



# PRINCE WILLIAM COUNTY

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## Prince William County, Virginia Internal Audit Report – Construction Project Management

January 26, 2022



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# TRANSMITTAL LETTER



January 26, 2022

The Board Audit Committee of  
Prince William County, Virginia  
1 County Complex Court  
Prince William, Virginia 22192

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Pursuant to the internal audit plan for calendar year (“CY”) 2021 for Prince William County, Virginia (“County” / “PWC”), approved by the Board of County Supervisors (“BOCS”), we hereby present the internal audit of the construction project management processes and controls, specific to the Department of Facilities & Fleet Management (“FFM”) and the Department of Parks, Recreation, & Tourism (“DPRT”). We will be presenting this report to the Board Audit Committee of Prince William County at the next scheduled meeting on May 10, 2022.

Our report is organized into the following sections:

<b>Executive Summary</b>	This provides a high-level overview and summary of the observations noted in this internal audit, as well as the respective risk ratings.
<b>Background</b>	This provides an overview of the function within the process, as well as pertinent operational control points and related requirements.
<b>Objectives and Approach</b>	The objectives of this internal audit are expanded upon in this section, as well as the various phases of our approach.
<b>Observations Matrix</b>	This section gives a description of the observations noted during this internal audit and recommended actions, as well as Management’s response including the responsible party, and estimated completion date.
<b>Process Maps</b>	This section provides a visual depiction of the workflow of key processes.

We would like to thank the staff and all those involved in assisting our firm with this internal audit.

Respectfully Submitted,

*RSM US LLP*

*Internal Audit*



## EXECUTIVE SUMMARY

### Background

Per the FY 2022 – FY 2027 Capital Improvements Program (“CIP”), adopted by the BOCS, capital improvement projects over the next six years for the County government total approximately \$1.05 billion. The major projects address transportation, community development/human services, public safety and technology infrastructure and improvements, all key focus areas of the County’s Strategic Plan.

The CIP provides almost \$785.5 million for transportation roadway and sidewalk improvement projects; \$125.7 million for community development projects; \$64.6 million for human services and general government projects; \$58.2 million for public safety projects; and \$12.2 million for technology improvement initiatives.

FFM Facilities Construction Management (“FCM”) Division is responsible for the oversight and management of construction projects at all County owned facilities, except PWC schools. Construction projects completed in FY 2021 included the Adult Detention Center Expansion Phase 2, and Fire & Rescue Station 22. The FY 2022 – FY 2027 CIP notes expected FY 2022 expenditures totaling approximately \$15.9 million for construction projects managed by FFM.

DPRT construction is responsible for the oversight and management of construction projects at all County owned park land and recreational facilities. Construction projects completed in FY 2021 included the Harbor Drive Wellness Park, and the Potomac Heritage National Scenic Trail. The FY 2022 – FY 2027 CIP notes expected FY 2022 expenditures totaling approximately \$9.9 million for construction projects managed by DPRT.

Fieldwork was performed during August through December 2021.

### Overall Summary / Highlights

The observations identified during our assessment are detailed within the pages that follow. We have assigned relative risk or value factors to each observation identified. Risk ratings are the evaluation of the severity of the concern and the potential impact on the operations of each item. There are many areas of risk to consider in determining the relative risk rating of an observation, including financial, operational, and/or compliance, as well as public perception or ‘brand’ risk.

*We would like to thank all County team members who assisted us throughout this internal audit.*

### Objectives and Approach

The purpose of the internal audit was to assess whether the system of internal controls is adequate and appropriate for effective project management of construction projects across two County departments: FFM and DPRT, and to evaluate the departments’ processes for opportunities for increased efficiency. As part of our internal audit, we performed the following:

- Gathered background information on the construction project management and monitoring procedures and any required controls or documentation;
- Obtained information and documentation for a sample of construction projects from across each department, including:
  - Contract copy
  - Contract administrator information
  - Project timeline
  - Detail of expenditures (including change orders) for each selected project;
- Performed limited transactional testing to validate the operating effectiveness of identified internal controls, and validated compliance with key contract provisions; and
- Assessed the construction project management processes within each in-scope department to identify opportunities for increased efficiency.

Where applicable, our testing focused on construction projects that were completed, or had a significant amount of construction completed, between May 1, 2020 and April 30, 2021.

### Summary of Observation Ratings

*(See page 3 for risk rating definitions)*

	High	Moderate	Low
Construction Project Management	0	3	1



## EXECUTIVE SUMMARY – CONTINUED

### Observations Summary

The following is a summary of the observations noted in the areas reviewed. Each detailed observation is included in the observation matrix section of the report. Improvement opportunities have been provided following the detailed observations section. Definitions of the rating scale are included below.

Summary of Observations	
Observation	Rating
1. Construction Project Management Software	Moderate
2. Project Status Meetings	Moderate
3. Consistency of Project Status Documentation	Moderate
4. Change Order Approval Thresholds	Low

Provided below are the observation risk rating definitions for the detailed observations.

Observation Risk Rating Definitions	
Rating	Explanation
Low	Observation presents a low risk (i.e., impact on financial statements, internal control environment, brand, or business operations) to the organization for the topic reviewed and/or is of low importance to business success/achievement of goals.
Moderate	Observation presents a moderate risk (i.e., impact on financial statements, internal control environment, brand, or business operations) to the organization for the topic reviewed and/or is of moderate importance to business success/achievement of goals. Action should be in the near term.
High	Observation presents a high risk (i.e., impact on financial statements, internal control environment, brand, or business operations) to the organization for the topic reviewed and/or is of high importance to business success/achievement of goals. Action should be taken immediately.



## BACKGROUND

### Capital Improvement Plan

Each year, the County prepares a six-year CIP, is adopted by the BOCS and included in the Adopted Budget. The CIP specifies the capital improvements and construction projects scheduled for funding over the next six years to maintain or enhance the County’s capital assets and delivery of services. The County’s adopted policy documents, including the Strategic Plan, the Comprehensive Plan, and the Principles of Sound Financial Management guide the development of the CIP.

Capital improvement projects over the next six years for the County government total approximately \$1.05 billion. The major projects address transportation, community development/human services, public safety and technology infrastructure and improvements; all key focus areas of the County’s Strategic Plan. The FY 2022 – FY 2027 CIP provides almost \$785.5 million for transportation roadway and sidewalk improvement projects; \$125.7 million for community development projects; \$64.6 million for human services and general government projects; \$58.2 million for public safety projects; and \$12.2 million for technology improvement initiatives.

### Building & Facility Capital Program

The Building & Facility Capital Program addresses largescale component replacement or repairs that cannot be accomplished with existing resources. The program invests in existing capital assets to extend the life of facilities and better serve the community. FFM and DPRT are the County’s primary facility owners.

### Facilities & Fleet Management Construction Overview

FFM Facilities Construction Management (“FCM”) Division is the infrastructure partner of County agencies. The Department strives to provide safe, sustainable, proactive, and effective infrastructure and services to County agencies, so the agencies can focus on serving the residents of the County. Construction Management is one of five programs in the FFM and supports the CIP by developing budgets and managing the design and construction of County facilities.

#### Project Overview

Per the FY 2022 – FY 2027 CIP, the following construction projects supported by FFM were completed (or substantially completed) in FY 2021:

Construction Project	Overview	Total Construction Cost	Final Completion Date
Fire & Rescue Station 22 (Groveton)	This project constructed a new 21,000 square-foot Fire & Rescue station in the west end of the County.	\$10,177,905	March 2021
Adult Detention Center Expansion Phase 2	This project constructed an expansion to the existing Adult Detention Center. The expansion provides bed space to alleviate overcrowding and accommodate future inmate population growth.	\$45,941,915	October 2020



## BACKGROUND – CONTINUED

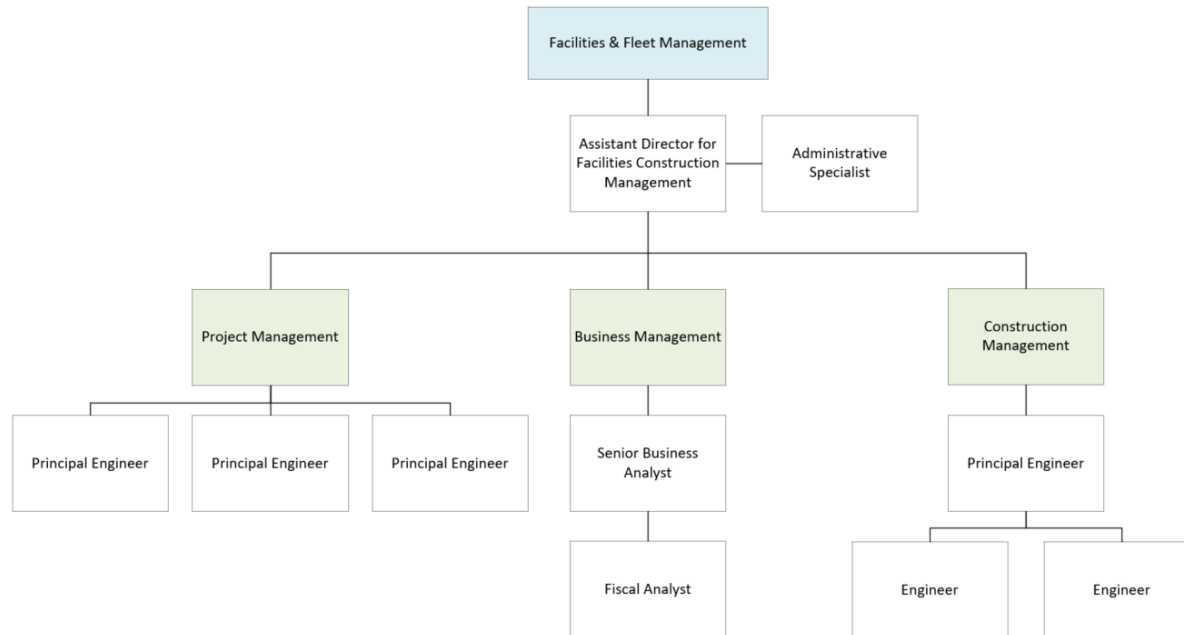
### Facilities & Fleet Management Construction Overview – Continued

Additionally, the following projects are in process to be completed in FY 2022 – FY 2023:

Construction Project	Overview	Total Construction Cost to Date	Estimated Completion Date
Courthouse Security System Replacement	This project assessed security improvements and provided physical security enhancements at various County facilities.	\$4,253,367	April 2022
Animal Shelter	This project will construct a new animal shelter that will include a welcome center, equipment, grooming, animal cruelty spaces, and kennels for dogs and cats.	\$12,447,279	Spring 2022

### Organization Chart

The following organization chart represents the structure of Construction Management within FFM FCM:





## BACKGROUND – CONTINUED

### Department of Parks, Recreation & Tourism Construction Overview

The DPRT operates a 4,400+ acre park system comprised of 81 properties and 60+ trail miles. DPRT staff operate a diverse portfolio of recreational facilities, services, and programs, hosting over 2 million visits annually and providing unique leisure experiences for residents of all ages, abilities, and recreational interests. The Construction Management within DPRT is responsible for managing the design and construction of DPRT projects that include small facilities like concession stands, as well as the development of County land into usable parks, ballfields, etc.

#### Project Overview

Per the FY 2022 – FY 2027 CIP, the following construction projects supported by DPRT were completed (or substantially completed) in FY 2021:

Construction Project	Overview	Total Construction Cost	Final Completion Date
Harbor Drive Wellness Park	This project created a new 203-acre neighborhood in Park Ridge, featuring amenities for active and passive recreation.	\$1,357,809	November 2021
Potomac Heritage National Scenic Trail	This project created new trail segments, Heritage Harbor and Occoquan Refuge.	\$502,108	April 2021
Catharpin Park Soccer Fields	This project created six rectangular fields.	\$4,858,008	June 2020
VSA Building	This project consisted of the construction of a new maintenance building.	\$1,060,164	September 2021

Additionally, the following projects are in process to be completed in FY 2022 – FY 2023:

Construction Project	Overview	Total Construction Cost to Date	Estimated Completion Date
Capital Improvement at Rollins Ford Park	This project will construct a 70-acre park including courts, fields, trails, and playgrounds.	\$7,275,214	July 2023
Doves Landing Project	This project consists of a master plan and construction of a park.	\$2,447,506	TBD
Locust Shade Warrior Course	This project will create a new park.	\$520,000	November 2021
Catharpin Park Concession Building	This will project will construct a new concession building.	\$1,097,000	November 2022
Rollins Ford	This project will create a new park.	\$10,086,061	July 2023
Occoquan Greenway Segment 3	This project will create trail segments 3, 4, and 6, as well as a pedestrian bridge.	\$1,921,674	July 2022



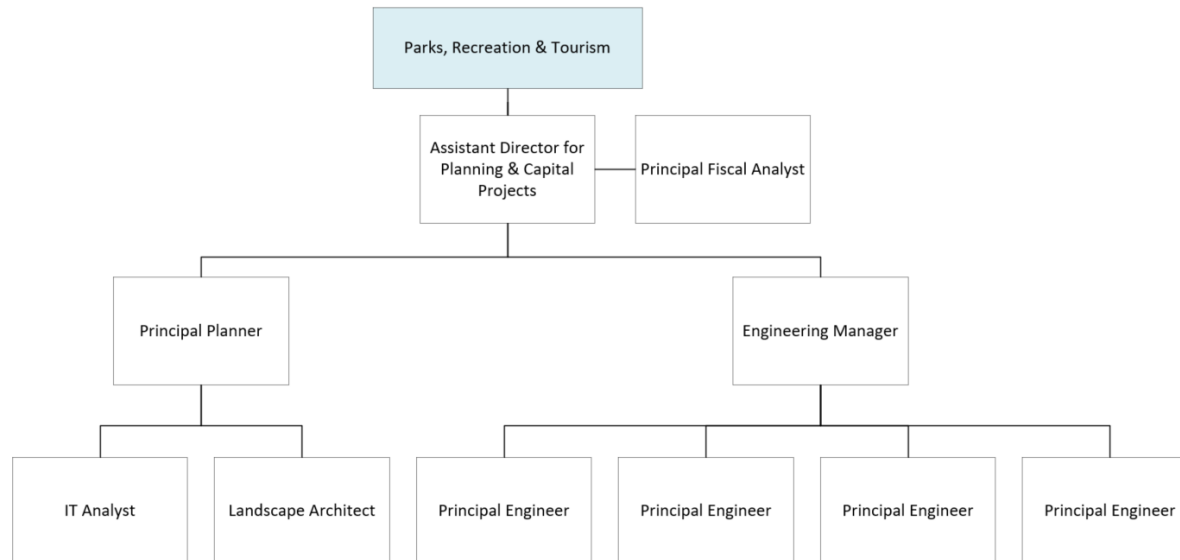


## BACKGROUND – CONTINUED

### Department of Parks, Recreation & Tourism Construction Overview – Continued

#### Organization Chart

The following organization chart represents the structure of the Construction Management within DPRT:



### Construction Project Management: Relevant Processes

The following provides high-level overviews for relevant project management steps and processes that were included in the scope of our review:

#### Periodic Meetings

Construction projects managed by FFM and DPRT are supported by established internal and external periodic meetings that include the following:

- **Weekly Internal Staff Reporting Meetings:** Departmental staff and management meet to discuss the status of each open project. Information is exchanged relating to the budget, timeline, issues, tasks completed, and upcoming milestones.
- **Bi-Weekly Status Meetings:** These are meetings specific to each open project. The attendees include representatives from:
  - The architectural/engineering firm;
  - The construction contractor;
  - The managing department (FFM or DPRT); and
  - Stakeholders from the department(s)/entities that will utilize the finished building or park/field.



## BACKGROUND – CONTINUED

### Construction Project Management: Relevant Processes – Continued

#### Periodic Meetings – Continued

- **Bi-Weekly Department Director Status Meeting:** Internal meeting held bi-weekly to discuss project status with the respective Department Director.
- **Monthly Stakeholder Status Meetings:** Monthly meetings conducted between the Project Manager and the construction project stakeholders (i.e.: the using department) to discuss the progress of the project, and to solicit feedback from the stakeholders. The notes and project items from the meeting are provided to the construction team for review and consideration.

#### Status Reports

Construction project management includes providing periodic status updates for construction projects in progress. The intent of these status updates is to provide the internal stakeholders (e.g.: using departments, County administrators, the BOCS, etc.) with information regarding the status of each project for which the County has committed its resources. The intent of the reports is to provide transparency regarding the progress of the projects, compared to the approved budgets and the developed project plans.

The information contained in each status report is similar, but the amount of information and degree of specificity varies depending on the intended audience for each report (e.g.: the square footage reported would be different numbers depending on if the report was being viewed by architects, engineers, occupants, etc.). Project status update reports include the following:

- **CIP Report:** Created/updated monthly and provided to Management in Finance and other departments. The CIP report provides timeline information for each phase of the project, along with budgeted cost and actual cost information for each project phase. There are approximately 35-40 recipients of this report.
- **CXO Dashboard:** This report is a summary of the information provided in the CIP report. The report is provided to the Deputy County Executive (“DCXO”), who communicates the report to the CXO.
- **Quarterly Progress Report (“QPR”):** This report is provided to the BOCS and is intended to provide information related to the progress of the project – both in terms of the construction timeline, but also the cost to date.

#### Pay Application process

On a monthly basis the Construction Contractor submits a pay application (invoice) requesting payment for project work performed during the month. One week prior to the end of the month the Construction Contractor will send a draft pay application to the Project Manager, County field personnel, and the Architect. The draft pay application will show the amount of the payment being requested. Each party reviews the pay application and compares the amount of the payment, and the basis for the amount (e.g.: the specific work completed, materials purchased, etc.) to supporting documentation. If there is a dispute over an item or an amount being charged there are meetings and/or on-site visits to discuss and resolve. If the dispute can be resolved quickly the draft pay application can be updated, if needed. If the dispute will take longer to resolve, the disputed item/amount can be removed from the pay application, so it doesn’t delay the processing and payment of the undisputed charges.

Once the draft pay application is approved, the Project Manager provides their approval to the Construction Contractor. The Construction Contractor then submits the formal pay application, which is signed by the Construction Contractor representative and the Architect, and is notarized. The formal pay application is accompanied by supporting documentation that could include: updated architectural drawings/maps, photographs, receipts for materials purchased, labor schedules, etc.



## BACKGROUND – CONTINUED

### Construction Project Management: Relevant Processes – Continued

#### Pay Application process – Continued

The Project Manager reviews the formal pay application and support and evidences approval through signature on the formal pay application. The Project Manager also provides the accounting coding, and the purchase order (PO) number. The formal pay application is provided to the Department Accountant, who enters the information into the County’s accounting system (was Ascend, now Mobius). The formal pay application is then routed via the accounting system based on a defined approval matrix for Department and County approvals based on defined approval requirements. Once the formal pay application is fully approved in the accounting system, the payment is issued.

#### Change Order process

Change orders are used during construction projects for additional work that was not included in the original construction contract. Change orders could request additional time and/or funding. The work could be unanticipated, such as land conditions requiring additional effort, or it could be the result of additions requested by the using department, such as additional lighting. Following preliminary discussion between the contractor, architect, and project manager, the contractor will submit a change order. The change order is signed by the Construction Contractor, and the department Assistant Director. Once approved, the change order is entered into the accounting system and routed through the accounting system for Department and County Finance approvals based on a defined matrix of approval requirements. Change orders also require the approval of County Procurement Services.

Additionally, if the amount of funding through change orders meets or exceeds 25% of the amount of the approved construction contract (either individually, or in aggregate), the change orders must go to the BOCS for approval, and procurement of additional funding. Note that our review found no instances in which the change orders for any of the projects selected met the 25% threshold for additional scrutiny.

The procedures we conducted include a review of the amount of time that it took to complete the process for reviewing and approving the change orders included in the sample we tested. We noted the following, with the disparity in the completion times being attributed to the disparate dollar value, and additional required approvers, between the FFM and DPRT change orders:

Average Change Order Review Time		
Department	Number of Change Orders Reviewed	Average Number of Days for Approval
FFM	26	13.19 days
DPRT	12	4.25 days



## OBJECTIVES AND APPROACH

### Objectives

The purpose of the internal audit was to assess whether the system of internal controls is adequate and appropriate for effective project management of construction projects across two County departments: FFM and DPRT, and to evaluate the departments' processes for opportunities for increased efficiency.

### Approach

Our audit approach consisted of the following three phases:

#### Understanding and Documentation of the Process

We conducted interviews with the appropriate representatives from FFM and DPRT in which we discussed the scope and objectives of the audit work, obtained preliminary data, and established working arrangements. From each department, we obtained and reviewed: 1) construction-related project management policies and procedures, 2) construction project summary details; and 3) other documents deemed necessary; and performed walkthroughs of the process(es) and key controls to gain an understanding of the function and assess the design of the process/key controls.

#### Evaluation of the Design and Operating Effectiveness of Process and Controls

The purpose of this phase was to assess the internal controls related to construction project management. Our testing was conducted utilizing sampling and other auditing techniques to meet our audit objectives outlined above. Procedures included the following:

- Gathered background information on the construction project management and monitoring procedures and any required controls or documentation;
- Obtained information and documentation for a sample of construction projects from across each department, including contract copy, contract administrator information, project timeline, and detail of expenditures (including change orders) for each selected project;
- Performed limited transactional testing to validate the operating effectiveness of identified internal controls, and validated compliance with key contract provisions.

Transactional testing performed included the review of the following construction project management elements:

- Payment applications
  - Change orders
  - Internal and external periodic project status meetings
  - Project status reports; and
- Assessed the construction project management processes within each department and identified opportunities for increased efficiency.

#### Reporting

At the conclusion of this audit, we summarized our findings into this report. We have reviewed the results with the appropriate Management personnel, and have incorporated Management's response into this report.



## OBSERVATIONS MATRIX

Observation	1. Construction Project Management Software
<p><b>Moderate</b></p>	<p>Construction-specific project management software provides a specialized tool to track the progress of construction projects from start to finish, along with a repository for the contractor and project manager to upload relevant project details, support, and information. Construction project management software also allows for the secure retention of all building documents, forms, pricing, quotes, plans, and more. As part of our review we inquired about the current construction project management software used by each department. We noted the following:</p> <p><u>FFM</u> FFM requires construction contractors to maintain project management software, and to provide access to the appropriate County personnel (project managers). For each project, FFM downloads the information/documents from the project management software to internal shared network folders.</p> <p><u>DPRT</u> DPRT does not utilize a project management software solution and instead utilizes Excel documents and internal shared network folders for collecting information and retaining documentation.</p> <p>Without County-owned construction project management software, FFM and DPRT are at an increased risk of failing to obtain and preserve all relevant construction project documentation. Missing documentation may prevent the departments from effectively assessing the performance of the contractor, and having all the information possible with which to evaluate project performance, including successes and opportunities. Additionally, the County is unable to limit access to project documentation to individuals with a legitimate business need, which could result in the unauthorized access, addition, deletion, and modification of project documents.</p>
<p><b>Recommendation</b></p>	<p>FFM and DPRT should work together to identify their project management needs and evaluate commercial construction project management software solutions to identify and implement a dedicated construction project management system that would allow the departments/County to own and manage the software used for managing construction projects. Further, we recommend that the departments grant contractor personnel appropriate segregated access to the project management software at the inception of each project, require that contractors provide all required project documentation and support through the project management through the duration of the project, and rescind contractor access at the conclusion of each project.</p>
<p><b>Management Action Plan</b></p>	<p><b>Response: FFM and DPRT:</b> FFM's Facilities Construction Management ("FCM") Division has presented an item for consideration to the Board of County Supervisors to fund the purchase of appropriate project management software during the FY 2023 budget process. FCM will assemble a working group consisting of representatives from DPRT, FFM, and Transportation to develop criteria to ensure the software will fulfill everyone's requirements. The group will partner with the Finance Department's Procurement Services Division to utilize an approved PWC purchasing process. If funding is not secured during the FY 2023 budget process, then the working group will develop another request for funding to be presented during the FY 2024 budget process.</p> <p><b>Responsible Party:</b> Assistant Director of FCM</p> <p><b>Estimated Completion Date:</b> Prior to end of FY 2023</p>



## OBSERVATIONS MATRIX - CONTINUED

Observation	2. Project Status Meetings
<p><b>Moderate</b></p>	<p>Based on our walkthroughs, we selected a sample of meetings and requested documentation to evidence that meetings occurred in accordance with the cadence identified by each department. Documentation would include meeting agendas, lists of attendees, meeting notes, project items, etc. Based on our testing, we identified that meeting documentation is not consistently maintained by either department. Requested samples by meeting type/department are detailed below. For 27 of 30 requested samples, no documentation could be provided as evidence of items discussed in the meeting, or that the meeting occurred:</p> <p><u>FFM</u></p> <ul style="list-style-type: none"> <li>Weekly Internal Staff Reporting meeting: no documentation could be provided for six (6) of six (6) samples.</li> </ul> <p><u>DPRT</u></p> <ul style="list-style-type: none"> <li>Weekly Internal Staff Reporting meeting: no documentation could be provided for six (6) of six (6) samples;</li> <li>Bi-Weekly Status meeting: no documentation could be provided for six (6) of six (6) samples;</li> <li>Weekly Department Director Status meeting: no documentation could be provided for three (3) of six (6) samples; and</li> <li>Stakeholder Status meeting: no documentation could be provided for six (6) of six (6) samples.</li> </ul> <p>Failing to conduct project status meetings on a defined, recurring basis increases the risk that project issues/problems are not identified and resolved timely, and that the County's expectations and priorities aren't clearly communicated. This could result in an inability to complete construction projects on time, and within budget.</p>
<p><b>Recommendation</b></p>	<p>We recommend the implementation of additional controls to document that required project status meetings are conducted as intended, as well as to document issues and action items. The control should identify each meeting, define the frequency of the meeting, the attendees, and include an agenda or meeting notes/project items to evidence the topics discussed and any follow-up commitments, along with due dates for the completion of each action item.</p>
<p><b>Management Action Plan</b></p>	<p><b>Response: FFM:</b> FCM will develop and implement a Standard Operating Procedure (SOP) that outlines the requirements for producing and maintaining accurate records of weekly internal staff meetings.</p> <p><b>DPRT:</b> DPRT will develop and implement a SOP that outlines the requirements for producing and maintaining accurate records of weekly internal staff meetings.</p> <p><b>Responsible Party: FFM:</b> Assistant Director of FCM; <b>DPRT:</b> Director, DPRT</p> <p><b>Estimated Completion Date:</b> Prior to the end of FY 2022</p>



## OBSERVATIONS MATRIX - CONTINUED

Observation	3. Consistency of Project Status Documentation
<p><b>Moderate</b></p>	<p>Construction project management includes providing periodic status updates for construction projects in progress. The intent of these status updates is to provide the stakeholders (e.g.: using departments, County administrators, the BOCS, etc.) with information regarding the status of each project.</p> <p>We selected a sample of project status reports and observed the status update elements included in each report. We noted inconsistency – both within status reports provided by each department, and among the status report prepared by both FFM and DPRT – in the information that was provided for each project; including projects within the same status update. Project information provided in some, but not each, report included:</p> <ul style="list-style-type: none"> <li>• Budget versus actual cost;</li> <li>• Planned versus actual timeline;</li> <li>• Significant milestones;</li> <li>• Upcoming key activities; and</li> <li>• Photographs of the project site.</li> </ul> <p>Project status updates provide County stakeholders with vital information regarding the progress of projects for which the County has committed its resources. The lack of consistent information for each project increases the risk that stakeholders do not have complete information to properly evaluate the progress for each project. Without this information, the County may not identify issues with project timing or spending that could be addressed and corrected before impacting the ability for the project to be completed on time, and within budget.</p>
<p><b>Recommendation</b></p>	<p>We recommend that FFM and DPRT work together, and with County stakeholders, to identify the information that is needed to provide a thorough understanding of the status of each project. The level of information may vary dependent on the intended recipient. For example, reporting to the BOCS may be in the form of a high-level summarized dashboard of the approved projects in progress, including status of timeline and costs. We further recommend that FFM and DPRT develop a standard template to be used for providing status update information for each open project.</p> <p>Effective status update reporting should, at a minimum include: budget versus actual spending, completed versus planned progress, original and updated completion timeline, completed milestones, upcoming planned milestones, and any major issues identified that could impact spending or completion progress. Additionally, we recommend that FFM and DPRT work to define and agree upon a scheduled, recurring interval for providing project status updates, rather than waiting until such information is requested.</p>
<p><b>Management Action Plan</b></p>	<p><b>Response: FFM and DPRT:</b> This observation will be addressed as a part of observation #1 of this report. FCM and DPRT will utilize the project management software to create standardized status reports for each required audience. The status report capability shall be used as one of the critical criteria in choosing and implementing a project management software package.</p> <p><b>Responsible Party: FFM:</b> Assistant Director of FCM; <b>DPRT:</b> Director, DPRT</p> <p><b>Estimated Completion Date:</b> Prior to the end of FY 2023</p>





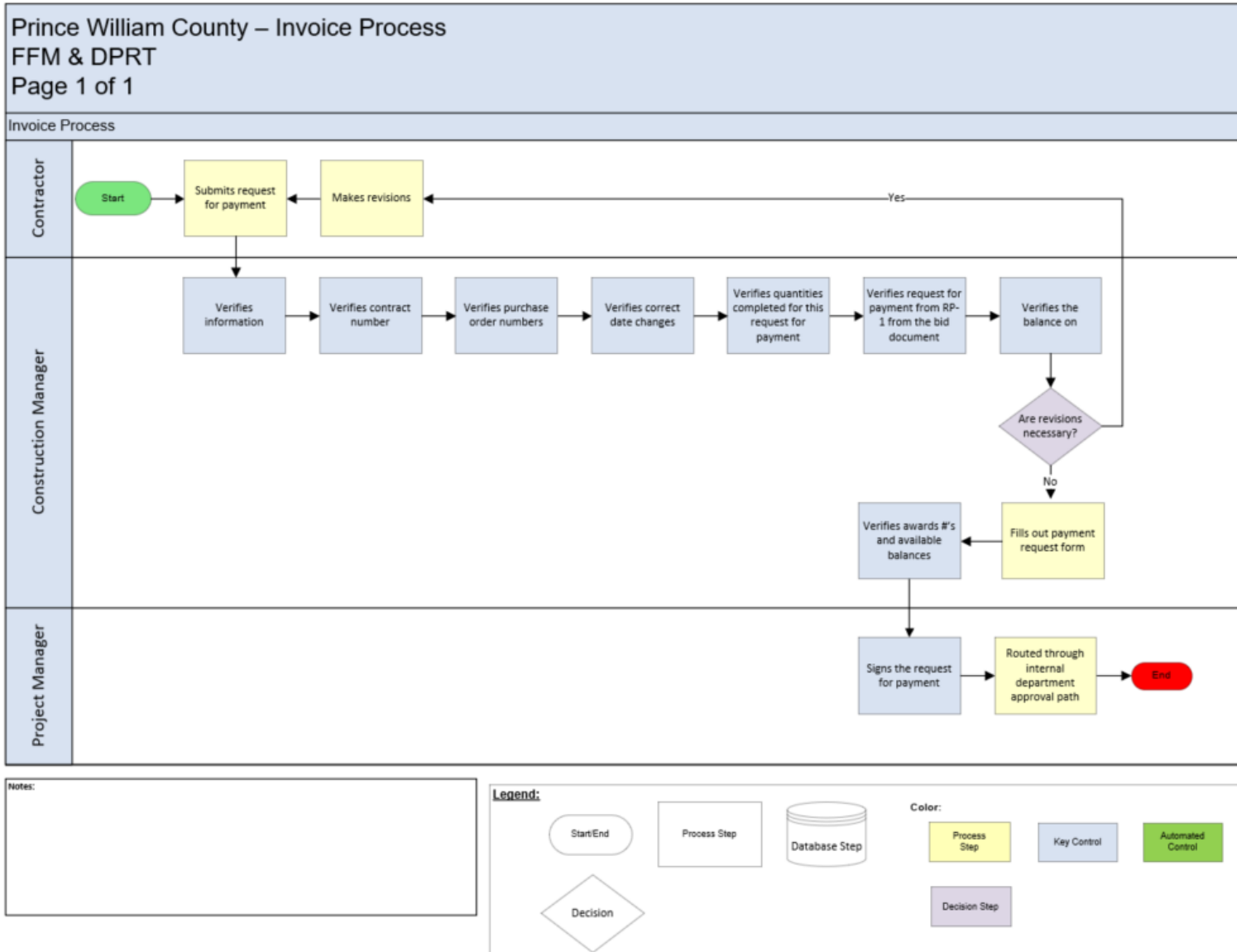
## OBSERVATIONS MATRIX - CONTINUED

Observation	4. Change Order Approval Thresholds
Low	<p>Through our information-gathering process with both FFM and DPRT, we learned that the County currently has one change order review and approval workflow in place for all construction project change orders. The change order workflow is not predicated on, and is not modified because of, the type of construction project, the amount of the construction project budget, or the dollar amount of the change order (on its own, or as a percentage of the total construction contract amount). Rather, the system workflow for each change order requires the review and approval of the same personnel from the Department, Finance, and Procurement.</p> <p>The construction project change order workflow specifies each of the reviews and approvals that are required, and mandates that the change order be presented to the BOCS for approval if the change order total (individually or in aggregate) reaches 25% of the value of the construction contract.</p> <p>Requiring the same set of approvers from the Department, Finance, and Procurement for all construction project change orders, regardless of the dollar amount or their impact on the total amount of the project could result in the misapplication of personnel time, as the increased levels of scrutiny are not likely to provide a material benefit on the likelihood or impact of allowing inappropriate or inaccurate change orders.</p>
Recommendation	<p>Our recommendation is that FFM and DPRT review the change order workflow with County stakeholders including Finance and Procurement, to consider the adoption of risk-based workflows where the requirements for review and approval are based on the dollar value of the change order, and the amount of the change order as a percentage of the construction contract value.</p> <p>Matrices should be defined and established where a base set of reviewers are identified, and then additional reviewers are added as the amount of the change orders increases, and/or as the amount of the change order as a percentage of the construction contract value increases. For example, FFM construction projects, being much higher in dollar value, should look to set a threshold that is lower than the 25% threshold. By the time FFM change orders reach 25% of the value of the original construction contract value, the project is already significantly over budget, and more than the amount of reserve anticipated in project planning and budgeting. Conversely, the dollar value of DPRT project construction contracts is generally much lower, and would not represent the same level of risk for the County. DPRT change orders could have much lower dollar values, combined with much higher percentage values, as those established for FFM projects.</p>
Management Action Plan	<p><b>Response:</b> FFM and DPRT will form a working committee to address this observation. The working committee will develop a SOP to be implemented by both Departments.</p> <p><b>Responsible Party: FFM:</b> Assistant Director of FCM; <b>DPRT:</b> Director, DPRT</p> <p><b>Estimated Completion Date:</b> Prior to the end of FY 2022</p>





## PROCESS MAPS

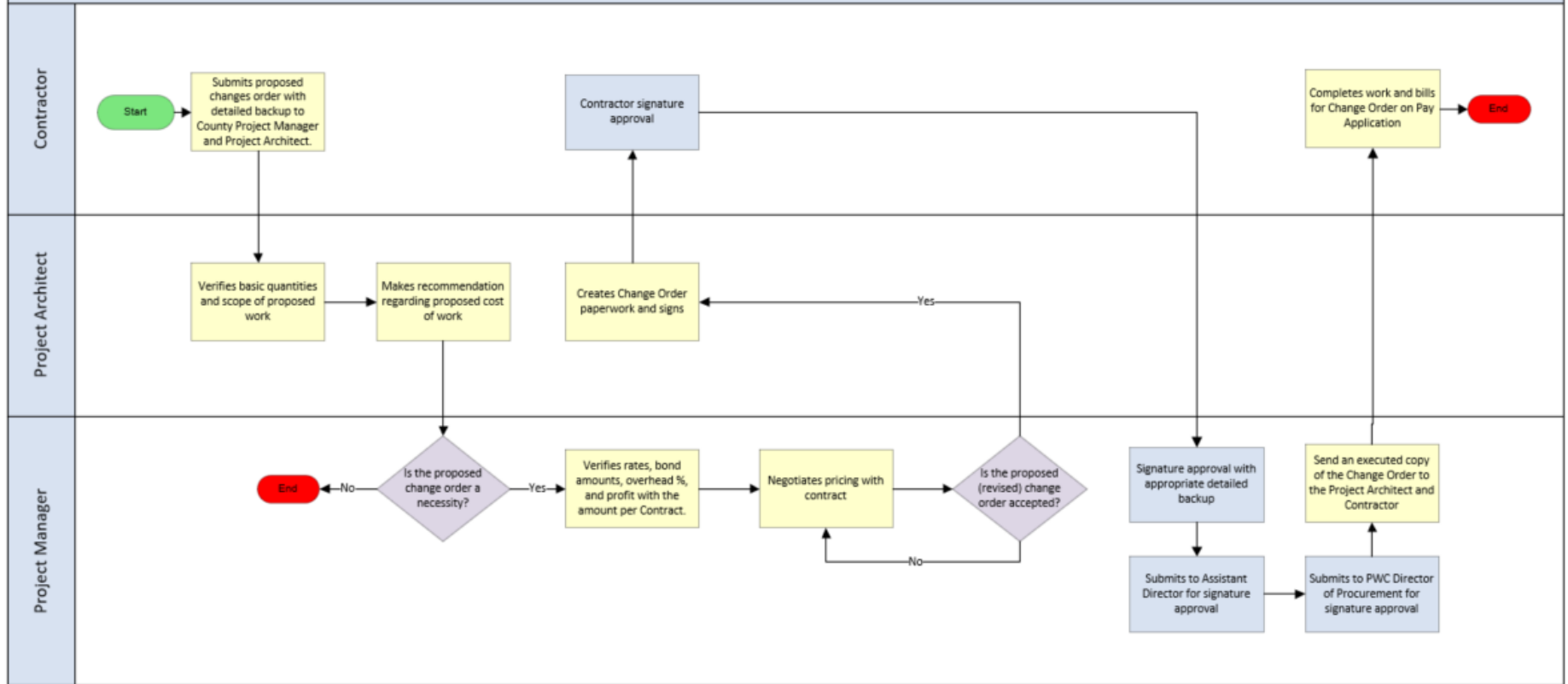




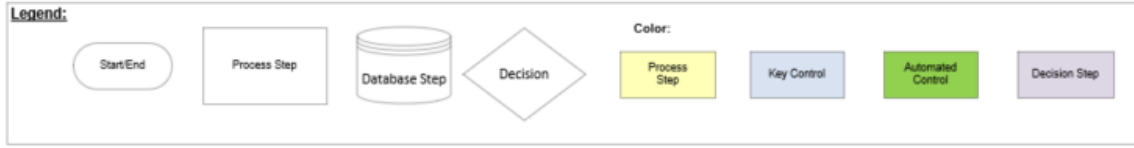
## PROCESS MAPS – CONTINUED

Prince William County – Change Order  
 Facilities and Fleet Management & Parks, Recreation, and Tourism  
 Page 1 of 1

Change Order



Notes:





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