



Daniel Belcher  
Michigan  
Department  
of Transportation

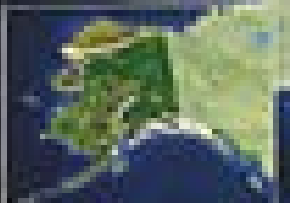
# THE GOOD







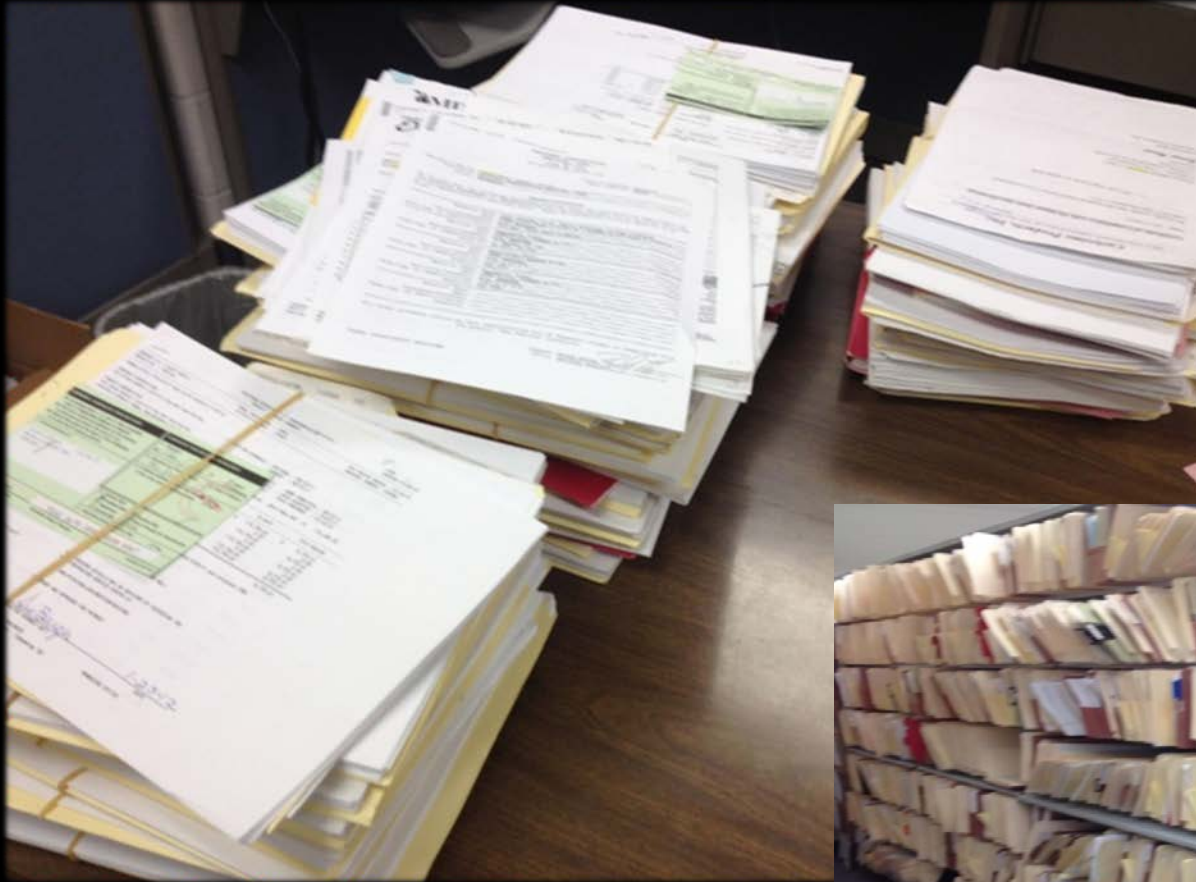
# MICHIGAN FROM SPACE





**T  
H  
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B  
A  
D**

# Got Paper?





# More Paper?



# Lost Paper?

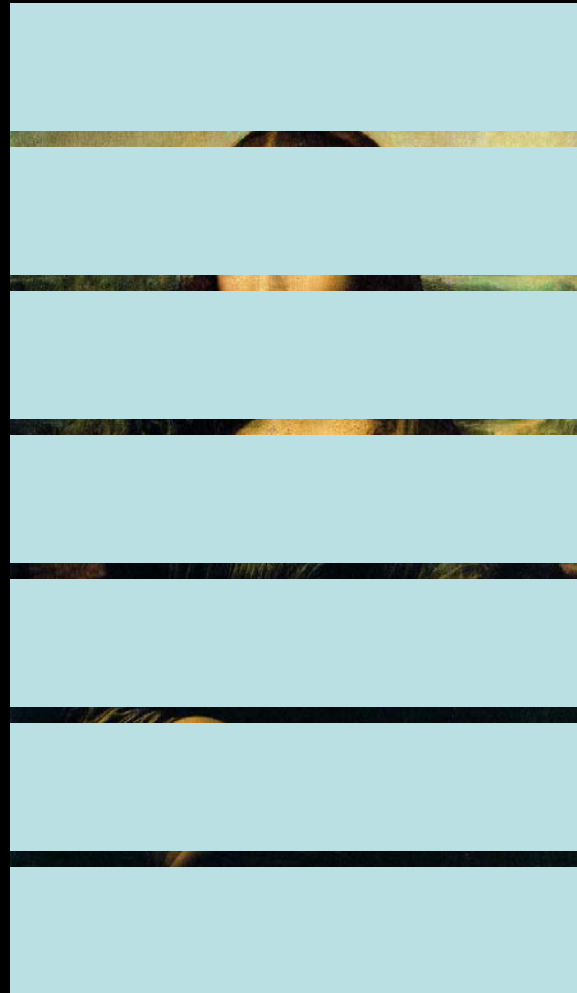


# THE UGLY





# Design



# Construction



# Plan Production - Design

## Significant changes to MDOT's Plan Production Process

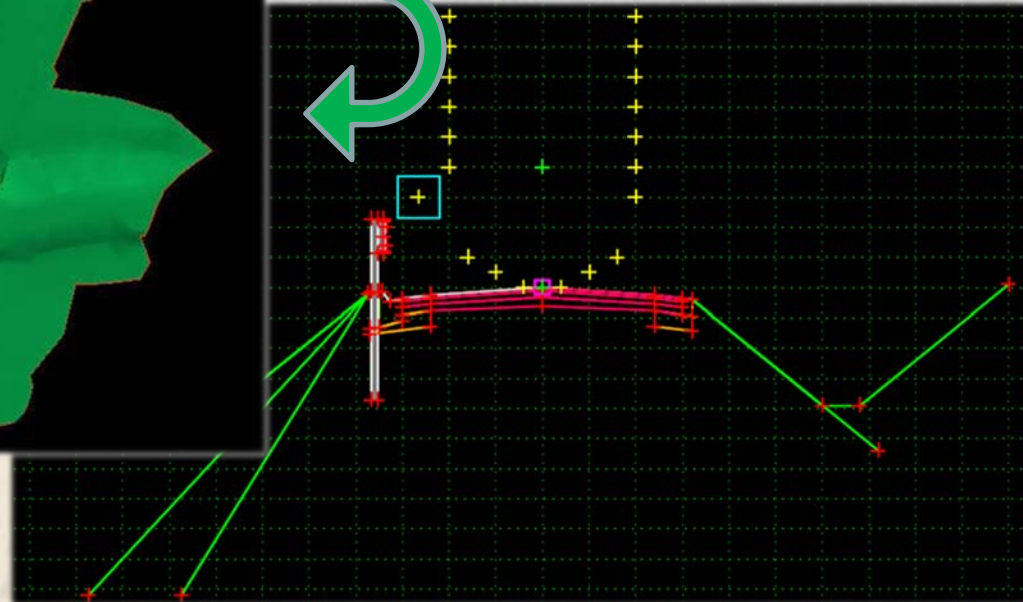


Survey – Relative to Real World Coordinates

Automated  
Production  
Of Survey  
Deliverables



Model Based Design with  
Roadway Designer



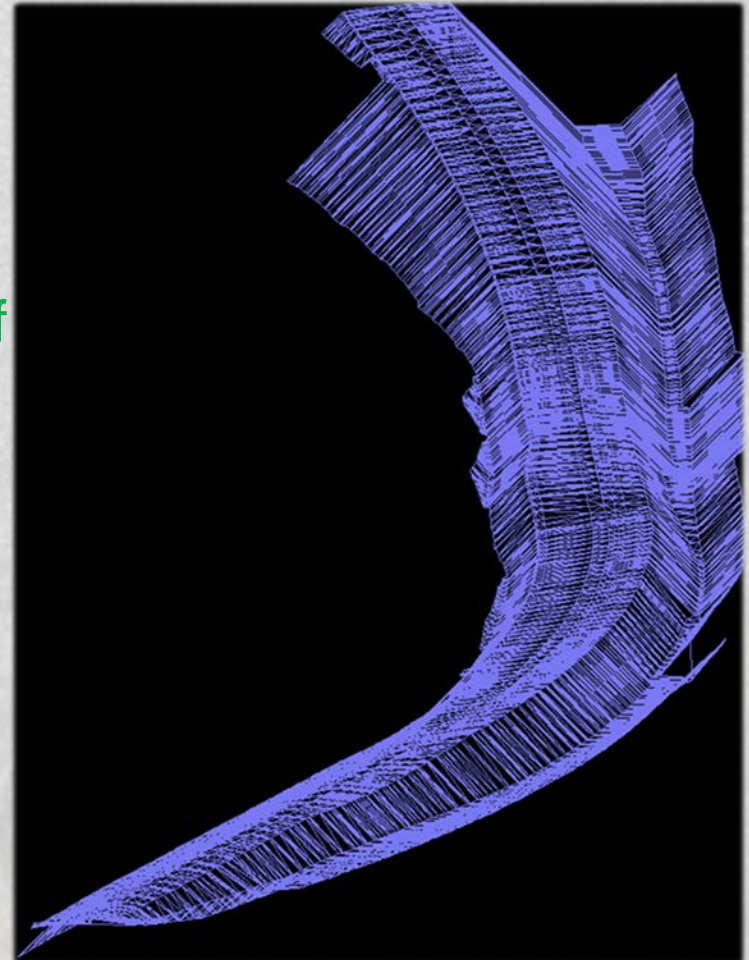


# Time of Advertisement

## Reference Information Documents (RID)

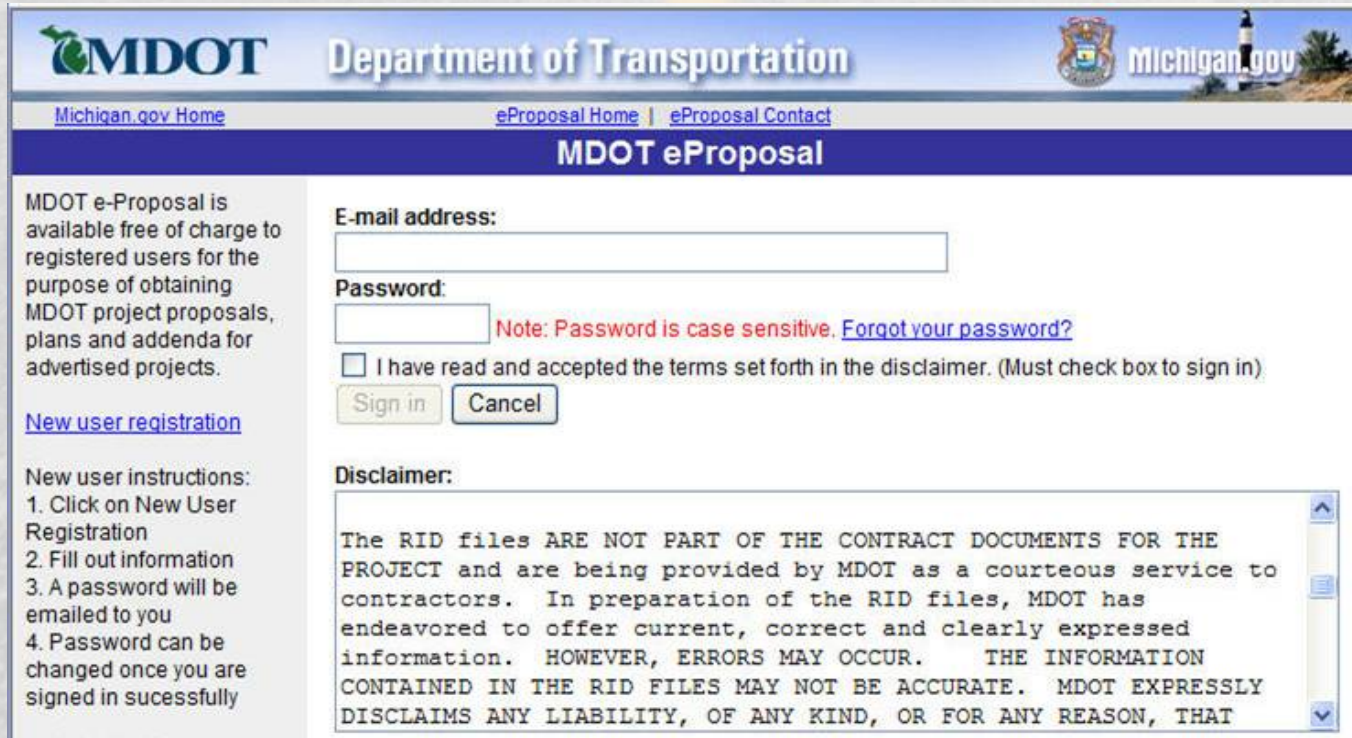
### Purpose:

- Streamline Data Flow
- Provide digital information at the time of bidding
- Reduce Contractor Risk
- Lower Costs



# Time of Advertisement

## e-Proposal Disclaimer



The screenshot shows the MDOT eProposal website interface. At the top, there is a navigation bar with the MDOT logo, the text "Department of Transportation", and the Michigan.gov logo. Below this, there are links for "Michigan.gov Home", "eProposal Home", and "eProposal Contact". The main heading is "MDOT eProposal".

On the left side, there is a text block: "MDOT e-Proposal is available free of charge to registered users for the purpose of obtaining MDOT project proposals, plans and addenda for advertised projects." Below this is a link for "New user registration".

Below the registration link, there are "New user instructions:" followed by a numbered list: 1. Click on New User Registration, 2. Fill out information, 3. A password will be emailed to you, 4. Password can be changed once you are signed in successfully.

The main content area contains a login form with the following fields and elements:

- E-mail address:** A text input field.
- Password:** A text input field with a note: "Note: Password is case sensitive. [Forgot your password?](#)"
- I have read and accepted the terms set forth in the disclaimer. (Must check box to sign in)
- Buttons: "Sign in" and "Cancel"

Below the login form is a "Disclaimer:" section with a scrollable text area containing the following text:

The RID files ARE NOT PART OF THE CONTRACT DOCUMENTS FOR THE PROJECT and are being provided by MDOT as a courteous service to contractors. In preparation of the RID files, MDOT has endeavored to offer current, correct and clearly expressed information. HOWEVER, ERRORS MAY OCCUR. THE INFORMATION CONTAINED IN THE RID FILES MAY NOT BE ACCURATE. MDOT EXPRESSLY DISCLAIMS ANY LIABILITY, OF ANY KIND, OR FOR ANY REASON, THAT















“The RID files ARE NOT PART OF THE CONTRACT DOCUMENTS ...”

“MDOT EXPRESSLY DISCLAIMS ANY LIABILITY, OF ANY KIND, OR FOR ANY REASON, THAT MIGHT OTHERWISE ARISE OUT OF ANY USE OF THE RID FILES...”



# Time of Advertisement

## What Information is Delivered?

| Item No                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Contract ID  | Control Sec | Job No  | Federal No   | Federal Item |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|-------------|---------|--------------|--------------|
| 1203 040                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 70063-103244 | NH 70063    | 103244A | NH 1270(006) | HH7776       |
| <p>1.95 mi of interchange construction and realignment, 2 new ramps, realignment of 2 existing ramps, replacement and widening of the 112th Avenue structure, hot mix asphalt resurfacing and reconstruction, culvert and sewer upgrades, permanent signing, and traffic signal on I-96 from west of M-104 to east of 112th Avenue, Ottawa County. This project includes a 5 year materials and workmanship pavement warranty.</p> <p>7.00% DBE PARTICIPATION REQUIRED</p> <p>Net classification required for this project is 6862 Fa or Comb/JL 6862 Cb, Ea</p> <p>In addition to the above minimum prequalification requirement for prime contractors this project includes subclassifications of Cb, Ea and Fa. If the prime contractor is not prequalified in those subclassifications it must use prequalified subcontractors. Those subcontractors must be designated prior to award of the contract to the confirmed low bidder.</p> <p><b>Plans and proposal:</b> Estimated pages for plans - 303</p> <p> <a href="#">Download PLANHALF-BR.pdf</a> - 12.66 MB</p> <p> <a href="#">Download PLANHALF-RD.pdf</a> - 34.88 MB</p> <p> <a href="#">Download PROPOSAL.pdf</a> - 6.27 MB</p> <p><b>Reference Information Documents:</b></p> <p> <a href="#">Download 103244_XSEC_12-20-2011.dgn</a> - 5.16 MB</p> <p> <a href="#">Download 103244_XSEC_12-20-2011.pdf</a> - 7.83 MB</p> <p> <a href="#">Download 103244_align_12-20-2011.dgn</a> - 340 KB</p> <p> <a href="#">Download 103244_construct_12-20-2011.dgn</a> - 298 KB</p> <p> <a href="#">Download 103244_drain_12-20-2011.dgn</a> - 401 KB</p> <p> <a href="#">Download 103244_prof_12-20-2011.dgn</a> - 1.32 MB</p> <p> <a href="#">Download 103244_row_12-20-2011.dgn</a> - 206 KB</p> <p> <a href="#">Download 103244_topo_12-20-2011.dgn</a> - 1.25 MB</p> <p> <a href="#">Download 103244_utility_12-20-2011.dgn</a> - 214 KB</p> <p> <a href="#">Download I-96 Project Packaging.pdf</a> - 574 KB</p> <p> <a href="#">Download Index of Reference Information Documents.pdf</a> - 8 KB</p> <p><b>NTB Contact Inquiry (Pre-Let):</b> Project Manager - <a href="#">Chris VanNorwick</a><br/>Files not available</p> |              |             |         |              |              |

- Original survey files
- 2D MicroStation base files
- X-sections
- 3D MicroStation files - models/proposed surface files
- Index
- Other content?



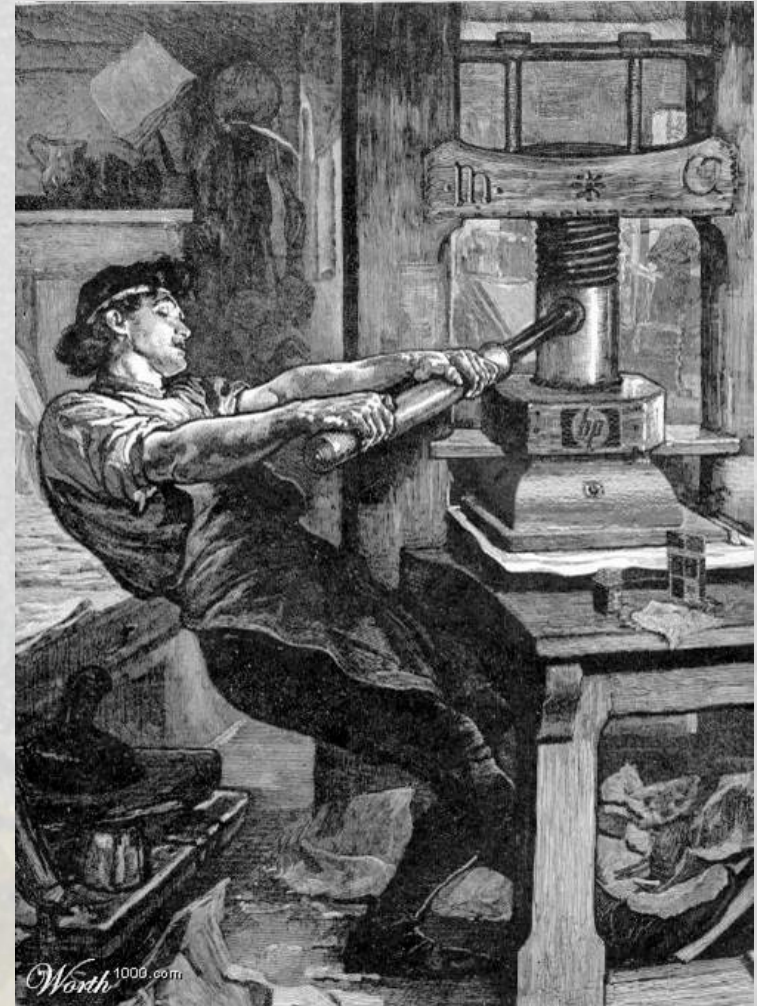
# Time of Advertisement

## Boilerplate Letting Documents

Purpose:

Store common letting data in one location instead of in each proposal and plan set.

- Reduce file download size
- Reduce storage space
- Reduce printing paper
- Boilerplate same per letting



# Time of Advertisement

## Checklist Example

e-Proposal Login Link: <https://mdotwas1.mdot.state.mi.us/public/eprop/login/index.cfm>

MDOT Internal ProjectWise Link (MDOT use only): [2013-05-22](#)

### Notice to Bidders Checklist

| Number  | Description                                                                         | Approval Date | Modified Within Last Month |
|---------|-------------------------------------------------------------------------------------|---------------|----------------------------|
| 12NB01* | INSURANCE                                                                           | 1/3/2011      |                            |
| 12NB03  | MICHIGAN DEPARTMENT OF TRANSPORTATION DISSEMINATION OF PUBLIC RELATIONS INFORMATION | 7/20/2011     |                            |
| 12NB07  | JOINT/TWO-PARTY CHECKS                                                              | 1/1/2008      |                            |
| 12NB10  | CERTIFIED PAYROLLS                                                                  | 4/4/2008      |                            |
| 12NB13  | MULTIPLE WAGE DECISIONS                                                             | 2/13/2012     |                            |
| 12NB14  | LABOR COMPLIANCE                                                                    | 3/13/2008     |                            |
| 12NB15  | BID RIGGING                                                                         | 11/15/2007    |                            |
| 12NB17  | NOTICE TO CONTRACTORS/CONSULTANTS FRAUD AND ABUSE HOTLINE                           | 8/6/2007      |                            |
| 12NB18  | ROAD CONSTRUCTION APPRENTICESHIP READINESS (RCAR) Program                           | 8/7/2008      |                            |
| 12NB20  | MULTIPLE WARRANTIES                                                                 | 11/15/2007    |                            |
| 12NB30  | LANDSCAPE PLANTS                                                                    | 11/15/2007    |                            |
| 12NB34* | PAVEMENT WARRANTY INFORMATION                                                       | 12/28/2012    |                            |
| 12NB35  | PASS-THROUGH WARRANTY BONDS                                                         | 8/6/2007      |                            |
| 12NB50  | MATERIAL TRANSFER DEVICE                                                            | 6/21/2012     |                            |
| 12NB60  | BUY AMERICA                                                                         | 12/28/2012    |                            |

\*Project Specific NTB included in this package under Unique Notice to Bidders



# Time of Advertisement

## Proposal Boilerplate

### Proposal:

|             |         |         |               |
|-------------|---------|---------|---------------|
| # of Pages: | 414 pgs | 154 pgs | 63% reduction |
| File Size:  | 4.76 MB | 1.62 MB | 66% reduction |



### Plans:

|             |         |         |               |
|-------------|---------|---------|---------------|
| # of Pages: | 290 pgs | 237 pgs | 19% reduction |
| File Size:  | 33.3 MB | 15.1 MB | 55% reduction |



# e-Sign

- Digital Electronic Signatures
  - Easy to use
  - Saves everyone money
  - Saves TIME
  - More sustainable (Green)
- Allowed anywhere a signature is needed
- 4 contract modifications
  - \$480,000
  - 3 days

DEPARTMENT OF  
ATTORNEY GENERAL  
MEMORANDUM

NOA 1983  
NOT FOR DISTRIBUTION  
OUTSIDE MDOT

TO: Jason Clark  
Construction Contracts Engineer  
Construction & Technology Division  
Michigan Department of Transportation

FROM: James C. Shell  
Assistant Attorney General  
Transportation Division

RE: ELECTRONIC SIGNATURES - Review of Electronic Signatures

QUESTION

You have asked whether the Michigan Department of Transportation (MDOT) may use signatures that are "electronic" and how "electronic signatures" differ from paper documents bearing written signatures.

SUMMARY RESPONSE

Yes. Based upon signatures that are electro



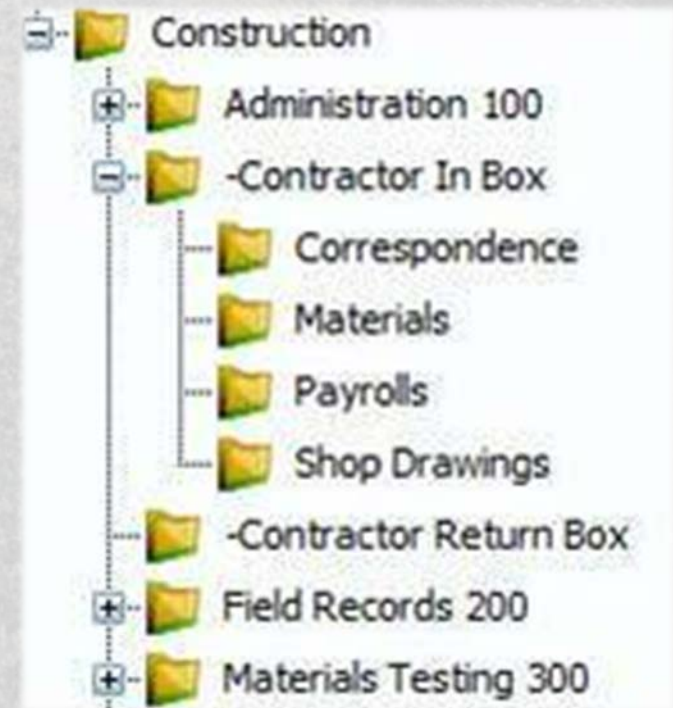
 Gregory C.  
Johnson, P.E.

Digitally signed by Gregory C. Johnson, P.  
E.  
DN: cn=Gregory C. Johnson, P.E.,  
o=MDOT, ou=Executive,  
email=johnsong2@mkhigan.gov, c=US  
Date: 2012.02.28 10:59:39 -05'00'

Chief Operations Officer

## e-Filing (ProjectWise)

- Electronic document submittal
- Information in one location
- Secure storage
- Intelligent Workflows
  - Known approval status
  - Email notifications
  - Document routing
- Audit trail
- Accessible (Web based access)
- Portable



# Audit Trail

https://mdotpwisestate.mi.us/?Control=Bentley.EC.Web.ProjectWise.UI.WebControls.WebParts.Prope - Microsoft Internet Explorer p

General Document References Audit Trail

1 of 1


| Object Name ↓           | Action Name  | Date/Time           | User Name   | Additional Data                                                                            | Comments        |
|-------------------------|--------------|---------------------|-------------|--------------------------------------------------------------------------------------------|-----------------|
| 017 Black Swamp MSL.pdf | Created      | 12/7/2012 1:34:...  | CyganN      | In folder 'Material Source Lists 300'                                                      |                 |
| 017 Black Swamp MSL.pdf | Modified     | 12/7/2012 1:34:...  | CyganN      |                                                                                            |                 |
| 017 Black Swamp MSL.pdf | Checked in   | 12/12/2012 2:11:... | HAWKERS     |                                                                                            |                 |
| 017 Black Swamp MSL.pdf | State Change | 12/12/2012 2:12:... | HAWKERS     | From E-Construction-Pending to E-Construction-Submitted Internal Review                    |                 |
| 017 Black Swamp MSL.pdf | Checked in   | 12/13/2012 8:35:... | HAWKERS     |                                                                                            |                 |
| 017 Black Swamp MSL.pdf | State Change | 12/13/2012 8:36:... | HAWKERS     | From E-Construction-Submitted Internal Review to E-Construction-Submittals Review Complete | Review Complete |
| 017 Black Swamp MSL.pdf | Checked in   | 12/13/2012 9:24:... | CyganN      | Copy left                                                                                  |                 |
| 017 Black Swamp MSL.pdf | Checked in   | 2/6/2013 11:06:...  | DaavettilaJ |                                                                                            |                 |
| 017 Black Swamp MSL.pdf | Checked in   | 2/6/2013 11:20:...  | DaavettilaJ |                                                                                            |                 |



# Electronic Documentation

Pipe, Concrete 200.00 Ft

Material Remarks: VI: Verified to have been produced and delivered by Northern Concrete Pipe, inspected, and accepted.

Reviewed By:  Brent J. Dankert P.E.  
Digitally signed by Brent J. Dankert P.E.  
 DN: cn=Brent J. Dankert P.E., o=Spicer Group,  
 ou=Design Engineer,  
 email=brendjd@spicergroup.com, c=US  
 Date: 2012.11.30 09:38:30 -0500

\_\_\_\_\_  
(Date)




**REVIEWED**  
 By Brent Dankert at 10:11 am, Nov 30, 2012

The system revised the IDR by removing the material associated of "Granular Material" from the following Pay items Sewer, CL d, 48 inch, Tr Det B; Sewer, CL C, 48 inch, Tr Det B; Dr Structure, 72 inch dia. This material was added in the field. See attached FieldBook Import Report

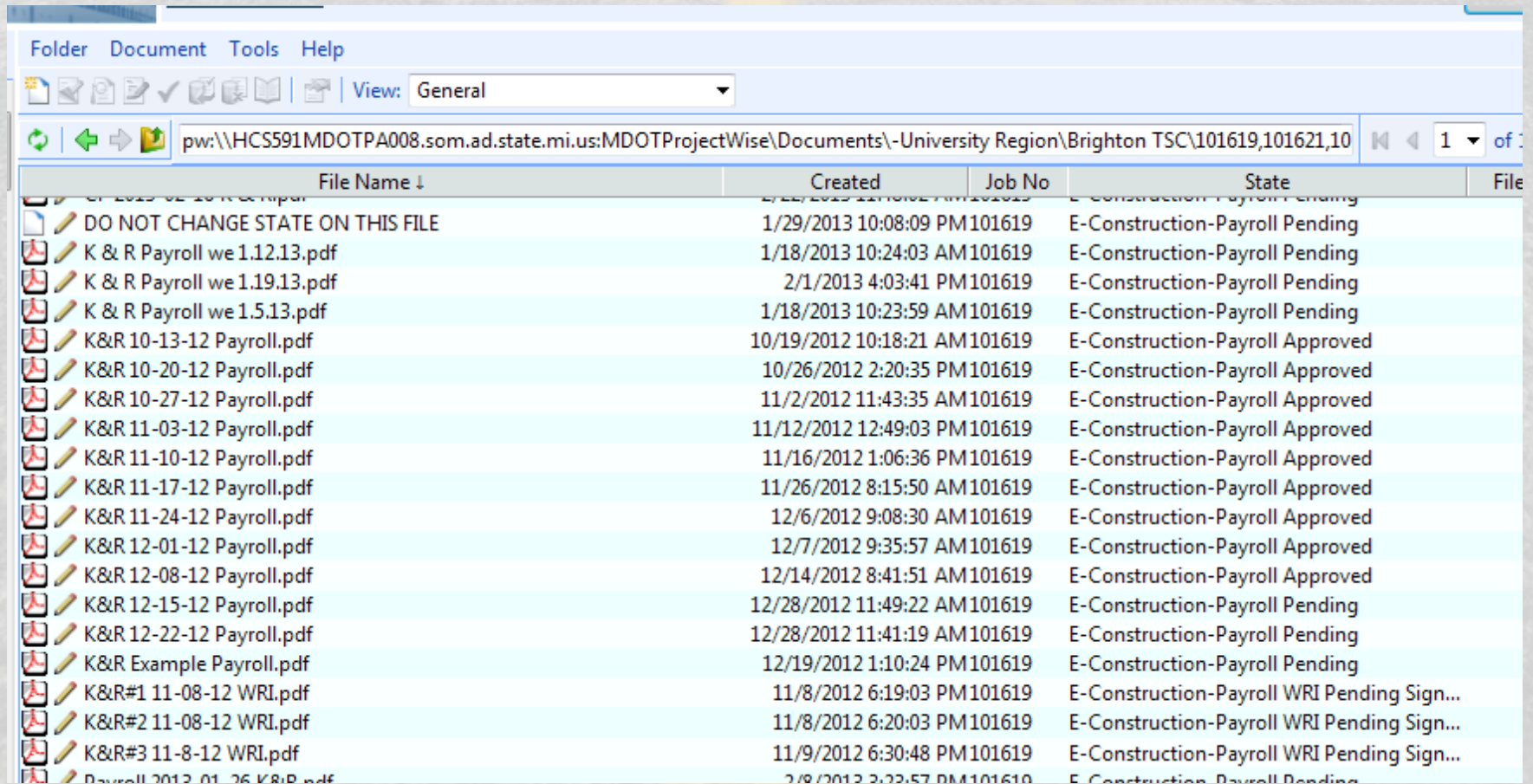
Contract: 47065-101619

IDR: 11/29/2012, nn, 1

Page 3 of 3

| DISTRIBUTION: (2 Copies) 1: Construction/Project Engineer, 2: Region Materials Supervisor (Please Print or Type all Fields)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                              | DPSA 47065                         |                           |                                                                                        |                     |      |      |     |       |                                                                                |                                                                                                              |                              |                                  |                           |                               |            |                  |               |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------|------------------------------------|---------------------------|----------------------------------------------------------------------------------------|---------------------|------|------|-----|-------|--------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------|------------------------------|----------------------------------|---------------------------|-------------------------------|------------|------------------|---------------|
| CONSTRUCTION/PROJECT ENGINEER<br>Jim Daavettilla                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                              | CONTRACTOR<br>Black Swamp Steel    |                           |                                                                                        |                     |      |      |     |       |                                                                                |                                                                                                              |                              |                                  |                           |                               |            |                  |               |
| PROJECT LOCATION<br>Nixon / Latson Road Over I-96                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                              | PROJECT NUMBER<br>101619           |                           |                                                                                        |                     |      |      |     |       |                                                                                |                                                                                                              |                              |                                  |                           |                               |            |                  |               |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                              | FOR OFFICE USE ONLY (Owner Agency) |                           |                                                                                        |                     |      |      |     |       |                                                                                |                                                                                                              |                              |                                  |                           |                               |            |                  |               |
| MDOT SPEC #                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | MDOT MATERIAL/PRODUCT NAME   | TYPE/SIZE or CLASS                 | APPX. QTY.                | SOURCE OF MATERIAL (NAME, ADDRESS, LOCATION, PH#)                                      | BASIS OF ACCEPTANCE |      |      |     |       | REMARKS/OTHER                                                                  |                                                                                                              |                              |                                  |                           |                               |            |                  |               |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                              |                                    |                           |                                                                                        | TEST                | T.S. | V.I. | QPL | CERTS |                                                                                |                                                                                                              |                              |                                  |                           |                               |            |                  |               |
| 905.03                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Epoxy Reinforcing Steel      | Grade 60                           | 378,062                   | CMC Rebar 780 Eastgate Industrial Pkwy.<br>Kankakee, IL 60901                          | X                   | X    | X    |     |       | Cert's required - VI - Epoxy must be from QPL                                  |                                                                                                              |                              |                                  |                           |                               |            |                  |               |
| 906.09                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Shear Developers             | 3/4"                               | 27,200                    | Tru Weld 460 Lake Road<br>Medina, Oh 44256                                             | X                   | X    | X    |     |       | From QPL-VI - Note name of Mfg. & Product on IDR. Steel Item - Cert's Required |                                                                                                              |                              |                                  |                           |                               |            |                  |               |
| 914.12                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | High Load Bearings           | DF-655                             | 12                        | DS Brown 300 E. Cherry Street<br>North Baltimore, Oh 45872                             |                     |      |      | X   |       | Steel Cert & Test Data Cert required                                           |                                                                                                              |                              |                                  |                           |                               |            |                  |               |
| 706.04                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Permanent Metal Deck Forms   | G210                               | 26,000                    | Redbird Engineering Sales, Inc<br>12015 Manchester Rd Ste. 58LL<br>St. Louis, Mo 63131 | X                   |      | X    |     |       | VI & Cert's Required                                                           |                                                                                                              |                              |                                  |                           |                               |            |                  |               |
| <p><b>RECEIVED</b><br/>         By Univ. Region Materials Lab at 1:49 pm, Dec 12, 2012</p> <p>I understand that all materials to be incorporated in the work, when the basis of acceptance is other than test, must be supplied by an approved source.</p> <table border="0"> <tr> <td>CONTRACTOR'S SIGNATURE<br/></td> <td>PRINT NAME<br/>Brad Carpenter</td> <td>TELEPHONE NUMBER<br/>419-667-8050</td> <td>DATE SUBMITTED<br/>12-7-12</td> </tr> <tr> <td>OWNER AGENCY (Rep. Signature)</td> <td>PRINT NAME</td> <td>TELEPHONE NUMBER</td> <td>DATE RECEIVED</td> </tr> </table> <p><b>RECEIVED</b><br/>         By Nancy R. Cygan at 9:24 am, Dec 13, 2012</p> |                              |                                    |                           |                                                                                        |                     |      |      |     |       |                                                                                | CONTRACTOR'S SIGNATURE<br> | PRINT NAME<br>Brad Carpenter | TELEPHONE NUMBER<br>419-667-8050 | DATE SUBMITTED<br>12-7-12 | OWNER AGENCY (Rep. Signature) | PRINT NAME | TELEPHONE NUMBER | DATE RECEIVED |
| CONTRACTOR'S SIGNATURE<br>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | PRINT NAME<br>Brad Carpenter | TELEPHONE NUMBER<br>419-667-8050   | DATE SUBMITTED<br>12-7-12 |                                                                                        |                     |      |      |     |       |                                                                                |                                                                                                              |                              |                                  |                           |                               |            |                  |               |
| OWNER AGENCY (Rep. Signature)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | PRINT NAME                   | TELEPHONE NUMBER                   | DATE RECEIVED             |                                                                                        |                     |      |      |     |       |                                                                                |                                                                                                              |                              |                                  |                           |                               |            |                  |               |

# State Change and Standard Naming



Folder Document Tools Help

View: General



pw:\\HCS591MDOTPA008.som.ad.state.mi.us:MDOTProjectWise\Documents\ -University Region\Brighton TSC\101619,101621,10

| File Name ↓                      | Created                | Job No | State                                      | File |
|----------------------------------|------------------------|--------|--------------------------------------------|------|
| DO NOT CHANGE STATE ON THIS FILE | 1/29/2013 10:08:09 PM  | 101619 | E-Construction-Payroll Pending             |      |
| K & R Payroll we 1.12.13.pdf     | 1/18/2013 10:24:03 AM  | 101619 | E-Construction-Payroll Pending             |      |
| K & R Payroll we 1.19.13.pdf     | 2/1/2013 4:03:41 PM    | 101619 | E-Construction-Payroll Pending             |      |
| K & R Payroll we 1.5.13.pdf      | 1/18/2013 10:23:59 AM  | 101619 | E-Construction-Payroll Pending             |      |
| K&R 10-13-12 Payroll.pdf         | 10/19/2012 10:18:21 AM | 101619 | E-Construction-Payroll Approved            |      |
| K&R 10-20-12 Payroll.pdf         | 10/26/2012 2:20:35 PM  | 101619 | E-Construction-Payroll Approved            |      |
| K&R 10-27-12 Payroll.pdf         | 11/2/2012 11:43:35 AM  | 101619 | E-Construction-Payroll Approved            |      |
| K&R 11-03-12 Payroll.pdf         | 11/12/2012 12:49:03 PM | 101619 | E-Construction-Payroll Approved            |      |
| K&R 11-10-12 Payroll.pdf         | 11/16/2012 1:06:36 PM  | 101619 | E-Construction-Payroll Approved            |      |
| K&R 11-17-12 Payroll.pdf         | 11/26/2012 8:15:50 AM  | 101619 | E-Construction-Payroll Approved            |      |
| K&R 11-24-12 Payroll.pdf         | 12/6/2012 9:08:30 AM   | 101619 | E-Construction-Payroll Approved            |      |
| K&R 12-01-12 Payroll.pdf         | 12/7/2012 9:35:57 AM   | 101619 | E-Construction-Payroll Approved            |      |
| K&R 12-08-12 Payroll.pdf         | 12/14/2012 8:41:51 AM  | 101619 | E-Construction-Payroll Approved            |      |
| K&R 12-15-12 Payroll.pdf         | 12/28/2012 11:49:22 AM | 101619 | E-Construction-Payroll Pending             |      |
| K&R 12-22-12 Payroll.pdf         | 12/28/2012 11:41:19 AM | 101619 | E-Construction-Payroll Pending             |      |
| K&R Example Payroll.pdf          | 12/19/2012 1:10:24 PM  | 101619 | E-Construction-Payroll Pending             |      |
| K&R#1 11-08-12 WRI.pdf           | 11/8/2012 6:19:03 PM   | 101619 | E-Construction-Payroll WRI Pending Sign... |      |
| K&R#2 11-08-12 WRI.pdf           | 11/8/2012 6:20:03 PM   | 101619 | E-Construction-Payroll WRI Pending Sign... |      |
| K&R#3 11-8-12 WRI.pdf            | 11/9/2012 6:30:48 PM   | 101619 | E-Construction-Payroll WRI Pending Sign... |      |
| Payroll 2012_01_26 K&R.pdf       | 2/8/2012 2:22:57 PM    | 101619 | E-Construction-Payroll Pending             |      |



# Time of Advertisement

## e-Proposal

 **Department of Transportation** 

[Michigan.gov Home](#) | [eProposal Home](#) | [eProposal Contact](#) | [My account](#) | [Sign Out](#)

### MDOT eProposal - 12/12/2012 - 1 Items

| Lettings |              | Item        |         |               |              |
|----------|--------------|-------------|---------|---------------|--------------|
| Item No  | Contract ID  | Control Sec | Job No  | Federal No    | Federal Item |
| 1212 601 | 56045-106848 | NH 56045    | 106848A | NH 1356(006)  | HH8322       |
|          |              | NH 56044    | 107607A | NH 1356(005)  | HH8321       |
|          |              | NH 56044    | 108695A | NH 1356(004)  | HH8320       |
|          |              | STT 56044   | 110434A | STP 1356(003) | HH8319       |
|          |              | BHN 56045   | 115135A | NH 1356(007)  | HH8323       |
|          |              | BHN 56045   | 115141A | NH 1356(009)  | HH8331       |

6.95 mi of mainline and ramp rehabilitation, bridge rehabilitation of 8 structures, and drainage and safety upgrades on US-10 from the Midland/Isabella county line easterly to M-18, Midland and Isabella Counties. This project includes four 5 year materials and workmanship pavement warranties and a bridge painting warranty. Each alternate may include different warranties. Alternate 1 is rubblize and hot mix asphalt surfacing with related items. Alternate 2 is concrete overlay with related items.

3.00% DBE PARTICIPATION REQUIRED

Net classification required for this project is 25359 B or 25359 Cb or Comb/JT. 25359 Ea, Fa

In addition to the above minimum prequalification requirement for prime contractors this project includes subclassifications of B, Cb, Ea and Fa. If the prime contractor is not prequalified in those subclassifications it must use prequalified subcontractors. Those subcontractors must be designated prior to award of the contract to the confirmed low bidder.

**Plans and proposal:** Estimated pages for plans - 265  
\*The proposal for this project includes all documents shown in PDF format below:

- [Download PlanhalfR1\\_Alt\\_Conc.pdf](#) - 13.79 MB
- [Download PlanhalfR1\\_Alt\\_HMA.pdf](#) - 13.25 MB
- [Download Proposal\\_Alt\\_HMA.pdf](#) - 3.7 MB
- [Download Proposal\\_Alt\\_Conc.pdf](#) - 3.72 MB
- [Download PlanhalfB1.pdf](#) - 29.38 MB
- [Download 121212\\_FUSP\\_SS\\_NTB.pdf](#) - 2.59 MB
- [Download 121212\\_Special Details.pdf](#) - 21.33 MB
- [Download Federal Mutual Letting Requirements.pdf](#) - 1.05 MB

- Boiler plate files (highlighted in yellow) are letting specific.
- Files stored in ProjectWise in a Letting specific folder.

# During Construction

## Automated Machine Guidance / Machine Control





## Automated Machine Guidance - Next Steps

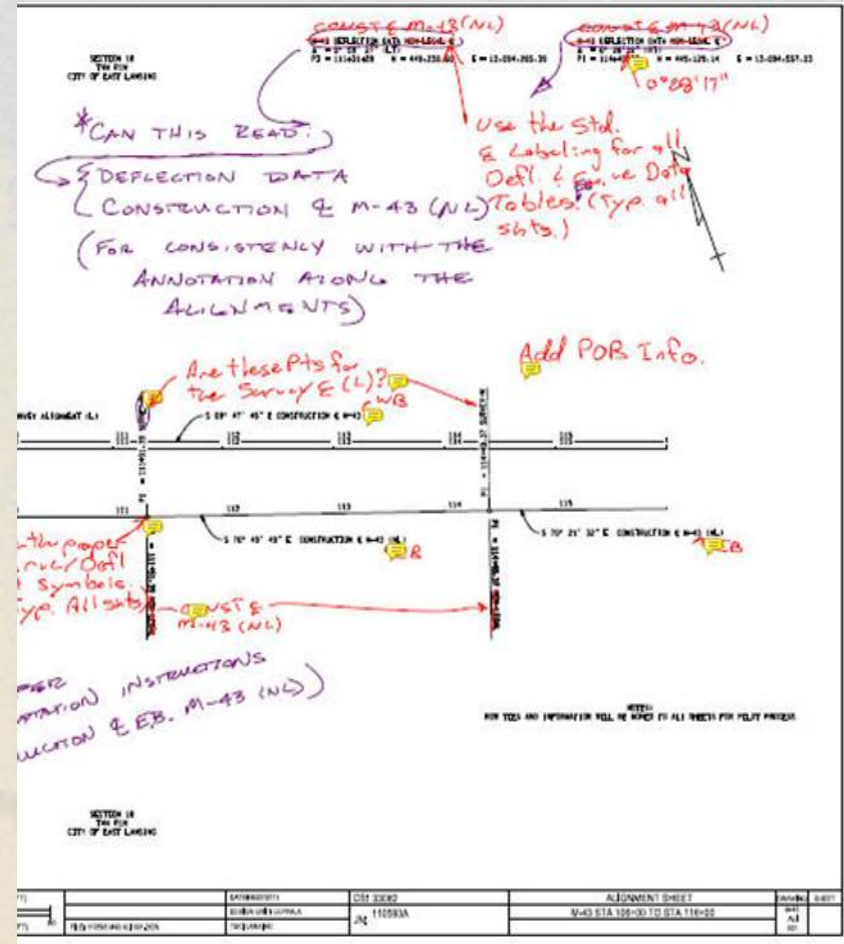
- Develop uniform model requirements.
- Develop workflows for QA/QC
- Implement modern survey technology for grade checking & booking.



## Other Innovations in Project Documentation

Tools being evaluated:

- Bentley Digital Pens for As-Builts  
Project Notes  
Design Milestone Reviews
- On-Site Inspection
- PDF Editing in Field (i-Devices)





# During Construction

## iStore Apps

- Lightmeter - Lumen verification during night construction
- Avenza - Visually identifies user location on a plan
- AutoCAD WS – Turn on and off layers, take measurements, etc.
- PDFReader Lite & TurboScan - Turn photographs into PDF files & transmit via e-mail.
- Google Earth – Visualize project over aerial image





# Transformational Change

## Better

Increased Accuracy/Transparency/Accountability, **Easier**

## Faster

Faster document submission, reviews, approvals, and payments.  
Eliminates “mail time”

## Safer

3D plan model / contractor GPS equipment = faster construction,  
less traffic impacts and fewer people on the job-site.

## Cheaper

Savings to all parties. (MDOT, contractor, subs, vendors,  
consultants, etc.)

## Smarter

Most documents are created on a computer, why print to paper?

# Next Steps

- Complete Pilot Projects
- Gather and evaluate feedback, lessons learned
- Develop Infrastructure (IT, training, etc.)
- Justify mobile devices / technology
- Statewide rollout, implementation & training



# Questions?



I LOVE THIS THING!