



Steese Expressway / Johansen Expressway Interchange

Project No. Z607320000/0002337

Project Overview

The Alaska Department of Transportation and Public Facilities (DOT&PF) is proposing to upgrade the intersection of the Steese Expressway and the Johansen Expressway located in Fairbanks, Alaska. Preliminary alternatives have been developed for potential intersection improvements.

Project Purpose & Need

Enhance motorized and non-motorized mobility and user safety at the Steese Expressway and Johansen Expressway intersection and within the influence area of the intersection.

Engineering analysis and public scoping identified the following operational and safety concerns.

Pedestrian and Bicycle Safety and Delay: Two pedestrian crashes have occurred in the past 10 years (2007 and 2010) crossing Steese Expressway, with one resulting in a pedestrian fatality and the other resulting in a major injury. Residences on the east and the commercial district on the west create a high crossing demand.

Proximity of Farmers Loop Road: The proximity of the Farmers Loop Road intersection creates additional delay during peak hours.

- ***Southbound Steese:*** Steese traffic exiting at the Johansen conflicts with entering Farmers Loop traffic, with conflicts highest during the AM peak.
- ***Eastbound Johansen:*** Johansen traffic desiring to turn at Farmers Loop utilizes the left-most turn lane, unbalancing the lanes and reducing the signal capacity. Queues can back traffic up to the Old Steese intersection.
- ***Northbound Steese:*** Traffic on the Steese wanting to turn at Farmers Loop utilize the left-most through lane, blocking the westbound left turn pocket during the PM peak, reducing signal capacity.

Vehicle Delay: Eastbound left-turn vehicles currently experience an average delay of over 1 minute per vehicle in the PM peak (LOS E) and the total intersection LOS will be E in the peak hour by 2024. This delay disproportionately impacts freight and transit vehicles and may impact air quality due to idling.



Schedule

Preliminary engineering will run through June 2019 and during this time, a preferred alternative will be selected, and the environmental document will be completed. Construction is not anticipated before 2022.

<http://dot.alaska.gov/nreg/steese-johansen/>



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Alternatives

The table below indicates the performance of each proposed build alternative when compared to the existing intersection.

Proposed Build Alternative	Purpose and Need				Other Issues Addressed			
	Improve Pedestrian/ Bicycle Safety	Reduce Pedestrian Delay	Reduce Conflicts between Intersections	Reduce Congestion	Reduce Freight Delay	Accommodate increased Traffic to the East	Avoid Impacts to Cemetery	Minimize Maintenance Impacts
Alternative B Enhanced Conventional Intersection*	Much Better	Much Better	Much Better	Better	Better	Better	No Impact	Worse
Alternative F Left Turn Flyover (Partial Interchange)	Better	Much Better	Much Better	Much Better	Much Better	No Impact	No Impact	Worse
Alternative G1 Tight Diamond (Full Interchange)	Better	Better	Much Better	Much Better	Much Better	Much Worse	Worse	No Impact
Alternative G3 Diverging Diamond (Full Interchange)	Better	Better	Better	Much Better	Much Better	Much Worse	Worse	Much Worse
Alternative H1 Full Echelon (Partial Interchange)	Much Better	Much Better	Much Better	Much Better	Much Better	No Impact	Worse	No Impact
Alternative H2 Partial Echelon (Partial Interchange)	Much Better	Better	Much Better	Much Better	Much Better	Worse	No Impact	Better

* when combined with Pedestrian Overpass

Other alternatives considered but dismissed: Alternative C - Synchronized Split-Phased Intersection, Alternative D- Displaced Left Turn Intersection, and Alternative G2 - Diamond Interchange with Cloverleaf.

Funding

The project is federally funded by FHWA and estimated costs range from \$20 - \$45 million depending on which alternative is selected.

Contact

For more information, or to share your ideas, contact:

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