

STANDARD PLANS SUMMARY

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-083-(131)	1995	2	39

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

ORIGINAL PLAN	DATE
147-95	
DESIGNED BY	
CHECKED BY	
NOTED BY	
DATE	

02/15/91	REVISED STANDARD PLAN H-19
10/16/90	REVISED STANDARD PLANS H-16, H-17, H-22 & H-23.
07/26/90	REVISED STANDARD PLANS D-02.
07/16/90	REVISED STANDARD PLANS B-12, B-13.
05/09/90	REVISED STANDARD PLANS TE-30, TE-31, & TE-32.
11/03/89	REVISED STANDARD PLANS 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 TO STANDARD PLANS
09/01/87	REVISED STANDARD PLANS 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.
03/06/87	REVISED STANDARD PLANS D-01, TE-09, TE-40, TE-50, TE-51, TE-57, TE-59, TE-61, TE-63 & TE-64.
DATE	REVISION

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

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION  
**STANDARD PLANS SUMMARY**  
**KAMEHAMEHA HIGHWAY RESURFACING**  
**Makao Road to Naniloa Loop and**  
**Kawela Camp Road to Vicinity of Kuilima Drive**  
**Federal Aid Project No. NH-083-(131)**  
Date: July, 1994  
SHEET No. 1 OF 1 SHEETS



FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-083-1(31)	1995	3	39

GENERAL NOTES

1. The scope of work for this project consists of resurfacing approximately 24,700 linear feet of Kamehameha Highway from Makao Road to Naniloa Loop and Kawela Camp Road to the Vicinity of Kuilima Drive. Improvements consist of resurfacing existing pavement and shoulder, roadway and shoulder widening, adjusting existing monuments and valve boxes, and installing guardrail, pavement markers and striping.
2. The Contractor is reminded of the requirements of 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.
3. 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.
4. 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.
5. 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.
6. 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.
7. The Contractor shall notify the Engineer in writing, two (2) weeks prior to starting paving operations.
8. The Contractor shall remove and dispose of all existing raised pavement markers prior to the overlaying of Asphalt Concrete. This work shall be considered incidental to Asphalt Concrete Pavement, Mix No. IV and will not be paid for separately.
9. All holes, depressions and wheel ruts shall be filled and compacted with Asphalt Concrete Pavement, Mix No. V prior to resurfacing. This work will be paid for under Asphalt Concrete Pavement, Mix No. IV.
10. Smooth riding connections shall be constructed at all limits of resurfacing, including the beginning and end of project, connecting approaches, side streets and driveways as shown on the plans and/or as directed by the Engineer.
11. Dressing of shoulder shall consist of clearing, grubbing, grading, reshaping and compacting the unpaved shoulders with suitable material as shown on the plans and/or as directed by the Engineer. This work shall be considered incidental to the various contract items.
12. 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.

13. The Contractor shall provide for access to and from all existing side streets and driveways at all times.
14. All saw cutting work shall be considered incidental to Cold Planing and will not be paid for separately.
15. The exact locations and limits or areas to be cold planed shall be determined in the field by the Engineer.
16. The Contractor shall lower manholes prior to Cold Planing, backfill with hot mix, and re-adjust after final paving when cold planing more than 1½". Covering of lowered manholes shall be incidental to Manhole Adjustments.
17. The joints in the new slabs shall be located a minimum of ten (10) feet and a maximum of 15 feet from the nearest joint.
18. The Contractor is directed to Sub-Section 411.03(S), pertaining to when pavement is allowed to be opened to traffic.

LEGEND

- Resurfacing Limits
- Existing Electrical Line
- Existing Power Pole
- Existing Joint Pole
- Adjusted Hawaiian Electric Manhole
- Adjusted Hawaiian Electric Box
- Existing Hawaiian Electric Handhole
- Existing Pull Box
- Existing Telephone Line
- Existing Telephone Pole
- Existing Hawaiian Telephone Box
- Existing Signal Corps Cable
- Existing 16" Water Line
- Existing Water Manhole
- Adjusted Water Manhole
- Existing Water Valve
- Adjusted Water Valve
- Existing Water Air Valve
- Existing Water Meter
- Adjusted Water Meter
- Existing Fire Hydrant
- Existing 4" Gas Line
- Existing Gas Valve
- Existing 12" Drain Line
- Existing Grated Drop Inlet
- Existing Traffic Sign With 1 Post
- Existing Traffic Sign With 2 Posts
- Existing Single Metal Guardrail
- New Single Metal Guardrail
- Existing Monument
- Adjusted Monument

ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
NOTE BOOK	DRAWN BY G. Althoff/J.M.	12/7/95
ddt/jason	DESIGNED BY B. Hironaka/G. Okano	
Handwritten	CHECKED BY	

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

GENERAL NOTES AND LEGEND

KAMEHAMEHA HIGHWAY RESURFACING  
Makao Road to Naniloa Loop and  
Kawela Camp Road to Vicinity of Kuilima Drive  
Federal Aid Project No. NH-083-1(31)

Date: July, 1994

SHEET No. 1 OF 2 SHEETS

HECO NOTES

- 1. The location of HECO's overhead and underground facilities shown on the plans are from existing records with varying degrees of accuracy and are not guaranteed as shown. The Contractor shall exercise extreme caution whenever construction crosses or is in close proximity of underground lines and shall maintain adequate clearance when operating equipment within or under any overhead lines.
- 2. The Contractor shall comply with the State of Hawaii's Occupational Safety and Health Law (DOSH).
- 3. The Contractor shall obtain an excavation permit from HECO's Mapping and Records Division located at 820 Ward Avenue, 4th floor, two weeks prior to starting construction. Please refer to our request number at that time.
- 4. For verification of underground lines or for assistance in supporting and protecting these lines, the Contractor shall call HECO's Underground Division at 543-7345 a minimum of 72 hours in advance.
- 5. When trench excavation is adjacent to or beneath our existing structures or facilities, the Contractor is responsible for:
  - a) Sheeting and bracing the excavation to prevent slides, cave-ins, and settlements.
  - b) Protecting existing structures or facilities with beams, struts, or under-pinnings.
- 6. For pole bracing instructions, the Contractor shall call the HECO District Superintendent at (Koolau/261-6085, Waiau/543-4223, Ward/543-7745) a minimum of 72 hours in advance.
- 7. Any work required to relocate HECO facilities shall be done by HECO and the Contractor shall be responsible for all coordination, and for possible costs if applicable.
- 8. Should it become necessary to temporarily relocate any of HECO facilities to enable the Contractor to perform his work in a safe and expeditious manner in fulfilling his contract obligations, these temporary relocations will be done by HECO, or by the Contractor under HECO's supervision, with all costs borne by the Contractor.
- 9. Any unforeseen conflict that would result in the redesign or relocation (either temporary or permanent) of HECO's electrical facilities may be cause for lengthy delays. To avoid such delays, the Contractor must notify HECO of the conflict a minimum of 30 days prior to the start of construction.
- 10. Any damage to HECO's facilities will be reported immediately to HECO's Trouble Dispatcher at 543-7874.
- 11. All HECO overhead and underground facilities shall be protected at all times by the Contractor during construction. Costs for damages to HECO facilities shall be borne by the Contractor. This repair work shall be done by HECO, or by the Contractor under HECO's supervision.
- 12. The Contractor shall indemnify, defend and hold harmless HECO from and against all losses, damages, claims and actions, all expenses incidental to such losses, damages, claims or action, based upon or arising out of damage to property or injuries to persons, or other tortious acts caused or contributed to by Contractor or anyone acting under its direction or control or on its behalf; provided Contractor's indemnity shall not be applicable to any liability upon the sole negligence of HECO.

WATER NOTES

- 1. Unless otherwise specified, all materials and construction of water system facilities and appurtenances shall be in accordance with the City and County of Honolulu Board of Water Supply's "WATER SYSTEM STANDARDS" VOLUME 1, DATED 1985, THE "APPROVED MATERIAL LIST AND STANDARD DETAILS FOR WATER SYSTEM CONSTRUCTION", VOLUME 2, DATED 1985, THE "WATER SYSTEM EXTERNAL CORROSION CONTROL STANDARDS", VOLUME 3, DATED 1991, and all subsequent amendments and additions.
- 2. All plans approved by the Board of Water Supply are based solely on the adequacy of the water supply. All other features of the water system, such as lines, grades, fittings, drainage, etc., and other features of improvements shall not be the responsibility of the Board of Water Supply.
- 3. The existence and location of underground utilities and structures as shown on the plans are from the latest available data but is not guaranteed as to the accuracy or the encountering of other obstacles during the course of the work. The Contractor shall be responsible and pay for all damages to existing utilities. The Contractor shall not assume that where no utilities are shown, that none exist.
- 4. Re-approval shall be required if this project is not under construction within a period of two years.
- 5. The Contractor shall notify BWS Planning and Engineering Division, Construction Section, one week prior to commencing work on the water system.
- 6. The Contractor shall verify all existing service lateral locations whether shown or not shown on plans prior to commencing with any of the work and shall not assume that where no services are shown none exist.
- 7. The Contractor shall adjust all manhole frames/valve boxes within the resurfaced area. Prior to resurfacing, BWS will initially locate all water manholes/valve boxes that will require adjustments. The Contractor shall then be responsible for "referencing" these manholes/valve boxes to facilitate the adjustments. The cost for adjustments shall be made at their respective unit prices in the Bid based on the actual number adjusted. Cost for referencing shall be incidental and shall not be paid for directly. Any additional request to BWS to again locate the manholes/valve boxes shall be done at the expense of the Contractor. (BWS will charge and bill the Contractor for all cost for said additional work.)
- 8. Any adjustments to the existing water system required during construction to meet requirements of BWS Standards, whether shown on the plans or not, shall be done by the Contractor at no cost to the Board.
- 9. Prior to any excavating, the Contractor shall verify in the field the location of existing water mains and appurtenances.

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HAWAII	HAW.	NH-083-1(31)	1995	4	39

ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
	DRAWN BY	12/12/94
NOTE BOOK	DESIGNED BY	
	CHECKED BY	

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

HECO NOTES & WATER NOTES

KAMEHAMEHA HIGHWAY RESURFACING

Makao Road to Naniloa Loop and

Kawela Camp Road to Vicinity of Kuilima Drive

Federal Aid Project No. NH-083-1(31)

Date: July, 1994

SHEET No. 2 OF 2 SHEETS