

# Concept 10 Summary: Route 7 Ramp - Westbound

## DESCRIPTION

Concept 10 seeks to provide a new two-lane on-ramp from Route 7 southbound to I-84 westbound. Currently, the on-ramp from Route 7 southbound to I-84 westbound is a single lane. Prior to the Route 7 southbound merge with I-84 westbound, the on-ramp from Federal Road merges with the Route 7 southbound ramp and creates a lane drop condition in a very short distance. The proposed improvement addresses this lane drop condition by suggesting minor widening along the Route 7 southbound on-ramp to widen from a single to a two lane on-ramp. The proposed improvement to the Route 7 southbound on-ramp to I-84 westbound results in changing the ramp configuration for the Route 7 southbound on-ramp to I-84 eastbound. The Route 7 southbound on-ramp to I-84 eastbound will be changed from an exit-only ramp to a typical exit ramp. Elements of Concept 10 include:

- New two lane on-ramp will be provided from Route 7 southbound to I-84 westbound.
- The Route 7 southbound on-ramp to I-84 eastbound will be changed from an exit-only ramp to an exit ramp.
- Acceleration lane length from Route 7 southbound to I-84 westbound will be improved to meet design standards.
- Deceleration lane length at the Route 7 southbound to I-84 eastbound diverge will be improved to meet design standards.
- 2 existing bridges will be replaced.



## PROS

- Peak hour delay will be reduced on I-84 westbound in the vicinity of Interchange 7.
- Vehicle queues are eliminated on I-84 westbound at Interchange 7 during peak periods.
- Vehicle queues are eliminated on Route 7 southbound at Interchange 7 during peak periods.
- Acceleration and deceleration lane lengths will be improved to meet design standards.
- Typical construction methods could be used.
- Minimal ROW impact.
- There are no impacts to known 4(f) properties.
- No bridge modifications or replacements at stream crossings would be required, thus minimizing water resource impacts.

## CONS

- Results in increased congestion on I-84 westbound past Interchange 7 towards Interchange 3 during the A.M. peak period.
- Does not address lane continuity on I-84 westbound.
- Does not address the left-hand entrance and exit ramps in the I-84 corridor.
- Lacks consistent design speed throughout the I-84 corridor.
- Does not propose changes to the existing interfaces to local streets.
- Interchange 6 remains a partial interchange.
- Does not improve access to the Danbury Hospital.

## RECOMMENDATION

This concept reduces travel time and delays within the limits of the proposed improvement, but it pushes the congestion from one end of the project corridor to the other. This concept is feasible from an engineering and constructability standpoint. This concept has a low probability of causing significant or irreparable harm to the natural or human environment.

It is recommended that this concept be combined with a concept that addresses resulting congestion and mobility adjacent to the highway.