

DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION  
FUNCTIONAL STATEMENT

Plans, designs and supervises the construction and maintenance of the State Highway System.

1. Selects, designates or lays out, in accordance with the requirements of the Federal Highway Act, a system or systems of highways in the State upon which Federal-Aid funds may or are to be expended together with State and/or county funds.
2. Alters, modifies or revises such highway systems or any portion or portions thereof as may be required by the Federal Highway Administrator under the provisions of the Federal-Aid Highway Act.
3. Prepares and submits for approval to the Administrator of the Federal-Aid Highway Act, project statements of proposed construction or reconstruction of any Federal-Aid highway system or portion thereof; prepares surveys, plans, specifications and estimates as are required by project statements; undertakes, enters into contracts for and supervises the construction of these Federal-Aid highway projects.
4. Maintains and/or directs and supervises the maintenance of highways upon which Federal-Aid funds have been expended.
5. Negotiates for and supervises engineering consultant work for the Division.

**ENGINEERING INFORMATION TECHNOLOGY OFFICE**

Serves as the on-site technical advisor to management by providing analysis, recommendations and technical supervision on matters relating to the division's computer systems, applications and equipment requirements. Acts as the divisional liaison with the Department's Computer Systems and Services Office, corresponding offices from the Harbors and Airports Divisions, and the Department of Accounting and General Service's Information and Communications Service Division.

Prepares, reviews and updates a detailed program to systematically achieve the established objectives for computer-based information systems; directs, organizes and coordinates activities to ensure that every component of the Highways Division is kept abreast and consistent with all each other in a unified effort toward an integrated data, network and telecommunication system; and takes appropriate action to ensure that all policies, procedures and guidelines are compliant with current Departmental rules and regulations.

Plans, organizes, coordinates, and directs the development, implementation, operation and maintenance of the division's computerized data processing systems to include but not limited to the following:

1. Management Program Services such as accounting, personnel, budgeting, maintenance management, word processing, spreadsheet, and database.
2. Engineering Program Services such as computer aided drafting, highway design, surveying, traffic design, hydraulic design, bridge design, planning engineering, project management, scheduling, and programming systems, project status reporting and web site management.
3. Technical Computer Services such as personal computer troubleshooting,

telecommunications, E-mail, operating systems and communications software.

#### DATABASE ADMINISTRATION SERVICES STAFF

Plans, designs, directs, implements, coordinates, controls, and maintains systems and program applications for project management and scheduling systems, project programming, project status reporting program, roadway inventory systems, and other management information systems. Provides the technical support for the installation, operation and management of all division wide computer applications requiring the utilization of Oracle Relational Database, Microsoft Access, and other database products.

#### INFORMATION DATA PROCESSING SERVICES STAFF

Provides technical support for main-frame and/or mid-range related applications, development and implementation of computer systems that are unique to the administration and operations of the division; develops and administers divisional information systems policies and procedures; develops PC based applications; provides user application training; provides management with the information systems technology support and interacts with agencies on matters involving electronic data processing; and analyzes, recommends and provides technical supervision on matters relating to the divisional computer systems and main-frame.

#### ENGINEERING COMPUTER SERVICES STAFF

Plans, designs, directs, implements, coordinates, controls and maintains the Division's technical engineering program services including Intergraph's Computer Aided Design and Drafting (CADD) and other highway engineering design programs, systems and applications.

#### COMMUNICATIONS AND PERSONAL COMPUTER SERVICES STAFF

Provides the technical and manpower support for all Highways personal computers (PC). Explores, recommends, implements and support work flow automation applications for different offices of the Highways Divisions; install/configure hardware/software using departmental standards; provides for trouble shooting, upgrading and repair services; works with other agencies in providing the telecommunications and network support necessary to achieve current and future connectivity requirements; and maintains PC inventory.

#### STAFF SERVICES OFFICE

Develops and maintains program planning and control systems; provides coordination and liaison services for federal-aid and legislative matters; coordinates, reviews, and prepares the Highways Division budget; provides project management, management, fiscal, personnel and clerical support services; provides public information services.

#### METHODS, STANDARDS & EVALUATION STAFF

Coordinates the divisional legislation program; reviews legislation for its impact on the divisional program areas; coordinates and assists in researching relevant economic, legal, social and other factors; provides recommendations on the legislation;

coordinates and assists in drafting legislation and legislative testimonies; recommends changes in the law.

Coordinates and maintains the divisional Administrative Rules; provides assistance to branches and district offices as the divisional liaison with the Office of Information Practices concerning release of information requests; develops, implements and maintains the divisional records management program.

Analyzes and evaluates a variety of subject matters which pertain to organizational structure, work simplification and forms revisions and provides recommendations for problem resolution. Prepares reorganization proposals for the Division. Develops and establishes new divisional procedures. Reviews, interprets and enforces departmental procedures and rules and regulations. Prepares and revises the division's organizational charts, position organization charts and functional statements. Provides technical assistance regarding organizational structure, work simplification and forms design to the divisional branches, district offices and staff offices.

### PERSONNEL STAFF

Provides a comprehensive human resources management and technical assistance program for the division; advises and assists all levels of management and employees on statutory provisions, rules and regulations, collective bargaining agreements and principles of good human resources management to include position classification and pay, recruitment and placement, employee-management-labor relations, equal employment opportunity and civil rights, workers' compensation and employee development; provides staff support and assistance in the administration of employee benefit/services programs and in accomplishing all human resources actions; provides managers with advice and assistance in alternative actions and to determine which action can best serve management's needs while maintaining fundamental merit principles and employee rights.

#### Human Resources Administration Section

Provides a workforce development and training program, human resources services to the division workforce; recruiting, pay administration, administrative services, benefits, and manages the human resource information system; provides technical support services; establishes procedures for processing human resources transactions, developing forms, maintaining human resources records, and reporting systems; and assists in the analysis of operations, workflow processes and methods, practices, and related human resources matters.

### PROJECT MANAGEMENT STAFF

Establishes and maintains a project control system and a project programming system; acts as divisional liaison with Federal Highway Administration, counties and others to obtain funding, concurrences and agreements.

#### Project Control Section

Establishes and maintains a project control system which provides current information relating to project planning, construction costs and schedules for all authorized highway projects; coordinates the supportive services involved in all projects; prepares project status reports; develops program funding guidelines and procedures; initiates action where actual results do not meet the schedule within the established guidelines and procedures for the respective projects.

Programs and Secondary Road Section

Develops and maintains program funding for the construction of federal-aid projects such as the interstate, primary, secondary, urban, highway planning and research, new programs and other State improvement projects.

BUDGET STAFF

Prepares and executes the Highways Division's operating and maintenance budget and expenditure plan. Acts as the divisional liaison with the department's PPB Office and Department of Budget and Finance staff on the operating and maintenance budget. Reviews and analyzes the status of funds and financial implications associated with program changes in organizational functions and activities; compiles and analyzes cost, revenue and related data used by management in carrying out its operations; provides position and expenditure control. Compiles, reviews, and analyzes data for long range planning needs. Reviews, analyzes and prepares program measures of effectiveness and variance reports. Prepares budget reports, general work activity reports, correspondence, legislative budget testimonies and other studies.

FISCAL STAFF

Directs and coordinates the fiscal activities of the Highways Division to meet program objectives; manages a comprehensive system of accounting for the division's appropriations, allotments, receipts, expenditures and a cost accounting system; prepares required financial statements and statistical reports covering the divisional fiscal operations; collects and accounts for damage claims, rentals, government agencies' charges, etc.; conducts audits of consultants and contractors; prepares audit findings; directs and coordinates infrastructure asset reporting, administration of contracts, procurement contracts and other legal documents; implements and monitors purchasing and internal control procedures; maintains inventory of equipment, supplies and materials; provides payroll transactional services for the division.

Accounting Systems and Procedures Section

Conducts analysis and participates in the development, implementation, improvement, maintenance and control of a comprehensive computer-based highways accounting system which complies with applicable rules, regulation, policies, procedures and requirements of the Federal Highways Administration and the State of Hawaii and consistent with fiscal control, record keeping reporting needs and statewide accounting; develops, revises and maintains the accounting and procedures manual for the highways accounting system; trains, coordinates, and develops computer-based accounting systems standards; publishes, distributes and maintains the necessary resource files and documentation.

Audit and Compliance Review Section

Performs financial audits of consultants, construction contractors, utility companies, governmental agencies, universities, non-profit organizations and others under contract or proposed contract with the Highways Division; provides assistance to branches and district offices on evaluation of cost segregation, cost and overhead allocation, internal control and timekeeping procedures; reviews cost assumptions; verifies cost claimed or billed to the State; prepares report of audit findings.

Procurement and Inventory Section

Purchases goods and services for the branches and staff offices; provides assistance for the purchase of goods and services related to highways expenditures for the Attorney General's Office; directs, coordinates, and participates in infrastructure asset reporting in accordance with the accounting standard adopted by Government Accounting Standards Board for the division, including contract administration and procurement contracts; coordinates the division's inventory management of real and personal property; maintains inventory of equipment, improvements, supplies and materials in conformity with rules and regulations for the State Department of Accounting and General Services; maintains property records showing percentage of federal funds used in purchases; reconciles property records with fiscal records; provides DBE-related information, data and assistance in the area of procurement; maintains storeroom of office and drafting supplies for the division and departmental staff offices.

Accounting and Reporting Section

Maintains and controls the appropriation and project accounting; processes reimbursement of federal funds for cost incurred on federal-aid projects and maintains accounting of these federal-aid projects; processes all expenditures for payment; maintains accounts receivable system; deposits all highway receipts to the State Treasury; prepares financial statements and other fiscal reports; prepares and maintains divisional payroll.

Transaction Management Unit

Reviews and processes labor and equipment distribution reports; reviews all source documents; reconciles and controls daily transaction input; reviews computer runs and coordinates error correction activities; maintains highways labor and accounts receivable system tables and files; provides divisional payroll transactional services.

Maintains accounts receivable system which includes the billing for highway receivables and the subsidiary accounting of these accounts; collects and deposits all highway receipts to the State Treasury.

Payroll Management Subunit

Provides divisional payroll transactional services; examines and performs computations for payroll; handles all payroll changes and corrects any discrepancies; prepares Turnaround Payroll Change Schedules reports, fringe reports and disability worksheets; prepares and submits required reports to Department of Accounting and General Services (DAGS) and/or Department of Human Resources Development (DHRD); coordinates and provides payroll information to divisional branches, districts, employees, DAGS, DHRD and other authorized requesting parties; maintains the divisional payroll files and records.

Financial Reporting Unit

Prepares current billing vouchers for reimbursement of costs incurred on federal-aid highway projects by analyzing and compiling financial data and/or documents; reviews pertinent project data and documents to ensure that all necessary information is provided to close federal-aid projects; reconciles final project costs; prepares final vouchers to close federal-aid projects.

Maintains and reconciles the general ledger and other control accounts of the State Highways (Special) Fund and Capital Projects Fund; maintains and controls the accounting for all operating appropriations and Capital Improvement Program appropriations; prepares financial statements and other special fiscal reports.

#### Appropriation and Disbursement Unit

Processes all Highways Division and some Attorney General expenditures for payment; prepares damage claims and other highway billings; maintains the subsidiary accounting of the division's accounts and notes receivables and trust accounts; reconciles the highway accounting system's expenditures, claim and contract encumbrances to the statewide accounting system.

#### **MOTOR VEHICLE SAFETY OFFICE**

Plans, develops, implements, and manages statewide non-engineering highway safety programs, Statewide Safe Communities Program, Statewide Occupant Protection Program, Statewide Alcohol Impaired Driving Program, Statewide Seat Belt Usage Program, Statewide Child Passenger Protection Education Program, Statewide Safety Data Improvement Program, and other National Highway Safety Programs and/or National Highway Safety Initiatives.

Develops and implements statewide uniform standards and procedures for driver licensing, commercial driver licensing, and registration to include the form and content of records to be maintained for the registration of vehicles and for the licensing of drivers, motor vehicle inspection, motor vehicle inspection stations; evaluates and approves all vehicle safety equipment for use within the State of Hawaii; establishes, implements, and manages statewide programs for motorcycle safety, rider education, driver education, and behind-the-wheel driver training.

Plans, develops, establishes, and manages the Statewide Size and Weight Vehicle Program, Statewide Motor Carrier Safety Assistance Program (MCSAP), Statewide Pupil Transportation Safety Program, and other motor carrier/commercial vehicle programs; establishes and implements statewide standards and guidelines for motor carrier/commercial vehicle drivers, physical examinations of motor carrier/commercial vehicle drivers, motor carrier driver training and driver improvement, periodic evaluation of motor carrier drivers, motor carrier/commercial vehicle safety inspections, motor carrier inspection stations and inspection personnel, motor carrier vehicle maintenance, size and weight of vehicles, modification of motor carrier/commercial vehicles and transporting of hazardous materials on the highway by motor carriers.

#### **CLERICAL SERVICES**

Provides clerical services; develops and maintains a record management system for the proper retention and disposal of records; provides stenographic, typing, filing, and other clerical services.

#### **MOTORCYCLE SAFETY, DRIVER LICENSING, EDUCATION, VEHICLE REGISTRATION, AND VEHICLE EQUIPMENT STAFF**

Develops, implements and manages a statewide motorcycle safety program; develops, implements and manages a statewide rider education program to include certification of rider education instructors and approval of the instructional curriculum; develops and implements statewide uniform standards and procedures for driver licensing, commercial driver licensing, and registration to include the form and content

of records to be maintained for the registration of vehicles and for the licensing of drivers; coordinates with state and county agencies for intra-state and inter-state participation in the driver license compact; coordinates the release of information requests; provides staff support to the department's Medical Advisory Board; develops, implements and manages a statewide driver education program and behind-the-wheel driver training program to include curriculum and certification of instructors and third-party examiners; develops and implements statewide uniform standards and procedures for motor vehicle inspection and motor vehicle inspection stations; coordinates, reviews, evaluates and approves all vehicle safety equipment for use within the State of Hawaii; prepares legislation and testimony on legislation; prepares and revises administrative rules, policies, procedures and guidelines; prepares budgetary and expenditure plans.

#### HIGHWAY SAFETY STAFF

Plans, develops, implements, and manages statewide non-engineering highway safety programs, Statewide Safe Communities Program, Statewide Occupant Protection Program, Statewide Alcohol Impaired Driving Program, Statewide Seat Belt Usage Program, Statewide Child Passenger Protection Education Program, Statewide Safety Data Improvement Program, and other National Highway Safety Programs and/or National Highway Safety Initiatives; monitors and manages the statewide federal highway grant programs to ensure compliance with established program requirements and overall program goals and objectives; prepares, selects, negotiates and manages consultant contracts; develops and establishes measures of effectiveness for program activities; coordinates with federal agencies, state agencies, county agencies, and private sector and businesses all non-engineering highway safety programs and activities; analyzes and evaluates highway safety programs and activities; provides recommendations on program improvements; conducts research, feasibility studies, cost benefit studies on new methodology and new technological advances and applications; conducts highway safety demonstration projects; analyzes and evaluates the effectiveness of the demonstration projects to determine if the projects should be included as on-going program activities; builds coalitions to support the highway safety effort and assists community groups; coordinates and provides statewide public information services and public information campaigns relating to highway safety; provides advisory and consultative services to the Governor, Legislature, State and County agencies, organizations, community groups and special interest groups on all matters pertaining to highway safety; provides staff support to the Governor's Highway Safety Council and County Traffic Safety Councils; reviews traffic accident reports; collects fatality data; identifies missing data and data discrepancies; corrects data discrepancies; codes data, analyzes and evaluates the data; prepares required statistical reports for the National Highway Traffic Safety Administration and other statistical reports as required; updates and maintains the Fatality Analysis Reporting System; reviews crash, injury and fatality data to identify highway safety issues; identifies traffic safety problems and identifies resources to mitigate the problems; prepares the State of Hawaii Highway Safety Plan and submits the plan annually to the National Highway Traffic Safety Administration and the Federal Highway Administrator; prepares the State of Hawaii Highway Safety Annual Report and submits the annual report to National Highway Traffic Safety Administration and the Federal Highway Administrator highlighting the highway safety program activities and accomplishments; prepares legislation and testimony on legislation; prepares and revises administrative rules, policies, procedures and guidelines; prepares budgetary and expenditure plans.

#### MOTOR CARRIER SAFETY STAFF

Develops, establishes, and manages the Statewide Size and Weight Vehicle Program, Statewide Motor Carrier Safety Assistance Program (MCSAP), Statewide Pupil Transportation Safety Program, and other motor carrier/commercial vehicle programs; establishes and implements statewide standards and guidelines for motor

carrier/commercial vehicle drivers, physical examinations of motor carrier/commercial vehicle drivers, motor carrier driver training and driver improvement, periodic evaluation of motor carrier drivers, motor carrier/commercial vehicle safety inspections, motor carrier inspection stations and inspection personnel, motor carrier vehicle maintenance, size and weight of vehicles, modification of motor carrier/commercial vehicles and transporting of hazardous materials on the highway by motor carriers; reviews and approves all plans and specifications for construction and/or modification of motor carrier/commercial vehicles in the State; investigates all motor carrier/commercial vehicle accidents resulting in deaths or other accidents as required; develops and implements statewide standards and guidelines for pupil transportation drivers, driver training, pupil transportation vehicles, and vehicle equipment design, construction and identification; updates and maintains the SAFETYNET system and prepares statistical reports; enforces federal regulations relating to the Federal Heavy Vehicle Use Tax; prepares legislation and testimony on legislation; prepares and revises administrative rules, policies, procedures and guidelines; prepares budgetary and expenditure plans; prepares and submits the Statewide Vehicle Size and Weight Plan annually to Federal Highway Administration; prepares and submits the Statewide Commercial Vehicle Safety Plan annually to Federal Motor Carrier Safety Administration.

#### Statistical Support

Reviews collected data for missing, discrepancies and incorrect coding of the required data elements; updates and maintains the SAFETYNET System; prepares statistical reports and other reports for the Federal Motor Carrier Assistance Program as required by the Federal Motor Carrier Safety Administration.

#### Motor Carrier Safety Sections – Kauai, Oahu, Maui, Hawaii

Implements and enforces on Kauai, Oahu, Maui, and Hawaii, statewide standards and guidelines for motor carrier/commercial vehicle drivers, physical examinations of motor carrier/commercial vehicle drivers, motor carrier driver training and driver improvement, periodic evaluation of motor carrier drivers, motor carrier/commercial vehicle safety inspections, motor carrier inspection stations and inspection personnel, motor carrier vehicle maintenance, size and weight of vehicles, modification of motor carrier/commercial vehicles and transporting of hazardous materials on the highway by motor carriers; conducts motor carrier/commercial vehicle safety compliance reviews and/or audits on businesses and/or motor carrier terminals; conducts statewide random motor carrier/commercial vehicle safety inspections on the highways; operates statewide weigh stations for overweight vehicles; issues citations for violations of motor carrier/commercial vehicle statutes, administrative rules and/or standards; investigates all motor carrier/commercial vehicle accidents resulting in deaths or other accidents as required; enforces statewide standards and guidelines for pupil transportation drivers, driver training, pupil transportation vehicles, and vehicle equipment design, construction, and identification; provides assistance to the Airport Division for inspection of any unique airport related vehicles utilized on airport property and enforcement of motor carrier/commercial vehicle standards; enforces federal regulations relating to the Federal Heavy Vehicle Use Tax.

#### **PLANNING BRANCH**

Manages the statewide transportation planning activities to ensure compliance with federal and state transportation planning requirements, i.e., planning activities related to pre-design highway planning, urban and rural transportation planning, alternatives for highway projects, and other planning efforts by state and county agencies; conducts route location studies, feasibility studies, and environmental studies; and coordinates the divisional review of land use change proposals.

## LAND USE PERMIT SECTION

Manages the division's technical review of proposed land use permits, zoning changes and subdivision plans.

### Engineering Unit

Reviews transportation and traffic engineering reports submitted in support of land use change applications. Negotiates transportation related land use conditions with the land use approval agencies and developers.

### Planning Unit

Reviews State and County permits such as land use, zoning, Subdivision maps (Oahu) Special Management Area use permit applications, environmental documents, to evaluate for any potential traffic impacts to State Highways. Collaborates with the applicants to develop traffic and mitigation strategies and establish agreements for fair share of financial responsibilities for the regional mitigation measures.

## ADVANCE PLANNING SECTION

Conducts studies of route locations and performs preliminary engineering work for highway projects through advanced planning procedures; establishes basic conceptual design; prepares project reports incorporating findings including user benefit/cost analysis, social, economic and environmental evaluations relating to alternatives, and project justifications.

### Project Planning Units A, B

Manages the consultant planning projects to include the selection, negotiation, development of work programs, time schedules, supervision and review of the consultants' work for compliance with State and/or Federal requirements; coordinates the obtaining of the necessary environmental documents for project clearances to include the preparation of environmental assessments and environmental impact statements; coordinates activities and acts as the liaison between the State and other governmental agencies, public utilities and private agencies; coordinates with and assists the County in performing similar tasks for Federal-Aid County projects.

Prepares preliminary engineering studies and plans for in-house highway projects in conformity with planning project requirements and design standards; prepares project cost estimates; coordinates structural, geotechnical and hydraulic requirements; coordinates preliminary right-of-way estimates to include advisory relocation assistance and payments; conducts public meetings and hearings; coordinates with and obtains necessary permits and clearances from other County, State and Federal agencies.

Provides technical information and comments regarding land use requests, zoning changes, right-of-way disposition and construction permit plan reviews and their interrelationship with future highway projects.

## PLANNING SURVEY SECTION

Provides highway data and information to support divisional planning, design, construction and maintenance functions to government agencies and the public, and to

fulfill departmental responsibilities with Federal Highway Administration (FHWA); develops and conducts annual and multi-year surveys designed to gather, process, evaluate and disseminate engineering, statistical, and economic information concerning land transportation on a statewide basis; develops and maintains divisional statewide Geographic Information System (GIS) and Coordinated Data System (CDS); provides forecasts of future traffic volumes and characteristics for facility and pavement design; designs and maintains traffic data collection instrumentation and facilities; conducts research and special studies on traffic and roadway infrastructure information.

#### Statistics Unit

Develops and publishes statewide vehicle traffic and travel statistical reports annually; coordinates with offices and government agencies to develop other statistical information and reports needed to fulfill the divisional responsibilities to FHWA; develops and establishes the annual statewide and multi-year traffic monitoring plans; maintains a statistical database of statewide historical vehicle traffic; processes, tabulates and compiles traffic and truck survey data gathered from the Traffic Survey Subunit, contractors, and data collection stations; develops daily and monthly variations, estimates of average daily traffic, annual average daily traffic, and vehicle miles of travel; prepares highway facility and project-level traffic forecasts and traffic assignments for facility and pavement design; and conducts other special studies such as freight and commodity economic impact studies.

#### Technical Support Unit

Coordinates within the section, other offices, and government agencies the Highway Performance Monitoring System, Traffic Monitoring System, and other programs; provides data and information to assist in the determination of the State's annual fair share of the Highway Trust Fund monies; develops and maintains policies, procedures and specification manuals; manages the consultant services program to include selection of consultants, negotiations with consultants, development of work programs and project time schedules, and coordination, supervision, and review of the project/services under contract; conducts research and special studies in the development of instrumentation, equipment, methodologies, and information systems to improve the data collection and information dissemination programs; evaluates existing manual methods, computerized data collection methods, and data processing procedures for the section; coordinates the development of systematic and automated processes to improve the efficiency and effectiveness of the section.

#### Data Survey and Mapping Unit

Maintains the divisional statewide GIS, CDS, mapping, traffic and road inventory data collection programs.

#### Traffic Survey Subunit

Conducts annual, multi-year, and special traffic data collection surveys statewide to gather traffic volume, vehicle type classification, speed, truck weight, intersection turning movement, travel time, and vehicle occupancy data.

#### Mapping, Drafting and Road Inventory Subunit

Conducts road inventory surveys to include digital photographic inventory (digital photologs), field measurement, and verification surveys; reviews digital photolog and as-built plans to capture and record physical changes and features of the State Highway

System, other state jurisdiction routes, and other major roads; maintains inventory records of major physical features and characteristics of the State Highway System, state jurisdiction routes and other major roads on road diagrams and the electronic CDS; develops and maintains map files of the State Highway System, National Highway System, Functional Class System, and urban area boundaries; maintains linkages to other governmental databases and linkages to features and data in the divisional statewide GIS roadway system; prepares map drawings, layouts, exhibit maps, photographic media and other graphic visual aids for the presentation of traffic and road inventory data.

### SYSTEMS PLANNING SECTION

Coordinates the divisional portion of the federally required statewide transportation planning process and other planning efforts for the state transportation network to ensure compliance with federal and state transportation planning requirements; develops the mid and long range land transportation plans and Statewide Transportation Improvement Program; conducts special studies for the statewide transportation planning process; and coordinates the review of proposed legislation and prepares legislative testimonies for the branch.

#### Long and Mid Range Plans Unit

Conducts highway needs studies on the long- and mid-range transportation plans and Transportation Asset Management Plan, and other plans and activities related to the Hawaii State Highway and Federal Aid System, including the Functional Classification of Public Roadways and Federal Aid Urban Boundary Program.

#### Planning Programs Unit

Coordinates the divisional portion of planning programs, provides technical assistance to branches, district offices and other government agencies; and conducts special studies required for the statewide transportation planning process.

#### Non-Motorist Planning Programs Unit

Coordinates the divisional non-motorist planning programs as required by federal and state transportation regulations, and coordinates with other government agencies; and conducts non-motorist program studies.

#### Statewide Transportation Improvement Program Unit

Develops and maintains a short term, fiscally constrained plan that lists highway and transit federally funded projects and locally funded regionally significant projects.

### DESIGN BRANCH

Prepares construction plans, specifications and estimates for highway projects; plans, develops, and implements the Landscape Master Plan for the State Highway System; conducts location and right-of-way surveys including preparation of engineering and subdivision maps; negotiates project agreements with governmental agencies and public and private utilities. Provides technical services to the divisional branches and districts.

## TECHNICAL DESIGN SERVICES OFFICE

Provides administrative and technical design services by reviewing all projects for compliance with applicable State, Federal and County requirements, policies, criteria and procedures; processes Federal-aid project plans through the Federal Highway Administration (FHWA); determines manpower and budget requirements to implement work programs; develops and maintains procedural manuals, specifications, policies and procedures.

Manages the design consultant program to include negotiation of consultant design contracts, development of work programs and consultant design contracts, development work programs and project time schedules, and coordination and review of design projects under contract to private consulting engineering firms.

### Consultant Contract Administration Staff

Manages the design consultant projects and design management contracts, from inception to completion, to include selection, negotiations with consultants, development of work programs and project time schedules, and coordination, supervision, and review of design projects under contract to private consulting engineering firms; reviews completed plans, specifications, proposals and estimates for both State and/or Federal requirements; acts as liaison between the State and other governmental agencies, utilities, and private agencies; coordinates activities with other branches, sections, and units of the Division relative to the consultant design projects; coordinates federal-aid county projects and metrication program.

### Technical Design Services Staff

Develops and maintains Design Branch procedural manuals, specifications, standard details, and policies and procedures. Compiles and edits all project specifications for the division; reviews final specification drafts prepared by other sections of the Design Branch for conformance with standards; reviews new construction methods and procedures to be incorporated into standard specifications; provides interpretation of specifications with the assistance of the Department of the Attorney General.

## LANDSCAPE DESIGN SECTION

Plans, develops, establishes, and manages a Statewide Landscape Architectural Design Program; plans, develops, and implements the Statewide Landscape Master Plan for the State Highway System; plans and develops land areas for optimum landscape management in consonance with multiple-use concepts.

Provides innovative approaches in the development and design of comprehensive landscape architectural plans, specifications, and cost estimates according to the contours, natural environment and intended use of specific sites for highway projects utilizing cost and resource effective measures; develops erosion control plans for roadside, median, and interchange areas; studies historical data and develops landscape architectural design plans for the rehabilitation or restoration of historic sites or areas; reviews project plans for functional utility and aesthetical requirements of the total highway environment to include structures, roadsides, retaining walls and other highly visible facilities; reviews permit plans for its impact on the landscape of the highway system.

Plans, develops, implements, and manages a Statewide Landscape Architectural Design Manual; develops, establishes, revises, and maintains policies and procedures, standards, and guidelines; prepares budgetary and expenditure plans; prepares

legislation and legislative testimonies; provides landscape design technical assistance to the divisional branches and districts; acts as the divisional landscape design liaison to Federal, State and County agencies, private sector, interested groups and individuals.

### HIGHWAY DESIGN SECTION

Designs and prepares complete construction plans, specifications and estimates for approved highway projects; provides technical consulting services to construction, inspection and maintenance branches and districts; coordinates with other offices and branches on project program scheduling and funding; develops and recommends design policies and standards for highways; reviews and makes recommendations on construction change orders.

#### Design Units A, B, C, and D

Designs and prepares construction plans for individual highway projects in conformity with planning project requirements, design standards and adequacy; prepares project specifications, estimates, and proposals; coordinates plans for structures, traffic signals, highway lighting, landscaping, right-of-way, adjustments, utilities, etc., for incorporation into final plans; obtains all necessary permits and clearances from various governmental agencies; prepares environmental assessments; reviews construction permit plans and provides comments; develops and coordinates project scheduling and funding; provides technical information and advice to other offices and units in the Division.

#### Drafting Unit

Prepares drawings for the construction and maintenance of highways and related facilities; computes quantity takeoffs of items such as earthwork and pavement structures; performs computations required for drafting purposes; drafts and processes post design plans; drafts plans from field data for design purposes; prepares pre-design plans for hearings; maintains as-built contract plan files and provides as-built information.

### BRIDGE DESIGN SECTION

Locates, plans and designs bridges, retaining walls, tunnels and culvert structures; provides the appraisal, rating and technical supervision for inspection of these structures; coordinates structural design work with other sections of the Design Branch, district offices and other governmental agencies; reviews and supervises the structural phase of consultant contract work; recommends policies and standards for bridges and other highway related structures.

#### Design Units A and B

Conducts preliminary location studies and prepares design computations, plans, specifications and estimates for bridges, culverts and tunnel structures for incorporation in the general construction plans, specification and estimates for projects; initiates and prepares the specifications covering special procedures or materials required for the structural design.

#### Drafting Unit

Prepares construction plans for new projects, revised plans of structural changes, plans for repairing existing structures and sketches for shop drawings; computes bid items in accordance with specifications; computes grades and dimensions for construction plans.

#### Field Consultant Unit

Furnishes field consultant services and makes recommendations relative to construction, inspection and maintenance of highway structures; reviews shop drawings Of steel structures and pre-stressed girders and false work plans required for construction of concrete structures; checks permit requests for heavy load movements over existing structures.

### HYDRAULIC DESIGN SECTION

Prepares design plans, specifications, estimates and cost control for drainage, drainage structures and landscaping sprinklers; reviews consultant drainage design plans; coordinates highway drainage facilities with those of other governmental agencies, private developers and local drainage districts; reviews construction permit plans and provides comments; investigates and prepares scour reports of all state highway bridges; prepares application to obtain permits from other governmental agencies as required by the Clean Water Act.

Conducts hydrologic and special drainage studies, storm damage and flood investigations; prepares reports and recommendations; maintains records of rainfall, stream flow data, flood and drainage problem areas.

Recommends policies and standards for highway drainage; provides technical consultant services to the divisional branches and districts concerning drainage and hydraulic problems.

#### Design Unit

Conducts preliminary location studies and prepares design plans, specifications and estimates for drainage and sprinkler systems; reviews consultant drainage design plans and specifications; provides technical consultant services on drainage and hydraulic problems; prepares application to obtain permits or certification from other governmental agencies as required by the Clean Water Act.

#### Drafting Unit

Prepares preliminary and final drawings for contract plans showing location and details for drainage, sprinkler and irrigation systems; prepares and traces construction drawings; develops minor designs and drawings from sketches and data.

#### Hydrology and Special Studies Unit

Collects and analyzes rainfall and stream flow data; conducts hydraulic and hydrologic studies and investigations; prepares charts and graphs for use in improving, planning and designing highway drainage facilities.

Conducts investigations, prepares special reports and provides recommendations on drainage and flood control problems arising from the maintenance

of the highways; recommends policies and standards for drainage; coordinates the drainage design activities within the Division to ensure conformance with established drainage and flood protection policies and standards.

Conducts field investigations, reviews and controls subdivision drainage and grading plans for work within or abutting the State Highway System to ensure conformance to State/Federal requirements and standards.

Investigates and prepares scour evaluation reports of all State highways bridges.

### CADASTRAL ENGINEERING SECTION

Conducts precise land surveys and locations necessary to establish highway alignments, ground controls, right-of-way and boundary markers; provides parcel descriptions, maps and other related documents.

#### Survey Unit

Conducts ground location surveys for preliminary location of transportation facilities and right-of-way surveys including research and studies to determine land titles and ownership; prepares descriptions of land to be acquired.

#### Mapping Unit

Prepares engineering, right-of-way and subdivision maps; prepares parcel maps for deeds or condemnations; maintains and files all cadastral engineering maps for the Department.

### ENVIRONMENTAL PERMITTING AND PROJECT COMPLIANCE SECTION

Develops and implements environmental policies and procedures relating to highway design, provides environmental and technical support, ensures highway designs are in compliance with the Municipal Separate Storm Sewer permit and Federal Environmental Protection Agency requirements relating to permanent best management practices (BMPs) for the Design Branch.

Manages the design consultants for all in-house projects that require post-construction BMPs; reviews design consultant's post-construction BMP plans and provides recommendations to ensure compliance with EPA design requirements; reviews post-construction BMPs for all in-house projects, consultant design plans, and construction permit plans; provides recommendations and recommends approval of post-construction BMPs to ensure compliance with EPA design requirements; reviews consultants and contractors site-specific construction BMPs and provides recommendations to ensure compliance with EPA requirements; coordinates and monitors the review, revision and approval of the National Pollutant Discharge Elimination System (NPDES) permits, Water Quality Certifications, Department of the Army Permits, Stream Channel Alteration Permits, and other permits and environmental documents as required by the EPA with the Department of Health, Army Corps of Engineers, Department of Land and Natural Resources, and Fish and Wildlife Service in the design phase of highway projects; reviews design consultants' permit applications and provides recommendations.

Plans, develops, implements, and manages the Statewide Environmental Design Permitting Guidelines Manual; develops, establishes, and implements policies, procedures, guidelines and standards to ensure compliance with EPA requirements; plans, develops, implements and manages the Statewide Post Construction BMP

Manual; develops, establishes, and implements policies, procedures, guidelines and standards to ensure compliance with EPA requirements; reviews and revises statewide environmental design policies, procedures, guidelines and standards annually; plans, develops and implements a statewide environmental design training program; provides technical environmental design guidance to sections in the Design Branch and district offices; prepares legislation and testimony on legislation; prepares budgetary and expenditure plans.

Plans, develops and implements guidance and policies and procedures relating to archaeological historical and cultural aspects of Highways Division projects. Provides support for the Design Branch for responsibilities associated with archaeological research, review, design and reports. Services as a cultural and historical resource in all issues relative to the National Historic Preservation Act Section 106 and Chapter 6E, HRS. Procure, administer and manage and/or assist in procuring, administering and managing archaeological and cultural consultant contracts.

### **RIGHT-OF-WAY BRANCH**

Acquires and manages lands, right-of-ways, easements and other real property interests required for the construction of highways and for other transportation projects on a state-wide basis.

Provides advisory relocation assistance and relocation payments to individuals, families, businesses including farm operators and non-profit organizations displaced by the Department of Transportation projects.

Disposes access rights, easements and airspace within highway rights-of-way and disposes of highway remnants authorized by the Department of Land and Natural Resources.

Monitors right-of-way activities by political subdivisions involved in County Federal-aid projects statewide.

### **LAND ACQUISITION SECTION**

Acquires lands, improvements, easements and other real property interests required for statewide transportation projects; negotiates with owners on property adjustments; provides purchase transaction information to Internal Revenue Service and state Department of Taxation; prepares utility relocation agreements.

#### **Acquisition Units A & B**

Negotiates for the acquisition of lands, improvements, easements and other real property interests required for statewide transportation projects; reviews right-of-way maps and construction plans and makes a parcel by parcel ground inspection of the entire right-of-way for each project; recommends changes in parcel boundaries and proposes construction features to mitigate severance damages, if warranted; negotiates with owners on property adjustments; may assist the Deputy Attorney General assigned to the case in the acquisition of parcels by eminent domain proceedings; provides purchase transaction information to Internal Revenue Service and state Department of Taxation; prepares utility relocation agreements; prepares statistical reports on right-of-way acquisitions.

### ABSTRACTING SECTION

Prepares all preliminary and final title examinations required for highways and other transportation projects as assigned; prepares continuations of title examinations for the Land Acquisition Section prior to the drafting of deeds, petitions for Land Court Subdivisions, filing of condemnation action by the Attorney General's Office; provides expert testimony in court in condemnation cases involving disputes in land titles.

### APPRAISAL SECTION

Prepares staff appraisals for all parcels, easements, access rights, construction parcels or other real property interests required for state-wide transportation projects; reviews both staff and consultant real estate appraisals for appropriateness and technical correctness and prepares a Report of Reviewer for each parcel; provides preliminary estimates of value for right-of-ways proposed for corridor public hearing by the Planning Branch and design public hearings by the Design Branch; negotiates fees and completion dates with selected fee appraisers; makes field inspections on a parcel by parcel basis for each project; provides supportive services to the Attorney General's Office in condemnation cases.

### PROPERTY MANAGEMENT SECTION

Plans, directs, and coordinates the statewide property management and relocation programs for the Highways Division.

#### Property Management Units A & B

Prepares Relocation Program Plans for routes proposed by the Planning Branch and environmental impact statement for Federal Highway Administration review and approval of job authorizations for right-of-way acquisition; provides relocation advisory assistance services and payments to individuals, families, businesses including farm operations and non-profit organizations displaced by highways and other transportation projects; updates relocation assistance procedures whenever Federal or State laws governing relocation assistance are amended; computes replacement housing payments and moving expense allowances in accordance with Federal and State laws; maintains records as supporting documentation and files reports on relocation activities as required by the Federal Highway Administration.

Administers the rental of real properties acquired as rights-of-way for highway projects; disposes improvements in conjunction with the clearing of rights-of-ways either by public auction sale or by requesting demolition; prepares, executes, and monitors leases and permits on excess land; acts as Agent for the Department of Land and Natural Resources for the disposition of remnants that are surplus to highway needs.

### MATERIALS TESTING AND RESEARCH BRANCH

Manages statewide programs for material quality assurance, testing and monitoring, research and development, geotechnical engineering, pavement design, material and/or quality assurance training, and certification of technicians and inspectors in material quality assurance; tests, accepts, certifies test equipment and materials incorporated into transportation facilities and related developments; conducts geotechnical engineering studies; manages engineering research and development programs.

## OFFICE SERVICES

Provides clerical and administrative support services.

## SUPPORT SERVICES UNIT

Provides janitorial, grounds maintenance, and other manual unskilled work tasks in support of the branch; performs calibration and verifications on procedures and equipment; maintains and repairs equipment, apparatus and instruments used for testing and research activities for the branch; maintains high pressure lines, water and drainage lines, motors, pumps, generators and other machinery; performs preventive maintenance activities on equipment.

## STRUCTURAL MATERIALS SECTION

Manages the statewide quality assurance program for cement, Portland cement concrete, steel and other related products; analyzes and evaluates the effectiveness of the specifications and practices used; establishes appropriate quality levels of structural materials used in the Capital Improvement Program, Special Maintenance Program and other highway projects; provides inspection and testing of structural materials; conducts studies on structural products and construction methods to establish standards and procedures; performs independent assurance inspections; provides materials technician and field inspector training in areas of responsibilities.

### Structural Materials Unit

Plans, develops, implements, and manages the statewide quality assurance program for cement, Portland cement concrete, steel and other related products; analyzes and evaluates the effectiveness of the specifications and practices used; reviews and analyzes certified test results; reviews and evaluates chemical and related physical analysis reports on construction materials and related construction products to ensure that the materials used are in conformance with contract requirements; establishes and monitors appropriate quality levels for materials in construction and maintenance projects; reviews and recommends acceptance/rejection of material certifications, mix designs, certified test results and other technical findings; conducts studies on concrete, steel, related products and construction methods to ensure that the completed highway projects are constructed to meet the anticipated service life of the highway structures and pavement; implements research findings and technology transfer into operating procedures and practices; develops and implements the utilization of improved materials and/or techniques for contract specifications and/or special provisions; manages the statewide chemical laboratory and testing program; conducts chemical testing and analysis on materials, products and materials for construction and maintenance projects; evaluates chemical testing and analysis reports and provides recommendations to accept or reject materials and/or products based on technical findings; conducts comparative studies or research studies on selected products, new products, new materials, and/or test methods and prepares technical reports on findings and recommendations; develops, establishes, and maintains policies and procedures, standards, and guidelines for the statewide structural materials quality assurance program; reviews construction permit plans and provides recommendations; provides structural materials technical assistance to the branches, district offices and other agencies; conducts material technicians and field inspectors training sessions in areas of responsibilities.

### Engineering Support Unit

Performs inspections and testing of structural materials; prepares test reports; performs calibration and verification on procedures and equipment; recommends acceptance or rejection of materials; identifies problem areas and recommends corrective action; performs acceptance testing, verification testing and independent assurance inspections; prepares and performs proficiency and correlation testing for accreditation and qualification programs; participates in the materials technicians and field inspectors training and certification programs by providing instructions, demonstrating test methods and evaluating performances.

### GEOTECHNICAL & PAVEMENT DESIGN SECTION

Manages the statewide quality assurance program for soils, aggregates other than Portland cement treated and asphalt treated aggregates, and other geotechnical materials; analyzes and evaluates the effectiveness of the specifications and practices used; establishes appropriate quality levels of geotechnical materials used in the Capital Improvement Program, Special Maintenance Program and other highway projects; manages statewide program for surface and subsurface investigations; manages the Statewide Pavement Management System and Pavement Preservation Program; manages the Statewide Highways Coastal (Shoreline) Protection Program and Rockfall/Landslide Protection Program; conducts pavement studies; prepares geotechnical reports and pavement type justification reports; conducts studies on geotechnical products and construction methods to establish standards and procedures; implements research findings and technology transfer into operating practices; provides inspection and testing of geotechnical materials; performs independent assurance inspections; provides materials technician and field inspector training in areas of responsibilities.

### Geotechnical Units A and B

Plans, develops, implements, and manages the statewide quality assurance program for soils, aggregates other than Portland cement treated and asphalt treated aggregates, and other geotechnical materials; analyzes and evaluates the effectiveness of the specifications and practices used; reviews and analyzes certified test results; reviews and evaluates chemical and related physical analysis reports on construction materials and related construction products to ensure that the materials used are in conformance with contract requirements; establishes and monitors appropriate quality levels for materials in construction and maintenance projects; prepares cost estimates and specifications for contracts to bore and/or to obtain soil samples; provides geotechnical support to pavement rehabilitation and reconstruction projects by preparing pavement justification reports; directs the installation and operations of field test equipment for pile dynamic and static load tests, pile down drag studies, pile settlement studies, embankment stability studies and embankment settlement studies; manages the surface and subsurface investigation program for structural foundations, retaining walls to include mechanically stabilized earth walls, travel way embankments and slopes, landslides, rock fall and debris flows; performs geotechnical analyses on alternative solutions, reports findings and recommends selected designs; performs research and/or provides research overview of geotechnical materials and methodologies; investigates and determines the appropriate usage of geotechnical materials; develops and implements the utilization of improved materials and/or techniques for contract specifications and/or special provisions; conducts studies on soil, aggregates, related products and construction methods to ensure that the completed highway projects are constructed to meet the anticipated service life of the highway structures and pavement; reviews and recommends acceptance/rejection of material certifications, soil and aggregate gradations, certified test results and other technical findings; implements research findings and technology transfer into operating procedures and practices; develops, establishes, and maintains policies and

procedures, standards, and guidelines for the statewide geotechnical materials quality assurance program; manages consultant and in-house design projects from inception to completion; provides geotechnical materials technical assistance to the branches, district offices and other agencies; conducts material technicians and field inspectors training in areas of responsibilities.

#### Pavement Design & Pavement Management System Unit

Plans, develops and manages the statewide soils investigation and laboratory design testing programs for pavements; performs soils structural testing and analyses and recommends pavement designs for new and rehabilitated pavements; conducts pavement performance analyses and recommends resurfacing overlays or other pavement life enhancements for existing pavements; plans, develops, implements and manages the Statewide Pavement Management System Program; manages the annual statewide pavement inspection and testing program which estimates the pavement structural capacity and determines the magnitude, severity and extent of pavement surface defects for the State Highway System; identifies and prioritizes state highway locations for the annual statewide pavement inspection and testing program; analyzes and evaluates inspectional and testing data; coordinates and analyzes the pavement surface testing results; provides recommendations for pavement design and/or highway projects; implements and manages the data collection of the roughness index for the Highway Performance Monitoring System (HPMS) Program; develops, updates and maintains the highways pavement design manual; prepares and updates specifications of pertinent materials and construction methods; provides engineering assistance to design, construction and maintenance personnel related to pavement design and structural capacity; coordinates the review of the construction permit plans and provides recommendations for the branch.

#### Engineering Support Unit

Performs inspections and testing of soil and aggregate materials; prepares test reports; recommends acceptance or rejection of materials; performs calibration and verification on procedures and equipment; inspects and directs drilling and sampling operations; monitors boring and pile studies; conducts field inspections and/or testing to estimate pavement structural capacity and to determine the magnitude, severity and extent of pavement surface defects; performs pavement surface testing; performs acceptance testing, verification testing and independent assurance inspections for soils and aggregates that are not included with asphalt cement and Portland cement additives; identifies problem areas and recommends corrective measures; prepares and performs proficiency and correlation testing for accreditation and qualification programs; participates in the materials technician and field inspectors training and qualification programs by providing instructions, demonstrating test methods and evaluating performances.

#### BITUMINOUS MATERIALS SECTION

Manages the statewide quality assurance program for bituminous materials, asphaltic concrete and other related products; analyzes and evaluates the effectiveness of the specifications and practices used; establishes appropriate quality levels of bituminous materials used in the Capital Improvement Program, Special Maintenance Program and other highway projects; provides inspection and testing of bituminous materials; conducts studies on bituminous products and construction methods to establish standards and procedures; performs independent assurance inspections; manages the statewide highway radiation safety program; provides materials technician and field inspector training in areas of responsibilities.

### Bituminous Materials Unit

Plans, develops, implements, and manages the statewide quality assurance program for bituminous materials, asphaltic concrete, and other related products; analyzes and evaluates the effectiveness of the specifications and practices used; reviews and analyzes certified test results; reviews and evaluates chemical and related physical analysis reports on construction materials and related construction products to ensure that the materials used are in conformance with contract requirements; establishes and monitors appropriate quality levels for materials in construction and maintenance projects; reviews and recommends acceptance/rejection of material certifications, mix designs, certified test results and other technical findings; conducts studies on bituminous materials, asphaltic concrete, related products and construction methods to ensure that the completed highway projects are constructed to meet the anticipated service life of the highway structures and pavement; implements research findings and technology transfer into operating procedures and practices; develops and implements the utilization of improved materials and/or techniques for contract specifications and/or special provisions; develops, establishes, and maintains policies and procedures, standards, and guidelines for the statewide bituminous materials quality assurance program; reviews construction permit plans and provides recommendations; provides bituminous materials technical assistance to the branches, district offices and other agencies; manages the statewide highway radiation safety program; establishes and implements policies, procedures, standards and guidelines for the proper usage, handling, storage and disposal of nuclear gauges; conducts material technicians and field inspectors training in areas of responsibilities.

### Engineering Support Unit

Performs inspections and testing of bituminous materials; prepares test reports; performs calibration and verification on procedures and equipment; recommends acceptance or rejection of materials; identifies problem areas and recommends corrective action; assists in research studies; performs acceptance testing, verification testing and independent assurance inspections; prepares and performs proficiency and correlation testing for accreditation and qualification programs; participates in the materials technicians and field inspectors training and certification programs by providing instructions, demonstrating test methods and evaluating performances.

## RESEARCH AND TECHNOLOGY TRANSFER SECTION

Manages the statewide engineering research and technology transfer programs; develops, establishes and maintains policies and procedures for conducting research studies including implementation and technology transfer; manages the Local Technical Assistance Program (LTAP); conducts research, feasibility and/or cost benefit studies on new materials, new products, new methodology and/or new technology; conducts environmental (noise and water quality) studies; establishes and maintains the statewide highway noise policy; provides the overall coordination of the Statewide Quality Assurance Program and the Laboratory Accreditation Program for the branch; manages the statewide materials training program for material technicians and field inspectors; provides consultative services and technical assistance to other branches in matters in areas of responsibilities; participates in activities of national organizations engaged in research and technology transfer.

### Research and Technology Transfer Unit

Plans, develops, implements and manages the division's statewide engineering research and technology transfer programs; develops, establishes and maintains policies and procedures for conducting research studies including implementation and technology transfer; manages the Local Technical Assistance Program (LTAP) and the

divisional Research Program; manages the divisional annual research work program; coordinates the activities of the division's Research Committee and the Technical Committees; researches for new material, new products, new technological advances and applications, and innovative engineering methods for applicability and implementation to meet the divisional needs; conducts research studies, feasibility studies and cost/benefit studies on new materials, new products, new methodology and/or new technology; analyzes and evaluates study results and prepares technical reports on findings; coordinates the statewide materials certification program; reviews and recommends acceptance/rejection of material certification, certified test results and other technical findings; prepares the required certification that all materials and products used for construction are in compliance with the contract specifications; maintains liaison with other branches in all matters relating to research; participates in activities of national organizations engaged in research and technology transfer; conducts environmental (noise and water quality) studies which involve predicting, monitoring and controlling noise pollution and water quality; provides technical reports on noise impacts and water quality; investigates and analyzes noise and water pollution complaints; develops, establishes and maintains the statewide highway noise policy; assists design engineers to evaluate potential noise impacts and recommends appropriate noise abatement measures; provides technical review and comment on noise studies performed by others; provides the overall coordination of the Statewide Quality Assurance Program and the Laboratory Accreditation Program for the branch; develops, coordinates and manages the statewide materials training program for material technicians and field inspectors; provides consultative and technical services to the branches in areas of responsibilities.

#### Engineering Support Unit

Conducts sampling, testing and compliance evaluations for noise and water quality requirements; performs independent assurance testing as required; collects and provides data such as noise and water quality for engineer's evaluation and technical reports; assists in research studies; provides assistance in the development and implementation of new technological methods and applications for construction, maintenance, research and development activities; participates in the material technicians and field inspectors training and certification programs by providing instructions, demonstrating test methods, and evaluating performances.

#### **PROJECT COORDINATION AND OPERATIONAL SUPPORT BRANCH**

Tracks and monitors the delivery process of all highway projects from the planning through the construction phases for the statewide Capital Improvement Program and the statewide Special Maintenance Program; alerts the various branches and districts if there are any delays/issues in the project delivery process, and coordinates efforts to remediate such delays/issues; oversees development, implements, maintains, and manages a statewide project delivery tracking, analysis and control system program that includes all federal and state highway projects; tracks various Highways data bases and applications software and consolidates the data for use by highways personnel and, if applicable, by various government agencies and the general public.

Manages the statewide engineering technical services program for the division; coordinates and handles all complaints filed for legal action; provides engineering technical opinions to the Deputy Attorney Generals; provides engineering expert oral testimony in court; provides divisional guidance on legal issues to the branches, districts and staff offices; plans, develops, implements and manages the divisional legal training program; prepares budgetary and expenditure plans.

Provides review and management services on statewide highway construction and maintenance programs; reviews and consolidates district construction and

maintenance budgets. Analyzes unit costs by work items, estimates requirements of personnel, material and equipment budgets submitted by district engineers. Develops, implements, and manages a statewide construction management program for the division which integrates with the statewide project delivery and analysis program for Highways.

Develops, implements and manages the Statewide Solid Waste Management Program, Statewide Petroleum, Oil, and Lubricants Management Program, Statewide Lead-based Paint Management Program, and Statewide Asbestos Management Program for the Division.

#### PROJECT COORDINATION SECTION

Tracks and monitors all highway projects from the planning phase through the construction phase for project delivery programs, e.g., Capital Improvement Program, Special Maintenance Program, etc.; assists branches/district offices with transitioning highway projects from one phase to another and with problem resolution to ensure that critical project deadlines are met and projects are completed as scheduled in each phase; develops and manages a statewide project delivery quality assurance/quality control program and a statewide project management system to include all federal and state highway projects and coordinates with branches/districts and recommends replacement projects; serves as team leader for the quality review team which consists of highways specialists and Federal Highways Administration representatives.

#### SOFTWARE SUPPORT SECTION

Provide software procurement and management support to branch, district and staff offices as needed to facilitate and improve the project delivery process. Oversees development, implements, maintains, and manages a statewide project delivery tracking, analysis and control system program that includes all federal and state highway projects; tracks various Highways data bases and applications software and consolidates the data for use by highways personnel and, if applicable, by various government agencies and the general public.

#### ENGINEERING TECHNICAL SERVICES SECTION

Manages the statewide engineering technical services program for the division; coordinates and handles all complaints filed for legal action; provides engineering technical opinions to the Deputy Attorney Generals; provides engineering expert oral testimony in court; provides divisional guidance on legal issues to the branches, districts, and staff offices; plans, develops, implements and manages the divisional legal training program; prepares budgetary and expenditure plans..

#### CONSTRUCTION SECTION

Monitors administration of construction projects; develops uniform standards and procedures for construction control and reviews detailed plans and specifications for construction projects; conducts periodic inspections and evaluation of field activities; coordinates requests from the Department of the Attorney General for investigation of construction contract litigation with the divisional branches and district offices.

Monitors construction contract administration with emphasis on areas involving Interpretation of plans and specifications: contract change orders, contract and construction time extensions, progress payments, payment retainage, additional fund requests, contract amendments, material acceptance problems, labor compliance, force

accounts, extra work item justification, contract work payment disputes and project acceptance.

Reviews federal-aid construction administration requests to the Federal Highway Administration for approval of contract change orders, time extension justifications, extra work item justifications, problem solutions or actions and county federal-aid construction contracts; coordinates the review and approval of construction value engineering change proposals.

Develops and manages contracts for construction management and construction support services. Performs consultant selection and contracting for construction projects.

### MAINTENANCE SECTION

Develops and updates statewide maintenance policies, procedures, methods, standards and guidelines; develops and monitors the highway maintenance management system; reviews district maintenance budgets and monitors the funding of the special maintenance program; coordinates with federal and county agencies and conducts inspections and evaluations of maintenance activities; develops, implements and monitors statewide maintenance programs, e.g., Integrated Vegetation Program, Adopt-A-Highway Program, etc.; provides management reports and performance evaluations on statewide maintenance activities.

Provides services for the review of maintenance procedures, practices, procurement of supplies and equipment and budgeting; prepares specifications for the purchase of materials. Analyzes unit costs by work items, estimates requirements of personnel, material and equipment budgets submitted by district engineers.

Coordinates the division emergency response activities.

#### Equipment and Safety Unit

Analyzes and recommends procedures on equipment operation, maintenance and repairs; recommends equipment rental rates for vehicles and equipment owned by the division and for construction projects; prepares specifications for the purchase of new equipment and administers equipment purchase contracts.

Reviews, inspects and makes recommendations on safety practices; prepares safety manual and civil defense emergency management procedures.

#### Permit Construction Unit

Reviews plans for construction within or adjoining existing State Highway System to: 1) require conformance with State standards, regulations, and practices; 2) protect highway facilities from damage and maintenance problems; 3) review the impact on the environment; and 4) provide for the safety of the general public.

Coordinates construction permit plan reviews with the federal agencies, state agencies and/or departmental units as needed.

#### Contract Services Unit

Develops, implements and manages maintenance contracts for the purchase of maintenance materials, motor vehicles, equipment and services. Assists in the review of construction plans. Monitors the District's operating and special maintenance funds.

## ENVIRONMENTAL SECTION

Develops and manages the Division's special programs, e.g., Statewide Solid Waste Management Program, Statewide Petroleum, Oil, and Lubricants Management Program, Statewide Lead-based Paint Management Program, Statewide Asbestos Management Program, in compliance with federal and state laws, rules and regulations, and policies and procedures of the Environmental Protection Agency, Occupational Safety and Health Administration, and Federal Highways Administration; acts as the divisional liaison and coordinates with federal agencies, state agencies, county agencies, and the public.

Prepares quarterly, semi-annual and annual reports on the statewide environmental programs. Develops and manages a statewide computerized database of lead-based paints, asbestos, fuel storage tanks, cesspools, material storage areas, and petroleum, oil and lubricants pipelines to include location maps and/or plans; reviews existing records and facility inventory data such as as-built plans, straight line diagrams, other computer databases, etc.; develops, revises and implements program reporting forms; reviews, analyzes data and reports from the divisional district offices.

Prepares plans, specifications and estimates for informal and formal construction, equipment and supplies, and consultant contracts; prepares requests for proposals. Manages consultant contracts; conducts field inspections; prepares field inspection reports and findings to ensure problem resolution and program compliance.

Develops and maintains divisional manuals for statewide programs, i.e., the Statewide Solid Waste Management Program, Statewide Petroleum, Oil, and Lubricants Management Program, Statewide Lead-based Paint Management Program, and Statewide Asbestos Management Program; develops and updates policies and procedures, guidelines, methods, and standards for each program.

Develops and implements statewide environmental training programs for solid waste management; petroleum, oil, and lubricants management; lead-based paint management; and asbestos management; prepares budgetary and expenditure plans; prepares legislation and legislative testimonies.

## TRAFFIC BRANCH

Plans and designs roadway pavement markings and signs, traffic signals, highway lighting, and operational and safety improvements to promote the safe, orderly and expeditious movement of traffic on the State Highway System; manages consultant contracts for traffic projects; manages the Traffic Systems Management, Congestion Management System, Traffic Accident Surveillance, and Traffic Safety Improvement Programs; analyzes and monitors operating characteristics, accident records, and statistical reports; provides new and innovative alternatives for problem resolution; develops and implements highways demand projects as a means of reducing traffic congestion throughout the State.

Reviews Environmental Impact Statements (EIS), development plans, applications for permits, pending legislation and other matters for their impact on traffic operations and safety. Conducts litigation investigations.

Manages the Title II Safety Improvement Project Program and Minor Improvement Project Program; maintains and publishes traffic and accident statistics; provides technical assistance on safety techniques, state-of-the-art safety equipment, devices, and material to the Branches/District Offices; acts as State Highways Traffic liaison to Federal, County, and other governmental and private agencies.

## TRANSPORTATION DEMAND MANAGEMENT OFFICE

Plans, develops, implements and promotes highway demand projects as a means of reducing traffic congestion throughout the State; develops goals and objectives for the programs; monitors program activities and coordinates with government agencies and/or private sector; analyzes and evaluates the effectiveness of the programs; promotes highway demand programs to public agencies and the private sector by providing training and/or promotional materials; prepares budgetary and expenditure plans; drafts legislation and provides testimony.

### OFFICE SERVICES

Provides the Traffic Branch with typing, filing and other clerical services.

### DESIGN SERVICE SECTION

Develops traffic design plans, specifications and cost estimates for roadway pavement markings and signs, traffic signals, highway lighting, and operation and safety improvements; conducts feasibility studies; prepares drawings for traffic-related construction and maintenance design projects of highways and facilities.

Manages the traffic design consultant program projects from inception to completion, to include selection, negotiations with consultants, development of work programs and project time schedules, and coordination, supervision, and review of traffic design projects under contract to private consulting engineering firms.

#### Design Unit

Develops design plans, specifications, and cost estimates for roadway pavement markings and signs, traffic signals, highway lighting, and operation and safety improvements; reviews geometric designs and construction traffic control plans; reviews changes in construction traffic detours and makes recommendations to District Offices; plans and designs emergency telephones for the State Highway Emergency Telephone System; conducts feasibility studies on Federal/ AASHTO recommendations regarding safety features; recommends adoption of safety features to be incorporated in the designing of new highway construction and/or improvement projects; revises standards and details relative to glare shields, guardrails, end treatment designs, wheelchair ramps, and bikeways; revises traffic design features of State Design Manual; evaluates and recommends policies and procedures regarding traffic related features for State facilities.

#### Drafting Unit

Prepares computer-aided drafting and design (CADD) and mechanical drawings for traffic-related construction and maintenance design projects of highways and facilities; performs computations required for drafting purposes; drafts and processes post traffic design plans; drafts traffic plans from field data for design purposes; prepares drawings of construction traffic control and/or traffic detours for newspaper publication notifying motorists of the alternative routes; prepares drawings for budget requests and programming information.

#### Consultant Contract Unit

Manages the traffic design consultant program projects from inception to completion, to include selection, negotiations with consultants, development of work

programs and project time schedules, and coordination, supervision, and review of traffic design projects under contract to private consulting engineering firms; reviews completed plans, specifications, proposals and estimates for both State and/or Federal requirements; acts as liaison between the State and other governmental agencies, utilities, and private agencies; coordinates activities with other branches, sections, and units of the Division relative to the consultant design projects; coordinates and processes federal-aid county projects.

### OPERATIONS SECTION

Manages the Traffic Systems Management, Title II Safety Improvement Project and the Minor Improvement Project, State High Occupancy Vehicle (HOV), Congestion Management System (CMS), and the State sign programs; conducts in-depth studies on traffic operations problems, speed, and traffic signal timing and/or signal warrants; prepares traffic budgetary and expenditure plans; handles public concerns and complaints; drafts legislation and Administrative Rules.

#### Operations Unit

Manages the Traffic Systems Management Program; identifies congested segments of the highway system; conducts in-depth studies to determine the cause(s); provides alternatives for problem resolution; formulates action plan; prepares preliminary design plans for traffic operation; implements and monitors action plan; provides follow-up studies to ascertain the efficacy of action taken and to ensure resolution of identified problem areas. Manages the traffic operation management system; monitors traffic and implements measures for the immediate alleviation of traffic congestion; manages and updates the statewide bikeway master plan.

Conducts traffic signal timing and/or signal warrant studies to establish the need for changes in the regulatory controls; conducts speed studies and determines speed limits on the highway system; performs special studies as requested.

Handles public concerns and complaints related to traffic matters. Reviews EISs, development plans, applications for permits, pending legislation, and other matters for their impact on traffic operations and safety. Drafts legislation and/or Administrative Rules concerning traffic related matters.

#### Improvement Management Unit

Manages the Title II Safety Improvement Project Program and the Minor Improvement Project Program; prepares traffic budgetary and expenditure requirements for the Capital Improvement Program and the Special Maintenance Program; manages the State High Occupancy Vehicle (HOV) program and State sign program; analyzes, evaluates and implements program improvements; coordinates traffic training and continuing education programs to meet the educational needs of the Branch and/or the Divisional requirements.

#### Congestion Management System Unit

Plans, develops, and manages the Congestion Management System and "Safe Routes to School Programs; analyzes and evaluates traffic volumes, roadway capacity, and other data; develops strategies and/or alternatives for congestion mitigation and for enhancing the mobility of persons and goods.

## TRAFFIC SAFETY SECTION

Manages the Traffic Accident Surveillance Program and the Traffic Safety Improvement Program; conducts in-depth studies of highway facilities and provides recommendations to improve traffic safety; prepares preliminary design plans for safety improvements; conducts litigation investigations; maintains and updates statewide traffic accident data system.

### Traffic Safety Unit

Manages the Traffic Accident Surveillance Program and the Traffic Safety Improvement Program; analyzes traffic accident records; conducts in-depth studies of highway facilities and provides recommendations to improve traffic safety; implements and monitors improvements; conducts follow-up studies to ascertain efficacy of improvements. Prepares preliminary design plans for safety improvements; provides technical assistance on safety techniques, state-of-the-art safety equipment, devices, and material. Conducts litigation investigations.

### Traffic Accident and Statistics Unit

Maintains and updates statewide traffic accident data system; analyzes accident statistics, location and rates; conducts research related to traffic control and safety devices; compiles vehicular speed data; publishes traffic and accident statistics.

## INTELLIGENT TRANSPORTATION SYSTEMS (ITS) BRANCH

Develops, coordinates, implements and manages a comprehensive integrated Intelligent Transportation Systems (ITS) Program for the State Highway System; plans, develops, deploys and oversees the comprehensive and integrated use of existing and emerging electronic communications and control technologies in managing traffic, vehicles and surface transportation operating systems or infrastructure in order to improve the efficiency and safety of travel on the statewide system of roadways consistent with transportation goals, ITS concepts and divisional and departmental administrative requirements.

Manages traffic and responds to unplanned incidents and events to assure the efficient movement of traffic on a 24-hours- a-day, 7-days-a-week basis. Monitors traffic movement related to the operation of major vehicular tunnels and facility systems for public safety.

Plans, develops, promotes, coordinates and oversees a traveler information system through the collection and assessment of traffic data; compiles, organizes and disseminates collected traffic data for public use.

## ITS OPERATIONS SECTION

Manages, operates and maintains a 24-hour, 7 days a week schedule to actively manage traffic and respond to incidents and emergencies on the roadway system; monitors and operates environmental control, traffic monitoring and control, emergency telephone, surveillance, motorist information, fire/life safety and other systems involved in the safe and efficient movement of vehicles through major tunnels and approaches and major facilities.

Coordinates and develops active traffic management and incident management plans with emergency responders, County transportation and public works departments, local emergency operation centers and district staff.

Prepares operation and maintenance budgetary and expenditure plans; prepares project listings and cost estimates for the Capital Improvement Program; prepares plans and specifications for repair of equipment and facilities; establishes and implements policies and procedures.

Manages contract operations programs from inception to completion including work program bid document development, Contractor selection, negotiations with contractors, and oversight and monitoring during program delivery.

#### Transportation Management Center Operations Unit

Manages traffic through the operation of ITS devices (e.g., cameras, speed sensors, message signs, etc.) and monitoring of closed circuit televisions and geographic information system tools to detect incidents on roadways, in the tunnels and approaches for safety and security measures; monitors traffic flow through the use of vehicle detection and surveillance systems; controls and operates traffic signals and other ITS field devices, lane control devices, variable and changeable message signs, emergency exit signs, strobes, beacons, swinging gates and auxiliary equipment; monitors carbon monoxide levels and operates ventilation system to decrease gas concentration in the tunnels; operates and monitors a communication system to assist motorists which includes a two-way radio system, AM/FM rebroadcast system and the highway emergency telephone system; operates the traveler information system and provides assistance to the public by notifying appropriate parties including, but not limited to Police Departments, Fire Departments, Emergency Ambulance Services and district maintenance staff when emergency situations or incidents occur within the highways system; monitors over height vehicle detectors to ensure that over height vehicles do not enter the tunnels; conducts public tours of the traffic management center and tunnel control facility.

#### ITS Operations Unit

Develops incident management plans for the roadway system; interacts and coordinates with incident and first responder counterparts at the Counties and within the State to plan for and coordinate responses to planned and unplanned events (e.g., US Presidential visit or tsunami evacuation); manages all aspects of the freeway service patrol program; provides performance monitoring of incident management and tracks progress to guide future deployments; develops cost-benefit analysis and reports; prepares plans and specifications for contracts to repair traffic management center equipment and facilities; and prepares budgetary and expenditure plans.

#### ITS ENGINEERING SECTION

Plans, develops, deploys and oversees the comprehensive and integrated use of existing and emerging electronic communications and control technologies to support branch responsibilities for managing traffic, vehicles and surface transportation operating systems or infrastructure on statewide basis.

Develops design plans, specifications and cost estimates for ITS deployments; maintains and updates ITS architecture; and reviews County ITS projects requesting federal aid.

Develops, coordinates, procures and manages information technology systems, software, devices, operations and systems maintenance to support the ITS Program.

Manages the ITS consultant program projects from inception to completion, including planning, programming, project procurement document development, selection, negotiations with consultants, development of work programs and project time schedules, and coordination, supervision, and review of ITS design projects under contract to private consulting engineering firms.

#### Engineering Unit

Develops and submits proposals for the development and/or revision of the ITS Regional Architecture; develops, designs, coordinates, implements and manages the ITS infrastructure components such as the Freeway Management Systems, Traffic Incident Management System, Traveler Information System, Traffic Signal Control System, etc.; identifies system functional requirements, interface requirements and information exchanges with planned and existing systems and subsystems, and key standards to support interoperability, uniformity and compatibility of equipment, practices and procedures; conducts systems engineering analysis; prepares and submits ITS projects and/or programs; prepares detailed project or program systems/subsystems; design plans, specifications, and cost estimates; implements, monitors and manages ITS projects and programs; coordinates with divisional branches and district office(s), departmental divisions, governmental agencies, private businesses, and the public; coordinates and facilitates private/public partnerships; develops ITS policies, procedures, guidelines and manuals; develops, coordinates and implements ITS information and public education programs; prepares budgetary and expenditure plans.

#### Systems Unit

Develops, coordinates, procures and manages the intelligent transportation systems, software, devices, operations and systems maintenance to support the ITS Program. Coordinates within the branch, with other offices, departments and agencies to implement and maintain telecommunications and network support necessary to achieve current and future connectivity requirements; establishes system requirements; provides the technical and manpower support for all ITS systems, including, but not limited to, active/advanced traffic management, incident management, advanced traveler information upgrades of the tunnel management system; maintains processing equipment for ITS systems supporting the deployment of ITS field devices and various other systems and components; installs, tests, and configures hardware and software using departmental standards; provides for trouble shooting, upgrading and repair services; and maintains an inventory of all ITS devices, systems hardware and software.

#### OAHU DISTRICT

Manages highway construction and highway maintenance projects in conformance with approved plans and specifications; maintains, alters and repairs roads, highways and related structures within the State Highway System on Oahu.

#### ELECTRICAL SERVICES

Reviews electrical designs, conducts training, and develops electrical standards; provides electrical engineering support to design, maintenance, and construction personnel; provides electrical training to highway inspectors on how to inspect highway

lighting system and electrical service equipment; provides technical support for O&M and CIP design projects and field support for construction and maintenance activities within the State Highway System on Oahu.

### OFFICE SERVICES

Provides the District Offices with purchasing and stores, fiscal, clerical, and routine human resources support services.

#### Purchasing and Stores

Prepares summary warrant vouchers; maintains a system of requisitioning and purchasing; processes purchase requisitions; prepares purchase orders; receives, stores and distributes goods.

#### Fiscal unit

Directs, coordinates and participates in district fiscal activities; processes account payables and cash receipts; collects and receipts fees and other cash payments; controls inventory.

#### Clerical unit

Provides general office and clerical support in typing, word processing, filing, maintaining logs and records; receives, reviews and processes correspondence, documents and a variety of other materials; performs centralized mail processing activities and inventory control.

#### Personnel unit

Directs, coordinates and participates in district personnel activities; provides the liaison and coordination between the district and division personnel staffs; initiates personnel transactions; processes newly hired employees; assists employees in completing standard personnel forms.

### URBAN CONSTRUCTION SECTION

Manages all highway construction projects and highway special maintenance projects under contract in conformance with approved plans and specifications within the urban corridor from Aiea to Sandy Beach.

#### Urban Resident Engineer Unit

Conducts inspections and field engineering of all highway construction projects and highway special maintenance projects under contract in conformance with approved plans and specifications within the urban corridor from Aiea to Sandy Beach.

#### Clerical Subunit

Provides clerical, purchasing and other support services.

Engineer Subunit

Conducts inspections and field engineering of assigned highway construction projects and highway special maintenance projects under contract in conformance with approved plans and specifications.

Inspector Subunit

Conducts inspections of all highway construction projects and highway special maintenance projects under contract in conformance with approved plans and specifications.

Land Surveyor Subunit

Provides land survey support for all highway construction projects and highway special maintenance projects under contract in conformance with approved plans and specifications.

RURAL CONSTRUCTION SECTION

Manages all highway construction projects and highway special maintenance projects under contract in conformance with approved plans and specifications within the rural corridor from Pearl City to Makapuu Beach.

Rural Resident Engineer Unit

Conducts inspections and field engineering of all highway construction projects and highway special maintenance projects under contract in conformance with approved plans and specifications within the rural corridor from Pearl City to Makapuu Beach.

Clerical Subunit

Provides clerical, purchasing and other support services.

Engineer Subunit

Conducts inspections and field engineering of assigned highway construction projects and highway special maintenance projects under contract in conformance with approved plans and specifications.

Inspector Subunit

Conducts inspections of all highway construction projects and highway special maintenance projects under contract in conformance with approved plans and specifications.

Land Surveyor Subunit

Provides land survey support for all highway construction projects and highway special maintenance projects under contract in conformance with approved plans and specifications.

## MAINTENANCE SECTION

Provides for the maintenance, repairs and alterations of existing roadways, structures, traffic control devices, landscaping and other appurtenant highway facilities within the State highways on Oahu; manages the automotive and equipment service and repair shops.

### Engineering Services

Provides engineering, inspectional and investigational support for maintenance related activities on Oahu.

#### Office Engineering Staff

Conducts litigation and damage claim investigations; provides information and prepares reports for the Department of the Attorney General and/or Department of Accounting and General Services; designs and drafts minor maintenance engineering plans; prepares and inspects minor repair and service contracts of highway facilities; performs bridge/structural inspections, evaluates condition of structures, provides recommendations for maintenance and repair, and prepares bridge inspection reports; assists in the preparation of the operation and maintenance budget to include the special maintenance program; prepares project listings and cost estimates for the biennial and six-year resurfacing and bridge/structural repair programs; updates as-built construction permit plans and maintains files; represents the State on Joint Pole Committee which coordinates utility pole usage on Oahu.

#### Field Services Staff

Reviews and provides comments on engineering plans and specifications for construction within the highway right-of-way from public and private agencies and/or individuals; issues construction permits and conducts inspections to ensure compliance with permits; issues permits for oversize and overweight vehicles; conducts landscape contract inspections and prepares progress payments; conducts special investigative services to assess existing field conditions and to evaluate the impact on the highway system and facilities on matters such as drainage, access restrictions, minor land use and zoning changes, etc.

#### Highway Maintenance Unit

Constructions additions, alterations and improvements to State highways and appurtenances; maintains all highway structures and appurtenances; performs paving, patching, and rehabilitation work on highways; maintains all traffic signs, highway markings, street light standards and other aid-to-motorists signs and markings; maintains the landscaped areas and irrigation systems.

#### Traffic Signs and Marking Subunit

Maintains, repairs, fabricates and installs traffic signs, highway markings, street lights standards and other aid-to-motorists signs and markings. Fabricates signs for Maui, Kauai, and Hawaii Districts.

Roadway Maintenance Subunit

Performs patching, resurfacing and rehabilitation work on paved roadways and shoulders; constructs additions, alterations and improvements to highways as required; cleans, repairs and restores State highways after slides, storm damages and accidents.

Structures Subunit

Maintains, repairs, fabricates and installs guardrails, fences, walls sidewalks and other structures.

Special Services Subunit

Provides maintenance services to include watering of landscaped areas, maintenance of irrigation systems, herbicide application, street sweeping, hazard clearing and drain cleaning.

Bridge Maintenance Subunit

Maintains and repairs major bridges and structures.

Landscaping Subunit

Maintains landscaped areas; performs roadside mowing; cleans ditches, slopes and culverts.

Equipment Services and Repair Unit

Maintains, services and repairs all automotive and construction equipment; fabricates and repairs parts; performs welding for a variety of repair and construction work.

Automotive Subunit

Maintains, services and repairs automotive equipment such as passenger cars, pick-up trucks and other similar-sized vehicles.

Heavy Equipment Subunit

Maintains, services and repairs heavy equipment such as large trucks, graders and loaders.

Welding Subunit

Performs welding and cutting of metal components for equipment and highway repairs.

Highway Electrical Unit

Installs, maintains and repairs all electrical equipment.

Field Subunit

Installs, maintains and repairs street lights, various flashers and other electrical appurtenances.

Shop Subunit

Provides technical support in the maintenance and repair of the various electrical equipment.

ENVIRONMENTAL MANAGEMENT SECTION

Manages the Storm Water Management Program (SWMP) for the Highways Division on Oahu; ensures compliance with the Department of Health, Municipal Separate Storm Sewer System (MS4), National Pollutant Discharge Elimination System (NPDES) permit, and the United States Environmental Protection Agency (EPA); manages all SWMP activities on Oahu, which includes the coordination of work with the City and County of Honolulu and other State and Federal agencies; manages the street sweeping, storm drain inlet cleaning, and underground drain line cleaning activities on Oahu; performs inspections of Oahu's storm drain infrastructure; investigates complaints and reported violations of storm water regulations on Oahu; prepares violation reports and drafts letters to violators; initiates and executes enforcement action against violators which may include warnings and/or fines; performs public education and outreach activities; provides oversight and inspection of erosion remediation projects for Oahu; reviews plans for construction projects that will impact the Oahu District's MS4 for proper Best Management Practices (BMPs); coordinates training activities for State employees, contractors, and consultants; reviews and approves all required deliverable items and official documents produced by consultants; reviews and approves consultant activities in the Waste Load Allocation (WLA) Program; works with the Department of Health in negotiating future permit responsibilities; coordinates storm water activities with other State, Federal and City and County organizations; prepares budgetary and expenditure plans as required.

TUNNEL OPERATIONS SECTION (OAHU DISTRICT)

Maintains all mechanical, electrical, electronic, plumbing and drainage, ventilation, fire control, security and other systems involved in the safe and efficient movement of vehicles through major tunnels and approaches; conducts structural inspections of the major tunnels and approaches.

Maintains ITS devices, including but not limited to CCTV cameras, speed sensors, travel time detectors, and dynamic message signs; and related communications networks and systems.

Maintains the Punahou Pump Station, manages the H-1 Zipper Lane Contract, including maintenance of the Zip Hale, related appurtenances and the Zipper vehicles themselves; manages numerous various towing contracts, morning traffic control activities on Nimitz Highway, H-1/Lunalilo on-ramp, Vineyard Boulevard and Kamehameha Highway at Castle Junction.

Prepares operation and maintenance budgetary and expenditure plans; prepares project listings and cost estimates for the Capital Improvement Program; prepares plans and specifications for repair of equipment and facilities; establishes and implements policies and procedures; identifies deficiencies that need to be corrected and procures materials and services through various procurement venues; manages maintenance, service and construction contracts; documents and processes payment for various

services. Coordinates tunnel activities with a variety of emergency response and military agencies, utilities and contractors.

Conducts public tours of the tunnel control facility.

#### Plant Maintenance Unit

Inspects, repairs and performs preventive maintenance on mechanical, electrical, and electronic equipment such as customized tunnel ventilation fans, motors, generators, emergency generators, high and low voltage transformers, high and low voltage lighting systems, motorized electrical controls, plumbing and drainage systems, pumping systems, fire control systems, etc.; ITS devices, including but not limited to CCTV cameras, speed sensors, travel time detectors, and dynamic message signs, and related communications networks and systems; removes hazardous debris, stalled and/or traffic accident vehicles in the major tunnels and/or approaches; conducts structural inspections of the tunnel buildings, tunnels, and viaducts for major tunnels and approaches and prepares required reports; performs preventive maintenance on computer hardware and software and other equipment; prepares plans and specifications for contracts to repair equipment and facilities; prepares budgetary and expenditure plans. Implements the Highways Division Safety program, ensures compliance with the Oahu MS4 Permit requirements, plans and monitors safety, environmental and technical training, coordinates the disposal of hazardous waste, determines planned repair or replacement of equipment.

Maintains off site variable message boards, cameras, fiber optic cable. Coordinates traffic control for their maintenance activities.

#### KAUAI DISTRICT

Performs for the island of Kauai 1) engineering services and field inspections of transportation construction projects in conformance with approved plans and specifications and 2) maintenance, alteration and repair of State roads, highways and related structures.

#### OFFICE SERVICES

Provides the District Offices with fiscal, purchasing, clerical and routine human resources support services. Performs fiscal and office services functions necessary to handle its business transactions; undertakes purchasing of supplies and equipment; maintains inventory, personnel and other records of the District; performs preparation of personnel action forms and collections.

#### ENGINEERING SECTION

Performs engineering, planning, and design services, survey data, stakeout, and locates reference points required by the highway program.

Conducts investigations for litigation and tort claim causes against the state. Prepares the capital improvement program and the special maintenance program budget.

### Permits and Bridge Inspection Unit

Issues permits for work within the State right-of-way, monitors permit compliance during construction.

Issues oversized and overweight permits for trucks which carry loads on State Highways. Assures that loads are within the required weight and size limits. Coordinates with the Highways Bridge Section to assure compliance of more complex or problem structures.

Manages compliance with the federally mandated National Bridge Inspection Program (NBIP). Oversees consultant and State inspections of structures on Kauai. Provides quality control checks of structures inspections performed by others. Reviews load ratings of bridges and structures to determine if load postings are required. Maintains the federally required inspection and maintenance records of all structures on Kauai.

Develops maintenance work orders for small highway and structures construction projects for which the work can be performed by maintenance forces or small contracts.

### Survey Unit

Establishes the lines and grades required for construction projects. Conducts preliminary location surveys necessary to establish highway alignments and ground controls.

## CONSTRUCTION SECTION

Performs construction inspections of highway, bridge, and other structures projects; performs inspection, sampling, and field tests of materials in compliance with plans and specifications, and provides As-Built postings.

### Inspection Unit

Inspects major permit work for compliance with the plans and specifications. Ensures compliance with federal agency funding requirements such as the Federal Highway Administration.

Conducts field engineering services on construction projects and ensures conformance with approved plans, specifications and Highways Division procedures; conducts bridge and culvert inspections; manages construction consultant support services as required.

Performs constructability reviews of highway and structures project plans for designs developed in-house and by consultant. Manages innovative contracting projects such as design-build.

### Materials Compliance Unit

Inspects materials manufactured or produced at central plants and conducts field tests of materials incorporated in construction projects.

## MAINTENANCE SECTION

Performs inspection, repair, and alterations necessary to preserve existing roadways, structures, traffic control devices, landscaping and other appurtenant highway facilities within an approved maintenance program and budget; operates automotive and equipment service and repair shops.

### Highway Maintenance and Landscaping Units I & II

Performs pavement patching and rehabilitates shoulder areas; maintains and repairs drainage facilities; installs, maintains and replaces pavement markings, and other traffic control devices; constructs additions, alterations and improvements to highways as directed; and maintains landscaped areas.

### Bridge Maintenance Unit

Maintains and repairs major bridge structures and other structures on State highways; fabricates, installs and maintains highway signs; installs and maintains drainage appurtenances, guardrails and delineators.

### Equipment Service and Repair Unit

Maintains, services and repairs automotive and construction equipment for the Kauai District.

### Traffic Signal Unit

Maintains the traffic signal system in Kauai District; repairs all existing traffic signal equipment; assembles, tests, adjusts, installs and modifies electronic equipment; inspects traffic signals; maintains the traffic signal inventory. Maintains highway lighting inventory and inspects highway lighting facilities.

## MAUI DISTRICT

Performs for the islands of Maui, Molokai, and Lanai 1) engineering services and field inspections of transportation construction projects in conformance with approved plans and specifications and 2) maintenance, alteration and repair roads, highways, and related structures.

## OFFICE SERVICES

Provides the District Office with fiscal and clerical support services.

## ENVIRONMENTAL MANAGEMENT SECTION

Manages the Storm Water Management Program (SWMP) for the Highways Division on Maui; ensures compliance with the Department of Health, Municipal Separate Storm Sewer System (MS4), National Pollutant Discharge Elimination System (NPDES) permit, and the United States Environmental Protection Agency (EPA); manages SWMP activities on Maui, which includes the coordination of work with the County of Maui, Harbor Division - Maui, Airport Division - Maui and other State and Federal agencies; manages the street sweeping, storm drain inlet cleaning, and underground drain line cleaning activities on Maui; performs inspections of Maui's storm

drain infrastructure; investigates complaints and reported violations of storm water regulations on Maui; prepares violation reports and drafts letters to violators; initiates and executes enforcement action against violators which may include warnings and/or fines; performs public education and outreach activities; reviews plans for construction projects that will impact the Maui District's MS4 for proper Best Management Practices (BMPs); inspects pollution control measures, BMPs, and receiving State waters for violations of storm water regulations within the MS4; coordinates training activities for State employee, contractors, and consultants; reviews and approves all required deliverable items and official documents produced by consultants for environmental regulation compliance; works with the Department of Health in negotiating future permit responsibilities; updates or drafts program procedures as needed; coordinates storm water activities with other State, Federal and City and County organizations; prepares budgetary and expenditure plans as required.

### DESIGN SECTION

Performs engineering, planning, and design services for the highway program; prepares construction plans, specifications, and cost estimates for the Special Maintenance Program projects and Capital Improvement Program (CIP) projects for the islands of Maui, Molokai and Lanai; performs advance planning work including alignment studies for corridor selection; negotiates and manages consultant planning, design, and construction contracts as required; provides drafting support; prepares the CIP budgetary and expenditure plans.

### CONSTRUCTION SECTION

Conducts inspections and field engineering of all highway construction projects; performs inspection, sampling, and field tests of materials; and provides all survey data, stake out, and reference points required by the highway program.

#### Inspection Unit

Conducts field inspection and field engineering services on assigned highway construction projects and ensures conformance with approved plans, specifications, and Highways Division procedures; manages construction consultant support services as required.

#### Survey Unit

Establishes, checks, and documents the alignments, positions, and grades required for construction projects; conducts preliminary topographic and location surveys necessary to establish highway alignment and to gather data of existing ground conditions for design; provides survey services required for right-of-way, litigation, research, operations, maintenance, and the repair of highways in accordance with established survey practices.

#### Material Compliance Unit

Inspects, collect samples of, and tests materials manufactured or produced at central plants and incorporated in construction projects in accordance with approved Highways Division procedures; reviews testing procedures by others and project records for compliance with material sampling, testing, and certification requirements.

## MAINTENANCE SECTION

Performs engineering, inspection, repair, and alterations necessary to preserve existing roadways, structures, traffic control devices, landscaping and other appurtenant highway facilities within an approved maintenance program and budget; operates automotive and equipment service and repair shops; prepares the Operating and Maintenance Program and the Special Maintenance Program budgetary and expenditure plans.

### Maintenance Engineering Unit

Issues permits for all construction within the highway right-of-way and conducts inspection of the construction to ensure compliance with the construction permits; issues permits for overweight and oversize vehicles, landscaping, surveys, etc.; conducts special investigations relating to drainage, access restrictions which need some field work, design and drafting to meet changes in land use and drainage, and the highway inventory; prepares plans for maintenance work orders; conducts investigations for litigation and tort claim cases against the State; inspects bridges/structures and prepares the inspectional reports; prepares the Special Maintenance Program budgetary and expenditure plans.

### Maintenance Unit

Performs inspection, repair, and alterations necessary to preserve existing roadways, structures, traffic control devices, landscaping and other appurtenant highway facilities within an approved maintenance program and budget; operates automotive and equipment service and repair shops; prepares the Operating and Maintenance Program budgetary and expenditure plans.

### Equipment Service and Repair Subunit

Maintains, services, and repairs automotive, construction equipment, and other equipment under the jurisdiction of the Highways Division.

### Traffic Signs and Marking Subunit

Maintains traffic signs, markings, traffic control devices, and other visual aids to users of highway facilities.

### Traffic Signal Subunit

Maintains the traffic signals system in Maui District; repairs all existing traffic signal equipment; assembles, tests, adjusts, installs, and modifies new electronic equipment; performs other related functions such as inspection, inventory, record keeping, cleaning, etc.

### Bridge Maintenance Subunit

Maintains and repairs major bridge structures and other structures on state highways; installs, maintains, and replaces guardrails.

### Highway Maintenance and Landscape Subunit

Performs pavement patching and rehabilitates shoulder areas; maintains and repairs structures and drainage facilities; constructs additions, alterations, and improvements to highways as directed; and maintains landscaped areas and drainage systems. In addition to the above described functions, the Molokai Crew will maintain, service, and repair automotive and construction equipment.

### HAWAII DISTRICT

Performs for the island of Hawaii 1) engineering services for the design and construction of transportation projects in conformance with appropriate federal and state guidelines, plans and specifications 2) engineering services and inspection of permits, and 3) maintenance, alteration and repair of roads, highways, and related structures.

### OFFICE SERVICES

Provides the District Office with fiscal and clerical support services.

### SAFETY OFFICE

Manages the Hawaii District's safety programs and inspects district facilities and operations for compliance with Occupational Safety.

### ENGINEERING SECTION

Performs engineering, planning and design services; provides all survey data, stakeout, and reference points required by the highway program; reviews land use requests; issues over size/overweight permits; and administers the capital improvement program and budget.

#### Engineering Services Unit

Performs engineering, planning and design services for the highways program; prepares construction plans, specifications and estimates for highway projects; performs advance planning work including alignment studies for corridor selection; provides drafting support; prepares capital improvement program budget.

Reviews completed plans, specifications, proposals and estimates for both State and/or Federal requirements; acts as liaison between the State and other government agencies, utilities, and private agencies; coordinates activities with branches, sections and units of the Division relative to the consultant design projects.

Issues permits for overweight and oversize vehicles; conducts special investigations relating to drainage, requests for access, design, and drafting to meet changes in land use; conducts investigations for litigation and tort claim cases against the State.

Manages the design consultant program for Hawaii District to include selection, negotiations with consultants, development of work programs and project time schedules, and coordination, supervision, and review of design projects under contract to private consulting engineering firms.

### Survey Units I & II

Establishes, checks, and documents the alignments, positions, and grades required for construction projects; conducts preliminary topographic and location surveys necessary to establish highway alignment and to gather data of existing ground conditions for design; provides survey services required for right-of-way, litigation, research, operations, maintenance, and the repair of highways in accordance with established survey practices.

## CONSTRUCTION SECTION

Manages all construction projects; performs inspection, sampling, and field tests of materials from inception to completion. Issue and inspect permit projects.

### Construction Unit

Conducts field inspection and field engineering services on assigned construction projects and ensures conformance with approved plans, specifications and Highways Division procedures; manages construction consultant support services as required.

Issues permits for all construction and use of highway rights-of-way and conducts inspection of the construction to ensure compliance with construction permits.

### Material Compliance Unit

Inspects, collects samples of, and tests materials manufactured or produced at central plants and incorporated in construction projects in accordance with approved Highways Division procedures; reviews testing procedures by others and project records for compliance with material sampling, testing and certification requirements.

## MAINTENANCE SECTION

Performs inspection, repair, and alteration and policing functions necessary to preserve existing roadways, structures, traffic control devices, landscaping and other appurtenant highway facilities within an approved maintenance program and budget; operates automotive and equipment service and repair shops. Administers the operation and maintenance and special maintenance program budgets.

### Maintenance Unit I

Performs inspection, repair, and alteration functions necessary to preserve existing structures; traffic control markings and devices; and maintains, services, and repairs equipment within an approved maintenance program and budget. Administers the operation and maintenance and special maintenance program budgets.

### Equipment Service and Repair Subunit

Maintains, services and repairs automotive and construction equipment under the jurisdiction of the Highways Division.

Traffic Services Subunit

Fabricates, installs, and maintains traffic signs; maintains, removes and/or installs traffic markings and other aids to users of highway facilities.

Bridge Maintenance Subunit

Maintains and repairs major bridge structures on highways under the jurisdiction of the Highways Division.

Maintenance Unit II

Performs pavement patching and rehabilitates shoulder areas; maintains and repairs structures and drainage facilities; constructs additions, alterations and improvements to highways as directed; maintains landscaped areas and drainage systems.

Roadside Maintenance Subunits

Performs mechanical roadside mowing; controls weeds by manual and chemical means; removes litter; plants, prunes, propagates, replants, fertilizes and waters roadside landscape; cleans ditches, slopes and culverts; sweeps streets and intersections; installs, replaces, straightens and cleans traffic signs.

Roadway Maintenance Subunits

Performs patching, resurfacing and rehabilitation work on pavements and shoulders; constructs, maintains and repairs structures and drainage facilities; installs, replaces and repairs guardrails and guideposts; constructs additions, alterations and improvements to highways; cuts, grades and constructs slopes, embankments and roadside areas; cleans, repairs and restores highway after slides, storm damage and accidents.