APPENDIX C

NBI Bridge Inspection Report,
Pontis Bridge Inspection Report,
and Bridge Appraisal Sheet

CITY AND COUNTY OF HONOLULU
DEPARTMENT OF DESIGN AND CONSTRUCTION
CIVIL DIVISION

NBI BRIDGE INSPECTION REPORT

Date of Inspection:	11-09-2016	**Bridge Number:**	935
Structure Number:	N/A	**Bridge Name:**	FARRINGTON HIGHWAY BOX CULVERT 1
Location : Island:	Oahu	**Number of Spans:**	1
Route No.:	N/A	**Highway:**	N/A
Feature Crossed:	Ditch	**Milepost:**	N/A
Bridge Material:	**Superstructure:** N/A	**Substructure:**	N/A
Bridge Coordinates:	**Latitude (N)** 021° 21' 18"		
	Longitude (W) 158° 03' 43"		

36 TRAFFIC SAFETY FEATURES

Indicate if feature meets currently acceptable standards.
0 - No 1 - Yes N - Not applicable

		REMARKS	PHOTOS
1. Railings	**0**	The W-beam guardrails do not meet minimum height requirements for acceptable railings. There is heavy damage along the upstream railing.	
2. Transitions	**0**		
3. Approach Guardrail	**0**	The W-beam guardrails in the approaches do not meet minimum height requirements for acceptable railings.	
4. Approach Guardrail Ends	**0**		

58 DECK

		REMARKS	PHOTOS
1. Wearing Surface	**7**	Asphalt wearing surface is in satisfactory condition.	
2. Decks - Structural Condition	**N**		
3. Curbs	**N**		
4. Median	**N**		
5. Sidewalks	**N**		
6. Parapet	**N**		
7. Railing	**0**	W-beam guardrail along both sides of road. Upstream guardrail is in a FAILED state. All posts are bent and each panel is damaged. The guardrail will likely not retain a stray vehicle. It appears that the guardrail has been in this state since before the inspection on 5/2/96.	
8. Paint	**N**		
9. Drains	**N**		
10. Lighting Stand	**N**		
11. Utilities	**N**		
12. Joint Leakage	**N**		
13. Expansion Joint or Devices	**N**		
INSPECTOR'S CONDITION RATING:	**N**	Based on item 2 only.	

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59 SUPERSTRUCTURE		REMARKS	PHOTOS
1. Bearing Devices	N		
2. Stringers	N		
3. Girders, Beams, or Arches	N		
4. Floor Beams and Diaphragms	N		
5. Trusses - General	N		
- Portals	N		
- Bracing	N		
6. Paint	N		
7. Machinery (Moveable Spans)	N		
8. Rivets and/or Bolts	N		
9. Welds - Cracks	N		
10. Rust	N		
11. Timber Decay	N		
12. Concrete Cracking and/or Spalling	N		
13. Collision Damage	N		
14. Deflection Under Load	N		
15. Alignment of Members	N		
16. Vibrations Under Load	N		
17. Flat Slab / Soffit	N		
INSPECTOR'S CONDITION RATING:	N		

60 SUBSTRUCTURE		REMARKS	PHOTOS
1. Abutment - Wings	N		
- Backwall/Breastwall	N		
- Footing	N		
- Piles	N		
- Erosion	N		
- Settlement	N		
2. Piers or Bents - Caps	N		
- Column/Wall	N		
- Footing	N		
- Piles	N		
- Scour	N		
- Settlement	N		
3. Pile Bents	N		
4. Concrete Cracking and/or Spalling	N		
5. Steel Corrosion	N		
6. Timber Decay, etc.	N		
7. Debris on Seats	N		

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8. Paint	**N**	
9. Collision Damage	**N**	
INSPECTOR'S CONDITION RATING:	**N**	

61 CHANNEL and CHANNEL		**REMARKS**	**PHOTOS**
1. Channel Scour	**7**	Vegetation growth in channels. No scour observed.	
2. Embankment Erosion	**6**	Culvert has been cleaned since the previous inspection	
3. Drift	**6**	Culvert has been cleaned since the previous inspection	
4. Vegetation	**5**	The heavy vegetation growth in the upstream and downstream channel has been trimmed since the previous inspection	
5. Channel Change	**6**		
6. Fender System	**N**		
7. Spur Dikes and Jetties	**N**		
8. Rip Rap	**N**		
9. Adequacy of Opening	**4**	Culvert has been cleaned since the previous inspection, however, there is a concrete block built at the outlet leaving only 16" of freeboard height for water to flow through	
INSPECTOR'S CONDITION RATING:	**4**	Based on all items.	

62 CULVERT and RETAINING WALLS		**REMARKS**	**PHOTOS**
1. Barrel	**4**		
- Concrete		Extensive spalling was found in the culvert soffit (see Photos)	
- Steel			
- Timber			
2. Headwall	**5**	Spalls in headwalls	
3. Cutoff Wall	**N**		
4. Wing Walls	**N**		
5. Settlement of Roadway	**7**		
6. Scour / Undermining	**7**	No scour or undermining observed.	
7. Adequacy	**4**	There is a concrete block built at the outlet leaving only 16" of freeboard height for water to flow through	
8. Debris	**6**	Culvert has been cleaned since the previous inspection	
INSPECTOR'S CONDITION RATING:	**4**		

Date of Inspection: 11-09-2016 **Bridge Number:** 935
Structure Number: N/A **Bridge Name:** FARRINGTON HIGHWAY BOX CULVERT 1

REMARKS **PHOTOS**

93 CRITICAL FEATURE INSPECTION DATE

Provide date if applicable
If not applicable, indicate with N

1. **Fracture Critical Details** N
2. **Underwater Inspection** N

[If applicable, submit Underwater Inspection Report]

3. **Other Special Inspection** N

OTHER FEATURES

Y - Yes N - No

1. **Bridge Posted?** **N**
   Posted Limit = N/A
2. **Signage for Posting Legible/Visible?** **N**
3. **Riding Surface (Roughness) Rating** **3**

[3 - Smooth, 2 - Average, 1 - Poor]

Inspected by: **Name (printed):** Brian Lott **Title:** Inspector
NHI Certified?: No
Signature:
Phone Number: 808-533-2210

Supervised by: **Name (printed):** Spencer Chung **Title:** Team Leader
NHI Certified?: Yes
Signature:
Phone Number: 808-533-2210

CITY AND COUNTY OF HONOLULU
DEPARTMENT OF DESIGN AND CONSTRUCTION
CIVIL DIVISION

PONTIS BRIDGE INSPECTION REPORT

Date of Inspection: 11-09-2016
Structure Number: N/A
Bridge Number: 935
Bridge Name: FARRINGTON HIGHWAY BOX CULVERT 1
Number of Spans: 1
Route Number: N/A
Location : Island: Oahu
Highway: N/A
Feature Crossed: Ditch
Superstructure: N/A
Substructure: N/A

ELEM NO	ENV	ELEMENT DESCRIPTION	TOTAL QUANT.	UNIT	ST1	ST2	ST3	ST4	ST5
241	2	Culvert: Reinforced Concrete	27	FEET		17	10		
330	3	Metal Bridge Railing	12	FEET		6		6	
359	2	Soffit Smart Flag	1	EACH	1				

COMMENTS:

Inspected by: **Name (printed):** Brian Lott **Title:** Inspector
NHI Certified?: No
Signature:
Phone Number: 808-533-2210

Supervised by: **Name (printed):** Spencer Chung **Title:** Team Leader
NHI Certified?: Yes
Signature:
Phone Number: 808-533-2210

CITY AND COUNTY OF HONOLULU
DEPARTMENT OF DESIGN AND CONSTRUCTION
CIVIL DIVISION

BRIDGE APPRAISAL SHEET

Date of Inspection: 11-09-2016
Structure Number: N/A
Bridge Number: 935
Bridge Name: FARRINGTON HIGHWAY BOX CULVERT 1
Tax Map Key: 9-1-17
District: 9

CONDITION:	MATERIAL	CONDITION ANALYSIS	RATING (0-9)
58. Deck	N/A	Not Applicable	N
59. Superstructure	N/A	Not Applicable	N
60. Substructure	N/A	Not Applicable	N
61. Channel and Channel Protection	Natural	Poor Condition	4
62. Culvert and Retaining Walls	Concrete	Poor Condition	4
63. Method Used to Determine Operating Rating	N/A		
64. Operating Rating	1.11		
65. Method Used to Determine Inventory Rating	N/A		
66. Inventory Rating	0.86		

APPRAISAL:	DEFICIENCIES	RATING (0-9)
67. Structural Condition	No ADT available. Estimated ADT is 401-1000 based on site review.	6
68. Deck Geometry	Curb to curb width = 22' (6.7056000000000004 m)	4
69. Under Clearance - Vert. and Lat.		N
70. Bridge Posting		5
71. Waterway Adequacy		7
72. Approach Roadway Management		6

PROPOSED IMPROVEMENTS:

75. Type of Work: N/A
76. Length of Structure Improvement: N/A
90. Inspection Date: Month: 11 **Year:** 2016

REMARKS:

In general, the culvert is in poor condition.