FEMA Public Assistance and FHWA Emergency Relief Funds Reimbursements

October 11, 2016

Today's Presenters

- **Moderator**
  Bonnie Castillo, Iowa Department of Transportation

- **NCHRP Synthesis 472**
  Dr. Yuko Nakanishi & Pierre Auza, Nakanishi Research & Consulting
  Rene Garcia, Caltrans

- **Vermont Agency of Transportation's Perspective**
  Richard Tetreault & Alec Portalupi, Vermont Agency of Transportation

- **TDOT Damage Assessment for the FHWA ER Program and FEMA PA Program**
  Derial Bivens, Tennessee Department of Transportation

NCHRP is...

A state-driven national program

- The state DOTs, through AASHTO's Standing Committee on Research...
  - Are core sponsors of NCHRP
  - Suggest research topics and select final projects
  - Help select investigators and guide their work through oversight panels

NCHRP delivers...

Practical, ready-to-use results

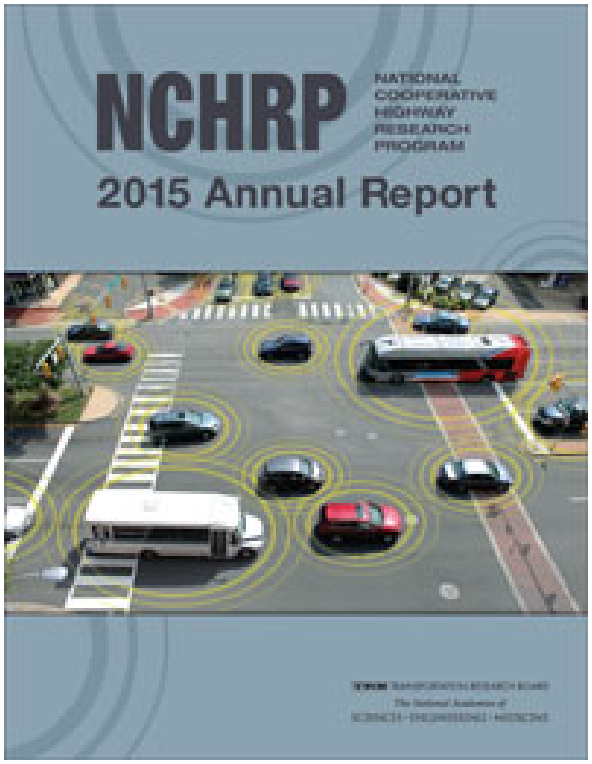
- Applied research aimed at state DOT practitioners
- Often become AASHTO standards, specifications, guides, manuals
- Can be directly applied across the spectrum of highway concerns: planning, design, construction, operation, maintenance, safety

A range of approaches and products

- Traditional NCHRP reports
- Syntheses of highway practice
- IDEA Program
- Domestic Scan Program
- Quick-Response Research for AASHTO
- Other products to foster implementation:
  - *Research Results Digests*
  - *Legal Research Digests*
  - *Web-Only Documents and CD-ROMs*

NCHRP Webinar Series

- Part of TRB's larger webinar program
- Opportunity to interact with investigators and apply research findings.



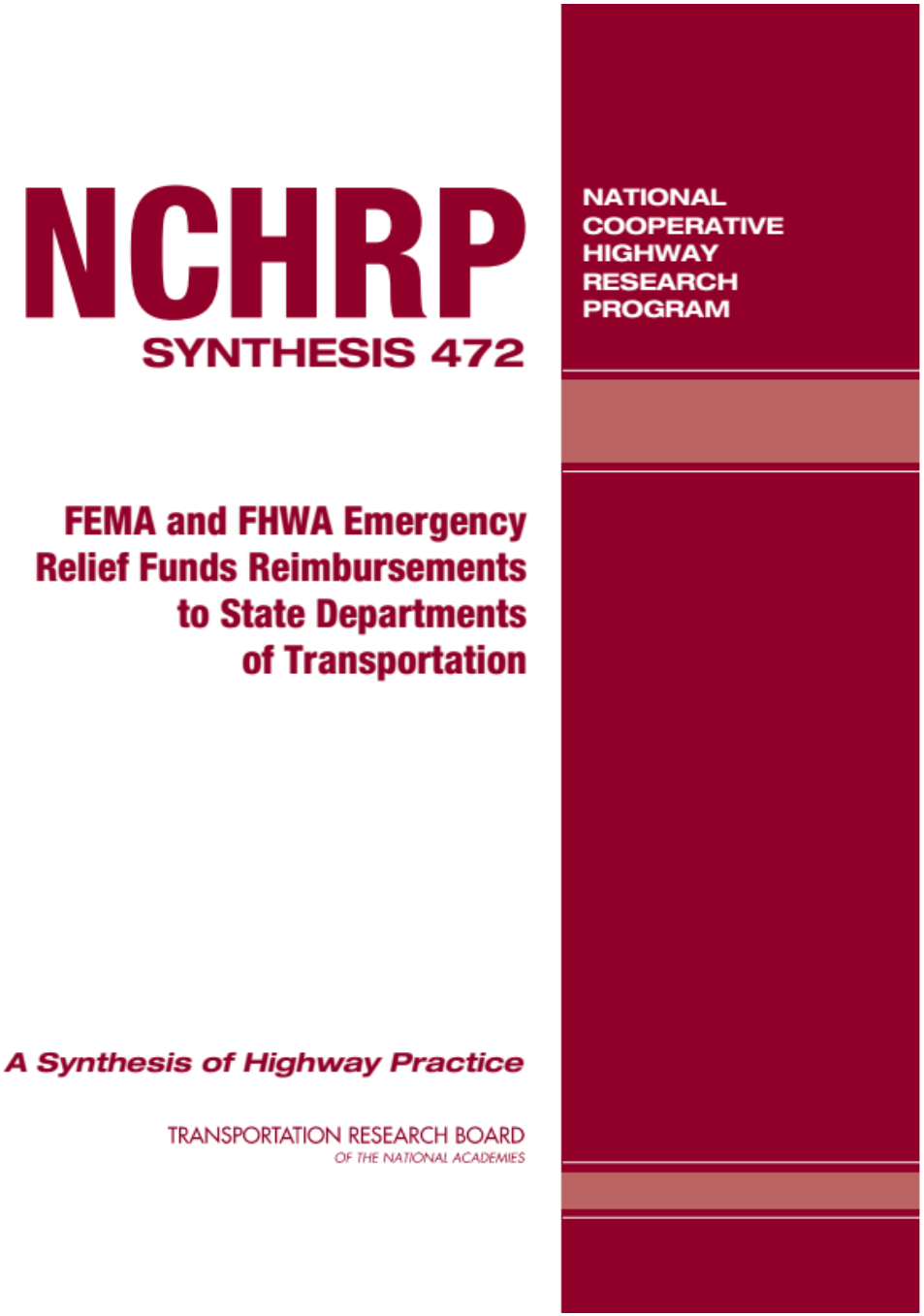
Today’s First Presenter

- **NCHRP Synthesis 472**
  Dr. Yuko Nakanishi & Pierre Auza, Nakanishi Research & Consulting
  Rene Garcia, Caltrans

NCHRP Synthesis 472 Presentation Agenda

- Introduction
- FEMA PA Program
- FHWA ER Program
- Findings

Motivation for Synthesis



Synthesis Structure

Chapter 1

- Background

Chapter 2

- Program Elements

Chapter 3

- DOT Experience
- Challenges, Findings

Synthesis Structure

Chapter 4

- Case Examples - California, Florida, Iowa, Louisiana, Missouri, New York, Tennessee, Texas, Wisconsin, Vermont

Chapter 5

- Conclusions, Research Needs

Appendices

- Web-only

Background

"The intention of both programs is to ***supplement*** state and local resources to address the significant expenses caused by natural disasters and other extraordinary conditions."

Exec. Summary, NCHRP Synthesis 472

Legislative Authority

FEMA PA Program

- Robert T. Stafford Disaster Relief and Emergency Assistance Act

FHWA ER Program

- Section 125 of US Code Title 23
- MAP-21 and FAST Act

FHWA ER Program

Facility	Roads & bridges on federal-aid highways
Cause	Natural disaster, catastrophic failure due to external cause
Required	Presidential declaration or governor's proclamation
Minimum Threshold	$700,000 statewide for federal share
Emergency Repair	100% federal share
Permanent Restoration	90% for Interstate, 80% for Other – federal share

FEMA PA Program

** Distinction made between* **Large** *and* **Small** *projects*	
Facility	Non federal-aid facilities with the exception of debris
Cause	Major disaster or emergency
Required	Presidential declaration
Minimum Threshold	Based on statewide per capita indicators.
Emergency Repair	75% federal share (minimum)
Permanent Restoration	75% federal share (minimum)

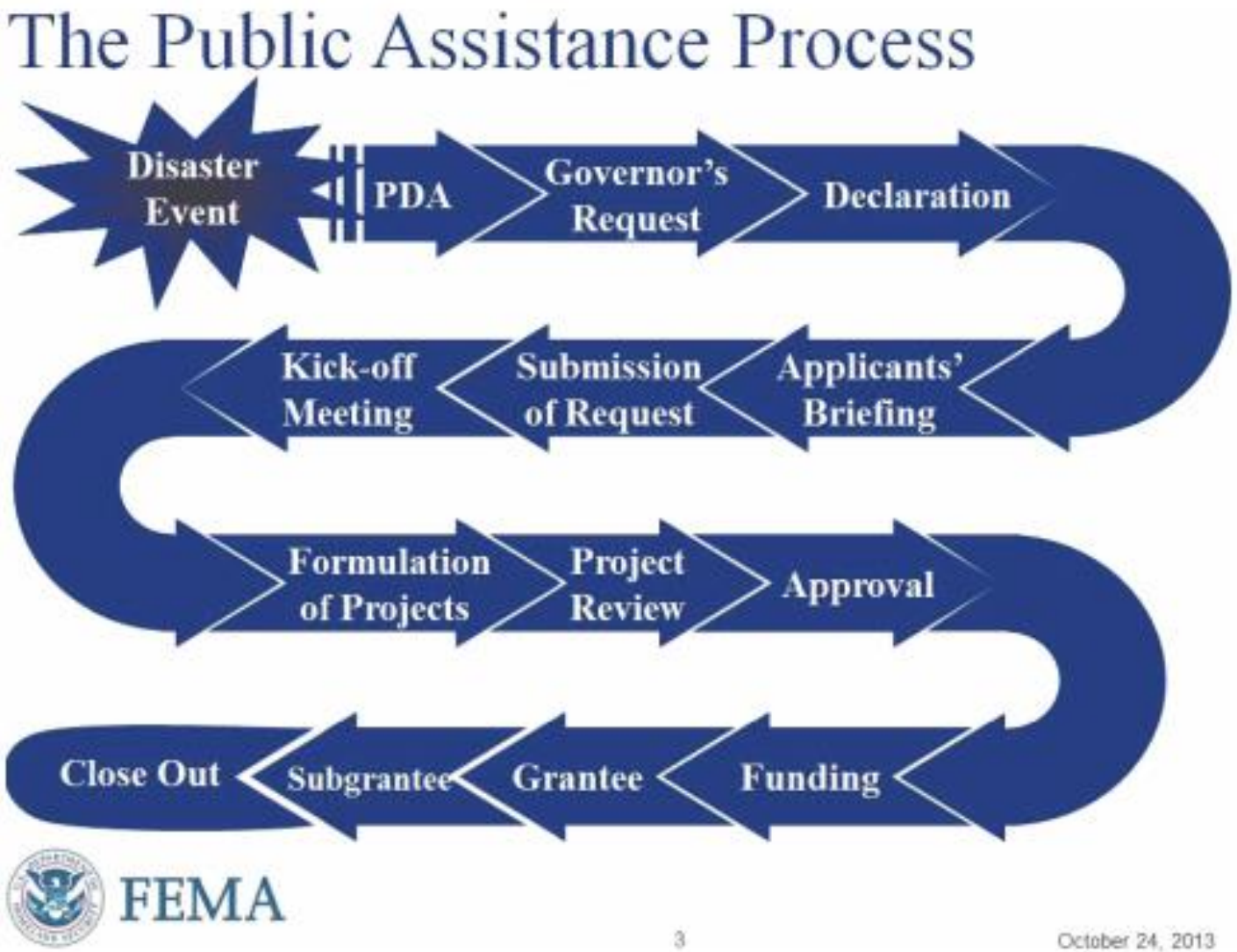
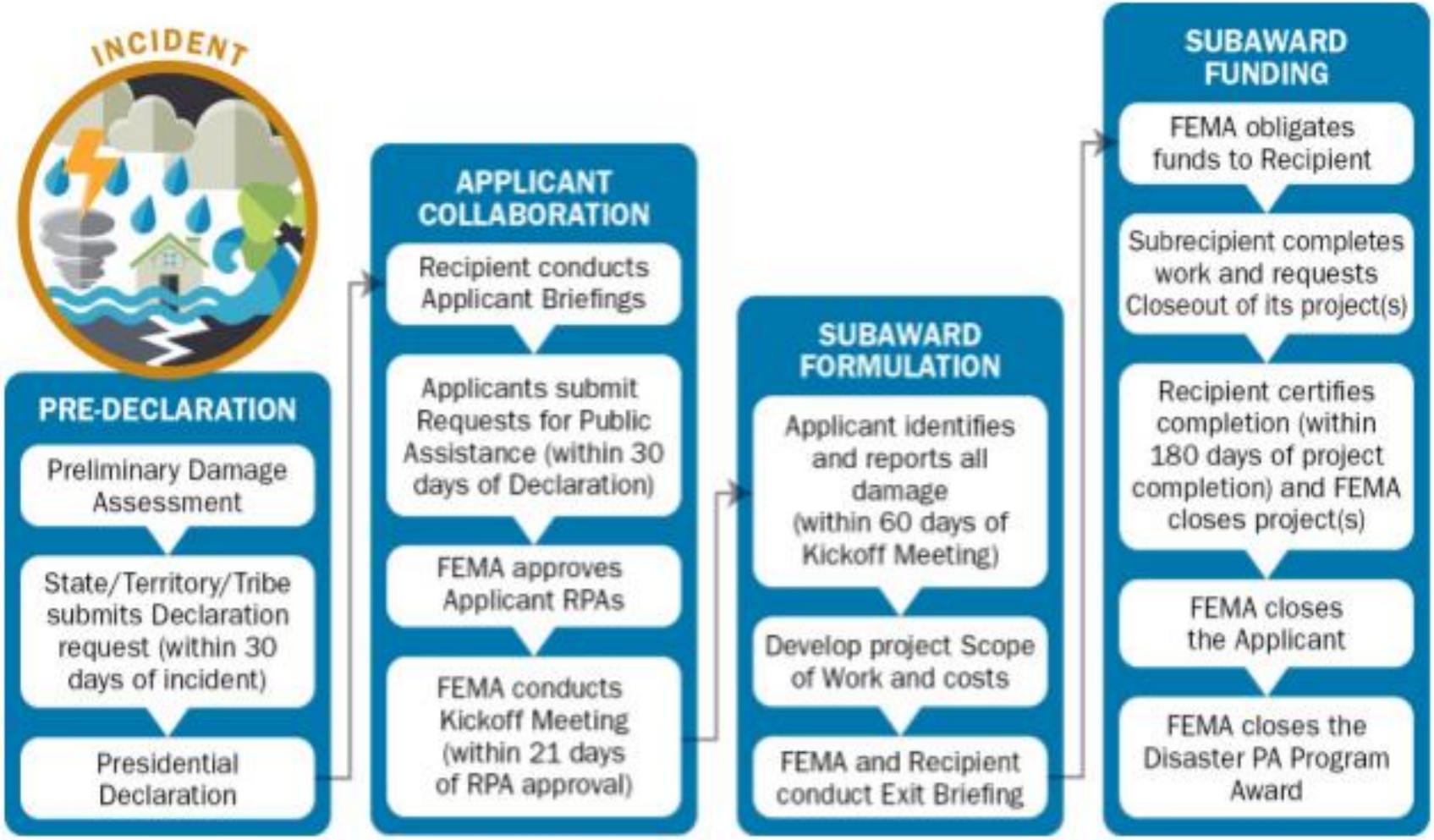


FIGURE 6 Public Assistance process flowchart (*Source*: "Public Assistance Grant Program Briefing" 2013).

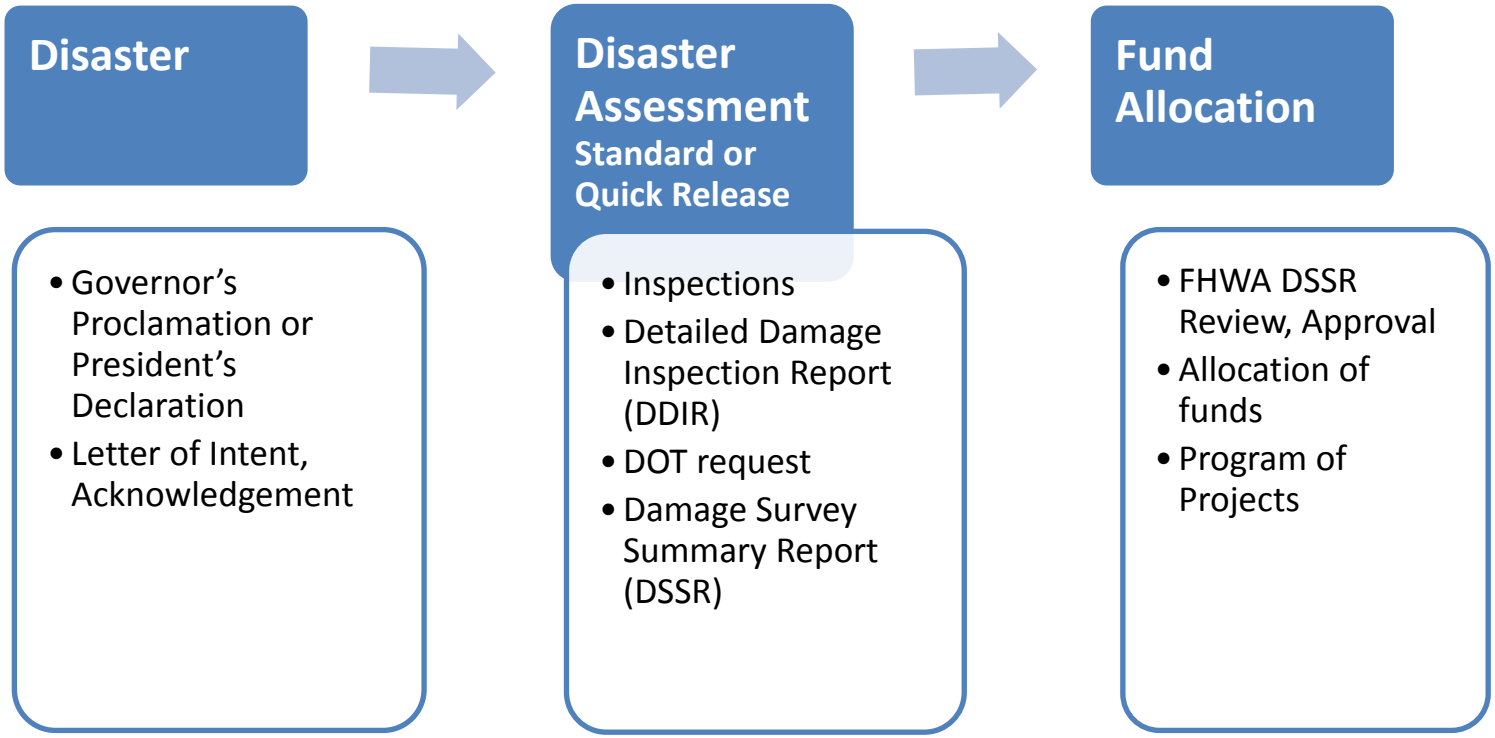


PA Program Implementation Process, page ix,
FEMA Public Assistance Program and Policy Guide (PAPPG), 2016

Post-publication Changes
to FEMA PA Program:
The Public Assistance Program and Policy Guide (PAPPG)

- Combines FEMA PA policy into a **single volume**
- Provides clear **overview** of PA process
- Facilitates consistent/efficient **eligibility determinations**
- Includes updates based on **Title 2, CFR Part 200**

FHWA ER Process



Post-publication Changes

to FHWA ER Program:

- FAST ACT (2016-2020)
  - Continues the FHWA ER Program
  - Funding authorizations remain @ $100 M per year
- New FHWA Order (Feb. 22, 2016)
  - Strengthens administration and oversight
  - Ensures the effective use of funds
  - Delineates responsibilities

List of Tables	
Topic	**Table, Page**
Program Elements	Table 3, page 21
Comparison of Traditional & Quick Release Methods	Table 4, page 23 Pay attention to staff placement and replacement. Put programs in place to ensure that staff has training and experience to be able to think on their feet. Conduct interagency training and exercises with other state agencies, such as emergency management and state patrol.
Eligibility Criteria	Table 5, page 26
Minimum Site Thresholds	Table 6, page 29
Work Completion Deadlines **Important Process Deadlines**	Table 8, page 31 Table 7, page 30
Small vs. Large Projects (FEMA)	Table 9, page 32
Disaster Assessment Methods	Table 10, page 34

Findings

Align **systems, processes,** and **technologies** with program requirements.

Good **business & management practices** contribute to successful reimbursements.

Establish effective **working relationships** with **federal, state, local** partners.

Pre-assign key roles.

Learn from **previous disasters**; resolve issues before the next one.

Findings

Understand **NIMS & ICS** record-keeping **procedures** & **forms**.

Deliver training on **reimbursement programs & procedures** to **all affected personnel**.

Meet emergency work deadlines by **streamlining necessary activities** (e.g., site inspection, contracting, environmental).

State-to-state variations in various areas exist (e.g., environmental laws, equipment rates, documentation policy).

Useful Policy/Practice

After Action Reports

Develop AARs after disasters or large incidents/events addressing improvements to reimbursement processes *(all case study agencies)*

Predesignated Reimbursement Coordinators

Assign specific agency staff the role of reimbursement coordinator prior to a disaster or emergency *(all case study agencies)*

Accounting/Financial Management

Source: pixabay.com

Unique Project Codes for Disasters

Assign unique project code for a disaster; using the code for all disaster-related expenses helps to monitor magnitude of expenses and submit them for reimbursement purposes *(all case study agencies)*

FHWA FMIS Access

Fiscal Management Information System *(most case study agencies)*

Documentation/Information Management

Central Location / Drive
(all case study agencies)

Electronic Storage
(all case study agencies)

Electronic Signature

Systematic Record-Keeping, Use of ICS Forms

Optical Character Recognition Software

Identified through case studies

"Effective information management practices, including storage of information in a central location… **can save staff time**.

Electronic formats can ***facilitate*** electronic transmittal of documentation, ***conserve*** storage space, and ***accommodate*** duplicate requests for documentation."

p.54, NCHRP Synthesis 472

Project Worksheet, DDIR, DAF

Electronic Worksheet/DDIR/DAF

Use electronic forms to facilitate document storage and updates/additions to the forms.

Automated Distribution System

Use of combined DDIR/PW form

FIGURE D - 31: Detailed Assessment Form Photo with Site Location. ***Courtesy: TDOT.***

Site Assessment

Bridge/Highway/Pavement Management System
(all case study agencies)

Preestablished Repair or Route Prioritization Method
(some case study agencies)

Geospatial Data/Lidar *(some case study agencies)*

Predesignated Assessment Teams

Weather Information Service/System

Automated Damage-Recording Van
to establish pre-disaster conditions

Aerial Imagery Services

Ability for Teams to be Self-Sustaining

Web-based Map *(some case study agencies)*

"In order to facilitate site assessments, information packets are distributed to **assessment teams**. Also, a **weather information system** and **bridge, highway, and pavement management systems** as well as a bridge monitoring system are employed to facilitate the assessment process. **Historical data are mapped** to show repetitive losses – this has been useful in justifying betterments and the inclusion of mitigation measures. **Geospatial data using LiDAR** are also useful in identifying damages and the cause of damaged infrastructure."

Iowa DOT Case Study, App. D, NCHRP Synthesis 472

Training

FHWA Emergency Relief Reimbursement process training
(all case study agencies)

FEMA Public Assistance Reimbursement process training
(all case study agencies)

Disaster Assessment training *(all case study agencies)*

Training for Local Public Agencies *(all case study agencies)*

Use of Scenarios from Prior Disasters

Training for State EMAs

Contracting

Emergency Waivers
(e.g., Permits)

Contractor Database

Standardized Payments to Contractors

One POC for Plans/Blueprints

Source: pixabay.com

Appeals

Discussion with FHWA Division Office

Citation of Relevant Laws

Citation of Prior Decisions (Precedents)

"When FEMA or FHWA denies applications or specific expenses, formal appeals require the state DOT to provide justification, additional information, and reasons the decision should be reversed. The state DOT may also need to review policy or regulations and cite specific sources of legislation."

p.43, NCHRP Synthesis 472

Concluding Thoughts

- **Keep current** with FHWA and FEMA guidance
- **Communicate regularly** with FHWA and FEMA, LPAs, and State EMA
- Train all relevant personnel (***don't forget*** accounting, financial personnel)
- **Leverage new technologies**

NCHRP

Synthesis 472

FEMA and FHWA Emergency Relief Funds Reimbursements to State Departments of Transportation

Vermont Agency of Transportation's Perspective

Richard M. Tetreault
Deputy Secretary of Transportation

Vermont Agency of Transportation

- Lessons Learned
- Disaster Preparedness
- Documentation
- Program Management

Lessons Learned

- Irene Innovation Task Force
  - Lessons learned from Tropical Storm Irene response and recovery
  - To gather, organize, and compile innovative practices/ideas
- Emergency Work
  - FHWA ER vs FEMA PA
  - Timeframes differ
  - Subtle differences in work types
- Construction Contracting
  - VAOT use of Maintenance Rental Agreements (FHWA vs FEMA)
  - VAOT as a “contractor” for municipalities under FEMA PA
  - VAOT contractors doing work on municipal roads under FEMA PA

Disaster Preparedness

- Development and maintenance of manuals
  - Incident Command Post (ICP) Administrative Manual
  - FHWA Emergency Relief Manual (VAOT)
- Damage Assessment Application (for handheld devices)
  - Used by VAOT field staff for both FEMA PA and FHWA ER-eligible sites
  - Allows for quick summary of total damages and determination of meeting disaster thresholds
- Retainer Contracts
  - Construction and materials contracts in place before disaster strikes
  - Consult with FHWA and FEMA on such contracts before implementing
- Training
  - Incident Command System
  - *Rivers and Roads Training*
  - Damage Assessment
  - Documentation/Programming

Documentation

- Detailed Damage Inspection Report (DDIR)
  - Customized by VAOT to include additional information from FEMA PA Program Project Worksheets (show new DDIR)
  - Created at HQs based on damage assessment data collected by District staff
- FEMA Forms: *Summary, Contracts, Materials, Equipment, Force Account* used for both FEMA PA and FHWA ER reimbursements

Programming

- Creation of Expenditure Accounts
  - As soon as DDIRs are complete, expenditure accounts created
  - Same applies for FEMA PA-eligible costs (primarily debris and State-owned rail damages)
- Programming Requests to FHWA
  - Submit as soon as FWHA approves declaration
- Briefings
  - FEMA Public Assistance Applicants Briefing
  - FHWA Emergency Relief Applicants Briefing

TDOT Damage Assessment for the FHWA ER Program and the FEMA PA Program

FEMA Public Assistance and FHWA Emergency Relief Programs Webinar

11 October, 2016

Derial W. Bivens, CEMP
Tennessee Department of Transportation

FEDERAL DISASTER PROGRAMS

ER Program - most cases

- Lower threshold to declare event
- Higher reimbursement rates

FEMA - debris cleanup

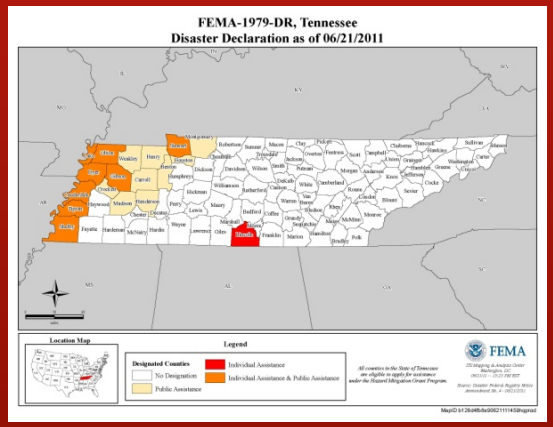
- Primarily vegetative / woody materials

TIMELINE

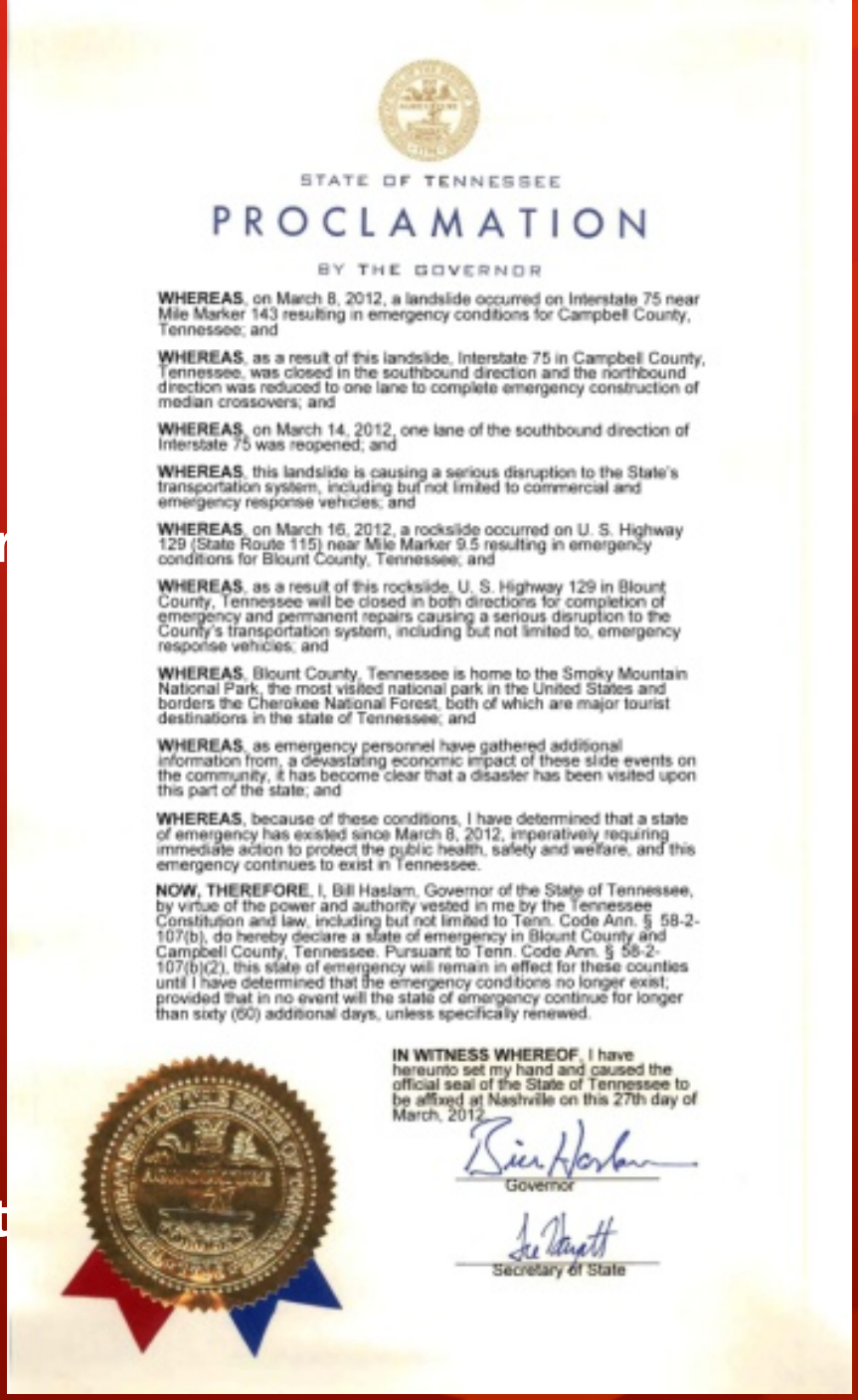
Time	Milestone
Begin	Disaster event occurs
Day 1	Preliminary assessment begins
Day 2	Detailed assessment begins
Day 14	Letter of Intent
6 Weeks	Damage Survey Summary Report
3 Months	Program of Projects
180 Days	Emergency repairs complete
2 Years	List of all sites and repair costs

INITIAL STEPS

1) Preliminary Damage Assessment
   - Windshield / aerial surveys
   - Photos of damage
2) Presidential Declaration or Governor's Proclamation



3) TDOT - Letter of Intent
4) FHWA - Acknowledgement Letter



STATE OF TENNESSEE

PROCLAMATION

BY THE GOVERNOR

WHEREAS, on March 8, 2012, a landslide occurred on Interstate 75 near Mile Marker 143 resulting in emergency conditions for Campbell County, Tennessee; and

WHEREAS, as a result of this landslide, Interstate 75 in Campbell County, Tennessee, was closed in the southbound direction and the northbound direction was reduced to one lane to complete emergency construction of median crossovers; and

WHEREAS, on March 14, 2012, one lane of the southbound direction of Interstate 75 was reopened; and

WHEREAS, this landslide is causing a serious disruption to the State's transportation system, including but not limited to commercial and emergency response vehicles; and

WHEREAS, on March 16, 2012, a rockslide occurred on U. S. Highway 129 (State Route 115) near Mile Marker 9.5 resulting in emergency conditions for Blount County, Tennessee; and

WHEREAS, as a result of this rockslide, U. S. Highway 129 in Blount County, Tennessee will be closed in both directions for completion of emergency and permanent repairs causing a serious disruption to the County's transportation system, including but not limited to, emergency response vehicles; and

WHEREAS, Blount County, Tennessee is home to the Smoky Mountain National Park, the most visited national park in the United States and borders the Cherokee National Forest, both of which are major tourist destinations in the state of Tennessee; and

WHEREAS, as emergency personnel have gathered additional information from, a devastating economic impact of these slide events on the community, it has become clear that a disaster has been visited upon this part of the state; and

WHEREAS, because of these conditions, I have determined that a state of emergency has existed since March 8, 2012, imperatively requiring immediate action to protect the public health, safety and welfare, and this emergency continues to exist in Tennessee.

NOW, THEREFORE, I, Bill Haslam, Governor of the State of Tennessee, by virtue of the power and authority vested in me by the Tennessee Constitution and law, including but not limited to Tenn. Code Ann. § 58-2-107(b), do hereby declare a state of emergency in Blount County and Campbell County, Tennessee. Pursuant to Tenn. Code Ann. § 58-2-107(b)(2), this state of emergency will remain in effect for these counties until I have determined that the emergency conditions no longer exist; provided that in no event will the state of emergency continue for longer than sixty (60) additional days, unless specifically renewed.

IN WITNESS WHEREOF, I have hereunto set my hand and caused the official seal of the State of Tennessee to be affixed at Nashville on this 27th day of March, 2012.

Governor

Secretary of State

DAMAGE ASSESSMENT

1. Identify Damage Sites
2. Complete Damage Assessment Forms
3. Submit Damage Survey Summary Report to FHWA

DAMAGE ASSESSMENT TEAMS

- 5-6 HIGHLY TRAINED teams per Region
- Regional ER Coordinator
- Team core:
  - 1 construction (practices)
  - 1 maintenance (practices & MMS) member
- Regional ER Coordinator determines deployment and assignment areas
- Phase 2 Teams may include Technical Specialists from any functional area

DAMAGE ASSESSMENT (FHWA)

- Preliminary Assessment:
  - Initial review of damage, i.e. windshield surveys
  - A list of damage sites is developed
- Detailed Assessment (Phase 1):
  - Assessment Teams deployed
  - Potentially eligible sites should have a formal assessment
- Detailed Assessment (Phase 2):
  - Follow up for large/complex sites
  - May involve technical specialists
- Revisions

DAMAGE ASSESSMENT FORM

5 Components:

- Summary
- Notes and Sketches
- Cost Calculations
- Maps
- Photos

[redacted]

Detailed Assessment Form

(For Federal-Aid Highways)

DAF Number
94-I0065-A

FHWA Disaster #	County Name	Route #	Page	1	of	15
ER-TN14-4	Williamson	I0065	Appendix Documents?	☑ YES	☐ NO	
Road Name	I-65		Inspection Date (mm/dd/yyyy)	8/15/2014		

Applicant (check one)					
☑ TDOT	Begin MM	(xxx.xx)	61.57	ROW Width (ft)	Varies
	End MM	(xxx.xx)	61.72		
☐ Other: _____	Bridge #		94I00650011	Travel Way Width (ft)	22
GPS Coordinates (xx.xxxx)					
Lat (N) 35.8596	Federal-Aid Route?	☑ YES	☐ NO	Paved Shoulder Width (ft)	2
Long (W) -86.8317					

Description of Damage: On August 15, 2014 a gasoline tanker truck carrying 9,000 gallons of gasoline veered off I-65 SBL and struck a bridge bent on the outside shoulder of I-65 at Peytonsville Road. The crash resulted in an explosion and large fire that damaged the existing concrete I-beam bridge and the partially completed replacement bridge (Phase 1 Bridge) that was under construction to such an extent that both bridges were considered unsafe. The asphalt pavement was also damaged by the fire.

COST ESTIMATE

Emergency Repair			Dollars
Force Account Scope of Work	Respond to the accident by performing traffic control for bridge inspection and detour of traffic, accident cleanup, removal of LOGO signs for businesses which were not accessible due to the bridge no longer in service. TDOT bridge repair crew provided labor and equipment resources to assist with the inspection of the bridges at the interchange, which were damaged as a result of the accident.	Site Work	$17,760
		Preliminary/ Construction Engineering	$0
Contract Scope of Work	Remove the damaged Phase 1 bridge and debris. Replace damaged asphalt pavement. Install new pavement markings and raised pavement markers on I-65. Remove existing pavement markings on ramps and install new pavement markings for detour. Install Traffic Control for detour. Remove and reset interconnected portable barrier rail. Remove and replace damaged electrical lines. Accelerate the fabrication and installation of Phase 2 bridge.	Site Work	$1,240,769
		Preliminary/ Construction Engineering	$62,038
		Total Emergency Repair Estimate	$1,320,568

Permanent Restoration			Dollars
Force Account Scope of Work		Site Work	$0
		Preliminary/ Construction Engineering	$0
Contract Scope of Work	Rebuild the damaged Phase 1 Bridge (with no acceleration costs included).	Site Work	$1,581,753
		Preliminary/ Construction Engineering	$158,175
		Total Permanent Restoration Estimate	$1,739,929
		Site Total	**$3,060,497**

Recommendation	FHWA Representative	Date
☐ Eligible ☐ Ineligible		
Recommendation	**State Representative**	**Date**
☑ Eligible ☐ Ineligible		10/30/2014
Recommendation	**Local Representative**	**Date**
☐ Eligible ☐ Ineligible		

[redacted]

Detailed Assessment Form

(For Federal-Aid Highways)

DAF Number			
94-I0065-A			
Page	1	of	15

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RECOMMENDATIONS

Recommendation	FHWA Representative	Date
☑ Eligible ☐ Ineligible		6/22/10
Recommendation	**State Representative**	**Date**
☑ Eligible ☐ Ineligible		6/22/10
Recommendation	**Local Representative**	**Date**
☑ Eligible ☐ Ineligible		6/22/10

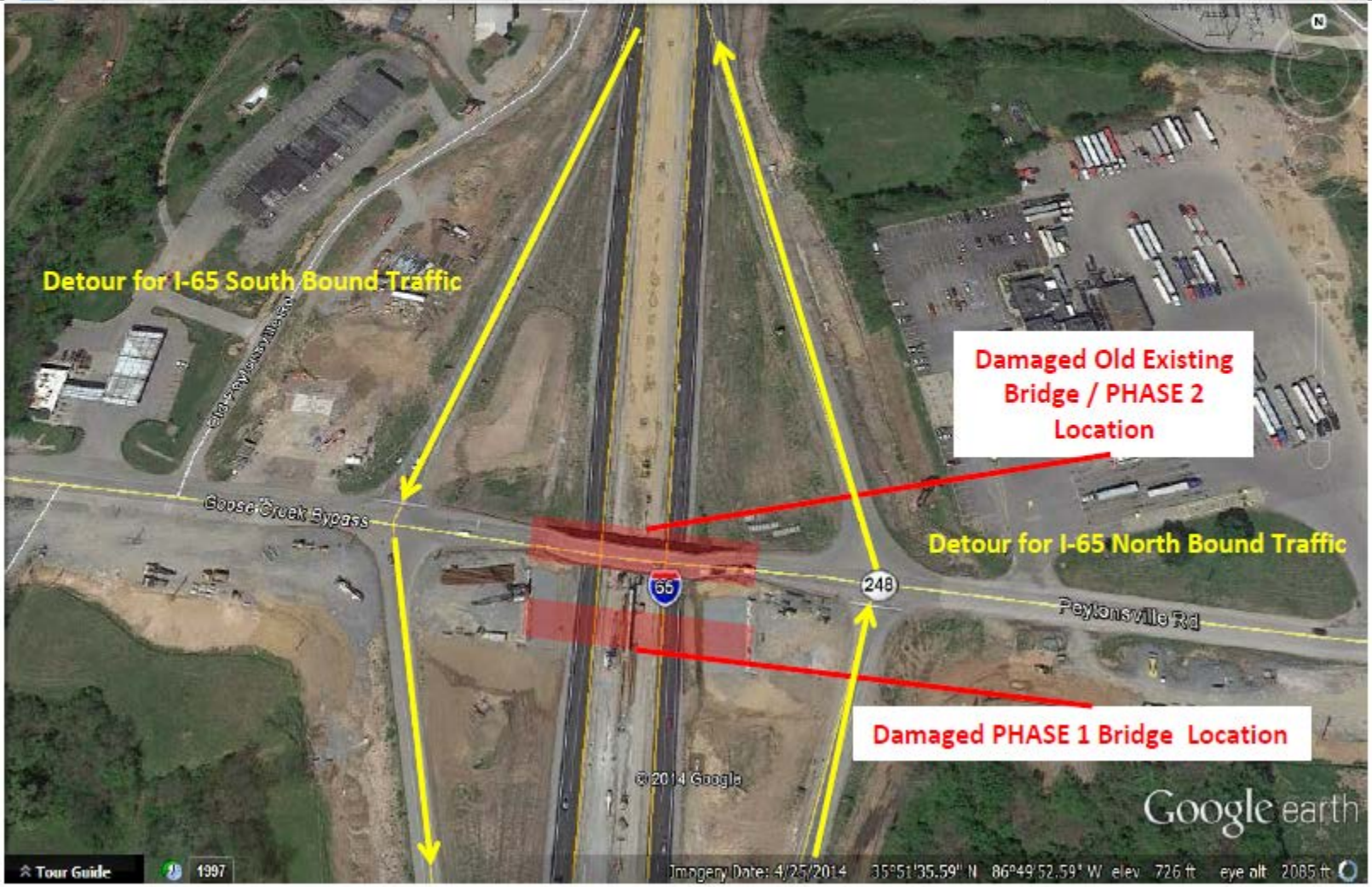
[redacted]

Detailed Assessment Form

(For Federal-Aid Highways)

DAF Number			
94-I0065-A			
Page	2	of	15

Notes and/or Sketches



Notes about the damage at the site.

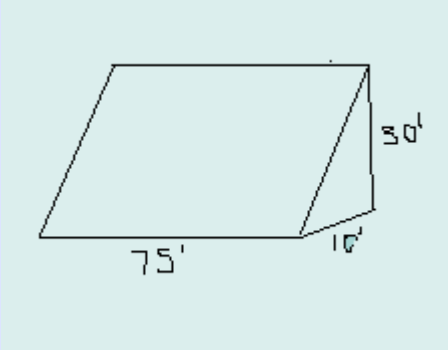
Detailed Assessment Form

(For Federal-Aid Highways)

DAF Number			
57-03051-1A			
Notes and/or Sketches	Page	2	of

- Slope washed out onto roadway. About 75' long and 30' high.
- Slope was about a 3:1 prior to slide (based off adjacent area.

- Recommend removal of remain unstable soil.
- Stabilize with Class B riprap.



Team Members	Bob Smith (TL), Tim Anderson, Jill Murphy (FHWA), Joe Harris (Chatt)

Notes/ Sketches

[redacted]

Detailed Assessment Form

(For Federal-Aid Highways)

DAF Number
94-I0065-A

Cost Calculations

Quantity	Unit	Items	Unit Price	Cost
	LB	713-11.01 "U" SECTION STEEL POSTS		
	SF	713-14 EXTRUDED ALUMINUM PANEL SI		
	EACH	713-15 REMOVAL OF SIGNS, POSTS, & FO		
	EACH	713-15.01 REMOVAL OF SIGN SUPPORT		
	EACH	713-16.03 CHANGEABLE MESSAGE SIGN		
	LM	716-13.06 SPRAY THERMO P.M. (40mil 4		
	LM	716-13.07 SPRAY THERMO P.M. (40mil 6		
	LM	719-01 SWEEPING		
	LS	730-40 TEMP. TRAFFIC SIGNAL SYSTEM		
	SY	740-10.04 GEOTEXTILE (TYPE IV) STABILI		
	UNIT	801-01 SEEDING (W MULCH)		
	SY	803-01 SODDING (NEW SOD)		
	SY	805-12.01 EROSION CONTROL BLANKET		
	SY	805-12.02 EROSION CONTROL BLANKET(		
	CY	622-01.01 SHOTCRETE BUTTRESS		
	LS	717-01 MOBILIZATION (SOIL NAILING)		
	LF	805-05.02 SOIL NAIL STABILIZATION		
209.79	TON	411-03.10 ACS MIX (PG76-22) GRADI		
115.61	TON	415-01.01 COLD PLANING BITUMINO		
54	EACH	712-04.01 FLEXIBLE DRUMS (CHANN		
18	EACH	712-05.01 WARNING LIGHTS (TYPE A		
159.04	S.F.	712-06 SIGNS (CONSTRUCTION)		
50	L.F.	712-07.03 TEMPORARY BARRICADES		
135	EACH	716-01.12 RAISED PVMT MARKERS (M		
1.635	L.M.	716-05.49 PAINTED PAVEMENT MAR		
708	L.F.	716-08.01 REMOVAL OF PAVEMENT		
1	LS	REMOVAL OF PHASE 1 BRIDGE		
1	LS	FABRICATION ACCELERATION FOR PHASE 2 BRIDGI	$128,800.00	128,800.00
1	LS	CREW ACCELERATION FOR PHASE 2 BRIDGE	$562,875.00	562,875.00
2,695	L.F.	760-19.03 REMOVE PRIMARY WIRE	$0.92	2,479.40
385	L.F.	760-19.25 (I) OH PRIMARY WIRE D #3/0 ACSR	$1.91	735.35
2,310	L.F.	760-19.28 (I) OH PRIMARY WIRE D #795 AAC	$4.04	9,332.40
420	DOLL	712-08.01 UNIFORMED POLICE OFFICER	$1.00	420.00
303	L.F.	730-12.02 CONDUIT 2" DIAMETER (PVC)	$6.50	1,969.50
1	LS	TRAFFIC CONTROL LOCAL AGENCIES	$39,600.00	39,600.00
1	LS	REMOVAL AND REPLACEMENT OF ELECTRICAL LINI	$100,000.00	100,000.00
1	LS	ADDITIONAL TRAFFIC CONTROL LOJAC	$5,760.00	5,760.00
			Total	$1,240,769

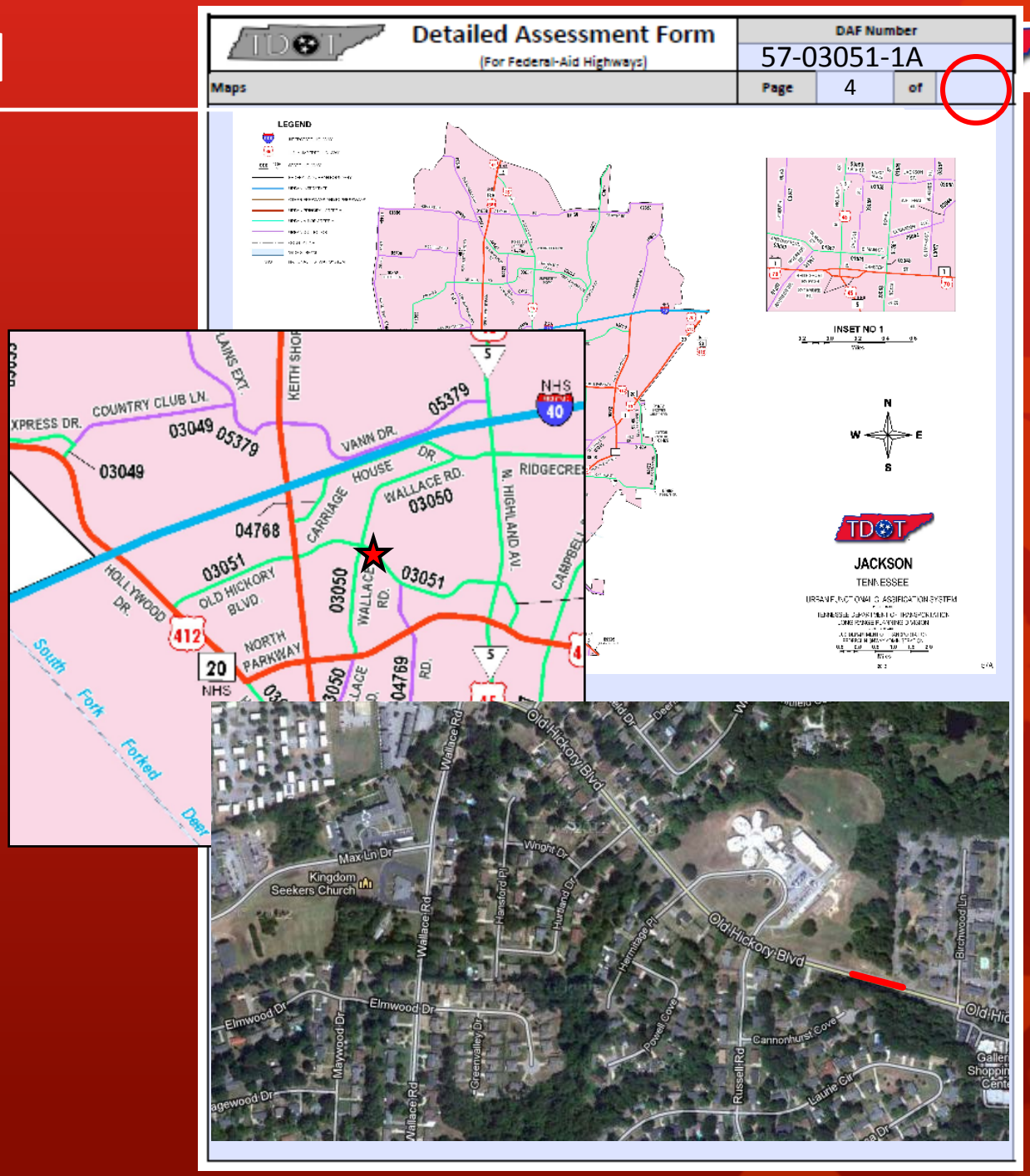
Justifications/ Comments:

209.79	TON	411-03.10 ACS MIX (PG76-22) GRADING D	$87.75	18,409.07
115.61	TON	415-01.01 COLD PLANING BITUMINOUS PAVEMEN	$10.00	1,156.10
54	EACH	712-04.01 FLEXIBLE DRUMS (CHANNELIZING)	$35.00	1,890.00
18	EACH	712-05.01 WARNING LIGHTS (TYPE A)	$25.00	450.00
159.04	S.F.	712-06 SIGNS (CONSTRUCTION)	$9.75	1,550.64
50	L.F.	712-07.03 TEMPORARY BARRICADES (TYPE III)	$24.50	1,225.00
135	EACH	716-01.12 RAISED PVMT MARKERS (MONO-DIRECT	$10.00	1,350.00
1.635	L.M.	716-05.49 PAINTED PAVEMENT MARKINGS (8" LIN	$3,000.00	4,905.00
708	L.F.	716-08.01 REMOVAL OF PAVEMENT MARKING (LIN	$1.50	1,062.00
1	LS	REMOVAL OF PHASE 1 BRIDGE	$356,800.00	356,800.00
1	LS	FABRICATION ACCELERATION FOR PHASE 2 BRIDGI	$128,800.00	128,800.00
1	LS	CREW ACCELERATION FOR PHASE 2 BRIDGE	$562,875.00	562,875.00
2,695	L.F.	760-19.03 REMOVE PRIMARY WIRE	$0.92	2,479.40
385	L.F.	760-19.25 (I) OH PRIMARY WIRE D #3/0 ACSR	$1.91	735.35
2,310	L.F.	760-19.28 (I) OH PRIMARY WIRE D #795 AAC	$4.04	9,332.40
420	DOLL	712-08.01 UNIFORMED POLICE OFFICER	$1.00	420.00
303	L.F.	730-12.02 CONDUIT 2" DIAMETER (PVC)	$6.50	1,969.50
1	LS	TRAFFIC CONTROL LOCAL AGENCIES	$39,600.00	39,600.00
1	LS	REMOVAL AND REPLACEMENT OF ELECTRICAL LINI	$100,000.00	100,000.00
1	LS	ADDITIONAL TRAFFIC CONTROL LOJAC	$5,760.00	5,760.00
			Total	$1,240,769

COST QUANTIFICATION

- Repair items select & quantified
- Estimates based on Regional Average Unit Cost (from construction)
- Quantified for:
  - Emergency Repair by In-House
  - Emergency Repair by Contract
  - Permanent Restoration by In-house
  - Permanent Restoration by Contract

Example – Local



Maps

Detailed Assessment Form

(For Federal-Aid Highways)

DAF Number
94-I0065-A

Photos with Description

Page	14		15

I-65 looking north at Peytonsville Road

I-65 looking south at Peytonsville Road

[redacted]	**Detailed Assessment Form** (For Federal-Aid Highways)	DAF Number 94-I0065-A			
Photos with Description		Page	15	of	15

Appendix Documents

	Description	Page Count
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Appendix B		
Appendix C		
Appendix D		
Appendix E		

TENNESSEE DEPARTMENT OF TRANSPORTATION
MAINTENANCE MANAGEMENT SYSTEM
Daily Work Report

Organization Unit	District	Date	Report No.
3491 - REG 3 BRIDGE REPAIR- NASH	30	Monday, August 18, 2014	2925443

Activity	Work Description	County	Asset Group
451 - MINOR STRUCTURE REPAIR	SUPERSTRUCTURE REPAIR	WILLIAMSON	BRIDGE

Asset	Special Event	Project #
SR 248 / I65		94000420004

Route	SC	CS	Begin LM	End LM	Length	Direction	Position	Off System Description
SR248	0	1	3.64	3.64	0.00	BOTH	ROADWAY	

Units of Accomplishment: 1.000 UOM: EACH Accident: N

	Labor	Equipment	Material	Total
Daily Cost:	750	568	0	1,318

Number	Description	Org/UOM	Quantity	Hours	Unit Cost	DWR Cost
Labor						
Regular Hours						
0276	[redacted]	3491		9.5	30.79	292.51
4028	[redacted]	3491		9.5	27.44	260.68
2117	[redacted]	3491		9.5	20.75	197.13
Equipment						
S4WU95	TRUCK, WITH SERVICE BODY	3491		9.5	10.01	95.10
S7HG50	TRUCK, CRANE	3491		9.5	49.74	472.53

DWR Comment : HELPED BRIDGE INSPECTION...

PROGRAM OF PROJECTS (D+90 Days)

ER Project Number	County(ies)	Description	PPRM PIN(s)	Federal Project Number	State Project Number(s)	Emergency Repair	Permanent Restoration	Estimated Project Cost	Estimated PE/ROW/CEI	Total Estimated Cost	Estimated FHWA Participation (%)	Estimated FHWA Share
ER-TN12-1-1	Cocke	I-40 Slide Repair Contract #1	117034.00		15001-4190-04	Ö		$60,000	$0	$60,000	100%	$60,000
ER-TN12-1-3		State Forces - Emergency Repair						$60,000	$6,000	$66,000		$66,000
ER-TN12-1-2	Cocke	I-40 Slide Repair Contract #2	117034.01	IME-40-8-(161)	15001-3192-44		Ö	$1,000,000	$0	$1,000,000	90%	$900,000
ER-TN12-1-4	Cocke	State Forces - Permanent Restoration						$50,000	$0	$50,000		$45,000
ER-TN12-1-5	Cocke	Consultant - Records Closeout					Ö	$40,000	$0	$40,000	90%	$36,000
ER-TN12-2-1	Campbell	I-75 Slide Repair Contract	117146.00	STP-IE-75-3(160)	07100-3129-44	Ö		$9,335,000	$15,000	$9,350,000	100%	$9,350,000
ER-TN12-2-2	Campbell	State Forces	117146.00		07100-1128-04	Ö		$1,175,000	$0	$1,175,000	100%	$1,175,000
ER-TN12-2-3	Campbell	Consultant - Records Closeout					Ö	$60,000	$0	$60,000	90%	$54,000