTCH FOR SINGLE COURSE  
RESURFACING OF MILLED AREAS**

LOCATION STATION	(S) Inches	(M) Inches
1035+70	2.0	2.0
8+67	2.0	2.0
23+57	2.0	2.0
0+70	2.0	2.0

7151  
MODIFIED



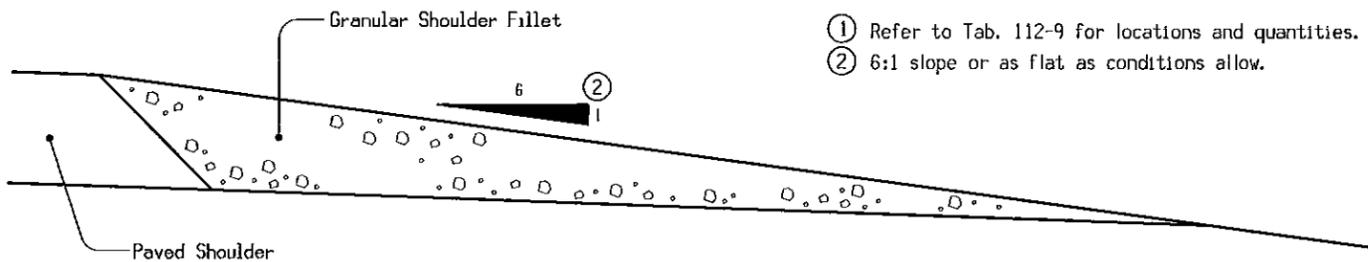
**TYPICAL SECTION  
RETROFIT PAVED SHOULDER**

- ① Refer to Tab. 112-9 for locations and dimensions.
- ② Refer to Tab. 112-9 for bid items and quantities.
- ③ HMA quantities above the HMA base widening are included with mainline quantities.
- ④ Slope at 4% for normal section. Refer to Standard Road Plans for requirements through superelevated curves.
- ⑤ Provide a vertical edge. Incidental to Class 13 Excavation.
- ⑥ Refer to Typ. 7135 or Typ. 7145.

7145  
MODIFIED

Notes:  
This typical illustrates the construction requirements for a granular fillet at the edge of a full-width paved shoulder.  
The granular fillet will be measured and paid for as "Granular Shoulder, Type B".

- ① Refer to Tab. 112-9 for locations and quantities.
- ② 6:1 slope or as flat as conditions allow.



**GRANULAR  
SHOULDER FILLET**

**ESTIMATED PROJECT QUANTITIES  
(UP TO A 5 DIVISION PROJECT)**

Division 1: Iowa DOT  
Division 2: City of Mount Vernon

Item No.	Item Code	Item	Unit	Estimated					As Built						
				Division 1	Division 2	Division 3	Division 4	Division 5	Total	Division 1	Division 2	Division 3	Division 4	Division 5	
1	2121-7425020	GRANULAR SHOULDERS, TYPE B	TON	35.0							35.0				
2	2212-0475095	CLEANING AND PREPARATION OF BASE	MILE	0.8							0.8				
3	2212-5070310	PATCHES, FULL-DEPTH REPAIR	SY	490.8	26.7						517.5				
4	2212-5070322	PATCHES, PARTIAL-DEPTH REPAIR, HOT MIX ASPHALT	SY	526.2							526.2				
5	2212-5070330	PATCHES BY COUNT (REPAIR)	EACH	41	1						42				
6	2212-5075001	HOT MIX ASPHALT SURFACE PATCHES	TON	8.0							8.0				
7	2213-2713300	EXCAVATION, CLASS 13, FOR WIDENING	CY	52.0							52.0				
8	2213-8200000	BASE WIDENING, HOT MIX ASPHALT MIXTURE	TON	105.0							105.0				
9	2214-5145150	PAVEMENT SCARIFICATION	SY	13,532.0							13,532.0				
10	2214-7450050	BLADING AND SHAPING SHOULDER MATERIAL	STA	7.00							7.00				
11	2303-0043503	HOT MIX ASPHALT MIXTURE (3,000,000 ESAL), SURFACE COURSE, 1/2 IN. MIX, FRICTION L-3	TON	1,630.0							1,630.0				
12	2303-0245828	ASPHALT BINDER, PG 58-28	TON	6.3							6.3				
13	2303-0247022	ASPHALT BINDER, PG 70-22	TON	98.0							98.0				
14	2303-6911000	HOT MIX ASPHALT PAVEMENT SAMPLES	LS	1.00							1.00				
15	2303-7000610	PAYMENT ADJUSTMENT INCENTIVE/DISINCENTIVE FOR HMA MIXTURE LABORATORY VOIDS (FORMULA - BY PAY FACTOR)	EACH												
16	2303-7000620	PAYMENT ADJUSTMENT INCENTIVE/DISINCENTIVE FOR HMA MIXTURE FIELD VOIDS (FORMULA - BY PAY FACTOR)	EACH												
17	2317-7000120	PAYMENT ADJUSTMENT INCENTIVE/DISINCENTIVE FOR HMA PAVEMENT SMOOTHNESS (BY SCHEDULE)	EACH												
18	2435-0600010	MANHOLE ADJUSTMENT, MINOR	EACH	9	1						10				
19	2511-6745900	REMOVAL OF SIDEWALK	SY	47.5							47.5				
20	2511-7526004	SIDEWALK, P.C. CONCRETE, 4 IN.	SY	31.8							31.8				
21	2511-7526006	SIDEWALK, P.C. CONCRETE, 6 IN.	SY	21.9							21.9				
22	2511-7528101	DETECTABLE WARNINGS	SF	42							42				
23	2526-8285000	CONSTRUCTION SURVEY	LS	1.00							1.00				
24	2527-9263109	PAINTED PAVEMENT MARKING, WATERBORNE OR SOLVENT-BASED	STA	71.25							71.25				
25	2527-9263137	PAINTED SYMBOLS AND LEGENDS, WATERBORNE OR SOLVENT-BASED	EACH	2							2				
26	2528-8445110	TRAFFIC CONTROL	LS	1.00							1.00				
27	2528-8445113	FLAGGERS	EACH								See Proposal				
28	2528-8445115	PILOT CARS	EACH								See Proposal				
29	2529-2242304	CD JOINT ASSEMBLY	EACH	9							9				
30	2529-5070110	PATCHES, FULL-DEPTH FINISH, BY AREA	SY	403.1	2.8						405.9				
31	2529-5070120	PATCHES, FULL-DEPTH FINISH, BY COUNT	EACH	25	1						26				
32	2529-8174010	SUBBASE (PATCHES)	SY	57.2							57.2				
33	2529-8201000	JOINT ASSEMBLY, EF	EACH	2							2				
34	2530-0400061	HOT MIX ASPHALT (PARTIAL DEPTH PATCH MATERIAL)	TON	118.4							118.4				
35	2533-4980005	MOBILIZATION	LS	1.00							1.00				

100-1D  
10-18-05

**PROJECT DESCRIPTION**

This project is located on Iowa 1 in the City of Mount Vernon from north of US 30 northeasterly to the Union Pacific Railroad. The work includes HMA resurfacing with milling, PCC patching, HMA patching, and replacement of pedestrian curb ramps.

ESTIMATE REFERENCE INFORMATION

Item No.	Item Code	Description
1	2121-7425020	GRANULAR SHOULDERS, TYPE B Refer to Tab. 112-9.
2	2212-0475095	CLEANING AND PREPARATION OF BASE Refer to Typ.'s 2617 and 2602.
3	2212-5070310	PATCHES, FULL-DEPTH REPAIR Refer to Tab. 102-6C(Repair).
4	2212-5070322	PATCHES, PARTIAL-DEPTH REPAIR, HOT MIX ASPHALT Refer to Tab. 102-14.
5	2212-5070330	PATCHES BY COUNT (REPAIR) Refer to Tab. 102-6C(Repair).
6	2212-5075001	HOT MIX ASPHALT SURFACE PATCHES Quantity estimated at a rate of 10 tons per mile of resurfacing.
7	2213-2713300	EXCAVATION, CLASS 13, FOR WIDENING Refer to Tab. 112-9. All material shall become the property of the contractor and shall be removed from the project.
8	2213-8200000	BASE WIDENING, HOT MIX ASPHALT MIXTURE Item is for construction of paved shoulders. Refer to Tab. 112-9. HMA shall be a 1 M ESAL mix.
9	2214-5145150	PAVEMENT SCARIFICATION Refer to Typ.'s 2617 and 2602. Quantity includes 650 SY for irregular areas. Millings shall become the property of the contractor.
10	2214-7450050	BLADING AND SHAPING SHOULDER MATERIAL Refer to Tab. 112-9.
11	2303-0043503	HOT MIX ASPHALT MIXTURE (3,000,000 ESAL), SURFACE COURSE, 1/2 IN. MIX, FRICTION L-3 Refer to Typ.s 2617 and 2602. Quantity includes 80 tons for irregularities.
12	2303-0245828	ASPHALT BINDER, PG 58-28 Item is for HMA Base Widening. The quantity is estimated at a rate of 6%.
13	2303-0247022	ASPHALT BINDER, PG 70-22 Item is for HMA Surface Course. The quantity is estimated at a rate of 6%.
14	2303-6911000	HOT MIX ASPHALT PAVEMENT SAMPLES
15	2303-7000610	PAYMENT ADJUSTMENT INCENTIVE/DISINCENTIVE FOR HMA MIXTURE LABORATORY VOIDS (FORMULA - BY PAY FACTOR)
16	2303-7000620	PAYMENT ADJUSTMENT INCENTIVE/DISINCENTIVE FOR HMA MIXTURE FIELD VOIDS (FORMULA - BY PAY FACTOR)
17	2317-7000120	PAYMENT ADJUSTMENT INCENTIVE/DISINCENTIVE FOR HMA PAVEMENT SMOOTHNESS (BY SCHEDULE)
18	2435-0600010	MANHOLE ADJUSTMENT, MINOR Refer to Tab. 104-10.
19	2511-6745900	REMOVAL OF SIDEWALK Refer to Tab. 110-5 and to S sheets.
20	2511-7526004	SIDEWALK, P.C. CONCRETE, 4 IN.
21	2511-7526006	SIDEWALK, P.C. CONCRETE, 6 IN.
22	2511-7528101	DETECTABLE WARNINGS Refer to Tab. 113-1 and to S sheets.

ESTIMATE REFERENCE INFORMATION

Item No.	Item Code	Description
23	2526-8285000	CONSTRUCTION SURVEY A tabulation of control points will be furnished by the engineer upon request.
24	2527-9263109	PAINTED PAVEMENT MARKING, WATERBORNE OR SOLVENT-BASED Refer to Tab. 108-22.
25	2527-9263137	PAINTED SYMBOLS AND LEGENDS, WATERBORNE OR SOLVENT-BASED Refer to Tab. 108-29.
26	2528-8445110	TRAFFIC CONTROL Refer to Tab. 108-23A.
27	2528-8445113	FLAGGERS
28	2528-8445115	PILOT CARS
29	2529-2242304	CD JOINT ASSEMBLY Refer to Tab.'s 102-6C(Repair) and 102-6C(Finish).
30	2529-5070110	PATCHES, FULL-DEPTH FINISH, BY AREA
31	2529-5070120	PATCHES, FULL-DEPTH FINISH, BY COUNT Refer to Tab.'s 102-6C(Finish) and 113-1.
32	2529-8174010	SUBBASE (PATCHES) Refer to Tab.'s 102-6C(Repair) and 102-6C(Finish).
33	2529-8201000	JOINT ASSEMBLY, EF Refer to Tab. 102-6C(Finish).
34	2530-0400061	HOT MIX ASPHALT (PARTIAL DEPTH PATCH MATERIAL) Refer to Tab. 102-14. HMA shall a 3 M ESAL mix.
35	2533-4980005	MOBILIZATION

105-4  
10-18-11

### STANDARD ROAD PLANS

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

Number	Date	Title
MI-220	10-16-12	Detectable Warnings and Pedestrian Ramp
PM-110	04-16-13	Line Types
PM-111	10-16-12	Symbols and Legends
PM-120	10-15-13	Stop Lines and Islands
PM-240	04-16-13	Railroad Crossing on Two-Lane Roadway
PM-420	04-19-11	Two-Lane Roadway with no Turn Lanes (One-Way Stop Condition)
PV-101	10-15-13	Joints
PV-102	04-16-13	PCC Curb Details
PV-103	04-19-11	Manhole Boxouts in PCC Pavement
PV-201	04-19-11	Manhole Boxouts in HMA Pavement and HMA Overlays
PV-202	04-16-13	Hot Mix Asphalt Resurfacing
PV-301	04-19-11	Superelevation Details Two Lane Roadway
RR-1	04-17-12	Full Depth Patch with 'EF' joint in PCC
RR-4	04-19-11	Full Depth PCC Patch with Dowels
RR-26	04-19-11	Subbase Patches
TC-1	04-16-13	Work Not Affecting Traffic (Two-Lane or Multi-Lane)
TC-202	10-15-13	Shoulder Closure (One Lane)
TC-212	04-16-13	Spot Location Lane Closure with Flaggers
TC-213	04-17-12	Lane Closure with Flaggers
TC-214	04-16-13	Lane Closure with Flaggers for use with Pilot Car
TC-282	04-19-11	Uneven Lanes
TC-601	10-18-11	Pedestrian Detour

232-3B  
Modified

### EROSION CONTROL (URBAN SEEDING)

Following the completion of work in a disturbed area, place seed, fertilizer, and mulch on the disturbed area as follows:

Use seed mix and fertilizer meeting the requirements of Section 2601.03,C,4 of the Standard Specifications.

Use mulch meeting the requirements of Sections 2601.03,E,2,a and 4169.07,A of the Standard Specifications.

Preparing the seedbed and furnishing and applying seed, fertilizer, and mulch is incidental to mobilization and will not be paid for separately.

### TABULATION OF UTILITIES

**Alliant Energy**  
Jason Hogan  
4902 North Biltmore - Suite 1000  
Madison, WI 53718  
608-458-4871 (Office)  
jasonhogan@alliantenergy.com

**Iowa Network Services**  
Jeff Klocko  
4201 Corporate Drive  
West Des Moines, IA 50266  
515-830-0445  
jeff@netins.com

**Mediacom**  
Joe Ernster  
6300 Council Street NE  
Cedar Rapids, IA 52402  
319-395-9699: Ext 354  
jernster@mediacomcc.com

**City of Mt. Vernon**  
Dan Boggs  
213 First Street NW  
Mt. Vernon, IA 52314  
319-895-8742 (Office)  
dboggs@mtvernon-ia.com

**ICN**  
Larry Klawitter  
400 East 1st Street / Grimes Office Building  
Des Moines, IA 50319  
515-725-4741  
larry.klawitter@iowa.gov

**CenturyLink (Formerly Qwest)**  
Steven Parker  
2103 East University Ave  
Des Moines, IA 50317  
515-265-0968 (Office)  
steven.parker4@centurylink.com

**Sprint Nextel**  
Gerry A. Crain  
5600 North River Road, Suite 300  
Rosemont, IL 60018  
847-737-1279 (Office)  
gerry.a.crain@sprint.com

262-6  
10-18-05

### UTILITIES (NOT A POINT 25 PROJECT)

This is NOT a POINT 25 project and is not subject to the provisions of IAC 761-115.25.

108-23A  
08-01-08

### TRAFFIC CONTROL PLAN

- Through traffic shall be maintained on the project at all times.
- Lane closures will not be permitted during Special Events. Refer to Tab. 102-15.
- The dimension "H" in TC-214 shall be limited to a maximum length of 2500 ft.

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
MP-30-6(719)266--76-57	HMA Crack Filling
STP-A-30-7(159)--86-57	PCC Pavement - Grade & Replace

102-15  
08-01-08

### TABULATION OF SPECIAL EVENTS

Event	Location	Date
Iowa Football vs. Northern Iowa	Iowa City	August 30, 2014
Iowa Football vs. Ball State	Iowa City	September 6, 2014
Iowa Football vs. Iowa State	Iowa City	September 13, 2014
Iowa Football vs. Indiana	Iowa City	October 11, 2014
Iowa Football vs. Northwestern	Iowa City	November 1, 2014
Iowa Football vs. Wisconsin	Iowa City	November 22, 2014
Iowa Football vs. Nebraska	Iowa City	November 28, 2014
Mount Vernon Heritage Days	Mount Vernon	Unknown

**EXISTING PAVEMENT**

No.	Location					Year	Type	Project Number	Surface		Base		Subbase		Removal		Coarse Aggregate			Reinforcement	Remarks
	County	Route	Dir. of Travel	Begin Milepost	End Milepost				Type	Depth	Type	Depth	Type	Depth	Type	Depth	Source	Type	Durability Class		
	Linn	Iowa 1	Both	107.45	107.79	1997 1984 1963 ????			HMA HMA HMA PCC	4.0 1.5 2.5 ???					Mill	3.2					25' to 31' wide B/C to B/C Original Pavement
	Linn	Iowa 1	Both	107.79	108.07	1985			PCC	9.5											31' wide B/C to B/C
	Linn	Iowa 1	Both	108.07	108.55	1997 1984 1963 ????			HMA HMA HMA PCC	4.0 1.5 2.5 ???					Mill	3.2					25' wide B/C to B/C Original Pavement

**TABULATION OF EXISTING HMA PAVEMENT FOR RECYCLING**

102-5A  
08-01-08

This information is given for information purposes only. When designed RAP is specified, the contractor shall process the RAP to control the uniformity of the final mixture.

① One half of the RAP friction aggregate content can be applied to the total friction aggregate requirement. Additional value may be given based on an extracted analysis of the RAP.

Route No.	Location	Year Placed	Layer	Thickness	Asphalt Binder		Aggregate				Friction Type ①
					Grade	Content	Description	Quality Type	Size	Content	
IA 1	In Mt Vernon	1997	Surface	2"	PG 58-28	6.1%	Nat Sand			20%	
							Crush Lmst	A	3/8"	40%	Type 4
							Clean	A	3/4"	15%	Type 4
							Wash chip	A	3/8"	25%	Type 4

**ADJUSTMENT OF FIXTURES**

104-10  
08-01-08

No.	Location Station	Type of Fixture	Adjustment
1	2+89	Sanitary Sewer 24" RT	In main line 5x5 box out
2	5+97	Sanitary Sewer 24" RT	In main line 5x5 box out
3	6+27	Storm Sewer 24" LT	In curb and gutter of side road radius special box out in curb.
4	23+10	Storm Sewer 24" RT	In main line 5x5 box out - Div. 2
SIDE ROAD FIXTURES			
5	6+08	WATER VALVE 9"	4TH ST SW 15' FROM SB EDGE LINE
6	22+87	SANITARY SEWER 24"	3RD ST NE 6' FROM BACK OF CURB
7	22+87	SANITARY SEWER 24"	3RD ST NE 7.4' FROM BACK OF CURB
8	23+00	4- 8" WATER VALVES	3RD ST NW 9' FROM EDGE LINE OF ROAD
9	23+05	SANITARY SEWER 24"	3RD ST NE 7' FROM NB EDGE LINE
10	33+61	SANITARY SEWER 24"	6TH ST NE 6.3' FROM NB EDGE LINE
11	36+70	SANITARY SEWER 24"	7TH ST NE 6.4' FROM NB EDGE LINE
12	36+77	SANITARY SEWER 24"	7TH ST NE 12' FROM NB EDGE LINE
13	36+85	WATER VALVE 9"	7TH ST NW 3' FROM SB EDGE LINE IN NW CORNER RADIUS (MAY NEED ADJUSTED)

**PAVEMENT SMOOTHNESS + PCC TEXTURE**

100-27  
10-20-09

Road Identification	Begin Station	End Station	Proposed Posted Speed			Remarks
			35 or less	40 - 45	over 45	
Iowa 1	1035+70.00	1043+35.00	X			
Iowa 1	0+00	42+91.65	X			
Iowa 1	994+50.00	1000+00.00	X			
Iowa 1	0+00	0+70	X			

**SHOULDERS**

- ① Lane(s) to which the shoulder is adjacent.
- ② Bid Item
- ③ Applies only for Paved Shoulders constructed on project with existing granular shoulders.
- ④ Does not include shrink.

Calculations assume a HMA unit weight (lbs/cf) of 150, a Special Backfill unit weight (lbs/cf) of 140, and a Granular Shoulder unit weight (lbs/cf) of 140.

Location				Quantities											Remarks							
Road Identification	① Direction of Traffic	Station to Station	Side	W	T	L	Class 13 ③ Excavation Widening	HMA Base Widening ③		Hot Mix Asphalt		Paved Shoulder	Reinforced Paved Shoulder	Special Backfill			E	Granular Shoulder		Earth Shoulder Construction		
				Width FT	Thickness IN	Length FT	CY ②	TON ②	TON/STA	TON	TON/STA	SY ②	SY ②	TON ②			TON/STA	FT	TON ②	TON/STA	STA ②	CY ④
Iowa 1	NB	1035+70	1039+20	Rt	6.0	4.0	350	26	53	15						2.0	18	5.0				
Iowa 1	SB	1035+70	1039+20	Lt	6.0	4.0	350	26	53	15						2.0	18	5.0				
<b>TOTALS</b>							<b>700</b>	<b>52</b>	<b>105</b>							<b>35</b>						

102-14  
04-17-12

**PARTIAL DEPTH HMA OR PCC REPAIR PATCHES**

Location				Type HMA or PCC	Dimension of Patch		Est. Quantities			Remarks
No.	Begin Station or Begin Milepost	End Station or End Milepost	Lane		Length FT	Width FT	PCC			
							SF	SY	TONS	
1	1038+00	1041+00	NB	HMA	300.0	2.0		66.7	15.0	Stations are 1036+77-1043+35
2	1037+44	1039+04	NB	HMA	160.0	2.0		35.6	8.0	0+00 to 42+91.65
3	1040+16	1040+88	SB	HMA	72.0	2.0		16.0	3.6	994+50-1000+00
4	1041+00	1041+16	SB	HMA	16.0	2.0		3.6	0.8	
5	1+16	2+21	NB	HMA	105.0	4.0		46.7	10.5	
6	3+61	5+41	NB	HMA	180.0	2.0		40.0	9.0	Sta 1036+77 new construction match
7	3+61	5+41	SB	HMA	180.0	2.0		40.0	9.0	line in MT Vernon
8	5+82	6+07	SB	HMA	25.0	2.0		5.6	1.3	
9	8+00	8+25	NB	HMA	28.0	2.0		6.2	1.4	
10	24+58	26+18	NB	HMA	160.0	2.0		35.6	8.0	
11	27+31	27+50	SB	HMA	19.0	2.0		4.2	1.0	
12	27+89	28+93	NB	HMA	104.0	2.0		23.1	5.2	
13	29+28	29+43	NB	HMA	15.0	2.0		3.3	0.8	
14	39+86	40+26	NB	HMA	104.0	2.0		23.1	5.2	
15	45+72	46+00	SB	HMA	28.0	4.0		12.4	2.8	
16	35+00	38+00	NB	HMA	300.0	2.0		66.7	15.0	
17	+06	7+25	NB	HMA	130.0	2.0		28.9	6.5	
17	<b>Subtotals</b>							457.6	103.0	
3	+15% Discretionary							68.6	15.4	
20	<b>TOTALS</b>							<b>526.2</b>	<b>118.4</b>	

Note: Partial-Depth HMA Patches shall be constructed only after Pavement Scarification.  
Thickness of Partial-Depth HMA Patches is estimated at 4 inches.

**FULL-DEPTH PATCHES (REPAIR)**

Refer to Standard Roads Plans RR-1, RR-2, RR-4, RR-18, and RR-26

Count	Location		Dimension			PCC Patches			HMA Patches	Composite HMA	Subbase Patches	Subbase Patch w/ 'EF' Joint	Patch Subdrain	'CD' Joints	'CT' Joints	'EF' Joints	Anchor Lugs Removal	Remarks
	Station or Milepost	Lane	Length	Width	Patch Thickness	With Dowels	Without Dowels	C R C										
	L, R, or B	FT	FT	IN	RR-4 SY	RR-2 SY	RR-18 SY											
1	1040+00	LT	8.0	12.0	12.0	10.7												STATIONS USED
2	1040+00	RT	8.0	12.0	12.0	10.7												
3	1040+00	RT	8.0	12.0	12.0	10.7												1036+77-1043+35
4	1040+16	LT	6.0	12.0	12.0	8.0												0+00 - 42+91.65
5	1040+60	RT	6.0	12.0	12.0	8.0												994+50-1000+00
6	1040+60	LT	6.0	14.0	12.0	9.3												
7	1041+16	LT	6.0	12.0	12.0	8.0												1036+77 matchline
8	1042+37	RT	6.0	12.0	12.0	8.0												new construction
9	1042+37	LT	6.0	12.0	12.0	8.0												
10	1042+70	RT	6.0	12.0	12.0	8.0												
11	1042+70	LT	6.0	12.0	12.0	8.0												
12	1043+35	RT	10.0	12.0	12.0	13.3				13.3								
13	1043+35	LT	10.0	12.0	12.0	13.3				13.3								
14	0+34	RT	6.0	12.0	12.0	8.0												
15	0+34	LT	6.0	12.0	12.0	8.0												
16	2+72	RT	6.0	12.0	12.0	8.0												
17	2+72	LT	6.0	12.0	12.0	8.0												
18	2+89	RT	5.0	5.0	12.0	2.8												5X5 BOX OUT
19	5+97	RT	5.0	5.0	12.0	2.8												5X5 BOX OUT
20	8+64	LT	11.0	15.0	12.0	18.3												
21	23+56	RT	20.0	13.6	12.0	30.2								1				INCLUDES CURB
22	23+86	LT	20.0	13.6	12.0	30.2								1				INCLUDES CURB
23	25+46	RT	10.0	11.0	12.0	12.2												
24	25+46	LT	10.0	11.0	12.0	12.2												
25	27+69	LT	11.0	11.0	12.0	13.4												
26	32+35	RT	6.0	11.0	12.0	7.3												
27	32+35	LT	6.0	11.0	12.0	7.3												
28	35+47	LT	18.0	12.6	12.0	25.2								1				INCLUDES CURB
29	35+88	LT	15.0	12.6	12.0	21.0								1				INCLUDES CURB
30	37+38	LT	12.6	12.0	12.0	16.8												INCLUDES CURB
31	37+38	RT	12.6	12.0	12.0	16.8												INCLUDES CURB
32	42+87	LT	12.6	10.0	12.0	14.0								1				INCLUDES CURB
33	42+87	RT	12.6	10.0	12.0	14.0												INCLUDES CURB
34	997+33	LT	12.0	20.0	12.0	26.7								1				Div. 2
35	998+59	LT	12.0	9.0	12.0	12.0												
36	999+09	RT	12.0	8.0	12.0	10.7												
36	Subtotals					450.0					26.6			6				
6	+15% Discretionary					67.5					4.0			1				
42	TOTALS					517.5					30.6			7				

### FULL-DEPTH PATCHES (FINISH)

Refer to Standard Roads Plans RR-1, RR-2, RR-4, RR-18, and RR-26

Count	Location		Dimension			PCC Patches			HMA Patches	Composite HMA	Subbase Patches	Subbase Patch w/ 'EF' Joint	Patch Subdrain	'CD' Joints	'CT' Joints	'EF' Joints	Anchor Lugs Removal	Remarks
	Station or Milepost	Lane	Length	Width	Patch Thickness	With Dowels	Without Dowels	C R C										
	L, R, or B	FT	FT	IN	RR-4 SY	RR-2 SY	RR-18 SY	SY										
1	8+77	LT	6.0	15.0	9.5	10.0												STATIONS USED
2	13+66	LT	6.0	12.0	9.5	8.0												813+65-820+35
3	13+65	LT	6.0	12.0	9.5	8.0												0+00-48+52
4	13+65	RT	6.0	12.0	9.5	8.0												
5	15+77	LT	20.0	20.0	9.5	44.4							1					0+00=820+35
6	15+77	RT	12.0	20.0	9.5	26.7												
7	15+90	LT	6.0	6.0	9.5	4.0												
8	15+90	LT	6.0	12.0	9.5	8.0												
9	15+95	LT	6.0	6.0	9.5	4.0												
10	16+51	RT	6.0	12.0	9.5	8.0												
11	16+51	LT	6.0	12.0	9.5	8.0												
12	19+17	RT	15.0	12.0	9.5	20.0												
13	19+17	LT	6.0	12.0	9.5	8.0												
14	23+10	RT	5.0	5.0	9.5	2.8												BOX OUT FIXTURE - Div. 2
15	23+61	LT	12.0	12.0	9.5	16.0												
16	25+00/26+76	RT	176.0	2.6	9.5	50.8												INCLUDES CURB
17	23+86	RT	55.0	13.6	9.5	83.1												INCLUDES CURB
18	0+00	LT	10.0	12.0	12.0	13.3						13.3						NEAR RR
19	0+00	RT	10.0	12.0	12.0	13.3						13.3						NEAR RR
19	Subtotals						344.5					26.6		1				2
3	+15% Discretionary						51.7							1				
22	TOTALS						396.2					26.6		2				2



110-5 08-01-08			
<b>SIDEWALK REMOVAL</b>			
Begin Station	End Station	Area	Remarks
		SY	
5+50	5+90	26.0	1100
5+50	5+90	21.5	1200
<b>TOTAL</b>		<b>47.5</b>	

113-2 04-16-13			
<b>PEDESTRIAN PATH CLOSURES</b>			
Refer to TC-601.			
*Assumes 6 foot wide barricade. Closures may need to be removed and re-established.			
Location	Side	Type III Barricades* No.	Remarks
Iowa 1 @ 4th Street South	Lt	3	1100
Iowa 1 @ 4th Street South	Rt	3	1200

113-1 04-16-13										
<b>SIDEWALKS</b>										
See MI-220 and S Sheets										
Road Identification	Station to Station	Side	A FT	B FT	S %	4" PCC Sidewalk SY	6" PCC Sidewalk SY	12" PCC Pavement SY	Detectable Warnings SF	Remarks
Iowa 1	5+50 5+90	Lt	---	---	---	17.2	11.6	5.1	22	1100
Iowa 1	5+50 5+90	Rt	---	---	---	14.6	10.3	4.6	20	1200
<b>TOTALS</b>						<b>31.8</b>	<b>21.9</b>	<b>9.7</b>	<b>42</b>	
Note: 12" PCC Pavement is for optional pavement patch at curb ramp.										

**SIDEWALK COMPLIANCE**

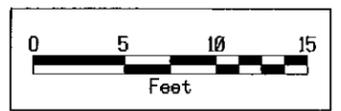
See S Sheets

\* Does not include curb  
① Staking required by Contracting Authority per Article 2511.03 of the Standard Specifications.

Point to Point	Sidewalk Designation	Distance*	Δ Elevation	Slope	Acceptable Constructed Range	Staking Required on this Quadrant? ①	Measured Slope	Initials	Remarks	FOR INFORMATION ONLY: VALUES USED TO DETERMINE DESIGNED SLOPES				
										Point	Station	Offset	Elevation	
		FT	FT	%	Pos. or Neg.		%							
1101	1102	Match Existing Cross Slope	6.83	0.18	2.6%	Match Existing					1101	5+66.55	-15.80	824.10
1101	1117	Ramp Running Slope	9.54	0.69	7.2%	0.5% to 8.3%					1102	5+72.52	-19.11	824.28
1102	1103	Ramp Running Slope	6.19	0.42	6.8%	0.5% to 8.3%					1103	5+72.48	-25.30	824.70
1103	1104	Ramp Running Slope	6.41	-0.10	-1.6%	0.5% to 8.3%					1104	5+78.89	-25.25	824.60
1103	1106	Landing/Turning Space	5.00	0.07	1.4%	0.1% to 2.0%					1105	5+82.01	-30.25	824.80
1103	1117	Landing/Turning Space	6.00	0.09	1.5%	0.1% to 2.0%					1106	5+72.44	-30.32	824.77
1104	1105	Match Existing Cross Slope	5.89	0.20	3.4%	Match Existing					1107	5+71.79	-30.33	824.78
1105	1106	Ramp Running Slope	9.56	-0.03	-0.3%	0.5% to 8.3%			Drainage has been checked		1108	5+71.67	-47.50	826.18
1106	1107	Landing/Turning Space	0.65	0.01	1.5%	0.1% to 2.0%					1109	5+70.94	-51.49	826.51
1107	1108	Ramp Running Slope	17.18	1.40	8.1%	0.5% to 8.3%			Length constructed must exceed 15 feet at a uniform running slope		1110	5+67.64	-51.43	826.42
1107	1112	Landing/Turning Space	4.00	0.06	1.5%	0.1% to 2.0%					1111	5+67.67	-47.43	826.12
1108	1109	Ramp Running Slope	4.05	0.33	8.1%	0.5% to 8.3%			Slope required to match existing conditions		1112	5+67.79	-30.35	824.84
1108	1111	Ramp Cross Slope	4.00	-0.06	-1.5%	0.1% to 2.0%					1113	5+66.44	-30.36	824.86
1109	1110	Match Existing Cross Slope	3.50	-0.09	-2.6%	Match Existing					1114	5+56.13	-30.39	825.26
1110	1111	Ramp Running Slope	4.00	-0.30	-7.5%	0.5% to 8.3%			Slope required to match existing conditions		1115	5+56.10	-26.44	825.22
1111	1112	Ramp Running Slope	17.07	-1.28	-7.5%	0.5% to 8.3%			Length constructed must exceed 15 feet at a uniform running slope		1116	5+66.47	-26.36	824.80
1112	1113	Landing/Turning Space	1.35	0.02	1.5%	0.1% to 2.0%					1117	5+66.47	-25.34	824.79
1113	1114	Ramp Running Slope	10.31	0.40	3.9%	0.5% to 8.3%								
1113	1116	Landing/Turning Space	4.00	-0.06	-1.5%	0.1% to 2.0%								
1114	1115	Match Existing Cross Slope	4.00	-0.04	-1.0%	Match Existing								
1115	1116	Ramp Running Slope	10.37	-0.42	-4.1%	0.5% to 8.3%								
1116	1117	Landing/Turning Space	1.02	-0.01	-1.0%	0.1% to 2.0%								
1201	1202	Ramp Running Slope	7.42	0.28	3.8%	0.5% to 8.3%					1201	5+72.57	14.99	823.52
1201	1214	Match Existing Cross Slope	5.65	0.15	2.7%	Match Existing					1202	5+72.62	22.41	823.80
1202	1203	Ramp Running Slope	6.24	-0.40	-6.4%	0.5% to 8.3%					1203	5+78.87	22.40	823.40
1202	1205	Landing/Turning Space	5.00	0.07	1.4%	0.1% to 2.0%					1204	5+80.56	27.39	823.30
1202	1213	Landing/Turning Space	5.00	0.07	1.4%	0.1% to 2.0%					1205	5+72.66	27.41	823.87
1203	1204	Match Existing Cross Slope	5.28	-0.10	-1.9%	Match Existing					1206	5+71.66	27.41	823.88
1204	1205	Ramp Running Slope	7.90	0.57	7.2%	0.5% to 8.3%					1207	5+71.76	41.31	824.27
1205	1206	Landing/Turning Space	1.00	0.01	1.0%	0.1% to 2.0%					1208	5+67.76	41.20	824.30
1206	1207	Ramp Running Slope	13.90	0.39	2.8%	0.5% to 8.3%					1209	5+67.66	27.42	823.94
1206	1209	Landing/Turning Space	4.00	0.06	1.5%	0.1% to 2.0%					1210	5+54.70	27.45	824.74
1207	1208	Match Existing Cross Slope	4.00	0.03	0.7%	Match Existing					1211	5+55.02	23.45	824.69
1208	1209	Ramp Running Slope	13.78	-0.36	-2.6%	0.5% to 8.3%					1212	5+67.63	23.42	823.88
1209	1210	Ramp Running Slope	12.96	0.80	6.2%	0.5% to 8.3%					1213	5+67.62	22.42	823.87
1209	1212	Landing/Turning Space	4.00	-0.06	-1.5%	0.1% to 2.0%					1214	5+67.55	12.39	823.67
1210	1211	Match Existing Cross Slope	4.00	-0.05	-1.2%	Match Existing								
1211	1212	Ramp Running Slope	12.61	-0.81	-6.4%	0.5% to 8.3%								
1212	1213	Landing/Turning Space	1.00	-0.01	-1.0%	0.1% to 2.0%								
1213	1214	Ramp Running Slope	10.03	-0.20	-2.0%	0.5% to 8.3%								



 = Landing / Turning Space



**Iowa 1 & 4th St. South  
Sidewalk Layout**