

## **PMOC MONTHLY REPORT**

**Honolulu Rail Transit Project**  
City and County of Honolulu  
Honolulu Authority for Rapid Transportation (HART)  
Honolulu, HI

December 2014 (FINAL)

PMOC Contract Number: DTFT60-09-D-00012  
Task Order No. 2: Honolulu Rail Transit Project  
Project No: DC-27-5140  
Work Order No. 1  
OPs Referenced: OP 1 and 25

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Length of Time Assigned: Five Years (November 18, 2009 through November 17, 2014)

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## 1.0 EXECUTIVE SUMMARY

### 1.1 Project Description

- **General Description:** The Project is a 20-mile-long elevated fixed guideway rail system along Oahu's south shore between East Kapolei and Ala Moana Center. The Project will include 21 stations. The alignment is elevated, except for a 0.6-mile at-grade portion at the Leeward Community College station. The Project is planned to be delivered in four guideway segments.
  - Segment I (West Oahu/Farrington Highway) – East Kapolei to Pearl Highlands (7 miles/7 stations)
  - Segment II (Kamehameha Highway) – Pearl Highlands to Aloha Stadium (4 miles/2 stations)
  - Segment III (Airport) – Aloha Stadium to Middle Street (5 miles/4 stations)
  - Segment IV (City Center) – Middle Street to Ala Moana Center (4 miles/8 stations)
- **Length:** 20 miles
- **No. of Stations:** 21
- **Additional Facilities:** Maintenance and Storage Facility and parking facilities
- **Vehicles:** 80 vehicles
- **Ridership Forecast:** Weekday boardings – 99,800 (2020); 114,300 (2030)

### 1.2 Project Status

- Primary construction activities include:
  - West Oahu /Farrington Highway (WOFH) Design-Build (DB) Contract – Contract is approximately 3 months behind schedule. HART is working with contractor to mitigate this delay. Approximately 1 mile of guideway has been erected. Installation of rail on guideway began in November 2014.
  - Kamehameha Highway Guideway (KHG) DB Contract – Contract is approximately 7 months behind schedule. HART received a recovery schedule from the contractor, but it was rejected. HART will continue working with the contractor to mitigate the delay.
  - Maintenance and Storage (MSF) DB Contract – Contract is approximately 55% complete with no issues. Building structures are moving along well with installation of tilt-up wall panels having begun.
  - Core Systems Design-Build-Operate-Maintain (DBOM) Contract – Contract is approximately 16% complete. Limited construction work (MSF signal house) anticipated beginning in December 2014; significant construction activity will not begin until summer 2015. AHJV revised their baseline contract schedule, and it has been approved. However, re-procurement of Westside Stations Group will result in revisions to CSC schedule at a later date.
  - Airport Advanced Utilities Design-Bid-Build (DBB) Contract – Work is scheduled to begin in January 2015.
- Appendix B of this report provides the status of the current design and construction contracts.

- The following table provides a summary of Design Percent Complete on all contracts provided for the project:

Contract Number	Final Design Contracts	Contractor/ Consultant	Percent Complete
DB-120	WOFH	KIWC	97%
DB-320	KHG	KIWC	95%
DB-200	MSF	KKJV	100%
DBOM-920	CSC	AHJV	53%
MI-930	Elevators and Escalators	Schindler	10%
FD-140	West Oahu Station Group (WOSG)	URS	100%
FD-240	Farrington Highway Station Group (FHSG) 1 & 2	HDR/URS	100%
FD-245	Pearl Highlands Parking Structure/Bus Transit Center	DB procurement ongoing*	10%
FD-340	Kamehameha Highway Station Group (KHSG)	Anil Verma	100%
FD-430	Airport Segment Guideway and Utilities Final Design	AECOM	90%
FD-440	Airport Station Group Design	AECOM	95%
FD-530	City Center Segment and Utilities Final Design	AECOM	85%
FD-550	Dillingham & Kaka'ako Station Group Design	Perkins & Will	45%
FD-600	University of Hawaii (UH) West Oahu Park and Ride/Ho'opili Station Design	URS	10%

\*Note: GEC 2 completed 10% drawings.

The Total Design Percent Complete is approximately 80.1% as of October 2014.

### 1.3 PMOC Issues or Concerns

The following key issues or concerns have been identified:

- The PMOC and HART held a workshop in December 2014 to review the current Estimate at Complete. HART's current Estimate at Complete (EAC) indicates that the Project will exceed the FFGA budget unless HART receives extremely favorable bids on the remaining contract packages and continues implementing valid cost mitigation measures successfully. The current overrun is estimated at \$500-600 million. This EAC takes into consideration the most recent cost estimates for the Westside Stations and the Airport/City Center Guideway, which have increased primarily due to the AIS and federal lawsuit delays. However, this number has not yet been validated.

The PMOC has reviewed and discussed the project cost on a monthly basis with HART in an effort to ensure that cost issues are proactively addressed, and PMOC has provided numerous cost mitigation recommendations that HART should give consideration to implement. However, since completion of the 2014 Risk Assessment Refresh effort, minimal cost containment measures have been accomplished by HART. This unfavorable trend of minimal cost containment is alarming. The PMOC will continue to hold Cost Containment Workshops with HART on a monthly basis to ensure HART begins properly implementing significant cost containment measures.

- Procurement –
  - Westside Stations Group – Since the procurement was cancelled, HART is repackaging these nine stations into three separate packages:

- Farrington Highway Stations Group – Invitation for Bids (IFB) in December 2014
- West Oahu Stations Group – IFB in March 2015
- Kamehameha Highway Station Stations Group – IFB in May 2015

The current Engineers Estimate exceeds the FFGA budget for the FHSG. The PMOC has provided some recommendations and suggested procurement strategy that HART should consider for the Waipahu Station, which could result in cost savings.

- Airport/City Center Guideway and Utilities Contract – HART is revising their procurement strategy and may now utilize Design-Build contract package(s).
  - Design Contracts – HART issued stop work notices to the designers for the Airport/City Center Guideway and Utilities Contract and Eastside Stations Group since these contract packages will now be DB.
  - Pearl Highlands Parking Structure DB Contract – HART issued an addendum extending the due date of qualifications until March 2015 and may extend this due date further. HART may consider a different contracting strategy to help mitigate costs.
  - HART is reviewing their packaging strategy for all remaining contracts. This strategy will impact numerous aspects of the project including the schedule.
- Funding – HART may have a shortfall of available funding due to limitations on the use of Section 5307 funds and GET revenues that are less than planned. HART will address this shortfall in an update of their Financial Plan, which will be available in February 2015.
  - Project Controls
    - Budget – There is concern that the current estimated contingency is not sufficient, which will impact the project budget. HART is currently assessing the remaining contract strategy including implementation of primary risk mitigations measures and value engineering to reduce project cost impacts. However, HART must review their Secondary Mitigation Measures and consider implementation of any valid measures to help reduce pressure on the project budget.
    - Contingency – HART's current assessment indicates a balance of uncommitted contingency of \$334 million (\$66.5M in unallocated and \$267.5M in allocated). However, this does not reflect impacts of the WSSG bids on the stations contracts or the updated cost estimate for the Airport/City Center Guideway Contract, which will now be delivered using DB contracting.
    - Schedule – It is anticipated that the Master Project Schedule will require revision as a result of the re-packaging of the remaining contracts. MPS must be updated to assess the impacts of these changes on the RSD. HART has indicated that this will be completed in February 2015.
  - Buy America – There is a possible issue with Buy America content as a result of the change to End (E) cars and M (Middle) cars since the M cars do not have some of the higher value components (e.g. propulsion). HART will perform a Buy America Audit of the M (Middle) car in January 2015.

- HART intends to build an interim park-n-ride facility at the University of Hawaii West Oahu Station. This facility will be in use until the developer completes the structure over the Kaloi Channel that allows for access to the permanent location of the park-n-ride facility. HART is evaluating the issue of either using federal funds or local funds to build the interim facility. However, the PMOC has cautioned HART about the use of federal funds to build an interim facility that will be replaced by a permanent facility constructed using federal funds. Clarification by HART on the use of funds for this work is needed. UH-West Oahu intends to use the interim facility for campus parking after HART no longer has need for the facility. However, it is not known how long the interim facility will be in use before the permanent facility can be constructed.
  
- Hawaiian Electric Companies (HECO)
  - HECO has a collective bargaining agreement that has different wage scales and allows payment to its labor forces biweekly, which does not satisfy Davis-Bacon. HECO has requested a waiver at the state and federal level on this requirement. HECO has made substantial progress and continues to move forward to meet all requirements of Davis-Bacon. Currently, HECO is in the process of finalizing additional written information/documents requested by the US Department of Labor (DOL) and Hawaii Department of Labor and Industrial Relations (DLIR) to support their waiver request.
  - HART is working with HECO to determine if/when a substation near the West Loch Station will be required. HART, HECO and their consultants are completing more detailed consumption analyses. One option is the use of wayside or on-board energy storage. This was considered previously, but the technology has advanced considerably since it was first reviewed.
  - The cost for activation of the Traction Power Substations was not initially included in the project estimate. A change order will be required to address this cost, which is still being assessed. This issue has now been nominally captured in HART's EAC.
  - 50-foot Offset Issue – Testing of the telescoping bucket truck continues, and HECO has indicated that initial results are favorable. HART is still working with HECO on the mechanism to acquire the truck.
  - HART has acknowledged that under-grounding of portions of the overhead power lines will likely be required along limited lengths of the guideway. HECO is awaiting a report from their consultant that has reviewed the alignment to determine the extent of these locations. Costs related to the under-grounding have not been included in HART's EAC.
  - HECO is being acquired by Florida-based NextEra Energy. It is anticipated that the sale will be finalized in late 2015.

## 1.4 Core Accountability Items

<b>Project Status: FFGA</b>		<b>Original at FFGA</b>	<b>Current Estimate</b>
<b>Cost</b>	Cost Estimate	\$5,122,000,000	\$5,122,000,000
<b>Contingency</b>	Unallocated Contingency	\$101,900,000	\$56,100,000
	Total Contingency (Allocated plus Unallocated)	\$643,600,000	\$334,000,000
<b>Schedule</b>	Revenue Service Date (RSD)	1/31/2020	1/31/2020
<b>Total Project Percent Complete</b>	Based on Expenditures	28.4% (October 2014)	
	Based on Earned Value*	28.4%	

\*Overall project progress is based on the weighted value progress of the individual construction and design contracts.

Major Issues	Status	Comments/Planned Action
Technical Capacity and Capability (TCC) Issues	The PMOC has expressed concern with the number of vacant key positions within HART.	<p>Following are the status of key positions:</p> <ul style="list-style-type: none"> <li>HART has indicated that additional Assistant Deputy Director positions will be created. The PMOC has recommended that the project organization be streamlined to be more effective. At a minimum, HART must update its management plans to include these additional positions.</li> <li>AECOM and URS – HART has reconsidered their packaging strategy for Airport/City Center contracts. If DB is utilized, HART believes it may be possible to retain URS since any contractual relationship with AECOM would be terminated under the DB scenario. HART is developing a plan that includes the timing for elimination of this Conflict of Interest.</li> </ul>
Potential Cost & Schedule Delays	HART has experienced delays and has incurred costs as a result of both the state and federal lawsuits.	<ul style="list-style-type: none"> <li>The PMOC and HART held a workshop in December 2014 to review the current Estimate at Complete. HART’s current EAC indicates that the Project will exceed the FFGA budget unless HART receives extremely favorable bids on the remaining contract packages and continues implementing valid cost mitigation measures successfully. The current overrun is estimated at \$500-600 million. This EAC takes into consideration the most recent cost estimates for the Westside Stations and the Airport/City Center Guideway, which have increased primarily due to the AIS and federal lawsuit delays. However, this number has not yet been validated.</li> <li>Contingency – HART’s current assessment indicates a balance of uncommitted contingency of \$334 million (\$66.5M in unallocated and \$267.5M in allocated). However, this does not reflect impacts of the WSSG bids on the stations contracts or the updated cost estimate for the Airport/City Center Guideway Contract, which will now be delivered using DB contracting.</li> <li>Schedule – It is anticipated that the Master Project Schedule will require revision as a result of the re-packaging of the remaining contracts. MPS must be updated to assess the impacts of these changes on the RSD. HART has indicated that this will be completed in February 2015.</li> </ul>
General Excise Tax (GET)	GET receipts continue to be an issue.	HART has requested monthly updates from the state on the GET revenues. HART received \$49.5M in GET funds for quarter ending September 30, 2014, which is \$5.2M under plan for this quarter. Overall, the GET total is \$40.8M under plan overall.
Post-Rod Changes	HART is considering several proposed design changes that may require additional environmental review.	FTA and HART hold bi-weekly meetings to discuss the status of any potential changes. HART has submitted or will submit information on each proposed change for FTA to determine the level of documentation required to assess impacts and subsequent mitigation measures.

<b>Major Issues</b>	<b>Status</b>	<b>Comments/Planned Action</b>
Hawaii Electric Company (HECO)	50-foot offset requirement	<ul style="list-style-type: none"> <li>• 50-foot Offset Issue – Testing of the telescoping bucket truck continues, and HECO has indicated that initial results are favorable. HART is still working with HECO on the mechanism to acquire the truck.</li> <li>• HART has acknowledged that under-grounding of portions of the overhead power lines will likely be required along limited lengths of the guideway. HECO is awaiting a report from their consultant that has reviewed the alignment to determine the extent of these locations. Costs related to the under-grounding have not been included in HART's EAC.</li> <li>• HECO is being acquired by Florida-based NextEra Energy. It is anticipated that the sale will be finalized in late 2015.</li> </ul>
<b>Date of Next Quarterly Meeting:</b>	January 22, 2015	

## 2.0 BODY OF REPORT

### 2.1 Grantee's Capabilities and Approach

#### 2.1.1 Technical Capacity and Capability (TCC)

HART has gone through a considerable number of organizational changes since the FFGA was executed in December 2012. Project staff has begun reviewing the project's numerous plans and procedures to determine whether updates are required to reflect these changes. The PMOC met with HART to discuss the timing of each plan that will require updating as a result of the organization and procedural changes that have occurred.

HART has identified additional Assistant Deputy Director positions since the FFGA. The PMOC has recommended that the project organization be streamlined to be more effective. At a minimum, HART must update its management plans to include these additional positions.

The acquisition of URS by AECOM was finalized October 17, 2014. This resulted in a conflict of interest since AECOM is the designer for the Airport and City Center Guideway and URS has been awarded the CE&I contract for those segments. HART issued a cure notice to URS on October 20, 2014. HART has reconsidered their packaging strategy for Airport/City Center contracts. If DB is utilized, HART believes it may be possible to retain URS since any contractual relationship with AECOM would be terminated under the DB scenario. HART is developing a plan that includes the timing for elimination of this Conflict of Interest.

#### 2.1.2 Project Controls for Scope, Quality, Schedule, Cost, Risk, and Safety

##### Schedule

- **Preliminary Engineering (PE):** FTA approved entrance into PE on October 16, 2009
- **Record of Decision (ROD):** ROD was issued on January 18, 2011.
- **Final Design (FD):** FTA approved entrance into FD on December 29, 2011.
- **Full Funding Grant Agreement (FFGA):** Executed on December 19, 2012.
- **Grantee Target Start of Revenue Operations for Full Alignment:** March 2019
- **FFGA Revenue Service Date (RSD):** January 31, 2020

##### Cost

- There is concern that the current estimated contingency is not sufficient, which will impact the project budget. HART is currently assessing the remaining contract strategy including implementation of primary risk mitigations measures and value engineering to reduce project cost impacts. However, HART must review their Secondary Mitigation Measures and consider implementation of any valid measures to help reduce pressure on the project budget.
- The PMOC and HART have engaged in a focused "cost containment workshop" on a monthly basis. The discussions focus on opportunities to reduce costs and accelerate

contract-scheduled activities to attain key milestones earlier than targeted and to contain cost. However, HART’s current Estimate at Complete (EAC) indicates that the Project will exceed the FFGA budget unless HART receives extremely favorable bids on the remaining contract packages and continues implementing valid cost mitigation measures successfully.

Quality

- The contractor damaged (cracked) two precast segments during erection of the WOFH guideway structure. These segments were incorporated into a single span of the structure, but a review and analysis must be completed to determine whether repairs can be completed or if the segments must be replaced. HART indicated that KWIC will replace the two precast segments instead of repairing them.
- Following is a summary of Non-Conformance Reports that have been issued on the project:

Contract	Description	NCRs		
		Issued	Closed	Open
DB-120	West Oahu/Farrington Highway	227	159	68
DB-200	Maintenance and Storage Facility	21	18	3
DB-320	Kamehameha Highway Guideway	36	30	6
DBOM-920	Core Systems Contract	13	13	0

System Safety and Security

- HART has held workshops with Engineering & Construction staff to address conformance checklists.
- HART is in the process of updating SSMP, SSCP and CSP to conform to pending update of the PMP.
- The PMOC expressed significant concern with the lack of progress made on the Certifiable Elements Lists (CELs) and Certifiable Items Lists (CILs). There are a number of outstanding CELs and CILs for design, and there are open CELs/CILs for some ongoing construction work. This must be a priority for HART.
- Ford Fuchigami was appointed by Governor elect David Ige to return to the state Department of Transportation as director. He started in this new role on December 1, 2014. The new HDOT Director appointed Ed Sniffen as the new Deputy Director of Transportation. The PMOC does not know how this affects Brandon Eshenour in his role as HDOT SOA PM.

Real Estate

The PMOC had identified some issues regarding progress of HART’s real estate activities:

- The number of outstanding parcels remains significant:
  - HART has closed 72 of 279 properties needed.
  - HART has completed 77 of 279 appraisals.
- Sufficient legal support had been an issue. However, Corporation Counsel has now assigned appropriate staff to support HART with real estate activities.
- HART submitted a revised RAMP to the FTA and PMOC for review. The updated RAMP provides for concepts to gain access to the parcels when needed.

- While there is some improvement between engineering and real estate coordination, HART must continue to develop a priority list of parcels to be acquired.

### **2.1.3 Compliance with Applicable Statutes, Regulations, Guidance and FTA Agreements**

#### National Environmental Policy Act (NEPA)

- Proposed Design Changes – HART is considering several proposed design changes that may require additional environmental review. FTA and HART hold bi-weekly meetings to discuss the status of any potential changes. HART has submitted or will submit information on each proposed change for FTA to determine the level of documentation required to assess impacts and subsequent mitigation measures.

## **2.2 Project Scope**

The Project is a 20-mile fixed guideway rail system along Oahu’s south shore between East Kapolei and Ala Moana Center. This Project is based on the Airport Alignment, which includes 21 stations. The alignment is elevated, except for a 0.6-mile at-grade portion at the Leeward Community College Station. The Project is planned to be delivered in four guideway segments:

- Segment I (West Oahu/Farrington Highway) – East Kapolei to Pearl Highlands (7 miles/7 stations)
- Segment II (Kamehameha Highway) – Pearl Highlands to Aloha Stadium (4 miles/2 stations)
- Segment III (Airport) – Aloha Stadium to Middle Street (5 miles/4 stations)
- Segment IV (City Center) – Middle Street to Ala Moana Center (4 miles/8 stations)

The alignment will average a total of 99,800 weekday boardings at the RSD in the year 2020 and 114,300 weekday boardings in the year 2030. It will provide two significant areas with potential for Transit-Oriented Development, one near the Airport and one in the surrounding industrial areas. The initial fleet will include 80 “light metro” rail vehicles.

### **2.2.1 Status of Design/Construction Documents**

The status of each contract is provided in Appendix B. The table in Section 1.2 provides a summary of Design Percent Complete on all contracts provided for the project. Final Design work and engineering activities are still proceeding on all other contracts that have been awarded to date. The Total Design Percent Complete is approximately 80.1%.

### 2.2.2 Status of Third-Party Agreements

The following table provides the status of Third Party Agreements for the project:

Agreement	Status	Target	Section	Notes/Remarks	Purpose/Description
University of Hawaii (UH) Master Agreement	Pending	September 2014	WOFH, KHG, City Center	Final negotiations are underway. Will secure Right of Construction as not to delay the project.	Needed for columns located on UH property; the master agreement will encompass all campuses that HART project interfaces with
UH -West O'ahu (UHWO) Pre-Construction Right of Entry	Executed		WOFH		Column construction for the WOFH D/B contract within the West Oahu campus. Sub-agreement will also include the UHWO park-and-ride
UH - West O'ahu (UHWO) Construction Right of Entry	Pending	November 2014	WOFH	In negotiations.	
Leeward Community College (LCC) Pre-Construction Right of Entry	Executed		WOFH		Column construction for the WOFH D/B contract within the LCC campus
Leeward Community College (LCC) Construction Right of Entry	Pending	November 2014	WOFH	In negotiations.	
UH Urban Garden Pre-Construction Right of Entry	Executed		KHG		Column construction for the KHG D/B contract
UH Urban Garden Construction Right of Entry	Executed		KHG	Follow-up action required for contractor access	
DR Horton Agreement for Construction	Executed		WOFH	Allows for construction to proceed	Column construction for the WOFH D/B contract in the Ho'opili area
DR Horton Final Easement Agreement	Pending	December 2014	WOFH	Document in process with DR Horton	
Honolulu Community College (HCC) Pre-Construction Right of Entry	Executed	April 2014	City Center		Column construction for the City Center section
Honolulu Community College (HCC) Construction Right of Entry	Pending	December 2014	City Center	In negotiations.	
Department of Land and Natural Resources (DLNR) Right of Entry	Executed		WOFH	Right of entry is in place	Column construction for the WOFH D/B contract
Department of Land and Natural Resources (DLNR) Easement	Pending	January 2015	WOFH	Easement documents in process	
Department of Education Master Agreement and Consent to Construct	Executed	May 2014	WOFH	ROE is pending to allow entry for work to proceed; Master Agreement is pending	For site improvements related to the construction of the Guideway at Waipahu High School
Aloha Stadium / Department of Accounting & General Services (DAGS) Right of Entry	Pending	November 2014	KHG	Limited ROE granted for staging for Kiewit for KHG Contract	Column construction for the KHG D/B contract

<b>Agreement</b>	<b>Status</b>	<b>Target</b>	<b>Section</b>	<b>Notes/Remarks</b>	<b>Purpose/Description</b>
Aloha Stadium / Department of Accounting & General Services (DAGS) Easement	Pending	January 2015	KHG	Easement in process	Column construction for the KHG D/B contract and the construction of the park-and-ride lot
DHHL Master Agreement	Executed		WOFH, MSF		Column construction on the WOFH section and the construction of the Maintenance and Storage Facility
DHHL Consent to Construct	Executed		WOFH, MSF	Consent to construct in place.	
DHHL License	Executed		WOFH, MSF		
HDOT Master Agreement	Executed		WOFH		Joint Use & Occupancy for Farrington and Kamehameha Highways for the construction of the Guideway from Kapolei to Pearlridge
HDOT Joint Use & Occupancy (JU&O) Sub-agreement	Executed		WOFH		
HDOT Master Agreement for KHG, Airport and City Center	Executed		KHG, Airport, City Center		Joint Use & Occupancy for Kamehameha and Nimitz Highways for the construction of the Guideway from Pearlridge to downtown Honolulu.
HDOT JU&O Sub-agreement	Executed		KHG Airport City Center		Joint Use & Occupancy for construction of the Guideway for the KHG D/B contract
HDOT SOA MOU	Executed		Program		Provides funding for HDOT personnel/support to implement the required State Safety Oversight Program
OCCC/Hawaii Department of Public Safety Agreement Dillingham Blvd	Pending	January 2015	City Center	Finalizing requirements.	Required due to parking space reduction at OCCC for roadway widening.
HI Community Development Agreement (HCDA)	Pending	December 2014	City Center	Awaiting final design requirements for the guideway.	Required for the column construction for City Center Guideway
DAGS	Pending	Oct 2014	City Center	Awaiting final design requirements for the guideway.	
U.S. Navy / General Services Administration (GSA)	Pending	December 2014	Airport	Easements and fee taking are being processed by the Navy. Under new directive Navy will charge for all licenses and easements.	For column construction of the Airport section and the Pearl Harbor Station
U.S. Post Office Honolulu Processing Center	Pending	December 2014	Airport	In negotiations.	Easement needed for column construction of the Guideway in the Airport
Federal Court House/GSA	Pending	Oct 2014	City Center	Awaiting final design requirements for the guideway	Easement needed for column construction of the Guideway in the Airport

<b>Agreement</b>	<b>Status</b>	<b>Target</b>	<b>Section</b>	<b>Notes/Remarks</b>	<b>Purpose/Description</b>
Pacific Guardian Center	Pending	Dec 2015	City Center	Awaiting final design requirements for the guideway and Downtown station.	Required for the column construction for City Center Guideway and Downtown station
Howard Hughes Corporation – Joint Development Agreement	Pending	Dec 2015	City Center	Awaiting final design requirements for the guideway and Kakaako station.	Required for the column construction for City Center Guideway and Kakaako station
Sam House Development LLC – Joint Development Agreement	Pending	Dec 2015	City Center	Awaiting final design requirements for the guideway and Ala Moana Center station.	Required for the column construction for City Center Guideway and Ala Moana Center station
GGP Ala Moana LLC – Joint Development Agreement	Pending	Dec 2015	City Center	Awaiting final design requirements for the guideway and Ala Moana station.	Required for the column construction for City Center Guideway and Ala Moana Center station

NOTE: ROW – Right of way  
ROE – Right of entry

Pending Third Party Agreements are not currently having an effect on the MPS. However, the following agreements are becoming critical and will impact the project if not completed in the near term:

- University of Hawaii (UH) Master Agreement / Right of Entry (ROE) – HART’s ROE for the UH Urban Gardens was executed in October 2014. However, UH requires that the contractor receive their own ROE. Kiewit is working with UH to execute the ROE. The ROE for the UH Urban Gardens will serve as the template for Leeward Community College and the UH-West Oahu campuses.
- Aloha Stadium / Department of Accounting & General Services (DAGS) – Right of Entry for KHG is pending. DAGS has presented a ROE document that would require HART provide compensation for loss of parking. HART does not agree with this clause and is continuing discussions with DAGS.
- U.S. Navy / General Services Administration – Easements are in progress, and HART is still targeting end of December 2014.

### 2.2.3 Delivery Method

As a result of project delays, HART revised the Contract Packaging Plan (CPP). Several contract packages were combined (Airport/City Center Guideway Construction/City Center Utilities, West Oahu/Farrington/Kamehameha Station Group, Dillingham/Kaka'ako Station Group) to maximize economies of scale and reduce interface needs between design and construction contractors to achieve both cost and schedule benefits. However, subsequent to cancellation of the Westside Stations Group (West Oahu/Farrington/Kamehameha Station Groups), HART is reviewing their packaging strategy for all remaining contracts. This strategy will impact numerous aspects of the project including the schedule.

- Westside Stations Group – Bids for the Westside Stations Group construction contract were significantly higher than the engineer's estimate and the procurement was cancelled. HART is repackaging these nine stations into three separate packages:
  - Farrington Highway Stations Group – Invitation for Bids (IFB) in December 2014
  - West Oahu Stations Group – IFB in March 2015
  - Kamehameha Highway Station Stations Group – IFB in May 2015
- Procurement –
  - Westside Stations Group – Since the procurement was cancelled, HART is repackaging these nine stations into three separate packages:
    - Farrington Highway Stations Group – Invitation for Bids (IFB) in December 2014
    - West Oahu Stations Group – IFB in March 2015
    - Kamehameha Highway Station Stations Group – IFB in May 2015The current Engineers Estimate exceeds the FFGA budget for the FHSG. The PMOC has provided some recommendations and suggested procurement strategy that HART should consider for the Waipahu Station, which could result in cost savings.
  - Airport/City Center Guideway and Utilities Contract – HART is revising their procurement strategy and may now utilize Design-Build contract package(s).
  - Design Contracts – HART issued stop work notices to the designers for the Airport/City Center Guideway and Utilities Contract and Eastside Stations Group since these contract packages will now be DB.
  - Pearl Highlands Parking Structure DB Contract – HART issued an addendum extending the due date of qualifications until March 2015 and may extend this due date further. HART may consider a different contracting strategy to help mitigate costs.
  - HART is reviewing their packaging strategy for all remaining contracts. This strategy will impact numerous aspects of the project including the schedule.
- Kako'o Consultant (Programmatic Agreement) Contract – Because of performance issues, HART intends to terminate this contract for convenience. They will then re-procure the contract with revisions to the scope of work with the concurrence of the consulting parties.

#### **2.2.4 Core Systems and Vehicle Status**

AHJV will design, furnish, install, test, and commission passenger vehicles, operating systems, auxiliary vehicles and equipment, and appurtances, in support of incremental opening of the System. The following table provides a status of the Core Systems and Vehicle activities associated with the project:

Core System Description	Status
<b>General</b>	
Staffing	Vacant AHJV positions include Lead Engineer for LRVs, O&M Manager, and Construction Manager (temporarily filled).
Schedule	AHJV revised baseline contract schedule has been approved. However, re-procurement of Westside Stations Group and Airport City Center Guideway will result in revisions to CSC schedule at a later date. It is possible this will affect the CSC schedule.
Design Status	<p>Interim Design will be complete by the end of December 2014. Final Design has begun for most systems elements. Following are the approximate levels of design completion:</p> <ul style="list-style-type: none"> <li>• LRVs – 71% (Interim Design), 0% (Final Design)</li> <li>• Train Control – 93% (Interim Design), 78% (Final Design)</li> <li>• Traction Power – 100% (Interim Design), 69% (Final Design)</li> <li>• Communications – 100% (Interim Design), 14% (Final Design)</li> <li>• Fire Detection – 100% (Interim Design), 41% (Final Design)</li> </ul>
NTP Delay Claim	AHJV has asserted that it has had a 9-month delay in starting work due to CSC protest. This issue was to go to mediation, but the mediation has been postponed.
Fare Collection System	HART is coordinating with DTS to establish a city-wide fare system. HART intends to utilize fare gates (closed transit system). HART anticipates issuing RFP in January 2015 for the fare collection system. A preliminary cost estimate is less than the EAC, but the detailed cost estimate will be available in January 2015. The PMOC recommended that HART consider implementing cost containment measure on fare gate system to reduce potential cost overruns.
System Performance Design	There are some concerns with AHJV’s method for calculating headways and round-trip times. HART received updated System Performance Documents and continues discussions with AHJV. Alignment changes from Airport and City Center Fixed Facility Contractors may affect system performance. A full analysis should be available by the end of 2014.
Safety and Security	Open safety items issues log must continue to be maintained.
<b>Hawaiian Electric Companies (HECO)</b>	
Estimated Traction Power Demand	HART is to provide HECO with AHJV simulations to estimate power demand based on actual operation scenarios. AHJV submitted revised simulations for fail over criteria and discussions with HECO are ongoing.
Activation Dates	HART and HECO are coordinating project schedule and HECO activation start dates for power. The cost for activation of the Traction Power Substations was not included in the project estimate. A change order will be required to address this cost, which is still being assessed. This issue has not been captured in HART’s forecast but has been identified in the Risk Register.
Service Requests	AHJV has submitted HECO service requests for all system sites. Design coordination is progressing.
Additional HECO Substation	HART is working with HECO to determine if/when a substation near the West Loch Station will be required. HART, HECO and their consultants are completing more detailed consumption analyses. One option is the use of wayside or on-board energy storage. This was considered previously, but the technology has advanced considerably since it was first reviewed.

<b>Core System Description</b>	<b>Status</b>
<b>Vehicle Subsystem</b>	
Vehicle Schedule	AHJV is restructuring baseline schedule to include vehicle related activities, including change to 4-cars trains, Platform Screen Gates, and safety activities.
Car Production	Car shell assembly began in November 2014. Delivery of first car is scheduled for January 2016, but there is concern that this date cannot be met.
4-car Trains	<p>HART now plans to start revenue service with 4-car trains in place of the initial plan of 2-car trains based on FTA's acceptance in December 2013. There is still a disagreement between HART and AHJV on the magnitude of the cost savings associated with this change to 4-car trains. At this time, the issue has not been resolved. It is anticipated that HART and AHJV will resolve the commercial terms for change to 4-car trains in December 2014.</p> <p>There is a possible issue with Buy America content as a result of the change to End (E) cars and M (Middle) cars since the M cars do not have some of the higher value components (e.g. propulsion). HART will perform a Buy America Audit of the M (Middle) in January 2015.</p>
<b>Traction Electrification Subsystem</b>	
Uninterruptible Power Supply (UPS)	UPS loads are under discussion between HART and AHJV.
Middle Street AM Antenna	Civil team is progressing with mitigation design.
<b>Communication Subsystems</b>	
Obstacle Detection	Obstacle Detection via on-board CCTV under discussion. Pending design solution from AHJV.
<b>O&amp;M Subsystem</b>	
MSF Yard Configuration	AHJV core systems interface delaying civil construction.
MSF O&M	AHJV needs to submit Operations and Maintenance (O&M) procedures.
Guideway	AHJV core system design schedule is not currently in alignment.
<b>Fire Detection Subsystems</b>	
Fire Detection	Fire Detection configuration is needed for the Operations Service Building (OSB).

It should be noted that Finmeccania, the parent company of Ansaldo Breda and Ansaldo STS, is considering offers for the sale of both companies. It is not anticipated that the sale will have a negative impact on the project. HART has not had discussions with AHJV regarding the pending sale.

## 2.3 Project Management Plan and Sub-Plans

HART is in the process of updating several of its procedures and management plans including the PMP. These updates are necessary due to the organizational changes enacted by the Executive Director and the contract packaging changes that are being planned. It is critical for HART to update these plans and procedures soon.

The following table presents the status of each of the grantee's current management deliverables.

Sub-Plan	Revision No.	Date	Notes
Project Management Plan (PMP)	5.0	29-Jun-12	Update pending
Quality Management Plan (QMP)	2A	31-Jan-14	Update pending
Real Estate Acquisition and Management Plan (RAMP)	5	01-Jun-12	Update pending
Bus Fleet Management Plan (BFMP)	3	Mar-12	
Rail Fleet Management Plan (RFMP)	0.1	Mar-12	Update pending
Safety and Security Management Plan (SSMP)	4	05-Jun-13	
Safety and Security Certification Plan (SSCP)	3	28-Jun-13	
Configuration Management Plan	2A	07-Mar-14	Update pending
Staffing and Succession Plan	6A	31-Jan-14	Update pending
Risk and Contingency Management Plan (RCMP)	0	29-Jun-12	Update pending
Operating Plan	0.2	29-Jun-12	
Force Account Plan	0.3	05-Jan-12	Will be incorporated into PMP
Mitigation Monitoring Program	0	15-Mar-12	
Interface Management Plan	0.1	17-Jan-12	
Contract Packaging Plan	4B	28-Jan-14	Update pending
Claims Avoidance Plan	0.1	24-Jan-12	
Construction Management Plan (CMP)	2A	07-Mar-14	Update pending
Contract Resident Engineer Manuals (DB & DBOM)	2	26-Jul-13	Update pending
Contract Resident Engineer Manuals (DBB)	1.0	28-Jan-14	Update pending
Project Procedures			Updates pending

## 2.4 Project Schedule Status

HART directed the Design-Build (DB) contractors to re-baseline/revise their Critical Path Method (CPM) schedules after the 2013 construction suspension period and federal court case delays were resolved. HART has accepted the West Oahu/Farrington Highway Guideway (WOFH), Maintenance and Storage Facility (MSF), and CSC contractor "re-baseline/revise" schedules and the new milestone dates have been incorporated into the Master Program Schedule (MPS). However, it is anticipated that the CSC and Master MPS will require another revision as a result of the re-packaging of the WSSG contract and the Airport/City Center Guideway Project.

The PMOC has stressed the importance of validating all major interface logic connections between the individual contractor schedules in lieu of solely focusing on each schedule separately. The PMOC has recommended HART be more proactive with the schedule review process to ensure that the HART management team can effectively manage critical construction interface.

HART has engaged the new GEC III consultant and the new CE&I consultants during the MPS refinement process and has received valuable input and validation thus far. Furthermore, the PMOC provided HART a forensic schedule analysis report that indicated various errors, warnings, and general “housekeeping” corrections needing correction. HART project control staff has addressed most of the comments although this process will need to be conducted again after the easterly alignment contract delivery methods are determined and HART revises the MPS accordingly.

The RSD identified in the FFGA is January 30, 2020. HART’s current MPS identifies the target date for the start of interim revenue service as June 2018 and revenue service as July 2019. The interim service date has now been pushed almost two years from the original June 2016 date. The PMOC continues to question HART about the political sensitivities and economic feasibility of pursuing an interim opening. HART and the PMOC do agree that certain risks can be mitigated or greatly reduced through the interim opening trial period though the PMOC is suspect of the financial risk/reward by doing so. The table below provides a comparison of key milestone dates at time of FFGA application and the current MPS.

Milestone Description	Activity ID	Finish Date		Variance (Days)
		FFGA Application Baseline	Current MPS	
Interim Revenue Service	MM-0100	29-Jun-16	22-Jun-18	(719)
Target for Full Revenue Service	DBOM-9270	12-Mar-19	31-Jul-19	(81)

The following is a look ahead for important activities associated with the Project:

Period: January 2015 – March 2015		
Activity	Responsibility	Date
Monthly Progress Meeting (Conference Call)	FTA, HART and PMOC	January 07, 2015
Quarterly Meeting	FTA, HART and PMOC	January 22, 2015
Monthly Progress Meeting	FTA, HART and PMOC	February 11, 2015
Cost and Schedule Containment Meeting	FTA, HART and PMOC	February 11, 2015
Monthly Progress Meeting	FTA, HART and PMOC	March 11, 2015
Cost and Schedule Containment Meeting	FTA, HART and PMOC	March 11, 2015

## 2.5 Project Cost Status

The grantee’s Base Cost Estimate (BCE) dated March 19, 2012 is \$5.122 billion in Year-of-Expenditure (YOE) dollars, including \$644 million in allocated and unallocated contingency (or 15.0% of the BCE) and \$173 million in financing costs. Of the \$644 million in total contingency, \$101 million is unallocated. The current Project Budget is as follows:

Source	Amount
Base Cost Estimate	\$4,305 billion
Total Contingency	\$0.644 billion
Finance Charges	\$0.173 billion
<b>Total Project Cost</b>	<b>\$5.122 billion</b>

**Total Expenditures to Date – \$1.252 billion (through October 2014)**

### **2.5.1 Standard Cost Category (SCC)**

The FFGA SCC Workbook is submitted as a separate electronic file. The following table presents the FFGA budget, expenditures to date, and Estimate at Completion (EAC) for each SCC.

SCC	SCC Description	FFGA Budget	Base Cost	Allocated Cont.	Incurred
<b>10</b>	<b>GUIDEWAY &amp; TRACK ELEMENTS</b>	<b>1,275,328,962</b>	<b>1,114,305,144</b>	<b>161,023,818</b>	<b>111,149,499</b>
10.04	Guideway: Aerial structure	1,175,328,184	1,022,380,670	152,947,514	76,934,788
10.08	Guideway: Retained cut or fill	8,077,393	7,492,943	584,450	0
10.09	Track: Direct fixation	86,332,027	79,437,204	6,894,823	34,214,711
10.11	Track: Ballasted	3,550,634	3,293,724	256,910	0
10.12	Track: Special (switches, turnouts)	2,040,724	1,700,603	340,121	0
<b>20</b>	<b>STATIONS, STOPS, TERMINALS, INTERMODA</b>	<b>506,165,689</b>	<b>421,804,742</b>	<b>84,360,947</b>	<b>3,016,698</b>
20.01	At-grade station, stop, shelter, mall, terminal, platform	7,333,599	6,111,333	1,222,266	0
20.02	Aerial station, stop, shelter, mall, terminal, platform	353,476,148	294,563,457	58,912,691	0
20.06	Automobile parking multi-story structure	79,690,518	66,408,765	13,281,753	0
20.07	Elevators, escalators	65,665,424	54,721,187	10,944,237	3,016,698
<b>30</b>	<b>SUPPORT FACILITIES: YARDS, SHOPS, ADMIN. BLDGS</b>	<b>99,425,456</b>	<b>92,535,013</b>	<b>6,890,443</b>	<b>44,762,412</b>
30.02	Light Maintenance Facility	8,161,279	7,591,887	569,392	840,288
30.03	Heavy Maintenance Facility	40,906,889	38,099,138	2,807,751	13,456,144
30.04	Storage or Maintenance of Way Building	8,382,270	7,797,460	584,810	1,329,637
30.05	Yard and Yard Track	41,975,018	39,046,528	2,928,490	29,136,343
<b>40</b>	<b>SITWORK &amp; SPECIAL CONDITIONS</b>	<b>1,103,867,264</b>	<b>980,569,426</b>	<b>123,297,838</b>	<b>341,372,730</b>
40.01	Demolition, Clearing, Earthwork	34,695,802	29,980,157	4,715,645	241,537
40.02	Site Utilities, Utility Relocation	350,694,801	299,449,755	51,245,046	28,855,869
40.03	Haz. mat'l, contam'd soil removal/mitigation, ground water treatments	7,228,935	6,590,542	638,393	69,843
40.04	Environmental mitigation, e.g. wetlands, historic/archeologic, parks	30,841,906	26,979,122	3,862,784	6,836,521
40.05	Site structures including retaining walls, sound walls	8,637,582	7,998,960	638,622	885,463
40.06	Pedestrian / bike access and accommodation, landscaping	48,262,816	41,073,897	7,188,919	50,000
40.07	Automobile, bus, van accessways including roads, parking lots	212,536,181	181,979,369	30,556,812	2,723,037
40.08	Temporary Facilities and other indirect costs during construction	410,969,241	386,517,624	24,451,617	301,710,460
<b>50</b>	<b>SYSTEMS</b>	<b>247,460,781</b>	<b>221,284,483</b>	<b>26,176,298</b>	<b>10,375,849</b>
50.01	Train control and signals	91,492,532	81,982,556	9,509,976	1,197,986
50.02	Traffic signals and crossing protection	12,524,011	10,458,227	2,065,784	0
50.03	Traction power supply: substations	32,873,934	29,500,927	3,373,007	342,747
50.04	Traction power distribution: catenary and third rail	36,426,286	32,878,150	3,548,136	3,120,123
50.05	Communications	59,889,234	53,691,339	6,197,895	5,714,993
50.06	Fare collection system and equipment	10,221,753	9,159,277	1,062,476	0
50.07	Central Control	4,033,031	3,614,007	419,024	0
<b>Construction Subtotal (10 - 50)</b>		<b>3,232,248,152</b>	<b>2,830,498,808</b>	<b>401,749,344</b>	<b>510,677,188</b>

SCC	SCC Description	FFGA Budget	Base Cost	Allocated Cont.	Incurred
<b>60</b>	<b>ROW, LAND, EXISTING IMPROVEMENTS</b>	<b>222,188,386</b>	<b>197,397,947</b>	<b>24,790,439</b>	<b>75,939,316</b>
60.01	Purchase or lease of real estate	201,658,907	179,360,664	22,298,243	71,879,497
60.02	Relocation of existing households and businesses	20,529,479	18,037,283	2,492,196	4,059,819
<b>70</b>	<b>VEHICLES</b>	<b>208,501,186</b>	<b>186,829,020</b>	<b>21,672,166</b>	<b>11,714,780</b>
70.02	Heavy Rail	186,061,066	166,721,385	19,339,681	8,420,146
70.06	Non-revenue vehicles	16,011,166	14,346,923	1,664,243	3,294,634
70.07	Spare parts	6,428,954	5,760,712	668,242	0
<b>80</b>	<b>PROFESSIONAL SERVICES</b>	<b>1,183,826,026</b>	<b>1,090,438,814</b>	<b>93,387,212</b>	<b>610,660,655</b>
80.01	Preliminary Engineering	95,120,484	94,055,262	1,065,222	101,098,184
80.02	Final Design	257,934,908	228,321,632	29,613,276	129,560,863
80.03	Project Management for Design and Construction	385,825,694	366,458,463	19,367,231	258,515,007
80.04	Construction Administration & Management	218,155,752	199,656,728	18,499,024	55,917,579
80.05	Professional Liability and other Non-Construction Insurance	52,138,030	46,549,724	5,588,306	18,988,608
80.06	Legal; Permits; Review Fees by other agencies, cities, etc.	76,135,125	67,641,006	8,494,119	14,972,076
80.07	Surveys, Testing, Investigation, Inspection	24,955,327	21,759,335	3,195,992	17,709,483
80.08	Start up	73,560,706	65,996,664	7,564,042	13,898,855
<b>90</b>	<b>Subtotal (10 - 80)</b>	<b>4,846,763,750</b>	<b>4,305,164,589</b>	<b>541,599,161</b>	<b>1,208,991,939</b>
	<b>UNALLOCATED CONTINGENCY</b>	101,871,170	0	101,871,170	0
<b>100</b>	<b>Subtotal (10 - 90)</b>	<b>4,948,634,920</b>	<b>4,305,164,589</b>	<b>643,470,331</b>	<b>1,208,991,939</b>
	<b>FINANCE CHARGES</b>	173,058,242			0
	<b>Total Project Cost (10 - 100)</b>	<b>5,121,693,162</b>	<b>4,305,164,589</b>	<b>643,470,331</b>	<b>1,208,991,939</b>
	<b>Provisional Request for Payment</b>				39,399,589
	<b>Total Project Cost (10 - 100)</b>	<b>5,121,693,162</b>	<b>4,305,164,589</b>	<b>643,470,331</b>	<b>1,248,391,528</b>

## 2.5.2 Contingency

HART's current assessment indicates a balance of uncommitted contingency of \$334 million (\$66.5M in unallocated and \$267.5M in allocated). However, this does not reflect impacts of the WSSG bids on the stations contracts or the updated cost estimate for the Airport/City Center Guideway Contract, which will now be delivered using DB contracting.

## 2.5.3 Funding Sources

The following are the project capital revenue (funding) sources:

Source	Amount
General Excise Tax (GET)	\$3.358 billion
Section 5309	\$1.550 billion
Section 5307	\$0.210 billion
American Recovery and Reinvestment Act (ARRA)	\$0.004 billion
<b>Total</b>	<b>\$5.122 billion</b>

The GET surcharge receipts received to date are approximately \$1.48 billion. HART received \$49.5 million in GET funds for quarter ending September 30, 2014, which is \$5.2 million under plan for this quarter. Overall, the GET total is \$40.8 million under plan overall.

HART may have a shortfall of available funding due to limitations on the use of Section 5307 funds and GET revenues that are less than planned. HART will address this shortfall in an update of their Financial Plan, which will be available in February 2015.

## 2.6 Project Risk

A Risk Refresh Workshop was performed the week of April 11, 2012 to address the Preliminary PMOC findings from a scope, schedule, and cost review, Risk Register and Action Items, and Path Forward.

A second Risk Refresh Workshop was performed on April 15, 2014. Based on the PMOC's initial review of the information provided to date, it is possible that a recommendation for HART to develop aggressive cost containment measures may be made.

The PMOC has emphasized the need for HART to revisit both its primary and secondary mitigation measures. HART engaged its new GEC and CE&I consultants to see if they have any new ideas that have not been considered for primary or secondary mitigation. PMOC and HART held a breakout session in February 2014 to discuss these measures. HART must still develop robust secondary mitigation strategies.

A second Risk Refresh Workshop was performed on April 15, 2014. FTA submitted the PMOC Risk Refresh Report to HART on August 14, 2014. HART's formal response to FTA/PMOC recommendations was provided on September 4, 2014. The PMOC report included the following conclusions and recommendations:

- HART's estimate falls short of the predicted FTA cost risk model outcome by \$265 million. HART should review its project estimate and determine how to reduce costs to

close this gap. It should be noted that this gap was identified prior to bids being received for the WSSG contract. It is anticipated this gap will change but will not be known until updated estimates of the remaining contracts are available.

- The PMOC-recommended amount of secondary mitigation is \$195.5 million.
- Strong controls must be put in place immediately to avoid future rapid contingency reduction. The frequency and the levels of project management to which these statistics are reported should be improved and monitored monthly.
- The PMOC and HART should engage in a focused “cost containment workshop” on a monthly basis to monitor the efforts taken to avoid rapid contingency usage.
- The FFGA RSD of January 2020 can be achieved; however, HART must implement strong schedule and contract management throughout the remainder of the project.

The PMOC and HART held a workshop in December 2014 to review the current Estimate at Complete. HART’s current Estimate at Complete (EAC) indicates that the Project will exceed the FFGA budget unless HART receives extremely favorable bids on the remaining contract packages and continues implementing valid cost mitigation measures successfully. The current overrun is estimated at \$500-600 million. This EAC takes into consideration the most recent cost estimates for the Westside Stations and the Airport/City Center Guideway, which have increased primarily due to the AIS and federal lawsuit delays. However, this number has not yet been validated.

The PMOC has reviewed and discussed the project cost on a monthly basis with HART in an effort to ensure that cost issues are proactively addressed, and PMOC has provided numerous cost mitigation recommendations that HART should give consideration to implement. However, since completion of the 2014 Risk Assessment Refresh effort, minimal cost containment measures have been accomplished by HART. This unfavorable trend of minimal cost containment is alarming. The PMOC will continue to hold Cost Containment Workshops with HART on a monthly basis to ensure HART begins properly implementing significant cost containment measures.

## 2.7 Action Items

Item No.	Item	Responsible Party	Date Identified	Date Due	Date Completed	Status
1	Provide information and resolution on HECO's 50-foot offset requirement	HART	Mar-14	Jan-15		On-going– Boom truck equipment was delivered in September 2014 and field testing began in October 2014. HECO evaluating site specific locations where truck may not fully address their requested clearance.
2	Process Kiewit submission of first claim for materials escalation due to AIS/NTP delay	HART	Mar-14	Aug-14	Nov-14	Closed – HART settled basis for paying escalation costs and received Board of Director's approval for change orders in November 2014.
3	Resolve issue with AHJV regarding cost savings associated with change to 4-car trains	HART	Mar-14	Dec-14		Open – in progress.
4	Resolve HECO issue with Davis-Bacon requirements	HART/FTA	Mar-14	Dec-14		Open – HECO waiver is pending. HART provided MOU to PMOC.
5	HART to provide updated Cost Estimates: - WSSG - Airport/City Center GW	HART	Oct-14	Dec-14		Open
6	Updates resulting from Risk Refresh:					
	PMOC to schedule a conference call with HART to discuss RCMP	PMOC	Oct-14	Dec-14		Open
	Risk Register Breakout Session	HART	Jul-14	Dec-14		Open– Scheduled for December 2014
	Procurement strategy	HART	Aug-14	Dec-14		
	Re-baseline MPS	HART	Apr-14	Feb-15		Open
	Update the RCMP (including Hold Points and Secondary Mitigation Measures)	HART	Sept-13	Feb-15		Open
	Re-baseline budget	HART	Apr-14	Feb-15		Open
	Re-baseline Financial Plan	HART	Apr-14	Feb-15		Open
7	HART to provide plan to address conflict of interest with AECOM acquisition of URS	HART	Jul-14	Dec-14		Open -
8	HART QAM to review constructability and design QA of remaining bid packages	HART	Jul-14	Dec-14		Open – In progress
9	HART to provide response letter to HDOT letter regarding safety and security CELs/CILs	HART	Oct-14	Nov-14		Open
10	Provide updates on Buy America status with Utility contracts	HART	Nov-14	Jan-15		

<b>Item No.</b>	<b>Item</b>	<b>Responsible Party</b>	<b>Date Identified</b>	<b>Date Due</b>	<b>Date Completed</b>	<b>Status</b>
11	Provide partial termination letters for Airport/City Center Guideway Design Project and East Side Station Design packages	HART	Dec-14	Jan-15		Open
12	PMOC to schedule a follow-up discussion of the CPP	PMOC	Dec-14	Jan-15		Open
13	HART to provide General Conditions/Special Conditions for FHSG IFB	HART	Dec-14	Dec-14		Open

## APPENDICES

### Appendix A: Acronym List

AHJV	▪ Ansaldo Honolulu Joint Venture
AIS	▪ Archeological Inventory Survey
APS	▪ Adjusted Project Schedule
ARRA	▪ American Recovery and Reinvestment Act
ASG	▪ Airport Station Group
ATC	▪ Alternative Technical Concept
AUG	▪ Airport Utilities Group
AVI	▪ Automatic Vehicle Indication
AVL	▪ Automatic Vehicle Location
BCE	▪ Base Cost Estimate
BFMP	▪ Bus Fleet Management Plan
CCUG	▪ City Center Utilities Group
CE&I	▪ Construction Engineering and Inspection
CMP	▪ Construction Management Plan
CPM	▪ Critical Path Method
CPP	▪ Contract Packaging Plan
CSC	▪ Core Systems Contract
CSSO	▪ Chief Safety and Security Officer
DAGS	▪ Department of Accounting & General Services
DB	▪ Design-Build
DBB	▪ Design-Bid-Build
DBOM	▪ Design-Build-Operate-Maintain
DCCA	▪ Department of Commerce and Consumer Affairs
DHHL	▪ Department of Hawaiian Home Lands
DLIR	▪ Department of Labor and Industrial Relations
DLNR	▪ Department of Land and Natural Resources
DOE	▪ Department of Education
DOT	▪ Department of Transportation
EAC	▪ Estimate at Completion
EIS	▪ Environmental Impact Statement
FD	▪ Final Design
FEIS	▪ Final Environmental Impact Statement
FFGA	▪ Full Funding Grant Agreement
FHSG	▪ Farrington Highway Station Group
FHWA	▪ Federal Highway Administration
FTA	▪ Federal Transit Administration
FY	▪ Fiscal Year
GEC	▪ General Engineering Consultant
GET	▪ General Excise Tax
GSA	▪ General Services Administration
HART	▪ Honolulu Authority for Rapid Transportation
HCC	▪ Honolulu Community College
HCDA	▪ Hawaii Community Development Authority
HDOT	▪ Hawaii Department of Transportation
HECO	▪ Hawaiian Electric Company
HNTB	▪ Howard, Needles, Tammen & Bergendoff
IFB	▪ Invitation to Bid
ITP	▪ Inspection Test Plans
JU&O	▪ Joint Use & Occupancy
KHG	▪ Kamehameha Highway Guideway
KHSG	▪ Kamehameha Highway Stations Group

KIWC	▪ Kiewit Infrastructure West Company
KKJV	▪ Kiewit Kobayashi Joint Venture
LCC	▪ Leeward Community College
LEED	▪ Leadership in Energy and Environmental Design (LEED)
MMP	▪ Mitigation Monitoring Program
MOA	▪ Memorandum of Agreement
MOT	▪ Maintenance of Traffic
MOW	▪ Maintenance of Way
MPS	▪ Master Project Schedule
MSF	▪ Maintenance and Storage Facility
NCR	▪ Non-Compliance Report
NEPA	▪ National Environmental Policy Act
NTP	▪ Notice to Proceed
OCCC	▪ Oahu Community Correctional Center
OCIP	▪ Owner Controlled Insurance Program
OP	▪ Oversight Procedure
PA	▪ Programmatic Agreement
PE	▪ Preliminary Engineering
PM	▪ Project Manager
PMC	▪ Project Management Consultant
PMOC	▪ Project Management Oversight Contractor
PMP	▪ Project Management Plan
PSG	▪ Platform Screen Gate
PW	▪ Project-wide
QA	▪ Quality Assurance
QAM	▪ Quality Assurance Manager
QAP	▪ Quality Assurance Plan
QMP	▪ Quality Management Plan
RAMP	▪ Real Estate Acquisition and Management Plan
RCMP	▪ Risk and Contingency Management Plan
RFMP	▪ Rail Fleet Management Plan
RFB	▪ Request for Bids
RFP	▪ Request for Proposals
RFQ	▪ Request for Qualifications
ROD	▪ Record of Decision
ROE	▪ Right of Entry
ROW	▪ Right of Way
RSD	▪ Revenue Service Date
SCC	▪ Standard Cost Category
SHPD	▪ State Historic Preservation Division
SOA	▪ State Oversight Agency
SS	▪ Safety and Security
SSCM	▪ Safety and Security Certification Manager
SSCP	▪ Safety and Security Certification Plan
SSMP	▪ Safety and Security Management Plan
SSPP	▪ System Safety Program Plan
SSSPS	▪ System Safety and Security Program Standards
TCC	▪ Technical Capacity and Capability
UH	▪ University of Hawaii
UPS	▪ Uninterruptible Power Supply
VE	▪ Value Engineering
WOFH	▪ West Oahu/Farrington Highway
WOSG	▪ West Oahu Stations Group
WSSG	▪ Westside Stations Group
YOE	▪ Year of Expenditure

## Appendix B: Contract Status

The following table provides the status of various ongoing contracts within this Project:

Contract	Description	Contractor	Base Contract Value	Change Orders	Change Order %	Current Contract Value	Expended	% Exp.	DBE	Award Date	Compl. Date
MM-901	Program Management Support Consultant (PMSC-2)	HDR/InfraConsult LLC	\$33,376,897			\$36,500,000	\$24,472,532	73.3%	0%	Mar 2012	Feb 2015
Notes/Issues:											
MM-910	General Engineering Consultant (GEC II)	Parsons Brinkerhoff	\$300,000,000				\$132,000,000		0%	Jun 2011	Pending
Notes/Issues:		Contract closeout is pending.									
MM-913	General Engineering Consultant (GEC III)	CH2M Hill	\$46,143,277			\$46,143,277	\$8,987,669	19.5%	1.32%	Dec 2013	Mar 2019
Notes/Issues:		<ul style="list-style-type: none"> <li>▪ None at this time</li> </ul>									
MM-290	Construction Engineering and Inspection (West)	PGH Wong Engineering, Inc	\$54,232,480			\$54,232,480	\$5,651,907	10.4%	0.92%	Jan 2014	Jan 2020
Notes/Issues:		<ul style="list-style-type: none"> <li>▪ None at this time.</li> </ul>									
MM-595	Construction Engineering and Inspection (East)	AECOM/URS Corporation	\$63,083,417			\$63,083,417	\$4,582,059	7.3%	0.87%	Jan 2014	Dec 2018
Notes/Issues:		<ul style="list-style-type: none"> <li>▪ Conflict of Interest. HART. However, HART is reconsidering packaging strategy for Airport/City Center contracts. If DB is utilized, HART believes it may be possible to retain URS since any contractual relationship with AECOM would be terminated under DB scenario.</li> </ul>									
MM-962	Core System Contract Oversight Consultant	Lea + Elliott, Inc	\$43,988,989			\$43,988,989	\$4,245,367	9.7%	0.25%	Feb 2014	Aug 2019
Notes/Issues:		<ul style="list-style-type: none"> <li>▪ None at this time.</li> </ul>									
DB-120	West Oahu/Farrington Highway DB	KIWC	\$482,924,000	\$113,998,382	23.6%	\$596,922,382	\$322,704,037	53.7%	0.78%	Nov 2009	Jul 2016
Notes/Issues:		<ul style="list-style-type: none"> <li>▪ Ongoing activities include utility relocations; construction of drilled shafts and columns; fabrication of precast segments; and erection of precast segments.</li> <li>▪ Agreement called for issuance of all four NTPs within 120 calendar days of December 1, 2009.</li> <li>▪ CCO has been approved by HART Board to resolve compensation associated with NTP and AIS Delays. Resolution does not include some components of escalation, which will be settled on case-by-case basis.</li> <li>▪ Contract is approximately 3 months behind schedule. HART is working with the contractor to mitigate delay.</li> </ul>									

Contract	Description	Contractor	Base Contract Value	Change Orders	Change Order %	Current Contract Value	Expended	% Exp.	DBE	Award Date	Compl. Date
DB-200	Maintenance and Storage Facility DB	Kiewit/Kobayashi JV	\$195,258,000	\$70,600,008	36.1%	\$265,858,008	\$151,214,117	55.1%	0.07%	Jun 2011	Apr 2016
Notes/Issues:		<ul style="list-style-type: none"> <li>Ongoing activities include retaining wall construction; utility installation; installation of building foundations, and steel erection.</li> <li>CCO has been approved by HART Board to resolve compensation associated with NTP and AIS Delays. Resolution does not include some components of escalation, which will be settled on case-by-case basis.</li> </ul>									
DB-320	Kamehameha Highway Guideway DB	KIWC	\$372,150,000	\$11,515,363	3%	\$383,665,363	\$116,390,828	30.2%	0.08%	Jun 2011	Sep 2016
Notes/Issues:		<ul style="list-style-type: none"> <li>Ongoing activities include design; utility relocations; and method and test shafts.</li> <li>CCO has been approved by HART Board to resolve compensation associated with NTP and AIS Delays. Resolution does not include some components of escalation, which will be settled on case-by-case basis.</li> <li>Contract is currently 7 months behind primarily as a result of using lower actual productivity rates from WOFH than was planned for KHG.</li> </ul>									
DBOM-920	Core Systems Contract	Ansald/Honolulu JV	\$573,782,793	\$29,198,490	5%	\$602,981,089	\$93,845,951	15.6%	0.025%	Nov 2011	Mar 2019
Notes/Issues:		<ul style="list-style-type: none"> <li>Ongoing activities include design; and vehicle manufacturing.</li> <li>AHJV revised baseline schedule is approved. However, re-procurement of Westside Stations Group and Airport/City Center Guideway will result in revisions to CSC schedule at a later date.</li> </ul>									
MI-930	Elevators and Escalators Install & Maintain	Schindler Elevator Corporation	\$50,982,714	\$0	0%	\$50,982,714	\$3,016,698	6.0%	0%	May 2013	Jul 2018
Notes/Issues:		<ul style="list-style-type: none"> <li>None at this time.</li> </ul>									
FD-140	West Oahu Station Group Construction FD	URS, Inc.	\$7,789,000	\$1,473,805	19%	\$9,262,805	\$7,546,546	78.9%	0%	Jun 2012	Dec 2016
Notes/Issues:		<ul style="list-style-type: none"> <li>Westside Stations Group construction package includes Farrington Highway Station Group, West Oahu Station Group, and Kamehameha Station Group. Procurement was cancelled due to higher than anticipated bids.</li> <li>Revised engineer's estimate exceeds the FFGA budget.</li> </ul>									
FD-240	Farrington Highway Station Group FD	HDR, Inc. / URS	\$9,300,696	\$2,907,349	31%	\$12,208,045	\$9,885,212	69.6%	4.7%	Jan 2011	Dec 2016
Notes/Issues:		<ul style="list-style-type: none"> <li>See FD-140</li> </ul>									
FD-340	Kamehameha Highway Station Group Construction FD	Anil Verma, Inc.	\$8,702,592	\$0	0%	\$8,702,592	\$7,687,346	90%	35.76%	Nov 2012	Dec 2016
Notes/Issues:		<ul style="list-style-type: none"> <li>See FD-140</li> </ul>									

Contract	Description	Contractor	Base Contract Value	Change Orders	Change Order %	Current Contract Value	Expended	% Exp.	DBE	Award Date	Compl. Date
FD-430	Airport Section Guideway and Utilities FD	AECOM	\$38,840,960	\$3,711,172	9.5%	\$42,052,132	\$35,700,077	83.9%	0.42%	Dec 2011	Jun 2017
Notes/Issues:		<ul style="list-style-type: none"> <li>▪ Ongoing activities include completion of design and preparation of bid package.</li> <li>▪ Airport and City Center Guideway Construction Packages will be combined. Request for Bids to be issued July 2014. HART to review timing of Geotechnical Data Report (GDR) in relation to the anticipated bid due date.</li> <li>▪ Revised engineer's estimate exceeds the FFGA budget.</li> </ul>									
FD-440	Airport Station Group Construction FD	AECOM	\$10,177,365	\$0	0%	\$10,177,365	\$8,756,369	76.8%	2.31%	Nov 2012	Jul 2017
Notes/Issues:		<ul style="list-style-type: none"> <li>▪ Final design activities ongoing.</li> </ul>									
FD-530	City Center Section Guideway and Utilities FD	AECOM	\$43,948,220	\$1,282,803	2.9%	\$45,231,023	\$34,820,966	77.0%	0.44%	Jul 2012	May 2018
Notes/Issues:		<ul style="list-style-type: none"> <li>▪ See FD-430.</li> </ul>									
FD-550	Dillingham and Kaka'ako Station Group Construction FD	Perkins & Will	\$18,321,918	\$0	0%	\$18,321,918	\$7,864,923	42.9%	0%	Jun 2013	Jul 2018
Notes/Issues:		<ul style="list-style-type: none"> <li>▪ Final design activities ongoing.</li> </ul>									
DBB-505	Airport Section Utilities Construction	Nan	\$28,413,973	\$0	0%	\$28,413,973	\$0.00	0%	0%	Jul 2014	Jun 2016
Notes/Issues:		<ul style="list-style-type: none"> <li>▪ Construction activities ongoing.</li> </ul>									
DBB-525	Airport Section Guideway Seven Pier Construction	HDCC/CJA JV	\$3,973,000	\$0	0%	\$3,973,000	\$0.00	0%	0%	Sep 2014	Feb 2015
Notes/Issues:		<ul style="list-style-type: none"> <li>▪ Construction activities ongoing.</li> </ul>									

## Appendix C: Procurement Schedule

Contract No.	Segment	Type Service	Description	Status	Advertise	NTP	Complete
DBB-185	WOFH/ KHG	Construction	West Oahu / Farrington Highway and Kamehameha Station Groups Construction	Cancelled			
DB-275	KHG	Design/Build	Pearl Highlands Parking Structure/Bus Transit Center	Suspended	3/3/2014	12/28/14	4/29/2018
DBB-520	Airport	Construction	Airport and City Center Guide Guideway Construction/City Center Utilities	Suspended	7/1/2014	12/15/2014	4/29/2018
DBB-271	WOFH	Construction	Farrington Highway Station Group	Pending	Dec 2014	Mar 2105	Jul 2017
DBB-171	WOFH	Construction	West Oahu Station Group	Future	TBD	TBD	TBD
DBB-371	KHG	Construction	Kamehameha Station Group	Future	TBD	TBD	TBD
DBB-470	Airport	Construction	Airport Station Group	Future	TBD	TBD	TBD
DBB-580	City Cen	Construction	Dillingham / Kaka'ako Station Group	Future	TBD	TBD	TBD
FD-600	WOFH	Design	UH West Oahu Park-and-Ride and Ho'opili Station Finishes	Future	TBD	TBD	TBD
DBB-600	WOFH	Construction	UH West Oahu Park-and-Ride and Ho'opili Station Finishes	Future	TBD	TBD	TBD

Note: PW indicates "Project Wide".

## Appendix F: Project Overview and Map

**Date:** December 2014  
**Project Name:** Honolulu Rail Transit Project  
**Grantee:** City and County of Honolulu  
**FTA Regional contact:** Catherine Luu  
**FTA HQ contact:** Kim Nguyen

### SCOPE

**Description** The proposed Project is an approximately 20-mile rail alignment extending from East Kapolei to Ala Moana Center.

**Guideway** The majority of the Project is to be built on aerial structure, but the Project also includes a short at-grade section (0.6 miles).

**Stations** 21 stations (20 aerial and 1 at-grade)

**Support Facility** Maintenance and Storage Facility (located near Leeward Community College)

**Vehicles** 80 light metro rail

**Ridership** 99,800 weekday boardings in 2019; 114,300 weekday boardings in 2030

### SCHEDULE

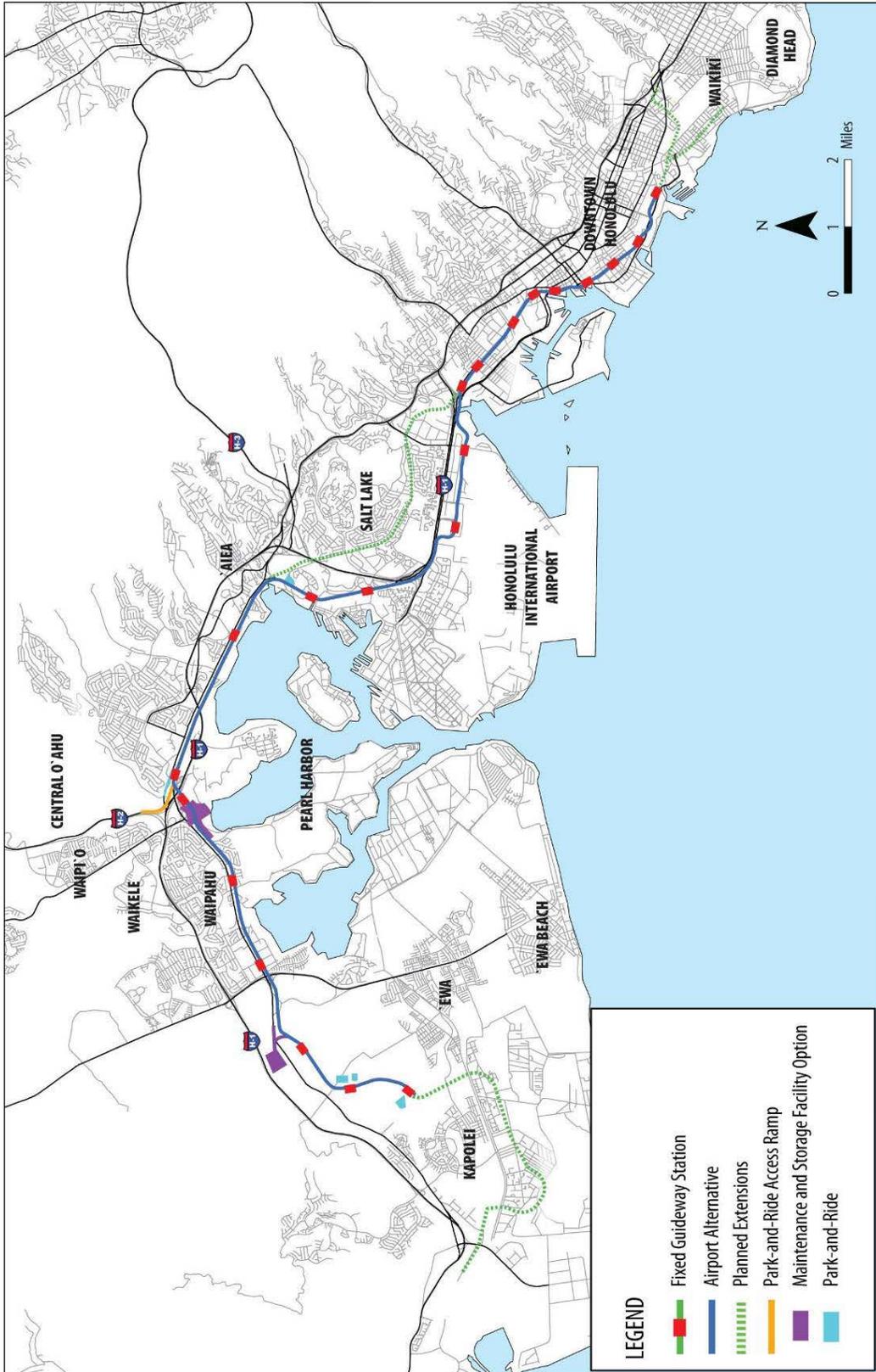
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12/11 Approval Entry to FD	03/19 Estimated RSD at Entry to FD
06/12 Request for FFGA	03/19 Estimated RSD at Request for FFGA
12/12 FFGA	01/20 RSD at FFGA

### COST

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\$1.252B Amount of Expenditures at date of this report  
29.0% complete (Total Project Expenditures/Total Project Cost)

# Honolulu Rail Transit Project Map



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# Honolulu Rail Transit Project Map

