

STANDARD PLANS SUMMARY

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	IM-STP-0750(10)	1999	2	97

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	07/01/86
B-13	Prestressed Concrete Piles	07/01/86

D-01	Chain Link Fence With Toprail	r03/06/87
D-02 ●	Chain Link Fence Without Toprail	07/01/86
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	07/01/86
H-17	Inlet Structures	07/01/86
H-18	Flared End Section for Culverts	07/01/86
H-19	Outlet Structures	07/01/86
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	07/01/86
H-23	Hat Shaped Coupling Band	07/01/86

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	r11/03/89
TE-31 ●	Miscellaneous Pavement Markings	r11/03/89
TE-32 ●	Miscellaneous Pavement Markings	r11/03/89
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	r11/03/89
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	r7/18/94
TE-69 ●	Wheelchair Ramps	r7/18/94

NOTE:
STANDARD PLANS APPLICABLE TO THIS PROJECT ARE INDICATED BY A "●" NEXT TO THE STANDARD PLAN NO. (B-01 ●)

05/09/93	REVISED STANDARD PLANS TE-30, TE-31 AND TE-32
01/27/92	ADDED STANDARD PLANS D-05, H-10, H-14 AND H-15. DELETED STANDARD PLANS B-12, B-13 AND H-13.
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

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

STANDARD PLANS SUMMARY

KUNIA ROAD WIDENING; AND
H-1. KUNIA I.C. RAMP KO WIDENING
F.A.I. PROJECT NO. IM-STP-0750(10)

SCALE: AS NOTED DATE: APRIL 1999

SHEET No. 1 OF 1 SHEETS

ORIGINAL PLAN	DATE
NOTED BY	
DESIGNED BY	
QUANTITIES BY	
CHECKED BY	

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	IM-STP-0750(10)	1999	3	97

NOTES FOR CONSTRUCTION WITHIN STATE RIGHT-OF-WAY

- The scope for this project consists of grading, paving, installing highway lighting, drainage and traffic signal system, signing, pavement markings, chain link fencing, gutter, sidewalk, guardrail, installing telephone, electrical and cable t.v. utilities and installing and relocating overhead electrical power lines.
- The contractor shall obtain a lane closure permit from the State's Highways District Engineer at 727 Koko Street, phone: 831-6712, prior to commencement of work within State Right-of-Way.
- Construction and restoration of all existing highway facilities within State Right-of-Way shall be done in accordance with all applicable sections of the current "Standard Specifications For Road and Bridge Construction", "Specification for Installation of Miscellaneous Improvements Within State Highways", and the Standard Plans and Special Provisions of the State Highways Division.
- All lanes shall be opened to traffic during the morning peak hours from 6:30 a.m. to 8:30 a.m., and during the afternoon peak hours from 3:00 p.m. to 6:00 p.m., and during off-work hours. Only one lane of Kunia Road shall be closed at any other time.
- The contractor shall provide, install, and maintain all necessary signs, lights, flares, barricades, markers, cones, and other protective facilities and shall take all necessary precautions for the protection and for the convenience and safety of public traffic. All such protective facilities and precautions to be taken shall conform with the "Administrative Rules of Hawaii Governing The Use of Traffic Control Devices at Work Sites on or Adjacent to Public Streets and Highways" adopted by the Director of Transportation, and the current U.S. Federal Highway Administration's "Manual on Uniform Traffic Control Devices for Streets and Highways, Part VI - Traffic Control for Highway Construction and Maintenance Operations". If lane closures are required during construction, a Traffic Control Plan shall be incorporated into the construction plans and must be approved by the Division prior to the issuance of the permit.
- The minimum pavement structure shall consist of:
4 1/2" Asphalt Concrete Mix No. IV, 10" Asphalt Concrete Base, 4" Untreated Permeable Base Course, & 6" Aggregate Subbase Course, or match existing pavement structure, whichever is greater.
- No material and/or equipment shall be stockpiled or otherwise stored within Highway Rights-of-Way except at locations designated in writing and approved by the District Engineer.
- Compaction tests for subbase, base course and trenches shall be taken by the Contractor in accordance with the "Hawaii Standard Specifications for Road, Bridge and Public Works Construction, 1994" and as amended. The Contractor shall also take compaction tests for embankment fill and subgrade materials in accordance to the Standard Specifications.
- Prior to commencing trench excavation work, the Contractor shall take a profile along the new centerline of utility trench and that such information shall be used in the verification of restoring the roadway to its original condition. A copy of the profile shall be submitted to the District Engineer.
- The Contractor shall be required to provide adequate, safe, non-skid bridging material over the trench, including shoring, when trenching in pavement areas to handle all types of vehicular traffic. Steel plates shall be installed in such a manner that will not cause noise and/or complaints from surrounding residents.
- No trench shall be opened more than 300 feet in advance of the installed and tested pipe and/or ductline.
- Longitudinal drainage along the highway shall be maintained.
- Pavement striping shall be done by contractor.
- Approval of permit construction plans shall be valid for a period of one year thereof from the date of notification of approval to the applicant. In the event construction does not commence within this one-year period, the applicant will be required to resubmit his construction plans for the Divisions's review and approval.
- All regulatory, guide and construction signs and barricades shall be of high intensity reflective sheeting. Portable concrete barriers shall be reflectorized in accordance to the "Standard Plans", State of Hawaii, Department of Transportation.
- Contractor shall inform the State Permit Office, phone 831-6712, at least two (2) days prior to closing any lanes.

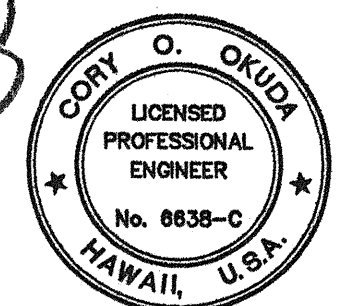
- Where pedestrian walkways exist, they shall be maintained in a safe passable condition or other facilities for pedestrians shall be provided. Passage between walkways at intersections shall likewise be provided.
- The Contractor shall reference to the satisfaction of the District Engineer, all existing traffic signs, posts & pavement markings prior to the commencement of construction. The Contractor shall replace or repair all traffic signs, posts & pavement markings disturbed by his activities, unless directed otherwise by the District Engineer or his representative.
- The Contractor shall exercise care when excavating in this area. Damages to the existing facilities shall be immediately reported to the respective utility companies, City or State agency. The repair work shall be done at the Contractor's expense.
- The Contractor shall notify the Highway Lighting and Traffic Signal Supervisor, State Department of Transportation, three (3) working days prior to commencing work in this area (phone: 834-4581).
- Contractor shall take proper precautions when working near overhead lines.
- 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.
- 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 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. Road Supervision Office, 811 Middle Street, Honolulu, HI. 96819 (phone: 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 prior to overlaying of Asphalt Concrete. This work shall be considered incidental to Asphalt Concrete Pavement, Mix No. 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, connecting approaches, side streets and driveways as shown on the plans and/or as directed by the Engineer.
- Dressing of shoulder, sidewalk and bus turnout 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.
- 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 the various contract items.
- The Contractor shall provide for access to and from all existing side streets at all times.
- All traffic control devices including: signs, barricades, vertical panels, drums, warning lights, arrow boards, changeable message signs, cones and tubular markers that meet the requirements of American Traffic Safety Services Association (ATSSA) "Quality Standard for Work Zone Traffic Control Devices", dated 1992 shall be used on this project. No "unacceptable" control devices shall be used and "marginal" control devices shall not exceed 50% of the total. Compliance with these requirements will be considered incidental to the Contract and no additional compensation for compliance will be allowed.

NOTES FOR CONSTRUCTION WITHIN CITY RIGHT OF WAY

- A permit shall be obtained from the Department of Transportation Services before work on any portion of a public street or highway may begin. Construction Traffic Control Plans approved by the Department of Transportation Services and/or the Department of Planning and Permitting must be provided when applying for the permit.
- The Contractor shall provide, install and maintain all necessary signs and other protective facilities, which shall conform with the "Hawaii Administrative Rules Governing the Use of Traffic Control Devices at Work Sites on or Adjacent to Public Streets and Highways" adopted by the Director of Transportation, and the current U.S. Federal Highway Administration's "Manual on Uniform Traffic Control Devices for Streets and Highways, Part VI - Traffic Controls for Street and Highway Construction and Maintenance Operations".
- Work on any City Street area may be performed only between the hours of 8:30 a.m. to 3:30 p.m., Monday to Friday, unless otherwise permitted by the Department of Transportation Services.
- During working hours, the Contractor shall provide for through traffic. During non-working hours, all trenches shall be covered with a safe non-skid bridging material and all lanes shall be open to traffic.
- As required by the Department of Transportation Services, the Contractor shall provide off-duty police officers to control the flow of traffic.
- Where pedestrian walkways exist, they shall be maintained in passable condition or other facilities for pedestrians shall be provided. Passage between walkways at intersections shall likewise be provided.
- Driveways shall be kept open unless the owners of the property using these Rights-of-Way are otherwise provided for satisfactorily.
- Contractor shall reference, to the approval of the Department of the Transportation Services and the Department of Planning and Permitting, all existing traffic signs, posts and pavement markings prior to the commencement of construction. The Contractor shall replace or repair all traffic signs, posts and pavement markings disturbed by his activities.
- The Contractor shall notify the Department of Planning and Permitting at 527-5087 one (1) week prior to any work to be done on signs, posts and pavement markings.
- No material and/or equipment shall be stockpiled or otherwise stored within street Rights-of-Way except at locations designated in writing and approved by the Department of Transportation Services.
- Castle & Cooke Homes Hawaii, Inc. shall ensure that the Contractor installs the construction traffic control devices in accordance with the MUTCD and Hawaii Administration Rules as specified in Traffic Note No. 2.

ADDITIONAL WATER NOTES:

- Contractor shall cut and plug all existing unused laterals at the main whether or not shown on the plans. Meter and valve boxes to be or already abandoned shall be demolished or removed and properly disposed of. The damaged area shall be repaired to an equal or better condition than the immediate area. All work shall be done at the expense of the Contractor.



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

Cory O. Okuda
P.E., Inc.
dba PARK ENGINEERING

5/30/00	ADDED WATER NOTES	G.I.	BWG
NO.	DATE	DESCRIPTION	ENGR.
REVISION		APPROVED	

APPROVED:

Catherine R. Dungca
CHIEF, PLANNING & ENGINEERING, BWG

APPROVED:

DATE:

6/7/00

DATE:

4/22/99

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION**CONSTRUCTION NOTES**KUNIA ROAD WIDENING: AND
H-1, KUNIA I.C. RAMP KO WIDENING
F.A.I. PROJECT NO. IM-STP-0750(10)

SCALE: AS NOTED

DATE: APRIL 1999

SHEET No. 1 OF 2 SHEETS

SURVEY PLOTTED BY	DATE
PLAN CHECKED BY	
DESIGNED BY	
QUANTITIES BY	
CHECKED BY	
ORIGINAL PLAN	
NOTE BOOK	
NO.	

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	IM-STP-0750(10)	1999	4	97

GRADING NOTES

- All grading work shall be done in accordance with Chapter 14, Articles 13, 14, 15 and 16, as related to grading, soil erosion and sediment control, of the Revised Ordinances of Honolulu, 1990, as amended.
- No Contractor shall perform any grading operation so as to cause falling rock, soil or debris in any form to fall, slide or flow onto to adjoining properties, streets or natural watercourses. should such violations occur, the costs incurred for any remedial action by the Director, Department of Planning and Permitting shall be payable by the Contractor.
- The Contractor, at his own expense, shall keep the project area and surrounding area free from dust nuisance. the work shall be in conformance with the Air Pollution Control Standards contained in Chapter 11-60, "Air Pollution Control".
- The underground pipes, cables or ductlines known to exist by the Engineer from his search of records are indicated on the plans. The Contractor shall verify the locations and depths of the facilities and exercise proper care in excavating in the area. Wherever connections of new utilities are shown on the plans, the Contractor shall expose the existing lines at the proposed connections to verify their locations.
- Adequate provisions shall be made to prevent surface waters from damaging the cut face of an excavation or the sloped surfaces of a fill. Furthermore, adequate provisions shall be made to prevent sediment-laden runoff from leaving the site.
- All slopes and exposed areas shall be sodded or planted as soon as final grades have been established. Planting shall not be delayed until all grading work has been completed. Grading to final grade shall be continuous, and any area within which work has been interrupted or delayed shall be planted.
- Fill on slopes steeper than 5:1 shall be keyed.
- The City shall be informed of the location of the borrow/disposal site for the project when the application for grading permit is made. The borrow/disposal site must also fulfill the requirements of the grading ordinance.
- No grading work shall be done on Saturdays, Sundays and holidays at any time without prior notice to the Director, Dept. of Planning and Permitting, provided such grading work is also in conformance with Hawaii Administrative Rules, Chapter 11-43, "Community Noise Control for Oahu".
- The limits of the area to be graded shall be flagged by the contractor before the commencement of the grading work.
- All grading operations shall be performed in conformance with the applicable provisions of the Water Pollution Control and Water Quality Standards contained in Hawaii Administrative Rules, Chapter 11-55, "Water Pollution Control" and Chapter 11-54, "Water Quality Standards" and if applicable, the NPDES for the project shall be obtained by the Contractor.
- Where applicable and feasible, the measures to control erosion and other pollutants shall be in place before any earth moving phase of the grading is initiated.
- Temporary erosion controls shall not be removed before permanent erosion controls are in place and established.
- Temporary erosion control procedures shall be submitted for approval prior to application for grading permit.
- If the grading work involves contaminated soil, then all grading work shall be done in conformance with applicable state and federal requirements.
- For bench mark, see Sheet 11.
- Contractor shall control all dust 7 days a week, 24 hours a day, at no additional cost to the State.
- Non-compliance to any of the above requirements shall mean immediate suspension of all work, and remedial work should commence immediately. All costs incurred shall be billed to the permittee. Furthermore, violators shall be subjected to administrative, civil and/or criminal penalties.

EARTHWORK NOTES

- Quantities shown are for permit purposes only and shall not be used for bidding purposes.
- Contractor shall be responsible to complete the grading work to the grades and dimensions shown on the plans.

EARTHWORK QUANTITIES

Area to be Graded = 4.4 Acres
Excavation = 16,300 C.Y.
Embankment = 330 C.Y.

GENERAL NOTES FOR CONSTRUCTION PHASING

- The Permittee shall make minor adjustments at intersections, driveways, bridges, structures, etc., to fit field conditions.
- When used, cones or delineators shall be extended to a point where they are visible to approaching traffic.
- Traffic control devices shall be installed such that the sign or device farthest from the work area shall be placed first. The others shall then be placed progressively toward the work area.
- Regulatory and warning signs within the construction zone that are in conflict with the traffic control plans shall be removed or covered. All signs shall be restored upon completion of the work.
- Flaggers and/or police officers shall be in sight of each other or in direct communication at all times.
- When required by the issuing office, the Permittee shall install a flashing arrow signal as shown on the Traffic Control Plans in Section 645 of the Contract Specifications.
- Sign spacings (L), taper lengths (T) and spacings of cones or delineators shall be as shown on the plans.
- All traffic lanes shall be a minimum of 11 feet wide.
- All construction warning signs shall be promptly removed or covered whenever the message is not applicable or not in use.
- The Engineer will not pay for construction and maintenance of detours seperately. The Engineer will consider the price for construction and maintenance of detours included in the contract price of the various items. The price includes full compensation for replacing installed traffic delineators that are lost, stolen, or damaged and not due to the Contractor's negligence; relocating of traffic delineators to the next detour phase; and furnishing labors, materials, tools, equipment, and incidentals necessary to complete the work.
- The backs of all signs used for traffic control shall be appropriately covered to preclude the display of inapplicable sign message (i.e., when signs have messages on both faces).
- At the end of each day's work or as soon as the work is completed, the permittee shall remove all traffic control devices no longer needed to permit free and safe passage of public traffic. Removal shall be in the reverse order of installation.
- Replace permanent pavement markings and traffic signs upon completion of each phase of work.

MECHANICAL/ELECTRICAL DESIGN AND ENGINEERING DIVISION NOTES

- The Contractor shall notify the Joint Pole Committee two (2) weeks in advance of any relocation of utility pole(s) that may be necessary.
- The Contractor shall notify the Mechanical/Electrical Design and Engineering Division, Department of Design and Construction, three (3) working days prior to commencing work on the Street Lighting and Communication Fiber Optic System (phone: 523-4106).
- The Street Lighting and Communication Fiber Optic Systems shall be kept operational during construction. Any relocation or changeover required shall be approved by the Mechanical/Electrical Design and Engineering Division, Department of Design and Construction, and performed and paid for by the Contractor.
- The Contractor shall be responsible for any damages to existing street lighting and communication fiber optic cable facilities. Any and all damages to these facilities shall be repaired by the Contractor at his cost in accordance with the requirements of the City and County of Honolulu.

WATER NOTES

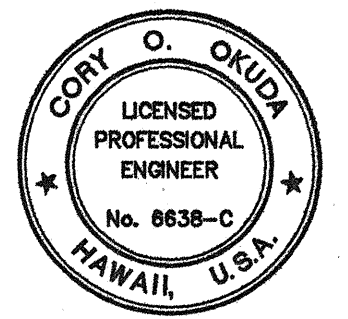
- Unless otherwise specified, all materials and construction of water system facilities and appurtenances shall be in accordance with the City and County of Honolulu Board of Water Supply's "Water System Standards" Volume 1, dated 1985, the "Approved Material List and Standard Details for Water System Construction", Volume 2, dated 1985, the "Water System External Corrosion Control Standards", Volume 3, dated 1991, and all subsequent amendments and additions.

WATER NOTES (Cont'd.)

- The Contractor shall be responsible for the protection of all water lines during construction. The Contractor shall be especially careful when excavating behind waterlines, tees, and bends, wherever there is a possibility of water line movement due to the removal of the supporting earth beyond the existing reaction blocks. The Contractor shall take whatever measures necessary to protect the water lines, such as constructing special reaction blocks (with BWS approval) and/or modifying his construction method.
- Re-approval shall be required if this project is not under construction within a period of two (2) years.
- The Contractor shall notify BWS Planning and Engineering Division, Construction Section, one week prior to commencing work on the water system.
- 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 shall pay for all the damages to existing utilities.
- 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.
- Any adjustments to the existing water system required during construction to meet requirements of the Board of Water Supply's Standards, whether shown on the plans or not, shall be done by the Contractor at no cost to the Board. Maintain 3'-0" minimum cover for all existing water lines (18" min. for service laterals) from new finish grade.
- Maintain 3'-0" min. horizontal clear separation between all waterline systems and nearest electrical/signal ductlines paralleling the water system at no cost to the Board of Water Supply.
- Maintain 3'-0" min. horizontal clear separation between street light/traffic signal standards (including any modular units) and the nearest water system. Contractor shall field verify for any conflicts at each street light/traffic signal standard location. Where conflicts occur, the Contractor shall coordinate with the Project Engineer to revise the street light/traffic signal standard to provide the required clearances at no cost to the BWS.
- At the electrical/signal ductline water crossings, adjust all electrical/signal ductline elevations to maintain 6" vertical clear separation from all water lines (12" clear for all electrical/signal ductline structures larger than 16") at no cost to the Board of Water Supply.

TRAFFIC CONTROL BRANCH NOTES

- The Contractor shall notify the Traffic Control Branch, Department of Transportation Services, three (3) working days prior to the commencement of work on the Traffic Signal System (phone: 523-4589).
- The Traffic Signal System shall be kept operational during construction and any relocation required shall be approved by the Traffic Control Branch, Department of Transportation Services, and paid for by the Contractor.
- The Contractor shall be responsible for any damages to the existing Traffic Signal Facilities, including the Traffic Signal Interconnect System. Any and all damages to these facilities shall be repaired by the Contractor at his cost in accordance with the requirements of the City and County of Honolulu.
- The Contractor shall be responsible for any damages to the existing Traffic Signal Fiber Optic Cable System. Any and all damages to these facilities shall be repaired by the Contractor at his cost in accordance with the requirements of the City and County of Honolulu.



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION
Cory O. Okada
P.E. No. 6638-C
dba PARK ENGINEERING

APPROVED: [Signature] DATE: 4/24/99
CHIEF, TRAFFIC CONTROL BRANCH, DPP
(FOR CONSTRUCTION WITHIN CITY R/W ONLY)
[Signature] 4/24/99
CHIEF, PLANNING & ENGINEERING, BWS CO.
[Signature] 5/17/99
CHIEF, CIVIL ENGINEERING BRANCH, DPP

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

CONSTRUCTION NOTES

KUNIA ROAD WIDENING: AND
H-1, KUNIA I.C. RAMP KO WIDENING
F.A.I. PROJECT NO. IM-STP-0750(10)

SCALE: AS NOTED DATE: APRIL 1999

SHEET No. 2 OF 2 SHEETS

SURVEY PLOTTED BY	DATE
DRAWN BY	
CHECKED BY	
DESIGNED BY	
QUANTITIES BY	
NO.	

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)

GENERAL NOTES

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 0.5 inches of rainfall.
- (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 report 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.

(B) Submittal Requirements:

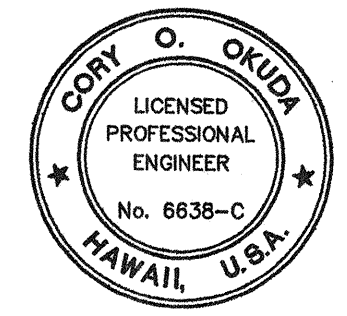
- (1) Construction activities of five (5) acres or more.
 - (a) Storm water discharges into State waters due to construction activities of five (5) acres or more, will require an NPDES permit from the Department of Health (DOH). The Contractor shall submit to the Engineer four (4) sets of Site-Specific 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 activities will require NPDES Permits(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 contract.
 - (b) No dewatering and/or hydrotesting activities will be authorized until the receipt of the NPDES Permit(s) from DOH.

LEGEND

- Reconstruction Areas
- Leveling Areas
- Cold Planing Areas
- Resurfacing Limits
- Existing Electrical Line
- New Electrical Line
- Existing Joint Pole
- Existing Power Pole
- Existing Electric Manhole
- Adjusted Elec. MH Frame/Cover
- New Electric Manhole
- Existing Telephone Line
- New Telephone Line
- Existing Telephone Pole
- Existing Telephone Manhole
- Adjusted Tele. MH Frame/Cover
- New Telephone Manhole
- Existing Signal Corps Line
- New Signal Corps Line
- Existing TV Cable
- New TV Cable
- Existing 12" Water Line
- New 12" Water Line
- Existing Water Manhole
- Adjusted Water MH Frame/Cover
- New Water Manhole
- Existing Water Air Valve
- Adjusted Water Air Valve
- New Water Air Valve
- Existing Water Valve Box
- Adjusted Water Valve Box
- New Water Valve Box
- Existing Water Meter
- Adjusted Water Meter
- New Water Meter
- Existing Fire Hydrant
- New Fire Hydrant
- Existing Sewer Line
- New 12" Sewer Line
- Existing Sewer Manhole
- Adjusted Sewer MH Frame/Cover
- New Sewer Manhole
- Existing 6" Gas Line
- New 6" Gas Line
- Existing Gas Valve Box
- Adjusted Gas Valve Box
- New Gas Valve Box
- Existing Gas Manhole
- Adjusted Gas MH Frame/Cover
- New Gas Manhole
- Existing Monument
- Adjusted Monument
- New Monument
- Existing 24" Drain Line
- New 24 " RCP Drain Line
- Existing Storm Drain Manhole
- Adjusted Storm Drain MH Frame/Cover
- New Storm Drain Manhole
- Existing Grated Drop Inlet
- Existing Catch Basin
- Existing Traffic Sign
- Existing Highway Lighting Standard
- Existing Edge of Pavement
- Existing Edge of Shoulder
- New Edge of Pavement
- New Edge of Shoulder
- Right-of-Way
- Inbound
- Outbound
- Baseline
- High Density Polyethylene

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	IM-STP-0750(10)	1999	5	97

DATE	*****
SURVEY PLOTTED BY	
DRAWN BY	
DESIGNED BY	
QUANTITIES BY	
CHECKED BY	
ORIGINAL PLAN	
NOTE BOOK	
No.	



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION
Cory O. Okuda
Parell, Inc.
dba PARK ENGINEERING

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

NPDES GENERAL NOTES
AND LEGEND

KUNIA ROAD WIDENING: AND
H-1, KUNIA I.C., RAMP KO WIDENING
F.A.I. PROJECT NO. IM-STP-0750(10)

SCALE: AS NOTED DATE: APRIL 1999

SHEET No. 1 OF 1 SHEETS