

## **PMOC MONTHLY REPORT**

### **Honolulu Rail Transit Project**

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

September 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

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Length of Time Assigned: Five Years (November 18, 2009 through February 23, 2015)

## TABLE OF CONTENTS

<b>1.0</b>	<b>EXECUTIVE SUMMARY .....</b>	<b>2</b>
1.1	Project Description.....	2
1.2	Project Status .....	2
1.3	Core Accountability Items .....	3
1.4	PMOC Issues or Concerns .....	3
<b>2.0</b>	<b>BODY OF REPORT.....</b>	<b>7</b>
2.1.1	Project Status .....	7
2.1.2	Status of Procurement .....	7
2.1.3	Status of Primary Construction Contracts.....	8
2.1.4	Status of Core Systems Contract.....	9
2.1.5	Real Estate Acquisition.....	11
2.1.6	Third Party Agreements and Coordination .....	12
2.1.7	Environmental mitigation measures .....	12
2.2	Project Management Plan (PMP) and Sub-Plans.....	12
2.3	Management Capacity and Capability (MCC) .....	13
2.4	Project Cost.....	13
2.4.1	Contingency .....	16
2.4.2	Funding Sources.....	17
2.5	Project Schedule.....	17
2.6	Quality Assurance/Quality Control (QA/QC) .....	17
2.7	Safety and Security .....	18
2.8	Project Risk.....	19
2.9	Action Item Table .....	20
<b>3.0</b>	<b>APPENDICES.....</b>	<b>21</b>

## LIST OF APPENDICES

- Appendix A: Acronym List
- Appendix B: Contract Status
- Appendix C: PMOC Team
- Appendix D: Project Overview and Map (Transmitted as a separate file)
- Appendix E: Safety and Security Checklist (Transmitted as a separate file)

## 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 37.5% complete as of July 2015. The planned completion at this time is approximately 54.6% (based on S-curve late plan).
- Overall design of the project is approximately 86.6% complete as of July 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 28.8% complete as of July 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	71.7%	81.3%	6 months behind
Kamehameha Highway Guideway (KHG) DB Contract	39.6%	84%	8 months behind
Maintenance and Storage (MSF) DB Contract	79%	85%	1 week
Core Systems Design-Build-Operate-Maintain (DBOM) Contract	24%**	29.7%	3 months behind***
Airport Advanced Utilities Construction Contract	15.7%	16.8%	7 months behind

\*As of July 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	38.1% (as of July 31, 2015)	
	Based on Earned Value*	38.1%	

\*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 revised Master Project Schedule, which is under review.

Major Issues	Status	Comments/Planned Action
Potential Cost & 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:	November 2015	

### 1.4 PMOC Issues or Concerns

- Budget – 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 revising the project budget and will update the EAC accordingly.
- Contingency – HART indicates a forecasted amount of \$303 million remaining in contingency (\$11.5 million in unallocated and \$291.8 million in allocated contingency). However, these numbers have not been updated and do not reflect impacts of the Westside Stations bids, the updated cost estimate for the Airport/City Center Guideway Contract, and several items that have been included in the EAC. It is critical that HART take into consideration both allocated and unallocated contingency when revising the

project budget to reflect their EAC. HART must also then update the contingency drawdown curve for inclusion in the Risk and Contingency Management Plan and Monthly Reports.

- Funding – DRAFT Financial Plan was submitted to the FTA/PMOC on August 14, 2015 and is based on the HART’s preliminary updated EAC and MPS. The draft financial plan accounts for the GET extension, some savings associated with low interest rates and an improved borrowing plan, and some offsetting costs to account for the need to borrow for a longer period. The PMOC is concerned the EAC does not include all potential costs, does not provide sufficient contingency to complete the project, and is based on a Revenue Service Date (RSD) that may be unrealistic. The FTA/PMOC has not validated HART’s reported exceedance of the FFGA budget and RSD. To complete the review, the PMOC has identified additional cost and schedule supporting documentation.
- 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. Preliminary estimates are that the GET extension could generate approximately \$1.8 billion in revenue at a 5 percent growth rate. 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 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 II 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 likely exceed the FFGA budget. Therefore, in addition to the matrices, HART should begin initiating plans that identify a course of action, such as Secondary Mitigation Measures, and start to implement them.

- 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 and identifies 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 is 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 and HART indicated that they would provide a revised MPS in October 2015.
- HART intends to build an interim park-n-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-n-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 at the state and federal level on its collective bargaining agreement that has different wage scales and allows payment to its labor forces biweekly. To date, HECO is still paying a different wage scale instead of prevailing wages required by the Department of Labor (DOL). The DOL has denied HECO request for waiver on its collective bargaining agreement that has different wage scales and allows payment to its labor forces biweekly. An appeal is pending. 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. HECO provided HART with a report from its consultant regarding the potential extents of under-grounding. HECO's preliminary estimate has not been validated by HART at this time. HART has indicated that some costs have been included in the EAC to cover HECO undergrounding, additional HECO work in City Center, and service connections. However, the PMOC strongly recommended that HART prepare an independent cost estimate for all additional HECO-related costs given their potential order of magnitude.

This is currently HART's most significant risk to the project. This issue must be resolved by fall 2015, 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.

## **2.0 BODY OF REPORT**

### **2.1.1 Project Status**

- Overall project is approximately 37.5% complete as of July 2015. The planned completion at this time is approximately 54.6% (based on S-curve late plan).
- Overall design of the project is approximately 86.6% complete as of July 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 28.8 complete as of July 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**

- Farrington Highway Station Group Construction – The contract was awarded to the lowest bidder, Hawaiian Dredging Construction Company, Inc., on June 10, 2015 in the amount of \$79.0 million.
- West Oahu Stations Group – The contract was awarded to the lowest bidder, Nan, Inc., on July 20, 2015 in the amount of \$56.1 million.
- Kamehameha Highway Station Stations Group – IFB was issued on August 18, 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) will be due in February 2016.
- City Center and Stations DB Contract – This contract will include a two-part RFP. Part I will be issued August 2015. Part II will be issued in October 2015. NTP is anticipated for June 2016. The PMOC strongly recommends that HART does not issue NTP for this contract unless the HECO clearance issues are resolved.
- Design Contracts – HART has limited the designers' activity for the Airport/City Center Guideway and Utilities Contract and Eastside Stations Group to supporting preparation of the eastside DB contracts.
- Pearl Highlands Parking Structure DB Contract – HART canceled this solicitation on July 1, 2015 and they will begin actively investigating a Public Private Partnership (PPP).
- H2R2 Ramp – The contract was awarded to the lowest bidder, Royal Contracting, in May 2015 in the amount of \$5.2 million.
- Fare Collection Technical Support Consultant – Proposals were received on April 27, 2015. Two proposals were received. An additional notice of request for qualifications was issued on May 28, 2015. No further responses were received. An exception to the three proposal requirement was approved. HART is evaluating the two proposals received.
- Fare Collection System - Request for Proposal (RFP) was issued August 11, 2015.

### 2.1.3 Status of Primary Construction Contracts

- West Oahu/Farrington Highway (WOFH) Design-Build (DB) Contract –
  - Contract is approximately 71.1% complete based on earned value (design and construction activities). The planned earned value at this time is approximately 81.3%.
  - The contract is approximately six months behind schedule. The delay is the result of less 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, but rejected by HART. HART requested that the schedule be resubmitted by KIWC via the Change Order process to quantify any extended overhead or escalation that may have resulted due to delays beyond KIWC's control. It is anticipated that the substantial completion milestone will be modified to reflect the delay.
  - Approximately four-miles of guideway have been erected.
  - Overall quality of the contract is good.
- Kamehameha Highway Guideway (KHG) DB Contract –
  - The contract is approximately 39.6% complete based on earned value (design and construction activities). The planned earned value at this time is approximately 84%.
  - The contract is approximately eight months behind schedule. The delay is the result of less-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 by HART. HART requested that the schedule be resubmitted by KIWC via the Change Order process to quantify any extended overhead or escalation that may have resulted due to delays beyond KIWC's control.
  - Guideway erection is scheduled to begin in October/November 2015. HECO transmission line clearance issues associated with the guideway delayed the shaft and guideway erection.
  - 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 79.0% 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.
  - Overall quality of the contract is good.
- Airport Advanced Utilities Construction Contract –
  - Contract is approximately 15.7% based on Earned Value. The planned earned value at this time is approximately 16.8%.
  - The contract is approximately seven months behind schedule. The delay was due to issues with Navy right of entry (ROE) for construction.

## 2.1.4 Status of Core Systems Contract

Core System Description	Status
<b>General</b>	
Overall	<p>Contract is approximately 24% complete based on expenditures (design, manufacturing, and construction activities). The planned completion at this time is approximately 29.7% (based on late plan S-curve).</p> <p>Hitachi, LTD has an agreement to purchase AnsaldoBreda and Ansaldo STS from Finmeccania S.P.A. The sale is expected to close later this year.</p>
Design	<p>Following are the approximate levels of design completion</p> <ul style="list-style-type: none"> <li>• LRVs – 94% (Interim Design), 55% (Final Design)</li> <li>• Train Control – 88% (Interim Design), 94% (Final Design)</li> <li>• Traction Power – 100% (Interim Design), 97% (Final Design)</li> <li>• Communications – 100% (Interim Design), 37% (Final Design)</li> <li>• Fire Detection – 100% (Interim Design), 55% (Final Design)</li> <li>• PSG, UPS, MPV – N/A (Interim Design), 80% (Final Design)</li> </ul> <p>(Note: HART reports earned value only for the overall contract, not for design of the individual components.)</p>
Construction	Limited construction work (MSF signal house) began in June 2015; significant construction activity will not begin until fall 2015.
Schedule	AHJV revised its baseline contract schedule 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 the CSC schedule. The revised baseline schedule will not be available for three months. HART wants to ensure that they provide AHJV with milestone dates for their schedule update that should not change.
Staffing	Several key personnel positions are vacant. AHJV needs to move quickly to address these vacancies and fill the open positions with experienced staff.
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 presented to 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 must still be completed.
<b>Vehicle Subsystem</b>	
Vehicle Schedule	HART is closely monitoring vehicle production in Italy and working with Ansaldo Breda to prepare for final assembly start-up in Pittsburgh, CA. HART met with AHJV in late January 2015 to discuss schedule and activities planned for early 2015. Shipment of the first LRV to Honolulu is scheduled for February 2016.
Car Production	Extrusion of car bodies began in November 2014. Final assembly of the first LRV in Pittsburg, CA is scheduled to begin in September 2015. The first car shell arrived at the final assembly plant on August 29, 2015. Shipment of the first LRV to Honolulu is scheduled for February 2016.

<b>Core System Description</b>	<b>Status</b>
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.
<b>Traction Electrification Subsystem</b>	
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.
<b>O&amp;M Subsystem</b>	
MSF O&M	AHJV has provided preliminary MSF Operations Plans, but will resubmit to better follow HART's O&M Plan and FTA guidelines.
<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 and discussions with HECO have concluded.
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 been partially captured in HART's EAC.
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 any avoid impacts to construction.
- It appears that some parcels may require condemnation. The number of outstanding parcels remains significant:
  - HART has completed 53 of 222 acquisitions.
  - HART has completed 213 of 222 appraisals.
- 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.
- Eminent Domain –
  - Five cases were forwarded by staff to the HART Board of Directors on May 21, 2015, to support the schedule for the Airport Guideway and Stations DB contract. Although the HART Board approved the resolutions and the Honolulu City Council had no objections, the HART staff is striving to reach an agreement with each owner that would eliminate the need to proceed with the eminent domain process.
  - Twenty cases were forwarded to the HART Board on June 25, 2015, primarily to support the schedule for the City Center Guideway and Stations DB contract. The HART Board approved the resolutions, which allowed staff to forward the matter to the Honolulu City Council for consideration. HART brought these cases back for the HART Board meeting on August 27, 2015.
  - Four cases were presented to the HART Board on July 30, 2015, primarily to support the City Center Guideway and Stations DB contract. HART anticipates bringing these cases back to the HART Board for their September 2015 meeting.
  - Seven cases were presented to the HART Board on August 27, 2015, primarily to support the schedule for the City Center Guideway and Stations DB contract. HART anticipates bringing these cases back to the HART Board for their October meeting.
  - HART continues to negotiate with each property owner in an attempt to reach mutual agreement. However, several more parcels may be proposed to the HART Board of Directors for eminent domain to support east DB contracts.
- All private property site access for the guideway is complete for KHG. KIWC has identified 3 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.
- High turnover of HART's real estate consultant staff had a negative impact on production. However, it has been noted that the consultant staffing has stabilized. The PMOC will continue to monitor ROW production.

- Negotiations for parcel acquisitions were delayed because project staff could not obtain definitive answers for certain technical questions (e.g. legal descriptions of the takings; how utilities will be addressed on the project.) However, HART has improved communication and coordination between the ROW and engineering and construction staffs by assigning a liaison.

### 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 very 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
- U.S. Navy – On June 22, 2015, the Navy issued HART a License Agreement, which is a construction right of entry to complete work on Navy property or on Navy facilities such as utility lines. Work has commenced, and HART continues close coordination with the Navy.

### 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 <sup>th</sup> 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 they can update the plan.
Real Estate Acquisition and Management Plan (RAMP)	Approved for FFGA.	FINAL RAMP submitted on September 1, 2015.

### 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 have been made to date or any proposed changes. 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 with anticipated fill dates:

- Director of Planning & Right-of-Way (Existing Position) – TBD
- Director of Operations & Maintenance (Existing Position) – October 1, 2015
- West Area Construction Manager (New Position) – October 15, 2015
- Project Manager Kamehameha Highway Station Group (KHSB)/H2R2 Ramp (New Position) – November 1, 2015
- Project Manager City Center (New Position) – November 1, 2015
- Assistant Project Manager City Center (New Position) – December 15, 2015

### 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
<b>Total Project Cost</b>	<b>\$5.122 billion</b>

**Total Expenditures to Date – \$1.630.5 billion (through July 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 their budget.

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>209,103,727</b>
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	161,310,964
10.09	Track: Direct fixation	86,332,027	79,437,204	6,894,823	47,775,385
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>4,362,333</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	4,362,333
<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>73,402,849</b>
30.02	Light Maintenance Facility	8,161,279	7,591,887	569,392	1,575,472
30.03	Heavy Maintenance Facility	40,906,889	38,099,138	2,807,751	23,297,845
30.04	Storage or Maintenance of Way Building	8,382,270	7,797,460	584,810	5,105,444
30.05	Yard and Yard Track	41,975,018	39,046,528	2,928,490	43,424,088
<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>480,562,379</b>
40.01	Demolition, Clearing, Earthwork	34,695,802	29,980,157	4,715,645	2,441,405
40.02	Site Utilities, Utility Relocation	350,694,801	299,449,755	51,245,046	87,128,329
40.03	Haz. mat'l, contam'd soil removal/mitigation, ground water treatments	7,228,935	6,590,542	638,393	2,112,047
40.04	Environmental mitigation, e.g. wetlands, historic/archeologic, parks	30,841,906	26,979,122	3,862,784	9,674,761
40.05	Site structures including retaining walls, sound walls	8,637,582	7,998,960	638,622	3,417,879
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	371,202,439
<b>50</b>	<b>SYSTEMS</b>	<b>247,460,781</b>	<b>221,284,483</b>	<b>26,176,298</b>	<b>30,769,005</b>
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	2,649,029
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	10,231,696
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
<b>Construction Subtotal (10 - 50)</b>		<b>3,232,248,152</b>	<b>2,830,498,808</b>	<b>401,749,344</b>	<b>798,200,293</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>85,609,306</b>
60.01	Purchase or lease of real estate	201,658,907	179,360,664	22,298,243	76,078,884
60.02	Relocation of existing households and businesses	20,529,479	18,037,283	2,492,196	9,530,422
<b>70</b>	<b>VEHICLES</b>	<b>208,501,186</b>	<b>186,829,020</b>	<b>21,672,166</b>	<b>28,540,009</b>
70.02	Heavy Rail	186,061,066	166,721,385	19,339,681	20,747,548
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
<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>717,699,284</b>
80.01	Preliminary Engineering	95,120,484	94,055,262	1,065,222	102,690,269
80.02	Final Design	257,934,908	228,321,632	29,613,276	162,191,050
80.03	Project Management for Design and Construction	385,825,694	366,458,463	19,367,231	292,889,561
80.04	Construction Administration & Management	218,155,752	199,656,728	18,499,024	71,301,910
80.05	Professional Liability and other Non-Construction Insurance	52,138,030	46,549,724	5,588,306	21,429,198
80.06	Legal; Permits; Review Fees by other agencies, cities, etc.	76,135,125	67,641,006	8,494,119	19,496,762
80.07	Surveys, Testing, Investigation, Inspection	24,955,327	21,759,335	3,195,992	26,204,341
80.08	Start up	73,560,706	65,996,664	7,564,042	21,496,193
<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>1,630,048,892</b>
	<b>UNALLOCATED CONTINGENCY</b>	<b>101,871,170</b>	<b>0</b>	<b>101,871,170</b>	<b>0</b>
<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>1,630,048,892</b>
	<b>FINANCE CHARGES</b>	<b>173,058,242</b>			<b>0</b>
	<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>1,630,048,892</b>
	<b>Provisional Request for Payment</b>				
	<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>1,630,048,892</b>

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 reviewing the project budget and will update the EAC accordingly.

## 2.4.1 Contingency

HART indicates a forecasted amount of \$303 million remaining in contingency (\$11.5 million in unallocated and \$291.8 million in allocated contingency). However, these numbers have not been updated and do not reflect impacts of the Westside Stations bids, the updated cost estimate for the Airport/City Center Guideway Contract, and several items that have been included in the EAC. It is critical that HART take into consideration both allocated and unallocated contingency when revising the project budget to reflect their EAC. HART must also then update the contingency drawdown curve for inclusion in the Risk and Contingency Management Plan and Monthly Reports.

The current estimated contingency is not sufficient to complete the project. HART is currently assessing the remaining contract strategy including implementation of primary risk mitigations measures and value engineering to reduce project cost impacts. HART should begin initiating plans that identify a course of action, such as Secondary Mitigation Measures, and start to implement them.

## 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
<b>Total</b>	<b>\$5.122 billion</b>

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.

## 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 and identifies 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 is 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 and HART indicated that they would provide a revised MPS in October 2015.

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

Period: October 2015 – December 2015		
Activity	Responsibility	Date
Risk Refresh	FTA, HART and PMOC	To be determined
Monthly Progress Meeting	FTA, HART and PMOC	October 14, 2015
Monthly Progress Meeting	FTA, HART and PMOC	November 4, 2015
Monthly Progress Meeting	FTA, HART and PMOC	December 9, 2015
Quarterly Meeting	FTA, HART and PMOC	TBD

## 2.6 Quality Assurance/Quality Control (QA/QC)

- 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. On March 31, 2015, KIWC completed the replacement of the two precast segments and Span 67 has been realigned into the guideway.

- WOFH Span 17 Damage and Repair – During the erection in March 2015, four segments were damaged due to unbalanced support from the temporary bearings. This issue has been technically resolved and a recommendation to proceed with the repair has been issued. Repair at Span 17 is not on the critical path and KIWC continues to proceed with span by span operations westbound.
- Span 105 Damage and Repair – The span shifted on the jacks while being set in April 2015 into its final horizontal and vertical position. Due to this incident, final span alignment operations were temporarily suspended to re-evaluate the procedures. KIWC has successfully repositioned the span and made necessary repairs of minor spalling. They also have developed a procedure for final span alignment to prevent this issue from reoccurring.
- 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	430	372	58
DB-200	Maintenance and Storage Facility	28	26	2
DB-320	Kamehameha Highway Guideway	78	52	26
DBOM-920	Core Systems Contract	214	177	37

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 is 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 1<sup>st</sup> 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.
- HART Safety and Security Certification Manager position has been vacant for approximately 3 months. HART Chief Safety and Security Manager and other HART staff are filling the gap while a search for a new candidate is undertaken.
- The Airport 7 Pier Project is nearing completion. HART will perform close out, including

final safety certification.

- HART to include HDOT SSOA critical review and approval dates to HART roadmap and also to the safety and security MPS schedule.

## **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 relate 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 most likely 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	<b>Updates resulting from Risk Refresh:</b>					
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	MPS Workshop	HART/PMOC	Feb-15	Sep-15		Will be held during week of September Progress Meeting
4	Provide OP 54 (Readiness for Revenue Operations) checklist/roadmap	FTA/PMOC	Apr-15	Sep-15		OP 54 provided to HART; PMOC to provide sample report
5	Hold conference call to discuss use of P3 for Pearl Highlands Parking Structure	FTA/HART	Aug-15	Sep-15		
6	Provide list of HART procedures that are to be updated	HART	Aug-15	Sep-15		
7	Provide EAC in SCC format	HART	Aug-15	Sep-15		
8	HART to provide updated list of Post-Rod changes	HART	Sep-15	Oct-15	Sep-15	Completed
9	HART to provide target date for Federal Courthouse resolution/sign-off	HART	Sep-15	Oct-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
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

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	\$33,216,423	81.0%	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	\$18,746,500	40.6%	2.88%	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	\$12,190,712	22.5%	1.81%	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	\$11,076,454	17.6%	1.65%	Jan 2014	Dec 2018
Notes/Issues:		<ul style="list-style-type: none"> <li>▪ HART has determined the AECOM acquisition of URS has created a Conflict of Interest (COI) that URS has been unsuccessful in resolving. HART subsequently issued a notice of termination letter to URS on March 10, 2015. To prevent disruption of services, URS will continue to provide services under a firewall arrangement until HART has re-procured and awarded a contract to a replacement contractor and remaining work is transitioned to the replacement contractor.</li> </ul>									
MM-962	Core System Contract Oversight Consultant	Lea + Elliott, Inc	\$43,988,989			\$43,988,989	\$9,543,654	21.7%	0.53%	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	\$142,053,939	22.5%	\$624,977,939	\$436,572,684	69.9%	1.11%	Nov 2009	Jul 2016
Notes/Issues:		<ul style="list-style-type: none"> <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 six months behind schedule. The delay is the result of less 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.</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	\$79,576,593	40.7%	\$274,834,593	\$211,194,348	76.9%	0.08%	Jun 2011	Apr 2016
Notes/Issues:		<ul style="list-style-type: none"> <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 substantial completion date has slipped 6 calendar days due to weather that impacted construction operations. KKJV and HART are working to mitigate the impacts to the critical path, which are not significant.</li> </ul>									
DB-320	Kamehameha Highway Guideway DB	KIWC	\$372,150,000	\$16,486,363	4.4%	\$388,636,363	\$152,782,191	38.4%	0.08%	Jun 2011	Sep 2016
Notes/Issues:		<ul style="list-style-type: none"> <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 eight months behind schedule. The delay is the result of less 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.</li> <li>KIWC is mobilizing a third guideway erection truss to help mitigate the WOFH and KHG delays.</li> </ul>									
DBOM-920	Core Systems Contract	Ansaldo/Honolulu JV	\$573,782,793	\$21,280,894	3.7%	\$595,139,998	\$143,512,483	24.1%	0.029%	Nov 2011	Mar 2019
Notes/Issues:		<p>AHJV has asserted that it has had a 9-month delay in starting work due to CSC protest. HART settled the NTP delay claim for \$8.5 million. AHJV's NTP delay claim amount was originally for \$9 million.</p> <ul style="list-style-type: none"> <li>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. HART and AHJV negotiated the 4-car train credit for \$5.2M and also negotiated the NTP delay claim for \$8.5M in July 2015.</li> <li>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. The revised baseline schedule will be available in 2-3 months after all interface milestones are finalized.</li> </ul>									
MI-930	Elevators and Escalators Install & Maintain	Schindler Elevator Corporation	\$50,982,714	\$0	0%	\$50,982,714	\$4,362,333	8.6%	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	\$2,777,305	34%	\$10,014,305	\$9,094,145	91.7%	0%	Jun 2012	Dec 2016
Notes/Issues:		<ul style="list-style-type: none"> <li>West Oahu Stations Group – IFB was issued in April 2015. Bids are due June 16, 2015.</li> </ul>									
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

Contract	Description	Contractor	Base Contract Value	Change Orders	Change Order %	Current Contract Value	Expended	% Exp.	DBE	Award Date	Compl. Date
	Notes/Issues:	<ul style="list-style-type: none"> <li>Bids were received on March 3, 2015.</li> <li>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.</li> <li>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.</li> </ul>									
FD-340	Kamehameha Highway Station Group Construction FD	Anil Verma, Inc.	\$8,702,592	\$352,176	3.9%	\$9,011,768	\$8,219,319	91.2%	40.25%	Nov 2012	Dec 2016
	Notes/Issues:	<ul style="list-style-type: none"> <li>Revised engineer's estimate exceeds the FFGA budget.</li> <li>Kamehameha Highway Station Stations Group – IFB will be issued in August 2015.</li> </ul>									
FD-430	Airport Section Guideway and Utilities FD	AECOM	\$38,840,960	\$4,293,512	11.0%	\$43,134,472	\$40,655,979	94.3%	0.42%	Dec 2011	Jun 2017
	Notes/Issues:	<ul style="list-style-type: none"> <li>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.</li> <li>Revised engineer's estimate exceeds the FFGA budget.</li> </ul>									
FD-440	Airport Station Group Construction FD	AECOM	\$10,177,365	\$1,244,840	12.2%	\$11,402,205	\$9,801,978	86.0%	2.31%	Nov 2012	Jul 2017
	Notes/Issues:	<ul style="list-style-type: none"> <li>HART has limited the designers' activity to supporting preparation of the eastside DB contracts.</li> </ul>									
FD-530	City Center Section Guideway and Utilities FD	AECOM	\$43,948,220	\$1,282,803	2.9%	\$46,183,523	\$40,014,026	86.6%	0.44%	Jul 2012	May 2018
	Notes/Issues:	<ul style="list-style-type: none"> <li>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.</li> <li>Revised engineer's estimate exceeds the FFGA budget.</li> <li>The PMOC strongly recommends that HART does not issue NTP for this contract unless the HECO clearance issues are resolved.</li> </ul>									
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"> <li>HART has limited the designers' activity to supporting preparation of the eastside DB contracts.</li> </ul>									
DBB-505	Airport Section Utilities Construction	Nan	\$28,413,973	\$0	0%	\$28,413,973	\$4,595,193	16.2%	0%	Jul 2014	Jun 2016

<b>Contract</b>	<b>Description</b>	<b>Contractor</b>	<b>Base Contract Value</b>	<b>Change Orders</b>	<b>Change Order %</b>	<b>Current Contract Value</b>	<b>Expended</b>	<b>% Exp.</b>	<b>DBE</b>	<b>Award Date</b>	<b>Compl. Date</b>
	Notes/Issues	<ul style="list-style-type: none"> <li>▪ The contract is approximately seven months behind schedule. The delay is due to issues with Navy right of entry (ROE) for construction.</li> </ul>									
DBB-525	Airport Section Guideway Seven Pier Construction	HDCC/CJA JV	\$3,973,000	\$17,378	0.43%	\$4,481,241	\$3,796,241	85.0%	0%	Sep 2014	Feb 2015
	Notes/Issues	<ul style="list-style-type: none"> <li>▪ Construction activities ongoing.</li> </ul>									

## Appendix C: PMOC Team

<b>Name</b>	<b>Position</b>	<b>Background</b>
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.
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.

**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:** September 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

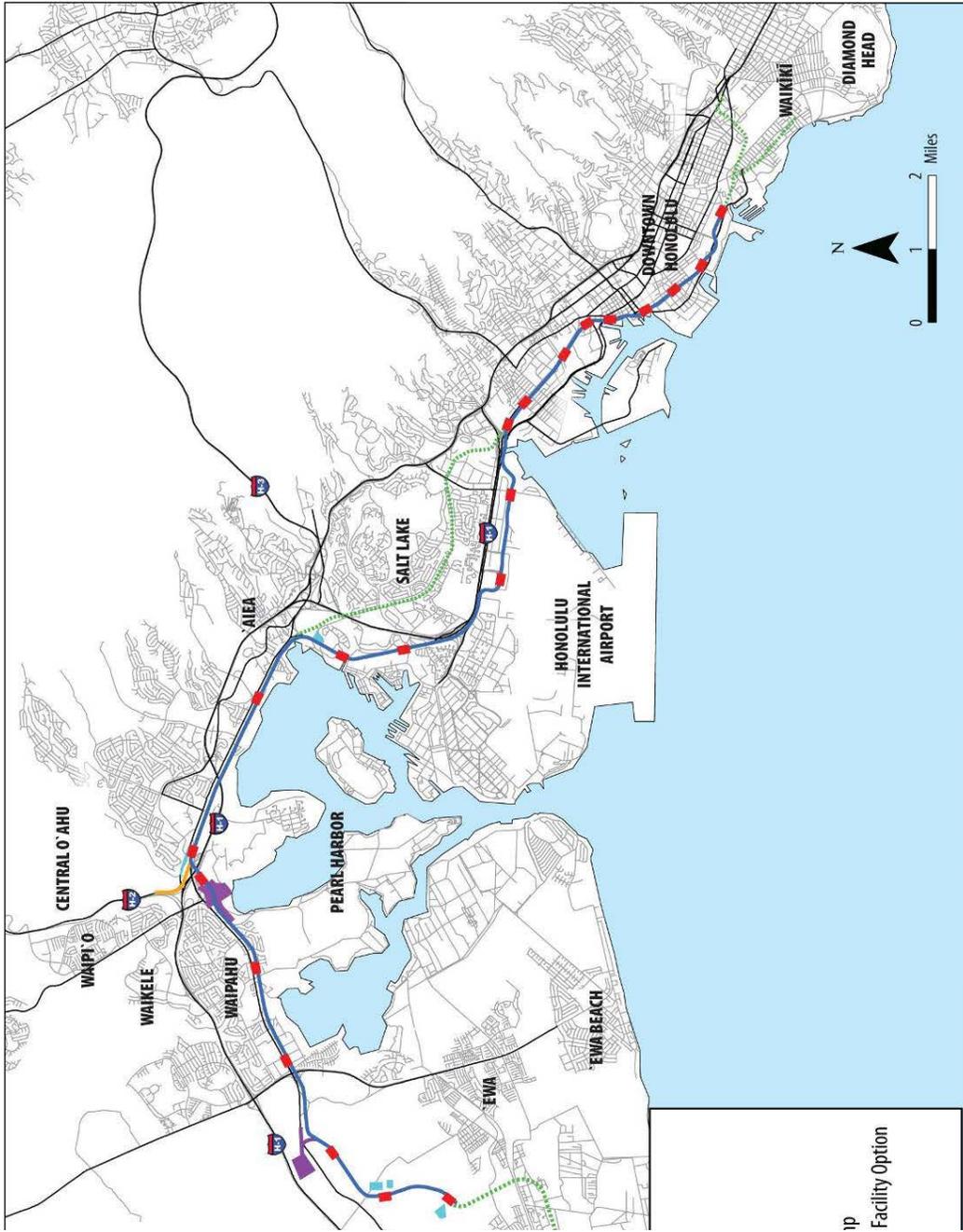
10/09 Approval Entry to PE	03/19 Estimated RSD at Entry to PE
12/11 Approval Entry to FD	03/19 Estimated RSD at Entry to FD
06/12 Request for FFGA	03/19 Estimated RSD at Request for FFGA
12/12 FFGA	01/20 RSD at FFGA

### 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

\$1.630.5B Amount of Expenditures at date of this report  
38.1% complete (Total Project Expenditures/Total Project Cost)

# Honolulu Rail Transit Project Map



## Appendix E: Safety and Security Checklist

<b>Project Overview</b>			
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		
<b>Project Plans</b>	<b>Version</b>	<b>Review by FTA</b>	<b>Status</b>
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
<b>Safety and Security Authority</b>	<b>Y/N</b>	<b>Status</b>	
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	
<b>SSMP Monitoring</b>			
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"> <li>• Activation Plan and Procedures</li> <li>• Integrated Test Plan and Procedures</li> <li>• Operations and Maintenance Plan</li> <li>• Emergency Operations Plan</li> </ul>	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
<b>Construction Safety</b>		
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

<b>Federal Railroad Administration</b>		
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	