

# eConstruction



Documentation is changing

# What is eConstruction?



# What is e-Construction?

**DIRECT ENTRY OF DOCUMENTATION**



# why?



# eConstruction Benefits

 Documents handled by fewer people

 Documents are not lost

 Documents available in real time

 Printing/scanning/mailing eliminated

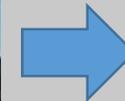
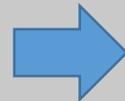
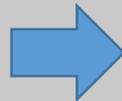
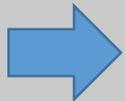
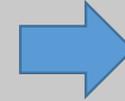
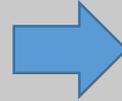
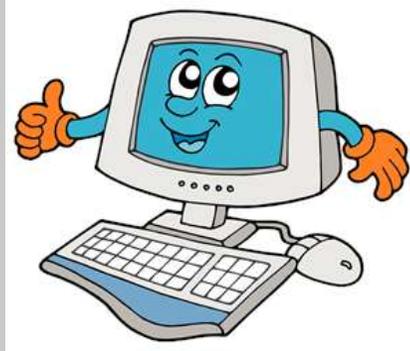
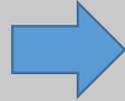
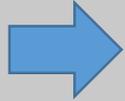
 Estimates payed quickly

 Final paperwork completed quickly

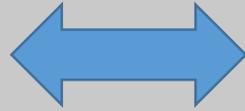
# Old-Timey Way



# Old-Timey Way PQR



# eConstruction PQR



# eConstruction PQR

- No paper SFN 10004
- Inspector enters payment information directly in the field.
- PQR instantly accessible to all parties.

# eConstruction PQR Source Document

ENTERED  
DIRECTLY

Project: SOIA-5-094(100)056

SubProject: 1 - GRADING, BRIDGE, STRUCTURE REMOVAL, BOX CULVERT, S

## Pay Quantity Maintenance <<

### 708 - 1430 - FIBER ROLLS 12IN

Unit: LF QTY: 21,514.000 Price:

Pay Quantity Date: 06/13/2015

Source Document:

Change Order: NONE

Contractor Approved: N

Remarks:

Added By: Jay J. Lutes

Release Flag: P

Attachment:  Browse...

### Locations:

Quantity	Location
27.000	APPROACH PIPE 3010+23 OUTLET
25.000	APPROACH PIPE 3013+94
27.000	APPROACH PIPE 3014+21
26.000	APPROACH PIPE 3016+30 LT
28.000	APPROACH PIPE 3016+30 RT

# eConstruction PQR Source Document

ATTACHED



Project: SOIA-5-094(100)056

SubProject: 1 - GRADING, BRIDGE, STRUCTURE REMOVAL, BOX CULVERT, S

## Pay Quantity Maintenance <<

### 302 - 120 - AGGREGATE BASE COURSE CL 5

Unit: TON QTY: 104,511.000 Price:

Pay Quantity Date: 06/27/2015

Source Document:

Change Order: NONE

Contractor Approved: Y

Remarks: See attached haul sheet

Added By: Jason R. Fischer

Release Flag: P

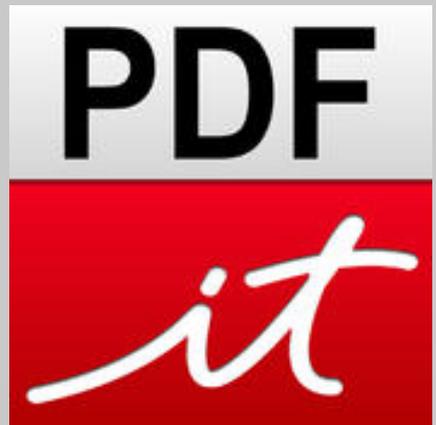
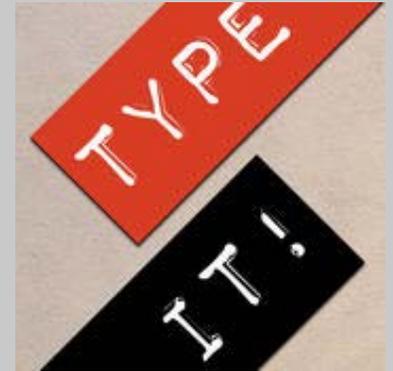
Attachment:

### >> Pay Quantity Attachments

07/02/2015 [PQ\\_302\\_120\\_PQ\\_302-120\\_Class\\_5\\_6-27-15.pdf](#)

### Locations:

Quantity	Location
5,139.500	3045+00 to 3088+00



# eConstruction PQR Source Document

REFERENCE

## Pay Quantity Maintenance <<

708 - 1030 - RIPRAP-LOOSE ROCK

Unit: TON QTY: 44,678.000 Price:

Pay Quantity Date:   (mm/dd/yyyy)

Source Document:  

Change Order:  

Contractor Approved:  Yes  No

Remarks:

You have **719** characters remaining

Added By: DOT Cars

Release Flag: R

Attachment:

### Locations:

Quantity	Location	Delete
<input type="text" value="75.000"/>	<input type="text"/>	<input type="checkbox"/>

# eConstruction PQR Checking

- Check all entries.
  - Source documents easily accessed.
- Engineer submits PQR for payment.

# **Pay Quantity Manager**

**COMING THIS SPRING!**



# Pay Quantity Manager

- All payment information for all items available on one page.
- Workflows for checking and submitting pay quantity entries.
- Ability to append previous entries.

# Quantity Approval Manager

## Filter Options

### Spec & Code

With Items  Without Items  Both

Status:

District Finals:

Construction Finals:

Filter

Submit

Reject

District Finals

Construction Finals

[Expand All SPEC/CODE](#)

[Expand Selected SPEC/CODE Details](#)

**+ 103 - 100 CONTRACT BOND (6)** Running Total: 5.00 Planned Quantity: 311.08 Price: 175,000.00 Unit: L SUM

**+ 103 - 200 ESCROW OF BID DOCUMENTATION (1)** Running Total: 1.00 Planned Quantity: 1.00 Price: 4,000.00 Unit: L SUM

**+ 201 - 330 CLEARING & GRUBBING (1)** Running Total: 0.50 Planned Quantity: 0.50 Price: 35,000.00 Unit: L SUM

**+ 201 - 370 REMOVAL OF TREES 10IN (2)** Running Total: 3.00 Planned Quantity: 3.00 Price: 1,000.00 Unit: EA

**103 - 100 CONTRACT BOND (6)** Running Total: 5.00 Planned Quantity: 311.08 Price: 175,000.00 Unit: L SUM

[Expand Rows](#)

<a href="#">Select All</a>	<a href="#">Date</a>	<a href="#">Source</a>	Quantity	Status	District Finals	Const. Finals
<input type="checkbox"/>	<a href="#">08/08/2015</a>	CP	62.222	 <b>Submitted</b>	Not Completed	Not Completed
<input type="checkbox"/>	<a href="#">10/19/2011</a>	MB	83.050	 <b>Submitted</b>	Not Completed	Not Completed
<input type="checkbox"/>	<a href="#">10/20/2011</a>	MB	159.104	 <b>Submitted</b>	Not Completed	Not Completed
<input type="checkbox"/>	<a href="#">10/27/2015</a>	PQ - No Additional	0.700	 Rejected	Not Completed	Not Completed
<input type="checkbox"/>	<a href="#">02/25/2016</a>	PQ - No Additional	5.000	 Paid	02/28/2016	Not Completed
<input type="checkbox"/>	<a href="#">02/25/2016</a>	PQ - No Additional	1.000	 <b>Submitted</b>	Not Completed	Not Completed

[10/27/2015](#)

PQ - No Additional

0.700



Rejected

Not Completed

Not Completed

**QTY****Location**

0.700

Project limits

**Remarks**

Pay total cost of receipts which is less than bid item unit price. See correspondence file for receipts.

**Files**

- [PQ 103 100 test.txt](#)
- [PQ 103 100 IMG 0363 - Copy.png](#)

[02/25/2016](#)

PQ - No Additional

5.000



Paid

02/28/2016

Not Completed

**QTY****Location**

5.000

test

**Remarks**

test daryl

[02/25/2016](#)

PQ - No Additional

1.000

Submitted

Not Completed

Not Completed

**QTY****Location**

1.000

test

**Remarks**

test

Project: SOIB-SOIA-7-023(038)900

SubProject: 1 - CONCRETE, HMA, GRADING, SIGNALS, PATH, CULVERTS, A

## Quantity Approval Manager

### Filter Options

#### Spec & Code

With Items  Without Items  Both

Status:

District Finals:

Construction Finals:

Filter

Submit

Reject

District Finals

Construction Finals

[Expand All SPEC/CODE](#)

[Expand Selected SPEC/CODE Details](#)

### Contract Adjustments

**108 - 9950 LIQUIDATED DAMAGES (2)** Running Total: 0.00 Planned Quantity: 8.00 Price: -5,000.00 Unit: DAY

[Expand Rows](#)

<a href="#">Select All</a>	<a href="#">Date</a>	<a href="#">Source</a>	Quantity	Status	District Finals	Const. Finals
<input type="checkbox"/>	<a href="#">02/26/2016</a>	PQ - No Additional	1.000	<input checked="" type="checkbox"/> Checked	Not Completed	Not Completed
<input type="checkbox"/>	<a href="#">02/23/2016</a>	PQ - Attached	1.000	<input checked="" type="checkbox"/> Checked	Not Completed	Not Completed

Added By: Scott J. Smyth

New Attachments:  test-05.txt

test-01.txt

test-02.txt

[Add More Files](#)

▼ Pending Attachments

test-01.txt [Remove](#)

test-06.txt [Remove](#)

test-11.txt [Remove](#)

▼ Saved Attachments

[PQ 103 100 test-02.txt](#) [DELETE](#)

[PQ 103 100 test.txt](#) [DELETE](#)

[PQ 103 100 test-10 - Copy.txt](#) [DELETE](#)

[PQ 103 100 test-06 - Copy.txt](#) [DELETE](#)

[PQ 103 100 test.txt](#) [DELETE](#)

[PQ 103 100 test-01.txt](#) [DELETE](#)

[PQ 103 100 IMG 0363 - Copy.png](#) [DELETE](#)

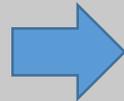
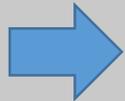
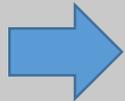
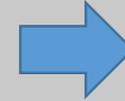
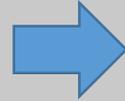
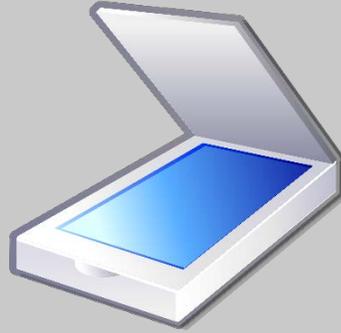
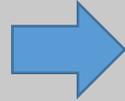
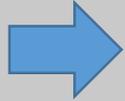
Approval Status: Not Checked

District Finals: Not Completed

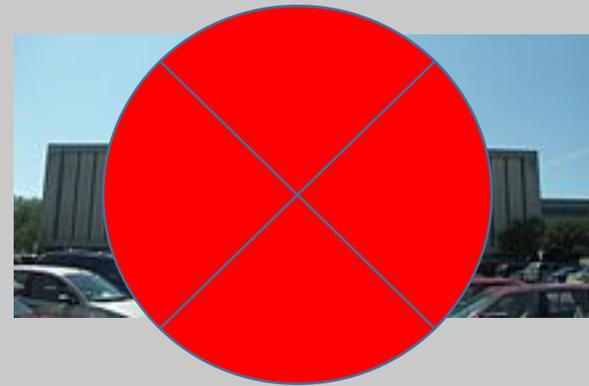
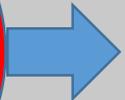
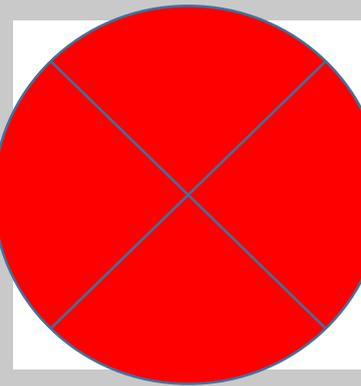
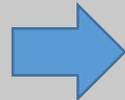
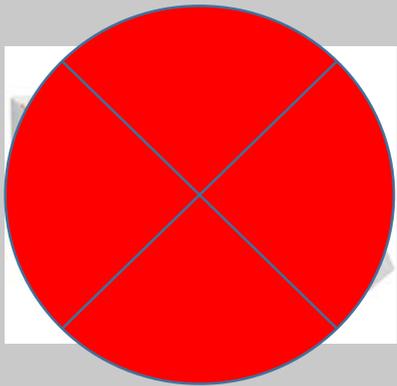
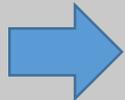
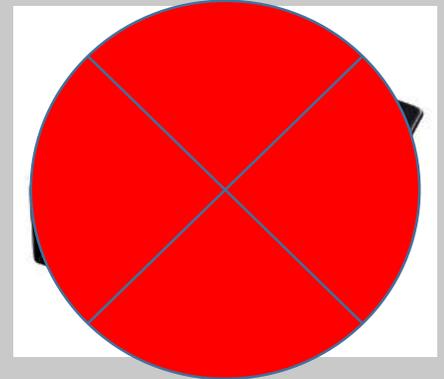
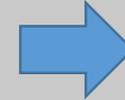
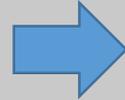
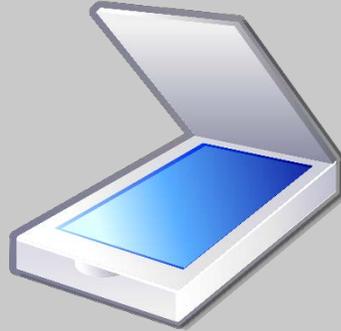
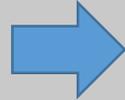
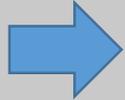
Construction Finals: Not Completed

Locations:

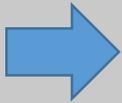
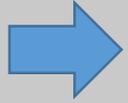
# Old-Timey Way Diary



# eConstruction 1<sup>st</sup> Generation Diary



# eConstruction Diary



# eConstruction Guidelines

## Construction Records Manual



Construction workers put rebar on roadway

The goal of this manual is to provide construction personnel with procedures for documentation of construction activities and pay items and to provide instructions for the operation of the Construction Automated Records System (CARS). This manual should not be interpreted to provide a legal standard of care or a strict code of conduct to be followed.

### Resources

- [Construction Records Manual Update List](#)
- [Change Order Process Due to Revised PE Administrative Rules](#) PDF
- [Guidance for Processing Work Drawings](#) PDF
- [CARS Login](#)
- [CARS: NOI/Claims Manual](#) PDF
- [Electronic Construction Documentation Guide](#) PDF

### Construction Records Manual for 2014 Spec Book

Section	Type
<a href="#">Cover and Forward</a>	PDF
<a href="#">Full Table of Contents - 2014</a>	PDF
<a href="#">Section 1: Construction Administration - 2014</a>	PDF
<a href="#">Section 2: CARS (Construction Automated Records System) Setup - 2014</a>	PDF



# eConstruction Training

- Electronic Construction Documentation Guide
  - Optional Changes
- Construction Records Manual
  - Required Changes

# eConstruction Filing

- If it is in CARS – DO NOT PLACE IN PAPER FILE
- Do not throw everything haphazardly into FileNet

**Diary attachments**

**Material Certification Module**

**COMING SOON**

**Electronic Signatures**

**Fuel Adjustment Module**

**New State Forms**

**COMING SOON**

**Flagging/Pilot Car**

**Water**

**PQR**

A background of red, vertically pleated curtains, typical of a theater stage. The lighting is slightly darker at the top and bottom, creating a sense of depth.

**COMING SOON**

**Your Idea Featured Here**

# State Form Changes

- Signatures removed from:
  - SFN 14634 Traffic Control Watchperson
  - SFN 10072 Aggregate Quality Tests Summary
  - SFN 10110 Project Engineer's Report on Materials Acceptance
- Only forms that state signature need to be signed.

# Field Hurdles

- Inspectors need mobile device
  - DOT Districts have received iPads



# Field Hurdles

- Inspectors need internet
  - Try boosters
  - Spec internet for labs



# iPad Apps

- FasterScan HD
- Skitch
- Documents 5
- Asphalt Pro
- Need other Apps? Let us know.

# Construction Records Manual

## Construction Records Manual for 2014 Spec Book

Section	Type
Cover and Forward	PDF 
Full Table of Contents - 2014	PDF 
Section 1: Construction Administration - 2014	PDF 
Section 2: CARS (Construction Automated Records System) Setup - 2014	PDF 
Section 3: Project Start/Diary/Progress Report - 2014	PDF 
Section 4: Pay Quantities - 2014	PDF 
Section 5: Contract Change Orders/Progressive Payments - 2014	PDF 
Section 6: Quantity Book/Reports - 2014	PDF 
Section 7: Final Records - 2014	PDF 
Section 8: Notice of Intent to File a Claim/Contractor Claims - 2014	PDF 
Complete Manual	PDF 
Revision and Updates List	PDF 

**Do Not Print**

# Construction Records Manual

- Updated Frequently
- Update Notices – GovDelivery

# Do Not Print



# CRM UPDATES



Traffic control inspections -  
Now required daily by  
owner (record in diary)

# CRM UPDATES

- No signature required for progress reports not tracking time.
- Progress reports not tracking time should still be processed.
- Signature required for all progress reports reporting liquidated damages.

# CRM UPDATES

- Tickets to be disposed of at the District's discretion.



A Big Heaping  
**THANK YOU**



***THANKS!***

