

## Off System Traffic Distribution of O'Hare West Bypass at Devon Avenue/Pratt Boulevard Interchange

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PROJECT: Elgin O'Hare-West Bypass

This memorandum summarizes traffic analyses performed to evaluate traffic impacts of the potential O'Hare West Bypass (Bypass) at Devon Avenue/Pratt Boulevard interchange on adjacent local roadways. The 2030 Baseline forecast/trip tables were used for this analysis. If this alternative is amongst the DEIS finalists, a 2030 Build Alternative forecast, unique to this alternative, will be developed, and travel performance will be reassessed.

### Analysis Area

The analysis area for this traffic study is bounded by I-90 (freeway) on the north, I-290 (freeway) on the west, York Road (major principal arterial) on the east, and Thorndale Avenue (major principal arterial) on the south. Land use in this area is mostly industrial and commercial. The area is nearly completely developed; hence traffic demand is not projected to increase substantially in the future.

Traffic assignments were reviewed in the analysis area to determine the effects of the Bypass on local roadways, and in particular to evaluate the potential impacts of the following ramp connections at the Devon and Pratt Boulevard interchange:

- Entrance ramp from eastbound Devon Avenue to northbound Bypass,
- Exit ramp from southbound Bypass to westbound Pratt Boulevard.

### Interchange Concept Layout

As part of the development of a concept layout for the Bypass corridor, a representative service interchange concept was developed to provide improved local access to the area bounded by I-90 on the north and Thorndale on the south. The representative concept is a split diamond interchange with IL 72 (Higgins Rd) providing access to and from the south with Devon Ave/Elmhurst Rd. and Pratt Blvd/Elmhurst Rd. ramps providing access to and from the north. The O'Hare West Bypass at this location is in a tunnel adjacent to the ramps/Elmhurst Rd. intersection in order to underpass the railroad tracks. This profile depression allows the northbound entrance ramp aligned with Devon Ave to overpass the Bypass as it continues north. This combination of ramps provides complete local access to areas north of the Elgin O'Hare Extension and west of the proposed Bypass.

The location and configuration of local access along the north leg of the Bypass is constrained by various features. Constraints and features that need to be considered in this area include O'Hare Airport facilities, runway protection zone constraints, and freight rail facilities. The representative interchange layout was developed with the objective of providing a workable plan for full local access, while avoiding impacts to airport operations, and minimizing costs of tunneling under the Union Pacific and Canadian Pacific Railroad.

The connection of the southbound ramp with Pratt Blvd. at Elmhurst Rd. was developed to provide a queuing platform for vehicles approaching the southbound exit ramp at the Pratt Blvd/Elmhurst Rd intersection.

### **2007 and 2030 Traffic Volumes**

The attached Traffic Demand Exhibit shows the year 2007 Average Daily Traffic (ADT), 2030 Baseline ADT, and 2030 ADT for Alternative G203. Key traffic volume characteristics include the following:

- Travel demand and traffic patterns are predominantly local in the study area.
- IL 83 and Elmhurst Rd serve as connectors to interstate corridors providing regional connectivity to study area traffic demand in 2007 and 2030 Baseline Scenario.
- There is marginal growth in travel demand in the study area between 2007 and 2030 conditions.
- The ADT for the Devon Ave entrance ramp and the Pratt Blvd exit ramp to the O'Hare West Bypass are 14,100 vpd and 19,900 vpd, respectively.
- Alternative G203 provides a north-south access controlled facility in the study area thereby attracting trips from other major north-south corridors.

### **Alternative G203 Traffic Redistribution**

With inclusion of the Bypass, some of the traffic previously using adjacent north-south streets (York Road, Illinois 83, Lively Blvd, Wooddale Rd and Arlington Heights Rd) would be diverted to the Bypass as it offers a more efficient route for travel. Similarly, some of the traffic along the east west streets (Thorndale Ave, Devon Ave, Pratt Blvd and Touhy Ave) would move to the Elgin O'Hare Expressway, as it offers a more efficient route for travel. Therefore, with Alternative G203, future traffic on most of the local streets would be less than 2007 and 2030 Baseline traffic.

It is expected that daily traffic on Pratt Blvd, between York Rd and IL 83 will increase by approximately forty percent with Alternative G203 due to the southbound exit ramp. Still the daily volume on Pratt Blvd would be relatively light, since Pratt Blvd is only a connector street providing access to adjacent land use in the study area. The Pratt Blvd volume would also still be within the threshold for a two lane roadway. Subsequently there is a twenty percent drop in traffic along Devon Ave between IL 83 and Elmhurst Rd due to Elgin O'Hare extension and the northbound on-ramp at Devon Ave primarily provides interstate access to local traffic in the study area.

Inclusion of the O'Hare West Bypass and Elgin-O'Hare Extension, with higher capacity and speeds than the arterial streets, would divert traffic from the local streets resulting in reduced congestion on arterials and collectors.

Any traffic increases on the local streets associated with the roadway alternatives will be reviewed and improvements will be investigated in detail during the Tier Two process.