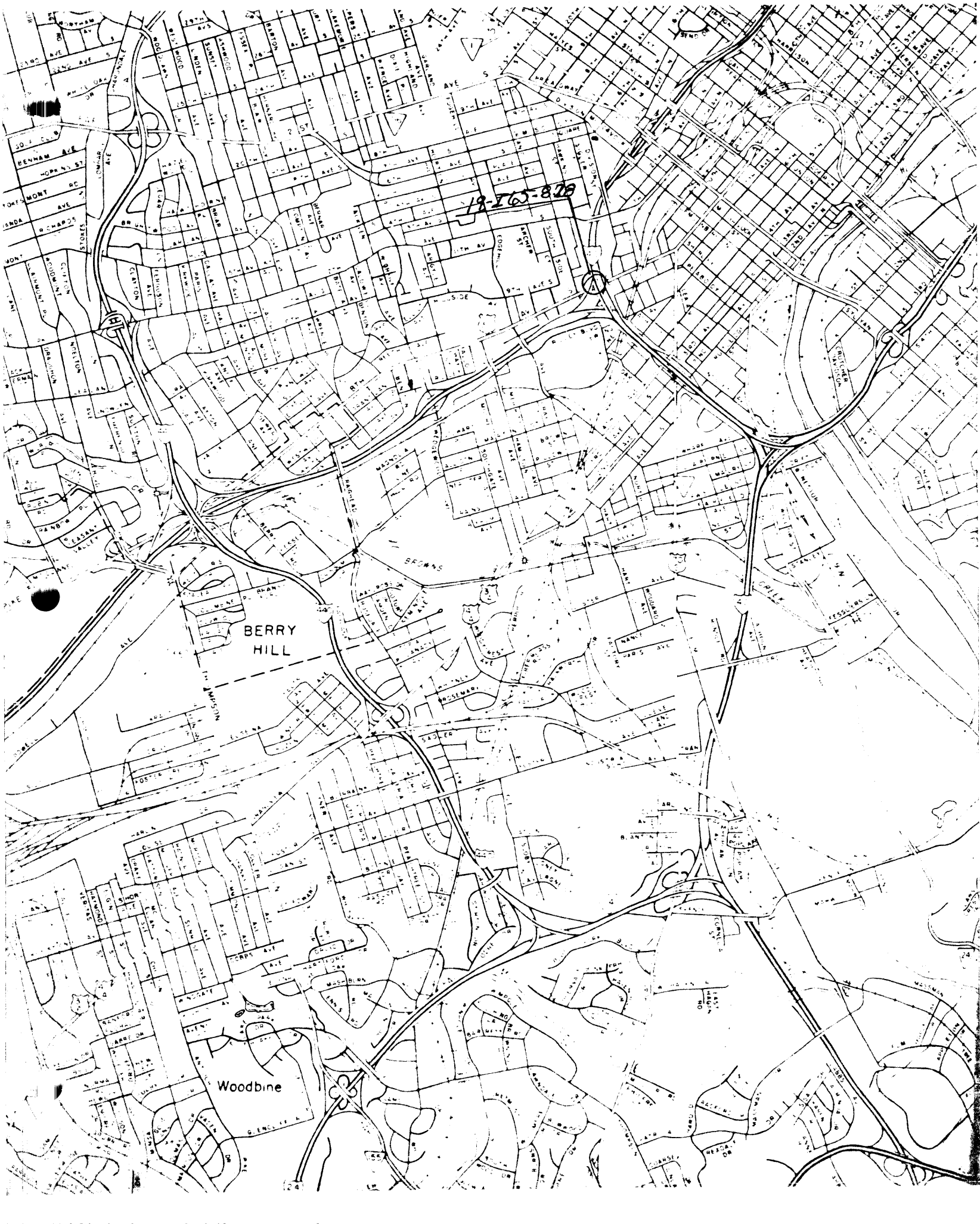
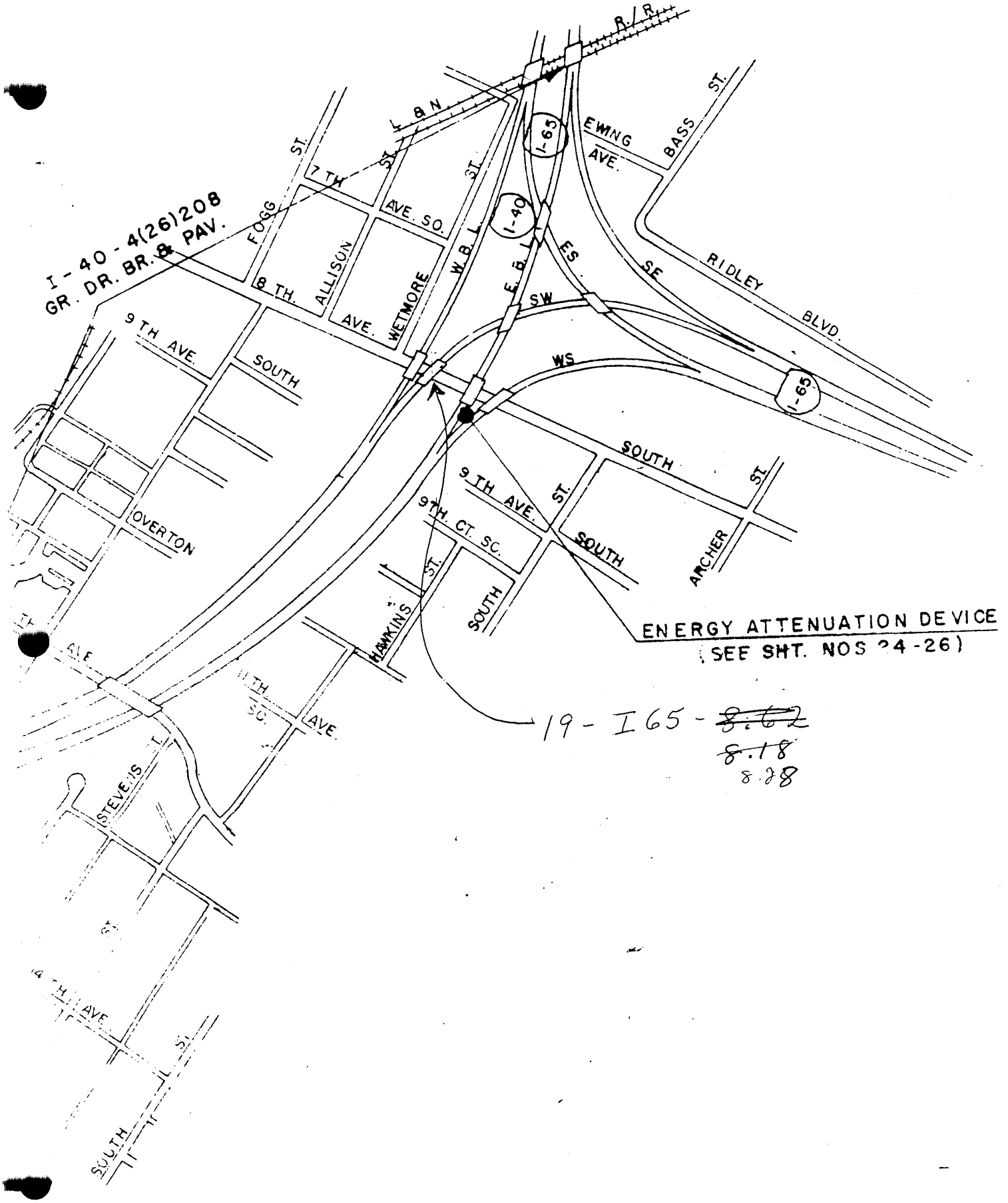

19-163-820
BERRY HILL
Woodbine



ENERGY ATTENUATION DEVICE
(SEE SHT. NOS 24-26)

19-I65-~~8.62~~ ~~8.18~~ 8.38

ST RETAINING WALL
)S 20 25)

Bridge Maintenance Recommendations

Bridge Location No.: 19 - I0065 - 8.28
Co. Route Log Mile

Crossing: 8TH AVE S SR

Bridge Rating: GOOD

Inspection Cycle: 15

Inspection Date: 12/30/2003

Comments: CLEAN JOINT "A" END

Bridge Number: 19I00650311
County: Davidson
Region: 03
District: 31
Maint.Resp.: 01
Spec.Case: 0
Co.Seq: 01

Maintenance Recommendations:

Maintenance Completed By / Date

- **BRIDGE RAIL IS SUBSTANDARD**
- **CLEAN AND SPOT PAINT STRUCTURAL STEEL**
- **REPAIR PARAPET BRIDGE RAIL SPAN #1 LEFT SIDE**
- **REPAIR TUBLAR RAIL AT POST #4 LEFT SIDE**

COMPLETION NOTIFICATION: RETURN WITHIN 6 MONTHS OF INSPECTION DATE.

INITIAL AND DATE RECOMMENDATIONS WHEN COMPLETED.

MAINTENANCE ACTIVITIES ARE COMPLETED (DATE) _____ BY_____

MAINTENANCE ACTIVITIES ARE PARTIALLY COMPLETED (DATE) _____ BY_____

MAINTENANCE ACTIVITIES ARE INCOMPLETE, SCHEDULED FOR (DATE) _____

EXPLANATIONS AND COMMENTS:

CONTACT:

Bridge Maintenance Recommendations

Bridge Location No.: 19 - I0065 - 8.28
Co. Route Log Mile

Crossing: I65 RAMP / 8TH AVE S SR

Bridge Rating: GOOD

Inspection Cycle: 14

Inspection Date: 10/22/2001

Comments:

Bridge Number: 19I00650311
County: Davidson
Region: 03
District: 31
Maint.Resp.: 01
Spec.Case: 0
Co.Seq: 01

Maintenance Recommendations:

	Maintenance Completed By / Date
BRIDGE RAIL IS SUBSTANDARD	
CLEAN AND SPOT PAINT STRUCTURAL STEEL	

COMPLETION NOTIFICATION: RETURN WITHIN 6 MONTHS OF INSPECTION DATE.

INITIAL AND DATE RECOMMENDATIONS WHEN COMPLETED.

MAINTENANCE ACTIVITIES ARE COMPLETED (DATE) _____ BY_____

MAINTENANCE ACTIVITIES ARE PARTIALLY COMPLETED (DATE) _____ BY_____

MAINTENANCE ACTIVITIES ARE INCOMPLETE, SCHEDULED FOR (DATE) _____

EXPLANATIONS AND COMMENTS:

CONTACT:

Bridge Maintenance Recommendations

Bridge Location No.: 19 - I0065 - 8.26 8
Co. Route Log Mile

Bridge Number: 19I00650311

Crossing: I65 RAMP / 8TH AVE S SR

County: Davidson
Region: 03
District: 31
Maint.Resp.: 01
Spec.Case: 0
Co.Seq: 01

Bridge Rating: FAIR

Inspection Cycle: 13

Inspection Date: 3/27/00

Comments: CLEAN DEBRIS FROM JOINT AT ABUTMENT #1.
REPAINT RANDOM AREAS OF PEELING AND FLACING MOST IN SPAN

Level of Service:	7	Number Main Spans:	003
Owner:	01	Number Appr Spans:	0000
Appr Rdwy (xxx ft):	036	Bridge Length (xxxxxx ft)	000140
Skew:	75	Curb-to-Curb (xxx.x ft):	0382
Type of Service:	11	Out-to-Out (xxx.x ft):	0416
Main Structure Type:	402	Item 500:	02
Appr Structure Type:	000	Facility Carried By:	I65

Maintenance Recommendations:

Maintenance Completed By / Date

BRIDGE MAINTENANCE RECOMMENDATIONS

BRIDGE SEQ. NO. : 19I00650311

BRIDGE NO. : 19 - I0065 - 0826 - N
OVER : I65 RAMP / 8TH AVE S SR

DATE	: 04/02/98	BRIDGE RATING	: FAIR	COUNTY	: Davidson
CO. SEQ.	: 01	INSPECTION CYCLE	: 12	MAINT DIST	: 31
SPEC. CASE	: 7	INSPECTION DATE	: 04/02/98	REGION	: 03

007	FACILITY CARRIED BY STRUCT	: I65
021	MAINTENANCE RESPONSIBILITY	: 01
022	OWNER	: 01
042	TYPE OF STRUCTURE	: 11
043	STRUCTURE TYPE, MAIN	: 402
044	STRUCTURE TYPE, APPROACH	: 000
045	SPANS, MAIN UNIT	: 003
046	SPANS, APPROACH	: 0000
049	STRUCTURE LENGTH	: 000140
032	APPROACH ROADWAY WIDTH	: 036
034	SKEW	: 75
051	BRDG RDWY WID, CRB-TO-CRB	: 0382
052	DECK WIDTH, OUT-TO-OUT	: 0416
500	HWY OF THE INVENTORY ROUTE	: 02

: MAINTENANCE & REPAIR RECOMMENDATIONS :

1 REPAIR _____RAILING IN SPAN NO. 0002___
2 REPAIR _____RAILING IN SPAN NO. 0003___

: MAINTENANCE COMPLETED :

1 BY _____ DATE _____
2 BY _____ DATE _____

: COMMENTS FOR BRIDGE SEQ. NO. : 19I00650311 :

REPAIR RISERS AT ABUTMENT #2.

COMPLETION NOTIFICATION : RETURN WITHIN 6 MONTHS OF INSPECTION DATE

MAINTENANCE ACTIVITIES ARE
--- COMPLETED (DATE) --------
--- PARTIALLY COMPLETE (DATE) --------
--- INCOMPLETE SCHEDULED FOR (DATE) --------

EXPLANATIONS AND COMMENTS:

BRIDGE MAINTENANCE RECOMMENDATIONS

BRIDGE SEQ. NO. : 19I00650311 BRIDGE NO. : 19 - I0065 - 0826 - N
OVER : I65 RAMP / 8TH AVE S SR

DATE	: 10/08/94	BRIDGE RATING	: FAIR	COUNTY	: Davidson
CO. SEQ.	: 01	INSPECTION CYCLE	: 11	MAINT DIST	: 31
SPEC. CASE	: 7	INSPECTION DATE	: 04/17/96	REGION	: 03

007 - FACILITY CARRIED BY STRUCT : I65
021 - MAINTENANCE RESPONSIBILITY : 01
022 - OWNER : 01
042 - TYPE OF STRUCTURE : 11
043 - STRUCTURE TYPE, MAIN : 402
044 - STRUCTURE TYPE, APPROACH : 000
045 - SPANS, MAIN UNIT : 003
046 - SPANS, APPROACH : 0000
049 - STRUCTURE LENGTH : 000140
032 - APPROACH ROADWAY WIDTH : 036
034 - SKEW : 75
051 - BRDG RDWY WID, CRB-TO-CRB : 0382
052 - DECK WIDTH, OUT-TO-OUT : 0416
500 - HWY OF THE INVENTORY ROUTE : 02

: MAINTENANCE & REPAIR RECOMMENDATIONS :	: MAINTENANCE COMPLETED :
1 REPAIR _____ RAILING IN SPAN NO. 0002___	1 BY _____ DATE _____
2 REPAIR _____ RAILING IN SPAN NO. 0003___	2 BY _____ DATE _____
3 CLEAN AND SEAL JOINT AT APPROACH NO. 000B___	3 BY _____ DATE _____

: COMMENTS FOR BRIDGE SEQ. NO. : 19I00650311 :

COMPLETION NOTIFICATION : RETURN WITHIN 6 MONTHS OF INSPECTION DATE

MAINTENANCE ACTIVITIES ARE
--- COMPLETED (DATE) --------
--- PARTIALLY COMPLETE (DATE) ----------
--- INCOMPLETE SCHEDULED FOR (DATE) --------

EXPLANATIONS AND COMMENTS:

TENNESSEE BRIDGE INSPECTION PROGRAM
SUMMARY OF EVALUATION

REV. 03-05-2003

BRIDGE ID NO: 19I00650311 *LOCATION NO:* 19 - I0065 - 8.28

(6A) CROSSING: I65 RAMP / 8TH AVE S SR

(505) METHOD OF ANALYSIS: LOAD FACTOR METHOD *(548) RATING BASED ON:* CONCRETE DECK

LOAD RATINGS IN TONS

INVENTORY (503) H	20	*(518B) HS*	36
OPERATING (504) H	46	*(519) HS*	82

(549) EVALUATOR: CAJ
(522) EVAL. DATE: 4/16/2004
LAST UPDATED BY: JOHNSON
(29) ADT: 18,210 *(30) ADT YR:* 2000
(100) STRAHNET ROUTE: YES
(19) DETOUR LENGTH: 16 *KM*
(520) VC OVER RDWY: 99.99 *METERS*

CONDITION RATINGS

(58) DECK RATING:	7
(59) SUPERSTRUCTURE RATING:	7
(60) SUBSTRUCTURE RATING:	6
(61) CHANNEL PROTECTION:	N
(62) CULVERT RATING:	N
(113A) NBIS SCOUR CODE:	N
(113B) TDOT SCOUR CODE:	

APPRAISAL RATINGS

(67) STRUCTURAL EVALUATION:	6
(68) DECK GEOMETRY:	9
(69) UNDER CLEARANCE:	6
(70) BRIDGE POSTING:	5
(71) WATERWAY ADEQUACY:	N
(72) APPROACH RDWY ALIGNMENT:	8

CODE VALUES

N - NOT APPLICABLE
9 - EXCELLENT CONDITION
8 - VERY GOOD CONDITION
7 - GOOD CONDITION
6 - SATISFACTORY
5 - FAIR CONDITION
4 - POOR CONDITION
3 - SERIOUS CONDITION
2 - CRITICAL CONDITION
1 - FAILURE IS IMMINENT
0 - FAILED CONDITION

OTHER RATING ITEMS

(521) OVERALL CONDITION:	G		
(513) TEXTURE COAT RATING:	G 12	*(36) TRAFFIC SAFETY FEATURES:*	0 1 1 1
(514) PAINT CONDITION RATING:	2 05 1989		
(41) WEIGHT POSTING CODE:	A	*(525) REPAIR LIST NO:*	N

COMMENTS

NO COMMENTS AT THIS TIME.

(502) SUFF. RATING:	80.0
(528) STR. DEFICIENT:	NO
(529) FUNC. OBSOLETE:	NO

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

Bridge Condition Coding Form

Revised 08/28/2003

Bridge Number: (Includes Item 5A) 19I006503111
Feature Intersected: I65 RAMP / 8TH AVE S SR
Evaluation Status:

County: 19
Route: I0065
Special Case: 0
County Sequence: 1
Log Mile: 8.28

CODE ONLY THOSE VALUES WHICH HAVE CHANGED

ITEM #	DESCRIPTION	VALUE
90	INSPECTION DATE	10/22/2001 12/30/03
10	MINIMUM V.C. OVER DECK (ROADWAY + SHOULDERS)	99 FT. 99 IN. ____ FT. ____ IN.
520	MINIMUM V.C. OVER DECK (EXCLUDES SHOULDERS)	99 FT. 99 IN. ____ FT. ____ IN.
36	TRAFFIC SAFETY FEATURES Br. Rail / Trans. / Appr. Rail / Terminal / SPEED LIMIT	0 / 1 / 1 / 1 / 55
41	STRC OPEN/CLOSED/POSTED (A K P)	A
58	DECK	7
59	SUPERSTRUCTURE	7
60	SUBSTRUCTURE	~~7~~ 6
61	CHANL/CHANL PROTECTION	N
62	CULVERT AND RETAIN WALL	N
71	WATERWAY ADEQUACY	N
72	APPROACH RDWY ALIGNMENT	8
521	OVERALL CONDITION	GOOD 6

J. Watts
TEAM LEADER SIGNATURE

12/30/03
REVIEW DATE

CONDITION CODING GUIDELINES
(Values for Coding Items 58, 59, 60 and 62)

- N NOT APPLICABLE
- 9 EXCELLENT CONDITION
- 8 VERY GOOD CONDITION - NO PROBLEMS NOTED.
- 7 GOOD CONDITION - SOME MINOR PROBLEMS.
- 6 SATISFACTORY CONDITION - MINOR DETERIORATION OF STRUCTURAL ELEMENTS.
- 5 FAIR CONDITION - ALL PRIMARY STRUCTURAL ELEMENTS ARE SOUND BUT MAY HAVE MINOR SECTION LOSS, CRACKING, SPALLING OR SCOUR.
- 4 POOR CONDITION - ADVANCED SECTION LOSS, DETERIORATION, SPALLING OR SCOUR.
- 3 SERIOUS CONDITION - LOSS OF SECTION, DETERIORATION, SPALLING OR SCOUR HAVE SERIOUSLY AFFECTED PRIMARY STRUCTURAL COMPONENTS. LOCAL FAILURES ARE POSSIBLE. FATIGUE CRACKS IN STEEL OR SHEAR CRACKS IN CONCRETE MAY BE PRESENT.
- 2 CRITICAL CONDITION - ADVANCED DETERIORATION OF PRIMARY STRUCTURAL ELEMENTS. FATIGUE CRACKS IN STEEL OR SHEAR CRACKS IN CONCRETE MAY BE PRESENT OR SCOUR MAY HAVE REMOVED SUBSTRUCTURE SUPPORT. UNLESS CLOSELY MONITORED IT MAY BE NECESSARY TO CLOSE THE BRIDGE UNTIL CORRECTIVE ACTION IS TAKEN.
- 1 "IMMINENT" FAILURE CONDITION - MAJOR DETERIORATION OR SECTION LOSS PRESENT IN CRITICAL STRUCTURAL COMPONENTS OR OBVIOUS VERTICAL OR HORIZONTAL MOVEMENT AFFECTING STRUCTURAL STABILITY. BRIDGE IS CLOSED TO TRAFFIC BUT CORRECTIVE ACTION MAY PUT IT BACK IN LIGHT SERVICE.
- 0 FAILED CONDITION - OUT OF SERVICE AND BEYOND CORRECTIVE ACTION.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

Underpass Condition Coding Form

Revised 08/28/2003

County: 19
Route: SR006
Special Case: 0
County Sequence: 1
Log Mile: 8.02

Bridge Number: (Includes Item 5A) 19I006503112
Feature Intersected: I65 RAMP / 8TH AVE S SR

CODE ONLY THOSE VALUES WHICH HAVE CHANGED

ITEM #	DESCRIPTION	VALUE
90	INSPECTION DATE	10/22/2001 12/30/03
10	MINIMUM V.C. OVER DECK (ROADWAY + SHOULDERS)	14 FT. 6 IN. ____ FT. ____ IN.
520	MINIMUM V.C. OVER DECK (EXCLUDES SHOULDERS)	14 FT. 6 IN. ____ FT. ____ IN.
47	TOTAL HORIZONTAL UNDERCLEARANCE	68 FT. 7 IN. ____ FT. ____ IN.
54	MINIMUM VERTICAL UNDERCLEARANCE (EXCLUDES SHOULDERS) Circle One: (H) R	14 FT. 6 IN.
55	MINIMUM LATERAL UNDERCLEARANCE ON RIGHT SIDE Circle One: (H) R	10 FT. 00 IN.
56	MINIMUM LATERAL UNDERCLEARANCE ON LEFT SIDE	10 FT. 07 IN.
521	OVERALL CONDITION	GOOD 9

UNDERPASS SAFETY FEATURES

515 (A) TYPE UNDERPASS BARRIER
NONE NEEDED OR NOT APPLICABLE

_____
Revised Barrier Type

(B) ADEQUACY OF BARRIER OR RAIL: N

(C) ADEQUACY OF TRANSITIONS: N

(D) ADEQUACY OF TERMINALS: N

554 VERTICAL CLEARANCE LISTED ON HEIGHT POSTING
FT. IN.
____ FT. ____ IN.

HEIGHT POSTED AT BOTH APPROACHES? YES [ ] ~~NO [ ]~~ N/A [ ]

555 COMMENTS _____

J. Watts
TEAM LEADER SIGNATURE

12/30/03
REVIEW DATE

14'-6" → 4.42 m.

DT-1449

TENNESSEE BRIDGE INSPECTION PROGRAM
SUMMARY OF EVALUATION

REV. 05-22-00

(548) RATING BASED ON: CONCRETE DECK

(505) METHOD OF ANALYSIS: _____

INVENTORY 503 H 20 Tons 518B HS 36 Tons

OPERATING 504 H 46 Tons 519 HS 82 Tons

Bridge No.: 19-I65-8.26-

(549) Evaluator: Alan Johnson

(522) Eval. Date: 09 / 09 /2000

(29) ADT: 95090 (19 99) Yr (30)

(100) Strahnet Route Yes (X) No ( )

(19) Detour 16 km

(53) Vert. Clearance Over Deck _____ m (XX.XX) (X) NA

CONDITION RATING (Structural)

		Culverts	
58	Deck	N	7
59	Superstructure	N	7
60	Substructure	N	7
61	Chl & Chl Protection		N
62	Culv & Ret Walls		N
113A	Scour Condition		N
113B	Scour Condition		

APPRAISAL RATING (Relation to System)

		Culverts	
67	Structural Evaluation		7
68	Deck Geometry		9
69	Under Clearance	N	6
70	Bridge Posting		5
71	Waterway Adequacy		N
72	Approach Rdwy Alignment		8

Overall Condition (521): (G) F P C

Texture Coat (513) G 1-2

Paint (514 A, B, & C) 2 0 5 1 9 8 9

Traffic Safety Features (36): 0 1 1 1 1

Repair List No. (525): 11

Comments and Recommendations:

SIB >> H20-HS36 REVIEWED-CAJ-03-26-2002

* * Article 5.1.2 of Maint. Man. For Conc. Br. with unknown reinf.

* * * Des. Std. or Des. Plans For H15 or HS20 Loading.

COMMENTARY (Condition)

N NOT APPLICABLE
9 EXCELLENT CONDITION
8 VERY GOOD CONDITION - no problems noted
7 GOOD CONDITION - some minor problems
6 SATISFACTORY CONDITION - structural elements show some minor deterioration
5 FAIR CONDITION - all primary structural elements are sound, but may have minor section loss, deterioration, spalling, or scour.
4 POOR CONDITION - advanced section loss, deterioration, spalling, or scour
3 SERIOUS CONDITION - loss of section, deterioration, spalling, or scour have affected primary structural components - local failures are possible - fatigue cracks in steel or shear cracks in concrete may be present
2 CRITICAL CONDITION - advanced deterioration of primary structural elements. Fatigue cracks in steel or shear cracks in concrete may be present or scour may have removed substructure support. Unless closely monitored, it may be necessary to close the bridge until corrective action is taken.
1 "IMMINENT" FAILURE CONDITION - Major deterioration or section loss present in critical structural components or obvious vertical or horizontal movement affecting structure stability. Bridge is closed to traffic, but corrective action may put it back in light service.
0 FAILED CODITION - Out of service, beyond corrective action.

COMMENTARY (Appraisal)

N - Not Applicable
9 - Superior to present desirable criteria
8 - Equal to present desirable criteria 7 - Better than present minimum criteria
6 - Equal to present minimum criteria
5 - Somewhat better than minimum adequacy to tolerate being left in place as is
4 - Meets minimum tolerable limits to be left in place as is
3 - Basically intolerable, requiring high priority of corrective action
2 - Basically intolerable, requiring high priority of replacement.
1 - This value of rating code not used.
0 - Bridge closed.

GOOD ------ 7, 8, & 9
FAIR ------ 5 & 6
POOR ------ 3 & 4
CRITICAL -- 0, 1, & 2

SUFFICIENCY RATING : _____.

DATE OF SUFF. RATING : ___/___/___.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

Bridge Condition Coding Form

Revised 06/15/2000

County:	19
Route:	10065
Special Case:	0
County Sequence:	01
Log Mile:	8.28

Bridge Number: (Includes Item 5A) 19I006503111

Feature Intersected: I65 RAMP / 8TH AVE S SR

CODE ONLY THOSE VALUES WHICH HAVE CHANGED

ITEM #	DESCRIPTION	VALUE
90	INSPECTION DATE	03/27/2000
		10/22/01
10	MINIMUM V.C. OVER DECK (ROADWAY + SHOULDERS)	99 FT. 99 IN.
		____ FT. ____ IN.
520	MINIMUM V.C. OVER DECK (EXCLUDES SHOULDERS)	99 FT. 99 IN.
		____ FT. ____ IN.
36	TRAFFIC SAFETY FEATURES	
	Br. Rail / Trans. / Appr. Rail / Appr. Rail Ends	1 1 1 1
		O --- --- ---
41	STRC OPEN/CLOSED/POSTED	A
	A K P	---
58	DECK	7

59	SUPERSTRUCTURE	7

60	SUBSTRUCTURE	7

61	CHANL/CHANL PROTECTION	N

62	CULVERT AND RETAIN WALL	N

71	WATERWAY ADEQUACY	N

72	APPROACH RDWY ALIGNMENT (USE VALUES OF 3, 6, OR 8)	8

521	OVERALL CONDITION (Circle One)	
	GOOD FAIR POOR CRITICAL	

[signature] 10/22/01

TEAM LEADER SIGNATURE REVIEW DATE

CONDITION CODING GUIDELINES
(Values for Coding Items 58, 59, 60 and 62)

- N NOT APPLICABLE
- 9 EXCELLENT CONDITION
- 8 VERY GOOD CONDITION - NO PROBLEMS NOTED.
- 7 GOOD CONDITION - SOME MINOR PROBLEMS.
- 6 SATISFACTORY CONDITION - MINOR DETERIORATION OF STRUCTURAL ELEMENTS.
- 5 FAIR CONDITION - ALL PRIMARY STRUCTURAL ELEMENTS ARE SOUND BUT MAY HAVE MINOR SECTION LOSS, CRACKING, SPALLING OR SCOUR.
- 4 POOR CONDITION - ADVANCED SECTION LOSS, DETERIORATION, SPALLING OR SCOUR.
- 3 SERIOUS CONDITION - LOSS OF SECTION, DETERIORATION, SPALLING OR SCOUR HAVE SERIOURSLY AFFECTED PRIMARY STRUCTURAL COMPONENTS. LOCAL FAILURES ARE POSSIBLE. FATIGUE CRACKS IN STEEL OR SHEAR CRACKS IN CONCRETE MAY BE PRESENT.
- 2 CRITICAL CONDITION - ADVANCED DETERIORATION OF PRIMARY STRUCTURAL ELEMENTS. FATIGUE CRACKS IN STEEL OR SHEAR CRACKS IN CONCRETE MAY BE PRESENT OR SCOUR MAY HAVE REMOVED SUBSTRUCTURE SUPPORT. UNLESS CLOSELY MONITORED IT MAY BE NECESSARY TO CLOSE THE BRIDGE UNTIL CORRECTIVE ACTION IS TAKEN.
- 1 "IMMINENT" FAILURE CONDITION - MAJOR DETERIORATION OR SECTION LOSS PRESENT IN CRITICAL STRUCTURAL COMPONENTS OR OBVIOUS VERTICAL OR HORIZONTAL MOVEMENT AFFECTING STRUCTURAL STABILITY. BRIDGE IS CLOSED TO TRAFFIC BUT CORRECTIVE ACTION MAY PUT BACK IN LIGHT SERVICE.
- 0 FAILED CONDITION - OUT OF SERVICE AND BEYOND CORRECTIVE ACTION.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

Underpass Condition Coding Form

Revised 06/15/2000

County: 19
Route: SR006
Special Case: 0
County Sequence: 01
Log Mile: 8.02

Bridge Number: (Includes Item 5A) 191006503112
Feature Intersected: I65 RAMP / 8TH AVE S SR

CODE ONLY THOSE VALUES WHICH HAVE CHANGED

ITEM #	DESCRIPTION	VALUE
90	INSPECTION DATE	03/27/2000 10/22/01
10	MINIMUM V.C. OVER DECK (ROADWAY + SHOULDERS)	14 FT. 6 IN. ____ FT. ____ IN.
520	MINIMUM V.C. OVER DECK (EXCLUDES SHOULDERS)	14 FT. 6 IN. ____ FT. ____ IN.
47	TOTAL HORIZONTAL UNDERCLEARANCE	68 FT. 6 IN. ____ FT. ____ IN.
54	MINIMUM VERTICAL UNDERCLEARANCE (EXCLUDES SHOULDERS) Circle One: (H) R	14 FT. 6 IN.
55	MINIMUM LATERAL UNDERCLEARANCE ON RIGHT SIDE Circle One: (H) R	10 FT. 0 IN.
56	MINIMUM LATERAL UNDERCLEARANCE ON LEFT SIDE	— FT. — IN.

UNDERPASS SAFETY FEATURES

515 (A) TYPE UNDERPASS BARRIER
None Needed or N/A

_____
Revised Barrier Type

(B) ADEQUACY OF BARRIER OR RAIL N

(C) ADEQUACY OF TRANSITIONS N

(D) ADEQUACY OF TERMINALS N

554 VERTICAL CLEARANCE LISTED ON HEIGHT POSTING
99 FT. 99 IN.
____ FT. ____ IN.

521 OVERALL CONDITION (Circle One)
(GOOD) FAIR POOR CRITICAL

HEIGHT POSTED AT BOTH APPROACHES?
YES [ ]
NO [X]
N/A [ ]

555 COMMENTS _____

Kyle Hogan Clark
TEAM LEADER SIGNATURE

10/22/01
REVIEW DATE

CONCRETE DECK RATINGS
---- LOAD FACTOR ANALYSIS ----

BRIDGE NUMBER..: 19 - I65 - 8.26

NAME : ALAN JOHNSON DATE : 09-11-1997

SPAN NUMBER..: TYPICAL BAY NUMBER..: TYPICAL

COMMENTS..: THE BEAMS ARE FLARED. I USED AN AVERAGE SPACING.

INPUT DATA

CLEAR SPAN LENGTH .....(FEET)..:	6.566
SLAB THICKNESS .....(INCH)..:	8
CLEAR DISTANCE - BOTTOM STEEL TO BOTTOM DECK ..(INCH)..:	1
NEW BAR SIZE NUMBER OF STEEL BAR.....(WHOLE NUMBER)..:	6
IS THE BAR ROUND ? .....(Y-N)..:	Y
SPACING BETWEEN THE STEEL BARS .....(INCH)..:	6.5
YIELD STRENGTH - STEEL .....(KSI)..:	40
PERCENT OF STEEL EFFECTIVE FOR MOMENT..(WHOLE NUMBER)..:	100
YIELD STRENGTH - CONCRETE .....(KSI)..:	3
ASPHALT THICKNESS .....(IN.)..:	3
SUPPORTING BEAM FLANGE OR WALL THICKNESS .....(IN)..:	12
DECK CONT. OVER 3 OR MORE BEAMS OR SUPPORTS ?...(Y-N)..:	Y
IS THE DECK MONOLITHIC ?.....(Y-N)..:	N
IS THE DECK SUPPORTED BY LONGITUDINAL BEAMS ?...(Y-N)..:	Y

OUTPUT DATA FOR LOAD FACTOR ANALYSIS

COMPUTED VALUES		NON-FACTORED MOMENTS	
A ---------- (INCH) =	1.066		
SPAN LENGTH ---- (FEET) =	7.07		
MOM-CAP -------- (K-FT) =	14.91	MDL --- =	.68
MOM-AVAIL-LL+I - (K-FT) =	14.02	H-LL+I =	3.54
W-DL ---------- (K/FT) =	.136	HS-LL+I =	4.71

H & HS RATINGS - (TONS)

H @ INV	H @ OPER	HS @ INV	HS @ OPER
27	46	49	82

BARS INPUT FILE DATA REPORT

- General Data -

FILE NAME: 19- 302.DAT

REGION: 3

ROUTE: I0065

LOGMILE: 0826

SYSTEM BRIDGE?: YES

LANE (R/L): R

CROSSING: I65-RAMP-STR-76 / SR-6

- Specific Data -

STD. OVERLOAD BRIDGE?: NO

TIMBER SUBSTRUCTURE?: NO

STRUCTURE TYPE - I43: 402

ASPHALT DEPTH ON DECK: 3.

LAST REVISION DATE: 09/11/97

TYPE OF RATING ANALYSIS: LF

OVERALL CONDITION: F

TOTAL NUMBER OF SPANS: 3

IS BRIDGE POSTED?: NO

MAXIMUM SPAN LENGTH - I48: 76

YEAR BRIDGE WAS BUILT: 1970

*AASHTO*AASHTO*AASHTO*AASHTO*AASHTO*AASHTO*AASHTO*AASHTO*AASHTO*AASHTO*AASHTO*AASHTO*AASHTO*AASHTO*AASHTO*AASHTO*

AASHTO*AASHTO*AASHTO*AASHTO*AASHTO*AASHTO*AASHTO*AASHTO*AASHTO*AASHTO*AASHTO*AASHTO*AASHTO*AASHTO*AASHTO*AASHTO*

AMERICAN ASSOCIATION OF STATE HIGHWAY
AND TRANSPORTATION OFFICIALS

A PROPRIETARY COMPUTER SOFTWARE PRODUCT

AASHTOWAREtm

BBBBBBBBBBBB AAAAAAA RRRRRRRRRRR SSSSSSSSSSSS
BBBBBBBBBBBBB AAAAAAAAA RRRRRRRRRRRR SSSSSSSSSSSSSS
BBB BBB AA AA RRR RRR SSSS SSSS
BBB BBB AAA AAA RRR RRR SSS
BBB BBB AAA AAA RRR RRR SSSS
BBBBBBBBBBBB AAA AAA RRRRRRRRRRRR SSSSSSSSSSSSS
BBBBBBBBBBBBB AAA AAA RRRRRRRRRR SSSSSSSSSSSSS
BBB BBB AAAAAAAAAAAAA RRR RRR SSSS
BBB BBB AAAAAAAAAAAAA RRR RRR SSS
BBB BBB AAA AAA RRR RRR SSSS SSSS
BBBBBBBBBBBBB AAA AAA RRR RRR SSSSSSSSSSSSSS
BBBBBBBBBBBB AAA AAA RRR RRR SSSSSSSSSSSS

BRIDGE ANALYSIS AND RATING SYSTEM

RELEASE 5.5 - MOD 3.3

FEBRUARY 5, 1997

*AASHTO*AASHTO*AASHTO*AASHTO*AASHTO*AASHTO*AASHTO*AASHTO*AASHTO*AASHTO*AASHTO*AASHTO*AASHTO*AASHTO*AASHTO*AASHTO*

BARS-PC R5.5-MOD 3.0

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                                 RECORD                                                 REC.NO.
01       091197 ALAN  JOHNSON     H15                               *LF*                   100
02CAJ302 ALAN  JOHNSON                      CWPG70   139 9 0    39 8 0 3                   100
05CAJ302LM 8.26 3 19 I-65                                                                  200
06CAJ3021 THERE IS 3" OF ASPHALT ON THE DECK.                                              300
07CAJ302              36000 3000                                                           400
08CAJ302G01  3        33 2 7    7511 2    30 515CSC          1.375                         500
10CAJ302G01 01                  W  427         33 2 7                                      600
10CAJ302G01 02                  W  427         7511 2                                      700
10CAJ302G01 03                  W  427         30 515                                      800
11CAJ302G01 0101    28 5 701                                                               900
11CAJ302G01 0102     4 9 002                                                              1000
11CAJ302G01 0201     4 9 003                                                              1100
11CAJ302G01 0202    66 5 204                                                              1200
11CAJ302G01 0203     4 9 003                                                              1300
11CAJ302G01 0301     4 9 002                                                              1400
11CAJ302G01 0302    25 81501                                                              1500
12CAJ302G01                        01   35.5000112.00P0.812535.093  0.0                   1600
12CAJ302G01                        01        020.625 33.87517.750  0.0                    1700
12CAJ302G01                        01        0312.00 0.81250.4062  0.0                    1800
12CAJ302G01                        02   37.2500113.00P0.875036.812  0.0                   1900
12CAJ302G01                        02        0212.00 0.812535.968  0.0                    2000
12CAJ302G01                        02        030.625 33.87518.625  0.0                    2100
12CAJ302G01                        02        0412.00 0.81251.2812  0.0                    2200
12CAJ302G01                        02        0513.00 0.87500.4375  0.0                    2300
12CAJ302G01                        03   37.8750113.00P0.875037.437  0.0                   2400
12CAJ302G01                        03        0212.00 1.125036.437  0.0                    2500
12CAJ302G01                        03        030.687 33.87518.937  0.0                    2600
12CAJ302G01                        03        0412.00 1.12501.4375  0.0                    2700
12CAJ302G01                        03        0513.00 0.87500.4375  0.0                    2800
12CAJ302G01                        04   36.1250112.00P1.125 35.562  0.0                   2900
12CAJ302G01                        04        020.687 33.87518.062  0.0                    3000
12CAJ302G01                        04        0312.00 1.12500.5625  0.0                    3100
14CAJ302G01 0101    28 5 7C  01   90.808.0018.02.1290.808.005.312                         3200
14CAJ302G01 0102     4 9 0N  02   90.808.0019.02.1290.808.004.437                         3300
14CAJ302G01 0201     4 9 0N  03   90.808.0019.02.1290.808.004.120                         3400
14CAJ302G01 0202    10 3 0N  04   90.808.0018.02.1290.808.005.000                         3500
14CAJ302G01 0203    46 3 0C  04                                                           3600
14CAJ302G01 0204     911 2N  04                                                           3700
14CAJ302G01 0205     4 9 0N  03                                                           3800
14CAJ302G01 0301     4 9 0N  02                                                           3900
14CAJ302G01 0302    25 815N  01                                                           4000
16CAJ302G01 01T01    33 2 7C                                                              4100
16CAJ302G01 01B01    19 612SPSP 1    19 612                                               4200
16CAJ302G01 01B02    13 711SPSP 1    13 711                                               4300
16CAJ302G01 02T01    7511 2C                                                              4400
16CAJ302G01 02B01    11 0 9SPSP 1    11 0 9                                               4500
16CAJ302G01 02B02    4910 0SPSP 2    2411 0                                               4600
16CAJ302G01 02B03    15 0 9SPSP 1    15 0 9                                               4700
16CAJ302G01 03T01    30 515C                                                              4800
16CAJ302G01 03B01     9 7 8SPSP 1     9 7 8                                               4900
16CAJ302G01 03B02    2010 7SPSP 1    2010 7                                               5000
```

THE FOLLOWING STRUCTURES WERE SELECTED

CAJ302

STRUCTURE I.D. = CAJ-302

****
* STRUCTURE HEADER AND DESCRIPTION *
****

100-- 2 ALAN JOHNSON EA/I/O/P = FILE REQUESTS AND OUTPUT DATA EXCEPTIONS
TYPE = CWPG YEAR = 70 LEN = 139.75 FT. WIDTH = 39.67 FT. 3 SPANS SP.LOAD =
INV.LL.TRK.= OP.LL.TRK.=

****
* STRUCTURE LOCATION AND PERMANENT IDENTIFICATION FACTORS *
****

200-- 5 BRIDGE=LM 8.26 DIST./CO.= 3 19 CONST. ROUTE = I-65 CONST. SECT.= CONST. STA.= 0+ .
MICROFILM REEL NO. DESIGN PLANS= COMPUTATIONS= CORRESPONDENCE=
ROUTE I.D.= MARKED ROUTE =

****
* COMMENTS *
****

300-- 6 1 THERE IS 3" OF ASPHALT ON THE DECK.

****
* SPECIFICATIONS GENERALLY APPLICABLE TO STRUCTURE MEMBERS *
****

	STRUCT STEEL	REINF. CONCRETE	COMPOSITE STEEL/CONC	PRESTRESSED CONCRETE	IMPACT FACTOR INV OP POST SPEC	TIMBER
400-- 7	FY= 0.	FY = 0.	FY =36000.	LOSS = 0. F"S = 0.	MAX =.00 .00 .00 .00	FY = 0.
		F"C= 0.	F"C= 3000.	EG/ES= .000 F"". C= 0.	MIN =.00 .00 .00 .00	FV = 0.

****
* MEMBER SPECIFICATIONS AND REQUIRED ANALYSIS-GIRDER,STRINGER AND FLOOR BEAM *
****

	MEMBER ID	SPANS SYMM	STIFF. CODE	SPAN 1 (SPAN 4)	SPAN 2 (SPAN 5)	SPAN 3 (SPAN 6)	MATL CODE	ALLOWABLE STRESS FY	FB	FC*	FC**	LL DIST. FACTOR	END FL.BM	THRU DECK	MAX INV	IMPACT OP.	IMPACT POST	IMPACT SPEC	FACTOR
500-- 8	G 1	3		33.203	75.927	30.495	CSC	.00		.00		1.375			.00	.00	.00	.00	

****
* SUPERIMPOSED DEAD LOADS-GIRDERS,STRINGERS AND FLOOR BEAMS *

MEMBER ID	SYMM.	SPAN NO.	DISTANCE FR. LEFT SUPP.	LOAD TYPE	LOAD P OR W(L)	LOAD W(R)	LENGTH
600--10	G 1	1	.000FT.	W	427.0	.0	33.203FT.
700--10	G 1	2	.000FT.	W	427.0	.0	75.927FT.
800--10	G 1	3	.000FT.	W	427.0	.0	30.495FT.

SECTION RANGE SPECIFICATIONS

MEMBER ID	SYMM.	SPAN NO.	RANGE NO.	RANGE LENGTH	SECTION NO. LEFT	SECTION NO. RIGHT	SEC. VAR.	HINGE CODE	HINGE 1 DIST.	HINGE 2 DIST.	HYBRID GIRDER CODE	HYBRID GIRDER FY	HYBRID GIRDER CODE	HYBRID GIRDER FY
900--11	G 1	1	1	28.453FT.	1	0			.000FT.	.000FT.		0.		0.
1000--11	G 1	1	2	4.750FT.	2	0			.000FT.	.000FT.		0.		0.
1100--11	G 1	2	1	4.750FT.	3	0			.000FT.	.000FT.		0.		0.
1200--11	G 1	2	2	66.427FT.	4	0			.000FT.	.000FT.		0.		0.
1300--11	G 1	2	3	4.750FT.	3	0			.000FT.	.000FT.		0.		0.
1400--11	G 1	3	1	4.750FT.	2	0			.000FT.	.000FT.		0.		0.
1500--11	G 1	3	2	25.745FT.	1	0			.000FT.	.000FT.		0.		0.

SECTION PROPERTIES (STEEL OR TIMBER) - GIRDERS STRINGERS, FLOOR BEAMS

MEMBER ID		NON-DETAILED SEC.	NON-DETAILED A	NON-DETAILED I	NON-DETAILED S	DETAILED CODE	DETAILED SAME	DETAILED ADR	DETAILED H	DETAILED ELE	DETAILED A	DETAILED IX	DETAILED DY	DETAILED DX
1600--12	G 1	0	.00	.0	.0	1	0		35.50	1	12.00P	.8	35.1	.0
1700--12	G 1	0	.00	.0	.0	1	0		.00	2	.63	33.9	17.8	.0
1800--12	G 1	0	.00	.0	.0	1	0		.00	3	12.00	.8	.4	.0
1900--12	G 1	0	.00	.0	.0	2	0		37.25	1	13.00P	.9	36.8	.0
2000--12	G 1	0	.00	.0	.0	2	0		.00	2	12.00	.8	36.0	.0
2100--12	G 1	0	.00	.0	.0	2	0		.00	3	.63	33.9	18.6	.0
2200--12	G 1	0	.00	.0	.0	2	0		.00	4	12.00	.8	1.3	.0
2300--12	G 1	0	.00	.0	.0	2	0		.00	5	13.00	.9	.4	.0
2400--12	G 1	0	.00	.0	.0	3	0		37.88	1	13.00P	.9	37.4	.0
2500--12	G 1	0	.00	.0	.0	3	0		.00	2	12.00	1.1	36.4	.0
2600--12	G 1	0	.00	.0	.0	3	0		.00	3	.69	33.9	18.9	.0
2700--12	G 1	0	.00	.0	.0	3	0		.00	4	12.00	1.1	1.4	.0
2800--12	G 1	0	.00	.0	.0	3	0		.00	5	13.00	.9	.4	.0
2900--12	G 1	0	.00	.0	.0	4	0		36.13	1	12.00P	1.1	35.6	.0
3000--12	G 1	0	.00	.0	.0	4	0		.00	2	.69	33.9	18.1	.0
3100--12	G 1	0	.00	.0	.0	4	0		.00	3	12.00	1.1	.6	.0

SECTION PROPERTIES (COMPOSITE) - GIRDERS, STRINGERS, FLOOR BEAMS

MEMBER ID	SYMM	SPAN RANGE	RANGE LENGTH	COMP CODE	N SECT	SAME	A R	WIDTH	THICK -NESS	FILLET WIDTH	FILLET THICK.	EFFECT. WIDTH	EFFECT. THICK.	DIST TO TOP SECT.
3200--14	G 1	1 1	28.453FT.	C	0 1	0		90.80	8.00	18.00	2.12	90.80	8.00	5.31
3300--14	G 1	1 2	4.750FT.	N	0 2	0		90.80	8.00	19.00	2.12	90.80	8.00	4.44
3400--14	G 1	2 1	4.750FT.	N	0 3	0		90.80	8.00	19.00	2.12	90.80	8.00	4.12
3500--14	G 1	2 2	10.250FT.	N	0 4	0		90.80	8.00	18.00	2.12	90.80	8.00	5.00
3600--14	G 1	2 3	46.250FT.	C	0 4	0		.00	.00	.00	.00	.00	.00	.00

3700--14	G 1	2	4	9.927FT. N	0	4	0	.00	.00	.00	.00	.00	.00	.00
3800--14	G 1	2	5	4.750FT. N	0	3	0	.00	.00	.00	.00	.00	.00	.00
3900--14	G 1	3	1	4.750FT. N	0	2	0	.00	.00	.00	.00	.00	.00	.00
4000--14	G 1	3	2	25.745FT. N	0	1	0	.00	.00	.00	.00	.00	.00	.00

****

* BRACING LENGTH SPECIFICATIONS - LOAD FACTOR ANALYSIS *

****

MEMBER ID	SYMM	SPAN	T/B	RANGE	RANGE LENGTH	SUPPORT COND. LEFT	RIGHT	SPACES	SPACING DISTANCE	STIFF SPACING
4100--16	G 1	1	T	1	33.203FT.C			0	.000FT.	.000IN.
4200--16	G 1	1	B	1	19.563FT.SP	SP		1	19.563FT.	.000IN.
4300--16	G 1	1	B	2	13.641FT.SP	SP		1	13.641FT.	.000IN.
4400--16	G 1	2	T	1	75.927FT.C			0	.000FT.	.000IN.
4500--16	G 1	2	B	1	11.047FT.SP	SP		1	11.047FT.	.000IN.
4600--16	G 1	2	B	2	49.833FT.SP	SP		2	24.917FT.	.000IN.
4700--16	G 1	2	B	3	15.047FT.SP	SP		1	15.047FT.	.000IN.
4800--16	G 1	3	T	1	30.495FT.C			0	.000FT.	.000IN.
4900--16	G 1	3	B	1	9.625FT.SP	SP		1	9.625FT.	.000IN.
5000--16	G 1	3	B	2	20.870FT.SP	SP		1	20.870FT.	.000IN.

SUMMARY OF RATING CALCULATIONS------STRUCTURE MEMBER G 1 BARS-PC RELEASE 5.5
INVENTORY AND/OR OPERATING ANALYSIS

INPUT CODING -- STRUCTURE LM 8.26 D/P STR. I.D.-- CAJ-302

DATE 9/11/97
BY ALAN JOHNSON

	INVENTORY		OPERATING	
	LIVE LOAD	RATING	LIVE LOAD	RATING
	H15	H 49.54	HS20	HS 59.97

STRUCTURE DESCRIPTION --

IDENTIFICATION	LM 8.26
TYPE	CWPG
YEAR OF CONSTR.	1970
LENGTH	139.75 FEET
ROADWAY WIDTH	39.67 FEET
NUMBER OF SPANS	3

LOCATION --

DISTRICT	3
COUNTY	19
CONSTR. RTE.	I-65
CONSTR. SEC.	
CONSTR. STA.	0+ .
KEY RTE.	
MARKED RTE.	

MICROFILM REEL NUMBERS --

DESIGN PLANS
COMPUTATIONS
CORRESPONDENCE

ANALYST REMARKS --

THERE IS 3" OF ASPHALT ON THE DECK.

INVENTORY RATING SUMMARY --

MEMBER ID.	G 1
SPAN	2
CRITICAL C.P. DIST.	38.0 FEET
LIVE LOAD DESIGNATION	H15

	MOMENT (FT. KIPS)
MEMBER CAPACITY	1542.1
DL EFFECT	455.8
CAPACITY FOR (LL+I)	1086.9
ACTUAL (LL+I)	329.1
INVENTORY RATING	H 49.54

OPERATING RATING SUMMARY --

MEMBER ID.	G 1
SPAN	2
CRITICAL C.P. DIST.	38.0 FEET
LIVE LOAD DESIGNATION	HS20

	MOMENT (FT. KIPS)
MEMBER CAPACITY	2570.2
DL EFFECT	455.8
CAPACITY FOR (LL+I)	1811.5
ACTUAL (LL+I)	604.2
OPERATING RATING	HS 59.97

*** FINAL SUMMARY OF RATING RESULTS FOR --- STRUCTURE ID. CAJ-302 BARS-PC RELEASE 5.5
INVENTORY AND/OR OPERATING ANALYSIS

STRUCTURE LM 8.26

D/P STR. ID-- CAJ-302

INPUT CODING--

DATE 9/11/97

BY ALAN JOHNSON

	INVENTORY		OPERATING	
	LIVE LOAD	RATING	LIVE LOAD	RATING
	H15	H 49.5	HS20	HS 60.0

STRUCTURE DESCRIPTION--

IDENTIFICATION	LM 8.26
TYPE	CWPG
YEAR OF CONSTR.	1970
LENGTH	139.75 FEET
ROADWAY WIDTH	39.67 FEET
NUMBER OF SPANS	3

LOCATION--

DISTRICT	3
COUNTY	19
CONSTR. RTE.	I-65
CONSTR. SEC.	
CONSTR. STA.	0+ .
KEY RTE.	
MARKED RTE.	

MICROFILM REEL NUMBERS--

DESIGN PLANS
COMPUTATIONS
CORRESPONDENCE

ANALYST REMARKS--

THERE IS 3" OF ASPHALT ON THE DECK.

INVENTORY RATING SUMMARY

MEMBER I.D.	G 1
SPAN	2
CRITICAL C.P. DIST.	38.0 FEET
LIVE LOAD DESIGNATION	H15

	MOMENT (FOOT-KIPS)
MEMBER CAPACITY	1542.1
DL EFFECT	455.8
CAPACITY FOR (LL+I)	1086.9
ACTUAL (LL+I)	329.1

INVENTORY RATING H 49.54

OPERATING RATING SUMMARY

MEMBER I.D.	G 1
SPAN	2
CRITICAL C.P. DIST.	38.0 FEET
LIVE LOAD DESIGNATION	HS20

	MOMENT (FOOT-KIPS)
MEMBER CAPACITY	2570.2
DL EFFECT	455.8
CAPACITY FOR (LL+I)	1811.5
ACTUAL (LL+I)	604.2

OPERATING RATING HS 59.97

DETAIL DATA FOR FLEXURAL MEMBER

DATE 09/11/97

D/P STRUCTURE I.D. CAJ-302
MEMBER I.D.--G01
MATERIAL--CSC
LL DIST. FACT. = 1.375

NO. SPANS = 3
NOT SYMMETRICAL

SPAN NO.	LENGTH FT.	RNG. NO.	LENGTH FT.	SEC.NO. LT	SEC.NO. RT	VAR CODE S T P	VAR CODE S T B	DL DUE TO MEM. WEIGHT W(LT) LBS/FT	DL DUE TO MEM. WEIGHT W(RT) LBS/FT
1	33.203	1	28.453	01	01			138.4	138.4
		2	4.750	02	02			215.8	215.8
2	75.927	1	4.750	03	03			248.5	248.5
		2	66.427	04	04			171.1	171.1
		3	4.750	03	03			248.5	248.5
3	30.495	1	4.750	02	02			215.8	215.8
		2	25.745	01	01			138.4	138.4

SUPERIMPOSED DISTRIBUTED DL(S)
LENGTH DISTRIBUTED**********
DIST. FROM LT SUPPORT***

SPAN NO.	W(LT) LBS/FT	W(RT) LBS/FT	* FT.	* FT.
1	427.0	427.0	.000	33.203
2	427.0	427.0	33.203	75.927
3	427.0	427.0	109.130	30.495

SUPERIMPOSED CONCENTRATED DL(S)
DIST. FROM LT SUPPORT****

STIFF TRANS.	STIFF LONG.	SPAN NO.	P KIPS	* FT.

CHECK POINTS RATED--

SPAN NO.	DIS FRM LT SPRT FT.	FUNC M	FUNC VL	FUNC VR
1	.000	X		X
1	13.281	X	X	X
2	.000	X	X	X
2	37.964	X	X	X
3	.000	X	X	X
3	18.297	X	X	X
3	30.495	X	X	

DETAIL DATA AT MOMENT CHECK POINT FOR
COMPOSITE STEEL AND CONCRETE FLEXURAL MEMBER

BARS RELEASE 5.5

DATE 09/11/97

D/P STRUCTURE I.D. CAJ-302
MEMBER I.D.--G01
C.P. LOCATION 1.00

***** SECTION PROPERTIES IN COMPOSITE RANGE 1OF SPAN 1

	H IN.	GROSS AREA SQ.IN.	---NET AREA--- + BEND SQ.IN.	- BEND SQ.IN.	IX + BEND IN**4	IX - BEND IN**4	C (BOT) IN.	SECTION MODULUS TOP + BEND IN**3	TOP - BEND IN**3	BOTTOM + BEND IN**3	BOTTOM - BEND IN**3
NON-COM	.00	.00	.00	.00	.0	.0	.00	.0	.0	.0	.0
COM (N=N)					22705.3		33.08	9400.0		686.3	
COM (N=3N)					16646.9		26.93	1942.8		618.1	

(AS)C = .0 SQ. IN. , (DS)C = .0 SQ. IN. BRACE LENGTH = .00 ,YBAR = .00

***** INFLUENCE LINE (SIMPLE SPAN)

***** ULTIMATE STRENGTH ***** MOMENT CAPACITY

	M1/M2 TOP	M1/M2 BOTTOM	TOP + BEND FT-KIPS	TOP - BEND FT-KIPS	BOTTOM + BEND FT-KIPS	BOTTOM - BEND FT-KIPS
INVENTORY	1.0	.0				
OPERATING	.0					
POST VEH1	.0					
POST VEH2	.0					
POST VEH3	.0					
POST SPEC	.0					

***** ORDINATES OF AND AREAS UNDER INFLUENCE LINE (CONTINUOUS SPAN)

	SPAN 1	SPAN 2	SPAN 3	SPAN 4	SPAN 5	SPAN 6
T 0	.000	.000	.000	.000	.000	.000
E 1	.000	.000	.000	.000	.000	.000
N 2	.000	.000	.000	.000	.000	.000
T 3	.000	.000	.000	.000	.000	.000
H 4	.000	.000	.000	.000	.000	.000
5	.000	.000	.000	.000	.000	.000
P 6	.000	.000	.000	.000	.000	.000
O 7	.000	.000	.000	.000	.000	.000
I 8	.000	.000	.000	.000	.000	.000
N 9	.000	.000	.000	.000	.000	.000
T 0	.000	.000	.000	.000	.000	.000
AREA TOTALS						
POS AREA	.0	.0	.0	.0	.0	.0
NEG AREA	.0	.0	.0	.0	.0	.0

***** DL MOMENT EFFECT

DL FT-KIPS	SDL FT-KIPS
.0	.0

***** AVAIL.CAPAC.FOR LL+IMPACT

	TOP +BEND F-KPS	TOP -BEND F-KPS	BOT +BEND F-KPS	BOT -BEND F-KPS
INVENTORY	1272.1	.0	1272.1	.0
OPERATING	2120.1	-576.2	2120.1	-576.2
VEH. 1	.0	.0	.0	.0
VEH. 2	.0	.0	.0	.0
VEH. 3	.0	.0	.0	.0
SPECIAL	.0	.0	.0	.0

***** LIVE LOAD AND RATING CALCULATIONS (IMPACT FACTOR = .300 FOR +BEND AND = .300 FOR -BEND)

LIVE LOAD		TRUCK LOAD LL+IMP FT-KIPS	TRUCK LOAD LL FT-KIPS	LOC.NO. 1 WHEEL FT.	DIR	AXLE SPACE FT.	LANE LOAD LL+IMP FT-KIPS	LANE LOAD LL FT-KIPS	LOC.CONC LOAD FT.	LOC.CONC LOAD 2 FT.	RATING FACT.	SAFE LOAD CAPACITY TONS	RATING VALUE
INV H15	+BEND	.0	.0	.000	L	.0	.0	.0	.000		8.253	123.8	H 123.8
	-BEND	.0	.0	.000	L	.0	.0	.0	.000	.000			
OPER HS20	+BEND	.0	.0	72.352	L	.0	.0	.0	.000		7.485	269.5	HS149.7
	-BEND	.0	.0	.000	L	.0	.0	.0	.000	.000			
POST	+BEND	.0	.0	.000							.000	.0	
	-BEND	.0	.0	.000									
POST	+BEND	.0	.0	.000							.000	.0	
	-BEND	.0	.0	.000									
POST	+BEND	.0	.0	.000							.000	.0	
	-BEND	.0	.0	.000									
POST SPEC	+BEND	.0	.0	.000							.000	.0	
	-BEND	.0	.0	.000									

DETAIL DATA AT MOMENT CHECK POINT FOR
COMPOSITE STEEL AND CONCRETE FLEXURAL MEMBER

BARS RELEASE 5.5

DATE 09/11/97

D/P STRUCTURE I.D. CAJ-302
MEMBER I.D.--G01
C.P. LOCATION 1.40

***** SECTION PROPERTIES IN COMPOSITE RANGE 10F SPAN 1

	H IN.	GROSS AREA SQ.IN.	---NET AREA--- + BEND SQ.IN.	- BEND SQ.IN.	IX + BEND IN**4	IX - BEND IN**4	C (BOT) IN.	SECTION MODULUS TOP + BEND IN**3	TOP - BEND IN**3	BOTTOM + BEND IN**3	BOTTOM - BEND IN**3
NON-COM	.00	.00	.00	.00	.0	.0	.00	.0	.0	.0	.0
COM (N=N)					22705.3		33.08	9400.0		686.3	
COM (N=3N)					16646.9		26.93	1942.8		618.1	

(AS)C = .0 SQ. IN. , (DS)C = .0 SQ. IN. BRACE LENGTH = 19.56 , YBAR = .00

***** INFLUENCE LINE (SIMPLE SPAN)

***** ULTIMATE STRENGTH ***** MOMENT CAPACITY

	M1/M2 TOP	M1/M2 BOTTOM	TOP + BEND FT-KIPS	TOP - BEND FT-KIPS	BOTTOM + BEND FT-KIPS	BOTTOM - BEND FT-KIPS
INVENTORY	1.0	.0				
OPERATING	.0					
POST VEH1	.0					
POST VEH2	.0					
POST VEH3	.0					
POST SPEC	.0					

***** ORDINATES OF AND AREAS UNDER INFLUENCE LINE (CONTINUOUS SPAN)

	SPAN 1	SPAN 2	SPAN 3	SPAN 4	SPAN 5	SPAN 6
T 0	.000	.000	.000	.000	.000	.000
E 1	1.810	-1.745	.148	.000	.000	.000
N 2	3.630	-2.561	.267	.000	.000	.000
T 3	5.473	-2.856	.344	.000	.000	.000
H 4	7.348	-2.857	.376	.000	.000	.000
5	5.945	-2.620	.371	.000	.000	.000
P 6	4.597	-2.204	.334	.000	.000	.000
O 7	3.314	-1.668	.272	.000	.000	.000
I 8	2.107	-1.069	.192	.000	.000	.000
N 9	.988	-.477	.099	.000	.000	.000
T 0	.000	.000	.000	.000	.000	.000
POS AREA	116.9	.0	7.3	.0	.0	.0
NEG AREA	.0	137.1	.0	.0	.0	.0

***** DL MOMENT EFFECT

DL FT-KIPS	SDL FT-KIPS
-36.4	-5.5

AREA TOTALS	
	124.2
	137.1

***** AVAIL.CAPAC.FOR LL+IMPACT

	TOP +BEND F-KPS	TOP -BEND F-KPS	BOT +BEND F-KPS	BOT -BEND F-KPS
INVENTORY	1297.2	-590.4	1297.2	-590.4
OPERATING	2162.0	-984.0	2162.0	-984.0
VEH. 1	.0	.0	.0	.0
VEH. 2	.0	.0	.0	.0
VEH. 3	.0	.0	.0	.0
SPECIAL	.0	.0	.0	.0

***** LIVE LOAD AND RATING CALCULATIONS (IMPACT FACTOR = .300 FOR +BEND AND = .249 FOR -BEND)

LIVE LOAD		TRUCK LOAD LL+IMP FT-KIPS	TRUCK LOAD LL FT-KIPS	LOC.NO. 1 WHEEL FT.	DIR	AXLE SPACE FT.	LANE LOAD LL+IMP FT-KIPS	LANE LOAD LL FT-KIPS	LOC.CONC LOAD FT.	LOC.CONC LOAD 2 FT.	RATING FACT.	SAFE LOAD CAPACITY TONS	RATING VALUE
INV H15	+BEND	167.6	128.9	27.281	R	.0	141.9	109.2	13.281				
	-BEND	72.5	58.1	69.986	R	.0	90.3	72.3	63.574	.000	6.537	98.1	H 98.1
OPER HS20	+BEND	263.5	202.7	-.718	L	.0	189.2	145.5	13.281				
	-BEND	165.7	132.7	77.574	R	.0	120.4	96.4	63.574	.000	5.938	213.8	HS118.8
POST	+BEND	.0	.0	.000							.000	.0	
	-BEND	.0	.0	.000									
POST	+BEND	.0	.0	.000							.000	.0	
	-BEND	.0	.0	.000									
POST	+BEND	.0	.0	.000							.000	.0	
	-BEND	.0	.0	.000									
POST SPEC	+BEND	.0	.0	.000							.000	.0	
	-BEND	.0	.0	.000									

DETAIL DATA AT MOMENT CHECK POINT FOR
COMPOSITE STEEL AND CONCRETE FLEXURAL MEMBER

BARS RELEASE 5.5

DATE 09/11/97

D/P STRUCTURE I.D. CAJ-302
MEMBER I.D.--G01
C.P. LOCATION 2.00

***** SECTION PROPERTIES IN COMPOSITE RANGE 1OF SPAN 2

	H	GROSS AREA	---NET AREA--- + BEND	- BEND	IX + BEND	IX - BEND	C (BOT)	SECTION MODULUS TOP + BEND	TOP - BEND	BOTTOM + BEND	BOTTOM - BEND
	IN.	SQ.IN.	SQ.IN.	SQ.IN.	IN**4	IN**4	IN.	IN**3	IN**3	IN**3	IN**3
NON-COM	.00	.00	.00	.00	.0	.0	.00	.0	.0	.0	.0
COM (N=N)					18284.2		22.09	827.8		827.8	
COM (N=3N)					18284.2		22.09	827.8		827.8	

(AS)C = .0 SQ. IN. , (DS)C = .0 SQ. IN. BRACE LENGTH = 13.64 ,YBAR = .87

***** INFLUENCE LINE (SIMPLE SPAN)

***** ULTIMATE STRENGTH ***** MOMENT CAPACITY

	M1/M2 TOP	M1/M2 BOTTOM	TOP + BEND FT-KIPS	TOP - BEND FT-KIPS	BOTTOM + BEND FT-KIPS	BOTTOM - BEND FT-KIPS
INVENTORY	.2	.0				
OPERATING	.0					
POST VEH1	.0					
POST VEH2	.0					
POST VEH3	.0					
POST SPEC	.0					

***** ORDINATES OF AND AREAS UNDER INFLUENCE LINE (CONTINUOUS SPAN)

	SPAN 1	SPAN 2	SPAN 3	SPAN 4	SPAN 5	SPAN 6
T 0	.000	.000	.000	.000	.000	.000
E 1	-.456	-4.362	.371	.000	.000	.000
N 2	-.885	-6.403	.669	.000	.000	.000
T 3	-1.260	-7.141	.859	.000	.000	.000
H 4	-1.553	-7.142	.940	.000	.000	.000
5	-1.738	-6.550	.926	.000	.000	.000
P 6	-1.788	-5.511	.835	.000	.000	.000
O 7	-1.675	-4.170	.681	.000	.000	.000
I 8	-1.373	-2.673	.480	.000	.000	.000
N 9	-.851	-1.193	.248	.000	.000	.000
T 0	.000	.000	.000	.000	.000	.000
AREA TOTALS						
POS AREA	.0	.0	18.3	.0	.0	.0
NEG AREA	38.4	342.8	.0	.0	.0	.0

***** DL MOMENT EFFECT

DL FT-KIPS	SDL FT-KIPS
-401.0	-155.0

***** AVAIL.CAPAC.FOR LL+IMPACT

	TOP +BEND F-KPS	TOP -BEND F-KPS	BOT +BEND F-KPS	BOT -BEND F-KPS
INVENTORY	2520.6	-1176.3	2520.6	-1176.3
OPERATING	4201.0	-1960.4	4201.0	-1960.4
VEH. 1	.0	.0	.0	.0
VEH. 2	.0	.0	.0	.0
VEH. 3	.0	.0	.0	.0
SPECIAL	.0	.0	.0	.0

***** LIVE LOAD AND RATING CALCULATIONS (IMPACT FACTOR = .300 FOR +BEND AND = .278 FOR -BEND)

LIVE LOAD		TRUCK LOAD LL+IMP FT-KIPS	TRUCK LOAD LL FT-KIPS	LOC.NO. 1 WHEEL FT.	DIR	AXLE SPACE FT.	LANE LOAD LL+IMP FT-KIPS	LANE LOAD LL FT-KIPS	LOC.CONC LOAD FT.	LOC.CONC LOAD 2 FT.	RATING FACT.	SAFE LOAD CAPACITY TONS	RATING VALUE
INV H15	+BEND	22.0	16.9	135.328	R	.0	19.3	14.8	121.328				
	-BEND	185.7	145.2	69.986	R	.0	268.8	210.2	63.574	19.922	4.376	65.6	H 65.6
OPER HS20	+BEND	40.8	31.4	144.477	R	.0	25.7	19.8	121.328				
	-BEND	424.1	331.7	77.574	R	.0	358.4	280.3	63.574	19.922	4.623	166.4	HS 92.5
POST	+BEND	.0	.0	.000							.000	.0	
	-BEND	.0	.0	.000									
POST	+BEND	.0	.0	.000							.000	.0	
	-BEND	.0	.0	.000									
POST	+BEND	.0	.0	.000							.000	.0	
	-BEND	.0	.0	.000									
POST SPEC	+BEND	.0	.0	.000							.000	.0	
	-BEND	.0	.0	.000									

DETAIL DATA AT MOMENT CHECK POINT FOR
COMPOSITE STEEL AND CONCRETE FLEXURAL MEMBER

BARS RELEASE 5.5

DATE 09/11/97

D/P STRUCTURE I.D. CAJ-302
MEMBER I.D.--G01
C.P. LOCATION 2.50

***** SECTION PROPERTIES IN COMPOSITE RANGE 3OF SPAN 2

	H IN.	GROSS AREA SQ.IN.	---NET AREA--- + BEND SQ.IN.	- BEND SQ.IN.	IX + BEND IN**4	IX - BEND IN**4	C (BOT) IN.	SECTION MODULUS TOP + BEND IN**3	TOP - BEND IN**3	BOTTOM + BEND IN**3	BOTTOM - BEND IN**3
NON-COM	.00	.00	.00	.00	.0	.0	.00	.0	.0	.0	.0
COM (N=N)					27404.0		32.27	7114.8		849.1	
COM (N=3N)					19961.7		26.10	1991.6		764.8	

(AS)C = .0 SQ. IN. , (DS)C = .0 SQ. IN. BRACE LENGTH = 24.92 ,YBAR = .00

***** INFLUENCE LINE (SIMPLE SPAN)

***** ULTIMATE STRENGTH ***** MOMENT CAPACITY

	M1/M2 TOP	M1/M2 BOTTOM	TOP + BEND FT-KIPS	TOP - BEND FT-KIPS	BOTTOM + BEND FT-KIPS	BOTTOM - BEND FT-KIPS
INVENTORY	.1	.0				
OPERATING	.0					
POST VEH1	.0					
POST VEH2	.0					
POST VEH3	.0					
POST SPEC	.0					

***** ORDINATES OF AND AREAS UNDER INFLUENCE LINE (CONTINUOUS SPAN)

	SPAN 1	SPAN 2	SPAN 3	SPAN 4	SPAN 5	SPAN 6
T 0	.000	.000	.000	.000	.000	.000
E 1	-.174	1.242	-.447	.000	.000	.000
N 2	-.337	3.475	-.805	.000	.000	.000
T 3	-.480	6.321	-1.034	.000	.000	.000
H 4	-.592	9.581	-1.132	.000	.000	.000
5	-.662	13.243	-1.116	.000	.000	.000
P 6	-.681	9.705	-1.006	.000	.000	.000
O 7	-.638	6.547	-.820	.000	.000	.000
I 8	-.523	3.759	-.578	.000	.000	.000
N 9	-.324	1.484	-.299	.000	.000	.000
T 0	.000	.000	.000	.000	.000	.000
AREA TOTALS						
POS AREA	.0	420.3	.0	.0	.0	.0
NEG AREA	14.6	.0	22.1	.0	.0	.0

	AREA TOTALS
POS AREA	420.3
NEG AREA	36.7

***** DL MOMENT EFFECT

DL FT-KIPS	SDL FT-KIPS
292.0	163.8

***** AVAIL.CAPAC.FOR LL+IMPACT

	TOP +BEND F-KPS	TOP -BEND F-KPS	BOT +BEND F-KPS	BOT -BEND F-KPS
INVENTORY	1268.7	-1078.1	1268.7	-1078.1
OPERATING	2114.4	-1796.8	2114.4	-1796.9
VEH. 1	.0	.0	.0	.0
VEH. 2	.0	.0	.0	.0
VEH. 3	.0	.0	.0	.0
SPECIAL	.0	.0	.0	.0

***** LIVE LOAD AND RATING CALCULATIONS (IMPACT FACTOR = .249 FOR +BEND AND = .300 FOR -BEND)

LIVE LOAD		---TRUCK LOAD--- LL+IMP FT-KIPS	LL FT-KIPS	LOC.NO. 1 WHEEL FT.	DIR	AXLE SPACE FT.	---LANE LOAD--- LL+IMP FT-KIPS	LL FT-KIPS	LOC.CONC LOAD FT.	LOC.CONC LOAD 2 FT.	RATING FACT.	SAFE LOAD CAPACITY TONS	RATING VALUE
INV H15	+BEND	309.2	247.6	85.167	R	.0	329.1	263.5	71.167		3.302	49.5	H 49.5
	-BEND	26.5	20.4	135.328	R	.0	29.6	22.7	121.328	.000			
OPER HS20	+BEND	604.2	483.8	57.167	L	.0	438.8	351.4	71.167		2.998	107.9	HS 60.0
	-BEND	49.2	37.8	144.477	R	.0	39.4	30.3	121.328	.000			
POST	+BEND	.0	.0	.000							.000	.0	
	-BEND	.0	.0	.000									
POST	+BEND	.0	.0	.000							.000	.0	
	-BEND	.0	.0	.000									
POST	+BEND	.0	.0	.000							.000	.0	
	-BEND	.0	.0	.000									
POST SPEC	+BEND	.0	.0	.000							.000	.0	
	-BEND	.0	.0	.000									

DETAIL DATA AT MOMENT CHECK POINT FOR
COMPOSITE STEEL AND CONCRETE FLEXURAL MEMBER

BARS RELEASE 5.5

DATE 09/11/97

D/P STRUCTURE I.D. CAJ-302
MEMBER I.D.--G01
C.P. LOCATION 3.00

***** SECTION PROPERTIES IN COMPOSITE RANGE 1OF SPAN 3

	H IN.	GROSS AREA SQ.IN.	---NET AREA--- + BEND SQ.IN.	- BEND SQ.IN.	IX + BEND IN**4	IX - BEND IN**4	C (BOT) IN.	SECTION MODULUS TOP + BEND IN**3	TOP - BEND IN**3	BOTTOM + BEND IN**3	BOTTOM - BEND IN**3
NON-COM	.00	.00	.00	.00	.0	.0	.00	.0	.0	.0	.0
COM (N=N)					15417.7		18.62	827.8		827.8	
COM (N=3N)					15417.7		18.62	827.8		827.8	

(AS)C = .0 SQ. IN. , (DS)C = .0 SQ. IN. BRACE LENGTH = 15.05 ,YBAR = .48

***** INFLUENCE LINE (SIMPLE SPAN)

***** ULTIMATE STRENGTH ***** MOMENT CAPACITY

	M1/M2 TOP	M1/M2 BOTTOM	TOP + BEND FT-KIPS	TOP - BEND FT-KIPS	BOTTOM + BEND FT-KIPS	BOTTOM - BEND FT-KIPS
INVENTORY	.5	.0				
OPERATING	.0					
POST VEH1	.0					
POST VEH2	.0					
POST VEH3	.0					
POST SPEC	.0					

***** ORDINATES OF AND AREAS UNDER INFLUENCE LINE (CONTINUOUS SPAN)

	SPAN 1	SPAN 2	SPAN 3	SPAN 4	SPAN 5	SPAN 6
T 0	.000	.000	.000	.000	.000	.000
E 1	.109	-.747	-1.265	.000	.000	.000
N 2	.211	-1.833	-2.280	.000	.000	.000
T 3	.300	-2.995	-2.928	.000	.000	.000
H 4	.370	-4.068	-3.203	.000	.000	.000
5	.414	-4.927	-3.158	.000	.000	.000
P 6	.425	-5.450	-2.846	.000	.000	.000
O 7	.399	-5.513	-2.321	.000	.000	.000
I 8	.327	-4.994	-1.637	.000	.000	.000
N 9	.203	-3.432	-.845	.000	.000	.000
T 0	.000	.000	.000	.000	.000	.000
AREA TOTALS						
POS AREA	9.1	.0	.0	.0	.0	.0	9.1
NEG AREA	.0	257.9	62.5	.0	.0	.0	320.3

***** DL MOMENT EFFECT

DL FT-KIPS	SDL FT-KIPS
-412.3	-132.9

***** AVAIL.CAPAC.FOR LL+IMPACT

	TOP +BEND F-KPS	TOP -BEND F-KPS	BOT +BEND F-KPS	BOT -BEND F-KPS
INVENTORY	2242.3	-962.3	2242.3	-962.3
OPERATING	3737.2	-1603.9	3737.2	-1603.9
VEH. 1	.0	.0	.0	.0
VEH. 2	.0	.0	.0	.0
VEH. 3	.0	.0	.0	.0
SPECIAL	.0	.0	.0	.0

***** LIVE LOAD AND RATING CALCULATIONS (IMPACT FACTOR = .300 FOR +BEND AND = .281 FOR -BEND)

LIVE LOAD		---TRUCK LOAD--- LL+IMP FT-KIPS	LL FT-KIPS	LOC.NO. 1 WHEEL FT.	DIR	AXLE SPACE FT.	---LANE LOAD--- LL+IMP FT-KIPS	LL FT-KIPS	LOC.CONC LOAD FT.	LOC.CONC LOAD 2 FT.	RATING FACT.	SAFE LOAD CAPACITY TONS	RATING VALUE
INV H15	+BEND	10.1	7.8	5.922	L	.0	9.1	7.0	19.922				
	-BEND	143.0	111.6	72.352	L	.0	240.6	187.8	86.352	121.328	4.000	60.0	H 60.0
OPER HS20	+BEND	19.5	15.0	-4.034	L	.0	12.1	9.3	19.922				
	-BEND	326.1	254.7	64.759	L	.0	320.7	250.5	86.352	121.328	4.918	177.0	HS 98.4
POST	+BEND	.0	.0	.000							.000	.0	
	-BEND	.0	.0	.000									
POST	+BEND	.0	.0	.000							.000	.0	
	-BEND	.0	.0	.000									
POST	+BEND	.0	.0	.000							.000	.0	
	-BEND	.0	.0	.000									
POST SPEC	+BEND	.0	.0	.000							.000	.0	
	-BEND	.0	.0	.000									

DETAIL DATA AT MOMENT CHECK POINT FOR
COMPOSITE STEEL AND CONCRETE FLEXURAL MEMBER

BARS RELEASE 5.5

DATE 09/11/97

D/P STRUCTURE I.D. CAJ-302
MEMBER I.D.--G01
C.P. LOCATION 3.60

***** SECTION PROPERTIES IN COMPOSITE RANGE 20F SPAN 3

	H	GROSS AREA	---NET AREA--- + BEND	- BEND	IX + BEND	IX - BEND	C (BOT)	SECTION MODULUS TOP + BEND	TOP - BEND	BOTTOM + BEND	BOTTOM - BEND
	IN.	SQ.IN.	SQ.IN.	SQ.IN.	IN**4	IN**4	IN.	IN**3	IN**3	IN**3	IN**3
NON-COM	.00	.00	.00	.00	.0	.0	.00	.0	.0	.0	.0
COM (N=N)					7891.1		17.75	444.6		444.6	
COM (N=3N)					7891.1		17.75	444.6		444.6	

(AS)C = .0 SQ. IN. , (DS)C = .0 SQ. IN. BRACE LENGTH = 20.87 , YBAR = .00

***** INFLUENCE LINE (SIMPLE SPAN)

***** ULTIMATE STRENGTH ***** MOMENT CAPACITY

	M1/M2 TOP	M1/M2 BOTTOM	TOP + BEND FT-KIPS	TOP - BEND FT-KIPS	BOTTOM + BEND FT-KIPS	BOTTOM - BEND FT-KIPS
INVENTORY	.4	.0				
OPERATING	.0					
POST VEH1	.0					
POST VEH2	.0					
POST VEH3	.0					
POST SPEC	.0					

***** ORDINATES OF AND AREAS UNDER INFLUENCE LINE (CONTINUOUS SPAN)

	SPAN 1	SPAN 2	SPAN 3	SPAN 4	SPAN 5	SPAN 6
T 0	.000	.000	.000	.000	.000	.000
E 1	.043	-.299	.714	.000	.000	.000
N 2	.084	-.733	1.528	.000	.000	.000
T 3	.120	-1.198	2.488	.000	.000	.000
H 4	.148	-1.627	3.598	.000	.000	.000
5	.165	-1.971	4.836	.000	.000	.000
P 6	.170	-2.180	6.180	.000	.000	.000
O 7	.159	-2.205	4.560	.000	.000	.000
I 8	.131	-1.998	3.005	.000	.000	.000
N 9	.081	-1.373	1.492	.000	.000	.000
T 0	.000	.000	.000	.000	.000	.000
AREA TOTALS						
POS AREA	3.7	.0	86.6	.0	.0	.0	90.3
NEG AREA	.0	103.1	.0	.0	.0	.0	103.1

***** DL MOMENT EFFECT

DL FT-KIPS	SDL FT-KIPS
-60.1	-5.5

***** AVAIL.CAPAC.FOR LL+IMPACT

	TOP +BEND F-KPS	TOP -BEND F-KPS	BOT +BEND F-KPS	BOT -BEND F-KPS
INVENTORY	1311.4	-576.2	1311.4	-576.2
OPERATING	2185.7	-960.3	2185.7	-960.3
VEH. 1	.0	.0	.0	.0
VEH. 2	.0	.0	.0	.0
VEH. 3	.0	.0	.0	.0
SPECIAL	.0	.0	.0	.0

***** LIVE LOAD AND RATING CALCULATIONS (IMPACT FACTOR = .300 FOR +BEND AND = .249 FOR -BEND)

		TRUCK LOAD LL+IMP FT-KIPS	TRUCK LOAD LL FT-KIPS	TRUCK LOAD LOC.NO. 1 WHEEL FT.	DIR	AXLE SPACE FT.	LANE LOAD LL+IMP FT-KIPS	LANE LOAD LL FT-KIPS	LOC.CONC LOAD FT.	LOC.CONC LOAD 2 FT.	RATING FACT.	SAFE LOAD CAPACITY TONS	RATING VALUE
INV H15	+BEND	138.2	106.3	113.427	L	.0	113.2	87.1	127.427		5.787	86.8	H 86.8
	-BEND	55.8	44.7	72.352	L	.0	68.6	54.9	86.352	.000			
OPER HS20	+BEND	206.7	159.0	141.426	R	.0	151.0	116.1	127.427		6.448	232.1	HS129.0
	-BEND	127.2	101.9	64.759	L	.0	91.5	73.2	86.352	.000			
POST	+BEND	.0	.0	.000							.000	.0	
	-BEND	.0	.0	.000									
POST	+BEND	.0	.0	.000							.000	.0	
	-BEND	.0	.0	.000									
POST	+BEND	.0	.0	.000							.000	.0	
	-BEND	.0	.0	.000									
POST SPEC	+BEND	.0	.0	.000							.000	.0	
	-BEND	.0	.0	.000									

DETAIL DATA AT MOMENT CHECK POINT FOR
COMPOSITE STEEL AND CONCRETE FLEXURAL MEMBER

BARS RELEASE 5.5

DATE 09/11/97

D/P STRUCTURE I.D. CAJ-302
MEMBER I.D.--G01
C.P. LOCATION 4.00

***** SECTION PROPERTIES IN COMPOSITE RANGE 20F SPAN 3

	H IN.	GROSS AREA SQ.IN.	---NET AREA--- + BEND SQ.IN.	- BEND SQ.IN.	IX + BEND IN**4	IX - BEND IN**4	C (BOT) IN.	SECTION MODULUS TOP + BEND IN**3	TOP - BEND IN**3	BOTTOM + BEND IN**3	BOTTOM - BEND IN**3
NON-COM	.00	.00	.00	.00	.0	.0	.00	.0	.0	.0	.0
COM (N=N)					7891.1		17.75	444.6		444.6	
COM (N=3N)					7891.1		17.75	444.6		444.6	

(AS)C = .0 SQ. IN. , (DS)C = .0 SQ. IN. BRACE LENGTH = .00 ,YBAR = .00

***** INFLUENCE LINE (SIMPLE SPAN)

***** ULTIMATE STRENGTH ***** MOMENT CAPACITY

	M1/M2 TOP	M1/M2 BOTTOM	TOP + BEND FT-KIPS	TOP - BEND FT-KIPS	BOTTOM + BEND FT-KIPS	BOTTOM - BEND FT-KIPS
INVENTORY	1.0	.0				
OPERATING	.0					
POST VEH1	.0					
POST VEH2	.0					
POST VEH3	.0					
POST SPEC	.0					

***** ORDINATES OF AND AREAS UNDER INFLUENCE LINE (CONTINUOUS SPAN)

	SPAN 1	SPAN 2	SPAN 3	SPAN 4	SPAN 5	SPAN 6
T 0	.000	.000	.000	.000	.000	.000
E 1	.000	.000	.000	.000	.000	.000
N 2	.000	.000	.000	.000	.000	.000
T 3	.000	.000	.000	.000	.000	.000
H 4	.000	.000	.000	.000	.000	.000
5	.000	.000	.000	.000	.000	.000
P 6	.000	.000	.000	.000	.000	.000
O 7	.000	.000	.000	.000	.000	.000
I 8	.000	.000	.000	.000	.000	.000
N 9	.000	.000	.000	.000	.000	.000
T 0	.000	.000	.000	.000	.000	.000
AREA TOTALS						
POS AREA	.0	.0	.0	.0	.0	.0
NEG AREA	.0	.0	.0	.0	.0	.0

***** DL MOMENT EFFECT

DL FT-KIPS	SDL FT-KIPS
.0	.0

***** AVAIL.CAPAC.FOR LL+IMPACT

	TOP +BEND F-KPS	TOP -BEND F-KPS	BOT +BEND F-KPS	BOT -BEND F-KPS
INVENTORY	1272.1	-576.2	1272.1	-576.2
OPERATING	2120.1	-960.3	2120.1	-960.3
VEH. 1	.0	.0	.0	.0
VEH. 2	.0	.0	.0	.0
VEH. 3	.0	.0	.0	.0
SPECIAL	.0	.0	.0	.0

***** LIVE LOAD AND RATING CALCULATIONS (IMPACT FACTOR = .300 FOR +BEND AND = .300 FOR -BEND)

LIVE LOAD		TRUCK LOAD LL+IMP FT-KIPS	TRUCK LOAD LL FT-KIPS	LOC.NO. 1 WHEEL FT.	DIR	AXLE SPACE FT.	LANE LOAD LL+IMP FT-KIPS	LANE LOAD LL FT-KIPS	LOC.CONC LOAD FT.	LOC.CONC LOAD 2 FT.	RATING FACT.	SAFE LOAD CAPACITY TONS	RATING VALUE
INV H15	+BEND	.0	.0	122.576	L	.0	.0	.0	.000		8.493	127.4	H 127.4
	-BEND	.0	.0	.000	L	.0	.0	.0	.000	.000			
OPER HS20	+BEND	.0	.0	108.576	L	.0	.0	.0	.000		8.110	292.0	HS162.2
	-BEND	.0	.0	.000	L	.0	.0	.0	.000	.000			
POST	+BEND	.0	.0	.000							.000	.0	
	-BEND	.0	.0	.000									
POST	+BEND	.0	.0	.000							.000	.0	
	-BEND	.0	.0	.000									
POST	+BEND	.0	.0	.000							.000	.0	
	-BEND	.0	.0	.000									
POST SPEC	+BEND	.0	.0	.000							.000	.0	
	-BEND	.0	.0	.000									

SUMMARY OF SHEAR ANALYSIS

DATE 09/11/97

D/P STRUCTURE I.D. CAJ-302

MEMB. ID	MATL	SPAN NO.	DIS FRM LT SPRT FT.	L R	DL SHEAR KIPS	SDL SHEAR KIPS	---INVENTORY--- LL+I MAX.V KIPS	T L	LL+I MIN.V KIPS	T L	---OPERATING--- LL+I MAX.V KIPS	T L	LL+I MIN.V KIPS	T L	--VEH. 1 -- LL+I MAX.V KIPS	LL+I MIN.V KIPS	--VEH. 2 -- LL+I MAX.V KIPS	LL+I MIN.V KIPS	--VEH. 3 -- LL+I MAX.V KIPS	LL+I MIN.V KIPS	--SPECIAL-- LL+I MAX.V KIPS	LL+I MIN.V KIPS
G01	CSC	1	.000	L	3.5	2.4	24.3	T	8.2	L	44.6	T	13.0	T								
		1	13.281	L	9.0	3.2	12.6	T	13.6	L	18.9	T	18.1	L								
		2	.000	L	37.0	16.5	36.7	L	1.4	L	58.4	T	2.4	T								
		2	37.964	L	.1	.3	14.4	L	13.3	L	24.2	T	21.8	T								
		3	.000	L	28.2	10.9	29.3	L	.4	L	48.2	T	.6	T								
		3	18.297	L	10.6	3.1	13.6	L	11.3	T	18.1	L	16.0	T								
		3	30.495	L	.8	2.2	6.8	L	23.8	T	10.9	T	41.6	T								

DETAIL DATA AT MOMENT CHECK POINT FOR BARS-PC RELEASE 5.5
COMPOSITE STEEL AND CONCRETE FLEXURAL MEMBER - LOAD FACTOR RATING

DATE 9/11/97

D/P STRUCTURE I.D. = CAJ-302
MEMBER I.D. -- G 1
C.P. LOCATION - 1.00

***** SECTION PROPERTIES IN COMPOSITE RANGE 1 OF SPAN 1 ******

-- STRUCTURAL STEEL PROPERTIES --

H (IN.)	Tweb (IN.)	H/Tweb	D (IN.)	D/Tweb	- B' (IN) - TOP	- B' (IN) - BOT	- B'/t - TOP	- B'/t - BOT	Lb (FT) TOP	Lb (FT) BOT	Ry (IN) TOP	Ry (IN) BOT	- Lb / Ry TOP	- Lb / Ry BOT	HYBRID RATIO, R +BEND	HYBRID RATIO, R -BEND
35.50	.63	56.80	33.88	54.20	5.69	5.69	7.00	7.00	CONT	19.56	3.46	3.46	.00	67.77	1.0000	1.0000

-- COMPOSITE CONCRETE PROPERTIES --

EFF.WIDTH (IN.)	EFF.THICK. (IN.)	VALUE N	(AS)C (SQ.IN.)	(DS)C (IN.)	VALUE a	VALUE Y	Atf (SQ.IN.)	Abf (SQ.IN.)	Aw (SQ.IN.)
90.8	8.0	9	.00	.00	6.32	.0	9.75	9.75	21.17

-- SECTION PROPERTIES -- -------- SECTION MODULUS -------- ---- PLASTIC SECTION MODULUS ----

	GROSS AREA SQ.IN.	NET AREA +BEND SQ.IN.	NET AREA -BEND SQ.IN.	IX +BEND IN.**4	IX -BEND IN.**4	C (BOT) IN.	TOP +BEND IN.**3	TOP -BEND IN.**3	BOTT +BEND IN.**3	BOTT -BEND IN.**3	TOP +BEND IN.**3	TOP -BEND+ IN.**3	BOTT +BEND IN.**3	BOTT -BEND IN.**3
NON-COM	40.67	40.67	40.67	7891.1	7891.1	17.75	444.6	444.6	444.6	444.6	517.49	517.49	517.49	517.49
COM(N=N)				22705.3	.0	33.08	9400.0	2180.0	686.3	686.3				
COM(N=3N)				16646.9	.0	26.93	1942.8	1004.7	618.1	618.1				

-- ULTIMATE STRENGTH --

Fy (PSI) STEEL	f'c (PSI) CONC.	Fy (PSI) REBAR	2055/(SQRT Fy) TOP FLANGE	2055/(SQRT Fy) BOT FLANGE	2200/(SQRT Fy) TOP FLANGE	2200/(SQRT Fy) BOT FLANGE	-- YIELD STRESS, Fy (PSI) -- BOT FLANGE	TOP FLANGE	WEB
36000.	3000.	50000.	10.83	10.83	11.60	11.60	36000.	36000.	36000.

***** SECTION QUALIFICATION *****

	STIFFENED LONG	STIFFENED TRANV	UNSTIFFENED	COMPACT	BRACED NON-COMPACT	UNBRACED NON-COMPACT	REDUCTION FACTOR	SYMMETRICAL	UNSYMMETRICAL
+BEND			X	X			1.0000		X
-BEND			X	X			1.0000	X	

***** SECTION CAPACITY *****

+BEND ML = .00 FT-KIPS, MR = .00 FT-KIPS
-BEND ML = .00 FT-KIPS, MR = .00 FT-KIPS

--- NON-COMPOSITE MOMENT CAPACITY (FT-KIPS) --- -- COMPOSITE MOMENT CAPACITY (FT-KIPS) -- -- SHEAR CAPACITY (KIPS) --

	TOP +BEND	TOP -BEND	BOTT +BEND	BOTT -BEND	MU	MAX. CAP. STEEL	MAX. CAP. CONC.	MU	VU LEFT	VU RIGHT
INV.	1272.06	716.52	1272.06	615.57	1552.46	517.49	2238.64	2756.13	442.07	442.07
OPER.	2120.10	1194.20	2120.10	1025.94	1552.46	517.49	2238.64	2756.13	442.07	442.07

***** MOMENT (FT-KIPS) AND SHEAR (KIPS) *****

-- DEAD LOAD --

M (DL)	M (SDL)	REDIS. M-(DL)	REDIS. M-(SDL)	V (DL)	V (SDL)
.00	.00	.00	.00	3.46	2.42

DETAIL DATA AT MOMENT CHECK POINT FOR
COMPOSITE STEEL AND CONCRETE FLEXURAL MEMBER - LOAD FACTOR RATING

DATE 9/11/97

D/P STRUCTURE I.D. = CAJ-302
MEMBER I.D. -- G 1
C.P. LOCATION -- 1.00

***** LIVE LOAD CALCULATIONS (IMPACT FACTOR = .300 FOR +BEND AND = .300 FOR -BEND)

	LIVE LOAD		-- LIVE LOAD -- TRUCK MOMENT: REDIS LL+I FT-KIPS	LL+IMP FT-KIPS	LL FT-KIPS	LOC.NO. 1 WHEEL FT.	DIR	LANE MOMENT: LL+IMP FT-KIPS	LL FT-KIPS	LOC.CONC. LOAD #1 FT.	LOC.CONC. LOAD #2 FT.	FIXED SHEAR +V KIPS	FIXED SHEAR -V KIPS	MAX SHEAR +V KIPS	MAX SHEAR -V KIPS
INV.	H15	+BEND	.00	.0	.0	.000	L	.0	.0	.000	.000	.00	.00		
		-BEND	.00	.0	.0	.000	L	.0	.0	.000	.000	.00	.00	.00	24.29
OPER.	HS20	+BEND	.00	.0	.0	72.352	L	.0	.0	.000	.000	.00	.00		
		-BEND	.00	.0	.0	.000	L	.0	.0	.000	.000	.00	.00	.00	44.64

***** ORDINATES OF AND AREAS UNDER MOMENT INFLUENCE LINE (CONTINUOUS SPAN) *****

	SPAN 1	SPAN 2	SPAN 3	SPAN 4	SPAN 5	SPAN 6
T 0	.000	.000	.000	.000	.000	.000
E 1	.000	.000	.000	.000	.000	.000
N 2	.000	.000	.000	.000	.000	.000
T 3	.000	.000	.000	.000	.000	.000
H 4	.000	.000	.000	.000	.000	.000
5	.000	.000	.000	.000	.000	.000
P 6	.000	.000	.000	.000	.000	.000
O 7	.000	.000	.000	.000	.000	.000
I 8	.000	.000	.000	.000	.000	.000
N 9	.000	.000	.000	.000	.000	.000
T 0	.000	.000	.000	.000	.000	.000

							AREA TOTALS
POS AREA	.0	.0	.0	.0	.0	.0	.0
NEG AREA	.0	.0	.0	.0	.0	.0	.0

***** MOMENT INFLUENCE LINE (SIMPLE SPAN)

X-DIST (FT.)	.00	.00	.00	POS AREA = .00
Y-ORDINATE	.00	.00	.00	

DETAIL DATA AT MOMENT CHECK POINT FOR
COMPOSITE STEEL AND CONCRETE FLEXURAL MEMBER - LOAD FACTOR RATING

DATE 9/11/97

D/P STRUCTURE I.D. = CAJ-302
MEMBER I.D. -- G 1
C.P. LOCATION -- 1.00

***** RATING FACTOR *****

-- RATING FACTOR FOR MOMENT --

		AVAILABLE (LL+I) CAPACITY (FT-KIPS)				RATING FACTOR - MOMENT				RATING	SAFE
		TOP +BEND	TOP -BEND	BOTT +BEND	BOTT -BEND	TOP +BEND	TOP -BEND	BOTT +BEND	BOTT -BEND	VALUE	LOAD CAP.(TONS)
INV.	H15	1272.1	.0	1272.1	.0	999.0000	999.0000	999.0000	999.0000		
OPER.	HS20	2120.1	576.2	2120.1	576.2	999.0000	999.0000	999.0000	999.0000		

-- RATING FACTOR FOR SERVICEABILITY --

		AVAILABLE (LL+I) CAPACITY (FT-KIPS)				RATING FACTOR -SERVICEABILITY				RATING	SAFE
		TOP +BEND	TOP -BEND	BOTT +BEND	BOTT -BEND	TOP +BEND	TOP -BEND	BOTT +BEND	BOTT -BEND	VALUE	LOAD CAP.(TONS)
INV.	H15	16074.0	884.9	1173.5	884.9	999.0000	999.0000	999.0000	999.0000		
OPER.	HS20	26789.9	1474.8	1955.9	1474.8	999.0000	999.0000	999.0000	999.0000		

-- RATING FACTOR FOR SHEAR --

		AVAILABLE CAPACITY (KIPS)		RATING FACTOR - SHEAR		RATING	SAFE
		LEFT	RIGHT	LEFT	RIGHT	VALUE	LOAD
INV.	H15	200.50	200.50	8.2530	8.2530	H 123.8	123.8
OPER.	HS20	334.17	334.17	7.4855	7.4855	HS149.7	269.5

DETAIL DATA AT MOMENT CHECK POINT FOR BARS-PC RELEASE 5.5
COMPOSITE STEEL AND CONCRETE FLEXURAL MEMBER - LOAD FACTOR RATING

DATE 9/11/97

D/P STRUCTURE I.D. = CAJ-302
MEMBER I.D. -- G 1
C.P. LOCATION - 1.40

***** SECTION PROPERTIES IN COMPOSITE RANGE 1 OF SPAN 1 ******

-- STRUCTURAL STEEL PROPERTIES --

H (IN.)	Tweb (IN.)	H/Tweb	D (IN.)	D/Tweb	- B' (IN) - TOP	- B' (IN) - BOT	- B'/t - TOP	- B'/t - BOT	Lb (FT) TOP	Lb (FT) BOT	Ry (IN) TOP	Ry (IN) BOT	- Lb / Ry TOP	- Lb / Ry BOT	HYBRID RATIO, R +BEND	HYBRID RATIO, R -BEND
35.50	.63	56.80	33.88	54.20	5.69	5.69	7.00	7.00	CONT	19.56	3.46	3.46	.00	67.77	1.0000	1.0000

-- COMPOSITE CONCRETE PROPERTIES --

EFF.WIDTH (IN.)	EFF.THICK. (IN.)	VALUE N	(AS)C (SQ.IN.)	(DS)C (IN.)	VALUE a	VALUE Y	Atf (SQ.IN.)	Abf (SQ.IN.)	Aw (SQ.IN.)
90.8	8.0	9	.00	.00	6.32	.0	9.75	9.75	21.17

-- SECTION PROPERTIES -- -------- SECTION MODULUS -------- ---- PLASTIC SECTION MODULUS ----

	GROSS AREA SQ.IN.	NET AREA +BEND SQ.IN.	NET AREA -BEND SQ.IN.	IX +BEND IN.**4	IX -BEND IN.**4	C (BOT) IN.	TOP +BEND IN.**3	TOP -BEND IN.**3	BOTT +BEND IN.**3	BOTT -BEND IN.**3	TOP +BEND IN.**3	TOP -BEND+ IN.**3	BOTT +BEND IN.**3	BOTT -BEND IN.**3
NON-COM	40.67	40.67	40.67	7891.1	7891.1	17.75	444.6	444.6	444.6	444.6	517.49	517.49	517.49	517.49
COM(N=N)				22705.3	.0	33.08	9400.0	2180.0	686.3	686.3				
COM(N=3N)				16646.9	.0	26.93	1942.8	1004.7	618.1	618.1				

-- ULTIMATE STRENGTH --

Fy (PSI) STEEL	f'c (PSI) CONC.	Fy (PSI) REBAR	2055/(SQRT Fy) TOP FLANGE	2055/(SQRT Fy) BOT FLANGE	2200/(SQRT Fy) TOP FLANGE	2200/(SQRT Fy) BOT FLANGE	-- YIELD STRESS, Fy (PSI) -- BOT FLANGE	TOP FLANGE	WEB
36000.	3000.	50000.	10.83	10.83	11.60	11.60	36000.	36000.	36000.

***** SECTION QUALIFICATION *****

	STIFFENED LONG	STIFFENED TRANV	UNSTIFFENED	COMPACT	BRACED NON-COMPACT	UNBRACED NON-COMPACT	REDUCTION FACTOR	SYMMETRICAL	UNSYMMETRICAL
+BEND			X	X			1.0000		X
-BEND			X			X	1.0000	X	

***** SECTION CAPACITY *****

+BEND ML = .00 FT-KIPS, MR = .00 FT-KIPS
-BEND ML = .00 FT-KIPS, MR = -279.19 FT-KIPS, M1/M2 = 1.0000 CB = 1.0

--- NON-COMPOSITE MOMENT CAPACITY (FT-KIPS) --- -- COMPOSITE MOMENT CAPACITY (FT-KIPS) -- -- SHEAR CAPACITY (KIPS) --

	TOP +BEND	TOP -BEND	BOTT +BEND	BOTT -BEND	MU	MAX. CAP. STEEL	MAX. CAP. CONC.	MU	VU LEFT	VU RIGHT
INV.	1272.06	615.55	1272.06	615.57	1552.46	517.49	2238.64	2756.13	442.07	442.07
OPER.	2120.10	1025.92	2120.10	1025.94	1552.46	517.49	2238.64	2756.13	442.07	442.07

***** MOMENT (FT-KIPS) AND SHEAR (KIPS) *****

-- DEAD LOAD --

M (DL)	M (SDL)	REDIS. M-(DL)	REDIS. M-(SDL)	V (DL)	V (SDL)
-36.44	-5.49	-36.44	-5.49	-8.95	-3.25

DETAIL DATA AT MOMENT CHECK POINT FOR
COMPOSITE STEEL AND CONCRETE FLEXURAL MEMBER - LOAD FACTOR RATING

DATE 9/11/97

D/P STRUCTURE I.D. = CAJ-302
MEMBER I.D. -- G 1
C.P. LOCATION -- 1.40

***** LIVE LOAD CALCULATIONS (IMPACT FACTOR = .300 FOR +BEND AND = .249 FOR -BEND)

			-- LIVE LOAD -- TRUCK MOMENT					LANE MOMENT				FIXED SHEAR		MAX SHEAR	
	LIVE LOAD		REDIS LL+I FT-KIPS	LL+IMP FT-KIPS	LL FT-KIPS	LOC.NO. 1 WHEEL FT.	DIR	LL+IMP FT-KIPS	LL FT-KIPS	LOC.CONC. LOAD #1 FT.	LOC.CONC. LOAD #2 FT.	+V KIPS	-V KIPS	+V KIPS	-V KIPS
INV.	H15	+BEND	167.60	167.6	128.9	27.281	R	141.9	109.2	13.281	.000	1.67	8.83		
		-BEND	90.32	72.5	58.1	69.986	R	90.3	72.3	63.574	.000	1.60	1.60	13.56	13.56
OPER.	HS20	+BEND	263.47	263.5	202.7	-.718	L	189.2	145.5	13.281	.000	12.99	8.76		
		-BEND	165.71	165.7	132.7	77.574	R	120.4	96.4	63.574	.000	12.48	12.48	18.87	18.87

***** ORDINATES OF AND AREAS UNDER MOMENT INFLUENCE LINE (CONTINUOUS SPAN) *****

	SPAN 1	SPAN 2	SPAN 3	SPAN 4	SPAN 5	SPAN 6
T 0	.000	.000	.000	.000	.000	.000
E 1	1.810	-1.745	.148	.000	.000	.000
N 2	3.630	-2.561	.267	.000	.000	.000
T 3	5.473	-2.856	.344	.000	.000	.000
H 4	7.348	-2.857	.376	.000	.000	.000
5	5.945	-2.620	.371	.000	.000	.000
P 6	4.597	-2.204	.334	.000	.000	.000
O 7	3.314	-1.668	.272	.000	.000	.000
I 8	2.107	-1.069	.192	.000	.000	.000
N 9	.988	-.477	.099	.000	.000	.000
T 0	.000	.000	.000	.000	.000	.000

							AREA TOTALS
POS AREA	116.9	.0	7.3	.0	.0	.0	124.2
NEG AREA	.0	137.1	.0	.0	.0	.0	137.1

***** MOMENT INFLUENCE LINE (SIMPLE SPAN)

X-DIST (FT.)	.00	.00	.00	POS AREA = .00
Y-ORDINATE	.00	.00	.00	

DETAIL DATA AT MOMENT CHECK POINT FOR
COMPOSITE STEEL AND CONCRETE FLEXURAL MEMBER - LOAD FACTOR RATING

DATE 9/11/97

D/P STRUCTURE I.D. = CAJ-302
MEMBER I.D. -- G 1
C.P. LOCATION -- 1.40

***** RATING FACTOR *****

-- RATING FACTOR FOR MOMENT --

		AVAILABLE (LL+I) CAPACITY (FT-KIPS)				RATING FACTOR - MOMENT				RATING	SAFE
		TOP +BEND	TOP -BEND	BOTT +BEND	BOTT -BEND	TOP +BEND	TOP -BEND	BOTT +BEND	BOTT -BEND	VALUE	LOAD CAP.(TONS)
INV.	H15	1297.2	590.4	1297.2	590.4	7.7398	6.5367	7.7398	6.5368	H 98.1	98.1
OPER.	HS20	2162.0	984.0	2162.0	984.0	8.2061	5.9382	8.2061	5.9383	HS118.8	213.8

-- RATING FACTOR FOR SERVICEABILITY --

		AVAILABLE (LL+I) CAPACITY (FT-KIPS)				RATING FACTOR -SERVICEABILITY				RATING	SAFE
		TOP +BEND	TOP -BEND	BOTT +BEND	BOTT -BEND	TOP +BEND	TOP -BEND	BOTT +BEND	BOTT -BEND	VALUE	LOAD CAP.(TONS)
INV.	H15	16552.2	735.0	1211.0	735.1	98.7578	8.1382	7.2251	8.1384		
OPER.	HS20	27587.0	1225.1	2018.3	1225.1	104.7075	7.3931	7.6604	7.3933		

-- RATING FACTOR FOR SHEAR --

		AVAILABLE CAPACITY (KIPS)		RATING FACTOR - SHEAR		RATING	SAFE
		LEFT	RIGHT	LEFT	RIGHT	VALUE	LOAD
INV.	H15	196.71	211.35	14.5114	14.5114		
OPER.	HS20	327.85	352.25	18.1393	18.1393		

DETAIL DATA AT MOMENT CHECK POINT FOR BARS-PC RELEASE 5.5
COMPOSITE STEEL AND CONCRETE FLEXURAL MEMBER - LOAD FACTOR RATING

DATE 9/11/97

D/P STRUCTURE I.D. = CAJ-302
MEMBER I.D. -- G 1
C.P. LOCATION - 2.00

***** SECTION PROPERTIES IN COMPOSITE RANGE 1 OF SPAN 2 ******

-- STRUCTURAL STEEL PROPERTIES --

H (IN.)	Tweb (IN.)	H/Tweb	D (IN.)	D/Tweb	- B' (IN) - TOP	- B' (IN) - BOT	- B'/t - TOP	- B'/t - BOT	Lb (FT) TOP	Lb (FT) BOT	Ry (IN) TOP	Ry (IN) BOT	- Lb / Ry TOP	- Lb / Ry BOT	HYBRID RATIO, R +BEND	HYBRID RATIO, R -BEND
37.88	.69	55.13	33.88	49.31	6.16	6.16	3.08	3.08	CONT	13.64	3.60	3.60	.00	45.48	1.0000	1.0000

-- COMPOSITE CONCRETE PROPERTIES --

EFF.WIDTH (IN.)	EFF.THICK. (IN.)	VALUE N	(AS)C (SQ.IN.)	(DS)C (IN.)	VALUE a	VALUE Y	Atf (SQ.IN.)	Abf (SQ.IN.)	Aw (SQ.IN.)
90.8	8.0	9	.00	.00	.00	.9	24.88	24.88	23.27

-- SECTION PROPERTIES -- -------- SECTION MODULUS -------- ---- PLASTIC SECTION MODULUS ----

	GROSS AREA SQ.IN.	NET AREA +BEND SQ.IN.	NET AREA -BEND SQ.IN.	IX +BEND IN.**4	IX -BEND IN.**4	C (BOT) IN.	TOP +BEND IN.**3	TOP -BEND IN.**3	BOTT +BEND IN.**3	BOTT -BEND IN.**3	TOP +BEND IN.**3	TOP -BEND+ IN.**3	BOTT +BEND IN.**3	BOTT -BEND IN.**3
NON-COM	73.02	73.02	73.02	18284.2	18284.2	18.94	827.8	827.8	827.8	827.8	1090.42	1090.42	1090.42	1090.42
COM(N=N)				18284.2	.0	22.09	827.8	.0	827.8	827.8				
COM(N=3N)				18284.2	.0	22.09	827.8	.0	827.8	827.8				

-- ULTIMATE STRENGTH --

Fy (PSI) STEEL	f'c (PSI) CONC.	Fy (PSI) REBAR	2055/(SQRT Fy) TOP FLANGE	2055/(SQRT Fy) BOT FLANGE	2200/(SQRT Fy) TOP FLANGE	2200/(SQRT Fy) BOT FLANGE	-- YIELD STRESS, Fy (PSI) -- BOT FLANGE	TOP FLANGE	WEB
36000.	3000.	50000.	10.83	10.83	11.60	11.60	36000.	36000.	36000.

***** SECTION QUALIFICATION *****

	STIFFENED LONG	STIFFENED TRANV	UNSTIFFENED	COMPACT	BRACED NON-COMPACT	UNBRACED NON-COMPACT	REDUCTION FACTOR	SYMMETRICAL	UNSYMMETRICAL
+BEND			X	X			1.0000		X
-BEND			X	X			1.0000	X	

***** SECTION CAPACITY *****

+BEND ML = .00 FT-KIPS, MR = .00 FT-KIPS
-BEND ML = -136.08 FT-KIPS, MR = -824.71 FT-KIPS

--- NON-COMPOSITE MOMENT CAPACITY (FT-KIPS) --- -- COMPOSITE MOMENT CAPACITY (FT-KIPS) -- -- SHEAR CAPACITY (KIPS) --

	TOP +BEND	TOP -BEND	BOTT +BEND	BOTT -BEND	MU	MAX. CAP. STEEL	MAX. CAP. CONC.	MU	VU LEFT	VU RIGHT
INV.	2187.05	1509.82	2187.05	1146.20	3271.27	1090.42	3648.19	4738.61	485.92	485.92
OPER.	3645.08	2516.36	3645.08	1910.33	3271.27	1090.42	3648.19	4738.61	485.92	485.92

***** MOMENT (FT-KIPS) AND SHEAR (KIPS) *****

-- DEAD LOAD --

M (DL)	M (SDL)	REDIS. M-(DL)	REDIS. M-(SDL)	V (DL)	V (SDL)
-400.99	-154.95	-400.99	-154.95	37.03	16.50

DETAIL DATA AT MOMENT CHECK POINT FOR
COMPOSITE STEEL AND CONCRETE FLEXURAL MEMBER - LOAD FACTOR RATING

DATE 9/11/97

D/P STRUCTURE I.D. = CAJ-302
MEMBER I.D. -- G 1
C.P. LOCATION -- 2.00

***** LIVE LOAD CALCULATIONS (IMPACT FACTOR = .300 FOR +BEND AND = .278 FOR -BEND)

			-- LIVE LOAD -- TRUCK MOMENT					LANE MOMENT				FIXED SHEAR		MAX SHEAR	
	LIVE LOAD		REDIS LL+I FT-KIPS	LL+IMP FT-KIPS	LL FT-KIPS	LOC.NO. 1 WHEEL FT.	DIR	LL+IMP FT-KIPS	LL FT-KIPS	LOC.CONC. LOAD #1 FT.	LOC.CONC. LOAD #2 FT.	+V KIPS	-V KIPS	+V KIPS	-V KIPS
INV.	H15	+BEND	21.99	22.0	16.9	135.328	R	19.3	14.8	121.328	.000	14.52	1.28		
		-BEND	268.77	185.7	145.2	69.986	R	268.8	210.2	63.574	19.922	14.28	14.28	36.67	35.23
OPER.	HS20	+BEND	40.83	40.8	31.4	144.477	R	25.7	19.8	121.328	.000	45.45	2.37		
		-BEND	424.08	424.1	331.7	77.574	R	358.4	280.3	63.574	19.922	44.69	44.69	58.42	56.13

***** ORDINATES OF AND AREAS UNDER MOMENT INFLUENCE LINE (CONTINUOUS SPAN) *****

	SPAN 1	SPAN 2	SPAN 3	SPAN 4	SPAN 5	SPAN 6
T 0	.000	.000	.000	.000	.000	.000
E 1	-.456	-4.362	.371	.000	.000	.000
N 2	-.885	-6.403	.669	.000	.000	.000
T 3	-1.260	-7.141	.859	.000	.000	.000
H 4	-1.553	-7.142	.940	.000	.000	.000
5	-1.738	-6.550	.926	.000	.000	.000
P 6	-1.788	-5.511	.835	.000	.000	.000
O 7	-1.675	-4.170	.681	.000	.000	.000
I 8	-1.373	-2.673	.480	.000	.000	.000
N 9	-.851	-1.193	.248	.000	.000	.000
T 0	.000	.000	.000	.000	.000	.000

							AREA TOTALS
POS AREA	.0	.0	18.3	.0	.0	.0	18.3
NEG AREA	38.4	342.8	.0	.0	.0	.0	381.2

***** MOMENT INFLUENCE LINE (SIMPLE SPAN)

X-DIST (FT.)	.00	.00	.00	POS AREA =	.00
Y-ORDINATE	.00	.00	.00		

DETAIL DATA AT MOMENT CHECK POINT FOR
COMPOSITE STEEL AND CONCRETE FLEXURAL MEMBER - LOAD FACTOR RATING

DATE 9/11/97

D/P STRUCTURE I.D. = CAJ-302
MEMBER I.D. -- G 1
C.P. LOCATION -- 2.00

***** RATING FACTOR *****

-- RATING FACTOR FOR MOMENT --

		AVAILABLE (LL+I) CAPACITY (FT-KIPS)				RATING FACTOR - MOMENT				RATING	SAFE
		TOP +BEND	TOP -BEND	BOTT +BEND	BOTT -BEND	TOP +BEND	TOP -BEND	BOTT +BEND	BOTT -BEND	VALUE	LOAD CAP.(TONS)
INV.	H15	2520.6	1176.3	2520.6	1176.3	114.6096	4.3765	114.6096	4.3765	H 65.6	65.6
OPER.	HS20	4201.0	1960.4	4201.0	1960.4	102.8970	4.6227	102.8970	4.6227	HS 92.5	166.4

-- RATING FACTOR FOR SERVICEABILITY --

		AVAILABLE (LL+I) CAPACITY (FT-KIPS)				RATING FACTOR -SERVICEABILITY				RATING	SAFE
		TOP +BEND	TOP -BEND	BOTT +BEND	BOTT -BEND	TOP +BEND	TOP -BEND	BOTT +BEND	BOTT -BEND	VALUE	LOAD CAP.(TONS)
INV.	H15	1749.1	1531.1	1749.1	1531.1	79.5289	5.6966	79.5304	5.6966		
OPER.	HS20	2915.1	2551.8	2915.2	2551.8	71.4014	6.0171	71.4027	6.0171		

-- RATING FACTOR FOR SHEAR --

		AVAILABLE CAPACITY (KIPS)		RATING FACTOR - SHEAR		RATING	SAFE
		LEFT	RIGHT	LEFT	RIGHT	VALUE	LOAD
INV.	H15	192.15	192.15	5.2400	5.2400		
OPER.	HS20	320.25	320.25	5.4815	5.4815		

DETAIL DATA AT MOMENT CHECK POINT FOR BARS-PC RELEASE 5.5
COMPOSITE STEEL AND CONCRETE FLEXURAL MEMBER - LOAD FACTOR RATING

DATE 9/11/97

D/P STRUCTURE I.D. = CAJ-302
MEMBER I.D. -- G 1
C.P. LOCATION - 2.50

***** SECTION PROPERTIES IN COMPOSITE RANGE 3 OF SPAN 2 ******

-- STRUCTURAL STEEL PROPERTIES --

H (IN.)	Tweb (IN.)	H/Tweb	D (IN.)	D/Tweb	- B' (IN) - TOP	- B' (IN) - BOT	- B'/t - TOP	- B'/t - BOT	Lb (FT) TOP	Lb (FT) BOT	Ry (IN) TOP	Ry (IN) BOT	- Lb / Ry TOP	- Lb / Ry BOT	HYBRID RATIO, R +BEND	HYBRID RATIO, R -BEND
36.13	.69	52.58	33.88	49.31	5.66	5.66	5.03	5.03	CONT	24.92	3.46	3.46	.00	86.31	1.0000	1.0000

-- COMPOSITE CONCRETE PROPERTIES --

EFF.WIDTH (IN.)	EFF.THICK. (IN.)	VALUE N	(AS)C (SQ.IN.)	(DS)C (IN.)	VALUE a	VALUE Y	Atf (SQ.IN.)	Abf (SQ.IN.)	Aw (SQ.IN.)
90.8	8.0	9	.00	.00	7.82	.0	13.50	13.50	23.27

-- SECTION PROPERTIES -- -------- SECTION MODULUS -------- ---- PLASTIC SECTION MODULUS ----

	GROSS AREA SQ.IN.	NET AREA +BEND SQ.IN.	NET AREA -BEND SQ.IN.	IX +BEND IN.**4	IX -BEND IN.**4	C (BOT) IN.	TOP +BEND IN.**3	TOP -BEND IN.**3	BOTT +BEND IN.**3	BOTT -BEND IN.**3	TOP +BEND IN.**3	TOP -BEND+ IN.**3	BOTT +BEND IN.**3	BOTT -BEND IN.**3
NON-COM	50.27	50.27	50.27	10496.8	10496.8	18.06	581.1	581.1	581.1	581.1	669.56	669.56	669.56	669.56
COM(N=N)				27404.0	.0	32.27	7114.8	2312.2	849.1	849.1				
COM(N=3N)				19961.7	.0	26.10	1991.6	1107.6	764.8	764.8				

-- ULTIMATE STRENGTH --

Fy (PSI) STEEL	f'c (PSI) CONC.	Fy (PSI) REBAR	2055/(SQRT Fy) TOP FLANGE	2055/(SQRT Fy) BOT FLANGE	2200/(SQRT Fy) TOP FLANGE	2200/(SQRT Fy) BOT FLANGE	-- YIELD STRESS, Fy (PSI) -- BOT FLANGE	TOP FLANGE	WEB
36000.	3000.	50000.	10.83	10.83	11.60	11.60	36000.	36000.	36000.

***** SECTION QUALIFICATION *****

	STIFFENED LONG	STIFFENED TRANV	UNSTIFFENED	COMPACT	BRACED NON-COMPACT	UNBRACED NON-COMPACT	REDUCTION FACTOR	SYMMETRICAL	UNSYMMETRICAL
+BEND			X	X			1.0000		X
-BEND			X			X	1.0000	X	

***** SECTION CAPACITY *****

+BEND ML = .00 FT-KIPS, MR = .00 FT-KIPS
-BEND ML = 35.91 FT-KIPS, MR = 416.45 FT-KIPS, M1/M2 = .0862 CB = 1.0

--- NON-COMPOSITE MOMENT CAPACITY (FT-KIPS) --- -- COMPOSITE MOMENT CAPACITY (FT-KIPS) -- -- SHEAR CAPACITY (KIPS) --

	TOP +BEND	TOP -BEND	BOTT +BEND	BOTT -BEND	MU	MAX. CAP. STEEL	MAX. CAP. CONC.	MU	VU LEFT	VU RIGHT
INV.	1542.12	804.64	1542.12	804.67	2008.68	669.56	2671.70	3341.26	485.92	485.92
OPER.	2570.20	1341.06	2570.20	1341.11	2008.68	669.56	2671.70	3341.26	485.92	485.92

***** MOMENT (FT-KIPS) AND SHEAR (KIPS) *****

-- DEAD LOAD --

M (DL)	M (SDL)	REDIS. M-(DL)	REDIS. M-(SDL)	V (DL)	V (SDL)
291.98	163.79	291.98	163.79	-.15	.29

DETAIL DATA AT MOMENT CHECK POINT FOR
COMPOSITE STEEL AND CONCRETE FLEXURAL MEMBER - LOAD FACTOR RATING

DATE 9/11/97

D/P STRUCTURE I.D. = CAJ-302
MEMBER I.D. -- G 1
C.P. LOCATION -- 2.50

***** LIVE LOAD CALCULATIONS (IMPACT FACTOR = .249 FOR +BEND AND = .300 FOR -BEND)

	LIVE LOAD		-- LIVE LOAD -- TRUCK MOMENT: REDIS LL+I FT-KIPS	LL+IMP FT-KIPS	LL FT-KIPS	LOC.NO. 1 WHEEL FT.	DIR	LANE MOMENT: LL+IMP FT-KIPS	LL FT-KIPS	LOC.CONC. LOAD #1 FT.	LOC.CONC. LOAD #2 FT.	FIXED SHEAR +V KIPS	FIXED SHEAR -V KIPS	MAX SHEAR +V KIPS	MAX SHEAR -V KIPS
INV.	H15	+BEND	329.13	309.2	247.6	85.167	R	329.1	263.5	71.167	.000	2.67	7.58		
		-BEND	29.56	26.5	20.4	135.328	R	29.6	22.7	121.328	.000	2.78	2.78	14.39	14.39
OPER.	HS20	+BEND	604.19	604.2	483.8	57.167	L	438.8	351.4	71.167	.000	2.28	6.69		
		-BEND	49.17	49.2	37.8	144.477	R	39.4	30.3	121.328	.000	2.37	2.37	24.24	24.24

***** ORDINATES OF AND AREAS UNDER MOMENT INFLUENCE LINE (CONTINUOUS SPAN) *****

	SPAN 1	SPAN 2	SPAN 3	SPAN 4	SPAN 5	SPAN 6
T 0	.000	.000	.000	.000	.000	.000
E 1	-.174	1.242	-.447	.000	.000	.000
N 2	-.337	3.475	-.805	.000	.000	.000
T 3	-.480	6.321	-1.034	.000	.000	.000
H 4	-.592	9.581	-1.132	.000	.000	.000
5	-.662	13.243	-1.116	.000	.000	.000
P 6	-.681	9.705	-1.006	.000	.000	.000
O 7	-.638	6.547	-.820	.000	.000	.000
I 8	-.523	3.759	-.578	.000	.000	.000
N 9	-.324	1.484	-.299	.000	.000	.000
T 0	.000	.000	.000	.000	.000	.000

							AREA TOTALS
POS AREA	.0	420.3	.0	.0	.0	.0	420.3
NEG AREA	14.6	.0	22.1	.0	.0	.0	36.7

***** MOMENT INFLUENCE LINE (SIMPLE SPAN)

X-DIST (FT.)	.00	.00	.00	POS AREA = .00
Y-ORDINATE	.00	.00	.00	

DETAIL DATA AT MOMENT CHECK POINT FOR
COMPOSITE STEEL AND CONCRETE FLEXURAL MEMBER - LOAD FACTOR RATING

DATE 9/11/97

D/P STRUCTURE I.D. = CAJ-302
MEMBER I.D. -- G 1
C.P. LOCATION -- 2.50

***** RATING FACTOR *****

-- RATING FACTOR FOR MOMENT --

		AVAILABLE (LL+I) CAPACITY (FT-KIPS)				RATING FACTOR - MOMENT				RATING	SAFE
		TOP +BEND	TOP -BEND	BOTT +BEND	BOTT -BEND	TOP +BEND	TOP -BEND	BOTT +BEND	BOTT -BEND	VALUE	LOAD CAP.(TONS)
INV.	H15	1268.7	1078.1	1268.7	1078.1	3.8545	36.4722	3.8545	36.4733		
OPER.	HS20	2114.4	1796.8	2114.4	1796.9	3.4996	36.5415	3.4996	36.5426		

-- RATING FACTOR FOR SERVICEABILITY --

		AVAILABLE (LL+I) CAPACITY (FT-KIPS)				RATING FACTOR -SERVICEABILITY				RATING	SAFE
		TOP +BEND	TOP -BEND	BOTT +BEND	BOTT -BEND	TOP +BEND	TOP -BEND	BOTT +BEND	BOTT -BEND	VALUE	LOAD CAP.(TONS)
INV.	H15	9670.4	1267.2	1086.9	1267.2	29.3815	42.8691	3.3023	42.8705	H 49.5	49.5
OPER.	HS20	16117.4	2112.0	1811.5	2112.0	26.6761	42.9506	2.9983	42.9519	HS 60.0	107.9

-- RATING FACTOR FOR SHEAR --

		AVAILABLE CAPACITY (KIPS)		RATING FACTOR - SHEAR		RATING	SAFE
		LEFT	RIGHT	LEFT	RIGHT	VALUE	LOAD
INV.	H15	224.19	224.19	15.5758	15.5758		
OPER.	HS20	373.64	373.64	15.4149	15.4149		

DETAIL DATA AT MOMENT CHECK POINT FOR BARS-PC RELEASE 5.5
COMPOSITE STEEL AND CONCRETE FLEXURAL MEMBER - LOAD FACTOR RATING

DATE 9/11/97

D/P STRUCTURE I.D. = CAJ-302
MEMBER I.D. -- G 1
C.P. LOCATION - 3.00

***** SECTION PROPERTIES IN COMPOSITE RANGE 1 OF SPAN 3 ******

-- STRUCTURAL STEEL PROPERTIES --

H (IN.)	Tweb (IN.)	H/Tweb	D (IN.)	D/Tweb	- B' (IN) - TOP	- B' (IN) - BOT	- B'/t - TOP	- B'/t - BOT	Lb (FT) TOP	Lb (FT) BOT	Ry (IN) TOP	Ry (IN) BOT	- Lb / Ry TOP	- Lb / Ry BOT	HYBRID RATIO, R +BEND	HYBRID RATIO, R -BEND
37.25	.63	59.60	33.88	54.20	6.19	6.19	3.67	3.67	CONT	15.05	3.62	3.62	.00	49.85	1.0000	1.0000

-- COMPOSITE CONCRETE PROPERTIES --

EFF.WIDTH (IN.)	EFF.THICK. (IN.)	VALUE N	(AS)C (SQ.IN.)	(DS)C (IN.)	VALUE a	VALUE Y	Atf (SQ.IN.)	Abf (SQ.IN.)	Aw (SQ.IN.)
90.8	8.0	9	.00	.00	.00	.5	21.13	21.13	21.17

-- SECTION PROPERTIES -- -------- SECTION MODULUS -------- ---- PLASTIC SECTION MODULUS ----

	GROSS AREA SQ.IN.	NET AREA +BEND SQ.IN.	NET AREA -BEND SQ.IN.	IX +BEND IN.**4	IX -BEND IN.**4	C (BOT) IN.	TOP +BEND IN.**3	TOP -BEND IN.**3	BOTT +BEND IN.**3	BOTT -BEND IN.**3	TOP +BEND IN.**3	TOP -BEND+ IN.**3	BOTT +BEND IN.**3	BOTT -BEND IN.**3
NON-COM	63.42	63.42	63.42	15417.7	15417.7	18.62	827.8	827.8	827.8	827.8	931.24	931.24	931.24	931.24
COM(N=N)				15417.7	.0	18.62	827.8	.0	827.8	827.8				
COM(N=3N)				15417.7	.0	18.62	827.8	.0	827.8	827.8				

-- ULTIMATE STRENGTH --

Fy (PSI) STEEL	f'c (PSI) CONC.	Fy (PSI) REBAR	2055/(SQRT Fy) TOP FLANGE	2055/(SQRT Fy) BOT FLANGE	2200/(SQRT Fy) TOP FLANGE	2200/(SQRT Fy) BOT FLANGE	-- YIELD STRESS, Fy (PSI) -- BOT FLANGE	TOP FLANGE	WEB
36000.	3000.	50000.	10.83	10.83	11.60	11.60	36000.	36000.	36000.

***** SECTION QUALIFICATION *****

	STIFFENED LONG	STIFFENED TRANV	UNSTIFFENED	COMPACT	BRACED NON-COMPACT	UNBRACED NON-COMPACT	REDUCTION FACTOR	SYMMETRICAL	UNSYMMETRICAL
+BEND			X	X			1.0000		X
-BEND			X	X			1.0000	X	

***** SECTION CAPACITY *****

+BEND ML = .00 FT-KIPS, MR = .00 FT-KIPS
-BEND ML = -353.72 FT-KIPS, MR = -785.70 FT-KIPS

--- NON-COMPOSITE MOMENT CAPACITY (FT-KIPS) --- -- COMPOSITE MOMENT CAPACITY (FT-KIPS) -- -- SHEAR CAPACITY (KIPS) --

	TOP +BEND	TOP -BEND	BOTT +BEND	BOTT -BEND	MU	MAX. CAP. STEEL	MAX. CAP. CONC.	MU	VU LEFT	VU RIGHT
INV.	1915.23	1289.41	1915.23	1146.20	2793.73	931.24	3218.43	4149.67	442.07	442.07
OPER.	3192.05	2149.02	3192.05	1910.33	2793.73	931.24	3218.43	4149.67	442.07	442.07

***** MOMENT (FT-KIPS) AND SHEAR (KIPS) *****

-- DEAD LOAD --

M (DL)	M (SDL)	REDIS. M-(DL)	REDIS. M-(SDL)	V (DL)	V (SDL)
-412.28	-132.87	-412.28	-132.87	28.16	10.87

DETAIL DATA AT MOMENT CHECK POINT FOR
COMPOSITE STEEL AND CONCRETE FLEXURAL MEMBER - LOAD FACTOR RATING

DATE 9/11/97

D/P STRUCTURE I.D. = CAJ-302
MEMBER I.D. -- G 1
C.P. LOCATION -- 3.00

***** LIVE LOAD CALCULATIONS (IMPACT FACTOR = .300 FOR +BEND AND = .281 FOR -BEND)

	LIVE LOAD		-- LIVE LOAD -- TRUCK MOMENT: REDIS LL+I FT-KIPS	LL+IMP FT-KIPS	LL FT-KIPS	LOC.NO. 1 WHEEL FT.	DIR	LANE MOMENT: LL+IMP FT-KIPS	LL FT-KIPS	LOC.CONC. LOAD #1 FT.	LOC.CONC. LOAD #2 FT.	FIXED SHEAR +V KIPS	FIXED SHEAR -V KIPS	MAX SHEAR +V KIPS	MAX SHEAR -V KIPS
INV.	H15	+BEND	10.14	10.1	7.8	5.922	L	9.1	7.0	19.922	.000	8.38	.33		
		-BEND	240.55	143.0	111.6	72.352	L	240.6	187.8	86.352	121.328	8.26	8.26	28.18	29.33
OPER.	HS20	+BEND	19.53	19.5	15.0	-4.034	L	12.1	9.3	19.922	.000	10.86	.64		
		-BEND	326.12	326.1	254.7	64.759	L	320.7	250.5	86.352	121.328	10.69	10.69	46.27	48.16

***** ORDINATES OF AND AREAS UNDER MOMENT INFLUENCE LINE (CONTINUOUS SPAN) *****

	SPAN 1	SPAN 2	SPAN 3	SPAN 4	SPAN 5	SPAN 6
T 0	.000	.000	.000	.000	.000	.000
E 1	.109	-.747	-1.265	.000	.000	.000
N 2	.211	-1.833	-2.280	.000	.000	.000
T 3	.300	-2.995	-2.928	.000	.000	.000
H 4	.370	-4.068	-3.203	.000	.000	.000
5	.414	-4.927	-3.158	.000	.000	.000
P 6	.425	-5.450	-2.846	.000	.000	.000
O 7	.399	-5.513	-2.321	.000	.000	.000
I 8	.327	-4.994	-1.637	.000	.000	.000
N 9	.203	-3.432	-.845	.000	.000	.000
T 0	.000	.000	.000	.000	.000	.000

							AREA TOTALS
POS AREA	9.1	.0	.0	.0	.0	.0	9.1
NEG AREA	.0	257.9	62.5	.0	.0	.0	320.3

***** MOMENT INFLUENCE LINE (SIMPLE SPAN)

X-DIST (FT.)	.00	.00	.00	POS AREA = .00
Y-ORDINATE	.00	.00	.00	

DETAIL DATA AT MOMENT CHECK POINT FOR
COMPOSITE STEEL AND CONCRETE FLEXURAL MEMBER - LOAD FACTOR RATING

DATE 9/11/97

D/P STRUCTURE I.D. = CAJ-302
MEMBER I.D. -- G 1
C.P. LOCATION -- 3.00

***** RATING FACTOR *****

-- RATING FACTOR FOR MOMENT --

		AVAILABLE (LL+I) CAPACITY (FT-KIPS)				RATING FACTOR - MOMENT				RATING	SAFE
		TOP +BEND	TOP -BEND	BOTT +BEND	BOTT -BEND	TOP +BEND	TOP -BEND	BOTT +BEND	BOTT -BEND	VALUE	LOAD CAP.(TONS)
INV.	H15	2242.3	962.3	2242.3	962.3	221.1873	4.0005	221.1873	4.0005	H 60.0	60.0
OPER.	HS20	3737.2	1603.9	3737.2	1603.9	191.3669	4.9180	191.3669	4.9180	HS 98.4	177.0

-- RATING FACTOR FOR SERVICEABILITY --

		AVAILABLE (LL+I) CAPACITY (FT-KIPS)				RATING FACTOR -SERVICEABILITY				RATING	SAFE
		TOP +BEND	TOP -BEND	BOTT +BEND	BOTT -BEND	TOP +BEND	TOP -BEND	BOTT +BEND	BOTT -BEND	VALUE	LOAD CAP.(TONS)
INV.	H15	1742.6	1265.3	1742.6	1265.3	171.8944	5.2601	171.8976	5.2601		
OPER.	HS20	2904.3	2108.9	2904.4	2108.9	148.7197	6.4666	148.7224	6.4666		

-- RATING FACTOR FOR SHEAR --

		AVAILABLE CAPACITY (KIPS)		RATING FACTOR - SHEAR		RATING	SAFE
		LEFT	RIGHT	LEFT	RIGHT	VALUE	LOAD
INV.	H15	180.62	180.62	6.1582	6.1582		
OPER.	HS20	301.03	301.03	6.2502	6.2502		

DETAIL DATA AT MOMENT CHECK POINT FOR BARS-PC RELEASE 5.5
COMPOSITE STEEL AND CONCRETE FLEXURAL MEMBER - LOAD FACTOR RATING

DATE 9/11/97

D/P STRUCTURE I.D. = CAJ-302
MEMBER I.D. -- G 1
C.P. LOCATION - 3.60

***** SECTION PROPERTIES IN COMPOSITE RANGE 2 OF SPAN 3 ******

-- STRUCTURAL STEEL PROPERTIES --

H (IN.)	Tweb (IN.)	H/Tweb	D (IN.)	D/Tweb	- B' (IN) - TOP	BOT	- B'/t - TOP	BOT	Lb (FT) TOP	BOT	Ry (IN) TOP	BOT	- Lb / Ry TOP	BOT	HYBRID RATIO, R +BEND	-BEND
35.50	.63	56.80	33.88	54.20	5.69	5.69	7.00	7.00	CONT	20.87	3.46	3.46	.00	72.30	1.0000	1.0000

-- COMPOSITE CONCRETE PROPERTIES --

EFF.WIDTH (IN.)	EFF.THICK. (IN.)	VALUE N	(AS)C (SQ.IN.)	(DS)C (IN.)	VALUE a	VALUE Y	Atf (SQ.IN.)	Abf (SQ.IN.)	Aw (SQ.IN.)
90.8	8.0	9	.00	.00	6.32	.0	9.75	9.75	21.17

-- SECTION PROPERTIES -- -------- SECTION MODULUS -------- ---- PLASTIC SECTION MODULUS ----

	GROSS AREA SQ.IN.	NET AREA +BEND SQ.IN.	NET AREA -BEND SQ.IN.	IX +BEND IN.**4	IX -BEND IN.**4	C (BOT) IN.	TOP +BEND IN.**3	TOP -BEND IN.**3	BOTT +BEND IN.**3	BOTT -BEND IN.**3	TOP +BEND IN.**3	TOP -BEND+ IN.**3	BOTT +BEND IN.**3	BOTT -BEND IN.**3
NON-COM	40.67	40.67	40.67	7891.1	7891.1	17.75	444.6	444.6	444.6	444.6	517.49	517.49	517.49	517.49
COM(N=N)				7891.1	.0	17.75	444.6	.0	444.6	444.6				
COM(N=3N)				7891.1	.0	17.75	444.6	.0	444.6	444.6				

-- ULTIMATE STRENGTH --

Fy (PSI) STEEL	f'c (PSI) CONC.	Fy (PSI) REBAR	2055/(SQRT Fy) TOP FLANGE	2055/(SQRT Fy) BOT FLANGE	2200/(SQRT Fy) TOP FLANGE	2200/(SQRT Fy) BOT FLANGE	-- YIELD STRESS, Fy (PSI) -- BOT FLANGE	TOP FLANGE	WEB
36000.	3000.	50000.	10.83	10.83	11.60	11.60	36000.	36000.	36000.

***** SECTION QUALIFICATION *****

	STIFFENED LONG	STIFFENED TRANV	UNSTIFFENED	COMPACT	BRACED NON-COMPACT	UNBRACED NON-COMPACT	REDUCTION FACTOR	SYMMETRICAL	UNSYMMETRICAL
+BEND			X	X			1.0000		X
-BEND			X			X	1.0000	X	

***** SECTION CAPACITY *****

+BEND ML = .00 FT-KIPS, MR = .00 FT-KIPS
-BEND ML = -134.23 FT-KIPS, MR = -353.72 FT-KIPS, M1/M2 = .3795 CB = 1.0

--- NON-COMPOSITE MOMENT CAPACITY (FT-KIPS) --- -- COMPOSITE MOMENT CAPACITY (FT-KIPS) -- -- SHEAR CAPACITY (KIPS) --

	TOP +BEND	TOP -BEND	BOTT +BEND	BOTT -BEND	MU	MAX. CAP. STEEL	MAX. CAP. CONC.	MU	VU LEFT	VU RIGHT
INV.	1272.06	615.55	1272.06	615.57	1552.46	517.49	2238.64	2756.13	442.07	442.07
OPER.	2120.10	1025.92	2120.10	1025.94	1552.46	517.49	2238.64	2756.13	442.07	442.07

***** MOMENT (FT-KIPS) AND SHEAR (KIPS) *****

-- DEAD LOAD --

M (DL)	M (SDL)	REDIS. M-(DL)	REDIS. M-(SDL)	V (DL)	V (SDL)
-60.13	-5.50	-60.13	-5.50	10.63	3.05

DETAIL DATA AT MOMENT CHECK POINT FOR
COMPOSITE STEEL AND CONCRETE FLEXURAL MEMBER - LOAD FACTOR RATING

DATE 9/11/97

D/P STRUCTURE I.D. = CAJ-302
MEMBER I.D. -- G 1
C.P. LOCATION -- 3.60

***** LIVE LOAD CALCULATIONS (IMPACT FACTOR = .300 FOR +BEND AND = .249 FOR -BEND)

			-- LIVE LOAD -- TRUCK MOMENT					LANE MOMENT				FIXED SHEAR		MAX SHEAR	
	LIVE LOAD		REDIS LL+I FT-KIPS	LL+IMP FT-KIPS	LL FT-KIPS	LOC.NO. 1 WHEEL FT.	DIR	LL+IMP FT-KIPS	LL FT-KIPS	LOC.CONC. LOAD #1 FT.	LOC.CONC. LOAD #2 FT.	+V KIPS	-V KIPS	+V KIPS	-V KIPS
INV.	H15	+BEND	138.18	138.2	106.3	113.427	L	113.2	87.1	127.427	.000	2.06	11.33		
		-BEND	68.60	55.8	44.7	72.352	L	68.6	54.9	86.352	.000	1.98	1.98	13.59	13.59
OPER.	HS20	+BEND	206.67	206.7	159.0	141.426	R	151.0	116.1	127.427	.000	10.86	16.94		
		-BEND	127.22	127.2	101.9	64.759	L	91.5	73.2	86.352	.000	10.43	10.43	18.11	18.11

***** ORDINATES OF AND AREAS UNDER MOMENT INFLUENCE LINE (CONTINUOUS SPAN) *****

	SPAN 1	SPAN 2	SPAN 3	SPAN 4	SPAN 5	SPAN 6
T 0	.000	.000	.000	.000	.000	.000
E 1	.043	-.299	.714	.000	.000	.000
N 2	.084	-.733	1.528	.000	.000	.000
T 3	.120	-1.198	2.488	.000	.000	.000
H 4	.148	-1.627	3.598	.000	.000	.000
5	.165	-1.971	4.836	.000	.000	.000
P 6	.170	-2.180	6.180	.000	.000	.000
O 7	.159	-2.205	4.560	.000	.000	.000
I 8	.131	-1.998	3.005	.000	.000	.000
N 9	.081	-1.373	1.492	.000	.000	.000
T 0	.000	.000	.000	.000	.000	.000

							AREA TOTALS
POS AREA	3.7	.0	86.6	.0	.0	.0	90.3
NEG AREA	.0	103.1	.0	.0	.0	.0	103.1

***** MOMENT INFLUENCE LINE (SIMPLE SPAN)

X-DIST (FT.)	.00	.00	.00	POS AREA =	.00
Y-ORDINATE	.00	.00	.00		

DETAIL DATA AT MOMENT CHECK POINT FOR
COMPOSITE STEEL AND CONCRETE FLEXURAL MEMBER - LOAD FACTOR RATING

DATE 9/11/97

D/P STRUCTURE I.D. = CAJ-302
MEMBER I.D. -- G 1
C.P. LOCATION -- 3.60

***** RATING FACTOR *****

-- RATING FACTOR FOR MOMENT --

		AVAILABLE (LL+I) CAPACITY (FT-KIPS)				RATING FACTOR - MOMENT				RATING	SAFE
		TOP +BEND	TOP -BEND	BOTT +BEND	BOTT -BEND	TOP +BEND	TOP -BEND	BOTT +BEND	BOTT -BEND	VALUE	LOAD CAP.(TONS)
INV.	H15	1311.4	576.2	1311.4	576.2	9.4909	8.3992	9.4909	8.3994		
OPER.	HS20	2185.7	960.3	2185.7	960.3	10.5759	7.5484	10.5759	7.5486		

-- RATING FACTOR FOR SERVICEABILITY --

		AVAILABLE (LL+I) CAPACITY (FT-KIPS)				RATING FACTOR -SERVICEABILITY				RATING	SAFE
		TOP +BEND	TOP -BEND	BOTT +BEND	BOTT -BEND	TOP +BEND	TOP -BEND	BOTT +BEND	BOTT -BEND	VALUE	LOAD CAP.(TONS)
INV.	H15	799.6	720.8	799.6	720.8	5.7866	10.5079	5.7867	10.5082	H 86.8	86.8
OPER.	HS20	1332.6	1201.4	1332.7	1201.4	6.4482	9.4435	6.4483	9.4437	HS129.0	232.1

-- RATING FACTOR FOR SHEAR --

		AVAILABLE CAPACITY (KIPS)		RATING FACTOR - SHEAR		RATING	SAFE
		LEFT	RIGHT	LEFT	RIGHT	VALUE	LOAD
INV.	H15	195.82	195.82	14.4135	14.4135		
OPER.	HS20	326.37	326.37	18.0169	18.0169		

DETAIL DATA AT MOMENT CHECK POINT FOR BARS-PC RELEASE 5.5
COMPOSITE STEEL AND CONCRETE FLEXURAL MEMBER - LOAD FACTOR RATING

DATE 9/11/97

D/P STRUCTURE I.D. = CAJ-302
MEMBER I.D. -- G 1
C.P. LOCATION - 4.00

***** SECTION PROPERTIES IN COMPOSITE RANGE 2 OF SPAN 3 ******

-- STRUCTURAL STEEL PROPERTIES --

H (IN.)	Tweb (IN.)	H/Tweb	D (IN.)	D/Tweb	- B' (IN) - TOP	BOT	- B'/t - TOP	BOT	Lb (FT) TOP	BOT	Ry (IN) TOP	BOT	- Lb / Ry TOP	BOT	HYBRID RATIO, R +BEND	-BEND
35.50	.63	56.80	33.88	54.20	5.69	5.69	7.00	7.00	CONT	20.87	3.46	3.46	.00	72.30	1.0000	1.0000

-- COMPOSITE CONCRETE PROPERTIES --

EFF.WIDTH (IN.)	EFF.THICK. (IN.)	VALUE N	(AS)C (SQ.IN.)	(DS)C (IN.)	VALUE a	VALUE Y	Atf (SQ.IN.)	Abf (SQ.IN.)	Aw (SQ.IN.)
90.8	8.0	9	.00	.00	6.32	.0	9.75	9.75	21.17

-- SECTION PROPERTIES -- -------- SECTION MODULUS -------- ---- PLASTIC SECTION MODULUS ----

	GROSS AREA SQ.IN.	NET AREA +BEND SQ.IN.	NET AREA -BEND SQ.IN.	IX +BEND IN.**4	IX -BEND IN.**4	C (BOT) IN.	TOP +BEND IN.**3	TOP -BEND IN.**3	BOTT +BEND IN.**3	BOTT -BEND IN.**3	TOP +BEND IN.**3	TOP -BEND+ IN.**3	BOTT +BEND IN.**3	BOTT -BEND IN.**3
NON-COM	40.67	40.67	40.67	7891.1	7891.1	17.75	444.6	444.6	444.6	444.6	517.49	517.49	517.49	517.49
COM(N=N)				7891.1	.0	17.75	444.6	.0	444.6	444.6				
COM(N=3N)				7891.1	.0	17.75	444.6	.0	444.6	444.6				

-- ULTIMATE STRENGTH --

Fy (PSI) STEEL	f'c (PSI) CONC.	Fy (PSI) REBAR	2055/(SQRT Fy) TOP FLANGE	2055/(SQRT Fy) BOT FLANGE	2200/(SQRT Fy) TOP FLANGE	2200/(SQRT Fy) BOT FLANGE	-- YIELD STRESS, Fy (PSI) -- BOT FLANGE	TOP FLANGE	WEB
36000.	3000.	50000.	10.83	10.83	11.60	11.60	36000.	36000.	36000.

***** SECTION QUALIFICATION *****

	STIFFENED LONG	STIFFENED TRANV	UNSTIFFENED	COMPACT	BRACED NON-COMPACT	UNBRACED NON-COMPACT	REDUCTION FACTOR	SYMMETRICAL	UNSYMMETRICAL
+BEND			X	X			1.0000		X
-BEND			X	X			1.0000	X	

***** SECTION CAPACITY *****

+BEND ML = .00 FT-KIPS, MR = .00 FT-KIPS
-BEND ML = .00 FT-KIPS, MR = .00 FT-KIPS

--- NON-COMPOSITE MOMENT CAPACITY (FT-KIPS) --- -- COMPOSITE MOMENT CAPACITY (FT-KIPS) -- -- SHEAR CAPACITY (KIPS) --

	TOP +BEND	TOP -BEND	BOTT +BEND	BOTT -BEND	MU	MAX. CAP. STEEL	MAX. CAP. CONC.	MU	VU LEFT	VU RIGHT
INV.	1272.06	716.52	1272.06	615.57	1552.46	517.49	2238.64	2756.13	442.07	442.07
OPER.	2120.10	1194.20	2120.10	1025.94	1552.46	517.49	2238.64	2756.13	442.07	442.07

***** MOMENT (FT-KIPS) AND SHEAR (KIPS) *****

-- DEAD LOAD --

M (DL)	M (SDL)	REDIS. M-(DL)	REDIS. M-(SDL)	V (DL)	V (SDL)
.00	.00	.00	.00	-.77	-2.15

DETAIL DATA AT MOMENT CHECK POINT FOR
COMPOSITE STEEL AND CONCRETE FLEXURAL MEMBER - LOAD FACTOR RATING

DATE 9/11/97

D/P STRUCTURE I.D. = CAJ-302
MEMBER I.D. -- G 1
C.P. LOCATION -- 4.00

***** LIVE LOAD CALCULATIONS (IMPACT FACTOR = .300 FOR +BEND AND = .300 FOR -BEND)

	LIVE LOAD		-- LIVE LOAD -- TRUCK MOMENT: REDIS LL+I FT-KIPS	LL+IMP FT-KIPS	LL FT-KIPS	LOC.NO. 1 WHEEL FT.	DIR	LANE MOMENT: LL+IMP FT-KIPS	LL FT-KIPS	LOC.CONC. LOAD #1 FT.	LOC.CONC. LOAD #2 FT.	FIXED SHEAR +V KIPS	FIXED SHEAR -V KIPS	MAX SHEAR +V KIPS	MAX SHEAR -V KIPS
INV.	H15	+BEND	.00	.0	.0	122.576	L	.0	.0	.000	.000	.00	.00		
		-BEND	.00	.0	.0	.000	L	.0	.0	.000	.000	.00	.00		
														23.82	.00
OPER.	HS20	+BEND	.00	.0	.0	108.576	L	.0	.0	.000	.000	.00	.00		
		-BEND	.00	.0	.0	.000	L	.0	.0	.000	.000	.00	.00		
														41.57	.00

***** ORDINATES OF AND AREAS UNDER MOMENT INFLUENCE LINE (CONTINUOUS SPAN) *****

	SPAN 1	SPAN 2	SPAN 3	SPAN 4	SPAN 5	SPAN 6
T 0	.000	.000	.000	.000	.000	.000
E 1	.000	.000	.000	.000	.000	.000
N 2	.000	.000	.000	.000	.000	.000
T 3	.000	.000	.000	.000	.000	.000
H 4	.000	.000	.000	.000	.000	.000
5	.000	.000	.000	.000	.000	.000
P 6	.000	.000	.000	.000	.000	.000
O 7	.000	.000	.000	.000	.000	.000
I 8	.000	.000	.000	.000	.000	.000
N 9	.000	.000	.000	.000	.000	.000
T 0	.000	.000	.000	.000	.000	.000

							AREA TOTALS
POS AREA	.0	.0	.0	.0	.0	.0	.0
NEG AREA	.0	.0	.0	.0	.0	.0	.0

***** MOMENT INFLUENCE LINE (SIMPLE SPAN)

X-DIST (FT.)	.00	.00	.00	POS AREA = .00
Y-ORDINATE	.00	.00	.00	

DETAIL DATA AT MOMENT CHECK POINT FOR
COMPOSITE STEEL AND CONCRETE FLEXURAL MEMBER - LOAD FACTOR RATING

DATE 9/11/97

D/P STRUCTURE I.D. = CAJ-302
MEMBER I.D. -- G 1
C.P. LOCATION -- 4.00

***** RATING FACTOR *****

-- RATING FACTOR FOR MOMENT --

		AVAILABLE (LL+I) CAPACITY (FT-KIPS)				RATING FACTOR - MOMENT				RATING	SAFE
		TOP +BEND	TOP -BEND	BOTT +BEND	BOTT -BEND	TOP +BEND	TOP -BEND	BOTT +BEND	BOTT -BEND	VALUE	LOAD CAP.(TONS)
INV.	H15	1272.1	576.2	1272.1	576.2	999.0000	999.0000	999.0000	999.0000		
OPER.	HS20	2120.1	960.3	2120.1	960.3	999.0000	999.0000	999.0000	999.0000		

-- RATING FACTOR FOR SERVICEABILITY --

		AVAILABLE (LL+I) CAPACITY (FT-KIPS)				RATING FACTOR -SERVICEABILITY				RATING	SAFE
		TOP +BEND	TOP -BEND	BOTT +BEND	BOTT -BEND	TOP +BEND	TOP -BEND	BOTT +BEND	BOTT -BEND	VALUE	LOAD CAP.(TONS)
INV.	H15	760.2	884.9	760.2	884.9	999.0000	999.0000	999.0000	999.0000		
OPER.	HS20	1267.0	1474.8	1267.0	1474.8	999.0000	999.0000	999.0000	999.0000		

-- RATING FACTOR FOR SHEAR --

		AVAILABLE CAPACITY (KIPS)		RATING FACTOR - SHEAR		RATING	SAFE
		LEFT	RIGHT	LEFT	RIGHT	VALUE	LOAD
INV.	H15	202.28	205.79	8.4927	8.4927	H 127.4	127.4
OPER.	HS20	337.13	342.98	8.1099	8.1099	HS162.2	292.0

SUMMARY OF SHEAR ANALYSIS

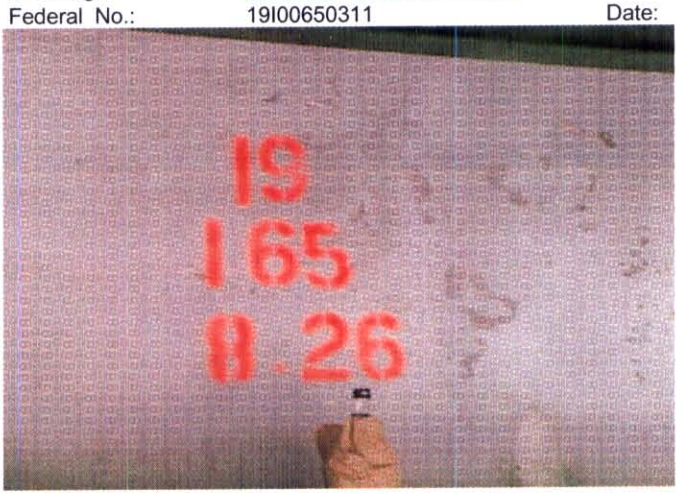
DATE 9/11/97

D/P STRUCTURE I.D. CAJ-302

MEMB. ID	MATL	SPAN NO.	DIS FRM L LT SPRT R FT.	DL SHEAR KIPS	SDL SHEAR KIPS	---INVENTORY---- LL+I MAX.V KIPS	T L	LL+I MIN.V KIPS	T L	---OPERATING---- LL+I MAX.V KIPS	T L	LL+I MIN.V KIPS	T L	--VEH. 1 -- LL+I MAX.V KIPS	--VEH. 1 -- LL+I MIN.V KIPS	--VEH. 2 -- LL+I MAX.V KIPS	--VEH. 2 -- LL+I MIN.V KIPS	--VEH. 3 -- LL+I MAX.V KIPS	--VEH. 3 -- LL+I MIN.V KIPS	--SPECIAL--- LL+I MAX.V KIPS	--SPECIAL--- LL+I MIN.V KIPS
G 1	CSC	1	.000 L	3.5	2.4	24.3	T	8.2	L	44.6	T	13.0	T	.0	.0	.0	.0	.0	.0	.0	.0
		1	13.281 L	9.0	3.2	12.6	T	13.6	L	18.9	T	18.1	L	.0	.0	.0	.0	.0	.0	.0	.0
		2	.000 L	37.0	16.5	36.7	L	1.4	L	58.4	T	2.4	T	.0	.0	.0	.0	.0	.0	.0	.0
		2	37.964 L	.1	.3	14.4	L	13.3	L	24.2	T	21.8	T	.0	.0	.0	.0	.0	.0	.0	.0
		3	.000 L	28.2	10.9	29.3	L	.4	L	48.2	T	.6	T	.0	.0	.0	.0	.0	.0	.0	.0
		3	18.297 L	10.6	3.1	13.6	L	11.3	T	18.1	L	16.0	T	.0	.0	.0	.0	.0	.0	.0	.0
		3	30.495 L	.8	2.2	6.8	L	23.8	T	10.9	T	41.6	T	.0	.0	.0	.0	.0	.0	.0	.0

Bridge No.: 00019 — I0065 — 8.26
Crossing:: I65 RAMP / 8TH AVE S SR
Federal No.: 19I00650311 Date: December 30, 2003

PIC1



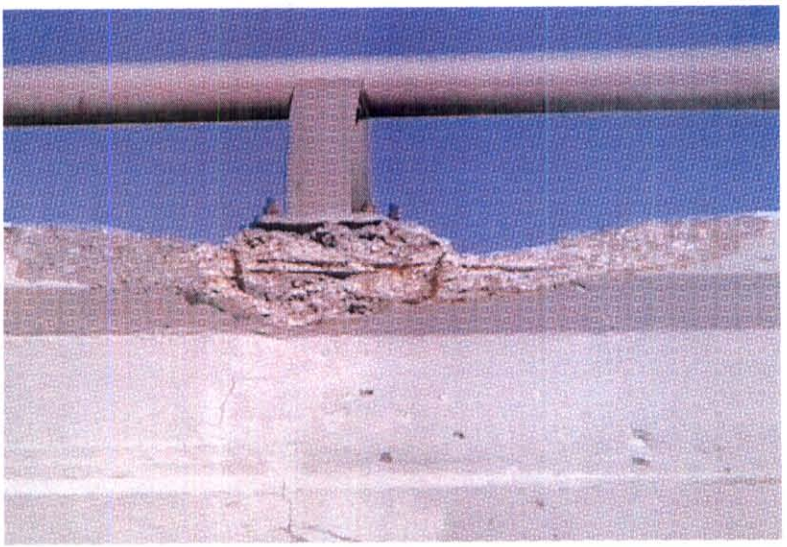
BRIDGE NO. AT ABUTMENT # 1

Bridge No.: 19 — I0065 — 8.26
Crossing:: I65 RAMP / 8TH AVE S SR
Federal N 19I00650311 Date: December 30, 2003

PIC2

ELEVATION LEFT VIEW

PIC3



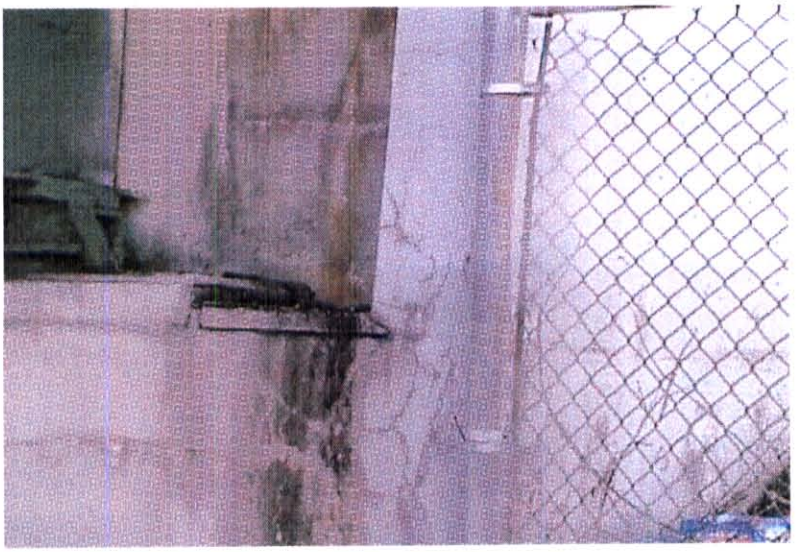
COLLISION DAMAGE AT LEFT SIDE AT SPAN #1

Bridge No.: 19 — I0065 — 8.26
Crossing:: I65 RAMP / 8TH AVE S SR
Federal No. 19I00650311 Date: December 30, 2003

PIC4

SPALL WITH EXPOSED STEEL AT ABUTMENT #2 LEFT SIDE

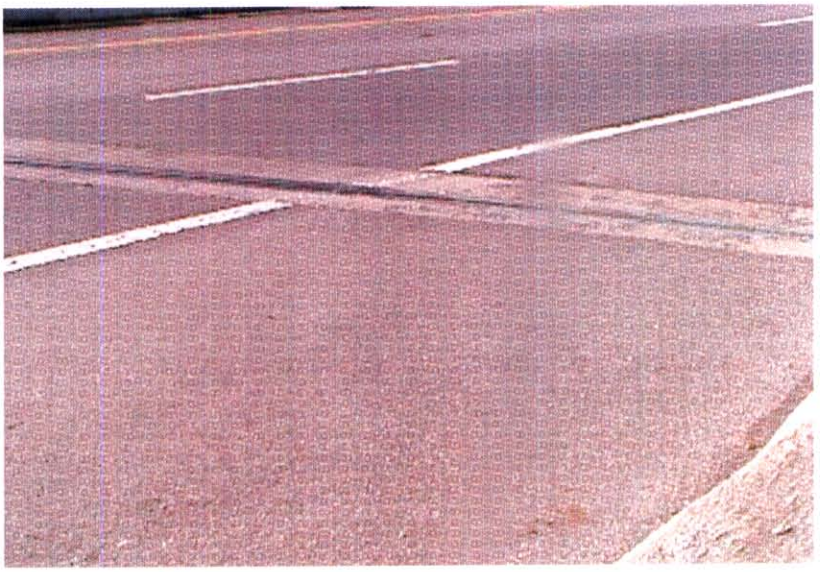
PIC5



RIGHT WING AT ABUTMENT #2 MAP CRACKING

Bridge No.: 19 — I0065 — 8.26
Crossing:: I65 RAMP / 8TH AVE S SR
Federal No.: 19I00650311 Date: December 30, 2003

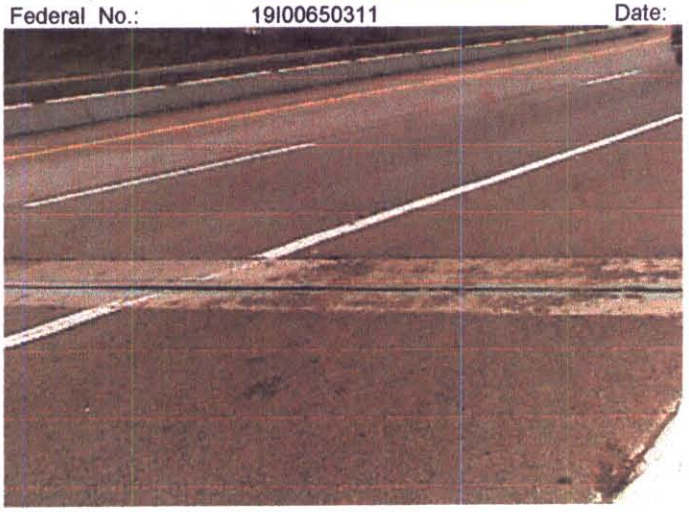
PIC6



VIEW ACROSS DECK

Bridge No.: 00019 — I 65 — 8.28
Crossing:: I65 RAMP / 8TH AVE S SR
Federal No.: 19I00650311 Date: October 22, 2001

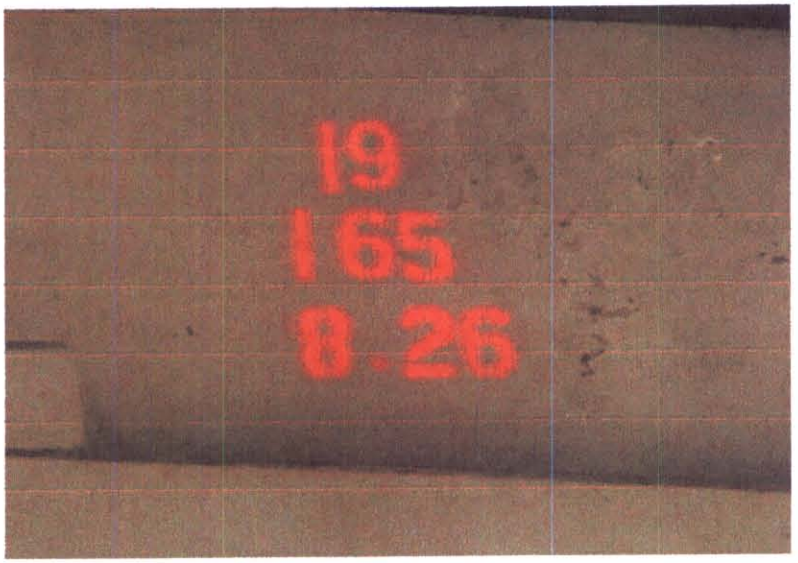
PIC1



VIEW ACROSS DECK

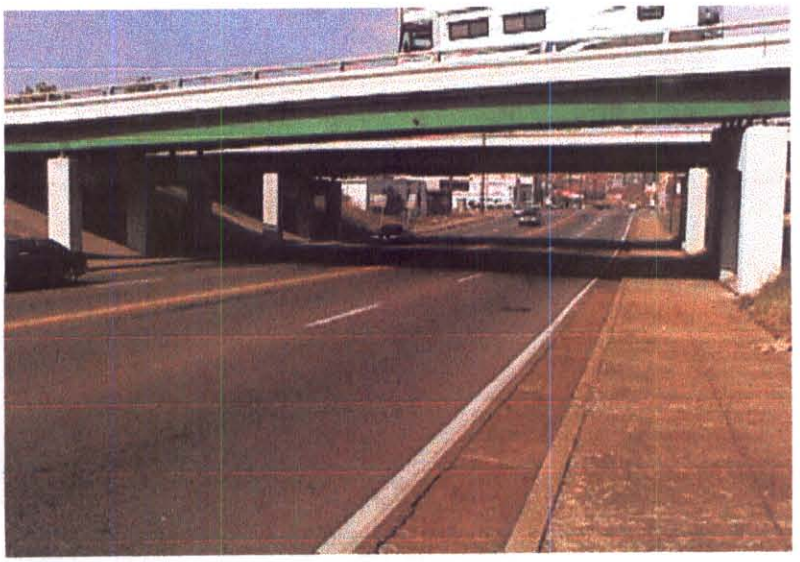
Bridge No.: 19 — I 65 — 8.28
Crossing:: I65 RAMP / 8TH AVE S SR
Federal No 19I00650311 Date: October 22, 2001

PIC2



BRIDGE NO. AT ABUTMENT # 1

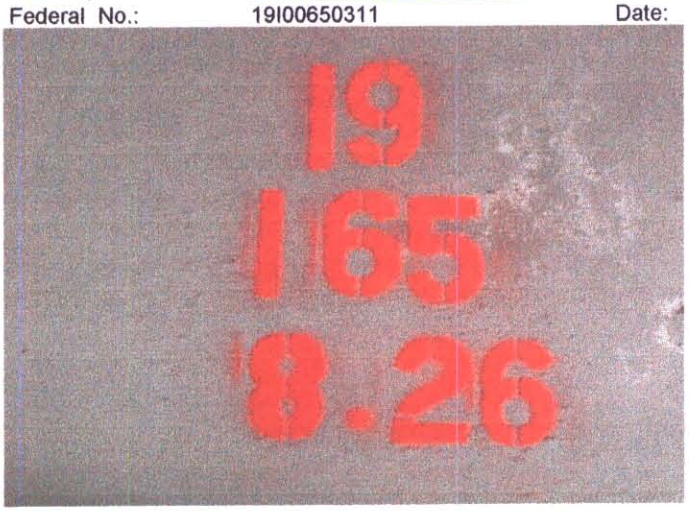
PIC3



ELEVATION LT VIEW

Bridge No.: 19 — I0065 — 0826
Crossing:: I65 RAMP / 8TH AVE S SR
Federal No.: 19I00650311 Date: March 27, 2000

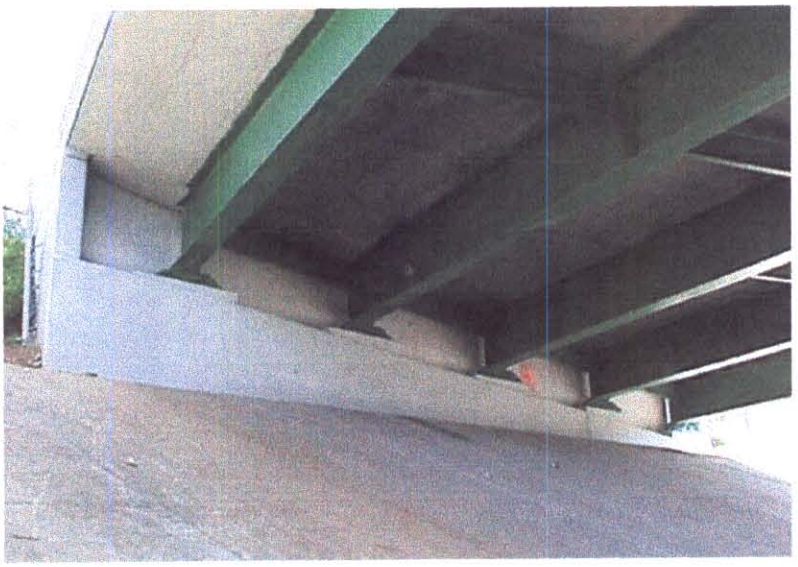
PIC1



BRIDGE NO. AT ABUTMENT # 1

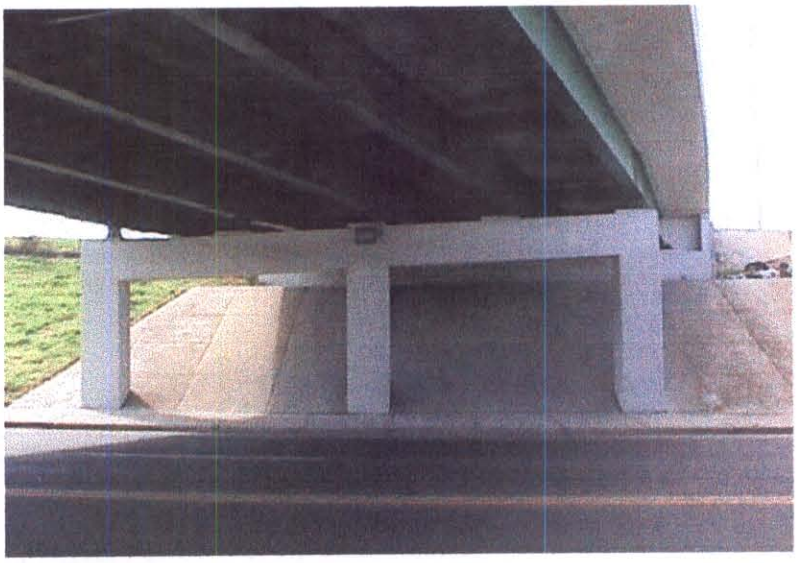
Bridge No.: 19 — I0065 — 0826
Crossing:: I65 RAMP / 8TH AVE S SR
Federal No 19I00650311 Date: March 27, 2000

PIC2



ABUTMENT TYPICAL

PIC3



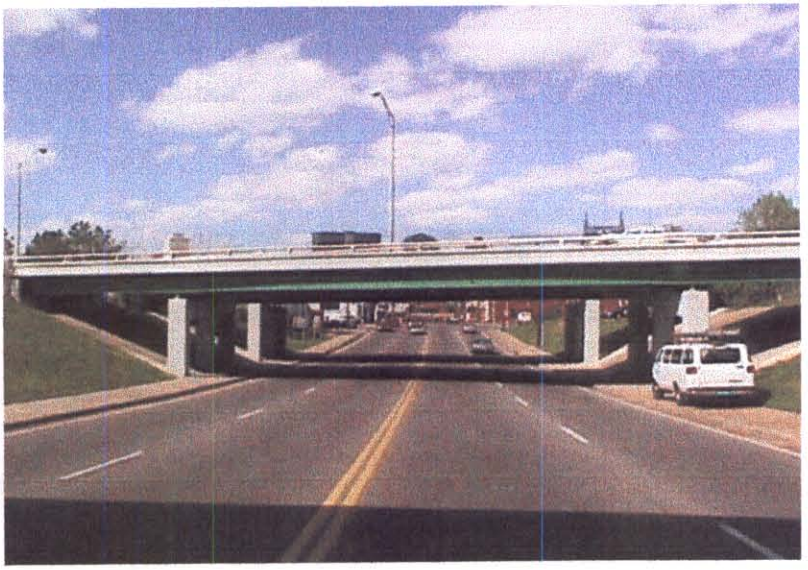
BENT TYPICAL

Bridge No.: 19 — I0065 — 0826
Crossing:: I65 RAMP / 8TH AVE S SR
Federal No.: 19I00650311 Date: March 27, 2000

PIC4

BOTTOM OF DECK

PIC5



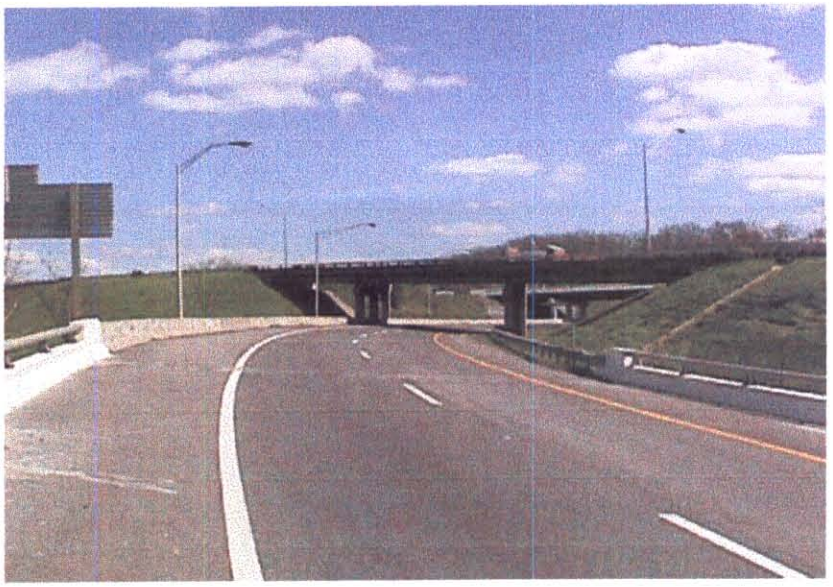
LEFT SIDE VIEW

Bridge No.: 19 — I0065 — 0826
Crossing:: I65 RAMP / 8TH AVE S SR
Federal No.: 19I00650311 Date: March 27, 2000

PIC6

VIEW ACROSS DECK

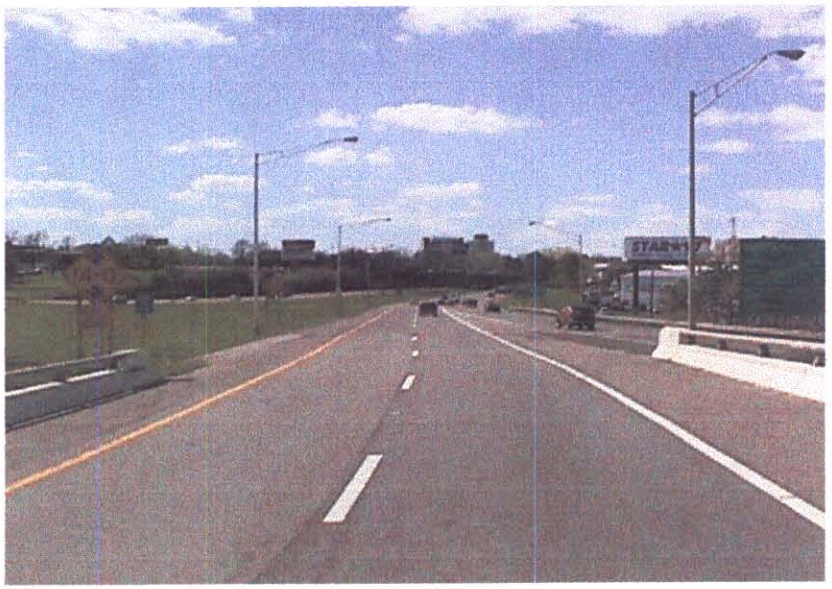
PIC7



APPROACH # 1

Bridge No.: 19 — I0065 — 0826
Crossing:: I65 RAMP / 8TH AVE S SR
Federal No.: 19I00650311 Date: March 27, 2000

PIC8



APPROACH # 2

PIC9

PEELING PAINT BEAM "A AND C"

ROUTINE BRIDGE INSPECTION REPORT

Page No.___

Form BIR 3.0C
(Rev. 9-22-98)
DT-1537

Field Report No. 15 Date 12.30.03
Previous Report No. 14 Date 10/22/2001
Plans: DESIGN

Bridge No. 19I00650311 (Eleven Digit No.)
Bridge Location No. 19 - I0065 - 8.28 (Co. Route Log Mile)

I 65 RAMP (Road Name) over 8TH AVE S SR (Crossing)
Indepth Insp. Req'd: NO
(If yes itemize limits under comments

Structure Type WPG
FRACTURE CRITICAL: NO

FEATURE CHANGES:

Wearing Surface NO Type ASPHALT Depth 3" (in.)
Bridge Rail NO Describe changes:
Approach Rail NO

CLEARANCE CHANGES: NO (If yes make changes below)

Vertical Clearance over deck		(ft.-in.)
Vertical Under Clearance	14'7"	(ft.-in.)
Horizontal Under Clearance		(*.* ft.)
Deck Width Curb/Curb	38.2'	(*.* ft.)
Deck Width Rail/Rail		(*.* ft.)
Sidewalk Width Rt.		Lt.

INSPECTORS

~~HUNTER~~	WATTS
DANIEL	CLERK
~~WALLER~~	CARVER
	LOVE

Condition: **GOOD** (If change describe in comments)

		Comments
Approaches	G	
Deck Condition (Item 58)	G	
Superstructure (Item 59)	G	
a. Beams	G	
b. Bearings	G	
c. Diaphragms	G	
Substructure (Item 60)	F	
a. Caps/Bridge Seats	G	
b. Columns/Piles	G	
c. Footings	NV	
d. Wing W./Breast W.	F	Rt. Wg. #1 & #2 Map Cracks & Leaching
Scour/Erosion	G	
Channel (Item 61)		

UNDERWATER INSPECTION
To Be Performed By: NONE REQUIRED
Date Underwater Insp.
BRIDGE is: OPEN

Weight Limit Posted N/O
Gross..... Tons
2 Axle..... Tons
3 or more Axles.. Tons

COMMENTS:
~~MAJOR REPAIRS HAVE BEEN MADE TO THIS STRUCTURE SINCE LAST INSPECTION.~~
Backwall @ Abut #2 Hvy Spalls w/ Exp. Rebar & Delamn.

Supervising Bridge Inspector: ~~GILBERT WAYNE HUNTER~~ BRIDGE RATING: **GOOD**

SUMMARY
19-I65-8.28
12/30/03

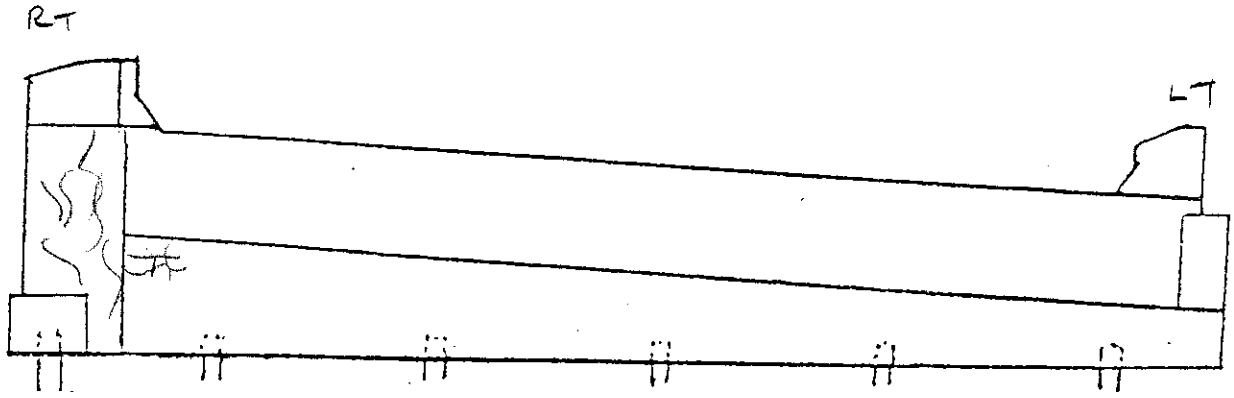
I65/8TH Avenue
3 Span/W.P.G.

This bridge was inspected and found to be in good condition. Approach alignment, embankment, and pavement are good. The bridge railing is substandard type and fair with moderate pitting. Approach guardrails and standard type and fair with moderate collision damage to the right side.

Asphalt cement wearing surface is good. Expansion joint is good with light debris. Bridge rail is rated poor with heavy collision damage and in place breakouts at post #4 left side for tubular rail. Tubular rail is fair with moderate collision damage at post area. Abutment #1 is good. Abutment #2 backwall is fair with spalls, exposed rebar and delamination. All superstructure elements are good. Beams "A", "B", and "C" in span #2 have moderate paint loss due to peeling and flaking. Embankment and slope pavement is good. The minimum distance to the nearest bent is 10'.

Jim Watts

3-27-00 MJ
10-22-01 MJ
12-30-03 KHE

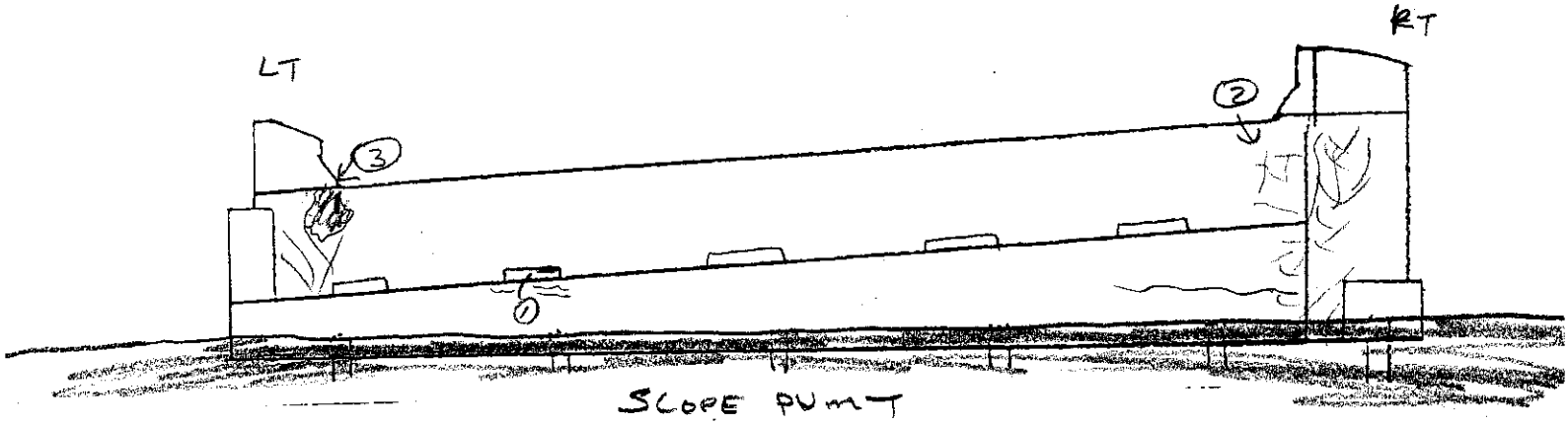


ABUT #1 Br. # 19-I65-8.2 3 6

Back wall	G	
CAP	G	riser 'B' cracked
wings	G-F	MAD CRACKS W/LEACH
Bearings	G	

3-27-00MD
10-22-01 MK

12-30-03 KHC



SLOPE PUMT

ABUT # 2 Br. # 19-I65-8.28

Back wall	F	(2) PATTERN CRACKS (3) SPALL W/EXP ST 1½'H x 1'W x 3"D + DELAMINATED
CAP	G	
WINGS	F	MAP CRACKS W/LEACH.
Bearings	G	
A	F	Mod corr
Risers	Good	(1) Riser under Bm. "B" has a 20" x 3" x 1" dp B.O.

ROUTINE BRIDGE INSPECTION REPORT

Page No.___

Form BIR 3.0C
(Rev. 9-22-98)
DT-1537

Field Report No. 14 Date 10-22-01
Previous Report No. 13 Date 3/27/00
Plans: DESIGN

Bridge No. 19I00650311 (Eleven Digit No.)

Bridge Location No. 19 - I0065 - 8.268 (Co. Route Log Mile)

I65 RAMP (Road Name) over ~~I65 RAMP~~ 8TH AVE S SR (Crossing)

Indepth Insp. Req'd: NO (If yes itemize limits under comment)

Structure Type WPG

FRACTURE CRITICAL: NO

FEATURE CHANGES:

Wearing Surface NO Type ASPHALT Depth 3" (in.)
Bridge Rail 5 Describe changes:
Approach Rail 1

CLEARANCE CHANGES: (If yes make changes below)

Vertical Clearance over deck		(ft.-in.)
Vertical Under Clearance	14'7"	(ft.-in.)
Horizontal Under Clearance		(*.* ft.)
Deck Width Curb/Curb	38.2'	(*.* ft.)
Deck Width Rail/Rail		(*.* ft.)
Sidewalk Width Rt.		Lt.

INSPECTORS

HEGGIE CLARK
CARVER
LOVE
HONEA

Condition: **GOOD** (If change describe in comments)

		Comments
Approaches	G	
Deck Condition (Item 58)	G	
Superstructure (Item 59)	G	
a. Beams	G	
b. Bearings	F	MOD CORR @ AB #2
c. Diaphragms	G	
Substructure (Item 60)	G	
a. Caps/Bridge Seats	G	
b. Columns/Piles	G	
c. Footings	N/V	
d. Wing W./Breast W.	G	
Scour/Erosion		
Channel (Item 61)		

UNDERWATER INSPECTION

To Be Performed By: NONE REQUIRED

Date Underwater Insp. ___

BRIDGE is: OPEN

Weight Limit Posted NO

Gross..... ___ Tons
2 Axle..... ___ Tons
3 or more Axles.. ___ Tons

COMMENTS:

Supervising Bridge Inspector: [signature] BRIDGE RATING: **GOOD**

SUMMARY
19-I65-8.28
10/22//01

I65/8th Avenue
3- Span/W.P.G.

This bridge was inspected and found to be in **good** condition. Approach alignment, embankment, and pavement are good. The bridge railing is substandard type and good. Approach guardrails are standard type and good.

Asphalt cement wearing surface is good. Expansion joint is good with light debris. Superstructure and sub-structure units are good. Beams "A", "B", and "C" in span #2 have moderate paint loss due to peeling and flaking. Embankment and slope pavement is good. The minimum distance to the nearest bent is 10'.

Karen Heggie Clark

BRIDGE INSPECTION REPORT

FORM BIR 3.0
Rev. 09/24/98
DT-0069

FIELD REPORT NO. 13 DATE 3-27-00
REVIOUS REPORT NO. 12 DATE 4-2-98
PLANS ---- YES [X] NO [ ]

BRIDGE NO. 19I0065031 (ELEVEN DIGIT NO.)
BRIDGE LOC. NO. 19 - I65 - 8.26 (CO. ROUTE LOG MILE)

I65 (ROAD NAME) OVER SR6 (FEATURE INTERSECTED)
(STRUCTURE NAME (IF NAMED))

YEAR CONSTRUCTED 70 (ESTIMATED OR ACTUAL) [ ] [X]
COUNTY Davidson
MAINTENANCE DISTRICT NO. 31

YEAR WIDENED ____ (ESTIMATED OR ACTUAL) [ ] [ ]
YEAR REHABILITATED ____ (ESTIMATED OR ACTUAL) [ ] [ ]

FEATURES

WEARING SURFACE-- CONCRETE [ ] TIMBER [ ] ASPHALT [X] (DEPTH= 3")
FLARED WIDTH ---------- YES [ ] NO [X]
NAVIGATIONAL CONTROL-- YES [ ] NO [X]
MEDIAN WIDTH --------- OPEN [ ] NONE [X] CLOSED [ ]

BRIDGE SKEW 75° LT [ ] RT [X]

STRUCTURE TYPE WPG (Main Span) NO. SPANS 3 (Main Span)
STRUCTURE TYPE ____ (Approach Spans) NO. SPANS ____ (Approach Spans)
MAXIMUM SPAN LENGTH 76 TOTAL LENGTH 139.8

INSPECTORS
1. Hunter
2. Daniel
3. Waller
4.
5.
6.
7.
8.
9.

WIDTHS

DECK OUT-TO-OUT 41.6'
ROADWAY CURB/CURB 38.2'
SIDEWALK ____ RT ____ LT
*APPROACH ROADWAY 24
APPR. SHLD. 6 RT 6 LT
*DOES NOT INCLUDE SHOULDER

CLEARANCES

MIN. VERTICAL OVER DECK ____
MIN. VERTICAL UNDER CL 14' 7"
MIN. LATERAL UNDER CL 10 RT
open LT

(<25')
NBIS BRIDGE LENGTH over 25' (ft) (in)

UNDERWATER INSPECTION

INSPECTION PERFORMED BY:
DOT FIELD TEAM [ ] DATE ____
CONTRACT DIVERS [ ] DATE ____
NONE REQUIRED [X]

FRACTURE CRITICAL DETAILS: YES [ ] NO [X]
IF YES, INCLUDE BIR 3.9

CHANGE IN STRUCTURAL CONDITION YES [X] NO [ ]
MAJOR REPAIRS MADE YES [X] NO [ ]

COMMENTS: Major Repairs have been made to this structure since last inspection.

Gilbert Wayne Hunter
SUPERVISING BRIDGE INSPECTOR

BRIDGE RATING [X] [ ] [ ] [ ]
GOOD FAIR POOR CRITICAL

FORM BIR 3.1
Rev. 09/24/98
DT-0080

BRIDGE LOC. NO. 19 - I65 - 8.26 (CO. - ROUTE - L.M.) DATE: 3-27-00

PERFORMANCE EVALUATION

Time of day inspected 1:30 Weather conditions Sunny 65°

Vehicles observed All types

LIVE LOAD BEHAVIOR	*YES*	*NO*	*COMMENTS*
Substructure			
Horiz. & Vert. Defl.	[ ]	[X]	
Vibration	[ ]	[X]	
Superstructure			
Horiz. & Vert. Defl.	[ ]	[X]	
Vibration	[X]	[ ]	

APPROACH

Alignment	(G)	F	P	C	
Slab	G	F	P	C	NV AC. overlay
Joints	(G)	F	P	C	
Pavement	(G)	F	P	C	
Embankment	(G)	F	P	C	
Drains	G	F	P	C	NA

TRAFFIC SAFETY FEATURES

					STANDARD	SUB-STANDARD	
Bridgerailing	(G)	F	P	C	[ ]	[ ]	
Transitions	(G)	F	P	C	[ ]	[ ]	
Guardrail	(G)	F	P	C	[ ]	[ ]	
Guardrail Terminal	(G)	F	P	C	[ ]	[ ]	

SIGNING

	YES	NO	NEEDED	
Paddleboard	[ ]	[X]	[ ]	WEIGHT LIMIT POSTED YES [ ] NO [X]
Vertical Clearance (< 14')	[ ]	[X]	[ ]	
Narrow [ ] One Lane Bridge [ ]	[ ]	[X]	[ ]	GROSS ____ TONS 2 AXLE ____ TONS 3 OR MORE AXLES ____ TONS

Other Signs or Plaques —

Comments Regarding Any Problems With Signing —

Other Recommendations —

FORM BIR 3.2
Rev. 09/24/98
DT-0081

BRIDGE LOC. NO. 19 - I65 - 8.26 (CO. - ROUTE - L.M.) DATE: 3-27-00

DECK

					COMMENTS
WEARING SURFACE	(G)	F	P	C	Asphalt overlay
DECK - STRUCTURAL CONDITION	(G)	F	P	C	
CURBS	G	F	P	C	NA
MEDIAN	G	F	P	C	NA
SIDEWALKS	G	F	P	C	NA
PARAPET	(G)	F	P	C	
RAILING	(G)	F	P	C	
PAINT	G	F	P	C	NA
DRAINS	G	F	P	C	NA
LIGHTING STD'S	(G)	F	P	C	
UTILITIES	(G)	F	P	C	
JOINT LEAKAGE	(G)	F	P	C	
EXPANSION JOINTS	(G)	F	P	C	

SUPERSTRUCTURE

					COMMENTS
BEARING DEVICES	(G)	F	P	C	
GIRDERS OR BEAMS	(G)	F	P	C	
FLOOR BEAMS	G	F	P	C	NA
STRINGERS	G	F	P	C	NA
DIAPHRAGMS	(G)	F	P	C	
BRACING	G	F	P	C	NA
TRUSSES - GENERAL	G	F	P	C	
- PORTALS	G	F	P	C	
- BRACING	G	F	P	C	
PAINT	G	(F)	P	C	random areas of peeling paint
ALIGNMENT OF MEMBERS	(G)	F	P	C	

TEXTURE COAT

CONDITION RATING	(G)	F	P	C
OVERALL APPEARANCE	(G)	F	P	C
STAINING	(G)	F	P	C
SCALING	(G)	F	P	C
FADING	(G)	F	P	C

NEEDS SPOT PAINTING? YES [ ] NO [X]
NEEDS REPAINTING? YES [ ] NO [X]

COMMENTS:

RECOMMENDATIONS

FORM BIR 3.3
Rev. 09/24/98
DT-0082

BRIDGE LOC. NO. 19 - I65 - 8.26
CO. ROUTE L.M.

DATE: 3-27-00

SUBSTRUCTURE

ABUTMENTS					COMMENTS
CAPS	(G)	F	P	C	
BREASTWALL	G	F	P	C	NA
WINGS	(G)	F	P	C	
BACKWALL	(G)	F	P	C	
PLUMB	(G)	F	P	C	
FOOTING	G	F	P	C	NV
PILES	G	F	P	C	NV
EMBANKMENT	(G)	F	P	C	
BEARING SURFACE	(G)	F	P	C	
SLOPE PAVING	(G)	F	P	C	

PIERS				
CAPS	G	F	P	C
COLUMNS	G	F	P	C
PLUMB	G	F	P	C
FOOTINGS	G	F	P	C
PILES	G	F	P	C
BEARING SURFACE	G	F	P	C

BENTS					
CAPS	(G)	F	P	C	
COLUMNS	(G)	F	P	C	
PLUMB	(G)	F	P	C	
FOOTINGS	G	F	P	C	NV
PILES	G	F	P	C	NV
BEARING SURFACE	(G)	F	P	C	

SCOUR CONDITION NONE

RECOMMENDATIONS:

CURRENT FIELD REPORT NO. 13 DATE 3-27-00
PREVIOUS FIELD REPORT NO. 12 DATE 4-2-98

FORM BIR 3.0A
Rev. 6-9-92
DT-1443

INSPECTION REPORT FOR UNDERPASS ROUTE

BRIDGE NO. 19I0065031 1 (ELEVEN DIGIT NUMBER) UNDERPASS LOC. NO. 19 (CO.) - 6 (RTE.) - 8.02 (L.M.)

___ (CO.) - I65 (RTE.) - ___ (L.M.) OVER 8TH Ave (CO.) - ___ (RTE.) - SR 6 (L.M.) STRUCTURE NAME (IF NAMED) ___

COUNTY Davidson

YEAR CONSTRUCTED 70 YEAR WIDENED ___ YEAR REHABILITATED ___
ESTIMATED [ ] ACTUAL [✓]

GEOMETRIC FEATURES UNDER BRIDGE

DIVIDED HIGHWAY - - - - LEFT RDWY [ ] RIGHT RDWY [ ] N.A. [✓]
TYPE OF WEARING SURFACE - - - - CONCRETE [ ] ASPHALT [✓] GRAVEL [ ]
WIDTH OF APPROACH TRAVELED ROADWAY 48 FT. (DOES NOT INCLUDE SHOULDERS)
WIDTH OF MEDIAN IF DIVIDED HIGHWAY — FT.
APPROACH SHOULDER WIDTH 10 FT. (RT.) 10.7 FT. (LT.)
*HORIZONTAL CLEARANCE UNDER BRIDGE 68 FT. 8 IN.
*DISTANCE BETWEEN PIER PROTECTION GUARDRAIL AND SUBSTRUCTURE — FT. (RT.) — FT. (LT.)
*WIDTH OF SIDEWALK UNDER BRIDGE ___ FT. (RT.) ___ FT. (LT.)
*MINIMUM VERTICAL CLEARANCE 14 FT. 8 IN.

*SHOW ON SKETCH

TRAFFIC SAFETY FEATURES FOR UNDERPASS ROUTE		STANDARD	SUB-STANDARD	
PIER PROTECTION RAILING OR PARAPET	G F P C	[ ]	[ ]	NON EXIST [✓]
APPROACH GUARDRAIL TRANSITIONS	G F P C	[ ]	[ ]	NON EXIST [✓]
APPROACH GUARDRAIL	G F P C	[ ]	[ ]	NON EXIST [✓]
APPROACH GUARDRAIL TERMINAL	G F P C	[ ]	[ ]	NON EXIST [✓]

SIGNING FOR UNDERPASS ROUTE

PADDLEBOARD	YES [ ]	NO [✓]	NEEDED [ ]
VERTICAL CLEARANCE (< 14'6")	YES [ ]	NO [✓]	NEEDED [ ]
NARROW PASSAGE	YES [ ]	NO [✓]	NEEDED [ ]
ONE LANE PASSAGE	YES [ ]	NO [✓]	NEEDED [ ]
CURVE	YES [ ]	NO [✓]	NEEDED [ ]
SPEED LIMIT	YES [ ]	NO [✓]	NEEDED [ ]

INSPECTORS

1. Hunter
2. Daniel
3. Waller
4. ___
5. ___
6. ___

FORM BIR 3.0A (CONTINUED)
Rev. 6-9-92
DT-1443

UNDERPASS LOC. NO. 19 - 6 - 8.02
CO. RTE. L.M.

OTHER SIGNS OR PLAQUES —

COMMENTS REGARDING ANY PROBLEM WITH SIGNING —

BRIDGE FEATURES

BRIDGE SKEW 75°
STRUCTURE TYPE WPG (MAIN SPAN) NO. SPANS 3 (MAIN TYPE)
STRUCTURE TYPE — (APPROACH SPAN) NO. SPANS — (APPROACH TYPE)
MAXIMUM SPAN LENGTH 76 FT. TOTAL LENGTH 139.8 FT.
WIDTH OF BRIDGE OUT-TO-OUT 41.6 FT. (RT. < TO L OF BRIDGE)
WIDTH OF BRIDGE ALONG SKEW — FT. (IF UNABLE TO MEASURE AT RT. ∢ TO L OF BRIDGE)
NUMBER OF LANES/TRACKS ON BRIDGE 4

BRIDGE CONDITION (G) F P C

DOES POTENTIAL EXIST FOR ELEMENTS FROM BRIDGE FALLING ON ROADWAY BENEATH? YES [ ] NO [X]

DOES POTENTIAL EXIST BECAUSE OF DETERIORATED CONDITION FOR FAILURE OF MAJOR MEMBERS? YES [ ] NO [X]

COMMENT ON ANY CONDITIONS OF BRIDGE THAT WOULD EFFECT ROADWAY BENEATH —

NOTE: IF UNDERPASS ROUTE IS DIVIDED HIGHWAY, USE TWO (2) OF THESE FORMS, ONE FOR EACH ROADWAY.

MINIMUM PICTURES REQUIRED

1. ELEVATION VIEW OF BRIDGE ON BOTH SIDES SHOWING UNDERPASS
2. VIEW SHOWING BOTH APPROACHES TO BRIDGE
3. VIEW SHOWING SAFETY FEATURES
4. VIEW SHOWING ANY PROBLEMS

SUMMARY
19-I65-8.26
3/27/00

I65/8th Avenue
3 Span/W.P.G.

This bridge was inspected and found to be in good condition. Approach alignment, embankment, and pavement are good. The bridge railing is standard type and good. Approach guardrails are standard type and good.

Asphalt cement wearing surface is good. Parapet is good. Railing is good. Expansion joint is good, but there is moderate debris in joint. Superstructure elements are good. Sub-structure units are good. Beams ▮ B▮ , ▮ A▮ , and ▮ C▮ in span have moderate paint loss due to peeling and flaking. Risers are good. Backwall is good. Embankment, bearing, and slope pavement are good. Bents are in good condition.

Gilbert Wayne Hunter

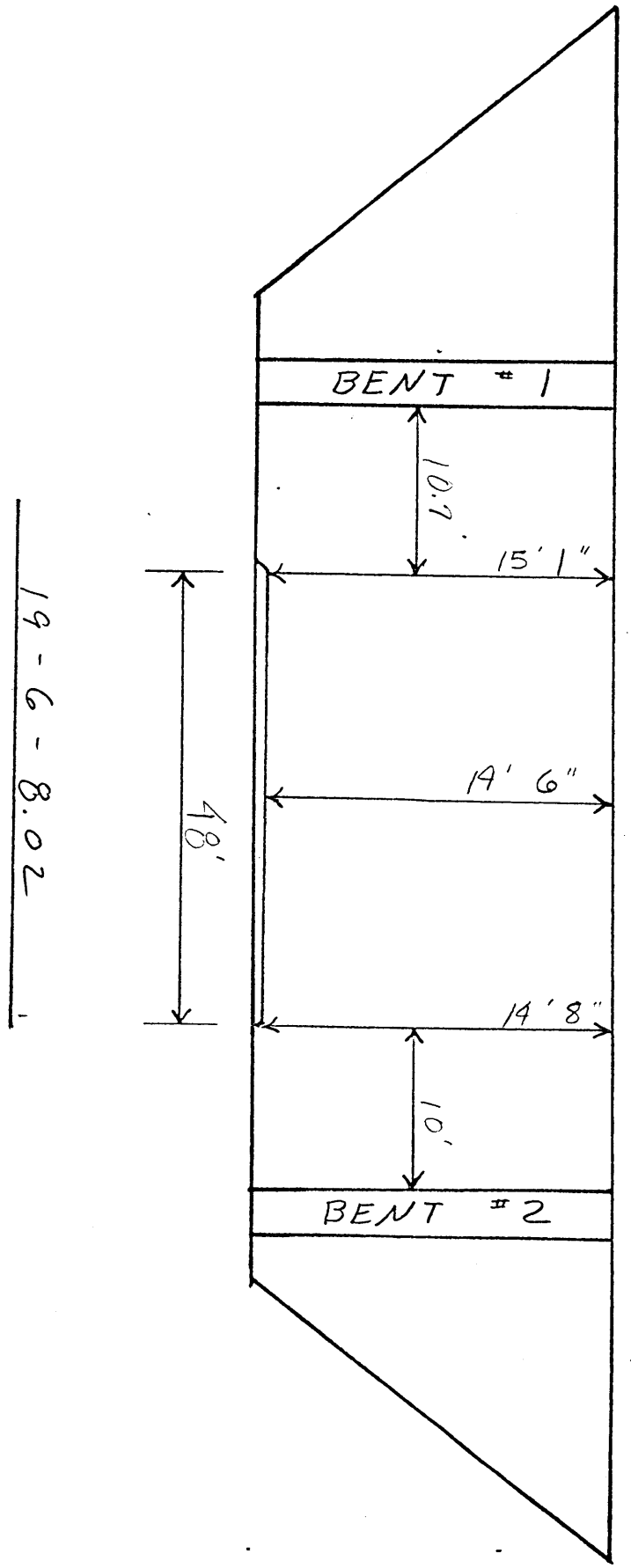
10-22-01 BL

4-2-98 MD

AUG 8 1991

5-29-73 MD

4-18-95 BB



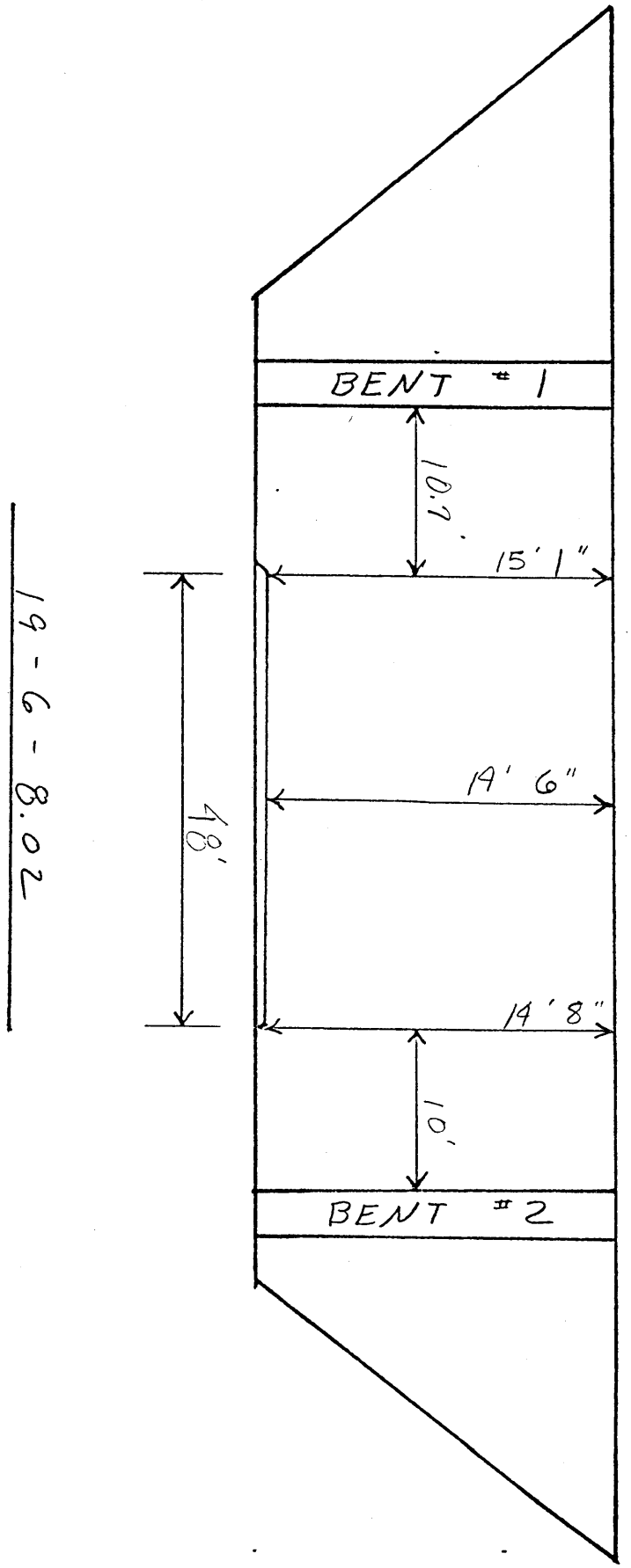
Clearance Sketch

4-2-98mD

AUG 8 1991

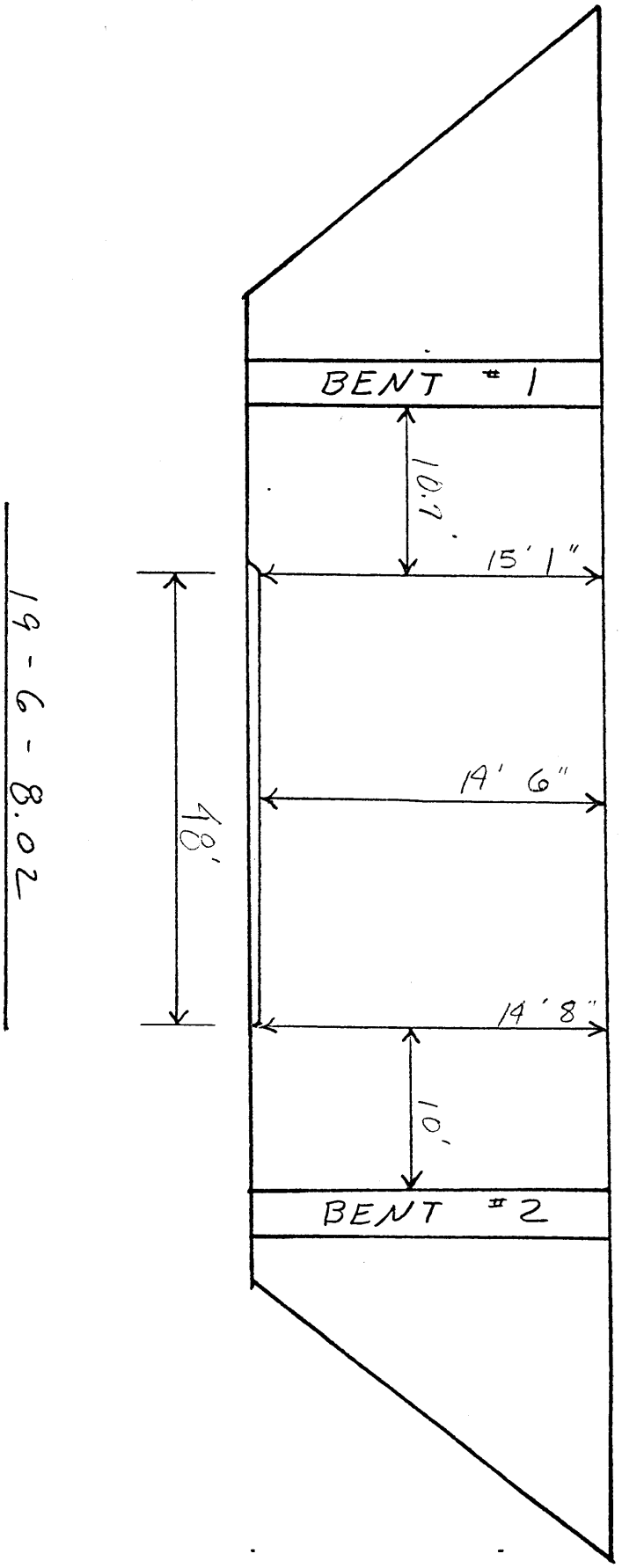
5-25-73 MD

4-18-96 DL



Clearance Sketch

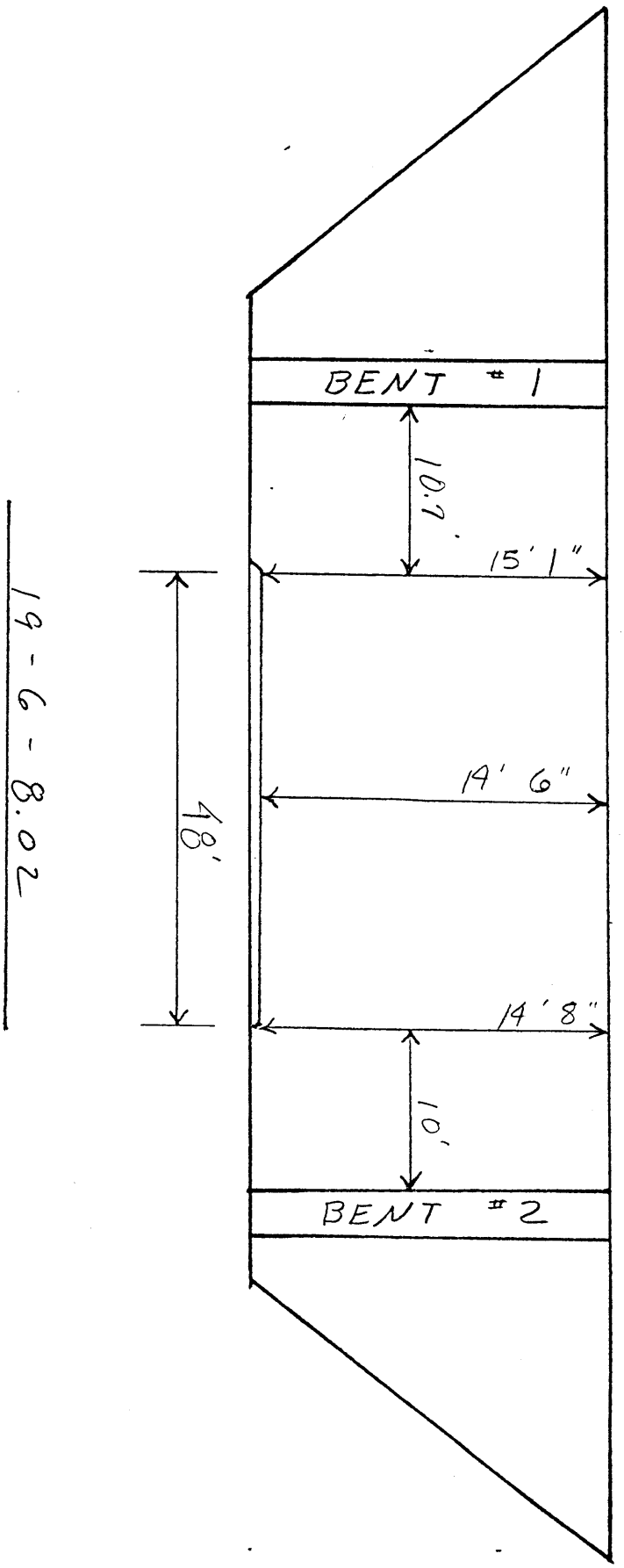
4-2-98MD
AUG 8 1984
5-25-73 MD
4-18-96 MD



Clearance Sketch

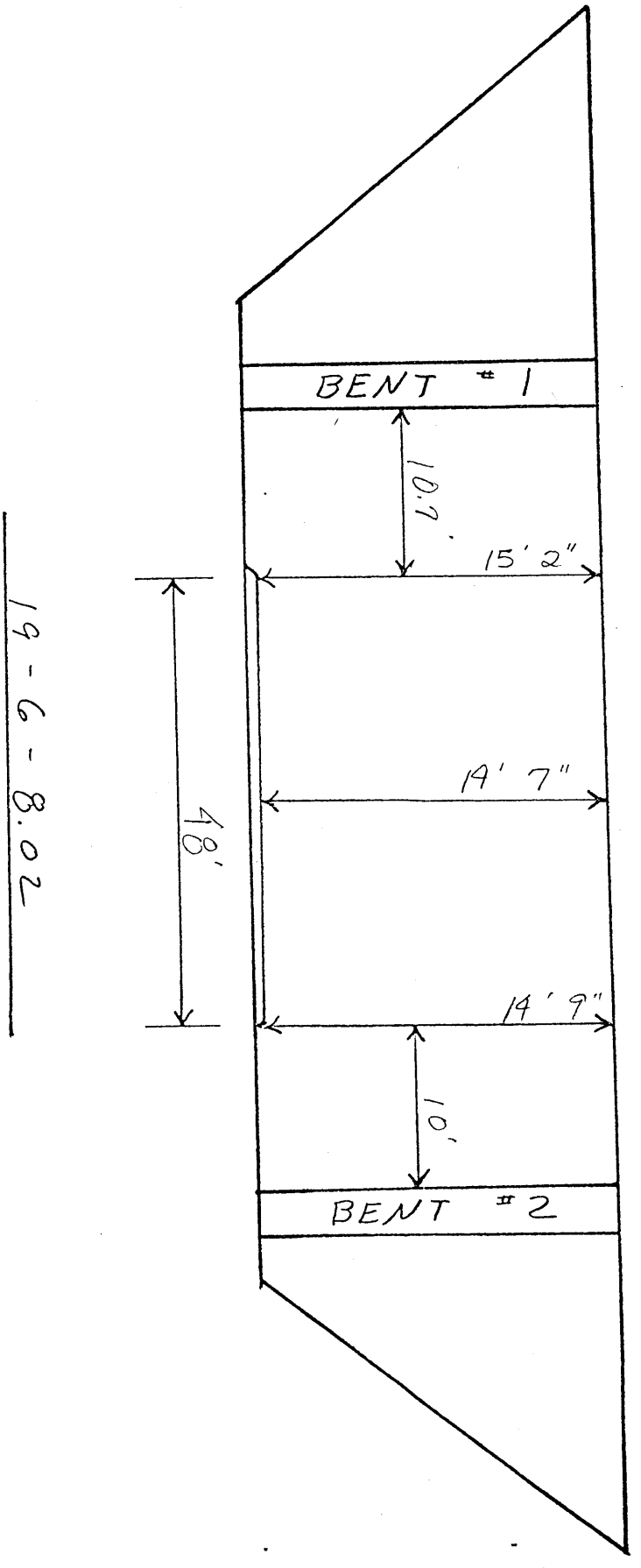
AUG 8 1984

5-29-73 MD



Clearance Sketch

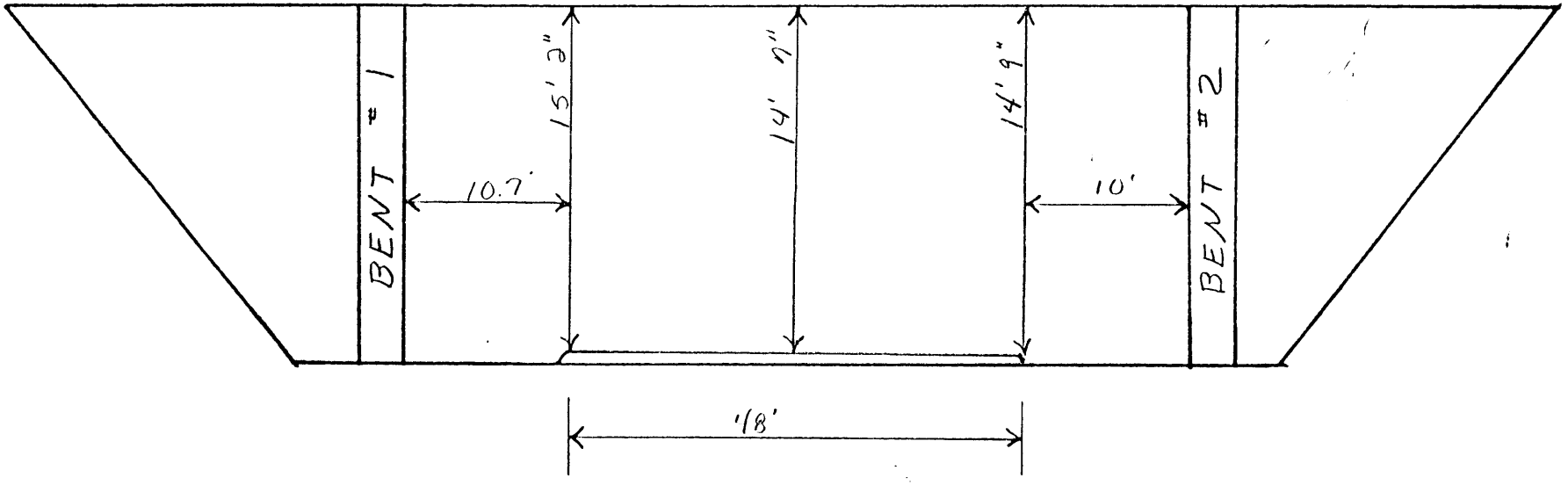
AUG 8 1991



Clearance Sketch

Clearance Sketch

19-I65-8.96
8.18



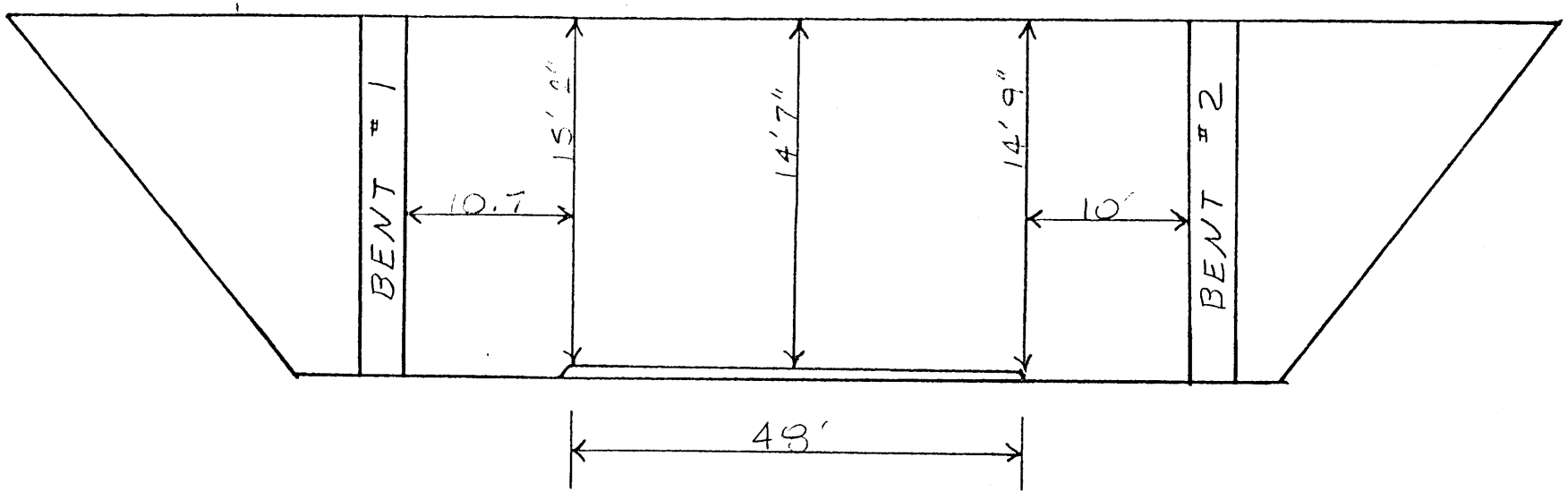
19-6-8.02

JUL 13 1989

23

8.26

19-I65-[redacted]

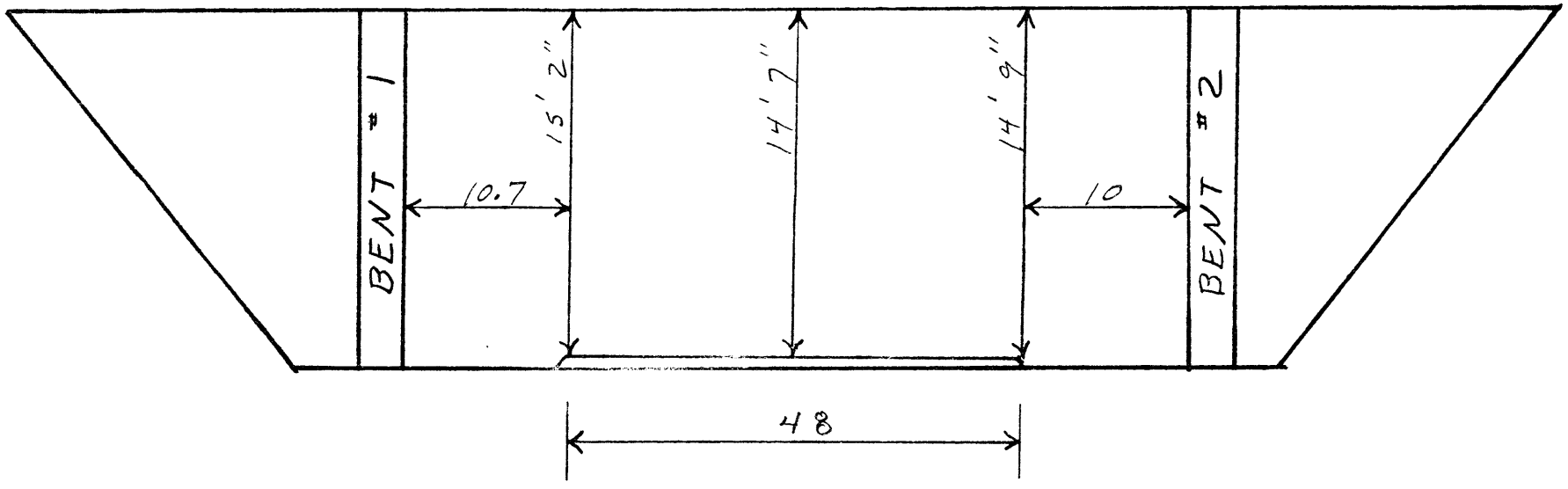


19-6-8.02

JUN 1 7 1987

22

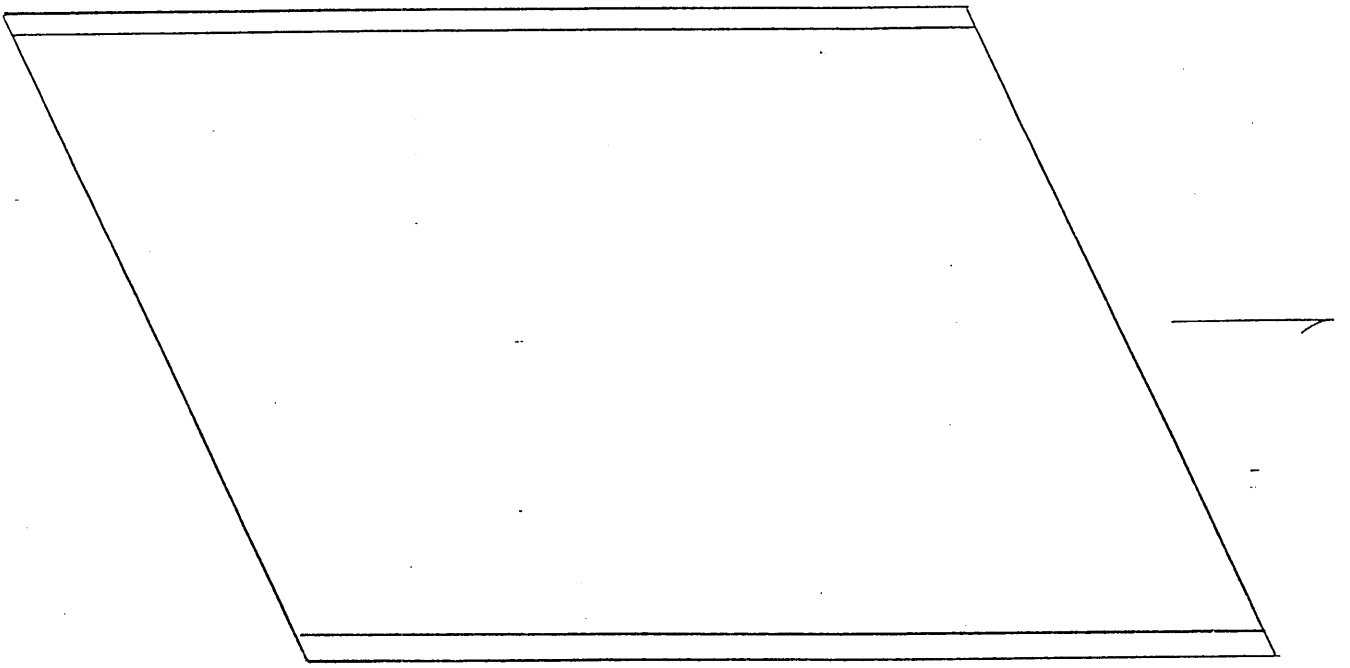
19-I65-8.26



19-6-8.02

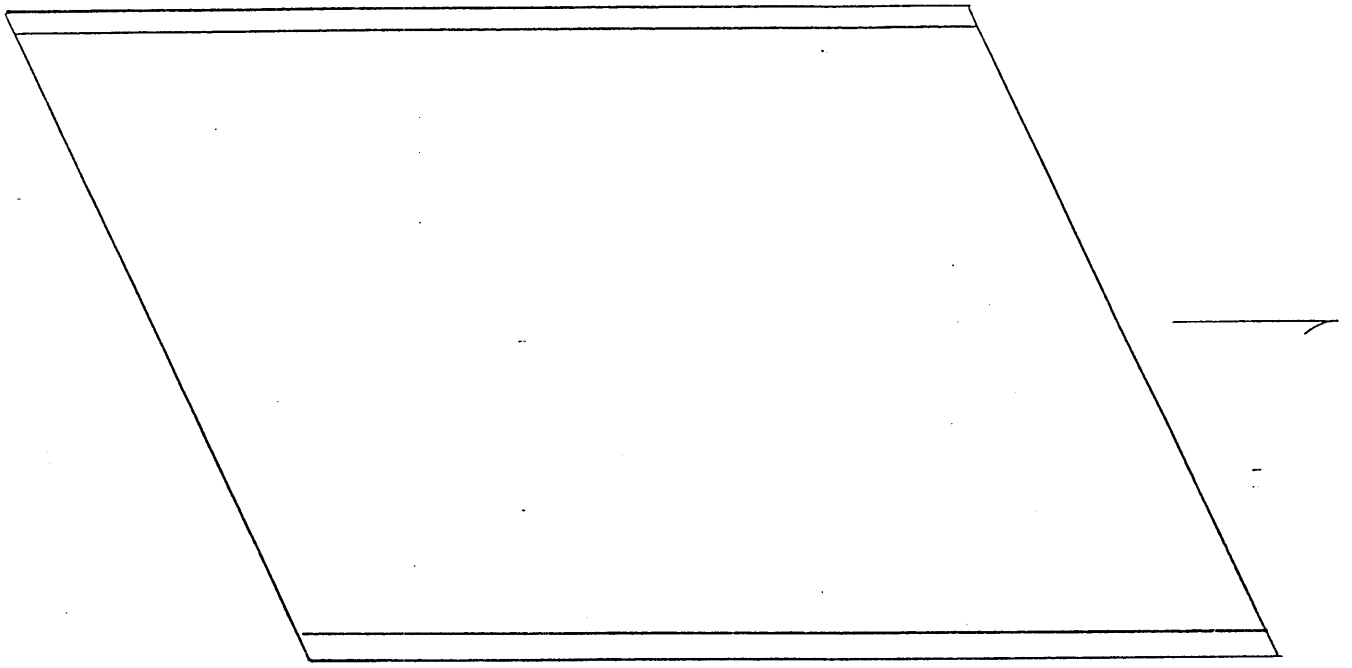
SEP 06 1985

5-21-00
Deck



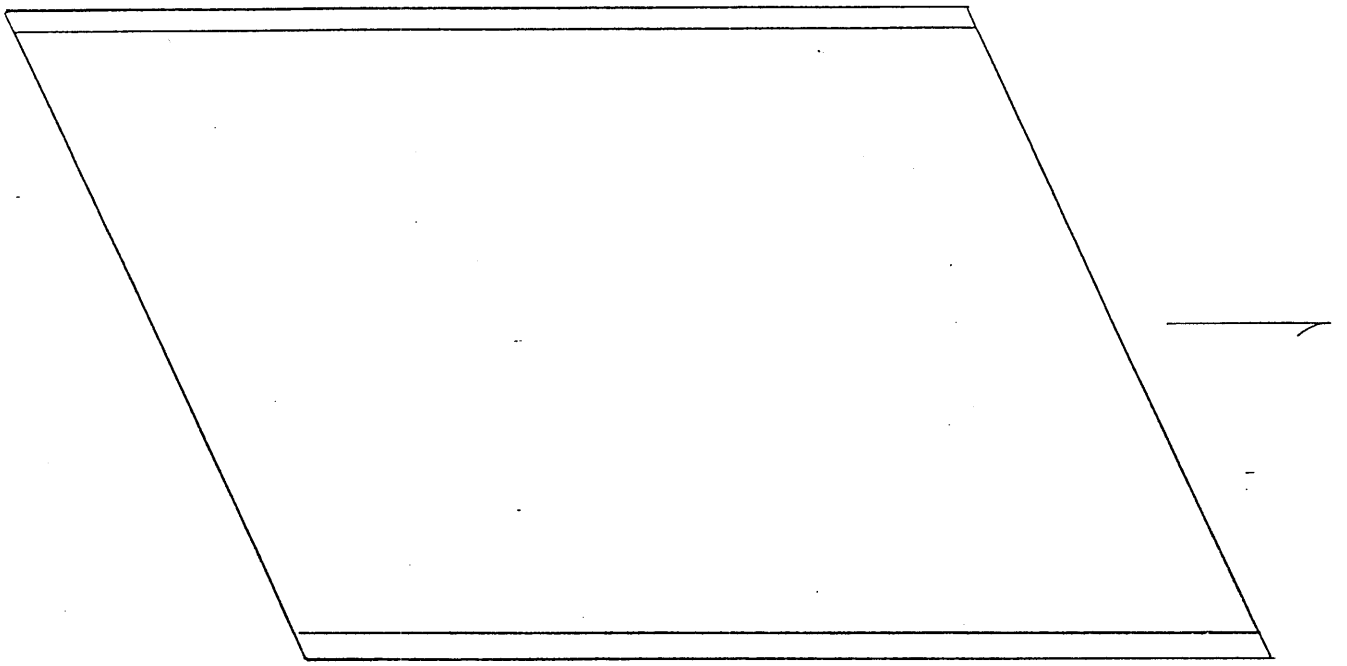
Top Slab # 1 Br. # 19-I65-8.26

Deck	NV	Asphalt overlay good
Joints	G	light debries in joint
Parapet	G	



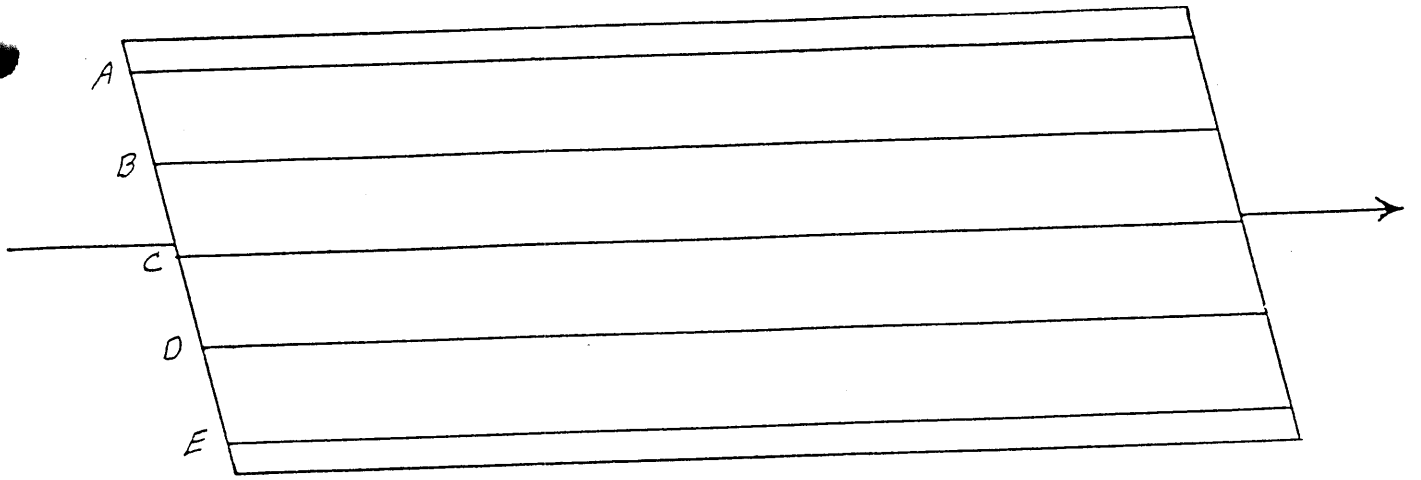
Top Slab # 2 Br. # 19-I65-8.26

Deck	NV	A.C. overlay good
Joints	NA	
Parapet	G	



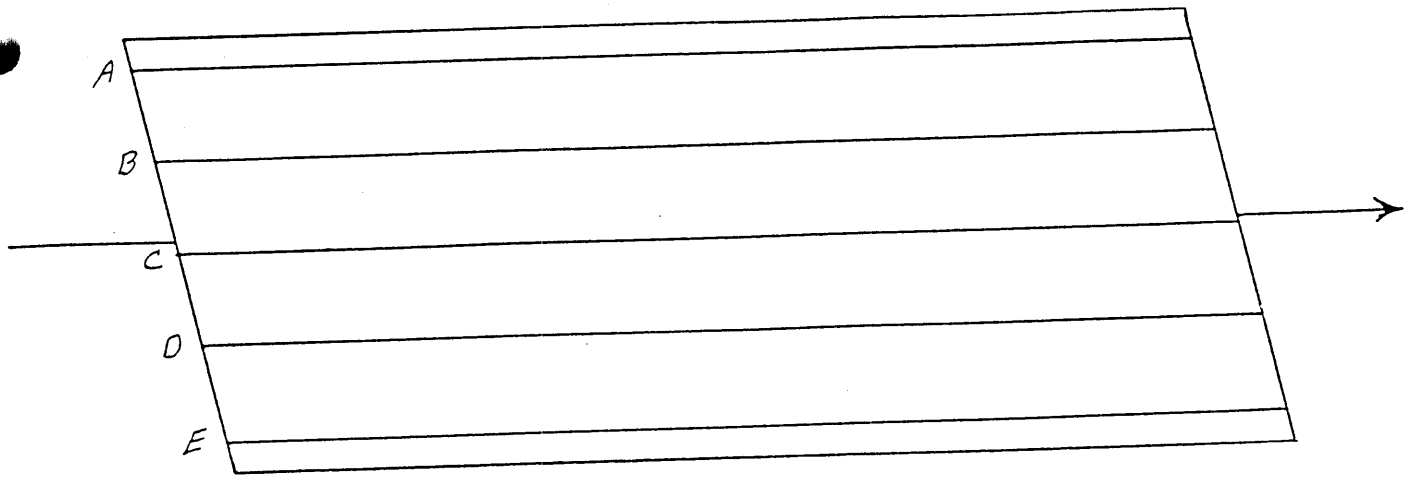
Top Slab #3 Br. # 19-I65-8.26

Deck	NV	A.C. overlay good
Joints	NV	paved over
Parapet	6	



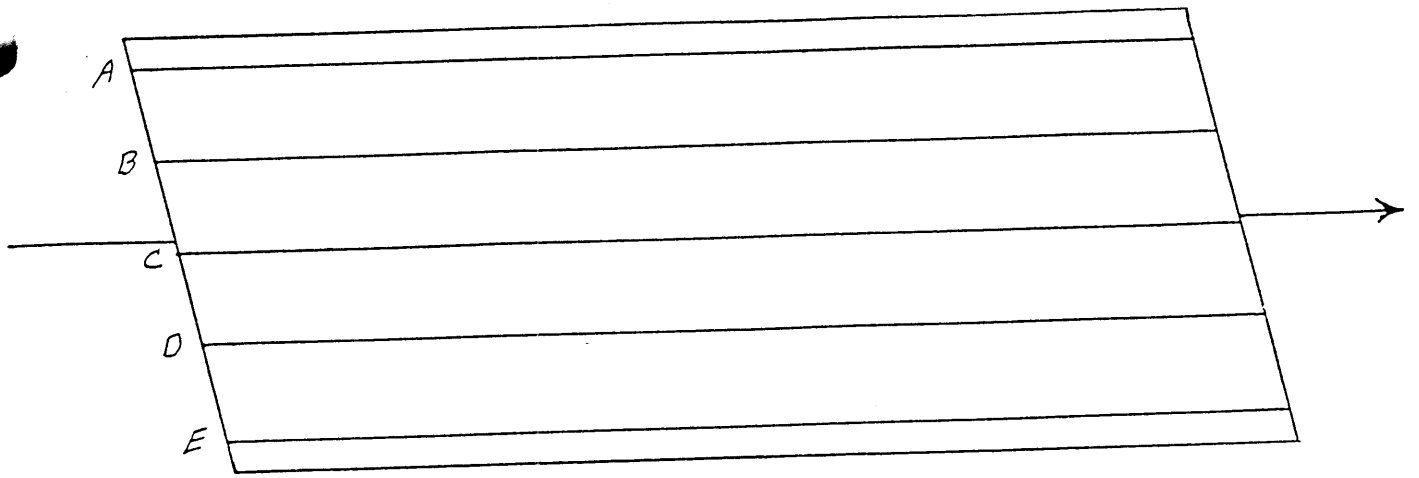
Bottom Slab = 1 Br. # 19-I65-8.26

Deck	Good
Diaph	Good
Beams	Good



Bottom Slab = Z Br. # 19-I65-8.26

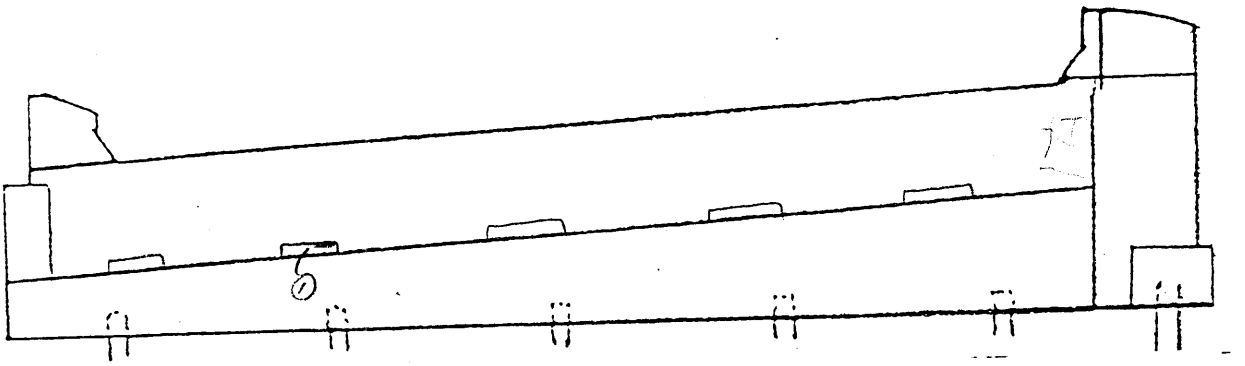
Deck	Good	
Diaph	Good	
Beams	Good	
		mod. paint loss due to peeling & flaking on Bm "A" "C"



Bottom Slab = 3 Br. # 19-I65-8.26

Deck	Good	
iaph	Good	
Beams	Good	

10-22-01 PM

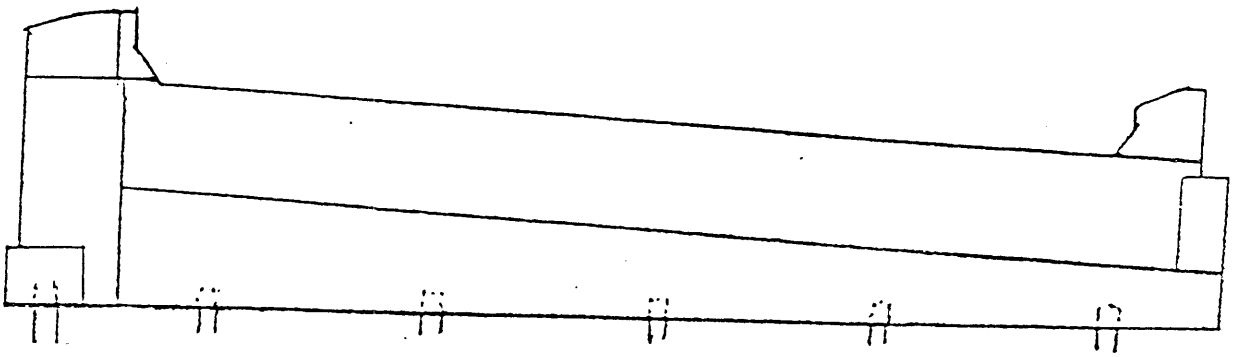


ABUT #2 Br. # 19-I65-8.26

Back wall	G	
CAP	G	
WINGS	G	
Bearings	G	
* A	F	Mod corr
Risers	Good	① Riser under Bm. "B" has a 20" x 3" x 1" dp B.O.

*

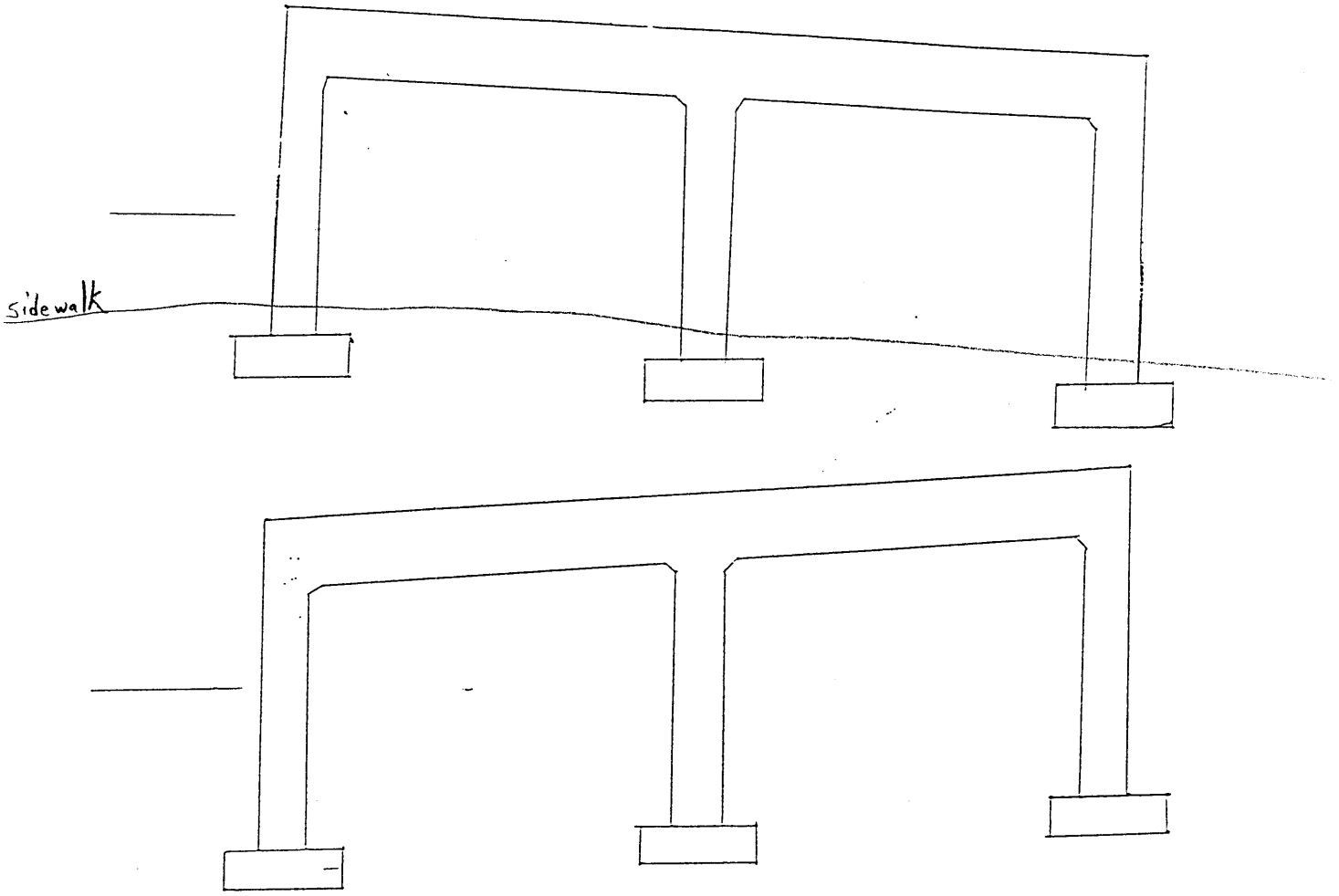
3-27-00MD



ABUT # 1 Br. # 19-I65-8.26

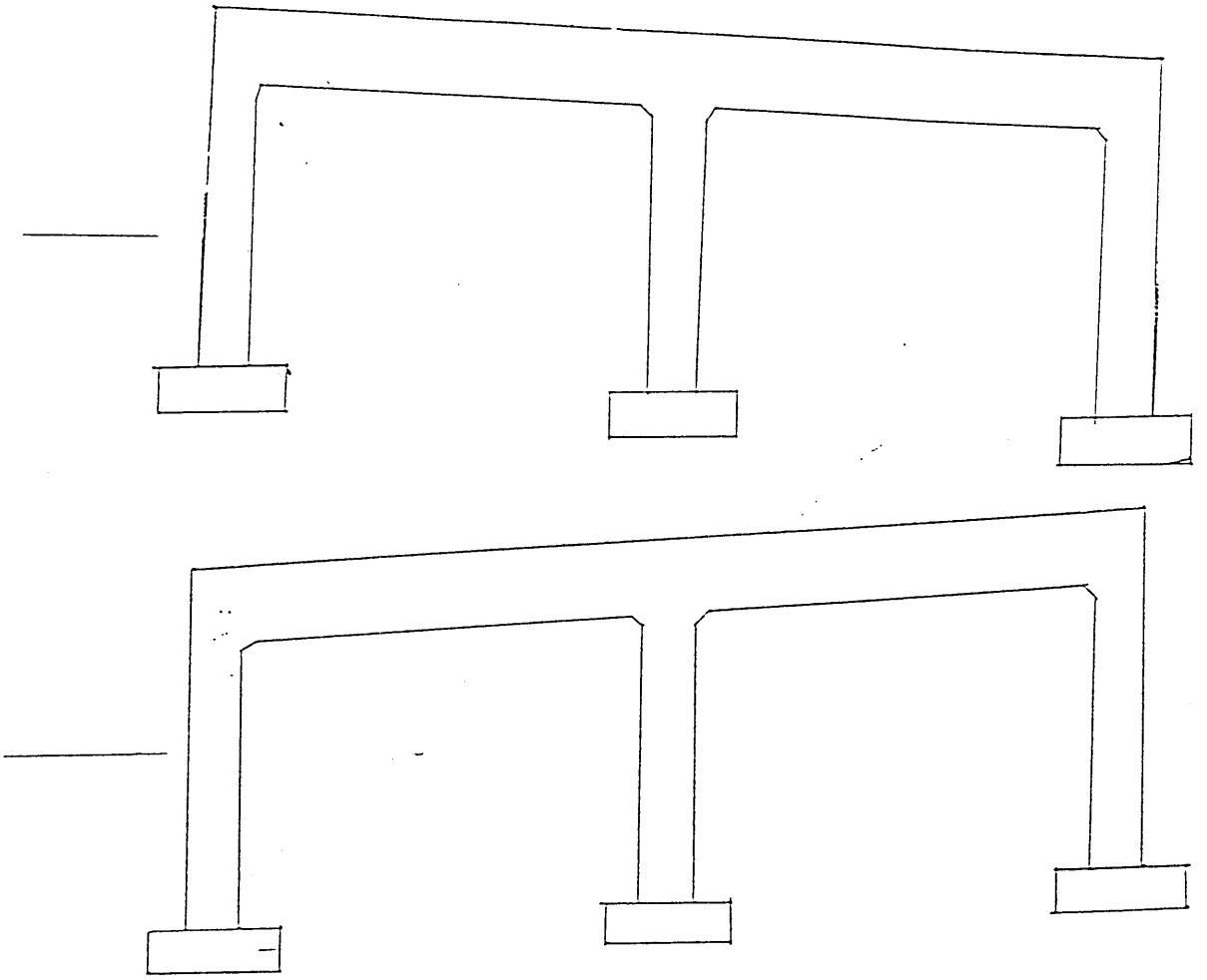
Back wall		
CAP		
wings		
Bearings		

3-21-00 MD



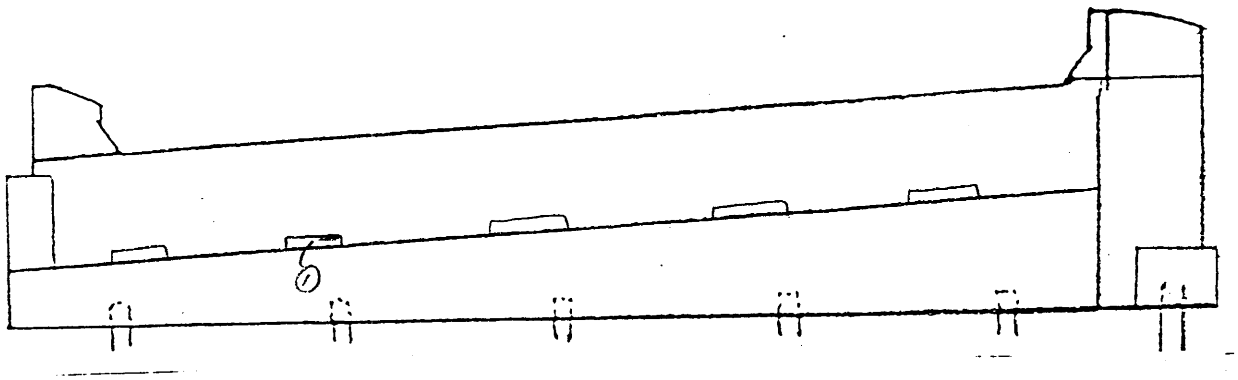
Bent # 1 Br. # 19-I65-8.26

CAP	Good
Columns	Good
Footing	N/V
Bearings	Good



Bent # 2 Br. # 19-I65-8.26

CAP	G
Columns	G
Footing	N/V
Bearings	G



ABUT # 2 Br. # 19-I65-8.26

Back wall	G	
CAP	G	
WINGS	G	
Bearings	G	
Risers	Good	① Riser under Bm. "B" has a 20" x 3" x 1" dp B.O.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BRIDGE INSPECTION AND REPAIR OFFICE
NASHVILLE, TENNESSEE 37243-0338

June 18, 1999

Mr. Donald Dahlinger
Special Design and Estimates Office
Suite 1000, J.K. Polk Bldg.
Nashville, TN. 37243

RE: Contract Maintenance
Project No. 19958-4127-04
Bridge No. 19-I40-18.31(WBL)/8TH Av.
Bridge No. 19-I40-18.40(WB Ramp)/Ramp From I65 NBL
Bridge No. 19-I65-8.26(NBL)/8TH AV.
Davidson County

Dear Mr. Dahlinger:

Enclosed are the repair drawings, reference drawings, estimated quantities, and cost estimate for the above referenced project, which is scheduled for the July 23, 1999 letting.

If we can be of any further assistance, please contact us.

Sincerely,

(for)
Hollis Tackitt
Civil Engineering Manager 2
Bridge Inspection and Repair

ML:tbc

cc: Mr. Mike Lawson
Mr. Terry Leatherwood

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BRIDGE INSPECTION AND REPAIR OFFICE
NASHVILLE, TENNESSEE 37243-0338

August 4, 1999

Mr. Terry Leatherwood
Bridge Inv. & Repair Office
Suite 1200
J. K. Polk Bldg.

RE: Contract Maintenance
July 23, 1999 Letting

Mr. Leatherwood;

Enclosed are two (2) 1/2 size sets of repair details of in house and/or consultant repair projects for the July 23, 1999 Letting.

COUNTY	BRIDGE NO.	DESCRIPTION	DONE BY & CONTRACT NO.
BLOUNT	05-SR335-9.974	SR335 / PISTOL CREEK	CONSULTANT NO. 5891
	(WORKING DAYS - ON OR BEFORE DECEMBER 15, 1999)		
CARROLL	09-SR436-0.70	SR436 / REEDY CREEK	
WEAKLEY	92-SR118-8.06	SR118 / OVERFLOW	
" "	92-SR118-9.74	SR118 / OVERFLOW	
" "	92-SR118-10.14	SR118 / OVERFLOW	
	NO PLANS -- SCOUR		CONSULTANT NO. 5893
	(WORKING DAYS - ON OR BEFORE NOVEMBER 16, 1999)		
CARROLL	09-SR424-3.04	SR424 / RUTHERFORD FORK OBION RIVER	
GIBSON	27-SR188-5.60	SR188 / NORTH FORK FORKED DEER RIVER	
	NO PLANS -- SCOUR		CONSULTANT NO. 5894
	(WORKING DAYS - ON OR BEFORE OCTOBER 30, 1999)		
DAVIDSON	19-I65-8.26	I-65 N.B. / 8TH AVE.	
" "	19-I40-18.31	I-40 W.B. / 8TH AVE.	
" "	19-I40-18.40	RAMP FROM I-40 W.B. / RAMP FROM I-65 N.B.	IN HOUSE NO. 5903
	(WORKING DAYS - ON OR BEFORE OCTOBER 15. 1999)		
DECATUR	20-SR100-9.63	SR100 / RUSTING CREEK	
	NO PLANS -- SCOUR		CONSULTANT NO. 5904
	(WORKING DAYS - ON OR BEFORE OCTOBER 16, 1999)		

HUMPHERYS	43-SR1-6.53 (L & R)	SR1 / TRACE CREEK	
" "	43-SR1-16.05	SR1 / TRACE CREEK	CONSULTANT
	(WORKING DAYS - ON OR BEFORE AUGUST 1, 2001)		NO. 5927
SHELBY	79-2827-3.16	2827 (MT. MORIAH) / I-240	
" "	79-176-5.97	176 (GETWELL RD.) / I-240	
" "	79-SR4-7.39	SR4 (LAMAR AVE., RAMP 7D) / I-240	
" "	79-SR4-7.49	SR4 (LAMAR AVE.) / W.B. I-240 RAMP	
" "	79-SR4-7.40	SR4 (LAMAR AVE.) / I-240	
" "	79-I240-9.12R	E.B. I-240 / B.N. S.F. R.R.	
" "	79-I240-9.12L	W.B. I-240 / B.N. S.F. R.R.	
" "	79-I240-7.76R	E.B.I-240 / Airways	
" "	79-I240-7.76L	W.B.I-240 / Airways	
" "	79-I240-7.71	E.B. I-240 / NONCONNAH CREEK	
" "	79-I240-7.83	W.B. I-240 / NONCONNAH CREEK	CONSULTANT
	(WORKING DAYS - ON OR BEFORE JULY 1, 2000)		NO. 5958
WASHINGTON	90-I181-4.08	I-181 / BROWN'S MILL RD.	CONSULTANT
	(WORKING DAYS - ON OR BEFORE NOVEMBER 15, 1999)		NO. 5965

If we can be of any further assistance, please contact us.

Yours very truly,

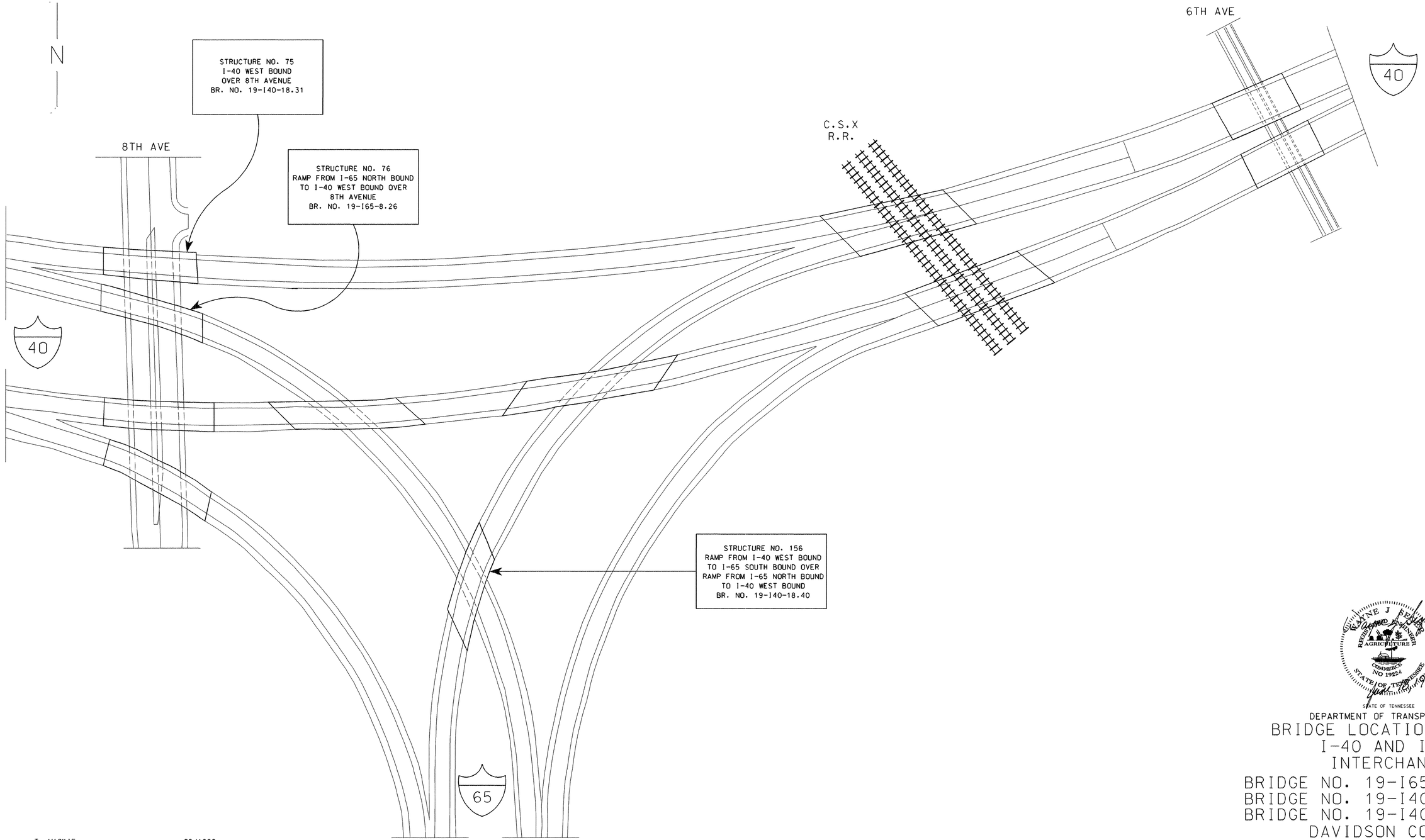
(for)
Hollis Tackitt
Civil Engineering Manager 2
Bridge Inspection and Repair

WJS:hl
Enclosure
cc: file

PROJECT NO.	YEAR	SHEET NO.
19958-4127-04	1999	

REVISIONS

NO	DATE	BY	BRIEF DISCRIPTION
1	7-6-99	TDM	REVISED YEAR



DESIGNED BY T. MACKIE DATE 08/1998
DRAWN BY SCOTT C. NELSON DATE 09/1998
SUPERVISED BY W.SEGER & T.CHRISTIANSON DATE 09/1998
CHECKED BY W.SEGER & T. MACKIE DATE 09/1998

WAYNE J. FEDAK
REGISTERED ENGINEER
AGRICULTURE
COMMERCE
NO 19224
STATE OF TENNESSEE
9/10/99

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

BRIDGE LOCATION SKETCH
I-40 AND I-65
INTERCHANGE

BRIDGE NO. 19-I65-8.26
BRIDGE NO. 19-I40-18.31
BRIDGE NO. 19-I40-18.40
DAVIDSON COUNTY
1999

BR-40-50

ESTIMATED BRIDGE QUANTITIES

ITEM NO	DESCRIPTION	UNIT	QUANTITY PER BRIDGE			TOTAL QUANTITIES
			19-I65-8 26 N B OVER 8th AVE	19-I40-18 31 OVER 8th AVE	19-I40-18 40 OVER I-65	
307-07 07	PERF GRADE (PF76-22) (BPMB-HM) GR B-M2	TON	—	60	80	140
411-01 01	MINERAL AGGREGATE (ACS) GRADING D	TON	—	35	47	82
411-02 01	MINERAL AGGREGATE (ACS) GRADING E	TON	—	29	38	67
411-02 02	ASPHALT CEMENT (ACS) GRADING E	TON	—	2	3	5
411-07 11	PERF GRADE ASPH CEMENT (PG76-22) (BPMB-HM) GR D	TON	—	3	3	6
(1) 602-10 05	BRACING REPAIRS	L S	—	0 5	0 5	1
602-10 09	STEEL HANDRAIL REPAIRS	L F	—	36	35	71
(2) 602-10 12	BEARING DEVICE (REPAIR)	L S	—	1	—	1
602-10 19	JACKING STEEL SPANS	L S	—	1	—	1
(3) 603-02 01	REPAINTING EXISTING STEEL STRUCTURES	L S	—	0 5	0 5	1
604-04 02	APPLIED TEXTURE FINISH (EXISTING STRUCTURES)	S Y	635	606	796	2037
(4) 604-10 14	REMOVAL OF EXISTING WEARING SURFACE	L S	—	0 5	0 5	1
(5) 604-10 17	NON-PENETRATING CONCRETE SEAL	S Y	75	70	99	244
(6) 604-10 30	BRIDGE DECK REPAIR (FULL DEPTH OF SLAB)	S Y	—	116	—	116
(7) 604-10 42	CONCRETE REPAIRS	C F	77	81	253	411
(8) 604-10 44	EXPANSION JOINT REPAIRS	L F	—	77	111	188
(6) 604-10 50	BRIDGE DECK REPAIR (PARTIAL DEPTH OF SLAB)	S Y	—	176	76	252
(9) 604-10 54	CONCRETE REPAIRS	S F	110	66	21	197
(10) 617-01	BRIDGE DECK SEALANT	S Y	—	562	751	1313

FOOTNOTES

(1) INCLUDES ALL COSTS TO PLACE CANTILEVER SUPPORTS IN PHASE I CONSTRUCTION FOR BRIDGE NO 19-I40-18 31 AS SHOWN ON DRAWING NO BR-40-61 & BR-40-61A AND PROVIDE MEANS TO CATCH AND CONTAIN ALL CONCRETE BEING REMOVED OVER TRAFFIC ON BRIDGES NO 19-I40-18 31 AND 19-I40-18 40 AS SHOWN ON DRWAING NO BR-40-61A

(2) COST OF RESETTING EXPANSION BEARINGS FOR BRIDGE NO 19-I40-18 31 INCLUDES INSTALLATION OF SHIM PLATES, REMOVING THE EXISTING TOP BEARING PLATE AND BOLTING TO THE BOTTOM FLANGE OF THE GIRDER, LABOR AND ANY MISCELLANEOUS MATERIALS NEEDED TO COMPLETE THE REPAIRS TO THE BEARINGS SHALL BE PAID FOR UNDER ITEM NO 602-10 12, L S SEE DRAWING NO BR-40-62 FOR DETAILS AND NOTES

(3) INCLUDES HAND TOOL CLEANING, PAINTING, CONTAINMENT AND DISPOSAL AND ALL LABOR AND MATERIALS FOR 10 ABUTMENT BEARING DEVICES PER BRIDGE

(4) INCLUDES ALL LABOR AND MATERIALS FOR REMOVAL AND DISPOSAL OF APPROXIMATELY 5" (±) EXISTING ASPHALT WEARING SURFACE WITHIN THE LIMITS OF EACH BRIDGE EXISTING ASPHALT DEPTHS VARY FROM 4" TO 6"

(5) INCLUDES CLEANING ALL SURFACES OF ALL DEBRIS AND FOREIGN MATERIALS BEFORE APPLYING SEALER SEE NOTE ON DRAWING NO BR-40-52

(6) ITEM NO'S 604-10 30 AND 604-10 50 IS A CONTINENCY ITEM THAT MAY BE INCREASED, DECREASED OR ELIMINATED AS DIRECTED BY THE ENGINEER

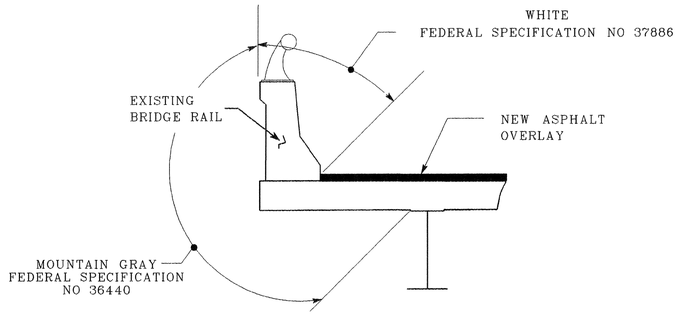
(7) INCLUDES THE COST OF CONCRETE, REINFORCING STEEL, RESETTING HANDRAIL ANCHOR BOLTS, FORMING, LABOR AND ALL MISCELLANEOUS ITEMS FOR COMPLETE AND IN PLACE REPAIR OF PARAPETS SEE DRAWING NO BR-40-64 FOR NOTES AND DETAILS

(8) INCLUDES ALL COSTS FOR REMOVAL OF EXISTING CONCRETE AND PLACEMENT OF NEW 18 HOUR CONCRETE, JOINT SEALANT, MECHANICAL BAR SPLICES AND REINFORCEMENT STEEL SEE DRAWING NO'S BR-40-59 AND BR-40-60 FOR NOTES AND DETAILS

(9) INCLUDES THE COST OF ALL LABOR AND MATERIALS REQUIRED TO REPAIR THE SURFACE OF THE BENTS AND ABUTMENTS AS DETAILED ON DRAWING NO BR-40-63 USING HIGH EARLY STRENGTH CONCRETE THIS ITEM SHALL BE BID AS CONTINGENCY AND MAY BE INCREASED, DECREASED OR ELIMINATED AS DIRECTED BY THE ENGINEER

(10) INCLUDES THE COST OF THE MASTIC AS SHOWN IN THE ASPHALT PAVEMENT DETAIL ON THIS SHEET

DESIGNED BY Terry Mackie DATE April 1999
DRAWN BY Don Kimber DATE June 1999
SUPERVISED BY W Seger & T Christianson DATE June 1999
CHECKED BY W. Seger, T. Mackie DATE June 1999

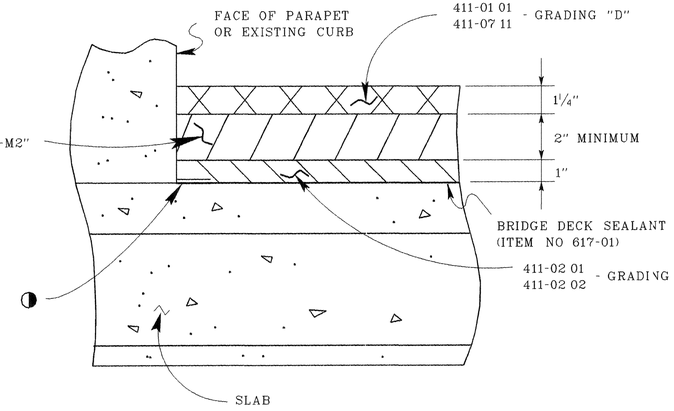


DETAIL SHOWING LIMITS OF TEXTURE FINISH

NOTES

TEXTURE FINISH THE SURFACES AS SHOWN FOR THE FULL LENGTH OF THE BRIDGES IN ADDITION TO AREAS SHOWN IN THE ABOVE SKETCH, THE FOLLOWING EXPOSED AREAS SHALL RECEIVE AN APPLIED TEXTURE FINISH (MOUNTAIN GREY) (36440), WINGWALLS, EXTERIOR PORTIONS OF ENDWALLS, ABUTMENT WALLS AND BENTS TO BE INCLUDED IN ITEM NO 604-04 02, S Y

BEFORE APPLYING TEXTURE FINISH, ALL SURFACES SHALL BE COMPLETELY CLEANED OF ALL DEBRIS AND FOREIGN MATERIALS



ASPHALT PAVEMENT DETAIL

(TYPICAL AT FACE OF EXISTING PARAPET)

◑ MASTIC AS RECOMMENDED BY MANUFACTURER OF MEMBRANE SEE STD SPEC ART 906 04

PROJECT NO.	YEAR	SHEET NO.
19958-4127-04	1999	2

REVISIONS

NO	DATE	BY	BRIEF DESCRIPTION
1	6-25-99	TDM	REVISED FOOTNOTES
2	7-6-99	TDM	GENERAL REVISIONS

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

ESTIMATED BRIDGE QUANTITIES
BRIDGE NO 19-I65-8 26
BRIDGE NO. 19-I40-18 31
BRIDGE NO 19-I40-18 40
DAVIDSON COUNTY
1999

(2)

BR-40-51

UTILITY NOTES

THE LOCATION OF UTILITIES SHALL BE FIELD LOCATED BY THE CONTRACTOR, AND BY CONTACTING THE UTILITY COMPANIES INVOLVED SOME UTILITIES CAN BE LOCATED BY CALLING THE TENNESSEE ONE CALL SYSTEM, INC AT 1-800-351-1111

UNLESS OTHERWISE NOTED, ALL UTILITY ADJUSTMENTS WILL BE PERFORMED BY THE UTILITY OR IT'S REPRESENTATIVE THE CONTRACTOR AND UTILITY OWNERS WILL BE REQUIRED TO CO-OPERATE WITH EACH OTHER IN ORDER TO EXPEDITE THE WORK REQUIRED BY THIS CONTRACT

THE CONTRACTOR SHALL PROVIDE ALL NECESSARY PROTECTIVE MEASURES TO SAFEGUARD EXISTING UTILITIES FROM DAMAGE DURING CONSTRUCTION OF THIS PROJECT IN THE EVENT THAT SPECIAL EQUIPMENT IS REQUIRED TO WORK OVER AND AROUND THE UTILITIES, THE CONTRACTOR WILL BE REQUIRED TO FURNISH SUCH EQUIPMENT THE COST OF PROTECTING UTILITIES FROM DAMAGE AND FURNISHING SPECIAL EQUIPMENT WILL BE INCLUDED IN THE PRICE BID FOR OTHER ITEMS OF CONSTRUCTION

THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR CONTACTING ALL AFFECTED UTILITIES PRIOR TO SUBMITTING HIS BID, IN ORDER TO DETERMINE THE EXTENT TO WHICH UTILITY RELOCATIONS AND/OR ADJUSTMENTS WILL HAVE UPON THE SCHEDULE OF THE WORK FOR THE PROJECT SOME UTILITY FACILITIES MAY NEED TO BE ADJUSTED CONCURRENTLY WITH THE CONTRACTOR'S OPERATIONS, WHILE SOME WORK MAY BE REQUIRED "AROUND" UTILITY FACILITIES THAT WILL REMAIN IN PLACE IT IS UNDERSTOOD AND AGREED THAT THE CONTRACTOR SHALL RECEIVE NO ADDITIONAL COMPENSATION FOR ANY DELAYS OR INCONVENIENCE CAUSED BY THE UTILITY ADJUSTMENTS

THE CONTRACTOR SHALL NOTIFY EACH INDIVIDUAL UTILITY OWNER OF HIS PLAN OF OPERATION IN THE AREA OF THE UTILITIES PRIOR TO COMMENCING WORK, THE CONTRACTOR SHALL CONTACT THE UTILITY OWNERS AND REQUEST THEM TO PROPERLY LOCATE THEIR RESPECTIVE UTILITY ON THE GROUND THIS NOTIFICATION SHALL BE GIVEN AT LEAST THREE (3) BUSINESS DAYS PRIOR TO COMMENCEMENT OF OPERATIONS AROUND THE UTILITY

GENERAL TIME LIMITATIONS AND WORK SEQUENCES

FOR EXACT TIMES AND LIQUIDATED DAMAGES SEE SPECIAL PROVISION 108B

WEEKDAY WORK

REPAIR ALL OVERHANGS AND PARAPETS ON ALL THREE (3) BRIDGES
REPAIR BEARINGS ON BRIDGE No 19-I40-18 31
PLACE ALL REQUIRED BRACING TO PREVENT FALLING CONCRETE ON BRIDGES No's 19-I40-18 31 AND 19-I40 - 18.40

THIS WORK WILL REQUIRE LANE CLOSURES ON 8th AVE FOR BRIDGES No's 19-I40-18 31 AND 19-I40-18.40 THESE CLOSURES SHALL BE DONE IN NON-PEAK TRAFFIC HOURS ONLY AND FULL TRAFFIC FLOW WITH ALL LANES OPEN BETWEEN THE HOURS OF 6 00 AM TO 9 00 AM AND BETWEEN 3 00 PM AND 7 00 PM

WEEKEND WORK

REMOVE ASPHALT, REMOVE CONCRETE IN LIMITS OF NEW JOINTS, REMOVE FULL AND PARTIAL DEPTH DECK CONCRETE, POUR NEW CONCRETE IN JOINT HEADERS AND IN FULL AND PARTIAL DEPTH DECK REPAIR AREAS AND PLACE NEW SEAL AND ASPHALT OVERLAY ON BRIDGE'S No 19-140-18 31 AND 19-I40-18.40.

THIS WORK WILL REQUIRE I40 AND I65 TO BE CLOSED TO ONE (1) LANE AND LANES CLOSURES TO 8th AVE FOR BRIDGE No 19-I40-18 31 AND LANE CLOSURES TO I65 UNDER BRIDGE No 19-I40-18 40 THE ONE (1) LANE CLOSURES TO BRIDGE'S No 19-I40-18 31 AND 19-I40-18 40 SHALL START AT 7 00 PM ON FRIDAY AND END ON 6 00 AM MONDAY THE INTERSTATE SHALL HAVE ALL LANES OPEN AFTER 6 00 AM MONDAY AND REMAIN SO DURING THE WEEK

REQUIREMENTS AND RESTRICITONS FOR PHASE CONSTRUCTION

1 SEE DRAWING NO BR-40-54,56 AND 58 FOR PHASE CONSTRUCTION DETAILS
2 SEE SPECIAL PROVISION 108B FOR TRAFFIC CONTROL RESTRICTIONS AND PROJECT COMPLETION REQUIREMENTS
3 SEE ROADWAY TRAFFIC CONTROL SHEETS FOR OTHER RESTRICTIONS

DESIGNED BY Terry Mackie DATE May 1999
DRAWN BY Don Kimber DATE June 1999
SUPERVISED BY W Seger & Tommy Christianson DATE June 1999
CHECKED BY W. Seger & Terry Mackie DATE June 1999

GENERAL NOTES

SPECIFICATIONS

STANDARD ROAD AND BRIDGE SPECIFICATIONS OF THE TENNESSEE DEPARTMENT OF TRANSPORTATION (MARCH 1, 1995 EDITION)

DESIGN SPECIFICATIONS

AASHTO 1996 EDITION WITH ADDENDA

REINFORCING STEEL

SEE THE STANDARD SPECIFICATIONS

SHOP DRAWINGS

SHALL BE SUBMITTED ACCORDING TO SPECIAL PROVISION NO 105A, SHOP DRAWINGS SHALL BE SUBMITTED TO THE BRIDGE REPAIR OFFICE OF THE DIVISION OF STRUCTURES

CONCRETE CURING

ALL CONCRETE IN REPAIR AREAS SHALL BE CURED ACCORDING TO THE STANDARD SPECIFICATIONS

MECHANICAL BAR SPLICERS

MUST BE ON THE APPROVED LIST MAINTAINED BY THE DIVISION OF MATERIALS AND TESTS THE BAR SPLICER SHALL MEET AASHTO STANDARD SPECIFICATIONS FOR MECHANICAL CONNECTION WHEN EPOXY COATING IS REQUIRED, THE EXPOSED THREADS SHALL BE REPAIRED AFTER SPLICING ACCORDING TO THE STANDARD SPECIFICATIONS, SECTION 907

DEMOLITION

THE CONTRACTOR SHALL TAKE SPECIAL CARE TO PROTECT ANY PARTS OF THE STRUCTURE THAT ARE NOT TO BE REMOVED SPECIFICALLY THE CONTRACTOR IS NOT ALLOWED TO USE A HYDRAULIC RAM MOUNTED ON A BACKHOE (COMMONLY CALLED A HOE RAM) OR OTHER SIMILARY HEAVY EQUIPMENT FOR CONCRETE REMOVAL PNEUMATIC HAMMERS MAY BE USED TO REMOVE UNSOUND CONCRETE FOR FULL DEPTH OF CONCRETE SLAB REMOVAL EXCEPT OVER BEAMS THE MAXIMUM HAMMER SIZE IS 90 POUND CLASS FOR PARTIAL DEPTH OF CONCRETE SLAB REMOVAL AND ANY WORK OVER BEAMS, THE MAXIMUM HAMMER SIZE IS 60 POUND CLASS SAWING OR CUTTING OF CONCRETE IS ACCEPTABLE AS LONG AS ANY SPECIFIED PROJECTION OF THE EXISTING REINFORCING STEEL IS MAINTAINED ALL DEVICES PROPOSED FOR CONCRETE DEMOLITION SHALL MEET WITH APPROVAL OF THE ENGINEER

GROUTED BARS IN DRILLED HOLES

HORIZONTALLY DRILLED HOLES SHALL BE DRILLED ½" IN DIAMETER LARGER THAN THE BAR, CLEANED, PACKED WITH NON-SHRINK GROUT AND THE BAR ROTATED (NOT DRIVEN) TO ITS SEAT VERTICALLY DRILLED HOLES SHALL BE DRILLED ¼" IN DIAMETER LARGER THAN THE BAR CLEANED, PACKED WITH EPOXY GROUT AND DRIVEN TO ITS SEAT ALL GROUTING MATERIAL SHALL BE APPROVED BY THE TENNESSEE DEPARTMENT OF TRANSPORTATION MATERIALS AND TESTS

BRIDGE RAIL

RE-BUILD BRIDGE RAILINGS ACCORDING TO STANDARD DRAWING STD-11-1

WELDING

ANSI/AASHTO/AWS D1 5-88 BRIDGE WELDING CODE AND THE STANDARD SPECIFICATIONS

ROADSIDE BANKS/SLOPES

ROADSIDE BANKS/ SLOPES USED BY THE CONTRACTOR FOR WORK ACCESS, PARKING, AND ANY OTHER OPERATIONS THAT ARE DISTURBED BY HIS OPERATIONS SHALL BE REPAIRED BY REGRADING, RESEEDING, MULCHING, OR WHATEVER MEANS ARE NECESSARY TO RESTORE THE BANKS/SLOPES TO THE ORIGINAL CONDITION ALL RESTORATION WORK SHALL MEET THE FULL SATISFACTION OF THE ENGINEER COST OF ALL RESTORATION WORK SHALL BE INCLUDED IN ITEMS BID ON

FINISHING CONCRETE SURFACES

CONCRETE FINISHING SHALL BE IN ACCORDANCE WITH SECTION 604 22 OF THE TENNESSEE STANDARD SPECIFICATION A CLASS I FINISH FOLLOWED BY AN APPLIED TEXTURE FINISH SHALL BE USED IN LEIU OF A CLASS II FINISH NO TEXTURE FINISH SHALL BE APPLIED PRIOR TO COMPLETION OF PAVING AND HAULING OPERATIONS AT THE BRIDGE SITE THE APPLIED TEXTURE FINISH SHALL BE MEASURED AND PAID FOR UNDER ITEM 604-04 02

HIGH EARLY STRENGTH CONCRETE (EXPANSION JOINTS, FULL AND PARTIAL DEPTH REPAIRS)

SHALL BE HIGH EARLY STRENGTH CONCRETE WITH A COMPRESSIVE STRENGTH OF 3,000 psi AT 18 HOURS THE CONTRACTOR SHALL PROVIDE PROOF PRIOR TO BEGINNING WORK THAT THE PROPOSED CONCRETE MIX SHALL OBTAIN REQUIRED PROPERTIES PROOF SHALL BE PROVIDED BY AN INDEPENDENT TESTING COMPANY AND SUBMITTED TO THE MATERIALS AND TEST DIVISION OF THE TENNESSEE DEPARTMENT OF TRANSPORTATION FOR APPROVAL TRAFFIC SHALL NOT BE PERMITTED ON ANY OF THE REPAIR AREAS UNTIL TEST SPECIMENS ATTAIN A COMPRESSIVE STRENGTH OF 3,000 psi MINIMUM AND THE CONCRETE HAS BEEN IN PLACE A MINIMUM OF 18 HOURS

HIGH EARLY STRENGTH CONCRETE (PARAPETS AND SLAB OVERHANGS)

HIGH EARLY STRENGTH CONCRETE (PARAPET AND SLAB OVERHANG) THE MIX TO MEET THE REQUIREMENTS OF THE STANDARD SPECIFICATIONS, CLASS 'A', EXCEPT THE CEMENT CONTENT SHALL BE A MINIMUM OF 714 LBS THE WATER CEMENT RATIO SHALL BE A MINIMUM OF 0 40 NO FLY ASH REPLACEMENT WILL BE PERMITTED, AND THE MINIMUM 28 DAY COMPRESSIVE STRENGTH SHALL BE 3,500 psi TRAFFIC SHALL NOT BE PERMITTED ON ANY OF THE REPAIR AREAS UNTIL TEST SPECIMENS ATTAIN A COMPRESSIVE STRENGTH OF 3,000 psi MINIMUM AND THE CONCRETE HAS BEEN IN PLACE A MINIMUM OF TEN (10) DAYS

PROJECT NO.	YEAR	SHEET NO.
19958-4127-04	1999	

REVISIONS

NO	DATE	BY	BRIEF DESCRIPTION
1	7 6 99	TDM	GENERAL REVISIONS

SPECIAL NOTE TO CONTRACTOR

NO CONCRETE OR OTHER DEBRIS SHALL BE ALLOWED TO DROP ONTO THE ROADWAY BELOW WHEN MAKING REPAIRS TO THE EXISTING STRUCTURE

CLEANING AND PAINTING

ALL STEEL BEARINGS SHALL BE CLEANED AND PAINTED CLEANING SHALL BE IN ACCORDANCE WITH TENNESSEE STANDARD SPECIFICATION SECTION 603 05 (A) HAND OR POWER TOOL CLEANING SHALL REMOVE ALL RUST, SCALE, LOOSE PAINT AND DIRT AFTER CLEANING, THE BEARINGS SHALL BE PAINTED WITH AN APPROVED EPOXY MASTIC PAINT APPLIED AT A MINIMUM DRY FILM THICKNESS OF 4 0 MILS THE COLOR OF THE FINISH COAT SHALL COMPLY WITH FEDERAL STANDARD NO 595A FEDERAL SPEC NO 24110 (BRIGHT GREEN) SEE SECTIONS 603 AND 9.0 OF THE STANDARD SPECIFICATIONS

SEE THE TENNESSEE DEPARTMENT OF TRANSPORTATION'S QUALIFIED PRODUCTS LIST FOR ACCEPTABLE BRANDS OF EPOXY MASTIC ALL PRODUCTS USED, INCLUDING THINNERS SHALL BE SUPPLIED BY THE SAME MANUFACTURER

APPLICATION THE COATING APPLICATOR SHALL FOLLOW THE MANUFACTURER'S PRINTED INSTRUCTIONS AND SHALL HAVE THESE INSTRUCTIONS ON SITE DURING THE COURSE OF THE WORK

CONCRETE SEALER

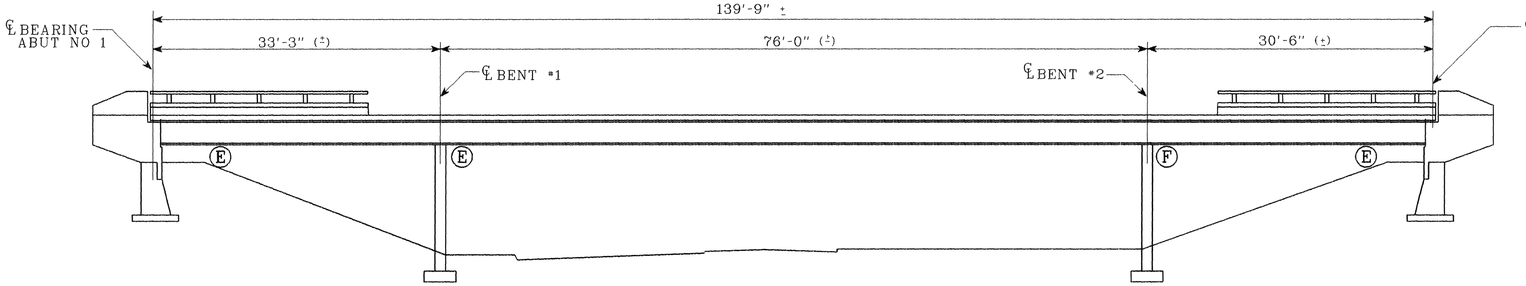
CONCRETE SEALER SHALL BE APPLIED TO SUBSTRUCTURES COINCIDING WITH EXPANSION JOINT LOCATIONS BEFORE PLACEMENT OF BEARING DEVICES AND APPLYING TEXTURE COATING CONCRTE SEALER SHALL BE APPLIED TO THE FRONT VERTICAL FACE OF THE ABUTMENT BACKWALL, THE FRONT AND TOP OF THE ABUTMENT BEAM PLUS CURTAIN WALL, SUMP WALLS OR ANY OTHER FACES THAT ARE DEEMED NECESSARY BY THE ENGINEER CONCRTE SHALL BE CLEAN AND DRY BEFORE APPLYING THE CONCRETE SEAL, AND THE THICKNESS OF THE SEAL SHALL BE AS RECOMMENDED BY THE SEALANT MANUFACTURER ACCEPTABLE CONCRETE SEALERS ARE INCLUDED IN THE QUALIFIED PRODUCTS LIST OF NON PENETRATING CONCRTE SEALS MAINTAINED BY THE DIVISOIN OF MATERIALS AND TESTS THE SEALER SHALL BE CLEAR OR SIMILAR TO THE COLOR OF EXISTING CONCRETE SURFACES TO BE SEALED THE COST OF THE SEALER, COMPLETE AND IN PLACE, SHALL BE INCLUDED IN ITEM NO 604-10 17

WAYNE J SEGER REGISTERED ENGINEER AGRICULTURE COMMERCE NO 19224 STATE OF TENNESSEE

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
GENERAL NOTES
BRIDGE NO. 19-165-8 26
BRIDGE NO 19-140-18 31
BRIDGE NO 19-140-18.40
DAVIDSON COUNTY
1999

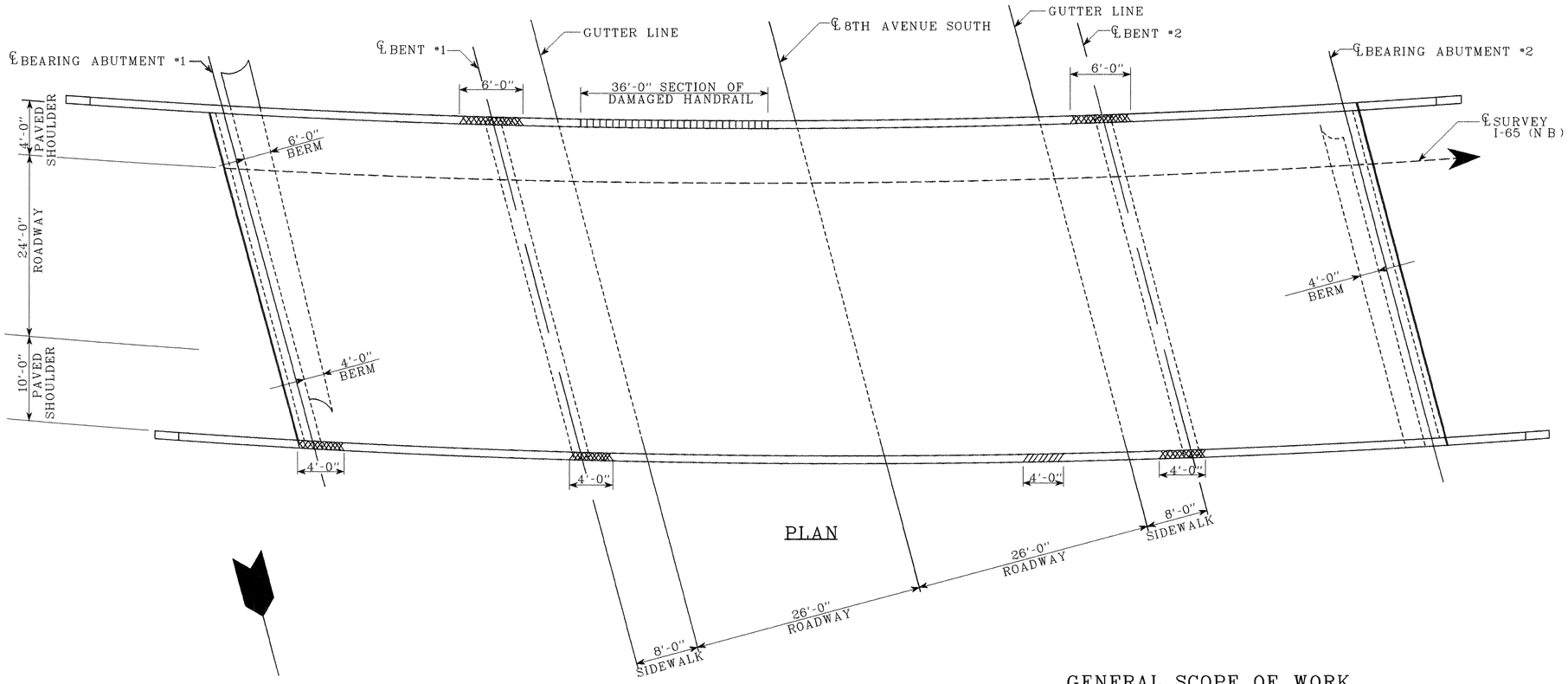
1

BR-40-52



ELEVATION

(E) DENOTES EXPANSION
(F) DENOTES FIXED



PLAN

DENOTES PARAPET AND OVERHANG REPAIR AREAS

DENOTES RESET HANDRAIL IN THIS AREA

DENOTES LOCATION OF DAMAGED HANDRAIL

GENERAL SCOPE OF WORK

1) REPAIR PARAPET BREAKOUTS & SPALLED AREAS
2) REPLACE SECTIONS OF DAMAGED HANDRAIL ON PARAPET
3) CLEAN AND PAINT THE EXISTING ABUTMENT BEARING DEVICES
4) REPAIR DETERIORATED AREAS ON ABUTMENTS, PARAPETS, OVERHANGS
5) APPLY CONCRETE SEALER TO ABUTMENT BEAMS & BACKWALLS
6) APPLY TEXTURE FINISH TO PARAPETS, OVERHANGS, AND SUBSTRUCTURES
7) MAINTAIN TRAFFIC CONTROL

PROJECT NO.	YEAR	SHEET NO.
19958-4127-04	1999	

REVISIONS

NO	DATE	BY	BRIEF DESCRIPTION
1	6-25-99	TDM	REVISED DATES AND ADDED DWGS
2	7-6-99	TDM	GENERAL REVSIONS

(1) LIST OF BRIDGE DRAWINGS

DRAWING NO.	LAST REV. DATE	DRAWING
BR-40-50	7-6-99	BRIDGE LOCATION SKETCH
BR-40-51	7-6-99	ESTIMATED QUANTITIES
BR-40-52	7-6-99	GENERAL NOTES
BR-40-53	7-6-99	LAYOUT OF BRIDGE TO BE REPAIRED
BR-40-54	7-6-99	PHASE CONSTRUCTION DETAILS
BR-40-61	7-6-99	BRIDGE REPAIR DETAILS
BR-40-62	7-6-99	BRIDGE REPAIR DETAILS
BR-40-63		BRIDGE REPAIR DETAILS
BR-40-64	7-6-99	BRIDGE REPAIR DETAILS

LIST OF REFERENCE DRAWINGS

(TO BE PRINTED WITH PLANS)

DRAWING NO.	DRAWING
K-61-27 THRU 35	EXISTING BRIDGE DRAWINGS

LIST OF STANDARD DRAWINGS

DRAWING NO.	LAST REV. DATE	DRAWING
STD-9-1	12-19-94	REINFORCING BAR SUPPORT
* STD-11-1	5-21-99	BRIDGE RAILING CONCRETE PARAPET WITH STRUCTURAL TUBING

* DENOTES, TO BE PRINTED WITH THE PLANS

LIST OF SPECIAL PROVISIONS

** DENOTES CURRENT REVISION DATE AS PER CONTRACT DOCUMENTS

NO.	LAST REV. DATE	REGARDING
105A	**	APPROVAL OF SHOP DRAWINGS
108B	**	PROJECT COMPLETION AND LIQUIDATED DAMAGES

DESIGNED BY Terry Mackie DATE May 1999
DRAWN BY Sher'ryl McAdoo DATE May 1999
SUPERVISED BY T Christianson/W Seger DATE May 1999
CHECKED BY T Mackie / W Seger DATE May 1999

DEPARTMENT OF TRANSPORTATION

EXISTING BRIDGE #76
LAYOUT OF BRIDGE
INTERSTATE 65 N.B. ROADWAY OVER 8TH AVENUE
BRIDGE NO. 19-I65-8.26
DAVIDSON COUNTY
1999

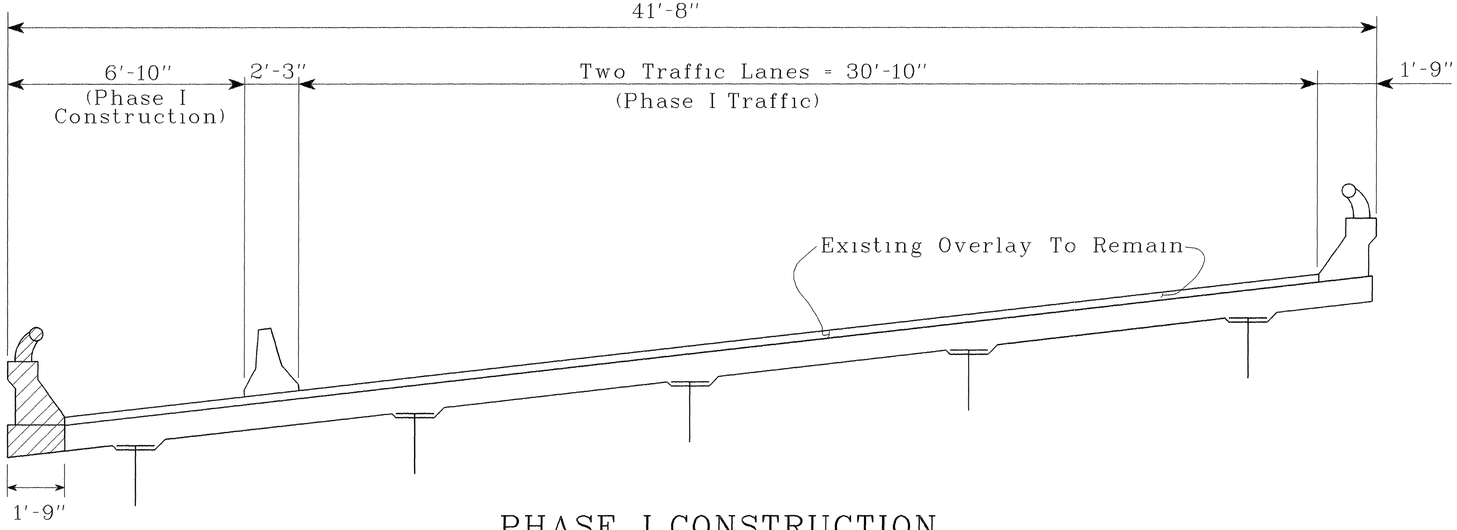
(2)

BR-40-53

PROJECT NO.	YEAR	SHEET NO.
19958-4127-04	1999	

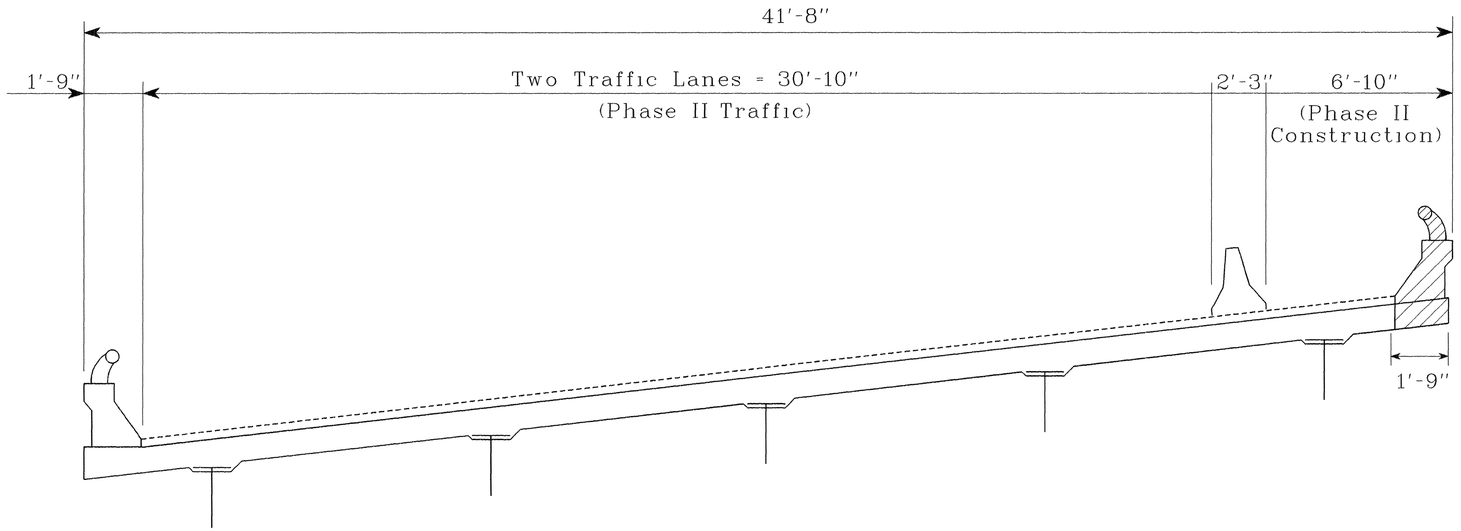
REVISIONS

NO	DATE	BY	BRIEF DESCRIPTION
1	7-6-99	TDM	CHANGED SHEET NO.



PHASE I CONSTRUCTION

DENOTES LIMITS OF REPAIR FOR PARAPET, OVERHANG AND HANDRAIL THE EXISTING ASPHALT OVERLAY WITH DECK SEAL AT THIS BRIDGE SITE SHALL NOT BE DISTURBED



PHASE II CONSTRUCTION

PHASE CONSTRUCTION DETAILS

(Looking Forward On Survey)

NOTE THESE PHASE CONSTRUCTION DETAILS ARE ACCEPTABLE FOR THE FULL LIFE OF THE PROJECT AT THIS BRIDGE SITE FOR ADDITIONAL PHASE CONSTRUCTION DETAILS, SEE THE TRAFFIC CONTROL PLANS, SHEET NO 2-A THRU 2-P. ⚠1

DESIGNED BY Terry Mackie DATE MAY 1999
DRAWN BY Sheryl McAdoo DATE MAY 1999
SUPERVISED BY T. Christianson/ Wayne Seger DATE MAY 1999
CHECKED BY Terry Mackie/ Wayne Seger DATE MAY 1999

WAYNE J. SEGER — REGISTERED ENGINEER — AGRICULTURE — COMMERCE — NO 19224 — STATE OF TENNESSEE — 1999

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

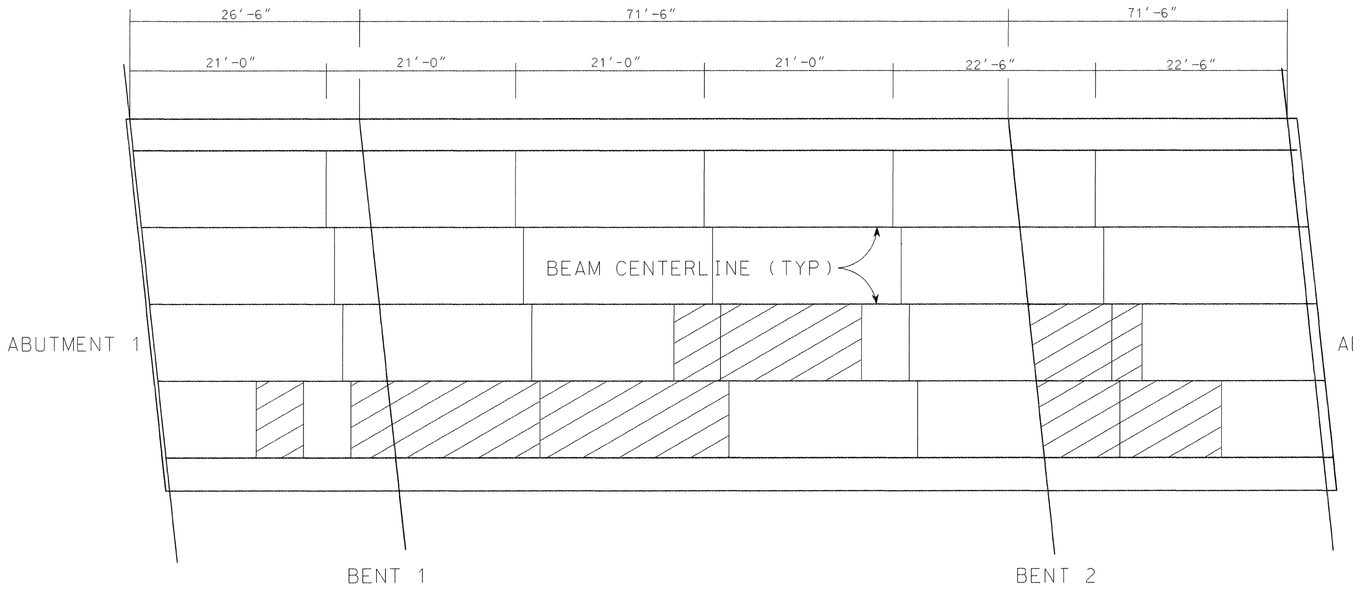
EXISTING BRIDGE #76
PHASE CONSTRUCTION DETAILS
INTERSTATE 65 N.B. ROADWAY
OVER 8TH AVENUE
BRIDGE NO. 19-I65-8.26
DAVIDSON COUNTY
1999

BR-40-54

PROJECT NO.	YEAR	SHEET NO.
19958-4127-04	1999	

REVISIONS

NO	DATE	BY	BRIEF DESCRIPTION
1	7-6-99	TDM	GENERAL REVISION



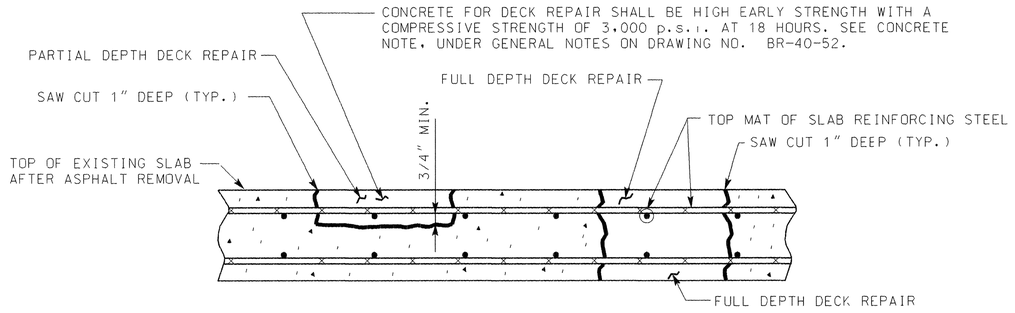
PLAN

(BRIDGE NO. 19-I40-18.31)

NOTE: FOR ADDITIONAL BRACING DETAILS, SEE DWG. NO. BR-40-61A.

DENOTES: APPROXIMATE AREAS OF FULL DEPTH DECK REPAIR.

NOTE: FULL DEPTH REPAIR AREAS SHOWN ARE APPROXIMATE AND FOR GENERAL INFORMATION ONLY. EXACT AREAS WILL BE DETERMINED AFTER REMOVAL OF ASPHALT.



DETAIL SHOWING FULL AND PARTIAL DEPTH DECK REPAIR

(BRIDGE NO. 19-I40-18.31 & 19-I40-18 40)

REMOVE CONCRETE IN ALL DELAMINATED AREAS TO A DEPTH OF $^{3}/_{4}$" (MINIMUM) BELOW THE TOP BAR OF THE TOP MAT OF REINFORCING STEEL. ALL REINFORCING STEEL IN AREAS OF DECK REPAIR SHALL BE COMPLETELY CLEANED. AREAS OF CONCRETE REMOVAL SHALL BE DESIGNATED BY PERSONNEL FROM THE BRIDGE REPAIR OFFICE. INSPECTIONS TO DETERMINE AREAS OF DECK REPAIR SHALL BE SCHEDULED WITH THE BRIDGE REPAIR OFFICE AT LEAST THREE (3) DAYS IN ADVANCE. DECK REPAIR WILL BE PAID FOR UNDER ITEM NO. 604-10 50, BRIDGE DECK REPAIR (PARTIAL DEPTH OF SLAB), AND ITEM NO.604-10.30, BRIDGE DECK REPAIR (FULL DEPTH OF SLAB). DURING PARTIAL DEPTH REPAIRS, SHOULD DETERIORATED CONCRETE BE ENCOUNTERED WHICH APPEARS TO RUN FULL DEPTH IN THE SLAB, THE ENGINEER MAY DESIGNATE THESE AREAS TO BE REPAIRED UNDER ITEM NO. 604-10.30. POWER DRIVEN HAND TOOLS USED FOR THE REMOVAL OF UNSOUND CONCRETE IN MAKING PARTIAL AND FULL DEPTH REPAIRS ARE SUBJECT TO THE FOLLOWING RESTRICTIONS: 1) (PARTIAL DEPTH REPAIRS) PNEUMATIC HAMMERS HEAVIER THAN NOMINAL 60 POUND CLASS SHALL NOT BE USED. 2) (FULL DEPTH REPAIRS) PNEUMATIC HAMMERS HEAVIER THAN NOMINAL 90 POUND CLASS SHALL NOT BE USED. ALSO ALL DECK REPAIR OVER BEAMS WILL BE RESTRICTED TO 60 POUND PNEUMATIC HAMMERS. 3) CHIPPING HAMMERS OF THE 15 POUND CLASS SHALL BE USED TO REMOVE CONCRETE FROM BENEATH ANY REINFORCING STEEL. 4) TRAFFIC CONTROL SHALL BE PROVIDED FOR TRAFFIC BELOW BRIDGE DURING PARTIAL AND FULL DEPTH DECK REPAIR.

NOTE: ITEM NO. 604-10.30 AND 604-10.50 SHALL BE BID WITH THE CONTINGENCY THAT THESE ITEMS MAY BE INCREASED, DECREASED, OR ELIMINATED AS DIRECTED BY THE ENGINEER.

STATE OF TENNESSEE

DEPARTMENT OF TRANSPORTATION

EXISTING BRIDGE NOS. 75, 76 & 156
BRIDGE REPAIRS
BRIDGE NO. 19-I65-8.26
BRIDGE NO. 19-I40-18.31
BRIDGE NO. 19-I40-18.40
DAVIDSON COUNTY
1999

DESIGNED BY	TERRY MACKIE	DATE	04/1999
DRAWN BY	SCOTT C. NELSON	DATE	04/1999
SUPERVISED BY	W.SEGER & T.CHRISTIANSON	DATE	04/1999
CHECKED BY	W.SEGER & T.MACKIE	DATE	04/1999

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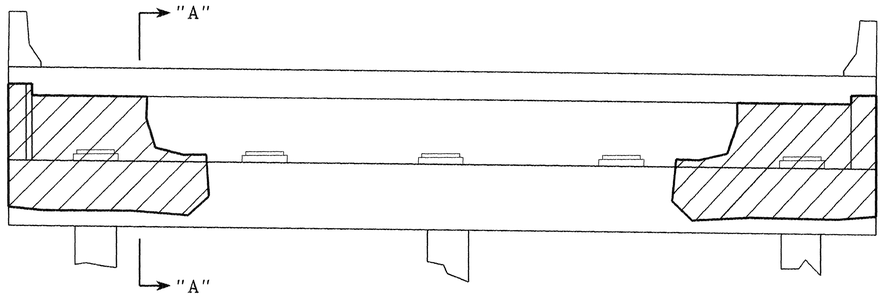
BR-40-61

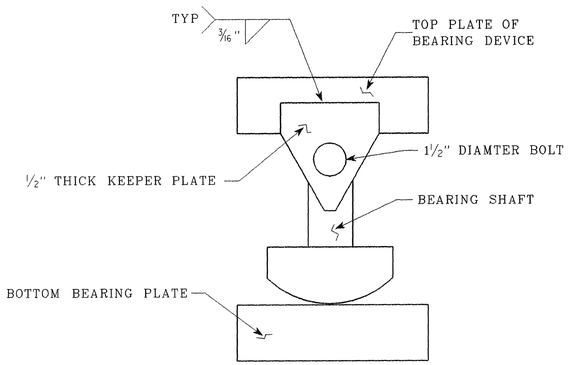
PROJECT NO.	YEAR	SHEET NO.
19958-4127-04	1999	

REVISIONS

NO	DATE	BY	BRIEF DESCRIPTION
1	6-29-99	T M	GENERAL REVISION

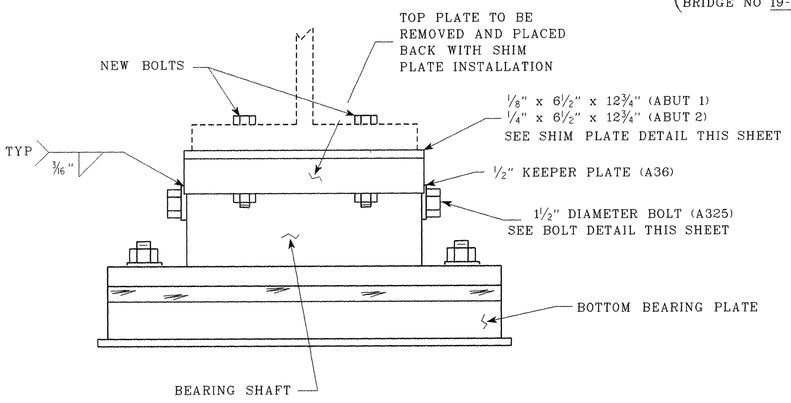


ABUTMENT ELEVATION VIEW



BEARING DEVICE DETAIL

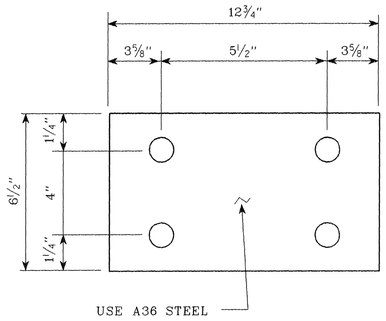
(SIDE ELEVATON VIEW)



BEARING DEVICE DETAIL

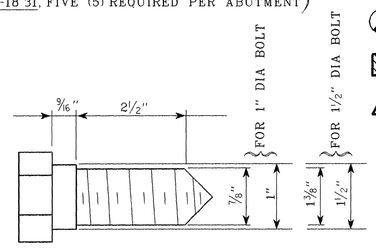
NOTES

THE KEEPER PLATE AND BOLT HAVE SHEARED OFF AT VARIOIUS LOCATOINS ANY MISSING OR BROKEN KEEPER PLATES AND BOLTS SHALL BE REPLACED THE CONTRACTOR SHALL FIELD MEASURE THE KEEPER PLATES BEFORE FABRICATION

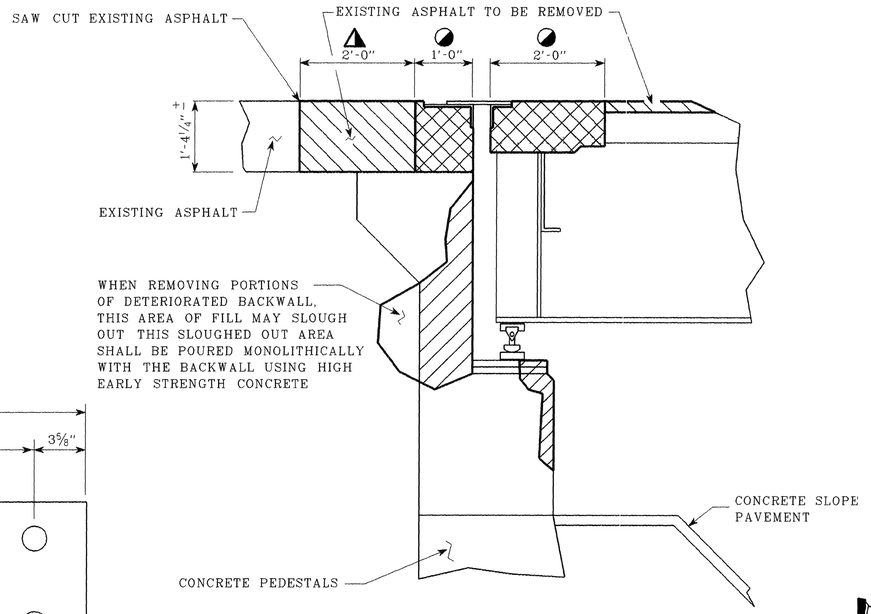


SHIM PLATE DETAIL

(SHIM PLATES REQUIRED ONLY FOR ABUTMENTS ON BRIDGE NO 19-140-18 31, FIVE (5) REQUIRED PER ABUTMENT)



BOLT DETAIL



SECTION "A-A"

NOTES

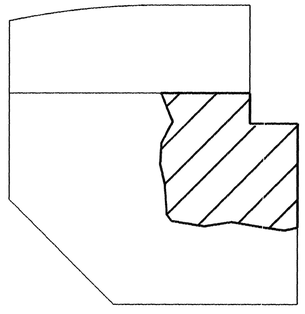
DENOTES AREA OF REMOVAL FOR EXPANSION JOINT REPAIR FOR FULL WIDTH OF SLAB

DENOTES AREAS OF SPALLED CONCRETE TO BE REPAIRED FOR MORE DETAILS AND NOTES REGARDING SPALLED CONCRETE AREAS SEE DRAWING NO BR-40-63

DENOTES EXPANSION JOINT REPAIRS IS REQUIRED FOR BRIDGE NO 'S 19-140-18 31 (NO 75) AND 19-140-18 40 (NO 156) ONLY

DENOTES EXISTING ASPHALT TO BE REMOVED

DENOTES THE EXISTING ASPHALT BEFORE THE BRIDGE SHALL BE REPLACED BY FIVE (5) EQUAL LIFTS OF GRADING "B" MODIFIED AND TOPPED WITH A 1 1/4" SURFACE LAYER OF GRADING "D" MIX



WINGWALL ELEVATION

NOTES

ALL WORK TO THE WINGWALLS, APRON WALLS, BACKWALLS, BEARING DEVICES, AND ABUTMENT BEAMS, SHALL BE COMPLETED DURING THE WEEKDAYS, PRIOR TO THE WEEKEND WORK

IF ANY DAMAGE OCCURS TO THE CONCRETE SLOPE PAVEMENT DURING THE JACKING OPERATION OR REPAIR PERIOD, THEN THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPLACING IN-KIND NO ADDITIONAL COST SHALL BE AWARDED FOR SLOPE PAVEMENT REPAIRS

EXISTING APRON WALLS SHALL BE REMOVED AND REPLACED CARE SHALL BE TAKEN AS NOT TO DAMAGE THE EXISTING REINFORCING IF THE EXISTING REINFORCING IS DAMAGED THE CONTRACTOR SHALL REPLACE AT HIS OWN EXPENSE

ALL REPAIRS TO THE CONCRETE UNDERNEATH THE BEARING DEVICE SHALL BE DONE BEFORE THE BEARING DEVICE IS RE-INSTALLED CARE SHALL BE TAKEN AS NOT TO DAMAGE THE ANCHOR BOLTS COST OF REPLACING ANY DAMAGED ANCHOR BOLTS SHALL BE THE CONTRACTOR'S RESPONSIBILITY AND AT NO ADDITIONAL COST

THE BEAMS SHALL BE JACKED AND THE TOP PLATE OF THE EXPANSION BEARING UNBOLTED THE BEARING SHAFT SHALL THEN BE REMOVED AND ANY MISSING OR BROKEN KEEPER PLATES AND BOLTS SHALL BE REPLACED

AFTER THE EXISTING GIRDERS HAVE BEEN JACKED AND THE EXISTING BEARING DEVICES ARE BEING REPAIRED, THE EXISTING GIRDERS SHALL BE SUPPORTED ON TEMPORARY WOOD BLOCKOUTS OR ALTERNATE THIS BLOCKOUT SHALL BE PLACED AT THE EXISTING BEARING LOCATION, (ON TOP OF THE EXISTING BOTTOM BEARING PLATE)

ALL BEARING REPAIRS SHALL BE COMPLETED BEFORE THE EXPANSION JOINTS ARE REMOVED AND REPLACED

COST NOTES

WHEN REMOVING THE BEARING DEVICES, THE CONTRACTOR SHALL BE RESPONSIBLE FOR SUPPORTING THE EXISTING GIRDERS THE GIRDER SUPPORTS SHALL BE PLACED PRIOR TO BEARING DEVICE REPAIR WORK BEING STARTED ON THIS PROJECT AT ANY GIVEN LOCATION THE METHOD OF SUPPORT SHALL BE THE FULL RESPONSIBLITY OF THE CONTRACTCR AND SHALL MEET THE FULL SATISFACTION OF THE ENGINEER DETAILS SHALL BE SUBMITTED TO THE ENGINEER FOR HIS APPROVAL COST OF THE SUPPORT SYSTEM SHALL BE INCLUDED IN ITEM NO 602-10 19

COST OF ALL BEARING DEVICE REPAIRS, INCLUDES REMOVING AND PLACING BACK TOP BEARING PLATES, SHIM PLATES, BOLTS, KEEPER PLATES, WELDING, REMOVING AND REPLACING BOLTS, RESETTING ANCHOR BOLTS, AND LABOR SHALL BE INCLUDED IN ITEM NO 602-10 12, BEARING DEVICE REPAIR (L S)

JACKING OF EXISTING STEEL GIRDERS TO FACILITATE THE INSTALLATION OF REPAIRED BEARING DEVICES AND SHIM PLATES (AS REQUIRED) SHALL BE PERFORMED INCREMENTALLY IN SUCH A MANNER THAT THE EXISTING SLAB IS NOT CRACKED JACKING PROCEDURES ARE TO BE MONITORED BY THE ENGINEER AND SHALL BE HALTED SHOULD SUCH DAMAGE OCCUR JACKING OF STEEL BEAM SHALL BE LIMITED TO THE MINIMUM HEIGHT REQUIRED TO INSTALL THE REPAIRED BEARING DEVICES AND SHIM PLATES JACKING IS REQUIRED FOR BRIDGE NO 19-140-18 31, WHERE SHIM PLATE INSERTION IS REQUIRED COST OF JACKING EXISTING STEEL GIRDER SHALL BE INCLUDED UNDER ITEM NO 602-10 19, JACKING STEEL SPANS (L S)

COST OF GRADING "B" (MODIFIED), EXCAVATION AND BACKFILLING TO BE INCLUDED IN ITEM NO 307-07 07, PERF GRADE (PF76-22) (BPMB-HM) GR B-M2, TON

CONTRACTOR TO TAKE EXTREME CARE WHEN REMOVING ENDS OF SLAB AT THE ABUTMENTS SO AS NOT TO DAMAGE EXISTING LONGITUDINAL REINFORCING STEEL ALL EXISTING REINFORCING STEEL SHALL BE COMPLETELY CLEANED BEFORE POURING NEW CONCRETE SLAB COST OF CLEANING REINFORCEMENTS, REMOVING AND REPOUING THE ENDS OF THE SLAB TO BE INCOLUDED UNDER ITEM NO 604-10 44, EXPANSION JOINT REPAIRS (L F)

COST OF PAINTING ALL ABUTMENT BEARING DEVICES SHALL BE INCLUDED IN ITEM NO 603-02 01, REPAINTING EXISTING STEEL STRUCTURES (L S) FOR PAINTING NOTES SEE DRAWING NO

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EXISTING BRIDGE NO. 75, 76 & 156
BRIDGE REPAIR DETAILS
BRIDGE NO. 19-165-8.26
BRIDGE NO. 19-140-18.31
BRIDGE NO. 19-140-18.40
DAVIDSON COUNTY
1999

DESIGNED BY Terry Mackie DATE May, 1999
DRAWN BY Cory Hawkins DATE May, 1999
SUPERVISED BY Wayne Seger, T. Christianson DATE May, 1999
CHECKED BY Wayne Seger, Terry Mackie DATE July, 1999

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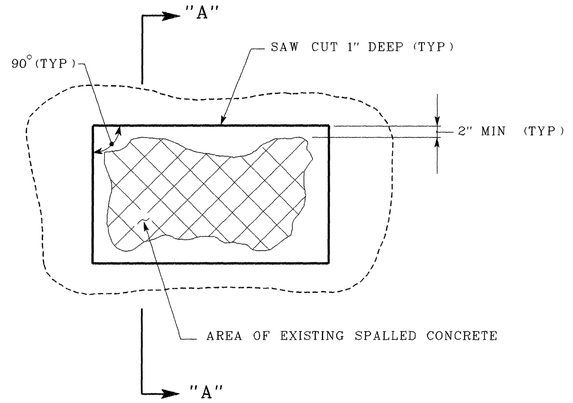
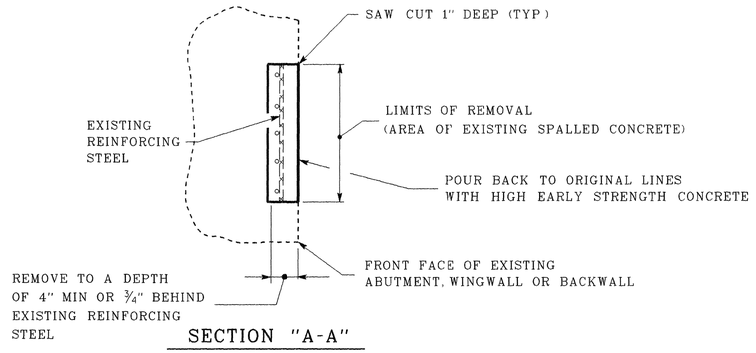
BR-40-62

PROJECT NO.	YEAR	SHEET NO.
19958-4127-04	1999	

REVISIONS

NO	DATE	BY	BRIEF DESCRIPTION





SECTION "A-A"

DETAILS OF SPALLED CONCRETE SURFACE REMOVAL AND REPAIR

NOTES

EXTREME CARE SHALL BE TAKEN WHEN REMOVING THE DETERIORATED CONCRETE SO AS NOT TO DAMAGE THE EXISTING REINFORCING STEEL ALL EXPOSED REINFORCING SHALL BE COMPLETELY CLEANED TO THE SATISFACTION OF THE ENGINEER BEFORE REPOURING

FOR CONCRETE NOTE, SEE GENERAL NOTES ON DRAWING NO BR-40-52

LIMITS AND LOCATION OF REPAIRS TO BE DISIGNATED BY THE ENGINEER ALL UNSOUND CONCRETE IN THESE AREAS SHALL BE REMOVED AND REPOURED WITH HIGH EARLY STRENGH CONCRETE THE MINIMUM DEPTH OF REPAIR SHALL BE 4 INCHES DEPTH MAY BE INCREASED TO EXTEND INTO SOUND CONCRETE AS DIRECTED BY THE ENGINEER EDGES OF THE REPAIR AREAS SHALL HAVE A MINIMUM 1 INCH SAW CUT PERPENDICULAR TO THE FACE OF THE CONCRETE

ITEM NO 604-10 54 SHALL BE BID WITH THE CONTINGENCY THAT THE ITEM MAY BE INCREASED, DECREASED OR ELIMINATED AS DIRECTED BY THE ENGINEER

SAW CUT EXISTING CONCRETE SURFACES SO AS TO OBTAIN SQUARED CORNERS

NOTES

POWER DRIVEN HAND TOOLS USED FOR THE REMOVAL OF UNSOUND CONCRETE ARE SUBJECT TO THE FOLLOWING RESTRICTIONS

1 Pneumatic hammers heavier than a 35 lb class shall not be used
2 Chipping hammers of the 15 lb class shall be used to remove concrete from behind the reinforcing steel

THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE STABILITY OF THE STRUCTURE DURING REPAIRS DETAILS OF ANY TEMPORARY SUPPORT SYSTEM (IF REQUIRED) SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW AND SHALL MEET WITH THE FULL SATISFACTION OF THE ENGINEER BEFORE REPAIRS HAVE BEGUN COST TO BE INCLUDED IN ITEMS BID ON

COST OF REMOVING DETERIORATED CONCRETE, CLEANING EXISTING REINFORCING STEEL, FORMING, HIGH EARLY STRENGTH CONCRETE AND ALL ADDITIONAL MATERIALS AND LABOR NECESSARY TO COMPLETE REPAIRS SHOWN IN THIS DETAIL TO BE INCLUDED UNDER ITEM NO 604-10 54, CONCRETE REPAIRS, S F

QUANTITY CHART

(ITEM NO 604-10 54, CONCRETE REPAIR (S F)

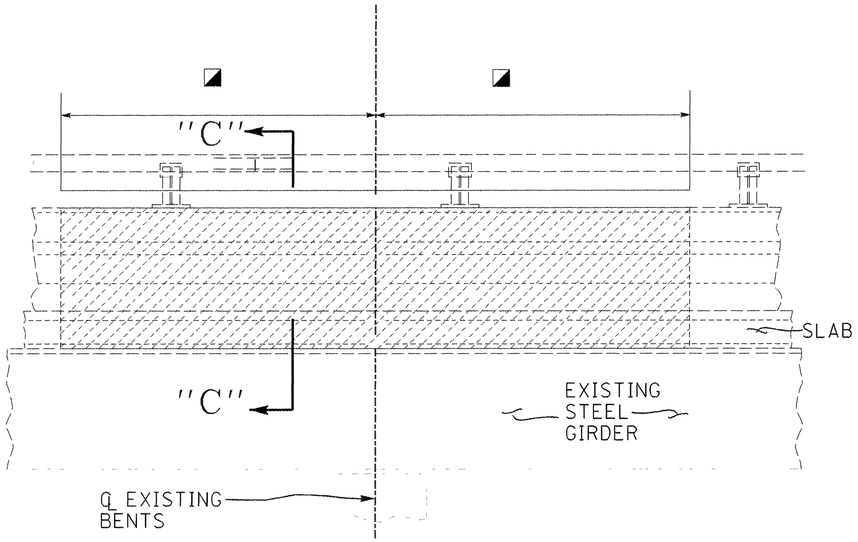
BRIDGE NO.	ABUT 1	ABUT 2
19-I65-8 26	48	62
19-I40-18 31	30	36
19 I40-18 40	15	6

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EXISTING BRIDGE NO. 75, 76 & 156
BRIDGE REPAIR DETAILS
BRIDGE NO 19-I65-8.26
BRIDGE NO. 19-I40-18 31
BRIDGE NO. 19-I40-18 40
DAVIDSON COUNTY
1999

DESIGNED BY Terry Mackie DATE May, 1999
DRAWN BY Cory Hawkins DATE May, 1999
SUPERVISED BY Wayne Seger, T Christianson DATE May, 1999
CHECKED BY Wayne Seger, Terry Mackie DATE May, 1999

BR-40-63



DETAIL SHOWING NEW PARAPET INSTALLATION

DENOTES AREAS OF DETERIORATED CONCRETE THAT IS TO BE REMOVED

DENOTES SEE LAYOUT DRAWING NO'S BR-40-53, BR-40-55 AND BR-40-57 FOR GENERAL LIMITS OF REMOVAL OF DETERIORATED PARAPETS AND OVERHANGS THIS LIMIT MAY BE INCREASED, DECREASED OR ELIMINATED AS DIRECTED BY THE ENGINEER

NOTE CARE SHALL BE TAKEN AS NOT TO DAMAGE ANY OF THE HORIZONTAL AND VERTICAL REINFORCING STEEL IN THE PARAPET OR OVERHANGS IF THE REINFORCING STEEL IS CUT PROVISIONS SHALL BE MADE TO OBTAIN THE REQUIRED STANDARD SPLICE LENGTH IF ANY VERTICAL REINFORCING IS DAMAGED THEN THE STEEL SHALL BE REPLACED ACCORDING TO THE BAR BENDING DIMENSIONS ON REFERENCE SHEET K-38-154A

HIGH EARLY STRENGTH CONCRETE (PARAPET AND SLAB OVERHANG) THE MIX TO MEET THE REQUIREMENTS OF THE STANDARD SPECIFICATIONS, CLASS 'A', EXCEPT THE CEMENT CONTENT SHALL BE A MINIMUM OF 714 LBS THE WATER CEMENT RATIO SHALL BE A MINIMUM OF 0 40 NO FLY ASH REPLACEMENT WILL BE PERMITTED, AND THE MINIMUM 28 DAY COMPRESSIVE STRENGTH SHALL BE 3,500 p s i TRAFFIC SHALL NOT BE PERMITTED ON ANY OF THE REPAIR AREAS UNTIL TEST SPECIMENS ATTAIN A COMPRESSIVE STRENGTH OF 3,000 p s i MINIMUM AND THE CONCRETE HAS BEEN IN PLACE A MINIMUM OF TEN (10) DAYS

NOTE COST OF HIGH EARLY STRENGTH CONCRETE, STEEL, RESETTING HANDRAIL ANCHOR BOLTS, FORMING, LABOR AND ALL MISCELLANEOUS ITEMS FOR THE COMPLETE AND IN-PLACE REPAIR OF THE PARAPETS SHALL BE INCLUDED IN ITEM NO 604-10 22, CONCRETE PARAPET REPAIRS, L F

NOTE PROVISIONS SHALL BE MADE FOR SETTING THE HANDRAIL ANCHOR BOLTS BEFORE THE CONCRETE IS POURED FOR THE PARAPET

NOTE COST OF HIGH EARLY STRENGTH CONCRETE, LABOR, FORMING AND MISCELLANEOUS ITEMS NECESSARY FOR THE PARAPET AND SLAB OVERHANG REPAIRS SHALL BE INCLUDED IN ITEM NO 604-10 42, CONCRETE REPAIRS, C F

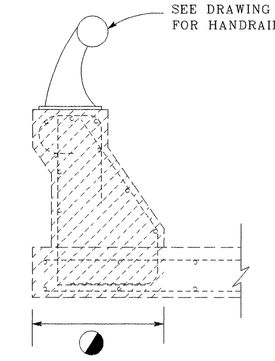
PROJECT NO.	YEAR	SHEET NO.
19958-4127-04	1999	

REVISIONS

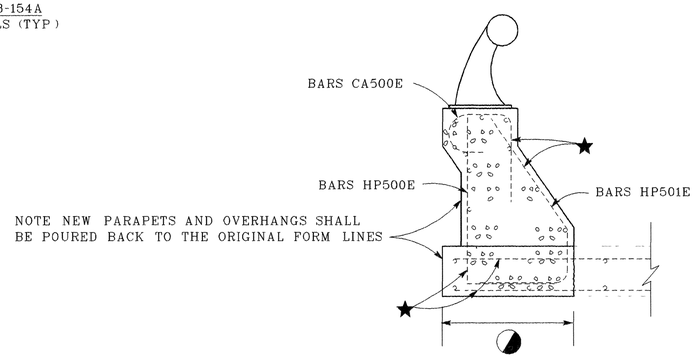
NO	DATE	BY	BRIEF DESCRIPTION
1	7 6 99	TDM	GENERAL REVISION

DENOTES LIMITS OF OVERHANG REPAIR THE LIMITS OF THE OVERHANG REPAIR FOR BRIDGE NO 19-I65-8 26 SHALL NOT EXTEND PAST THE FRONT FACE OF THE PARAPET SO AS TO PRESERVE THE EXISTING BRIDGE DECK SEAL FOR BRIDGE NO 19-I40-18 40, THE LOW-SIDE OVERHANG SHALL BE REMOVED TO THE CENTER LINE OF THE EXTERIOR GIRDER THE OVERHANG SUPPORTS NEEDED TO SUPPORT THE OVERHANG CAN STAY IN PLACE UNTIL ALL BRIDGE DECK REPAIRS ARE COMPLETE

NOTE CARE SHALL BE TAKEN SO AS NOT TO DAMAGE THE EXISTING PARAPET AND OVERHANG REINFORCING STEEL IF ANY REINFORCING STEEL IS CUT OR DAMAGED, IT SHALL BE THE CONTRACTOR'S RESPONSIBITITY TO REPAIR OR REPLACE TO THE FULL SATISFICATION OF THE ENGINEER ALL EXISTING REINFORCING STEEL SHALL BE CLEANED PRIOR TO POURING NEW CONCRETE PARAPET AND OVERHANG



SECTION "C"
(SHOWING REMOVAL LIMITS)



SECTION "C"
(SHOWING REPAIRED SECTION)

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BRIDGE REPAIR DETAILS
BRIDGE NO 19-I65-8 26
BRIDGE NO 19-I40-18 31
BRIDGE NO 19-I40-18 40
DAVIDSON COUNTY
1999

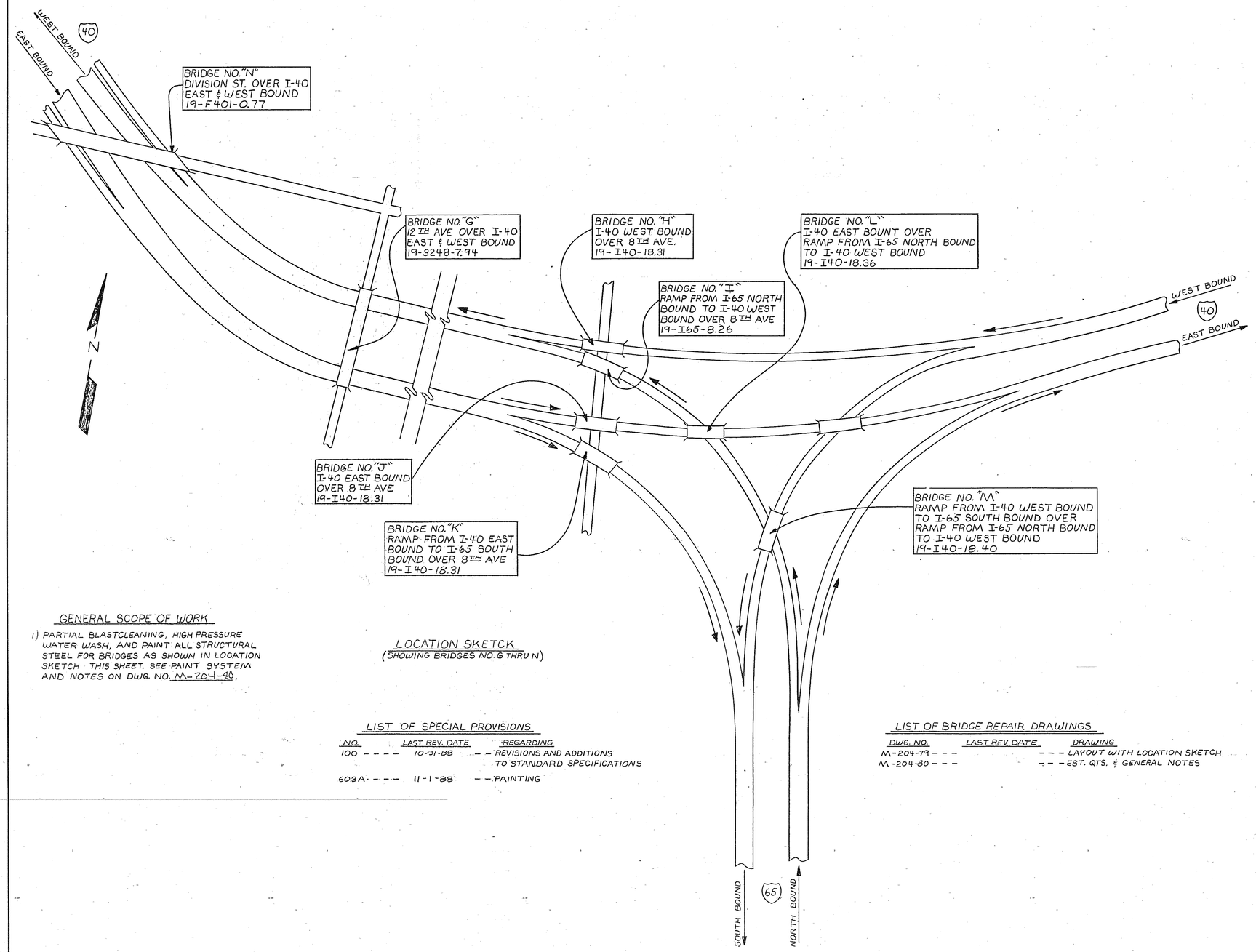
BR-40-64

DES GNED BY Terry Mackie DATE May 1999
DRAWN BY Don Kimber DATE May 1999
SUPERVISED BY W. Seger & T. Christianson DATE May 1999
CHE KED BY W. Seger & Terry Mackie DATE June 1999

PROJECT NO.	YEAR	SHEET NO.
1996-4120-04	1989	

REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION



GENERAL SCOPE OF WORK

1) PARTIAL BLASTCLEANING, HIGH PRESSURE WATER WASH, AND PAINT ALL STRUCTURAL STEEL FOR BRIDGES AS SHOWN IN LOCATION SKETCH THIS SHEET. SEE PAINT SYSTEM AND NOTES ON DWG. NO. M-204-80,

LOCATION SKETCK

(SHOWING BRIDGES NO. G THRU N)

LIST OF SPECIAL PROVISIONS

NO.	LAST REV. DATE	REGARDING
100	10-31-88	REVISIONS AND ADDITIONS TO STANDARD SPECIFICATIONS
603A	11-1-88	PAINTING

LIST OF BRIDGE REPAIR DRAWINGS

DWG. NO.	LAST REV. DATE	DRAWING
M-204-79		LAYOUT WITH LOCATION SKETCH
M-204-80		EST. QTS. & GENERAL NOTES

LIST OF REFERENCE DRAWINGS

TO BE PRINTED WITH PLANS

BRIDGE NO. "G"
- K-61-12 - LAYOUT OF BRIDGE
- K-61-13 - SUPERSTRUCTURE DETAIL
- K-61-14 - STRUCTURAL STEEL DETAIL

BRIDGE NO. "H"
- K-61-36 - LAYOUT OF BRIDGE
- K-61-37 - SUPERSTRUCTURE DETAIL
- K-61-38 - STRUCTURAL STEEL DETAIL

BRIDGE NO. "I"
- K-61-27 - LAYOUT OF BRIDGE
- K-61-28 - SLAB DETAIL
- K-61-29 - STRUCTURAL STEEL DETAIL

BRIDGE NO. "J"
- K-61-20 - LAYOUT OF BRIDGE
- K-61-21 - SUPERSTRUCTURE DETAIL
- K-61-22 - STRUCTURAL STEEL DETAIL

BRIDGE NO. "K"
- K-61-43 - LAYOUT OF BRIDGE
- K-61-44 - SLAB DETAIL
- K-61-45 - STRUCTURAL STEEL DETAIL

BRIDGE NO. "L"
- K-61-54 - LAYOUT OF BRIDGE
- K-61-56 - SLAB DETAIL
- K-61-57 - FRAMING PLAN & DETAIL

BRIDGE NO. "M"
- K-61-84 - LAYOUT OF BRIDGE
- K-61-86 - SLAB DETAIL
- K-61-87 - FRAMING PLAN & DETAIL

BRIDGE NO. "N"
- K-61-1 - LAYOUT OF BRIDGE
- K-61-2 - SUPERSTRUCTURE DETAIL
- K-61-3 - STRUCTURAL STEEL DETAIL

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

LAYOUT WITH LOCATION SKETCH FOR BRIDGE PAINTING PROJECT BRIDGE NO. G, H, I, J, K, L, M & N DAVIDSON COUNTY 1989

DESIGNED BY McINTURFF DATE 2-89
DRAWN BY HOUSTON LEWIS DATE 2-89
SUPERVISED BY GENTRY & McINTURFF DATE 2-89
CHECKED BY McINTURFF & LEWIS DATE 3-89

CORRECT Edward P. Wasserman
ENGINEER OF STRUCTURES

APPROVED Louis Evans
DIRECTOR OF HIGHWAYS

M-204-79

TELEDYNE POST 340051

ESTIMATED BRIDGE QUANTITIES

Item	Description	Bridge No. "G" 12th Ave. / I-40 East + West Bound 19-3248-7.94	Bridge No. "H" I-40 West Bound over 8th Ave. 19-I40-18.31	Bridge No. "I" Ramp from I-65 N.B. to I-40 W.B / 8th Ave. 19-I65-8.26	Bridge No. "J" I-40 East Bound over 8th Ave. 19-I40-18.31	Bridge No. "K" Ramp from I-40 E.B. to I-65 S.B / 8th Ave. 19-I40-18.31	Bridge No. "L" I-40 E.B. over Ramp from I-65 N.B. to I-40 W.B. 19-I40-18.36	Bridge No. "M" Ramp from I-40 W.B to I-65 S.B. / Ramp from I-65 N.B. to I-40 W.B. 19-I40-18.40	Bridge No. "N" Division St. / I-40 East + West Bound 19-F401-0.77	Unit	Total
① 603-02.01	REPAINTING EXISTING STEEL STRUCTURES (BRIDGE No."G")	1								L.S.	1
① 603-02.02	REPAINTING EXISTING STEEL STRUCTURES (BRIDGE No."H")		1							L.S.	1
① 603-02.03	REPAINTING EXISTING STEEL STRUCTURES (BRIDGE No."I")			1						L.S.	1
① 603-02.04	REPAINTING EXISTING STEEL STRUCTURES (BRIDGE No."J")				1					L.S.	1
① 603-02.05	REPAINTING EXISTING STEEL STRUCTURES (BRIDGE No."K")					1				L.S.	1
① 603-02.06	REPAINTING EXISTING STEEL STRUCTURES (BRIDGE No."L")						1			L.S.	1
① 603-02.07	REPAINTING EXISTING STEEL STRUCTURES (BRIDGE No."M")							1		L.S.	1
① 603-02.08	REPAINTING EXISTING STEEL STRUCTURES (BRIDGE No."N")								1	L.S.	1

FOOTNOTES:

① INCLUDES COST OF ALL LABOR AND MATERIALS FOR PARTIAL BLASTCLEANING AND PAINTING OF ALL EXISTING STRUCTURAL STEEL. NOTE – FOR APPROXIMATE WEIGHT OF STRUCTURAL STEEL TO BE PAINTED, SEE TABLE BELOW.

BRIDGE NO.	ESTIMATED WEIGHT OF STRUCTURAL STEEL (LBS.)
G	426,500
H	118,000
I	134,100
J	135,900
K	170,700
L	178,822
M	188,512
N	640,200

TABLE DESIGNATING AREAS OF STRUCTURAL STEEL TO BE BLASTCLEANED AND PRIMED WITH INORGANIC ZINC.

(SEE PAINT NOTE THIS SHEET)

BRIDGE NUMBER	AREA TO BE BLASTCLEANED
BRIDGE NO."G" 12th AVE. OVER I-40 19-3248-7.94	5'-0" AT EACH END OF THE BRIDGE (ABUTMENTS NO.1 & 2)
BRIDGE NO."H" I-40 WB OVER 8th AVE. 19-I40-18.31	5'-0" AT EACH END OF THE BRIDGE (ABUTMENTS NO.1 & 2)
BRIDGE NO."I" RAMP FROM I-65 NB TO I-40 WB OVER 8th AVE. 19-I65-8.26	5'-0" AT EACH END OF THE BRIDGE (ABUTMENTS NO.1 & 2)
BRIDGE NO."J" I-40 EB OVER 8th AVE. 19-I40-18.31	5'-0" AT EACH END OF THE BRIDGE (ABUTMENTS NO.1 & 2)
BRIDGE NO."K" RAMP FROM I-40 EB TO I-65 SB OVER 8th AVE. 19-I40-18.31	5'-0" AT EACH END OF THE BRIDGE (ABUTMENTS NO.1 & 2)
BRIDGE NO."L" I-40 EB OVER RAMP FROM I-65 NB TO I-40 WB 19-I40-18.36	5'-0" AT EACH END OF THE BRIDGE (ABUTMENTS NO.1 & 2)
BRIDGE NO."M" RAMP FROM I-40 WB TO I-65 SB OVER RAMP FROM I-65 NB TO I-40 WB 19-I40-18.40	5'-0" AT EACH END OF THE BRIDGE (ABUTMENTS NO.1 & 2)
BRIDGE NO."N" DIVISION ST. OVER I-40 EB AND WB 19-F401-0.77	5'-0" AT EACH END OF THE BRIDGE (ABUTMENTS NO.1 & 2)

SURFACE PREPARATION AND PAINTING OF EXISTING STEEL

Painting System

The painting system shall be a high performance two coat system, (additional areas of the bridge are to receive a complete blastcleaning and primed with Inorganic Zinc Primer, see table this sheet.), consisting of a two component Aluminum Epoxy Mastic Primer and a High Build Aliphatic Polyurethane Finish Coat. The material specifications for the finish coat shall comply with Tennessee Special Provision No. 603A, except the minimum dry film thickness shall be 4.0 mils in lieu of 2.0 mils. The finish coat shall display compatibility with, and adhesion to, the cured Aluminum Epoxy Mastic Primer when applied directly over the Aluminum Epoxy Mastic Primer in accordance with the manufacturer's current printed instructions.

Coating System Description

The coating specified here-in shall be applied in order to meet the following requirements:
Surface Preparation: (See notes below)
Primers: Aluminum Epoxy Mastic at 7 mils Dry Film Thickness and Inorganic Zinc.
Finish Coat: Two Component High Build Aliphatic Polyurethane at 4 mils Dry Film Thickness.
All products used in this coating system, including thinners, must be supplied by the same manufacturer.
All products used, (with the exception of the Inorganic Zinc Primer), shall be applied by roller or brush only.
The Inorganic Zinc Primer shall be applied by spray.

Application

The coating applicator shall follow the manufacturer's printed instructions, and shall have these instructions on site during the course of the work.

Finish Coat

The finish coat shall be a High Build Aliphatic Polyurethane. Color of the finish coat shall comply with Federal Standard No. 595a, 24110, Bright Green. The finish coat shall be applied to the entire structural steel surface.

Products

The Aluminum Epoxy Mastic shall be Carboline's Carbomastic 90, Devoe-Napko's Epoxy Aluminum Mastic, Catalog #235-K-9100 or an equal Aluminum Epoxy Mastic that can be supplied by a paint company that is currently on the Tennessee Department of Transportation's Qualified Products Lists for Paint - Inorganic Zinc Primers and Top Coats.

The High Build Aliphatic Polyurethane shall be in accordance with Special Provision No. 603A, (except as modified in the notes above), and shall be supplied by the same manufacturer.

The Inorganic Zinc Primer shall be in accordance with Tennessee Standard Specifications Section 603.06 and 910.03.

Surface Preparation

A) Remove any oil or grease with a solvent cleaning in accordance with SSPC-SP1. Solvents shall be safe and biodegradeable. Remove all chalk, loose coating and other contaminants with a high pressure water wash. (Typical for all structural steel members, except for areas as designated in table this sheet.) See note "B" below.

B) All structural steel for the limits shown in table this sheet shall be blast cleaned in accordance with the Tennessee Standard Specifications, Section 603.05b. After blastcleaning these areas shall receive a primer coat of Inorganic Zinc. All other rusted or corroded areas on the structural steel shall receive a hand or power tool cleaning. These areas shall be spot primed with 7 mils dry film thickness, of Aluminum Epoxy Mastic.

C) After a high pressure water wash of all structural steel, all structural steel shall then receive 7 mils dry film thickness, of Aluminum Epoxy Mastic.

GENERAL NOTES

SPECIFICATIONS: STANDARD ROAD AND BRIDGE SPECIFICATIONS OF THE TENNESSEE DEPT. OF TRANSPORTATION. (MARCH 1981 EDITION)

DESIGN SPECIFICATIONS: AASHTO (1983 EDITION) WITH ADDENDA.

PROJECT NO.	YEAR	SHEET NO.
19946-4120-04	1989	2

REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

ESTIMATED QUANTITIES + GENERAL NOTES FOR BRIDGE PAINTING PROJECT BRIDGES No. G, H, I, J, K, L, M + N DAVIDSON COUNTY 1989

DESIGNED BY Wayne McInturff DATE 12-88
DRAWN BY Cory Hawkins DATE 12-88
SUPERVISED BY Gentry + McInturff DATE 1-89
CHECKED BY McInturff & Lewis DATE 3-89

CORRECT Edward P. [illegible] ENGINEER OF STRUCTURES
APPROVED Lewis [illegible] DIRECTOR OF HIGHWAYS

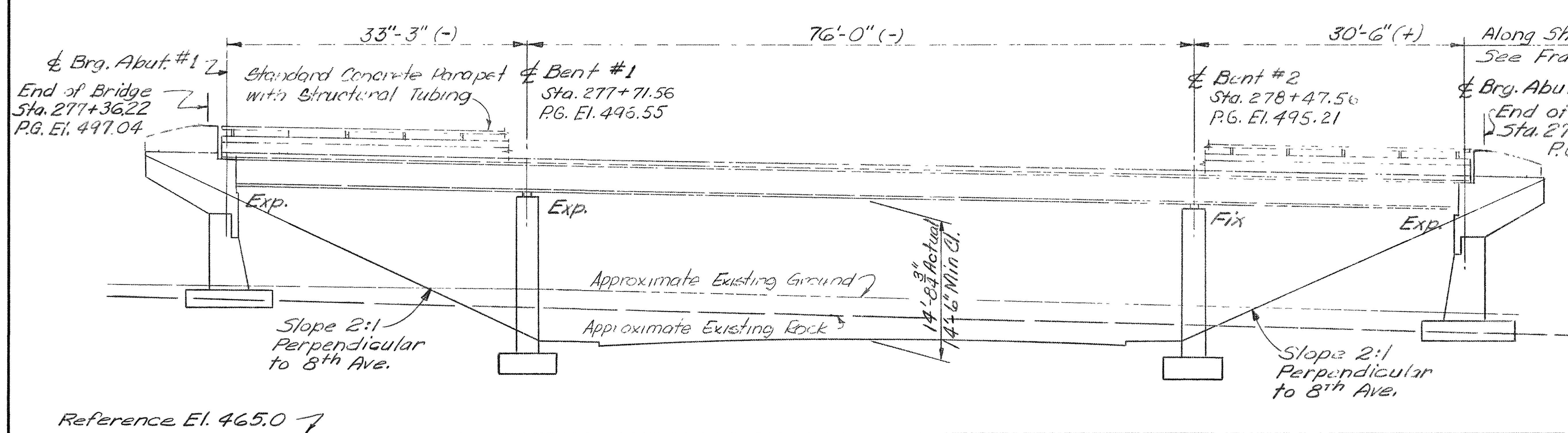
M-204-80

FED ROAD DIST NO	STATE	FED. AID PROJ. NO	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
3	TENN	I-40-4(26)208	1970	120	305

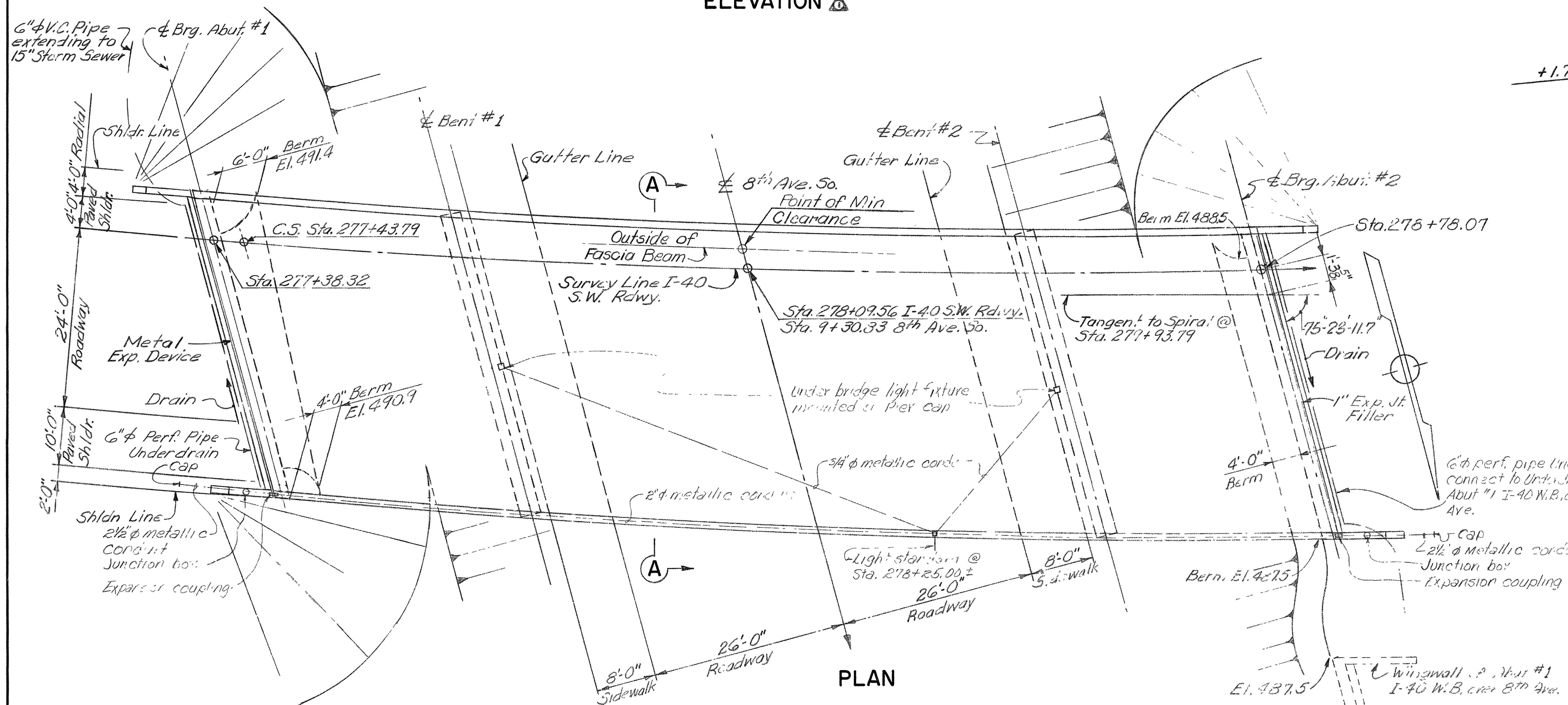
③ HVB 12-9-71 Light Standard Base Details K-61-124 to K-61-96.

① Abutment [illegible]

② [illegible] Foundation Notes

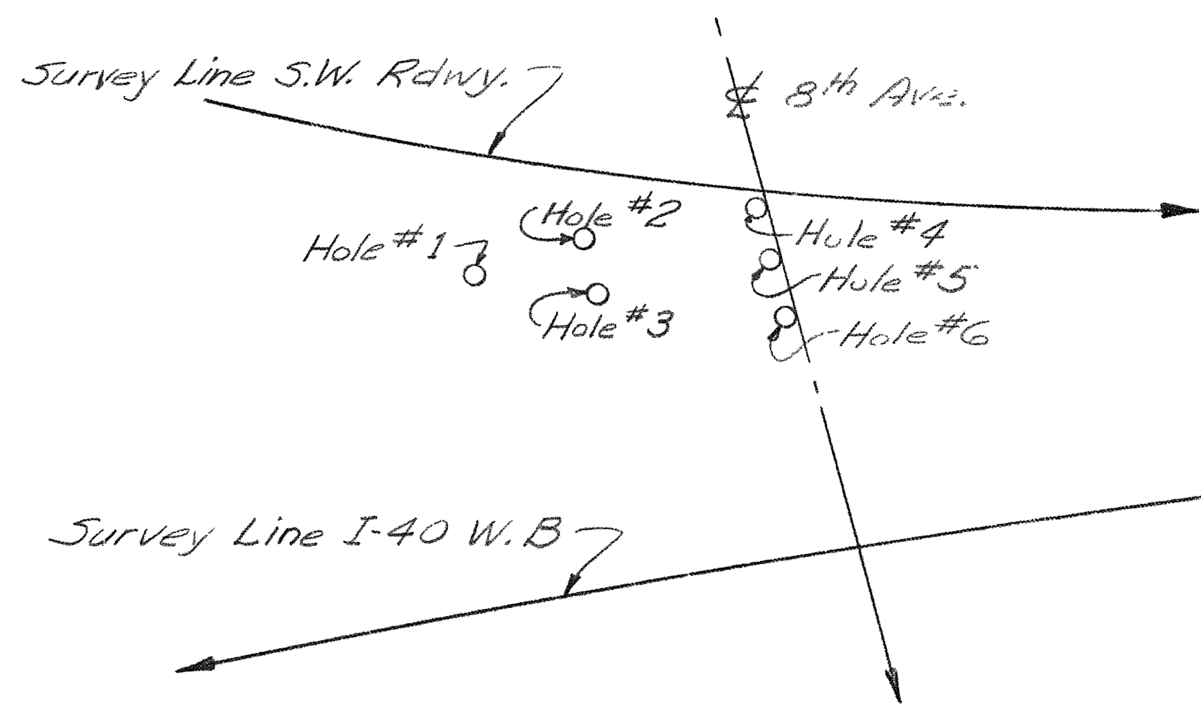


ELEVATION ①



PLAN

* **
LIGHTING SYSTEM (Lump Sum): This item includes furnishing and placing 110 lin. ft. of 3/4"φ metallic conduit, 152 lin. ft. of 2"φ metallic conduit and 29 lin. ft. of 2½"φ metallic conduit plus all pull boxes, junction boxes and [illegible] required for bridge lighting. For additional details [illegible] DWG. K-61-96 and [illegible]. ③



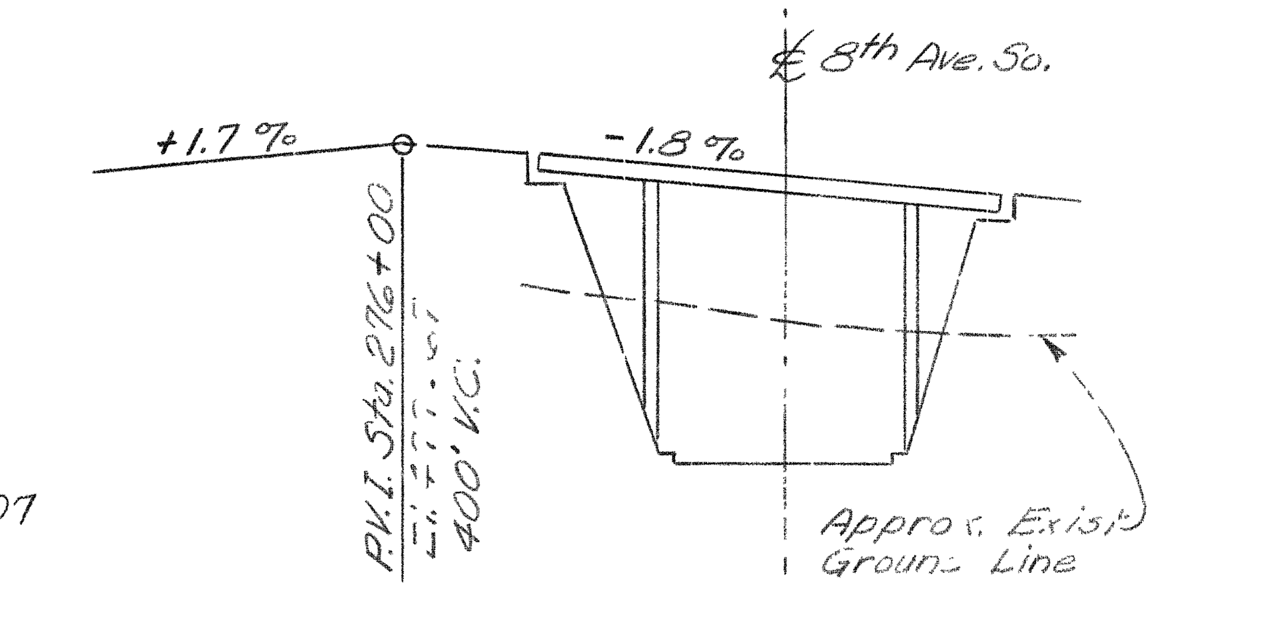
SOUNDING SKETCH

ROCK SOUNDING ELEVATION TABLE

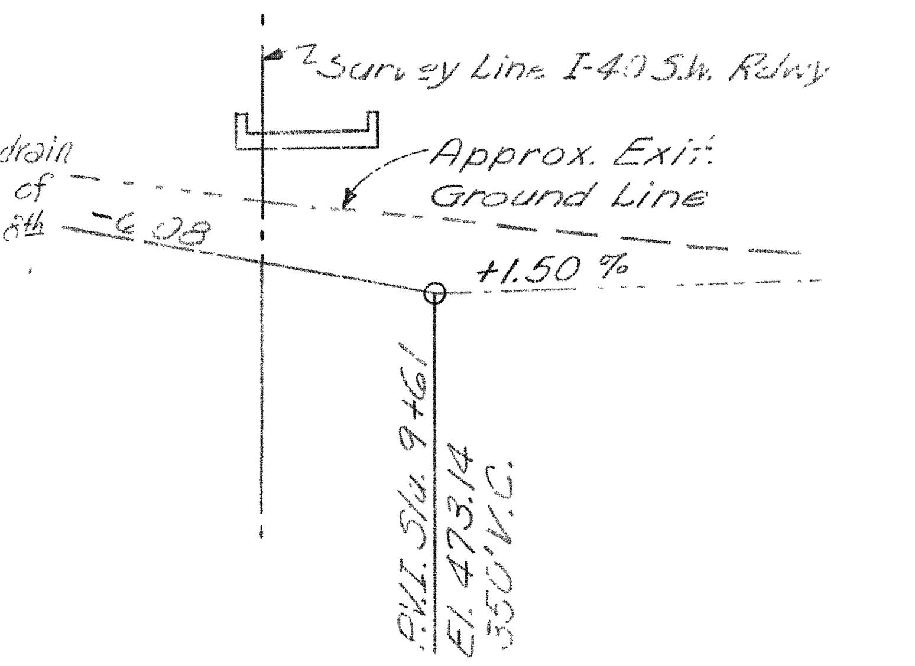
Hole No.	Sta I-40 W.B. Line	Offset Left	Offset Right	Ground El.	Rock El.
1	267+15		87'	485.38	484.38
2	266+89		91'	484.08	481.08
3	266+56		76'	484.08	480.08
4	266+45		92'	483.98	482.98
5	266+42		78'	483.78	481.78
6	266+39		64'	483.58	480.58

CURVE DATA

PI Sta. 278+23.68
D = 7°00' 00"
R = 818.5
Lc = 842.81
Ls = 250
Ts = 772.70



I-40 S.W. RDWY. PROFILE



8TH AVE PROFILE

BRIDGERAIL NOTE

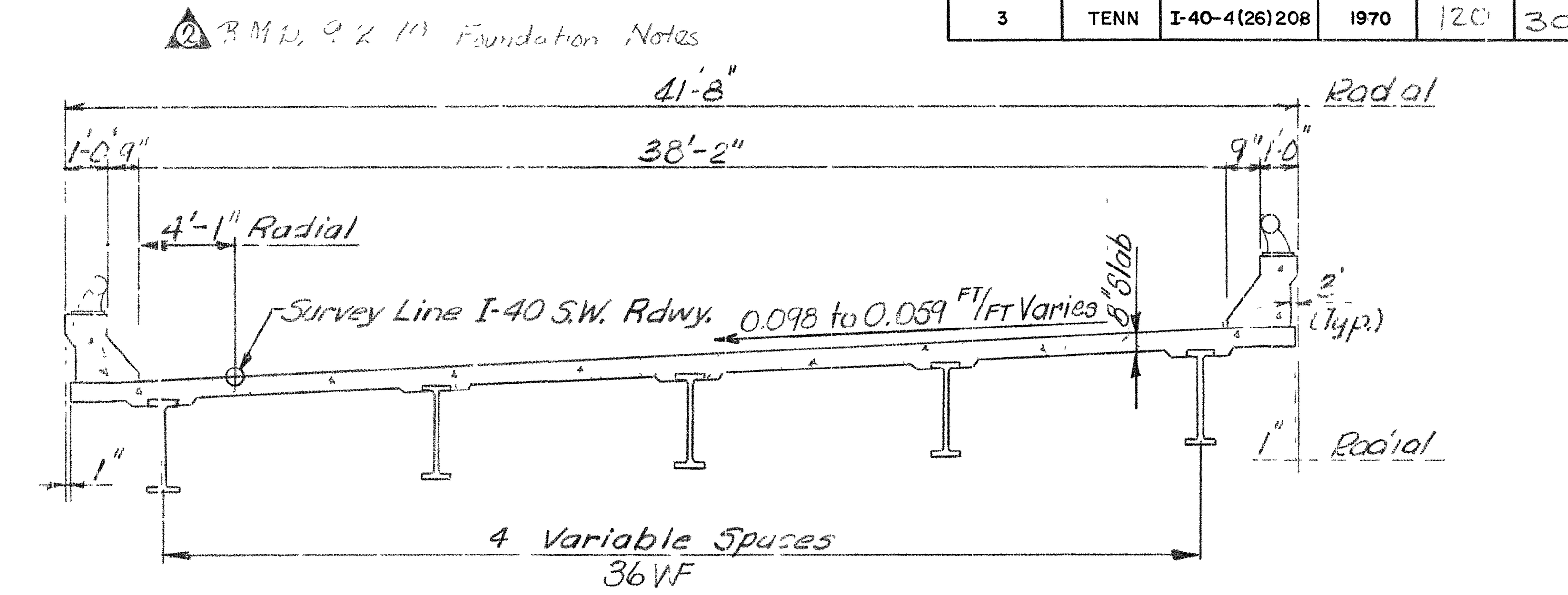
Use Standard Concrete Parapet with Structural Tubing. See Dwg. K-38-154A
Post Spacing North N=14 L=9'-10" X=1'-1½"
South N=14 L=9'-11" X=1'-3⅛"
Dimensions shown are measured along centerline of base plates.

① "ESTIMATED QUANTITIES"

ITEM No	204-05	204-02.01	204-04.01	604-03.01	604-03.02	602-04.01	615-[illegible]	604-03.03	710-10	710-[illegible]	714-01
Item	Rock Drilling L.F.	Excav. Cu. Yds. Dry	Excav. Cu. Yds. Rock	Concrete Class "A" Cu. Yds.	Reinforcing Steel Lbs.	Steel Structures	Bridgerail Lin Ft.	Linseed oil Treatment Sq. yds.	6"φ perf. C.M. pipe - Bky. w/porous backfill [illegible] **	[illegible] pipe [illegible]	Roadway [illegible]
Superstructure		—		144.3	55,427		282	783			
Abutment No. 1	18	62	34	5	7,			52	53	[illegible]	
Bent No. 1	18	—	58	39.0	6,703			—			
Bent No. 2	18	—	62	37.7	6,501			—			
Abutment No. 2	18	78	44		7.			50	51	20	
Total	72	140	198	32	84,	Lump Sum*	282	885	104	40	L.S.***

* Total Estimated Weight of Steel Structures 134,100 lbs Includes Bearing Devices, Roadway Expansion Device Shear Connectors Weld [illegible] Term. see Standard Specifications Section 602.27 and 602.28

** Note: Cost of [illegible] perforated C.M. pipe.
Note: The cost of 16 threaded steel inserts and 16 ⅞"φ x [illegible] hex. [illegible] (A307) to be [illegible] bid on.
Note: The cost of all miscellaneous joint material to be included in Bridge items bid on.
Note: Excavation for Abut. [illegible] based on Existing [illegible]



SECTION A-A

GENERAL NOTES

SPECIFICATIONS: Standard Road and Bridge Specifications of the Tennessee Department of Highways. (1968 Edition)
DESIGN SPECIFICATIONS: 1969 Edition of A.A.S.H.O. Standard Specifications for Highway Bridges with add[illegible]
LOADING: HS-20-44 & Alternate Military Loading.
CONCRETE: To be Class "A." f'c = 3,000 psi, See Special Provision Regarding finishing concrete surfaces.
REINFORCING STEEL: To be ASTM A615 Standard hook details as recommended by C.R.S.I shall apply, Bending dimensions shown based on Grade 40.
SHOP INSPECTION OF STEEL STRUCTURES: The Contractor as soon as he receives his work orders, shall notify the Bridge Engineer, in writing, who will supply the structural steel and the location of the plant where it will be fabricated.
APPROVAL OF MATERIALS: No fabrication shall be started until the materials involved have been approved by the Tennessee Highway Division of Tests.
IDENTITY OF MAIN MATERIALS: Heat numbers on main material must be preserved or transferred during fabrication and shop painting so that they will be identifiable in the field.
WELDING: See Tennessee Standard Specifications Section 602.13 and Notes on DWG K-61-29
HIGH STRENGTH BOLTS: See Tennessee Standard Specifications Section 602.12 and notes on DWG K-61-29.
RADIOGRAPHIC AND MAGNETIC PARTICLE INSPECTION: See Special Provision regarding Welded Structures and notes Dwg. No. K-61-29.
PAINT: System B-Silico Chromate See Tennessee Highway Standard Specifications Section 603
JOINT SEALER: See Special Provisions, Type I [illegible]
STEEL STRUCTURES: See Tennessee Standard Specifications Section 602 and note on DWG No. K-61-29.

② FOUNDATION NOTES

When the foundation for Bents and Abutments has been excavated, holes 6 feet deep shall be drilled into rock at points designated by the Engineer. From the results obtained, the Bridge Engineer shall determine the final footing elevation.
When excavating for rock foundations, rock shall be line drilled and pre-split. The contractor shall use extreme care so as not to excavate rock below elevations shown on plans. Any additional expense caused by underexcavating rock below plans elevations shall be borne by the contractor. See Tennessee Highway Specs. 1968 Edition, Section 204.08, 204.09 & 304.10A.

LIST OF DRAWINGS

LIST OF DRAWINGS	DWG. NO.
Layout of Bridge	K-61-27
Slab Details	K-61-28
Structural Steel Details	K-61-29
Structural Steel Details	K-61-30
Anchor Bolt Layout & Stakeout Diagram	K-61-31
Abutment No. 1 Details	K-61-32
Abutment No. 2 Details	K-61-33
Bent Details	K-61-34
Bill of Steel	K-61-35
Bridgerail	STD. K-38-154 A
Roadway Expansion Device	STD. K-56-34
③ Light Standard Base Details	K-61-96
Standard Reinforcing Bar Support Details for Concrete Slabs	STD. K-80-14

38'-0" ROADWAY WITH SAFETY CURBS

STATE OF TENNESSEE
DEPARTMENT OF HIGHWAYS
NASHVILLE

LAYOUT OF BRIDGE NO. 76

INTERSTATE 40 S.W. ROADWAY OVER 8TH AVE.

STATION 278+09.56

DAVIDSON COUNTY

1970

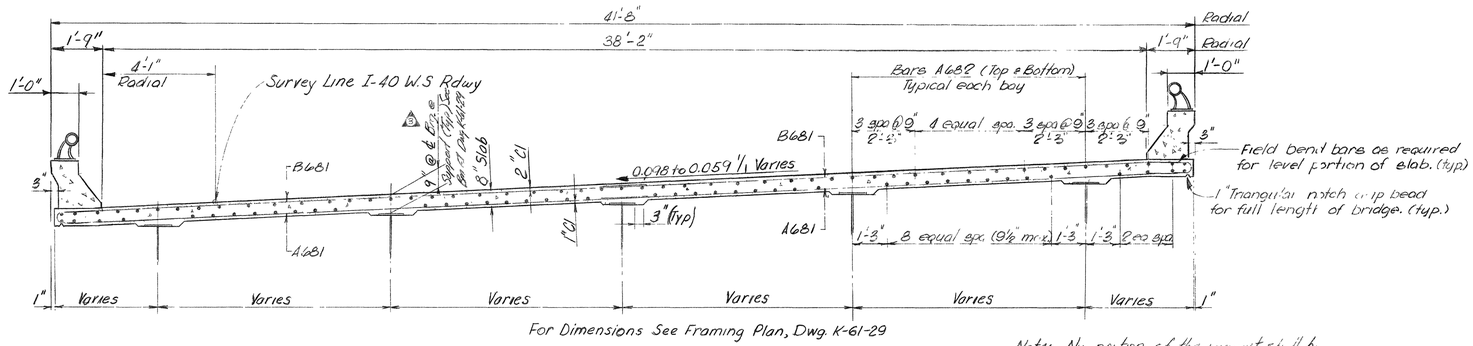
DESIGNED BY ______ DATE ______
DRAWN BY DWF DATE ______
TRACED BY ______ DATE ______
CHECKED BY RFC DATE 6-70

APPROVED ______

K-61-27

BRIGHTON ENGINEERING COMPANY

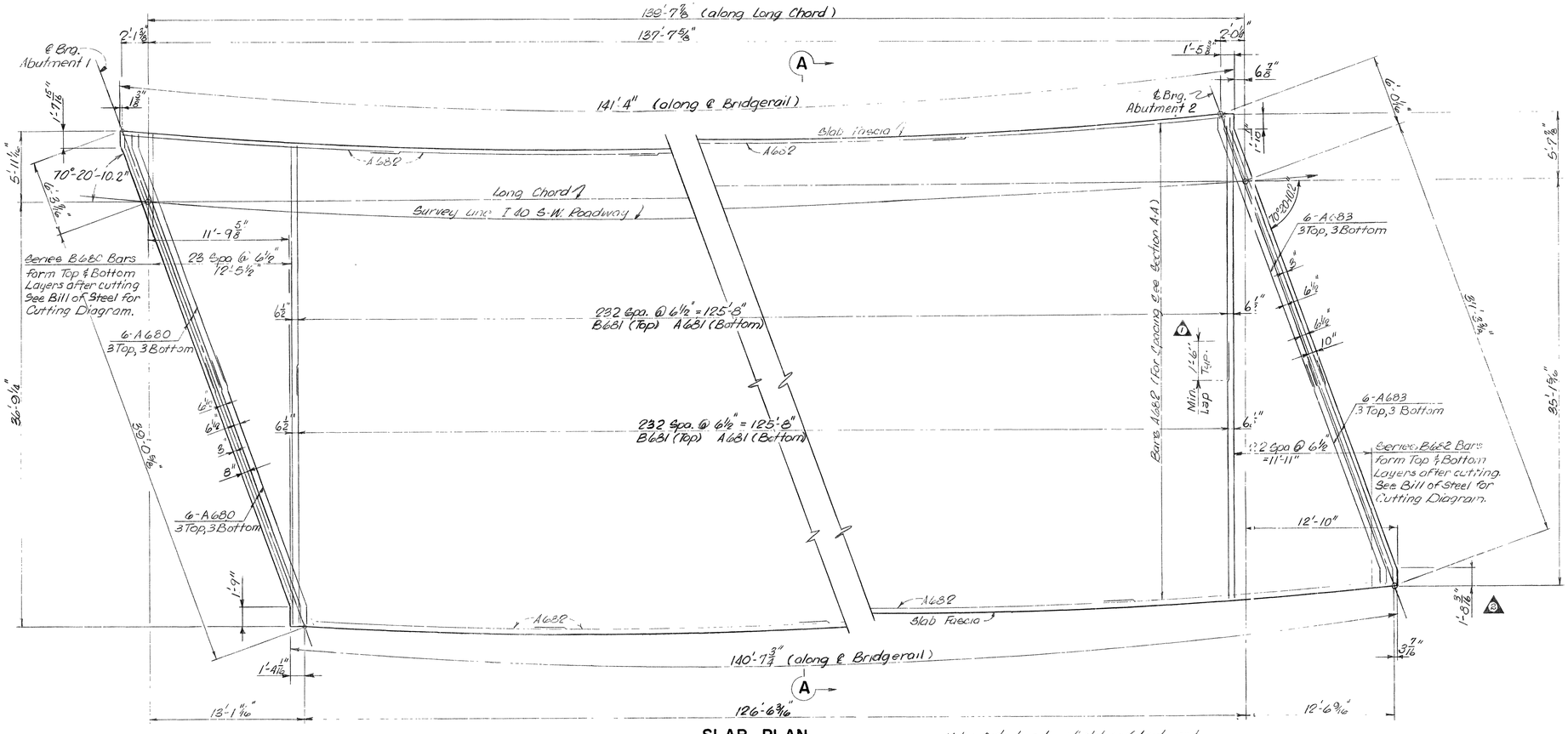
FED ROAD DIST. NO.	STATE	FED AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
3	TENN	I-40-4(26)208	1970	121	305



SECTION A-A

Note: When pouring deck, provision shall be made to set steel for bridgerail parapet. See Standard Drawing K-38-154A for details.

Note: No portion of the pavement shall be poured until the entire deck slab is in place



SLAB PLAN

Note: Outside edge of slab and bridgerail to conform to horizontal curve.

DESIGNED BY	R.T.	DATE	Mar. 11 '66
DRAWN BY	A.L.K.	DATE	April '66
TRACED BY		DATE	
CHECKED BY	K.F.C.	DATE	6-'68

1 R.M.D 9-2-70; Slab Plan

Note: The concrete deck shall not be poured until all superstructure steel is erected and all welding or bolting is complete.

2 R.M.D 11-19-70; Slab Plan Dimension

3 R.M.D 21-Dec-70 Dim. from top of slab to top of beam clarified

ESTIMATED QUANTITIES

Item	Concrete - Class "A" Cu. Yds	Reinforcing Steel Lbs.
Slab	144.8	55,927

STATE OF TENNESSEE
DEPARTMENT OF HIGHWAYS
NASHVILLE

SLAB DETAILS

INTERSTATE 40 S.W. ROADWAY OVER 8th. AVE.

STATION 278+09.56

DAVIDSON COUNTY

1970

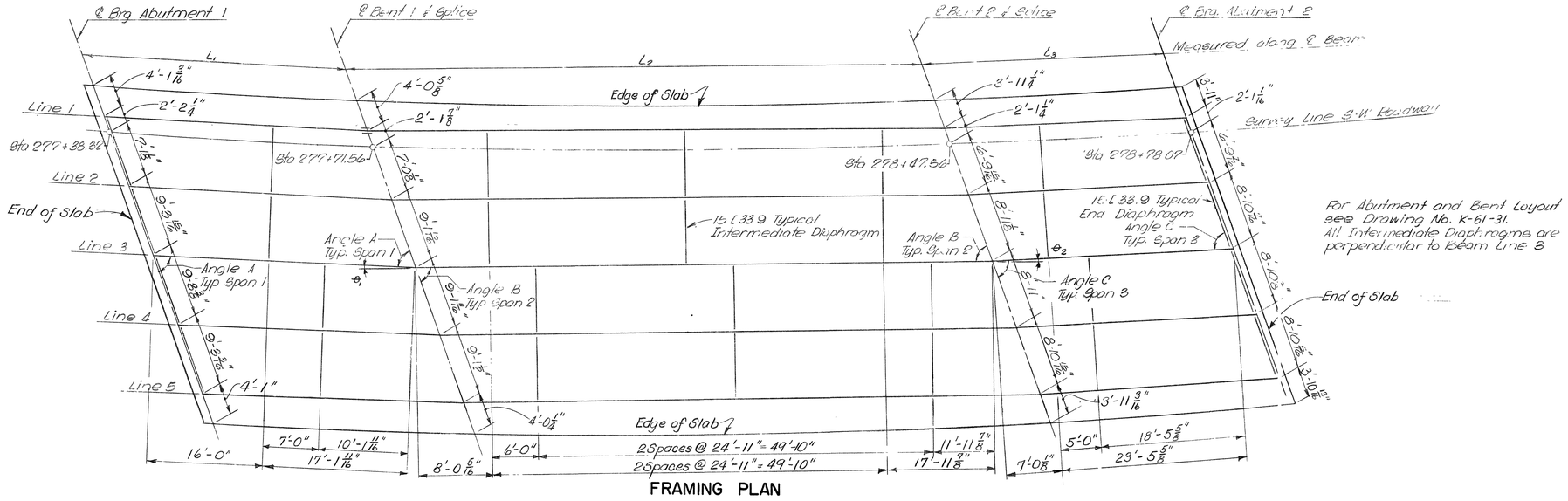
APPROVED

K-61-28

BRIGHTON ENGINEERING COMPANY

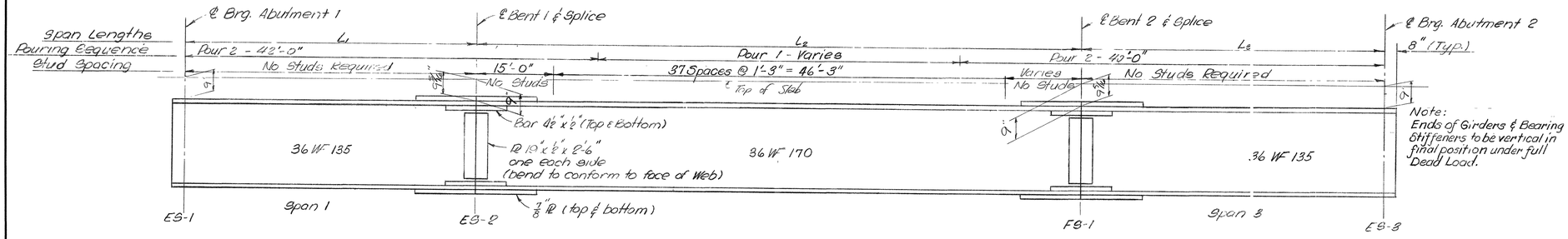
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
3	TENN.	I-40-4(26)208	1970	122	305

1 RnD 21-Dec-70 Sta's added to Bm. Ct.



FRAMING PLAN

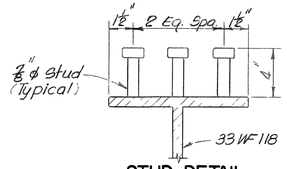
For Abutment and Bent Layout see Drawing No. K-61-31.
All Intermediate Diaphragms are perpendicular to ℄Beam Line B



Note:
Ends of Girders & Bearing Stiffeners to be vertical in final position under full Dead Load.

BEAM ELEVATION

Concrete placement shall be made in numerical sequence. Pours with the same number designation may be made simultaneously. Dimensions shown for pouring limits are along line 3



STUD DETAIL

Note. Studs shall be in sets of 3 and spaced as shown above

TABLE OF DIMENSIONS

Line No.	Length L1	Length L2	Length L3	Angle A	Angle B	Angle C
1	33'-3"	76'-0 1/16"	30'-6 9/16"	67°20'-31.1"	70°31'-40.7"	72°56'-58.8"
2	33'-2 7/16"	75'-11 15/16"	30'-5 15/16"	67°31'-27.3"	70°41'-43.3"	73°03'-16.4"
3	33'-1 11/16"	75'-10 3/16"	30'-5 3/8"	67°18'-04.9"	70°51'-28.6"	73°09'-27.4"
4	33'-1"	75'-9 5/16"	30'-5 9/16"	68°01'-43.6"	71°00'-57.0"	73°15'-26.2"
5	33'-0 7/16"	75'-8 1/2"	30'-5 3/8"	68°15'-00.3"	71°10'-09.0"	73°21'-13.0"

Dimensions shown are for a normal temperature of 70°F with dead load on the structure. Layout dimensions are horizontal dimensions.

θ = Intersection ∠ between beam lines
θ1 = ∠ B - ∠ A
θ2 = ∠ C - ∠ B

STRUCTURAL STEEL NOTES

Structural Steel shall conform to ASTM A36 unless otherwise noted.

Field Connections shall be welded and/or 8 ϕ High Tensile Strength bolts as shown on plans. See AASHO Specifications Article 2.10.20. All High Strength Connections are friction type.

Paint System B - Silica Chromate See Tennessee Standard Specifications Section 603. No paint shall be applied to the top surfaces of top flanges or of any part of field weld or bolt connections Splices and other field connections shall be cleaned and primed before forming slab.

Welding shall be in accordance with A.W.S. current Specs. and Tennessee Standard Specifications Section 602.13. The cost of Radiographic and Magnetic Particle Inspection is to be included in the price bid for structural steel.

Beams to be cambered for Dead Load Deflection and Vertical Curve (See Drawing No. K-61-30 for Dead Load Correction Curve.)

For Bearing Details see Drawing No. K-61-30.

For Roadway Expansion Device Details see Dwg. No. K-56-34.

For other structural steel details see Drawing No. K-61-30.

For Splice Details see Drawing No. K-61-30

For Slab Details see Drawing No. K-61-28

For General Notes see Drawing No. K-61-27.

Stud Shear Connectors: See Tennessee Standard Specifications Section 602.14

Approval of Materials: No fabrication shall be started until the materials involved have been approved by the Tennessee Highway Division of Tests.

Additional Shop Splice Note: Shop splices necessary due to lengths or size of material involved may be located by the fabricator subject to approval by the Engineer.

STATE OF TENNESSEE
DEPARTMENT OF HIGHWAYS
NASHVILLE

STRUCTURAL STEEL DETAILS

INTERSTATE 40 S.W. ROADWAY OVER 8th AVE

STATION 278+09.56

DAVIDSON COUNTY

1970

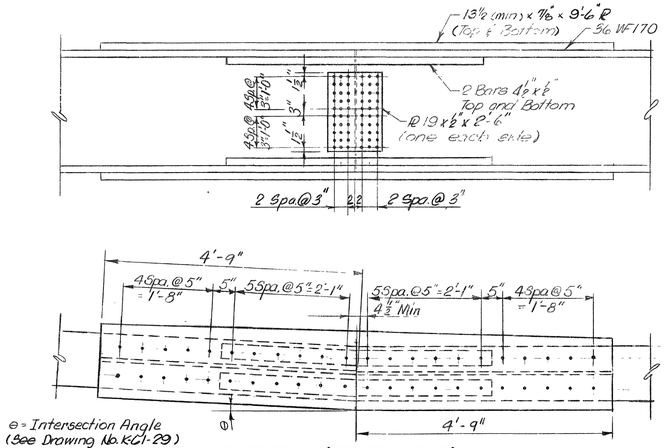
APPROVED _____

K-61-29

DESIGNED BY SAM DATE 5-6-66
DRAWN BY FAB. DATE 5-31-66
TRACED BY _____ DATE _____
CHECKED BY RWH DATE _____

BRIGHTON ENGINEERING COMPANY

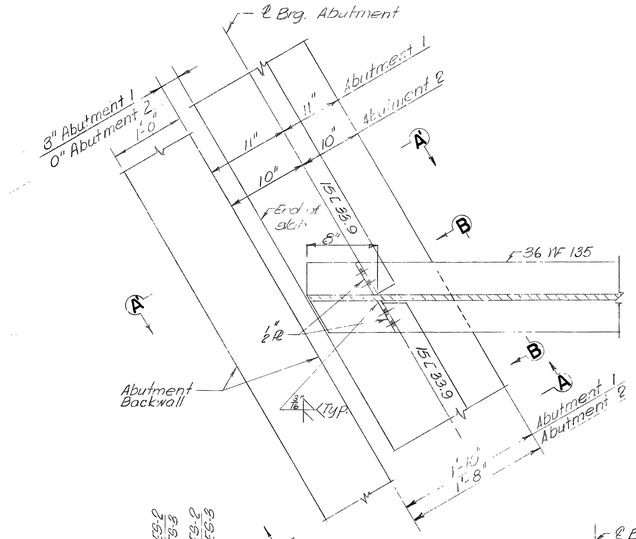
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
3	TENN	I-40-4(26)208	1970	123	305

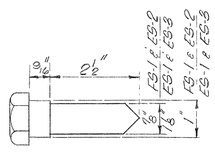


SPLICE DETAIL (BENTS 1 & 2)

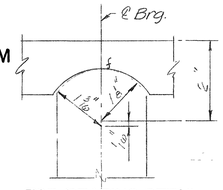
Note: Holes shall be subpunched or subdrilled ½" smaller reamed to size, and match marked while assembled in the shop.

⚠1 For Intersection Angle (θ) see Sheet K-61-29 If weld splice alternate used, See K-82-116

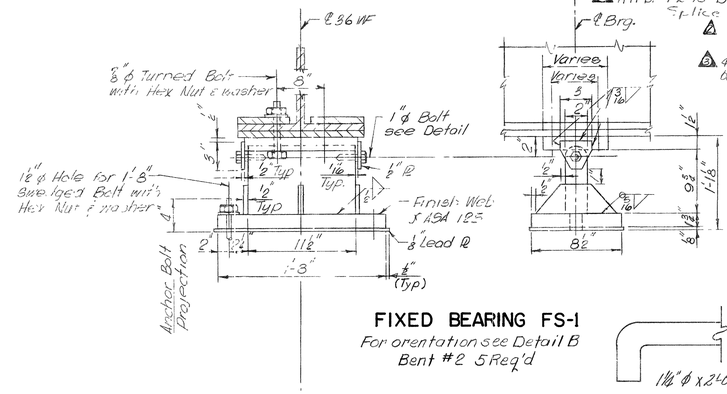




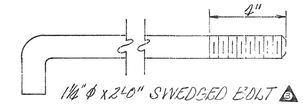
BOLT DETAIL

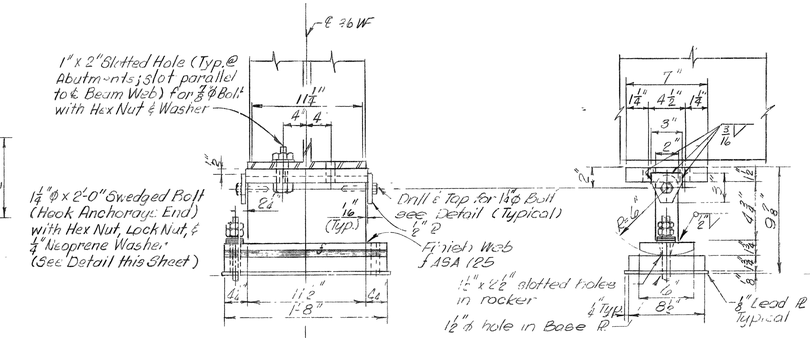


TOP BEARING DETAIL
℄ ASA 125

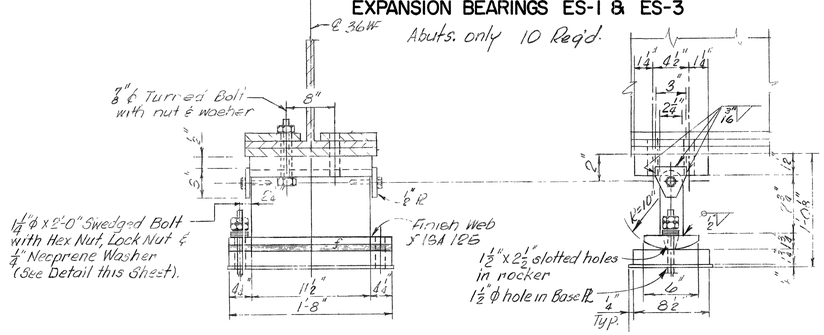


FIXED BEARING FS-1
For orientation see Detail B
Bent #2 5 Req'd

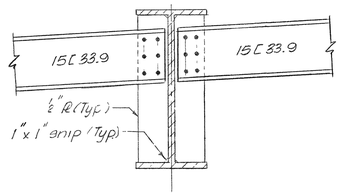




EXPANSION BEARINGS ES-1 & ES-3
Abuts. only 10 Req'd.



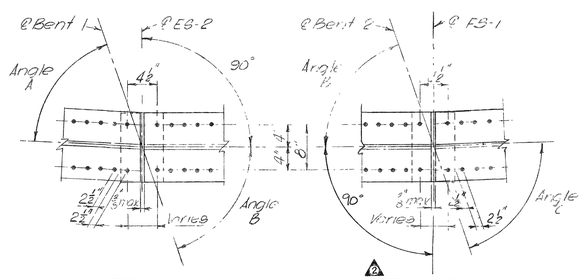
EXPANSION BEARING ES-2
For orientation see Detail A
Bent #1 5 Req'd.



SECTION B-B

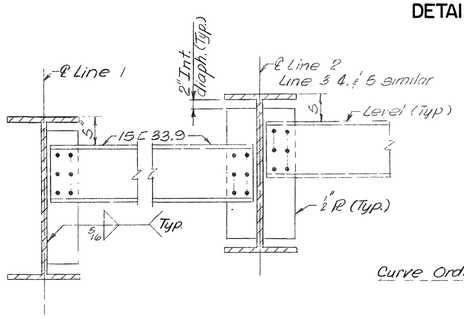
SECTION A-A

SECTION A'-A'

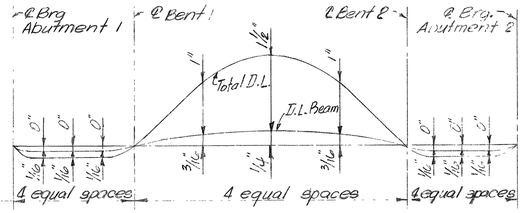


DETAIL A

DETAIL B

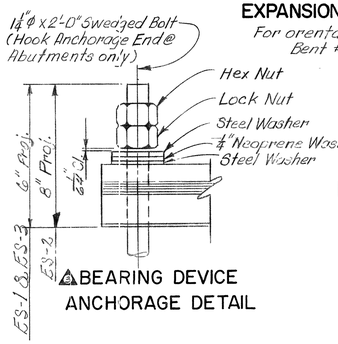


INTERMEDIATE DIAPHRAGM CONNECTION DETAIL



Curve Ordinates

DEAD LOAD CORRECTION CURVE
Dead Load Correction same for all Beams.



⚠BEARING DEVICE ANCHORAGE DETAIL

⚠1 R.M.D. 9-2-70 Dimension Section A'-A' & Splice detail note.

⚠2 18-Jan-71 - R.M.D. Revised angles in Detail B

⚠3 4-2-71 C.E.H. Revised Anchor bolt Proj.

STATE OF TENNESSEE
DEPARTMENT OF HIGHWAYS
NASHVILLE

STRUCTURAL STEEL DETAILS

INTERSTATE 40 S.W. ROADWAY OVER 8th AVE.

STATION 278+09.56

DAVIDSON COUNTY

1970

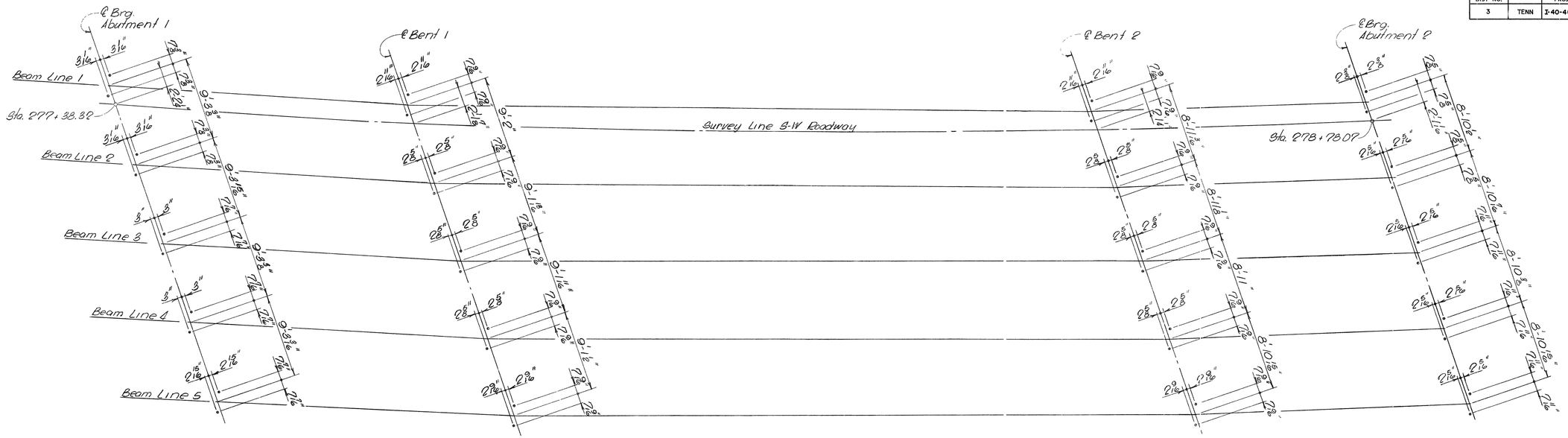
DESIGNED BY	SAM	DATE	5-10-66
DRAWN BY	FAB	DATE	6-14-66
TRACED BY		DATE	
CHECKED BY	RWH	DATE	8-66

APPROVED

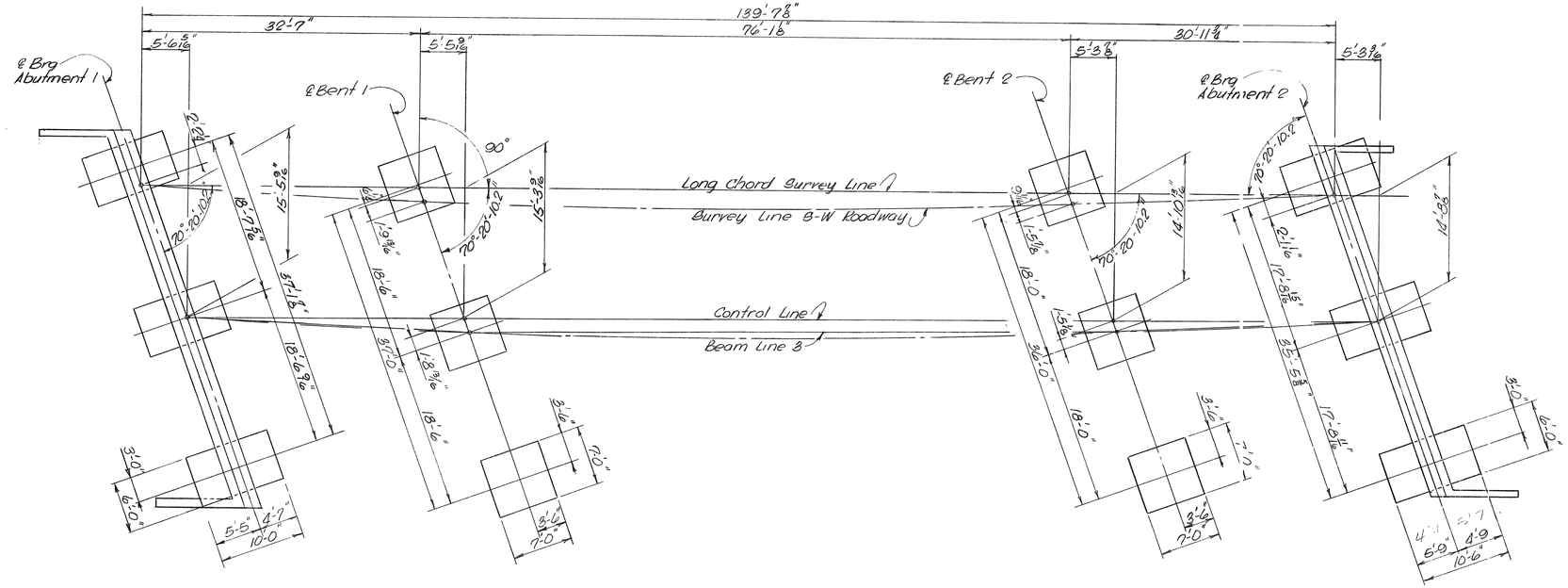
K-61-30

BRIGHTON ENGINEERING COMPANY

FED ROAD DIST NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO	TOTAL SHEETS
3	TENN	I-40-4(26)208	1970	124	305



ANCHOR BOLT LOCATION



STAKE OUT DIAGRAM

DESIGNED BY _____ DATE _____
DRAWN BY F.A.B DATE 2-20-68
TRACED BY _____ DATE _____
CHECKED BY RWH & RFC DATE 6-24-68

STATE OF TENNESSEE
DEPARTMENT OF HIGHWAYS
NASHVILLE

ANCHOR BOLT LOCATION & STAKE OUT DIAGRAM

INTERSTATE 40 S.W. ROADWAY OVER 8TH AVE.

STATION 278+09.56

DAVIDSON COUNTY

1970

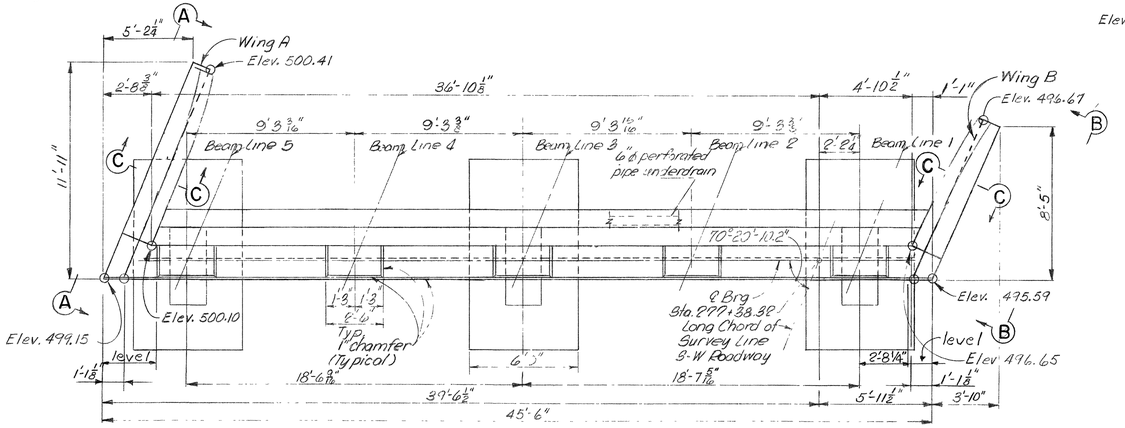
APPROVED _____

K-61-31

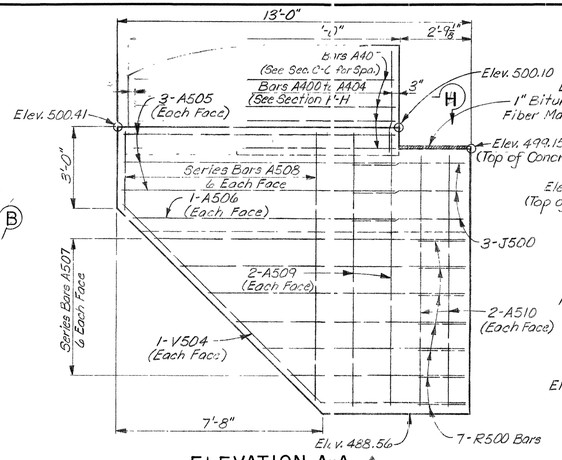
BRIGHTON ENGINEERING COMPANY

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO	FISCAL YEAR	SHEET NO	TOTAL SHEETS
3	TENN	I-40-4 (26)208	1970	125	305

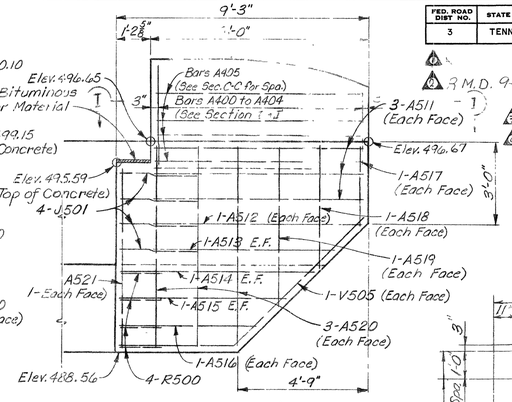
(1) Note:
For Anchor Bolt Layout See Drawing No. K-61-31.
Anchor Bolts shall be cast in place.
Bolt Projection = 6"



PLAN (1)

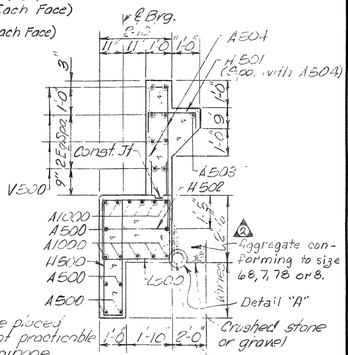


ELEVATION A-A (1)

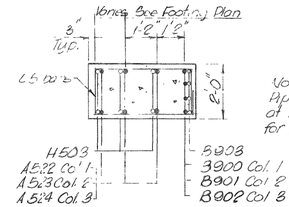


ELEVATION B-B (1)

(2) R.M.D. 9-2-70 : Revised Section G-G and added Detail "A".
(3) R.M.D. 11-23-70 - Elevations
(4) 4-2-71 C.E.P. Revised Anchor Bolt Proj.



SECTION D-D (2)

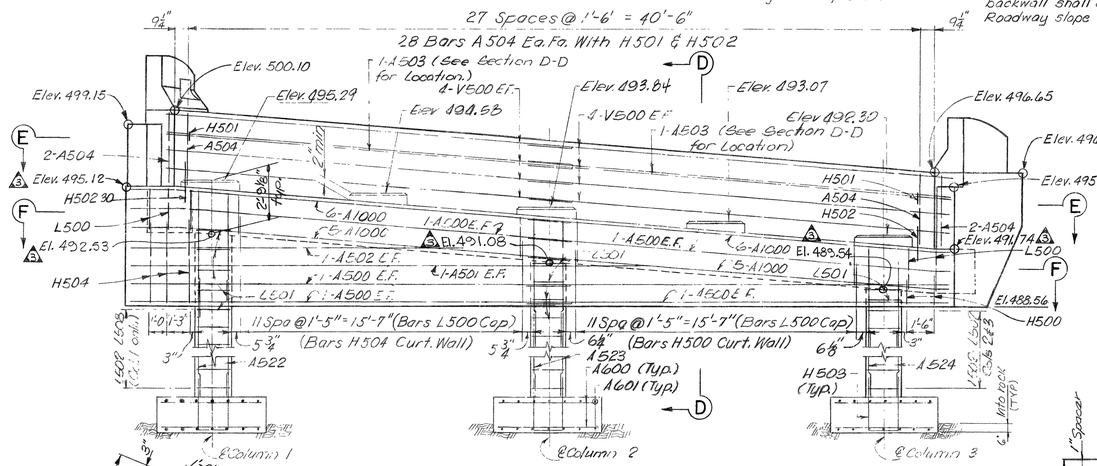


SECTION G-G

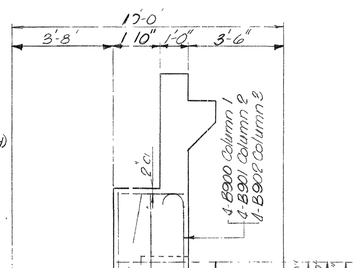
Note:
Pipe should be placed at lowest point practicable for proper drainage.

NOTE: Riser blocks to be poured monolithically with Cap Beam

NOTE: Top 12" of backwall to be poured concurrently with end of slab. Top of backwall shall conform to Roadway slope and grade.

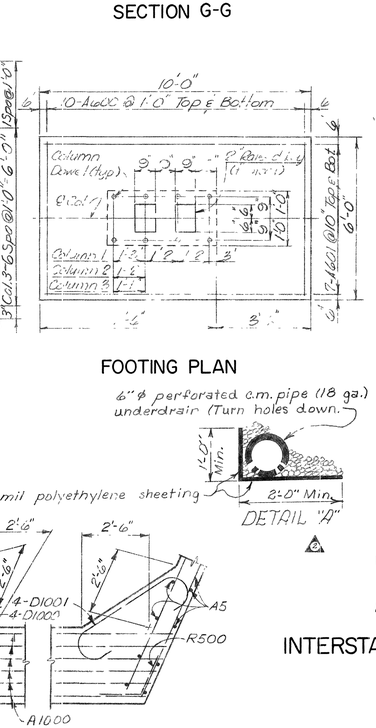


ELEVATION

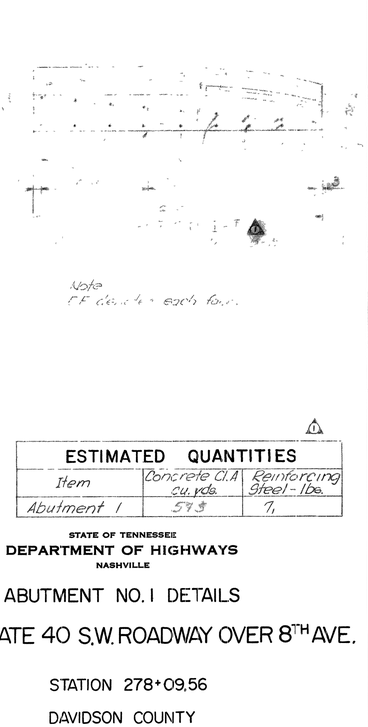


SECTION C-C

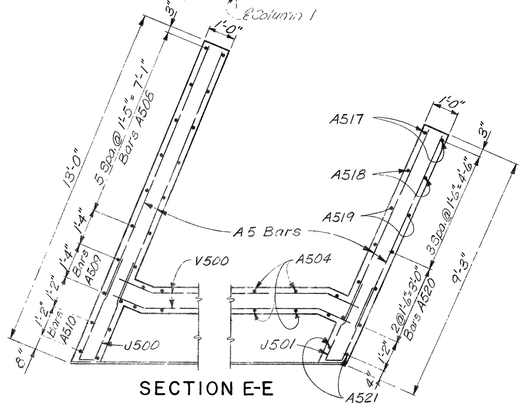
COLUMN ELEVATION



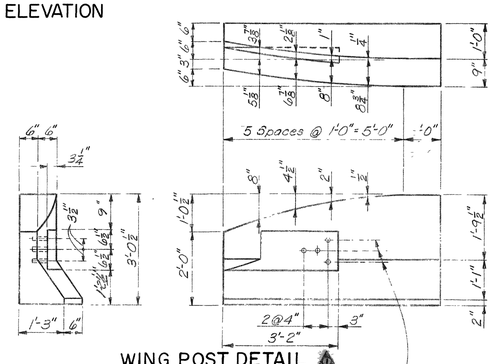
FOOTING PLAN



Note
F.F. dowel 4 in each face.

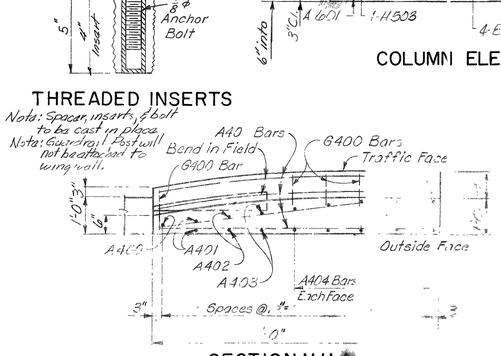


SECTION E-E



WING POST DETAIL (1)

℄ 4 threaded steel inserts to fit ⅞" ϕ x 4" Hex. Head bolt (A301). For additional details see Std. Dwg. No. RD-R-64. Cost to be included in cost of bid items.



SECTION H-H (1)
(Wing Post at Elevation - shown,

SECTION F-F

DETAIL "A" (2)

(1)

ESTIMATED QUANTITIES		
Item	Concrete Cl. A cu. yds.	Reinforcing Steel - lbs.
Abutment 1	573	71,000

STATE OF TENNESSEE
DEPARTMENT OF HIGHWAYS
NASHVILLE

ABUTMENT NO. 1 DETAILS

INTERSTATE 40 S.W. ROADWAY OVER 8TH AVE.

STATION 278+09.56

DAVIDSON COUNTY

1970

DESIGNED BY A.J.C. DATE 7/1/66
DRAWN BY E.J.C. DATE 8-12-66
TRACED BY DATE
CHECKED BY R.F.C. DATE 6-24-68

APPROVED

K-61-32

BRIGHTON ENGINEERING COMPANY

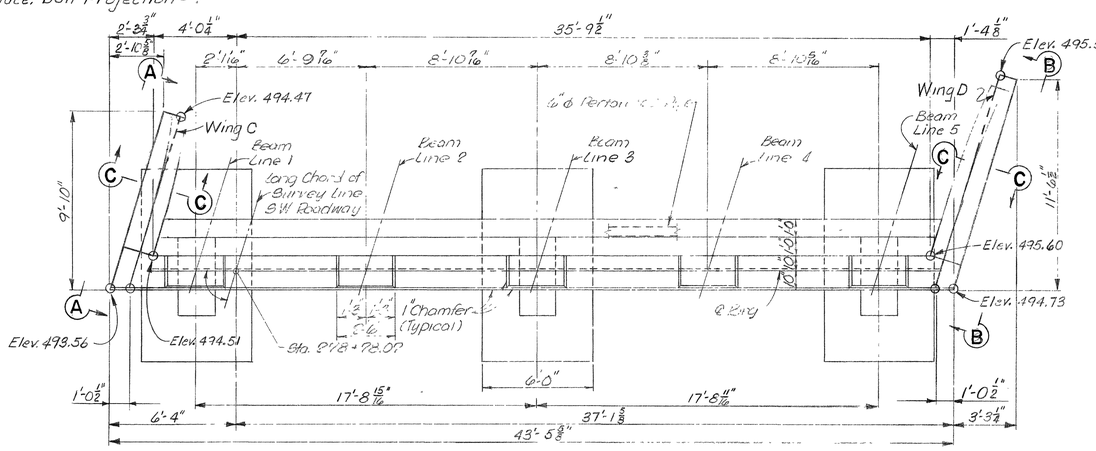
FED. ROAD DIST. NO	STATE	FED. AID PROJ. NO	FISCAL YEAR	SHEET NO	TOTAL SHEETS
3	TENN	I-40-4(26)208	1970	126	305

(1) Note: For Anchor Bolt Layout see Drawing No. K-61-31 Anchor Bolts for Bearing Devices shall be cast in place. Bolt Projection = 4".

(1) R.M.D. 9-2-70 Revised Section J-D and added Detail "A".

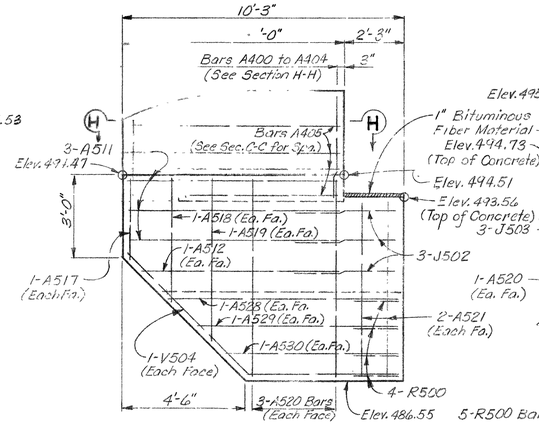
(2) R.M.D. 11-23-70 - Elevations & Dimensions

(3) 4-2-71 C.S.U. Revised Anchor Bolt Proj.

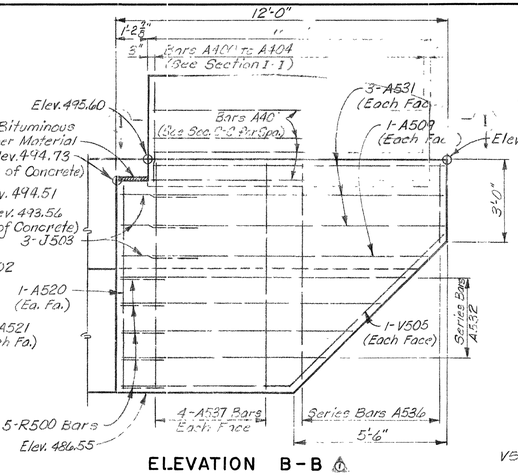


PLAN (1)

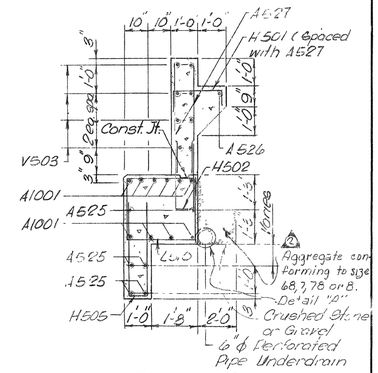
Note: Top 12" of Backwall to be poured concurrently with end of slab. Top of backwall shall conform to Roadway slope and grade.



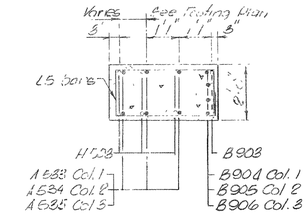
ELEVATION A-A (1)



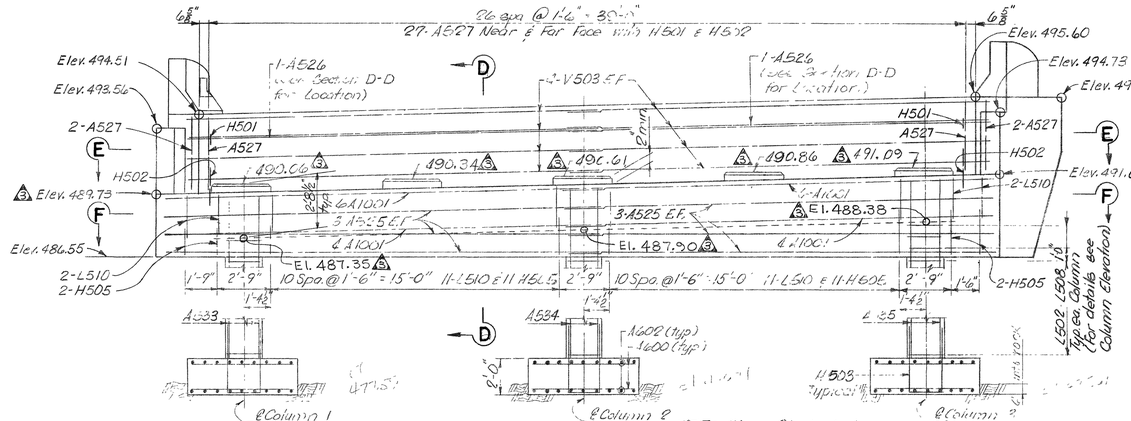
ELEVATION B-B (1)



SECTION D-D

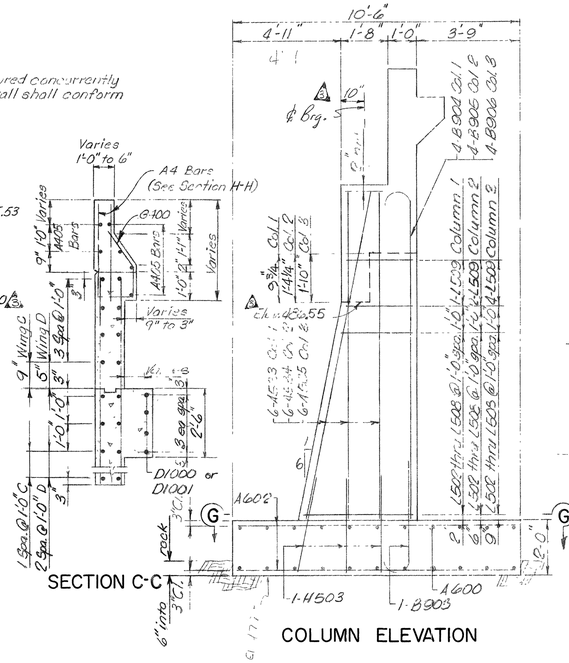


SECTION G-G



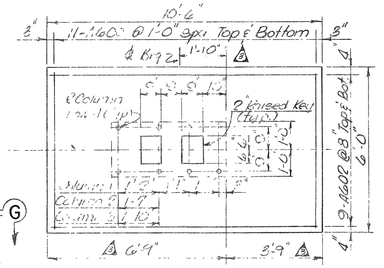
ELEVATION

NOTE: Riser Blocks to be poured monolithic with Abutment Beam.



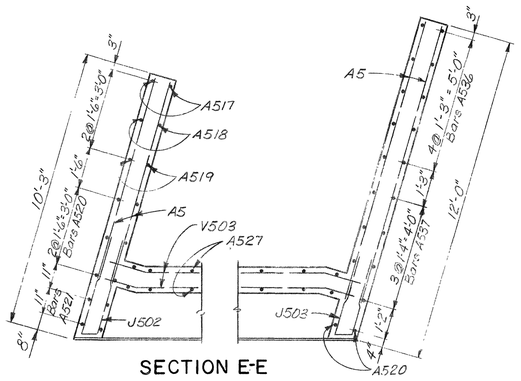
SECTION C-C

COLUMN ELEVATION

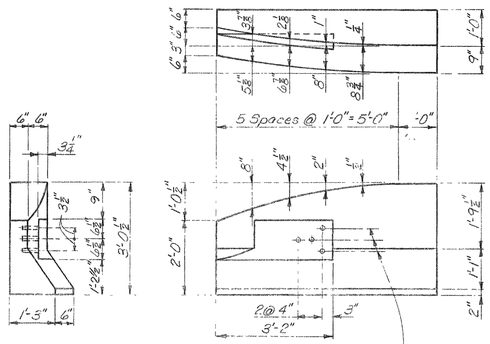


FOOTING PLAN

Note: E.F. denotes each face.

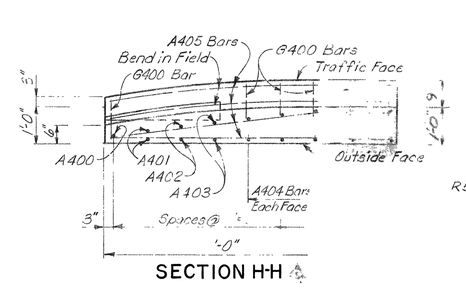


SECTION E-E



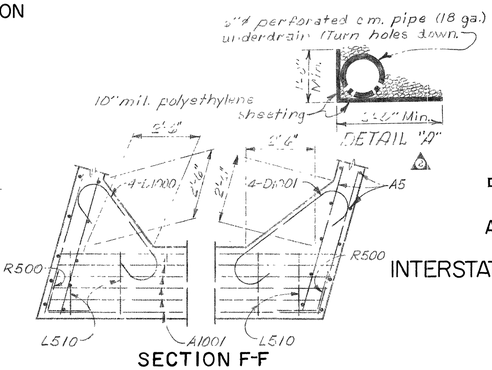
WING POST DETAIL (1)

(2) 4 threaded steel inserts to fit 7/8"ϕ x 4" Hex. Head bolt (A307). For additional details see Std. Dwg. No. RD-R-64. Cost to be included in cost of bid items.



SECTION H-H (1)

(Wing Post at Elevation A-A shown.



SECTION F-F

ESTIMATED QUANTITIES		
Item	Concrete C.Y. - cu. yd.	Reinforcing Steel - lbs.
Abutment 2		7

STATE OF TENNESSEE
DEPARTMENT OF HIGHWAYS
NASHVILLE

ABUTMENT NO. 2 DETAILS

INTERSTATE 40 S.W. ROADWAY OVER 8TH AVE.

STATION 278+09.56

DAVIDSON COUNTY

1970

DESIGNED BY	A.L.K.	DATE 7-66
DRAWN BY	F.A.B.	DATE 8-29-66
TRACED BY		DATE
CHECKED BY	R.F.C.	DATE 6-24-66

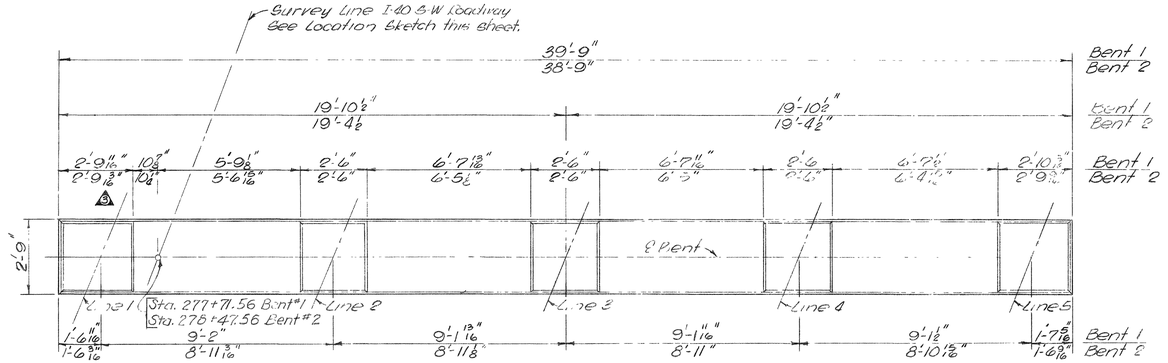
APPROVED _____

K-61-33

BRIGHTON ENGINEERING COMPANY

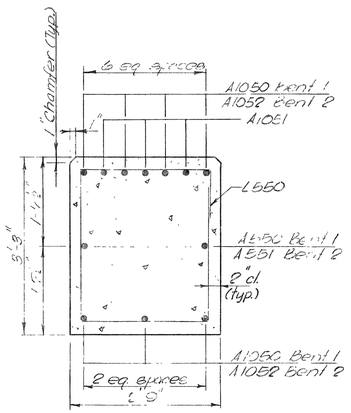
2 R.M.D. 11-23-70 Elevations
3 R.M.D. 12-30-70 Dimension Changed
1 R.M.D. 9-2-70 Dimension Section B-B

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
3	TENN	I-40-4(26)208	1970	127	305

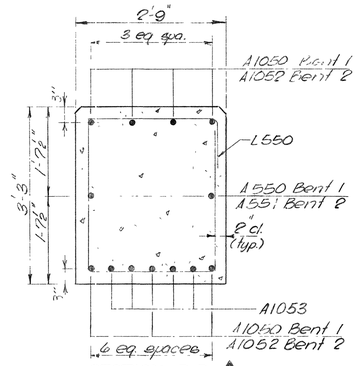


PLAN

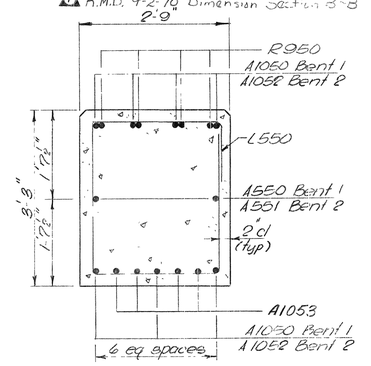
Riser Blocks to be poured monolithic with cap beam.



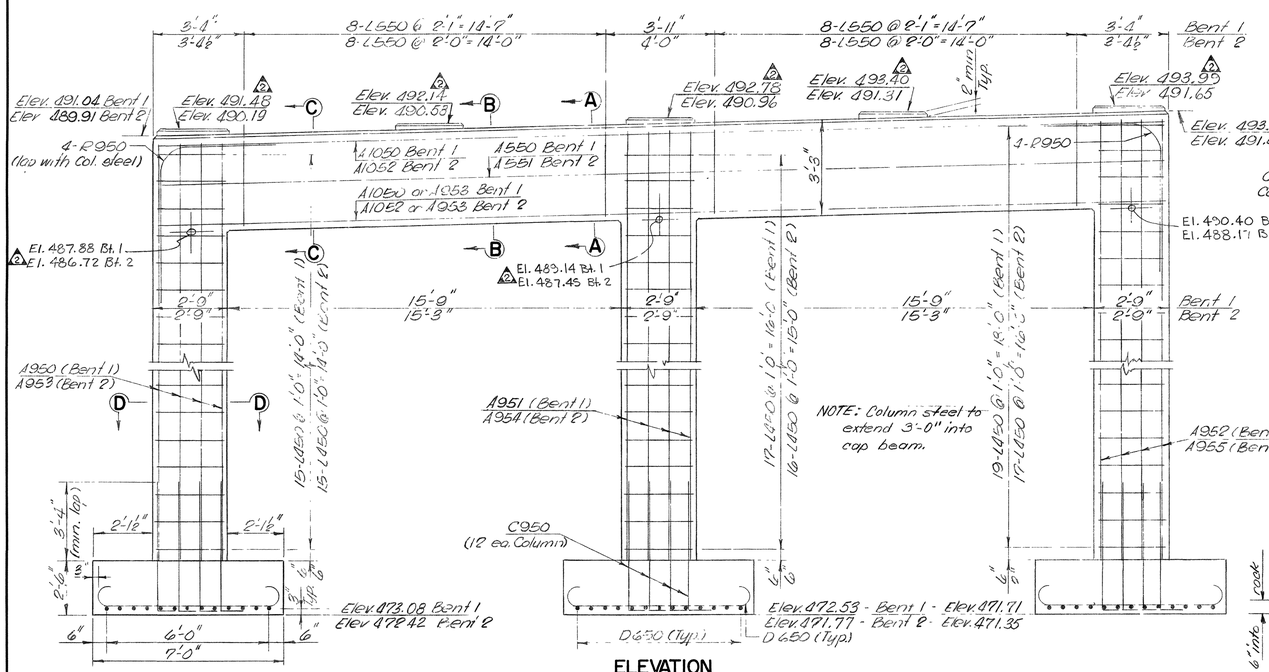
SECTION A-A



SECTION B-B 1



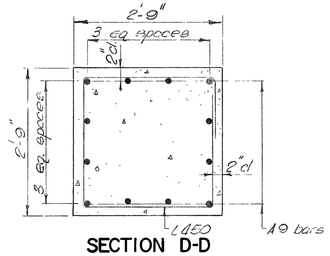
SECTION C-C



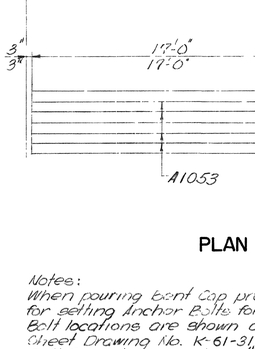
ELEVATION
Looking Forward on Survey

END ELEVATION

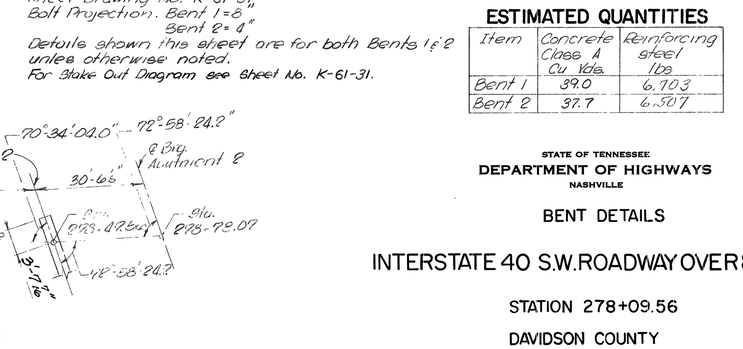
FOOTING PLAN



SECTION D-D
(Typical Each Column)

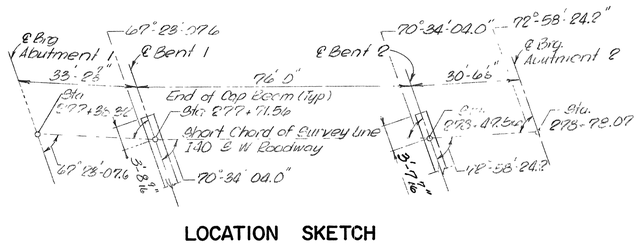


TOP OF CAP BEAM



BOTTOM OF CAP BEAM

PLAN OF MAIN REINFORCEMENT - CAP BEAM



LOCATION SKETCH

Notes:
When pouring bent cap provisions shall be made for setting Anchor Bolts for Bearing Devices. Bolt locations are shown on Anchor Bolt Layout Sheet Drawing No. K-61-31.
Bolt Projection. Bent 1 = 8"
Bent 2 = 4"
Details shown this sheet are for both Bents 1 & 2 unless otherwise noted.
For Stake Out Diagram see Sheet No. K-61-31.

ESTIMATED QUANTITIES

Item	Concrete Class A Cu. Yds.	Reinforcing steel lbs
Bent 1	39.0	6,703
Bent 2	37.7	6,507

STATE OF TENNESSEE
DEPARTMENT OF HIGHWAYS
NASHVILLE

BENT DETAILS

INTERSTATE 40 S.W. ROADWAY OVER 8th AVE.

STATION 278+09.56

DAVIDSON COUNTY

1970

DESIGNED BY A.L.C. DATE ?
DRAWN BY F.A.B. DATE 7-11-66
TRACED BY DATE
CHECKED BY R.F.C. DATE 6-6-66

APPROVED

K-61-34

BRIGHTON ENGINEERING COMPANY

BILL OF STEEL

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
3	TENN.	I-40-4(26)208	1970	128	305

⚠ Revised 6-2-70 Bars A404, A405, A406 and G400

ABUTMENTS

BAR	LOCATION	SIZE	NO. REQ'D. ABUT. 1	NO. REQ'D. ABUT. 2	BENDING DIMENSIONS a	b	c	d	LENGTH
A400	Wing Post	4	2	2					2'-10"
A401	↕	4	4	4					3'-2"
A402	↕	4	4	4					3'-5"
A403	↕	4	4	4					3'-8"
A404	↓	4	2⚠9	2⚠9					3'-9"
A405	Wing Post	4	6	6					7'-8"
~~A406~~	~~Wing Post~~	~~4~~	6	6					9'-8
A500	Cap & Curtain Wall	5	10						23'-6"
A501	Curtain Wall	5	2						28'-6"
A502	Curtain Wall	5	2						18'-6"
A503	Pavement Seat	5	2						22'-10"
A504	Backwall	5	60						4'-10"
A505	Wingwall	5	6						10'-1"
A506	Wingwall	5	2	2					9'-8"
A507	Wingwall (SERIES)	5	6		11'-6"	6'-3"	6		17'-9"
A508	Wingwall (SERIES)	5	6		11'-0"	2'-10"	6		13'-10"
A509	Wingwall	5	4						11'-4"
A510	↕	5	4						10'-3"
A511	↕	5	6						7'-8"
A512	↕	5	2	2					7'-4"
A513	↕	5	2						6'-6"
A514	↕	5	2						7'-2"
A515	↕	5	2						6'-2"
A516	↕	5	2						5'-2"
A517	↕	5	2	2					2'-10"
A518	↕	5	2	2					4'-6"
A519	↕	5	2	2					6'-2"
A520	↓	5	6	8					7'-9"
A521	Wingwall	5	2	6					6'-8"
A522	Column 1	5	6						13'-9"
A523	Column 2	5	6						11'-6"
A524	Column 3	5	6						9'-6"
A525	Cap & Curtain Wall	5		12					22'-6"
A526	Pavement Seat	5		2					21'-10"
A527	Backwall	5		58					4'-0"
A528	Wingwall	5		2					8'-4"
A529	↕	5		2					7'-5"
A530	↕	5		2					6'-5"
A531	Wingwall	5		6					10'-6"
A532	Wingwall (SERIES)	5		4	10'-0"	7'-3"	4		17'-3"
A533	Column 1	5		6					10'-0"
A534	Column 2	5		6					11'-6"
A535	Column 3	5		6					12'-0"
A536	Wingwall (SERIES)	5		5	2'-10	8'-6"	5		11'-4"
A537	Wingwall	5		8					8'-8"

ABUTMENTS

BAR	LOCATION	SIZE	NO. REQ'D. ABUT. 1	NO. REQ'D. ABUT. 2	BENDING DIMENSIONS a	b	c	d	LENGTH
A600	Footing	6	60	66					5'-6"
A601	Footing	6	42						9'-6"
A602	Footing	6		54					10'-0"
A1000	Cap	10	22						24'-4"
A1001	Cap	10		20					23'-4"
B900	Column	9	4		13'-9"				15'-0"
B901	Column	9	4		11'-6"				12'-9"
B902	Column	9	4		9'-6"				10'-9"
B903	Ftg. Dowel	9	12	12	5'-1"				6'-4"
B904	Column	9		4	10'-0"				11'-3"
B905	Column	9		4	11'-6"				12'-9"
B906	Column	9		4	13'-0"				14'-3"
D1000	Cap	10	4	4	4'-0"				7'-3"
D1001	Cap	10	4	4	4'-9"				8'-0"
G400	Wing Post	4	16	16	11"	11"	1'-8"	1'-5"	3'-6"
⚠ H500	Curtain Wall	5	14		0'-8"	2'-9"			6'-2"
H501	Pavm't Seat	5	28	27	1'-8"	0'-6"			2'-8"
H502	Backwall & Cap	5	28	27	0'-8"	3'-8"			8'-0"
H503	Column	5	9	9	1'-6"	4'-7"			10'-8"
H504	Curtain Wall	5	15		0'-8"	4'-6"			9'-8"
H505	Curtain Wall	5		26	0'-8"	3'-0"			6'-8"
J500	Wingwall	5	3		4'-1"	3'-10"	7"	3"	8'-6"
J501	↕	5	4		3'-1"	2'-10"	7"	3"	6'-6"
J502	↓	5		3	3'-6"	3'-4"	7"	2"	7'-5"
J503	Wingwall	5		3	2'-11"	2'-9"	7"	2"	6'-3"
L500	Cap-Abut 1	5	28		2'-6"	1'-0"	2'-2"		10'-4"
L501	Columns	5	11	3	2'-6"	1'-0"	1'-8"		9'-4"
L502	↕	5	3	3	2'-8"	1'-0"	1'-8"		9'-8"
L503	↕	5	3	3	2'-10"	1'-0"	1'-8"		10'-0"
L504	↕	5	3	3	3'-0"	1'-0"	1'-8"		10'-4"
L505	↕	5	3	3	3'-2"	1'-0"	1'-8"		10'-8"
L506	↕	5	3	3	3'-4"	1'-0"	1'-8"		11'-0"
L507	↕	5	3	3	3'-6"	1'-0"	1'-8"		11'-4"
L508	↓	5	1	3	3'-8"	1'-0"	1'-8"		11'-8"
L509	Columns	5		7	2'-4"	1'-0"	1'-8"		9'-0"
L510	Cap - Abut 2	5		26	2'-4"	1'-0"	2'-2"		10'-0"
R500	Cap & Wingwall	5	11	9	0'-1 7/8"	1'-6"			3'-0"

ABUTMENTS

BAR	LOCATION	SIZE	NO. REQ'D. ABUT. 1	NO. REQ'D. ABUT. 2	BENDING DIMENSIONS a	b	c	d	LENGTH
V500	Backwall	5	16		1'-6"	0'-7"	21'-10"		23'-4"
V501	Wingwall	5	2		10'-3"	7'-6"	5'-5"		15'-8"
V502	Wingwall	5	2		6'-8"	5'-0"	4'-4"		11'-0"
V503	Backwall	5		16	1'-6"	0'-5"	20'-10"		22'-4"
V504	Wingwall	5		2	6'-5"	5'-0"	5'-6"		11'-11"
V505	Wingwall	5		2	7'-3"	5'-0"	6'-4"		13'-7"

BENTS

BAR	LOCATION	SIZE	NO. REQ'D. BENT 1	NO. REQ'D. BENT 2	BENDING DIMENSIONS a	b	c	d	LENGTH
A550	Cap-Bent 1	5	2						39'-3"
A551	Cap-Bent 2	5		2					38'-3"
A950	Column	9	12						15'-3"
A951	Column	9	12						17'3"
A952	Column	9	12						19'-3"
A953	Column	9		12					14'-9"
A954	Column	9		12					16'-3"
A955	Column	9		12					17'-3"
A1050	Cap	10	7						39'-3
A1051	Cap	10	3	3					9'-0"
A1052	Cap	10		7					38'-3"
A1053	Cap	10	8	8					17'-0"
C950	Footing & Col.	9	36	36	5'-6"				6'-11"
D650	Footing	6	78	78	6'-6"				7'-10"
L450	Column	4	51	48	2'-5"	1'-0"	2'-5"		10'-8"
L550	Cap	5	16	16	2'-11	1'-0"	2'-5"		11'-8"
R950	Col. & Cap	9	8	8	2'-0"	6'-0"			11'-2"

SUPERSTRUCTURE

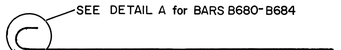
BAR	LOCATION	SIZE	NO. REQ'D	BENDING DIMENSIONS a	b	c	d	LENGTH
A680	Slab	6	6					23'6"
A681	Slab	6	466					21'-9"
A682	Slab	6	380					37'-0"
A683	Slab	6	6					22'-6"
B680	Slab - Series	6	24	5'-0"	40'-0"			46'-0"
B681	Slab	6	466	21'-9"				22'-9"
B682	Slab - Series	6	23	5'-0"				46'-0"

REINFORCING STEEL CODE

TYPE	SIZE	SERIES
A	5	50

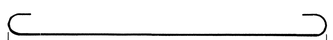
NOTE: Dimensions on this sheet are outside to outside of bars.

BARS A

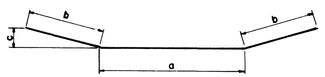


BARS B

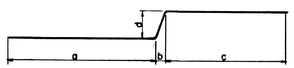
BARS C



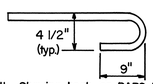
BARS D



BARS E

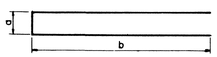


BARS F

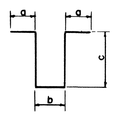


DETAIL Showing hook on BARS B680 thru B684.

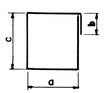
DETAIL A



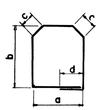
BARS H



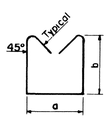
BARS K



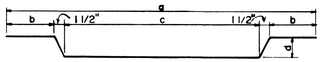
BARS L



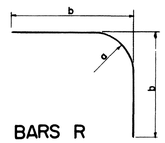
BARS M



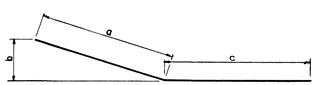
BARS S



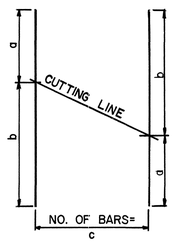
BARS N



BARS R

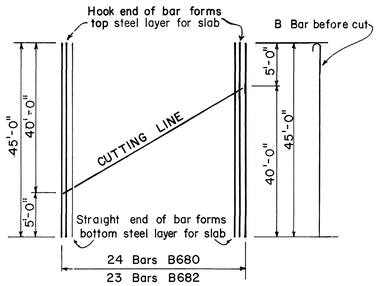


BARS V



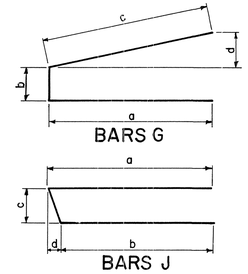
CUTTING DIAGRAM
SERIES BARS A IN WINGWALLS

Bars to be laid out in one layer and adjacent trapezoids will form near face and far face layers in wingwalls.



CUTTING DIAGRAM
SERIES BARS B680 & B682 IN SLAB

Bars to be laid out in one layer and adjacent trapezoids will form top and bottom steel layers for slab.



STATE OF TENNESSEE
DEPARTMENT OF HIGHWAYS
NASHVILLE

BILL OF STEEL

INTERSTATE 40 S.W. OVER 8TH AVE.

STATION 278+09.56

DAVIDSON COUNTY

1970

DESIGNED BY _____ DATE _____
DRAWN BY CDF DATE 6-'68
TRACED BY _____ DATE _____
CHECKED BY RFC DATE 6-'68

APPROVED _____

K-61-35

BRIGHTON ENGINEERING COMPANY