

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

Highway Number (ON) 5D: 470A

Mile Post (ON)11: 21.064 mi

Bridge Name: F-17-HP      Inspection Date: 3/5/2013      Sufficiency Rating: 94.1      Not Eligible

|                        |                  |                           |                  |                            |              |
|------------------------|------------------|---------------------------|------------------|----------------------------|--------------|
| NBI Reporting ID:      | F-17-HP          | Hist Signif 37:           | 5                | UW Inspection Date 93B:    |              |
| Rgn/Sectn 2E/2M:       | 68               | Posting status 41:        | A                | SI Date 93C:               |              |
| Trans Region 2T:       | 02               | Service on/un 42A/B:      | 6    1           | Bridge Cost 94:            | \$ 0         |
| County Code 3:         | 035              | Main Mat/Desgn 43A/B:     | 6    2           | Roadway Cost 95:           | \$ 0         |
| DOUGLAS                |                  | Aprr Mat/Desgn 44A/B:     | 0    0           | Total Cost 96:             | \$ 0         |
| Place Code 4:          | 00000            | Main Spans Unit 45:       | 2                | Year of Cost Estimate 97:  |              |
| non-city               |                  | Approach Spans 46:        | 0                | Brdr Brdg Code/% 98A/B:    |              |
| Rte.(On/Under)5A:      | 1                | Horiz Clr 47:             | 38.0 ft          | Border Bridge Number 99:   |              |
| Signing Prefix 5B:     | 3                | Max Span 48:              | 96.5 ft          | Defense Highway 100:       | 0            |
| Level of Service 5C:   | 1                | Str Length 49:            | 189.5 ft         | Parallel Structure 101:    | R            |
| Directional Suffix 5E: | 0                | Curb Wdth L/R 50A/B:      | 0.0 ft    0.0 ft | Direction of Traffic 102:  | 1            |
| Feature Intersected 6: |                  | Width Curb to Curb 51:    | 38.0 ft          | Temporary Structure 103:   |              |
| SH 177-UNIVERSITY BLVD |                  | Width Out to Out 52:      | 41.5 ft          | Highway System 104:        | 1            |
| Facility Carried 7:    |                  | Deck Area:                | 7,864. sq. ft    | Fed Lands Hiway 105:       | 0            |
| SH 470 ML EBND         |                  | Min Clr Ovr Brdg 53:      | 99.99            | Year Reconstructed 106:    | 0000         |
| Alias Str No.8A:       |                  | Min Undrclr Ref 54A:      | H                | Deck Type 107:             | 1            |
|                        |                  | Min Undrclr 54B:          | 17.4 ft          | Wearing Surface 108A:      | 6            |
| Pril Str No. 8P        |                  | Min Lat Clrnce Ref R 55A: | H                | Membrane 108B:             | 2            |
| F-17-HQ                |                  | Min Lat Undrclr R 55B:    | 8.0 ft           | Deck Protection 108C:      | 1            |
| Location 9:            |                  | Min Lat Undrclr L 56:     | 5.0 ft           | Truck ADT 109:             | 6 %          |
| 4 M E OF JCT US 85     |                  | Deck 58:                  | 7                | Trk Net 110:               | 1            |
| Max Clr 10:            | 328.1 ft         | Super 59:                 | 7                | Pier Protection 111:       |              |
| BaseHiway Net12:       | 1                | Sub 60:                   | 6                | NBIS Length 112:           | Y            |
| IrsinvRout 13A         | 000000470A       | Channel/Protection 61:    | N                | Scour Critical 113:        | N            |
| IrrsubRout No13B:      | 00               | Culvert 62:               | N                | Scour Watch 113M:          |              |
| Latitude 16:           | 39d 33' 47"      | Oprrtg Rtg Method 63:     | 1 LF Load Factr  | Future ADT 114:            | 64,944       |
| Longitude 17:          | 104d 57' 39"     | Operating Rating 64:      | 58.0             | Year of Future ADT 115:    | 2027         |
| Range18A:              | 68 W             | Inv Rtg Method 65:        | 1                | CDOT Str Type 120A:        | CPGC         |
| Township18B:           | 68               | Inventory Rating 66:      | 30.0             | CDOT Constr Type 120B:     | 31           |
| Section18C:            | 1                | Asph/Fill Thick 66T:      | 003 "in"         | Inspection Indic 122A:     |              |
| Detour Length 19:      | 0.0 mi           | Str. Evaluation 67:       | 6                | Inspection Trip 122AA:     |              |
| Toll Facility 20:      | 3                | Deck Geometry 68:         | 6                | Inspection Schedule ID:    | ODD MAY E14  |
| Custodian 21:          | 1                | Undrclr Vert/Hor 69:      | 4                | Maintenance Patrol 123:    | 30           |
| Owner 22:              | 1                | Posting 70:               | 5                | Expansion Dev/Type124:     | D            |
| Functional Class 26:   | 12               | Waterway Adequacy 7:      | N                | Brdg Rail Type/Mod 125A/B: | R    0       |
| Year Built 27:         | 1984             | Approach Alignment 72:    | 8                | Posting Trucks 129A/B/C:   | 0    0    0  |
| Lanes on 28A:          | 2                | Type of Work 75A:         |                  | Str Rating Date 130:       | 11/24/1997   |
| Lanes Under 28B:       | 8                | Work Done By 75B:         |                  | Special Equip 133:         |              |
| ADT 29:                | 45,100           | Length of Improvment 76:  | 0.0 ft           | Vert Clr N/E 134A/B/C:     | X 99.99    0 |
| Year of ADT 30:        | 2007             | Insp Team Indicator 90B:  | WHITE TEAM       | Vert Clr S/W 135A/B/C:     | X 99.99    0 |
| Design Load 31:        | 6                | Inspector Name 90C:       | CHURCHESK        | Vertical Clr Date:         | 5/5/1905     |
| Apr Rdwy Width 32:     | 38.0 ft          | Frequency 91:             | 24 months        | Weight Limit Color: 139:   | 0            |
| Median 33:             | 1                | FC Frequency 92A:         |                  | Str Billing Type:          | U            |
| Skew 34:               | 2.00 °           | UW Frequency 92B:         |                  | Userkey 1 - System:        | ONSYS        |
| Structure Flared 35:   | 0                | SI Frequency 92C:         |                  | Userkey 7-Update Indid:    |              |
| Sfty Rail 36a/b/c/d:   | 1    1    1    1 | FC Inspection Date 93A:   |                  |                            |              |
| Rail ht36h:            | 34 "in"          |                           |                  |                            |              |

Inspector Name: CHURCHESK

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**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 |
|--------|----------------------|-------|-----------|--------|-------|--------|------|--------|------|--------|------|--------|------|
| 26/4   | Conc Deck/Coatd Bars | (SF)  | 7,864     | 100 %  | 7,864 | 0 %    | 0    | 0 %    | 0    | 0 %    | 0    | 0 %    | 0    |
| 109/4  | P/S Conc Open Girder | (LF)  | 940       | 98 %   | 920   | 2 %    | 20   | 0 %    | 0    | 0 %    | 0    | 0 %    | 0    |
| 210/4  | R/Conc Pier Wall     | (LF)  | 23        | 100 %  | 23    | 0 %    | 0    | 0 %    | 0    | 0 %    | 0    | 0 %    | 0    |
| 215/4  | R/Conc Abutment      | (LF)  | 82        | 99 %   | 81    | 1 %    | 1    | 0 %    | 0    | 0 %    | 0    | 0 %    | 0    |
| 234/4  | R/Conc Cap           | (LF)  | 39        | 100 %  | 39    | 0 %    | 0    | 0 %    | 0    | 0 %    | 0    | 0 %    | 0    |
| 300/4  | Strip Seal Exp Joint | (LF)  | 82        | 100 %  | 82    | 0 %    | 0    | 0 %    | 0    | 0 %    | 0    | 0 %    | 0    |
| 308/4  | Constr Non Exp Jt    | (LF)  | 82        | 100 %  | 82    | 0 %    | 0    | 0 %    | 0    | 0 %    | 0    | 0 %    | 0    |
| 321/4  | R/Conc Approach Slab | (EA)  | 2         | 100 %  | 2     | 0 %    | 0    | 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         | 100 %  | 4     | 0 %    | 0    | 0 %    | 0    | 0 %    | 0    | 0 %    | 0    |
| 331/4  | Conc Bridge Railing  | (LF)  | 380       | 99 %   | 377   | 1 %    | 3    | 0 %    | 0    | 0 %    | 0    | 0 %    | 0    |
| 340/4  | Superstr Cnc Coating | (EA)  | 1         | 100 %  | 1     | 0 %    | 0    | 0 %    | 0    | 0 %    | 0    | 0 %    | 0    |
| 341/4  | Substr Conc Coating  | (EA)  | 1         | 100 %  | 1     | 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    |
| 530/4  | Approach Guardrail A | (EA)  | 1         | 100 %  | 1     | 0 %    | 0    | 0 %    | 0    | 0 %    | 0    | 0 %    | 0    |

| Elem/Env | Description          | Element Notes   |
|----------|----------------------|---|
| 26/4     | Conc Deck/Coatd Bars | 3 Inches of asphalt.<br>Minor raveling along longitud. seams.   |
| 109/4    | P/S Conc Open Girder | Hairline and light horizontal cracks along top of web of some girders, extending up to 5 feet from abutments.<br>Minor chips on Girders 2B and 2E near Abutment 3.<br>Bottom flange of Girder 2F has been patched above #3 NBnd lane. |
| 210/4    | R/Conc Pier Wall     | Some hairline vertical, horizontal, and random shrinkage cracks.  |
| 215/4    | R/Conc Abutment      | Few hairline and light vertical cracks in backwalls, and diagonal cracks at utility blockouts.<br>Minor spall/chip at bottom left end of Abutment 3. (See 2007 Photo)   |
| 234/4    | R/Conc Cap           | Good condition.   |
| 300/4    | Strip Seal Exp Joint | Strip seal expansion joints at roadway end of approach slabs.<br>Both open 2 inches and filled with sand.   |
| 308/4    | Constr Non Exp Jt    | Both are covered with asphalt.<br>Look OK.  |
| 321/4    | R/Conc Approach Slab | Asphalt covered.<br>Look OK.  |
| 325/4    | Slope Prot/Berms     | New slope paving at Abutment 1 prior to 2013 inspection.<br>Slope paving at Abutment 3 was replaced prior to 2011 inspection.<br>Both look good.  |
| 326/4    | Bridge Wingwalls     | U-type abutment wings, and sub-wings.<br>Integral wings have minor horizontal cracks, some with efflor., at cold joints.<br>Sub-wings at #1 Left, #1 Right, and #3 Left are breaking up. (See 2007 Photos)                            |

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| Elem/Env | Description          | Element Notes  |
|----------|----------------------|--|
| 331/4    | Conc Bridge Railing  | Couple spalls with exposed rebar on top of right rail above Span 1.<br>Spall (1 ft. Ø) in face of right rail above Span 2.<br>Typical vertical cracks in both.<br>Some light scale starting along the base.  |
| 340/4    | Superstr Cnc Coating | On exterior girders, overhangs, and bridge railing.<br>Starting to peel in the splash zone along the bridge railing.<br>Waterstained.  |
| 341/4    | Substr Conc Coating  | On abutments, wingwalls, pier wall, and pier cap.<br>Some blotted out graffiti, on the face of Abutment 1.<br>Waterstained.  |
| 359/4    | Soffit Smart Flag    | Some transverse cracks with efflorescence in the deck bottom, and overhangs.   |
| 530/4    | Approach Guardrail A | Approach rail is settling and/or pushing:<br>settled 1½ inches at #1 Lt. approach;<br>settled 4 inches, and pushed 1½ inches, at #1 Rt. approach;<br>settled 1¼ inches at #3 Lt. approach;<br>settled 2½ inches, and pushed 1½ inches, at #3 Rt. approach. |

**Bridge Notes**

|   |
|---|
| <p><b>New slope paving at Abutment 1 prior to 2013 inspection.</b><br/> <b>Slope paving at Abutment 3, and concrete paving for Northbound lanes, was replaced prior to 2011 inspection.</b></p> |
|---|

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**Inspection Notes**

Temperature: 28°  
Time: 11:45  
Weather: Clear

**Scope:**

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

**Team Leader Inspection Check-off:**

FCM's  Vertical Clearance  
 Posting Signs  Stream Bed Profile  
 Essential Repair Verification

**Inspection Team:**

**Inspection Date:** 03/05/2013

**Inspector:** CHURCHESK

**Inspector (Team Leader)**