Transportation Issue Brief

Congestion Management: A Systems Approach

Overview

It is the Downtown Business Improvement District's (BID) position that the time has come to accelerate congestion management in Downtown DC. As a consequence of continuing growth and vitality, Downtown will experience greater congestion. Increased congestion is highly visible now in the evenings, as workers commute out of the city while many other people are moving through the city to attend social, cultural and entertainment functions. On any given evening as many as 50,000 people will be moving to such events and activities, especially when there is a major event taking place at the Verizon Center.

The Downtown Congestion Task Force's 2004 Report identified action items that could have been implemented within 24 months. Today, only half of those measures have been implemented fully. Since the 2004 Task Force Report, new congestion management strategies have emerged that should be incorporated into a systems approach to managing congestion led by the District Department of Transportation (DDOT).

The Task Force identified five strategies for managing congestion:

1. Make public transportation a more efficient and attractive option;
2. Optimize Downtown traffic circulation patterns;
3. Improve curbside space management;
4. Improve on and off street parking management; and
5. Enable smarter travel choices.

Although several offices within the DDOT have acted autonomously to implement several of the recommended strategies, the BID proposes that these activities be combined and operated in a coordinated, systematic way to have even greater impact.

To accelerate implementation efforts, actions that have been initiated but not completed should be brought to fruition. In addition, ongoing actions should be expanded, such as curbside management and traffic control officers. The Task Force's more complex recommendations should not be shelved, but rather dusted off for reconsideration in the context of developing a comprehensive management system, as well as emerging congestion management practices in other cities.

The Downtown BID has reviewed Task Force recommendation implementation to date. We also have collected information on new congestion management techniques. Our findings are organized according to DCTFís five strategies for congestion management. Finally, the Downtown BID is calling on DDOT to approach congestion management challenges in a comprehensive, systematic way internally and across agency boundaries.

Strategy #1: Make Transit More Efficient and Attractive

Systematically Redesign K Street

K Street is at the core of creating more efficient public transit in Downtown DC. K Street is also the east-west spine for all other transportation modes in Downtown. DDOT should be casting a wide net to incorporate multiple congestion strategies in the corridor's redesign, such as:

- **Optimizing Downtown circulation patterns** for pedestrians. This will occur by developing a design that focuses not only on a transit way but also the sidewalks, crosswalks and streetscape--because transit customers are all pedestrians at the beginning and end of their trips;

- **Improving curbside management** for commercial loading zones and taxi drop-off and pick-up because transit customers will have to traverse the curbside at the beginning and end of their trips to a center lane transit way; and

- **Managing on- and off-street parking** because virtually every block on K Street between 12th and 21st Street has an off-street parking garage entrance and exit that will have an impact on vehicles and people moving on the edges of the transit way.

A center lane transit way in a newly designed K Street is just a beginning point for a comprehensive plan for a more efficient and attractive environment in which to move people, goods and services in the corridor.

Prioritize Traffic Signal Technologies for Premium Transit

Traffic signal technology implementation for transit has stalled. DDOT has invested in premium bus transit with the Metro Extra and the DC Circulator in order to advance making transit more attractive, but premium buses stuck in traffic are only half the loaf. Implementing signal changes in these premium corridors will yield an exponential return on DDOT's investment and should be prioritized in a re-energized implementation effort.

Strategy #2: Optimize Downtown Traffic Circulation Patterns

Functionally Integrate Traffic Control Officers (TCOs) into Transportation Operations Division Programs

TCO's recent organizational realignment within DDOT's Transportation Operations Division is a step towards better integrating congestion management efforts. In-field communications between the Transportation Management Center and the TCOs should enable re-deployment of resources to deal with changing congestion hot spots, with an emphasis on bus zones. Providing rapid towing in response to TCO provided field information should be increased.

Evaluating the impact that TCO deployment makes on congestion is necessary to make sure this congestion tool remains sharp. Feedback loops from the TCO program to other Transportation Operations Division programs responsible for signals, traffic engineering and signage must be robust to address systemic problems that contribute to congestion.

Make the Case for Relocating Street Space for Transit

Bus/bike lanes were installed on 7th and 9th Streets within the Downtown BID in 2005 to evaluate the impact on bus efficiency and congestion for all vehicles. To the best of our knowledge, this assessment has not happened. Meanwhile, DDOT is preparing to re-launch the DC Transit Alternatives Analysis that will call for new forms of transit, such as bus rapid transit and streetcars, in dedicated running ways. Without a transparent evaluation methodology, it will be difficult for DDOT to convince decision-makers and consumers to reallocate roadway space for cars in order to accommodate surface transit.

Manage Motor Carriers and Tour Buses

As Downtown DC continues to open new attractions and retail destinations, tour bus and motor carrier volume grows. The Volpe Transportation Center has prepared detailed plans on how to manage motor carriers and tour buses for DDOT, with significant stakeholder and general public input. The Task Force recommended that DDOT expedite hiring a manager of motor vehicles and tour buses within the Transportation Policy and Planning Administration (TPPA).

It is our understanding that DDOT's personnel system has thwarted implementing this recommendation. A loaned executive from the federal government or WMATA might be an alternative approach to establishing a management position for motor carriers and tour buses within DDOT. Part of this executive's job would be recruiting a permanent staff person and establishing an operating framework for the Office.

Strategy #3: Manage Curb Space Holistically

A 2003 DDOT report on L Street documented that motor vehicles park in travel lanes to deliver everything from packages to drinking water, thereby reducing street capacity by as much as 40%. Illegally parked vehicles in bus zones make access for customers difficult at best, and impossible if the customer is disabled. The impact of illegally parked vehicles in bus zones ripples through the entire service route and contributes to unreliable service.

In 2003, DDOT identified 14 of the most congested Downtown corridors, which became targets for implementing a systematic approach to reducing illegal parking through the following actions:

- In cooperation with DDOT, the Downtown and Golden Triangle BIDs developed **new curbside regulatory signage** plans that relocated and expanded loading zones to increase the convenience and supply of the zones. DDOT installed new curbside regulatory signage on K and I Streets in 2006.

- To encourage increased commercial vehicle turnover, DDOT introduced **loading zone** metering along K Street shortly after installing multi-space meters.

- The Department of Public Works **increased parking enforcement** efforts in commercial loading zones on K Street between 12th and 21st Street in tandem with other congestion measures.

In May 2007, the Downtown BID and DDOT collaborated on evaluating these K Street actions. The evaluation revealed improved travel times by car, bicycle and bus. The data indicated that travel times were reduced by statistically significant amounts for automobiles and bicycles, as well as transit buses (4%). The variability of travel times also was reduced. Simply stated, **shorter and more reliable travel times on K Street were observed after DDOT implemented congestion management measures**.

DDOT has completed planning for all 14 priority congested corridors, but only two of the plans—K Street and I Street—have been put in place. The K Street evaluation's positive results should fuel rapidly implementing remaining plans. We encourage DDOT to gather baseline travel times on those corridors and to evaluate the subsequent travel times after the actions have been fully implemented.

Strategy #4: Improve Parking Management

Encourage Smart Parking for Off-Street Locations

There are emerging smart parking technologies that could be applied in Downtown to reduce emissions that result from cruising for a parking space. The most obvious application is found currently at airports, where arriving travelers are guided not only to parking lots, but also to floors and spaces in buildings where the parking is available. This is the result of installing monitoring devices into parking garage floors so that they can convey information to a central source. In turn, the information is transferred to variable message boards.

Aside from being an effective tool for communicating to users, this technology is also an effective management tool that allows for effectively monitoring space utilization. In the future, it may be possible to upload and display this information both on cellular phones with GPS capabilities, and also on in-dash displays in cars. The technology cost can range from $10,000 to $200,000 for garages, depending upon the nature and extent of the technology. Creating variable message boards may cost as much as $3 million. DDOT should encourage developing these applications with available federal congestion mitigation funding.

Strategy #5: Enable Smarter Choices

Expedite Metered Parking Performance Pricing

Charging differential parking rates based on demand can encourage individuals to change their own behavior while simultaneously financing better travel choices such as more attractive and efficient transit. This market-based approach to parking pricing will increase parking availability as travelers begin to change their behavior based on their own cost benefit analysis of parking Downtown. DDOT's plans for piloting this pricing scheme should be enacted and evaluated as expeditiously as possible.

Discontinue DC Government Agency Parking Subsidies

As a Downtown employer, the DC government should lead by example and enable its workers to make travel choices based on the true cost of parking and driving Downtown.

Creating a Congestion Management System

DDOT should establish oversight for the entire congestion management system. An Office of Congestion Management would ensure coordination between responsible entities, public and private, in implementing, maintaining, evaluating and communicating congestion management strategies. It would be guided by performance goals set by the DDOT Director and be located in the Director's office. The reason for this organizational location is that all DDOT administrations, except for Urban Forestry, have responsibilities in a systems approach to congestion management. Setting congestion management benchmarks and performance reviews should be conducted at a Department-wide level.

Costs and Benefits of a Congestion Management System

The costs for implementing the component parts of a DDOT Congestion Management System could be financed from a variety of sources. Revenue sources could include the following: increased parking meter rates, increased parking taxes, increased violation fees for non-compliance with parking regulations, increased fare box revenues and federal congestion mitigation funds. Connecting higher user fees to greater user benefits is a path to public acceptance.

A DDOT congestion management system has both financial and environmental benefits. A direct financial benefit to DDOT comes from DDOT-funded premium bus transit's ability to provide service with fewer buses once the congestion stranglehold is loosened internal DDOT operations efficiencies also should result from better coordination and integration in a systems approach to congestion. The financial benefit to the public is increased productivity due to faster travel times. By tackling congestion, DDOT takes on the primary source of air pollution in the District of Columbia - motor vehicles.

Conclusion

There are solutions to managing congestion more effectively. We have proven that over the last several years. By expanding efforts such as these throughout the Downtown and Center City area, and by putting them together in a system framework and managing the system, it will be possible to reduce congestion and increase efficiency. Both are essential for Downtown's and the city's future.

The Downtown DC Business Improvement District (BID) is a private, non-profit organization that provides safety, hospitality, maintenance and beautification, homeless, economic development, transportation, streetscape and marketing services to Washington's urban core. Property owners agree to tax themselves to provide services to the Downtown BID area, which covers 138 blocks from Massachusetts Avenue on the north to Constitution Avenue on the south, and from Louisiana Avenue on the east to 16th Street on the west. For more information, visit www.downtowndc.org.