

PMOC MONTHLY REPORT

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

November 2015 (FINAL)

PMOC Contract Number: DTFT60-14-D-00012
Task Order No. 3: Honolulu Rail Transit Project
Project No: DC-27-5288
Work Order No. 1
OPs Referenced: OP 1 and 25

Jacobs Engineering Group, Inc.

319 E. Warm Springs Road, Suite 200, Las Vegas, Nevada 89119

William Tsiforas, (702) 938-5400, william.tsiforas@jacobs.com

Length of Time Assigned: Five Years (February 18, 2015 through February 17, 2020)

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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/6 stations)
 - Segment II (Kamehameha Highway) – Pearl Highlands to Aloha Stadium (4 miles/3 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 – 104,300 (2020); 119,600 (2030)

1.2 Project Status

- Overall project is approximately 39.2% complete as of September 2015. The planned completion at this time is approximately 54.6% (based on S-curve late plan).
- Overall design of the project is approximately 87.1% complete as of September 2015. The planned completion at this time is approximately 96.7% (based on S-curve late plan). However, this percent complete may change as a result of utilizing DB procurement strategy for the Airport and City Center guideway and stations sections.
- Overall construction of the project is approximately 30.7% complete as of September 2015. The planned completion at this time is approximately 46.6% (based on S-curve late plan). Section 2.1.3 and Appendix B of this report provide the status of the current design and construction contracts. The following table provides the summary level status of the primary construction contracts:

Description	% Complete*		Schedule Status
	Actual	Planned	
West Oahu /Farrington Highway (WOFH) DB Contract	75%	85%	6 months behind
Kamehameha Highway Guideway (KHG) DB Contract	44%	88%	12 months behind
Maintenance and Storage (MSF) DB Contract	79%	85%	On time
Core Systems Design-Build-Operate-Maintain (DBOM) Contract	27%**	33.3%	3 months behind***
Airport Advanced Utilities Construction Contract	22%	24%	7 months behind
Airport Section Guideway Seven Pier Construction	100%	100%	Complete

*As of September 2015

**Based on expenditures. All others are based on Earned Value.

***Contract schedule is to be re-baselined to incorporate new milestone dates due to re-procurement of Westside Stations Group and use of DB for the eastside guideway and stations.

1.3 Core Accountability Items

Project Status: FFGA		Original at FFGA	Current Estimate
Cost	Cost Estimate	\$5,122,000,000	\$5,122,000,000**
Contingency	Unallocated Contingency	\$101,900,000	\$11,500,000
	Total Contingency (Allocated plus Unallocated)	\$643,600,000	\$303,000,000
Schedule	Revenue Service Date (RSD)	1/31/2020	1/31/2020***
Total Project Percent Complete	Based on Expenditures	39.2% (as of September 25, 2015)	
	Based on Earned Value*	39.2%	

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

**Does not reflect HART's current EAC, which has not been validated and does not include all known potential costs.

***Does not reflect changes to Master Project Schedule, which is under revision.

Major Issues	Status	Comments/Planned Action
Cost Increase & Schedule Delays	HART has experienced delays and has incurred costs as a result of the state and federal lawsuits as well as protested procurements.	See PMOC Monthly Report Section 1.4 for status.
Funding Shortfall	Section 5307 funds will not be made available and GET receipts continue to be an issue.	See PMOC Monthly Report Section 1.4 for status.
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.
Hawaii Electric Company (HECO)	50-foot clearance requirement for facility maintenance including pole replacement	See PMOC Monthly Report Section 1.4 for status.
Next Quarterly Meeting:	To be determined	

1.4 PMOC Issues or Concerns

- During the HART Joint Finance/Project Oversight Committee Meeting on October 15, 2015, HART staff provided an Update on Budget and Schedule Pursuant to Resolution 2015-86:
 - GET Revenue Growth Rate Discussion – HART staff proposed the use of a 4% growth rate in the updated Financial Plan, which would add \$1.524 billion through the 5-year extension of the GET.
 - Master Project Schedule – Staff provided the following preliminary targets for Revenue Service Dates (RSD):
 - Phase 1 Milestone Ready for Revenue Service to Aloha Stadium – 3rd Quarter 2018
 - Phase 2 Milestone Ready for Revenue Service (full system) – 4th Quarter 2021
 - Project Cost Update – Staff provided the following preliminary information:
 - Updated Estimate at Completion (EAC) – \$6.5 billion

- Updated EAC includes \$240 million in Allocated Contingency and \$299 million in Unallocated Contingency. The allocated contingency is primarily for the new contracts. The unallocated contingency is for both the existing and new contracts. These amounts differ from the FFGA and still must be reconciled through a risk refresh.
 - Updated finance costs are \$310 million.
 - The HART Joint Finance/Project Oversight Committee did not take action on the preliminary information that was presented. It is anticipated that additional discussions will occur during the November 2015 Board meetings.
 - HART staff has begun providing supporting documentation for the updated cost and schedule. This included an updated MPS that will be used for the Risk Refresh. However, there were several cost-related items discussed with HART during the November 2015 Project Controls Meeting that the PMOC believes may not be fully addressed in the EAC. Some of these items include:
 - Cost for full buildout of Pearl Highlands Parking Garage
 - HECO clearance issue
 - Real estate adjustments
 - Full exposure of WOFH, KHG, and CSC delays
 - OCIP adjustment for time extensions
 - Elevator/Escalator Contract escalation
- GET Extension - The Hawaii State Legislature passed House Bill 134, which would extend the City and County of Honolulu's current 0.5% surcharge on the state's General Excise Tax (GET) for the rail transit project for an additional five years through 2027. The legislative session closed on May 17, 2015. Initial estimates indicated that the GET extension could generate approximately \$1.8 billion in revenue at a 5 percent growth rate. However, as noted above, more current (and conservative) forecasts indicate that the additional revenue will be closer to \$1.5 billion.

The Governor signed the bill on July 14, 2015. The City Council will need to amend an ordinance to enact the tax extension. The City Council cannot enact the measure before July 1, 2015 (start of Fiscal Year) but must take action by July 1, 2016. If passed by the City Council, the Mayor must then sign the measure. The City Council could take action on Bill 23 to extend collection of the GET as early as December 2015. Public hearings were held November 5 and 9, 2015. The PMOC is concerned that the delay of the City Council's action beyond the planned target dates for issuance of the City Center Guideway and Stations DB RFP Part, which is anticipated in February 2016. This may further impact the project budget and schedule.

- Cost Containment/Cost Reduction Measures – The PMOC has discussed the project cost on a monthly basis with HART in an effort to ensure that cost issues are proactively addressed. HART has recently implemented Cost Containment and Cost Reduction measures in an effort to mitigate the cost increase. These efforts include:
 - Review of contract general terms and conditions to eliminate unique conditions and ambiguities that result in added costs

- Significant revision of the project’s contract packaging strategy to simplify interface and create cost reduction opportunities through contractor proposed innovations
- Development of a detailed cost reduction matrix that focuses on the remaining construction contracts (Value Engineering)
- Review of interface milestones to help relieve schedule compression where possible
- Review of various options related to financing of the project
- Identification of items that could be considered Operations & Maintenance costs
- Development of a HART Decision Milestone Matrix.

The PMOC will continue to hold Cost Containment Workshops with HART on a monthly basis to review the Cost Reduction Measures Matrix and HART’s Decision Milestone Matrix. Nevertheless, it is still anticipated that the Project cost will most exceed the FFGA budget. Therefore, in addition to the matrices, HART should initiate plans that identify a course of action, such as Secondary Mitigation Measures, and start to implement them.

- HART intends to build an interim park-and-ride facility at the University of Hawaii West Oahu Station. This facility would be in use until the developer completes the structure over the Kaloi Channel that allows for access to the permanent location of the park-and-ride facility. HART is evaluating the issue to determine whether to use federal or local funds to build the interim facility. 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. If federal funds are to be used, clarification is needed to determine the anticipated period that the facility would be utilized by HART.
- 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 that has so far been denied by the Department of Labor (DOL), although HECO has appealed. Meanwhile, HECO is still paying a wage scale that is less than the prevailing wages required by the DOL. HART may have to pay for HECO prevailing wages if the appeal is denied by DOL. The potential HECO prevailing wage costs are not reflected in HART’s revised EAC. If the appeal is denied, it is unclear whether HART would be required to pay HECO’s prevailing wage costs retroactively to cover any field work that has been completed by HECO for the project. HART and HECO met with DOL officials in September 2015. They are awaiting a final determination from the DOL.
 - 50-foot Clearance Issue – HECO and HART have continued high-level meetings to discuss numerous issues, including the offset issue. HECO has now indicated that the clearance is required to accommodate future pole replacement. The proposed use of a telescoping bucket truck would only mitigate some but not all line maintenance issues. This may have a tremendous impact on both schedule

and cost. Resolution of this issue affects ongoing DB contracts as well as the future DB contracts.

HART has acknowledged that under-grounding of portions of the overhead power lines will likely be required along limited lengths of the guideway. HART has assembled a Task Force Committee to review all options to help mitigate clearance issues.

This is currently HART's most significant risk to the project. This issue must be resolved soon, so HART can incorporate the final configuration into the City Center Guideway and Stations DB Contract. If HART is required to underground all affected lines, it would have a significant impact on the project costs. HART has indicated that they have incorporated some exposure into their EAC for this, but not enough to cover the full cost if the HECO clearance preferred solution requires complete undergrounding. The PMOC strongly recommended that HART prepare an independent cost estimate for all additional HECO-related costs, given their potential order of magnitude. The PMOC has also recommended that HART revise their procurement schedule for the remaining DB contracts if this issue is not formally resolved with HECO in sufficient time to accommodate any decisions into the RFP Part II proposals. This would include not only the extents of potential undergrounding, but also the key milestone dates (HECO design and all associated construction activities).

2.0 BODY OF REPORT

2.1.1 Project Status

- Overall project is approximately 39.2% complete as of September 2015. The planned completion at this time is approximately 54.6% (based on S-curve late plan).
- Overall design of the project is approximately 87.1% complete as of September 2015. The planned completion at this time is approximately 96.7% (based on S-curve late plan). However, this percent complete may change as a result of utilizing DB procurement strategy for the Airport and City Center guideway and stations sections.
- Overall construction of the project is approximately 30.7% complete as of September 2015. The planned completion at this time is approximately 46.6% (based on S-curve late plan).
- Section 2.1.3 and Appendix B of this report provide the status of the current design and construction contracts.

2.1.2 Status of Procurement

- Kamehameha Highway Station Stations Group – Invitation to Bid (IFB) was issued on August 18, 2015. Bids are due in November 17, 2015.
- Airport Guideway and Stations DB Contract – This contract will include a two-part Request for Proposals (RFP). RFP Part I (qualifications) responses were received in August 2015. Part II responses (price and technical) are due in February 2016. Final date for submission of Alternate Technical Concepts is December 18, 2015.
- City Center and Stations DB Contract – This contract will include a two-part RFP. RFP Part I was issued in August 2015. Responses are due in November 18, 2015. HART has not finalized a date for issuance of RFP Part II. However, HART indicated that they may delay the Part 1 responses to allow teams more time to form and to resolve critical issues (e.g. GET extension, HECO clearances).
- Dillingham Utilities and Road Widening – IFB to be issued in January 2016. Originally this work was to begin well in advance of the City Center Guideway and Stations DB Contract. However, the contracts are now overlapping. Therefore, the PMOC has questioned the merits of having a separate construction contract for this work.
- Pearl Highlands Parking Structure DB Contract – HART canceled this solicitation on July 1, 2015. HART is reviewing various options including partial buildout to support RSD and full buildout under a Public Private Partnership (PPP). HART discussed some options with the FTA on October 21, 2015.
- Fare Collection Technical Support Consultant – Contract was awarded to CH2M Hill on September 24, 2015, for a term of five years.
- Fare Collection System – Request for Proposal (RFP) was issued August 11, 2015. The deadline for receipt of proposals was extended to October 30, 2015, with the Best and Final Offer (BAFO) anticipated in early December 2015, and award in January 2016.
- CE&I East – Contract was awarded to Stantec. NTP was issued September 14, 2015.

2.1.3 Status of Primary Construction Contracts

- West Oahu/Farrington Highway (WOFH) Design-Build (DB) Contract –
 - Contract is approximately 75% complete based on earned value (design and construction activities). The planned earned value at this time is approximately 85%.
 - The contract is approximately six months behind schedule. The delay is the result of lower-than-planned production rates and lack of site access. HART and KIWC have been working to mitigate impacts to critical path activities. A revised baseline schedule was submitted by the contractor in August 2015 and is under review by HART. It is anticipated that the substantial completion milestone will be modified to reflect the delay.
 - Approximately five miles of guideway have been erected.
 - Overall quality of the contract is good, but there are some issues as discussed in Section 2.4.2 of this report.
- Kamehameha Highway Guideway (KHG) DB Contract –
 - The contract is approximately 44% complete based on earned value (design and construction activities). The planned earned value at this time is approximately 88%.
 - The contract is approximately 12 months behind schedule. HART has indicated that the delay is the result of lower-than-planned production rates, weather, and third-party construction of utility relocation work. A revised schedule was submitted in September 2015, re-sequencing the guideway and road work. That schedule is currently being reviewed by HART. Guideway is currently forecasted to be complete in April 2017. However, the completion of the overall contract has been pushed out to September 2017.
 - Guideway erection began in September 2015.
 - KIWC has mobilized a third guideway erection truss to help mitigate the WOFH and KHG delays.
- Maintenance and Storage (MSF) DB Contract –
 - The contract is approximately 79% complete based on earned value (design and construction activities). The planned earned value at this time is approximately 85%.
 - Building structures are essentially complete with interior buildout continuing.
 - Contract substantial completion is essentially on time and scheduled to be completed in April 2016.
 - Overall quality of the contract is good.
- Airport Advanced Utilities Construction Contract –
 - Contract is approximately 22% complete based on Earned Value. The planned earned value at this time is approximately 24%.
 - The contract is approximately seven months behind schedule. The delay was due to issues with Navy right of entry (ROE) for construction. The planned earned value has been adjusted as a result of the delayed access.
- Airport Section Guideway Seven Pier Construction Contract –
 - Contract is 100% based on Earned Value.

- All work has been completed. HART is currently in the process of closing out the contract.

2.1.4 Status of Core Systems Contract

Core System Description	Status
General	
Overall	<p>Contract is approximately 27% complete based on expenditures (design, manufacturing, and construction activities). The planned completion at this time is approximately 33.3% (based on late plan S-curve).</p> <p>Hitachi, LTD completed its acquisition of Ansaldo Breda and Ansaldo STS on November 2, 2015. HART met with Hitachi representatives and was told that there would be no immediate changes in management or staffing of AHJV.</p>
Design	<p>Following are the approximate levels of design completion</p> <ul style="list-style-type: none"> • LRVs – 100% (Interim Design), 56% (Final Design) • Train Control – 88% (Interim Design), 94% (Final Design) • Traction Power – 100% (Interim Design), 99% (Final Design) • Communications – 100% (Interim Design), 43% (Final Design) • Fire Detection – 100% (Interim Design), 56% (Final Design) • PSG, UPS, MPV – N/A (Interim Design), 78% (Final Design) <p>(Note: HART reports earned value only for the overall contract, not for design of the individual components.)</p>
Testing	Initial testing of the Platform Screen Gates (PSG) mockup is scheduled for November 2015.
Construction	Limited construction work (MSF signal house) began in June 2015; significant construction activity will not begin until fall 2015.
Schedule	AHJV revised baseline contract schedule was approved. However, re-procurement of Westside Stations Group and use of DB for the eastside guideway and stations will result in another revision to the CSC schedule. Revisions to the station and guideway Construction Access Milestone (CAM) dates will affect substantial completion of the AHJV work. HART anticipates that AHJV will submit a change request for extended overhead and escalation due to delay as a result. HART wants to ensure that the milestone dates it provides AHJV for its schedule update will not change.
Staffing	HART is satisfied with the current staffing levels provided by AHJV.
NTP Delay Claim	AHJV has asserted that it has had a 9-month delay in starting work due to CSC protest. Negotiations have been completed, and the proposed settlement has been approved by the HART Board.
System Performance Design	There are some concerns with AHJV's method for calculating headways and round-trip times. Alignment changes from Airport and City Center Fixed Facility Contractors may affect system performance. A full analysis was completed by AHJV and approved by HART in September 2015. The System Performance Analysis was provided to the PMOC for review.
Vehicle Subsystem	
Vehicle Schedule	Shipment of the first MOV (Maintenance Vehicle) to Honolulu is scheduled for February 2016. Final assembly of the first LRV in Pittsburg, CA began in September 2015. Shipment of the first LRV to Honolulu is scheduled for March 2016.

Core System Description	Status
Buy America	HART performed a Buy America Audit of the LRVs. HART intends to report the percentage based on the trainset, not type of car (End and Middle). Based on the trainset, the US content is 63%. Based on the type of car, the percentages are 64% (E car) and 62% (M car), which satisfy the minimum 60% US content for rail vehicles under Buy America.
Ship America	AHJV is negotiating terms with a carrier to transport the LRVs from Italy to US mainland and from US mainland to Hawaii. Once that agreement is finalized, HART will provide confirmation to FTA. AHJV received approval from the US Maritime Agency to ship the first 4 vehicles from a non-US carrier.
Traction Electrification Subsystem	
Middle Street AM Antenna	HART has identified an alternate location to relocate the AM Antenna. ROW is working to execute the agreement and relocate. Shielding is no longer necessary.
O&M Subsystem	
MSF O&M	AHJV has provided preliminary MSF Operations Plans, but will resubmit to better follow HART's O&M Plan and FTA guidelines.
Hawaiian Electric Companies (HECO)	
Activation Dates	HART and HECO are coordinating project schedule and HECO activation start dates for power.
Service Requests	AHJV has submitted HECO service requests for all system sites. Design coordination is progressing.

2.1.5 Real Estate Acquisition

- Currently, there are no ROW actions impeding construction work, although the ROW team continues to seek site access or full acquisition to ensure no delay to construction. HART is working to obtain all ROW and parcels that are necessary for construction. The PMOC will continue to closely monitor progress of the ROW actions to help avoid any impacts to construction.
 - HART has completed 54 of 225 acquisitions. The PMOC is concerned that the costs for acquisition may creep since many of the parcels have not been settled.
 - HART has completed 225 of 226 appraisals.
 - HART has site control of 105 parcels.
- HART proposed the use of irrevocable right of entry documents (Right of Entry, Possession and Use Agreement) to gain control of a parcel prior to condemnation. However, the use of the irrevocable right of entry has been delayed due to concerns expressed by owners regarding liability arising from third parties. This approach is a modification of the current procedures, and HART has updated the RAMP to include this approach.
- HART has requested authorization for eminent domain of 44 parcels:
 - 5 parcels have been filed with the court – 2 have been settled; 2 are friendly condemnations; and 1 is disputed.
 - 35 parcels received no objection from the City Council.
 - 2 parcels have been initially rejected by the City Council.
- All private property site access for the guideway is complete for KHG. KIWC has identified three permanent easement locations for relocated utilities. HART is working with KIWC to resolve these easements, and while they are critical, there is not currently an impact on construction work.
- HART is updating its EAC for real estate and will provide the information to the PMOC by the end of November 2015.

2.1.6 Third Party Agreements and Coordination

The following agreements are critical and will impact the project if not completed in the near term:

- Aloha Stadium Construction Right of Entry (CROE) – The CROE has been executed for the Kamehameha Highway Guideway with the Stadium Authority. This clears the way for guideway construction to begin in the area. HART is negotiating with the Stadium Authority for the park-and-ride construction right of entry. This agreement will become critical in early 2016.
- University of Hawaii Right of Entry – University of Hawaii (UH) requested that the HART contractor enter into a separate right of entry to construct on University property. University maintains that the current ROE with HART only addresses preliminary work, does not cover on-site construction, and that the University can refuse to admit the contractor. KIWC and UH are close to finalizing the ROE for the Leeward Community College, which will serve as the model for all other ROEs with UH.
- HART indicated that an MOU is pending with the GSA for all work adjacent to the Federal courthouse. This will include any protective measures (e.g. barriers) along the

station and guideway. The PMOC inquired whether GSA will have the right to review the final design since this work will now be completed under a DB contract. HART was uncertain, but will review the terms of the MOU and will provide clarification. The HDOT SOA is aware of the issue and is waiting for HART to resolve the issue. The MOU is not on the critical path, but if this issue is not resolved in the next 3 to 6 months, it may become critical.

- The outstanding third party agreements may affect construction contracts if not resolved in the next 3 to 6 months.

2.1.7 Environmental mitigation measures

- Proposed Design Changes/Refinement – HART is considering several proposed design refinements 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 Management Plan (PMP) and Sub-Plans

HART is in the process of updating several of its procedures and management plans. These updates are necessary due to HART organizational changes and the contract packaging changes that are being implemented. It is critical for HART to update these plans and procedures soon. Following is the status of the key management plan updates:

Plan	Status	Note
Project Management Plan (PMP)	Approved for FFGA but plan is being updated.	Draft PMP submitted to the PMOC for review in July 2015 without detailed budget and schedule information. HART will incorporate this information when it becomes available (tentatively 4 th Quarter of 2015). PMOC comments were provided to HART.
Contract Packaging Plan (CPP)	Approved for FFGA but update is pending	CPP must still be updated to reflect MPS and EAC changes.
Risk and Contingency Management Plan (RCMP)	Approved for FFGA but update is pending	PMOC received HART's response to our comments of the DRAFT RCMP on June 10, 2015. These responses are under review.
Financial Plan	Approved for FFGA. Draft Financial Plan submitted to FTA/PMOC for review.	Draft Financial Plan submitted to FTA/PMOC on August 14, 2015, which is based on HART's preliminary EAC and MPS. HART needs to await final action on the GET extension and approval of a revised FFGA budget by the FTA before it can update the plan.
Real Estate Acquisition and Management Plan (RAMP)	Approved for FFGA.	FINAL RAMP submitted on September 1, 2015.
Operations and Maintenance Plan (OMP)	Under PMOC review	Draft OMP submitted to the PMOC for review in September 2015.
Rail Fleet Management Plan (RFMP)	Under PMOC review	Draft RFMP submitted to the PMOC for review in September 2015.
Safety and Security Management Plan (SSMP)	Under PMOC review	Draft SSMP submitted to the PMOC for review in November 2015.
Safety and Security	Under PMOC review	Draft SSCP submitted to the PMOC for review

Certification Plan (SSCP)	in November 2015.
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2.3 Management Capacity and Capability (MCC)

HART has gone through a considerable number of organizational changes since the FFGA was executed in December 2012. The PMOC has recommended that HART review its staffing and consider changes to streamline the organization. HART has begun reviewing the project organization to determine if changes can be made to be more effective. Project staff has also begun updating the project’s numerous plans and procedures to reflect these changes. HART’s update of the management plans must incorporate any organizational changes that are proposed or already accomplished. It has become critical that any changes be documented in the various management plans immediately.

The PMOC is concerned that key HART staff has departed the project, which has left some gaps in their Management Capacity and Capability. The following is a summary of key open positions:

- Director of Planning & Right-of-Way (Existing Position) – agreement reached with candidate
- Director of Operations & Maintenance (Existing Position) – recruiting is ongoing
- West Area Construction Manager (New Position) – target November 2015 to fill position
- WOFH/KHG Project Manager (Existing Position) – Construction Manager will work as interim Project Manager until a replacement is recruited
- Project Manager Kamehameha Highway Station Group (KHSB)/H2R2 Ramp (New Position) – target November 2015 to fill position
- Assistant Project Manager City Center (New Position) – target December 2015 to fill position

HART Executive Director and Project Director are to review the staffing plan through completion of project to determine if agency and consultant staffing levels can be optimized as a cost reduction measure.

2.4 Project Cost

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
Total Project Cost	\$5.122 billion

Total Expenditures to Date – \$1.727 billion (through September 2015)

The following table presents the FFGA budget and expenditures to date. The Estimate at Completion (EAC) for each SCC will be provided once HART re-baselines its budget.

SCC	SCC Description	FFGA Budget	Base Cost	Allocated Cont.	Incurred
10	GUIDEWAY & TRACK ELEMENTS	1,275,328,962	1,114,305,144	161,023,818	235,047,373
10.04	Guideway: Aerial structure	1,175,328,184	1,022,380,670	152,947,514	17,378
10.08	Guideway: Retained cut or fill	8,077,393	7,492,943	584,450	185,962,277
10.09	Track: Direct fixation	86,332,027	79,437,204	6,894,823	49,067,718
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
20	STATIONS, STOPS, TERMINALS, INTERMODA	506,165,689	421,804,742	84,360,947	4,643,982
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	4,643,982
30	SUPPORT FACILITIES: YARDS, SHOPS, ADMIN. BLDGS	99,425,456	92,535,013	6,890,443	75,445,757
30.02	Light Maintenance Facility	8,161,279	7,591,887	569,392	1,661,094
30.03	Heavy Maintenance Facility	40,906,889	38,099,138	2,807,751	24,771,232
30.04	Storage or Maintenance of Way Building	8,382,270	7,797,460	584,810	5,297,687
30.05	Yard and Yard Track	41,975,018	39,046,528	2,928,490	43,715,744
40	SITWORK & SPECIAL CONDITIONS	1,103,867,264	980,569,426	123,297,838	499,589,989
40.01	Demolition, Clearing, Earthwork	34,695,802	29,980,157	4,715,645	2,504,792
40.02	Site Utilities, Utility Relocation	350,694,801	299,449,755	51,245,046	97,830,797
40.03	Haz. mat'l, contam'd soil removal/mitigation, ground water treatments	7,228,935	6,590,542	638,393	2,140,832
40.04	Environmental mitigation, e.g. wetlands, historic/archeologic, parks	30,841,906	26,979,122	3,862,784	9,965,033
40.05	Site structures including retaining walls, sound walls	8,637,582	7,998,960	638,622	4,028,004
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	4,535,519
40.08	Temporary Facilities and other indirect costs during construction	410,969,241	386,517,624	24,451,617	378,535,012
50	SYSTEMS	247,460,781	221,284,483	26,176,298	33,202,470
50.01	Train control and signals	91,492,532	81,982,556	9,509,976	2,250,972
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	3,088,502
50.04	Traction power distribution: catenary and third rail	36,426,286	32,878,150	3,548,136	16,769,209
50.05	Communications	59,889,234	53,691,339	6,197,895	12,225,688
50.06	Fare collection system and equipment	10,221,753	9,159,277	1,062,476	(1,131,901)
50.07	Central Control	4,033,031	3,614,007	419,024	0
Construction Subtotal (10 - 50)		3,232,248,152	2,830,498,808	401,749,344	847,929,571

SCC	SCC Description	FFGA Budget	Base Cost	Allocated Cont.	Incurred
60	ROW, LAND, EXISTING IMPROVEMENTS	222,188,386	197,397,947	24,790,439	87,342,497
60.01	Purchase or lease of real estate	201,658,907	179,360,664	22,298,243	77,473,977
60.02	Relocation of existing households and businesses	20,529,479	18,037,283	2,492,196	9,868,520
70	VEHICLES	208,501,186	186,829,020	21,672,166	29,150,290
70.02	Heavy Rail	186,061,066	166,721,385	19,339,681	21,357,829
70.06	Non-revenue vehicles	16,011,166	14,346,923	1,664,243	7,792,461
70.07	Spare parts	6,428,954	5,760,712	668,242	0
80	PROFESSIONAL SERVICES	1,183,826,026	1,090,438,814	93,387,212	742,934,814
80.01	Preliminary Engineering	95,120,484	94,055,262	1,065,222	102,945,648
80.02	Final Design	257,934,908	228,321,632	29,613,276	164,814,514
80.03	Project Management for Design and Construction	385,825,694	366,458,463	19,367,231	300,493,872
80.04	Construction Administration & Management	218,155,752	199,656,728	18,499,024	75,916,481
80.05	Professional Liability and other Non-Construction Insurance	52,138,030	46,549,724	5,588,306	28,373,781
80.06	Legal; Permits; Review Fees by other agencies, cities, etc.	76,135,125	67,641,006	8,494,119	20,097,291
80.07	Surveys, Testing, Investigation, Inspection	24,955,327	21,759,335	3,195,992	27,495,734
80.08	Start up	73,560,706	65,996,664	7,564,042	22,797,493
90	Subtotal (10 - 80)	4,846,763,750	4,305,164,589	541,599,161	1,707,357,172
	UNALLOCATED CONTINGENCY	101,871,170	0	101,871,170	0
100	Subtotal (10 - 90)	4,948,634,920	4,305,164,589	643,470,331	1,707,357,172
	FINANCE CHARGES	173,058,242			0
	Total Project Cost (10 - 100)	5,121,693,162	4,305,164,589	643,470,331	1,707,357,172
	Provisional Request for Payment				19,374,627
	Total Project Cost (10 - 100)	5,121,693,162	4,305,164,589	643,470,331	1,726,731,799

HART's current Estimate at Completion (EAC) indicates that the Project cost will most likely exceed the FFGA budget primarily due to the AIS, federal lawsuit delays, subsequent impact of current market conditions, and several other items that are anticipated to be an additional cost to the project. HART is continuing to review the project budget and will update the EAC accordingly.

2.4.1 Contingency

During the HART Joint Finance/Project Oversight Committee Meeting on October 15, 2015, HART staff provided an Update on Budget and Schedule Pursuant to Resolution 2015-86. During the presentation, HART staff provided the following preliminary information:

- Updated Estimate at Completion (EAC) – \$6.5 billion
- Updated EAC includes \$240 million in Allocated Contingency and \$299 million in Unallocated Contingency.
- Updated finance costs include \$310 million.

The HART Joint Finance/Project Oversight Committee did not take action on the preliminary information that was presented. It is anticipated that additional discussions will occur during the November 2015 Board meetings.

HART staff has begun providing supporting documentation for the updated cost and schedule. However, there were several items discussed with HART during the November 2015 Project

Controls Meeting that the PMOC believes may not be fully addressed in the EAC. Some of these items include:

- Cost for full buildout of Pearl Highlands Parking Garage
- HECO clearance issue
- Real estate adjustments
- Full exposure of WOFH, KHG, and CSC delays
- OCIP adjustment for time extensions
- Elevator/Escalator Contract escalation

Once the EAC is finalized, HART must also then update the contingency drawdown curve for inclusion in the Risk and Contingency Management Plan and Monthly Reports.

2.4.2 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
Total	\$5.122 billion

Following is the status of HART’s GET receipts:

- HART has received approximately \$1.521 billion in GET funds since 2007.
- HART has received approximately \$1.143 billion in GET funds since Preliminary Engineering, which began in October 2009.

HART has indicated that it will not have access to \$210 million in Section 5307 funds for the project. HART and the City identified substitute funding to address the loss of these funds in the Draft Financial Plan that was submitted to the FTA/PMOC on August 14, 2015. The City Council could take action on Bill 23 to extend collection of the GET as early December 2015. Public hearings were held November 5 and 9, 2015.

2.5 Project Schedule

The Master Project Schedule has undergone significant revision as a result of the re-packaging of the remaining contracts. A preliminary update of the MPS was provided to the PMOC in March 2015. HART then transmitted a work-in-progress (Draft) MPS to the PMOC for review on July 8, 2015 that identified a Target Completion Date (TCD) for the start of full revenue service of June 2021. Although a project sponsor’s TCD may be earlier than the FTA Revenue Service Date (RSD), the TCD provided by HART was based on an 8% level of confidence. It was noted by FTA at the Quarterly Progress Meeting on August 19, 2015 that such a low level of confidence is unacceptable. The updated MPS did not contain any unallocated contingency. HART and the PMOC held a schedule workshop on September 8, 2015.

During the HART Joint Finance/Project Oversight Committee Meeting on October 15, 2015, HART staff provided the following preliminary targets for Revenue Service Dates (RSD):

- Phase 1 Milestone Ready for Revenue Service to Aloha Stadium – 3rd Quarter 2018
- Phase 2 Milestone Ready for Revenue Service (full system) – 4th Quarter 2021

HART provided the PMOC with an updated MPS in November 2015 that indicates a RSD for the full system in December 2021. This version of the MPS will be used for the Risk Refresh.

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

Period: December 2015 – February 2016		
Activity	Responsibility	Date
Monthly Progress Meeting	FTA, HART and PMOC	December 9, 2015
Monthly Progress Meeting	FTA, HART and PMOC	January 13, 2016
Monthly Progress Meeting	FTA, HART and PMOC	February 9, 2016
Quarterly Meeting	FTA, HART and PMOC	To be determined
Risk Refresh	FTA, HART and PMOC	To be determined

2.6 Quality Assurance/Quality Control (QA/QC)

- WOFH Span 17 Damage and Repair – During the erection in March 2015, three segments were damaged due to unbalanced support from the temporary bearings. KIWC has submitted a repair procedure, which was approved by HART. KIWC is currently preparing for the Pre-Activity meeting on the repair of the cracked segments. Repair completion is not in the critical path.
- Track Construction Operations – KIWC had proposed fabrication of precast guideway segments to eliminate the need for plinths. However, KIWC had issues with geometry control in casting and erection that have resulted in deviations in vertical and horizontal alignment that exceeds tolerances in several locations. KIWC and HART are discussing options for these locations. It should be noted that KIWC’s geometry control on more recent segments are within tolerances.
- Following is a summary of Non-Conformance Reports (NCR) that have been issued:

Contract	Description	NCRs		
		Issued	Closed	Open
DB-120	West Oahu/Farrington Highway	462	401	61
DB-200	Maintenance and Storage Facility	28	27	1
DB-320	Kamehameha Highway Guideway	85	61	24
DBOM-920	Core Systems Contract	284	215	69

It should be noted that the increase in Open NCRs for the WOFH DB Contract is primarily the result of items identified in the precast yard and the concrete consolidation issues with drilled shafts. KHG DB contract is experiencing similar concrete consolidation issues with the drilled shafts. However, KIWC has developed measures to correct these NCRs and help prevent issues in the future.

2.7 Safety and Security

- HART Design Conformance Checklists, including CELs/CILs for active projects, are going through the Safety and Security Review Committee (SSRC) for approval. However, Construction Conformance and Testing Verification are lagging.
- HART is in the process of updating its Safety and Security Management Plan (SSMP), Safety and Security Certification Plan (SSCP), and Construction Safety and Security Plan (CSSP) to conform to the update of the PMP which was submitted on August 4, 2015.
- HART will be receiving LRVs during the 1st Quarter of 2016. Prior to any dynamic testing, HART must provide HDOT with all design, construction, and inspection verification and meet the requirements of its SOA Program Plan before HDOT will approve HART for interim testing. HART is working on vehicle certification planning activities to comply with the HART Certification Plan.
- The Airport 7 Pier Project is completed. HART performed close out, including final safety certification.
- HART submitted an updated Safety and Security Roadmap that incorporates input from HDOT State Oversight Agency.
- HART indicated that an MOU is pending with the GSA for all work adjacent to the Federal courthouse. This will include any protective measures (e.g. barriers) along the station and guideway. The PMOC inquired whether GSA will have the right to review the final design since this work will now be completed under a DB contract. HART has been unable to answer how reviews of security measures will be handled. However, HART Project Director has committed to providing an answer.
- HDOT has discussed the preliminary recommendations from recent TSO review with HART.

2.8 Project Risk

A Risk Refresh Workshop was performed on April 15, 2014. Some of the conclusions and recommendations in the PMOC report included:

- 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. This gap will increase, 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 has discussed the project cost on a monthly basis with HART in an effort to ensure cost issues are proactively addressed. HART has recently implemented Cost Containment and Cost Reduction measures in an effort to mitigate the cost increase. These efforts include:

- Significant revision of HART's contract packaging strategy
- Development of a detailed cost reduction matrix that focuses on the remaining construction contracts (Value Engineering)
- Review of interface milestones to help relieve schedule compression where possible
- Review of various options related to financing of the project
- Identification of items that could be considered Operations & Maintenance costs
- Development of a HART Decision Milestone Matrix.

HART will continue to update the Cost Reduction Measures matrix and Decision Milestone Matrix on a regular basis (at least monthly). The PMOC will continue to hold Cost Containment Workshops with HART on a monthly basis to review the Cost Reduction Measures Matrix and HART's Decision Milestone Matrix. Nevertheless, it is still anticipated that the Project cost will exceed the FFGA budget.

It is anticipated that another Risk Refresh will be completed once the updated MPS is available and the EAC has been updated.

2.9 Action Item Table

Item No.	Item	Responsible Party	Date Identified	Date Due	Date Completed	Status
1	Resolve HECO issue with Davis-Bacon requirements	HART/FTA	Mar-14	On-going		Open – HECO waiver is pending. HART provided MOU to PMOC.
2	Updates resulting from Risk Refresh:					
2a	Update the Contract Packaging Plan	HART	Aug-14	Dec-15		In progress – Draft provided to PMOC but changes may be incorporated on updated estimate and schedule
2b	Re-baseline Financial Plan	HART	Apr-14	TBD		Pending final update of budget and schedule
2c	Re-baseline budget	HART	Apr-14	Dec-15		In progress (EAC will be available in July, but an approved re-baseline budget will not occur until late 2015.)
2d	Re-baseline MPS	HART	Apr-14	TBD		In progress – PMOC is reviewing draft update; will be discussed at September Progress Meeting
2f	Update RCMP (including Hold Points and Secondary Mitigation Measures)	HART	Sept-13	TBD		In progress – PMOC provided review comments on early draft, but updated draft will be prepared to reflect revised budget and schedule.
3	Provide OP 54 (Readiness for Revenue Operations) checklist/roadmap	FTA/PMOC	Apr-15	Nov-15		OP 54 provided to HART; PMOC to provide sample report
4	Hold conference call to discuss use of P3 for Pearl Highlands Parking Structure	FTA/HART	Aug-15	Nov-15		
5	Provide list of HART procedures that are to be updated	HART	Aug-15	Nov-15		
6	Provide EAC in SCC format	HART	Aug-15	Nov-15		
7	HART to provide target date for Federal Courthouse resolution/sign-off	HART	Sep-15	Nov-15		
8	HART to provide NCR for shim tolerances	HART	Oct-15	Oct-15	3-Nov-15	Completed
9	Provide Addendum for City Center Guideway and Stations DB contract.	HART	Oct-15	Oct-15	Nov-15	Completed
10	HART to provide two letters regarding Hitachi's acquisition of Ansaldo Breda and Ansaldo STS	HART	Nov-15	Nov-15		
11	HART to provide a matrix of ROW parcels	HART	Nov-15	Nov-15		

Item No.	Item	Responsible Party	Date Identified	Date Due	Date Completed	Status
12	HART to provide Buy America email to FTA on HVAC controls/	HART	Nov-15	Nov-15		
13	HART to provide white paper on HDOT betterments	HART	Nov-15	Nov-15		

3.0 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
CROE	▪ Construction Right of Entry
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
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

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	Amendment No. 4d. 3/18/14		\$40,993,274	\$34,945,136	85.2%	0%	Mar 2012	Mar 2016
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	\$21,051,360	45.6%	3.66%	Dec 2013	Mar 2019
Notes/Issues:		<ul style="list-style-type: none"> ▪ None at this time 									
MM-290	Construction Engineering and Inspection (West)	PGH Wong Engineering, Inc	\$54,232,480			\$54,232,480	\$16,766,614	30.9%	1.81%	Jan 2014	Jan 2020
Notes/Issues:		<ul style="list-style-type: none"> ▪ None at this time. 									
MM-595	Construction Engineering and Inspection (East)	AECOM/URS Corporation	\$63,083,417	(\$47,826,417)		\$15,257,000	\$11,045,554	72.5%	2.1%	Jan 2014	Dec 2018
Notes/Issues:		<ul style="list-style-type: none"> ▪ The new CE&I consultant for the East Section was issued NTP in September. The AECOM/URS team immediately began a transition that will occur from NTP through October 9, 2015. The AECOM/URS project closeout is expected to be completed 30 days after the completion of the transition. 									
MM-596	Construction Engineering and Inspection II (East)	Stantec Consulting Services Inc.	\$55,036,130			\$55,036,130				Sep 2015	Dec 2019
Notes/Issues:		<ul style="list-style-type: none"> ▪ HART requested an Independent Cost Estimate (ICE) be performed on the Airport Guideway and Stations DB contract, the Dillingham Utilities and Roadway DBB contract, and the City Center Guideway and Stations DB contract. These ICE's will be completed over the next five months and in advance of the bid opening dates. ▪ Transition with the previous CE&I staff was successfully completed. 									
MM-962	Core System Contract Oversight Consultant	Lea + Elliott, Inc	\$43,988,989			\$43,988,989	\$10,812,962	24.6%	0.57%	Feb 2014	Aug 2019
Notes/Issues:		<ul style="list-style-type: none"> ▪ None at this time. 									
MM-945	On-Call Construction Contractor	Royal Contracting Co. Ltd	\$1,000,000	\$999,951	99.99%	\$1,999,951	\$1,911,070	95.6%	0%	Aug 2014	Jul 2019
Notes/Issues:		<ul style="list-style-type: none"> ▪ None at this time. 									

Contract	Description	Contractor	Base Contract Value	Change Orders	Change Order %	Current Contract Value	Expended	% Exp.	DBE	Award Date	Compl. Date
DB-120	West Oahu/Farrington Highway DB	KIWC	\$482,924,000	\$148,282,384	30.7%	\$631,206,384	\$463,061,419	73.4%	1.31%	Nov 2009	Jul 2016
Notes/Issues:		<ul style="list-style-type: none"> Agreement called for issuance of all four NTPs within 120 calendar days of December 1, 2009. 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. Contract is approximately six months behind schedule. The delay is the result of lower-than-planned production rates and lack of site access. HART and KIWC have been working to mitigate impacts to critical path activities. HART received a revised baseline schedule from the contractor, but it was rejected. HART has requested that the schedule be resubmitted via the Change Order process. 									
DB-200	Maintenance and Storage Facility DB	Kiewit/Kobayashi JV	\$195,258,000	\$79,620,772	40.77%	\$274,878,772	\$225,845,597	70.7%	0.17%	Jun 2011	Apr 2016
Notes/Issues:		<ul style="list-style-type: none"> 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. 									
DB-320	Kamehameha Highway Guideway DB	KIWC	\$372,150,000	\$16,759,985	4.5%	\$388,909,985	\$168,647,073	42.1%	0.08%	Jun 2011	Sep 2016
Notes/Issues:		<ul style="list-style-type: none"> 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. Contract is approximately 12 months behind schedule. The delay is the result of lower-than-planned production rates and lack of site access. HART and KIWC have been working to mitigate impacts to critical path activities. HART received a revised baseline schedule from the contractor, but it was rejected. HART has requested that the schedule be resubmitted via the Change Order process. KIWC has mobilized a third guideway erection truss to help mitigate the WOFH and KHG delays. 									
DBOM-920	Core Systems Contract	Ansaldo/Honolulu JV	\$573,782,793	\$21,280,894	3.7%	\$595,063,687	\$150,172,400	25.2%	0.029%	Nov 2011	Mar 2019
Notes/Issues:		<ul style="list-style-type: none"> AHJV revised their baseline contract schedule, and it has been approved. However, re-procurement of Westside Stations Group and use of DB for the eastside guideway and stations will result in another revision to CSC schedule. Revisions to the station and guideway Construction Access Milestone (CAM) dates might affect substantial completion of the AHJV work. HART anticipates that AHJV will submit a change request for extended overhead and escalation due to delay as a result. HART wants to ensure that they provide AHJV with milestone dates for their schedule update that should not change. Hitachi, LTD completed its acquisition of Ansaldo Breda and Ansaldo STS on November 2, 2015. HART met with Hitachi representatives and was told that there would be no immediate changes in management or staffing of AHJV. 									
MI-930	Elevators and Escalators Install & Maintain	Schindler Elevator Corporation	\$50,982,714	\$0	0%	\$50,982,714	\$4,643,982	9.1%	0%	May 2013	Jul 2018
Notes/Issues:		<ul style="list-style-type: none"> None at this time. 									

Contract	Description	Contractor	Base Contract Value	Change Orders	Change Order %	Current Contract Value	Expended	% Exp.	DBE	Award Date	Compl. Date
FD-140	West Oahu Station Group Construction FD	URS, Inc.	\$7,789,000	\$2,825,305	36.2%	\$10,014,305	\$9,093,096	91.7%	0%	Jun 2012	Dec 2016
Notes/Issues:		<ul style="list-style-type: none"> None at this time. 									
FD-240	Farrington Highway Station Group FD	HDR, Inc. / URS	\$9,300,696	\$5,017,093	54%	\$14,198,045	\$12,546,293	89.4%	4.7%	Jan 2011	Dec 2016
Notes/Issues:		<ul style="list-style-type: none"> Bids were received on March 3, 2015. FFGA budget for this stations group was \$55 million, and the current Engineers Estimate was \$76 million. The apparent low bid was \$78.9 million. HART received a bid protest notification from the second low bidder on March 11, 2015. HART rejected the protest and the bidder filed an appeal with the DCCA. A hearing is scheduled for May 28, 2015. HART is proceeding with award of the contract in June 2015 and issuing NTP in July 2015. 									
FD-340	Kamehameha Highway Station Group Construction FD	Anil Verma, Inc.	\$8,702,592	\$976,698	11.2%	\$9,636,290	\$8,843,841	98.1%	40.25%	Nov 2012	Dec 2016
Notes/Issues:		<ul style="list-style-type: none"> Revised engineer's estimate exceeds the FFGA budget. Kamehameha Highway Station Stations Group – IFB will be issued in August 2015. 									
FD-430	Airport Section Guideway and Utilities FD	AECOM	\$38,840,960	\$4,293,512	11.0%	\$43,134,472	\$41,028,823	95.1%	0.42%	Dec 2011	Jun 2017
Notes/Issues:		<ul style="list-style-type: none"> Airport Guideway will be combined with Airport Stations into a DB Contract. This contract will include a two-RFP. Part I was issued in April 2015 with responses due June 9, 2015. However, HART has extended the response period 6 weeks to allow for JV teams to form. Part II responses (price and technical) will be due in January 2016. Some of HART's staff have expressed concern whether viable teams are forming. HART will check with DCCA to see if any new JV teams have applied for a contracting license. Revised engineer's estimate exceeds the FFGA budget. 									
FD-440	Airport Station Group Construction FD	AECOM	\$10,177,365	\$1,514,840	14.88%	\$11,672,205	\$9,801,978	86.0%	2.31%	Nov 2012	Jul 2017
Notes/Issues:		<ul style="list-style-type: none"> HART has limited the designers' activity to supporting preparation of the eastside DB contracts. 									
FD-530	City Center Section Guideway and Utilities FD	AECOM	\$43,948,220	\$1,282,803	2.9%	\$46,183,523	\$40,284,180	87.2%	0.44%	Jul 2012	May 2018
Notes/Issues:		<ul style="list-style-type: none"> City Center Guideway will be combined with Dillingham/Kaka'ako Stations Group into a DB Contract. This contract will include a two-RFP. Part I will be issued August 2015. Part II will be issued in October 2015. NTP is anticipated for June 2016. Revised engineer's estimate exceeds the FFGA budget. The PMOC strongly recommends that HART does not issue NTP for this contract unless the HECO clearance issues are resolved. 									

Contract	Description	Contractor	Base Contract Value	Change Orders	Change Order %	Current Contract Value	Expended	% Exp.	DBE	Award Date	Compl. Date
FD-550	Dillingham and Kaka'ako Station Group Construction FD	Perkins & Will	\$18,321,918	\$1,046,743	5.71%	\$19,308,042	\$10,677,500	59.5%	0%	Jun 2013	Jul 2018
Notes/Issues:		<ul style="list-style-type: none"> HART has limited the designers' activity to supporting preparation of the eastside DB contracts. 									
DBB-505	Airport Section Utilities Construction	Nan	\$28,413,973	\$0	0%	\$28,413,973	\$6,272,609	22.1%	0%	Jul 2014	Jun 2016
Notes/Issues		<ul style="list-style-type: none"> The contract is approximately seven months behind schedule. The delay is due to issues with Navy right of entry (ROE) for construction. 									
DBB-525	Airport Section Guideway Seven Pier Construction	HDCC/CJA JV	\$3,973,000	\$508,241	12.7%	\$4,481,241	\$3,796,241	85.0%	0%	Sep 2014	Feb 2015
Notes/Issues		<ul style="list-style-type: none"> Construction is substantially completed 									
DBB-271	Farrington Highway Station Group Construction	Hawaiian Dredging Construction Company, Inc.	\$78,999,000	\$0	0%	\$78,999,000	\$0	0%	0%	Aug 2015	Sep 2017
Notes/Issues		<ul style="list-style-type: none"> None at this time. 									
DBB-385	Ramp H2R2	Royal Contracting Co. Ltd	\$5,203,646	\$0	0%	\$5,203,646	\$0	0%	0%	May 2015	Jun 2016
Notes/Issues		<ul style="list-style-type: none"> None at this time. 									

Appendix C: PMOC Team

Name	Position	Background
Tim Mantych, PE	Program Manager	Overall responsibility for the Jacobs PMO program. He has spent 16 years in key management roles on the PMO program, including Program Manager and Task Order Manager, effectively managing oversight services for major capital projects in Regions V and IX.
Bill Tsiforas	Task Order Manager	Responsible for oversight of this task order. He has over 25 years of experience and has served as Task Order Manager and as a systems integration manager in the PMO Program since 2008. His project management experience covers a wide range of transit projects including BRT, monorail, streetcar, light rail, and heavy rail systems. In rail projects and other transportation modes, he has experience in management of project planning, engineering, and architecture service contract, engineering design, and construction management.
Keith Konradi, PE	Civil Engineer	Has extensive over 40 years of experience as a civil engineer and trackwork expert who can provide informed reviews of all issues regarding the design and construction of civil, railroad, and transit. He has specialized in railroad and transit projects, designing new alignments, realignments, profiles, yard, and maintenance facility layouts, connections, and interlockings.
Charles Neathery	Construction Management Manager	Responsible for oversight of construction management activities and project scheduling. He has served on the PMO Program since 1995 in various key positions: Deputy Program Manager, Task Order Manager, Construction Manager, Risk Manager, and Technical Specialist. His heavy civil construction background as a construction contractor Project Manager and as Program and Controls Director combines experience on both sides of the industry as a builder and a manager.
Tim Morris	Cost Estimating Manager	Responsible for oversight of cost estimating and cost control. He brings 34 years of experience in cost estimating. His background includes: construction and project management of heavy civil projects; cost estimating; field engineering; scheduling; project controls; change order negotiations; and procurement.
Brian Carpenter	Project Scheduling Manager	Responsible for oversight of project scheduling. Has over 25 years of experience project controls including schedule development and management. Well versed with following: Primavera Project Planner (P3), Primavera 7.0, Suretrak, M.S. Project, Schedule Analyzer, Claim Digger, Private Investigator, and PertMaster (Monte Carlo Risk Analyzer), as well as document management tools: Prolog, ProjectWise, and Contract Manager (Expedition).
Dorothy Schulz, PhD	Systems Safety Manager	Responsible for oversight of safety and security activities. She has been Director of Transit Security Practice at Interactive Elements for more than 20 years. She performs safety and security studies and oversights for various agencies. She also performs FTA State Oversight Agency (SOA) audits as well as Safety and Security Readiness Reviews (SSRRs). Dr. Schulz has written and/or reviewed numerous TVAs, PHAs, SSPPs, and SSPs; all require comprehensive understanding of the 882C Standard.
Arun Virginkar	Rail Equipment Engineer	Responsible for oversight of rail vehicle engineering and Buy America compliance. He has been involved with the PMOC Program since 1994. He has experience in contract management, vehicle and systems equipment engineering, operations and maintenance planning, system integration and testing, safety certification plans, and quality and system assurance. He also has specialized experience in Buy America Pre-Award and Post-Delivery audits of car builders.
Bob Merryman	Real Estate Manager	Responsible for oversight of real estate activities on the project. He has 35 years of practical experience in the implementation of the Uniform Act in federally funded projects. In addition, he has written three text books used by FHWA, as well as the one additional course text used by the FTA discussing the implementation of the Uniform Act. He also served as lead investigator on the business retrospective study for the Federal Highway Administration. The information gleaned from this investigation was to develop the most recent revisions to 49 CFR Part 24.

David Sillars, PhD	Risk Assessment Manager	Responsible for oversight of the risk management activities for the project. He has over 35 years of experience in risk and management consulting and transportation research. He assisted FTA with editing and developing the updated MAP-21 Risk and Contingency Management Oversight Procedure (OP 40) and updated FTA risk workbook. He has co-developed and delivered the New Starts risk management training program for the National Transit Institute on behalf of the FTA.
David Nelson	Transit Operations Manager	Responsible for oversight of the transit operations planning for the project Has more than 30 years of experience with in-depth, working knowledge of North American public transportation agencies. Was previously assistant director and project manager of planning and manager of transit applications for the Massachusetts Bay Transportation Authority and the manager of planning and administration for the Boston & Maine Railroad.

Appendix D: Project Overview and Map (Transmitted as a separate file)

Appendix E: Safety and Security Checklist (Transmitted as a separate file)

Appendix D: Project Overview and Map

Date: November 2015
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 104,300 weekday boardings in 2019; 119,600 weekday boardings in 2030

SCHEDULE

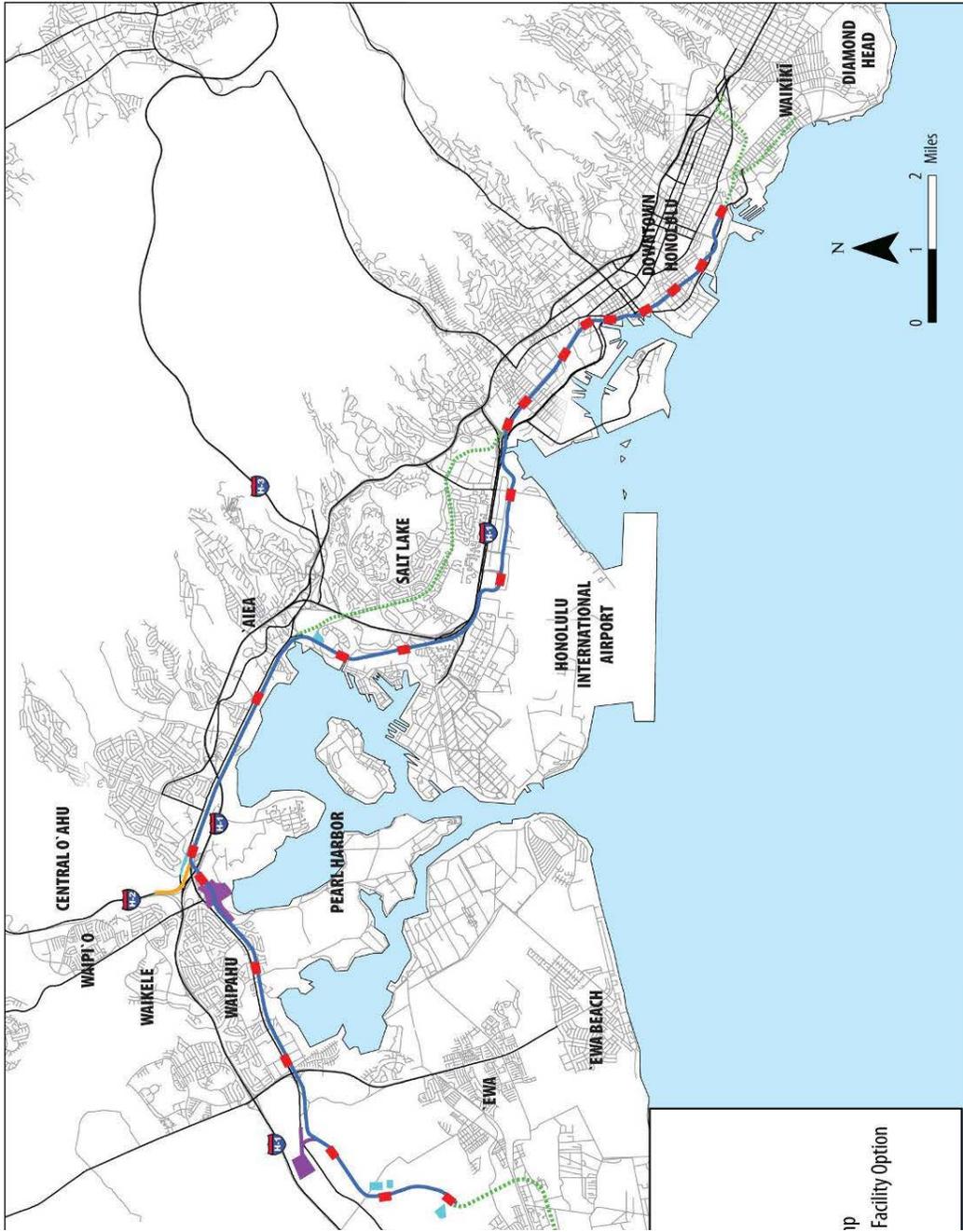
10/09 Approval Entry to PE	03/19 Estimated RSD at Entry to PE
12/11 Approval Entry to FD	03/19 Estimated RSD at Entry to FD
06/12 Request for FFGA	03/19 Estimated RSD at Request for FFGA
12/12 FFGA	01/20 RSD at FFGA

COST

\$5.348 B Total Project Cost (\$YOE) at Approval Entry to PE
\$5.126 B Total Project Cost (\$YOE) at Approval Entry to FD
\$5.122 B Total Project Cost (\$YOE) at request for an FFGA
\$5.122 B Total Project Cost (\$YOE) at FFGA

\$1.727B Amount of Expenditures at date of this report
39.2% complete (Total Project Expenditures/Total Project Cost)

Honolulu Rail Transit Project Map



Appendix E: Safety and Security Checklist

Project Overview			
Project Name	Honolulu Rail Transit Project		
Project mode (Rail, Bus, BRT, Multimode)	Rail		
Project phase (Preliminary Engineering, Final Design, Construction, or Start-up)	FD		
Project Delivery Method (Design/Build, Design/Build/Operate Maintain, CMGC, etc.)	DB, DBB and DBOM		
Project Plans	Version	Review by FTA	Status
Safety and Security Management Plan	3.0	Y	Complete
Safety and Security Certification Plan	2.0	Y	Complete
System Safety Program Plan			Submittal date Mar-13
System Security Plan or Security and Emergency Preparedness Plan (SSEPP)		N	TBD
Construction Safety and Security Plan	1.0	Jun-11	Submitted in Mar-11
Safety and Security Authority	Y/N		Status
Is the grantee subject to 49 CFR Part 659 state safety oversight requirements?	Y		
Has the state designated an oversight agency as per Part 659.9	Y		Executive Order 10-04 effective April 6, 2010
Has the oversight agency reviewed and approved the grantee's SSPP as per Part 659.17?	N		Submission/Approval in 2013
Has the oversight agency reviewed and approved the grantee's Security Plan or SEPP as per Part 659.21?	N		Submission/Approval in 2013
Did the oversight agency participate in the last Quarterly Program Review Meeting?	Y		April 16, 2014
Has the grantee submitted its safety certification plan to the oversight agency?	N		SOA information
Has the grantee implemented security directives issues by the Department Homeland Security, Transportation Security Administration?	N		None issued to date
SSMP Monitoring			
Is the SSMP project-specific, clearly demonstrating the scope of safety and security activities for this project?	Y		
Grantee reviews the SSMP and related project plans to determine if updates are necessary?	Y		
Does the grantee implement a process through which the Designated Function (DF) for Safety and DF for Security are integrated into the overall project management team? Please specify.	Y		
Does the grantee maintain a regularly scheduled report on the status of safety and security activities?	Y		Reported Monthly
Has the grantee established staffing requirements, procedures and authority for safety and security activities throughout all project phases?	Y		
Does the grantee update the safety and security responsibility matrix/organization chart as necessary?	Y		
Has the grantee allocated sufficient resources to oversee or carry out safety and security activities?	Y		
Has the grantee developed hazard and vulnerability analysis techniques, including specific types of analysis to be performed during different project phases?	Y		

Does the grantee implement regularly scheduled meetings to track to resolution any identified hazards and/or vulnerabilities?	Y	
Does the grantee monitor the progress of safety and security activities throughout all project phases? Please describe briefly.	Y	
Does the grantee ensure the conduct of preliminary hazard and vulnerability analyses? Please specify analyses conducted.	Y	
Has the grantee ensured the development of safety design criteria?	Y	
Has the grantee ensured the development of security design criteria?	Y	
Has the grantee verified conformance with the safety and security requirements in the design?	N	Will be done during FD/Construction
Has the grantee identified conformance with safety and security requirements in equipment and materials procurement?	N	Will be done during FD/Construction
Has the grantee verified construction specification conformance?	N	Will be done during construction
Has the grantee identified safety and security critical tests to be performed prior to passenger operations?	N	Will be done during Rail Activation phase
Has the grantee verified conformance with safety and security requirements during testing, inspection and start up phases?	N	Will be done during Rail Activation phase
Does the grantee evaluate change orders, design waivers, or test variances for potential hazards and/or vulnerabilities?	N	Will be done during FD/Construction
Has the grantee ensured the performance of safety and security analyses for proposed work-arounds?	N	Will be done during Rail Activation phase
Has the grantee demonstrated through meetings or other methods, the integration of safety and security in the following: <ul style="list-style-type: none"> • Activation Plan and Procedures • Integrated Test Plan and Procedures • Operations and Maintenance Plan • Emergency Operations Plan 	N	Will be done during Rail Activation phase
Has the grantee issued final safety and security certification?	N	Will be done after completion of Rail Activation phase
Has the grantee issued the final safety and security verification report?	N	Will be done during Rail Activation phase
Construction Safety		
Does the grantee have a documented/implementation Contractor Safety Program with which it expects contractors to comply?	Y	CSP development is included in construction contracts
Does the grantee's contractor(s) have a documented company-wide safety and security program plan?	TBD	Is a requirement of CSSP
Does the grantee's contractor(s) have a site-specific safety and security program plan?	TBD	Is a requirement of CSSP
Provide the grantee's OSHA statistics compared to the national average for the same type of work?	TBD	None developed yet
If the comparison is not favorable, what actions are being taken by the grantee to improve its safety record?	TBD	None developed yet
Does the grantee conduct site audits of the contractor's performance versus required safety/security procedures?	Y	Audit required in CSSP

Federal Railroad Administration		
If the shared track: has the grantee submitted its waiver request application to FRA? (Please identify any specific regulations for which waivers are being requested)	NA	
If the shared corridor: has grantee specified specific measures to address shared corridor safety concerns?	NA	
Is the Collision Hazard Analysis underway?	NA	
Other FRA required Hazard Analysis – fencing, etc?	NA	
Does the project have Quiet Zones?	NA	
Does FRA attend Quarterly Review Meetings?	NA	