

NCHRP 20-68A – “US Domestic Scan Program”

Scan 08-02 Best Practices in Maximizing Traffic Flow on Existing Highway Facilities

Description of Scan

Nationally, congestion is increasing at a rapid rate. In most cases, building new infrastructure to add capacity is not possible due to lack of funds, unavailability of more right-of-way, or other network constraints. This makes it essential for agencies to maximize traffic flow safely through the nations existing roadway facilities. Innovative strategies need to be implemented by all agencies to make this possible and thus reduce congestion throughout network.

To this end this scan’s objectives are:

- Identification of best practices and the conditions under which each is applicable/best suited.
- Improvements in planning/design processes.
- The audience may include traffic engineers, highway designers, ITS operations personnel, and planners.

This scan will consider such techniques as applications of ITS technology, uses of shoulders and lane reversals, and pricing, that may be used to alleviate congestion. More specifically strategies to be found and studied may include but are not limited to such items as:

- Contra flow lanes (lane control signals or moveable barrier systems)
- Reversible lanes
- Real-time traffic management using ITS technologies (ATIS and ATMS)
- Congestion pricing
- Use of shoulders as lanes
- Narrow lanes
- Traffic smoothing strategies such as metering

This scan is expected to capture a body of knowledge that will provide Reduction in delay, crashes, injuries and fatalities by:

- Ensuring that transportation personnel are aware of and have access to a full range of choices for reducing congestion along existing facilities and thus improving safety also.
- Improving the planning/design processes to ensure that certain strategies are always considered before considering infrastructure improvements
- Improving the use of innovative technologies and products as congestion mitigation tools.

It will also provide for development of a domestic network for peer exchange to gain insights on the best practices, organizational structures, technologies and lessons learned to catalyze the development better methods of maximizing the capacity of existing facilities. This domestic scan will provide opportunities for stakeholders to share experience and knowledge in developing regional cooperative agreements, planning, design, implementation, maintenance and operation of existing highway systems.

Original Scan Proposal Title: Best Practices for Maximizing Traffic Flow Through Existing Facilities

Last Reviewed/Revised October 26, 2010

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Execution Schedule

Milestone	Anticipated Date
Chairs and Team Members Identified	December, 2009
Desk Scan Completed	February, 2009
Prescan Meeting Held	February, 2009
Scan Conducted	November, 2009
Draft PowerPoint submitted by SME	March, 2010
Draft Report Delivered to NCHRP and Panel	September, 2010
Final Report Delivered to NCHRP	April, 2012

Estimated Scan Cost and Funding

Actual cost and duration: \$171,000; 2 week
Anticipated fund from FHWA: \$ 25,000

Last Reviewed/Revised July 15, 2012