



# COMMONWEALTH of VIRGINIA

DEPARTMENT OF TRANSPORTATION

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Fairfax, Virginia 22030

Stephen C. Brich, P.E.  
Commissioner

July 29, 2022

The Honorable John W. Foust  
Dranesville District  
Fairfax County Board of Supervisors  
McLean Governmental Center  
1437 Balls Hill Road  
McLean VA 22101

The Honorable Senator Barbara Favola  
District 31  
Senate of Virginia  
2319 18th Street North  
Arlington, VA 22201-3506

The Honorable Delegate Kathleen Murphy  
District 34  
Virginia House of Delegates  
P.O. Box 146  
McLean, VA 22101

**SUBJECT: I-495 Express Lanes Northern Extension (Project NEXT)**  
State Project Number: 0495-029-419, P101  
UPC Number: 116754  
**Responses to Questions from Supervisor Foust, Senator Favola and Delegate Murphy dated June 8, 2022**

Dear Supervisor Foust, Senator Favola and Delegate Murphy:

The Virginia Department of Transportation (VDOT) would like to thank you for your attendance at the June 6th and 7th Public Information Meetings. VDOT appreciates your questions and offers the following responses. In addition to these responses, The Maryland Department of Transportation State Highway Administration (MDOT) will be responding separately to questions specific to the I-495 & I-270 Managed Lanes Study (MLS).

For the purposes of the responses, please reference the George Washington Memorial Parkway & I-495 Interchange (GWMP) graphic:

*Figure 1: Proposed GWMP associated with Virginia's I-495 NEXT project.*



Figure 1 clarifies the design elements associated with the I-495 NEXT project. These elements, shaded in purple, include a realignment and construction of 2 existing at-grade ramps (Ramp 1 and Ramp 5), and the construction of 2 new ramps which will provide connections to and from the GWMP and the I-495 NEXT Express Lanes (Ramp 2 and Ramp 3). A new fifth ramp (Ramp 4) is being studied by MDOT under the MLS that will connect the southbound Express Lane to eastbound George Washington Memorial Parkway.

1. Exactly how high are the five flyover lanes that are proposed for near Live Oak Drive?

**Response:**

*Figure 2 shows ground elevations as well as proposed elevations based upon the preliminary design as of May 25<sup>th</sup>, 2022. Attachment 1 shows several lines-of-sight of the proposed improvements from different perspectives around the GWMP interchange.*

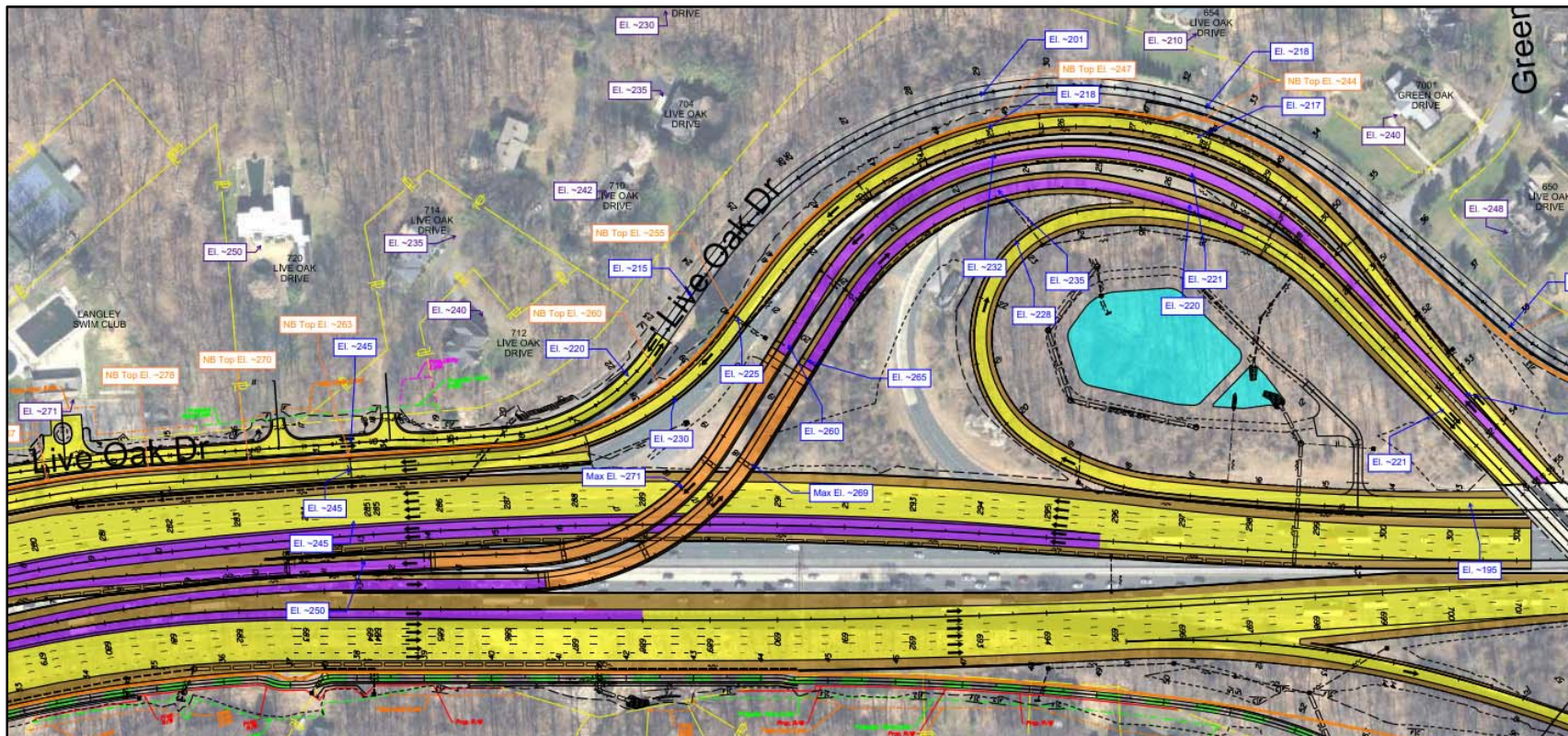
*Below is a description of each of the proposed ramps:*

- a. *Ramp 1 is from westbound GWMP to the southbound I-495 general purpose lanes. This ramp exists today and is being reconstructed as part of the I-495 NEXT project after which MDOT will perform work to tie into the new GWMP bridge over I-495. The range in elevation for the portions of the ramp associated with the I-495 NEXT project is anticipated to be from 217' to 245'.*
- b. *Ramp 2 is from the westbound GWMP to southbound I-495 Express Lanes. This is a new ramp being constructed as part of the I-495 NEXT project and includes a bridge over the southbound I-495 general purpose lanes. The range in elevation of the ramp is anticipated to be from 221' to 271'.*

- c. Ramp 3 is from the northbound I-495 Express Lanes to the eastbound GWMP. This is a new ramp that will be constructed as part of the I-495 NEXT project and includes a bridge over the southbound I-495 general purpose lanes. The range in elevation of the ramp is anticipated to be from 220' to 269'.*
  - d. Ramp 4 is from the southbound I-495 high-occupancy toll (HOT) lanes to the eastbound GWMP. This is a new ramp being constructed as part of the MLS and includes a bridge over the southbound I-495 general purpose lanes. MDOT will provide information on this ramp.*
  - e. Ramp 5 is from the southbound I-495 general purpose lanes to the eastbound GWMP. This ramp is existing today and will be reconstructed as part of the I-495 NEXT project after which MDOT will perform work to tie into I-495 and the new GWMP bridge over I-495. The range in elevation for the portions of the ramp associated with the I-495 NEXT project is anticipated to be from 195' to 228'.*
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Figure 2: Elevations for proposed GWMP associated with the I-495NEXT project



Notes:

- 1) Elevations of existing conditions are based on survey information except for elevations at 720 Live Oak Drive and 708 Live Oak Drive, which are based on Google Earth Terrain data due to being outside of the project survey area.
- 2) Elevations have a margin of error of approximately 1-foot due to file conversion of land survey information overlaid on aerial imagery.
- 3) Elevations shown on the proposed design elements are from roadway surface based on Design Plans shared at May and June 2022 Public Information Meetings.

2. Will the extended toll lanes be the same height as the existing highway, or will they be higher?

**Response:**

*The mainline of the Express Lanes associated with the I-495 NEXT project will be built at the same general elevation as the Beltway is today.*

3. Exactly how high are the visual and sound barriers that are proposed to shield Live Oak Drive from the flyover lanes and the extended toll lanes?

**Response:**

*The I-495 NEXT Preliminary Noise Analysis showed noise barriers to be reasonable and feasible along Live Oak Drive up to Rivercrest Drive (see Attachment 2 to this letter). The following response is related to the proposed noise barriers associated with the I-495 NEXT project. The Preliminary Noise Analysis (Environmental Assessment Preliminary Noise Technical Report, pages 56 – 57) indicates that the height of the proposed noise barriers (Barrier 10 and 10 [ext]) range from 8 feet to 26 feet. These heights may change based on the Final Noise Analysis, but will not be any less than the heights that currently exists today. Final Noise Analysis efforts are currently in progress and are not publicly available at this time. This information is being developed according to the Federal Highway Administration (FHWA) regulations and to VDOT's Statewide Noise Policy. It will take into account current design plans, and will be shared once the analysis is completed and reviewed/approved by the FHWA for public availability. Residences that are impacted and/or benefitted will be provided the opportunity to vote on whether or not they want the proposed noise barriers to move forward to construction.*

*MDOT will provide sound barrier heights specific to the MLS.*

- a. Where VDOT proposes to replace the existing barriers, will the replacement barriers be sound barriers or merely visual barriers?

**Response:**

*The surface of the proposed noise barriers will be designed to partially absorb highway noise, and are meant to serve as noise barriers. Although they may additionally serve as visual barriers, their main purpose is noise abatement.*

- b. Where VDOT proposes to replace the existing barriers, will the barriers be the same height as the existing barriers or will they be higher?

**Response:**

*The height of the noise barriers will be determined by the Final Noise Analysis. However, based on VDOT policy and guidance, the replacement barriers will be the same height as the existing wall or higher.*

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- c. Where VDOT proposes to replace the existing barriers, will the barriers be high enough to shield both the sound and the visual impacts from the highway expansion?

**Response:**

*Based on the methodologies prescribed by VDOT Guidelines, the Final Noise Analysis will determine the height of the noise barriers to mitigate noise impacts in accordance with FHWA regulations. It is anticipated that the noise barriers along Live Oak Drive will offer a visual barrier of the proposed ramps associated with the I-495 NEXT project from several perspectives from Live Oak Drive and adjacent residences. Please refer to Attachment 2 to see representative lines-of-sight based on the Preliminary Noise Analysis.*

- d. Please provide details on the materials proposed for the barriers shielding Live Oak Drive.
  - i. For example, will VDOT use "Whisper Walls" or will some other type of wall be used?

**Response:**

*The type of barriers that are anticipated to be constructed at Live Oak are pre-cast concrete with drystack finish on the exterior of the wall. The photo below is a general example of what the noise barrier surface will look like.*

*Figure 3: Noise Barrier Example for the I-495 NEXT project*



- ii. Exactly how much sound protection will these barriers provide?
    - 1. Please provide the response both in terms of percentage reduction in sound impacts and in actual decibels with and without the barriers.
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2. Please include in the response impacts for the MDOT and the VDOT portions of the project, both separately and combined.

**Response:**

*The Preliminary Noise Analysis for the I-495 NEXT project is based on 2045 predicted noise levels associated with predicted traffic modeling for that design year, which assumes predicted traffic data as result of the implementation of the MDOT MLS. The Preliminary Noise Analysis for Live Oak Drive is associated with two (2) Common Noise Environments (CNE) named CNE C and CNE E. The amount of noise reduction varies for each noise receptor within each CNE. Based on the information found in the Appendix M and Appendix N of the Preliminary Noise Analysis, predicted sound levels within the CNE's associated with Live Oak Drive is shown to have a range of 50-78 dBA without the barrier in place and with the barrier is shown to have a range of 49-65 dBA with a range of predicted reduction from 1-16dBA. For more information regarding Preliminary Noise Analysis associated with Live Oak Drive, please refer to Page 35, 36, 55-57 as well as Appendix A – Page 1 & 2, Appendix M, Page 1 & Appendix N, Pages 3-5 in the May 2020 I-495 NEXT Preliminary Noise Analysis Report.*

*MDOT will provide a response specific to MLS elements.*

4. When, exactly (month and year), was VDOT first informed that MDOT would be building five flyover lanes near Live Oak Drive?

**Response:**

*The VDOT planning studies have been public and have considered the input of MDOT and the public. The analysis conducted as part of the National Environmental Policy Act (NEPA) process is iterative in order to consider public and agency feedback and analysis of new information. The current modified interchange reflects the incorporation of this information.*

*The May 20, 2019, Public Information Meeting provided a display board for the Design Year 2045 which showed the locations of Ramps 1, 2, 4 & 5 generally as they are currently planned to be constructed. VDOT showed a modified Ramp 3 location within the established approved Limits of Disturbance on September 28, 2021, and on September 29, 2021, that was the result of coordination efforts with MDOT as well as in response to public comments.*

- a. Please explain what specific measures were taken, and when, to inform the affected communities that MDOT would be building five flyover lanes near Live Oak Drive.

**Response:**

*VDOT invited MDOT to participate in the I-495 NEXT EA public engagement process by attending its Public Information Meetings (June 11, 2018; May 20, 2019; September 28 & 30, 2020; November 18, 2020; September 29, 2021; and June 6 & 7, 2022), a Public*

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*Hearing (October 5 & 8, 2020), and a presentation to the Fairfax County Board of Supervisors Transportation Committee (September 28, 2021); all of which MDOT attended to present the status of their proposed project action and to address any questions.*

5. Please identify exactly where in the public documentation VDOT explains to the public that MDOT will be building five flyover ramps (and taking other actions) in Virginia. Please also identify specifically when (month and year) that documentation was made available to the public.

***Response:***

*See response to Question 1 for ramp description and construction responsibility.*

*VDOT hosted a Public Information Meeting on May 20th, 2019. During this meeting, VDOT presented proposed interchange options under consideration and also presented exhibits depicting the proposed conceptual plans for the Interim Year (2025) and Design Year (2045). The Design Year exhibits depict an early concept of the improvements that were being studied at the GWMP interchange. This exhibit was posted on the I-495 NEXT website in May 2019:*

*[http://www.495northernextension.org/documents/pim052019/pim052019\\_07designyeardraft.pdf](http://www.495northernextension.org/documents/pim052019/pim052019_07designyeardraft.pdf)*

*The I-495 NEXT Revised Environmental Assessment (EA) published in May 2021 shows the adjustment to the GWMP interchange related to the ramp configuration, in Exhibit 2-1e. in Chapter 2 of the main EA document on page 2-22, which also depicts a preliminary concept of ramp modifications proposed by the MLS project. This document was posted to the project website for I-495 NEXT in May 2021:*

*[http://www.495northernextension.org/documents/studies/070121/i-495\\_next\\_revised\\_ea\\_may\\_2021.pdf](http://www.495northernextension.org/documents/studies/070121/i-495_next_revised_ea_may_2021.pdf)*

*VDOT and MDOT hosted a Public Information Meeting on September 29, 2021, to provide status updates for both projects. During this meeting, VDOT presented the modified GWMP interchange. Information and documents related to the meeting content – including the updated configuration of the GWMP interchange, were posted on the project website on the day of the meeting:*

*[https://495northernextension.org/public\\_meetings/092921\\_vpim.asp](https://495northernextension.org/public_meetings/092921_vpim.asp)*

*The presentation slides and associated graphics presented at the September 2021 Public Information Meeting, which show improvements under study by MDOT, were posted on VDOT's I-495NEXT Project website on the day of the meeting:*

*[https://495northernextension.org/documents/pim092021/2021-09-29\\_495\\_next\\_pim\\_presentation\\_final.pdf](https://495northernextension.org/documents/pim092021/2021-09-29_495_next_pim_presentation_final.pdf)*

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*The limits associated with VDOT's I-495 NEXT project at the George Washington Memorial Parkway, including the change in ramp alignment for the northbound Express Lanes exit ramp (Ramp 3 in Figure 1), are shown on Slide 12. MDOT's study showed approximate limits and assumed construction responsibilities in Virginia are shown on the graphics dated August 18, 2021, as shown in slides 23, 25, and 26. Specific responsibilities with respect to necessary tie-in work are dependent upon the timing of implementation of each of the projects.*

6. What specific actions did MDOT take to inform the affected Virginia communities that it would be taking actions with Significant Environmental Impacts in those Virginia communities?
  - a. What specific actions did MDOT take to ensure that affected Virginia communities received notice that its Draft Environmental Impact Statement was available for public review and comment?\*
  - b. What specific actions did MDOT take to ensure that affected Virginia communities received notice that it would be holding public hearings on its Draft Environmental Impact Statement?\*

***Response:***

*MDOT will provide a response to this question.*

7. What specific measures did VDOT take to inform the affected Virginia communities that MDOT would be taking actions with Significant Environmental Impacts in those Virginia communities?

***Response:***

*See response to 3A.*

- a. What specific actions did VDOT take to ensure that affected Virginia communities received notice that MDOT's Draft Environmental Impact Statement was available for public review and comment, and that that document would discuss specific and significant impacts in Virginia?

***Response:***

*MDOT MLS is its own study with its own logical termini and independent utility. MDOT will provide additional information pertaining to its public engagement process associated with its project.*

- b. What specific actions did VDOT take to ensure that affected Virginia communities received notice that MDOT would be holding public hearings on its Draft Environmental Impact Statement, and that MDOT construction would have specific and significant impacts in Virginia?
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**Response:**

*The I-495 NEXT project website has links to the MDOT website. VDOT invited MDOT to attend our Public Information Meetings where they informed the public about their upcoming document availability and the SEIS Public Hearing held November 1, 2021 (See September 28, 2021 presentation to the Fairfax County Board of Supervisors Transportation Committee as well VDOT's Public Information Meeting presentation on September 29, 2021.)*

8. Please explain VDOT's rationale for not discussing in its Environmental Assessment, as a "connected action," the MDOT construction that will occur in Virginia. For reference, "connected actions" are "closely related and therefore should be discussed in the same impact statement. Actions are connected if they...are interdependent parts of a larger action and depend on the larger action for their justification." 40 C.F.R. § 1508.25(a)(1) (emphasis added).

**Response:**

*Section 1.1 of the approved Revised Environmental Assessment (EA), published in May 2021, describes the I-495 NEXT project limits and how the project has independent utility and therefore would not be categorized as having a "connected action" with any proposed adjacent future improvement. As lead federal agency, FHWA has reviewed and concurred with the logical termini and independent utility determination for the I-495 NEXT project. The VDOT I-495 NEXT project has established the logical termini to be the George Washington Memorial Parkway and Dulles Toll Road (Route 267). This selection of logical termini was based on the determination that the proposed improvements address the purpose and need of the I-495 NEXT project. The MDOT MLS has established its southern logical termini to be the George Washington Memorial Parkway. Each project has independent utility since they each provide a usable facility and would be a reasonable expenditure of funds even if no additional transportation improvements in the area are made. Additionally, each project has its own respective purpose and need. Therefore, while the projects are geographically adjacent, they are unique and independent projects with proposed improvements to address their respective purpose and need that could function regardless of the other.*

9. Please explain VDOT's rationale for not discussing in its Environmental Assessment, as a "cumulative action," the MDOT construction that will occur in Virginia. For reference, "cumulative actions" are "cumulative actions, which when viewed with other proposed actions have cumulatively significant impacts and should therefore be discussed in the same impact statement." 40 C.F.R. § 1508.25(a)(2)(emphasis added).
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**Response:**

*The previous question above describes where the approved Revised Environmental Assessment (EA) describes the project limits, established logical termini and how the project has independent utility and therefore would not be categorized as having a “cumulative action” with any proposed adjacent future improvement.*

*As a separate project with its own logical termini and independent utility, the proposed MDOT project does not contribute to the direct impacts analyzed in FHWA/VDOT’s EA. Instead, the proposed MDOT project is considered a reasonably foreseeable project within the vicinity that could contribute to cumulative impacts. Table 5-1 of the Indirect and Cumulative Effects (ICE) Technical Report lists the proposed MDOT project as a reasonably foreseeable future project. Section 3.0 of the ICE Technical Report explains how the potential impacts from the proposed MDOT project were analyzed in the FHWA/VDOT EA and incorporated into the FHWA Finding of No Significant Impact (FONSI) for the Virginia project. The FONSI can be found on the I-495 NEXT website:*

*[https://www.495northernextension.org/documents/studies/070121/fhwa\\_finding\\_of\\_no\\_significant\\_impact\\_impact.pdf](https://www.495northernextension.org/documents/studies/070121/fhwa_finding_of_no_significant_impact_impact.pdf).*

10. Please explain VDOT's rationale for not discussing in its Environmental Assessment, as "cumulative effects," the environmental impacts of the MDOT construction that will occur in Virginia. For reference, cumulative effects" are "effects on the environment that result from the incremental effects of the action when added to the effects of other past, present, and reasonably foreseeable actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions. Cumulative effects can result from individually minor but collectively significant actions taking place over a period of time." 40 C.F.R. § 1508.1(g) (emphasis added).

**Response:**

*Cumulative effects are summarized at the end of Chapter 3 of the May 2021 Revised Environmental Assessment (EA), and cumulative effects specific to construction are discussed in Section 5.3.2 – Present and Reasonably Foreseeable Future Actions of the May 2021 Revised Indirect and Cumulative Effects (ICE) Technical Report posted on the project website. MDOT’s project – and relevant information available at the time of publication -- is specifically referenced in Table 5-1 on page 60 of the report. Section 3.0 of the ICE Technical Report explains how the potential impacts from the proposed MDOT project were analyzed in the FHWA/VDOT EA and incorporated into the FHWA FONSI for the Virginia project.*

*Indirect & Cumulative Effects Tech Report Final (Revised May 2021):*

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[https://www.495northernextension.org/documents/studies/070121/revised\\_indirect\\_cumulative\\_effects\\_tech\\_report\\_-\\_may\\_2021.pdf](https://www.495northernextension.org/documents/studies/070121/revised_indirect_cumulative_effects_tech_report_-_may_2021.pdf)

11. Please explain the rationale for VDOT and MDOT not preparing a single, integrated Environmental Impact Statement (EIS), given that the regulations clearly mandate a single EIS for "connected" and "cumulative" actions.

**Response:**

*While FHWA is the lead federal agency for both projects in question, there are two independent project proponents (VDOT and MDOT) who have brought their respective proposals to the FHWA Division office assigned to their state. As lead federal agency, FHWA has concurred on the selected logical termini and independent utility of each project. As explained in the response for Question 9, each project has established logical termini, independent utility and respective purpose and need. Therefore, as stated above, it is important to reiterate in the response for this question that while the projects are geographically adjacent, they are unique and independent projects with proposed improvements to address their respective purpose and need that could function regardless of the other.*

12. Please explain why VDOT and MDOT believe that separately analyzing clearly connected and cumulative actions does not constitute unlawful "segmentation" under the National Environmental Policy Act (NEPA). For reference, unlawful segmentation occurs when agency artificially divides a major federal action into smaller components to avoid application of NEPA to some of its segments. See, e.g., Coalition on Sensible Transportation, Inc. v. Dole, 826 F.2d 60, 68 (D.C. Cir. 1987) ("Agencies may not evade their responsibilities under NEPA by artificially dividing a major federal action into smaller components.").

**Response:**

*Unlawful segmentation is not applicable because each project has independent utility. Each project provides a usable facility delivered by utilizing a reasonable expenditure of funds even if no additional transportation improvements in the area are made, which defines how they are unique and independent projects that could function regardless of the other while being geographically adjacent to each other.*

13. Please explain the basis for your belief that Virginia residents should have been on notice that the "Significant Environmental Impacts" to the Northern Virginia community would be undertaken by MDOT and thus would be addressed only in MDOT's Draft Environmental Impact Statement, and neither identified nor discussed in VDOT's Environmental Assessment.
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***Response:***

*Please see responses to Questions 4, 5 and 7 regarding the I-495 NEXT public outreach.*

*MDOT will provide a response regarding their public engagement process for the MLS.*

14. We understand from the meeting on June 6, 2022, that VDOT and Transurban have reached financial close on the 495-NEXT expansion project. We also understand that VDOT has not yet completed its noise analyses as well as various other environmental impact studies. Please explain how financial close does not constitute an illegal "irretrievable commitment of resources" under NEPA. For reference, NEPA analyses must be prepared at the "feasibility analysis (go-no go) stage." *Andrus v. Sierra Club*, 442 U.S. 347, 351 n. 3 (1979). As such, NEPA requires that the environmental analyses be conducted and completed "before any irreversible and irretrievable commitment of resources" occurs. *Metcalf v. Daley*, 214 F.3d 1135, 1142 (9th Cir, 2000); see also *Native Ecosystems Council v. Dombeck*, 304 F. 3d 886 (9th Cir. 2002).

***Response:***

*Financial close for the I-495 NEXT project was reached on March 1, 2022, after the FHWA issued a Finding of No Significant Impact (FONSI) to complete the NEPA process. NEPA was concluded on June 29, 2021. During a meeting between FHWA and VDOT on September 2, 2021, FHWA stated that the minor changes to the ramps are within the limits of disturbance that was evaluated in the Environmental Assessment and FONSI. As the project advances and the design is more detailed, the detailed design and associated final studies, such as the Final Noise Analysis, are reviewed and confirmed to ensure they are consistent with FHWA's NEPA decision.*

15. Please explain VDOT's legal rationale for not addressing the noise impacts of both its portion of the project and MDOT's five flyover ramps, including why failure to do so does not violate NEPA's prescriptions regarding connected actions, cumulative actions, cumulative impacts and unlawful segmentation.
- a. Does VDOT's Analysis of Noise Abatement include the noise impacts from the five flyover ramps being constructed by VDOT?
  - b. Does VDOT's estimate of a 10 decibel increase in traffic noise in the Live Oak Drive neighborhood include the noise impacts of the flyover ramps or exclude those impacts?
  - c. If VDOT's estimate of a 10 decibel increase in traffic noise in the Live Oak Drive neighborhood excludes the noise impacts of the flyover ramps, please explain how the MDOT and VDOT projects together meet the US Department of Transportation's requirements for noise levels in residential neighborhoods. See 23 C.F.R. §§ 772.11(c), 772.13 and Table 1 to Part 772.
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**Response:**

*The Preliminary Noise Analysis (PNA) was done based on the configuration shown at the Public Hearing on November 18, 2020. The analysis utilized projected traffic in 2045, which included projected traffic conditions as result of the MDOT project since it was included in the Constrained Long Range Plan (CLRP). The Final Noise Analysis will take into consideration the projected 2045 traffic conditions and configuration of the ramps included in both projects.*

16. Where in the public record can we find the following analyses:

a. Alternatives assessment for the expanded project scope?

- i. What other options were considered besides the new, expanded and elevated flyover ramps, and were those options discussed in the Environmental Assessment prepared by VDOT or only in the documents prepared by MDOT?

**Response:**

*The initial option for the GWMP and potential ramps under study by MDOT were first shown to the public in the I-495 NEXT Public Information Meeting on May 20, 2019. The proposed improvements under study by MDOT were shown on the display boards dated May 2019, as shown on Board #5 here:*

*[http://www.495northernextension.org/documents/pim052019/pim052019\\_07designyeardraft.pdf](http://www.495northernextension.org/documents/pim052019/pim052019_07designyeardraft.pdf)*

*MDOT will provide a response.*

- ii. On what basis did VDOT and MDOT conclude that these massive new ramps are the least environmentally-impactful alternative, and was that rationale discussed in the Environmental Assessment prepared by VDOT or only in the documents prepared by MDOT?

**Response:**

*The preferred alternative/selected action is one that best meets the purpose and need while balancing cost and impact. FHWA has concurred with the I-495 NEXT preferred alternative based on these criteria.*

*MDOT will provide a response.*

- b. Assessment of mitigation measures to address the impacts on the Live Oak Drive community and Scotts Run Nature Preserve that will result from the expanded project scope?
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- i. What specific mitigation measures were considered, and were those measures discussed in the Environmental Assessment prepared by VDOT or only in the documents prepared by MDOT?
- ii. On what basis were those mitigation measures rejected and was that rationale discussed in the Environmental Assessment prepared by VDOT or only in the documents prepared by MDOT?

**Response:**

*Mitigation measures for the project were identified in the Environmental Assessment and FONSI. Design options currently being constructed are within the limits of disturbance as identified in the NEPA document. As we work to finalize the design, mitigation measures for impacts as result of the project will be reviewed and approved to ensure they are consistent with the EA and FONSI.*

*MDOT will provide a response regarding their proposed mitigation for any impacts to regulated resources within Virginia.*

- c. Noise impacts that will result from the new project scope, including:
  - i. Traffic noise predictions in conformance with the FHWA Traffic Noise Model (TNM), as required under 23 C.F.R. §§772.9 and 772.111?
  - ii. Analysis of Noise Abatement for Live Oak Drive, as required under 23 C.F.R. § 772.3?

**Response:**

*See response to Question 3.*

*MDOT will provide a response regarding the MLS noise analysis.*

- d. Light pollution impacts on the Live Oak Drive community that will result from the new project scope?

**Response:**

*Roadway lighting will be designed to minimize lighting impacts to surrounding communities.*

*MDOT will provide a response regarding the light pollution for the MLS.*

- e. Air dispersion modeling analysis that assesses both the criteria and the hazardous air pollutant emission impacts from the new project scope?

**Response:**

*An air quality study was completed in February 2021 and published in May 2021 as part of the I-495 NEXT Environmental Assessment documentation, following all federal air quality requirements, and found that the project would not cause or contribute to a violation of any air quality standard. The air study included a dispersion modeling*

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*analysis for carbon monoxide (CO) and found that peak CO concentrations from the project would remain well below the Environmental Protection Agency's CO standards in all locations. A dispersion modeling analysis was not required for any other criteria or hazardous air pollutants. The air study can be viewed on the Project website:*  
[http://www.495northernextension.org/documents/studies/070121/revised\\_air\\_quality\\_tech\\_report\\_-\\_may\\_2021.pdf](http://www.495northernextension.org/documents/studies/070121/revised_air_quality_tech_report_-_may_2021.pdf)  
[http://www.495northernextension.org/documents/studies/070121/revised\\_air\\_quality\\_tech\\_report\\_appendices\\_-\\_may\\_2021.pdf](http://www.495northernextension.org/documents/studies/070121/revised_air_quality_tech_report_appendices_-_may_2021.pdf)

*Shifting of the northbound I-495 NEXT Express Lanes exit ramp from the inside of the Beltway to the outside of the Beltway would not substantially impact on the findings of the Air Impact Analysis Study.*

*MDOT will provide a response regarding the air analysis for the MLS.*

- f. Visibility and noise impacts on Scotts Run Nature Preserve that will result from the new project scope?

***Response:***

*Impacts to Scotts Run Preserve were covered under the I-495 NEXT Revised Environmental Assessment and supporting technical studies. A final design noise analysis is currently under development that will evaluate noise impacts associated with the final design for the entire project corridor, which will include Scotts Run Nature Preserve.*

*MDOT will provide a response regarding the visual and noise impacts analysis for the MLS.*

- g. Impacts on water quality from the increased traffic that will result from the new project scope?
- h. Wetlands impacts that will result from the new project scope?
- i. Biological resources impacts that will result from the new project scope?

***Response:***

*Based on the impact analyses performed for natural resources – including water quality, wetlands, and biological resources – for the original project footprint and documented in the May 2021 Revised Environmental Assessment (EA), the impacts within the Limits of Disturbance (LOD) were established and quantified. Ramp 3 is located within the previously established LOD and approved in the 2021 EA. More details on the impact to natural resources can be found in the Revised May 2021 Natural Resources Technical Report and Appendices on the project website:*

[https://www.495northernextension.org/documents/pim032020/i-495\\_next\\_7\\_natural\\_resources\\_tech\\_report\\_final.pdf](https://www.495northernextension.org/documents/pim032020/i-495_next_7_natural_resources_tech_report_final.pdf)

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[https://www.495northernextension.org/documents/pim032020/i-495\\_next\\_7a\\_natural\\_resources\\_tech\\_report\\_appendices\\_final.pdf](https://www.495northernextension.org/documents/pim032020/i-495_next_7a_natural_resources_tech_report_appendices_final.pdf)

*MDOT will provide a response regarding the natural resources analysis associated with the MLS.*

- j. In light of the documented health impacts to communities near major traffic sites, air quality impacts on the Live Oak Drive community that will result from the new project scope?

***Response:***

*As part of the I-495 NEXT Environmental Assessment, an air quality study was completed in February 2021 and published in May 2021 as part of the environmental documentation, following all federal air quality requirements and found that the project would not cause or contribute to a violation of any air quality standard. The air quality study can be viewed on the I-495 NEXT project website, as referenced above in the response to question 16.e.*

*MDOT will provide a response regarding the air analysis associated with their Final Environmental Impact Statement.*

- k. Calculated climate change impacts resulting from increased traffic resulting from the new project scope? (We assume that, in accordance with federal regulations and guidance, VDOT used the most current Social Cost of Carbon to calculate the monetary climate change impacts from the new project scope. What was the result of that analysis?)

***Response:***

*There are currently no explicit federal requirements pertaining to transportation project-related greenhouse gas (GHG) emissions, although a qualitative GHG assessment was completed as part of the I-495 NEXT Environmental Assessment air quality study to help support an informed decision. The analysis found that the project would reduce vehicle miles traveled (VMT) in the 2045 Build scenario compared to the 2045 No-Build scenario. The lower VMT anticipated in the 2045 Build scenario compared to No-Build scenario is attributed to a number of factors. The Express Lanes will directly encourage carpooling, improve I-495 bus operations, and indirectly help to fund transit and active transportation alternatives in the corridor, and these are all anticipated to reduce VMT and GHG emissions. The I-495 NEXT project is also anticipated to shift demand in Virginia from parallel arterial facilities to the freeway network, which would result in more direct (shorter-distance) trips being taken.*

*MDOT will provide a response regarding climate change analysis associated with the MLS.*

---

Supervisor Foust, Senator Favola and Delegate Murphy

July 29, 2022

Page 18 of 18

If you have any questions or need additional information, please do not hesitate to contact Abi Lerner at (703) 414-9299 – [Abraham.Lerner@vdot.virignia.gov](mailto:Abraham.Lerner@vdot.virignia.gov) or me at (703) 259-1995 or by email at [Susan.Shaw@vdot.virginia.gov](mailto:Susan.Shaw@vdot.virginia.gov).

Sincerely,



Susan Shaw, P.E.

VDOT MegeProjects

Northern Virginia District

cc:

Tom Biesiadny, FCDOT  
Martha Coello, FCDOT  
John Simkins, FHWA  
Jitesh Parikh, FHWA  
Gregory Murrill, FHWA  
Jeff Folden, MDOT  
Caryn Brookman, MDOT

#### Attachments

- Attachment 1: Lines-of-Sight for Proposed Ramps at George Washington Memorial Parkway Ramp Exhibit
  - Attachment 2: Preliminary Noise Analysis Noise Barrier Location Along Live Oak Drive
-

Attachment 1

Line of Sight for Proposed Ramps at George Washington Memorial Parkway Ramp Exhibit

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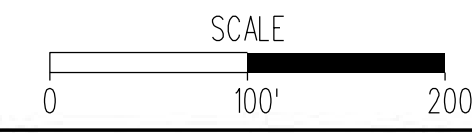
# 495 Express Lanes Northern Extension Project

## June 2022 Public Update Meeting Design - Cross Section View Map

### Project NEXT

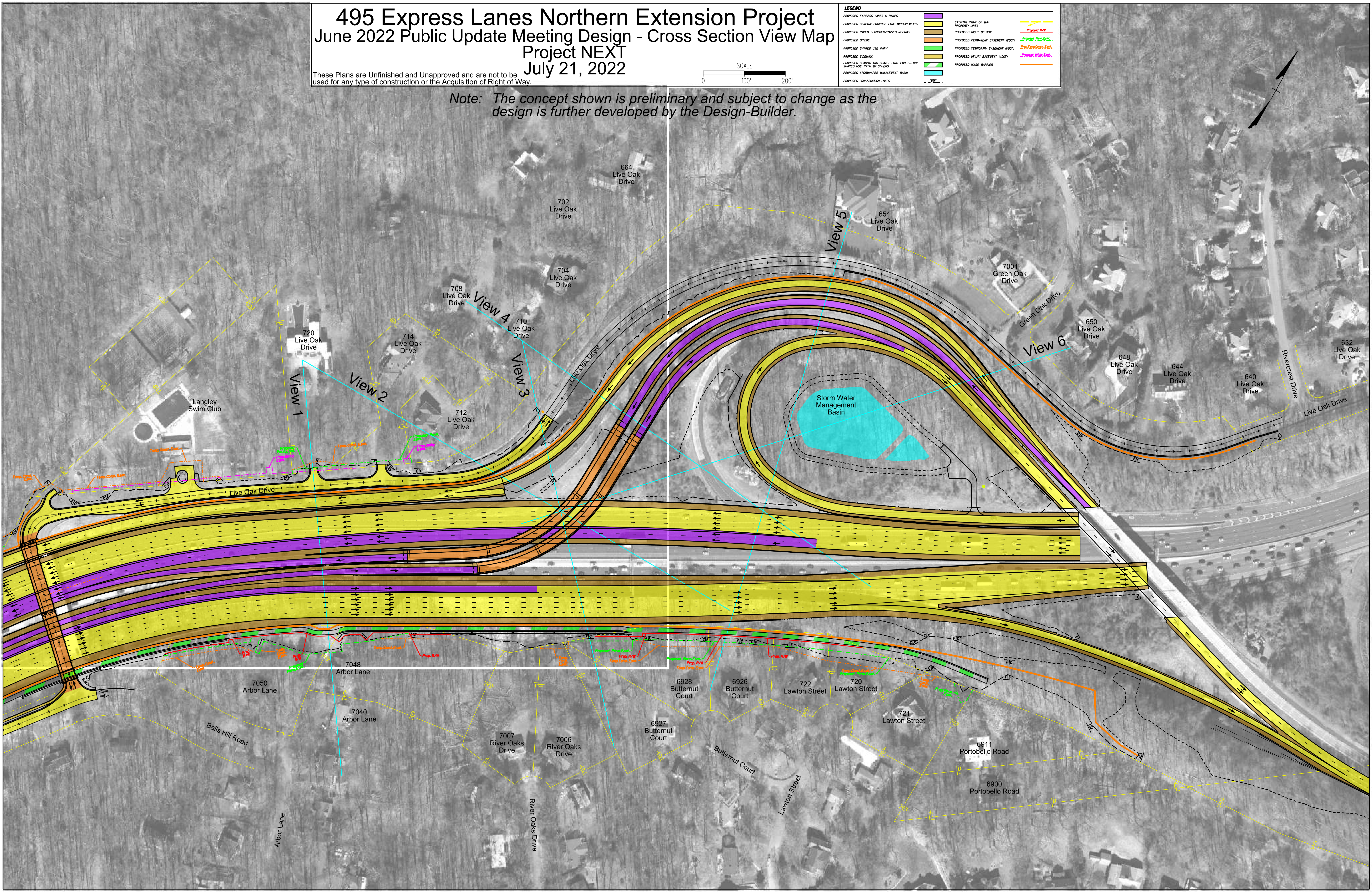
#### July 21, 2022

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LEGEND	
PROPOSED EXPRESS LANES & RAMP	EXISTING RIGHT OF WAY
PROPOSED GENERAL PURPOSE LANE IMPROVEMENTS	PROPOSED RIGHT OF WAY
PROPOSED PAVED SHOULDER/RAISED MEDIANS	PROPOSED PERMANENT EASEMENT (WOV)
PROPOSED BRIDGE	PROPOSED TEMPORARY EASEMENT (WOV)
PROPOSED SHARED USE PATH	PROPOSED UTILITY EASEMENT (WOV)
PROPOSED SIDEWALK	PROPOSED NOISE BARRIER
PROPOSED GRADING AND SHOULDER TRAIL FOR FUTURE SHARED USE PATH OR OTHERS	PROPOSED CONSTRUCTION LIMITS
PROPOSED STORMWATER MANAGEMENT BASIN	

Note: The concept shown is preliminary and subject to change as the design is further developed by the Design-Builder.





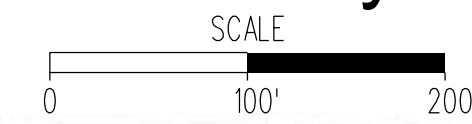
# 495 Express Lanes Northern Extension Project

## June 2022 Public Update Meeting Design - Cross Section View Map

### Project NEXT and I-495/I-270 Managed Lanes Study

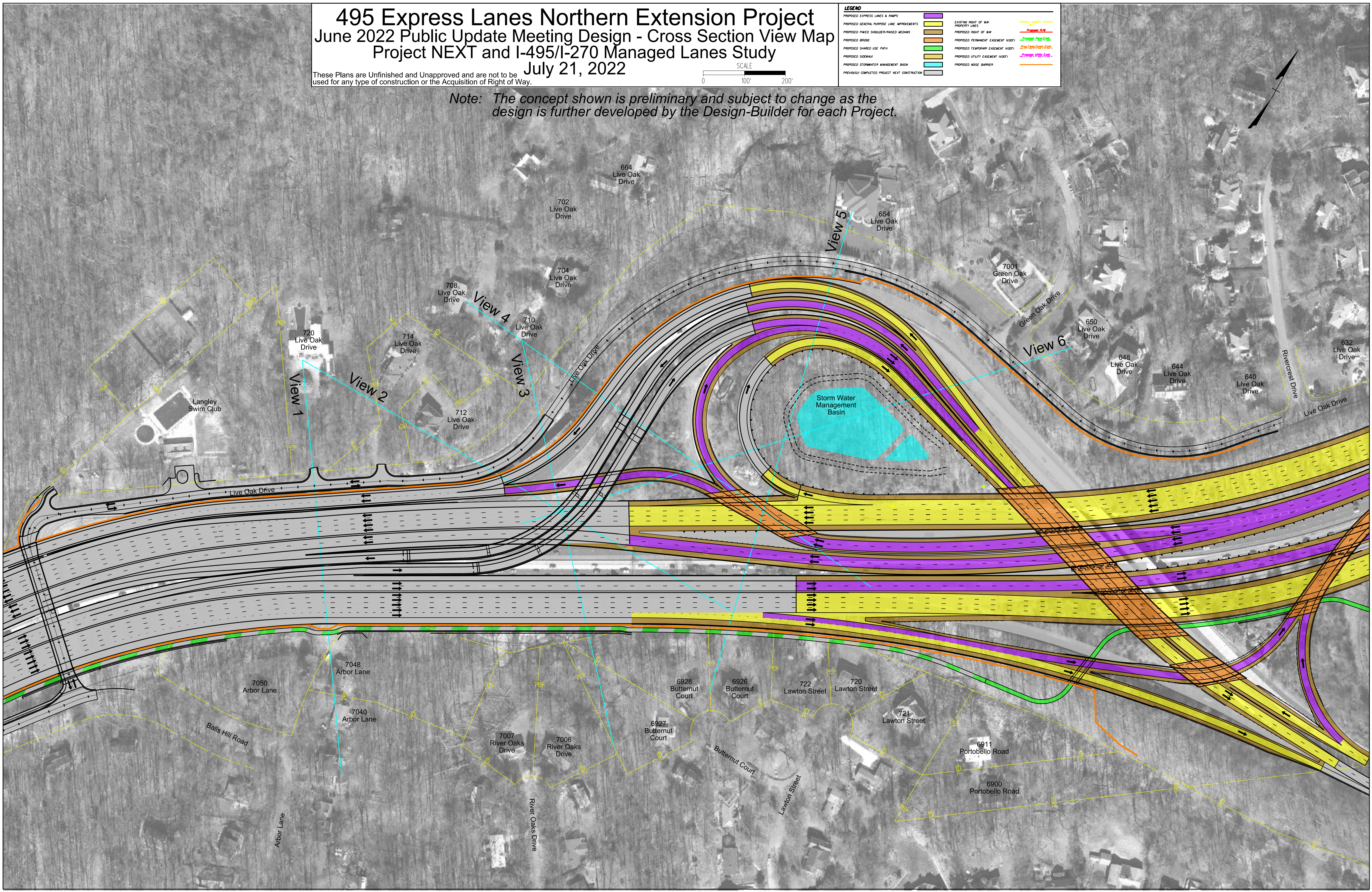
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PROPOSED EXPRESS LANES & RAMP	EXISTING RIGHT OF WAY
PROPOSED GENERAL PURPOSE LANE IMPROVEMENTS	PROPOSED RIGHT OF WAY
PROPOSED PAVED SHOULDER/RAISED MEDIANS	PROPOSED PERMANENT EASEMENT (WOV)
PROPOSED BRIDGE	PROPOSED TEMPORARY EASEMENT (WOV)
PROPOSED SHARED USE PATH	PROPOSED UTILITY EASEMENT (WOV)
PROPOSED SIDEWALK	PREVIOUSLY COMPLETED PROJECT NEXT CONSTRUCTION
PROPOSED STORMWATER MANAGEMENT BASIN	

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# 495 Express Lanes Northern Extension Project

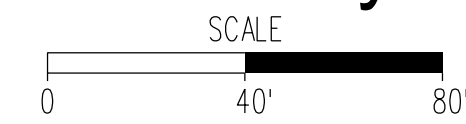
## June 2022 Public Update Meeting Design - Cross Section Views

### Project NEXT and I-495/I-270 Managed Lanes Study

July 21, 2022

## Cross Section View 1

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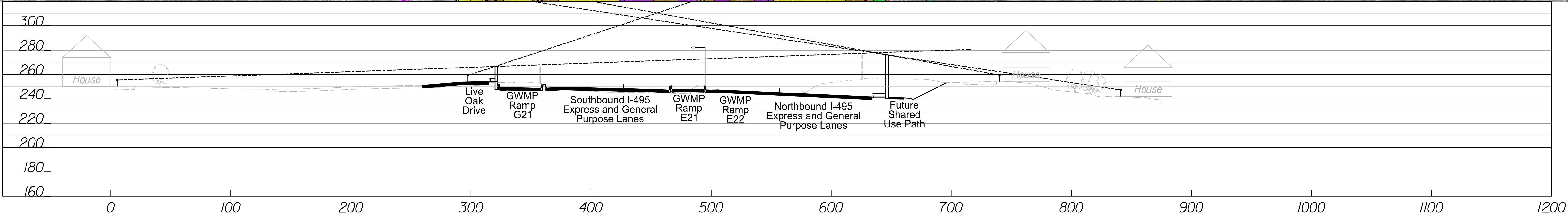
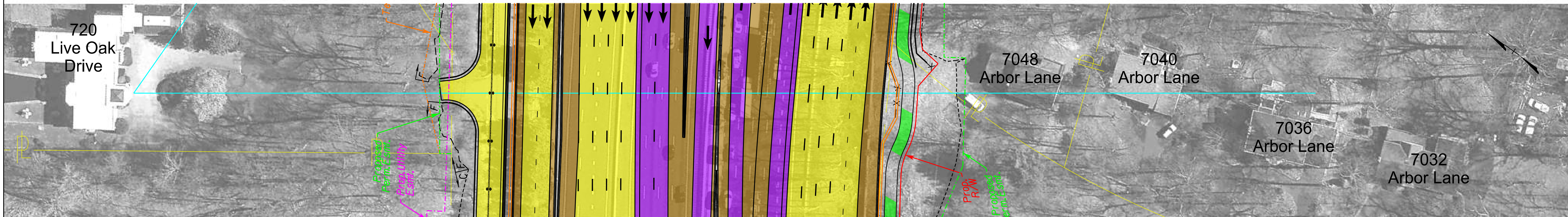


LEGEND	
PROPOSED EXPRESS LANES & RAMP	EXISTING RIGHT OF WAY
PROPOSED GENERAL PURPOSE LANE IMPROVEMENTS	PROPERTY LINES
PROPOSED PAVED SHOULDER/PAVED MEDIANS	PROPOSED RIGHT OF WAY
PROPOSED BRIDGE	PROPOSED PERMANENT EASEMENT (V2001)
PROPOSED SHARED USE PATH	PROPOSED TEMPORARY EASEMENT (V2001)
PROPOSED SIDEWALK	PROPOSED UTILITY EASEMENT (V2001)
PROPOSED GRAZING AND GRAVEL TRAIL FOR FUTURE SHARED USE PATH BY OTHERS	PROPOSED MOSE BARRIER
PROPOSED STORMWATER MANAGEMENT BASIN	PREVIOUSLY COMPLETED PROJECT NEXT CONSTRUCTION

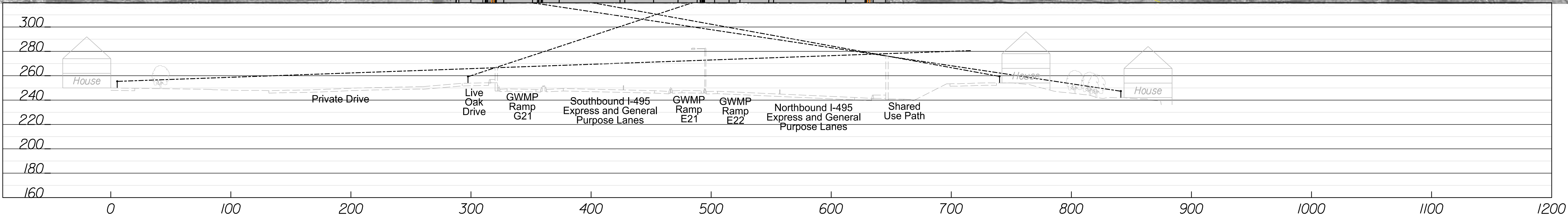
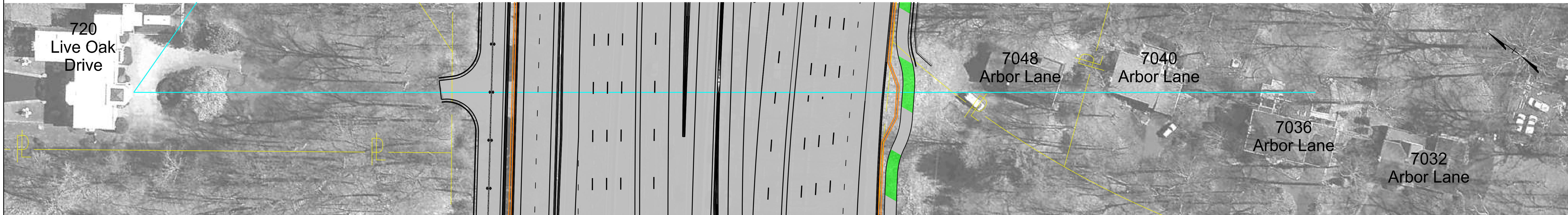
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### Project NEXT



### Project NEXT and I-495/I-270 Managed Lanes Study (Maryland Project)





# 495 Express Lanes Northern Extension Project

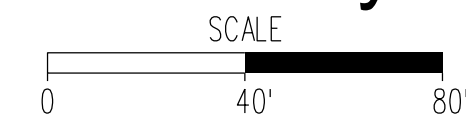
## June 2022 Public Update Meeting Design - Cross Section Views

### Project NEXT and I-495/I-270 Managed Lanes Study

July 21, 2022

## Cross Section View 2

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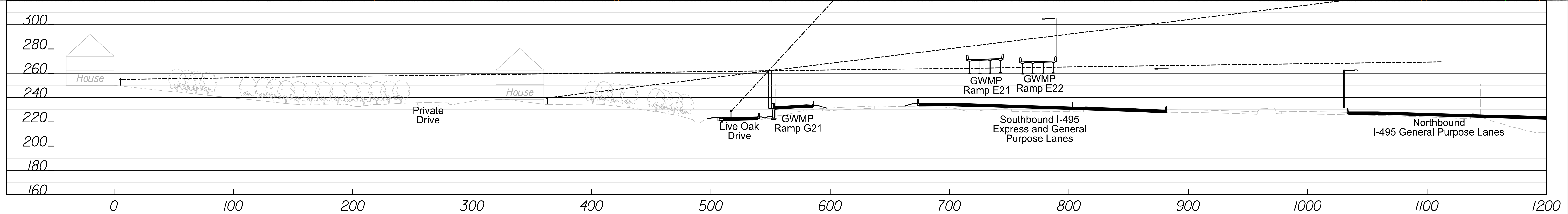
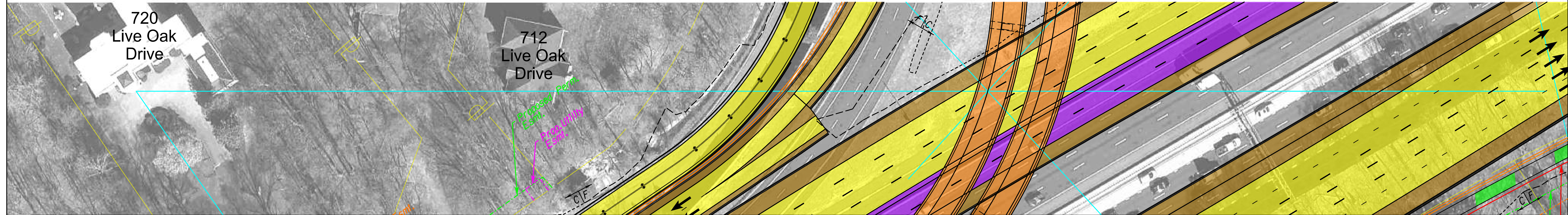


LEGEND	
PROPOSED EXPRESS LANES & RAMP	EXISTING RIGHT OF WAY
PROPOSED GENERAL PURPOSE LANE IMPROVEMENTS	PROPOSED RIGHT OF WAY
PROPOSED PAVED SHOULDER/Raised MEDIAN	PROPOSED PERMANENT EASEMENT (VDOT)
PROPOSED BRIDGE	PROPOSED TEMPORARY EASEMENT (VDOT)
PROPOSED SHARED USE PATH	PROPOSED UTILITY EASEMENT (VDOT)
PROPOSED SIDEWALK	PROPOSED MOOSE BARRIER
PROPOSED GRADING AND GRAVEL TRAIL FOR FUTURE SHARED USE PATH BY OTHERS	PREVIOUSLY COMPLETED PROJECT NEXT CONSTRUCTION

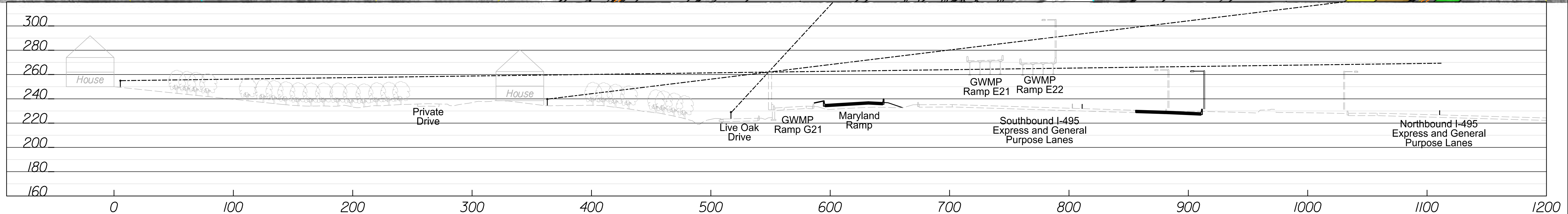
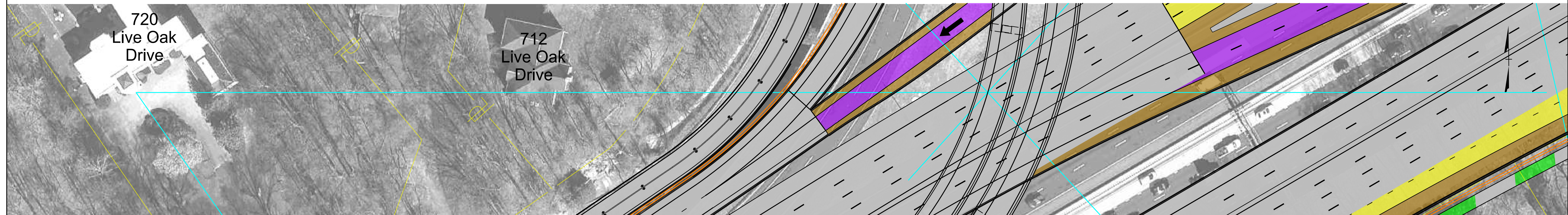
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### Project NEXT



### Project NEXT and I-495/I-270 Managed Lanes Study (Maryland Project)





# 495 Express Lanes Northern Extension Project

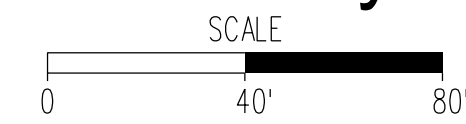
## June 2022 Public Update Meeting Design - Cross Section Views

### Project NEXT and I-495/I-270 Managed Lanes Study

July 21, 2022

## Cross Section View 3

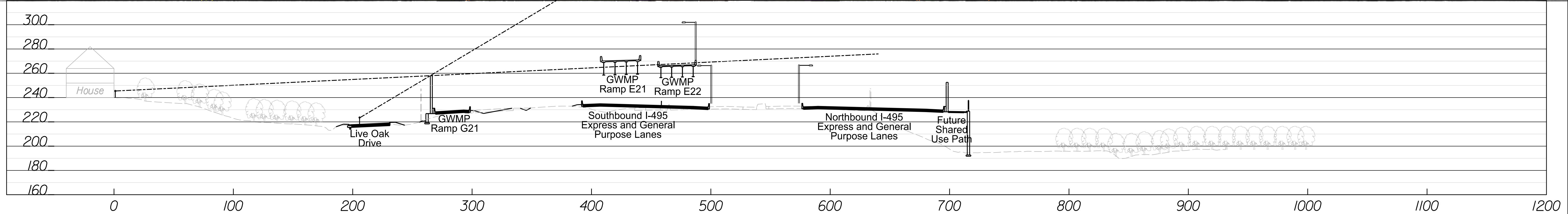
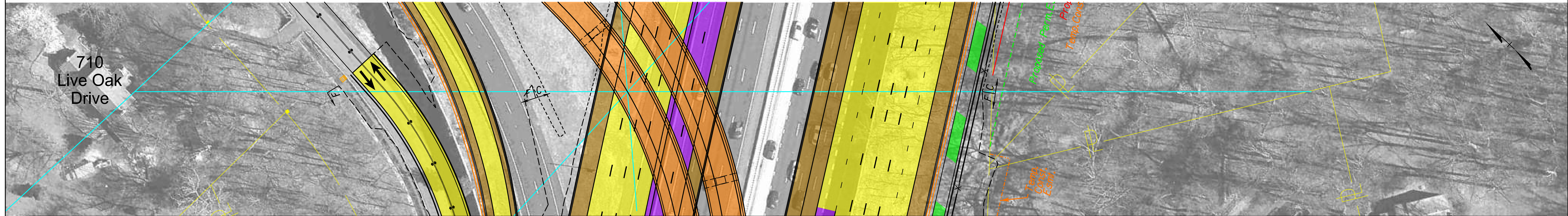
These Plans are Unfinished and Unapproved and are not to be used for any type of construction or the Acquisition of Right of Way.



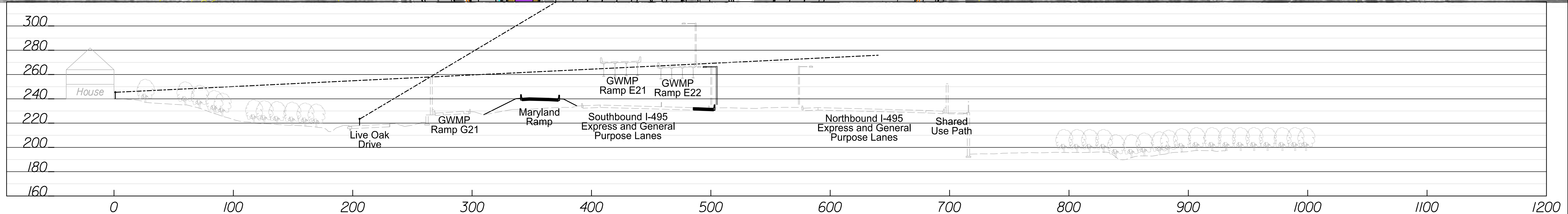
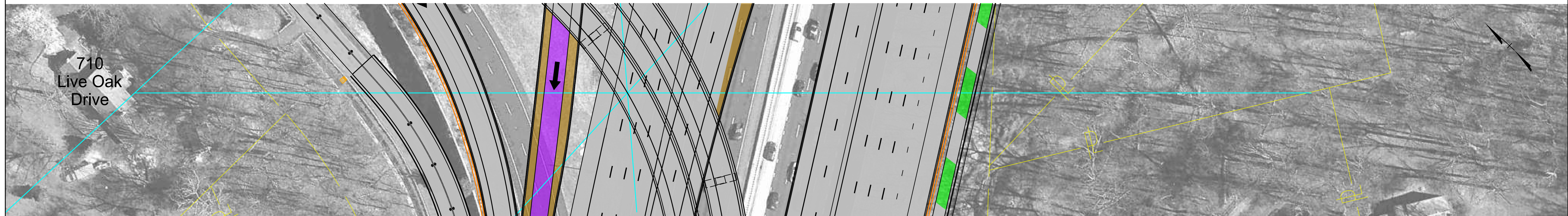
LEGEND	
PROPOSED EXPRESS LANES & RAMP	EXISTING RIGHT OF WAY PROPERTY LINES
PROPOSED GENERAL PURPOSE LANE IMPROVEMENTS	PROPOSED RIGHT OF WAY
PROPOSED PAVED SHOULDER/PARKED MEDIAN	PROPOSED PERMANENT EASEMENT (VDOT)
PROPOSED BRIDGE	PROPOSED TEMPORARY EASEMENT (VDOT)
PROPOSED SHARED USE PATH	PROPOSED UTILITY EASEMENT (VDOT)
PROPOSED SIDEWALK	PROPOSED MOOSE BARRIER
PROPOSED GRAZING AND GRAVEL TRAIL FOR FUTURE SHARED USE PATH BY OTHERS	PREVIOUSLY COMPLETED PROJECT NEXT CONSTRUCTION

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### Project NEXT



### Project NEXT and I-495/I-270 Managed Lanes Study (Maryland Project)





# 495 Express Lanes Northern Extension Project

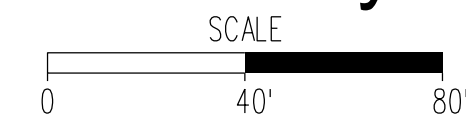
## June 2022 Public Update Meeting Design - Cross Section Views

### Project NEXT and I-495/I-270 Managed Lanes Study

July 21, 2022

## Cross Section View 4

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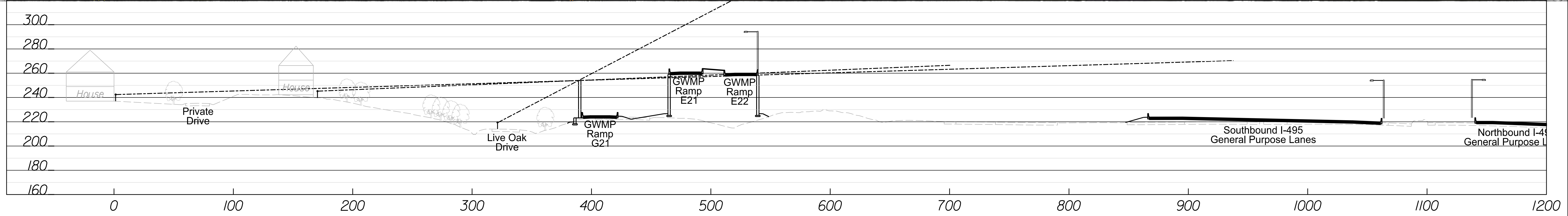
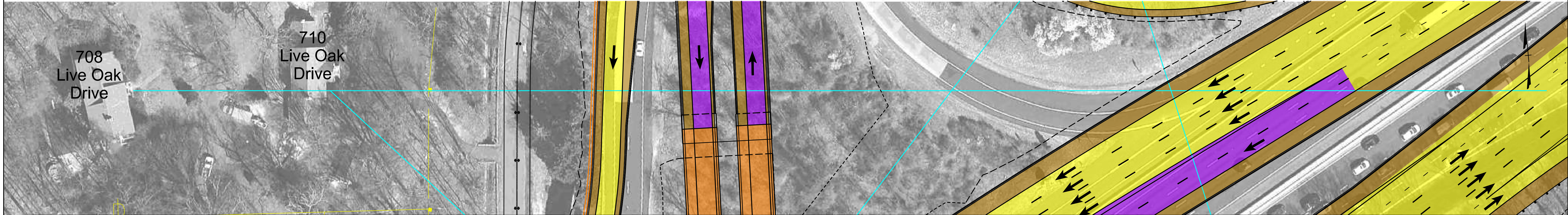


LEGEND	
PROPOSED EXPRESS LANES & RAMP	EXISTING RIGHT OF WAY
PROPOSED GENERAL PURPOSE LANE IMPROVEMENTS	PROPOSED RIGHT OF WAY
PROPOSED PAVED SHOULDER/PARKED MEDIAN	PROPOSED PERMANENT EASEMENT (V2001)
PROPOSED BRIDGE	PROPOSED TEMPORARY EASEMENT (V2001)
PROPOSED SHARED USE PATH	PROPOSED UTILITY EASEMENT (V2001)
PROPOSED SIDEWALK	PROPOSED MOOSE BARRIER
PROPOSED GRADING AND GRAVEL TRAIL FOR FUTURE SHARED USE PATH BY OTHERS	PREVIOUSLY COMPLETED PROJECT NEXT CONSTRUCTION

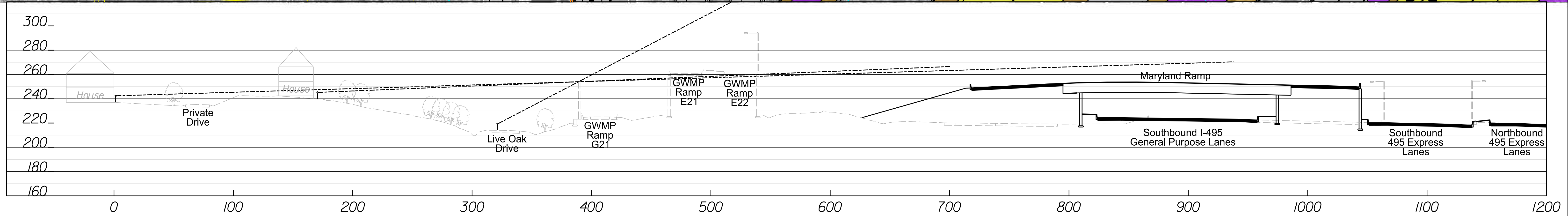
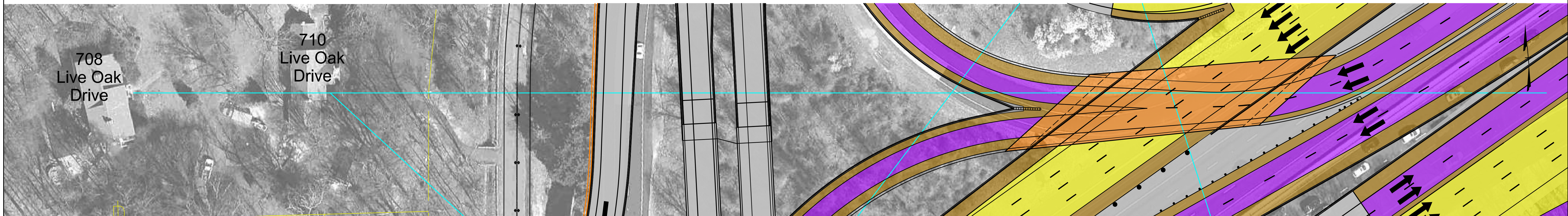
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### Project NEXT



### Project NEXT and I-495/I-270 Managed Lanes Study (Maryland Project)





# 495 Express Lanes Northern Extension Project

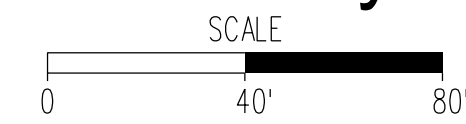
## June 2022 Public Update Meeting Design - Cross Section Views

### Project NEXT and I-495/I-270 Managed Lanes Study

July 21, 2022

## Cross Section View 5

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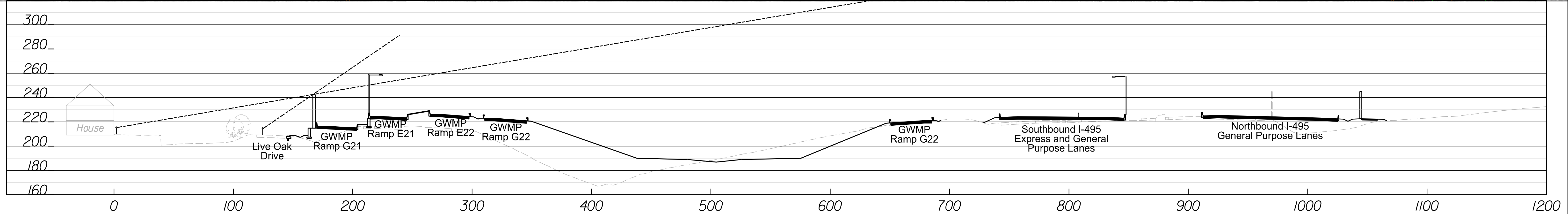
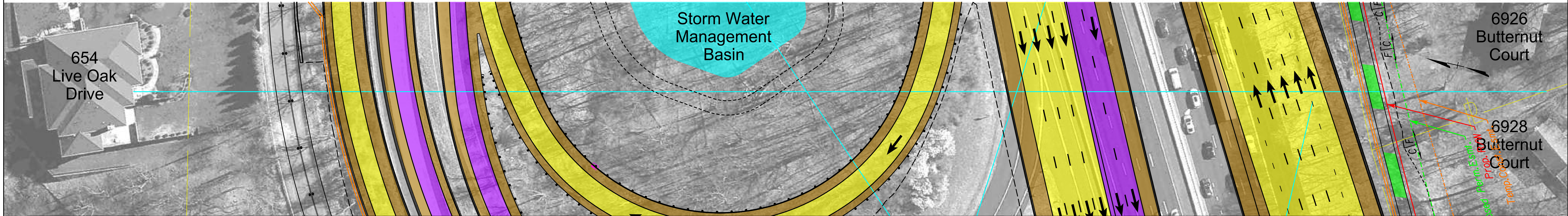


LEGEND	
PROPOSED EXPRESS LANES & RAMP	EXISTING RIGHT OF WAY
PROPOSED GENERAL PURPOSE LANE IMPROVEMENTS	PROPERTY LINES
PROPOSED PAVED SHOULDER/Raised MEDIAN	PROPOSED RIGHT OF WAY
PROPOSED BRIDGE	PROPOSED PERMANENT EASEMENT (VDOT)
PROPOSED SHARED USE PATH	PROPOSED TEMPORARY EASEMENT (VDOT)
PROPOSED SIDEWALK	PROPOSED UTILITY EASEMENT (VDOT)
PROPOSED GRAZING AND GRAVEL TRAIL FOR FUTURE SHARED USE PATH BY OTHERS	PROPOSED MOOSE BARRIER
PROPOSED STORMWATER MANAGEMENT BASIN	PREVIOUSLY COMPLETED PROJECT NEXT CONSTRUCTION

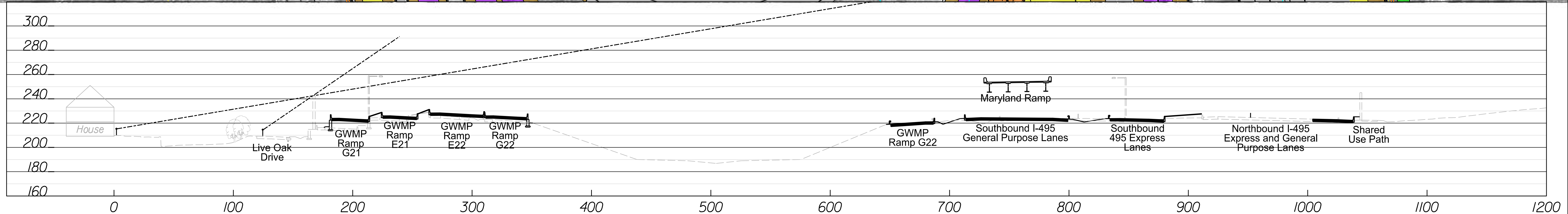
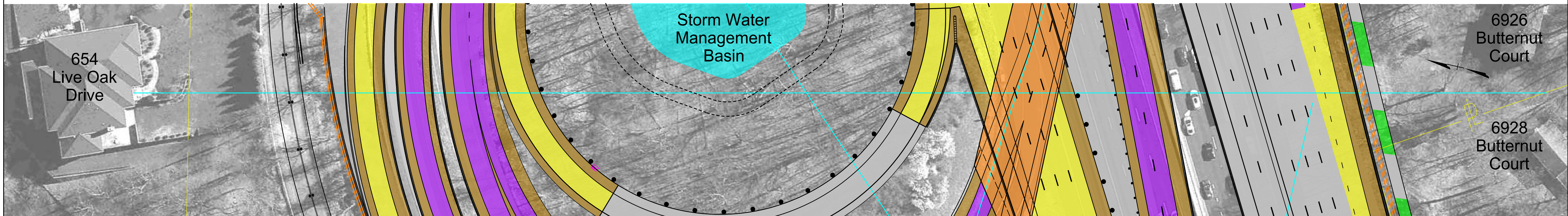
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### Project NEXT



### Project NEXT and I-495/I-270 Managed Lanes Study (Maryland Project)





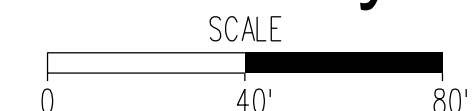
# 495 Express Lanes Northern Extension Project

## June 2022 Public Update Meeting Design - Cross Section Views

### Project NEXT and I-495/I-270 Managed Lanes Study

July 21, 2022

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**LEGEND**

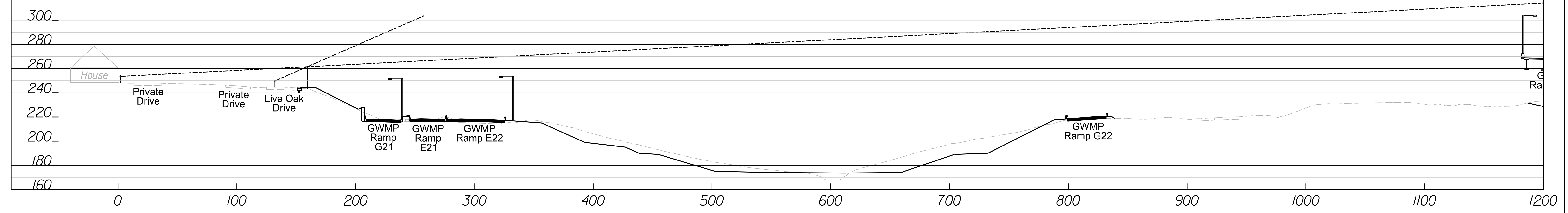
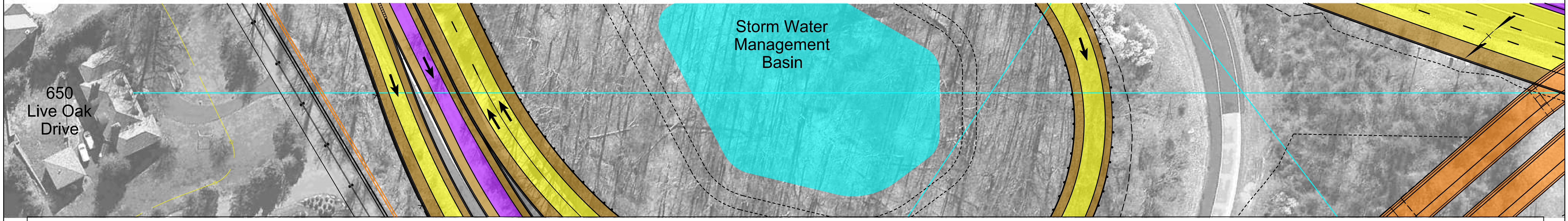
PROPOSED EXPRESS LANES & RAMP	EXISTING RIGHT OF WAY	PROPOSED PERMANENT EASEMENT (V2021)
PROPOSED GENERAL PURPOSE LANE IMPROVEMENTS	PROPOSED RIGHT OF WAY	PROPOSED TEMPORARY EASEMENT (V2021)
PROPOSED PAVED SHOULDER/PAVED MEDIANS	PROPOSED UTILITY EASEMENT (V2021)	PROPOSED MOOSE BARRIER
PROPOSED BRIDGE	PROPOSED STORMWATER MANAGEMENT BASIN	PREVIOUSLY COMPLETED PROJECT NEXT CONSTRUCTION
PROPOSED SHOULDER		
PROPOSED SHARED USE PATH		
PROPOSED SIDEWALK		
PROPOSED GRAZING AND GRAVEL TRAIL FOR FUTURE SHARED USE PATH BY OTHERS		

**Notes:**

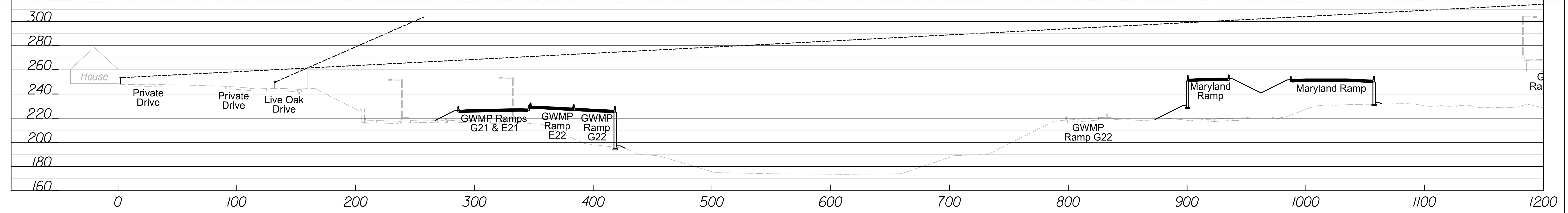
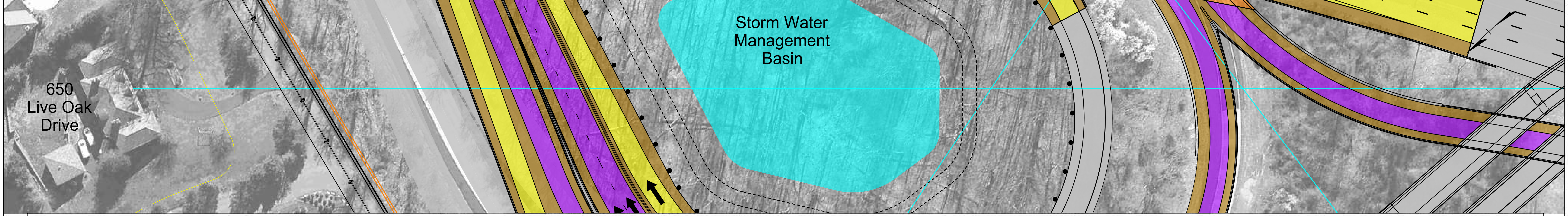
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## Cross Section View 6

### Project NEXT



### Project NEXT and I-495/I-270 Managed Lanes Study (Maryland Project)

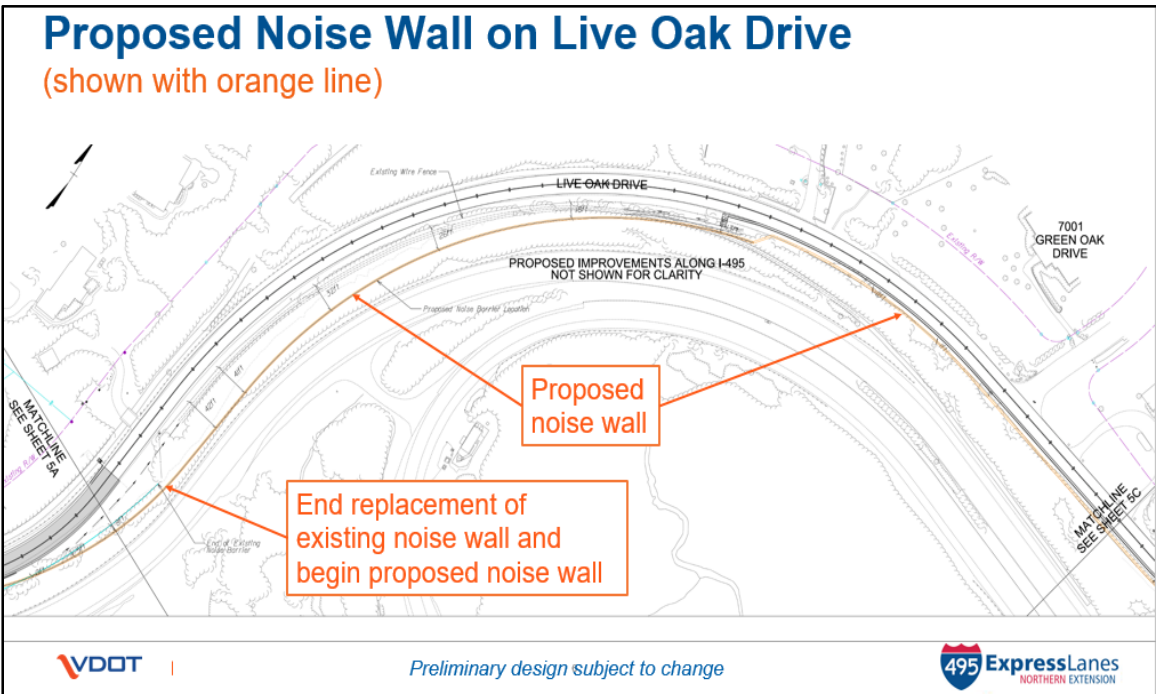
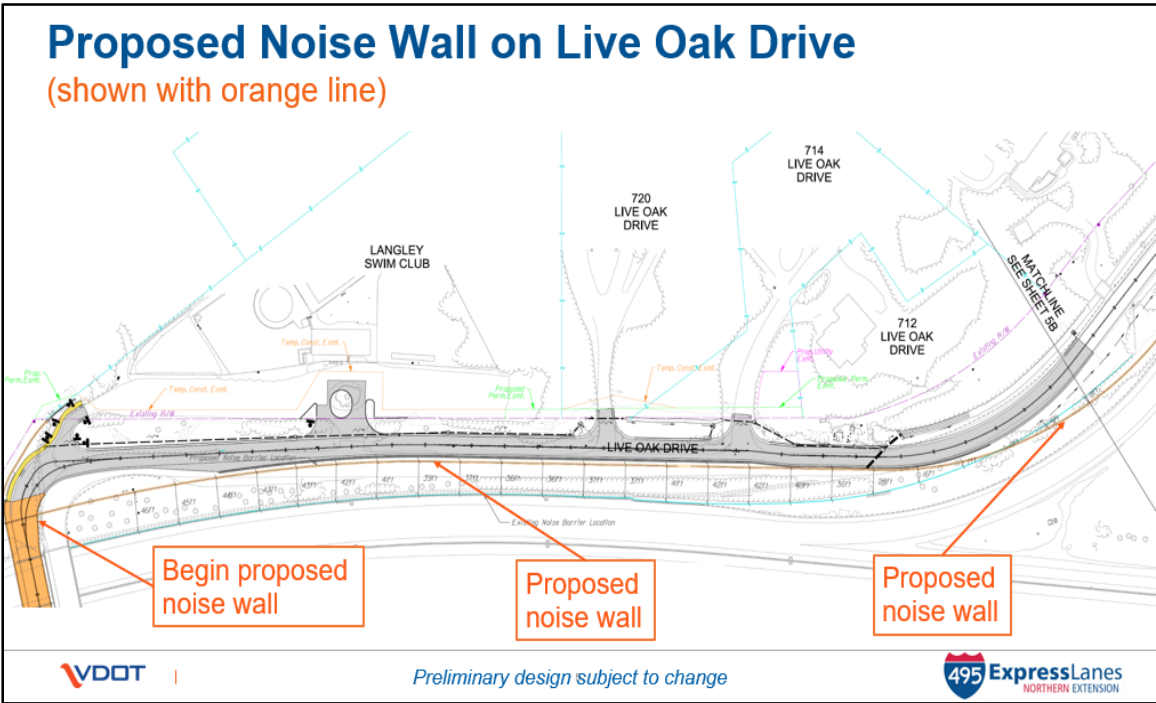




Attachment 2

Preliminary Noise Analysis Noise Barrier Location Along Live Oak Drive

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Based on the Preliminary Noise Analysis, the VDOT project will provide a continuous noise wall adjacent to Live Oak Drive terminating at Rivercrest Drive as shown in these exhibits