

Noise Barrier Retrofit Program

How much money is allocated to the Noise Barrier Retrofit Program?

Council has approved and allocated \$12 M for the construction of noise barriers on the 2024-2026 Noise Barrier Retrofit Program project list.

Currently, how many candidate projects are on the priority list?

The 2023 – 2026 project list contains 11 priority areas eligible for construction for 2024-2026.

Where is the Noise Impact measured?

- Truck Routes
 - Standard Lot – Noise levels are measured 3 meters from the house at a height of 1.5 meters above ground.
 - Walk-Out Style Lot (built after 1996) – Noise levels are measured at a height of 1 meter above the centre of the main floor deck.
- Non-Truck Routes
 - All homes are measured 3 meters from the house at a height of 1.5 meters above the ground.

How are noise studies conducted?

The program is a citizen-led initiative where individuals may request the assessment of noise levels at their property. The first step to initiate a noise measurement is through a 3-1-1 inquiry or an online request.

If a location qualifies for noise measurement, a traffic noise investigation request form is sent to affected property owners. The request form must be supported by two-thirds of those directly impacted. All eligible complaints and enquires are investigated to determine if they meet the criteria for the Noise Barrier Retrofit Program list.

What information is required to complete the noise barrier request?

- Name, address, phone number or email address.
- A signed petition with 2/3 support for the noise barrier from residents directly impacted from transportation noise.

What are the steps for a noise barrier investigation?

1. A request form is submitted by a resident (with two-thirds support from impacted households).
2. An initial site visit is made to establish the feasibility of the sound attenuation wall construction.

(Note: issues such as lot flankage, frontage, access points, sight lines, relative grade, accessibility, and distance from the roadway will be assessed).

3. Once feasibility has been established, the location is then added to the annual list for detailed field measurement and traffic count in the subsequent year.
4. From June to September each year, noise field measurements and traffic counts are conducted at each location on the list.
5. After the required testing has been completed, the data is evaluated to determine eligibility under the Surface Transportation Noise Policy. The result of the evaluation is then communicated to the affected parties.
6. The locations that qualify under the program are retained on file for detailed evaluation, benefit/cost calculation, and prioritization assessment.
7. When the prioritization list is established and timelines are confirmed, a survey is sent to impacted residents to ensure that there is a minimum of two-thirds support for the construction of a noise attenuation wall.
8. An Open House is held to inform neighbours and communities.
9. The noise barrier is constructed.

How are priority locations ranked?

Priority locations are ranked according to the expected benefit/cost ratio of the project. The benefit/cost ratio is a consistent formula for evaluating and prioritizing candidate locations. The highest ranking goes to the location with the highest benefit/cost ratio. Factors taken into consideration include:

- The severity of the noise problem.
- The amount of noise reduction required.
- The cost of the project.
- The number of residential homes that will benefit.

What type of wall will be constructed?

Noise barrier retrofit projects are placed on tender and the type of wall is determined by the contractor completing the work.

What if I don't want a wall?

A noise barrier can only be constructed under the NBRP program if two-thirds of the directly impacted property owners support the project.

The initial request must be accompanied by a list of homeowners who support the request. Before construction begins, a final poll will be taken to ensure two-thirds support remains.

Noise Barriers

Will a noise barrier eliminate traffic noise?

- A noise barrier will make a significant difference lessening the impact of transportation noise.
- A noise barrier can achieve a 5-decibel noise level reduction when it is tall enough to break the line-of-sight from the roadway to the receiver location.
- After the line-of-sight is broken, an additional 1.5 decibel noise level reduction can be achieved per one meter of barrier height.

My existing fence has gaps in it. Do gaps in the fence affect its ability to block noise?

A higher level of sound protection is achieved when fences have no gaps.

How is noise attenuation considered for new community subdivisions?

At the onset of a new community development next to a skeletal road, arterial street, or parkway, The City works with land developers to project the future transportation noise. If noise is expected to exceed the design noise level criteria, a noise barrier will be constructed.

Qualifying for the Noise Barrier Retrofit Program

Why do some locations not qualify for a noise barrier?

It may not be feasible to construct a barrier at all locations due to physical restrictions and/or the cost of construction. Additionally, a noise barrier may not significantly reduce noise levels in all cases.

I already have a fence that was constructed by a developer. Am I eligible for this program?

Any property owner who believes they have a noise problem can submit a request and apply for a noise barrier through the NBRP program.

Government of Alberta and City of Calgary Regulations

KEY ELEMENTS OF THE SURFACE TRANSPORTATION NOISE POLICY (City of Calgary)

- The City's Surface Transportation Noise Policy prescribes the conditions under which noise barriers are constructed adjacent to residential properties using guidelines established by the Federal Government.
- The Policy only deals with noise generated from typical traffic passing by a location - it does not deal with noise sources such as aircraft noise, engine retarder braking, or construction activities.
- The Policy provides for relief due to excessive noise impacts for the rear outdoor recreation area of a residential property only. Noise levels experienced within the dwelling or building are not relevant to this Policy.
- The Policy applies to roadways designated as Skeletal Roads, Arterial Streets and Parkways as defined by The City's roadway classification map.

- If the roadway is a non-truck route, the threshold traffic noise level is 60 (dBA), based on a 24-hour average.
- If the roadway is a truck route, the threshold noise level is 65 (dBA), based on a peak hour noise level.

Sound attenuation walls are constructed in three ways:

- Since 1988 new residential sub-division developers have been required to evaluate the need for noise walls at the time the development occurs, and where deemed necessary, provide a wooden or stucco-faced fence of an appropriate height.
- If The City upgrades a roadway adjacent to existing residential development, the need for sound attenuation is reviewed, and provided, when found warranted.
- For existing residential areas, The City has established a program (Noise Barrier Retrofit), with a limited annual budget, to construct concrete sound attenuation walls, on a priority basis, for locations deemed to be impacted the worst by adjacent traffic noise.
- In each of the preceding situations the Policy states the conditions and design criteria to be used in determining need and the subsequent extent of protection.