

**Project Level Process/Expectations & Owners
GOALS AND OBJECTIVES
DRAFT 3/15/07**

- ❑ **Don't forget to go back to consider maintenance and other projects...**
- ❑ **Determine if the strategy applies to all projects or just significant projects...**
- ❑ **Consider using the word "activity" in place of project where it applies to all construction, maintenance, and 3rd party work zones**

Goal A: Implement requirements of the Work Zone Safety and Mobility Policy (23 CFR 630 Subpart J)

Objective 1: Consider work zone impact during TIP development

	OWNERS		COMMITTEE CONTACT
	Lead Unit:	Other Units affected:	
Revise existing "Feasibility Study" process to account for work zone impacts, such as network impacts The intent of this strategy is that work zone impacts are identified early on in the process so that funding can be obtained for any strategies that may be used for traffic. Some of the processes may include: <ul style="list-style-type: none"> • FSU to coordinate with WZTCU (to include municipalities) to identify the significant projects and network impacts • FSU and WZTCU will create a checklist of items that are asked at each feasibility scoping meeting • WZTCU and FSU could work together to determine percentage of cost per project type 	FSU	WZTCU	Derrick Lewis/Nicole Hackler
Consider appropriate project selection, project scope, and project limits The intent of this strategy is to minimize the impact on the users by proper sequencing and coordination of projects within the transportation network. Some of the process may include: <ul style="list-style-type: none"> • FSU should coordinate with other to validate the project scope and project limits 	FSU/TIP Unit		Derrick Lewis/Nicole Hackler

Objective 2: Consider work zone impact during project planning

	OWNERS		COMMITTEE CONTACT
	Lead Unit:	Other Units affected:	
Identify "Significant" projects per developed process and criteria The intent of this strategy is to establish a project identity for significant projects at the planning stage that is consistent through the delivery of the project and transfers from planning to design to construction. Some of the process may include: <ul style="list-style-type: none"> • Need a required field in PMii • Establish a project website for "Significant" projects to provide and exchange information to participants in the delivery system • Need a procedure for how this process will work (Significant Projects Subcommittee may be working on this) 	PDEA	TPB	Charles Cox, Debi Hutchings
Revise existing project planning process to account for work zone impacts, such as network impacts, identification of "Significant" projects and environmental resources (Ask Mike Bruff) by considering other adjacent projects The intent of this strategy is to update the project planning process to account for work zone impacts. Some of the process may include: <ul style="list-style-type: none"> • WZTCU needs to create an internal process to identify work zone impacts • Clarify how work zone impacts affect the environmental resources (construction noise?) • May affect PMii • Determine what role this would play during a public hearing meeting • Consider contract duration at the planning scoping stage • Identify all stakeholders that could impact coordination issues such as, utilities, enforcement, communities, etc • Update process to include municipalities and utility companies as stakeholders • WZTCU to coordinate with IM to determine strategies and add Incident Management to the checklist of items that PDEA addresses in the planning process • Consider condition of adjacent roadways in planning stage • Include traffic control commitments in the planning document 	PDEA	WZTCU/RDU/Division s	Charles Cox
Establish default traffic management strategies The intent of this strategy is to establish default traffic management strategies per project type based on impact that are then refined on a project-by-project basis. Some of the process may include: <ul style="list-style-type: none"> • WZTCU to write the guidelines • FSU & PDEA to implement the strategies • WZTCU and PDEA needs to develop a decision matrix for how to determine the traffic management strategies and fund them 	PDEA	WZTCU	Charles Cox

Objective 2: Consider work zone impact during project planning

	OWNERS		COMMITTEE CONTACT
	Lead Unit:	Other Units affected:	
<p>Consider funding for traffic management strategies early in the process The intent of this strategy is to be sure that the funding adequately accounts for traffic management strategies. Some of the process may include:</p> <ul style="list-style-type: none"> Coordinate project with any statewide ITS strategic plan Consider some of the strategies such as Transportation Management Centers, IMAP, ITS device deployments (ramp metering, weather stations, smart work zones, cameras, message signs, etc.) 	PDEA/TIP Unit	WZTCU /PS/ITS	Charles Cox
<p>Coordinate work zone activities with Incident Management (IM) during planning The intent of this strategy is assess how IM would be impacted by BOTH the work zone and the ultimate roadway improvement during the planning process so that design features and their associated costs could be factored into the project. Some of the process may include:</p> <ul style="list-style-type: none"> ITS Ops/ Division IM could develop a checklist to help planners make this assessment. Sample IM features might include: enforcement and accident investigation areas, IMAP, incident detection or cameras, towing, alternative access points for emergency vehicles, etc Determine the use of permanent devices in the work zone 	PDEA	WZTCU/ITS Ops/RWY/Division ITS	Charles Cox

Objective 3: Consider work zone impact during design

	OWNERS		COMMITTEE CONTACT
	Lead Unit:	Other Units affected:	
<p>Develop TMP for all projects The intent of this strategy is clear. Some of the process may include:</p> <ul style="list-style-type: none"> WZTCU and IMPACT will need to coordinate to develop the TMP 	WZTCU	IMPACT	Stuart Bourne
<p>Establish a process during design to follow up on traffic management strategies that were determined in the planning process The intent of this strategy is to conduct a more detailed design level assessment of the work zone impacts of individual projects and develop appropriate TMPs. Some of the process may include:</p> <ul style="list-style-type: none"> Assess work zone impacts of the project through the various design iterations. Consider alternative design, construction, contracting, and transportation management strategies in the assessment of work zone impacts. Select appropriate transportation management strategies that will help manage the work zone impacts of the project. Develop the TMP based on these strategies. Include appropriate TMP items in plans, specifications, and estimates (PS&Es) for the project. (FHWA Brochure) Include coordinate with stakeholders identified in planning or identify new stakeholders, for example, IM meeting, community meetings, etc 	WZTCU		Stuart Bourne
<p>Formalize design guidelines for temporary traffic patterns during construction The intent of the strategy is to implement a traffic control design manual. Some of the topics that may be included, but not limited to:</p> <ul style="list-style-type: none"> Lane closure restrictions Road closure restrictions Minimum lane widths Minimum shoulder widths Minimum deceleration lane lengths (capacity) Minimum acceleration lane lengths (merging) Ramp closure restrictions Allowable queue lengths 	WZTCU	RDU/TEB/CU/DIV (DDC)	Stuart Bourne
<p>Consider impacts of geometric design on temporary and final alignment and on traffic management strategies The intent of this strategy is develop guidelines to make the geometric design fit better with the construction staging / maintenance of traffic on a project. These guidelines might include:</p> <ul style="list-style-type: none"> Keep proposed grade as close to existing as possible Symmetrical vs. asymmetrical design Identify need for on or off-site detours, run-arounds, and cross-overs Phasing of structures to accommodate temporary traffic patterns Should occur each time a design (preliminary, final) is performed Affect of positive protection 	RDU	WZTCU	DeWayne Sykes
<p>Incorporate value engineering earlier in design The intent of this strategy is to alter the current procedure to incorporate value engineering (peer review) earlier in the design process to develop a more effective and efficient design.</p>	ADU	All Preconstruction	Jimmy Travis
<p>Anticipate construction and maintenance needs during design, such as, full depth shoulders and adjacent or future projects The intent of this strategy is to develop a procedure to solicit Division feedback to improve constructability, improve maintenance, and minimize work zone impacts on future projects and activities.</p> <ul style="list-style-type: none"> Identify what information is needed from the Division. 	RDU	WZTCU/DIV	DeWayne Sykes
<p>Provide the most accurate contract duration estimate The intent of this strategy is to match the contract duration to the traffic management strategy.</p> <ul style="list-style-type: none"> Determine the contract duration earlier in the design process to match the chosen traffic management strategy. 	PS	RDU/ WZTCU/ CU/ADU	DeWayne Sykes
<p>Consider internal and external constructability reviews on all significant projects The intent of this strategy is to develop a process to incorporate internal and external (includes Contractors) constructability reviews on all significant projects.</p>	ADU	WZTCU/ CU	Rodger Rochelle

	OWNERS		COMMITTEE CONTACT
	Lead Unit:	Other Units affected:	
Objective 3: Consider work zone impact during design Allow more flexibility to the contractor to increase productivity The intent of this strategy is to allow the Contractor more flexibility by choosing adaptable designs as it relates to constructability. <ul style="list-style-type: none"> Consider performance based specifications and contracts. 	CU	WZTCU/PS/ DIV	DeWayne Sykes
Coordinate work zone activities with Incident Management during design The intent of this strategy is evaluate incident management needs during construction and incorporate into the traffic control phasing. <ul style="list-style-type: none"> There would be an evaluation of IM issues during design so that specific features of the work zone and completed project would improve or at least not degrade Incident Management in the area. (See Goal A, Objective 2 for list of possible IM elements.) 	WZTCU	RDU/ ITS Ops/ DIV	Stuart Bourne

	OWNERS		COMMITTEE CONTACT
	Lead Unit:	Other Units affected:	
Objective 4: Consider work zone impact during construction Implement, monitor and revise (if necessary) TMP strategies The intent of this strategy is to implement procedures to ensure project commitments are being met and information going out to the public is accurate, timely, and consistent. These procedures may include: <ul style="list-style-type: none"> Regular Safety and Operations Meeting with Contractor, Division, WZTC, NCSHP, Impact, Traffic Safety Possibly providing adequate DOT (or 3rd party contractor) staff and equipment to run a TMC or an IMAP program on significant projects. Work towards documented expectations for traveler information and IM. Review and analyze traffic flow and accident data on regularly scheduled intervals during the life of the work zone and recommend and implement improvements. Include coordinate with stakeholders identified in planning and design or identify new stakeholders, for example, Safety and Operations Meeting 	CU	WZTCU/ CU/ DIV/ ITS Ops	Wendi Johnson, Michelle Long
Coordinate work zone activities with Incident Management during construction The intent of this strategy is to implement, monitor, assess, and revise incident management strategies developed during design. This could include: <ul style="list-style-type: none"> Work through local Interagency Incident Management Teams (or creating them where they do not exist) continually share and evaluate the work zone for its ability to support good Incident Management. Ensure after incident critiques are held that includes the Contractor and DOT Construction staff. Regular Safety and Operations Meeting with Contractor, Division, WZTC, NCSHP, Impact, Traffic Safety 	DIV	CU/CU/ CU/ DIV/ ITS Ops	Wendi Johnson, Michelle Long

Goal B: To promote an agency culture committed to the Work Zone Safety and Mobility Policy)

	OWNERS		COMMITTEE CONTACT
	Lead Unit:	Other Units affected:	
Objective 1: Promote organizational awareness by educating staff on how decisions made in their respective work unit's affect the success of the WZ Safety and Mobility Policy Develop a program or method to educate staff at all levels on the policy The intent of this strategy is to develop a program to educate staff at all levels on the policy. Make the policy available to all levels.	Committee	T&D/CU/All	Stuart Bourne
Participate in national committees The intent is to participate in national committees and share and gain information.	WZTCU		Stuart Bourne
Host national or regional work zone safety conferences The intent of this strategy is to host a national work zone safety conference to share and gain pertinent information.	WZTCU		Stuart Bourne
Document and share initiatives and successes nationally The intent of this strategy is to document and share initiatives and successes nationally.	WZTCU	CU/IT/All	Stuart Bourne
Develop a program or method to educate staff on how their timely decisions affect work zone safety and mobility, construction duration, and cost The intent of this strategy is to develop a program to educate staff on how their timely decisions affect work zone safety and mobility, construction duration, and cost.	WZTCU	CU/T&D/All	Stuart Bourne

Goal C: To provide safe work zones for workers and road users

	OWNERS		COMMITTEE CONTACT
	Lead Unit:	Other Units affected:	
Objective 1: Utilize ITS and enforcement strategies to enhance safety Use Smart Work Zone Technology to monitor traffic flow and adjust traffic strategies The intent of this strategy is to monitor traffic operation within work zone and networks using smart zone technology. Some of the procedures could include: <ul style="list-style-type: none"> Encourage the integration of SWZ into existing ITS. Use permanent ITS in lieu of temporary devices where applicable, assuming that the long-range strategic goals and the short term ITS work zone strategies are compatible. Define goals and performance measures of SWZ. Monitor, evaluate, and modify operations during life of WZ. 	WZTCU	CU/ ITS Ops/ITS	Stuart Bourne
Establish criteria for effective law enforcement in the work zone	CU	SHP/WZTCU/DIV	Michelle Long

Objective 1: Utilize ITS and enforcement strategies to enhance safety

	OWNERS		COMMITTEE CONTACT
	Lead Unit:	Other Units affected:	
<p>The intent of this strategy is to establish guidelines for matching law enforcement strategy to type of work zone. Examples would include Operation Yellow Jacket and Drone Car. Strategies would include:</p> <ul style="list-style-type: none"> Coordinate with law enforcement by evaluating and prioritizing our project needs for enforcement needs and keep updated Coordinate with law enforcement agencies to develop a program to familiarize them with work zone safety (Target audience is local law enforcement agencies...sheriff, municipalities, dmv, etc) Work with local Interagency Incident Management Team 			
<p>Use permanent ITS devices/programs more efficiently and cost effectively Table topic until we Talk with Kelly about this strategy and see how/if it fits into the first strategy under this objective or how it relates to work zones. The intent of this strategy is to...</p> <ul style="list-style-type: none"> Use all available permanent ITS devices and statewide Traveler Information tools (TIMS/511) approaching work zones or logical diversion points. Have more real time information on ITS Devices and TIMS/511. (Possible strategy: Tie TIMS to HiCams, create Chief Engineer's Performance Measure, etc.) Do we/how do we make sure traffic signal systems are proactively optimized on detour or likely alternative routes during work zone. (Damron) 	ITS Ops	ITS/WZTCU/DIV	Kelly Damron

Objective 2: Provide a safe design with the work zone in mind

	OWNERS		COMMITTEE CONTACT
	Lead Unit:	Other Units affected:	
<p>Establish criteria for the use of positive protection in work zone The intent of this strategy is to be consistent in the use of the appropriate positive protection. The WZTCU is already working on the criteria for this strategy. This criteria goes hand in hand with the drop off policy. This strategy applies to all projects, applies to maintenance, and is measured by a establishing criteria and using it.</p>	WZTCU	DIV	Stuart Bourne
<p>Establish guidelines for drop off protection The intent of this strategy is to be consistent in the use of drop off protection measures. This strategy applies to all projects, applies to maintenance, and is measured by establishing criteria and using it.</p>	WZTCU	WZTCU Div	Stuart Bourne
<p>Establish bike and pedestrian mobility policy in work zones The intent of this strategy is to comply with the MUTCD requirements for maintenance of pedestrians and bike traffic in the work zone. This strategy applies to all projects, applies to maintenance, and is measured by a establishing criteria and using it.</p>	WZTCU	DIV, TEB, RWY, STUCTURES, PDEA, PEDS&BIKES	Stuart Bourne
<p>Analyze crash history on corridor and incorporate corrective measures into the final design The intent of this strategy is to look into problem areas on the project and within the network and correct them before the project begins. As a process the fatal investigations completed by the RTEs are copied to Stuart. TABLED for further discussion.... Should occur from planning, design, construction... Don't forget to go back and answer the 5 questions...</p>	WZTCU	TEB, Roadway	Stuart Bourne

Objective 3: Provide a continuously safe work zone environment

	OWNERS		COMMITTEE CONTACT
	Lead Unit:	Other Units affected:	
<p>Monitor and maintain work zone devices The intent of this strategy is to create a checklist for inspectors to monitor work zone devices and minimum performance standards for devices. This applies to all projects and includes maintenance. It is measured by a checklist and developing the standards.</p>	WZTCU (develop procedure) DIV (maintain)	DIV	Stuart Bourne
<p>Follow criteria for the use of positive protection in work zone The intent of this strategy is Some of the processes may include:</p>	DIV		Stuart Bourne
<p>Establish procedures for setting speed limit in work zones The intent of this strategy is to standardize the way we set speed limits in work zones. One procedure would include establish criteria for speed limit reduction in work zone.</p>	WZTCU	TEB/DIV	Stuart Bourne
<p>Continue to conduct safety meetings (tailgate meetings) The intent is to emphasis the importance of conducting safety meetings and promote day to day safety discussions.</p>	S&L/DIV	CU/Other units that are in field (L&S, Traffic Survey, etc)	Stuart Bourne/Wendi Johnson
<p>Include Incident Management Plan (IM) as part of TMP for significant projects The intent of this strategy is to develop a plan from the IM elements that were identified in planning and design for significant projects.</p>	ITS Ops	WZTCU /DIV	Kelly Damron
<p>Conduct investigations on "insert proactive term" incidents, implement improvements where appropriate The intent of this strategy is to identify problematic locations and make recommendations for implement improvements. A process needs to be set up so that the right people are involved. Some of the processes could include:</p> <ul style="list-style-type: none"> Set threshold of crashes and investigate crashes that exceed threshold Incidents that affect the travel way and impacts traffic within the work zone will be logged into TIMS and can be paged out to relevant subscribers for significant projects TABLE THIS Incidents needs to be defined and could include crashes, congestion, etc. Discuss with Kelly..IS THIS BEING ARCHIVED? Stuart is subscribed but is he getting useful information? 	DIV	S&L/WZTCU	Kelly Damron

Objective 4: Reduce Crashes in Work Zones

	OWNERS		COMMITTEE CONTACT
	Lead Unit:	Other Units affected:	
<p>Evaluate work zone crash data to establish work zone strategies and procedures that reduce crashes in work zones The process would include:</p> <ul style="list-style-type: none"> ➤ Improve method of collecting work zone crash data, This could include: <ul style="list-style-type: none"> - Determine where we need to focus our efforts by identifying the type of work zone (TIP/Maintenance/Utility/3rd party) - Accurately identify severity of crash for each work zone crash - Coordinate with Traffic Ops to find the best use for TIMS - Possibly modify form for collecting information - Coordinate with law enforcement to obtain and collect crash data - Flow chart of who uses the data collected ➤ Develop a process to routinely analyze work zone crashes and operational data on projects <ul style="list-style-type: none"> - Modify plans as needed - Update any policies/procedures as needed - Coordinate with Traffic Ops to find the best use for TIMS - Develop a database with project level information for analysis 	TEB/WZTCU	WZTCU/ITS Ops/Other units may be affected	Terry Hopkins
<p>Analyze and consider pre-work zone crash data in TMP design The intent of this strategy is to analyze crash history on corridor, alleviate any deficiencies, and incorporate into successive stages and final design. Some of the processes could include:</p> <ul style="list-style-type: none"> - Develop checklist for road safety audit 	WZTCU	TEB/DIV	Stuart Bourne

Goal D: To consider mobility and access in work zones to minimize impact to users

Objective 1: Utilize innovative technology in work zones to enhance mobility

	OWNERS		COMMITTEE CONTACT
	Lead Unit:	Other Units affected:	
<p>Establish guidelines to match technology with work zone strategy <i>Technology could include:</i></p> <ul style="list-style-type: none"> ➤ Use ITS (dynamic lane merge, Smart Work Zone) and match technology with work zone strategies <ul style="list-style-type: none"> - Consider keeping technology in place after project is over – don't just lease - Implement and effectively use strategies identified in planning and design phases. Need to have some MOE to assess whether or not the use is effective or not 	WZTCU	CU/ ITS Ops/ITS/DIV	Stuart Bourne
<p>Provide proactive "Real-time" Regional and Statewide notifications for significant projects, such as real time information to DMS, Welcome Centers, Trucking Association, etc. The intent of this strategy is to provide accurate real-time information to motorist so that they can make informed decisions. This could include:</p> <ul style="list-style-type: none"> - Improving quality, timeliness and credibility of TIMS entries will significantly improve this, since TIMS entries can help generate other ITS messages. With implementation of the 24x7x365 NCDOT Statewide Transportation Operations Center in Jan 2007 we could treat work zones (both Construction and Maintenance) just like we treat accidents and provide the same level of local, regional, statewide, or multi-state traveler information for "significant" work zones. (See "Special Alert Checklist for list of real time traveler information strategies. 	ITS Ops	CU/WZTCU/DIV	Kelly Damron
<p>Utilize project website to enhance mobility <i>Project Level Processes / Expectations:</i></p> <ul style="list-style-type: none"> - Establish a project website for "Significant" projects to provide and exchange information to participants in the delivery system - This website is for internal use - PDEA to begin but would affect all design units - TDSS Transportation Decision Support System (Glenn Dennison) may be already working on this 	OEQ/ IT	Project Manager/PDEA/All Design Units/ DIV	Charles Cox

Objective 3: Minimize delays and reduce congestion in work zones

	OWNERS		COMMITTEE CONTACT
	Lead Unit:	Other Units affected:	
<p>Consider IMAP in more work zones The intent is to consider establishing IMAP type services for significant projects to reduce incident duration and prevent secondary crashes. This could include:</p> <ul style="list-style-type: none"> - Requiring the contractor to provide some type of IMAP services - This may or may not include maintenance projects, depending on funds and existing IMAP services - May be more global, consider network 	ITS Ops	DIV/WZTCU	Kelly Damron
<p>Provide the road users with adequate access to businesses and residences while balancing the efficiency of the work zone The intent is to develop programs to balance the accessibility and efficiency of the work zone for all road users. This could include:</p> <ul style="list-style-type: none"> - Implementing a pedestrian and bike work zone policy 	PDEA (planning) WZTCU (design) CU (construction)	DIV	Charles Cox/Michelle Long/Stuart Bourne
<p>Provide the contractor adequate access to the project The intent is to provide the contractor adequate ingress and egress to the project without impeding traffic operation.</p>	WZTCU	DIV	Stuart Bourne/ Wendi Johnson
<p>Monitor work zones</p>	ITS Ops/WZTCU	TEB/DIV	Stuart Bourne/Kelly

Objective 3: Minimize delays and reduce congestion in work zones

	OWNERS		COMMITTEE CONTACT
	Lead Unit:	Other Units affected:	
<p>The intent of this strategy is to monitor work zones for speed, volume, queue lengths, etc and use this information to reduce congestion and delays. Some of the process would include:</p> <ul style="list-style-type: none"> - Establish a process for collecting - Establish a process for analyzing data - Coordinate existing DOT data collecting efforts - Implement the criteria for delay (thresholds) - Use "Speed Info" areas - More detection and self-serve web-based access to it for all DOT customers in real time. - All projects, including maintenance 			Damron
<p>Establish state wide criteria for delays or queue lengths(thresholds) The intent of this strategy is to establish a statewide maximum acceptable delays or queue lengths. Process that may be included:</p> <ul style="list-style-type: none"> - Database for lane closure time restrictions. - Queue lengths may be easier to measure 	WZTCU	TEB	Stuart Bourne

Goal E: To advocate innovative thinking in work zone planning, design, and management

Objective 1: Consider alternative/innovative design, construction, contracting, and transportation management strategies to emphasize "Get In, Get Out, Stay Out" mentality

	OWNERS		COMMITTEE CONTACT
	Lead Unit:	Other Units affected:	
<p>Consider the use of innovative design strategies, contracting techniques, materials, and construction methods The intent is to encourage the use of innovative strategies to save time, improve quality, reduce cost, and improve safety, improve mobility. Examples could include: precast pavement slabs, automated speed enforcement, temporary lighting, better retroreflectivity, rumble stripes, delineation, and innovative traffic control devices.</p>	All design units, DIV, etc	Other design units	DeWayne Sykes
<p>Provide the contractor adequate access to the project to expeditiously complete the work The intent of this strategy is to design the project so the contractor can get to the work faster.</p>	WZTCU	DIV	Stuart Bourne/ Wendi Johnson
<p>Select the appropriate traffic management strategy for the construction duration and work zone impacts to meet stakeholder needs The intent of this strategy is to match the traffic management strategy to the construction duration and work zone impacts to meet stakeholder needs. Determine when to talk about this and who to involve. Work with the Division to determine the desired project duration and communicate the desired project duration to those determining project duration times. Must be an iterative process.</p>	WZTCU	PS/PDEA/CU/ADU	Stuart Bourne
<p>Improve accessibility to electronic project files/data for all affected parties The intent is to make plans and documents available electronically easily to improve This could be set up on a website.</p>	OEQ	IT/File Owners	DeWayne Sykes

Objective 2: Minimize third party delay on letting and construction of projects

	OWNERS		COMMITTEE CONTACT
	Lead Unit:	Other Units affected:	
<p>Update current Utility, Rail, and Utility Right of Way policies, procedures, specifications, and design manuals The intent is to minimize delays to project completion.</p>	PS/Rail/ROW/Utilities		DeWayne Sykes
<p>Include Utility, Rail, Municipality, and Right of Way coordination early in the planning process The intent is to coordinate with 3rd parties to address possible delays and improve the delivery process.</p>	PDEA	All other affected units	Charles Cox
<p>Investigate innovative ideas to minimize and eliminate 3rd party conflicts The intent is to find ways to work with 3rd parties to minimize delays. 3rd party could be environmental agencies, utilities, railroad. Ideas could include:</p> <ul style="list-style-type: none"> - Making utility relocation a pay item - consider sharing electronic files - Include and use the highest level of Subsurface Utility Exploration (SUE) on all urban significant projects 	PS/Utilities		DeWayne Sykes

Goal F: To improve credibility/compliance of work zone

Objective 1: Provide and disseminate useful and essential information

	OWNERS		COMMITTEE CONTACT
	Lead Unit:	Other Units affected:	
<p>Utilize ITS (Smart Work Zone Technology, permanent DMS) to provide proactive and accurate "Real-time" information The intent is to use dynamic ITS to improve compliance in the work zone.</p>	ITS Ops	WZTCU/CU/DIV/ITS	Kelly Damron
<p>Include Public Information (PI) component as part of the Transportation Management Plan (TMP) The intent is to comply with the rule for safety and mobility and to provide useful and essential information to the public. This would include:</p> <ul style="list-style-type: none"> - Developing a process to include PI in the TMP - Work with local media 	WZTCU/CU	DIV/CO	Michelle Long
<p>Establish a project identity when applicable for significant projects</p>	CU/PDEA/DIV	WZTCU/ /DIV/M	Michelle Long

Objective 1: Provide and disseminate useful and essential information

	OWNERS		COMMITTEE CONTACT
	Lead Unit:	Other Units affected:	
The intent is to establish a project identity for significant projects at the planning stage that is consistent through the delivery of the project and transfers from planning to design to construction. This would be part of the PI component of the TMP.			
Coordinate work zone activities within the network to avoid conflicts The intent of this strategy is to coordinate work zone activities (construction, maintenance, 3 rd party) so that we are providing credible information to the motorist and provide safety traffic operations. Examples of conflicting activities include detouring traffic into a lane closures, lane closures close together, or providing PI that no lane closures will be in place and maintenance puts in a lane closure.	WZTCU/DIV		Stuart Bourne
Develop strategies to enforce activity owner's (agencies, contractor, utilities, etc) compliance with signing requirements The intent is to enforce compliance. Issues to be addressed: - Use work zone signing only when the activity could be affecting traffic - Remove/ cover signing that does not apply - Ensure that we have the correct sign - Ensure the correct messages are on the CMSs and DMSs	WZTCU	TEB (Traffic Safety), ITS Ops, RM, DIV, CU, PS (contract time committee), M	Stuart Bourne
Ensure useful information is generated and entered into existing databases that capture construction activities The intent of is to provide accurate real-time information to motorist that is essential and useful. The could be included: - Coordinating existing databases that captures on going construction activities on Interstates and US Highways (TIMS, STOC, Construction Progress Database, RTMS, "Speed Info" Areas)	ITS Ops	WZTCU/CU/DIV/M	Kelly Damron

Objective 2: Provide consistency among all work zones

	OWNERS		COMMITTEE CONTACT
	Lead Unit:	Other Units affected:	
Require Work Zone Qualification and Training The intent is to have proper work zone installation, maintenance, and oversight. This would be a requirement of the Department and the industry. This would include: - Require the Contractor to provide a certified Traffic Control Inspector - Education on state industry standards for approved traffic control devices. - Educate DOT staff including residents, inspectors, etc about standards and specifications, traffic operations, intent, etc	WZTCU	TEB, DIV, CU	Stuart Bourne
Establish a standardized method for determining lane closure and holiday restrictions The intent is to provide a consistent method to determine lane closure and holiday restrictions for all activities within a corridor or network. The system could include: - A statewide database that includes predetermined time restrictions on Interstates and US Highways (similar to Maryland and Ohio) - Establish a system for issuing lane closure permits for every lane closure (Does this apply to all lane closures on all roads? Establish a level of road where this permit process is required. Lesser roads covered by guidelines. We tell the Contractor when he is allowed to close lanes. If he wants to close lanes at other times, the Contractor has to apply for a permit to do this.? Apply only to encroachment agreements.) - Exclusion of emergency situations - Waiver process for noncompliance - Up to date traffic counts - Use construction year traffic count for significant projects (DETERMINE WHERE THIS NEEDS TO GO)	WZTCU	TEB (Traffic Safety), ITS Ops, CU, DIV, RM, IM, TSU, PS, IT	Stuart Bourne

Objective 3: Provide responsive customer service during the entire project delivery process to both internal and external customers

	OWNERS		COMMITTEE CONTACT
	Lead Unit:	Other Units affected:	
Provide timely responses to customers regarding work zones and work zone impacts The intent is to provide an open line of communication between the Department and the public. Consider all target audiences identified during planning and early development stages of TMP strategies.	CU	DIV, CO, WZTCU, ITS Ops	Michelle Long
Establish and maintain a project website for Significant Projects to provide information to the public The intent is to provide an open line of communication between the Department and the public and provide credible, timely information to the public. The could possible be linked to TIMS	PDEA	IT, WZTCU, ITS Ops, CU, DIV, CO, PRECON, DDC, OEQ	Charles Cox

Goal G: To continuously assess and improve work zone strategies, practices, and procedures

Objective 1: Assess, document, and implement successful strategies

	OWNERS		COMMITTEE CONTACT
	Lead Unit:	Other Units affected:	
Solicit feedback and suggestions from field engineers and contractors to improve design policies The intent is to evaluate a project after completion to determine lessons learned and implement changes to current policy.	CU/WZTCU	DIV, TEB (RTE), RWY, Other Design Units, ADU	Stuart Bourne/ Michelle Long
Solicit feedback from law enforcement, road users, and municipalities The intent is to evaluate a project after completion to determine lessons learned and implement changes to current policy.	CU/WZTCU	DIV, ADU	Stuart Bourne/ Michelle Long

Objective 2: Conduct project performance assessment and process reviews

	OWNERS		COMMITTEE CONTACT
	Lead Unit:	Other Units affected:	
Regularly conduct "Windshield Review" of active construction project work zones	WZTCU	DIV, CU, ADU, TEB	Stuart Bourne

Objective 2: Conduct project performance assessment and process reviews

	OWNERS		COMMITTEE CONTACT
	Lead Unit:	Other Units affected:	
The intent is to assess the compliance of our policies. The target is on work zone policies.			
Conduct safety inspections/audits as needed to address specific problems that occur The intent is to address specific safety concerns on a project. Project for safety audits can be identified during “Windshield review”. Evaluate existing forms. The WZTCU and CU are now using the same forms and sharing audits with each other. May need to include the municipalities in the safety audit review. This should be required on a regular basis for Significant projects. Regular basis is at least once a year and/or when significant phase changes occur. (Do we follow up with the Roadway Construction Engineers and Regional Traffic Engineers on specific project issues identified during the Windshield Review?)	Committee (procedures)DIV (conduct)	WZTCU, TEB, CU, M, ADU	Stuart Bourne
Utilize the FHWA Work Zone Self Assessment Program to evaluate the Department policies and program The intent is to effectively participate in and benefit from the FHWA Work Zone Self-Assessment Program. The process would include: <ul style="list-style-type: none"> Develop an action plan to address deficiencies Develop an attendee list of key participants that represent key functional areas in the Department 	WZTCU		Stuart Bourne
Conduct process review to assess wide scale performance of work zones with the goal of improving work zone processes and procedures and develop strategies to address non-compliance The intent is to evaluate the data from the FHWA Work Zone Self-Assessment Program, Safety Audits, and Windshield Review to improve work zone processes and procedures. The process may include: <ul style="list-style-type: none"> Develop an action plan to address deficiencies Define the personnel and rank doing the reviews that include representatives from planning, design, and construction Waiting on an example of what this requirement means from Joe Giegle Consider the following for non-compliance: <ul style="list-style-type: none"> Explore making safety one of the bases for prequalification Explore Leaving lane closure signs then assess liquidated damages NOV for traffic control Develop policy for making enforcement consistent (standard methods of enforcement) 	WZTCU	Planning, Design, and Construction Units	Stuart Bourne

Objective 3: Provide and disseminate essential temporary traffic control design information to traffic control professionals

	OWNERS		COMMITTEE CONTACT
	Lead Unit:	Other Units affected:	
Develop communication strategy to inform traffic control professionals The intent is to evaluate and enhance existing disseminate information to traffic control professionals (ADU, DIV, and PEF). The process could be communication web for traffic control professionals.	WZTCU	IT	Stuart Bourne
Develop and implement a plan for training traffic control professionals <i>The intent is to evaluate existing training tools and improve as necessary. The process needs to determine:</i> <ul style="list-style-type: none"> Who will do the training, provide updates? Who attends the training? (Designers in WZTCU, division design engineers, design-build engineers, and private engineering firm engineers) 	WZTCU		Stuart Bourne
Develop Traffic Control Design Manual The intent is to finalize and distribute the TC Manual.	WZTCU		Stuart Bourne

Key

ADU - Alternate Delivery Unit
CM – Congestion Management
CO – Communications Office
CU – Construction Unit
DIV – All 14 Divisions
FSU – Feasibility Unit

IM – Incident Management
IMPACT – Public Information/Construction Unit
IT – Information Technology
ITS – Intelligent Transportation Systems (Greg)
ITS Ops – ITS Operations (Kelly)

L&S – Location and Surveys
M – Municipalities
OEQ – Office of Environmental Quality
PDEA – Project Development Environmental Analysis
PRECON – Preconstruction (all Design Units)
PS – Project Services
RDU – Roadway Design Unit
RM – Roadway Maintenance

ROW – Right of Way
SHP – State Highway Patrol
S&L – Safety and Loss
T&D – Training and Development
TEB – Traffic Engineering Branch
TSU – Traffic Survey Unit
WZTCU – Work Zone Traffic Control Unit