Interstate I-93 Reconstruction Project

Traffic Incident Management Plan

Adopted – March 26, 2008

Executive Summary

The New Hampshire Department of Transportation (NHDOT) in cooperation with the Federal Highway Administration (FHWA), the New Hampshire Department of Safety (NHDOS), the New Hampshire Department of Environmental Services (NHDES) and local emergency responders, initiated an effort to address more effectively the mobility and safety implications of traffic incidents on the I-93 corridor from the Massachusetts State line to the City of Manchester before, during and after the reconstruction project planned for this corridor. As part of this effort, it was determined that a detailed plan of action was necessary that would spell out the mission, vision and goals of the incident management (IM) improvement task, as well as strategies to accomplish these items.

Traffic incident management training workshops and meetings were held with state and local stakeholders to solicit their input on the needs and opportunities seen in the corridor. A multi-disciplined IM Work Group of NHDOT employees were tasked with developing this action plan from the feedback gathered from these sessions. One of the products of the Work Group is this action plan for addressing the issues and making the most of the opportunities for improving mobility and safety during incidents in the I-93 corridor. This plan established the following goals:

Goal #1: Minimize the impacts of incidents on travel
Goal #2: Improve safety at the incident scene
Goal #3: Reduce the probability of secondary incidents
Goal #4: Foster inter-agency cooperation
Goal #5: Establish a sustainable traffic incident management program

The plan outlined the following strategies to achieve these goals:

Strategy 1.1: Service Patrols
Strategy 1.2: Intelligent Transportation System (ITS) Devices
Strategy 1.3: Communications Protocols
Strategy 1.4: Emergency Detour Routes
Strategy 1.5: Individual Work Zone Traffic Incident Management Plans
Strategy 1.6: Emergency Responder Support Infrastructure
Strategy 1.7: Memorandums of Agreement (MOA)
Strategy 1.8: Public Education and Awareness
Strategy 1.9: Technical Steering Committee (TSC)
Strategy 1.10: Post Incident Review Process
Strategy 1.11: Enhanced Reference Location Signs

This action plan is intended to document the traffic incident management needs of the corridor and provide a detailed outline of specific strategies for meeting these needs. It is intended that from the outlined strategies, more detailed plans for implementing the strategies will be developed and later attached to this plan as appendices.

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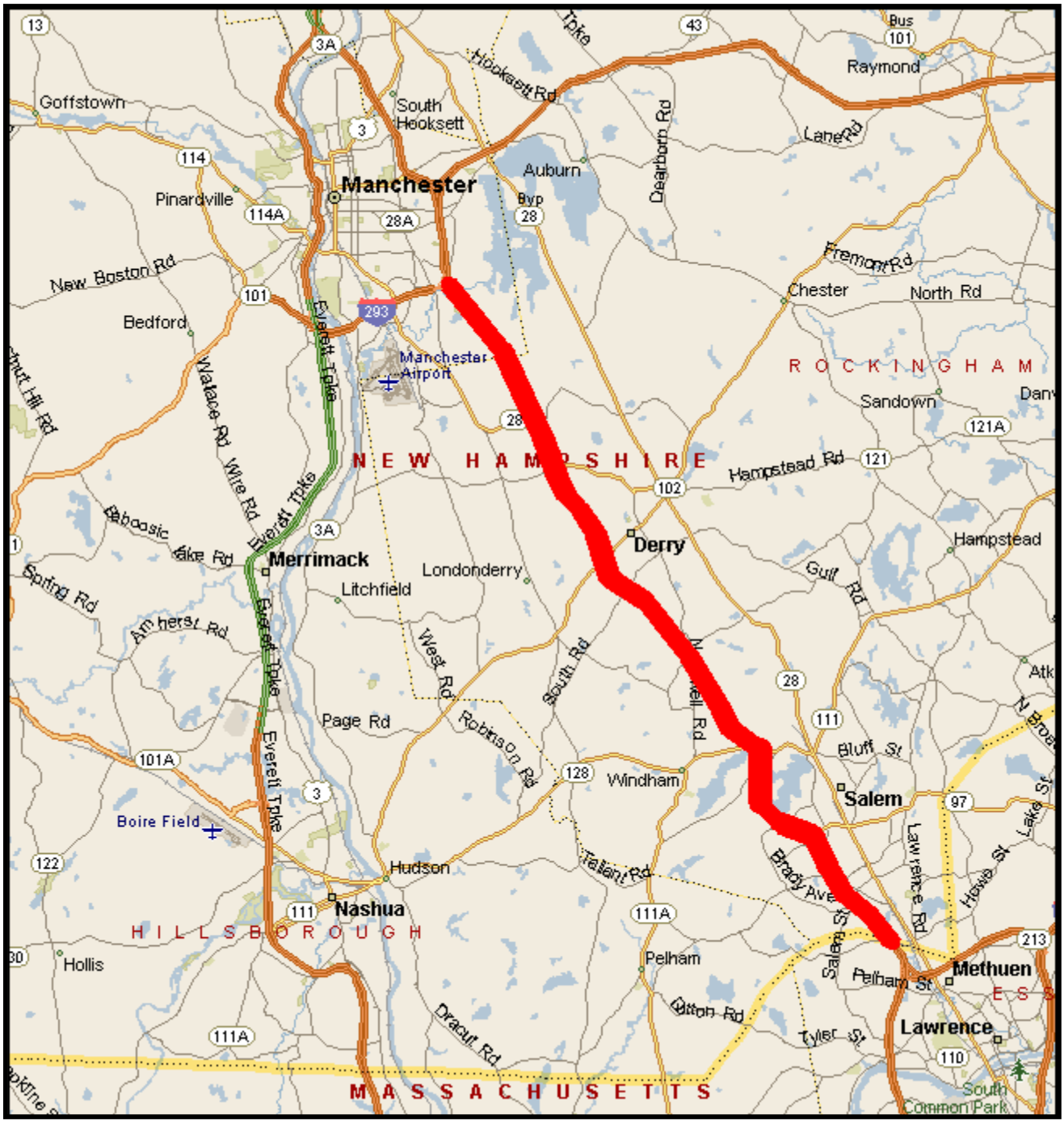
Project Background

The Interstate 93 Corridor Traffic Incident Management Plan (I-93 TIMP) has been an effort led by the New Hampshire Department of Transportation (NHDOT) in cooperation with the Federal Highway Administration (FHWA) and regional stakeholders. The overall vision of the I-93 TIMP is the seamless management of traffic and emergency operations across multiple jurisdictional and agency boundaries for the I-93 corridor in New Hampshire, from the Massachusetts State Line to the I-93/I-293 Interchange in Manchester during the reconstruction of this roadway and for years thereafter. This management will be facilitated through the establishment of cooperative strategies, agreements, and the integration of advanced technologies. The I-93 TIMP covers the I-93 reconstruction project limits with extensions into Massachusetts to the South and Concord to the North, as well as the parallel arterial routes and east-west connectors to I-93. The Traffic Incident Management Plan includes areas of influence beyond the project limits to take full advantage of regional traffic notification and diversion opportunities. The project area is shown in Figure 1.1.

The I-93 TIMP employs a philosophy that emphasizes efficient performance of transportation facilities during an incident through regulatory, management, operational, and traffic engineering strategies. In general, the I-93 TIMP promotes cooperation, coordination, information sharing and application technology-based solutions, such as the use of dynamic message signs (DMS) to disseminate traffic information to motorists, and traffic signal coordination to increase capacity on alternate routes during incidents along the I-93 corridor. In addition, by improving the exchange of information among Federal, State, local and private response agencies, they can react more effectively to incidents on I-93, and minimize and manage the impact to local streets and services.

Development of this Plan included an examination of the primary and secondary parallel alternate routes to I-93 and the identification of cooperative strategies and technologies that could aid in alleviating congestion. The plan includes agreed upon strategies to meet the incident management goals ultimately established though a cooperative effort with local municipalities and State agencies.

Figure 1.1: Project Overview Map



Plan Purpose

This section of I-93 runs through the municipalities of Salem, Windham, Derry, Londonderry, and Manchester. In 2006, the Average Annual Daily Traffic (AADT) along I-93 ranged from 110,000 vehicles per day south of Exit 1 to 75,000 vehicles per day north of Exit 5. In addition to the rapidly growing ADT, traffic incidents occur regularly on I-93 within the reconstruction project limits. The incidents vary in severity, from debris on the Interstate to overturned tractor-trailers, which cause motorists to seek detours on local streets, spreading congestion onto the parallel roads. It has become evident that a corridor-wide traffic incident management solution is critical to keeping people and goods moving, as well as reducing the potential for secondary incidents. This need will only intensify during the reconstruction project. As a result, NHDOT has sponsored the development of this plan to improve traffic flow during incident conditions along the I-93 corridor, building on the current efforts of regional stakeholders.

The Interstate 93 Corridor Traffic Incident Management Plan is the beginning of a multi-stage program for improved traffic incident management which includes the New Hampshire Traffic Management Center (NH TMC) and I-93 Intelligent Transportation Systems (ITS) deployment. Initially, the I-93 TIMP will address management of incidents along I-93 from the Massachusetts State line to the junction of I-293 in Manchester throughout the planned reconstruction of this highway section. The I-93 TIMP is intended to evolve into a formal and sustained traffic incident management program well beyond the reconstruction project. However, this plan is specifically designed to address the needs of the highway during the reconstruction project.

The traffic incident management activities will become more complex when I-93 becomes an active work zone during the multi-year I-93 reconstruction project. During this time, work zone restrictions and constrictions on the highway will likely exacerbate the effects of incidents. Without steps to mitigate incidents in the project area, response and clearance time would likely be well beyond those acceptable to motorists and produce a significant safety hazard. To mitigate the effects of these factors, early planning and deployment of strategic TIM initiatives are necessary.

There are two effective strategies for implementing effective Traffic Incident Management strategies in a work zone:

- Identify Traffic Incident Management (TIM) as a planning priority. This requires the early deployment of an Advance Traffic Management System (ATMS) prior to construction. This concept needs to be part of the overall construction planning and design process and not an “add-on” feature. Proper implementation will allow the NHDOT to monitor the impacts of construction on the corridor.

- The second strategy is to actively incorporate Traffic Incident Management principles as a key component of the overall construction project. The inclusion of a comprehensive Traffic Incident Management program as a key component of the overall construction project will enhance safety along the corridor and provide traffic mitigation during construction and incidents.

Stakeholders

In developing the I-93 TIMP, a concerted effort was put forth to capture the issues and concerns of all emergency responders and municipalities along the I-93 corridor, as well as stakeholders outside of the corridor such as the Massachusetts Highway Department and the Massachusetts State Police. Participation was established in a two-tiered format: the Regional Stakeholders outreach and the more focused Technical Steering Committee (TSC).

Regional Stakeholders

The Regional Stakeholders provided the input necessary to develop the Traffic Incident Management Plan. Two Stakeholder Workshops were held to gather the knowledge and experience of the participants involved. Participants from each municipality included personnel associated with the local government, administration and public works, police force, and emergency services. The following organizations were involved as Regional Stakeholders:

- New Hampshire Department of Transportation
- Town of Derry
- Town of Londonderry
- Town of Salem
- Town of Windham
- City of Manchester
- Federal Highway Administration
- Central New Hampshire Regional Planning Commission
- Rockingham Planning Commission
- Southern New Hampshire Regional Planning Commission
- Nashua Regional Planning Commission
- New Hampshire Bureau of Emergency Services
- New Hampshire Department of Safety
- New Hampshire State Police Troop A
- New Hampshire State Police Troop B
- New Hampshire Fire Academy
- Massachusetts Highway Department
- Massachusetts State Police
- New Hampshire International Speedway
- Federal Motor Carrier Safety Administration
- New Hampshire Towing Association
- Al’s Automotive and Truck Center
- Woody's Auto Repair and Towing, Inc.

Technical Steering Committee (TSC)

The TSC was developed as a one-stop forum to help guide the progress and direction of the traffic incident management efforts in the corridor. The following agencies are members of the TSC:

- Federal Highway Administration (FHWA)
- Massachusetts Highway Department (MHD) – ITS Operations
- Massachusetts State Police
- New Hampshire Department of Safety (NHDOS)– State Police – Troop B
- New Hampshire Department of Transportation (NHDOT)
- Town of Derry – Fire, Police, and Public Works Departments
- Town of Londonderry – Fire, Police, and Public Works Departments
- Town of Salem – Fire, Police, and Public Works Departments
- Town of Windham – Fire, Police, and Public Works Departments
- City of Manchester – Fire, Police, and Public Works Departments
- City of Methuen, MA– Fire, Police, and Public Works Departments

Work Group

In order to compile and manage the information from both the Stakeholders meetings and the TSC the Department formed a multi-disciplined IM Work Group of NHDOT employees. The IM Work Group was tasked with developing this TIMP and to work as the liaison between the Department and the TSC As many of the Strategies outlined in this document require action by the Department, the IM Work Group is tasked with developing the Strategies, presenting them to the TSC for review and comment and then following through with implementation.

Plan Development Process

A collaborative process was used in the development of this plan. It began with stakeholder training and information gathering sessions. These sessions were used to engage I-93 emergency responders and local communities in the traffic incident management plan development process. Existing conditions were reviewed, which led to a needs assessment for the corridor. From this information, mission and vision statements for the plan were developed upon which stakeholders could agree. A set of five (5) broad traffic incident management goals were also established which guided the development of strategies to be used to meet the corridor TIM goals.

The goal achievement strategies are the meat of the plan where specific actions outlined. Each strategy is specifically tied to one or more goals with intended outcomes. Each strategy outlined includes: a purpose, background, intended outcomes, needed participants, an implementation time frame, anticipated funding requirements and sources, and possible performance measures that can be used to ensure success.

The following elements comprise the I-93 Traffic Incident Management Plan development process:

- Existing Conditions and Needs Assessment
- Mission, Vision, and Goals development
- Strategies / Deployments outlines
- Program Implementation
- Evaluation & Modification

Existing Conditions and Needs Assessment – Before recommending strategies and activities for improved incident management along the corridor, the strengths and weaknesses of the existing activities were discussed to ensure a clear understanding of the problems and needs of the corridor (essentially what works, and what does not work). Through a detailed inventory of the existing conditions, the needs for the program were defined and documented.

Vision, Goals, and Objectives – The Vision for a Traffic Incident Management Program along the I-93 corridor guided the direction of the project team in establishing the goals of traffic incident management, and to a certain extent, the process to achieve these goals. Therefore, the overall Vision is supported by a formal set of Goals and Objectives.

Recommended Strategies / Deployments – Strategies and Deployments are specific activities employed to address the goals of the program. For instance, the specific activity of providing a *Service Patrol* to reduce delay during the peak hours was established for the goal of *Minimizing the Impacts of Incidents on Travel*. A successful traffic incident management program must consider a combination of **Strategies** (people-related activities) and **Deployments** (improvements and technology that enable improved TIM activities). In this plan deployments are included as strategies instead of being listed separately in order to keep the plan simple.

Program Implementation – Implementation of this Plan is essentially implementing the strategies outlined in it. Since the strategies are in outline form, they will require some further development and refinement to meet the specific needs of the corridor in order to be implemented. It is expected that the NHDOT will work cooperatively with their State and local partners in refining and implementing these strategies in the time frames outlined for each.

Program Evaluation – The plan includes mostly well-established traffic incident management strategies. However, the effectiveness of these strategies in this particular corridor may not always be as envisioned or desired, depending upon many circumstances including the manner in which they are implemented. Even effective strategies may need to be modified from time to time to ensure an optimum outcome. Therefore, program evaluation and associated plan updating is a key part of this plan. This will take the form of periodic program and Post Incident reviews (see Strategy 1.10). It is anticipated that performance measures will also be implemented where possible as established by the TSC.

Mission, Vision and Goals

Mission

Efficiently and effectively manage the response to traffic incidents on I-93 during the reconstruction project in order to reduce the impact on motorists.

Vision

The overall vision of the I-93 TIMP is the seamless management of the traffic and emergency operations of the I-93 corridor across multiple jurisdictional and agency boundaries, with the assistance of cooperative strategies, agreements, and integration of advanced technologies.

Goals

Goal #1: Minimize the impacts of incidents on travel through the I-93 corridor and surrounding communities.
Goal #2: Improve safety at the incident scene.
Goal #3: Reduce the probability of secondary incidents.
Goal #4: Foster inter-agency cooperation.
Goal #5: Establish a sustainable Traffic Incident Management Program for the I-93 corridor.

Goal Achievement Strategies

Goal Achievement Strategies Template

In order to achieve each of the goals outlined in the section above, strategies have been developed. Each strategy was developed using a standard template for consistency and ease of use. It is intended that these sections of the Traffic Incident Management Plan will be revised from time to time in order to achieve the desired results (goals). This may include revising existing strategies, adding new strategies based on new ideas or technology, or removing old strategies if they are deemed ineffective or otherwise undesirable. The following eight items are required for each strategy developed, as part of the strategies template:

Background: *Define problem extents and contributing factors that this particular strategy will address including what is done now, and other issues related to this strategy.*

Output: *Describe the results that are anticipated from implementing this strategy in terms of how it helps to achieve the corresponding goal.*

Participants: *List who is involved in executing this strategy and their associated role.*

Time Frame: *Define the time frame to implement this strategy.*

Funding: *Identify the funding requirements and source needed to implement this strategy.*

Performance Measure(s): *Define the quantitative or qualitative measure (if no quantitative measure can be determined) that will be used to determine the effectiveness of this strategy. The tool to be used to measure the effectiveness should also be described.*

Implementation: *Describe the actions that are required to implement this strategy. List keys to success and potential roadblocks, if any.*

Each of the items above should be defined in enough detail to ensure those tasked with implementing the strategy have all the essential information needed to refine and develop the actual implementation actions needed for the item/tactic. However, it should be recognized that this strategy template is only intended to essentially outline the strategy and therefore is not intended to define every detail needed for implementation. Therefore, each strategy outline should be one or two pages in length at the most.

Strategy 1.1: Service Patrols

Purpose: Assist in achieving Goals # 1 and #3

Background: Most incidents on major highways are relatively minor in nature, e.g., flat tires, running out of gas, overheating, or even simple debris in the roadway. However, it has been shown that even such a minor incident on the shoulder of a busy highway can have a significant impact on lane capacity, vehicle speeds, and driver safety. This impact is due to the shying away from fixed or still objects near the travel way. More significant traffic impacts occur when minor incidents occupy the travel way itself. The impact of minor incidents will likely be increased during construction when minimum shoulders or other restrictions exist in certain locations. During peak traffic volume flows these minor incidents could cause major congestion and possibly contribute to more serious secondary incidents.

Output:

- **Goal #1:** Service patrols will respond mostly to minor incidents (the most frequent type of incident on roadways) and assist in the removal of the vehicle involved or debris found and thereby mitigate the impact of these types of incidents on traffic operations.
- **Goal #2:** Service patrols will provide scene safety by assisting in traffic control (utilizing the vehicle, cones, flares, etc. under the direction of State Police) and being a DOT representative on the scene if additional resources are necessary.
- **Goal #3:** Service patrols could also assist in traffic control operations during initial stages of major incidents, which will ultimately reduce the probability of secondary impacts caused by sudden unexpected traffic condition changes.
- **Goal #4:** Service patrols can foster inter-agency cooperation by virtue of being on the scene of an incident and having face-to-face communication with the Incident Commander.

Participants: NHDOT would be the primary stakeholder as they would administrate the service patrols. State Police may also play a consultation role in service patrol development and implementation.

Time Frame: This strategy will be implemented in May 2008 for a trial period of 6 months.

Funding: Service patrols are a major expense and will be funded through the I-93 reconstruction project and private sector sponsors as much as possible. Costs involve initial expenditure for vehicles and equipment, then operational costs for fuel, maintenance, and salaries.

Implementation: Implementation will require NHDOT to determine specific tasks and functions the service patrol will perform, which in turn will dictate the necessary equipment, personnel, and magnitude of the service patrol. In addition, funding opportunities need to be identified, solicited (in the case of private sector funding), and secured. Procurement issues also need to be addressed upfront.

Implementing service patrols will require significant funding and funding is limited. Therefore, funding opportunities need to be identified quickly. To ensure long-term success, the service

patrol should initially provide minimal services to prove the concept of this strategy. The members of the TSC will be surveyed at least twice during the trial period to seek their opinion of the effectiveness of the Service Patrols, and what can be done (if anything) to increase their effectiveness (expanded communications capabilities, expanded scope of operations, etc.).

Strategy 1.2: Intelligent Transportation System (ITS) Devices

Purpose: Assist in achieving Goals #1, 3 and 4.

Background: To effectively respond to an incident on the highway you must have timely and accurate information regarding the situation. The more accurate the information you have, the more likely you are going to respond in an efficient manner. Notification and verification are the first two pieces of information emergency responders need. You must be informed that something has occurred and then verify that the notification is accurate. In addition, accurately determining as many details before committing resources also affects the efficiency of the response. Information that may substantially help emergency responders includes: verification that an incident exists, determination of the exact location of the incident, quantifying the magnitude of the incident, and determining the resulting effect on traffic the incident has caused. ITS devices such as cameras and traffic sensors can help in all four of these areas.

In addition to verification, location, magnitude and effect of an incident, informing the public of the incident and providing them with meaningful, real-time information on what is occurring, and what they might do as a result, goes a long way toward mitigating the effects of an incident. ITS devices such as dynamic message signs (DMS), Highway Advisory Radio (HAR), and phone-based "511" traveler information systems can provide effective means for getting this information out to the traveling public.

Lastly, knowing the ever-changing weather and pavement conditions on the highways over the winter months can assist the NHDOT, and possibly local authorities, in knowing when and how much roadway treatment is necessary, as well as the effect of such treatments on the pavement. ITS devices such as road weather information systems (RWIS) assist in knowing how to respond to weather incidents.

Output:

- **Goal #1**: Deployment of ITS devices to provide the traveling public essential information on incidents should mitigate the impact of such incidents by allowing for alternative routing and better trip planning.
- **Goal #2**: Deployment of cameras will help verify, locate and assess an incident so that the proper equipment can be mobilized efficiently to deal with the incident including getting the equipment to the right location quickly. This will create a safer environment for responders to work in.
- **Goal #3**: Identifying the correct location and magnitude of an incident up front will decrease secondary incidents. Emergency responders will not be forced to travel in multiple directions from multiple on-ramps to locate the incident. In addition, cross-over usage may become less frequent.
- **Goal #4**: ITS device deployment will not only help get better information to the traveling public, it will also assist in getting better information to all responders. This should foster better cooperation between the various response agencies as they share information from these technologies.

Participants: The NHDOT is responsible for designing and deploying these devices but will seek input from State and local emergency responders as appropriate.

Time Frame: Intelligent Transportation Systems along the I-93 corridor need to be installed as soon as possible, particularly in the affected areas of construction. The first phase includes a deployment of temporary and permanent devices to be installed from Salem to Manchester. This work may occur prior to, or concurrent with, major reconstruction projects and may include "smart work zone" systems, which are prearranged compilations of certain devices custom designed to manage specific work zone setups. All temporary ITS devices will be relocated to their permanent locations during construction of each adjacent reconstruction project. It is important to know and understand that the “Smart Work Zone Systems” are not a substitute for the ITS system.

Funding: Costs involve the initial expenditure for the devices and their installation, monitoring center and communication network, then the operating costs for power, communication network, maintenance, and salaries for monitoring and maintenance personnel. Funding for ITS device deployments will be the responsibility of the NHDOT and are eligible for Federal-aid funding.

Performance Measure(s): Ultimately, the measure of success of this strategy should be the time required to clear an incident, and/or the amount of traffic delay resulting from similar incidents. Because this information is not presently measured and the tools or system to measure this does not presently exist in NH, no performance measure has been identified.

Implementation: Engineering work has been completed for the ITS system. The project needs to go to RFP as soon as possible, as main line work has begun. To be most effective, ITS device deployments should occur prior to or in conjunction with the construction of major sections of the I-93 reconstruction project. Deployments of these types of devices can require extensive planning and design, as well as cooperation with other agencies.

Strategy 1.3 Communications Protocols

Purpose: Assist in achieving Goals #1, 2, 3, 4, and 5

Background: It has been shown that a coordinated response to incidents is dependent on timely and accurate information. The advent of improved radio communications along with cell phones has changed the manner in which information is received and how the various response agencies communicate with each other. The implementation of ITS technologies provides governmental agencies the methods to communicate traffic incident information to motorists, thus reducing congestion and delays. Coordination of the various forms of communications will enhance the response to and the mitigation of incidents.

Output: The flow and dissemination of information will be utilized to reduce response time and improve the deployment of emergency response units and their coordination at the scene.

- **Goal #1** Improved communications through the use of ITS technologies will allow the dissemination of information to motorists in a timely manner to allow them to seek alternative routes and/or to keep them informed of the status of the incident.
- **Goal #2** Improved communications and the implementation of protocols will enhance the ability of all responding agencies to communicate and coordinate their efforts more effectively and efficiently. Responders will be safer because the Incident Commander will be able to issue orders directly and avoid duplication of tasks and effort.
- **Goal #3** Providing motorists with information regarding an incident to alert them to what is happening, thus allowing them to divert or be prepared for potential congestion and stopped traffic conditions. In addition, early notification to "corridor communities" of an active highway incident will reduce reaction time to deploying signs and manpower to intersections that will need to be staffed due to emergency detour route usage. This will reduce congestion on secondary roads.
- **Goal #4** The ability of various agencies to communicate effectively with each other will enhance inter-agency cooperation by reducing misunderstandings of support requirements and increasing appreciation of each agency's roles and responsibilities.
- **Goal #5** As part of an overall Traffic Incident Management Plan for the corridor, improve the coordination of all responding agencies within the corridor with the Transportation Management Center (TMC) in Concord. In addition, coordinate information dissemination to Massachusetts Agencies and Media.

Participants:

NH DOT – Cooperatively working with the NHSP in the TMC will coordinate the dissemination of information thru ITS devices and with other responding agencies as needed.

NH DOS – The NHSP dispatch, which is co-located with the NHDOT in the TMC, will ultimately coordinate communications with law enforcement agencies along the corridor and the adjacent State of Massachusetts. Whereas NHSP currently dispatches Troopers from the individual troop stations, the logistics of this will need to be worked out.

Local Fire/EMS – Will provide emergency response to the scene as required.

Local Police – Will provide emergency response to the scene and provide traffic control along diversion routes as required.

Local Public Works – Will provide assistance along diversion routes to assist in traffic control.

Tow Industry – Will respond to the incident for vehicle removal and recovery.

Other State/Local Agencies – Will be called to respond based on the incident type, such as Haz-mat, fatality, etc.

Media – Will provide real time information to media outlets for broadcast to the public.

Time Frame: Major construction will begin with the Exit 1 ramps in late 2007. Construction of Phase I ITS deployment is scheduled for 2008. Corresponding protocols for dissemination of information should be developed and in place as soon as possible.

Funding: Separate funding for the development of protocols is not required as these should be developed by the IM Work Group in concert with TSC members.

Performance Measures: No definitive performance measures have been identified. Post incident reviews of major incidents will assess communication efforts and make recommendations for addressing issues found. The goal is to improve communications and information dissemination at all levels.

Implementation: Implementation will occur as the TMC becomes fully operational in the fall of 2007 and ITS devices are installed in 2008. These two activities will provide an overall command and control operations center based on the level of the incident.

Field communications issues should be addressed by a subcommittee established by the TSC to review current technology and operational procedures, identify deficiencies and address remedial actions.

The TSC recognizes that the NHSP, NHDOT TMC, NH E-911, and all affected local agencies will need to work out a logical communications plan to ensure seamless communication. This strategy will be one of our top priorities. Memorandums of Understanding will likely need to be put into place.

Strategy 1.4: Emergency Detour Routes

Purpose: Assist in achieving Goals #1, 3 and 4.

Background: Implementation of detours to be used during incidents on I-93 will help to alleviate the traffic congestion on local roads as well as on the interstate. The goal of these routes will be to allow as much traffic as possible to bypass the section of the interstate that is affected by any given incident. This will help to minimize back-up of traffic on the interstate and to facilitate the flow of traffic on secondary roads, thus reducing the probability of secondary incidents. The Department has worked with all of the towns within this segment of the I-93 corridor, including Methuen, MA, as well as with representatives from New Hampshire and Massachusetts State Police. The planning and associated detour design also includes development of detour maps, evaluation of signals along the detour routes, installation of supplemental I-93 guide signs, installation of permanent detour signing, and development/distribution of signing to be put in place during detour implementation.

Output:

- **Goal #1:** Implementation of emergency detour routes will help to reduce the impact that an incident will have on the traveling public.
- **Goal #3:** Reduction of the impact to the traveling public will help to reduce the probability of secondary incidents.
- **Goal #4:** Pre-planned detour routes help foster interagency cooperation by facilitating discussions during development and by providing clear plans for implementation during an incident.

Participants: Planning/development and implementation of detours have been conducted through the cooperation of the affected communities within the corridor. This includes representatives from public works, fire and police from Salem, Windham, Derry, Londonderry, Manchester and Methuen, MA as well as New Hampshire State Police, Massachusetts State Police and the New Hampshire Department of Transportation.

Time Frame: Detour planning is complete. Implementation is imminent. Scheduled completion date is August 2008. The impacts of individual I-93 construction contracts on the pre-determined detour routes should be evaluated. Additionally, the routes should be re-examined at regular intervals to determine if local development or other roadway projects have had an impact on the detours.

Funding: Costs associated with the detours will be related mainly to the installation of signing packages. These can be broken down into three categories: installation of supplemental I-93 guide signs, installation of permanent detour signing, and development/distribution of signing to be put in place during detour implementation. Although signal timing along the detour routes will be evaluated with the goal of identifying the possibility for overrides during detour implementation, it is anticipated that signal improvements will not be necessary. Additional minor costs will be associated with continued review of the detour routes. These reviews would most likely be undertaken by NHDOT or by the I-93 TSC. Funding necessary for the costs relating to the additional detour signage would be funded through the project.

Performance Measure(s): The key to performance for the detours will fall under three categories:

Ease of Implementation: Determine how easily the detour was implemented, including sign placement during the detour implementation. Measurement will be subjective and based on post-incident reviews.

Facilitation of traffic flow on Secondary Roads: Evaluate traffic flow along the detour routes. NHDOT should attempt to observe the traffic flow along the routes and at major intersections during detour operations. Measurement will be subjective and should be discussed in post-incident reviews.

Relief of back-ups on the Interstate: As each incident will impact traffic on a different scale, evaluation would have to be a subjective judgment. Again, this should be discussed in post-incident reviews.

After-action reviews should be utilized to evaluate all of the criteria above and determine if there are ways of improving the detour routes.

Implementation: Implementation requires consultation with the municipalities and agencies listed above. The following steps will be undertaken:

- Identify potential detour routes – develop mapping/reference material. (COMPLETE)
- Identify/evaluate location of permanent detour signing. (COMPLETE)
- Identify location and types of signing to be put in place to implement a detour route. (COMPLETE)
- Identify locations for installation of supplemental I-93 guide signs. (COMPLETE)
- Evaluate signalized intersections along detour routes. (COMPLETE)
- Install needed signing and make signing packages available.
- Conduct kick-off meeting for final review of detour routes and distribute detour mapping/reference material. (COMPLETE)
- Conduct evaluation through the TSC once routes are signed and utilized to determine effectiveness and to evaluate any needed modifications.

Strategy 1.5: Individual Work Zone Traffic Incident Management Plans

Purpose: Assist in achieving Goals #1, 2, 3 and 4.

Background: Though this document serves as the overall TIMP for I-93 throughout the I-93 Reconstruction Project area, more detailed plans should be developed to address contractor operations and highway constrictions through the individual construction sites. Depending on the contractor's sequence of operations, schedule of work and other factors related to an individual work site, specific traffic incident management measures should be planned and implemented ahead of the construction. It is likely that each major reconstruction project on I-93 will require an Individual Work Zone TIMP. Smaller projects in the corridor may be combined for planning purposes or included in the Individual Work Zone TIMP for a larger project, as may be appropriate.

Output:

- **Goal #1:** Individual project TIMPs that cover one or more individual reconstruction projects should minimize traffic disruption by providing efficient clearing of incidents and/or removing construction restrictions on the highway.
- **Goal #2:** Developing a tailored TIMP for individual work zones will increase responder safety and address responder needs such as access through the site.
- **Goal #3:** The efficient response to an incident using a tailored TIMP for each construction work site (that may include the use of contractor equipment) will provide quick clearance of the highways and will reduce the potential for secondary incidents.
- **Goal #4:** There will be coordination with all emergency responders responsible for the section of highway within the project limits during development of the individual TIMPs. This will help foster inter-agency cooperation prior to and during an incident in the work zone.

Participants: The NHDOT is responsible for developing individual TIMPs for construction projects and will need the cooperation of other state and local emergency responders, as well as the contractor, in making these plans a success.

Time Frame: Each individual project should be evaluated to determine the need for a site specific TIMP. During this evaluation it may be determined that the project being reviewed need not have its own plan as it may be covered by another project's plan. TIMP that cover a project should be in place prior to the start of construction. All individual projects' TIMP should be regularly evaluated and adjusted throughout the construction duration as contractor plans and situations change.

Funding: Costs involve personnel salaries during development of Individual Work Zone TIMPs. Development of the Individual Work Zone TIMPs will be done as part of the project design process and will, therefore, be funded using project funds.

Performance Measure(s): Ultimately, the measure of success of this strategy should be the time required to clear an incident, and/or the amount of traffic delay resulting from an incident. Because this information is not presently measured and the tools or system to measure this does not presently exist in NH, no performance measure has been identified. However, every

mainline construction project related to the I-93 Reconstruction Project should have an Individual Work Zone TIMP.

Implementation: NHDOT must budget and make part of the construction project planning and development process the development of Individual Work Zone TIMPs. Consultation with other state and local agencies, as well as contractors, is also important.

It will be important to identify and specify required provisions of the Individual Work Zone TIMPs in the related contracts that go out. Coordination among the overlapping or abutting contractors will also need to be addressed in the contracts.

TIMPs for individual major projects need to be developed in conjunction with affected local agencies. Once the TIMP is published, work shall not commence until the local agencies affected by the project have been notified and the plan shared.

Strategy 1.6: Emergency Responder Support Infrastructure

Purpose: Assist in achieving Goals #1, 3 and 4.

Background: From the onset of incident management planning for the I-93 corridor, there have been discussions within regarding improving the ability of emergency responders to handle incidents that occur within the right-of-way. The primary concerns of local emergency responders were access to the highway and access to a water source. In an effort to improve on both of these issues, NHDOT has worked with the local communities to identify tactics. Each tactic was then reviewed in conjunction with the planned improvements to determine the feasibility of implementation. These efforts resulted in planning for dry standpipes on bridges, establishment of emergency access points, establishment of water access points through right-of-way fencing and sound walls for fire hose and maintaining highway median turn-arounds.

Output:

- **Goal #1:** Establishment of the infrastructure items noted above will improve response time and thus reduce the impact on the traveling public.
- **Goal #3:** Reduction of the impact on the traveling public will help reduce the probability of secondary incidents.
- **Goal #4:** The efforts put forth by the NHDOT and the local communities have resulted in the establishment of a working relationship that has benefited other IM efforts. Furthermore, all parties have gained a better understanding of how each will function that will aid in future projects.

Participants: Planning/development of the infrastructure improvements were conducted through the cooperation of the towns affected by the corridor. This includes representatives from public works, fire and police from Salem, Windham, Derry, Londonderry, Manchester and Methuen, MA as well as New Hampshire State Police, Massachusetts State Police and the New Hampshire Department of Transportation.

Time Frame: The infrastructure improvements will be incorporated into the individual construction projects and therefore their implementation will follow the progress of construction. The current construction schedule calls for projects to be under construction from 2007 to 2017.

Funding: Infrastructure improvements are being finalized as part of the project design process and will, therefore, be funded using project funds.

Performance Measure(s): Evaluation of the infrastructure improvements will be through subjective feedback obtained from emergency responders during post-incident reviews.

Implementation: The infrastructure improvements shall be incorporated into the project plans and be built as part of construction projects.

Strategy 1.7: Memorandums of Agreement (MOA)

Purpose: Assist in achieving Goals #4 and 5.

Background: A Memorandum of Agreement (MOA) is a written document between parties to establish ground rules to cooperatively work together to meet an agreed upon objective. An MOA is a formal document that holds the parties responsible to their commitment. Effective incident management throughout the I-93 corridor will require a cooperative effort between state agencies, local communities, and private entities. Execution of Memorandums of Agreement (and Mutual Aid Agreements) will provide the means for one jurisdiction to provide resources or support to another jurisdiction, and to facilitate the timely delivery of assistance during incidents. Examples of specific Memorandums of Agreement may include the following:

- Standardization/Interoperability of Radio Communications
- Traffic Signal Operations and Maintenance
- Video and Data Sharing
- Utility (Fire Access and Standpipe) Maintenance
- Towing Services
- TSC Organization

Output:

- **Goal #4:** MOAs are intended to provide a means for support between jurisdictional agencies. Inherently, execution of these agreements will serve to foster interagency cooperation.
- **Goal #5:** The cooperation between state agencies, local communities, and private entities is essential to sustain a Traffic Incident Management Program throughout the I-93 corridor.

Participants: Memorandums of Agreement may involve the NHDOT, other state agencies and the local communities, as well as certain private entities (e.g. Towing/ Wrecker Services) as appropriate.

Time Frame: Memorandums of Agreement should be discussed and executed as early as possible. Individual construction contracts may require execution of specific MOAs prior to the start of construction to identify future maintenance responsibilities upon completion of the improvements.

Funding: Funding is addressed under the specific item referenced within the MOA.

Performance Measure(s): Ultimately, the measure of success of this strategy should be the time required to clear an incident, and/or the amount of traffic delay resulting from an incident. Because this information is not presently measured and the tools or system to measure this does not presently exist in NH, no performance measure has been identified.

Implementation: Implementation will require consultation with other state agencies, local communities, and private entities to establish ground rules and to identify specific responsibilities. Memorandums of Agreement and Mutual Aid Agreements should be executed prior to implementation of the specific item that is addressed. Agreements necessary for early construction projects should also be evaluated prior to the start of construction.

Strategy 1.8: Public Education and Awareness

Purpose: Assist in achieving Goals #1 and 3.

Background: The intention of implementing a Traffic Incident Management Plan (TIMP) is to improve response to incidents and to improve safety for emergency responders and the general public. It is important to elicit public participation in order to improve upon the other strategies outlined in the TIMP. This will be done through an organized Public Outreach Campaign (POC). The intention of the POC is to be proactive in informing the public of upcoming construction activities, to disseminate information about TIMP strategies and to provide information regarding traffic conditions. This will be done through coordination specifically with the TIMP strategies that address Detour Routes, Deployment of ITS Devices and Individual Work Zone TIMPs. Furthermore, efforts should be made to inform the public of the general benefits of the TIMP, such as improved incident response, service patrols, etc. The Department has formed a Work Group to specifically address the POC. POC-related materials will be distributed through the I-93 website (RebuildingI93.com) and in hard copy format at locations of public interest.

Output:

- **Goal #1:** The POC will proactively provide information regarding detour routes as well as provide traffic/incident information to the public, thus reducing the impact that an incident will have on the traveling public.
- **Goal #3:** Reduction of the impact to the traveling public will help reduce the probability of secondary incidents.

Participants: The POC Work Group will coordinate activities so that information can be distributed to the public. Other NHDOT departments/bureaus will provide input/information as needed. All traffic information will be coordinated with the Department's Transportation Management Center (TMC) and the 5-1-1 system – Traveler Information.

Time Frame: As construction projects start impacting the traveling public, efforts to disseminate traffic information should begin. As the details of the TIMP are finalized, any information regarded as being pertinent to the public should be distributed.

Funding: Implementation of the POC will be funded using project funds.

Performance Measure(s): POC efforts should be evaluated through a public opinion survey. TSC members will be surveyed as well. It is the intention of the POC to implement a feedback section on the project website. This will allow the public the opportunity to provide comments and answer survey questions so that the efforts can be evaluated.

Implementation: Relative to TIMP public education and awareness the following steps should be undertaken:

- Substantially complete the outline of TIMP Strategies.
- Clearly identify what information should be disseminated to the public and provide such information to the POC Work Group.
- Periodically review and update information provided to the POC Work Group.

Strategy 1.9: Technical Steering Committee (TSC)

Purpose: Assist in achieving Goals #4 & 5

Background: Since 2001 the communities along the I-93 corridor (Salem, Windham, Derry, Londonderry and Manchester), representatives from the New Hampshire State Police, New Hampshire Department of Transportation (NHDOT), the Massachusetts Highway and Massachusetts State Police have been meeting periodically to address a wide variety of traffic incident management issues. As part of the overall I-93 widening project, the New Hampshire Department of Transportation recognized the need to formalize a working relationship between the Department, other state agencies, and local communities. This began with the development of a Traffic Incident Management Plan (TIMP) originally developed by Edwards and Kelcey, Inc. in 2005.

Through the process of addressing issues identified in the 2005 TIMP, the NHDOT created an Incident Management (IM) Work Group that recognized the need to modify the original organizational structure to better reflect current and future needs and requirements. The TSC was initially envisioned to be an advisory committee to the NHDOT in the implementation of the TIMP. Revision to the original TIMP indicated to the IM Work Group that this committee should function more as a steering committee to help guide IM initiatives and should be led by the local communities with the NHDOT providing the technical support to the committee on the highway infrastructure and operations initiatives. Having a steering committee that is locally led is critical to ensure local support and long-term sustainability. An organizational chart is shown in the appendix and a memorandum of agreement (MOA) should be developed to establish the goals, responsibilities and authority of this committee.

Output:

- **Goal #4:** The establishment of a Technical Steering Committee (TSC) will assist in fostering interagency cooperation by identifying needs, possible solutions and exchanging information. It will also help to develop direct personal relationships that will enhance emergency response.
- **Goal #5:** The TSC will assist in the development a Traffic Incident Management Plan not only for the I-93 construction phase, but also for establishment of a long-term interagency process to reduce response times and to enhance safety along the I-93 corridor.

Participants: The NHDOT would be the responsible state agency to facilitate the meetings and to provide technical support, whereas the committee itself should be lead by an appropriate local authority. Members would include representatives from the police, fire/EMS and public works from the communities of Salem, Windham, Derry, Londonderry, Manchester and Methuen, MA. Other membership would include the NH State Police, the Federal Highway Administration (FHWA), Massachusetts Highway, Massachusetts State Police, the tow industry and media.

Time Frame: The TSC will be formalized and implemented as soon as possible, to ensure that there is a formal process in place to exchange information, identify needs and establish a formal process to address issues.

Funding: There will be minimal costs for the committee operations. These involve telephone operation, travel, meeting time and printing of minutes and documents generated by the TSC. Funding for telephone operations, travel and meeting time will be the responsibility of the individual agencies. The NHDOT will be responsible for the recording of and the printing of minutes and documents.

Implementation: Implementation will require the development of the organizational structure, definition of the roles and responsibilities of the agencies involved and a commitment by these agencies to support the process. Implementation will require a commitment by all parties to develop an open and cooperative format that allows the exchange of ideas and information to enhance traffic incident management. The establishment of a Memorandum of Understanding between all the parties involved will formalize the structure.

Strategy 1.10: Post Incident Review Procedure

Purpose: Assist in achieving Goals #4 and 5

Background: There has been some collaborative traffic incident management training with all of the different agencies and private entities that respond to incidents in the I-93 corridor. However, the training does not always provide the same insight as to operations, or cover all the types of actions that may occur during a real incident. Cooperation among responders is better than ever, but there remains room for improvement. One of the best means to improve operations is to review actual incident responses soon after they have occurred. These types of reviews will help to identify operations that worked well and should possibly be used more often, as well as those that didn't work as well and how they could be improved. Establishing a formal post incident review procedure will encourage this practice and provide a systematic way to ensure that it is done effectively.

Presently, post incident reviews have occurred; however, formal procedures have not been established on how to initiate, implement or document the results of such a review.

Output:

- **Goal #4:** Documented review procedures will promote the practice of post incident reviews. Properly conducted reviews have been shown to be effective ways to foster better cooperation between the various response agencies as they share information and become more familiar with how their actions affect the other responders.

- **Goal #5:** Documented review procedures will become a key part of a sustainable traffic incident management program for the I-93 corridor.

Participants: The Statewide Traffic Incident Management Committee should be tasked with formalizing a standard post incident review procedure that can be used in this project and others. The I-93 TSC should adopt this procedure for their corridor. In the event the Statewide TIMC does not establish a procedure, the TSC will establish one to be used in our corridor.

Time Frame: Documented procedure should be established before mainline construction starts on the project.

Funding*:* There are not funds available to implement this strategy. However, there will be minimal costs for the committee operations. These involve telephone operation, travel, meeting time, and recording of and printing of minutes and documents generated by the review procedure. Funding for telephone operations, travel and meeting time will be by the individual agencies and recording and printing of minutes and documents by the NHDOT.

Performance Measure(s):

1. Established and adopted (by TSC) post incident review procedure.
2. Number of fully implemented reviews that are initiated and completed using the procedure.
3. Results of periodic surveys of review participants regarding the impact that these reviews have on their practices/operations.

Implementation: The Statewide Traffic Incident Management Committee needs to actively support procedure development and the TSC needs to be involved in the development process.

To be successful, this review procedure needs to clearly address:

- How a post incident review will be initiated
- Who will facilitate reviews and document results
- Establish standard documentation format of results, and
- Establish a process for the disposition and tracking of results.

Strategy 1.11: Enhanced Reference Location Signs

Purpose: Assist in achieving Goals #1 and 3

Background: Incident location identification is perhaps one of the most important components of responding to an emergency incident. Correct location information reduces the response time of emergency responders, thereby increasing the survivability of those involved in an incident. Further, correct location identification enables responding units to access the highway from the correct on-ramp, in the correct direction. This decreases instances of multiple units traveling in different directions, looking for the incident. It also decreases the use of crossovers. A highway location identification system is currently in place, but is substandard to what the rest of the state is using. Signs identifying the mile markers in $2/10^{th}$ increments, as well as bridge signs need to be installed.

Output:

- **Goal #1:** Correct location equals quicker response time which results in quicker clearance times.
- **Goal #3:** Correct location results in all units going in one direction to one place rather than multiple units traveling in different directions, creating a higher potential of secondary incidents.

Participants: NH DOT would be responsible for identifying sign locations, producing and installing the signs.

Time Frame: This initiative should be undertaken as soon as possible.

Funding: This initiative will likely need to be funded by NH DOT.

Performance Measure(s): Evaluation of the infrastructure improvements will be through subjective feedback obtained from emergency responders during post-incident reviews.

Implementation: The project needs to be designed, bid, and installed as soon as possible.

Implementation

The Technical Steering Committee (TSC)

The implementation of the comprehensive Traffic Incident Management Plan should be through a Technical Steering Committee (TSC) that is comprised of membership from state agencies, the local communities along the corridor, the private sector (tow industry and media) and representatives from Massachusetts.

Strategy 1.9 addresses the organizational structure of the TSC and its primary roles and responsibilities. As noted in Strategy 1.9 the NHDOT has the primary responsibility to establish a formal Technical Steering Committee and to provide the administrative support to ensure its success.

The initial step is to formalize the TSC through a meeting of the key representatives that have been identified and have participated previously in discussions. The NHDOT should present a recommended organizational chart and a draft mission statement that would be incorporated into a Memorandum of Agreement among all the parties. This would formalize the process and commit the parties to a cooperative effort in regards to Traffic Incident Management initiatives.

Once formalized, the TSC should develop its own objectives, and activities to meet the formal goals. The committee's organizational structure process development should be such that it can address issues prior to major construction efforts and during the construction phase. It should also provide for a post construction process that is sustainable and results in continued interagency cooperation.

Currently each of the strategies are at various stages of implementation. While some strategies may only be applicable during construction of the I-93 improvements, others will be developed and put into place with the goal of continual implementation. The following narrative and schedule offers a brief overview of strategy implementation as of Macrh 1, 2008.

Strategy 1.1: Service Patrols

The implementation of Service Patrols has been discussed with the corridor communities and the IM Work Group is currently in the process of developing a specification and identifying funding sources. It is anticipated that Service Patrols will begin in April 2008, to correspond with the start of mainline construction.

Strategy 1.2: Intelligent Transportation System (ITS) Devices

An ITS system for the I-93 corridor from Salem to Manchester has been engineered. It is imperative that a renewed commitment from the NHDOT to install this system is received by the TSC, and action on this initiative begin as soon as possible.

In the fall of 2007 Smart Work Zone specifications were implemented in the Exit 1 Ramps project and will continue to be implemented on individual construction projects as warranted. However, while the Smart Work Zone project is identified as nice to know information for the motoring public, it has very little benefit for emergency responders. Therefore, the ITS system needs to be constructed in addition to the Smart Work Zone project.

Strategy 1.3: Communications Protocols
During the Spring of 2008 the existing communication protocols will be evaluated, with revisions or new protocols developed and phased in during the Fall of 2008.

Strategy 1.4: Emergency Detour Routes
The Emergency Detour Routes have been identified and established. A contract is going out for the construction and installation of signage, with expected project completion in August 2008.

Strategy 1.5: Individual Work Zone Traffic Incident Management Plans
Over the winter of 2007/2008 the IM Work Group will be developing specifications for Individual Work Zone TIMPs. It is anticipated that specifications will be ready for insertion into mainline construction contracts in the spring of 2008. The individual TIMPs still need to be shared with the individual members of the TSC for review and concurrence.

Strategy 1.6: Emergency Responder Support Infrastructure
The need for infrastructure improvements has been discussed with the corridor communities. The location and nature of the improvements have been identified and will be worked into individual construction contracts. The first improvements are detailed in Exit 1 Ramps project, which is currently under construction.

Strategy 1.7: Memorandums of Agreement (MOA)
Draft MOAs addressing bridge standpipes have been circulated to the corridor communities. Additional MOAs will be developed and implemented as needed during 2008 and 2009.

Strategy 1.8: Public Education and Awareness
NHDOT has initiated a public outreach campaign through the use of the rebuildingi93 website and other media outlets. Current focus is on piloting strategies for the Exit 1 Ramps project with the intention to continue with implementation throughout the duration of construction.

Strategy 1.9: Technical Steering Committee (TSC)
The leadership of the TSC was established in February 2008. During March of 2008, the TSC Charter, list of priorities, MOUs, and the TIMP will be adopted.

Strategy 1.10: Post Incident Review Process
Post Incident reviews have been ongoing. Starting 2008, the review process will be documented and fine-tuned if needed, while reviews continue to be conducted.

Strategy 1.11: Enhanced Reference Location Signs
An identification system needs to be installed within the corridor to alert motorists as to their location so assist them in verifying where they are when they report an incident.

IM Strategy Implementation Schedule

	2007				2008				2009			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Strategy 1.1: Service Patrols			Develop specs. for Service Patrols				Begin implementation of Service Patrols →					
Strategy 1.2: ITS Devices	← Outline Needs				Begin installation of ITS/Smart Work Zones →							
Strategy 1.3: Communications Protocols					Review & formalize existing protocols				Implement formalized Protocols →			
Strategy 1.4: Emergency Detour Routes	← Develop detour routes & signing						Install Detour Signing and begin using IM Detours as needed →					
Strategy 1.5: Individual Work Zone TIMP				Develop specs.				Implement Individual Work Zone TIMP →				
Strategy 1.6: E. Responder Support Infrastructure	Outline infrastructure needs				Begin installation of infrastructure as part of construction contracts →							
Strategy 1.7: Memorandums of Agreement (MOA)			Begin development of MOAs in coordination with interested parties →									
Strategy 1.8: Public Education and Awareness	← Public Outreach Campaign on going →											
Strategy 1.9: Technical Steering Committee (TSC)	← Initial development of TSC				Formalization of TSC structure and rolls →							
Strategy 1.10: Post Incident Review Process	← Reviews as needed				Document review process, while continuing reviews as needed →							

← Effort began prior to 2007

→ Effort will continue past 2009. Efforts associated with each strategy will be continued through completion of construction and beyond as needed.

Processing of Issues

A number of issues, concerns and requests have been identified either though the initial round of workshop meetings in 2004-2005 facilitated by Edwards and Kelcey or through subsequent follow-up meetings with town officials. The NHDOT is reviewing these issues, concerns and requests and developing implementation strategies where appropriate, or rejecting requests because of engineering, environmental or other technical reasons.

The procedures to identify and resolve issues needs to be a two-way process. As the NHDOT moves forward with a detailed design process, issues will be identified that need local, and possibly collective, input to resolve. The NHDOT will bring these issues to the TSC, or a portion of the TSC based on the issue, for discussion and input.

Local issues or concerns that need resolution would be presented to the NHDOT and/or other appropriate Federal, State and local agencies for discussion and resolution. As many issues have an impact on several agencies, it is critical that the TSC develops its own process to address and resolve issues based on the concept of two-way communication and a cooperative working relationship.

As the construction process progresses, it may be necessary to modify the membership of the TSC to ensure that all appropriate public and private entities are represented. The TSC process to identify and resolve issues needs to be dynamic and flexible.

Evaluation and Modification

This plan will need to be evaluated in a regular period basis to ensure that is stay relevant to the needs of the corridor. Given the dynamic nature of a major reconstruction project, the plan should be reviewed at least once a year. Ultimately, the TSC should establish a time frame for periodic reviews.

Performance measures are another tool that can be used to help evaluate how the plan is working. It is anticipated that the TSC will establish TIM performance measures for the corridor over time.

Modifications to the plan can be proposed by any agency that is part of the TSC. It is the responsibility of the agency proposing the change to outline what the recommended change is and identify each aspect of the plan that will need to be revised to accommodate the change including providing recommended revisions to each of those plan areas. Proposed changes should be submitted in writing, unless it is agreed by all the committee members that the change is of such a minor nature that a verbal discourse on the change will suffice. The TSC should evaluate the proposed change(s) and take a formal approval action on it. Changes that affect the operation of, or financially impact, a specific agency will also need to be approved by the affected agency.

Appendix A

TSC Membership

City of Manchester:		
Fire:	Chief James Burkush	jburkush@manchesternh.gov
Police:	Sergeant James Flanagan	jflanag1@manchesternh.gov
DPW:	Director Kevin Sheppard	ksheppard@manchesternh.gov
Town of Londonderry:		
Fire:	Chief Kevin MacCaffrie	kmaccaffrie@londonderrynh.org
Police:	Chief Joseph Ryan	jryan@londonderrynh.org
DPW:	Director Janusz Czyzowski	jczyzowski@londonderrynh.org
Town of Derry:		
Fire:	Chief George Klauber	georgeklauber@ci.derry.nh.us
Police:	Captain Vern Thomas	vthomas@derrynhpolice.com
DPW:	Director Michael Fowler	mikefowler@ci.derry.nh.us
Town of Windham:		
Fire:	Chief Tom McPherson	tmcpherson@windhamnewhampshire.com
Police:	Chief Gerald Lewis	glewis@windhamnewhampshire.com
DPW:	Road Agent Jack McCartney	jmccartney@windhamnewhampshire.com
Town of Salem:		
Fire:	Asst. Chief Paul J. Parisi	pparisi@ci.salem.nh.us
Police:	Deputy Chief Bill Ganley	wganley@ci.salem.nh.us
DPW:	Director Rick Russell	rrussell@ci.salem.nh.us
City of Methuen, MA:		
Fire:	Chief Cliff Gallant	cjgallant@ci.methuen.ma.us
Police:	Sergeant Mike Heavey	mheavey@ci.methuen.ma.us
NH State Police:		
Troop B:	Lieutenant John LeLacheur	jlelacheur@safety.state.nh.us
MA State Police:		
Troop A:	Lieutenant Ed Downer	edward.downer@pol.state.ma.us
MassHighway:	Manager Paul Jodoin	paul.jodoin@state.ma.us
NH DOT:	Manager Peter Stamnas	pstamnas@dot.state.nh.us
FHWA:	Martin Calawa	martin.calawa@fhwa.dot.gov

APPENDIX B

I-93 Incident Management Technical Steering Committee – Organizational Chart