Office of Inspector General
Robert E. Clift, Inspector General

Advisory Report No. 15P-1003 August 29, 2016
District Maintenance Contracts – Pipe Desilting and Video Inspection Monitoring

What We Did

The Office of Inspector General (OIG) performed a review of the Department of Transportation's (department) district maintenance contracts to evaluate the procedures, processes, and controls for video inspection, pipe desilting, cleaning, debris removal, and repair.

What We Found

We determined:

- Video inspection footage did not reconcile back to the invoices and work documents;
- Payments were made prior to receipt of the deliverables; and
- Actual quantity exceeded the estimated quantity on maintenance work documents by more than 5% and approval was not documented.

We also noted three observations regarding:

- inconsistent monitoring processes for inspection and storage of video files;
- overestimated quantities;
- tracking of payment packets; and
- segregation of duties.

What We Recommend

We recommend the Director of the Office of Maintenance:

- review the adequacy and usefulness of contractors providing all video inspections, even those that do not identify pipe defects;
- ensure future maintenance contracts include consistent contract specifications language regarding video inspection;
- ensure staff responsible for monitoring contracts, which include video inspection, receive appropriate training;
- ensure the districts review and reconcile submitted invoices to the work documents and video inspections prior to payment to ensure accurate payments for services;
- ensure deliverables are received prior to payment;

- ensure the districts maintain all video inspections, if a deliverable, in accordance with the records retention procedure; and
- ensure the districts comply with procedure requirements regarding documenting approval for actual work exceeding 5% of the estimated quantities prior to payment of the invoice.

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BACKGROUND AND INTRODUCTION

The OIG initiated this review as a result of allegations received by District One of incomplete work, intentional pipe damage, and improper billing for pipe desilting and repairs by a contractor in 2012. OIG Investigators observed what they believed to be inefficient monitoring of the contractor's performance and ineffective validation of work performed on contractor invoices. As a result of the investigation, the OIG initiated a review, at the request of the Inspector General, during fiscal year (FY) 2014-2015 and the project was carried forward to the FY 2015-2016 annual audit plan.

The department spent $3.8 million on maintenance contracts for video inspection, pipe desilting, cleaning, debris removal, and repair within the district maintenance offices (maintenance contracts) during fiscal year (FY) 2013-2014 and $2.7 million during FY 2014-2015. As of February 5, 2015, there were 32 active maintenance contracts for the seven districts and Florida's Turnpike Enterprise (TPE). All 32 included desilting in the scope of services and 20 included video inspection.

What is Pipe Desilting?

Pipe desilting is performed by maintenance contractors to clear blocked drains, pipes, and storm sewers using a vacuum truck. Hydro jetting is a cleaning process that uses large volumes of water under very high pressure to clean the walls of the drains, pipes, and storm sewers.

What is Video Inspection and its Purpose?

Video inspection is a method used to visually inspect the interior of drains, pipes, and storm sewers and determine their condition. Video inspection is performed for various reasons including identifying defects in order to develop repair contracts.

How do the Districts Monitor Pipe Desilting and Video Inspection Contracts?

Procedure 375-020-002, Maintenance Contract Administration, Inspection, and Reporting outlines the responsibilities of the Inspector, Contract Coordinator, and Maintenance Manager/Contracts regarding the administration, inspection, and reporting of a maintenance contract.

- The Inspector is responsible for field verification of the Contractor's work to review acceptability of performance, and document the maintenance activities performed under the contract.
- The Contract Coordinator is responsible for monitoring the Contractor's performance, verifying that the maintenance activities have been performed as specified in the contract documents, and ensuring that the appropriate procedures for payment processing have been completed as required. The Contract Coordinator shall periodically review the Inspector's methods and conduct quality assurance inspections as needed.

- The Maintenance Manager/Contracts is responsible for verifying that appropriate contracting procedures are followed, contracts are administered fairly and consistently, and contract reports and records are properly completed.

RESULTS OF REVIEW

We identified three findings concerning the department's procedures, processes, and controls of maintenance contracts. Additionally, we provided three observations that could improve department monitoring of maintenance contracts.

Finding 1 – Contract Deliverables

We determined video inspection footage did not reconcile to the footage on the invoices and work documents. We also identified payment for deliverables prior to receipt of the deliverables.

We reviewed 20 active contracts with video inspection included in the scope and found contract specifications language regarding video inspection is inconsistent. We noted the department Standard Specifications does not identify a method of measurement for video inspection. However, 8 of the 20 (40%) reviewed contracts specified the method of measurement for payment for video inspections. Six contracts identified the quantity to be paid would be the length of pipe the camera physically traveled during the inspection of the location specified on the work orders. Two contracts identified the payment quantity is the number of linear feet of video inspection, including the video narration, written report, and a DVD copy of the video. The remaining 12 contracts did not specify the method of measurement for payment for video inspections.

In order to identify and evaluate the contract monitoring controls and processes used to verify deliverables, we sampled and reviewed 20 work documents and invoices to determine whether the linear feet reflected on the work documents and invoices reconciled with the video file.

The total video inspection footage did not reconcile to 14 of the 20 (65%) invoices and 13 of the 20 (65%) work documents (WDs), allowing for a 5% variable in linear feet. Of the 14 inaccurate invoices:

- 10 included footage exceeding the video inspection;
- 1 reflected footage less than the video inspection; and
- 3 invoices could not be reconciled since the invoice or video inspection was not provided by the district.

The provided video inspections recorded 22,834.49 fewer feet than the reconciled invoices and work documents, which resulted in an overpayment of $20,495.57 (See Appendix C). The districts were unable to provide all supporting video footage for paid video inspections to support the invoices and work documents. Of the 13 inaccurate WDs:

- 10 reflected footage exceeding the actual video inspection;
- 1 reflected footage less than the video inspection; and
- 2 work documents could not be reconciled since the video inspections were not provided by the district.

We identified 10 payments for deliverables (video inspections or reports) prior to receipt. Table 1 shows District Three's contract E3M71[1] payments. Highlighted payments correspond to payment prior to receipt of the video inspection and inspection report deliverables.

Table 1: Payments for Deliverables (contract E3M71)

State Road	WD	Corresponding Invoice	Dates of Service from Invoice	Video Inspection Amount from Invoice
87	1	16062	3/31/14-4/30/14	$17,734.00
87	2	16094	5/1/14-5/31/14	$32,378.00
87	3	16126	6/1/14-6/30/14	$10,328.00
87	4	16152	7/1/14-7/31/14	$4,090.00
87	5	16168	8/1/14-8/31/14	$28,796.00
87	6	16186	9/1/14-9/30/14	$7,056.00
87	7	16253	10/1/14-11/30/14	$33,570.00
4	8	16273	12/1/14-12/31/14	$38,484.00
4 & 89	9	16302	1/1/15-1/31/15	$50,898.00
89 & 8	10, 10-1	16321	2/1/15-3/2/15	$25,118.00
8	11	16350	3/3/15-4/2/15	$31,016.00
8	12	16387	4/3/15-6/4/15	$21,334.00
Total Amount for E432-4				**$300,802.00**

District Three confirmed they paid monthly invoices based on the actual quantities from the work documents and not from the video inspections or their corresponding written reports. The contractors did not submit the video inspections or reports to the district until the entire roadway was complete as per the contract. The district processed the final payment after the receipt of the reports and videos.

We recommend the Director of Maintenance:

- review the adequacy and usefulness of contractors providing all video inspections, even those that do not identify pipe defects;
- ensure future maintenance contracts include consistent contract specifications language regarding video inspection;
- ensure the districts review and reconcile submitted invoices to the work documents and video inspections prior to payment to ensure accurate

[1] Contract E3M71 consisted of video pipe inspection in Santa Rosa County.

payments for services;
- ensure deliverables are received prior to payment;
- ensure the districts maintain all video inspections, if a deliverable, in accordance with the records retention procedure; and
- ensure staff responsible for monitoring contracts, which include video inspection, receive training which covers the items listed above.

Finding 2 – Prior Approval of Quantity Adjustments

We determined documentation for approval for quantities that exceeded the estimated quantity by more than 5% did not exist on 66% of the sampled maintenance work documents.

Procedure 375-020-002-k states, “Actual work performed by the Contractor shall not exceed 5% of the estimated quantities on the Work Document without prior approval by the Department. If approval is given, the Contract Coordinator shall document the adjusted quantity.”

We sampled 9 of 21 (43%) work documents issued after the updated Procedure No. 375-020-002-k, effective February 18, 2015, requiring this type of approval. Of the 9 sampled maintenance work documents, 6 (66.67%) did not contain documented approval when actual quantities exceeded estimated quantities by more than 5%.

Table 2: Work Documents

	WD #	Item #	Work Description	Estimated Quantity	Actual Quantity	Change in Quantity
1	R2 WD 7	E425-73-1	Cleaning Manholes & Inlets (Mechanical)	7	10	42.86%
2	R2 WD 8	0430-94-1	Desilting Pipe, 0"-24"	2544	2960	16.35%
	R2 WD 8	E432-4	Storm Sewer Inspection, Video	2731	3136	14.83%
3	R0 WD 9	0430-94-3	Desilting Pipe, 37-48"	0	232.2	Pay item added
	R0 WD 9	E432-4	Storm Sewer Inspection (video camera)	0	236.1	Pay item added
4	R0 WD 10	0520-1-10	Concrete Curb & Gutter, Type F	28	38	35.71%
5	WD 11	0432-4	Storm Water Video Inspection	50	54	8.00%
6	WD 12	0430-94-1	Desilting pipe 0" - 24"	300	323	7.67%
	WD 12	E432-4	Storm sewer inspection (video camera)	300	323	7.67%

This practice could result in payment for unauthorized services, which affects the amounts encumbered for the duration of the contract.

We recommend the Director Maintenance ensure the districts comply with procedure requirements regarding documenting approval for actual work exceeding 5% of the estimated quantities prior to payment of the invoice.

Observation 1 – Monitoring of Video Inspection and Storage of Video Files

The districts lack consistency in monitoring processes for inspection and storage of video files.

Best practices observed during our review for maintaining video inspection included:

- use of daily or weekly forms to track video inspection quantities (Districts Two, Three, Four, and Five);
- receipt of working video inspections the day after video inspection is complete (District One);
- requirement in specifications for DVD label to be marked with contract number, state road number, section number, location descriptions, structure numbers, and date of inspection (District Five); and
- requirement for contractor to schedule the video inspection 48 hours in advance (District Five).

We observed inconsistencies in the districts' storage of video inspections. The video inspection DVDs were stored various ways in unlocked and locked file cabinets, desk drawers, on external hard drives, and in boxes in employee offices. The districts were unable to provide all video inspections for our sampled work documents.

Other business units within the districts may need to review the video inspections in order to develop specifications for a repair contract. If the districts do not maintain a log of the location and status of video inspections, this could impede the districts from properly letting a contract for pipe repair.

Observation 2 – Overestimated Quantities on Work Documents

For contract E3M71, managed out of the District Three Milton Operations office, we noted all 13 work documents included an overestimation of quantities from 11.49% to 100%.

We received 13 work documents for contract E3M71 that included 189 line pay items. Of the 189 line items, 183 (97%) contained overestimated quantities ranging from 11.49% to 100%. Of the 183 overestimated line items, 108 (59%) reflected estimates of work and actual work was not performed. Of these 108 line items, 68 (63%) were for locations where work was not performed throughout the work document and 40 (37%) were for locations where work was performed on the work document. In addition, we noted the work documents were incorrectly completed and did not include the work description in the appropriate section. (See Appendix D and Appendix E).

When quantities are overestimated, this provides the contractor an opportunity to falsify actual quantities up to the overestimated quantity amount.

Observation 3 – Tracking of Payment Packets

During our review of invoice processing, we were unable to determine whether the districts sent all payment packets for sampled invoices to the districts' financial services offices within the required five days.

Approval and inspection of goods or services shall take no longer than 5 working days from receipt of goods or services per Rule Chapter 69I-24, Florida Administrative Code.

We judgmentally sampled and reviewed 3 invoices per district for a total of 24 invoices. We verified 18 of 24 (75%) sampled invoice payment packets were sent to the districts' financial services offices within 5 days.

Best practices observed included:

- payment packets submitted with a transmittal log showing the date the packet was sent to the Office of Comptroller (TPE); and
- emails maintained tracking the payment packages to the district financial services office (District Two).

The remaining offices do not keep track of when payment packets are sent to the districts' financial services offices.

Observation 4 – Segregation of Duties

District Two did not have proper segregation of duties for processing invoices. One individual was certifying goods and services were received and also certifying the request for payment.

The Committee of Sponsoring Organizations of the Treadway Commission defines segregation of duties as dividing, or segregating duties, among different people to reduce the risk of error or inappropriate actions.

We judgmentally sampled and reviewed three invoices per district for a total of 24 invoices. Of the seven districts and TPE, District Two did not have proper segregation of duty for certifying the goods and services they receive and authorization for payment. All three of the sampled invoices from District Two included the same staff member as both the project manager and District Maintenance Engineer (DME) designee by signing the invoice twice. This situation exists since the Project Manager was also assigned as the DME designee. Currently, there is not an alternate process in place to assign another individual for approval of payment when dual responsibilities are assigned to one employee.

APPENDIX A – Purpose, Scope, and Methodology

Section 20.055, Florida Statutes, requires the OIG to conduct audits, examinations, investigations, and management reviews related to programs and operations of the department. This audit was performed as part of the OIG's mission to promote accountability, integrity, and efficiency for the citizens of Florida by providing objective and timely audit and investigative services.

The **purpose** of this engagement was to identify and evaluate the contract monitoring controls and processes used to verify deliverables in video inspections and pipe desilting maintenance contracts. The engagement also determined if the monitoring of video inspection and pipe desilting is consistent across districts.

The **scope** of the engagement included applicable documents, records, policies, procedures, district desilting and video inspection contracts, and standard specifications during Fiscal Year (FY) 2013-2014 and the first half of FY 2014-2015.

The **methodology** included interviewing appropriate district personnel, site visits, and reviewing:

- applicable statutes, rules, and procedures;
- district desilting and video inspection contracts;
- 2010, 2013, and 2014 FDOT Standard Specifications for Road and Bridge Construction;
- 2012, 2013, 2014, and 2015 FDOT Design Standards; and
- standard operating guides, handbooks, and desktop procedures.

APPENDIX B – Management Response

The Director of the Office of Maintenance provided the following response on August 1, 2016:

Finding 1 – Contract Deliverables

"**We determined** video inspection footage did not reconcile to the footage on the invoices and work documents. We also identified payment for deliverables prior to receipt of the deliverables.

"**We recommend** the Director of Maintenance:

- review the adequacy and usefulness of contractors providing all video inspections, even those that do not identify pipe defects;
- ensure future maintenance contracts include consistent contract specifications language regarding video inspection;
- ensure the districts review and reconcile submitted invoices to the work documents and video inspections prior to payment to ensure accurate payments for services;
- ensure deliverables are received prior to payment;
- ensure the districts maintain all video inspections, if a deliverable, in accordance with the records retention procedure; and
- ensure staff responsible for monitoring contracts, which include video inspection, receive training which covers the items listed above."

The Office of Maintenance (OOM) Response:

The OOM concurs with the finding and recommendations. Each recommendation will involve some combination of specification changes, process reviews, procedure changes, form modifications, Quality Assurance Review (QAR) modifications, and training. The OOM will discuss the finding and recommendations during the August 2016, District Maintenance Engineers meeting and during the monthly Maintenance Issues Group (MIG) meetings to determine the best resolutions. As resolutions are determined, the OOM will discuss with all Districts during annual QARs. Resolutions to all recommendations will be accomplished by the end of November 2017.

Observation 1 – Monitoring of Video Inspection and Storage of Video Files will be reviewed and improvements implemented using this same process.

Finding 2 – Prior Approval of Quantity Adjustments

"**We determined** documentation for approval for quantities that exceeded the estimated quantity by more than 5% did not exist on 66% of the sampled maintenance work documents.

"**We recommend** the Director Maintenance ensure the districts comply with procedure requirements regarding documenting approval for actual work exceeding 5% of the estimated quantities prior to payment of the invoice."

OOM Response:

The OOM concurs with the finding and recommendation. The OOM is currently discussing and reviewing the proper estimations of work and the proper handling of modifications with all Districts during annual QARs. This practice will continue and will remain a focus area thru the end of November 2017.

Observation 2 – Overestimated Quantities on Work Documents will be discussed and reviewed using this same process.

Observation 3 – Tracking of Payment Packets

"During our review of invoice processing, we were unable to determine whether the districts sent all payment packets for sampled invoices to the districts' financial services offices within the required five days."

OOM Response:

The OOM will discuss the observation during the August 2016, District Maintenance Engineers meeting.

Observation 4 – Segregation of Duties

"District Two did not have proper segregation of duties (SOD) for processing invoices. One individual was certifying goods and services were received and also certifying the request for payment."

OOM Response:

The OOM will discuss the observation during the August 2016, District Maintenance Engineers meeting.

APPENDIX C – Comparison of Video Footage to Invoices and Work Documents

In order to identify and evaluate the contract monitoring controls and processes used to verify deliverables, we sampled seven work document driven contracts from Districts One, Two, Three, Four, Six, Seven, and TPE, which contained 127 work documents. Of the 127 work documents, 73 included video inspection as a line item. Of the 73 work documents, we sampled and reviewed 20 work documents and invoices to determine whether the linear feet reflected on the work documents and invoices reconciled with the video file. The District Five contract selected for review was a site-specific contract and was not work document driven. We selected three invoices to determine whether linear feet present on the invoice reconciled with the DVD information.

District	Work Document (WD) #	Video Footage	Invoice Information	WD Information	Difference b/t Video and Invoice	Difference b/t Video and WD	Video Footage Reconcile with Invoice (Allowing 5% Variable)	Video Footage Reconcile with WD (Allowing 5% Variable)
1	R2 WD 4	1,644.50	1,872.00	1,872.00	(227.50)	(227.50)	No	No
1	R2 WD 7	889.10	906.00	906.00	(16.90)	(16.90)	Yes	Yes
1	R3 WD 8	3,044.70	3,136.00	3,136.00	(91.30)	(91.30)	No	No
2	WD 2	1,109.70	1,447.00	1,447.00	(337.30)	(337.30)	No	No
2	WD4	726.70	726.70	726.70	-	-	Yes	Yes
2	WD 9	231.30	236.10	236.10	(4.80)	(4.80)	Yes	Yes
3	WD 4	1,834.20	2,045.00	2,045.00	(210.80)	(210.80)	No	No
3	WD 7	11,285.70	16,785.00	16,785.00	(5,499.30)	(5,499.30)	No	No
3	WD 10	3,491.00	2,635.00	2,635.00	856.00	856.00	No	No
4	R0 WD 4	208.40	4,970.40	4,970.00	(4,762.00)	(4,761.60)	No	No
4	R1 WD 1	345.00	6,599.40	6,599.40	(6,254.40)	(6,254.40)	No	No
4	R1 WD 3	137.60	5,888.20	5,888.20	(5,750.60)	(5,750.60)	No	No
6	R0 WD 2	32.90	55.00	55.00	(22.10)	(22.10)	No	No
6	R0 WD 10	426.60	447.00	447.00	(20.40)	(20.40)	Yes	Yes
6	R1 WD 4	42.80	43.00	43.00	(0.20)	(0.20)	Yes	Yes
7	WD 11	54.50	54.00	54.00	0.50	0.50	Yes	Yes
7	WD 12	Not provided	377.00	323.00	No reconcillation	No reconcillation	No	No
7	WD 6-24-15	1,531.50	Not provided	1,531.30	No reconcillation	0.20	No	Yes
TPE	R0 WD 8	Not provided	346.00	346.00	No reconcillation	No reconcillation	No	No
TPE	R1 WD 5	84.81	620.00	620.00	(535.19)	(535.19)	No	No
Total (excluding those within the 5% variable)		27,121.01	49,188.80	50,665.70	(22,834.49)	(22,834.09)	**20**	**20**
YES							6	7
NO							14	13

District	Invoice #	Video Footage	Invoice Footage	Difference b/t Video and Invoice	Video Footage Reconcile with Invoice (Allowing 5% Variable)
5	3356	4,005.40	3,990.70	14.70	Yes
5	3411	2,116.20	2,117.90	(1.70)	Yes
5	3427	3,039.90	3,039.90	-	Yes
Total	**3**	9,161.50	9,148.50	13.00	**3**
	YES				3
	NO				0

*Numbers in green were within the allowable 5% variable.

APPENDIX D – Overestimated Quantities

We received 13 work documents for contract E3M71 that included 189 line pay items. Of the 189 line items, 183 (97%) contained overestimated quantities ranging from 11.49% to 100%. Of the 183 overestimated line items, 108 (59%) reflected estimates of work and actual work was not performed. Of these 108 line items, 68 (63%) were for locations where work was not performed throughout the work document (orange rows) and 40 (37%) were for locations where work was performed on the work document (purple rows).

WD #	Item #	Work Description	Work Location	Estimated Quantity	Actual Quantity	Change in Quantity
WD 1	0430-94-2	Desilting Pipe 25-36"	SR-87	20,000	1,504	-92.48%
WD 1	0430-94-1	Desilting Pipe 0-24"	SR-87	20,000	2,996	-85.02%
WD 1	E432-4	Storm Sewer Inspection Video	SR-87	50,000	8,867	-82.27%
WD 1	E425-73-1	Clean Manholes/Inlets (Mechanical)	SR-87	200	63	-68.50%
WD 1	0430-94-3	Desilting Pipe 37-48"	SR-87	1,100	2,054	86.73%
WD 1	0430-94-4	Desilting Pipe 49-60"	SR-87	1,000	2,313	131.30%
WD 1	0430950	Desilting Concrete Box Culvert	SR-87	100	0	-100.00%
WD 1	E425-73-5	Clean Manholes/Inlets Manual	SR-87	200	0	-100.00%
WD 1	0430-94-1	Desilting Pipe 0-24"	SR-89	20,000	0	-100.00%
WD 1	0430-94-2	Desilting Pipe 25-36"	SR-89	20,000	0	-100.00%
WD 1	0430-94-3	Desilting Pipe 37-48"	SR-89	1,100	0	-100.00%
WD 1	0430-94-4	Desilting Pipe 49-60"	SR-89	1,000	0	-100.00%
WD 1	0430950	Desilting Concrete Box Culvert	SR-89	100	0	-100.00%
WD 1	E425-73-1	Clean Manholes/Inlets (Mechanical)	SR-89	200	0	-100.00%
WD 1	E425-73-5	Clean Manholes/Inlets Manual	SR-89	200	0	-100.00%
WD 1	E432-4	Storm Sewer Inspection Video	SR-89	50,000	0	-100.00%
WD 2	0430-94-2	Desilting Pipe 25-36"	SR-87	20,000	4,167	-79.17%
WD 2	0430-94-1	Desilting Pipe 0-24"	SR-87	20,000	4,728	-76.36%
WD 2	E432-4	Storm Sewer Inspection Video	SR-87	50,000	16,189	-67.62%
WD 2	E425-73-1	Clean Manholes/Inlets (Mechanical)	SR-87	200	88	-56.00%
WD 2	0430-94-3	Desilting Pipe 37-48"	SR-87	1,100	3,522	220.18%
WD 2	0430-94-4	Desilting Pipe 49-60"	SR-87	1,000	3,772	277.20%
WD 2	0430950	Desilting Concrete Box Culvert	SR-87	100	0	-100.00%
WD 2	E425-73-5	Clean Manholes/Inlets Manual	SR-87	200	0	-100.00%
WD 2	0430-94-1	Desilting Pipe 0-24"	SR-89	20,000	0	-100.00%
WD 2	0430-94-2	Desilting Pipe 25-36"	SR-89	20,000	0	-100.00%
WD 2	0430-94-3	Desilting Pipe 37-48"	SR-89	1,100	0	-100.00%
WD 2	0430-94-4	Desilting Pipe 49-60"	SR-89	1,000	0	-100.00%
WD 2	0430950	Desilting Concrete Box Culvert	SR-89	100	0	-100.00%

WD 2	E425-73-1	Clean Manholes/Inlets (Mechanical)	SR-89	200	0	-100.00%
WD 2	E425-73-5	Clean Manholes/Inlets Manual	SR-89	200	0	-100.00%
WD 2	E432-4	Storm Sewer Inspection Video	SR-89	50,000	0	-100.00%
WD 3	E432-4	Storm Sewer Inspection Video	SR-87	50,000	5,164	-89.67%
WD 3	0430-94-2	Desilting Pipe 25-36"	SR-87	20,000	2,081	-89.60%
WD 3	0430-94-4	Desilting Pipe 49-60"	SR-87	1,000	111	-88.90%
WD 3	0430-94-1	Desilting Pipe 0-24"	SR-87	20,000	2,333	-88.34%
WD 3	E425-73-1	Clean Manholes/Inlets (Mechanical)	SR-87	200	32	-84.00%
WD 3	0430-94-3	Desilting Pipe 37-48"	SR-87	1,100	254	-76.91%
WD 3	0430-94-5	Desilting Pipe, 61" or greater	SR-87	1,000	385	-61.50%
WD 3	0430950	Desilting Concrete Box Culvert	SR-87	100	0	-100.00%
WD 3	0430-94-1	Desilting Pipe 0-24"	SR-89	20,000	0	-100.00%
WD 3	0430-94-2	Desilting Pipe 25-36"	SR-89	20,000	0	-100.00%
WD 3	0430-94-3	Desilting Pipe 37-48"	SR-89	1,100	0	-100.00%
WD 3	0430-94-4	Desilting Pipe 49-60"	SR-89	1,000	0	-100.00%
WD 3	0430950	Desilting Concrete Box Culvert	SR-89	100	0	-100.00%
WD 3	0430-94-5	Desilting Pipe, 61" or greater	SR-89	1,000	0	-100.00%
WD 3	E425-73-1	Clean Manholes/Inlets (Mechanical)	SR-89	200	0	-100.00%
WD 3	E432-4	Storm Sewer Inspection Video	SR-89	50,000	0	-100.00%
WD 4	0430-94-3	Desilting Pipe 37-48"	SR-87	1,100	68	-93.82%
WD 4	0430-94-1	Desilting Pipe 0-24"	SR-87	20,000	1,977	-90.12%
WD 4	E425-73-1	Clean Manholes/Inlets (Mechanical)	SR-87	200	30	-85.00%
WD 4	0430-94-2	Desilting Pipe 25-36"	SR-87	20,000	0	-100.00%
WD 4	0430-94-4	Desilting Pipe 49-60"	SR-87	1,000	0	-100.00%
WD 4	E432-4	Storm Sewer Inspection Video	SR-87	50,000	2,045	-95.91%
WD 4	0430-94-1	Desilting Pipe 0-24"	SR-89	20,000	0	-100.00%
WD 4	0430-94-2	Desilting Pipe 25-36"	SR-89	20,000	0	-100.00%
WD 4	0430-94-3	Desilting Pipe 37-48"	SR-89	1,100	0	-100.00%
WD 4	0430-94-4	Desilting Pipe 49-60"	SR-89	1,000	0	-100.00%
WD 4	0430950	Desilting Concrete Box Culvert	SR-89	100	0	-100.00%
WD 4	0430950	Desilting Concrete Box Culvert	SR-89	100	0	-100.00%
WD 4	E425-73-1	Clean Manholes/Inlets (Mechanical)	SR-89	200	0	-100.00%
WD 4	E425-73-5	Clean Manholes/Inlets Manual	SR-89	200	0	-100.00%
WD 4	E425-73-5	Clean Manholes/Inlets Manual	SR-89	200	0	-100.00%
WD 4	E432-4	Storm Sewer Inspection Video	SR-89	50,000	0	-100.00%
WD 5	0430-94-2	Desilting Pipe 25-36"	SR-87	20,000	2,455	-87.73%

WD 5	E425-73-1	Clean Manholes/Inlets (Mechanical)	SR-87	400	98	-75.50%
WD 5	E432-4	Storm Sewer Inspection Video	SR-87	50,000	14,398	-71.20%
WD 5	0430-94-1	Desilting Pipe 0-24"	SR-87	20,000	10,265	-48.68%
WD 5	0430-94-3	Desilting Pipe 37-48"	SR-87	2,000	1,678	-16.10%
WD 5	0430-94-4	Desilting Pipe 49-60"	SR-87	1,000	0	-100.00%
WD 5	0430950	Desilting Concrete Box Culvert	SR-87	100	0	-100.00%
WD 5	E425-73-5	Clean Manholes/Inlets Manual	SR-87	400	0	-100.00%
WD 5	0430-94-5	Desilting Pipe, 61" or greater	SR-87	1,000	0	-100.00%
WD 6	0430-94-2	Desilting Pipe 25-36"	SR-87	20,000	130	-99.35%
WD 6	E425-73-1	Clean Manholes/Inlets (Mechanical)	SR-87	400	4	-99.00%
WD 6	E432-4	Storm Sewer Inspection Video	SR-87	50,000	3,528	-92.94%
WD 6	0430-94-1	Desilting Pipe 0-24"	SR-87	20,000	3,398	-83.01%
WD 6	0430-94-5	Desilting Pipe, 61" or greater	SR-87	1,000	0	-100.00%
WD 6	0430-94-2	Desilting Pipe 37-48"	SR-87	2,000	0	-100.00%
WD 6	0430-94-4	Desilting Pipe 49-60"	SR-87	1,000	0	-100.00%
WD 6	0430950	Desilting Concrete Box Culvert	SR-87	1,000	0	-100.00%
WD 6	E425-73-5	Clean Manholes/Inlets Manual	SR-87	400	0	-100.00%
WD 7	0430-94-2	Desilting Pipe 25-36"	SR-87	20,000	1,014	-94.93%
WD 7	E425-73-5	Clean Manholes/Inlets Manual	SR-87	400	0	-100.00%
WD 7	E425-73-1	Clean Manholes/Inlets (Mechanical)	SR-87	400	27	-93.25%
WD 7	0430-94-4	Desilting Pipe 49-60"	SR-87	1,000	124	-87.60%
WD 7	E430-94-5	Desilting Pipe, 61" or greater	SR-87	1,000	247	-75.30%
WD 7	0430-94-3	Desilting Pipe 37-48"	SR-87	2,000	580	-71.00%
WD 7	E432-4	Storm Sewer Inspection Video	SR-87	50,000	16,785	-66.43%
WD 7	0430-94-1	Desilting Pipe 0-24"	SR-87	20,000	14,820	-25.90%
WD 7	0430950	Desilting Concrete Box Culvert	SR-87	1,000	0	-100.00%
WD 8	0430-94-2	Desilting Pipe 25-36"	SR-4	20,000	1,002	-94.99%
WD 8	E425-73-1	Clean Manholes/Inlets (Mechanical)	SR-4	600	54	-91.00%
WD 8	0430-94-3	Desilting Pipe 37-48"	SR-4	2,000	538	-73.10%
WD 8	E432-4	Storm Sewer Inspection Video	SR-4	50,000	19,242	-61.52%
WD 8	0430-94-1	Desilting Pipe 0-24"	SR-4	20,000	17,702	-11.49%
WD 8	0430-94-4	Desilting Pipe 49-60"	SR-4	1,000	0	-100.00%
WD 8	0430950	Desilting Concrete Box Culvert	SR-4	1,000	0	-100.00%
WD 8	E425-73-5	Clean Manholes/Inlets Manual	SR-4	400	0	-100.00%
WD 8	E432-4	Storm Sewer Inspection Video	SR-4	50,000	0	-100.00%
WD 8	0430-94-5	Desilting Pipe, 61" or greater	SR-4	1,000	0	-100.00%
WD 8	E425-73-5	Clean Manholes/Inlets Manual	SR-87	400	0	-100.00%
WD 8	0430-94-1	Desilting Pipe 0-24"	SR-87	20,000	0	-100.00%

WD 8	0430-94-2	Desilting Pipe 25-36"	SR-87	20,000	0	-100.00%
WD 8	0430-94-4	Desilting Pipe 49-60"	SR-87	1,000	0	-100.00%
WD 8	0430-94-3	Desilting Pipe 37-48"	SR-87	2,000	0	-100.00%
WD 8	0430950	Desilting Concrete Box Culvert	SR-87	1,000	0	-100.00%
WD 8	E425-73-1	Clean Manholes/Inlets (Mechanical)	SR-87	400	0	-100.00%
WD 8	0430-94-5	Desilting Pipe, 61" or greater	SR-87	1,000	0	-100.00%
WD 9	0430-94-2	Desilting Pipe 25-36"	SR-4	20,000	100	-99.50%
WD 9	E425-73-1	Clean Manholes/Inlets (Mechanical)	SR-4	600	10	-98.33%
WD 9	0430-94-3	Desilting Pipe 37-48"	SR-4	2,000	89	-95.55%
WD 9	E432-4	Storm Sewer Inspection Video	SR-4	50,000	5,449	-89.10%
WD 9	0430-94-1	Desilting Pipe 0-24"	SR-4	20,000	24,713	23.57%
WD 9	0430-94-4	Desilting Pipe 49-60"	SR-4	1,000	0	-100.00%
WD 9	0430950	Desilting Concrete Box Culvert	SR-4	1,000	0	-100.00%
WD 9	E425-73-5	Clean Manholes/Inlets Manual	SR-4	400	0	-100.00%
WD 9	0430-94-5	Desilting Pipe, 61" or greater	SR-4	1,000	0	-100.00%
WD 9	0430-94-1	Desilting Pipe 0-24"	SR-87	20,000	0	-100.00%
WD 9	0430-94-2	Desilting Pipe 25-36"	SR-87	20,000	0	-100.00%
WD 9	0430-94-3	Desilting Pipe 37-48"	SR-87	2,000	0	-100.00%
WD 9	0430-94-4	Desilting Pipe 49-60"	SR-87	1,000	0	-100.00%
WD 9	0430950	Desilting Concrete Box Culvert	SR-87	1,000	0	-100.00%
WD 9	E425-73-1	Clean Manholes/Inlets (Mechanical)	SR-87	400	0	-100.00%
WD 9	E425-73-5	Clean Manholes/Inlets Manual	SR-87	400	0	-100.00%
WD 9	E432-4	Storm Sewer Inspection Video	SR-87	50,000	0	-100.00%
WD 9	0430-94-5	Desilting Pipe, 61" or greater	SR-87	1,000	0	-100.00%
WD 9	0430-94-2	Desilting Pipe 25-36"	SR-89	20,000	347	-98.27%
WD 9	E425-73-1	Clean Manholes/Inlets (Mechanical)	SR-89	800	30	-96.25%
WD 9	0430-94-3	Desilting Pipe 37-48"	SR-89	2,000	200	-90.00%
WD 9	E432-4	Storm Sewer Inspection Video	SR-89	50,000	20,000	-60.00%
WD 9	0430-94-1	Desilting Pipe 0-24"	SR-89	20,000	16,416	-17.92%
WD 9	0430-94-4	Desilting Pipe 49-60"	SR-89	1,000	0	-100.00%
WD 9	0430950	Desilting Concrete Box Culvert	SR-89	1,000	0	-100.00%
WD 9	E425-73-5	Clean Manholes/Inlets Manual	SR-89	800	0	-100.00%
WD 9	0430-94-5	Desilting Pipe, 61" or greater	SR-89	1,000	0	-100.00%
WD 10	E425-73-1	Clean Manholes/Inlets (Mechanical)	SR-8	800	6	-99.25%
WD 10	0430-94-2	Desilting Pipe 25-36"	SR-8	20,000	174	-99.13%
WD 10	0430-94-3	Desilting Pipe 37-48"	SR-8	4,000	168	-95.80%
WD 10	0430-94-4	Desilting Pipe 49-60"	SR-8	2,000	91	-95.45%

WD 10	E432-4	Storm Sewer Inspection Video	SR-8	50,000	2,635	-94.73%
WD 10	0430-94-1	Desilting Pipe 0-24"	SR-8	20,000	2,196	-89.02%
WD 10	0430950	Desilting Concrete Box Culvert	SR-8	1,000	0	-100.00%
WD 10	E425-73-5	Clean Manholes/Inlets Manual	SR-8	800	0	-100.00%
WD 10-1	0430-94-1	Desilting Pipe 0-24"	SR-4	20,000	0	-100.00%
WD 10-1	0430-94-2	Desilting Pipe 25-36"	SR-4	20,000	0	-100.00%
WD 10-1	0430-94-3	Desilting Pipe 37-48"	SR-4	2,000	0	-100.00%
WD 10-1	0430-94-4	Desilting Pipe 49-60"	SR-4	1,000	0	-100.00%
WD 10-1	0430950	Desilting Concrete Box Culvert	SR-4	1,000	0	-100.00%
WD 10-1	E425-73-1	Clean Manholes/Inlets (Mechanical)	SR-4	600	0	-100.00%
WD 10-1	E425-73-5	Clean Manholes/Inlets Manual	SR-4	400	0	-100.00%
WD 10-1	0430-94-5	Desilting Pipe, 61" or greater	SR-4	1,000	0	-100.00%
WD 10-1	E432-4	Storm Sewer Inspection Video	SR-4	50,000	0	-100.00%
WD 10-1	E425-73-5	Clean Manholes/Inlets Manual	SR87	400	0	-100.00%
WD 10-1	0430-94-1	Desilting Pipe 0-24"	SR-87	20,000	0	-100.00%
WD 10-1	0430-94-3	Desilting Pipe 37-48"	SR-87	2,000	0	-100.00%
WD 10-1	0430-94-4	Desilting Pipe 49-60"	SR-87	1,000	0	-100.00%
WD 10-1	0430950	Desilting Concrete Box Culvert	SR-87	1,000	0	-100.00%
WD 10-1	E425-73-1	Clean Manholes/Inlets (Mechanical)	SR-87	400	0	-100.00%
WD 10-1	0430-94-5	Desilting Pipe, 61" or greater	SR-87	1,000	0	-100.00%
WD 10-1	E432-4	Storm Sewer Inspection Video	SR-87	50,000	0	-100.00%
WD 10-1	E425-73-1	Clean Manholes/Inlets (Mechanical)	SR-89	800	25	-96.88%
WD 10-1	0430-94-2	Desilting Pipe 25-36"	SR-89	20,000	643	-96.79%
WD 10-1	E432-4	Storm Sewer Inspection Video	SR-89	50,000	9,924	-80.15%
WD 10-1	0430-94-5	Desilting Pipe, 61" or greater	SR-89	1,000	208	-79.20%
WD 10-1	0430-94-3	Desilting Pipe 37-48"	SR-89	2,000	421	-78.95%
WD 10-1	0430-94-4	Desilting Pipe 49-60"	SR-89	1,000	351	-64.90%
WD 10-1	0430-94-1	Desilting Pipe 0-24"	SR-89	20,000	8,307	-58.47%
WD 10-1	E425-73-5	Clean Manholes/Inlets Manual	SR-89	800	0	-100.00%
WD 10-1	0430950	Desilting Concrete Box Culvert	SR-89	1,000	0	-100.00%
WD 10-1	0430-94-2	Desilting Pipe 25-36"	SR-89	20,000	0	-100.00%
WD 11	E425-73-1	Clean Manholes/Inlets (Mechanical)	SR-8	800	84	-89.50%
WD 11	0430-94-2	Desilting Pipe 25-36"	SR-8	20,000	2,681	-86.60%
WD 11	0430-94-3	Desilting Pipe 37-48"	SR-8	4,000	1,013	-74.68%
WD 11	0430-94-5	Desilting Pipe, 61" or greater	SR-8	2,000	509	-74.55%
WD 11	0430-94-4	Desilting Pipe 49-60"	SR-8	2,000	528	-73.60%
WD 11	E432-4	Storm Sewer Inspection Video	SR-8	50,000	15,508	-68.98%
WD 11	0430-94-1	Desilting Pipe 0-24"	SR-8	20,000	10,777	-46.12%

WD 11	0430950	Desilting Concrete Box Culvert	SR-8	1,000	0	-100.00%
WD 1	E425-73-5	Clean Manholes/Inlets Manual	SR-8	800	0	-100.00%
WD 12	0430-94-2	Desilting Pipe 25-36"	SR-8	20,000	376	-98.12%
WD 12	E425-73-1	Clean Manholes/Inlets (Mechanical)	SR-8	800	86	-89.25%
WD 12	0430-94-3	Desilting Pipe 37-48"	SR-8	4,000	785	-80.38%
WD 12	E432-4	Storm Sewer Inspection Video	SR-8	50,000	10,667	-78.67%
WD 12	0430-94-5	Desilting Pipe, 61" or greater	SR-8	2,000	443	-77.85%
WD 12	0430-94-1	Desilting Pipe 0-24"	SR-8	20,000	6,484	-67.58%
WD 12	E425-73-1	Dewatering for Video Inspection	SR-8	1	1	0.00%
WD 12	0430-94-4	Desilting Pipe 49-60"	SR-8	2,000	0	-100.00%
WD 12	0430-94-4	Desilting Pipe 49-60"	SR-8	2,000	0	-100.00%

APPENDIX E – Example of Work Document with Overestimated Quantities

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION
CONTRACT MAINTENANCE WORK DOCUMENT

375-020-05
MAINTENANCE
10/10

Page 1 of 8
WORK ACTIVITY 0430 94 1 Desilting Pipe 0 - 24"
CONTRACT NUMBER E3M71
JOB NUMBER 42214227236

DATE ISSUED 3/18/2014
*DATE RECEIVED 3/18/2014 BL
DATE WORK BEGAN 3/18/2014
UNIT DESCRIPTION LF

ITEM NO.	LOCATION	WORK DESCRIPTION	**DATE COMPLETED / ***DATE ACCEPTED	WORK UNITS EST	WORK UNITS ACTUAL
1	SR-87N	FROM: SR-10 (Hwy 90) M.P. 0.000 TO: SR-89 M.P. 4.862	7/31/14 BL 8/4/14 [illegible]	20,000	1977
2	SR-89 BY-PASS	FROM: SR-10 (Hwy 90) M.P. 0.000 TO: SR-87 M.P. 3.668		20,000	Ø

UNITS ACCOMPLISHED:
PRIMARY ______ INTERSTATE ______ TOLL ______

TOTAL: EST 40,000 ACTUAL 1977

REMARKS:
You will have 45 days to complete this call-out

CERTIFIED CORRECT:
MATERIAL COMPLIANCE [signature]
CONTRACTOR NAME ______
PHONE ______ FAX ______
VERIFIED [signature]
INSPECTOR MATERIAL SOURCE ______

First Copy – Job File Second Copy – Contractor Third Copy – Contractor Fourth Copy – Contract Inspector

* Contractor Must Initial Date Received.
** Contractor Must Date & Initial When Completed.
*** Inspector Must Date & Initial When Accepted; this is the Official Date of Final Acceptance for Work Referenced.

DISTRIBUTION, PROJECT TEAM, AND STATEMENT OF ACCORDANCE

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Project Team:

Engagement was conducted by Amy Furney, Audit Team Leader
Tiffany Hurst, Lillian Spell, and Michelle Candies
Under the supervision of:
Joe Gilboy, Audit Manager; and
Kristofer B. Sullivan, Director of Audit
Approved by: Robert E. Clift, Inspector General

Statement of Accordance

The mission of the department is
to provide a safe transportation system that ensures the mobility of people and goods, enhances economic prosperity, and preserves the quality of our environment and communities.

The mission of the Office of Inspector General is
to promote integrity, accountability, and process improvement in the Department of Transportation by providing objective fact-based assessments to the DOT team.

This work product was prepared pursuant to section 20.055, Florida Statutes, in accordance with the applicable *Principles and Standards for Offices of Inspectors General* as published by the Association of Inspectors General, and *the International Standards for the Professional Practice of Internal Auditing* as published by The Institute of Internal Auditors.

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