STRUCTURE I.D. = 401-102

STRUCTURE HEADER AND DESCRIPTION

952576-- 2 MARK NOLT EA/I/O/P = FILE REQUESTS AND OUTPUT DATA EXCEPTIONS
TYPE = CSC YEAR = 85 LEN = 355.50 FT. WIDTH = 47.50 FT. 5 SPANS SP.LOAD =
INV.LL.TRK.= HS20 OP.LL.TRK.= HS20

COMMENTS

952576-- 6 1 I-77 SBL BRIDGE OVER I-20 RICHLAND COUNTY
952576-- 6 2 STRUCTURE NO: 40-I-0077-3-14-00 FILE NO: 40.835
952576-- 6 3 S 1 IS THE 48 FT. INT. CSC BEAM
952576-- 6 4 S 3 IS THE 91-83-84.5 FT. INT. CSC CONTINUOUS GIRDER

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	FACTOR SPEC
952576-- 8	S 1	1		46.885	0.000	0.000	CSC	36000.00		4000.00		1.591			.00	.00	.00	.00
952576-- 8	S 3	3	X	90.224	83.042	83.729	CSC	36000.00		4000.00		1.909			.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)	W(R)	LENGTH
952576--10	S 1	1	0.000FT.	W	161.0	0.0	46.885FT.
952576--10	S 1	1	23.443FT.	P	0.4	0.0	0.000FT.
952576--10	S 3	1	0.000FT.	W	161.0	0.0	90.224FT.
952576--10	S 3	1	22.557FT.	P	0.4	0.0	0.000FT.
952576--10	S 3	1	45.115FT.	P	0.4	0.0	0.000FT.
952576--10	S 3	1	67.672FT.	P	0.4	0.0	0.000FT.
952576--10	S 3	2	0.000FT.	W	161.0	0.0	83.042FT.
952576--10	S 3	2	20.760FT.	P	0.4	0.0	0.000FT.
952576--10	S 3	2	41.521FT.	P	0.4	0.0	0.000FT.
952576--10	S 3	2	62.281FT.	P	0.4	0.0	0.000FT.
952576--10	S 3	3	0.000FT.	W	161.0	0.0	83.729FT.

952576--10	S 3	3	20.932FT.	P	0.4	0.0	0.000FT.
952576--10	S 3	3	41.865FT.	P	0.4	0.0	0.000FT.
952576--10	S 3	3	62.797FT.	P	0.4	0.0	0.000FT.

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	FY	CODE	FY
952576--11	S 1	1	1	7.568FT.	1	0			0.000FT.	0.000FT.		0.		0.
952576--11	S 1	1	2	31.750FT.	2	0			0.000FT.	0.000FT.		0.		0.
952576--11	S 1	1	3	7.568FT.	1	0			0.000FT.	0.000FT.		0.		0.
952576--11	S 3	1	1	60.000FT.	1	0			0.000FT.	0.000FT.		0.		0.
952576--11	S 3	1	2	19.724FT.	2	0			0.000FT.	0.000FT.		0.		0.
952576--11	S 3	1	3	10.500FT.	3	0			0.000FT.	0.000FT.		0.		0.
952576--11	S 3	2	1	16.500FT.	3	0			0.000FT.	0.000FT.		0.		0.
952576--11	S 3	2	2	54.042FT.	4	0			0.000FT.	0.000FT.		0.		0.
952576--11	S 3	2	3	12.500FT.	5	0			0.000FT.	0.000FT.		0.		0.
952576--11	S 3	3	1	10.500FT.	5	0			0.000FT.	0.000FT.		0.		0.
952576--11	S 3	3	2	73.229FT.	6	0			0.000FT.	0.000FT.		0.		0.

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

MEMBER ID		SEC.	A	I	S	COMPACT	SEC.	SAME ADR			H	I	A	IX	DY	DX
			NON-DETAILED DESCRIPTION					DETAILED DESCRIPTION								
952576--12	S 1	0	0.00	0.0	0.0	1	0	29.65	1	7.00	0.3	29.3	0.0			
952576--12	S 1	0	0.00	0.0	0.0	1	0	0.00	2	14.72	983.2	14.8	0.0			
952576--12	S 1	0	0.00	0.0	0.0	1	0	0.00	3	7.00	0.3	0.3	0.0			
952576--12	S 1	0	0.00	0.0	0.0	2	0	30.65	1	7.00	0.3	30.3	0.0			
952576--12	S 1	0	0.00	0.0	0.0	2	0	0.00	2	14.72	983.2	15.8	0.0			
952576--12	S 1	0	0.00	0.0	0.0	2	0	0.00	3	7.00	0.3	1.3	0.0			
952576--12	S 1	0	0.00	0.0	0.0	2	0	0.00	4	8.00	0.7	0.5	0.0			
952576--12	S 3	0	0.00	0.0	0.0	1	0	50.06	1	8.25	0.3	49.7	0.0			
952576--12	S 3	0	0.00	0.0	0.0	1	0	0.00	2	18.00	3456.0	25.4	0.0			
952576--12	S 3	0	0.00	0.0	0.0	1	0	0.00	3	22.00	3.5	0.7	0.0			
952576--12	S 3	0	0.00	0.0	0.0	2	0	49.81	1	8.25	0.3	49.5	0.0			
952576--12	S 3	0	0.00	0.0	0.0	2	0	0.00	2	18.00	3456.0	25.1	0.0			
952576--12	S 3	0	0.00	0.0	0.0	2	0	0.00	3	13.50	1.4	0.6	0.0			
952576--12	S 3	0	0.00	0.0	0.0	3	0	50.75	1	22.00	3.5	50.1	0.0			
952576--12	S 3	0	0.00	0.0	0.0	3	0	0.00	2	18.00	3456.0	25.4	0.0			
952576--12	S 3	0	0.00	0.0	0.0	3	0	0.00	3	22.00	3.5	0.7	0.0			
952576--12	S 3	0	0.00	0.0	0.0	4	0	49.38	1	8.25	0.3	49.0	0.0			
952576--12	S 3	0	0.00	0.0	0.0	4	0	0.00	2	18.00	3456.0	24.7	0.0			
952576--12	S 3	0	0.00	0.0	0.0	4	0	0.00	3	8.25	0.3	0.3	0.0			
952576--12	S 3	0	0.00	0.0	0.0	5	0	50.38	1	19.00	2.2	49.8	0.0			
952576--12	S 3	0	0.00	0.0	0.0	5	0	0.00	2	18.00	3456.0	25.2	0.0			
952576--12	S 3	0	0.00	0.0	0.0	5	0	0.00	3	19.00	2.2	0.6	0.0			
952576--12	S 3	0	0.00	0.0	0.0	6	0	49.31	1	7.50	0.2	49.5	0.0			
952576--12	S 3	0	0.00	0.0	0.0	6	0	0.00	2	18.00	3456.0	25.2	0.0			
952576--12	S 3	0	0.00	0.0	0.0	6	0	0.00	3	19.00	2.2	0.6	0.0			

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

	MEMBER ID	SPAN SYMM	RANGE	RANGE LENGTH	COMP CODE	N	SECT	A SAME	R	WIDTH	THICK -NESS	FILLET WIDTH	FILLET THICK.	EFFECT. WIDTH	EFFECT. THICK.	DIST TO TOP SECT.
952576--14	S 1	1	1	46.885FT.	C	0	1	0		105.00	8.50	22.00	2.00	102.00	8.50	6.00
952576--14	S 3	1	1	90.224FT.	C	0	2	0		105.00	8.50	22.00	2.00	102.00	8.50	6.00
952576--14	S 3	2	1	83.042FT.	C	0	3	0		105.00	8.50	22.00	2.00	102.00	8.50	6.00
952576--14	S 3	3	1	83.729FT.	C	0	4	0		105.00	8.50	22.00	2.00	102.00	8.50	6.00

BRACING LENGTH SPECIFICATIONS - LOAD FACTOR ANALYSIS

	MEMBER ID	SPAN SYMM	RANGE T/B		RANGE LENGTH	SUPPORT COND. LEFT	RIGHT	SPACES	SPACING DISTANCE	STIFF SPACING
952576--16	S 1	1	T	1	46.885FT.C			0	0.000FT.	0.000IN.
952576--16	S 1	1	B	1	46.885FT.SP	SP		2	23.443FT.	0.000IN.
952576--16	S 3	1	T	1	90.224FT.C			0	0.000FT.	0.000IN.
952576--16	S 3	1	B	1	90.224FT.SP	SP		4	22.557FT.	40.438IN.
952576--16	S 3	2	T	1	83.042FT.C			0	0.000FT.	0.000IN.
952576--16	S 3	2	B	1	83.042FT.SP	SP		4	20.760FT.	40.438IN.
952576--16	S 3	3	T	1	83.729FT.C			0	0.000FT.	0.000IN.
952576--16	S 3	3	B	1	83.729FT.SP	SP		4	20.932FT.	40.438IN.

*** FINAL SUMMARY OF RATING RESULTS FOR --- STRUCTURE ID. 401-102 BARS RELEASE 5.4
INVENTORY AND/OR OPERATING ANALYSIS

STRUCTURE

D/P STR. ID-- 401-102

INPUT CODING--

DATE 7/20/98

BY MARK NOLT

	INVENTORY		OPERATING	
	LIVE LOAD	RATING	LIVE LOAD	RATING
	HS20	HS 21.5	HS20	HS 35.9

STRUCTURE DESCRIPTION--

IDENTIFICATION	
TYPE	CSC
YEAR OF CONSTR.	1985
LENGTH	355.50 FEET
ROADWAY WIDTH	47.50 FEET
NUMBER OF SPANS	5

LOCATION--

DISTRICT	
COUNTY	
CONSTR. RTE.	
CONSTR. SEC.	
CONSTR. STA.	0
KEY RTE.	
MARKED RTE.	

MICROFILM REEL NUMBERS--

DESIGN PLANS
COMPUTATIONS
CORRESPONDENCE

ANALYST REMARKS--

I-77 SBL BRIDGE OVER I-20 RICHLAND COUNTY
STRUCTURE NO: 40-1-0077-3-14-00 FILE NO: 40.835
S 1 IS THE 48 FT. INT. CSC BEAM
S 3 IS THE 91-83-84.5 FT. INT. CSC CONTINUOUS GIRDER

INVENTORY RATING SUMMARY

MEMBER I.D.	S 3
SPAN	3
CRITICAL C.P. DIST.	50.2 FEET
LIVE LOAD DESIGNATION	HS20

	MOMENT (FOOT-KIPS)
MEMBER CAPACITY	1889.7
DL EFFECT	729.0
CAPACITY FOR (LL+I)	1275.2
ACTUAL (LL+I)	1184.2

INVENTORY RATING HS 21.54

OPERATING RATING SUMMARY

MEMBER I.D.	S 3
SPAN	3
CRITICAL C.P. DIST.	50.2 FEET
LIVE LOAD DESIGNATION	HS20

	MOMENT (FOOT-KIPS)
MEMBER CAPACITY	3149.5
DL EFFECT	729.0
CAPACITY FOR (LL+I)	2125.3
ACTUAL (LL+I)	1184.2

OPERATING RATING HS 35.89

STRUCTURE I.D. = 401-100

STRUCTURE HEADER AND DESCRIPTION

952576-- 2 MARK NOLT EA/I/O/P = FILE REQUESTS AND OUTPUT DATA EXCEPTIONS
TYPE = CSC YEAR = 84 LEN = 197.00 FT. WIDTH = 41.00 FT. 3 SPANS SP.LOAD =
INV.LL.TRK.= HS20 OP.LL.TRK.= HS20

COMMENTS

952576-- 6 1 I-77 NBL BRIDGE OVER I-77 RAMP RICHLAND COUNTY
952576-- 6 2 STRUCTURE NO: 40-1-0077-1-13-00 FILE NO: 40.835.6
952576-- 6 3 S 1 IS THE 67.5 FT. INT. BEAM
952576-- 6 4 S 2 IS THE 82 FT. INT. BEAM
952576-- 6 5 S 3 IS THE 47.5 FT. INT. BEAM

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

MEMBER ID	SPANS	STIFF. SYMM	SPAN 1 CODE (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 CECK	MAX INV	IMPACT OP.	POST	FACTOR SPEC
952576-- 8	S 1	1	65.906	0.000	0.000	CSC	36000.00		4000.00		1.682			.00	.00	.00	.00
952576-- 8	S 2	1	80.479	0.000	0.000	CSC	36000.00		4000.00		1.682			.00	.00	.00	.00
952576-- 8	S 3	1	45.896	0.000	0.000	CSC	36000.00		4000.00		1.682			.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)	W(R)	LENGTH
952576--10	S 1	1	0.000FT.	W	196.0	0.0	65.906FT.
952576--10	S 1	1	21.969FT.	P	0.5	0.0	0.000FT.
952576--10	S 1	1	43.938FT.	P	0.5	0.0	0.000FT.
952576--10	S 2	1	0.000FT.	W	196.0	0.0	80.479FT.
952576--10	S 2	1	20.120FT.	P	0.5	0.0	0.000FT.
952576--10	S 2	1	40.240FT.	P	0.5	0.0	0.000FT.
952576--10	S 2	1	60.359FT.	P	0.5	0.0	0.000FT.
952576--10	S 3	1	0.000FT.	W	196.0	0.0	45.896FT.
952576--10	S 3	1	22.948FT.	P	0.5	0.0	0.000FT.

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	FY	CODE	FY
952576--11	S 1		1	1	10.099FT.	1	0			0.000FT.	0.000FT.		0.		0.
952576--11	S 1		1	2	45.700FT.	2	0			0.000FT.	0.000FT.		0.		0.
952576--11	S 1		1	3	10.099FT.	1	0			0.000FT.	0.000FT.		0.		0.
952576--11	S 2		1	1	13.240FT.	1	0			0.000FT.	0.000FT.		0.		0.
952576--11	S 2		1	2	54.000FT.	2	0			0.000FT.	0.000FT.		0.		0.
952576--11	S 2		1	3	13.240FT.	1	0			0.000FT.	0.000FT.		0.		0.
952576--11	S 3		1	1	5.740FT.	1	0			0.000FT.	0.000FT.		0.		0.
952576--11	S 3		1	2	34.417FT.	2	0			0.000FT.	0.000FT.		0.		0.
952576--11	S 3		1	3	5.740FT.	1	0			0.000FT.	0.000FT.		0.		0.

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

MEMBER ID	SEC.	A	I	S	COMPACT SEC.	SAME ADR		H	I	A	IX	DY	OX
		-- NON-DETAILED DESCRIPTION						DETAILED DESCRIPTION					
952576--12	S 1	0	0.00	0.0	0.0	1	0	35.05	1	11.26	0.8	35.4	0.0
952576--12	S 1	0	0.00	0.0	0.0	1	0	0.00	2	21.23	2041.7	17.9	0.0
952576--12	S 1	0	0.00	0.0	0.0	1	0	0.00	3	11.26	0.8	0.5	0.0
952576--12	S 1	0	0.00	0.0	0.0	2	0	37.54	1	11.26	0.8	37.1	0.0
952576--12	S 1	0	0.00	0.0	0.0	2	0	0.00	2	21.23	2041.7	19.6	0.0
952576--12	S 1	0	0.00	0.0	0.0	2	0	0.00	3	11.26	0.8	2.2	0.0
952576--12	S 1	0	0.00	0.0	0.0	2	0	0.00	4	15.19	3.6	0.8	0.0
952576--12	S 2	0	0.00	0.0	0.0	1	0	35.90	1	20.75	2.7	35.3	0.0
952576--12	S 2	0	0.00	0.0	0.0	1	0	0.00	2	25.37	2355.5	17.9	0.0
952576--12	S 2	0	0.00	0.0	0.0	1	0	0.00	3	20.75	2.7	0.6	0.0
952576--12	S 2	0	0.00	0.0	0.0	2	0	37.34	1	20.75	2.7	36.7	0.0
952576--12	S 2	0	0.00	0.0	0.0	2	0	0.00	2	25.37	2355.5	19.4	0.0
952576--12	S 2	0	0.00	0.0	0.0	2	0	0.00	3	20.75	2.7	2.1	0.0
952576--12	S 2	0	0.00	0.0	0.0	2	0	0.00	4	20.13	3.5	0.7	0.0
952576--12	S 3	0	0.00	0.0	0.0	1	0	29.65	1	7.00	0.3	29.3	0.0
952576--12	S 3	0	0.00	0.0	0.0	1	0	0.00	2	14.72	983.2	14.8	0.0
952576--12	S 3	0	0.00	0.0	0.0	1	0	0.00	3	7.00	0.3	0.3	0.0
952576--12	S 3	0	0.00	0.0	0.0	2	0	30.90	1	7.00	0.3	30.6	0.0
952576--12	S 3	0	0.00	0.0	0.0	2	0	0.00	2	14.72	983.2	16.1	0.0
952576--12	S 3	0	0.00	0.0	0.0	2	0	0.00	3	7.00	0.3	1.6	0.0
952576--12	S 3	0	0.00	0.0	0.0	2	0	0.00	4	10.00	1.3	0.6	0.0

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.
952576--14	S 1	1	1	65.906FT.	C	0	1	0		111.00	8.50	22.00	2.00	102.00	8.50	6.00

952576--14	S 2	1	1	80.479FT.	C	0	2	0	111.00	8.50	22.00	2.00	102.00	8.50	6.00
952576--14	S 3	1	1	45.896FT.	C	0	3	0	111.00	8.50	22.00	2.00	102.00	8.50	6.00

****
* BRACING LENGTH SPECIFICATIONS - LOAD FACTOR ANALYSIS *
****

MEMBER ID	SYMM	SPAN	RANGE T/B	RANGE LENGTH	SUPPORT COND. LEFT	RIGHT	SPACES	SPACING DISTANCE	STIFF SPACING
952576--16	S 1	1	T 1	65.906FT.C			0	0.000FT.	0.000IN.
952576--16	S 1	1	B 1	65.906FT.SP		SP	3	21.969FT.	0.000IN.
952576--16	S 2	1	T 1	80.479FT.C			0	0.000FT.	0.000IN.
952576--16	S 2	1	B 1	80.479FT.SP		SP	4	20.120FT.	0.000IN.
952576--16	S 3	1	T 1	45.896FT.C			0	0.000FT.	0.000IN.
952576--16	S 3	1	B 1	45.896FT.SP		SP	2	22.948FT.	0.000IN.

*** FINAL SUMMARY OF RATING RESULTS FOR --- STRUCTURE ID. 401-100 BARS RELEASE 5.4
INVENTORY AND/OR OPERATING ANALYSIS

STRUCTURE

D/P STR. ID-- 401-100

INPUT CODING--

DATE 7/20/98

BY MARK NOLT

	INVENTORY		OPERATING	
	LIVE LOAD	RATING	LIVE LOAD	RATING
	HS20	HS 33.6	HS20	HS 56.0

STRUCTURE DESCRIPTION--

IDENTIFICATION	
TYPE	CSC
YEAR OF CONSTR.	1984
LENGTH	197.00 FEET
ROADWAY WIDTH	41.00 FEET
NUMBER OF SPANS	3

LOCATION--

DISTRICT	
COUNTY	
CONSTR. RTE.	
CONSTR. SEC.	
CONSTR. STA.	0
KEY RTE.	
MARKED RTE.	

MICROFILM REEL NUMBERS--

DESIGN PLANS
COMPUTATIONS
CORRESPONDENCE

ANALYST REMARKS--

I-77 NBL BRIDGE OVER I-77 RAMP RICHLAND COUNTY
STRUCTURE NO: 40-1-0077-1-15-00 FILE NO: 40.835.6
S 1 IS THE 67.5 FT. INT. BEAM
S 2 IS THE 82 FT. INT. BEAM
S 3 IS THE 47.5 FT. INT. BEAM

INVENTORY RATING SUMMARY

MEMBER I.D.	S 1
SPAN	1
CRITICAL C.P. DIST.	33.0 FEET
LIVE LOAD DESIGNATION	HS20

	MOMENT (FOOT-KIPS)
MEMBER CAPACITY	2301.8
DL EFFECT	781.5
CAPACITY FOR (LL+I)	1614.7
ACTUAL (LL+I)	961.8

INVENTORY RATING HS 33.58

OPERATING RATING SUMMARY

MEMBER I.D.	S 1
SPAN	1
CRITICAL C.P. DIST.	33.0 FEET
LIVE LOAD DESIGNATION	HS20

	MOMENT (FOOT-KIPS)
MEMBER CAPACITY	3836.3
DL EFFECT	781.5
CAPACITY FOR (LL+I)	2691.1
ACTUAL (LL+I)	961.8

OPERATING RATING HS 55.96

STRUCTURE I.D. = 401-105

STRUCTURE HEADER AND DESCRIPTION

952576-- 2 MARK NOLT Ea/I/O/P = FILE REQUESTS AND OUTPUT DATA EXCEPTIONS
TYPE = CSC YEAR = 84 LEN = 164.00 FT. WIDTH = 41.00 FT. 3 SPANS SP.LOAD =
INV.LL.TRK.= HS20 OP.LL.TRK.= HS20

COMMENTS

952576-- 6 1 I-77 SBL BRIDGE OVER I-77 RAMP RICHLAND COUNTY
952576-- 6 2 STRUCTURE NO: 40-1-0077-3-15-00 FILE NO: 40.835.6
952576-- 6 3 S 1 IS THE 48 FT. INT. BEAM
952576-- 6 4 S 2 IS THE 01 FT. INT. BEAM
952576-- 6 5 S 3 IS THE 33 FT. INT. BEAM

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 CP.	IMPACT POST	FACTOR SPEC
952576-- 8	S 1	1		47.417	0.000	0.000	CSC	36000.00		4000.00		1.682			.00	.00	.00	.00
952576-- 8	S 2	1		80.000	0.000	0.000	CSC	36000.00		4000.00		1.682			.00	.00	.00	.00
952576-- 8	S 3	1		31.917	0.000	0.000	CSC	36000.00		4000.00		1.682			.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)	W(R)	LENGTH
952576--10	S 1	1	0.000FT.	W	196.0	0.0	47.417FT.
952576--10	S 1	1	23.708FT.	P	0.5	0.0	0.000FT.
952576--10	S 2	1	0.000FT.	W	196.0	0.0	81.000FT.
952576--10	S 2	1	20.000FT.	P	0.5	0.0	0.000FT.
952576--10	S 2	1	40.000FT.	P	0.5	0.0	0.000FT.
952576--10	S 2	1	60.000FT.	P	0.5	0.0	0.000FT.
952576--10	S 3	1	0.000FT.	W	196.0	0.0	31.917FT.
952576--10	S 3	1	15.958FT.	P	0.5	0.0	0.000FT.

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	CODE	FY
952576--11	S 1	1	1	6.500FT.	1	0			0.000FT.	0.000FT.		0.		0.
952576--11	S 1	1	2	34.417FT.	2	0			0.000FT.	0.000FT.		0.		0.
952576--11	S 1	1	3	6.500FT.	1	0			0.000FT.	0.000FT.		0.		0.
952576--11	S 2	1	1	13.000FT.	1	0			0.000FT.	0.000FT.		0.		0.
952576--11	S 2	1	2	54.000FT.	2	0			0.000FT.	0.000FT.		0.		0.
952576--11	S 2	1	3	13.000FT.	1	0			0.000FT.	0.000FT.		0.		0.
952576--11	S 3	1	1	31.917FT.	1	0			0.000FT.	0.000FT.		0.		0.

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

MEMBER ID	SEC.	NON-DETAILED DESCRIPTION A	I	S	COMPACT	SEC.	SAME ADR	DETAILED DESCRIPTION		H	I	A	IX	DY	DX
952576--12	S 1	0	0.00	0.0	0.0	1	0	29.65	1	7.00	0.3	29.3	0.0		
952576--12	S 1	0	0.00	0.0	0.0	1	0	0.00	2	14.72	983.2	14.8	0.0		
952576--12	S 1	0	0.00	0.0	0.0	1	0	0.00	3	7.00	0.3	0.3	0.0		
952576--12	S 1	0	0.00	0.0	0.0	2	0	30.90	1	7.00	0.3	30.6	0.0		
952576--12	S 1	0	0.00	0.0	0.0	2	0	0.00	2	14.72	983.2	16.1	0.0		
952576--12	S 1	0	0.00	0.0	0.0	2	0	0.00	3	7.00	0.3	1.6	0.0		
952576--12	S 1	0	0.00	0.0	0.0	2	0	0.00	4	10.00	1.3	0.6	0.0		
952576--12	S 2	0	0.00	0.0	0.0	1	0	35.90	1	20.75	2.7	35.3	0.0		
952576--12	S 2	0	0.00	0.0	0.0	1	0	0.00	2	25.37	2355.5	17.9	0.0		
952576--12	S 2	0	0.00	0.0	0.0	1	0	0.00	3	20.75	2.7	0.6	0.0		
952576--12	S 2	0	0.00	0.0	0.0	2	0	37.34	1	20.75	2.7	36.7	0.0		
952576--12	S 2	0	0.00	0.0	0.0	2	0	0.00	2	25.37	2355.5	19.4	0.0		
952576--12	S 2	0	0.00	0.0	0.0	2	0	0.00	3	20.75	2.7	2.1	0.0		
952576--12	S 2	0	0.00	0.0	0.0	2	0	0.00	4	20.13	3.5	0.7	0.0		
952576--12	S 3	0	0.00	0.0	0.0	1	0	32.86	1	8.49	0.4	32.5	0.0		
952576--12	S 3	0	0.00	0.0	0.0	1	0	0.00	2	17.26	1416.3	16.4	0.0		
952576--12	S 3	0	0.00	0.0	0.0	1	0	0.00	3	8.49	0.4	0.4	0.0		

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

MEMBER ID	SYMM	SPAN	RANGE	RANGE LENGTH	COMP CODE	N	SECT	A	SAME	R	WIDTH	THICK -NESS	FILLET WIDTH	FILLET THICK.	EFFECT. WIDTH	EFFECT. THICK.	DIST TO TOP SECT.
952576--14	S 1	1	1	47.417FT.	C	0	1	0			111.00	8.50	22.00	2.00	102.00	8.50	6.00
952576--14	S 2	1	1	80.000FT.	C	0	2	0			111.00	8.50	22.00	2.00	102.00	8.50	6.00
952576--14	S 3	1	1	31.917FT.	C	0	3	0			111.00	8.50	22.00	2.00	102.00	8.50	6.00

BRACING LENGTH SPECIFICATIONS - LOAD FACTOR ANALYSIS

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MEMBER ID	SYM	SPAN	RANGE T/B	RANGE	RANGE LENGTH	SUPPORT COND. LEFT	RIGHT	SPACES	SPACING DISTANCE	STIFF SPACING
952576--16	S	1	1 T	1	47.417FT.C			0	0.000FT.	0.000IN.
952576--16	S	1	1 B	1	47.417FT.SP		SP	2	23.708FT.	0.000IN.
952576--16	S	2	1 T	1	80.000FT.C			0	0.000FT.	0.000IN.
952576--16	S	2	1 B	1	80.000FT.SP		SP	4	20.000FT.	0.000IN.
952576--16	S	3	1 T	1	31.917FT.C			0	0.000FT.	0.000IN.
952576--16	S	3	1 B	1	31.917FT.SP		SP	2	15.958FT.	0.000IN.

*** FINAL SUMMARY OF RATING RESULTS FOR --- STRUCTURE ID. 401-105 BARS RELEASE 5.4
INVENTORY AND/OR OPERATING ANALYSIS

STRUCTURE

O/P STR. ID-- 401-105

INPUT CODING--

DATE 7/20/90

BY MARK NOLT

	INVENTORY		OPERATING	
	LIVE LOAD	RATING	LIVE LOAD	RATING
	HS20	HS 31.5	HS20	HS 52.6

STRUCTURE DESCRIPTION--

IDENTIFICATION	
TYPE	CSC
YEAR OF CONSTR.	1984
LENGTH	164.00 FEET
ROADWAY WIDTH	41.00 FEET
NUMBER OF SPANS	3

LOCATION--

DISTRICT	
COUNTY	
CONSTR. RTE.	
CONSTR. SEC.	
CONSTR. STA.	0
KEY RTE.	
MARKED RTE.	

MICROFILM REEL NUMBERS--

DESIGN PLANS
COMPUTATIONS
CORRESPONDENCE

ANALYST REMARKS--

I-77 SBL BRIDGE OVER I-77 RAMP RICHLAND COUNTY
STRUCTURE NO: 40-1-0077-3-15-00 FILE NO: 40.835.6
S 1 IS THE 48 FT. INT. BEAM
S 2 IS THE 81 FT. INT. BEAM
S 3 IS THE 33 FT. INT. BEAM

INVENTORY RATING SUMMARY

MEMBER I.D.	S 1
SPAN	1
CRITICAL C.P. DIST.	23.7 FEET
LIVE LOAD DESIGNATION	HS20

	MOMENT (FOOT-KIPS)
MEMBER CAPACITY	1356.8
DL EFFECT	386.1
CAPACITY FOR (LL+I)	980.9
ACTUAL (LL+I)	622.2

INVENTORY RATING HS 31.53

OPERATING RATING SUMMARY

MEMBER I.D.	S 1
SPAN	1
CRITICAL C.P. DIST.	23.7 FEET
LIVE LOAD DESIGNATION	HS20

	MOMENT (FOOT-KIPS)
MEMBER CAPACITY	2261.3
DL EFFECT	386.1
CAPACITY FOR (LL+I)	1634.8
ACTUAL (LL+I)	622.2

OPERATING RATING HS 52.55

STRUCTURE I.D. = 401-140

STRUCTURE HEADER AND DESCRIPTION

100-- 2 MARK A KWAYISI EA/I/O/P = FILE REQUESTS AND OUTPUT DATA EXCEPTIONS
TYPE = CSTEEL YEAR = 84 LEN = 169.00 FT. WIDTH = 41.00 FT. 3 SPANS SP.LOAD =
INV.LL.TRK.= HS20 OP.LL.TRK.= HS20

COMMENTS

200-- 6 1 RICHLAND CTY., I-77(NBL) BRIDGE OVER S-1196(WINDSOR LK. BLVD)
300-- 6 2 DESIGN LOAD HS-20.
400-- 6 3 S11 (35' SPAN), S12 (46' SPAN), S13 (88' SPAN)
500-- 6 4 THE STRUCTURE NUMBER IS 40-1-0077-1-02-00
16

SPECIFICATIONS GENERALLY APPLICABLE TO STRUCTURE MEMBERS

	STRUCT STEEL	REINF. CONCRETE	COMPOSITE STEEL/CONC	PRESTRESSED CONCRETE		IMPACT FACTOR INV OP POST SPEC	TIMBER
600-- 7	FY= 0.	FY = 0. F"C= 0.	FY = 0. F"C= 0.	LOSS = 0. EG/ES= 0.000	F"S = 0. F"". C= 0.	MAX =.00 .00 .00 .00 MIN =.00 .00 .00 .00	FY = 0. 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 FACTOR OP.	POST	SPEC
700-- 8	S11	1		34.260	0.000	0.000	CSC	0.00		0.00		1.273			.00	.00	.00	.00
800-- 8	S12	1		45.417	0.000	0.000	CSC	0.00		0.00		1.273			.00	.00	.00	.00
900-- 8	S13	1		87.444	0.000	0.000	CSC	0.00		0.00		1.273			.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)	W(R)	LENGTH
1000--10	S11		1	0.000FT.	W	109.0	0.0	34.260FT.
1100--10	S11		1	0.000FT.	W	100.0	0.0	34.260FT.
1200--10	S11		1	17.130FT.	P	0.2	0.0	0.000FT.
1300--10	S12		1	0.000FT.	W	109.0	0.0	45.417FT.
1400--10	S12		1	0.000FT.	W	100.0	0.0	45.417FT.
1500--10	S12		1	22.708FT.	P	0.3	0.0	0.000FT.
1600--10	S13		1	0.000FT.	W	109.0	0.0	87.444FT.
1700--10	S13		1	0.000FT.	W	100.0	0.0	87.444FT.
1800--10	S13		1	21.861FT.	P	0.3	0.0	0.000FT.
1900--10	S13		1	43.722FT.	P	0.3	0.0	0.000FT.
2000--10	S13		1	65.583FT.	P	0.3	0.0	0.000FT.

SECTION RANGE SPECIFICATIONS

	MEMBER ID	SYMM.	SPAN NO.	RANGE NO.	RANGE LENGTH	SECTION NO. LEFT	RIGHT	SEC. VAR.	HINGE CODE	HINGE 1 DIST.	HINGE 2 DIST.	HYBRID GIRDER CODE	FY	CODE	FY
2100--11	S11		1	1	34.260FT.	1	0			0.000FT.	0.000FT.		0.		0.
2200--11	S12		1	1	45.417FT.	1	0			0.000FT.	0.000FT.		0.		0.
2300--11	S13		1	1	87.444FT.	1	0			0.000FT.	0.000FT.		0.		0.

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

	MEMBER ID	SEC.	A	I	S	COMPACT	SEC.	SAME	ADR		H	I	A	IX	DY	DX
		-- NON-DETAILED DESCRIPTION							DETAILED DESCRIPTION							
2400--12	S11	0	0.00	0.0	0.0	1	0	26.71	1	6.37	0.2	26.4	0.0			
952576--12	S11	0	0.00	0.0	0.0	1	0	0.00	2	11.70	630.4	13.4	0.0			
952576--12	S11	0	0.00	0.0	0.0	1	0	0.00	3	6.37	0.2	0.3	0.0			
952576--12	S12	0	0.00	0.0	0.0	1	0	30.01	1	8.92	0.5	29.6	0.0			
952576--12	S12	0	0.00	0.0	0.0	1	0	0.00	2	16.00	1068.3	15.0	0.0			
952576--12	S12	0	0.00	0.0	0.0	1	0	0.00	3	8.92	0.5	0.4	0.0			
952576--12	S13	0	0.00	0.0	0.0	1	0	36.71	1	20.75	2.7	36.1	0.0			
952576--12	S13	0	0.00	0.0	0.0	1	0	0.00	2	25.37	2355.5	18.8	0.0			
952576--12	S13	0	0.00	0.0	0.0	1	0	0.00	3	20.75	2.7	1.4	0.0			
952576--12	S13	0	0.00	0.0	0.0	1	0	0.00	4	12.19	0.7	0.4	0.0			

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.
2800--14	S11		1	1	34.260FT.	C	9	1	0		84.00	7.50	18.00	2.40	84.00	7.30	5.40
2900--14	S12		1	1	45.417FT.	C	9	1	0		84.00	7.50	18.50	2.70	84.00	7.30	5.40
3000--14	S13		1	1	87.444FT.	C	9	1	0		84.00	7.50	24.50	3.00	84.00	7.30	5.40

BRACING LENGTH SPECIFICATIONS - LOAD FACTOR ANALYSIS

MEMBER ID	SYMM	SPAN	T/B	RANGE	RANGE LENGTH	SUPPORT COND. LEFT	RIGHT	SPACES	SPACING DISTANCE	STIFF SPACING
952576--16	S11	1	T	1	34.260FT.C			0	0.000FT.	0.000IN.
952576--16	S11	1	B	1	34.260FT.SP	SP		2	17.130FT.	0.000IN.
952576--16	S12	1	T	1	45.417FT.C			0	0.000FT.	0.000IN.
952576--16	S12	1	B	1	45.417FT.SP	SP		2	22.708FT.	0.000IN.
952576--16	S13	1	T	1	87.443FT.C			0	0.000FT.	0.000IN.
952576--16	S13	1	B	1	87.443FT.SP	SP		4	21.859FT.	0.000IN.

*** FINAL SUMMARY OF RATING RESULTS FOR --- STRUCTURE ID. 401-140 BARS RELEASE 5.4
INVENTORY AND/OR OPERATING ANALYSIS

STRUCTURE

D/P STR. ID-- 401-140

INPUT CODING--

DATE 7/ 9/97

BY MARK A KHAYISI

	INVENTORY		OPERATING	
	LIVE LOAD	RATING	LIVE LOAD	RATING
	HS20	HS 28.6	HS20	HS 47.6

STRUCTURE DESCRIPTION--

IDENTIFICATION	
TYPE	CSTEEL
YEAR OF CONSTR.	1984
LENGTH	169.00 FEET
ROADWAY WIDTH	41.00 FEET
NUMBER OF SPANS	3

LOCATION--

DISTRICT	
COUNTY	
CONSTR. RTE.	
CONSTR. SEC.	
CONSTR. STA.	0
KEY RTE.	
MARKED RTE.	

MICROFILM REEL NUMBERS--

DESIGN PLANS
COMPUTATIONS
CORRESPONDENCE

ANALYST REMARKS--

RICHLAND CTY., I-77(NBL) BRIDGE OVER S-1196(WINDSOR LK. BLVD)
DESIGN LOAD HS-20.
S11 (35' SPAN), S12 (46' SPAN), S13 (88' SPAN)
THE STRUCTURE NUMBER IS 40-1-0077-1-02-00

INVENTORY RATING SUMMARY

MEMBER I.D.	S12
SPAN	1
CRITICAL C.P. DIST.	22.7 FEET
LIVE LOAD DESIGNATION	HS20

	MOMENT (FOOT-KIPS)
MEMBER CAPACITY	912.0
DL EFFECT	269.6
CAPACITY FOR (LL+I)	632.2
ACTUAL (LL+I)	442.5

INVENTORY RATING HS 28.57

OPERATING RATING SUMMARY

MEMBER I.D.	S12
SPAN	1
CRITICAL C.P. DIST.	22.7 FEET
LIVE LOAD DESIGNATION	HS20

	MOMENT (FOOT-KIPS)
MEMBER CAPACITY	1519.9
DL EFFECT	269.6
CAPACITY FOR (LL+I)	1053.6
ACTUAL (LL+I)	442.5

OPERATING RATING HS 47.62

STRUCTURE I.D. = 401-141

STRUCTURE HEADER AND DESCRIPTION

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100-- 2    MARK A KWAYISI    EA/I/O/P =                FILE REQUESTS AND OUTPUT DATA EXCEPTIONS
                 TYPE =  CSTEEL   YEAR =   84  LEN =  169.00 FT.       WIDTH =   41.00 FT.       3 SPANS SP.LOAD =
                 INV.LL.TRK.= HS20  OP.LL.TRK.= HS20
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COMMENTS

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200-- 6    1  RICHLAND CTY., I-77(SBL) BRIDGE OVER S-1196(WINDSOR LK. BLVD)
300-- 6    2  DESIGN LOAD HS-20.
400-- 6    3  S11 (35' SPAN), S12 (46' SPAN), S13 (88' SPAN)
500-- 6    4  THE STRUCTURE NUMBER IS 40-1-0077-3-02-00
                                                  16
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SPECIFICATIONS GENERALLY APPLICABLE TO STRUCTURE MEMBERS

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                STRUCT          REINF.        COMPOSITE          PRESTRESSED                          IMPACT FACTOR          TIMBER
                STEEL           CONCRETE      STEEL/CONC          CONCRETE                           INV   OP POST SPEC

600-- 7         FY=     0.      FY =     0.   FY =     0.   LOSS =     0.  F"S =     0.   MAX =.00  .00  .00  .00     FY =     0.
                                 F"C=     0.   F"C=     0.   EG/ES= 0.000  F"". C=     0.   MIN =.00  .00  .00  .00     FV =     0.
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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 FACTOR OP.	POST	SPEC
700-- 8	S11	1		34.167	0.000	0.000	CSC	0.00		0.00		1.417			.00	.00	.00	.00
800-- 8	S12	1		45.167	0.000	0.000	CSC	0.00		0.00		1.417			.00	.00	.00	.00
900-- 8	S13	1		87.167	0.000	0.000	CSC	0.00		0.00		1.417			.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)	W(R)	LENGTH
1000--10	S11	1	0.000FT.	W	163.0	0.0	34.167FT.
1100--10	S11	1	0.000FT.	W	100.0	0.0	34.167FT.
1200--10	S11	1	17.083FT.	P	0.2	0.0	0.000FT.
1300--10	S12	1	0.000FT.	W	163.0	0.0	45.167FT.
1400--10	S12	1	0.000FT.	W	100.0	0.0	45.167FT.
1500--10	S12	1	22.583FT.	P	0.3	0.0	0.000FT.
1600--10	S13	1	0.000FT.	W	163.0	0.0	87.167FT.
1700--10	S13	1	0.000FT.	W	100.0	0.0	87.167FT.
1800--10	S13	1	21.792FT.	P	0.3	0.0	0.000FT.
1900--10	S13	1	43.583FT.	P	0.3	0.0	0.000FT.
2000--10	S13	1	65.375FT.	P	0.3	0.0	0.000FT.

SECTION RANGE SPECIFICATIONS

MEMBER ID	SYMM.	SPAN NO.	RANGE NO.	RANGE LENGTH	SECTION NO. LEFT	RIGHT	SEC. VAR.	HINGE CODE	HINGE 1 DIST.	HINGE 2 DIST.	HYBRID GIRDER CODE	FY	CODE	FY
2100--11	S11	1	1	34.167FT.	1	0			0.000FT.	0.000FT.		0.		0.
2200--11	S12	1	1	45.167FT.	1	0			0.000FT.	0.000FT.		0.		0.
2300--11	S13	1	1	87.167FT.	1	0			0.000FT.	0.000FT.		0.		0.

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

MEMBER ID	SEC.	A	I	S	COMPACT	SEC.	SAME	ADR			H	I	A	IX	DY	DX
	NON-DETAILED DESCRIPTION							DETAILED DESCRIPTION								
2400--12	S11	0	0.00	0.0	0.0	1	0	26.92	1	7.44	0.3	26.5	0.0			
952576--12	S11	0	0.00	0.0	0.0	1	0	0.00	2	12.46	671.5	13.5	0.0			
952576--12	S11	0	0.00	0.0	0.0	1	0	0.00	3	7.44	0.3	0.4	0.0			
952576--12	S12	0	0.00	0.0	0.0	1	0	33.09	1	9.84	0.6	32.7	0.0			
952576--12	S12	0	0.00	0.0	0.0	1	0	0.00	2	18.20	1493.5	16.5	0.0			
952576--12	S12	0	0.00	0.0	0.0	1	0	0.00	3	9.84	0.6	0.4	0.0			
952576--12	S13	0	0.00	0.0	0.0	1	0	37.15	1	20.75	2.7	36.5	0.0			
952576--12	S13	0	0.00	0.0	0.0	1	0	0.00	2	25.37	2355.5	19.2	0.0			
952576--12	S13	0	0.00	0.0	0.0	1	0	0.00	3	20.75	2.7	1.9	0.0			
952576--12	S13	0	0.00	0.0	0.0	1	0	0.00	4	18.75	2.4	0.6	0.0			

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

MEMBER ID	SYMN	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.
2800--14	S11	1	1	34.167FT.	C	9	1	0		93.50	8.00	18.00	2.50	93.50	7.80	5.65
2900--14	S12	1	1	45.167FT.	C	9	1	0		93.50	8.00	19.50	2.60	93.50	7.80	5.65
3000--14	S13	1	1	87.167FT.	C	9	1	0		93.50	8.00	24.50	3.00	93.50	7.80	5.65

BRACING LENGTH SPECIFICATIONS - LOAD FACTOR ANALYSIS

MEMBER ID	SYMM	SPAN	T/B	RANGE	RANGE LENGTH	SUPPORT COND. LEFT	RIGHT	SPACES	SPACING DISTANCE	STIFF SPACING
952576--16	S11	1	T	1	34.167FT.	C		0	0.000FT.	0.000IN.
952576--16	S11	1	B	1	34.167FT.	SP	SP	2	17.083FT.	0.000IN.
952576--16	S12	1	T	1	45.167FT.	C		0	0.000FT.	0.000IN.
952576--16	S12	1	B	1	45.167FT.	SP	SP	2	22.583FT.	0.000IN.
952576--16	S13	1	T	1	87.167FT.	C		0	0.000FT.	0.000IN.
952576--16	S13	1	B	1	87.167FT.	SP	SP	4	21.792FT.	0.000IN.

*** FINAL SUMMARY OF RATING RESULTS FOR --- STRUCTURE ID. 401-141 BARS RELEASE 5.4
INVENTORY AND/OR OPERATING ANALYSIS

STRUCTURE

D/P STR. ID-- 401-141

INPUT CODING--

DATE 7/ 9/97

BY MARK A KWAYISI

	INVENTORY		OPERATING	
	LIVE LOAD	RATING	LIVE LOAD	RATING
	HS20	HS 32.3	HS20	HS 53.9

STRUCTURE DESCRIPTION--

IDENTIFICATION	
TYPE	CSTEEL
YEAR OF CONSTR.	1984
LENGTH	169.00 FEET
ROADWAY WIDTH	41.00 FEET
NUMBER OF SPANS	3

LOCATION--

DISTRICT	
COUNTY	
CONSTR. RTE.	
CONSTR. SEC.	
CONSTR. STA.	0
KEY RTE.	
MARKED RTE.	

MICROFILM REEL NUMBERS--

DESIGN PLANS
COMPUTATIONS
CORRESPONDENCE

ANALYST REMARKS--

RICHLAND CTY., I-77(SBL) BRIDGE OVER S-1196(WINDSOR LK. BLVD)
DESIGN LOAD HS-20.
S11 (35' SPAN), S12 (46' SPAN), S13 (88' SPAN)
THE STRUCTURE NUMBER IS 40-1-0077-3-02-00

INVENTORY RATING SUMMARY

MEMBER I.D.	S12
SPAN	1
CRITICAL C.P. DIST.	22.6 FEET
LIVE LOAD DESIGNATION	HS20

	MOMENT (FOOT-KIPS)
MEMBER CAPACITY	1126.9
DL EFFECT	315.5
CAPACITY FOR (LL+I)	789.4
ACTUAL (LL+I)	488.6

INVENTORY RATING HS 32.31

OPERATING RATING SUMMARY

MEMBER I.D.	S12
SPAN	1
CRITICAL C.P. DIST.	22.6 FEET
LIVE LOAD DESIGNATION	HS20

	MOMENT (FOOT-KIPS)
MEMBER CAPACITY	1878.2
DL EFFECT	315.5
CAPACITY FOR (LL+I)	1315.6
ACTUAL (LL+I)	488.6

OPERATING RATING HS 53.85

STRUCTURE I.D. = 431-139

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

  100-- 2    MARK A KNAYISI    EA/I/O/P =                    FILE REQUESTS AND OUTPUT DATA EXCEPTIONS
                 TYPE = CSTEEL   YEAR =   84  LEN = 360.00 FT.      WIDTH =  41.00 FT.    11 SPANS SP.LOAD =
                 INV.LL.TRK.= HS20  OP.LL.TRK.= HS20


*****************************************************************************************************************************
*                                                      COMMENTS                                                             *
*****************************************************************************************************************************

  200-- 6    1  RICHLAND CTY., I-77(NBL) BRIDGE OVER WINDSOR LAKE(JACKSON CRK.)
  300-- 6    2  DESIGN LOAD HS-20.
  400-- 6    3  BRIDGE HAS; FOUR 30-FT TWO SPAN CONTINOUS SLABS, TWO 30-FT
  500-- 6    4  SLABS AND ONE 60-FT COMPOSITE STEEL GIRDER.
  600-- 6    5  THE STRUCTURE NUMBER IS 4-21-0077-14-03-00
                                          17

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

                STRUCT          REINF.          COMPOSITE          PRESTRESSED                    IMPACT FACTOR          TIMBER
                STEEL           CONCRETE        STEEL/CONC         CONCRETE                     INV   UP POST SPEC

  700-- 7       FY=     0.      FY =    0.      FY =    0.      LOSS =    0.  F"S =    0.    MAX =.30  .30  .30  .00    FY =    0.
                                F"C=    0.      F"C=    0.      EG/ES= 0.000  F"". C=    0.    MIN =.27  .27  .27  .00    FV =    0.


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

        MEMBER SPANS  STIFF. SPAN 1      SPAN 2      SPAN 3   MATL   ALLOWABLE STRESS   LL DIST.  END  THRU  MAX  IMPACT  FACTOR
          ID        SYMM CODE (SPAN 4)  (SPAN 5)    (SPAN 6)  CODE    FY   FB FC* FC**  FACTOR  FL.BM DECK  INV  UP.  POST  SPEC

  800-- 8   S 1   2 X      29.500      0.000       0.000     RC     0.00      0.00     0.173                .30  .30  .30   .00
  900-- 8   S 2   1        29.000      0.000       0.000     RC     0.00      0.00     0.174                .30  .30  .30   .00
 1000-- 8   S 3   1        58.667      0.000       0.000    CSC     0.00      0.00     1.162                .27  .27  .27   .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)	W(R)	LENGTH
1100--10	S 3	1	6.000FT.	W	143.0	0.0	58.667FT.
1200--10	S 3	1	19.556FT.	P	2.3	0.0	0.000FT.
1300--10	S 3	1	39.111FT.	P	2.3	0.0	0.000FT.

SECTION RANGE SPECIFICATIONS

MEMBER ID	SYMM.	SPAN NO.	RANGE NO.	RANGE LENGTH	SECTION NO. LEFT	RIGHT	SEC. VAR.	HINGE CODE	HINGE 1 DIST.	HINGE 2 DIST.	HYBRID GIRDER CODE	FY	CODE	FY
1400--11	S 1	1	1	19.500FT.	1	2			0.000FT.	0.000FT.		0.		0.
1500--11	S 1	1	2	19.000FT.	2	3			0.000FT.	0.000FT.		0.		0.
1600--11	S 2	1	1	29.000FT.	1	2			0.000FT.	0.000FT.		0.		0.
1700--11	S 3	1	1	58.667FT.	1	2			0.000FT.	0.000FT.		0.		0.

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

MEMBER ID	SEC.	A	I	S	COMPACT	SEC.	SAME ADR		NON-DETAILED DESCRIPTION		DETAILED DESCRIPTION				
											H	I	A	IX	DY	DX
1000--12	S 3	0	0.00	0.0	0.0	1	0		30.44	1	15.96	1.5	29.9	0.0		
952576--12	S 3	0	0.00	0.0	0.0	1	0		0.00	2	18.54	1250.5	15.2	0.0		
952576--12	S 3	0	0.00	0.0	0.0	1	0		0.00	3	15.96	1.5	6.5	0.0		

SECTION PROPERTIES (REINFORCED CONCRETE) - GIRDERS, STRINGERS, FLOOR BEAMS

MEMBER ID	SECT. NO.	SAME AS	ADR	BFL	H	A	S	B*	T	I	R	AS	O	COMP CODE
1900--13	S 0	1	0	0	19.00	0.00	0.00	12.00	0.00	0		1.90	17.38	
2000--13	S 1	2	0	0	19.00	0.00	0.00	12.00	0.00	0		2.20	12.67	
2100--13	S 2	1	0	0	20.00	0.00	0.00	12.00	0.00	0		2.50	18.38	

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.
2200--14	S 3		58.667FT.	0	0	0	1	78.	7.50	28.00	2.00	79.00	7.50	5.50

BRACING LENGTH SPECIFICATIONS - LOAD FACTOR ANALYSIS

MEMBER ID	SPAN SYMM	RANGE T/B	RANGE LENGTH	SUPPORT COND. LEFT	SUPPORT COND. RIGHT	SPACES	SPACING DISTANCE	STIFF SPACING
952576--10	5 3	1 T 1	58.657FT.C			0	0.000FT.	0.000IN.
952576--16	5 3	1 B 1	58.657FT.SP	SP		3	19.557FT.	0.000IN.

*** FINAL SUMMARY OF RATING RESULTS FOR --- STRUCTURE ID. 401-139 BARS RELEASE 5.4
INVENTORY AND/OR OPERATING ANALYSIS

STRUCTURE

INPUT CODING-- D/P STR. ID-- 401-139

DATE 1/ 5/97

BY MARK A. KHAYIST

	INVENTORY		OPERATING	
	LIVE LOAD	RATING	LIVE LOAD	RATING
	HS20	HS 28.0	HS20	HS 46.7

STRUCTURE DESCRIPTION--

IDENTIFICATION
TYPE (STEEL
YEAR OF CONSTR. 1984
LENGTH 300.00 FEET
ROADWAY WIDTH 41.66 FEET
NUMBER OF SPANS 11

LOCATION--

DISTRICT
COUNTY
CONSTR. RTE.
CONSTR. SEC.
CONSTR. STA. 0
KEY RTE.
MARKED RTE.

MICROFILM REEL NUMBERS--

DESIGN PLANS
COMPUTATIONS
CORRESPONDENCE

ANALYST REMARKS--

RICHLAND CTY., I-77(NBL) BRIDGE OVER WINDSOR LAKE(JACKSON CRK.)
DESIGN LOAD HS-20.
BRIDGE HAS FOUR 60-FT TWO SPAN CONTINUOUS SLABS, TWO 30-FT
SLABS AND ONE 60-FT COMPOSITE STEEL GIRDER.
THE STRUCTURE NUMBER IS 40-0-0077-1-03-00

INVENTORY RATING SUMMARY

MEMBER I.D.	S 1
SPAN	1
CRITICAL C.P. DIST.	11.8 FEET
LIVE LOAD DESIGNATION	HS20

	MOMENT (FOOT-KIPS)
MEMBER CAPACITY	92.0
DL EFFECT	14.5
CAPACITY FOR (LL+I)	33.8
ACTUAL (LL+I)	24.1

INVENTORY RATING HS 28.01

OPERATING RATING SUMMARY

MEMBER I.D.	S 1
SPAN	1
CRITICAL C.P. DIST.	11.8 FEET
LIVE LOAD DESIGNATION	HS20

	MOMENT (FOOT-KIPS)
MEMBER CAPACITY	92.0
DL EFFECT	14.5
CAPACITY FOR (LL+I)	56.3
ACTUAL (LL+I)	24.1

OPERATING RATING HS 46.68

STRUCTURE I.D. = 401-138

STRUCTURE HEADER AND DESCRIPTION

```
100-- 2    MARK A KWAYISI     EA/I/O/P =                    FILE REQUESTS AND OUTPUT DATA EXCEPTIONS
                 TYPE =     SLAB    YEAR =    84   LEN =  360.00 FT.        WIDTH =    41.00 FT.        12 SPANS SP.LOAD =
                 INV.LL.TRK.= HS20   UP.LL.TRK.= HS20
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COMMENTS

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200-- 6    1  RICHLAND CTY., I-77(SBL) BRIDGE OVER WINDSOR LAKE(JACKSON CRK.)
300-- 6    2  DESIGN LOAD HS-20.
400-- 6    3  BRIDGE HAS; FIVE 60-FT TWO SPAN CONTINOUS SLABS AND TWO 30-FT
500-- 6    4  SLABS
600-- 6    5  THE STRUCTURE NUMBER IS 40-1-0077-3-~~03~~-00
                                                  17
```

SPECIFICATIONS GENERALLY APPLICABLE TO STRUCTURE MEMBERS

```
                STRUCT          REINF.        COMPOSITE          PRESTRESSED                          IMPACT FACTOR          TIMBER
                STEEL           CONCRETE      STEEL/CONC         CONCRETE                             INV   UP POST SPEC

700-- 7         FY=     0.      FY =     0.   FY =     0.        LOSS =     0.  F"S =     0.    MAX =.30  .30  .30  .00     FY =     0.
                                 F"C=     0.   F"C=     0.        EG/ES= 0.000   F"". C=     0.    MIN =.30  .30  .30  .00     FV =     0.
```

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

```
        MEMBER SPANS  STIFF. SPAN 1      SPAN 2      SPAN 3   MATL   ALLOWABLE STRESS   LL DIST.  END  THRU  MAX  IMPACT  FACTOR
          ID          SYMM CODE (SPAN 4) (SPAN 5)    (SPAN 6) CODE   FY    FB  FC* FC**  FACTOR   FL.BM DECK  INV  OP.  POST  SPEC

800-- 8   S 1    2 X        29.500      0.000       0.000    RC     0.00        0.00     0.173                .30  .30  .30   .00
900-- 8   S 2    1          29.000      0.000       0.000    RC     0.00        0.00     0.174                .30  .30  .30   .00
```

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	FY	CODE	FY
1000--11	S 1		1	1	19.500FT.	1	0			0.000FT.	0.000FT.		0.		0.
1100--11	S 1		1	2	10.000FT.	2	0			0.000FT.	0.000FT.		0.		0.
1200--11	S 2		1	1	29.000FT.	1	0			0.000FT.	0.000FT.		0.		0.

****
* SECTION PROPERTIES (REINFORCED CONCRETE) - GIRDERS, STRINGERS, FLOOR BEAMS *
****

MEMBER ID	SECT. NO.	SAME AS	ADR	DFL	H	A	B	D*	T	I R	AS	D	COMP CODE
1300--13	S 1	1	0		19.00	0.00	0.00	12.00	0.00	0	1.90	17.38	
1400--13	S 1	2	0		19.00	0.00	0.00	12.00	0.00	0	2.20	2.67	
1500--13	S 2	1	0		20.00	0.00	0.00	12.00	0.00	0	2.50	18.38	

SUMMARY OF RATING CALCULATIONS-------STRUCTURE MEMBER S 1 BARS RELEASE 5.4
INVENTORY AND/OR OPERATING ANALYSIS

INPUT CODING --

DATE 2/28/95
BY MARK A KWAYISI

STRUCTURE

D/P STR. I.D.-- 401-138

	INVENTORY		OPERATING	
	LIVE LOAD	RATING	LIVE LOAD	RATING
	HS20	HS 28.01	HS20	HS 46.68

STRUCTURE DESCRIPTION --

IDENTIFICATION
TYPE SLAB
YEAR OF CONSTR. 1984
LENGTH 360.00 FEET
ROADWAY WIDTH 41.00 FEET
NUMBER OF SPANS 12

LOCATION --

DISTRICT
COUNTY
CONSTR. RTE.
CONSTR. SEC.
CONSTR. STA. 0
KEY RTE.
MARKED RTE.

MICROFILM REEL NUMBERS --

DESIGN PLANS
COMPUTATIONS
CORRESPONDENCE

ANALYST REMARKS --

RICHLAND CTY., I-77(SBL) BRIDGE OVER WINDSOR LAKE(JACKSON CRK.)
DESIGN LOAD HS-20.
BRIDGE HAS: FIVE 60-FT TWO SPAN CONTINOUS SLABS AND TWO 30-FT SLABS
THE STRUCTURE NUMBER IS 40-1-0077-3-03-00

INVENTORY RATING SUMMARY --

MEMBER ID. S 1
SPAN 1
CRITICAL C.P. DIST. 11.8 FEET
LIVE LOAD DESIGNATION HS20

	MOMENT (FT. KIPS)
MEMBER CAPACITY	92.0
DL EFFECT	14.5
CAPACITY FOR (LL+I)	33.8
ACTUAL (LL+I)	24.1
INVENTORY RATING	HS 28.01

OPERATING RATING SUMMARY --

MEMBER ID. S 1
SPAN 1
CRITICAL C.P. DIST. 11.8 FEET
LIVE LOAD DESIGNATION HS20

	MOMENT (FT. KIPS)
MEMBER CAPACITY	92.0
DL EFFECT	14.5
CAPACITY FOR (LL+I)	56.3
ACTUAL (LL+I)	24.1
OPERATING RATING	HS 46.68

SUMMARY OF RATING CALCULATIONS------STRUCTURE MEMBER S 2 BARS RELEASE 5.4
INVENTORY AND/OR OPERATING ANALYSIS

INPUT CODING -- STRUCTURE D/P STR. I.D.-- 401-138

DATE 2/28/95
BY MARK A KWAYISI

INVENTORY		OPERATING	
LIVE LOAD	RATING	LIVE LOAD	RATING
HS20	HS 30.84	HS20	HS 51.39

STRUCTURE DESCRIPTION --

IDENTIFICATION
TYPE SLAB
YEAR OF CONSTR. 1984
LENGTH 360.00 FEET
ROADWAY WIDTH 41.00 FEET
NUMBER OF SPANS 12

LOCATION --

DISTRICT
COUNTY
CONSTR. RTE.
CONSTR. SEC.
CONSTR. STA. 0
KEY RTE.
MARKED RTE.

MICROFILM REEL NUMBERS --

DESIGN PLANS
COMPUTATIONS
CORRESPONDENCE

ANALYST REMARKS --

RICHLAND CTY., I-77(SBL) BRIDGE OVER WINDSOR LAKE(JACKSON CRK.)
DESIGN LOAD HS-20.
BRIDGE HAS; FIVE 60-FT TWO SPAN CONTINOUS SLABS AND TWO 30-FT SLABS
THE STRUCTURE NUMBER IS 40-1-0077-3-03-00

INVENTORY RATING SUMMARY --

MEMBER ID. S 2
SPAN 1
CRITICAL C.P. DIST. 14.5 FEET
LIVE LOAD DESIGNATION HS20

	MOMENT (FT. KIPS)
MEMBER CAPACITY	125.6
DL EFFECT	26.3
CAPACITY FOR (LL+I)	42.2
ACTUAL (LL+I)	27.4
INVENTORY RATING	HS 30.84

OPERATING RATING SUMMARY --

MEMBER ID. S 2
SPAN 1
CRITICAL C.P. DIST. 14.5 FEET
LIVE LOAD DESIGNATION HS20

	MOMENT (FT. KIPS)
MEMBER CAPACITY	125.6
DL EFFECT	26.3
CAPACITY FOR (LL+I)	70.3
ACTUAL (LL+I)	27.4
OPERATING RATING	HS 51.39

*** FINAL SUMMARY OF RATING RESULTS FOR --- STRUCTURE ID. 401-138
INVENTORY AND/OR OPERATING ANALYSIS

BARS RELEASE 5.4

STRUCTURE

D/P STR. ID-- 401-138

INPUT CODING--

DATE 2/28/95

BY MARK A KWAYISI

	INVENTORY		OPERATING	
	LIVE LOAD	RATING	LIVE LOAD	RATING
	HS20	HS 28.0	HS20	HS 46.7

STRUCTURE DESCRIPTION--

IDENTIFICATION	
TYPE	SLAB
YEAR OF CONSTR.	1984
LENGTH	360.00 FEET
ROADWAY WIDTH	41.00 FEET
NUMBER OF SPANS	12

LOCATION--

DISTRICT	
COUNTY	
CONSTR. RTE.	
CONSTR. SEC.	
CONSTR. STA.	0
KEY RTE.	
MARKED RTE.	

MICROFILM REEL NUMBERS--

DESIGN PLANS
COMPUTATIONS
CORRESPONDENCE

ANALYST REMARKS--

RICHLAND CTY., I-77(SBL) BRIDGE OVER WINDSOR LAKE(JACKSON CRK.)
DESIGN LOAD HS-20.
BRIDGE HAS: FIVE 60-FT TWO SPAN CONTINOUS SLABS AND TWO 30-FT SLABS
THE STRUCTURE NUMBER IS 40-1-0077-3-03-00

INVENTORY RATING SUMMARY

MEMBER I.D.	S 1
SPAN	1
CRITICAL C.P. DIST.	11.8 FEET
LIVE LOAD DESIGNATION	HS20

	MOMENT (FOOT-KIPS)
MEMBER CAPACITY	92.0
DL EFFECT	14.5
CAPACITY FOR (LL+I)	33.8
ACTUAL (LL+I)	24.1

INVENTORY RATING HS 28.01

OPERATING RATING SUMMARY

MEMBER I.D.	S 1
SPAN	1
CRITICAL C.P. DIST.	11.8 FEET
LIVE LOAD DESIGNATION	HS20

	MOMENT (FOOT-KIPS)
MEMBER CAPACITY	92.0
DL EFFECT	14.5
CAPACITY FOR (LL+I)	56.3
ACTUAL (LL+I)	24.1

OPERATING RATING HS 46.68