

**New Jersey Interagency  
Emergency Management Plan**

Final Report  
September 2005

Submitted by

Rod Roberson & Janet Hansen  
Center for Advanced Infrastructure & Transportation  
Rutgers University



NJDOT Research Project Manager  
Arthur Egan

NJDOT  
BUREAU OF RESEARCH

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## **EXECUTIVE SUMMARY**

The research into existing practices within the four state level transportation agencies reveals that the agencies continue to practice silo style management to operate the state roadway network. Interagency communications is minimal and lacks protocols. The agencies operate individual roadways but fail to operate the road network. A new paradigm to operate the road network is warranted. Agencies must consider the impacts on other roadways prior to taking action. Real time communications and inter-agency coordination would enhance operation along the routes.

Vulnerability assessments of roadway features by transportation employees have not been done. The toll agencies report that NJSP units have reviewed the roadways for security issues. DOT has also not performed a vulnerability assessment.

Toll agencies and DOT operate their respective roadways differently. Toll agencies have NJSP troops to “operate” their roadways. DOT “operates” state highways utilizing two traffic operations centers.

DOT is designated as the “lead transportation agency” and a “lead support agency” under the state emergency management plan. The DOT plays a significant role in the state OEM during times of emergency. DOT is required to maintain the NJ portion of the Strategic Highway Network “STRAHNET”.

Only the NJTPA has developed a “continuous operations plan”. The other agencies, including DOT, have no continuous operations plan available.

Communications issues exist within each of the agencies between mobile units and dispatch centers.

Training for agency emergency management coordinators and field staff is needed in order to facilitate a “team” response.

Emergency contracts are maintained by DOT. However, other agencies do not maintain separate contracts to assist in emergency response.

The DOT Maintenance Management System is the most modern system in the four agencies. The system provides information to DOT relative to materials, staffing and equipment usage. The system is essential during emergency response. Staffing to operate the system is an issue for DOT.

Cohabitation of toll agency and DOT staff in DOT TOCs could facilitate real time coordinated communications which would enhance daily operations as well as emergency response.

## **BACKGROUND**

New Jersey is a corridor state with aged infrastructure that accommodates high numbers of thru trips and commuter trips uncommon anywhere in the nation. Statistics indicate that while New Jersey's highways are the most congested in the nation, they are among the safest.

A reliable road network that affords traffic movement throughout New Jersey is critical not only to the state's economy but to the Mid-Atlantic, New York, and New England areas as well. The road network has demonstrated its value during emergencies numerous times. Mother Nature has shown that the infrastructure is vulnerable an equal number of times.

In addition to the New Jersey Department of Transportation (DOT) which operates some 2200 center line miles of Interstate, Freeway, and land service highways, three authorities operate toll roads in New Jersey. The South Jersey Turnpike Agency (SJTA) operates the Atlantic City Expressway; the New Jersey Turnpike Authority (NJTPA) operates the New Jersey Turnpike; the New Jersey Highway Authority (NJHA) operates the Garden State Parkway.

The statewide roadway system in New Jersey is a three tier composite of roads: state level routes including those belonging to DOT and the three toll agencies; county routes; and municipal roadways.

Transition between roadway tiers is generally transparent to the user, despite the fact that the tiers cross political and geographical boundaries. Toll road jurisdictions cross geographical and political boundaries as well. However, the limits of toll agency jurisdiction are recognizable by signage and physical features such as toll barriers.

In the early 1990's the Department of Transportation (DOT) accepted that New Jersey could not build its way out of congestion. The department had to move traffic more efficiently by maximizing the value of existing infrastructure. A new paradigm focusing on moving traffic and delivering enhanced customer service was instituted within the agency.

Through a partnership with the Federal Highway Administration (FHWA) the DOT initiated a successful program to improve congestion by opening two Traffic Operations Centers (TOC's) located in both the northern and southern parts of the state.

The TOC's monitor traffic, analyze data, design, deploy, and utilize Intelligent Transportation Systems (ITS), Incident Management Response Teams (IMRT), and Emergency Service Patrols (ESP). Subsequently a joint venture with the NJ

State Police (NJSP) provided for cohabitation of both agencies in each of the TOC's. The DOT/NJSP relationship has continued to evolve into an effective team, providing faster better coordinated response to incidents.

The four state level transportation agencies continue to explore new strategies and techniques in their effort to meet customer demands to keep traffic moving during all incidents. Many of the initiatives mirror what is being done on the road(s) of a sister agency, however, the initiatives are focused on each agency's respective roadways.

Despite these efforts, the fragile balance between infrastructure capacity and user volumes is easily disrupted by the smallest incident or loss of capacity. Increasing traffic volumes and unstable world events are but a few of the things that influence the frequency and nature of incidents that must be planned for and responded to. Minimizing impact through effective traffic management and coordination is the anticipated norm of the customer, regardless of conditions.



## **OBJECTIVES**

The joint Emergency Management Plan project was initiated to examine current emergency management practices within the four state level transportation agencies (New Jersey Turnpike Authority (NJTPA), New Jersey Highway Authority (NJHA), South Jersey Transportation Authority (SJTA)) and to develop a plan to “Keep NJ Moving” using the synergy created through operational unification of the four agencies during times of emergency. The plan is to be executed under the leadership of the Commissioner of Transportation.

## INTRODUCTION

During this phase of the project, contact inside the agencies was restricted to those individuals appointed as project leads at the joint agency kick off meeting with Commissioner Lettiere.

- NJTPA Robert Dale
- NJHA Jude Depko
- SJTA Richard Woolston
- NJDOT Arthur Egan

Several visits were made to each agency to discuss operating practices, staffing equipment and organization structure. Additionally, access was granted to documents related to operating practices, administrative reporting systems, emergency management planning, emergency contracting and business continuity plans.

Agency Emergency Management Coordinators:

- NJTPA - Mr. Robert Dale is designated as the agency “Emergency Management Coordinator.” Mr. Dale receives some emergency management coordinator training.
- NJHA - Jude Depko has recently been designated as the agency “Emergency Management Coordinator”. Mr. Depko has not received emergency management coordinator training.
- SJTA - Ken Thomas is the agency “Emergency Management Coordinator”. Mr. Woolston reports that Mr. Thomas has been trained in emergency management practices.
- NJDOT - Mr. Chester Lyszczek is the agency “Emergency Management Coordinator”. Mr. Lyszczek has had some training with emergency management.

## **SUMMARY OF THE LITERATURE REVIEW**

The literature review consisted of interviews with Project Leads and review of agency documents.

History attests to the commitment and ability of the four agencies to maintain operations across the state level road network under emergent conditions. Management of incidents from routine crashes and crowds attending Olympic Games, to events of catastrophic proportions never before thought of, are all models of success that have emerged from New Jersey. These models are now discussed and implemented routinely across the nation.

Between 1999 and 2002, NJDOT responded to multiple infrastructure failures on the state roadways. These major failures resulted from torrential rain storms, a hurricane, severe snows, a tanker fire, and the catastrophic events related to 9/11. While traffic disruptions were unavoidable, effective management and informal partnering with the three toll agencies minimized impacts throughout the response and recovery periods.

Independent operations by the state level transportation agencies are the historical norm. However, informal partnering between the four agencies during times of major incidents has resulted in significant findings:

- The agencies are able to come together quickly and to work together as a cohesive team under single leadership
- Informal networking between agency staff provided a forum for credible dialogue on short notice
- Scheduled briefings during major events contributed to the success of the state transportation mission
- Operating staff within the agencies have become less encumbered by administrative issues and informal barriers that have existed between the agencies.

While the primary mission of all four agencies is similar, “to provide for the safe and efficient movement of goods and people”, the parameters that each agency works within and the influences affecting each agency are significantly different. Funding source is a major difference between the DOT and the toll agencies.

DOT is publicly funded vs. the toll agencies that are revenue (toll) funded. All four of the agencies want to move traffic safely and efficiently. However, closing the road or having traffic moving slower than capacity on the toll routes is detrimental to the revenues of the agency. Despite valiant efforts by each of the toll agencies, traffic volume and/or crashes occur, creating slow downs and sporadic roadway closures.

When road closures are necessary the toll agencies utilize pre-determined closure points or “nodes”. The nodes are toll barriers along the routes. Most often times motorists are re-directed thru the nodes to a state highway. However, there has been occasion when the preferred node could not be used and diversion resulted in traffic being put onto a county or local network. Notification of toll road closing to DOT or the receiving agency is informal. The call is a courtesy call rather than an advance call for coordination or authorization. On occasion motorists have been diverted from a toll road to a route that was under construction or congested for other reasons. This lack of coordination compounds the situation instead of relieving it.

NJDOT is prohibited from diverting traffic onto toll roads. DOT’s practice is to divert traffic onto other state routes. However, there are times when county and municipal roadways are used. DOT has worked to foster relationships with both county municipal governments through a “Traffic Diversion Plan” program. This program is a combined effort between state, county, and local agencies funded by FHWA and has resulted in the completion of pre-planned diversion routes for 13 of 21 counties in New Jersey.

With traffic volumes on many roads exceeding capacity, motorists familiar with local roadways migrate to those roads as alternate routes, effectively leveling traffic volumes across the network. During normal operating conditions traffic leveling is a phenomenon that is not easily measured or accounted for. However, during emergency events local roads are often times part of the planned diversion routes. When the local routes are used to divert traffic around an incident the impacts are more widespread and difficult to manage. It is not unusual for traffic diversion onto local routes to become points of controversy for residents and governing bodies, despite the diversion having been developed in cooperation with the local emergency officials months before.

### **Agency Operations:**

The four state level transportation agencies in New Jersey currently operate their respective roadways independent of each other. Each agency focuses on the mission and goals of the respective agency, not always cognizant or respective of impacts on adjoining roadways when operational decisions are made.

While each of the four agencies has maintenance staff stationed along the respective roadways for maintenance duties, the three toll roads are operated significantly different than roadways under DOT jurisdiction. Specifically, each toll agency contracts with a New Jersey State Police Troop for traffic operations along the roadways. The state police have full authority and responsibility for roadway operations including but not limited to routine patrol, rest area/facility safety and security, incident response, construction zone oversight, traffic diversion, and roadway closures.

Responsibility for traffic operations on DOT roadways rests with DOT, specifically the Division of Traffic Operations. The division has the authority/responsibility to cross internal organizational boundaries and direct resources to incidents, divert traffic, close roads, and employ other options to keep traffic moving. The division also operates a centralized dispatch center from the New Jersey State Police communications center in Hamilton Township, Mercer County. When DOT requires police assistance, the TOCs follow protocols and operating procedures which guide them to request either local law enforcement or state police assistance.

To enhance DOT's efforts, a limited number of NJSP troopers are assigned to each TOC location. The troopers assist with multiple tasks related to the DOT mission of moving traffic. Troopers working in the TOCs do not perform patrol duties. When State Police are needed in the field by DOT, troopers are requested from and dispatched by the local barracks through the troopers in the TOC. State Police availability to assist DOT is commensurate with competing NJSP assignments. Conversely, troopers working on the toll roads are assigned exclusively to the respective toll road.

NOTE: For report clarification, NJ State Police troopers are employed and used on DOT capital construction projects. The troopers on the construction projects are part of a special "construction detail" assigned to DOT, unrelated to the Traffic Operations troopers.

Each of the toll agencies maintain 24 hour operations centers staffed by NJSP, however, only the NJSP maintains a compliment of road maintenance staff on a 24 hour schedule. The NJHA, SJTPA, and the DOT schedule nighttime road maintenance staff on an as needed basis for special projects.

The toll agencies report that while they do have a civilian employee designated as the agency Emergency Management Coordinator, the NJSP unit assigned to the roadway is the agency lead during emergency incidents. The NJSP direct the handling of the incident and rely on the civilian employees for support.

As explained earlier in this document, DOT's role is significantly different than that of the toll agencies during emergencies.

With the exception of some special initiatives which were coordinated by the OEM, each of the four transportation agencies individually plans for traditional "what if" emergencies. The DOT and the SJTPA have jointly developed a lane reversal plan for use in the event that South Jersey shore areas need to be evacuated.

DOT and the NJTPA have recently concluded efforts on a DOT constructed lane reversal plan for I-195 for shoreline evacuation. This project also included coordination efforts with Monmouth County for the interchange area of I-195 and CR 537.

DOT has also worked in concert with county and local agencies to develop lane reversal and evacuation plans along land service roads such as Rt. 27 and Rt. 55. Sections of other shore routes have been identified and are becoming part of transportation evacuation plans.

Annually the evacuation plans are reviewed and “mock” exercises involving all of the agencies are conducted. These exercises are in cooperation with NJSP as well as county and local officials.

## SUMMARY OF THE WORK PERFORMED

### Findings:

#### **A. Emergency Planning**

Within each of the agencies remains independent and focused on a single agency response that allows the agency to keep “their” road operating under emergent conditions. The independent planning results in each agency maintaining inventories of materials and equipment to support their individual plans. Overlap, duplication of effort, and lack of coordination are consequences of independent emergency preparation.

#### **B. Training in Emergency Management**

With the exception of the NJHA, employees involved in emergency management and incident response have received training through NJSP. NJHA field employees have not been trained in the areas of incident response or emergency management. The toll agencies rely on assigned NJSP Troopers to manage incidents. Incident response has not been a major activity for the agency field staff. Toll agency field employees work under the direction and in support of the troopers, supplying traffic channeling devices or signage.

#### **C. Traffic Diversion**

DOT has a traffic diversion planning project that has mapped pre-planned diversion routes through a coordinated effort involving state, county, and local agencies. Thirteen of the twenty-one counties have been mapped.

#### **D. Emergency Notification Lists**

Plans for notification of executive and management staff during off duty hours exists within all of the agencies. The DOT has a formal, well defined plan of notification and maintains lists of support units within the agency should those units be needed. The DOT maintains call out lists for internal units such as communications, procurement, structures, and aeronautics. The toll agency lists are less formal and appear to be based on the fact that the NJSP is the designated operator of the roadways.

#### **E. Continuity of Business Plans**

- NJTPA - The NJTPA has a formal “continuity of business plan”. Review of the document, with the understanding that the contents remain confidential, was permitted. The plan is intended to enable the agency to continue full business operations in the event of a

catastrophic loss to original records and/or facilities. The plan includes a prescribed notification plan and staff assembly procedure should management and executive staff be unable to access the main facility.

- SJTA/NJHA - Neither the SJTA nor the NJHA have continuity of business plans. However, both agencies assert that toll records are filed and available for retrieval at off site locations as well as in the agency business offices. The agency representatives assert that the toll records will enable the agency to continue collecting tolls in the event of facility loss.
- NJDOT - A Continuity of Business Plan was initiated in late 2001. However, the plan remains incomplete and in the early stages of development. The agency does maintain a “contingency” plan for use during a possible job action. The plan has not been updated since the mid 1990’s.

#### **F. Equipment Reporting**

All four agencies maintain electronic equipment management systems. The capability to determine “real time” availability of equipment from the system was not possible. Additionally, only the NJDOT equipment system is capable of providing near real time status of equipment.

#### **G. Maintenance Management System**

- NJHA - The NJHA system exists but is unreliable and outdated.
- SJTPA/NJTPA - The SJTPA and the NJTPA have systems that capture data.
- NJDOT - NJDOT has a modern MMS with full capability of staff reporting, material inventory, and equipment utilization. The system incorporates and is based on the features inventory. The system is linked to the straight line diagram system and is capable of linking to the DOT GIS system. Current operations and data validation are an issue for the agency due to staffing within the unit. The system was designed to be expandable and would allow for the toll agencies to utilize the system. Each of the toll agencies could be viewed as a “region”.

#### **H. Emergency Contracts**

- NJTPA/SJTPA/NJHA - The toll agencies do not maintain contracts specifically intended for emergency response. As the need is realized, the agencies utilize a contractor that is



currently working along the roadway to mitigate the emergency and then develop, advertise, and award contracts for complete repairs if needed.

- NJDOT - The agency maintains contracts that are intended specifically for emergency response: contracts for on site vehicle refueling; structural and concrete repairs; and excavation contracts for utilization by the agency in the lead support agency (e.g. mad cow disease excavation contract). Additionally, in 1999 the division of procurement was tasked with incorporating 7/24 vendor availability by the Department Emergency Management Coordinator. As material and equipment and service contracts cycle for renewal, the 7/24 requirement is incorporated into materials, equipment, and service contracts.

### **I. Vulnerability Assessments**

Following the events of 9/11, transportation agencies across the nation were charged with conducting assessments of their respective infrastructure to determine continued operability if features of the system were damaged or lost. Police agencies were charged with conducting assessments related to security of the infrastructure.

- NJTPA/SJTA/NJHA – The toll agency representatives report that infrastructure vulnerability assessments have been conducted by NJSP assigned to the roadway. The results of the assessments remain with NJSP.
- NJDOT - In accordance with FHWA guidelines issued in late 2001, the DOT started development of a vulnerability assessment program. The assessment has not been conducted.

### **J. Training**

Emergency management and incident management training has been a priority for DOT due to the responsibility DOT shoulders in operating the system. DOT management in the Division of Traffic Operations is intimately involved in the latest techniques, methods, and equipment used in incident management. The relationship between NJSP and DOT Traffic Operations has evolved to a level unsurpassed in the nation. The relationship between the agencies is attributable to the divisions' management team in handling day to day operations and working as a team with the NJSP.

Training of field staff within the newly formed emergency management unit to gather and document information during events has begun within DOT. Equipment such as cameras, video recorders and pocket recorders in the hands of trained staff are essential for accurate depiction of events and conditions. However the equipment is not readily available.

### **K. Communications**

The agencies rely on radio communications between operations and field teams. On a limited basis the agencies are using cell phone technology. Some field units have the ability to contact NJSP dispatchers to communicate with NJSP field units.

DOT has two radio systems that are used to communicate in the field. An 800 mghz system is used by DOT dispatchers to communicate with field supervisors. A much older low band radio remains as the communications link to non-supervisor field pieces. The older low band system has been neglected and some radios are inoperable.

The toll agencies utilize the 800 mghz radio system.

Cross communications between the four agencies using radio communications is not possible at this time.

Interagency communications at the operating level is informal, however, not routine or consistent. Communications during response or management of incidents has also not been the norm. Protocols for the routine exchange of information between the agencies do not exist at this time. Each of the agencies has a relationship with the NJSP. However, because the NJSP operate the toll roadways and DOT operates their roadways, the relationships are very much different. Interaction between troopers operating the toll road and the respective agency occurs at a different level than the interaction between troopers patrolling state routes and the DOT. The lack of information moving between agencies is not intentional, but is the result of the silo type operating practice that has existed between the four agencies.

### **L. Movement of Outsized Cargo**

Each of the four agencies has a permit process that allows outsized cargo to be moved on their respective roadways. After hour permitting for movement of outsized cargo is handled in different ways between the agencies. This issue is relative to contractors needing to move large pieces of equipment into an area to assist with the response or recovery effort. Traditional permitting procedures can delay the arrival of needed equipment and must be considered as an element in the emergency

management plan. DOT developed a process for addressing this need and has employed it several times since inception in 1999.

### **M. Cost Recovery**

Accurate accounting of expenses is required if the agencies intend to recover eligible expenses related to emergency response. FEMA provides for the recovery of some expenses during the response and recovery phase of an event. Understanding eligibility and the FEMA procedures varies between the agencies.

Agencies that anticipate having the opportunity to recover costs are required to document relevant information at the beginning of an event, through the recovery phase. Currently, each agency captures their information and submits appropriate documentation for reimbursement. During a statewide event, four sets of documents are submitted vs. a single transportation submission. As we learned from prior events, requests for information relevant to costs are made of the DOT soon after the events begin. The DOT has been responsible for responding for all of the four state level transportation agencies. The lack of clear practices and procedures within the four agencies led to much confusion and DOT's inability to respond appropriately with reasonable information.

## CONCLUSIONS AND RECOMMENDATIONS

The joint agency emergency management plan should move forward as a priority initiative for all the agencies. The agencies continue to practice silo type operating practices with minimal interagency communications. The first step in moving forward should be to resolve the interagency communications between the four agencies. The lack of coordination and interaction between the agencies at the operating level contributes to inefficiencies daily. This situation is compounded when an incident or emergency situation arises. Face to face exchange of information allows for real time discussion/coordination and is the most suitable method of sharing information. Cohabitation of agency staff is the recommended method to establish the face to face exchange. Merging operating staff of the agencies would enhance daily operations and insure unified, coordinated operation of the state level network during emergency events. In that the DOT is responsible for coordinating and implementing the state level transportation response, staffing the existing DOT locations with toll agency staff appears warranted.

**Options** - There are several options to consider:

**Option #1** - Consider the state level roadways as four integral parts of an entire system that plans, communicates coordinates, and works as a limited "Joint Venture" (JV) to operate the larger network. Administratively, the agencies would remain autonomous. The JV would be for the sole purpose of improving operability of the network. Day to day traffic operations of the four agencies would work as "TOCs" within the joint venture. Instead of DOT operating 2 TOCs and each of the toll agencies operating individual TOCs, the JV would operate 5 TOCs. The TOCs would operate under DOT direction but would remain attached to the respective toll agency.

Each of the toll agencies would assign staff to both of the DOT TOC's in order to facilitate real time communications between agencies.

Communication links between all of the TOCs would provide for the free flow of information between the agencies during routine and emergency operations.

**Option #2** - Build on option 1 to further the partnership between the four agencies. This option would utilize the DOT Maintenance Management System (MMS) to accomplish the structure of the JV, by having the toll agencies enter into the MMS as regions. Each of the agencies could be viewed as individual regions in the system allowing them to enter respective features inventory, material stock piles, staff time reporting, and equipment usage. The information would be accessible only by the agencies until a time of emergency when all of the information could be

viewed by those managing the emergency. Additionally, the system would provide a single format for developing public information briefings, and reimbursement packages.

The DOT MMS was originally designed to be expanded and look at the toll agencies as regional units. (It was originally intended that the MMS program would immediately allow the NJHA to enter as a region and eventually contribute to the operation and upkeep of the system.)

Utilizing the DOT MMS as the common system would require adding additional data relative to each toll road. However, the system would provide a unification link while allowing the agencies to operate independently. The linkage of the DOT MMS to the DOT GIS system could lead to the agencies utilizing the system to convey information relative to impacted areas with before and after pictures. Additionally, events could be tracked through real time mapping using data from field forces.

A discussion with Michael Baker Jr. Inc. reveals that the system is fully capable of being utilized as explained above.

Expanding DOT's MMS could save operating dollars as the four agencies would need to fund only one MMS.

## **Recommendations**

- The joint agency emergency management plan should move forward as a priority initiative for all the agencies. The agencies continue to practice silo type operating practices with minimal interagency communications. The first step in moving forward should be to resolve the interagency communications between the four agencies. The lack of coordination and interaction between the agencies at the operating level contributes to inefficiencies daily. This situation is compounded when an incident or emergency situation arises. Face to face exchange of information allows for real time discussion/coordination and is the most suitable method of sharing information. Cohabitation of agency staff is the recommended method to establish the face to face exchange. Merging operating staff of the agencies would enhance daily operations and insure unified, coordinated operation of the state level network during emergency events. In that the DOT is responsible for coordinating and implementing the state level transportation response, staffing the existing DOT locations with toll agency staff appears warranted.

Additionally, option 2 as outline above should be part of the plan. Option 2 alleviates the problem of agencies tracking employees, materials and equipment by utilizing a single system.

- Implement a standardized process for each agency to conduct a vulnerability assessment of roadway features along each agency's roadways. The assessment should prioritize each feature identified through the process and include developing appropriate mitigations efforts. The plan should identify resources needed to accomplish the mitigation. Implementation of the vulnerability assessment process must include training for those conducting the assessment.
- DOT radio communications between field units and supervisor vehicles and dispatch locations must be improved so as to allow for communications between vehicles using a reliable method.
- Interagency radio communications between field units should be possible but operation should be restricted so as to have it available only during training or actual event.
- Agencies should develop Continuous Operations Plans to allow for uninterrupted operation and record/document recovery in the event of records or facilities being lost.
- The newly staffed Emergency Management Unit within DOT needs clear lines of authority and responsibility defined. The emergency management needs of the department would be well served by locating all emergency management activities in one location. It seems logical that this unit be the location. The unit continues to define itself in the organization as well as the intended role of the unit. Relocation of the unit within the department that would allow the unit to be more visible should be considered. The unit should be responsible for coordinating the vulnerability of the toll agencies and for carrying out the assessment on DOT routes.

## **IMPLEMENTATION AND TRAINING**

### **Recommendations**

- Expand emergency management and incident management training to roadway workers that have not been trained in all four agencies.
- Joint agency exercise training should be conducted regularly. The agencies cannot plan or train for every imaginable event. Training together allows agencies to understand how the other works and enable the units to function as part of a larger team.

## APPENDIX

### Sample Format

Vulnerability Assessment – Transportation Features	
Feature:	Rt. 72 Manahawkin Bridge Length of span 1500 ft (+-) Elevated fixed bridge provides crossing of Barnegat Bay. Barnegat Bay/tidal waters
Structure:	Bridge is single point of access to Long Beach Island Seasonal population changes range from 11,000 full time residents to 250,000 summer residents
Critical Features:	Hospital Elderly Care Ambulatory School Other
Priority:	High Medium Low
Options:	Institute ferry service Floating bridge Temporary span Helicopter service
Preparation for option implementation:	
Availability of equipment to accomplish option:	
Timeframe to implement options:	
Costs to implement options:	
If the Rt. 72 Manahawkin Bridge was taken out of service unexpectedly, how would DOT provide access to and from Long Beach Island while repairs or replacement of the bridge was conducted?	