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May 21, 2010 RT2/09-299218

Comment [MB1]: Date

Mr. Dennis Callan
Stop Rail Now
1011 Prospect Street, Suite 702
Honolulu, Hawaii 96822

Dear Mr. Callan:

Subject: Honolulu High-Capacity Transit Corridor Project
Comments Received on the Draft Environmental Impact Statement

The U.S. Department of Transportation Federal Transit Administration (FTA) and the City and County of Honolulu Department of Transportation Services (DTS) issued a Draft Environmental Impact Statement (EIS) for the Honolulu High-Capacity Transit Corridor Project. This letter is in response to substantive comments received on the Draft EIS during the comment period, which concluded on February 6, 2009. The Final EIS identifies the Airport Alternative as the Project and is the focus of this document. The selection of the Airport Alternative as the Preferred Alternative was made by the City to comply with the National Environmental Policy Act (NEPA) regulations that state that the Final EIS shall identify the Preferred Alternative (23 CFR § 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 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 selection is described in Chapter 2 of the Final EIS. The Final EIS also includes 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. The following paragraphs address comments regarding the above-referenced submittal:

General Comments

The capital plan for the Project is presented in Section 6.3 of the Final EIS. The capital plan took the economic downturn into account and reduced the anticipated General Excise and Use Tax (GET) surcharge collections to reflect that downturn based on conditions as of the first quarter of fiscal year 2010 using forecasts by the State Council on Revenue. Section 6.6 of the Final EIS also describes risks and uncertainties associated with these funding assumptions,

which include changing economic conditions and the possibility of varying levels of revenue collection and project costs. The City will continue to refine revenue forecasts and cost estimates as the Project proceeds through FTA's New Starts process. The capital plan is a dynamic document that will be updated regularly as conditions warrant.

Capital costs of the Project, including finance charges, are expected to be fully paid for by a combination of FTA Section 5309 New Starts and FTA Section 5307 Funds from the Federal government and revenues from the County General Excise Tax Surcharge levied from 2007 through 2022 on Oahu. These sources of revenue are available only for public transportation purposes.

Regarding the Hawaii Department of Transportation's (HDOT) projects, they are not new projects. They are all contained in the latest Oahu Metropolitan Planning Organization (OahuMPO) Regional Transportation Plan (2008), and are the basis of the No Build Alternative used to evaluate the fixed guideway project as described in Chapter 2 of the Final EIS. The No Build Alternative is used as a baseline against which to compare the build alternative (i.e., fixed guideway), as well as being a stand-alone alternative. It is against this backdrop that the results are presented in the EIS. As discussed in Chapter 3 of the Final EIS, the No Build Alternative does not meet the Purpose and Need of the Project. Based on the Project's analysis, rail is needed in addition to all projects contained in the OahuMPO Plan, which includes all the State Projects.

A travel forecasting model was used to forecast roadway conditions in 2030, both with and without the Project. As described in Chapter 2 of the Final EIS, modeling took into account committed transportation projects anticipated to be operational by 2030, which includes the projects identified in the Highway Modernization Plan put forth by HDOT in 2009.

As shown in Tables 3-9 and 3-10 of the Final EIS, roadway conditions without the fixed guideway system would get worse, despite nearly $3 billion in planned roadway improvements in 2030. However, these tables also show that traffic volumes on the highway system will decrease with the fixed guideway system. As shown in Table 3-14 in the Final EIS, congestion will be worse in 2030 without the Project.

The State of Hawaii's Highway Modernization Plan, dated January 22, 2009, is an accelerated construction schedule for many of the projects listed in Table 2-3 of the Final EIS. These projects were included in the analysis of all alternatives in the Draft EIS, including the No Build Alternative.

The process of analyzing and screening alternatives included the analysis of a Managed Lane Alternative, which is substantially similar to the referenced high-occupancy toll (HOT) alternative. The main difference between the Managed Lane Alternative compared to the HOT alternative proposed in the comment letter is the configuration of ramps. The HOT facility proposed in the comment letter includes more access ramps than the Managed Lane Alternative studied during the Alternatives Analysis phase, which adds to the cost of the Project. As documented in the Alternatives Analysis Report *(DTS 2006b) and explained more fully in Chapter 2 of the Final EIS, two options were considered for the Managed Lane Alternative—a*

Comment [H2]: The alternative includes express bus srvice but not BRT on dedicated row. THIS SHOULD BE STATED THEN.

Comment [MB3]: OUTSTANDING: Provide numbers for both HOT and Managed Lanes alts.

Comment [MB4]: OUTSTANDING: Provide a percentage or rough cost estimate.

Two-direction Option and a Two-lane Reversible Option. This alternative would have provided a two-lane elevated toll facility between Waipahu and Downtown Honolulu, with variable pricing strategies to maintain free-flow speeds for transit and high-occupancy vehicles (HOVs). The Two-direction Option would have served express buses operating in both directions during the entire day. To maintain free-flow speeds in the Two-direction Option, it would have been necessary to charge tolls to manage the number of HOVs using the facility. For the Two-lane Reversible Option, three-person HOVs would be allowed to use the facility for free, while single-occupant and two-person HOVs would have to pay a toll. The Two-lane Reversible Option was found to be the optimal of the two alternatives studied.

The findings are summarized in Chapter 2 of the Final EIS as follows: The Managed Lane Alternative was evaluated for its ability to meet project goals and objectives related to mobility and accessibility, supporting planned growth and economic development, constructability and cost, community and environmental quality, planning consistency and ultimately, to meet the requirements of the FTA New Starts Program. While this alternative would have 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 islandwide vehicle hours of delay would have increased with the Managed Lane Alternative compared to the No Build Alternative, indicating an increase in system-wide congestion (Table 2-2 of the Final EIS).

The Managed Lane Alternative would not have supported planned concentrated future population and employment growth because it would not provide concentrations of transit service that would serve as a nucleus for a more compact and efficient development plan. The Managed Lane Alternative would have provided little transit benefit at a high cost. The cost-per-hour of transit-user benefits for the Managed Lane Alternative would have been two to three times higher than that for the Fixed Guideway Alternative. Similar to the Transportation System Management (TSM) Alternative, the Managed Lane Alternative would not have substantially improved service or access to transit for transit-dependent communities. No dedicated funding sources were identified for the Managed Lane Alternative. Neither the County GET Surcharge imposed by the City Council in 2006 nor the FTA New Starts Program provide funding for Managed Lanes as they do for fixed guideway. Other funding sources are available for roadways, but none are currently identified for a managed lane project in Honolulu. Funding sources are identified for the fixed guideway. Toll revenues from the Managed Lane Alternative would pay for ongoing operations and maintenance while remaining revenues would be used to repay debt incurred to construct the system.

Comment [MB5]: Provide reference to AA, and include where the AA can be found/accessed.

The Managed Lane Alternative would have generated the greatest amount of air pollution, required the greatest amount of energy for transportation use, and would have resulted in the largest number of transportation noise impacts of all the alternatives evaluated. Because the Managed Lane Alternative would have served a shorter portion of the study corridor (approximately 16 miles compared to the 20 miles served by the fixed guideway), it would have resulted in fewer displacements and would have impacted fewer archaeological, cultural, and historic resources than the Fixed Guideway Alternative. The Managed Lane Alternative would not have affected any farmlands. Visually, the elevated structure would have extended a shorter distance, but it would have been more visually intrusive because its elevated structure, with a

Comment [MB6]: Include a reference where this information can be found. AA?

typical width of between 36 and 46 feet, would have been much wider than the Fixed Guideway Alternative.

After the Alternatives Analysis phase was completed, scoping was held to provide the public and agencies the opportunity to comment on March 28th and March 29th, 2007, per 40 C.F.R. Part 1501.7. Several scoping comments were received requesting reconsideration of the Managed Lane Alternative that was considered and rejected during the Alternatives Analysis phase. Because no new information was provided that would have changed the findings of the Alternatives Analysis regarding the Managed Lane Alternative, it was not included in the Draft EIS for further consideration. Specifically, the discussion of BRT in the proposed reconsideration was similar to the bus operation studied in the Alternatives Analysis.

The Final EIS fully and adequately addresses the environmental aspects of the Project. A supplement environmental document will not be completed because all environmental aspects of the project have been addressed in accordance with NEPA requirements. Additionally, no new major study will be completed because there is no new information to support or evidence that a new study would produce different results.

The Draft EIS does not reference a 30-percent decrease in congestion. As shown in Table 3-14 of the Draft EIS, there is approximately a 20-percent reduction in vehicle hours of delay (VHD) when comparing Build Alternatives to the No Build Alternative. (VHD is the time lost in congested conditions compared to the time it would take to travel without congestion.) The travel demand forecasting model has been refined since the Draft EIS to include non-home-based direct demand trips (trips that do not originate at home) during off-peak hours. The air passenger model, which forecasts travel in the corridor related to passengers arriving or departing at Honolulu International Airport, was also updated to reflect current conditions. Table 3-14 in the Final EIS shows an 18-percent reduction in VHD with the Project versus the No Build Alternative. With respect to traffic reductions, the Draft EIS reflects the results of the analysis conducted with the Project compared to the No Build Alternative. The figures have been updated for the Final EIS based on selection of the Airport Alternative and refinements to the travel demand forecasting model (e.g., non-home-based direct-demand trips during off-peak periods, air passenger model). In addition, the air passenger model was updated to reflect current conditions. The updated results continue to show that traffic will decrease with the addition of the Project compared to 2030 No Build conditions. The Final EIS includes the latest information.

Section 1

1–2. These comments provide information and are not related to the environmental analysis of the Project.

3. This comment is not related to the environmental analysis of the Project. As stated in Section 3.3.2 of the Final EIS, "With increasing traffic congestion over the last 20 years, scheduled trip times for bus routes have been lengthened to reflect the additional time each bus trip takes." The implementation of the fixed guideway system will allow for the redistribution of bus service hours to add service to the growing areas of Central, West, and East Oahu.

Comment [cvw7]: Please add a citation to this.

Comment [cvw8]: This is not the correct standard for whether to supplement. Please use the same language as the Slater response on whether or not to do a supplemental document. The Slater response contains the correct standard and cites to the FTA NEPA regulation.

4. This comment is not related to the environmental analysis of the Project. Figure 3-7 in the Final EIS shows that transit travel times will be substantially shorter with the fixed guideway system than with the No Build Alternative.

5. This comment is not related to the environmental analysis of the Project. National trends show increasing transit ridership, and last year (2008) recorded the highest demand for public transportation in 52 years (APTA 2008 Ridership Report). National transit ridership has grown 18 percent over the past 10 years (2007 National Transit Summaries and Trends, National Transit Database). Honolulu transit ridership has grown over the past several years, recovering from three fare increases (July 1, 2001, July 1, 2003, October 1, 2003) and a month-long strike bus strike (FY 2004).

6. This comment is not related to the environmental analysis of the project. As stated previously, Figure 3-7 in the Final EIS shows that transit travel times will be substantially shorter with the fixed guideway system than with the No Build Alternative. Table 3-14 of the Final EIS shows that VHD decreases 18 percent with the Project versus the No Build Alternative.

7. As noted above, national trends show transit ridership increases. Honolulu transit ridership has also increased over the past several years.

8. An analysis of congestion on the highway system is undertaken in the environmental review of the Project and is presented throughout Chapter 3 of the Final EIS. In addition, the relevance of the 2012 compared to 2000 data is unclear. There are other ways to decrease or maintain traffic congestion, including increasing the number of people per vehicle. The fixed guideway project, as currently planned, would carry a minimum of 8,500 people per hour per direction during peak periods, thus reducing traffic congestion as compared to the No Build Alternative. It is unclear what is meant by the "lower table" in the comment letter (no tables are found in the comment letter).

Comment [H9]: His reference to 2000 is unclear. There is no mention of keeping congestion at 2000 levels as this comment would imply. INCLUDE THIS INFORMATION IN A SENT AFTER THE 2012/2000 SENT.

9. Your planned use of terminology is noted.

10. The Final EIS discusses both bus and rail transit. As noted in Section 2.5.6 of the Final EIS, "bus service will be enhanced and the bus network will be modified to coordinate with the fixed guideway system."

11-14. These comments are not related to the environmental analysis of the Project.

15. See response above (Section 1, Response 5) regarding national trends showing increases in transit ridership.

16-17. These comments are not related to the environmental analysis of the Project.

18. This comment is not related to the environmental analysis of the Project. In addition, Houston does have a rail system.

19-21. These comments are not related to the environmental analysis of the Project.

22. A travel demand forecasting model was used to forecast traffic volumes at six screenlines (i.e., virtual lines that cut across the corridor used to measure the performance of the transportation system at that location) in 2030, both with and without the fixed guideway system. As seen in Tables 3-9 and 3-10 in the Final EIS, traffic volumes in 2030 will be reduced with the Project versus with the No Build Alternative. For instance, with the fixed guideway system there is an 11 percent reduction in traffic at the Kalauao screenline in the Koko Head-bound direction during the a.m. peak hour ~~(7 a.m. to 9 a.m.)~~ and a 10 percent reduction in the Ewa-bound direction during the p.m. peak hour when compared to conditions without the fixed guideway.

23. The travel forecasting model uses guidelines established by FTA for all projects seeking federal funds from the New Starts program. According to modeling done for the Project, the fixed guideway system will relieve traffic congestion compared to the No Build Alternative. Table 3-14 in the Final EIS shows an 18 percent reduction in VHD in 2030 with the Project compared to the No Build Alternative. As stated in the previous response, traffic congestion at the Kalauao screenline will improve with the Project compared to No Build conditions. Accordingly, the Project will provide benefits to residents along the Leeward corridor.

24. As stated previously (Section 1, Response 5), rail has reduced traffic congestion within the corridor within which it is built (see Salt Lake City, Dallas, etc.).

25. As noted above (General Comments), a Managed Lane Alternative meeting this general description was fully evaluated in the Alternatives Analysis phase of the Project and was demonstrated to be less effective than a Fixed Guideway Alternative. The HOT facility was not only less effective in meeting the Project's Purpose and Need, but it was also less effective financially because it does not qualify for the GET surcharge funds or Federal New Starts funding. Tolls would also have to be high to pay for the cost of the elevated lanes (approximately $6.60 during the peak period). Tolls would still only generate less than a quarter of the capital funding needed to build the system. This toll rate is comparable to similar systems where tolls are as high as $10.00 during peak times (e.g., Orange County, CA—SR 91 HOT lanes).

26-27. As noted above, the Managed Lane Alternative was fully evaluated in the Alternatives Analysis phase and was demonstrated to be less effective than a Fixed Guideway Alternative. While there are minor differences in the proposal mentioned in the comment compared to the design addressed in the Alternatives Analysis, they do not reflect a substantive departure from the studied concept. Therefore, it has not been considered as a project alternative in the Draft or Final EISs.

28. The Draft and Final EISs do not consider HOT lanes, as those were eliminated for inferior performance compared to the fixed guideway during the Alternatives Analysis process, as discussed in Chapter 2 of the Final EIS. See previous comments under the "General Comments" section of this letter regarding the alternative's inability to effectively meet Purpose and Need and financial performance requirements.

Comment [H10]: The peak hour will vary by facility. It is not appropriate to list a generic time to indicate the peak hour referenced in the response. The concept of a peak hour is generally understood to be the time of highest use on the facility.
IT WOULD BE APPROPRIATE TO IDENTIFY THE PEAK HOUR FOR THE KALAUAO SCREENLINE, THEN, SINCE IT IS IDENTIFIED IN THE EXAMPLE. It is included in other response letters so I would like to include it here.

Comment [MB11]: In another response letter, it was stated that there is no pm peak perioed in HI. Why is one mentioned here?

Comment [cvw12]: Please add a citation to where the Managed Lane Alternative was eliminated. Also discuss whether the comment's proposal would change the transportation benefits associated with the managed lane alternative such that it would be more attractive than what was analyzed in the AA.

Comment [MB13]: OUTSTANDING: 27-What about the variable pricing component? Not addressed.

Comment [cvw14]: Please cite where eliminated.

Comment [MB15]: Was this the technical reason it was dropped? Sounds too subjective.

29. See previous explanations about why HOT lanes were not included in the Draft or Final EISs. While the BRT/HOT alternative would have 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 islandwide VHD would have increased with the Managed Lane Alternative compared to the No Build Alternative, indicating an increase in systemwide congestion (Table 2-2 of the Final EIS); the same result is anticipated for the BRT/HOT alternative.

30. As stated previously, two options were considered for the Managed Lane Alternative—Two-direction and Two-lane Reversible. This alternative "would have provided a two-lane elevated toll facility between Waipahu and Downtown Honolulu, with variable pricing strategies to maintain free-flow speeds for transit and high-occupancy vehicles (HOVs)." The Alternatives Analysis phase found that this alternative had inferior performance compared to the fixed guideway alternative for reasons previously explained (as discussed previously under the "General Comments" section of this letter).

31. The Alternatives Analysis Report indicated that transit reliability would not have been improved except for express bus service operation in the managed lanes. 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 islandwide VHD would have increased with the Managed Lane Alternative compared to the No Build Alternative, indicating an increase in system-wide congestion. As stated in Section 2.5.1 of the Final EIS, the rail system will achieve an average of 30 mph or greater, including dwell times at stations. The managed lane option would allow favorable speeds on the facility itself if free flow conditions could be maintained (such as through imposition of a high enough variable toll), but the alternative suffers at either end and in travel to and from the facility, leading to overall system speeds that are slower than the fixed guideway.

32. The capital plan for the Project is presented in Section 6.3 of the Final EIS, including a description of the amount of funding anticipated from various sources. Section 6.6 of the Final EIS describes risks and uncertainties associated with these funding assumptions. ~~The intent of your comment is unclear. For example,~~To clarify, the reference to first-phase construction segments ~~are~~ is inconsistent with the information in the Final EIS in Chapter 2, and the crossing of the H-1 Freeway at University Avenue is not a part of the Final EIS Project but is a potential future extension, which will be evaluated separately at a later date if the extension is pursued.

Comment [H16]: These are referenced in the response. It's hard to know how to even address this comment as it is unrelated to anything in the project. I BELIEVE WE DISCUSS THE FUNDING ARLIER IN THE LETTER SO THE REFERENCES CAN REMAIN. I TRIED TO 'CLARIFY' THINGS FOR HIM...

33. As stated above, Section 6.3 of the Final EIS describes the anticipated funding sources for the capital cost of the Project. Capital costs of the Project, including finance charges, are expected to be fully paid by a combination of FTA Section 5309 New Starts Funds and FTA Section 5307 Funds from the Federal government and the revenues from the County General Excise Tax (GET) Surcharge levied from 2007 through 2022. As a note regarding cost overruns, the capital cost estimate includes over $1 billion in 2009 dollars in contingencies to account for such events. Section 6.4 of the Final EIS describes the funding sources for ongoing operations and maintenance anticipated for the Project. Operating and maintenance costs will utilize the same funding sources currently used for TheBus—Federal funding, fare revenues, and subsidies from the City's General and Highway Funds.

34. See the previous response regarding costs of the Project.

Comment [MB17]: Provide Section and Comment numbers.

35. The analysis of the HOT facility in Honolulu from the Alternatives Analysis Report shows the cost for the HOT lanes alternative to be $2.6 billion in 2006 dollars (the figure would be higher today because of inflation, however, as the managed lane alternative was examined during the Alternatives Analysis phase conducted in 2006, costs in 2006 dollars are used when discussing the managed lane). As stated in the Transit Task Force Report, a committee was charged with reviewing cost estimates for the two Alternatives involving construction (Managed Lane Alternative and Fixed Guideway Alternative). The report states that "the Task Force agrees with this committee that the Alternatives Analysis' construction cost estimates were fairly and consistently prepared, and that they may be used for both planning and cost comparisons." Information was obtained by the Transit Task Force from HDOT and others familiar with HOT facilities. It is the only estimate to date that addresses Honolulu conditions.

Comment [cvw18]: This is fine.

There is no substantiation of the estimate from the Tampa Bay toll facility being applicable in Honolulu. Regarding the comparison of the Tampa Bay facility, the Transit Task Force report states that "the committee concluded that the projects are sufficiently different (actual costs versus projected costs with contingencies; available, accessible [rights-of-way] vs. construction in actively used highways; no utilities relocation vs. extensive relocations) as to make the comparison unreasonable."

36. HOT Lanes are not eligible for FTA New Starts funding.

37. The Alternatives Analysis Report shows that the estimated cost of HOT Lanes is $2.6 billion (2006 dollars), which would be higher now. As stated in response to Comment 35 (above), this cost has been reviewed by HDOT and others.

38. Comment is missing from your letter.

39. This comment is not related to the environmental analysis of the Project. Rail has reduced traffic congestion within the corridor within which it is built (see Salt Lake City, Dallas, etc.). The travel forecasting model used in the environmental analysis of the Project uses guidelines established by FTA and, according to modeling done for the Project, the fixed guideway system will relieve traffic congestion compared to the No Build Alternative. Table 3-14 in the Final EIS shows an 18-percent reduction in VHD in 2030 with the Project as compared to the No Build Alternative.

40. As discussed above, a Managed Lane Alternative was studied in the Alternatives Analysis phase. This alternative was rejected for the reasons discussed above. Traffic conditions will be worse in 2030 under any circumstances and regardless of whether the fixed guideway, managed lane, or more buses are implemented. With the fixed guideway system, total islandwide congestion (as measured by VHD) would decrease by 18 percent as compared to the No Build Alternative (Table 3-14 in the Final EIS). In addition, traffic volumes were studied at various screenlines in the study corridor. The travel demand forecasting model was used to forecast traffic volumes at these screenlines in 2030, both with and without the Project. Analysis

revealed that traffic volumes at these screenlines would decrease up to 11 percent with the Project during the a.m. peak hour (Table 3-9 in the Final EIS). Accordingly, traffic conditions will be substantially better with the fixed guideway than compared to the No Build Alternative. By contrast, in the Alternatives Analysis, the Managed Lane alternative showed a 1 percent reduction in VHD.

41. The fixed guideway project will provide an alternative to the private automobile.

42. As discussed above, the Managed Lane Alternative was fully evaluated in the Alternatives Analysis phase and demonstrated to be less effective than a Fixed Guideway Alternative for reasons previously stated in this letter.

43. As noted above, a Managed Lane Alternative meeting this general description was fully evaluated in the Alternatives Analysis phase and demonstrated to be less effective than a Fixed Guideway Alternative. The HOT facility was not only less effective in meeting the Project's Purpose and Need, but it was also financially unrealistic because it does not qualify for the GET Surcharge funds or Federal New Starts funding. Tolls would also have to be high to pay for the cost of the elevated lanes at $6.60 during the peak period. Tolls would still only generate less than a quarter of the capital funding needed to build the system. This toll rate is comparable to similar systems where tolls are as high as $10.00 during peak times (e.g., Orange County, CA—SR 91 HOT lanes).

Section 2

1-3. These comments are not related to the environmental analysis of the Project. These options may have application in the right time and the right place in conjunction with the fixed guideway project. The Project does not preclude these activities from occurring; however, they are not within the control of the City.

4-5. This comment is not related to the environmental analysis of the Project. As noted above, regarding school hours, this option may have application in the right time and the right place in conjunction with the fixed guideway project. The Project does not preclude these activities from occurring; however, they not within the control of the City.

6. The State of Hawaii's Highway Modernization Plan, dated January 22, 2009, includes the $600 million Nimitz Viaduct project. It would complement the transit project and is included in the modeling conducted for both the No Build and Project Alternatives. As presented in the Highway Modernization Plan, the Nimitz Viaduct project does not include reversible lanes.

7. This comment is not related to the environmental analysis of the Project. It is not likely that increasing response times to accidents would significantly impact traffic congestion; however, the Project does not preclude other entities from improving accident response times.

Comment [MB19]: Awkward.

8. This comment is not related to the environmental analysis of the Project. This option may have application in the right time and the right place in addition to the fixed guideway

project. The Project does not preclude it from happening. This alternative is not within the control of the City.

9. This comment is not related to the environmental analysis of the Project. However, the Project does not preclude pay-as-you-go insurance from happening.

10. This comment is not related to the environmental analysis of the Project. The Project does not preclude this from happening.

11. This comment is not related to the environmental analysis of the Project. The City has a program to modernize the traffic signal system. It is in addition to and independent of the Project.

12-15. These comments are not related to the environmental analysis of the Project. These options may have application in the right time and the right place in addition to the fixed guideway project. The Project does not preclude it from occurring.

16. This comment is not related to the environmental analysis of the Project. This option may have application in the right time and the right place in addition to the fixed guideway project. The Project does not preclude this from happening. As mentioned in Section 4.19.2 of the Final EIS, TOD is expected to occur in project station areas as an indirect effect of the Project. In March 2009, the City Council approved and the Mayor of Honolulu signed Bill 10 (Ordinance 09-4), which defines the City's approach to TOD around fixed guideway stations. Zoning regulations, which will be developed in late 2009or 2010, will address parking standards, new density provisions, open spaces, and affordable housing. While the Project is coordinating with
City and State agencies to encourage development of enhanced pedestrian and bicycle facilities and other land use changes near the stations, the actual construction of such facilities and zoning changes are outside the scope of the Project. For reference, the Ewa Development Plan provides a thorough overview of the concept for future development in the Ewa Plain.

Comment [MB20]: Either they were developed in late 2009 or they will be developed in 2010. Please update.

17-30. These comments are not related to the environmental analysis of the Project. However, the Project does not preclude these activities from happening.

Section 3

1. A variety of bus-related alternatives were examined during the Alternatives Analysis phase. BRT was also studied in the Primary Corridor Study in 2002. The alternatives in these analyses covered a variety of options, including increasing frequency of operations on an elevated bus facility. The Alternatives Analysis revealed that the fixed guideway system was more effective at reducing congestion on the existing roadways (11 percent reduction in VHD in AA) than an enhanced bus transit system (2 percent reduction in VHD).

2. The information on the South Nevada Metropolitan Area Express (MAX) system has been noted. The Alternatives Analysis showed that transit reliability would not have been improved except for express bus service operation while in the managed lanes. While this

alternative would have slightly reduced congestion on parallel highways, system-wide traffic congestion (1 percent reduction in VHD) would have been similar to the No Build Alternative as a result of increased traffic on arterials trying to access the facility. Total islandwide VHD would have increased with the Managed Lane Alternative as compared to the No Build Alternative, indicating an increase in systemwide congestion as shown in Table 2-2 in the Final EIS.

3. The information on the Los Angeles Metro Rapid system has been noted. The Metro Rapid system relies primarily on non-exclusive right-of-way on existing roadways. As discussed in Section 3.4.2 of the Final EIS, there are no available options in Honolulu for improved bus service on existing roadways that are not already subject to high levels of congestion during peak travel times, which hinder reliability and level of service. The development of an exclusive right-of-way option for buses, such as the Orange Line in LA, was evaluated as part of the Managed Lane Alternative in the Alternatives Analysis phase (please see the response provided under the "General Comments" section in this response letter).

4. The information on the Los Angeles Orange Line system has been noted. Please see the previous response (Section 3, Response 3).

5. Information about TOD development has been noted. As stated in Section 4.19.2 of the Final EIS, TOD development could occur near station areas as an indirect effect of the Project. In March 2009, the City Council approved and the Mayor of Honolulu signed Bill 10 (Ordinance 09-4), which defines the City's approach to TOD around fixed guideway stations. Future zoning regulations will address parking standards, new density provisions, open spaces, and affordable housing. Financial incentives could include public-private partnerships, real property tax credits, and infrastructure financing. While the Project team is coordinating with City and State agencies to encourage development of enhanced pedestrian and bicycle facilities and other land use changes near the stations, the actual construction of such facilities and zoning changes are beyond the scope of the Project. The TOD effort will encourage public input into the design of TOD neighborhood plans to reflect unique community identities. TOD planning would occur before the fixed guideway stations are constructed.

6. Information about the NJ Transit Village Initiative and Boston's TOD policies on parking, transportation mitigation, and security has been noted. A Maintenance of Traffic (MOT) and a Transit Mitigation Plan (TMP) will identify measures to mitigate temporary construction-related effects on transportation. Additionally, the MOT Plan will address effects on streets and highways, transit, businesses and residences, pedestrians and bicyclists, and parking as mentioned in Section 3.5.7 of the Final EIS. A Safety and Security Management Plan will be developed in accordance with FTA requirements to mitigate potential effects on community services as mentioned in Section 4.5.2 of the Final EIS. In general, zoning changes are determined by the local government (e.g., Ordinance 09-4).

7. This comment is not related to the environmental analysis of the Project.

8. Information regarding Ottawa and Pittsburgh BRT TOD has been noted. This comment is not related to the environmental analysis of the Project.

9. This comment is not related to the environmental analysis of the Project. Information on the success of TOD developments worldwide has been noted. For more information about TOD as it relates to the Project, see Section 3, Response 5 (above).

10. This comment is not related to the environmental analysis of the Project. The information on the relationship between connecting TOD to transit has been noted.

Section 4

1. This comment is not related to the environmental analysis of the Project. The information on Mark Muirello and the New York Exclusive Bus Lane (XBL) has been noted.

2-7. These comments are not related to the environmental analysis of the Project. The information on New York Port Authority bridges and tunnels has been noted.

8. This comment is not related to the environmental analysis of the Project. The information on operational changes of the NY XBL has been noted.

9-10. These comments are not related to the environmental analysis of the Project. The information on planning activities, including their alternatives, and partnerships for the New York area has been noted.

11. This comment is not related to the environmental analysis of the Project. The information on the pricing pilot program has been noted.

12. This comment is not related to the environmental analysis of the Project. The information on the Lincoln Tunnel HOT lane study has been noted.

13. This comment is not related to the environmental analysis of the Project. The information on the study of the NY Commercial vehicle priority has been noted.

14-18. These comments are not related to the environmental analysis of the Project. The information on the evolution of the Houston contraflow and HOV lanes has been noted.

19-20. These comments are not related to the environmental analysis of the Project. Information on Houston's HOV system connection to the Metro Rail system, parking capacity, and trips has been noted.

21-27. This comment is not related to the environmental analysis of the Project. Information on studies pertaining to BRT in Maryland has been noted. Please note the Red Line Project in Maryland is a Light Rail Transit project, not a BRT project.

28. This comment is not related to the environmental analysis of the Project. Information on the Corridor Cities Transitway in Maryland has been noted.

29. This comment is not related to the environmental analysis of the Project. Information on the Bi-County Transitway project has been noted.

30. This comment is not related to the environmental analysis of the Project. Information on the issues with BRT projects has been noted.

31. This comment is not related to the environmental analysis of the Project. Information on Robert Poole and virtual exclusive busways via Managed Lanes and pricing has been noted.

32. This comment is not related to the environmental analysis of the Project. Information on value pricing has been noted.

33-36. These comments are not related to the environmental analysis of the Project. Information about the history of HOV lanes, including carpool and vanpool information, has been noted.

37. This comment is not related to the environmental analysis of the Project. Information about the sustainability of BRT in HOV lanes has been noted.

38. Information about the I-15 HOT lanes and the 91 Express lanes has been noted. The concept of HOT was considered as part of the Alternatives Analysis phase but did not perform as well as the fixed guideway in terms of travel time or delay as noted in Chapter 2 of the Final EIS. The Alternatives Analysis does not dismiss the validity of HOT lanes in the appropriate application; however, they did not perform as well as the fixed guideway for this project.

39-40. See the previous response (Section 4, Response 38). Information about virtual exclusive busway (VEB) concepts, capacity, pricing, cost, and individual opinion to be recognized by the FTA as a viable alternative has been noted.

41. See the previous response (Section 4, Response 38). Information about VEB in Houston has been noted.

42. See the previous responses (Section 4, Response 38). Information about VEB concepts, capacity, pricing, cost, and individual opinion to be recognized by the FTA as a viable alternative has been noted.

43. See the previous responses (Section 4, Response 38). Information about VEB concepts and their cost has been noted.

44. It is agreed that managed lanes are being considered in a number of locations in the U.S. and that policy changes could make them acceptable to more applications through various forms of funding. As stated earlier, the validity of managed lanes is not questioned as an effective transportation alternative, but it does not perform as well as the fixed guideway in Honolulu based on the Alternatives Analysis Report findings and the information contained in Chapter 2 of the Final EIS.

Comment [MB21]: Are VEB eligible for NS funding? Please state.

Comment [H22R21]: Don't know. Can the FTA please provide this answer?

45. This comment is not related to the environmental analysis of the Project.

Section 5

1. Project goals include supporting planned development. In addition to the number of trips served, which is related to the population density, planning also considers the length of trips served. For instance, there is a better opportunity for travel time savings on longer the trips, which increases the potential benefit received from improvements to the system. Potential Transit Markets are discussed in Section 1.6 of the Final EIS, which provides a summary of population projections, locations of employment growth, current and future transit dependent households, and resident and tourist transit markets.

2. As indicated in Section 3.4.2 of the Final EIS, overall access to public transit would be enhanced with the Project. More than 25 percent of the population lives within one half mile of a fixed guideway station. Substantial Project ridership will be provided by local bus and people walking to the station. Bus and walk access to stations will account for "approximately 90 percent of total trips in the a.m. peak period" (Final EIS, Section 3.4.2, Access to Fixed Guideway Stations). Access to stations will be enhanced by accommodating bicyclists and pedestrians. Several stations will be located near existing or planned bicycle facilities. In addition, bus access will be enhanced to coordinate with the fixed guideway system. Lastly, park-and-ride facilities will be provided at stations with the highest demand for drive-to-transit access.

Comment [H23]: This information is only provided for Communities of Concern in the EIS for which it is 36%. This section focuses on the combination of bus and walk access.

Comment [MB24]: The H22 comment is unclear, re: 36%.

3. These comments are not related to the environmental analysis of the Project.

4. Ordinance 09-4 to establish a TOD program for the City and County of Honolulu provides for the development of the close knit communities mentioned in the comment. The Project further enhances accessibility within and among those communities.

5. With the Project, as stated in Chapter 3 of the Final EIS, the rate of transfers will be higher than under the No Build Alternative due to proposed changes in local bus service to maximize access to the fixed guideway system. However, because of the high frequency of the fixed guideway service (e.g., three-minute headways between trains during peak periods), riders transferring from buses to the fixed guideway will experience minimal wait times. Riders transferring from the guideway service to buses will benefit from improved frequencies on existing bus routes serving stations. Also, several new routes with high frequencies will be provided as feeders to the guideway system. Since these routes will primarily operate in residential areas, they will provide greater reliability versus routes operating along congested arterials. Using these systems in the proposed complementary fashion, ridership forecasts are 116,000 riders daily on the Project as noted in Chapters 2 and 3 of the Final EIS. This is higher than any of the options evaluated in the Alternatives Analysis phase or in the Draft EIS.

Comment [MB25]: Other response letters use "trips." Choose one term and stick with it.

6. Chapter 3 of the Final EIS states that adding substantial passenger capacity with more buses is not feasible in some locations along the system because of roadway capacity constraints. Choke points occur in Downtown Honolulu during the a.m. peak period ~~(7 a.m. to 9 a.m.)~~, especially at the merger of North Beretania, North King, and Liliha Streets and Dillingham

Comment [H26]: Same note as before
CAN WE NOTE THE PEAK HOURS FOR DOWNTOWN HONOLULU, SPECIFICALLY?

Boulevard and along Hotel Street. King Street has been used to introduce new service in recent years due to the capacity limitation of Hotel Street; however, choke points occur at the Chinatown bus stops and at the Punchbowl Street and King Street stops. Buses often must wait to move into an open and safe boarding position. Continuing to add additional service to King Street without physical improvements would add to the gridlock in this corridor, deteriorate transit service, and complicate pedestrian and traffic safety issues. In the p.m. peak period, choke points occur along Beretania Street, Hotel Street, Nimitz Highway, and Ala Moana Boulevard in the Downtown area.

Comment [MB27]: Another letter comment from project team stated no pm peak is used in HI. Please revise if appropriate.

Several routes, including CountryExpress! Routes C, D, and E, are projected to be overloaded in 2030. Increasing frequency would require headways of five minutes or less. Further, the Downtown street network cannot support the number of buses that would be required to meet projected demand. These system capacity limitations are a major obstacle to an effective addition of bus service in the corridor. The Alternatives Analysis Report showed that an enhancement to the bus system would provide minimal benefit because it is subject to the same congestion impediments that already exist on the highway system.

7-8. These comments are not related to the environmental analysis of the Project. The improvements you have proposed could be part of a comprehensive program of transportation improvements. They offer additional benefit, but do not replace the need for the fixed guideway.

9. This comment is not related to the environmental analysis of the Project. The Project provides the opportunity for the development of TOD and the support of the City's land use plans to grow in a manageable way, which is expected as an indirect effect of the Project.

Comment [MB28]: I recommend stating the P&N of the project, too.

10-12. These comments are not related to the environmental analysis of the Project. Please see previous responses regarding buses, HOT lanes, and TOD.

13. As noted in Chapter 2 of the Final EIS, many other alternative approaches were evaluated in the Alternatives Analysis phase and rejected because they do not offer the capacity and other benefits of the elevated rail system proposed for the City of Honolulu.

Section 6

1. The island's unique visual character and scenic beauty were considered in the visual and aesthetic analysis presented in Section 4.8 of the Final EIS. The Project will be set in an urban context where visual change is expected and differences in scales of structures are typical. The following measures will be included with the Project to minimize negative visual effects and enhance the visual and aesthetic opportunities that it creates:

- *Develop and apply design guidelines that will establish a consistent design framework for the Project with consideration of local context.*
- *Coordinate the project design with City's TOD program within the Department of Planning and Permitting.*

- *Consult with the communities surrounding each station for input on station design elements.*

- *Consider specific sites for landscaping and trees during the final design phase when plans for new plantings will be prepared by a landscape architect. Landscape and streetscape improvements will serve to mitigate potential visual impacts.*

It should also be noted that the Project will provide users, including tourists, with expansive views from several portions of the corridor by elevating riders above highway traffic, street trees, and low structures adjacent to the alignment. In Section 4.8.3 of the Final EIS under the heading Design Principals and Mitigation, specific environmental, architecture and landscape design criteria are listed (e.g., textured guideway or columns, tall plantings where it can screen features of the project, control of lighting to prevent intrusion into neighborhoods, etc., that will help minimize visual effects of the Project.

2. The highways will carry more vehicles in 2030 under any circumstances and regardless of which solution is applied. 2005 traffic volume data for the H-1 Freeway reports 10,140 vehicles per hour (vph) at the Kalauao screenline in the Koko Head-bound direction during the a.m. peak hour. This number is predicted to increase to 13,160 vph under 2030 No Build conditions; however, this number is lower with the fixed guideway (12,190 vph). The Alternatives Analysis Report showed that reduction in daily vehicles trips was higher for the fixed guideway (48,000) than for the managed lanes (14,900). Accordingly, traffic conditions will be better with the fixed guideway than any of the other potential solutions studied, including managed lanes and additional bus service.

3. Screened alternatives included a No Build Alternative, a Transportation System Management Alternative (TSM) (enhanced bus service), and a number of Build Alternatives. The comparison of alternatives presented in the Alternatives Analysis Report concluded that the TSM Alternative would provide little benefit at a relatively low cost. A brief description of the TSM Alternative is provided in Section 2.1.2 of the Draft EIS. The comment makes the assumption that because they are not bound by a guideway, buses will travel from origin to destination. That is typically not the case as most long trips require a transfer to connect the two ends of a trip. The exception is express bus service that can take a person who lives near a bus stop directly to his/her destination. The fixed guideway offers similar connections, but at a higher level of service.

Comment [MB29]: I think his comment is regarding Express bus service (comment header is "Express").

4. Based on the detailed operations modeling completed for the Project, which uses a speed of travel between stations consistent with what the design of the guideway can safely support and which includes the time of acceleration and deceleration, the train will travel from one end of the line to the other in 42 minutes, including stops at all stations. That is about 30 mph on average and can be delivered regardless of the time of day or the conditions on the highways. As shown in Section 2.2.2 of the Final EIS, transit reliability would not have been improved in any of the other options evaluated in the Alternatives Analysis phase or the Draft EIS except for express bus service operation in the managed lanes during the time the bus is actually within the lanes. While this alternative would have slightly reduced congestion on parallel

highways, systemwide traffic congestion would have been similar to the No Build Alternative as a result of increased traffic on arterials trying to access the facility. The TSM Alternative would have generated fewer hours of transit-user benefits than either the Managed Lane or Fixed Guideway Alternative. Since most buses would still operate in mixed traffic, the TSM Alternative would have done little to improve corridor mobility and travel reliability. The Alternatives Analysis further showed that the annualized cost per rider compared to the TSM Alternative was $102.74 for the managed lane option and $22.75 for the fixed guideway.

5. With the Project, as stated in Chapter 3 of the Final EIS, the rate of transfers will be higher than under the No Build Alternative due to proposed changes in local bus service to maximize access to the fixed guideway system. However, because of the high frequency of the fixed guideway service (three-minute headways between trains during peak periods), riders transferring from buses to the fixed guideway will experience minimal wait times. Riders transferring from the guideway service to buses will benefit from improved frequencies on existing bus routes serving stations. Also, several new routes with high frequencies will be provided as feeders to the guideway system. Since these routes will primarily operate in residential areas, they will provide greater reliability versus routes operating along congested arterials. The travel demand forecasting model includes a time penalty for transfers. With these characteristics in place, the transit system with the Project would still have ridership levels 44 percent higher than the No Build Alternative (i.e., continuation of present practices regarding bus service).

6. The highways will carry more vehicles in 2030 under any circumstances and regardless of which solution is applied, though the fixed guideway will offset those numbers. Traffic volume data for the H-1 Freeway reports 10,960 vph at the Kalauao screenline in the Koko Head-bound direction during the a.m. peak hour. This number is predicted to increase to 18,049 vph under 2030 No Build conditions; however, this number is lower with the fixed guideway (17,209 vph). Accordingly, traffic conditions will be better with the fixed guideway than any of the other potential solutions studied, including managed lanes (18,419 vph) and additional bus service (17,897 vph). In addition, the Alternatives Analysis did not show an improvement in traffic congestion on the H-1 Freeway with the Managed Lane Alternative compared to the No Build Alternative as evidenced in the previously mentioned reductions in vehicle hours of delay which drop by 18 percent for the fixed guideway compared to 1 percent for the Managed Lane Alternative.

7. This analysis was included in the evaluation of the Managed Lane Alternative in the Alternatives Analysis. It accommodated toll-free travel for buses and HOVs and a toll for single-occupant vehicles. However, this alternative was not selected. The proposed fixed guideway system will not share space with other vehicles due to safety concerns.

The amount of service provided on the fixed guideway will be scaled to match the demand. If the service attracts fewer riders than expected, then less service may be provided, by adjusting headways or train length, thereby resulting in lower operating and maintenance costs than currently projected. There is no plan to offer free ridership on the fixed guideway system.

8. As discussed previously in Section 3, Comment 1, adding substantial passenger capacity with more buses is not feasible in various locations along the system because of roadway capacity constraints, as shown in Section 3.4.2 of the Final EIS.

9. Overall system reliability, considering all factors, for a fully grade-separated transit system is substantially greater than for any system operating in mixed-flow conditions. In Honolulu, there is no practical difference between the proposed rail system and TheBus regarding labor considerations. The same is true for the Project or any other system, such as the Managed Lane Alternative. The comment regarding non-bid, single source-source contract is inaccurate. The City adheres to strict procurement rules that encourage bidding by as many firms as possible.

10. There is no indication that damage to a fixed guideway would be more difficult to repair than an elevated roadway. The chance of a transit vehicle being stopped by a disabled vehicle is greater in any form of mixed traffic flow, such as managed lanes, than in an exclusive right-of-way carrying only routinely maintained rail vehicles.

11. Section 6.3 of the Final EIS describes the anticipated financial resources needed to pay for the capital cost of the Project, including finance charges. Capital costs are expected to be fully paid for by a combination of FTA Section 5309 New Starts and FTA Section 5307 Funds from the Federal government and revenues from the County General Excise Tax Surcharge levied from 2007 through 2022 on Oahu. The Managed Lane Alternative cost estimate was $2.6 billion in 2006 dollars. It provides less benefit per dollar spent than the Project (the annualized additional cost per rider is $103 for managed lane and $22.75 for fixed guideway compared to TSM) as indicated in the Alternative Analysis and in Chapter 2 of the Final EIS.

As stated in Section 4.11.3 of the Final EIS, the Project is anticipated to reduce daily transportation energy demand as expressed in BTUs by approximately 3 percent compared to the No Build Alternative. (The energy demand compares the use of energy from gasoline or electricity in common terms.) The Project will consume approximately 1 to 2 percent of the total projected electricity generated on Oahu in 2030. According to the Hawaiian Electric Company (HECO), the planned electricity generation capacity on Oahu will be sufficient to support the transit system, but the electricity distribution system will require various upgrades to support the system. HECO is moving toward renewable energy generation. As that happens, the fixed guideway will also benefit from such new sources of energy.

Comment [cvw30]: Megan suggested that another letter makes the statement that this cannot be quantified. The letters should be consistent, so it should not say in another letter that this cannot be quantified if it has been. Another issue, though. This omits construction energy usage. That point needs to be made clear here and in Chapter 4 of the EIS where it discusses energy. The EIS should note in 4.11.3 exactly where construction energy usage is detailed, as well as the fact that combining construction energy usage and daily transportation energy demand for the study timeframe (until 2030) would mean more energy usage for the Project than for the No Build.

12. This comment is not related to the environmental analysis of the Project. Information about the quality of buses has been noted. As shown in Figure 3-7 of the Final EIS, transit travel with the Project will be substantially faster than transit travel under No Build conditions. This travel time includes transfers. As stated in Section 3.4.2, operation of the fixed guideway in exclusive right-of-way will improve convenience. For riders who stand, the guideway service will also provide increased safety (e.g., ease of acceleration/deceleration, low floor access, etc.).

13. The EIS does not address tolling because the Project does not include any tolled facilities. Tolls were considered during the Alternatives Analysis phase for the Managed Lane Alternative. Tolls of $6.60 during the peak period were used and able to fund only 25 percent of

the capital cost of the elevated lane project. In other places, such as Orange County, California, the SR-91 tolls rise to $10 during the peak times of the week. Similar costs are forecast for the HOT lanes on the Dulles Expressway. Such high tolls were anticipated to be prohibitive for Honolulu users and would have impaired the project's ability to meet Purpose and Need regarding equitable transportation.

14. Implementation of the Managed Lane Alternative would have resulted in increased automobile use on Oahu relative to all other alternatives evaluated in the Alternatives Analysis phase (for more information, see Table 6-3 of the Alternatives Analysis).

15. Project goals include supporting planned development. The objective of this goal is to avoid the dispersal of development which will lead to more sprawl in parts of the island unable to support it. In addition to the number of trips served, which is related to the population density, planning of the system considers the length of trips served. A fixed guideway system has the advantage of providing a permanent mode of transportation, which is necessary to support planned development. This allows for longer term planning without the concern that the system can change easily over time, which could be the case with a bus network. The Project will help shape future development. Jobs and housing are more likely to locate closer to each other with the Project based on the experience in all other rail projects over the past 20 years (e.g., Portland, OR, Seattle, WA, Houston, TX, etc).

Comment [MB31]: Mention the benefit of having a fixed system as opposed to one that can change frequently?

The Project has developed plans to prevent safety and security problems at stations and will provide police staffing at stations to support those plans. The stations are also being designed according to the precepts of Crime Prevention Through Environmental Design (CPTED) which ensures that spaces are visible, open, well-lit and observable to minimize crime. Ridership forecasts, on the other hand, are made without the benefit of speculation about what type of land uses might locate near transit stations. The FTA only allows approved development or imminent plans to be considered in planning the system.

16. The Final EIS does not consider HOT lanes, as those were eliminated during the Alternatives Analysis process, as discussed in Chapter 2 of the Final EIS. Costs for the Managed Lanes Alternative in the Alternatives Analysis were developed using the same principles, procedures and unit costs used for the fixed guideway (see X in the Final EIS). The costs were furthered reviewed and agreed to by HDOT.

17. The Managed Lane Alternative was fully evaluated in the Alternatives Analysis phase and demonstrated to be less effective than a Fixed Guideway Alternative. The engineering cost estimate for a two-lane reversible managed lane facility, which was calculated following the same rigorous cost estimating process used for the Fixed Guideway Alternatives, was $2.6 billion in 2006 dollars. The zipper lane was eliminated in evaluation of the reversible facility because with the additional lanes, the demand and capacity would be better balanced without the zipper lane. Implementation of the zipper lane results in the loss of two lanes of capacity in the reverse direction. By 2030, the directional transportation demand will be more balanced than it is today. Eliminating the zipper lane, while evaluating the reversible Managed Lane Alternative, provided the greatest benefit to modeled freeway users by increasing capacity in both directions. Access ramps were provided at several locations. Park-and-ride facilities and bus stops were included

to maximize transit use, providing the alternative the greatest opportunity to generate transit user benefits.

The City Council's Transit Advisory Task Force, which reviewed the Alternatives Analysis, concluded in their report of December 14, 2006, that the assessment of each alternative was "fair and accurate" and that capital cost estimates were compiled using the same methodology and unit cost and that the construction cost estimates were fairly and consistently prepared.

The Managed Lane Alternative was evaluated in the Alternatives Analysis and demonstrated to be less effective than a Fixed Guideway Alternative. The findings are summarized in Chapter 2 of the Final EIS as follows:

The Managed Lane Alternative was evaluated for its ability to meet project goals and objectives related to mobility and accessibility, supporting planned growth and economic development, constructability and cost, community and environmental quality, and planning consistency. VMT would have increased compared to any of the other alternatives. While this alternative would have 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 islandwide VHD would have increased with the Two-lane Reversible Option as 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. The Managed Lane Alternative would not have supported planned concentrated future population and employment growth because it would not provide concentrations of transit service that would serve as a nucleus for TOD. The Managed Lane Alternative would have provided little transit benefit at a high cost. The cost-per-hour of transit-user benefits for the Managed Lane Alternative would have been two to three times higher than that for the Fixed Guideway Alternative. Similar to the TSM Alternative, the Managed Lane Alternative would not have substantially improved service or access to transit for transit-dependent communities.

All meetings and materials supporting meetings were prepared according to the practices required by NEPA and the FTA. The objective of meetings was to obtain input on the Project and shape the project to be compatible with the community's needs. The information contained in the Final EIS was added or modified as a result of responses from the meetings and comments shared by the general public.

Section 7

1. Adding buses and elevated HOT Lanes were evaluated in the Alternatives Analysis phase and eliminated because they did not perform as well as the fixed guideway, as described in Chapter 2 of the Final EIS. In addition, riders will be able to access the fixed guideway system by all the modes listed in this comment.

2. Adding substantial passenger capacity with more buses, even larger buses, is not feasible in some locations along the system because of roadway capacity constraints as shown in Section 3.4.2 of the Final EIS. Even with the fixed guideway, buses will continue to carry the

largest portion of transit users (about 78 percent). The difference is TheBus will be operated in support of the fixed guideway and that intermodal linkage provides a more efficient trip. Bicycles will be accommodated on the rail vehicles. A policy is in development regarding bicycle accommodation on rail vehicles. The primary focus will be on ensuring that bicycles can be safely carried on vehicles. This may require consideration of passenger loads during heavy travel periods on the trains to make sure riders are not displaced by bicycles.

3. As mentioned in Chapter 2 of the Final EIS, transit reliability would not have been improved except for express bus service operation in the managed lanes. While the Managed Lanes 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. Transit travel times for the Project compared to Existing Conditions and the No Build Alternative are shown in Figure 3-7, and travel speeds in Table 3-15 of the Final EIS. In all cases, the transit performance is improved with the Project.

4. As shown in Chapter 2 of the Final EIS, even using a managed lane for part of the trip, most buses still operate primarily in mixed traffic. That results in little improvement in corridor mobility and travel reliability even though the portion in the special lanes improves. Buses can travel at reasonable speeds in the special lanes but still may need to negotiate congested access points which obviate much of the benefit of the concept. This prevents the buses from achieving the travel time identified in the comment.

5. As noted in Chapter 2 of the Final EIS, adding buses and HOT lanes were studied in the Alternatives Analysis phase and eliminated because those options did not perform as well as the fixed guideway, which is the subject of the Final EIS.

6. With the Project, as stated previously (see Section 5, Response 5), the rate of transfers will be higher than under the No Build Alternative due to proposed changes in local bus service to maximize access to the fixed guideway system. However, because of the high frequency of the fixed guideway service (three-minute headways between trains during peak periods), riders transferring from buses to the fixed guideway will experience minimal wait times. Riders transferring from the guideway service to buses will benefit from improved frequencies on existing bus routes serving stations. Also, several new routes with high frequencies will be provided as feeders to the guideway system. Since these routes will primarily operate in residential areas, they will provide greater reliability versus routes operating along congested arterials.

The travel demand forecasting model includes a time penalty for transfers. With these characteristics in place, the transit system with the Project will still have ridership levels 44 percent higher than the No Build Alternative due to the fixed guideway, feeder bus routes, and TheBus routes. In addition, as stated in Section 1.2 of the Final EIS, 63 percent of Oahu population and 80 percent of employment are located within the study corridor. By 2030, these distributions will increase to 69 percent and 83 percent, respectively. Lastly, the fixed guideway system provides park-and-ride lots at the stations with the highest projected drive-to-transit demand. While people typically try to minimize transfers on any trip, the more fundamental criterion for making a trip decision is how long the trip takes. Rail will offer people a shorter

overall trip time compared to other options even with the transfers, as noted in Section 3.4.2 of the Final EIS.

7. As stated in response to a previous comment (Section 5, Response 5), those transferring to the rail from TheBus will experience minimal wait times. Riders transferring from the guideway service to buses will benefit from improved frequencies on bus routes serving stations where the shorter routing of many bus lines in the vicinity of stations will allow for shorter headways. As stated in Chapter 3 of the Final EIS, all stations will be equipped with escalators and elevators. Stations will also have covered waiting areas.

8. As stated in Response 33-36 under Section 4, the Alternatives Analysis Report showed the cost of the Managed Lane Alternative to be $2.6 billion (vetted by HDOT and other experts familiar with Hawaii's building conditions and requirements), compared to the fixed guideway at $3.5 billion, and had little benefit to users compared to the fixed guideway. The Tampa Bay experience is not typical and could not be duplicated in Honolulu. There are many differences between the two locations that need to be considered (e.g., the Tampa Bay project required almost no rights-of-way to be acquired; the Tampa Bay project did not need to relocate major utilities along the corridor; the Tampa Bay project did not need to span major facilities such as freeway; and finally, construction costs in Tampa Bay are substantially lower than in Honolulu).

9. This comment is not related to the environmental analysis of the Project. Information about other cities building HOT lanes and population numbers has been noted. Recognizing each city is unique, no other single city has been used as a model for Honolulu in developing the characteristics of the rail system.

10. The Alternatives Analysis phase evaluated an expanded bus system (TSM Alternative) and showed it did not perform in a satisfactory manner compared to the fixed guideway. This is discussed in Chapter 2 of the Final EIS. Ridership for the TSM Alternative increases to 7 percent over the No Build Alternative compared to 38 percent for the Project over the No Build. As stated previously, the amount of service provided will be scaled to generally match the demand.

11. This comment is not related to the environmental analysis of the Project. Prior BRT planning programs, such as addressed in the Primary Corridor Project, are not part of the current Project or EIS.

12. As stated previously, the Project will consume 1 to 2 percent of the total projected electricity generated on Oahu in 2030. The Final EIS indicates that the Project will reduce energy consumption by about 2,000 MBTUs over the No Build. This represents about 15,000 gallons of fuel saved per day. Alternative energy sources, such as photo-voltaic cells, can be built into the rail system as the development of alternative energy sources continues. The Project will still rely on HECO for energy, but the planned electricity generation capacity on Oahu will be sufficient to support the transit system.

13. As presented in the Alternatives Analysis Report and summarized in Chapter 2 of the Final EIS, the cost for a two-lane reversible managed lane facility is $2.6 billion in 2006 dollars. The fixed guideway alternatives were calculated following the same cost estimating process. Toll revenue would pay for less than 25 percent of the cost, based on a $6.60 toll. The construction of numerous off-ramps and parking facilities would require acquisition of property and displacement of current businesses and residents, all of which are included in cost estimates, when applicable.

14. The Project consists of the construction and implementation of rail transit service (analyzed in the Final EIS). As mentioned in Section 4.19.2 of the Final EIS, TOD is anticipated in project station areas as an indirect effect of the Project. The increased mobility and accessibility that the Project may provide will also increase the desirability and value of land near the stations, thereby attracting new real estate investment (in the form of TOD). Planning and zoning around station areas is the responsibility of the City's Department of Planning and Permitting in compliance with the City's TOD Ordinance 09-4.

15. The Project provides a variety of ways to access the fixed guideway and does not account for the possibility of TOD in the forecasts of ridership. If riders live nearby, they can walk or bike, and if they live further away, they can drive and park or take the bus. Bicycle/pedestrian facilities, as well as park-and-ride facilities are included in the Project. Chapter 3 of the Final EIS details ridership characteristics and system usage on a station-by-station basis, which shows ridership is not impeded by the planned station locations.

Section 8

1. The Managed Lane Alternative was evaluated in the Alternatives Analysis phase and demonstrated to be less effective than a Fixed Guideway Alternative. The findings are summarized in Chapter 2 of the Final EIS.

2. Regarding "main myths," in the case of the Honolulu system, rail performs better overall in the measures listed, including construction costs, if the bus system requires that a new guideway be built. The Alternatives Analysis phase compared an expansion of the bus system against the fixed guideway. Unlike the Project, while the bus expansion is less costly, it provides no measurable benefit compared to the No Build Alternative. As discussed in Chapter 2 of the Final EIS, the Managed Lane Alternative would have generated the greatest amount of air pollution, required the greatest amount of energy for transportation use, and resulted in the largest number of transportation noise impacts of all the alternatives evaluated.

3. Regarding speed, most buses still operate in mixed traffic, resulting in less improvement in corridor mobility and travel reliability than the fixed guideway system. As shown in the Alternatives Analysis Report and Section 2.2.2 of the Final EIS, transit reliability would not have been improved except for express bus service operation in the managed lanes. According to the Alternatives Analysis Report, while a Managed Lane Alternative would have reduced congestion on parallel highways, leading to a 4 percent reduction in vehicle hours of delay for the two-direction managed lane option over all, 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. As shown in Chapter 3 of the Final EIS, travel time by rail from East Kapolei to Ala Moana Center will take 42 minutes with the Project, regardless of the time of day or conditions on surrounding roadways. As shown in Figure 3-7, transit travel time during the a.m. peak period from Kapolei to Downtown will take approximately 55 minutes door to door compared to approximately 90 minutes on the freeway.

4. Chapters 2 and 3 of the Final EIS state that the system will have a minimum capacity exceeding 17,300 passengers per direction during the two-hour peak period. If demand warrants, the system can expand to a four-car train and run at 90-second intervals, increasing capacity by over 100 percent. Also, like a bus system, during the off-peak periods, the service level is reduced to use equipment and other resources efficiently.

5. Regarding "Myth 3", overall system reliability for a fully grade-separated transit system is greater than for any system operating in mixed-flow conditions (meaning all vehicles can operate on the facility as opposed to restrictions based on numbers of riders, separate bus lanes or other restrictive limits on usage.) Breakdowns do not affect the operation of the system beyond removal of the defective equipment. The system is designed to allow trains to continue functioning even if there is an obstruction in the line by providing cross-over tracks at strategic locations throughout the corridor. Though transit strikes in Honolulu have been infrequent, labor unions can be expected to be part of the operation of the system, so there is the possibility of a work stoppage under some circumstances. That does not obviate the benefit of the Project. Though strikes can be disruptive, the Project would provide service well over 99 percent of the time based on the past ten years of transit labor history on Oahu. There has been one one-month long strike during that period (Month and year).

Comment [MB32]: Please provide.

6. Regarding "Myth 4", according to the FTA's Safety Management Information Statistics for 1997, the most recent data available in the Transportation Research Board (TRB) Report, Improving Transit Security, there was one serious offense for every one million passenger miles carried on rail. There is a need for security on transit systems, just as there is a need for police and other security with other transportation modes (e.g., airports and ports), but there is no evidence that crime rates associated with transit are any higher than for society in general. *Crime rates on transit systems are correlated closely with crime rates in the neighborhoods within which the stations are located (e.g., "Crime in public transit systems: An environmental design perspective", Adele Pearlstein and Martin Wachs).*

The costs of security are included in the operating costs for the Project. DTS, with assistance from the Honolulu Police Department, is developing a security plan for transit facilities, including park-and-ride lots. Security, including cameras, will be provided at all stations and park-and-ride facilities.

7. Regarding "Myth 5", information about the cost of the Managed Lane Alternative versus the Fixed Guideway is shown in the Alternatives Analysis Report. The Project is more expensive than the Managed Lane Alternative but provides benefits in terms of reliability, mobility, access to planned development, and transportation system equity compared to the No Build Alternative. The Project is subject to the same bidding process that would be applied to the construction of an elevated managed lane facility.

8. Regarding "Myth 6", the Managed Lane Alternative was evaluated in the Alternatives Analysis phase and eliminated because it did not perform as effectively as the Fixed Guideway Alternative, as noted in Chapter 2 of the Final EIS. Details in the comment regarding other locations are inconsistent with the findings of a comprehensive analysis completed in the Alternatives Analysis for Honolulu. As stated in Response 35 under Section 1, the Tampa Bay example is unique and not duplicable for the same costs in Honolulu due to items such as those mentioned in Section 7, Response 8 The estimate for construction of the Managed Lane in Honolulu was reviewed by HDOT and others during the Alternatives Analysis process and found to be consistent with cost experience in Hawaii.

9. Regarding "Myth 7", while it may be true that auto pollution is less when cars are traveling on uncongested roadways, this comment is not related to the project alternatives or effects.

10. As shown in the Alternatives Analysis Report, both the TSM and Managed Lane Alternatives showed small increases in transit ridership compared to the No Build Alternative while the Fixed Guideway Alternative showed substantial increases in ridership. The Project will provide feeder bus service to surrounding communities.

11. Regarding "Myth 8", as shown in Table 3-7 in the Transportation Technical Report, ridership on TheBus (including TheHandi-Van) has been increasing. The increase in resident daily transit trips from 166,400 in 2007 to 255,500 (Table 3-13 of the Final EIS) in 2030 with the Project represents a 53.5-percent increase for this 23-year period. This represents a compound annual growth rate of less than 2 percent. This is a reasonable expectation with the addition of a grade-separated fixed guideway line to the transportation system. Increases of this magnitude are not uncommon in other U.S. transit systems (e.g., Portland, OR with 40 percent growth between 1990 and 1997).

12. Regarding "Myth 9", as stated above, the Final EIS indicates that the Project will reduce energy consumption over the No Build. Table 4-21 of the Final EIS shows that ~~construction~~ operation of the Project will reduce energy consumption for transportation by 3 percent compared to the No Build Alternative. The construction of the Project is anticipated to consume approximately 7.5 million MBTUs. Construction projects of similar magnitude would be expected to use a similar amount of energy.

Comment [MB33]: See earlier comment.

13. Regarding "Myth 10", according to information provided by HECO, transportation (e.g., cars , trucks and buses) accounts for 63 percent of Hawaii's imported oil while electrical generation consumes 30 percent of the imported oil. Currently, 11 percent of the electricity on Oahu is generated by renewable resources. HECO is currently soliciting proposals for 100 MW of renewable-energy generating capacity to be in service between 2010 and 2014.

The transit system will allow for a decrease in automobile use, thereby reducing the amount of oil required for transportation while only using about 1 to 2 percent of the electrical generating capacity through HECO and other independent power producers in 2030. The Project does not require the construction of a new power plant. Emergency generators will be provided

at stations, but they are a safety and security requirement for stations. They do not draw additional electrical energy unless in use.

14. Regarding "Myth 11", this comment is not related to the environmental analysis of the Project. Information regarding the Vancouver Skytrain is noted. However, similar to Vancouver's Skytrain, the Honolulu fixed guideway system will be integrated with the buses, including a single fare system.

15. Regarding "Myth 12", this comment is not related to the environmental analysis of the Project. Information regarding the Vancouver transportation system is noted.

16. Regarding "Myth 13", this comment is not related to the environmental analysis of the Project. Information regarding Buenos Aires, Atlantic City, Hong Kong, and Asia is noted. All systems in the U.S. require subsidies as currently configured. Until general practices change in this country, the same will apply to Honolulu. The information about annual subsidies is presented in Section 6.4.2 of Chapter 6 of the Final EIS

17. Regarding "Myth 14", this comment is not related to the environmental analysis of the Project. Information regarding transit ridership trends in Pittsburgh is noted.

18-19. These comments are not related to the environmental analysis of the Project. Information regarding transit ridership trends in Pittsburgh is noted.

20-21. Regarding "Myth 16", the American Public Transportation Association's 2008 Public Transportation Fact Book states: "Since 1995, public transportation ridership in the U.S. grew by more than 32 percent, faster than highway travel or the U.S. population." Data from the American Public Transportation Association is based on information reported by transit agencies regarding various aspects of transit ridership. Census data is based on more general information and does not adequately reflect transit trends; the Census data cited in the comment letter is regarding people using transit to commute only.

22-23. Regarding "Myth 17", the ridership forecast for the fixed guideway project is over 116,000 boardings a day in 2030 (Table 3-18 of the Final EIS). As stated in Section 3.4.2 of the Final EIS, of the 116,000 boardings a day, more than 40,000 are riders who, in the absence of the fixed guideway, would have had use a car on the freeways and highways of the island. Travel forecasting models and methodologies are developed in consultation with FTA. The forecasts in the Final EIS have been reviewed and approved by the FTA.

24. Regarding "Myth 18", this comment is not related to the environmental analysis of the Project.

25. This comment is not related to the environmental analysis of the Project.

Comment [MB34]: What is the percentage of the population expected to use the facility? Is it 10% as stated in the comment?

26. Regarding "Myth 19", this statement does not appear in the Draft or Final EISs.

27. Table 7-2 of the Final EIS shows that a transit trip from Waianae to UH Manoa will take 121 minutes (two hours) with one transfer in 2030 without the Project (No Build Alternative), and 93 minutes (with two transfers) for the Project.

28. Regarding "Myth 20", it is not clear what the source of your comment is, but the intent appears to be a concern about an increase in transfers. There will be an increase in transfers with the fixed guideway, but even with the transfers, overall travel times will be substantially shorter as noted in Figure 3-7 of the Final EIS, and noted in Section 8, Response 27.

29. This comment is not related to the environmental analysis of the Project.

Comment [cvw35]: Was a busway considered and rejected? We need to cite to that, as well as make a comparison to the type of busway being suggested by the commenter (i.e., one without stations on the elevated portions). The comment does appear to be relevant, even if it is something we addressed earlier in the process.

30. Regarding "Myth 21", the evaluated Managed Lane Alternative from the Alternatives Analysis phase includes ramps at several locations, including Aloha Stadium and Middle Street. Any increase in the number of access points to the facility will result in additional right-of-way requirements and additional costs beyond the estimate of $2.6 billion in 2006 dollars.

31. As described in Chapter 2 of the Final EIS, the City has selected steel wheels operating on steel rail transit. There will be an uninterruptible power supply (UPS) at each station, with capability to energize critical systems, such as lighting and communications, for a few hours in the case of a temporary power outage. There will also be a UPS backup for the Operations Control Center (OCC) and a backup diesel generator for long-term backup of the OCC. There will also be a special connection at each station to allow for a portable generator to be used in case of a longer-term outage affecting a single station. The FTA requires that a project begin Preliminary Engineering before the Final EIS is completed. Information from Preliminary Engineering is required to assess all significant impacts that would result from project implementation.

32. The NEPA and FTA New Starts processes can be completed in different ways, by either preparation of an Alternatives Analysis/EIS or an EIS/Preliminary Engineering. The latter approach allows for a better understanding of the project because more detailed information is known about the project design that can help in completing the environmental work.

Comment [eaz36]: This response is not correct needs to be rewritten. Preliminary Engineering is New Starts terminology for a specific stage in the application process. Could go on to explain the types of activities that stage includes.

In order to identify potential impacts and alternatives for the NEPA process, some level of engineering is necessary. This helps planners and FTA to identify items such as the footprint for stations and the alignment, affects on historic properties and wetlands, and noise and vibration impacts. However, this level of engineering is limited to approximately only 10 percent of the total level of engineering that would be required for a project to enter construction. The reason that more engineering is not completed until after the environmental process is to not preclude the consideration of other alternatives.

33. Chapter 6 of the Final EIS describes the needed financial resources anticipated to pay for the capital cost of the Project and for ongoing operating and maintenance costs. Capital costs of the Project, including finance charges, are expected to be fully paid for by a combination of FTA Sections 5307 and 5309 New Starts Funds from the Federal government and the GET surcharge revenues collected from 2007 through 2022 on Oahu. Operating and maintenance costs will be paid for using the same sources currently used for TheBus—Federal funding, fare revenues, and City revenues from the General and Highway Funds.

34. As described above, the Managed Lane Alternative was evaluated in the Alternatives Analysis Phase and demonstrated to be less effective than a Fixed Guideway Alternative.

Section 9

1-11 and a. With the Project, as stated in Chapter 3 of the Final EIS, the rate of transfers would be higher than under the No Build Alternative due to proposed changes in local bus service to maximize access to the fixed guideway system. However, because of the high frequency of the fixed guideway service (three-minute headways between trains during peak periods), riders transferring from buses to the fixed guideway will experience minimal wait times. Riders transferring from the guideway service to buses will benefit from improved frequencies on existing bus routes serving stations. Also, several new routes with high frequencies will be provided as feeders to the guideway system. Since these routes will primarily operate in residential areas, they will provide greater reliability versus routes operating along congested arterials. The travel demand forecasting model includes a time penalty for transfers. Ridership forecasts increase 44 percent over the No Build Alternative despite a higher rate of transfers. While people typically try to minimize transfers on any trip, the more fundamental criterion for making a trip decision is how long the trip takes. Rail will offer people a shorter overall trip time compared to other options even with the transfers, as noted in Section 3.4.2 of the Final EIS.

12. As stated in Section 3.4.2 of the Final EIS, for those leaving stations in the a.m. two-hour peak period (usually around 7 a.m. to 9 a.m.), most people walk, particularly at stations with large employment concentrations. Table 3-20 of the Final EIS shows the mode of access information for each fixed guideway station.

13. The fixed guideway system will directly serve the Airport. As shown in Table 2-7 of the Final EIS, trains will serve stations every 3 minutes during peak periods and up to every 10 minutes during off-peak periods.

14. As stated in the Alternatives Analysis Report and Section 2.2.2 of the Final EIS, enhanced bus service was examined during the Alternatives Analysis and rejected because this alternative would not have improved roadway congestion.

15. Tourist use of rail with luggage is estimated to be very low. Other tourist use, such as shopping or visiting sites of interest, would represent about 7 percent of total usage. As stated in Chapter 3 of the Final EIS, approximately 9~~,~~900 visitors will use the fixed guideway daily of which 1,800 are to or from the airport.

Comment [MB37]: Please check this typo.

Section 10

1. This comment is not related to the environmental analysis of the Project.

2. The Managed Lane Alternative was evaluated in the Alternatives Analysis Phase and demonstrated to be less effective than a Fixed Guideway Alternative for reasons previously explained. Roadway solutions result in lower capacity to carry people as they emphasize moving automobiles, instead of people. Reduced traffic congestion as a result of the fixed guideway compared to the No Build Alternative will result in improved operations for roadway users.

Comment [cvw38]: This statement is not needed. We should not infer and generalize the motivations for building roadways. I suggest deleting the sentence.

3. Rail transit will be provided by DTS or their selected operator. As stated previously, though transit strikes in Honolulu have been infrequent, labor unions can be expected to be part

of the operation of the system, so there is the possibility of a work stoppage. However, that does not obviate the benefit of the Project.

4. An increase in the bus fleet was addressed in the Alternatives Analysis Phase under the TSM Alternative, as noted in Chapter 2 of the Final EIS. It did not improve conditions because of existing congestion on the highway system and was eliminated from further consideration in favor of the fixed guideway that is the subject of the Final EIS.

5. Such express bus service fails to serve any intermediate points. Additionally, if any portion of the bus trip is within mixed traffic flow, travel time reliability is less than an exclusive right-of-way fixed guideway system.

6. There is no indication that damage to a fixed guideway would be any more difficult to repair than to an elevated roadway/busway.

7. For a high-volume transit system, operating costs are higher per passenger for bus compared to rail service. The greatest cost of transit is the labor cost, which is higher for buses than rail. Rail systems are less expensive to operate than bus systems on a per-passenger-mile basis according to the Transportation Energy Data Book of the Department of Energy.

Section 11

Description

1. The HOT lanes were addressed in the Alternatives Analysis Phase (described as the Managed Lane Alternative) and rejected as providing less benefit as compared to the fixed guideway. The summary of that finding is presented in Chapter 2 of the Final EIS, and is addressed in General Comments of this letter.

2. The Project is a 20-mile fixed-guideway system that extends from East Kapolei to Ala Moana Center and includes points in-between.

Cost

3. The Final EIS analyzes the fixed guideway project. The HOT lanes were addressed in the Alternatives Analysis (described as the Managed Lane Alternative) and rejected because it provided less benefit compared to the fixed guideway. The summary of that finding is presented in Chapter 2 of the Final EIS. The $1 billion construction cost figure is not consistent with the results of the Alternatives Analysis. The Alternatives Analysis estimated the cost of the managed lane in Honolulu at $2.6 billion. This cost was verified by HDOT and others familiar with Hawaii and HOT projects. The HOT facility could qualify for some Federal funding from highway sources, but it is not eligible for the funds available to the fixed guideway project.

4. The capital plan for the Project is presented in Section 6.3 of the Final EIS, including a description of the amount of funding anticipated from various sources. Section 6.6 of the Final EIS describes risks and uncertainties associated with these funding assumptions. While Federal

funds are not guaranteed until Congress acts to allocate them, the completion of the environmental process and approval of a Record of Decision indicates that a project may be eligible for Federal funding, if it meets the specific requirements as identified in the Safe, Accountable, Flexible, Efficient Transportation Equity Act, a Legacy for Users (SAFETEA-LU). FTA has given no indication that they will not fund the Project at the levels requested.

Traffic

5. While managed lanes would have 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 islandwide VHD would have increased with the Managed Lane Alternative as compared to the No Build Alternative, indicating an increase in system-wide congestion as shown in Chapter 2 of the Final EIS.

6. Conditions on the highways will be worse in 2030 under any circumstances, regardless of which solution is applied. Vehicle Hours of Delay is expected to increase from 71,800 in 2009 to 104,700 in 2030 under the No Build Alternative. With the fixed guideway system, total islandwide congestion (as measured by VHD) would decrease by 18 percent to 85,800, compared to the No Build Alternative (Figure 3-14 in the Final EIS). In addition, traffic volumes were studied at various screenlines in the study corridor. The travel demand forecasting model was used to forecast traffic volumes at these screenlines in 2030, both with and without the Project. Analysis revealed that traffic volumes at these screenlines will decrease up to 11 percent with the Project during the a.m. peak hour (Tables 3-9 and 3-10 of the Final EIS). These tables show an improvement in conditions on the H-1 Freeway with the Project compared to No Build conditions.

Energy Savings

7. As stated in the Alternatives Analysis Report and Chapter 2 of the Final EIS, energy consumption would have been the highest with the Managed Lane Alternative. The higher energy use is due to the additional vehicle trips that would occur with this Alternative.

8. As stated before, the Final EIS indicates that the Project will reduce energy consumption by about 2,000 MBTUs over the No Build. The result is also noted in Section 4.11 of the Final EIS. This represents about 15,000 gallons of fuel saved per day. Alternative energy sources, such as photo-voltaic cells, can be built into the rail system at stations and facilities. As the development of alternative energy sources evolves on the island, HECO will generate more electric power from renewable sources, which will contribute to a greener use of energy by the Project.

Environment

9. The Managed Lane Alternative was fully evaluated in the Alternatives Analysis and demonstrated to be less effective than a Fixed Guideway Alternative. All alternatives, including the No Build Alternative, include trade-offs between benefits and impacts. As stated in Chapter 2 of the Final EIS, the Managed Lane Alternative would have generated the greatest amount of air

pollution, required the greatest amount of energy for transportation use, and would have resulted in the largest number of transportation noise impacts of all the alternatives evaluated.

10. To paraphrase from Section 4.6.3 of the Final EIS: The transit facility is not expected to be a visual or physical barrier in most neighborhoods; the Project will not substantially change development patterns, although it may change the character of development along the alignment. The Project will provide a reliable and efficient travel mode for accessing the region's current and future jobs, shopping, and social resources, particularly those in Kapolei and Downtown. This increase in mobility for neighborhood residents will generally improve the quality of life, especially those with limited financial resources and those who may be transit dependent.

The Project is a little over 20 miles long, and noise levels are lower than for a bus 50 feet away from a sensitive noise receptor (see Section 4.10 of the Final EIS). In most of the corridor, noise levels as a result of the Project are lower than existing ambient levels. There is also recognition of the visual effect of the Project in the Final EIS. The island's unique visual character and scenic beauty was considered in the visual and aesthetic analysis presented in the Final EIS. The Project will be set in an urban context where visual change is expected and differences in scales of structures are typical. The measures included with the Project to minimize negative visual effects and enhance the visual and aesthetic opportunities that it creates can be found in Section 4.8.3 of the Final EIS under the heading Design Principles and Mitigation. Specific environmental, architecture and landscape design criteria are listed and include various treatments of the guideway and columns, landscaping, etc.

Ridership and Capacity

11. The TSM Alternative had a larger number of daily transit trips (243,100) than the No Build Alternative (232,100) and less than the Fixed Guideway Alternative (281,900), as shown in Table 2-2 of the Final EIS.

12. Figure 3-11 of the Final EIS shows that the fixed guideway will increase the transit mode share for home-based work trips during the a.m. two-hour peak period (7 a.m. to 9 a.m.). As shown in Figure 3-11, for many travel markets, the transit share of trips under the Project will double or triple the share occurring under the No Build Alternative. For example, the commute-to-work transit share of the Kapolei to Downtown Honolulu travel market would increase from 23 percent under the No Build Alternative to 60 percent under the Project. In other words, more than half of the people going from Kapolei to Downtown to work in the morning would use transit with the Project, compared to only a quarter without the Project.

Convenience

13. HOT lanes were evaluated during the Alternatives Analysis phase and rejected because they did not reduce congestion as compared to other alternatives considered. As noted earlier in Section 5, Response 5, there will be more transfers with the fixed guideway, but overall travel times will be shorter because of frequency of service.

14. With the Project, as stated in Chapter 3 of the Final EIS, the rate of transfers will be higher than under the No Build Alternative due to proposed changes in local bus service to maximize access to the fixed guideway system. However, because of the high frequency of the fixed guideway service (three-minute headways between trains during peak periods), riders transferring from buses to the fixed guideway will experience minimal wait times. Riders transferring from the guideway service to buses will benefit from improved frequencies on existing bus routes serving stations. Also, several new routes with high frequencies will be provided as feeders to the guideway system. Since these routes will primarily operate in residential areas, they will provide greater reliability versus routes operating along congested arterials. The travel demand forecasting model includes a time penalty for transfers. Ridership forecasts show an increase of 44 percent over the No Build Alternative despite a higher rate of transfers. While people typically try to minimize transfers on any trip, the more fundamental criterion for making a trip decision is how long the trip takes. Rail will offer people a shorter overall trip time compared to other options even with the transfers as noted in Section 3.4.2 of the Final EIS.

Land Development

15. The Project will include enhanced bus service integrated with the fixed guideway system. Alternatives that relied only on bus transit were evaluated during the Alternatives Analysis and were shown to be less effective than the Fixed Guideway Alternative. Chapter 2 of the Final EIS summarizes those findings.

16. Population growth is expected regardless of the Project. However, because of the Project, more development and growth is expected around station locations. From Section 4.19.2 of the Final EIS, the increased mobility and accessibility that the Project may provide would also increase the desirability and value of land near the stations, thereby attracting new real estate investment nearby. Therefore, the Project's primary indirect effect would be higher densities than presently planned or could otherwise be developed near transit stations. These land use effects could take the form of TOD or transit-supportive development (TSD). In March 2009, the City Council approved and the Mayor of Honolulu signed Bill 10 (2008) (Ordinance 09-4), which defines the City's approach to TOD around fixed guideway stations. Zoning regulations will address parking standards, new density provisions, open spaces, and affordable housing. Financial incentives could include public-private partnerships, real property tax credits, and infrastructure financing. While the Project is being coordinated with City and State agencies to encourage development of enhanced pedestrian and bicycle facilities and other land use changes near the stations, the actual construction of such facilities and zoning changes are beyond the scope of the Project. The special districts also encourage public input into the design of TOD neighborhood plans to reflect unique community identities.

Taxes

17. The $1 billion construction cost figure is not consistent with the results of the Alternatives Analysis. The Alternatives Analysis estimated the cost of the managed lane in Honolulu at $2.6 billion. This cost was verified by HDOT and others familiar with Hawaii and HOT projects during the Transit Task Force review. The HOT facility could qualify for some

Federal funding from highway sources, but it is not eligible for the funds available to the fixed guideway project.

18. Section 6.3 of the Final EIS describes the financial resources anticipated to pay for the capital cost of the Project, including finance charges. Ordinance 07-001 prohibits using real property tax revenues to pay for capital costs.

Section 12

The engineering cost estimate for a two-lane reversible managed lane facility, which was calculated following the same cost estimating process used for the Fixed Guideway Alternatives, was $2.6 billion in 2006 dollars. The City Council's Transit Advisory Task Force reviewed the Alternatives Analysis and concluded in their report of December 14, 2006, that the assessment of each alternative was "fair and accurate" and that capital cost estimates were compiled using the same methodology and unit cost and that the construction cost estimates were fairly and consistently prepared. The Task Force also concluded that the Honolulu project is not comparable to the referenced Tampa tollway. As a point of reference, the State of Hawaii's Highway Modernization Plan, dated January 22, 2009, estimates the cost of the Nimitz Viaduct at $600 million for a less-than 2.5-mile elevated highway.

The zipper lane was eliminated in evaluation of the reversible facility because with the additional lanes, the demand and capacity would be better balanced without the zipper lane. Implementation of the zipper lane results in the loss of two lanes of capacity in the reverse direction. By 2030, the directional transportation demand will be more balanced than it is today. Eliminating the zipper lane when evaluating the reversible Managed Lane Alternative provided the greatest benefit to modeled freeway users by increasing capacity in both directions. Stations were provided at important transfer points to maximize the benefit to transit users with destinations other than on the elevated lanes.

As described above, access ramps were provided at several locations, including Aloha Stadium and Middle Street.

Section 13

As shown in Table 6-1 of the Final EIS, the estimated cost for the Project is $4.6 billion in 2009 dollars or and $5.5 billion in inflated dollars. The other system costs are noted. Because the costs included in your comment are not adjusted for inflation (they include costs that are more than 20 years old), a direct comparison cannot be made to the other projects mentioned in your comment.

Section 14

1. A travel forecasting model was used to forecast traffic volumes during the a.m. and p.m. peak hours in 2030, both with and without the fixed guideway system. Six screenlines (virtual lines across the corridor used to measure total travel at that point) were identified to compare changes in traffic conditions in the corridor at the six locations. As seen in Tables 3-9

Comment [MB39]: Bus stations aren't addressed here; please add.

Comment [H40R39]: They are mentioned below on next page.
YES, HOWEVER, THEY ARE MENTIONED IN CALLAN'S SECTION 12 COMMENT.

Comment [MB41]: Same comment as made previously.

and 3-10 of the Final EIS, traffic volumes in 2030 will be better with the Project compared to the No Build Alternative. For instance, with the fixed guideway system, there is an 11 percent reduction in traffic at the Kalauao screenline in the Koko Head-bound direction during the a.m. peak hour and a 10-percent reduction in the Ewa-bound direction during the p.m. peak hour when compared to conditions without the fixed guideway.

2. In "Chapter 2—Alternatives Considered" of the Alternative Analysis report, November 2006 and summarized in the Final EIS--two options were considered for the Managed Lane Alternative: a Two-direction Option and a Two-lane Reversible Option. Both Managed Lane Alternatives "would have provided a two-lane elevated toll facility between Waipahu and Downtown Honolulu, with variable pricing strategies for single or low occupant vehicles to maintain free-flow speeds for transit and high-occupancy vehicles (HOVs)." The Two-direction Option would have served express buses operating in both directions during the entire day. To maintain free-flow speeds in the Two-direction Option, it may be necessary to charge tolls to manage the number of HOVs using the facility. For the Two-lane Reversible Option, three-person HOVs would be allowed to use the facility for free, while single-occupant and two-person HOVs would have to pay a toll. The Two-lane Reversible Option was found to be the most optimal of the Managed Lanes Alternative options, but it was shown not to be the best alternative when compared to the fixed guideway.

3. As stated in Chapter 2 of the Final EIS, while this alternative would have 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 islandwide VHD would have increased with the Managed Lane Alternative compared to the No Build Alternative, indicating an increase in system-wide congestion (Table 2-2 of the Final EIS).

4-6. As stated previously, energy use would be the highest with the Managed Lane Alternative. HECO is moving toward renewable energy generation. As that happens, the fixed guideway will also benefit from such new sources of energy. In addition, the Department of Energy publishes statistics for average transit rail energy consumption (2,784 BTUs per passenger mile), cars (3,512 BTUs per passenger mile), and transit buses (4,235 BTUs per passenger mile). Based upon these figures, transit trains are a more energy-efficient mode of transportation than passenger cars or transit buses. As the Department of Energy advises, great care should be taken when comparing modal energy intensity data among modes. Because of the inherent differences among the transportation modes in the nature of services, routes available, and other additional factors, it is not possible to obtain truly comparable national energy intensities among modes. These values are averages, and there is variability within modes.

7-9. As mentioned in Chapter 2 of the Final EIS, transit reliability would not have been improved except for express bus service operation in the managed lanes. 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 islandwide VHD would have increased with the Managed Lane Alternative as compared to the No Build Alternative, indicating an increase in system-wide congestion (Table 2-2 of the Final EIS). Furthermore, the managed lanes alternative would not

have been significantly less costly than fixed guideway and would have been unable to encourage the type of compact growth desired in the corridor.

10. As mentioned in the Executive Summary and Chapter 2 of the Final EIS, the Managed Lane Alternative would have provided less of a transit benefit at a higher cost than the Fixed Guideway Alternative. The Fixed Guideway Alternative will be more cost effective in the long run. In the "Summary—Funding Options" section, funding sources for the capital investments associated with the fixed guideway include a State GET surcharge, City general obligation bonds, and FTA funds. Only the Fixed Guideway Alternative could be funded with the GET surcharge. As noted in Chapter 6 of the Final EIS, the GET is expected to generate $3.5 billion through 2022 and the FTA has agreed to consider at least $1.4 55 billion for Federal contribution to the Project through the New Starts program for the Fixed Guideway. The Alternatives Analysis indicates that toll revenues from the Managed Lanes Alternative, if high enough, would pay for ongoing operations and maintenance while any remaining toll revenues, supplemented by other revenues, would be used to repay debt incurred to construct the system.

Comment [MB42]: Make sure this isn't a typo (the range is so great, I had to question it).

11. As shown in Chapter 2 of the Final EIS, November 2008, the Managed Lane Alternative would have provided little community benefit, as it would not have resulted in substantially improved transit access in the corridor. This alternative also would not have supported planned concentrated future population and employment growth because it would not provide concentrations of transit service that would serve as a nucleus for TOD

12. The purpose of the Project, as established in Section 1.8 of the Final EIS, is to provide high-capacity rapid transit in the highly congested east-west transportation corridor between Kapolei and UH Manoa. In Section 1.9, goals include: improve corridor mobility, corridor travel reliability, access to planned development, and transportation equity.

13. Chapter 6 of the Final EIS describes the financial resources anticipated to pay for the capital cost of the Project and for ongoing operating and maintenance costs. Capital costs of the Project, including finance charges, are anticipated to be fully paid for by a combination of FTA Section 5309 New Starts and FTA Section 5307 Funds from the Federal government and revenues from the County General Excise Tax Surcharge levied from 2007 through 2022 on Oahu. Section 6.6 of the Final EIS describes risks and uncertainties associated with these funding assumptions. Chapters 3 and 4 of the Final EIS discuss the effects of the Project on the transportation system and natural and built environment.

14. Chapter 1 of the Final EIS indicates that 69 percent of the islandwide population and 83 percent of employment will be located within the corridor in (provide year). Many are much closer than that. Ridership forecasts of over 116,000 trips a day indicate service will reach a broad base of the population and carry high percentages of trips during the peak travel times when it is most needed. For example, over 30 percent of work trips to Downtown Honolulu will use transit with the implementation of the Project. NEPA (40 C.F.R. Part 1506.6) requires public involvement as part of the environmental impact statement process. The public involvement program is designed, as required by NEPA, to engage the public in as many ways as practical. This program for the Project has been comprehensive in sharing information with as many

Comment [MB43]: Complete.

people as possible. Other assertions about travel behavior in your comment are inconsistent with the findings in Chapter 3 of the Final EIS related to transit ridership.

15. The Project provides an alternative to the travel condition noted in your comment. The Project would result in decreased congestion compared to the No Build Alternative, making travel more reliable for emergency vehicles than with the No Build Alternative.

16. Your preference for elevated lanes is noted.

The FTA and DTS appreciate your interest in the Project. The Final EIS, a copy of which is included in the enclosed DVD, has been issued in conjunction with the distribution of this letter. Issuance of the Record of Decision under NEPA and acceptance of the Final EIS by the Governor of the State of Hawaii are the next anticipated actions.

Very truly yours,

WAYNE Y. YOSHIOKA
Director

Enclosure