

## 12<sup>th</sup> Annual Pennsylvania Concrete Conference

# PennDOT's 2011 Program

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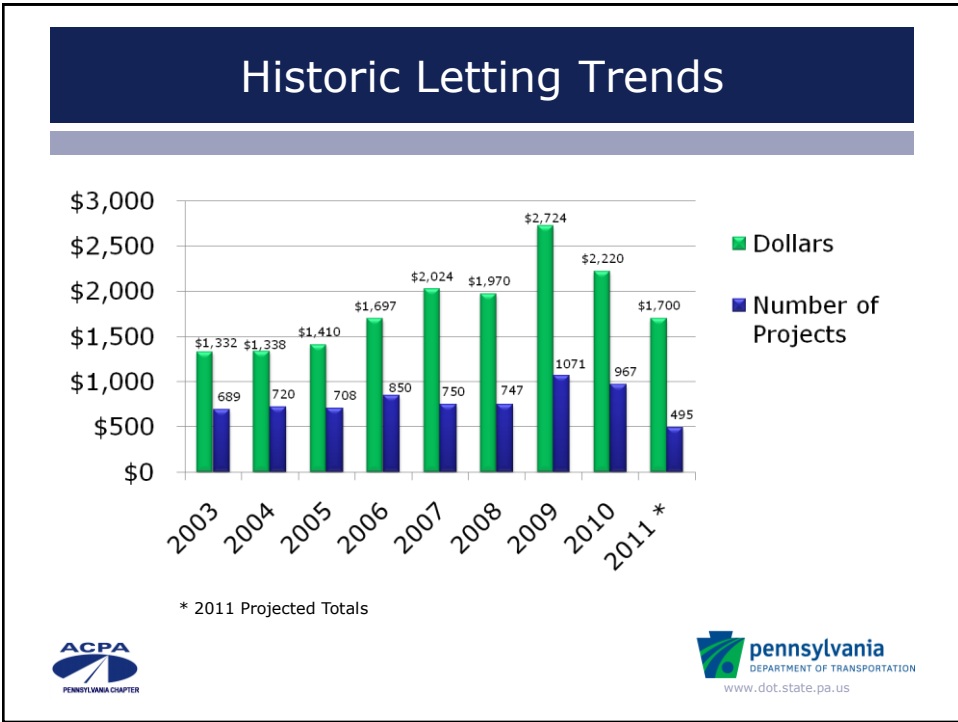
February 1<sup>st</sup>-2<sup>nd</sup>, 2011- Grantville, PA



## 2011 Highlights

- **Project Delivery**
- **Asset Management**
- **Construction Quality**







## Project Type Breakdown

| Year  | % Bridge | % Highway | % Other | Amount    |
|-------|----------|-----------|---------|-----------|
| 2005  | 21%      |           | 79%     | \$ 1.41 B |
| 2006  | 31%      |           | 69%     | \$ 1.70 B |
| 2007  | 35%      | 58%       | 7%      | \$ 2.02 B |
| 2008  | 36%      | 56%       | 8%      | \$ 1.97 B |
| 2009  | 39%      | 52%       | 9%      | \$ 2.72 B |
| 2010  | 44%      | 35%       | 21%     | \$ 2.22 B |
| 2011* | 41%      | 44%       | 15%     | \$ 1.70 B |

\* Projected Data for Committed Projects

# ARRA

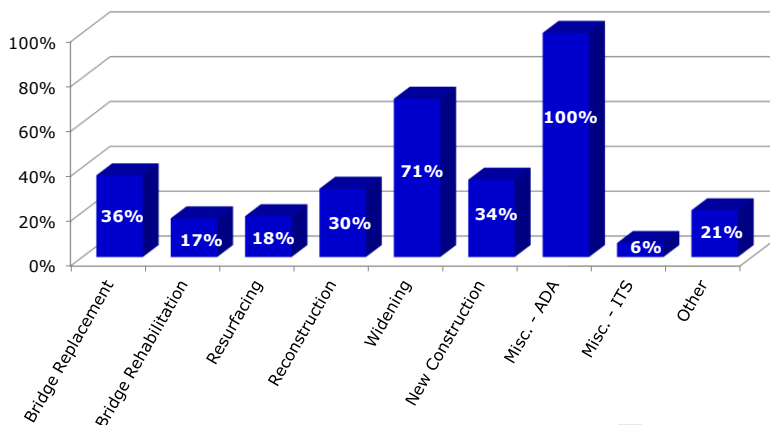
- 302 Total ARRA Contracts
- 185 Contracts have been completed
- \$763 million of the \$1.028 billion has been expended

\*All data is as of 01/03/2011



# 2010 Design-Build Trends

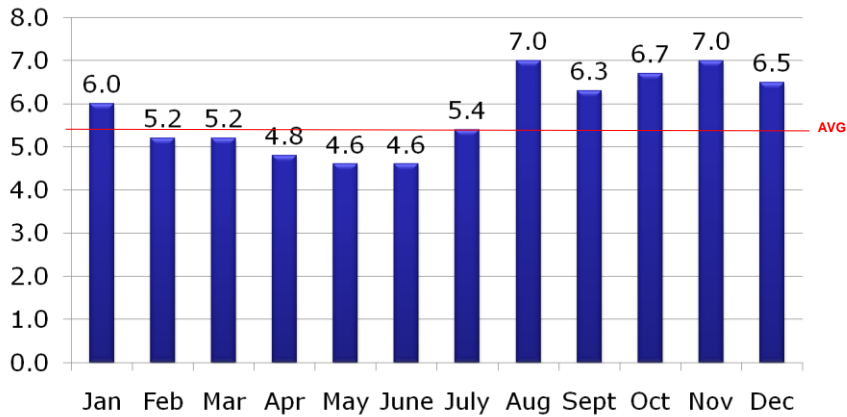
(percent of contracts bid design-build for type of work)



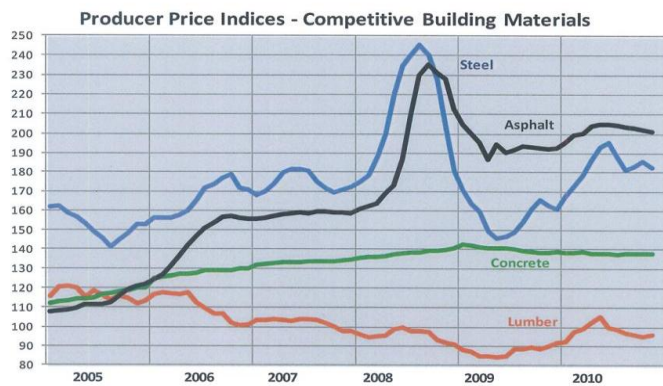
Data Source: State projects bid in ECMS in CY 2010, by STOW code



## 2010 Average Number of Bidders



## Producer Price Indices – Competitive Building Materials





Source: Portland Cement Association Market Intelligence, December 15, 2010, from U.S. Bureau of Labor Statistics Data. Base Year: 2002 = 100.



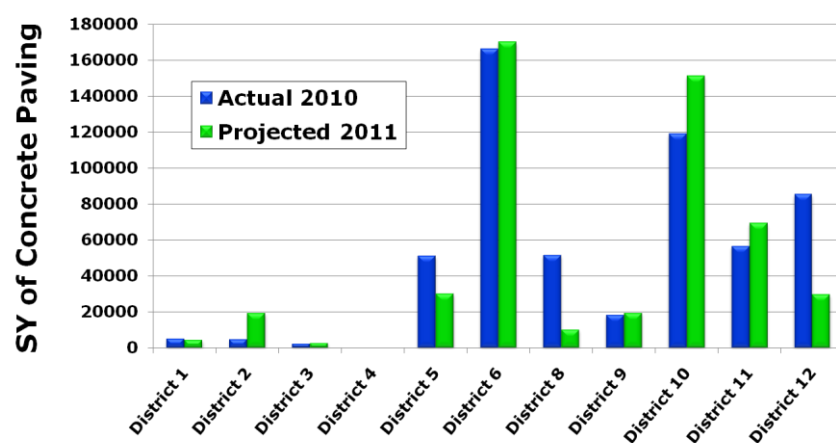
## Materials Usage Totals

|                             | <b>2007</b> | <b>2008</b> | <b>2009</b> | <b>2010</b> | <b>2011</b>  |
|-----------------------------|-------------|-------------|-------------|-------------|--------------|
| <b>Asphalt (Tons)</b>       | 9.8 M       | 8.5 M       | 8.2 M       | 8.4 M       | <i>6.3 M</i> |
| <b>Aggregate (Tons)</b>     | 13.9 M      | 11.8 M      | 13.5 M      | 10.8 M      | <i>9.1 M</i> |
| <b>Concrete Paving (SY)</b> | 0.5 M       | 0.8 M       | 1.0 M       | 0.6 M       | <i>0.5M</i>  |



Data Source = Projected Material Usage from Annual District Surveys

## Concrete Paving Program - 2010 and 2011



| District    | Actual 2010 (SY) | Projected 2011 (SY) |
|-------------|------------------|---------------------|
| District 1  | ~5,000           | ~5,000              |
| District 2  | ~5,000           | ~20,000             |
| District 3  | ~5,000           | ~5,000              |
| District 4  | ~5,000           | ~5,000              |
| District 5  | ~50,000          | ~30,000             |
| District 6  | ~170,000         | ~170,000            |
| District 8  | ~50,000          | ~10,000             |
| District 9  | ~20,000          | ~20,000             |
| District 10 | ~120,000         | ~150,000            |
| District 11 | ~55,000          | ~70,000             |
| District 12 | ~85,000          | ~30,000             |

## Concrete Paving Program - 2010 and 2011

- **558,605 sy of paving were completed in 2010.**
- **504,918 sy of paving are to be completed in 2011.**



## Concrete Pavements

| Item of Work                                       | Quantities Paid through 2010 | Future Quantities to be Completed on Existing Contracts |
|--|------------------------------|---|
| Reinforced or Plain Cement Concrete Pavements      | 261,840.38 SY                | 289,713.32 SY   |
| Reinforced or Plain Cement Concrete Pavements, RPS | 264,451.03 SY                | 89,266.70 SY  |



## Concrete Pavement Rehabilitation (CPR)

| Item of Work   | Quantities Paid through 2010 | Future Quantities to be Completed on Existing Contracts |
|--|------------------------------|---|
| Diamond Grinding of Concrete Pavement                | 396,381.74 SY                | 185,613.03 SY   |
| Concrete Pavement Patching                           | 206,390.04 SY                | 154,074.79 SY   |
| Concrete Pavement Spall Repair                       | 7,627.01 SF                  | 3,578.57 SF   |
| Dowel Retrofit                                       | 8,017.00 EA                  | 665.00 EA   |
| Longitudinal & Transverse Joint Cleaning and Sealing | 1,847,971.72 LF              | 1,154,405.09 LF   |
| Crack Cleaning and Sealing                           | 438.50 LF                    | 154,668.00 LF   |



## 2011 Construction Program

**\$1.7 Billion\***



**\*Unknowns: Act 44 Funds, Reauthorization of Highway Trust Fund, Motor License Funds**



## 2011 Letting Schedule

- **495 Projects Planned for 2011\***
- **379 Projects Populated in ECMS**
  - **13 Have Concrete Paving**
  - **19 Have Concrete Pavement Rehabilitation (CPR) Operations**

\* Projected Data



## Asset Management

### Pavement Management Cycle – New Concrete Construction



## Quality Challenges



Pavement showing signs of distress




Cores taken from the pavement showing cracking below the surface



## PennDOT /Industry Joint Efforts for Quality

- Concrete Pavement Quality Improvement Committee was established in 2000 to resolve concrete performance issues
- Premature Pavement Distress Forensic Study with University of Pittsburgh
- Vanport Limestone Research with Penn State University





PennDOT Looks Forward to Working  
with ACPA in 2011!

Thank-You!

