

DATE: March 31, 2026
TO: Benton County Planning Commission
FROM: Kelly Sandow P.E.
Sandow Engineering



RENEWAL 06/30/26

RE: LU-25-066 and LU-25-067 Northside Church-Response to Comments

Sandow Engineering would like to provide the following information and response to the transportation-related questions and comments provided within the Benton County Staff Report, public works comments, and public comments for the Northside Church application.

1.0 ROADWAY WIDTH AND EXISTING CONDITIONS

Powers Avenue is classified as a primary local road within the Benton County Transportation System Plan (TSP). Cross-section and operational standards are based on functional classification.

The applicable design parameters for this roadway classification are:

- Average Daily Trips (ADT): <700 vehicles per day
- Design Hour Volumes (DHV): <100 vehicles per hour
- Minimum Right-of-Way: 50 feet
- Minimum Surface Width: 20 feet
- Minimum Lane Width: 10 feet
- Shoulder Width: 2 foot gravel

Average Daily Trips

As identified in the staff report, the most recent available traffic counts (2019) indicate volumes of approximately 246 vehicles per day (VPD) on the west end of Powers Ave and 436 VPD on the east end. No significant development has occurred in the vicinity since that time that would materially increase background traffic volumes. Therefore, these counts remain representative of existing conditions.

Trip generation for Phase 1 of the proposed church was estimated using the Institute of Transportation Engineers (ITE) Trip Generation Manual. Use of ITE data is appropriate for Phase 1, as the proposed 18,902-square-foot building falls within the range of observed data for churches included within the ITE data set.

The proposed development is estimated to generate:

- 128 weekday daily trips
- 588 Sunday daily trips
- Based on a 7-day average, the resulting site-generated ADT is approximately **194 VPD**.

Directional distribution is estimated at 25% to/from the west and 75% to/from the east, consistent with regional travel patterns and roadway network.

Based on these assumptions, the total projected ADT on Powers Avenue is:

- West of site: 295 VPD
- East of site: 585 VPD

With the construction of Phase 1, the traffic volumes remain below the 700 VPD threshold identified in the TSP for Primary Local Roads. The roadway will continue to operate within the intended volume range for its functional classification.

Design Hour Volumes

The DHV for Powers Road after completion of the church is estimated at 30 vph for the west side and 60 vph for the east side. These volumes are well below the 100 vehicles per hour threshold identified in the TSP for this roadway classification and are consistent with low-volume rural roadway operations.

Right-of-Way

The right-of-way width along Powers Avenue varies in width and is less than the 50-foot standard in sections, including the development frontage. Consistent with standard practice, the applicant will provide the necessary right-of-way dedication along the property frontage to achieve the 50-foot standard.

Any section of roadway outside of the frontage is outside the control of the applicant. Oregon land use laws do not allow conditions of approval that rely on actions or agreements from third parties that are outside of the applicant's control. Therefore, the applicant cannot be required to obtain off-site right-of-way to meet the current standards or to construct off-site roadway widening improvements.

Surface Width and Travel Lane Width

The existing pavement width for Powers Avenue is generally 20 feet, with some sections less than 20 feet.

The County is requesting that pavement widening be required along the full length of Powers Avenue to two 10-foot travel lanes. However, the TSP standard applies to roadway design at

the time of construction or reconstruction and is not intended to require full corridor upgrades where the roadway is already functioning within its intended classification.

As demonstrated above, the projected ADT (295–585 VPD) and design hour volumes (30–60 vph) remain well within the thresholds for a Primary Local Road. The existing roadway is operating within its functional capacity, and the proposed development does not introduce volumes that would necessitate widening beyond the project frontage. Additionally, the roadway operates within the range of low-volume rural facilities where narrower cross sections are typical and function effectively. Consistent with guidance from the American Association of State Highway and Transportation Officials (AASHTO), the existing width is sufficient to accommodate anticipated traffic without requiring widening.

Requiring full-length pavement widening would address existing conditions unrelated to the proposed development and would function as a system-wide improvement rather than project-related mitigation.

Shoulder Width

The TSP identifies a 2-foot gravel shoulder as the standard for this roadway classification. Existing conditions along Powers Avenue include segments where the shoulder width is less than 2 feet due to constrained right-of-way and existing roadside features. The County has requested that the shoulder be widened along the full length of the roadway, beyond the 2-foot standard, to a “hybrid standard” of 4 feet to accommodate pedestrian travel. This requirement exceeds the adopted standard and is not supported by the operating conditions of the roadway.

The roadway currently operates at low traffic volumes (295–585 total ADT), which is consistent with rural shared-use conditions where pedestrians and bicyclists utilize the travel way. While the posted speed is 45 mph, the low traffic volumes limit the frequency of conflicts and are consistent with rural local roadway environments without continuous shoulder or sidewalk facilities.

Achieving a continuous 4-foot shoulder along the corridor would require widening beyond the existing right-of-way in multiple locations, including areas with drainage features, vegetation, and existing utilities. Implementation would therefore require the acquisition of off-site right-of-way and substantial reconstruction. Conditions of approval cannot require actions dependent on third-party property acquisition.

Given that the roadway is operating within the volume and functional thresholds of a Primary Local Road, and that the proposed development does not introduce a level of pedestrian or bicycle activity requiring dedicated facilities, a continuous widened shoulder is not warranted.

No capacity, operational, or safety deficiency has been identified that would warrant roadway improvements associated with this development.

2.0 TRAFFIC FLOW PATTERNS

Traffic associated with the proposed church use will occur in predictable, short-duration periods and will disperse efficiently within the existing roadway network. The projected traffic volumes do not result in sustained congestion, unsafe queuing conditions, or degradation of roadway operations. The traffic flow characteristics are described in the following.

Trip Distribution and Routing

Powers Avenue functions as a local access roadway with limited connectivity and does not serve as a regional through route. As such, site traffic will utilize the most direct paths to higher-order roadways. Therefore, traffic will primarily route to/from the east via Scenic Drive, where Scenic Drive connects to other major roadways within the City. It is estimated that approximately 75% of site traffic will travel to/from the east via Scenic Drive, with the remaining 25% traveling to/from the west via Oak Grove Drive.

Peak Traffic Characteristics

Church uses generate traffic in short-duration peaks, typically occurring immediately before and after scheduled services.

These peak periods are:

- Infrequent (generally limited to one to two periods per week)
- Short in duration (typically 30–60 minutes)
- Offset from weekday commuter peak periods

Outside of these peak periods, traffic volumes remain low and consistent with typical rural residential conditions.

Traffic Flow and Queuing

Public testimony suggests that peak traffic may result in queuing along Powers Avenue. Based on the projected volumes and roadway characteristics, extended queuing is not expected.

At low traffic volumes, vehicles departing the site will disperse quickly along the roadway network. While brief delays may occur during peak departure periods, these conditions are temporary and do not result in sustained congestion.

The low background volumes allow for adequate vehicle progression without significant interruption to traffic flow.

Turning Movements and Gap Availability

Turning movements onto Scenic Drive and Oak Grove Drive occur under rural conditions with posted speeds up to 45 mph. While higher speeds increase gap requirements, traffic volumes on these facilities remain low. These low volumes result in sufficient gaps for vehicles entering and exiting onto these roadways. The addition of site-generated traffic will not materially affect gap availability or create unsafe turning conditions.

Comparison to Typical Rural Roadway Operations

The projected traffic conditions are consistent with typical rural local roadway operations, where:

- Traffic volumes are low
- Peak activity is intermittent
- Shared use of the roadway is common

The proposed development does not introduce continuous or high-frequency traffic patterns associated with commercial or urban uses.

3.0 TRAFFIC SAFETY

Public testimony and staff comments raise concerns regarding traffic safety along Powers Avenue NW and at its intersections with Scenic Drive and Oak Grove Drive, particularly due to the posted speed of 45 mph and the limited shoulder width.

Traffic safety is a function of multiple factors, including traffic volume, operating speed, roadway geometry, and user exposure. These factors were evaluated for the proposed development.

Traffic Volume and Exposure

The proposed development is estimated to result in a total ADT of approximately 194 vehicles per day, with total corridor volumes ranging from approximately 295 to 585 vehicles per day.

These volumes are well within the range of low-volume rural roadways. At these traffic levels, the frequency of vehicle interactions is low, which limits the potential for vehicle-vehicle, vehicle-pedestrian, and vehicle-bicycle conflicts.

Low traffic volume is a primary factor contributing to safe operations on rural roadways without dedicated pedestrian or bicycle facilities.

Operating Speed

Powers Avenue NW, Scenic Drive, and Oak Grove Drive operate under rural conditions with posted speeds up to 45 mph.

While higher speeds can increase the severity of potential conflicts, safety is also strongly influenced by traffic volume and conflict frequency. In low-volume environments, the likelihood of conflicts is reduced due to fewer vehicle interactions.

The combination of low traffic volumes and predictable traffic patterns results in operating conditions that are consistent with rural roadway environments where shared use is typical.

Pedestrian and Bicycle Considerations

As per the TSP, primary local streets are purposefully intended to have shared roadway facilities where bikes and vehicles share the travel lane. This treatment is appropriate on low-volume streets where vehicles have adequate gaps in oncoming traffic to maneuver around a bicycle in the road.

Pedestrian and bicycle activity in the area is limited, and users commonly share the travel way under low-volume conditions. The proposed development does not introduce a level of pedestrian or bicycle activity that would necessitate the construction of continuous dedicated facilities.

While additional shoulder width may be desirable, it is not required for safe operation under the projected traffic conditions.

Crash Risk and Safety Performance

There is no evidence of a documented crash pattern or safety deficiency along the roadway that would warrant reconstruction or capacity improvements.

The proposed development does not introduce traffic volumes or operational characteristics associated with increased crash risk, such as high traffic volumes, continuous turning conflicts, or substantial increases in pedestrian activity.

Consistency with Rural Roadway Design

The existing roadway cross section and operating conditions are consistent with rural local roadways throughout Benton County, where:

- Traffic volumes are low
- Shoulders may be limited or discontinuous
- Pedestrians and bicyclists share the travel way

The proposed development does not alter these fundamental characteristics.

4.0 PROPORTIONALITY AND NEXUS

Staff has identified off-site roadway improvements, including roadway widening and shoulder expansion along Powers Avenue, as necessary to address transportation impacts associated with the proposed development. The applicant does not agree that these improvements are warranted.

Under Oregon land use law, conditions of approval must demonstrate an essential nexus to a legitimate issue caused by the development and be roughly proportional to the impacts of the proposed development.

Nexus to Project Impacts

As demonstrated in Sections 1.0 through 3.0, the proposed development:

- Operates within the traffic volume thresholds for a Primary Local Road
- Does not create a capacity or operational deficiency
- Does not introduce a safety condition requiring mitigation

The roadway is currently functioning within its intended classification, and the addition of project traffic does not alter that condition.

The improvements identified by staff, including full-length roadway widening and shoulder expansion, address existing roadway conditions rather than impacts directly attributable to the proposed development. As such, these improvements do not demonstrate a direct nexus to project-specific impacts.

Rough Proportionality

The scale of the requested improvements is not proportional to the impacts of the proposed development.

The project generates low traffic volumes with intermittent peak periods typical of church uses. These traffic characteristics do not warrant full corridor reconstruction, widening, or expansion of the roadway cross section.

Requiring improvements along the entire length of Powers Avenue would impose the burden of correcting existing system deficiencies on a single development, rather than addressing impacts created by the project itself. The extent of the requested improvements exceeds what is necessary to mitigate project-related impacts.

Feasibility and Control

As discussed in Section 1.0, implementation of the requested improvements would require work beyond the existing right-of-way in multiple locations and may necessitate the acquisition of property from adjacent landowners.

The applicant does not control these properties and cannot guarantee acquisition. Conditions of approval cannot require actions dependent on third-party property rights.

Accordingly, requiring full roadway widening or continuous shoulder improvements outside of the project frontage is not feasible and is not supported by the impacts of the proposed development.

5.0 CONCLUSION

The proposed Northside Church Phase 1 development will generate low traffic volumes (7-day ADT of 194 VPD), resulting in total corridor volumes that remain well within the Benton County Transportation System Plan thresholds for a Primary Local Road. The existing roadway is operating within its intended functional classification, and the addition of project traffic does not create a capacity, operational, or safety deficiency.

Public testimony and staff comments raise concerns regarding safety, including the posted speeds, limited shoulder width, and potential conflicts between vehicles, pedestrians, and bicyclists. These concerns are acknowledged; however, traffic safety is governed not only by speed, but also by traffic volume and user exposure. At the projected traffic levels (295–585 ADT), Powers Avenue will continue to operate as a low-volume rural roadway, where the frequency of vehicle interaction and therefore conflict potential is low. Under these conditions, shared use of the roadway is typical and consistent with similar facilities throughout Benton County, and with the TSP. The proposed development does not introduce a level of traffic, pedestrian activity, or operational change that would create a new or increased safety risk beyond existing conditions.

While certain segments of Powers Avenue do not meet full cross-section standards, these conditions reflect existing rural roadway characteristics rather than deficiencies attributable to the proposed development. At the projected traffic levels, the roadway functions consistent with low-volume rural facilities, where narrower cross sections are typical and operate effectively.

The off-site roadway improvements identified in the staff report, including full roadway widening and shoulder expansion, address existing system conditions rather than impacts caused by the proposed use. The scale of these improvements is not proportional to the level

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of traffic generated by the project and would require off-site right-of-way acquisition from properties not under the applicant's control.

Accordingly, the requested improvements do not meet the required nexus, proportionality, or feasibility standards and should not be required as conditions of approval.