PLAN INDEX	
SH. NO.	DESCRIPTION
1	TITLE SHEET
2	EXPANSION JOINT DETAILS
3	EXISTING GENERAL PLAN OF SITE
4	EXISTING GENERAL PLAN OF STRUCTURE
5-7	EXISTING STRUCTURAL STEEL DETAILS
8-11	DECK RESURFACING DETAILS
12-13	PIN & HANGER DETAILS

TRAFFIC DATA S01 OF 50112						
	TOTAL ADT	DIR ADT	DIR DHV	% COMM OF ADT	SPEED LIMIT	DESIGN SPEED
2001	47,300	23,650	2,650	8%	70 MPH	75 MPH
2003	48,700	24,350	2,730	8%	70 MPH	75 MPH
2025	68,000	34,000	3,800	9%		

STANDARD PLANS

WHERE THE FOLLOWING ITEMS ARE CALLED FOR ON THE PLANS THEY ARE TO BE CONSTRUCTED ACCORDING TO THE STANDARD PLAN GIVEN BELOW OPPOSITE EACH ITEM UNLESS OTHERWISE INDICATED.

MOLDING, BEVEL, LIGHT STANDARD ANCHOR BOLT ASSEMBLY AND NAME PLATE DETAILS	B-103-C

TITLE SHEET LEGEND

PROPOSED BRIDGE PROJECT

EXISTING ROADS
- CITY STREET
- COUNTY
- STATE ROUTES
- FEDERAL DIVIDED ROUTES
- FEDERAL DIVIDED INTERSTATE ROUTES
- HOT MIX ASPHALT
- GRAVEL

SECTION LINE

CITY, VILLAGE OR TOWNSHIP LIMITS

RAILROADS

MICHIGAN
DEPARTMENT OF TRANSPORTATION

PLANS OF PROPOSED

MICHIGAN PROJECT BHI 02560(066)

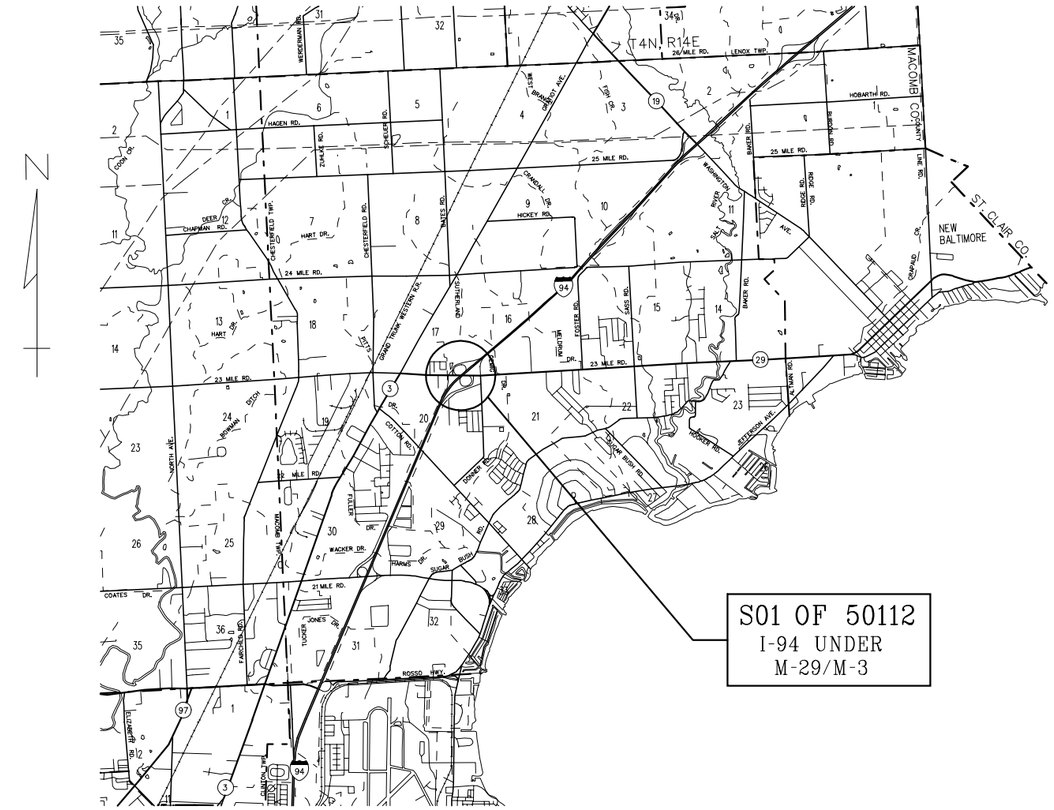
CONTROL SECTION 50112

JOB NUMBER 51481A

I-94

CHESTERFIELD TOWNSHIP

MACOMB COUNTY



GENERAL NOTES

THE REHABILITATION DESIGN IS BASED ON CURRENT AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES HS20-44 LOADING. LIVE LOAD PLUS IMPACT DEFLECTION DOES NOT EXCEED 1/1000 OF SPAN LENGTH AND 1/375 OF CANTILEVER ARM. THE LOAD FACTOR METHOD OF DESIGN WAS USED FOR THIS DESIGN. THE ORIGINAL STRUCTURE WAS DESIGNED FOR HS20 LOADING.

EXCEPT WHERE OTHERWISE INDICATED ON THESE PLANS, OR IN THE PROPOSAL AND SUPPLEMENTAL SPECIFICATIONS CONTAINED HEREIN, ALL MATERIALS AND WORKMANSHIP SHALL BE ACCORDING TO THE MICHIGAN DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR CONSTRUCTION 2003 EDITION.

THE STATIONING AS SHOWN ON THESE PLANS FOR THE INTERSECTION OF THE CENTERLINE OF BRIDGE AND ROADWAY CENTERLINE IS BELIEVED TO BE CORRECT. IT SHALL, HOWEVER, BE CHECKED AT THE TIME OF STARTING CONSTRUCTION, AND IF THE STATIONING SHOWN ON THE PLANS IS INCORRECT, IT SHALL BE REPORTED TO THE DESIGN OFFICE IN LANSING, AND THE STRUCTURE SHALL BE STAKED OUT USING THE ACTUAL INTERSECTION OF THE CENTERLINE OF BRIDGE AND ROADWAY CENTERLINE AS THE CONTROL POINT.

THE DESIGN OF THE STRUCTURAL MEMBERS IS BASED ON MATERIAL OF THE FOLLOWING GRADES AND STRESSES:

CONCRETE: GRADE D	f'c = 4,000 psi
STEEL REINFORCEMENT	fy = 60,000 psi
STRUCTURAL STEEL:	
AASHTO M270 GRADE 50	Fy = 50,000 psi
STRUCTURAL STEEL PINS: ASTM A 276	
UNS DESIGNATION S20161 OR S21800	Fy = 50,000 psi
TEMP SUPPORT HANGER RODS:	
ASTM A 193 GRADE B7 (AISI 4140)	
2½" AND UNDER	Ft = 125,000 psi
	Fy = 105,000 psi
OVER 2½" TO 4"	Ft = 115,000 psi
	Fy = 95,000 psi
OVER 4" TO 7"	Ft = 100,000 psi
	Fy = 75,000 psi

ALL EXPOSED CONCRETE CORNERS SHOWN SQUARE ON THE PLANS SHALL BE BEVELED WITH ½" TRIANGULAR MOLDINGS EXCEPT AS OTHERWISE NOTED.

THE REGULATED WASTE ACTIVITY IDENTIFICATION NUMBERS FOR THIS PROJECT ARE AS FOLLOWS:

CONTROL SECTION	NUMBER
S01 OF 50112	MIR000024695

CONTRACT FOR: DEEP & SHALLOW OVERLAYS, PIN & HANGER REPLACEMENT, COATING OF STRUCTURAL STEEL, BEAM END REPAIRS, & MAINTAINING TRAFFIC.

APPROVALS

RECOMMENDED FOR APPROVAL _____ _____
PROJECT MANAGER DATE

RECOMMENDED FOR APPROVAL _____ _____
RESIDENT ENGINEER DATE

MICHIGAN
DEPARTMENT OF TRANSPORTATION
KIRK T. STEUDLE - DIRECTOR

APPROVED BY _____ _____
ENGINEER OF DEVELOPMENT DATE

MDOT Michigan Department of Transportation

_____
MDOT DESIGN COORDINATOR

_____
DESIGN UNIT

CONTROL SECTION	JOB NUMBER	FEDERAL NUMBERS PROJECT	FEDERAL NUMBERS ITEM	SHEET NO.
S01 OF 50112	51481A	BHI 02560(066)	RR3368	1

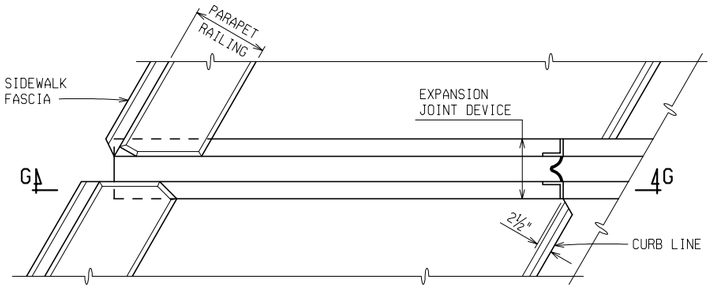
CONTROL SECTION — JOB NUMBER 50112-51481A

DATE: CORRECTED BY:

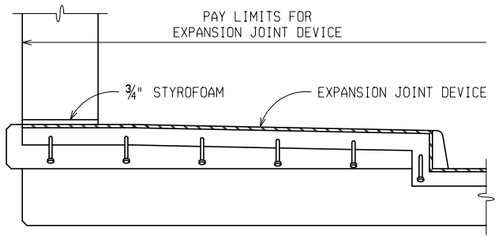
DATE: CHECKED BY:

DATE: DRAWN BY:

FILE NAME:



PLAN AT PARAPET RAILING WITH SIDEWALK



SECTION G - G

REVISIONS			
NO.	DESCRIPTION	DATE	BY

NOTES:

JOINT TYPES

THE EXPANSION JOINT DEVICE SHALL BE OF A TYPE THAT INCLUDES A CONTINUOUS NEOPRENE (OR EQUIVALENT) SEAL ACROSS THE DECK. UNLESS OTHERWISE NOTED ON THE PLANS, THE CONTRACTOR HAS THE OPTION OF USING ANY OF THE DEVICES LISTED BELOW:

DEVICE	MANUFACTURER
WABO STRIP SEAL - TYPE M	WATSON-BOWMAN & ACME, INC.
WABO STRIP SEAL - TYPE A	WATSON-BOWMAN & ACME, INC.
STEELFLEX-SSA2	D.S. BROWN
STEELFLEX-SSCM	D.S. BROWN
ONFLEX 40 SS	STRUCTURAL RUBBER PRODUCTS CO.

THE MODEL OF THE JOINT TYPE SELECTED SHALL BE SUITABLE TO ACCOMMODATE THE TOTAL MOVEMENT NOTED ON THE PLANS.

COMPLETE WORKING DRAWINGS OF ALL DETAILS OF FABRICATION OF THE EXPANSION JOINT DEVICE SHALL BE SUBMITTED FOR REVIEW IN ACCORDANCE WITH STANDARD SPECIFICATION 104.02. THIS REQUIREMENT IS WAIVED FOR EXPANSION JOINT DEVICES FOR WHICH A SET OF STANDARD INSTALLATION DETAILS HAS BEEN APPROVED. STANDARD INSTALLATION DETAILS CAN BE OBTAINED FROM THE DESIGN SUPPORT AREA.

FABRICATION AND INSTALLATION

THE EXPANSION JOINT SHALL BE SHOP FABRICATED TO CONFORM TO THE CONTOUR OF THE BRIDGE DECK, BARRIERS, ETC. IT SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS SUBJECT TO NOTES HEREIN AND THE APPROVAL OF THE ENGINEER.

THE TOP OF THE EXPANSION JOINT DEVICE SHALL BE SET ⅛" - ¼" BELOW THE CONCRETE SLAB (PAVEMENT) WITH A TOLERANCE OF ± ⅛".

THE STEEL ANCHORAGE FOR STRIP SEAL GLANDS SHALL BE HOT DIP GALVANIZED IN ACCORDANCE WITH SUBSECTION 707.03C.16 OF THE STANDARD SPECIFICATIONS.

THE AREA OF THE STEEL ANCHORAGE AND SEALING GLAND WHICH WILL BE IN CONTACT WITH A SEALANT, OR LUBRICANT-ADHESIVE SHALL BE CLEANED WITH TOLUENE OR OTHER APPROVED SOLVENT.

WHERE THE SEALING GLAND IS LOCKED INTO A STEEL ANCHORAGE, A LUBRICANT-ADHESIVE CONFORMING TO STANDARD SPECIFICATION 914.04D SHALL BE REQUIRED BETWEEN THE SEAL AND STEEL ANCHORAGE.

IN THE EVENT THAT SPLICING IS REQUIRED OF THE SEALING GLAND, IT SHALL BE SPLICED BY AN APPROVED METHOD (SUCH AS COLD VULCANIZATION) BY A TRAINED REPRESENTATIVE OF THE MANUFACTURER.

DETAILS AT CURBS OR BARRIERS

THE DETAILS ON THIS SHEET SHOW AN APPROVED MEANS OF TERMINATING THE EXPANSION JOINT DEVICE AT CURBS OR BARRIERS. VARIATIONS OR ALTERNATIVE SCHEMES WILL BE CONSIDERED AND MAY BE USED IF APPROVED BY THE ENGINEER.

MATERIALS

THE COST OF ALL MATERIALS AND LABOR REQUIRED FOR PROPER INSTALLATION OF THE EXPANSION JOINT AND THE TERMINAL ASSEMBLIES AT THE CURBS, SIDEWALKS, OR BARRIERS IS INCLUDED IN THE PAYMENT FOR THE EXPANSION JOINT DEVICE.

STRUCTURE NUMBER	ANGLE OF CROSSING TO NEAREST 10°	LOCATION OF JOINT	MIN. TOT. TRAVEL ALONG CENTERLINE OF BRIDGE	REQUIRED LENGTH OF EXPANSION JOINT DEVICE
S01	40°	PIER 1	2"	110'-0"
S01	40°	PIER 2	0	110'-0"
S01	40°	PIER 3	2"	110'-0"

QUANTITY		
ITEM	UNIT	AMOUNT
Expansion Joint Device	Ft	330'-0"

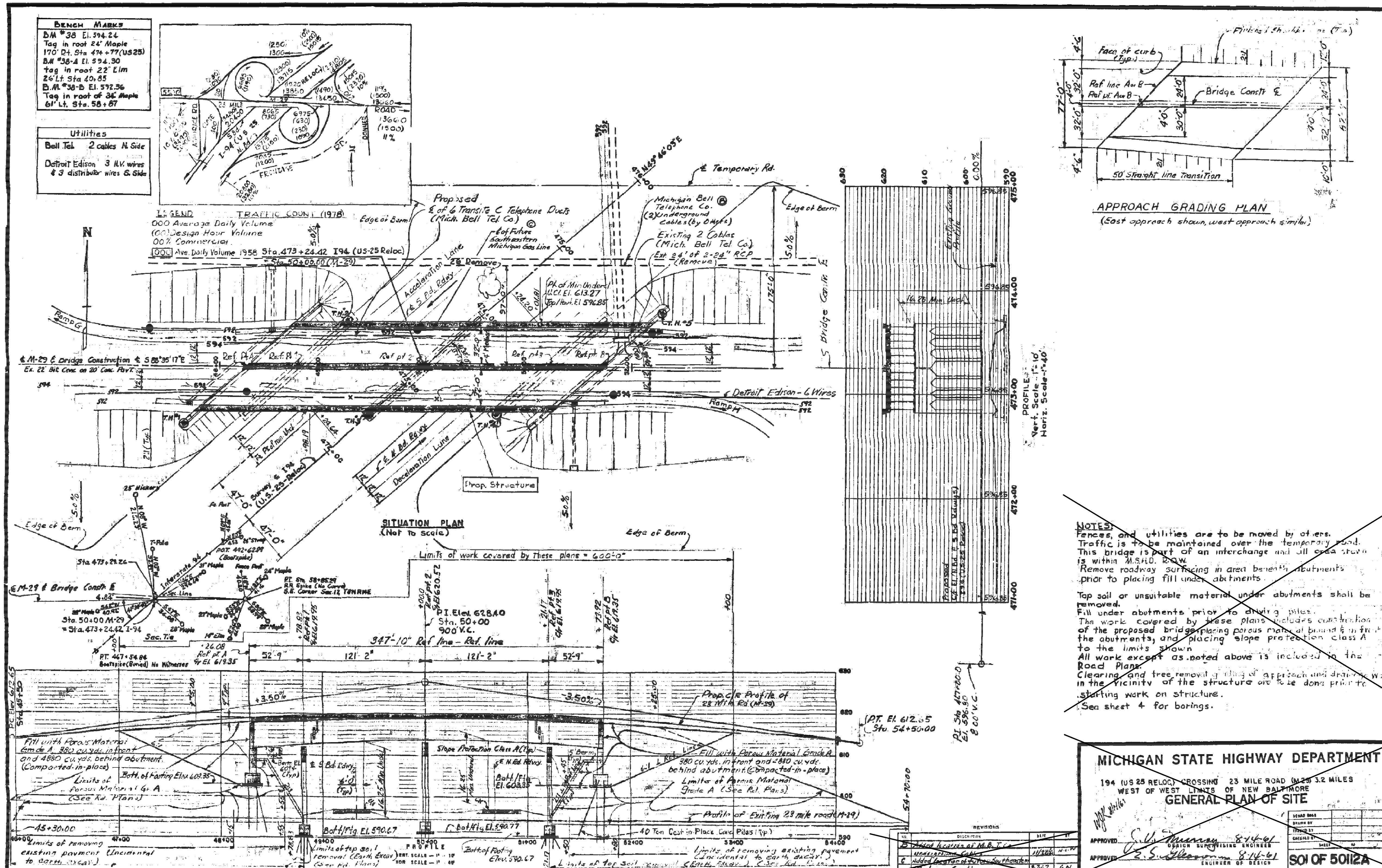
MDOT Michigan Department of Transportation

EXPANSION JOINT DETAILS
EJ3X (04/28/2004)

DATE	CONT. SEC.	JOB NO.	DESIGN UNIT	SHEET
	S01 OF 50112	51481A		2 OF 13

DRAWN BY: DATE: CHECKED BY: DATE: CORRECTED BY: DATE: FILE NAME:

REVISIONS			
NO.	DESCRIPTION	DATE	BY



NOTES:
Fences, and utilities are to be moved by others.
Traffic is to be maintained over the temporary road.
This bridge is part of an interchange and all area shown is within M.S.H.D. R.O.W.
Remove roadway surfacing in area beneath abutments prior to placing fill under abutments.

Top soil or unsuitable material under abutments shall be removed.
Fill under abutments prior to driving piles.
The work covered by these plans includes construction of the proposed bridge, placing porous material behind & in front of the abutments, and placing slope protection class A to the limits shown.
All work except as noted above is included in the Road Plans.
Clearing and tree removal, grading of approach and drainage work in the vicinity of the structure are to be done prior to starting work on structure.
See sheet 4 for borings.

REVISIONS			
NO.	DESCRIPTION	DATE	BY
B	Added location of M.B.T. Co. underground Cables	11/28/61	
C	Added location of Future Southeastern Michigan Gas Line	3-7-62	G.N.

MICHIGAN STATE HIGHWAY DEPARTMENT
I94 (US 25 RELOC) CROSSING 23 MILE ROAD (M-29) 3.2 MILES WEST OF WEST LIMITS OF NEW BALTIMORE
GENERAL PLAN OF SITE
APPROVED [signature] 8-14-61 DESIGN SUPERVISING ENGINEER
APPROVED [signature] 8-14-61 ENGINEER OF DESIGN
S01 OF 50112A

EXISTING

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DO NOT WORK FROM THIS SHEET. THE INFORMATION SHOWN HERE IS FOR REFERENCE ONLY. NO PAY ITEMS ARE SHOWN.

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Michigan Department of Transportation

EXISTING GENERAL PLAN OF SITE
I-94 UNDER M-29/M-3, 3 MILES WEST OF NEW BALTIMORE

DATE	CONT. SEC.	JOB NO.	DESIGN UNIT	SHEET
	S01 OF 50112	51481A		3 OF 13

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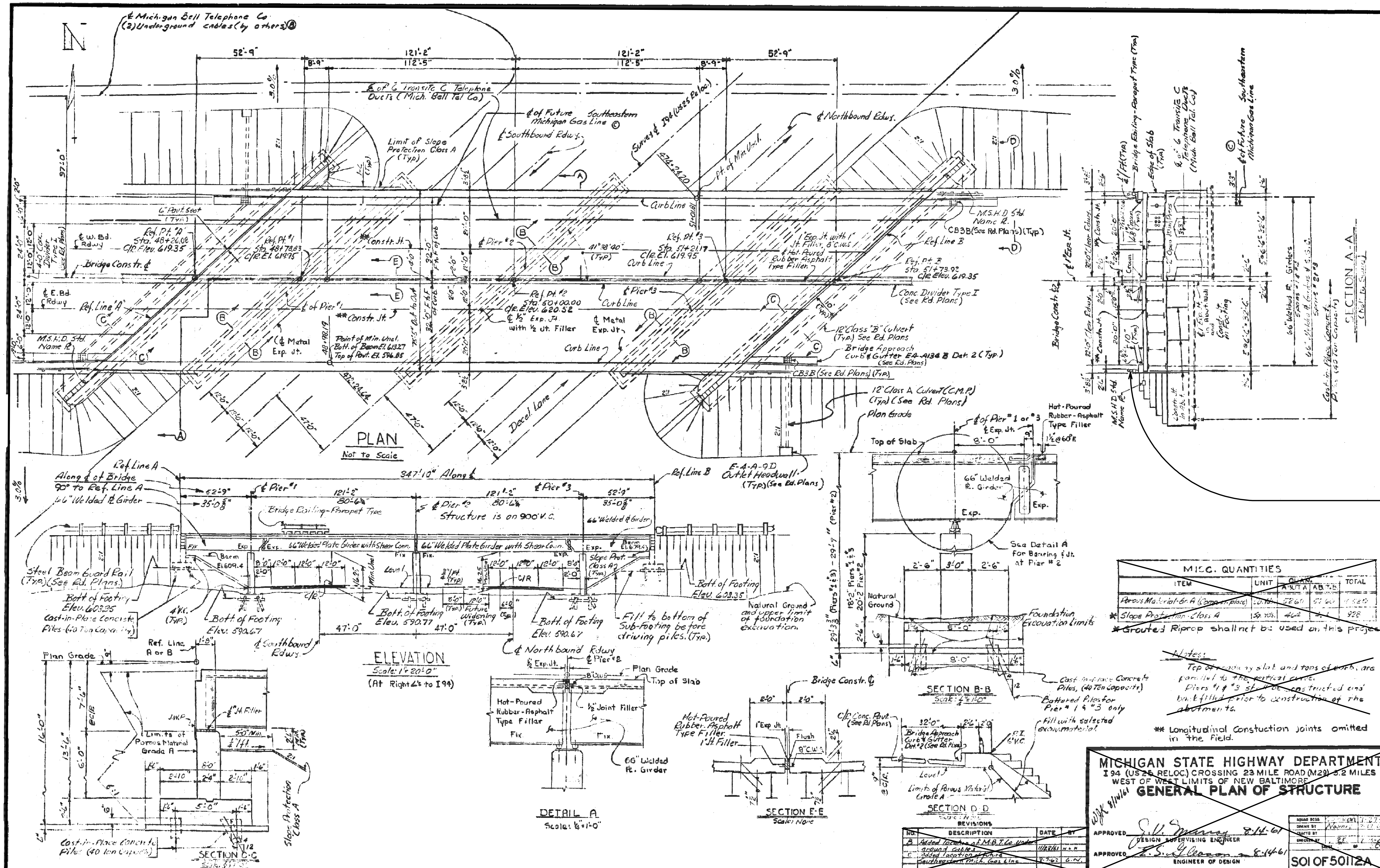

NOTE: THE EXISTING RAILING HAS BEEN FITTED WITH A THRIE BEAM RETROFIT, BUT IS NOT SHOWN ON THESE PLANS.

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EXISTING GENERAL PLAN OF SITE

I-94 UNDER M-29/M-3, 3 MILES WEST OF NEW BALTIMORE

DATE	CONT. SEC.	JOB NO.	DESIGN UNIT	SHEET
	S01 OF 50112	51481A		4 OF 13

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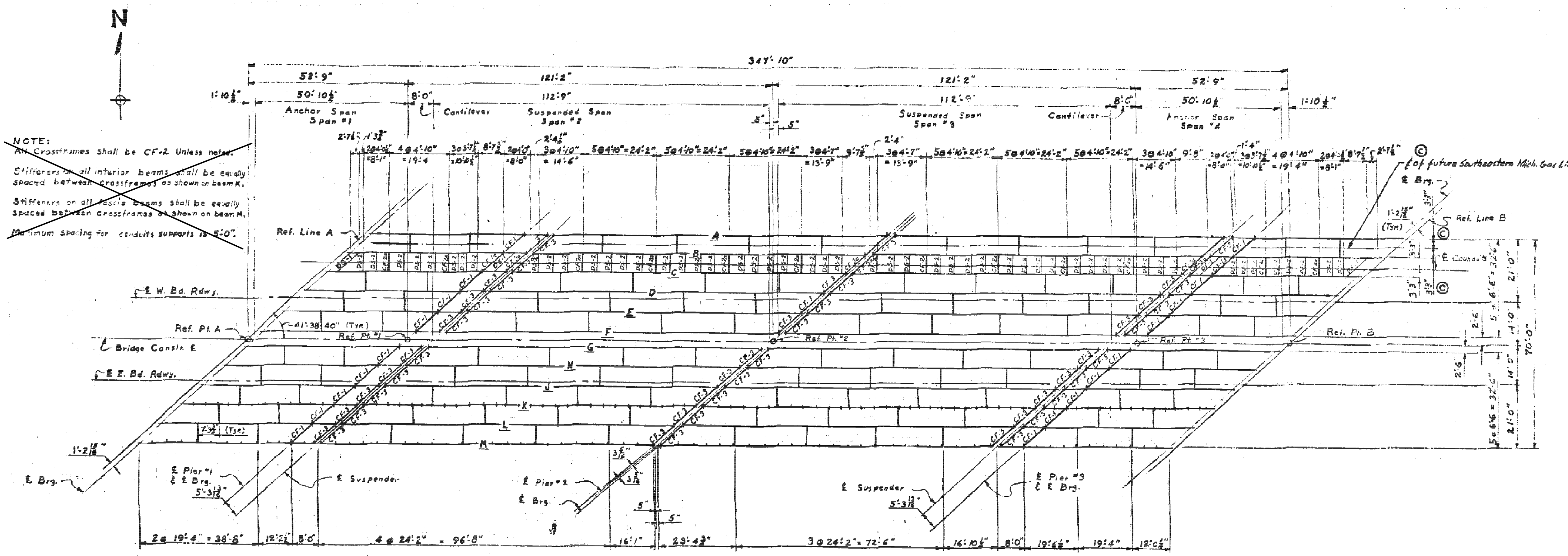

ERECTION DIAGRAM

NOTE:
All Crossframes shall be CF-2 Unless noted.
Stiffeners on all interior beams shall be equally spaced between Crossframes as shown on beam K.
Stiffeners on all fascia beams shall be equally spaced between Crossframes as shown on beam M.
Maximum spacing for conduits supports is 5'-0".

NOTES:

Fabrication: Michigan State Highway Department's Standard Specifications for Road and Bridge Construction-1960 Edition.

Design: Michigan State Highway Department's Specifications for Design of Highway Bridges-1958 Edition H20-S16-44 Loading.

Shop Connections: All shop connections shall be Welded as shown on the plans.

Field Connections: Field connections, unless otherwise noted, shall be bolted with high-strength bolts.

High-Strength Bolts: 3/4" ⌀

Open Holes: Open holes for high-strength bolts shall be 13/16" ⌀ unless otherwise noted.

Shop Paint: In addition to the shop paint provisions of the Standard Specifications, the top surfaces of masonry plates shall be coated in accordance with the requirements for machine finished surfaces. Metal floor joints shall not be painted in shop except as noted on the plans.

Camber: See camber diagram.

Sole Plates: Sole plates 3" or more in thickness may be built up by welding together plates not less than 1 1/2" in thickness. Edges must be beveled 1/2" and welded, with a continuous weld, for the full perimeter. Welds shall be ground flush with faces of plate.

Structural Steel: The steel for web plates, flange plates, and end stiffeners shall conform to the requirements for welding (A.S.T.M. 373). All other steel shall be A-7.

The quantity Structural Furnishing and Fabricating includes:

A-7 Steel .... 184,200 #
A-373 Steel ... 894,500 #
Lead Plates ... 300 #

Total ... 1,079,000 # (Structural Steel Furnishing and Fabricating, including weight of Metal Expansion Joint.)

Structural Steel-Erection: 1,079,000 #

Field Painting: Lump Sum.

Shear Connectors: Lump Sum.

Work This Sheet with Sheets #17, 18 & 19

MICHIGAN STATE HIGHWAY DEPARTMENT

STRUCTURAL STEEL DETAILS

REVISIONS			
NO.	DESCRIPTION	DATE	BY
C	Added location of future Southeastern Michigan Gasline		G.N.

S01 OF 50112A

REVISIONS			
NO.	DESCRIPTION	DATE	BY

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Michigan Department of Transportation

EXISTING GENERAL PLAN OF SITE
I-94 UNDER M-29/M-3, 3 MILES WEST OF NEW BALTIMORE

DATE	CONT. SEC.	JOB NO.	DESIGN UNIT	SHEET
	S01 OF 50112	51481A		5 OF 13

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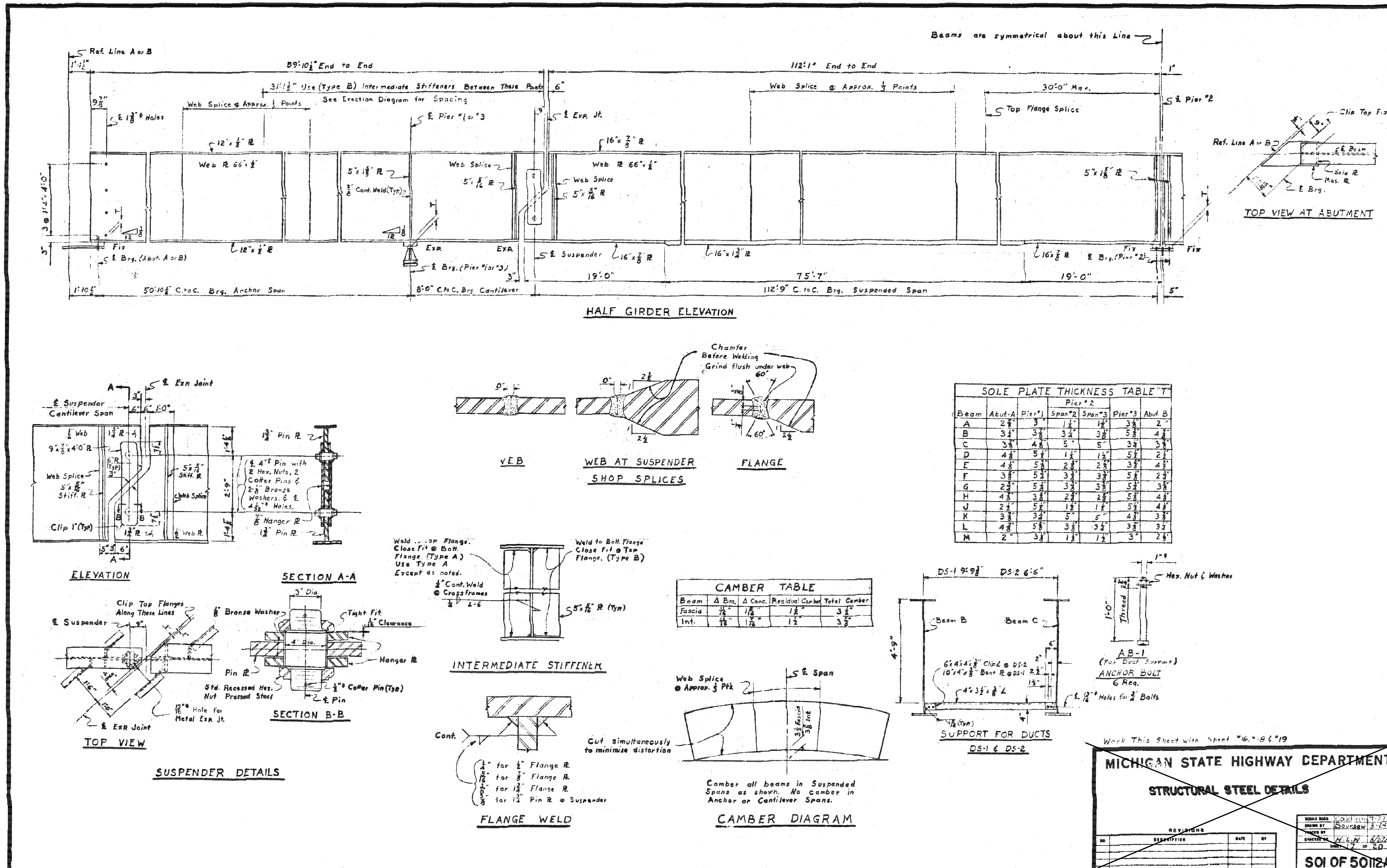

SOLE PLATE THICKNESS TABLE "T"						
			Pier #2			
Beam	Abut.-A	Pier #1	Span #2	Span #3	Pier #3	Abut. B
A	2 5/8"	3"	1 1/2"	1 1/2"	3 1/8"	2"
B	3 1/4"	3 7/8"	3 1/4"	3 1/8"	5 3/8"	4 7/8"
C	3 7/8"	4 7/8"	5"	5"	3 1/4"	3 3/8"
D	4 1/8"	5 1/2"	1 1/2"	1 1/2"	5 1/2"	2 1/2"
E	4 1/8"	5 7/8"	2 5/8"	2 5/8"	3 5/8"	4 7/8"
F	3 5/8"	5 3/4"	3 1/8"	3 1/8"	5 1/8"	2 3/4"
G	2 3/4"	5 1/8"	3 3/8"	3 3/8"	5 3/4"	3 5/8"
H	4 7/8"	3 5/8"	2 5/8"	2 5/8"	5 7/8"	4 1/8"
J	2 1/2"	5 1/2"	1 1/2"	1 1/2"	5 1/2"	4 1/8"
K	3 7/8"	3 1/4"	5"	5"	4 7/8"	3 3/8"
L	4 7/8"	5 3/8"	3 1/8"	3 1/4"	3 7/8"	3 1/4"
M	2"	3 1/8"	1 1/2"	1 1/2"	3"	2 5/8"

CAMBER TABLE				
Beam	Δ Bm.	Δ Conc.	Residual Camber	Total Camber
Fascia	11/16"	1 5/16"	1 1/2"	3 1/2"
Int.	11/16"	1 7/16"	1 1/2"	3 5/8"

MICHIGAN STATE HIGHWAY DEPARTMENT

STRUCTURAL STEEL DETAILS

S01 OF 50112A

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REVISIONS			
NO.	DESCRIPTION	DATE	BY

MDOT
Michigan Department of Transportation

EXISTING GENERAL PLAN OF SITE

I-94 UNDER M-29/M-3, 3 MILES WEST OF NEW BALTIMORE

DATE	CONT. SEC.	JOB NO.	DESIGN UNIT	SHEET
	S01 OF 50112	51481A		6 OF 13

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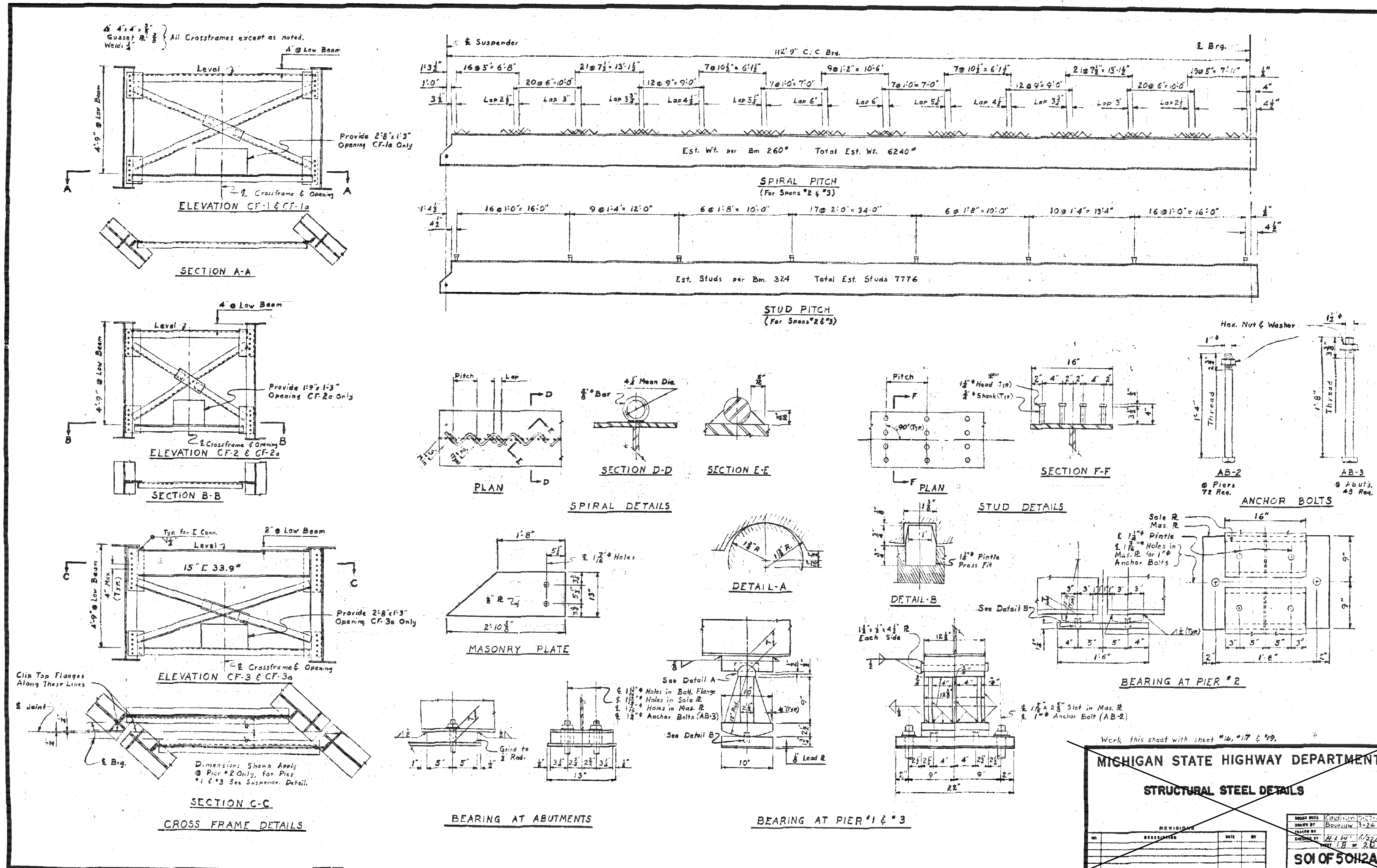
FILE NAME: s0150112.fio


ELEVATION CF-1 & CF-1a
SECTION A-A
ELEVATION CF-2 & CF-2a
SECTION B-B
ELEVATION CF-3 & CF-3a
SECTION C-C
CROSS FRAME DETAILS
SPIRAL PITCH
(For Spans #2 & #3)
Est. Wt. per Bm 260# Total Est. Wt. 6240#
STUD PITCH
(For Spans #2 & #3)
Est. Studs per Bm. 324 Total Est. Studs 7776
PLAN
SECTION D-D
SECTION E-E
SPIRAL DETAILS
SECTION F-F
STUD DETAILS
AB-2
AB-3
ANCHOR BOLTS
MASONRY PLATE
DETAIL-A
DETAIL-B
BEARING AT PIER #2
BEARING AT ABUTMENTS
BEARING AT PIER #1 & #3
Work this sheet with sheet #16, #17 & #19.
MICHIGAN STATE HIGHWAY DEPARTMENT
STRUCTURAL STEEL DETAILS
S01 OF 50112A

REVISIONS			
NO.	DESCRIPTION	DATE	BY

EXISTING

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Michigan Department of Transportation

EXISTING GENERAL PLAN OF SITE

I-94 UNDER M-29/M-3, 3 MILES WEST OF NEW BALTIMORE

DATE	CONT. SEC.	JOB NO.	DESIGN UNIT	SHEET
	S01 OF 50112	51481A		7 OF 13

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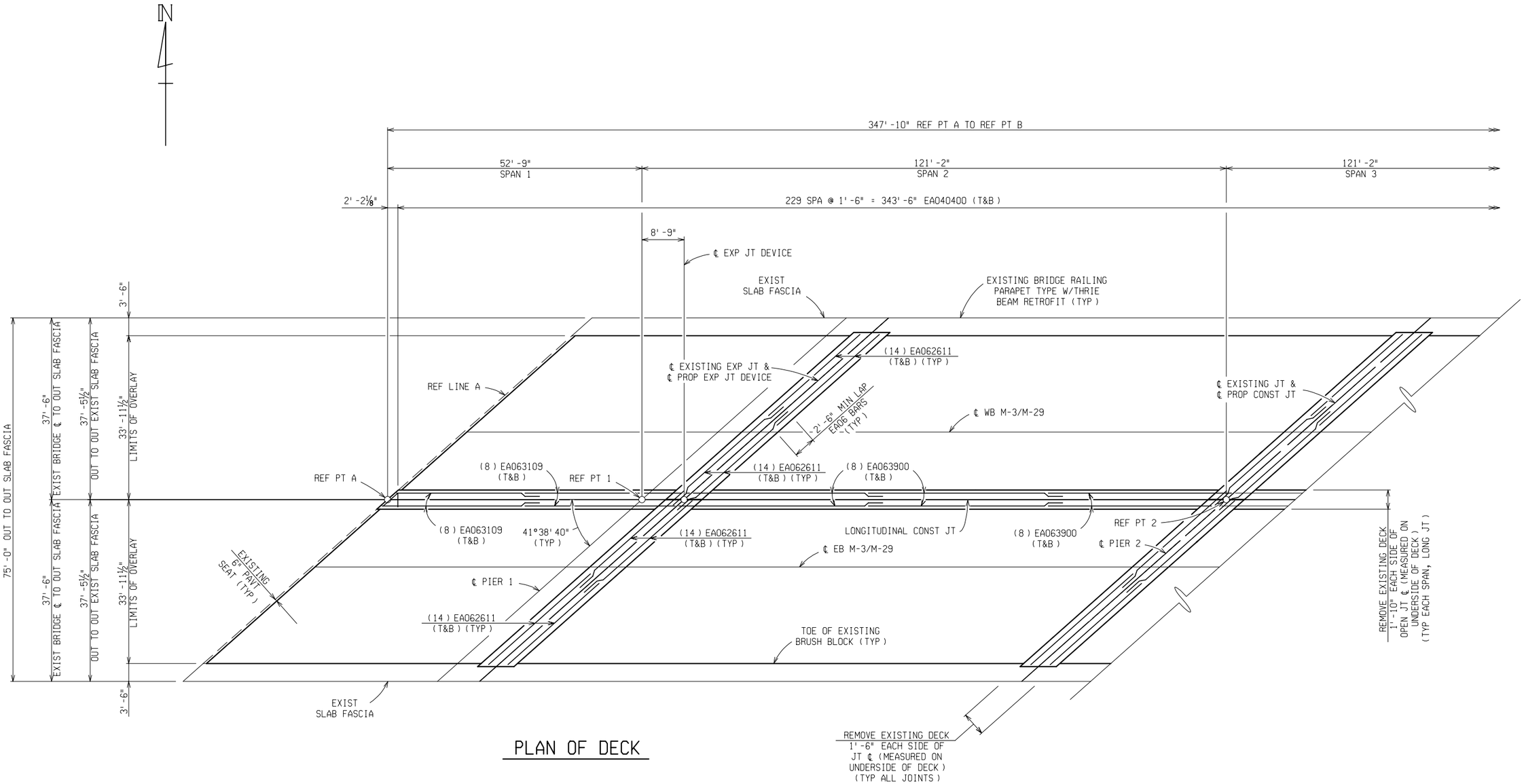

PLAN OF DECK

MDOT Michigan Department of Transportation

DECK RESURFACING DETAILS

DATE	CONT. SEC.	JOB NO.	DESIGN UNIT	SHEET
	S01 OF 50112	51481A		8 OF 13

DATE: CORRECTED BY: DATE: CHECKED BY: DATE: DRAWN BY: FILE NAME: s0120112.ov

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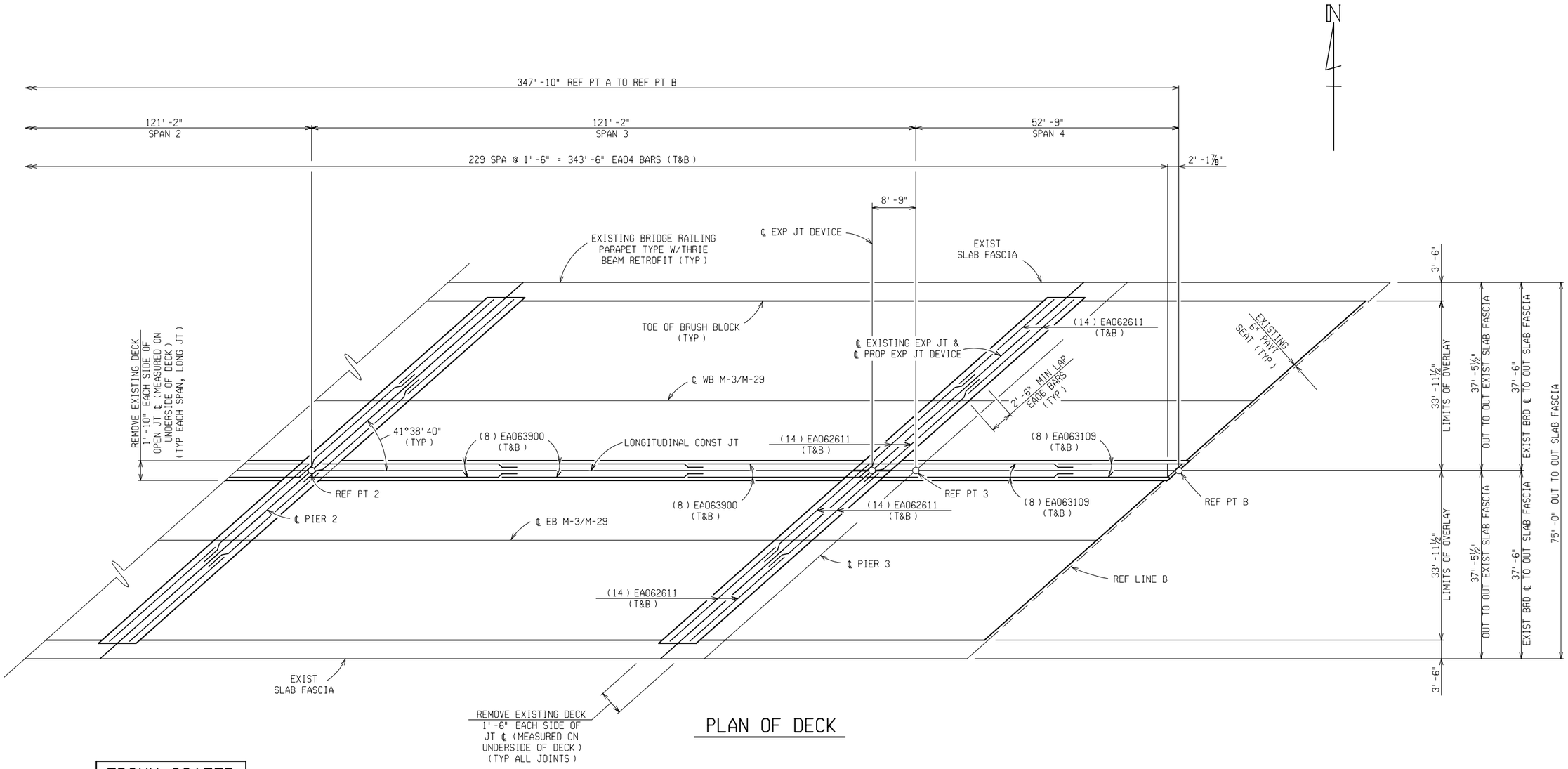

PLAN OF DECK

EPOXY COATED STEEL REINFORCEMENT
(FOR INFORMATION ONLY)

	BAR	NO. REQ'D	TOTAL WT
	EA062611	168	6793
	EA063900	48	2812
	EA063109	32	1527
	EA040400	460	1226
*	OVERRUN		142
	GRAND TOTAL = 12,500 LBS		

* STEEL REINFORCEMENT NEEDED TO REPLACE WEAKENED REINFORCEMENT FOUND DURING DECK PREPARATION.

EA BAR

BAR LEGEND

MDOT Michigan Department of Transportation

DECK RESURFACING DETAILS

DATE	CONT. SEC.	JOB NO.	DESIGN UNIT	SHEET
	S01 OF 50112	51481A		9 OF 13

DATE: CORRECTED BY:
DATE: CHECKED BY:
DATE: DRAWN BY:
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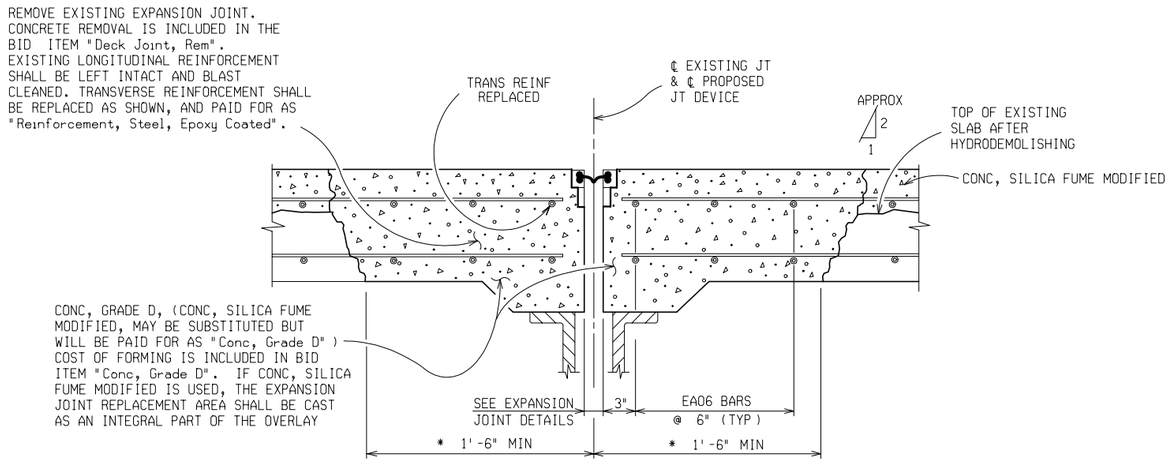
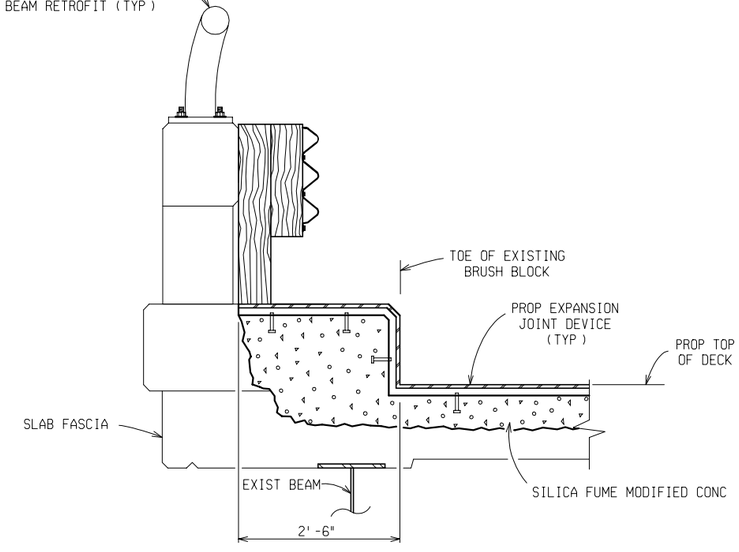
REVISIONS			
NO.	DESCRIPTION	DATE	BY



SECTION AT PROPOSED TRANSVERSE JOINT

* BEFORE FORMING, SOUND CONCRETE TO SEE IF ADDITIONAL REMOVAL WILL BE REQUIRED.



SECTION THRU BARRIER AT PROP EXPANSION JOINT DEVICE

MISCELLANEOUS QUANTITIES

12500 Lb		Reinforcement, Steel, Epoxy Coated
110 Sft	*	Patch, Forming
2 Cyd	*	Patching Conc, C-L
510 Cyd		Conc, Silica Fume Modified
18175 Sft		False Decking
35 Cft	*	Hand Chipping, Other Than Deck
2628 Syd		Hydrodemolition, First Pass
106 Syd		Hydrodemolition, Second Pass
678 Ft		Deck Joint, Rem
2628 Syd		Bridge Deck Surface Construction
2628 Syd		Latex Conc Surface, Rem

THE ACTUAL QUANTITY OF SILICA FUME MODIFIED CONCRETE PLACED ON THE DECK WAS _____ CUBIC YARDS. (THIS INFORMATION IS TO BE FILLED IN BY THE ENGINEER WHEN SUBMITTING AS CONSTRUCTED PLANS.)

* TO BE USED FOR SUBSTRUCTURE REPAIR AS DIRECTED BY THE ENGINEER.

NOTES:

THE WORK COVERED BY THESE PLANS INCLUDES RESURFACING THE EXISTING BRIDGE DECK WITH A DEEP OVERLAY, DECK JOINT REPLACEMENT, COATING OF STRUCTURAL STEEL, P&H REPLACEMENT, BEAM END REPAIR, SUBSTRUCTURE REPAIR, AND MAINTAINING TRAFFIC.

THE CONTRACTOR SHALL LOCATE ALL ACTIVE UNDERGROUND UTILITIES PRIOR TO STARTING WORK AND SHALL CONDUCT HIS OPERATIONS IN SUCH A MANNER AS TO ENSURE THAT THOSE UTILITIES NOT REQUIRING RELOCATION WILL NOT BE DISTURBED.

M-29/M-3 TRAFFIC IS TO BE MAINTAINED OVER THE BRIDGE BY PART-WIDTH CONSTRUCTION.

THE VOLUME OF SILICA FUME MODIFIED CONC, IS BASED ON THE OVERLAY AND AN ESTIMATED QUANTITY TO REPLACE UNSOUND CONCRETE AND TO MAKE GRADE ADJUSTMENTS AS DETERMINED BY THE ENGINEER.

THE CONTRACTOR SHALL REMOVE AND REPLACE ONLY THAT PORTION OF THE BRUSH BLOCK THAT IS NECESSARY FOR INSTALLATION OF THE DECK JOINT.

THE ITEM "Deck Joint, Rem" INCLUDES HAND CHIPPING WITHIN LIMITS REQUIRED FOR REMOVAL.

BEFORE OVERLAYING, SOUND CONCRETE TO DETERMINE WHETHER 1'-6" REMOVAL AT EACH SIDE OF TRANSVERSE JOINTS WILL BE ADEQUATE. INCREASE THE REMOVAL LIMITS IF NECESSARY.

WHERE STRUCTURAL STEEL IS EXPOSED DURING THE REMOVAL OF UNSOUND DECK CONCRETE, IT SHALL BE CLEANED AND COATED. CLEANING SHALL BE BY BLASTING OR POWER TOOLS. THE PROTECTION OF WORK AND ENVIRONMENT DURING CLEANING WILL BE PAID FOR AS EXTRA WORK.

FALSE DECKING SHALL INCLUDE THE AREA BOUNDED BY REFERENCE LINES 1 & 3 AND OUTSIDE FLANGE FASCIAS OF BEAMS A & M.

BRIDGE OVERLAY CROSS SLOPE SHALL BE 2%.

MEASURES SHALL BE TAKEN TO PREVENT DEBRIS FROM FALLING FROM THE STRUCTURE.

ALL STEEL FOR EXPANSION JOINT SHALL BE AASHTO M270, GRADE 36.

THE CONTRACTOR WILL BE FURNISHED WITH PLANS OF THE EXISTING STRUCTURE IF REQUESTED.

WORK FOR REMOVAL AND REINSTALLATION OF PORTIONS OF THE EXISTING THRIE BEAM GUARDRAIL REQUIRED FOR ACCESS TO SCREED THE DECK SHALL BE INCLUDED IN THE BID ITEM, "Bridge Deck Surface Construction".

WORK FOR REMOVAL AND REINSTALLATION OF PORTIONS OF THE EXISTING THRIE BEAM GUARDRAIL REQUIRED FOR ACCESS TO REPLACE THE JOINTS SHALL BE INCLUDED IN THE BID ITEM, "Deck Joint, Rem".

NO PORTION OF THE DECK WORK SHALL ENCROACH ON THE EXISTING UNDERCLEARANCE.

FIELD BEND STEEL REINFORCEMENT IF NECESSARY TO CLEAR OBSTRUCTIONS AND BEND BACK INTO PLACE FOR EMBEDMENT INTO PROPOSED CONCRETE. INCLUDED IN THE BID ITEM "Reinforcement, Steel, Epoxy Coated".

THE CONTRACTOR SHALL NOTIFY EACH UTILITY COMPANY 48 HOURS IN ADVANCE OF PREFORMING WORK ON THAT COMPANY'S CONDUITS OR FACILITIES.

FORMS FOR LARGE PATCHES SHALL BE INSTALLED IN 2'-0" TO 4'-0" HIGH SECTIONS WITH THE TOP OF FORM NO MORE THAN 4'-0" ABOVE THE LEVEL OF CONCRETE AS THE POUR PROGRESSES.

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DECK RESURFACING DETAILS

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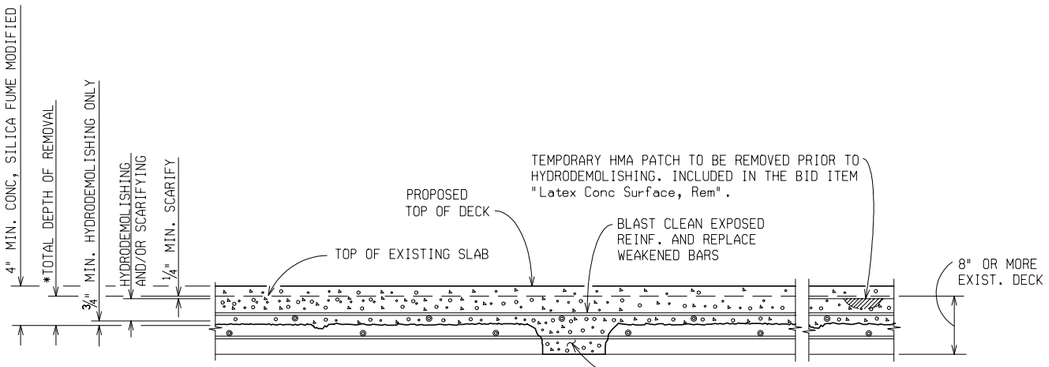
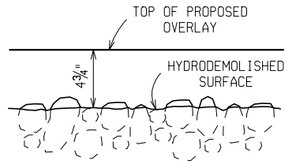


PARTIAL DECK SECTION

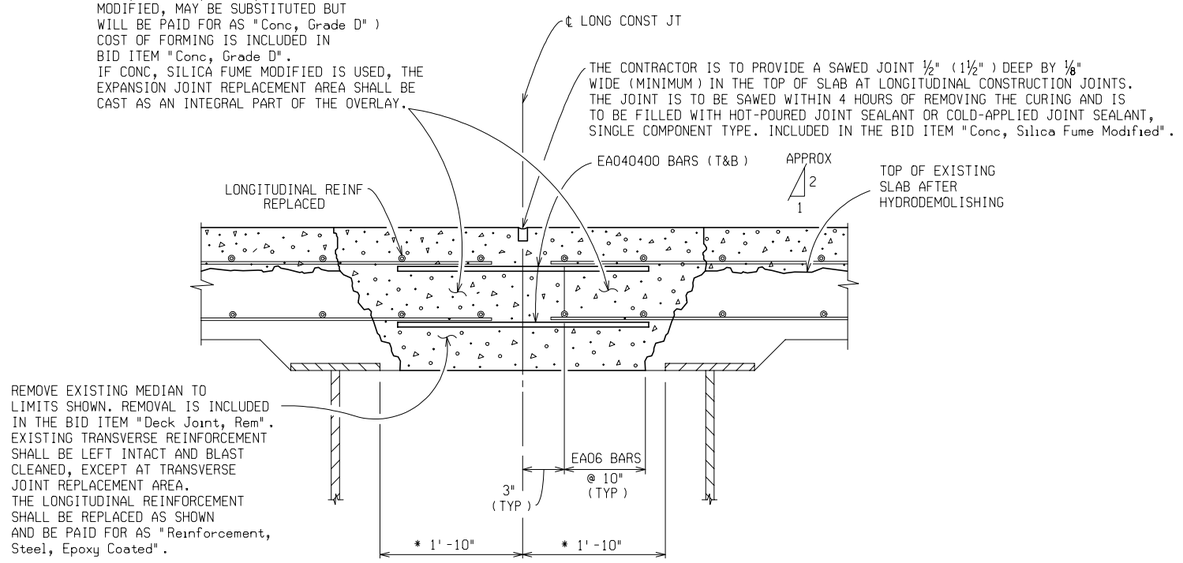
PROPOSED TOP OF DECK SHALL BE APPROXIMATELY 2½" ABOVE EXISTING TOP OF DECK AT CROWN POINT. *4" MAXIMUM OR ¾" BELOW TOP MAT OF STEEL REINFORCEMENT WHICHEVER IS LESS.
** WHERE FORMING IS REQUIRED FROM THE UNDERSIDE OF THE DECK, THE WORK INVOLVED IN FORMING, FORM REMOVAL AND CLEANUP, AS WELL AS ANY MAINTAINING TRAFFIC REQUIRED UNDERNEATH THE STRUCTURE DUE TO THE WORK REQUIRED TO REPAIR THE FULL DEPTH PATCH, WILL BE PAID FOR AS EXTRA WORK.



OVERLAY LIMITS SKETCH

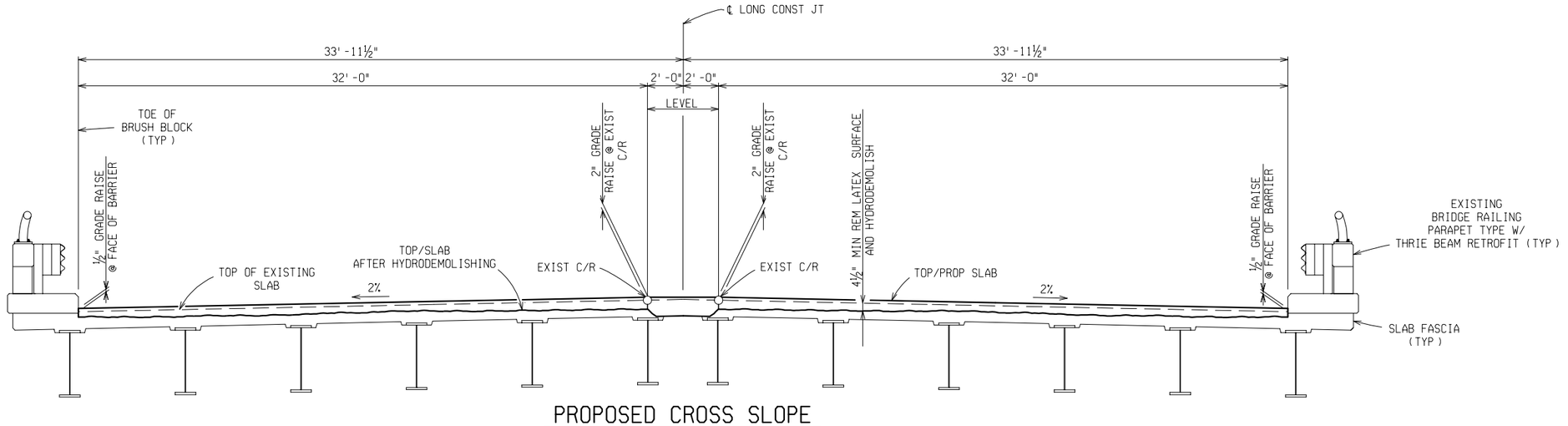
(HYDRODEMOLISHING)
(STEEL REINFORCEMENT NOT SHOWN)

CONC, GRADE D, (CONC, SILICA FUME MODIFIED, MAY BE SUBSTITUTED BUT WILL BE PAID FOR AS "Conc, Grade D") COST OF FORMING IS INCLUDED IN BID ITEM "Conc, Grade D". IF CONC, SILICA FUME MODIFIED IS USED, THE EXPANSION JOINT REPLACEMENT AREA SHALL BE CAST AS AN INTEGRAL PART OF THE OVERLAY.



SECTION THRU MEDIAN OPEN JOINT

* BEFORE FORMING, SOUND CONCRETE TO SEE IF ADDITIONAL REMOVAL WILL BE REQUIRED



PROPOSED CROSS SLOPE

(LOOKING UPSTATION)

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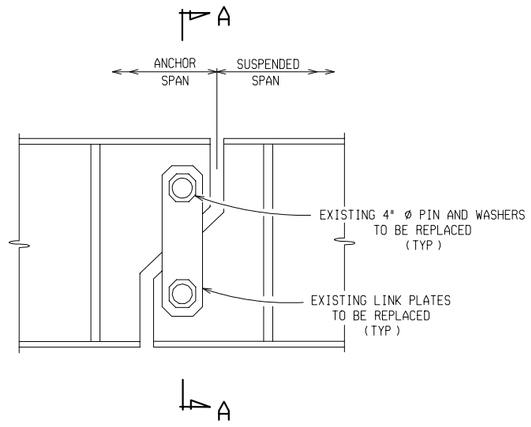
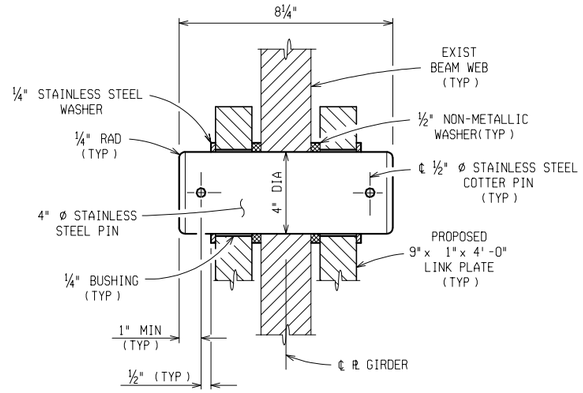
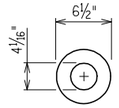


ELEVATION AT PIN



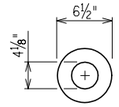
PROPOSED PIN DETAIL

(48 REQ'D)



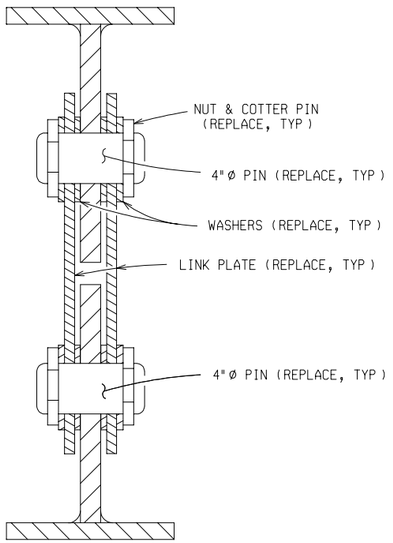
¼" STAINLESS STEEL WASHER

(96 REQ'D)

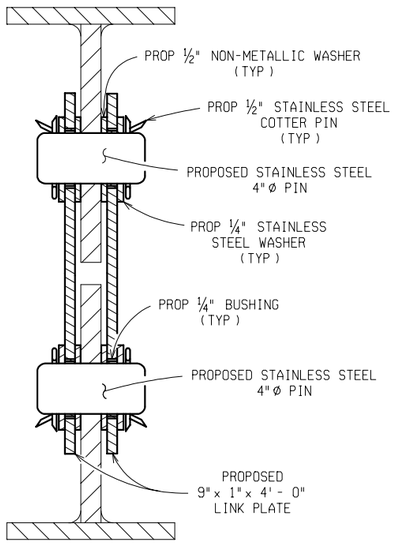


½" NON-METALIC WASHER

INCLUDED IN THE BID ITEM
"Structural Steel, Furn and Fab, Pin & Hanger"
(96 REQ'D)



SECTION A-A
(EXISTING)



SECTION A-A
(PROPOSED)

MISCELLANEOUS QUANTITIES

1700 Ft		Beam Plate, Seal Perimeter
1 LS		Conc Surface Coating (S01 of 50112)
630 Syd		Water Repellent Treatment, Penetrating
348 Ft		Protective Shield, Utility Pipe
24 Ea		Support, Suspension, Temp
24 Ea		Hanger Assembly, Field Measurement
24 Ea		Hanger Assembly, Rem and Erect
7012 Lbs		Structural Steel, Furn and Fab, Pin and Hanger
96 Ea		Bushing
1 LS	*	Steel Structure, Cleaning, Type 4 (S01 of 50112)
1 LS	*	Steel Structure, Coating, Type 4 (S01 of 50112)
1 LS		Field Repr of Damaged Coating (S01 of 50112)

* THE ESTIMATED AREA OF STRUCTURAL STEEL TO BE PAINTED IS 84,300 SQUARE FEET.

NOTES:

THIS BRIDGE IS COATED WITH LEAD BASED PAINT.

SEE SUBSECTION 715 OF THE STANDARD SPECIFICATIONS FOR PROTECTION OF WORK AND ENVIRONMENT DURING THE BLAST CLEANING OF STRUCTURES.

CONDUITS SHALL NOT BE CLEANED AND COATED. (SEE SUBSECTION 715 OF THE STANDARD SPECIFICATIONS.)

CONCRETE SURFACE COATING SHALL BE APPLIED TO THE TOP OF ALL PIERS.

PENATRATING WATER REPELLANT TREATMENT SHALL BE APPLIED TO THE ENTIRE EXPOSED SURFACES OF ALL PIERS EXCEPT TOP.

THE AREA BEHIND AND AROUND THE HANGER ASSEMBLY SHALL BE COATED PRIOR TO INSTALLING THE NEW LINK PLATES AND PINS. PROPOSED LINK PLATES SHALL BE SHOP COATED.

THE PROTECTION OF WORK AND ENVIRONMENT DURING BLAST CLEANING OF WEBS BEHIND AND AROUND HANGER ASSEMBLIES SHALL BE ACCORDING TO SUBSECTION 715 OF THE STANDARD SPECIFICATIONS. (INCLUDED IN THE BID ITEM "Hanger Assembly, Remove And Erect".)

WELDING ON EXISTING GIRDERS WILL NOT BE PERMITTED.

THE PERMISSIBLE HYDRAULIC JACK CAPACITY SHALL BE LIMITED TO 70 TON.

ALTERNATE DESIGNS OF THE TEMPORARY SUPPORT SHALL BE BASED ON LOADS AS FOLLOWS:

140 KIPS VERTICAL GIRDER LOAD.

THE ENGINEER SHALL INSPECT THE STRUCTURAL STEEL PARTS THAT HAVE BEEN BLAST CLEANED FOR EVIDENCE OF CRACKS OR LOSS OF SECTION DUE TO CORROSION OF MORE THAN 25 PERCENT. SUCH DETERIORATION SHALL BE REPORTED IN WRITING TO THE REGION BRIDGE ENGINEER.

THE SIGNS OVER I-94 SHALL BE REMOVED FOR CLEANING AND COATING OF THE FASCIA BEAMS. SIGNS SHALL BE REINSTALLED USING NEW CONNECTION HARDWARE ACCORDING TO SUBSECTION 919.02 OF THE STANDARD SPECIFICATIONS. (INCLUDED IN THE BID ITEMS FOR CLEANING AND COATING EXISTING STEEL STRUCTURES.)

SEALANT SHALL BE APPLIED AROUND THE PERIMETER OF BEARING PLATES TO CONCRETE CONTACT SURFACES AFTER CUTTING AWAY ANY PROTRUDING PORTION OF LEAD PLATE.

SEALANT SHALL BE APPLIED AROUND THE PERIMETER OF BOLTED END DIAPHRAGM CONNECTION PLATES AND ANGLES.

SEALANT SHALL BE APPLIED AROUND THE PERIMETER OF ALL BEAM ENDS WHERE ENCASED IN THE BACKWALLS.

ALL STRUCTURAL STEEL SHALL BE COATED ACCORDING TO SUBSECTION 716 OF THE STANDARD SPECIFICATIONS. THE COLOR OF THE URETHANE PROTECTIVE COAT SHALL BE LIGHT GRAY. FEDERAL STANDARD 595B COLOR NUMBER 16440.

THE CONTRACTOR SHALL TAKE NECESSARY MEASURES TO AVOID OVERSPRAY ON ADJACENT SUBSTRUCTURE AND SUPERSTRUCTURE CONCRETE SURFACES AND ON SIGNS ATTACHED TO THE STRUCTURE. (INCLUDED IN THE BID ITEM "Steel Structure, Coating, Type 4".)

IF END DIAPHRAGMS INTERFERE WITH THE PLACEMENT OF THE TEMPORARY SUPPORT, THEY SHALL BE REMOVED AND RE-INSTALLED WITH NEW HARDWARE. INCLUDED IN THE BID ITEM "Support, Suspension, Temp".

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PIN & HANGER REPLACEMENT DETAILS

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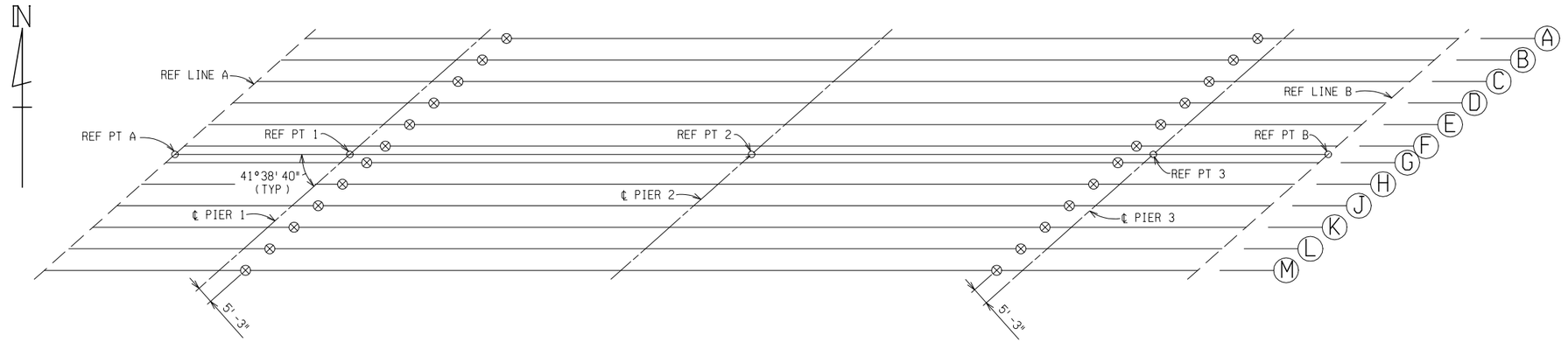
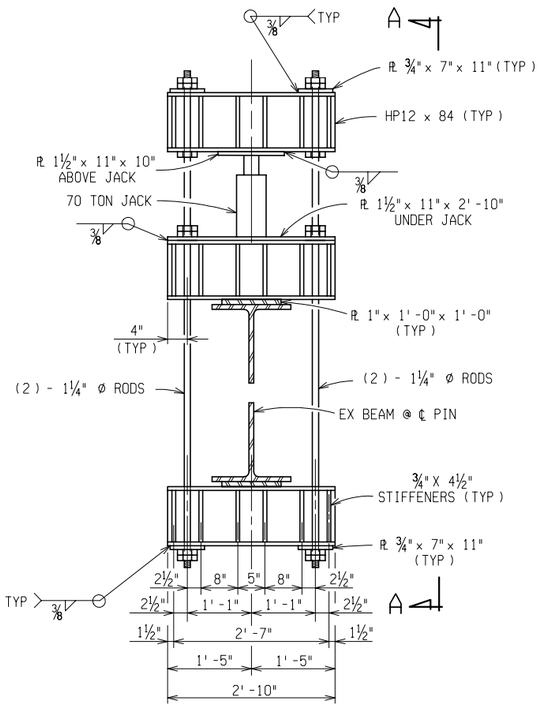
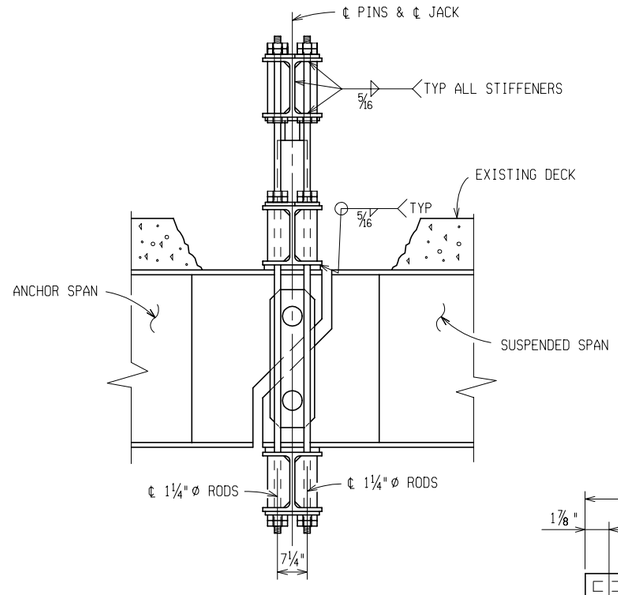


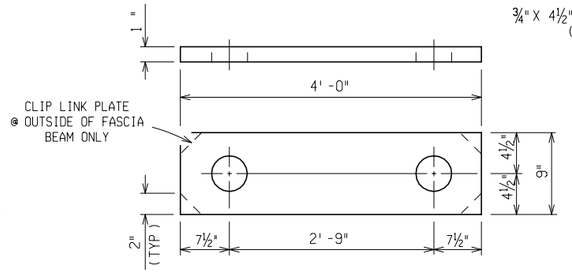
⊗ - TEMPORARY SUPPORT LOCATION



ELEVATION

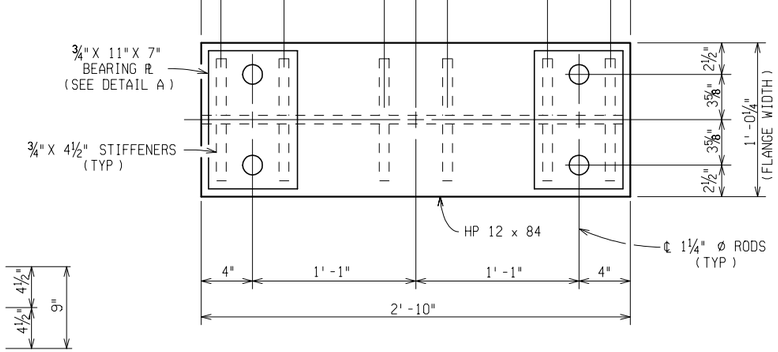


VIEW A-A

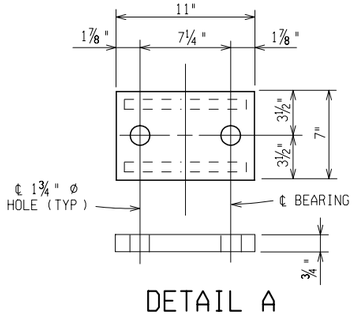


LINK PLATE

(48 REQ'D)

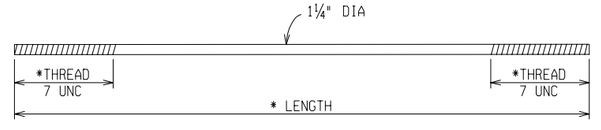


PLAN OF TEMPORARY SUPPORT



DETAIL A

(4 REQUIRED PER ASSEMBLY)



SUSPENDER ROD DETAIL

* CONTRACTOR SHALL DETERMINE ROD AND THREAD LENGTH TO FIT SITUATION

4 REQUIRED PER ASSEMBLY W/7 HEAVY HEX NUTS & 4 HARDENED WASHERS PER ROD

TEMPORARY SUPPORT

NOTE: 1¾" Ø DRILLED HOLES IN ALL HP 12 X 84 SECTIONS AND PLATES

NUTS ARE USED AS SHIMS

STOP WELD ¼" SHORT OF CORNER CLIPS, WRAP WELD AROUND OUTSIDE EDGE AT STIFFENERS

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PIN & HANGER REPLACEMENT DETAILS

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