# Capital Paving Program & Project Management The "ODB"



City of Milwaukee
Department of Public Works
Infrastructure Services Staff
September 6, 2012

### Introduction

- Paving Project development one stop tracking
  - ~ From inception through project closeout

#### The Oracle Data Base ~~ O D B ~~

Programming Utility Coordination

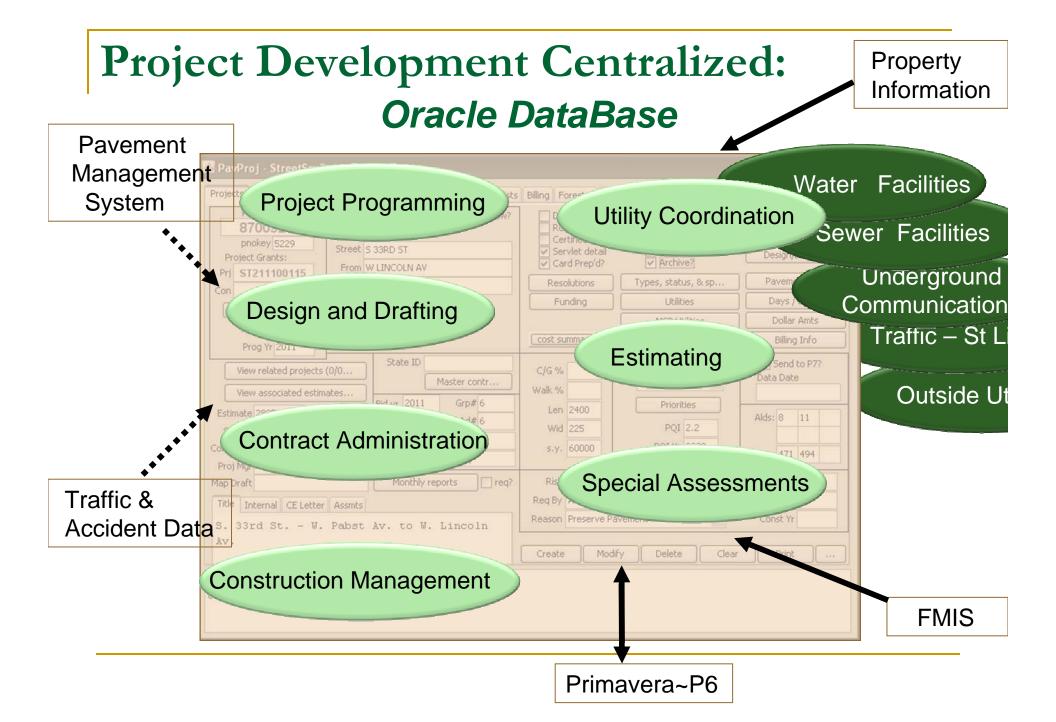
Design Contract Bidding

Estimating Construction

Drafting Property Assessments

>>>FMIS Link <u>Fi</u>nancial <u>Management Information System</u> Funding, Cost Tracking, & Hours Worked

>>>Primavera-P6 Link Project Management
Planning, Scheduling Resources by Task,
Progress, & Task Management



### The ODB – a Shared System

- Organized multiple data base systems
- Eliminates multiple entries and duplicate lists

### FMIS – Brings in Historical Data

Costs

- Resources
- Hours workedTasks

### Primavera - Project Management

- Improved grasp of the whole project:
- Timing 

  Critical Path 

  Tracking

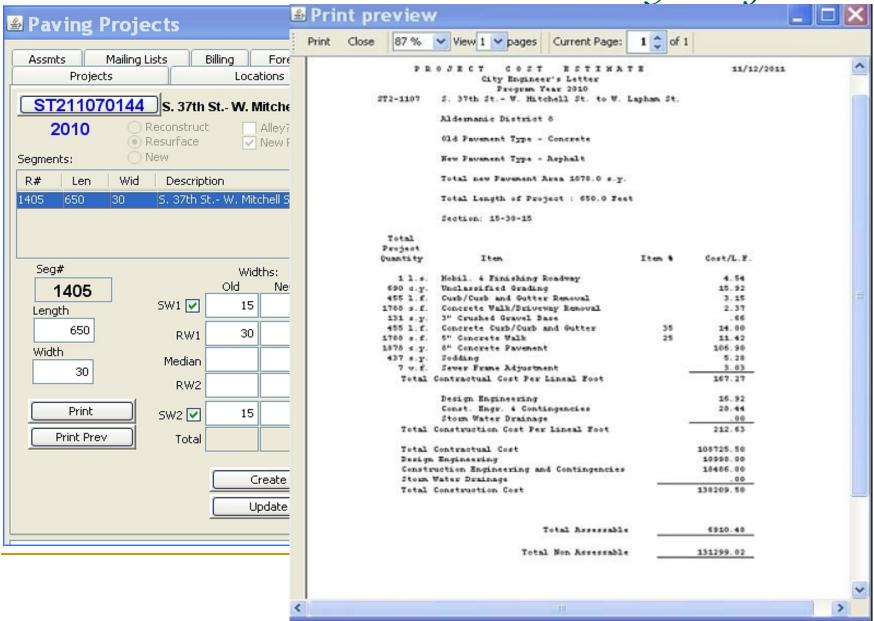
### Project Development

- Preliminary Engineering Funding approval
- Design and Drafting
- Construction Funding approval
- Bidding and Contract Award
- Construction
- Property Assessments

Main Screen: Paving Project

≦ PavProj - StreetSrv2	
Projects Locations Boxcar Unit Prices Reports Assmts Mailing	Lists Billing Forestry Maj. Str. Proj. P7 FMIS Work Orders
Project Num:  8770944  pnokey 4274  Project Grants:  Drive Office Additional Street  Street  Street  Street  Street  Multiple Additional Street  Stree	w? Do Not Retr. Orange Sewers Rdy to Bill PTM Orange Bridge/MSP/Spec Certified Grey Bridge/MSP/Spec V Servlet detail Exempt? Design/Drafting Card Prep'd? Archive?
Prj ST211070144 To W LAPHAM ST	Resolutions Types, status, & sp Pavement Info
CE Letters	Funding Utilities Days / Dates
Fund Yr 2011	MSP Utilities Dollar Amts
Prog Yr 2011	cost sum Billing Info
View related projects (0/0  View associated estimates  Estimate 28866  Details  Superv  Const Mgr Lynn DesJardins - Sup Proj Mgr  State ID  Master contr  Proj Mgr  Cont num.  Y	C/G %
Map Draft Monthly reports  Title Internal CE Letter Assmts	Req By Engineering Request ROW Yr
S. 37th St W. Mitchell St. to W. Lapham St.	Reason Preserve Pavement Const Yr  Create Modify Delete Clear Print
112 rows in full report	

Initial Estimate: Box Car - City Project



### **FMIS**

**FMIS** 

Chart of Accounts

#### **ChartField Notebook**

Revision 1



## FMIS Link >>>> ODB Hours ~ Costs ~ Tasks

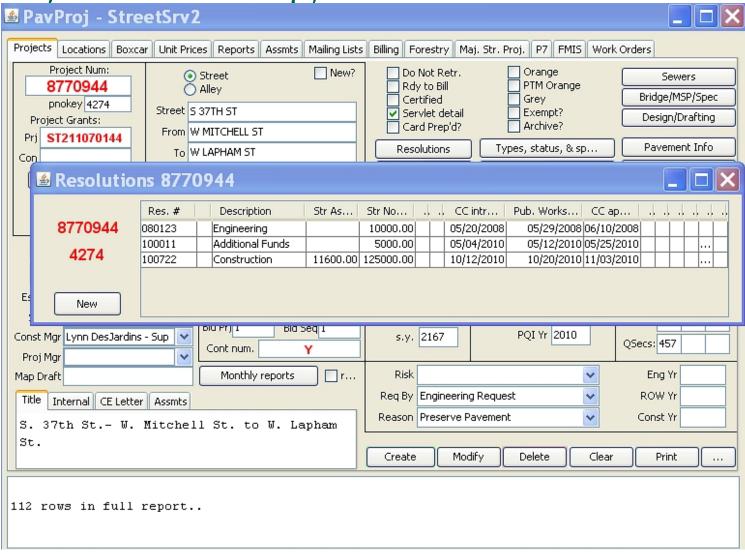
- FMIS Data Updates to ODB on Weekends
- Associated by
  - Project Grant Number
  - Resource (Employee)
  - Task
- Retrievable by Specific Time Periods
- Historical Data to Create Estimates

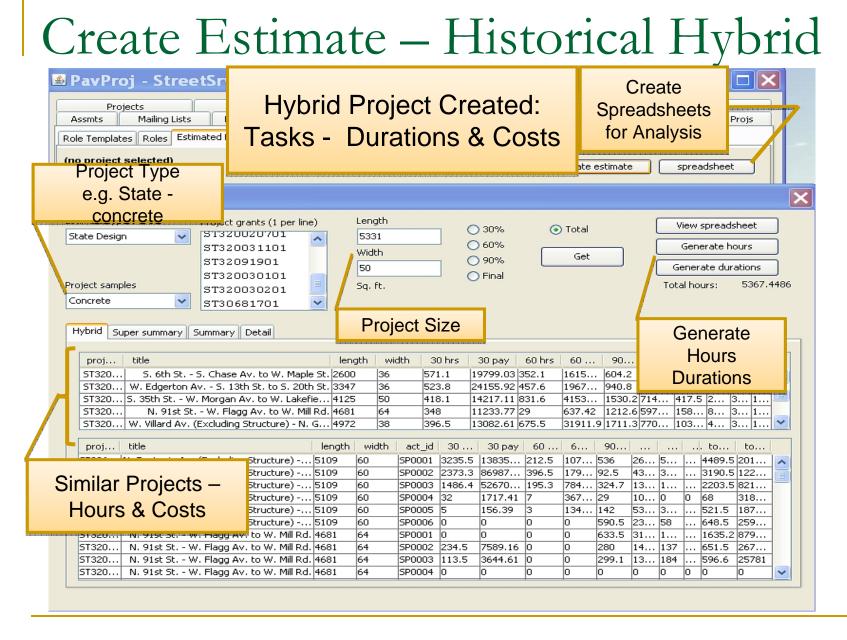
## Create Estimate base on Historical ODB & FMIS Project Data - Resources, Tasks, Costs

#### Local Street Design Estimate

2550	30	S. 50th St W. Oklahoma Av. to W. Cleveland Av.
2600	30	N. 61st St W. Keefe Av. Parkway to W. Capitol Dr.
750	30	W. Auer Av N. 84th St. to N. 87th St.
1500	30	W. Michigan St N. 91st St. to N. 93rd St. (Incl. N. 93rd St. )
Hours	Resource	
217	Eng Tech IV	
172	Eng Tech II	
19	EngTech VI	
107	Eng Tech V	
2	Drafting IV	
45	Drafting II	
38	Eng Tech IV	
6	Assment Tech	
<u>606</u>		<u>\$ 17,000</u>
	2600 750 1500 <b>Hours</b> 217 172 19 107 2 45	2600       30         750       30         1500       30         Hours       Resource         217       Eng Tech IV         172       Eng Tech II         19       EngTech VI         107       Eng Tech V         2       Drafting IV         45       Drafting II         38       Eng Tech IV         6       Assment Tech

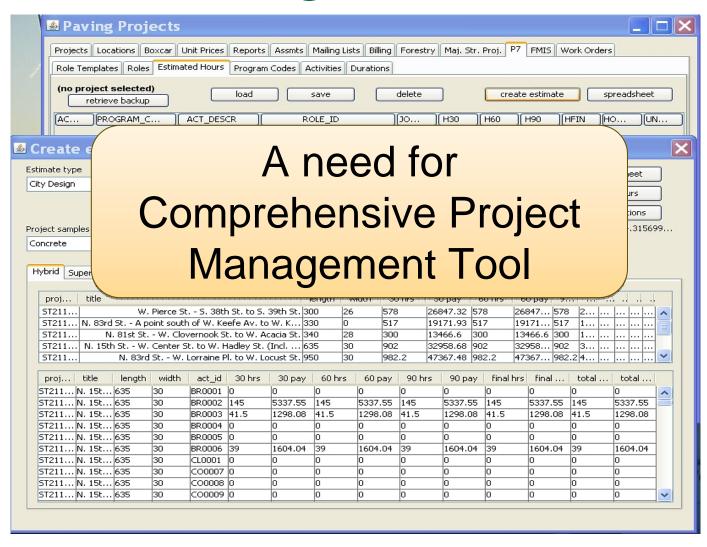
Project Funding - Resolutions





Major Street Project

### WisDOT Funding: Master Contract



### Primavera

## A powerful Project Management and Planning Software

- Creates detailed Project Schedule using Cost & Labor
   Estimates based on the ODB Historical Project Data
- Data link with the ODB ~ Actual & Scheduled Dates
- Customize Schedule to specific Projects
- Schedule Adjustments as Design Develops ~
   Time Resources Tasks Task Driving Relationships –
   Critical Path What-if scenarios Status at any time
- Reporting Tools ~ Gantt Charts, Activity Chart & Network, and Custom Time & Financial Reports

### Project Management

#### Data link with the ODB

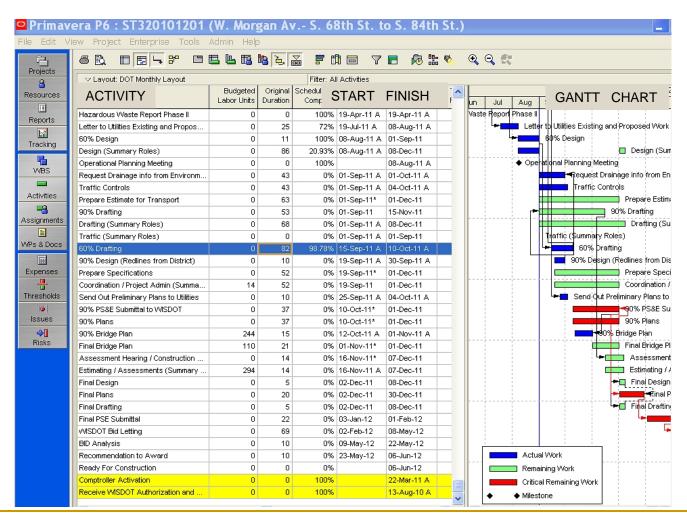
ODB Primavera



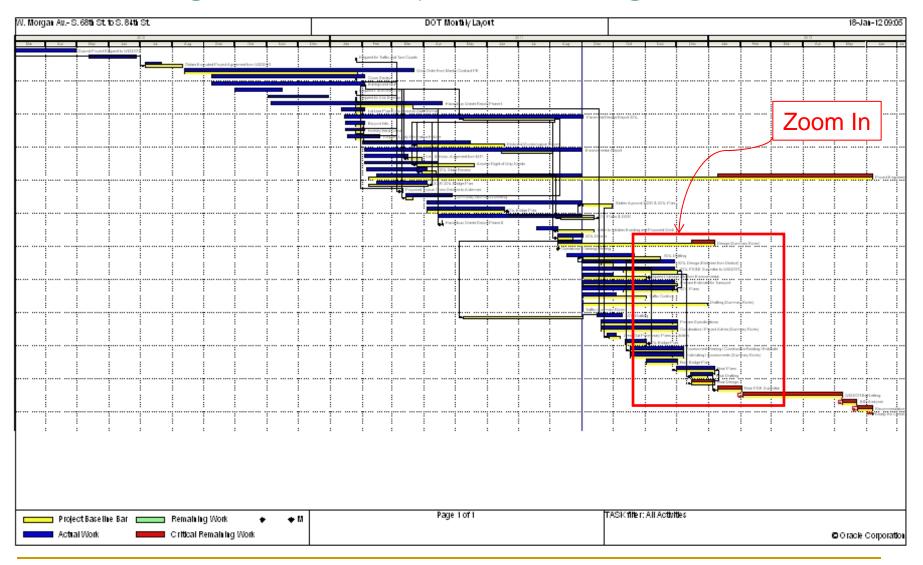




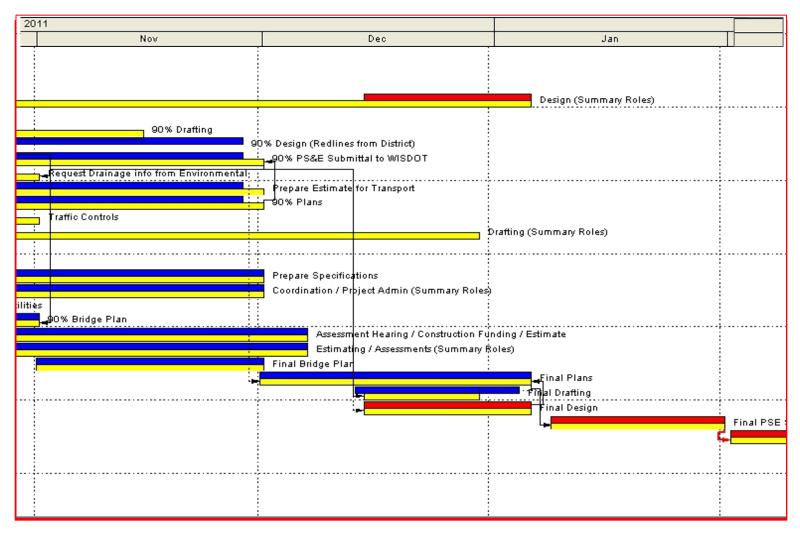
### Morgan Ave Project Create Baseline Schedule



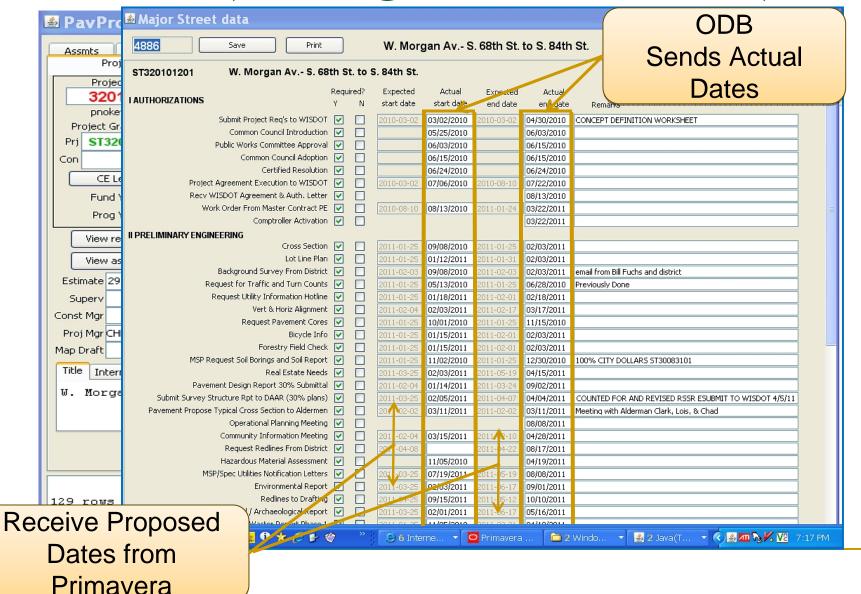
### Morgan Ave Project ~ Design Gantt



### Zoom In: Morgan Ave Project ~ Gantt



### ODB Project Page – WisDoT Project



### Project Life

Data Integration Continues







ODB Primavera

- Historical Data
- Paving Project [A]
- Enter ActualDates & Data

- Baseline Schedule
- Budgeted Schedule
- Proposed & Actual –
   Dates, Duration, Costs

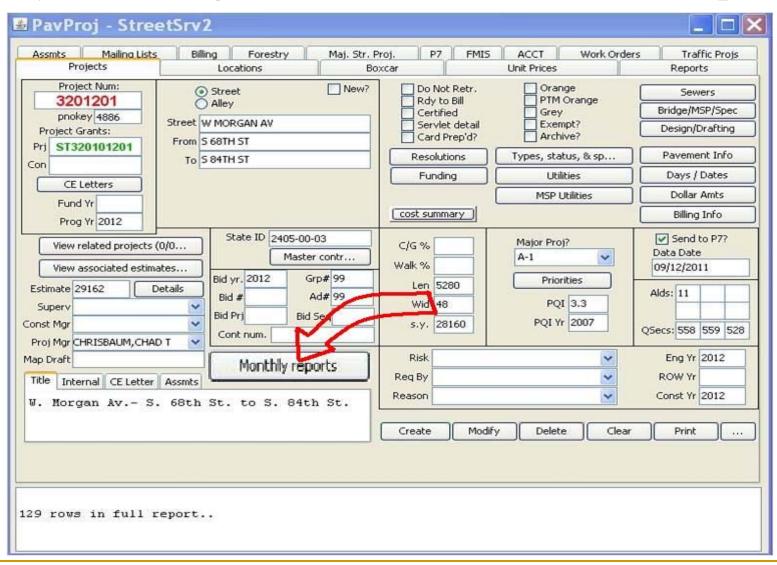
Adjustments as Project Develops

### Project Managers ~ Reports

- Accessed in ODB and Primavera
- Monthly WisDOT Reports
  - Status
  - Hours worked by Task
  - Work completed & remaining
- FMIS
  - Funding, Agreement, Work Oder
  - Expense to Date
  - Percentage Complete
- PrimaveraPresent Gantt Chart Schedule



AND MORE!!



#### **Project Monthly Status Report**

The purpose of this status report is to provide a record of the work accomplished to support the monthly invoice for each local project involving federal funding.

Project ID: 2405-00-03

Project name: W. Morgan Ave. - South 68th St. to South 84th St.
Reporting period: October 30, 2011 To November 26, 2011

Work accomplished for the current reporting period (include relevant tasks performed, status of the task i.e. in progress or completed and the names of staff involved).

Tasks performed	Status	Staff name
Resubmittal of DSR after all DAAR changes addressed. Updating 90% plan based on DAAR comments, misc. quant. And estimate. Finalizing pavement marking and underground conduit plans. Putting final touches on 90% contract documents. ESR signed on 11/02/11. DSR signed on 11/14/11	Ongoing/Complete	C. Chrisbaum, S. LaMarca, S. Bieganski, D. Zalewski, J. Blakeman, J. Bondowski
90% Design	Complete	R. Viktora,
Final bridge plans and specs, utility coordination	Complete	A. Roy, K. Suess, C. Liberto, H. Rutenbeck, G. Rogalinski
See Attached Report for Hours and Staff		

Work proposed for the next reporting period (planned tasks to be performed).

90% PS&E submittal on November 29, 2011. Construction permits and driveway applications.

See Attached Report for Hours and Staff

II. Identify any issues that may require a change to the approved schedule, scope of work and/or budget. Ability to meet the accelerated work schedule milestones. The ability of the City and DAAR/WISDOT to work through the approvals on the items listed in IV, below, will determine timely delivery.

III. Identify any items needed from WisDOT and/or others.

90% PS&E review comments once the documents have been submitted.

IV. Identify current challenges, risks, and/or hindrances to the project.

#### **Personnel Hours**

EVENT_D	T YEAR	PROG	TASK PERFORMED	LAST NAME	FRST_NAM	PAY AMNT	HOURS
11/12/201	1 2011	4411 Traffic Engineering		BLAKEMAN	JOSEPH	191.02	3
11/19/201	1 2011	4411 Traffic Engineering		BONDOWSKI	JOSEPH	61.35	1
11/12/201	1 2011	4812 Bridge Design		LIBERTO	CRAIG	93.1	1
11/12/201	1 2011	4812 Bridge Design		RUTENBECK	HOLLY	407.31	9
11/12/201	1 2011	4812 Bridge Design		ROY	ALAK	554.0B	7
11/26/201	1 2011	4812 Bridge Design		RUTENBECK	HOLLY	543.09	12
11/26/201	1 2011	4812 Bridge Design		ROY	ALAK	395.77	3
11/26/201	1 2011	4812 Bridge Design		LIBERTO	CRAIG	186.21	2
11/5/201	1 2011	4819 Bridge Drafting		ROGALINSKI	GREGORY	159.11	3
11/19/201	1 2011	4819 Bridge Drafting		SUESS	KENNETH	53.04	1
11/12/201	1 2011	4922 Project Engineering		CHRISBAUM	CHAD	1881.35	27
11/12/201	1 2011	4922 Project Engineering		LA MARCA	SALVATOR	4026.15	75
11/26/201	1 2011	4922 Project Engineering		CHRISBAUM	CHAD	905.85	13
11/26/201	1 2011	4922 Project Engineering		LA MARCA	SALVATOR	2898.83	54
11/26/201	1 2011	492A Roadway Design		VIKTORA	ROBERT	97.76	1
11/12/201	1 2011	492B Drafting/Clerical		BIEGANSKI	SCOTT	18.49	0.5
11/5/201	1 2011	492C Estimating		ZALEWSKI	DAVID	552.13	9

#### Funds – Expenses

state id 2405-00-03 project ST320101201

W. Morgan Av.- S. 68th St. to S. 84th St.

	totals	\$549,000.00	\$4,084,000.00	\$317,179.04	\$201,743.56		63.61%
st id sfx	description	resolutions	agreements	work orders	expenses to date	% complete	
0	Engineering/review	\$549,000.00	\$549,000.00	\$317,179.04	14.5		0.00%
20	Real estate						
40	Utility						
50	Rall road						
70	Construction		\$3,380,000.00				
90	Lighting and traffic		\$155,000.00				
	other						

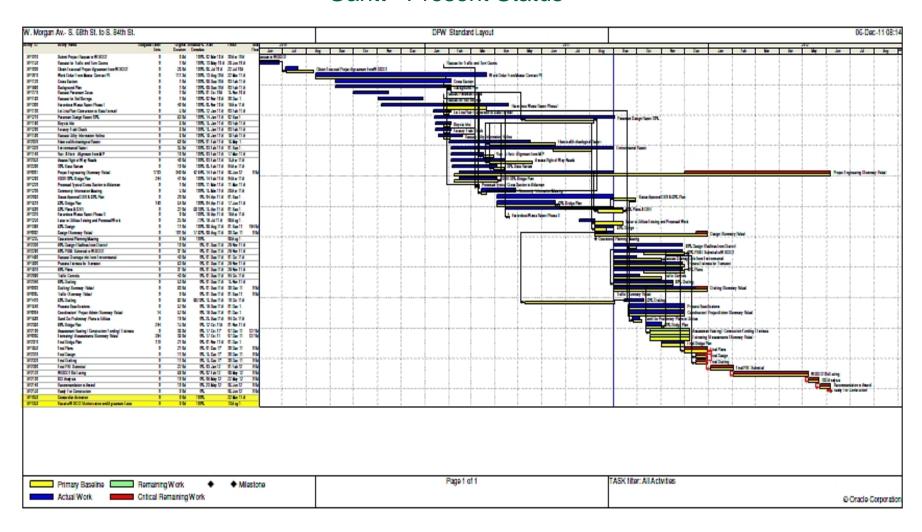
#### Tasks – Completion

W. Morgan Av.- S. 68th St. to S. 84th St.

Project ID 2405-00-03

Task	Work Order (s)	Work Order (s)	Current Pay	Current Pay Period	Total	Total	Percent
Description	Estimated Hours	Estimated Dollars	Period Hours	Dollars	Hours	Amount	Complete
Totals	5367	\$317,179.04	223.5	\$13,024.64	3554.6	\$201,743.56	63.61%
4411/4412 Traffic Lighting and Engineering	219	\$12,613.88	4	252.37	152.6	\$7,036.47	55.78%
4812 Bridge Design	498	\$34,842.11	36	2179.56	315.5	\$17,953.52	51.53%
4819 Bridge Drafting	240	\$12,728.91	4	212.15	126.5	\$6,709.22	52.719
4922 Project Engineering	1703	\$109,153.46	169	9712.18	1500.5	\$89,465.72	81.969
492A Roadway Design	651	\$41,122.38	1	97.76	479.7	\$30,231.17	73.529
492B Drafting/Clerical	1086	\$54,624.75	0.5	18.49	527.8	\$26,875.22	49.209
492C Estimating	294	\$16,224.83	9	552.13	329	\$17,227.60	106.189
492M Field Work/Survey	635	\$32,959.78	0	0	123	\$6,244.64	18.959
4925/4928 Admin/Coordination	14	\$1,074.50	0	0	0	\$0.00	0.009
492D Utility Coordination	27	\$1,834.34	0	0	0	\$0.00	0.009

#### Gantt- Present Status

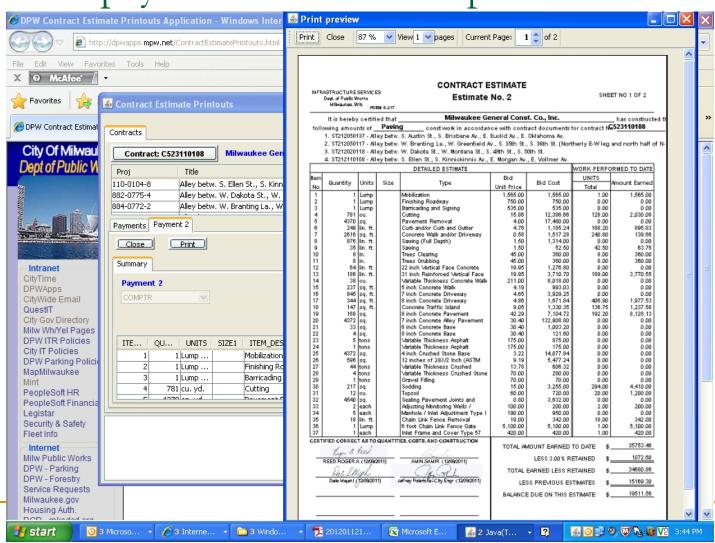


**Property** Assessments Billing **Owner List** Process - City Projects PavProj - StrzetSrv2 Assmts Mailing Lists Billing Forestry Maj. Str. Proj. **FMIS** ACCT Work Orders Traffic Projs Reports Ghassan Korban Sewers Commissioner of Public Works Preston Cole Bridge/MSP/Spec Director of Operations Department of Public Works Jeffrey S. Polenske Design/Drafting Infrastructure Services Division City Engineer December 09, 2011 Pavement Info SD... Construction Manager Days / Dates Construction Section Room 710, Municipal Building Dollar Amts Billing Info Subject: Tentative Ad No. 3 Official Notice No. 5 Send to P7? Dear Sir: Data Date For your consideration and review, a Tentative Paving Ad is tabulated below. Kindly review the estimated quantities and develop the special Alds: 8 contract provisions for these projects. The contractor bids for this Official Notice are tentatively scheduled for opening on 02/03/2012. Print Ad Supervisor's Date Due 01/06/2012 Eng Y Supervisor: FRASCH, WILLIAM - Sup ROW Yr ST211110130 W. Flagg Av. - N. 96th St. to N. 98th St. Const Y Asph Surf ST211110123 N. 97th St. - W. Carmen Av. to W. Flagg Av. Asph Surf Clear Print TAd ST211110124 N. 98th St. - W. Carmen Av. to W. Flagg Av. Asph Surf ^ Very truly yours. Mr. Double War Helling Mary L. Dziewiontkoski Project Programming Manager

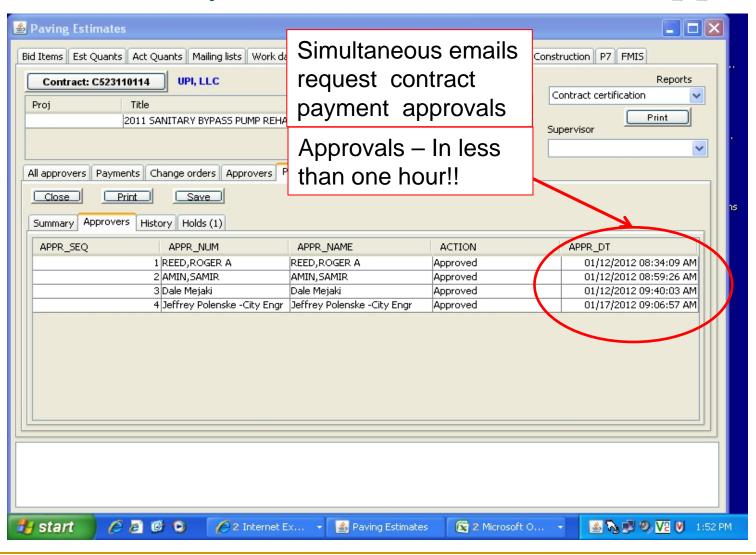
## Electronic Contract Payments ~ Prompt Payment Resolution ~

- Payment Created in the ODB, also change orders
- Simultaneous Automatic Emails to Approvers
  - Supervisors & Managers
  - Contract Office Labor & Contract requirements
  - Accounting Funding
- Tracking shows timing, holds, approvals
- Approved >DPW Admin. Control Group Register
- Comptroller > Treasurer > Check to Contractor
- Contract Close Out >Final Payment >Assessments

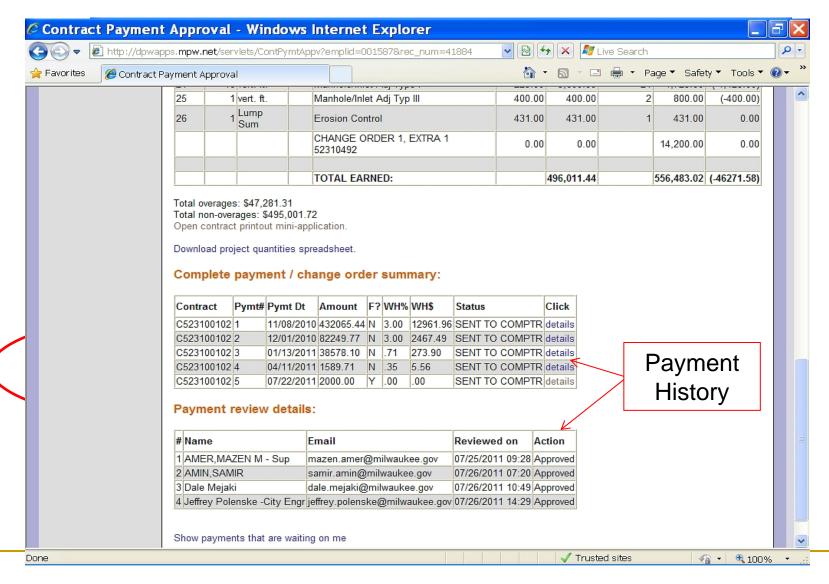
## Contract Payments – Contract Estimate for payment of work completed



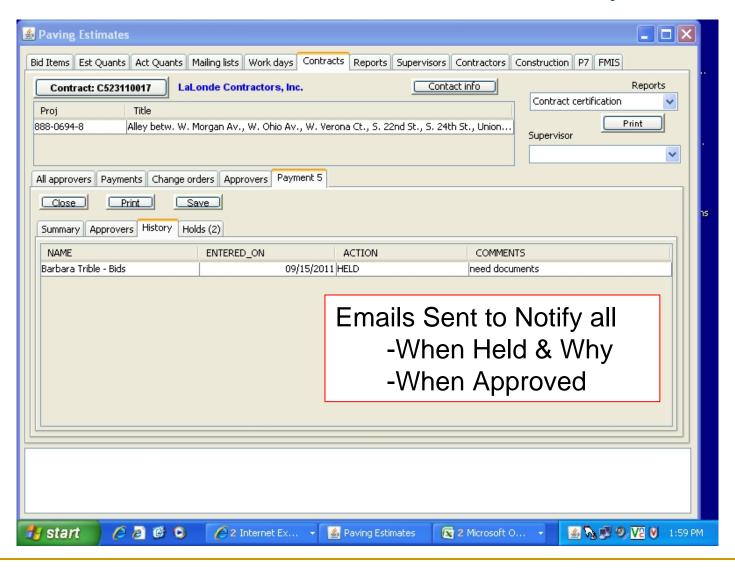
### Contract Payments – Track Work Approvals



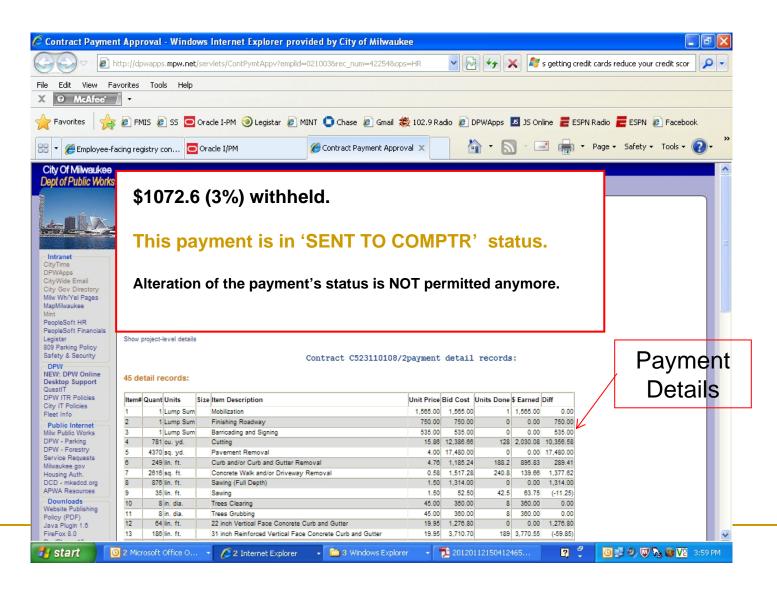
### Contract Payments-DPW Payment Approvals



### Contract Payments - Holds - who, why, where?



### After DPW Approvals – To Admin.>Comptroller>Treasurer



#### Contract Payments – Contract closeout – Final Payment

Subject: FW: Contract C523100102/5 payment \*FINAL\* APPROVED!

Attachments:

Recipients: mary.dziewiontkoski@milwaukee.gov

Dear Mary:

Contractor: Milwaukee General Const. Co., Inc.

Contract: C523100102

Payment #: 5

has been approved by the first reviewer.

To view the payment details online, click on the following link:

http://dpwapps.mpw.net/servlets/ContPymtAppv?emplid=001587&rec\_num=41884

To print an estimate, use the applet:

http://dpwapps.mpw.net/ContractEstimatePrintouts.html

Auto email to
Special Assessments
-Certificate
-Property Owner Billing

#### ODB At Work

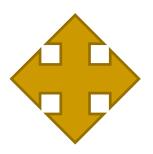
- Common Data Base for ALL Data Entry & Retrieval
- Coordinated Scheduling
- Project Management ~ Primavera Software
- Construction Payments electronic, time savings
- Property Owner Lists Shared Public meetings,
   Surveys, Mailings, Assessments, Estimates, & Billing
- Expansion and adaptation to other DPW services:
   Sewer, water, street lighting, traffic control
- □ Project Costs ~ Before During After
- Links to DPW Informational web sites ~ Bid Info
- Paving Program ODB data in Map Milwaukee

### Efficiencies Gained

#### ODB ~ FMIS ~ Primavera

- Eliminate duplication: data bases, paper files, spreadsheets, project info entries throughout DPW
- Eliminate financial inquiries from Administration and time waiting for processing financial information.
- Project Records and financial info available to Managers, technicians, Project Engineers, & City Officials immediately at work stations.
- FMIS time charged on projects to date and historical data help in planning and adjusting work loads.
- Project control scope, changes over time, & total costs
- Meet Extensive WisDot Project Reporting requirements
  - avoid staff increase and consultant fees

### What lies ahead...



#### Potential

- Electronic bidding
- Further adaptation to other DPW services:
  - Sewer, water, street lighting, traffic control
- Links to more City Departments & external utilities
- Construction field reporting interface
- Primavera ~ Global and Project Level Reporting
  - Multiple Categories:
     Budgetary ~ Resources ~ Completion ~ Task Relationships



# Thank you! Any Questions??

Oracle Data Base





