STRUCTURE NO. 01686B

I-84 TR 825

over

US RT 44EB & COLUMBUS BD

HARTFORD

Indepth Inspection

on

8/28/2006

Inspected by Baker - 23

for Area 1

TEAM:	Forwarded to Senior	AI Engineers	Date	5/9/2007
SENIOR:	Reviewed by Senior	Basil Bantimba	Date	8/1/2007
	BMM Required	Yes		
	Town Bridge	No		
	Rating <= 5 (Items 58,59,60 or 62)	Yes		
	Forwarded to Supervisor	Ralph Phillips	Date	8/7/2007
	Forwarded to "To Be Copied Drawer"	☐	Date	
	Date BRI-19 Entered	3/10/2007		
SUPERVISOR:	Reviewed by Supervisor	Ralph Phillips	Date	12/4/2007
SUPPORT:	Date Copies Made	12-5-07	BMM No	07-473

NBI: Yes

BRIDGE SAFETY & EVALUATION

LIST 99 - BRIDGE 01686B

Bridge No:	01686B	***Town:***	HARTFORD	***Area:***	1	***Deck:***	4
Feature Carried:		I-84 TR 825		***NBI?***	Yes	***Superstructure:***	5
Features Intersected:		US RT 44EB & COLUMBU		***Sufficiency Rating***	72.9	***Substructure:***	5
Year Built:	1961	***YearRebuilt:***	0000	***Main Material & Design:***	32	***Culverts:***	N
List #:	99					***Structural Evaluation:***	5
Submitted By:	RAP			***Project #:***		***Scour Rating:***	
Date Submitted:	10/3/2007			***Advertising Date***			
Reviewed By:							
Date Submitted to Design:							

Problems and General Condition:

AI Review

The deck has a maximum of 79% deterioration in sp ɔration of 25.3%. The parapet also exhibit advanced deterioration with deep spallin he structure.

The deck joints exhibit adhesion failures which is all ɜrstructure and substructure.

The beam ends below the joint are showing signs of measureable scour.

Other Related Projects:

Recommendations:

Deck Replacement	Span 3 has 79% deterioration on the underside. The structure has 25.3% deterioration overall.
Superstructure Repair	The beam ends exhibit heavy rust and section losses. Clean, paint and add material wjherever needed to maintain an acceptable inventory rating capacity.
Substructure Repair	Repair delaminating and spalled areas on the piers. Clean and paint the areas of section loss on the steel pier cap.

Bridge Number **01686B**

Inspected By: Michael Jackie & C. Perry

Sufficiency Rating 90.15

Previous Inspection Date 9/21/04

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION
BRIDGE SAFETY & EVALUATION
STRUCTURE EVALUATION

SHEET 1 OF 2 FORM BRI-19 REV 10/00

BS&E Received ☐ Data Entry By: Bad

Copies Made ☐ Data Entry Date: 3/10/07

SHEET_____ OF_____ (INSP. REPORT)

90) Inspection Date	Inspection Team	91) Frequency	Class:
08/28/06	23 2 3	24	02

Indepth Insp	Deck Survey	Access	Flagman
4/24/96 08/28/06		21 2 2	0

CRITICAL FEATURE INSPECTIONS

	Type	Frequency	Team	Date	
Fracture:	K K	24 2 4	1 2 3	9/21/04	08/28/06
Uwater:					
Special:					

RED FLAG

date had been updated by Chris

IDENTIFICATION

Bridge Name

Town Name HARTFORD Town Code 37070

5) Inventory Route:

A) Record Type 1 D) Route Number 00084

B) Signing Prefix 1 Interstate High E) Directional Suffix 0 NA

C) Level of Service 7 Ramp, Wye, C

6) Feature Intersected US RT 44EB & COLUMBUS BD

7) Facility Carried I-84 TR 825

9) Location RAMP TO I91SB FROM I84 EB

11) Milepoint 0.11 Miles

16) Latitude 41 deg 46 min 6.00 sec deg min sec

17) Longitude 72 deg 40 min 12.00 sec deg min sec

98) Border Bridge:

A) State Code B) Percent Responsibility %

C) Border Town Name

99) Border Bridge Structure No

STRUCTURE TYPE AND MATERIAL

43) Structure Type, Main:

A) Material 3 Steel B) Design Type 2 Stringer/Multi-beam

44) Structure Type, Approach:

A) Material 0 Other B) Design Type 0 Other

45) Number of Spans, Main Unit 8

46) Number of Approach Spans 0

107) Deck Structure Type 1 Concrete Cast-in-Place

108) Wearing Surface/Protective System:

A) Type of Wearing Surface 6 Bituminous

B) Type of Membrane 2 Preformed Fabric

C) Type of Deck Protection 8 Unknown

AGE AND SERVICE

27) Year Built 1961 106) Year Reconstructed 0000

42) Type of Service:

A) On 1 Highway B) Under 1 HIGHWAY

28) Number of Lanes:

A) On 1 B) Under * 5

29) Average Daily Traffic 10400 0 1 0 7 0 0 Half ADT?: No 4

109) Percent Truck 9 %

30) Year of ADT 1993 2005

19) Bypass, Detour Length 1 miles

GEOMETRIC DATA

48) Length of Max Span 88 ft

49) Structure Length 525 ft

50) Curb or Sidewalk Widths:

A) Left 1.5 ft B) Right 1.5 ft

51) Brg Rdwy width,curb-curb 20.0 ft

52) Deck Width, Out-Out 25.5 ft

32) Approach Roadway Width 20 ft

33) Bridge Median 0 No Median

Deck Area 13916 sqft

34) Skew Angle 99 deg

35) Structure Flared 0

10)Inv. Rte. Min. Vert Clearance 14 ft 11 in ~~14 ft 0 in~~

47) Log Inv. Rte. Total Horiz Clr.: 20.0 ft

47) RLog Inv. Rte. Total Horiz. Clr.: ft

53) Min Vert Clearance Over Bridge 14 ft 9 in

54) Min Vert Under Clearance H Ref 15 ft 2 in Ref

55) Min Lat Under Clearance on Right H Ref 3.5 ft Ref

56) Min Lat Under Clearance on Left 1.5 ft ~~0 ft 3 in~~ 2.0

BRIDGE COMMENTS

ITEM 10 CODING ASSUMED TO BE CONTROLLED BY OVERPASS PIER CAP, NOT THE FASCIA GIRDER

* HALF ADT (EB ONLY)

STRUCTURE EVALUATION

SHEET 2 OF 2 FORM BRI-19 REV 10/00

SHEET_____ OF_____ (INSP. REPORT

Bridge Number	01686B	NBIS Length	
Town Name	HARTFORD	Yes 525	
Facility Carried	I-84 TR 825		
Feature Crossed	US RT 44EB & COLUMBUS BD		

Inspected By: MICHAEL JAKIEL & C. PERRY

CLASSIFICATION

112) NBIS Bridge Length	Yes		✓
104) Highway System	1	On System	
26) Functional Class	11	Urban Principal Arterial - Interstate	
100) Defense Highway	2	Defense Highway over/under another	
101) Parallel Structure	N	No parallel structure exists	
102) Direction of Traffic	1	1-way traffic	
103) Temporary Structure			
110) Designated National Network	1	On national network	
20) Toll	3	On Free Road	
21) Maintain	1	State Highway Agency	
22) Owner	1	State Highway Agency	
Report Class	S	STATE	
37) Historical Significance	5	Bridge is not eligible for National Register	

WATERWAY

DrainageBasinCode		
38) Navigation Control		No navigation control on waterway
39) Navigation Vert Clr.		40) Navigation Horiz Clr.
116) Vert-Lift Brg Nav Min		
111) Pier Abutment Protection		

PROPOSED IMPROVEMENTS

75A) Type of Work Proposed		
75B) Work Done By		
76) Length of Struct. Improvement		ft
94) Bridge Improvement Cost	$	
95) Roadway Improvement Cost	$	
96) Total Project Cost	$	
97) Year of Improvement Cost Est.		
114) Future ADT		115) Year Future ADT
List No.	Project No.	Advertised

POSTED SIGNS & UTILITIES

Other Posted Signs 1					
Other Posted Signs 2	7	Sharp Curve			
Actual P.L. Single Unit Truck		tons	Actual P.L. 4Axle Truck		tons
Rec. P.L. Single Unit Truck		tons	Rec. P.L. 4Axle Truck		tons
Actual P.L. Semi-TrailerTruck		tons	Actual P.L. 3S2 Truck		tons
Rec. P.L. Semi-TrailerTruck		tons	Rec. P.L. 3S2 Truck		tons
Rec. P.L. All Vehicles		tons	Actual P.L. All Vehicles		tons
Posted Vert Clearance On Bridge		ft in			ft In
Posted Vert UnderClearance		ft in			ft In
Posted Speed Limit		mph			mph
Utility					

LOAD RATING AND POSTING

31) Design Load	5	Evaluation Code	L	
63) Operating Rating Type	1	Year of Evaluation	2002	
64) Operating Rating	65.2	70) Bridge Posting	5	
65) Inventory Rating Type	1	41) Structure Status	A	A
66) Inventory Rating	39.1	Open, no restriction		

CONDITION

		Rating	By
58) Deck	PDM4	6	MMS
59) Superstructure		7	5 MMS
60) Substructure		6	5 MMS
61) Channel & Chan. Protection		N	N MMS
62) Culverts		N	N MMS

APPRAISALS

	Rating	By
67) Structure Evaluation	6	5 PDM
68) Deck Geometry	5	5 MMS
69) Under Clear Vert & Horiz	3	3 MMS
71) Waterway Adequacy	N	N MMS
72) Approach Rdwy Alignment	6	6 MMS
113) Scour Critical		

Items 58 Thru 72 Checked By: ?? BJR

36) Traffic Safety Features:

A) Bridge Railings	1	0	Does not meet current Bridge STANDARDS
B) Transitions	0	0	Does not meet R-B 350 STANDARDS.
C) Approach Guardrail	1	0	"
D) Approach Guardrail End	1	0	"

OTHER FEATURES

Fence Required	No	BLANK		Barrel Ladder	No
Fence Present	No	✓		Stand Pipes	No
Fence Height	0.0 ft		ft	Cat Walks	No
Fence Type				Movable Inspection System	No
Fence Material				Loose Concrete Checked?	Yes ✓
Fence Top Type					

INSPECTION COMMENTS

Proposed Next Indepth Insp Year	2006	Paul McGuinness
Senior	daiglejl	PE #17040 2/21/07
Supervisor	lapierretd	

REVIEWED BY _____ Date _____

BRIDGE NUMBER	TOWN NAME	NBIS BRG LGTH	
01686B	HARTFORD	Yes	525
FACILITY CARRIED	FEATURE CROSSED		
I-84 TR 825	US RT 44EB & COLUMBUS BD		

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION
DIVISION OF BRIDGE SAFETY EVALUATION

INVENTORY ROUTE UNDER STRUCTURE EVALUATION

FORM BRI-25 REV 10/00

INSPECTED BY: MICHAEL SAKIN / C. PERRY

REVIEWED BY: ?? DATE: ?? BB

SHEET_____ OF_____ (INSP. REPORT)

IDENTIFICATION

DESCRIPTION:

5) INVENTORY ROUTE:

A) RECORD TYPE	2	
B) ROUTE SIGNING PREFIX	2	U.S. Numbered Highway
C) DESIGNATED LEVEL OF SERVICE	1	Mainline
D) ROUTE NO.	00044	
11) MILE POINT (INV.RTE)	53.74	

CLASSIFICATION

26) INV. RTE. FUNCT CLASSIFICATION	14	Urban Other Principal Art
100) DEFENSE HIGHWAY DESIGNATION	1	Defense Highway
** 102) DIRECTION OF TRAFFIC	1	1-way traffic
104) HIGHWAY SYSTEM OF INV. ROUTE	1	On System
110) DESIGNATED NATIONAL NETWORK		On national network

AGE & SERVICE

+ 28B) NUMBER OF INV.ROUTE LANES	3		
* 29) ADT (INV. RTE)	11450		0 1 0 7 0 0 *
* 109) TRUCK ADT % (INV.RTE)	6		0 6
* 30) YEAR OF ADT (INV. RTE)	2003		2 0 0 5
* 41) INV ROUTE OPERATIONAL STATUS	A	Open, no restriction	A
19) BYPASS DETOUR LENGTH	1	Miles	

POSTED SIGNS

+ POSTED VERT. CLR UNDER BRIDGE 0 ft 0 in ft in

(BLANK

COMMENTS:

* - HALF ADT (EB ONLY)

GEOMETRIC DATA

+ 10) INV. RTE. MIN. VERT. CLEARANCE	15 ft 8 in	1 5 ft 0 3 in
+ 47) LOG INV. RTE. TOTAL HORIZ CLR.	39 ft	3 6 . 9 ft
+ 47) RLOG INV. RTE. TOTAL HORIZ CLR.	ft	. ft
+ LOG MIN VERT CLR OVER INV ROUTE	15 ft 3 in	1 5 ft 0 2 in
+ RLOG MIN VERT CLR OVER INV ROUTE	ft in	ft in
+ 55) MIN LAT UNDERCLR ON RIGHT	H 4.2 ft	. ft
+ 56) MIN LAT UNDERCLR ON LEFT	0.5 ft	0 2 . 0 ft

← If curb is non-mountable, item = 0 ft. see note sheet 11. BB

* FILL OUT ON EVERY INSPECTION 29, 109, 30, 41

\+ VERIFY EVERY INSPECTION 28B, 10, 47, 53, 55, 56 & POSTED VERT CLEARANCE UNDER THE BRIDGE

** MUST BE FILLED OUT OR VERIFIED ON THE FIRST INSPECTION MADE BASED ON THE NEW FHWA GUIDE 102

BB 8/1/07

Structure Inventory and Appraisal Sheet (English Units)

Bridge Key: 01686B | Agency ID: 01686B | Sufficiency Rating: 82.1

IDENTIFICATION

State 1: 09 Connecticut | Struc Num 8: 01686B
Facility Carried 7: I-84 TR 825 | Location 9: RAMP TO I91SB FROM I84 EB
Rte.(On/Under)5A: Route On Structure | Rte. Signing Prefix 5B: 1 Interstate Hwy
Level of Service 5C: 7 Ramp | Rte. Number 5D: 00084
Directional Suffix 5E: 0 N/A (NBI) | % Responsibility : 0
SHD District 2: 01 | County Code 3: Hartford
Place Code 4: HARTFORD | Mile Post 11: 0.370 mi
Feature Intersected 6: US RT 44 & COLUMBUS BLVD
Latitude 16: 41d 46' 06" | Longitude 17: 072d 40' 12"
Border Bridge Code 98: Unknown (P)
Border Bridge Number 99: NA

INSPECTION

Frequency 91: 24 months | Inspection Date 90: 8/28/2006 | Next Inspection: 08/28/2008
FC Frequency 92A: 24 months | FC Inspection Date 93A: ~~10/1/2000~~ 8/28/06 | Next FC Inspection: ~~11/1/2001~~ 8/28/08
UW Frequency 92B: NA | UW Inspection Date 93B: NA | Next UW Inspection: NA
SI Frequency 92C: NA | SI Date 93C: NA | Next SI: NA
Element Frequency: 24 months | Element Inspection Date: 08/28/2006 | Next Elem. Insp. Due: 08/28/2008

CLASSIFICATION

Defense Highway 100: 2 Over/under STRAHNET | Parallel Structure 101: No || bridge exists
Direction of Traffic 102: 1 1-way traffic | Temporary Structure 103: Unknown (NBI)
Highway System 104: 1 On the NHS | NBIS Length 112: Long Enough
Toll Facility 20: 3 On free road | Functional Class 26: 11 Urban Interstate
Historical Significance 37: 5 Not eligible for NRHP
Owner 22: 1 State Highway Agency
Custodian 21: 1 State Highway Agency

STRUCTURE TYPE AND MATERIALS

Number of Approach Spans 46: 0 | Number of Spans Main Unit 45: 8
Main Span Material/Design 43A/B:
3 Steel | 02 Stringer/Girder
Deck Type 107: 1 Concrete-Cast-in-Place
Wearing Surface 108A: 6 Bituminous
Membrane 108B: 2 Preformed Fabric
Deck Protection 108C: 8 Unknown

CONDITION

Deck 58: 4 Poor | Super 59: 5 Fair | Sub 60: 5 Fair
Culvert 62: N N/A (NBI) | Channel/Channel Protection 61: N N/A (NBI)

LOAD RATING AND POSTING

Inventory Rating Method 65: 2 AS Allowable Stres | Operating Rating Method 63: 2 AS Allowable Stress
Inventory Rating 66: HS16.0 | Operating Rating 64: HS34.7
Design Load 31: 5 MS 18 (HS 20) | Posting 70: 5 At/Above Legal Loads
Posting status 41: A Open, no restriction

AGE AND SERVICE

Year Built 27: 1961 | Year Reconstructed 106: Unknown
Type of Service on 42A: 1 Highway
Type of Service under 42B: 1 Highway
Lanes on 28A: 1 | Lanes Under 28B: 3 | Detour Length 19: 1.2 mi
ADT 29: ~~10,400~~ 10700 | Truck ADT 109: 9 % | Year of ADT 30: ~~1993~~ 2005

APPRAISAL

Bridge Rail 36A: 0 ~~1 Meets Standards~~ | Approach Rail 36C: 0 ~~1 Meets Standards~~
Transition 36B: 0 ~~1 Meets Standards~~ | Approach Rail Ends 36D: 0 ~~1 Meets Standards~~
Str. Evaluation 67: ~~8~~ 5 | Deck Geometry 68: 3 Intolerable - Correct
Underclearance, Vertical and Horizontal 69: 3 Intolerable - Correct
Waterway Adequacy 71: N Not applicable | Approach Alignment 72: 6 Equal Min Criteria
Scour Critical 113: N Not Over Waterway

GEOMETRIC DATA

Length Max Span 48: 87.9 ft | Structure Length 49: 524.9 ft
Curb/Sdwlk Wdth L 50A: 1.6 ft | Curb/Sidewalk Width R 50B: 1.6 ft
Width Curb to Curb 51: 20.0 ft | Width Out to Out 52: 25.6 ft
Approach Roadway Width 32: (w/ shoulders) 20.0 ft | Median 33: 0 No median
Deck Area: 13,916. sq. ft
Skew 34: 99.00 ° | Structure Flared 35: 0 No flare
Minimum Vertical Clearance Over Bridge 53: 14.8 ft
Minimum Vertical Underclearance Reference 54A: H Hwy beneath struct
Minimum Vertical Underclearance 54B: 15.3 ft
Minimum Lateral Underclearance Reference R 55A: H Hwy beneath struct
Minimum Lateral Undrclearance R 55: 3.6 ft
Minimum Lateral Undrclearance L 56: ~~1.8 ft~~ 2.0

PROPOSED IMPROVEMENTS

Bridge Cost 94: $ 1,000 | Type of Work 75: 38 Other Structural
Roadway Cost 95: $ 1,000 | Length of Improvment 76: 0.3 ft
Total Cost 96: $ 2,000 | Future ADT 114: 5,200
Year of Cost Estimate 97: 2000 | Year of Future ADT 115: 2019

NAVIGATION DATA

Navigation Control 38: N NA-no waterway
Vertical Clearance 39: 0.0 ft | Horizontal Clearance 40: 0.0 ft
Pier Protection 111: Unknown (NBI) | Lift Bridge Vertical Clearance 116:

ELEMENT CONDITION STATE DATA

Str Unit	Elm/Env	Description	Units	Total Qty	% in 1	Qty. St. 1	% in 2	Qty. St. 2	% in 3	Qty. St. 3	% in 4	Qty. St. 4	% in 5	Qty. St. 5
UNIT0	14/3	P Conc Deck/AC Ovly	(SF)	13,916	100 %	13,916	0 %	0	0 %	0	0 %	0	0 %	0
UNIT0	107/3	Paint Stl Opn Girder	(LF)	2,170	90 %	1,955	2 %	50	7 %	150	1 %	15	0 %	0
UNIT0	205/3	R/Conc Column	(EA)	12	17 %	2	33 %	4	50 %	6	0 %	0	0 %	0
UNIT0	210/3	R/Conc Pier Wall	(LF)	39	24 %	9	38 %	15	38 %	15	0 %	0	0 %	0
UNIT0	231/3	Paint Stl Cap	(LF)	98	19 %	18	15 %	15	25 %	25	41 %	40	0 %	0
UNIT0	234/3	R/Conc Cap	(LF)	187	49 %	92	27 %	50	24 %	45	0 %	0	0 %	0

Structure Inventory and Appraisal Sheet (English Units)

Str Unit	Elm/Env	Description	Units	Total Qty	% in 1	Qty. St. 1	% in 2	Qty. St. 2	% in 3	Qty. St. 3	% in 4	Qty. St. 4	% in 5	Qty. St. 5
UNIT0	305/3	Asphaltic Plug Joint	(LF)	210	64 %	135	29 %	60	7 %	15	0 %	0	0 %	0
UNIT0	310/3	Elastomeric Bearing	(EA)	34	35 %	12	65 %	22	0 %	0	0 %	0	0 %	0
UNIT0	313/3	Fixed Bearing	(EA)	34	75 %	26	25 %	9	0 %	0	0 %	0	0 %	0
UNIT0	331/3	Conc Bridge Railing	(LF)	1,007	89 %	897	5 %	50	6 %	60	0 %	0	0 %	0
UNIT0	357/3	Pack Rust Smart Flag	(EA)	1	0 %	0	100 %	1	0 %	0	0 %	0	0 %	0
UNIT0	359/3	Soffit Smart Flag	(EA)	1	0 %	0	0 %	0	0 %	0	100 %	1	0 %	0
UNIT0	363/3	Section Loss SmFlag	(EA)	1	0 %	0	100 %	1	0 %	0	0 %	0	0 %	0
UNIT0	370/3	deck drainage system	(LF)	138	27 %	38	36 %	50	36 %	50	0 %	0	0 %	0
UNIT0	371/3	Free Fall Pipes, Scu	(EA)	3	0 %	0	33 %	1	67 %	2	0 %	0	0 %	0

BRIDGE SAFETY INSPECTION

STATE PROJECT NO. 170-2357

BRIDGE NO. 01686B
INTERSTATE 84 TR 825
OVER
US ROUTE 44 E.B. & COLUMBUS BOULEVARD

HARTFORD, CONNECTICUT

STATE OF CONNECTICUT
PAUL D. McGUINNESS
No 17040
LICENSED
PROFESSIONAL ENGINEER

IN-DEPTH INSPECTION

Prepared by

RECEIVED
FEB 2 6 2007
BRIDGE ASSESSMENT & EVALUATION

BAKER ENGINEERING
2096-B SILAS DEANE HIGHWAY
ROCKY HILL, CT 06067

AUGUST 28, 2006

Structure No. 01686B Town Hartford

Inspectors Baker Engineering Michael R. Jakiel & Christopher Perry Date 08/28/2006

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BRI-19, HWY Bridge SI&A Form	2
BRI-25, Under Entry SI&A Form	1
BRI-39, RR Bridge SI&A Form	--
BRI-49, Sign Structure SI&A Form	--
PONTIS Element Data Collection Form	2

Plan Sheets Project # 63-116 1958 Check here if already on file: X

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RECEIVED FEB 2 6 2007 BRIDGE

Executive Summary

Bridge No. 01686B carries Interstate 84 TR 825 over US Route 44 Eastbound and Columbus Boulevard in Hartford, Connecticut. The bridge consists of an eight span, steel multi-girder superstructure with a reinforced concrete deck. The bridge is supported by concrete piers and one steel pier cap and is connected to bridge 01686A at the west end and bridge 01686E at the east. The bridge has an overall length of 525 feet, a curb-to-curb measurement of 20 feet and was constructed in 1961. According to information on file at ConnDOT, this structure has an inventory load factor rating capacity of 39 tons for an HS loading using the load factor design method. Section losses found this inspection may warrant re-analysis of this structure. The bridge was found to be in fair condition during an in-depth inspection completed in October 2006.

The deck was found to be in poor condition. The bituminous overlay exhibits random transverse and longitudinal cracks up to 40' long by up to 3/4" wide. There are random areas of raveling and numerous areas of map cracking throughout. There is up to 40% mapcracking in the overlay of span 3. The underside of deck exhibits transverse hairline cracks, numerous areas of map cracking with and without efflorescence, hollow areas up to 5' x 8', a few honeycombing areas and random large spalls up to 3' x 3' x 3" deep with exposed rebar and section loss. There are full depth patches in spans 3 - 8. The maximum underside of deck deterioration is 79% in span 3 and the total underside of deck deterioration is 25.3%. Span 3 underside has 6 bay panels with ±50% hollow areas and more than half of this span exhibits map cracking with efflorescence. There was a large spall/hollow area in span 1 over live traffic which was removed by CDOT maintenance forces at the time of inspection. There is a large spall up to 9' long x 7" x 3" deep in the north safety walk of span 6. The parapets exhibit areas of minor impact scrapes, random hollow areas up to 2' x 4' and spalls up to 1' x 1' x 3" deep. There is a large spall/hollow area in span 6 on the north parapet up to 21' long x full height x 3" deep with exposed rebar (previous inspection called this area out in span 5) and a 22' long x 2' high hollow area in span 7 adjacent to the south curb line. There is a bent section (3" over 8') of bridge rail in span 2 on the north parapet. The lower section of rail on the south parapet in span 8 exhibits a 1" diameter rusted through hole at the connection. Random scuppers throughout the deck are partially or fully clogged. There was active leakage at the scupper support in span 6 at the time of inspection. Junction box covers are typically missing up to 10 of 12 screws but the covers are secure. There is collision damage to the junction box cover in span #6 on the north parapet. The junction box cover in span #3 on the north parapet is missing, exposing the wires. The asphaltic plug joints exhibit adhesion failures up to 1/4" wide and heaving up to 1" high mostly in the shoulders. Active joint leakage was noted below joints at piers 3 and 6.

The superstructure was found to be in fair condition. The elastomeric bearing pads exhibit normal movement at approximately 75 Fahrenheit degree. There are isolated bearings with gaps along the fronts up to full width x 1/4" high x 4" deep (no contact between pad and concrete cap ±33% of bearing area). The southwest corner of the bearing pad on pier 3 in span 3 overhangs the pier cap by 2.5" x 2.5"; also there are random pads with corners that overhang the pier caps by 1.5" x 1.5". There is undermining of the elastomeric pads up to 3" x 1/2" at the northeast corner of random girders on pier 6 in span 6. The fixed bearings exhibit light to moderate rust with areas of impacted rust up to 1/4" between the masonry and sole plates. There are random anchor bolt nuts with up to 75% section loss in span 8 on pier 7. There is a missing anchor bolt nut at the north bearing of the steel cap girder. The girders exhibit random areas of light surface rust with the girder ends over the piers exhibiting moderate to heavy rust with section loss due to active leakage the through joints. There are random areas of section loss in low stress and high stress areas. The worse case section loss in a high stress area (web loss at the girder ends) is 7% on girder 1, pier 1 in span 1. Girder 1 in span 2 over the pier 1 exhibits section loss in the bottom flange 3' long x full width x 1-1/8' remaining. This condition has resulted in 33% section loss in a low stress area. The scupper support channels in span 6 adjacent to girder 4 exhibit heavy laminated rust and 1/8" pitting losses, along with a 7-1/2" long crack in the weld between the connection angle and support channel. There are missing bottom welds between the diaphragm channel and web stiffeners at isolated locations.

The substructure was found to be in fair condition. There are no abutments or wingwalls at either end of the structure, the bridge is connected to Bridge 01686A at the west end and Bridge 01686E at the east end. The concrete caps in general exhibit cracks up to 1/8" wide with efflorescence and rust, areas of map cracking up to full width x 2' wide with efflorescence and rust stains, hollow areas up to full width x 4.5' high and spalls up to 4' long x 2.5' x 2.5" deep with exposed rebar. Pier 2 exhibits numerous hollow areas and spalls up to 4.5' x 9" x 2" deep (all loose concrete over or adjacent to the sidewalk was removed at the time of inspection). There is a large spall/hollow area (3' x 1' x 2" deep / 4' x 1.5') with exposed rebar on the west face of pier 7. The columns exhibit cracks up to 1/8" wide with efflorescence and rust, areas of map cracking up to 3.5' x 6" wide, hollow areas up to 5' x 2' and spalls up to 1' x 1' x 2" deep. There are two (2) vertical cracks up to 16' high x 1/4" wide (max) on the north elevation of pier 2. Pier 3, south face exhibits a spall 8.5' high x 3' wide x 2" deep with exposed rusty rebar. The perimeter of the spall is hollow up to the full width of the column. There is a riveted steel pier cap at pier 1. The top flange of pier 1 exhibits heavy laminated rust with ±3/16" pitting losses and rivet heads with up to ±40% section loss. There is up to ±1/4" impacted rust between flange cover plates at random locations. The bottom ±6" of the vertical web stiffeners exhibit ±1/8" section loss at both sides. There is up to 1-3/8" impacted rust between the bearing stiffeners over the south bearing. The webs of the girders exhibit areas of section loss up to 12' long x 8" high x 1/16" deep near mid-span. There is section loss in the bottom flange up to ±3/16" deep. The section losses found in the bottom flange below girder 1 were up to 5.1% (area of significant but not maximum moment), while section losses found at mid-span in the bottom flange (high moment area) were 3.8%.

Both approaches to the bridge are two connecting structures as noted above.

Repair recommendations are as follows:

Deck:

1. Repair the cracks in the overlay (±250 Linear Feet).
2. Repair the hollow areas and spalls with exposed rebar in the underside of deck (3 Cubic Yards). Consideration should be given to removing and replacing the entire deck, at least in span 3.
3. Repair the numerous hollow areas and spalls with exposed rebar in the parapets (2 Cubic Yards).
4. Replace all bent and deteriorated bridge rails and connections (±30 Linear Feet).
5. Clean out clogged scuppers (2 Each).
6. Replace the damaged and missing junction box covers (2 Each).
7. Repair the cracks and adhesion failures in the asphaltic plug joints (±75 Linear Feet).

Superstructure:

1. Monitor the condition of the elastomeric bearing pads with gaps along their front edges at the next inspection. Also consideration should be given to jacking and resetting the expansion (elastomeric bearing pads) bearings.
2. Replace the missing anchor bolt nut on the pier cap bearing (1 Each).
3. Clean and paint areas of laminated rust and section losses on the girders (±125 Square Feet).
4. Grind out the broken weld between the connection angle and scupper support channel in span 6, clean and reweld (1 Linear Foot).

Substructure:

1. Repair delaminating and spalled areas on the piers (3 Cubic Yards).
2. Clean and paint the areas of section loss on the steel pier cap (850 Square feet).

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BRIDGE #: 01686B

INSPECTION DATE: 8/28/2006

INSPECTION TYPE: Indepth

PREVIOUS INSPECTION DATE: 9/21/2004

SNOOPER REQUIRED: No

INSPECTION PERFORMED BY: Baker Engineering

SNOOPER USED: No

TOWN: HARTFORD

FEATURE CARRIED: I-84 TR 825

YEAR BUILT: 1961

LOCATION: RAMP TO I91SB FROM I84 E

FEATURE INTERSECTED US RT 44EB & COLUMBUS BD

YEAR REBUILT: 0

MAIN MATERIAL: Steel

MAIN DESIGN: Stringer/Multi-beam or Gird

INSPECTION VISITS:

Inspection Date:	10/3/2006	Start Time:	1:45 PM
Temperature:	75 °F	End Time:	3:15 PM
Inspection Date:	8/28/2006	Start Time:	8:30 AM
Temperature:	75 °F	End Time:	3:00 PM
Inspection Date:	10/2/2006	Start Time:	8:30 AM
Temperature:	70 °F	End Time:	4:15 PM

INSPECTORS:

Inspector:	M. Jakiel	Task:	Team Leader
Inspector:	C. Perry J.C.	Task:	Assistant Team Leader

58. DECK

OVERALL RATING 4

	RATING	
OVERLAY	6	The bituminous overlay exhibits random transverse and longitudinal cracks up to 40' long by up to 3/4" wide. There are random areas of raveling and numerous areas of map cracking throughout. There is up to 40% mapcracking in the overlay in span 3. See sheets 15 and 16 and photos 9 and 10.
DECK STR. CONDITION	4	The underside of deck exhibits transverse hairline cracks, numerous areas of map cracking with and without efflorescence, hollow areas, a few honeycombing areas and random large spalls with exposed rebar. There are full depth patches in spans 3 - 8. The large spall adjacent to pier 7 in span 8 exhibits section loss to the rebar. There are hollow haunches over pier 3 in span 3, with all loose concrete in the haunches being removed. The maximum underside of deck deterioration is 79% in Span 3 and the total underside of deck deterioration is 25.3%. Spans 1-3 exhibit numerous areas of map cracking with efflorescence, hollow areas up to 5' x 8' and large surface spalls up to 3' x 3' x 3" deep with exposed rebar and section loss. The large spall/hollow area in span 1 over live traffic was removed by CDOT maintenance forces at the time of inspection. See sheets 18-25 and photos 11-13.
CURBS	6	Concrete curb is monolithic with the safetywalk. See "SIDEWALKS" item below.
MEDIAN	N	
SIDEWALKS	6	The concrete safetywalks exhibits random edge spalls and collision scrapes. There is a large spall up to 9' long x 7" x 3" deep in the north safety walk in span 6. See sheets 15 and 16 and photo 14.
PARAPET	4	Parapets exhibit random vertical hairline cracks, some with efflorescence. There is light to moderate scaling on the parapet faces and numerous areas of minor impact scrapes. There are random hollow areas up to 2' x 4' and spalls up to 1' x 1' x 3" deep. There is a large spall/hollow area in span 6 on the north parapet up to 21' long x full height x 3" deep with exposed rebar (previous inspection called this area out in span 5) and a 22' long x 2' high hollow area in span 7 adjacent to the south curb line. See sheets 15 and 16 and photos 15 and 16.
RAILING	5	The two pipe bridge railing exhibits moderate to heavy laminated rust and impacted rust up to 1/4" between the base plate and parapets. There is a bent section (3" over 8') of bridge rail in span 2 on the north parapet. The lower section of rail on the south parapet in span 8 exhibits a 1" diameter rusted through hole at the connection. See sheets 15 and 16. Needs Photo BB
PAINT	N	
FENCE	N	
DRAINS	6	P.V.C. and scuppers. Random scuppers throughout the deck are partially or fully clogged. There was active leakage at the scupper support in span 6 at the time of inspection. See sheets 15 and 16 and photo 17.
LIGHTING STANDARD	5	All junction box covers are missing up to 10 of 12 screws but covers are secure. There is collision damage to the junction box cover in span #6 on the north parapet. The junction box

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BRIDGE #: 01686B **INSPECTION DATE:** 8/28/2006

58. DECK

OVERALL RATING 4

cover in span #3 on the north parapet is missing, exposing the wires. See sheets 15 and 16 and photo 18.

UTILITIES TYPE/SIZE	N	
CONSTRUCTION JOINTS	N	
EXPANSION JOINTS	5	The asphaltic plug joints exhibit adhesion failures up to 1/4" wide and heaving up to 1" high mostly in the shoulders. Active joint leakage was noted at piers 3 & 6. See Sheets 15 and 16 and photos 19 and 20.

59. SUPERSTRUCTURE

OVERALL RATING 5

	RATING	
BEARING DEVICES	6	The elastomeric bearing pads exhibit normal movement at ±75 degree Fahrenheit. There are isolated bearings with gaps along the fronts up to full width x 1/4" high x 4" deep (no contact between pad and concrete cap ±33% of bearing area) . The southwest corner of the bearing pad on pier 3 in span 3 overhangs the pier cap by 2.5" x 2.5", also there are random pads with corners that overhang the pier caps by 1.5" x 1.5". There is undermining of the elastomeric pads up to 3" x 1/2" at the northeast corner of random girders on pier 6 in span 6. See sheets 18-25 and photos 22 and 23. The fixed bearings exhibit light to moderate rust with areas of impacted rust up to 1/4" between masonry and sole plates. There are random anchor bolt nuts with up to 75% section loss in span 8 on pier 7. See sheets 18-25 and photo 21. The bearings on the steel pier caps exhibit moderate rust with heavy rust on the anchor bolts and nuts with negligible section loss. There is a missing anchor bolt nut at the north bearing. See sheet 26 and photo 24.
STRINGERS	N	
GIRDERS	5	Girders exhibit random areas of light surface rust with the girder ends over the piers exhibiting moderate to heavy rust with section loss due to active leakage ~~the~~ through joints. There are random areas of section loss in low stress and high stress areas. There is pitting and section loss up to 1/8" deep (3% section loss in a high stress area) on the web of girder 4 in span 6, random areas are painted over. The worse case section loss in a high stress area (web loss at the girder ends) is 7% on girder 1, pier 1 in span 1. Per the BIM section 10.5 section losses in high stress areas less than 25% should be rated a 5. There are random areas of 1/8" pitting losses in the girder bottom flanges mostly at the ends over the piers. Girder 1 in span 2 over pier 1 exhibits section loss in the bottom flange 3' long x full width x 1-1/8' remaining. This condition has resulted in 33% section loss in a low stress area. See sheets 18-25 and photos 25 and 26.
FLOOR BEAMS	N	
TRUSSES-GENERAL	N	
TRUSSES-PORTALS	N	
TRUSSES-BRACING	N	
PAINT	7	Random areas of chipping and peeling paint. Less than 5% of total surface area with missing paint.
RUST	5	Areas of moderate rust at girder ends with negligible section loss. The scupper support channels exhibit heavy laminated rust and 1/8" pitting losses in span 6 adjacent to girder 4. Also see girder and welds and cracks items. See sheets 18-25.
MACHINERY MOV SPAN	N	
RIVETS & BOLTS	6	There are random erection bolts missing at the diaphragm connections. See sheets 18-25.
WELDS & CRACKS	6	There are missing bottom welds between the diaphragm channel and web stiffeners at isolated locations. Also there is a 7-1/2" long crack in the weld between the connection angle and scupper support channel in span 6 adjacent to girder 4. See sheets 18-25 and photo 26 and 27.
TIMBER DECAY	N	
CONCRETE CRACKING	N	

the

BB

Previous insp. noted 1/4" BB

Connecticut Department of Transportation

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BRIDGE #: 01686B

INSPECTION DATE: 8/28/2006

59. SUPERSTRUCTURE

OVERALL RATING 5

COLLISION DAMAGE	7	Minor scrapes in the girders which appear to be construction related.
MEMBER ALIGNMENT	8	
DEFLECT. UNDER LOAD	N	
VIBR. UNDER LOAD	N	
STAND PIPES	N	
BARREL LADDERS	N	

ARE BARREL LADDERS OSHA COMPLIANT? NA

60. SUBSTRUCTURE

OVERALL RATING 5

	RATING	
ABUTMENTS-STEM	N	Bridge connected to Bridge 01686A at the west end and Bridge 01686E at the east end. Therefore, there are no abutments or wingwalls.
ABUTMENTS-BACKWALL	N	
ABUTMENTS-FOOTINGS	N	Not Visible BB
ABUT.-SETTLEMENT	N	
ABUTMENTS-WINGWALLS	N	
PIERS/BENTS-CAPS	5	The concrete caps in general exhibit cracks up to 1/8" wide with efflorescence and rust, areas of mapcracking up to full width x 2' wide with efflorescence and rust stains, hollow areas up to full width x 4.5' and spalls up to 4' long x 2.5' x 2.5" deep with exposed rebar. Pier 2 exhibits numerous hollow areas and spalls up to 4.5' x 9" x 2" deep (all loose concrete over or adjacent to the sidewalk was removed at the time of inspection). There is a large spall/hollow area (3' x 1' x 2" deep / 4' x 1.5') with exposed rebar on the west face of pier 7. Also on the south face of pier 7 at the top there is a full width x 1' x 2" deep spall with exposed rebar. See sheets 28-34 and photos 28, 29 and 30. Steel Pier Cap at Pier 1 See "Steel Corrosion" item below.
PIERS/BENTS-PILE BENT	N	
PIERS/BENTS-COLUMN	5	The columns exhibit cracks up to 1/8" wide with efflorescence and rust, areas of mapcracking up to 3.5' x 6" wide, hollow areas up to 5' x 2' and spalls up to 1' x 1' x 2" deep. There are two (2) vertical cracks up to 16' high x 1/4" wide (max) on the north elevation of pier 2. Pier 3, south face exhibits a spall 8.5' high x 3' wide x 2" deep with exposed rusty rebar. The perimeter of the spall is hollow up to the full width of the column. This column is in poor condition; however all other columns are satisfactory to good. See sheets 28-34 and photo 31.
PIERS/BENTS-FOOTINGS	N	Not visible BB
PIERS/BENTS-SETTLEMent	8	
EROSION-SCOUR	8	
CONCRETE CRACK-SPALL	5	See above items.
STEEL CORROSION	5	There is a riveted steel pier cap at pier 1. The top flange of pier 1 exhibits heavy laminated rust with ±3/16" pitting losses and rivet heads with up to ±40% section loss. There is up to ±1/4" impacted rust between flange cover plates. The bottom ±6" of the vertical web stiffeners exhibit ±1/8" section loss at both sides. There is up to 1-3/8" impacted rust between the bearing stiffeners over the south bearing. The webs of the girders exhibit areas of section loss up to 12' long x 8" high x 1/16" deep near mid-span. There is section loss in the bottom flange up to ±3/16" deep. Section loss in the bottom flange below girder 1 is up to 5.1% (area of significant but not maximum moment). Section loss at mid-span is the bottom flange is 3.8% (high moment area). Per the BIM section losses in flanges in high stress areas (up to 5%) should be rated a 5. See sheets 26 and 27 and photos 32-34.

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BRIDGE #: 01686B

INSPECTION DATE: 8/28/2006

60. SUBSTRUCTURE

OVERALL RATING 5

PAINT	5	See item "Steel Corrosion" above. ± 50% of painted surfaces are deteriorated.
TIMBER DECAY	N	
COLLISION DAMAGE	8	
DEBRIS	6	Light to moderate debris along the tops of the pier caps.

61. CHANNEL & CHANNEL PROTECTIO

OVERALL RATING N

62. CULVERTS & RETAINING WALL

OVERALL RATING N

APPROACH CONDITION

OVERALL RATING P

	RATING	
APPROACH SLAB	N	The bridge is connected to bridge #1686A at west end and bridge #1686E at the east end.
RELIEF JOINTS	N	
APPROACH GUIDE RAIL	N	
APPROACH PAVEMENT	N	
APPROACH EMBANKMENT	N	

TRAFFIC SAFETY FEATURES:

BRIDGE RAILINGS	0	Does not meet current bridge standards.
TRANSITIONS	0	Does not meet R-B 350 standards.
APPROACH GUARDRAILS	0	Does not meet R-B 350 standards.
APPR. GUARDRAIL ENDS	0	Does not meet R-B 350 standards.

LOAD POSTING

SINGLE UNIT (TONS)		
HS (TONS)		
4 AXLE (TONS)		
3S2 (TONS)		
ADVANCE WARNING Y/N	N	
LEGIBILITY	N	
VISIBILITY/LOCATION	N	

MISC.

MIN VERT. UNDERCLR.	15' 2"	
POSTED CLR. UNDER BRIDGE	' "	
POSTED CLR. ON BRIDGE	' "	
ADVANCE WARNING (Y/N)	No	
SPEED LIMIT (IF ANY)	MPH	
CHARACTER OF TRAFFIC		Heavy interstate traffic mixed.

ADDITIONAL NOTES

Bridge I.D. is mostly faded. Bridge logged from west to east with girder 1 located on the north fascia. Inspected with a 40' lift

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BRIDGE #: 01686B **INSPECTION DATE:** 8/28/2006

truck. Local police for spans over U.S Route 44 and Columbus Boulevard.

ADDITIONAL COMMENTS:

Large hollow areas and potential spalls over areas of live traffic were called into Bridge Safety and Evaluation at the time of inspection. Bridge maintenance was on site at the time of inspection to remove potential spalls.

Inspectors' Signatures:

1) Date: 02/22/2007

2) (For CP) Date: 02/22/07

3) Date: __/__/__

4) Date: __/__/__

P.E. Signature: Paul McGuinness Date: 2/22/07

P.E.#: PE #17040

Reviewed by: AI ~~CDOT~~ Date: 8/7/07

RECEIVED
FEB 26 2007
CONNECTICUT DOT
BRIDGE SAFETY & EVALUATION

Baker

SUPPLEMENTAL SHEET

☑ FIELD ORIGINAL ☐ TRANSCRIBED BY: ____

BRIDGE NO. 01686B | DATE: SEE BELOW

CREW: SEE BELOW | SHEET 10 OF 54

DESCRIPTION: TIME LOG

			DESCRIPTION:	TIME AT SITE:
DATE:	8/28/2006			
WEATHER:	CLOUDY / RAIN 75°	CREW:	MRJ, CP	8:30AM TO 3:00pm
EQUIP. LIST:		SNOOPER:		TO
		LIFT:	BAKER 40'	8:30AM TO 3:00pm
		CRASH TRUCK:		TO
ARROW HRS.	TO	TROOPER:		TO
VISITORS:		:		TO

TC & NOTES: –, INSP OF SPANS 4, 5, 6 & 7 SUB & Superstructure.

			DESCRIPTION:	TIME AT SITE:
DATE:	10-02-06			
WEATHER:	Sunny ≈70°F	CREW:	MRJ, JC	8:30AM TO 4:15PM
EQUIP. LIST:	Baker Box Truck	SNOOPER:		TO
		LIFT:	Baker 40' Lift	8:30AM TO 4:15PM
		CRASH TRUCK:		TO
ARROW HRS.	TO	TROOPER:	Hartford PD; Hardwick #276	8:30AM TO 3:45PM
VISITORS:	Regional DOT Maintenance *	:		TO

TC & NOTES: • Left & Right Lane Closures to Rte 44 & Columbus Blvd.

* called in for u-side of deck loose cons removal

			DESCRIPTION:	TIME AT SITE:
DATE:	10-03-06			
WEATHER:	Sunny 75°F	CREW:	MRJ, JC	1:45PM TO 3:15PM
EQUIP. LIST:	Baker Van	SNOOPER:		TO
		LIFT:		TO
		CRASH TRUCK:		TO
ARROW HRS.	TO	TROOPER:		TO
VISITORS:		:		TO

TC & NOTES: • Top of Deck
• Inspection Complete

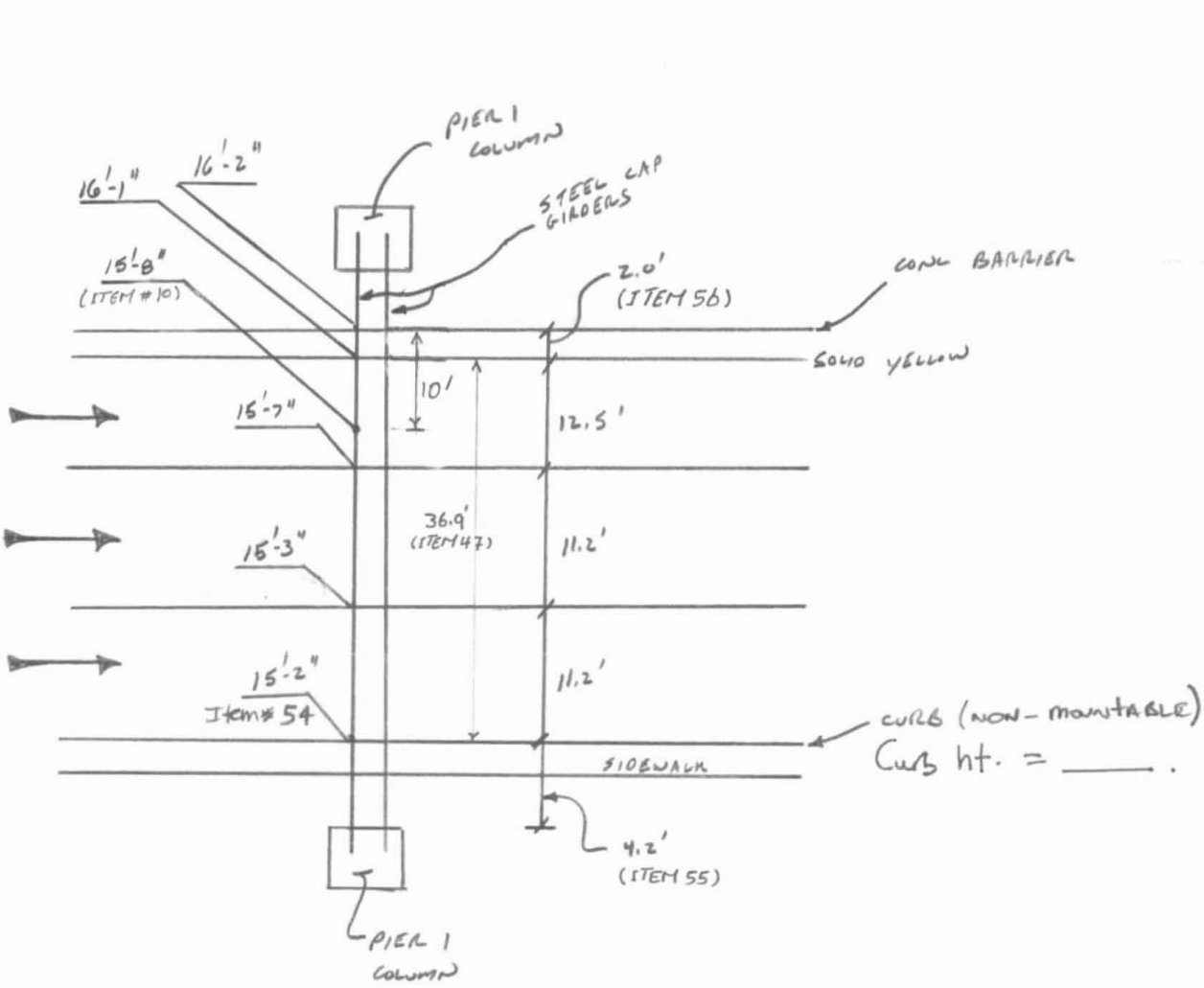
			DESCRIPTION:	TIME AT SITE:
DATE:				
WEATHER:		CREW:		TO
EQUIP. LIST:		SNOOPER:		TO
		LIFT:		TO
		CRASH TRUCK:		TO
ARROW HRS.	TO	TROOPER:		TO
VISITORS:		:		TO

TC & NOTES:

Baker

SUPPLEMENTAL SHEET	BRIDGE NO. 1686 B	DATE: 10/2/06
☐ FIELD ORIGINAL ☒ TRANSCRIBED BY: AJP	CREW: JC, AAJ	SHEET 11 OF 54

DESCRIPTION:



CLEARANCES FOR RT 44 E/B AT PIER 1

UPDATE NO.	DATE	COMPANY	CREW
△			
△			
△			
△			

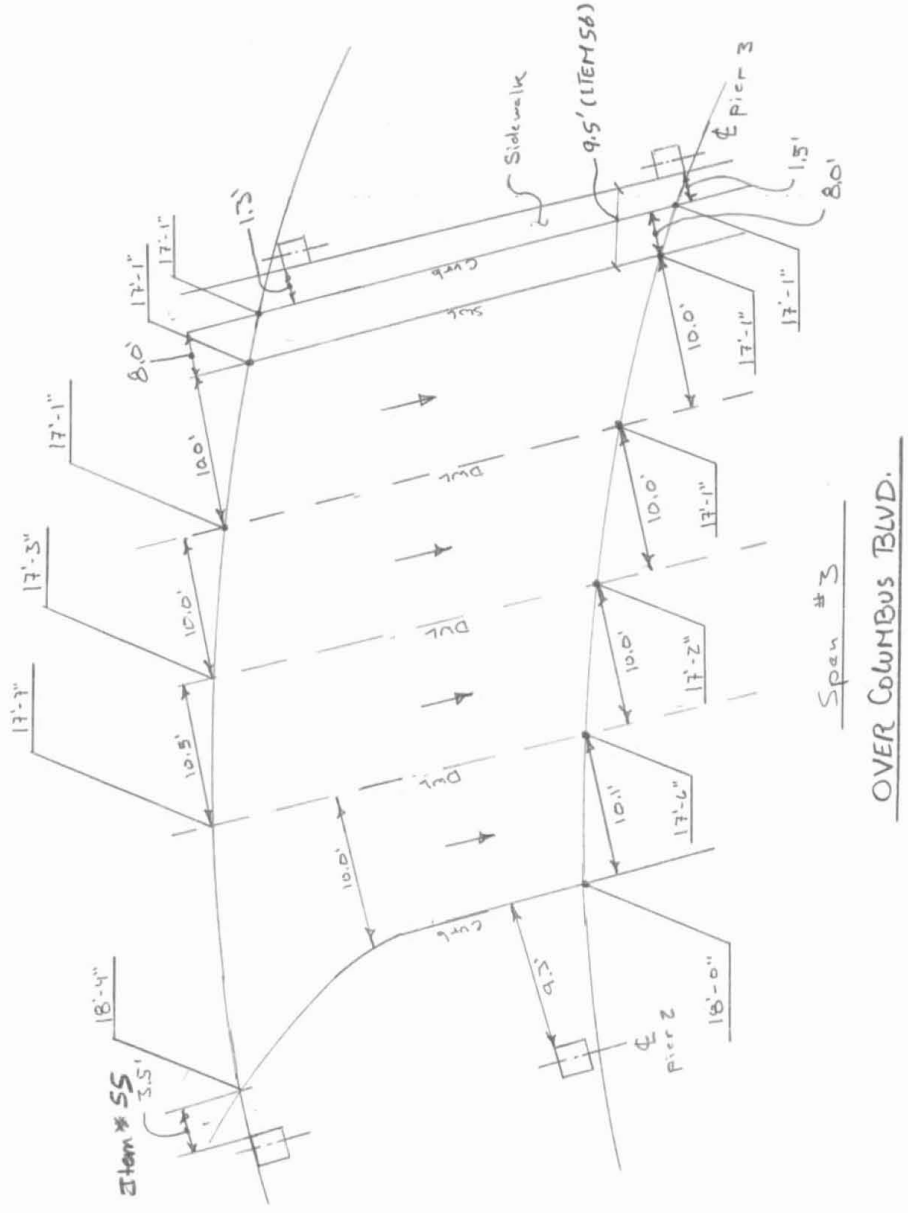
Baker

SUPPLEMENTAL SHEET

☐ FIELD ORIGINAL ☒ TRANSCRIBED BY: JC

BRIDGE NO. 016	DATE: 10/3/2006
CREW: JC, MRJ	SHEET 12 OF 54

DESCRIPTION: Clearance Diag. - Span 3



Notes:
- All sidewalk curbs are granite, non-mountable
- Road surface has been repaved & restriped since previous inspection.

Dwl - dashed white line
Swl - single white line

Baker

SUPPLEMENTAL SHEET

☐ FIELD ORIGINAL ☒ TRANSCRIBED BY: MJO

DESCRIPTION:

BRIDGE NO. 1686 B

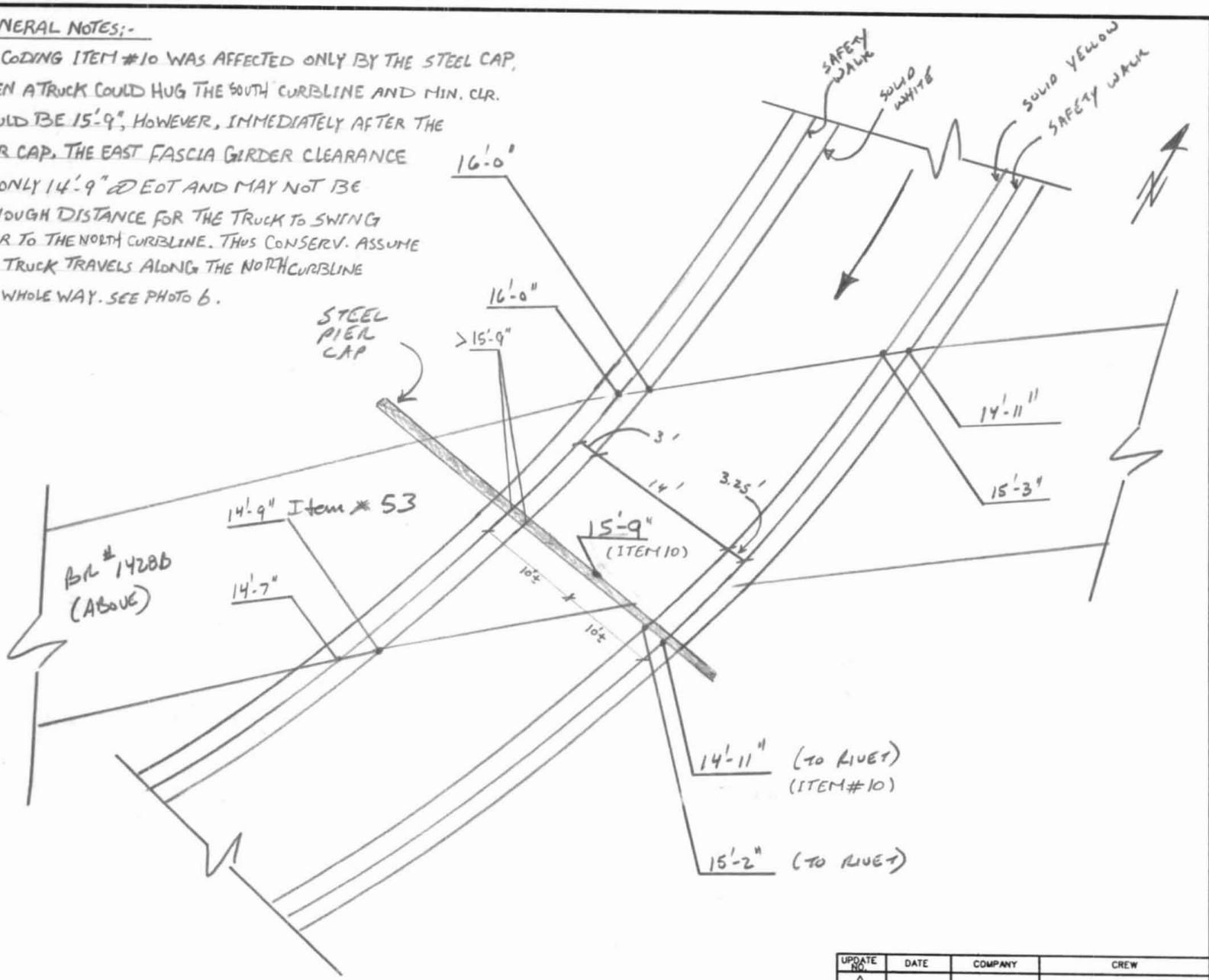
CREW: MRJ, JC

DATE: 10/3/06

SHEET 13 OF 54

GENERAL NOTES;-

- IF CODING ITEM #10 WAS AFFECTED ONLY BY THE STEEL CAP, THEN A TRUCK COULD HUG THE SOUTH CURBLINE AND MIN. CLR. WOULD BE 15'-9", HOWEVER, IMMEDIATELY AFTER THE PIER CAP, THE EAST FASCIA GIRDER CLEARANCE IS ONLY 14'-9" @ EOT AND MAY NOT BE ENOUGH DISTANCE FOR THE TRUCK TO SWING OVER TO THE NORTH CURBLINE. THUS CONSERV. ASSUME THE TRUCK TRAVELS ALONG THE NORTH CURBLINE THE WHOLE WAY. SEE PHOTO 6.



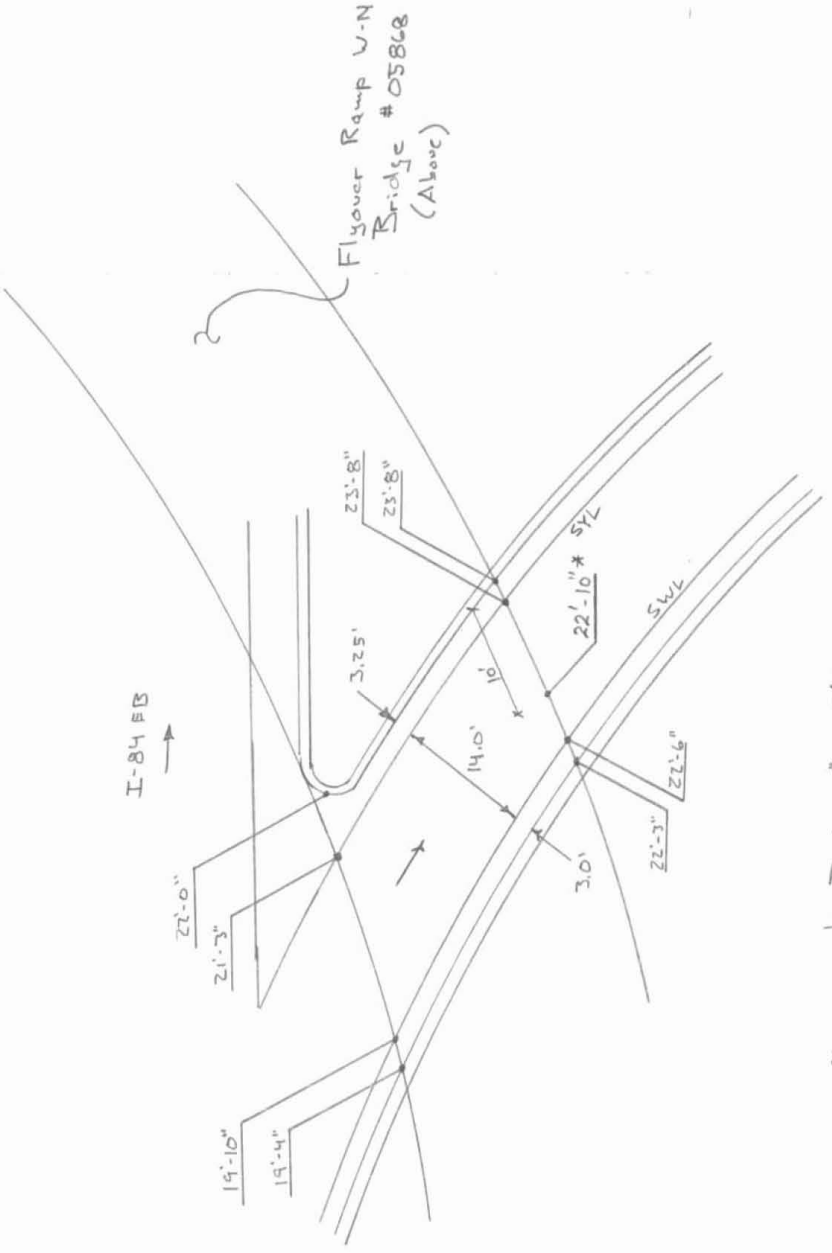
CLEARANCES BELOW BR # 1428 B - (ABOVE BR. 1686B)

UPDATE NO.	DATE	COMPANY	CREW
△			
△			
△			
△			

Baker

SUPPLEMENTAL SHEET	BRIDGE NO. 01686B	DATE: 10/3/2006
☐ FIELD ORIGINAL ☒ TRANSCRIBED BY: JC	CREW: JC, MRJ	SHEET 14 OF 54

DESCRIPTION: Clearance Diag - Measurements to Bridge #05868



Clearances to Bridge #05868
(ABOVE BR. 1686B)

* - INTERPOLATED CLEARANCE
SYL - Single yellow line
SWL - Single white line

N

Baker

SUPPLEMENTAL SHEET

☒ FIELD ORIGINAL ☐ TRANSCRIBED BY: ____

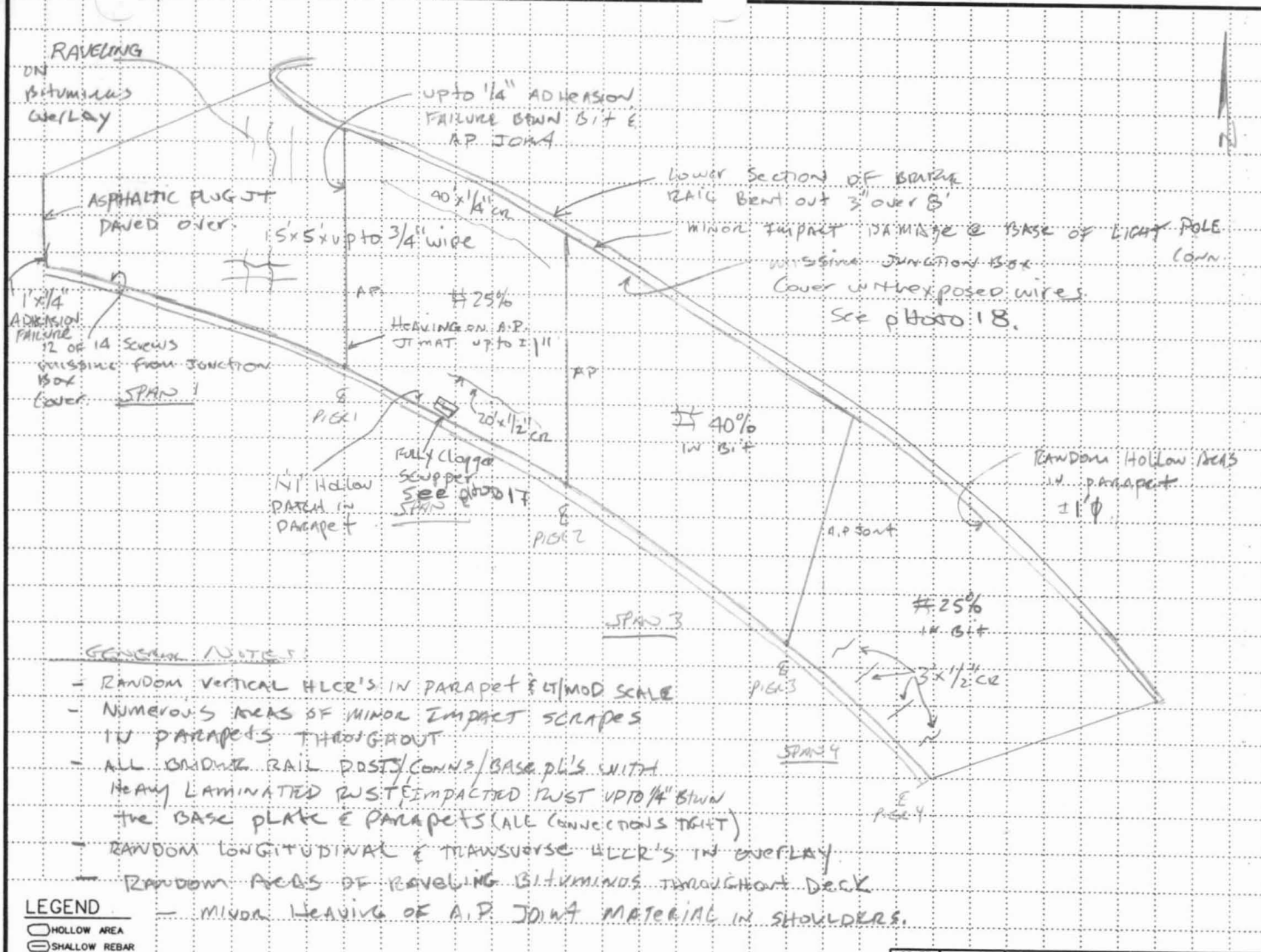
DESCRIPTION: Top of Deck

BRIDGE NO. 01686B

DATE: 10/3/2006

CREW: MBJ, JC

SHEET 15 OF 54



GENERAL NOTES:

- RANDOM VERTICAL HLCR'S IN PARAPET & LT/MOD SCALE
- NUMEROUS AREAS OF MINOR IMPACT SCRAPES IN PARAPETS THROUGHOUT
- ALL BRIDGE RAIL POSTS/CONNS/BASE PL'S WITH HEAVY LAMINATED RUST & IMPACTED RUST UP TO 1/4" BTWN the BASE PLATE & PARAPETS (ALL CONNECTIONS TIGHT)
- RANDOM LONGITUDINAL & TRANSVERSE HLCR'S IN OVERLAY
- RANDOM AREAS OF RAVELING BITUMINOUS THROUGHOUT DECK
- MINOR HEAVING OF A.P JOINT MATERIAL IN SHOULDERS.

LEGEND

- HOLLOW AREA
- SHALLOW REBAR
- SPALL AREA
- SPALL AREA WITH EXPOSED REBAR
- MAP CRACKS (MpC) OR HAIRLINE MAP CRACKS (HLMpC)
- HAIRLINE CRACK (HLC) OR CRACKS (CRK)
- HONEY COMB AREA
- SCALE AREA (HVY, MED OR LT)

UPDATE NO.	DATE	COMPANY	CREW
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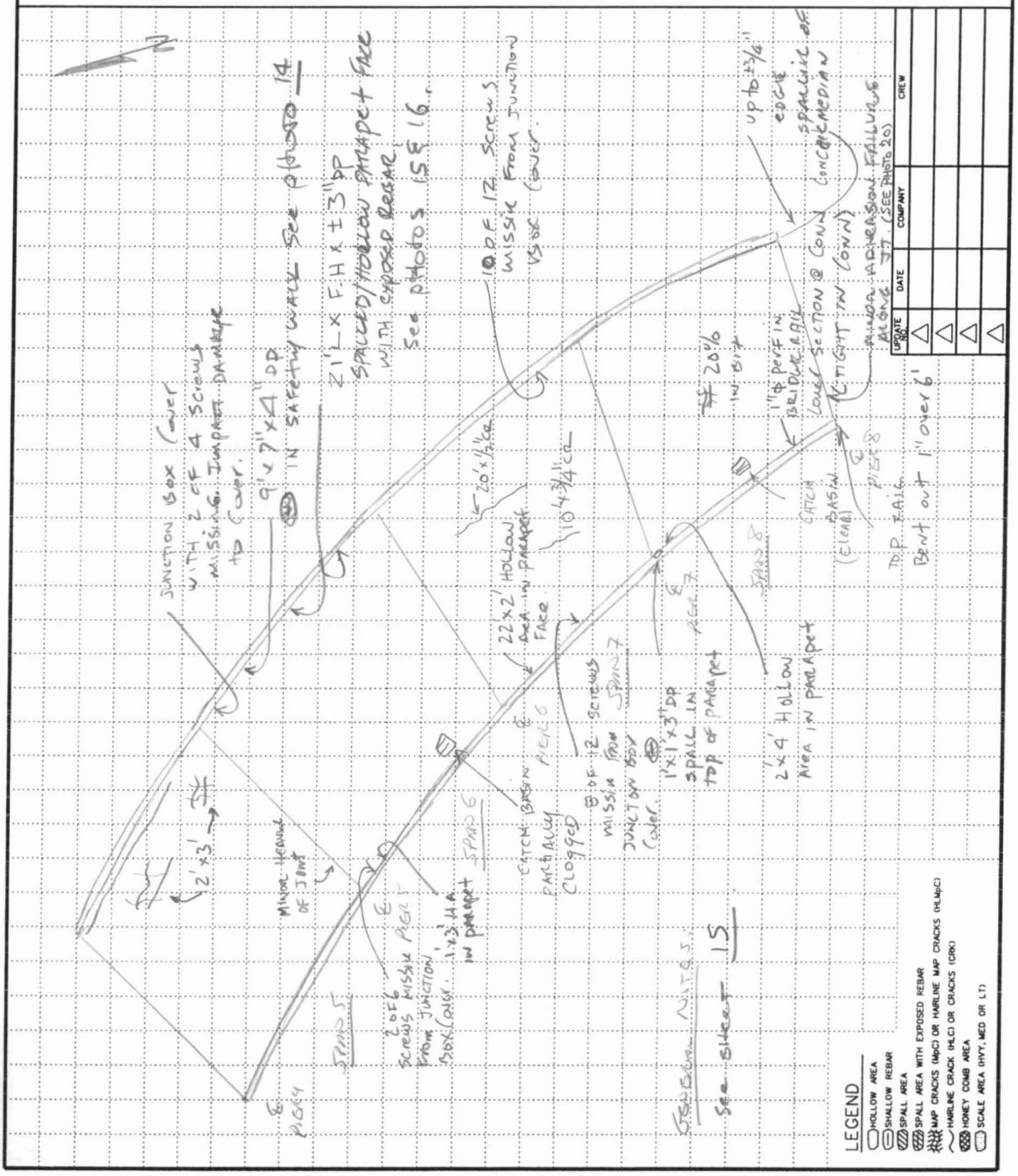
Baker

SUPPLEMENTAL SHEET

☒ FIELD ORIGINAL ☐ TRANSCRIBED BY: ____

BRIDGE NO. 016863	DATE: 10/3/2006
CREW: MKJ, JC	SHEET 16 OF 54

DESCRIPTION: TOP OF DECK



Baker

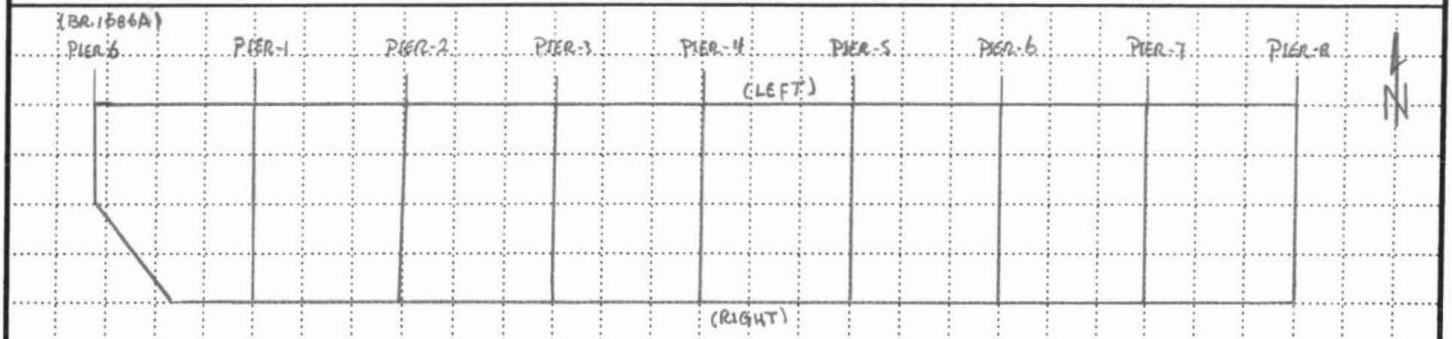
SUPPLEMENTAL SHEET

☒ FIELD ORIGINAL ☐ TRANSCRIBED BY: ____

BRIDGE NO. 01686D | DATE: 10-03-06

CREW: JC, MRJ | SHEET 17 OF 54

DESCRIPTION: PARAPET JOINT MEASUREMENTS



Ave Curb Reveal: North: 7 1/2"
South: 7 1/2"

LOCATION	MEASUREMENT < 50° F LEFT	RIGHT	TEMP	DATE	MEASUREMENT > 50° F LEFT	RIGHT	TEMP	DATE	JOINT TYPE
Pier 1					1 7/16"	1 7/16"	75°F	10-03-06	Asph Plug
Pier 2					1 1/2"	1 3/8"	↓	↓	↓
Pier 3					1 1/4"	1 5/16"	↓	↓	↓
Pier 4					1 5/16"	1 5/16"	↓	↓	↓
Pier 5					1 1/8"	1 1/16"	↓	↓	↓
Pier 6					1 3/16"	1 5/16"	↓	↓	↓
Pier 7					1 1/2"	1 1/16"	↓	↓	↓
Pier 8					7/8"	1 1/8"	↓	↓	↓

GENERAL NOTES:

- All measurements taken 3" from top of ppt @ front face (normal to transverse surfaces @ skewed jts).
- ALL MEASUREMENTS DOUBLE CHECKED.

(NO MEASUREMENTS to COMPARE to)

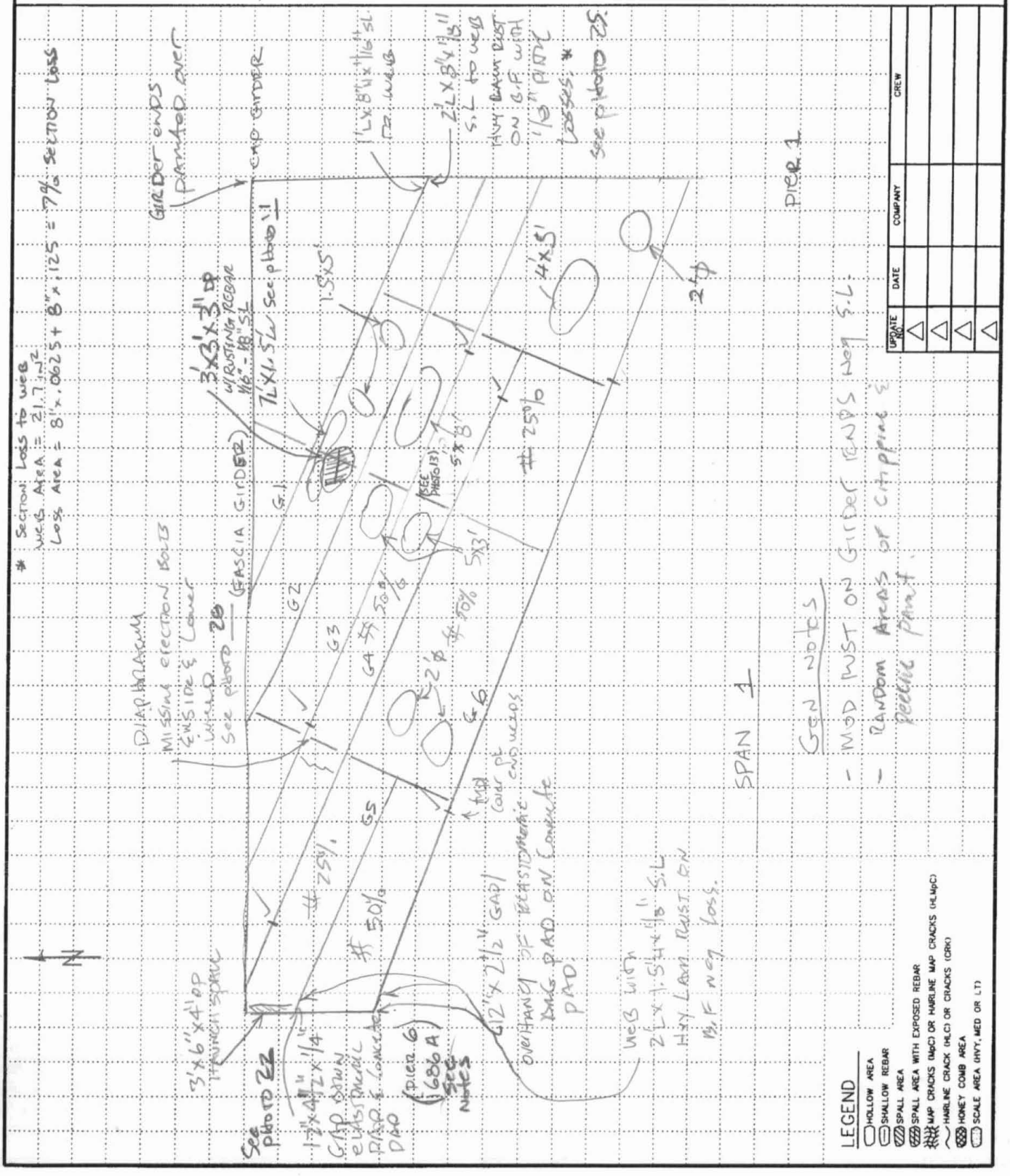
Baker

SUPPLEMENTAL SHEET

☑ FIELD ORIGINAL ☐ TRANSCRIBED BY: _____

BRIDGE NO. 01686B	DATE: 10/2/2006
CREW: MRJ, JC	SHEET 18 OF 54

DESCRIPTION: Span 1



Baker

SUPPLEMENTAL SHEET

☒ FIELD ORIGINAL ☐ TRANSCRIBED BY: ____

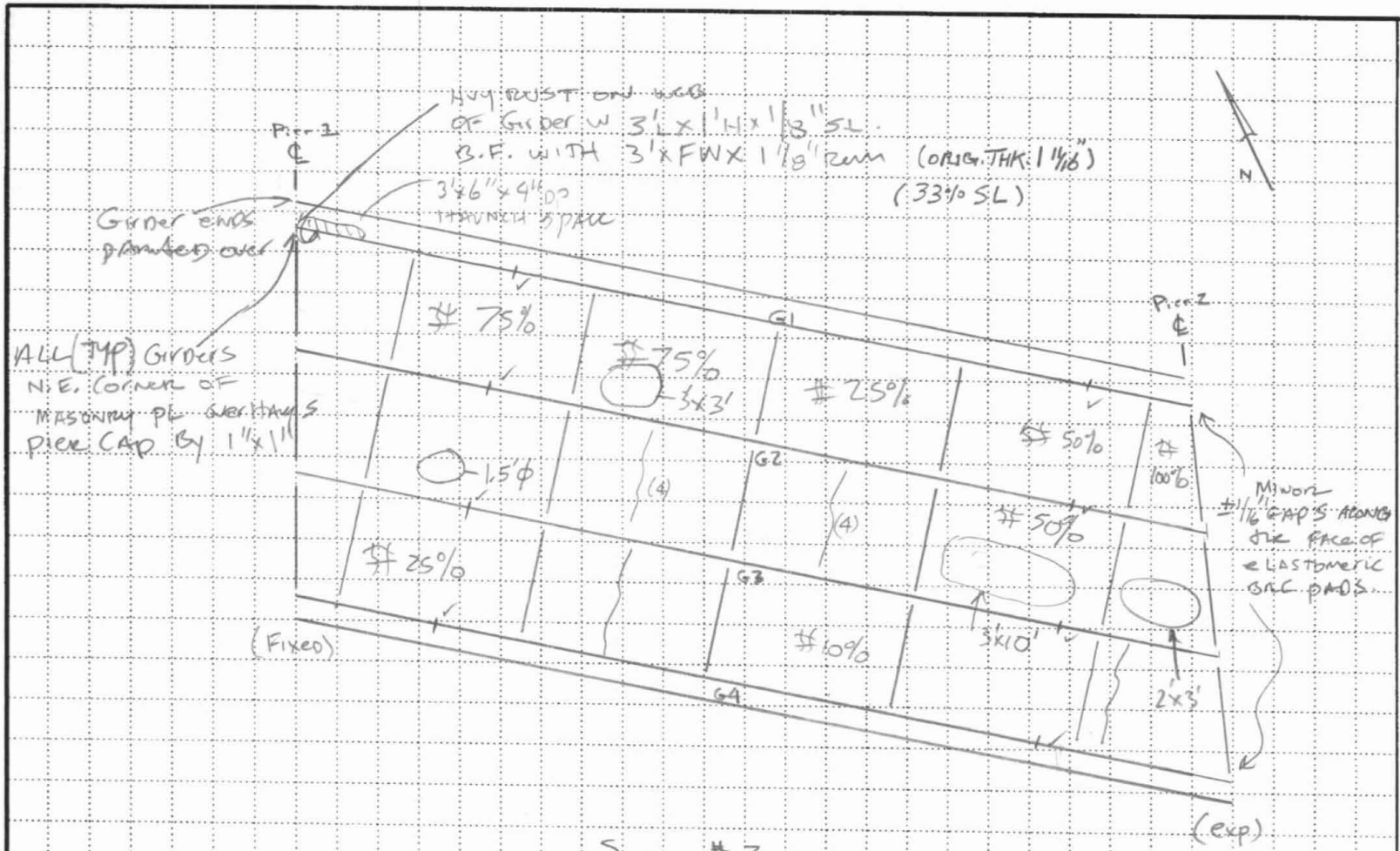
DESCRIPTION:

BRIDGE NO. 01060

CREW: MRT, JC

DATE: 10-02-06

SHEET 19 OF 54



Span # 2
N.T.S.

Gen Notes

- painted over girder ends
- up to 1/4" painted over I.R. brnn fixed brg plates.
- Random missing bottom weld brnn diaphragm channel & web stiffener.

LEGEND

⊥ = Bot. flg

- HOLLOW AREA
- SHALLOW REBAR
- SPALL AREA
- SPALL AREA WITH EXPOSED REBAR
- MAP CRACKS (MpC) OR HAIRLINE MAP CRACKS (HLMpC) MCFFLO
- HAIRLINE CRACK (HLC) OR CRACKS (CRK) VFFLO
- HONEY COMB AREA
- SCALE AREA (HVY, MED OR LT)

UPDATE NO.	DATE	COMPANY	CREW
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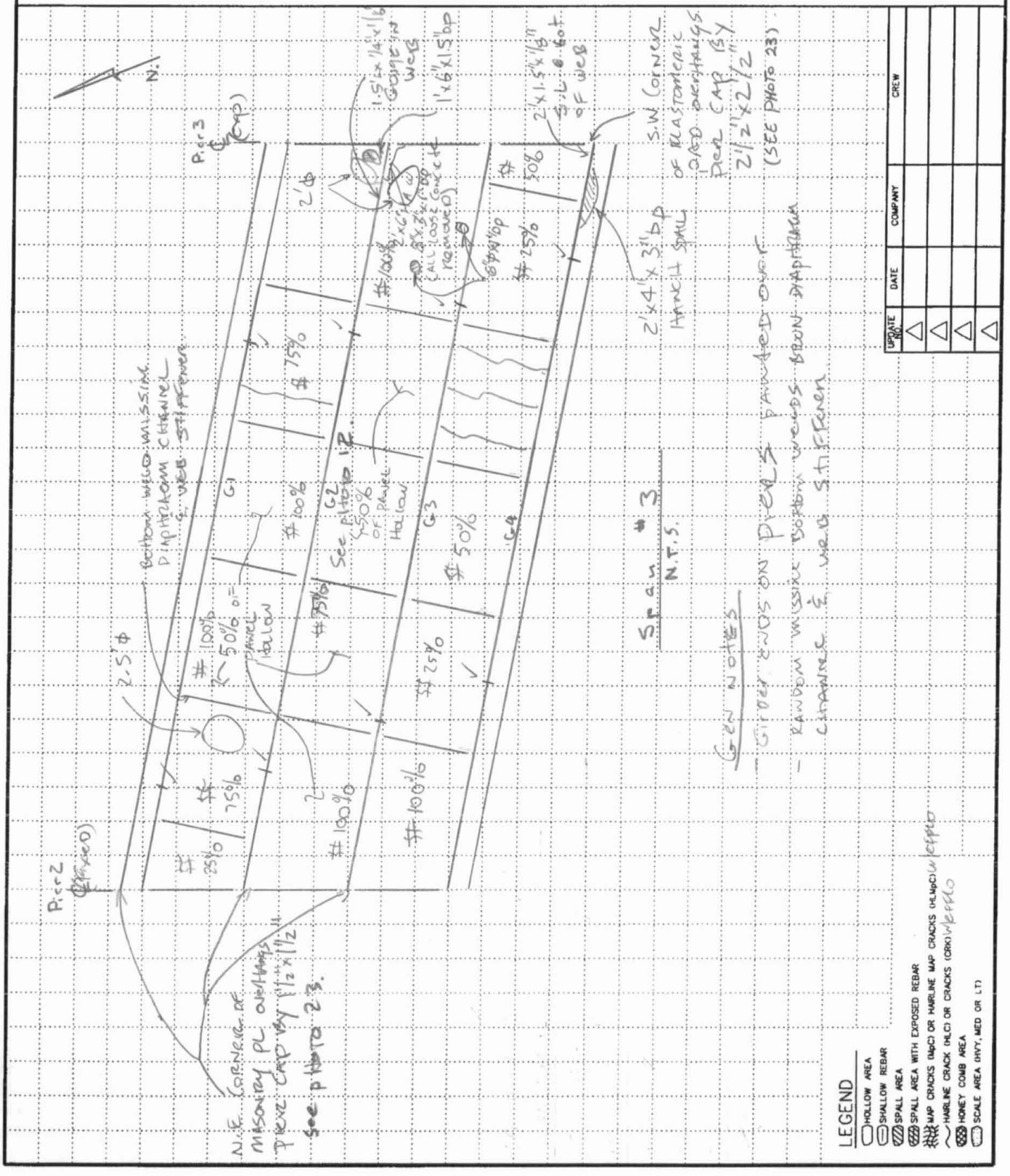
Baker

SUPPLEMENTAL SHEET

☒ FIELD ORIGINAL ☐ TRANSCRIBED BY: _____

BRIDGE NO. 01686B	DATE: 10-02-06
CREW: MRJ, JC	SHEET 20 OF 54

DESCRIPTION:



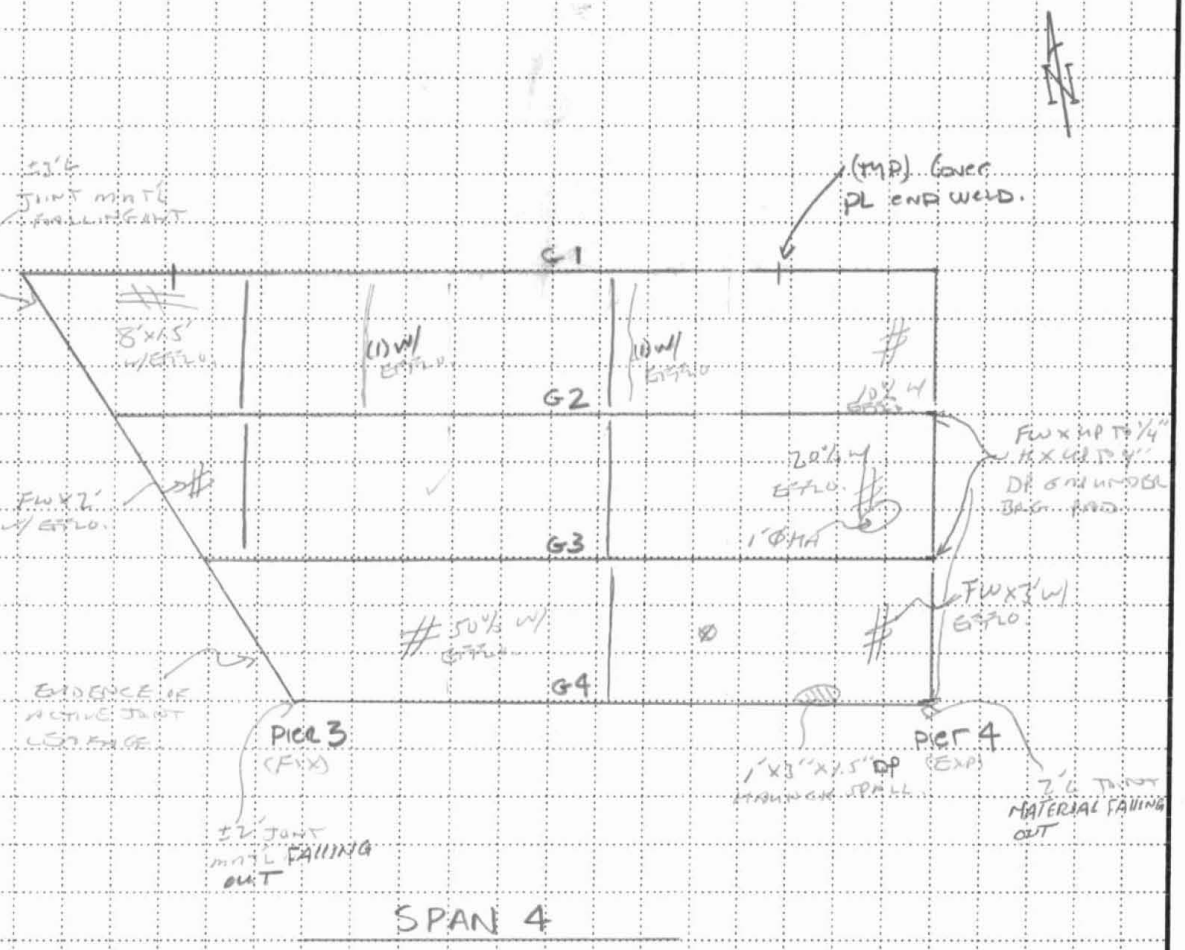
Baker

SUPPLEMENTAL SHEET

☑ FIELD ORIGINAL ☐ TRANSCRIBED BY: ____

BRIDGE NO. 01686B	DATE: 8/28/2006
CREW: CP, MMJ	SHEET 21 OF 54

DESCRIPTION: SPAN 4 FRAMING & UNDERSIDE



GEN NOTES

- GIRDER ENDS HAVE NEWER PAINT I 3.5'6
- STEEL W/ FLAKY/PEELING PAINT W/ RUST. MOD/HVY MAT
- ELASTOMERIC BRG'S OVER PIER 4 IN MATERIAL TO SLIGHTLY GOOD AT I 72°F
- U-SIDE W/ RUST. SOLID CONC. INTACT.

LEGEND

- HOLLOW AREA
- SHALLOW REBAR
- SPALL AREA
- SPALL AREA WITH EXPOSED REBAR
- MAP CRACKS (MpC) OR HAIRLINE MAP CRACKS (HLMpC)
- HAIRLINE CRACK (HLC) OR CRACKS (CRK)
- HONEY COMB AREA
- SCALE AREA (HVY, MED OR LT)
- PVC weep pipe (short)

UPDATE NO.	DATE	COMPANY	CREW
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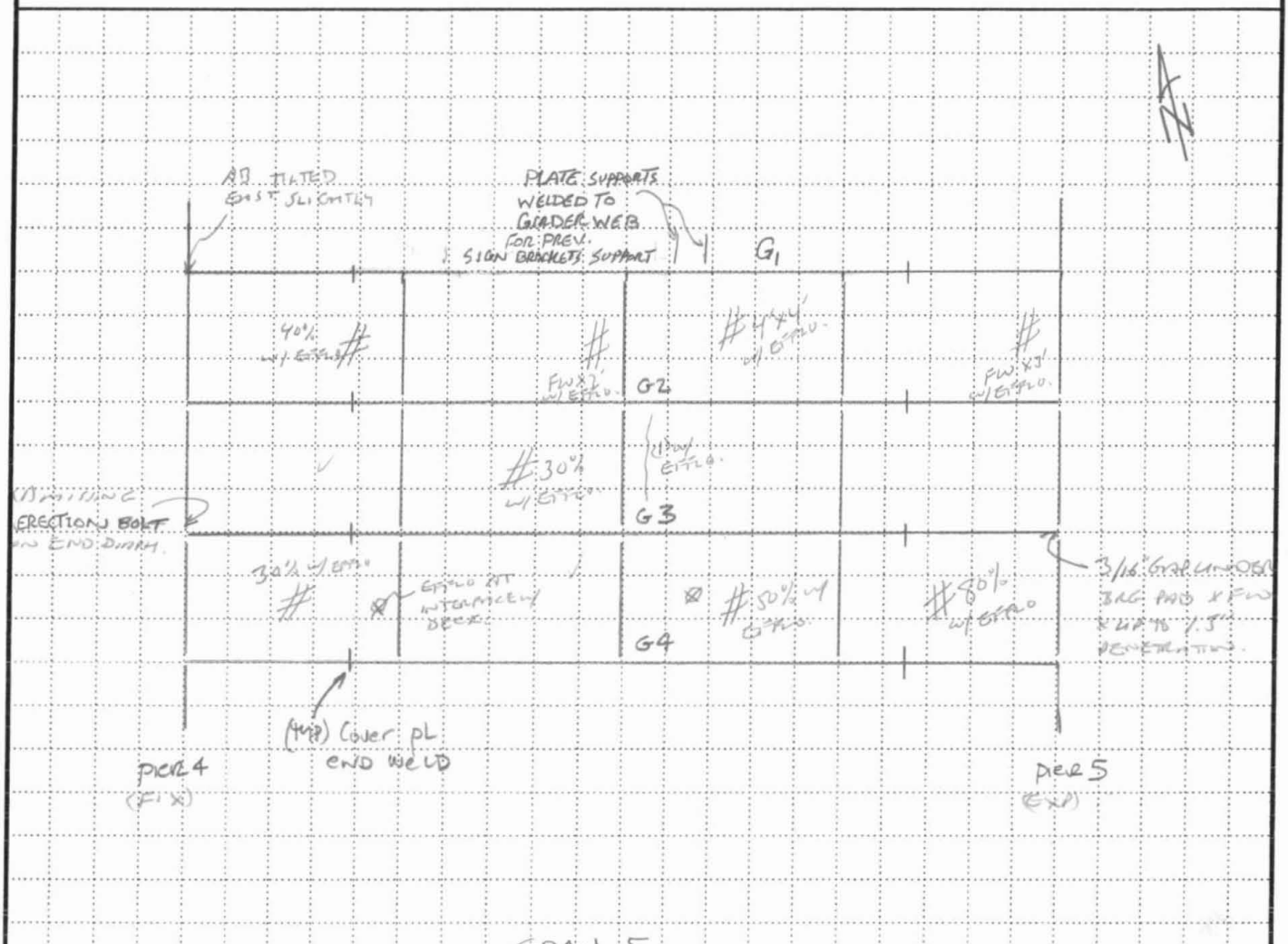
Baker

SUPPLEMENTAL SHEET

☑ FIELD ORIGINAL ☐ TRANSCRIBED BY: ____

BRIDGE NO. 01686B	DATE: 8/28/2006
CREW: CD, MRJ,	SHEET 22 OF 54

DESCRIPTION: SPAN 5 FRAMING & U-SIDE



SPAN 5

GEN NOTES

- ELASTOMERIC BRG'S OVER PIER 5 IN NORMAL TO SLIGHT CONTRACTION @ 70°F.
- GIRDERS 1-4 [illegible] 33.5'L NEWER PAINT
- GIRDERS 1-4 [illegible] MID/HVY MIST.
- ELASTOMERIC BRG'S W/ GAP UP TO 1/8" AT EDGES UNDER BRG PAD
- UNDERSIDE [illegible] SOLID CONCRETE PATCHES.

LEGEND

- HOLLOW AREA
- SHALLOW REBAR
- SPALL AREA
- SPALL AREA WITH EXPOSED REBAR
- MAP CRACKS (MpC) OR HAIRLINE MAP CRACKS (HLMpC)
- HAIRLINE CRACK (HLC) OR CRACKS (CRK)
- HONEY COMB AREA
- SCALE AREA (HVY, MED OR LT)

Ø - WEEP DRAIN.

UPDATE NO.	DATE	COMPANY	CREW
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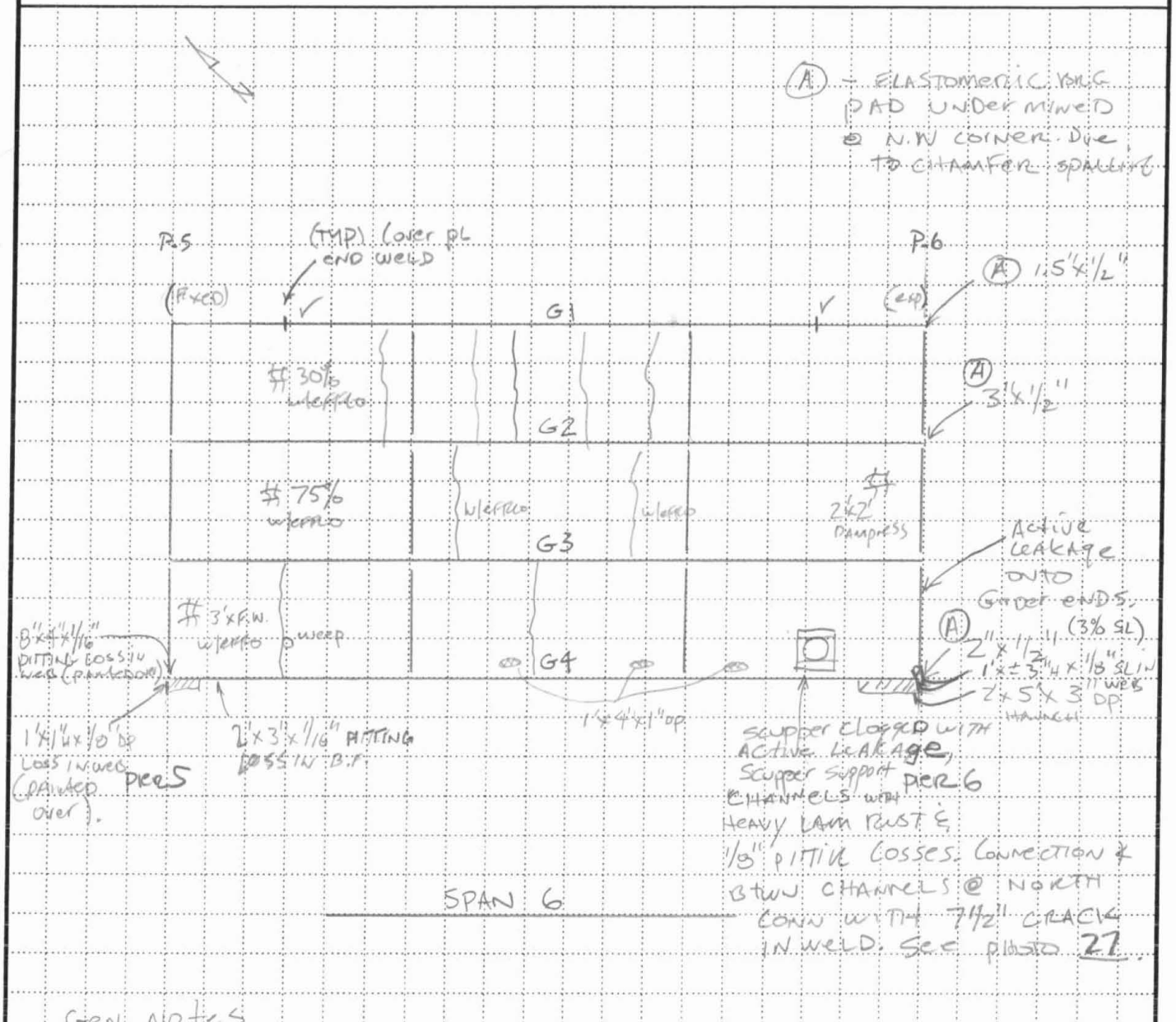
Baker

SUPPLEMENTAL SHEET

☑ FIELD ORIGINAL ☐ TRANSCRIBED BY: ____

BRIDGE NO. 01686B	DATE: 8/23/2006
CREW: MRJ, CP	SHEET 23 OF 54

DESCRIPTION: SPAN 6 FRAMING + U-SIDE



Gen Notes

- Girder ends painted over.
- Random erection bolts missing @ diaphragm conn's.
- Lt/mod rust on brg plates.
- Random areas of lt/mod rust on girders (no loss).
- Up to 3/16" impacted rust btwn masonry plate and cap on fixed brg's (painted over).

LEGEND

- HOLLOW AREA
- SHALLOW REBAR
- SPALL AREA
- SPALL AREA WITH EXPOSED REBAR
- MAP CRACKS (MpC) OR HAIRLINE MAP CRACKS (HLMpC)
- HAIRLINE CRACK (HLC) OR CRACKS (CRK)
- HONEY COMB AREA
- SCALE AREA (HVY, MED OR LT)

UPDATE NO.	DATE	COMPANY	CREW
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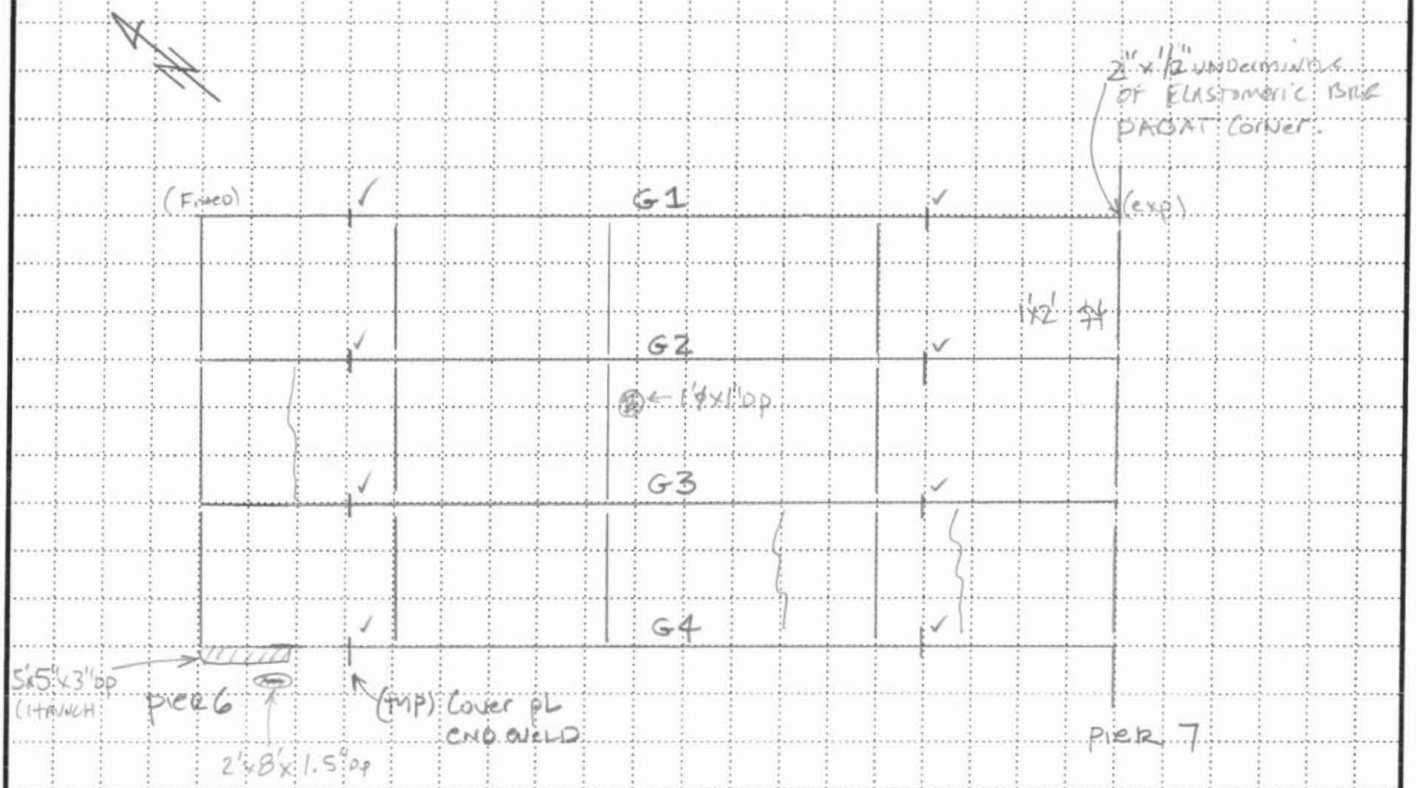
Baker

SUPPLEMENTAL SHEET

☑ FIELD ORIGINAL ☐ TRANSCRIBED BY: ____

BRIDGE NO. 01686B	DATE: 8/28/2006
CREW: MRJ, CP	SHEET 24 OF 54

DESCRIPTION: SPAN 7 FRAMING & U-SIDE



SPAN 7

Gen Notes

- Girder ends cleaned & painted over
- Random areas of lt/mod rust on bot flanges of girder (no loss).
- Random concrete patches in underside of deck
- Light/mod rust on exp brg plates.
- Edge spalling in underside of deck and parapet

LEGEND

- HOLLOW AREA
- SHALLOW REBAR
- SPALL AREA
- SPALL AREA WITH EXPOSED REBAR
- MAP CRACKS (MpC) OR HAIRLINE MAP CRACKS (HLMpC)
- HAIRLINE CRACK (HLC) OR CRACKS (CRK)
- HONEY COMB AREA
- SCALE AREA (HVY, MED OR LT)

UPDATE NO.	DATE	COMPANY	CREW
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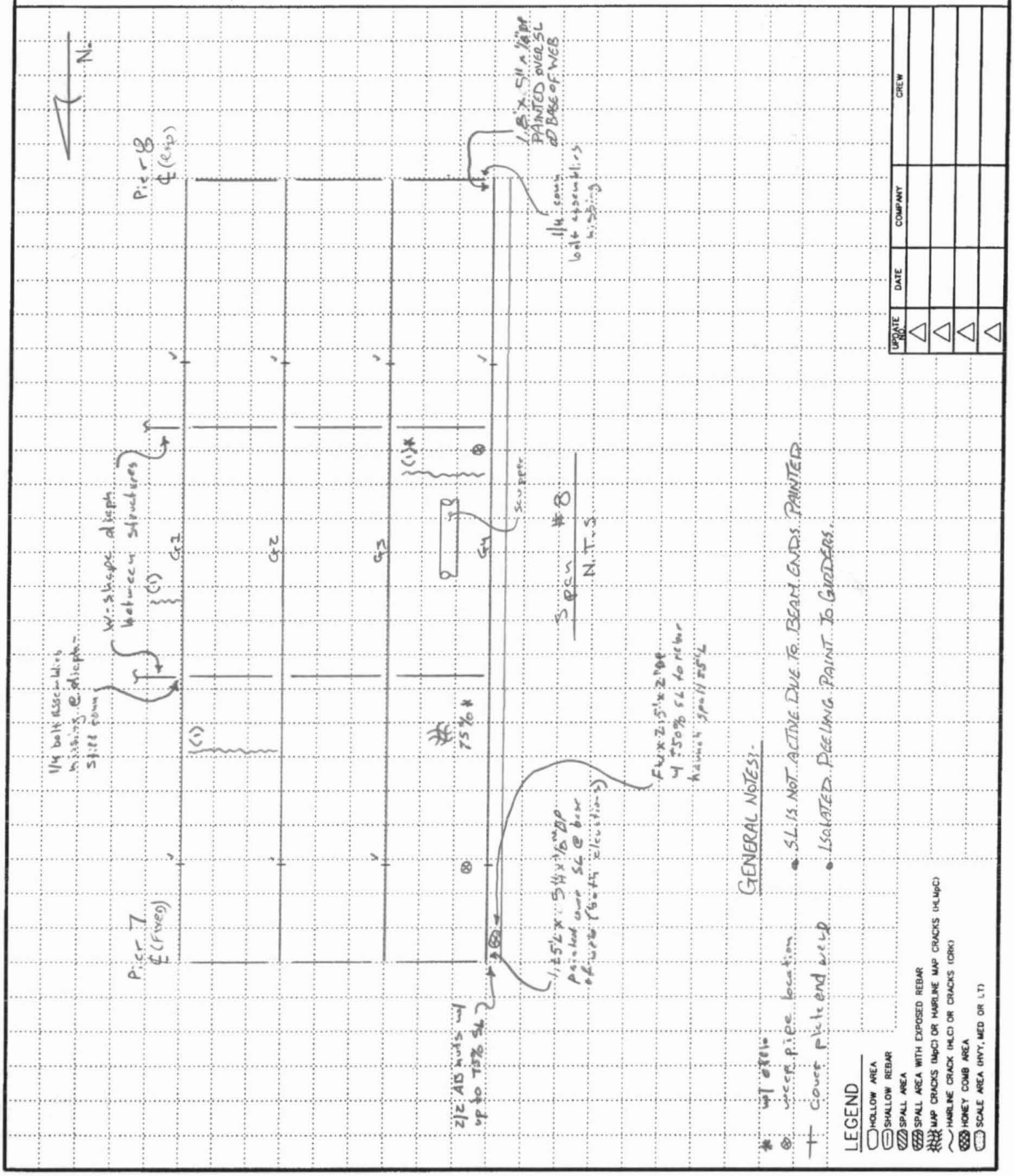
Baker

SUPPLEMENTAL SHEET

☒ FIELD ORIGINAL ☐ TRANSCRIBED BY: _____

BRIDGE NO. 01686B	DATE: 10-02-06
CREW: JC, MRJ	SHEET 25 OF 54

DESCRIPTION: SPAN 8



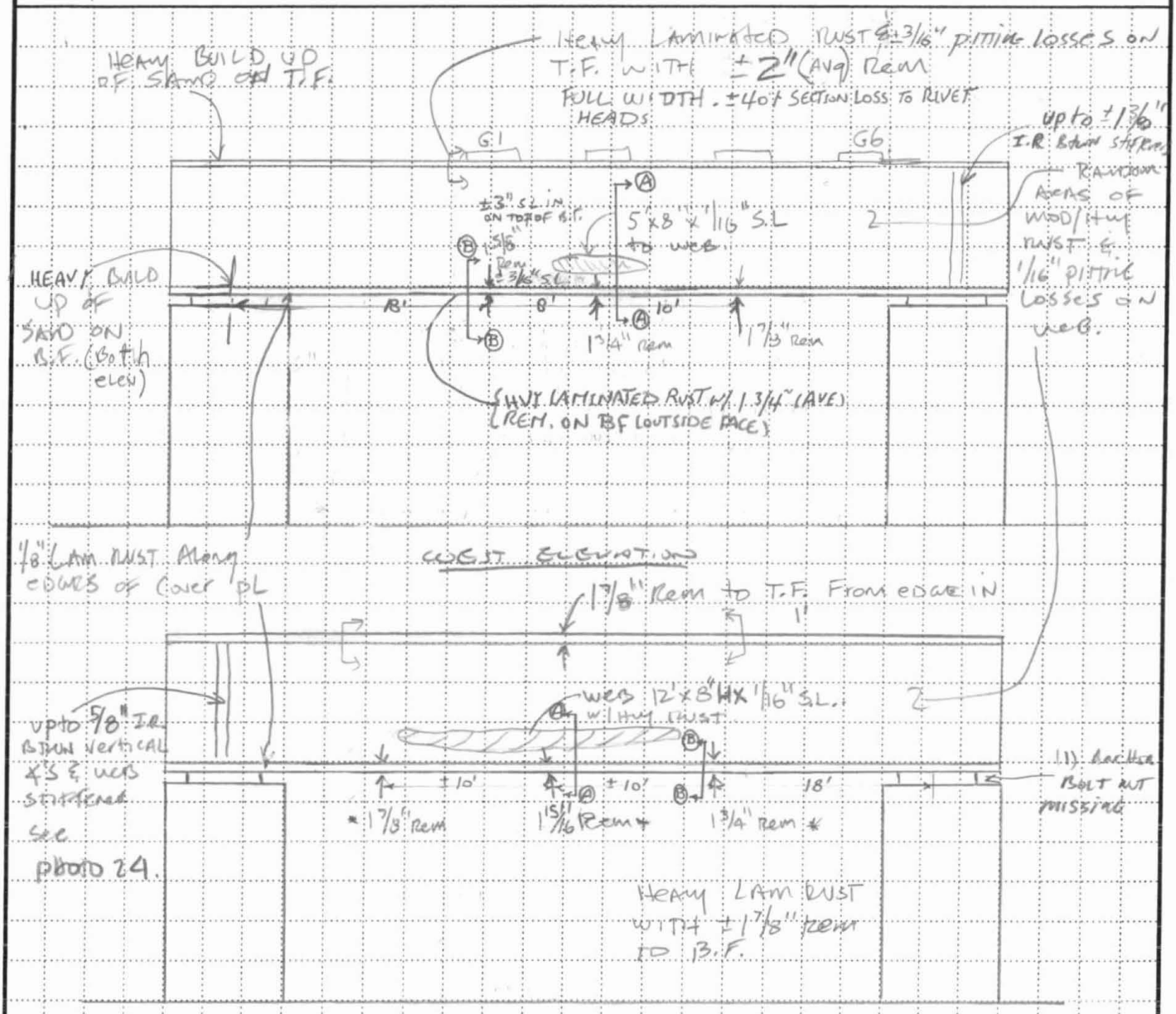
Baker

SUPPLEMENTAL SHEET

☒ FIELD ORIGINAL ☐ TRANSCRIBED BY: ____

BRIDGE NO. 016863	DATE: 10/2/2006
CREW: MKJ, JC	SHEET 26 OF 54

DESCRIPTION: PIER 1 - TWIN BEAM CAP GIRDER



* - REMAINING THICKNESS OF B.F. (BUILT UP)
+ - up to ±1/4" IMPACTED RUST BETWEEN FLANGE PLATES @ RANDOM LOCATIONS
- BUILD UP OF DEBRIS ON TOP OF CAP
- ALL VERTICAL WEB STIFFENERS (exterior) BOT ±6" WITH HVY LAM RUST & ± 1/8" SL. (Both sides)
- MOD RUST ON BRG'S. WITH HVY RUST ON ANCHOR BOLTS & NUTS, NEG SECTION LOSS.

LEGEND
- HOLLOW AREA
- SHALLOW REBAR
- SPALL AREA
- SPALL AREA WITH EXPOSED REBAR
- MAP CRACKS (MpC) OR HAIRLINE MAP CRACKS (HLMpC)
- HAIRLINE CRACK (HLC) OR CRACKS (CRK)
- HONEY COMB AREA
- SCALE AREA (HVY, MED OR LT)

UPDATE NO.	DATE	COMPANY	CREW
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S.O. No. _____

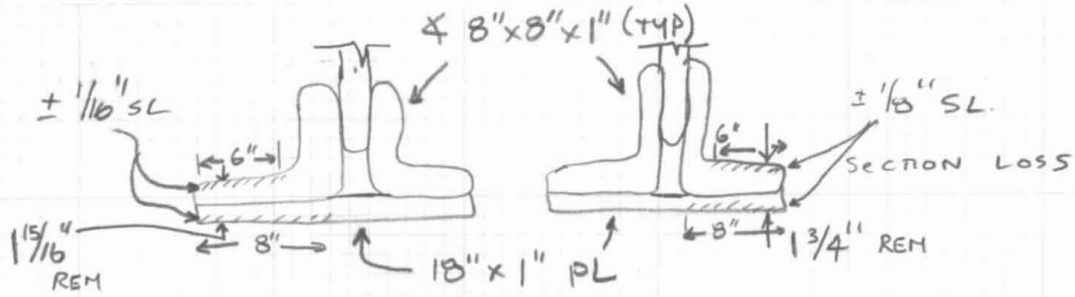
Subject: SECTION LOSS ON PIER 1 STEEL PIER CAP
BOT FLG MID-SPAN.

Sheet No. _____ of _____

Drawing No. _____

Computed by MRJ Checked By _____ Date 12/1/2006

Baker



SECTION A-A

SECTION LOSSES @ MID-SPAN OF PIER 1

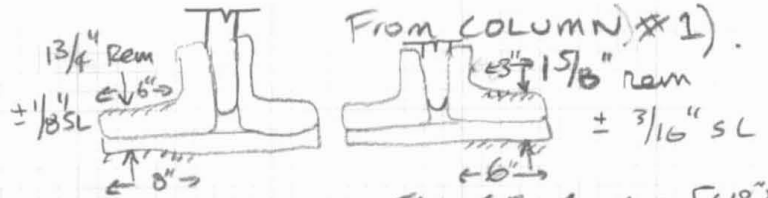
TOTAL BOTTOM FLANGE AREA (INCLUDING BOTTOM OF WEB PL) $= [(18"\times1") + (16\times1")] \times 2 = 68\ IN^2$

LOSS AREA $= 8\times.0625" + 6"\times.0625" + 8"\times.125" + 6"\times.125"$
$= 2.625\ IN^2$

$$\frac{2.625\ IN^2}{68\ IN^2}\times100 = \boxed{3.8\%\ \text{SECTION LOSS @ MIDSPAN}}$$

SECTION B-B

SECTION LOSS BELOW G1 BOTTOM FLANGE (±18' FROM COLUMN #1).



TOTAL BOTTOM FLANGE AREA (INCLUDES BOTTOM OF WEB PL) $= [(18"\times1") + (16"\times1")] \times 2 = 68\ IN^2$

LOSS AREA $= 6"\times.125" + 8"\times.125" + 3"\times.1875" + 6"\times.1875" = 3.475\ IN^2$

$$\frac{3.475\ IN^2}{68\ IN^2}\times100 = \boxed{5.1\%\ \text{SL @ 18' FROM COLUMN 1 PIER 1 OF NORTH BRG}}$$

Baker

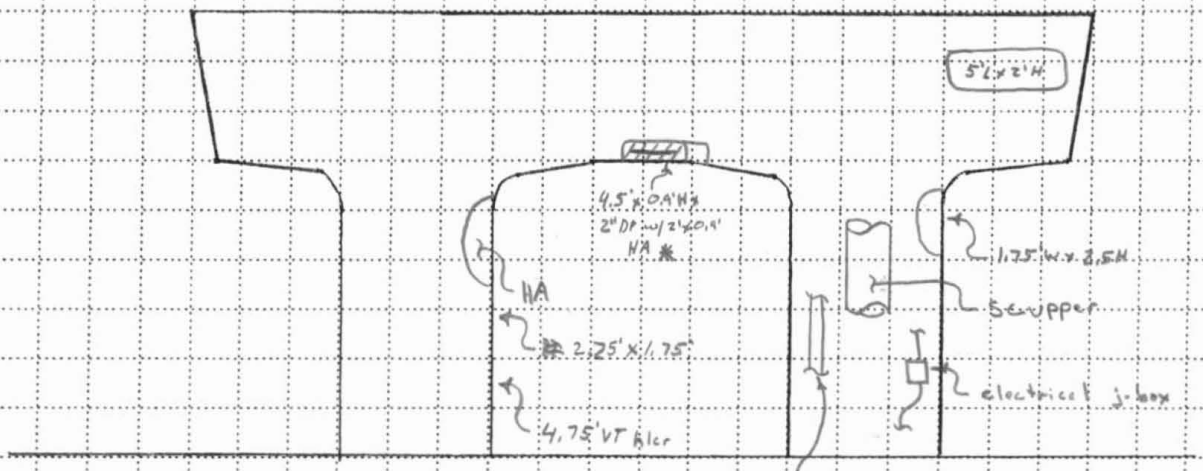
SUPPLEMENTAL SHEET

☒ FIELD ORIGINAL ☐ TRANSCRIBED BY: ____

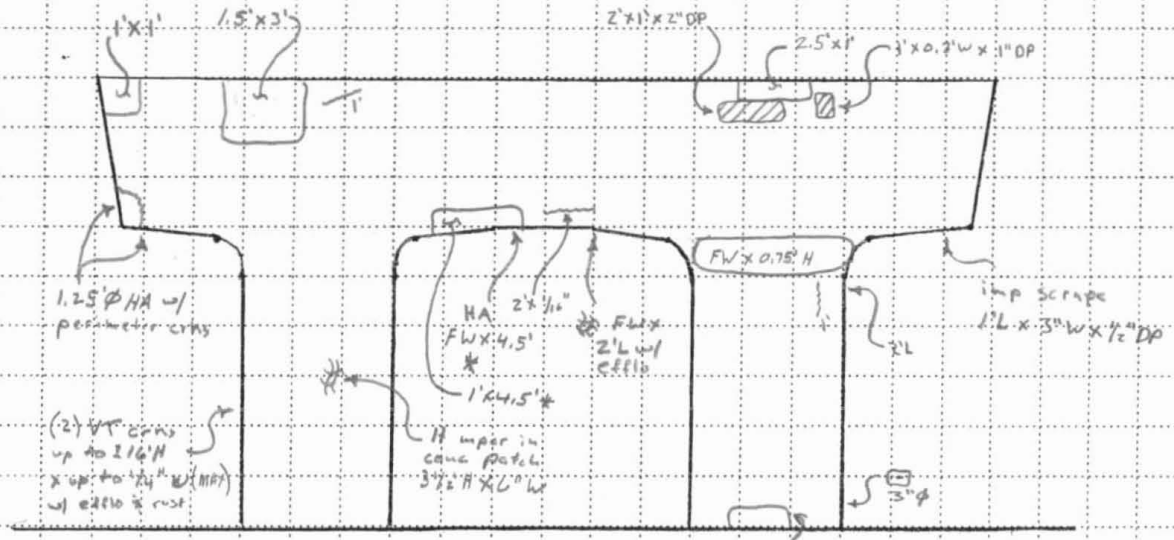
BRIDGE NO. 01686B | DATE: 10-02-06

CREW: JC, MRJ | SHEET 28 OF 54

DESCRIPTION: Pier 2



WEST ELEVATION



EAST ELEVATION

General Notes:

- conc patches @ east & loc's w/ perimeter cracks w/ rust / efflo.
- all loose conc removed, remaining priority "C" *

LEGEND

- HOLLOW AREA
- SHALLOW REBAR
- SPALL AREA
- SPALL AREA WITH EXPOSED REBAR
- MAP CRACKS (MpC) OR HAIRLINE MAP CRACKS (HLMpC)
- HAIRLINE CRACK (HLC) OR CRACKS (CRK)
- HONEY COMB AREA
- SCALE AREA (HVY, MED OR LT)

UPDATE NO.	DATE	COMPANY	CREW
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Baker

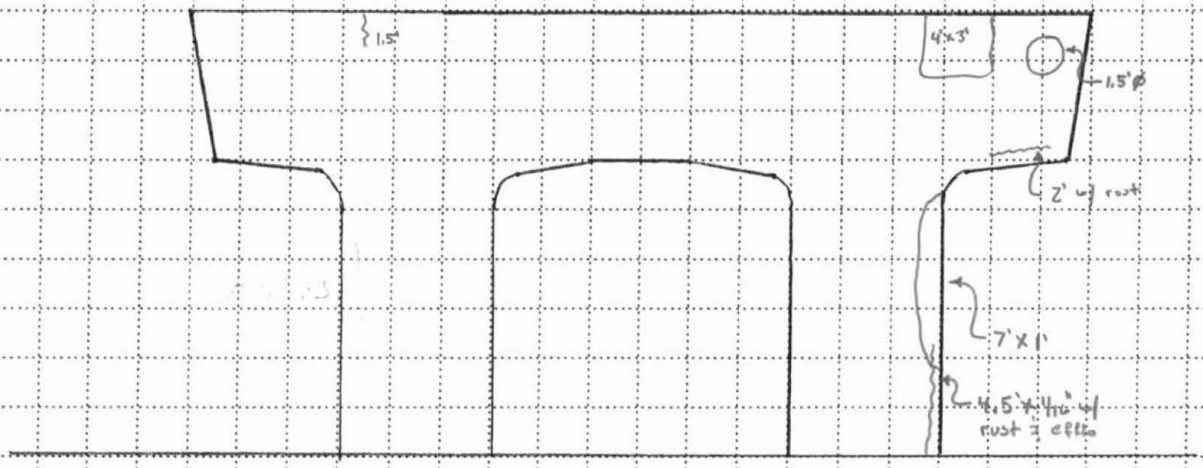
SUPPLEMENTAL SHEET

☒ FIELD ORIGINAL ☐ TRANSCRIBED BY: _____

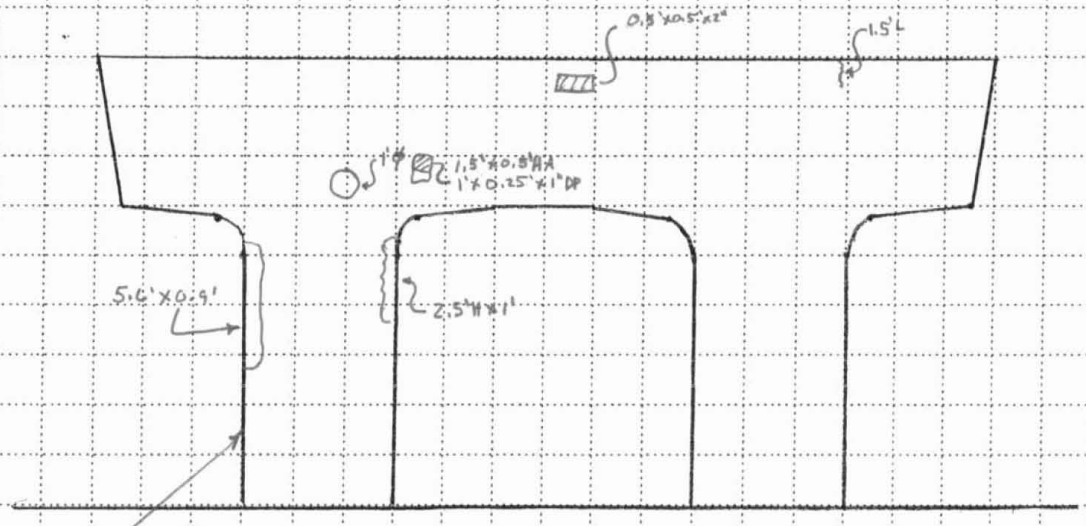
BRIDGE NO. 016863 | DATE: 10-02-06

CREW: JC, MRS | SHEET 29 OF 54

DESCRIPTION: Pier 3



WEST ELEVATION



EAST ELEVATION

LARGE ±8.5'H x 7'W x 2"dP w/ REMAINING COLUMN WIDTH HA w/ CRACKS, RUST & EFFLO. UP TO 8.5'H (SEE PHOTO 31)

LEGEND

- HOLLOW AREA
- SHALLOW REBAR
- SPALL AREA
- SPALL AREA WITH EXPOSED REBAR
- MAP CRACKS (MpC) OR HAIRLINE MAP CRACKS (HLMpC)
- HAIRLINE CRACK (HLC) OR CRACKS (CRK)
- HONEY COMB AREA
- SCALE AREA (HVY, MED OR LT)

UPDATE NO.	DATE	COMPANY	CREW
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Baker

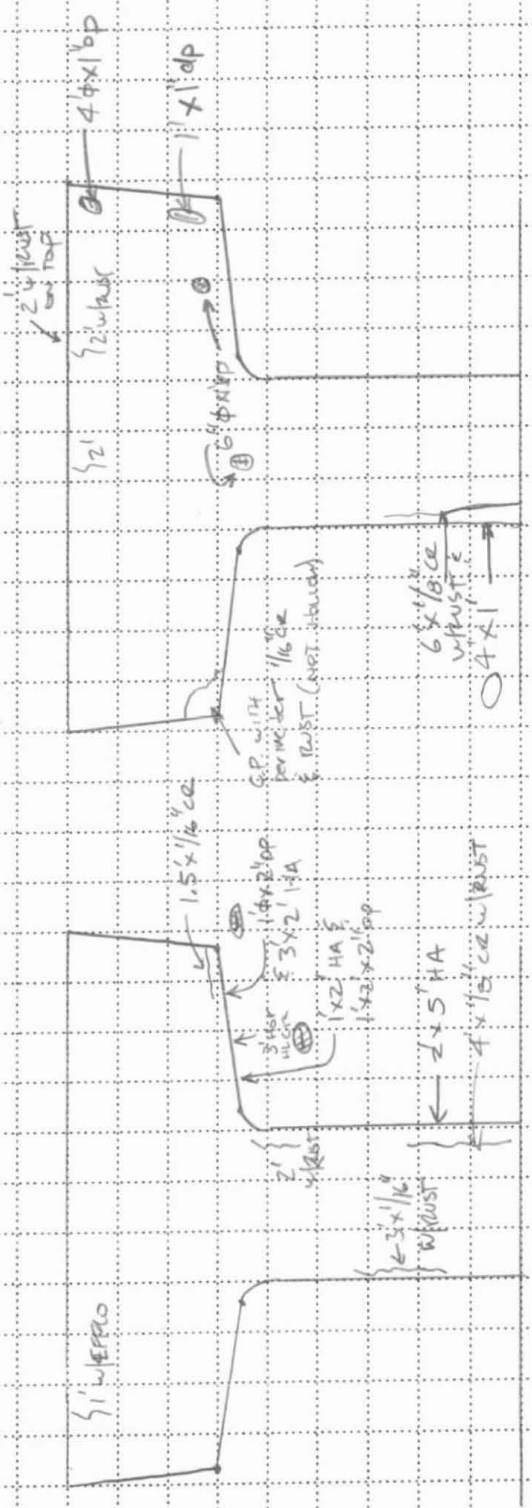
SUPPLEMENTAL SHEET

☑ FIELD ORIGINAL ☐ TRANSCRIBED BY: _____

BRIDGE NO. 01686B | DATE: 8/28/2006

CREW: MRJ, CP | SHEET 30 OF 54

DESCRIPTION: PIER 4



UPDATE NO.	DATE	COMPANY	CREW

LEGEND

- HOLLOW AREA
- SHALLOW REBAR
- SPALL AREA
- SPALL AREA WITH EXPOSED REBAR
- MAP CRACKS (MpC) OR HAIRLINE MAP CRACKS (HLMpC)
- HAIRLINE CRACK (HLC) OR CRACKS (CRK)
- HONEY COMB AREA
- SCALE AREA (HVY, MED OR LT)

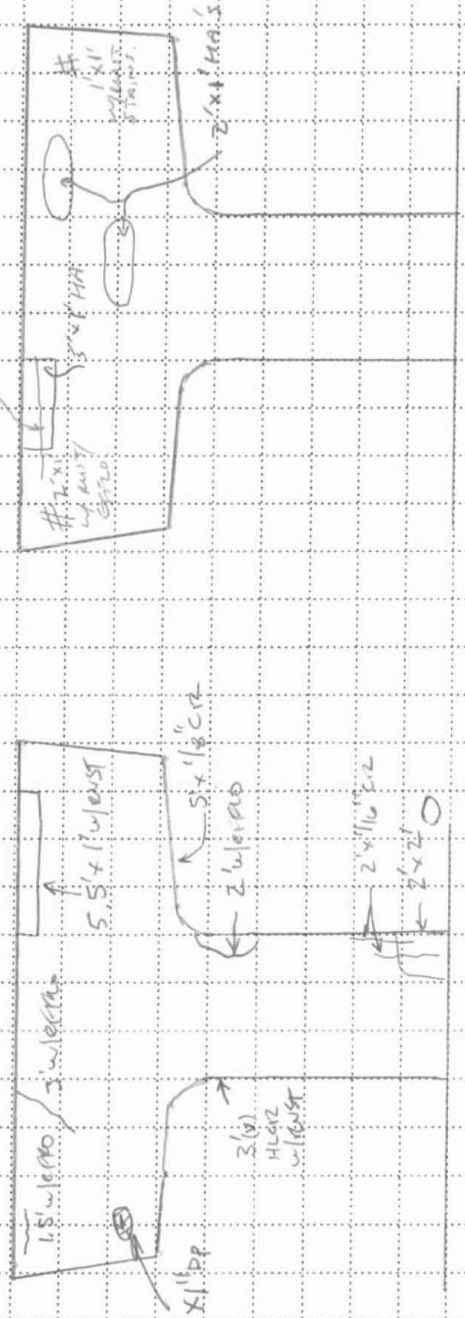
Baker

SUPPLEMENTAL SHEET

☒ FIELD ORIGINAL ☐ TRANSCRIBED BY: ____

BRIDGE NO. 016868	DATE: 8/28/06
CREW: CP, MRJ	SHEET 31 OF 54

DESCRIPTION: PIER 5



EAST ELEVATION

WEST ELEVATION

GENERAL NOTES:

- REMOVE CONC. PROTECTED (SAND) (SAND) ... REMOVE STEEL ... ETC.

CONDUIT ATTACHED TO EAST ELEVATION w/ MED. SURFACE RUST

UPDATE NO.	DATE	COMPANY	CREW
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LEGEND

- HOLLOW AREA
- SHALLOW REBAR
- SPALL AREA
- SPALL AREA WITH EXPOSED REBAR
- MAP CRACKS (MpC) OR HAIRLINE MAP CRACKS (HLMpC)
- HAIRLINE CRACK (HLC) OR CRACKS (CRK)
- HONEY COMB AREA
- SCALE AREA (HVY, MED OR LT)

Baker

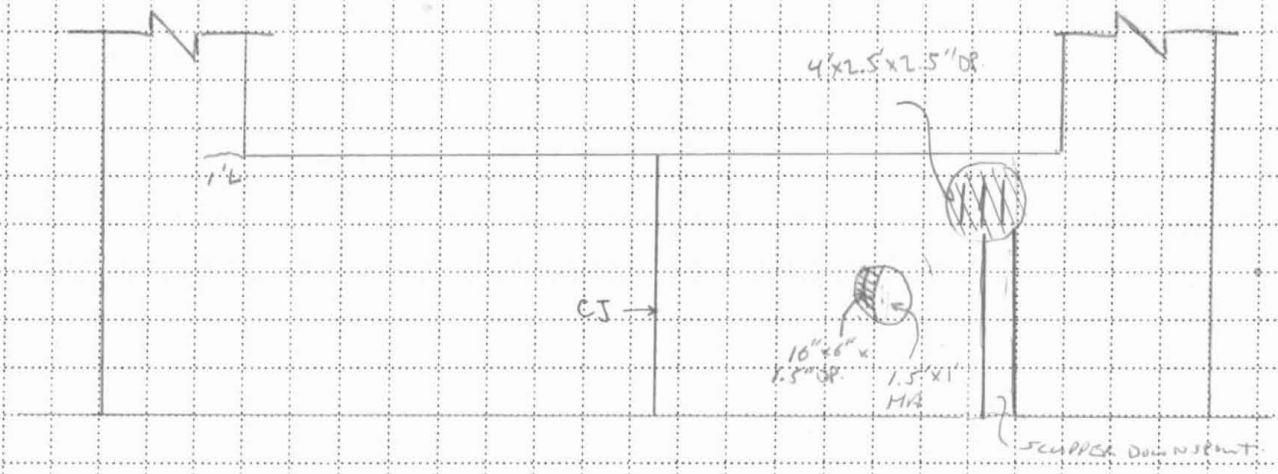
SUPPLEMENTAL SHEET

☐ FIELD ORIGINAL ☐ TRANSCRIBED BY: ____

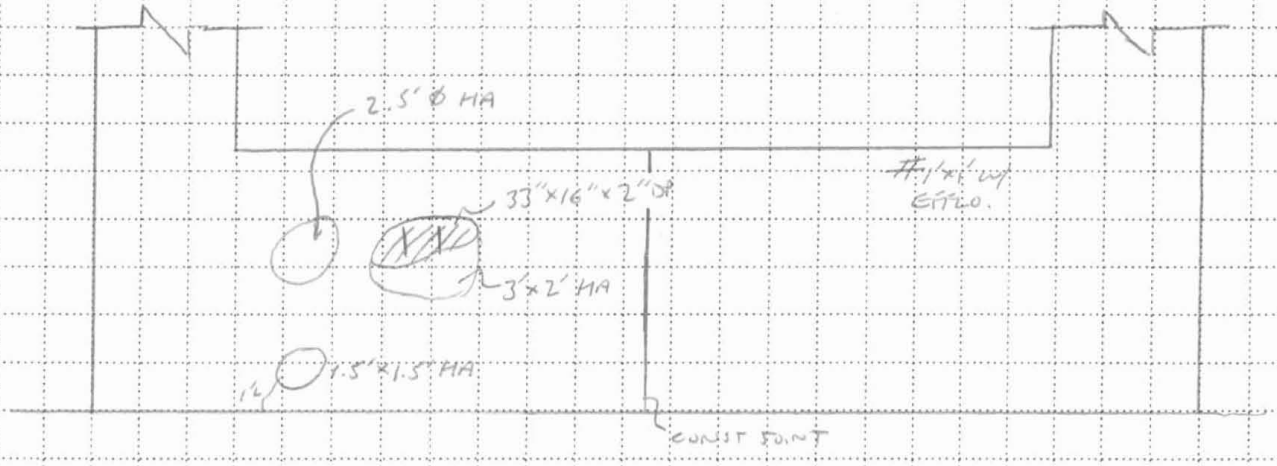
BRIDGE NO. 01686 B | DATE: 8/28/06

CREW: CP, MRJ | SHEET 32 OF 54

DESCRIPTION: PIER 6



WEST ELEVATION



EAST ELEVATION

GENERAL NOTES

SEAT STAINING FROM ACTIVE PAST JOINT LEAKAGE

LEGEND

- HOLLOW AREA
- SHALLOW REBAR
- SPALL AREA
- SPALL AREA WITH EXPOSED REBAR
- MAP CRACKS (MpC) OR HAIRLINE MAP CRACKS (HLMpC)
- HAIRLINE CRACK (HLC) OR CRACKS (CRK)
- HONEY COMB AREA
- SCALE AREA (HVY, MED OR LT)

UPDATE NO.	DATE	COMPANY	CREW
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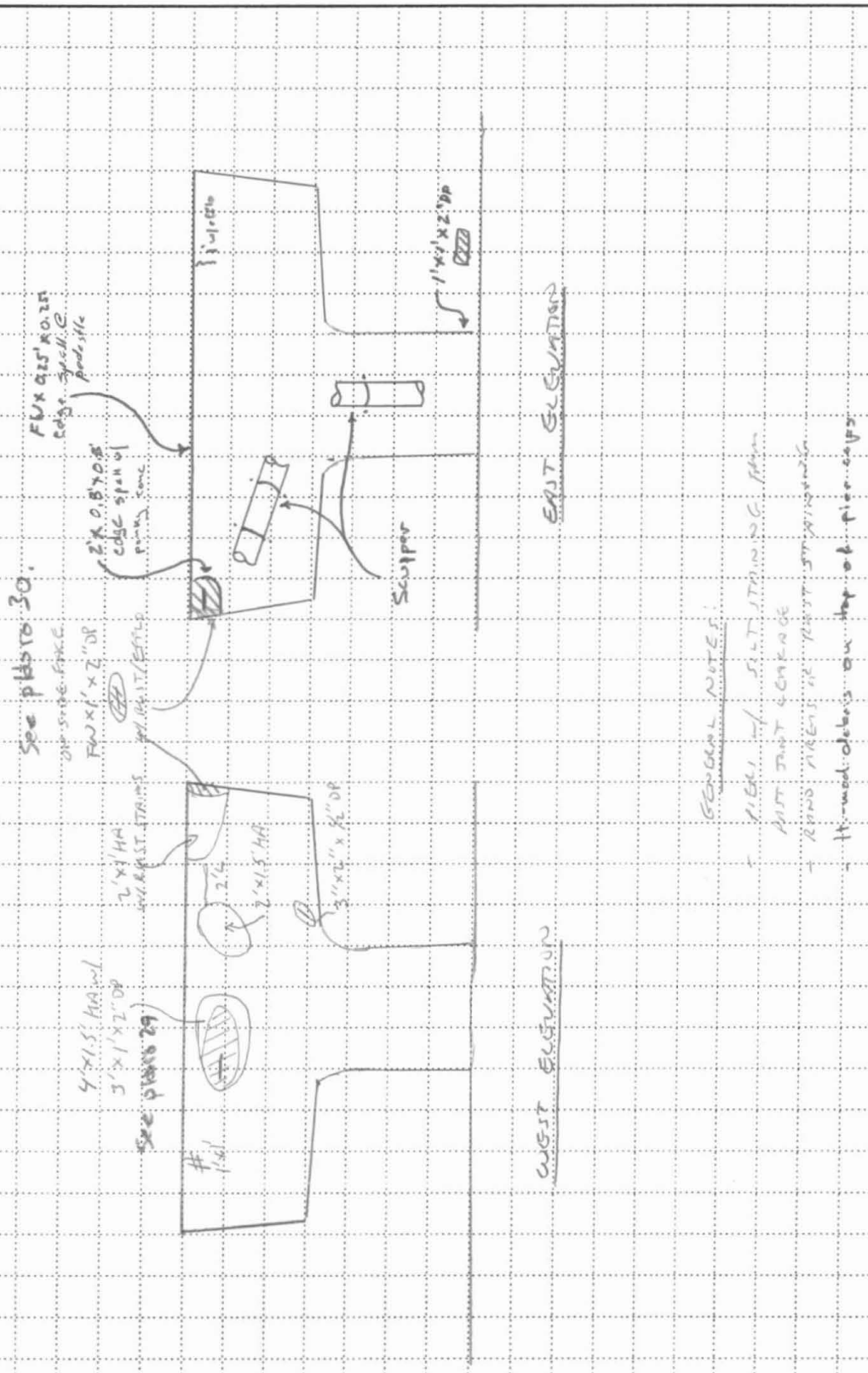
Baker

SUPPLEMENTAL SHEET

☒ FIELD ORIGINAL ☐ TRANSCRIBED BY: _____

BRIDGE NO. 01686B	DATE: 8/28/06
CREW: CP, MRJ	SHEET 33 OF 54

DESCRIPTION: PIER 7



UPDATE NO.	DATE	COMPANY	CREW
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LEGEND

- HOLLOW AREA
- SHALLOW REBAR
- SPALL AREA
- SPALL AREA WITH EXPOSED REBAR
- MAP CRACKS (MpC) OR HAIRLINE MAP CRACKS (HLMpC)
- HAIRLINE CRACK (HLC) OR CRACKS (CRK)
- HONEY COMB AREA
- SCALE AREA (HVY, MED OR LT)

Baker

SUPPLEMENTAL SHEET

☒ FIELD ORIGINAL ☐ TRANSCRIBED BY: ____

BRIDGE NO. 016863	DATE: 10/02/06
CREW: JC, MMJ	SHEET 34 OF 54

DESCRIPTION: PIER 8 WEST ELEVATION

GENERAL NOTES:-

- H. MOD. DEBRIS ON TOP OF PIER CAP.
- RAND. AREAS OF FAINT C.P. OR THROUGHOUT.
- RAND. PERIMETER CRACKS AROUND C.P.'S W/ EFFLO. & RUST.
- RAND. RUST STAINS THROUGHOUT.

LEGEND

- HOLLOW AREA
- SHALLOW REBAR
- SPALL AREA
- SPALL AREA WITH EXPOSED REBAR
- MAP CRACKS (MpC) OR HAIRLINE MAP CRACKS (HLMpC)
- HAIRLINE CRACK (HLC) OR CRACKS (CRK)
- HONEY COMB AREA
- SCALE AREA (HVY, MED OR LT)

UPDATE NA	DATE	COMPANY	CREW
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Bridge No: 01686B___ Date: 12/04/2006__ Prepared By: MRJ_

CONCRETE DETERIORATION WORKSHEET

BRI-10

		Deterioration By Span - In Square Feet										
		Span Number										
Deterioration Type		1	2	3	4	5	6	7	8			Total
Spalled and Delaminated Areas	*Top*											
	Bot.	138	48	460	3		3	6	3			661
Scale (Moderate to Severe Only)	*Top*											
	Bot.											
Cracks:with Efflorescence (Use 6" width x length)	*Bot.*	4	38	14	10	4	63	12	10			155
Cracks w/o Efflo.(Use 3" width x Length)	*Top*											
	Bot.											
Map Cracking: w/Efflorescence (Use full Area)	*Bot.*	126	477	1377	187	285	153	2	96			2703
Map Cracking w/o Efflo.(Use 50% of Area)	*Top*											
	Bot.											
Honeycombed Areas (only areas more than 1 1/2" deep)	*Bot.*											
Total Deterioration	*Bot.*	268	563	1851	200	289	219	20	109			3519
Span Area		1866	2289	2342	1307	1528	1426	1707	1451			13916
% Spalled and Delaminated on top	*Top*	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			
% Deterioration on Bottom	*Bot.*	14.4%	24.6%	79.0%	15.3%	18.9%	15.4%	1.2%	7.5%			25.3%

- See sheet 35A for calcuation of span 3 percentage deterioration.

75% in previous report.

FormBRI-10.xls

Baker

SUPPLEMENTAL SHEET

☐ FIELD ORIGINAL ☑ TRANSCRIBED BY: SE

BRIDGE NO. 01686B | DATE: 10/2/06

CREW: MRJ, JC | SHEET 35A OF 54

DESCRIPTION: CONC. DETERIORATION CALCULATIONS FOR SPAN 3

(ASSUMING 15± FULL BAYS)

SPALLS & HAS:

$50\% \times 6 \div \frac{3}{15} \simeq 20 \pm \%$

MP Cr. w/EFFLO:

$0.6 + 0.5 \times 6 + 0.75 + 1.0 + 1.0 + 0.25 + 0.5 + 0.30 = \frac{8.65}{15} = 58 \pm \%$

Crs w/EFFLO

$< 1\%$

79 ± % TOTAL

LEGEND

- HOLLOW AREA
- SHALLOW REBAR
- SPALL AREA
- SPALL AREA WITH EXPOSED REBAR
- MAP CRACKS (MpC) OR HAIRLINE MAP CRACKS (HLMpC)
- HAIRLINE CRACK (HLC) OR CRACKS (CRK)
- HONEY COMB AREA
- SCALE AREA (HVY, MED OR LT)

UPDATE NO.	DATE	COMPANY	CREW
△			
△			
△			
△			

Bridge No.	01686B	**Inspected by:**	Michael R. Jakiel
Town:	Hartford	**Inspected by:**	Christopher Perry
Feature Carried:	Interstate 84 TR 825	**Date Inspected:**	08/28/2006
Feature Crossed:	US Route 44 E.B.& Columbus Boulevard	**Project No.:**	170-2357

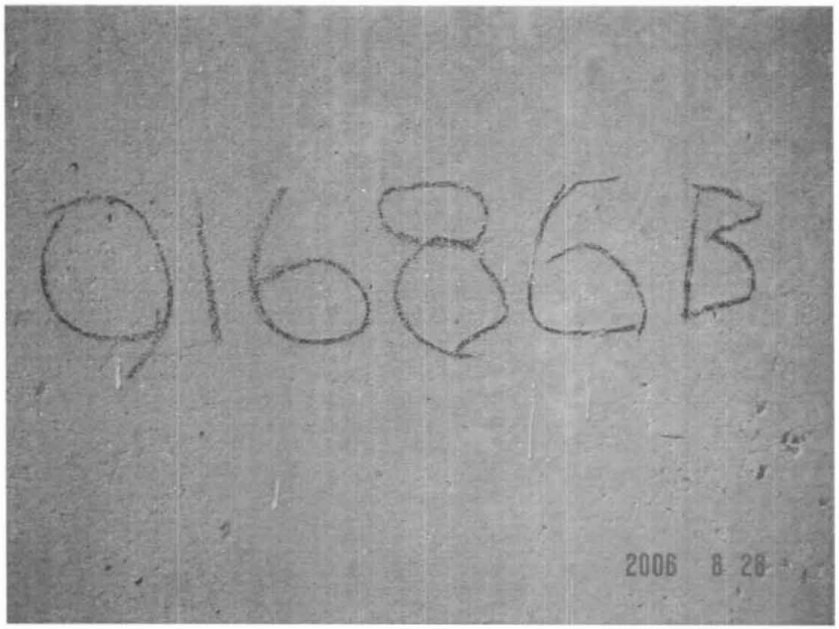

Photo # 1: Bridge I.D. (I.D. on structure is faded).

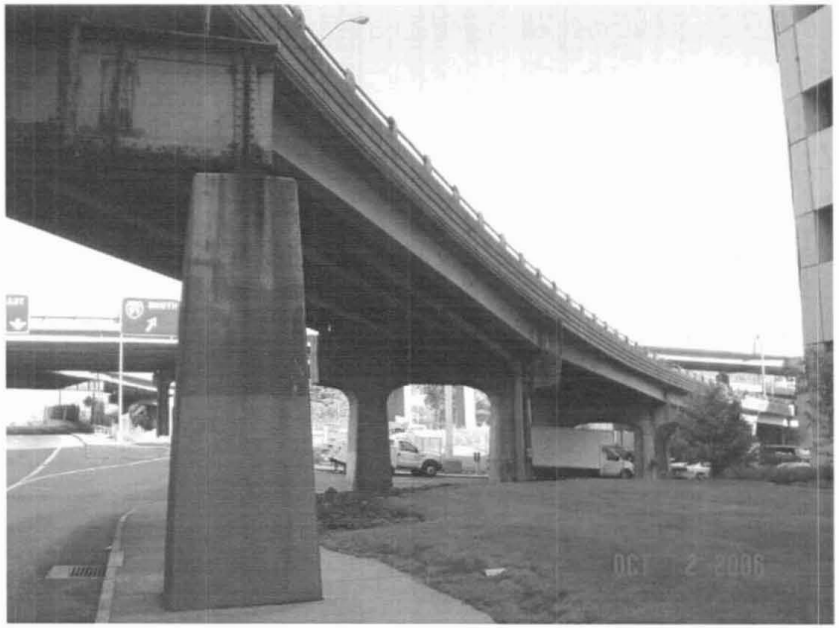

Photo # 2: South elevation of structure.

Bridge No.	01686B	**Inspected by:**	Michael R. Jakiel
Town:	Hartford	**Inspected by:**	Christopher Perry
Feature Carried:	Interstate 84 TR 825	**Date Inspected:**	08/28/2006
Feature Crossed:	US Route 44 E.B.& Columbus Boulevard	**Project No.:**	170-2357

Photo # 3: North elevation of structure.

Photo # 4: Bridge from west approach.

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Town:	Hartford	**Inspected by:**	Christopher Perry
Feature Carried:	Interstate 84 TR 825	**Date Inspected:**	08/28/2006
Feature Crossed:	US Route 44 E.B.& Columbus Boulevard	**Project No.:**	170-2357

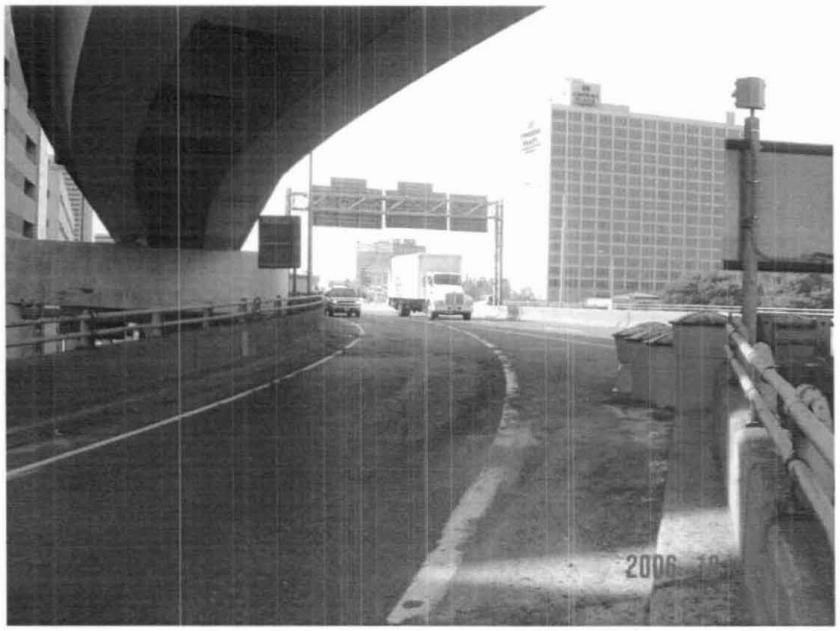

Photo # 5: West approach from bridge.

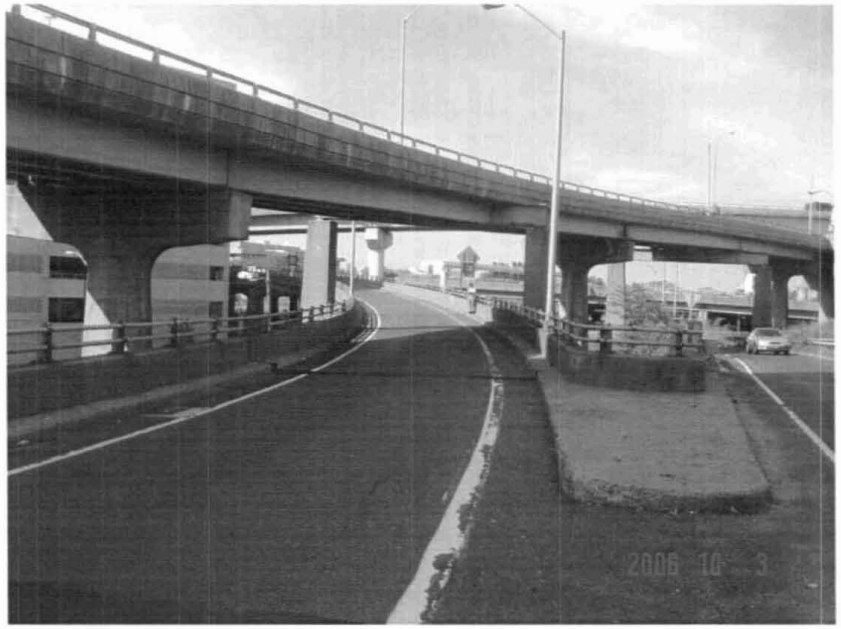

Photo # 6: Bridge from east approach.

Bridge No.	01686B	**Inspected by:**	Michael R. Jakiel
Town:	Hartford	**Inspected by:**	Christopher Perry
Feature Carried:	Interstate 84 TR 825	**Date Inspected:**	08/28/2006
Feature Crossed:	US Route 44 E.B.& Columbus Boulevard	**Project No.:**	170-2357

Photo # 7: East approach from bridge.

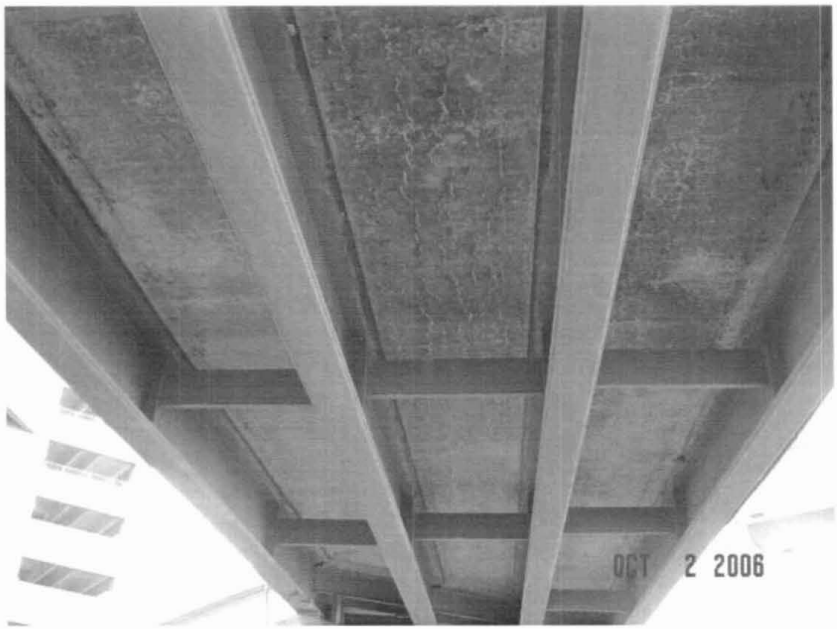

Photo # 8: Typical superstructure and underside of deck.

Bridge No.	01686B	**Inspected by:**	Michael R. Jakiel
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Photo # 9: Typical top of deck.

Photo # 10: Typical map cracking in the bituminous overlay.

Bridge No.	01686B	**Inspected by:**	Michael R. Jakiel
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Feature Crossed:	US Route 44 E.B.& Columbus Boulevard	**Project No.:**	170-2357

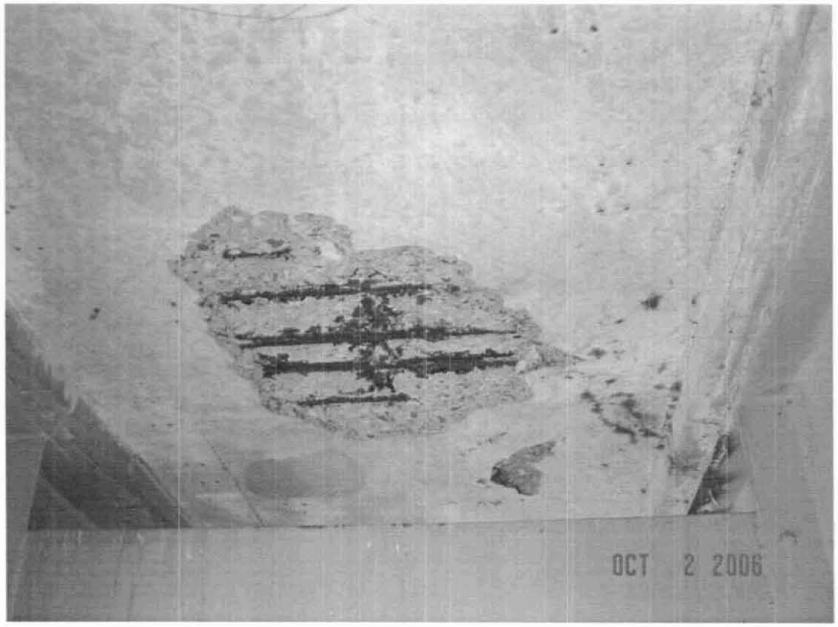

Photo # 11: Large spall with exposed rebar and hollow areas in the underside of deck in bay 1 of span 1.

Photo # 12: Typical hollow areas and map cracking in the underside of span 3.

Bridge No.	01686B	**Inspected by:**	Michael R. Jakiel
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Feature Crossed:	US Route 44 E.B.& Columbus Boulevard	**Project No.:**	170-2357

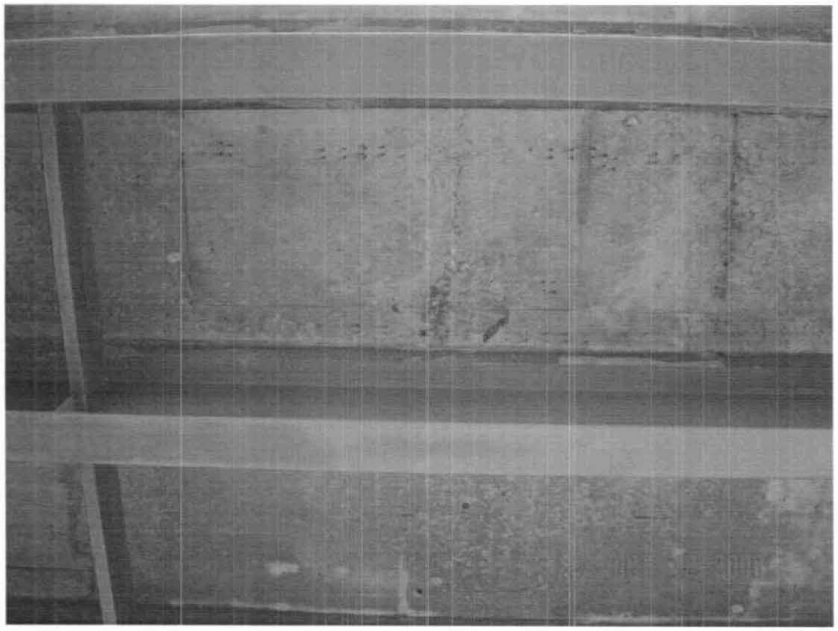

Photo # 13: Typical hollow areas and map cracking in the underside of span 1.

Photo # 14: Large spall in the safety walk of the north shoulder in span 6.

Bridge No.	01686B	**Inspected by:**	Michael R. Jakiel
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Feature Carried:	Interstate 84 TR 825	**Date Inspected:**	08/28/2006
Feature Crossed:	US Route 44 E.B.& Columbus Boulevard	**Project No.:**	170-2357

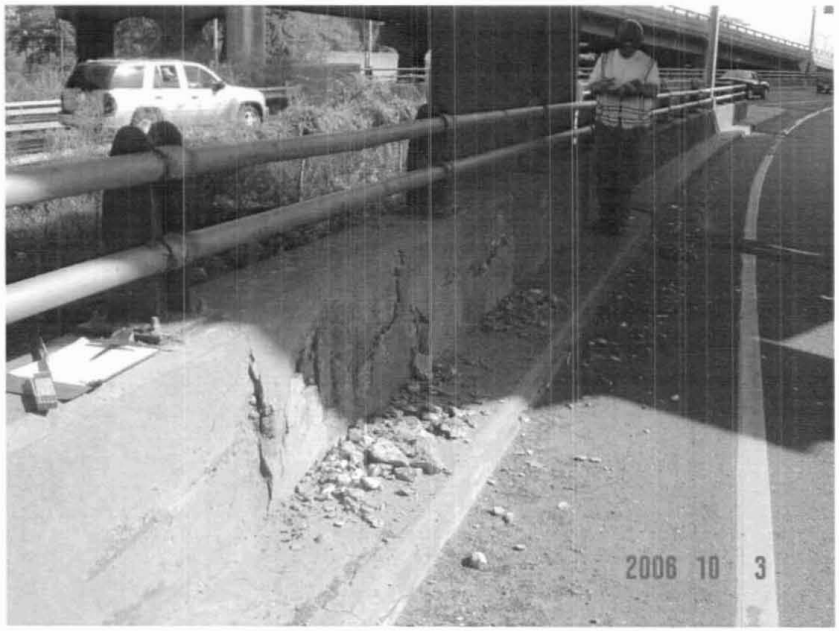

Photo # 15: Large spall with exposed rebar and hollow areas in the north parapet in span 6.

Photo # 16: Overall view of the large spalls and hollow areas in the north parapet of span 6.

Bridge No.	01686B	**Inspected by:**	Michael R. Jakiel
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Feature Carried:	Interstate 84 TR 825	**Date Inspected:**	08/28/2006
Feature Crossed:	US Route 44 E.B.& Columbus Boulevard	**Project No.:**	170-2357

Photo # 17: Clogged scupper and catch basin in span 2 along the south shoulder.

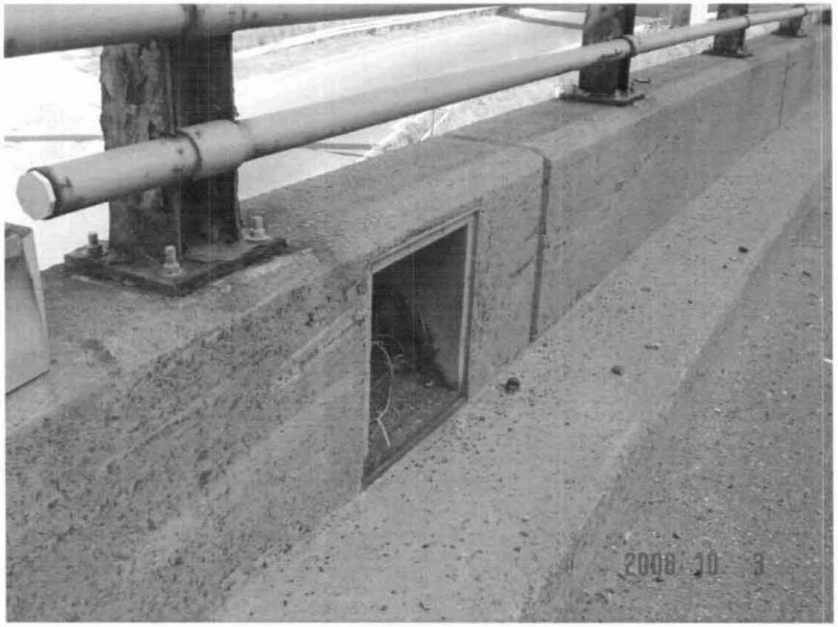

Photo # 18: Junction box with missing cover in span 2, north shoulder.

Bridge No.	01686B	**Inspected by:**	Michael R. Jakiel
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Photo # 19: Typical asphaltic plug joint over pier 2.

Photo # 20: Adhesion failure between the overlay and adphaltic plug joint material over pier 8.

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Feature Carried:	Interstate 84 TR 825	**Date Inspected:**	08/28/2006
Feature Crossed:	US Route 44 E.B.& Columbus Boulevard	**Project No.:**	170-2357

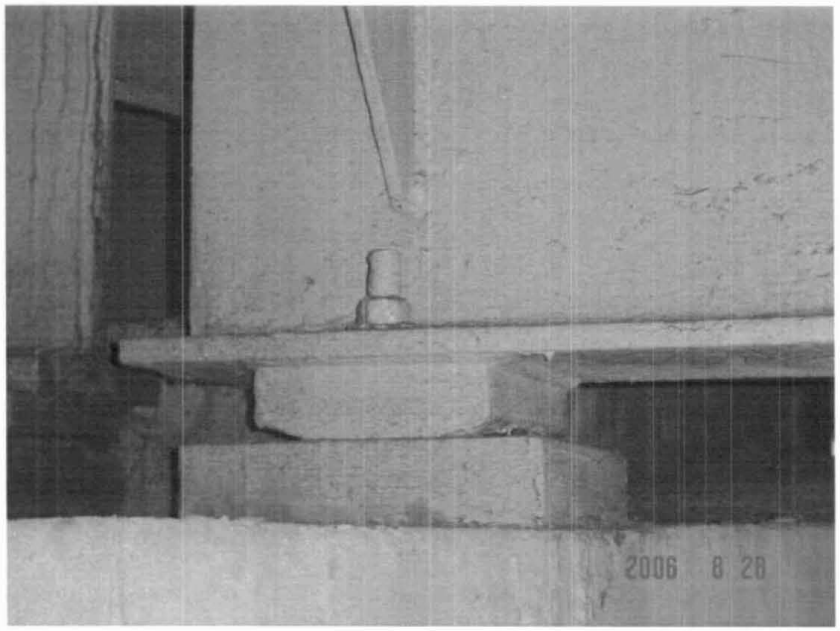

Photo # 21: Typical fixed bearing.

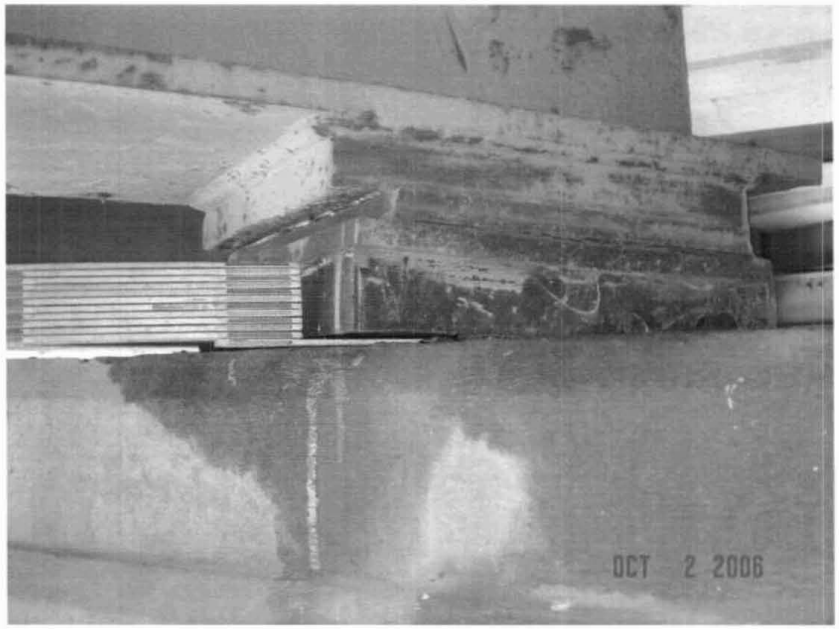

Photo # 22: Typical elastomeric bearing, note gap between elastomeric bearing pad and concrete cap of girder 5 in span 1 on pier ~~1~~6 (Bridge # 01686A).

Bridge No.	01686B	**Inspected by:**	Michael R. Jakiel
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Feature Carried:	Interstate 84 TR 825	**Date Inspected:**	08/28/2006
Feature Crossed:	US Route 44 E.B.& Columbus Boulevard	**Project No.:**	170-2357

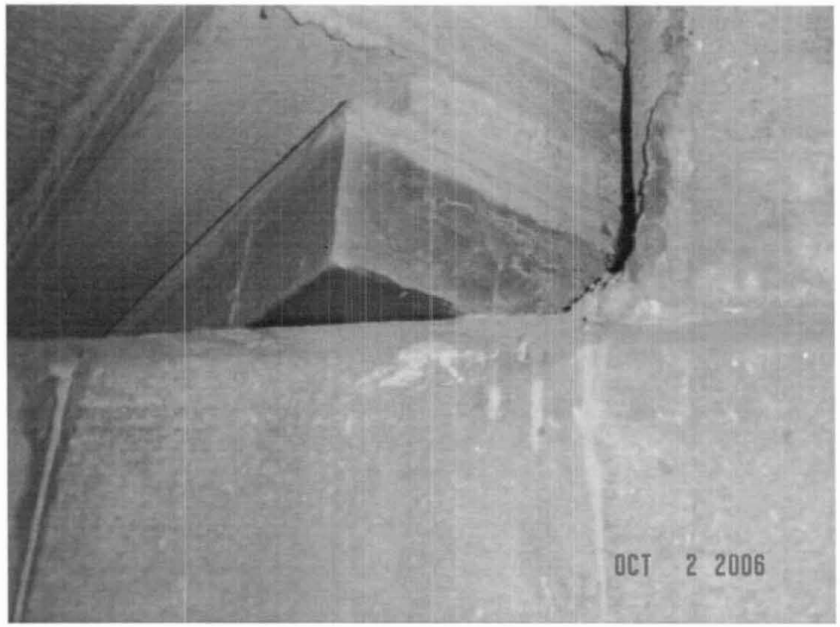

Photo # 23: Typical elastomeric bearing pad overhanging pier cap in span 3 on pier 3.

Photo # 24: Typical bearing of the steel pier cap on column #2 of pier 1, also note 5/8" impacted rust between bearing stiffeners.

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Feature Crossed:	US Route 44 E.B.& Columbus Boulevard	**Project No.:**	170-2357

Photo # 25: Section loss (partially painted over) in the web of girder 1 in span 1 on pier 1.

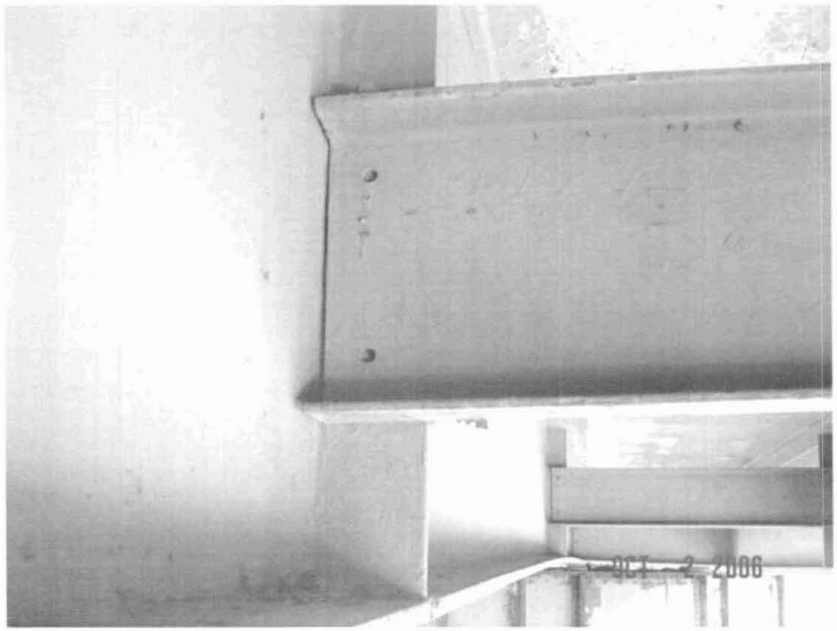

Photo # 26: Missing erection bolts and lower weld on the diaphragm connection to the web stiffener of girder 3 in span 1.

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Feature Crossed:	US Route 44 E.B.& Columbus Boulevard	**Project No.:**	170-2357

Photo # 27: Cracked weld between connection angle and scupper support channel in span 6 adjacent to girder 4.

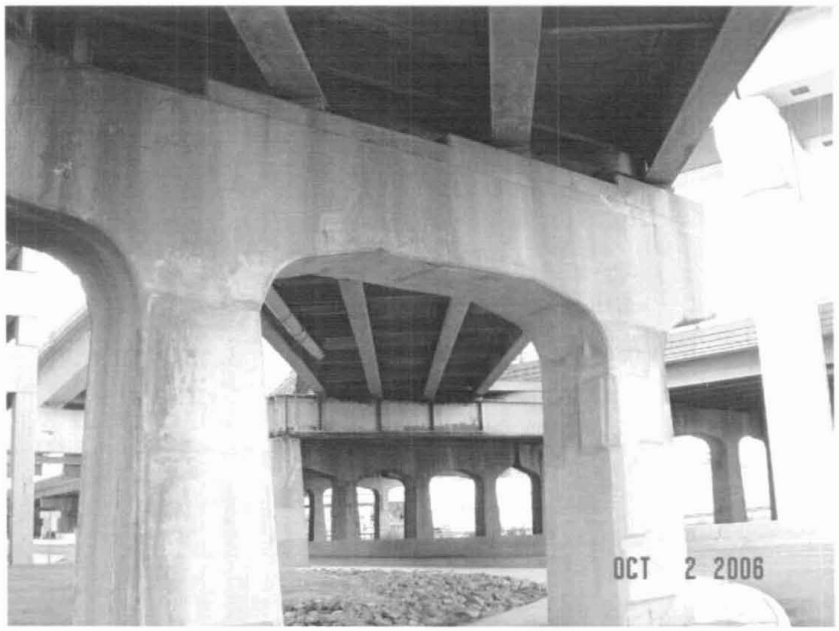

Photo # 28: Typical pier elevation (pier 2).

Bridge No.	01686B	**Inspected by:**	Michael R. Jakiel
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Feature Carried:	Interstate 84 TR 825	**Date Inspected:**	08/28/2006
Feature Crossed:	US Route 44 E.B.& Columbus Boulevard	**Project No.:**	170-2357

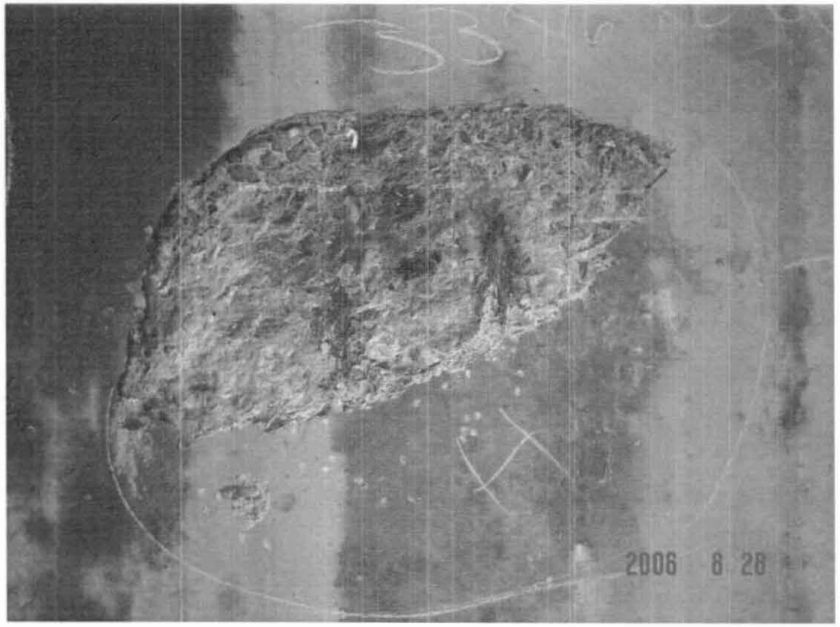

Photo # 29: Large spall with exposed rebar in the west elevation of pier 7.

Photo # 30: Large spall with exposed rebar on the south end (top) of pier 7.

Bridge No.	01686B	**Inspected by:**	Michael R. Jakiel
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Feature Carried:	Interstate 84 TR 825	**Date Inspected:**	08/28/2006
Feature Crossed:	US Route 44 E.B.& Columbus Boulevard	**Project No.:**	170-2357

Photo # 31: Large spall with exposed reinforcing on the south elevation of south column of pier 3.

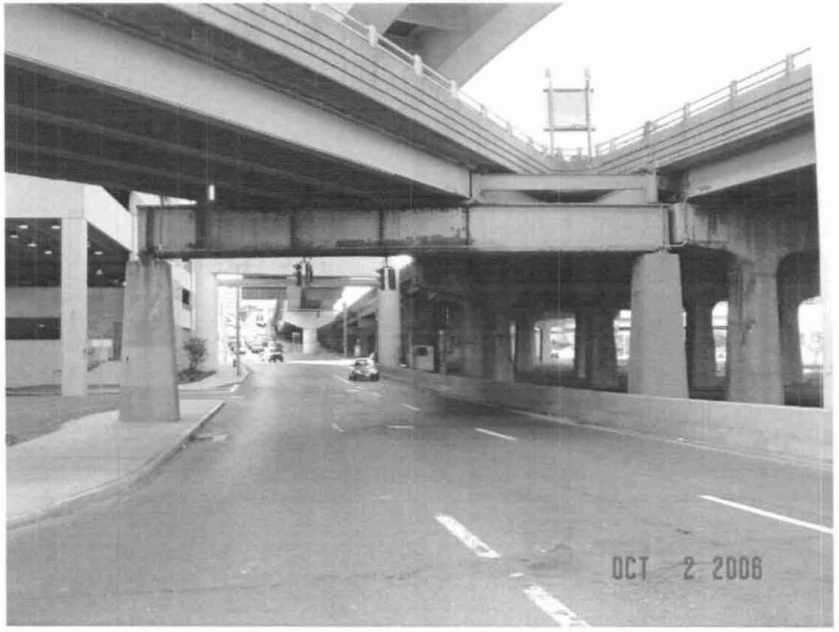


Photo # 32: Typical elevation of pier #1 (steel pier cap).

Bridge No.	01686B	**Inspected by:**	Michael R. Jakiel
Town:	Hartford	**Inspected by:**	Christopher Perry
Feature Carried:	Interstate 84 TR 825	**Date Inspected:**	08/28/2006
Feature Crossed:	US Route 44 E.B.& Columbus Boulevard	**Project No.:**	170-2357

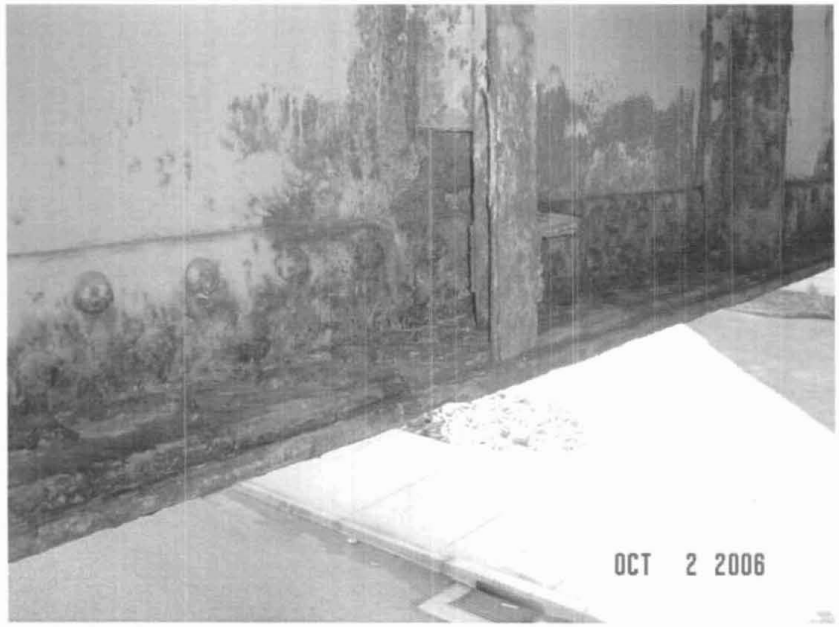
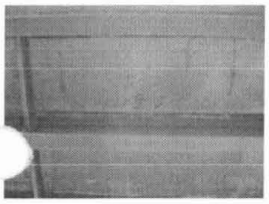


Photo # 33: Heavy rust and section loss on the bottom flange and web of the steel pier cap (pier #1) west elevation.

Photo # 34: Heavy rust and section loss in the bottom flange on the steel pier cap (pier #1).

53/54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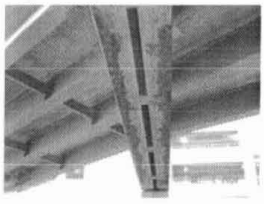
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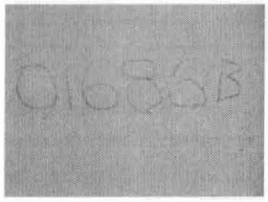
DSC06056

DSC06058

34 2 3 32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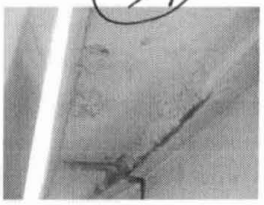
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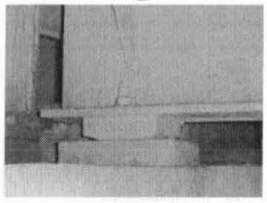
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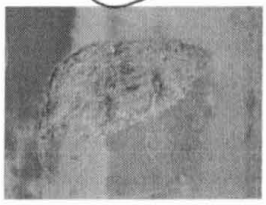
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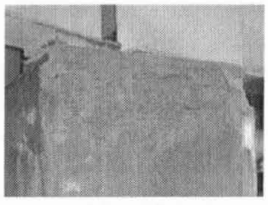
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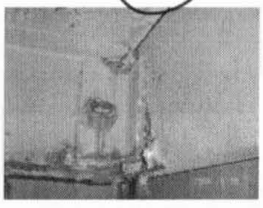
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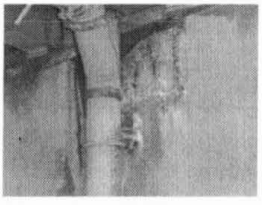
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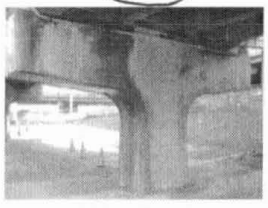
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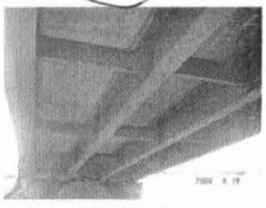
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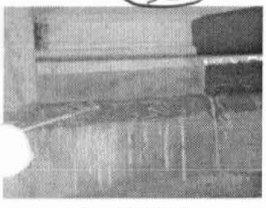
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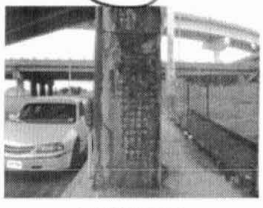
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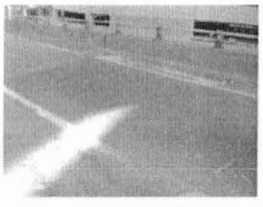
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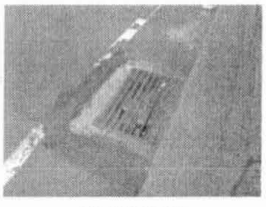
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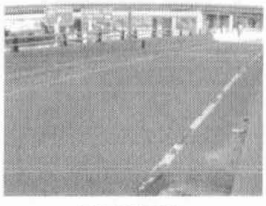
17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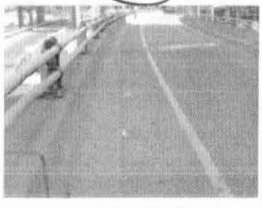
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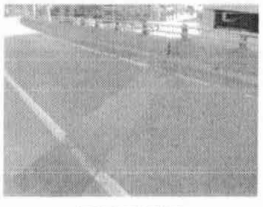
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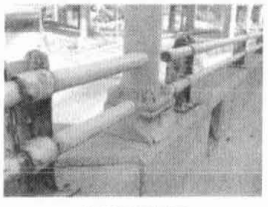
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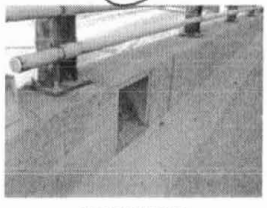
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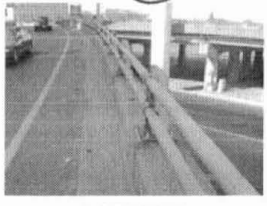
9 19 18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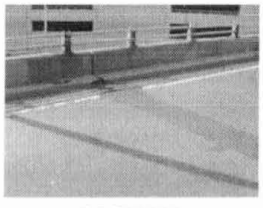
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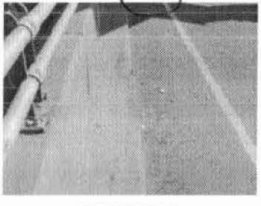
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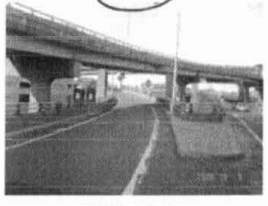
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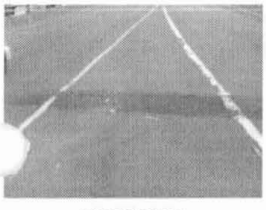
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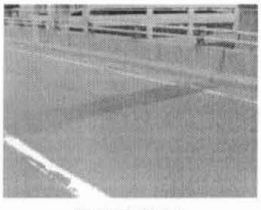
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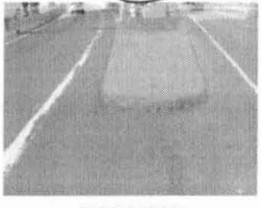
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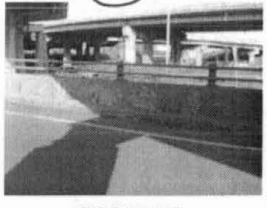
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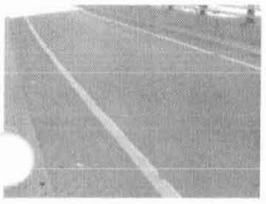
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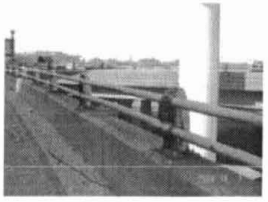
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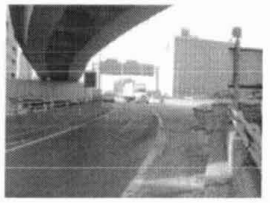
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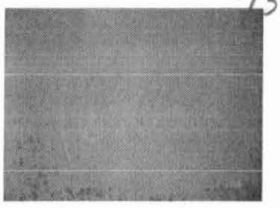
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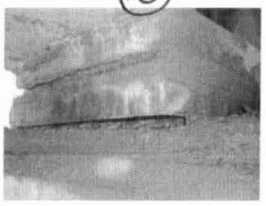
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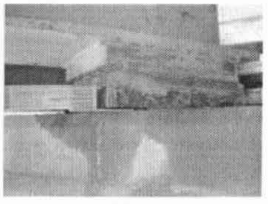
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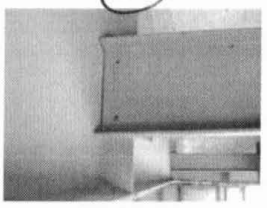
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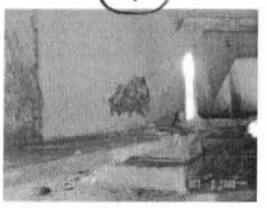
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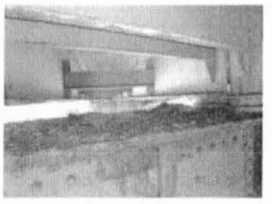
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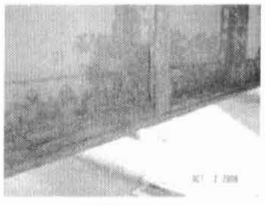
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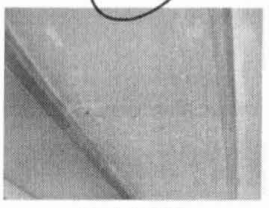
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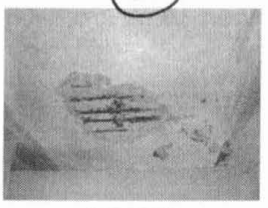
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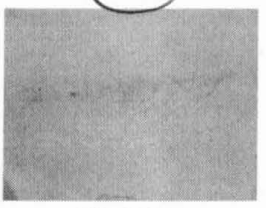
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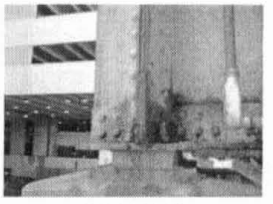
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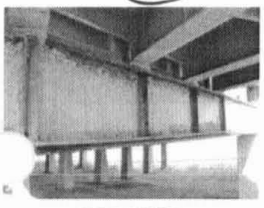
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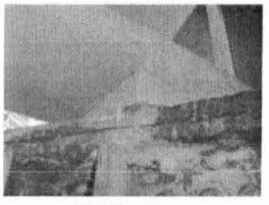
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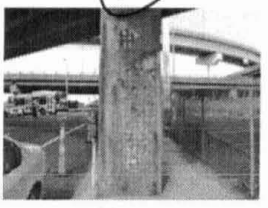
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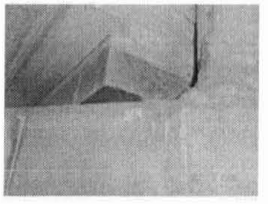
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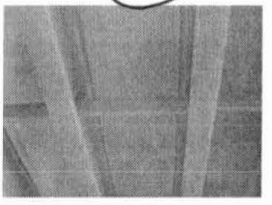
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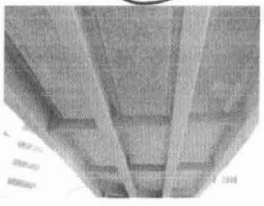
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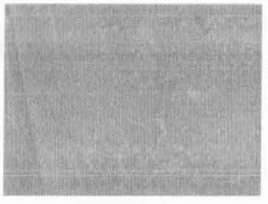
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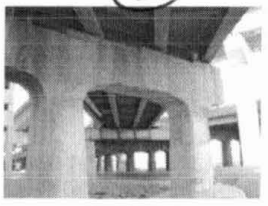
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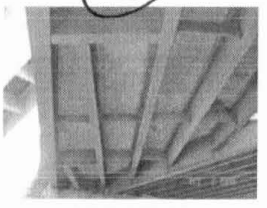
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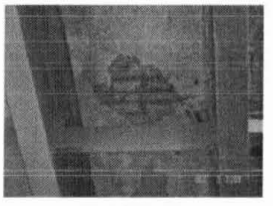
DSC06052

BAKER ENGINEERING NY, INC.

BRIDGE # 01686B

ADDITIONAL FIELD NOTES

(BACK-UP MATERIAL)

DATE: 08/28/2006

PHOTO LOG

Form BRI-13, Rev. 9/97

Bridge Information System

Image Inventory

Bridge No. 01680B Date 10-03-06

Town: Hartford Photographer: JC

Carried / Crossed: I-84 Ramp B25 / Rte 44 EB & Columbus Blvd

Film Frame #	Image Description
1	typ west appr overlay
2	heaving @ P1 jt, south shldr
3	clogged scupper/catch basin, span 1, south shldr
4	typ top of deck
5	typ shldr & ppt
6	typ asph plug jt (P2 shown)
7	Imp dmg to lt. std. span 2 @ p2, north shldr
8	j-box w/o cover, span 2, north shldr
9	typ bridge railing
10	asph plug joint @ P3 jt
11	spall @ north shldr span 6
12	South appr
13	bridge from south appr
14	adhesion failure @ P8 jt
15	typ jt @ P8
16	spalling @ median curb @ P8
17 - 18	spalling @ north ppt, span 6
19	# in span 2
20	imp dmg to north rail, span 2
21	north appr
22	bridge from north appr

PHOTO LOG

Form BRI-13, Rev. 9/97

Bridge Information System

Image Inventory

Bridge No. 016B6B

Date 10/2/2006

Town: _____

Photographer: _____

Carried / Crossed: _____

Film Frame #	Image Description
11	1/2" IR btwn brg stiff ∡'s @ steel pier cap
12	east elev of steel pier cap mes ℄ overhang @ girders
13	spall @ south column, south elev, pier 3
14	pier 3, span 3, typ elastomeric brg pad overhang
15-17	HAs in u-side, midspan pier 3
18	east elev pier 2
19	HA's in u-side, span 1
20	large spall, span 1, bay 1 ← CDOT rem ? rep
21	HA's in span 1
22	hvy rust @ steel pier cap bot ℄
23	south elev
24	north elev
25	typ pier 1 elev

PHOTO LOG

Form BRI-13, Rev. 9/97

Bridge Information System

Image Inventory

Bridge No. 01686B

Date 8/28/06

Town: HARTFORD

Photographer: CP, MPJ

Carried / Crossed:

Film Frame #	Image Description
1	ID
2	FRAMING GUIDE SPAN NEAR P6, SPAN 7 (SOUTH)
3	G1, P7 UNDERSIDE OF CONT. BRG PAD.
4	TYP FIXED BRG.
5	LARGE SPALL AT W. ELEV. P7
6	SOUTH END P7 SPALL
7	CRACKING WELD BTWN SCUPPER CHANNEL SUPPORT & ANGLE SUPPORT
	IN SPAN 6, NOT G4.
8	LARGE SPALL IN W. ELEV. P6
9	TYP PIER ELEVATION (PIER 5 EAST ELEV)
10	TYP SUPERSTRUCTURE / UNDER SPAN 5
11	GAP BTWN PAD & PIER CAP SPAN 4, G3 over P4
12	LARGE SPALL OF PIER 3 SOUTH ELEV. DUNKY CONCRETE
	10/2/2006
1	I.D.
2	Girder 6 PIER 0 or PIER 6 (1686A) EATON PAD GAP
3	GIRDER 5 " "
4.	Missing ~~welds~~ & Erection Bolts on DIAPHRAGM S1
5.	S.L on web OF Girder 1 on pier CAP S1
6	Hvy RUST S.L on TOP OF PIER CAP T.F.
7	" " Bot OF PIER CAP B.F. & web.
8, 9, 10	BAYS 1 & 2 SPAN 1 WITH HA'S over TRAFFIC.
11	

From: "Statchen, Ned T." <Ned.Statchen@po.state.ct.us>
To: "Hiscox, David" <David.Hiscox@po.state.ct.us>
Date: 10/2/2006 3:37 PM
Subject: Br#01686B Hartford BMM # 06-369 - Priority A

CC: "Ference, Alan J." <Alan.Ference@po.state.ct.us>, "Dumas, Sandra A." <Sa...

Hi Dave, Just to fill you in...
Baker Engineers were inspecting Br# 01686B Hartford I-84 Ramp 825 over Route 44 & Columbus Blvd today, 10-2-06.
They called in hollow concrete over Rte 44 and Columbus Blvd. They removed some themselves with 3 lb. hammers but said there was still some requiring removal. I called Hartford Bridge directly to try to get some one out there right away while Baker still had Traffic Control up. I spoke with Alan Farence who was able to get a crew to go out there right away to remove the bad areas, and then follow it with a clean and coat of the exposed rebar.

I will forward you BMM # 06-369 - Priority A in a day or two. Thanks.

Ned Statchen
DOT Bridge Safety
594-3169

From: Paul McGuinness
To: james.barilla@po.state.ct.us; sandra.dumas@po.state.ct.us; Statchen, Ned
Date: 10/2/2006 1:15 PM
Subject: Priority A/B Potential spalls at Br. 1686B in Htfd.

CC: Jakiel, Michael; Kristoff, William; Moravej, Ghasem

Sandy, Ned & Jim,

This email is a follow-up to a brief call to Jim Barilla a few minutes ago.

Our crew leader, Mike Jakiel (cell# 860-205-3108) called me at 1PM to let me know that they identified several spalls, potential spalls and hollow areas on the underside of deck of Br. 1686B over Route 44 EB. They are now inspecting the deck over Columbus Blvd.

The most loose potential spalls were removed by our crew; however, there remain significant potential spalls over the left lane of Route 44 EB.

Our crew will be at the bridge for the remainder of today with local police and TC signage, in case CDOT would like to have Maint. use it for a look or even possible quick removal with pneumatic tools. FYI, we do not plan to return wth TC in future days.

Please call myself or Mr. Jakiel to discuss or if you desire a Priority Memo generated.

Thank you.

Paul

Paul McGuinness, PE

Project Manager
Baker Engineering
2096-B Silas Deane Highway
Rocky Hill, CT 06706

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Fax 860-529-6627
email: pmcguinness@mbakercorp.com