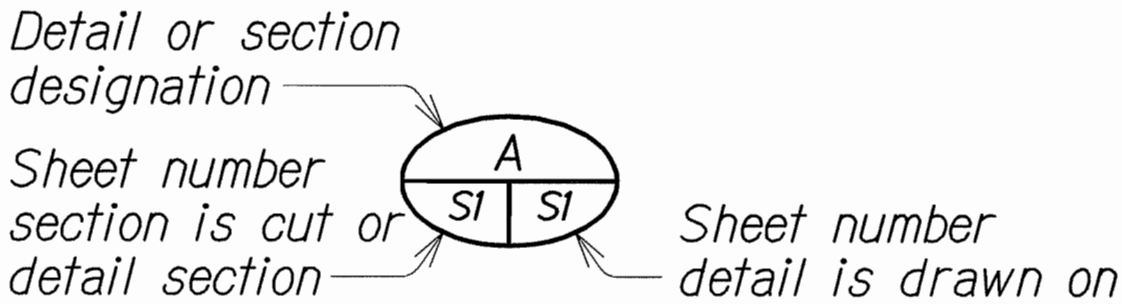


INDEX TO DRAWINGS	
SHEET	DESCRIPTION
Q1	Index, Symbols, Abbreviations and Bridge General Notes
Q2	Bridge General Notes and Location Plan
Q3	Halawa Interchange Structure No. 10, Exist. Endpost (W.W. #3) - Site Plan
Q4	Halawa Interchange Structure No. 10, Exist. Endpost (W.W. #3) Demolition - Plan & Elevation and Details
Q5	Halawa Interchange Structure No. 10, Endpost (W.W. #3) Upgrade - Plan & Elevation
Q6	Halawa Interchange Structure No. 10, Endpost (W.W. #3) Upgrade - Plan & Elevation
Q7	Halawa Interchange Structure No. 11 - Existing Plan
Q8	Halawa Interchange Structure No. 11, Removal of Existing Typical Metal Bridge Railing - Elevation, Sections and Details
Q9	Halawa Interchange Structure No. 11, Existing Light Standard at Bridge
Q10	Halawa Interchange Structure No. 11, Partial Type "A" Concrete Bridge Railing Upgrade (Left Rail) - Plan and Elevation
Q11	Halawa Interchange Structure No. 11, Partial Type "A" Concrete Bridge Railing Upgrade (Right Rail) - Plan and Elevation
Q12	Halawa Interchange Structure No. 11, Type "A" Concrete Bridge Railing Section and Details
Q13	Halawa Interchange Structure No. 11, Type "A" Concrete Bridge Railing Upgrade - Details, Plan and Notes
Q14	Halawa Interchange Structure No. 11, Typical Expansion Joint at Concrete Railing
Q15	Halawa Interchange Structure No. 11, Typical Light Standard Details at Concrete Railing
Q16	Halawa Interchange Structure No. 11, Existing Endpost Nos. 1 & 3 - Plans and Inset
Q17	Halawa Interchange Structure No. 11, Endpost Nos. 1 & 3 Demolition - Plan and Elevation
Q18	Halawa Interchange Structure No. 11, Endpost Nos. 1 & 3 Upgrade - Plan, Elevation and Detail
Q19	Endpost Upgrade Details - Typical Sections
Q20	Endpost Upgrade Details - Typical Sections, Partial Plan and Partial Isometric View
Q21	Type "D2" Enpost Details - Metal Guardrail Type 3 Thrie Beam and Appurtenances Details

SYMBOLS



ORIGINAL PLAN	DATE	XXX 2011
DESIGNED BY	DATE	XXX 2011
CHECKED BY	DATE	XXX 2011
NOTED BY	DATE	XXX 2011
QUANTITIES BY	DATE	XXX 2011
DATE	DATE	XXX 2011

ABBREVIATIONS

A.B.	Anchor Bolt	I.D.	Inside Diameter
Abut.	Abutment		
ac, a.c.	Asphalt Concrete	lbs.	Pounds
Approx.	Approximate	Lg., lg.	Long
Az.	Azimuth	Lt.	Left
		ltbox	Light Box
℄	Baseline		
Bm., bm.	Beam	Max.	Maximum
Brg.	Bearing	Min., min.	Minimum
℄	Center line	No., Nos.	Number(s)
Cl., Clr., cl.	Clear		
Conc., conc.	Concrete	o.c.	On Center
Cont.	Continuous		
Contr.	Contraction	P.C.	Point of Curb
		PL	Plate
Dia., ø	Diameter	P.T.	Point of Tangent
dwgs	Drawings		
ea.	Each	R	Radius
E.F.	Each Face	Rdwy., rdwy.	Roadway
Eq.	Equal	Ref.	Reference
Exist., exist.	Existing	Reinf.	Reinforcement
exp.	Expansion	Req'd	Required
		Rt.	Right
F.F.	Front Face	sdmh	Storm Drain Manhole
Fin.	Finish	Sht.	Sheet
Ftg.	Footing	Spcs.	Spaces
		Sta.	Station
Galv.	Galvanized	Std.	Standard
Gr., gr.	Grade	Struct.	Structure
grp	Grouted Rubble Paving		
		T&B	Top and Bottom
		Typ.	Typical
H.S.S.	Hollow Struct-ural Section		
Hwy.	Highway	w/	with
		w.p.	Working Point
		w.w.	Wingwall

BRIDGE GENERAL NOTES

GENERAL SPECIFICATIONS:

General Specifications: Hawaii Department of Transportation, Hawaii Standard Specification for Road, Bridge and Public Works Construction, 2005, together with Special Provisions prepared for this contract.

DESIGN SPECIFICATIONS:

(A) AASHTO 2010 LRFD Bridge Design Specifications (Fifth Edition) and its subsequent interim specifications with interim supplements and modifications by the HDOT Highway Division.

(B) "Design Criteria for Bridges and Structures" dated October 20, 2010.

LOADS:

(A) Railing Test Level: TL-2

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	STP-7241(002)	2012	41	81

MATERIALS:

- (A) All concrete strengths shall have a 28-day compressive strength of 4,000 psi unless otherwise noted. All concrete shall have a maximum W/C Ratio of 0.45.
- (B) The use of any calcium chloride in any concrete is prohibited.
- (C) All reinforcing steel shall be ASTM A615 Grade 60 unless otherwise noted.
- (D) Reinforcing steel shall be ASTM A706 where welded connections are required.
- (E) All structural steel shall be ASTM A992 hot dip galvanized after fabrication, unless otherwise noted.
- (F) All anchor bolts, washers and nuts shall be AASHTO M164 hot dip galvanized after fabrication, unless otherwise specified.
- (G) Hollow Structural Steel Shapes shall conform to ASTM A500, Grade B.
- (H) All welding shall conform to the latest ANSI/ AASHTO/ AWS D1.5 Bridge Welding Code. All welds shall be ground smooth. Unless noted
- (I) Epoxy shall conform to ASTM C881 Grade I, Class C, Type IV.

REINFORCEMENT:

- (A) The covering measured from the surface of the concrete to the face of any reinforcing bars shall be as follows, except as otherwise shown:
- (1) Concrete cast against and permanently exposed to earth = 3"
- (2) All others unless otherwise noted = 2"
- (B) Reinforcing bars shall be detailed in accordance with the latest edition of the AASHTO LRFD bridge design specifications unless otherwise noted.
- (C) Minimum clear spacing between parallel bars shall be 1½ times the diameter of bars (for non bundled bars). In no case shall the clear distance between the bars be less than 1½ times the maximum size of the coarse aggregate or 1½".
- (D) All dimensions relating to reinforcing bars are to centers of bars unless otherwise noted.
- (E) Reinforcing bars shall be securely tied at all intersections and lap splices except where the spacing of intersections is less than one foot in each direction, in which case alternate intersections shall be tied.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

INDEX, SYMBOLS, ABBREVIATIONS,
and BRIDGE GENERAL NOTES

KAHUAPAANI STREET RESURFACING
Moanalua Freeway to Salt Lake Boulevard
Federal Aid Project No. STP-7241(002)

Scale: As Noted

Date: May, 2012

SHEET No. Q1 OF 21 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	STP-7241(002)	2012	42	81

CONSTRUCTION NOTES:

- (A) The Contractor shall verify all dimensions and site conditions and shall report any discrepancies in writing to the Engineer before commencing work or ordering materials.
- (B) The Contractor shall verify all site condition and not rely upon these plans for existing, dimensions, elevations and azimuths, stream channel location, roads, roadway gutters, curbs and sidewalks, etc. Conditions may differ from those shown.
- (C) The Contractor shall be solely responsible for the protection of adjacent properties, utilities and existing and new structures from damage due to construction. Repairing any damage shall be at the Contractor's own expense, to the satisfaction of the Engineer.
- (D) The Contractor shall verify the location of all utility lines and notify the respective owners before commencing with excavation, and any temporary piling or sheeting.
- (E) Except as otherwise noted, all vertical dimensions are measured plumb.
- (F) For concrete finish see Standard Specifications and Special Provisions.
- (G) Construction joints may be relocated or additional ones added subject to the approval of the Engineer.
- (H) Unless otherwise noted, all exposed concrete edges shall be chamfered 3/4 " x 3/4 ".
- (I) The Contractor shall verify the location and size of all existing reinforcing bars prior to drilling.
- (J) Drilled holes in existing concrete for reinforcing steel dowels shall not be left unfilled for more than 8 hours. Epoxy in drilled holes shall be able to develop the full strength of the dowels prior to pouring concrete around reinforcing steel dowels. Follow all manufacturer's recommendations for dowel and epoxy.
- (K) Contractor shall unplug, clean and maintain existing drains during construction of the project. This work shall be incidental to the various Contract items.
- (L) Location of drilled holes in plans are approximate. Prior to placing holes in concrete, the Contractor shall locate all reinforcing steel, anchor bolts, thru bolts holes, etc. and adjust the location of the drilled holes to clear of them. Final hole locations are subject to the approval of the Engineer.

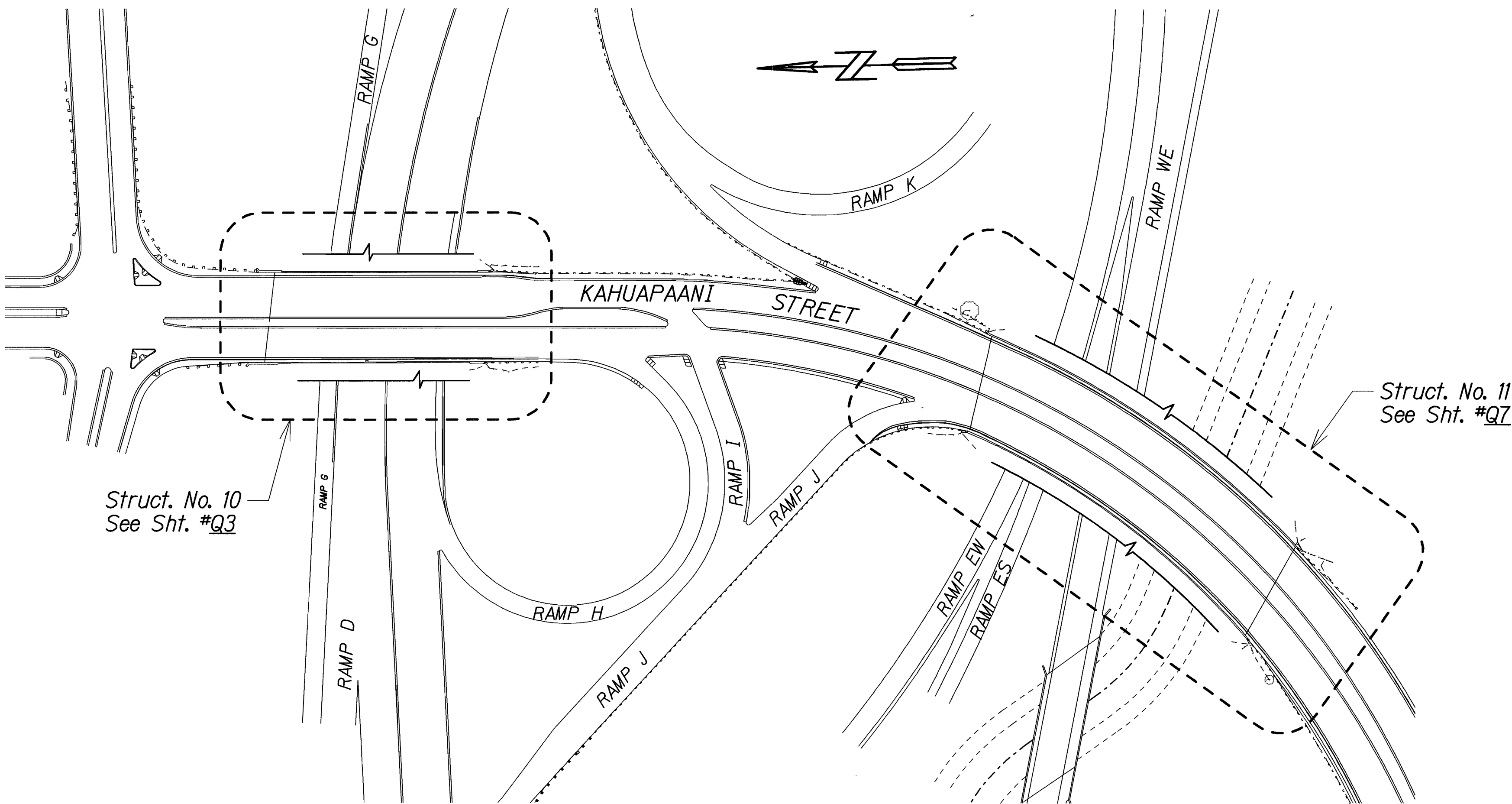
- (M) Bolts and nuts for guardrail connections shall bear flush against concrete surfaces. Wedge washers shall be used as required.
- (N) When only portions of concrete are to be demolished. The intersections between the demolished concrete and the concrete that is to remain shall have a 3/4 inch deep sawcut around the entire perimeter of the demolished area.
- (O) At the time concrete is placed, reinforcing shall be free from mud, oil, laitance or other coatings adversely affecting bond capacity.
- (P) The concrete surfaces which new concrete is poured against shall be roughened to a full amplitude of 1/4 of an inch and cleaned.
- (Q) All existing reinforcing shall remain in place and shall not be damaged in any way unless otherwise noted.

CONSTRUCTION NOTES (CONT.):

- (R) All existing reinforcing that is to remain in place shall have a minimum concrete cover of 2".
- (S) The Contractor shall restore the bridge name inscribed in railing when it is obstructed or removed. This work shall be considered incidental to the cost of the end posts.
- (T) New concrete surfaces shall match the finish of the existing structure any reveals, patterns, or decorative features shall also match the existing structure.
- (U) Demolition and removal of existing structures shall be considered incidental to the various contract items.

GENERAL:

- (A) All items noted incidental will not be paid for separately.
- (B) Standard Plans refer to all structures in general, except for modifications as may be required for special conditions. For such modifications refer to the corresponding detailed drawings.
- (C) Plans of the existing bridges are available for review from the Highways Design Branch located at the State Department of Transportation, Highways Division Kakuhihewa Building, Room 609, 601 Kamokila Boulevard, Kapolei, HI 96707 (phone number 692-7586).
- (D) Temporarily relocate highway lighting conduit, pullboxes, etc. obstructing construction as needed. This work shall be considered incidental to the various contract items.



LOCATION PLAN
Scale: 1 " = 100'-0"

ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
NOTE BOOK	TRACED BY	XXX 2011
N. XXXXXXXX	DESIGNED BY	XXX 2011
	QUANTITIES BY	XXX 2011
	CHECKED BY	XXX 2011

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

BRIDGE GENERAL NOTES and
LOCATION PLAN

KAHUAPAANI STREET RESURFACING
Moanalua Freeway to Salt Lake Boulevard
Federal Aid Project No. STP-7241(002)

Scale: As Noted
Date: May, 2012

SHEET No. Q2 OF 21 SHEETS