Record of Decision

Honolulu High-Capacity Transit Corridor Project
O'ahu, Hawai'i
By the
Federal Transit Administration

Decision

The U.S. Department of Transportation, Federal Transit Administration (FTA), as the lead federal agency for this project, has determined that the requirements of 23 C.F.R. part 771 for the National Environmental Policy Act (NEPA), and all applicable regulations and statutes, have been satisfied for the Honolulu High-Capacity Transit Corridor Project (HHCTCP) located in O'ahu, Hawai'i . This decision applies to the HHCTCP Fixed Guideway Transit Alternative via the Airport, which was described and evaluated in the *Honolulu High-Capacity Transit Corridor Project Final Environmental Impact Statement/Section 4(f) Evaluation*, dated June 2010, and was evaluated as one of three build alternatives in the Draft Environmental Impact Statement (EIS), and as the NEPA preferred alternative in the Final EIS. The Final EIS was issued on June 25, 2010 by FTA and is the subject of this Record of Decision (ROD) pursuant to 40 C.F.R. § 1505.2, *Record of decision in cases requiring environmental impact statements* . The full range of alternatives that were evaluated, which led to the selection, is described in Section 2.2 of the Final EIS.

The selected project alternative (the "Project") is a 20-mile fixed guideway rail system, which is a portion of the overall 34-mile Locally Preferred Alternative (LPA) as described in Section 2.5.10 of the Final EIS. At the west end, the Project begins at the University of Hawai'i -West O'ahu (near the future Kroc Center), and proceeds east via Farrington Highway and Kamehameha Highway (adjacent to Pearl Harbor), to Aolele Street serving the Airport, to Dillingham Boulevard, to Nimitz Highway, to Halekauwila Street, and ending at Ala Moana Center. The East Kapolei Station, which is the west terminus for the Project, is an area that is undergoing major mixed-use development. The location of this terminus fulfills one of the identified needs of the Project, which is to "improve access to planned development to support the City's policy to develop a second urban center." The Ala Moana Center, O'ahu's largest shopping center and major activity center, is the east Project terminus. The east terminus will allow riders to link to the major employment centers and traffic generators in the area. The Project has logical termini and independent utility from any extensions that may be constructed in the future.

In addition to the guideway, there will be 21 transit stations and supporting facilities, including a vehicle maintenance and storage facility near Leeward Community College, transit centers, park-and-ride lots, a parking structure, and traction power substations. The Project includes the design, construction and operation of a grade-separated fixed guideway rail system using steel wheel on steel rail technology. The entire system will operate in exclusive right-of-way. All parts of the guideway will be grade-separated except near Leeward Community College, where it will be at-grade in exclusive right-of-way. The Project is described in greater detail below under "Description of the Project."

Record of Decision

Honolulu High-Capacity Transit Corridor Project
O'ahu, Hawai'i
By the
Federal Transit Administration

Background

The lead agencies for the Project include the City and County of Honolulu Department of Transportation Services (DTS) and the FTA. DTS is the local transit agency, the designated recipient of Project funds, and a co-lead agency with FTA. The DTS Rapid Transit Division (RTD) is the entity presently tasked with development and implementation of the Project.

Prior to selecting an elevated fixed guideway system, a broad range of high-capacity transit options were evaluated during the Primary Corridor Transportation Project (1998-2002) and HHCTCP alternatives analysis process. Options evaluated and rejected included an exclusively at-grade fixed guideway system using light-rail or bus rapid transit (BRT) vehicles, as well as a mix of options consisting of both at-grade and grade-separated segments. In addition to comments received during the alternatives analysis and EIS scoping meetings, these studies provided a critical foundation for the conclusion that an elevated system would result in the best overall performance and better support of the Project's Purpose and Need.

In 2004 and 2005, the O'ahu Metropolitan Planning Organization (O'ahuMPO) identified the need for a fixed guideway system in its *O'ahu Regional Transportation Plan* (ORTP) 2030. Development of the ORTP 2030 was a public process and system-planning effort that identified and prioritized the east-west H-1 travel corridor as having the greatest need for improved transit service. A range of transportation scenarios for O'ahu were evaluated, including fixed guideway transit in various corridors and alternatives that did not include a fixed guideway. The ORTP 2030 envisions that the fixed guideway rail system will become the backbone of the transit system—connecting major employment and residential centers to each other and to Downtown Honolulu (Downtown).

In 2005, the State Legislature also recognized the need and public support for a high-capacity transit system on O'ahu and passed Act 247, Session Laws of Hawai'i 2005, *Relating to County Surcharge on State Tax*. Act 247 authorized the City to levy a general excise and use tax (GET) surcharge to construct and operate a mass transit system serving O'ahu. The City Council subsequently adopted Ordinance 05-027 to levy a tax surcharge to fund public transportation. With dedicated, secure local funding established for the first time, the City began the HHCTCP alternatives analysis process to evaluate high-capacity transit alternatives in the study corridor.

Project development followed the process outlined in FTA's *Advancing Major Transit Investments through Planning and Project Development* (FTA 2003), which is the

process followed for New Starts Projects. FTA has been actively involved with the City in all major steps of the planning process—from the alternatives analysis phase through this ROD. FTA and the City evaluated and screened a range of alternatives to select alternatives that would best meet the Project's Purpose and Need, namely: improve corridor mobility, improve travel reliability in the corridor, support City policy to support development of the second urban center, and improve transportation equity.

In 2005 and 2006, the alternatives analysis phase evaluated and screened a range of transit modes and general alignment alternatives in terms of their cost, benefits and impacts. As described below in the "Alternatives Considered" section, a diverse variety of alternatives were considered and screened such as light rail transit and managed lanes and other fixed-guideway alternatives.

The FTA published a Notice of Intent to Prepare an Alternatives Analysis/Draft EIS in the Federal Register on December 7, 2005. The Notice of Intent invited all interested individuals and organizations, and federal, state, and local agencies to comment on the proposed alternatives, Purpose and Need, and range of issues to be evaluated at a series of scoping meetings. Scoping activities relating to the HHCTCP alternatives analysis process were completed between December 2005 and January 2006. Completed in November 2006, *the Honolulu High-Capacity Transit Corridor Project Alternatives Analysis Report* (AA) (DTS 2006b) documented the evaluation of three build alternatives that would provide transit service in the study corridor between Kapolei and UH Mānoa.

After review of the AA and consideration of nearly 3,000 comments received from the public, on December 22, 2006 under Ordinance 07-001, the City Council identified the Fixed Guideway Transit System Alternative, along an alignment that extended from Kapolei to UH Mānoa with a branch to Waikīkī, as the LPA. The City proceeded with planning and engineering a fixed guideway transit system within these limits and following the alignment defined in the ordinance. The ordinance also required that a segment of the LPA, for purposes of federal New Starts funding eligibility, be selected and that it be fiscally constrained.

Based on the AA and identification of the LPA, the City and FTA published a Notice of Intent to prepare an EIS in the Federal Register on March 15, 2007. The Notice of Intent requested public and agency input on the proposed alternatives, Purpose and Need, and range of issues to be evaluated in the EIS. The scoping process was concluded in April 2007.

On November 4, 2008, the voters of O'ahu passed a charter amendment that declared the City should establish a steel-wheel on steel-rail transit system. The Notice of Availability

of the Draft EIS was published in the Federal Register on November 21, 2008. In response to requests from the public and agencies, the public comment period on the Draft EIS was extended to February 6, 2009. Having secured the support of voters and considering the information in the Draft EIS, the City Council passed Resolution 08-261 on January 28, 2009, which resolved that the Airport Alternative best meets the fiscal objectives of Resolution 08-261. The Airport Alternative was evaluated in the Final EIS as the NEPA preferred alternative.

FTA approved distribution of the Final EIS on June 14, 2010, and a Notice of Availability of the Final EIS was filed with Environmental Protection Agency (EPA) on June 18, 2010. On June 25, 2010 the Notice of Availability was published in the Federal Register. On July 23, 2010, the Notice of Availability was amended and re-published in the Federal Register to extend the review period to August 16, 2010 and to make a correction in the Project title. Subsequently, on August 13, 2010, based on public requests for additional time, the FTA again extended the public review period to August 26, 2010.

Public Involvement and Outreach

Agencies, non-governmental groups, consulting parties identified under Section 106 of the National Historic Preservation Act (NHPA), and the public have been engaged throughout the planning and environmental process, beginning with public review and comment on the ORTP 2030, early evaluation of alternatives (the alternatives analysis phase), and the entire NEPA/Hawai'i Revised Statutes (HRS) Chapter 343 environmental process. The Project has included an extraordinary level of public outreach using different venues and techniques to insure a maximum level of participation by the public and agencies, as summarized below:

- Various printed informational materials were produced that included newsletters, fact sheets, brochures, media releases, public meeting announcements, and project handouts.
- Informational radio and video segments were produced and broadcast on commercial stations, public access and the Internet.
- A Project website (www.honolulutransit.org) was created to post project information and to receive public input.
- Electronic versions of the Draft EIS and Final EIS were uploaded to the Project website.
- An interactive DVD on the Draft EIS, a 28-minute video guide to the Draft EIS, and a computer animated flythrough of the Airport and Salt Lake Alternatives were sent to all recipients of the Draft EIS.

- A telephone information line (808-566-2299) was established.
- Participation in radio programs and a monthly show on public access television.
- Islandwide community updates were held to share information and gather input on significant milestone decisions.
- Attendance at neighborhood board meetings.
- Participation in Speakers Bureaus, community events and coffee hours to provide Project information to community groups, agencies, and organizations.
- Feedback was solicited from various government and other agencies through direct contact with elected officials, neighborhood boards, the Transit Solutions Advisory Committee, stakeholders, and interested organizations.
- Two separate sets of scoping meetings were held during project development. The first set included two public scoping meetings and one agency scoping meeting in December 2005. The second set included three public scoping meetings in March and April 2007 and an agency scoping meeting in March 2007. Comments were received via mail, website, and the telephone line and at the scoping meetings.
- Participation in town hall meetings.
- Approximately 20 half-hour information shows about the Project have been produced and broadcast on local 'Ōlelo television.
- Participation in approximately 800 community events such as the Hawai'ian Products Show, Annual Splendor of China event, Energy Expo, Job Quest Job Fair, Seniors & Disabilities Workshop, Asia Pacific Clean Energy Expo, Hawai'i Lodging, Hospitality & Foodservice Expo, Dragon Boat Race, and Workforce Job Fair.
- Station design workshops were held to solicit community input and ideas about station design elements and the interface between each station and the surrounding community.
- Public hearings on the Draft EIS were advertised in major local newspapers, on local radio and television, and in ethnic and cultural newspapers in several languages. The hearings and the document's availability were also announced through the Project's website, hotline, newsletters, and a postcard mailed to area residents, agencies and organizations on the Project's mailing list.
- In addition to the Project website, the Draft EIS also could be viewed at the following locations:
  - City and County of Honolulu Municipal Library
  - All O'ahu public libraries
  - City and County of Honolulu Department of Transportation Services
  - City and County of Honolulu Department of Transportation Services, Rapid Transit Division

- Five public hearings on the Draft EIS were held in December 2008. Each public hearing was open to the public for a two hour period. The public and agencies were provided several methods to provide comment: verbal comments during the hearing, oral comments to a court reporter, submittal of written comments at the hearing, and submittal by mail to the City or FTA.

  The Draft EIS was prepared and distributed to the public on November 1, 2008, and posted on the Project's website on that date. Comments received between November 1, 2008, and the issuance of the Notice of Availability on November 23, 2008, were included in the list of the comments received on the Draft EIS and related written responses.

  In December 2008, the review and comment period was extended until February 6, 2009, in response to requests from the public. At the conclusion of the comment period, approximately 586 comment submissions were received.

  A Notice of Availability of the Final EIS was published in the Federal Register on June 25, 2010, which began the 30-day review period. However, the period was ultimately extended to August 26, 2010 to provide additional time for public review of the document. The Final EIS was advertised in a major newspaper, television, in ethnic and cultural newspapers in several languages, the Project's website, information line, and one newsletter. The document was also available for viewing at all Hawai'i State libraries and DTS, and published on FTA's website and e-mail subscriber list.

- Although not required under NEPA or local environmental laws, a public information meeting was held by the City Council on July 14, 2010, after the first Notice of Availability of the Final EIS was published in the Federal Register. Both oral and written testimony was accepted from the public and submitted to the FTA and the City for consideration

- Consultation occurred with various consulting parties as required by Section 106 of the NHPA. Extensive effort was made to identify, contact and consult with groups entitled to be consulting parties relating to archaeological, cultural, and historic resources within and adjacent to the Project's Area of Potential Effect (APE). The City and FTA consulted with over 30 organizations and agencies, including a number of Hawai'ian organizations. Between July 28, 2009 and November 14, 2009, FTA and the City participated in a series of consultation meetings, which resulted in the development of a Programmatic Agreement (PA) (Appendix B) to mitigate impacts to these resources.

- Agency coordination occurred throughout the planning and environmental processes, as described in Section 8.4.2 of the Final EIS. Cooperating agencies were offered the opportunity to be briefed on the Project and given an opportunity to comment on preliminary copies of both the Draft EIS and Final EIS. Coordination with agencies with permitting authority will continue during the permit application process and implementation of permit conditions.

Alternatives Considered

As described in the "Background" section of this ROD and in more detail below, the FTA and the City considered a broad range of alternatives that were considered in separate studies prior to initiation of the alternatives analysis process, and continuing through the Draft and Final EIS. Project scoping was conducted in two phases, as allowed for under the *Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users* ("SAFETEA-LU") guidance issued by FTA and the Federal Highway Administration (FHWA). Early scoping was completed during the alternatives analysis phase and continued after selection of the LPA. The scoping process for the alternatives analysis involved a presentation of the viable alternatives to the public and interested public agencies and officials, and opportunities to receive comments on the Purpose and Need, alternatives, and scope of the analysis. Scoping followed the FTA process that provides for a culling of alternatives studied in the EIS through an alternatives analysis process.

Alternatives Analysis Process

During the fall of 2005 and winter of 2006, the FTA and the City conducted a scoping process that included a variety of highway, bus and fixed guideway options for consideration. Both modal technology and alignment options were combined to create a number of alternatives for consideration. The alternatives analysis evaluated and screened these alternatives in terms of their cost, benefits and impacts and their ability to meet the Project's Purpose and Need. The alternatives were identified through previous transit studies, field reviews of the study corridor, analysis of current population and employment data for the study corridor, a literature review of technology modes, work completed for the ORTP 2030 and public and agency comments received.

Transit Technologies – As documented in the *Final Technology Options Memo (DTS 2000)*, a variety of alternative transit technologies were considered during the alternatives analysis and EIS processes. To achieve the Project's Purpose and Needs, a two-step evaluation was completed. The first step evaluated the candidate technologies against six criteria that identified "fatal flaws" and illuminated major operational differences between the technologies. The initial criteria included: technical maturity, line capacity, cruise speeds, station/stop spacing and activity center access. If the technology did not meet the minimum low rating in any one of these categories, it was considered a fatal

flaw and that technology was eliminated from further consideration. The technologies that were eliminated from further consideration in this first step are described below:

- *Personal rapid transit* was eliminated based on lack of technical maturity and low cruise speeds. This alternative would not have met Purpose and Need as it would not have improved corridor mobility or travel reliability, would not have supported the City's policy on supporting the second urban center, nor would it have improved transportation equity.
- *Emerging rail concepts* were eliminated from consideration because they have not been proven in real-world use, lack technical maturity, and none have proven to be stable enough to meet the rapid implementation schedule of the Project.
- *Commuter rail* was eliminated based on poor operating performance and because of the need for short station spacing in the study corridor, especially in the urban core. It scored poorly in terms of its lack of maneuverability, making it inappropriate in serving the Downtown portion of the corridor. Further, because of the lack of existing freight tracks, this technology's normally inherent cost/affordability advantage could not be realized.
- *Waterborne ferry service* was eliminated as a primary transit system because it could not meet line capacity requirements nor did it have the ability to service many of the key activity centers in the corridor. This alternative would not meet Purpose and Need as it would not have improved corridor mobility or travel reliability, would not have supported the City's policy on supporting the second urban center, nor improve transportation equity.

The remaining technologies that were still under consideration were then screened against more detailed criteria, some of which were similar to the initial criteria. These criteria included: technical maturity, line capacity, performance, maneuverability, cost/affordability, environmental impacts, safety, supplier competition, implementation time, and accessibility. The result of this second step evaluation eliminated the following technologies:

- *Rubber-tired guided* vehicles were eliminated after the AA due to propriety technology (lack of supplier competition) and technical maturity.
- *Diesel Multiple Unit* (DMU) was eliminated due to moderate technical maturity and supplier competition. Compared to other technologies in the light-rail transit category for both mixed traffic and exclusive right-of-way operations, it scored the poorest and therefore was not recommended for further consideration.

- *Magnetic levitation* was eliminated after the AA due to proprietary technology unproven in the U.S. It also scored poorly in terms of cost and supplier competition.

- *Monorail* was eliminated after the AA due to proprietary technology.

- *Corridor-wide Light rail* transit was also eliminated as discussed in the "Alternatives" section described below.

Eliminated Alternatives – The following alternatives were considered but eliminated from further consideration for the reasons described below:

- *Tunnel Crossing* – The tunnel crossing beneath Pearl Harbor was rejected because it would not improve connectivity within the study corridor. It would have bypassed much of the corridor and it would not have provided an alternative to the private automobile. The tunnel crossing also had been considered for the ORTP 2030 but was rejected based on the cost compared to the limited benefit that it would have provided, as well as security concerns. This alternative would not meet Purpose and Need as it would not have improved corridor mobility or travel reliability, would not have supported the City's policy on supporting the second urban center, nor improve transportation equity.

- *Corridor-wide At-grade Light-rail Transit and At-Grade Alternative In Downtown Section of Corridor* – To minimize impacts on historic resources, visual aesthetics, and surface traffic, the screening process considered 15 combinations of tunnel, at-grade, or elevated alignments between Iwilei and Ward Avenue. Five different alignments through Downtown were advanced for further analysis in the alternatives analysis process, including an at-grade portion along Hotel Street, a tunnel under King Street, and elevated guideway along Nimitz Highway and Queen Street. As documented in the AA, the process evaluated the alignment alternatives based on transportation and overall benefits, environmental and social impacts, and cost considerations. The report found that an at-grade alignment along Hotel Street would require the acquisition of more parcels and could potentially affect more burial sites than any of the other alternatives considered. The alignment with at-grade operation Downtown and a tunnel under King Street, was not selected because of the environmental effects, such as impacts to cultural resources, reduction of street capacity, and property acquisition requirements of the at grade and tunnel sections, which would cost an additional $300 million.

  Some of the technical considerations associated with an at-grade versus elevated alignment through Downtown included the following:

- **System Capacity, Speed, and Reliability**-The short, 200-foot (or less) blocks in Downtown would permanently limit an at-grade system to two-car trains to prevent stopped trains from blocking vehicular traffic on cross-streets. Under ideal operational circumstances, the capacity of an at-grade system could reach 4,000 passengers per hour per direction, assuming optimistic five minute headways. Based on travel forecasts, the Project should support approximately 8,000 passengers in the peak hour by 2030. To reach a comparable system capacity, speed, and reliability, an at-grade alignment would have required a fenced, segregated right-of-way that would eliminate all obstacles to the train's passage, such as vehicular, pedestrian, or bicycle crossings. Even with transit signal priority, the at-grade speeds would have been slower and less reliable than an elevated guideway. An at-grade system would have travelled at slower speeds due to the shorter blocks, tight and short radius curves in places within the constrained and congested Downtown street network, the would have needed to obey traffic regulations (e.g., traffic signals), and potential conflicts with other at-grade activity, including cars, bicyclists, and pedestrians. These effects would have meant longer travel times and far less reliability than a fully grade-separated system.
- **Mixed-Traffic Conflicts**- An at-grade system would have prevented effective coordination of traffic signals in the delicately balanced signal network in Downtown. A disruption of traffic signal cycle coordination every three minutes would have severely affected traffic flow and capacity of cross-streets. Furthermore, there would have been no option to increase the capacity of the at-grade rail system by reducing the headway to 90 seconds, which would have exacerbated the signalization problem. An at-grade system would have required removal of two or more existing traffic lanes on affected streets. This effect would have been significant and would have exacerbated congestion. Congestion would not have been isolated to the streets that cross the at-grade alignment but, instead, would have spread throughout Downtown. An at-grade light rail system with continuous tracks in-street would have created major impediments to turning movements. Even where turning movements would have been designed to accommodate this type of system, at-grade systems experience potential collision problems. Mixing at-grade fixed guideway vehicles with cars, bicyclists, and pedestrians presented a much higher potential for conflicts compared to grade separated conditions. This potential would be

high in the Chinatown and Downtown neighborhoods, where the number of pedestrians is high and the aging population presents a particular risk.

- **Construction Impacts**- An at-grade rail system would have resulted in more effects than an elevated system in a number of ways. The wider and continuous footprint of an at-grade rail system would have increased the potential of utility conflicts and impacts to sensitive cultural resources. In addition, the extra roadway lanes utilized by an at-grade system would have resulted in increased congestion or required that additional businesses or homes be taken to widen the roadway through Downtown. Additionally, the duration of short-term construction impacts to the community and environment with an at-grade system would have been considerably greater than with an elevated system. Because of differing construction techniques, more lanes would have needed to be continuously closed for at-grade construction and the closures would have lasted longer than with elevated construction. This would result in a greater disruption to business and residential access, prolonged exposure to construction noise, and traffic impacts.

  Because it was not feasible for an at-grade system through Downtown to move passengers rapidly and reliably without significant detrimental effects on other transportation system elements (e.g., the highway and pedestrian systems, safety, reliability, etc.), an at-grade system would have resulted in a negative system-wide impact that would have reduced ridership throughout the system.

  In addition to the points described above, the at-grade system would not have met the Project's Purpose and Need because it would not have satisfied the mobility and reliability needs of the Project.

- *Various Fixed Guideway Options* – As documented in the *Honolulu High-Capacity Transit Corridor Project Alternatives Screening Memorandum* (DTS 2006a) and depicted in Table 4-1 through Table 4-8 of this Memo, a total of 75 fixed guideway alignment options were considered and screened to a smaller number to be evaluated in more detail. The corridor was divided into eight geographic sections and between 4 to 16 alignment options were evaluated for each of these sections. Within each section, the alignments retained for further evaluation were those that demonstrated the best performance related to evaluation criteria regarding: mobility and accessibility, smart growth and economic development, constructability and cost, community and environmental quality, and consistency with adopted plans. The options that were eliminated

from further consideration were eliminated because they did not meet one or more of the evaluation criteria,

- *Transportation System Management Alternative* (TSM) – This alternative was developed to evaluate how well a combination of relatively low-cost transit improvements could meet the study area's transportation needs. Bus service was optimized by increasing bus service but without building a new fixed guideway for transit. The analysis demonstrated that the Purpose and Need for the Project could not be met through a lower-cost, bus-based alternative alone. It would have done little to improve corridor mobility and travel reliability. Roadway congestion also would not have been alleviated. The TSM Alternative would not have supported the City's goals of concentrating growth within the corridor and reducing development pressures in rural areas.

- *Managed Lane Alternative* – This alternative would have provided a two-lane elevated toll facility between Waipahu and Downtown, with variable pricing strategies for single-occupant vehicles to maintain free-flow speeds for transit and high-occupancy vehicles. Two design and operational variations were evaluated:
  - Two-direction Option
  - Two-lane Reversible Option

  Under this alternative, vehicle miles travelled (VMT) would have increased compared to other alternatives considered (higher numbers indicate greater distances travelled between two points). While this alternative would have slightly reduced congestion on parallel highways, system wide traffic congestion would have been similar to the No Build Alternative as a result of increased traffic on arterials trying to access the facility. Total island wide vehicle hours of delay (VHD) would have increased compared to the No Build Alternative, indicating an increase in system wide congestion. Transit reliability would not have been improved except for express bus service operating in the managed lanes.

  This alternative would not have supported forecasted population and employment growth in plans previously adopted by the City pursuant to the *Hawai'i State Planning Act* (HRS Chapter 226). This alternative would have provided very little transit benefit at a high cost. The cost-per-hour of transit-user benefits for the alternative would have been two to three times higher than that for the Fixed Guideway Alternative and would not have substantially improved service or access to transit for transit-dependent communities. In sum, the Managed Lane Alternative failed to meet the Project's Purpose and Need as it would not have improved corridor mobility or travel reliability, would not have supported the

City's policy on supporting the second urban center, nor improve transportation equity.

Alternatives Carried Forward - Building on the AA, four alternatives were carried forward and were further evaluated in the Draft EIS. They included the No Build Alternative and three build alternatives as described below.

- *No Build Alternative* – This alternative was evaluated to provide a comparison of what the future conditions would be if none of the Build Alternatives were implemented. The No Build Alternative also allowed the public and decision makers to compare the benefits, costs, and impacts of each Build Alternative. The No Build Alternative bus network included all routes in operation today, plus planned route modifications and additions to the existing bus network that are likely to occur between now and the year 2030 to respond to the population and employment estimates for the year 2030. Due to increasing traffic congestion and slower travel times, transit service levels and passenger capacity under the No Build would remain about the same as they are today.
- *Airport Alternative* – The NEPA preferred alternative, referred to in the Final EIS as the Project or Airport Alternative, was one of three build alternatives evaluated in the Draft EIS. The Airport Alternative will carry the most passengers and provide the greatest transit-user benefits. The Airport Alternative also will result in the fewest VMT and VHD. It will provide access to employment centers at Pearl Harbor Naval Base and Honolulu International Airport and will have substantially greater ridership to those areas than the Salt Lake Alternative. It will serve the Salt Lake neighborhood with connecting bus service. The Airport Alternative will have slightly lower potential for encountering archaeological resources but will affect more historic resources than the Salt Lake Alternative. The Airport Alternative will result in the least overall harm to resources that are protected by Section 4(f) of the U.S. Department of Transportation Act of 1966 and would encroach least into waters of the U.S. during both construction and operation.

The other two build alternatives that were considered in the Draft EIS but were ultimately eliminated from further consideration in the Final EIS are described below.

- *Salt Lake Alternative* – This alternative would have included the construction and operation of a grade-separated elevated fixed guideway transit system with the same system characteristics described for the Project. At the west end, the guideway would have followed the same alignment as described for the Project. However, in the vicinity of Aloha Stadium, the guideway would have left Kamehameha Highway immediately 'Ewa of Aloha Stadium, crossed the Aloha

Stadium main parking lot, and continued Koko Head along Salt Lake Boulevard. It would have followed Pūkōloa Street through Māpunapuna before crossing and following Moanalua Stream to cross over the H-1 Freeway and continued to the Middle Street Transit Center. From this point, the guideway would have followed the same alignment as described for the Project to Ala Moana Center.

The total guideway length for the Salt Lake Alternative would have been approximately 19 miles, and would have included 19 stations. This Alternative would have included feeder bus connections from fixed guideway stations to Pearl Harbor Naval Base, Honolulu International Airport, and Hickam Air Force Base.

Compared to the Project, the Salt Lake Alternative would have resulted in substantially less ridership to employment centers at Pearl Harbor Naval Base and Honolulu International Airport, higher noise impacts to residential buildings near Salt Lake Boulevard, and slightly higher air pollution, energy consumption, and water pollution due to higher vehicle miles traveled. Visual effects would have been greater because the guideway and station would dominate views in residential areas along Salt Lake Boulevard. On the other hand, this alternative would have affected fewer historical resources.

Although this alternative was not identified as the preferred alternative it is still part of the LPA and may be constructed in the future as an extension to the Project if funding can be secured.

- *Airport & Salt Lake Alternative* – This alternative would have been identical to the Salt Lake Alternative, with an additional segment that would have followed Kamehameha Highway and Aolele Street from Aloha Stadium to Middle Street. This alternative would have followed the alignments described for both the Salt Lake Alternative and the Airport Alternative. The Aloha Stadium Station on Kamehameha Highway would have been relocated makai to provide an Arizona Memorial Station instead of a second Aloha Stadium Station. At the Middle Street Transit Center Station, each line would have had a separate platform with a concourse providing a pedestrian connection between them to allow passengers to transfer. The total guideway length for this alternative would have been approximately 25 miles and it would have included 23 stations.

  This alternative would have resulted in the greatest impact because the most resources would have been affected. In addition, this alternative would have resulted in the highest VMT, slightly fewer hours of transit-user benefits and the highest cost per hours of transit-user benefits.

Selection of Preferred Alternative -The Final EIS was based on the findings of the AA and Draft EIS and followed FTA's planning and guidance. It provided information on both the No Build Alternative and identified the Airport Alternative as the Preferred Alternative, in compliance with NEPA regulations that require that the Preferred Alternative be identified when it is known (23 C.F.R. § 771.125 (a)(1)). This selection was based on consideration of the benefits of each alternative studied in the Draft EIS, public and agency comments received on the Draft EIS, and City Council action under Resolution 08-261 identifying the Airport Alternative as the Project to be the focus of the Final EIS. The Final EIS included additional information and analyses, as well as minor revisions to the Project that were made to address comments received from agencies and the public on the Draft EIS. As depicted in Table 7-11 in the Final EIS, the Project meets Purpose and Needs identified for the HHCTCP. Specifically, the Project will improve corridor mobility, corridor travel reliability, access to planned development to support City policy to develop a second urban center, and transportation equity.

Description of the Project

In addition to the 20-mile elevated guideway, the Project will require the construction of 21 stations and supporting facilities. Supporting facilities include: a vehicle maintenance and storage facility (MSF), transit centers, park-and-ride lots, traction power stations approximately every mile, a parking structure, and an access ramp from the H-2 Freeway to the Pearl Highlands park-and-ride. The MSF will be located near Leeward Community College. This site was selected over an alternate site at Ho'opili due to its central location on the rail line, the guideway being at-grade at this location, better access in/out of the facility, and its being the least costly option since there is no need for access tracks. By comparison, the Ho'opili site would have been further away from the guideway, been more costly to design and construct approximately one mile of elevated access tracks to connect the site to the guideway, and required rezoning of State agricultural land. For these reasons, the MSF site near Leeward Community College was selected.

From Wai'anae to Koko Head (west to east), the guideway will follow North-South Road and other future roadways to Farrington Highway. The guideway will follow Farrington Highway Koko Head on an elevated structure and continue along Kamehameha Highway to the vicinity of Aloha Stadium. The guideway will continue past Aloha Stadium along Kamehameha Highway makai to Nimitz Highway and turn makai onto Aolele Street. It will then follow Aolele Street, Ualena Street, and Waiwai Loop Koko Head to reconnect to Nimitz Highway near Moanalua Stream and continue to the Middle Street Transit Center. Koko Head of Middle Street, the guideway will follow Dillingham Boulevard to

the vicinity of Ka'aahi Street and then turn Koko Head to connect to Nimitz Highway near Iwilei Road. The guideway will follow Nimitz Highway Koko Head to Halekauwila Street, and then proceed along Halekauwila Street past Ward Avenue, where it will transition to Queen Street. The guideway will cross from Waimanu Street to Kona Street in the vicinity of Pensacola Street. The guideway will run above Kona Street to Ala Moana Center.

The planned rail system will operate between 4:00 a.m. and midnight, with a train arriving in each direction at each station every 3 to 10 minutes. A unified fare structure is planned, similar to the current structure for TheBus. The system is planned to operate with multi-vehicle trains approximately 120 to 180 feet long and will be expandable to accommodate longer trains of up to 240 feet in the future to increase capacity. Also, the system could be operated with shorter headways (time between train arrivals) to increase peak capacity. This level of service will require a peak-period fixed guideway fleet of approximately 75 vehicles in 2030.

Basis for Decision

FTA has determined, in accordance with 40 C.F.R. § 1505.2, that the Project is the Environmentally Preferred Alternative and meets the Purpose and Needs of the proposed action as discussed below.

Improves Corridor Mobility – The Project will substantially improve corridor mobility in the most highly congested corridor in the City. It will increase average transit speeds by approximately 25 percent, leading to higher transit ridership and travel time savings for existing and new transit users. Transit travel times between major destinations will decrease up to 60 percent. As transit becomes a faster, and thus a more attractive travel choice, ridership is projected to increase. Specifically, ridership will increase by approximately 56,200 trips per day or 25 percent by 2030. Moreover, transit users will save more than 20 million equivalent hours of travel time per year by 2030.

Increases in transit ridership will benefit highway users as well by removing cars from the roadways through better transit service. The Project will reduce traffic congestion by 18 percent and improve mobility. Daily VMT will decrease by 4 percent; vehicle hours travelled (VHT) will decrease by 8 percent; and VHD will decrease by 18 percent as shown in Table 3-14 in the Final EIS.

Under the No Build, mobility and congestion conditions in 2030 will worsen. Despite implementation of the planned $3 billion in roadway improvements identified in the *ORTP 2030*, the No Build Alternative still would not relieve traffic congestion for drivers or improve mobility for transit riders compared to today.

Average travel times along major corridors would increase. Locations farthest from employment centers would experience the largest increase in congestion, decline in mobility, and constrained access. As shown in Table 7-2 in the Final EIS, VMT, VHT, and VHD would increase under the No Build Alternative compared to today. Vehicular traffic volumes on major roadways would grow substantially between now and 2030. Increases in a.m. peak-hour traffic across screen lines would range from approximately 10 to 50 percent (Table 3-9 in Chapter 3 of Final EIS). For TheBus and TheHandi-Van riders, these increases in highway congestion would directly affect their mobility because travel times on buses would increase. For the No Build Alternative, transit would continue to operate in mixed traffic, except on several short bus-only segments and in high-occupancy vehicle lanes on freeways.

Improves Corridor Travel Reliability – Predictable travel time for transit riders will increase substantially as trips are moved from buses operating on streets in mixed traffic and congested freeways to the fixed guideway. Forty-three percent of transit trips and transit passenger miles will be carried on an exclusive fixed guideway that will not be subject to traffic delay. With the Project, bus passengers will also realize service reliability as a result of route restructuring that replaces long-haul bus routes with shorter local routes integrated with the fixed guideway system. The driver's travel time and bus transit reliability will also improve as a result of reduced congestion and delay on the highway.

With the No Build Alternative, travel reliability for both drivers and transit riders would decrease by 2030. Because delay on the system is not predictable from one day to another, reliability for drivers would worsen. The large increase (46 percent) in VHD shown in Table 3-14 of the Final EIS that would occur with the No Build Alternative includes an element of unpredictability that requires special accommodations in travel planning. Average travel times would increase somewhat under the No Build Alternative, but the impact on reliability would be more dramatic, especially in the morning. The reason is that drivers are forced to allocate more time to account for the possibility that unexpected delays will occur. All transit riders would experience similar decreases in reliability under the No Build Alternative. Problems with turnbacks and schedule adherence already plague the transit system. These reliability factors are expected to get worse in the future as the highway system becomes more congested.

Improve Access to Planned Development to Support City Policy to Develop a Second Urban Center - One of the needs identified for the Project is to support urban development planned by the City in the 'Ewa Development Plan area. As stated in Section 1.8.3 of the Final EIS, Kapolei is developing as a "second city" to Downtown and is projected to grow by more than 350 percent. The 'Ewa district is projected to grow by

more than 199 percent and Makakilo by nearly 125 percent between 2000 and 2030. Accessibility to the overall 'Ewa Development Plan area is currently severely impaired by the congested roadway network, which will only worsen in the future. Improved accessibility is needed to support this area's future planned growth per the City policy and general plan.

The Project will provide improved mobility and access to this area and Downtown. Compared to the No Build Alternative, the Project will support a greater amount of development and redevelopment around stations by enhancing access and supplying a daily influx of transit riders and potential customers for businesses. Although the construction of the Project does not directly cause development to occur, land use plans and policies will encourage new development to be located near transit stations to take advantage of the transportation infrastructure and increased accessibility afforded by the Project. With the Project, approximately 60,000 additional residents and 27,000 new jobs will be located within walking distance to project stations in 2030. As shown in Table 7-2 of the Final EIS, the "second city" planned for Kapolei will experience transit travel times to Ala Moana Center that are reduced by 44 percent compared to the No Build Alternative.

Improves Transit Equity – The Project will provide service in the area of the City where the transit need is greatest. The Project will connect areas that have the highest transit dependency, which includes "communities of concern", as defined in Section 4.7.2 of the Final EIS. Thirty-six percent of the population within communities of concern will be located within one-half mile of a transit station in 2030. The Project will provide transit travel-time savings to approximately 61 percent of the island wide population in 2030. Of the 35 percent of the island's population that resides in areas containing concentrations of communities of concern, over half would realize a substantial transit travel-time savings. The Project will substantially improve transportation equity compared to the No Build Alternative. The rest of the island's population that resides in areas with concentrations of communities of concern will experience little change in transit travel time as a result of the Project. None of the population will experience an increase in travel times.

Tourists pay approximately 30 percent of the GET surcharge collected, which is the Project's local funding source. The remaining local transit investment costs are distributed throughout the island in proportion to how much each individual expends on goods and services. The Project will substantially improve transportation equity compared to the No Build Alternative.

Based on demographics within the study corridor, the demand and need for public transit on O'ahu is greatest within the areas served by the Project (Figure 1-8 in Chapter 1 of the Final EIS

In summary, the Project best meets the Purpose and Need and will:

- Carry the most passengers
- Provide the greatest transit-user benefits
- Result in the fewest VMT
- Result in the fewest VHD
- Provide direct access to employment centers at Pearl Harbor Naval Base and Honolulu International Airport
- Have substantially greater ridership

Measures to Avoid, Minimize and Mitigate Effects of the Project

Measures to avoid, minimize and mitigate the effects of the Project were considered in the Project's design and in coordination with affected agencies. All practicable means to avoid or minimize effects from the Project have been adopted. The guideway support columns have been designed to use as little property as practicable, and be located in areas away from important community resources and recreational activities, while accommodating access as needed. The mitigation commitments and the monitoring and enforcement program are fully described in the *Mitigation Monitoring Plan for Project Management Oversight of Environmental Compliance* (Attachment A).

Even with mitigation measures, some obstruction and changes to protected views and vistas will change as a result of the Project and will be unavoidable. Depending on the degree of view obstruction or blockage, some changes in view will result in a significant and unavoidable adverse effect. These effects will be most noticeable where the guideway and stations are nearby or in the foreground of views. The degree of visual effect will vary with the alignment orientation and the height of the guideway, stations, and surrounding buildings and trees, along with the viewer's expectations of view quality. Although changes in visual resources or view planes and the viewer response will be significant in some areas, view changes are not likely to be obtrusive in wider vistas or regional panoramic views where the project elements serve as smaller components of the larger landscape.

Implementation of the mitigation measures will preserve visual resources, enhance the Project with architectural and landscape design features and engage the community in the Project design.

Record of Decision

Honolulu High-Capacity Transit Corridor Project
O'ahu, Hawai'i
By the
Federal Transit Administration

Comments Received on Final EIS

As described in the Background section of this ROD, the Notice of Availability of the Final EIS was published in the Federal Register on June 25, 2010. The review period was extended until August 26, 2010 to receive public/agency comments.

Within the Abstract, and Section 5.1 of the Final EIS, a request for public comments was made concerning a design refinement in the vicinity of the airport area and on the Section (4) *de minimis* impact finding for the Ke'ehi Lagoon Beach Park and the Pacific War Memorial sites. Both of these changes occurred subsequent to the issuance of the Draft EIS. Although a request for comments was made, no comments were received during the review period specifically on these elements of the Project.

The FTA received 9 comment letters on the Final EIS from the following governmental agencies:

- U.S. General Services Administration - this agency reminded the City of its commitment to implement security measures for the Prince Jonah Kuhio Kalanianaole (PJKK) Federal Building and Courthouse. Several meetings were held with the General Services Administration (GSA) and their federal tenants (e.g., Department of Homeland Security/US Immigration and Customs Enforcement, the U.S. Marshal for the District of Hawai'i, and several federal judges) concerning safety and security measures in project design and development of the Project's *Threat and Vulnerability Assessment* (TVA). GSA reviewed the TVA and related project information and was satisfied with the assessment and project design changes made on clearance distance to this federal building. This issue is further described in the *Safety and Security* section below.
- U.S. Department of Homeland Security, Federal Emergency Management Agency (FEMA) – this agency reminded the City that it is a participant in the National Flood Insurance Program (NFIP) and, as such, must comply with NFIP floodplain management building requirements as described in 44 C.F.R. §§ 59 through 65. The City will comply with the NFIP requirements in final design.
- EPA – this agency commented that most of their concerns regarding the alternatives analysis, wetlands, water quality, environmental justice, noise impacts and various consultation processes were addressed in the Final EIS. EPA also stated that the Section 106 consultation process must be completed and mitigation for impacts to historic resources be committed to in the ROD. EPA also encouraged the City to continue coordination with residents and business owners who will be relocated due to the Project.

- U.S. Department of Interior/U.S. Geological Survey – no comments were provided from this agency.
- U.S. Department of the Interior/Office of Environmental Policy and Compliance – this agency had the following comments: 1) requested that they be given the opportunity to review the executed PA to ensure that the stipulations contained in the PA were consistent with the Section 4(f) analysis; 2) the Archaeological Inventory Survey (AIS) conducted for Segment 1 of the Project appeared incomplete; 3) requested an understanding on how archaeological sites were evaluated in the Section 4(f) analysis in terms criteria on significance and integrity; 4) requested that additional simulations of the Waikele Stream Bridge and the bridge over the OR&L spur be completed to better assess view impacts; 5) questioned why the USS Utah was not mentioned as being within the National Historic Landmark (NHL) boundary at the US Naval Base at Pearl Harbor ; 6) questioned why it was not mentioned that both USS Bowfin and USS Arizona are also NHL sites; and 7) felt historic views of Makalapa Navy Housing Historic District was not acknowledged in the Section 4(f) analysis. Responses to these concerns are noted below in the same order listed above:
  - Executed PA – The finalized PA is attached to this ROD and available to DOI. The National Park Service, a bureau of DOI, participated extensively during the Section 106 consultation process, provided comments and specific language for inclusion in the PA, and is an invited signatory of the PA.
  - AIS – The AIS was completed for Phase1 of the Project (the area between East Kapolei and Pearl Highlands) and identified a subsurface deposit. As described in Section 7 of the AIS, *Significance Assessments*, the evaluation for significance is according to the criteria established for the National and Hawai'i Registers of Historic Places. The AIS concluded that SIHP 50-80-9-7751, a subsurface cultural deposit (lo'i sediments), is significant under criteria D (have yielded or is likely to yield information important for research on prehistory or history). The AIS also concluded that this resource has integrity of location and materials but not integrity of design, setting, workmanship, feeling, or association. The report on the findings of the Segment 1 AIS is available from DTS and the State Historic Preservation Officer (SHPO).
  - Based on the AIS, the FTA concludes that this archaeological resource is important chiefly because of what can be learned by data recovery and has minimal value for preservation in place. Therefore, SIHP 50-80-9-7751 is exempt from Section 4(f) approval under 23 C.F.R. § 774.13(b).

- Section 4 (f) criteria – As discussed above, a subsurface cultural deposit (lo'i sediments), is significant under criteria D (have yielded or is likely to yield information important for research on prehistory or history).
- Obstruction of historic views – this comment refers to Irwin Park. The features of the park are described on page 5-52 of the Final EIS. The seating areas in the park are oriented in the mauka-makai (water-mountain) direction. The guideway and highway are mauka of the park in the median of Nimitz Highway. The makai views are identified as a feature of the park. These views will not be obstructed by the Project. In addition, there are mature trees that buffer the views of Nimitz Highway from the area where the benches and tables are located. The view in Figure 5-38 of the Final EIS is located Koko Head and is not in the direction that park users will be looking.
- Request for Simulations - The Project will be 40 feet above the roadway (Farrington Highway) and will not eliminate the primary views of the design elements of the Waikele Bridge or the bridge over the OR&L spur or alter their relationship to the existing transportation corridor. Moreover, there will be no use of the bridges. The current activities, features, or attributes of the property that qualify for protection under Section 4(f) are its design elements and historic association.
- Resources within the NHL - The description of the Section 4(f) evaluation considered the US Naval Base Pearl Harbor NHL as a whole. As discussed on page 4-191 of the Final EIS, the Project is adjacent to the Pearl Harbor NHL and near the CINCPACFLT Building NHL but is not within the boundary of the NHLs and does not have a direct impact on these resources. The USS Bowfin and USS Arizona are also noted on this page. To avoid impacting this NHL resource, the entrances to the elevated Aloha Stadium Station and the Pearl Harbor Naval Station were designed to touch down on the mauka (mountain) side of Kamehameha Highway, which is outside of the NHL boundary, in order to avoid taking any of the Pearl Harbor NHL property. Numerous meetings were held with NPS and other consulting parties to develop and commit to mitigation as stipulated in the attached the PA.
- View impacts to Makalapa Historic District - The views from the Potential Makalapa Navy Housing Historic District were considered in the Section 4(f) evaluation as to how the Project will affect the attributes of the district itself. As discussed in Section 5.6.2 of the Final EIS, the views themselves are not considered historic and therefore, were not evaluated as a Section 4(f) property. The current activities, features or attributes of the property that

qualify for protection under Section 4(f) are its architectural elements and historic associations.

- State of Hawai'i Department of Accounting and General Services (DAGS) – this agency re-affirmed that it had no objection to the *de minimis* impact finding to Aloha Stadium and requested continued coordination with the City to consider options to improve transportation benefits to the Aloha Stadium, especially concerning parking, parking revenues, and access to stadium events. A proposed parking management plan is being developed in coordination with DAGS that will address DAGS' concerns about preserving access to parking for events and revenue from parking receipts. Coordination will continue during final design and construction to ensure that the Project will result in a net benefit, in terms of both enhanced access and parking.
- State of Hawai'i Department of Transportation – this agency stated concerns regarding the loss of 110 parking spaces at the Honolulu International Airport (HNL), including potential parking impacts to the future mauka concourse. It is anticipated that the loss of 110 parking spaces at the airport to make room for the airport rail station will be more than offset by transit service to be provided by the Project. Every passenger arriving by transit reduces the demand for parking at the airport. With the rail project in place, the number of air passengers using transit to reach HNL on a daily basis is projected to increase from 700 today to 3,500 in 2030, increasing the percentage of total air passengers from 1.2% today to 3.4%. This estimate is in line with other U.S. cities with rail transit service that generally falls within 2% to 5% of all air passengers using transit to reach the airport. However, the John F. Kennedy International Airport in New York sees about 10% of air passengers using transit, and many Asian and European cities show 20% to 30% of air passengers arriving by rail transit. Given the large number of international visitors, especially from Asia, the actual number of air passengers using rail transit to reach the HNL could be even higher than predicted by the model.
- City Department of Design and Construction – this agency stated that it had no comments.
- City Department of Parks and Recreation (DPR) – this agency confirmed that the State of Hawai'i owned, in fee, the Ke'ehi Lagoon Beach Park and that the City has jurisdiction pursuant to the Governor's Executive Order 2110. DPR also suggested a property use agreement or acquisition be negotiated with the state concerning the DAV Ke'ehi Lagoon Memorial property that is adjacent to the park. An agreement that allows the use this property for purposes of the Project is under consideration by the City, but is not required in order to mitigate Project

impacts and is not part of the mitigation commitments in this ROD. The City will pay for all improvement measures to minimize harm and mitigate impacts to Ke'ehi Lagoon Beach Park. The City will continue to coordinate with DPR during final design to provide lighting and associated resurfacing for four of the tennis courts near the park entrance prior to construction so that nighttime tennis court use will be maintained during construction and after project completion. These improvement measures will be completed as soon as practical.

Forty-three comment letters, public testimony or emails were received from the public. These comments were essentially similar to comments submitted during the Draft EIS comment period. Some comment letters pertained to sections within the Final EIS and others pertained to the response to comment letter received by the individual or organization. The main topics of comments are listed below:

- Alternatives Analysis process
- Reconsideration of alternatives eliminated
- Overall high Project costs
- Consideration of Project design changes related to elevated rail
- Minimal traffic congestion relief from the Project
- Visual impacts too great and view protection not satisfactory
- Perceived noise impacts
- Choice of technology selected and preference for other technologies
- Support and non- support for the Project
- Completion of the Section 106 process and PA
- Request for completion of the AISs before proceeding further with NEPA process

The following discussion summarizes various topics presented by a number of comments received.

Unsigned PA – At the time the Final EIS was published, the PA was not signed. The PA has now been signed and is included as Attachment B to this ROD. Some comments expressed concerns about the fact that the PA was unsigned in the Final EIS. Because of continued discussions with signatories and invited signatories on the Draft PA, FTA chose to publish the Final EIS with the draft PA rather than wait to publish the Final EIS with an executed PA. The comment letters on the Final EIS revealed some confusion on the NEPA and the Section 106 processes, linkages, and their requirements. The FTA and City followed 36 C.F.R. § 800.8, *Coordination With the National Environmental Policy Act*, which lays the process that federal agencies may use for coordinating the NEPA process with the Section 106 process.

Notice of Intent (NOI) on Technologies - Several comments inquired why the December 7, 2005 NOI to prepare the AA/Draft EIS indicated that all technologies listed in the NOI (light-rail transit, rapid rail transit [steel-wheel on steel rail], rubber-tired guided vehicles, magnetic levitation system and monorail system) would be studied, yet only steel-on steel was evaluated in the Draft EIS. As described in Section 2.2.3 of the Final EIS, a technical review process was initiated. Transit vehicle manufacturers submitted 12 responses covering all of the technologies listed in the NOI. The responses were reviewed in February 2008 by a technology panel that ranked the performance, cost, and reliability of the proposed technologies and accepted public comment on the technology selection. The independent five-member technology panel was composed of four transit experts and a transportation academic appointed by the City Council. The panel's findings are summarized in its report to the City Council dated February 22, 2008. The panel's report resulted in the City establishing steel wheel operation on steel rail as the technology to be further evaluated for the Project.

Project Refinements based on Agency and Public Comments and Coordination during Draft EIS Comment Period – Final EIS – comments were also received concerning changes that occurred after the Draft EIS was circulated for comment. In particular, some comments shared concern that the public was not given the opportunity to weigh in on the alignment shift along the airport area, and effects of two parks (Ke'ehi Lagoon Park and the Pacific War Memorial Site). As discussed in the Abstract and Section 5.1 of the Final EIS, comments were requested from the public concerning refinement of the design of the Airport Alternative (Project) and *de minimis* impact findings at Ke'ehi Lagoon Beach Park and the Pacific War Memorial site (near the Ke'ehi Lagoon Beach Park) during the comment period following the June 25, 2010 Federal Register Notice of Availability of the Final EIS. In addition, as described in Section 3.4.6 of the Final EIS, the City coordinated with the Federal Aviation Administration (FAA), HDOT Airport Division, and FTA concerning the decision to refine the project routing through the airport area to avoid the current runway protection zone. Once the decision was made by these agencies to transition the alignment from Aolele Street to nearby Ualena Street, affected property owners were contacted in April 2010 via individual letters and personal meetings to discuss impacts to their respective properties and to explain the right-of-way acquisition process per the *Uniform Relocation Assistance and Real Property Acquisition Policies Act*, as amended (49 C.F.R. part 24). A press release was also issued at that time on the alignment shift at the airport. This shift did not result in any new substantive impacts or an increase in the severity of impacts. Also, no substantive comments were received from the public during the 63-day Final EIS review period. Also, no comments were received from the public on the *de minimis* impact findings at Ke'ehi Lagoon Beach Park and the Pacific War Memorial site (near the Ke'ehi Lagoon Beach Park).

Timing of Archaeological Inventory Surveys – Some comment letters requested that the Final EIS include the results of the Archaeological Inventory Surveys (AIS) so as not to risk violating HRS §§ 6E-8 and 6E-42. Section 106 of the NHPA and HRS Chapter 6E are both laws that protect historic resources. HRS Chapter 6E in particular, protects pre-discovered and inadvertently discovered native Hawai'ian burials.

The PA prepared for the Project is a Section 106 requirement to address federal historic preservation requirements under the NHPA. The PA was developed over a period of months in consultation with over 30 interested organizations including the SHPO, the Oahu Island Burial Council (OIBC), and federal and state agencies. The document reflects not only what Section 106 requires, but also what the parties agreed to. Consequently, the PA also addresses HRS Chapter 6E but does not replace HRS Chapter 6E compliance. As documented in the Project's *Archaeological Resources Technical* Report (RTD2008n), available at the City's RTD office and on the project website (www.honolulutransit.org), the entire project was studied for impacts to historic sites and native Hawai'ian burials. Based on this study, there are no known or discovered burial sites within the project area, although the study did make a determination that the likelihood of discovering burial sites is higher in some areas than in others. In addition to the technical report, and prior to construction, the AIS will be completed in phases prior to final design and consistent with the construction phases planned for the project. These construction phases are depicted in Figure 2-41 of the Final EIS and described in Stipulation III (A) of the PA. The state or City permit granting authority will be required to notify the SHPD when the project applies for permits (e.g., grading and grubbing) if any AIS show that the Project may impact a burial or other resource. This would also include coordination with OIBC for pre-discovered burials.

The advantage of a phased approach to the AISs is to limit disturbance of potential resources during the surveys. Plans developed for the AISs will follow the requirements of HAR Chapter 13-276. The AIS fieldwork will be completed in advance of the completion of final design as described in Stipulation III of the PA. The OIBC has requested, and the City has agreed, to a more thorough investigation than has ever previously been completed. The City has agreed to pre-explore every column location within the highest-risk portions of the corridor. By completing engineering at the same time as the excavation, only locations that would actually be disturbed by the Project will be excavated. Other areas will remain intact. If any human skeletal remains (iwi) are encountered, the project design is flexible to be able to design around and avoid them. If

iwi are encountered, procedures will be followed and related mitigation plans will be prepared per the provisions described in Stipulation III of the PA.

Evaluation of the LPA – Some commenters requested that the full LPA be evaluated in the Final EIS. As described in Section 2.2.3 of the Final EIS, the City Council passed City Council Resolution 07-039 and directed that the first construction project be fiscally constrained. The Council further directed, due to funding constraints, that the preliminary engineering/environmental analysis be completed for a portion of the LPA between East Kapolei and Ala Moana Center. The full LPA is not financially feasible with the funding available, so the federal component of the Project has always been the 20-mile East Kapolei to Ala Moana portion of the LPA. The federal funds are similarly not contingent on nor have they ever been tied to the implementation of the full LPA. As discussed in Section 2.5.10 of the Final EIS, the planned extensions, which are included in the ORTP 2030, are anticipated to be completed some time in the future prior to 2030 as separate projects that would receive separate detailed environmental review. The Project has logical termini and independent utility from any extensions that may be constructed in the future.

Potential Reallocation of 49 U.S.C. § 5307 (Section 5307) Bus Funds – Comments were received concerning the diversion of Section 5307 bus funds to finance the Project due to a potential shortfall in collection of general use and excise tax (GET). As stated in Section 6.3.1 of the Final EIS, TheBus service will be expanded with the Project and capital and operating and maintenance costs for enhanced bus service are included in the Project budget. Under any circumstances, the City will try to minimize the use of 5307 funds if they are needed, but it is an allowable funding source and consistent with the intended funding program. Bus service will not suffer in the program as presented.

Need for Supplemental EIS – Several commenters stated that preparation of a Supplemental EIS was needed to evaluate all technologies listed in the December 2005 NOI and the future extensions. As discussed above, the Final EIS properly evaluated and discussed all reasonable alternatives that met Purpose and Need. In addition, future extensions do not require further evaluation at this time, because the Project has logical termini and independent utility from any extensions that may be constructed in the future.

Determinations and Findings

The environmental record for the Project consists of the previously referenced AA, the Draft EIS, the Final EIS, and supporting technical reports and addenda referenced in these documents. This record also includes this ROD, which includes mitigation commitments and mitigation monitoring plan (Attachment A) and an executed Section 106 Programmatic Agreement (Attachment B). In addition to the these documents, the

FTA has reviewed each transcript of hearings submitted under 49 U.S.C. § 5323(b) and finds that an adequate opportunity to present views was given to all parties having a significant economic, social, or environmental interest in the project includes a record of: A) the environmental impact of the Project; B) adverse environmental effects that cannot be avoided; C) alternatives to the Project; and D) irreversible and irretrievable impacts on the environment.

On the basis of the evaluation of social, economic, and environmental impacts presented in the environmental record for the Project, FTA hereby determines, in accordance with 49 U.S.C. § 5324(b)(3), that:

1. An adequate opportunity to present views was given to all parties having a significant economic, social, or environmental interest in the Project;
2. The preservation and enhancement of the environment and the interest of the community in which the Project is located were considered; and
3. All reasonable steps have been taken to minimize the adverse environmental effects of the Project, and where adverse environmental effects remain, no feasible and prudent alternatives to avoid or further mitigate such effects exists.

Historical and Archaeological Resources

Pursuant to the regulations implementing Section 106 of the NHPA, FTA in consultation with the City and the SHPD, defined the APE for the proposed undertaking. In addition to consultation with the SHPD, the FTA also consulted with the ACHP, and various organizations and agencies with concerns regarding archaeological, cultural, and historic resources. This consultation included Native Hawai'ian organizations that had an interest in the Project. Consultation with consulting parties was initiated to identify historic properties potentially affected by the Project, assess the Project's effects, and seek ways to avoid, minimize or mitigate any adverse effects on historic properties in procedures described in the PA. The PA stipulates the actions to be taken by FTA and the City during preliminary engineering, final design and construction of the Project. The PA is included in Attachment B of this ROD. FTA has provided the consulting parties with the documentation required by 36 C.F.R. § 800.11(e).

The FTA finds that the Section 106 process is complete, so that it may approve the expenditure of federal funds for the Project.

Conformity with Air Quality Plans

The federal Clean Air Act (CAA), as amended, requires that transportation projects conform to the State Implementation Plan (SIP) purpose of eliminating or reducing the severity and number of violations of the National Ambient Air Quality Standards

(NAAQS) and of achieving expeditious attainment of such standards. The EPA regulation implementing this provision of the CAA establishes criteria for demonstrating that a transportation project conforms to the applicable air quality plans.

The entire State of Hawai'i is designated as an attainment area for carbon monoxide (CO), ozone (O3), and particulate matter (PM_{10} and $PM_{2.5}$). The State is in compliance with the NAAQS for these pollutants. Projects included in Hawai'i's regional transportation network are found in the ORTP. The HHCTCP is listed in the area's ORTP and complies with the goals set forth in the Statewide Transportation Plan.

Therefore, the FTA finds that the Project level conformity requirements of 40 C.F.R. part 93 are satisfied and that the Project conforms to air quality plans for Hawai'i.

Final Section 4(F) Approval

Section 4(f) of the U.S. Department of Transportation Act of 1966 (49 U.S.C. § 303) affords special protection to public parks, recreation areas, and wildlife and waterfowl refuges and historic sites, including archaeological sites. The requirements of Section 4(f) are implemented through 23 C.F.R. part 774, *Parks, Recreation Areas, Wildlife and Waterfowl Refuges, and Historic Sites (Section 4(f))*. Impacts assessed under Section 4(f) include: 1) impacts due to permanent taking or acquisition of lands, and 2) impacts due to "constructive use" or impairment of 4(f) designated land uses due to the proximity of the project. Chapter 5 of the Final EIS evaluates these issues and resources.

The Project will result in the direct use of 11 Section 4(f) historic properties, *de minimis* use of two historic properties; *de minimis* use of three park and recreational properties; and temporary occupancy of two recreational properties. In accordance with 23 C.F.R. §§ 771.105(a) and 771.133, the documentation supporting Section 4(f) approval for these properties is included in Appendix F and discussed in Chapter 5 of the Final EIS.

Regarding the use of Afuso House, Higa Four-Plex, Teixeira House, Lava Rock Curbs, Kalama Canal Bridge, Six Quonset Huts, True Kamani Trees, O'ahu Railway & Land Company Terminal Building, O'ahu Railway & Land Company Office/Document Storage Building, Chinatown Historic District, Dillingham Transportation Building, HECO Downtown Plant and Leslie A. Hicks Building, the FTA hereby determines that (1) there is no feasible and prudent avoidance alternative, as defined in 23 C.F.R. § 774.17, to the use of land from these properties; and (2) the Project includes all possible planning, as defined in 23 C.F.R. § 774.17, to minimize harm to the property resulting from such use. The basis for these findings is discussed in Sections 5.4 and 5.5 of the Final EIS.

Regarding *de minimis* impacts to Boulevard Saimin, Oahu Railway & Land Company basalt paving blocks, O'ahu Railway & Land Company former filling station, the FTA has received written concurrence from the SHPO and from the ACHP, in a finding of "no adverse effect" or "no historic properties affected" in accordance with 36 C.F.R. part 800, and as indicated by their signing of the PA attached hereto. The FTA hereby determines that the Project will have a *de minimis* impact on these historic properties.

Regarding *de minimis* impacts to Aloha Stadium, Ke'ehi Lagoon Beach Park, and Pacific War Memorial Site, the FTA informed the officials with jurisdiction of its intent to make a *de minimis* impact finding of these parks and recreational resources. Following an opportunity for public review and comment, no comments were received from the public and one comment was received from DAGS re-affirming they had no objection to the *de minimis* impact finding for Aloha Stadium. Comment also was received from the City's DPR in regard to preparation of an agreement for the use of Ke'ehi Lagoon Beach Park and the Pacific War Memorial site properties. As such, the officials with jurisdiction over the Section 4(f) resource concurred, in writing, that the Project will not adversely affect the activities, features, or attributes that make these properties eligible for Section 4(f) protection (see Appendix F in Final EIS, Agency Correspondence and Coordination). The FTA hereby determines that the Project will not adversely affect the features, attributes, or activities qualifying these properties for protection under Section 4(f); therefore, the Project will have a *de minimis* impact on these properties.

Regarding temporary occupancy of Pearl Harbor Bike Path and Future Middle Loch Park, FTA hereby determines that, pursuant to 23 C.F.R. § 774.13(d), these temporary occupancies of land are so minimal as to not constitute a use within the meaning of Section 4(f). The conditions for satisfying a temporary occupancy and the basis for this determination are discussed in Section 5.7 of the Final EIS.

FTA has determined that there is no prudent and feasible alternative to the use of the Section 4(f) properties described in Chapter 5 of the Final EIS that would serve the purpose of the Project. FTA has further determined that the Project includes all possible planning to minimize harm to the Section 4(f) properties as detailed in the Section 106 PA and the Final EIS.

Ecosystems

Ko'oloa'ula (Abutilon menziesii), an endemic plant species, was not observed during the field surveys; however, the Project is known to be in close proximity to extant plant clusters and within approximately 200 feet of the northern edge of an established contingency reserve. Ko'oloa'ula is an endangered Hawai'ian hibiscus that grows in dryland forests. On October XX,2010, the U.S. Fish and Wildlife Service (USFWS)

concurred in the FTA determination that the Project is not likely to adversely affect any threatened or endangered species in accordance with Section 7 of the Endangered Species Act, as amended (7 U.S.C.§ 136; 16 U.S.C.§§ 1531 et seq.). The City will implement the minimization measures as described in FTA's letter to USFWS, dated September 15, 2010 (Attachment C). These commitments also are included in Attachment A Mitigation Monitoring Plan. This letter also summarizes the issues discussed during informal consultation with USFWS staff on July 22, 2010.

Waters

Waters of the U.S. - Coordination with federal, state and local agencies was conducted in compliance with Section 404 of the Clean Water Act (CWA) and Section 10 of the Rivers and Harbors Act as described in Section 4.14.1 of the Final EIS. The Project will permanently encroach upon approximately 0.08 acre of Waters of the U.S. These impacts are from placing piers in Waiawa Springs, Moanalua Stream, Kapalama Canal Stream, and Nu'uanu Stream and Waiawa Springs. Permanent mitigation features are proposed at Waiawa Stream, within the Pearl Highlands Station area.

Flood Zones -The guideway will cross several floodplains but will not cause significant floodplain encroachment as defined by U.S. Department of Transportation Order 5650.2, *Floodplain Management and Protection*, April 23, 1979. Any changes caused by the Project will be mitigated through design to comply with current flood zone regulations. With mitigation, the Project will not raise base flood elevations.

Groundwater - The Project meets the coordination requirements of Section 1424(e) of the Safe Drinking Water Act, in accordance with the 1984 Sole Source Aquifer Memorandum of Understanding between the EPA and the USDOT (FHWA/EPA 1984). A Water Quality Impact Assessment was reviewed by EPA, and EPA concurred that contamination of the Southern O'ahu Basal Aquifer will not occur (letter dated March 27, 2009, located in Appendix F of the Final EIS).

Environmental Justice

Executive Order 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*, calls on Federal agencies to identify and address disproportionately high and adverse human health or environmental effects of Federal activities on minority and low-income populations. As described in Section 4.7.4 of the Final EIS, no minority or low-income communities consistent with the O'ahuMPO Environmental Justice (EJ) areas were identified to have potential disproportionately high and adverse effects in either the analysis of the Project or as a finding of the public outreach activities. As a result, no additional special measures were required by the USDOT Order on Environmental Justice (USDOT 1997). Because the Banana Patch

community is made up of people of Asian descent, it was identified as an EJ area of concern. Because the Pearl Highlands Station will displace this community, the location of the station and associated facilities was examined under the USDOT Order on Environmental Justice (USDOT 1997). The Final EIS concluded the Project will not result in disproportionately high and adverse impacts to the Banana Patch community.

Finding

On the basis of the determinations made in compliance with relevant provisions of federal law, FTA finds the Project has satisfied the requirements of the National Environmental Policy Act of 1969, the Clean Air Act of 1970, and the U.S. Department of Transportation Act of 1966, all as amended.

_____ _____

Leslie T. Rogers Date
Regional Administrator
Federal Transit Administration, Region IX

Attachments:

Attachment A: Mitigation Monitoring Plan

Attachment B: Section 106 Programmatic Agreement

Attachment C: FTA letter to USFWS Regarding Section 7