PMOC MONTHLY REPORT

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

February 2016 (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 (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 43.0% complete as of December 2015. The planned completion at this time is approximately 61% (based on HART's S-curve late plan).
- Overall design of the project is approximately 87.8% complete as of December 2015. The planned completion at this time is approximately 98.2% (based on HART's 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 35.1% complete as of December 2015.The planned completion at this time is approximately 53.4% (based on HART's 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	81.1%	88%	6 months behind
Kamehameha Highway Guideway (KHG) DB Contract	49.7%	92%	12 months behind
Maintenance and Storage (MSF) DB Contract	85.5%	90%	On time
Core Systems Design-Build-Operate-Maintain (DBOM) Contract	28.4%	40%	6 months behind***
Airport Advanced Utilities Construction Contract	31.4%	70%	7 months behind
Farrington Highway Station Group Construction Contract	0%	0%	On time
West Oahu Station Group Construction Contract	0%	0%	On time

*As of November 2015

** HART's assessment of Earned Value, which is based on a weighted expenditure calculation of the contract and is not a true Earned Value calculation.

***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	43.0% (as of December 25, 2015)	
	Based on Earned Value*	43.0%	

*HART's assessment of Earned Value, which is based on the weighted expenditure calculation of the individual construction and design contracts and is not a true Earned Value calculation
**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.
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

- HART has presented information that forecasts an increase to project costs and an extension of the overall completion date for the project:
  - GET Extension – 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 workshop, which is scheduled for March 30, 2016.
        - Updated finance costs are $310 million.
    - HART staff has begun providing supporting documentation for the updated cost and schedule.
        - Cost – There are several significant cost-related items that have been discussed with HART that the PMOC believes are not fully addressed in the EAC. Some of these items include:
            - Cost for full buildout of Pearl Highlands Parking Garage – HART's EAC currently includes a cost for partial buildout of the facility, which is significantly less than the cost for full buildout. HART is evaluating the possibility of using a Public Private Partnership (PPP) to offset some of the construction costs.
            - HECO clearance issue (construction costs and right-of-way costs)
            - Real estate adjustments
            - Full exposure of WOFH, KHG, and CSC delays
            - Park-n-Ride lots
            - OCIP adjustment for time extensions
            - Elevator/Escalator Contract escalation
            - Miscellaneous support contracts (e.g. ROW support, On-Call Construction, Eminent Domain Legal Support)
        - Schedule – HART indicated that a revision is underway to account for elimination of the Dillingham Utilities and Road Widening package. This work will be completed under the City Center Guideway and Stations DB Contract and through an On-Call Construction Contract. This change will affect RSD of the full system. PMOC also has concerns that MPS does not fully account for HECO undergrounding activities along Dillingham Boulevard, which would affect the critical path. HART committed to providing the updated MPS by February 29, 2016. It is critical that HART meet this deadline, so the PMOC has sufficient time to prepare for the Risk Refresh Workshop.

- 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. 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. On January 27, 2016, the City Council approved Bill 23 to extend collection of the GET to December 2027.

- 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 exceed the FFGA budget. Therefore, HART should initiate plans that identify Secondary Mitigation Measures and being implementation.

- 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. DOL submitted several questions, which will be responded to by HECO. The USDOL ruling for compliance is pending receipt of HECO's responses. HECO will start paying wages on a weekly basis instead of bi-weekly. However, the HECO wage rates will not change unless a ruling is made by the USDOL. HECO will continue to pay wages on a weekly basis even if the ruling is favorable or unfavorable.

- 50-foot Clearance Issue – HART has assembled a Task Force Committee to review all options to help mitigate clearance issues.

  HART has made the determination that they will underground HECO lines along a section of the Airport Segment (9 poles) and on a significant portion of Dillingham Boulevard within the City Center Segment (1.8 miles). However, HART has not resolved several issues including design responsibility, sequencing, milestone dates, etc. The MPS also does not contain sufficient detail to assess the impact of undergrounding the lines.

  The PMOC had recommended that HART defer issuance of the RFP Part II for the City Center Guideway and Stations until they have more resolution on the undergrounding of the HECO lines. HART did defer RFP Part II, but intends to issue it in early February 2016. There are still a number of issues that must be resolved and addressed through addenda to the RFP.

  If HART is required to underground all affected lines, it would have a significant impact on the project costs and schedule. HART has indicated that they have incorporated some exposure into their EAC and MPS for this, but not enough to cover the full cost and time if the HECO clearance preferred solution requires complete undergrounding. This is currently HART's most significant risk to the project.

- HECO Relocation Services – Relocations are ongoing. HART has indicated that HECO has been able to complete relocations in advance such that the WOFH and KHG contracts have not been impacted. No relocations have been required for station contracts yet. All relocation locations are discussed at weekly coordination meetings.

- HECO has identified equipment that may mitigate the 46KV distribution line relocations. The equipment manufacturer is Altec, and HECO will test the equipment for approximately three months. HART may be responsible for acquisition of the equipment if it is found to be acceptable by HECO. HART requested the equipment designer to be present during testing to possibly modify equipment so that it could be used for both 46 KV and 138KV lines.

- Buy America – There are 15 Train Control & Communication Rooms (TCCR) along the guideway corridor. Each TCCR will "house" only Train Control and Communications equipment for the Core Systems Contract. HART wanted to ensure that Train Control and Communications equipment will comply with federal Buy America regulations in 49 CFR 661. HART was recently informed by CSC Contractor that the Variable Refrigerant Flow (VRF) air conditioning equipment in the TCCR will not be sourced from the USA. These equipment items are not included in the 49 CFR 661.11 (t) & (u) list. HART sought clarification from FTA that Buy America regulation would allow them to be foreign and still comply with the minimum 60% domestic content requirement of the "rolling stock end product" as described at Appendix A to 49 CFR 661.3. FTA determined and informed HART that FTA does not find that the VRF is either train control or communications equipment and, as such, is not rolling stock for purposes of 49 CFR 661.11. HART has indicated they are now preparing a Waiver Request for the Train Control and Communications Equipment Variable Refrigerant Flow. HART submitted a Waiver Request to FTA on February 8, 2016.

  AHJV has changed the truck body supplier for the LRVs. AHJV is verifying the calculation for Buy America percentage for the vehicles and will submit that information to HART for review.

2.0 BODY OF REPORT

2.1.1 Project Status

- Overall project is approximately 43.0% complete as of December 2015. The planned completion at this time is approximately 61.0% (based on S-curve late plan).
- Overall design of the project is approximately 87.8% complete as of December 2015. The planned completion at this time is approximately 98.2% (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 35.1% complete as of December 2015.The planned completion at this time is approximately 53.4% (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. 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 – Bids were received November 17, 2015. Engineers Estimate was $108M. Watts Construction was the apparent low bidder with $112.7M but they were found to non-responsive. Watts filed a protest that was denied by HART. Watts did not appeal HART's decision and the deadline for an appeal has passed. HART awarded the contract to Nan, Inc. on January 27, 2016.
- Airport Guideway and Stations DB Contract – Final date for submission of Alternate Technical Concepts was December 18, 2015. RFP Part II responses (price and technical) are due March 22, 2016. A Best and Final Offer (BAFO) is possible, but HART does not intend to utilize. If BAFO is used, it could affect schedule. Award is anticipated to occur in May 2016.
- City Center Guideway and Stations DB Contract – RFP Part I responses were received November 18, 2015. RFP Part II is to be issued February 2, 2016. Award is tentatively scheduled for September 2016. HART intended to utilize WOFH/KHG precast site for City Center DB Contract. However, negotiations to continue having access to site are not progressing quickly enough. Therefore, HART has identified an alternative location. If this alternative location is utilized, it would require Post-ROD approval from FTA. The PMOC emphasized that it is critical for HART to resolve this issue to support the procurement schedule and to not further delay the RFP process.
- Dillingham Utilities and Road Widening – HART will eliminate this package. This work will be completed under the City Center Guideway and Stations DB Contract and through an On-Call Construction Contract.
- Pearl Highlands Parking Structure DB Contract – HART is reviewing various options including partial buildout to support RSD and full buildout under a Public Private Partnership (PPP). HART staff will begin updating a DB package that could be advertised in summer 2016.
- Fare Collection System – Request for Proposal (RFP) was issued August 11, 2015. Bids were received on November 13, 2015 and are being evaluated.

- HART indicated that several other contracts were in process to be procured:
    - On-Call Construction III
    - ROW Support II – HART may use funds from SCC 60 already captured for ROW costs or allocated contingency for this contract.
    - Eminent Domain/Legal Support – HART may use funds from SCC 60 already captured for ROW costs or allocated contingency for this contract.
    - Outside Council for Land Court Petition Services – HART may use funds from SCC 60 already captured for ROW costs or allocated contingency for this contract.
    - On-Call Appraiser Contract – HART may use funds from SCC 60 already captured for ROW costs or allocated contingency for this contract.
    - UH West Oahu Temporary Park and Ride and UH West Oahu Campus Road "B"- HART may use allocated contingency to cover costs.
    - Core Systems Back-up Generators – HART captured these costs in forecast for CSC.
    - Photovoltaic for Rail Operations Center (ROC) – HART captured these costs in the forecast for CSC.

2.1.3 Status of Primary Construction Contracts

- West Oahu/Farrington Highway (WOFH) Design-Build (DB) Contract –
    - Contract is approximately 81.1% complete based on earned value (design and construction activities). The planned earned value at this time is approximately 89.2%.
    - 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. All shafts are complete and only 33 spans remain to be erected. Guideway construction will be complete in summer 2016.
    - Overall quality of the contract is good, but there are some issues as discussed in Section 2.6 of this report.
- Kamehameha Highway Guideway (KHG) DB Contract –
    - The contract is approximately 49.7% complete based on earned value (design and construction activities). The planned earned value at this time is approximately 93.5%.
    - 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 failure by the contractor to provide required labor and material to perform required column and foundation 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, and overall construction progress has improved over past several months.
- Maintenance and Storage (MSF) DB Contract –
    - The contract is approximately 85.5% complete based on earned value (design and construction activities). The planned earned value at this time is approximately 92%.
    - Building structures are essentially complete with interior buildout continuing.
    - HART has indicated that contract substantial completion is essentially on time and scheduled to be completed in May 2016. However, there appears to be a number of items that must be completed prior to occupancy. PMOC will closely monitor this contract to assess whether the target date for occupancy is realistic.
    - Overall quality of the contract is good.
- Airport Advanced Utilities Construction Contract –
    - Contract is approximately 31.4% complete based on Earned Value. The planned earned value at this time is approximately 35%.
    - The contract is approximately seven months behind schedule. The delay was due to issues with Navy right of entry (ROE) for construction. HART's planned earned value has been adjusted as a result of the delayed access.
- Farrington Highway Station Group Construction Contract –
    - The contract is approximately 0% complete based on HART's earned value calculation. HART's planned earned value at this time is approximately 0%.
    - The baseline schedule has not yet been approved.
    - Construction is anticipated to begin in March 2016.
- West Oahu Station Group Construction Contract –
    - The contract is approximately 0% complete based on HART's earned value calculation. HART's planned earned value at this time is approximately 0%.
    - The baseline schedule has not yet been approved.
    - Construction is anticipated to begin during the First Quarter of 2016.

2.1.4 Status of Core Systems Contract

Core System Description	Status
General	
Overall	Contract is approximately 28.2% complete based on expenditures (design, manufacturing, and construction activities). The planned completion at this time is approximately 40% (based on late plan S-curve). 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.
Design	Following are the approximate levels of design completion • LRVs – 100% (Interim Design), 76% (Final Design) • Train Control – 93% (Interim Design), 99% (Final Design) • Traction Power – 100% (Interim Design), 100% (Final Design) • Communications – 100% (Interim Design), 45% (Final Design) • Fire Detection – 100% (Interim Design), 56% (Final Design) • PSG, UPS, MPV – N/A (Interim Design), 78% (Final Design) (Note: HART reports earned value only for the overall contract, not for design of the individual components.)
Testing	Initial testing of the PSG mockup has been postponed until March 2016 due to mechanical issues. The PSG are not on the critical path.
Construction	Construction activity will not begin along guideway until 1Q16.
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.
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 reviewed by the PMOC and comments were provided to HART.
Vehicle Subsystem	
Vehicle Schedule	Shipment of the first LRV to Honolulu is scheduled for March 2016. AHJV was having issues with truck supplier (DRS) and has subsequently elected to change the supplier. Delivery of the second LRV is planned for summer 2016. Three (3) Maintenance-of-Way Vehicles (MOW) were delivered on February 8, 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. AHJV has changed the truck body supplier for the LRVs. AHJV is verifying the calculation for Buy America percentage for the vehicles and will submit that information to HART for review.
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. CSC construction work is anticipated to be completed in late 2016. Fire detection will be completed in April 2016, which is required for occupancy.
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

- HART has completed all appraisals of required properties identified to date.
- Settlements Not Approved by FTA – Three large settlements have not been approved by FTA. The PMOC met with HART staff to discuss what information should be provided to increase possibility for approval by FTA.
- Resolution of the HECO 50-foot offset issue will add numerous easements to the project. HART is considering a separate consultant team to acquire these parcels. They may elect to use waivers instead of formal appraisals for many of these parcels. FTA increased administrative utilities amount for HART from to $25,000, which should allow HART to accelerate acquisition of their easement.
- Two parcels were not approved by City Council for condemnation – One parcel will be deleted from the project through a minor change in design. The other parcel is still needed, and HART will again seek authority from the City Council to condemn.

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) – DRAFT Agreement has been routed for review. Department of Accounting and General Services (DAGS), Stadium Authority and HART are scheduled to meet week of January 14, 2016 to discuss the agreement, which must be in place by mid-2016 to not impact the schedule.
- University of Hawaii Right of Entry – Construction Rights of Entry are pending.
- GSA – An MOU is pending with the GSA for all work adjacent to the Federal courthouse. This will include 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 by May 2016, it may become critical. Details of the MOU have been substantially agreed to, but HART is awaiting a landscape plan that is being prepared by the GSA. The cost of this plan must be analyzed to determine whether it falls within HART's budget.
- US Post Office – HART and USPS are in disagreement on the value of property. HART has engaged their congressional delegation to assist in advancing negotiations. HART is still in negotiations with the USPS, but HART cannot condemn the federally owned property.
- US Navy – The Current Base Commander would like to finalize the license agreement prior to change of Base Command staff, which will occur spring 2016.
- The outstanding third party agreements may affect construction contracts if not resolved in the next 4-6 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. HART has indicated that they anticipate submitting information for all outstanding critical Post-ROD changes to the FTA in February or March 2016. HART must submit Post Rod changes for Backup Generators, Makai Precast Yard for Airport Guideway and Stations and another Precast Yard close to the Makai site for the City Center Guideway and Stations Project. Post Rod changes need to be approved by FTA prior to HART awarding these contracts.

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 August 2016). 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.
Construction Management Plan	PMOC provided review comments	Draft CMP submitted to the PMOC for review in December 2015. Comments provided to HART in February 2016. HART responded to PMOC comments February 26, 2016.
Construction Safety Plan	No PMOC comments	HART staff was notified of the Construction Safety and Security Plan, Rev. 3, via CMS email on October 22, 2015
Change Procedure	PMOC provided review comments	Draft change procedure 5.CA-11 submitted to the PMOC for review in December 2015. PMOC provided comments to HART on February 7, 2016. HART responded to PMOC comments February 26, 2016.
Quality Management Plan	No PMOC comments	HART staff was notified of the Quality Management Plan, Rev 2, via CMS email on October 21, 2015.
Risk and Contingency Management Plan (RCMP)	Approved for FFGA but update is pending	Update is pending outcome of Risk Refresh
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 HARTs 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 DRAFT RAMP submitted on September 1, 2015.
Operations and Maintenance Plan (OMP)	PMOC provided review comments	Draft OMP submitted to the PMOC for review in September 2015. Comments were provided to HART on December 17, 2015. HART responded to PMOC comments on 2/16/16.
Rail Fleet Management Plan (RFMP)	PMOC provided review comments	Draft RFMP submitted to the PMOC for review in September 2015. Comments were provided to HART on December 17, 2015. HART responded to PMOC comments 2/16/16.
Safety and Security Management Plan (SSMP)	PMOC provided review comments	Draft SSMP submitted to the PMOC for review in November 2015. Comments were provided to HART on February 5, 2016. HART to respond to PMOC comments.
Safety and Security Certification Plan (SSCP)	PMOC provided review comments	Draft SSCP submitted to the PMOC for review in November 2015. Comments were provided to HART on February 5, 2016. HART to respond to PMOC comments.

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 following is a summary of key open positions:

- Deputy Director of Construction has tendered his resignation. Kai Nani Kraut (PMC) will act as the Interim West Construction Manager. Kevin Cox (PMC) is the East Construction Manager.
- Director of Operations & Maintenance (Existing Position) – Recruiting is ongoing.
- West Area Construction Manager (New Position) – Target 1Q16 to fill position.
- WOFH/KHG Project Manager (Existing Position) – Interim West Construction Manager will work as interim Project Manager until a replacement is recruited.
- Project Manager Kamehameha Highway Station Group (KHSG)/H2R2 Ramp (New Position) – Target 1Q16 to fill position.
- Assistant Project Manager City Center (New Position) – target December 2015 to fill position.
- Chief Financial Officer has tendered her resignation. HART will initiate a search for a replacement.
- Risk Manager – HART has appointed a member of the GEC as the Acting Risk Manager. The PMOC strongly recommends that HART make this a full-time position that is

independent from the Project Controls or Design and Construction groups. HART should make this a priority.

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 – $1.883 billion (through December 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**	**277,113,495**
10.02	Guideway: At-grade semi-exclusive	0	0	0	17,378
10.04	Guideway: Aerial structure	1,175,328,184	1,022,380,670	152,947,514	225,597,278
10.08	Guideway: Retained cut or fill	8,077,393	7,492,943	584,450	0
10.09	Track: Direct fixation	86,332,027	79,437,204	6,894,823	51,495,763
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	3,076
20	**STATIONS, STOPS, TERMINALS, INTERMODA**	**506,165,689**	**421,804,742**	**84,360,947**	**5,066,456**
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	5,066,456
30	**SUPPORT FACILITIES: YARDS, SHOPS, ADMIN. BLDGS**	**99,425,456**	**92,535,013**	**6,890,443**	**90,169,783**
30.01	Administration Building: Office, Sales	0	0	0	191,435
30.02	Light Maintenance Facility	8,161,279	7,591,887	569,392	4,559,985
30.03	Heavy Maintenance Facility	40,906,889	38,099,138	2,807,751	29,157,826
30.04	Storage or Maintenance of Way Building	8,382,270	7,797,460	584,810	6,803,772
30.05	Yard and Yard Track	41,975,018	39,046,528	2,928,490	49,456,765
40	**SITEWORK & SPECIAL CONDITIONS**	**1,103,867,264**	**980,569,426**	**123,297,838**	**525,282,842**
40.01	Demolition, Clearing, Earthwork	34,695,802	29,980,157	4,715,645	2,539,412
40.02	Site Utilities, Utility Relocation	350,694,801	299,449,755	51,245,046	112,539,707
40.03	Haz. mat'l, contam'd soil removal/mitigation, ground water treatments	7,228,935	6,590,542	638,393	2,706,597
40.04	Environmental mitigation, e.g. wetlands, historic/archeologic, parks	30,841,906	26,979,122	3,862,784	10,816,505
40.05	Site structures including retaining walls, sound walls	8,637,582	7,998,960	638,622	4,618,004
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	5,472,264
40.08	Temporary Facilities and other indirect costs during construction	410,969,241	386,517,624	24,451,617	386,540,353
50	**SYSTEMS**	**247,460,781**	**221,284,483**	**26,176,298**	**37,082,160**
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	4,751,819
50.04	Traction power distribution: catenary and third rail	36,426,286	32,878,150	3,548,136	16,942,495
50.05	Communications	59,889,234	53,691,339	6,197,895	14,268,775
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**	**934,714,736**
50.07	Central Control	4,033,031	3,614,007	419,024	0
60	ROW, LAND, EXISTING IMPROVEMENTS	222,188,386	197,397,947	24,790,439	100,303,144
60.01	Purchase or lease of real estate	201,658,907	179,360,664	22,298,243	88,850,279
60.02	Relocation of existing households and businesses	20,529,479	18,037,283	2,492,196	11,452,865
70	VEHICLES	208,501,186	186,829,020	21,672,166	34,051,880
70.02	Heavy Rail	186,061,066	166,721,385	19,339,681	26,259,419
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	774,986,111
80.01	Preliminary Engineering	95,120,484	94,055,262	1,065,222	103,435,648
80.02	Final Design	257,934,908	228,321,632	29,613,276	163,164,307
80.03	Project Management for Design and Construction	385,825,694	366,458,463	19,367,231	313,488,523
80.04	Construction Administration & Management	218,155,752	199,656,728	18,499,024	82,963,677
80.05	Professional Liability and other Non-Construction Insurance	52,138,030	46,549,724	5,588,306	28,408,468
80.06	Legal; Permits; Review Fees by other agencies, cities, etc.	76,135,125	67,641,006	8,494,119	21,141,132
80.07	Surveys, Testing, Investigation, Inspection	24,955,327	21,759,335	3,195,992	29,585,563
80.08	Start up	73,560,706	65,996,664	7,564,042	32,798,793
90	Subtotal (10 - 80)	4,846,763,750	4,305,164,589	541,599,161	1,844,055,871
	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	1,844,055,871
	FINANCE CHARGES	173,058,242			0
	Total Project Cost (10 - 100)	5,121,693,162	4,305,164,589	643,470,331	1,844,055,871
	Provisional Request for Payment				39,255,396
	Total Project Cost (10 - 100)	5,121,693,162	4,305,164,589	643,470,331	1,883,311,267

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

HART staff presented the status of the program budget and schedule to the Board of Directors at the October and November 2015 monthly meetings. Forecasts indicated an increase to project costs and extension of the overall completion date for the project:

- 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.

HART staff has begun providing supporting documentation for the updated cost and schedule. However, there are several significant cost-related items that have been discussed with HART that the PMOC believes are not 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
- Park-n-Ride lots
- OCIP adjustment for time extensions
- Elevator/Escalator Contract escalation
- Miscellaneous support contracts (e.g. ROW support, On-Call Construction, Eminent Domain Legal Support)

The PMOC will develop proposed adjustments to the EAC for inclusion in the model to be used for the Risk Refresh. 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 $1.586 billion in GET funds since 2007.

- HART has received approximately $1.208 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. 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. Initial estimates indicated that the GET extension could generate approximately $1.8 billion in revenue at a 5 percent growth rate. However, 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. On January 27, 2016, the City Council approved Bill 23 to extend collection of the GET to December 2027.

2.5 Project Schedule

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 indicated that a revision is underway to account for elimination of the Dillingham Utilities and Road Widening package. This work will be completed under the City Center Guideway and Stations DB Contract and through an On-Call Construction Contract. PMOC also has concerns that MPS does not fully account for HECO undergrounding activities along Dillingham Boulevard, which would affect the critical path. These changes will affect RSD of the full system. HART is reviewing several schedule scenarios internally. HART committed to providing the updated MPS by February 29, 2016. It is critical that HART meet this deadline, so the PMOC has sufficient time to prepare for the Risk Refresh Workshop.

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

Period: March 2016 – May 2016		
Activity	**Responsibility**	**Date**
Monthly Progress Meeting	FTA, HART and PMOC	February 10, 2016
Monthly Progress Meeting	FTA, HART and PMOC	March 9, 2016
Risk Refresh	FTA, HART and PMOC	March 30, 2016
Monthly Progress Meeting (Conference Call)	FTA, HART and PMOC	April 13, 2016
Monthly Progress Meeting	FTA, HART and PMOC	TBD
Quarterly Meeting	FTA, HART and PMOC	TBD

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 has ordered special forms to complete the repairs, which are not on the critical path.

- Plinthless Track – 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. HART engaged technical staff from other transit agencies to complete a Peer Review of the situation and provide some recommendations. Indications are that HART will accept shimming of the track and may receive a credit from KIWC.
- 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	501	453	48
DB-200	Maintenance and Storage Facility	31	27	4
DB-320	Kamehameha Highway Guideway	107	83	24
DBOM-920	Core Systems Contract	382	304	78

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 provided an updated Roadmap to the PMOC dated January 16, 2016. The PMOC recommends HART to review the updated Roadmap, which must include milestone dates for all safety certification activities that are related to the MSF facilities and MSF CSC rail activation. The safety certification activities requiring milestone dates include: design/construction conformance review certifications; System Integration Testing; issuance of manuals, operating procedures, training, and other start up elements. A similar breakdown of milestone dates must to be done for the WOFH Guideway and the other contracts that identifies when these Fixed Facilities will be completed and the CSC will be performing functional tests.
- The substantial completion date for the MSF buildings is tentatively scheduled for May 2016 and the WOFH CSC substantial completion date is tentatively scheduled for September 2016. The PMOC is concerned that these dates might not be met given the number of deliverables that must be completed. The Rail Activation Committee has been formed as of February 2016 but some HART staff is filling dual roles. HART provided a baseline Operational Readiness checklist and a hold point plan for rail activation needed for the MSF and WOFH. Although HART will not be ready for revenue operations for a few years, HART will have an active MSF rail yard and will be performing rail vehicle functional tests/preliminary rail operations to meet the Revenue Operation Date (RSD) or for an Interim Opening which may be earlier than the RSD. The items listed in the bullet above are required for safety certification to allow preliminary rail operations.

- HART has completed 100% design conformance reviews for the WOFHSG and FHSG contracts. The PMOC is pleased with the design conformance review progress and HART is performing over the shoulder construction conformance reviews to accelerate the approval process HART, which is very positive.
- HART provided the PMOC with the DRAFT MOU 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 MOU does not indicate whether GSA will have the right to review the final design since this work will now be completed under a DB contract. HART Project Director is still pursuing this issue to determine what review authority GSA will have.
- HART accepted delivery of three (3) Maintenance-of-Way Vehicles (MOW) delivered on February 8, 2016. Interim certification was issued by Safety and Security with a list of open items and restrictions.
- HDOT will work with HART Safety and Security to provide questions on the NPRM issued by FTA, which is due on April 5, 2016.

2.8 Project Risk

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 continues 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 an updated Risk Refresh will be performed March 30, 2016.

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	TBD		In progress
2d	Re-baseline MPS	HART	Apr-14	TBD		HART to provide revised MPS update for review
2f	Update RCMP (including Hold Points and Secondary Mitigation Measures)	HART	Sept-13	TBD		HART to provide updated draft that reflects revised budget and schedule.
3	HART to provide target date for Federal Courthouse resolution/sign-off	HART	Sep-15	Feb-15		Target date is May 2016; PMOC will continue to track progress in meeting this target date.
4	HART to provide Operational Readiness Checklist/Hold Points for MSF Certification	HART	Jan-16	Jan-16	Feb-16	Complete

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	$37,479,508	91.4%	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	$268,451		$46,411,728	$23,982,916	51.3%	4.27%	Dec 2013	Mar 2019
	Notes/Issues:	▪ None at this time									
MM-290	Construction Engineering and Inspection (West)	PGH Wong Engineering, Inc.	$54,232,480			$54,232,480	$20,135,729	37.1%	4.0%	Jan 2014	Jan 2020
	Notes/Issues:	▪ None at this time.									
MM-595	Construction Engineering and Inspection (East)	AECOM/URS Corporation	$63,083,417	($47,826,417)		$15,257,000	$12,377,950	91.1%	10.36%	Jan 2014	Dec 2018
	Notes/Issues:	▪ The new CE&I consultant for the East Section was issued NTP in September. The AECOM/URS team immediately began a transition that occurred through October 9, 2015. The AECOM/URS project closeout is ongoing.									
MM-596	Construction Engineering and Inspection II (East)	Stantec Consulting Services Inc.	$55,036,130			$55,036,130				Sep 2015	Dec 2019
	Notes/Issues:	▪ HART requested an Independent Cost Estimate (ICE) be performed on the Airport Guideway and Stations DB contract and the City Center Guideway and Stations DB contract. These ICE is anticipated to be completed in February 2016 and prior to the bids.									
MM-962	Core System Contract Oversight Consultant	Lea + Elliott, Inc.	$43,988,989			$43,988,989	$12,830,304	29.2%	0.70%	Feb 2014	Aug 2019
	Notes/Issues:	▪ None at this time.									
MM-945	On-Call Construction Contractor	Royal Contracting Co. Ltd	$1,000,000	$999,951	99.99%	$1,999,951	$1,922,968	96.1%	23%	Aug 2014	Jul 2019
	Notes/Issues:	▪ None at this time.									
DB-120	West Oahu/Farrington Highway DB	KIWC	$482,924,000	$149,250,758	31.0%	$632,174,758	$512,032,937	81.1%	1.41%	Nov 2009	Jul 2016

Contract	Description	Contractor	Base Contract Value	Change Orders	Change Order %	Current Contract Value	Expended	% Exp.	DBE	Award Date	Compl. Date
	Notes/Issues:	▪ Progress is lagging from the approved baseline schedule. KIWC has notified HART that a 6 month time extension beyond substantial completion is needed to complete work at LCC due to these impacts. HART is currently working with the contractor to mitigate delays and is evaluating the merit of KIWC's request for change to the substantial completion date.									
DB-200	Maintenance and Storage Facility DB	Kiewit/Kobayashi JV	$195,258,000	$79,789,423	40.8%	$275,047,423	$239,428,393	85.5%	0.23%	Jun 2011	Apr 2016
	Notes/Issues:	▪ None at this time.									
DB-320	Kamehameha Highway Guideway DB	KIWC	$372,150,000	$16,817,876	4.3%	$388,967,876	$198,133,217	49.7%	0.08%	Jun 2011	Sep 2016
	Notes/Issues:	▪ Contract is approximately 12 months behind schedule. KIWC submitted revised schedule in September 2015 via RFC, re-sequencing the guideway and road work. The schedule is currently being reviewed by HART. The revised schedule shows the guideway structure forecasted to be complete in April 2017 with completion of the roadway civil construction and the overall project in September 2017.									
DBOM-920	Core Systems Contract	Ansaldo/Honolulu JV	$573,782,793	$24,780,894	4.3%	$598,563,687	$168,956,392	28.4%	0.029%	Nov 2011	Mar 2019
	Notes/Issues:	▪ 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	$5,066,456	9.9%	0%	May 2013	Jul 2018
	Notes/Issues:	▪ None at this time.									
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:	▪ 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:	▪ Revised engineer's estimate exceeds the FFGA budget.									

Contract	Description	Contractor	Base Contract Value	Change Orders	Change Order %	Current Contract Value	Expended	% Exp.	DBE	Award Date	Compl. Date
FD-340	Kamehameha Highway Station Group Construction FD	Anil Verma, Inc.	$8,702,592	$1,199,698	12.2%	$9,859,290	$9,177,277	93.1%	43.9%	Nov 2012	Dec 2016
	Notes/Issues:	▪ Revised engineer's estimate exceeds the FFGA budget.									
FD-430	Airport Section Guideway and Utilities FD	AECOM	$38,840,960	$4,293,512	11.0%	$43,134,472	$41,447,161	96.1%	0.42%	Dec 2011	Jun 2017
	Notes/Issues:	▪ Airport Guideway was combined with Airport Stations into a DB Contract. ▪ Revised engineer's estimate exceeds the FFGA budget.									
FD-440	Airport Station Group Construction FD	AECOM	$10,177,365	$1,416,487	14.88%	$11,573,852	$9,801,978	84.7%	2.31%	Nov 2012	Jul 2017
	Notes/Issues:	▪ Airport Guideway was combined with Airport Stations into a DB Contract. ▪ Revised engineer's estimate exceeds the FFGA budget.									
FD-530	City Center Section Guideway and Utilities FD	AECOM	$43,948,220	$1,296,842	2.9%	$46,197,562	$40,908,953	88.6%	0.44%	Jul 2012	May 2018
	Notes/Issues:	▪ City Center Guideway was combined with Dillingham and Kaka'ako Stations into a DB Contract. ▪ Revised engineer's estimate exceeds the FFGA budget. ▪ The PMOC strongly recommended that HART not issue NTP for this contract unless the HECO clearance issues are resolved.									
FD-550	Dillingham and Kaka'ako Station Group Construction FD	Perkins & Will	$18,321,918	$1,046,743	5.71%	$19,308,042	$11,875,668	66.2%	0%	Jun 2013	Jul 2018
	Notes/Issues:	▪ City Center Guideway was combined with Dillingham and Kaka'ako Stations into a DB Contract. ▪ Revised engineer's estimate exceeds the FFGA budget.									
DBB-505	Airport Section Utilities Construction	Nan	$28,413,973	$0	0%	$28,413,973	$8,930,361	31.4%	0.12%	Jul 2014	Jun 2016
	Notes/Issues	▪ 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	$3,889,433	86.8%	0%	Sep 2014	Feb 2015
	Notes/Issues	▪ Construction is complete. Closeout is ongoing.									

Contract	Description	Contractor	Base Contract Value	Change Orders	Change Order %	Current Contract Value	Expended	% Exp.	DBE	Award Date	Compl. Date
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		▪ 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		▪ None at this time.									
DBB-171	West Oahu Station Group Construction	Nan, Inc.	$56,088,470	$0	0%	$56,088,470	$0	0%	0%	Oct 2015	Mar 2019
Notes/Issues:		▪ 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:	February 2016
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

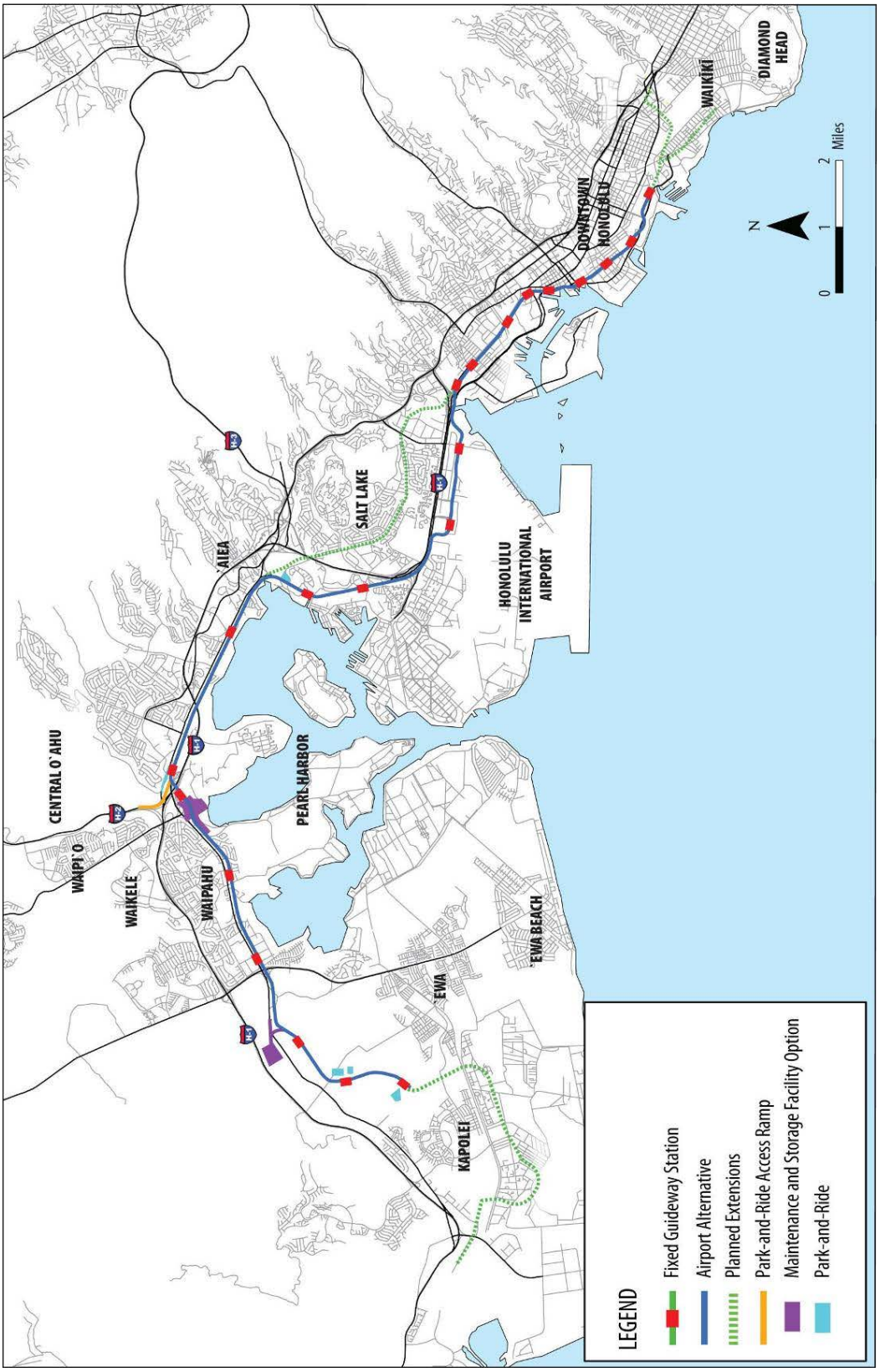
10/09 Approval Entry to PE	03/19 Estimated RSD at Entry to PE
12/11 Approval Entry to FD	03/19 Estimated RSD at Entry to FD
06/12 Request for FFGA	03/19 Estimated RSD at Request for FFGA
12/12 FFGA	01/20 RSD at FFGA

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

$1.883B Amount of Expenditures at date of this report
43.0% 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	5	Y	Complete
Safety and Security Certification Plan	4	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	3	Jun-11	Completed Oct 2015
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?	Y		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 evaluated 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: • 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	