



INTERNAL REVIEW

Capital Program Management and Execution

In response to the internal review of Metro's Capital Program Management, including review of Metrorail Vehicle Capital Improvement Program, Metrorail Power Systems Upgrade, 7000-Series Railcar Acquisition Program, and Metrorail Radio Infrastructure Replacement Program, the office of Quality Assurance, Internal Compliance & Oversight (QICO) has coordinated the development of twelve (12) CAPs, eight (8) are specific to individual projects and four (4) apply to system-wide areas for improvement. Each CAP outlines the findings, recommendations and requirements to be addressed, and a detailed action plan outlining responsible parties and specific actionable items.

EXECUTIVE LEADERSHIP OF RESPONSIBLE PARTIES

Corrective Action Plan Commitment

FOR:  

19 DEC 17

Joseph Leader
Chief Operating Officer (COO)

Date

12/18/17

Craig Stewart
Chief, Capital Planning and Program Management (CPPM)

Date

WMATA INTERNAL OVERSIGHT

Corrective Action Plan Acknowledgement

12/19/17

Angel Peña
Managing Director, Quality Assurance, Internal Compliance & Oversight (QICO)

Date

12/19/17

Eric Christensen
Chief, Internal Compliance (INCP)

Date

12/19/17

Paul J. Wiedefeld
General Manager & Chief Executive Officer (GM/CEO)

Date

METRO RAIL VEHICLE CAPITAL IMPROVEMENT PROGRAM CAPS



CORRECTIVE ACTION PLAN

Purpose and Scope

On October 25, 2017 the office of Quality Assurance, Internal Compliance & Oversight (QICO) issued a comprehensive internal review report, regarding the current policies, procedures, and practices associated with WMATA's Metrorail Vehicle Engineering Capital Improvement Program. This Corrective Action Plan (CAP) has been developed to address the finding and required action per QICO-CRP-17-01.

QICO Finding	QICO Recommendation
<p>F-CRP-17-01: Effective Quality Management Plan is essential to ensure project deliverables are met with the required levels of quality.</p>	<p>- Establish a requirement for a standardized comprehensive Quality Management Plan prior to project implementation to ensure the quality of work being performed.</p>
<p>F-CRP-17-02: Comprehensive activity based schedule is essential to ensure timely delivery of the project objectives.</p>	<p>- Establish a requirement for a standardized comprehensive Project Master Schedule prior to project implementation to ensure timely project deliverables.</p>

Required Action

QICO-CRP-17-01: Establish a requirement to develop a standardized comprehensive Quality Management Plan (QMP) and Project Master Schedule prior to project implementation to ensure the quality and timeliness of work being performed.

(Risk Rating: Elevated)



ACTION PLAN

Description

The majority of Capital Improvement Projects require the use of outside contractors to complete the intended work, e.g. Rail Car Improvement of Equipment, etc.... Some project are completed internally. In either case, a Statement of Work (SOW) is typically completed for each CIP project and provides the technical requirements for the project along with any necessary contract deliverables. Depending upon the complexity, risks, and cost of the project; the Project Manager may elect to add additional requirements for the contractor to provide a PMP, QMP, and Schedule – these would be listed in the “Deliverables” section of the SOW. As a result some projects will contain a longer list of deliverables than others – this is a normal process. However, to improve the existing process and consistency between Project Managers; CENV proposes that we develop a CIP Project Specific Statement of Work SOW template. This template would be used by the Project Managers and Engineers that would include the appropriate deliverables needed based on project “Class” or complexity. A decision matrix (table) would be provided to guide the Project Managers and Engineers to include the necessary contract deliverables based on the “project class” – the project class would be defined based on complexity, risks, and cost of the project. For example, the Door Spindle modification did not require a compressive project schedule, while a project with major equipment overhauls or Rail Car improvement (e.g. 5K HVAC project) required a more detailed project schedule.

With the implementation of the Project Class Decision Matrix and the CENV CIP SOW Template, CENV will provide better instructions for Project Managers and Engineers to develop the SOWs for their projects (reduce the guess work in what requirements are really needed and what: “must haves” should be included). We consider this a Process Improvement.

Business Impact – Budget/Cost Estimate

- Process Improvement – A current process/procedure needs to be optimized to address the QICO Required Action. This type of initiative does not need additional resources because current manpower will be used to improve the process.

PLAN STRUCTURE

Actionable items	Description	Responsible Party	Estimated Start	Estimated Completion
1) Develop Project Class Matrix	A simple table that provides a method of selection to include contract deliverables for projects based on complexity, risk, and cost. The project class would be provided for three basic types: Class A – Large Project with Highest Complexity and Cost; Class B – Medium project with lower complexity and cost and Class C – Small project with little complexity and lower costs. And finally, Class D projects are the lowest cost, complexity and risk.	CENV Baldassano	11/06/17	12/31/17
2) CIP Project Specific Statement of Work SOW template – issue an SOP.	A CIP Project Specific Statement of Work SOW <i>template</i> (in outline format) for use by the Project Managers and Engineers that would include the appropriate language for the deliverables considered “minimum must haves” based on Project Class. An SOP would be issued with the SOW Template.	CENV Baldassano	01/08/18	02/28/18
3) QICO CAP Verification Report	QICO will evaluate actionable items submitted to confirm there is reasonable evidence that the findings and this required action have been resolved, taking into account the actionable item descriptions and performance measures.	QICO	02/28/18	04/25/18

*In the event of personnel or departmental changes, responsibilities for actionable items shall transfer to the new leadership.





COMPLETION DOCUMENTATION




Performance Measures

- Statement of Work (SOW) template developed under actionable item #2 conforms to Project Class Matrix established under actionable item #1.
- Examples of completed SOWs demonstrating conformance with Standard Operating Procedure (SOP) requirements developed under actionable item #2.

RESPONSIBLE PARTIES¹

CENV	Stephen Baldassano	 11/3/2017
CENV	Tara Soesbee	 11/3/17

SECOND LEVEL RESPONSIBILITY

Chief Engineer, Rail Vehicles	Sachit Kakkar	 11/8/17
Chief Mechanical Officer	John Doherty	
AGM Rail Services	Andrew Off	 8 NOV 17

METRORAIL POWER SYSTEMS UPGRADE PROGRAM CAPS



CORRECTIVE ACTION PLAN

Purpose and Scope

On October 26, 2017 the office of Quality Assurance, Internal Compliance & Oversight (QICO) issued a comprehensive internal review report, regarding the current policies, procedures, and practices associated with WMATA's Metrorail Power Systems Upgrade Program. This Corrective Action Plan (CAP) has been developed to address the finding and required action per QICO-PSUP-17-01.

QICO Finding	QICO Recommendation
F-PSUP-17-01: Consistent inspection reporting standards are required to ensure effective communication and accurate accounting of work within the project.	- Standardize requirements for project inspection reports, including frequency and content, and define methods to measure project performance in accordance with these requirements.

Required Action

QICO-PSUP-17-01: Standardize requirements for project inspection reports, including frequency and content, and define methods to measure project performance in accordance with these requirements.

(Risk Rating: Moderate)



ACTION PLAN

Description

The Infrastructure Renewal Program Group (IRPG) 100% 8-Car Train Upgrades project team will create a report template for WMATA Inspector Daily Records (IDRs) to ensure consistent and uniform content is recorded each work shift. The required content will be specified on the IDR form.

Individual separate IDRs will be prepared by each Inspector for each location worked each day. After completing the IDR Form, the Inspector will email the completed form along with photo attachments illustrating work completed to the Project Team: Assistant Project Manager(s), Construction Engineers (CE), other Inspectors, and Office engineer (OE) by 10 AM each day.

Contractors will continue to upload Daily Progress Reports (DPRs) on the Documents tab on Procore using pre-specified DPR form.

Business Impact – Budget/Cost Estimate

- **Process Improvement** – A current process/procedure needs to be optimized to address the QICO Required Action. This type of initiative does not need additional resources because current manpower will be used to improve the process.

PLAN STRUCTURE

Actionable items	Description	Responsible Party	Estimated Start	Estimated Completion
1) Establish requirement for a WMATA IDR Form	Provide the IRPG-Power team with a written directive that a report form has been created for WMATA Inspector Daily Records (IDRs) and all sections are required to be completed. Identify the new procedure for review and provide a time for when the report template is required to be in use.	Alex Zimar	11/06/17	11/30/17
2) Create a flow chart to illustrate QC process for review of daily reports	Establish roles and responsibilities for reviewing WMATA Inspector IDRs to ensure reports are complete and stored appropriately.	Alex Zimar	10/31/17	11/30/17
3) Train Inspectors to use report form	Provide Inspectors with training on the requirements of the new form and expectations of the new process.	Pedro Luina	11/13/17	11/30/17
4) QICO CAP Verification Report	QICO will evaluate actionable items submitted to confirm there is reasonable evidence that the findings and this required action have been resolved, taking into account the actionable item descriptions and performance measures.	QICO	12/01/17	1/30/18

*In the event of personnel or departmental changes, responsibilities for actionable items shall transfer to the new leadership.





COMPLETION DOCUMENTATION

Performance Measures

- 100% of active inspection personnel assigned to the project are trained on requirements and process developed under actionable items 1 and 2.

RESPONSIBLE PARTIES

IRPG-POWER	Alexandria Zimar	 11/6/17
IRPG-POWER	Kelly Reahl	 11/6/2017

SECOND LEVEL RESPONSIBILITY

IRPG	Kenneth Spain	 11/7/17
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7000-SERIES RAILCAR ACQUISITION PROJECT CAPS



CORRECTIVE ACTION PLAN

Purpose and Scope

On October 25, 2017, the Office of Quality Assurance, Internal Compliance & Oversight (QICO) issued a comprehensive internal review report, regarding the current policies, procedures, and practices associated with WMATA's 7000-Series Railcar Acquisition Project. This Corrective Action Plan (CAP) has been developed to address the finding and required action per QICO-7K-17-01.

QICO Finding

QICO Recommendation

F-7K-17-01: Establishing policies and procedures regarding Train-to-Wayside-Data-Transfer (TWDT) capabilities is essential to fully taking advantage of the 7000-series maintenance architecture.

- Establish policies and procedures regarding Train-to-Wayside-Data-Transfer (TWDT).

Required Action

QICO-7K-17-01: Establish policies and procedures regarding Train-to-Wayside-Data-Transfer (TWDT).

(Risk Rating: Moderate)



ACTION PLAN

Description

Base functionality for Train-to-Wayside-Data-Transfer (TWDT) needs to be established in the near-term, and detailed policies and procedures should be in place before the end of the commissioning phase of the project. This is a multi-stakeholder effort, with dependencies on other WMATA business functions. Therefore, parts which are achievable by the 7000-series project team in railcar engineering (CENV) are detailed here.

Business Impact – Budget/Cost Estimate

- Process Execution – A current process/procedure exists that meets the QICO Required Action, but needs to be executed. This type of initiative does not need additional resources.

PLAN STRUCTURE

Actionable Items	Description	Responsible Party	Estimated Start	Estimated Completion
1) Functional TWDT System	Establish a 7000-series railcar Train-to-Wayside-Data-Transfer (TWDT) system with base functionality. This includes automatic wireless downloading of mileage and faults at WMATA rail yards.	CENV IT-APPS	12/1/2017	6/1/2018 (6 months)
2) Establish Policies and Processes for TWDT	Establish detailed 7000-series railcar policies and procedures for Train-to-Wayside-Data-Transfer (TWDT).	CENV	12/1/2017	12/1/2018 (12 months)
3) QICO CAP Verification Report	QICO will evaluate actionable items submitted to confirm there is reasonable evidence that the findings and this required action have been resolved, taking into account the actionable item descriptions and performance measures.	QICO	6/1/2018	1/1/2019

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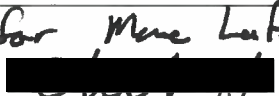
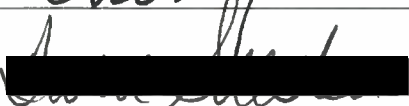


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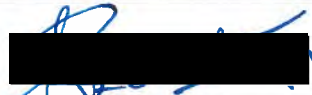


Performance Measures

- Evidence of basic functionality of TWDT in Metrorail yards.
- Evidence of approved TWDT Standard Operating Procedures (SOPs) / Operating Administration Procedures (OAPs).

RESPONSIBLE PARTIES

7000-Series Railcar Project Manager (CENV)	Timothy Bach	 11/7/17
IT Project Manager	Marc Labortune	for Marc Labortune 
Senior Program Manager (CENV)	Tara Soesbee	 11/7/17

SECOND LEVEL RESPONSIBILITY

Chief Engineer, Rail Vehicles (CENV)	Sachit Kakkar	 11/8/17
Chief Mechanical Officer (CMO)	John Doherty	
AGM RAIL	Andrew Off	 8 NOV 17



CORRECTIVE ACTION PLAN

Purpose and Scope

On October 25, 2017 the office of Quality Assurance, Internal Compliance & Oversight (QICO) issued a comprehensive internal review report, regarding the current policies, procedures, and practices associated with WMATA's 7000-Series Railcar Project. This Corrective Action Plan (CAP) has been developed to address the finding and required action per QICO-7K-17-02.

QICO Finding

QICO Recommendation

F-7K-17-02: Timely and thorough troubleshooting training is required in order to ensure railcars are properly maintained.

- Establish a comprehensive strategy for troubleshooting training for maintenance techs and engineers – one that includes training on the use of on-board vehicle diagnostics and on-the-job training (OJT) from Kawasaki.

Required Action

QICO-7K-17-02: Establish a comprehensive strategy for training of maintenance techs and engineers – one that includes training on the use of on-board vehicle diagnostics and on-the-job training (OJT) from Kawasaki.

(Risk Rating: Moderate)

**ACTION PLAN****Description**

Re-training is to be conducted for relevant project personnel and maintenance technicians. In addition, because the 7000-series railcar represents a technological leap forward in comparison to previous railcar series, an investigation into the need for specialized technicians for troubleshooting data off VMDS is needed.

Business Impact – Budget/Cost Estimate

- Process Execution – A current process/procedure exists that meets the QICO Required Action, but needs to be executed.

PLAN STRUCTURE

Actionable items	Description	Responsible Party	Estimated Start	Estimated Completion
1) Establish new training program	Execute contract modification for new training to be provided for WMATA vehicle engineers and maintenance personnel.	CENV	12/1/2017	12/1/2018 (12 months)
2) Investigate needs for 7000-series railcar network technicians	Investigate the need for specialized technicians for 7000-series onboard train networks.	CMO	12/1/2017	12/1/2018 (12 months)
3) QICO CAP Verification Report	QICO will evaluate actionable items submitted to confirm there is reasonable evidence that the findings and this required action have been resolved, taking into account the actionable item descriptions and performance measures.	QICO	6/1/2018	12/1/2018

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COMPLETION DOCUMENTATION


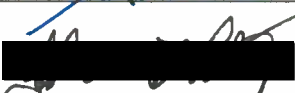
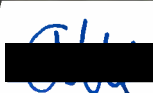
Performance Measures

- Execution of the contract modification, and committed schedule for training delivery.

RESPONSIBLE PARTIES

7000-Series Railcar Project Manager (CENV)	Timothy Bach	 11/3/17
Senior Program Manager, CENV Capital Programs	Tara Soesbee	 11/3/17

SECOND LEVEL RESPONSIBILITY

Chief Engineer, Rail Vehicles (CENV)	Sachit Kakkar	 11/8/17
Chief Mechanical Officer (CMO)	John Doherty	
AGM RAIL	Andrew Off	 8 NOV 17



CORRECTIVE ACTION PLAN

Purpose and Scope

On October 25, 2017, the Office of Quality Assurance, Internal Compliance & Oversight (QICO) issued a comprehensive internal review report, regarding the current policies, procedures, and practices associated with WMATA's 7000-Series Railcar Project. This Corrective Action Plan (CAP) has been developed to address the finding and required action per QICO-7K-17-03.

QICO Finding

QICO Recommendation

F-7K-17-03: Timely delivery of spare parts is required to address ongoing maintenance issues.

- Establish a process to ensure spare parts are available in sufficient quantities for the 7000-series railcar fleet, for everything that is in warranty or not covered by warranty. In addition, in future railcar acquisitions, consider including capital spares for each of the options.

Required Action

QICO-7K-17-03: Establish a process to ensure spare parts are available in sufficient quantities for the 7000-series railcar fleet, for everything that is in warranty or not covered by warranty. In addition, in future railcar acquisitions, consider including capital spares for each of the options.

(Risk Rating: Moderate)

**ACTION PLAN****Description**

Spare parts management for the 7000-Series is of increasing concern as more cars exit the warranty stage. The first step towards improving this process is securing an updated Recommended Spare Parts List from the contractor and transferring this information into the Authority's systems. Doing so will help increase supplier registration with WMATA's supplier portal.

Business Impact – Budget/Cost Estimate

- Process Execution – A current process/procedure exists that meets the QICO Required Action, but needs to be executed. This type of initiative does not need additional resources.

PLAN STRUCTURE

Actionable items	Description	Responsible Party	Estimated Start	Estimated Completion
1) Finalize the Spare Parts List / Illustrated Parts Catalogue	Finalize the Illustrated Parts Catalogue (IPC) / Spare Parts List.	CENV	12/1/2017	6/1/2018 (6 months)
2) Transfer lessons learned to 8000-series railcar project	Track and present lessons learned with regards to deficiencies in spare parts contract and spare parts management to the 8000-series project before it goes out to bid in spring 2018.	CENV	12/1/2017	3/1/2018 (3 months)
3) QICO CAP Verification Report	QICO will evaluate actionable items submitted to confirm there is reasonable evidence that the findings and this required action have been resolved, taking into account the actionable item descriptions and performance measures.	QICO	3/1/2018	6/1/2018

*In the event of personnel or departmental changes, responsibilities for actionable items shall transfer to the new leadership.

**Additional Note: QICO has a set of required actions from an internal review on Parts & Materials Management (QICO-PMIM-17-01 through QICO-PMIM-17-04) which are addressing systematic issues in parts/inventory management.





COMPLETION DOCUMENTATION

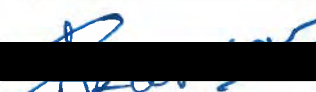
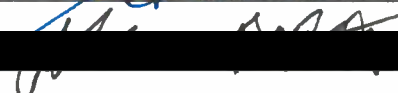
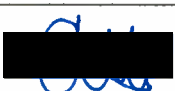
Performance Measures

- Evidence that the IPCS / Spare Parts List is completed and approved (actionable item #1).
- Evidence that lessons learned (actionable item #2) are included in 8000-series project bid.

RESPONSIBLE PARTIES

7000-Series Railcar Project Manager (CENV)	Timothy Bach	 11/3/17
Senior Program Manager, CENV Capital Programs	Tara Soesbee	 11/3/17

SECOND LEVEL RESPONSIBILITY

Chief Engineer, Rail Vehicles (CENV)	Sachit Kakkar	 11/8/17
Chief Mechanical Officer (CMO)	John Doherty	
AGM RAIL	Andrew Off	 9/10/17

METRORAIL RADIO INFRASTRUCTURE REPLACEMENT PROGRAM CAPS



CORRECTIVE ACTION PLAN

Purpose and Scope

On October 25, 2017 the office of Quality Assurance, Internal Compliance & Oversight (QICO) issued a comprehensive internal review report, regarding the current policies, procedures, and practices associated with WMATA's Metrorail Radio Infrastructure Replacement Program. This Corrective Action Plan (CAP) has been developed to address the finding and required action per QICO-RIRP-17-03.

QICO Finding	QICO Recommendation
F-RIRP-17-04: Consistent acceptance procedures are necessary to ensure an effective project outcome.	- Establish and implement controls that comply with the requirements set forth in the PSQMP for final acceptance inspection of completed tunnel line segments.
F-RIRP-17-05: Consistent, documented inspections of equipment installation are essential to ensure safe and reliable operations.	- Establish inspection and reporting standards to ensure that reporting consistently provides a detailed condition assessment of radio and cellular systems.

Required Action

QICO-RIRP-17-03: Define uniform inspection and acceptance requirements for radio and cellular system assets and develop methods to measure asset condition in accordance with these requirements.

(Risk Rating: Elevated)



ACTION PLAN

Description

F-RIRP-17-04: The radio project management team will establish controls to ensure compliance with defined work acceptance requirements and update Project Specific Quality Management Plan (PSQMP) accordingly.

F-RIRP-17-05: The radio project management team will modify inspection daily report (IDR) template and define inspection requirements to ensure a consistent detailed condition assessment of radio and cellular systems.

Business Impact – Budget/Cost Estimate

- Process Improvement – A current process/procedure needs to be optimized to address the QICO Required Action. This type of initiative does not need additional resources because current manpower will be used to improve the process.

PLAN STRUCTURE

Actionable items	Description	Responsible Party	Estimated Start	Estimated Completion
1) Incorporate Inspection Checklist Into PSQMP	WMATA and carrier team will define a standardized inspection checklist and incorporate it into PSQMP.	Joseph Butler (IRPG)	11/07/17	1/31/18
2) Develop Processes/Procedures For Work Acceptance	Define roles and responsibilities of key stakeholders and develop processes/procedures for completion of Substantial Completion Inspections (SCIs).	Joseph Butler (IRPG)	11/07/17	1/31/18
3) Review Of Work Acceptance Criteria	Perform a detailed review of acceptance criteria to ensure all additions have been incorporated into PSQMP on a quarterly basis.	Karen Fisher (IRPG)	11/07/17	4/02/18
4) Modify IDR Template	Modify IDR to give a more detailed assessment of work performed in the field.	Stephen Coleman (IRPG)	11/07/17	2/28/18
5) Establish Requirement For A Modified WMATA IDR Form	Provide construction inspectors with a written directive that the current IDR form has been modified and all sections are required to be completed. Identify the new procedure for review and provide a time for when the report template is required to be in use.	Stephen Coleman (IRPG)	11/07/17	11/30/17
6) Train Construction Inspectors On How To Use Modified IDR Form	Provide Inspectors with training on the requirements of new form and expectations of the new process.	Stephen Coleman (IRPG)	11/07/17	2/28/18
7) QICO CAP Verification Report	QICO will evaluate actionable items submitted to confirm there is reasonable evidence that the findings and this required action have been resolved, taking into account the actionable item descriptions and performance measures.	QICO	4/02/18	5/04/18

*In the event of personnel or departmental changes, responsibilities for actionable items shall transfer to the new leadership.



COMPLETION DOCUMENTATION

Performance Measures

- Evidence that inspection checklist and acceptance criteria updates have been incorporated into PSQMP as prescribed under actionable item #1 and #3.
- 100% of active inspectors assigned to the project receive training as prescribed in actionable item #5, 6.

RESPONSIBLE PARTIES

IRPG	Allen Wonder	[Redacted]	11/6/17
IRPG	Kelly Reahl	[Redacted]	11/6/2017

SECOND LEVEL RESPONSIBILITY

IRPG	Kenneth Spain	[Redacted]	11/7/17
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CORRECTIVE ACTION PLAN

Purpose and Scope

On October 25, 2017 the office of Quality Assurance, Internal Compliance & Oversight (QICO) issued a comprehensive internal review report, regarding the current policies, procedures, and practices associated with WMATA's Metrorail Radio Infrastructure Replacement Program. This Corrective Action Plan (CAP) has been developed to address the finding and required action per QICO-RIRP-17-02.

QICO Finding	QICO Recommendation
F-RIRP-17-03: Consistent enforcement of design package requirements is essential to ensure program reliability.	- Establish processes and controls to ensure IFC packages are completed and approved prior to the start of distinct construction activities.

Required Action

QICO-RIRP-17-02: Establish requirements to secure approval of Issued For Construction (IFC) plan and have plans certified prior to installation of equipment on the railroad.

(Risk Rating: Elevated) ■



ACTION PLAN

Description

F-RIRP-17-03: Radio project management team will develop procedures that will establish processing controls to ensure IFC drawings are completed and approved prior to the start of distinct construction activities.

Business Impact – Budget/Cost Estimate

- Process Improvement – A current process/procedure needs to be optimized to address the QICO Required Action. This type of initiative does not need additional resources because current manpower will be used to improve the process.

PLAN STRUCTURE

Actionable items	Description	Responsible Party	Estimated Start	Estimated Completion
1) Review of WMATA's manual of Design Criteria	Review WMATA's manual of design criteria to confirm processes/procedures are being adhered to for the development of construction drawings.	Anderson Bray (ENGA)	11/7/17	1/31/18
2) Create project specific controls for design packages	Create project specific controls for development and issuance of approved design packages.	Anderson Bray (ENGA)	11/7/17	3/31/18
3) Update Project Specific Quality Management Plan	Update PSQMP accordingly with processes/procedures identified in WMATA's manual of design criteria and newly established controls.	Karen Fisher (IRPG)	11/2/17	5/31/18
4) Establish monthly design package review working session	Recurring monthly meetings between ENGA and IRPG to review all approved construction activities in accordance with design package content for the duration of the project.	Anderson Bray (ENGA)	10/31/17	2/28/17
5) QICO CAP Verification Report	QICO will evaluate actionable items submitted to confirm there is reasonable evidence that the findings and this required action have been resolved, taking into account the actionable item descriptions and performance measures.	QICO	5/31/18	7/02/18

*In the event of personnel or departmental changes, responsibilities for actionable items shall transfer to the new leadership.



COMPLETION DOCUMENTATION

Performance Measures

- Evidence of design criteria review as prescribed under actionable item #1.
- Updated PSQMP developed under actionable item #3 contains all project controls outlined in actionable item #2.
- Evidence of design package working sessions as prescribed under actionable item #4, including sign-in sheets and meeting agendas to demonstrate items discussed and resulting actions.

RESPONSIBLE PARTIES

IRPG	Allen Wonder	[REDACTED]	11/6/17
IRPG	Kelly Reahl	[REDACTED]	11/6/2017

SECOND LEVEL RESPONSIBILITY

IRPG	Kenneth Spain	[REDACTED]	11/7/17
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CORRECTIVE ACTION PLAN

Purpose and Scope

On October 25, 2017 the office of Quality Assurance, Internal Compliance & Oversight (QICO) issued a comprehensive internal review report, regarding the current policies, procedures, and practices associated with WMATA's Metrorail Radio Infrastructure Replacement Program. This Corrective Action Plan (CAP) has been developed to address the finding and required action per QICO-RIRP-17-01.

QICO Finding	QICO Recommendation
F-RIRP-17-01: Identification of clear roles and responsibilities of project management personnel is essential to effective project implementation.	- Establish specific responsibilities for project management personnel as required in the PSQMP.
F-RIRP-17-02: Effective control of project documentation is required to provide verification and traceability of activities.	- Establish document controls to comply with requirements set forth in the PSQMP.

Required Action

QICO-RIRP-17-01: Establish consistency between the Project Specific Quality Management Plan (PSQMP) and WMATA's new Quality Management System Plan (QMSP) and ensure clearly defined personnel responsibilities and document control measures are included.

(Risk Rating: Elevated) ■



ACTION PLAN

Description

F-RIRP-17-01: The radio project management team will develop a document identifying roles and specific responsibilities of management personnel as well as a succession plan for the whole project management staff.

F-RIRP-17-02: The radio project management team will update its Project Specific Quality Management Plan (PSQMP) in accordance with WMATA's new Quality Management System Plan (QMSP) issued August 2017 and include document control measures.

Business Impact – Budget/Cost Estimate

Process Improvement – A current process/procedure needs to be optimized to address the QICO Required Action. This type of initiative does not need additional resources because current manpower will be used to improve the process.

PLAN STRUCTURE

Actionable items	Description	Responsible Party	Estimated Start	Estimated Completion
1) Identify project management personnel's specific responsibilities	Create a document identifying and defining project management personnel's specific responsibilities.	Eric Feazel (IRPG)	10/30/17	11/30/17
2) Establish a project communication plan to guide information to project staff and stakeholders	The communication plan will ensure effective delivery of information (e.g. management personnel's specific responsibilities) to project staff and affected stakeholders.	Eric Feazel (IRPG)	11/30/17	12/9/17
3) Develop a Succession Plan	Create a succession plan for key management positions.	Allen Wonder (IRPG)	11/2/17	11/30/17
4) Review and Update current Project Specific Quality Management Plan (PSQMP)	Review and update current PSQMP in accordance with WMATA's new QMSP with document controls and clearly defined personnel roles.	Karen Fisher (IRPG)	11/2/17	1/31/18
5) QICO CAP Verification Report	QICO will evaluate actionable items submitted to confirm there is reasonable evidence that the findings and this required action have been resolved, taking into account the actionable item descriptions and performance measures.	QICO	1/31/18	3/2/18

*In the event of personnel or departmental changes, responsibilities for actionable items shall transfer to the new leadership.


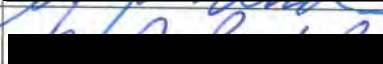


COMPLETION DOCUMENTATION

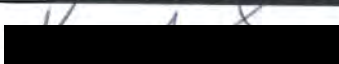
Performance Measures

- 100% of active project staff signature acknowledgement of specific responsibilities as prescribed under actionable item #2.
- Project Specific Quality Management Plan (PSQMP) developed under Actionable Item #4 conforms to requirements established under the Quality Management System Plan (QMSP).

RESPONSIBLE PARTIES

IRPG	Allen Wonder		11/6/17
IRPG	Kelly Reahl		11/6/2017

SECOND LEVEL RESPONSIBILITY

IRPG	Kenneth Spain		11/7/17
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SYSTEM-WIDE CAPITAL PROGRAM MANAGMENT CAPS



CORRECTIVE ACTION PLAN

Purpose and Scope

On November 1, 2017 the office of Quality Assurance, Internal Compliance & Oversight (QICO) issued a comprehensive internal review report regarding the current policies, procedures, and practices associated with WMATA's Capital Program. This Corrective Action Plan (CAP) has been developed to address the finding and required action per QICO-CPM-17-01.

QICO Finding

QICO Recommendation

F-CPM-17-01: Incorporation of performance-driven targets in WMATA's long-term capital planning process will improve alignment of project planning with the authority's mission and goals.

- Establish standards for asset condition and/or useful life benchmarks and their use in capital program planning to better align with WMATA's strategic objectives.

Required Action

QICO-CPM-17-01: Establish standards for asset condition and/or useful life benchmarks and their use in capital program planning to better align with WMATA's strategic objectives.

(Risk Rating: Elevated)



ACTION PLAN

Description

The department of Capital Planning & Program Management (CPPM, established April 2017), in support of the General Managers restructuring directive of November 9, 2017 will establish the standards and performance targets to be used in the development of a performance-driven, long-term capital program.

Business Impact – Budget/Cost Estimate

Process Improvement – A current process/procedure needs to be optimized to address the QICO Required Action. This type of initiative does not need additional resources because current manpower will be used to improve the process.

PLAN STRUCTURE

Actionable items	Description	Responsible Party	Estimated Start	Estimated Completion
1) Update the asset management policy (P/I 1.18)	The policy will identify the approach to gathering requirements for asset condition and establish the frequency to update the conditions.	CPPM	10/01/17	10/31/18
2) Develop a procedure to review the conditions of key assets and create asset performance targets for the capital program	The procedure will identify the condition details of key assets to be reviewed. Determine their associated performance targets for the capital program. This procedure will be incorporated in to the forthcoming Capital Program Development Playbook.	CPPM	12/01/17	05/31/18
3) Develop a capital program plan that is performance driven and aligned with WMATA's strategic goals.	A prioritized capital program plan that drives towards established performance targets will be created beginning with FY2020 of the Capital Program. The forthcoming Capital Program Development Playbook will establish the requirements for activities to be considered for entry into the FY2020 Capital Program.	CPPM	07/01/18	09/30/19
4) Establish a procedure to monitor and track conditions of key assets and performance indicators	The procedure will identify the process to ensure monitoring and reporting on the conditions of key assets and performance indicators that are being impacted by ongoing capital investments. The procedure will define the required content of the reports including a comparison between current conditions and performance indicators.	CPPM	03/01/18	05/31/18



PLAN STRUCTURE

Actionable items	Description	Responsible Party	Estimated Start	Estimated Completion
5) Establish an organizational communication plan to announce newly established policy and inform WMATA staff, stakeholders and end users	The communication plan will ensure effective information sharing of newly established organizational policies to include outreach to the Capital Program Advisory Committee (CPAC) and inclusion of corporate partners in the Chief Operating Officer (COO), Chief Financial Officer (CFO), Internal Business Operations (IBOP) and Capital Planning and Program Management (CPPM) organizations in adoption of the new policy. The plan will also include methods, upon adoption, to communicate and inform the wider WMATA community and end users.	CPPM	05/17/18	06/30/18
6) QICO CAP Verification Report	QICO will evaluate actionable items submitted to confirm there is reasonable evidence that the findings and this required action have been resolved, taking into account the actionable item descriptions and performance measures.	QICO	10/01/19	11/01/19

*In the event of personnel or departmental changes, responsibilities for actionable items shall transfer to the new leadership.

COMPLETION DOCUMENTATION

Performance Measures

- Signature acknowledgement of the processes developed under actionable items 2 and 3 by applicable management representatives (director level positions and above as listed as responsible parties in the Capital Program Development Playbook).

RESPONSIBLE PARTIES

CPPM	Shyam Kannan	
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CORRECTIVE ACTION PLAN

Purpose and Scope

On November 1, 2017 the office of Quality Assurance, Internal Compliance & Oversight (QICO) issued a comprehensive internal review report regarding the current policies, procedures, and practices associated with WMATA's Capital Program. This Corrective Action Plan (CAP) has been developed to address the finding and required action per **QICO-CPM-17-02**.

QICO Finding

QICO Recommendation

F-CPM-17-02: Standard project controls for managing cost and schedule will support effective project execution and promote accountability.

- Standardize project controls for managing cost and schedule, defining methods to measure project performance in accordance with these requirements.

Required Action

QICO-CPM-17-02: Standardize project controls for managing cost and schedule, defining methods to measure project performance in accordance with these requirements.

(Risk Rating: Elevated)

**ACTION PLAN****Description**

The department of Capital Planning & Program Management (CPPM) will establish policies and procedures to define baseline project budgets and schedules. The baseline budget definition may be different from the approved funding. This process will establish how to track changes to baseline project budgets and schedules, including any associated scope changes.

Business Impact – Budget/Cost Estimate

Process Improvement – A current process/procedure needs to be optimized to address the QICO Required Action. This type of initiative needs an estimated \$150,000 of resources to improve the process.

PLAN STRUCTURE

Actionable items	Description	Responsible Party	Estimated Start	Estimated Completion
1) Establish a standard to identify project budgets	Identify a standard for the establishment of a project budget. The standard will establish the requirements for updates to project scopes, based on changes to project budgets. This standard will be reviewed with corporate partners in the departments of the Chief Operating Officer (COO), Chief Financial Officer (CFO) and Internal Business Operations (IBOP). This will be incorporated in to the forthcoming Capital Program Development Playbook.	CPPM	11/06/17	05/31/18
2) Establish a standard to identify the project schedule	Identify a standard for the establishment of a project schedule, with standardized milestones. The standard will establish the requirements for updates to project scope, based changes to project schedules. This standard will be reviewed with corporate partners in the departments of the COO, CFO and IBOP. This will be incorporated in to the forthcoming Capital Program Development Playbook.	CPPM	11/06/17	05/31/18
3) Establish procedures to monitor and track budget and schedule performance	Identify the processes to evaluate the performance of projects against the baseline budget and schedule. This standard will be reviewed with corporate partners in the departments of the COO, CFO and IBOP. These processes will be incorporated in to the forthcoming Capital Program Development Playbook.	CPPM	11/06/17	05/31/18
4) Establish an organizational communication plan to announce newly established policy and inform WMATA staff, stakeholders and end users	The communication plan will ensure effective information sharing of newly established organizational policies to include outreach to the CPAC and inclusion of corporate partners in the COO, CFO, IBOP and CPPM organizations in adoption of new policy. The plan will also include methods, upon adoption, to communicate and inform the wider WMATA community and end users.	CPPM	05/01/18	06/30/18



PLAN STRUCTURE

Actionable items	Description	Responsible Party	Estimated Start	Estimated Completion
5) QICO CAP Verification Report	QICO will evaluate actionable items submitted to confirm there is reasonable evidence that the findings and this required action have been resolved, taking into account the actionable item descriptions and performance measures.	QICO	07/01/18	07/31/18

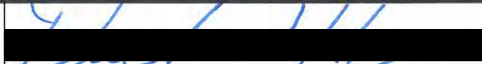
*In the event of personnel or departmental changes, responsibilities for actionable items shall transfer to the new leadership.

COMPLETION DOCUMENTATION

Performance Measures

- Signature acknowledgement of standards and processes developed under actionable items 1-3 by applicable management representatives (director level positions and above as listed as responsible parties in the Capital Program Development Playbook).

RESPONSIBLE PARTIES

CPPM	Devintia Headen		12/18/17
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CORRECTIVE ACTION PLAN

Purpose and Scope

On November 1, 2017 the office of Quality Assurance, Internal Compliance & Oversight (QICO) issued a comprehensive internal review report regarding the current policies, procedures, and practices associated with WMATA's Capital Program. This Corrective Action Plan (CAP) has been developed to address the finding and required action per **QICO-CPM-17-03**.

QICO Finding

QICO Recommendation

F-CPM-17-03: Consistent methods for reporting project progress and status will improve coordination of project activities and promote accountability.

- Establish standard reporting requirements for projects and define methods to measure project performance in accordance with these requirements.

Required Action

QICO-CPM-17-03: Establish standard reporting requirements for projects and define methods to measure project performance in accordance with these requirements.

(Risk Rating: Elevated)



ACTION PLAN	
Description	
The department of Capital Planning & Program Management (CPPM) will establish policies and procedures for the collection, monitoring, and reporting of capital project's status and progress. CPPM will also oversee the development of a reporting tool, including appropriate training curriculum.	
Business Impact – Budget/Cost Estimate	
Process Improvement – A current process/procedure needs to be optimized to address the QICO Required Action. This type of initiative needs an estimated \$1,592,000 of resources to improve the process.	

PLAN STRUCTURE					
Actionable items		Description	Responsible Party	Estimated Start	Estimated Completion
1)	Establish a standard for project reporting	This standard will identify the required elements to be included in an agency-wide capital project report. It will also establish a standard for reporting frequency. This will be incorporated in to the forthcoming Capital Program Development Playbook.	CPPM	10/01/17	05/31/18
2)	Establish processes for reporting data and ensuring quality of project reports	Identify the requirements for project reporting, the roles and responsibilities of the departments of Chief Operating Officer (COO), Chief Financial Officer (CFO), and Internal Business Operations (IBOP), including quality control and quality assurance.	CPPM	10/01/17	05/31/18
3)	Establish a reporting tool	Develop an electronic reporting tool to collect and store report data. There will be two phases: an initial tool will be Excel based until more robust software can be implemented.	CPPM	06/01/18	10/31/18
4)	Establish training curriculum for staff on project reporting requirements	Develop training curriculum on project reporting requirements and the reporting tool. The training will occur on an established schedule and define a requirement for initial training and refresher trainings.	CPPM	05/01/18	06/30/18
5)	Establish an organizational communication plan to announce newly established policy and inform WMATA staff, stakeholders and end users	The communication plan will ensure effective information sharing of newly established organizational policies to include outreach to the Capital Program Advisory Committee (CPAC) and inclusion of corporate partners in the COO, CFO, IBOP CPPM organizations in adoption of new policy. The plan will also include methods, upon adoption, to communicate and inform the wider WMATA community and end users.	CPPM	05/17/18	06/30/18
6)	QICO CAP Verification Report	QICO will evaluate actionable items submitted to confirm there is reasonable evidence that the findings and this required action have been resolved, taking into account the actionable item descriptions and performance measures.	QICO	11/01/18	11/30/18

*In the event of personnel or departmental changes, responsibilities for actionable items shall transfer to the new leadership.




COMPLETION DOCUMENTATION

Performance Measures

- Signature acknowledgement of the standard and processes developed under actionable items 1-3 by applicable management representatives (director level positions and above as listed as responsible parties in the Capital Program Development Playbook).
- Evidence of a documented training plan, including who is conducting the training, how it will be delivered, the schedule for the training, and a list of initial staff to be trained on the standards and processes established in the Capital Program Development Playbook.
- Evidence of compliance with newly established project reporting requirement for project reports produced within the first four months.

RESPONSIBLE PARTIES

CPPM	Devintia Headen	 12/18/17
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CORRECTIVE ACTION PLAN

Purpose and Scope

On November 1, 2017 the office of Quality Assurance, Internal Compliance & Oversight (QICO) issued a comprehensive internal review report, regarding the current policies, procedures, and practices associated with WMATA's Capital Program. This Corrective Action Plan (CAP) has been developed to address the finding and required action per **QICO-CPM-17-04**.

QICO Finding

QICO Recommendation

F-CPM-17-04: Clearly defining the roles and responsibilities for capital planning and monitoring will promote effective interdepartmental coordination and project execution.

- Establish a framework of roles, responsibilities and processes for capital program planning that incorporates stakeholder departments and promotes cooperation.

Required Action

F-CPM-17-04: Establish a framework of roles, responsibilities and processes for capital program planning that incorporates stakeholder departments and promotes cooperation.

(Risk Rating: Elevated)



ACTION PLAN

Description

The department of Capital Planning & Program Management (CPPM) will establish policies and procedures to ensure inclusion of appropriate staff throughout the organization in the development of a performance-driven, long-term capital program.

Business Impact – Budget/Cost Estimate

Process Improvement – A current process/procedure needs to be optimized to address the QICO Required Action. This type of initiative needs an estimated \$1.5 million of resources to improve the process.

PLAN STRUCTURE

Actionable items	Description	Responsible Party	Estimated Start	Estimated Completion
1) Develop and issue a Capital Program Delivery Playbook	Develop a Capital Program Delivery Playbook to establish procedures and processes for planning, initiation, implementation, delivery and monitoring of capital projects within WMATA’s Capital Program.	CPPM	10/01/17	05/31/18
2) Establish a policy to identify key WMATA staff that participate in the development of the capital program	Develop a policy that indicates the roles of departments of Chief Operating Officer (COO), Chief Financial Officer (CFO), Internal Business Operations (IBOP) and Capital Planning and Program Management (CPPM), in the development of the capital program. The policy should also address the requirements to utilize the forthcoming Capital Program Development Playbook. This playbook will include procedures for advancing projects both for inclusion in the annual update to the capital program plan and between planning cycles.	CPPM	11/06/17	08/31/18
3) Establish an organizational communication plan to announce newly established policy and inform WMATA staff, stakeholders and end users	The communication plan will ensure effective information sharing of newly established organizational policies to include outreach to the Capital Program Advisory Committee (CPAC) and inclusion of corporate partners in the COO, CFO, IBOP, and CPPM organizations in adoption of new policy. The plan will also include methods, upon adoption, to communicate and inform the wider WMATA community and end users.	CPPM	05/17/18	06/30/18
4) QICO CAP Verification Report	QICO will evaluate actionable items submitted to confirm there is reasonable evidence that the findings and this required action have been resolved, taking into account the actionable item descriptions and performance measures.	QICO	09/01/18	09/30/18

*In the event of personnel or departmental changes, responsibilities for actionable items shall transfer to the new leadership.



COMPLETION DOCUMENTATION

Performance Measures

- Policy Instructions are enterprise-wide and are adopted in adherence to the established process for review and implementation, prior to final distribution.

RESPONSIBLE PARTIES

CPPM

Daniel C. Anderson, Jr

[Redacted]

12/18/17