

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
AIRPORTS DIVISION / OAHU DISTRICT
DANIEL K. INOUE INTERNATIONAL AIRPORT

TERMINAL 2 TICKETING LOBBY
RENOVATE AND LANDSCAPE (12) PLANTER BOXES
WITH NATIVE HAWAIIAN PLANTS

PROJECT NO. DOT-AIR-O-26-025

SCOPE OF WORK – Furnish labor, parts and materials to renovate and landscape (12) planter boxes with native Hawaiian plants. Project to be completed within nine (9) months after Notice to Proceed. Project not to exceed 365 days.

CONTRACTOR REQUIREMENTS – To be eligible for award, bidders must possess a valid State of Hawaii Specialty Contractor "C-27", Landscaping contractor license at time of bidding. Contractor's experience shall include landscape projects with Native Hawaiian plants

SPECIFICATIONS – Work shall be performed in accordance with the following specifications sections:

Section 01000 – Description of Work
Section 32100 – Preparation for Planter Box
Section 32200 – Planter Box Irrigation
Section 32300 – Native Hawaiian Plants

PREVAILING WAGES – The requirements of Chapter 104, HRS – Wages and Hours of Employees on Public Works Law shall apply to this solicitation.

Prevailing wages and certified payroll shall apply to this project.

Bids over \$25,000.00 shall be required to provide a performance and payment bond for award of the project.

PAYMENT – Invoices may be submitted on a monthly basis for progress payment to the Project Manager. Bid Proposal unit costs shall include all labor, materials, tools, equipment, taxes, fees and incidental expenses needed to complete the contract.

SECTION 01000 – DESCRIPTION OF WORK

PART 1 – GENERAL

1.01 RELATED DOCUMENTS

The Hawaii Department of Transportation 2016 General Provisions for Construction Projects and Special Provisions apply to the work specified in this document.

1.02 DESCRIPTION OF WORK

Scope of Work includes:

- 1) Removal of topsoil and existing irrigation piping and sprinkler system.
- 2) Install new soil mixture, weed control barrier and gravel surface cover in preparation to plant native Hawaiian plants listed on Exhibit A-1.
- 3) Install French Style drains as shown on Exhibit A-2.
- 4) Modify existing planter box drainage pipe and surface contour as shown on Exhibit A-3.
- 5) Remove (12) existing sprinkler irrigation systems.
- 6) Install (12) new drip irrigation systems.
- 7) Landscape (12) Planter boxes with Native Hawaiian plants suitable for shaded or partial sunlight exposure areas of planter boxes. See Planter Box landscape arrangement in Exhibit A-4.
- 8) Restore (6) previously renovated Planter boxes in Lobby 4 & 5 by adding aggregate material, river rocks and new Native Hawaiian plants to fill missing sections of (6) planter box landscape plants.
- 9) Contractor shall fuse together river rocks with clear resin or high strength grout or other methods to deter removal or disturbing river rocks for all (18) planter boxes.
- 10) Contractor shall trim and manicure Ti leaf trees and landscape plants within (6) existing planter boxes in Lobby 4 & 5.
- 11) Contractor shall make recommendations to Project Manager on types of Native Hawaiian plants which are low maintenance, drought resistance, ground cover species with importance to Hawaiian culture use and traditions.

Contractor shall provide all labor to remove, dispose existing plants and transplant new native Hawaiian plants into renovated planter boxes to complete project.

The work to be performed under this Contract shall be done in phases, where one or two planter boxes can be worked on simultaneously to minimize the impact on Airport operations. Phases shall divide the total amount of Lobby planter boxes into workable groups not exceeding four (4) phases. Each phase shall have a duration of 45-60 calendar days, unless agreed otherwise with State Project Manager. Work shall include all labor, equipment, and materials necessary to perform work specified herein specifications.

1.03 GENERAL REQUIREMENTS

- A. At the time of bidding, Contractor submitting a bid proposal shall possess a State of Hawaii, Specialty Contractors "C-27" Landscaping Contractor's license. All subcontractors shall be properly licensed for the planter box landscaping and related landscaping work.

- B. The Contractor shall have a minimum of five (5) year experience, immediately prior to the bid opening date, in the field of landscaping and related field of landscaping work such as irrigation and lawn sprinkler systems. Prior to award, upon request by the State, the Contractor shall furnish a list of past projects with references for review by the State.
- C. Failure to respond or to provide the required information to the State Project Manager (SPM) within ten (10) working days of request by the project manager shall deem the Contractor “unresponsive” and disqualify his/her bid proposal.

1.04 SECURITY REQUIREMENTS

AOA Badges – Shall only be issued to people that apply through the Airport Security Office and complete all the fingerprinting requirements. The Contractor shall be aware it may take approximately three (3) to four (4) weeks to obtain badges.

All contractor personnel working on planter box renovation project shall obtain an Airport ID Badge with unescorted access. All fees associated with obtaining ID badges shall be borne by the Contractor. Information regarding fees may be obtained by calling Daniel K. Inouye International Airport (HNL), Pass & ID Office at (808) 836-6427.

1.05 LOCATION OF WORK

- A. The work to be performed under this contract is located at Daniel K. Inouye International Airport, Honolulu, Hawaii.
- B. All landscaping planter boxes for this project are located in Terminal 2, 2nd Level Ticketing Lobbies 4, 5, 6, 7 and 8. See Exhibit A-1 for location of 12 planter boxes.
- C. The airport shall remain operational at all times. Any damages to existing areas caused by the Contractor shall be repaired by the Contractor at no cost to the State.

1.06 PERMITS

- A. DOTA anticipates no permits will be required for this landscaping project.

1.07 HOURS OF WORK

- A. General – All work on landscape planter boxes shall be conducted Monday to Friday during normal hours from 7:00 a.m. to 4:00 p.m. To avoid exposure of landscaping work with airline passengers in ticketing lobby, the Contractor shall provide safety stanchions or delineators to protect public from work being done.
- B. Regular Working Hours – The term “regular working hours” as used in these specifications shall mean 7:00 a.m. to 4:00 p.m., Monday through Friday, except State holidays. Depending on planter box location, the Contractor may be required to perform planter box renovation work during nighttime hours from 9:00 p.m. to 5:00 a.m.

- C. Contractor shall submit certified payroll documents with the invoice to the State Project Manager every month for employees.
- D. The Contractor and State Project Manager shall agree on a project work schedule which shall begin within (30) calendar days from Notice to Proceed (NTP) date.

1.08 TERM OF CONTRACT

The term of this contract shall be nine (9) months from the date indicated in the Notice to Proceed. Should the Contractor require additional time to complete planter box renovation work, the Contractor shall provide the following to the State Project Manager:

- A. Written request to extend contract term with an explanation for extension.
- B. The contract term, including extension(s), shall not exceed 365 days.

1.09 ALLOWANCE

- A. Allowance includes, but not limited to, unforeseen planter box conditions and other measures, such as irrigation plumbing and controls, construction barricades, Native Hawaii plants and security measures, approved by State Project Manager.
- B. Use the allowance only as directed by the State Project Manager for the completion of planter box renovation project.
- C. Allowance shall include overhead, profit, taxes, insurance, and all incidental costs.
- D. Any unused balance remaining in the Allowance will be credited back to the State.

1.10 SAFETY

- A. The Contractor shall take the necessary precautions to protect their workers and other personnel from injuries. The rules and regulations promulgated by the Occupational Safety and Health Acts (OSHA) are applicable and made a part of these specifications.
- B. To protect the general public, the Contractor shall erect construction barricades or safety stanchions around the work area to prevent entry into the planter box area during renovation work.
- C. During the progress of the work, demolition debris, empty crates, waste, material drippings, etc. shall be cleaned and removed by the Contractor at the end of each workday, and the work area shall be left clean and orderly.

1.11 CONSTRUCTION SAFETY STANCHIONS

- A. The Contractor shall provide and install safety stanchions or delineators as temporary construction perimeter around planter box during renovation and restoration work. Cost to furnish and install all safety stanchions, delineators and construction signs shall be included within the contractor unit price on the Proposal Schedule.

1.12 OPERATION OF AIRPORT FACILITIES DURING CONSTRUCTION

- A. The Contractor shall coordinate the phases of work under this contract with the Project Engineer to allow continuing operation of Airport facilities and to minimize disruption to pedestrian foot traffic in ticketing lobbies.
- B. Utility Maintenance: During the execution of this contract, existing water and electric service shall not be disrupted except where authorized with an Outage Request approved by Airport Landside manager. by authorities having jurisdiction. No disruption of utility service is anticipated during renovation and landscape work on Ticketing Lobby Planter boxes.
- D. Approved outages for water and electrical power, if necessary, shall be kept to a minimum and scheduled for off-peak hours from 12:00 am to 6:00 am, unless approved by the Project Engineer.

1.13 WORK UNDER SEPARATE CONTRACTS

- A. General: Cooperate fully with separate contractors so work on these contracts may be carried out smoothly without interfering with or delaying work under this Contract or other contracts. Coordinate the Work of this Contract with work performed under separate contracts.
- B. Concurrent Work: The State is planning to award separate contract(s) for the following construction operations at Project site and within the Overseas Terminal. These operations might be conducted simultaneously with work under this Contract.
 - 1. Ticket Lobby Renovation and BHS Improvements, Daniel K. Inouye International Airport, State Project No. AO1033-22.

1.14 EXISTING AS-BUILT DRAWINGS

- A. Bidders who are interested in researching as-built drawings for Daniel K. Inouye International Airport may do so by the following procedure:
 - 1. Bidders shall fill out and sign the two attached forms, "Request for Airport Plans and CAD/Computer Graphics Data" and "Recipient's Indemnification Clause" as provided in this specification, and e-mail back to the State Project Manager for further processing.
 - 2. Airport staff will contact the requestor advising of their clearance to research the as-built drawing library. Requestor shall contact the State Project Manager to schedule an appointment to access the as-built drawings.
 - 3. Requestor shall be responsible for performing the necessary as-built research. DOT-A will only provide the plans sheets that were requested in PDF format. Requestor shall bring with him/her a blank CD/DVD, onto which the requested PDF files will be copied.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION (NOT USED)

PART 4 – MEASUREMENT AND PAYMENT

4.01 MEASUREMENT AND PAYMENT

- A. Work under this section will be measured and paid for separately, at pre-approved contract unit price. All payments shall be full compensations for all materials, labors, tools, equipment, and incidentals needed to complete the Contract.

<u>Item No.</u>	<u>Item Description</u>	<u>Unit</u>
01000.01	Remove Top Soil and Existing Irrigation System	Each
01000.02	Install Top Soil Mix, Bio-Barrier and Gravel Surface Cover	Each
01000.03	Install New French Style Drains (2 per box)	Each
01000.04	Modify Planter Box Drainage Pipe and Surface Contour	Each
01000.05	Install New Drip Irrigation System	Each
01000.06	Restore (6) Planter Boxes in Lobby 4 & 5	Allowance
01000.07	Unforeseen Planter Box Repairs	Allowance

END OF SECTION

DIVISION 32 – EXTERIOR IMPROVEMENTS

SECTION 32100 - PREPARATION FOR PLANTER BOX

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

- A. The General Provisions of the Contract, including General and Special Provisions and General Requirements of the Specifications shall apply to the work specified in this section.
- B. Section Includes:
 - 1. Excavate planter box soil to expose existing irrigation pipe and spray heads.
 - 2. Remove existing planter box top soil, approximately 4" thick layer.
 - 3. Change contour of middle section planter box soil slope from 20 deg to 5 deg or less, and slope surface to existing 12" vertical pipe drain.
 - 4. Install French style drains on all planter box center section, 2 drains per planter box.
 - 5. Mix soil removed from planter box with red cinders and Pro-mix planting material and return to planter box.
 - 6. Install Bio-barrier weed control fabric.
 - 7. Install drip irrigation feed lines from backflow preventer to approximate location of planter box plants.
 - 8. Install 18" wide strip of No.4 Coarse, Grade A, HC&D aggregate.
 - 9. Install 1" Thick Layer, No.3B Coarse, HC&D aggregate on entire remaining planter box surface, including raised tier section.
 - 10. Install 12" wide strip of river rock over all French Drains. To prevent public from tampering or removing river rocks, the Contractor shall apply clear resin **or** high strength grout **or** T316 stainless steel mesh to secure river rock in place within all (18) planter boxes.
 - 11. Install 1 or 2 large 12" diameter rock in each raised tier section. The Contractor shall provide large moss rocks suitable for landscaping. Rocks shall be in natural condition, free from cement, metals, paint or similar defects. Use of man-made decorative rock may be substituted upon approval of Project Manager.
 - 12. Provide native Hawaiian plants for landscaping project. See Section 32300 Native Hawaiian Plants.

1.02 DEFINITIONS

- A. Aggregate Terminology: HC&D product line aggregates found on company website: www.hcdhawaii.com
- B. College of Tropical Agriculture and Human Resources (CTHAR), Ornamentals and Flowers, March 2003, "OF-30", Native Hawaiian Plants for Landscaping, Conservation, and Reforestation.
- C. College of Tropical Agriculture and Human Resources (CTHAR), Ornamentals and Flowers, March 2008, "OF-40", Best Native Plants for Landscapes.

1.03 PRE-CONSTRUCTION MEETING

- A. Preliminary Planter Box Landscaping Meeting: Before starting renovation project, Contractor shall conduct meeting at Project site.
1. Meet with State Project Manager, State Inspector and Contractor's jobsite supervisor and State landscaping supervisor to discuss project objectives and scope of work.
 2. Review methods and procedures related to the planter box landscaping work, including, but not limited to, the following:
 - a. Inspection condition of existing planter soil to determine, if soil can be re-used for planter box after screening soil to remove foreign material.
 - b. Contractor shall keep planter box area clean of dirt and debris upon completion of work day or night, whichever applies.
 - c. Use of construction stanchions or delineators to protect unauthorized entry into work area(s) during working and non-working hours.
 - d. Expose existing irrigation system before removal of piping, valves, spraying fixtures, and controller for inspection by Project Engineer.
 - e. Installation of two (2) French style drainage system. See Exhibit A-2.
 - f. Removal of existing top soil up to 4" deep and conditioning below surface with cinders and Pro-mix soil additives. Objective to facilitate drainage from planting media. Suggestions from contractor will be welcome.
 - g. Lower slope of planter box surface from 18-20 deg to 5 deg or less. If possible, Contractor shall create a slope to existing 12" drainage pipe collection grate. See Exhibit A-3 for new planter box profile.
 - h. Install new drip irrigation system for planter box. See Section 32200 Planter Box Irrigation.
 - i. Install bio-barrier for weed control over amended soil in planter box.
 - j. Cover surface of all planter box elevated tier sections with 1" to 2" layer of HCD No. 3B Coarse cushion gravel.
 - k. General planter box slope area shall have three types of rock. Upper section shall be HCD No. 4 Coarse rock, middle section shall be HCD No. 3B Coarse cushion gravel and lower section over French Drains shall be river rocks.
 - l. Lower section river rocks shall be secured in place to prevent removal and tampering with clear resin or high strength grout or stainless steel mesh wire or other type of approved landscaping method
 - m. Furnish, deliver and plant approved native Hawaiian plants in planter boxes as identified in Exhibit A-1.
 - n. Provide Native Hawaiian plant maintenance instructions to Airport landscapers within 30 days of project completion.

1.04 SUBMITTALS

- A. Product Data: For each type of planting material and aggregate product used.
- B. Product Data: For type of drainage pipe used in French Drain.

1.05 FIELD CONDITIONS

- A. Existing Planter Boxes: Contractor is responsible to inspect jobsite conditions and planter boxes prior to submitting bid proposal for project. Locations of the existing Landscape Planter Boxes are shown in Exhibit A-1.
- B. Airport operation around all planter boxes will continue during entire planter box renovation and landscaping project therefore:
 - 1. Conduct planter box renovation work so State's operations are not disrupted.
 - 2. Coordinate work on no more than two (2) planter boxes at one time, unless approval is given by State Project Manager.
 - 3. During the course of work, if structurally impaired areas of concrete planter boxes are detected, notify the Project Engineer and stop work until proper precautions are taken to secure the affected area below the planter box. Verify that the area below the affected work area have been secured before proceeding with work on the planter box.
- C. Protect concrete planter boxes and adjacent Atrium concrete walkways from soil and debris removed from planter boxes. Cover planter box ledges, sides, and sitting area with industrial grade brown paper or equal. Concrete walkways and floor adjacent to planter boxes shall be vacuum daily to prevent dirt, organic material and debris from littering the Ticketing Lobby. If Contractor elects not to vacuum area next to planter box, the floor area shall be protected with industrial grade gray, fiber reinforced polyethylene tarp to minimize daily cleanup by sweeping after completion of work day. Washdown with water will be permitted, only if Contractor can collect all wash water from floor. Water disposal to floor drain is not allowed. All water drains go to the ocean.
- D. Maintain access to existing walkways, corridors, and other adjacent occupied or used facilities.
- E. Conditions existing at time of inspection for bidding will be maintained by State as far as practical.
- F. Weather Limitations: Proceed with planter box renovation work when existing and forecasted weather conditions permit Work to proceed without water entering the planter boxes during:
 - 1. Soil removal and replenishing.
 - 2. Irrigation removal and installation.
 - 3. French drain installation.

PART 2 - PRODUCTS

2.01 AGGREGATE

- A. HC&D No. 4 Course – Used for 18” wide backstop strip along planter box wall.

- B. HC&D No. 3B Coarse – Used for typical planter box 1” layer surface cover.
- C. HC&D No. 3B Course – Used for French drain backfill cushion.
- D. Tileco Red Cinder 3/8” minus – Used for soil mixture.
- E. Geobunga or equal River Rock – Used for French Drain surface cover.

2.02 FRENCH DRAIN

- A. Advanced Drainage Systems or equal, 4” x 10ft. Corrugated Drain Pipe Perforated, Model No. 4040010. Sold via Home Depot.

PART 3 - EXECUTION

3.01 PREPARATION

- A. Contractor shall erect a continuous plywood barricade to enclose planter box prior to start of planter box renovation work. See Exhibit C-1. Plywood barricade shall be painted semi-gloss white and free standing with typical Hawaiian motif banners (See Exhibit C-1, Detail #4) and Construction signs (See Exhibit C-1, Detail #5). Construction barricade shall not be secured to Lobby floor. Barricade shall have one (1) locking door to prevent unauthorized access during non-working hours.
- B. Removal of existing planter box plants to be done by Airport landscaping crew.
- C. Remove shredded wood chips and loose ground cover from planter box surfaces and inside PVC drainage pipe with industrial vacuum to minimize spillage onto Ticketing Lobby floor.
- D. Remove approximately 4” existing soil and screen for reuse in planter box. Excess soil can be transferred to upper right and upper left areas of planter box.
- E. Reduce planter box middle section ground slope to 5 degrees or less, to minimize rainwater runoff during heavy rains. See Exhibit A-4 for new planter box profile.
- F. Remove and shorten planter box PVC drainage pipe to new planter box grade to facilitate surface water drainage.
- G. Heavy equipment will not be permitted on 2nd Level Ticketing Lobby floor area for this project. Heavy equipment shall include, but not limited to backhoe, mini-wheel loader, rubber trac excavator, forklift, or similar mechanized machinery.
- H. Expose existing irrigation piping in planter box for Project Engineer. Upon approval by Project Engineer, remove all irrigation piping, sprinklers and valves up to water supply backflow preventer.
- I. Expose existing electrical conduit for inspection by Project Engineer. All electrical work to be performed by Airport electricians.

3.02 FRENCH DRAIN INSTALLATION

- A. Excavate and remove soil to create two (2) French Style Drains in middle section of planter boxes. Each French Drain trench shall be 9" wide x 8" deep x 180" long. See Exhibit A-3 for details.
- B. Install fabric filter cloth in French Drain trench for erosion control.
- C. Install new 4" Corrugated Drain Pipe into trench and backfill with HC&D No. 3B Course gravel cushion.
- D. Install and secure 1" PVC pipe lateral from French Drain 4" Corrugated Drain Pipe to 12" vertical PVC collection pipe, one (1) per French Drain. Total two (2) 1" PVC pipe lateral per planter box. No lateral pipe connection needed for upper level planter box terraces.
- E. Cap open ends of French Drain 4" Corrugated Drain pipe.
- F. Cover French Drain 9" trench width with 1" layer GeoBunga 1" x 2" River rock.
- G. Cover planter box surface with HC&D No. 3B Coarse gravel on final application of planter box surface aggregate.

3.03 PLANTER BOX SOIL INSTALLATION

- A. Mix native soil removed from planter box with Tileco Red Cinders 3/8" minus and Pro-Mix potting soil 1/3 portion to volume, return and backfill planter boxes lower and upper level areas as needed.
- B. Prior to backfilling native soil into planter boxes, Contractor shall install textured Weatherside fiber-cement siding to cover exposed planter box black poly-liner and stainless-steel retainer bar, as best as possible. Grout exposed siding gaps.
- C. Install new irrigation pipe manifold from ½ Backflow preventer and shut-off valve as specified in Section 32200, Irrigation.
- D. All electrical conduit replacement and NEMA 4 weatherproof ground fault outlets to be replaced by Airport maintenance department and Not In Contract (N.I.C.).
- E. Cover entire planter box surface with Bio-barrier fabric for weed control.
- F. All native Hawaiian plants shall be planted in accordance with Exhibit A-1 Plant Index. Plants shall be spaced evenly, not less than 2 feet apart to allow for grow out space. See Exhibit A-4 for Typical Plant Arrangement within planter box.
- G. Contractor shall complete one (1) planter box with Native Hawaiian plants as a model for review and approval. Thereafter, Airport landscapers shall plant Native Hawaiian plants into remaining eleven (11) planter boxes to complete project.

- H. Cover entire planter box surface with HC&D No. 3B Coarse gravel aggregate. Entire planter box surface shall include upper right tier level, upper left tier level, low right and lower left sides of planter box. If possible, Use same No. 3B coarse gravel material from same batch.

3.04 WASTE DISPOSAL

- A. Collect demolished materials, aggregate bags, cardboard boxes and place in containers or Heavy-duty construction trash bags.
 - 1. Promptly dispose of demolished materials.
 - 2. Do not allow demolished materials to accumulate on-site.
 - 3. Storage or sale of demolished items or materials on-site is not permitted.
- B. Transport and legally dispose of demolished materials off State's property.

PART 4 - MEASUREMENT AND PAYMENT

4.01 BASIS OF MEASUREMENT AND PAYMENT

- A. Work under this section will not be measured nor paid for separately but, shall be considered incidental and included in the bid prices for the various items of work in this project.

END OF SECTION

DIVISION 32 – EXTERIOR IMPROVEMENTS

SECTION 32200 - PLANTER BOX IRRIGATION

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

- A. The General Provisions of the Contract, including General and Special Provisions and General Requirements of the Specifications shall apply to the work specified in this section.
- B. Section Includes:
 - 1. Remove existing irrigation piping and pop-up sprinkler devices to existing backflow preventer shut-off valve.
 - 2. Design and install new typical drip irrigation system for (12) planter boxes to be renovated under this project.
 - 3. Verify water supply to planter boxes are operational and sufficient to deliver water to new landscape plants.
 - 4. Installation of new drip irrigation system with valve box from manual shut-off valve. Contractor shall verify water supply to existing 120v solenoid control shut-off valve.
 - 5. All existing water supply Back Flow Preventers (BFP) are not included in contract. Contractor shall inform project manager, if BFP needs repair or replacement.
 - 6. "As-built" sketch or drawing of new drip irrigation system. Irrigation system shall be typical for all planter boxes.
 - 7. Existing planter box water sprinkler system on electronic clock timer. No changes to drip irrigation system timer are not included in contract. If a new drip irrigation system timer is needed, cost will be expensed to Unforeseen Planter Box Repairs, item #01000.07 in Proposal Schedule, upon approval of Project Engineer.

1.02 PRE-CONSTRUCTION MEETING

- A. Preliminary Planter Box Landscaping Meeting: Before removal of existing planter box irrigation system, Contractor shall hold meeting at Project site.
 - 1. Meet with State Project Manager, State Inspector and Contractor's jobsite supervisor and State landscaping supervisor to discuss proposed drip irrigation system to be installed in planter boxes.
 - 2. Review types of Native Hawaiian plants and concerns regarding planter boxes which may create installation and maintenance problems. Example of meeting topics shall include, but not limited to, the following:

- a. Supply of irrigation water to planter boxes.
- b. Water requirements for Native Hawaiian plants.
- c. Use of safety stanchions and delineators to protect unauthorized entry into work area(s) during working and non-working hours.
- d. Hours of work on planter box irrigation system.
- e. Expose existing irrigation system before removal of piping, valves, spraying fixtures, and controller for inspection by Project Engineer.
- f. Inspect existing water supply system from backflow preventer to existing automatic solenoid valve shut-off valve.
- g. Use of bio-barrier fabric for weed control with irrigation system.
- h. Time frame to install irrigation system per planter box.

1.03 SUBMITTALS

- A. Product Brochure: Drip irrigation controller, valves, connectors, etc. to be used.
- B. Instruction Manual: For irrigation controller to be used.
- C. "As-built" drawing or sketch for irrigation system.

1.04 FIELD CONDITIONS

- A. Existing Planter Boxes: Contractor is responsible to inspect jobsite conditions and planter boxes prior to submitting bid proposal for project. Locations of the existing Landscape Planter Boxes are shown in Exhibit A-1.
- B. Airport operation around all planter boxes will continue during entire planter box renovation and landscaping project therefore:
 - 1. Conduct planter box renovation work so State's operations are not disrupted.
 - 2. Coordinate work on no more than two (2) planter boxes at one time, unless approval is given by State Project Manager.
 - 3. During the course of work, if structurally impaired areas of concrete planter boxes are detected, notify the Project Engineer and stop work until proper precautions are taken to secure the affected area below the planter box. Verify that the area below the affected work area have been secured before proceeding with work on the planter box.

- C. Protect concrete planter boxes and adjacent Atrium concrete walkways from soil and debris removed from planter boxes. Cover planter box ledges, sides, and sitting area with industrial grade brown paper or equal. Concrete walkways adjacent to planter boxes shall be protected with industrial grade gray, fiber reinforced polyethylene tarp to minimize daily cleanup after completion of work day. Washdown with water will be permitted, only if Contractor can collect all wash water from floor. Water disposal to floor drain is not allowed.
- D. Maintain access to existing walkways, corridors, and other adjacent occupied or used facilities.
- E. Conditions existing at time of inspection for bidding will be maintained by State as far as practical.
- F. Weather Limitations: Proceed with planter box renovation work when existing and forecasted weather conditions permit Work to proceed without water entering the planter boxes during:
 - 1. Soil removal and replenishing.
 - 2. Irrigation removal and installation.
 - 3. French drain installation.

PART 2 - PRODUCTS

PART 3 - EXECUTION

3.01 PREPARATION

- A. Expose existing irrigation piping and sprinkler device connection in planter box to backflow preventer for Project Engineer.
- B. Provide a shop drawing or field sketch of new drip irrigation system to be installed from existing backflow preventer service valve to service all four (4) sections of planter box. New irrigation shall be typical for all planter boxes.
- C. Upon approval by Project Engineer, remove all irrigation piping, sprinklers and valves to existing water supply backflow preventer.
- D. Verify water supply to planter box is operational and will provide enough water to maintain landscape plants.
- E. Expose existing electrical conduit wiring for inspection by Project Engineer. All electrical repair work to be performed by Airport electricians or a licensed electrical contractor provided by the State.

3.02 INSTALLATION

- A. Install new Schedule 40, PVC piping and distribution manifold from backflow preventer to valve box.
- B. All PVC SOC pipe connections shall be primed with Weld-On P-70 or equal.
- C. All PVC SOC pipe connections shall be glued with Weld-On P-704 or equal PVC cement compatible for irrigation application.
- D. Connection from drip irrigation manifold to backflow preventer will have one (1) manual service valve after solenoid control shut-off valve to allow maintenance on drip irrigation system.
- E. Programming for existing irrigation timer/controller shall be reviewed by the Contractor, to verify time and duration of water supply to new drip irrigation system is suitable for Native Hawaiian plant species to be planted within the planter box.
- F. Upon completion of irrigation system installation, irrigation system shall be tested manually to demonstrate water distribution of drip irrigation system is operational.
- G. The Contractor shall verify existing drip irrigation systems in renovated planter boxes R1 to R6 have sufficient water flowing throughout the drip irrigation systems.

3.03 WASTE DISPOSAL

- A. Collect all unused PVC pipes, fittings, wires, unused PVC primer PVC cement, old irrigation piping and fittings removed from planter boxes, cardboard boxes and place into Heavy-Duty construction trash bags for disposal.
 - 1. Promptly dispose of demolished materials.
 - 2. Do not allow demolished materials to accumulate on-site.
 - 3. Storage or sale of demolished items or materials on-site is not permitted.
- B. Transport and legally dispose of demolished materials off State's property.

PART 4 – MEASUREMENT AND PAYMENT

4.01 BASIS OF MEASUREMENT AND PAYMENT

- A. Work under this section will not be measured nor paid for separately, but shall be considered incidental to and included in the bid prices for the various items of work in this project.

END OF SECTION

DIVISION 32 – EXTERIOR IMPROVEMENTS

SECTION 32300 – NATIVE HAWAIIAN PLANTS

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

- A. The General Provisions of the Contract, including General and Special Provisions and General Requirements of the Specifications shall apply to the work specified in this section.
- B. Section Includes:
 - 1. Types and quantity of Native Hawaiian Plants to be planted.
 - 2. Handling and care of Native Hawaiian Plants to be planted.
 - 3. Delivery location for Native Hawaiian Plants to be furnished by Contractor.

1.02 PRE-CONSTRUCTION MEETING

- A. Preliminary Planter Box Landscaping Meeting: Before starting removal of existing planter box irrigation system, conduct meeting at Project site.
 - 1. Meeting with State Project Manager, Contractor's jobsite supervisor and State landscaping supervisor to discuss the quantity and types of Native Hawaiian plants to be furnished to Airport Landscaping department and establish an estimated delivery date of plants needed to complete landscaping project.
 - 2. Review types of Native Hawaiian plants and concerns regarding planter boxes which may create installation and maintenance problems. Example of meeting topics shall include, but not limited to, the following:
 - a. Supply of potable irrigation water to planter boxes.
 - b. Water requirements for Native Hawaiian plants
 - c. Availability of Native Hawaiian Plants identified in Exhibit A-1.
 - d. Inspect (6) existing planter boxes R1, R2, R3, R4, R5, R6, and replace plants as needed to refresh appearance of planter boxes.
 - e. Prune existing Green and Red TI Leaf plants in planter boxes R1, R2, R3, R4, R5 and R6 as needed.
 - f. Add new Ti Leaf plants where plants are missing in planter boxes.
 - g. Deliver and transplant Native Hawaiian plant directly into (12) newly renovated planter boxes.
 - h. Fertilize and monitor plants for 30 days after planting into planter boxes. If plants fail to acclimate into planter box environment and die within 60 days, remove and replace plants at no additional cost.
 - i. Remove and dispose of all plant pots, wrappers and green waste from trimming, pruning of existing Hawaiian plants off Airport property daily.

1.03 SUBMITTALS

- A. Product Data: If available, general instructions how to care for each Native Hawaiian plant species to be provided for landscaping project with this contract.
- B. Invoices: Cost of Native Hawaiian plants for Planter Box Renovation project shall be charged to Allowance item #32300.01 of Proposal Schedule. If plant cost exceeds the Allowance amount, the Contractor shall notify the Project Engineer prior to landscaping the planter boxes.

PART 2 - PRODUCTS

2.01 TYPES OF NATIVE HAWAIIAN PLANTS

- A. Green Ti Leaf (Stalk Plant)
- B. Red Ti Leaf (Stalk Plant)
- C. Pohinahina (Vitex)
- D. Uki 'Uki (Shrub)
- E. 'Akia (Shrub)
- F. 'Ilima "Official Flower of Oahu" (Shrub)
- G. 'Palapalai (Fern)
- H. Iliee (Ground Cover)

PART 3 - EXECUTION

3.01 PREPARATION

- A. All plants shall be in plastic or bio-degradable containers. All plants transporting containers such as plastic pots and metal cans shall be removed from Airport property and dispose of daily by the contractor, at no extra cost to the State.
- B. Only plants of one species shall be furnished and transplanted into each planter box as identified on Exhibit A-1. The contractor shall not mix plant species within one planter box to complete landscaping of the planter box.
- C. See Exhibit A-4 for Typical Planting Arrangement of plants within the planter box.
- D. All plants shall be watered and fertilized prior to delivery to Airport for transplanting in planter boxes.
- E. All plants shall be in healthy condition, contain no brown leaves and broken stems upon delivery to Airport for populating each planter box.

3.02 WASTE DISPOSAL

- A. Waste generated from the delivery of Native Hawaiian plants (i.e. stretch wrap, cardboard boxes, and shipping wrappers) shall be collected and removed from Airport property for disposal.
- B. Transport and legally dispose of planter box demolished materials and green waste off State's property, daily to prevent exposure of dirt, debris and green waste from the planter boxes to airline passengers waiting in the ticketing lobbies.

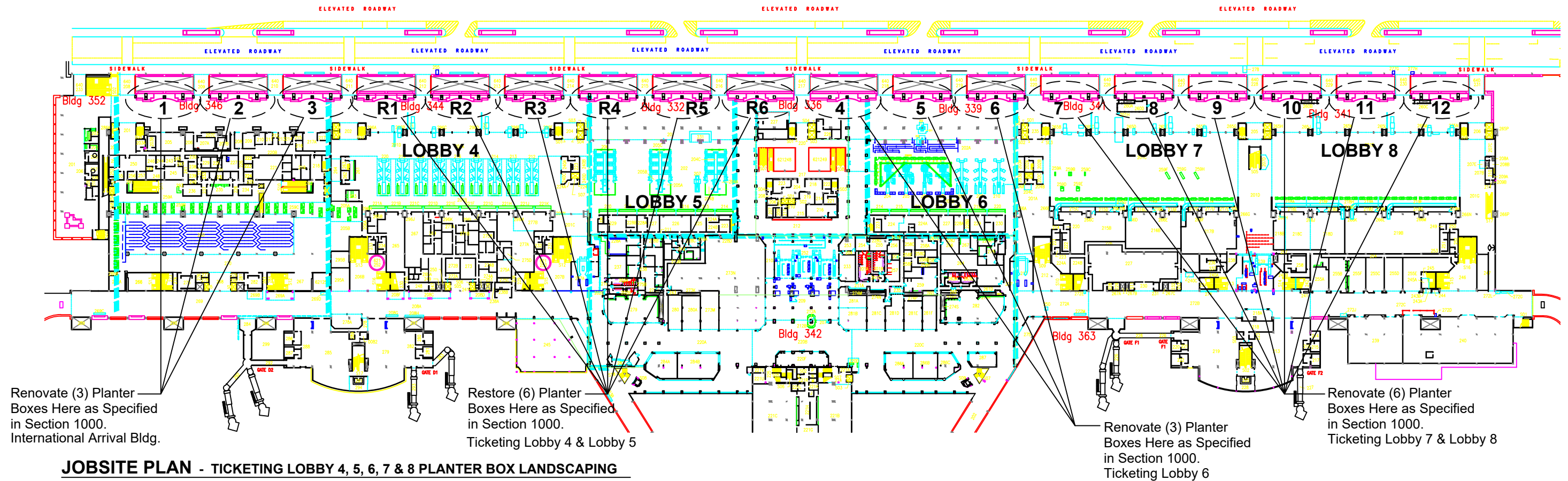
PART 4 – MEASUREMENT AND PAYMENT

4.01 BASIS OF MEASUREMENT AND PAYMENT

- A. Work under this section will not be measured nor paid for separately, but shall be considered incidental to and included in the unit bid prices for the various items of furnished in this project.
- B. Native Hawaiian plants for the planter boxes required by the State shall be paid for under an allowance item in the Proposal Schedule. The allowance is an estimate and the amount shall not exceed the maximum amount shown in the proposal schedule.

<u>Item No.</u>	<u>Description</u>	<u>Unit</u>
32300.01	Furnish Hawaiian Plants	Allowance

END OF SECTION



NEW LANDSCAPING PLAN - TICKETING LOBBY 4, 5, 6, 7 & 8 PLANTER BOXES

DO NOT SCALE

TOTAL (12) PLANTER BOXES

General Notes:

- 1) Hawaiian Plant species may vary to suit planting recommendation from Contractor.
- 2) Native Hawaiian Plant selection from Planter Box Index may change depending on availability of plants upon completion of Planter Box renovation work.
- 3) Green Ti Leaf and Red Ti Leaf plants to be planted on all upper level area of planter boxes. Ti Leaf color will match on both sides of planter box. Color will alternate from green to red.
- 4) Story Board Signage shown not included in contract. State of Hawaii Airports will decide and install signage at a later date.

RENOVATE LANDSCAPING (12) EA. PLANTER BOX - NATIVE HAWAIIAN PLANTS INDEX

- PLANTER BOX 1 - Palapalai (Fern) *This area is under shade*
- PLANTER BOX 2 - Pohinahina
- PLANTER BOX 3 - 'Ilima (Official Oahu Flower)
- PLANTER BOX 4 - 'Ilima (Official Oahu Flower)
- PLANTER BOX 5 - 'Uki 'Uki (Ground cover)
- PLANTER BOX 6 - 'Akia (Ground cover)
- PLANTER BOX 7 - 'Ilee (Plumbago) (Ground cover)
- PLANTER BOX 8 - Palapalai (Fern) *This area is under shade*
- PLANTER BOX 9 - 'Pohinahina (Purple Flower)
- PLANTER BOX 10 - 'Ilima (Official Oahu Flower)
- PLANTER BOX 11 - 'Uki 'Uki (Ground cover)
- PLANTER BOX 12 - 'Akia (Ground cover)

RESTORE LANDSCAPING (6) EA. PLANTER BOX - NATIVE HAWAIIAN PLANTS INDEX

- PLANTER BOX R1 - 'Akia (Ground cover)
- PLANTER BOX R2 - 'Uki 'Uki (Ground cover)
- PLANTER BOX R3 - 'Ilee (Ground cover)
- PLANTER BOX R4 - Palapalai (Fern)
- PLANTER BOX R5 - Pohinahina (Ground cover)
- PLANTER BOX R6 - 'Ilima (Official Oahu Flower)



TYPICAL STORY BOARD - ALL PLANTER BOXES

DO NOT SCALE

NOT IN CONTRACT (N.I.C.)

SCALE: NOTED

DANIEL K. INOUE INTERNATIONAL AIRPORT



OST Terminal 2
Ticketing Lobby 4, 5, 6, 7 & 8
Planter Box - Landscaping

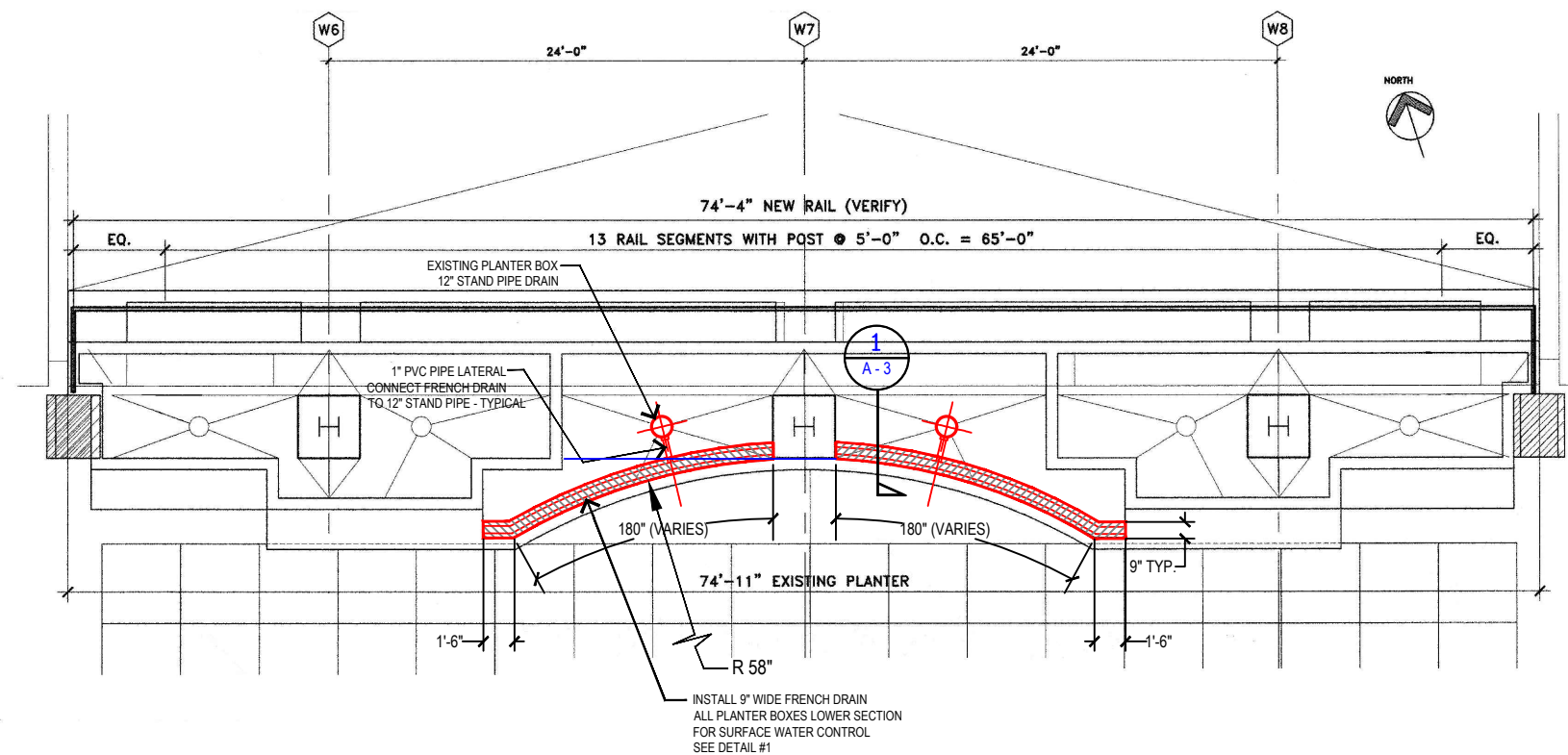
Date : 4-1-26

Planter Box - Renovate and Restore
Native Hawaiian Landscaping Plants
Jobsite Plan

EXHIBIT:

A-1

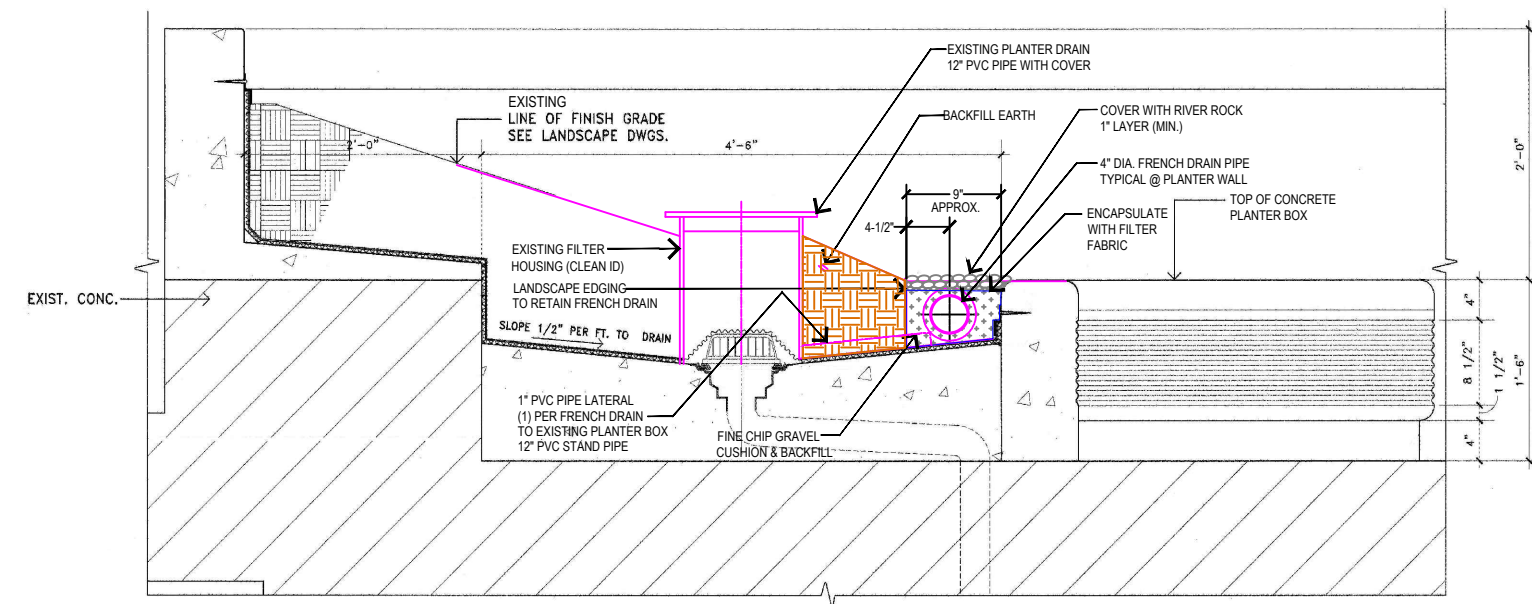
SHT 1 OF 1



PLAN VIEW - 2ND LEVEL PLANTER BOX TYPICAL FRENCH DRAIN
DO NOT SCALE



PROPOSED FRENCH DRAIN - WATER RUN-OFF CONTROL
DO NOT SCALE



1 A-3 DETAIL - PLANTER BOX FRENCH DRAIN
SCALE: 1 1/2" = 1'-0"

GENERAL NOTES:

- 1) JOBSITE LOCATION - TICKETING LOBBY 4, 5, 6, 7 & 8 IN TERMINAL 2, 2ND LEVEL.
- 2) TOTAL TWELVE (12) PLANTER BOXES.
- 3) FRENCH DRAINS TO INSTALLED ON LOWER, MIDDLE SECTION OF PLANTER BOX. ALL FRENCH DRAINS SHALL HAVE LEFT AND RIGHT SIDE SECTIONS. SEE PLAN VIEW.



FRENCH DRAIN PIPE - 4" DIA. PERFORATED
DO NOT SCALE

NOT TO SCALE:

DANIEL K. INOUE INTERNATIONAL AIRPORT

Date : 4-1-26

EXHIBIT:

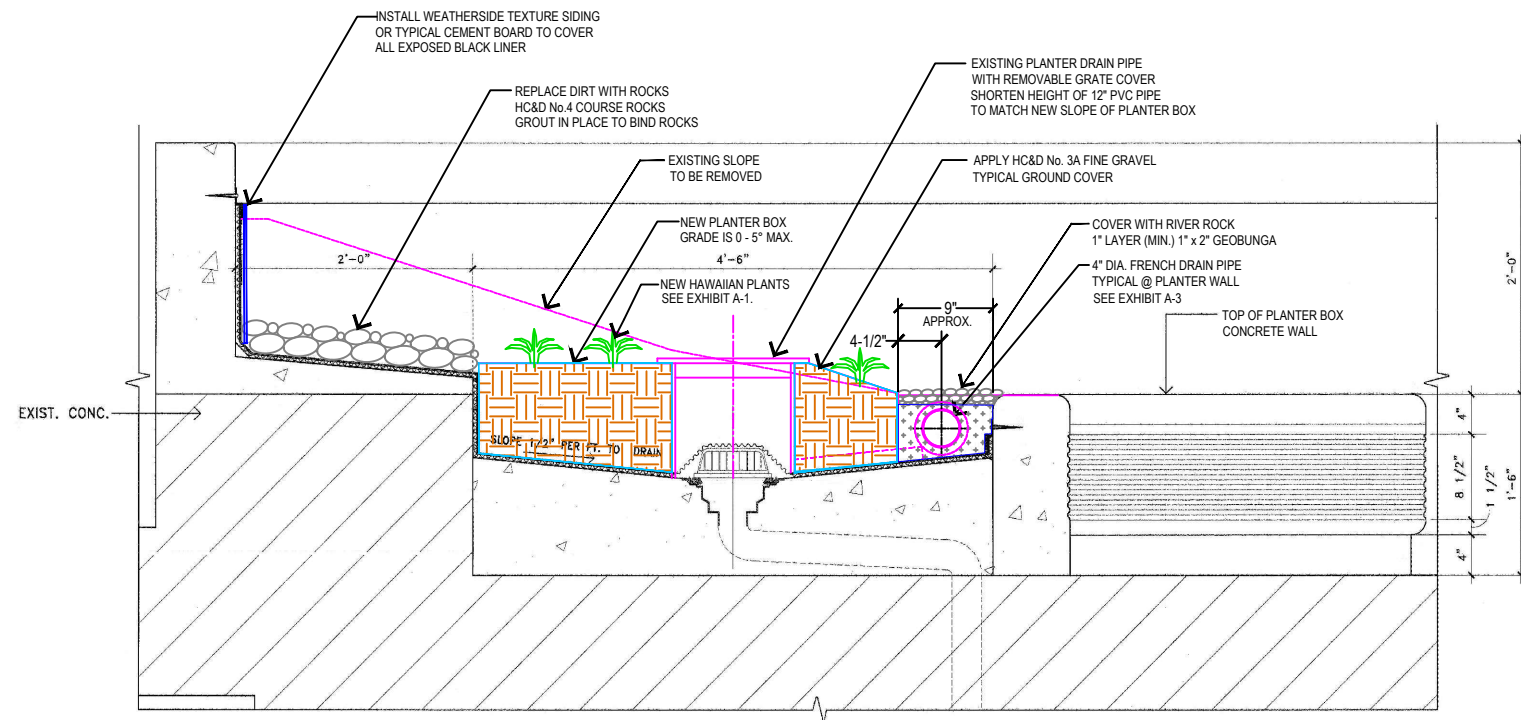


OST Terminal 2
Ticketing Lobby 4, 5, 6, 7 & 8
Planter Box - Landscaping

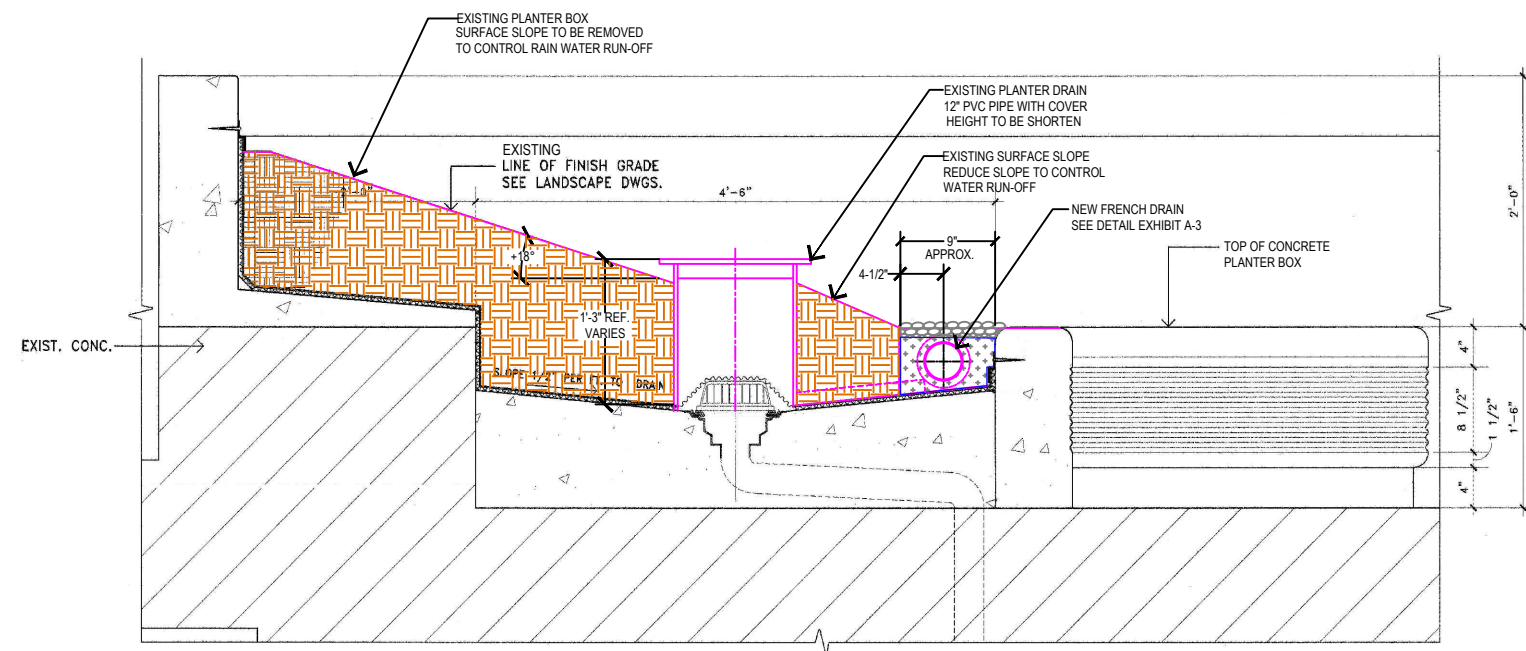
Planter Box - Renovate and Restore
Proposed French Drains
Plan View and Installation Detail

A-2

SHT 1 OF 1



3 **DETAIL - PLANTER BOX NEW SLOPE PLAN WITH FRENCH DRAIN**
A-4 SCALE: 1 1/2" = 1'-0"



1 **DETAIL - PLANTER BOX EXISTING SLOPE WITH FRENCH DRAIN**
A-4 SCALE: 1 1/2" = 1'-0"

GENERAL NOTES:

- 1) JOBSITE LOCATION - TICKETING LOBBY 4, 5, 6, 7 & 8 IN TERMINAL 2, 2ND LEVEL.
- 2) TOTAL TWELVE (12) PLANTER BOXES.
- 3) EXISTING PLANTER BOX SLOPE TO BE REDUCED TO CONTROL RAIN WATER RUN-OFF ON ALL TWELVE (12) PLANTER BOXES.
- 4) REAR SECTION OF PLANTER BOXES TO BE CHANGED FROM SOIL TO NO. 4 COURSE GRAVEL TO ELIMINATE PLANTS AND MAINTENANCE.

NOT TO SCALE:

DANIEL K. INOUE INTERNATIONAL AIRPORT

Date : 4-1-26

EXHIBIT:

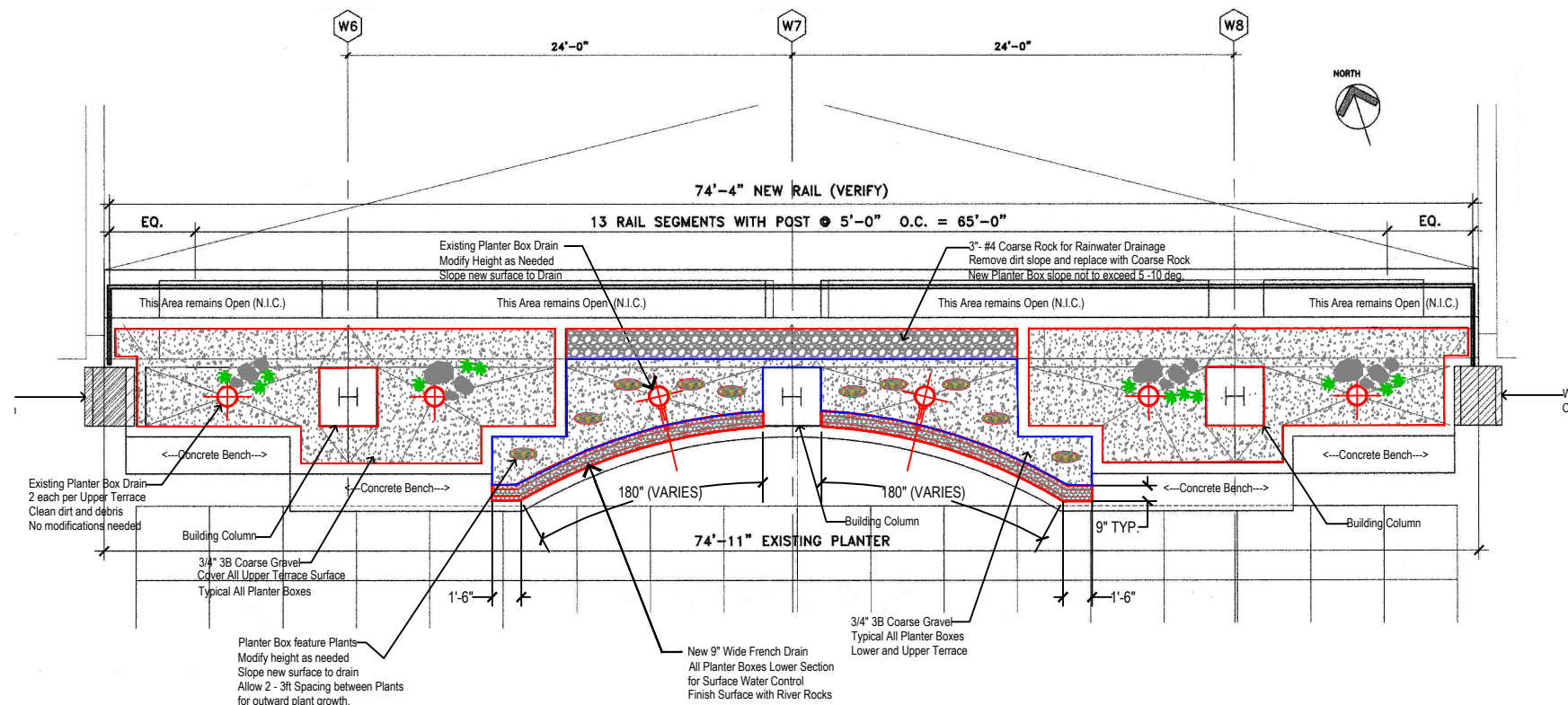


OST Terminal 2
Ticketing Lobby 4, 5, 6, 7 & 8
Planter Box - Landscaping

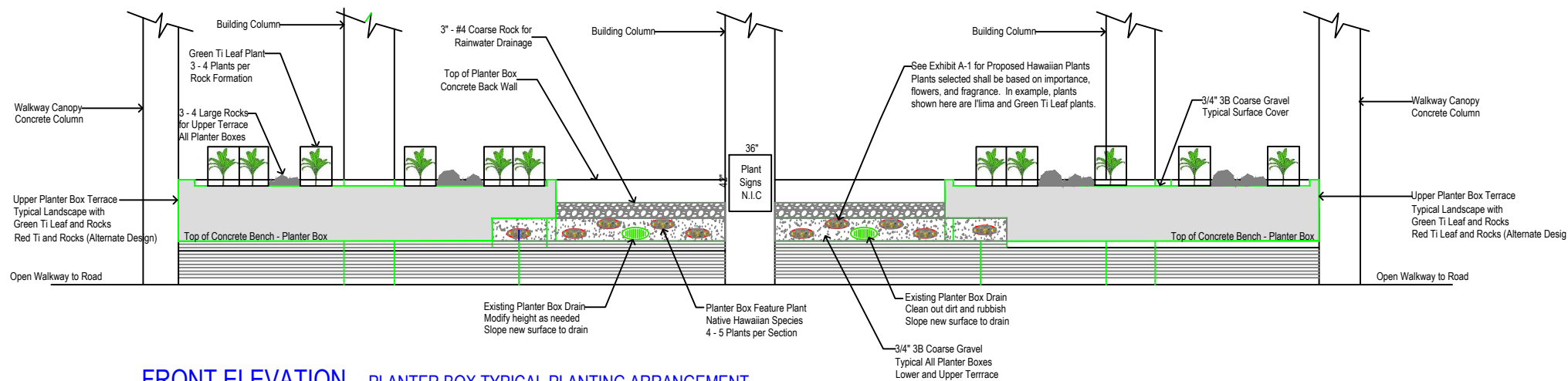
Planter Box - Renovate and Restore
Remove Planter Box Slope
Existing and New Slope Plan

A-3

SHT 1 OF 1



PLAN VIEW - PLANTER BOX TYPICAL PLANTING ARRANGEMENT
DO NOT SCALE



FRONT ELEVATION - PLANTER BOX TYPICAL PLANTING ARRANGEMENT
DO NOT SCALE

GENERAL NOTES:

- 1) JOBSITE LOCATION - TICKETING LOBBY 4, 5, 6, 7 & 8 IN TERMINAL 2, 2ND LEVEL.
- 2) TOTAL TWELVE (12) PLANTER BOXES.
- 3) EACH PLANTER BOX SHALL FEATURE A DIFFERENT NATIVE HAWAIIAN PLANT SPECIES IN LOWER SECTION OF PLANTER BOX. UPPER PLANTER BOX TERRACES SHALL BE GREEN TI LEAF AND RED TI LEAF PLANTS.
- 4) ALTERNATE TI LEAF COLOR EVERY PLANTER BOX. DO NOT MIX COLORS WITHIN A SINGLE PLANTER BOX.
- 5) SHADE AREAS MAY USE LIGHT SENSITIVE FERNS.

NOT TO SCALE:

DANIEL K. INOUE INTERNATIONAL AIRPORT

Date : 4-7-26

EXHIBIT:



OST Terminal 2
Ticketing Lobby 4, 5, 6, 7 & 8
Planter Box - Landscaping

Planter Box - Renovate and Restore
Typical Planting Arrangement
Plan View and Front Elevation

A-4

SHT 1 OF 1