

Angle Parking in Cul-de-sacs

EXECUTIVE SUMMARY

The designed purpose of the cul-de-sac is to ensure that vehicles can turn around to leave the dead-end road. The rules that govern how vehicles must be parked on-street are contained in The City of Calgary's Parking Bylaw (41M2002) and come directly from the Alberta Traffic Safety Act. Angle parking in cul-de-sacs is only permitted where appropriate traffic signs and roadway markings have been installed. However, residents often choose to park 'nose-in' to the curb as a matter of convenience. This has resulted in the issuance of parking tickets to some residents, where a parking complaint had been registered with the Calgary Parking Authority.

Administration previously recommended that Council adopt the same parking requirements as the City of Edmonton, where the minimum radius of the cul-de-sac must be 15 meters to accommodate angle parking. This standard is focused on the larger vehicles that provide emergency response, municipal services and personal delivery, so they may have access to the homes and buildings surrounding the cul-de-sac. However, less than 1% of all residential cul-de-sacs in Calgary meet this recommended size.

As directed, Administration has developed a process to evaluate and support angle parking requests from residents who live on smaller cul-de-sacs. Residents would benefit from convenient parking, and likely more spaces to park, while still ensuring that they can drive into and out of the space. The parking plans would require minimum clearances for emergency responders to operate, and include parking restrictions or alternate cart collection locations when necessary to support safe and efficient waste collection. The residents would be responsible for the costs to approve and set up the angle parking, which would be approximately \$2300.

However, several risks have been identified in allowing the angle parking of vehicles within smaller cul-de-sacs. These include emergency access and operation, turnaround capabilities for larger vehicles, and increased demand for parking enforcement in these residential areas. Administration believes these risks outweigh the benefits of providing a service that addresses the parking preference of residents who live on smaller cul-de-sacs.

ADMINISTRATION RECOMMENDATION:

That the SPC on Transportation and Transit recommends that Council:

1. Direct Administration to:
 - a) implement a new service for residents to request angle parking in cul-de-sacs, where the cul-de-sac has a minimum radius of 15 metres [**Recommended Option**];
 - OR**
 - b) implement a new service for residents to request angle parking in cul-de-sacs of any configuration, where the suitability and number of parking spaces will be determined by Administration's case-by-case assessment;
2. Direct Administration to recover the costs associated with the necessary review, assessment and installation of signs and pavement marking from the Applicant;
3. Support the Calgary Parking Authority's proposal to implement a 2018 pilot project to issue warnings for first-time angle parking violations in residential cul-de-sacs.

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PREVIOUS COUNCIL DIRECTION / POLICY

On 2017 February 6, Council supported a Notice of Motion (NM2017-03) on Angle Parking in Cul-De-Sacs (Attachment 1) that directed Administration to develop a process that would allow for residents to angle park in cul-de-sacs where that activity is permitted from an operational standpoint. The process would also include cost recovery mechanisms and application guidelines, and Administration would make more information available for citizens about parking in cul-de-sacs. Administration was also directed to investigate if relaxations could be applied to the minimum width of a cul-de-sac to allow for more locations to be compliant for angle parking.

On 2017 July 19, the SPC on Transportation and Transit ("The Committee") received a report on Angle Parking in Cul-De-Sacs (TT2017-0594), and amended the recommendation to refer the report back to Administration to develop a process that would allow for residents to Angle Park in cul-de-sacs and adopt operational procedures to adapt, and report back to Council, through the SPC on Transportation and Transit by Q1 2018.

On 2018 March 8, The Committee deferred the report on Angle Parking in Cul-De-Sacs (TT2018-0225) to the 2018 May session at the request of Administration, due to the number of reports originally scheduled for the 2018 March session.

BACKGROUND

A cul-de-sac is designed to be a dead-end street with a rounded end to allow for vehicles to turn around. The design ensures that larger vehicles that provide emergency response, municipal services and personal delivery have ease of access to the homes and buildings surrounding the cul-de-sac. Cul-de-sacs are common in Calgary, with approximately 2500 across the city.

Drivers sometimes find that parallel parking their vehicles within the rounded design is challenging. In response, many drivers choose to park 'nose-in' to the curb instead, at an almost perpendicular angle. They may also feel that this leaves more room for other vehicles to park. This practice is common enough that it does influence how other residents or visitors choose to park their vehicles in the cul-de-sac.

Regulations

Most parking laws in Calgary are contained in the Parking Bylaw (41M2002), and come directly from the Use of Highway and Rules of the Road Regulations (AR 304/2002) of the Alberta Traffic Safety Act (RSA 2000 c. T-6). Any bylaw that a municipality passes may not contradict or expand these provincial laws. The Parking Bylaw (section 4.1) states that when parking on a roadway, a driver shall park that vehicle with the sides of it parallel to the curb or edge of the roadway. Angle parking, section 5.1 of the Parking Bylaw, may only be permitted when a traffic sign is posted to allow this type of parking. Where the angle of the parked vehicle is going to be greater than 60 degrees from the curb, parking guide lines are required to be marked on the roadway. The angle of parking in cul-de-sacs would be greater than 60 degrees, therefore it would require both road marking and signs.

The City of Calgary plans for fire access at the design stage for a roadway, including dead ends and cul-de-sacs. These decisions are guided by the requirements set in the Alberta Building Code (2014). When planning these access routes, the municipality considers the type and size of vehicles that are used for fire and emergency response, while reviewing the "connection with public thoroughfares, weight of firefighting equipment, width of roadway, radius of curves, overhead clearance, location of fire hydrants, location of fire department connections, and

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vehicular parking” (Alberta Building Code, 9.10.20.3). Changes to vehicle parking angles can reduce the available turning and operating space within a cul-de-sac, which would go against the intent of the regulations.

The general design of the cul-de-sac does limit the available space for on-street parking, particularly where the surrounding homes have front garage driveways. As vehicles are required to be parked a minimum of 1.5 metres away from an access to a garage or driveway, many of these cul-de-sacs do not have any space for legal on-street parking (Parking Bylaw, section 3(1)(g)).

INVESTIGATION: ALTERNATIVES AND ANALYSIS

Administration contacted sixteen cities in North America about their angle parking rules in cul-de-sacs. Most cities prohibit angle parking in these spaces, and some prohibit all on-street parking within the curve. Only Edmonton had a process of evaluation and permission to establish angle parking in cul-de-sacs. In 2012, Edmonton established guidelines that permit angle parking for residents who live in cul-de-sacs with a radius of 15 metres or greater (Attachment 2).

The minimum radius ensures that there would still be sufficient road space for vehicles to turn around in, and is based on the Transportation Association of Canada’s design criteria to accommodate the turning movement of a typical delivery truck or waste management truck, which is 10.5 metres. In the 2017 July report to Council (TT2017-0594), Administration recommended that Calgary adopt the same 15 metre requirement as Edmonton for angle parking in cul-de-sacs (Attachment 3).

However, in Calgary, less than 1% of all residential cul-de-sacs would meet this minimum size. The width of cul-de-sacs in Calgary do vary, but in general they have reduced in size over the years as developers and home buyers have favoured the design of homes with front-drive garages. In these cul-de-sacs, personal vehicles are intended to be parked in the garage or on the private driveway, which reduced the need to accommodate space for on-street parking. Therefore, the cul-de-sacs were built to the size required to maintain appropriate vehicle turning movements.

At the direction of The Committee, Administration was asked to further review the issue and develop a process that would allow for more cul-de-sacs to qualify for angle parking. This new option was to be brought back to The Committee for consideration.

A New Option

The development of a new service to allow angle parking in cul-de-sacs has been completed with the input and cooperation of Calgary Fire, Waste & Recycling Services, Calgary Roads, and the Calgary Parking Authority. Administration determined that each angle parking request for a cul-de-sac would have to be evaluated independently, rather than based on a set criteria such as a specific size radius. Due to the varying sizes, criteria for consideration would also include crossing points and infrastructure located within the built form.

The following table compares this new angle parking process to the 15-metre radius option that was previously recommended to Council:

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ANGLE PARKING IN CUL-DE-SACS		
	<i>15m Radius Option</i>	<i>New Option</i>
Number of cul-de-sacs eligible for review	1% of total	All Each cul-de-sac evaluated independently on built-form
Maintain passenger car turning movements	Yes	Yes
Maintain delivery vehicle turning movements	Yes	No Larger vehicles would have to conduct multi-point turns, or back in/out.
Maintain WRS vehicle movement and operation	Yes	Yes With parking restrictions on collection days, or an agreed upon secondary collection location , where rear collection is not available
Maintain CFD vehicle turning movements	Yes	No Maintaining turning movement not possible under 15m
Maintain CFD operating space	Yes	Yes Minimum 6m width for access will remain. May restrict the number of emergency vehicles into the bulb.
Increase on-street parking spaces	Yes	Likely Depends upon the built-form

WRS – Waste & Recycling Services; CFD – Calgary Fire Department

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Evaluation Criteria

While each cul-de-sac would be evaluated independently, and not limited to a set radius size, other criteria have been proposed for the evaluation:

1. Minimum access standards for emergency response
2. Safe and efficient collection of waste
3. Standardize petition requirements – Reduce percentage for successful petition
4. Optimize parking – Make it work for residents and visitors

1. Access Standards for Emergency Response

The Calgary Fire Department (CFD) does have Access Standards for roadway design to ensure there is adequate, unobstructed access for emergency responses. These standards are based on the Alberta Fire Code 2014, Alberta Building Code 2014 and the Safety Code Act (RSA 2000 C. S-1). The following criteria would be adopted into the process:

- A minimum of 6 metres of clearance will be planned for their apparatus to set up at an emergency scene and provide a work area for emergency personnel.

Risk – In smaller cul-de-sacs where vehicles are parked on angles around the curve, the remaining road space may only accommodate one emergency response vehicle. Other fire trucks, ambulances or police would likely need to be stationed further out, which could make adjusting equipment and moving patients more challenging and take longer. Property damage may occur where emergency response vehicles are being positioned amongst other vehicles that have parked on the angle in the cul-de-sac.

2. Safe and Efficient Collection of Waste

Waste & Recycling Services (WRS) provides residential waste collection for the community (black, blue and green carts) to protect both public health and the environment. WRS confirms that maintaining adequate turning and working space is important to ensure this service is done in a safe and efficient manner. Where waste collection is performed in the cul-de-sac, a secondary location for carts or short-term parking restrictions are a reasonable compromise to maintain safe and efficient delivery, while supporting the parking preference for the residents. The following criteria is proposed:

- A safe and accessible secondary location can be agreed to for all the waste carts to be placed for Collection Days.
- Where no suitable secondary location is possible, there would be no street parking on Collection Days during operating hours (7 AM - 4 PM). This would affect the residents one time each week, and twice a week on alternating weeks on waste collection days.
- Parking restrictions would be posted on the sign that also allows for angle parking.

Establishing parking restrictions would be the simplest and most efficient approach to balancing the issues of service delivery and parking. WRS would not need to be involved further in the parking review process which saves time in circulation and resources. However, where alternate locations for waste cart collection are available, the angle parking plan would not be implemented until the cart collection plan was agreed to by residents and approved by WRS.

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Risk – Waste collection may be missed when carts are not placed in the agreed upon location regardless of weather or road conditions. It is likely that improperly parked vehicles that obstruct cart collection may result in an increased demand for parking enforcement actions to be taken. The Calgary Parking Authority (CPA) has concerns about meeting those expectations, as they have limited resources to expand their response in residential areas.

3. Standardize Petition Requirements

Administration has previously approved angle parking in 13 cul-de-sacs in Calgary. These were initiated by residents who contacted 3-1-1 for angle parking signage. A petition form was prepared for the applicant to get signed by all affected residents, and a successful petition required 100% agreement of the residents. Since 2006, only nine angle parking requests had met this threshold and been approved. In 2016 alone, there were 140 requests made. Administration views 100% agreement as too restrictive for residents, particularly where other criteria are considered as part of a process. A current process that uses resident petitions is for the installation of parking restrictions within an existing Residential Parking Zone, and the threshold is 80% approval for a successful petition. Therefore, the following criteria is proposed:

- Adopt 80% as the threshold for a successful petition for angle parking in cul-de-sacs.
- Adopt a threshold of a simple majority (> 50%) for a successful petition to remove angle parking where previously installed.

The residents would be advised of any potential restrictions to parking or alternate waste cart placement as part of the petition process, to encourage an informed vote.

4. Optimize Parking

The availability of on-street parking in residential areas is important to citizens. Administration would develop parking plans that best use the parking spaces that are available in the cul-de-sac. There may be a combination of space for parallel parking, and marked angle parking stalls. The residents would be provided with the parking plan as part of the petition package. The following criteria is proposed:

- Plan to increase street parking spaces wherever possible
- Maintain adequate passenger vehicle movement into and out of the cul-de-sac

Risk – Residents may develop a sense of ‘ownership’ over the marked parking stalls in front of their property. This may be more likely where angle parking stalls have been placed in front of some homes and not others, depending on the plan. While every on-street parking space is available for public use, the concern about being able to park in front of one’s home is called in regularly to CPA, Administration and Council offices. This may increase demand for parking enforcement action to be taken, when the CPA has limited resources to address these concerns.

While the parking may be optimized for passenger vehicles, the reduced space for larger vehicles to turn will likely cause difficulty for trucks that must use the roadway to deliver services to residents. Examples would include Calgary Transit Access vehicles, moving and storage trucks, and those that deliver furniture, appliances, and landscaping materials. Larger vehicles would be forced to execute multi-point turns, or to back in/out of the cul-de-sac, travelling backwards for longer distances down the road. This could include WRS collection trucks, should they need to pick up the waste carts from a secondary location

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within the cul-de-sac. These manoeuvres increase the risk of collision, as the drivers must constantly look for people, pets and objects in their restricted rear view.

Process and Cost Recovery

Administration is recommending that the application follow a permit-like process, rather than a local improvement process that is typically used for more expensive projects, like laneway paving. The resident would initiate an application for angle parking through 3-1-1, and pay an application fee. The cul-de-sac would be reviewed, and where it meets the criteria, a parking plan and resident petition would be created. Upon receiving a successful petition and the associated cost-recovery fees, an installation timeline for signage and road marking would be created and communicated back to the residents.

A cost recovery mechanism for the necessary planning, signage and road marking was requested by Council in the 2017 February Notice of Motion (Attachment 1). The breakdown of costs for this new process would be:

Application Fee \$70.00

- Flat fee, non-refundable. Covers administrative costs for initial review and decision.

Installation Fee \$2300.00 (approximate)

- Administration (Parking plan design and drawings, petition creation, final circulations)
- Sign manufacturing and installation
- Road marking / painting (Some variability in cost depending on the number of lines)

The applicant would be responsible for paying the fees. Any personal arrangements for cost-sharing with the other interested residents is up to the applicant. The establishment of these costs are in alignment with Council's User Fees and Subsidies Policy (CFO 010). Administration would not charge for lifecycle maintenance of the signs or road markings. They would be fixed or refreshed as needed, and prioritized within the allocated operating budget. This is consistent with past practices, including "No Parking" signage adjacent to commercial driveways.

Enforcement

The Calgary Parking Authority (CPA) is responsible for enforcing the parking laws in Calgary. While they do not regularly patrol cul-de-sacs in residential areas for parking offenses, they must respond to citizen complaints about illegal parking. In 2017, CPA received 249 calls for service regarding parking issues in cul-de-sacs, resulting in the issuance of 72 tickets for failing to park parallel to the curb. This represents 0.02% of the 336,463 parking tickets issued by CPA in 2017. By comparison, 6746 parking tickets were issued during the three Snow Route parking bans that were implemented in 2018 January - 2018 March.

As mentioned earlier, the CPA has identified risks about changes in process and permission that may increase demand for services for these residential streets. Should a new parking option become available, and residents take the required steps to apply and pay for angle parking to be installed, it is understandable and predictable that there would be an expectation that residents in other cul-de-sacs follow the same rules: either obtain permission or only park parallel to the curb. Where expectations are not met, calls for parking enforcement are likely.

As angle parking is a common occurrence in cul-de-sacs, there does appear to be a general misunderstanding of how the regular parking rules for the street apply to this unique circular environment. As a result, enforcing the rules around parking in cul-de-sacs has at times resulted

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in conflict between the CPA and residents. Once the angle parking decision is made by Council, Administration will work with the CPA to develop both on-line and printed materials to better communicate the parking rules in cul-de-sacs to citizens.

Pilot Project

The Calgary Parking Authority (CPA) is willing to conduct a six-month pilot project to better educate residents about angle parking, if so directed by Council. Beginning 2018 September, CPA officers would respond to complaint calls only for unauthorized angle parking in cul-de-sacs. During the initial visit to a location, the CPA would take the following steps:

1. A CPA supervisor will assess the situation and determine the appropriate course of action.
2. Warnings would be issued to all vehicles parked in contravention of the Calgary's Parking Bylaw (41M2002).
3. An information brochure would be placed on each vehicle directing the owner/operator to an online site to obtain information regarding parking in cul-de-sacs, including any relevant permission processes.
4. The visit will be documented in the CPA's computer-assisted dispatch system.

Upon receiving a follow-up complaint for a location that has been issued a warning, tickets will be issued to vehicles in violation.

Stakeholder Engagement, Research and Communication

The development of a new option to allow angle parking in cul-de-sacs has been completed with the input and cooperation of Calgary Fire, Waste & Recycling Services, Calgary Roads, and the Calgary Parking Authority. Following the decision of Council, Administration and the Calgary Parking Authority will update and develop communication materials related to parking in cul-de-sacs.

Strategic Alignment

This report does align with principles found in the Calgary Transportation Plan, as we ensure the attractiveness, convenience and safety of all modes of transportation. Residential streets will focus on the needs of private automobiles and on-street parking. However, access to emergency and municipal services, and the incorporation of emergency evacuation routes, must be considered in the design and operation of all road and street types. This is critical to ensure every Calgarian lives in a safe community.

Social, Environmental, Economic (External)

The review of angle parking in cul-de-sacs does support The City's goal to make Calgary a safe city by ensuring that emergency response and municipal access requirements are considered as part of the review process for angle parking applications.

Financial Capacity

Current and Future Operating Budget:

Providing a new service will have to be initially supported within the existing resources and operating budget for 2018. Depending on the demand for service, this may result in extended timelines to provide the review and parking plan for applicants.

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While the application and installation fees will recover direct costs for the service, additional resources may be required to meet customer expectations going forward. These resources would be submitted as part of the One Calgary 2019-2022 budget cycle.

Current and Future Capital Budget:

The information contained in this report contain no decisions that would impact capital budgets.

Risk Assessment

If Council chooses to endorse a process to allow for smaller cul-de-sacs to qualify for angle parking, the identified risks and mitigation plans around emergency access and the Alberta Building Code, waste and recycling service delivery, large vehicle movement and demand for parking enforcement will be assumed by Administration. These specific risks were identified earlier in this report.

By implementing an option that is contrary to recommended safety standards and poses a greater risk to the delivery of emergency services and public safety, The City will likely be incurring additional risk of liability. In addition, the reach and extent of this liability will be very difficult to estimate given that each cul-de-sac design scenario will be highly situation specific.

As angle parking is a common occurrence in cul-de-sacs, calls for enforcement may increase once the issue of angle parking comes before Council, and is reported by the media. This risk may be mitigated by improving communication materials and supporting the CPA's pilot project to educate residents about residential parking rules, which often leads to improved compliance in the future.

REASON(S) FOR RECOMMENDATION(S):

Based on design standards and input from internal stakeholders, only cul-de-sacs that have a minimum radius of 15 metres should be considered for angle parking. Administration believes the identified risks associated with emergency access and positioning, and large vehicle movement outweigh the benefits of providing a service that addresses the parking preference of residents who live on smaller cul-de-sacs. This is consistent with the parking practices of most Canadian and American municipalities.

However, as directed by Council, a process for permission to angle park in smaller cul-de-sacs has been developed for consideration. Should Council choose this option, Administration would assume the identified risks and attempt to mitigate them through the review process.

ATTACHMENT(S)

1. Attachment 1 – Notice of Motion on Angle Parking in Cul-de-sacs (NM2017-03)
2. Attachment 2 – Municipal Review of Angle Parking Rules
3. Attachment 3 – Angle Parking in Cul-de-sacs Report – July 2017 (TT2017-0594)