

STANDARD PLANS SUMMARY

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-H1-1(235)	1999	2	84

STANDARD PLAN NO.	TITLE	DATE
B-01 ●	Notes and Miscellaneous Details	07/01/86
B-02		
B-03	Typical Structure Excavation and Backfill Pay Limits	07/01/86
B-04		
B-05		
B-06	Concrete Box Girder	07/01/86
B-07	Concrete Box Girder	07/01/86
B-08	Concrete Box Girder	07/01/86
B-09		
B-10		
B-11		
B-12	Prestressed Concrete Piles	r07/16/90
B-13	Prestressed Concrete Piles	r07/16/90

D-01	Chain Link Fence With Toprail	r03/06/87
D-02	Chain Link Fence Without Toprail	r07/26/90
D-03	Wire Fence With Metal Posts	07/01/86
D-04	Typical Details of Curbs and/or Gutters	07/01/86
D-05	Typical Details of Reinforced Concrete Drop Driveway	07/01/86
D-06 ●	Centerline and Reference Survey Monument	07/01/86
D-07	Street Survey Monument	07/01/86
D-08	Landscaping Shrub and Tree Planting	07/01/86
D-09	Field Office	07/01/86
D-10	Field Office	07/01/86
D-11	Project Site Laboratory	07/01/86
D-12	Project Site Laboratory	07/01/86
D-13	Field Office & Project Site Laboratory	07/01/86

H-01	Type A, B, C and D Catch Basin	07/01/86
H-02	Type A1, B1, C1 and D1 Catch Basin	07/01/86
H-03	Type A2, B2, C2 and D2 Catch Basin	07/01/86
H-04	Typical Reinforcing Details for Catch Basins	07/01/86
H-05	Type A, B and C Storm Drain Manhole	07/01/86
H-06	Type D and E Storm Drain Manhole	07/01/86
H-07	Type F Storm Drain Manhole	07/01/86
H-08	Catch Basin and Manhole Casting	07/01/86
H-09	Type A-9 and A-9P Frames and Grates	07/01/86
H-10	Type A-9B Frames and Grates	07/01/86
H-11 ●	Type 61614 and 61214 Grated Drop Inlet	07/01/86
H-12	Type 61616 Grated Drop Inlet	07/01/86
H-13 ●	61214, 61614 & 61616 Steel Frames and Grates	07/01/86
H-14 ●	61214B Steel Frame and Grates	07/01/86
H-15 ●	61614B Steel Frame and Grates	07/01/86
H-16 ●	Concrete and Cement Rubble Masonry Structures	r10/16/90
H-17	Inlet Structures	r10/16/90
H-18	Flared End Section for Culverts	07/01/86
H-19	Outlet Structures	r02/15/91
H-20	Concrete Spillway Inlet	07/01/86
H-21	18" Slotted C.M.P. Drain	07/01/86
H-22	C.M.P. Coupling Details Standard Joint	r10/16/90
H-23	Hat Shaped Coupling Band	r10/16/90

STANDARD PLAN NO.	TITLE	DATE
TE-01 ●	Miscellaneous Sign Details	07/01/86
TE-02 ●	Galvanized Flanged Channel Sign Post Mounting	07/01/86
TE-03 ●	Galvanized Square Tube Sign Post Mounting	07/01/86
TE-04 ●	Regulatory Signs	r09/01/87
TE-05 ●	Warning Signs	07/01/86
TE-06 ●	Miscellaneous Signs	r11/03/89
TE-07	Reserved	07/01/86
TE-08 ●	Construction Signs	r09/01/87
TE-09	Miscellaneous Intersection Signs	r03/06/87
TE-10	Reserved	07/01/86
TE-11	Bike Route Sign and Supplementary Plates	07/01/86
TE-12 ●	State Route Marker and Auxiliary Markers	07/01/86
TE-13 ●	Interstate Route Marker	07/01/86
TE-14 ●	State Route Marker and Border Detail for Guide Signs	07/01/86
TE-15 ●	Route Marker Assemblies	07/01/86
TE-16 ●	Miscellaneous Reflector Markers	07/01/86
TE-17 ●	Type II Object Markers	07/01/86
TE-18 ●	Mileposts	07/01/86
TE-19	Reserved	07/01/86
TE-20	Overhead Sign Supports	07/01/86
TE-21	Overhead Sign Support, Box Truss Type, Aluminum	07/01/86
TE-22	Foundation Details and Schedules	07/01/86
TE-23 ●	Supports for Ground Mounted Guide Sign	r11/03/89
TE-24 ●	Breakaway Sign Supports for Ground Mounted Guide Signs	07/01/86
TE-25	Laminated Aluminum Sign Panels (Overhead)	07/01/86
TE-26 ●	Laminated Aluminum Sign Panels (Ground Mounted)	07/01/86
TE-27 ●	Solid Aluminum Extruded Sign Panel and Accessory Details	07/01/86
TE-28	Guide Signs Luminaire Mountings	07/01/86
TE-29	Reserved	07/01/86
TE-30 ●	Raised Pavement Markers and Striping	r05/09/90
TE-31 ●	Miscellaneous Pavement Markings	r05/09/90
TE-32 ●	Miscellaneous Pavement Markings	r05/09/90
TE-33	Miscellaneous Pavement Markings	r11/03/89
TE-34	Reserved	07/01/86
TE-35 ●	Pavement Alphabets, Numbers & Symbols	07/01/86
TE-36 ●	Pavement Alphabets, Numbers & Symbols	07/01/86
TE-37	Reserved	07/01/86
TE-38	Traffic Signal System, Miscellaneous Details	r11/03/89
TE-39	Traffic Signal System, Miscellaneous Details	07/01/86
TE-40	Loop Detectors	r11/03/89
TE-41	Pullboxes	07/01/86
TE-42	Type III Traffic Signal Standard	07/01/86
TE-43	Concrete Pullbox (2' x 3')	07/01/86
TE-44	Reserved	07/01/86

STANDARD PLAN NO.	TITLE	DATE
TE-45	Reserved	07/01/86
TE-46	Reserved	07/01/86
TE-47	Reserved	07/01/86
TE-48	Reserved	07/01/86
TE-49	Reserved	07/01/86
TE-50	Metal Guardrail	r03/06/87
TE-51	Metal Guardrail	r09/01/87
TE-52	Metal Guardrail with Rubrail	r11/03/89
TE-53	Metal Guardrail with Rubrail at Obstruction	r09/01/87
TE-54	Beam Type Guardrail with Rubrail at Obstruction (Shoulder Installation)	r11/03/89
TE-55	Metal Guardrail Connection to Concrete Barrier	r11/03/89
TE-56	Concrete Barrier Transition	07/01/86
TE-57	Guardrail Type 3, Thrie Beam	r11/03/89
TE-57A	Guardrail Type 3, Modified Thrie Beam	11/03/89
TE-58	Approach End Flare, One & Two Way Roadway	07/01/86
TE-59	Trailing End Flare, One & Two Way Roadway	r11/03/89
TE-60	Anchor Block Details	07/01/86
TE-61	Breakaway Cable Terminal (BCT)	r11/03/89
TE-62	Breakaway Cable Terminal (BCT)	r09/01/87
TE-63	Guardrail Type 4 (Rigid Barrier)	r09/01/87
TE-64 ●	Portable Concrete Barrier	r11/03/89
TE-65	Guardrail Type 4, Miscellaneous	r09/01/87
TE-66 ●	Barricades	07/01/86
TE-67 ●	Delineation & Pavement Markings at Bridges	07/01/86
TE-68	Wheelchair Ramps	r11/03/89
TE-69	Wheelchair Ramps	r11/03/89

DATE: 6/10/98
SCALE: 1" = 1
FILE: 9814-21

PM: BST/TC
OPER: SHA,CDK,*FAI
REVISED: 04/23/99

SURVEY PLOTTED BY: _____
DRAWN BY: _____
DESIGNED BY: _____
CHECKED BY: _____

ORIGINAL PLAN _____
NOTEBOOK _____
No. _____

02/15/91 10/16/90 07/26/90 07/16/90 05/09/90 11/03/89	REVISED H-19 REVISED H-16,H-17, H-22 & H-23 REVISED D-02 REVISED B-12,B-13 REVISED TE-30,TE-31 & TE-32 REVISED TE-06,TE-23, TE-30, TE-31, TE-32, TE-33, TE-38, TE-40, TE-52, TE-54, TE-55, TE-57, TE-59, TE-61, TE-64, TE-68 & TE-69, ADDED TE-57A REVISED TE-04,TE-06, TE-08, TE-32, TE-51, TE-53, TE-54, TE-55, TE-57, TE-59, TE-62, TE-63, TE-65 & TE-69 REVISED D-01, TE-09, TE-40, TE-50, TE-51, TE-57, TE-59, TE-61, TE-63 & TE-64
09/01/87	
03/06/87	
DATE	REVISION

NOTE:
STANDARD PLANS APPLICABLE TO THIS
PROJECT ARE INDICATED BY A " ● "
NEXT TO THE STANDARD PLAN NO.
(FOR EXAMPLE: D-07 ●)

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

STANDARD PLANS SUMMARY

INTERSTATE ROUTE H-1 RESURFACING
Kunia IC to Waikele Stream Bridge
F.A.I. Project No. NH-H1-1(235)

No Scale Date: Apr. 30, 1999

SHEET NO. 1 OF 1 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-H1-1(235)	1999	3	84

LEGEND

	H-1 Freeway Pavement Weakened Areas		Existing Fire Hydrant
	Ramp KO Reconstructed Pavement Areas		New Fire Hydrant
	Bridge Approach Reconstruction		Existing Sewer Line (Size as Indicated)
	Reconstructed Shoulder Lane		New Sewer Line (Size as Indicated)
	Resurfacing Limits		Existing Sewer Manhole
	Existing Electrical Line		Adjusted Sewer MH Frame/Cover
	New Electrical Line		New Sewer Manhole
	Existing Joint Pole		Existing Gas Line (Size as Indicated)
	Existing Power Pole		New Gas Line (Size as Indicated)
	Existing Electric Manhole		Existing Gas Valve Box
	Adjusted Elec. MH Frame/Cover		Adjusted Gas Valve Box
	New Electric Manhole		New Gas Valve Box
	Existing Telephone Line		Existing Gas Manhole
	New Telephone Line		Adjusted Gas MH Frame/Cover
	Existing Telephone Pole		New Gas Manhole
	Existing Telephone Manhole		Existing Monument
	Adjusted Tele. MH Frame/Cover		Adjusted Monument
	New Telephone Manhole		New Monument
	Existing Signal Corps Line		Existing Drain Line (Size as Indicated)
	New Signal Corps Line		New Drain Line (Size as Indicated)
	Existing TV Cable		Existing Storm Drain Manhole
	New TV Cable		Adjusted Storm Drain MH Frame/Cover
	Existing Water Line (Size as Indicated)		New Storm Drain Manhole
	New Water Line (Size as Indicated)		Existing Grated Drop Inlet
	Existing Water Manhole		New Grated Drop Inlet
	Adjusted Water MH Frame/Cover		Existing Catch Basin
	New Water Manhole		New Catch Basin
	Existing Water Air Valve		Existing Traffic Sign
	Adjusted Water Air Valve		New Traffic Sign
	New Water Air Valve		Existing Highway Lighting Standard
	Existing Water Valve Box		New Highway Lighting Standard
	Adjusted Water Valve Box		
	New Water Valve Box		
	Existing Water Meter		
	Adjusted Water Meter		
	New Water Meter		

THIS WORK WAS PREPARED BY
ME OR UNDER MY SUPERVISION
Benjamin S. Tanaka

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

GENERAL NOTES AND LEGEND

INTERSTATE ROUTE H-1 RESURFACING
Kunia IC to Waikale Stream Bridge
F.A.I. Project No. NH-H1-1(235)

No Scale Date: Apr. 30, 1999

GENERAL NOTES

- The scope of work for this project consists of repairing and rehabilitating the existing pavement by cold planing, reconstructing weakened pavement and asphaltic concrete paving; surface drainage improvements and culvert/drainage structures; removing and installing guardrails; and installing signs, and pavement markings; highway lighting and other incidentals.
- The Contractor is reminded of the requirements of the Subsection 108.01 – Subletting of Contract, which requires him to perform work amounting to not less than 50 percent of the total contract cost less deductible items. Non-compliance with this Subsection may be grounds for rejection of bid.
- The Contractor’s attention is directed to the following Sections of the Special Provisions: Subsection 107.13 – Public Convenience and Safety; Subsection 107.21 – Contractor’s Responsibility For Utility Property And Services; and Section 645 – Traffic Control.
- At the end of each day’s work, the Contractor shall remove all equipment and other obstructions to permit free and safe passage of public traffic.
- The existence and location of underground utilities, manholes, monuments and structures as shown on the plans are from the latest available data but the accuracy is not guaranteed. The encountering of other obstacles during the course of work is possible. The Contractor shall be held liable for any damages incurred to the existing facilities and/or improvements as a result of his operations.
- The exact locations and limits or areas to be filled with leveling course, reconstructed and cold planed shall be determined in the field by the Engineer.
- The Contractor shall notify in writing, the Oahu Transit Services, Inc. Roads Supervision Office, 811 Middle St. Hon. HI 96819 (ph. #848-4571) seven (7) days prior to any paving operations.
- The Contractor shall notify the Engineer in writing, two (2) weeks prior to starting paving operations.
- The Contractor shall remove and dispose of all existing raised pavement markers and preformed pavement marking tape prior to the overlaying Asphalt Concrete. This work shall be considered incidental to Asphalt Concrete Pavement, Mix IV and will not be paid for separately.
- Smooth riding connections shall be constructed at all limits of resurfacing, including the beginning and end of project, and connecting approaches as shown on the plans and/or as directed by the Engineer.
- Existing drainage system will be functional at all times during construction. The Contractor is to furnish materials, equipment, labor, tools and incidentals necessary to maintain flow. This work shall be considered incidental to various contract items.
- Earth swale shall be graded to drain and will be paid under Roadway Excavation.
- All saw cutting work shall be considered incidental to the various contract items.
- The Contractor shall clean and remove any accumulation of aggregates and debris along the roadside within 10 feet of the edge of pavement. This work shall be considered incidental to the various contract items.

15. Base Course shall be either Plant Mix Asphalt Concrete Base Course, Recycled Plant Mix Asphalt Concrete Base Course or Plant Mix Glassphalt Concrete Base Course. Selection will be based on the least expensive base course alternative.

COLD PLANING NOTES

- All saw cutting work shall be considered incidental to the various contract items and will not be paid for separately.
- The exact locations and limits or areas to be cold planed will be determined in the field by the Engineer.
- In cold planing the pavement over an existing structure, the Contractor shall exercise care not to damage any portion of the structure, especially the slab, joints, drain pipes or reinforcement. Any damage to the structure during the cold planing operations shall be repaired by the Contractor at no cost to the State. Repair work shall be as directed by the Engineer, The Contractor shall verify the existing pavement thickness by hand digging at various locations. This work shall be considered incidental to cold planing and will not be paid for separately.
- If a vertical pavement drop-off exists at the end of each day’s cold planing and paving, the Contractor shall provide a wedge with a 48:1 minimum transition taper for transverse drop-off, and no steeper than 6:1 along the lane line for longitudinal drop-off, as accepted by the Engineer. This work shall be considered incidental to Cold Planing.
- Cold Planing equipment shall not be used in removing existing A.C. Pavement over concrete gutter unless otherwise indicated. This work shall be incidental to Cold Planing.

ABBREVIATIONS

A.C., a.c.	Asphalt Concrete
	Baseline
e.p.	Existing edge of pavement
e.s.	Existing edge of shoulder
E.P.	New Edge of Pavement
E.S.	New Edge of Shoulder
S.E.	Super Elevation
P.C.	Point of Curvature
P.C.C.	Point of Compound Curve (for Alignment)
P.C.C.	Portland Cement Concrete
P.I.	Point on Intersection
P.O.C.	Point on Curvature
P.T.	Point of Tangency
R	Radius
I.B., i.b.	Inbound
O.B., o.b.	Outbound

SURVEY PLOTTED BY _____ DATE _____

DRAWN BY _____

DESIGNED BY _____

CHECKED BY _____

ORIGINAL PLAN

NOTEBOOK

No. _____

DATE: 01/27/99

SCALE: 1" = 1'

FILE: 9814-68

PM: BST

OPER: SHA*FAI

REVISED: 03/18/99

NPDES GENERAL NOTES

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-H1-1(235)	1999	4	84

A. Erosion and Sediment Control Inspection and Maintenance Practices:

- (1) The Contractor shall inspect the erosion and sediment control measures at least once a week or after 0.05 inches of rainfall, or greater.
- (2) The Contractor shall maintain the erosion and sediment control measures according to the Contract. If a repair is necessary, the Contractor shall initiate the repairs within twenty-four (24) hours after the inspection such as:
- (a) When sediment build-up reaches one-third (1/3) the height of the silt fence, the Contractor shall remove and dispose of the sediment build-up from the silt fence.
- (b) When the depth of the sediment basin reaches ten percent (10%) of the design capacity, the Contractor shall remove and dispose of the sediment build-up.
- (c) When tears are found on the silt fence, the Contractor shall replace the fabric.
- (d) The Contractor shall check to see if the fabric is securely attached to the fence posts and to see that the fence posts are firmly in the ground.
- (e) The Contractor shall inspect the diversion dike and repair the breaches.
- (f) The Contractor shall inspect temporary and permanent seeding and planting for bare spots, washouts, and healthy growth.

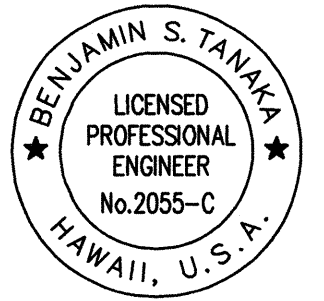
- (3) The Contractor shall have its personnel make a maintenance inspection promptly after each inspection. The Contractor shall select a minimum of three (3) personnel who will be responsible for inspection, maintenance, repair activities, and filling out the inspection and maintenance report. Personnel selected for the inspection and maintenance responsibilities will receive training from the Contractor. The Contractor shall train these personnel in the inspection and maintenance practices necessary for keeping the erosion and sediment used onsite according to the contract. The maintenance inspection reports shall include duration and estimated volume of storm water discharge.

(B) Submittal Requirements:

- (1) Construction activities of five (5) acres or more.
- (a) Storm water discharge into State waters due to construction activities of five (5) acres or more, will require an NPDES from the Department of Health (DOH). The Contractor shall submit to the Engineer four (4) sets of Site Specific Best Management Plans (BMP). The Plans shall be submitted no later than thirty (30) calendar days after the award of Contract.
- (b) No construction activities will be authorized until the Contractor's Site-Specific BMP has been approved by the Highways Division.
- (2) Construction activities dewatering and/or hydrotesting water.
- (a) Discharges into State waters due to dewatering and/or hydrotesting will require NPDES Permit(s) from DOH. If the Contractor options to discharge dewatering and/or hydrotesting effluent into State waters, the Contractor shall submit to the Engineer four (4) sets of Site-Specific Dewatering and/or Hydrotesting BMP, and four (4) copies of the Quality of Discharge Test results. The Plans and test results shall be submitted no later than thirty (30) calendar days after the award of the contract.
- (b) No dewatering and/or hydrotesting activities will be authorized until the receipt of the NPDES Permit(s) from DOH.

DATE	6/20/98
SCALE	1" = 1'
FILE	9814-23
SURVEY PLOTTED BY	
DRAWN BY	
DESIGNED BY	
CHECKED BY	
ORIGINAL PLAN	
NOTED BY	
No.	

PM: BST
OPER: SHA, CDK*FAI
REVISED: 04/23/99

 <p>THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION</p> <p><i>Benjamin S. Tanaka</i></p>	<p>STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION</p> <p>NPDES GENERAL NOTES</p> <p>INTERSTATE ROUTE H-1 RESURFACING Kunia IC to Waialeale Stream Bridge F.A.I. Project No. NH-H1-1(235)</p> <p>No Scale Date: Apr. 30, 1999</p> <p>SHEET NO. 1 OF 1 SHEETS</p>
--	---