

**STATE OF HAWAII  
DEPARTMENT OF LAND AND NATURAL RESOURCES  
OFFICE OF CONSERVATION AND COASTAL LANDS  
HONOLULU, HAWAII**

*June 27, 2014*

**BOARD OF LAND AND  
NATURAL RESOURCES  
STATE OF HAWAII  
HONOLULU, HAWAII**

**REGARDING:** Conservation District Use Application (CDUA) HA-3700

**APPLICANT:** State of Hawaii – Department of Transportation

**AGENT:** Ron Terry, c/o Geometrician Associates

**LOCATION:** Māmalahoa Highway, Ka’ū District, Island of Hawaii

**TMKs:** (3) 9-5-016:006, 022, 025 & 026

**AREA OF PARCELS:** ~200 acres

**AREA OF USE:** ~1.3 acres (for CDUA); ~6.4 acres total in Conservation District

**SUBZONE:** General & Limited

**DESCRIPTION OF AREA AND CURRENT USE:**

The project site is located along the Māmalahoa Highway (State Rte. 11) which is a two (2) lane highway that serves as the only route through the Ka’ū District and provides a link between East Hawai’i Island and the South Kona District (**Exhibit 1**). The project site reflects a long history of animal husbandry and grazing practices that have allowed non-native vegetation to dominate the area and spread. Geologically, the project site is located on the lower flank of the Mauna Loa volcano with the surface material consisting of lava flows approximately 750 – 5,000 years old. The surface is underlain by thin layers of basalt lava flows which are fractured, porous and contain lava tubes making this area highly permeable. The terrain to the shoreline consists of generally minor slopes (i.e., Kāwā Flats) which range from 1 to 4 degrees and are considered uniform across the project area.

The affected area within the conservation district consists of an existing road right-of-way (ROW) as well as undeveloped land directly adjacent to the project area that exhibits typical non-native, shrubby vegetation. This area is more than 2,000 feet from the ocean and the springs and ponds of Kāwā. The Corral Gate road provides (gated) access to private ranching lands mauka, and is an alternate access to Kāwā Bay on the makai side, which is being very gradually developed by the County of Hawai’i as a low-impact, passive recreational area for shoreline activities. The flora of the area is composed of predominantly non-native plants. No rare, threatened, or endangered plant

species was identified in the area, and only wide-ranging threatened or endangered vertebrates are present, which will be protected through construction timing restrictions. Operationally, the culverts would mimic the existing hydrological conditions and no measurable change in downstream sediment delivery is expected. The duplication of existing hydrology would result in a continuance of surface and groundwater conditions for the coastal ponds located about 0.4 miles away, which are formed by outflow of groundwater and occasional influxes of ocean water during high waves.

State GIS maps indicate that the ROW occupied by Māmalahoa Highway in this vicinity has its *mauka* (landward) half in the State Land Use (SLU) Agricultural District and its *makai* (seaward) half in the SLU Conservation District General and Limited Subzones (**Exhibit 2**). State GIS maps of the Conservation District subzones indicate that the Conservation District begins makai of the ROW (**Exhibit 3**). Regardless, because this project involves work both *within* and *makai* of the ROW, some of the work proposed will be located on Conservation District lands (**Exhibit 4, 4a**).

The affected area within the Conservation District consists of existing road ROW as well as undeveloped land directly adjacent to the project area which is more than 2,000 feet from the ocean and the springs and ponds of Kāwā (**Exhibit 5**). The Corral Gate road provides (gated) access to private ranching lands mauka, and is an alternate access to Kāwā Bay on the makai side, which is being very gradually developed by the County of Hawai'i as a low-impact, passive recreational area for shoreline activities.

### ***Culture, Architecture and Archeology***

An archaeological survey identified and recorded five (5) archaeological sites within the proposed project area (**Exhibit 6**) which were partially destroyed during the original construction of Māmalahoa Highway; these sites represent the remains of historical ranching activities. Although not in pristine states of preservation, all five sites do retain sufficient integrity to be considered significant under Criterion "D" for the information they have yielded relative to former pre-contact and historic land uses in this portion of the Ka'ū District of Hawai'i Island, thus making the sites potentially eligible for listing in the National Register of Historic Places. Only the most recent sites, those likely associated with twentieth century ranching activities, exhibit intact architecture. The archaeologists concluded that a reasonable and adequate amount of information has been collected about these historic properties during the study to warrant a *no-mitigation work requirement*, and thus a no adverse effects determination for these sites with respect to the project.

### **PROPOSED USE:**

The State of Hawai'i, Department of Transportation (DOT) proposes to construct drainage improvements along an approximately 3,700-foot long section of the Māmalahoa Highway (State Route 11) located at Kāwā Flats in the District of Ka'ū (**Exhibit 7**). This objective of the proposed project is to alleviate the episodic flooding that occurs in this area (**Exhibit 8**). The highway's surface would be raised a maximum of about 10 feet, to an elevation of 46 feet above mean sea level. This would place the road surface approximately two feet above the 50-year flood level. A reinforced concrete box culvert measuring 84 feet wide by 8 feet high would be emplaced beneath the highway to convey the full design flow. This concrete structure would be divided into 6 cells, each 12 wide and 8 feet high. This culvert would drain runoff directly from the north

drainage basin located upstream of the culvert. This culvert would also be connected via a 720-foot long, 50-foot wide unlined rock channel to another drainage basin that lies to the south and that also contributes to highway flooding at the project site (**Exhibit 9**). This culvert and channel would provide proper drainage capacity that would essentially maintain the current runoff patterns and flow depths but allow the runoff to pass under, rather than over, the highway.

In order to allow traffic to move unimpeded during construction, which would occur over the course of about one year, a temporary, paved two-lane bypass roadway would be built on the *mauka* side of the highway outside the Conservation District. After construction, an intersection near the northern end of the project will be built to provide access, on a permanent basis, to the County's Kāwā properties, to roads on the makai side of the highway and, to the old corral on the mauka side of the highway. Construction of the temporary bypass would alleviate construction-phase impacts to traffic flow. The drainage improvements would produce a long-term benefit for traffic flow during flood emergencies and would also remove potential obstructions to emergency vehicles. Impacts to water quality during construction would be mitigated by Best Management Practices that prevent erosion and sedimentation from occurring and reduce or eliminate pollution from construction vehicles and equipment.

#### **SUMMARY OF COMMENTS:**

The Office of Conservation and Coastal Lands (OCCL) referred the application to the following state agencies for review and comment: DLNR - Division of Forestry and Wildlife (DOFAW), Engineering Division, Historic Preservation Division (SHPD), State Parks Division, Hawaii Island Land Division (HDLO), the Office of Hawaiian Affairs (OHA), and the County of Hawaii - Department of Planning and the County of Hawaii - Department of Parks & Recreation. The application was also provided to the Pahoehoe State Library and to the Hawaii Wildlife Fund (HWF) for review and comment.

*Comments received from the following agencies have been summarized by staff as follows:*

#### **DLNR – Hawaii District Land Office (HDLO)**

No comments on the proposed project.

#### **DLNR – Division of State Parks**

No comments on the proposed project.

#### **DLNR – Engineering Division**

We confirm that part of the project site, according to the Flood Insurance rate Map (FIRM), is located in Flood Zone X. The National Flood Insurance Program (NFIP) does not have any regulations for developments within Flood Zone X.

#### ***Applicant Response:***

*We acknowledge receipt of the comments from the DLNR – Engineering Division and recognize that the proposed project is located in Flood Zone X to which there are no requirements for development.*

County of Hawaii – Planning Department

We are in receipt of your letter, dated *February 19, 2014*, requesting our comments on CDUA HA-3700 for the proposed drainage improvements along Māmalahoa Highway at Kāwā Flats, Ka'ū, Hawaii. The Planning Department approved Special Management Area Minor Permit No. 13-000285 (SMM 13-285) on October 10, 2013 for the subject project. Condition No. 4 of SMM 13-285 states: “[a] Conservation District Use permit from the Board of Land and Natural Resources or other written approval from the DLNR – Office of Conservation and Coastal Lands must be obtained for the drainage improvement within one (1) year from the date of approval of this permit”. Approval of this permit on or before October 10, 2014, would satisfy this condition. Additionally we have reviewed the subject application and all improvements appear substantially the same as what was approved under SMM 13-285; therefore we have no further comment or concerns regarding CDUA HA-3700.

***Applicant Response:***

*Thank you for your comment letter dated March 10, 2014, on the subject CDUA. On behalf of the Department of Transportation the agent for the applicant provided answers to the specific points addressed in the letter:*

- 1. SMA Minor Permit No. 13-000285, October 10, 2013, and condition for CDUA. Thank you for noting that the SMA permit and the condition to obtain the CDUP by October 10, 2014. It currently appears that HDOT will have this permit in hand by this date; and*
- 2. Improvements detailed in CDUA are substantially the same as those approved in the SMA permit. We appreciate your review, and agree with your assessment. Any changes to the design that have occurred as the project has progressed from preliminary to final have been negligible and have had no bearing on impacts to SMA resources.*

Hawaii Wildlife Fund

Our comments are limited to certain aspects of the environmental consequences of the proposed project, specifically management of the grubbing and grading work and soil management mitigation to reduce the potential for soil intrusion into the ecosystems of Kāwā's native anchialine pools and estuary.

Based on the Environmental Assessment (EA), it appears that the usual rainstorms in this area, while they may occasionally flood the road, do not create surface runoff to the ocean, instead the water moves into the subsurface water table. Our concern in this regard is that this water [after construction is completed] still moves toward the ocean within the shoreline springs and throughout the anchialine pools and the estuary.

While the volcanic ash soil in the proposed work area is currently stabilized by vegetation, it seems possible that a rain event that occurs during or post-construction activities may cause or exacerbate soil loss and erosion that may impact the nearby coastal resources, such as the estuary and/or anchialine pools.

In section 3.1.2 of the EA, the list of BMPs on page 15 claiming to mitigate storm-water soil runoff appears to address our concern; except that the first and second bullets state:

1. *Minimization of soil loss and erosion by re-vegetation and stabilization of slopes and disturbed areas of soil, possibly using hydromulch, geotextiles, or binding substances, as soon as possible after working; and*
2. *Minimization of sediment loss by emplacement of structural controls possibly including silt fences, gravel bags, sediment ponds, etc.*

The EA mentions the loss of a high percentage of Hawai'i's native anchialine pools and estuaries due to coastal development and other anthropogenic causes. Yet, if nothing is done to prevent soil loss from the proposed project site, the potential also exists here for severe degradation or complete loss of these natural ecosystems in Kāwā during high rainfall or storm events. Therefore, the stated bullet points are not adequate. The word "possibly", used in these measures quoted above, should be deleted from the text.

**Control of soil loss/ soil erosion should be a high priority requirement for this road work during construction and including post-construction stabilization of all disturbed areas throughout the project site [sic].** All disturbed soil must be prevented from runoff by the BMPs. Re-vegetation following construction would be ideal, but without a local water source thus may not be a feasible option. However, if re-vegetation does occur, we would suggest out-planting with only native species that are both drought resistant and saltwater tolerant (e.g., naupaka). Covering all sold with a geotextile fabric post-construction may be an appropriate alternative measure until natural vegetation can be established.

***Applicant Response:***

*Thank you for the comment letter dated March 22, 2014, on the CDUA. As the project planner and on behalf of the Hawai'i Department of Transportation (HDOT), I am responding to your comment letter.*

*We appreciate the interest you have taken in the project and in particular the measures to reduce sedimentation and protect anchialine ponds, a subject which is very important to the HDOT. Please note that the language in the EA reflected an early point in project design, before the NPDES and other permit conditions were specified. We would like to update you on the current design plans, permits and Best Management Practices (BMPs). According to the State Water Quality Standards Maps, the discharge point of the project is in Class AA marine waters. Per Hawai'i Administrative Rules (HAR) §11-54, it is the objective of class AA waters that these waters remain in their natural pristine state as nearly as possible with an absolute minimum of pollution or alteration of water quality from any human-caused source or actions. Therefore, as part of the project, HDOT will submit an Individual National Pollutant Discharge Elimination System (NPDES) Permit Application to the Department of Health (DOH) Clean Water Branch a minimum of 180 calendar days before construction is scheduled to begin. The Individual NPDES Permit is regulated under Hawai'i Administrative Rules (HAR) §11-55 Water Pollution Control.*

*In addition to DOH - Clean Water Branch review, the Individual NPDES requires publication of public notice and a 30 calendar day public comment period. It may also involve a public hearing at the discretion of the Department of Health. In addition to requiring NPDES coverage, as a construction activity, the project discharges must also comply with the HAR §11-54 Water Quality Standards. The Individual NPDES Application requires a Site-Specific Best Management*

*Practices (BMPs) Plan to ensure that storm water discharges associated with construction activities will not violate HAR, §11-54; HAR, §11-55; and HAR, §11-55, Appendix C. This plan will contain perimeter control BMPs everywhere storm water may leave the project site, appropriate controls to prevent tracking of sediment and debris onto streets/roads and appropriate controls to prevent a discharge of non-storm water pollutants; pollutants comingled in storm water; pollutants that may contaminate ground water; and any applicable Section 3-03(d) pollutants of concern for the receiving State water. Post-construction BMPs are also required to be implemented, maintained, and incorporated into the project for storm water quantity and quality control. The post-construction BMPs will ensure that the project will comply with HAR, §11-54; HAR, §11-55; and HAR, §11-55, Appendix C. The overall construction sequence will begin with the installation of sediment and erosion control measures. Sediment and erosion control measures will include silt fences and stabilized construction entrance. Stabilization will include vegetative cover. The project will be completed by the removal and erosion control measures upon the inspector's approval. Contract Erosion Control Plans will show the locations of required silt fencing and stabilized construction entrances. The contractor will be legally required to comply with the following requirements, as noted on the project contract drawings, relating to the concerns on soil management mitigation:*

- 1. Follow the guidelines in the "Construction Best Management Practices Field Manual", dated January, 2008 in developing, installing and maintaining the Best Management Practices for the project.*
- 2. Follow the guidelines in the Honolulu City and County "Rules Relating to Soil Erosion Standards and Guidelines" along with applicable Soil Erosion Guidelines for projects on Maui, Moloka'i, Kaua'i and Hawai'i.*
- 3. Install a rain gage prior to any field work including the installation of any site-specific best management practices. The rain gage will have a tolerance of at least 0.05 inches of rainfall, and have an opening of at least one-inch in diameter. Install the rain gage on the project site in an area that will not deter rainfall from entering the gage opening. The rain gage installation will be stable and plumbed. Field work cannot begin until the rain gage is installed and site specific best management practices are in place.*
- 4. Inspect all control measures at least once each week and within 24 hours of any rainfall event of 0.5 inches or greater within a 24 hour period.*
- 5. Maintain all measures in good working order. If repair is necessary, it will be initiated within 24 hours after the inspection.*
- 6. Remove built up sediment from silt fence when it has reached one third the height of the fence.*
- 7. Inspect silt screen or fence for depth of sediment, tears, to verify that the fabric is securely attached to the fence posts or concrete slab and to verify that the fence posts are firmly in the ground. Inspect and verify the bottom of the silt screen is buried a minimum of 6 inches below the existing ground.*

8. *Inspect temporary and permanent seeding and planting for bare spots, washouts and healthy growth.*
9. *Make a maintenance inspection report promptly after each inspection. Submit a copy to the Engineer no later than one week from the date of inspection.*
10. *Provide a stabilized construction entrance to reduce vehicle tracking of sediments. Include stabilized construction entrance in the Water Pollution, Dust and Erosion Control submittals. Minimum length should be 50 feet. Minimum width should be 30 feet. Minimum depth should be 12 inches or as recommended by the soils engineer and underlain with geo-textile fabric. Clean the paved street adjacent to the site entrance daily or as required to remove any excess mud, cold planed materials, dirt or rock tracked from the site. Cover dump trucks hauling material from the construction sites with a tarpaulin.*
11. *Include designated Concrete Washout Area(s) in the Water Pollution, Dust and Erosion Control submittals.*
12. *Submit the name of a specific individual designated responsible for inspections, maintenance and repair activities and filling out the inspection and maintenance report.*
13. *Personnel selected for the inspection and maintenance responsibilities will receive training from the Contractor. They will be trained in all the inspection and maintenance practices necessary for keeping the erosion and sediment controls used onsite in good working order.*
14. *The temporary bypass road may be overtopped with water at times. The Contractor will be responsible to clean up the silt and repair eroded areas to its original state.*

*The Individual NPDES Application also requires a contingency plan which is to be implemented by the contractor to prevent or respond to polluted discharges resulting from a severe storm or natural disaster, which includes monitoring weather reports and in the case of severe weather, take measures including but not limited to, securing the construction site and implementing all Site Specific BMPs. Upon return to the site, all BMPs will be inspected, repaired and/or reinstalled as needed. If repair is necessary, it will be initiated immediately after the inspection and repairs or replacement will be complete within 48 hours. When there either has been a discharge which violates Hawai'i Water Pollution rules and regulations OR there is an imminent threat of a discharge which violates Hawai'i Water Pollution rules and regulations and/or endangers human and/or environmental health, the permittee will at a minimum execute the following steps:*

1. *Assess whether construction needs to stop or if additional BMPs are needed to stop or prevent a violation.*
2. *Take all reasonable measures to protect human and environmental health.*

3. *Notify responsibly parties and immediately notify the DOH of the incident. The notification will also include the identity of the pollutant sources and the implemented control or mitigation measures.*
4. *Document corrective actions; take photographs of discharge and receiving waters.*
5. *Revise Site Specific BMPs Plan to prevent future discharges of a similar nature.*

*Finally, the contract documents require that erosion control blankets be anchored to cut and fill slopes as temporary slope protection. The exact location of the blankets will be determined by the engineer and will be hydro-mulched or otherwise stabilized as deemed necessary. We very much appreciate your review of the document. I would like to again emphasize that HDOT shares your concern about the value of the resources at Kāwā and reducing sedimentation to the maximum amount feasible, and is confident that the proposed measures will accomplish this.*

**ANALYSIS:**

Following review and acceptance for processing, the Applicant's Agent was notified, by letter dated *February 19, 2014* that:

1. The proposed use is an identified land use within the Conservation District Resource Subzone pursuant to Hawaii Administrative Rules (HAR), §13-5-22, P-6, **PUBLIC PURPOSE USES (D-1)**, *Not for profit land uses undertaken in support of a public service by an agency of the county, state or federal government, or by an independent non-governmental entity, except that an independent non-governmental regulated public utility may be considered to be engaged in a public purpose use. Examples of public purpose uses may include but are not limited to public roads, marinas, harbors, airports, trails, water systems and other utilities, energy generation from renewable sources, communication systems, flood or erosion control projects, recreational facilities, community centers, and other public purpose uses, intended to benefit the public in accordance with public policy and the purpose of the conservation district.* The decision to approve or deny this proposal rests with the Chair of the Board of Land and Natural Resources;
2. Pursuant to HAR §13-5-40, Hearings, a public hearing will not be required;
3. On **August 8, 2014** a notice of a Finding of No Significant Impact (FONSI) for the Māmalahoa Highway Drainage Improvement Final Environmental Assessment (FEA) was published in the Office of Environmental Quality Control (OEQC) publication the Environmental Notice; and
4. A Special Management Area (SMA) Minor Permit (No. 13-00285) permit was obtained from the County of Hawaii on **October 10, 2013** for the proposed project.

The notice for this proposed Conservation District Use Application (CDUA) HA-3700 was published in the *March 8, 2014* issue of the Office of Environmental Quality Control (OEQC) document Environmental Notice.

**§13-5-30 CRITERIA:**

The following discussion evaluates the merits of the proposed land use by applying the criteria established in HAR §13-5-30.

- 1) *The proposed use is consistent with the purpose of the Conservation District.*  
The objective of the Conservation District is to conserve, protect, and preserve the important natural resources' of the state through appropriate management and use to promote their long-term sustainability and the public health, safety and welfare.

This proposed project has been designed to increase the safety and efficiency of the State Highway system in this area, particularly regarding drainage, which is in keeping with the purpose of the Conservation District regarding public safety. Implementation of mitigation measures contained in the EA will avoid, minimize or mitigate any adverse environmental impacts. In some aspects, such as drainage, public safety, and emergency response, the proposed land uses and mitigation will result in social and environmental conditions that are an improvement from existing or anticipated "no-project" impacts. Therefore staff believes that the proposed project is consistent and in character with the purpose of the Conservation District.

- 2) *The proposed land use is consistent with the objectives of the Subzone of the land on which the use will occur.*

The objective of the General Subzone is to *designate open space where specific conservation uses may not be defined, but where urban use would be premature* while the objective of the Limited Subzone is to *limit uses where natural conditions suggest constraints on human activities*. The proposed use is an identified land use in the Conservation District pursuant to HAR §13-5-22, P-6, **PUBLIC PURPOSE USES (D-1)**.

As the proposed land use is an upgrade and maintenance to an existing, heavily used public purpose use (i.e., State Highway) and the proposed land uses aim to reduce the environmental impacts due to flooding, staff believes this project is consistent with the objectives of both the *Limited* and *General* Subzones. Additionally, staff believes the design of the project will involve uses and practices that will lessen exposure to the current flooding hazard and will not affect future potential uses of the area except in protective and beneficial ways.

- 3) *The proposed land use complies with the provisions and guidelines contained in Chapter 205A, HRS entitled "Coastal Zone Management", where applicable.*

The CZM program is intended to promote the protection and preservation of fragile coastal resources through the state of Hawaii. Based on the analysis provided it appears the proposed use is consistent with Chapter 205A as the project has been designed not to affect/alter existing public access to recreational areas, historic resources, scenic and open space resources, coastal ecosystems, economic uses, or coastal hazards. As federal funds are involved in this proposed project, a Consistency Determination from the Hawai'i Coastal Zone Management (CZM) Program was required. From a letter dated *March 9,*

2012, it was determined that the proposed project is consistent with the CZM program criteria, as long as the permit conditions and environmental mitigation measures that have been specified within the EA are adhered to by the State DOT and the FHWA. In addition, the County of Hawai'i granted SMA Permit No. 13-001018 for the project on *October 1, 2013*. These agencies have thus concurred with FHWA's evaluation concerning the CZM in general and the SMA in particular that: 1) *the project preserves access to recreational opportunities*; 2) *the project has properly inventoried historic resources and prevents harm to significant historic sites*; 3) *the project preserves scenic resources*; 4) *the project has been designed to minimize and prevent impacts to coastal ecosystems*; 5) *the project provides a facility vital to cross-island transportation and thus the economic health of the islands*; 6) *the project reduces hazards from overland flooding*; and 7) *the project has involved public participation that has helped manage development in the coastal zone which aims to eliminate or minimize impacts to beaches or marine resources*.

There is an important coastal resource situated downslope of the project area that may be influenced by the project development. The estuary of Kāwā Flats, a site that has current restoration activities being conducted, was reviewed with regards to project design and environmental impacts. A request for comments to the Hawaii Wildlife Fund (HWF), currently working at Kāwā Flats, provided recommendations for protecting the tidal wetland resources. Most rain that falls in this area does not evapotranspire, instead it reaches the sea as groundwater rather than runoff; groundwater in this area is contained within both surficial and basal aquifers. Fresh water discharges as coastal springs, which are abundant along this stretch of coastline. Because of the site geomorphology it has been determined that construction phase impacts have the potential to produce uncontrolled excess sediments and soil erosion during and/or after excavation and construction if not mitigated correctly. The design of this project has taken into account the potential for discharge of soil runoff towards the ocean. Due to the extent of the project area a national Pollutant Discharge Elimination System (NPDES) permit will be obtained by the State of Hawaii, prior to conducting work in this area.

Based on the preceding analysis and on-site observations the project has been designed to essentially reproduce the existing hydrology of the intermittent stream drainage that flows in this area. Similarly, the project has been designed to not alter the existing quantity of sediment, or sediment characteristics, that currently flow across the project area. Based on the project design, and with the recommendations put forth by the HWF with regards to the Kāwā Flats Estuary restoration efforts, staff believes that there are no expected changes to the wetland or coastal resources located 2,000 feet from the project site.

- 4) *The proposed land use will not cause substantial adverse impact to existing natural resources within the surrounding area, community or region.*

As described elsewhere in this document, the project could be considered beneficial to the environment (e.g., reduce flooding) and is designed to avoid sensitive resources. Extensive mitigation for potential impacts to archaeological sites (e.g., data recovery, fencing of out-of-bounds areas during construction, and monitoring during ground disturbance) will prevent potential impacts to those resources. A NPDES and Grading Permit will include extensive and strictly enforced conditions to prevent erosion and sedimentation of

downslope areas. The existing level of access to the recreational resources at Kāwā Bay will be maintained during construction to the extent feasible and permanent access to those areas is being improved by the project. Staff therefore believes that the proposed project will not cause substantial negative impacts to the project areas natural resources.

- 5) *The proposed land use, including buildings, structures and facilities, shall be compatible with the locality and surrounding areas, appropriate to the physical conditions and capabilities of the specific parcel or parcels.*

The proposed use is compatible with the surrounding area as it represents an upgrade and maintenance of an existing State Highway drainage to channel the stormwater under the highway rather than over the highway as is presently the case. This project has been designed with the protection of life, property and community well-being as a primary focus, as this area periodically floods. This proposed project will ensure the sustained use of the natural resources in the project area by mitigating and reducing current impacts and minimizing adverse effects to the surrounding properties or uses in this area.

- 6) *The existing physical and environmental aspects of the land, such as natural beauty and open space characteristics, will be preserved or improved upon, whichever is applicable.*

The proposed highway repairs and maintenance will continue to provide views of the coastline and adjacent areas that are present today; in fact, it could be said that this proposed project will improve viewplanes to the ocean by providing a higher vantage point. Viewplanes of the mountains or shoreline from the vacant properties adjacent to the proposed improvements will not be affected except immediately adjacent to the new drainage structures; although this area has minimal current uses. The physical beauty characteristics of the existing area will be preserved and the character of the project site and surrounding area will not be altered.

The County of Hawai‘i recently purchased and took effective control of this property for open space and other purposes. Although there is a coastal trail that provides hiking access from the north and south, the principal accesses are two rough four-wheel drive roads that extend southeast towards the sea from Highway 11. The main access is located to the north of the project and will not be affected. Because the road will be raised in this area, the existing access will no longer be accessible. However, the gravel road that will be built on the makai (seaward) side of the highway will provide permanent access to this existing four-wheel drive road towards the shoreline once construction is finished. To the extent feasible, this access will also be open during the approximately one-year construction period through coordination with the County of Hawaii.

- 7) *Subdivision of land will not be utilized to increase the intensity of land uses in the Conservation District.*

The proposed project does not involve subdivision of Conservation District land.

- 8) *The proposed land use will not be materially detrimental to the public health, safety and welfare.*

The improvements and repairs to the existing highway are being proposed in order to address hazards due to flooding that have an impact to life, property and well-being. Staff believes that because the project aims to reduce flooding, minimize the impacts from storm events and provide safe, consistent access along the existing highway that the proposed project will not be detrimental to the public health, safety, and welfare.

Because the project will disturb more than one acre of land surface area, a National Pollutant Discharge Elimination System (NPDES) permit will be obtained by the State DOT before the project commences. This permit requires the completion of a Storm Water Pollution Prevention Plan (SWPPP); in order to properly manage storm water runoff, the SWPPP will describe the emplacement of a number of BMPs for the proposed project.

#### **CULTURAL AND HISTORICAL IMPACT REVIEW:**

A Cultural Impact Assessment (CIA) report was submitted as part of this application process to meet applicable State and Federal requirements for the protection of cultural and historical resources in the area. Document review and field research indicated that the area around the project site that will be affected by the drainage improvements does not appear to have significance in the cultural history of the area. The post-contact character of the project site includes existing cattle pasture and animal husbandry practices on the mauka side and minimal to no active land uses found, observed or reported on the makai side. The vegetation in and around the project site is highly overgrown, influenced by previous and existing cattle grazing and the construction of the highway. Similarly the project site vegetation does not contain the quality and quantity of natural resources that would be important for native gathering rights and practices. Furthermore, no caves, springs, pu'u, native forest groves, observed or recorded gathering resources or other natural features are present on or near the project site. The existing archaeological sites are associated mainly with cattle grazing and are not significant beyond information content related to post-contact Hawaiian history.

In addition to document review and pedestrian field research, an effort was made to consult with knowledgeable parties who reside in the area about potential traditional cultural properties and associated practices that might be present or have taken place in this area of Ka'ū. To this end a number of meetings and interviews were held to determine the extent of native rights and practices in this area. These led to further investigations to verify the absence of certain sensitive resources known to Ka'ū families from the general area.

Construction fencing will be used to prevent damage to historic sites outside the work area. Most of the area will have black silt fencing that will demarcate the areas beyond which no work will be permitted. Furthermore, in areas that lack silt-fencing, orange fencing will be installed around identified archaeological sites that are within 25 feet of the work area. Archaeological monitoring will be conducted during ground disturbance phases of the construction activity so that an immediate response can occur if previously unrecognized potential historic properties are inadvertently discovered. By letters of *May 6, 2011* and *September 13, 2011*, the SHPD concurred with the findings of the report and approved of the monitoring conditions.

**DISCUSSION:**

The primary purpose of this proposed project is to eliminate the episodic flooding that occurs around a 3700-foot long section of the existing Māmalahoa Highway (State Rte. 11) located in the Ka'ū District on the Island of Hawaii.

At this time the State of Hawaii, Department of Transportation (DOT) is proposing to construct several drainage improvements that will allow flood and stormwater to pass under, rather than over, the existing highway. The work within the conservation district includes the following land uses: grubbing and grading of land, roadway and roadbed construction, channel excavation, concrete headwall placement and construction, the emplacement of gravel road surface and minor fencing.

The highway was constructed over 50 years ago with no drainage facilities for this low-lying section located in the area known as "Kāwā Flats". Flood waters from intermitted drainage appurtenances frequently overtop and impact the highway leading to road closures and/or unsafe road conditions. This flooding is a hazard to motorists and also endangers the regions communities, as it prevents the passage of emergency vehicles and other critical services. Additionally, this situation is undesirable because flooding can damage the roadway structure and necessitate a longer term road closure for substantial road repair in the future. The DOT therefore considered the existing roadway status as "not acceptable", and therefore determined that there was an immediate need to re-design and re-construct the stormwater/floodwater management devices and upgrade this roadway section.

Design for the project has taken into account the potential discharge of sediment-laden storm water runoff towards the ocean. Kāwā Flats Estuary, located 2,000 feet makai of the project area, is one of the few pristine natural environments located in this area that has the potential to be influenced by this proposed project. Recommendations from the Hawaii Wildlife Fund personnel, who are currently conducting restoration activities at Kāwā Flats Estuary, include: 1) *minimizing soil loss and erosion by immediate re-vegetation and stabilization of slopes and disturbed areas of soil* (i.e., geotextiles, out-planting) and, 2) *minimizing sediment loss by the emplacement of structural controls* (i.e., silt fencing, sediment ponds). As most of the water flow that occurs makai of the project site ends up as groundwater, with minimal overland flow, the impacts to the springs and estuary located 2,000 makai of the project site should be minimal with regards to sedimentation.

In order to further minimize the potential for sedimentation and spoil erosion, the contractor will perform all earthwork and grading in conformance with the State DOT's *Construction Best Management Practices Field Manual* which outlines specific BMPs that may be necessary or required for this type of construction activity. The design has to take into account not only the environmental and cultural impacts, but the safety and security of a vital state infrastructure component.

**RECOMMENDATION:**

Based on the preceding analysis, Staff recommends that the Board of Land and Natural Resources **APPROVE** this application for the *Māmalahoa Highway Drainage Repair Project* located in Kāwā Flats, Ka'ū District, Island of Hawaii, on Tax Map Keys: (3) 9-5-016: 006, 022, 025 & 026, subject to the following conditions:

1. The permittee shall comply with all applicable statutes, ordinances, rules, and regulations of the federal, state, and county governments, and applicable parts of this chapter;
2. The permittee, its successors and assigns, shall indemnify and hold the State of Hawaii harmless from and against any loss, liability, claim, or demand for property damage, personal injury, and death arising out of any act or omission of the applicant, its successors, assigns, officers, employees, contractors, and agents under this permit or relating to or connected with the granting of this permit;
3. The permittee shall obtain appropriate authorization from the department for the occupancy of state lands, if applicable;
4. The permittee shall comply with all applicable department of health administrative rules, and the applicable parts of HAR §13-5-42;
5. Before proceeding with any work authorized by the department or the board, the permittee shall submit four copies of the construction plans and specifications for the various farm facility buildings to the chairperson or an authorized representative for approval for consistency with the conditions of the permit and the declarations set forth in the permit application. Three of the copies will be returned to the permittee. Plan approval by the chairperson does not constitute approval required from other agencies;
6. Unless otherwise authorized, any work or construction to be done on the land shall be initiated within one (1) year of the approval of such use, in accordance with construction plans that have been signed by the chairperson, and shall be completed within three (3) years of the approval of such use. The permittee shall notify the department in writing when construction activity is initiated and when it is completed;
7. All representations relative to mitigation set forth in the accepted *Final Environmental Assessment* (FEA) for the proposed use are incorporated as conditions of the permit;
8. The permittee understands and agrees that the permit does not convey any vested right(s) or exclusive privilege;
9. In issuing the permit, the department and board have relied on the information and data that the permittee has provided in connection with the permit application. If, subsequent to the issuance of the permit such information and data prove to be false, incomplete, or inaccurate, this permit may be modified, suspended, or revoked, in whole or in part, and the department may, in addition, institute appropriate legal proceedings;

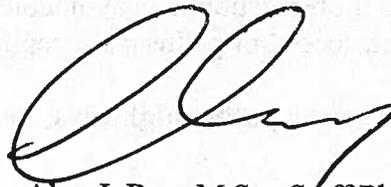
10. When provided or required, potable water supply and sanitation facilities shall have the approval of the department of health and the county department of water supply;
11. Provisions for access, parking, drainage, fire protection, safety, signs, lighting, and changes on the landscape shall be provided;
12. Where any interference, nuisance, or harm may be caused, or hazard established by the use, the permittee shall be required to take measures to minimize or eliminate the interference, nuisance, harm, or hazard;
13. Obstruction of public roads, trails, lateral shoreline access, and pathways shall be avoided or minimized. If obstruction is unavoidable, the permittee shall provide alternative roads, trails, lateral beach access, or pathways acceptable to the department;
14. **Except in case of public highways, access roads shall be limited to a maximum of two lanes;**
15. During construction, appropriate mitigation measures shall be implemented to minimize impacts to off-site roadways, utilities, and public facilities;
16. Cleared areas shall be revegetated, in accordance with landscaping guidelines provided in this chapter, within thirty days unless otherwise provided for in a plan on file with, and approved by, the department;
17. Use of the area shall conform to the program of an appropriate soil and water conservation district or plan approved by and on file with the department, where applicable;
18. Specific Best Management Practices (BMP) outlined in the accepted *Final Environmental Assessment* (FEA) and throughout this staff report shall be utilized during all phases of the proposed project;
19. The permittee shall obtain a county building or grading permit or both for the use prior to final construction plan approval by the department;
20. For all landscaped areas, landscaping and irrigation shall be contained and maintained within the property, and shall under no circumstances extend seaward of the shoreline as defined in section 205A-1, HRS;
21. Artificial light from exterior lighting fixtures, including but not limited to floodlights, uplights, or spotlights used for decorative or aesthetic purposes, shall be prohibited if the light directly illuminates or is directed to project across property boundaries toward the shoreline and ocean waters, except as may be permitted pursuant to section 205A-71, HRS . All exterior lighting shall be shielded to protect the night sky;
22. The permittee acknowledges that the approved work shall not hamper, impede, or otherwise limit the exercise of traditional, customary, or religious practices of native Hawaiians in the

immediate area, to the extent the practices are provided for by the Constitution of the State of Hawaii, and by Hawaii statutory and case law;

23. Other terms and conditions as prescribed by the chairperson;

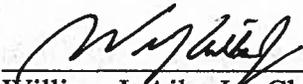
24. Failure to comply with any of these conditions shall render a permit void under the chapter, as determined by the chairperson or board.

Respectfully submitted,



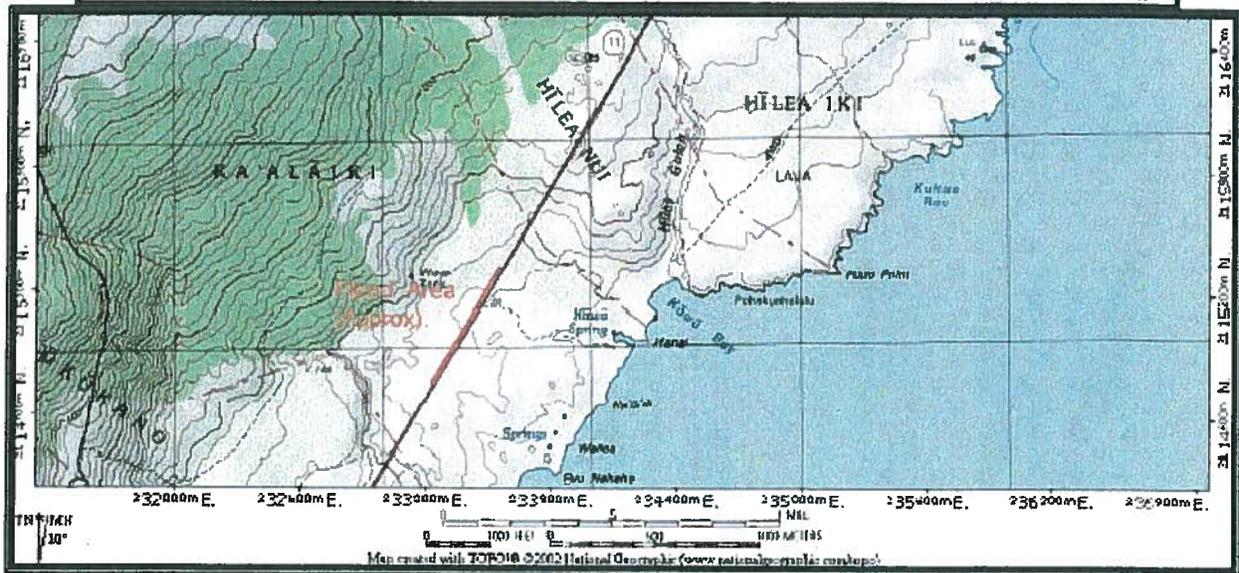
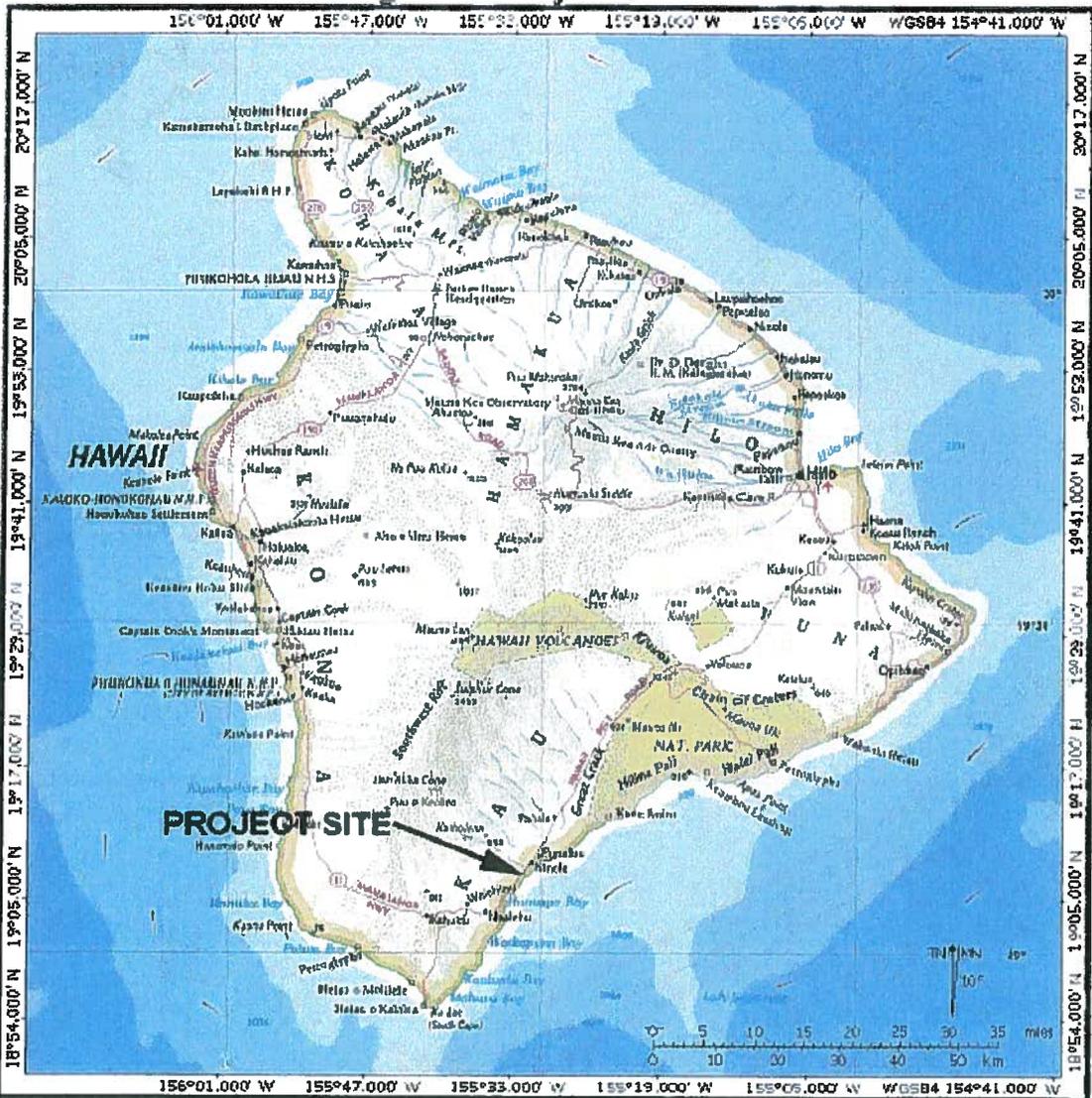
Alex J. Roy, M.Sc., Staff Planner  
*Office of Conservation and Coastal Lands*

Approved for submittal:



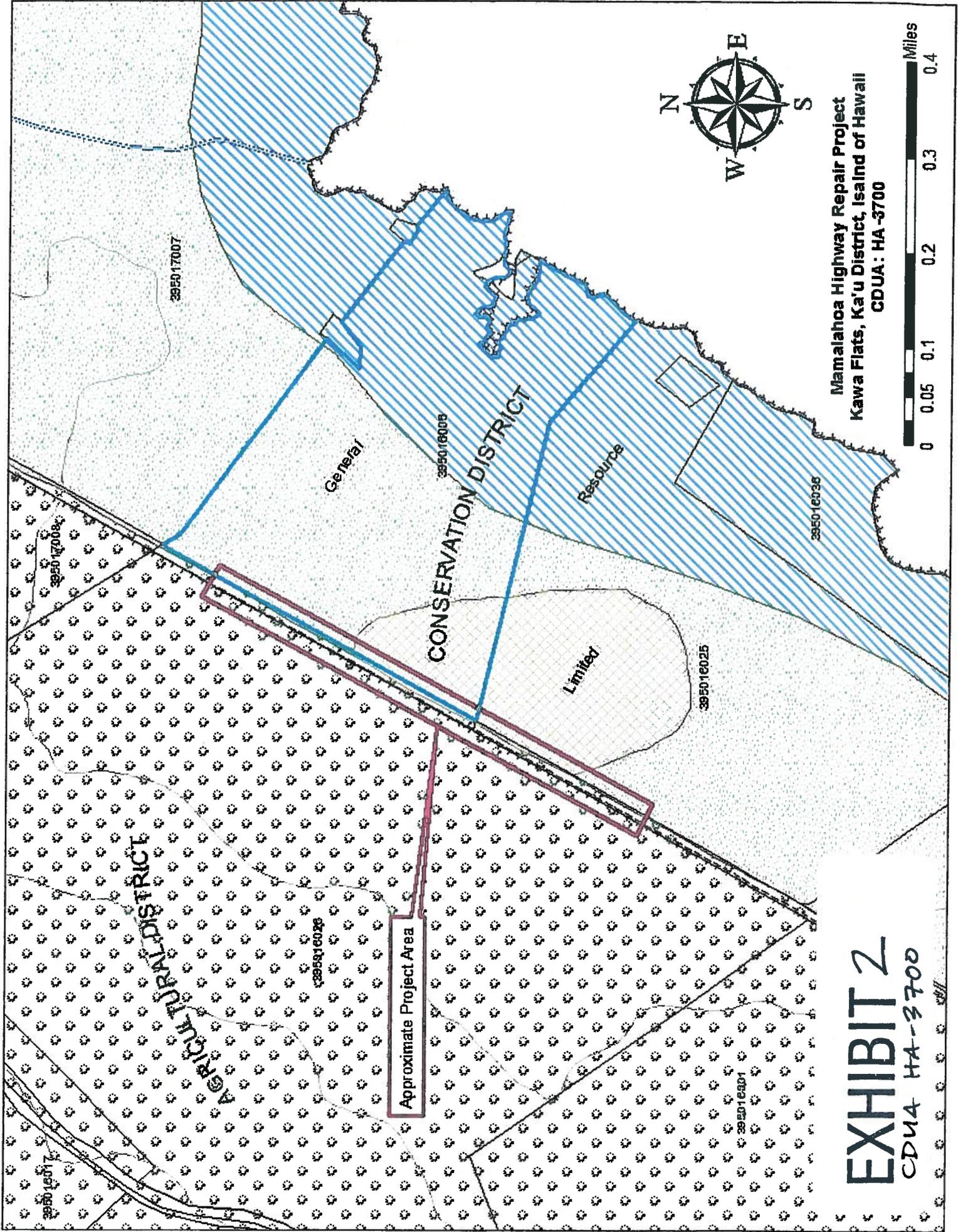
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William J. Aila, Jr., Chairperson  
*Board of Land and Natural Resources*



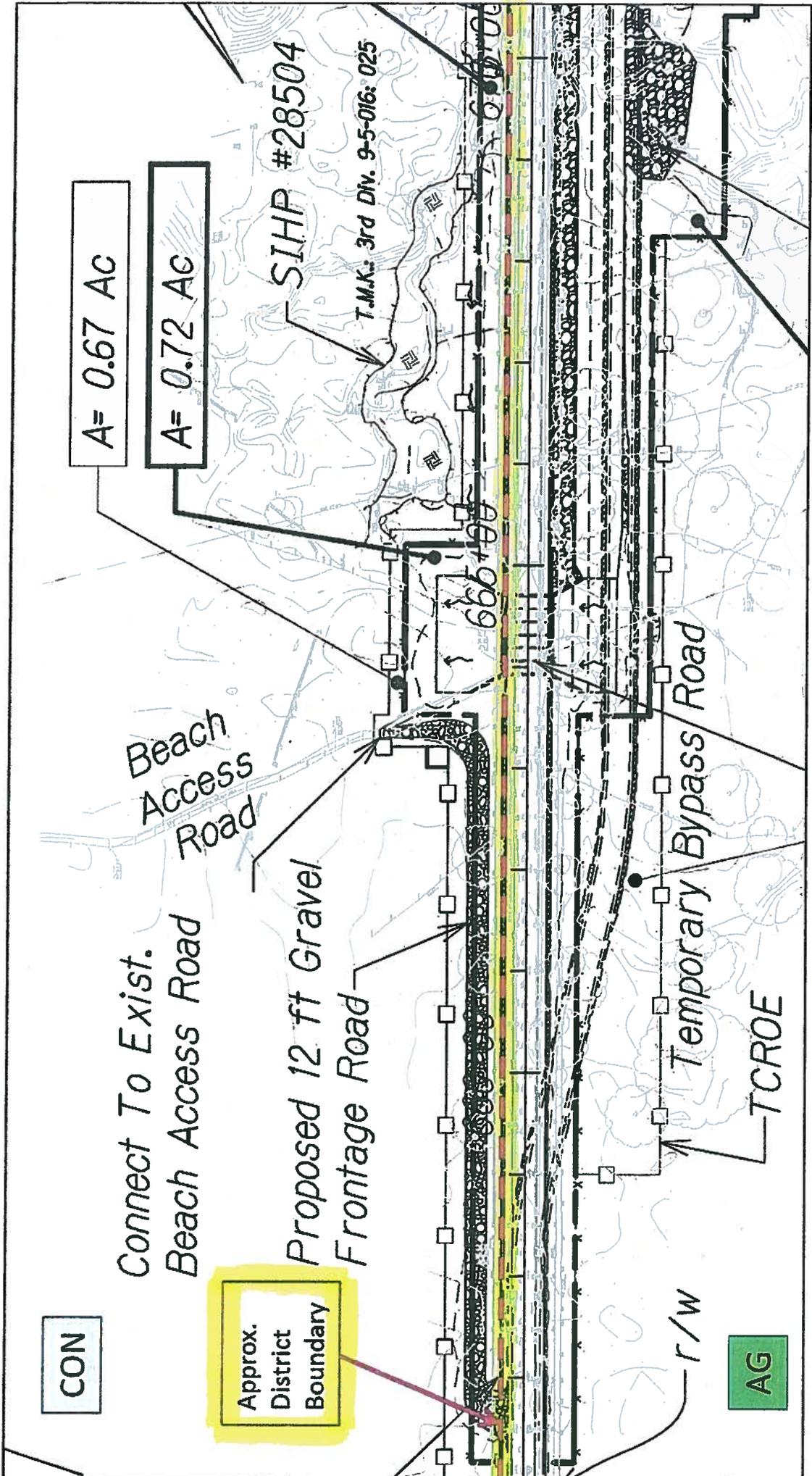
# EXHIBIT I

CDUA HA-3700



# EXHIBIT 2

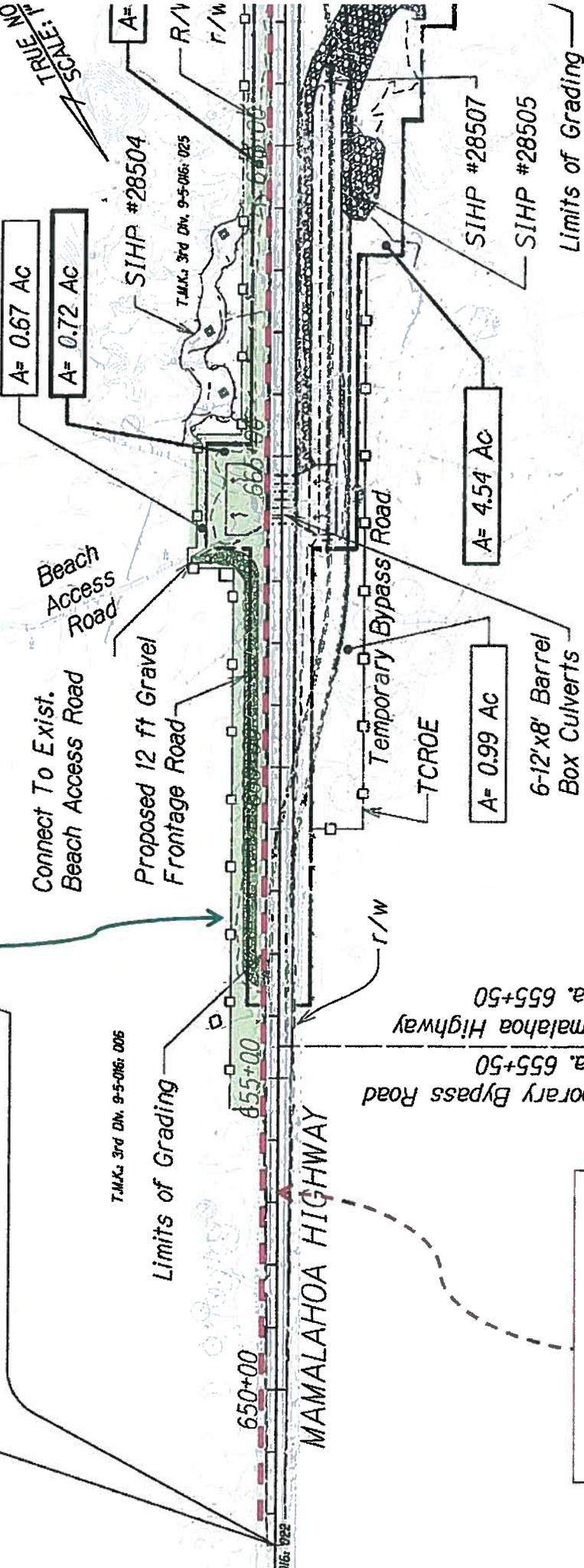
CDUA HA-3700



**EXHIBIT 3**  
 CDUA HA-3700

**BEGIN PROJECT**  
F.A.P. No. STP-011-2(36)  
# Sta. 647+50

**Approx. work in Conservation District**



SCALE: 1" = 40'

T.M.C. 3rd Div. 9-5-016: 026

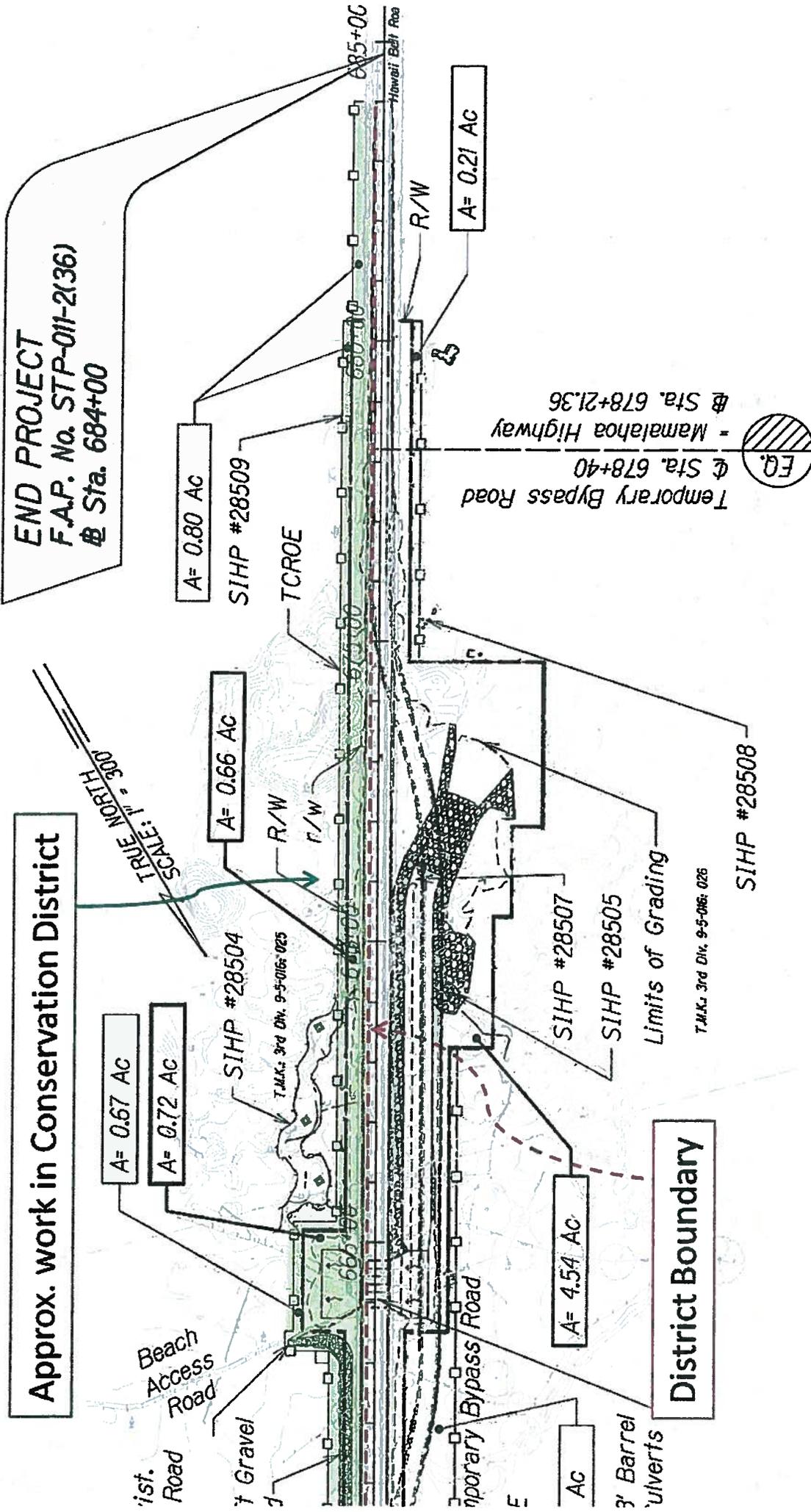
T.M.C. 3rd Div. 9-5-016: 026

T.M.C. 3rd Div. 9-5-016: 026

SIHP #:

**District Boundary**

**EXHIBIT 4**  
CDMA HA-3700



**END PROJECT**  
 F.A.P. No. STP-011-2(36)  
 @ Sta. 684+00

**Approx. work in Conservation District**

EQ. (hatched circle)  
 Temporary Bypass Road  
 @ Sta. 678+40  
 - Mamalahoa Highway  
 @ Sta. 678+21.36

**District Boundary**

**EXHIBIT 4A**  
 CDUA HA-3700

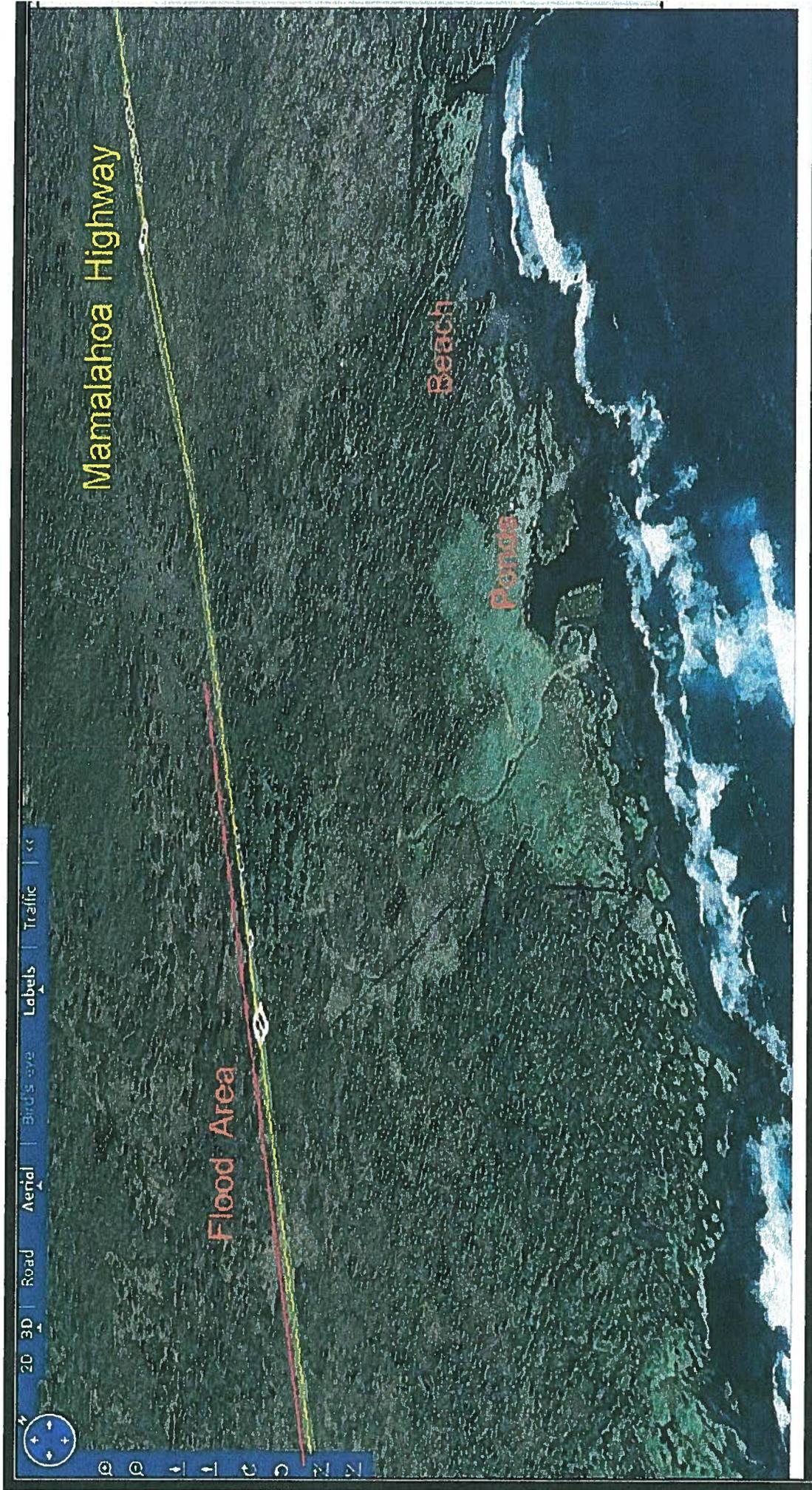
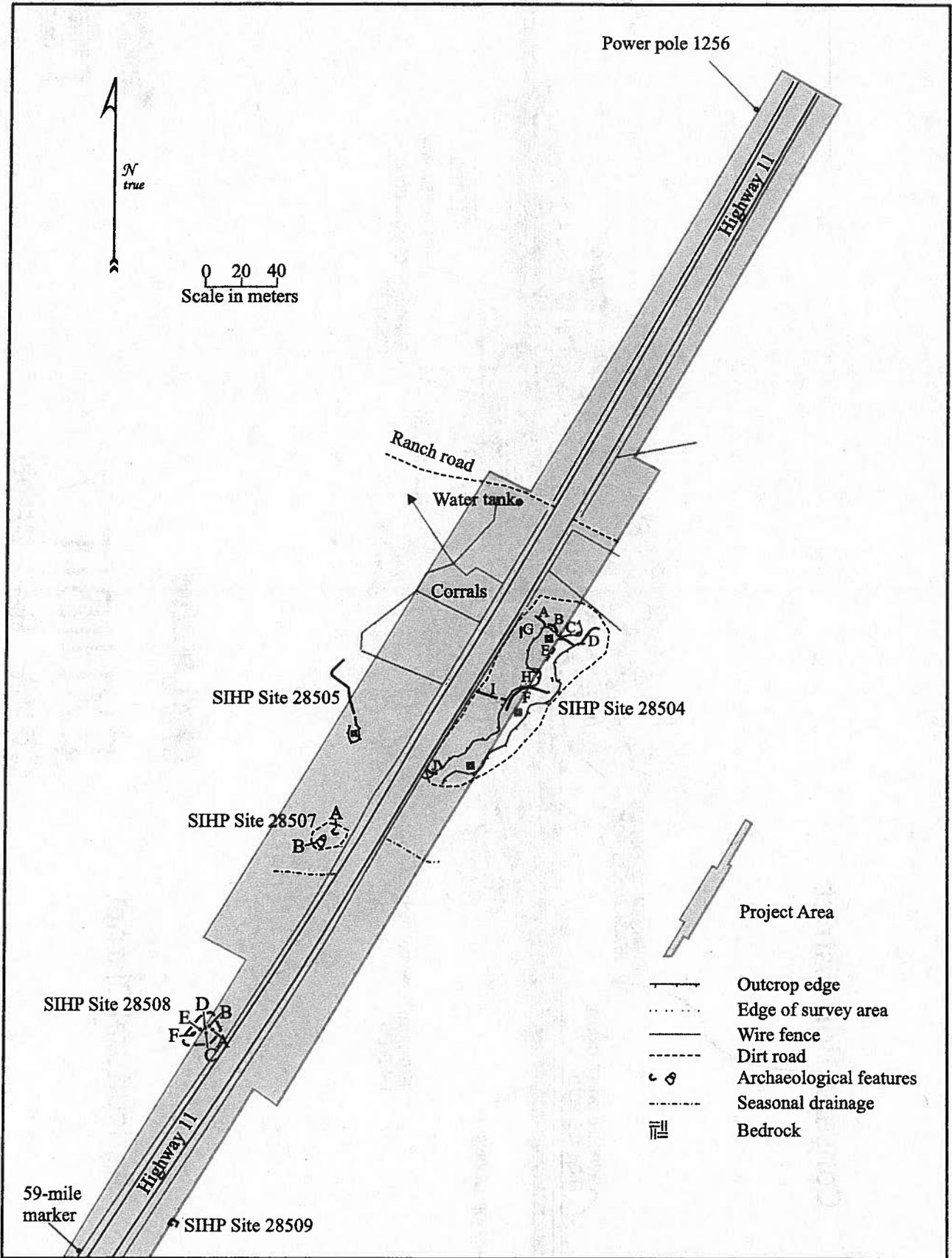
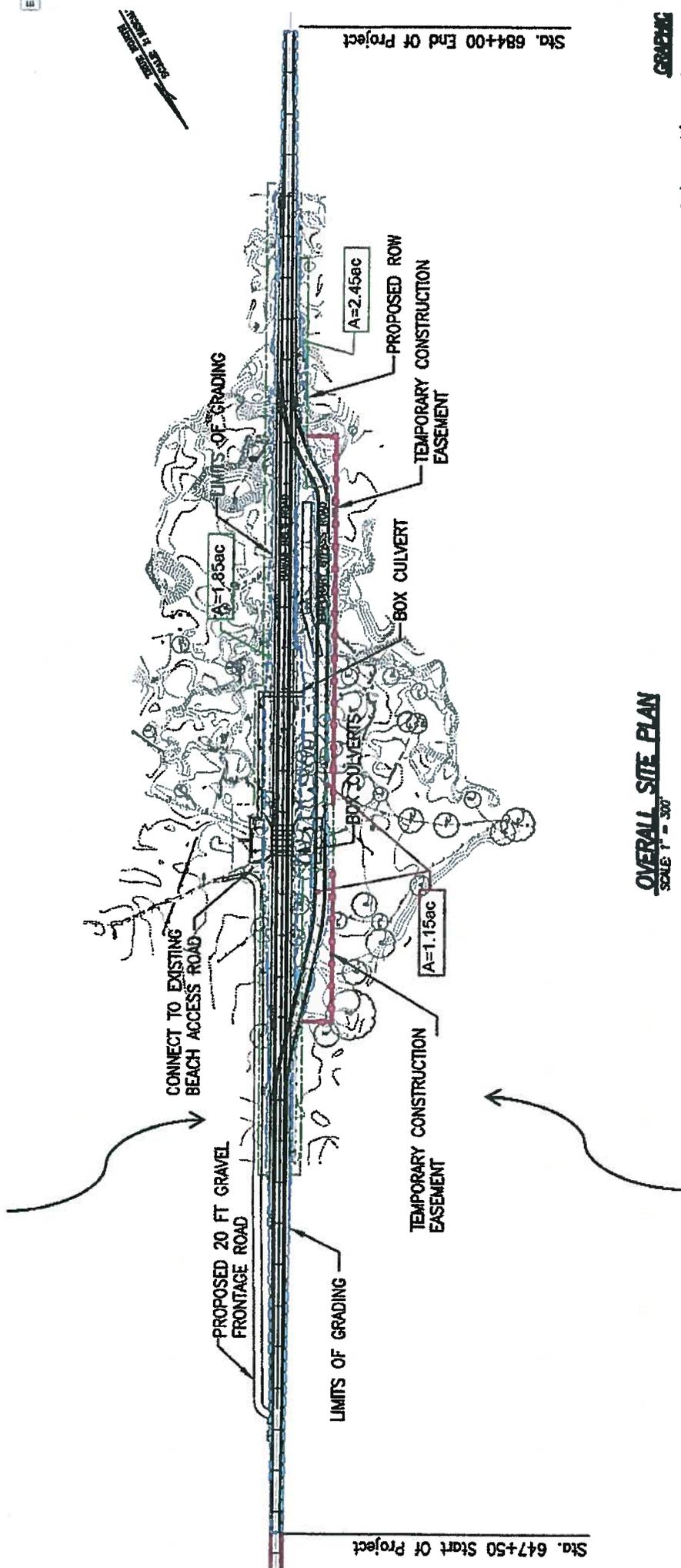


EXHIBIT 5  
CDUA HA-3700



**EXHIBIT 6**  
 CDUA HA-3700

Conservation District



OVERALL SITE PLAN  
SCALE 1" = 300'

EXHIBIT 7  
CDUA HA-3700

Agricultural District

# EXHIBIT 8

CDUA HA-3700

