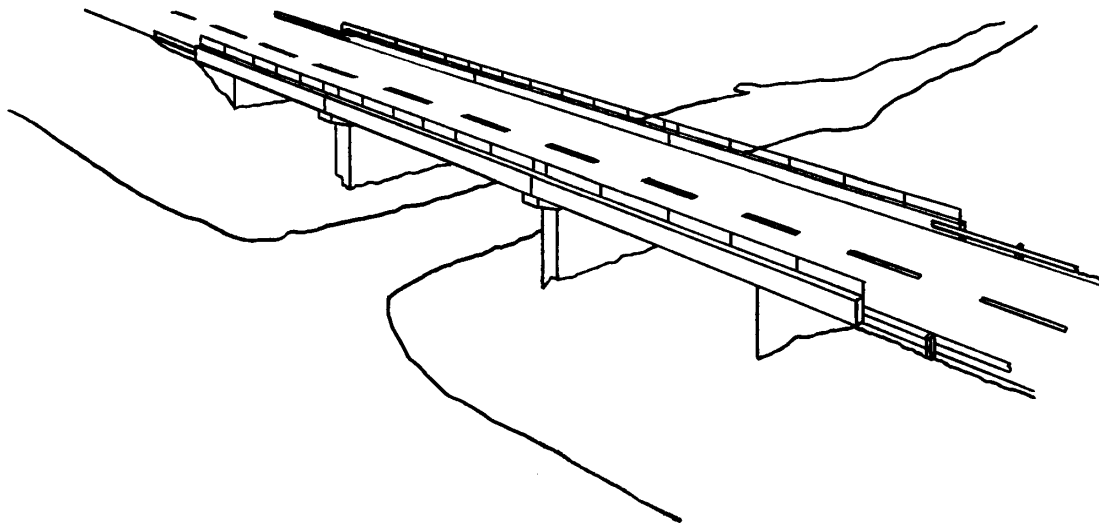




BRIDGE INSPECTION REPORT

INSPECTION TYPE: ROUTINE

OLD U.S. ROUTE 90 BRIDGE

PARK ENTRANCE ROAD OVER OLD U.S. ROUTE 90

GULF ISLANDS NATIONAL SEASHORE

STRUCTURE NO. 5320-002P

DATE OF INSPECTION: 3/26/03



U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
FEDERAL LANDS HIGHWAY
BRIDGE INSPECTION AND MANAGEMENT PROGRAM

IDENTIFICATION PHOTOGRAPHS

OLD U.S. ROUTE 90 BRIDGE

STRUCTURE NO. 5320-002P

DATE OF INSPECTION: 03/26/03

PARK ENTRANCE ROAD OVER OLD U.S. ROUTE 90
GULF ISLANDS NATIONAL SEASHORE



LOOKING SOUTH TOWARD VISITOR CENTER



EAST SIDE

STRUCTURE SUMMARY
OLD U.S. ROUTE 90 BRIDGE

STRUCTURE NO. 5320-002P
DATE OF INSPECTION: 3/26/03

BRIDGE IDENTIFICATION AND DESCRIPTION

MAIN SPAN MATERIAL: P/S CONCRETE CONTINUOUS	NO. OF MAIN SPANS: 3
MAIN SPAN TYPE: STRINGER/MULTI-BEAM or GIRDER	NO. OF APPR. SPANS: 0
# OF BEAMS, MAIN SPAN:.. 5	STRUCT. TOTAL LENGTH:.. 139.0 FT (42.4 M)
APPR. SPAN MATERIAL: N/A	MAX. SPAN LENGTH: 65.0 FT (19.8 M)
APPR. SPAN TYPE: N/A	DECK WIDTH: 43.9 FT (13.4 M)
DECK TYPE: CONCRETE CAST-IN-PLACE	CURB TO CURB WIDTH: 40.0 FT (12.2 M)
WEARING SURFACE: MONOLITHIC CONCRETE	SKEW ANGLE: 0°
ABUT. #1 FOUNDATION: SPREAD FOOTING ON PILES	YEAR CONSTRUCTED: 1982
ABUT. #2 FOUNDATION: SPREAD FOOTING ON PILES	YEAR RECONSTRUCTED:.. N/A
PIER FOUNDATION: SPREAD FOOTING ON PILES	PROJ./PLAN REF. NO.: 635/41.041A / NONE
WALL/COLUMN MAT'L: CONCRETE	FRACTURE CRITICAL? NO
ADDITIONAL DATA:	

LOCATION

GULF ISLANDS NATIONAL SEASHORE	LOCATION: 0.8 MILES FROM U.S. ROUTE 9.
STATE: MISSISSIPPI	
COUNTY: JACKSON	
FACILITY CARRIED: PARK ENTRANCE ROAD	
FEATURE INTERSECTED: .. OLD U.S. ROUTE 90	
MILE POINT..... 0.80 (KM POINT 1.29)	

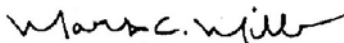
STRUCTURE EVALUATION SUMMARY

This structure is in good condition overall and requires only minor repairs. There have been no significant changes in the structural condition since the last inspection. However, the deck expansion joint seals are undersized for the joint openings, allowing water to leak through the joints and onto the beam ends and substructure below. Appropriately sized seals should be installed to prevent further leakage and potential deterioration.

An asphalt leveling course has been placed at each approach to correct settlement. The leveling courses are currently providing a reasonably smooth transition to the structure and are considered satisfactory at this time. However, the approaches will continue to be monitored for settlement and pavement distress.

The concrete slope paving has settled considerably and has vegetation growing from the joints and weep holes. The vegetation should be removed. The settlement will continue to be monitored.

With corrective action and regular maintenance, a useful life of approximately 50-55 years can be expected for this structure under current loading conditions.

INSPECTION TEAM LEADER: T. KIMBALL	INSPECTION TEAM: T. KIMBALL, S. LESLIE
OFFICE TEAM LEADER: MARCUS MILLER STERLING, VA (703) 404-6252	PROGRAM COORDINATOR: JOHN THIEL STERLING, VA (703) 404-6251
REPORT REVIEW: 	M. MILLER
REPORT APPROVAL: 	JOHN THIEL DATE: 07/22/03

RECOMMENDATIONS AND ESTIMATED COSTS

STRUCTURE NO. 5320-002P

DATE OF INSPECTION: 3/26/03

226 PRIORITY OF IMPROVEMENT

D

A (Critical) - Structure is closed, in imminent danger of collapse, presents a critical safety hazard.
 B (Major) - Structure is critically deficient or presents a safety hazard, but can remain in service at reduced loads with frequent inspections.
 C (Moderate) - Structure is deficient, functionally obsolete, or requires substantial repairs to prevent a critical deficiency or unsafe condition.
 D (Minor) - Structure is generally in good condition. Preventative maintenance may be required.
 E (Special) - Structure is under construction or reconstruction.

REC. NO.	ITEM NO.	MAINTENANCE RECOMMENDATIONS (GENERALLY NOT FLHP ELIGIBLE)	PRELIMINARY COST ESTIMATES	
			IN HOUSE	CONTRACT
1	58.2	REPLACE EXPANSION JOINT COMPRESSION SEALS WITH LARGER COMPRESSION SEALS (SEE REMARKS BELOW).	\$5,000	\$10,000
2	58.7, 60.7,11	REMOVE DEBRIS FROM CURBLINES AND INLETS. REMOVE VEGETATION FROM SLOPE PAVING WEEP HOLES AND JOINTS.	\$2,000	\$4,000
3	222.4	SEAL TRANSVERSE CRACKS IN APPROACH ASPHALT LEVELING COURSES WITH AN APPROVED SEALER.	\$1,000	\$2,000
TOTAL MAINTENANCE:			\$8,000	\$16,000

REC. NO.	ITEM NO.	REHABILITATION/RECONSTRUCTION NEEDED WITHIN 5 YEARS	PRELIMINARY COST ESTIMATES			
			BRIDGE WORK ONLY		TOTAL CONTRACT	
			REHAB.	CONSTR.	REHAB.	CONSTR.
SUBTOTALS:			\$0	\$0	\$0	\$0
REC. NO.	ITEM NO.	NEEDED WITHIN 10 YEARS	PRELIMINARY COST ESTIMATES			
			BRIDGE WORK ONLY		TOTAL CONTRACT	
			REHAB.	CONSTR.	REHAB.	CONSTR.
SUBTOTALS:			\$0	\$0	\$0	\$0

REMARKS: Cost estimates are approximate and are for preliminary planning purposes only; they should not be used as a complete or final engineer's estimate. Maintenance cost estimates assume that the recommended actions will be combined with similar work being performed on other structures.

New compression seals must be large enough to completely fill expansion joint gaps under low temperatures.

FIELD INSPECTION REPORT

STRUCTURE NO. 5320-002P

DATE OF INSPECTION: 3/26/03

CONDITION RATING CODES FOR ITEMS 58 - 62, 222, 223

N NOT APPLICABLE	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.
9 EXCELLENT CONDITION	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 structure until corrective action can be taken.
8 VERY GOOD CONDITION - no problems noted.	1 "IMMINENT" FAILURE CONDITION - major deterioration or section loss present in critical structural components or obvious vertical or horizontal movement affecting structure stability. Structure is closed to traffic but corrective action may return structure to light service.
7 GOOD CONDITION - some minor problems.	0 FAILED CONDITION - out of service; beyond corrective action.
6 SATISFACTORY CONDITION - structural elements show some minor deterioration.	
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.	

CONDITION RATING CODE EQUIVALENTS FOR SUB-ELEMENTS

G = GOOD (CODES 7 - 9) F = FAIR (CODES 5 - 6) P = POOR (CODES 0 - 4)

58. DECK		7	ITEM REFERENCE AND REMARKS	
1. DECK SLAB	G		58.1	MINOR TRANSVERSE AND DIAGONAL CRACKING OF DECK IN A FEW LOCATIONS; LIGHT EFFLORESCENCE FROM CRACKS ON DECK UNDERSIDE. MINOR STAINING OF DECK UNDERSIDE AT JOINTS.
2. EXPANSION JOINTS	F		58.2	MODERATE ACCUMULATION OF SOIL AND GRAVEL IN DECK JOINTS, MAINLY AT SHOULDER AREAS. COMPRESSION SEALS IN DECK JOINTS ARE UNDERSIZED AND DO NOT COMPLETELY FILL JOINTS; THIS ALLOWS LEAKAGE THROUGH JOINTS ONTO BRIDGE ELEMENTS BELOW (SEE 60.1,3,15).
3. WEARING SURFACE	N		58.4	MINOR RAMPING EFFECT AT ENDS OF LEVELING COURSES PLACED TO CORRECT APPROACH SETTLEMENT. SEE 222.4,6.
4. RIDEABILITY	F		58.6	MODERATE CHECKING AND SPLINTERING OF TIMBER RAILS AND POSTS.
5. CURBS, SIDEWALKS, AND MEDIAN	G		58.7	MINOR ACCUMULATION OF STORM DEBRIS IN CURBLINES; MODERATE IN INLETS AT APPROACHES.
6. PARAPETS AND/OR RAILINGS	F		59.1	BENT ANCHOR BOLT ON WEST BEARING OF EACH ABUTMENT. ELASTOMERIC BEARING PADS IN GOOD CONDITION.
7. DRAINS AND DRAINAGE	F		59.2, 60.15	MINOR STAINING OF ENDS OF EXTERIOR BEAMS AND PIER CAPS AT JOINTS. MINOR SPALL AT NORTH END OF BEAM #1 (WEST EXTERIOR BEAM) AT NORTH ABUTMENT. MINOR SPALL AT END OF BEAM #5 (EAST EXTERIOR BEAM) OVER NORTH PIER.
8. UTILITIES	N		60.1,3,4,15	MINOR CRACKING AND EFFLORESCENCE ON SOUTH ABUTMENT BREASTWALL AT PEDESTAL FOR BEAM #4. MODERATE TO HEAVY STAINING OF ABUTMENT CORNERS AND PIER CAP ENDS DUE TO RUNOFF THROUGH DECK JOINTS.
9. DEFLECTION AND/OR VIBRATION	G		60.7,11	MODERATE SETTLEMENT OF SLOPE PAVING BLOCKS. MODERATE ACCUMULATION OF DEBRIS AND VEGETATION GROWTH ALONG SIDES OF SLOPE PAVING; MINOR VEGETATION GROWTH IN SLOPE PAVING WEEP HOLES AND JOINTS.
10. OTHER	N			
59. SUPERSTRUCTURE		7		
1. BEARING DEVICES	G			
2. GIRDERS OR BEAMS	G			
3. ARCH(ES) OR SLAB(S)	N			
4. FLOOR BEAMS AND STRINGERS	N			
5. TRUSSES	N			
6. DIAPHRAGMS AND BRACING	G			
7. PAINT	N			
8. FASCIA(E)	N			
9. DEFLECTION AND/OR VIBRATION	G			
10. ALIGNMENT	G			
11. OTHER	N			
60. SUBSTRUCTURE		7		
ABUTMENTS				
1. BREASTWALLS OR COLUMNS	G			
2. PILE BENTS	N			
3. CAPS AND/OR BEARING SEATS	G			
4. BACKWALLS AND/OR BULKHEADS	G			
5. FOUNDATIONS	N			
6. WINGWALLS	G			
7. WEEP HOLES	P			
8. EXPANSION JOINTS	N			
9. EROSION AND/OR SCOUR	G			
10. SETTLEMENT OR DEFLECTION	G			
11. SLOPE PROTECTION	F			
12. OTHER	N			
PIER(S)				
13. WALL(S) AND/OR COLUMN(S)	G			
14. PILE BENT(S)	N			
15. CAPS AND/OR BEARING SEATS	G			
16. FOUNDATIONS	N			
17. EROSION AND/OR SCOUR	G			
18. SETTLEMENT OR DEFLECTION	G			
19. OTHER	N			

FIELD INSPECTION REPORT

STRUCTURE NO. 5320-002P

DATE OF INSPECTION: 3/26/03

ITEM REFERENCE AND REMARKS

61.	CHANNEL	N
1. ALIGNMENT		
2. EROSION AND/OR SCOUR		
3. CHANNEL PROTECTION		
4. WATERWAY OBSTRUCTIONS		
5. OTHER		
6. ADEQUACY OF OPENING:		
7. NORMAL VELOCITY:		
8. AVG. CLEAR OPENING:		
9. STREAM BED COMPOSITION:		

222. APPROACHES	6
1. APPROACH SLABS	N
2. RELIEF JOINTS	N
3. APPROACH GUARDRAIL	F
4. SURFACING	F
5. EROSION	G
6. SETTLEMENT	G
7. SIGNS	N
8. ALIGNMENT	F
9. OTHER (UNDERPASS ROADWAY)	F

223. RETAINING WALL	N
1. WALL	
2. WEEP HOLES	
3. FOOTINGS	
4. EROSION AND/OR SCOUR	
5. SETTLEMENT OR DEFLECTION	
6. OTHER	

36. TRAFFIC SAFETY FEATURES	
A. BRIDGE RAILING	1
B. TRANSITIONS	1
C. APPROACH GUARDRAIL	1
D. APPROACH GUARDRAIL ENDS	1

TRAFFIC SAFETY RATING CODES	
0 -	Does not meet standards or a safety feature is required and none is provided.
1 -	Meets currently acceptable standards.
N -	Not applicable or a safety feature is not required.

[illegible]

STRUCTURE LOAD RATING

STRUCTURE NO. 5320-002P

TRUCK TYPE	INVENTORY RATING (NORMAL TRAFFIC)		OPERATING RATING (MAXIMUM LOAD)	
	TONS	METRIC TONS	TONS	METRIC TONS
H	28	25	47	43
HS	36	43	60	54
TYPE 3	33	29	46	42
TYPE 3S2	45	40	62	56
TYPE 3-3	55	50	75	68

DESIGN LOADING: HS20 (MS18)

X ORIGINAL LOAD CAPACITY REMAINS

ORIGINAL LOAD CAPACITY REDUCED

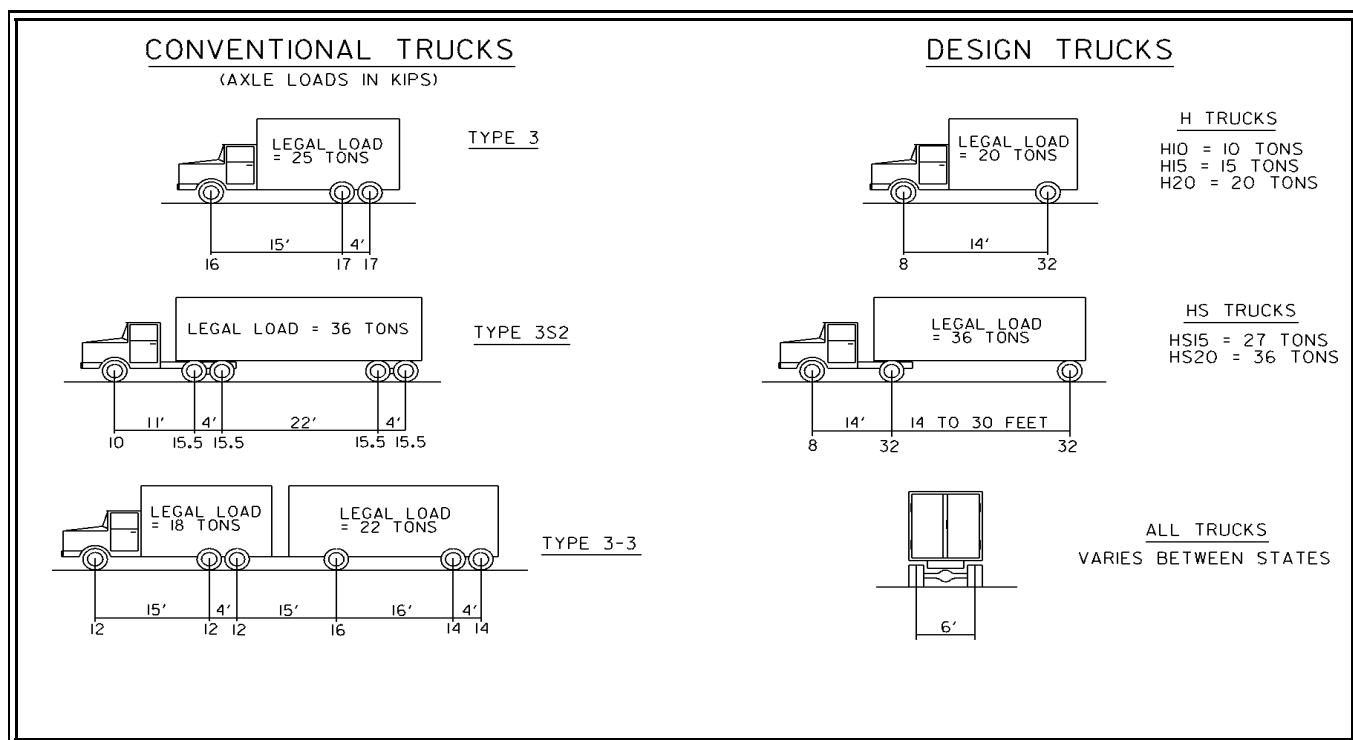
ORIGINAL LOAD RATING CALCULATION APPLICABLE

ORIGINAL LOAD RATING CALCULATION REVISED

DATE OF LOAD RATING CALCULATION:

LOAD RATING CONTROLLED BY:

REMARKS: RATING IS BASED ON DESIGN LOAD OF STRUCTURE.



STRUCTURE INVENTORY AND APPRAISAL

STRUCTURE NO. 5320-002P

STRUCTURE IDENTIFICATION

(201) PARK: GULF ISLANDS NATIONAL SEASHORE	(1) STATE: 284-MISSISSIPPI (MS)
(202) STRUCT. NAME: OLD U.S. ROUTE 90 BRIDGE	(2) STATE HWY. AGENCY DIST.: .. 0
(203) STRUCTURE KIND: 1-BRIDGE	(3) COUNTY CODE: 059-JACKSON
(204) STRUCTURE NO.: 5320-002P	(4) CITY/PLACE CODE: 0-
(205) NPS REGION: 4-SOUTHEAST	(5) INVENTORY ROUTE: 178000000
(206) ROUTE CODE NO.: 0	(6) FEATURES INTERSECTED: OLD U.S. ROUTE 90
(207) ROAD SECTION NO.: ... 002P	(7) FACILITY CARRIED:..... PARK ENTRANCE ROAD
(208) NPS ROAD CLASS.: 1	(8) STATE STRUCTURE NO.: 53200002P0000000
(209) WITHIN NPS BNDRY?.. Y	(9) LOCATION: 0. 8 MILES FROM U.S. ROUT
(210) OPERATING UNIT: PARK	(10) INV. RTE. - MIN. VERT. CLR.: 9999
(211) NPS PROJECT NO(S).... 635/41.041A	(11) MILE POINT: 0.80 (KM POINT 1.29)
(212) DRAWING NO(S):..... NONE	(27) YEAR BUILT: 1982 (106) YEAR REBUILT: 0
(21) MAINTAINED BY: 66-NATIONAL PARK SERVICE	(20) TOLL: 3-FREE ROAD
(22) OWNER: 66-NATIONAL PARK SERVICE	(37) HISTORICAL DESIGNATION:... 5-NOT ELIGIBLE

STRUCTURE DESCRIPTION, FOUNDATION, AND DECK TYPE

(43) MAIN STRUCT. TYPE: 602-P/S CONCRETE CONTINUOUS-STRIN	(44) APPROACH STRUCT. TYPE: .. 000-OTHER-OTHER
(45) NO. OF MAIN SPANS: 3	(46) NO. OF APPROACH SPANS: 0
(48) MAX. SPAN LENGTH: 65.0 FT (19.8 M)	(108) WEAR SURF/PROTECT SYSTEM
(49) STRUCTURE LENGTH: .. 139.0 FT (42.4 M)	A)TYPE WEARING SURFACE: 1-MONOLITHIC CONCRETE
(216) ABUTMENT FDNS.: 33-#1: SPREAD FOOTING ON PILES #2: SP	B)TYPE MEMBRANE: 0-NONE
(217) PIER FDNS.: 33-#1: SPREAD FOOTING ON PILES #2: SP	C)TYPE PROTECTION: 0-NONE
(107) DECK TYPE: 1-CONCRETE CAST-IN-PLACE	(218) IS SALT USED? N

LOAD RATING AND POSTING

(31) DESIGN LOAD: MS18 (HS20)	(41) LOAD RESTRICTION: A-OPEN, NO RESTRICTION
(66) INVENTORY RATING: 36.0 TONS (43.0 METRIC TONS)	(70) BRIDGE POSTING: 5-NO POSTING REQUIRED
(64) OPERATING RATING: 60.0 TONS (54.0 METRIC TONS)	

GEOMETRY, TRAFFIC, AND NAVIGATIONAL DATA

(16) LATITUDE: 30°23'55.70	(17) LONGITUDE: 088°46'41.40	(52) DECK WIDTH: 43.9 FT (13.4 M)
(19) DETOUR LENGTH: 0.00 MI (0.0 KM)		(32) APPR. ROADWAY WIDTH: 22.0 FT (6.7 M)
(28) LANES ON STRUCTURE: 2	LANES UNDER STRUCTURE: 2	(213) APPR. PAVEMENT WIDTH: 22.0 FT (6.7 M)
(42) SERVICE ON: 1-HIGHWAY		LEFT SHOULDER: 9.0 FT (2.7 M) RIGHT: 9.0 FT (2.7 M)
SERVICE UNDER: 1-HIGHWAY		(33) BRIDGE MEDIAN: 0-NO MEDIAN
(29) AVG. DAILY TRAFFIC: 550	(30) YEAR OF ADT: 2003	(34) SKEW ANGLE: 0°
(114) FUTURE ADT: 800	(115) YEAR OF ADT: 2023	(35) DECK FLARE? 0
(101) PARALLEL STRUCTURE:..... N-NONE		(47) TOTAL HORIZ. CLEARANCE: 40.0 FT (12.2 M)
(38) NAVIGATION CONTROL? N		(50) SIDEWALKS: LEFT:0.0 FT (0.0 M) RIGHT:0.0 FT (0.0 M)
(39) VERTICAL CLEARANCE: 0 FT (0.0 M)		(214) BRIDGE RAIL TYPE: 171-FULL HEIGHT (NO P
(40) HORIZONTAL CLEARANCE: 0 FT (0.0 M)		(215) BRIDGE RAIL HEIGHT: 3.0 FT (0.9 M)
(111) ABUT. OR PIER PROTECTION: 1-NAV PROTECTION NOT REQUIRE	(53) MIN. VERT. CLEAR. OVER DECK: 9999	
HORIZONTAL UNDERCLEARANCE:.. (55) RIGHT 9999 (56) LEFT 998	(54) MIN. VERT. UNDERCLEARANCE: 16.1 FT (4.9 M)	

CONDITION AND APPRAISAL DATA, PROPOSED IMPROVEMENTS, AND COSTS

(58) DECK: 7	(67) STRUCTURAL EVALUATION: 7
(59) SUPERSTRUCTURE: 7	(68) DECK GEOMETRY: 8
(60) SUBSTRUCTURE: 7	(69) UNDERCLEARANCES: 7
(61) CHANNEL: N	(71) WATERWAY ADEQUACY: N
(62) CULVERT: N	(72) APPROACH ALIGNMENT: 6
(222) APPROACHES: 6	(113) SCOUR CRITICAL: N
(223) RETAINING WALL: N	(225) PURPOSE OF IMPROVEMENT: 1-MAINTENANCE
(224) EST. REMAINING LIFE: 50 YRS	(226) IMPROVEMENT PRIORITY: D-MINOR
(36) TRAFFIC SAFETY FEATURES: . 1111	(227) MAINTENANCE COST: \$16,000.00
(75) WORK TYPE:..... 351-GENERAL REHAB,CONTRACT	(228) REPAIR/REHAB. COST: \$0.00
(76) IMPROVEMENT LENGTH:..... 0.0 FT (0.0 M)	(229) CONSTRUCTION COST: \$0.00

INSPECTION DATES

(90) INSPECTION DATE: 03/03	(91) FREQ. OF INSP: 24 MOS	(92) CRITICAL FEATURE INSPECTION (CFI):
(219) ADD. STUDIES NEEDED? N0-NONE		(A) FRACT. CRIT.: N INSP. EVERY 0 MOS LAST INSP.: 0
(220) SPECIAL STUDY TYPE: 0-NONE		(B) UNDERWATER: N INSP. EVERY 0 MOS LAST INSP.: 0
(221) SPECIAL STUDY DATE: 00		(C) SPECIAL INSP.: N INSP. EVERY 0 MOS LAST INSP.: 0

(230) REMARKS / HISTORY:

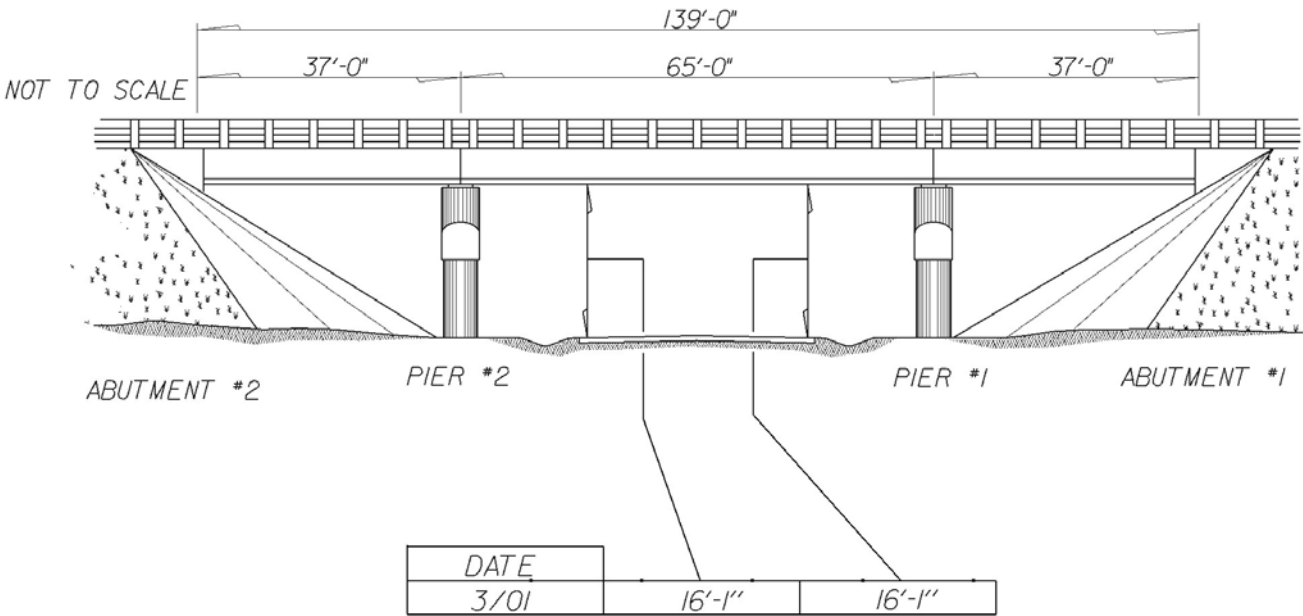
1995-ASPHALT LEVELING COURSE PLACED AT APPROACHES.

(231) ADDITIONAL CONSIDERATIONS:

PARK ENTRANCE ROAD OVER OLD U.S.ROUTE 90
EAST SIDE

NORTH TOWARD U.S.ROUTE 90

SOUTH TOWARD VISITOR CENTER



PHOTOGRAPH SHEET
OLD U.S. ROUTE 90 BRIDGE

STRUCTURE NO. 5320-002P
DATE OF INSPECTION: 3/26/2003



PHOTO #1 - GENERAL VIEW OF DECK (PHOTO FROM 3/20/01 INSPECTION REPORT)



PHOTO #2 - UNDERVIEW OF NORTH SPAN

PHOTOGRAPH SHEET
OLD U.S. ROUTE 90 BRIDGE

STRUCTURE NO. 5320-002P
DATE OF INSPECTION: 3/26/2003



PHOTO #3 - EXPANSION JOINT AT NORTH
PIER (PHOTO FROM 3/20/01 INSPECTION
REPORT)



PHOTO #4 - TRANSVERSE CRACKING OF
ASPHALT AT SOUTH APPROACH (PHOTO
FROM 3/20/2001 INSPECTION)

PHOTOGRAPH SHEET
OLD U.S. ROUTE 90 BRIDGE

STRUCTURE NO. 5320-002P
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PHOTO #5 - NORTH PIER, EAST SIDE; NOTE MINOR SPALL AT END OF BEAM AND STAINING OF PIER CAP (PHOTO FROM 3/20/01 INSPECTION REPORT)

PHOTO #6 - SETTLEMENT OF SLOPE PAVING AT EAST SIDE OF SOUTH ABUTMENT (PHOTO FROM 3/20/01 INSPECTION REPORT)

