



NICK KOSZYKOWSKI, SR. SOFTWARE ARCHITECT

CENTER FOR TECHNOLOGY AND TRAINING



Michigan Technological University

Civil and Environmental
Engineering



- STARTED IN 1997
- INITIALLY, JUST ELECTRONIC SPEC BOOK
- PROJECT ESTIMATOR INTRODUCED
 - HELP PREVENT ERRORS FOR SUBMISSION TO LAP
 - MDOT-LET JOBS



- MORE LOCAL FOCUS
 - PROJECT ESTIMATOR
 - BID UTILITY
 - LOCAL JOB MANAGER



- PROJECT ESTIMATOR
 - MDOT'S PAY ITEM LIST AND AVERAGE UNIT PRICES
 - USER-DEFINED PAY ITEM CODES
- BID UTILITY
 - COLLECT AND ANALYZE BIDS
- LOCAL JOB MANAGER
 - MANAGE THE PROJECT IN THE FIELD, TRACKING ITEM USAGE AND PAYMENTS



- YEARLY CONTRACT WITH MDOT
 - CURRENT CONTRACT: ~\$150,000
 - DEVELOPMENT, SUPPORT, AND TRAINING
- FREE TO MI LOCAL AGENCIES/CONSULTANTS
- ~1400 USERS



LOCAL JOB MANAGER

- DAILY INSPECTIONS/POSTINGS
- PAY ESTIMATES
- CONTRACT MODIFICATIONS

Postings	Pay Estimates	Contract Mods	Item Summary
Date	Total	Notes	
10/17/2009	\$2,008.74	This posting is to balance our records with the contractor records t	
10/16/2009	\$33,769.90	HMA patch placed in all disturbed sidewalk areas today. No ticket	
10/15/2009	\$1,098.20	Installed sewer lateral at Santo Stefano Del Lago	
10/14/2009	\$6,963.50	These items were placed at Santo Stefano Del Lago. In addition t	
10/13/2009	\$8,138.43	Work was performed in front of Mr. Kozak's today. In addition to th	

Posting Date: 10/13/2009

Field Book Number/Page:

Notes:






Work was performed in front of Mr. Kozak's today. In addition to these items, future pay estimates need to include Extra Service Length, Long-1 each, and Upsize Water Service 1" to 1.5", Long-1 each.

Pay Item	Description	Qty	Units	Price	Total
1 2040013	Sidewalk, Rem	23.300	Syd	\$2.60	\$60.58
2 4027002	Forcemain, DI, 16 inch, Tr Det G	34.500	Ft	\$32.30	\$1,114.35
3 8250245	Water and Fire Suppression Service, 6 inch, Long	1.000	Ea	\$5,400.00	\$5,400.00
4 8257030	Additional Water Main Fittings, Not Shown on Plans	265.000	Lb	\$5.90	\$1,563.50



LOCAL JOB MANAGER

- ITEM SUMMARY
 - COMPLETELY PLACED, QTY REMAINING, UNPAID
- ITEM POSTING HISTORY

Postings	Pay Estimates	Contract Mods	Item Summary		
Filter:					
Pay Item:		Description:			
 Filter Pay Item		 Filter Description	 Completely Placed 		
Pay Item	Description	Units	Proj Qty	Placed	Paid
2040005	Curb, Rem	Rt	105.00	105.00	0.00
4027054	San Service Connection, PVC, 18 inch	Ea	1.00	1.00	0.00
4027055	San Service Connection, PVC, 30 inch	Ea	1.00	1.00	0.00
4027060	Sewer Flow Control, 24 inch	Ea	1.00	1.00	1.00
8120102	Plastic Drum, High Intensity, Lighted, Furn	Ea	40.00	40.00	40.00
8120103	Plastic Drum, High Intensity, Lighted, Oper	Ea	40.00	40.00	40.00
8250057	Gate Valve and Box, 12 inch	Ea	2.00	2.00	0.00
8257030	Additional Water Main Fittings, Not Shown on Plans	Lb	1,500.00	2,120.00	0.00

Item Posting History			
Pay Item:		Description:	
8257030		Additional Water Main Fittings, Not Shown on Plans	
Project Qty:		Unit Price:	
1500.00		\$5.90	
Posting Date	FB No./Page	Qty Placed	Total
10/02/2009		265.00	\$1,563.50
10/05/2009		265.00	\$1,563.50
10/06/2009		265.00	\$1,563.50
10/07/2009		265.00	\$1,563.50
10/08/2009		265.00	\$1,563.50
10/10/2009		265.00	\$1,563.50
10/13/2009		265.00	\$1,563.50
10/14/2009		265.00	\$1,563.50



MERL MOBILE

- FREE FOR ANDROID AND IOS
- DAILY POSTING
 - NOTES
 - ITEMS/QUANTITIES

10:56

← Add Items

3 inch

Pay Item Code	Units	Quantity Available
8190029	Ft	15
8190032	Ft	50
8190044	Ft	50
Conduit, DB, 1, 3 inch		
Conduit, DB, 2, 3 inch		
Conduit, Directional Bore, 3 inch		

Pay Item Code	Quantity	Units	Price	Total
8190029	185	Ft	\$10.00	\$1,850.00
Conduit, DB, 1, 3 inch				



- WEB-BASED PROJECT ESTIMATOR
 - MDOT AND LOCAL JOBS
- WEB-BASED BID UTILITY
 - LOCAL JOBS
- WEB-BASED LOCAL JOB MANAGER
 - LOCAL JOBS

COMING 2020



WEB-BASED MERL

- HOSTED IN MICROSOFT'S CLOUD SERVICES
 - FREE FOR ANY LOCAL AGENCY, CONSULTANT, OR CONTRACTOR WORKING IN MICHIGAN
- ACCESS VIA ANY MODERN BROWSER
 - CHROME, FIREFOX, EDGE, SAFARI
- MIGRATE FROM DESKTOP TO WEB USING BULK EXPORT/BULK IMPORT



WHAT'S NEXT FOR MERL?

- FIELD MANAGER PHASING OUT IN 2-3 YEARS
- AASHTOWARE PROJECT ONLY MDOT-LET JOBS
- LOCAL JOB OPTIONS:
 - APPIA (FROM INFOTECH VIA YEARLY LICENSE)
 - MERL



WHAT'S NEXT FOR MERL?

- CONSTRUCTION MANAGEMENT SYSTEM FOR LOCAL AGENCIES
 - INVESTIGATION OF FEASIBILITY, SCOPE, AND SCALE OF CHANGES TO REPLACE FIELD MANAGER FOR LOCAL USE.



WHAT'S NEXT FOR MERL?

- CURRENT FUNCTIONALITY

- POSTINGS
- PAY ESTIMATES
- CONTRACT MODS
- MOBILE APP

- TO BE ADDED

- MATERIALS/CERTS
- SMALLER ENHANCEMENTS
 - MULTIPLE INSPECTORS
 - MULTIPLE POSTINGS/DAY
 - CONTRACT MOD TO CHANGE QTY
 - DOC ATTACHMENTS



WHAT'S NEXT FOR MERL?

• TO BE ADDED

- MATERIALS/CERTS
- SMALLER ENHANCEMENTS
 - MULTIPLE INSPECTORS
 - MULTIPLE POSTINGS/DAY
 - CONTRACT MOD TO CHANGE QTY
 - DOC ATTACHMENTS

• ESTIMATED COMPLETION

- ENHANCEMENTS RELEASED AS THEY ARE DONE
- MATERIALS/CERTS: UNKNOWN--DEPENDING ON ADDITIONAL REQUIREMENTS
- ~6 MONTHS FOR UPDATED MOBILE APP

QUESTIONS?

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