

# Winter Workshop 2015

## Lessons Learned

### **The Year in Review**

*Presented by: Maureen Kelley*

*Pictures & Content Help Provided by: Clayton Bedwell*

# Final Inspections

- Background
- Current Process

Why

Who

Semi-Final

Final ADA

Final

Monthly Inspection Report

**Office of Performance Management  
Final Inspection Comments Report  
Contract No. T201207505, F.A.P. No. EBHOS-2012(3)  
Kent County Pipe Replacements, Federal, 2012  
South I Construction  
December 3, 2014**

**Contractor:** Zack Excavating, Inc.  
2935 S. DuPont Boulevard  
Smyrna, DE 19977

**Contract Duration:** 145 Calendar Days

**Award Amount:** \$985,153.35

**Attendees:**

Craig Blowers	DelDOT, South I Construction
George Haldas	DelDOT, South I Construction
David Crouch	DelDOT, South I Construction
Clayton Bedwell	DelDOT, Office of Performance Mgmt.
Craig Stevens	DelDOT, Bridge Design
Nicholas Dean	DelDOT, Bridge Design
Mary Hamilton	DelDOT, E&S Management
Travis Wamock	URS
Dave Lafferty	URS
Ryan Kimble	Zack Excavating, Inc.
Craig Simon	Zack Excavating, Inc.

**Location:** Reeves Crossing Road

**Observation:**

The lower sections of Posts 1 & 2 of each guardrail end treatments (4 Total) protruded more than 4" above the ground. The guardrail terminals must be installed per the manufacturer's drawing since this is how it was tested and certified for crash worthiness.



# Background

- “Ride-Bys”
- Engineers, Construction Techs, Contractors, M&O
- No Reports Filed
- No Lessons Learned
  - No attempt to find root of problem
  - Mistakes → Punchlist → Project Closeout
  - No Tracking or Follow Up

# Current Process:

- Why ?
- Who ?
- Semi-Final
- Final ADA
- Final



# WHY ?

- Learning Process
- Procedural Changes
- Spec Changes
- Construction Detail Changes
- Working Group Discussions



# WHO ?

- Office of Performance Management
- In Conjunction With:
  - Administering Section (Construction, M&O)
  - Contractor
  - Maintenance District Personnel (Accepting District)
  - DelDOT Internal Interested Parties
  - Developer (Public Works Jobs)

# Semi-Final Inspections

- Semi-Final and ADA Inspection to Occur Before Final Inspection is Scheduled
- Intent
  - Resolve all non-compliant issues while contractor is still on-site
  - Attendees
  - Informal
- Creation of Punchlist and Timeframes
  - Contractor Input

## Final ADA Inspection (If Necessary)

- “Request to Report” Goal = 10 Calendar Days
- 1-Day Notice to Requesting Section
- All ADA Components Measured
- Creation of Punchlist and Timeframes



## Final Inspection

- After Completion of Semi-Final & ADA Punchlists
- Fill Out Final Inspection Request on Citrix
- OPMs preparation
- Ensure Compliance with Plans, Specs, Details
- Follow-Up
- Creation of Report and Findings
- Approval by M & O Director



Contract No. T201106803  
Microsurfacing Central & South, FY2011

# Monthly Final Inspection Reports

- Sent to Chief Engineer
- Reports # and type of Inspections
- Highlights only a few issues and concerns
- Creates “follow-up/action items”
  - Procedural changes
  - Spec changes
  - Construction Detail changes
  - Working Group discussions

# Example



SHAILEN P. BHATT  
SECRETARY

MEMORANDUM

**TO:** Rob McCleary, Chief Engineer  
Office of the Secretary

**FROM:** Maureen Kelley  
Office of Performance Management

**DATE:** January 27, 2015

**SUBJECT:** Final Inspection Report – December 2014

In the month of December 2014, there were a total of twelve (12) Final Inspections.

MAINTENANCE & OPERATIONS	CONTRACT	TITLE
Canal District – M&O	T201007701; FAP No. EHBN-2010(33)	Structure Rehabilitation End. FY 2011-20
Canal District – Public Works	Agreement Nos. 1903, 1905, 1906, 1909, & 1910	Village of Bayberry
Canal District – Public Works	Permit No. NC-489-COM	McDonald's Hares C Entrance Improven
Canal District – Public Works	Permit No. NC-492-COM	Carman Ford Entru Improvements
Canal District – Public Works	Permit No. NC-496-COM	FMC Crop. Entra Improvements
Canal District – Public Works	Permit No. NC-505-COM	DuPont Pioneer Stine Entrance Improven
Central District – M&O	T201106803	Microsurfacing Cent South, FY 201
South District – Public Works	Permit No. C-08-14	Americana Bayside, E Plans for Parcel 16 (P)
South District – Public Works	Permit No. SSR2223	Spring Breeze Hollymo Improvements

December 2014 Monthly Inspection Report

TRANSPORTATION SOLUTIONS	CONTRACT	
North II Construction	T201200106, ESTP-N348 (04)	HEP
South I Construction	T201207505, EBHOS-2012 (3)	Ken
South II Construction	T201207305/Permit No. 2055	I

FOLLOW-UP/ACTION ITEMS FROM THESE FI

- SPECIAL PROVISIONS, SUPPLEMENTAL AND STANDARDS
- STANDARD DETAILS – NONE
- DGM'S, TRAFFIC/SAFETY/STRIPING, MISCELLANEOUS
- DESIGN TOPICS – NONE
- CONSTRUCTION/CTF/MAINTENANCE/PUBLIC WORKS

**A. Paving Practices – From Agreement No. 1903, 1905, 1906, 1909, & 1910**  
Continually, we are seeing paving and patching operations that will, in turn, develop into maintenance issues for maintenance operations are already stretched with in-house staff is continually doing less paving operations get submitted for CTF. Only the worst of the work items that were paid to be fixed under this contract need to be re-habituated again. In our opinion, the amount of money paid. Maintenance key "tool in the toolbox" to effectively maintain our budgetary times and OPM wants to ensure effective scoping, design, and construction to maximize the maintenance activities in all the Districts. The Post Construction Review should focus on the type of repair that was performed and how it was performed, so that recommendations can be forwarded to Bridge Management to better prepare contracts in the future. The Districts should be included in the planning of the contracts to make sure the needs are met at all levels. Please see the pictures on the following page:

Joint failed and vaulted, resulting in failure of new patch via traffic and snow ops.



Sawcut "curved", patch not a rectangle, and not crack sealed per spec.



Small piece of concrete left between two new patches and crack formed adjacent to two new patches.

6. GENERAL NOTES

**A. Annual inspections on OPEN END contracts – From T201007701:** Previously, it was determined to have annual final inspections on work performed on open end contracts. Because open end contracts are multiple years in duration, the Department cannot hold the contractor responsible for work that was performed and completed in year one, and evaluated for acceptance in year three or later. The point of doing an annual final inspection is to release the responsibility of the contractor as tasks or work orders are completed, and that any non-compliant work can be fixed within a reasonable timeframe. This did not occur on this contract and most of the work evaluated at the final inspection was completed several years before.

\* Pythagoras Path's piss poor paving practice per Pappas.

December 2014 Monthly Inspection Report

December 2014 Monthly Inspection Report

# Monthly Final Inspection Report

- Addressed to Chief Engineer
- Sent to various sections
- # of Inspections
- Which division inspection was for



STATE OF DELAWARE  
 DEPARTMENT OF TRANSPORTATION  
 800 BAY ROAD  
 P.O. BOX 778  
 DOVER, DELAWARE 19903

SHAILEN P. BHATT  
 SECRETARY

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Canal District – Public Works	Agreement Nos. 1903, 1905, 1906, 1909, & 1910	Village of Bayberry North
Canal District – Public Works	Permit No. NC-489-COM	McDonald’s Hares Corner Entrance Improvements
Canal District – Public Works	Permit No. NC-492-COM	Carman Ford Entrance Improvements
Canal District – Public Works	Permit No. NC-496-COM	FMC Crop. Entrance Improvements
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Central District – M&O	T201106803	Microsurfacing Central and South, FY 2011
South District – Public Works	Permit No. C-08-14	Americana Bayside, Entrance Plans for Parcel 16 (Parcel H)
South District – Public Works	Permit No. SSR2223	Spring Breeze Hollymount Road Improvements

December 2014 Monthly Inspection Report

# Monthly Final Inspection Report

- Follow-Up/Action Items
- Special Provisions, Supplementals, Standard Specs
- Standard Details
- DGMs, Traffic, Misc.
- Design Topics
- Construction/CTF/Maintenance

TRANSPORTATION SOLUTIONS	CONTRACT	TITLE
North II Construction	T201200106, ESTP-N348 (04)	HEP NCC, Salem Church Road at Christiana High School
South I Construction	T201207505, EBHOS-2012 (3)	Kent County Pipe Replacements, Federal, 2012
South II Construction	T201207305/Permit No. 2055	Royal Farms #114, Laurel

## FOLLOW-UP/ACTION ITEMS FROM THESE FINAL INSPECTIONS

1. SPECIAL PROVISIONS, SUPPLEMENTAL AND STANDARD SPECIFICATIONS - NONE
2. STANDARD DETAILS – NONE
3. DGM'S, TRAFFIC/SAFETY/STRIPING, MISCELLANEOUS- NONE
4. DESIGN TOPICS – NONE
5. CONSTRUCTION/CTF/MAINTENANCE/PUBLIC WORKS
  - A. *Paving Practices – From Agreement No. 1903, 1905, 1906, 1909, & 1910\**: Continually, we are seeing paving and patching operations that are leaving open joints that will, in turn, develop into maintenance issues in the near future. Budgets for maintenance operations are already stretched when it comes to patching. M&O in-house staff is continually doing less paving operations in subdivisions, which in turn get submitted for CTF. Only the worst of the worst actually get patched.
  - B. *Post Construction Review Suggested – From T201007701*: The Office of Performance Management (OPM) heavily suggests that a Post Construction Review of this contract is performed. The quality of the work was very poor, and many of the items that were paid to be fixed under this contract, are now at a point that they need to be re-habilitated again. In our opinion, the repair and what we got out of it, was not worth the amount of money paid. Maintenance contracts like these, are a key "tool in the toolbox" to effectively maintain our infrastructure in challenging budgetary times and OPM wants to ensure effective scoping, design, and construction to maximize the maintenance activities in all the Districts. The Post Construction Review should focus on the type of repair that was performed and how it was performed, so that recommendations can be forwarded to Bridge Management to better prepare contracts in the future. The Districts should be included in the planning of the contracts to make sure the needs are met at all levels. Please see the pictures on the following page:

# Monthly Final Inspection Report

- General Notes
- Photos
- Forwards to our partners

Joint failed and vaulted, resulting in failure of new patch via traffic and snow ops.



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## 6. GENERAL NOTES

A. *Annual inspections on OPEN END contracts* – From T201007701: Previously, it was determined to have annual final inspections on work performed on open end contracts. Because open end contracts are multiple years in duration, the Department cannot hold the contractor responsible for work that was performed and completed in year one, and evaluated for acceptance in year three or later. The point of doing an annual final inspection is to release the responsibility of the contractor as tasks or work orders are completed, and that any non-compliant work can be fixed within a reasonable timeframe. This did not occur on this contract and most of the work evaluated at the final inspection was completed several years before.

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December 2014 Monthly Inspection Report

**Contract No. T201207301, F.A.P. No. EBROS-S571(01)  
Br. 3-142 on Adamsville Road over Short & Hall Ditch  
South II Construction  
January 14, 2014**



Permit No. NC-446-COM  
Wellington Commons Commercial Entrance  
Canal Public Works  
March 13, 2014



Scaling....

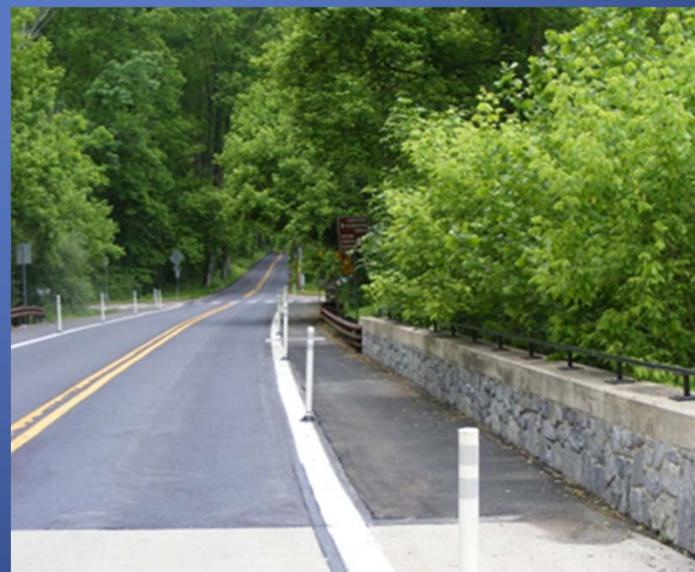
Contract No. T201206403  
P.C.C. Patching, North, Open End, 2012  
North District Maintenance  
April 15, 2014



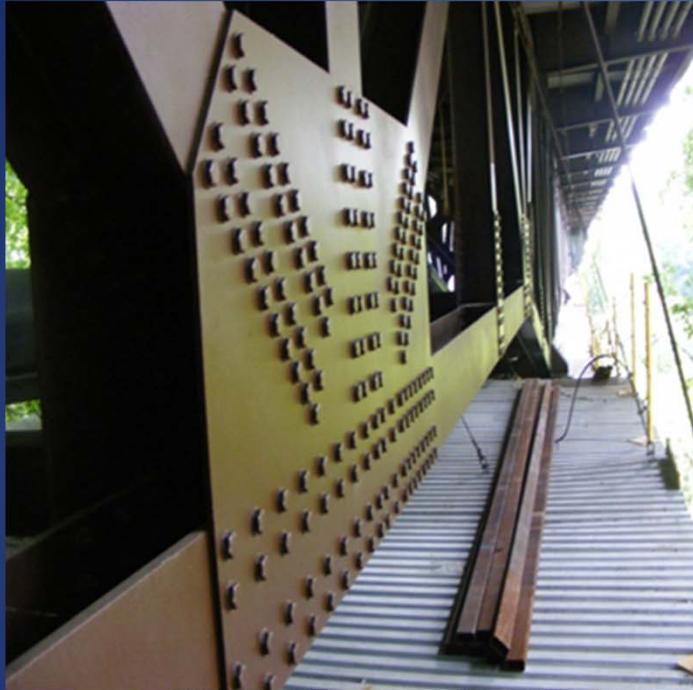
Contract No. T200907201, F.A.P. No. EBROS-K203(8)  
Bridge 2-203A on Todds Mill Road over Isaac Branch  
South I Construction  
April 22, 2014



Contract No. T201230007  
Open End Construction Services, Statewide Trails, NCC  
Hopkins Road Connector  
North II Construction  
May 29, 2014



Contract No. T201007402, F.A.P. No. EBHOS-N049(1)  
Br. 1-585 on N049 Augustine Cutoff over Brandywine Creek  
North I Construction  
June 4, 2014



Contract No. T201087701  
Guardrail Repair, Open-End, Canal, FY11-13  
Canal Maintenance  
July 1, 2014



Contract No. T201400506  
School House Road Railroad Crossing Improvements  
Canal Maintenance/Railroad Section  
July 17, 2014



Permit No. 220634  
M&L Ventures Commercial  
Entrance  
Central Public Works  
September 2, 2014



Agreement No. 1551  
Pinehurst Village Irish Hill Rd.  
Entrance  
Central Public Works  
September 3, 2014



Permit No. C-43-12  
Millville by the Sea  
South Public Works  
September 9, 2014



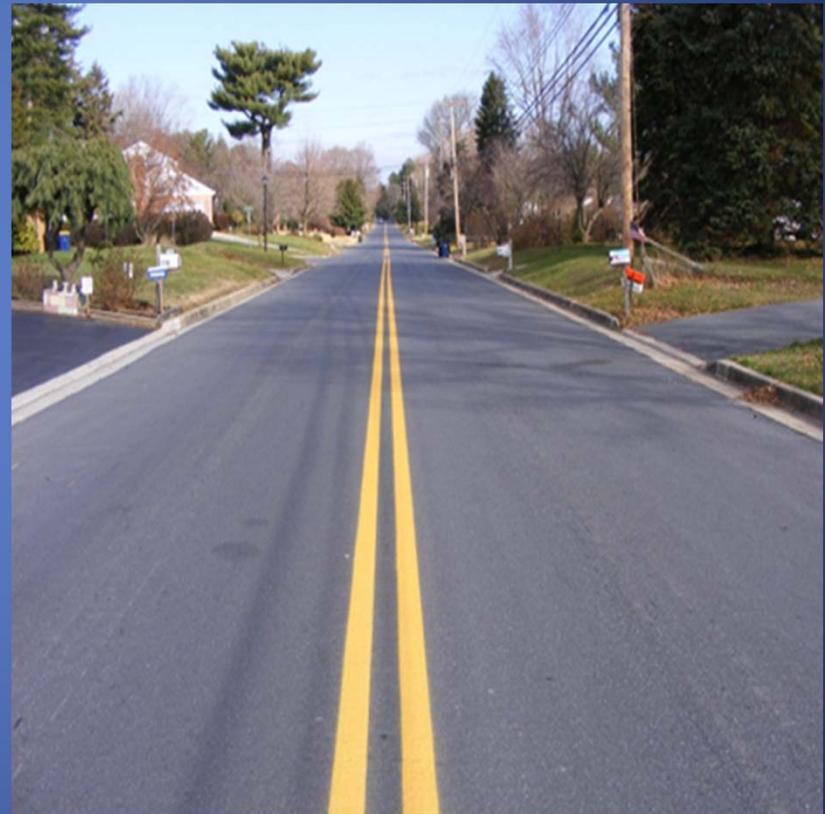
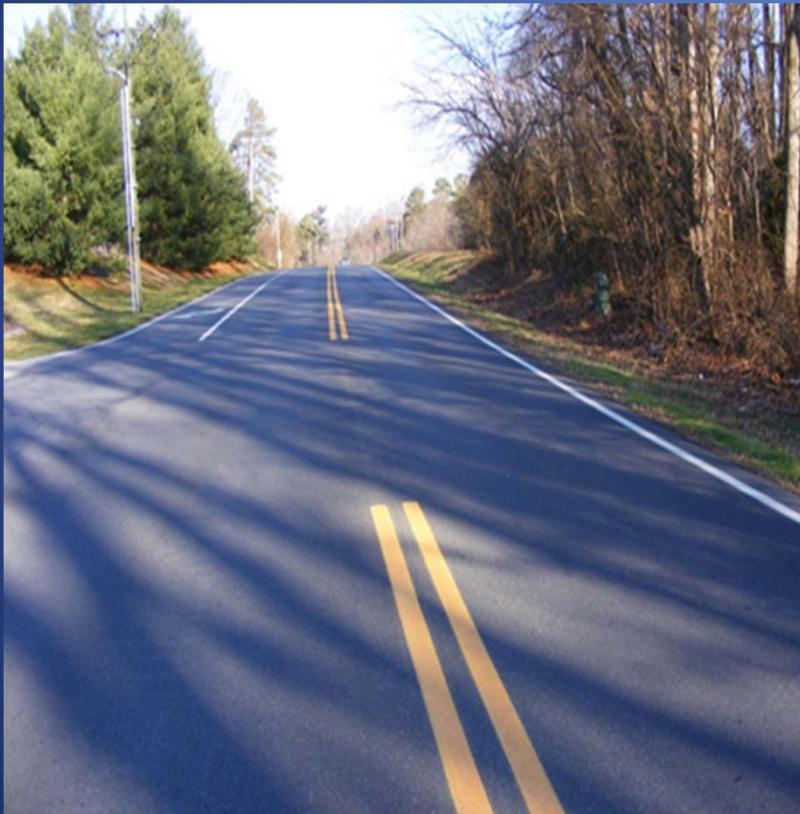
Contract No. T201406902  
Conversion Roads, South, 2014  
South Maintenance  
November 5, 2014



Contract No. T201207505, F.A.P. No. EBHOS-2012(3)  
Kent County Pipe Replacements, Federal, 2012  
South I Construction  
December 3, 2014



Contract No. T201106803  
Microsurfacing Central and South, FY 2011  
Central Maintenance  
December 18, 2014



Coming up...Day Two:

**2014 Summary of Inspections**

**&**

**OPMs “Hot” Item List**