

**Colorado Department of Transportation**  
**Structure Inspection and Inventory Report (English Units)**

Highway Number (ON) 5D: 025A 1

Mile Post (ON)11: 141.109 mi

Bridge Key: I-17-DG      Inspection Date: 9/15/2010      Sufficiency Rating: 56.2      FO

Rgn/Sectn 2E/2M:	24	Hist Signif 37:	5	UW Inspection Date 93B:	
Trans Region 2T:	01	Posting status 41:	A	SI Date 93C:	
County Code 3:	041	Service on/un 42A/B:	6 6	Bridge Cost 94:	\$ 1,227,213
EL PASO		Main Mat/Desgn 43A/B:	5 2	Roadway Cost 95:	\$ 122,721
Place Code 4:	16000	Appr Mat/Desgn 44A/B:	0 0	Total Cost 96:	\$ 1,840,819
COLORADO SPRINGS		Main Spans Unit 45:	6	Year of Cost Estimate 97:	2006
Rte.(On/Under)5A:	1	Approach Spans 46:	0	Brdr Brdg Code/% 98A/B:	
Signing Prefix 5B:	1	Horiz Clr 47:	56.0 ft	Border Bridge Number 99:	
Level of Service 5C:	1	Max Span 48:	53.3 ft	Defense Highway 100:	1
Directional Suffix 5E:	0	Str Length 49:	302.3 ft	Parallel Structure 101:	N
Feature Intersected 6:		Curb Wdth L/R 50A/B:	0.0 ft 0.0 ft	Direction of Traffic 102:	2
US 24 ML, FOUNTAIN CRK		Width Curb to Curb 51:	100.0 ft	Temporary Structure 103:	
Facility Carried 7:		Width Out to Out 52:	106.0 ft	Highway System 104:	1
I 25 ML		Deck Area:	32,044. sq. ft	Fed Lands Hiway 105:	0
Alias Str No.8A:		Min Clr Ovr Brdg 53:	99.99	Year Reconstructed 106:	1978
#I-17-DF		Min Undrclr Ref 54A:	H	Deck Type 107:	1
Prll Str No. 8P		Min Undrclr 54B:	16.3 ft	Wearing Surface 108A:	6
I-17-DF		Min Lat Clrnce Ref R 55A:	H	Membrane 108B:	2
Location 9:		Min Lat Undrclr R 55B:	2.0 ft	Deck Protection 108C:	0
IN COLORADO SPRINGS		Min Lat Undrclr L 56:	2.000000024	Truck ADT 109:	9 %
Max Clr 10:	99.99	Deck 58:	6	Trk Net 110:	1
BaseHiway Net12:	1	Super 59:	6	Pier Protection 111:	#
IrsinvRout 13A:	000000025A	Sub 60:	5	NBIS Length 112:	Y
IrsSubRout No13B:	00	Channel/Protection 61:	8	Scour Critical 113:	8
Latitude 16:	38d 49' 40"	Culvert 62:	N	Scour Watch 113M:	
Longitude 17:	104d 50' 06"	Optprtng Rtg Method 63:	1 LF Load Factr	Future ADT 114:	119,738
Range18A:	67 W	Operating Rating 64:	42.0	Year of Future ADT 115:	2028
Township18B:	67	Inv Rtnng Method 65:	1	CDOT Str Type 120A:	CPG
Section18C:	13	Inventory Rating 66:	25.0	CDOT Constr Type 120B:	0.
Detour Length 19:	2.0 mi	Asph/Fill Thick 66T:	005 "in"	Inspection Indic 122A:	
Toll Facility 20:	3	Str. Evaluation 67:	5	Inspection Trip 122AA:	
Custodian 21:	1	Deck Geometry 68:	5	Scheduling Status 122B:	
Owner 22:	1	Undrclr Vert/Hor 69:	3	Maintenance Patrol 123:	69
Functional Class 26:	11	Posting 70:	5	Expansion Dev/Type124:	B
Year Built 27:	1959	Waterway Adequacy 7:	8	Brdg Rail Type/Mod 125A/B:	H 4
Lanes on 28A:	7	Approach Alignment 72:	8	Posting Trucks 129A/B/C:	0 0 0
Lanes Under 28B:	6	Type of Work 75A:	33	Str Rating Date 130:	8/8/1997
ADT 29:	87,400	Work Done By 75B:	1	Special Equip 133:	-1
Year of ADT 30:	2008	Length of Improvment 76:	302.2 ft	Vert Clr N/E 134A/B/C:	E 16.67 16.33
Design Load 31:	5	Insp Team Indicator 90B:	BLUE TEAM	Vert Clr S/W 135A/B/C:	W 17.92 17.42
Apr Rdwy Width 32:	102.0 ft	Inspector Name 90C:	STADIGM	Vertical Clr Date:	8/23/2006
Median 33:	3	Frequency 91:	24 months	Weight Limit Color: 139:	0
Skew 34:	15.00 °	FC Frequency 92A:	-1	Str Billing Type:	U
Structure Flared 35:	0	UW Frequency 92B:	-1	Userkey 1 - System:	ONSYS
Sfty Rail 36a/b/c/d:	0 0 0 0	SI Frequency 92C:	-1	Userkey 7-Update Indic:	
Rail ht36h:	30 "in"	FC Inspection Date 93A:			

Inspector Name: STADIGM

**Colorado Department of Transportation**  
**Structure Inspection and Inventory Report (English Units)**

Highway Number (ON) 5D: 025A 1

Mile Post (ON)11: **141.109 mi**

**Element Inspection Report**

Elm/En	Description	Units	Total Qty	% in 1	CS 1	% in 2	CS 2	% in 3	CS 3	% in 4	CS 4	% in 5	CS 5
14/4	P Conc Deck/AC Ovly	(SF)	32,044	100 %	32,044	0 %	0	0 %	0	0 %	0	0 %	0
104/4	P/S Conc Box Girder	(LF)	906	100 %	906	0 %	0	0 %	0	0 %	0	0 %	0
109/4	P/S Conc Open Girder	(LF)	4,228	98 %	4,132	1 %	56	1 %	40	0 %	0	0 %	0
205/4	R/Conc Column	(EA)	45	87 %	39	13 %	6	0 %	0	0 %	0	0 %	0
215/4	R/Conc Abutment	(LF)	220	65 %	143	11 %	25	23 %	50	1 %	2	0 %	0
234/4	R/Conc Cap	(LF)	480	53 %	255	39 %	185	8 %	40	0 %	0	0 %	0
304/4	Open Expansion Joint	(LF)	110	5 %	5	0 %	0	95 %	105	0 %	0	0 %	0
308/4	Constr Non Exp Jt	(LF)	440	0 %	0	100 %	440	0 %	0	0 %	0	0 %	0
310/4	Elastomeric Bearing	(EA)	72	100 %	72	0 %	0	0 %	0	0 %	0	0 %	0
311/4	Moveable Bearing	(EA)	84	0 %	0	100 %	84	0 %	0	0 %	0	0 %	0
313/4	Fixed Bearing	(EA)	84	0 %	0	100 %	84	0 %	0	0 %	0	0 %	0
325/4	Slope Prot/Berms	(EA)	2	100 %	2	0 %	0	0 %	0	0 %	0	0 %	0
326/4	Bridge Wingwalls	(EA)	4	75 %	3	25 %	1	0 %	0	0 %	0	0 %	0
331/4	Conc Bridge Railing	(LF)	302	67 %	202	33 %	100	0 %	0	0 %	0	0 %	0
334/4	Metal Rail Coated	(LF)	604	83 %	504	17 %	100	0 %	0	0 %	0	0 %	0
338/4	Conc Curbs/SW	(LF)	604	100 %	604	0 %	0	0 %	0	0 %	0	0 %	0
343/4	Pole Attachment	(EA)	2	100 %	2	0 %	0	0 %	0	0 %	0	0 %	0
359/4	Soffit Smart Flag	(EA)	1	0 %	0	100 %	1	0 %	0	0 %	0	0 %	0
501/4	Channel Cond	(EA)	1	100 %	1	0 %	0	0 %	0	0 %	0	0 %	0
502/4	ChannProtMatCond	(EA)	1	100 %	1	0 %	0	0 %	0	0 %	0	0 %	0
504/4	BankCond	(EA)	1	100 %	1	0 %	0	0 %	0	0 %	0	0 %	0
505/4	Debris Smart Flag	(EA)	1	100 %	1	0 %	0	0 %	0	0 %	0	0 %	0

Elem/Env	Description	Element Notes
14/4	P Conc Deck/AC Ovly	4 to 5 Inches of asphalt. Sealed cracks across piers and abutments. Sealed D-cracking at A7. Otherwise looks good.
104/4	P/S Conc Box Girder	Includes Girder lines I, J, and K. A few hairline vertical cracks are visible. Blackened at A7 from hobo campfires.
109/4	P/S Conc Open Girder	Ends of all at A7 have hairline to light horizontal cracks, approximately 48 inches long. Exterior girders at piers have heavy waterstaining, along with some spalls and rust stains. Several diaphragms at piers have deterioration at the bottoms. Corners at abutments are diagonally cracked, (past the bearings) at a few. Ends of some girders have minor delams. and spalls, with exposed rebar.
205/4	R/Conc Column	Debris walls between columns at P5, look good. Light delam. on Column 5A, adjacent to the nose angle. Some delam. cracking at Columns 2A, 2I, 3G, 3I, and 4I. Moderate scale on the bottom of 3G.

**Colorado Department of Transportation**  
**Structure Inspection and Inventory Report (English Units)**

Highway Number (ON) 5D: 025A 1

Mile Post (ON)11: **141.109 mi**

Elem/Env	Description	Element Notes
215/4	R/Conc Abutment	Light vertical cracks throughout. Both abutments are apparently pushing, causing bearings to break out spalls on front faces of abutment seats. Many were repaired by patching with concrete and placing steel plates over patches. Most of these repairs have failed. All spalls go to anchor bolts, and some have bearing loss. A1 under GIRDERS: 1B - Spall 10% bearing loss; 1C - spalled 10% loss; 1F - spalled 10% loss; 1H - spalled; 1L - spalled 10% loss; 1M - spalled 10% loss; 1N - repair failing but not fallen off; 1O - repair failed, broken anchor bolt, 15% loss; 1P - repair failed; 1Q - 50% bearing loss, and repair failed. A7 under GIRDERS: 6A - repair failing; 6B - repair failed and 25% bearing loss; 6D - repair failing; 6E - repair failing; 6F - repair failing; 6G - repair failing; 6H - delamination. See 2002 PHOTOS of spalls.
234/4	R/Conc Cap	Lower faces of most caps have horizontal delam. cracks, with water and rust stains. Ends of all caps have light to moderate scale with spalls/delam/rust stains. The Pier 2 Cap has a heavy horizontal crack at the Left end top of the cap, and horizontal cracking at the Right end (top and bottom) of the cap, along with spalling at the end. The Pier 4 Left end is spalled to rebar. A spall under Girder 3A at P4 - no bearing loss. The P6 cap is diagonally cracked under 6L. At P3 under 3N, spalled - no bearing loss. Some light scale on the bottom of the P6 Cap, below box girders.
304/4	Open Expansion Joint	The sliding plate is visible in the the curbs, at Pier 5. Assumed that the plate in the driving lane is covered with asphalt. Plates in the curbs have worn paint, and R1 corrosion. Heavy sealed D-cracking and above the joint at P5, SBnd in the exterior lane; (see 08/23/2006 PHOTO of previous condition). Heavy leaking below. Plates are obviously loose as they ring under live loads. Assume 100% failure.
308/4	Constr Non Exp Jt	Located at Piers 2, 3, 4, and 6. Asphalt covered in the roadway. Interior lanes in both directions are overlaid, asphalt on the exterior lanes has moderate cracking. Joint material is falling through to the pier caps.
310/4	Elastomeric Bearing	Beneath box girders. Four at each pier, and eight at abutments. Some R1 corrosion on plates. Pads look OK.
311/4	Moveable Bearing	R1 to R2 corrosion on all.
313/4	Fixed Bearing	R1 to R2 corrosion on all.
325/4	Slope Prot/Berms	Concrete slope pavement at A1 only. A few light horizontal cracks in some panels. A dirt slope at A7, the berm is settled to the bottom of the cap, with minor erosion troughs.
326/4	Bridge Wingwalls	Some shallow delams./spalls in #1 Left, and #7 Right. Spall with exposed rebar in #7 Left.
331/4	Conc Bridge Railing	Concrete Type R railing in the median. Light vertical cracks. Spots of light scale. A spall in the top of the rail, at Pier 2.
334/4	Metal Rail Coated	Type H railing mounted to tops of exterior curbs. Looks OK.
338/4	Conc Curbs/SW	Light transverse cracks. Scattered light spalls on gutter faces.
343/4	Pole Attachment	Attached to concrete pedestals extending from curbs, in Span 4 on both sides. Light delam. in the concrete pedestal at the Left.
359/4	Soffit Smart Flag	Hairline map cracking scattered throughout. Some transverse cracks with light efflor. An old utility box in the deck bottom in Bay 3P, has a hole through the deck, and causing deterioration of the deck bottom; (see 08/23/2006 PHOTO).
501/4	Channel Cond	Fountain Creek. A moderate in 2010. Flows in Span 5. Rock, gravel, sandy bed.
502/4	ChannProtMatCond	A rock filled gabion at the toe of the #7 slope. Looks OK.
504/4	BankCond	Steep. Some rocks, trees, bushes, dirt, and trash.
505/4	Debris Smart Flag	About 4 cubic yards of logs, branches, and other debris built up on Column 5A; 1 cubic yard on Column 5E; with a minor amount on Column 5G.

**Colorado Department of Transportation**  
**Structure Inspection and Inventory Report (English Units)**

Highway Number (ON) 5D: 025A 1

Mile Post (ON)11: 141.109 mi

**Maintenance Activity Summary**

<b>MMS Activity</b>	<b>Description</b>	<b>Recommended</b>	<b>Status</b>	<b>Target Year</b>	<b>Est Cost</b>
358.04	Substr	7/24/2002	-1	2013	12000

Remove and replace delaminated and spalled concrete on pier caps.

**358.05	Substr	7/24/2002	-1	2013	30000
----------	--------	-----------	----	------	-------

Pulpits required at abutments and fix old bearing repairs that are failing.

358.04	Substr	8/25/2008	-1	2013	250
--------	--------	-----------	----	------	-----

Remove logs, branches, and other debris that is built up on columns at Pier 5.

352.00	Cln & Wash	8/23/2006	-1	2013	1200
--------	------------	-----------	----	------	------

Trim trees over Span 4 on the Left side.

**Colorado Department of Transportation**  
**Structure Inspection and Inventory Report (English Units)**

Highway Number (ON) 5D: 025A 1

Mile Post (ON)11: 141.109 mi

**Bridge Notes**

**Inspection Notes**

TIME: 3:20    TEMP: 85    WEATHER: Partly Cloudy

**Scope:**

NBI:  Element:  Underwater:  Fracture Critical:  Other:    Type: Regular NBI

Inspector: STADIGM

Inspection Team:

Inspection Date: 09/15/2010

\_\_\_\_\_  
Inspector

\_\_\_\_\_  
Inspector