

Military Road Safety Improvements Project

Pilot Roundabout Engagement Opportunity – Summer 2022

Executive Summary

In Spring 2022, Arlington County Transportation staff shared a public engagement opportunity for the pilot roundabout at Military Road and Nelly Custis Drive. This intersection is the final one to be improved as part of the Military Road Safety Improvements capital project.

This pilot project was installed in October 2021 to examine operational and safety outcomes for a roundabout, a potential design solution being considered for the intersection. The project team asked for community feedback on how the pilot project had been received by the community. We received 702 responses to at least some of the questions, and this memo summarizes the feedback.

Key Takeaways:

- Most responses came from residents of the 22207 Zip Code, which is the same as the project location
- The majority of all respondents reported feeling less safe while using the pilot intersection, but the margins were very narrow for those who walked or biked through the intersection.
- Those who reported feeling less safe highlighted concerns with operational confusion, the size of the pilot roundabout and the perceived lack of sufficient space for a well-designed roundabout in the future condition.
- Those who reported feeling more safe highlighted concerns with operational confusion, but also reported better yield rates by vehicles to pedestrians, slower vehicle speeds, and easier operations for traffic flow and left turns from Military to Military.
- The majority of issues raised in the feedback we received can be addressed through design in a capital project, where the intersection design will not be limited by existing curb lines. This project may take the form of either a signalized intersection or a roundabout.

The project team is reviewing this public feedback from the pilot project engagement alongside safety and operational data gathered during the pilot period. Along with the County's applicable adopted plans and guidance, this information will be used to select the concept that will be advanced for design and construction of the permanent capital project. The project team anticipates announcing this decision in Fall 2022.

Design for the selected concept is anticipated to begin in 2023 and construction is tentatively slated to commence in 2024 and will last approximately 12-15 months. A public engagement opportunity for the selected concept design will be held in spring 2023 and will focus on elements of the design.

Project Background

Military Road Safety Improvements – Pilot Project Engagement – Spring 2022

The Military Road Safety Improvements Project will implement safety improvements at three intersections on Military Road, including at the intersection with Nelly Custis Drive. These intersections are three among many identified in the 2004 Arterial Transportation Management Study that led to the implementation of several safety projects in the Military Road corridor over the years.

In 2021, the Military Road Safety Improvements project completed improvements at the intersections of Military Road and 38th Street N. and Military Road and N. Marcey Road. The Nelly Custis Drive intersection is the third and final location to address as part of this project. It has received additional consideration and study due to the challenging geometry of the intersection, safety issues, and its inclusion in school walking zones for Taylor Elementary School and Hamm Middle School.

A 2017 public meeting shared two different concepts for the intersection with Nelly Custis Drive: a traditional signal and a roundabout. Engagement received at that meeting and a subsequent online feedback form showed support for safety interventions at the intersection over a no-build alternative, and a mild preference for the roundabout over the signalized intersection. Subsequent analysis for the roundabout concept delivered inconclusive operations results, so the project team sought to learn more through a pilot project.

In October 2021, the project team partnered with Vision Zero program staff to install a temporary roundabout as a pilot project. This facility, constructed with quick curb, pavement markings and bollards, is intended to improve intersection safety by increasing vehicle yield rates at cross walks and to gather data to inform future decisions for this project. The pilot was installed November 2021 and will be studied for 1 year.

For more information on the project's background, history, goals and planning basis, please visit the [project website](#).

Goals and Basis

This project directly supports the broader goals and imperatives of the Master Transportation's Streets element, including the County's Complete Streets Policy, and improves broader multimodal transportation connectivity for people walking, biking, accessing transit and driving. It also implements goals from the Vision Zero Action Plan related to piloting innovative safety interventions, reducing vehicle speeds, and addressing known safety issues before serious or fatal crashes occur, particularly when the location is within a school walk zone.

This pilot project, in conjunction with the [Vision Zero](#) transportation safety program, will test the effectiveness of a roundabout for improving pedestrian safety and reducing vehicle speeding at the intersection, while also measuring operational effectiveness for vehicle traffic movements.

Following the collection of data and public input, the project team will select a design alternative from those presented in 2017 (and updated for 2022) to advance for the capital project already funded at this location.

Public Engagement

Public engagement is an important component of both capital projects and pilot safety projects in Arlington and contributes to the information project staff use to make decisions on future efforts for pilot project locations, along with observational data, speed data, crash history, and relevant transportation planning guidance adopted by the County Board.

In May 2022, the project team hosted a community open house at Dorothy Hamm Middle School to share more about the Military Road Safety Improvements Project, gather feedback on the pilot roundabout project implemented at the intersection of Nelly Custis Drive and Military Road, and review the options for a preferred alternative to be constructed at the intersection. This meeting welcomed 31 attendees.

An online feedback form was also made available to collect feedback from the community on their experiences with the pilot safety project. This feedback form received 702 responses between May 15 and June 6, 2022.

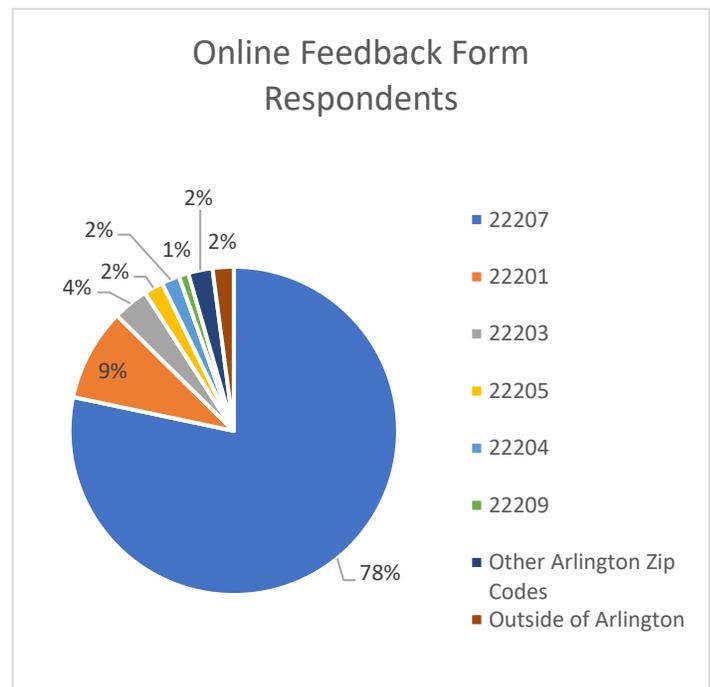
Additionally, the project team has received public comments on the pilot project via a dedicated email address (militaryroad@arlingtonva.us). The project team received 82 emails from 52 individuals between October 2021 and the conclusion of the engagement period with comments about the pilot project. These comments closely resembled the feedback we received through the online engagement form and were considered along with those received in the online feedback form in this summary.

The output of the online feedback form and all relevant emails received in the project inbox have been posted on the project website for public review.

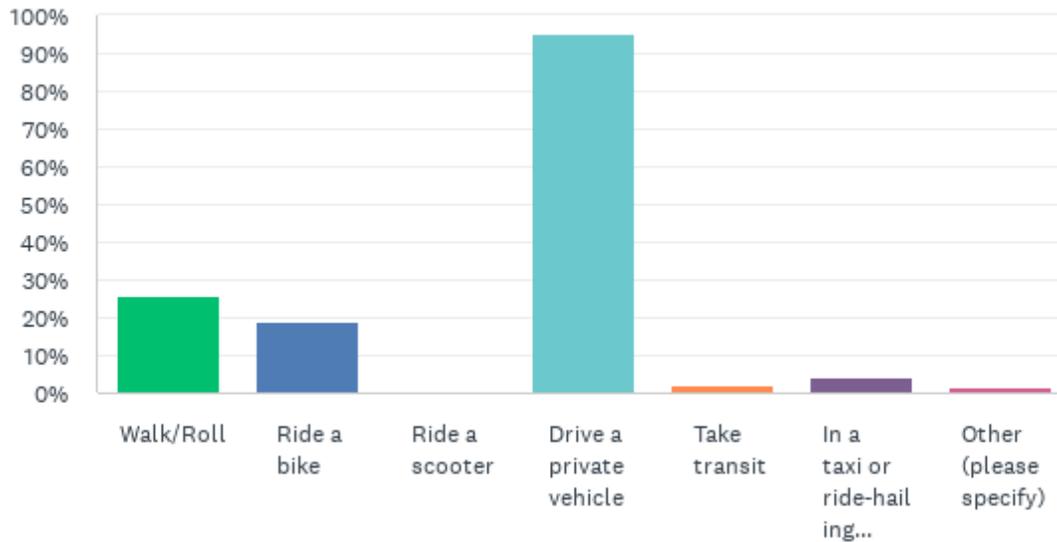
Who Responded?

Of the respondents who provided the zip code in which they reside in the online feedback form, 77.5% (491 of 627) of respondents reported living in the 22207 zip code, where the pilot project is located. This shows a high level of engagement from the group of people most likely to use the intersection across all modes.

Additionally, the online feedback form requested information about how people use the corridor in which the pilot project is located. Most (91%, or 667 of 701) reported driving along the corridor, while 25.5% (179 of 701) reported walking/rolling along the corridor and 18.8% (132 of 701) reported riding a bike along the corridor. Other modes were significantly less likely to report being used.



The following graphs depict responses to the survey question “On a typical day, how do you travel along the pilot project corridor? Select all that apply.” Respondents could select more than one option. (N=701)



What We Heard

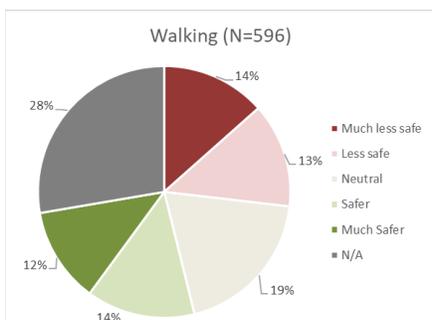
The online feedback form asked respondents to rate their feeling of safety compared to the previous condition when using the pilot project on a variety of modes. Respondents could select from a range or indicate that a given mode was not applicable to them. They were then provided the opportunity to share feedback on why they selected their responses in an open-ended question.

Ratings of Perceived Safety

Generally speaking, more people reported feeling “less safe” or “much less safe” than “safer” or “much safer” while using the three most common modes of travel along the corridor, with a significant portion of all respondents selecting “Neutral” regardless of mode.

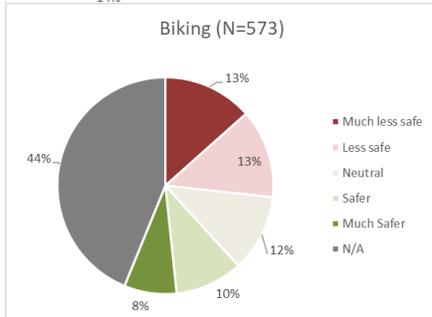
Most respondents held differing perceptions of safety depending on the mode of travel (i.e., feeling “safer” while walking, but “much less safe” while driving.) Not all respondents provided feedback on all modes, and not all responses corresponded to the modes that individuals indicated they used.

The following graphs depict responses to the survey question: “After the pilot project was implemented, how do you feel while traveling along the corridor using the following types of transportation?” (N=699)



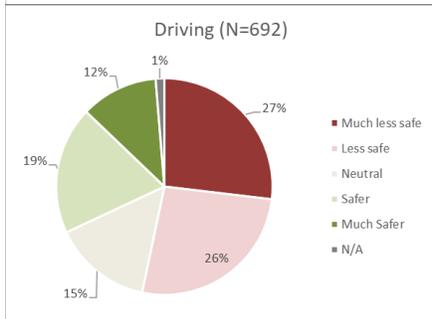
Walking/Rolling

- 26% of respondents reported feeling “**Much Safer**” or “**Safer**”
- 27% reported feeling “**less safe**” or “**much less safe**”
- 19% of respondents felt “**neutral**”



Biking

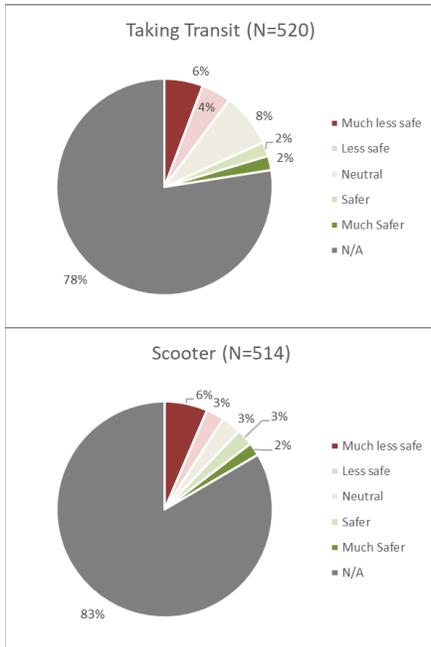
- 18% of respondents reported feeling “**Much Safer**” or “**Safer**”
- 26% reported feeling “**less safe**” or “**much less safe**”
- 12% of respondents felt “**neutral**”



Driving

- 31% of respondents reported feeling “**Much Safer**” or “**Safer**”
- 53% reported feeling “**less safe**” or “**much less safe**”

- 15% of respondents felt “neutral”



- **Taking Transit**

- 4% of respondents reported feeling “**Much Safer**” or “**Safer**”
- 10% reported feeling “**less safe**” or “**much less safe**”
- 8% of respondents felt “**neutral**”

- **Riding a Scooter**

- 5% of respondents reported feeling “**Much Safer**” or “**Safer**”
- 9% reported feeling “**less safe**” or “**much less safe**”
- 3% of respondents felt “**neutral**”

When given the opportunity to expand on why they responded the way they did to the question of perceived safety, there was significant nuance to the qualitative answers provided by respondents. This section highlights the key themes for each of the types of responses provided for the three most common modes of transportation, as submitted by respondents.

This nuance is evident when comparing qualitative responses regarding perceived safety by mode of travel. The following section highlights the most common themes for respondents based on their perceived safety by mode of travel.

Respondents who provided qualitative feedback could be included in multiple categories listed below. Most (67%) respondents held differing perceptions of safety depending on mode. (i.e., feeling safer while walking, but much less safe while driving).

Walking

People who felt “Much safer” or “safer” while **walking** after the pilot project was installed frequently mentioned:

- **Vehicle speeds:** Respondents frequently mentioned slower vehicle speeds as a benefit of the pilot project, making crossing the street easier on foot. Key topics within this theme include increased predictability for vehicles, higher yield rates, safer crossings for walking to school, and further reductions in vehicle speeds at some entrances to the roundabout.
- **General support:** A number of respondents voiced support for a roundabout based on prior experience with the intersection treatment, the included addition of crosswalks and pedestrian refuges, more controlled vehicle movements, and the lack of perceived safety in the previous intersection condition.

- **Operational confusion:** Respondents made mention of the issues related to user confusion in the roundabout, but also highlighted how this confusion often resulted in slower vehicle speeds and increased their perceived safety. Most highlighted the lack of experience that many users may have with roundabout operations, based on their perceptions.

People who felt “less safe” or “much less safe” while **walking** after the pilot project was installed frequently mentioned:

- **Operational confusion:** Many respondents report feeling confused as to who has the right-of-way when using the roundabout and highlight their perceptions of others’ lack of experience with this intersection type. Many respondents highlighting this theme also note that they find the temporary materials used in the pilot add to user confusion. Comparisons to the previous condition highlight the ease of understanding what each road user should do when compared to the roundabout.
- **General opposition:** Respondents question the need for any safety intervention at this intersection, and the use of resources to address what is perceived as an intersection without major safety issues.
- **Insufficient Right-of-way:** Respondents here note the limited space used for the pilot roundabout in terms of motor vehicle operations, particularly for those turning from Military to Military northbound or from Nelly Custis to Military southbound. Many respondents here also note the temporary removal of the bicycle lane through the intersection from Nelly Custis to Military.

People who felt “neutral” while **walking** after the pilot project was installed frequently mentioned:

- **Operational confusion:** Respondents here highlight their perception that drivers do not understand how to use the roundabout, and which vehicle has right-of-way. Many note that some approaches to the roundabout do not require as much deviation from the straight line, so many drivers do not yield the right-of-way to those already in the circle.
- **Insufficient Right-of-way:** Respondents highlighting this theme focus on the center of the roundabout’s size, noting that it is not sufficient in their minds to force users to slow down for some approaches. Others here note that their experience with the small size of the roundabout make it difficult to assess who has the right of way, creating confusion between those using the circle and those approaching it.
- **Bicycle safety:** Some respondents highlighting this theme here note that slower vehicle speeds and more predictable movements made the intersection easier to traverse by bicycle in their experience. Other respondents cite the removal of the previous painted bike lane as a concern, requiring people biking to take the lane before entering the roundabout.

Biking

People who felt “Much safer” or “safer” while **biking** after the pilot project was installed frequently mentioned:

- **Vehicle speeds:** Respondents in this category focused on how reductions in vehicle speeds increased their perceived safety while bicycling. Some also mentioned their desire for additional

bicycle facilities to be incorporated into the roundabout, to separate people biking from vehicle drivers while navigating the intersection.

- **General support:** Respondents in this category focused on their perceptions of reduced vehicle speeds, increased attention paid by all users and the associated improvements in yielding and operational efficiency. They cited past experiences with roundabouts in other locations (inside and outside of the US) and supported roundabouts in other locations around the county.
- **Operational confusion:** Respondents in this category highlighted a perceived lack of experience or understanding with operating in a roundabout intersection, particularly for vehicle drivers. Some highlighted the temporary materials as adding to this confusion, and opined that a permanent roundabout would reduce these issues.

People who felt “less safe” or “much less safe” while **biking** after the pilot project was installed frequently mentioned:

- **Operational confusion:** Respondents in this category highlight their experiences of inconsistent behavior of drivers at this intersection, making navigation more difficult for all users. Several noted the visual challenges they experienced, particularly with the temporary materials.
- **Insufficient Right-of-way:** Respondents in this category focused on operational challenges related to the size of the pilot roundabout, specifically regarding perceived understanding right-of-way for users inside the circle versus those approaching the circle. Several stated that it was challenging to merge with vehicle traffic in advance of the intersection in the absence of a consistent bicycle facility, as well as indicating intention while in the circle.
- **General opposition:** Respondents in this category questioned the necessity of this project, staff intentions, and the data used to inform the project.

People who felt “neutral” while **biking** after the pilot project was installed frequently mentioned:

- **Operational confusion:** Respondents in this category highlight a lack of understanding for vehicle drivers as to who has the right of way and note that many drivers revert to habits from the previous intersection layout, increasing uncertainty. Several noted the visual challenges of the temporary materials as a contributing factor.
- **Insufficient Right-of-way:** Respondents in this category note that the space afforded for vehicles travelling in the circle to execute a turn (i.e., passing one approach while inside the circle) is not, in their view, sufficient to allow approaching drivers to react. Several note that the available space is challenging for larger vehicles to navigate.
- **Vehicle speeds:** Respondents in this category perceived that vehicle speeds have decreased, which in their view improves safety. Some note that vehicle drivers approaching from Nelly Custis do not slow down as frequently, creating confusion and safety challenges.

Driving

People who felt “Much safer” or “safer” while **driving** after the pilot project was installed frequently mentioned:

- **Vehicle speeds:** Respondents in this category almost uniformly cite the reduction in vehicle speeds as a significant benefit of the pilot project, increasing their perceptions of safety. Many also add that the intersection increases caution and attention paid by users, which they feel has increased yield rates for pedestrians in the crossings. Others mention that this attention is sometimes exclusively paid to other vehicle drivers, reducing perceived safety for pedestrians.
- **General support:** Respondents in this category expressed general support for roundabouts in Arlington, and specific support for a permanent roundabout in this location, highlighting the conversion from temporary to permanent materials as an improvement over the existing pilot. Many highlight their perceptions of more efficient movements for users at all approaches as a benefit of the design.
- **Operational confusion:** Respondents in this category express concern with their perceptions of a lack of understanding on how roundabouts operate among fellow intersection users. Most offer suggestions for how to improve the existing pilot or a potential permanent roundabout design.

People who felt “less safe” or “much less safe” while **driving** after the pilot project was installed frequently mentioned:

- **Operational confusion:** Respondents in this category emphasize a high level of perceived driver confusion regarding operations in the circle. Many cite differences in behavior on approach and while in the circle as challenging for motor vehicle operators and highlight the decreased clarity they perceive about proper procedure in the intersection for themselves and other users.
- **Insufficient Right-of-way:** Respondents in this category highlight the small footprint of the roundabout as a significant contributor to of the operational confusion they perceived when operating in the roundabout, with insufficient time to understand who is proceeding in which direction to respond appropriately when approaching and navigating the intersection. Several commenters highlight this for vehicles entering at one approach and turning immediately at the next approach, which many say creates a “free” turn that reduces yielding to traffic in the circle and increases operating speeds.
- **General opposition:** Respondents in this category highlight their personal experiences with the roundabout and compare them unfavorably with the previous condition at the intersection. Many questioned the necessity of this project, staff intentions, and the data used to inform the project.

People who felt “neutral” while **driving** after the pilot project was installed frequently mentioned:

- **Operational confusion:** Respondents in this category highlight the confusion they have witnessed from other intersection users related to right of way and operations approaching and within the roundabout, with several mentioning the approach from Nelly Custis specifically. Many say they have witnessed other drivers yielding within the circle to those approaching.
- **Vehicle speeds:** Respondents in this category highlight the reduction in car speeds as a benefit of the pilot. Some state that they believe some of this reduction in speed is due to driver confusion, which may or may not continue.

- **Insufficient Right-of-way:** Respondents in this category highlight the size of the intersection and pilot roundabout as the cause of the challenges they experienced navigating the intersection. Many mentioned the size in the context of yielding to traffic within the circle by those approaching it.

A complete spreadsheet of all online feedback form responses is available on the [project page](#).

Emailed comments

The project team received 82 emails from 52 individuals between October 2021 and the conclusion of the engagement period with comments about the pilot project. These comments closely resembled the feedback we received through the online engagement form and were considered along with those received in the online feedback form in this summary.

Overall, 50% of emailed comments represented perspectives in alignment with perspectives in the “less safe” or “much less safe” categories above. 29% of emails represented perspectives similar to those in the “much safer” or “safer” categories, and 21% of emails represented perspectives similar to those in the “neutral” category. Major themes from the emailed comments were substantially similar to those in the online feedback form comments.

A PDF of all emailed comments during the pilot period is available on the [project page](#).

Next Steps

The project team is reviewing this public feedback from the pilot project engagement alongside safety and operational data gathered during the pilot period. Along with the County’s applicable adopted plans and guidance, this information will be used to select the concept that will be advanced for design and construction of the permanent capital project. The project team anticipates announcing this decision in Fall 2022.

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More Information

Project Page: <https://www.arlingtonva.us/Government/Projects/Project-Types/Transportation-Projects/Military-Road-Safety-Improvements>

Project Contacts:

Gabriela Kock
Capital Project Management Coordinator
Email: gkock@arlingtonva.us
Tel: 703-228-3938

Nate Graham
Public Engagement Specialist
Email: nsgraham@arlingtonva.us
Tel: 703-228-3412