STAFF REPORT

Meeting Type:	City Council
Meeting Date:	August 3, 2026
From:	Kelly O'Neill Jr., Development Services Director
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Subject:	Intersection Study for Highway 211 and Dubarko Road

DECISION TO BE MADE:

Hold a work session to discuss the intersection study for Highway 211 and Dubarko Road that was performed by DKS Associates and Harper Houf Peterson Righellis Inc. (HHPR).

APPLICABLE COUNCIL GOAL:

- **Goal 7.12:** Complete initial study of intersection at Highway 211 and Dubarko Road to determine required budget for safety improvements.

BACKGROUND / CONTEXT:

The Highway 211 and Dubarko Road Intersection Improvement Evaluation memorandum evaluates existing and future conditions and summarizes improvement options that were analyzed at the intersection and recommends a preferred treatment.

Definition note: Level of service (LOS): A "report card" rating (A through F) based on the average delay experienced by vehicles at the intersection. LOS A, B, and C indicate conditions where traffic moves without significant delays over periods of peak hours travel demand. LOS D and E are progressively worse operation conditions. LOS F represents conditions where average vehicle delay has become excessive, and demand has exceeded capacity.

- **The operations at the intersection are already underperforming**: 2026 operations show that the intersection is exceeding the City's LOS D mobility target in the p.m. peak hour, with the Dubarko Road approach operating at LOS E.
- **The frequency of collisions at the intersection is higher than similar intersections with the volume of traffic served**: the crash history is above the critical crash-rate threshold, with 26 crashes over five years, including 18 injury crashes. The observed crash rate of 1.40 crashes per million entering vehicles exceeds the critical crash rate at similar intersections of 0.41.
- **Conditions are forecast to worsen by 2030 and 2040 without improvements:** operations are expected to reach LOS F and significant delay is expected under the no-build scenarios

assuming the existing two-way stop control at the intersection, both with and without the planned east extension of Dubarko Road to US 26.

KEY CONSIDERATIONS / ANALYSIS:

Multiple alternatives were evaluated at the intersection using the forecasted 2040 traffic volumes, including two way stop control, a roundabout, and a traffic signal. The alternatives were compared for operations, pedestrian/bicycle access, property impacts, cost, and safety.

- Two-way stop control has an operations fatal flaw, despite assuming different lane configurations, as no configuration allowed for the current mobility target to be met through 2040 without changes to the existing traffic control at the intersection.
- A roundabout performs well operationally and provides safety benefits, but has a higher estimated construction cost, greater property/right-of-way impacts, and more design complexity due to speed and grade conditions.
- A traffic signal ranks highest overall, and is expected to meet signal warrants by 2030, addresses operations, safety and pedestrian crossing needs, and with an estimated total cost significantly less than a roundabout.
- The downhill slopes approaching the intersection could make it prone to slippery driving conditions during the winter season, especially as drivers attempt to stop. Some options, such as an Icy Road Warning System, “Rest in Red” technology for traffic signals and Heated Pavement have been implemented to help detect, warn drivers, or control snow and ice in other areas. These could be implemented at the intersection to help alleviate some of the challenges for drivers during the winter season.

BUDGET IMPACT:

The traffic signal alternative has an estimated total cost of about $4.6 million and a benefit-cost ratio of 2.04, compared to $8.5 million and a benefit-cost ratio of 1.55 for the roundabout.

- This suggests that the traffic signal improvement alternative is a more cost-effective solution when compared to the roundabout, although both have a B/C ratio well above 1.0, which suggests that they provide more economic safety benefits when compared to the cost of construction.
- The improvements would likely need to be funded with a combination of funding sources, including Transportation SDCs, proportional share fees from developments that impact the intersection, and fuel taxes.

RECOMMENDATION:

The recommended improvement is a traffic signal with an exclusive left-turn lane and shared through/right-turn lanes on each approach. Recommended left-turn storage is 100 feet for the northbound, southbound, and eastbound approaches, and 125 feet for the westbound approach.

No interim improvements are recommended because the intersection is already substandard and expected to worsen by 2030. The results show that the traffic signal at the intersection is needed by 2030, and that improvements should occur with the left turn lanes to allow the intersection to meet the mobility target during the 2040 peak hours.

A preliminary roadway design concept was prepared by HHPR for the intersection to show the recommended traffic signal and left-turn lane improvements. The preliminary concept estimates that about 25,000 square feet of new pavement will be needed, with some widening required along Dubarko Road to provide the new left-turn lanes on the eastbound and westbound approaches and along the west side of Highway 211 to provide the new left-turn lanes on the northbound and southbound approaches. A retaining wall of approximately 6,500 square feet will also be required to accommodate the roadway widening along the west side of Highway 211, south of Dubarko Road.

LIST OF ATTACHMENTS / EXHIBITS:

- Exhibit A. Intersection Study for Highway 211 and Dubarko Road