Presentation Objectives

1. Status of the Work Zone Task Force Milestones from 2001 to Present
2. Work Zone training of DOTD, contractor, and police personnel
3. Modifications to the Traffic Control Details & Item 744-01 Traffic Control Management
Objective #1

Status of the Work Zone Task Force Milestones from 2001 to Present
Why are we making a change (2001)?

**DOTD Strategic Plan** – Improve work zone safety by reducing crash rate 10% per year on Interstate construction projects.

Measured by # of work zone accidents per million vehicle miles on construction projects.

<table>
<thead>
<tr>
<th>Year</th>
<th>Objective</th>
<th>Result</th>
<th>% Reduction</th>
</tr>
</thead>
<tbody>
<tr>
<td>2002</td>
<td>N/A</td>
<td>2.78</td>
<td>N/A</td>
</tr>
<tr>
<td>2003</td>
<td>2.50</td>
<td>2.34</td>
<td>15.8</td>
</tr>
<tr>
<td>2004</td>
<td>2.25</td>
<td>2.27</td>
<td>3.0</td>
</tr>
<tr>
<td>2005</td>
<td>2.03</td>
<td>1.66</td>
<td>26.9</td>
</tr>
<tr>
<td>2006</td>
<td>1.82</td>
<td>incomplete data</td>
<td></td>
</tr>
</tbody>
</table>
WZ Task Force Mission

“We want safe work zones that minimize delay for motorists.”
Why worry about Work Zones in Louisiana?

<table>
<thead>
<tr>
<th>Year</th>
<th>Number of Fatalities</th>
<th>Number of Injuries</th>
</tr>
</thead>
<tbody>
<tr>
<td>1998</td>
<td>12</td>
<td>670</td>
</tr>
<tr>
<td>1999</td>
<td>10</td>
<td>947</td>
</tr>
<tr>
<td>2000</td>
<td>11</td>
<td>812</td>
</tr>
<tr>
<td>2001</td>
<td>20</td>
<td>803</td>
</tr>
<tr>
<td>2002</td>
<td>14</td>
<td>688</td>
</tr>
<tr>
<td>2003</td>
<td>10</td>
<td>940</td>
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<tr>
<td>2004</td>
<td>14</td>
<td>690</td>
</tr>
<tr>
<td>2005</td>
<td>12</td>
<td>709</td>
</tr>
</tbody>
</table>
Recommendations of the Work Zone Task Force

45 Total Recommendations
(27 Completed, 18 Left To Do by October 2007)
Motorists Lack of Respect for Highway Signs and WZ Speed Limits

1. Revise HS-01 to new Traffic Control (TC) standard details
2. Increase the use of Changeable Message Signs (CMS)
3. Establish philosophy of dynamic traffic control plan
4. Clarify and revise current work zone speed limit policy to reflect “dynamic” philosophy
5. Increase the use of police officers in work zones
Motorists Lack of Respect for Highway Signs and WZ Speed Limits – (continued)

6. Design TCP to minimize lane closures and traffic shifting when possible

7. Draft legislation to reduce contractor and state liability thus allowing project acceptance and returning the roadway to normal driving condition as soon and safely as possible

8. Give DOTD administrative guidance to expedite acceptance of projects by updating standards

9. Use speed signs, trailers, and temporary rumble strips in work zones
Motorists Lack of Respect for Highway Signs and WZ Speed Limits – (continued)

10. Work with enforcement agencies to ensure speed limits are strictly enforced
11. Develop a comprehensive traffic control management policy
12. Ensure DOTD employees in work zones use the required personal protective equipment

13. Establish a focal point for Work Zone Safety and Mobility in LA DOTD Headquarters – Barry Lacy

14. Develop Night Work specification

15. Require that contractors’ workers use same personal safety devices as LA DOTD workers
16. Develop guidelines to address when and where to use specific safety devices for better protection for workers (including: concrete and water-filled barriers, truck mounted attenuators, shadow vehicles, intrusion detection devices, conspicuity tape and warning devices on vehicles)
17. Add Work Zone Safety and Public Awareness to the Pre-Construction Conference Checklist
18. Increase use of innovative work zone traffic devices
19. Ensure proper lighting on complicated projects with lane shifts – add to preconstruction checklist
20. Include emergency pull-off areas in work zones – add to plan-in-hand & preconstruction checklist
21. Require all District Construction & Lab personnel to receive ATSSA training per the following: (a) Flagger & TCT Courses - all District Construction & Lab personnel (b) TCS Course - all ET5 & higher (including engineers)

22. Meet with AGC and other contractor groups to ensure contractors are trained in work zone traffic control

23. Require designated and trained flaggers on all projects

24. Require contractors to have trained and Authorized Traffic Control Technicians on all projects

25. Traffic control plan should be designed with an engineering study done by a professional experienced in traffic engineering – TCDS training
Public Information on Work Zones

26. Ensure that LA DOTD website contains accurate and up-to-date construction information

27. Provide accurate and timely information to motorists via LA DOTD’s website

28. Commit funding for public information/public relations campaigns on work zones

29. Designate one fully trained person in each district responsible for work zone activities

30. Assign the DCE to Work Zone Public Information duty – act as liaison to HQ
31. Perform market research to determine how best to keep the public informed
32. On significant projects, add a contract item for public information
Intelligent Transportation System (ITS) in Work Zones

33. Identify and implement several projects to demonstrate the use of ITS technology in Work Zones

34. Develop policies, procedures and specifications for implementing temporary ITS technologies in WZs

35. List ITS applications on the constructability and bidability checklist in design process

36. All affiliated project personnel should receive ITS technology training for work zones
Utility Work Zones

37. Make work zone traffic control requirements and information a part of utility work permits
38. Develop a “Work Zone Traffic Control Guide for Utility Companies”
39. Consider restricting utility work during peak hours
40. Assist utility companies in work zone training efforts
41. Work with OSHA to educate utility companies in correct/safe work zone practices
42. Enforce actions for non-compliance of work zone traffic control requirements in utility work
43. Increase use of A + B projects with incentive clauses on high profile projects
44. Work with State Police to ensure appropriate and accurate information about lane closures & working/reporting crashes are included in the Training Academy curriculum
45. Evaluate changing from “lump sum” to “unit price” for Temporary Signs & Barricades
Objective #2

Work Zone training of DOTD, contractor, and police personnel
# Work Zone Training

DOTD Personnel

<table>
<thead>
<tr>
<th></th>
<th>Flagger</th>
<th>TCT</th>
<th>TCS</th>
</tr>
</thead>
<tbody>
<tr>
<td>ATSSA</td>
<td>723</td>
<td>894</td>
<td>458</td>
</tr>
<tr>
<td>AGC</td>
<td>N/A</td>
<td>N/A</td>
<td>30</td>
</tr>
<tr>
<td>Total</td>
<td>723</td>
<td>894</td>
<td>488</td>
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</table>
## Work Zone Training Contractor Personnel

<table>
<thead>
<tr>
<th></th>
<th>Flagger</th>
<th>TCT</th>
<th>TCS</th>
</tr>
</thead>
<tbody>
<tr>
<td>ATSSA</td>
<td>275</td>
<td>242</td>
<td>160</td>
</tr>
<tr>
<td>AGC</td>
<td>N/A</td>
<td>N/A</td>
<td>387</td>
</tr>
<tr>
<td>Total</td>
<td>275</td>
<td>242</td>
<td>547</td>
</tr>
</tbody>
</table>
### Work Zone Training Statewide Totals

<table>
<thead>
<tr>
<th>Flagger</th>
<th>TCT</th>
<th>TCS</th>
</tr>
</thead>
<tbody>
<tr>
<td>998</td>
<td>1136</td>
<td>1035</td>
</tr>
</tbody>
</table>
## Work Zone Police Training

<table>
<thead>
<tr>
<th></th>
<th>DOTD</th>
<th>CCC</th>
<th>State Police</th>
<th>Local Law</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>125</td>
<td>23</td>
<td>531</td>
<td>841</td>
<td>1520</td>
</tr>
</tbody>
</table>
Objective #3

Modifications to the Traffic Control Details & Item 744-01
Traffic Control Management
What Drove the Changes

★ Our Customers (public) have spoken
  – DOTs work during peak traffic hours
  – DOTs lower speed unnecessarily
  – DOTs don’t give adequate advance notice
  – DOTs place too many non-applicable signs

★ Public no longer believes what we tell them
What Drove the Changes

- They even say our signs are confusing!
Why change?

- The MUTCD has changed
- DOTD policies have changed
- Establish consistency through our work zones statewide
- Provide clear and concise information to our contractors
- Improve safety throughout our work zones
History of TC Details

- La WZ Task Force began working on Traffic Control details back in late 2002.
- TCs called Details and not Standard Plans.
- TC details began showing up in projects mid 2003.
- The July 2003 TC details ordered into all Department projects in Fall of 2003.
- TC details were presented to all Districts.
- October 16, 2006 TC details – latest revision
Common Problems with Temporary Traffic Control (TCs)

- Traffic Control Specialist (Brett Morgan) inspects all projects twice a year for deficiencies.
- All deficiencies are reported to the PE and recorded in a master database – deficiencies shall be corrected within 5 days.
Common Problems with Temporary Traffic Control (TCs)

- **TC-00** - Speed limits are not being raised back up when the road work permits.
- **TC-00, Signs** - Signs that need to be covered need to be in a manner where the whole sign is covered with a material that cannot be seen through at night. Check all devices periodically during the day, especially at the beginning and end of work, that appropriate signs are in place (i.e., signs not needed are removed, left lane closure & not right lane closed, etc.).
- **TC-00, Flaggers** – make sure they are properly trained – an easy way to spot an untrained one is when he has a flag in his hand instead of a stop/slow paddle.
Common Problems with Temporary Traffic Control (TCs)

- Make sure that all devices are crashworthy (NCHRP 350 approved) & there is a WZ letter on file with all Category II & III devices.
- Cutting asphalt cores – some traffic control needs to be in place (single flagger w/ signs, etc.)
- “Construction” instead of “Work” – allowed if requested and approved by PE, but grace period ends 1/1/2006
- Using police as flaggers & protection for your work zone
Common Problems with Temporary Traffic Control (TCs)

- **TC-00** - Inspectors have the authority to reject channelizing devices or have the contractor clean them. There are a lot of very bad devices out there. TC-00 shows all acceptable channelizing devices. The striping and color of devices must match these examples. For example, there are a lot of drums with three white reflective stripes – two stripes is the acceptable drum.

- **TC-01, note 6** - The shoulder drop-off policy needs to be enforced in every situation.

- **TC-01, 02, 03, 05** – no parking on opposite shoulder within 500’ of work zone.
Figure 6H-10. Lane Closure on Two-Lane Road Using Flaggers (TA-10)

Note: See Tables 6H-2 and 6H-3 for the meaning of the symbols and/or letter codes used in this figure.

Note: The buffer space should be extended so that the two-way traffic taper is placed before a horizontal or crest vertical curve to provide adequate sight distance for the flagger and a queue of stopped vehicles.

Typical Application 10
Common Problems with Temporary Traffic Control (TCs)

- **TC-02, note 6 & TC-03, note 5** - During ANY lane closure, additional flagmen are required to be at all intersections and major driveways.

- **TC-02, 03, & 15** - Lane closure/flagmen signs are not being placed in the correct location. Flaggers must be visible from flagger signs. This includes moving operations. For instance, do not place signs at the beginning of the job and then place a flagger two miles down the road - the signs have no purpose in this situation.
Common Problems with Temporary Traffic Control (TCs)

- **TC-03** - During any lane closure, no matter how long or how short, a pilot car shall be used (if required) or channelizing devices shall be down the centerline throughout the length of the closure. Pilot cars are mandatory for the operations/situations listed.

- **TC-06** – attenuators are mandatory when workers are present without positive barrier protection.

- Existing striping needs to be completely removed before applying new temporary striping for diversions, closures, etc. Black paint is not acceptable unless permission is granted in certain instances.
Common Problems with Temporary Traffic Control (TCs)

- **Section 713.05, Red Book** – Reflectors are required on ALL concrete barriers at 15’ spacing. This includes our barriers that contractors are using.

- Moveable signs on stands are very dirty and/or scratched to a point where they are rejectable – caused from throwing them into contractor’s truck.

- Moveable signs are not crashworthy if they are not clipped in the stand correctly.
The Bottom Line

- Take pride in your work zone
- Have workers wearing appropriate safety garments (not worn or ragged) – they will command more respect from the motoring public
- Establish a work zone that any driver (young or old) could navigate easily
- Temporary Traffic Control sets the tone for the entire project - if your TTC doesn't look good or isn't correct, motorists won't respect you, and expect sloppy inspection & construction
SUPPLEMENTAL SPECIFICATION

SECTION 744

TRAFFIC CONTROL MANAGEMENT

Important Points to Ponder
Item 744-01
Traffic Control Management

Statewide Average Cost Per Day

2004-2005  $177/Day
2006       $148/Day
744.02 REQUIREMENTS:

“The TCS shall have a set of all contract documents relating to traffic control or traffic staging and a current copy of the MUTCD and a current copy of Louisiana Work Zone Traffic Control Details readily available at all times.”

The PE shall assure these documents are available by reviewing them at the onset of the project. Reviews should continue periodically throughout the project duration.
744.03 AUTHORIZATION:

“Prior to commencing work requiring traffic control management, the contractor shall submit to the engineer a copy of the TCS’s and TCT’s current authorization.”

Currently, ATSSA & AGC are acceptable, plus any others that contractors can justify.
744.04 DUTIES:

(a) “…The TCS may have other assigned duties, but must be readily available at all times to perform TCS duties as required in the contract. A minimum of one TCT shall be required on site during working hours.”

Someone in charge of traffic control (TCT or TCS) shall be on site at all times.
(d) “The TCS shall be responsible for the training of flagging personnel. This training will ensure that all flagging done on the project is in compliance with the MUTCD Part VI and Louisiana Work Zone Traffic Control Details.”

Police are OK when used as flaggers, as long as they meet the flagger requirements and are being used ONLY as flaggers (not police)
744.04 DUTIES:

(e) “The TCS shall coordinate all traffic control operations for the duration of the contract, including those of subcontractors, utility companies, and suppliers, to ensure that all traffic control is in place and fully operational prior to the commencement of any work.”
744.04 DUTIES:

(g) “The TCS shall prepare and submit statements concerning road closures, delays, and other project activities to the news media on a weekly basis or more often as needed.”

Revision – the District Construction Engineer (Area Engineer ?) will now prepare the statement
744.04 DUTIES:

(h) “The TCS shall be responsible for notifying the engineer, or designee, immediately of all vehicular accidents and/or incidents related to the project traffic control. The time and date of notification shall be documented in the traffic control diary. The TCS shall also monitor and document queues that occur as necessary.”
744.05 TRAFFIC CONTROL DIARY:

“The TCS shall maintain a project traffic control diary in a bound book...The TCS shall keep the traffic control diary current on a daily basis, and shall sign each daily entry.”

Revision – The Department will now allow a provisional diary (electronic, etc.) provided it meets the minimum requirements set forth in the AGC diary.
744.05 TRAFFIC CONTROL DIARY:

“The traffic control diary shall be available at all times for inspection by the engineer; and the diary shall be reviewed with the engineer on a weekly basis and a copy submitted to the engineer on a monthly basis.”

Any and all deficiencies shall be noted on the contractor’s diaries.

Revision – The Department will now require weekly submittals of the diaries.
744.06 INSPECTION OF TRAFFIC CONTROL:

“The TCS shall be responsible for the inspection of all traffic control devices every calendar day that traffic control devices are in use. This inspection may be delegated to the TCT. The “Quality Guidelines for Work Zone Traffic Control Devices” standard by the American Traffic Safety Services Association (ATSSA) shall be used to evaluate the condition of the traffic control devices to determine if acceptable for use.”
ATSSA Pamphlet Distribution

- 600 pamphlets to DOTD personnel
- 178 pamphlets to 48 different contractors
- Distributed in Fall 2005
- I have lots more if needed!
744.06 INSPECTION OF TRAFFIC CONTROL:

“The traffic control devices shall be inspected by the TCS on weekends, holidays, or other non-work days at least once per day. Traffic control devices shall be inspected by the TCS at least once a week during nighttime periods and the same night after any modifications or changes have been made in the traffic control devices.”
744.07 FAILURE TO COMPLY:

“The engineer may suspend all or part of the contractor’s operation(s) for failure to comply with the approved “Traffic Control Plan” or failure to correct unsafe traffic conditions within a reasonable period of time after such notification is given to the contractor in writing.”

Serious deficiencies shall constitute in the contractor’s operations being shut down until such time as he can demonstrate that he can meet the specification in its entirety.
“Came out today and had trucks set to go on different project. After getting this done, I left yard and went to plant in Metropolis, then went to Hwy 123 job where Jim had start laying binder mix. He had the first load on job site and I had about 11 other trucks hauling to him. I stayed until he got further down the road & had about 6 or 8 trucks unloaded. I also talked to the two girls unloading trucks and asked them to try and clean apron on trucks better.

Went to Hwy 456, and got with Tom & Jerry to see what was going on, then came back to Hwy 789 on Jim’s job, where I didn’t get to see much except men asleep on job until I saw him at the store up the road. Came back to office for rest of day until time to go on. Had trucks set up for next day.”
WORK ZONE CRASH/FATALITY SHEET

PROJECT NUMBER: ___________________ DATE OF CRASH/FATALITY: ________________
PROJECT NAME: ___________________________________________________________________
PARISH: ____________________________ ROUTE: ________________________________
LOG MILE OF COLLISION: ______________ LENGTH OF PROJECT: ___________________
NUMBER OF INJURIES: __ __ const. worker __ driver/passenger __ pedestrian __ bicyclist __ other
NUMBER OF FATALITIES: __ __ const. worker __ driver/passenger __ pedestrian __ bicyclist __ other
NUMBER OF VEHICLES INVOLVED: ______

Pictures: ___yes ___no

NARRATIVE: (Please list all Work Zone devices 1 mile in each direction)
________________________________________________________________________________
________________________________________________________________________________
________________________________________________________________________________
________________________________________________________________________________
________________________________________________________________________________
________________________________________________________________________________
________________________________________________________________________________
________________________________________________________________________________
________________________________________________________________________________

Investigating Agency: ______________________________________________________________
P.E. Name: ___________________________ P.E. Signature: ___________________________
Project Engineer

Original

Highway Safety Section 82
Fax Copy: 225
Barry L. Lacy, P.E.
Work Zone/Claims/Audit Engineer
blacy@dotd.la.gov
(225) 379-1584

Questions?