



STAFF REPORT

Meeting Type: City Council
Meeting Date: August 3, 2026
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Subject: Intersection Study for 362nd Drive and Dubarko Road

DECISION TO BE MADE:

Hold a work session to discuss the intersection study for 362nd Drive and Dubarko Road that was performed by DKS Associates.

APPLICABLE COUNCIL GOAL:

No applicable City Council goal, but this study is needed to define intersection needs especially considering additional development to the west of the intersection at 17151 362nd Drive.

BACKGROUND / CONTEXT:

The 362nd Drive 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 performing well today:** 2026 operations show that the intersection meets the City's LOS D mobility target under its existing two-way stop control, operating with a LOS C or better during peak hours.
- **The frequency of collisions at the intersection is typical for similar intersections with the volume of traffic served:** the crash history is below the critical crash-rate threshold, with 3 crashes over five years. The observed crash rate of 0.14 crashes per million entering vehicles is below the critical crash rate at similar intersections of 0.29.

- **Without changes, the intersection will continue to operate adequately through 2040:** operations are expected to be LOS D or better under the no-build scenario assuming the existing two-way stop control and turn movements at the intersection.
- **Additional vehicle trips on the west leg (17151 362nd Drive) will cause the intersection to exceed city mobility targets by 2040:** The Dubarko Road westward extension from 362nd Drive to Champion Way (Sandy TSP Project D13) will introduce a new west leg and turn movements at the intersection, and traffic volumes will increase as new trips are generated by future development on the vacant parcels surrounding the Dubarko Road westward extension. This is expected to cause a significant increase in delay at the intersection, reaching LOS “F” for the Dubarko Road approach under the no-build scenario assuming the existing two-way stop control at the intersection.

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 and greater property/right-of-way impacts.
- A traffic signal ranks highest overall due to lower construction costs (\$2.0M vs. \$5.5M for a roundabout) and minimal right-of-way impacts. However, full signalization is not currently warranted until traffic increases beyond 2040.
- The traffic signal and roundabout alternatives have an estimated benefit-cost ratio of 0.07 at the intersection. This suggests that they are not cost-effective solutions with a B/C ratio well below 1.0, and the cost of construction outweighing the expected economic safety benefits provided by the improvements.
- 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.
- The curve of 362nd Drive at Chinook Street could benefit through the installation of traverse rumble strips or other measures on the northbound lane of 362nd Drive to help alert drivers to the upcoming intersection.

BUDGET IMPACT:

The traffic signal alternative has an estimated total cost of about \$2.0 million. This estimate does not include the costs associated with acquisition of right-of-way or project design.

- 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, direct developer improvements, and fuel taxes.

RECOMMENDATION:

The two-way stop control should remain at the intersection until Dubarko Road is extended westward and/or once new development occurs to the west of the 362nd Drive and Dubarko Road intersection. When the extension or development takes place, the recommended improvement is a traffic signal that initially functions as a pedestrian hybrid beacon until converted to a full traffic signal once the warrants are met.

- Provide separate left and through/right-turn lanes on the new Dubarko Road west leg of the intersection, an exclusive northbound left turn lane and southbound right turn lane on 362nd Drive and an exclusive left turn lane on the Dubarko Road east leg of the intersection.
- Add safety measures such as transverse rumble strips on the northbound lane of 362nd Drive at the curve south of the intersection with Dubarko Road to help alert drivers to the upcoming intersection.
- Add an interim crosswalk with a pedestrian refuge island on 362nd Drive at the Dubarko Road intersection if new sidewalks are provided on the west side of 362nd Drive before the recommended traffic signal installation occurs.

LIST OF ATTACHMENTS / EXHIBITS:

- Exhibit A. Intersection Study for 362nd Drive and Dubarko Road