

# Press Release

(Lewiston, ME)

The Lewiston Interchange (Exit 80) was constructed in 1954 when the Maine Turnpike was extended from Portland to Augusta. Exit 80 was originally built as a trumpet-shaped interchange with the northbound (NB) and southbound (SB) mainline roadways crossing over the NB ramps with two separate bridge structures. In 1989, the interchange was modified to accommodate the local road extension, the Alfred Plourde Parkway (APP) through the interchange from Route 196 to Goddard Road.

Exit 80 was evaluated as part of a collaborative study between the Maine Turnpike Authority (MTA) and Maine Department of Transportation (MaineDOT), known as the Lewiston-Auburn Downtown Connector Turnpike Interchange Study, completed in November 2010. This study's main focus was to determine ways to better connect the Lewiston Central Business District (CBD) and South Lewiston Growth Area (SLGA) to the main traffic link in the region - the Turnpike.

After MaineDOT, MTA and the City of Lewiston agreed with the study findings and recommendations, the HNTB design team was tasked with developing an effective approach that addressed the project purpose and needs, including:

- Correcting design deficiencies
- Supporting economic development
- Reducing congestion and delay
- Improving safety at the high crash locations
- Improving accessibility from the Maine Turnpike to the SLGA and CBD

HNTB developed a range of alternative configurations and evaluated factors, including traffic, property and natural resource impacts as well as overall costs in determination of the preferred option.

Alternatives considered included:

- Realignment of northbound loop ramps
- Traditional diamond interchange
- Single point urban interchange

The evaluation of the geometric and operational criteria ultimately led

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MTA, city and HNTB to the conclusion that the SPUI alternative would provide the greatest benefit to the community, the traveling public, and the MTA.

The Lewiston Exit 80 SPUI is the first of its kind interchange design in Maine and the longest single-span plate-girder bridge in the state. The SPUI concept was created to move large volumes of traffic through a limited amount of space safely and efficiently. The application of this design reduced the project footprint by more than 130,000 square feet compared to other potential layouts and provided a reduction in average vehicle delay of more than 300-percent due to its four mainline ramps and the local road converging at a single point where operation is governed by a single (point) traffic signal system.

The interchange design required that this intersection point be clear of all obstacles including bridge abutments and piers and have uninterrupted sight lines for all traffic approaching the intersection. In Lewiston Exit 80's case, it required a clear span of 193 feet, becoming the longest single-span plate-girder in Maine. The location of this intersection, directly below the two new mainline bridges, allowed for a well-lighted, signed and striped intersection providing simple and efficient traffic movement. The bridge span also provides for future growth opportunities for both the mainline ramps, which can be widened to two lanes, and the (local road) Alfred Plourde Parkway, which can be widened from three to five lanes. The as-constructed SPUI design (not considering the additional lane capacity) will accommodate the city's and the MPO's aggressive traffic and economic development projections well beyond a 30-year planning horizon.

The final SPUI design provides a safer and more sustainable transportation link, creates economic development opportunities, and presents a comprehensive and creative engineering technique that will set the stage for future projects in Maine.

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