

CITY OF NORWICH PUBLIC WORKS DEPARTMENT

RFQ 11-04

The City of Norwich is seeking to engage a Consulting Engineering firm to provide engineering services for the preparation of a Rehabilitation Study Report for the following transportation project:

State Project No. 103-TBD (*Temporary*) Rehabilitation of the Sunnyside Street Bridge over Yantic River

The project involves the rehabilitation of Bridge No. 04746, which carries Sunnyside Street over the Yantic River in Norwich, CT. The extent of the improvements will be determined after the completion of a Rehabilitation Study, which will be prepared by the selected consultant. It is anticipated that these improvements will include formalizing an alternating one-way traffic pattern over the bridge, rehabilitation of the superstructure, and scour protection installation. Additional improvements may include but not necessarily be limited to full depth reconstruction of roadway approaches; upgrading of bridge rails, roadway railing and sidewalks; and utility adjustments.

The Consulting Engineering firm selected may also be required to perform survey; provide engineering services for and including the preparation of contract plans and documents for construction of the improvements determined from the Rehabilitation Study; prepare environmental documents; and perform construction inspection. The projected construction cost is expected to be in the range of \$ 1.0 million. Firms responding to the request should be of adequate size and sufficiently staffed to perform the assignment described above.

The Consulting Engineering firm will be evaluated and selected based on design and technical competence, the capacity and capability to perform the work within the time allotted, past record of performance, and knowledge of Federal, State, and Municipal procedures, approximately weighted in descending order of importance.

The design fee will be negotiated on a Lump Sum basis.

A goal of ten percent (10%) of the work must be subcontracted to Disadvantaged Business Enterprises (DBE).

The selected firm must meet all Municipal, State, and Federal affirmative action and equal employment opportunity practices.

A letter of interest, together with general information on the firm and proposed subconsultants, the firm's brochure, current Federal Form SF330, experience of the firm, and resumes of key personnel shall be addressed to: the City of Norwich, Mr. William Block, City Purchasing Agent, 100 Broadway, Norwich, CT 06360. Please submit five (5)

copies of the proposal, with the project name clearly mark on the exterior of the submittal. Inquiries should be directed to Mr. Patrick McLaughlin, City Engineer @ 860-823-3798.

Additionally, all interested firms must submit a detailed statement including the organizational structure under which the firm proposes to conduct business. Proposed subconsultants should be clearly identified. The relationship of any "parent" firm or subsidiary firm, to any of the parties concerned, must be clearly defined.

Personnel in responsible charge of the project will be required to possess and maintain a valid Connecticut Professional Engineer's License. All letters of interest must be postmarked by a U.S. Post Office (if mailed) or brought to Mr. William Block, City Purchasing Agent, at the above address (if hand delivered) no later than 3:00 pm, on Wednesday, March 16, 2011. Responses received after this date will not be considered.

William Block

A handwritten signature in black ink, appearing to read "Wm. Block", written in a cursive style.

City purchasing Agent



WILLIAM BLOCK
PURCHASING AGENT
Phone: (860) 823-3706
Fax: (860) 823-3812

100 Broadway Room 105
Norwich, CT 06360-4431

bblock@cityofnorwich.org

February 11, 2011,

Ladies/Gentlemen:

RFQ 11-04

Subject: **Request for Letter of Interest**
State Project No. 103-TBD (*Temporary*)
Federal-aid Project No. (PE) 6103(TBD) (*Temporary*)
Project Title: **Rehabilitation of the Sunnyside Street Bridge over
Yantic River**
City of Norwich

Your firm is one of the firms that have been pre-qualified for calendar year 2011 by the Connecticut Department of Transportation (Department) to provide Bridge and Structural Design services.

The City of Norwich is seeking to engage a Consulting Engineering firm to perform design services for the rehabilitation of the Sunnyside Street Bridge over the Yantic River. The extent of the improvements will be determined after the completion of a Rehabilitation Study, which will be prepared by the selected consultant. It is anticipated that these improvements will include formalizing an alternating one-way traffic pattern over the bridge, rehabilitation of the superstructure, and scour protection installation. Additional improvements may include but not necessarily be limited to full depth reconstruction of roadway approaches; upgrading of bridge rails, roadway railing and sidewalks; and utility adjustments.

Successful respondents to this request may also be required to perform survey; provide engineering services for and including the preparation of contract plans and documents for construction of the improvements determined from the Rehabilitation Study; prepare environmental documents; and perform construction inspection. Firms responding to this request should be of adequate size and sufficiently staffed to perform the assignment described above.

If your firm desires to be considered for this assignment, your submittal should consist of a letter of interest, general information on the firm and proposed subconsultants, the firm's brochure, current Federal Form SF330, relevant experience of the firm and subconsultants, and resumes of key personnel. Additionally, all interested firms must submit a detailed statement including the organizational structure under which the firm proposes to conduct business. Proposed subconsultants should be clearly identified. The relationship of any "parent" firm or subsidiary firm to any of the parties concerned must be clearly defined. Five copies of the submittal must be postmarked by March 16th (if mailed)

or brought to Mr. William Block, City Purchasing Agent, 100 Broadway, Norwich, CT 06360, (if hand delivered) no later than 3:00 p.m. of that date. Responses received or postmarked after this date will not be considered.

Your firm will be evaluated and selected based on design and technical competence, the capacity and capability to perform the work within the time allotted, past record of performance, and knowledge of Federal, State, and Municipal procedures, approximately weighted in descending order of importance. The selected firm must meet all Municipal, State, and Federal affirmative action and equal employment opportunity practices.

For a DBE goal:

You are advised that there is a ten percent (10%) Disadvantaged Business Enterprises (DBE) subconsultant usage goal that applies to this assignment. Within the letter of interest narrative, you must include the designated certified DBE subconsultant(s) which you plan to use. (The DBE subconsultants must be currently certified by the Department). All firms are advised that the prime consultant must perform the major part of the work with employees of the firm. Subconsultants may be used to comply with DBE requirements or perform specialized work. Joint venturing assignments will not be allowed.

Prior to the negotiations process, the selected firm will be required to have a Connecticut Department of Transportation-approved audit and affirmative action plan, as well as current corporate registration with the Secretary of State (partnerships excluded). The selected firm will also be required to maintain professional liability insurance coverage from a firm licensed to do business in the State of Connecticut. Proof of coverage must be submitted prior to the start of the negotiations process.

Circumstances may require the rescheduling or cancellation of projects. Should this action be necessary, the City would be under no obligation to provide supplementary work.

All letters of interest shall be addressed to:

Mr. William Block, City Purchasing Agent
100 Broadway
Norwich, CT 06360

Please be advised that firms must also be pre-qualified in the particular year a shortlist is finalized and/or a selection is made.

Very truly yours,

A handwritten signature in black ink, appearing to read 'Wm. Block', with a stylized flourish at the end.

William Block
City Purchasing Agent

STRUCTURE NO. 04746

SUNNYSIDE STREET

over

YANTIC RIVER

NORWICH

Indepth Inspection

on

9/23/2008

Inspected by Baker - 23

for Area 4

TEAM:	Forwarded to TE3	Sandra Dumas	Date	5/8/2009
TE3:	Reviewed by TE3	Sandra Dumas	Date	5/12/2009
	BMM Required		No	
	Town Bridge		Yes	
	Rating <= 5 (Items 58,59,60 or 62)		No	
	Forwarded to Supervisor	Sandra Dumas	Date	5/12/2009
	Forwarded to "To Be Copied Drawer"	☐	Date	
	Date BRI-19 Entered		5/15/2009	
SUPERVISOR:	Reviewed by Supervisor	Sandra Dumas	Date	5/26/2009
SUPPORT:	Date Copies Made	5/29/09	BMM No	town
	Scanned By:	80	Date Scanned	5/29/09
			PDF Box No	

NBI: Yes

STRUCTURE EVALUATION

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

SHEET _____ OF _____

Bridge Number	04746	NBIS Length	
Town Name	NORWICH	Yes 166	
Facility Carried	SUNNYSIDE STREET		
Feature Crossed	YANTIC RIVER		

Inspected By: M. Orlovsky & T. Kurusz

LOAD RATING AND POSTING

31) Design Load	0	Evaluation Code	
63) Operating Rating Type	5	Year of Evaluation	2001
64) Operating Rating	58.0	70) Bridge Posting	5
65) Inventory Rating Type	5	41) Structure Status	A
66) Inventory Rating	34.0		

CONDITION

APPRAISALS

58) Deck	N	Rating	By
59) Superstructure	6	67) Structure Evaluation	6
60) Substructure	6	68) Deck Geometry	2
61) Channel & Chan. Protection	7	69) Under Clear Vert & Horiz	N
62) Culverts	N	71) Waterway Adequacy	3
		72) Approach Rdwy Alignment	5
		113) Scour Critical	4

Items 58 Thru 72 Checked By: S. Dumas

36) Traffic Safety Features:

A) Bridge Railings	1
B) Transitions	0
C) Approach Guardrail	0
D) Approach Guardrail End	0

OTHER FEATURES

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

INSPECTION COMMENTS

Proposed Next Indepth Insp Year: 2008

Senior: Don Carlson

Supervisor: Joseph Kozlowski

REVIEWED BY: S. Dumas Date: 5/12/09

CLASSIFICATION

112) NBIS Bridge Length	Yes	
104) Highway System	0	Off System
26) Functional Class	19	Urban Local
100) Defense Highway	0	Not Defense Highway
101) Parallel Structure	N	No parallel structure exists
102) Direction of Traffic	3	One lane bridge for 2-way traffic
103) Temporary Structure	0	
110) Designated National Network	3	Not on national network
20) Toll	4	On Free Road
21) Maintain	4	City or Municipal Highway Agency
22) Owner	4	City or Municipal Highway Agency
Report Class	L	LOCAL
37) Historical Significance	1	On National Register

WATERWAY

Drainage Basin Code	3900
38) Navigation Control	0
39) Navigation Vert Clr.	0
116) Vert-Lift Brg Nav Min	0
111) Pier Abutment Protection	0

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	
114) Future ADT	
115) Year Future ADT	

POSTED SIGNS & UTILITIES

Other Posted Signs 1	Blank
Other Posted Signs 2	Blank
Actual P.L. Single Unit Truck	tons
Rec. P.L. Single Unit Truck	tons
Actual P.L. Semi-Trailer Truck	tons
Rec. P.L. Semi-Trailer Truck	tons
Actual P.L. All Vehicles	tons
Rec. P.L. All Vehicles	tons
Posted Vert Clearance On Bridge	ft
Posted Vert Under Clearance	ft
Posted Speed Limit	mph

Structure Inventory and Appraisal Sheet (English Units)

Bridge Key: 04746

Agency ID: 04746

Sufficiency Rating: 64.5

IDENTIFICATION

State 1: 09 Connecticut Struc Num 8: 04746
 Facility Carried 7: SUNNYSIDE STREET Location 9: 40 FT EAST OF FRANKLIN RD
 Rte (On/Under) 5A: Route On Structure Rte. Signing Prefix 5B: 5 City Street
 Level of Service 5C: 0 None of the below Rte. Number 5D: 00000
 Directional Suffix 5E: 0 N/A (NBI) % Responsibility: 0
 SHD District 2: 02 County Code 3: New London
 Place Code 4: NORWICH Mile Post 11: 0.020 mi
 Feature Intersected 6: YANTIC RIVER
 Latitude 16: 41d 33' 36" Longitude 17: 072d 07' 24"
 Border Bridge Code 98: Unknown (P)
 Border Bridge Number 99: NA

INSPECTION

Frequency 91: 24 months Inspection Date 92: 9/24/2009 Next Inspection: 09/24/2010
 FC Frequency 92A: NA FC Inspection Date 93A: NA Next FC Inspection: NA
 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: 09/24/2009 Next Elem. Insp. Due: 09/24/2010

CLASSIFICATION

Defense Highway 100: 0 Not a STRAHNET hwy Parallel Structure 101: No || bridge exists
 Direction of Traffic 102: 3 1-lane Br for 2-way Temporary Structure 103: Unknown (NBI)
 Highway System 104: 0 Not on NHS NBIS Length 112: Long Enough
 Toll Facility 20: 3 On free road Functional Class 26: 19 Urban Local
 Historical Significance 37: 1 Br on Natl Reg Hist Pl
 Owner 22: 4 City/Municipal Hwy Agency
 Custodian 21: 4 City/Municipal Hwy Agency

STRUCTURE TYPE AND MATERIALS

Number of Approach Spans 46: 0 Number of Spans Main Unit 45: 2
 Main Span Material/Design 43A/B:
 8 Masonry 11 Arch-Deck
 Deck Type 107: N N/A (NBI)
 Wearing Surface 108A: 8 Bituminous
 Membrane 108B: 8 Unknown
 Deck Protection 108C: N N/A (no deck (NBI))

CONDITION

Deck 58: N N/A (NBI) Super 59: 6 Satisfactory Sub 60: 6 Satisfactory
 Culvert 62: N N/A (NBI) Channel/Channel Protection 61: 5 Bank Prot Eroded

LOAD RATING AND POSTING

Inventory Rating Method 65: 2 AS Allowable Stress Operating Rating Method 63: 2 AS Allowable Stress
 Inventory Rating 68: HS19.8 Operating Rating 64: HS22.0
 Design Load 31: Unknown (NBI) Posting 70: 5 A/Above Legal Loads
 Posting status 41: A Open, no restriction

AGE AND SERVICE

Year Built 27: 1908 Year Reconstructed 108: Unknown
 Type of Service on 42A: 5 Highway-pedestrian
 Type of Service under 42B: 5 Waterway
 Lanes on 28A: 1 Lanes Under 28B: 0 Detour Length 19: 98.6 mi
 ADT 29: 418 Truck ADT 109: 2 % Year of ADT 30: 2009

APPRAISAL

Bridge Rail 36A: 1 Meets Standards Approach Rail 36C: 0 Substandard
 Transition 36B: 0 Substandard Approach Rail Ends 36D: 0 Substandard
 Str. Evaluation 67: 0 Deck Geometry 68: 2 Intolerable - Replace
 Underclearance, Vertical and Horizontal 69: N Not applicable (NBI)
 Waterway Adequacy 71: 3 Intolerable - Correct Approach Alignment 72: 5 Above Tolerable
 Scour Critical 113: 4 Stable, needs action

GEOMETRIC DATA

Length Max Span 48: 74.0 ft Structure Length 49: 168.0 ft
 Curb/Sdwk Width L 50A: 0.0 ft Curb/Sidewalk Width R 50B: 3.3 ft
 Width Curb to Curb 51: 13.5 ft Width Out to Out 52: 20.3 ft
 Approach Roadway Width 32: 19.0 ft Median 33: 0 No median (w/ shoulders)
 Deck Area: 3,368. sq ft
 Skew 34: 0.00° Structure Flared 35: 0 No flare
 Minimum Vertical Clearance Over Bridge 53: 320.1 ft
 Minimum Vertical Underclearance Reference 54A: N Feature not hwy or RR
 Minimum Vertical Underclearance 54B: 0.0 ft
 Minimum Lateral Underclearance Reference R 55A: N Feature not hwy or RR
 Minimum Lateral Underclearance R 55: 327.8 ft
 Minimum Lateral Underclearance L 56: 0.0 ft

PROPOSED IMPROVEMENTS

Bridge Cost 94: \$ 1,000 Type of Work 75: 38 Other Structural
 Roadway Cost 95: \$ 1,000 Length of Improvement 76: 0.3 ft
 Total Cost 96: \$ 2,000 Future ADT 114: 175
 Year of Cost Estimate 97: 2000 Year of Future ADT 115: 2019

NAVIGATION DATA

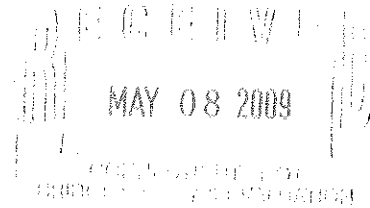
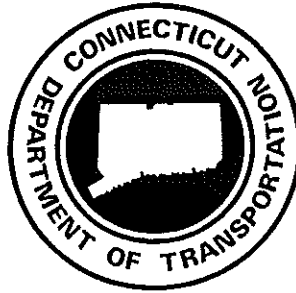
Navigation Control 38: 0 Permit Not Required
 Vertical Clearance 39: 0.0 ft Horizontal Clearance 40: 0.0 ft
 Pier Protection 111: Unknown (NBI) Lift Bridge Vertical Clearance 116:

ELEMENT CONDITION STATE DATA

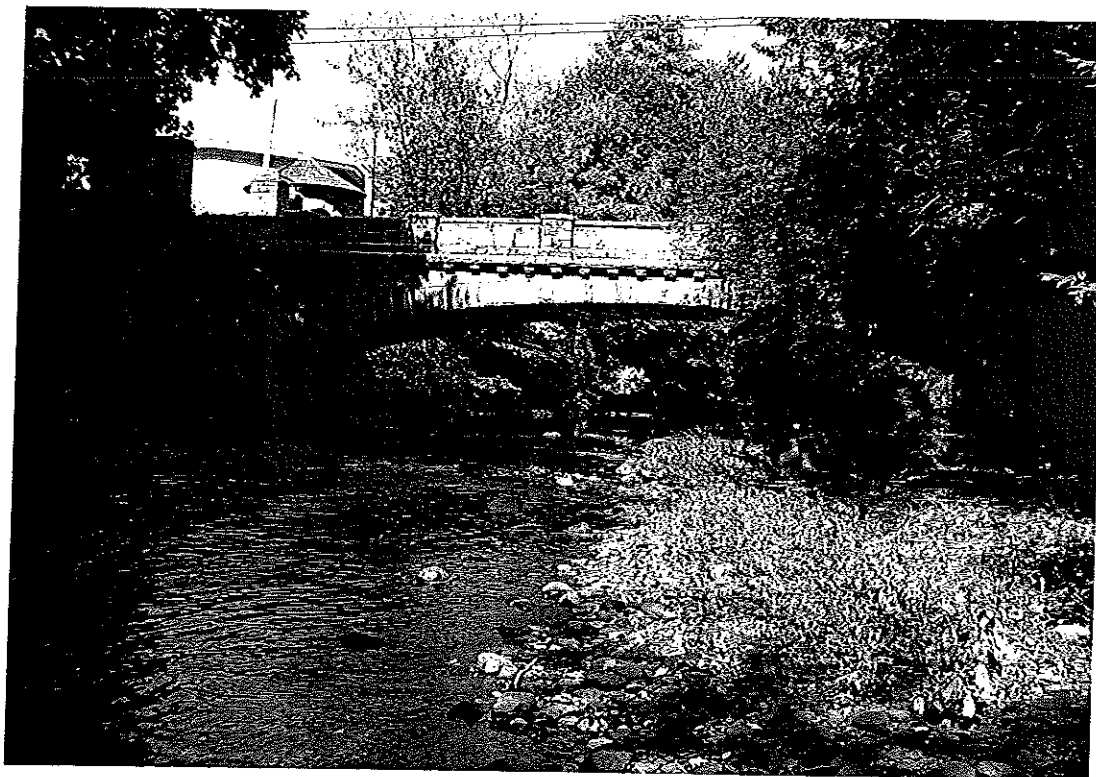
Str Unit	Elm/Env	Description	Units	Total Qty	% in 1	Qty. St. 1	% in 2	Qty. St. 2	% in 3	Qty. St. 3	% in 4	Qty. St. 4	% in 5	Qty. St. 5
UNIT0	58/3	Other Sidewalk	sq.ft	560	100 %	560	0 %	0	0 %	0	0 %	0	0 %	0
UNIT0	145/3	Other Arch	(LF)	108	59 %	64	37 %	40	4 %	4	0 %	0	0 %	0
UNIT0	217/3	Other Mit Abutment	(LF)	82	85 %	70	15 %	12	0 %	0	0 %	0	0 %	0
UNIT0	301/3	Pourable Joint Seal	(LF)	39	31 %	12	0 %	0	69 %	27	0 %	0	0 %	0
UNIT0	333/3	Other Bridge Railing	(LF)	332	94 %	312	6 %	20	0 %	0	0 %	0	0 %	0

BRIDGE SAFETY INSPECTION

STATE PROJECT NO. 170-2729



BRIDGE NO. 04746
SUNNYSIDE STREET OVER YANTIC RIVER
NORWICH, CONNECTICUT
SEPTEMBER 24, 2008
(LAST DAY OF INSPECTION APRIL 7, 2009)

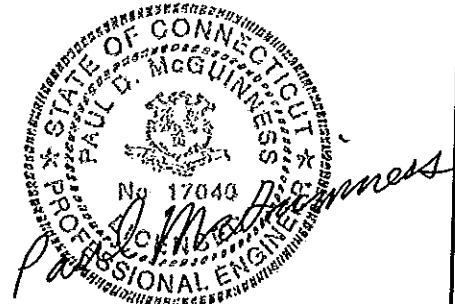


IN-DEPTH INSPECTION

Prepared by:

Baker

500 Enterprise Drive, Suite 2B
Rocky Hill, CT 06067



Structure No. 04746 Town Norwich

Inspectors Michael Baker Engineering, Inc. (MJO/TK)/McLaren (DK, JD, SM) Date 09/24/2008

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BRI-19, HWY Bridge SI&A Form	2
BRI-25, Under Entry SI&A Form	
BRI-39, RR Bridge SI&A Form	--
BRI-49, Sign Structure SI&A Form	--
PONTIS Element Data Collection Form	1
Plan Sheets 1987 Rehab, LPAI Proj. 86101.01	Check here if already on file: ☒

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90) Inspection Date 07/24/08	Inspection Team 23 23	91) Frequency Class: 02
Indepth Insp 7/17/2008	Deck Survey 9/24/08	Access 0
Flagman 0		

CRITICAL FEATURE INSPECTIONS

Fracture:	Type	Frequency	Team	Date
Uwater:				
Special:				

IDENTIFICATION

Bridge Name **NORWICH**
Town Code **56270**
Inventory Route: **5**
A) Record Type **1**
B) Signing Prefix **5**
C) Level of Service **0**
D) Route Number **00000**
E) Directional Suffix **0** NA
City Street **0**
None of the bel **0**

YANKEE RIVER

Feature Intersected **SUNNYSIDE STREET**
Facility Carried: **40 FT EAST OF FRANKLIN RD**

9) Location

11) Milepoint **1.59** Miles
16) Latitude **41deg 33' min**
17) Longitude **72deg 7' min**

98) Border Bridge:

A) State Code **0**
B) Percent Responsibility **0**%
C) Border Town Name **0**
Border Bridge Structure No **0**

STRUCTURE TYPE AND MATERIAL

43) Structure Type, Main:
A) Material **8** Masonry
44) Structure Type, Approach:
A) Material **0** Other
45) Number of Spans, Main Unit **2**
46) Number of Approach Spans **0**
107) Deck Structure Type **0** Not Applicable
108) Wearing Surface/Protective System:
A) Type of Wearing Surface **6** Bituminous
B) Type of Membrane **8** Unknown
C) Type of Deck Protection **N** Not Applicable

AGE AND SERVICE

27) Year Built **1908**
42) Type of Service:
A) On **5** Highway-pedestrian
28) Number of Lanes:
A) On **1**
29) Average Daily Traffic **410**
109) Percent Truck **2%**
30) Year of ADT **2007**
19) Bypass, Detour Length **99 miles**

GEOMETRIC DATA

48) Length of Max Span **74ft**
49) Structure Length **166ft**
50) Curb or Sidewalk Widths:
A) Left **0'0ft**
51) Brg Rdwy width, curb-curb **13'4ft**
52) Deck Width, Out-Out **20'4ft**
32) Approach Roadway Width **19ft**
33) Bridge Median **0** No Median
Deck Area **3386** sqft
34) Skew Angle **0deg**
35) Structure Flared **0**
10) Inv. Rte. Min. Vert Clearance **99ft**
47) Log Inv. Rte. Total Horiz Clr.: **13'4ft**
47) RLog Inv. Rte. Total Horiz. Clr.: **ft**
53) Min Vert Clearance Over Bridge **99ft**
54) Min Vert Under Clearance **N** Ref **0in**
55) Min Lat Under Clearance on Right **N** Ref **99.9ft**
56) Min Lat Under Clearance on Left **0.0ft**

BRIDGE COMMENTS

April 23 2007 - BRI -8 submitted to increase inspection interval to 48 months (JCK)

* ADT based on 1% increase per year.

RED FLAG

STRUCTURE EVALUATION

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

SHEET _____ OF _____

Bridge Number	04746	NBIS Length	
Town Name	NORWICH	Yes	166
Facility Carried	SUNNYSIDE STREET		
Feature Crossed	YANTIC RIVER		

Inspected By: M. Orłowski & T. Kurasz

LOAD RATING AND POSTING

31) Design Load	0	Evaluation Code	
63) Operating Rating Type	5	Year of Evaluation	2001
64) Operating Rating	58.0	70) Bridge Posting	5
65) Inventory Rating Type	5	41) Structure Status	A
66) Inventory Rating	34.0		

CONDITION

58) Deck	N	Rating	By
59) Superstructure	6	67) Structure Evaluation	6
60) Substructure	6	68) Deck Geometry	2
61) Channel & Chan. Protection	7	69) Under Clear Vert & Horiz	N
62) Culverts	N	71) Waterway Adequacy	3
		72) Approach Rdwy Alignment	5
		113) Scour Critical	4

Items 58 Thru 72 Checked By:

36) Traffic Safety Features:

A) Bridge Railings	1
B) Transitions	0
C) Approach Guardrail	0
D) Approach Guardrail End	0

OTHER FEATURES

Fence Required	No	Barrel Ladder	No
Fence Present	No	Stand Pipes	No
Fence Height	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: 2008

Senior: Don Carlson

Supervisor: Joseph Kozlowski

PE #17040 5/7/09

REVIEWED BY: _____ Date _____

CLASSIFICATION

112) NBIS Bridge Length	Yes	0	Off System
104) Highway System	19	Urban Local	
26) Functional Class	0	Not Defense Highway	
100) Defense Highway	N	No parallel structure exists	
101) Parallel Structure	3	One lane bridge for 2-way traffic	
102) Direction of Traffic			
103) Temporary Structure			
110) Designated National Network	0	Not on national network	
20) Toll	3	On Free Road	
21) Maintain	4	City or Municipal Highway Agency	
22) Owner	4	City or Municipal Highway Agency	
Report Class	L	LOCAL	
37) Historical Significance	1	On National Register	

WATERWAY

Drainage Basin Code	3900
38) Navigation Control	0
39) Navigation Vert Clr.	0
116) Vert-Lift Brg Nav Min	0
111) Pier Abutment Protection	Blank

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	

POSTED SIGNS & UTILITIES

Other Posted Signs 1	Blank
Other Posted Signs 2	Blank
Actual P.L. Single Unit Truck	tons
Rec. P.L. Single Unit Truck	tons
Actual P.L. Semi-Trailer Truck	tons
Rec. P.L. Semi-Trailer Truck	tons
Rec. P.L. All Vehicles	tons
Posted Vert Clearance On Bridge	ft
Posted Vert Under Clearance	ft
Posted Speed Limit	mph
Utility	

Structure Inventory and Appraisal Sheet (English Units)

Bridge Key: 04746

Agency ID: 04746

Sufficiency Rating: 64.5

IDENTIFICATION

State 1: 09 Connecticut Struc Num 8: 04746
 Facility Carried 7: SUNNYSIDE STREET Location 9: 40 FT EAST OF FRANKLIN RD
 Rte (On/Under) 5A: Route On Structure Rte. Signing Prefix 5B: 5 City Street
 Level of Service 5C: 0 None of the below Rte. Number 5D: 00000
 Directional Suffix 5E: 0 N/A (NBI) % Responsibility: 0
 SHD District 2: 02 County Code 3: New London
 Place Code 4: NORWICH Mile Post 11: 0.020 mi
 Feature Intersected 6: YANTIC RIVER
 Latitude 16: 41d 33' 36" Longitude 17: 072d 07' 24"
 Border Bridge Code 68: Unknown (P)
 Border Bridge Number 69: NA

INSPECTION

Frequency 91: 24 months Inspection Date 90: 9/24/2008 Next Inspection: 09/24/2010
 FC Frequency 92A: NA FC Inspection Date 93A: NA Next FC Inspection: NA
 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: 09/24/2008 Next Elem. Insp. Due: 09/24/2010

CLASSIFICATION

Defense Highway 100: 0 Not a STRAHNET hwy Parallel Structure 101: No // bridge exists
 Direction of Traffic 102: 3 1-lane Br for 2-way Temporary Structure 103: Unknown (NBI)
 Highway System 104: 0 Not on NHS NBIS Length 112: Long Enough
 Toll Facility 20: 3 On free road Functional Class 28: 19 Urban Local
 Historical Significance 37: 1 Br on Natl Reg Hist Pl
 Owner 22: 4 City/Municipal Hwy Agency
 Custodian 21: 4 City/Municipal Hwy Agency

STRUCTURE TYPE AND MATERIALS

Number of Approach Spans 46: 0 Number of Spans Main Unit 45: 2
 Main Span Material/Design 43A/B:
 8 Masonry 11 Arch-Deck

Deck Type 107: N N/A (NBI)
 Wearing Surface 108A: 6 Bituminous
 Membrane 108B: 8 Unknown
 Deck Protection 108C: N N/A (no deck (NBI))

CONDITION

Deck 58: N N/A (NBI) Super 59: 6 Satisfactory Sub 60: 6 Satisfactory
 Culvert 62: N N/A (NBI) Channel/Channel Protection 61: 5 Bank Prot Eroded

LOAD RATING AND POSTING

Inventory Rating Method 65: 2 AS Allowable Stress Operating Rating Method 63: 2 AS Allowable Stress
 Inventory Rating 66: HS19.8 Operating Rating 64: HS22.0
 Design Load 31: Unknown (NBI) Posting 70: 5 All Above Legal Loads
 Posting status 41: A Open, no restriction

AGE AND SERVICE

Year Built 27: 1908 Year Reconstructed 106: Unknown
 Type of Service on 42A: 6 Highway-pedestrian
 Type of Service under 42B: 5 Waterway
 Lanes on 28A: 1 Lanes Under 28B: 0 Detour Length 19: 99.8 mi
 ADT 29: 418 Truck ADT 109: 2 % Year of ADT 30: 2009

APPRAISAL

Bridge Rail 36A: 1 Meets Standards Approach Rail 36C: 0 Substandard
 Transition 36B: 0 Substandard Approach Rail Ends 36D: 0 Substandard
 Str. Evaluation 67: 6 Deck Geometry 68: 2 Intolerable - Replace
 Underclearance, Vertical and Horizontal 69: N Not applicable (NBI)
 Waterway Adequacy 71: 3 Intolerable - Correct Approach Alignment 72: 5 Above Tolerable
 Scour Critical 113: 4 Stable, needs action

GEOMETRIC DATA

Length Max Span 48: 74.0 ft Structure Length 49: 166.0 ft
 Curb/Sdwk Width L 50A: 0.0 ft Curb/Sidewalk Width R 50B: 3.3 ft
 Width Curb to Curb 51: 13.5 ft Width Out to Out 52: 20.3 ft
 Approach Roadway Width 32: 19.0 ft Median 33: 0 No median
 (w/ shoulders)
 Deck Area: 3,380. sq. ft
 Skew 34: 0.00 ° Structure Flared 35: 0 No flare
 Minimum Vertical Clearance Over Bridge 53: 328.1 ft
 Minimum Vertical Underclearance Reference 54A: N Feature not hwy or RR
 Minimum Vertical Underclearance 54B: 0.0 ft
 Minimum Lateral Underclearance Reference R 55A: N Feature not hwy or RR
 Minimum Lateral Underclearance R 55: 327.8 ft
 Minimum Lateral Underclearance L 56: 0.0 ft

PROPOSED IMPROVEMENTS

Bridge Cost 94: \$ 1,000 Type of Work 75: 38 Other Structural
 Roadway Cost 95: \$ 1,000 Length of Improvement 76: 0.3 ft
 Total Cost 96: \$ 2,000 Future ADT 114: 175
 Year of Cost Estimate 97: 2000 Year of Future ADT 115: 2019

NAVIGATION DATA

Navigation Control 38: 0 Permit Not Required
 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	58/3	Other Sidewalk	sq. ft	560	100 %	560	0 %	0	0 %	0	0 %	0	0 %	0
UNIT0	145/3	Other Arch	(LF)	108	59 %	64	37 %	40	4 %	4	0 %	0	0 %	0
UNIT0	217/3	Other Mt Abutment	(LF)	82	85 %	70	15 %	12	0 %	0	0 %	0	0 %	0
UNIT0	301/3	Pourable Joint Seal	(LF)	39	31 %	12	0 %	0	69 %	27	0 %	0	0 %	0
UNIT0	333/3	Other Bridge Railing	(LF)	332	94 %	312	6 %	20	0 %	0	0 %	0	0 %	0

Executive Summary

Bridge No. 04746 carries Sunnyside Street over the Yantic River in Norwich. The bridge is a two span stone masonry arch that was built in 1908. It has an overall length of 166 feet and a curb-to-curb measurement 13.4 feet. There is no load rating information for this bridge on file at ConnDOT, but the bridge has a "Judgment Rating" of 34 tons. Consideration should be given to performing a load rating analysis of this structure. The bridge was found to be in satisfactory condition during an in-depth inspection completed in April, 2009.

The bituminous overlay has cracking up to 3/4" wide, transverse sawcuts up to 2" wide without sealant, and the overlay near the north curb ramps up 3" over a width of 8". The south curb has random corner spalls at the edges of granite stones. Stone masonry parapets have cracks up to 3/16" wide in the mortar joints, one capstone is shifted 1", and there are areas of missing mortar up to 4.5" deep, worst in span 1. The parapets are tilted outward approximately 1.25" over a height of 1.5' and the north parapet in span 2 is bowed outward 2" – 3" over a length of 20'. The stone masonry guard turrets at the west approach have isolated missing roof sheathing, random deteriorated wood roof shakes, and large sloppy mortar repairs.

The superstructure was found to be in satisfactory condition. The intrados of both spans have heavy efflorescence leakage and areas of water leakage, worst at the ends of the spans. Random mortar joints are cracked up to 1/8" wide and there are random areas of missing mortar up to 2" deep, including at the span 2 crown. The spandrels have isolated cracked stones, random cracked mortar joints up to 1/8" wide, and random areas of missing mortar up to 4" deep. The mortar joints between the spandrels and the arch rings are deteriorated up to 4" deep in span 1 and cracked up to 1/8" wide in span 2 with random hollow and deteriorated mortar up to 2" deep.

The substructure was found to be in satisfactory condition. Abutments have heavy efflorescence leakage and areas of water leakage through the mortar joints. A void/undermined area was noted at the base of the west abutment up to 8' long x 0.5' high x 0.5' deep per McLaren inspection. Previously exposed footing at the east end of span 1 was covered with channel material this inspection. Stone masonry wingwall mortar joints have random cracks up to 1/8" wide, random deteriorated mortar up to 5" deep, and random vegetation/vine growth. The northeast wingwall has stones that are settled and laterally displaced up to 4.5", creating voids up to 2" wide x 15" deep. The southeast wingwall has a 1' x 6" x 7" deep void. Retaining wall at the north elevation is tipping outward, approximately 1.5" over a height of 2.5'.

The channel was found to be in fair condition. The channel is in span 1 only. Channel bed is comprised mainly of large stones and random areas of silt/muck at areas of deeper water. There is scour along the west abutment, where water depths are up to 3.3' (average water depth is 1.6' below the bridge) and a void/undermining is noted at the base of the abutment up to 8' long x 0.5' high x 0.5' deep per McLaren underwater inspection. There is a scour pocket below the bridge at the northeast corner of span 1 where water depths are up to 4.1' deep (typically ±1.5' elsewhere), but the scour pocket does not extend fully to the east abutment.

The approaches were found to be in fair condition. The southwest approach has random uneven patches, heavy map cracking, and areas of potholes/breaking up bituminous, up to 5' x 3' x

2" deep (this area is used for parking). The east approach pavement has heavy map cracking up to 5/8" wide, random areas of up to 1.5" settlement in the shoulders, and isolated potholes/breaking up bituminous up to 8" x 9" x 1" deep. There is minor erosion at the northeast approach. There is no approach guide rail; none is installed at the west approach due to guard turrets.

Repair recommendations are as follows:

Deck:

1. Seal the cracks and the sawcuts in the overlay (± 600 linear feet).
2. Repair corner spalls in the granite curbs ($< 1/4$ cubic yard).
3. Repair deteriorated mortar joints along the parapets (± 250 linear feet).
4. Continue to monitor the tipping of the parapets.
5. Repair deteriorated roof shakes (as required) and missing section of roof sheathing (± 2 square feet) at the guard turrets.

Superstructure:

1. Repair the areas of mortar loss along the intrados and spandrels (± 150 linear feet).
2. Consider removing heavy efflorescence from the ends of the spans to inspect mortar at the intrados.

Substructure:

1. Repair deteriorated mortar joints (± 50 linear feet).
2. Fill in undermined area along the west abutment with suitable material ($< 1/4$ cubic yard).
3. Continue to monitor tipping of the retaining wall at the north elevation.

Channel:

1. Continue to monitor channel mudline elevations.

Approaches:

1. Repair deteriorated bituminous at the southwest approach (< 1 ton).
2. Consider installing approved guide railing at the east approaches (± 50 linear feet).

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Connecticut Department of Transportation

Bridge Inspection Report BRI-18

BRIDGE #: **04746**

INSPECTION DATE:

9/24/2008

INSPECTION TYPE: **Indepth**

PREVIOUS INSPECTION DATE: **7/26/2006**

SNOOPER REQUIRED: **No**

INSPECTION PERFORMED BY: **Baker Engineering**

SNOOPER USED: **No**

TOWN: **NORWICH**

FEATURE CARRIED: **SUNNYSIDE STREET**

YEAR BUILT: **1908**

LOCATION: **40 FT EAST OF FRANKLIN R**

FEATURE INTERSECTED **YANTIC RIVER**

YEAR REBUILT: **0**

MAIN MATERIAL: **Masonry**

MAIN DESIGN: **Arch - Deck**

INSPECTION VISITS:

Inspection Date: **9/24/2008**

Start Time: **8:30 AM**

INSPECTORS:

Inspector: **M. Orlowsky**

Task: **Team Leader**

Temperature: **70** °F

End Time: **4:15 PM**

Inspector: **T. Kurasz**

Task: **Asst. Team Leader**

58. DECK

Stone arch with bituminous roadway over ballast.

OVERALL RATING **P**

RATING

OVERLAY

6

The bituminous overlay has random transverse, longitudinal, and map cracks up to 3/8" wide. Isolated cracks are up to 3/4" wide. The bituminous adjacent to the base of the north parapet is approximately 3" higher than the roadway surface approximately 8" away. There are random sawcuts in the overlay up to 2" wide that are filled with dirt and/or vegetation. No sealant was seen along these sawcuts. See sheets 11-12 and photos 9 - 11.

DECK STR. CONDITION

N

Stone arch with bituminous roadway over ballast.

CURBS

6

South side only: There are random spalls at the edges of the granite stones, up to 7" long x 4" wide x 5" high. Some spalled areas are filled in with bituminous. Random mortar joints are cracked or deteriorated. Average curb reveal was found to be 4.75". See sheets 11 & 12 and photo 9.

MEDIAN

N

SIDEWALKS

7

South side only: Bituminous sidewalk has random minor uneven areas. See sheets 11-12 and photo 9.

PARAPET

5

Stone masonry parapets: Stone masonry parapets have random cracked mortar joints, up to 3/16" wide, and areas of missing mortar, up to 4.5" deep. Mortar deterioration is worst at the outside faces of the span 1 parapets, where approximately 60% of the mortar joints are deteriorated. A capstone at the south parapet in span 1 is shifted south 1". The previously reported 3/8" gap between the parapet and the pillar at the southwest corner of the bridge is open up to a maximum of 5/8". The parapets are tilted outward, up to 1.25" over 1.5'. Additionally, the north parapet at the east end in span 2 appears to be bowed/distorted outward 2" - 3" over a length of 20'. See sheets 11-12 and photo 12.

Stone benches integral with the parapets between spans 1 & 2: One bench stone has a 13" x 4" fracture. Fractured portion did not move when struck with a hammer (wedged in place). See sheets 11-12.

RAILING

N

PAINT

N

FENCE

N

DRAINS

7

Span 1 only: There is minor debris in and around the scupper grates. Debris is present in the basins, but scuppers do not appear to be clogged. See sheets 11-12.

LIGHTING STANDARD

8

There is utility pole in span 1 with a light standard attached. Light exhibited no deficiencies (light was not on during the daytime inspection).

UTILITIES TYPE/SIZE

N

Stone masonry guard turrets at west approach: The north turret has a 2' x 1' missing section of roof. There are random deteriorated shakes along the roofs. There are sloppy mortar repairs at each turret, up to 5' high x 1' wide x 9" deep. There is random graffiti inside of the turrets. See sheets 11-12 and photos 5 & 13.

CONSTRUCTION JOINTS

N

EXPANSION JOINTS

N

Connecticut Department of Transportation
Bridge Inspection Report BRI-18

6/4/

BRIDGE #: 04746

INSPECTION DATE:

9/24/2008

59. SUPERSTRUCTURE

Two span stone masonry arch.

OVERALL RATING 6

	RATING	
BEARING DEVICES	N	
STRINGERS	6	Intrados: There are areas of heavy efflorescence along the mortar joints throughout in each span. There are also areas of water leakage at random areas, mostly at the lower sections of the arch (as opposed to the crown area). Random mortar joints are cracked up to 1/16" wide. There are isolated areas of missing mortar in span 1 up to 2" deep. The transverse mortar joint along the crown in span 2 has missing cracked mortar ($\pm 1/8$" wide) along the north half of this joint and deteriorated/missing mortar up to 1" deep along the south half of this joint. Random areas of previously noted missing mortar may have been hidden by heavy efflorescence accumulations. Also, there are random repairs to the mortar joints, some of which appear recent. See sheets 13-18 and photos 4, 14, & 15. Spandrels: Stone masonry spandrel walls have random cracks along the mortar joints, up to 1/8" wide, and random areas of missing mortar up to 4" deep. The span 1 south spandrel has an isolated cracked stone and small stone spall. The mortar joints between the arch ring and the span 1 spandrel bases are deteriorated throughout. These mortar joints have cracks, punky areas, missing mortar up to 4" deep, and areas of loose/pushing out mortar throughout. These same mortar joints in span 2 have cracks up to 1/8" wide, random light efflorescence, and random hollow and deteriorated mortar up to 2" deep. See sheets 13-18 and photos 16 & 17.
GIRDERS	N	
FLOOR BEAMS	N	
TRUSSES-GENERAL	N	
TRUSSES-PORTALS	N	
TRUSSES-BRACING	N	
PAINT	N	
RUST	N	
MACHINERY MOV SPAN	N	
RIVETS & BOLTS	N	
WELDS & CRACKS	N	
TIMBER DECAY	N	
CONCRETE CRACKING	N	
COLLISION DAMAGE	8	
MEMBER ALIGNMENT	8	
DEFLECT. UNDER LOAD	N	None.
VIBR. UNDER LOAD	N	None.
STAND PIPES	N	
BARREL LADDERS	N	

ARE BARREL LADDERS OSHA COMPLIANT? NA

60. SUBSTRUCTURE

OVERALL RATING 6

	RATING	
ABUTMENTS-STEM	6	Abutments are considered to be those areas below the spring lines at the ends of each span. Abutments have heavy efflorescence leakage and areas of water leakage through the mortar joints. A void/undermined area was noted at the base of the west abutment up to 8' long x 0.5'

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BRIDGE #: 04746

INSPECTION DATE:

9/24/2008

60. SUBSTRUCTURE

OVERALL RATING 6

high x 0.5' deep per McLaren inspection. See sheets 13-18 and photos 14 & 15.

ABUTMENTS-BACKWALL N

ABUTMENTS-FOOTINGS N

A void/undermined area was noted at the west abutment, approximately 8' long x .5' high x 0.5' deep per McLaren underwater inspection. No well-defined footing was noted at this location. Previously exposed footing at the east end of span 1 was covered with channel material this inspection; footing not seen. See sheets 24,25.

ABUT.-SETTLEMENT 5

No evidence of abutment settlement was noted.

Note: For this inspection wingwalls are only considered to be those walls at the four corners of the bridge, perpendicular to the spandrels. Retaining walls perpendicular to the bridge at the east end of span 1 and/or west end of span 2 are for embankment retention, past the limits of this bridge and are not considered for this report.

Wingwall settlement:

North retaining wall between spans 1 & 2 is tipped outward, approximately 1.5" over a height of 2.5'. Additionally the northeast wingwall has stones that are settled and laterally displaced up to 4.5". Previous 8" settlement noted at this location actually appears to be uplift of a concrete pour on top of the wall due to tree root growth just under this concrete pour. See "Embankment Erosion" item under Item 61 for the condition of the retaining walls along the channel. See sheets 19-22 and photo 19.

ABUTMENTS-WINGWALLS 5

Stone masonry wingwall mortar joints have random cracks up to 1/8" wide, random deteriorated mortar up to 5" deep, and random vegetation/vine growth. The northwest wingwall has one missing cap stone. The southwest wingwall has a stone arch for a raceway/stream. The northeast wingwall has two cracked stones, one up to 1/4" wide. In addition, the northeast wingwall has stones that are settled and laterally displaced up to 4.5", creating voids up to 2" wide x 15" deep. The southeast wingwall has one stone that is pushed out 1/2", an area of mortar pushing out, and a 1' x 6" x 7" deep void. See sheets 19-22 and photos 19-21.

Retaining walls between spans 1 & 2 at bridge fascias, below the parapets:

Wall at the north elevation is tipping outward, approximately 1.5" over a height of 2.5'. There are two full height x 1/8" wide cracks along the mortar and isolated missing mortar up to 6" long x 3" deep. The wall at the south elevation was almost completely covered and/or inaccessible due to heavy vegetation at the time of inspection. Accessible areas of this wall have random cracked and deteriorated mortar. See sheets 19-22 and photo 22.

Architectural treatments at the corners of span 1:

There are areas of missing mortar up to 6" deep and water leakage. There treatment at the northeast corner of span 1 has up to 50% deteriorated, mortar and one stone is loose due to deteriorated mortar. See sheets 19-22 and photo 18.

PIERS/BENTS-CAPS N

PIERS/BENTS-PILE BENT N

PIERS/BENTS-COLUMN N

PIERS/BENTS-FOOTINGS N

PIERS/BENTS-SETTLEMENT N

EROSION-SCOUR 5

There is scour along the west abutment, where water depths are up to 3.3' (average water depth is 1.6' below the bridge) and a void/undermining is noted at the base of the abutment up to 8' long x 0.5' high x 0.5' deep per McLaren underwater inspection. There is a scour pocket below the bridge at the northeast corner of span 1 where water depths are up to 4.1' deep (typically $\pm 1.5'$ elsewhere), but the scour pocket does not extend fully to the east abutment. Minor erosion is noted along the east abutment embankments in span 2.

CONCRETE CRACK-SPALL N

STEEL CORROSION N

PAINT N

TIMBER DECAY N

Connecticut Department of Transportation
Bridge Inspection Report BRI-18

8/41

BRIDGE #: 04746

INSPECTION DATE:

9/24/2008

60. SUBSTRUCTURE

OVERALL RATING 6

COLLISION DAMAGE 8

DEBRIS N

61. CHANNEL & CHANNEL PROTECTIO

OVERALL RATING 5

RATING

CHANNEL SCOUR 5

The channel is in span 1 only. Channel bed is comprised mainly of large stones and random areas of silt/muck at areas of deeper water. There is scour along the west abutment, where water depths are up to 3.3' (average water depth is 1.6' below the bridge) and a void/undermining is noted at the base of the abutment up to 8' long x 0.5' high x 0.5' deep per McLaren underwater inspection. There is a scour pocket below the bridge at the northeast corner of span 1 where water depths are up to 4.1' deep (typically $\pm 1.5'$ elsewhere), but the scour pocket does not extend fully to the east abutment.

Just downstream of the bridge, there is a large area of aggradation that forces flow to the west half of the channel. Within this area, there is a 15' x 6' x 1' deep scour area.

See sheets 23-25 and photos 23-25.

EMBANKMENT EROSION 6

Stone retaining walls along the channels have shifted stones, voids, and up to 6" bulging. There are random trees growing in these walls. There are areas of light to moderate erosion along areas with dirt channel banks. There are trees with exposed roots at the southeast channel embankment. See sheet 24 and photo 21.

DEBRIS 6

There is a large roll of fencing below the northwest corner of span 1. There is random minor flood debris along the embankments and random debris in the channel.

VEGETATION 7

Moderate to heavy brush growth along the channel embankments and tops of the retaining walls.

CHANNEL CHANGE 6

See "Channel Scour" item above.

FENDER SYSTEM N

SPUR DIKES & JETTIES N

RIP RAP N

There are large boulders at the southeast embankment, but not organized rip-rap.

62. CULVERTS & RETAINING WALL

OVERALL RATING N

APPROACH CONDITION

OVERALL RATING 5

RATING

APPROACH SLAB N

RELIEF JOINTS N

APPROACH GUIDE RAIL N

None.

APPROACH PAVEMENT 5

West approach: Bituminous approach pavement has random cracks up to 1/2" wide. The south shoulder has random uneven patches, heavy map cracking, and areas of potholes/breaking up bituminous up to 5' x 3' x 2" deep (this area used for parking). See sheets 11-12 and photo 27.

East approach: The east approach pavement has heavy map cracking up to 5/8" wide, random areas of up to 1.5" settlement in the shoulders, and isolated potholes/breaking up bituminous up to 8" x 9" x 1" deep. There are also random patches. See sheets 11-12 and photo 26.

APPROACH EMBANKMENT 7

There is an area of erosion up to 4' x 3' x 5" deep at the northeast approach.

TRAFFIC SAFETY FEATURES:

BRIDGE RAILINGS 1

TRANSITIONS 0

APPROACH GUARDRAILS 0

Bridge Inspection Report BRI-18

BRIDGE #: 04746

INSPECTION DATE:

9/24/2008

APPROACH CONDITION

OVERALL RATING 5

APPR. GUARDRAIL ENDS 0

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. ☐' ☐"POSTED CLR. UNDER BRIDGE ☐' ☐"POSTED CLR. ON BRIDGE ☐' ☐"

ADVANCE WARNING (Y/N) No

SPEED LIMIT (IF ANY) ☐ MPH

CHARACTER OF TRAFFIC

Light volume, mostly passenger cars.

ADDITIONAL NOTES

- No bridge ID.
- Bridge is logged from west to east.
- This bridge is considered to have two sets of abutments (no pier).
- Bridge inspected with ladders, including 10' step ladder.
- Chest waders required.
- Underwater inspection performed this inspection along the west abutment due to water depth and voids/undermining at this location.

ADDITIONAL COMMENTS:

Inspectors' Signatures:

1)

2)

3)

4)

Date: 5/27/09

Date: 05/07/09

Date: __/__/__

Date: __/__/__

P.E. Signature:

P.E.#:

Paul McDunnness
17040

Date: 5/17/09

Reviewed by:

CDOT

Date: __/__/__

SUPPLEMENTAL SHEET

BRIDGE NO. 4746

DATE: SEE BELOW

☒ FIELD ORIGINAL☐ TRANSCRIBED BY: _____

CREW: SEE BELOW

SHEET 10/41

DESCRIPTION: TIME LOG

DATE:	<u>9/24/08</u>	DESCRIPTION:	TIME AT SITE:
WEATHER:	<u>Sunny 60's + 70's</u>	CREW:	<u>MTV, TN</u> <u>7:30</u> TO <u>4:15</u>
EQUIP. LIST:		SNOOPER:	TO
		LIFT:	TO
		CRASH TRUCK:	TO
ARROW HRS.	TO	TROOPER:	TO
VISITORS:			TO
TC & NOTES:	<u>Inst complete with ladders</u>		

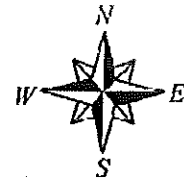
DATE:		DESCRIPTION:	TIME AT SITE:
WEATHER:		CREW:	TO
EQUIP. LIST:		SNOOPER:	TO
		LIFT:	TO
		CRASH TRUCK:	TO
ARROW HRS.	TO	TROOPER:	TO
VISITORS:			TO
TC & NOTES:			

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

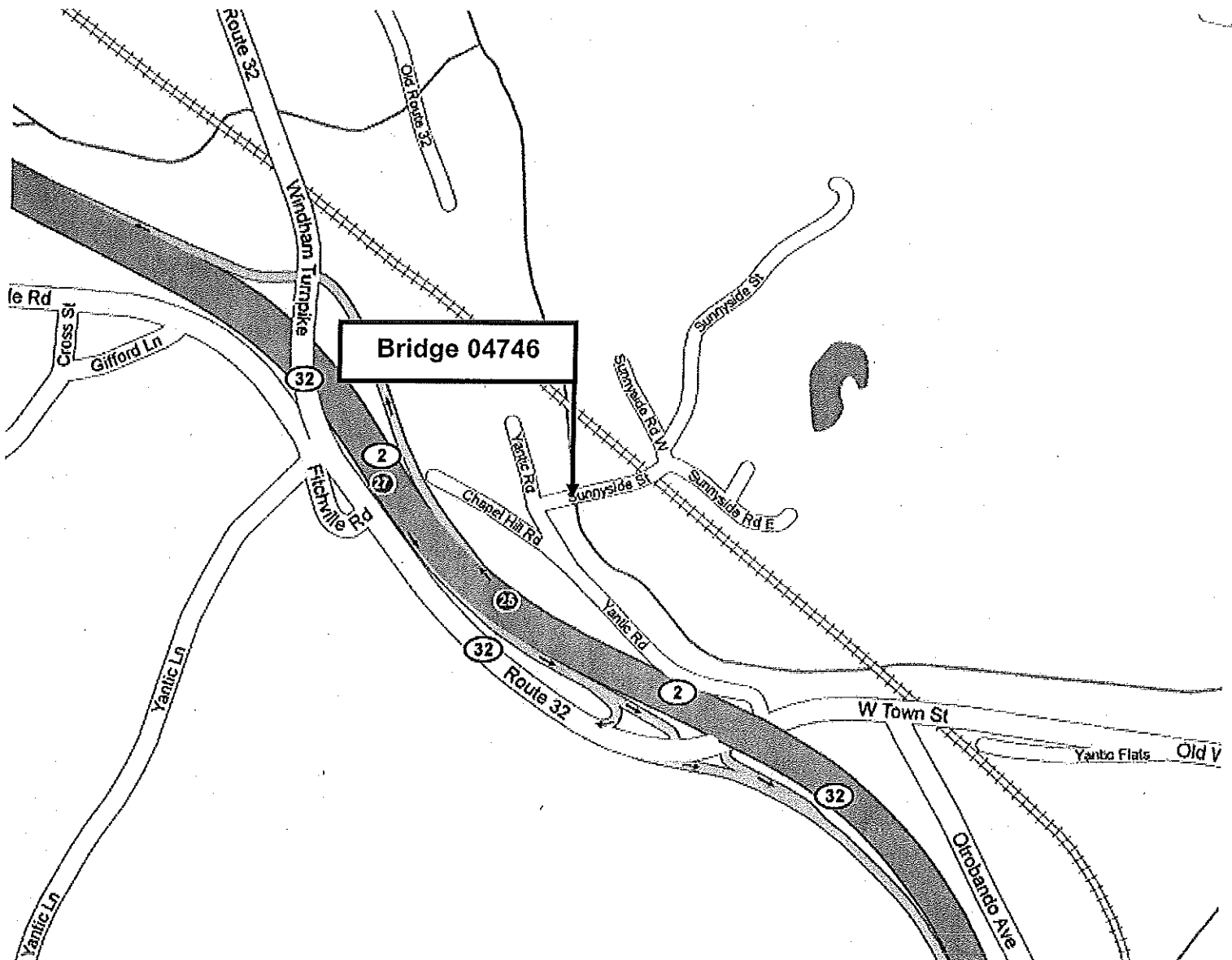
DATE:		DESCRIPTION:	TIME AT SITE:
WEATHER:		CREW:	TO
EQUIP. LIST:		SNOOPER:	TO
		LIFT:	TO
		CRASH TRUCK:	TO
ARROW HRS.	TO	TROOPER:	TO
VISITORS:			TO
TC & NOTES:			



Baker



DESCRIPTION: SUNNYSIDE STREET OVER YANTIC RIVER LOCATION MAP



SUPPLEMENTAL SHEET

☐ FIELD ORIGINAL

☐ TRANSCRIBED BY: _____

JOB NO. 170-²⁷²⁹~~1965~~

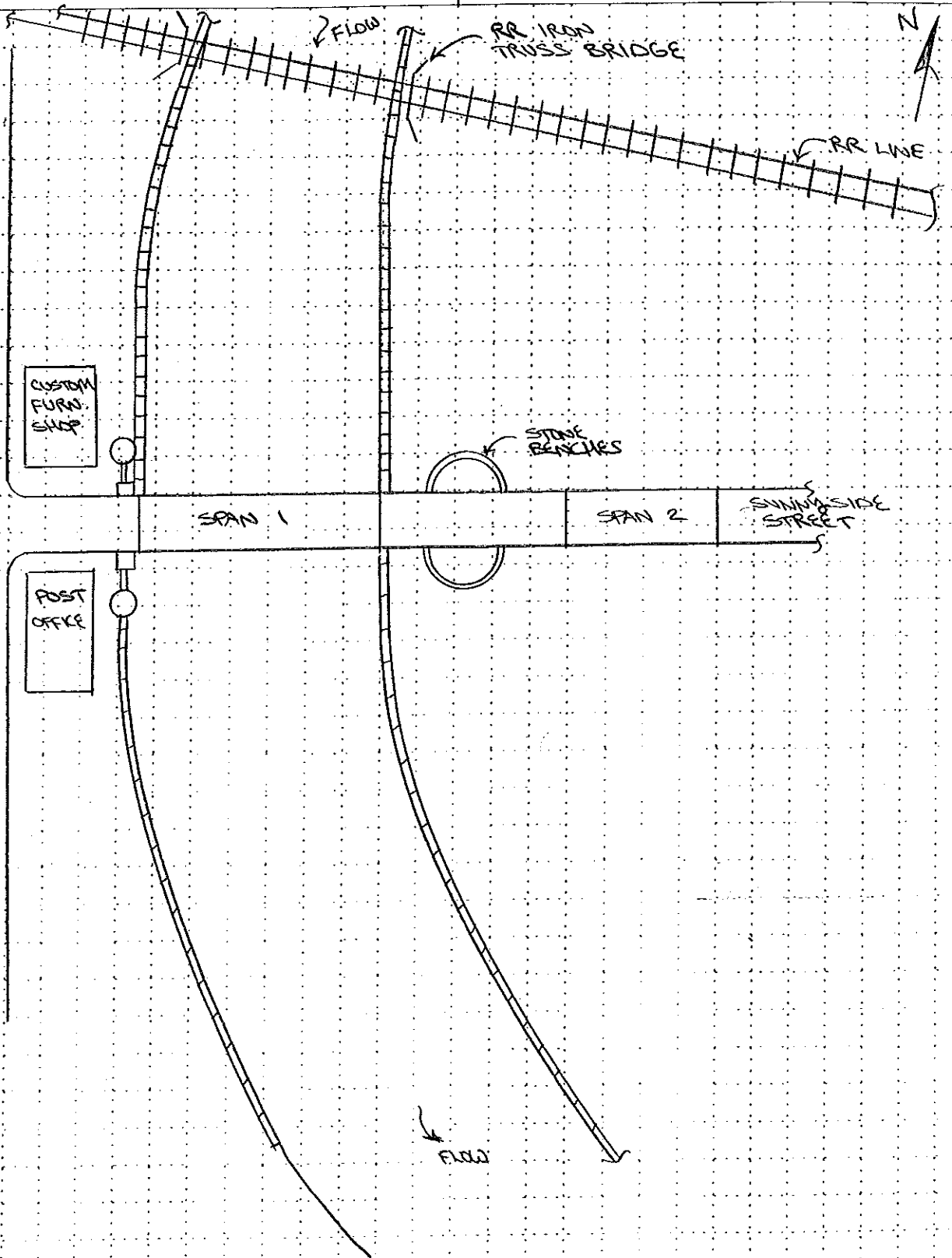
BRIDGE NO. 04746

DATE: 9/24/08

SHEET 10 OF 41

DESCRIPTION: Key Plan - N

CREW: MJO, TK



SUPPLEMENTAL SHEET

BRIDGE NO. 04746

DATE: 9/24/08

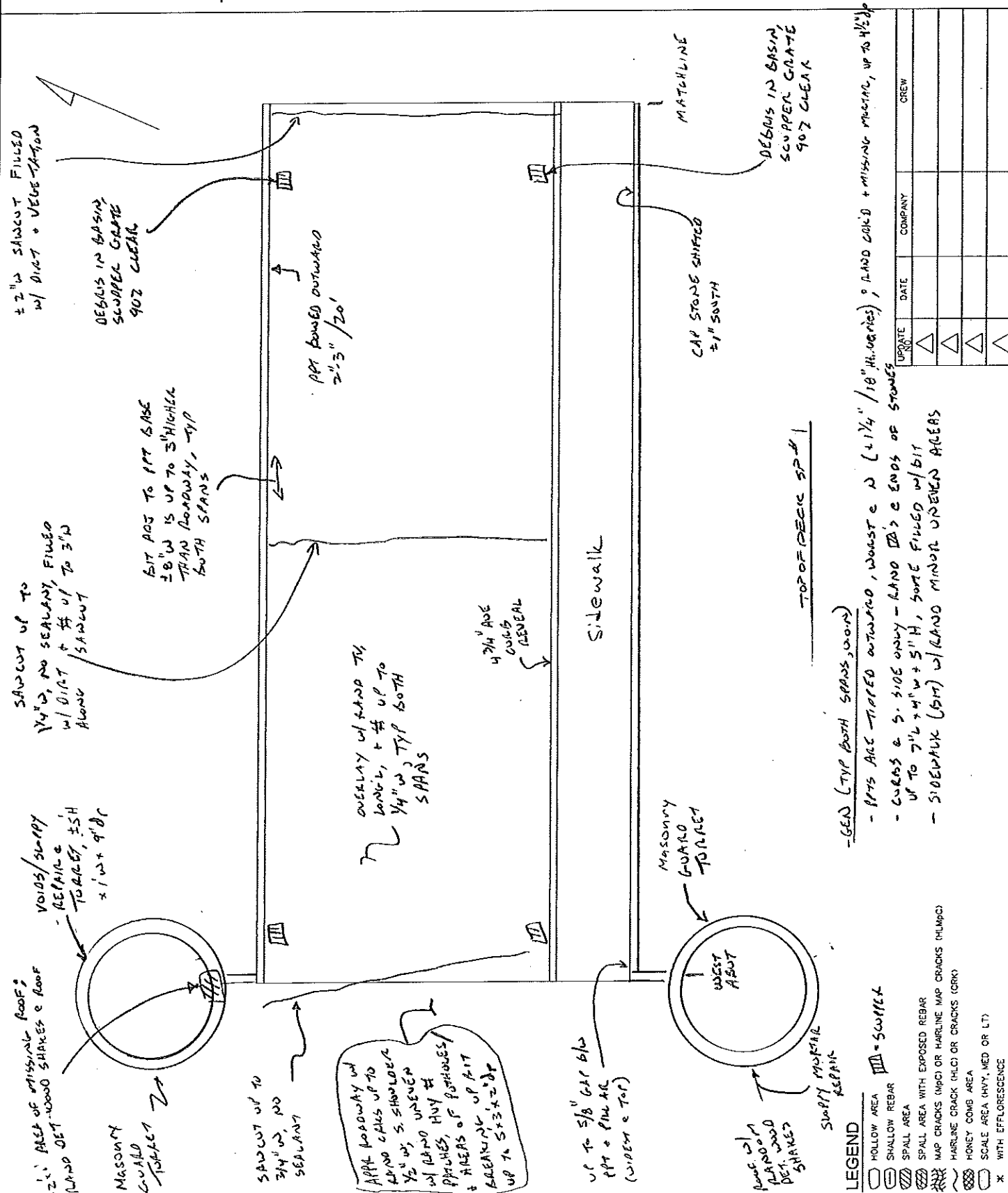
FIELD ORIGINAL

☐ TRANSCRIBED BY: _____

CREW: *AD, TK*

SHEET 11/41

DESCRIPTION: Top of Deck



SUPPLEMENTAL SHEET

☒ FIELD ORIGINAL

☐ TRANSCRIBED BY: _____

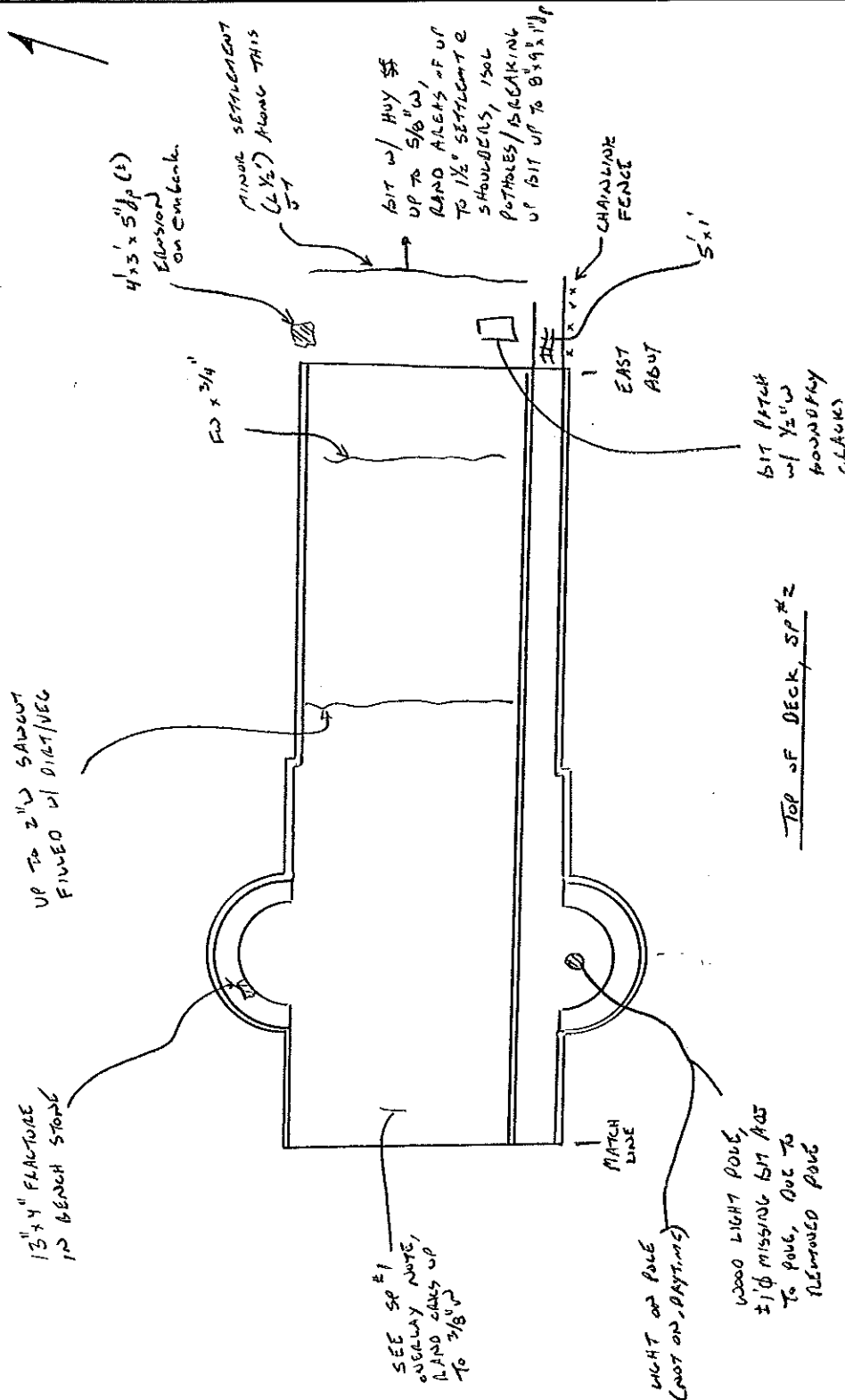
BRIDGE NO. 4746

DATE: 9/24/08

CREW: MW, TK

SHEET 12 OF 41

DESCRIPTION:



UPDATE	DATE	COMPANY	CREW
△			
△			
△			
△			

LEGEND

- HOLLOW AREA
- SHALLOW REBAR
- SPALL AREA
- SPALL AREA WITH EXPOSED REBAR
- MAP CRACKS (MPC) OR HARLINE MAP CRACKS (LMPC)
- HARLINE CRACK (HLC) OR CRACKS (CRK)
- MONEY COMB AREA
- SCALE AREA (VNT, MED OR LT)

SUPPLEMENTAL SHEET

FIELD ORIGINAL

TRANSCRIBED BY: _____

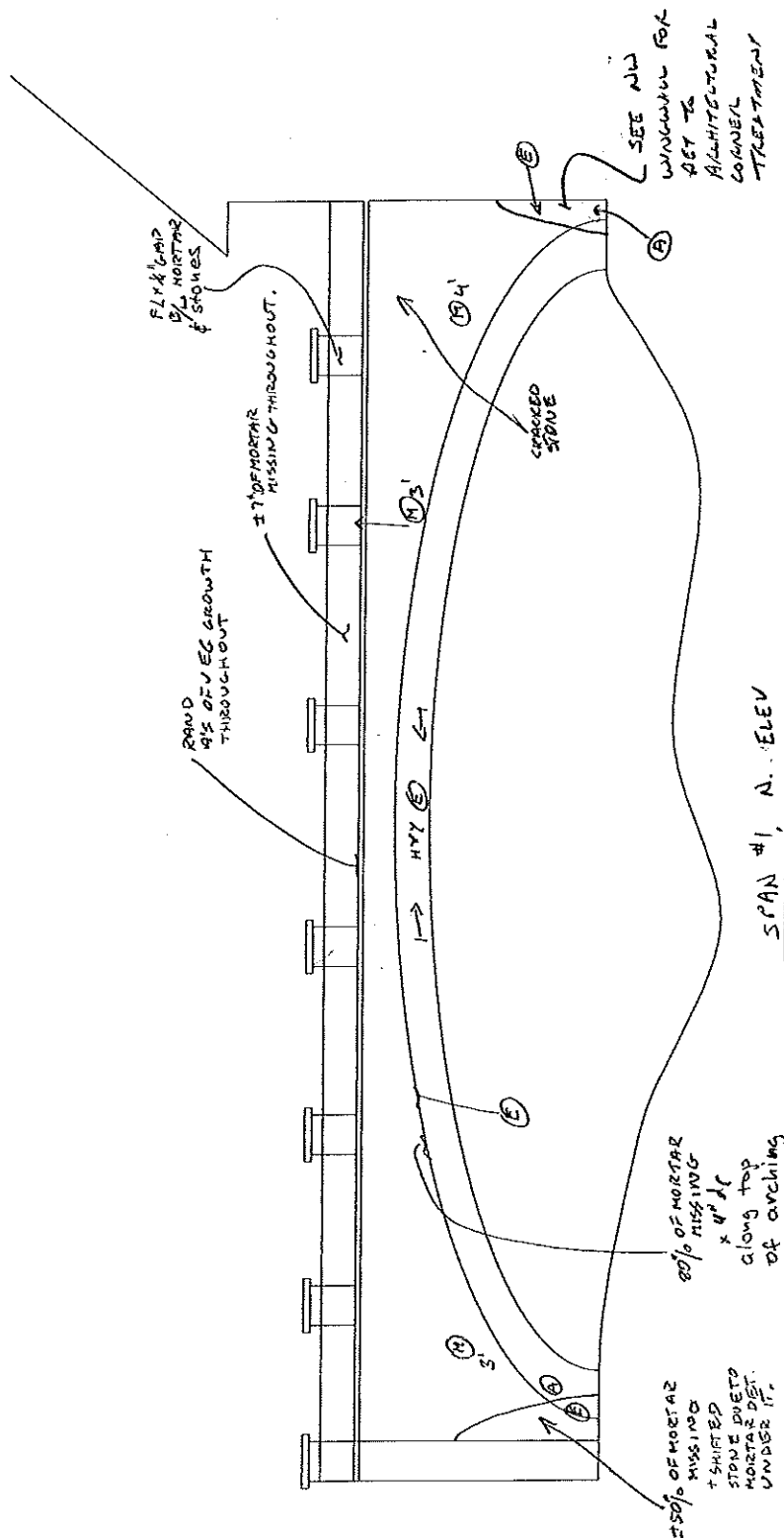
BRIDGE NO. 04746

DATE: 9/24/08

CREW: TK, MTJ

SHEET 13/41

DESCRIPTION: Substructure



GEN. NOTE

-RANDOM 9'S OF DET MORTAR W/CAPS OF MORTAR & STONES & SUB. GROWTH @ JTS.

LEGEND

- HOLLOW AREA
- SHALLOW REBAR
- SPALL AREA
- SPALL AREA WITH EXPOSED REBAR
- MAP CRACKS (W/C) OR HAIRLINE MAP CRACKS (H-LIN)
- HAIRLINE CRACK (HLC) OR CRACKS (CRK)
- HONEY COMB AREA
- SCALE AREA (HNY, MED OR LT)
- × WITH EFFLUESCENCE

① - ACTIVE LEAKAGE

② - EPFLD

③ - MISSING MORTAR w/dp (MAN)

UPDATE NO.	DATE	COMPANY	CREW
△			
△			
△			
△			

SUPPLEMENTAL SHEET

~~FIELD ORIGINAL~~

☐ TRANSCRIBED BY: _____

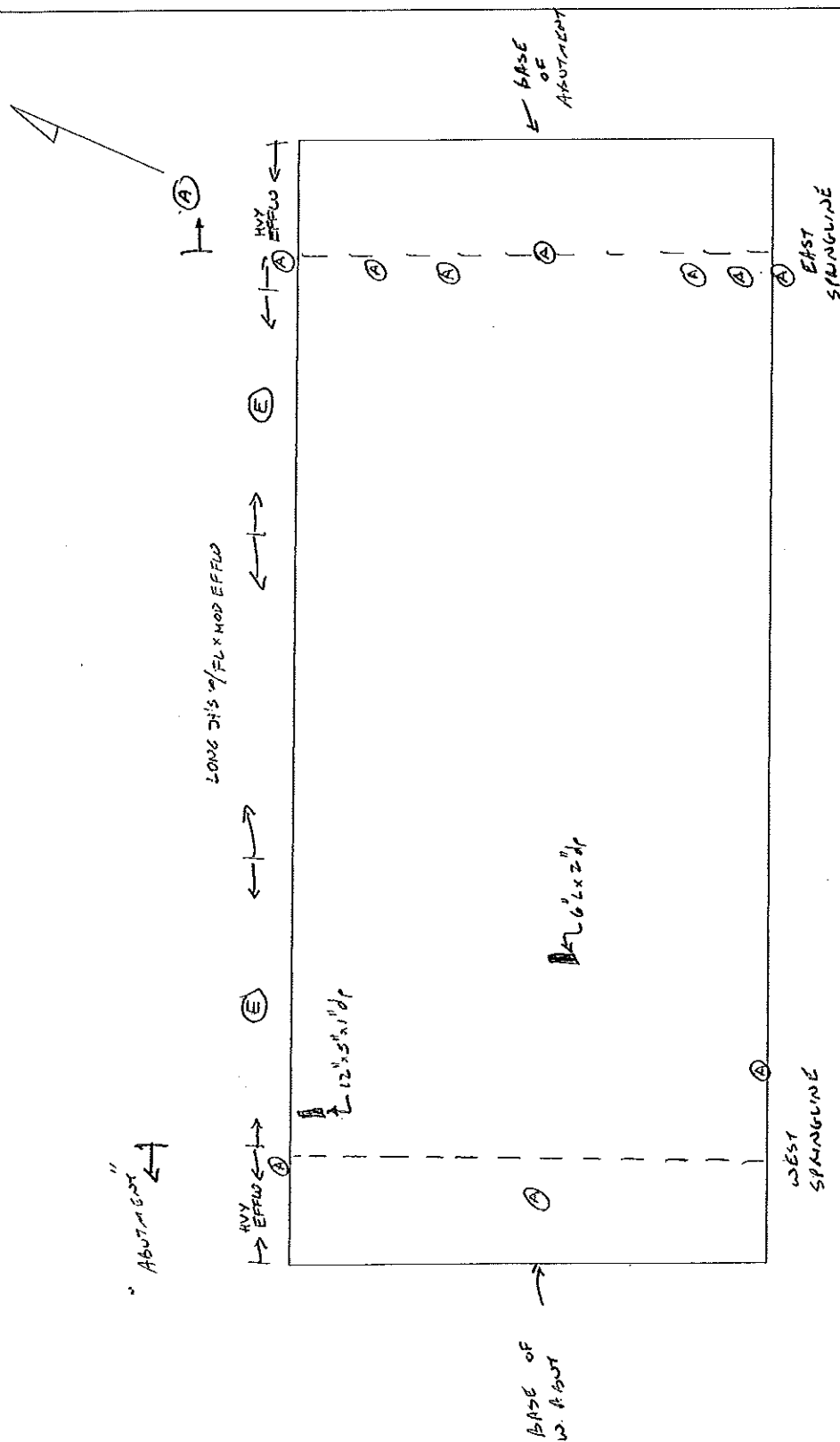
BRIDGE NO. 04746

DATE: 9/24/08

CREW: Tk. MJO

SHEET 14/41

DESCRIPTION: Underside of Deck



SPAN⁴¹, UNDERSIDE

LEGEND



HOLLOW AREA

 SHALLOW REBAR

SPALL AREA

SPALL AREA WITH
MAP CRACKS (MO)

 HAIRLINE CRACK + HONEY COMB ARE
 COMB ARE

SCALE AREA (HV) X WITH EFFLORESCENCE

[illegible]

MISSILE MONITOR

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. M)

X WITH EFFLORESCENCE

Table 1

(A) - ACTIVE LEAKAGE
(E) RAND A'S W/HOD EFFLD @ COND & TV. JTS

UPDATE NO.	DATE	COMPANY	CREW
△			
△			
△			
△			

SUPPLEMENTAL SHEET

X FIELD ORIGINAL

□ TRANSCRIBED BY: _____

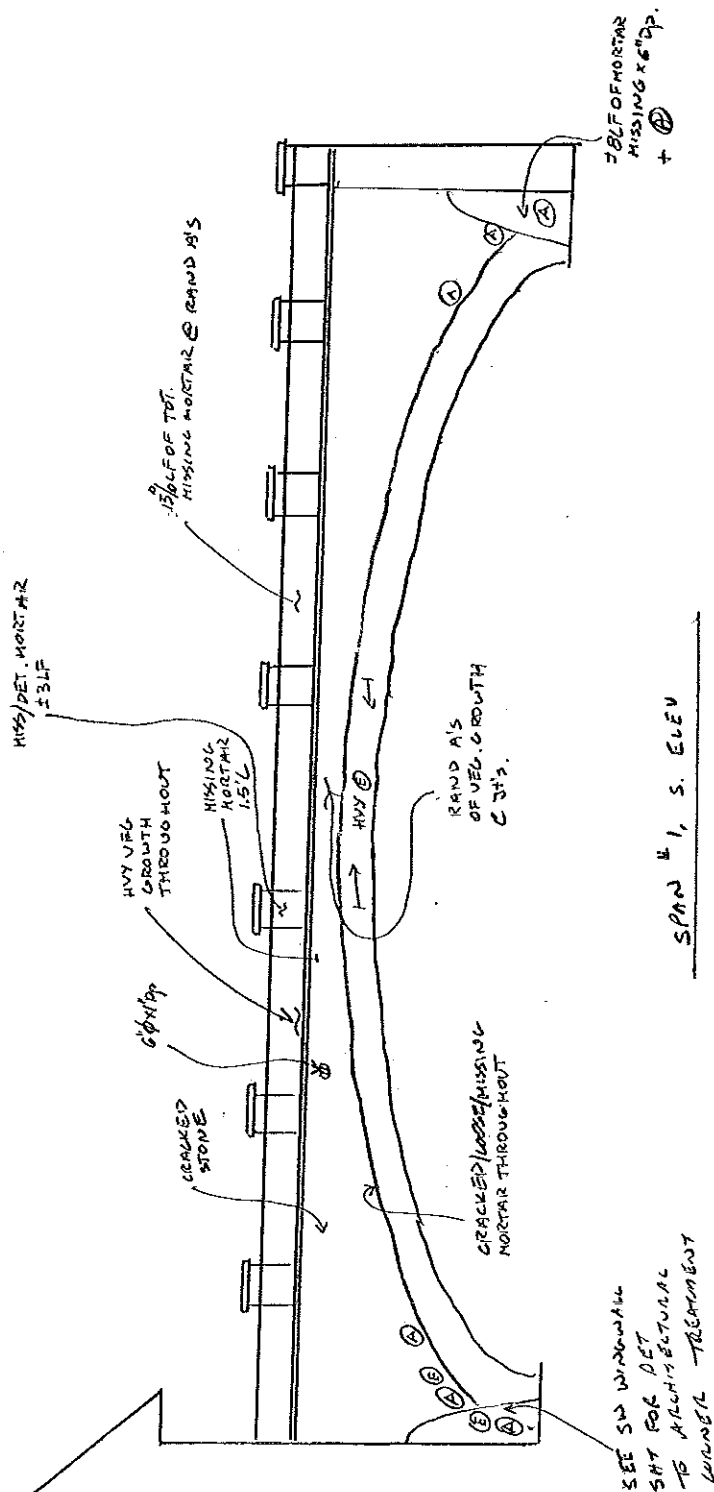
BRIDGE NO. 4746

DATE: 9/24/08

CREW: TK, TP

SHEET 15 OF 41

DESCRIPTION:



SPAN #1, S. ELEV

CBN. AREAS OF MISSING MORTAR TYP. 4"dp

LEGEND

○ HOLLOW AREA

○ SHALLOW REBAR

○ SPALL AREA

○ SPALL AREA WITH EXPOSED REBAR

○ SPALL CRACKS (INDIC) OR MARLINE MAP CRACKS (INDIC)

○ MARLINE CRACK (INDIC) OR CRACKS (INDIC)

○ HONEY COMB AREA

○ SCALE AREA (HVV, MED OR LIT)

① - ACTIVE LEAKAGE
② - EFFLO

UPDATE NO.	DATE	COMPANY	CREW
△			
△			
△			
△			

SUPPLEMENTAL SHEET

☒ FIELD ORIGINAL☐ TRANSCRIBED BY: _____

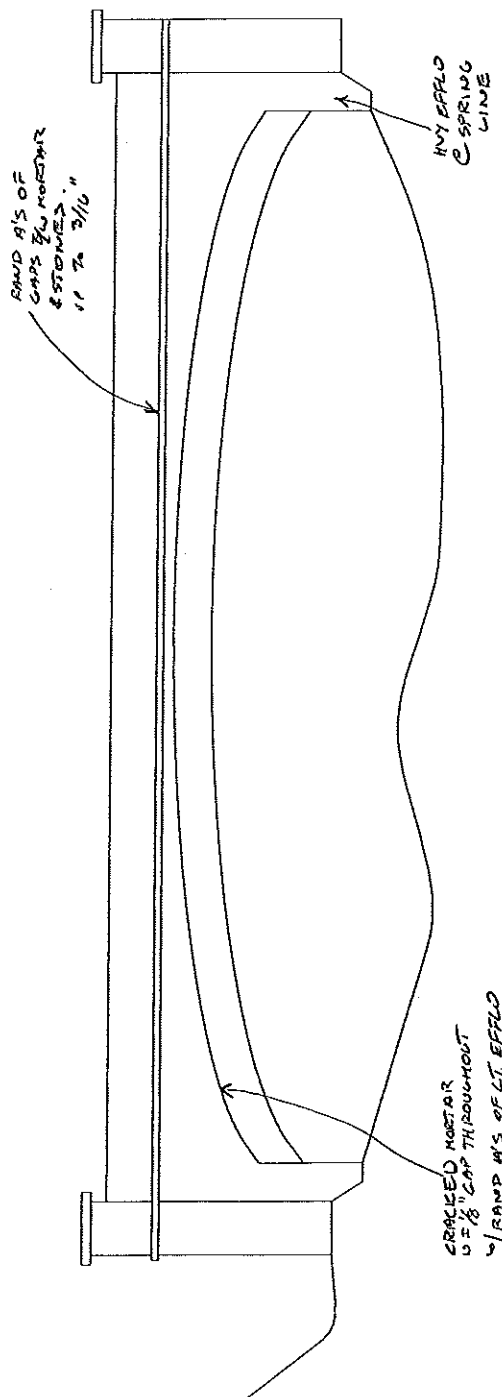
BRIDGE NO. 04746

DATE: 9/24/08

CREW: MJO/TK

SHEET 16/41

DESCRIPTION: Substructure



SPAN #2, N. ELEV

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 (HVT, MED OR LT)
- ☒ WITH EFFLORESCENCE

GEN. NOTES.

- RAND LT-VEGETATION GROWTH B/W STONES.
- RAND G'S OF LT EFFLO & RAND STONES AT JOINTS.

UPDATE NO.	DATE	COMPANY	CREW
△			
△			
△			
△			

SUPPLEMENTAL SHEET

☒ FIELD ORIGINAL☐ TRANSCRIBED BY: _____

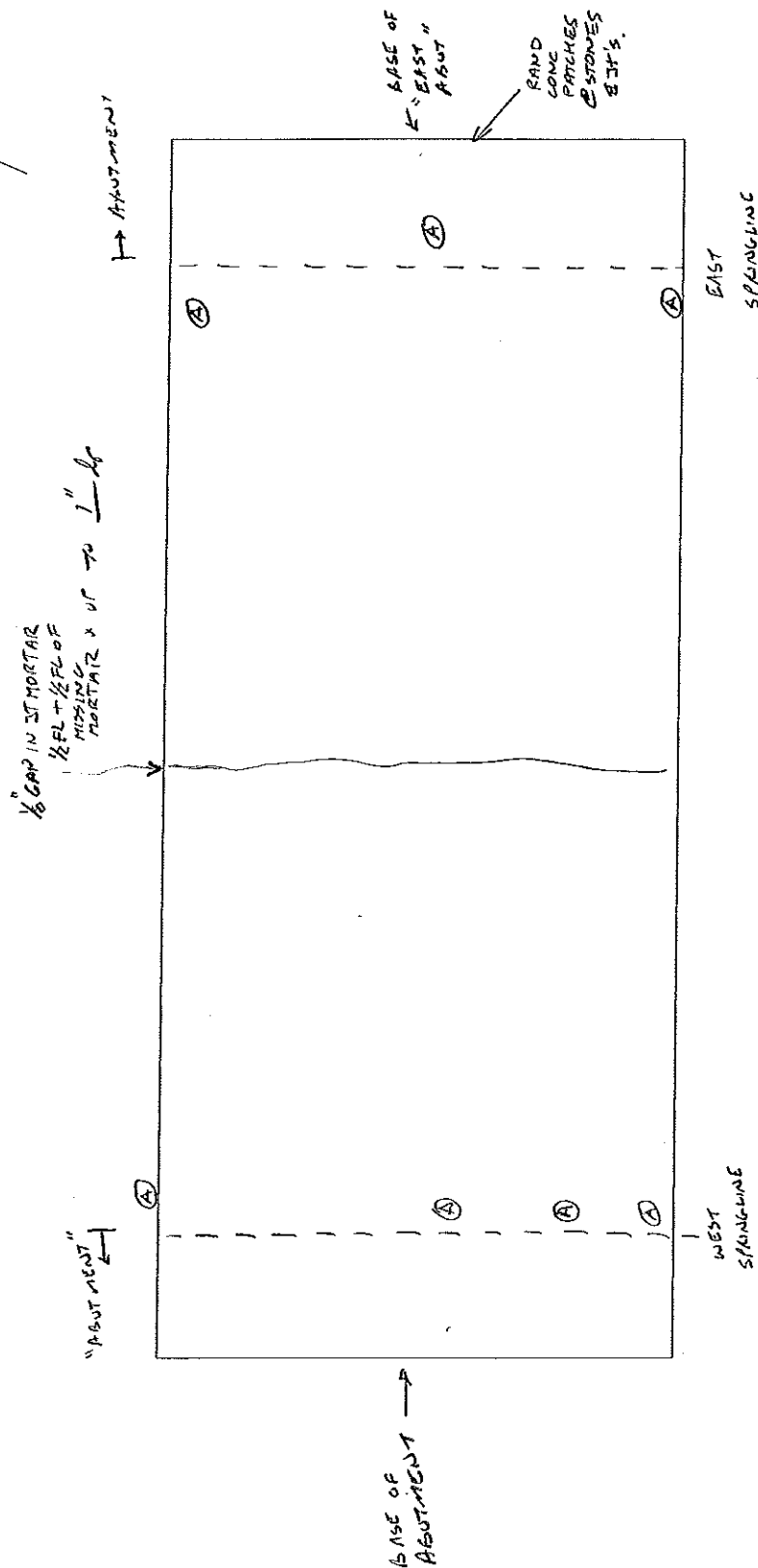
BRIDGE NO. 04746

DATE: 9/24/08

CREW: TK/M70

SHEET 17/41

DESCRIPTION: Underside of Deck



① - ACTIVE LEAKAGE

SPAN # 2 UNDERSIDE

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 (HY, MED OR LT)

x WITH EFFLORESCENCE

GEN. NOTES

- MOD EFFLO @ JOINTS

- HY EFFLO @ Spilling Lines & BASES

UPDATE DATE	DATE	COMPANY	CREW
△			
△			
△			
△			

SUPPLEMENTAL SHEET

☒ FIELD ORIGINAL

☐ TRANSCRIBED BY: _____

BRIDGE NO. 4746

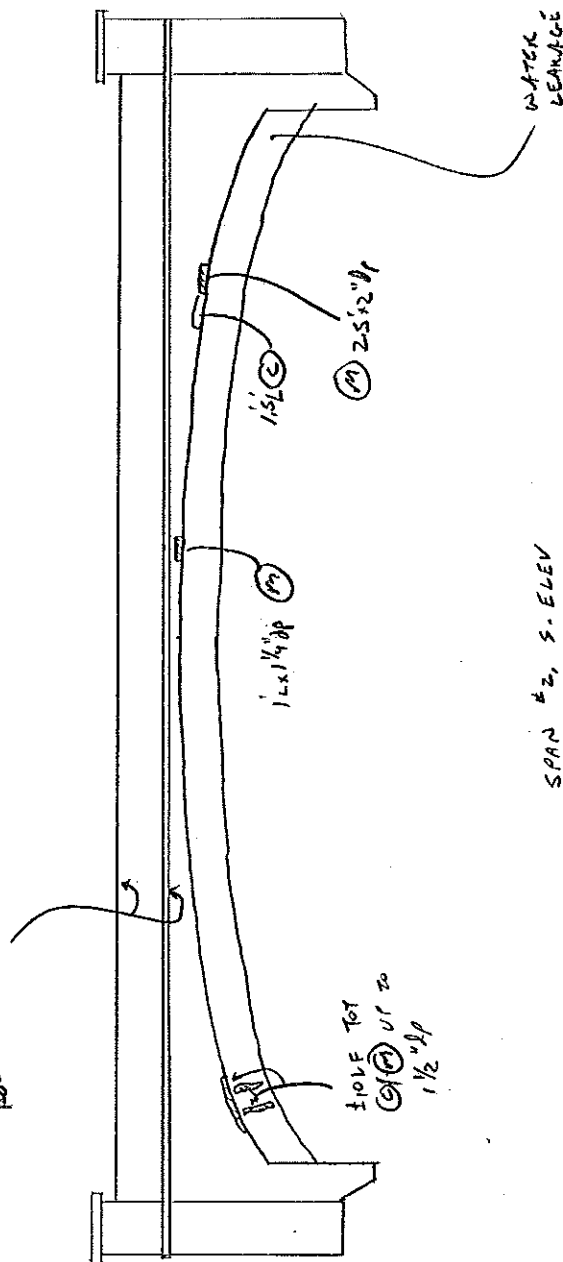
DATE: 9/24/08

CREW: MTR, TK

SHEET 13 OF 41

DESCRIPTION:

LAND CLWD MORTAR BELOW THIS ROW OF STONES, 7/16" - 1/8" W.



SPAN #2, S. ELEV

LEGEND
 (M) MISSING MORTAR
 (C) LAND Hollow MORTAR

GEN
 - LAND AREAS OF EFFLO C EACH KING STONE UT JTS
 - LAND HICK'S & MORTAR JOINTS
 - LAND VINE GROWTH

LEGEND

- () HOLLOW AREA
- () SHALLOW REBAR
- () SPALL AREA
- () SPALL AREA WITH EXPOSED REBAR
- () MAP CRACKS (M/C) OR HARLINE MAP CRACKS (H/M/C)
- () HARLINE CRACK (H/C) OR CRACKS (C/R)
- () HONEY COMB AREA
- () SCALE AREA (VVT, MED OR LT)

UPDATE	DATE	COMPANY	CREW
△			
△			
△			
△			

SUPPLEMENTAL SHEET

BRIDGE NO. 4746

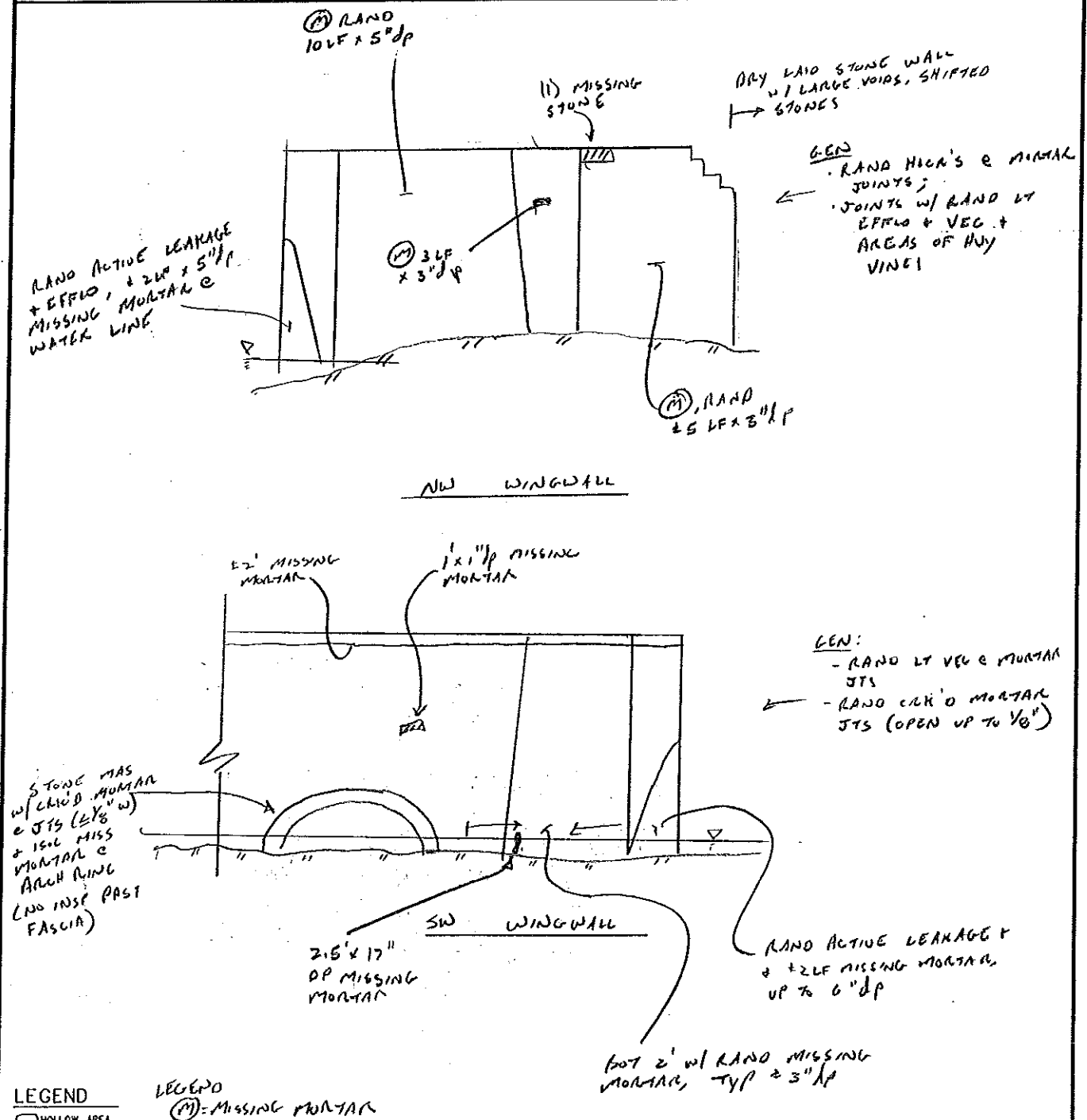
DATE: 4/24/08

☒ FIELD ORIGINAL☐ TRANSCRIBED BY: _____

CREW: MJO, TK

SHEET 19 OF 41

DESCRIPTION:



UPDATE NO.	DATE	COMPANY	CREW
△			
△			
△			
△			

SUPPLEMENTAL SHEET

BRIDGE NO. 4746

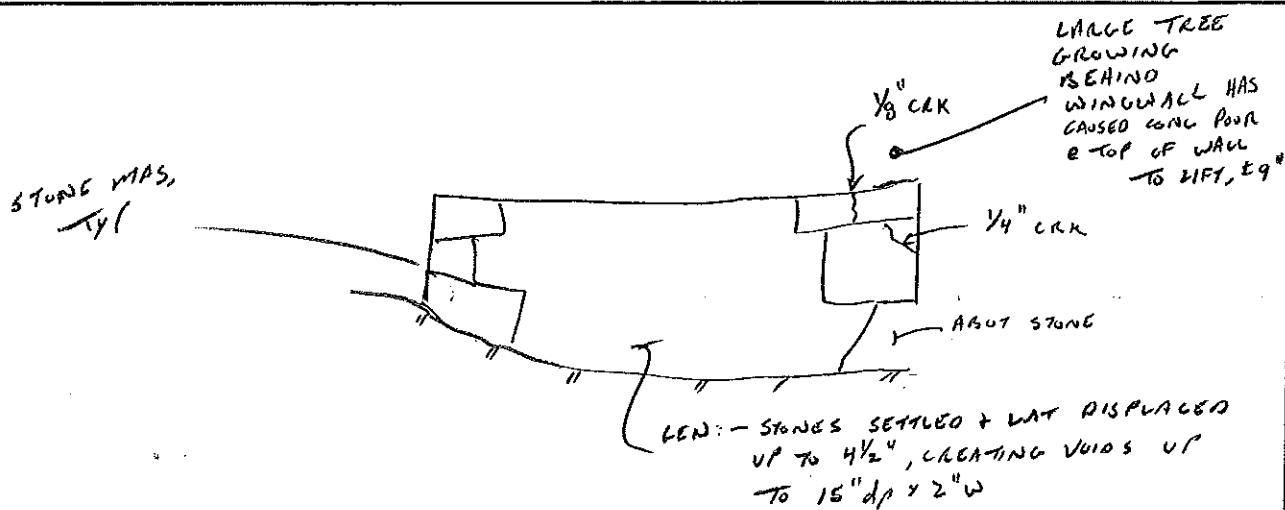
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☒ FIELD ORIGINAL☐ TRANSCRIBED BY: _____

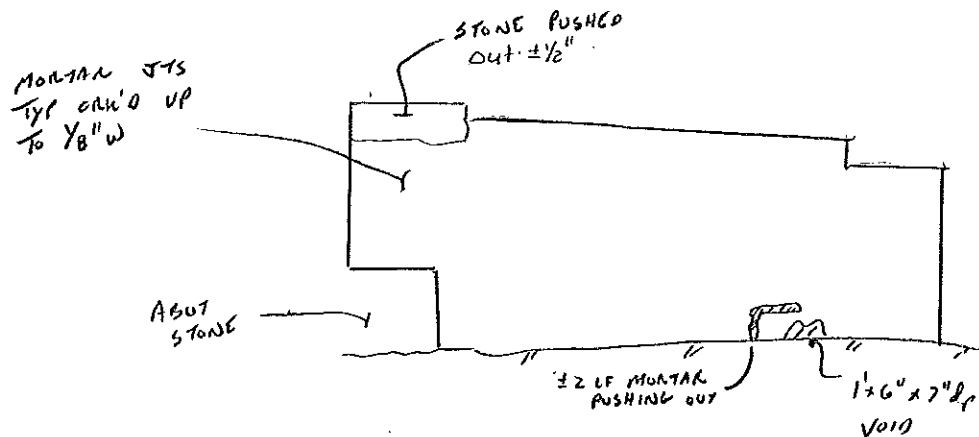
CREW: MTJ, TK

SHEET 20 OF 41

DESCRIPTION:



NE WINGWALL



SE WINGWALL

LEGEND

- HOLLOW AREA
- SHALLOW REBAR
- SPALL AREA
- SPALL AREA WITH EXPOSED REBAR
- MAP CRACKS (LUPC) OR HARLINE MAP CRACKS (HLUPC)
- HARLINE CRACK (HLC) OR CRACKS (CRK)
- HONEY COMB AREA
- SCALE AREA (HYV, MED OR LT)

UPDATE NO.	DATE	COMPANY	CREW
△			
△			
△			
△			

SUPPLEMENTAL SHEET

BRIDGE NO. 04746

DATE: 9/24/08

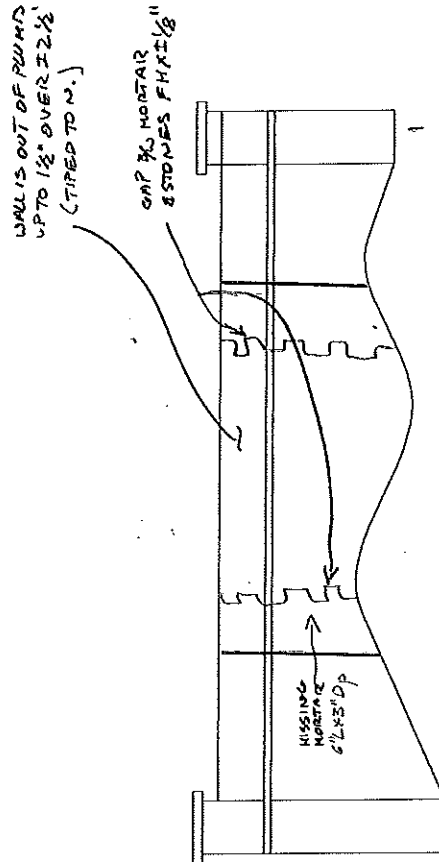
☒ FIELD ORIGINAL

☐ TRANSCRIBED BY: _____

CREW: TK, MTJ

SHEET 21/41

DESCRIPTION: Substructure



LET WALL b/w SP 6, 72
N. ELEV

GEN. NOTES

- MOD TO H/V NEG GROWTH
- 1/2\"/>

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)
- X WITH EFFLORESCENCE

UPDATE	DATE	COMPANY	CREW
△			
△			
△			
△			

Baker

SUPPLEMENTAL SHEET

☒ FIELD ORIGINAL

☐ TRANSCRIBED BY: _____

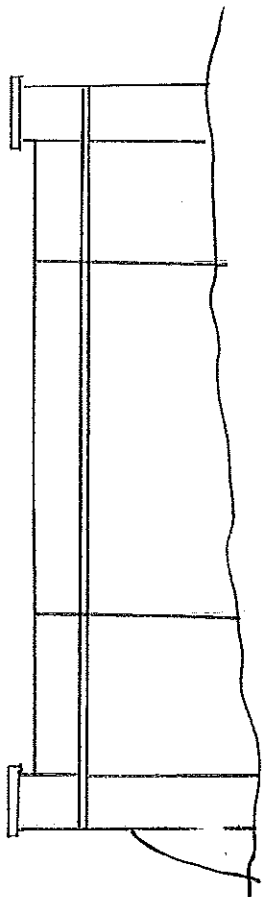
BRIDGE NO. 4746

DATE: 9/24/08

CREW: TR, MOD

SHEET 22 OF 41

DESCRIPTION:



LET. WALK. G/W. SP²1+2
SOUTH ELEV

GEN NOTES.

- NO VEG GROWTH SIGN: AFFECTS VISIBILITY OF THE STRUCTURE.
- RAWD A'S w/CRACKED/DET MORTAR.

LEGEND

- HOLLOW AREA
- SHALLOW REBAR
- SHALLOW AREA
- SPALL AREA WITH EXPOSED REBAR
- SPALL AREA
- MAP CRACKS (MPC) OR HARLINE MAP CRACKS (HLMPC)
- HARLINE CRACK (HLC) OR CRACKS (CR)
- MOIST COMB AREA
- SCALE AREA (HVT, MID OR LT)

UPDATE NO.	DATE	COMPANY	CREW
△			
△			
△			
△			

SUPPLEMENTAL SHEET

FIELD ORIGINAL

TRANSCRIBED BY: _____

BRIDGE NO. 4746

DATE: 9/24/08

CREW: MJO, TH

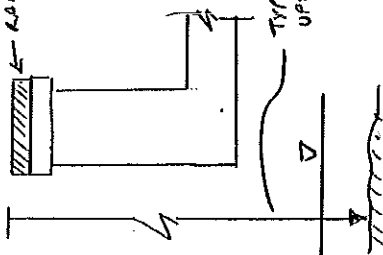
SHEET 23 OF 41

DESCRIPTION: DROP LINE READINGS

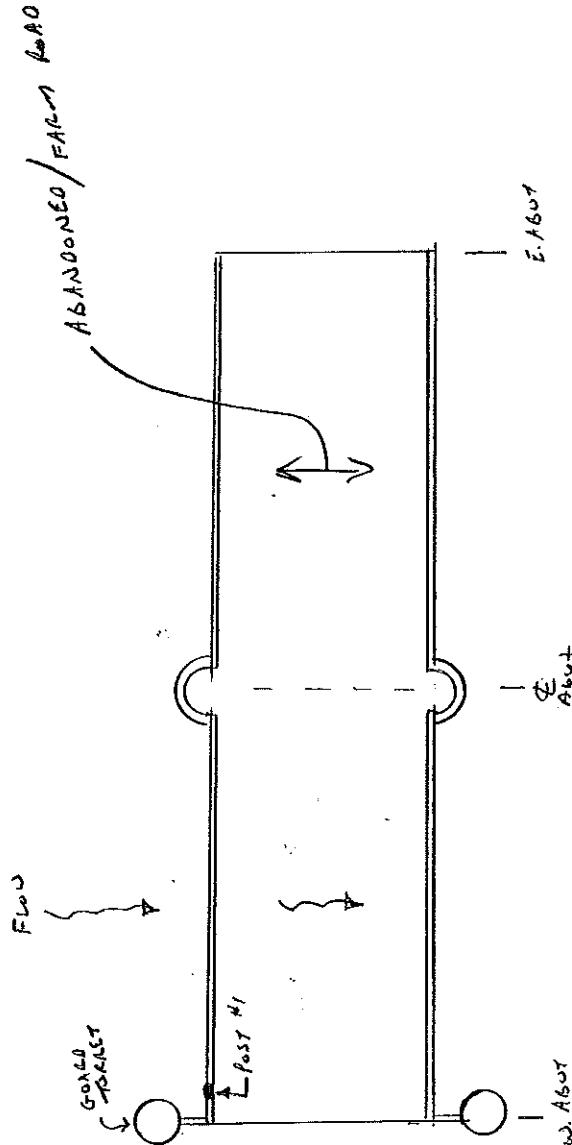
DROP LINE READINGS

W. Abut- 18.5'
 Post #1- 20.0'
 Post #2- 19.9'
 Post #3- 17.8'
 Post #4- 20.4' (17' DEPTH)
 Post #5- 21.9'
 Post #6- 22.4'
 Post #7- 7.0'
 Abut./- 7.3'
 SITTING AREA
 18.7' TO W2

RAISED CAPSTONE



FLOW



DROP LINE READINGS

PLAN VIEW

GEN.
 . DROP LINE READINGS TAKEN AS SHOWN ABOVE
 . NO READINGS TAKEN IN SPAN 2 → ABANDONED/FARM ROAD

UPDATE	DATE	COMPANY	CREW
△			
△			
△			
△			

SUPPLEMENTAL SHEET

☒ FIELD ORIGINAL

☐ TRANSCRIBED BY: _____

BRIDGE NO. 4746

DATE: 9/24/08

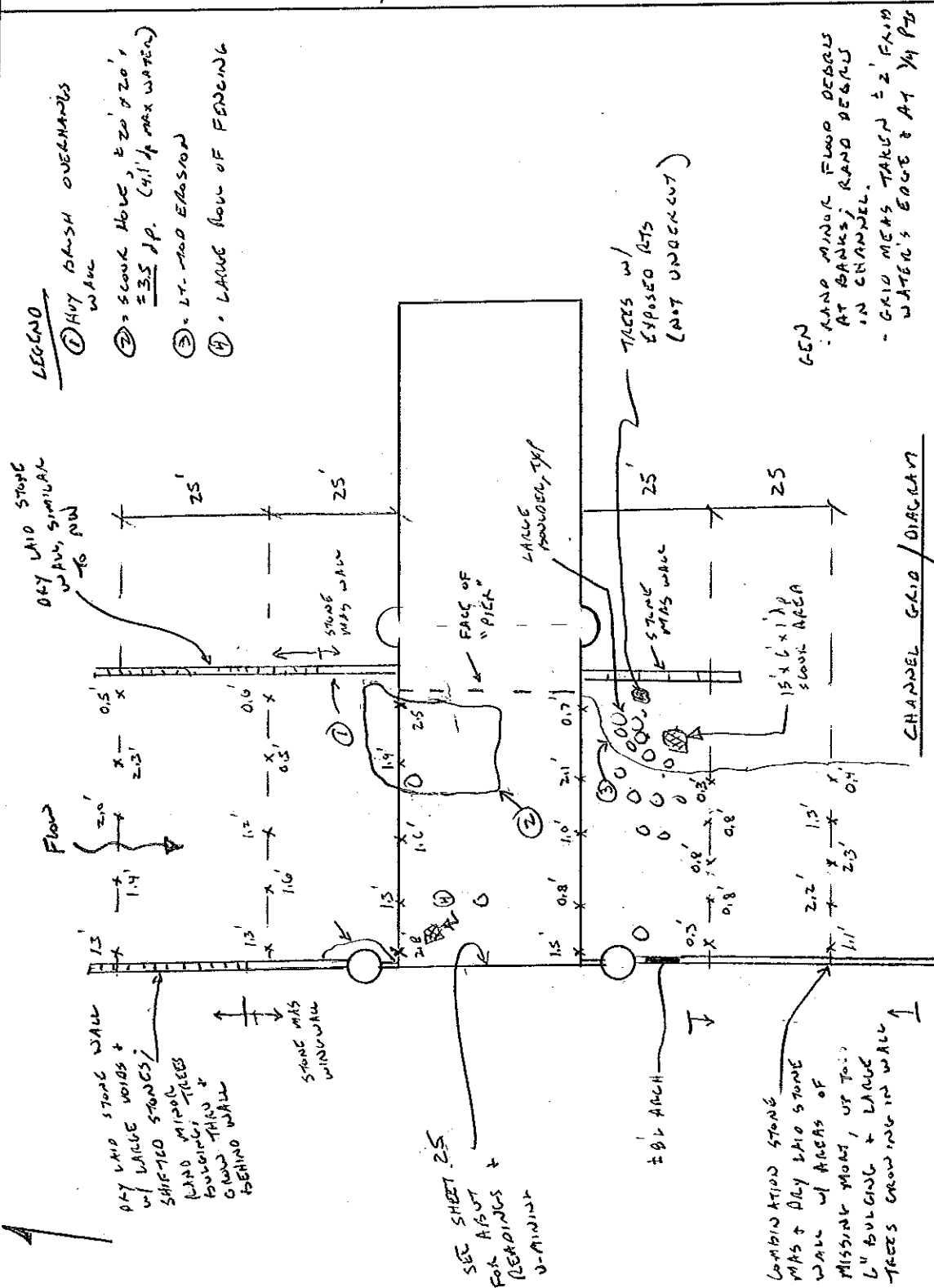
CREW: MJB, TK

SHEET 24 OF 41

DESCRIPTION: CHANNEL GMD/DIAGRAM

LEGEND

- ① ANY BRUSH OVERHANDS W/IN
- ② = SLOPE HOLE, ±20' x 20', ±3.5' d.p. (4.1' d.p. MAX WATER)
- ③ = 14'-RAD ELLIPSE
- ④ = LARGE HOLE OF FENCING



UPDATE	DATE	COMPANY	CREW
△			
△			
△			
△			

SUPPLEMENTAL SHEET

☒ FIELD ORIGINAL☐ TRANSCRIBED BY: _____

BRIDGE NO. 4746

DATE: 9/24/08

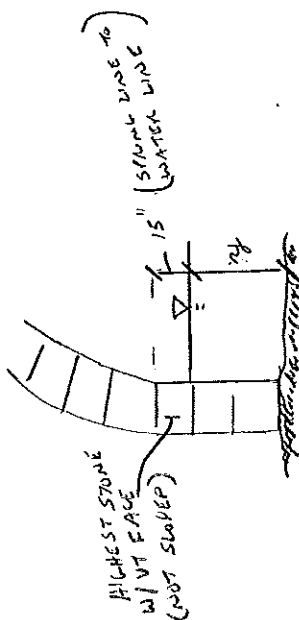
CREW: RTU, TK

SHEET 25 OF 41

DESCRIPTION: READINGS e W. ABUT

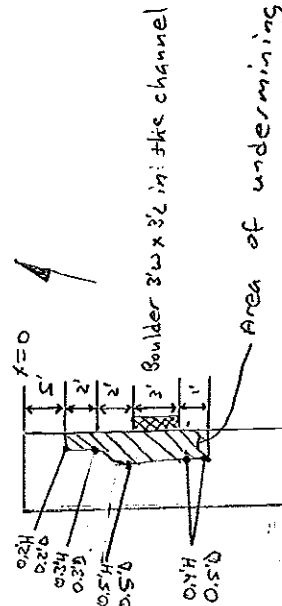
CHANNEL READINGS ALONG ABUT

STATION	READING
0	2'-9"
3	2'-9"
5	2'-10"
8.2	3'-4"
11.0	2'-9"
14.0	2'-6"
17.0	2'-0"
END OF STEM	1'-7"



Y-SECTION W. ABUT

LOOKING N.



NOTE:
AVE CHANNEL DEPTH BELOW
SLAB = ± 1.6'

Plan view - W. Abut.

per McLaren
Inspection
(April 7, 2009)

UPDATE	DATE	COMPANY	CREW
△			
△			
△			
△			

Bridge No.	04746	Inspected by:	M. Orlowsky
Town:	Norwich	Inspected by:	T. Kurasz
Feature Carried:	Sunnyside Street	Date Inspected:	September 24, 2008
Feature Crossed:	Yantic River	Project No.:	170-2729

<u>04746</u>	
Photo # 1: Bridge ID. There is no Bridge ID on the structure.	Photo # 2: Span 1, south elevation.

Bridge No.	04746	Inspected by:	M. Orlowsky
Town:	Norwich	Inspected by:	T. Kurasz
Feature Carried:	Sunnyside Street	Date Inspected:	September 24, 2008
Feature Crossed:	Yantic River	Project No.:	170-2729



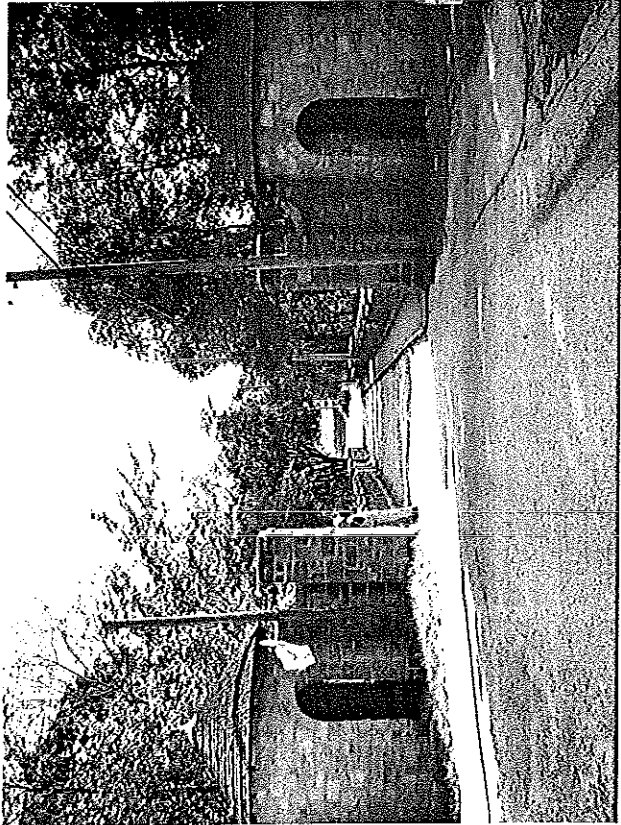
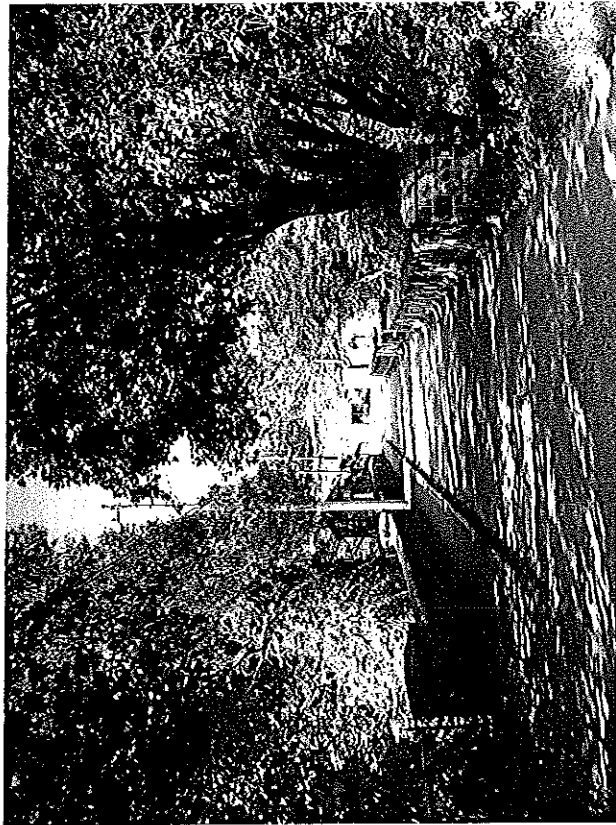
Photo # 3: Span 2, north elevation.



Photo # 4: Typical underside, span 1 (looking west).

Note the efflorescence leakage at the mortar joints.

Bridge No.	04746	Inspected by:	M. Orlowsky
Town:	Norwich	Inspected by:	T. Kurasz
Feature Carried:	Sunnyside Street	Date Inspected:	September 24, 2008
Feature Crossed:	Yantic River	Project No.:	170-2729

	
Photo # 5: Bridge from the west approach.	Photo # 6: Bridge from the east approach.

Bridge No.	04746	Inspected by:	M. Orlowsky
Town:	Norwich	Inspected by:	T. Kurasz
Feature Carried:	Sunnyside Street	Date Inspected:	September 24, 2008
Feature Crossed:	Yantic River	Project No.:	170-2729

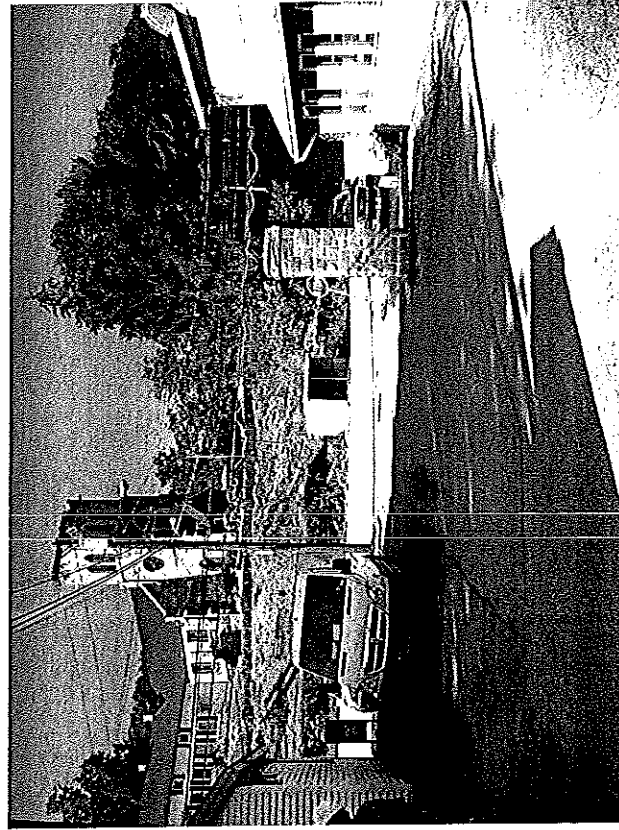


Photo # 7: West approach from the bridge.



Photo # 8: East approach from the bridge.

Bridge No.	04746	Inspected by:	M. Orlowsky
Town:	Norwich	Inspected by:	T. Kurasz
Feature Carried:	Sunnyside Street	Date Inspected:	September 24, 2008
Feature Crossed:	Yantic River	Project No.:	170-2729

	
Photo # 9: Typical top of deck.	Photo # 10: Bridge overlay ramps up approximately 3" near the base of the north parapet.

Bridge No.	04746	Inspected by:	M. Orlowsky
Town:	Norwich	Inspected by:	T. Kurasz
Feature Carried:	Sunnyside Street	Date Inspected:	September 24, 2008
Feature Crossed:	Yantic River	Project No.:	170-2729

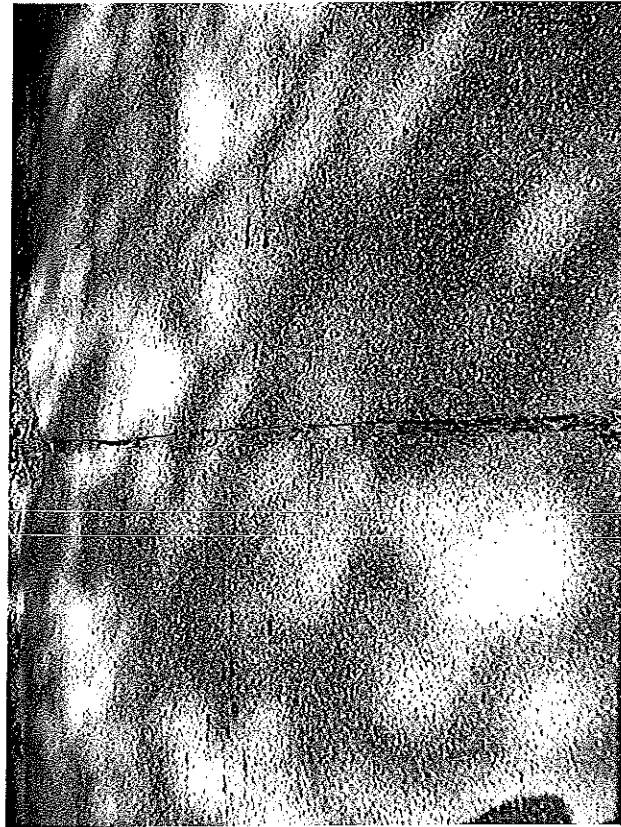
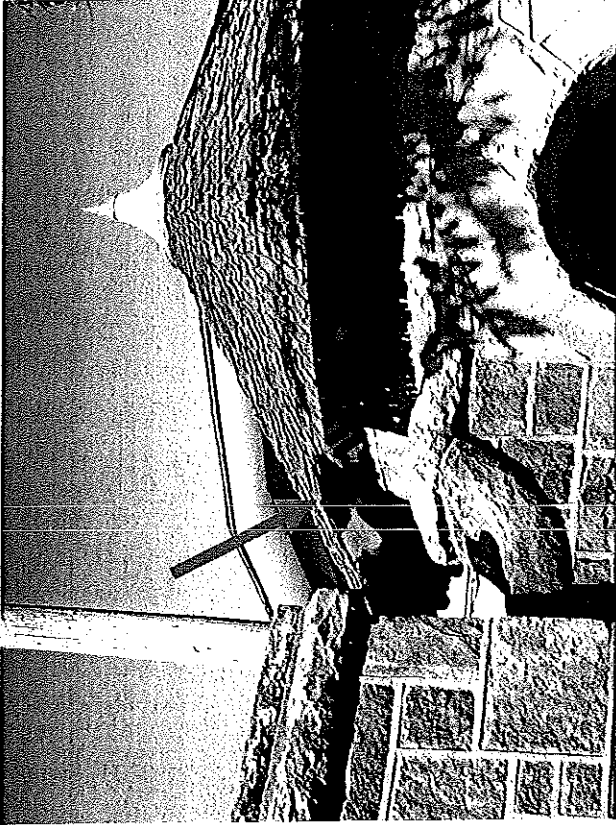


Photo # 11: Typical sawcut in the bridge overlay. Note that there is no sealant. Sawcuts are filled with dirt and have random vegetation.



Photo # 12: Tipping of the north parapet.

Bridge No.	04746	Inspected by:	M. Orlowsky
Town:	Norwich	Inspected by:	T. Kurasz
Feature Carried:	Sunnyside Street	Date Inspected:	September 24, 2008
Feature Crossed:	Yantic River	Project No.:	170-2729

 Photo # 13: North guard turret: Missing section of roof at the south side of the turret.	 Photo # 14: East end of span 1: Areas of heavy efflorescence and areas of water leakage through the arch intrados.
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Bridge No.	04746	Inspected by:	M. Orlowsky
Town:	Norwich	Inspected by:	T. Kurasz
Feature Carried:	Sunnyside Street	Date Inspected:	September 24, 2008
Feature Crossed:	Yantic River	Project No.:	170-2729



Photo # 15: East end of span 2: Heavy efflorescence and water leakage through the arch intrados.



Photo # 16: Span 1, south elevation, east end: Deteriorated mortar between the arch ring stones and the spandrel wall.

Bridge No.	04746	Inspected by:	M. Orlowsky
Town:	Norwich	Inspected by:	T. Kurasz
Feature Carried:	Sunnyside Street	Date Inspected:	September 24, 2008
Feature Crossed:	Yantic River	Project No.:	170-2729

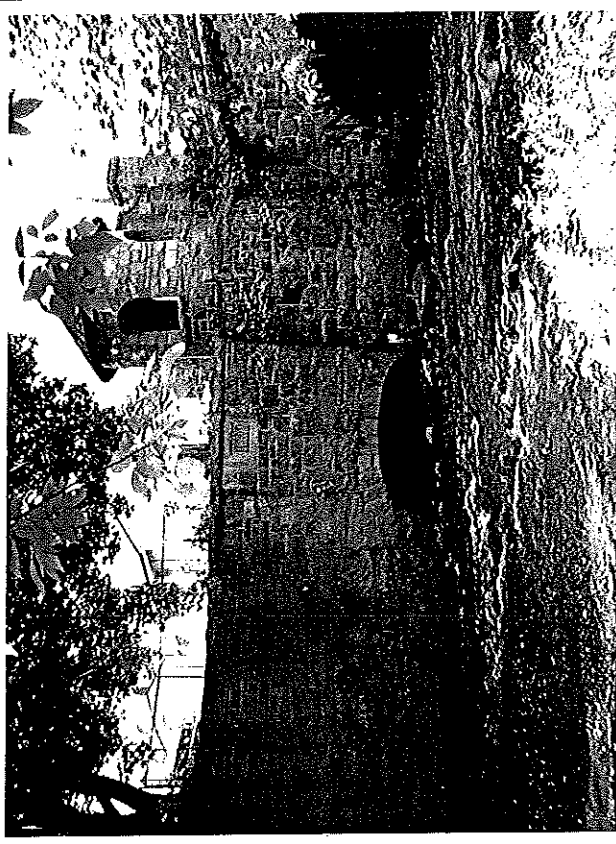


Photo # 17: Span 2, south spandrel and railing, typical.



Photo # 18: Span 1, southeast corner: Architectural stone treatment at the corner of the span has deteriorated mortar/voids between the stones. Also note the leakage through the arch ring.

Bridge No.	04746	Inspected by:	M. Orlowsky
Town:	Norwich	Inspected by:	T. Kurasz
Feature Carried:	Sunnyside Street	Date Inspected:	September 24, 2008
Feature Crossed:	Yantic River	Project No.:	170-2729

	
Photo # 19: Northeast wingwall: Stones shifted out at the base.	Photo # 20: Southwest wingwall. Note the stone arch in the wingwall.

Bridge No.	04746	Inspected by:	M. Orlowsky
Town:	Norwich	Inspected by:	T. Kurasz
Feature Carried:	Sunnyside Street	Date Inspected:	September 24, 2008
Feature Crossed:	Yantic River	Project No.:	170-2729

	
Photo # 21: Southwest retaining wall: Shifted stones and tree growing out of the wall.	Photo # 22: Stone masonry wall between spans 1 & span 2, north elevation.

Bridge No.	04746	Inspected by:	M. Orlowsky
Town:	Norwich	Inspected by:	T. Kurasz
Feature Carried:	Sunnyside Street	Date Inspected:	September 24, 2008
Feature Crossed:	Yantic River	Project No.:	170-2729

	
Photo # 23: Channel, looking upstream.	Photo # 24: Channel, looking downstream.

Bridge No.	04746	Inspected by:	M. Orlowsky
Town:	Norwich	Inspected by:	T. Kurasz
Feature Carried:	Sunnyside Street	Date Inspected:	September 24, 2008
Feature Crossed:	Yantic River	Project No.:	170-2729



Photo # 25: Scour hole at the southeast channel embankment.

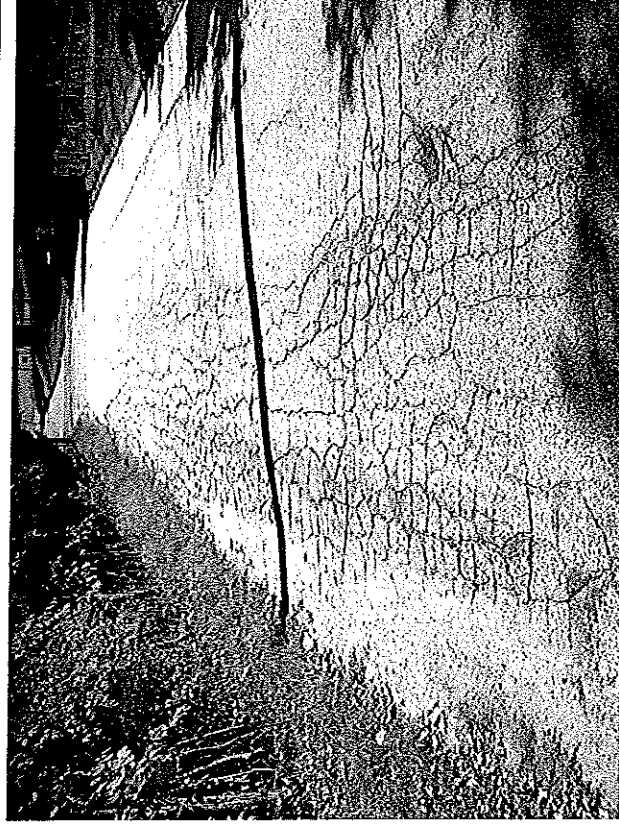


Photo # 26: East approach pavement with heavy cracking.

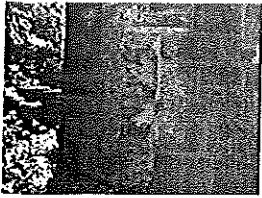
Bridge No.	04746	Inspected by:	M. Orlowsky
Town:	Norwich	Inspected by:	T. Kurasz
Feature Carried:	Sunnyside Street	Date Inspected:	September 24, 2008
Feature Crossed:	Yantic River	Project No.:	170-2729



Photo # 27: Deteriorated bituminous at the west approach, south shoulder.

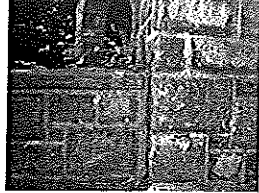
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N. TOWER. Pk 100



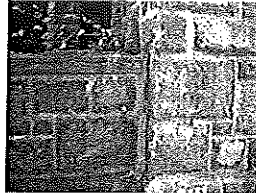
DSC01589

SW GARDEN GAP



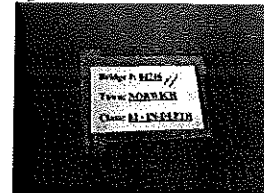
DSC01590

SAME



DSC01591

TO



DSC03902

70/41
BR FROM W



DSC03903

TYP T.O.P.



DSC03904

W. APRIL



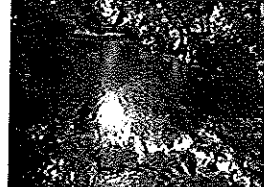
DSC03905

U/S



DSC03906

D/S



DSC03907

E. APRIL



DSC03908

BR FROM E



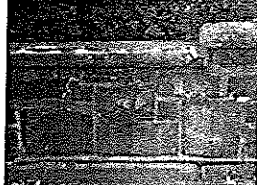
DSC03909

DRWAY & CURB



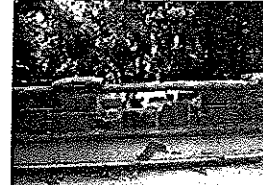
DSC03910

S. MT SP#1, TYP



DSC03911

SP#1, S. MT



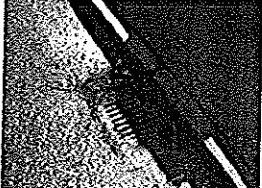
DSC03912

N. TOWER



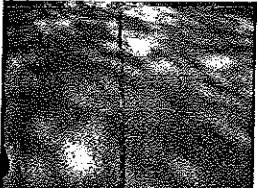
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TYP SW PIER



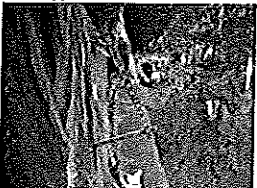
DSC03914

SAWCUT & SP#2



DSC03915

TYPING OF PIER



DSC03916

TYPING N. MT NEIGH PIER



DSC03917

N. PIER & PIER



DSC03918

E. APRIL PIER



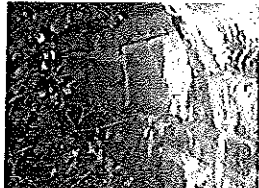
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W. APRIL PIER



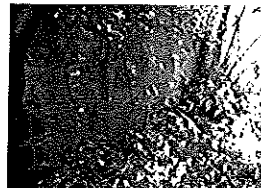
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NE WING



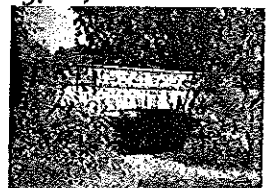
DSC03921

SE WING



DSC03922

SP#2, S



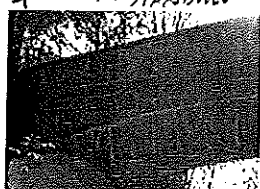
DSC03923

SP#2, N



DSC03924

SP#2 N. TOWER



DSC03925

SP#2 S. TOWER



DSC03926

S. GARDEN SP#1



DSC03927

U/S



DSC03928

D/S



DSC03929

SW WING



DSC03930

TYP U/S SP#1



DSC03931

SW WING



DSC03932

SP#1 SE CORNER



DSC03933

SP #1, S. SPAND



DSC03934

SP #2 NE



DSC03935

SP #2 S. SPAND



DSC03936

NE WING
CONCRETE



DSC03937

PIER "N"

41/41



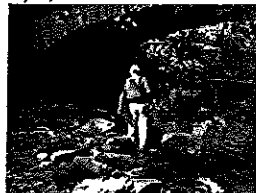
DSC03938

PIER "S"



DSC03939

MTB



DSC03940

SE SP #1



DSC03943

SW LET



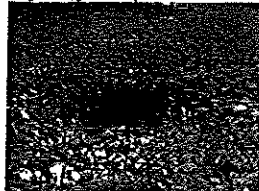
DSC03944

NW LET



DSC03945

SE BANK



DSC03946

MTB



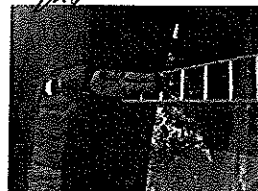
DSC03947

MTB



DSC03948

MTB



DSC03949

MICHAEL BAKER ENGINEERING, INC.

BRIDGE # 04746

ADDITIONAL FIELD NOTES

(BACK-UP MATERIAL)

DATE: SEPTEMBER 24, 2008

From: William Kristoff
To: P.E. George Assis; Sam S. Fares
CC: Michael Orlowsky; Paul McGuinness
Date: 9/26/2008 5:01 PM
Subject: Fwd: FW: Bridge No. 04746 (Sunnyside Street over Yantic River, Norwich)

Hey Guys,

See email notes below from the team leader (Mike Orlowsky) and Sandy of CDOT. We basically need you guys to inspect the portion of the west abutment below the water for the above bridge, and check the undermining. You could probably do this when doing the other u/w for the other Norwich town bridges on your list. As Sandy said, no CADD needed, just send us some hand written notes to incorporate into the report.

Call or email with any questions and/or concerns with this.

Thanks.

Bill

>>> Michael Orlowsky 9/26/2008 10:32 AM >>>
Paul/Bill,

Please forward to McLaren. Also, have them check for deficiencies in the west abutment face from the waterline to the channel bottom. There were some voids noted in the WMK/MDD inspection below the waterline, which we did not see through the water.

Thanks,
MJO

>>> "Dumas, Sandra A." <Sandra.Dumas@po.state.ct.us> 9/26/2008 10:20 AM >>>
Bill/Mike,

To answer question 1 - We did move the in-depth date up 1 cycle. We have been doing this when we assign a town to a consultant - we know you guys are basically doing an in-depth anyway and since we have to pay for a CE inspection, we might as well pay for a CE in-depth. (P.S. Thanks for asking though - we do make mistakes and we appreciate it when brought to our attention.)

To answer question 2 - Please have McLaren do this inspection under your project. Have them inspect the abutment in question (west) and if you need anything in the channel. They do not have to submit cadd sketches, but can just send in hand drawn sketches to you. Mike - you should incorporate what they find into your report (one submittal). Try and have McLaren do this sooner rather than later so that the report and letter are not held up.

Thanks again for your hard work!

Sandra A. Dumas
Bridge Safety & Evaluation
(860) 594-2072

>>> Michael Orlowsky 9/25/2008 3:17 PM >>>
Paul/Bill,

A few issues regarding the inspection of the above noted structure:

1. Per the BRI-19, the next inspection of this bridge is supposed to be 2010, but the bridge list calls for an in-depth inspection (per MRJ). Note that Baker did an in-depth in 2000, which would make this inspection a routine. I called MRJ yesterday. Please let me know how you want this report classified. It doesn't really matter too much to me, the report won't vary if we call it an in-depth or a routine.

2. The water depths along west abutment were up to 40" deep. We were able to wade in front of the entire west abutment, and found an area of undermining approximately 3.2' long x 12" deep x 6" high. Water depths of up to 40" made accurate measurement of this undermining difficult. I believe that water depth of 30" trigger an underwater inspection, so you may want to ask BS&E if they want divers to go out there. Additionally, water depths were up to 4.1' deep in the channel at the east end of the span, but the channel was could be waded along the substructure at that end of the span.

MJO

Form BRL-13, Rev. 9/97

Form BRL-13, Rev. 9/97

Image Inventory

Date 9/24/08

Photographer: TK/H70

Carried / Crossed: SUNNYSIDE ST / YANTIC RIVER

Film Frame #	Image Description
1	ID
2	AIR FROM WEST
3	T.O.D.
4	N. APPROACH
5	UPSTREAM
6	DOWNSTREAM } SP#1
7	E. APPR
8	BRIDGE FROM EAST
9	SLOPED OVERLAY NEAR N. PPT IN SP#1
10, 11	PET HORTAR W/ VEGET & S. PPT, PATCHES @ S. PPT. SP#1
12	BROKEN OFF ROOF SECTION @ N. GUARD TURRET
13	SCUMPER IN SP#1 TRP
14	CUT AT SP#2 TRP
15	OUTSIDE OF N. PPT OUT OF PLUMB
16	V. PPT NEAR THE PIECE CURVED OUTWARD ± 3"
17	BROKEN SEAT STONE @ N. SITING AREA
18	BM @ E. APRK
19	N. TURRET
20, 21	SW INT / POST JCT - 5/8" CAR
22	NE WING
23	SE WING
24	S. ELUV SP#2
25	N. ELUV SP#2
25	SP#2, N. SPANOROL MYP?
26	" " S. "
27	S. ELUV, SP#1
28	UPSTREAM
29	DOWNSTREAM
30	SW WINC
31	SP#1 U/S LEADING W
32	" " "
33	MISPLNG MONITOR, SP#1, S. ELUV, E. EX ?
34	SP#1 SE CORNER - CAN/MISS MONITOR ABOVE RING BTONY
35	SP#2 NE CORNER
36	SP#2, S. END
37	NE WING - CONC @ TOP OF WALL
38	PIER, N. ELUV
39	S. ELUV OF PIER - Hwy VCL

Form BRI-13, Rev. 9/97

Form BRI-13, Rev. 9/97

[illegible]



McLaren
ENGINEERING
GROUP

PROJECT 04746

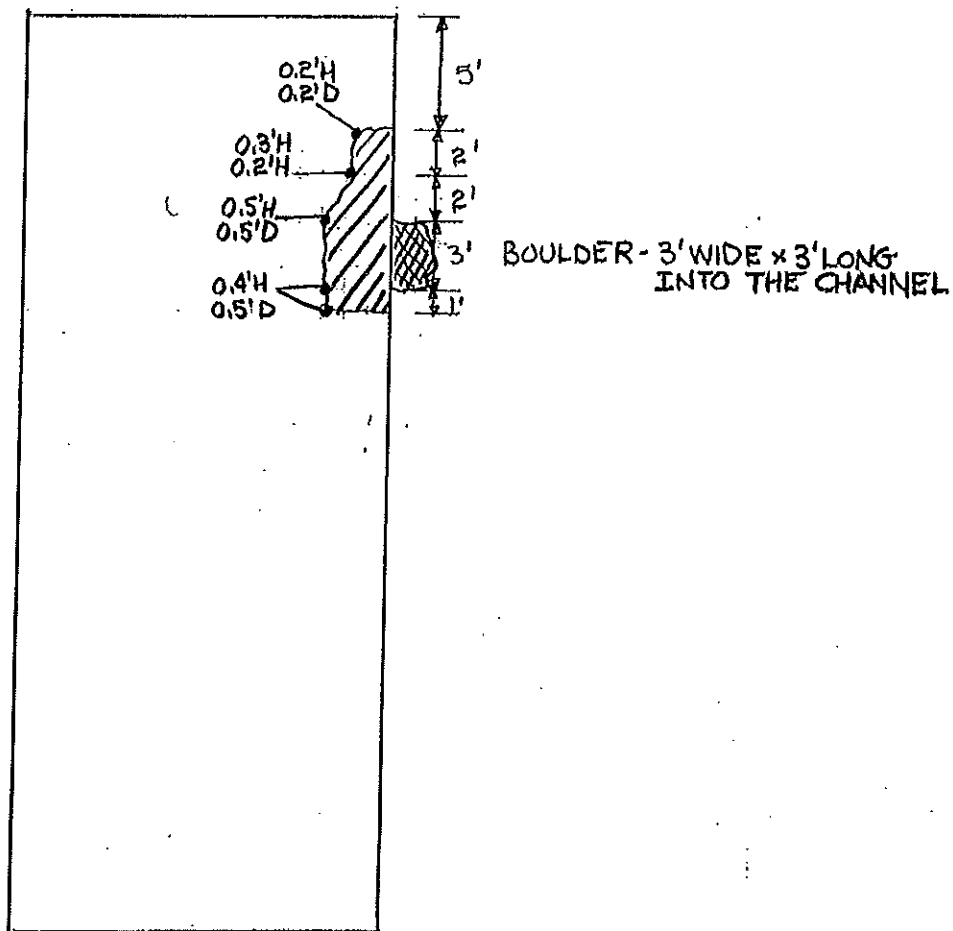
SHEET NO. _____ OF _____

CALCULATED BY _____ DATE 4/7/09

CHECKED BY _____ DATE _____

REVISIONS _____

SCALE _____



PLAN VIEW-WEST ABUTMENT
N.T.S.