

Minimum Vertical Clearance for Existing Bridges which are not Being Replaced and for Existing Bridges on which the Superstructure is not Being Replaced^{1, 2}

Overpass Facility →	Freeway, Expressway, or STH		Railroad ⁵ , CTH, Town Road, Local Road, or Street	Pedestrian or Shared-use Structures	Sign Structures ⁶
Underpass Facility ↓	Interchange	Grade Separation			
Non-arterial either STH, CTH, Town Road, Local Road, or Street	15'-3" min. or ES ³	If existing is < 14'-0" then increase to 14'-0" min. or ES ³	16'-3" min. or ES ³		18'-0" min. or ES ³ for existing sign structures on new construction projects or reconstruction projects;
		If existing is ≥ 14'-0", but < 14'-6" then maintain existing min. or ES ³			
		If existing is ≥ 14'-6" then 14'-6" min. or ES ³			
Arterial either CTH, Town Road, Local Road, or Street (excludes freeway and expressway; also excludes arterial STH)	If existing is < 15'-3" then increase to 15'-3" min. or ES ³	If existing is < 14'-0" then increase to 14'-0" min. or ES ³	17'-0" min. or ES ³		17'-0" or ES ³ for existing sign structures on 3R projects
	If existing is ≥ 15'-3", but < 16'-0" then maintain existing min. or ES ³	If existing is ≥ 14'-0", but < 14'-6" then maintain existing min. or ES ³			
	If existing is ≥ 16'-0" then 16'-0" min. or ES ³	If existing is ≥ 14'-6" then 14'-6" min. or ES ³			
Arterial STH (excludes freeway and expressway)	If existing is < 15'-3" then increase to 15'-3" min. or ES ³	If existing is < 14'-0" then increase to 14'-0" min. or ES ³	17'-0" min. or ES ³		
	If existing is ≥ 15'-3", but < 16'-0" then maintain existing min. or ES ³	If existing is ≥ 14'-0", but < 16'-0" then maintain existing min. or ES ³			
	If existing is ≥ 16'-0" then 16'-0" min. or ES ³	If existing is ≥ 16'-0" then 16'-0" min. or ES ³			
Freeway ⁴ or Expressway	16'-0" min. or ES ³				
Railroad ⁵	Maintain existing vertical clearance - if existing clearance is < 23'-0" then confer with BTLR Railroads and Harbors Section to determine the adequacy of the existing clearance.				

General notes:

- ¹ Vertical clearance is needed for the entire roadway width (critical point; to include traveled way, auxiliary lanes, turn lanes, and shoulders), according to the above table. Provide greater than minimum clearance if evaluation shows that greater clearance is needed because bridge superstructure is susceptible to being hit by under-passing vehicles.

Vertical clearance for railroads is measured from the top of rail and is required over an area 8 feet 6 inches from the track centerline on each side of a railroad track.

- ² Include a low clearance sign (W12-2), on structures if its use is in accordance with WisDOT MUTCD 2C.22.

- ³ ES = approved Exceptions To Standards Report required (see [FDM 11-1-2](#) and [FDM 11-1-4](#)).

- ⁴ See [FDM 11-44-1](#) for vertical clearance guidance specific to Interstate freeways.

- ⁵ Consult with the Region Railroad Coordinator if the over-passing or under-passing facility is either a railroad or a "rails-to-trails" trail; or if a structure is owned by a railroad company.

- ⁶ See LRFD Bridge Manual Chapter 39 for design considerations for vertical clearance on Sign Structures (http://on.dot.wi.gov/dtid_bos/extranet/structures/LRFD/LRFDManualIndex.htm).

Vertical Clearance for Construction of New Bridges, Replacement Bridges, and Bridges on which the Superstructure is being replaced¹

Overpass Facility →	Freeway, Expressway, or STH		Railroad ⁴ , CTH, Town Road, Local Road, or Street	Pedestrian or Shared-use Structures	Sign Structures ²
Underpass Facility ↓	Interchange	Grade Separation			
Non-arterial either STH, CTH, Town Road, Local Road, or Street	15'-9" Desirable	15'-3" Desirable	16'- 9" Desirable	18'-3" Minimum	
	15'-3" Minimum	14'-9" Minimum	16'-3" Minimum		
Arterial either CTH, Town Road, Local Road, or Street (excludes freeway and expressway; also excludes arterial STH)	16'-9" Desirable	15'-3" Desirable	17'- 9" Desirable		
	16'-3" Minimum	14'-9" Minimum	17'-3" Minimum		
Freeway ³ or Expressway or arterial STH	16'-9" Desirable		17'- 9" Desirable		
	16'-4" Minimum		17'-4" Minimum		
Railroad ^{4,5,6,7}	23'-0" Minimum to 23'-3½" Maximum				

General notes:

- ¹ Vertical clearance is needed for the entire roadway width (critical point; to include traveled way, auxiliary lanes, turn lanes, and shoulders), according to the above table.

Vertical clearance for railroads is measured from the top of rail and is required over an area 8 feet 6 inches from the track centerline on each side of a railroad track.

Do not exceed the desirable vertical clearance shown unless justified. Depending on topography and other specific situations vertical clearance for any structure may be greater than that shown when justified. Some things to consider are: over height loads traveling on the roadway; the level of development in the area, the projected growth in traffic volume and importance of the roadway, and the possibility of reclassification.

- ² See LRFD Bridge Manual Chapter 39 (http://on.dot.wi.gov/dtid_bos/extranet/structures/LRFD/LRFDManualIndex.htm) and LRFD Standard Details 39.02 and 39.10 for design considerations and requirements for vertical clearance on new and replacement Sign Structures.
- ³ See FDM 11-44-1 for vertical clearance guidance specific to Interstate freeways.
- ⁴ Consult with the Region Railroad Coordinator if the over-passing or under-passing facility is either a railroad or a "rails-to-trails" trail; or if a structure is owned by a railroad company.
- ⁵ A vertical clearance <23'-0" requires both an approved Exception to Standards (see FDM 11-1-2 and FDM 11-1-4) and early coordination with BTLR R&H, Railroads and Harbors Section (RHS) through the Region Railroad Coordinator. The Exception to Standards shall contain documentation that the Office of the Commissioner of Railroads (OCR) has been petitioned.
- See Chapter 17 for additional information.
- ⁶ Provide justification for a vertical clearance >23'-3 ½" to the RHS.
- ⁷ Vertical clearance less than 23'-0" may be acceptable or desirable in certain situations, such as for spur tracks, lead tracks, some branch lines and even mainline tracks when other impediments to 23'-0" exist. Review such situations with the Railroad Project Coordination Engineer in RHS. Early coordination with RHS is required.

BRIDGE INSPECTION REPORT
 Wisconsin Dept. of Transportation
 DT2007 2003 s.84.17 Wis. Stats. Type = ROUTINE INSPECTION

page 1

Inventory Data

Feature On: BICYCLE/PEDESTRIAN		Maintainer: TOWN		Structure No: B-44-190	
Feature Under: USH 41		Sect/Twn/Rng: S20 T21N R17E			
Location: AT USH 41		County: OUTAGAMI	Municipality: TOWN-GRAND CHUTE (44020)		
Inv Rating: PEDESTRIAN	Rdwy Width (ft): 9.8	Deck Width (ft): 11.8	Existing Posting:		
Oper Rating: PEDESTRIAN	Total Length (ft): 225.3	Deck Area(ft2): 2658	ADT On: Yr:	ADT Under: Yr:	

Inspection Type (* = Supplemental Form Required)

	Routine Visual	Fracture Critical*	In-Depth*	UW-Dive*	UW-Surv*	UW-Probe/Visual*	Movable*
Last Insp.	03-12-12						
Frequency	24						
Recom. Freq.							
	Initial*	Damage	Interim	Load Posted	SI & A Field Review*		
Last Insp.	02-15-05						
Frequency	N/A						
Recom. Freq.	N/A				Item No. Needing Change		

Load Rating Information

Overburden	Measurement (in): 0.0	Date:	Deck Surface Type: CONCRETE		
Section Loss	File Meas. (%):	File Insp. Date: 03-16-10	Insp. Measurement (%):	Describe:	
Re-rate for load capacity?		Reason:		Date Last Rated: 01-25-01	

Expansion Joints

Location	Type	Temp:		Signing Condition			
		File Insp. Date	File Insp. (in)	New Insp. (in)	Type of Marker	File	Y/N
					Bridge Markers		
					Narrow Bridge		
					One Lane Road		
					Vertical Clearance		
					Weight Limit Post		
					Other(Addl. Sign)		

Clearances(Cardinal = N or E)

	File Meas. (ft.)	File Date	New Meas. (ft.)
Min. Vertical Clearance Under (Cardinal)	19.0	12-06-00	
Min. Vertical Clearance Under (non-Cardinal)	19.0	12-06-00	
Min. Vertical Clearance On			

Structure Type

				Construction/Rehabilitation History			
Material	Configuration	# of Spans	Overall Length (ft)	Year	Work Performed	Plan	Shop
CONT STEEL	DECK GIRDER		110.0	2002	NEW STRUCTURE		
CONT STEEL	DECK GIRDER		110.0				

Inspection Information

Special Requirements	Y/N	Comments				
Traffic Control						
Access Equipment						
Other						

Inspector Information

Team Leader Name and No. Printed: Gerstner, Ron (3514)		Team Member(s) Name(s) Printed:			
Team Leader Signature:		Inspection Date: 03-12-12		Inspection Agency: TOWN (5)	
District/Local Manager and No. Printed:		District/Local Manager Signature:		Review Date:	

Element Inspection (X) Check Elements Inspected

					Quantity in Condition States				
Ck	Elem./Env.	Description	Unit	Total QTY.	1	2	3	4	5
X	26 / 2	Conc Deck/Coatd Bars	SF	2442	2442				
X	107 / 4	Paint Stl Opn Girder	LF	440	440				
X	172 / 4	Painted Steel Diaphr	EA	11	5	6			
		Rusting on diaphragms that are directly over traffic							
X	205 / 4	R/Conc Column	EA	1	1				
X	215 / 3	R/Conc Abutment	LF	24	24				
X	300 / 2	Strip Seal Exp Joint	LF	2		2			
		reseal with a flexible caulking							
X	311 / 2	Moveable Bearing	EA	6	6				
X	313 / 2	Fixed Bearing	EA	4	4				
X	322 / 2	Bituminous Approach	EA	2			2		
		repave approaches							
X	331 / 4	Conc Bridge Railing	LF	440	440				
X	343 / 4	Crushed Aggregate Sp	EA	2	2				
X	359 / 4	Und Dk Surf Sm Flag	EA	1		1			
		Minor Cracking							
X	400 / 3	Concrete Wingwall	EA	4	4				
X	405 / 2	Drainage	EA	4	4				

Element Inspection (X) Check Elements Inspected

					Quantity in Condition States				
Ck	Elem./Env.	Description	Unit	Total QTY.	1	2	3	4	5
X	410 / 4	Curb	LF	440	440				
X	416 / 2	Utilities	EA	3	3				

General Inspection/Maintenance Notes

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Maintenance Recommendations (See standard code items & numbers)

Maintenance Item:
Amount: Date(YYYY-MM-DD):
Maintenance item comment:

Maintenance Item:
Amount: Date(MM-DD-YY):
Maintenance item comment:

NBI Ratings

NBI	File	New	NBI	File	New
Deck	8	8	Culvert	N	N
Superstructure	8	8	Channel	N	N
Substructure	8	8	Waterway	N	N

Maintenance Item:
Amount: Date(MM-DD-YY):
Maintenance item comment:

STRUCTURE INVENTORY AND APPRAISAL FIELD REVIEW FORM

B-44-190
BICYCLE/PEDESTRIAN over USH 41

- (3) Municipality:
(16) Latitude(° ' "):
(17) Longitude(° ' "):

LOCATION	
TOWN-GRAND CHUTE (44020)	
44°17'01.74"N	
88°27'58.74"W	

- (28A) Lanes On:
(28B) Lanes Under:
(102) Traffic Pattern On:
(102) Traffic Pattern Under:
(19) Detour Length(mi):

TRAFFIC SERVICE	
0	
6	
X-NO TRAFFIC	-ONE WAY TRAFFIC -TWO WAY TRAFFIC
-NO TRAFFIC	-ONE WAY TRAFFIC X-TWO WAY TRAFFIC

- (49) Structure Length(ft):
(50) Sidewalk Width(ft):
(50) Curb Width(ft):
(52) Culvert Barrel Length(ft):
(34) Skew:
(51) Bridge Roadway(ft):
(52) Deck(ft):
(32) Approach Roadway(ft):
(47) Minimum Horizontal(ft):
(55) Minimum Right Lateral(ft):
(55) Minimum Left Lateral(ft):

GEOMETRY	
225.3	
Left: 10.0	Right: 0.0
Angle(°): 0	Direction: -RIGHT FORWARD -LEFT FORWARD
Cardinal Width	Non-Cardinal Width
9.8	9.8
11.8	11.8
0	0
Cardinal Under Clearance	Non-Cardinal Under Clearance
83.7	83.7
24.0	24.0
23.7	23.7

- (36A) Bridge Rail Adequacy:
(36B) Transition Adequacy:
(36C) Approach Guardrail Adequacy:
(36D) Guardrail Termination Adequacy:
Outer Rail:

RAILING APPRAISAL		
-SUB-STANDARD	-STANDARD	-NOT APPLICABLE
-SUB-STANDARD	-STANDARD	-NOT APPLICABLE
X-SUB-STANDARD	-STANDARD	-NOT APPLICABLE
X-SUB-STANDARD	-STANDARD	-NOT APPLICABLE
Left	Right	Type
		TYPE F (TWO SQUARE TUBES) - STEEL(8)
		TYPE F (3 SQUARE TUBES) - STEEL(65)
		TYPE F (4 SQUARE TUBES) - STEEL(72)
		TYPE M-STEEL 3 SQUARE TUBES(93)
		SLOPED FACE PARAPET LF(91)
		SLOPED FACE PARAPET HF(92)
		VERTICAL FACE PARAPET TYPE A(74)
		TYPE W-THREE BEAM(79)
		TYPE H ON VERTICAL PARAPET(80)
		TIMBER(38)
X	X	OTHER(99) (Please specify) Left: CHAIN LINK FENCE(42) Right: CHAIN LINK FENCE(42)
Transition Type:		
		CONT GUARD RAIL
		NO APP GRDRL
		NO ATTACHMENT
		22 MM(7/8") BOLT (Please enter quantity)
		25 MM(1") BOLT (Please enter quantity)
		OTHER (Please specify)
Guardrail Termination Type:		
		(01) ENERGY ABSORBING TERMINAL/EAT
		(02) TURN DOWN
		(99) OTHER (Please specify)

- (72) Approach Alignment Appraisal:

ROADWAY ALIGNMENT APPRAISAL	
	(3) INTOLERABLE- Horizontal or Vertical curvature requires a substantial reduction in vehicle operating speed
	(6) FAIR- Horizontal or Vertical curvature requires a very minor speed reduction
X	(8) GOOD- No speed reduction required

CONTROL	CONTROL 1	CONTROL 2	CONTROL 3	CONTROL 4
STA. 220+04.62	STA. 219+28.62	STA. 220+05.52	STA. 219+29.52	
OFFSET 32.46' LT.	32.46' LT.	12.46' LT.	12.46' LT.	

DESIGN DATA

LIVE LOAD:
 DESIGN RATING = HS20
 INVENTORY RATING = HS22
 OPERATING RATING = HS31
 MAX. STANDARD PERMIT VEHICLE LOAD = 230 KIPS
 STRUCTURE IS DESIGNED FOR A FUTURE WEARING SURFACE OF 20 POUNDS PER SQUARE FOOT.
 INVENTORY, OPERATIONAL, AND STANDARD PERMIT VEHICLE RATINGS DO NOT INCLUDE FUTURE WEARING SURFACE.

ULTIMATE DESIGN STRESSES:
 CONCRETE MASONRY - SLAB $f'_c = 4,000$ psi
 - ALL OTHER $f'_c = 3,500$ psi
 HIGH STRENGTH BAR REINFORCEMENT, GRADE 60 $f_y = 60,000$ psi
 54" PRESTRESSED GIRDERS - CONC. MASONRY $f'_c = 6,000$ psi
 STRANDS - 1/2" DIA. WITH AN ULTIMATE TENSILE STRENGTH OF 270,000 psi

FOUNDATION DATA

ABUTMENTS TO BE SUPPORTED ON HP10 X 42 STEEL PILING ESTIMATED 45' LONG AND DRIVEN TO A BEARING CAPACITY OF 55 TONS PER PILE. TYPICAL BOTH ABUTMENTS.

PIER TO BE SUPPORTED ON HP10 X 42 STEEL PILING ESTIMATED 30' LONG AND DRIVEN TO A BEARING CAPACITY OF 55 TONS PER PILE.

LIST OF DRAWINGS

- GENERAL PLAN
- GRADE LINES, QUANTITIES & GENERAL NOTES
- SUBSURFACE EXPLORATION
- WEST ABUTMENT
- W. ABUT. DETAILS
- EAST ABUTMENT
- E. ABUT. DETAILS
- PIER
- SUPERSTRUCTURE
- SUPERSTRUCTURE DETAILS
- 54" PRESTRESSED GIRDER DETAILS
- STEEL DIAPHRAGM
- SLOPED FACE PARAPET "B"

TRAFFIC DATA		TRAFFIC DATA	
S.T.H. 76	U.S.H. 41	S.T.H. 76	U.S.H. 41
ADT (1997) = 15,880	ADT (1997) = 34,430	ADT (2017) = 23,800	ADT (2017) = 49,220
DHV = 10 %	DHV = 9.0 %	DHV = 10 %	DHV = 9.0 %
D = 50 %	D = 50 %	D = 50 %	D = 50 %
T = 7.7 %	T = 12.4 %	T = 7.7 %	T = 12.4 %
V = 45 MPH	V = 65 MPH	V = 45 MPH	V = 65 MPH

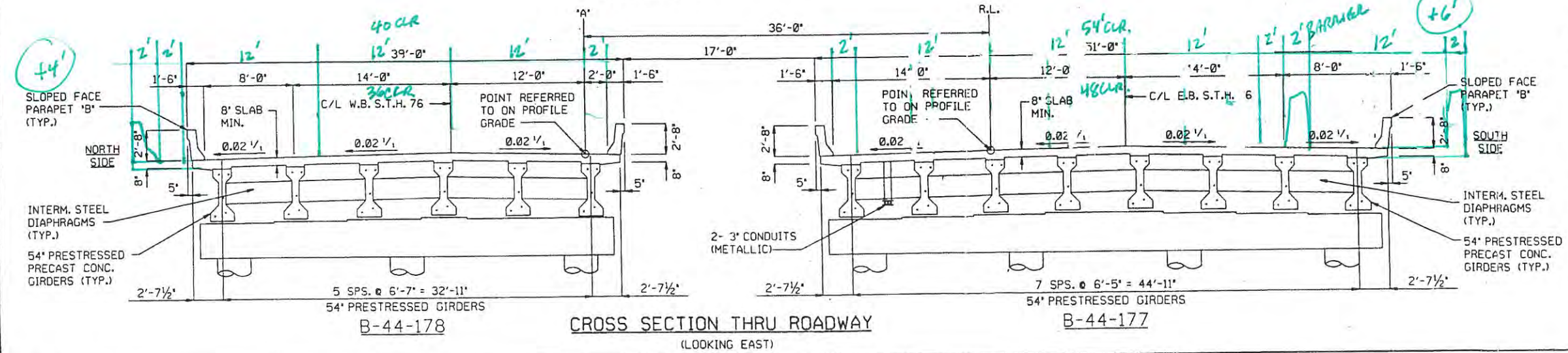
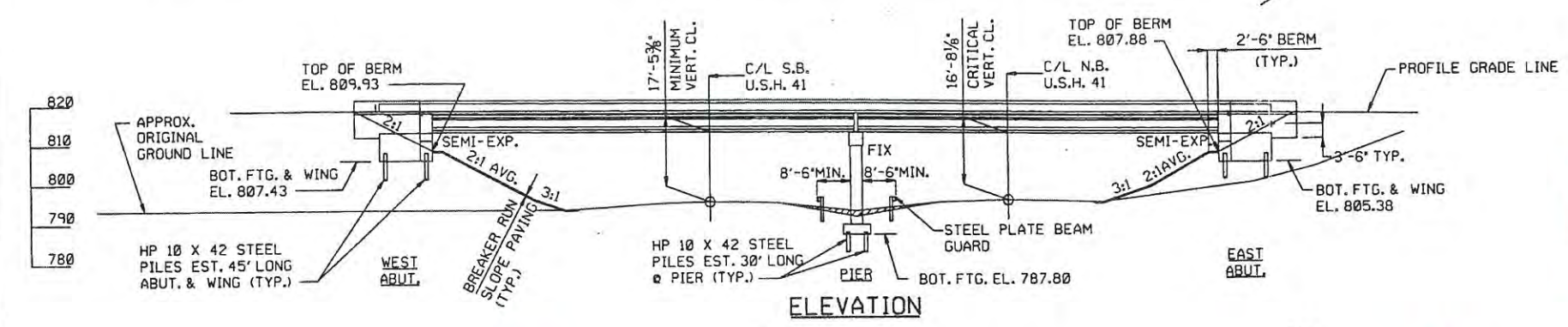
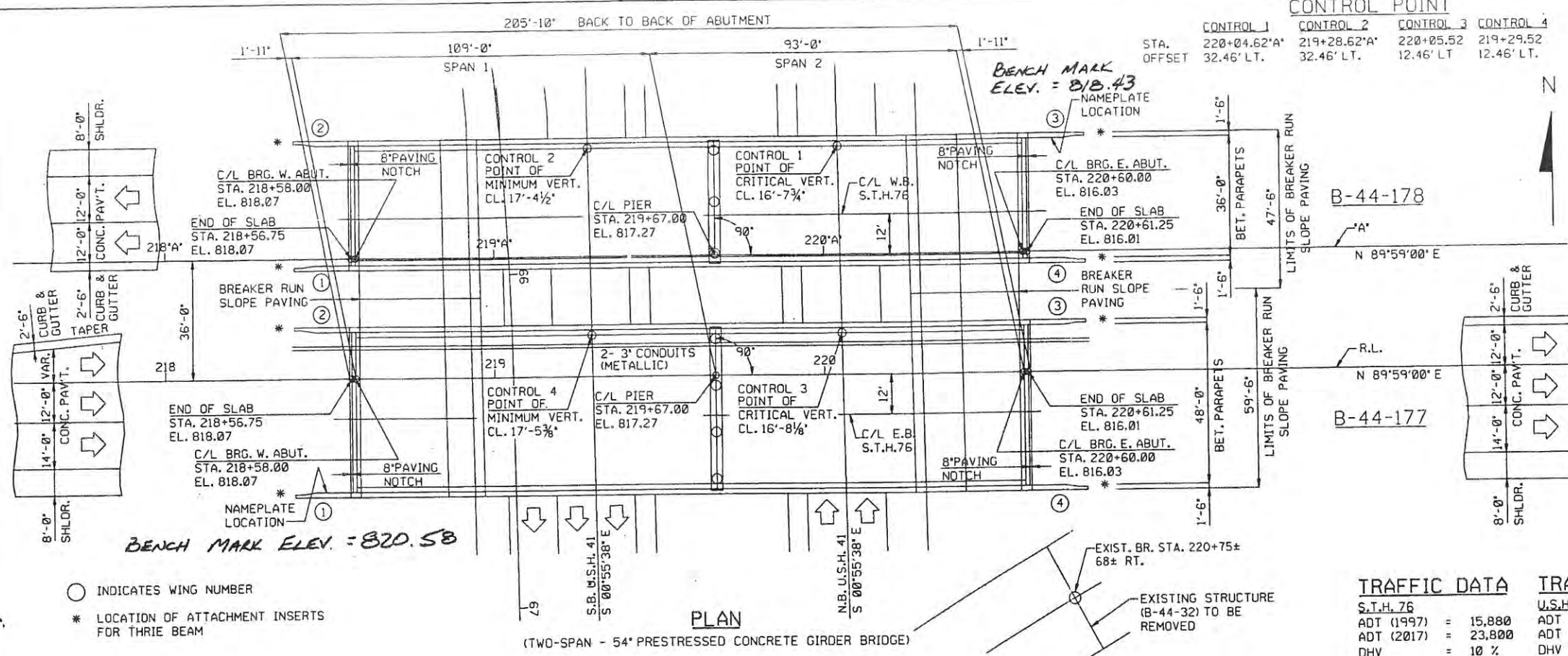
BRIDGE OFFICE CONTACT:
 FINN HUBBARD (608) 266-8489
 DAVE KIEBUSCH (608) 266-5084

BENCH MARK TABLE

NO.	STATION	DESCRIPTION	ELEV.
709	230+25.00	PK IN 24" OAK 100' W. OF ABENDROTH RD. ON C.T.H. 00	792.34
608	218+00.00	PT MK ON BOLT WEST END OF ORDE ADVERTISING SIGN 700' N. OF C.T.H. 00	794.60

PRELIMINARY BRIDGE PLANS
 PREPARED BY: SHORT-ELLIOTT-HENDRICKSON INC.
 CONTACT: JEFFREY A. JOHNSON (612) 490-2078

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS			
STRUCTURE B-44-177			
S.T.H. 76 OVER U.S.H. 41			
COUNTY	OUTAGAMIE	TOWN	GRAND CHUTE
DESIGN SPEC.	A.A.S.H.T.O. 1994	LOAD	HS20
DESIGNED BY	DJK	DESIGN	CK'D. C.RAY
DRAWN BY	JHG/DLF	PLANS	CK'D. DJK
APPROVED: <i>Harold H. Anderson</i>		DATE: 09-18-96	
STATE BRIDGE ENGINEER			
GENERAL PLAN		SHEET 1 OF 13	
		Oct, 1995	



a-wid02369.01

sth76/gpl.dwg

DISTRICT CONTACT

SCALE: 1/8" = 1'-0"

BR B44177-GP1.DGN

STATE PROJECT NUMBER	SHEET NO.
1146-07-72	8.1

TOTAL ESTIMATED QUANTITIES - B-44-177

BID ITEMS	UNIT	WEST ABUT.	EAST ABUT.	PIER	SUPER.	TOTALS
EXCAVATION FOR STRUCTURES, BRIDGES B-44-177	L.S.					1
CONCRETE MASONRY, BRIDGES	C.Y.	45	45	60	372	522
PROTECTIVE SURFACE TREATMENT	GAL.				76	76
PRESTRESSED GIRDER 'I' TYPE 54-INCH	L.F.				1,622	1,622
HIGH STRENGTH BAR STEEL REINFORCEMENT, BRIDGES	LB.	3,280	3,260	990		7,530
COATED HIGH STRENGTH BAR STEEL REINFORCEMENT, BRIDGES	LB.	460	460	7,490	66,470	74,880
STEEL PILING, DELIVERED AND DRIVEN, HP 10-INCH, 42-POUND	L.F.	630	585	720		1935
NON-LAMINATED ELASTOMERIC BEARING PAD	EA.				24	24
RUBBERIZED MEMBRANE WATERPROOFING	S.Y.	10	10			20
SLOPE PAVING, BREAKER RUN	S.Y.	245	210			455
ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD	EA.					4
STEEL DIAPHRAGMS, STRUCTURE B-44-177	EA.				28	28
STRUCTURE BACKFILL	C.Y.	315	315			630
NON-BID ITEMS						
FILLER	SIZE					1/2" & 3/4"

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

ELASTOMERIC BEARING PADS NEED NOT BE INDIVIDUALLY MOLDED PROVIDED THE CUT EDGES ARE SMOOTH AND TRUE.

THE SLOPE OF FILL IN FRONT OF THE ABUTMENTS SHALL BE COVERED WITH SLOPE PAVING TO THE EXTENT SHOWN ON SHEET 1.

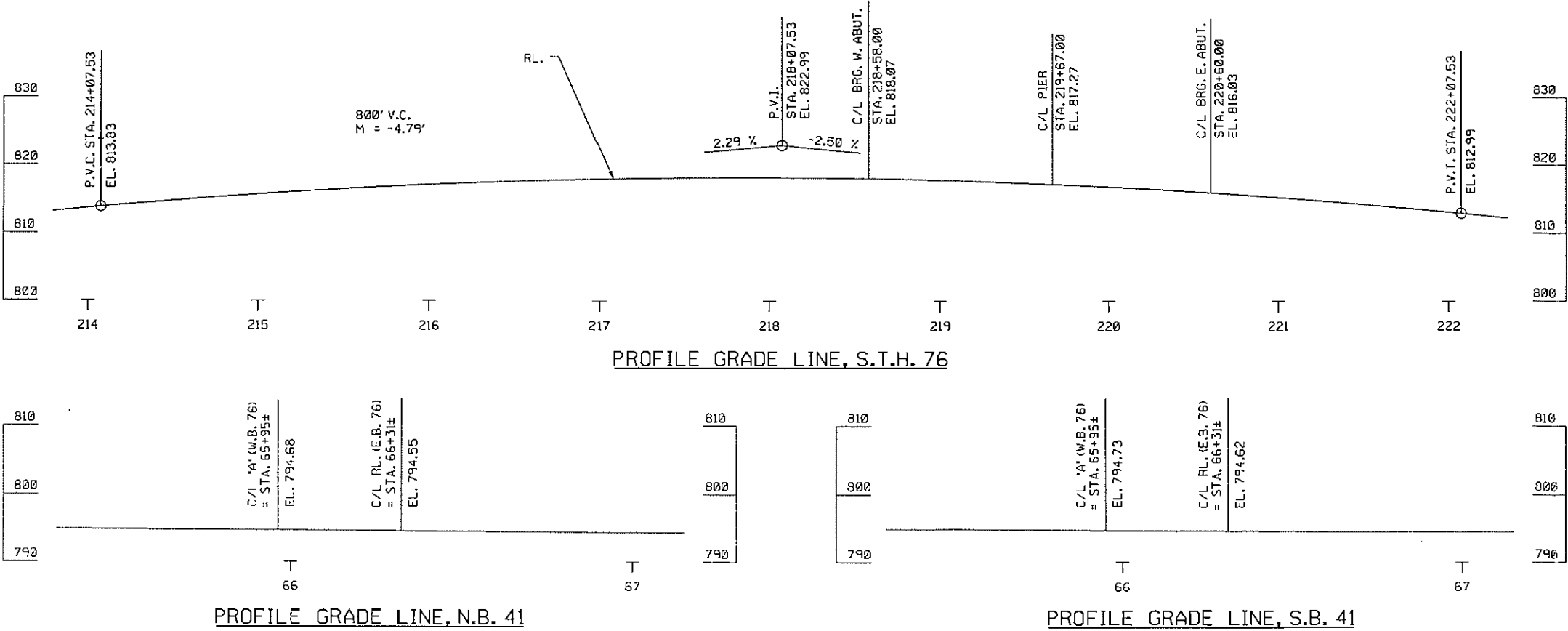
SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF 1/2" FILLER WITH NON-STAINING GRAY NON-ASPHALTIC JOINT SEALER (1" DEEP & HOLD 1/8" BELOW SURFACE OF CONCRETE).

FILLER SHALL CONFORM TO THE REQUIREMENTS OF AASHTO DESIGNATION :M153 TYPE 1, 2, OR 3 OR AASHTO DESIGNATION :M213

THIS STRUCTURE WILL REPLACE (B-44-32) WHICH IS A 275' LONG 36' WIDE FOUR-SPAN BOX GIRDER BRIDGE.

INSERTS FOR HANGERS FOR 3" CONDUITS TO BE SUPPLIED BY UTILITY AND PLACED BY CONTRACTOR. COST OF PLACING INSERTS TO BE INCLUDED IN PRICE BID FOR "CONCRETE MASONRY, BRIDGES".

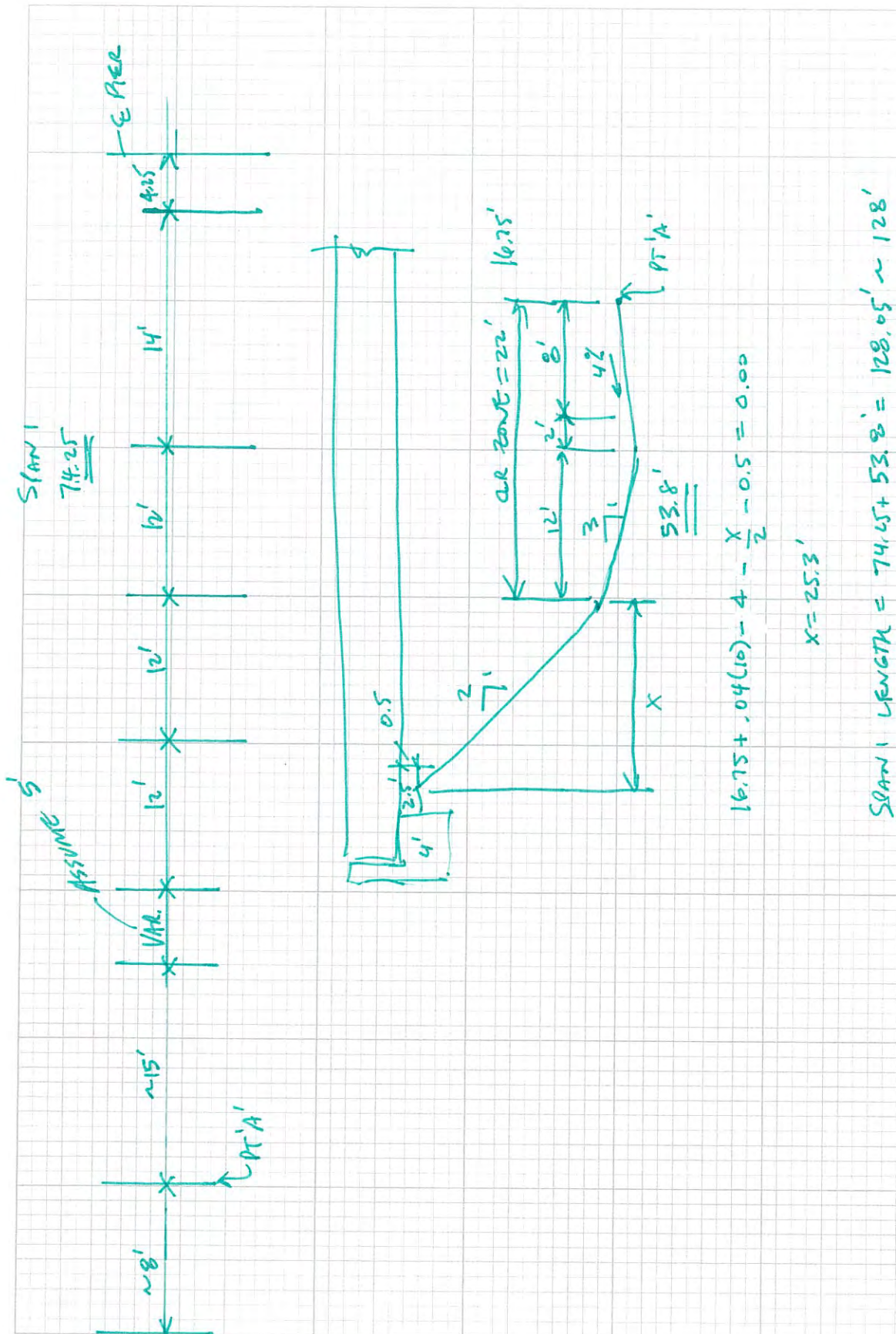
HANGERS & CONDUIT TO BE SUPPLIED & INSTALLED BY UTILITY.



NO.	DATE	REVISION	BY
		STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS	
		STRUCTURE B-44-177	
CONST. SPEC.	WIS. 1989	DRAWN BY JHG/DLF	PLANS CK'D. DJK
		GRADE LINES, QUANTITIES & GENERAL NOTES	SHEET 2

0-wid02369.01

Calculations for	Job No.	Sheet No.
Made by	Date	
Checked by	Date	
Backchecked by	Date	



Minimum Vertical Clearance for Existing Bridges which are not Being Replaced and for Existing Bridges on which the Superstructure is not Being Replaced^{1, 2}

Overpass Facility →	Freeway, Expressway, or STH		Railroad ⁵ , CTH, Town Road, Local Road, or Street	Pedestrian or Shared- use Structures	Sign Structures ⁶
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		If existing is ≥ 14'-0", but < 14'-6" then maintain existing min. or ES ³			
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	If existing is ≥ 15'-3", but < 16'-0" then maintain existing min. or ES ³	If existing is ≥ 14'-0", but < 14'-6" then maintain existing min. or ES ³			
	If existing is ≥ 16' 0" then 16' 0" min. or ES ³	If existing is ≥ 14'-6" then 14'- 6" min. or ES ³			
Arterial STH (excludes freeway and expressway)	If existing is < 15'-3" then increase to 15'-3" min. or ES ³	If existing is < 14'-0" then increase to 14'-0" min. or ES ³	17'-0" min. or ES ³		
	If existing is ≥ 15'-3", but < 16'-0" then maintain existing min. or ES ³	If existing is ≥ 14'-0", but < 16'-0" then maintain existing min. or ES ³			
	If existing is ≥ 16' 0" then 16' 0" min. or ES ³	If existing is ≥ 16' 0" then 16' 0" min. or ES ³			
Freeway ⁴ or Expressway	16'-0" min. or ES ³				
Railroad ⁵	Maintain existing vertical clearance - if existing clearance is < 23'-0" then confer with BTLR Railroads and Harbors Section to determine the adequacy of the existing clearance.				

General notes:

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Vertical clearance for railroads is measured from the top of rail and is required over an area 8 feet 6 inches from the track centerline on each side of a railroad track.

- ² Include a low clearance sign (W12-2), on structures if its use is in accordance with WisDOT MUTCD 2C.22.

- ³ ES = approved Exceptions To Standards Report required (see [FDM 11-1-2](#) and [FDM 11-1-4](#)).

- ⁴ See [FDM 11-44-1](#) for vertical clearance guidance specific to Interstate freeways.

- ⁵ Consult with the Region Railroad Coordinator if the over-passing or under-passing facility is either a railroad or a "rails-to-trails" trail; or if a structure is owned by a railroad company.

- ⁶ See LRFD Bridge Manual Chapter 39 for design considerations for vertical clearance on Sign Structures (http://on.dot.wi.gov/dtid_bos/extranet/structures/LRFD/LRFDManualIndex.htm).

Vertical Clearance for Construction of New Bridges, Replacement Bridges, and Bridges on which the Superstructure is being replaced¹

Overpass Facility →	Freeway, Expressway, or STH		Railroad ⁴ , CTH, Town Road, Local Road, or Street	Pedestrian or Shared-use Structures	Sign Structures ²
Underpass Facility ↓	Interchange	Grade Separation			
Non-arterial either STH, CTH, Town Road, Local Road, or Street	15'-9" Desirable	15'-3" Desirable	16'-9" Desirable	16'-9" Desirable	18'-3" Minimum
	15'-3" Minimum	14'-9" Minimum			
Arterial either CTH, Town Road, Local Road, or Street (excludes freeway and expressway; also excludes arterial STH)	16'-9" Desirable	15'-3" Desirable	17'-9" Desirable	17'-9" Desirable	
	16'-3" Minimum	14'-9" Minimum			
Freeway ³ or Expressway or arterial STH	16'-9" Desirable		17'-9" Desirable	17'-9" Desirable	
	16'-4" Minimum				
Railroad ^{4,5,6,7}	23'-0" Minimum to 23'-3½" Maximum				

General notes:

- ¹ Vertical clearance is needed for the entire roadway width (critical point; to include traveled way, auxiliary lanes, turn lanes, and shoulders), according to the above table.

Vertical clearance for railroads is measured from the top of rail and is required over an area 8 feet 6 inches from the track centerline on each side of a railroad track.

Do not exceed the desirable vertical clearance shown unless justified. Depending on topography and other specific situations vertical clearance for any structure may be greater than that shown when justified. Some things to consider are: over height loads traveling on the roadway; the level of development in the area, the projected growth in traffic volume and importance of the roadway, and the possibility of reclassification.

- ² See LRFD Bridge Manual Chapter 39 (http://on.dot.wi.gov/dtid_bos/extranet/structures/LRFD/LRFDManualIndex.htm) and LRFD Standard Details 39.02 and 39.10 for design considerations and requirements for vertical clearance on new and replacement Sign Structures.
- ³ See FDM 11-44-1 for vertical clearance guidance specific to Interstate freeways.
- ⁴ Consult with the Region Railroad Coordinator if the over-passing or under-passing facility is either a railroad or a "rails-to-trails" trail; or if a structure is owned by a railroad company.
- ⁵ A vertical clearance <23'-0" requires both an approved Exception to Standards (see FDM 11-1-2 and FDM 11-1-4) and early coordination with BTLR R&H, Railroads and Harbors Section (RHS) through the Region Railroad Coordinator. The Exception to Standards shall contain documentation that the Office of the Commissioner of Railroads (OCR) has been petitioned.
- See Chapter 17 for additional information.
- ⁶ Provide justification for a vertical clearance >23'-3 ½" to the RHS.
- ⁷ Vertical clearance less than 23'-0" may be acceptable or desirable in certain situations, such as for spur tracks, lead tracks, some branch lines and even mainline tracks when other impediments to 23'-0" exist. Review such situations with the Railroad Project Coordination Engineer in RHS. Early coordination with RHS is required.

BRIDGE INSPECTION REPORT
 Wisconsin Dept. of Transportation
 DT2007 2003 s.84.17 Wis. Stats. Type = ROUTINE INSPECTION

page 1

Inventory Data

Feature On: STH 15		Maintainer: STATE HIGHWAY DEPT		Structure No: B-44-0177	
Feature Under: USH 41		Sect/Twn/Rng: S17 T21N R17E			
Location: 2.0M S JCT USH 45		County: OUTAGAMI	Municipality: TOWN-GRAND CHUTE (44020)		
Inv Rating: HS22	Rdwy Width (ft): 48.0	Deck Width (ft): 51.0	Existing Posting:		
Oper Rating: HS31	Total Length (ft): 204.5	Deck Area(ft2): 10429	ADT On: 7405 Yr: 2003	ADT Under: Yr:	

Inspection Type (* = Supplemental Form Required)

	Routine Visual	Fracture Critical*	In-Depth*	UW-Dive*	UW-Surv*	UW-Probe/Visual*	Movable*
Last Insp.	10-12-10						
Frequency	24						
Recom. Freq.							
	Initial*	Damage	Interim	Load Posted	SI & A Field Review*		
Last Insp.							
Frequency	N/A						
Recom. Freq.	N/A				Item No. Needing Change		

Load Rating Information

Overburden	Measurement (in): 0.0	Date:	Deck Surface Type: CONCRETE		
Section Loss	File Meas. (%):	File Insp. Date: 02-02-09	Insp. Measurement (%):	Describe:	
Re-rate for load capacity?		Reason:		Date Last Rated: 07-16-96	

Expansion Joints

Location	Type	File Insp. Date	File Insp. (in)	New Insp. (in)	Type of Marker	File	Y/N	Comments
					Bridge Markers			
					Narrow Bridge			
					One Lane Road			
					Vertical Clearance			
					Weight Limit Post			
					Other(Addl. Sign)			

Clearances(Cardinal = N or E)

	File Meas. (ft.)	File Date	New Meas. (ft.)
Min. Vertical Clearance Under (Cardinal)	16.54	10-03-97	
Min. Vertical Clearance Under (non-Cardinal)	17.32	10-03-97	
Min. Vertical Clearance On			

Structure Type

Material	Configuration	# of Spans	Overall Length (ft)	Construction/Rehabilitation History			
				Year	Work Performed	Plan	Shop
CONT PREST CO	DECK GIRDER		109.0	1997	NEW STRUCTURE	PLAN	
CONT PREST CO	DECK GIRDER		93.0				

Inspection Information

Special Requirements	Y/N	Comments				
Traffic Control						
Access Equipment						
Other						

Inspector Information

Team Leader Name and No. Printed: Blazek, Chris (3009)		Team Member(s) Name(s) Printed:	
Team Leader Signature:		Inspection Date: 10-12-10	Inspection Agency: STATE HIGHWAY DEPARTMENT (1)
District/Local Manager and No. Printed:		District/Local Manager Signature:	Review Date:

Element Inspection (X) Check Elements Inspected

					Quantity in Condition States				
Ck	Elem./Env.	Description	Unit	Total QTY.	1	2	3	4	5
X	26 / 4	Conc Deck/Coatd Bars	SF	10430	10430				
		dia. cracks & ends. Trans. cracks, leaching. Short long. cracks @ top of beams							
X	109 / 4	P/S Conc Open Girder	LF	1624	1624				
X	172 / 4	Painted Steel Diaphr	EA	28	28				
X	205 / 4	R/Conc Column	EA	4	3	1			
		Small spall in north column.							
X	215 / 4	R/Conc Abutment	LF	101	101				
X	234 / 4	R/Conc Cap	LF	49	49				
X	250 / 4	Concrete Diaphragm	EA	7	7				
X	321 / 4	R/Conc Approach Slab	EA	2	2				
		Shoulders Starting to settle							
X	331 / 4	Conc Bridge Railing	LF	462	420	42			
X	343 / 2	Crushed Aggregate Sp	EA	2		2			
		Settled at abutments.							
X	358 / 4	Deck Cracking SmFlag	EA	1	1				
		Diagonal cracks at end of deck.							
X	359 / 4	Und Dk Surf Sm Flag	EA	1	1				
X	400 / 4	Concrete Wingwall	EA	4	4				

General Inspection/Maintenance Notes

--

Maintenance Recommendations (See standard code items & numbers)

Maintenance Item: Drainage - Repair Washouts / Erosion
--

Amount:	Date(YYYY-MM-DD):
---------	-------------------

Maintenance item comment: Repair undermining.erosion of curb at ends of wingwalls.
--

Maintenance Item: Deck - Seal Surface Cracks
--

Amount:	Date(MM-DD-YY):
---------	-----------------

Maintenance item comment:

NBI Ratings

NBI	File	New	NBI	File	New
Deck	7	7	Culvert	N	N
Superstructure	8	8	Channel	N	N
Substructure	8	8	Waterway	N	N

Maintenance Item:

Amount:	Date(MM-DD-YY):
---------	-----------------

Maintenance item comment:

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BRIDGE INSPECTION REPORT
 Wisconsin Dept. of Transportation
 DT2007 2003 s.84.17 Wis. Stats. Type = ROUTINE INSPECTION

page 1

Inventory Data

Feature On: STH 15		Maintainer: STATE HIGHWAY DEPT		Structure No: B-44-0178	
Feature Under: USH 41 NB		Sect/Twn/Rng: S17 T21N R17E			
Location: 0.4M N JCT CHT AA		County: OUTAGAMI	Municipality: TOWN-GRAND CHUTE (44020)		
Inv Rating: HS22	Rdwy Width (ft): 36.0	Deck Width (ft): 39.0	Existing Posting:		
Oper Rating: HS30	Total Length (ft): 204.5	Deck Area(ft2): 7975	ADT On: 7405 Yr: 2003	ADT Under: Yr:	

Inspection Type (* = Supplemental Form Required)

	Routine Visual	Fracture Critical*	In-Depth*	UW-Dive*	UW-Surv*	UW-Probe/Visual*	Movable*
Last Insp.	10-12-10						
Frequency	24						
Recom. Freq.							
	Initial*	Damage	Interim	Load Posted	SI & A Field Review*		
Last Insp.							
Frequency	N/A						
Recom. Freq.	N/A				Item No. Needing Change		

Load Rating Information

Overburden	Measurement (in): 0.0	Date:	Deck Surface Type: CONCRETE		
Section Loss	File Meas. (%):	File Insp. Date: 02-02-09	Insp. Measurement (%):	Describe:	
Re-rate for load capacity?	Reason:			Date Last Rated: 07-16-96	

Expansion Joints

Location	Type	Temp:			Signing Condition			
		File Insp. Date	File Insp. (in)	New Insp. (in)	Type of Marker	File	Y/N	Comments
					Bridge Markers			
					Narrow Bridge			
					One Lane Road			
					Vertical Clearance			
					Weight Limit Post			
					Other(Add. Sign)			

Clearances(Cardinal = N or E)

	File Meas. (ft.)	File Date	New Meas. (ft.)
Min. Vertical Clearance Under (Cardinal)	16.5	10-03-97	
Min. Vertical Clearance Under (non-Cardinal)	17.29	10-03-97	
Min. Vertical Clearance On			

Structure Type

Material	Configuration	# of Spans	Overall Length (ft)	Year	Work Performed	Plan	Shop
CONT PREST CO	DECK GIRDER		109.0	1997	NEW STRUCTURE	PLAN	
CONT PREST CO	DECK GIRDER		93.0				

Inspection Information

Special Requirements	Y/N	Comments				
Traffic Control						
Access Equipment						
Other						

Inspector Information

Team Leader Name and No. Printed: Blazeck, Chris (3009)		Team Member(s) Name(s) Printed:			
Team Leader Signature:		Inspection Date: 10-12-10		Inspection Agency: STATE HIGHWAY DEPARTMENT (1)	
District/Local Manager and No. Printed:		District/Local Manager Signature:		Review Date:	

Quantity in Condition States

Element Inspection (X) Check Elements Inspected					Quantity in Condition States				
Ck	Elem./Env.	Description	Unit	Total QTY.	1	2	3	4	5
X	26 / 4	Conc Deck/Coatd Bars	SF	7976	7976				
	diag. cracks @ ends. trans cracks, leaching. Short long. ceacks @ top of beams.								
X	109 / 4	P/S Conc Open Girder	LF	1217	1216	1			
	Small spall in north girder above NB lanes (above outside edge line).								
X	172 / 4	Painted Steel Diaphr	EA	20	20				
X	205 / 4	R/Conc Column	EA	3	3				
X	215 / 4	R/Conc Abutment	LF	78	78				
X	234 / 4	R/Conc Cap	LF	39	39				
X	250 / 4	Concrete Diaphragm	EA	5	4	1			
	North diagram spalled on the west side of the pier.								
X	321 / 4	R/Conc Approach Slab	EA	2	2				
	new 1998. Shoulder settling at NE & NW quadrants.								
X	331 / 4	Conc Bridge Railing	LF	462	420	42			
X	343 / 2	Crushed Aggregate Sp	EA	2		2			
	Settled at abutments.								
X	358 / 4	Deck Cracking SmFlag	EA	1	1				
X	359 / 4	Und Dk Surf Sm Flag	EA	1	1				
X	362 / 4	Traf Impact SmFlag	EA	1	1				
	Small spall in north girder above NB outside edge line.								
X	400 / 4	Concrete Wingwall	EA	4	4				

General Inspection/Maintenance Notes

--

Maintenance Recommendations (See standard code items & numbers)

Maintenance Item: Drainage - Repair Washouts / Erosion
--

Amount: Date(YYYY-MM-DD):

Maintenance item comment: Repair undermining/erosion of curb at wingwalls.
--

Maintenance Item:

Amount: Date(MM-DD-YY):

Maintenance item comment:

NBI Ratings

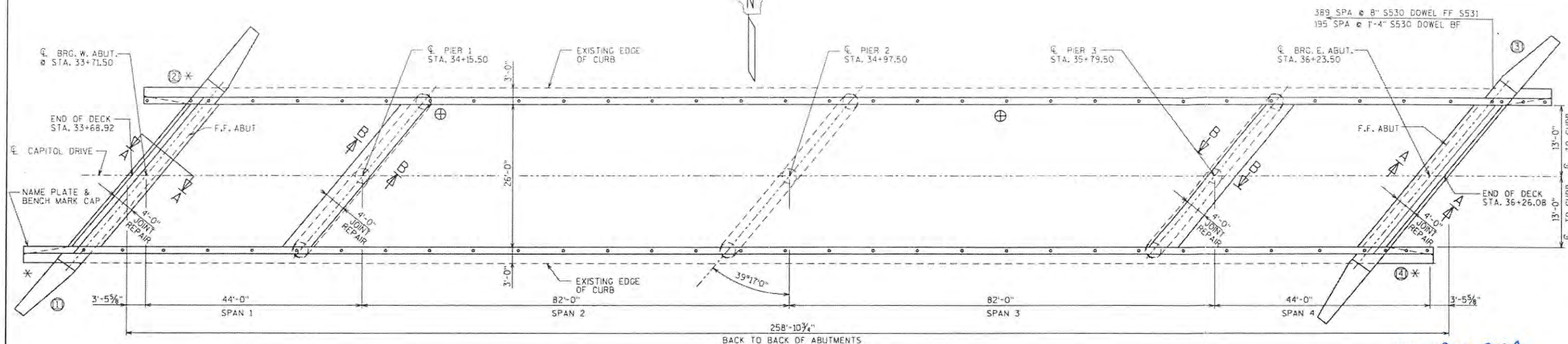
NBI	File	New	NBI	File	New
Deck	7	7	Culvert	N	N
Superstructure	8	8	Channel	N	N
Substructure	8	8	Waterway	N	N

Maintenance Item:

Amount: Date(MM-DD-YY):

Maintenance item comment:

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PLAN

DESIGN DATA

LIVE LOAD:

INVENTORY RATING: HS-XX
 OPERATIONAL RATING: HS-XX
 MAX PERMIT VEHICLE = XX KIPS

ULTIMATE DESIGN STRESSES:

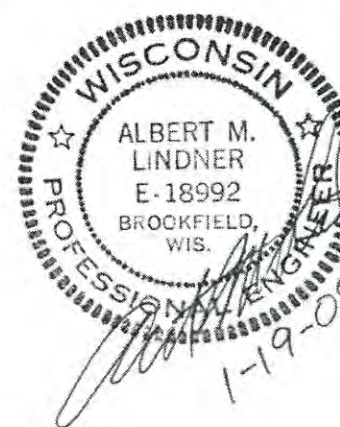
CONCRETE MASONRY SLAB— $f'_c = 4,000$ P.S.I. ALL OTHER— $f'_c = 3,500$ P.S.I.
 BAR STEEL REINFORCEMENT, GRADE 60 $f_y = 60,000$ P.S.I.

BENCH MARK

NO.	STATION	DESCRIPTION	ELEV.
650		CHISELED SQUARE, SOUTHWEST CORNER 9 MS INLET, 175 FT EAST OF CAPITOL DRIVE IN MEDIAN OF US HIGHWAY 41.	800.99

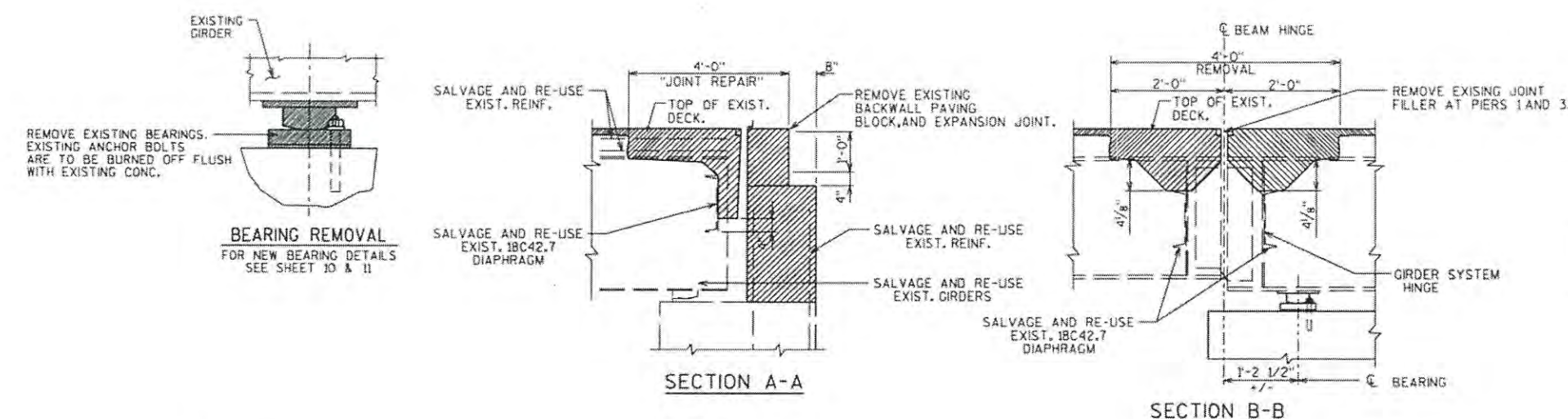
LIST OF DRAWINGS

1. CONCRETE OVERLAY
2. QUANTITIES
3. WEST ABUTMENT
4. WEST ABUTMENT DETAIL
5. EAST ABUTMENT
6. EAST ABUTMENT DETAIL
7. PARAPET FOOTING
8. PIERS 1, 2 & 3
9. CONCRETE SURFACE REPAIR
10. ELASTOMERIC BEARING DETAIL
11. FIXED BEARING DETAILS
12. SUPERSTRUCTURE DETAILS 1
13. EXPANSION DEVICE
14. COVER PLATE DETAILS
15. TUBULAR RAILING TYPE "H" (ALUM.)
16. TUBULAR RAILING TYPE "H" (STEEL)



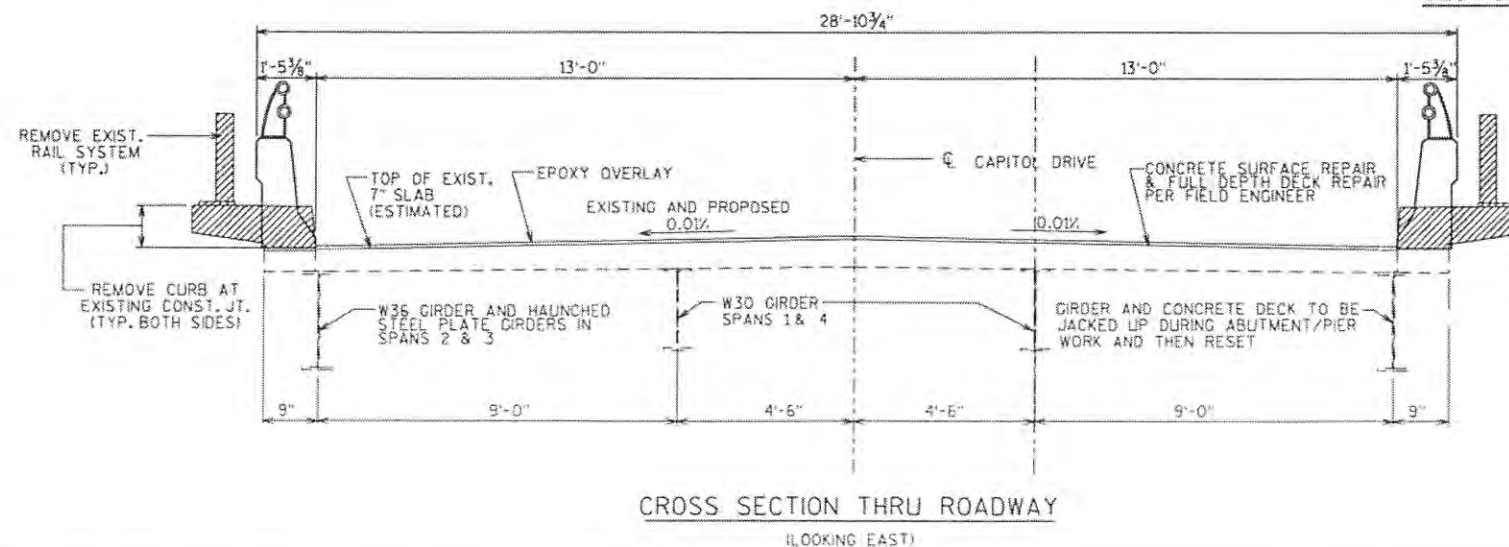
STRUCTURE DESIGN CONTACT:

WILLIAM DREHER PE (608) 261-8489
 ALBERT M. LINDNER PE (414) 259-1500



SECTION A-A

SECTION B-B

CROSS SECTION THRU ROADWAY
(LOOKING EAST)

NO.	DATE	REVISION	BY

PLANS PREPARED BY: **GRÄEF**

One Honey Creek Corporate Center
 125 South 54th Street,
 Suite 401
 Milwaukee, WI 53214-1470
 414/259-1500
 414/259-0037 fax
 www.graef-usa.com

WISDOT
 BUREAU OF STRUCTURES

APPROVED: *William C. Dreher* SDR 1-20-09
 CHIEF STRUCTURAL DESIGN ENGINEER DATE

STRUCTURE B-44-24

CAPITOL DRIVE OVER U.S.H. 41

COUNTY	TOWN/CITY/VILLAGE
OUTAGAMIE	GRAND CHUTE

DESIGN SPEC.	LOAD	CONST. SPEC.
AASHTO STD. SPEC. 2003	HS-20	2009

DESIGNED BY	DESIGN CK'D.	DRAWN BY	BLM	PLANS CK'D.	AL
JS	KW	BY			

EPOXY OVERLAY & RAISING

SHEET 1 OF 16

51

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2" CLEAR UNLESS OTHERWISE SHOWN OR NOTED.

THE FIRST DIGIT OF A THREE DIGIT BAR MARK AND THE FIRST TWO DIGITS OF A FOUR DIGIT BAR SIGNIFY THE BAR SIZE.

FILLER SHALL CONFORM TO THE REQUIREMENTS OF AASHTO DESIGNATION M153, TYPE 1, II, OR III, OR M213.

AT ABUTMENTS, ALL SPACES EXCAVATED AND NOT OCCUPIED BY THE NEW STRUCTURE SHALL BE BACKFILLED WITH "BACKFILL STRUCTURE".

NON-LAMINATED ELASTOMERIC BEARING PADS NEED NOT BE INDIVIDUALLY MOLDED PROVIDED THE CUT EDGES ARE SMOOTH AND TRUE.

DIMENSIONS SHOWN ARE BASED ON THE ORIGINAL STRUCTURE PLANS.

CONTRACTOR SHALL VERIFY ALL DIMENSIONS PRIOR TO ANY FABRICATION AND CONSTRUCTION.

INFORMATION ON THESE DRAWINGS RELATED TO THE EXISTING BRIDGE IS BASED UPON AVAILABLE DRAWING FROM THE WISCONSIN DEPARTMENT OF TRANSPORTATION, NO GUARANTEE OR WARRANTY IS MADE THAT THE INFORMATION IS ALL INCLUSIVE OR TOTALLY ACCURATE. THEREFORE, THE CONTRACTOR SHALL MAKE ITS OWN DETERMINATION OF THE ACTUAL CONDITIONS TO BE ENCOUNTERED.

THE EXISTING STRUCTURE, B-44-24, IS A 4 SPAN, HAUNCHED STEEL DECK GIRDER GIRDER STRUCTURE WITH AN OVERALL WIDTH OF 32 FEET AND AN OVERALL LENGTH OF 258.9 FEET. THE EXISTING RAIL SYSTEM, THE ENTIRE 3 FOOT WIDE BRUSH CURBS, AND OTHER REMOVALS NOT INDICATED ON THE PLANS ARE TO BE REMOVED UNDER THE BID ITEM "REMOVING OLD STRUCTURE".

CONCRETE SURFACE REPAIR AS DIRECTED BY PROJECT ENGINEER.

PREPARATION DECKS TYPE 1, PREPARATION DECKS TYPE 2 AS DIRECTED BY PROJECT ENGINEER.

THE BID ITEM "CONCRETE MASONRY BRIDGES" INCLUDES CONCRETE FOR PREPARATION DECKS 1, PREPARATION DECKS TYPE 2, FULL DEPTH DECK REPAIR AND CONCRETE PLACED FOR THE JOINT REPAIR.

ALL CONCRETE REMOVAL NOT COVERED WITH A CONCRETE OVERLAY SHALL BE DEFINED BY A 1/2" DEEP SAW CUT.

USE EXISTING BAR STEEL REINFORCEMENT WHERE SHOWN AND EXTEND
24 BAR DIAMETER INTO NEW WORK.

VARIATIONS TO THE NEW GRADE LINE OVER 1/2" MUST BE SUBMITTED BY THE FIELD ENGINEER TO THE BUREAU OF STRUCTURES SECTION FOR REVIEW.

THE CONTRACTOR SHALL SUBMIT A REMOVAL PLAN TO THE ENGINEER FOR APPROVAL PER SPECIAL PROVISIONS.

CONTRACTOR SHALL SUPPLY A NEW NAME PLATE IN ACCORDANCE WITH SECTION 502.3.11 OF THE STANDARD SPECIFICATIONS AND THE STANDARD DETAILED DRAWINGS. THE NEW NAME PLATE SHALL SHOW THE ORIGINAL CONSTRUCTION YEAR OF 1960.

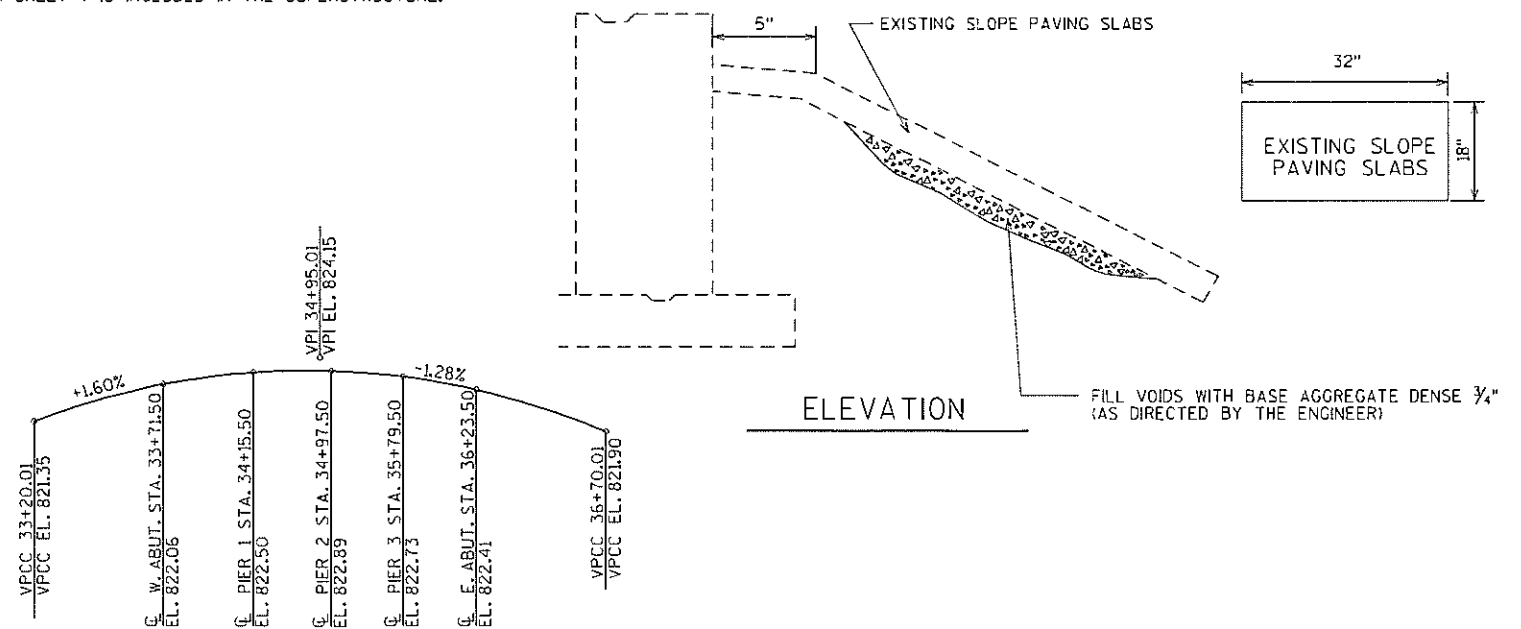
PROTECTIVE SURFACE TREATMENT SHALL BE APPLIED TO THE FRONT FACE OF THE PARAPETS AND THE TOP OF THE PARAPETS. PROTECTIVE SURFACE TREATMENT SHALL ALSO BE APPLIED TO THE TOP SURFACE OF THE PIER CAPS ON PIERS 1 AND 3 AND ALL COLUMNS OF PIERS 1 AND 3 FROM THE EXISTING GROUND LINE TO THE BOTTOM OF THE PIER CAP.

THERE ARE EXISTING SHIMS UNDER THE BEARING OF GIRDERS 1 AND 2 ON PIER 1 AND UNDER THE GIRDER 2 OVER PIER 2. THE CONTRACTOR SHALL PROVIDE NEW SHIMS OF EQUAL THICKNESS TO THE EXISTING SHIMS AND INCLUDE THEM INTO THE INSTALLATION OF THE NEW BEARINGS. THE NEW SHIMS FOR PIER 1 ARE TO BE WELDED BETWEEN THE BOTTOM FLANGE AND TOP PLATE OF THE LAMINATED ELASTOMERIC BEARING PAD. THE NEW SHIM FOR PIER 2 IS TO BE INCLUDED BETWEEN THE MASONRY PLATE AND THE 1/8" BEARING PAD. THE SHIM SHALL HAVE THE SAME DIMENSIONS OF THE MASONRY PLATE. THE SHIMS ARE INCIDENTAL TO THE BID ITEM OF THE BEARINGS. AS AN ALTERNATE TO SUPPLYING AND INSTALLING THE STEEL SHIMS, THE NEW BEARING SEATS OF THE PIER CAPS MAY BE RAISED EQUAL TO THE THICKNESS OF THE EXISTING SHIMS FOR THAT PARTICULAR LOCATION. VERIFY SHIM THICKNESS SHOWN ON THE PIER DETAIL SHEET.

TOTAL ESTIMATED QUANTITIES

BID ITEMS	UNIT	SUPER.	WEST ABUT.	EAST ABUT.	PIER 1	PIER 2	PIER 3	TOTALS
EXCAVATION FOR STRUCTURES BRIDGES B-44-24	LS	—	—	—	—	—	—	1
BACKFILL STRUCTURE	CY	—	23	23	—	—	—	46
PREPARATION DECKS TYPE 1	SY	275	—	—	—	—	—	275
PREPARATION DECKS TYPE 2	SY	45	—	—	—	—	—	45
JOINT REPAIR	SY	66	—	—	—	—	—	66
CONCRETE SURFACE REPAIR	SF	—	18	18	18	18	18	90
BAR STEEL REINFORCEMENT HS COATED BRIDGES	LB	17,780	4490	4490	1060	1060	1060	29,940
CONCRETE MASONRY BRIDGES	CY	87	26	26	6	6	6	157
EXPANSION DEVICE B-44-24	LS	—	—	—	—	—	—	1
MASONRY ANCHORS TYPE L NO. 8 BARS	EACH	—	8	8	—	—	—	16
MASONRY ANCHORS TYPE S 5/8-INCH	EACH	1172	90	90	80	80	80	1592
BEARING PADS ELASTOMERIC LAMINATED	EACH	—	4	4	4	—	4	16
BEARING ASSEMBLIES FIXED B-44-24	EACH	—	—	—	—	4	—	4
ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD	EACH	—	2	2	—	—	—	4
RUBBERIZED MEMBRANE WATERPROOFING	SY	—	19	19	—	—	—	38
BRIDGE JACKING B-44-24	LS	—	—	—	—	—	—	1
REMOVING BEARINGS B-44-24	EACH	—	4	4	4	4	4	20
SLOPE PAVING REPAIR	SY	—	3	3	—	—	—	6
FULL-DEPTH DECK REPAIR	SY	1	—	—	—	—	—	1
RAILING TUBULAR TYPE H B-44-24	LS	—	—	—	—	—	—	1
REMOVING OLD STRUCTURE STA. 34+97.50	LS	—	—	—	—	—	—	1
EPOXY OVERLAY SPECIAL B-44-24	SF	6732	—	—	—	—	—	6732
PROTECTIVE SURFACE TREATMENT	SY	240	35	35	38	—	38	386

THE CONCRETE FOR THE FOOTING AND PARAPET OF THE
"PARAPET FOOTING" ON SHEET 7 IS INCLUDED IN THE SUPERSTRUCTURE.



CAPITOL DRIVE PROFILE GRADE LINE

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-44-24			
DRAWN BY GLM		PLANS CK'D, AML	
QUANTITIES		SHEET 2 OF 16 — 52 —	

Vertical Clearance for Construction of New Bridges, Replacement Bridges, and Bridges on which the Superstructure is being replaced¹

Overpass Facility →	Freeway, Expressway, or STH		Railroad ⁴ , CTH, Town Road, Local Road, or Street	Pedestrian or Shared-use Structures	Sign Structures ²
Underpass Facility ↓	Interchange	Grade Separation			
Non-arterial either STH, CTH, Town Road, Local Road, or Street	15'-9" Desirable	15'-3" Desirable	16'-9" Desirable	16'-3" Minimum	18'-3" Minimum
	15'-3" Minimum	14'-9" Minimum			
Arterial either CTH, Town Road, Local Road, or Street (excludes freeway and expressway; also excludes arterial STH)	16'-9" Desirable	15'-3" Desirable	17'-9" Desirable	17'-3" Minimum	
	16'-3" Minimum	14'-9" Minimum			
Freeway ³ or Expressway or arterial STH	16'-9" Desirable		17'-9" Desirable	17'-4" Minimum	
	16'-4" Minimum				
Railroad ^{4,5,6,7}	23'-0" Minimum to 23'-3½" Maximum				

General notes:

- ¹ Vertical clearance is needed for the entire roadway width (critical point; to include traveled way, auxiliary lanes, turn lanes, and shoulders), according to the above table.

Vertical clearance for railroads is measured from the top of rail and is required over an area 8 feet 6 inches from the track centerline on each side of a railroad track.

Do not exceed the desirable vertical clearance shown unless justified. Depending on topography and other specific situations vertical clearance for any structure may be greater than that shown when justified. Some things to consider are: over height loads traveling on the roadway; the level of development in the area, the projected growth in traffic volume and importance of the roadway, and the possibility of reclassification.

- ² See LRFD Bridge Manual Chapter 39 (http://on.dot.wi.gov/dtid_bos/extranet/structures/LRFD/LRFDManualIndex.htm) and LRFD Standard Details 39.02 and 39.10 for design considerations and requirements for vertical clearance on new and replacement Sign Structures.
- ³ See FDM 11-44-1 for vertical clearance guidance specific to Interstate freeways.
- ⁴ Consult with the Region Railroad Coordinator if the over-passing or under-passing facility is either a railroad or a "rails-to-trails" trail; or if a structure is owned by a railroad company.
- ⁵ A vertical clearance <23'-0" requires both an approved Exception to Standards (see FDM 11-1-2 and FDM 11-1-4) and early coordination with BTLR R&H, Railroads and Harbors Section (RHS) through the Region Railroad Coordinator. The Exception to Standards shall contain documentation that the Office of the Commissioner of Railroads (OCR) has been petitioned.
- See Chapter 17 for additional information.
- ⁶ Provide justification for a vertical clearance >23'-3 ½" to the RHS.
- ⁷ Vertical clearance less than 23'-0" may be acceptable or desirable in certain situations, such as for spur tracks, lead tracks, some branch lines and even mainline tracks when other impediments to 23'-0" exist. Review such situations with the Railroad Project Coordination Engineer in RHS. Early coordination with RHS is required.

Minimum Vertical Clearance for Existing Bridges which are not Being Replaced and for Existing Bridges on which the Superstructure is not Being Replaced^{1, 2}

Overpass Facility →	Freeway, Expressway, or STH		Railroad ⁵ , CTH, Town Road, Local Road, or Street	Pedestrian or Shared-use Structures	Sign Structures ⁶
Underpass Facility ↓	Interchange	Grade Separation			
Non-arterial either STH, CTH, Town Road, Local Road, or Street	15'-3" min. or ES ³	If existing is < 14'-0" then increase to 14'-0" min. or ES ³	16'-3" min. or ES ³		
		If existing is ≥ 14'-0", but < 14'-6" then maintain existing min. or ES ³			
		If existing is ≥ 14'-6" then 14'-6" min. or ES ³			
Arterial either CTH, Town Road, Local Road, or Street (excludes freeway and expressway; also excludes arterial STH)	If existing is < 15'-3" then increase to 15'-3" min. or ES ³	If existing is < 14'-0" then increase to 14'-0" min. or ES ³	17'-0" min. or ES ³		18'-0" min. or ES ³ for existing sign structures on new construction projects or reconstruction projects;
	If existing is ≥ 15'-3", but < 16'-0" then maintain existing min. or ES ³	If existing is ≥ 14'-0", but < 14'-6" then maintain existing min. or ES ³			
	If existing is ≥ 16'-0" then 16'-0" min. or ES ³	If existing is ≥ 14'-6" then 14'-6" min. or ES ³			
Arterial STH (excludes freeway and expressway)	If existing is < 15'-3" then increase to 15'-3" min. or ES ³	If existing is < 14'-0" then increase to 14'-0" min. or ES ³	17'-0" min. or ES ³		17'-0" or ES ³ for existing sign structures on 3R projects
	If existing is ≥ 15'-3", but < 16'-0" then maintain existing min. or ES ³	If existing is ≥ 14'-0", but < 16'-0" then maintain existing min. or ES ³			
	If existing is ≥ 16'-0" then 16'-0" min. or ES ³	If existing is ≥ 16'-0" then 16'-0" min. or ES ³			
Freeway ⁴ or Expressway	16'-0" min. or ES ³				
Railroad ⁵	Maintain existing vertical clearance - if existing clearance is < 23'-0" then confer with BTLR Railroads and Harbors Section to determine the adequacy of the existing clearance.				

General notes:

- ¹ Vertical clearance is needed for the entire roadway width (critical point; to include traveled way, auxiliary lanes, turn lanes, and shoulders), according to the above table. Provide greater than minimum clearance if evaluation shows that greater clearance is needed because bridge superstructure is susceptible to being hit by under-passing vehicles.

Vertical clearance for railroads is measured from the top of rail and is required over an area 8 feet 6 inches from the track centerline on each side of a railroad track.

- ² Include a low clearance sign (W12-2), on structures if its use is in accordance with WisDOT MUTCD 2C.22.

- ³ ES = approved Exceptions To Standards Report required (see [FDM 11-1-2](#) and [FDM 11-1-4](#)).

- ⁴ See [FDM 11-44-1](#) for vertical clearance guidance specific to Interstate freeways.

- ⁵ Consult with the Region Railroad Coordinator if the over-passing or under-passing facility is either a railroad or a "rails-to-trails" trail; or if a structure is owned by a railroad company.

- ⁶ See LRFD Bridge Manual Chapter 39 for design considerations for vertical clearance on Sign Structures (http://on.dot.wi.gov/dtid_bos/extranet/structures/LRFD/LRFDManualIndex.htm).

BRIDGE INSPECTION REPORT
Wisconsin Dept. of Transportation
DT2007 2003 s.84.17 Wis. Stats. Type = ROUTINE INSPECTION

page 1

Inventory Data

Feature On: CAPITAL DR		Maintainer: STATE HIGHWAY DEPT		Structure No: B-44-024
Feature Under: USH 41		Sect/Twn/Rng: S17 T21N R17E		
Location: 0.9M W JCT CTH A		County: OUTAGAMI	Municipality: TOWN-GRAND CHUTE (44020)	
Inv Rating: HS18	Rdwy Width (ft): 26.0	Deck Width (ft): 32.0	Existing Posting:	
Oper Rating: HS48	Total Length (ft): 257.2	Deck Area(ft2): 8230	ADT On: 500 Yr: 1980	ADT Under: 55440 Yr: 2003

Inspection Type (* = Supplemental Form Required)

	Routine Visual	Fracture Critical*	In-Depth*	UW-Dive*	UW-Surv*	UW-Probe/Visual*	Movable*
Last Insp.	10-13-11						
Frequency	24						
Recom. Freq.							
	Initial*	Damage	Interim	Load Posted	SI & A Field Review*		
Last Insp.							
Frequency	N/A						
Recom. Freq.	N/A				Item No. Needing Change		

Load Rating Information

Overburden	Measurement (in): 0.0	Date:	Deck Surface Type: CONCRETE	
Section Loss	File Meas. (%):	File Insp. Date: 09-28-09	Insp. Measurement (%):	Describe:
Re-rate for load capacity?	Reason:		Date Last Rated:	

Expansion Joints

		Temp:	60		Signing Condition		
Location	Type	File Insp. Date	File Insp. (in)	New Insp. (in)	Type of Marker	File	Y/N
WEST ABU	STRIPSEA			1.0	Bridge Markers		
PIER NO	STRIPSEA			1.0	Narrow Bridge		
PIER NO	STRIPSEA			1.0	One Lane Road		
EAST ABU	STRIPSEA			1.0	Vertical Clearance		
					Weight Limit Post		
					Other(Addl. Sign)		

Clearances(Cardinal = N or E)	File Meas. (ft.)	File Date	New Meas. (ft.)
Min. Vertical Clearance Under (Cardinal)	16.28	10-06-09	
Min. Vertical Clearance Under (non-Cardinal)	16.66	10-06-09	
Min. Vertical Clearance On			

Structure Type		Construction/Rehabilitation History					
Material	Configuration	# of Spans	Overall Length (ft)	Year	Work Performed	Plan	Shop
CONT STEEL	DECK GIRDER		44.0	1960	NEW STRUCTURE	P035	F045
CONT STEEL	DECK GIRDER		82.0	1978	PAINTING		
CONT STEEL	DECK GIRDER		82.0	1990	PAINTING		
CONT STEEL	DECK GIRDER		44.0	1995	REPAIR DECK		
				2009	RAISE STRUCTU		

Inspection Information

Special Requirements	Y/N	Comments			
Traffic Control	Y				
Access Equipment	Y				
Other	Y				

Inspector Information

Team Leader Name and No. Printed: Weber, Dale (3007)		Team Member(s) Name(s) Printed:	
Team Leader Signature:		Inspection Date: 10-13-11	Inspection Agency: STATE HIGHWAY DEPARTMENT (1)
District/Local Manager and No. Printed:		District/Local Manager Signature:	Review Date:

Element Inspection (X) Check Elements Inspected

					Quantity in Condition States				
Ck	Elem./Env.	Description	Unit	Total QTY.	1	2	3	4	5
X	18 / 3	Conc Deck/Thin Ovl	SF	8230	8230				
	Overlaid in 2009								
X	107 / 4	Paint Stl Opn Girder	LF	1016		500	516		
	Corrosion over roadway								
X	172 / 4	Painted Steel Diaphr	EA	51			51		
X	205 / 4	R/Conc Column	EA	9	9				
	Repaired in 2009								
X	215 / 3	R/Conc Abutment	LF	71	65	6			
	CS-2 (E Abut 3" & W Abut 3")								
X	234 / 3	R/Conc Cap	LF	114	104	10			
	Repaired in 2009								
X	300 / 3	Strip Seal Exp Joint	LF	78	78				
	New in 2009								
X	310 / 3	Elastomeric Bearing	EA	16	16				
	New in 2009								
X	322 / 3	Bituminous Approach	EA	2	2				
	New in 2009								
X	333 / 3	Combin Bridge Railing	LF	515	475	40			
X	342 / 4	RipRap Slope Protect	EA	2	2				
	Concrete Block								
X	357 / 4	Pack Rust Smart Flag	EA	1	1				
X	358 / 4	Deck Cracking SmFlag	EA	1	1				
X	359 / 4	Und Dk Surf Sm Flag	EA	1		1			
X	400 / 4	Concrete Wingwall	EA	4	4				

General Inspection/Maintenance Notes

--

Maintenance Recommendations (See standard code items & numbers)

Maintenance Item: Expansion Joints - Clean
Amount: Date(YYYY-MM-DD):
Maintenance item comment:

Maintenance Item:
Amount: Date(MM-DD-YY):
Maintenance item comment:

NBI Ratings

NBI	File	New	NBI	File	New
Deck	8	8	Culvert	N	N
Superstructure	6	6	Channel	N	N
Substructure	7	7	Waterway	N	N

Maintenance Item:
Amount: Date(MM-DD-YY):
Maintenance item comment:

STRUCTURE INVENTORY AND APPRAISAL FIELD REVIEW FORM

B-44-024
CAPITAL DR over USH 41

- (3) Municipality:
(16) Latitude(° ' "):
(17) Longitude(° ' "):

LOCATION

TOWN-GRAND CHUTE (44020)
44°17'41.73"N
88°27'49.77"W

- (28A) Lanes On:
(28B) Lanes Under:
(102) Traffic Pattern On:
(102) Traffic Pattern Under:
(19) Detour Length(mi):

TRAFFIC SERVICE

2
4
-NO TRAFFIC -ONE WAY TRAFFIC X-TWO WAY TRAFFIC
-NO TRAFFIC -ONE WAY TRAFFIC X-TWO WAY TRAFFIC
6

- (49) Structure Length(ft):
(50) Sidewalk Width(ft):
(50) Curb Width(ft):
(52) Culvert Barrel Length(ft):
(34) Skew:

GEOMETRY

257.2	
Left: 3.0	Right: 3.0
0.0	
Angle(°): 39	Direction: -RIGHT FORWARD X-LEFT FORWARD
Cardinal Width	Non-Cardinal Width
26.0	26.0
32.0	32.0
32	0
Cardinal Under Clearance	Non-Cardinal Under Clearance
51.0	51.0
9.0	9.0
17.0	17.0

- (51) Bridge Roadway(ft):
(52) Deck(ft):
(32) Approach Roadway(ft):
(47) Minimum Horizontal(ft):
(55) Minimum Right Lateral(ft):
(55) Minimum Left Lateral(ft):

RAILING APPRAISAL

- (36A) Bridge Rail Adequacy:
(36B) Transition Adequacy:
(36C) Approach Guardrail Adequacy:
(36D) Guardrail Termination Adequacy:
Outer Rail:

-SUB-STANDARD	X-STANDARD	-NOT APPLICABLE
-SUB-STANDARD	X-STANDARD	-NOT APPLICABLE
-SUB-STANDARD	X-STANDARD	-NOT APPLICABLE
-SUB-STANDARD	X-STANDARD	-NOT APPLICABLE
Left	Right	Type
		TYPE F (TWO SQUARE TUBES) - STEEL(8)
		TYPE F (3 SQUARE TUBES) - STEEL(65)
		TYPE F (4 SQUARE TUBES) - STEEL(72)
		TYPE M-STEEL 3 SQUARE TUBES(93)
		SLOPED FACE PARAPET LF(91)
		SLOPED FACE PARAPET HF(92)
		VERTICAL FACE PARAPET TYPE A(74)
		TYPE W-THREE BEAM(79)
		TYPE H ON VERTICAL PARAPET(80)
		TIMBER(38)
X	X	OTHER(99) (Please specify) Left: TYPE G (ALUMINUM) ON SLOPED PPT(53) Right: TYPE G (ALUMINUM) ON SLOPED PPT(53)
Transition Type:		
CONT GUARD RAIL		
NO APP GRDRL		
NO ATTACHMENT		
5		22 MM(7/8") BOLT (Please enter quantity)
		25 MM(1") BOLT (Please enter quantity)
		OTHER (Please specify)
Guardrail Termination Type:		
X		(01) ENERGY ABSORBING TERMINAL/EAT
		(02) TURN DOWN
		(99) OTHER (Please specify)

- (72) Approach Alignment Appraisal:

ROADWAY ALIGNMENT APPRAISAL

	(3) INTOLERABLE- Horizontal or Vertical curvature requires a substantial reduction in vehicle operating speed
	(6) FAIR- Horizontal or Vertical curvature requires a very minor speed reduction
X	(8) GOOD- No speed reduction required

DESIGN DATA

LIVE LOAD:

DESIGN RATING: HS-20
 INVENTORY RATING: HS-21
 OPERATIONAL RATING: HS-41
 MAXIMUM STANDARD PERMIT VEHICLE LOAD = 250 KIPS.
 STRUCTURE IS DESIGNED FOR A FUTURE WEARING
 SURFACE OF 20 POUNDS PER SQUARE FOOT.

ULTIMATE DESIGN STRESSES:

CONCRETE MASONRY DECK — $f'_c = 4,000$ P.S.I. ALL OTHER — $f'_c = 3,500$ P.S.I.
 BAR STEEL REINFORCEMENT, GRADE 60 — $f_y = 60,000$ P.S.I.
 54W" PRESTRESSED GIRDERS, CONCRETE MASONRY — $f'_c = 7,000$ P.S.I. (SPAN 1)
 $f'_c = 8,000$ P.S.I. (SPAN 2)
 STRANDS- 0.6" ϕ WITH ULTIMATE TENSILE STRENGTH OF 270,000 P.S.I.

FOUNDATION DATA

ABUTMENTS TO BE SUPPORTED ON HP 12 X 53 STEEL PILING
 DRIVEN TO A MINIMUM BEARING VALUE OF 70 TONS PER PILE.
 ESTIMATED 45 FEET LONG.

PIER TO BE SUPPORTED ON HP 12 X 53 STEEL PILING
 DRIVEN TO A MINIMUM BEARING VALUE OF 70 TONS PER PILE.
 ESTIMATED 25 FEET LONG.

EXISTING BOX CULVERT
 C-44-15 TO REMAIN IN PLACE.

TRAFFIC VOLUME

U.S.H. 41	C.T.H. A
A.D.T.=59,200 (2004)	A.D.T.=15,520 (2004)
A.D.T.=78,200 (2024)	A.D.T.=23,620 (2024)
R.D.S.=70 M.P.H.	R.D.S.=45 M.P.H.

$$\left[\frac{23620}{15520} \right]^{.05} = 1.021$$

or
 2.1% GROWTH
 $23620(1.021)^{13} = 30950$

STRUCTURES DESIGN CONTACTS:

BILL DREHER (608) 261-8205
 JERRY ZIRK (608) 266-5163

LIST OF DRAWINGS

1. GENERAL PLAN
2. CROSS SECTION & QUANTITIES
3. SUBSURFACE EXPLORATION
4. SOUTH ABUTMENT
5. SOUTH ABUTMENT DETAILS
6. NORTH ABUTMENT
7. NORTH ABUTMENT DETAILS
8. PIER
9. PIER DETAILS
10. SUPERSTRUCTURE
11. SUPERSTRUCTURE
12. SUPERSTRUCTURE DETAILS
13. 54W" PRESTRESSED GIRDER DETAILS
14. STEEL DIAPHRAGM
15. SLOPED FACE PARAPET 'HF'
16. VERTICAL FACE PARAPET 'A' - WEST
17. VERTICAL FACE PARAPET 'A' - EAST
18. CHAIN LINK FENCE DETAILS
19. STEEL SHEET PILING

NO.	DATE	REVISION	BY
 Plans Prepared By WISDOT BUREAU OF STRUCTURES			
APPROVED <i>John Hubbard</i> 5-28-2004 CHIEF STRUCTURAL DESIGN ENGINEER/SDR DATE			
STRUCTURE B-44-140			
C.T.H. A OVER U.S.H. 41			
COUNTY	OUTAGAMIE	TOWNSHIP/VILLAGE	GRAND CHUTE
DESIGN SPEC.	AASHTO STD. SPEC. 2002	LOAD HS-20	CONST. SPEC. 2003
DESIGNED BY	RRW CKD.	DRAWN BY	JPH CKD.
GENERAL PLAN			SHEET 1 OF 19
			191

FILE= 01-140GP.DGN
 SCALE = 20



* PROVIDE FOR THREE BEAM
 GUARD RAIL ATTACHMENT

○ INDICATES WING NUMBER

STA. 224+22.49 SB R C.T.H. A =
 STA. 668+03.95 NB R U.S.H. 41

END EXISTING STRUCTURE
 STA. 223+40.00

R SB. LANE
 C.T.H. A

END OF DECK
 STA. 223+49.24
 223+00

CL BRC. SOUTH ABUT.
 STA. 223+50.49

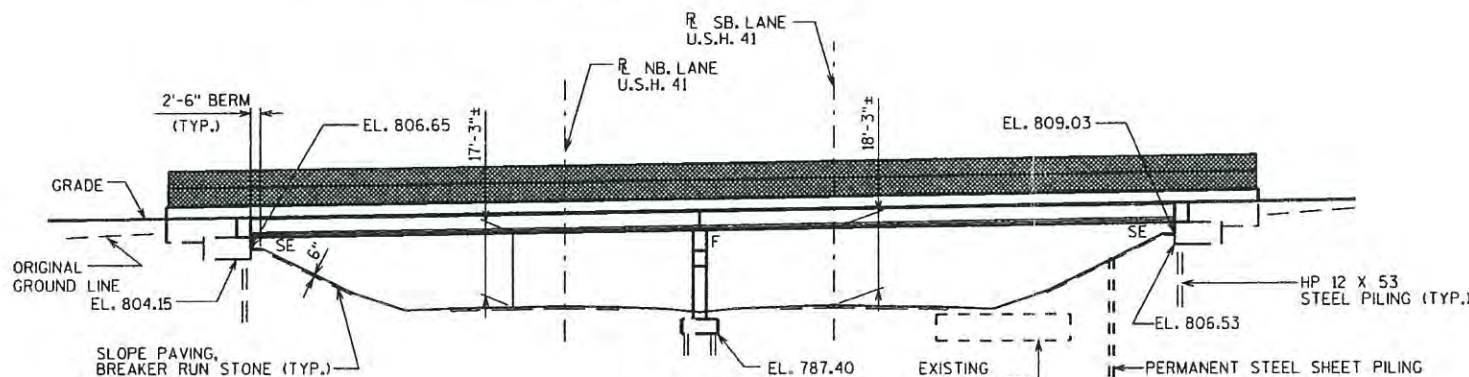
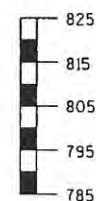
NAME PLATE & BENCH MARK CAP
 -FOR LOCATION SEE SHEET 17

STA. 224+22.49 NB R C.T.H. A =
 STA. 668+23.95 NB R U.S.H. 41

PERMANENT STEEL
 SHEET PILING AT PIER
 SEE SHEET 19 FOR DETAILS

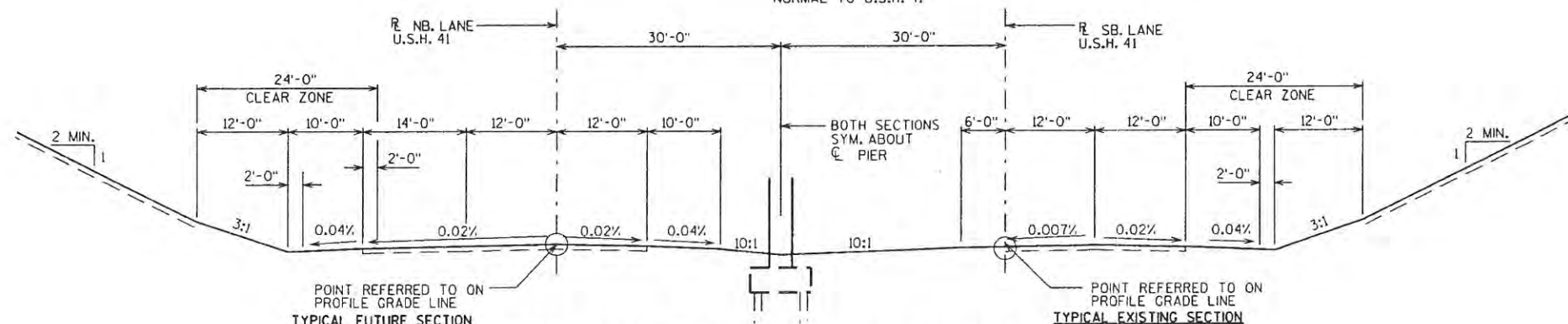
PLAN

2-SPAN 54W" PRESTRESSED GIRDERS

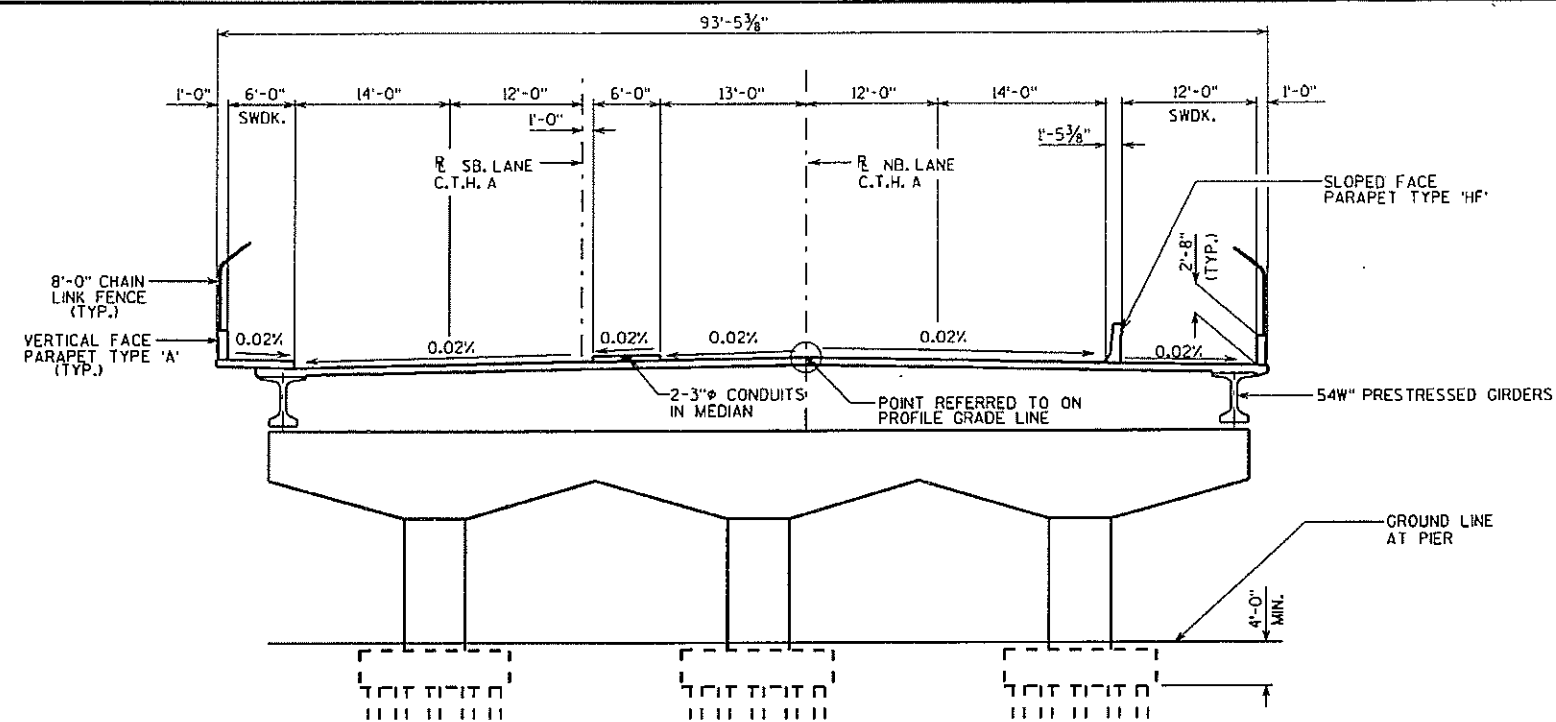


ELEVATION

NORMAL TO U.S.H. 41



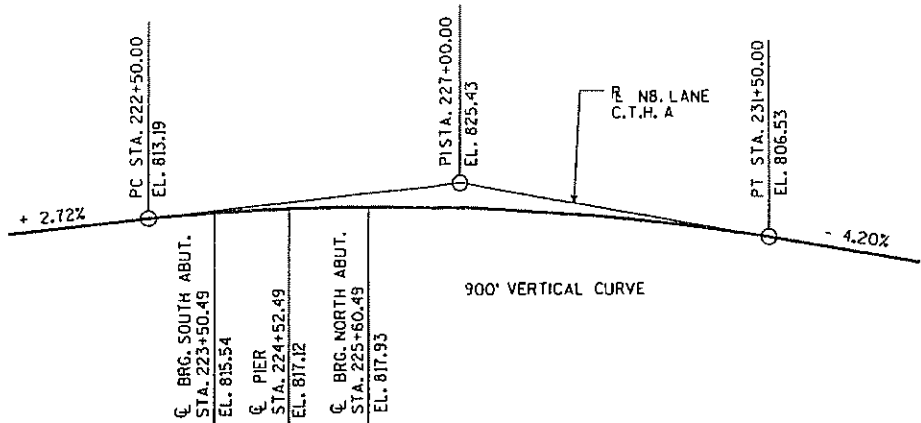
TYPICAL SECTION THRU U.S.H. 41 LOOKING WEST



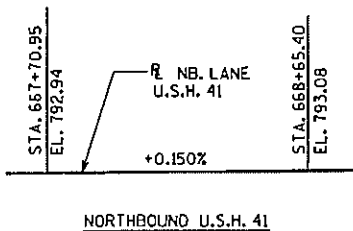
CROSS SECTION THRU ROADWAY LOOKING NORTH

TOTAL ESTIMATED QUANTITIES

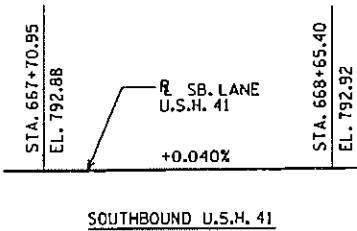
BID ITEMS	UNIT	SUPER.	SOUTH ABUT.	NORTH ABUT.	PIER	TOTALS
REMOVING OLD STRUCTURE STA. 224+51.50	LS	—	—	—	—	1
EXCAVATION FOR STRUCTURES BRIDGES B-44-140	LS	—	—	—	—	1
BACKFILL STRUCTURE	CY	—	440	445	—	885
CONCRETE MASONRY BRIDGES	CY	830	80	80	136	1126
MASONRY ANCHORS TYPE S 1/2-INCH	EACH	286	—	—	—	286
MASONRY ANCHORS TYPE S 5/8-INCH	EACH	638	—	—	—	638
PROTECTIVE SURFACE TREATMENT	SY	2590	—	—	—	2590
PRESTRESSED GIRDER TYPE I 54W-INCH	LF	1897	—	—	—	1897
BAR STEEL REINFORCEMENT HS BRIDGES	LB	—	5040	5060	2770	12870
BAR STEEL REINFORCEMENT HS COATED BRIDGES	LB	159590	1630	1640	19500	182360
BEARING PADS ELASTOMERIC NON-LAMINATED	EACH	27	—	—	—	27
STEEL DIAPHRAGMS B-44-140	EACH	32	—	—	—	32
PILING STEEL DELIVERED AND DRIVEN HP 12-INCH X 53 LB.	LF	—	720	765	1050	2535
PILING STEEL PREBORING SPECIAL	LF	—	80	170	—	250
PILING STEEL SHEET PERMANENT DELIVERED	SF	—	—	950	620	1570
PILING STEEL SHEET PERMANENT DRIVEN	SF	—	—	950	620	1570
RUBBERIZED MEMBRANE WATERPROOFING	SY	—	21	21	—	42
SLOPE PAVING BREAKER RUN	SY	—	240	330	—	570
PIPE UNDERDRAIN 6-INCH	LF	—	100	100	—	200
PIPE UNDERDRAIN UNPERFORATED 6-INCH	LF	—	20	20	—	40
ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD	EACH	1	—	—	—	1
FENCE CHAIN LINK 8-FT.	LF	481	—	—	—	481
GEOTEXTILE FABRIC TYPE DF (SCHEDULE A)	SY	—	84	84	—	168
CONDUIT RIGID NONMETALLIC SCHEDULE 40 3-INCH	LF	427	—	—	—	427
QMP CONCRETE STRUCTURES 5-CYLINDER	CY	830	80	80	136	1126
INCENTIVE STRENGTH CONCRETE STRUCTURES	DOL	8300	800	800	1360	11260
NON-BID ITEMS						
FILLER	SIZE	—	—	—	—	1/2" & 3/4"



PROFILE GRADE LINE NB. LANE C.T.H. A



PROFILE GRADE LINE U.S.H. 41



SOUTHBOUND U.S.H. 41

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2" CLEAR UNLESS OTHERWISE SHOWN OR NOTED.

ELASTOMERIC BEARING PADS NEED NOT BE INDIVIDUALLY MOLDED PROVIDED THE CUT EDGES ARE SMOOTH AND TRUE.

AT THE BACKFACE OF ABUTMENT ALL VOLUME WHICH CANNOT BE PLACED BEFORE ABUTMENT CONSTRUCTION AND IS NOT OCCUPIED BY THE NEW STRUCTURE SHALL BE BACKFILLED WITH STRUCTURE BACKFILL.

THE EXISTING GROUND LINE SHALL BE USED AS THE UPPER LIMITS OF EXCAVATION AT THE PIERS.

THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

THE GRADATION OF THE STRUCTURE BACKFILL SHALL MEET THE REQUIREMENTS OF SECTION 209.2.2 OF THE STANDARD SPECIFICATIONS FOR GRADE 1 MATERIAL.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-44-140			
DRAWN BY JPH		PLANS CKD. ZIRK	
CROSS SECTION & QUANTITIES		SHEET 2	
		192	

Minimum Vertical Clearance for Existing Bridges which are not Being Replaced and for Existing Bridges on which the Superstructure is not Being Replaced^{1,2}

Overpass Facility →	Freeway, Expressway, or STH		Railroad ⁵ , CTH, Town Road, Local Road, or Street	Pedestrian or Shared-use Structures	Sign Structures ⁶
Underpass Facility ↓	Interchange	Grade Separation			
Non-arterial either STH, CTH, Town Road, Local Road, or Street	15'-3" min. or ES ³	If existing is < 14'-0" then increase to 14'-0" min. or ES ³	16'-3" min. or ES ³		18'-0" min. or ES ³ for existing sign structures on new construction projects or reconstruction projects;
		If existing is ≥ 14'-0", but < 14'-6" then maintain existing min. or ES ³			
		If existing is ≥ 14'-6" then 14'-6" min. or ES ³			
Arterial either CTH, Town Road, Local Road, or Street (excludes freeway and expressway; also excludes arterial STH)	If existing is < 15'-3" then increase to 15'-3" min. or ES ³	If existing is < 14'-0" then increase to 14'-0" min. or ES ³	17'-0" min. or ES ³		17'-0" or ES ³ for existing sign structures on 3R projects
	If existing is ≥ 15'-3", but < 16'-0" then maintain existing min. or ES ³	If existing is ≥ 14'-0", but < 14'-6" then maintain existing min. or ES ³			
	If existing is ≥ 16'-0" then 16'-0" min. or ES ³	If existing is ≥ 14'-6" then 14'-6" min. or ES ³			
Arterial STH (excludes freeway and expressway)	If existing is < 15'-3" then increase to 15'-3" min. or ES ³	If existing is < 14'-0" then increase to 14'-0" min. or ES ³	17'-0" min. or ES ³		
	If existing is ≥ 15'-3", but < 16'-0" then maintain existing min. or ES ³	If existing is ≥ 14'-0", but < 16'-0" then maintain existing min. or ES ³			
	If existing is ≥ 16'-0" then 16'-0" min. or ES ³	If existing is ≥ 16'-0" then 16'-0" min. or ES ³			
Freeway ⁴ or Expressway	16'-0" min. or ES ³				
Railroad ⁵	Maintain existing vertical clearance - if existing clearance is < 23'-0" then confer with BTLR Railroads and Harbors Section to determine the adequacy of the existing clearance.				

General notes:

- ¹ Vertical clearance is needed for the entire roadway width (critical point; to include traveled way, auxiliary lanes, turn lanes, and shoulders), according to the above table. Provide greater than minimum clearance if evaluation shows that greater clearance is needed because bridge superstructure is susceptible to being hit by under-passing vehicles.

Vertical clearance for railroads is measured from the top of rail and is required over an area 8 feet 6 inches from the track centerline on each side of a railroad track.

- ² Include a low clearance sign (W12-2), on structures if its use is in accordance with WisDOT MUTCD 2C.22.

- ³ ES = approved Exceptions To Standards Report required (see [FDM 11-1-2](#) and [FDM 11-1-4](#)).

- ⁴ See [FDM 11-44-1](#) for vertical clearance guidance specific to Interstate freeways.

- ⁵ Consult with the Region Railroad Coordinator if the over-passing or under-passing facility is either a railroad or a "rails-to-trails" trail; or if a structure is owned by a railroad company.

- ⁶ See LRFD Bridge Manual Chapter 39 for design considerations for vertical clearance on Sign Structures (http://on.dot.wi.gov/dtid_bos/extranet/structures/LRFD/LRFDManualIndex.htm).

Vertical Clearance for Construction of New Bridges, Replacement Bridges, and Bridges on which the Superstructure is being replaced¹

Overpass Facility →	Freeway, Expressway, or STH		Railroad ⁴ , CTH, Town Road, Local Road, or Street	Pedestrian or Shared-use Structures	Sign Structures ²
Underpass Facility ↓	Interchange	Grade Separation			
Non-arterial either STH, CTH, Town Road, Local Road, or Street	15'-9" Desirable	15'-3" Desirable	16'-9" Desirable 16'-3" Minimum	18'-3" Minimum	
	15'-3" Minimum	14'-9" Minimum			
Arterial either CTH, Town Road, Local Road, or Street (excludes freeway and expressway; also excludes arterial STH)	16'-9" Desirable	15'-3" Desirable	17'-9" Desirable		
	16'-3" Minimum	14'-9" Minimum	17'-3" Minimum		
Freeway ³ or Expressway or arterial STH	16'-9" Desirable		17'-9" Desirable		
	16'-4" Minimum		17'-4" Minimum		
Railroad ^{4,5,6,7}	23'-0" Minimum to 23'-3½" Maximum				

General notes:

- ¹ Vertical clearance is needed for the entire roadway width (critical point; to include traveled way, auxiliary lanes, turn lanes, and shoulders), according to the above table.

Vertical clearance for railroads is measured from the top of rail and is required over an area 8 feet 6 inches from the track centerline on each side of a railroad track.

Do not exceed the desirable vertical clearance shown unless justified. Depending on topography and other specific situations vertical clearance for any structure may be greater than that shown when justified. Some things to consider are: over height loads traveling on the roadway; the level of development in the area, the projected growth in traffic volume and importance of the roadway, and the possibility of reclassification.

- ² See LRFD Bridge Manual Chapter 39 (http://on.dot.wi.gov/dtid_bos/extranet/structures/LRFD/LRFDManualIndex.htm) and LRFD Standard Details 39.02 and 39.10 for design considerations and requirements for vertical clearance on new and replacement Sign Structures.
- ³ See FDM 11-44-1 for vertical clearance guidance specific to Interstate freeways.
- ⁴ Consult with the Region Railroad Coordinator if the over-passing or under-passing facility is either a railroad or a "rails-to-trails" trail; or if a structure is owned by a railroad company.
- ⁵ A vertical clearance <23'-0" requires both an approved Exception to Standards (see FDM 11-1-2 and FDM 11-1-4) and early coordination with BTLR R&H, Railroads and Harbors Section (RHS) through the Region Railroad Coordinator. The Exception to Standards shall contain documentation that the Office of the Commissioner of Railroads (OCR) has been petitioned.
- See Chapter 17 for additional information.
- ⁶ Provide justification for a vertical clearance >23'-3 ½" to the RHS.
- ⁷ Vertical clearance less than 23'-0" may be acceptable or desirable in certain situations, such as for spur tracks, lead tracks, some branch lines and even mainline tracks when other impediments to 23'-0" exist. Review such situations with the Railroad Project Coordination Engineer in RHS. Early coordination with RHS is required.

BRIDGE INSPECTION REPORT
 Wisconsin Dept. of Transportation
 DT2007 2003 s.84.17 Wis. Stats. Type = ROUTINE INSPECTION

page 1

Inventory Data

Feature On: CTH A		Maintainer: STATE HIGHWAY DEPT		Structure No: B-44-140	
Feature Under: 41		Sect/Twn/Rng: S16 T21N R17E			
Location: AT USH 41		County: OUTAGAMI	Municipality: TOWN-GRAND CHUTE (44020)		
Inv Rating: HS21	Rdwy Width (ft): 62.0	Deck Width (ft): 90.0	Existing Posting:		
Oper Rating: HS41	Total Length (ft): 213.8	Deck Area(ft2): 19242	ADT On: 15520 Yr: 2004	ADT Under: Yr:	

Inspection Type (* = Supplemental Form Required)

	Routine Visual	Fracture Critical*	In-Depth*	UW-Dive*	UW-Surv*	UW-Probe/Visual*	Movable*
Last Insp.	10-13-11						
Frequency	24						
Recom. Freq.							
	Initial*	Damage	Interim	Load Posted	SI & A Field Review*		
Last Insp.	06-13-05						
Frequency	N/A						
Recom. Freq.	N/A				Item No. Needing Change		

Load Rating Information

Overburden	Measurement (in): 0.0	Date:	Deck Surface Type: CONCRETE		
Section Loss	File Meas. (%):	File Insp. Date: 10-13-09	Insp. Measurement (%):	Describe:	
Re-rate for load capacity?		Reason:	Date Last Rated: 05-28-04		

Expansion Joints

Location	Type	Temp:		New Insp. (in)	Signing Condition			
		File Insp. Date	File Insp. (in)		Type of Marker	File	Y/N	Comments
					Bridge Markers			
					Narrow Bridge			
					One Lane Road			
					Vertical Clearance			
					Weight Limit Post			
					Other(Add. Sign)			

Clearances(Cardinal = N or E)

	File Meas. (ft.)	File Date	New Meas. (ft.)
Min. Vertical Clearance Under (Cardinal)	17.25	03-31-04	
Min. Vertical Clearance Under (non-Cardinal)	18.25	03-31-04	
Min. Vertical Clearance On			

Structure Type

Construction/Rehabilitation History

Material	Configuration	# of Spans	Overall Length (ft)	Year	Work Performed	Plan	Shop
CONT PREST CO	DECK GIRDER		102.0	2005	NEW STRUCTURE	PLAN	
CONT PREST CO	DECK GIRDER		108.0				

Inspection Information

Special Requirements	Y/N	Comments				
Traffic Control	Y					
Access Equipment	Y					
Other	Y					

Inspector Information

Team Leader Name and No. Printed: Weber, Dale (3007)		Team Member(s) Name(s) Printed:			
Team Leader Signature:		Inspection Date: 10-13-11		Inspection Agency: STATE HIGHWAY DEPARTMENT (1)	
District/Local Manager and No. Printed:		District/Local Manager Signature:		Review Date:	

Element Inspection (X) Check Elements Inspected					Quantity in Condition States				
Ck	Elem./Env.	Description	Unit	Total QTY.	1	2	3	4	5
X	26 / 4	Conc Deck/Coatd Bars	SF	19976	19976				
X	109 / 4	P/S Conc Open Girder	LF	1897	1897				
X	172 / 4	Painted Steel Diaphr	EA	32	32				
X	205 / 4	R/Conc Column	EA	3	3				
X	215 / 4	R/Conc Abutment	LF	187	181	6			
	CS-2 (E Abut 3" & W Abut 3")								
X	234 / 3	R/Conc Cap	LF	88	88				
X	250 / 4	Concrete Diaphragm	EA	8	8				
X	321 / 4	R/Conc Approach Slab	EA	4	4				
X	331 / 4	Conc Bridge Railing	LF	426	386	40			
X	342 / 4	RipRap Slope Protect	EA	2	2				
X	359 / 4	Und Dk Surf Sm Flag	EA	1	1				
X	400 / 4	Concrete Wingwall	EA	4	4				
X	415 / 4	Sidewalk/Median	LF	426	426				

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Maintenance Item:
Amount: Date(YYYY-MM-DD):
Maintenance item comment:

Amount:	Date(MM-DD-YY):
Maintenance item comment:	

NBI	File	New	NBI	File	New
Deck	8	8	Culvert	N	N
Superstructure	8	8	Channel	N	N
Substructure	8	8	Waterway	N	N

Amount:	Date(MM-DD-YY):
Maintenance item comment:	

STRUCTURE INVENTORY AND APPRAISAL FIELD REVIEW FORM

B-44-140
CTH A over 41

- (3) Municipality:
(16) Latitude(° ' "):
(17) Longitude(° ' "):

LOCATION	
TOWN-GRAND CHUTE (44020)	
44°17'56.00"N	
88°26'44.76"W	

- (28A) Lanes On:
(28B) Lanes Under:
(102) Traffic Pattern On:
(102) Traffic Pattern Under:
(19) Detour Length(mi):

TRAFFIC SERVICE	
4	
4	
-NO TRAFFIC -ONE WAY TRAFFIC X-TWO WAY TRAFFIC	
-NO TRAFFIC -ONE WAY TRAFFIC X-TWO WAY TRAFFIC	
3	

- (49) Structure Length(ft):
(50) Sidewalk Width(ft):
(50) Curb Width(ft):
(52) Culvert Barrel Length(ft):
(34) Skew:

GEOMETRY	
213.8	
Left: 6.0	Right: 12.0
Angle(°): 0	Direction: -RIGHT FORWARD -LEFT FORWARD
Cardinal Width	Non-Cardinal Width
62.0	62.0
90.0	90.0
68	68
Cardinal Under Clearance	Non-Cardinal Under Clearance
59.0	59.0
11.0	11.0
24.0	24.0

- (51) Bridge Roadway(ft):
(52) Deck(ft):
(32) Approach Roadway(ft):

(47) Minimum Horizontal(ft):
(55) Minimum Right Lateral(ft):
(55) Minimum Left Lateral(ft):

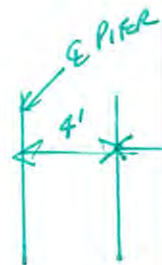
- (36A) Bridge Rail Adequacy:
(36B) Transition Adequacy:
(36C) Approach Guardrail Adequacy:
(36D) Guardrail Termination Adequacy:
Outer Rail:

RAILING APPRAISAL		
-SUB-STANDARD X-STANDARD -NOT APPLICABLE		
-SUB-STANDARD X-STANDARD -NOT APPLICABLE		
-SUB-STANDARD X-STANDARD -NOT APPLICABLE		
-SUB-STANDARD X-STANDARD -NOT APPLICABLE		
Left	Right	Type
		TYPE F (TWO SQUARE TUBES) - STEEL(8)
		TYPE F (3 SQUARE TUBES) - STEEL(65)
		TYPE F (4 SQUARE TUBES) - STEEL(72)
		TYPE M-STEEL 3 SQUARE TUBES(93)
		SLOPED FACE PARAPET LF(81)
	X	SLOPED FACE PARAPET HF(92)
		VERTICAL FACE PARAPET TYPE A(74)
		TYPE W-THRIE BEAM(79)
		TYPE H ON VERTICAL PARAPET(80)
		TIMBER(38)
X		OTHER(99) (Please specify) Left: TYPE H ON NJ PARAPET(69)
Transition Type:		
CONT GUARD RAIL		
NO APP GRDRL		
NO ATTACHMENT		
S	22 MM(7/8") BOLT (Please enter quantity)	
	25 MM(1") BOLT (Please enter quantity)	
	OTHER (Please specify)	
Guardrail Termination Type:		
X	(01) ENERGY ABSORBING TERMINAL/EAT	
	(02) TURN DOWN	
	(99) OTHER (Please specify)	

- (72) Approach Alignment Appraisal:

ROADWAY ALIGNMENT APPRAISAL	
	(3) INTOLERABLE- Horizontal or Vertical curvature requires a substantial reduction in vchle operating speed
	(6) FAIR- Horizontal or Vertical curvature requires a very minor speert reduction
X	(8) GOOD- No speed reduction required

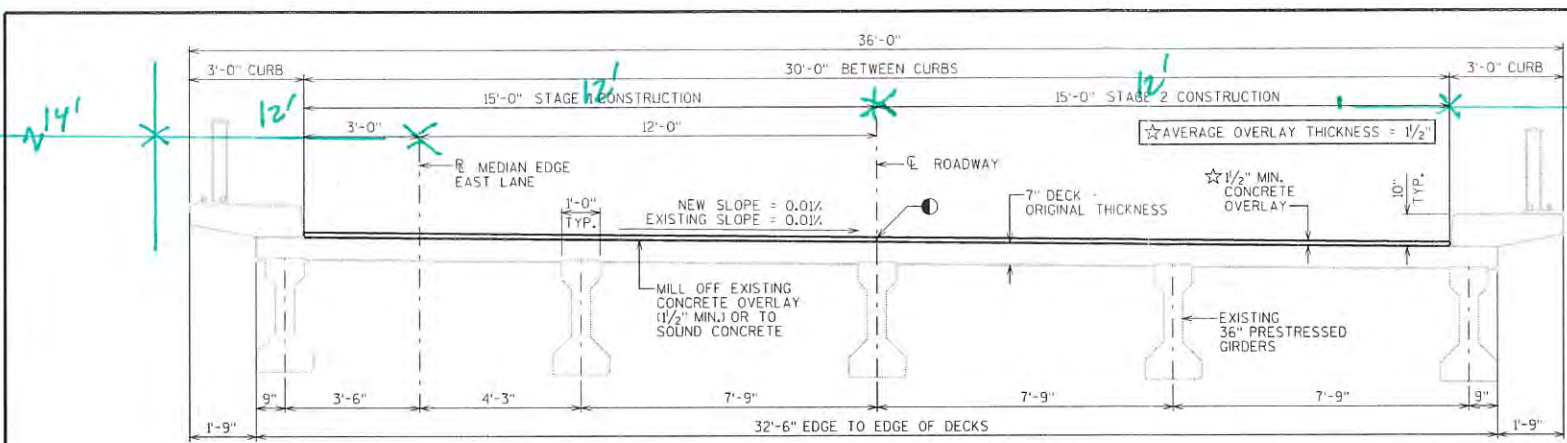
$$60' - 12(2) - 14(2) = 8'$$



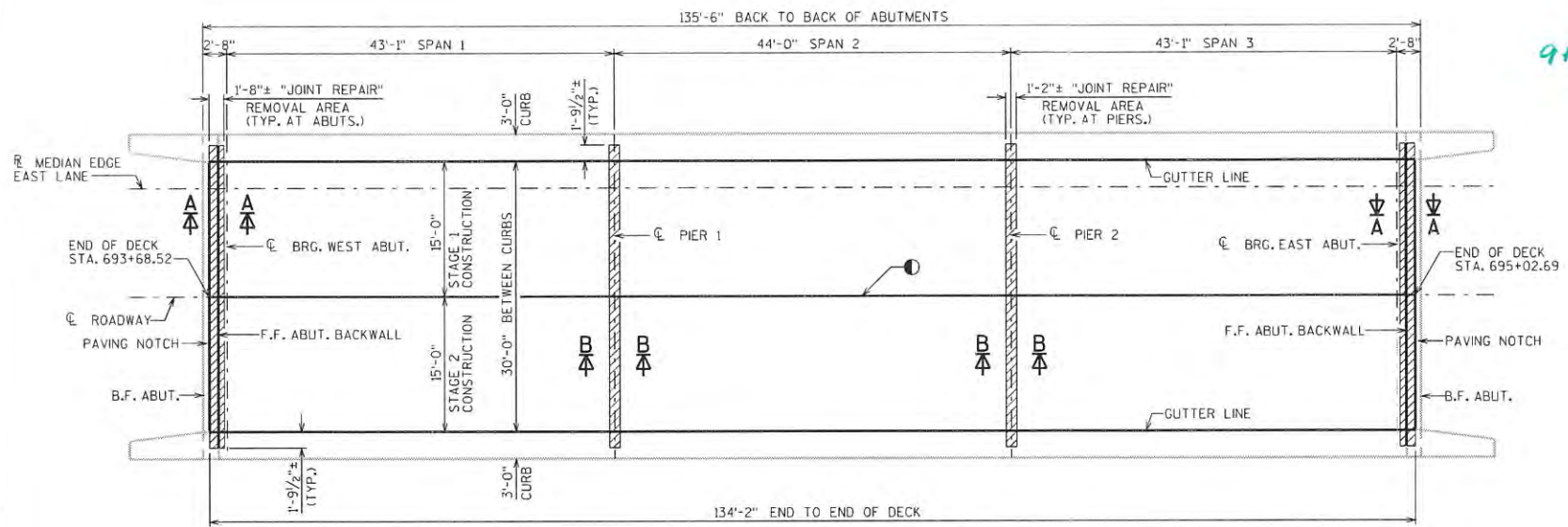
Prop. $12' + 14' + 8' = 26'$
 EXIST $3' + 23' = 26'$
 23'

$$13 \times 1.5 = 24.5$$

$$24.5 + 10.5 = 35'$$



CROSS SECTION THRU ROADWAY
LOOKING EAST



PLAN

NOTE:
FOR THE SECTIONS THRU "JOINT REPAIR" AREAS
(SECTIONS A-A & B-B) SEE SHEET 2 FOR DETAILS.

TOTAL ESTIMATED QUANTITIES

BID ITEMS	UNIT	TOTALS
COMPRESSION JOINT SEALER PREFORMED ELASTOMERIC 3-INCH	LF	130
PROTECTIVE SURFACE TREATMENT	SY	450
PREPARATION DECKS TYPE 1	SY	130
PREPARATION DECKS TYPE 2	SY	13
JOINT REPAIR	SY	22
FULL-DEPTH DECK REPAIR	SY	1
CONCRETE MASONRY OVERLAY DECKS	CY	27
REMOVING CONCRETE OVERLAY	SY	450

INCLUDES CONCRETE FOR PREPARATION DECKS TYPE 1, PREPARATION DECKS TYPE 2, JOINT REPAIR AND FULL-DEPTH DECK REPAIR AREAS.

LONGITUDINAL CONSTRUCTION JOINT IN CONCRETE OVERLAY. TRAFFIC TO BE MAINTAINED DURING CONSTRUCTION. CONSTRUCTION STAGING SHALL BE DONE AS SHOWN OR AS DIRECTED BY THE FIELD ENGINEER.

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.
 DIMENSIONS SHOWN ARE BASED ON THE EXISTING ORIGINAL STRUCTURE PLANS.
 ANY EXCAVATION REQUIRED TO COMPLETE THE OVERLAY OR REMOVING PAVING BLOCKS AT THE ABUTMENTS IS TO BE CONSIDERED INCIDENTAL TO THE BID ITEM "CONCRETE MASONRY OVERLAY DECKS".
 PROFILE GRADE LINE SHALL BE DETERMINED BASED ON A MINIMUM OVERLAY THICKNESS OF 1 1/2" PLACED ABOVE THE DECK SURFACE AFTER REMOVING THE EXISTING CONCRETE OVERLAY. EXPECTED AVERAGE OVERLAY THICKNESS IS 1 1/2". IF EXPECTED AVERAGE OVERLAY THICKNESS IS EXCEEDED BY MORE THAN 1/2", CONTACT THE BUREAU OF STRUCTURES DESIGN SECTION.
 "PROTECTIVE SURFACE TREATMENT" SHALL BE APPLIED TO THE EXPOSED DECK SURFACE OF THE NEW CONCRETE OVERLAY BETWEEN CURBS.
 "FULL-DEPTH DECK REPAIR" SHALL BE DONE AS DIRECTED BY THE FIELD ENGINEER.

Prop. $12'(3) + 1.5' = 36'$
 EXIST $12' + 15' = 27'$

DESIGN DATA

LIVE LOAD:
 INVENTORY RATING: HS-30
 OPERATIONAL RATING: HS-44
 MAXIMUM STANDARD PERMIT VEHICLE LOAD: 250 KIPS
 ULTIMATE DESIGN STRESSES:
 CONCRETE MASONRY OVERLAY DECKS: $f'c = 4,000$ P.S.I.

$9' \times 0.021 = 0.18$

22.62
 22.44

ADD #1
 NEW SHT 16C
 3/22/06

STRUCTURES DESIGN CONTACTS:
 WILLIAM DREHER (608) 261-8205
 JERRY ZIRK (608) 266-5163

NO.	DATE	REVISION	BY
Plans Prepared By WISDOT BUREAU OF STRUCTURES Approved: <i>Kim Hubbard</i> SDR 1-19-06 CHIEF STRUCTURAL DESIGN ENGINEER DATE			
STRUCTURE B-44-21			
USH 41EB LANE OVER 500 LINE RAILROAD			
COUNTY	OUTAGAMIE	TOWN	GRAND CHUTE
DESIGN SPEC.	AASHTO STD. SPEC. 2003	LOAD	CONSTR. SPEC. 2003
DESIGNED BY	WCD	DRAWN BY	JPH
CONCRETE OVERLAY		SHEET 1 OF 2	

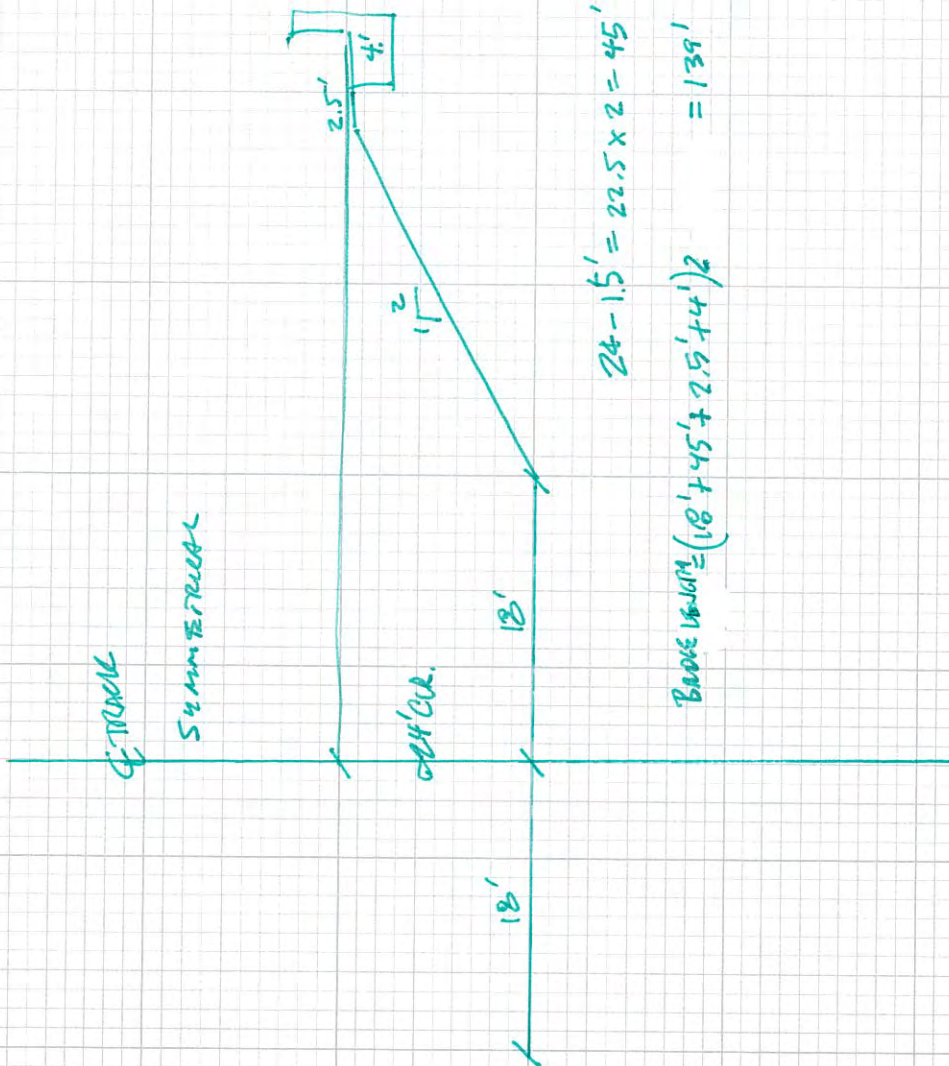
LIST OF DRAWINGS

1. CONCRETE OVERLAY
2. JOINT REPAIR

I.D. 1130-20-00B

DATE: 5/19/05

Calculations for	Job No.	Sheet No.
Made by	Date	
Checked by	Date	
Backchecked by	Date	



$$24 - 1.5' = 22.5' \times 2 = 45'$$

$$18' + 45' + 2.5' + 4' = 69.5'$$

$$69.5' \times 2 = 139'$$

Minimum Vertical Clearance for Existing Bridges which are not Being Replaced and for Existing Bridges on which the Superstructure is not Being Replaced^{1,2}

Overpass Facility →	Freeway, Expressway, or STH		Railroad ⁵ , CTH, Town Road, Local Road, or Street	Pedestrian or Shared-use Structures	Sign Structures ⁶
Underpass Facility ↓	Interchange	Grade Separation			
Non-arterial either STH, CTH, Town Road, Local Road, or Street	15'-3" min. or ES ³	If existing is < 14'-0" then increase to 14'-0" min. or ES ³	16'-3" min. or ES ³		18'-0" min. or ES ³ for existing sign structures on new construction projects or reconstruction projects;
		If existing is ≥ 14'-0", but < 14'-6" then maintain existing min. or ES ³			
		If existing is ≥ 14'-6" then 14'-6" min. or ES ³			
Arterial either CTH, Town Road, Local Road, or Street (excludes freeway and expressway; also excludes arterial STH)	If existing is < 15'-3" then increase to 15'-3" min. or ES ³	If existing is < 14'-0" then increase to 14'-0" min. or ES ³	17'-0" min. or ES ³		17'-0" or ES ³ for existing sign structures on 3R projects
	If existing is ≥ 15'-3", but < 16'-0" then maintain existing min. or ES ³	If existing is ≥ 14'-0", but < 14'-6" then maintain existing min. or ES ³			
	If existing is ≥ 16'-0" then 16'-0" min. or ES ³	If existing is ≥ 14'-6" then 14'-6" min. or ES ³			
Arterial STH (excludes freeway and expressway)	If existing is < 15'-3" then increase to 15'-3" min. or ES ³	If existing is < 14'-0" then increase to 14'-0" min. or ES ³	17'-0" min. or ES ³		
	If existing is ≥ 15'-3", but < 16'-0" then maintain existing min. or ES ³	If existing is ≥ 14'-0", but < 16'-0" then maintain existing min. or ES ³			
	If existing is ≥ 16'-0" then 16'-0" min. or ES ³	If existing is ≥ 16'-0" then 16'-0" min. or ES ³			
Freeway ⁴ or Expressway	16'-0" min. or ES ³				
Railroad ⁵	Maintain existing vertical clearance - if existing clearance is < 23'-0" then confer with BTLR Railroads and Harbors Section to determine the adequacy of the existing clearance.				

General notes:

- ¹ Vertical clearance is needed for the entire roadway width (critical point; to include traveled way, auxiliary lanes, turn lanes, and shoulders), according to the above table. Provide greater than minimum clearance if evaluation shows that greater clearance is needed because bridge superstructure is susceptible to being hit by under-passing vehicles.

Vertical clearance for railroads is measured from the top of rail and is required over an area 8 feet 6 inches from the track centerline on each side of a railroad track.

- ² Include a low clearance sign (W12-2), on structures if its use is in accordance with WisDOT MUTCD 2C.22.

- ³ ES = approved Exceptions To Standards Report required (see [FDM 11-1-2](#) and [FDM 11-1-4](#)).

- ⁴ See [FDM 11-44-1](#) for vertical clearance guidance specific to Interstate freeways.

- ⁵ Consult with the Region Railroad Coordinator if the over-passing or under-passing facility is either a railroad or a "rails-to-trails" trail; or if a structure is owned by a railroad company.

- ⁶ See LRFD Bridge Manual Chapter 39 for design considerations for vertical clearance on Sign Structures (http://on.dot.wi.gov/dtid_bos/extranet/structures/LRFD/LRFDManualIndex.htm).

Vertical Clearance for Construction of New Bridges, Replacement Bridges, and Bridges on which the Superstructure is being replaced¹

Overpass Facility →	Freeway, Expressway, or STH		Railroad ⁴ , CTH, Town Road, Local Road, or Street	Pedestrian or Shared-use Structures	Sign Structures ²
Underpass Facility ↓	Interchange	Grade Separation			
Non-arterial either STH, CTH, Town Road, Local Road, or Street	15'-9" Desirable	15'-3" Desirable	16'- 9" Desirable	18'-3" Minimum	
	15'-3" Minimum	14'-9" Minimum	16'-3" Minimum		
Arterial either CTH, Town Road, Local Road, or Street (excludes freeway and expressway; also excludes arterial STH)	16'-9" Desirable	15'-3" Desirable	17'- 9" Desirable		
	16'-3" Minimum	14'-9" Minimum	17'-3" Minimum		
Freeway ³ or Expressway or arterial STH	16'-9" Desirable 16'-4" Minimum		17'- 9" Desirable 17'-4" Minimum		
Railroad ^{4,5,6,7}	23'-0" Minimum to 23'-3½" Maximum				

General notes:

- ¹ Vertical clearance is needed for the entire roadway width (critical point; to include traveled way, auxiliary lanes, turn lanes, and shoulders), according to the above table.

Vertical clearance for railroads is measured from the top of rail and is required over an area 8 feet 6 inches from the track centerline on each side of a railroad track.

Do not exceed the desirable vertical clearance shown unless justified. Depending on topography and other specific situations vertical clearance for any structure may be greater than that shown when justified. Some things to consider are: over height loads traveling on the roadway; the level of development in the area, the projected growth in traffic volume and importance of the roadway, and the possibility of reclassification.

- ² See LRFD Bridge Manual Chapter 39

(http://on.dot.wi.gov/dtid_bos/extranet/structures/LRFD/LRFDManualIndex.htm) and LRFD Standard Details 39.02 and 39.10 for design considerations and requirements for vertical clearance on new and replacement Sign Structures.

- ³ See FDM 11-44-1 for vertical clearance guidance specific to Interstate freeways.

- ⁴ Consult with the Region Railroad Coordinator if the over-passing or under-passing facility is either a railroad or a "rails-to-trails" trail; or if a structure is owned by a railroad company.

- ⁵ A vertical clearance <23'-0" requires both an approved Exception to Standards (see FDM 11-1-2 and FDM 11-1-4) and early coordination with BTLR R&H, Railroads and Harbors Section (RHS) through the Region Railroad Coordinator. The Exception to Standards shall contain documentation that the Office of the Commissioner of Railroads (OCR) has been petitioned.

See Chapter 17 for additional information.

- ⁶ Provide justification for a vertical clearance >23'-3 ½" to the RHS.

- ⁷ Vertical clearance less than 23'-0" may be acceptable or desirable in certain situations, such as for spur tracks, lead tracks, some branch lines and even mainline tracks when other impediments to 23'-0" exist. Review such situations with the Railroad Project Coordination Engineer in RHS. Early coordination with RHS is required.

BRIDGE INSPECTION REPORT
Wisconsin Dept. of Transportation
DT2007 2003 s.84.17 Wis. Stats. Type = ROUTINE INSPECTION

page 1

Inventory Data

Feature On: USH 41 SB		Maintainer: STATE HIGHWAY DEPT		Structure No: B-44-020	
Feature Under: SOO LINE		Sect/Twn/Rng: S15 T21N R17E			
Location: 1.3M S JCT STH 47 TO		County: OUTAGAMI	Municipality: TOWN-GRAND CHUTE (44020)		
Inv Rating: HS30	Rdwy Width (ft): 30.0	Deck Width (ft): 36.0	Existing Posting:		
Oper Rating: HS44	Total Length (ft): 128.8	Deck Area(ft2): 4636	ADT On: 27720 Yr: 2003	ADT Under: Yr:	

Inspection Type (* = Supplemental Form Required)

	Routine Visual	Fracture Critical*	In-Depth*	UW-Dive*	UW-Surv*	UW-Probe/Visual*	Movable*
Last Insp.	10-13-11						
Frequency	24						
Recom. Freq.							
	Initial*	Damage	Interim	Load Posted	SI & A Field Review*		
Last Insp.							
Frequency	N/A						
Recom. Freq.	N/A				Item No. Needing Change		

Load Rating Information

Overburden	Measurement (in): 1.5	Date: 01-19-06	Deck Surface Type: CONCRETE	
Section Loss	File Meas. (%):	File Insp. Date: 10-13-09	Insp. Measurement (%):	Describe:
Re-rate for load capacity?	Reason:		Date Last Rated: 01-19-06	

Expansion Joints

Location	Type	Temp:		Signing Condition				Comments
		File Insp. Date	File Insp. (in)	New Insp. (in)	Type of Marker	File	Y/N	
WEST ABU	COMPSEAL				Bridge Markers	Y	Y	
PIER 1	COMPSEAL				Narrow Bridge			
PIER 2	COMPSEAL				One Lane Road			
EAST ABU	COMPSEAL				Vertical Clearance			
					Weight Limit Post			
					Other(Addl. Sign)			

Clearances(Cardinal = N or E)

	File Meas. (ft.)	File Date	New Meas. (ft.)
Min. Vertical Clearance Under (Cardinal)			
Min. Vertical Clearance Under (non-Cardinal)			
Min. Vertical Clearance On			

Structure Type

Construction/Rehabilitation History

Material	Configuration	# of Spans	Overall Length (ft)	Year	Work Performed	Plan	Shop
PREST CONCRET	DECK GIRDER		43.1	1960	NEW STRUCTURE	P035	F045
PREST CONCRET	DECK GIRDER		44.0	1972	PAINTING		
PREST CONCRET	DECK GIRDER		43.1	1983	CONCRETE OVER	C226	C226
				1985	BEARING - MIS	C275	
				1993	BEARING - MIS		
				2006	CONCRETE OVER		

Inspection Information

Special Requirements	Y/N	Comments				
Traffic Control	Y					
Access Equipment	Y					
Other	Y					

Inspector Information

Team Leader Name and No. Printed: Weber, Dale (3007)		Team Member(s) Name(s) Printed:	
Team Leader Signature:		Inspection Date: 10-13-11	Inspection Agency: STATE HIGHWAY DEPARTMENT (1)
District/Local Manager and No. Printed:		District/Local Manager Signature:	Review Date:

Element Inspection (X) Check Elements Inspected

Element Inspection (X) Check Elements Inspected					Quantity in Condition States				
Ck	Elem./Env.	Description	Unit	Total QTY.	1	2	3	4	5
X	22 / 4	Conc Deck/Conc Ov	SF	4636	4636				
X	109 / 2	P/S Conc Open Girder	LF	626	626				
X	205 / 2	R/Conc Column	EA	6	6				
X	215 / 3	R/Conc Abutment	LF	71	43	25	3		
	CS-2 (N Abut 13" & S Abut 12") CS-3 (S Abut 3")								
X	234 / 4	R/Conc Cap	LF	58	39	16	3		
	shallow spalls								
X	250 / 3	Concrete Diaphragm	EA	16	8	4	4		
X	302 / 4	Compressn Joint Seal	LF	144	124	20			
	Leaking								
X	310 / 4	Elastomeric Bearing	EA	15	15				
X	313 / 4	Fixed Bearing	EA	15	15				
X	322 / 4	Bituminous Approach	EA	2	2				
X	334 / 4	Metal Rail Coated	LF	259		259			
X	340 / 4	Concrete Slope Prote	EA	2			2		
X	358 / 4	Deck Cracking SmFlag	EA	1	1				
X	359 / 4	Und Dk Surf Sm Flag	EA	1		1			

Element Inspection (X) Check Elements Inspected

					Quantity in Condition States				
Ck	Elem./Env.	Description	Unit	Total QTY.	1	2	3	4	5
X	400 / 3	Concrete Wingwall	EA	4	4				
X	410 / 4	Curb	LF	206	49	108	49		
		Curb is disintegrating							

General Inspection/Maintenance Notes

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Maintenance Recommendations (See standard code items & numbers)

Maintenance Item:
Amount: Date(YYYY-MM-DD):
Maintenance item comment:

Maintenance Item:
Amount: Date(MM-DD-YY):
Maintenance item comment:

NBI Ratings

NBI	File	New	NBI	File	New
Deck	7	7	Culvert	N	N
Superstructure	7	7	Channel	N	N
Substructure	6	6	Waterway	N	N

Maintenance Item:
Amount: Date(MM-DD-YY):
Maintenance item comment:

STRUCTURE INVENTORY AND APPRAISAL FIELD REVIEW FORM

B-44-020
USH 41 SB over SOO LINE

- (3) Municipality:
(16) Latitude(° ' "):
(17) Longitude(° ' "):

LOCATION	
TOWN-GRAND CHUTE (44020)	
44°17'56.65"N	
88°26'08.53"W	

- (28A) Lanes On:
(28B) Lanes Under:
(102) Traffic Pattern On:
(102) Traffic Pattern Under:
(19) Detour Length(mi):

TRAFFIC SERVICE	
2	
0	
-NO TRAFFIC X-ONE WAY TRAFFIC -TWO WAY TRAFFIC	
X-NO TRAFFIC -ONE WAY TRAFFIC -TWO WAY TRAFFIC	
0	

- (49) Structure Length(ft):
(50) Sidewalk Width(ft):
(50) Curb Width(ft):
(52) Culvert Barrel Length(ft):
(34) Skew:

GEOMETRY	
128.8	
Left: 3.0	Right: 3.0
Angle(°): 0	Direction: -RIGHT FORWARD -LEFT FORWARD
Cardinal Width	Non-Cardinal Width
30.0	30.0
36.0	36.0
40	0
Cardinal Under Clearance	Non-Cardinal Under Clearance

- (51) Bridge Roadway(ft):
(52) Deck(ft):
(32) Approach Roadway(ft):
(47) Minimum Horizontal(ft):
(55) Minimum Right Lateral(ft):
(55) Minimum Left Lateral(ft):

- (36A) Bridge Rail Adequacy:
(36B) Transition Adequacy:
(36C) Approach Guardrail Adequacy:
(36D) Guardrail Termination Adequacy:
Outer Rail:

RAILING APPRAISAL		
-SUB-STANDARD	X-STANDARD	-NOT APPLICABLE
-SUB-STANDARD	X-STANDARD	-NOT APPLICABLE
-SUB-STANDARD	X-STANDARD	-NOT APPLICABLE
-SUB-STANDARD	X-STANDARD	-NOT APPLICABLE
Left	Right	Type
		TYPE F (TWO SQUARE TUBES) - STEEL(8)
		TYPE F (3 SQUARE TUBES) - STEEL(65)
		TYPE F (4 SQUARE TUBES) - STEEL(72)
		TYPE M-STEEL 3 SQUARE TUBES(93)
		SLOPED FACE PARAPET LF(91)
		SLOPED FACE PARAPET HF(92)
		VERTICAL FACE PARAPET TYPE A(74)
		TYPE W-THREE BEAM(79)
		TYPE H ON VERTICAL PARAPET(80)
		TIMBER(38)
X	X	OTHER(99) (Please specify) Left: 2 LINE HORIZONTAL CHANNEL - STEEL(5) Right: 2 LINE HORIZONTAL CHANNEL - STEEL(5)
Transition Type:		
		CONT GUARD RAIL
		NO APP GRDRL
X		NO ATTACHMENT
		22 MM(7/8") BOLT (Please enter quantity)
		25 MM(1") BOLT (Please enter quantity)
		OTHER (Please specify)
Guardrail Termination Type:		
X		(01) ENERGY ABSORBING TERMINAL/EAT
		(02) TURN DOWN
		(99) OTHER (Please specify)

- (72) Approach Alignment Appraisal:

ROADWAY ALIGNMENT APPRAISAL	
	(3) INTOLERABLE- Horizontal or Vertical curvature requires a substantial reduction in vehicle operating speed
	(6) FAIR- Horizontal or Vertical curvature requires a very minor speed reduction
X	(8) GOOD- No speed reduction required

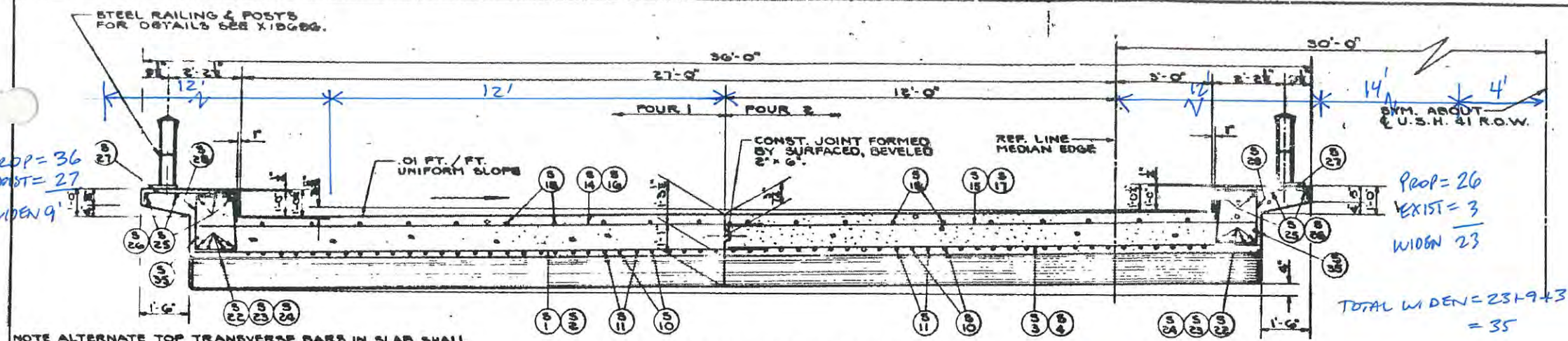
11-AUG-1997 14:04
ScreenScan

BILL OF BARS 98,580#

DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT.

MARK	NO.	SIZE	LENGTH	SPACING	LOCATION	DET.
S1	52	5	17'-6"	1'-6"	FLOOR-TRANS.-BOTTOM	
S2	114	5	17'-6"	9"	"	
S3	52	5	16'-3"	1'-6"	"	
S4	114	5	16'-3"	9"	"	
S5	24	4	17'-3"	1'-6"	HAUNCH-	
S6	24	4	16'-3"	1'-6"	"	
S7	32	10	18'-9"	SHOWN	"	
S8	32	10	16'-3"	SHOWN	"	
S9	132	5	16'-0"	1'-0"	" - LONG. - "	A
S10	120	9	26'-6"	1'-0"	FLOOR- LONG. - BOTTOM	
S11	120	9	20'-6"	1'-0"	"	
S12	66	9	35'-0"	11"	"	
S13	64	9	24'-0"	11"	"	
S14	106	4	17'-3"	1'-6"	" - TRANS. - TOP	
S15	106	4	16'-3"	1'-6"	"	
S16	56	9	17'-3"	1'-1"	"	
S17	56	9	16'-3"	1'-1"	"	
S18	80	4	13'-0"	1'-6"	" - LONG. - TOP	
S19	124	9	37'-0"	1'-0"	"	
S20	120	9	23'-0"	1'-0"	"	
S21	40	4	11'-0"	1'-6"	"	
S22	32	9	16'-0"	SHOWN	CURB- LONG. - BOTTOM	A
S23	32	9	26'-0"	SHOWN	"	
S24	16	9	33'-0"	SHOWN	"	
S25	60	9	19'-0"	SHOWN	" - TOP	
S26	40	9	26'-0"	SHOWN	"	
S27	424	5	4'-6"	1'-0"	" - TRANS.	B
S28	320	4	7'-0"	1'-0"	"	C
S29	16	4	7'-3"	1'-0"	"	C
S30	16	4	7'-9"	1'-0"	"	C
S31	16	4	8'-3"	1'-0"	"	C
S32	16	4	8'-6"	1'-0"	"	C
S33	16	4	9'-0"	1'-0"	"	C
S34	24	4	9'-3"	1'-0"	"	C
S35	8	4	15'-0"	SHOWN	" - LONG. @ PIERS ONLY	

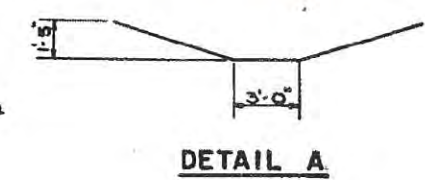
NOTE: BILL OF BARS CONTAINS BAR STEEL REINFORCEMENT FOR B-44-28 & B-44-29.



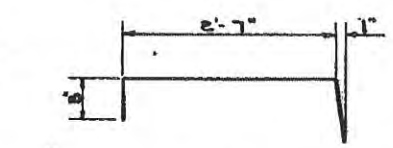
NOTE ALTERNATE TOP TRANSVERSE BARS IN SLAB SHALL BE SUPPORTED BY INDIVIDUAL BAR CHAIRS AT APPROXIMATELY 3'-0" CENTERS. BOTTOM LONGITUDINAL BARS SHALL BE SUPPORTED BY CONTINUOUS BAR CHAIRS AT APPROXIMATELY 4'-0" CENTERS.

CROSS SECTION THRU ROADWAY
LOOKING EAST B-44-28
LOOKING WEST B-44-29

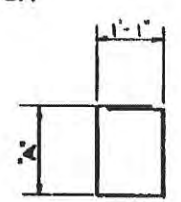
15.00 -
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DETAIL A

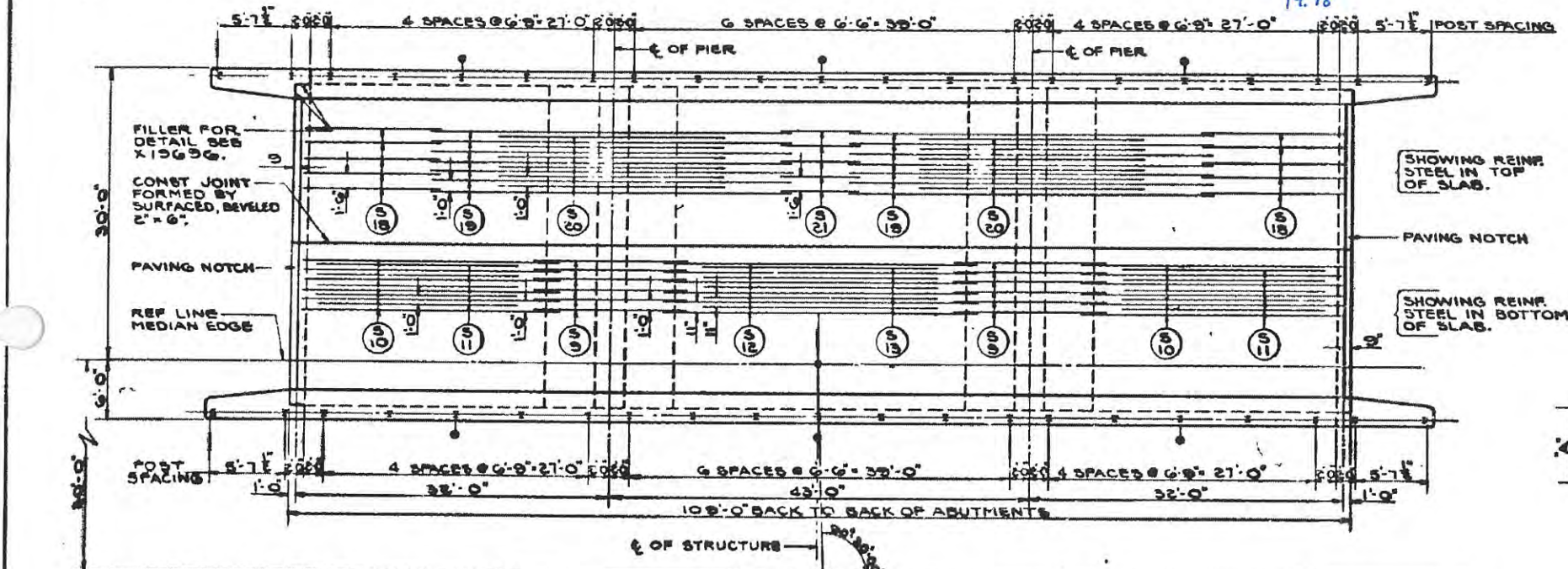


DETAIL B



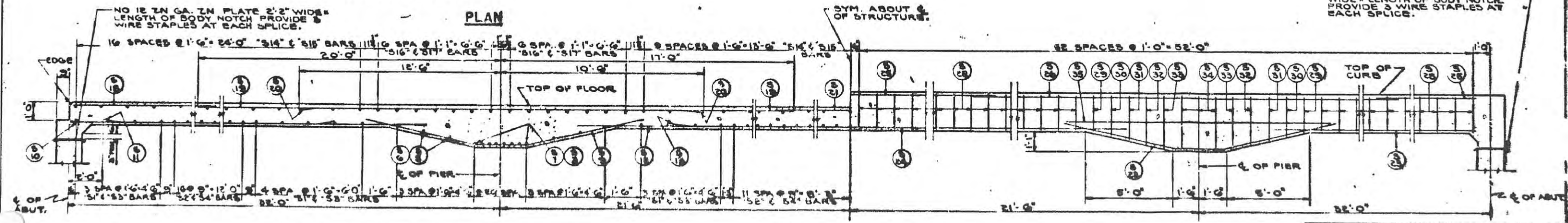
MARK	DIM "A"
S28	1'-11"
S29	2'-1"
S30	2'-3 1/2"
S31	2'-6"
S32	2'-8 1/2"
S33	2'-11"
S34	3'-0"

DETAIL C



• DENOTES LOCATION OF FIELD SPLICE IN RAILING.
STRUCTURE IS SYM. BY ROTATION OF 180° ABOUT THIS POINT STA. 708+09.80 U.S.H. 41

PLAN



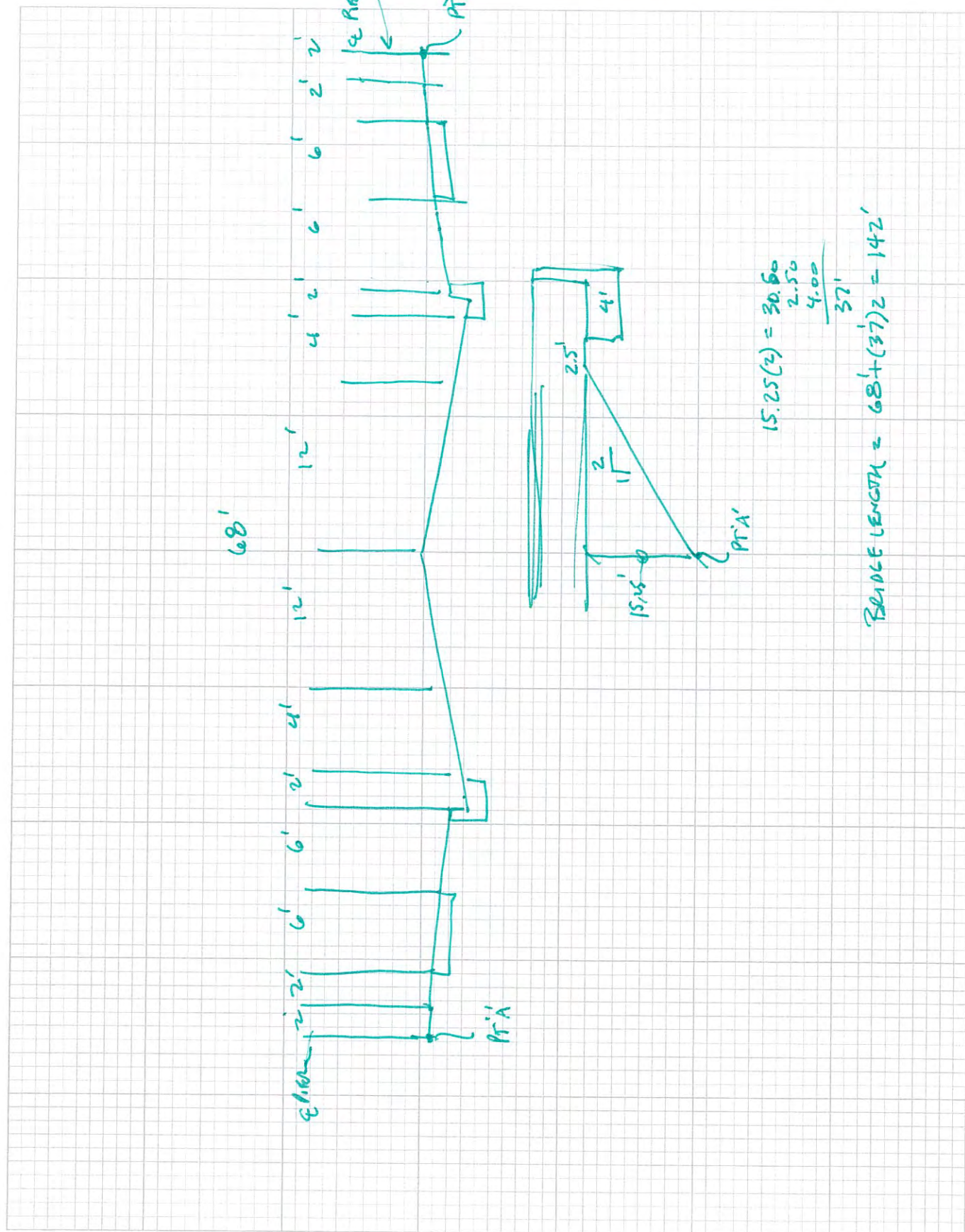
HALF LONG. SECTION THRU FLOOR

HALF LONG. SECTION THRU CURB

NOTE: ALL SLAB THICKNESS DIMENSIONS ARE TO FACE UNLESS NOTED OTHERWISE.

Calculations for	Job No.	Sheet No.
Made by	Date	
Checked by	Date	
Backchecked by	Date	

HNTB



Minimum Vertical Clearance for Existing Bridges which are not Being Replaced and for Existing Bridges on which the Superstructure is not Being Replaced^{1, 2}

Overpass Facility →	Freeway, Expressway, or STH		Railroad ⁵ , CTH, Town Road, Local Road, or Street	Pedestrian or Shared-use Structures	Sign Structures ⁶
Underpass Facility ↓	Interchange	Grade Separation			
Non-arterial either STH, CTH, Town Road, Local Road, or Street	15'-3" min. or ES ³	If existing is < 14'-0" then increase to 14'-0" min. or ES ³	16'-3" min. or ES ³		
		If existing is ≥ 14'-0", but < 14'-6" then maintain existing min. or ES ³			
		If existing is ≥ 14'-6" then 14'-6" min. or ES ³			
Arterial either CTH, Town Road, Local Road, or Street (excludes freeway and expressway; also excludes arterial STH)	If existing is < 15'-3" then increase to 15'-3" min. or ES ³	If existing is < 14'-0" then increase to 14'-0" min. or ES ³	17'-0" min. or ES ³		18'-0" min. or ES ³ for existing sign structures on new construction projects or reconstruction projects;
	If existing is ≥ 15'-3", but < 16'-0" then maintain existing min. or ES ³	If existing is ≥ 14'-0", but < 14'-6" then maintain existing min. or ES ³			
	If existing is ≥ 16'-0" then 16'-0" min. or ES ³	If existing is ≥ 14'-6" then 14'-6" min. or ES ³			
Arterial STH (excludes freeway and expressway)	If existing is < 15'-3" then increase to 15'-3" min. or ES ³	If existing is < 14'-0" then increase to 14'-0" min. or ES ³	17'-0" min. or ES ³		17'-0" or ES ³ for existing sign structures on 3R projects
	If existing is ≥ 15'-3", but < 16'-0" then maintain existing min. or ES ³	If existing is ≥ 14'-0", but < 16'-0" then maintain existing min. or ES ³			
	If existing is ≥ 16'-0" then 16'-0" min. or ES ³	If existing is ≥ 16'-0" then 16'-0" min. or ES ³			
Freeway ⁴ or Expressway	16'-0" min. or ES ³				
Railroad ⁵	Maintain existing vertical clearance - if existing clearance is < 23'-0" then confer with BTLR Railroads and Harbors Section to determine the adequacy of the existing clearance.				

General notes:

- ¹ Vertical clearance is needed for the entire roadway width (critical point; to include traveled way, auxiliary lanes, turn lanes, and shoulders), according to the above table. Provide greater than minimum clearance if evaluation shows that greater clearance is needed because bridge superstructure is susceptible to being hit by under-passing vehicles.

Vertical clearance for railroads is measured from the top of rail and is required over an area 8 feet 6 inches from the track centerline on each side of a railroad track.

- ² Include a low clearance sign (W12-2), on structures if its use is in accordance with WisDOT MUTCD 2C.22.

- ³ ES = approved Exceptions To Standards Report required (see [FDM 11-1-2](#) and [FDM 11-1-4](#)).

- ⁴ See [FDM 11-44-1](#) for vertical clearance guidance specific to Interstate freeways.

- ⁵ Consult with the Region Railroad Coordinator if the over-passing or under-passing facility is either a railroad or a "rails-to-trails" trail; or if a structure is owned by a railroad company.

- ⁶ See LRFD Bridge Manual Chapter 39 for design considerations for vertical clearance on Sign Structures (http://on.dot.wi.gov/dtid_bos/extranet/structures/LRFD/LRFDManualIndex.htm).

Vertical Clearance for Construction of New Bridges, Replacement Bridges, and Bridges on which the Superstructure is being replaced¹

Overpass Facility →	Freeway, Expressway, or STH		Railroad ⁴ , CTH, Town Road, Local Road, or Street	Pedestrian or Shared-use Structures	Sign Structures ²
Underpass Facility ↓	Interchange	Grade Separation			
Non-arterial either STH, CTH, Town Road, Local Road, or Street	15'-9" Desirable	15'-3" Desirable	16'- 9" Desirable	18'-3" Minimum	
	15'-3" Minimum	14'-9" Minimum	16'-3" Minimum		
Arterial either CTH, Town Road, Local Road, or Street (excludes freeway and expressway; also excludes arterial STH)	16'-9" Desirable	15'-3" Desirable	17'- 9" Desirable		
	16'-3" Minimum	14'-9" Minimum	17'-3" Minimum		
Freeway ³ or Expressway or arterial STH	16'-9" Desirable		17'- 9" Desirable		
	16'-4" Minimum		17'-4" Minimum		
Railroad ^{4,5,6,7}	23'-0" Minimum to 23'-3½" Maximum				

General notes:

¹ Vertical clearance is needed for the entire roadway width (critical point; to include traveled way, auxiliary lanes, turn lanes, and shoulders), according to the above table.

Vertical clearance for railroads is measured from the top of rail and is required over an area 8 feet 6 inches from the track centerline on each side of a railroad track.

Do not exceed the desirable vertical clearance shown unless justified. Depending on topography and other specific situations vertical clearance for any structure may be greater than that shown when justified. Some things to consider are: over height loads traveling on the roadway; the level of development in the area, the projected growth in traffic volume and importance of the roadway, and the possibility of reclassification.

² See LRFD Bridge Manual Chapter 39

(http://on.dot.wi.gov/dtid_bos/extranet/structures/LRFD/LRFDManualIndex.htm) and LRFD Standard Details 39.02 and 39.10 for design considerations and requirements for vertical clearance on new and replacement Sign Structures.

³ See FDM 11-44-1 for vertical clearance guidance specific to Interstate freeways.

⁴ Consult with the Region Railroad Coordinator if the over-passing or under-passing facility is either a railroad or a "rails-to-trails" trail; or if a structure is owned by a railroad company.

⁵ A vertical clearance <23'-0" requires both an approved Exception to Standards (see FDM 11-1-2 and FDM 11-1-4) and early coordination with BTLR R&H, Railroads and Harbors Section (RHS) through the Region Railroad Coordinator. The Exception to Standards shall contain documentation that the Office of the Commissioner of Railroads (OCR) has been petitioned.

See Chapter 17 for additional information.

⁶ Provide justification for a vertical clearance >23'-3 ½" to the RHS.

⁷ Vertical clearance less than 23'-0" may be acceptable or desirable in certain situations, such as for spur tracks, lead tracks, some branch lines and even mainline tracks when other impediments to 23'-0" exist. Review such situations with the Railroad Project Coordination Engineer in RHS. Early coordination with RHS is required.

BRIDGE INSPECTION REPORT
 Wisconsin Dept. of Transportation
 DT2007 2003 s.84.17 Wis. Stats. Type = ROUTINE INSPECTION

page 1

Inventory Data

Feature On: USH 41 SB		Maintainer: STATE HIGHWAY DEPT		Structure No: B-44-028	
Feature Under: GILLETT ST		Sect/Twn/Rng: S15 T21N R17E			
Location: 1.0M S JCT STH 47 TO		County: OUTAGAMI	Municipality: TOWN-GRAND CHUTE (44020)		
Inv Rating: HS21	Rdwy Width (ft): 30.0	Deck Width (ft): 36.0	Existing Posting:		
Oper Rating: HS30	Total Length (ft): 107.5	Deck Area(ft2): 3870	ADT On: 27720 Yr: 2003	ADT Under: 500 Yr: 1980	

Inspection Type (* = Supplemental Form Required)

	Routine Visual	Fracture Critical*	In-Depth*	UW-Dive*	UW-Surv*	UW-Probe/Visual*	Movable*
Last Insp.	10-13-11						
Frequency	24						
Recom. Freq.							
	Initial*	Damage	Interim	Load Posted	SI & A Field Review*		
Last Insp.							
Frequency	N/A						
Recom. Freq.	N/A				Item No. Needing Change		

Load Rating Information

Overburden	Measurement (in): 1.5	Date: 01-06-06	Deck Surface Type: CONCRETE		
Section Loss	File Meas. (%):	File Insp. Date: 10-13-09	Insp. Measurement (%):	Describe:	
Re-rate for load capacity?	Reason:			Date Last Rated: 01-06-06	

Expansion Joints

Location	Type	Temp:		New Insp. (in)	Signing Condition			
		File Insp. Date	File Insp. (in)		Type of Marker	File	Y/N	Comments
					Bridge Markers	Y	Y	
					Narrow Bridge			
					One Lane Road			
					Vertical Clearance			
					Weight Limit Post			
					Other(Addl. Sign)			

Clearances(Cardinal = N or E)

	File Meas. (ft.)	File Date	New Meas. (ft.)
Min. Vertical Clearance Under (Cardinal)	15.0		
Min. Vertical Clearance Under (non-Cardinal)			
Min. Vertical Clearance On			

Structure Type

Material	Configuration	# of Spans	Overall Length (ft)	Construction/Rehabilitation History			
				Year	Work Performed	Plan	Shop
CONT CONCRETE	HAUNCHED SLAB		32.0	1961	NEW STRUCTURE	P035	F045
CONT CONCRETE	HAUNCHED SLAB		43.0	1972	PAINTING		
CONT CONCRETE	HAUNCHED SLAB		32.0	1983	CONCRETE OVER	C226	
				2006	CONCRETE OVER		

Inspection Information

Special Requirements	Y/N	Comments				
Traffic Control	Y					
Access Equipment	Y					
Other	Y					

Inspector Information

Team Leader Name and No. Printed: Weber, Dale (3007)		Team Member(s) Name(s) Printed:	
Team Leader Signature:		Inspection Date: 10-13-11	Inspection Agency: STATE HIGHWAY DEPARTMENT (1)
District/Local Manager and No. Printed:		District/Local Manager Signature:	Review Date:

Element Inspection (X) Check Elements Inspected

					Quantity in Condition States				
Ck	Elem./Env.	Description	Unit	Total QTY.	1	2	3	4	5
X	48 / 4	Conc Slab/Conc Ov	SF	3870	3870				
X	205 / 3	R/Conc Column	EA	6	6				
X	215 / 4	R/Conc Abutment	LF	81	69	12			
		Zinc plate is coming out. CS-2 (N Abut 6" & S Abut 6")							
X	322 / 4	Bituminous Approach	EA	2	2				
X	334 / 4	Metal Rail Coated	LF	216		216			
X	340 / 4	Concrete Slope Prote	EA	2		2			
		Block							
X	358 / 4	Deck Cracking SmFlag	EA	1	1				
X	359 / 4	Und Dk Surf Sm Flag	EA	1		1			
X	400 / 4	Concrete Wingwall	EA	4	4				
X	410 / 4	Curb	LF	212	65	98	49		

General Inspection/Maintenance Notes

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Maintenance Recommendations (See standard code items & numbers)

Maintenance Item: Approach - Seal Approach to Paving Block

Amount: Date(YYYY-MM-DD):

Maintenance item comment: w/rubber

Maintenance Item:

Amount: Date(MM-DD-YY):

Maintenance item comment:

NBI Ratings

NBI	File	New	NBI	File	New
Deck	7	7	Culvert	N	N
Superstructure	7	7	Channel	N	N
Substructure	7	6	Waterway	N	N

Maintenance Item:

Amount: Date(MM-DD-YY):

Maintenance item comment:

TOWN-GRAND CHUTE (44020)
44°17'56.36"N
88°25'49.80"W

TRAFFIC SERVICE		
2		
2		
-NO TRAFFIC	X-ONE WAY TRAFFIC	-TWO WAY TRAFFIC
-NO TRAFFIC	-ONE WAY TRAFFIC	X-TWO WAY TRAFFIC
0		

GEOMETRY	
107.5	
Left: 3.0	Right: 3.0
Angle(°): 0	Direction: -RIGHT FORWARD -LEFT FORWARD
Cardinal Width	Non-Cardinal Width
30.0	30.0
36.0	36.0
40	0
Cardinal Under Clearance	Non-Cardinal Under Clearance
40.0	
8.0	
8.0	

-SUB-STANDARD	X-STANDARD	-NOT APPLICABLE
-SUB-STANDARD	X-STANDARD	-NOT APPLICABLE
-SUB-STANDARD	X-STANDARD	-NOT APPLICABLE
-SUB-STANDARD	X-STANDARD	-NOT APPLICABLE

Transition Type:

(72) Approach Alignment Appraisal:

	(3) INTOLERABLE- Horizontal or Vertical curvature requires a substantial reduction in vehicle operating speed
	(6) FAIR- Horizontal or Vertical curvature requires a very minor speed reduction
X	(8) GOOD- No speed reduction required

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BRIDGE INSPECTION REPORT
 Wisconsin Dept. of Transportation
 DT2007 2003 s.84.17 Wis. Stats. Type = ROUTINE INSPECTION

page 1

Inventory Data

Feature On: USH 41 NB		Maintainer: STATE HIGHWAY DEPT		Structure No: B-44-029
Feature Under: GILLET ST		Sect/Twn/Rng: S15 T21N R17E		
Location: 3.5M N JCT USH 10 TO		County: OUTAGAMI	Municipality: TOWN-GRAND CHUTE (44020)	
Inv Rating: HS21	Rdwy Width (ft): 30.0	Deck Width (ft): 36.0	Existing Posting:	
Oper Rating: HS30	Total Length (ft): 107.5	Deck Area(ft2): 3870	ADT On: 27720 Yr: 2003	ADT Under: 500 Yr: 1980

Inspection Type (* = Supplemental Form Required)

	Routine Visual	Fracture Critical*	In-Depth*	UW-Dive*	UW-Surv*	UW-Probe/Visual*	Movable*
Last Insp.	10-13-11						
Frequency	24						
Recom. Freq.							
	Initial*	Damage	Interim	Load Posted	SI & A Field Review*		
Last Insp.							
Frequency	N/A						
Recom. Freq.	N/A				Item No. Needing Change		

Load Rating Information

Overburden	Measurement (in): 1.5	Date: 01-13-06	Deck Surface Type: CONCRETE	
Section Loss	File Meas. (%):	File Insp. Date: 10-13-09	Insp. Measurement (%):	Describe:
Re-rate for load capacity?	Reason:		Date Last Rated: 01-13-06	

Expansion Joints

Location	Type	Temp:		Signing Condition				Comments
		File Insp. Date	File Insp. (in)	New Insp. (in)	Type of Marker	File	Y/N	
					Bridge Markers			
					Narrow Bridge			
					One Lane Road			
					Vertical Clearance			
					Weight Limit Post			
					Other(Addl. Sign)			

Clearances(Cardinal = N or E)

	File Meas. (ft.)	File Date	New Meas. (ft.)
Min. Vertical Clearance Under (Cardinal)	15.42		
Min. Vertical Clearance Under (non-Cardinal)			
Min. Vertical Clearance On			

Structure Type

Construction/Rehabilitation History

Material	Configuration	# of Spans	Overall Length (ft)	Year	Work Performed	Plan	Shop
CONT CONCRETE	HAUNCHED SLAB		32.0	1961	NEW STRUCTURE	P035	F045
CONT CONCRETE	HAUNCHED SLAB		43.0	1972	PAINTING		
CONT CONCRETE	HAUNCHED SLAB		32.0	1983	CONCRETE OVER	C226	
				2006	CONCRETE OVER		

Inspection Information

Special Requirements	Y/N	Comments			
Traffic Control	Y				
Access Equipment	Y				
Other	Y				

Inspector Information

Team Leader Name and No. Printed: Weber, Dale (3007)		Team Member(s) Name(s) Printed:	
Team Leader Signature:		Inspection Date: 10-13-11	Inspection Agency: STATE HIGHWAY DEPARTMENT (1)
District/Local Manager and No. Printed:		District/Local Manager Signature:	Review Date:

Element Inspection (X) Check Elements Inspected

					Quantity in Condition States				
Ck	Elem./Env.	Description	Unit	Total QTY.	1	2	3	4	5
X	48 / 4	Conc Slab/Conc Ov	SF	3870	3870				
		Concrete OL in 2006							
X	205 / 3	R/Conc Column	EA	6	6				
X	215 / 4	R/Conc Abutment	LF	71	55	16			
		CS-2 (N Abut 8" & S Abut 8")							
X	322 / 4	Bituminous Approach	EA	2	2				
X	334 / 4	Metal Rail Coated	LF	216		216			
		Beamguard & steel railing							
X	340 / 4	Concrete Slope Prote	EA	2		2			
		Block							
X	358 / 4	Deck Cracking SmFlag	EA	1	1				
X	359 / 4	Und Dk Surf Sm Flag	EA	1			1		
		Cracking and leaching @ const. joint							
X	400 / 4	Concrete Wingwall	EA	4	4				
X	410 / 4	Curb	LF	212	152	40	20		

General Inspection/Maintenance Notes

--

Maintenance Recommendations (See standard code items & numbers)

Maintenance Item: Approach - Seal Approach to Paving Block
 Amount: _____ Date(YYYY-MM-DD): _____
 Maintenance item comment: w/rubber

Maintenance Item: _____

Amount: _____ Date(MM-DD-YY): _____

Maintenance item comment: _____

NBI Ratings

NBI	File	New	NBI	File	New
Deck	7	7	Culvert	N	N
Superstructure	7	7	Channel	N	N
Substructure	6	6	Waterway	N	N

Maintenance Item: _____

Amount: _____ Date(MM-DD-YY): _____

Maintenance item comment: _____

A circular diagram divided into four segments. The segments are labeled with percentages: 30%, 20%, 10%, and 40%. The segments are arranged in a circle, with the 40% segment at the top, 30% on the right, 10% on the left, and 20% at the bottom.



(72) Approach Alignment Appraisal:

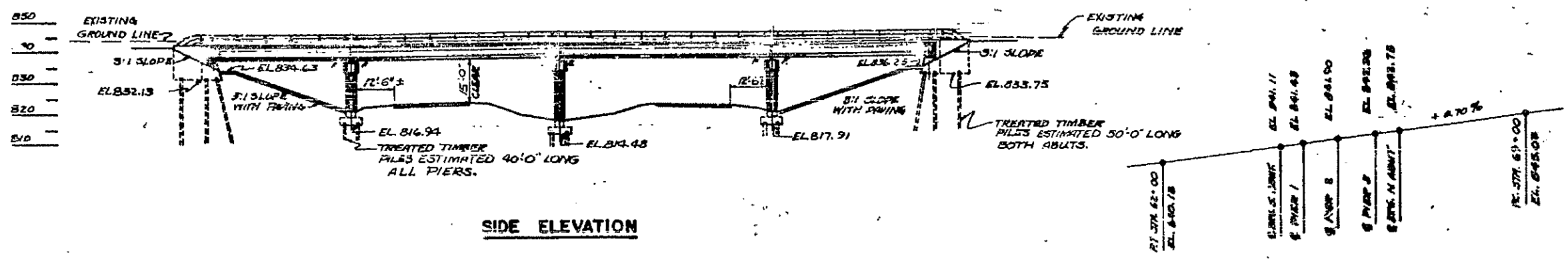
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13-AUG-1997 13:09

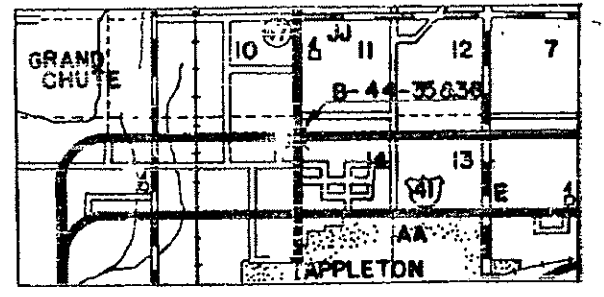
BENCH MARK

NO.	STATION	DESCRIPTION	ELEV.
54	747+40	PT. MK. N.E. COR. 50T. STEP OF HD 25' RT	843.56

COUNTY & HIGHWAY	ROUTE & SECTION	CLASS & AGREEMENT	S.P.R. DIVISION	PROJECT	SHEET NO.	TOTAL SHEETS
44.1	3.2	21.28		F03-2(60)	69	179

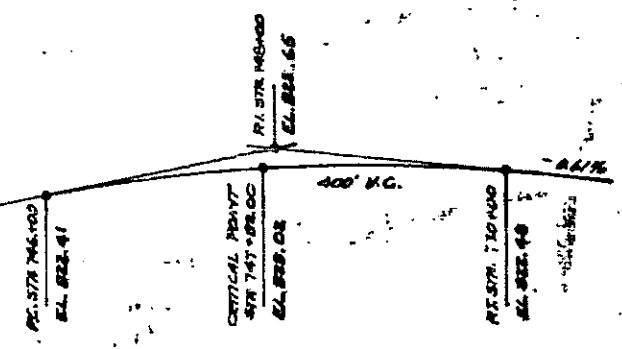


SIDE ELEVATION



LOCALITY MAP

PROFILE GRADE LINE ON STH. 47



PROFILE GRADE LINE ON USH 41
(ON MEDIAN EDGE OF 5' & 11' LANES)

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.
ALL CONCRETE REINFORCEMENT SHALL BE GRADE 60.
STEEL REINFORCEMENT SHALL BE IMBEDDED 2" CLEAR UNLESS OTHERWISE SHOWN OR NOTED.
LEVEL ALL EXPOSED EDGES OF CONCRETE IF UNLESS OTHERWISE SPECIFIED.
THE USE OF STRUCTURAL GRADE BAR STEEL REINFORCEMENT IS PROHIBITED.
THE TOP AND SLOPE OF THE FILL IN FRONT OF THE ABUTMENTS SHALL BE COVERED WITH SLOPE PAVING AS SHOWN IN PLAN ON THIS SHEET AND IN SECTIONS A1/D1 ON SHEETS X20716 & X20719 RESPECT.
ALL EXCAVATED VOLUME NOT OCCUPIED BY THE ABUTMENTS SHALL BE FILLED WITH GRANULAR BACKFILL TO THE GROUND LINE WHICH EXISTED BEFORE EXCAVATION FOR ABUTMENTS DEBRAY. FILLMENT WILL BE MADE ONLY FOR MATERIAL ACTUALLY PLACED WITHIN THE LIMITS SPECIFIED FOR EXCAVATION FOR STRUCTURES.
PILING AT THE ABUTMENTS SHALL BE TREATED TIMBER PILING ESTIMATED 50'-0" LONG AND DRIVEN TO A MINIMUM BEARING VALUE OF 30 TONS PER PILE.
PILING AT PIERS SHALL BE TREATED TIMBER PILING ESTIMATED 40'-0" LONG AND DRIVEN TO A MINIMUM BEARING VALUE OF 30 TONS PER PILE.

LIST OF DRAWINGS

- 1 GENERAL PLAN X20711
- 2 SUPERSTRUCTURE X20712
- 3 SUPERSTRUCTURE X20713
- 4 RAILING & EXP. JOINT X20714
- 5 GIRDERS X20715
- 6 SOUTH ABUTMENT X20716
- 7 PIER 1 X20717
- 8 PIER 2 X20718
- 9 NORTH ABUTMENT X20719
- 10 SUBSURFACE EXPLORATION X20720

REVISED 10-14-53 - HEIGHT OF CURB RAISED FROM 10" TO 12"

TOTAL ESTIMATED QUANTITIES

BID ITEMS	UNIT	SUPER-STRUCTURE	SOUTH ABUTMENT	PIER 1	PIER 2	PIER 3	NORTH ABUTMENT	TOTAL
EXCAVATION FOR STRUCTURES	C.Y.		90	65	55	65	90	345
GRANULAR BACKFILL	C.Y.		40				40	80
CONCRETE MASONRY	C.Y.	243.3	60.7	46.4	48.8	46.4	60.7	506.3
BAR STEEL REINFORCEMENT	LB.	4,690	1,410	4,290	4,310	4,040	1,410	60,980
STRUCTURAL CARBON STEEL	LB.	12,480						12,480
BEARING PADS	SF	70						70
EXCAVATED BRONZE PLATES	LB.	384						384
TREATED TIMBER PILING - DELIVERED	LF.		700	1,120	1,120	1,120	700	4,760
TREATED TIMBER PILING - DRIVEN	LF.		700	1,120	1,120	1,120	700	4,760
STEEL RAILING	LF.	505						505
SLOPE PAVING (CONC. BLOCK)	S.Y.		197				223	420
PRE-STRESSED GIRDERS SPAN 1	EA.	6						6
PRE-STRESSED GIRDERS SPAN 2	EA.	18						18
PRE-STRESSED GIRDERS SPAN 4	EA.	6						6
NON-BID ITEMS								
PRE-FORMED JOINT FILLER	SIZE 4" x 1"							4" x 1"

* DRIVE ONE AT LOCATION OF SOUTH ABUTMENT & ONE AT PIER 2

GRADE LINE TABLE OF ELEVATIONS

SPAN 1				SPAN 2				SPAN 3				SPAN 4			
AT	STATION	GE EL.	AT	STATION	GE EL.	AT	STATION	GE EL.	AT	STATION	GE EL.	AT	STATION	GE EL.	AT
2 DKS	63+00.03	841.11	2 DKS	63+65.95	841.43	2 DKS	64+55.99	841.91	2 DKS	65+21.95	842.58	2 DKS	65+21.95	842.58	
4 PT	63+51.38	841.19	4 PT	64+12.35	841.59	4 PT	64+12.35	841.59	4 PT	64+12.35	841.59	4 PT	64+12.35	841.59	
1 PT	63+62.55	841.27	1 PT	64+12.35	841.59	1 PT	64+12.35	841.59	1 PT	64+12.35	841.59	1 PT	64+12.35	841.59	
1 PT	63+73.78	841.55	1 PT	64+12.35	841.59	1 PT	64+12.35	841.59	1 PT	64+12.35	841.59	1 PT	64+12.35	841.59	
2 DKS	65+00.03	841.42	2 DKS	65+00.03	841.42	2 DKS	65+00.03	841.42	2 DKS	65+00.03	841.42	2 DKS	65+00.03	841.42	

STATE HIGHWAY COMMISSION OF WISCONSIN

GENERAL PLAN

OUTAGAMIE CO. GRAND CHUTE

SECTION 14.15

DATE 9-2-53

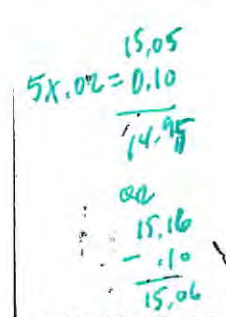
SUBMITTED N. B. Schultz

APPROVED E. C. Ruppert

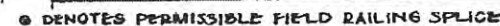
STRUCTURE B-44-35

SHEET 1 OF 10

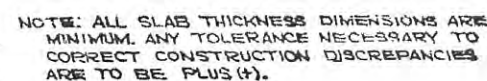
X 20711



AT RT. 2'S TO E.W. LANE. LOOKING NORTH



8- $\frac{3}{4}$ " MALLEABLE HEX NUTS 5" LG.
OR APPROVED EQUAL INSERT.
WELD TO #4 TIE ROD. _____



SECTION SI



NOTE: TO COMPENSATE FOR VARIATIONS IN PRE-STRESS GIRDED CAMBER AND OTHER MINOR CONSTRUCTION DISCREPANCIES THE PROJECTION OF THE TOPS OF THE GIRDERS INTO THE SLAB MAY BE VARIED FROM A MIN. OF $\frac{1}{2}$ " TO A MAXIMUM OF 2".

X20712

STATE PROJECT NUMBER	SHEET NO.
0044-14-13	8.3

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.
BAR STEEL REINF SHALL BE IMBEDDED
2" CL. UNLESS OTHERWISE SHOWN OR NOTED.
THE 1ST DIGIT OF A BAR MARK
SIGNIFIES THE BAR SIZE.
CONTRACTOR SHALL VERIFY DIMENSIONS
IN FIELD.
LIMITS OF "JOINT REPAIR" EXTEND OUT TO
OUT OF CURBS.

TOTAL ESTIMATED QUANTITIES

CONCRETE MASONRY, OVERLAY	52 C.Y.
HIGH STRENGTH BAR STEEL REINFORCEMENT	300 LBS.
JOINT REPAIR	41 S.Y.
DECK CLEANING	785 S.Y.
DECK PREPARATION	39 S.Y.
EXPANSION DEVICE	1 L.S.
PREFORMED ELASTOMERIC COMPRESSION	
JOINT SEAL 3 INCH	77 L.F.
PREFORMED ELASTOMERIC COMPRESSION	
JOINT SEAL 2 1/2 INCH	77 L.F.

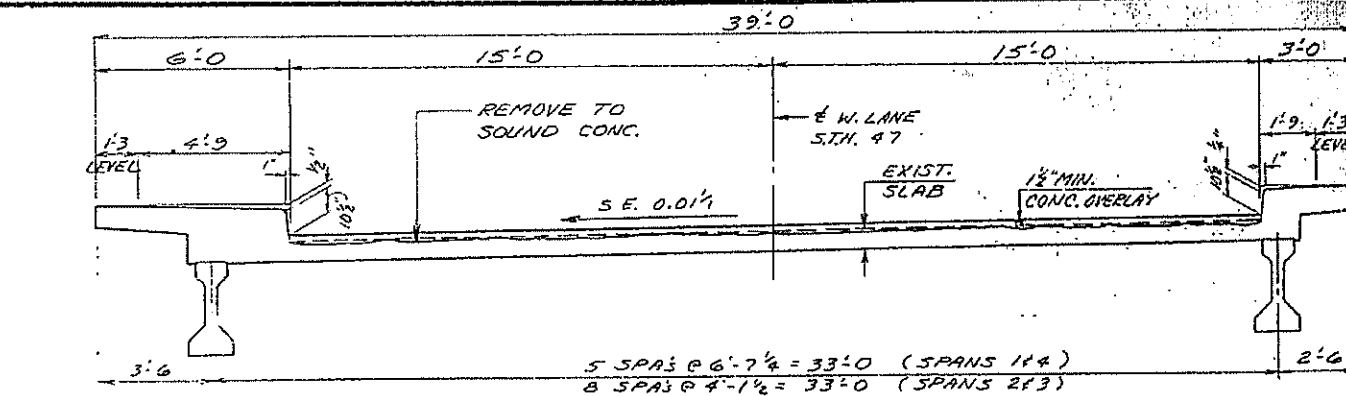
DESIGN DATA

LIVELOAD:
INVENTORY RATING : H520
OPERATIONAL RATING : H534

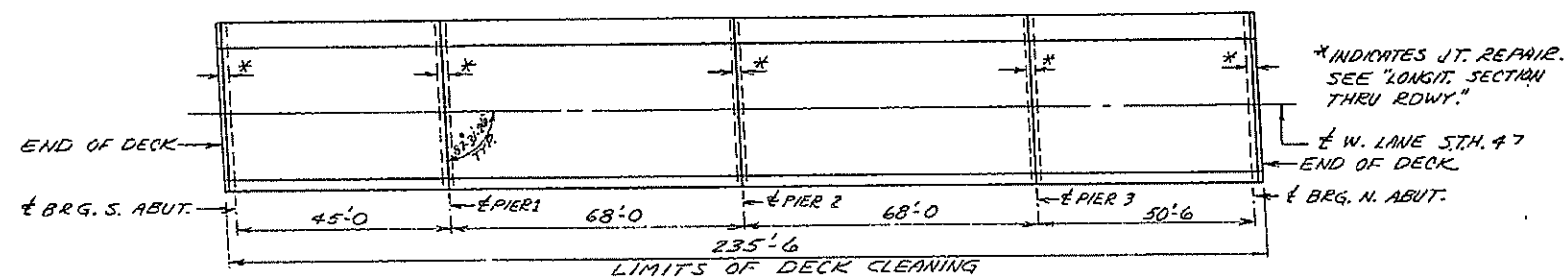
ALLOWABLE DESIGN STRESSES :
CONCRETE MASONRY _____ $f_c = 4,000$ PSI
HIGH STRENGTH BAR STEEL
REINFORCEMENT _____ $f_y = 60,000$ PSI

LIST OF DRAWINGS

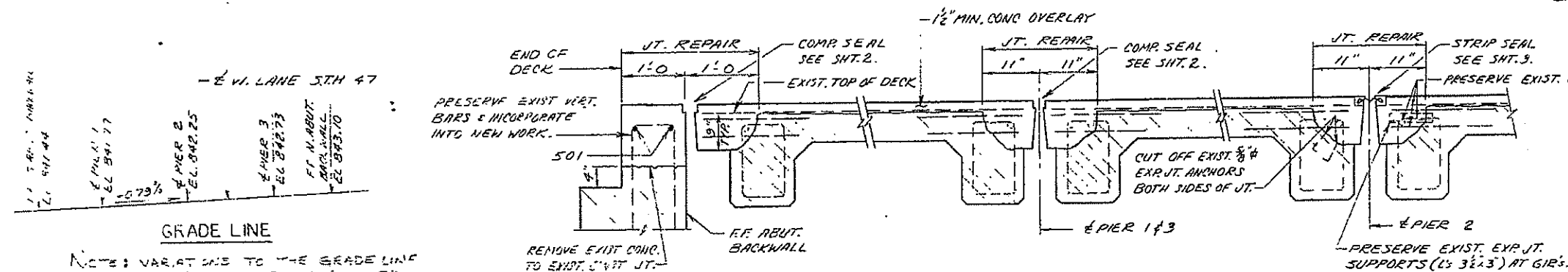
1. LAYOUT _____ X68080'
2. JOINTS AT ABUTS.
PIERS 1 & 3 _____ X68081
3. STRIP SEAL
EXPANSION JT. _____ X68082



CROSS SECT. THRU RDWY.



PLAN



LONGIT. SECTION THRU RDWY.

AS BUILT PLAN
DATE 10-85 BY W.K.

No.	Date	Revision	By
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-4-35			
<i>S.T.H. 47 OVER U.S.H. 41</i>			
County	Town/City/Village		
<i>OUTAGAMIE</i>	<i>GRAND CHUTE</i>		
Design Spec.	<i>ARSHTO '81</i>	Load	Contt. Spec. <i>1981</i>
Designed By	<i>D.T.M.</i>	Drawn By	<i>J.H.G.</i>
Checked	<i>D.F.S.</i>	Checked	<i>F.W.G.</i>
Approved <i>Stanley T. Zebos</i> Chief Bridge Engineer			<i>3-22-82</i> Date
LAYOUT			SHEET 1 OF 3 X68080