

Bridge No. BC 1555

Central Avenue over
Harford Run

Routine Inspection

2009

BRIDGE INSPECTION PROGRAM

City of Baltimore Contract #1105



Presented by:  STV

In association with:
Modjeski & Masters, Inc.
Sabra, Wang & Associates, Inc.
Tuhin Basu & Associates, Inc.
M&N Engineering and Diving, Inc.

2009 BALTIMORE CITY BRIDGE INSPECTION

BRIDGE NO. BC 1555

CENTRAL AVENUE OVER HARFORD RUN

Amanda D. Schindhelm, P.E.

Date

Professional Certification - I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland, License No. 27713, Expiration Date: July 12, 2012.

This inspection report was prepared under my supervision. The condition data and recommendations contained within this report are based on a visual inspection of accessible portions of the existing structure. No responsibility is accepted for the existence of latent defects, which cannot be detected during visual inspection.

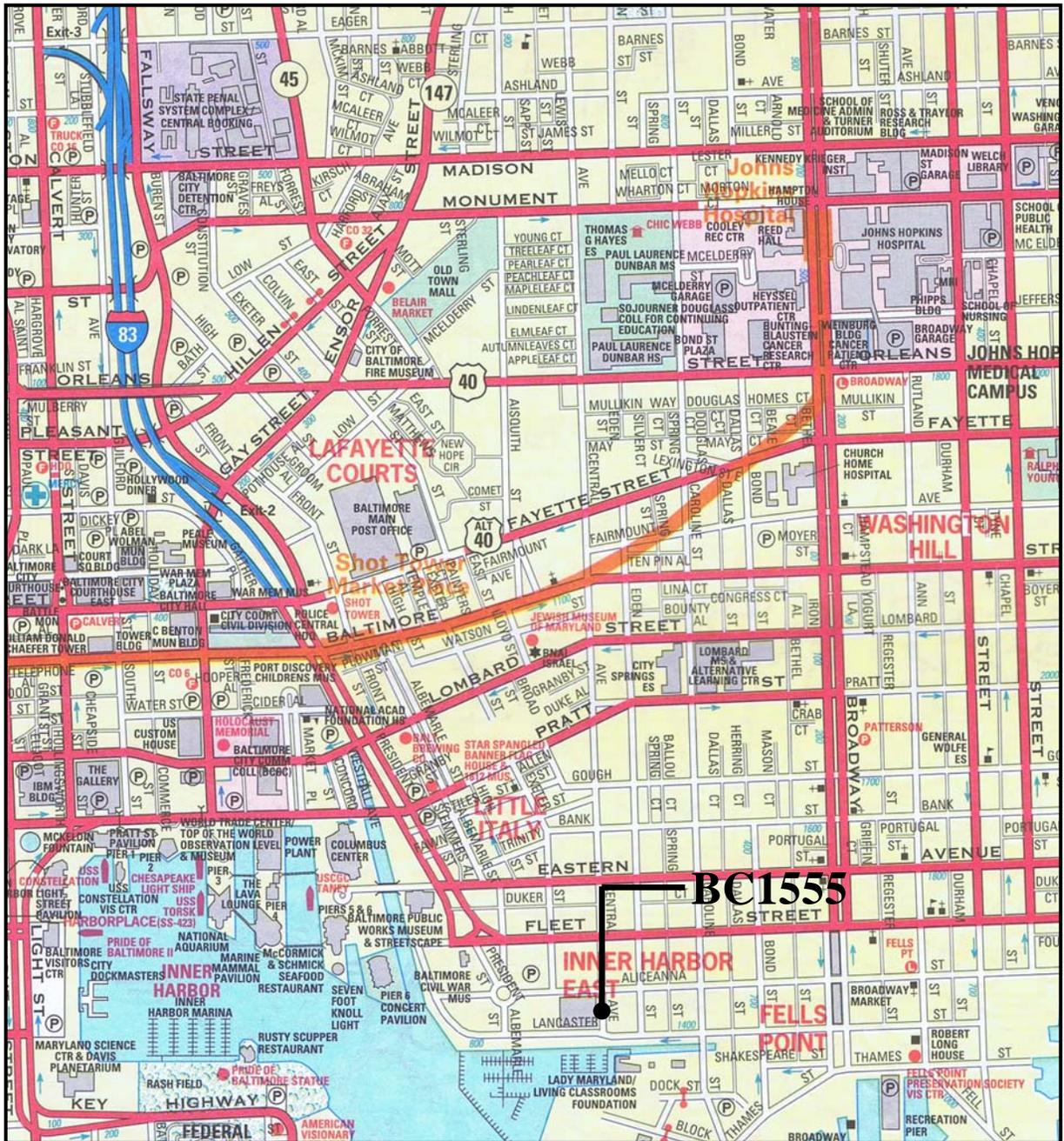
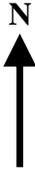
2009 BALTIMORE CITY BRIDGE INSPECTION

BRIDGE NO. BC 1555

CENTRAL AVENUE OVER HARFORD RUN

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ADC Street Grid Location: DOWNTOWN G6

LOCATION MAP

SCALE: 1" = 2,000'

Copyright ADC The Map People
M&N's Permitted Use Number: 21007246
Expiration Date: July 31, 2011

**2009 BALTIMORE CITY BRIDGE INSPECTION
BRIDGE NO. BC 1555
CENTRAL AVENUE OVER HARFORD RUN
SUMMARY REPORT**

BRIDGE NO.: BC 1555
DESCRIPTION: CENTRAL AVENUE OVER HARFORD RUN
REPORT PREPARED BY: M&N Engineering & Diving Services, Inc.

REPORT REVIEWED AND SUBMITTED BY:

PROJECT MANAGER: Amanda D. Schindhelm, P.E.

DATE OF INSPECTION: 08/24/2010
REDUNDANT/NON-REDUNDANT: Redundant
FRACTURE CRITICAL: No
PIN/HANGER UT INSPECTION: No
UNDERWATER INSPECTION: Required. Due 08/13.
POSTED: No
RATING RECOMMENDED: No
POSTING RECOMMENDED: No
MAINTENANCE NEEDS: Yes, See Repair Recommendations
REPAIR NEEDS: Yes, See Repair Recommendations
REHABILITATION: No
LETTER OF CONCERN: No
BRIDGE SUFFICIENCY RATING: 99.7
FOLLOW-UP REQUIREMENTS:
 Warm Weather Inspection: No
 Storm Weather Inspection: No
 Underwater Inspection: Required. Due 08/13.
 Increased Inspection Frequency: Yes, 12-Month cycle
 Other: None
SCOUR EVALUATION: 8P
DATE OF SUBMISSION:

**2009 BALTIMORE CITY BRIDGE INSPECTION
BRIDGE NO. BC 1555
CENTRAL AVENUE OVER HARFORD RUN
BRIDGE INSPECTION DATA FORM**

BRIDGE NO. BC 1555 YEAR BUILT 1960
(8) (27, 106)
 PRINCIPAL ROUTE Central Avenue
 CROSSING Harford Run (Between Aliceanna & Lancaster Streets) (6)
 TYPE A19, Concrete Box Culvert POSTED WEIGHT & SPEED (7)
(43, 44, 206, 207) (41, 224, 225)
 LENGTH 24'
(Total length from end of approach pavement to end of approach pavement)

ROADWAY MEASUREMENTS

APPROACH	BRIDGE	SIDEWALKS
Width-Traveled Way: <u>42'</u> <small>(32)</small>	Clear Roadway: <u>42'</u> <small>(curb to curb) (51)</small>	Number: <u>None</u>
Type of Roadway: <u>Bituminous</u>	Surface: <u>Bituminous</u> <small>(107, 108, 232)</small>	Clear Width: Lt <u>0'</u> Rt. <u>0'</u> <small>(50) (50)</small>
Width of Shoulders: <u>None</u> <small>(32)</small>	Clearance over Rd.: <u>Unlimited</u> <small>(53, 226)</small>	Railing Type: <u>None</u> <small>(235, 236)</small>
Type of Shoulders: <u>None</u>	Skew: <u>0 Degrees</u> <small>(34)</small>	
	Long. Dist.: <u>278'</u>	
Alignment: <u>Tangent</u> <small>(72)</small>	Trans. Dist.: <u>24'</u> <small>(52)</small>	
	Alignment: <u>Tangent</u>	

FOUNDATION

Character of Foundation Material: Unknown

Type of Footing: Pile Concrete Filled Steel Pipe Spread None
(228, 230) (228, 230)

HYDRAULIC DATA (To be completed for structures over water - By others)

Record of High Water Above Uncl. (Ft) N/A Below Uncl. (Ft) N/A Data N/A
(251) (251) (252)

WATERSHED DATA -By others

UTILITIES (260, 261)

Area in Acres: <u>N/A</u>	Storm Sewers: <u>Yes, Misc. Storm Drains Empty into Culvert</u>
Discharge at Bridge (c.f.s.): <u>N/A</u>	Sanitary Sewers: <u>Yes, 8" parallel to Box Culvert</u>
Velocity Thru Bridge (ft./sec.): <u>N/A</u>	Water Mains: <u>Yes, 10" parallel to Box Culvert</u>
Bridge Opening Calculated (sq. ft.): <u>N/A</u>	Gas Mains: <u>None</u>
Bridge Opening Furnished (sq. ft.): <u>N/A</u>	Electric Mains: <u>Yes, 1-4" dia. and 1-3" dia. conduit parallel to Culvert</u>
Underclearance of Bridge to M.L.W.: <u>N/A</u>	Overhead: <u>None</u>
	Underground: <u>None</u>
	Other: <u>None</u>

CLEARANCES UNDER BRIDGES OVER HIGHWAYS AND RAILROADS

Vertical: N/A
(Minimum distance from top of roadway to underside of bridge superstructure) (54)

Horizontal: N/A
(Each lane of duals - Minimum distance face to face of supports flanking roadway. Measurements to be made perpendicular to Centerline of roadway) (55, 56, 280)

**2009 BALTIMORE CITY BRIDGE INSPECTION
BRIDGE NO. BC 1555
CENTRAL AVENUE OVER HARFORD RUN
BRIDGE INSPECTION DATA FORM**

BRIDGE NO. BC 1555 **YEAR BUILT** 1960
PRINCIPAL ROUTE Central Avenue **CROSSING** Harford Run (Between Aliceanna & Lancaster
TYPE A19, Concrete Box Culvert **POSTED WEIGHT AND SPEED**
TRAFFIC SAFETY FEATURES N-N-N-N

DATE OF INSPECTION	08/06/03	11/15/05	4/7/09	8/24/10	REMARKS
INSPECTOR	ADS	BEC	DS	ADS	
1. Number of Cells	1	1	1	1	
2. Foundations	7	7	7	7	
a. Undermining	8	8	8	8	
b. Scour	N	N	N	N	
c. Alignment	8	8	8	8	
3. Headwalls and Wing Walls	N	N	N	N	
a. Concrete	N	N	N	N	
b. Rubble	N	N	N	N	
c. Alignment	N	N	N	N	
4. Cell Walls	7	7	6	6	
a. Concrete	7	7	6	6	
b. Metal	N	N	N	N	
c. Other	N	N	N	N	
5. Piles	N	N	N	N	
6. Ceiling of Cells	6	6	6	6	Full Width Trans. Cracks
7. Curbs	N	N	N	N	
8. Sidewalks	N	N	N	N	
9. Balustrade/Parapet	N	N	N	N	
10. Slope Protection	N	N	N	N	
11. Disintegrated Concrete	Yes	Yes	Yes	Yes	
12. Stream Channel	8	8	8	8	
13. Removal of Vegetation	No	No	No	No	
14. Identification Number	BC1555	BC1555	BC 1555	BC1555	
15. Deck Punctures	None	None	None	None	
16. Coatings	N	N	N	N	
a. Asphalt	N	N	N	N	
b. Galvanizing	N	N	N	N	
c. Other	N	N	N	N	
17. Deck	8	7	7	7	
a. Surfacing	8	7	7	7	
b. Slabs	N	N	N	N	
18. Height of Fill over Structure	0	0	0	0	
19. Diver Needed	Yes	Yes	Yes	Yes	

**2009 BALTIMORE CITY BRIDGE INSPECTION
BRIDGE NO. BC 1555
CENTRAL AVENUE OVER HARFORD RUN
BRIDGE INSPECTION FINDINGS**

Description

Bridge No. BC 1555 is an at-grade single-cell reinforced concrete box culvert built in 1960 (see Photograph Nos. 1 - 4). The culvert carries two lanes of Central Avenue over Harford Run between Aliceanna Street to the north and Lancaster Street to the south. The cell has a span length of 24'-0" with a rise of 7'-3". The culvert has an overall length of 278'-0" along the invert (north and south) with a clear roadway width of 42'-0" and carries two lanes, one in each direction (north and south). There are no approach traffic barriers along the approaches or over the bridge, however; these are not required due to urban features.

The culvert is not posted. The culvert was inspected on August 24, 2010. The numbering convention for reporting purposes is from the north and the west.

Inspection Access

The inspection of Bridge No. BC 1555 required chest waders, a ladder, and a boat. The culvert is located between and abuts up to BC 8019 to the north and BC 8018 to the south. Access was obtained through the underside of BC 8018.

Inspection Findings

Overall the culvert is in satisfactory condition. The following is a summary of the bridge inspection findings. For a more detailed description of the condition of each bridge element, see Pontis form:

Approach Roadways

1. There is an 1/8" to 1/2" wide crack in the pavement construction joint along the west edge of the culvert (see Photograph No. 5).
2. There are random hairline to 1/4" wide transverse and longitudinal cracks in the bituminous wearing surface over the culvert. Several of the transverse cracks are full width.

Culvert

1. There are sixteen (16) full width hairline transverse cracks with moderate efflorescence and minor rust staining in the top slab. Several of these cracks extend through the haunches and culvert walls.
2. The construction joints typically are cracked with water leakage, rust staining and

efflorescence (see Photograph No. 6).

3. The top slab has a full width x 1'-0" long area of delaminated concrete and hairline cracking with rust stains located 10'-0" from the south end of the culvert.

4. There is a 1'-0" long x 10'-0" wide area of delaminated concrete and hairline cracking with rust staining located 20'-0" from the south end of the culvert in the top slab.

5. There are random fine longitudinal cracks in the top slab.

6. There are random areas of honeycombing throughout the top slab and culvert walls.

7. There is a 1'-4" square by 3" deep spall with exposed reinforcement in the top slab approximately 20' from the south end of the culvert (see Photograph No. 7).

8. There are random areas of hairline map cracking in the haunches.

9. There are fine to hairline vertical cracks randomly throughout the culvert walls, a few have light efflorescence.

10. There is a 1'-4" wide x 7" long x 4" deep spall with exposed reinforcement in the culvert wall approximately 30' from the south end of the culvert (see Photograph 8).

11. There are two storm water pipe outlets in the west wall of the culvert. There are spalls surrounding the entire circumference of both pipes with exposed and corroded reinforcement (see Photograph Nos. 9 & 10). Flow in the northern most pipe in the west wall is approximately 50% blocked due to debris build-up in the pipe.

Stream Channel

1. The bottom slab is covered with up to 1'-0" of silt and sand.

Review of Previous Report

The 2007 Bridge Inspection Report was available and used for comparison purposes. The overall condition of the structure differed from the previous report as noted:

The following repairs have been completed since the previous inspection:

1. No repairs were noted.

The following defects have progressed since the previous inspection:

1. The spall approximately 30' from the south end of the culvert has exposed reinforcement.

The following are new defects noted in the current inspection:

1. No new defects were noted.

Review of Item 113 - Scour Potential Rating

Item 113 is currently rated 8P. This implies that the bridge is a culvert-type structure with a paved bottom. Based on the observed conditions, this rating is still valid and does not require reevaluation.

Load Ratings Summary/Posting Recommendation

Whether due to deterioration or rehabilitation, the overall condition of the structure and rated components have not significantly changed since the 2007 inspection. The following Maryland Legal Load Limits were reproduced from the 2007 inspection report. Since review of load rating computations is beyond the scope of this inspection, no representation is hereby made or responsibility hereby assumed for the accuracy of the following tabulation:

Vehicle	Gross Vehicle Weight	Inventory (Tons)	Operating (Tons)
H-15	15 tons	24	39
HS-20	36 tons	44	70
Type 3	33 tons	24	39
Type 3S2	40 tons	44	70

Based on the above ratings, the bridge requires posting for 48,000 pounds for Single Unit Vehicles and 80,000 pounds for Combination Vehicles. Since the structure is inspected on a 12 month frequency, posting is not required.

**2009 BALTIMORE CITY BRIDGE INSPECTION
 BRIDGE NO. BC 1555
 CENTRAL AVENUE OVER HARFORD RUN
 RECOMMENDATIONS**

Item	Quantity	Units	Unit Cost	Total Cost
Immediate				
None				\$0.00
Subtotal (Immediate)				\$0.00
Short Term				
None				\$0.00
Subtotal (Short Term)				\$0.00
Long Term				
1. Clean the exposed reinforcement steel and repair the spalls in the top slab and the west wall of the culvert around the storm drains.	70	SF	\$60	\$4,200.00
2. Clean out the partially blocked drain pipe in the west wall.	1	LS	\$250.00	\$250.00
Subtotal (Long Term)				\$4,450.00
Total Maintenance Cost				\$4,450.00

**2009 BALTIMORE CITY BRIDGE INSPECTION
BRIDGE NO. BC 1555
CENTRAL AVENUE OVER HARFORD RUN
PHOTOGRAPHS**



1. North Approach Looking South



2. North Approach Looking North

**2009 BALTIMORE CITY BRIDGE INSPECTION
BRIDGE NO. BC 1555
CENTRAL AVENUE OVER HARFORD RUN
PHOTOGRAPHS**



3. South Approach Looking North



4. South Approach Looking South

**2009 BALTIMORE CITY BRIDGE INSPECTION
BRIDGE NO. BC 1555
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PHOTOGRAPHS**



5. Typical Longitudinal Cracking in Wearing Surface at West Side of Culvert



6. Typical Cracking at Transverse Joint in Top Slab

**2009 BALTIMORE CITY BRIDGE INSPECTION
BRIDGE NO. BC 1555
CENTRAL AVENUE OVER HARFORD RUN
PHOTOGRAPHS**



7. Spall in Top Slab Approximately 20' from South End of Culvert



8. Spall in Top Slab Approximately 30' from South End of Culvert

**2009 BALTIMORE CITY BRIDGE INSPECTION
BRIDGE NO. BC 1555
CENTRAL AVENUE OVER HARFORD RUN
PHOTOGRAPHS**



9. Spalling at the North Pipe Opening in the West Wall



10. Spalling at the South Pipe Opening in the West Wall

Structure Inventory and Appraisal Forms

STRUCTURE INVENTORY AND APPRAISAL REPORT

BRIDGE NUMBER:

IDENTIFICATION

FORM 1 OF 8

(8) STRUCTURE NUMBER:	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
(7) FACILITY CARRIED:	<input style="width: 100%;" type="text"/>				
(6) FEATURE INTERSECTED:	<input style="width: 100%;" type="text"/>				
(27) YEAR BUILT:	<input type="text"/>	(106) YEAR RECONSTR:	<input type="text"/>		
(1) STATE CODE:	<input type="text"/>	(2) DISTRICT CODE:	<input type="text"/>		
(3) COUNTY CODE:	<input type="text"/>	(4) PLACE CODE:	<input type="text"/>		
(5) INVENTORY ROUTE:	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
	Route Prefix	Level of Service	Number	Direction	
(9) LOCATION:	<input style="width: 100%;" type="text"/>				
(11) MILE POINT:	<input type="text"/>	(16) LATITUDE:	<input type="text"/>		
(17) LONGITUDE:	<input type="text"/>	(28) LANES ON:	<input type="text"/>	LANES UNDER:	<input type="text"/>
(42) TYPE OF SERVICE ON:	<input type="text"/>	TYPE OF SERVICE UNDER:	<input type="text"/>		
(98) BORDER STATE:	<input type="text"/>	BORDER STATE'S SHARE %:	<input type="text"/>		
(99) BORDER STATE'S NUMBER:	<input type="text"/>				
(262) NAME OF STRUCTURE:	<input style="width: 100%;" type="text"/>				

CLASSIFICATION

FORM 2 OF 8

(104) HWY SYSTEM: <input type="text"/>	(26) FUNCTION CLASS: <input type="text"/>
(100) DEFENSE HWY: <input type="text"/>	(101) PARALLEL STRUCT: <input type="text"/>
(102) DIRECTION: <input type="text"/>	(103) TEMP STRUCT: <input type="text"/>
(110) NAT'L NTWK: <input type="text"/>	(20) TOLL: <input type="text"/>
(21) MAINTENANCE: <input type="text"/>	(22) OWNER: <input type="text"/>
(37) HISTORICAL: <input type="text"/>	

TRAFFIC

(19) DETOUR: <input type="text"/>	(29) ADT: <input type="text"/>	(114) FUTURE ADT: <input type="text"/>	
(109) TRUCK ADT %: <input type="text"/>	(30) ADT YEAR: <input type="text"/>	(115) FUTURE ADT YEAR: <input type="text"/>	

Bridge Number:

1

STRUCTURE TYPE AND MATERIAL

FORM 3 OF 8

(43) STRUCT TYPE:	<input type="checkbox"/>	<input type="checkbox"/>	(274) MAIN SUPP MEMBERS:	<input type="checkbox"/>
(44) STRUCT TYPE - APPR:	<input type="checkbox"/>	<input type="checkbox"/>		
(206) SUPPL TYPE - MAIN:	<input type="checkbox"/>	(207) SUPPL APPROACH:	<input type="checkbox"/>	
(208) STRUCT TYPE - WIDENED/EXTENDED:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
(228) FOOTING - ABUTMENT:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
(229) SUBSTRUCT ABUTMENT:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
(230) FOOTING - PIER:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
(231) SUBSTRUCTURE PIER:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
(233) SUPSTRUCT DESIGN:	<input type="checkbox"/>	<input type="checkbox"/>		
(277) SUBSTRUCT - SPECIAL:	<input type="checkbox"/>	(219) SLOPE PROTECTION:	<input type="checkbox"/>	
(221) STRUCTURAL STEEL:	<input type="checkbox"/>	(235) PARAPET:	<input type="checkbox"/>	
(242) BEARING TYPE:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
(107) DECK STRUCTURE TYPE:	<input type="checkbox"/>	(270) CONCRETE SLAB:	<input type="checkbox"/>	
(271) REBARS:	<input type="checkbox"/>	(272) ADMIXTURES:	<input type="checkbox"/>	
(108) WEARING SURFACE:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
(243) JOINT TYPE:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
(236) RAILING:	<input type="checkbox"/> <input type="checkbox"/>	-	<input type="checkbox"/> <input type="checkbox"/>	-
(237) FENCING:	<input type="checkbox"/> <input type="checkbox"/>	-		
(278) PAINT SYSTEM:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
(344) PAINT COLOR / NUMBER:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

GEOMETRICS

FORM 4 OF 8

(112) NBIS BRIDGE LENGTH:	<input type="checkbox"/>	(49) STRUCTURE LENGTH:	<input type="checkbox"/>
(210) NUMBER OF SPANS:	<input type="checkbox"/>	(48) LENGTH MAX SPAN:	<input type="checkbox"/>
(45) # SPANS IN MAIN UNIT:	<input type="checkbox"/>	(46) # APPROACH SPANS:	<input type="checkbox"/>
(209) # CONTINUOUS SPANS:	<input type="checkbox"/>		
(211) SPAN LENGTH 1:	<input type="checkbox"/>	(212) SPAN LENGTH 2:	<input type="checkbox"/>
(213) SPAN LENGTH 3:	<input type="checkbox"/>	(214) SPAN LENGTH 4:	<input type="checkbox"/>
(215) SPAN LENGTH 5:	<input type="checkbox"/>	(216) SPAN LENGTH 6:	<input type="checkbox"/>
(217) SPAN LENGTH 7:	<input type="checkbox"/>	(218) SPAN LENGTH 8:	<input type="checkbox"/>
(238) # STRINGER - ORIGINAL:	<input type="checkbox"/>	(239) # STRINGERS - WIDENED:	<input type="checkbox"/>
(240) SPACING - ORIGINAL:	<input type="checkbox"/>	(241) SPACING - WIDENED:	<input type="checkbox"/>
(51) DECK CURB-CURB WIDTH:	<input type="checkbox"/>	(52) DECK OUT-OUT WIDTH:	<input type="checkbox"/>
(50) CURB/SIDEWALK WIDTHS:	<input type="checkbox"/> <input type="checkbox"/>	(223) SHOULDER WIDTHS:	<input type="checkbox"/> <input type="checkbox"/>
(33) BRIDGE MEDIAN:	<input type="checkbox"/>	(205) MEDIAN WIDTH:	<input type="checkbox"/>
(32) APPROACH ROAD WIDTH:	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	(35) STRUCTURE FLARED:	<input type="checkbox"/>
(10) INVENT ROUTE, MIN VERT CLEAR:	<input type="checkbox"/>	(47) INVENT ROUTE, TOTAL HORIZ CLEAR:	<input type="checkbox"/>
(53) BRIDGE ROADWAY, MIN VERTCLEAR:	<input type="checkbox"/>		

Bridge Number:

2

GEOMETRICS (Cont.)

FORM 5 OF 8

- (54) MIN VERTICAL UNDERCLEARANCE:
- (55) MIN LATERAL UNDERCLEARANCE (RIGHT):
- (56) MIN LATERAL UNDERCLEARANCE (LEFT):
- (342) HORIZONTAL CLEARANCE - ON:
- (280) HORIZONTAL CLEARANCE - UNDER
- (34) SKEW, IN DEGREES:
- (253) NUMBER OF CELLS:
- (256) SPAN OF CELLS:
- (258) EARTH FILL:
- (343) CENTERLINE LENGTH - CULVERTS/PIPES:
- (254) RISE:

LOAD RATINGS AND POSTINGS

- (41) STATUS:
- (31) DESIGN LOAD:
- (70) POSTING:
- (224) WEIGHT POSTED, KIPS:
- (64) OPERATING RATING:
- (464) OPERATING RATING - H:
- (564) OPERATING RATING - HS:
- (664) OPERATING RATING - T3:
- (764) OPERATING RATING - 3S2:
- (225) SPEED LIMIT ON STRUCTURE
- (66) INVENTORY RATING:
- (466) INVENTORY RATING - H:
- (566) INVENTORY RATING - HS:
- (666) INVENTORY RATING - T3:
- (766) INVENTORY RATING - 3S2:
- (226) MIN VERT CLEARANCE OVER ROADWAY POSTED:
- (227) MIN VERT UNDERCLEARANCE POSTED:

SINGLE VEH. COMBO VEH.
(First 2 Digits) (Second 2 Digits)

BMS CONDITION RATINGS

FORM 6 OF 8

- (90) INSPECTION DATE:
 - (91) INSPECTION FREQUENCY, MONTHS:
 - (92) CRITICAL FEATURE INSP:
 - (93) CRIT FEATURE INSP DATE:
 - (58) DECK:
 - (59) SUPERSTRUCTURE:
 - (60) SUBSTRUCTURE:
 - (61) CHANNEL:
 - (62) CULVERT:
 - (332) POSTING SIGNS:
 - (307) UNDER CONSTRUCTION:
 - (340) INSPECTION CLASSIFICATION
- | | | |
|----------------------|----------------------|----------------------|
| FRACTURE
CRITICAL | UNDER
WATER | OTHER
SPECIAL |
| <input type="text"/> | <input type="text"/> | <input type="text"/> |
| <input type="text"/> | <input type="text"/> | <input type="text"/> |
| <input type="text"/> | <input type="text"/> | <input type="text"/> |
| <input type="text"/> | <input type="text"/> | <input type="text"/> |

Bridge Number:

3

APPRAISAL

FORM 7 OF 8

- (67) STRUCTURAL EVALUATION:
- (69) UNDERCLEARANCE:
- (71) WATERWAY ADEQUACY:
- (36) TRAFFIC SAFETY RAILINGS:
- FEATURES TRANSITIONS:
- (113) SCOUR EVALUATION:



- (68) DECK GEOMETRY:
- (72) APPROACH ALIGNMENT:
- APPROACH BARRIER:
- APPROACH BARRIER ENDS:

NAVIGATION AND HYDRAULIC

- (38) NAVIGATION CONTROL:
- (40) NAV HORIZONTAL CLEARANCE:
- (111) PIER/ABUTMENT PROTECTION:
- (116) MIN NAV VERT CLEARANCE, VERT LIFT BRIDGE
- (247) DESIGN YEAR STORM:
- (249) DRAINAGE AREA:
- (251) HIGH WATER ELEVATION:
- (252) YEAR HIGH WATER ELEVATION - LATEST:

- (39) NAV VERT CLEARANCE:
- (248) RUN-OFF Q:
- (250) STRUCTURE IN TIDAL AREA:

HISTORY AND PROPOSED IMPROVEMENTS

FORM 8 OF 8

- (201) CONTRACT NUMBERS:
- (202) CONTRACT NUMBERS:
- (203) SHA SPEC-YEAR:
- (263) SHA SPEC RECON 1:
- (265) AASHTO SPEC RECON 1
- (75) TYPE OF WORK:
- (94) BRIDGE IMPROVE COST:
- (96) TOTAL PROJECT COST:

- (204) AASHTO SPEC-YEAR:
- (264) SHA SPEC RECON 2:
- (266) AASHTO SPEC RECON 2:
- (76) LENGTH OF IMPROVEMENT:
- (95) ROADWAY IMPROVE COST:
- (97) YEAR OF IMPROVEMENT:

MISCELLANEOUS

- (244) SIGNS ON STRUCTURE
- (246) ROADWAY LIGHTING:
- (260) UTILITIES - ON:
-
-
-
-
-

- (245) BRIDGE ROADWAY LIGHTING
- (261) UTILITIES - UNDER:
-
-
-
-
-

REMARKS:

Bridge Number:

4

PONTIS Form

**2009 BALTIMORE CITY BRIDGE INSPECTION
 BRIDGE NO. BC 1555
 CENTRAL AVENUE OVER HARFORD RUN
 PONTIS FORM**

BRIDGE NUMBER: BC 1555

INSPECTION DATE: 08/24/2010

(58) DECK (59) SUPERSTRUCTURE (60) SUBSTRUCTURE
 (61) CHANNEL (62) CULVERT

ELEMENT **TQ** **CS 1** **CS 2** **CS 3** **CS 4** **CS 5**

057 Concrete Culvert at Grade Slab, Unprotected, with AC Overlay (EA)

The roadway is in good condition. There is a 1/8" to 1/2" wide crack in the pavement construction joint along the west edge of the culvert. There are random hairline to 1/4" wide transverse and longitudinal cracks in the bituminous wearing surface over the culvert. Several of the transverse cracks are full width.

241 Concrete Culvert (LF)

The culvert is in satisfactory condition. There are sixteen (16) full width hairline transverse cracks with moderate efflorescence and minor rust staining in the top slab. Several of these cracks extend through the haunches and culvert walls. The construction joints typically are cracked with water leakage, rust staining and efflorescence. The top slab has a full width x 1'-0" long area of delaminated concrete and hairline cracking with rust stains located 10'-0" from the south end of the culvert. There is a 1'-0" long x 10'-0" wide area of delaminated concrete and hairline cracking with rust staining located 20'-0" from the south end of the culvert in the top slab. There are random fine longitudinal cracks in the top slab. There are random areas of honeycombing throughout the top slab and culvert walls. There is a 1'-4" square by 3" deep spall with exposed reinforcement approximately 20' from the south end of the culvert. There are random areas of hairline map cracking in the haunches. There are fine to hairline vertical cracks randomly throughout the culvert walls, a few have light efflorescence. There is a 1'-4" wide x 7" long x 4" deep spall with exposed reinforcement in the top slab approximately 30' from the south end of the culvert. There are two storm water pipe outlets in the west wall of the culvert. There are spalls surrounding the entire circumference of both pipes with exposed and corroded reinforcement. Flow in the northern most pipe in the west wall is approximately 50% blocked due to debris build-up in the pipe.

345 Stream Channel (ENTIRE BRIDGE)

The bottom slab is covered with up to 1'-0" of silt and sand.