4 Critical Infrastructure Protection

Critical Infrastructure Protection

Capability Definition

The capability of public and private entities to identify, assess, prioritize, and engage in protecting critical infrastructure and key resources (CI/KR) in order to detect, prevent, deter, degrade, and mitigate deliberate efforts to destroy, incapacitate, or exploit the critical infrastructure and key resources.

Capability Outcome

Critical infrastructure is identified; risk assessments are conducted, documented, and standardized; assets are prioritized; decisions are made regarding protective and preventative programs; protective and preventative plans are implemented; and the risk to, vulnerability of, and consequence of attack to critical infrastructure is reduced.

Capability Discussion Points

When discussing and analyzing the NCR's homeland security preparedness capabilities, stakeholder participants should consider the following:

- The decision making process utilized to identify critical infrastructure, including collaboration with Federal agency, public sector, state, regional, and other personnel.
- The training and exercises developed for various types of critical infrastructure.
- The way in which vulnerability assessments of critical infrastructure are standardized to ensure that a consistent methodology is applied.
- The risk management approach for measuring high risk targets and reducing threats and vulnerabilities.
- The organizational structure in place to support critical infrastructure protection and the plan for sustaining and evolving processes.

NCR Discussion Results on Critical Infrastructure Protection

Resource	S/W	Comments
People	S	• Key personnel are available for the CI assessments needed since 911. • COG NCR CIP committee was established to address issues related to infrastructure protection. • Utility personnel have expertise and experience in emergency response. • Groups like utility companies and hospitals historically give priority to SNP.
	W	• Hospitals, dispensing centers, and medication caches need increased personnel with arrest powers and security abilities. (6) • Need more staff for CIP such as regional cyber security and the NOC. (4) • Need funding to sustain CIP at NCR. (2) • Need to better engage private sector. (2) • Lack of ability for NCR emergency responders to utilize existing metro CCTV capabilities. • Need to include SNP in the decision making process because they are more vulnerable by the loss of critical infrastructure. • Need to integrate non-profit CIP leads into the NCR. • Hospitals should be classified as "Critical Infrastructure." • Need a critical infrastructure program in DC.
Equipment	S	• Radio cache can restore communications on a limited basis
	W	• NCR needs to ensure back-up power generation both mobile units and for major facilities (8) • Hospital security and hardening needs to be emphasized so hospitals don't close as a result of

Resource	S/W	Comments
		an emergency (4) • We need back up systems to support communications (2) • NCR has single points of failure that could lead to system wide breakdowns; need redundant control capability and enhanced monitoring systems. (2) • Need to secure server and cache sites (2) • Single point of communication failure in DC metro radio station (2) • Single points of failure are known to be taken care of (need common secure analysis) • We are vulnerable because of our cyber-security weaknesses • Resources are not available in a critical time; need more stockpiles, etc. • Need back up systems to support transportation requirements • Inventory of existing equipment and supporting fuels. • Need to secure network ops center • Lack of CBRNE detection equipment • Lack of equipment/system mitigation (hospitals) • Lack of reliable communications in the metro system • Lack of sufficient resources to mitigate and restore CIS-metro • Need standardized software program for risk assessment and threat assessment • PLOSN need critical infrastructure, power, transportation, emergency healthcare, etc., more that non-disabled populations, especially if they used equipment like power wheelchairs, accessible communication devices, dialysis equipment, etc. • Standardized assessment tools • Standardized protection tools • Secure equipment and information exchange • PCJJ certification for NCR • Trucked radio system outage at risk • Lack of ability to reconstruct a system that has been lost • Information protection • Fusion/analysis center • Databases • "Acamsand Ramcap" • VDOT smart traffic center software platform, computer hardware, etc, are all legacy equipment and in need of replacement, before the region can be effectively integrated. New software systems would enable us to more effectively and efficiently, identify incidents, verify situations, form response, deploy right resource, inform road users, etc. • Need more protective equipment
Training	W	• Lack of comprehensive NCR training program for METRO system (2) • Regional training in infrastructure protection including dams aw well as electrical or water supply • Management level understand what ability is their (capability) → communication resources • Need training of facility staff on roles and responsibilities degree of force – and legal issues surrounding protection • Regional assessment training • No set regional training piece • Training of critical infrastructure personnel needs to include the needs of PLOSN, especially the higher risks they face with loss of power, transportation, and other critical infrastructure. • Need to standardize the risk assessment process between feds, state and local • Need for enhanced reliability of existing communications capability in transit tunnels both for first responders and train operations • Joint communications training with Red Cross techs and other communications techs. • COOP training for key VOAD organizations • Do not train private sector folks who are responsible for critical facilities • Create and implement a test plan • The NCR has trained for natural and man-made events, but the consequences of losing power, water, communications, transportation are unclear

Resource	S/W	Comments
		• Fortify energy responders with the appropriate training. Establish a minimum level of training for ESF-12 respondents on ELD's in all jurisdictions in NCR • Need integration with law enforcement to have response teams to protect "critical" buildings
Exercises/Evaluation	W	• Need exercises to perform recovery/restoration exercises with emphasis on decontamination, communication, etc. (4) • Need an exercise/evaluation component (3) • Need to practice responses, evacuations, shelter in place, etc. • Unsure as to whether we can prevent water born attacks • Have not exercised a communication failure • Need more exercises on targeting • Need exercises to take into account people with special needs • Lack of PPE training and exercises (hospitals) • Need to exercise equipment at run at load and beyond maintenance test levels • Need to perform COOP exercises, including key government, non-profit, and homeland security partners. • Need to exercise whether generators can run under load and be refueled. • Need to create and implement exercises that assume communications capability is compromised. • Need utility participation in active exercises.
Plans, Policies and Procedures	S	• Formation of NCR – CIP working group • Established agreement between NCR jurisdictions and WMATA • Redundancy in some systems in some areas • Utility, transportation, sectors have good vulnerability assessments → government mandate • Extensive back-up generator capability/requirements • Learned that solar technology was very beneficial in Rita • Hospitals have in house plans to maintain power, water, and food
	W	• Recovery needs more emphasis in terms of plans and procedures for restoring services with emphasis on decontamination → also equipment issue (9) • CIP must be expanded to include healthcare facilities (hospitals). Target hardening and law enforcement perimeter security must be prioritized. Fire/hazmat support (including WMD detection) and response to events requiring mass decontamination operations occurring at hospitals. (4) • Lack of reliable communication system (4) • Need for regional methodology for prioritizing risk across CIP sectors within NCR (4) • Communications infrastructure needs to be protected and secured → highly reliant on electricity (3) • No coordination between DHS and NCR planning organizations (2) • How are we implementing private sector (2) • Need a process and means for emergency notification • Not specified in most plans for security reasons • Plan implementation for CIPP • Focus on identifying gaps in the fire services infrastructure, resources and its protection • Lack planning to maintain fuel for response vehicles • What will you do if you loose an entire service? • There are no plans in place to harden targets that result from an event • Need a governing council to push regional policies and regulations and M.O.U. • Need to address special needs and prison population needs in regional policies and procedures for CIP in the NCR! • Regional T.I. P.P. program, tip line! • Need to better recognize the needs of LOSN and management and analysis should include the heightened risk to PLOSN who are more vulnerable to the effects of losing critical infrastructure services. • Agreement needs to be reviewed and revised • Hospitals have plans however they do not have personnel

Resource	S/W	Comments
		• Prioritization and I.D. of critical infrastructure needs to e developed using a common tool→ help from DHS? • Reliance solely on grid system • Command and control • Lack of resources for training on emergency response, response mitigation, etc. with Metro (esp. Underground) • Need to test back-up generators more regularly also testing protocols need to be enforced. • Region's population is underutilized and capable of being an effective threat evaluator • Need regional plan for generators to move fuel • Monitor transportation infrastructure → then communicating threats to different ESFs • Mandate of COOP/COG plan for critical infrastructure in the NCR (private sector) • Develop a plan to har5den the targets that relate to critical facilities • Notification of ESF 5 during outages utilities • Develop a standardized way to analyze the critical facilities • Daily security at hospitals is very lax with the exception of obstetrics • Failure to include private sector in planning process • Failure to link regional and national reporting system for cyber attacks • Failure to link terrorism databases with CRO personnel databases • Failure to include no – CI/KA private sector in vulnerability assessments • In place emergency generation equipment 1) inventory with details 2) maintenance 3) upkeep in operating mode 4) fuel source(s)/re-fueling • Inclusion of potential mass care facilities within CIP plans • Generators → inventory, where are they, what can they support • In the process of identifying a CONOPS and governance structure • Need to complete a risk assessment • Need to create an IT security policy • Need to create an IT architecture • Implement IT security tools • Create a continuity of operations plan for voice/data systems • Unaware of plans for a complete break –down of the critical infrastructure • Minimum standard of readiness for plans • Mutual (regional) standard operating procedures

NCR Concept Papers and Initiative Plans

Concept Paper ***Preliminary Document – Presented for Review and Discussion***		January 26, 2006 Chris Voss, Division Chief, DC Emergency Management Agency Chris.voss@dc.gov 202-673-2101 x1141	
Project Title:	**National Capital Region Critical Infrastructure Resiliency Program**	**Estimated Grant Amount**	$4,801,109
NCR Strategic Goal Alignment:	Planning & Decision-Making; Community Engagement; Prevention & Mitigation; Response & Recovery	**Allowability**	All staffing and equipment costs are allowable under the HSGP
Estimated Timeline	[Please see attached White Paper]	**Dependencies and Cost Factors:**	[Please see attached White Paper]

Problem Statement/Project Description:

The principal governments involved in the critical infrastructure (CI) program agree that a resilient CI program requires strong partnerships that are based on trust in data and the acceptance of common terminology and methodology. In order to achieve this resilient program the principals have, in the earliest stages of the program, committed to engage the public and private sector critical infrastructure owners and operators to develop the foundation for a prolonged CI partnership.

In order to cultivate this partnership and develop the framework for protected information sharing, the principals must commit resources to CI programs in their governments. Currently, the principals are utilizing overtaxed resources to start this initiative and have realized that resources to implement a resilient CI program require dedicated protagonists for each of the three states and a staff to implement the program.

This program aims to create a resilient CI program through the following activities:

- Partnering with the public-private CI owners and operators
- Identifying a common risk assessment methodology
- Developing an IT system for the exchange of protected information and a security protocol to protect this information.
- Creating emergency response plans for the CI that require updates to their plans
- Implementing a training and exercise program that will train and test the public-private response
- Implementing corrective actions for the CI

Preliminary Project Plan (Tasks, Resources, Deliverables, Collaborating Partners, etc.)

Task(s)	Owner(s) or Collaborating Partners	Deliverable(s)	Target Date(s) or Level of Effort
1. Hire Staff	Sponsor jurisdictions	Staff support	2 months from award
2. Constitute CI committees	CI Officers	Regional collaboration	5 months from award

3. Select a common risk assessment methodology/tool	CI Officers/CI group	Common risk assessment tool	12 months from award
4. IT system development	CI group	Information exchange and display system	24 months from award
5. CI Risk Assessment	Sectors	Risk assessment data for IT system	18 months from award to 60 months from award

Project Performance Measures	Baseline Value	Target Value
1. Common risk assessment	0	1
2. IT system	0	1
3. Facility specific risk assessments available in IT system	0	1 each
4. Sector specific training	0	2/quarter
5. Public-private exercise	0	2/year
6. Corrective action	0	TBD

INITIATIVE PLAN

NATIONAL CAPITAL REGION CRITICAL INFRASTRUCTURE RESILIENCY PROGRAM

1. Provide the Name of this Initiative. Describe how this Initiative will address the priority needs and strengths identified through the program and capability evaluation, and prioritization analysis.

National Capital Region Critical Infrastructure Resiliency Program

2. Regional Construct: Briefly describe the geographical context of this Initiative.

The National Capital Region (NCR) is creating a regional critical infrastructure protection program. This program involves senior officials from the Commonwealth of Virginia, the District of Columbia and the State of Maryland with pending involvement of representatives from the critical infrastructure operators and owners. These operators and owners will represent critical infrastructure located in the NCR or infrastructure that are major suppliers to the region.

3. Resources, Processes, and Tools: Identify the resources, processes and tools that already exist, and those that will need to be leveraged, created, or acquired for this Initiative. Briefly consider how these resources, processes and tools may be attained.

To successfully implement the program, the NCR will have to develop an information sharing program between the public and private sector. This program will leverage the regional IT

infrastructure but will have to be engineered to protect the private critical infrastructure data. The program costs will be split between staffing costs to coordinate and implement the program; the development of an IT system; a public-private training and exercise program; CI risk assessments; and corrective actions for the CI owners and operators.

4. Governance Structure: Describe the high-level governance structure (e.g., management plan, stakeholder involvement) required for successful implementation of this Initiative.

The NCR has an existing group, the Critical Infrastructure Protection Group, with governmental representatives. This group is currently expanding to include sector representatives and will report its findings to the homeland security advisors of DC, Md., and Va. The NCR CIPG reports directly to the Senior Policy Group which is consists of the Homeland Security Advisors of DC, Md. and Va.

5. Program Management: Explain how this Initiative relates to the overall State homeland security program, and/or how it helps incorporate the three Overarching National Priorities.

This initiative is closely tied to the state homeland security program and the Overarching National Priorities. The state homeland security program requires that the critical infrastructure in the region be resilient so that the prevention, response and recovery assets can operate at an efficient level. Two of the three overarching national priorities, Implementation of the NIPP and Expand Regional Collaboration, are addressed with this plan. Currently, the regional collaboration is focused on the public sector. A series of strong relationships have been developed with this collaboration. With the development of a resilient critical infrastructure program, the public-private sector collaboration will be enhanced and the regional collaboration will have greater depth. Cataloguing the critical infrastructure through a public-private partnership, selecting a common critical infrastructure assessment tool and enhancing the resiliency of the system will allow this program to address the NIPP.

<table>
<tr><td colspan="2">CONCEPT PAPER

Preliminary Document –
Presented for Review and Discussion</td><td colspan="2">January 25, 2006
Virginia Department of
Transportation, Northern Virginia District
Roger Boothe
Assistant Manager, NOVA Smart Travel

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<tr><td>Project Title:</td><td>Northern Virginia Transportation Management Program: Enhancements for Incident Response and Emergency Operations Command/Control and Information Sharing.</td><td>Estimated Grant Amount</td><td>2006-7 Total: $9, 550,000
Breakdown by Project Focus
• $300,000 - Automated Incident Detection: CAD Integration
• $400,000 - Integration for Enhancing Information Sharing
• $50,000 - Continuous Monitoring Protocol for Freeway Ops
• $200,000 – Crisis Response/Evacuation Plan
• $300,000 - Safety Service Patrol Sign Replacement
• $1,800,000 – Expand VMS Coverage on Interstates
• $1,500,000 – Expand CCTV Monitoring on Interstates
• $2, 000, 000 - ATMS Command, Control, Information Sharing Central System: Phase 1
• $3,000,000 – ATMS Command/Control/Information Sharing Central System: Phase 2, Action 1</td></tr>
<tr><td>NCR Strategic Goal Alignment:</td><td>Strategic Goal 3
An enduring capability to protect the NCR by preventing or mitigating “all-hazards” threats or events.

Objectives
▪ Strengthen the gathering, fusion, analysis, and exchange of multi-discipline strategic and tactical information and data for shared situational awareness.
▪ Employ a performance- and risk-based approach to critical infrastructure protection across the NCR, targeting resources where the threat, vulnerability, and impact are greatest.

Strategic Goal 4
A sustained capacity to respond to and recover from “all-hazards” threats or events across the NCR.

Objectives
▪ Ensure the capacity to operate multi-level coordinated response and recovery.</td><td>Allowability</td><td>Applicable Categories from DHS Preparedness Directorate Office of Grants and Training AEL
4.1 Applications Software
4.2 Hardware
4.3 System and Networking Software
6.11.3 Public Notification and Warning
14.1 Surveillance, Warning, Access, Intrusion Control Systems
14.3 Support for Continuation of Critical Infrastructure Operations
21.8 Consulting Services in Support of Equipment Acquisition
21.10 Equipment and Supplies, Information/Operations Center</td></tr>
</table>

	▪ Ensure adequate and effective sharing of resources.		
Estimated Timeline	03/06 – 06/08	**Dependencies and Cost Factors:**	Implementation phase depends upon construction of PSTOC facility Final delivery of ATMS central system depends on amount of software customization required. Crisis Response/Evacuation Plan interdependent with D.C. plans.

Problem Statement/Project Description:

As a public agency managing and operating one of the largest and most critical arrays of infrastructure within the NCR, VDOT NOVA District is very conscious of our responsibility to maintain the *safety and security* of these assets, and we are committed to earning and maintaining public trust that we will meet these responsibilities without fail. We are equally committed to working in *partnership* with public and private entities throughout the NCR to ensure the overall security of the region and to respond efficiently in time of crisis. As part of this resolve, VDOT NOVA District proposes to plan and implement a program of unified enhancements and upgrades to the District's transportation command/control and information-sharing capabilities, to improve *safety, security* and daily operations. This Concept Paper requests UASI funding support for a series of projects within this program that are most directly relevant to *maintaining NCR critical infrastructure security* and *responding effectively and managing incidents and emergencies*. These projects detailed individually for the convenience of reviewers, although each is proposed under VDOT NOVA's unified transportation management program, and each has been deemed critical to VDOT NOVA's ability to *meet and exceed its safety, security and response needs* and to enhance our capability to *serve a strategic function during an emergency, natural disaster or security threat.* The proposed projects are:

1. Implement Automated Incident Detection: CAD Integration (Phase 1 of broader District initiative)
2. Integration for Enhancing Information Sharing (Phase 1 of broader District initiative)
3. Develop Continuous Monitoring Protocol for Freeway Operations
4. Develop Crisis Response/Evacuation Plan
5. Safety Service Patrol Sign Replacement
6. Expand VMS Coverage on Interstates
7. Expand CCTV Monitoring on Interstates
8. ATMS Command/Control/Information Sharing Central System: Phases 1 and 2

The projects proposed allow VDOT to more effectively *monitor its critical infrastructure* (and potentially infrastructure belonging to others to *identify risks and prevent incidents; share information* with regional partners through CapCOM/RITIS and CapWIN; share information with public through 511 and field devices; and to respond efficiently to any and all occurrences. Each "systems" project proposed relies upon implementing the "foundational" project within this series: deployment of a new, robust central system for command/control and information-sharing. The success of our proposed Operations Program, and its ability *to impact safety and security in the NCR,* is contingent upon replacement of the existing ATMS. In addition to being aligned with the NCR Strategic Goals, this program may support several of the Scenarios, Tasks and Capabilities outlined in Homeland Security Presidential Directive (HSPD) -8. Specifically, the proposed series of projects would assist in emergency response under the Chemical, Biological, Radiological, Explosive and Natural Disaster Scenarios. The proposed project will become a tool for each of the Prevention, Protection, Response and Recovery Tasks. The project provides through a phased, iterative process, many Capabilities cited in HSPD-8, including:

Common-Target Capabilities: Interoperable Communications ;**Prevent Mission Area-Target Capabilities:** Information Collection and Threat Recognition; Information Sharing and Collaboration; **Protect Mission Area-Target Capabilities:** Critical Infrastructure Protection; **Respond Mission Area-Target Capabilities:** On-Site Incident Management; Emergency Operations Center Management; Citizen Protection: Evacuation/In-Place Protection; Emergency Public Information and Warning; **Recover Mission Area-Target Capabilities;** Structural Damage Assessment and Mitigation. Projects support the intent of DHS' National Incident Management System to create *interoperability and coordination between systems and agencies* at all levels with a role in incident/emergency response.

The Projects Detailed

Automated Incident Detection: CAD Integration

The project proposed for UASI funding is Phase I of a broader Automated Incident Detection initiative being undertaken by VDOT NOVA. Phase I is critical to NCR security in that it provides a basic set of incident detection capabilities that are currently not available with the existing STC. Importantly for NCR security, and safety, this project offers corollary benefits for

First Responders in that it will provide an automated mechanism for law enforcement and other First Responders to be aware that the NOVA STC has verified a reported incident through the use of CCTV cameras. It would provide an automated mechanism for police and other systems to be aware of new incidents that the STC has detected, and would provide road work and incident data to First Responders' CADs so that dispatchers can find the quickest route to an incident based on the real-time traffic conditions. Phase I includes:

Integrate Virginia State Police CAD with the Incident Management Module at the STC

Install a Fairfax CAD workstation at STC control room as the first step. Implement a pilot project to gather data from existing CCTV Incident Detection available from private and public sources outside VDOT.

Increase frequency of Safety Service Patrols and implement Automated Vehicle Location on SSP vehicles

Place radio scanners at all STC workstations, improve/upgrade SSP/STC 2-way radio communications and cell phones, modify/implement SOP.

Integration for Enhancing Information Sharing

The project proposed for UASI funding constitutes Phase I of a broader Regional Integration initiative. Regional Information-Sharing and integration is an emerging focus in the ITS community. Driven by security concerns, incident management needs and burgeoning traffic in major metropolitan areas that envelope multiple jurisdictions, agencies are moving toward sharing dispatch, traffic monitoring, weather and related information to enhance regional transportation system performance. The objectives are coordination and cooperation across agency and jurisdictional lines. A prime example is the NCR's RITIS project, which is supported by VDOT NOVA. This proposed project supports and meshes with the RITIS effort by integrating data provided by RITIS into VDOT NOVA's existing systems. VDOT NOVA has already taken a first step by contracting with the developers of RITIS to create and Incident Management "front-end" module in Windows XP, for use with our STC legacy central software. This proposed project will integrate certain highly strategic systems with the Incident Management Module. Regional Integration may include systems interoperability, data and information sharing capabilities, and increased cooperation between agencies, jurisdictions and people. A second element of Regional Integration is the ability to provide comprehensive, accurate, real-time information to the traveling public via various means of dissemination. While both inter-agency coordination and traveler information are functions of regional integration, they are distinctly different in terms of hardware, software and methodology. It is essential that VDOT NOVA understand and appreciate that distinction moving forward. Thirdly, given the corridor-oriented nature of Virginia's highway system, integration between VDOT NOVA systems and those of other Districts/agencies C regional agencies is an emerging focus. State systems such as Virginia Operational Information System (VOIS), and agencies such as Maryland State Highway Administration, D.C. DOT, WMATA, the county DOTs in Suburban Maryland and Northern Virginia, U.S. Park Police, and various enforcement, response and emergency management agencies are all likely partners for Regional Information Sharing. In this proposed phase, VDOT NOVA will begin taking advantage of these opportunities by:

Integrating the VOIS and RITIS systems with the STC Incident Management Application. This will eliminate the current practice of manually entering data in VOIS in addition to entering the same data into the STC IM Module., and will therefore shorten incident verification time. This effort will include:

Link to RITIS within existing Incident Management (IM) Application; Push data to RITIS and pull data from RITIS to IM, taking advantage of data in RITIS.

Fully integrate VOIS with IM Application

Continuous Monitoring Protocol for Freeway Operations

Under this project we propose to develop & implement a continuous monitoring protocol for freeway operations to identify recurring & non-recurring incidents on the freeway system, and to record and respond to those incidents using available ITS tools. This is a short-term project designed to shore up weaknesses in VDOT NOVA's ability to monitor incidents identified by systems other than the STC. Specifically, VDOT NOVA will partner with private and research entities to develop methods for systematically diagnosing traffic problems via monitoring and analysis of historical data, in comparison with real-time data.

Crisis Response/Evacuation Plan Development and Assessment

Under this project we propose to update and enhance Northern Virginia Incident Management Manual, revising and improving response and recovery protocols and adding an evacuation protocol. As part of this effort we will, *working in partnership with D.C. and Maryland*, revise and update our planned diversion routes for emergencies and will develop plans and protocols for evacuation routes. Once routes are defined, we will simulate the performance of these routes under various incident and emergency scenarios, and modify plans accordingly. The effort proposed for UASI funding constitutes a one-time, wholesale revision and enhancement of our Incident Management plans. These plans will be reviewed and updated annually by VDOT.

Safety Service Patrol Directional Sign Replacement

This project is to install new directional signs on NOVA Safety Service Patrol vehicles. In addition to their usefulness at accident sites, these vehicles with directional signs will be a key traffic management tool during any route diversion or evacuation, and will become an important tool to put into effect the protocols developed as part of our Crisis Response/Evacuation Plan.

Expand VMS Coverage on Interstates

This project is to install new Variable Message Sign hardware, with supporting site engineering, structure and telecommunications equipment, at locations on Interstates throughout the District where coverage is lacking or insufficient.

This project will enhance our ability to provide information to motorists and to direct traffic flow during an emergency or evacuation.

Expand CCTV Monitoring on Interstates

This project is to install new camera hardware, with supporting site engineering, structure and telecommunications equipment, at locations on Interstates throughout Northern Virginia where coverage is lacking or insufficient. This video imagery will be shared with law enforcement and other emergency response entities. This project will increase and improve the breadth of visual incident identification and verification capability. It also benefits First Responders in that it allows those agencies to independently locate and verify an incident prior to dispatching resources, and to quickly deliver resources to an incident scene.

ATMS Replacement and Enhancement

The "core project" in this proposed series, and indeed of the full VDOT NOVA program, is replacement and enhancement of the District's Advanced Traffic Management System (ATMS), which will be housed at a new facility called the Public Safety Transportation Operations Center (PSTOC) – a co-located operations center with Fairfax County and Virginia State Police. ATMS Replacement is a multi-year project with total cost on the order of $12 million, of which VDOT proposes to fund approximately $7 million. Due to the strategic nature of the ATMS and its capability relative to NCR security, we request some $5 million via UASI for the initial two phases of this project. The proposed ATMS will be multidisciplinary, multi-functional, useful for *situational awareness,* and built with an eye toward *an "all hazards" incident and emergency management capability*. The vision for this project includes eventual information sharing capabilities with other systems in the NCR. These may include RITIS, CapCom, CapWIN, CHART, DCDOT, WMATA, Virginia State Police CAD, Fairfax County CAD, and others. A strategic assessment of assets and operational capabilities and requirements conducted by VDOT NOVA identified over 130 desirable ATMS functional and administrative needs, in 18 categories. These needs taken together offer a profile of what a robust, fully functional and geographically broad ATMS would look like. The existing NOVA STC central software was provided nearly ten years ago and has become very nearly functionally obsolete. The system is currently being maintained and enhanced in piecemeal fashion. This system falls far short of meeting the functional need. Additionally, the system resides on a legacy platform which is both difficult to maintain and is no longer industry-standard, as nearly all ATMS central software today runs on a Windows platform (typically NT or XP) and uses data management and information exchange tools and protocols such as JMS, XML and SOAP, none of which are available for the legacy platform. Clearly, a new central software system is necessary to meet the functional needs identified, or, at minimum a significant enhancement effort to the current system is needed. Such an effort would include nearly wholesale revisions of the source code and migration of the system to an industry standard platform. This in itself would constitute development of an essentially "new" system, although the "look and feel" of the GUI might be retained for the comfort of the Operators. With the impending move of ATMS command and control functions to the new PSTOC in Fairfax County, the time is right to initiate procurement of a new central software system, or wholesale revision of the existing system, along with systems design, integration and testing services, and central hardware procurement for the PSTOC. The project will proceed as follows:

Phase 1 Complete June 2007: $2 million: evaluate, plan and design system; develop Graphic User Interface and Software Prototype.

Phase 2, Action 1 Complete June 2008: $3 million: investigate platform options, fully develop and implement the core ATMS, and implement expanded functionality and transform the system to include a host of advanced features that will make the NOVA ATMS a truly robust system and bring the software online at the PSTOC.

Phase 2, Action 2 Complete 2013: $7 million (Note: VDOT NOVA is not requesting funding for this portion of the project from UASI. This portion will be funded by VDOT): Phase 2, Action 2 will constitute the functional and geographic expansion of the system. Many of these features will be determined based upon changing needs of the region, industry trends and technology advances. We expect Phase 2, Action 2 will be complete in 2013 for $7 million. VDOT will program funding for this effort.

Preliminary Project Plan (Tasks, Resources, Deliverables, Collaborating Partners, etc.)			
Tasks	**Collaborating Partners**	**Deliverables**	**Target Date**
1. Implement Automated incident Detection Phase 1	VDOT NOVA Consultant	Integrated CAD; Workstation; Thumbnail Web Page; Additional SSP Routes and Vehicles with AVL installed; SOP Manual	04/06-12/06
2. Integration for Enhancing Information Sharing	VDOT NOVA Consultant	Integrated System	0306-0906
3. Continuous Monitoring Protocol for Freeway Operations	VDOT NOVA Consultant	Feasibility Study Implemented Solution	03/06-ongoing
4. Crisis Response and Evacuation Plan	VDOT NOVA Consultant	Revised IM Manual with diversion and evacuation routes/protocols	04/06-12/06
5. SSP Directional Sign Replacement	VDOT NOVA	Outfitted Vehicles	03/06-06/06
6. Expand VMS Coverage on Interstates	VDOT NOVA Consultant	Location Evaluation; Deployed, integrated VMS	06/06-12/08
7. Expand CCTV Monitoring on Interstates	VDOT NOVA Consultant	Location Evaluation; Deployed, integrated cameras	06/06-12/08
8. ATMS Replacement and Enhancement Phases 1 and 2	VDOT NOVA Consultant	Feasibility Study; ConOps; Functional Requirements; Functional Definition; System Design; Software builds; Implementation	03/06-06/08

Project Performance Measures	Baseline Value	Target Value
1. 10% improvement in throughput per mile for targeted segments based on 2006 volume	90%	100%
2. Ability to effectively manage all normal traffic disruptions; natural disasters; evacuations	75%	100%
3. Ability to share all available data with RITIS and draw all data from RITIS	95%	100%
4. 20% reduction in incident response time	80%	100%
5. 15% Reduction in incident clearance time	85%	100%

INITIATIVE PLAN

Northern Virginia Transportation Management Program: Enhancements for Incident Response and Emergency Operations Command/Control and Information Sharing.

1. Provide the Name of this Initiative. Describe how this Initiative will address the priority needs and strengths identified through the program and capability evaluation, and prioritization analysis.

The name of this initiative is*: Northern Virginia Transportation Management Program: Enhancements for Incident Response and Emergency Operations Command/Control and Information Sharing.*

The table below identifies the priority needs identified during the NCR's Capability Review Session for Critical Infrastructure Protection, which will be addressed by this initiative.

Resource	Needs
People	• Need funding to sustain CIP at NCR. • Lack of ability for NCR emergency responders to utilize existing CCTV capabilities.
Equipment	NCR has single points of failure that could lead to system wide breakdowns; need redundant control capability and enhanced monitoring systems. (2) Resources are not available in a critical time; need more stockpiles, etc. Need back up systems to support transportation requirements Need to secure network ops center Secure equipment and information exchange Information protection Fusion/analysis center Databases VDOT smart traffic center software platform, computer hardware, etc, are all legacy equipment and in need of replacement, before the region can be effectively integrated. New software systems would enable us to more effectively and efficiently, identify incidents, verify situations, form response, deploy right resource, inform road users, etc.
Training	Training of critical infrastructure personnel needs to include the needs of PLOSN, especially the higher risks they face with loss of power, transportation, and other critical infrastructure.
Exercises/Evaluation	Need to practice responses, evacuations, shelter in place, etc.
Plans, Policies and Procedures	Need a process and means for emergency notification Command and control

The needs addressed by VDOT NOVA's proposed initiative fall primarily in the category of "Equipment". The proposed initiative will lead to deployment of equipment and systems that provide and enhance command and control, monitoring, information-sharing, and emergency response capabilities. Implicit in this initiative is the requirement for development of plans and Standard Operating Procedures; the need to train personnel; the need to have qualified staff and; the need to practice identifying and responding to scenarios using the newly deployed equipment, to evaluate performance, and to iteratively improve.

2. Regional Construct: Briefly describe the geographical context of this Initiative.

This initiative will be specifically implemented within VDOT's Northern Virginia District, with an emphasis on those areas within immediate proximity to Washington, D.C. The functional capability delivered by this initiative will provide benefits to Washington, D.C. and Maryland, as well as Northern Virginia.

3. Resources, Processes, and Tools: Identify the resources, processes and tools that already exist, and those that will need to be leveraged, created, or acquired for this Initiative. Briefly consider how these resources, processes and tools may be attained.

The foundation for this initiative currently exists in the VDOT NOVA's Smart Traffic Center and existing ATMS, as well as related programs such as the Safety Service Patrol. However, the capabilities of these existing resources are sub-standard and require significant upgrade and/or replacement. The intent of our initiative is to begin by effectively leveraging the assets we currently have, through incremental improvements such as integration of CAD systems with the STC; enhancement of the SSP program, and development of short-term "fixes" that will ameliorate the impact of current operational limitations. Longer term, this initiative provides for full replacement of the core ATMS assets with a system that is robust, interoperable with other regional systems, and that will substantially upgrade the region's safety and security. The most efficient means of attaining the resources required by this initiative is to competitively bid elements of the initiative to private sector contractors/consultants.

4. Governance Structure: Describe the high-level governance structure (e.g., management plan, stakeholder involvement) required for successful implementation of this Initiative.

This initiative will be managed by the Operations Division of VDOT NOVA District, using the standard project management and oversight tools and protocols regularly employed by the District. Involvement of regional stakeholders from both the public and private sectors will occur throughout the initiative, both formally and informally. Coordination with WashCOG's Transportation Planning Board and its various committees will occur regularly, and the technical implementation of this initiative will occur in concert with other regional efforts such as CapCom/RITIS, CapWIN and efforts of individual agencies. An early step in this initiative will be to define the functions required of the new VDOT NOVA ATMS, and input and information needs of all regional stakeholders will be strongly considered in defining ATMS functions.

5. Program Management: Explain how this Initiative relates to the overall State homeland security program, and/or how it helps incorporate the three Overarching National Priorities.

This initiative strongly supports all three of the Overarching National Priorities. The ability to monitor infrastructure, to effectively operate the transportation system, to move people away from danger and emergency responders toward incident sites are all key elements of implementing the National Incident Management System and National Response Plan. The ability to gather and share information across jurisdictions and geographic boundaries, to share resources and assist other agencies in securing their facilities as well as VDOT's own, directly supports Expanded Regional Collaboration. Finally, increasing monitoring, operations and response capabilities on VDOT's own infrastructure meshes with the intent of the Interim National Infrastructure Protection Plan. In addition to supporting the Overarching National Priorities as described above, this initiative fits squarely within the mission and goals of both Virginia's homeland security program and that of the NCR. By providing improved operation of the transportation system, by sharing information with other agencies, by enhancing the free flow of the conduits by which emergency responders reach their destination, by protecting what is among the most valuable and largest infrastructure assets in both Virginia and throughout the NCR, this initiative "moves the needle" on the level of safety, security and response capability in the state and in the region.

<table>
<tr><td colspan="2" rowspan="3">CONCEPT PAPER

Preliminary Document –
Presented for Review and Discussion</td><td colspan="2">January 27, 2006</td></tr>
<tr><td colspan="2">Mark Miller
Operations Emergency Coordinator
WMATA</td></tr>
<tr><td colspan="2">600 5th Street, NW
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202-962-1787
Mmiller1@wmata.com</td></tr>
<tr><td>Project Title:</td><td>WMATA Alternate Operations Control Center</td><td>Estimated Grant Amount</td><td>$9 million</td></tr>
<tr><td>NCR Strategic Goal Alignment:</td><td>Goal 3 – Risk based critical infrastructure protection
Goal 4 – Ensure the capacity to operate multi-level coordinated response and recovery</td><td>Allowability</td><td>Yes</td></tr>
<tr><td>Estimated Timeline</td><td>20 months after receipt of grant approval</td><td>Dependencies and Cost Factors:</td><td>Will also apply FY06 Transit Grant to the project</td></tr>
<tr><td colspan="4">Problem Statement/Project Description:
WMATA's existing OCC is a multi-dimensional facility. It directs rail and bus operations, emergency repair actions, rail, bus and police radio communications, coordination and communications with the region's emergency first responders, receives chemical sensor program data, origination point for public announcements, and needs to be extremely facile with the ability to quickly respond to a variety of incidents. WMATA's OCC represents a single point of vulnerability for operating the entire rail system. If the building that currently houses the OCC was destroyed or had to be evacuated, it would be essentially impossible to maintain rail service with any acceptable degree of reliability. During the rush hour, 30 percent of the region's commuters rely on Metrorail service, and almost half of peak period riders are federal employees. The recent attacks in</td></tr>
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London and Madrid have shown that transit systems are a favorite target of terrorists. Addressing this single point failure in WMATA's operating system in a timely fashion will serve to mitigate the negative impacts and enhance the response and recovery capabilities of the National Capital Region resulting from a terrorist attack directed towards transit or other high threat targets in the region.

WMATA's #1 Security Priority Based on Federal Assessments; Regional Endorsements:

The need to put in place an Alternate Operations Control Center was singled out as WMATA's top security need in a system wide risk-based security assessment sponsored by the DHS's Office for Domestic Preparedness (ODP) in 2004. A Federal Transit Administration security assessment conducted in 2002 also identified the need for redundancy in critical operations control and communications systems as a top priority for WMATA. The FY06 Department of Homeland Security Appropriations bill also highlighted the need for redundant transit operations control abilities in the NCR to maintain federal continuity of operations and directed ODP to address the issue. At the request of the NCR CAOs during the FY05 UASI funding process, WMATA requested and obtained the endorsement of the NCR Transportation Planning Board for the project in May of 2005. In a letter to WMATA, the TPB, stated: "WMATA has demonstrated that such a project is a top homeland security project for the region. The TPB looks forward to the progress that the region's partners can make on directing federal homeland security funds targeted to the NCR to this important and timely effort." All the local jurisdictions and states included in the WMATA compact have endorsed the allocation of federal homeland security funds to address this top security need as part of the "Metro Matters" Agreement signed by all compact participants in 2004.

Alignment with National/NCR Priorities/Target Capabilities:

Addressing WMATA's number one security concern based on the application of a DHS sponsored comprehensive risk based assessment methodology on all of Metro's assets is in alignment with the implementation goals of the National Infrastructure Protection Plan (NIPP) and directly covers two National/NCR Target Capability Areas: Critical Infrastructure Protection and Citizen Protection: Evacuation and/or In-Place Protection. WMATA's Alternate OCC request aligns with goals three and four, and the relevant objectives and initiatives linked to the goals, of the NCR Homeland Security Strategic Plan. In terms of goal three, providing WMATA with the full capability to operate the transit system from a location outside of the region's core, allows for the protection of the regional transit system's most critical asset as determined by a risk-based methodology sponsored by ODP. Taking this protective action has the potential to mitigate the impact of "all hazards" threats or events by enhancing the reliability of rail service during an emergency, including assisting with evacuation efforts, or taking immediate actions to get Metro customers out of harm's way if the transit system is the target of an attack . Enhancing the reliability of Metrorail service will also yield benefits after an attack during the response and recovery phase, the focus of goal four. Regional recovery activities will be especially comprised as a consequence of the negative impact on rail service throughout the Metro system if WMATA does not have access to a fully functional OCC.

Broader Regional Transportation Benefits:

WMATA also intends to make the facility that will house the new primary OCC available to other transportation agencies in the region to address their need for backup traffic management center capabilities. The current building's space availability, its close proximity to other regional transportation centers and future and existing regional connectivity outlets provides the potential for the facility to become a center point for regional transportation information sharing and coordination during emergencies. Enhancing this capability addresses two additional National Priorities/related capabilities: Expanded Regional Coordination and Strengthen Information Sharing and Collaboration Capabilities.

New Accelerated Plan with Cost Savings:

In an effort to address this top security priority in a more cost effective and timely manner, WMATA recently decided to designate the existing facility it was originally going to use as a backup as its future primary OCC. Moving the primary OCC outside the region's core area will address the critical security risk, and result in cost savings by transferring rather than replicating most of the new radio infrastructure and other communications component upgrades. WMATA has allocated most of its prior-year DHS regional transit grants funds to this project, including just under $7 million of the total $7.3 million rail grant allocated to WMATA in FY05. Taking into consideration the shift to a more cost effective approach, combined with the DHS transit grant funds already allocated to the project, WMATA has gotten the outstanding cost down to $15 million. WMATA intends to also allocate FY06 DHS transit grant to the project, but the amount WMATA receives from the transit program is approximately one-tenth the size of the of the annual NCR UASI allocation. WMATA needs assistance from the NCR UASI program to get the Alternate OCC up and running in a more timely and cost-effective manner. Without UASI funds, project completion will be delayed at least a year.

Description of Project Request:

The $9 million requested by WMATA will provide for the procurement and installation of the essential equipment and information technology and network systems necessary for the daily operations of the Alternate Operations Control Center. This includes designing and equipping a new Operations Control Center that will provide large screen overview displays, desktop PCs and monitors, radio and automatic vehicle locator consoles, PROTECT (chemical detection) stations, recording capability, the Rail Operation Computer Systems (ROCS) and the Local Area Network/Wide Area Network (LAN/WAN) system. Assuming the availability and allocation of FY06 DHS Transit Grant funds (FY06 allocations are still pending) for the project, this $9 million request will allow for the completion of the Alternate OCC and to function as the primary OCC for WMATA by the early spring of 2008.

Deemed a #1 Priority During FY05 UASI RESF Consideration:

Funding related to this project was deemed a #1 priority by RESF-1 (Transportation) and the full RESF committee group during the FY05 UASI process, but was designated as a second priority by the CAOs and received no UASI funds. At the completion of the FY05 UASI process, the Senior Policy Group/CAOs stated that projects originally designated as priority #1 during the RESF consideration process that did not end receiving funding would be given high priority for funding during the FY06 UASI process.

Preliminary Project Plan (Tasks, Resources, Deliverables, Collaborating Partners, etc.)

Tasks	Collaborating Partners	Deliverables	Target Date
1. Control Center Design	WMATA	Requirements assessments Control Center design specification	Issue task within the month the sub-grant is approved
2. Network Design	WMATA	Requirements assessments Network design specification	Same as above. 6 months duration
3. Procurement Process	WMATA	Selection of contractors to complete Control Center and Network specifications tasks	8 months duration
4. Control Center and Network Installation	WMATA	Completing the specifications identified in the Control and Network specifications tasks	March 2008
5. PROTECT Network equipment	WMATA	Provide a room with A/c, UPS and servers; procure and install network equipment to include CB-EMIS servers and software	December 2007
6. Procurement of Recording System	WMATA	Design/install system capable of recording all OCC communications	December 2007

Project Performance Measures	Baseline Value	Target Value
1. Alternate Operations Control Center Capability	limited	comprehensive
2. PROTECT Chemical Detection Backup Data Flow	limited	comprehensive

INITIATIVE PLAN

WMATA Alternate Operations Control Center

1. **Provide the Name of this Initiative. Describe how this Initiative will address the priority needs and strengths identified through the program and capability evaluation, and prioritization analysis.**

   This Initiative provides redundancies in critical operations control capabilities for transit in order to address a single point of failure in system wide operations already identified through a comprehensive risk-based security assessment sponsored by the Department of Homeland Security as well as a security assessment conducted by the Federal Transit Administration. This Initiative provides a specific protection action that addresses one of the key capability gaps resulting from the session on critical infrastructure protection – the need to address single points of failure that can cause system wide failures in key critical infrastructure sectors within the NCR such as transportation. If the building that currently houses the Washington Metropolitan Area Transit Authority's (WMATA) Operations Control Center (OCC) was destroyed or had to be evacuated, it would be essentially impossible to maintain rail service with any acceptable degree of reliability. Simply put, the OCC is WMATA's levee.

2. **Regional Construct: Briefly describe the geographical context of this Initiative.**

   This Initiative impacts the entire National Capital Region since the Washington Metropolitan Area Transit Authority's rail and bus service covers the entire NCR. During the rush hour, 30 percent of the region's commuters rely on Metrorail service. Metrorail service is also critical component to the federal continuity of government operations, since almost half of peak riders are federal employees. The breakdown in service resulting from a shutdown of WMATA's OCC would have a tremendous impact on District of Columbia and every jurisdiction/county within Virginia and Maryland that is part of the National Capital Region.

   WMATA also intends to make the facility that will house the new primary OCC available to other transportation agencies in the region to address their need for backup traffic management center capabilities. The current building's space availability, its close proximity to other regional transportation centers and future and existing regional connectivity outlets provides the potential for the facility to become a center point for regional transportation information sharing, monitoring and coordination during emergencies.

3. **Resources, Processes, and Tools: Identify the resources, processes and tools that already exist, and those that will need to be leveraged, created, or acquired for this Initiative. Briefly consider how these resources, processes and tools may be attained.**

   WMATA has already applied most of its FY03-FY05 DHS transit grant funding towards the program and intends to use their FY06 allocation towards the project. But the transit grant program does not provide enough resources to put in place an Alternate Operations Control Center in a timely manner. WMATA has received only a total of $15 million in DHS transit grant funds over the three year period between FY03-FY05. With the use of FY06 UASI funds in addition to the FY06 transit grant funding, WMATA will be able to complete the project without the need to acquire DHS grant funding

beyond FY06. Without the use of FY06 UASI funds, completion of the project will be delayed at least a year.

In an effort to address this top security priority in a more cost effective and timely manner, WMATA recently decided to designate the existing facility it was originally going to use as a backup as its future primary OCC. Moving the primary OCC outside the region's core area will address the critical security risk, and result in cost savings by transferring rather than replicating most of the new radio infrastructure and other communications component upgrades. WMATA has leveraged existing capital funding acquired from other federal sources for the radio infrastructure and other communications component upgrades.

4. Governance Structure: Describe the high-level governance structure (e.g., management plan, stakeholder involvement) required for successful implementation of this Initiative.

WMATA has consulted and obtained the endorsement of a wide range of transportation stakeholders in the region for this initiative. Funding for this initiative was deemed a top priority by RESF-1 (Transportation) in 2005. At the request of the NCR CAOs during the FY05 UASI funding process, WMATA requested and obtained the endorsement of the NCR Transportation Planning Board for the project in May of 2005. As cited in the previous question, WMATA intends to make the facility that will house the new primary OCC available to other transportation agencies in the region to address their need for backup traffic management center capabilities.

WMATA has designated the need to put in place an Alternate Operations Control Center its number one security priority and has devised a sound management plan for the project. WMATA already has a building in place to house the Alternate OCC, committed prior year DHS transit grant funding towards design and initial procurement activities for the project and appointed the Director for the Office of Infrastructure Renewal to lead and mange the project.

5. Program Management: Explain how this Initiative relates to the overall State homeland security program, and/or how it helps incorporate the three Overarching National Priorities.

This Initiative directly serves to advance in the NCR two of the three Overarching National Priorities: Implement the Interim National Infrastructure Protection Plan and Expanded Regional Collaboration. As cited in the responses above, this Initiative addresses a single point of failure associated with a key sector of the NCR's critical infrastructure and will also expanded regional coordination in the transportation sector by providing the opportunity for enhanced connectivity and coordination among all transportation agencies operating within NCR.

CONCEPT PAPER

Preliminary Document –
Presented for Review and Discussion

January 27, 2006

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District Department of Transportation – Engineer

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671-4681

Project Title:	**Critical Transportation Infrastructure Protection**	**Estimated Grant Amount**	$1,000,000
NCR Strategic Goal Alignment:	Goal 3: Prevent and Mitigate Threats & Events	**Allowability**	
Estimated Timeline	24 Months from Receipt of Grant	**Dependencies and Cost Factors:**	

Problem Statement/Project Description:

The District of Columbia Department of Transportation (DDOT), Maryland Department of Transportation (MDOT) State Highway Administration (SHA), and Virginia Department of Transportation (VDOT) have identified the ten most critical and vulnerable highway transportation infrastructure assets in the National Capital Region (NCR). These assets include prominent structures like the Woodrow Wilson Bridge and the American Legion Bridge along the Capital Beltway and Interstate 95, the river crossings into our Nation's Capital and major tunnels in the city that are essential to regional transportation and commerce. Loss or damage to any of these assets would significantly impair the regions ability to conduct timely evacuations, diminish the ability of first responders to mobilize emergency resources effectively, and extensively impact the economy of the region.

The purpose of the project is to investigate methods to reduce the vulnerability of these critical transportation assets by enhancing existing buffer zone protection, employing surveillance and alarm detection equipment, and hardening critical single point-of-failure structural members. To support the project, a qualified engineering firm will be retained to conduct a detailed engineering analysis to determine specific critical vulnerabilities associated with each of these individual assets. Additionally, the firm will investigate the feasibility of critical member hardening, installing state of the art alarm detection and surveillance equipment, and buffer zone protection improvements, to improve or enhance physical security. A cost benefit analysis for each of the various options will be performed and recommendations provided to DDOT, SHA, and VDOT on the most effective means to reduce the vulnerability of these critical assets to terrorist attack. The regional transportation agencies will review the report provided and select various candidates for implementing and evaluating the proposed improvements. The results of the study will be shared with transportation agencies throughout the NCR.

The project will reduce the vulnerabilities of these critical transportation assets to terrorist attack, emergency event, or disaster incident. This will serve to increase public safety, reduce the potential for loss of life, ensure regional ability to conduct timely and effective evacuations, enable first responders to mobilize and respond efficiently, support regional transportation and commerce, and provide effective means to conduct regional restoration and recovery operations. The project will also encourage and support regional cooperation and partnerships across multiple jurisdictions among transportation departments and agencies.

Preliminary Project Plan (Tasks, Resources, Deliverables, Collaborating Partners, etc.)			
Tasks	**Collaborating Partners**	**Deliverables**	**Target Date**
1. Retain Contractual Engineering Consulting Services	DDOT, SHA, VDOT	Consulting Contract	6 Months After Start
2. Perform Vulnerability & Feasibility Study	Consultant Contractor	Analysis Report	12 Months After Start
3. Transportation Agency Review	DDOT, SHA, VDOT, Consultant Contractor	Implementation Recommendations	14 Months After Start
4. Install Enhancements at Select Assets	DDOT, SHA, VDOT, Consultant Contractor	Infrastructure Protection Enhancement Prototype	22 Months After Start
5. DOT Evaluation	DDOT, SHA, VDOT, Consultant Contractor	Final Report	24 Months After Start

Project Performance Measures	Baseline Value	Target Value
1. Number of Critical Transportation Assets with Enhanced Protection	0	10

INITIATIVE PLAN

Critical Transportation Infrastructure Protection

1. Provide the Name of this Initiative. Describe how this Initiative will address the priority needs and strengths identified through the program and capability evaluation, and prioritization analysis.

The name of this initiative is "*Critical Transportation Infrastructure Protection"*. The Department of Homeland Security (DHS) has identified the implementation of the national infrastructure protection plan as one of the overarching national priorities in the National Preparedness Goal. This includes actions to reduce the vulnerability of critical infrastructure or key resources in order to deter, mitigate, or neutralize terrorist attacks, major disasters, and other emergencies. Protecting critical infrastructure has also been identified as one of the top 14 priority capabilities in the National Capital Region (NCR) by the Metropolitan Washington Council of Governments (MWCOG). The objective of the proposal is to propose and test feasible state-of-the-art cost effective solutions to enhance the protection and security of critical transportation assets in the NCR.

The proposal also supports the National Preparedness Goal of expanding regional collaboration. This project embraces partnerships between regional transportation agencies across multiple jurisdictions in order to cooperatively determine effective regional solutions to enhance critical transportation infrastructure security. The effort will allow agencies to share lessons learned, spread costs, and apply uniform approaches to enhancing security throughout the NCR. This approach will allow these agencies to increase efficiency, enhance public protection, and leverage regional capabilities.

2. Regional Construct: Briefly describe the geographical context of this Initiative.

The project entails examining critical transportation infrastructure assets through the entire National Capital Region (NCR), This includes the District of Columbia, and portions of Maryland and Northern Virginia. Responsibilities for infrastructure protection are the responsibility of the District of Columbia Department of Transportation (DDOT), the Maryland Department of Transportation (MDOT) State Highway Administration (SHA), and the Virginia Department of Transportation (VDOT). These agencies work closely together to ensure the ability to support regional evacuations, maintain regional commerce, ensure public safety, provide assistance and support to first responders, and perform debris removal and transportation system recovery operations in the event of a terrorist event, regional emergency event, or natural disaster. This initiative supports these activities by ensuring the viability of critical transportation infrastructure assets by effectively reducing the vulnerability of these assets to terrorist attack thereby enhancing regional security across the NCR.

3. Resources, Processes, and Tools: Identify the resources, processes and tools that already exist, and those that will need to be leveraged, created, or acquired for this Initiative. Briefly consider how these resources, processes and tools may be attained.

This project allows DDOT, SHA, and VDOT to share existing capabilities and resources across jurisdictional boundaries. These include existing video surveillance monitoring and detection devices, specifications and protocols for developed hardware and software resources, integration technologies, and information and details of state-of the-art protection systems under design, development, or consideration. By effectively engaging these regional transportation departments, the project will leverage both existing technologies and resources, and project analysis recommendations to enhance critical transportation infrastructure security throughout the NCR.

4. Governance Structure: Describe the high-level governance structure (e.g., management plan, stakeholder involvement) required for successful implementation of this Initiative.

Management and oversight of the project will be the responsibility of the District of Columbia Department of Transportation (DDOT). DDOT will be responsible for reporting the status and final recommendations of the project final report to the Metropolitan Washington Council of Governments (MWCOG) Management Operations and Intelligent Transportation Systems (MOITS) committee on a regular basis. DDOT will assemble a team of supporting management representatives, highway engineers, and information technology specialists from DDOT, SHA, and VDOT, to support, oversee, and evaluate recommendations received from the consulting contracting firm selected to perform the study. The agencies will closely cooperate and support the effort so that results can be shared and implemented across jurisdictional boundaries.

5. Program Management: Explain how the Initiative relates to the overall State homeland security program, and/how it helps incorporate the three Overarching National Priorities.

The initiative supports current homeland security efforts in the District of Columbia, Maryland, and Virginia to reduce the vulnerability and enhance the security and protection of critical statewide infrastructure assets. By supporting these efforts, the initiative serves to improve public safety and the ability of local jurisdictions to cooperatively respond to terrorist attacks, emergency incidents, or natural disasters by ensuring that critical transportation infrastructure assets remain available for evacuations, first response, and recovery and restoration operations. This initiative directly supports

the National Preparedness Goals of protecting critical infrastructure and key resources and expanding regional cooperation of transportation agencies across multiple jurisdictions.

CONCEPT PAPER ***Preliminary Document –*** ***Presented for Review and Discussion***		December 5, 2005 Soumya Dey, P.E. Deputy Associate Director District Department of Transportation/TSA 2000 14th Street NW Washington, DC 20009 (202) 671-2700	
Project Title:	**New Transportation Management Center at Anacostia Gateway**	**Estimated Grant Amount**	$3,000,000
NCR Strategic Goal Alignment:	*SG2, SG3, SG4*	**Allowability**	
Estimated Timeline	*28 months*	**Dependencies and Cost Factors:**	

Problem Statement/Project Description:

The District Department of Transportation is relocating to a new facility at the Anacostia Gateway site. An integral part of this new facility will be a new Transportation Management Center (TMC) that is an integral component of the District's response to any disaster. The TMC controls the District's 1500+ traffic signals, the CCTV cameras, dynamic message signs, highway advisory radio and roadway operations patrol. Its development will support regional Emergency Support Function (ESF) 1. The new TMC development will take into account existing requirements of safety and security, connectivity to critical agencies in the capital and other regional partners such as MDOT, VDOT, and WMATA. The following list includes some sample details that the TMC will support.

- Implementation of regional emergency support functions
- Support centralized DMS control for regional emergency evacuation
- Support Public Emergency Notification System (public address system for pedestrians and motorists under emergency conditions)
- Support regional (DC Metro area) video surveillance and detection system for both traffic and security monitoring purpose
- Support regional evacuation or emergency response timing plans
- Support integrated regional traffic control coordination between freeways in VDOT and MDOT and surface street traffic control (DDOT)
- Support incident/event detections
- Support information sharing and integration with MDOT, DDOT, and WMATA.
- Have dedicated power generators and UPS for TMC operation under emergency conditions.
- With these capabilities built in, DDOT's TMC can serve as a command and control center for emergency response

Preliminary Project Plan (Tasks, Resources, Deliverables, Collaborating Partners, etc.)			
Tasks	**Collaborating Partners**	**Deliverables**	**Target Date**
1. Departments of transportation (DOT) in Washington DC, Maryland and Virginia jointly develop program plans, communication plans and define the scope of work.	DDOT, MDOT, VDOT	The scope of work; Program plans; and communication plans.	2 months from activation date
2. Study and assess RESF 1 needed	DDOT, MDOT, VDOT	Assessment reports of needs in Regional ESF 1 functions.	1 months after Task 1 is complete
3. Develop system requirements specification and concept of operations	DDOT	System requirements specifications; and Concept of operations	4 months after Tasks 1 and 2 are complete
4. Response plans of Regional ESF 1	DDOT, MDOT, VDOT	Integrated regional response plans	2 months after Tasks 1 and 2 are complete
5. Regional system integration concepts and operations	DDOT, MDOT, VDOT	Reports on regional system integration concepts, design and operations	3 months after Tasks 1 and 2 are complete
6. Development of PS&E	DDOT	PS&E	4 months after Tasks 1, 2, 3, 4, and 5 are complete.
7. System installation, integration, and tests	DDOT	TMC	12 months

INITIATIVE PLAN

New Transportation Management Center at Anacostia Gateway

1. Provide the Name of this Initiative. Describe how this Initiative will address the priority needs and strengths identified through the program and capability evaluation, and prioritization analysis.

New Transportation Management Center at Anacostia Gateway**.** Within the National Capital Region (NCR) there clearly is a need to identify homeland security functions when building a new Traffic Management Center (TMC) in Washington DC Department of Transportation (DDOT). This initiative is established to develop and integrate those new identified functions in the area of homeland security into the TMC, including Critical Infrastructure Protection, Intelligence /Information Sharing and Dissemination, Information Gathering and Recognition of Indicators and Warnings, and Interoperable Communications. The new TMC will also support Target Capabilities in "Citizen Protection: Evacuation and/or In Place Protection" using DMS signs, emergency public address system, emergency response plans, and signal controls. The new TMC development will meet the requirements of National Incident Management System (NIMS), Expanded Regional Collaboration, and Strengthen Information Sharing and Collaboration Capabilities.

2. Regional Construct: Briefly describe the geographical context of this Initiative.

This initiative will be led by District Department of Transportation (DDOT) as part of its homeland security program. Its Information Sharing and Collaboration Capabilities will be developed so that Maryland and Virginia Department of Transportation can share information with the TMC. Moreover, the TMC will be interfaced with Regional Integrated Transportation Information System (RITIS) to facilitate regional information sharing, incident responses and emergency evacuation. An integrated and coordinated evacuation plan among DDOT, MDOT and VDOT will be created to effectively evacuate citizens in Washington Metropolitan Area. And TMC will be the command center to handle emergencies.

3. Resources, Processes, and Tools: Identify the resources, processes and tools that already exist, and those that will need to be leveraged, created, or acquired for this Initiative. Briefly consider how these resources, processes and tools may be attained.

DDOT's existing TMC has working hardware and software supporting current normal operations. But its expansion has reached the limit in meeting the additional requirements of homeland security. For example, the communication network is based on twisted pair and it is challenge to add additional video cameras. DDOT has new TMC specification, ITS program plan, TMC operation document and evacuation plan in place and in-house expertise to specify, procure, manage the TMC development leading to its test/acceptance. DDOT has process in place to manage federal projects.

4. Governance Structure: Describe the high-level governance structure (e.g., management plan, stakeholder involvement) required for successful implementation of this Initiative.

This initiative will be spearheaded by the District Department of Transportation (DDOT) with the support of the Regional Emergency Support Function (RESF #1) Transportation Committee, the Management, Operations, Intelligent Transportation Systems (MOITS) Committee and other relevant working groups that support the Regional Emergency Preparedness Committee (REPC) through the Metropolitan Washington Council of Governments**.** DDOT will develop the program plan to guide the execution of the program and communication plan to keep stakeholders informed, obtain their inputs and address their concerns. This initiative will also adhere to the grant administration and management set forth by DHS and ODP as administered through the region's SAA.

5. Program Management: Explain how this Initiative relates to the overall State homeland security program, and/or how it helps incorporate the three Overarching National Priorities.

DDOT's homeland security program covers many areas including updating and protecting communication network, deployment of evacuation dynamic message signs, emergency public address system, evacuation plans, redundancy of power supplies, incident detection/management, deployment of additional CCTV cameras, and Regional Integrated Transportation Information System (RITIS). Efforts in this initiative will result in an integrated and centralized command and control center with the abilities to gather information, disseminate data, share data, detection incidents, and manage events and emergencies. This initiative addresses Overarching Capabilities in Expanded Regional Collaboration, and National Incident Management System.

CONCEPT PAPER

Preliminary Document –
Presented for Review and Discussion

December 5, 2005

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Deputy Associate Director
District Department of Transportation/TSA

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(202) 671-2700

Project Title:	**Multifunctional Evacuation Dynamic Message Signs**	**Estimated Grant Amount**	$3,004,500
NCR Strategic Goal Alignment:	SG3, SG4	**Allowability**	
Estimated Timeline	20 months	**Dependencies and Cost Factors:**	

Problem Statement/Project Description:

- DDOT's current Dynamic Message Signs (DMS) are all portable signs and cannot be controlled from a central location (TMC). The signs are controlled manually one by one in the field. This seriously limits DDOT's ability to support regional emergency response strategies, especially in case of emergencies that require evacuation
- Under emergency conditions, regional evacuation plans need coordinated efforts in Washington Metro Region including Washington DC DOT, Virginia DOT and Maryland DOT. Currently, such dynamic message sign (DMS) based regional emergency support function does not exist.
- Need to communicate traveler information and roadway operations information in case of an emergency.
- Need to study DMS deployment deficiency in Washington Metropolitan area (DDOT, MDOT, and DDOT) and design and install fixed multifunctional dynamic message signs along emergency evacuation routes.
- Overcome the inability to support emergency evacuation using VMS signs.
- Enhanced efficiency during evacuations
- Provide real-time traveler information quickly during emergencies
- Coordinate emergency response with other regional partners such as VDOT and MDOT

Preliminary Project Plan (Tasks, Resources, Deliverables, Collaborating Partners, etc.)

Tasks	Collaborating Partners	Deliverables	Target Date
1. Departments of transportation (DOT) in Washington DC, Maryland and Virginia jointly develop program plans, communication plans and define the scope of work.	DDOT, MDOT, VDOT	The scope of work; Program plans; and communication plans.	2 months from activation date
2. Study and assess DMS deployment status in supporting RERF 1.	DDOT, MDOT, VDOT	Assessment reports of needs in DMS functions.	2 months after Task 1 is complete
3. Develop system requirements	DDOT, MDOT, VDOT	System requirements specifications; and Concept of	2 months after Tasks 1 and 2

specification and concept of operations		operations	are complete
4. Response plans of Regional ESF 1 using DMSs	DDOT, MDOT, VDOT	Integrated DMS response plans	3 months after Tasks 1 and 2 are complete
5. Regional DMS system integration concepts and operations	DDOT, MDOT, VDOT	Reports on regional DMS system integration concepts, design and operations	3 months after Tasks 1 and 2 are complete
6. Development of PS&E	DDOT, MDOT, VDOT	PS&E	4 months after Tasks 1, 2, 3, 4, and 5 are complete.
7. System installation, integration, and tests	DDOT, MDOT, VDOT	DMS signs that are strategically located and deployed to support RESF 1	8 months

INITIATIVE PLAN

Multifunctional Evacuation Dynamic Message Signs

1. Provide the Name of this Initiative. Describe how this Initiative will address the priority needs and strengths identified through the program and capability evaluation, and prioritization analysis.

Multifunctional Evacuation Dynamic Message Signs. This initiative is established by DC Department of Transportation (DDOT) in response to the Target Capabilities in "Citizen Protection: Evacuation and/or In Place Protection". DC area does not have location-fixed dynamic message signs (DMS) controlled from Traffic Management Center. This seriously limits DDOT's ability to evacuate citizen under emergency situations. The objective of the initiative is to develop a DMS based system to effectively evacuate citizen and provide traffic information to motorists under normal situations. The initiative will lead to regional effort to meet the requirements of National Incident Management System (NIMS), Expanded Regional Collaboration, and Strengthen Information Sharing and Collaboration Capabilities.

2. Regional Construct: Briefly describe the geographical context of this Initiative.

Washington Metropolitan Region consists of Washington DC, Maryland (Montgomery county and Prince George county) and Northern Virginia (Arlington, county, Fairfax county, Prince William county, and Loudoun county). This initiative will be led by District Department of Transportation (DDOT) as part of its homeland security program. Citizen evacuation relies on strong coordination and partnership with Department of Transportation of Maryland and Virginia in information sharing to increase efficiency in citizen evacuation. An integrated and coordinated evacuation plan among DDOT, MDOT and VDOT will be created to effectively evacuate citizens in Washington Metropolitan Area. This initiative can be an integral part of Regional Integrated Transportation Information System (RITIS)

3. Resources, Processes, and Tools: Identify the resources, processes and tools that already exist, and those that will need to be leveraged, created, or acquired for this Initiative. Briefly consider how these resources, processes and tools may be attained.

Currently, DDOT does not have any location-fixed DMS signs to be used in citizen evacuation. DDOT needs to develop a completely new DMS based information system from ground up that can handle emergency evacuation including software, hardware and the associated operation/evacuation plans. This initiative will help DDOT cover the identified weakness that prevents from effective evacuation.

DDOT does have communication network in place to support the controls of the evacuation DMS signs along the evacuation routes in most of the places. DDOT, experienced in handling federal aided programs, also has process in place to manage federal projects.

4. Governance Structure: Describe the high-level governance structure (e.g., management plan, stakeholder involvement) required for successful implementation of this Initiative.

This initiative will be spearheaded by the District Department of Transportation (DDOT) with the support of the Regional Emergency Support Function (RESF #1) Transportation Committee, the Management, Operations, Intelligent Transportation Systems (MOITS) Committee and other relevant working groups that support the Regional Emergency Preparedness Committee (REPC) through the Metropolitan Washington Council of Governments**.** DDOT will develop the program plan to guide the execution of the program and communication plan to keep stakeholders informed, obtain their inputs and address their concerns. This initiative will also adhere to the grant administration and management set forth by DHS and ODP as administered through the region's SAA.

5. Program Management: Explain how this Initiative relates to the overall State homeland security program, and/or how it helps incorporate the three Overarching National Priorities.

DDOT's homeland security program covers many areas including updating and protecting communication network, deployment of evacuation dynamic message signs, TMC based public address system, evacuation plans, redundancy of power supplies, incident detection/management, deployment of additional CCTV cameras, and Regional Integrated Transportation Information System (RITIS). Efforts in this initiative will result in improved incident detection/management and evacuation plan. Moreover, the DMS system can be integrated into RITIS shared by the whole DC Metropolitan area including Maryland and Virginia.

This initiative addresses Overarching Capabilities in Expanded Regional Collaboration, and National Incident Management System. The identified weakness in the DMS assisted evacuation is well-defined and has revealed urgent needs to address this issue.

CONCEPT PAPER

Preliminary Document –
Presented for Review and Discussion

December 5, 2005

Soumya Dey, P.E.
Deputy Associate Director
District Department of Transportation/TSA

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(202) 671-2700

Project Title:	**Critical Infrastructure Monitoring and Protection**	**Estimated Grant Amount**	$3,001,200
NCR Strategic Goal Alignment:	SG3, SG4	**Allowability**	
Estimated Timeline	19 months	**Dependencies and Cost Factors:**	

Problem Statement/Project Description:

Washington Metropolitan Region (Washington DC, Maryland and Virginia) has many bridges and tunnels as critical infrastructure. Several bridges connect Capital Washington DC with Virginia and Maryland. Some of these bridges and tunnels carry huge traffic daily to support regional economic development. However, these bridges and tunnels are not sufficiently monitored and protected. Considering that critical bridges and tunnels in Washington Metropolitan area would be possible targets of terrorists, they are in a vulnerable status for the time being. There is an urgent need to protest them as the key part of the region's infrastructure.

Needs in bridge monitoring and protection: Some critical bridges such as TR bridge and the bridge in the 14th street in Washington DC have towers on them that are unmanned, and these unmanned bridge towers do not have intrusion detection devices that are connected to the traffic management center for monitoring. Similarly, Woodrow Wilson Memorial Bridge and American Legion Memorial Bridge on I-95 and I-495 are not sufficiently monitored and protected, either. These two bridges are part of busy beltway of Washington DC supporting local economy. They carry heavy traffic daily for I-95 along the east coast of USA.

Needs in tunnel monitoring and protection: Some tunnel monitoring video devices are very old and do not even have PTZ control capability that limits the operators' means to scrutinize any situations inside tunnels for susceptible acts.

The purpose of this project is to develop a CCTV camera based system and intrusion detection system to monitor and protect critical bridges and tunnels in Washington Metropolitan Region. The final outcomes of the efforts include the following:

1. An intrusion detection and monitoring system for bridge protection: This system shall be able to effectively detect intrusion to unmanned bridge towers and send alarms to local traffic management centers (TMC). The system must be properly integrated with local TMCs for centralized operations. Meanwhile, it shall allow the TMC operators to control and monitor the video signals from the cameras installed inside or close to the towers on the bridges.
2. Updated CCTV camera system inside tunnels: The system shall replace the old video cameras and allow the TMC operators to perform PTZ control to the cameras.
3. Regional event response plans

Project Benefits

- Safeguarding critical infrastructure by monitoring and reducing the probability of terrorist attacks
- Providing real-time traffic monitoring
- Accelerating regional responses to events

Preliminary Project Plan (Tasks, Resources, Deliverables, Collaborating Partners, etc.)

Tasks	Collaborating Partners	Deliverables	Target Date
1. Departments of transportation (DOT) in Washington DC, Maryland and Virginia jointly develop program plans, communication plans and define the scope of work.	DDOT, MDOT, VDOT	The scope of work; Program plans; and communication plans.	2 months from activation date
2. Study and assess major bridges and tunnels in Washington Metropolitan Region that are vulnerable for being attacked. Each DOT is responsible to do the study of its own bridges and tunnels. The study result will be combined into a single study report.	DDOT, MDOT, VDOT	Assessment reports of needs in protection in bridges and tunnels in Washington Metro areas.	2.5 months after Task 1 is complete
3. Develop system requirements specification and concept of operations	DDOT, MDOT, VDOT	System requirements specifications; and Concept of operations	2.5 months after Tasks 1 and 2 are complete
4. Design CCTV camera systems and intrusion detection and monitoring systems for bridges and tunnels	DDOT, MDOT, VDOT	Preliminary design documents and final design documents for tunnel video monitoring and bridge monitoring/intrusion detections.	4 months after task 1, 2 and 3 are complete
5. Procure, install, integrate and test the CCTV camera systems and intrusion detection systems that are centralized to each state's TMC, respectively.	DDOT, MDOT, VDOT	Plan, Specification and Estimation (PS&E) Final systems	8 months after tasks 1, 2, 3, and 4 are complete.

INITIATIVE PLAN

Critical Infrastructure Monitoring and Protection

1. **Provide the Name of this Initiative. Describe how this Initiative will address the priority needs and strengths identified through the program and capability evaluation, and prioritization analysis.**

   The name of this initiative is Critical Infrastructure Monitoring and Protection. It has been established in response to one of the Interim National Preparedness Goal in "protect critical infrastructure and key resource as described in National Infrastructure Projection Plan (NIPP)". It addresses the "Protect Mission Area" in "Critical Infrastructure Protection (CIP). The objective of the initiative is to propose a solution to protecting critical infrastructure (bridges and tunnels), a critical weakness area identified, in the Washington DC Metropolitan Region.

   Protecting critical infrastructure has also been identified as one of the 14 priority capabilities in National Capital Region (NCR) by Metropolitan Washington Council of Government (MWCOG). Washington DC Metropolitan Region has many bridges and tunnels as critical part of its infrastructure. Some critical bridges in this area have towers on them that are unmanned, and these unmanned bridge towers are not monitored. This initiative will develop a system to monitor key bridges and tunnels 24 hours a day and 7 days a week in Traffic Management Centers (TMC) in Washington DC Metropolitan Region. The initiative will lead to regional effort to meet the requirements of National Incident Management System (NIMS), Expanded Regional Collaboration, and Strengthen Information Sharing and Collaboration Capabilities. It covers the Target Capabilities of CBRNE detection and Critical Infrastructure Protection (NCR additional capabilities).

2. **Regional Construct: Briefly describe the geographical context of this Initiative.**

   Washington Metropolitan Region consists of Washington DC, Maryland (Montgomery county and Prince George county) and Northern Virginia (Arlington, county, Fairfax county, Prince William county, and Loudoun county). This initiative will be led by District Department of Transportation (DDOT) as part of its homeland security program. It relies on strong coordination and partnership with Department of Transportation of Maryland and Virginia. This is a regional effort to address the concerns shared by the region. For example, while DDOT is responsible for bridges and tunnels inside DC, Maryland and Virginia Department of transportation will take more responsibilities in critical bridges such as American Legion Memorial Bridge outside Washington DC. Real time event information is shared. In addition, the three DOTs will jointly respond to events as appropriate. If there are any suspicious actions detected, then the response procedure will involve all related States to take prompt actions. As far as daily operations, there will be built-in redundancy in monitoring the critical bridges by both States for those bridges cross the two States at the same time to increase the reliability of event monitoring and responses.

3. **Resources, Processes, and Tools: Identify the resources, processes and tools that already exist, and those that will need to be leveraged, created, or acquired for this Initiative. Briefly consider how these resources, processes and tools may be attained.**

Currently, DDOT, MDOT and VDOT do not have video based bridge monitoring and intrusion detection system in place, including their communication support infrastructure. Therefore, the system is likely to be built from ground up. The initiative will develop the overall system including communication links to the existing network. DDOT, MDOT and VDOT will provide support to integrate the video detection system with TMC hardware/software systems. However, additional hardware and software may have to be added or modified to integrate the initiative system for integrated and centralized operations. As of replacement of tunnel video cameras, the communication network is in place to support video cameras. Additional control wires and interface devices are needed to control PTZ.

4. Governance Structure: Describe the high-level governance structure (e.g., management plan, stakeholder involvement) required for successful implementation of this Initiative.

DDOT will be responsible for the oversight in regards to the management of the grant that will be provided through State Administrative Agent (SAA). DDOT will work with Management, Operations and Intelligent Transportation Systems and Regional Emergency Support Function #1 committee at the Metropolitan Council of Government. DDOT will develop the program plan to guide the execution of the program and communication plan to keep stakeholders informed, obtain their inputs and address their concerns.

5. Program Management: Explain how this Initiative relates to the overall State homeland security program, and/or how it helps incorporate the three Overarching National Priorities.

DDOT's homeland security program covers many areas including updating and protecting communication network, deployment of evacuation dynamic message signs, TMC based public address system, evacuation plans, redundancy of power supplies, incident detection/management, deployment of additional CCTV cameras, and Regional Integrated Transportation Information System (RITIS). This initiative will provide DDOT with an additional capability in protecting its bridges and tunnels. Efforts in this initiative will result in improved incident detection/management and evacuation plan. Moreover, the real time bridge and tunnel monitoring/detection information can be integrated into RITIS shared by the whole DC Metropolitan area including Maryland and Virginia.

This initiative directly addresses the National Preparedness Goal regarding "protect critical infrastructure and key resources" (page 1, section 1.B, FY-2006 Homeland Security Grant Program), and Overarching Capabilities in Expanded Regional Collaboration, National Incident Management System and National Infrastructure Protection Plan. The identified weakness in the critical infrastructure in this initiative is well-defined and has revealed urgent needs to address this issue.

CONCEPT PAPER

Preliminary Document –
Presented for Review and Discussion

January 27, 2006

RESF#3 (WATER)
Regional Water Security Work Group
Charles M. Murray, Chairman
Fairfax Water

James Shell, Principal Water Resources Planner,
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Project Title:	**Expansion, Establishment and Operation of the Water Security Monitoring Network in the National Capital Region**	**Estimated Grant Amount**	$ 1,250,000
NCR Strategic Goal Alignment:	Meets the National Priority to strengthen CBRNE Detection, Response, and Decontamination Capabilities Addresses a weakness of Priority Capability CBRNE Detection Addresses a weakness of Priority Capability Critical Infrastructure Addresses a weakness of Priority Capability WMD/Hazardous Materials Response and Decontamination Meets the needs of NCR Goal 3: Prevention and Mitigation Objective 3: Enhance and integrate risk assessment of critical infrastructure and high risk targets within the NCR	**Allowability**	This is allowable in accordance with UASI guidelines for planning activities. Commercially available radiation monitors may require ODP approval. Previous biomonitoring and chemical monitors have received ODP approval
Estimated Timeline	16 months from the grant award date	**Dependencies and Cost Factors:**	The expansion and operation of the additional monitoring station will be heavily dependent on staff support from participating water utilities; this project represents a continuation of previous funding for this purpose

Problem Statement/Project Description:

Water Utilities in the National Capital Region have long recognized the need for enhanced water security monitoring for both raw and finished drinking water supplies. As early as 2001, the Regional Water Security Work Group has been actively working to establish a comprehensive water security monitoring network in order to enhance water security and safety in the NCR. In February of 2005, UASI FY04"grant funding was secured to initiate the establishment of that water security monitoring network. The first group of monitoring stations will be fully operational by May 2006, establishing monitoring capability at a number of critical locations. However, it only represents a portion of the needed network monitoring stations. Under the current network not all drinking water systems and sources are being monitored. Additional monitoring stations at critical locations in the NCR are needed and would incorporate the biological and chemical water quality monitoring systems that are currently being used as well as the incorporation of radiological monitoring.

NCR Monitoring Network Station Selection Criteria: Under this initiative, additional monitoring stations would be established in source water and in drinking water distribution systems. Criteria used for selecting station locations would be based on 1)proximity to high concentrations of population and/or employment within distribution systems; 2) source water locations above water treatment plant intakes; 3) source drinking water plant intakes; and 4) locations where treated water exits just downstream of treatment plants.

Monitoring Equipment: Biological and Chemical Monitoring: Funding would be used to purchase and operate 6 additional fish biomonitors, and 6 additional chemical water quality monitors, at 12 new monitoring stations and be integrated with the regional water security early warning network. The chemical monitors would be located within newly identified or existing network water distribution systems, while the fish biomonitors would primarily focus on raw drinking water sources. Radiological Monitoring: 4 radiological monitors would be purchased and would be likely co-located at existing or new monitoring station sites. Because of the continued concern about radiological contamination of water from dirty bombs or introduction by terrorist into water supplies and because there is no known capability to continuously measure radiation in water, it is proposed that 4 radiological monitors be purchased and installed at critical locations in the NCR network. These units would begin to establish some water monitoring capability for radiological events at critical locations in the raw water and distribution systems. The radiological monitors are commercially available and are in use at a large National Lab in Virginia as well as a large California city. The units are capable of detecting alpha, beta, and gamma emitting radio nuclides in water through a continuously flow through system.

Target Goals: The incorporation of these new monitoring stations will significantly expand and enhance coverage of the existing NCR Water Security Monitoring network, but will not completely meet the water security monitoring needs of the NCR. The approach is to expand the system in a 5 year phased approach. The ultimate TARGET GOALS of the NCR's Water Security Monitoring Network would be to provide:

- 100% coverage of all raw water intakes in the Potomac and reservoirs in the NCR;
- 100% coverage of the finished water as it exits from each water treatment plant;
- Comprehensive monitoring coverage upstream in the Potomac River above the intakes that will add a greater early warning capability; and
- Strategic coverage in the distribution systems (high populations concentrations; at strategic locations relative to buildings, etc.)
- Strategic coverage of radiological events in raw and finished water

The additional water security monitoring capability will significantly enhance the NCR's water security monitoring network's ability to detect and provide early warning of contaminants in water supplies as well as significantly increase the network coverage and citizen safety. It is anticipated that the expansion of the water security monitoring network will be required and funding would be required over the next 3 to 5 years in order to provide complete comprehensive water security monitoring coverage.

Preliminary Project Plan (Tasks, Resources, Deliverables, Collaborating Partners, etc.)

Tasks	Collaborating Partners	Deliverables	Target Date
1. In coordination with RESF#3 and its Water Security Project Team, Develop project management plan	All NCR jurisdictions (MWCOG) and RESF3 Work Group, Water Security Monitoring Project Team	Water Security Monitoring Project Management Plan	To be completed within the first 30 to 60 days of the grant award
2. Identification and selection of new monitoring locations and participating utilities	All NCR jurisdictions (MWCOG) and RESF3 Work Security Work Group members, Water Security Monitoring Project Team	New monitoring sites selected; participating utilities agreement to operation stations	To be completed within the first 30 to 60 days of the grant award
3. Place orders for purchase of biomonitors, and water quality monitors	MWCOG staff on behalf of RESF#3	Purchase Orders developed and submitted; equipment is sole source as was previously	To be completed within the first 30 to 60 days of the grant award
4. Initiate process for ODP approval for radiation monitors	RESF#3, MWCOG staff	Support materials and meetings with ODP	To be completed within the first 30 days of the grant award

5. Place orders for radiation monitors	MWCOG staff on behalf of RESF#3	Purchase Orders developed and submitted for radiation monitors	To be completed within the first 90 to 120 days of the grant award
6. Conduct monitoring equipment (fish biomonitors, water quality, radiation training sessions	All NCR jurisdictions (COG) and RESF3 Work Security Work Group members, Water Security Monitoring Project Team	Training sessions for monitoring equipment	To be completed within the first 3 to 4 months of the grant award
7. Monitoring equipment installation	Participating Utilities, MWCOG, and manufacturer reps.	Installation of 16 new monitoring units and stations	To be completed within the 8 to 10 months of the grant award
8. Monitoring stations up and operational	Participating Utilities, MWCOG, and manufacturer reps.	Operational fish biomonitors, chemical water quality monitors, and radiation monitors	To be completed within 9 to 12 months of the grant award
9. Incorporate new stations and monitors into the regional data management monitoring network	Project Monitoring Project Team; newly participating Utilities, MWCOG	Establishment of data network connections for additional monitoring systems	To be completed within the 9 to 10 months of the grant award
10. Continuous station operation	Project Monitoring Project Team; newly participating Utilities, MWCOG	Continuous new operating monitoring stations	From month 10 to 16
11. Draft Assessment and Evaluation report	Project Monitoring Project Team; MWCOG	Draft Assessment and Evaluation Report	Month 14 from the date of the grant award
12. Final Assessment and Evaluation report	Project Monitoring Project Team; MWCOG	Final Assessment and Evaluation Report	Month 16 from the date of the grant award

Project Performance Measures	Baseline Value	Target Value
1. Purchase and installation and operation of 16 new water security monitors (biological, chemical, radiological) and stations to expand the existing water security monitoring network.	Current number of water security monitors is 15, representing 11 stations in the NCR; no radiological stations exist.	16 new monitors at 12 stations installed and operational in the NCR. Network expanded to approximately 23 stations (bio., chem., rad.)
2. Completion of monitor equipment training	Monitor equipment training needs to be provided for water utility personnel on new network system monitors	Conduct a series of utility staff training sessions for new monitors
3. Approval of new NCR water security monitoring equipment by ODP	Current water security monitors have been ODP approval	New radiation monitor to be added to ODP approved equipment list

4. Expanded monitoring network. Continuous operation of 27water security monitoring stations	As of May 2006, 11 stations and 15 monitors will be continuously operational	At the completion of the 06 UASI grant 23 stations will be in continuous operation.

INITIATIVE PLAN

Expansion, Establishment and Operation of the Water Security Monitoring Network in the National Capital Region

1. Provide the Name of this Initiative. Describe how this Initiative will address the priority needs and strengths identified through the program and capability evaluation, and prioritization analysis.

Through the continuation and expansion of the NCR Water Security Monitoring Network this initiative directly meets the National Priority to strengthen CBRNE detection, response and Decontamination, as well as it addresses identified weaknesses in CBRNE, WMD/Hazardous Materials Response and Critical Infrastucture Priority Capabilities, and meets the needs of NCR Goal 3: Prevention and Mitigation. The expanded network provides more complete early warning drinking water monitoring data as well as greater coverage of the NCR, thereby providing more protection to the citizens of the NCR.

2. Regional Construct: Briefly describe the geographical context of this Initiative.

This initiative will build upon efforts by the regional Water Security Work Group to develop comprehensive responses to the highest regional water security needs identified through regional strategic planning sessions and individual water utility vulnerability assessments. The Water Security Work Group consists of water utilities, NCR local governments, as well as state, federal and regional public agencies covering the entire National Capital Region.

3. Resources, Processes, and Tools: Identify the resources, processes and tools that already exist, and those that will need to be leveraged, created, or acquired for this Initiative. Briefly consider how these resources, processes and tools may be attained.

This project allows DDOT, SHA, and VDOT to share existing capabilities and resources across jurisdictional boundaries. These include existing video surveillance monitoring and detection devices, specifications and protocols for developed hardware and software resources, integration technologies, and information and details of state-of the-art protection systems under design, development, or consideration. By effectively engaging these regional transportation departments, the project will leverage both existing technologies and resources, and project analysis recommendations to enhance critical transportation infrastructure security throughout the NCR.

4. Governance Structure: Describe the high-level governance structure (e.g., management plan, stakeholder involvement) required for successful implementation of this Initiative.

Management and oversight of the project will be the responsibility of the District of Columbia Department of Transportation (DDOT). DDOT will be responsible for reporting the status and final

recommendations of the project final report to the Metropolitan Washington Council of Governments (MWCOG) Management Operations and Intelligent Transportation Systems (MOITS) committee on a regular basis. DDOT will assemble a team of supporting management representatives, highway engineers, and information technology specialists from DDOT, SHA, and VDOT, to support, oversee, and evaluate recommendations received from the consulting contracting firm selected to perform the study. The agencies will closely cooperate and support the effort so that results can be shared and implemented across jurisdictional boundaries.

5. Program Management: Explain how the Initiative relates to the overall State homeland security program, and/how it helps incorporate the three Overarching National Priorities.

The initiative supports current homeland security efforts in the District of Columbia, Maryland, and Virginia to reduce the vulnerability and enhance the security and protection of critical statewide infrastructure assets. By supporting these efforts, the initiative serves to improve public safety and the ability of local jurisdictions to cooperatively respond to terrorist attacks, emergency incidents, or natural disasters by ensuring that critical transportation infrastructure assets remain available for evacuations, first response, and recovery and restoration operations. This initiative directly supports the National Preparedness Goals of protecting critical infrastructure and key resources and expanding regional cooperation of transportation agencies across multiple jurisdictions.

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<tr><td colspan="2" rowspan="3">CONCEPT PAPER

Preliminary Document –
Presented for Review and Discussion</td><td colspan="2">January 27, 2006</td></tr>
<tr><td colspan="2">RESF-3 (Water)
Charles M. Murray, Chairman
Fairfax Water</td></tr>
<tr><td colspan="2">Project Contact:
Steve Bieber
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Washington, DC 20002
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sbieber@mwcog.org</td></tr>
<tr><td>Project Title:</td><td>PipelineNet Water Distribution System Model Development for Water Utilities in the National Capital Region</td><td>Estimated Grant Amount</td><td>$300,000</td></tr>
<tr><td>NCR Strategic Goal Alignment:</td><td>Meets the National Priority of strengthening CBRNE detection, response, and decontamination capabilities. Addresses a weakness of priority capability of WMD/hazardous materials response and decontamination.

Meets the following NCR goals:
1.Planning and Decision Making
Provides water utilities with capability to examine “what if” scenarios and supports development of contingency plans for responding to water contamination incidents. Supports collaboration with health departments and agencies.</td><td>Allowability</td><td>This is allowable in accordance with UASI guidelines.</td></tr>
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	3. Prevention and Mitigation Provides tools and training to support the prevention and mitigation of water contamination incidents. 4. Response and Recovery Provides tools and training to support response and recovery efforts related to water contamination incidents.		
Estimated Timeline	12 months.	**Dependencies and Cost Factors:**	This project builds on NCR distribution system modeling work carried out using FY 04 UASI funds. The goal is 3 systems per year for the next 2 years, with a goal of 90% (4.14M people) of the region covered by a contaminant modeling tool by 2007 and 100% covered by 2008. This would equate to $300K/year for 2 years.

Problem Statement/Project Description:

Water utilities in the National Capital Region have identified the need for real time information to track and model the flow of contaminants within a water supply distribution system as a high priority to help minimize risks to human health during a contamination event. The PipelineNet model was developed to support and augment detection and response capabilities resulting from intentional contamination events in public water supply systems. PipelineNet is a Geographic Information System (GIS) - based software tool with integrated data base capability that can be used to model the flow and concentration of contaminants in a water utility's drinking water pipeline infrastructure. It contains a pipe network hydraulic model (EPANET), maps, and a US Census Population database. PipelineNet was initially developed for the 2002 Winter Olympic Games in Salt Lake City and has subsequently been applied to over 20 additional water utilities in the US and Canada, including several water utilities in the National Capital Region (NCR).

Through an American Water Works Association Research Foundation (AwwaRF) case study, additional capabilities have been added to PipelineNet to address consequence assessment issues. These capabilities include tools to close valves to isolate the system, the identification of monitoring locations based on model inputs, outputs, population density and location of critical facilities, and spatial data display and overlay functions that aid in the Initial Distribution System Evaluation for Stage 2 Disinfection Byproducts. The model can also calculate the population at risk, simulate the flow and concentration of biological or chemical contaminants in the distribution system, and assess the effects of water treatment on the contaminant. These tools will provide water utilities in the NCR with the capability to examine "what if" scenarios and to develop contingency plans for responding to water contamination incidents. They also support collaboration with health departments and agencies.

The proposed project would:

- Identify three water utility distribution systems in the COG Region for application of the PipelineNet modeling tool using the size of the population served and the availability of hydraulic model input data and GIS data as selection criteria.
- Successfully simulate the flow and concentration of contaminants in those distribution systems, and assess the effects of water treatment on those contaminants.
- Integrate use of the model into the NCR Water Supply Emergency Plan and the Regional Incident Communication and Coordination System.

Preliminary Project Plan (Tasks, Resources, Deliverables, Collaborating Partners, etc.)			
Tasks	**Collaborating Partners**	**Deliverables**	**Target Date**
1. Collection of existing data and selection of three partner water utilities	MWCOG, SAIC, Water Security Work Group (RESF-3 Water)	Obtain hydraulic modeling and GIS data that describes the partner utility's water distribution system	Collect data within 3 months of final award.
2. Conversion of hydraulic model input data into EPANET compatible format	MWCOG, SAIC, Water Security Work Group (RESF-3 Water)	The following data in EPANET format: 1. Temporal water use patterns. 2. Tank characteristics. 3. Pump controls	Convert hydraulic model within 4 months of final award.
3. Conversion of hydraulic model into PipelineNet	MWCOG, SAIC, Water Security Work Group (RESF-3 Water)	Hydraulic model infrastructure data in Geodatabase format. The hydraulic model infrastructure data contains junctions, nodes, tanks, reservoirs, pipes, pumps, and valves. PipelineNet includes a tool for converting the EPANET input data files into Geodatabase format.	Convert hydraulic model to PipelineNet format within 5 months of final award.
4. Populating PipelineNet with GIS data	MWCOG, SAIC, Water Security Work Group (RESF-3 Water)	Water distribution infrastructure and basic GIS coverages will be obtained in shapefile or other ESRI compatible format.	Populate PipelineNet with GIS data within 7 months of final award.
5. Model calibration	MWCOG, SAIC, Water Security Work Group (RESF-3 Water)	Compare the model results to those observed from SCADA output and make modifications (calibration) as needed.	Calibrate model within 8 months of final award.
6. Testing and Scenario development	MWCOG, SAIC, Water Security Work Group (RESF-3 Water)	Develop model scenarios and test the model operation with these scenarios. Scenarios will consist of hypothetical contaminations within the distribution system representing a range of constituents (chemical and biological); spill types (instantaneous and continuous); input locations (reservoirs, tanks, etc.) and spill amounts.	Develop model scenarios and test model operation within 10 months of final award.
7. Training	MWCOG, SAIC, Water Security Work Group (RESF-3 Water)	Conduct a one-day PipelineNet training course for partner water utilities. This course will include all	Conduct a one-day PipelineNet training course for partner water utilities within 11 months of final award.

		system capabilities including IDSE tools for monitoring site locations.	
8. Final Report	MWCOG, SAIC, Water Security Work Group (RESF-3 Water)	Prepare a model evaluation and assessment report that will describe the steps and data used to develop the PipelineNet model. The report will include information on calibration, scenario development and the outcome of an exercise to determine monitoring locations based on the PipelineNet hierarchical ranking methodology.	Prepare a model evaluation and assessment report within 12 months of final award.

Project Performance Measures	**Baseline Value**	**Target Value**
1. Apply the PipelineNet modeling tool in two additional drinking water distribution systems in the COG region.	75% of the NCR	90% of the NCR by 2007, 100% of NCR by 2008
2. Prepare a model evaluation and assessment report that will describe the steps and data used to develop the PipelineNet model.	No report	Completed report
3. Integrate use of the model into the NCR Water Supply Emergency Plan and the Regional Incident Communication and Coordination System	Existing WSEP	Revised WSEP

INITIATIVE PLAN

PipelineNet Water Distribution System Model Development for Water Utilities in the National Capital Region

1. Provide the Name of this Initiative. Describe how this Initiative will address the priority needs and strengths identified through the program and capability evaluation, and prioritization analysis.

This initiative is a continuation of an FY'04 UASI to develop a PipelineNet model to reduce contamination risk for the population served by the water utilities in the National Capital Region. Water utilities in the National Capital Region have identified the need for real time information to track and model the flow of contaminants within a water supply distribution system as a high priority to help minimize risks to human health during a contamination event. This need was confirmed during the recent Capability Review Sessions held for the NCR. The PipelineNet model was developed to support and augment detection and response capabilities resulting from intentional or accidental contamination events in public water supply systems.

2. Regional Construct: Briefly describe the geographical context of this Initiative.

This initiative will build upon efforts by the regional Water Security Work Group (RESF-3 Water) to develop comprehensive responses to the highest regional water security needs identified through regional strategic planning sessions and individual water utility vulnerability assessments. The Water Security Work Group (RESF-3 Water) consists of water utilities, local governments, state, federal and regional public agencies covering the entire National Capital Region.

3. Resources, Processes, and Tools: Identify the resources, processes and tools that already exist, and those that will need to be leveraged, created, or acquired for this Initiative. Briefly consider how these resources, processes and tools may be attained.

Under Title IV of the Public Health Security and Bioterrorism Response Act of 2002 (PL 107-188)the Act, EPA is authorized to conduct research to prevent, detect, and respond to the intentional introduction of chemical, biological, or radiological contaminants into community water systems and source water for these systems. The PipelineNet model was developed to support and augment detection and response capabilities resulting from intentional contamination events in public water supply systems. PipelineNet was initially developed for the 2002 Winter Olympic Games in Salt Lake City and has subsequently been applied to over 20 additional water utilities in the U.S. and Canada, including several water utilities in the National Capital Region (e.g., DC-WASA, WSSC, City of Falls Church, and Fairfax Water).

Through an American Water Works Association Research Foundation (AwwaRF) case study, additional capabilities have been added to PipelineNet to address consequence assessment issues. These capabilities include tools to close valves to isolate the system, the identification of monitoring locations based on model inputs, outputs, population density and location of critical facilities, and spatial data display and overlay functions that aid in the Initial Distribution System Evaluation for Stage 2 Disinfection Byproducts. The model can also calculate the population at risk, simulate the flow and concentration of biological or chemical contaminants in the distribution system, and assess the effects of water treatment on the contaminant. These tools will provide water utilities in the National Capital Region with the capability to examine "what if" scenarios and to develop contingency plans for responding to water contamination incidents. They also support collaboration with health departments and agencies.

This project is a continuation of previous funding for this purpose.

4. Governance Structure: Describe the high-level governance structure (e.g., management plan, stakeholder involvement) required for successful implementation of this Initiative.

This initiative will be governed by the regional Water Security Work Group (RESF-3 Water), which consists of water utilities, local governments, state, federal and regional public agencies covering the entire National Capital Region.

5. Program Management: Explain how this Initiative relates to the overall State homeland security program, and/or how it helps incorporate the three Overarching National Priorities.

The modeling work conducted for this project will be fully integrated with the NCR Water Supply Emergency Plan for the National Capital Region. This plan has been formally incorporated as an

annex to the Regional Emergency Coordination Plan (RECP[SM]) under Regional Emergency Support Function 3, Public Works and Engineering, and helps facilitate a coordinated response to events that affect the quality or quantity of water in the National Capital Region. Consequently, the proposed modeling work would also help ensure implementation of the National Incident Management System, coordination with the Federal Response Plan, and enhance development of regional capabilities.

CONCEPT PAPER

Preliminary Document –
Presented for Review and Discussion

January 20, 2006

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Project Title:	**WMATA Communications Upgrade Continuation of the FY05 Project**	**Estimated Grant Amount**	**FY06 $6,100,000.00**
NCR Strategic Goal Alignment:	**3.2.2 Regional Interoperability** **3.3.1 Infrastructure Protection**	**Allowability**	**Allowable per the Fall 2005 IAB SEL 06CP-01-REPT Repeaters**
Estimated Timeline	Assuming **6/1/06** UASI Funding availability the FY06 project goals would be complete **3/1/08**	**Dependencies and Cost Factors:**	**Project completion is dependent on continuing funding availability in FY07, and potentially FY08 depending on the speed with which the repeaters can be replaced.**

Problem Statement/Project Description:

Communication capacity and reliability are critical to the successful management and mitigation of emergency incidents in the Metrorail system. Metrorail, the second largest rail transit system in the United States, carries hundreds of thousands of passengers each day, is a critical regional transportation link and a major response challenge for first responders. Communication for first responders operating on 800 MHz radio systems in the below ground portions of the Metrorail system is provided by the Public Safety System (PSS), which is a complex distributed antenna system consisting of bi-directional amplifiers (BDAs) and Radiax™ coaxial cable installed throughout the below grade portions of the system.

The FY06 Grant request of $6,100,000 addresses the Strategic Plan Target Capabilities of Interoperable Communications, Law Enforcement Investigation and Operations, Critical Infrastructure Protection, Onsite Incident Management, Urban Search and Rescue, Public Safety and Response, Firefighting Operations/Support, and Economic & Community Recovery by supporting capacity and reliability of the WMATA PSS to meet the needs of first responders.

Redundancy for Washington D.C.'s Trunked System Infrastructure ($4,000,000)
The first need concerns the resilience of the manner in which Washington, DC's trunked infrastructure is tied into the PSS. Currently, there is a single fiber optic connection between DC's radio system and the PSS. A break in this connection, whether inadvertent or intentional, disconnects the trunked infrastructure from the PSS which would create a communication outage throughout all the below grade portions of the Metrorail system in DC.

Utilizing funds from the FY05 Grant, a second donor antenna site is being evaluated and selected and an interface to the PSS is being designed.

The FY06 funding will be utilized to implement, integrate and test the redundant system. This Project will provide redundancy for the District's trunked system infrastructure that is tied into the PSS via a fiber optic connection. A Public Safety Radio System above ground antenna will be installed at another donor site. The interface equipment between the new donor site and the WMATA fiber optic network and between the fiber network and the interface head-end amplifier needed to complete the connection will be provided.

Replacement of Existing BDA's ($2,100,000)
The second need concerns the replacement of the existing Bi-Directional Antennas (BDA's) to eliminate a frequent point of failure and to provide remote monitoring capability for all BDAs in the system. Many of the BDAs currently in the system are nearing the end of their useful life, approximately 15 years, and in addition cannot be economically equipped for remote status monitoring. The absence of remote monitoring capability means that the only way failures are identified is through regular system testing, or when communication failures are experienced during incidents. Given the age of the majority of the BDAs (in excess of 13 years in many cases) frequent failures result in coverage outages until the outages are identified and BDA(s) are repaired. Concurrent with the replacement of the older BDAs, all BDAs in the system need to be connected to the existing WMATA radio system monitoring infrastructure so that their status can be monitored remotely, providing real-time notification of outages so that they can be addressed in a timely manner.

Presently the BDAs are 600' to 1100' apart. Antennae testing will be conducted to determine if we can use a more powerful BDA but spaced further apart. Depending on the results of the antennae test, the type and positioning of the BDAs will then be determined. For example: the results could conclude that if we purchase more powerful BDAs but only need BDAs every 2400 feet, then the unit price of each BDA is higher but we then only need 25% of the BDAs we have now. Spacing the BDA's every 2400 feet will allow them to be relocated out of the track right-of-way, making maintenance easier. FY05 funding will also be used to begin replacement of the BDA's.

Funds from the FY06 Grant will be used to replace the next increment of the aging BDAs with new BDA's. This will eliminate a frequent point of failure and to provide remote monitoring capability for all BDAs in the system once all the old BDAs have been replaced. Once the overall project is complete, the reliability of the system infrastructure will improve dramatically. Remote status monitoring will insure that system managers will always be aware of system status and provide a means of proactive, rather than reactive, management of the system infrastructure. This will maximize the availability and reliability of the system for first responders. Unanticipated outages greatly increase the risk to the public and first responders during responses.

Preliminary Project Plan (Tasks, Resources, Deliverables, Collaborating Partners, etc.)

Task(s)	Owner(s) or Collaborating Partners	Deliverable(s)	Target Date(s) or Level of Effort
Redundant DC Radio Interface			
1. WMATA Board Approval to Initiate & Award Contract	WMATA	Board approval	Within 2 months after sub-grant is approved.
2. Issue Request for Proposal	WMATA	Contract documents (Prepared using FY05 Grant.)	Within 3 months after sub-grant is approved.
3. Procurement Process	WMATA	Selection of contractor(s) to implement, integrate and test redundant system.	7 months after sub-grant is approved.
4. Material Procurement	WMATA and contractors(s)	Cable, antenna	10 months after sub-grant is approved.
5. Implementation and Integration	WMATA and contractors(s)	Installation of new antenna and fiber optic connection	20 months after sub-grant is approved.
6. Testing & Final Acceptance	WMATA and contractors(s)	Redundant System operational	22 months after sub-grant is approved.

BDA Replacement and Alarming			
1. WMATA Board Approval to Initiate & Award Contract	WMATA	Board approval	Within 2 months after sub-grant is approved.
2. Determine Final Scope and Issue Request for Proposal	WMATA	Contract documents.	Within 3 months after sub-grant is approved.
3. Procurement Process	WMATA	Selection of contractor.	6 months after sub-grant is approved.
4. Material Procurement	WMATA and contractors(s)	New BDA's and cabling received	9 months after sub-grant is approved.
5. Installation	WMATA and contractors(s)	New BDA's installed	19 months after sub-grant is approved.
6. Testing & Final Acceptance	WMATA and contractors(s)	Remote monitoring and improved reliability	21 months after sub-grant is approved.

Project Performance Measures	**Baseline Value**	**Target Value**
1. Redundancy for DC's Trunk System	0%	100%
2. Replace existing BDA's/Reduction of BDA's	20%	60%

INITIATIVE PLAN

WMATA Communications Upgrade

1. **Provide the Name of this Initiative. Describe how this Initiative will address the priority needs and strengths identified through the program and capability evaluation, and prioritization analysis.**

   WMATA Communications Upgrade. This initiative addresses crucial regional interoperability and critical infrastructure protection. The Washington Metropolitan Area Transit Authority (WMATA) Metrorail system is a regional subway system that provides critical transportation capability to the NCR transporting hundreds of thousands of passengers each day. This initiative ensures that public safety first responders (law enforcement, fire and EMS personnel) will have robust communications capacity when incidents occur in the tunnel system. This communications capacity also enhances the ability to protect the infrastructure from disruption and to restore it in a timely manner when disruptions do occur.

2. **Regional Construct: Briefly describe the geographical context of this Initiative.**

   The WMATA Communications Upgrade addresses critical Metrorail tunnel infrastructure that passes through a large number of NCR jurisdictions. Metrorail tunnels pass through Washington, DC, Arlington County and the City of Alexandria in Virginia, and Montgomery and Prince George's Counties in Maryland. The below grade portions of the Metrorail system make up the core of the system and as a result carry the highest number of passengers in the system.

3. **Resources, Processes, and Tools: Identify the resources, processes and tools that already exist, and those that will need to be leveraged, created, or acquired for this Initiative. Briefly consider how these resources, processes and tools may be attained.**

A major strength within NCR is the robust communications interoperability between first responders. This project leverages the existing interoperability strength by addressing a critical regional weakness, extending the interoperability below grade and improving the reliability and availability of the existing system infrastructure. The long term goal of the initiative is to provide reliable comprehensive interoperable public safety communications in the Metrorail system.

This is the second year of a three to four year upgrade project requiring a total of approximately $13M to address all the existing system deficiencies. FY06 funding of $6.1M is being requested to continue the project. FY07 funding in the amount of $2.9M is anticipated to be needed for completion of the upgrade. Depending on variables that cannot be defined at this point it is possible that some of the FY07 funding may need to be re-allocated to FY08 to compete the upgrade; in any case, at present the total funding anticipated to complete the upgrade is $9M, $6.1M in FY06 and $2.9M allocated between FY07 and FY08.

Starting in FY08 maintenance funding will be required to perform semi-annual preventative maintenance on the infrastructure. This maintenance will ensure that the system remains properly tuned.

4. Governance Structure: Describe the high-level governance structure (e.g., management plan, stakeholder involvement) required for successful implementation of this Initiative.

This initiative is being managed through a partnership between the Metropolitan Washington Council of Governments (MWCOG) Fire Chiefs' and WMATA. The COG Fire Chiefs' Committee has tasked the Fire Communications Sub-Committee to work with WMATA to ensure the timely implementation of this project while achieving the project goals. In addition, the Fire Communications Sub-Committee is working with the Police Communications Sub-Committee to ensure that law enforcement needs are being addressed. Committee members are participating in project review meetings and review proposed system designs and schedules to make sure that first responder concerns are being addressed.

WMATA has developed a project team focused on delivering a robust, reliable system that meets the needs of the public safety first responders.

5. Program Management: Explain how this Initiative relates to the overall State homeland security program, and/or how it helps incorporate the three Overarching National Priorities.

The WMATA Communications Upgrade initiative supports the three Overarching National Security Priorities; Implementation of the National Incident Management System and National Response Plan; Expanded Regional Collaboration; and Implementation of the Interim National Infrastructure Protection Plan. NIMS and the NRP are directly supported by providing enhanced communications capabilities in one of the highest threat and most complex environments that exists within the NCR. Absent robust communications capabilities implementation of NIMS in support of the NRP is very difficult.

The initiative leverages and builds upon existing Regional Collaboration by providing a means to utilize the existing interoperability that has been developed within the NCR to mitigate incidents in the Metrorail system.

Infrastructure protection is enhanced by addressing a critical communications vulnerability that exists within the Metrorail system. The Metrorail system is critical to maintaining continuity of government in the NCR due to the critical transportation capacity that it provides. The ability to communicate within the Metrorail system is essential to protecting this critical infrastructure and restoring it to function in the event that an incident does occur within the system.

<table>
<tr><td colspan="2">CONCEPT PAPER

Preliminary Document –
Presented for Review and Discussion</td><td colspan="2">December 12, 2005

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<tr><td>Project Title:</td><td>“Increasing Emergency Generation Reliability and Capability in the National Capital Region (NCR)”</td><td>Estimated Grant Amount</td><td>$543,000</td></tr>
<tr><td>NCR Strategic Goal Alignment:</td><td>Goal 3: Prevention & Mitigation – Obj. 3: Critical Infrastructure. Increase reliability and capability of emergency generator facilities in all jurisdictions in the NCR that support critical government and selected private facilities.

Goal 4: Response & Recovery – Obj’s 3: Resource & 4: Recovery. Enhance availability and reduce failure rates of emergency generator facilities in the NCR; incorporate lessons learned from recent (2003-2005) natural disasters.</td><td>Allowability</td><td>The National Capital Region is the Washington, D.C. Urban Area as set forth in 10 U.S.C. 2674(f)(2). It includes 19 separate political jurisdictions.</td></tr>
<tr><td>Estimated Timeline</td><td>July 1, 2006 - December 31, 2007</td><td>Dependencies and Cost Factors</td><td>Project success depends upon cooperation and access to government and private emergency generator facilities.</td></tr>
<tr><td colspan="4">Problem Statement/Project Description:
There are a few thousand permanent and portable emergency generators in the National Capital Region; the aggregate electric capacity is measured in a few tens of Megawatts. However, when called upon during an emergency (e.g., Hurricane Isabel), a large percentage of these did not operate properly, or at all. This degraded operating capability is true for both publicly (all levels of government) and privately owned units. This degradation significantly impacts the capability of the affected organizations to respond to a terrorist attack or a natural disaster.</td></tr>
<tr><td colspan="4">Preliminary Project Plan (Tasks, Resources, Deliverables, Collaborating Partners, etc.)</td></tr>
<tr><td colspan="2">Tasks</td><td>Collaborating Partners</td><td>Deliverables</td><td>Target Date</td></tr>
<tr><td colspan="2">1. Facilities Survey
Conduct mail/phone/ site visit survey of public and selected</td><td>All federal, state, district, county, city agencies, selected private firms (supporting vulnerable</td><td>Excel database and GIS mapping of all surveyed (publicly and selected privately owned) emergency</td><td>Start: 7/1/06
Complete: 3/31/07
Duration: 9 Months</td></tr>
</table>

private emergency generator facilities. Pilot survey now underway to validate methodology.	populations), and utilities in the NCR.	generating units and their characteristics in each NCR jurisdiction.	
2. **Facility Demo's** Demonstrate capabilities and limits of selected generators/ facilities.	Selected federal, state, district, county, and city agencies and private firms in the NCR.	Updated database (Task 1) with all tested units and their capabilities in each jurisdiction in NCR	**Start:** 10/1/06 **Complete:** 7/31/07 **Duration:** 10 Months
3. **Refueling Strategies** Develop refueling procedures for facilities and integrate into Emerg. Operating Plans	Private fuel supply firms and public agencies in NCR to develop refueling strategies using lessons learned from recent hurricanes.	Documented procedures and organizations involved in refueling for surveyed facilities and integration into NCR public Emergency Operating Plans	**Start:** 1/1/07 **Complete:** 10/31/07 **Duration:** 10 Months
4. **Emergency Generation Security Networks** Investigate potential for government high-reliability generator networks in NCR.	Selected NCR juris- dictions (federal, state, county, and/or city) and utilities.	Conceptual design of high-reliability generator networks in NCR. Technical, financial, administrative, and organizational benefits and costs for such networks.	**Start:** 10/2/06 **Complete:** 9/31/07 **Duration:** 12 Months
5. **Best Practices & Outreach** Identify best practices for O&M and testing of units and equipment. Disseminate results to public agencies and private firms in NCR	NCR facility owners (public and selected private) and industry organizations (equipment manufacturers, suppliers, and associations).	Four workshops (three – public agencies and one – private firms) with distributed materials documenting the public and private best practices. Documentation of recommended and best practices for unit O&M and testing.	**Start:** 4/1/07 **Complete:** 9/31/07 **Duration:** 5 Months
6. Regional Strategy for Emerg. Generator Management Identify strategic actions to support NCR organizations during emergencies.	NCR emergency managers, COG committees, and industry organizations (equipment manufacturers, suppliers, and associations).	Strategic actions and priorities for emergency managers. Identified opportunities for industry support.	**Start:** 1/1/07 **Complete:** 10/31/07 **Duration:** 10 Months

Project Performance Measures	**Baseline Value**	**Target Value**
1. Survey Responses: Mail-only questionnaire responses normally average up to 30 percent. Mail w/ follow up telephone calls and selected site visits will increase response level.	30 percent	85 percent
2. Facility/unit demonstration of engine/generator capabilities and limitations.	15 units – various sizes & owners	Statistically significant: U≥ UUU15 units
3. Conceptual design and costs and benefits of high-reliability security network(s).	1 network	3 networks (city, county, state)

4. Refueling strategies and procedures integrated into public Emergency Operating Plans	5 jurisdictions	19 jurisdictions
5. Public (all levels of government) and industry workshops	4 workshops	4 workshops
6. NCR Emergency Generator Management Strategy – Participants	5 jurisdictions 2 suppliers	12 jurisdictions 6 suppliers

INITIATIVE PLAN

Increasing Emergency Generation Reliability and Capability in the National Capital Region (NCR)

1. Provide the Name of this Initiative. Describe how this Initiative will address the priority needs and strengths identified through the program and capability evaluation, and prioritization analysis.

Initiative Title: "Increasing Emergency Generation Reliability and Capability in the National Capital Region (NCR)"

Address Needs & Priorities: This Initiative addresses issues that were raised in all five Resource areas – People; Equipment; Training; Exercise/Evaluation; and Plans, Policies, and Procedures – of the Critical Infrastructure Protection (CIP) segment in the NCR's Capability Review (1/6-11/06). Emergency generation capability directly supports all the eight Priority Capabilities listed in the *State Homeland Security Program and Capability Review Guidebook (Volume 1)* and this Initiative directly addresses issues raised in the *Additional Capabilities* "Protect Mission Area Target Capabilities" area of the *Guidebook: Critical Infrastructure Protection (CIP).* All critical government agencies and functions depend upon electric power to conduct their mission and when utility service is interrupted, emergency generation equipment continues to support each organization's mission in the affected area for natural, technical, or human-initiated disaster.

This Initiative also addresses a number of infrastructure weaknesses that have been identified in various NCR infrastructure security and hurricane and Florida hurricane impact studies conducted between mid-2000 and the present by the proposed project team members.

2. Regional Construct: Briefly describe the geographical context of this Initiative.

Geographic Area: This Initiative involves a number of activities in all 19 federal, state, District, county, and city jurisdictions in Washington, D.C. Urban Area, which consists of the National Capital Region, as defined in 10 U.S.C. 2674(f)(2). This is one of the designated Candidate Urban Areas in the UASI FY05 program.

3. Resources, Processes, and Tools: Identify the resources, processes and tools that already exist, and those that will need to be leveraged, created, or acquired for this Initiative. Briefly consider how these resources, processes and tools may be attained.

Resources & Tools: This Initiative's success depends upon the cooperation and access to government (at all levels) and specific private emergency generator facilities in the NCR. Support to gain access will be sought through existing organizations such as the COG R-ESF 5 and 12 Committees/Task Forces, the Northern Virginia Emergency Managers' Council, the federal General Services Administration. In the private sector, support and assistance will be sought from relevant professional associations, government human services agencies, medical organizations, and utilities serving the NCR.

4. Governance Structure: Describe the high-level governance structure (e.g., management plan, stakeholder involvement) required for successful implementation of this Initiative.

High-Level Governance: Members of COG R-ESF 5 and 12 Committees/Task Forces and relevant professional associations will be invited to participate directly in a project advisory committee that will review the technical and administrative progress and direction of the Initiative. Presentations on the Initiative's progress will also be presented at regular COG R-ESF 5 and 12 committee meetings to obtain additional feedback and suggestions.

5. Program Management: Explain how the Initiative relates to the overall State homeland security program, and/how it helps incorporate the three Overarching National Priorities.

Expand Regional Collaboration: The Initiative supports this National Priority by collecting and integrating information regarding emergency generator installations across the federal government, two states and the District, five counties, and 10 independent cities all in the National Capital Region. The results of the Initiative will be integrated into Emergency Operations Centers and Emergency Operating Plans in all the jurisdictions to enhance security and capability of critical public and private functions.

Implement Interim NIPP: The Initiative supports this National Priority by enhancing the capability, reliability, and security of emergency generation facilities installed or available in the NCR and thereby enhancing critical government and private facilities' capability to operate during an emergency, regardless of cause. It also increases the efficient use of already installed and available emergency generation resources for critical infrastructures and key resources (CI/KRs) by interacting directly with both public and private sector organizations and sharing best practices and expertise, regardless of where it was developed.

Implement NIMS & NRP: The Initiative directly supports by bringing to a higher level the capabilities and limitations of this resource that is generally estimated to be measured in the 10s to 100s of Megawatts of installed capacity. This is an important infrastructure resource that should be brought to bear during emergencies, either natural or man-made. However, as Hurricane Isabel and other local natural disasters have demonstrated, a significant number of these units a) do not start when called upon, b) fail in less than one-hour if they do start, or 3) refueling provisions have not been put in place. Because of these situations, response to emergencies by both critical government

and private organizations are either hampered or knocked out altogether, thus negatively impacting their capability to respond.

<table>
<tr><td colspan="2">CONCEPT PAPER

Preliminary Document –
Presented for Review and Discussion</td><td colspan="2">January 24, 2006

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<tr><td>Project Title:</td><td>Clean, Reliable Back-Up Portable Generation for Critical Infrastructures within the National Capital Region</td><td>Estimated Grant Amount</td><td>The full cost will not exceed $1,500,000.</td></tr>
<tr><td>NCR Strategic Goal Alignment:</td><td>NCR Goal 3: An enduring capability to protect the NCR by preventing or mitigating “all-hazards” threats or events.
Objectives:
• Develop and sustain common, mullti-disciplinary standards for planning, equipping, operating, and (cross-jurisdictional) exercising to maximize prevention and mitigation capabilities across the NCR
• Strengthen the gathering, fusion, analysis, and exchange of multi-discipline strategic and tactical information and data for shared situational awareness
• Employ a performance and risk based approach to critical infrastructure protection across the NCR, targeting resources where the threat, vulnerability, and impact are greatest.
NCR Goal 4: A sustaining capacity to respond to and recover from “all hazards” events across the NCR
Objectives:
• Develop, adopt and implement integrated plans, policies, and standards to facilitate response and recovery.
• Ensure the capacity to operate multi-level coordinated response and recovery.
• Ensure adequate and effective sharing of resources
• Comprehensively identify long-term recovery issues.</td><td>Allowability</td><td>UASI Equipment
Category: Power Equipment</td></tr>
</table>

Estimated Timeline	18 Months from start	**Dependencies and Cost Factors:**	The total project cost would depend on the facility or application deemed most appropriate for alterative energy system demonstration.

Problem Statement/Project Description:

The National Capital Region (NCR) is endowed with structures that are considered critical to the security of the entire Country. These critical infrastructures are essential for public safety and for the effective operation of the public and private sectors during emergencies. Events during the past year have also underscored the staggering social and economic impacts that natural disasters and terrorism can have on people and communities throughout the world.

Moreover, this hurricane season has demonstrated the devastating impact these events can have on our energy infrastructure. Whether it was long lines at gasoline stations who had no power for their pumps or the inability to power for several days critical infrastructure, including water, sewer and telecommunications systems, regions did not have enough back up power to service their needs until utility crews could complete restoration efforts.

Although many of the critical infrastructures within the NCR have emergency generators, most of these generators are running on diesel. Experience from hurricanes Katrina and Rita has shown the difficulties in obtaining diesel or any fossil fuel during prolonged energy emergencies. Thus, making diesel run back-up generators an unreliable source of energy during prolonged energy emergencies. In order for critical facilities to continue their operations during emergencies it is necessary to assure that they have back-up generation that utilizes readily available and reliable energy sources such as solar and wind energy, and fuel cells.

The project would create a demonstration project for the use of alternative energy systems—whether by solar, wind or fuel cell—and implement its use at a critical facility or location. Potential projects include but are not limited to:

- Photovoltaic cells along evacuation routes to ensure continuous power during evacuations
- Fuel cell generators at key switching and cell towers to ensure communications
- Photovoltaic powered generators at hospitals and facilities that take care of our most vulnerable populations.

These generators would provide a quiet, non-polluting alternative to diesel generators to nursing home or hospital patients.

Another aspect of the project is to create a public private partnership with a major oil company to do a pilot project on using alternate-powered generators at a gasoline station in the NCR. This pilot project could demonstrate the feasibility of using photovoltaic or fuel cell generators so it can be replicated throughout the region and the nation.

This project aligns with NCR goals 3 and 4. The selected projects for implementation would all be based on risk reduction potential to critical regional infrastructure in the NCR. As such, the project would reflect the most important locations to reduce risk and develop a sustained capacity to respond and recover from all hazards or events across the NCR.

Preliminary Project Plan (Tasks, Resources, Deliverables, Collaborating Partners, etc.)

Tasks	Collaborating Partners	Deliverables	Target Date
1. Develop detailed work program	-COG and Local Governments -District of Columbia Energy Office Clean Energy Group -Selected Local Utilities -James Lee Witt Associates -National Solar Industries Association -National Renewable Association	Detailed Work Program	5%
2. Develop Evaluation Criteria, Standards for Project Assessment		Evaluation Criteria and Standards	5%
3. Conduct technical		Technical Document	5%

literature review			
4. Identification of BMPs in the field and Prepare BMP Practice Guide		BMP Guide	10%
5. Identify planning, training, exercise, and/or equipment needed to address the problem and identify projects for demonstration implementation		Workshop, training, Work	25%
6. Procure Equipment		Equipment	5%
7. Evaluate In Field Performance		Technical Document	15%
8. Conduct training and workshop on demonstration findings		Training materials	25%
9. Prepare final report		Final report	5%

Project Performance Measures	Baseline Value	Target Value
	0	5%
1. Research and Prepare BMP Guide		
2. Determine information and application requirements to install alternative sources of energy supply		

Project Performance Measures	Baseline Value	Target Value
3. Identify and obtain agreements from parties to install equipment		
4. Conduct Seminar of Applied Demonstrations		
5. Number of Critical Locations demonstrated		

INITIATIVE PLAN

Alternative Energy Systems Technology for Homeland Security Applications

1. Provide the Name of this Initiative. Describe how this Initiative will address the priority needs and strengths identified through the program and capability evaluation, and prioritization analysis.

Alternative Energy Systems Technology for Homeland Security Applications

The NCR has an extensive back-up generation capability in both the public and private sectors, with subsequent requirements. There is a role that alternative sources of power can fulfill in energy contingency and emergency planning. For example, Hurricane Katrina and Rita demonstrated that

solar technology was very beneficial. Solar power was the first line of defense to maintain hospital and medical supplies. Systems that depended upon fossil fuel were not operational simply because there was no fuel. Diversification of power sources for emergency planning is beneficial.

The program and capability evaluation identified gaps in critical infrastructure that relies solely on the electric grid system. A key aspect of this gap in critical infrastructure is backup power and its role in restoring power quickly. Throughout the capability review various references to gaps in planning and information were noted. Among the specific gaps that would assist the region in rapid recovery are the following:

- Develop strategies and procedures that do not rely solely on grid system
- Need to test back-up generators more regularly also testing protocols need to be enforced.
- Need to inventory generator (where are they, what can they support)
- In place emergency generation equipment 1) inventory with details 2) maintenance 3) upkeep in operating mode 4) fuel source(s)/re-fueling
- Need regional plan for generators to move fuel
- Mandate of COOP/COG plan for critical infrastructure in the NCR (private sector)
- Need for regional methodology for prioritizing risk across CIP sectors within NCR (4)
- Unaware of plans for a complete break –down of the critical infrastructure

This initiative will be developed in 2 phases. Phase 1 is the planning phase during which time an inventory of back power generators in both the public and private sectors will be conducted. Phase 2 is application and demonstration of technologies. Both phases are necessary in order to meet our national goal of response and recovery by enhancing our ability to rapidly restore electric service to critical infrastructure facilities in the event of terrorism or a natural event.

2. Regional Construct: Briefly describe the geographical context of this Initiative.

This initiative will provide funding to demonstrate the application of various alternative system technologies for backup power for selected critical infrastructure facilities. The application and demonstrations for this project is the NCR region defined by law.

3. Resources, Processes, and Tools: Identify the resources, processes and tools that already exist, and those that will need to be leveraged, created, or acquired for this Initiative. Briefly consider how these resources, processes and tools may be attained.

There are hundreds of critical infrastructure facilities, ranging from hospitals to pumping stations that support the estimated 6 million people in the NCR. To increase our capacity for critical infrastructure recovery this initiative brings us closer to achieving our goal to sustain a capacity to respond and recover from “all hazards” events across the NCR.

4. Governance Structure: Describe the high-level governance structure (e.g., management plan, stakeholder involvement) required for successful implementation of this Initiative.

The existing Council of Governments Energy Policy Advisory Committee’s ESP#12 will govern this initiate. The Committee consists of representation from the local and governments, state energy and regulatory agencies, utilities, and energy distributors. A detailed work program will be approved by

the EPAC, with input from all R-ESFs. The EPAC reports to the Chief Administrative Officers Committee and the COG Board of Directors.

5. Program Management: Explain how the Initiative relates to the overall State homeland security program, and/how it helps incorporate the three Overarching National Priorities.

Planning is the foundation on which all capabilities are developed and enhanced. Planning is a mechanism to develop, validate, and maintain plans, policies, and procedures describing how the entire response spectrum will coordinate and manage resources to prevent, protect, respond to and recover from all disasters. Planning processes incorporate hazard analysis and risk assessment. Planning support all of the Emergency Support Functions and all response agencies including Federal, State and local assets. Planning ensures implementation of the National Incident Management System coordinates with the Federal Response Plan and develops regional capabilities.

<table>
<tr><td colspan="2">CONCEPT PAPER

Preliminary Document –
Presented for Review and Discussion</td><td colspan="2">January 27, 2006

George R. Gacser
Manager-Emergency Management
Potomac Electric Power Co. [PEPCO]

701 Ninth St. NW
Washington, DC 20068
301-469-5203
grgacser@pepco.com</td></tr>
<tr><td>Project Title:</td><td>Rapid Response Mobile Transformer

[RESF-12 Energy]</td><td>Estimated Grant Amount</td><td>$2,500,000</td></tr>
<tr><td>NCR Strategic Goal Alignment:</td><td>Goal 4, Response & Recovery: Enhance the ability to rapidly restore electric service to critical infrastructure in the event of a terrorist attack on electric infrastructure in the National Capitol Region.</td><td>Allowability</td><td>UASI: Enhancement to ability to respond and recover from an act of terrorism.</td></tr>
<tr><td>Estimated Timeline</td><td>21 months from award of grant</td><td>Dependencies and Cost Factors:</td><td>Pepco will provide ongoing O&M of equipment at appx. $10,000/year.</td></tr>
<tr><td colspan="4">Problem Statement/Project Description:
The National Capital Region is supplied electricity by several major utilities including Pepco, Dominion Virginia Power, Baltimore Gas & Electric, and Allegheny Power.

The loss of an entire substation or loss of major power transformers serving such a substation is difficult to overcome. For example, Con Edison experienced damaged and destroyed substations as a result of the attacks of September 11th in New York City. This concept paper calls for a large rapid response mobile transformer that could be deployed, set up and energized in less than 32 hours. The rapid recovery mobile transformers would be coupled to existing mobile switchgear to re-supply the electric feeders providing service to critical network and high voltage urban area services. Of special concern are urban area business and government districts where critical government agencies and their support services are located. Electric transmission and distribution system in urban areas are typically underground. Electric service to urban area customers is supplied from the network or high voltage systems to provide a redundant and reliable supply of energy. Switching of underground network and high voltage customers to other supply circuits is time consuming and often times not possible.</td></tr>
</table>

A rapidly deployable mobile transformer with a primary voltage of 69 kV is proposed. The transformer secondary voltages of 13.8 kV would contain a wide range of taps for application at multiple locations. The proposed primary and secondary voltages are utility standards allowing the possibility of the transformers use at other regional electric utilities and large critical infrastructure customers within the NCR with similar ratings. Presently there are not mobile transformers that are large enough to quickly re-supply a substation. Existing spare transformers are large and can take several weeks to move and hundreds of labor hours to install. Recovery of electric service to the network and high voltage customers in a timely manner could be difficult due to problems with switching and tying of underground circuits.

Rapid recovery mobile transformers that are "road ready" on trailers for deployment could be moved, set up and energized in less than 32 hours. The weights and dimensions would be kept within or below government limits that require special permitting. Additionally, several federal, state and local critical infrastructure facilities such as water and sewage treatment, military facilities and multi building campus type facilities utilize equipment of this class in the National Capital Region.

Maintenance and storage of the transformers would be provided by Pepco. The units could be made available to other regional utilities or similar high voltage classes of customers under a "Memorandum of Understanding" agreement and appropriate terms. The use of the units would be reserved for actual or pre contingency emergencies.

Preliminary Project Plan (Tasks, Resources, Deliverables, Collaborating Partners, etc.)

Task(s)	Owner(s) or Collaborating Partners	Deliverable(s)	Target Date(s) or Level of Effort
1. Specification Development for. Transformer	Pepco, ESP's with Similar Class Equipment	Specification, Bid Packages	Six Weeks
2. Award Bids to Manufacturer	Pepco, Manufacturers	Award Package, Contract	Ten Weeks
3. Transformer Manufacture	Manufacturers	Rapid Deployment Transformer Unit	Sixty-Four Weeks
4. Testing & Receipt of Transformer	Pepco	Rapid Deployment Transformer	Eight Weeks
5. Maintenance	Pepco		Annual[Ongoing]

Project Performance Measures	Baseline Value	Target Value
1. Budget Control	Under Budget	Monthly Review
2. Maintenance	Manufacturer Spec.	Best Practices
3. Deployment and Installations of Replacement Transformer to Substation [Standard Trans. vs. Rapid Response Trans.]	7 Weeks	32 Hours

INITIATIVE PLAN

RAPID RESPONSE MOBILE TRANSFORMER [RESF-12 Energy]

1. Provide the Name of this Initiative. Describe how this Initiative will address the priority needs and strengths identified through the program and capability evaluation, and prioritization analysis.

RAPID RESPONSE MOBILE TRANSFORMER [RESF-12 Energy]

This initiative will allow for rapid recovery capability from a catastrophic incident at a critical node in the electric system, specifically the electric substation. As this infrastructure is in public space its protection is problematic. Equipment to facilitate rapid recovery from a direct attack or collateral damage will help ensure continuity of electric service and government operations in the impacted area. This initiative addresses Critical Infrastructure Protection and rapid recovery from a potential man made or natural disaster event. This initiative also helps ensure the continuity of government and other essential service provider operations**.**

2. Regional Construct: Briefly describe the geographical context of this Initiative.

This initiative has broad application in the National Capital Region. Specifically several regional utilities can utilize the functionality of this initiative. Also, critical government and private high voltage facilities providing essential services to multiple jurisdictions in the NCR could utilize the rapid response mobile transformer. Such facilities include water and sewage treatment as well as defense facilities essential to National and regional protection with similar equipment ratings.

3. Resources, Processes, and Tools: Identify the resources, processes and tools that already exist, and those that will need to be leveraged, created, or acquired for this Initiative. Briefly consider how these resources, processes and tools may be attained.

Existing utility resources will be utilized to support the execution of this initiative. Utility service providers are familiar are experienced in the efficient and reliable operation of the electric system and have experience in the development and procurement of technologies and equipment to facilitate that operation and continued reliability. Experienced utility resources can be utilized to maintain and deploy the Rapid Response Mobile Transformer.

4. Governance Structure: Describe the high-level governance structure (e.g., management plan, stakeholder involvement) required for successful implementation of this Initiative.

Implementation will be achieved using standard business project management and procurement processes. Specification and bid packages will be developed with input from key stakeholders. Solicitations will be received and evaluated on price and qualification resulting in selection of the lowest, best qualified bid. Construction progress will be monitored and testing completed prior to acceptance of the unit.

5. Program Management: Explain how this Initiative relates to the overall State homeland security program, and/or how it helps incorporate the three Overarching National Priorities.

This initiative will incorporate two of the Overarching National Priorities. It will result in **Expanded Regional Collaboration** in that electric utilities are multi jurisdictional entities and frequently share resources among themselves in an emergency. This project will ensure the rapid recovery of critical electric system infrastructure from a directed attack or collateral damage to support continuity of government or other critical operations. This initiative creates a public private partnership which meets a critical need for both parties.

Additionally this initiative will help implement the **Interim National Infrastructure Protection Plan** in that it will strengthen the ability to restore service to critical and essential services in the event of a directed attack against or collateral damage to critical electric system infrastructure.

This project will also achieve regional **Goal #4, Response and Recovery** in that it will enhance the ability to rapidly restore electric service to critical infrastructure in the event on a directed attack in the National Capital Region.

CONCEPT PAPER

Critical Infrastructure Protection Program

Estimated Timeline: Present to September 30th, 2006, and beyond, indefinite future

Describe regional Problem/Deficiency in Terrorism Prevention, Preparedness, Response, and/or Recovery that Application will Address:

The National Capitol Region (NCR) is home to Critical Infrastructure and Key Assets (CI/KA) that are both critical and symbolic to both the District of Columbia and the United States. Development of a Critical Infrastructure Protection Program within the National Capitol Region, which allows for the seamless communication of information across jurisdictions is critical to insuring a comprehensive approach to the protection of these sites, as well as a rapid response and recovery plan in the event of an incident within the NCR. Currently, the NCR does not have an established and staffed Critical Infrastructure Protection Program as does many other UASI Regions throughout the country. This deficiency has affected the ability to asses, collect, store and share CI/KA information as mandated by Homeland Security Presidential Directive 7 (HSPD-7), and to share this information with the surrounding jurisdictions in the event of an incident.

The development of a coordinated Critical Infrastructure Protection Program within the National Capitol Region that will allow for an analysis and information-sharing program within the NCR, that encompasses and prioritizes not only governmental infrastructure, but NGO's, private organizations and community infrastructure, is key to preventing, preparing and the mitigation of the "all hazards" threat against these facilities.

Identify Regional Planning, Training, Exercises, and/or Equipment Needed and Explain how it/they will Address Problem/Deficiency:

1. Development of assessment protocols and guidelines accepted by all NCR partners that will allow for the collection of the same Site Assessment Visit (SAV) information across the region, as well as the rapid and seamless information sharing across the region that will allow for the necessary risk assessments, intelligence analysis, increases site security, response and recovery for these identified CI/KA.

2. Ensure that designated personnel within the NCR Critical Infrastructure Working Group (CIWG) have received the necessary security clearances to allow unrestricted information sharing within the NCR.

3. Ensure that designated members of the NCR's Critical Infrastructure Working Group undergo training and certification in the Protection of Critical Infrastructure Information (PCII) that will allow for the collection, retention and security of this information with both the NCR and Federal partners. Without this certification and training, information sharing of sensitive information across the NCR and among Federal agencies cannot exist.

4. Obtain secure communications equipment required for the storage and exchange of protected critical infrastructure information such a secure fax, phone lines, secure internet (CiperNet) and cell phones. Without the certified communications equipment, PCII certification cannot exist.

5. Procure necessary assessment technology-i.e. Cameras, laptops, printers, office space, GIS mapping, and databases similar to those in use by Maryland (such as MEEGAN & EMMA) which will to allow for effective and efficient information gathering and exchange.

6. Ensure that all members receive the necessary training to conduct and prepare the necessary SAV's for use within the NCR, to include databases such as those in use in the NCR to include MEEGAN & EMMA).

Provide Estimated Cost and Long Term Funding Strategy:

1. Retain contractor to conduct assessment of NCR to assist in the development of assessment protocols and guidelines accepted by all NCR partners, to include the development of a secured database, such as MEEGAN & EMMA, which will allow for rapid exchange of information: $800,000

2. Retain contractor or outside vendor to conduct an assessment, training and protocol preparation for the NCR CIWG to obtain certification in the Protection of Critical Infrastructure Information (PCII), as required by DHS $350,000

3. Obtain secure communications equipment required for the storage and exchange of protected critical infrastructure information such a secure fax, phone lines, secure internet (CiperNet), secure computer storage equipment and cell phones. Without the certified communications equipment, PCII certification cannot exist $300,000

4. Procure necessary assessment technology-i.e. Cameras, laptops, printers, office space, GIS mapping, and databases which will allow for effective and efficient information gathering and exchange $ 350,000.

5. Contractor and overtime costs to ensure that all CIWG members receive the necessary training to conduct and prepare the necessary SAV's for use within the NCR, to include databases, and SAV equipment. $150,000

Dependencies and Cost Factors: Time delays for necessary security clearance of personnel may create unnecessary setbacks, Standard cost increases and inflation, delays in the production of secure communications equipment due to current high demand

Provide Names and Contact Information for Individuals with Appropriate Expertise who will Prepare and/or Assist in Preparing Application:

Commander Cathy Lanier (cathy.lanier@dc.gov)
Captain Jeffrey Herold (Jeffrey.herold@dc.gov)
Lieutenant Steven Sund (steven.sund@dc.gov)
Special Operations Division
Metropolitan Police Department, 300 Indiana Avenue N.W., Washington D.C. 20001
(202) 671-6505

INITIATIVE PLAN

Critical Infrastructure Protection Program

1. **Provide the Name of this Initiative. Describe how this Initiative will address the priority needs and strengths identified through the program and capability evaluation, and prioritization analysis.**

   The National Capitol Region (NCR) is home to Critical Infrastructure and Key Assets (CI/KA) that are both critical and symbolic to both the District of Columbia and the United States. Development of a Critical Infrastructure Protection Program within the District of Columbia, which allows for the seamless communication of information with our NCR partners, is critical to insuring a comprehensive approach to the protection of these sites, as well as a rapid response and recovery plan in the event of an incident within the NCR.

2. **Regional Construct: Briefly describe the geographical context of this Initiative.**

   Currently, the National Capitol Region does not have a unified Critical Infrastructure Protection Program that ensures consistency across the region. This deficiency hinders our ability to efficiently asses, collect, store and share CI/KA information as mandated by Homeland Security Presidential Directive 7 (HSPD-7).

3. **Resources, Processes, and Tools: Identify the resources, processes and tools that already exist, and those that will need to be leveraged, created, or acquired for this Initiative. Briefly consider how these resources, processes and tools may be attained.**

   The development of a coordinated Critical Infrastructure Protection Program within the National Capitol Region that will allow for an analysis and information-sharing program within the NCR, that encompasses and prioritizes not only governmental infrastructure, but NGO's, private organizations and community infrastructure, is key to preventing, preparing and the mitigation of the "all hazards" threat against these facilities.

   Development of assessment protocols and guidelines accepted by all NCR partners that will allow for the collection of the same Site Assessment Visit (SAV) information across the region, as well as the rapid and seamless information sharing across the region that will allow for the necessary risk assessments, intelligence analysis, increases site security, response and recovery for these identified CI/KA.

The ability for all jurisdictions within the region to obtain the necessary training and certification in the Protection of Critical Infrastructure Information (PCII) will significantly improve the collection, retention and security of this information with both the NCR and Federal partners. Without this certification and training, information sharing of sensitive data across the NCR and among Federal agencies cannot exist.

Additionally, the successful implementation of this initiative requires the procurement of secure communications equipment, the upgrading of current technologies, as it relates to mapping capabilities and software, and the acquisition of the necessary training to conduct and prepare the necessary SAV's for use within the NCR.

4. **Governance Structure: Describe the high-level governance structure (e.g., management plan, stakeholder involvement) required for successful implementation of this Initiative.**

   The Regional CIP Program would be governed through a multi-jurisdictional committee administered through the Council of Governments.

5. **Program Management: Explain how this Initiative relates to the overall State homeland security program, and/or how it helps incorporate the three Overarching National Priorities.**

   The Critical Infrastructure Program would be in cooperation with various agencies within the city and throughout the NCR. This will ensure that the program supports the respective local response plans, the National Response Plan (NRP) as well as Regional Plans, which will be necessary to secure the unique infrastructure of the National Capitol Region. This program will be in direct support of the National Infrastructure Protection Program (NIPP)

CONCEPT PAPER ***Preliminary Document – Presented for Review and Discussion***		December 10, 2005 Jeff Delinski, Captain, Metro Transit Police Department 600 5th Street NW, Washington DC, 20001 (202-962-2411) Jdelinski@wmata.com	
Project Title:	**Managing Metro Emergencies I (Awareness Level)**	**Estimated Grant Amount**	*$124,500*
NCR Strategic Goal Alignment:	*Managing Metro Emergencies supports NCR Strategic Goal #3 Mitigation and #4 Response & Recovery* *This awareness-level course will provide 600 NCR first responders the knowledge, skills and abilities to manage Metro emergencies by using the five tactical priorities of Mitigation, Evacuation, Transportation, Recovery, and Overall Return to Service.*	**Allowability**	*Allowed under UASI guidelines and ODP approved*
Estimated Timeline	*April 3, 2006 thru November 30, 2006*	**Dependencies and Cost Factors:**	*Cost of contractor* *Instructor's time schedule* *Cost of materials*

Preliminary Project Plan (Tasks, Resources, Deliverables, Collaborating Partners, etc.)			
Task(s)	**Owner(s) or Collaborating Partners**	**Deliverable(s)**	**Target Date(s) or Level of Effort**
1. Obtain budget approval from WMATA Board	Metro Transit Police, Office of Safety and Risk Protection	Board resolution	February 2006
2. Identify stakeholders and schedule training	NCR first responders	Scheduling and training locations	February 2006
3. Initiate and award training contract	WMATA Office of Procurement	Contract	April 3, 2006
4. Procure course materials	Contractor	600 manuals	April 3, 2006
5. Procure course materials	Contractor	600 quick reference guides	April 3, 2006
6. Conduct classes	Contractor	In-class training	May 1 – Nov. 30, 2006

Project Performance Measures	**Baseline Value**	**Target Value**
1. First Responders have the knowledge, skills and abilities to manage Metro emergencies by using the five tactical priorities of Mitigation, Evacuation, Transportation, Recovery, and Overall Return to Service.	1429	2029

INITIATIVE PLAN

Managing Metro Emergencies I (Awareness Level)

1. Provide the Name of this Initiative. Describe how this Initiative will address the priority needs and strengths identified through the program and capability evaluation, and prioritization analysis.

The Managing Metro Emergencies Training Course (Awareness Level) was developed after a series of major Metro service disruptions to include tunnel fires, a train collision and persons struck by a train. This incident, coupled with the looming threat of terrorism, requires NCR first responders to be better trained in effectively managing Metro-specific emergencies. The subject matter consists of:

- Metro's Importance to the NCR
- Nature of Metro Emergencies
- Future Threats to the System
- Emergency Management Concepts
- Weapons of Mass Destruction
- Emergency Traffic Control

This training course addresses the NCR's Program and Capability needs of Critical Infrastructure, Intelligence/Information Sharing Dissemination, and WMD/Hazardous Materials Response and Decontamination.

2. Regional Construct: Briefly describe the geographical context of this Initiative.

The Managing Metro Emergencies Training Course (Awareness Level) is designed for all National Capital Area first responders who are expected to take action on the scene of a major Metro service disruption. Included are: Federal agencies, state and local law enforcement, firefighters, Metro operations personnel and department of transportation personnel. To date, 1500 first responders representing 45 agencies have taken this course. The 2006 UASI Grant proposal will allow another 600 first responders to receive this important training.

3. Resources, Processes, and Tools: Identify the resources, processes and tools that already exist, and those that will need to be leveraged, created, or acquired for this Initiative. Briefly consider how these resources, processes and tools may be attained.

The Managing Metro Emergencies Training Course (Awareness Level) was created in 2005 under the UASI Grant, therefore, there are no development costs associated with this proposal. The resources associated with this proposal are:

- 600 Training Manuals
- 600 Quick Reference Guides
- One instructor to teach 30 classes

The total costs associated with this proposal are approximately $124,500. The resources may be attained through either a competitive bid or sole source process using outside professional and technical contractors.

4. Governance Structure: Describe the high-level governance structure (e.g., management plan, stakeholder involvement) required for successful implementation of this Initiative.

Polly Hanson, Chief of the Metro Transit Police, appoints the program manager who oversees the grant process, contract award, payments, equipment, scheduling, marketing, registration process, materials, evaluations, and certificates. Monthly reports are filed with DC Office of Homeland Security Program Manger, Mark Yader.

Stakeholders participate in seven group problem solving exercises throughout the course and share their viewpoints and finding with the entire class. Class discussions are encouraged and individuals have an opportunity to share experiences and state their position on particular topics. Upon completion of the Course, participants complete a two page (20 question) written evaluation, which is reviewed by the instructor, contractor and program manager. If necessary, adjustments are then made to the program.

5. Program Management: Explain how this Initiative relates to the overall State homeland security program, and/or how it helps incorporate the three Overarching National Priorities.

The Managing Metro Emergencies Training Course (Awareness Level) supports NCR Strategic Goal #3 Mitigation and #4 Response and Recovery. It also supports the National Strategy for Homeland Security Priority #3 of Minimize the damage and recover from attacks that may occur. The intent is to

also create a "cultural shift" among first responders through collaboration, information sharing, threat recognition, risk management and intervention.

This Awareness-Level course will provide 600 NCR first responders with the knowledge, skills and abilities to manage Metro emergencies by using the five tactical priorities of Mitigation, Evaluation, Transportation of the Evacuated, Recovery (at the initial level), and Overall Return to Service.

CONCEPT PAPER ***Preliminary Document – Presented for Review and Discussion***		December 15, 2005 Jeff Delinski, Captain, Metro Transit Police Department 600 5th Street NW, Washington DC, 20001 (202-962-2411) Jdelinski@wmata.com	
Project Title:	**Managing Metro Emergencies II (Operations Level)**	**Estimated Grant Amount**	*$210,750*
NCR Strategic Goal Alignment:	*Managing Metro Emergencies II supports NCR Strategic Goal #3 Mitigation and #4 Response & Recovery* *This operations-level course will provide 600 NCR first responders scenario based training on the five tactical priorities of Mitigation, Evacuation, Transportation, Recovery, and Overall Return to Service.*	**Allowability**	*Allowed under UASI guidelines and ODP approved*
Estimated Timeline	*April 3, 2006 thru November 30, 2006*	**Dependencies and Cost Factors:**	*Cost of contractor* *Instructor's time schedule* *Cost of equipment*

Project Description:

This operations-level training course is designed for all first responders who are likely to take action during a Metro emergency. The course focuses on reinforcing and applying the five tactical priorities of Mitigation, Evacuation, Transporting, Recovery and Overall Return to Service to training exercises. The training exercises entail multiple improvised explosive device explosions on Metrorail and Metrobus. Participants will practice the National Incident Management System, Incident Command, Chemical Emergency Management Information System (CEMIS), Emergency Traffic Control, and rescue and recovery from tunnels, elevated structures, and grade level facilities.

Preliminary Project Plan (Tasks, Resources, Deliverables, Collaborating Partners, etc.)

Task(s)	Owner(s) or Collaborating Partners	Deliverable(s)	Target Date(s) or Level of Effort
1. Equipment	Contractor	CEMIS Laptop & Software	March 1, 2006
2. Equipment	Contractor	Powered Rescue Trolley	March 1, 2006
3. Equipment	Contractor	Emergency Tunnel Evacuation Cart	March 1, 2006
4. Equipment	Contractor	2 Warning Strobe Alarm Devices	March 1, 2006
5. Instructors	Contractor	Scenario based training exercises	April 3 – Nov. 30, 2006

Project Performance Measures	Baseline Value	Target Value
1. First Responders have the knowledge, skills and abilities to manage Metro emergencies by using the five tactical priorities of Mitigation, Evacuation, Transportation, Recovery, and Overall Return to Service.		600
2. Participants will receive a written evaluation of their performance during the exercises. Upon completion of the exercises, participants as a whole will be debriefed. The scenarios will be reviewed and the participants will receive verbal feedback from the instructors.	Acceptable Performance	Exceeds Expectations

INITIATIVE PLAN

Managing Metro Emergencies II (Operations Level)

1. **Provide the Name of this Initiative. Describe how this Initiative will address the priority needs and strengths identified through the program and capability evaluation, and prioritization analysis.**

   The Managing Metro Emergencies II Training Course (Operations Level) was developed in response to the overwhelming success of the Awareness Level course that was presented before 1,500 of the NCR's first responders representing 45 agencies. From these 65 training sessions, several requests were made for continued Metro related training, particularly, scenario based training exercises that allow area first responders to practice the tactical priorities and procedures learned at the awareness level. The subject matter consists of:

   - Metro's Operating Strategies
   - System Evacuation Procedures (tunnels & elevated structures)
   - Powered Rescue Trolley Demonstration
   - Chemical Emergency Management Information System (CEMIS)
   - NIMS Training Exercise (Multiple IED detonations)

   This training course addresses the NCR's Program and Capability needs of Critical Infrastructure, Explosive Device Response Operations, Intelligence/Information Sharing Dissemination, and WMD/Hazardous Materials Response and Decontamination.

2. **Regional Construct: Briefly describe the geographical context of this Initiative.**

   The Managing Metro Emergencies II Training Course (Operations Level) is designed for all National Capital Area first responders who are expected to take action on the scene of a major Metro service disruption. Included are: Federal agencies, state and local law enforcement, firefighters, Metro operations personnel and department of transportation personnel. This is a new initiative. The 2006 UASI Grant proposal will allow 600 first responders to receive this important training.

3. **Resources, Processes, and Tools: Identify the resources, processes and tools that already exist, and those that will need to be leveraged, created, or acquired for this Initiative. Briefly consider how these resources, processes and tools may be attained.**

The resources associated with this proposal are:

- CEMIS Laptop & Software
- Powered Rescue Trolley
- Emergency Tunnel Evacuation Cart
- 2 Warning Strobe Alarm Devices
- 2 Instructors for 30 training classes

The total costs associated with this proposal are approximately $210,750. The resources may be attained through either a competitive bid or sole source process using outside professional and technical contractors.

4. Governance Structure: Describe the high-level governance structure (e.g., management plan, stakeholder involvement) required for successful implementation of this Initiative.

Polly Hanson, Chief of the Metro Transit Police, appoints the program manager who oversees the grant process, contract award, payments, equipment, scheduling, marketing, registration process, materials, evaluations, and certificates. Monthly reports are filed with DC Office of Homeland Security Program Manger, Mark Yader.

Stakeholders participate in two scenario-based training exercise in which there are several improvised explosive device detonations. Participants are expected to apply the five tactical priorities of Mitigation, Evacuation, Transportation of Evacuated, Recovery (at initial level), and Overall System Recovery. Upon completion of the exercises, participants will be debriefed and will receive verbal feedback from instructors and classmates. Class discussions are encouraged and individuals have an opportunity to share experiences and state their position on particular topics. Upon completion of the Course, participants complete a two page (20 question) written evaluation, which is reviewed by the instructor, contractor and program manager. If necessary, adjustments are then made to the program.

5. Program Management: Explain how this Initiative relates to the overall State homeland security program, and/or how it helps incorporate the three Overarching National Priorities.

The Managing Metro Emergencies II Training Course (Operations Level) supports NCR Strategic Goal #3 Mitigation and #4 Response and Recovery. It also supports the National Strategy for Homeland Security Priority #3 of Minimize the damage and recover from attacks that may occur. The intent is to also create a "cultural shift" among first responders through collaboration, information sharing, threat recognition, risk management and intervention.

This Operations-Level course focuses on reinforcing and applying the five tactical priorities of Mitigation, Evaluation, Transportation of the Evacuated, Recovery (at the initial level), and Overall Return to Service. 600 NCR first responders are expected to participate in this important training course.

Scoring Sheet

Critical Infrastructure Protection

Scoring Criteria: All candidate Concept Papers are to scored on the basis of compliance with the following 5 criteria. Each criteria is to be scored from 1 to 10 points, with 1 being lowest compliance and 10 being the highest.

Criteria #1: How well does this Concept Paper/Initiative Plan address identified strengths and weaknesses of the 14 Priority Target Capabilities?

Criteria #2: How well does this Concept Paper/Initiative Plan address identified strengths and weaknesses of the 3 Overarching National Priorities?

Criteria #3: How appropriate is the funding requested with the deliverables proposed by the Concept Paper?

Criteria #4: How beneficial will this concept paper be in addressing regional needs?

Criteria #5: How important is it to implement this Concept Paper/Initiative Plan in FY 06?

Concept Paper	National Capital Region Critical Infrastructure Resiliency Program										
Related Target Capabilities:	Intelligence/Information Sharing and Dissemination										
Score:	Criteria #1 (1-10)	1	2	3	4	5	6	7	8	9	10
	Criteria #2 (1-10)	1	2	3	4	5	6	7	8	9	10
	Criteria #3 (1-10)	1	2	3	4	5	6	7	8	9	10
	Criteria #4 (1-10)	1	2	3	4	5	6	7	8	9	10
	Criteria #5 (1-10)	1	2	3	4	5	6	7	8	9	10
	Total: (5-50)										

Concept Paper	Northern Virginia Transportation Management Program: Enhancements for Incident Response and Emergency Operations Command/Control and Information Sharing										
Related Target Capabilities:	Intelligence/Information Sharing and Dissemination, Interoperable Communications										
Score:	Criteria #1 (1-10)	1	2	3	4	5	6	7	8	9	10
	Criteria #2 (1-10)	1	2	3	4	5	6	7	8	9	10
	Criteria #3 (1-10)	1	2	3	4	5	6	7	8	9	10
	Criteria #4 (1-10)	1	2	3	4	5	6	7	8	9	10
	Criteria #5 (1-10)	1	2	3	4	5	6	7	8	9	10
	Total: (5-50)										

Concept Paper	WMATA Alternate Operations Control Center										
Related Target Capabilities:											
Score:	Criteria #1 (1-10)	1	2	3	4	5	6	7	8	9	10
	Criteria #2 (1-10)	1	2	3	4	5	6	7	8	9	10
	Criteria #3 (1-10)	1	2	3	4	5	6	7	8	9	10
	Criteria #4 (1-10)	1	2	3	4	5	6	7	8	9	10
	Criteria #5 (1-10)	1	2	3	4	5	6	7	8	9	10
	Total: (5-50)										

Concept Paper	Critical Transportation Infrastructure Protection										
Related Target Capabilities:											
Score:	Criteria #1 (1-10)	1	2	3	4	5	6	7	8	9	10
	Criteria #2 (1-10)	1	2	3	4	5	6	7	8	9	10
	Criteria #3 (1-10)	1	2	3	4	5	6	7	8	9	10
	Criteria #4 (1-10)	1	2	3	4	5	6	7	8	9	10
	Criteria #5 (1-10)	1	2	3	4	5	6	7	8	9	10
	Total: (5-50)										

Concept Paper	New Transportation Management Center at Anacostia Gateway										
Related Target Capabilities:	Intelligence/Information Sharing and Dissemination, Interoperable Communications										
Score:	Criteria #1 (1-10)	1	2	3	4	5	6	7	8	9	10
	Criteria #2 (1-10)	1	2	3	4	5	6	7	8	9	10
	Criteria #3 (1-10)	1	2	3	4	5	6	7	8	9	10
	Criteria #4 (1-10)	1	2	3	4	5	6	7	8	9	10
	Criteria #5 (1-10)	1	2	3	4	5	6	7	8	9	10
	Total: (5-50)										

Concept Paper	Multifunctional Evacuation Dynamic Message Signs										
Related Target Capabilities:											
Score:	Criteria #1 (1-10)	1	2	3	4	5	6	7	8	9	10
	Criteria #2 (1-10)	1	2	3	4	5	6	7	8	9	10
	Criteria #3 (1-10)	1	2	3	4	5	6	7	8	9	10
	Criteria #4 (1-10)	1	2	3	4	5	6	7	8	9	10
	Criteria #5 (1-10)	1	2	3	4	5	6	7	8	9	10
	Total: (5-50)										

Concept Paper	Critical Infrastructure Monitoring and Protection										
Related Target Capabilities:											
Score:	Criteria #1 (1-10)	1	2	3	4	5	6	7	8	9	10
	Criteria #2 (1-10)	1	2	3	4	5	6	7	8	9	10
	Criteria #3 (1-10)	1	2	3	4	5	6	7	8	9	10
	Criteria #4 (1-10)	1	2	3	4	5	6	7	8	9	10
	Criteria #5 (1-10)	1	2	3	4	5	6	7	8	9	10
	Total: (5-50)										

Concept Paper	Expansion, Establishment and Operation of the Water Security Monitoring Network in the National Capital Region										
Related Target Capabilities:	Critical Infrastructure Protection										
Score:	Criteria #1 (1-10)	1	2	3	4	5	6	7	8	9	10
	Criteria #2 (1-10)	1	2	3	4	5	6	7	8	9	10
	Criteria #3 (1-10)	1	2	3	4	5	6	7	8	9	10
	Criteria #4 (1-10)	1	2	3	4	5	6	7	8	9	10
	Criteria #5 (1-10)	1	2	3	4	5	6	7	8	9	10
	Total: (5-50)										

Concept Paper	PipelineNet Water Distribution System Model Development for Water Utilities in the National Capital Region										
Related Target Capabilities:	Planning										
Score:	Criteria #1 (1-10)	1	2	3	4	5	6	7	8	9	10
	Criteria #2 (1-10)	1	2	3	4	5	6	7	8	9	10
	Criteria #3 (1-10)	1	2	3	4	5	6	7	8	9	10
	Criteria #4 (1-10)	1	2	3	4	5	6	7	8	9	10
	Criteria #5 (1-10)	1	2	3	4	5	6	7	8	9	10
	Total: (5-50)										

Concept Paper	WMATA Communications Upgrade Continuation of the FY05 Project										
Related Target Capabilities:	Interoperable Communications										
Score:	Criteria #1 (1-10)	1	2	3	4	5	6	7	8	9	10
	Criteria #2 (1-10)	1	2	3	4	5	6	7	8	9	10
	Criteria #3 (1-10)	1	2	3	4	5	6	7	8	9	10
	Criteria #4 (1-10)	1	2	3	4	5	6	7	8	9	10
	Criteria #5 (1-10)	1	2	3	4	5	6	7	8	9	10
	Total: (5-50)										

Concept Paper	"Increasing Emergency Generation Reliability and Capability in the National Capital Region (NCR)"										
Related Target Capabilities:											
Score:	Criteria #1 (1-10)	1	2	3	4	5	6	7	8	9	10
	Criteria #2 (1-10)	1	2	3	4	5	6	7	8	9	10
	Criteria #3 (1-10)	1	2	3	4	5	6	7	8	9	10
	Criteria #4 (1-10)	1	2	3	4	5	6	7	8	9	10
	Criteria #5 (1-10)	1	2	3	4	5	6	7	8	9	10
	Total: (5-50)										

Concept Paper	Clean, Reliable Back-Up Portable Generation for Critical Infrastructures within the National Capital Region										
Related Target Capabilities:	Planning										
Score:	Criteria #1 (1-10)	1	2	3	4	5	6	7	8	9	10
	Criteria #2 (1-10)	1	2	3	4	5	6	7	8	9	10
	Criteria #3 (1-10)	1	2	3	4	5	6	7	8	9	10
	Criteria #4 (1-10)	1	2	3	4	5	6	7	8	9	10
	Criteria #5 (1-10)	1	2	3	4	5	6	7	8	9	10
	Total: (5-50)										

Concept Paper	Rapid Response Mobile Transformer										
Related Target Capabilities:											
Score:	Criteria #1 (1-10)	1	2	3	4	5	6	7	8	9	10
	Criteria #2 (1-10)	1	2	3	4	5	6	7	8	9	10
	Criteria #3 (1-10)	1	2	3	4	5	6	7	8	9	10
	Criteria #4 (1-10)	1	2	3	4	5	6	7	8	9	10
	Criteria #5 (1-10)	1	2	3	4	5	6	7	8	9	10
	Total: (5-50)										

Concept Paper		Critical Infrastructure Protection Program									
Related Target Capabilities:		Law Enforcement Investigation and Operations, Intelligence/Information Sharing and Dissemination									
Score:	Criteria #1 (1-10)	1	2	3	4	5	6	7	8	9	10
	Criteria #2 (1-10)	1	2	3	4	5	6	7	8	9	10
	Criteria #3 (1-10)	1	2	3	4	5	6	7	8	9	10
	Criteria #4 (1-10)	1	2	3	4	5	6	7	8	9	10
	Criteria #5 (1-10)	1	2	3	4	5	6	7	8	9	10
	Total: (5-50)										

Concept Paper		Managing Metro Emergencies I (Awareness Level)									
Related Target Capabilities:		CBRNE Detection, WMD/Hazardous Materials Response and Decontamination, Explosive Device Response Operations, Law Enforcement Investigation and Operations, Intelligence/Information Sharing and Dissemination									
Score:	Criteria #1 (1-10)	1	2	3	4	5	6	7	8	9	10
	Criteria #2 (1-10)	1	2	3	4	5	6	7	8	9	10
	Criteria #3 (1-10)	1	2	3	4	5	6	7	8	9	10
	Criteria #4 (1-10)	1	2	3	4	5	6	7	8	9	10
	Criteria #5 (1-10)	1	2	3	4	5	6	7	8	9	10
	Total: (5-50)										

Concept Paper		Managing Metro Emergencies II (Operations Level)									
Related Target Capabilities:		CBRNE Detection, WMD/Hazardous Materials Response and Decontamination, Explosive Device Response Operations, Law Enforcement Investigation and Operations, Intelligence/Information Sharing and Dissemination									
Score:	Criteria #1 (1-10)	1	2	3	4	5	6	7	8	9	10
	Criteria #2 (1-10)	1	2	3	4	5	6	7	8	9	10
	Criteria #3 (1-10)	1	2	3	4	5	6	7	8	9	10
	Criteria #4 (1-10)	1	2	3	4	5	6	7	8	9	10
	Criteria #5 (1-10)	1	2	3	4	5	6	7	8	9	10
	Total: (5-50)										