



## ARLINGTON COUNTY, VIRGINIA

<p><b>County Board Agenda Item Meeting of September 13, 2008</b></p>
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**DATE:** September 2, 2008

**SUBJECT:** Approval of an Agreement between the County Board and the Commonwealth of Virginia, Department of Transportation (VDOT) for the Development and Administration of Transportation System Management & Communications Plant Upgrade.

**C. M. RECOMMENDATION:**

1. Approve the Agreement between the County Board of Arlington, Virginia and the Commonwealth of Virginia, Department of Transportation (VDOT) for the Development and Administration of Transportation System Management & Communications Plant Upgrade and authorize the County Manager or his designee on behalf of the County Board to execute the Agreement, after approval as to form by the County Attorney.
2. Approve and Appropriate \$960,000.00 in Regional Surface Transportation Program funds (with State matching funds) previously awarded to the County for the Preliminary Engineering (PE) phase of the Transportation System Management & Communications Plant Upgrade project and allocate to the (313-43514-T99S-0319-0000) expense account. These expenses will be fully reimbursed by VDOT.

**ISSUES:** County Board approval is required to receive and expend federal and state funds. No issues have been identified.

**SUMMARY:** This is a request for approval of an Agreement for development and administration of the Transportation System Management & Communications Plant Upgrade project. The estimated cost for this project is \$18.8 million. Including the funds which are the subject of this agreement, the County will have secured a total of \$5.04 million (100% reimbursable) through various federal grants. This project will upgrade the existing twisted-pair (copper) communication plant with the fiber-optic cables in multiple phases to expand the County ITS (Intelligent Transportation System) technologies and enhance the traffic signal system.

**BACKGROUND:** Implementation of this project will help Arlington to upgrade the aging communications plant for the signal system. The existing twisted-pair (copper) system, which

<p>County Manager: _____</p>
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<p>County Attorney: _____</p>
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<p>Staff: A. Wasim Raja, Department of Environmental Services</p>
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was built during the early eighties, is degrading and communication failures are becoming more common. Replacing copper with fiber-optic cables will make the system faster and more reliable. Compared to copper, fiber-optic cables would also provide an exponentially greater capacity for sending video for the recently-installed, Closed Circuit Television (CCTV) camera system, making it easier for the County to expand its Intelligent Transportation System (ITS) technologies and enhance the traffic signal system.

**DISCUSSION:** In May 2006, Arlington completed its Communications Master Plan to assess the demands and needs of County's current and future communications network for transportation-related technology deployments. In summary, the recommended plan will (1) replace the aging 52 miles of twisted pair communication cable with fiber-optics cable; (2) expand the County's existing CCTV, transit signal priority and emergency vehicle preemption systems; (3) add Dynamic Message Signs to present area activity/parking management information; and (4) add arterial detection zones to monitor traffic conditions in real-time and take appropriate corrective actions to help reduce congestion and aid with local and regional incident / emergency management and coordination.

The Communications Master Plan delineates a three-phase solution for implementing future ITS deployments and provides a plan for accommodating those deployments with the modification or expansion of the communications network. The estimated cost for the complete deployment is \$18.8 million, of which the County will have secured a total of \$5.04 million, after the execution of this Agreement, through various federal grants. The County will continue to seek federal grants and other available funding sources to build this project in its entirety through multiple phases.

Using the existing capital funding, the County had previously selected a consulting firm to complete 90% design for Phase-1 fiber optics run for the first 54 of its total 276 traffic signals. The estimated cost for implementing the Phase-1 fiber optic run is approx. \$2.2 million; and the construction of Phase-1 is scheduled to begin in February 2010. No acquisition of right-of-way will be required for any phase of this project. Nevertheless, the County will need to complete the final design and obtain right-of-way and environmental clearances prior to the construction of Phase-1.

Attached is the Standard Project Administration Agreement to be used for this project.

**FISCAL IMPACT:** The estimated cost for this project is \$18.8 million, of which the County will have secured a total of \$5.04 million (100% reimbursable) through various federal grants. The County will continue to seek federal grants and other available funding sources to build this project in its entirety in multiple phases. The requested funding to appropriate \$ 960,000.00 (expense account: 313-43514-T99S-0319-0000; revenue account to be determined) at the present time will allow the County to complete Phase-1 fiber-optics run design, and also continue with the design of the future phases. The remaining \$ 4.0 million, to be allocated to the County as per this Agreement, will be used towards construction. Since the Phase-1 construction is scheduled to begin in February 2010, the request for the appropriation of the construction money will be made in fall 2009.