Ocean View Avenue Comprehensive Transportation Study – East Beach to Willoughby Spit

Round 3 Public Outreach Questions & Answers

Introduction: During the third and final survey period for this comprehensive transportation study (October 17 to November 6, 2022), 219 survey responses (paper + online) were submitted to the project team. In addition, 27 comments were submitted through the general comment form on the project webpage www.norfolk.gov/oceanviewstudy, posted on the city's social media platforms, or sent via other communication channels to the City of Norfolk Department of Transit (DOT).

During the second survey period (June 27 to July 24, 2022), 743 survey responses (paper + online) were submitted and 43 comments were submitted through the general comment form, posted on the city's social media platforms, or sent via other communication channels to the Department of Transit.

During the first survey period (March 4 to April 15, 2022), 818 survey responses (online only) were submitted along with 263 comments posted to the online comment map. Additionally, 90 comments were submitted through the general comment form, posted on the city's social media platforms, or sent via other communications channels to the Department of Transit.

Although comments and questions came from individuals in 32 different zip codes, about 90% of the survey and comment map respondents from all three rounds of input live in the vicinity of Ocean View Avenue (either 23503 or 23518 zip codes). The rest of the respondents were from other zip codes in Norfolk and the surrounding cities.

The following list of Questions and Answers has been compiled based on all the comments and questions received to date.

1. **What are the benefits of repurposing vehicle lanes into bike lanes on E. Ocean View Avenue?**
    a. Lane repurposing — a reduction in the number of vehicle lanes to make space for other road users — is a cost-effective approach to implement safe and comfortable bicycle accommodations on E. Ocean View Avenue and will provide benefits to cyclists, pedestrians, and motorists. Expanding the bike lanes will provide cyclists with a more comfortable travel option and better connections to existing bicycle infrastructure. Pedestrians will benefit from increased safety and walkability with fewer bicycle interactions on sidewalks, an added buffer from vehicle traffic, and shorter crossing distances across motorized vehicle traffic. Buffered bike lanes are effective traffic calming and safety tools. They have been shown to reduce total crash rates compared to streets with no bike lanes. Calmer vehicle speeds decrease the risk of severe and fatal crashes for all road users if a crash does occur. See Question #8 for information about how bike lanes have impacted vehicle speeds in Norfolk.
    b. Lane repurposing has been endorsed by the Federal Highway Administration (FHWA) as a Proven Safety Countermeasure. Studies show that more bike lanes lead to fewer roadway fatalities and injuries for all road users. On average, cities with protected and separated bike infrastructure have 44% fewer fatalities than other cities. Agencies nationwide and statewide recognize the benefits of lane repurposing. In Virginia over the last ten years, 66 lane repurposing projects have been implemented on over 39

miles of roads. Projects across the country demonstrate that well-planned lane repurposing efforts effectively reduce crashes without substantially increasing congestion or travel times. Over a 5-year period from 2016 to 2020, there were 13,289 crashes on Norfolk roads (excluding the interstates), including 410 crashes involving pedestrians and 182 crashes involving bicyclists. These resulted in 84 fatalities. 29 of the fatalities were pedestrians and 3 of the fatalities were bicyclists. None of the bicyclist or pedestrian fatalities occurred at bike lane locations. Of the 182 crashes involving bicyclists, 3 were in buffered bike lanes, 10 were in unbuffered bike lanes, and the remaining 169 were on roads without bike lanes. A map showing this bicycle crash data, a crash dashboard for the City of Norfolk as well as other crash-related information can be found on the city's Vision Zero website.

c. Access to high-quality bike lanes can boost economic vitality. Studies have shown that bike facilities can have positive, statistically significant impacts on home values and adding bike lanes that improve safety and encourage multimodal use provide benefits to local businesses. In addition, investing in bicycle infrastructure can stimulate development to expand job opportunities and attract new businesses and young talent to the city.

d. Lane repurposing provides benefits for those citizens who can't afford a car or who choose not to travel by car – see Question #11 for more information. This relates to the City's Completes Streets Policy, which calls on the city to design streets to allow safe access for all people regardless of age, ability, income, ethnicity, or chosen mode of travel, including pedestrians, bicyclists, motorists, and transit riders. Expanding the bike lanes on Ocean View Avenue will create a much-needed corridor for bicyclists to safely move between neighborhoods and access multiple locations of interest, including the beach.

2. **Why is the section of Ocean View Avenue west of 4th View Street not included in the detailed traffic analysis? Will the bike lanes eventually be extended to the end of Willoughby Spit?**

   a. The City of Norfolk Bicycle and Pedestrian Strategic Plan, adopted by City Council in 2015, identifies buffered bike lanes as the recommended bicycle facility along Ocean View Avenue from Willoughby Spit to 19th Bay Street (Corridor 10, Segments 1-5). To accommodate the recommended bike lanes, the Strategic Plan recommends a lane repurposing from two travel lanes to one travel lane in each direction for vehicular traffic. Part of the purpose of this comprehensive transportation study was to evaluate the feasibility of this lane repurposing between 1st View Street and Pretty Lake Avenue. Therefore, the detailed traffic analysis for this study only looked at the section of Ocean View Avenue between 1st View Street and Pretty Lane Avenue.

   b. Due to the Hampton Roads Bridge Tunnel expansion project and the resulting traffic impacts on W. Ocean View Avenue, there are currently no plans to study the feasibility of improving the bike lanes through a lane repurposing project in Willoughby Spit. Therefore, the project team has not conducted a detailed traffic analysis from 4th View Street to 15th View Street at this time. The area west of 4th View Street has recently been studied as part of the Virginia Department of Transportation's (VDOT) Hampton Roads Bridge Tunnel and Hampton Roads Express Lane studies. Although the feasibility of a lane repurposing in Willoughby Spit is a project that can be considered in the future,

the project team can consider bike safety improvements for the existing Willoughby bike lanes as part of the current Ocean View Comprehensive Transportation Study.

3. **Will this study consider lane repurposing on Ocean View Avenue between 19th Bay Street and Pretty Lake Avenue?**
    a. Yes, this comprehensive transportation study evaluated the feasibility of lane repurposing on Ocean View Avenue from 19th Bay Street to the intersection of Shore Drive and Pretty Lake Avenue through the future conditions analysis, which was conducted for the year 2031. The "Build 1" scenario in the analysis considered lane repurposing on Ocean View Avenue from 1st View Street to the intersection of Shore Drive and Pretty Lake Avenue with one travel lane and a separate bicycle lane in each direction. The results of the analysis indicate that lane repurposing from 19th Bay Street around the curve to the intersection of Shore Drive and Pretty Lake Avenue is not feasible. During the AM and PM peak hours, the Level of Service (LOS) – a measure to define how well vehicle traffic flows along a road – would decrease, meaning the flow of traffic along this segment of the corridor would be negatively impacted if lane repurposing were to occur. See Question #21 for more information about the Future Conditions Analysis results.
    b. The City of Norfolk's 2015 Bicycle and Pedestrian Strategic Plan, recommends a shared-use path on Ocean View Avenue or a neighborhood bypass from 19th Bay Street to the intersection of Shore Drive and Pretty Lake Avenue. According to the Strategic Plan, an alternate route is needed along this section of Ocean View Avenue because traffic volumes are too high to accommodate lane repurposing. The project team can confirm that the segment of Ocean View Avenue from 19th Bay Street around the curve to Pretty Lake Avenue has the heaviest volume of vehicles. Additionally, adding in a bike lane and reducing the width of the two existing travel lanes also does not appear to be feasible due to the limited amount of road space, especially along the curve between 20th Bay Street and Pleasant Avenue. Regarding the shared-use path recommendation from the 2015 Strategic Plan, there are potential right-of-way constraints due to the newly developed properties to safely build an off-road path along Ocean View Avenue from 19th Bay Street to the intersection with Pretty Lake Avenue.
4. **Why were the 3rd Bay Street and 13th Bay Street signalized intersections not included as part of the vehicle turning movement count and speed/volume count locations?**
    a. The 3rd Bay Street and 13th Bay Street signalized intersections were not originally scoped as locations to collect vehicle turning movement count data and conduct a detailed traffic analysis because lane repurposing has already occurred at these locations. Since these two intersections are located along the stretch of Ocean View Avenue that currently has bike lanes, the comparison between the existing conditions analysis and the future conditions analysis would be the same. The current lane configuration for vehicles for this part of the Ocean View Avenue corridor is the same as the proposed lane configuration.
5. **Is this a bike-only project?**
    a. Although bike lanes are a focus item for this comprehensive transportation study, it was not the only element the project team evaluated. The scope of the project included evaluating the feasibility of expanding the bike lanes along Ocean View Avenue between

1st View Street and Cape View Avenue as well as from 19th Bay Street to the intersection of Shore Drive and Pretty Lake Avenue and the feasibility of accommodating golf carts along the corridor. The purpose of the study was also to evaluate the feasibility of a speed limit reduction of the existing 35 MPH speed limit and to identify locations along the entire Ocean View Avenue corridor from East Beach to Willoughby Spit that need pedestrian safety improvements, including better pedestrian crossings and public beach access.

6. **Will transit and parking be elements evaluated in this study? What are the benefits of on-street parking?**
    a. Transit is not a focus item for this transportation study. The transit routes and service were part of an in-depth analysis for the Transit System Redesign element of the city's Multimodal Transportation Master Plan. However, since there is consensus to move forward with lane repurposing to expand the bike lanes on E. Ocean View Avenue, the project team will have to consider how the buses will interact with the bike lanes as well as the design and locations of the bus stops. Improvements to bus stop amenities may also be considered.
    b. Parking is also not a focus item for this project, but as the project moves forward, the project team will need to consider how the bike lanes will impact on-street parking. The recommended lane repurposing alternative (2A/2B) may provide opportunities for additional on-street parking. However, this will need further evaluation once the project goes to the design phase. In addition, the project team may consider the feasibility of providing more parking options near beach access locations along Ocean View Avenue. See Question #12 for information on the benefits of on-street parking.
7. **Is this project funded? What is the implementation schedule?**
    a. This comprehensive transportation study has been funded, but funding has not yet been identified for the recommended improvements along the Ocean View Avenue corridor. This is a planning study with preliminary conceptual design, and the recommendations that result from this study will be used to pursue funding for design & construction.
    b. With the conclusion of this study, the project team has finalized the recommended improvements for the Ocean View Avenue corridor. Input from the final round of public engagement guided the project team in finalizing the preferred lane repurposing concept and other study recommendations. In the third Ocean View Avenue Comprehensive Transportation survey conducted from October 17 – November 6, 2022, respondents were asked whether they support the recommended lane repurposing alternative and the recommended pedestrian crossing treatments. 66% of online survey respondents and 78% of paper survey respondents indicated that they support the recommended alternative (Alternative 2A/2B: repurpose one travel lane in each direction to provide buffered bike lanes). Additionally, 80% of online survey respondents and 90% of paper survey respondents indicated that they support the pedestrian crossing recommendations, which include installing RRFBs (rectangular rapid flashing beacons) and median refuge islands at select non-signalized intersections along Ocean View Avenue. For more details on the recommendations as well as the third survey, please see the Ocean View Avenue Comprehensive Transportation Study Story Map and

the Ocean View Avenue Comprehensive Transportation Study Round 3 Public Engagement Summary.

c. Now that the project team has finalized the study recommendations, the city is advancing with applications for future local, regional, state, and federal transportation funding programs. However, since the funding for design and construction has not yet been identified, there is no implementation schedule at this time. The timeline for implementation will depend on the type of funding identified for the improvements as well as when the funding will become available.

d. The completion of this study does line up with the timing of the City's next budget cycle. Based on the list of improvement projects generated from this comprehensive transportation study, the project team has developed and submitted CIP (Capital Improvement Program) requests to the City Manager and to City Council in the Fall of 2022. If these CIP requests are approved, the funding for various improvements along Ocean View Avenue would become available in subsequent fiscal years.

8. What will be done to reduce speeding along the project corridor? Will the speed limit on Ocean View Avenue be reduced?

a. Part of the purpose of this comprehensive transportation study was to evaluate the speed limit for the entire Ocean View Avenue corridor from East Beach to Willoughby Spit as well as to consider the feasibility of a speed limit reduction of the existing 35 MPH speed limit on Ocean View Avenue from 1st View Street to the intersection of Shore Drive and Pretty Lake Avenue. The Ocean View community has expressed a desire to reduce vehicle speeds as well as reduce the speed limit along the Ocean View Avenue corridor. In the first Ocean View Avenue Comprehensive Transportation survey conducted from March 14 – April 15, 2022, reducing vehicle speeds was ranked as the #1 priority by 26% of respondents and was ranked in the top three priorities for 58% of all respondents. The Department of Transit recognizes that speeding is an issue on Ocean View Avenue and aims to address these concerns to create a safer environment for all users of the corridor. Therefore, the Department recommends reducing the speed limit along E. Ocean View Avenue to 30 MPH. Since the Virginia Department of Transportation (VDOT) classifies Ocean View Avenue as a "Major Collector" road west of 4th View Street and a "Minor Arterial" road from 4th View Street to the intersection of Shore Drive and Little Creek Road, a speed study is required before the speed limit can be reduced. As we work to reduce the speed along Ocean View Avenue, the Department of Transit will continue to coordinate with the Norfolk Police Department to develop a plan for targeted enforcement.

b. In November 2019, the City of Norfolk's City Council adopted a Vision Zero Resolution with a goal to eliminate all roadway fatalities and serious injuries while making the city's streets safer for all road users, especially for the most vulnerable users. At lower speeds, drivers have a wider field of view and are more likely to notice other road users, including pedestrians and bicyclists. This is especially important in neighborhoods where more people are walking, biking, scootering, or playing. By better balancing the needs of all road users, the City of Norfolk can advance the Vision Zero goal of zero traffic-related fatalities and severe injuries. Visit www.norfolk.gov/visionzero to learn more about Vision Zero in Norfolk.

c. Lane repurposing, another consideration by this project, has been demonstrated to reduce speed differential. Many case studies cited by the Federal Highway Administration (FHWA) show that lane reduction can result in lower vehicle speed variability, reduce vehicle speeds, and reduce the number of vehicles speeding excessively. In the second Ocean View Avenue Comprehensive Transportation survey conducted from June 27 – July 24, 2022, there was public support for lane repurposing with a slight preference for the directional bike lanes. Alternatives 2A and 2B, the directional bike lanes, collectively had the highest average ratings among the online and paper survey respondents. For more details on the second survey, please see the Ocean View Avenue Comprehensive Transportation Study Round 2 Public Engagement Summary.

d. Comparison of vehicle speeds collected before and after bike lane implementation on Lafayette Boulevard, Llewellyn Avenue, and E. Ocean View Avenue (between Cape View Avenue and 19th Bay Street) generally indicate modest reductions in average speed and significant decreases in the percentage of traffic travelling more than 5 MPH over the posted speed limit during the peak hours of 3PM-6PM.

9. How will the bike lanes be maintained?

a. As with the existing infrastructure in the city, street sweeping for bike lanes is part of the Public Works Street Sweeping Program, which sweeps main arterials twice a month. Bike lane pavement maintenance is part of street repair and maintenance operations conducted by Public Works Streets and Bridges. Maintenance of bike lane barrier infrastructure, such as flex posts, is conducted by the Department of Transit, Traffic Operations Center.

10. Can bicyclists just use sidewalks instead of repurposing vehicle lanes into bike lanes?

a. While bicycling on sidewalks is allowed in Norfolk outside of downtown and outside of pedestrian emphasis areas, bicycling on sidewalks is far from ideal. Sidewalks are designed to provide adequate width for pedestrians to walk and pass one another safely, not for safe traversal by bicycles. It makes sidewalks less safe for pedestrians, who generally don't expect people traveling at bicycling speeds. There are also many obstacles and narrow spaces that are difficult for bicyclists to traverse. There is significantly higher incidence of bicyclist-motor vehicle crashes with bicyclists riding on the sidewalk than with bicyclists riding in the roadway. It also endangers bicyclists when crossing the street because drivers do not expect people moving at bicycling speeds at crosswalks.

11. What is the origin of this study? Who will benefit from this project?

a. In response to requests from the residential communities in Ocean View, the City of Norfolk has performed a comprehensive transportation study to evaluate the feasibility of potential changes to improve transportation and safety along the Ocean View Avenue corridor from East Beach to Willoughby Spit. The City received several requests from the communities along Ocean View regarding the potential use of golf carts to cross or to travel along Ocean View Avenue, the desire to fill in the gaps in the existing bicycle network, requests to address speeding along the corridor, and the need for improved pedestrian crossings and beach access. This project also stems from recommendations coming out of the 2015 Bicycle and Pedestrian Strategic Plan as well as the Multimodal

Transportation Master Plan. For more information about the project background, please see the Ocean View Avenue Comprehensive Transportation Study Story Map.

b. Bicycle and pedestrian infrastructure projects are rooted in enhancing the quality of life of residents by improving safety, mobility, and equity and ensuring that a range of transportation options are available and convenient. Bike and pedestrian safety and connectivity are especially important for addressing racial- and income-inequities. Research compiled from multiple studies across North America shows that 49% of the people who bike to work earn less than $25,000 per year, and Black and Hispanic bicyclists have a fatality rate 30% and 23% higher than white bicyclists, respectively. For individuals who don't own a car or have access to one, bicycling and/or walking represent an important pathway to opportunity. According to the 2020 American Community Survey 5-Year Estimate, there were approximately 11,093 households with no vehicle available (12.4% of all households) in Norfolk in 2020. See Questions #1 and #8 for more information on the safety benefits of lane repurposing, bike lanes, and reduced speeds.

12. Since E. Ocean View Avenue is classified by the Virginia Department of Transportation as a minor arterial road, does it restrict the implementation of certain traffic-calming measures (e.g., speed humps) along the corridor?

a. Yes, the use of traffic-calming measures such as speed humps, chicanes, and raised intersections would not be allowed on Ocean View Avenue because of the traffic volumes. Typical traffic volumes on streets with speed humps are about 4,000 vehicles per day. Ocean View Avenue carries between approximately 13,000 and 21,000 vehicles per day, or 3 to 5 times the allowable volume. Even if the classification of E. Ocean View Avenue from 4th View Street to the intersection of Shore Drive and Pretty Lake Avenue were changed from a minor arterial road to a collector road, the traffic-calming measures mentioned above would not be allowed due to the higher traffic volumes. The same restrictions for certain traffic-calming measures would hold true for W. Ocean View Avenue in Willoughby Spit due to the higher traffic volumes even though VDOT classifies this section as a collector road.

b. There are certain traffic-calming measures that are appropriate for roads such as Ocean View Avenue. Lane repurposing is a traffic-calming measure that can be implemented on an arterial road. Lane repurposing has the potential to improve safety, convenience, and quality of life for all road users. See Question #1 for more information on the safety benefits of lane repurposing and bike lanes.

c. On-street parking and median refuge islands are other safety measures that can be implemented along Ocean View Avenue. On-street parking encourages slower speeds by increasing the "friction" along a street as well as decreasing the crossing distance for pedestrians. On-street parking also provides a buffer between vehicular traffic and pedestrians on the sidewalk. Median refuge islands provide a protected space for pedestrians and bicyclists, allows them to cross a street more comfortably, and reduces the overall crossing length and exposure to vehicle traffic. Median refuge islands can also calm vehicle traffic by physically narrowing the roadway and potentially restricting vehicle left turn movements.

13. **Are there any consequences of changing the functional classification of Ocean View Avenue from a minor arterial road to a collector road?**
    a. The concept of functional classification defines the role that a particular roadway segment plays in serving the flow of traffic through the road network. Functional class impacts several factors including determining road design features, the eligibility of federal transportation funds for road improvements and maintenance, the frequency of VDOT maintenance inspections, access management features, and eligibility for traffic calming measures. Changing the classification of Ocean View Avenue would impact the city's maintenance dollars received from the Virginia Department of Transportation (VDOT) and would affect the city's operating budget. Therefore, the city would not recommend changing the E. Ocean View Avenue classification from a minor arterial road to a collector road. However, the Department of Transit still supports lane repurposing as an opportunity to expand bicycle/scooter lanes and to slow vehicle speeds. For a visual of the road classifications in the City of Norfolk, please view VDOT's Functional Classification Web Map.
    b. There are many factors that are considered when classifying roads, and VDOT's functional classifications are based off federal definitions of the technical classifications. The biggest element considered is how the road is used – access to/from specific locations and travel mobility. Other factors that play into the classification are the physical characteristics of the roadway and traffic volume. In addition to providing access to the beach and the various commercial and residential neighborhoods, Ocean View Avenue also connects to I-64 for access to other locations in Norfolk and the Hampton Roads region. For more information on road classification, please see the Federal Highway Administration's Highway Functional Classification Concepts and VDOT's Functional Classification Comprehensive Guide.
14. **What is the City's vision for the Ocean View Avenue corridor?**
    a. The segment of Ocean View Avenue under study from 1st View Street to the intersection of Shore Drive and Pretty Lake Avenue is identified in Norfolk's Multimodal Transportation Master Plan as a bicycle/scooter, transit, and pedestrian emphasis area. This "multimodal emphasis" indicates that Ocean View Avenue should serve as a critical connection for all modes of transportation while providing safe and accessible travel whether it's by bike, scooter, foot, bus, or car. This section of Ocean View Avenue has also been identified as a multimodal placemaking corridor. Placemaking corridors are less focused on moving lots of people quickly and more focused on creating a sense of place where pedestrians and bicyclists of all ages and abilities feel safe and comfortable accessing nearby residential, commercial, and recreational centers. Lastly, E. Ocean View Avenue is identified as a Major Avenue, which contain the highest density of destinations, intensity of activity, and mix of travel modes. Major Avenues are intended to have lower design speeds and carry more localized vehicular traffic while supporting high numbers of pedestrians and on-road bicyclists.
    b. Norfolk's Comprehensive Plan, PlaNorfolk2030, establishes a vision for the city that includes the development of a comprehensive transportation system which offers a wide variety of choices. Investment in alternative transportation choices, such as bike lanes, will support Norfolk's economic future.

15. **What are the rules for golf cart operation in Norfolk? Do golf cart drivers need to have a valid driver's license and proof of insurance?**
    a. According to Sec. 25-321 of the Norfolk Code of Ordinances, golf carts are allowed to operate in several neighborhoods in the City of Norfolk. Regarding the Ocean View Avenue area, golf carts may operate in East Beach, Pinewell (south of Ocean View Avenue between Granby Street, Norfolk Avenue, and Battersea Road), and East Ocean View (south of Ocean View Avenue between 1st Bay Street and Shore Drive).
    b. According to Sec. 25-322 of the Norfolk Code of Ordinances, "A golf cart may be operated only on designated public highways, posted with the required sign, where the posted speed limit is twenty-five (25) miles per hour or less. No golf cart shall cross any highway at an intersection where the highway being crossed has a posted speed limit of more than twenty-five (25) miles per hour. However, a golf cart may cross a highway at an intersection controlled by a traffic light if the highway has a posted speed limit of no more than thirty-five (35) miles per hour."
    c. Other limitations on golf cart operations as stated in Sec. 25-322 of the City Code are as follows: No person shall operate any golf cart on any public highway unless he has in his possession a valid driver's license. Every golf cart whenever operated on a public highway, shall display a slow-moving vehicle emblem. Golf carts must yield to all vehicular, bicycle and pedestrian traffic. Golf carts shall be operated upon the public highways only between sunrise and sunset, unless equipped with lights required by the Virginia State Code. No one shall ride standing in a golf cart. The number of riders is limited to the number of seated passengers the golf cart is designated to accommodate. For more information on golf cart operations, reference the Virginia State Code.
    d. The owner of a golf cart operated on designated streets and highways shall maintain a liability insurance policy of at least $100,000 for personal injury or death of any one person resulting from an accident and $20,000 for property damage. Any violation of the Code of Ordinances can result in a penalty of $100. For repeat violations, the penalty will be increased to $250.
16. **Does anybody use golf carts? Do people really want to use Ocean View Avenue to travel with golf carts?**
    a. The City has received inquiries from the residential communities along Ocean View Avenue regarding the potential use of golf carts to cross or travel along Ocean View Avenue. As stated in the previous question, golf carts are permissible on neighborhood streets south of Ocean View Avenue and in East Beach and are signed accordingly. Part of the purpose of this comprehensive transportation study was to evaluate the feasibility of a speed limit reduction and potentially develop and assess alternatives for accommodating golf carts along or across Ocean View Avenue from 1st View Street to the intersection of Shore Drive and Pretty Lake Avenue. Based on public response and concerns raised during the first and second rounds of public engagement, golf carts are not recommended to operate along Ocean View Avenue and none of the conceptual alternatives that have been developed include golf cart accommodations. However, as the project moves forward, certain signalized intersections may be identified to permit

golf carts to cross Ocean View Avenue. Potential locations for golf cart parking will also need to be considered as part of this process.

b. In the first Ocean View Avenue Comprehensive Transportation Study survey conducted March 4 – April 15, 2022, and received over 800 responses, only 12% of all respondents indicated that they own a golf cart or neighborhood electric vehicle (NEV) while another 23% do not own a golf cart/NEV but are interested in using one for personal transportation. Among those who currently own a golf cart/NEV, the most common types of trips made using a golf cart/NEV are visiting neighbors, visiting restaurants and shops or running errands, and visiting the beach or other recreation areas. Those respondents who currently own a golf cart/NEV indicated that their top reasons for not using their golf cart/NEV for personal transportation more often are limited designated streets for golf cart/NEV operation, interactions with automobiles or other road users, and limited street crossings. For more information about the first survey, see the Ocean View Avenue Comprehensive Transportation Study Round 1 Public Engagement Summary.

17. What type of pedestrian crossings will be placed along the corridor to improve crossings & beach access?

a. With the conclusion of this study, the project team has finalized the recommended pedestrian crossing locations and treatments for the Ocean View Avenue corridor. These recommended improvements have been guided by public outreach and engagement. During the first round of public engagement, the project team asked residents and other community members to share their concerns, ideas, and priorities on how transportation and safety can be improved along the Ocean View Avenue corridor. The project team created an online comment map for the public to identify specific locations along the corridor. Many comments were received regarding the need for improved pedestrian safety, particularly at beach access points.

b. During the second round of public engagement, the project team showcased conceptual alternatives, including potential designs for improved pedestrian crossings. The project team asked residents in the second community survey to list their top three locations for either a new pedestrian crossing or enhanced pedestrian treatment. The five most frequently identified locations received during the second public workshop and from survey respondents were: 21st Bay Street (85 mentions), Cape View Avenue (53 mentions), 1st View Street (52 mentions), Sturgis Street (37 mentions), and 5th Bay Street (32 mentions). For more details on the second survey, please see the Ocean View Avenue Comprehensive Transportation Study Round 2 Public Engagement Summary.

c. During the final round of public engagement, the project team worked with the community to identify preferred pedestrian crossing locations and treatments based on the recommendations presented by the project team. Recommended pedestrian crossing treatments include new marked crosswalks at signalized and non-signalized intersections, installation of pedestrian median refuge islands, installation of rectangular rapid flashing beacons (RRFBs), and installation of a new traffic signal. In the final community survey, the project team asked residents whether they support the recommended pedestrian crossing treatments. 80% of online survey respondents and 90% of paper survey respondents indicated that they support the recommendations. For

more details on the recommended pedestrian crossing treatments as well as the final survey results, please see the Ocean View Avenue Comprehensive Transportation Study Story Map and the Ocean View Avenue Comprehensive Transportation Study Round 3 Public Engagement Summary.

18. **What do the bike pavement markings and signs mean?**
    a. The primary purpose of pavement markings and signage is to indicate the presence of a bicycle facility or to distinguish that facility for bicyclists, motorists, and pedestrians. Bicycle signage includes wayfinding and route signage, regulatory signage, and warning signage. Bicycle pavement markings are intended to designate a specific right-of-way, direction, potential conflict area, or route option. Markings may be used to enhance a particular lane, intersection, or signal treatment.
    b. The bicycle pavement markings found throughout the City of Norfolk include bike lanes and sharrows. Sharrows are used where cyclists share the lane with motorists, either in single file or side-by-side. They guide cyclists to the safest place on the street to ride and inform drivers to share the lane with cyclists. Bike lanes designate a dedicated space on the roadway for bicyclists to ride. Dashed lines along a bike lane means a mix of traffic can use the space. Watch for turning vehicles or buses making stops. Green bike lanes highlight locations where drivers merge across or turn across a bike lane. The green pavement alerts both drivers and cyclists to pay extra attention. A painted buffer along a bike lane increases the gap between vehicles and cyclists. Cars should not park or travel in a buffer area. A green bike box at an intersection is where cyclists wait ahead of traffic. Motorists stop behind the box. This makes bikes more visible and predictable for drivers. Motorists cannot make a right turn on red if there are cyclists in the box. For more information on bike pavement markings and signs, reference the National Association of City Transportation Official (NACTO) Urban Bikeway Design Guide and read the city's Understanding Bike Symbols, Signs & Markings document.
19. **What bike ridership data has been collected citywide and on Ocean View Avenue to justify taking away vehicle lanes for bike lanes in the project corridor?**
    a. Existing bike ridership is not the only consideration, nor is it even the primary consideration, when determining whether to move forward with lane repurposing. Lane repurposing with bike lanes in the project corridor is justified based on their proven performance as a safety countermeasure for reducing vehicle speeds and decreasing the risk of fatal and serious injuries for bicyclists. See Question #1 for information about the importance of bike lanes for safety and traffic-calming purposes.
    b. The City of Norfolk Department of Transit initiated a Bike-Pedestrian Counter program in March 2021 to provide a reliable method of data collection. Data collected from the counters show high trip counts for protected bike lanes in the city such as on Llewellyn Avenue and Olney Road. Data collected from April 2021 to December 2022 shows a total of 23,967 bicycle trips for the southbound Llewellyn Avenue bike lane and a total of 13,387 trips for the northbound Llewellyn Avenue bike lane. The eastbound Olney Road bike lane had a total of 29,753 bicycle trips and the westbound Olney Road bike lane had a total of 24,161 bicycle trips during this same timeframe. The buffered bike lanes on E. Ocean View Avenue show a total of 12,790 trips in the eastbound direction. The higher counts on Llewellyn Avenue and Olney Road illustrate how good connections

to other bike facilities within the bike network has had a significant positive impact on ridership. A similar positive influence on ridership would be expected if the bike lanes on E. Ocean View Avenue were expanded to complete the gap in the bicycle network and connect to other existing bike lanes. To learn more about the counter program and view the Bike and Pedestrian Trip Counts dataset in the Open Data portal, visit https://www.norfolk.gov/5226/Bike-Pedestrian-Counters.

c. The bike ridership data collected along E. Ocean View Avenue through the counter program isn't necessarily reflective of the current demand. Since the existing bike lanes on E. Ocean View Avenue are not connected to other bike lanes in the city's bike network, many riders may not feel comfortable using the corridor as it exists today. However, if the bike lanes were expanded along the corridor, those who bike may be more willing to use the bike lanes and those who currently don't bike, but are interested in biking, may feel more comfortable. In the first Ocean View Avenue Comprehensive Transportation Study survey conducted from March 4 – April 15, 2022, 50% of respondents indicated that they would be "very willing" to ride a bike along Ocean View Avenue and another 23% said they would be "somewhat willing" if adequate bike facilities were available. For those respondents who do not bike along Ocean View Avenue or find it difficult, the most common reasons given are that there are not enough dedicated bike facilities and that existing bike facilities do not feel safe or comfortable. For more information about the first survey, see the Ocean View Avenue Comprehensive Transportation Study Round 1 Public Engagement Summary.

20. Will this study consider the rapid development and influx of new residents along Ocean View Avenue? Will the influx of people have a big impact on speeding?

a. Yes, the future growth on the corridor has been considered as part of the detailed traffic analysis for the study. The Department of Transit recognizes that the influx of individuals coming to the Ocean View area, particularly around East Beach, is rapidly increasing and will continue to change as more development occurs. In parallel with the development of the preliminary design concepts, the project team performed a future conditions traffic operations analysis. See Question #21 for more details about the analysis. The future conditions analysis was conducted for the year 2031, and all three of the future condition scenarios being analyzed included a 1% annual traffic growth rate from 2021 to 2031 (accounting for increased development in the area), a speed limit reduction along Ocean View Avenue to 30 MPH, and traffic signal timing optimization.

b. The Department of Transit also recognizes that speeding is an issue on Ocean View Avenue and aims to address these concerns to create a safer environment for all users of the corridor. See Question #8 for more information on what will be done to reduce speeding along the corridor as well as the benefits of lane repurposing for reducing vehicle speeds.

21. I am concerned about congestion on Ocean View Avenue, especially after lane repurposing. How will this project affect vehicle traffic on Ocean View Avenue?

a. As part of this comprehensive transportation study, a future conditions analysis was conducted for the year 2031 to compare traffic capacity and travel times along the project corridor under three scenarios: "No Build" future conditions (i.e., **without** lane repurposing/bike lanes), "Build 1" future conditions (i.e., **with** lane repurposing/bike

lanes from 1st View Street to intersection of Shore Drive & Pretty Lake Avenue), and "Build 2" future conditions (i.e., **with** lane repurposing/bike lanes from 1st View Street to 19th Bay Street). Existing conditions were analyzed using traffic data that was collected in July 2021 and increased by 10% to account for ongoing impacts from the COVID-19 pandemic.

b. The future traffic operations analysis results were presented at the October 17th, 2022 public workshop. Based on the results for the recommended "Build 2" alternative, corridor travel times in 2031 would only be slightly longer (approximately 30 seconds) compared to the travel times for the "No Build" 2031 alternative. The results also show that for the recommended "Build 2" alternative, all intersections along the Ocean View Avenue corridor would operate at a Level of Service C or better. Level of Service (LOS) is a measure to define how well vehicle traffic flows along a road. LOS A through LOS D are considered acceptable during peak hours. The results from this traffic analysis provide contextual support for the recommended lane repurposing alternative (Alternative 2A/2B: repurpose one travel lane in each direction to provide buffered bike lanes) as well as for the recommended build alternative (Build 2: implement the lane repurposing between 1st View Street and 19th Bay Street). To learn more, view the October 17, 2022 Workshop presentation or view the Ocean View Avenue Comprehensive Transportation Study Story Map.

c. The future conditions analysis evaluated traffic conditions during the AM and PM peak hours on the average weekday, which is standard practice for transportation agencies in the United States. It also took into consideration optimized and coordinated traffic signal timing (signal synchronization) at the signalized intersections along the study corridor. Traffic signal retiming along a corridor such as Ocean View Avenue requires significant data collection and study. Norfolk's DOT has been actively retiming coordinated signal systems across the City, and Ocean View Avenue is slated to be retimed with the next available round of funding.

22. What will be done about better enforcement of speeds?

a. The City is diligently working to fill the vacant positions in the police department, which includes new pay plans for the department to help retain existing officers as well as attract more officers. As we work to reduce the speed along Ocean View Avenue, the Department of Transit will continue to coordinate with the Norfolk Police Department to develop a plan for targeted enforcement.

23. How would the proposed lane repurposing for bike lanes affect emergency vehicles traveling along the project corridor?

a. The Department of Transit works closely with Fire Rescue to review all project plans to mitigate potential impacts to emergency vehicle services. Fire Rescue has participated in the Ocean View Avenue Study Advisory Group, and they have provided feedback on the conceptual alternatives during the Advisory Group meetings. Once this project goes into the design phase, the project team will continue to meet with officials from Fire Rescue specifically regarding this project and discuss design considerations to ensure emergency operations are not impacted.

24. Will Bayview Boulevard be considered as an alternative multimodal connector from Cape View Avenue to Chesapeake Boulevard, Tidewater Drive, and Granby Street?

a. Ocean View Avenue is a key east-west corridor and provides direct access to many of Norfolk's commercial, residential, and recreational centers as well as access to Virginia Beach and the military bases. Expanding the bike lanes on Ocean View Avenue will make bike travel a safe and convenient option for many Norfolk residents between these key destinations. Bayview Boulevard is a minor arterial that runs somewhat parallel to Ocean View Avenue but does not extend as far east. While Bayview Boulevard may be a good alternative route for certain origins and destinations, it cannot provide the level of connectivity that Ocean View Avenue does to the overall citywide multimodal network. In addition, getting to/from destinations on Ocean View Avenue from Bayview Boulevard will still require traveling on Ocean View Avenue for some distance.
b. Although there are currently no studies underway to evaluate the feasibility of installing bike lanes along the entire Bayview Boulevard corridor, Bayview Boulevard has been identified in Norfolk's Multimodal Transportation Master Plan as a bicycle/scooter modal emphasis corridor. This "bike/scooter emphasis" indicates that Bayview Boulevard is envisioned to be part of a future connected network of streets that bicyclists and scooter riders can use to travel safely and comfortably within and between activity centers and other destinations across the city. Both Bayview Boulevard and Ocean View Avenue are important elements for the bike network and for providing multimodal transportation access. However, Ocean View Avenue is a crucial building block to establish a citywide connected bike network.
c. While further improvements to the bike network need to be made on Bayview Boulevard, there are a few existing bike accommodations along the corridor or that connect to the corridor. There are existing bike lanes on Bayview Boulevard between Tidewater Drive and Granby Street. There is also an existing bike lane on the northbound side of Cape View Avenue and an existing sharrow on the southbound side of Cape View Avenue between Bayview Boulevard and Ocean View Avenue. To view Norfolk's current bike network, visit https://www.norfolk.gov/5369/By-Bike.

25. Will traffic-calming measures be considered for Bayview Boulevard to prevent it from becoming a cut-through street if speeds are lowered on Ocean View Avenue?

a. Traffic-calming measures on Bayview Boulevard are not being considered at this time as part of the study. Once the speed limit on Ocean View Avenue is reduced, the Department of Transit plans to conduct studies for before/after comparisons of traffic volumes. If the studies indicate an increase in volume on Bayview Boulevard, then city staff can work with the civic leagues to determine appropriate traffic-calming solutions.
b. The City of Norfolk's Department of Transit has begun implementation of a citywide speed reduction program to reduce the speed limit on "local" neighborhood streets from 25 MPH to 20 MPH. On October 26, 2021, Norfolk City Council passed an ordinance that allows the city to lower speeds on local/neighborhood streets without requiring speed studies. However, higher-level streets (collectors and arterials) still require speed studies to determine if the speed limit can be reduced. Bayview Boulevard is classified as a "Minor Arterial" road, which means a speed study must be conducted before the speed limit can be reduced. See Question #13 for information on roadway classification. For more information on the Neighborhood Speed Reduction Program, visit https://www.norfolk.gov/5130/Neighborhood-Speed-Reduction-Program.