

# HONOLULU RAIL TRANSIT PROJECT



## November 2017 MONTHLY PROGRESS REPORT



[www.HonoluluTransit.org](http://www.HonoluluTransit.org)

**DISCLAIMER NOTICE**

This document is disseminated under the sponsorship of the United States Department of Transportation, Federal Transit Administration (FTA), in the interest of information exchange. The United States Government assumes no liability for the contents or use thereof.

The United States Government does not endorse products or manufacturers. Any trade or manufacturers' names appear herein solely because they are considered essential to the contents of the report.

**NO RELIANCE BY THIRD PARTIES**

This report and all subsidiary reports are prepared solely for the FTA, and should not be relied upon by any party, except the FTA, its Project Management Oversight Contractors (PMOC), and the Honolulu Authority for Rapid Transportation (HART) Board of Directors, in accordance with the purpose as described in the next section.

**REPORT FORMAT AND FOCUS**

This document is submitted in compliance with the terms of FTA Contract No. DTFT60-09-D-00012, Task Order No. 2. Its purpose is to provide information and data to assist the FTA as it continually monitors HART's technical capability and capacity to execute a project efficiently and effectively, and hence, whether HART continues to be ready to receive federal funds for further project development.

This document covers the project and quality management activities on the Honolulu Rail Transit Project managed by HART as the project sponsor and partially financed by the FTA under the Full Funding Grant Agreement (FFGA). Concurrent non-project activities and other items not covered by the FFGA may not be included.

**INFORMATION REGARDING FORWARD-LOOKING STATEMENTS**

This document includes forward-looking information. The words "believe", "anticipate", "expect", "intend", "aim", "plan", "predict", "continue", "assume", "positioned", "may", "will", "should", "shall", "risk" and any other similar expressions that are predictions of or indicate future events and future trends identifies forward-looking information. Forward-looking information includes all matters that are not historical facts. Readers should not place undue reliance on forward-looking information because it involves known and unknown risks, uncertainties and other factors that are in many cases beyond HART's control. By its nature, forward-looking information involves risks and uncertainties because it relates to events and depends on circumstances that may or may not occur in the future. Forward-looking information is not a guarantee of future performance, and HART's actual results of operations, financial condition, and the development of the industry in which it operates may differ materially from those made in or suggested by forward-looking information contained in this document. The cautionary statements set forth above should be considered in connection with any subsequent forward-looking information that HART, or persons acting on its behalf, may issue. Factors that may cause HART's actual results to differ materially from those expressed or implied by the forward-looking statements in this document include but are not limited to the risks described in HART's annual report. For projects funded through the FTA's New Starts program, the FTA and its PMOC use a risk-based assessment process to review and validate a project sponsor's budget and schedule. Any results of an FTA or PMOC risk-based assessment represent a "snapshot in time" for a particular project under the conditions known at that same point in time. The status of any assessment may be altered at any time by new information, changes in circumstances, or further developments in the project. Furthermore, any forward looking statements contained in this document are made as of the date of this report, and HART does not undertake any obligation to update publicly or to revise any of the included forward-looking statements, whether as a result of new information, future events or otherwise, except as expressly required by law.

**ON THE COVER:**

Left: West Loch Station construction.

Upper Right: Station construction at the Ho'opili Station site.

Lower Right: Construction at the Pearlridge Station site.

**TABLE OF CONTENTS**

LIST OF ACRONYMS.....	4
PROJECT MAP.....	7
1 SUMMARY .....	8
2 OVERALL PROJECT PROGRESS AND FINANCIALS .....	10
2.1 Project Progress .....	10
2.2 Project Budget .....	12
2.3 Project Contingency.....	12
2.4 Project Funding .....	13
3 SCHEDULE.....	14
4 CONTRACT STATUS.....	16
4.1 System-Wide .....	18
4.2 Section I – West O'ahu/Farrington Highway: East Kapolei to Pearl Highlands.....	25
4.3 Section II – Kamehameha Highway: Pearl Highlands to Aloha Stadium.....	33
4.4 Section III – Airport: Aloha Stadium to Middle Street Transit Center Station .....	39
4.5 Section IV – City Center: Middle Street Transit Center Station to Ala Moana Center.....	43
4.6 Contract Status .....	46
5 OVERALL PROJECT-WIDE ACTIVITIES.....	50
5.1 Permits.....	50
5.2 Hawai'i Department of Transportation (HDOT) Agreements .....	50
5.3 Utility Agreements .....	51
5.4 Right-of-Way .....	53
6 MANAGEMENT AND ADMINISTRATIVE UPDATES .....	60
6.1 Safety and Security .....	60
6.2 Quality Management .....	64
6.3 Buy America Compliance .....	64
6.4 Disadvantaged Business Enterprise (DBE) .....	65
6.5 Art-in-Transit Program.....	65
6.6 Planning and Environment.....	66
6.7 Risk Management .....	67
6.8 Community Outreach.....	69
6.9 Staffing .....	69
6.10 Operations and Maintenance (O&M) .....	71
APPENDICES .....	72
A. Project Cost Reports .....	73
B. Vehicle Car Shell Progress Tracker .....	76
C. Project Organization Chart.....	78

**TABLE OF FIGURES**

Figure 1. Overall Project Progress (% Complete) .....	10
Figure 2. Construction Progress (% Complete).....	10
Figure 3. Design Progress (% Complete).....	11
Figure 4. Planned vs. Received Project Funding.....	13
Figure 5. New Starts Drawdown by Federal Fiscal Year .....	13
Figure 6. H RTP Master Project Schedule Summary (MPSS) .....	15
Figure 7. Right-of-Way Status for the Parcels .....	54
Figure 8. Relocation Status for the Occupants .....	54
Figure 9. Inter-Governmental Agreement Status.....	55
Figure 10. Staffing Activities.....	70

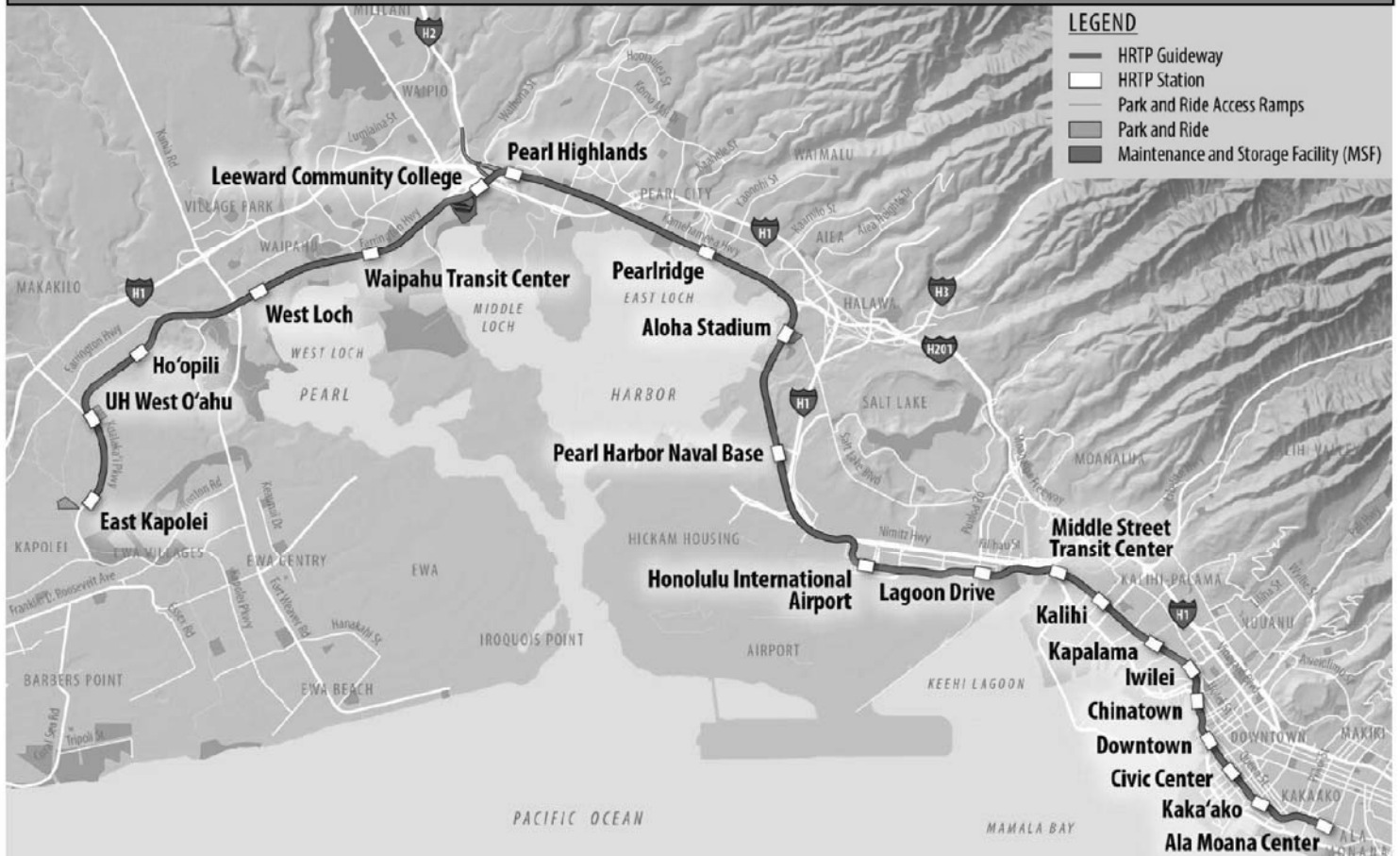
## LIST OF ACRONYMS

A&E	Architect/Engineer	CROE	Construction Right-of-Entry
AAN	Accepted as Noted	CSC	Core Systems Contract
AB	AnsaldoBreda	CSCC	Construction Specification Conformance Checklists
AC	Asphalt Concrete	CSL	Cross Hole Sonic Logging
ACHP	Advisory Council on Historic Preservation	CSOC	Core Systems Oversight Consultant
ACS	Access Control System	CSSC	Core System Support Consultant
ADA	Americans with Disabilities Act	CSSP	Construction Safety & Security Plan
AFA	Air Force Association	CTS	Communications Transmission System
AFE	Authorized for Expenditure	CW	Corridor-Wide
AGS	Airport Guideway and Stations	CWR	Continuous Welded Rail
AHJV	Ansaldo Honolulu Joint Venture	CWRM	Commission on Water Resource Management
AIS	Archaeological Inventory Survey	CZM	Coastal Zone Management
AIT	Art-in-Transit	DAGS	Department of Accounting & General Services
ANR	Accepted as Noted–Resubmit	DAV	Disabled American Veterans
APS	Auxiliary Power Supply	DB	Design-Build
APTA	American Public Transportation Association	DBB	Design-Bid-Build
ARRA	American Recovery and Reinvestment Act	DBE	Disadvantaged Business Enterprise
ASG	Airport Station Group	DBEDT	Department of Business, Economic Development and Tourism
ASI	Architectural Supplemental Information	DBOM	Design-Build-Operate-Maintain
ASU	Airport Section Utilities	DCAB	Disability and Communication Access Board
ATC	Automatic Train Control	DCCC	Design Criteria Conformance Checklists
ATO	Automated Train Operation	DCN	Design Change Notice
AVA	Anil Verma Associates, Inc.	DD	Definitive Design
BA	Buy America	DDC	Department of Design and Construction
BAC	Buy America Compliance	DES	Department of Environmental Services
BACM	Buy America Compliance Matrix	DFF	Direct Fixation Fastener
BAFO	Best and Final Offer	DFIM	Design Furnish Install Maintain
BART	Bay Area Rapid Transit	DFM	Department of Facility Maintenance
BCS	Balanced Cantilever System	DHHL	Department of Hawaiian Homelands
BFS	Budget and Fiscal Services	DHR	Department of Human Resources
BLS	Bureau of Labor Statistics	DIT	Department of Information Technology
BMP	Best Management Practice	DKSG	Dillingham and Kaka'ako Station Group
BOD	Board of Directors	DLIR	Hawai'i Department of Labor and Industrial Relations
BPS	Baseline Project Schedule	DLNR	Department of Land and Natural Resources
BUE	Bottom-Up Estimate	DOE	Department of Education
BUEG	Back-up Emergency Generator	DOH	Department of Health
CAM	Construction Access Milestone	DOL	Department of Labor
CAR	Corrective Actions	DPM	Deputy Project Managers
CCGS	City Center Guideway and Stations	DPP	Department of Planning and Permitting
CCH	City and County of Honolulu	DPR	Department of Parks and Recreation
CCO	Contract Change Order	DPS	Department of Public Safety
CCTV	Closed Circuit Television	DS	Downstream
CCUG	City Center Utilities and Guideway	DTS	Department of Transportation Services
CCUR	City Center Utilities Relocation	DTU	Dillingham Temporary Utilities
CDC	Compendium of Design Criteria	DUF	Division of Urban Forestry
CDL	Commercial Driver License	DVT	Design Verification Test
CDR	Conceptual Design Review	EA	Environmental Assessment
CDRL	Contract Document Requirements List	EAC	Estimate at Completion
CE&I	Construction Engineering and Inspection	EB	East Bound
CEL	Certifiable Elements List	EC	Environmental Compliance
CIC	Communication Interface Cabinet	ECP	Environmental Compliance Plan
CIL	Certifiable Items List	E/E	Elevator/Escalator
CIP	Cast-in-place	EKP	East Kapolei
CJA	Condon-Johnson & Associates	EMC	Electromagnetic Compatibility
CLSM	Controlled Low-strength Material	EMF	Electromagnetic Forces
CM	Construction Manager	EMI	Electromagnetic Interference
CMP	Construction Management Plan	EMP	Environmental Management Plan
CMS	Contract Management System	EOR	Engineer of Record
CMU	Concrete Masonry Unit	EOS	Electrically Operated Switch
CNMMP	Construction Noise Mitigation and Monitoring Plan	ESA	Engineering Services Agreement
CO	Certificate Occupancy	FAA	Federal Aviation Administration
COI	Conflict of Interest	FAI	First Article Inspection
COMMs	Communications	FAR	Floor Area Ratios
CONRAC	Consolidated Rental Car Facility	FAT	Factory Acceptance Tests
COR	Corporation Counsel	FCC	Federal Communications Commission
CORP	Central Oahu Regional Park	FCN	Field Change Notice
CP	Consulting Party	FD	Final Design
CPM	Critical Path Method	FDAS	Fire Detection Alarm System
CPO	Chief Procurement Officer	FDC	Field Design Change
CPP	Contract Packaging Plan	FDR	Final Design Review
CRMS	Customer Relational Management System	FEIS	Final Environmental Impact Statement

FFC	Fixed Facility Contractor	ITP	Inspection and Test Plan
FFGA	Full Funding Grant Agreement	ITS	Intelligent Transportation Systems
FHSG	Farrington Highway Station Group	IVR	Interactive Voice Response
FHWA	Federal Highway Administration	JTMS	Joint Traffic Management System
FISC	Fleet and Industrial Supply Center	JU&O	Joint Use & Occupancy
FLSWG	Fire/Life-Safety Working Group	JUOA	Joint Use and Occupancy Agreement
FOCN	Fiber Optic Communication Network	JV	Joint Venture
FOM	Finding of Merit/No Merit	KCDD	Kaka'ako Community Development District
FPO	Federal Preservation Officer	KCH	Kanehili Cultural Hui
FTA	Federal Transit Administration	KHG	Kamehameha Highway Guideway
FTE	Full-Time Equivalent	KHSG	Kamehameha Highway Station Group
FUT	Factory Unit Testing	KIWC	Kiewit Infrastructure West Company
FWS	Fish and Wildlife Service	KKJV	Kiewit/Kobayashi Joint Venture
FY	Fiscal Year	L+E	Lea +Elliott
GAT	Great Aleutian Tsunami	LCC	Leeward Community College
GBS	Gap Breaker Station	LD	Lagoon Drive
GDR	Geotechnical Data Report	LEED	Leadership in Energy and Environmental Design
GEC	General Engineering Consultant	LF	Linear Feet
GET	General Excise and Use Tax	LOTB	Log of Test Borings
GIS	Geographic Information System	LPR	License Plate Reader
GPR	Ground Penetrating Radar	LRV	Light Rail Vehicle
GSA	General Services Administration	LT	Load Test
GT	General Terms	LVPS	Low Voltage Power Supply
HA	Hazard Analysis	MIM	Manufacture-Install-Maintain
HABS	Historic American Buildings Survey	MITT	Multimodal Integration Technical Team
HAER	Historic American Engineering Record	MMIS	Maintenance Management Information System
HALS	Historic American Landscape Survey	MMP	Mitigation Monitoring Program
HART	Honolulu Authority for Rapid Transportation	MOS	Minimum Operable Segment
HCC	Honolulu Community College	MOT	Maintenance of Traffic
HCDA	Hawaii Community Development Authority	MOU	Memorandum of Understanding
HCSA	Hawai'i Capital Special District	MOW	Maintenance of Way
HDCC	Hawaiian Dredging Construction Company	MPS	Master Project Schedule
HDOE	Hawai'i Department of Education	MPSS	Master Project Schedule Summary
HDOH	Hawai'i Department of Health	MPV	Multiple Purpose Vehicle
HDOT	Hawai'i Department of Transportation	MPY	Makai Precast Yard
HDOT-A	Hawai'i Department of Transportation Airports Division	MS4	Municipal Separate Storm Sewer System
HDPE	High-density polyethylene	MSE	Mechanically Stabilized Earth
HECO	Hawaiian Electric Company	MSF	Maintenance and Storage Facility
HFD	Honolulu Fire Department	MTM	Modern Track Machineries
HHF	Historic Hawai'i Foundation	NCE	Non-Conformance Evaluation
HHFDC	Hawaii Housing Finance & Development Corporation	NCR	Non-Conformance Report
HHPRB	Hawai'i Historic Places Review Board	NDC	Notice of Design Change
HIA	Honolulu International Airport	NEPA	National Environmental Policy Act
HIE	Hawaii Independent Energy	NHL	National Historic Landmark
HILT	Hawaiian Islands Land Trust	NOI	Notice of Intent
HIOSH	Hawaii Occupational Safety and Health Division	NPDES	National Pollutant Discharge Elimination System
HOP	Ho'opili	NPS	National Park Service
HP	Historic Preservation	NR	National Register
HPC	Historic Preservation Committee	NRHP	National Register of Historic Places
HPCA	Historic Preservation Certification Application	NSM	Negotiation Strategy Memo
HPD	Honolulu Police Department	NTP	Notice to Proceed
HPF	Historic Preservation Fund	NTS	Network Time Server
HRHP	Hawai'i Register of Historic Places	O&M	Operations and Maintenance
HRI	Hitachi Rail Italy	OCC	Operations Control Center
H RTP	Honolulu Rail Transit Project	OCCL	Office of Conservation and Coastal Lands
HRU	Hitachi Rail USA, Inc.	OCIP	Owner-Controlled Insurance Program
HTI	Hawaiian Telcom	OIBC	O'ahu Island Burial Council
HTL	Hazard Tracking Log	OIL	Open Items List
HV	High Voltage	OMPO	Oahu Metropolitan Planning Organization
HVAC	Heating, Ventilation and Air Conditioning	ORCC	Operational Readiness Conformance Checklists
I&T	Inspection & Testing	OSB	Operations and Servicing Building
IAMR	Interstate Access Modification Report	OSHA	Occupational Safety and Health Administration
IC	Interim Certification	OTR	One-Time-Review
ICCS	Integrated Communications Control System	OTS	Oahu Transit Services
ICD	Interface Control Documents	OTW	Oceanic Time Warner
ICE	Independent Cost Estimate	OTWC	Oceanic Time Warner Cable
ICM	Interface Control Manual	P3	Public-private Partnership
ICWG	Interim Certification Working Group	PA	Programmatic Agreement
IDS	Intrusion Detection System	PAIS	Programmatic Agreement Implementation Schedule
IFB	Issued for Bid	PARs	Preventative Actions
IFC	Issued for Construction	PAT	Production Acceptance Test
IJ	Isolation Joint	PB	Parsons Brinckerhoff, Inc.
INMS	Integrated Network Management System	PCI	Payment Card Industry
IP	Implementing Procedures	PCN	Potential Change Notice

PDR	Preliminary Design Review	SOP	Standard Operating Procedures
PE	Preliminary Engineering	SOW	Scope of Work
PGC	Pacific Guardian Center	SP	Special Provisions
PHA	Preliminary Hazard Analysis	SQP	Supplemental Quality Plan
PHPR	Pearl Highlands Park and Ride	SSC	Safety Security Certification
PHS	Pearl Harbor Station	SSCP	Safety and Security Certification Plan
PICM	Project Interface Control Manual	SSCWG	Safety and Security Certification Working Group
PIG	Permitted Interaction Group	SSI	Sensitive Security Information
PIM	Project Interface Manager	SSMP	Safety and Security Management Plan
PLA	Project Labor Agreement	SSRC	Safety and Security Review Committee
PLO	Priority-Listed Offerors	SSSP	Site Safety Security Plan
PM	Project Managers	STCC	Specification/Testing Conformance Checklists
PMC	Project Management Consultant	STG	Shimmick/Taylor/Granite, Joint Venture
PMIM	Project Management and Interface Management	SUE	Subsurface Utility Engineering
PMOC	Project Management Oversight Contractor	SWPPP	Storm Water Pollution Prevention Plan
PMP	Project Management Plan	T&M	Time and Material
PMSC	Program Management Support Consultant	TAP	Transportation Alternatives Program
PPE	Personal Protective Equipment	TAT	Transient Accommodation Tax
PRTCC	Pre-revenue Testing Conform Checklist	TC	Train Control
PSC	Personal Services Contract	TCCR	Train Control and Communications Room
PSG	Platform Screen Gate	TCE	Temporary Construction Easement
PSGS	Platform Screen Gate System	TCO	Temporary Certificate Occupancy
PSIT	Pre-shipment Inspection Test	TCP	Traffic Control Plan
PT	Passenger Train	TCS	Train Control System
PTG	Parsons Transportation Group	TES	Traction Electrification System
PUC	Public Utilities Commission	TIGER	Transportation Investment Generating Economic Recovery
PUP	Property Utilization Plan	TIP	Transportation Improvement Program
PV	Passenger Vehicle	TMK	Tax Map Key
QA	Quality Assurance	TMP	Traffic Management Plan
QAM	Quality Assurance Manager	TOC	The Outdoor Circle
QAP	Quality Assurance Plan	TOD	Transit-Oriented Development
QC	Quality Control	TPO	Thermoplastic Polyolefin
QMP	Quality Management Plan	TPSS	Traction Power Sub-Station
QMS	Quality Management System	TSA	Transportation Security Administration
QTF	Quality Task Force	TSI	Transportation Safety Institute
R&R	Revise & Re-submit	TVA	Threat & Vulnerability Assessments
RAC	Rail Activation Committee	TVM	Ticket Vending Machine
RAMP	Real Estate Acquisition and Management Plan	TWF	Train Wash Facility
RCMP	Risk and Contingency Management Plan	UCA	Utility Construction Agreement
RCP	Reinforced Concrete Pipe	UFRCA	Utility Facilities Relocation and Cost Reimbursement Agreement
RE	Resident Engineer	UG	Underground
READ	Real Estate Acquisition Database	UH	University of Hawai'i
RFB	Request for Bids	UHWO	University of Hawai'i West O'ahu
RFC	Request for Change	UL	Underwriters Laboratories
RFHB	Request for High Bids	UPS	Uninterrupted Power Supply
RFI	Request for Information	USACE	U.S. Army Corps of Engineers
RFID	Requests for Interface Data	USDOL	United States Department of Labor
RFMP	Rail Fleet Management Plan	USDOT	U.S. Department of Transportation
RFP	Request for Proposals	USN	United States Navy
RFQ	Request for Qualifications	UST	Underground Storage Tank
RNR	Revise and Resubmit	VAR	Volt-Ampere Reactive
ROC	Rail Operations Center	VCR	Vertical Conduit Raceway
ROD	Record of Decision	VE	Value Engineering
ROE	Right of Entry	VECP	Value Engineering Change Proposal
ROH	Revised Ordinances of Honolulu	VMS	Variable Message Sign
ROM	Rough Order of Magnitude	VRC	Vertical Raceway Column
ROW	Right-of-Way	VRCS	Voice Radio Communication System
RR	Risk Register	VRF	Variable Refrigerant Flow
RSD	Revenue Service Date	WA	Work Area
RTM	Requirements Traceability Matrix	WHS	Waipahu High School
RTSA	Regional Transit Stabilization Agreement	WL	West Loch
S&S	Safety and Security	WLO	West Loch
S1	Segment 1	WOEDA	West Oahu Economic Development Association
SAIS	Supplemental Archaeological Inventory Survey	WOFH	West O'ahu/Farrington Highway
SCADA	Supervisory Control and Data Acquisition	WOSG	West O'ahu Station Group
SCAP	Stream Channel Alteration Permit	WQC	Water Quality Certification
SCC	Standard Cost Category	WSS	West Side Stations
SHPD	State Historic Preservation Division	WSSG	West Side Station Group
SHPO	State Historic Preservation Officer	WTB	Wheel Truing Building
SIC	Sandwich Isle Communications	WTC	Waipahu Transit Center
SIT	System Integration Testing	WYL	West Yard Lead
SLAN	Station Local Area Network	YCB	Yard Control Bungalow
SOG	Slab on Grade	YOE	Year of Expenditure
SOI	Secretary of the Interior		

## PROJECT MAP





# 1 SUMMARY

## REPORTING DATE AND SUBSEQUENT EVENTS

This report was published on Dec. 8, 2017, for the PMOC meeting scheduled for Dec. 13, 2017. Most of the data is presented with a reporting cutoff date of Oct. 27, 2017, unless otherwise noted.

## KEY ACTIVITIES IN NOVEMBER

### Project Overview

Construction work along Kamehameha Highway in the area south of Aloha Stadium is ramping up. Crews continued with the shaft work excavation for the support columns to the Airport Guideway Section (from Aloha Stadium to Middle Street).

### Hawaiian Names for HART's Rail Stations

The Honolulu Authority for Rapid Transportation (HART) announced the Hawaiian names of the nine rail stations on the ewa end of the rail system as recommended by its Hawaiian Station Naming Working Group.

The recommended names are:

- Kualaka'i (Location: Kroc Center)
- Keone'ae (Location: UH West O'ahu)
- Honouliuli (Location: Ho'opili)
- Hō'ae'ae (Location: Waipahu, West Loch)
- Pouhala (Location: Waipahu Transit Center)
- Hālaulani (Location: Leeward Community College)
- Waiawa (Location: Pearl Highlands)
- Pu'uloa (Location: Pearlridge)
- Hālawā (Location: Aloha Stadium)

Members of the working group used diverse community knowledge, oral accounts and written history to come up with the names, and to bring back place names and significant sites in Hawaiian culture. The working group invites the public to contribute its stories, historic facts and knowledge of significant events about the station names over the next month. The group will then meet to consider the public comments before finalizing the names and presenting them to the HART Board of Directors for review and adoption.

### Industry Day

HART held an "Industry Day" for contractors, subcontractors, construction-related organizations, Disadvantaged Business Enterprise (DBE) firms, small businesses and trade unions interested in the upcoming City Center Utilities Relocation solicitation. HART's goal is to maximize competition and the participation of local companies and organizations in the construction of the remainder of the rail transit project.

## COST (as of Oct. 27, 2017)

Project Cost Summary (\$ in millions)				
Description	Original FFGA Budget	Recovery Plan Budget	Current Estimate at Completion (EAC)	Incurred To Date
Project Capital Costs				
Base Cost without Contingency	\$4,305	\$7,100	\$7,276	\$2,933
Total Contingency	644	1,065	889	1
<b>Total Project Capital Costs</b>	<b>4,949</b>	<b>8,165</b>	<b>8,165</b>	<b>2,934</b>
FFGA Finance Charges	173	602	602	2
<b>Total FFGA Project Costs</b>	<b>5,122</b>	<b>8,767</b>	<b>8,767</b>	<b>2,936</b>
Post-RSD Finance Charges	42	256	256	0
<b>Total Project Costs</b>	<b>\$5,164</b>	<b>\$9,023</b>	<b>\$9,023</b>	<b>\$2,936</b>

### Original FFGA Budget

The Original FFGA Budget reflects the full build-out of the project as executed by the Full Funding Grant Agreement in December 2012.

### Recovery Plan Budget Total

The Project Recovery Plan Budget (submitted to the FTA on Sept. 15, 2017) is based on the additional local revenues generated by 2017 Special Session Act 1, which was signed into law on Sept. 5, 2017. Act 1 extends the General Excise and Use Tax (GET) surcharge for three additional years, through Dec. 31, 2030, and raises the Transient Accommodation Tax (TAT) from 9.25% to 10.25% for 13 years, until Dec. 31, 2030. These measures will provide financial capacity needed to complete the project as planned in the FFGA.



**Current Estimate at Completion (EAC)**

The Project Current EAC indicates the cost will exceed the FFGA budget. The increases are primarily due to federal lawsuit delays, Archeological Inventory Survey, subsequent impact of market conditions, Hawaiian Electric Company (HECO) utility relocations and high voltage clearance conflicts, delayed procurement due to aforementioned causes, extended level of efforts for staff and consultants, and cost escalation shift of Revenue Service Date from 2019 to 2025.

The Recovery Plan Budget and EAC remains the same at \$9,023 million, inclusive of total contingency and financing costs. The EAC includes the risk adjusted forecast for all known risk factors as incorporated in HART's project risk model, which is continuously updated. The total contingency decreased this period from \$1,012 million to \$889 million to recognize drawdown of known construction potential changes and risk exposures for West O'ahu/Farrington Highway (WOFH), West O'ahu Station Group (WOSG), Kamehameha Highway Station Group (KHSG), and the Core System contracts.

**Incurred to Date**

The Incurred-to-date costs are cumulative through October 2017, and exclude third-party costs. The \$2,936 million to date represents 41% of the base Current EAC. The Incurred-to-date costs increased by \$22 million for the period.

**SCHEDULE**

Project Progress* Through Oct. 27, 2017			
	Actual	Early Plan	Late Plan
Overall Project Progress	38.8%	41.0%	38.2%
Construction Progress	33.9%	35.9%	33.4%
Design Progress	72.2%	75.2%	70.5%
* Reported percentages complete are based on the revised Estimate at Completion for the Minimum Operable Segment (MOS) and revised Revenue Service Date (RSD).			

**PROGRESS REPORT SUMMARY OF CHANGES**

The following is a brief summary of major changes that have occurred from the previous month's report. For more information and detail, please refer to the respective pages in the report.

**Contract Status**

- Contracts in Procurement
  - The University of Hawai'i (UH) West O'ahu Station Temporary Park-and-Ride and UH West O'ahu Campus Road "B" protest was resolved and award activities have resumed. Please see page 16.
  - The On-Call Appraisers III contract was awarded. Please see page 16.
  - The Legal Counsel for Real Estate Matters II contract was awarded. Please see page 16.
  - The On Call Construction Contractor "IV" contract was awarded. Please see page 16.
- West O'ahu Station Group (WOSG)
  - The current contract value amount has increased due to change orders. Please see page 27.
- Farrington Highway Station Group (FHSG)
  - The current contract value amount has increased due to a change order. Please see page 29.
- Kamehameha Highway Guideway (KHG)
  - The current contract value amount has increased due to a change order. Please see page 33.
- Ramp H2R2
  - The contract substantial completion date has been updated from May 2017 to November 2017. Please see page 35.
  - The projected substantial completion date has changed from November 2017 to December 2017. Please see page 35.
  - The schedule status has changed from "On time" to "1 month behind." Please see page 35.
  - The current contract value amount has increased due to a change order. Please see page 35.

## 2 OVERALL PROJECT PROGRESS AND FINANCIALS

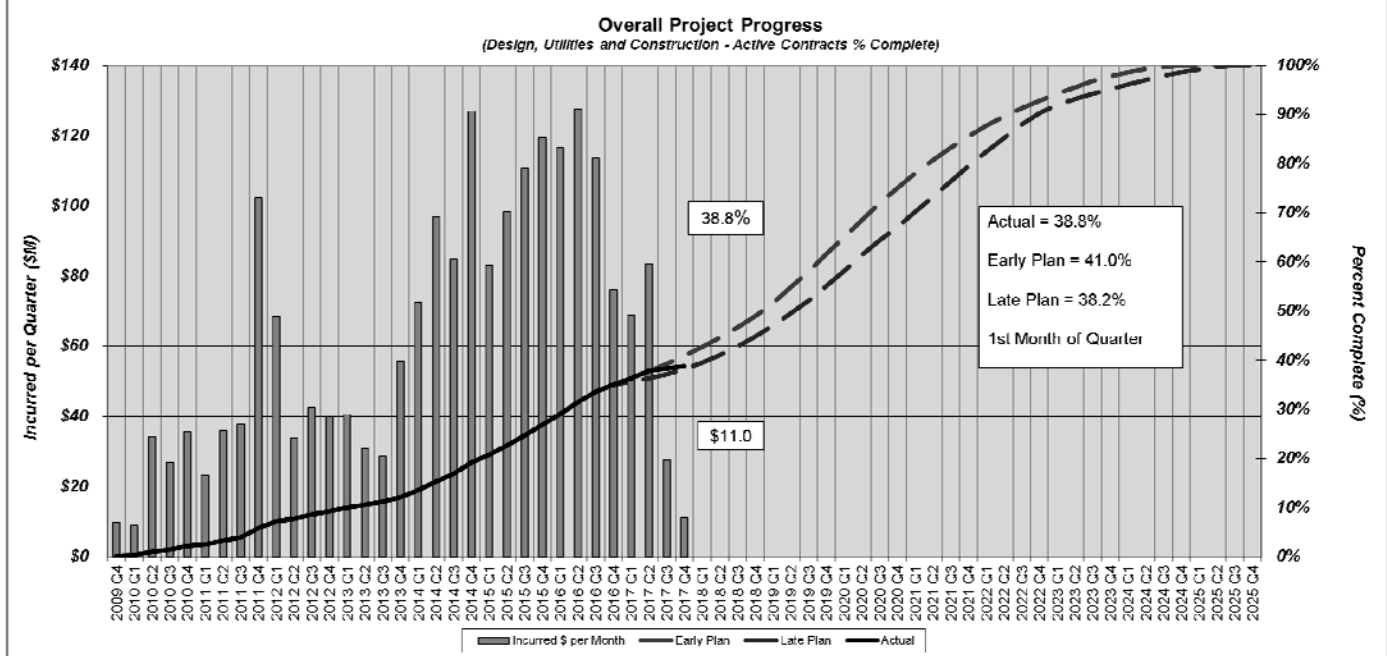
### 2.1 Project Progress (data as of Oct. 27, 2017)

Reported percentages complete are based on the revised Estimate at Completion for the Minimum Operable Segment (MOS) and revised Revenue Service Date (RSD). HART may revise its progress curves further when the project budget and RSD are re-baselined.

Note:

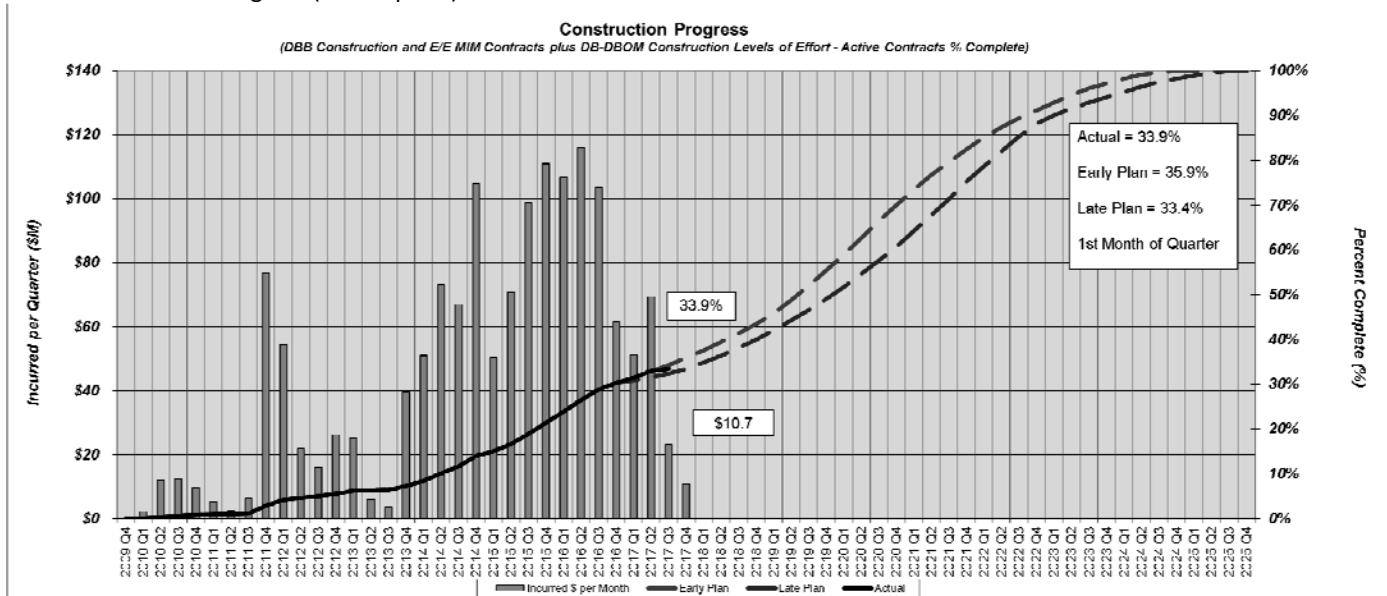
- Actual = Actual cost of work performed, based on invoiced-to-date amount.
- Early Plan = Earliest dates activities can begin and finish, based on logic and durations used in the schedule.
- Late Plan = Latest dates activities can begin and finish and not have an impact on completion date, based on logic and durations used in the schedule.

Figure 1. Overall Project Progress (% Complete)



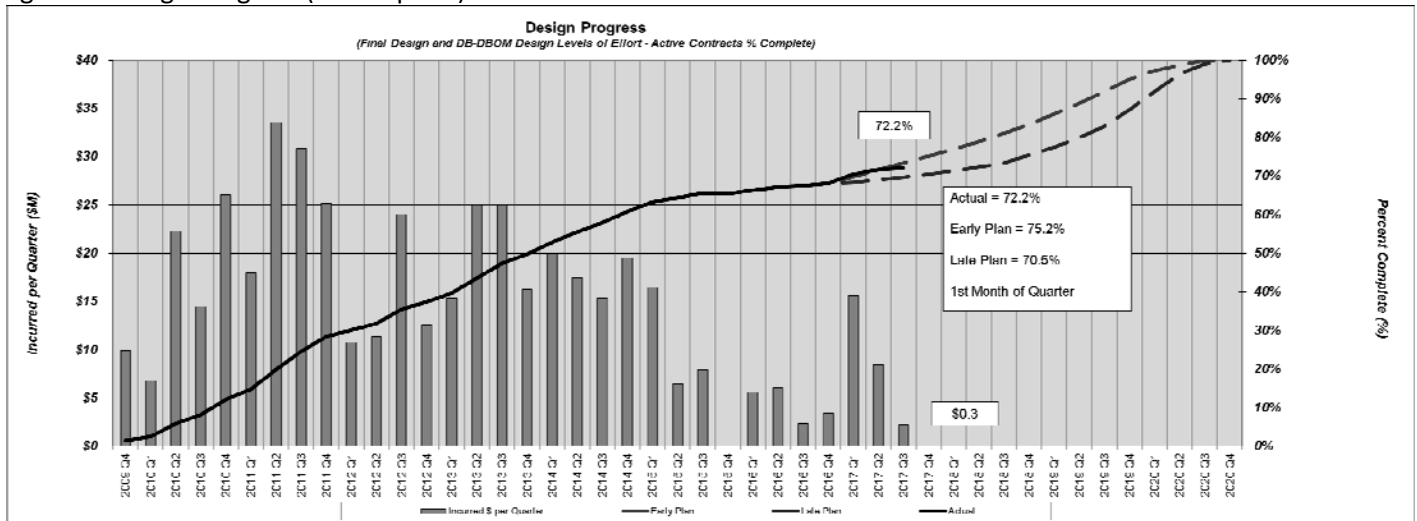
At present "overall" project progress is based on the weighted value progress of the individual construction and design contracts (Design-Build [DB], Design-Bid-Build [DBB], Design-Build-Operate-Maintain [DBOM], Elevator/Escalator Manufacture-Install-Test-Maintain [MIM], Final Design [FD] and DB-DBOM design levels of effort), not including City or non-design consultant labor. Overall Project Progress reflects all project elements as budgeted.

Figure 2. Construction Progress (% Complete)



Overall construction progress is based on the weighted average progress of the individual DBB and E/E MIM construction contracts and the DB-DBOM construction levels of effort, not including consultant Construction Engineering and Inspection (CE&I) services.

Figure 3. Design Progress (% Complete)



Overall design progress is based on the weighted average progress of the individual FD contracts and the design levels of effort of the DB and DBOM construction contracts, not including City or non-design consultant labor.

Note: Design responsibility will be transferred to DB, once DB packages are awarded. Deductive change orders will be issued to correct the total contract amount.

## 2.2 Project Budget (data as of Oct. 27, 2017)

Project Budget (\$ in millions)			
Description	Original FFGA Budget	Recovery Plan Budget	Current Estimate at Completion (EAC)
Project Capital Costs			
Base Cost without Contingency	\$4,305	\$7,100	\$7,276
Total Contingency	644	1,065	889
<b>Total Project Capital Costs</b>	<b>4,949</b>	<b>8,165</b>	<b>8,165</b>
FFGA Finance Charges	173	602	602
<b>Total FFGA Project Costs</b>	<b>5,122</b>	<b>8,767</b>	<b>8,767</b>
Post-RSD Finance Charges	42	256	256
<b>Total Project Costs</b>	<b>\$5,164</b>	<b>\$9,023</b>	<b>\$9,023</b>

### Original FFGA Budget

The Original FFGA Budget reflects the full build-out of the project as executed by the Full Funding Grant Agreement in December 2012.

### Recovery Plan Budget Total

The Project Recovery Plan Budget (submitted to the FTA on Sept. 15, 2017) is based on the additional local revenues generated by 2017 Special Session Act 1, which was signed into law on Sept. 5, 2017. Act 1 extends the General Excise and Use Tax (GET) surcharge for three additional years, through Dec. 31, 2030, and raises the Transient Accommodation Tax (TAT) from 9.25% to 10.25% for 13 years, until Dec. 31, 2030. These measures will provide financial capacity needed to complete the project as planned in the FFGA.

### Current Estimate at Completion (EAC)

The Project Current EAC indicates the cost will exceed the FFGA budget. The increases are primarily due to federal lawsuit delays, Archeological Inventory Survey, subsequent impact of market conditions, Hawaiian Electric Company (HECO) utility relocations and high voltage clearance conflicts, delayed procurement due to aforementioned causes, extended level of efforts for staff and consultants, and cost escalation shift of Revenue Service Date from 2019 to 2025.

The Recovery Plan Budget and EAC remains the same at \$9,023 million, inclusive of total contingency and financing costs. The EAC includes the risk adjusted forecast for all known risk factors as incorporated in HART's project risk model, which is continuously updated. The total contingency decreased this period from \$1,012 million to \$889 million to recognize drawdown of known construction potential changes and risk exposures for WOFH, WOSG, KHSB, and the Core System contracts.

## 2.3 Project Contingency (data as of Oct. 27, 2017)

Project Contingency (\$ in millions)			
Description	Original FFGA Budget	Recovery Plan Budget	Current Estimate at Completion
Allocated Contingency	\$542	\$791	\$726
Unallocated Contingency	102	274	163
<b>Total Contingency</b>	<b>\$644</b>	<b>\$1,065</b>	<b>\$889</b>

### Original FFGA Budget

The Original FFGA Budget reflects \$644 million.

### Recovery Plan Budget Total

The Recovery Plan Budget reflects \$1,065 million of total contingency or 15% of the base cost estimate which reflects available funding capacity. Based on FTA requirements on contingency for the current phase of the project, the 15% is sufficient reserve to cover against the risk of cost increases during development of the project.

### Current Estimate at Completion

The contingency is a reserve to cover known and unknown, but anticipated, project execution costs and uncertainty due to risk factors such as unresolved design issues, unknown site conditions, schedule impacts and market fluctuations. Cumulatively, there is \$889 million in Total Contingency remaining. Of which, \$163 million is unallocated.

## 2.4 Project Funding (data as of Oct. 27, 2017)

Figure 4. Planned vs. Received Project Funding

Planned vs. Received Project Funding					
Funding Source	Pre-FFGA Project <sup>1</sup>	Project Funding		Total Project	Actuals Received in October 2017
	2007 - 2009 Actuals Received	Planned <sup>2</sup> (\$YOE M)	2009 - Present Actuals Received	2007 - Present Actuals Received	
Beginning Project Cash Balance <sup>3</sup>	-	298	298	-	-
Interest Income on Cash Balance	7	3	2	9	(0)
FTA Section 5309 New Starts Revenue <sup>4</sup>	-	1,550	806	806	-
ARRA Funds	-	4	4	4	-
Net General Excise Tax (GET) Surcharge revenues FY2010-FY2030	378	5,873	1,669	2,047	69
Transient Accommodation Tax (TAT) revenue FY2018-FY2030	0	1,111	0	0	-
City Subsidy - HART Administration FY2018-FY 2030	0	160	0	0	-
Additional Funds FY2018-FY2030	0	54	0	0	-
<b>Total</b>	<b>385</b>	<b>9,053</b>	<b>2,780</b>	<b>2,866</b>	<b>69</b>

<sup>1</sup> GET and Interest Income received during Pre-Preliminary Engineering (pre-PE) phase prior to entry into PE.

<sup>2</sup> Updated to Chapter 6 - Project Finance, Figure 6-1 of HART's Recovery Plan submitted to the FTA on September 15, 2017.

<sup>3</sup> Beginning Project Cash Balance at Entry into Preliminary Engineering (PE) on October 16, 2009 (the FFGA Project start date) = Pre-PE GET, investment and miscellaneous income minus pre-PE expenditures. The \$298 million is included in the Pre-FFGA actual amounts received between 2007-2009 of \$378 million.

<sup>4</sup> New Starts Funds Obligated Through Federal Fiscal Year 2014 Totals \$806.3 million.

Figure 5. New Starts Drawdown by Federal Fiscal Year (data date as of Oct. 27, 2017)

New Starts Grant Information by Federal Fiscal Year (Amounts in Italics are Pending)				
Federal Fiscal Year (FFY) Allocation	FTA Obligated Amounts	Actual Drawdown Amounts to Date	Available Balance	FFGA Base Case Cash Flow
2008	\$15,190,000	\$15,190,000	\$0	
2009	\$19,800,000	\$19,800,000	\$0	
2010	\$30,000,000	\$30,000,000	\$0	
2011	\$55,000,000	\$55,000,000	\$0	\$20,607,242
2012	\$200,000,000	\$200,000,000	\$0	\$99,382,758
2013	\$236,277,358	\$236,277,358	\$0	\$258,280,277
2014	\$250,000,000	\$249,991,376	\$8,624	\$441,719,724
2015*	\$250,000,000	\$0	\$250,000,000	\$250,000,000
2016*	\$250,000,000	\$0	\$250,000,000	\$250,000,000
2017*	\$243,732,642	\$0	\$243,732,642	\$230,010,000
<b>Total</b>	<b>\$1,550,000,000</b>	<b>\$806,258,734</b>	<b>\$743,741,266</b>	<b>\$1,550,000,000</b>

\*HART submitted an updated Recovery Plan in September 2017; the FTA is evaluating the plan prior to awarding FFY 2015 - 2017 allocations to the Project.

### 3 SCHEDULE

(data as of Oct. 27, 2017)

#### Critical Path Analysis

- Interim Revenue Service Date is planned for December 2020.
  - The critical path for Interim Opening of the rail system from East Kapolei Station to Aloha Stadium includes work on Traction Power Service Stations, and Kamehameha Highway station construction work. Following construction, the controlling work shifts to the Core Systems installation, testing, and commissioning leading to pre-revenue and Interim Revenue Service Date.
- Target Revenue Service Date (RSD) is December 2025.
  - The critical path for RSD of the rail system from East Kapolei Station to Ala Moana Station includes the solicitation, evaluation, and award of the City Center Guideway and Station contract as well as utility installation along Dillingham Boulevard and guideway/station construction. Following completion of station construction, the controlling work shifts to the Core Systems installation, testing, and commissioning leading to full Revenue Service.

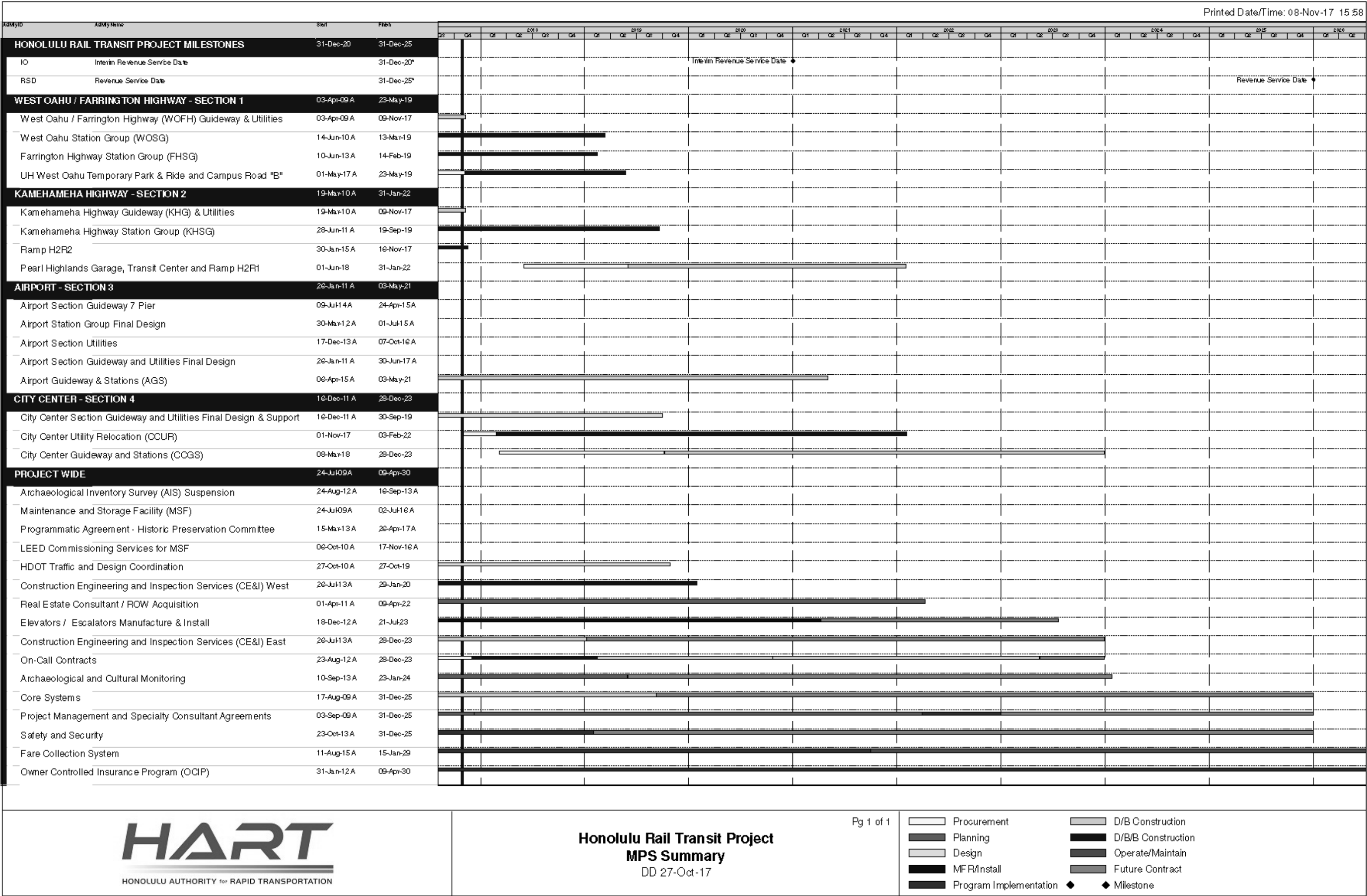
#### Three-Month Look Ahead

- City Center Utilities Phase 2 is expected to start work upon the award of On-Call IV in fourth quarter 2017.
- Dynamic Testing started from Waipahu High School to the West Loch Station (near Don Quijote in Waipahu) to support the functional train testing in the end of first quarter 2018.
  - Completion of the Train Control and Communications Room (TCCR) foundation for handover to the Core System Contractor for West Loch Station.
- Ground-level station construction for the west station groups to progress in the next few months.
  - First elevator installation to start at Ho'opili Station in fourth quarter 2017, with concrete curbs for fare gate in early 2018.
  - Completion of the UH West O'ahu 46kV distribution line relocation allowed mauka box girder construction to commence. Box girder slab planned at East Kapolei and UH West O'ahu Stations by year-end.
  - Mauka and makai transformers scheduled for West Loch Station in fourth quarter 2017. Mauka transformer installation planned for early 2018.
  - Pearl Highlands Station to pour columns and foundations for station entrance in fourth quarter 2017.
  - Pearlridge Station foundations for elevator pit, Traction Power Substation (TPSS) and entrance building planned for fourth quarter 2017.
  - Aloha Stadium Station is to complete mass excavation, retaining wall and elevator pits.
- Design work and guideway foundations are ongoing for the Airport Guideway and Stations Design-Build contract.

#### Key Schedule Issues

- Impact of 46kV distribution line relocation resequenced work at UH West O'ahu Station.
- Clarification and schedule of FHSG structural steel canopies to be settled with the contractor and designer. This impacts the conduits for Core Systems closed circuit television (CCTV), signage and speakers.
- Acceptance of the Airport Guideway and Stations contractor baseline schedule is unresolved.
- Continue efforts to mitigate delays and monitor construction progress on west stations contracts for Interim Revenue Service Date.

Figure 6. H RTP Master Project Schedule Summary (MPSS)  
The Master Program Summary Schedule reflects currently approved schedule end dates for contracts that have been awarded, and planned dates for future contracts.





## 4 CONTRACT STATUS

### Contracts in Procurement (data as of Nov. 20, 2017)

#### Overview

- Awarded Contracts:
  - University of Hawai'i (UH) West O'ahu Station Temporary Park-and-Ride and UH West O'ahu Campus Road "B" Request for Bids (RFB): The contract was awarded on Sept. 22, 2017. A timely protest was received on Sept. 27, 2017. The protest was resolved on Nov. 7, 2017 and award activities have resumed.
  - On-Call Appraisers III Request for Proposals (RFP): The contract was a multiple award, awarded to Colliers International Valuation & Advisory Services, LLC on Nov. 1, 2017, and Overland, Pacific & Cutler, Inc., on Nov. 8, 2017.
  - Legal Counsel for Real Estate Matters II RFP: The contract was a multiple award, awarded to Nossaman, LLP and Starn O'Toole Marcus & Fisher on Nov. 15, 2017.
  - On Call Construction Contractor "IV" RFP: The contract was awarded on Nov. 20, 2017, to Royal Contracting Co., Ltd.
- Active Procurements:
  - City Center Guideway and Stations (CCGS) Design-Build RFP: The RFP was cancelled on Aug. 24, 2017. HART is reviewing alternate delivery models and will be resoliciting this procurement.
  - Programmatic Agreement Historic Architecture Design Services Consultant "II" Request for Qualifications (RFQ) was issued on Sept. 13, 2017. Qualifications were received on Oct. 6, 2017, and are currently being evaluated.
  - Art-in-Transit: HART continues its negotiations with the highest-ranked artists for each of the stations. To date, eleven (11) contracts have been awarded.
  - Engineering Design and Design Review Services Contractor RFQ: The RFQ was issued on Dec. 22, 2016. Qualifications were received on Jan. 31, 2017. A list of ranked qualified proposers has been established and the selection process is underway.
  - Design Services for 138kV Utilities Relocation at KHG RFQ: The RFQ was issued on May 25, 2017. Statements of Qualifications were received on Aug. 2, 2017, and are currently being evaluated.
  - On Call Hazardous Materials Assessment RFQ: The RFQ was issued on June 1, 2017, and subsequently cancelled on July 6, 2017, due to an inadequate number of submittals. A new RFQ was issued on July 10, 2017. Statements of Qualifications were received on July 24, 2017, and are currently being evaluated.

Active Procurements						
Contract Code	Contract Name	Advertise Date	Bids or Proposals Due	RFP Part 2 Proposals/BAFO Due	Issue NTP	Projected Contract Substantial Completion Date
AP-00	Art-in-Transit	May 09 '13	-	NA	TBD/Staggered	TBD
MM-990	Engineering Design and Design Review Services Contractor	Dec 22 '16	Jan 31 '17	NA	TBD/Staggered	TBD
FD-700	Design Services for 138 KV Utilities Relocation at KHG	May 25 '17	Aug 02 '17	NA	TBD	TBD
MM-946	On Call Hazardous Materials Assessment	Jul 10 '17	Jul 24 '17	NA	TBD	TBD
PA-102	Programmatic Agreement Historic Architecture Design Services Consultant (Sole Source for Design Support During Construction)	Sep 11 '17	Sep 18 '17	NA	TBD	1 year
PA-102	Programmatic Agreement Historic Architecture Design Services Consultant "II"	Sep 13 '17	Oct 6 '17	NA	Dec 21 '17	TBD
MI-940	Traction Power Back-Up Generators	Jan 5, '18	Mar. 5, '18	NA	Jun '18	TBD

## Upcoming Procurement Under Evaluation

Contract Code	Contract Name	Issue Date
TBD	Resurfacing Kamehameha Highway	
DBB-511	City Center Utility Relocation Package	Dec 2017
DBB-550 (combined with DBB-510, DBB- 511, DBB-570, & DBB-575)	City Center Guideway and Stations	Mar 2018
DB-275 (DBB 275 & FD-245 combined)	Pearl Highlands Garage, Transit Center and Ramp H2R1 Design-Build	
AP-00	Art-in-Transit, Windscreen	
MI-940	Traction Power Back-up Generators	
MI-950	VAR Equipment Design-Furnish-Install	
DBB-600	UHWO Permanent Park & Ride DBB Construction	
DBB-600	East Kapolei Permanent Park & Ride DBB Construction	

## 4.1 System-wide

### A. Core Systems Contract (CSC)

**Contract No.:** DBOM-920

**DBOM Contractor:** Ansaldo Honolulu Joint Venture (AHJV)

**Contract Start Date:** January 2012

**Contract Substantial Completion:** March 2019

**Projected Substantial Completion:** July 2025

**Project Description:** Providing rail passenger vehicles, automated train control system, traction electrification system (TES), communication systems, passenger platform screen gates (PSGs), and operation and maintenance of the project.

Progress		Schedule Status
Physical % Complete	45.1%	On time**
Early Plan*	85.7%	
Late Plan*	80.4%	
* Data as of Oct. 27, 2017. The progress chart reflects early program expectations. Change Orders are being negotiated which would extend the Contract Completion and recalculate (lower) the planned percentages. Progress is being tracked against interim Construction Access Milestone dates, which show the project is "On-Time". ** Based on draft Re-baseline Rev K.		

### COST INFORMATION:

Original Contract:	\$573,782,793	Incurred-to-Date:	\$295,249,106
Current Contract Value <sup>1</sup> :	\$613,653,757	Incurred in October:	\$5,194,838

<sup>1</sup>Current Contract Value = Original contract value (excluding original O&M budget) + executed Change Orders

Disadvantaged Business Enterprise (DBE) Participation	
Actual DBE Participation:	\$408,365
DBE % Attained:	0.068%

Change Orders in October		
Change No.	Description	Amount (\$)
Cumulative through September 2017		\$39,870,964
None	N/A	---
Cumulative to Date		\$39,870,964

### SCHEDULE:

Upcoming Schedule Status per November 2017:

- Baseline Project Schedule Rev K was resubmitted as Rev K1 and is under review.
- Installations for the Train Control and Communications Room (TCCR) at the stations will start in Fourth Quarter 2017 at Ho'opili and West Loch Stations.
- Delivery of Site System #5 (West Loch) Traction Power Sub-Station (TPSS) is anticipated for First Quarter of 2018.
- Energization of MSF Yard is planned for Second Quarter 2018.
- Delivery of Train #3 to Honolulu is anticipated for First Quarter 2018.

**WORK PROGRESS:**

	Base Design Percent Complete	East Kapolei – Aloha Stadium Design	Aloha Stadium – Middle Street Design
Passenger Vehicles	97%		
PSGS	100%		
Communications	76%	73%	0%
Fire Detection	100%	100%	N/A
ATC / SCADA	100%	100%	100%
TES	100%	100%	100%

Activities this Month:**Design:**

- Review of design submittals is ongoing.
- Continued coordination between AHJV and Airport Guideway and Stations (AGS) contractor for integration of core systems requirements.
- Finalized design of TES cableways at feeder to guideway.

**Manufacturing:**

- Hitachi Rail USA, Inc. (HRU) is continuing with the assembly of Train #3, #4, and #5 in Pittsburg, CA.
- AHJV/HRU personnel rectified improper cable crimps on Train #1.
- Pre-shipment inspection and test of Supervisory Control and Data Acquisition (SCADA) continues.

**Installation, Testing, and Commissioning:**

- Qualification test on Platform Screen Gate System (PSGS) continues.
- SCADA installation in the MSF Operations and Servicing Building (OSB) is 50% complete.
- Communications (COMMS) installation and testing in the MSF buildings and yard continues.
- Conducted initial Passenger Vehicle on-guideway propulsion tests.
- Conducted initial Dynamic Train Setup test on the guideway at AW0.
- Continued coordination with WOSG, FHSG, and KHSG station contractors.
- Continued installation of TES jumpers from Leeward Community College (LCC) to Aloha Stadium.
- Completed installation of Train Control (TC) wayside equipment from East Kapolei to Aloha Stadium, except for station Insulation Joint (IJ) locations.
- Testing of Automatic Train Control (ATC) system in MSF is substantially complete.

Look Ahead:**Design:**

- Continue Final Design of all subsystems.
- Continue coordination between AHJV and WOSG/FHSG/KHSG/AGS.
- Finalize design of guideway internal cableway.

**Manufacturing:**

- Passenger Vehicle Truck Fabrication – Continue truck frame and bolster fabrication activities in Italy.
- Continue car shell fabrication activities in Italy.
- Continue manufacturing of communications, automated train control, traction power, and other subsystems equipment.

**Installation, Testing, and Commissioning:**

- Continue installation and testing of communications system cabling and devices in MSF buildings.
- Continue installation and testing of communications devices in the MSF yard.
- Continue installation of TC wayside equipment at station IJ locations on guideway (East Kapolei Station to Aloha Stadium).
- Continue Passenger Vehicle "set-up" dynamic tests on powered guideway.
- Static Design verification and routine testing on Train #2 to continue in Honolulu.
- Installation of Operations Control Center (OCC) technical room equipment.
- Installation of Ho'opili and West Loch TCCR equipment.
- Complete TES jumper installation on guideway from LCC to Aloha Stadium.
- Continue the remaining testing of the ATC wayside system test in MSF.
- On-call to complete remaining work at East Kapolei TPSS and LCC Gap Breaker Station (GBS).
- Commence installation of TC cabling in at-grade section adjacent to MSF and through LCC Station.

**KEY ISSUES:**

- HART issued revised Construction Access Dates in May 2017. The CSC has submitted a revised Baseline Project Schedule (BPS Rev K) to show a November 2020 interim opening date. A revised BPS Rev K1 has been resubmitted and is under review.
- The current projected project completion date is December 2025. Core Systems is developing options to meet the December 2025 date.
- The CSC's Communications System design completion has been delayed. The base design for the specification and selection of equipment is largely complete. The communications "physical" design (that is, layout of equipment) at each facility is delayed. Lack of resources within AHJV and its communications subcontractor have contributed to design delay. AHJV has informed HART that additional resources are being sought out to aid in the physical design. The Communications System delay is an internal AHJV delay and not affecting any critical path activities at this time. HART is monitoring this subsystem delay as it is a key component needed for future signaling system qualification testing and can affect system wide integrated testing if it is not adequately addressed.
- HECO provided HART with results of the power quality study which shows that voltage variation issues caused by the operation of the trains leaving the stations may have to be addressed. HART is currently analyzing the data and will provide comments back to HECO.

**KEY MILESTONES:**

- Access to West Loch and Ho'opili TCCR was provided to AHJV to commence installation activities.

**QUALITY MANAGEMENT:**

- Audit of Hitachi Rail Italy (HRI) manufacturing and assembly facilities in California and Italy was completed with AHJV.

CSC NCR Log			
	TOTAL	CLOSED	OPEN
AHJV & Subs	38	37	1
Hitachi Rail	1,175	933	242
<b>TOTAL</b>	<b>1,213</b>	<b>970</b>	<b>243</b>

**B. Elevators and Escalators Manufacture-Install-Maintain (MIM)****Contract No.:** MI-930**Contractor:** Schindler Elevator Corporation**Contract Start Date:** August 2013**Contract Substantial Completion:** July 2018**Projected Substantial Completion:** July 2018 (see the Schedule section below)**Project Description:** Furnish / install / test / maintain all elevator and escalator equipment located at the 21 stations.

Progress		Schedule Status
Physical % Complete	13.3%	Pending**
Early Plan*	TBD	
Late Plan*	TBD	
*Data as of Oct. 27, 2017. Plans will be determined after the approval of the baseline schedule for the AGS DB contract and the decision to award the CCGS contract. **The E&E schedule is dependent on other contractors' schedules. Actual release for manufacturing will be coordinated for a 'just in time' delivery.		

**COST INFORMATION:**

Original Contract:	\$50,982,714	Incurred-to-Date:	\$8,262,126
Current Contract Value <sup>1</sup> :	\$52,481,922	Incurred in October:	\$140,825

<sup>1</sup>Current Contract Value = Original contract value with Design Allowance + executed Change Orders

DBE Participation	
Actual DBE Participation:	\$0
DBE % Attained:	0%

Change Orders in October		
Change No.	Description	Amount (\$)
Cumulative through September 2017		\$1,499,208
None	N/A	---
Cumulative to Date		\$1,499,208

**SCHEDULE:**

- The Elevators and Escalators (E&E) schedule for FHSG and WOSG has been established. On Dec. 1, 2016, HART sent a Notice to Proceed (NTP) letter for the release of the equipment for KHSB. The AGS DB contract has been awarded, and the Notice to Proceed has been issued. The AGS DB contractor has resubmitted a full baseline schedule which is under review; this contract contains four stations. The E&E contract schedule for the remaining eight east-side stations will be established once the City Center Guideway and Stations (CCGS) contract is awarded and the schedule is accepted.
- The E&E projected completion date of July 2018 will change to a later date predicated on the approved baseline schedule for the AGS DB contract and the award of the CCGS contract. Both of these contracts are for the east portion of the guideway. Once the AGS baseline schedule is approved, the substantial completion date for the E&E contract will be revised to reflect the AGS station completion dates.

**WORK PROGRESS:**Activities this Month:

- Final Design is approximately 43% complete, as 9 of the 21 stations have been released for manufacturing. All draft equipment drawings for the 21 stations have been submitted for review and have been accepted.
- Permits for the installation of all elevators and escalators for the FHSG, KHSG and WOSG have been issued. These permits are for installation only, not operation.
- Interface between the Elevator and Escalator contractor and the AGS DB designer are ongoing to ensure that the installation of the equipment being supplied via the E&E contract will function as designed.
- A visit occurred in September 2017 to the Escalator manufacturing facility in North Carolina to ensure the specifications are being met, that Schindler is meeting the Buy America requirement, and that Quality Control specifications are being met. HART has received the final report and all contractual requirements are being met.
- The two elevators and one escalator for the West Loch Station and the one escalator for the UH West O'ahu Station were shipped in October from the manufacturing facilities. They arrived in Hawai'i in November.

Look Ahead:

- Elevators' schedule for the four stations in the AGS DB contract will be established once the contractor's baseline schedule is accepted. The E&E substantial completion date will be revised to incorporate the E&E equipment for the four stations included in the AGS DB contract. The remaining eight east-side stations will be established once the contract is awarded for the CCGS and the schedule for this contract is accepted.
- Initial elevator pit and elevator shaft steel is being erected at various western stations. Elevator and Escalator CE&I inspections are being scheduled to ensure that these elements constructed by others meet the required specifications.
- Installation of elevators and escalators for the West Loch and UH West O'ahu Stations is expected to commence in early December 2017.
- The elevator for the UH West O'ahu Station and the two elevators for the Ho'opili Station are scheduled to be shipped in December 2017, with arrival in Hawai'i by late January 2018.

**KEY ISSUES:**

- The release for manufacturing the E&E equipment is being coordinated for a 'just in time' delivery. Final completion of the equipment requirements for the four stations included in the DB contract for Airport Guideway and Stations will be subject to the final design of the DB. The eight stations included in the City Center Guideway and Stations contract are on hold pending contract award for this work. Both of the solicitation packages contain the size and configuration of the elevators and escalators purchased for these twelve remaining stations.
- Continue coordination with station contractors on construction interface milestones.
- The current completion date of the City Center section of guideway with stations will impact the completion of the Elevator and Escalator contract.

**KEY MILESTONES:**

- Elevators and escalators for the West Loch and UH West O'ahu Stations arrived in Hawai'i this month.
- The second elevator for UH West O'ahu and Ho'opili Stations will be shipped in December 2017.

**QUALITY MANAGEMENT:**

Elevators and Escalators NCR Log		
Total NCRs Issued To Date	CLOSED	OPEN
0	0	0



**C. Fare Collection System****Contract No.:** MI-900**Contractor:** INIT, Innovations in Transportation, Inc.**Contract Start Date:** April 2016**Contract Substantial Completion:** September 2021**Projected Substantial Completion:** 60 days after full rail revenue service date

**Project Description:** The fare collection system is a joint HART and City and County of Honolulu (DTS, DIT, BFS) project that will consist of a multi-modal, closed loop, account based smart card system. The Fare System vendor, INIT Innovations in Transportation, Inc., is responsible for design, manufacture, testing, installation and operation of the entire system inclusive of hardware and software.

The rail portion of the project will consist of Ticket Vending Machines (TVMs) and fare gates at stations that accept smart cards which can also be used for payment on board TheBus and facilitate a seamless transfer between modes. Equipment and software to be used by both HART and the City and County will include transaction processing, fare equipment monitoring, and customer service systems, as well as a Data Warehouse. TheBus equipment will consist of stand-alone smart card readers on board.

Progress		Schedule Status
Percent Complete	14.9%	On time
Early Plan*	TBD	
Late Plan*	TBD	
* Data as of Oct. 27, 2017. Planned information is being evaluated based on the current (full-alignment) scope versus the revised requirements of the Interim Revenue Service completion date.		

**COST INFORMATION:**

<u>Original Contract:</u>	<u>\$15,464,198</u>	<u>Incurred-to-Date:</u>	<u>\$3,563,041</u>
<u>Current Contract Value<sup>1</sup>:</u>	<u>\$15,464,198</u>	<u>Incurred in October:</u>	<u>\$0</u>

<sup>1</sup>Current Contract Value = Original contract value with Design Allowance + executed Change Orders

DBE Participation	
Actual DBE Participation:	\$0
DBE % Attained:	0%

Change Orders in October		
Change No.	Description	Amount (\$)
<b>Cumulative through September 2017</b>		<b>\$0</b>
None	N/A	---
<b>Cumulative to Date</b>		<b>\$0</b>

**SCHEDULE:**

- The baseline schedule for the fare systems project has the following milestones and is currently tracking to schedule:
  - The Final Design Review (FDR) milestone was completed on Sept. 22, 2017, with the agreement on the Back Office hardware and software and the Disaster Recovery approach.
  - Factory Acceptance Testing (FAT) was delayed due to European lab schedule issues with the new Federal Communications Commission (FCC) requirements. Completion was in November 2017. This delay will push the Production Acceptance Testing (PAT) of the bus equipment hardware to December 2017. System Integration Testing (SIT) is anticipated to start in December 2018.
  - All three phases of Factory Unit Testing (FUT) have been completed.

**WORK PROGRESS:**Activities this Month:

- Continued development of work-arounds for non-Architectural Supplemental Information (ASI) implemented conditions at West Loch.
- Developed draft Negotiation Strategy Memo (NSM) for design change orders
- Determined alternate path for load balancing and external firewall for back Office, as City F5 as planned in design is no longer available.
- Developed NSW and executed amendment for SOP development (Customer Service, Retail, Satellite City Hall and Call Center).
- Begin back office set up at FASI building.
- Begin set up of Test Lab at Oahu Transit Services (OTS).
- Met with Budget and Fiscal Services (BFS) to begin discussion of reconciliation of Standard Operating Procedures (SOPs).
- Provided additional wiring design support for KHSG stations.

Look Ahead:

- Witness PAT for the on-board bus equipment.
- Develop draft Customer Services SOPs. Continue in field monitoring of TVM and fare gate stub ups at station entrances. Confirm conduit is correct.
- Finalize initial roll out activities, including brand launch.
- Confirm design change orders and negotiate costs.
- Continue Test Lab set-up at OTS Middle Street.

**KEY ISSUES:**

- Call Center build out and documentation funding remains stalled pending decision from the City and County of Honolulu Corporation Counsel (COR) as to the validity of the capital and O&M Memorandum of Understandings (MOUs) signed in 2015 and early 2016 respectively in light of Charter Amendment 4 in November 2016.
- Bus antenna installation timeframe may cause delay to the Field Integration Test (FIT) currently scheduled for March 2018.
- Vendor's delay in PAT may delay FIT, currently scheduled for March 2018.

**KEY MILESTONES:**

- Full FDR completed on Sept. 30, 2017, with agreed-upon design changes to support minimized impact to Back Office budget.
- FAT on-bus hardware completed in November 2017.
- Test Lab equipment installation at Middle Street by the end of December 2017.
- Receipt and set-up of all Back Office equipment at FASI by Dec. 15, 2017.
- Complete PAT for on-board bus equipment Dec. 30, 2017.

**QUALITY MANAGEMENT:**

Fare Collection NCR Log		
Total NCRs Issued To Date	CLOSED	OPEN
0	0	0

## 4.2 Section I – West O'ahu/Farrington Highway: East Kapolei to Pearl Highlands

### A. West O'ahu/Farrington Highway Guideway (WOFH)

**Contract No.:** DB-120

**DB Contractor:** Kiewit Infrastructure West Company (KIWC)

**Contract Start Date:** December 2009

**Contract Substantial Completion:** March 2017

**Projected Substantial Completion:** TBD

**Project Description:** Design and construction of 6.8 miles of rail alignment, starting at the East Kapolei Station and ending at the Pearl Highlands Station.

Progress		Schedule Status
Physical % Complete	99.4%	TBD**
Early Plan*	100%	
Late Plan*	100%	
*Data as of Oct. 27, 2017. ** Further explanation is provided in the Schedule section.		

### COST INFORMATION:

Original Contract:	\$482,924,000	Incurred-to-Date:	\$665,612,084
Current Contract Value <sup>1</sup> :	\$669,341,831	Incurred in October:	\$17,219

<sup>1</sup>Current Contract Value = Original contract value + executed Change Orders

DBE Participation	
Actual DBE Participation:	\$13,166,612
DBE % Attained:	2.03%

Change Orders in October		
Change No.	Description	Amount (\$)
Cumulative through September 2017		\$186,417,830
None	N/A	---
Cumulative to Date		\$186,417,830

### SCHEDULE:

- As of the January 2017 progress update, the project was scheduled for substantial completion in March 2017.
- KIWC has communicated the projected substantial completion as April 2017. HART disagrees, due to unresolved issues. This issue has been elevated to the executive level.

### WORK PROGRESS:

WOFH Construction Status as of 11/24/17								
Utility Status	Qty to Date	Final Qty	% Complete		Structure Element	Total to Date*	Total Qty	% Complete
Water Line	9,348	9,348	100%		Shafts	309	309	100%
Sewer Line	570	570	100%		Columns	283	283	100%
Fuel Line	340	340	100%		Segment Casting	3,209	3,209	100%
Gas line	1,591	1,591	100%		Spans Stressed	274	274	100%
Drainage Line	5,166	5,166	100%		Trackwork	278	278	100%
Elec/Telecom	21,374	21,374	100%		Third Rail	278	278	100%
Street Lights	8,357	8,357	100%		Mill & Overlay	27,643	27,643	100%
Traffic Sig/ITS Duct bank	10,802	10,802	100%		*Total quantity for the construction items has been revised to reflect the latest Issued for Construction number of shafts, columns, segments, and spans.			
System Sites	7,046	7,046	100%					
ITS Systems Devices	4,121	4,121	100%					

Activities this Month:**Track Construction**

- Running rail geometry report was submitted and is under review.

**Civil**

- KIWC continues work to complete the outstanding HDOT punchlist items.

**Traffic Signals**

- KIWC is working on completing punchlist items for traffic signals. Waiting on HDOT for concurrence on repair procedures.

Look Ahead:**Civil**

- KIWC looks to complete the outstanding HDOT punchlist items.

**Traffic Signals**

- KIWC looks to complete the remainder of the punchlist items.

**KEY ISSUES:**

- Closeout**– KIWC continues to submit all project closeout documents and as-built drawings for HART review.
- Shims** – KIWC has completed the shim replacement work for the entire WOFH Guideway.
- Tendons** – KIWC has completed their investigation of the condition of all tendons. The data has been submitted to HART for review.

**KEY MILESTONES:**

- Punchlist: 100% of KIWC's list has been verified and closed by CE&I for the guideway. KIWC's internal punchlist: KIWC is working to complete HDOT, CSC, and Safety and Security punchlist items.

**SUBSTANTIAL COMPLETION:**

- No progress to report this month.

**QUALITY MANAGEMENT:**

- KIWC continues to follow their established quality processes through quality monitoring and audits.
- Closing Out NCRs** – KIWC has been working to correct, validate, and close out NCR's during this period. Totals are displayed in the table below.

WOFH NCR LOG		
Total NCRs Issued To Date	CLOSED	OPEN
586	579	7

**B. West O'ahu Station Group (WOSG)****Contract No.:** DBB-171**Contractor:** Nan, Inc.**Contract Start Date:** October 2015**Contract Substantial Completion:** March 2018**Projected Substantial Completion:** March 2019

**Project Description:** The West O'ahu Station Group construction contract includes services to build three (3) transit stations along Kualaka'i Parkway and Farrington Highway. The stations are East Kapolei (EKP), UH West O'ahu (UHWO), and Ho'opili (HOP) Stations. In addition to the transit stations, operational ancillary buildings, a traction power substation, and adjacent areas are included in this project. There will also be a Park-and-Ride lot at the EKP and UHWO Stations.

Progress		Schedule Status
Physical % Complete	31.0%	12 months behind**
Early Plan*	99.6%	
Late Plan*	99.6%	
*Data as of Oct. 27, 2017. HART has responded to a Time Impact Analysis (TIA) received from the contractor for Site Access, which will lead to a Change Order and a reduction to planned percentages. Other TIAs are being reviewed. If approved, this would result in a reduction to the planned percentages of the Early/Late Plans. **Further explanation is provided in the Schedule section.		

**COST INFORMATION:**

Original Contract:	\$56,088,470	Incurred-to-Date:	\$21,882,139
Current Contract Value <sup>1</sup> :	\$59,419,246	Incurred in October:	\$2,509,324

<sup>1</sup>Current Contract Value = Original contract value + executed Change Orders

DBE Participation	
Actual DBE Participation:	\$0
DBE % Attained:	0%

Change Orders/Amendments in October		
Change No./Amend	Description	Amount (\$)
<b>Cumulative through September 2017</b>		<b>\$2,479,234</b>
00005	HECO 46kV Relocation	\$143,119
00006	Schedule Mitigation and Resequencing	\$708,423
<b>Cumulative to Date</b>		<b>\$3,330,776</b>

**SCHEDULE:**

- The schedule status reported above reflects the contractor's progress schedule as of September 2017. HART worked with the contractor to mitigate the 14-month schedule delay by 2 months via resequencing; therefore, the projected substantial completion date was adjusted to reflect this cost savings. HART is continuing to work with the contractor to mitigate the remaining delays, if possible, and is evaluating the contract substantial completion date and warranted time extensions.
- The project has been initially delayed due to site access issues. The schedule is forecasted to be further delayed due to 46kV line relocation by HECO, which impacts the box girder work at UHWO and EKP Stations.
- The contractor's progress schedule for September 2017 has been processed.

**WORK PROGRESS:**Activities this Month:

- EKP: Completed falsework for box girder.
- EKP: Diaphragm cages fabricated for box girder.
- EKP: Setting girders and safety nets over roadway.
- EKP: Completed all ground level columns.
- EKP: Pedestrian walkway installed.
- UHWO: Falsework installed between piers 46-48.
- UHWO: bearing plates at platform stair connection completed.
- UHWO: Main 2" waterline installed and tied in to main.
- UHWO: Diaphragm and anchor zone reinforcement installed between piers 48-49.
- UHWO: Floors in the TCCR and Uninterrupted Power Supply (UPS) room sealed.
- UHWO: East side shoring complete; platform install for top slab.
- UHWO: Installation of the new electrical duct bank and foundation for the street light north of pier 10.
- HOP: Ancillary rooms, piping installed for water service.
- HOP: Welding at the elevator shafts 1 and 2.
- HOP: Graded the subgrade for the slab on grade.
- HOP: Set intermediate landing platforms; welding has begun.
- HOP: Walls striped and waterproofing installed at the TPSS Cable Vault.
- HOP: Ancillary room concrete masonry unit (CMU) walls installed.
- HOP: Installed PSG baseplates.
- HOP: TPSS walls poured and faregate slab on grade poured.

Look Ahead:

- HOP: Layout/install pipe for drain inlet box for storm drain A and B.
- HOP: Hoist and set Elevator 1 and 2 framework; weld landing frames.
- HOP: Install structural steel and interim landings.
- HOP: Layout and frame stairs 1 and 2; pour stair 1.
- HOP: Backfill and prep subgrade for TPSS vault.
- HOP: Pour TPSS top slab, strip forms and backfill.
- HOP: Install manholes at TPSS.
- HOP: Electrical rough ins TCCR.
- UHWO: Install top slab on channel side box girder.
- UHWO: Road side box girder install hatches and sleeves.
- UHWO: Pour bottom slab and walls of piers 48-49 of the road side box girder.
- UHWO: Pour bottom slab and walls of piers 46-47 of the road side box girder.
- UHWO: Pour stair's bike curb.
- UHWO: Install CMU walls in the entrance building.
- UHWO: Install escalator at entrance building.
- EKP: Install 20 Kip decking.
- EKP: Install bottom slab and rebar.
- EKP: Install decking, for box girder walls.
- EKP: Hoist and install bottom slab and wall rebar.
- EKP: Install east half box girder and rebar.

**KEY ISSUES:**

- Acquisition and installation of variable refrigerant flow (VRF) at HOP and UHWO.

**KEY MILESTONES:**

- TCCR and UPS rooms at HOP ready for turn-over.
- Erection of falsework at EKP completed.
- TCCR and UPS rooms at UHWO ready for turn-over.

**QUALITY MANAGEMENT:**

- Conducted bi-weekly Quality Task Force Meetings.

WOSG NCR Log			
	NCRs ISSUED TO DATE	CLOSED	OPEN
East Kapolei	5	4	1
UH West O'ahu	20	11	9
Ho'opili	18	13	5
Contract Wide	8	6	2
<b>TOTAL</b>	<b>51</b>	<b>34</b>	<b>17</b>

**C. Farrington Highway Station Group (FHSG)****Contract No.:** DBB-271**Contractor:** Hawaiian Dredging Construction Company, Inc. (HDCC)**Contract Start Date:** August 2015**Contract Substantial Completion:** January 2018**Projected Substantial Completion:** January 2019

**Project Description:** The Farrington Highway Station Group construction contract includes services to build three (3) transit stations along Farrington Highway. The stations are West Loch (WLO), Waipahu Transit Center (WTC), and Leeward Community College (LCC) Stations. The station work includes operational ancillary buildings, a traction power substation at WLO, and a Kiss-and-Ride lot at WLO.

Progress		Schedule Status
Physical % Complete	44.4%	12 months behind**
Early Plan*	93%	
Late Plan*	73%	
*Data as of Oct. 27, 2017. A Change Order request is under review to possibly extend the contract substantial completion date due to contractor's contentions related to access delays and issuance date of IFC drawings. This could result in a reduction to Early/Late Plans previously reported.		
**Further explanation is provided in the Schedule section.		

**COST INFORMATION:**

Original Contract:	\$78,999,000	Incurred-to-Date:	\$37,568,377
Current Contract Value <sup>1</sup> :	\$82,257,672	Incurred in October:	\$2,535,980

<sup>1</sup>Current Contract Value = Original contract value + executed Change Orders

DBE Participation	
Actual DBE Participation:	\$2,007,781
DBE % Attained:	2.51%

Change Orders/Amendments in October		
Change No./Amend	Description	Amount (\$)
<b>Cumulative through September 2017</b>		<b>\$3,243,629</b>
00011	Issue 00062 RFCR 00013 NOPC	\$15,043
<b>Cumulative to Date</b>		<b>\$3,258,672</b>

**SCHEDULE:**

- HART's current assessment of the schedule: HART has accepted the re-baselined Baseline Project Schedule (BPS) and meets weekly with HDCC to keep the working schedule current.
- HDCC's current assessment of the schedule: They will deliver the project 12 months late.
- A change order is under negotiation to extend the contract substantial completion date due to contractor's contentions of access delays and issuance of Issued for Construction (IFC) drawings and subsequent revisions.

**WORK PROGRESS:**Activities this Month:

- WLO: Type 2 Box Girder – Completed installation.
- WLO: Continued roughing in electrical, fire-protection, and mechanical at makai and mauka buildings.
- WLO: Begin removing shoring for Type 2 Box Girder.
- WLO: Installed vertical conduit raceway (VCR) conduit and base at Type 1 Box Girder.
- WLO: Receive and begin elevator installation.
- WLO: Installing handrails.

Look Ahead:

- WLO: Complete shoring removal.
- WLO: Install vertical raceway column (VRC) below Type 2 Box Girder.
- WLO: Install HECO transformer pads.
- WLO: Install VRF system pads.
- WLO: Install FM200 system.
- WLO: Complete painting of structural steel.
- WTC: Complete UG electrical at mauka side.



Activities this Month (continued):

- WLO: Continue painting of Lantern structural steel for the makai building.
- WLO: Continue installation of balustrades.
- WLO: Install Kiss-and-Ride entrance driveway.
- WLO: Beginning ancillary building inside utility installation.
- WLO: Install curb at Kiss-and-Ride parking area.
- WLO: Turn over TCCR Building to Ansaldo.
- WTC: Form and pour Box Girder Anchor Ends.
- WTC: Installation of platform end stairs.
- WTC: Place foundations and beams.
- WTC: Set makai pedestrian bridge (Third try).
- WTC: Completed makai pedestrian bridge column and beam.
- WTC: Install and backfill Makai Grounding Grid.
- WTC: Install future elevator pit walls/waterproof.
- LCC: Placed concrete for the ancillary building trash room perimeter wall.
- LCC: Installed scaffolding, and beginning installation of suspended slab and overhead beams.
- LCC: Installing scaffolding and beginning installation of entrance roof.
- LCC: Installing station stairway.
- LCC: Completed underground (UG) utilities for station entrance area.
- LCC: Installed forms and reinforcing.

Look Ahead (continued):

- WTC: Install retaining wall.
- WTC: Continue installation of electrical, fire-protection and mechanical.
- LCC: Install stairway.
- LCC: Place station entrance roof.
- LCC: Install parapet roofing.
- LCC: Install UG electrical for the station entrance and fare gates.
- LCC: Place HECO transformer pad.
- LCC: Complete suspended slab and beams.

**KEY ISSUES:**

- Additional electrical and communication conduit from the TCCR to the entrance building and the platform was added to the scope of work by the CSC.
- Additional electrical and communication conduit for the fare gates have been added to the scope of work by CSC.
- Station names are needed.

**KEY MILESTONES:**

- Dynamic testing is in progress; trains are passing through the Waipahu Transit Center Station site.
- WLO: TCCR ancillary building access was turned over on Nov. 1, 2017.
- WTC: TCCR will be ready to be provided to CSC in January 2018.
- LCC: TCCR will be ready to be provided to CSC in February 2018.

**QUALITY MANAGEMENT:**

- CE&I is working with HDCC to ensure required submittals are approved prior to related construction activities.

FHSG NCR Log			
	NCRs ISSUED TO DATE	CLOSED	OPEN
West Loch	30	27	3
Waipahu Transit Center	3	3	0
Leeward Community College	11	4	7
Contract Wide	0	0	0
<b>TOTAL</b>	<b>44</b>	<b>34</b>	<b>10</b>

**D. Maintenance and Storage Facility (MSF)****Contract No.:** DB-200**Contractor:** Kiewit/Kobayashi Joint Venture (KKJV)**Contract Start Date:** July 2011**Actual Substantial Completion:** July 2016

**Project Description:** The MSF contract consists of the Operations and Servicing Building (OSB), Maintenance of Way (MOW), Train Wash Facility (TWF) and Wheel Truing Building (WTB). In addition to the four (4) facility buildings, MSF includes rail procurement, special trackwork, ties, third rail and other track material for the four guideway segments on the project.

Progress		Schedule Status
Physical % Complete	100%	Substantial Completion Obtained*
Early Plan	100%	
Late Plan	100%	

\* Further explanation is provided in the Schedule section.

**COST INFORMATION:**

Original Contract: \$195,258,000

Incurred-to-Date: \$281,753,403

Current Contract Value<sup>1</sup>: \$281,775,032

Incurred in October: \$0

<sup>1</sup>Current Contract Value = Original contract value + executed Change Orders

DBE Participation	
Actual DBE Participation:	\$710,472
DBE % Attained:	0.26%

Change Orders in October		
Change No.	Description	Amount (\$)
Cumulative through September 2017		\$86,517,032
None	N/A	---
Cumulative to Date		\$86,517,032

**SCHEDULE:**

- The MSF project is currently in the close-out stage. The anticipated final acceptance is to be determined pending the completion of the following issues: computer room air-conditioning unit seismic certification, and completion of the Transfer of Capital Assets. A timeline on a new final acceptance date continues to be discussed with the contractor.

MSF Construction Status 99.9% Complete Overall as of 11/15/17	
Element	% Complete*
OSB	99.9%
MOW Building	99.9%
WTB	100 %
TWF	99.9%
Rail	100%
Paving	100%

\*Not including testing and commissioning.

**WORK PROGRESS:**Activities this Month:**OSB**

- Final documents for project close-out continue to be provided.

**MOW**

- Final documents for project close-out continue to be provided.

**WTB**

- Final documents for project close-out completed.

**TWF**

- Final documents for project close-out continue to be provided.

Look Ahead:**OSB**

- Final documents for project close-out completed.
- Final documentation of the computer room air-conditioning unit seismic requirements submitted.

**MOW**

- Final documents for project close-out completed.

**TWF**

- Final documents for project close-out completed.

Activities this Month (continued):**Administration**

- Assisting with the completion of final documents for final acceptance of the MSF project.
- Reviewing the Contract Management System (CMS) to ensure all modules are properly closed for project completion.

**KEY ISSUES:**

- **Final Acceptance** – Coordination with KKJV continues for submission of final documents such as final punchlist, submittals, training, O&M manuals, spare parts, and equipment turnover for final acceptance. There are a few items that remain and are as follows: OSB computer room seismic certification and completion of Transfer of Capital Assets.
- **3/16" Direct Fixation Isolation Pads** – KKJV has procured the isolation pads for the east-side project through Nationwide. Three shipments were received and are stored at the MSF. The first two shipments of isolation pads were received in June 2017 and the third and final shipment was received in July 2017. Certification and test reports for the isolation pad material are submitted. Final documentation to close out the two remaining NCRs is pending.
- **Transfer of Capital Assets** – HART/MSF met on July 10, 2017, to discuss turnover of O&M manuals, warranties submittal, CMS, etc. HART O&M and MSF continue to hold weekly meetings. These meetings will continue until final acceptance is granted.
- **OSB Computer Room Air-Conditioning Unit Seismic Requirements** – On Aug. 2, 2017, KKJV informed MSF the OSB computer room air conditioning units did not meet the seismic requirements identified in the contract specification. KKJV has investigated the issue and identified only two ground air conditioning units are not in compliance with the seismic requirements. Letter 00283 was issued by MSF on Sept. 19, 2017, requesting an action plan and timeline for completion of the work. KKJV provided their response in Letter 00531, dated Sept. 27, 2017, and Letter 00534, dated Oct. 13, 2017. KKJV informed MSF on Nov. 15, 2017, that the seismic certification and modification is anticipated to be completed by the end of December 2017.

**KEY MILESTONES:**

- No significant milestones were completed this month.

**QUALITY MANAGEMENT:**

- Overall quality of the contract is good.

MSF NCR Log		
Total NCRs Issued to Date	CLOSED	OPEN
34	32	2

### 4.3 Section II – Kamehameha Highway: Pearl Highlands to Aloha Stadium

#### A. Kamehameha Highway Guideway (KHG)

**Contract No.:** DB-320

**Contractor:** Kiewit Infrastructure West Company (KIWC)

**Contract Start Date:** June 2011

**Contract Substantial Completion:** September 2017

**Projected Substantial Completion:** TBD

**Project Description:** Kamehameha Highway Guideway DB Contract (KHG) consists of 3.9 miles and starts 400 feet east of the Pearl Highlands Station and terminates 1,400 feet beyond the Aloha Stadium Station. KHG work scope is made up of utility relocations, traffic signal improvements, highway widening, drilled shaft foundations, columns, and aerial structure.

Progress		Schedule Status
Physical % Complete	99.6%	TBD**
Early Plan*	100%	
Late Plan*	97.9%	
*Data as of Oct. 27, 2017.		
** Further explanation is provided in the Schedule section.		

#### COST INFORMATION:

Original Contract: \$372,150,000

Incurred-to-Date: \$390,868,956

Current Contract Value<sup>1</sup>: \$392,570,922

Incurred in October: \$243,949

<sup>1</sup>Current Contract Value = Original contract value + executed Change Orders

DBE Participation	
Actual DBE Participation:	\$859,791
DBE % Attained:	0.22%

Change Orders in October		
Change No.	Description	Amount (\$)
Cumulative through September 2017		\$20,385,922
00061	RFCC 00133 - OTW C Utility Scope Change	\$35,000---
Cumulative to Date		\$20,420,922

#### SCHEDULE:

- KIWC has communicated the projected substantial completion as September 2017. HART is currently evaluating this issue.

#### WORK PROGRESS:

KHG Construction Status as of 11/24/17							
Utility Status	Qty to Date	Final Qty	% Complete	Structure Element	Total to Date	Total Qty	% Complete
Water Line	4,362	4,362	100%	Shafts	186	186	100%
Gas Line	12,641	12,641	100%	Columns	169	169	100%
Sewer Line	492	492	100%	Segment Casting	2,029	2,029	100%
Drainage Line	1,460	1,469	99%	Spans Stressed	163	163	100%
Elec/Telecom	19,300	19,455	99%	Trackwork	166	166	100%
System Sites	99%	N/A	99%	Third Rail	158	158	100%
Signals/ITS/Lights	18,325	18,486	99%	Mill & Overlay Roadway	0	N/A	0%

Activities this Month:**Shaft/Column/Segments**

- Finished walkway repairs at Aloha Stadium Station.

**Median Restoration**

- Finished guardrail at Phase 12.
- Punchlist sign-off on repairs.
- KIWC continues to perform punchlist repairs.

**Traffic Signals**

- Raised/lowered and sealed pull boxes.
- Punchlist sign-off on repairs started.
- Worked on connecting traffic cameras online.
- Adjusted non-compliant traffic signal poles (Type 1).
- Punchlist repairs.

**Trackwork**

- KIWC completed track work repairs.

**Highway Widening**

- Replaced/repairs non-compliant curb ramps and sidewalk.
- Puu Momi and Puu Poni curb ramps installed.

Look Ahead:**Design Progress**

- KIWC to continue preparing as-built drawings.

**Shaft/Column/Segments**

- Correct remaining safety and security items.

**Median Restoration**

- Punchlist repairs.

**Highway Widening**

- Repair/replace curb ramps not compliant with Americans with Disabilities Act (ADA).
- Punchlist repairs.

**Traffic Signals**

- Remove temporary overhead fiber at Phases 1 to 9.
- Punchlist repairs.

**Trackwork**

- Resolve punchlist, safety and security items.

**Street Lights**

- KIWC to begin punchlist repairs and sign-off.

**KEY ISSUES:**

- **Access Coordination between Contracts** – Coordination between contractors is ongoing and requires turnover of guideway work to follow-on station and Core Systems contractors.
- **Closeout**- KIWC is submitting all project closeout documents and as-built drawings on time for HART review.

**KEY MILESTONES:**

- No significant milestones were completed this month.
- Punchlist development walks completed. Acceptance walks are now in progress.

**QUALITY MANAGEMENT:**

- **Quality Process** – KIWC continues to follow an established quality process.
- **Longitudinal Tendons** – Longitudinal tendons have been monitored for possible indications of rust. KIWC added two witness points to their Pre-Grout Inspection Checklist for HART to visually inspect the tendon anchorages for corrosion, take photographs, and observe the removal of the deviator boots to ensure no water had accumulated at the low points of the duct.
- **Shims** – NCR #225 was issued to KIWC in October 2016, for non-compliance with ASTM testing requirements.

KHG NCR Log		
Total NCRs Issued to Date	CLOSED	OPEN
252	248	4

**B. Ramp H2R2****Contract No.:** DBB-385**Contractor:** Royal Contracting Co. Ltd.**Contract Start Date:** May 2015**Contract Substantial Completion:** November 2017**Projected Substantial Completion:** December 2017

**Project Description:** Ramp H2R2 is an off-ramp from the H2 Interstate which will connect the north-bound H2 Interstate to east-bound Kamehameha Highway. The off-ramp terminates just west of the intersection of Kamehameha Highway and Waihona Street.

Progress		Schedule Status
Physical % Complete	99.0%	1 month behind
Early Plan*	100%	
Late Plan*	100%	
*Data as of Oct. 27, 2017. Project is 99.0% complete, pending installation of bridge rail to achieve Substantial Completion, forecast for next month. This project is not on the Critical Path.		

**COST INFORMATION:**

Original Contract: \$5,203,646

Incurred-to-Date: \$5,051,510

Current Contract Value<sup>1</sup>: \$5,657,047

Incurred in October: \$53,145

<sup>1</sup>Current Contract Value = Original contract value + executed Change Orders

DBE Participation	
Actual DBE Participation:	\$508,702
DBE % Attained:	9.70%

Change Orders/Amendments in October		
Change No./Amend	Description	Amount (\$)
<b>Cumulative through September 2017</b>		<b>\$409,752</b>
00004	Added Guardrail on H2	\$43,649
<b>Cumulative to Date</b>		<b>\$453,401</b>

**SCHEDULE:**

- Royal Contracting was awarded this project on May 4, 2015, and issued NTP on May 18, 2015. Start of construction was delayed due to unforeseen HDOT required soil remediation and submittal of required documentation.
- Contract Change Order CCO-00004 was executed on Sept. 19, 2017, extending the substantial completion date to Nov. 15, 2017, due to additional guardrail added to the project. There are no delay costs associated with this time extension since the extra guardrail work was concurrent with contractor delays.
- The ramp will not be in service until the Pearl Highlands transit center is constructed.

**WORK PROGRESS:**Activities this Month:

- Installation of bridge rail.
- Working on completion of punchlist work.

Look Ahead:

- Achieve Substantial Completion.
- Completion of punchlist work.
- Transition of property management from the H2R2 contract to the On-Call contract.

**KEY ISSUES:**

- The only contract work remaining is installation of bridge rail and punchlist work.

**KEY MILESTONES:**

- Project complete, except for bridge rail installation.
  - Pre-final inspection performed with HDOT. Working on punchlist items from the inspection.
  - Final inspection with HDOT will be performed after all contract work is complete.
- 

**QUALITY MANAGEMENT:**

- Conducted bi-weekly Quality Task Force meetings.

Ramp H2R2 NCR Log		
Total NCRs Issued To Date	CLOSED	OPEN
12	12	0



**C. Kamehameha Highway Station Group (KHSBG)****Contract No.:** DBB-371**Contractor:** Nan, Inc.**Contract Start Date:**

Notice to Commence Administrative Work: April 2016

Notice to Commence Investigative/Pre-Construction Work at Pearl Highlands: July 2016

Full Notice to Proceed (NTP): October 2016

**Contract Substantial Completion:** May 2019**Projected Substantial Completion:** August 2019

**Project Description:** The Kamehameha Highway Station Group construction contract includes services to build three (3) transit stations along Kamehameha Highway. The stations are Pearl Highlands Station, Pearlridge Station, and Aloha Stadium Station. Operational ancillary buildings, pedestrian crossing improvements, Train Control and Communications Rooms (TCCRs), and landscaping of the station sites are included in addition to the transit stations. The Pearl Highlands Station will include a transit center. The Pearl Highlands and Aloha Stadium Stations include both a Park-and-Ride lot and a Kiss-and-Ride lot.

Progress		Schedule Status
Physical % Complete	13.4%	3 months behind**
Early Plan*	39.0%	
Late Plan*	26.5%	
* Data as of Oct. 27, 2017.		
** Further explanation is provided in the Schedule section.		

**COST INFORMATION:**

Original Contract:	\$115,805,845	Incurred-to-Date:	\$19,599,106
Current Contract Value <sup>1</sup> :	\$117,180,508	Incurred in October:	\$1,100,022

<sup>1</sup>Current Contract Value = Original contract value with Design Allowance + executed Change Orders

DBE Participation	
Actual DBE Participation:	\$0
DBE % Attained:	0%

Change Orders/Amendments in October		
Change No./Amend	Description	Amount (\$)
Cumulative through September 2017		\$1,374,663
None	N/A	---
Cumulative to Date		\$1,374,663

**SCHEDULE:**

- Critical Path has been impacted due to the slow production of the Pearl Highlands drill shafts and late submittal/delivery of falsework. The first set of falsework is on site and has been erected. HART has reviewed the Time Impact Analysis and is currently working with the contractor in mitigating falsework delays.
- Full access to the Parking Lot Site and the Aloha Stadium Station Site was granted to the contractor on Oct. 9, 2017. The contractor struck an unregistered underground storage tank (UST) during mass grading work and is remediating the situation.

**WORK PROGRESS:**Activities this Month:

- **Pearl Highlands** –Completed column 8 installation, the last of the large diameter columns. Completed installation of beams and structural slab for pour sections 1 and 2. Pour 4 shoring deck installation is in progress and commenced installation of formwork and reinforcement.
- **Pearlridge Station** –Issues involving archeological discoveries to date have been fully resolved through reinternment of the finds, and construction is now moving forward per the redesign of affected station elements. The positive power line has been installed through the area affected by the finds. Mobilization of drill shaft rigging equipment has commenced
- **Aloha Stadium** –Completed clearing, grubbing, survey, and perimeter fence installation for the entire site. Completed mass grading of the site. Completed installation of drain line J and I. Rough-in of electrical conduit and irrigation lines for the parking lot area of the site are in progress. Commenced installation of parking lot curb and gutter.

Look Ahead:

- **Pearl Highlands** – Complete shoring deck at pour 4. Form, reinforce and pour beams and structural slab at pour 4. Install pour 3 shoring.
- **Pearlridge Station** –Commence drilling and pouring production drill shafts.
- **Aloha Stadium** –Continue drain line installation. Continue curb and gutter installation. Begin retaining wall and grounding grid work.

**KEY ISSUES:**

- The designer is now working with the Hawai'i Department of Transportation (HDOT) to develop a Traffic Management Plan (TMP) to conduct a long-term closure of the eastbound lane along Kamehameha Highway at the Pearl Highlands Station in support of utility, civil, and road work. HART is helping to facilitate ongoing discussions with HDOT.
- Unforeseen finds were encountered at the Pearlridge Makai Site on Aug. 7, 2017. Issues involving archeological discoveries to date have been fully resolved through reinternment of the finds, and construction is now moving forward per the redesign of affected station elements. HART and the contractor are currently meeting to mitigate schedule delays.

**KEY MILESTONES:**

- Partial Access for Systems Equipment Installation at Pearl Highlands Station – HART and the contractor are working towards identifying the appropriate time frame for the TCCR and the Uninterruptible Power Supply Building/Rooms to be turned over from the KHSG contractor to the CSC contractor.
- Station Site Turnover at Pearlridge Station – Both the northern and southern sites at the Pearlridge Station have been vacated by the KHG contractor in October 2016. Both method and load shafts have been accepted in March 2017. Production shafts are expected to begin in December 2017.

**QUALITY MANAGEMENT:**

KHSG NCR Log			
	NCRs ISSUED TO DATE	CLOSED	OPEN
<b>Pearl Highlands</b>	18	16	2
<b>Pearlridge</b>	0	0	0
<b>Aloha Stadium</b>	0	0	0
<b>Contract Wide</b>	0	0	0
<b>TOTAL</b>	<b>18</b>	<b>16</b>	<b>2</b>

#### 4.4 Section III – Airport: Aloha Stadium to Middle Street Transit Center Station

##### A. Airport Section Guideway and Stations (AGS)

**Contract No.:** DB-450

**Contractor:** Shimmick/Traylor/Granite, JV (STG)

**Contract Start Date:** December 2016

**Contract Substantial Completion:** May 2021

**Projected Substantial Completion:** May 2021

**Project Description:** The Airport Guideway and Stations Design-Build contract consists of the design and construction of 5.2 miles of elevated guideway, four (4) stations, and associated facilities between Aloha Stadium and the Middle Street Transit Center. The contractor will begin by interfacing with design disciplines, third-party stakeholders, and construction contracts within the corridor of the project to coordinate and resolve utilities conflicts. Design field verification efforts (potholing and geotechnical exploration) will be followed by construction activities once design packages have been approved.

Progress		Schedule Status
Physical % Complete*	15.0%	Pending***
Early Plan*	16.0%	
Late Plan**	TBD	
* Data as of Oct. 27, 2017. Percent Complete is based on actual installed work divided by Early Plan. Calculation omits non-construction (administrative) costs. ** Late Plan remains TBD and will be determined once the complete project baseline is approved. *** Further explanation is provided in the Schedule section.		

##### COST INFORMATION:

Original Contract:	\$874,750,000	Incurred-to-Date:	\$137,414,966
Current Contract Value <sup>1</sup> :	\$874,764,308	Incurred in October:	\$0
<sup>1</sup> Current Contract Value = Original contract value + executed Change Orders			

DBE Participation	
Actual DBE Participation:	\$8,090,645
DBE % Attained:	0.92%

Change Orders in October		
Change No.	Description	Amount (\$)
Cumulative through September 2017		\$14,308
None	N/A	---
Cumulative to Date		\$14,308

##### SCHEDULE:

- STG's first-year baseline schedule (Rev. D) was returned as Accepted as Noted (AAN) by HART.
- The Baseline Project Schedule Rev C was returned as Revise and Resubmit (RNR). Baseline Project Schedule Rev D was submitted and will undergo review. Project status will be determined after the full Baseline Project Schedule is approved.

**WORK PROGRESS:**Activities this Month:

- Potholing to verify utilities continues - 2,713 of 2,900 currently planned have been completed with restoration pending at various locations.
- Log of Test Borings (LOTB) 100% completed.
- Early Foundations (Reach A) Issued for Construction (IFC) Resubmitted – pending HART review and acceptance.
- Early Foundations construction started Oct. 23, 2017, and to date 15 foundations have been installed; 5 shafts were completed in October (P444-448) and 10 shafts have been completed in November (P449-455, 457, 473 and 474).
- Reach C – Honolulu International Airport (HIA) Station Definitive Design (DD) submitted and reviewed.
- LT3 – Final reports are pending HART review.
- Reach A Widening – Paving and Gutter/Curb-completed.
- Precast Yard detention pond turned-over to STG.

Look Ahead:

- Design coordination meetings with HECO and other third-parties (HDOT-A, Navy, Keehi Lagoon, and Memorial Park).
- Finalize mass concrete control plan for drilled shafts.
- Contract potholing and boring completion in 2017.
- Reach A – Receive Pearl Harbor Station FD submittal and review Civil and Composite Utilities FD submission.
- Reach C – Review Civil and Composite Utilities FD submittal.
- Reach D – Receive Lagoon Drive Station FD submittal.
- IFC Submissions – HECO Electrical Zone 1, 3, 7, 4, 6 and 9, Systems Site #25, System Site #28, HDOT Irrigation, HDOT Drainage, HDOT Highway (Reach A and B), City and County of Honolulu (CCH) Water, CCH Sewer.
- Final Submissions – HECO Electrical Zone 8, Systems Site #27.
- Presentation of Pearl Harbor Station (PHS) Design to Consulting Parties (CPs). Community presentation of PHS and Lagoon Drive (LD) Station in early 2018.
- Corridor-Wide (CW) Specs – IFC to be submitted.
- Reach B construction and restriping.

**KEY ISSUES:**

- Precast yard "as-is" condition.
- Precast yard sublicensing agreement for 2018 and beyond.
- Full Baseline Schedule submittal and acceptance.
- August, September, and October schedule updates have not been provided.
- Transfer of HECO scope to HART (in lieu of HECO construction agreements).
- "Historic Landmark Assessment" presentation to CPs, Community Meeting – Pearl Harbor Station, early 2018.
- ASU scope carry-over Hawaiian Telcom (HTI) work, Navy Ducts 804, 812 and 815.
- Coordination with C&C Honolulu Projects at Keehi Lagoon Park.

**KEY MILESTONES:**

- Completion of LT3 testing; preliminary results look good, HART is reviewing the final report for acceptance.
- Shaft construction started on Oct. 23, 2017 on P444 (middle of Kamehameha Highway between Halawa and Radford Dr.).
  - 13 shafts were completed before Thanksgiving of 2017.

**QUALITY MANAGEMENT:**

- Quality Audit completed with substantial compliance noted.
- Pre-Work Meetings began.
- Inspection and Testing Plan received.

AGS NCR Log		
Total NCRs Issued To Date	CLOSED	OPEN
13	4	9

**B. Airport Section Utilities Construction****Contract No.:** DBB-505**Contractor:** Nan, Inc.**Contract Start Date:** July 2014**Contract Substantial Completion:** October 2016**Actual Substantial Completion:** October 2016

**Project Description:** The Airport Utilities contract consisted of relocating utilities lines and facilities that have been determined to be impacted by the construction of the HART aerial guideway and associated facilities between Aloha Stadium and Middle Street Transit Center. The scope of utilities included underground communications lines, Navy electrical lines, fuel lines, gas lines, water lines, storm sewer lines, sanitary sewer lines, and street light conduits and poles/fixtures. HECO work was excluded from this contract.

Progress		Schedule Status
<b>Physical % Complete</b>	100%	Substantial
<b>Early Plan</b>	100%	Completion
<b>Late Plan</b>	100%	Obtained

**COST INFORMATION:**

Original Contract:	\$27,993,290	Incurred-to-Date:	\$27,919,489
Current Contract Value <sup>1</sup> :	\$28,175,544	Incurred in October:	\$0

<sup>1</sup>Current Contract Value = Original contract value + executed Change Orders

DBE Participation	
Actual DBE Participation:	\$36,094
DBE % Attained:	0.13%

Change Orders in October		
Change No.	Description	Amount (\$)
<b>Cumulative through September 2017</b>		<b>\$182,256</b>
None	N/A	---
<b>Cumulative to Date</b>		<b>\$182,256</b>

**SCHEDULE:**

- Nan, Inc. has completed the contract scope and punch list items. Roadways have been paved and striped, and the landscaping has also been completed as of the substantial completion date of Oct. 7, 2016. Additional unforeseen utility items, not originally identified in this contract, and several contract work items have been removed from Nan's scope, due to unresolved conflicts resulting in potential cost and schedule impacts, and were transferred to the On-Call Construction contract. The Airport Utility Contract to-date negotiated change orders have been executed. A singular final change resolution, encompassing all remaining unresolved claims, is in review with HART management for discussion with Nan to finalize contract close-out.
- On-Call has completed the majority of the ASU carried-over work. They have completed the overhead HTI telephone lines and have begun relocation of the 24" drain line accommodating a column shift by the AGS contract.

**WORK PROGRESS:**Activities this Month:

- On-Call continues to relocate a 24" drain line on Kamehameha Highway.

Look Ahead:

- HART management to discuss with Nan on final close-out of remaining outstanding claims.
- Conclude HDOT acceptance of two street lights with mild rust scuffs.

**KEY ISSUES:**

- No issues to report this month.
- 

**KEY MILESTONES:**

- Substantial completion occurred on Oct. 7, 2016.
  - Concluded 1-year warranty on Oct. 17, 2017, with the exception of two street lights with mild rust.
- 

**QUALITY MANAGEMENT:**

- Overall quality of the contract is good.

Airport Utilities NCR Log		
Total NCRs Issued To Date	CLOSED	OPEN
19	19	0

## 4.5 Section IV – City Center: Middle Street Transit Center Station to Ala Moana Center

### A. City Center Section Guideway and Utilities

**Contract No.:** FD-530

**Contractor:** AECOM Technical Services, Inc., Final Design Consultant (Engineer of Record)

**Contract Start Date:** July 2012

**Contract Substantial Completion:** March 2019

**Projected Substantial Completion:** March 2019

**Project Description:** The City Center Section Guideway and Utilities final design contract consists of 4.12 miles of elevated transit guideway serving eight (8) passenger stations, in addition to roadway widening, utility relocation, and other improvements to facilitate construction of the guideway. Design of the City Center Guideway has been suspended under this contract and will be completed by the City Center Guideway and Stations (CCGS) DB contract. However, final designs for utilities and roadway are proceeding under this FD-530 Final Design contract in support of expedited utilities and roadway construction packages.

Progress		Schedule Status
Based on Expenditures*	82.5%	On time**
Early Plan*	TBD	
Late Plan*	TBD	
*Data as of Oct. 27, 2017.		
** Further explanation is provided in the Schedule section.		

### COST INFORMATION:

Original Contract: \$43,948,220

Incurred-to-Date: \$47,732,132

Current Contract Value<sup>1</sup>: \$57,889,307

Incurred in October: \$26,010

<sup>1</sup>Current Contract Value = Original contract value with Design Allowance + executed Change Orders

DBE Participation	
Actual DBE Participation:	\$191,227
DBE % Attained:	0.41%

Change Orders/Amendments in October		
Change No./Amend	Description	Amount (\$)
Cumulative through September 2017		\$13,941,087
None	N/A	---
Cumulative to Date		\$13,941,087

### SCHEDULE:

- City Center Utilities Phase 3 final design is scheduled to conclude in March 2019.

### WORK PROGRESS:

#### Activities this Month:

- City Center Utilities Phase 2 final design received all comments for final approval by all reviewing entities [HECO and Department of Transportation Services (DTS)].
- Department of Planning and Permitting (DPP) concluded their One-Time-Review for City Center Utilities Phase 3, Roadway design.
- City Center Utilities Phase 3 for 138kV, Dillingham Wet Utilities, Kaka'ako Wet Utilities, Tree Disposition, and Technical Specifications were submitted to DPP to initiate DPP's One-Time Review of those packages.

#### Look Ahead:

- City Center Utilities Phase 2 final comments will be addressed and the package routed for third-party approvals.
- HART will provide updated Subsurface Utility Engineering (SUE) data to AECOM for use in the design of City Center Utilities Phase 3.
- City Center Utilities Phase 3 designs for Dry Utilities and Traffic Signals is scheduled for DPP One-Time Review in February 2018.

Activities this Month (continued):

- HART received the final design of the 138kV riser pole from HECO for City Center Utilities Phase 3. All easements for the current 138kV design have now been identified.
- HART instructed AECOM to incorporate the recent HECO policy changes for communication manhole sizes and ductline intercepts on all voltages higher than 12kV.

Look Ahead (continued):

- AECOM design will continue to seek variances from utility owners to allow reduced clearances between utilities, due to the high density of utilities proposed to be constructed in Dillingham Boulevard.

---

**KEY ISSUES:**

- HART has instructed AECOM to incorporate the HECO policy changes for manhole sizes and ductline intercepts. The consultant has advised HART that there will be impact to cost and schedule associated with the redesign work. This risk has been captured in the HART risk management register.

---

**KEY MILESTONES:**

- City Center Utilities Phase 2 design will be routing for final signed and sealed package to all reviewing authorities.
- City Center Utilities Phase 3 138kV design, Dillingham and Kaka'ako Wet Utility, Tree Disposition & Specifications will be submitted for review by DPP, DTS, and the Hawai'i Department of Transportation (HDOT).



**B. Dillingham and Kaka'ako Station Group (DKSG)****Contract No.:** FD-550**Contractor:** Perkins+Will (P+W), Final Design Consultant (Engineer of Record)**Contract Start Date:** August 2013**Contract Substantial Completion:** August 2016**Actual Substantial Completion:** Work concluded May 2016

**Project Description:** Design of eight (8) stations for the fourth and final phase of the current project that will connect Dillingham Boulevard to Ala Moana Center. The DKSG stations have been combined with the City Center Guideway into a single City Center Guideway and Stations Design-Build package. Due to the change from a DBB to a DB delivery method, the design for these stations has been suspended and will not be completed under this FD-550 contract.

Progress		Schedule Status
Earned Value*	100%	Substantial Completion Obtained
Early Plan*	100%	
Late Plan*	100%	
*Design for these stations has been suspended and will not be completed under this FD-550 contract.		

**COST INFORMATION:**Original Contract: \$18,321,918Incurred-to-Date: \$12,205,081Current Contract Value<sup>1</sup>: \$19,631,717Incurred in October: \$0<sup>1</sup>Current Contract Value = Original contract value with Design Allowance + executed Change Orders

DBE Participation	
Actual DBE Participation:	\$0
DBE % Attained:	0%

Change Orders in October		
Change No.	Description	Amount (\$)
<b>Cumulative through September 2017</b>		<b>\$1,309,799</b>
None	N/A	---
<b>Cumulative to Date</b>		<b>\$1,309,799</b>

**SCHEDULE:**

- There is no work scheduled under this contract.
- This contract is scheduled to be closed out in late 2017.

**WORK PROGRESS:**Activities this Month:

- Administrative closeout activities are ongoing.

Look Ahead:

- Future efforts will be administrative only.

**KEY ISSUES:**

- N/A.

**KEY MILESTONES:**

- N/A.

## 4.6 Contract Status

Cost reports are run from the HART Contract Management System (CMS). Note: This report excludes third-party costs.



## Contract Status

Reporting Cutoff Date: 10/27/17

Page: 1 of 4

Contract	Description	Contractor	A		B	C = A + B Current Contract Value	D	E = D / C		Award Date	Completion Date	Revised Completion Date
			Original Contract	Change Orders				Incurred	% Exp.			
ART	ART Contracts	Multiple Contracts	\$1,894,500		\$10,000	\$1,904,500	\$166,075	8.72	05/09/14	05/09/14	05/09/14	
CCH-100	HART/CITY CCH	Multiple Contracts	\$15,348,443		\$0	\$15,348,443	\$14,925,228	97.24				
CCH-101	HART/ City Dept of BFS	CCH-Budget & Fiscal Services	\$105,092		\$0	\$105,092	\$0	0.00	07/01/11	06/30/16	06/30/16	
CCH-102	HART/ City DDC Land Division	CCH-Dept of Design and Construction	\$256,201		\$0	\$256,201	\$173,182	67.80	07/01/11	06/30/16	06/30/16	
CCH-107	HART/ City Corporation Counsel (COR)	Multiple Contracts	\$1,616,253		\$300,000	\$1,916,253	\$306,077	15.97				
CCH-108	HART / Board of Water Supply (BWS)	CCH-Board of Water Supply	\$928,325		\$0	\$928,325	\$928,325	100.00	07/01/11			
DBB-120	West Oahu/Farrington Hwy Guideway	Kiewit Infrastructure West Co.	\$482,430,201		\$186,417,831	\$668,848,032	\$665,612,084	99.52	11/11/09	10/10/21/13	03/03/17	
DBB-200	Maintenance & Storage Facility	Kiewit Kobayashi a Joint Venture	\$195,258,000		\$86,517,032	\$281,775,032	\$281,753,403	99.99	06/30/11	12/12/20/14	07/02/16	
DBB-320	Kamehameha Hwy Guideway	Kiewit Infrastructure West Co.	\$372,150,000		\$20,420,922	\$392,570,922	\$390,868,956	99.57	06/30/11	10/10/15/14	09/30/17	
DBB-460	Airport Section Guideway/Star ASG	Shimmick/Traylor/Granite JV	\$874,750,000		\$14,308	\$874,764,308	\$137,414,966	15.71	09/20/16	05/53/21	05/03/21	
DBB-171	West Oahu Station Group WOSGC	Nan, Inc.	\$56,088,470		\$3,330,776	\$59,419,246	\$21,882,138	36.83	07/20/15	03/31/21/18	03/12/18	
DBB-271	Farrington Highway Stat. Grp. FHS GC	Hawaiian Dredging	\$78,999,000		\$3,258,672	\$82,257,672	\$37,568,377	45.87	08/22/15	01/11/16/18	01/16/18	
DBB-371	Kamehameha Hwy Stat. Grp. KHS GC	Nan, Inc.	\$115,805,846		\$1,374,663	\$117,180,508	\$19,599,106	16.73	01/27/16	05/51/17/19	05/17/19	
DBB-385	Ramp H2R2	Royal Contracting	\$5,203,846		\$463,401	\$5,667,247	\$5,051,510	89.30	05/18/15	10/10/21/16	11/15/17	
DBB-505	Airport Section Utilities Constr. DBB	Nan, Inc.	\$27,993,290		\$182,266	\$28,175,546	\$27,919,489	99.09	06/30/14	02/28/16	10/07/16	
DBB-525	Airport Section Guideway 7-Pier DBB	HDCC CJA JV	\$3,973,000		\$54,843	\$4,027,843	\$4,027,843	100.00	09/18/14	02/28/15	04/24/15	
DBOM-920	Core Systems Design Build O&M	Ansaldi Honolulu Joint Venture	\$573,782,793		\$39,870,964	\$613,653,757	\$295,249,106	48.11	11/28/11	03/31/19	06/01/19	
FD-140	West Oahu Station Group FD	URS Corporation	\$7,789,000		\$2,756,643	\$10,545,643	\$10,532,074	99.87	06/15/12	06/02/17	06/02/17	

\* Current Contract Value = Base Contract Value + Change Order

FILTER: Not included in this report are Ineligible and Operating costs.

Third Party costs which are reimbursed by an Agency are NOT included in the totals.

QUERY: Maximum date of data based on query: 10/27/17

m\_imp\_contract\_status - No. 15a

Print Date: 11/29/17 22:18



## Contract Status

Reporting Cutoff Date: 10/27/17

Page: 2 of 4

Contract	Description	Contractor	A	B	C = A+B	D	E = D/C	Award Date	Completion Date	Revised Completion Date
			Original Contract	Change Orders	Current Contract Value	Included	% Exp.			
FD-240	Farmington Highway Stations Group FD	URS Corporation	\$9,300,696	\$4,994,235	\$14,294,931	\$14,092,781	98.59	01/12/11	01/15/12	03/23/12
FD-340	Kamehameha Hwy Station Group FD	Anil Verma Associates, Inc.	\$8,702,592	\$1,998,576	\$10,701,168	\$9,980,839	93.27	11/16/12	06/01/17	06/14/17
FD-430	Airport Sect. Guideway/Util FD	AECOM Technical Services, Inc.	\$38,840,960	\$4,111,440	\$42,952,400	\$41,901,347	97.55	12/22/11	06/03/17	06/30/17
FD-440	Airport Station Group FD	AECOM Technical Services, Inc.	\$10,177,365	\$1,398,487	\$11,575,852	\$10,059,820	86.92	11/07/12	01/12/14	07/01/15
FD-530	City Center Guideway/Util FD	AECOM Technical Services, Inc.	\$43,948,220	\$13,941,087	\$57,889,307	\$47,732,132	82.46	07/30/12	04/03/18	09/30/19
FD-550	SPCD - Dillingham and Kakaako S/G FD	Perkins+Will	\$18,321,918	\$1,309,799	\$19,631,717	\$12,205,081	62.17	08/08/13	11/11/14	01/15/16
HART-200	HART - Labor	Multiple Contracts	\$79,580,998	\$0	\$79,580,998	\$66,984,421	84.17			
HART-201	HART Expenses & ODCs	Multiple Contracts	\$31,111,215	\$319,788	\$31,431,003	\$30,411,129	96.76			
HART-202	Precast Yard Agreement	Kapolei Lot 16915-A Holdings VII LLC	\$15,580,201	\$0	\$15,580,201	\$1,185,865	7.61	04/28/17		
MI-900	Fare Collection DFI	INIT Innovations in Transportation	\$15,464,198	\$0	\$15,464,198	\$3,563,041	23.04	03/18/16	01/15/29	01/15/29
MI-930	Elevators & Escalators Install/Maint	Schindler Elevator Corporation	\$50,982,714	\$1,469,208	\$52,451,922	\$8,262,125	15.74	07/31/13	05/01/18	04/30/18
MM-290	Construction Engrg & Insp CEI West	PGH Wilong Engineering, Inc.	\$54,232,480	\$16,000,000	\$70,232,480	\$56,890,988	81.00	01/09/14	01/19/20	01/09/20
MM-595	Const. Engrg & Insp. CEI East	URS Corporation	\$63,083,417	(\$50,377,317)	\$12,706,100	\$12,382,150	97.46	01/07/14	01/16/19	01/06/16
MM-596	Construction Engrg & Insp CEI East 2	Stantec Consulting Services Inc.	\$55,036,130	\$0	\$55,036,130	\$22,536,262	40.95	09/10/15	12/12/19	
MM-900	Program Mgt Support Const (PMSC-1)	InfraConsult LLC	\$0	\$0	\$0	\$0	0.00	06/28/11		
MM-901	Program Mgt Support Const (PMSC-2)	InfraConsult LLC	\$33,376,897	\$18,444,023	\$51,820,920	\$49,739,335	95.98	02/23/12	03/07/17	03/07/17
MM-902	Program Mgt Contractor Contract	HDR Engineering, Inc.	\$63,522,953	\$0	\$63,522,953	\$9,538,139	15.02	01/01/17	12/12/22	
MM-905	MM-905 Gen Engrg Const EIS/PE	Parsons Brinckerhoff, Inc.	\$0	\$78,564,942	\$78,564,942	\$74,157,822	94.39	04/08/11		

m\_imp\_contract\_status - No. 19a

Print Date: 11/29/17 22:18

\* Current Contract Value = Base Contract Value + Change Order

FILTER: Not included in this report are Ineligible and Operating costs.

Third Party costs which are reimbursed by an Agency are NOT included in the totals.

QUERY: Maximum date of data based on query: 10/27/17



HONOLULU AUTHORITY FOR RAPID TRANSPORTATION

## Contract Status

Reporting Cutoff Date: 10/27/17

Page: 3 of 4

Contract	Description	Contractor	A		B	C = A + B		D	E = D / C		Award Date	Completion Date	Revised Completion Date
			Original Contract	Change Orders		Current Contract Value	Incurred		% Exp.				
MM-910	MM-910 Gen Engrg Constt FD-Construct	Parsons Brinckerhoff, Inc.	\$150,226,265	\$0		\$150,226,265	\$150,226,026	100.00			06/30/11		
MM-913	MM-913 Gen Engrg Reconnecte	CH2M Hill, Inc	\$46,143,277	\$699,572		\$46,842,849	\$43,000,369	91.80			12/05/13	04/04/19	04/04/19
MM-915	HDOT Traffic Mgmt. Consult.	ICX Transportation Group, Inc.	\$1,600,000	\$3,350,000		\$4,950,000	\$4,550,208	91.92			06/05/12	06/06/19	06/06/19
MM-920	HDOT Coordination Constt W/OFH	AECOM Technical Services, Inc.	\$3,000,000	\$6,500,000		\$9,500,000	\$8,585,943	90.38			06/07/11	06/07/18	06/07/18
MM-921	HDOT Coordination Constt KHG	AECOM Technical Services, Inc.	\$10,000,000	(\$1,400,000)		\$8,600,000	\$8,088,947	70.80			06/29/12	06/03/17	
MM-922	HDOT Coordination Constt Airport	SSFM International, Inc.	\$12,000,000	(\$5,600,000)		\$6,400,000	\$3,883,392	60.68			06/08/12	06/01/17	
MM-925	HDOT - W/OFH/KHG Imprv Agreements	Hawaii Department of Transportation	\$550,000	\$2,865,833		\$3,415,833	\$2,150,234	62.95			07/23/13	06/07/18	06/07/18
MM-930	HDOT State SOA Manager & Consultant	Hawaii Department of Transportation	\$1,272,400	\$583,142		\$1,855,542	\$1,041,176	56.11			02/03/12		
MM-935	Real Estate Consultant	Paragon Partners Ltd.	\$3,000,000	\$5,077,665		\$8,077,665	\$7,504,910	92.91			03/14/12	03/13/17	03/13/17
MM-936	Real Estate Consultant II	Colliers International Hawaii LLC	\$8,190,000	\$0		\$8,190,000	\$1,032,331	12.60			09/13/16	09/01/20	09/12/20
MM-937	Real Estate Consultant - Maps/Surv.	R.M. Towill Corporation	\$2,998,000	\$1,130,000		\$4,128,000	\$1,950,499	47.25			05/22/14	05/02/17	05/22/19
MM-940	Kako'o Consultant	Pacific Legacy, Inc.	\$1,000,000	\$0		\$1,000,000	\$537,125	53.71			03/13/12	03/03/22	
MM-941	Kako'o Consultant II	Honua Consulting	\$200,000	\$0		\$200,000	\$141,667	70.83			12/08/15	12/12/17	
MM-946	On-Call Contractor	Royal Contracting	\$1,000,000	\$1,000,000		\$2,000,000	\$1,993,468	99.67			08/08/14	07/76/19	
MM-946	On-Call Hazmat Removal Contractor	CH2M Hill, Inc	\$3,075,000	\$2,075,000		\$5,150,000	\$4,541,918	88.19			08/23/12	08/02/19	02/18/20
MM-947	On-Call Contractor 2	Royal Contracting	\$7,500,000	\$0		\$7,500,000	\$7,474,041	99.65			05/21/15	06/03/18	
MM-948	On-call Contractor 3	Royal Contracting	\$20,000,000	\$6,000,000		\$26,000,000	\$15,178,339	58.38			05/09/16	05/15/23	05/15/23
MM-950	OCIP Consultant	Marsh USA Inc.	\$1,250,000	\$0		\$1,250,000	\$1,250,000	100.00			05/10/12	05/09/17	

\* Current Contract Value = Base Contract Value + Change Order

FILER: Not included in this report are Ineligible and Operating costs.

Third Party costs which are reimbursed by an Agency are NOT included in the totals.

QUERY: Maximum date of data based on query: 10/27/17

m\_jm\_p\_contract\_status - No. 15a

Print Date: 11/29/17 22:18



## Contract Status

Reporting Cutoff Date: 10/27/17

Page: 4 of 4

Contract	Description	Contractor	A		B	C = A + B Current Contract Value	D	E = D / C	Award Date	Completion Date	Revised Completion Date
			Original Contract	Change Orders			Inurred				
MM-951	Owner-Controlled Insurance Program	Aon Risk Services, Inc. of Hawaii	\$41,000,000	\$0		\$41,000,000	\$39,218,290	95.65	04/09/14		
MM-953	OCIP II	Marsh USA Inc.	\$415,000	\$0		\$415,000	\$79,208	19.09	05/10/17		
MM-960	Archeological & Cultural Monitoring	Cultural Surveys Hawaii, Inc.	\$2,489,748	\$0		\$2,489,748	\$1,905,746	76.54	01/15/14	01/124/19	
MM-962	Core Systems Support	Lea + Elliott	\$43,988,989	\$0		\$43,988,989	\$26,433,870	60.09	02/10/14	09/8/10/19	09/10/19
MM-964	Safety and Security Consultant	Lawson & Associates	\$4,699,573	\$5,602,596		\$10,302,170	\$6,632,554	64.38	04/23/14	01/13/17	01/31/19
MM-970	Fare Collection Consultant	CH2M Hill, Inc	\$1,178,300	\$0		\$1,178,300	\$361,541	30.88	09/24/15	12/1231/19	
MM-975	LEED Commissioning Services for MSF	Enovity, Inc.	\$278,630	\$39,900		\$318,530	\$286,475	89.94	10/06/10	08/8/13/17	08/31/17
MM-981	Complex Real Property Nego. Lit. Sup	Stam O'Toole Marcus & Fisher	\$600,000	\$0		\$600,000	\$256,279	42.71	09/09/16	09/88/18	
MM-982	On Call Appraiser	ACM Consultants, Inc.	\$1,000,000	\$0		\$1,000,000	\$78,581	7.86	06/23/16	06/622/20	
MM-983	Land Court Petition Services	Imanaka Asato	\$1,200,000	\$0		\$1,200,000	\$37,249	3.10	10/17/16	10/10/16/19	
MM-985	On Call Appraisers II	Yamaguchi & Yamaguchi, Inc.	\$1,261,308	\$0		\$1,261,308	\$98,641	5.44	04/10/17	04/49/22	
MM-986	Real Estate Legal Services	Kobayashi Sugita & Goda	\$1,250,000	\$0		\$1,250,000	\$0	0.00	10/18/17	10/1021/22	
OTHER	All Project Wide Docs/3P Agreements	Multiple Contracts	\$11,807,165	\$0		\$11,807,165	\$1,807,165	15.31			
PA-102	Programmatic Agreement HPC	Fung Associates, Inc.	\$400,000	(\$150,000)		\$250,000	\$294,142	89.66	08/01/13	05/51/16	04/26/17
ROW	Real Estate Docs/ 3P Agreements	Multiple Contracts	\$200,739,721	\$0		\$200,739,721	\$146,659,129	73.06			
UTIL	Utility Contracts and Agreements	Multiple Contracts	\$93,948,141	\$1,484,941		\$95,433,082	\$84,748,909	63.83	12/02/09	12/122/09	12/02/09
<b>Total Project:</b>			<b>\$4,090,896,529</b>	<b>\$466,423,027</b>		<b>\$4,557,319,556</b>	<b>\$2,335,529,408</b>	<b>64.41</b>			

\* Current Contract Value = Base Contract Value + Change Order

FIL TER: Not included in this report are Ineligible and Operating costs.

Third Party costs which are reimbursed by an Agency are NOT included in the totals.

QUERY: Maximum date of data based on query: 10/27/17

m\_imp\_contract\_status- No. 159

Print Date: 11/29/17 22:18

## 5 OVERALL PROJECT-WIDE ACTIVITIES

### 5.1 Permits

#### Permits Submitted and In-Progress

- HART received an approval from the State of Hawai'i Department of Health (HDOH) to reduce the monitoring frequency from daily to weekly for Phase 2 activities within Waiawa Stream.
- HART received the approved Notice of General Permit Coverage file no. HI R21F396 for the Kapolei Casting Yard.
- HART submitted the duly authorized representative documents for Kiewit to submit their dewatering monitoring reports to HDOH.

#### Look Ahead

- STG is preparing the Water Quality Certification 401 application for pier construction in Kalihi Stream.

### 5.2 Hawai'i Department of Transportation (HDOT) Agreements

#### Activities this Month

- Comments received from the City and HDOT on the WOFH Master Agreement and Joint Use and Occupancy Agreement (JUOA) Amendment 1.
- Comments received from the City and HDOT on the KHG, AGS, CCGS Master Agreement Amendment 1. Revisions have been drafted and are being reviewed by Corporation Counsel.
- Tracking changes to the project list for the Highway Improvement Agreement. The project list is being revised to reflect actual costs of the completed projects and to incorporate additional highway improvement projects. Total amount of the Agreement is to remain constant.

#### Look Ahead

- Identify the Highway Improvement Project costs to start the process for the third transfer of funds from the Federal Highway Administration to the Federal Transit Administration.
- Execution of the City Center Joint Use and Occupancy Agreement.
- Revise and route for execution of the West O'ahu Farrington Highway Master Agreement and Joint Use and Occupancy Agreement Amendment 1.
- Execution of Amendment 1 to the Master Agreement for the sections to and from: Kamehameha Highway Guideway, Airport Guideway, and City Center Guideway.
- Execution of Amendment 1 to the Highway Improvement Agreement, upon finalization of the project list.

## 5.3 Utility Agreements

Utility Agreements Status Matrix										
Utility Owner	Status	WOFH		KHG		Airport		City Center		
		ESA	UCA	ESA	UCA	UCA	COMBINED ESA		UCA	
AT&T (Corporation)	Executed	05/11/11	12/20/11	5/18/12	Including with ESA	Not Required	12/26/13		05/03/17	
	NTP	05/12/11	12/21/11							
	Amd 01	07/01/11	HRS Ch. 104	11/22/16						
AT&T (Government Solutions)	Executed			12/26/13		Working on Agreement	12/26/13		Combined with AT&T Corp	
	NTP									
Chevron	Executed	12/04/09		11/04/11						
	NTP	12/22/09		11/15/11						
	Amd 01	07/01/11								
Hawaiian Telcom	Executed	05/20/10	11/17/14	05/10/12	12/31/14	05/28/15	09/27/13		04/06/17	
	NTP	06/14/10	11/18/14							
	Amd 01	07/01/11		04/13/15		05/11/17		Draft sent to HTI for review		
	Amd 02	05/10/12		Working on Amd 02						
HECO		Design Services	Construction Services	Design Services	Construction Services	Design Services	Construction Services	Design Services	Construction Services	
	Executed	11/20/13	11/29/13	11/20/13	11/29/13	11/20/13		11/25/13	HECO revision to include Temp Poles	
	NTP	11/20/13	11/29/13	11/20/13	11/29/13	11/20/13		11/25/13		
	Change Order 01		06/30/17					Working on Change Order 01		
	Change Order 02		Working on Change Order 02							
	Memorandums of Understanding	08/07/14 – Construction Drawings								
		05/01/15 – Access								
		05/15/15 – Derrick Truck								
		06/23/15 – Master Agreement								
		06/09/15 – MSF Advanced Construction								
		09/16/15 – Right of Entry								
		10/12/15 – Clearance (West)					11/10/15 – Dillingham Blvd Materials			
		07/13/16 – KHG Vertical Clearance								
		Power Quality MOU								
		Airport Overlap MOU								
		Vehicle Storage MOU								
Oceanic Time Warner Cable	Executed	12/08/09	12/21/11	01/09/12	06/02/14	12/19/14	04/03/13	9/22/16		
	NTP	12/22/09					04/04/13	9/30/16		
	Amd 01	07/01/11	02/27/14		HRS Ch 104	Agreement is being processed.		Draft sent to OTWC for review		
	Amd 02	10/07/13	HRS Ch. 104							
Pacific Lightnet/ Wavecom	Executed	04/28/10	03/12/12	02/15/12						
	NTP	04/29/10	03/13/12	02/16/12						
	Amd 01	07/01/11	HRS Ch. 104							

Utility Agreements Status Matrix								
Utility Owner	Status	WOFH		KHG		Airport		City Center
		ESA	UCA	ESA	UCA	UCA	COMBINED ESA	UCA
Sandwich Isle Communications	Executed	05/20/10		04/20/12				
	NTP	06/08/10						
	Amd 01	07/01/11						
Hawai'i GAS	Executed	12/18/09	06/30/11	06/01/12	04/14/14	08/19/14	09/27/13	05/08/15
	NTP	12/22/09	07/12/11			08/20/14		05/11/15
	Amd 01	07/01/11	10/17/14		08/28/14	08/31/17		Fully Executed AMD 01 10/24/17
	Amd 02		05/09/16		10/23/15			
	Amd 03				HRS Ch. 104			
Level 3/TW Telecom	Executed	12/02/09		02/14/12	Oceanic to relocate for TW Telecom		10/11/12	Draft sent to TW Telecom
	NTP	12/22/09		02/16/12				
	Amd 01	07/01/11						
	Amd 02							
Tesoro	Executed			02/15/12	09/12/13		08/27/13	
	NTP			02/16/12			09/03/13	
	Amd 01				09/12/14			
	Amd 02				05/13/15			
	Amd 03				HRS Ch. 104			
<b>Legend</b>		= Action this month		COR = Corporation Counsel		UCA = Utility Construction Agreement		
		= Not applicable		ESA = Engineering Services Agreement		UFCRA = Combined Engineering and Construction Utility Agreement		

## Issues

- **Electrical Construction** – For WOFH and KHG, HART was responsible for infrastructure (trenching, ductline installation, etc.) construction and HECO was responsible for electrical (cable installation and termination) construction for electric utility relocations. In April 2017, HECO informed HART that it will not perform electrical construction for electric utility relocation for the Airport and City Center sections, including the Dillingham Temporary Utilities section. HECO will continue to perform the electrical design. HART is proceeding to procure utility relocation electrical construction services and is also now responsible for procuring electrical materials.

## HECO

- **Davis-Bacon requirements** – HECO has a collective bargaining agreement that contains different wage scales and allows payment to its labor forces bi-weekly, which does not satisfy Davis-Bacon requirements. Based on the State of Hawaii Department of Labor and Industrial Relations correspondence, HECO has begun the process to pay their employees weekly. HECO has submitted a rate conformance request that has so far been denied by the United States Department of Labor (USDOL), although HECO has appealed. HECO and HART are still awaiting a final decision from the USDOL for the applicable rates.
- **HECO 46kV Substation near MSF area** – HECO is planning to construct a new dedicated 46kV substation in order to provide power needed by HART for its rail project. Per requirements of HECO Rule 13 for line extensions and substations, HECO will pay for construction of this new substation and HART is responsible for providing land for the substation. A location near the MSF has been identified and initial planning is ongoing with HECO, the University of Hawai'i and Leeward Community College.
- **Horizontal Working Clearances** – Besides regulatory minimum safety clearances, HECO requires horizontal working clearances of 50', 40', and 30' between their existing overhead line conductors to the edge of the rail guideway for their 138kV, 46kV, and 12kV overhead lines respectively, in order to safely perform ongoing maintenance and repair of their existing facilities along HART's rail guideway and stations.
- **Mitigation of Horizontal Working Clearance Requirements** – For WOFH and KHG, HECO has successfully tested two new bucket trucks (not currently in their fleet) that can perform maintenance and repair work for existing 46kV and 12kV lines with less than their required horizontal working clearance. This will mitigate the need to relocate almost 90% of the 46kV and 12kV poles/lines that do not meet their current required working clearances. For the 138kV lines at WOFH and KHG, HECO and HART traveled to Colorado to review the operational capabilities of the Phoenix and Skybird bucket trucks. HECO has determined that these two types of trucks will allow them to



perform 138kV work with less than their required horizontal working clearance. HECO has provided specialized equipment reports for both the 46kV/12kV and 138kV trucks, including the quantity of trucks needed and costs for these trucks. HART and HECO are currently working to procure these trucks. For AGS, a HECO-HART solution of 1) shortening the conductor pole arms on nine (9) existing 138kV poles fronting Pearl Harbor; 2) increased conductor easements from the Navy; and 3) the use of the new 138kV specialized equipment as mentioned above, will avoid having to underground HECO's 138kV lines to meet horizontal working clearance requirements. For City Center, HART and HECO have agreed to underground the existing overhead 138kV lines.

## 5.4 Right-of-Way (data as of Nov. 2, 2017)

### Key Issues

- In order to maintain the project schedule and also to support the Airport and the City Center Guideway and Station Design-Build contracts, eminent domain proceedings were authorized by the HART Board and the Honolulu City Council for several parcels.
  - West O`ahu/Farrington
    - 1 case is filed with the court and is active
  - Kamehameha
    - 1 case is closed
  - Airport
    - 2 cases are filed with the court and are active
    - 1 case is anticipated to be filed with the court (2 TMKs)
  - City Center
    - 3 cases are filed with the court and are active (4 TMKs)
    - 1 case is filed with the court and has been settled pending the Final Order of Condemnation

In the meantime, negotiations are still continuing with the private property owners in an attempt to reach mutual agreement.

- Negotiations are underway with HECO regarding clearances next to the HART system. HART may have approximately 100 new private easements that will be acquired for HECO undergrounding. Another 146 small parcels will be located in public streets and HDOT property. They are primarily in the Airport and City Center sections for miscellaneous utility easements for HECO and other utilities. These parcels will eventually be turned over to HECO.
- HART received approval from the HART Board in December 2016 for a policy change regarding Floor Area Ratios (FAR) that affects disposal of excess property. HART must update its Real Estate Acquisition and Management Plan (RAMP) to address the changes.
- The ROW budget was re-baselined because of the recovery plan.
- Negotiations are continuing with UH Honolulu Community College to secure construction right of entry.
- ROW and Construction are working collaboratively to mitigate any potential construction impacts. The objective is to secure site access via Rights of Entry (ROE) or other arrangements. ROW has moved forward with some condemnation and obtained legally enforceable possession of the property. However, these possession authorities will eventually require resolution of the valuation of the subject parcel.

## Acquisitions

Figure 7. Right-of-Way Status for the Parcels [data provided by Real Estate Acquisition Database (READ)]

	TOTAL ACQUISITIONS REQUIRED (a)		TOTAL ACQUISITIONS COMPLETED (b)		ACQUISITIONS PENDING AND ACCESS OBTAINED (c)	
	Current No. of Parcels Needed (TMKs)	Current Square Feet Needed	No. of Parcels (TMKs)	Square Feet of Completed Acquisitions	No. of Parcels (TMKs)	Square Feet
W.Oahu/Farrington	35	9,889,168	30	7,941,661	5	1,947,507
Kamehameha	12	2,939,023	8	97,894	4	2,841,129
Airport	49	1,020,754	40	954,389	7	24,504
City Center	124	809,274	43	217,459	21	44,831
<b>GRAND TOTAL</b>	<b>220</b>	<b>14,658,219</b>	<b>121</b>	<b>9,211,403</b>	<b>37</b>	<b>4,857,971</b>

*During design development, the real estate requirements have been adjusted to accommodate the design refinements. Parcel requirements are adjusted as design is finalized.*

**Footnotes:**  
 (a) Total Acquisitions Required - Parcels identified as needed by the project.  
 (b) Total Acquisitions Completed - Acquisitions are completed and the right to access and construct is obtained for 69 private owners and agreements on 52 government parcels. While these parcels may be accessible at this time, further documentation may also be required.  
 (c) Acquisitions Pending & Access Obtained - Acquisitions are pending, but the right to access and construct has been obtained.

## Relocations

Figure 8. Relocation Status for the Occupants (data provided by READ)

	Active Relocations	Relocations Completed	Total Relocations
W.Oahu/Farrington	0	25	25
Kamehameha	0	5	5
Airport	1	10	11
City Center	8	63	71
<b>Grand Total:</b>	<b>9</b>	<b>103</b>	<b>112</b>

o Relocations are pursuant to the Uniform Relocation Act.  
 o Relocations are reported by the number of displacees.  
 o During design development, the relocation requirements have been adjusted to accommodate the design refinements. Relocation requirements are adjusted as design is finalized.

**Status of Inter-Governmental Agreements**

Figure 9. Inter-Governmental Agreement Status – These are agreements between HART and other government entities, with the exception of D.R. Horton. 1) Obtaining the Right of Entry is the objective with government agencies. Some government agencies may choose to issue the final documents after construction is substantially underway or near completion. 2) ROW negotiates and obtains Rights of Entry for certain construction activities as requested by Design and Construction. There may be other Rights of Entry and Agreements which may not involve ROW that are being addressed by other departments. 3) Agreements to be executed are in white. Executed agreements are in grey at the end of the table, and while these parcels may be accessible at this time, further documentation may also be required.

Inter-Governmental Agreements					
Agency	Pending Agreements (Executed Agreements are shaded grey)	Target	Section	Construction Right of Entry Obtained	Notes/Remarks
<b>STATE AGREEMENTS</b>					
UH – University of Hawaii, West O`ahu (UHWO) East Kapolei	Construction Right of Entry and Occupancy & Use Agreement for East Kapolei Temporary Park & Ride	Dec 2018	WOFH		To be processed.
UH – Urban Gardens	Conveyance to HDOT(H) – Dept. of Transportation Highways	May 2018	KHG	Yes	In process. HART's Construction is not impacted as the HART Right of Entry (ROE) for right to access and construct is executed. Contractor & sub-contractors' ROE are pending.
UH – Honolulu Community College (HCC)	Construction Right of Entry for guideway & station	Dec 2017	City Center		In review.
DLNR – Dept of Land & Natural Resources	Kapolei Easement Agreement for overhead guideway and for park and ride facility	June 2019	WOFH	Yes	In process. Construction is not impacted as the ROE for right to access and construct is executed.
DLNR	Keehi Lagoon Easement Agreement	Feb 2018	Airport	Yes	In process. Construction is not impacted as the ROE for right to access and construct is executed.
DLNR	City Center Construction Right of Entry	Aug 2018	City Center		In process.
DLNR	City Center Easement Agreement	Aug 2018	City Center		In process.
DLNR/C&C Wastewater Div	Easement Agreement	Jan 2019	City Center		In process.
DLNR/C&C Wastewater Div	Construction Right of Entry	Aug 2018	City Center		In process.
DOE – Dept. of Education Waipahu H.S.	Memorandum of Understanding (State portion)	Aug 2018	WOFH	Yes	In process. Construction is not impacted as the ROE for right to access and construct is executed.
DOE - Waipahu H.S.	Permanent Easement (State portion)	Jan 2018	WOFH	Yes	In process. Construction is not impacted as the ROE for right to access and construct is executed.
DOE – Waipahu H.S	Memorandum of Understanding (City portion)	Aug 2018	WOFH	Yes	In process. Construction is not impacted as the ROE for right to access and construct is executed.
DOE – Waipahu H.S.	Permanent Easement (City portion)	Jan 2018	WOFH	Yes	Permanent easement from City in process. Construction is not impacted as the Master/Construction Agreement is executed.
Aloha Stadium / Dept of Accounting & General Services (DAGS)	Easement Agreement for guideway	Jan 2020	KHG	Yes	In process. Construction is not impacted as the ROE for right to access and construct is executed.

Inter-Governmental Agreements					
Agency	Pending Agreements (Executed Agreements are shaded grey)	Target	Section	Construction Right of Entry Obtained	Notes/Remarks
Aloha Stadium/ DAGS	Easement Agreement for station park and ride	Jan 2020	KHG	Yes	In process. Construction is not impacted as the ROE for right to access and construct is executed.
HDOT(H) – Dept. of Transportation Highways	Master Agreement Amendment	Jan 2018	WOFH	Yes	In process. Construction is not impacted as the Joint Use & Occupancy Agreement (JU&O) for right to access and construct is executed.
HDOT(H) and (A) – Dept of Transportation Highways & Airports	Master Agreement for KHG, Airport and City Center Amendment	Jan 2018	KHG, Airport, City Center	Yes for KHG & Airport	Construction is not impacted as the Joint Use & Occupancy Agreement (JU&O) for right to access and construct for City Center will be executed when the Notice to Proceed (NTP) is issued.
HDOT(H)	Joint Use & Occupancy (JU&O) Sub-agreement	Jan 2018	WOFH	Yes	In process. Construction is not impacted as the JU&O for right to access and construct is executed.
HDOT(H)	Joint Use & Occupancy (JU&O) Sub-agreement	Aug 2018	City Center		In process. Construction is not impacted as the JU&O will be executed when Notice to Proceed (NTP) is issued.
HCDA -HI Community Development Authority	Construction ROE, License Agreement, & Final Disposition	Aug 2018	City Center		Coordination is ongoing.
DAGS – Dept. of Accounting & General Services / Hi Housing Finance & Development Corp (HHFDC)	Construction Right of Entry	Aug 2018	City Center		In process.
DAGS/HHFDC	Easement Agreement	Aug 2018	City Center		To be processed.
DAGS	Construction Right of Entry for City Center	Aug 2018	City Center		To be processed.
DAGS	Easement Agreement for City Center	Aug 2018	City Center		To be processed.
<b>FEDERAL AGREEMENTS</b>					
U.S. Gov't/General Services Administration (GSA)/Federal Courthouse	Master Agreement to include Security & Landscape Plan	Jan 2018	City Center		Under review.
GSA Federal Courthouse	Temporary Construction Easement (TCE)	Aug 2018	City Center		Under review.
GSA Federal Courthouse	Quitclaim Easement Document	Aug 2018	City Center		Under review.
<b>OTHER AGREEMENTS</b>					
D.R. Horton	Final Easement Agreement	Jan 2018	WOFH	Yes	In process and subject to owner's development plans. Construction is not impacted.
<b>EXECUTED AGREEMENTS</b>					
<b>CITY AGREEMENTS</b>					

Inter-Governmental Agreements					
Agency	Pending Agreements (Executed Agreements are shaded grey)	Target	Section	Construction Right of Entry Obtained	Notes/Remarks
BFS – Dept. of Budget & Fiscal Svcs.	Intra-Agency Joint Use (Continental Investment)		KHG	Via intra-agency joint use	Ongoing intra-agency coordination.
BFS / DFM (Dept. of Facility & Maintenance)	Intra-Agency Joint Use of Awa Triangle, N. Nimitz & Awa St.		City Center	Via intra-agency joint use	Ongoing intra-agency coordination.
DFM	Jurisdictional transfer from DFM to HART of Kamehameha Hwy/Makalapa Manor		Airport	Yes	
DFM	Intra-Agency Joint Use of Kapalama Stream for Guideway		City Center	Via intra-agency joint use	Ongoing intra-agency coordination.
DPR - Dept. of Parks & Recreation	Construction consent to construct for MSF drainage		WOFH	Yes	
DTS – Dept. of Transportation Svcs.	Intra-Agency Joint Use of Middle Street Station		Airport	Via intra-Agency joint use	Ongoing intra-agency coordination.
<b>STATE AGREEMENTS</b>					
UH – University of Hawaii	Master Agreement is not needed as the ROE for right to access and construct will be executed separately by each campus.		WOFH, KHG, City Center	Will be executed by each campus	Construction is not impacted as the ROE for right to access and construct will be executed by each campus.
UH	Pre-Construction Right of Entry and Amendment		WOFH, KHG, City Center	Yes	
UH - West O'ahu (UHWO)	Construction Right of Entry for Station, Temporary Park & Ride, and Amendment for Construction of Road B		WOFH	Yes	
UH - Leeward Community College (LCC)	Construction Right of Entry for Guideway		WOFH	Yes	
UH - LCC	Construction Right of Entry for Station		WOFH	Yes	
UH - Urban Gardens	Construction Right of Entry		KHG	Yes	
DLNR – Dept. of Land and Natural Resources	Kapolei Construction Right of Entry for overhead guideway and for park and ride facility		WOFH	Yes	
DLNR	Keahi Lagoon Construction Right of Entry		Airport	Yes	
DOE – Dept. of Education Waipahu H.S.	Master/Construction Agreement		WOFH	Yes	
DOE/DLNR for Waipahu H.S.	Construction Right of Entry		WOFH	Yes	Executed by DLNR with DOE concurrence
Aloha Stadium / Dept. of Accounting & General Services (DAGS)	MOU for guideway & station		KHG	Yes	
Aloha Stadium/DAGS	Construction Right of Entry for guideway		KHG	Yes	
Aloha Stadium/DAGS	Construction Right of Entry for station park and ride		KHG	Yes	

Inter-Governmental Agreements					
Agency	Pending Agreements (Executed Agreements are shaded grey)	Target	Section	Construction Right of Entry Obtained	Notes/Remarks
HDOT(H) – Dept. of Transportation Highways	Master Agreement for HDOT Highways for WOFH		WOFH	Yes	
HDOT(H) and (A) – Dept. of Transportation Highways & Airports	Master Agreement for HDOT Highways and Airports, for KHG, Airport and City Center Sections		KHG, Airport, City Center	Yes except for City Center whose JU&O will be executed when the NTP is issued	
HDOT(H)	Joint Use & Occupancy (JU&O) Sub-agreement		WOFH	Yes	
HDOT(H)	Joint Use & Occupancy (JU&O) Sub-agreement		KHG	Yes	
HDOT(H)	Joint Use & Occupancy (JU&O) Sub-agreement		Airport	Yes	
HDOT (A) - Dept. of Transportation Airports	Airport Special Provisions for Right of Entry		Airport	Yes	
HDOT(A)	Joint Use & Occupancy (JU&O) Sub-agreement for Airport Division parcels		Airport	Yes	
HDOT(A)	Easement document for Airport Division parcel (Main guideway easement)		Airport	Yes	Ongoing intra-agency coordination. Construction is not impacted as the Special Provisions and the JU&O for right to access and construct is executed.
DHHL - Dept. of Hawaiian Home Lands (Exchange w/ Varona Village)	MOA, License/ROE from DHHL, City Council Resolution		WOFH, MSF	Yes	
OCCC - Dept. of Public Safety, Oahu Community Correctional Center	Memorandum of Understanding (MOU)		City Center	Yes	
OCCC/DLNR	Construction Right of Entry		City Center	Yes	
DLNR/OCCC	Letter of Responsibility from City-DFM/Road		City Center	Yes	
HCDA -HI Community Development Authority	Pre-construction Right of Entry		City Center	Yes, effective upon request	Verbal approval granted by the HCDA Board in 6/2016.
<b>FEDERAL AGREEMENTS</b>					
U.S. Navy	Grant of Easements for Maintenance & Storage Facility (MSF)/Rail Operations Center (ROC) offsite drainage and sewer easements		WOFH	Yes	
U.S. Navy	Licenses/Construction Right of Entry		WOFH, KHG, Airport	Yes	
U.S. Navy	Easement Agreements		WOFH, KHG, Airport	Yes	Grant of Easement executed.
U.S. Navy	Pearl Harbor Station Acquisition of Fee Transfer		Airport	Yes	Quitclaim deed executed.

Inter-Governmental Agreements					
Agency	Pending Agreements (Executed Agreements are shaded grey)	Target	Section	Construction Right of Entry Obtained	Notes/Remarks
U.S. Post Office (USPS)	Honolulu Processing Center acquisition		Airport	Yes	Acquisition completed.
<b>Other Agreements</b>					
D.R. Horton	Construction Right of Entry Amendment		WOFH	Yes	

## 6 MANAGEMENT AND ADMINISTRATIVE UPDATES

### 6.1 Safety and Security (S&S)

#### Key Issues

- The Core Systems AHJV Safety and Security Certification point of contact is on island part-time. This individual is on island for approximately 10 days once every 6 weeks. HART is communicating with Ansaldo's executive level to remedy this situation. An interim plan proposed by AHJV to address the gaps in coverage for meeting system safety requirements has been accepted. This issue will be ongoing and monitored by HART Safety and Security and Core Systems.
- AHJV Director of Operations and Maintenance (O&M) and Deputy Director of O&M positions are vacant. AHJV does not have an Operational Safety Manager on site. Concerns have been raised with respect to AHJV's ongoing management capability of Operations and Maintenance and Operational Safety. HART has requested that AHJV improve their O&M safety during commissioning activities.
- Shims – KIWC has completed the shim replacement work for the entire WOFH Guideway.
- Tendons – KIWC has completed their investigation of the condition of all tendons. The data has been submitted to HART for review.
- HART Safety is awaiting the certification of the ten MOW Vehicles.
- Certification for the Yard Control Bungalow (YCB) Construction Specification Conformance Checklist (CSCC) needs to be completed to move forward with ATC acceptance and MSF energization.
- HART Safety is awaiting the development and acceptance of the functional track certification.
- HART Safety is preparing for delivery, certification, planning and acceptance of the next round of Passenger Trains (PTs).
- KHG is missing traceability documentation for certification, similar to WOFH.
- CSC is lagging in closing out design criteria conformance requirements and verification documentation for Passenger Vehicles, COMM, ATC / SCADA, and Fire Detection Alarm System (FDAS).

#### Two-Month Look Ahead

- See chart below for the certification activities for December 2017 and January 2018.

#### 6.1.1 S&S Twelve (12) Month Certification Projected Milestones and Work Priority

12 - Month Certification Projected Milestones												
Contract and Interim Certificates (IC)	Next 30-90 days			Next 90-180 days			Next 180-270 days			Next 270-365 days		
X – Projected Month, TBD – To be Determined	Dec 2017	Jan 2018	Feb 2018	Mar 2018	Apr 2018	May 2018	Jun 2018	July 2018	Aug 2018	Sept 2018	Oct 2018	Nov 2018
1. YCB CSCC Civil - Certification (CSC)	TBD											
2. Nine (9) MOW Vehicles Final Certification	TBD											
3. Shunter Vehicle (MOW Vehicle) Certification	X											
4. SSMP Update Rev 7	X											
5. SSCP Update Rev 6	X											
6. FD-340 & DBB-385 Ramp H2R2 Civil Certification		X										
7. DB-120, WOFH Guideway Civil Certification		X										
8. DB-320, KHG Guideway Civil Certification			X									
9. MSF/Alignment/Trackwork PHAs final acceptance “UD”			X								X	
10. PT-003, Delivery IC				X								
11. PT-004, Delivery IC					X							
12. PT-005, Delivery IC						X						
13. PT-003, IC to enter Dynamic Testing						X						
14. PT-006 Delivery IC							X					
15. MSF TES energization ATC activation IC							X					
16. PT-004 to Enter Dynamic Testing							X					
17. PT-005 to Enter Dynamic Testing								X				
18. PT-006 IC to enter Dynamic Testing									X			
19. Functional Track IC – TES/ATC/SCADA/PSGS											X	



## 6.1.2 S&amp;S Certification Documents

<b>Key HART S&amp;S Certification Documents - Status</b>			
<b>S&amp;S Project Plans, PHAs, Core Systems SSHA and O&amp;SHA, and TVA</b>			
<b>Documents</b>	<b>REV #</b>	<b>Date Approved</b>	<b>Comments</b>
<b>Documents Approved</b>			
<b>HART SAFETY AND SECURITY</b>			
1. Safety & Security Management Plan (SSMP)	Rev 6	5/1/2017	Rev 7 Submitted Pending HART Acceptance 12/31/2017
2. Safety & Security Certification Plan (SSCP)	Rev 5	5/1/2017	Rev 6 Submitted Pending HART Acceptance 12/31/2017
3. WOFH SSCP	Rev 0	10/22/2014	SSRC approved - No future updates: HART SSCP is in affect
4. Construction Safety and Security Plan (CSSP)	Rev 3	10/06/2015	SSRC approved and signed
5. Security Sensitive Information (SSI) Plan	Rev 0	12/15/2015	SSRC approved and signed
6. Project Preliminary Hazard Analysis (PHAs)	Rev 2. A	9/3/2015	Rev 3 Submitted Pending HART Acceptance 9/27/2017
a. MSF – Yard and Shop	Rev 2. A	2/24/2016	SSRC approved
b. Alignment	Rev 2. A	3/23/2016	SSRC approved
c. Tracks	Rev 2. A	2/24/2016	SSRC approved
d. Stations	Rev 2. A	3/23/2016	SSRC approved
7. TES Back-Up Generator System HA	Rev A	5/25/2016	SSRC Approved
8. Threat & Vulnerability Assessments (TVAs)	Rev 1	1/16/2015	Overall update on hold – MSF portion updated with summary of results
<b>HART CORE SYSTEMS</b>			
9. Core Systems Contract (CSC) PHAs (DBOM)	Rev G	9/1/2016	SSRC Approved (CMS # 575)
10. Central ATC O&SHA	Rev C	9/23/2015	SSRC approved (CMS # 874)
11. Wayside/ATC System HA	Rev C	6/22/2016	SSRC approved (CMS# 835)
12. Wayside ATC SSHA	Rev B	6/22/2016	SSRC approved (CMS# 836)
13. Wayside ATC O&SHA	Rev D	9/23/2015	SSRC approved (CMS # 850)
14. Passenger Train ATC System HA	Rev C	5/22/2017	SSRC approved (CMS # 751)
15. Passenger Train ATC SSHA	Rev E	2/24/2016	SSRC approved (CMS # 853)
16. Passenger Train ATC O&SHA	Rev F	2/24/2016	SSRC approved (CMS # 873)
17. UPS O&SHA	Rev C	2/24/2016	SSRC approved (CMS # 1092)
18. TES SSHA	Rev B	11/30/2016	SSRC approved (CMS # 884)
19. FDAS SSHA	Rev C	4/27/2016	SSRC approved (CMS # 1216)
20. FDAS O&SHA	Rev B	2/24/2016	SSRC approved (CMS # 1217)
21. SCADA SSHA	Rev C	6/22/2016	SSRC approved (CMS# 854)
22. SCADA O&SHA	Rev E	5/25/2016	SSRC Approved (CMS # 887)
23. PSGS O&SHA	Rev D	3/22/2017	SSRC Approved (CMS # 880)
24. Communications O&SHA	Rec C	1/25/2017	SSRC Approved (CMS # 1206)
<b>Documents Pending Approval</b>			
<b>HART SAFETY AND SECURITY</b>			
25. Project Preliminary Hazard Analysis (PHAs)	Rev 2. A		Rev 3 Submitted Pending HART Acceptance 9/27/2017
e. Traction Power	Rev 2. A		Update on-hold - pending approval of TES SSHA and O&SHA
f. Train Control	Rev 2. A		Update on-hold - pending approval of ATC SSHA & O&SHA
g. Vehicles	Rev 2. A		Update on-hold - pending approval of PT SSHA & O&SHA
h. Communications	Rev 2. A		Update on-hold - pending approval of Comms SSHA and O&SHA
26. Elevator/Escalators System HA	Rev A		Under Development
27. Project OHAs	Rev A		Under development
<b>HART CORE SYSTEMS and Other Contracts</b>			
28. Technologies PHAs	Rev G		7/10/2017 - Pending SSRC approval (CMS # 545)
29. Passenger Train Fire Hazard Analysis (FHA)	Rev D		11/22/2016 - AAN Re-submit (CMS# 749)
30. Passenger Train SSHA	Rev C		5/2/2017 - CSC R&R (CMS # 1273)
31. Passenger Train O&SHA	Rev C		8/9/2017 - CSC UTR (CMS # 1320)
32. Passenger Train FMECA	Rev A		HNL-DO279
33. Passenger Train ATC FMECA	Rev A		HNL-44200
34. Wayside ATC FMECA	Rev A		HNL-44201
35. SCADA FMECA	Rev A		HNL-49030
36. TES O&SHA	Rev D		4/26/2017 – R&R (CMS # 1099)
37. TES FMECA	Rev A		HNL-50407
38. PSGS SSHA	Rev E		4/20/2017 - Pending SSRC approval (CMS # 938)
39. PSGS FMECA	Rev A		HNL-90624
40. Communications SSHA	Rev E		8/2/2017 - CSC R&R, (CMS # 1205)
41. Communications FMECA	Rev A		8/18/2017 New Item (CMS# 01844)
42. FDAS FMECA	Rev A		HNL-75157
43. MOW Support Vehicles O&SHA	Rev A		5/4/2017 – R&R (CMS # 1752)
44. UPS SSHA	REV A		4/17/2017 - R&R (CMS # 1720)
45. UPS FMECA	Rev A		HNL-51304
46. TES Arc Flash Hazard Analysis (HA)	REV B		8/10/2017- UTR (CMS # 01780)

## 6.1.3 Project Overall Certification Status

<i>Project Overall Certification Status - Progress</i>						
Historical Record	Jun/17	July/17	Aug/17	Sept/17	Oct/17	Nov/17
<b>Final Revenue Overall %</b>	19%	19%	20%	20%	21%	22%
- Interim Revenue Service - 12/2020	32%	32%	33%	33%	35%	36%
- Phase II Revenue Service - 12/2025	7%	7%	7%	7%	7%	7%

## 6.1.4 Interim Revenue Service Date Certification Status

<i>Interim Revenue Service (2020) Certification Status - Progress</i>						
Historical Record	Jun/17	July/17	Aug/17	Sept/17	Oct/17	Nov/17
<b>Major Components</b>						
- Guideways (Civil & Systems)	40%	40%	42%	42%	46%	49%
- MSF (Civil & Systems)	68%	69%	71%	72%	73%	75%
- Stations (Civil & Systems)	18%	18%	18%	18%	18%	18%
- Passenger Train (PT) (1,2,6,7,8,9)	16%	16%	16%	16%	19%	19%
- Operational Readiness	17%	17%	17%	17%	17%	16%

## 6.1.5 Phase II Revenue Service Date Certification Status

<i>Phase II Revenue Service (2025) Certification Status - Progress</i>						
Historical Record	Jun/17	July/17	Aug/17	Sept/17	Oct/17	Nov/17
<b>Major Components</b>						
- Guideways (Civil & Systems)	8%	8%	9%	9%	9%	11%
- Stations (Civil & Systems)	0%	0%	0%	0%	0%	0%
- Passenger Trains (PT) (3,4,5 & 10-20)	1%	1%	1%	1%	1%	1%
- Operational Readiness	17%	17%	17%	17%	17%	16%

## 6.1.6 Certification Base Checklists not yet SSRC Approved

<i>Certification - Base DCCC / CCCC / STCC not yet SSRC Approved</i>	
1. Traction Power Back-up Generator (TPBUG) - DCCC	Developed - under PM Review
2. PT Cert for Pre-revenue Service - STCC	Developed - under PM review
3. DBB-602, W. Oahu Temp P&R, Road-B - CCCC	To be developed - need 100% specs
4. DB-275, Pearl Highlands PS/BTC - CCCC	To be developed - need 100% specs
5. FD/DBB UH WO Permanent P&R DCCC	To be developed
6. FD/DBB UH WO Permanent P&R CCCC	To be developed - need 100% specs
7. East Kapolei Permanent P&P DCCC	To be developed
8. East Kapolei Permanent P&P CCCC	To be developed - need 100% specs
9. Pre-revenue Testing Conform Checklist (PRTCC)	To be developed - need plan
10. DBB-505 Dillingham Utilities Road - CCCC	To be developed - need 100% specs
11. DB-450, Airport Guideway - CCCC	To be developed - need 100% specs
12. DB-450, Airport Stations - CCCC	To be developed - need 100% specs
13. DB-550, City Center Guideway - CCCC	To be developed - need 100% specs
14. DB-550, City Center Stations - CCCC	To be developed - need 100% specs

## 6.1.7 S&amp;S Open Items List Status

<i>"Open Items List"</i>						
<i>"Open Items" - Design/Construction and Verification Issues</i>						
Month 2017	Total #	Total # Open	Total # Closed	% Closed Overall	# Closed In Month	% Closed In Month
Aug	286	40	246	86%	2	1%
Sept	287	35	252	88%	6	2%
Oct	292	37	255	87%	3	1%
Nov	292	31	261	89%	6	2%

## 6.1.8 Certification Certificates Issued to Date

<i>S&amp;S Certification Certificates Issued to Date</i>		
Contracts / Interim Certification (IC) Certificates Issued	Date Signed	Comments
1. FD-430 / DBB-525 Airport 7-Piers Civil Cert Certificate	9/21/2015	SSRC Approved
2. Three (3) – MOW Vehicles Delivery & M-7, M-2, M-1 MSF Tracks – IC Certificate	2/4/2016	SSRC Approved
3. MSF Yard M-4 and M-6 Tracks – IC Certificate	3/10/2016	SSRC Approved
4. PT-001 Delivery, OSB, M-5/M-4 Tracks, ORCC, MOW MPV - IC Certificate	3/29/2016	SSRC Approved
5. Five (5) – MOW Vehicles Delivery – IC Certificate (Vehicles Only)	5/20/2016	SSRC Approved
6. MOW Facility Early Occupancy – IC Certificate (Administrative Areas Only)	5/23/2016	SSRC Approved
7. MSF Civil IC Certificate - Tracks and Facilities	7/6/2016	SSRC Approved
8. PT-001 Truck (Bogies) Delivery #1 IC, 1 set of bogies – two (2) wheel Sets	11/10/2016	SSRC Approved
9. PT-001 Truck (Bogies) Delivery #2 IC, 7-sets of bogies – fourteen (14) wheel sets	12/01/2016	SSRC Approved
10. PT-001 Dead Car Pull IC - PT-001, MPV, WOFH	5/30/2017	SSRC Approved
11. Dynamic Section Test Track – TES, WOFH Civil, MPV acceptance	10/06/2017	SSRC Approved
12. PT-001 IC to Enter Dynamic Testing	10/06/2017	SSRC Approved
13. DB-200 MSF Civil Contract Final Certification	10/09/2017	SSRC Approved
14. FD-430, DBB-505 Airport Section Utilities Civil Contract Final Certification	10/09/2017	SSRC Approved

## 6.1.9 Construction Safety and Security:

## Safety and Security Incidents

Incidents for Oct. 25, 2017-Nov. 21, 2017:

- There were no security or recordable incidents during this reporting period.

	2014			2015			2016			2017		
	Hours worked	No. of Recordable	No. of Loss Time	Hours worked	No. of Recordable	No. of Loss Time	Hours worked	No. of Recordable	No. of Loss Time	Hours worked	No. of Recordable	No. of Loss Time
January				145,806	1	0	172,799	0	0	105,639	1	1
February				126,526	1	0	172,950	1	0	82,068	0	0
March				139,422	3	1	183,147	0	0	91,567	1	0
April				71,856	1	0	230,808	2	0	45,603	2	0
May				167,204	0	0	181,979	1	0	85,744	1	0
June				123,391	2	1	165,737	0	0	76,754	2	0
July				130,954	0	0	167,039	0	0	49,055	1	0
August	52,834	1	0	154,381	1	1	129,067	1	1	105,613	0	0
September	108,337	1	1	102,224	1	0	113,137	0	0	99,671	0	0
October	126,351	0	0	172,845	0	0	130,238	0	0			
November	116,929	3	3	45,913	0	0	94,003	1	0			
December	102,942	1	0	154,215	0	0	106,913	1	0			
Total	507,393	6	4	1,534,735	10	3	1,847,817	7	1	741,714	8	1
OSHA Annual Incident Rate				1.3			0.76					

Work Hours for WOFH, KHG, MSF, Airport, CORE System as reported to OCIP and certified.

## 6.2 Quality Management

### Key Issues

HART NCR Log		
Total NCRs Issued To Date	CLOSED	OPEN
<b>64 (Audits)</b>	<b>62</b>	<b>2</b>
<b>1 (Construction)</b>	<b>1</b>	<b>0</b>

- Resolution of two (2) major WOFH NCRs that need to be addressed and corrected to prevent recurrence and to mitigate impact on the overall progress of the project. The major NCRs are described below:
  - Tendons:** KIWC has completed their investigation of the condition of all tendons. The data has been submitted to HART for review.
  - Shims** – KIWC has completed the shim replacement work for the entire WOFH Guideway.
- Resolution of one (1) major KHG NCR that needs to be addressed and corrected to prevent recurrence and to mitigate impact to the overall progress of the project. The major NCR is described below:
  - Shims** – NCR #225 was issued to KIWC in October 2016, for non-compliance with ASTM testing requirements.
- Resolution of one (1) major CSC NCR that needs to be addressed and corrected to prevent recurrence and to mitigate impact on the overall progress of the project. The major NCR is described below:
  - HRI presented the positive results of the first car shell structural defect retrofit to Safety and Security Review Committee (SSRC). HRI has shipped four car shells that include the aluminum extrusion defects back to Reggio Calabria, Italy, for retrofit. Retrofit work at Reggio Calabria is in progress.

### Audit Look Ahead

- Issued Audit Closeout Letter on Joint HART/AHJV Audit No. 17-006 HRU Quality Assurance (QA) Systems Audit of Hitachi Rail USA, Pittsburg, CA, on the CSC contract.
- Issued Audit Report on Joint HART/AHJV Audit No. 17-007 HRI QA Systems Audit of Hitachi Rail, Italy, on the CSC contract.
- Issued Audit Report on No. 17-011 E&E QA Systems Audit of Schindler Elevators and Escalators held on Oct. 13, 2017.
- Issued Audit Report on No. 17-012 CEI-East Combined QA and Environmental Compliance (EC) Audit of STANTEC held on Oct. 26, 2017.
- Performed Audit No. 17-014 CEI – West Combined QA and EC Audit of PGH Wong on Nov. 9, 2017.
- Performed Audit No. 17-015 KHSG Combined QA, Buy America (BA) and EC Audit of Nan Inc. on Nov. 16, 2017.
- Updated (Revision 6) the Project Combined Management System Audit Schedule for 2017 to all contractors, consultants and suppliers.

### Oversight and Monitoring

- Bi-weekly Quality Task Force Meetings.
- Pre-activity Meetings.
- QA Surveillance.
- Reviewed STG Quality Assurance Plan (QAP) for Casting Yard on AGS contract.
- Review of new and revised HART Baseline Plans and Procedures.
- Prepared Project NCRs Trend Analysis from January 2017 to November 2017.

## 6.3 Buy America Compliance (49 CFR 661 and 49 CFR 663)

### Overview and Key Issues

- No updates to report this month.

## 6.4 Disadvantaged Business Enterprise (DBE)

### Activities this Month

- \$68,829,722 = total dollar participation for all DBEs on all HART contracts from 9/24/07 to 11/30/17
  - 8.54% = DBE utilization on total disbursed FTA funds received to date (\$68,829,722 divided by \$806,258,734)
  - 3.90% = DBE utilization to date on total Project FTA funds (\$68,829,722 divided by \$1,763,903,901)

## 6.5 Art-in-Transit (AIT) Program

The Honolulu Rail Transit Project's December 2012 FFGA grant (Sitework and Special Conditions) includes a public art program. In addition, the Revised Ordinances of Honolulu (ROH) Section 3-2.7, "Art in City Buildings," provides for the inclusion of art in city-owned buildings frequented by the public. For the rail project, the AIT staff negotiates and manages contracts for the west-side stations and AGS. AIT contracts are managed in five Notice to Proceed (NTP) phases:

- NTP1 - Conceptual design
- NTP2 - Design development, final design, and construction documents
- NTP3 - Mobilization
- NTP4 - Fabrication, transportation, and installation
- NTP5 - Final acceptance

Conceptual and final designs are presented to the Mayor's Commission on Culture and the Arts for review and comment. The Transit Art Committee evaluates and makes the final recommendation and approval.

Station / Facility Name	Artist Name	NTP Phase	Comments
East Kapolei Station	Robert Flint	NTP2	Revising final design.
University of Hawai'i West O'ahu Station	Satoru Abe	NTP2	Technical integration of artwork; working on construction documents.
Ho'opili Station	Karen Lucas	NTP2	Revising final design.
West Loch Station	Hans Ladislaus	NTP2	Revising final design.
Waipahu Transit Center Station	John Koga	NTP1	Conceptual design.
Rail Operations Center – Operations & Servicing Building	Shigeru Miyamoto	NTP2	Approved to NTP2.
Pearlridge Station	Robert Kushner	NTP2	Technical integration of artwork; working on construction documents.
Aloha Stadium Station	Jay Wilson	NTP1	Revising conceptual design.
Pearl Harbor Naval Base Station	Carol Bennett	NTP1	Conceptual design restarted with STG.
Honolulu International Airport Station	Mamoru Sato	NTP1	Kick-off meeting held with STG. Start conceptual design.
Lagoon Drive Station	Carol Yotsuda	NTP1	Conceptual design.

## 6.6 Planning and Environment

### Activities this Month

- Programmatic Agreement (PA) Activities:
  - The required second neighborhood design workshop for Pearl Harbor Station is tentatively scheduled for Jan. 9, 2018. Planning staff is working with all stakeholders to organize the workshop.
  - The 2017 Q3 Mitigation Monitoring report is in final review phase.
  - The monthly PA report for September was distributed to Consulting Parties by the Kāko'o.
  - HART Planning continues to plan and attend bi-weekly meetings with the FTA on PA activities and issues.
  - Planning staff is attending bi-weekly AGS station design and landscape meetings.
  - HART Planning coordinated an informational brief regarding the Secretary of the Interior Standards as they apply to Pearl Harbor Station.
  - HART Planning coordinated a Noise and Vibration informational briefing by STG to the consulting parties.
  - HART Planning received Pearl Harbor station and landscape renderings. Comments were submitted.
  - HART Planning provided review comments on the draft State Strategic Plan for Transit-Oriented Development (TOD)/Transit-Ready Development.
  - Updating the Programmatic Agreement Implementation Schedule (PAIS) to reflect current updates.
  - HART's On-Call Contractor completed construction on the Manghnani Building by Nov. 10, 2017.
- Planning, Environmental, and Cultural Activities:
  - Staff conducted an environmental compliance audit of the East Construction Engineering and Inspection (CE&I) consultant on Oct. 26-27, 2017.
  - On Nov. 2, 2017, staff received formal FTA approval of the City Center Realignment Post-Record of Decision (ROD).
  - Staff submitted to FTA a request for determination of documentation for the LCC HECO Substation.
  - Treatment and preservation measures were implemented for all inadvertently discovered burials and human skeletal remains at Pearlridge Station makai footprint.
  - On Oct. 26, HART convened a meeting with its Hawaiian Station Naming Working Group to continue finalizing proposals for Hawaiian names for the first nine stations.
  - Staff met with the Division of Urban Forestry (DUF) to finalize the plans for the tree mitigation and dust control project at the Central Oahu Regional Park (CORP).
  - HART started the tree mitigation, dust control irrigation and grassing project at CORP.
  - Staff attended bi-weekly TOD Subcabinet meetings.
  - Staff led a bi-monthly TOD Coordination meeting between HART, DPP/TOD, and DTS on Nov. 17, 2017, to discuss various projects and coordination needs.
  - Staff submitted the Brownfield Grant Quarterly Report to the Environmental Protection Agency.

### Look Ahead

- Prepare and submit final Post-ROD Documentation to FTA for approval:
  - City Center Makai Precast Yard (MPY), pending FTA comments on Over-the-Shoulder draft version of Post-ROD and State Historic Preservation Division (SHPD) concurrence letter of no adverse effect.
  - Emergency Generator Post-ROD (pending FTA review of Over-the-Shoulder draft which was revised to include required additional noise and vibration analysis).
  - Revise FTA's submittal to SHPD in accordance to SHPD's guidance for MPY proposed action.
- Additional Right-of-Way, awaiting potential project refinements.
- West O'ahu Park-and-Ride Lots, on hold pending identification of potential Park-and-Ride sites.
- Hōlau Market/Ai-Goto, National Register of Historic Places (NRHP) nominations and Historic American Buildings Survey (HABS) documentation by First Quarter 2018.

## 6.7 Risk Management

The primary goal of risk management is to maintain a reserved contingency balance throughout the life of the Project that is acceptable to HART and the FTA. Effective management of project risks is necessary to significantly increase the likelihood of delivering a successful project. Risk management is the systematic process of identifying, analyzing, and responding to risk in a timely manner. Risk management is integral to all phases leading up to revenue service opening including: planning, design, construction, systems testing, system operation start-up, safety and security certification, and ultimately to project construction closeout.

The HART program Risk Management System focuses on mitigation strategies to assist the project teams in successful project delivery. The bottoms-up risk assessment for all projects in the program are updated monthly by the project teams. A network model is then updated to evaluate the cost and schedule contingencies of the program, including relationships between each of the individual projects and contracts. Risk assessment discussions with the project teams are held periodically to identify, assess, prioritize, manage and mitigate risk exposure, and develop prudent contingency plans. The Project Risk Register (RR) is the depository for all risks identified for the Project. Every month, risks contained in the RR are reviewed to confirm risks are appropriately identified, identify new risks, and close out risks that no longer pose an issue. The individual project risks are now updated monthly and input into the RR. Outputs from the RR are now being transitioned as a batch input to the overall cost forecasting reports.

The risk management system quantifies each risk as a schedule impact or as a direct cost impact independently. The schedule impact is then monetized if it is a critical-path risk, based in the model and based upon the contracts impacted. The top risks to the program are then evaluated on both schedule and cost.

As HART implements the risk management system focused on mitigation, monitoring, and control, the PMOC has requested to work with HART to possibly develop a new tracking mechanism or data reporting set to better assist in the oversight of the program. The HART risk manager plans to report risk updates by project on a monthly basis and perform a model update of the program on a quarterly basis. Currently, HART is in the process of updating the Risk and Contingency Management Plan (RCMP) with input from the PMOC. Current activities include the build-up of the contingency curves and hold-points as well as monthly reporting.

### Notes of Significance

- The On-Call contractor is verifying the existing as-built data of the utilities in the City Center Section to mitigate risk of unidentified utilities.
- Developing agreements with landowners and utilities for access during construction is mitigating potential construction schedule delays.
- Evaluated response strategy for HART performing HECO construction work.
- The procurement for the combined guideway and station package on the City Center Guideway and Stations contract was cancelled by HART on Aug. 24, 2017. HART has now evaluated options for a new procurement with input from Risk Management. A risk model was run on the new City Center procurement strategy, with an advance utility package (unit rate contract), followed by a separate guideway and stations package (Design-Build or Public-Private Partnership [P3]), which showed a reduction in risk compared to the option of a Design-Build package for utilities as well as the guideway and stations.

### Areas of Focus

**A) Quarterly Risk Refresh** – The Risk Manager held numerous meetings with the project teams in September and early October 2017 for the Quarterly Risk Refresh. A kick-off meeting was held with the Risk Management Committee. Risk refresh sessions were held with ROW, Utilities, Core Systems, CCGS, AGS, station groups (WOSG, FHSB, and KHSB), WOFB, KHG, Pearl Highlands Garage, Elevators/Escalators, and several of the consulting contracts. The most significant findings and results are summarized below.

- 1) Separation of CCGS risks into two projects, for Advance Utilities DBB followed by another procurement for guideway and stations.

- 2) Risk Reductions due to Duplications: The Risk Refresh workshops found that several utilities risks had been duplicated between teams. This has been corrected, resulting in approximately \$48 million of reductions of forecast risks.
- 3) The Risk Refresh Workshops and updated Risk Register resulted in a reasonable level of confidence of completing the Project within the budget stated in the Recovery Plan of \$8.165 billion, and with a project completion date for Revenue Service by Dec. 31, 2025.
- 4) Another Risk Refresh Workshop is underway in November 2017, inclusive of the overall risk updates from the teams, but also focusing on potential for overall contractor claims at project closeout, or for issues that the CE&I teams had earlier determined had no merit.
- 5) Value Engineering and Cost Containment/Cost Reduction Workshop: The Risk Manager facilitated this workshop with numerous HART project team members on Sept. 21, 2017. The following summary was presented to the HART Executive Director and CEO on Sept. 25, 2017. Proposal evaluations for overall merit of each idea are ongoing. The results of High-Level Analysis, for 80 ideas that were brainstormed, are as follow:
  - a) 9 ideas "passed" with High Savings Potential, for further development (cost savings greater than \$10 million for each idea)
  - b) 7 ideas "passed" with Moderate Savings Potential, for further development (cost savings from \$1 million to \$10 million for each idea)
  - c) 4 ideas "passed" with Low Savings Potential, for further development (cost savings less than \$1 million for each idea)
  - d) 1 idea "passed" with Cost Increase, for further development (cost increase for each idea, but proposed for functional reason)
  - e) 38 ideas are to be Observations for Cost Avoidance, or Functional Considerations in the design
  - f) 8 ideas were already being done by HART
  - g) 13 ideas were rejected due to Evident Disadvantages
- 6) Analysis of the Value Engineering (VE) Opportunities is ongoing through November and December. Ideas with merit will be presented to HART senior management in January 2018 for consideration in implementation on the City Center or other ongoing projects as applicable.

**Market Conditions** – The construction market in Hawai'i continues to outpace other major metropolitan US cities. The years 2015 and 2016 set new records for construction in the state. This translates to increased escalation of about 1% per month from late 2014 through the end of 2016, according to the Rider Levett Bucknall, Quarterly Construction Cost Report. These conditions may impact the supply of experienced craft labor which will in turn affect contractor productivity rates and traffic mobility issues. Looking forward into 2017 and beyond, the construction market looks to slow down from its record pace, but remain above average. HART will monitor this situation as it develops in the coming months.

**Mitigation Progress:**

- HART's continuous improvement in estimating methodology has led to more confidence in the likely construction pricing, but continued pricing pressures in the market could still lead to higher than expected price proposals and bids.
- Special focus will be on the procurement of the City Center utilities, guideway, and station contract(s) given that it is a significant contract affected by market conditions.

**B) Utilities** – Utilities continue to be an issue for the project, as they are for most transit and rail projects.

**Mitigation Progress:**

- Resources to relocate HECO facilities are now keeping up with scheduled requests to resolve utility conflicts through improved coordination efforts between agencies at all levels from project management to executive levels.
- Identifying existing utilities along the City Center corridor.
- Resolve utility conflicts prior to construction contracts being issued.
- Sign construction agreements with utilities for the Dillingham Temporary Utility work as well as the City Center construction area.



- Evaluated and now implementing the advancing of the City Center utilities relocation package as an early contract, followed by the DB procurement for the City Center Guideway and Stations project.

**C) Right-of-Way** – While construction access for nearly all west-side acquisitions is complete, east-side acquisitions are still in active negotiations for construction access and acquisition. The goal is to provide site access to the contractors for the entire project to avoid or mitigate against associated inefficiencies related to re-sequencing the work plan which would have a negative impact to the revenue service date.

#### Mitigation Progress:

- West-side: Construction access for all property transactions have been accomplished, with the exception of a few ancillary utility relocation or road widening improvements.
- East-side: Construction access for the Airport Section is ongoing. There is one parcel that is presently not available. Negotiations for construction access in the City Center Section are actively ongoing, with access obtained for approximately 83% of the Dillingham Temporary Utility portion of the section and 35% of the remaining portion of the section. Relocation and cost-to-cure activity is ongoing and are not impacting preconstruction work at this time.

## 6.8 Community Outreach

### Overview

- Since the inception of HART, the outreach team has participated in:
  - 1,158 Presentations and Events
    - 14 Events and Presentations in November 2017. HART's public outreach team participated in the Blue Planet Foundation Youth Energy Summit, the Waipahu Community Association's Observance of the 120<sup>th</sup> Anniversary of Waipahu town, and Small Business Saturday, the U.S. Small Business Administration and American Express campaign to encourage holiday shopping at local small businesses. The team also provided tours of the HART Rail Operations Center to the Pacific Century Fellows and Naval Facilities Engineering Command (NAVFAC).
  - 679 Neighborhood Board Meetings
    - 7 Neighborhood Board Meetings in November 2017.

### Community Input

- HART's public outreach team responded to dozens of public inquiries and comments this month. Inquiries were related to HART's paving of Kamehameha Highway, maintenance issues along the rail corridor, and employment with the rail project.

## 6.9 Staffing

### Overview

- Project Staffing:
  - Target: 137 Full-Time Equivalent (FTE) City Staff
    - Actual City Staff Total: 117 Personnel (5 Civil Service and 112 Personal Services Contract [PSC] Employees)
    - Project Management Support Consultant (HDR) Staff: 19 Personnel
    - Total Project Staff: 136 Personnel (this includes City and PMSC staff—reflects arrivals and departures for the current month)
- The following positions were filled in November:
  - Rail Facilities Maintenance Development Manager (PSC)
  - Scheduler in Project Controls (PSC)
  - Contract Management Assistant (PSC)
- The following position became vacant in November:
  - Planner III in Right-of-Way (PSC)

Figure 10. Staffing Activities

Staffing Activities				
Title	Group	New/Existing HART Position (City or PMC)	Position Status*	Start Month
<b>Design and Construction</b>				
Secretary	Core Systems	Existing (City)	Selected/Processing - PSC	Dec
<b>Operations and Maintenance Development</b>				
Rail Facilities Maintenance Development Manager	Operations and Maintenance Development	New (City)	Filled – PSC	Nov
<b>Project Controls</b>				
Scheduler	Project Controls	Existing (City)	Filled – PSC	Nov
<b>Procurement, Contracts and Construction Claims</b>				
(2) Procurement & Specifications Specialists	Procurement and Consultant Contracts	Existing (City)	Recruiting/Interviewing - PSC	
Contract Manager	Construction Claims, Utility, and Third Party Contracts	New (City)	Recruiting/Interviewing - PSC	
Contract Management Assistant	Construction Claims, Utility, and Third Party Contracts	New (City)	Filled – PSC	Nov
Construction Claims Manager	Construction Claims, Utility, and Third Party Contracts	New (City)	Recruiting/Interviewing - PSC	
Construction Claims Specialist	Construction Claims, Utility, and Third Party Contracts	New (City)	Recruiting/Interviewing - PSC	
<b>Planning, Permitting, and ROW</b>				
Deputy Director of ROW Legal Affairs	Planning, Permitting and ROW	New (City)	Recruiting - PSC	
<b>Public Information</b>				
Information Specialist II (Construction and Community Relations)	Public Information	New (City)	Recruiting/Interviewing - PSC	
Information Specialist II (Business Relations)	Public Information	New (City)	Recruiting/Interviewing - PSC	

\*Personal Services Contracts are limited to one year per the Revised Charter of the City and County of Honolulu, Sec. 6-1103(g).

For the latest project organization chart, see Appendix C.

## 6.10 Operations and Maintenance (O&M)

### Overview

- Rail O&M is actively working with DTS on a roadmap to revenue service. The teams are reviewing governance, policies, organizational development, staffing, O&M transition, and revenue service funding.
- Rail O&M continues to assist with ensuring operational readiness and cost containment by evaluating and communicating operations and maintenance implications to Project decision-makers and stakeholders, and facilitating operational and safety policy discussions.
- Rail O&M reviews Project documents, capital construction, Memoranda of Understanding (MOUs), and third-party agreements to ensure operability and maintainability, and provides additional Project oversight and consultation to Project teams.
- Rail O&M, along with its stakeholders and partners, are currently evaluating the merits of an interim opening prior to full project completion to Ala Moana Station.

### Ongoing Activities

- Submitted application for governance study grant.
- Reviewing organizational development and staffing plan with DTS.
- Reviewing capital maintenance costs.
- Updating HART Operations and Maintenance Plan and Rail Fleet Management Plan.
- Proposed HART agreements procedure.
- Coordinating Rail Operations Center (ROC) Transfer of Assets.
- Developing guideway inspection RFP and Independent Cost Estimate.
- Reviewing standard operating procedures.
- Reviewing maintenance manuals and procedures.
- Reviewing proposed ordinances for DTS review.
- Reviewing safety incident reporting and emergency notification system.
- Reviewing Responsibility Matrix documentation.
- Overseeing the Core System Contractor O&M mobilization plan, staffing, and roadmap to revenue service.
- Finalizing Pre-Revenue Operations Plan.
- Sharing training documentation and materials with LCC Workforce Development Program.

### Look Ahead

- Develop Asset Management Program Strategy.
- Support rollout of LCC Workforce Development Program.

# APPENDICES

## Appendix A. Project Cost Reports (data as of Oct. 27, 2017)

Cost reports are run from the HART Contract Management System (CMS)

Project Costs by SCC – Level 2



### Project Costs - SCC Details

Reporting Month: 10/27/2017

Reporting month: 10/21/2017													Page: 1 of 3			
Cost Code	A	B	BUDGET		C=A+B	D	COMMITTED		F=D+E	ESTIMATE AT COMPLETION		J				
			Baseline	Transfers			Current*	Contract		Executed	Current		Risk Exposure	Est. At Compl**	Variance	Incurred To Date
1. Subtotal 10 - 80 SCC Costs																
10. Guideway & Track Elements	1,114,215,147	398,597,837	0	1,512,812,984	1,239,060,762	43,414,552	1,342,475,314	217,830,433	1,560,105,747	(47,292,763)	573,173,303					
10.02 Guideway: At-grade semi-exclusive	0	0	0	0	0	17,378	17,378	17,378	0	0	17,378					
10.04 Guideway: Aerial Structure	1,022,380,671	362,794,982	1,385,175,653	1,223,419,652	35,082,791	1,258,502,442	173,965,974	1,432,468,416	(47,292,763)	487,806,661						
10.05 Guideway: Built-up fill	0	0	0	0	0	0	0	0	0	0	5,054,744					
10.06 Guideway: Underground Cut & Cvr	0	0	0	0	0	(1,228,000)	(1,228,000)	1,228,000	0	0	-1,228,000					
10.08 Guideway: Retained Cut or Fill	7,492,944	(2,421,319)	5,071,625	6,436,266	0	6,436,266	0	(1,364,631)	5,071,625	0	0					
10.09 Track: Direct Fixation	79,347,205	39,285,256	118,632,461	65,006,980	9,511,507	74,518,487	44,113,974	118,632,461	0	77,597,271						
10.11 Track: Ballasted	3,293,724	(891,355)	2,402,369	2,697,875	0	2,697,875	(295,506)	2,402,369	0	2,394,373						
10.12 Track: Special (Switches, turnouts)	1,700,603	(169,727)	1,530,876	1,500,000	30,876	1,530,876	0	1,530,876	0	1,530,876						
10.13 Track: Vibration and noise dampen	0	0	0	0	0	0	0	0	0	0	0					
20. Stations/ Stops, Terminals, Intermodal	421,804,740	335,678,283	757,483,023	382,001,092	6,723,487	388,724,579	405,244,148	793,968,727	(36,485,704)	60,020,443						
20.01 At-grade station, stop, shelter...	6,111,332	5,200,868	11,312,190	9,411,189	0	9,411,189	1,901,001	11,312,190	0	1,751,160						
20.02 Aerial station, stop, shelter, mail	294,563,457	241,677,156	536,240,613	321,607,189	5,654,279	327,261,468	246,464,849	572,726,317	(36,485,704)	50,007,158						
20.04 Other stations, landings, terminal	0	35,124,797	35,124,797	0	0	0	35,124,797	35,124,797	0	0						
20.06 Automobile parking multi-story str	66,408,765	55,914,736	122,323,501	0	0	0	122,323,501	122,323,501	0	0						
20.07 Elevators, Escalators	54,721,186	(2,239,264)	52,481,922	50,982,714	1,069,208	52,051,922	430,000	52,481,922	0	8,262,125						
30. Support Facilities: Yards, Shops, Admin	92,535,015	27,480,772	120,015,787	96,343,664	19,623,814	115,973,478	4,042,309	120,015,787	0	120,036,063						
30.01 Administration Bldg: Office, sales	0	0	0	0	0	231,250	231,250	0	0	231,250						
30.02 Light Maintenance Facility	7,591,888	222,066	7,813,954	7,586,793	(4,089)	7,582,704	231,250	7,813,954	0	7,582,704						
30.03 Heavy Maintenance Facility	38,099,138	8,218,672	46,317,810	37,857,030	5,847,789	43,704,819	2,612,991	46,317,810	0	46,317,810						
30.04 Storage or Maintenance of Way Bul	7,797,460	1,095,279	8,892,739	7,735,910	1,083,223	8,819,133	73,606	8,892,739	(0)	8,892,739						
30.05 Yard and Yard Track	39,046,529	17,944,755	56,991,284	43,163,931	12,471,641	55,635,572	1,355,712	56,991,284	0	57,011,560						
40. Sitemwork & Special Conditions	983,178,121	572,609,409	1,555,787,530	596,704,930	173,074,439	769,779,369	1,040,971,841	1,810,751,210	(254,963,680)	758,473,981						
40.01 Demolition, Clearing, Earthwork	29,980,158	14,728,504	44,708,662	16,160,175	286,375	16,446,550	28,262,112	44,708,662	0	16,879,937						
40.02 Site Utilities, Utility Relocation	299,449,756	261,359,343	560,809,099	200,592,197	9,324,325	209,916,523	347,771,631	557,688,154	3,120,946	175,088,297						
40.03 Haz. mat'l, contain'd soil removal	9,199,237	22,809,146	32,008,383	3,298,080	5,100,987	8,399,067	23,609,316	32,008,383	0	6,876,726						
40.04 Environmental Mitigation	26,979,122	(15,597,249)	11,391,873	16,540,308	16,864	16,557,672	(5,165,799)	11,391,873	0	11,391,864						
40.05 Site structures, retaining walls,	7,998,960	86,124,892	94,123,852	10,418,671	2,844,158	13,262,829	81,001,849	94,264,678	(140,826)	14,182,137						
40.06 Pedestrian/bike access/landscaping	41,073,897	(23,260,142)	17,813,755	7,942,962	(2,791,026)	5,151,936	12,661,819	17,813,755	0	1,746,671						

m\_pc\_23\_proj\_scc\_query\_vew

\*\*\*Est. At Completion - Based on estimated cost to complete the approved FRGA scope to Ala Moana Station.  
 FILTER: This report does not contain ineligible costs or operation costs. It does NOT include third party costs which will be reimbursed by an Agency.  
 QUERY: This report contains records with a maximum date of 10/27/17

Print Date: 11/30/17 21:30



# Project Costs - SCC Details

Reporting Month: 10/27/2017

Page: 2 of 3

Cost Code	A		B		C=A+B		D	COMMITTED		F=D+E		ESTIMATE AT COMPLETION		I=C-H	J
	Baseline	Transfers	Current*	Current*	Contract	Executed	Current	Risk Exposure	Est. At Compl**	Variance	Incurred To Date				
1. Subtotal 10 - 80 SCC Costs															
40.07	Auto, bus, van accessways	181,979,387	(72,163,153)	109,816,214	37,009,393	(5,966,956)	31,042,437	78,773,777	109,816,214	0	46,410,537				
40.08	Temporary Facilities/Indirect Cost	386,517,624	298,998,068	685,515,692	304,742,646	164,259,711	469,002,356	474,057,135	943,059,491	(257,943,799)	485,897,811				
50. Systems		221,284,301	77,027,810	298,311,911	222,024,718	36,637,238	258,661,955	32,511,157	291,173,112	7,138,799	101,340,434				
50.01	Train control and signals	81,982,556	64,643,927	146,626,483	82,402,646	25,180,359	107,583,005	37,377,778	144,960,783	1,665,700	33,881,559				
50.02	Traffic signals and crossing prot.	10,468,226	(10,360,226)	98,000	0	98,000	98,000	0	98,000	0	98,000				
50.03	Traction power supply: sub-station	29,500,926	3,812,824	33,313,750	30,968,291	2,002,515	32,970,806	(1,262,056)	31,708,750	1,605,000	12,398,683				
50.04	Traction power distribution: cat	32,878,150	(1,544,520)	31,333,630	25,087,996	7,941,115	33,029,111	(1,695,481)	31,333,630	0	26,186,531				
50.05	Communications	53,691,339	12,569,321	66,260,660	54,251,397	11,765,249	66,016,646	(4,755,986)	61,260,660	5,000,000	24,432,447				
50.06	Fare collection system and equipme	9,159,277	8,066,320	17,225,597	25,860,597	(10,350,000)	15,510,597	2,846,901	18,357,498	(1,131,901)	2,792,680				
50.07	Central Control	3,613,827	(160,036)	3,463,791	3,463,791	0	3,463,791	0	3,463,791	0	1,550,535				
80. ROW, Land, Existing Improvements		197,397,947	59,755,370	257,153,317	211,929,721	2,195,580	214,125,301	43,028,016	257,153,317	0	155,641,950				
80.01	Purchase or lease of real estate	179,380,664	(7,921,649)	171,439,015	179,468,673	167,780	179,626,463	(8,187,438)	171,439,015	0	136,765,718				
80.02	Relocation of existing households	18,037,283	67,677,019	85,714,302	32,471,047	2,027,800	34,498,847	51,215,465	85,714,302	0	18,876,232				
70. Vehicles		186,829,020	5,009,421	191,838,441	190,028,297	1,939,924	191,968,221	57,945,647	249,913,868	(58,075,427)	71,278,672				
70.01	Light Rail	166,721,386	5,716,192	172,437,578	171,122,353	1,446,224	172,568,577	57,926,428	230,495,005	(58,057,427)	58,895,848				
70.05	Other	0	494,919	494,919	0	493,700	493,700	1,219	494,919	0	493,700				
70.06	Non-revenue vehicles	14,346,923	(1,320,375)	13,026,548	13,026,548	0	13,026,548	0	13,026,548	0	11,889,124				
70.07	Spare parts	5,760,711	118,685	5,879,396	5,879,396	0	5,879,396	18,000	5,897,396	(18,000)	0				
80. Professional Services		1,087,830,119	1,105,004,003	2,192,834,122	1,072,628,689	184,726,260	1,257,354,948	935,479,174	2,192,834,122	(0)	1,093,010,211				
80.01	Preliminary Engineering	94,055,262	48,820,870	142,876,132	88,661,445	20,905,682	109,567,127	33,309,005	142,876,132	(0)	126,616,465				
80.02	Final Design	228,321,632	247,510,519	475,832,151	174,914,426	67,236,727	242,151,153	233,680,998	475,832,151	0	226,918,683				
80.03	Project Management Design & Const	363,849,768	341,891,422	705,741,190	403,280,668	103,668,235	506,968,903	198,772,287	705,741,190	0	421,261,569				
80.04	Constr. Admin. & Management	199,656,728	295,677,726	495,334,454	176,042,372	(27,426,187)	148,616,185	346,718,269	495,334,454	0	140,869,534				
80.05	Professional Liability & other ins	46,549,724	53,490,776	100,040,500	44,389,157	700,500	45,089,657	54,950,843	100,040,500	0	43,010,698				
80.06	Legal; Permits, Review Fees etc..	67,641,005	9,644,826	77,285,831	37,434,123	7,482,052	44,916,175	32,369,656	77,285,831	0	29,770,794				
80.07	Surveys, Testing, Investigation, I	21,759,336	117,028,951	138,788,287	99,844,477	2,229,842	102,074,319	36,713,968	138,788,287	(0)	58,943,568				
80.08	Start up	65,996,664	(9,061,088)	56,935,577	48,062,020	9,909,409	57,971,429	(1,035,852)	56,935,577	(1)	46,618,901				
Subtotal:		4,305,074,410	2,581,162,705	6,886,237,115	4,070,721,872	460,341,293	4,539,063,165	2,736,852,725	7,275,915,890	(389,678,775)	2,932,975,057				

m\_po\_23\_proj\_soc\_recovery\_new

\*\*\*Est. At Completion - Based on estimated cost to complete the approved FFCA scope to Ala Moana Station.  
 FILTER: This report does not contain ineligible costs or operation costs. It does NOT include third party costs which will be reimbursed by an Agency.  
 QUERY: This report contains records with a maximum date of 10/27/17

Print Date: 11/30/17 21:30



**Project Costs - SCC Details**  
Reporting Month: 10/27/2017

Page: 3 of 3

Cost Code	A		B		C=A+B		D	E	F=D+E	G	H=F+G	I=C-H	J
	Baseline	Transfers	BUDGET	Current*	Contract	COMMITTED	Executed	Risk Exposure	Est. At Compl**	Variance	Incurred To Date		
<b>3. Contingency</b>													
CNTR Allocated Contingency	541,689,343	574,360,692	1,116,050,035	8,367,491	(1,318,266)	6,449,225	719,322,035	726,371,260	389,678,775	747,186			
90.02 Allocated Contract Contingency	540,101,329	575,948,706	1,116,050,035	1,261,308	3,578,856	4,840,164	721,531,096	726,371,260	389,678,775	807,805			
90.03 Allowances	1,588,014	(1,588,014)	0	7,106,183	(5,467,121)	1,609,061	(1,609,061)	0	0	-60,619			
90.07 Known Change Contingency	0	0	0	0	0	0	0	0	0	0			
PRJ Unallocated Contingency	101,871,170	60,895,872	162,767,042	0	0	0	162,767,042	162,767,042	0	0			
90.01 Unallocated Project Contingency	101,871,170	60,895,872	162,767,042	0	0	0	162,767,042	162,767,042	0	0			
<b>Subtotal:</b>	<b>643,560,513</b>	<b>635,256,564</b>	<b>1,278,817,077</b>	<b>8,367,491</b>	<b>(1,918,266)</b>	<b>6,449,225</b>	<b>882,689,077</b>	<b>889,138,302</b>	<b>389,678,775</b>	<b>747,186</b>			
<b>4. Finance Charges - Eligible</b>													
OTH Finance Charges	173,058,243	428,941,757	602,000,000	11,807,165	0	11,807,165	590,192,835	602,000,000	0	1,807,165			
100.1 Finance Charges: Project-Eligible	173,058,243	428,941,757	602,000,000	11,807,165	0	11,807,165	590,192,835	602,000,000	0	1,807,165			
<b>Subtotal:</b>	<b>173,058,243</b>	<b>428,941,757</b>	<b>602,000,000</b>	<b>11,807,165</b>	<b>0</b>	<b>11,807,165</b>	<b>590,192,835</b>	<b>602,000,000</b>	<b>0</b>	<b>1,807,165</b>			
<b>FTA TOTAL PROJECT:</b>	<b>5,121,693,166</b>	<b>3,645,361,026</b>	<b>8,767,054,192</b>	<b>4,090,896,529</b>	<b>466,423,027</b>	<b>4,557,319,556</b>	<b>4,209,734,636</b>	<b>8,767,054,192</b>	<b>0</b>	<b>2,935,529,408</b>			
<b>4. Finance Charges - Ineligible Costs</b>													
FINC Finance Charges	42,000,000	214,000,000	256,000,000	0	0	0	256,000,000	256,000,000	0	0			
100.2 FTA Non-Eligible Costs	42,000,000	214,000,000	256,000,000	0	0	0	256,000,000	256,000,000	0	0			
<b>Subtotal:</b>	<b>42,000,000</b>	<b>214,000,000</b>	<b>256,000,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>256,000,000</b>	<b>256,000,000</b>	<b>0</b>	<b>0</b>			
<b>NON FTA - INELIGIBLE:</b>	<b>42,000,000</b>	<b>214,000,000</b>	<b>256,000,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>256,000,000</b>	<b>256,000,000</b>	<b>0</b>	<b>0</b>			
<b>Totals:</b>	<b>5,163,693,166</b>	<b>3,859,361,026</b>	<b>9,023,054,192</b>	<b>4,090,896,529</b>	<b>466,423,027</b>	<b>4,557,319,556</b>	<b>4,465,734,636</b>	<b>9,023,054,192</b>	<b>0</b>	<b>2,935,529,408</b>			

\*\*\*Est. At Completion - Based on estimated cost to complete the approved FFGA scope to Ala Moana Station.  
FILTER: This report does not contain ineligible costs or operation costs. It does NOT include third party costs which will be reimbursed by an Agency.  
QUERY: This report contains records with a maximum date of 10/27/17

m\_po\_23\_proj\_soc\_recovery\_new

Print Date: 11/30/17 21:30

## HONOLULU HRI R.C. FABRICATION TRACKER

[illegible]





5-0671010-0000

## Appendix C. Project Organization Chart

SEPTEMBER 11, 2017

## HONOLULU AUTHORITY FOR RAPID TRANSPORTATION

Prepared by:  9/11/17  
Administrative Specialist  
Date

Concur:  9/11/17  
Director of Administrative Services  
Date

Approved:  9/11/17  
Executive Director & CEO  
Date

