



Transportation Construction:

*Change Orders, Checklists, Comment Logs, and
Legal Compliance*

May 2017

A Report by the Internal Auditor

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Executive Summary

Key Findings

This audit on transportation construction finds that Clackamas County has an opportunity to improve administrative efficiency and effectiveness by updating policies and procedures. The scope of work section of contracts is sent to applicable County disciplines for review. There is no system in place to ensure each applicable discipline has received, reviewed and approved the scope of work. Design comment log procedures should also be standardized to ensure all appropriate personnel have reviewed the project documentation applicable to their discipline and any questions or comments they have, are effectively resolved.

By updating administrative policies and procedures, such as, the use of checklists, approval of change orders and on-call contracts supporting documentation, the County may be able to enhance its stewardship controls to more effectively show all contract deliverables were received and to better ensure project changes are appropriately preapproved. We also found the County can better utilize data available for ensuring contract change orders are reasonable, appropriate and balanced.

Transportation payments should be periodically reconciled from the Department of Transportation and Development (DTD) subsidiary system (PawPrints) to the County's book of record (PeopleSoft Financial). Project management staff generally only use PawPrints to track transportation payments. This presents a significant risk if the actual amount of payments does not match what is recorded in PawPrints. We did identify an instance for \$4,268 where payments from PawPrints did not reconcile to PeopleSoft Financial.

State law requires public improvement contractors receive progress payments timely. Typically payment must be made by the County within 30 days from when the contractor's invoice is received or 15 days after the invoice is approved, whichever is first. The County is currently unable to show compliance with prompt payment requirements.

Key Recommendations



Our specific recommendations for management are included on page 20 of this report. In summary, we made recommendations to:

- Update and improve policies, procedures and documentation;
- Ensure applicable disciplines review design and construction documents;
- Revamp contract change order documentation and approvals;
- Show compliance with state law prompt payment requirements.

Response

County transportation management generally agreed with our recommendations. They are already implementing corrective action to address some of the improvements identified. Their full response is at the end of the report.

Background

In accordance with the Clackamas County 2016 internal audit plan, we conducted an audit of the County’s transportation engineering and construction process.

Clackamas County

Transportation construction is primarily administered by two departments at Clackamas County; the Department of Transportation and Development (DTD) and the Development Agency (DA). Ultimately both departments report to the Director of DTD.



Mt. Hood in Clackamas County

Transportation construction

Clackamas County is responsible for an extensive transportation network throughout the County. This network is part of a larger regional transportation system that supports the needs of the people and businesses in the County. The vast majority of the County road system is located outside of cities. The entire County transportation network encompasses a variety of structures, as well as a substantial system of sidewalks, bike lanes, traffic signs, guardrails, culverts, catch basins and more. This also includes 180 bridges.

Figure 1: Public ownership of roads in Clackamas County (in miles)

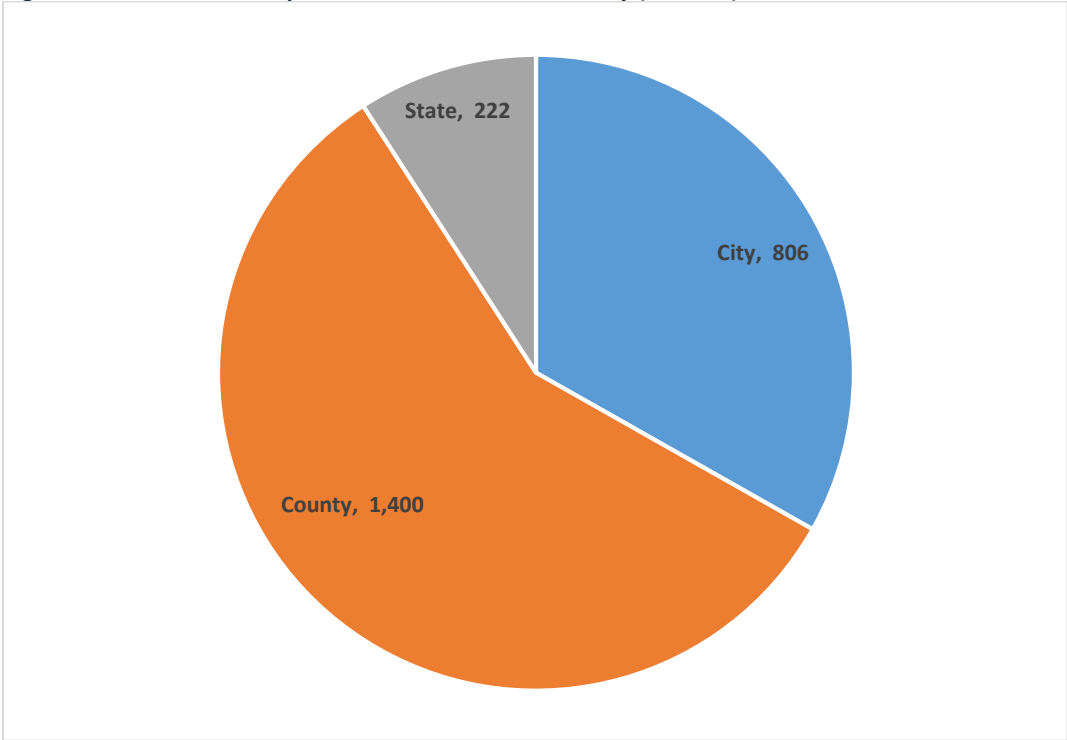
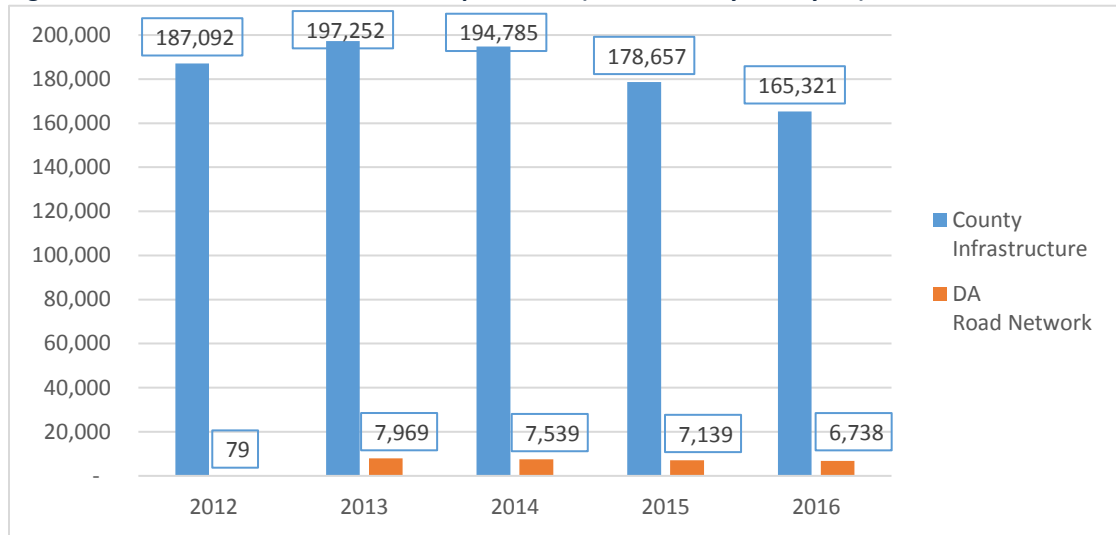


Figure 2: Infrastructure value – net of depreciation (in millions, by fiscal year)



The major capital improvements needed for the transportation system are identified within the Clackamas County Transportation System Plan (TSP). Transportation capital projects are primarily located on arterial and collector roads. Similarly, federal transportation funding is only available for capital improvement projects located on roads that are classified as arterials and collectors, with an emphasis on maintaining the operations of the principal arterial system.

A 20 year capital improvement plan (CIP) was developed and adopted as part of the TSP. Within this 20 year CIP exists a five year CIP, comprised of projects for which funding has been identified or is anticipated over the next five years. The five year CIP is updated every two years.

Transportation Funding

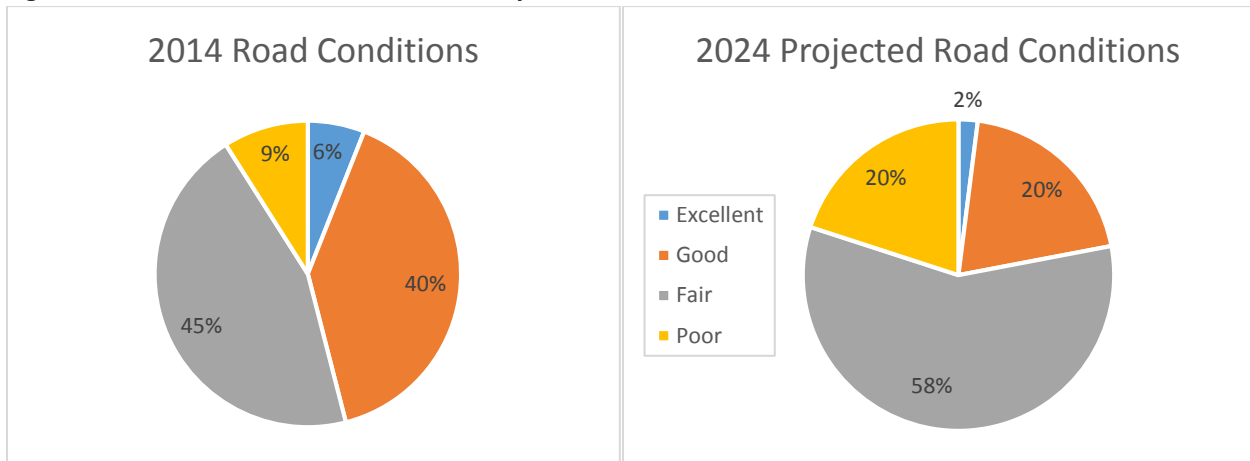
Despite the 2016 Clackamas County Community Survey results¹ that indicated residents prioritized road maintenance over other issues like jobs, the economy, and schools, the 2016 fuel tax measure did not pass. With the failure of the 2016 fuel tax measure², the DTD Transportation and Maintenance Division estimates that road conditions will fall from 46% being in “excellent” or “good” condition, to only 22% being in “excellent” or “good” condition in 2024. Roads in “poor” condition are too deteriorated to apply preventive maintenance and they must be reconstructed at a projected cost of approximately 13 times more than routine maintenance.

Roads in “poor” condition must be reconstructed at a projected cost of approximately 13 times more than routine maintenance.

¹ Clackamas County Community Survey prepared by DHM Research, conducted via telephone from February 25th – 29th, 2016.

² 2016 - Measure 3-509: A countywide 6-cent per gallon fuel tax for seven years that failed. Proceeds would have been split 60 percent for the County and 40 percent for cities, based on population. Oregon law requires fuel taxes to be spent on roads and bridges.

Figure 3: Road conditions in Clackamas County



Local funding sources include:

- Clackamas County Road Fund
- Transportation System Development Charges
- Urban Renewal (Tax Increment Financing)
- Safe Communities

Federal, state and regional funding sources include:

- Federal Highway Trust Fund – Moving Ahead for Progress in the 21st Century
- Oregon State Highway Fund
- Transportation Investment Generating Economic Recovery Discretionary Grant
- Western Federal Lands Access Program
- Federal Highway Administration (FHWA) Accelerated Innovation Deployment Aid Demonstration Program
- FHWA Emergency Relief Program
- Statewide Transportation Improvement Program
- Highway Safety Improvement Program
- Highway Bridge Program
- Oregon Watershed Enhancement Board
- Fish America Foundation
- National Fish Passage Program – US Fish and Wildlife
- Jobs and Transportation Act
- ConnectOregon
- Metropolitan Transportation Improvement Program
- Regional Flexible Fund Allocation

An audit of federal awards is performed yearly, in accordance with U.S. Office of Management and Budget, Circular A-133 compliance standards. The last transportation construction compliance audit at the County was conducted for the fiscal year ended June 30, 2016, over the Highway Planning and Construction Cluster (CFDA 20.205). The County received an unmodified (i.e. clean³) opinion on the expenditure of those funds.



Certified Local Public Agency

Clackamas County is 1 of only 5 local public agencies⁴ in Oregon with full certification through the Oregon Department of Transportation's (ODOT's) Local Agency Certification Program.

The federal Local Agency Certification Program enables Certified Local Public Agencies (CLPA) to obtain optimum approval authority and control at the local level when delivering federally funded transportation projects. While the Certification Program does not

eliminate any project development requirements, it allows Clackamas County to be more cost effective and timely at delivering Federal Highway Administration (FHWA) projects. This certification should reduce the cost of doing business while maintaining quality, and focus on the customer – the citizens of Clackamas County.

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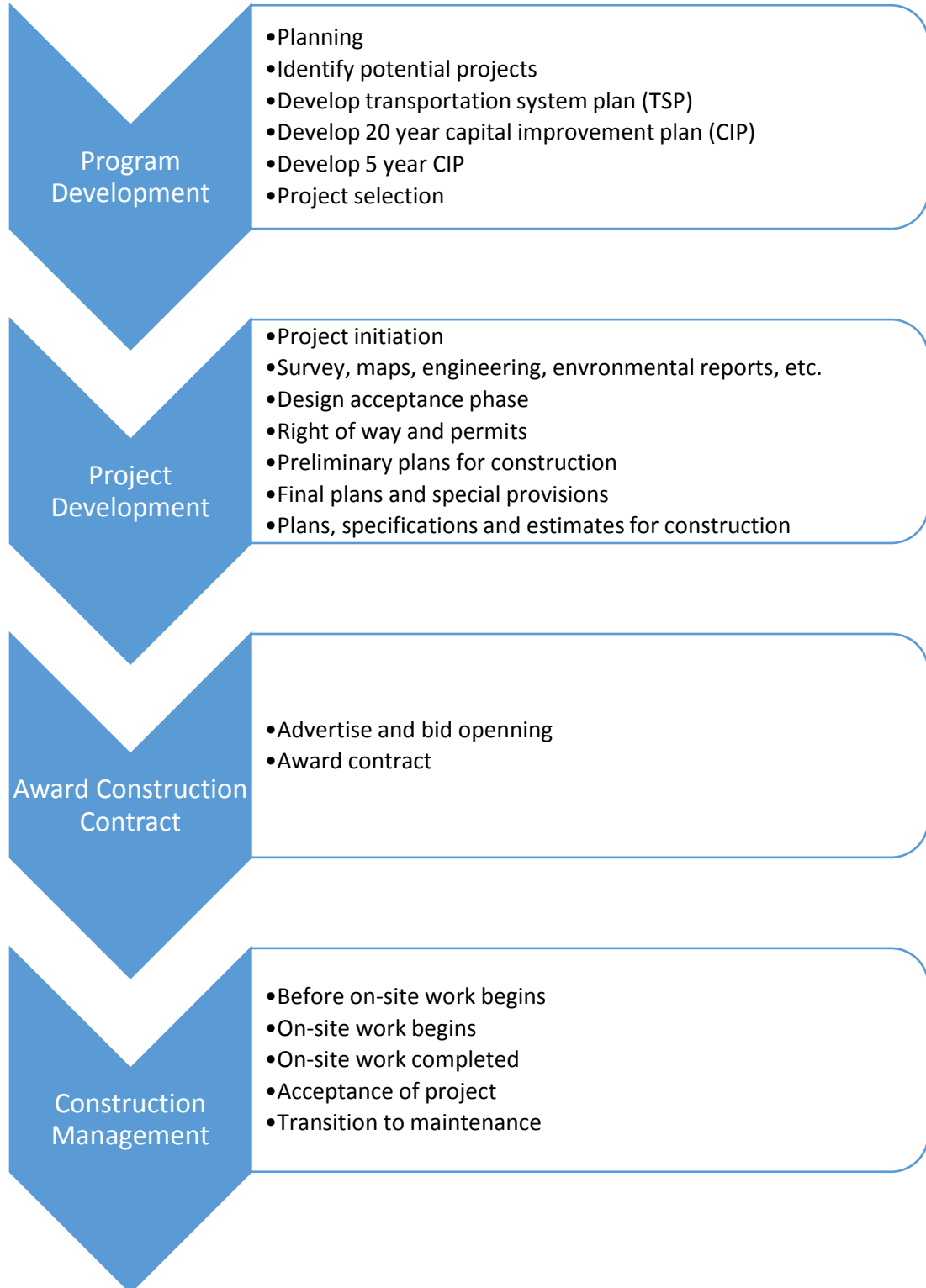
³ Per Moss Adams, the County complied, in all material respects, with the types of compliance requirements (discussed in their report,) that could have a direct and material effect on each of its major federal programs for the year ended June 30, 2016.

⁴ Other ODOT certified local public agencies: City of Corvallis, City of Portland, City of Eugene, Linn County.

Transportation construction lifecycle

The County's construction projects generally go through a four phase process for selecting, designing, and building construction projects (Figure 4).

Figure 4: Transportation construction lifecycle



In the program development phase, the County's TSP guides transportation related decisions and identifies the transportation needs and priorities. Information from the TSP is used to develop the 20 year and 5 year Capital Improvement Plans (CIP). The TSP is created in coordination with the County's 15 cities, the State of Oregon, area transit providers, and other affected agencies. The TSP has been vetted through a public comment process, which includes a series of public outreach events and Public Advisory Committee⁵ meetings.

Except for emergencies, projects enter the project development phase after they are approved and scheduled on the 5 year CIP. This phase includes designing the project, obtaining right of way and permits, and developing the final plans, specifications, and estimates (PS&E) for construction. A Request for Proposal (RFP) is usually prepared so that private firms can bid on designing the construction project. Due to staffing constraints, sometimes right of way is conducted by DTD's in-house right of way (ROW) staff and other times ROW is contracted out. County Project Managers typically monitor design firms progress at various milestones, which are usually broken down in the contract into the following design phases:

- Conceptual design (30% complete),
- Preliminary design (60% complete),
- Advanced design (90% complete),
- Final design (100% complete)

The County's Procurement division oversees the bidding process, while the Project Management staff evaluate the winning bid and make recommendations.

In the award construction phase, a RFP is prepared by the County's Procurement division, based on information provided by the design contractor and the County's project management staff. Private contractors submit bids based on specific line items, or bid items, for each task the contractor will perform and each supply it will provide. The County's Procurement division oversees the bidding process, including reviewing bids received from contractors and identifying the lowest bid that meets all minimum contract requirements. County Project Management staff evaluate the winning bid and make a recommendation to award or not award the contract.

Construction management is the final phase. The contractor begins work on the project with oversight by a County Project Manager (PM). Daily progress reports are prepared by County Project Managers in conjunction with quantity verification forms (QVFs). Progress reports, QVFs, field notes and more are used to ensure the accuracy of the monthly invoice sent by the construction contractor. Once all work is completed and any cleanup and repair work has been accomplished, the Project Manager's team performs a final inspection. If all work has been satisfactorily completed, the County accepts the project and makes final payment to the contractor, which includes any remaining retainage⁶.

⁵ The 2013 TSP was vetted through 12 Public Advisory Committee meetings.

⁶ Retainage held is an amount equal to not more than five percent of the contract price of the work completed. (ORS 701.420)

Audit Results and Recommendations

Review should be documented and maintained

Scope of work review is not documented

As discussed in the “Background” section of this report, the County contracts out the design and construction services related to transportation construction projects. Final project development procedures indicate project managers will develop a scope of work and fee estimate for the design contract’s Request for Proposal (RFP). The scope of work is then sent to the applicable County disciplines for review. This includes, but may not be limited to, the surveyor, right of way agent, traffic engineer, public and government affairs, transportation planning, water environment services, civil engineering and more.

There is no current system in place to ensure each applicable discipline has received, reviewed and approved the scope of work.

There is no current system in place to ensure each applicable discipline has received, reviewed and approved the scope of work. Project Managers have indicated if they do not receive comments back from the applicable disciplines, they move forward with the RFP without input from that applicable discipline in order to keep the project moving.

We recommend management ensure staff follow scope of work (SOW), project development procedures, by producing a system to track comments and approvals related to the development of the scope of work section in the design contracts. If the applicable discipline has “no comments” regarding the scope of work, they should respond with “no comment.” Silence should not be an indication of approval.

Design comment log review should be standardized

As outlined in the “Background” section of this report, key milestones in the design firm’s progress are usually at the 30%, 60%, 90% and 100% phases. Project Managers (PMs) send the designer firm’s documentation (e.g. plans, specifications, estimates for construction, etc.) to applicable disciplines for review at the aforementioned phases. County personnel respond with questions, comments, suggestions, etc. Comments received at one phase are supposed to be reviewed by the same applicable party and/or the Project Manager at the subsequent phase.

For example, if ROW reviews the design firm’s documentation at the 60% phase and has comments, the Project Manager will usually provide the same documentation to ROW at the 90% phase to ensure the ROW’s comments at the 60% phase have been addressed and corrected.

We identified the following weaknesses with the current “comment log” that could be resolved by implementing a standardized log and process:

- Project Managers (PMs) do not ensure all applicable disciplines comment. PMs e-mail the design documents to the applicable disciplines. If the applicable discipline does not respond, the PM continues with the project.
- The format for “comment logs” is not standardized.

Some “comment logs” have adequate tracking information where they show a place that specifically references the planned sheet and page, detailed comment, who made the comment, date of comment and reviewer. The log also includes a place for the design team to respond, who responded, and date. Finally, the log contains a spot for the County’s project staff to approve or deny the response, who made the decision, date they made the decision and any additional comments. Other “comment logs” do not include, for example, the dates the comments were made, who made the comments, who addressed the comment and if the comment was accepted or denied.



- Tracking to ensure all comments were addressed is difficult. “Comment logs” are received from multiple applicable disciplines. Ensuring all comments are cleared can be difficult. The County does not always have one master comment log that tracks all comments from each discipline.

We recommend management:

- *Ensure all applicable disciplines comment on project documentation at the appropriate design phase⁷; (i.e. if they have no comments, they should send a response with “no comments”; silence is not acceptable; if the applicable discipline does not need to comment, the PM should put ‘N/A’ and explain why);*
- *Standardize the “comment log” format; and*
- *Develop a system to ensure all comments were efficiently and effectively addressed. For example, tracking all comments in a master Excel spreadsheet.*

⁷ For ease of review, consider outlining what each applicable discipline is responsible for reviewing.

Enhance project tracking and organization

Project management checklist

DTD has various project management checklists related to the design and construction phases of the project. The checklists typically have a standard list of task descriptions and a column to indicate if the task is complete or does not apply. The checklist also has an area to add other tasks. Currently it is unclear if all PMs use these checklists. Also, if they are completed, they are subsequently discarded and not maintained in the project files. These checklists are a good way to ensure all project tasks are completed or explain why they do not apply. It would also make it easier for other PMs or management to ensure all project steps and deliverables were complete, and where the support for each project step or deliverable is located. For example, we could not find information which supported three project kickoff meetings took place, PMs could check off each time they received a monthly progress report, etc. Opportunities exist to maximize the value of checklists.

Transportation construction checklists are a good way to ensure all project tasks are completed or explain why they do not apply.

We recommend project management checklists be used and maintained in the project management folders.

We also recommend project management checklists include:

- *All project deliverables outlined in the contract,*
- *An area for staff to put the date each task was reviewed as completed,*
- *A place for staff to initial (legibly) who ensured the task was completed or 'N/A',*
- *An area for staff comments, and*
- *An area which references where the applicable support for the task was completed.*

Management should continue to work for consistency in project organization

Management recently developed a project directory outline for design and construction contracts. This directory better articulates where project deliverables should be located and provides for consistency in project documentation across all projects. However, opportunities for improvement still exist. For example, adequate supporting documentation was not provided or could not be found for one payment related to a construction contract. Project staff also indicated project costs were not tracked at the bid item level until after change orders begun on this same project. Payments on this project were significant.

We recommend management continue to create a reference system that can be used by transportation construction staff by numbering folders and documents within folders so they can easily be referenced in transportation construction checklists and more.

Change order and amendment process should be revamped

Changes during the construction process are normal

Engineers and technical staff who design construction projects cannot foresee every possible development that could take place during construction. If a project needs to be modified, the County may also need to update its contract with the construction contractor to address these unforeseen or emerging issues. The change order process and allowed mark-ups are typically outlined in the contract and should be followed.

Construction project changes often have legitimate reasons, but can also stem from errors or mistakes. Some causes for a project modification are:

- A change in conditions on the ground or unforeseen circumstance,
- Adding work (e.g. County adds work, regulatory/code update, etc.),
- Cost saving proposals, and
- Errors.

Sometimes changes occur because conditions on the ground are different when construction begins than when the project design was completed. For example, excessive rain can cause the ground to be more unstable than initially observed, requiring additional excavation and shoring before the contractor can begin other work.

Examples of added work are ensuring sidewalks are compliant with the Americans with Disabilities Act (ADA) or extending the sidewalk to connect to a nearby sidewalk.

Another reason for changing a project is adding work to take advantage of economies of scale, reduce delays, or address stakeholder concerns. As an example, the construction contractor may notice it would be beneficial to extend a sidewalk beyond what they agreed, to connect to a nearby sidewalk; or add work to ensure the sidewalk is compliant with the Americans with Disabilities Act (ADA).

A contractor may make a cost-savings proposal to lower project costs. This involves changing some contract work, such as reducing costs by using a temporary traffic signal in place of traffic flaggers when construction crews are not on-site.

Construction project changes can also be the result of errors during the design phase. For example, a paving project could mistakenly be designed to have asphalt that is 2 inches deep when it should actually be 3 inches deep to withstand the expected traffic load. After consulting with the project design staff, the Project Manager may need to modify the contract to allow the contractor to add the additional inch of asphalt.

Though contracts can only be changed through a contract change order (CCO) and amendment, not every change to a construction project requires a change to the contract. For example, Project Managers can make minor (insignificant) changes to the type of inlet used without using a CCO, when inlets are already included in the contract. However, these changes should still be agreed upon in writing.

Change order versus amendment

The County uses contract change orders (CCOs) and amendments to modify construction contracts and change project funding authorizations. CCOs are legal documents used to change transportation construction contracts.

CCOs contain the following information:

- CCO number
- Project specifications (project number, title, location, contractor, date of contract, County fund used, notice to proceed date, etc.)
- Date of CCO
- Description and purpose of change
- Cost (e.g. unit cost, units needed, time, materials, etc.)
- Overall contract amount changes (from the total original amount of the contract to the total amount after CCOs)
- Contractor and County approval (via signatures), should include design firm approval, if determined necessary

The County requires the construction contractor to explain the reason for the change, justify any change in costs, and provide other supporting documentation as determined necessary. For example, it is not uncommon to see pictures attached to the CCO which supports why the CCO is necessary.

In County transportation construction contracts, change orders are defined as follows:

A price agreement for Extra Work, Changed Work, Field Directives, or other changes. A change order does not change the contract value, scope, or time until it is incorporated into an Amendment. Change Order will be agreed upon, in writing, by the County Project Manager and the Contractor's designated representative.

In County transportation construction contracts, an amendment is defined as follows:

A contract modification for Additional Work, Changed Work, Extra Work, Field Directives, or other changes. An Amendment changes the contract value, scope, and/or time. Amendments require formal approval by the Board of County Commissioners (BCC), pursuant to LCRB Rule Division 160, prior to approval of such work.

The BCC has overall authority for contract changes, overruns and increases. However, the BCC delegates specific authority to various positions in the County. County Code currently indicates the DTD Director has the authority to sign contract amendments, for public improvement contracts, which do not exceed 10% of the original contract amount, or \$150,000, whichever is greater.

County Project Managers (PMs) are currently approving the CCOs from the private construction contractors. Work is then being performed in compliance with the approved CCOs and the private contractor may also be getting paid for any additional work agreed in the CCOs.

For efficiency, County Project Managers will wait to incorporate CCOs into an amendment when the combined CCOs reach a significant contract value, scope and/or time change; or the project is getting close to concluding and no more CCOs are needed. All CCOs available are then incorporated into one contract amendment. That contract amendment is then approved in accordance with the County signature authority regulations.

Preventative versus detective controls

The initial approval of the CCO is designed to be a preventative control. Specific levels of signature authority⁸ related to preapproving agreements of this nature have been contemplated by the County. Even with the CCO and amendment contract language outlined above, there still exist the risk that all CCO work would be performed, completed and paid for, prior to an amendment being approved by the DTD Director or BCC. The DTD Director or BCC approval then becomes a detective control, where it's detecting a potential error after the work has been completed and potentially paid for, versus preventing an error from occurring.

The contract change order (CCO) and amendment process circumvents preventative controls outlined in County policies and procedures. The current process puts the County at risk for CCO work being performed and paid for without the appropriate level of preapproval.

There are several ways management can update policies, procedures and future contract language to ensure CCOs meet the efficiency needs of DTD and DA while still effectively meeting the preventative control needs of the County.



North Fork (Dickey Prairie Road), before construction



North Fork (Dickey Prairie Road), after construction

⁸ E.g. County Code appendix C.

We recommend management from DTD, DA and Finance (e.g. Procurement division), in conjunction with County Counsel, evaluate the contract change order (CCO) process to determine the type of controls, including approval structure, that are desired and necessary to mitigate risk. The procedure developed should be compliant with current or revised County signature authority rules, procurement policies, Oregon Revised Statutes (ORS) and County Code.

The approving signature on a CCO should be performed by someone with the appropriate level of authority and the CCO should include all the necessary information to be processed by the Finance department. One potential solution is to give PMs, management and/or Assistant Directors various levels of signature authority. Also, for example, agencies like ODOT do contemplate if work must begin before a CCO is approved (signed) by the appropriate level of signature authority. In these cases, the ODOT PM must obtain proper verbal approval to allow the work to start. The ODOT PM must record the preapproval date on the CCO and submit the completed CCO soon thereafter for official signature. (All other CCO signatures and documentation would be prepared prior to change order work commencing.)

Change order bid items should be analytically reviewed

Construction contractors submit their bid at the line item level. Each bid item is for a lump sum amount, unit price (e.g. each unit, square foot, square yard, ton, cubic yard, acre, etc.) times the quantity needed, or hourly rate times number of hours.

For projects reviewed, project management generally did a good job comparing bid items to help ensure they were reasonable, appropriate and balanced.

Staff places each bid item in a spreadsheet where they compare every contractors' bid items. As generally required by law, the County will go with the lowest overall bid. However, project management evaluates each individual bid item against other contractors' bid items to ensure the bid is reasonable, appropriate and balanced⁹. Questions and clarifications can be asked to the contractor that submitted the bid.

When CCOs are prepared, the County and contractor can renegotiate the unit price, lump sum amount, time and/or materials. The County can implement additional procedures to ensure the County is getting a fair price on CCOs. ODOT does discuss CCOs in their 2015 Standard Specifications for Construction (i.e. 00195 - 00197).

We recommend the County include the original bid item and associated lump sum, time and/or materials amounts on the CCO, as applicable. ***We also recommend*** the CCO amount(s) be compared to other sources, such as ODOT's average bid costs for similar work, the PMs independent cost estimate and/or the original bid item comparison sheet. This helps ensure the contractor is not requesting a CCO at the bid item rate or amount that was determined unbalanced in the initial bid item comparison or is currently unbalanced. This comparison should be documented.

⁹ Unbalanced bidding is when contractors submit abnormally high or low prices on certain line items. Contractors can unbalance bids in generally two ways: mathematically or materially.

Documentation improvements

Signed contracts should be maintained in project files

Contract documentation is typically prepared by DTD and Development Agency (DA) staff in conjunction with County Finance Procurement (Procurement) staff. Once the contract is awarded, Procurement staff are responsible for getting the appropriate contractor and County management signatures. After the contract is approved by all appropriate parties, the contract is either scanned into the County's information technology system or filed.



Bridge over Sandy River, before construction



Bridge over Sandy River, after construction

A copy of the contract is then sent to DTD and DA administrative staff. A copy of the signed contract, including all the contracts' specifications, are not kept in the project files so they cannot be easily accessed by DTD and DA project staff. Project management staff are typically working off the last copy of the contract that went to Procurement for approval from the applicable management and contractors.

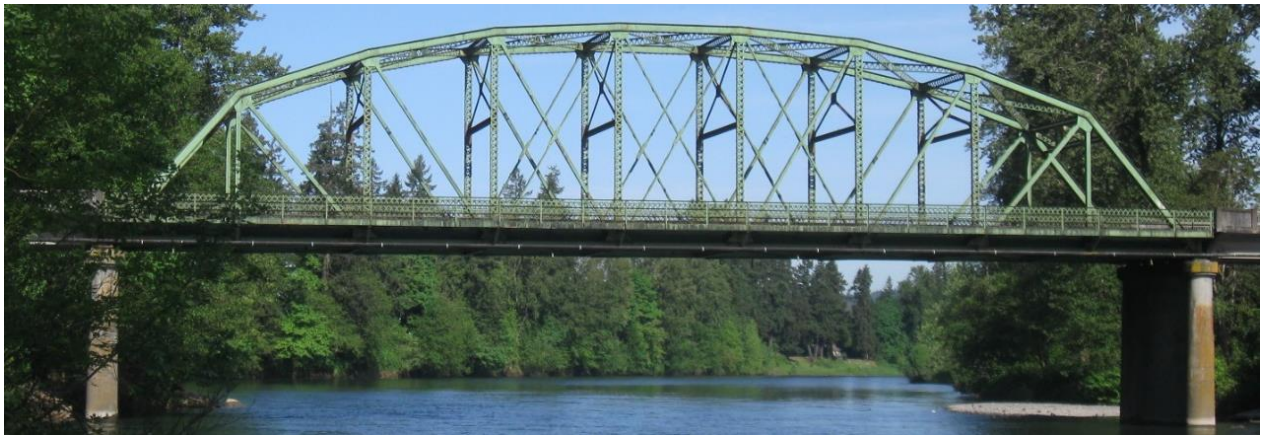
During testing, we also noted that the specifications section of the contract (e.g. section 8,) is copied on a CD and provided to the contractor and maintained by Procurement. While the signed contract is provided to DTD and DA administrative staff, the CD that outlines a significant portion of the contract specifications is not provided to DTD and DA staff.

We recommend final approved contract documentation be maintained within DTD and DA project files so that project management staff is working from the final approved contract. We also recommend DTD and DA staff ensure the entire contract documentation is received (e.g. all plans and specifications).

Right of way status reports

Right of way (ROW) status reports are periodically submitted to PMs to show the status of all right of way, including, temporary construction easements, right of entry, permanent easements, etc. The ROW status report is an effective tool to track the status of all outstanding ROW and track the expiration of any temporary right of way. The format and/or information for the ROW status reports were not consistent from project to project. Also, in six instances, not all ROW status reports we reviewed were complete. It is difficult to determine if all ROW is complete without one overarching completed status report. It is also easier to track all ROW, especially expiring contracts, such as, temporary construction easements, rights of entry, etc., if it is maintained in one master ROW status report.

***We recommend** management create a mechanism to ensure all ROW outlined in the status report is complete and consider standardizing the format and/or information included in the ROW status reports. For example, this report could be included as a requirement on the project management checklist.*



Carver Bridge (Springwater Road), before construction



Carver Bridge (Springwater Road), after construction

Payments should be reconciled from the DTD subsidiary system to the County's book of record

Payments are not reconciled from PawPrints to PeopleSoft Financial

DTD uses an Access based subsidiary system called "PawPrints" to track project information. Included in PawPrints is the tracking of payments to contractors for transportation projects. The payments from PawPrints are not reconciled to the County's book of record, PeopleSoft Financial. Project management staff do not use or access PeopleSoft Financial. Without regular reconciliation, the project staff may not have accurate information which shows the actual amount of payments made to each contractor. For example, we found one payment for \$4,268 that was recorded in PeopleSoft Financial that was not recorded in the PawPrints system.

We recommend regular reconciliations are performed from DTD's subsidiary system (PawPrints) to the County's book of record (PeopleSoft Financial). For example, reconciliation documentation could be included with each payment.

County is unable to show compliance with prompt payment requirements

State law requires timely payments

Clackamas County is required to make progress payments on construction contracts monthly as work progresses on public improvement contracts. Statute requires interest to commence 30 days after receipt of an invoice from a contractor or 15 days after a payment is approved by the County, whichever is earlier. Clackamas County does not have a system in place to ensure compliance with this legal requirement.

We identified five payments during testing that the County could not show met the timeline requirements outlined in statute. When this occurs, the contractor may be eligible to receive interest in addition to the amount invoiced to the County. Such interest is usually not eligible for federal reimbursement. Since there is not a system in place to track when the invoice is received, when it is approved, when it is paid, etc., we are not able to determine the potential amount of interest due. However, based on the invoice date from the contractor and the date the check was issued, we believe the amount of interest potentially due would be minimal.

We recommend management develop a system to track when an invoice is received, when the invoice is approved and when the invoice is paid, to ensure compliance with statute. Procedures should also be in place to pay the appropriate amount of interest when the applicable legal compliance requirements are not met.



Refine on-call contractor's supporting documentation

On-call contracts overview

On-call contracts are typically awarded without a specific public works project or scope of work in mind, but rather are categorized around general types of anticipated work or trades in advance of the actual need for those services.

Clackamas County uses on-call contracts to deal with small projects. For example, on-call contracts can be used for right of way services, including appraisals, appraisal review, acquisition, relocation services, etc. The on-call contracts eliminate very small procurements and can be used when no transportation staff are available or transportation staff resources are limited. For example, the Oregon Department of Transportation (ODOT) has on-call contracts related to architectural and engineering services. County on-call transportation contracts typically have a maximum annual compensation authorized not to exceed \$25,000.

Best practices and testing



During detail testing we reviewed a number of transactions associated with on-call contractor payments. Best practices would support that when a specific scope of work is identified, individual work orders be authorized based on either, a not-to-exceed time and materials basis, or on a negotiated lump sum

amount. These terms should coincide with the fee structure outlined in the contract with the on-call contractor. For two of the on-call contractor payments we reviewed, we were unable to determine if prior to any services being performed, the County and on-call contractor agreed to:

- A specific scope of work, and
- Any not-to-exceed time and material parameters, or
- A negotiated lump sum.

In one of the two aforementioned payments, the on-call contractor billed a flat fee, when the on-call contract indicated hourly rates should be charged.

We recommend supporting documentation with the on-call contractors' payment(s) include¹⁰:

- *Scope of work, deliverables and schedule, and*
- *Not-to-exceed time and material parameters¹¹ or negotiated lump sum¹¹, and*
- *Appropriate level of County approval (signature authority).*

¹⁰ I.e. prior to any services being provided.

¹¹ Payment terms previously negotiated in the on-call contract should be used or at least considered as a part of these negotiations.

Recommendations in Summation

To improve County processes, we recommend transportation management:

- Ensure staff follow scope of work (SOW), project development procedures, by producing a system to track comments and approvals related to the development of the SOW section in the design contracts.
- Ensure all applicable disciplines comment on project documentation at the appropriate design phase; (i.e. if they have no comments, they should send a response with “no comments”; silence is not acceptable; if the applicable discipline does not need to comment, the PM should put ‘N/A’ and explain why).
- Standardize the “comment log” format.
- Develop a system to efficiently and effectively ensure all comments were addressed.
- Ensure checklists are used and maintained by staff in the project management folders.
- Ensure project management checklists include:
 - All project deliverables outlined in the contract,
 - An area for staff to put the date each task was reviewed as completed,
 - A place for staff to initial (legibly) who ensured the task was completed or not applicable,
 - An area for staff comments, and
 - An area for staff to reference to where the applicable support for the item was completed.
- Continue to create a reference system that can be used by transportation construction staff by numbering folders and documents within folders so they can easily be referenced in transportation construction checklists and more.
- Work with Finance (e.g. Procurement division), in conjunction with County Counsel, to evaluate the contract change order (CCO) process to determine the type of controls, including approval structure, that are desired and necessary to mitigate risk.
- Include the original bid item and associated lump sum, time and/or materials amounts on the CCO, as applicable. We also recommend the CCO amount(s) be compared to other sources, such as ODOT’s average bid costs for similar work, the PMs independent cost estimate and/or the original bid item comparison sheet.
- Ensure final approved contract documentation is maintained within DTD and DA project files so that project management staff is working from the final approved contract.
- Verify the entire contract documentation is received (e.g. all plans and specifications).
- Create a mechanism to ensure all ROW outlined in the status report is complete and consider standardizing the format and/or information included in the ROW status reports.
- Ensure regular reconciliations are performed from DTD’s subsidiary system (PawPrints) to the County’s book of record (PeopleSoft Financial).
- Develop a system to track when an invoice is received, when the invoice is approved and when the invoice is paid, to ensure compliance with statute.
- Ensure supporting documentation related to the on-call contractor’s payment(s) include:
 - Previously agreed upon scope of work, deliverables and schedule, and
 - Previously agreed upon not-to-exceed time and material parameters or negotiated lump sum, and
 - Appropriate level of County approval (signature authority).

Objectives, Scope and Methodology

Our audit objective was to evaluate the County's transportation construction process. Clackamas County works with private contractors to design and construct roads, bridges, bike lanes, sidewalks and more. The Department of Transportation and Development (DTD) and the Development Agency (DA) are the primary departments responsible for administering transportation projects.

We reviewed internal controls associated with transportation construction. These controls include signature authority and the associated approval documentation. We also reviewed individual purchase decisions.

We conducted a series of process improvement tests related to six judgmentally selected transportation construction projects. Of the six projects, two were generally projects managed by DA, while four were generally projects managed by DTD.

We also conducted a series of control, substantive and legal compliance tests. We used individual transaction data from the six transportation construction projects as the basis for many of these tests. Detail control, substantive and legal compliance testing was ultimately performed over 36 individual transactions. We selected all transactions judgmentally using various data stratification techniques to identify transactions from design, construction, on-call and "other" type contractors. Data was used from the County's PeopleSoft Financial system and DTD's subsidiary system, PawPrints.

To address our audit objectives, we interviewed County employees who manage the transportation construction function and project managers who run transportation construction projects. We also interviewed County employees in various departments who assist in administering and/or provide input on transportation construction projects (e.g. Procurement Division).

We compared our operations to other government agencies. We learned of additional procedures that could be implemented by the County.

We reviewed federal and state laws, administrative rules and best practices related to transportation construction and our audit objectives. We also reviewed various DTD and DA policies and procedures.

An auditor from another organization, who was not involved with the audit, conducted a quality control review of the audit report to ensure it was accurate and conclusions were supported by audit evidence. This auditor is a Certified Public Accountant, Certified Internal Auditor and Certified Fraud Examiner.

The courtesies and cooperation extended by officials and employees of Clackamas County during the course of this audit were commendable and sincerely appreciated.

Pictures courtesy of DTD and the Mt. Hood Territory.



M. BARBARA CARTMILL
DIRECTOR

DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT

DEVELOPMENT SERVICES BUILDING
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To: Brian Nava, Internal Auditor
From: Mike Bezner, Assistant Director of Transportation *MS*
Subject: Transportation Construction Audit Response
Date: May 30, 2017

Summary

The Clackamas County Department of Transportation and Development and associated programs appreciate the efforts of Brian Nava, Clackamas County Internal Auditor, and the Clackamas County Internal Audit Oversight Committee (IAOC) to complete this thorough review of the Transportation Construction program. Though this internal review found opportunities for improvement, management is pleased with the results that illustrate there are policies in place to provide effective programmatic control and systems to evaluate and limit risk. Management agrees with the recommendations set forth and will implement the audit recommendations not yet implemented, ensuring existing procedures are followed as well as add some additional measures to address identified deficiencies.

Responses to Recommendations in Summation

1. Recommendation: Ensure staff follow scope of work (SOW), project development procedures, by producing a system to track comments and approvals related to the development of the SOW section in the design contracts.

Response: Management will develop a Quality Assurance/Quality Control (QA/QC) process for our Project Managers (PM's) to ensure the SOW is thoroughly vetted through our existing standard procedures. These measures will ensure all comments and approvals related to the development of the scope of work section are secured, and that silence is not taken as approval. In addition, a process will be developed to formally authorize any revisions to the established list of commenters on the design project documentation and at what phase. An improved routing slip that will lead this process has already been developed.

Anticipated Implementation Date: September 2017

Position Responsible: Transportation Construction program manager

2. Recommendation: Ensure all applicable disciplines comment on project documentation; (i.e. if they have no comments, they should send a response with “no comments”; silence is not acceptable; if the applicable discipline does not need to comment, the PM should put ‘N/A’ and explain why).
Response: Implementation of the new routing slip will help address the identified concerns. In addition, PM’s will seek final authorization from management through an enhanced authorization process to determine if the disciplines concerns have been adequately addressed.
Anticipated Implementation Date: September 2017
Position Responsible: Transportation Construction program manager

3. Recommendation: Standardize the “comment log” format
Response: Improvements to the QA/QC process will ensure that each comment log contains certain required information for each comment. Though the logs themselves might be a little different (depending on whether it is the County’s or any of a multitude of consultants), they all should contain dates, names of commenters, who addressed it, how it was resolved, etc.
Anticipated Implementation Date: September 2017
Position Responsible: Transportation Construction program manager

4. Recommendation: Develop a system to efficiently and effectively ensure all comments were addressed.
Response: Management will develop a QA/QC process described above to ensure those comments that are not incorporated are vetted. Also, we will close the loop and send back responses to commenters.
Anticipated Implementation Date: September 2017
Position Responsible: Transportation Construction program manager

5. Recommendation: Ensure checklists are used and maintained by staff in the project management folders.
Response: Management will develop a QA/QC process to ensure that checklists are maintained in the project files once they are completed.
Anticipated Implementation Date: September 2017
Position Responsible: Transportation Construction program manager

6. Recommendation: Ensure project management checklists include:
 - o All project deliverables outlined in the contract,
 - o An area for staff to put the date each task was reviewed as completed,
 - o A place for staff to initial (legibly) who ensured the task was completed or not applicable,
 - o An area for staff comments, and

- o An area for staff to reference to where the applicable support for the item was completed.

Response: Management will develop a QA/QC process to ensure that checklists contain this information.

Anticipated Implementation Date: September 2017

Position Responsible: Transportation Construction program manager

7. Recommendation: Continue to create a reference system that can be used by transportation construction staff by numbering folders and documents within folders so they can easily be referenced in transportation construction checklists and more.

Response: Management will develop a QA/QC process to ensure PM's are properly using our folder numbering system. Numbering documents is a little more difficult since many of our projects are designed and delivered by different consultants, each of whom use their own systems. We will explore using a simplified version for our own files to contain basic documents (deliverables) that we receive from consultants for use in checklists.

Anticipated Implementation Date: September 2017

Position Responsible: Transportation Construction program manager

8. Recommendation: Work with Finance (e.g. Procurement division), in conjunction with County Counsel, to evaluate the contract change order (CCO) process to determine the type of controls, including approval structure, that are desired and necessary to mitigate risk.

Response: Management will work with all parties to confirm current procurement practice or work with the Procurement division to modify our practices accordingly. Procurement has recently changed many processes from those familiar to our PM's for the last decade. Revisions to current internal practices are needed to ensure consistency with these revisions. Assistance from the Procurement division will be required to ensure any revisions to Procurement procedures are communicated and thoroughly vetted. We will also create an internal hierarchy of authorities and an efficient process to gain approvals to keep construction moving without process delays.

Anticipated Implementation Date: December 2017

Position Responsible: Assistant Director of Transportation

9. Recommendation: Include the original bid item and associated lump sum, time and/or material amounts on the CCO, as applicable. We also recommend the CCO amount(s) be compared to other sources, such as ODOT's average bid costs for similar work, the PMs independent cost estimate and/or the original bid item comparison sheet.

Response: Revised QA/QC procedures will ensure that the method used to verify the CCO amount is documented. In some cases with smaller CCO's this will just be a breakdown from the contractor. For larger amounts, a separate analysis will be performed.

Anticipated Implementation Date: September 2017

Position Responsible: Transportation Construction program manager

10. Recommendation: Ensure final approved contract documentation is maintained within DTD and DA project files so that project management staff is working from the final approved contract.

Response: Revised QA/QC procedures will ensure that Procurement provides PM's with the final contract documents, and that these documents will be filed and used for construction. Unsigned copies will be filed in a different location.

Anticipated Implementation Date: September 2017

Position Responsible: Transportation Construction program manager

11. Recommendation: Verify the entire contract documentation is received (e.g. all plans and specifications).

Response: Revised QA/QC procedures will ensure that Procurement provides us with the entire contract documentation.

Anticipated Implementation Date: September 2017

Position Responsible: Transportation Construction program manager

12. Recommendation: Create a mechanism to ensure all ROW outlined in the status report is complete and consider standardizing the format and/or information included in the ROW status reports.

Response: Revised QA/QC procedures will ensure the last ROW status report states that all ROW files are complete (include in project checklist). We will also ensure that important basic information is contained in each report, if not necessarily in a standardized format since consultants each use their own.

Anticipated Implementation Date: September 2017

Position Responsible: Transportation Construction program manager

13. Recommendation: Ensure regular reconciliations are performed from DTD's subsidiary system (PawPrints) to the County's book of record (PeopleSoft Financial).

Response: DTD is implementing modifications to the PawPrints program that will allow staff to reconcile PawPrints with the general ledger (PeopleSoft). We have already sent an initial request to our programmer for the modifications to the PawPrints program and we have been building upon this initial concept as we meet to discuss the changes we are going to implement. We plan on reconciling these entries monthly, as part of the monthly monitoring process.

Anticipated Implementation Date: December 2017

Position Responsible: Administrative Services Manager

14. Recommendation: Develop a system to track when an invoice is received, when the invoice is approved, and when the invoice is paid to ensure compliance with statute.

Response: We believe PawPrints could accommodate this – we can expand on the reconciliation request above and add date fields that would let us track all three of these dates. If we stamp all invoices/mail with the date received in our office, we can ask the PM's to add a date to their approval signature and the reconciliation of PS/PawPrints will track the date paid. Finance would have to be part of the process since DTD has no control over the actual date the invoice is paid.

Anticipated Implementation Date: December 2017

Position Responsible: Administrative Services Manager

15. Recommendation: Ensure supporting documentation related to the on-call contractor's payment(s) include:
- Previously agreed upon scope of work, deliverables and schedule, and
 - Previously agreed upon not-to-exceed time and material parameters or negotiated lump sum, and
 - Appropriate level of approval (signature authority).

Response: Revised QA/QC procedures will ensure work orders for on-call contracts will have enough detail to specify what the work is to be done, and how it is being paid for. Invoices for this work will include a description of what portion of the work order is being paid for. The appropriate signature authority already approves the contracts themselves, so the dollar amount is already authorized. The person approving the payment checks the progress to ensure original amount is not exceeded.

Anticipated Implementation Date: September 2017

Position Responsible: Transportation Construction program manager