Follow the Money

November 6, 2018
Presentation to:

ACEC and ADOT Liaison Meeting

Follow the Money

Steve Boschen
IDO Division

November 6, 2018
What is IDO Division?

- Infrastructure Development & Operations - 1,300+
- 28,000 Lane Miles
- 50 Maintenance Camps
- 7 Districts
Where in Midwest on October 21, 2018?
BRAD PITT
MONEYBALL
JONAH HILL  PHILIP SEYMOUR HOFFMAN
BASED ON A TRUE STORY
Why Money Ball

- AMS
- Metrics
- Business
Follow the Money

- ADOT 20-30-30-20
- Revenue Stream
- What Increases Costs
- Design Fees
20-30-30-20
Project Delivery
March 13, 2015
What is 20-30-30-20 Project Delivery?

Flattened Delivery Curve
Projects Delivered – MAG, PAG, Greater AZ

FY 2014

64% Delivered in 2nd Half
63% Delivered in 4th Quarter
Project Delivery Partnership with ACEC Member Firms

- Prepare & Manage Real Risk Based Schedules
- Clearances, Clearances, Clearances (ROW) (Not just PS&E)
- Utilize Stage Submittal Checklists with ADOT PM
- Complete, On-Time, Quality Deliverables
- Prime PM actively engaged with ADOT PM on Results & Progress
- Advertise for Construction in the Month Quarter Scheduled
How we doing on Project Delivery?
# IDO Score Card

## Performance Metric Titles

<table>
<thead>
<tr>
<th>Custom Field</th>
<th>JOP</th>
<th>YTD</th>
<th>Jan</th>
<th>Feb</th>
<th>Mar</th>
<th>Apr</th>
<th>May</th>
<th>June</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Breakthrough Metrics</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Task Order Execution</strong></td>
<td><strong>Speed</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7/1/2017 Target</td>
<td>50</td>
<td>50</td>
<td>50</td>
<td>50</td>
<td>50</td>
<td>50</td>
<td>50</td>
<td></td>
</tr>
<tr>
<td>69 Actual</td>
<td>52</td>
<td>34</td>
<td>65</td>
<td>33</td>
<td>51</td>
<td>72</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Contract Execution</strong></td>
<td><strong>Speed</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7/1/2017 Target</td>
<td>90</td>
<td>150</td>
<td>135</td>
<td>120</td>
<td>110</td>
<td>100</td>
<td>90</td>
<td></td>
</tr>
<tr>
<td>234 Actual</td>
<td>194</td>
<td>143</td>
<td>91</td>
<td>0</td>
<td>55</td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Operational / Sustainment Metrics</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>On-Time Construction Delivery</strong></td>
<td><strong>Speed</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7/1/2017 Target</td>
<td>75%</td>
<td>63%</td>
<td>67%</td>
<td>70%</td>
<td>72%</td>
<td>74%</td>
<td>75%</td>
<td></td>
</tr>
<tr>
<td>45% Actual</td>
<td>78%</td>
<td>63%</td>
<td>75%</td>
<td>57%</td>
<td>67%</td>
<td><strong>73%</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>On-Time Development Delivery</strong></td>
<td><strong>Speed</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7/1/2017 Target</td>
<td>100%</td>
<td>90%</td>
<td>95%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td></td>
</tr>
<tr>
<td>58% Actual</td>
<td>8%</td>
<td>21%</td>
<td>30%</td>
<td>50%</td>
<td>11%</td>
<td><strong>36%</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Pavement Treatments (Miles)</strong></td>
<td><strong>Speed</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7/1/2017 Target</td>
<td>3000</td>
<td>0</td>
<td>200</td>
<td>400</td>
<td>900</td>
<td>300</td>
<td>200</td>
<td></td>
</tr>
<tr>
<td>2680 Actual</td>
<td>157</td>
<td>213</td>
<td>219</td>
<td>628</td>
<td>390</td>
<td><strong>465</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>On-Budget Construction Delivery</strong></td>
<td><strong>Cost</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7/1/2017 Target</td>
<td>90%</td>
<td>90%</td>
<td>90%</td>
<td>90%</td>
<td>90%</td>
<td>90%</td>
<td>90%</td>
<td></td>
</tr>
<tr>
<td>72 Actual</td>
<td>78%</td>
<td>75%</td>
<td>100%</td>
<td>100%</td>
<td>67%</td>
<td><strong>60%</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Bridge Condition</strong></td>
<td><strong>Quality</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7/1/2017 Target</td>
<td>37%</td>
<td>37%</td>
<td>37%</td>
<td>37%</td>
<td>37%</td>
<td>37%</td>
<td>37%</td>
<td></td>
</tr>
<tr>
<td>35.50% Actual</td>
<td>37%</td>
<td>37%</td>
<td>37%</td>
<td>37%</td>
<td>37%</td>
<td><strong>37%</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

## Custom Field Legend

- **Speed**
  - Go Faster (Respond, Decide, Resolve)
- **Quality**
  - Compliance, Customer Satisfaction
- **Cost**
  - Dollars Saved
- **People**
  - Retain Employees / Safe Employees

## Performance to Targets Color Coding:

- 100% of Target
- Within 75% - 99% of Target
- Within 0% - 74% of Target

---

ARIZONA DEPARTMENT OF TRANSPORTATION
Projects Delivered – MAG, PAG, Greater AZ

74
12
26

FY 2014

84% Delivered in 2nd Half
63% Delivered in 4th Quarter
Projects Delivered – MAG, PAG, Greater AZ

- 2014:
  - 1st Qtr: 6 projects
  - 2nd Qtr: 12 projects
  - 3rd Qtr: 26 projects
  - 4th Qtr: 74 projects

Projects Delivered, MAG, PAG, Greater AZ

- 2018:
  - 1st Qtr: 23 projects
  - 2nd Qtr: 48 projects
  - 3rd Qtr: 23 projects
  - 4th Qtr: 20 projects
Projects Delivered by Month

**Hockey Stick** at Quarter End

- **June**: 29 projects
- **March**: 14 projects
- **April**: 3 projects
- **May**: 3 projects
- **June**: 4 projects
- **July**: 7 projects
- **August**: 17 projects
- **September**: 10 projects
- **October**: 1 project
- **November**: 5 projects
- **December**: 1 project

Colors correspond to:
- July
- August
- September
- October
- November
- December
- January
- February
- March
- April
- May
- June
Revenue Stream

• How many streams make up the HURF tank?
ARGONZA DEPARTMENT OF TRANSPORTATION
FY 2018 HURF ACTUAL REVENUE DISTRIBUTION FLOW
(Millions of Dollars)

NOTES:
/1. Arizona Revised Statutes 28-5926 and 28-5927 transfer 1.6 percent of gas tax revenues to the State Lake Improvement Fund (SLIF) and 0.55 percent of gas tax revenues to the Off-Highway Vehicle Recreation Fund (OHRVF). The $527.4 million of gas tax revenue is before of a total $113.3 million transferred to the above two funds.
/2. In FY 2018, $656,100 was appropriated to MVD for the vehicle registration enforcement and 3rd party programs.
/3. The $99.4 million appropriation to DPS in FY 2018 has been netted of a $0.1 million reversion from DPS to HURF for unused FY 2017 appropriations.
/4. Starting in FY 2015, special off-the-top distributions to cities, towns and counties have been made each fiscal year. Laws 2016, 2nd Regular Session, Chapter 125 (HB 2708) distributes $30.0 million to cities, towns and counties in FY 2018. Actual FY 2018 distributions: 1. Cities over 300,000 persons - $1.6 million, 2. Cities/Towns - $14.4 million, 3. Counties over 800,000 persons - $4.0 million, 4. Counties - $10.0 million. Counties over 800,000 persons distribution was deposited into the MAG and PAG 12.6% accounts within the State Highway Fund.
/5. Laws 2011, 1st Regular Session, Chapter 28 (SB 1616) transfers from the State Highway Fund share of VLT generated the difference in the two-year and five-year VLT to the state general fund which totaled $1.8 million. Laws 2010, 7th Special Session, Chapter 12 (HB 2012) an amount equal to 90 percent of the fees collected under 28-4802 (A) and 60 percent of the fees collected under 28-4802 (B) shall be transferred from the State Highway Fund share of VLT to the State General Fund which totaled $6.3 million.
/6. Per Arizona Revised Statutes 28-5988, 1.51 percent of the State Highway Fund share of HURF VLT is distributed to the DPS Parity Compensation Fund.
/7. The 12.6% (statutory) and 2.6% (non-statutory) allocations from the State Highway Fund share of HURF distributions.
/8. Revenues to the State Highway Fund are reduced by the amount retained by Authorized Third Parties for the collection of VLT.
What are the challenges of Existing Revenue Stream?
Two Trends Have Eroded Gas Tax Purchasing Power Over Time

- Construction Cost Inflation
- Fuel Efficiency

Cumulative Growth Since 1993

Source: Institute on Taxation and Economic Policy (ITEP) analysis of data from the Federal Highway Administration (FHWA), Energy Information Administration (EIA), and Congressional Budget Office (CBO). Fuel-efficiency data reflect the average on-road efficiency of all light duty vehicles in operation in a given year.
Purchasing Power of Federal Gas Tax Rate Has Fallen by Nearly Two-Thirds Because of Inflation and Fuel-Efficiency Gains

Cumulative Decline in Value of 18.3 Cent Tax Rate Since 1993

Source: Institute on Taxation and Economic Policy (ITEP) analysis of data from the Federal Highway Administration (FHWA), Energy Information Administration (EIA), and Congressional Budget Office (CBO).
Two Trends Have Eroded Gas Tax Purchasing Power

- Construction Cost Inflation
- Fuel-efficiency

Construction costs are 66.6% higher than in 2000. A $5M project in 2000 costs $8.3M in 2016.

2000
Average vehicle gets 20 miles per gallon. On a 15-gallon tank, drivers travel 300 miles before refueling and paying any gas tax.

2016
Average vehicle gets 22 miles per gallon. On a 15-gallon tank, drivers can now travel 330 miles before refueling and paying any gas tax.

Fuel-efficiency data reflect the average on-road efficiency of all light duty vehicles in operation in a given year. Source: ITEP Analysis of data from the Federal Highway Administration.
Comparison of HURF Revenue Forecasts: 2006 vs. 2017

$16.9 Billion
Cost Increases

Development & Construction

October 26, 2018 Transportation Board Meeting
Item 8 – State Engineer’s Report
Active Project Breakdown

<table>
<thead>
<tr>
<th>Region</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>South Mountain</td>
<td>$916</td>
</tr>
<tr>
<td>South Central</td>
<td>$261</td>
</tr>
<tr>
<td>Central</td>
<td>$169</td>
</tr>
<tr>
<td>North Central</td>
<td>$135</td>
</tr>
<tr>
<td>North West</td>
<td>$84</td>
</tr>
<tr>
<td>South West</td>
<td>$32</td>
</tr>
<tr>
<td>North East</td>
<td>$27</td>
</tr>
<tr>
<td>South East</td>
<td>$25</td>
</tr>
</tbody>
</table>
Awarding of Construction Projects

1. How many were on Consent Agenda?

2. How many required action/discussion?
Awarding of Construction Projects

1. How many were on Consent Agenda? 1

2. How many required action/discussion? 9
# Item 9 – New Construction Contracts

<table>
<thead>
<tr>
<th>Item</th>
<th>Highway</th>
<th>Low bid</th>
<th>State Estimate</th>
<th>Difference</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>3h</td>
<td>SR 89</td>
<td>$1,259,399.99</td>
<td>$1,288,827.80</td>
<td>($29,427.81)</td>
<td>-2.3%</td>
</tr>
<tr>
<td>9a*</td>
<td>Local</td>
<td>$1,277,218.50</td>
<td>$728,726.10</td>
<td>$548,492.40</td>
<td>75.3%</td>
</tr>
<tr>
<td>9b*</td>
<td>Local</td>
<td>$1,074,784.00</td>
<td>$771,953.85</td>
<td>$302,830.15</td>
<td>39.2%</td>
</tr>
<tr>
<td>9c*</td>
<td>Local</td>
<td>$4,298,025.00</td>
<td>$3,189,521.70</td>
<td>$1,108,503.30</td>
<td>34.8%</td>
</tr>
<tr>
<td>9d**</td>
<td>I-10</td>
<td>$20,807,745.25</td>
<td>$17,770,463.00</td>
<td>$3,037,282.25</td>
<td>17.1%</td>
</tr>
<tr>
<td>9e**</td>
<td>I-40</td>
<td>$869,604.00</td>
<td>$678,448.60</td>
<td>$191,155.40</td>
<td>28.2%</td>
</tr>
<tr>
<td>9f</td>
<td>US 60</td>
<td>$3,925,407.90</td>
<td>$3,073,146.00</td>
<td>$852,261.90</td>
<td>27.7%</td>
</tr>
<tr>
<td>9g</td>
<td>US 70</td>
<td>$767,472.00</td>
<td>$673,219.50</td>
<td>$94,252.50</td>
<td>14.0%</td>
</tr>
<tr>
<td>9h</td>
<td>SR 92</td>
<td>$1,987,382.36</td>
<td>$1,655,767.00</td>
<td>$331,615.36</td>
<td>20.0%</td>
</tr>
<tr>
<td>9i</td>
<td>Statewide</td>
<td>$5,786,319.00</td>
<td>$7,450,000.00</td>
<td>($1,663,681.00)</td>
<td>22.3%</td>
</tr>
<tr>
<td></td>
<td>**</td>
<td>**</td>
<td>**</td>
<td>**</td>
<td>**</td>
</tr>
<tr>
<td>TOTAL THIS MONTH</td>
<td></td>
<td>$13,725,981.25</td>
<td>$14,140,960.30</td>
<td>($414,979.05)</td>
<td>-2.9%</td>
</tr>
<tr>
<td>TOTAL FY TO DATE</td>
<td></td>
<td>$88,664,753.72</td>
<td>$87,359,800.87</td>
<td>$1,304,952.85</td>
<td>1.5%</td>
</tr>
</tbody>
</table>

*Items 9a, 9b, and 9c are "Reject All Bids" and are not included in the totals.

**Items 9d and 9e are "Postpone" and are not included in the totals.
Nine Action/Discussion Projects

- 6 Consultant Design
- 2 In-house Design
- 1 Local Self-Administered Design
What Increases Costs?

- Lowballed Estimates compared to SOW (No. 1 Reason) (Common District Engineer practice)
- Unforeseen Scope
- Right-of-Way
- Perfection – Over review
- Current Infrastructure Delivery Market
What Increases Costs?

• Desire to hit budget and not Scope
• Time and Money to go to Council or County Board
• 2018 Labor and Materials – 15% plus
Design Fees

As Presented to Arizona Association of County Engineers (AACE) Board of Director’s Meeting on August 16, 2018
## FY15 - FY17 Project Close out Expenditure Analysis
### Projects $1 Million or Less

### Values

<table>
<thead>
<tr>
<th>Fiscal Year</th>
<th>State or Local</th>
<th>Count of TRACS</th>
<th>Sum of DEV_Exp</th>
<th>Sum of Land_Acq</th>
<th>Sum of CON_Exp</th>
<th>Sum of TOTAL_Exp</th>
<th>Design % (Dev + R/W)</th>
</tr>
</thead>
<tbody>
<tr>
<td>15</td>
<td>Local</td>
<td>33</td>
<td>$6,430,921</td>
<td>$0</td>
<td>$12,269,217</td>
<td>$18,700,138</td>
<td>52.42%</td>
</tr>
<tr>
<td></td>
<td>State</td>
<td>24</td>
<td>$5,589,162</td>
<td>$0</td>
<td>$9,590,983</td>
<td>$15,180,065</td>
<td>58.28%</td>
</tr>
<tr>
<td>15 Total</td>
<td></td>
<td>57</td>
<td>$12,020,083</td>
<td>$0</td>
<td>$21,860,120</td>
<td>$33,880,203</td>
<td>54.99%</td>
</tr>
<tr>
<td>16</td>
<td>Local</td>
<td>15</td>
<td>$1,776,130</td>
<td>$0</td>
<td>$7,035,532</td>
<td>$8,811,662</td>
<td>25.25%</td>
</tr>
<tr>
<td></td>
<td>State</td>
<td>23</td>
<td>$4,134,939</td>
<td>$2,461</td>
<td>$10,990,413</td>
<td>$15,127,813</td>
<td>37.65%</td>
</tr>
<tr>
<td>16 Total</td>
<td></td>
<td>38</td>
<td>$5,911,070</td>
<td>$2,461</td>
<td>$18,025,944</td>
<td>$23,939,475</td>
<td>32.81%</td>
</tr>
<tr>
<td>17</td>
<td>Local</td>
<td>9</td>
<td>$1,108,563</td>
<td>$0</td>
<td>$2,704,287</td>
<td>$3,812,850</td>
<td>40.99%</td>
</tr>
<tr>
<td></td>
<td>State</td>
<td>14</td>
<td>$1,753,051</td>
<td>$0</td>
<td>$5,133,655</td>
<td>$6,886,706</td>
<td>34.15%</td>
</tr>
<tr>
<td>17 Total</td>
<td></td>
<td>23</td>
<td>$2,861,615</td>
<td>$0</td>
<td>$7,837,942</td>
<td>$10,699,557</td>
<td>36.51%</td>
</tr>
<tr>
<td>Grand Total</td>
<td></td>
<td>118</td>
<td>$20,792,767</td>
<td>$2,461</td>
<td>$47,724,006</td>
<td>$68,519,235</td>
<td>43.57%</td>
</tr>
</tbody>
</table>

### Note:
- Does not include Project CAX Sub Phases
- Phases ending in R are designated as Right of Way
- Phases ending in C are designated as Construction
- All Other Phases are designated as Development
- Design Percentage calc includes Dev and R/W Cost

### Data Source:
AFIS Accounting System, PRO Databases and FAST

3 year average
Design Fees
Overall FY 15-17
18
## Design Fees

**Overall FY 15-17**

<table>
<thead>
<tr>
<th>Category</th>
<th>Total Fees</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Local Projects</td>
<td>90</td>
<td>14.97%</td>
</tr>
<tr>
<td>State Projects</td>
<td>267</td>
<td>18.18%</td>
</tr>
<tr>
<td>All Projects</td>
<td>357</td>
<td>18.05%</td>
</tr>
</tbody>
</table>
# Design Fees

## Overall FY 15-17

<table>
<thead>
<tr>
<th>Close out FY</th>
<th>State or Local</th>
<th>Count of TRACS</th>
<th>DEV Exp</th>
<th>R/W</th>
<th>CONS Exp</th>
<th>TOTAL Exp</th>
<th>Design % (Dev + R/W)</th>
</tr>
</thead>
<tbody>
<tr>
<td>15 Local</td>
<td>22</td>
<td>$3,019,287</td>
<td>$100,000</td>
<td>$21,942,925</td>
<td>$25,062,213</td>
<td>14.22%</td>
<td></td>
</tr>
<tr>
<td>State</td>
<td>82</td>
<td>$130,545,293</td>
<td>$52,199,294</td>
<td>$1,037,870,011</td>
<td>$1,220,614,599</td>
<td>17.61%</td>
<td></td>
</tr>
<tr>
<td>15 Total</td>
<td>104</td>
<td>$133,564,581</td>
<td>$52,299,294</td>
<td>$1,059,812,937</td>
<td>$1,245,676,812</td>
<td>17.54%</td>
<td></td>
</tr>
<tr>
<td>16 Local</td>
<td>40</td>
<td>$3,887,151</td>
<td>$500,000</td>
<td>$29,352,604</td>
<td>$33,739,756</td>
<td>14.95%</td>
<td></td>
</tr>
<tr>
<td>State</td>
<td>103</td>
<td>$75,823,142</td>
<td>$7,999,614</td>
<td>$447,291,491</td>
<td>$531,114,248</td>
<td>18.74%</td>
<td></td>
</tr>
<tr>
<td>16 Total</td>
<td>143</td>
<td>$79,710,294</td>
<td>$8,499,614</td>
<td>$476,644,096</td>
<td>$564,854,004</td>
<td>18.51%</td>
<td></td>
</tr>
<tr>
<td>17 Local</td>
<td>28</td>
<td>$4,032,003</td>
<td>$100,000</td>
<td>$26,470,538</td>
<td>$30,602,541</td>
<td>15.61%</td>
<td></td>
</tr>
<tr>
<td>State</td>
<td>82</td>
<td>$58,416,603</td>
<td>$7,578,634</td>
<td>$343,738,345</td>
<td>$409,733,582</td>
<td>19.20%</td>
<td></td>
</tr>
<tr>
<td>17 Total</td>
<td>110</td>
<td>$62,448,606</td>
<td>$7,678,634</td>
<td>$370,208,883</td>
<td>$440,336,123</td>
<td>18.94%</td>
<td></td>
</tr>
<tr>
<td>Grand Total</td>
<td>357</td>
<td>$275,723,480</td>
<td>$68,477,543</td>
<td>$1,906,665,915</td>
<td>$2,250,866,938</td>
<td>18.05%</td>
<td></td>
</tr>
</tbody>
</table>
Design Fees

$1M Construction and less

Greater AZ and Local FY 15-17
## Design Fees

$1M Construction and less

Greater AZ and Local FY 15-17

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Local Projects</td>
<td>90</td>
<td>14.97%</td>
</tr>
<tr>
<td>State Projects</td>
<td>70</td>
<td>28.59%</td>
</tr>
<tr>
<td>All Projects</td>
<td>160</td>
<td>18.97%</td>
</tr>
</tbody>
</table>
## Design Fees

$1M Construction and less

### Greater AZ and Local FY 15-17

<table>
<thead>
<tr>
<th>Close out FY</th>
<th>State or Local</th>
<th>Count of TRACS</th>
<th>Dev Exp</th>
<th>R/W Exp</th>
<th>Cons Exp</th>
<th>Total Exp</th>
<th>Design % (Dev + R/W)</th>
</tr>
</thead>
<tbody>
<tr>
<td>15 Local</td>
<td></td>
<td>22</td>
<td>$3,019,287</td>
<td>$100,000</td>
<td>$21,942,925</td>
<td>$25,062,213</td>
<td>14.22%</td>
</tr>
<tr>
<td>State</td>
<td></td>
<td>17</td>
<td>$1,759,102</td>
<td>$95,205</td>
<td>$8,309,359</td>
<td>$10,163,667</td>
<td>22.32%</td>
</tr>
<tr>
<td>15 Total</td>
<td></td>
<td>39</td>
<td>$4,778,389</td>
<td>$195,205</td>
<td>$30,252,285</td>
<td>$35,225,879</td>
<td>16.44%</td>
</tr>
<tr>
<td>16 Local</td>
<td></td>
<td>40</td>
<td>$3,887,151</td>
<td>$500,000</td>
<td>$29,352,604</td>
<td>$33,739,756</td>
<td>14.95%</td>
</tr>
<tr>
<td>State</td>
<td></td>
<td>34</td>
<td>$4,542,231</td>
<td>$396,998</td>
<td>$15,283,932</td>
<td>$20,223,162</td>
<td>32.32%</td>
</tr>
<tr>
<td>16 Total</td>
<td></td>
<td>74</td>
<td>$8,429,383</td>
<td>$896,998</td>
<td>$44,636,536</td>
<td>$53,962,917</td>
<td>20.89%</td>
</tr>
<tr>
<td>17 Local</td>
<td></td>
<td>28</td>
<td>$4,032,003</td>
<td>$100,000</td>
<td>$26,470,538</td>
<td>$30,602,541</td>
<td>15.61%</td>
</tr>
<tr>
<td>State</td>
<td></td>
<td>19</td>
<td>$2,475,617</td>
<td>$863</td>
<td>$8,830,932</td>
<td>$11,307,412</td>
<td>28.04%</td>
</tr>
<tr>
<td>17 Total</td>
<td></td>
<td>47</td>
<td>$6,507,620</td>
<td>$100,863</td>
<td>$35,301,470</td>
<td>$41,909,953</td>
<td>18.72%</td>
</tr>
<tr>
<td>Grand Total</td>
<td></td>
<td>160</td>
<td>$19,715,392</td>
<td>$1,193,066</td>
<td>$110,190,291</td>
<td>$131,098,749</td>
<td>18.97%</td>
</tr>
</tbody>
</table>
Design Fees – Potential Root Causes:

• Project SOW and Economy of Scale
• Sample Set of Plans not provided
• Too many Submittals for Type of Project
• Scope Changes and Enhancements
• ADOTization – Not enough interest in Project from local – just do it
• Use of Local Stds Good – Do not ADOTize
• NEPA can be a pain – but balances infrastructure with environment
Design Fees – Potential Counter Measures:
• Skin in Game – Day one
• Sample Set of Plans
• Agreement on SOW Early
• Number of Submittals
• Local Standards (No ADOTizing) and Inspection
• Streamlining of NEPA

• Performance Based Practical Design
Project Closeout:
- Greater Emphasis on Closing Out Projects
- Inactive is 180 days or more
- Reprogram Dead Money

Challenges with Closeout:
- Personnel changes at local and ADOT
- Construction personnel have moved on to next project
Quiz

1. What is 20-30-30-20?
2. How many projects required action at last board meeting?
3. When does a project hit the inactive list?
4. What was gap in HURF projections from 2006?
5. Number One Cause of Increased Delivery Cost of Project?
6. Would a Sample set of plans be a good countermeasure for reduced Design Fees?
Quiz

1. What is 20-30-30-20? (Flattened Delivery Curve)
2. How many projects required action at last board meeting? (Nine)
3. When does a project hit the inactive list? (180 days)
4. What was gap in HURF projections from 2006? ($17B)
5. Number One Cause of Increased Delivery Cost of Project? (Lowballed Estimate to Scope)
6. Would a Sample Set of Plans be a good countermeasure for reduced Design Fees? (Yes)
Follow the Money
Questions?

ACEC Arizona
American Council of Engineering Companies of Arizona