

Attachment 1.5c

Required Design Exceptions and Design Waivers

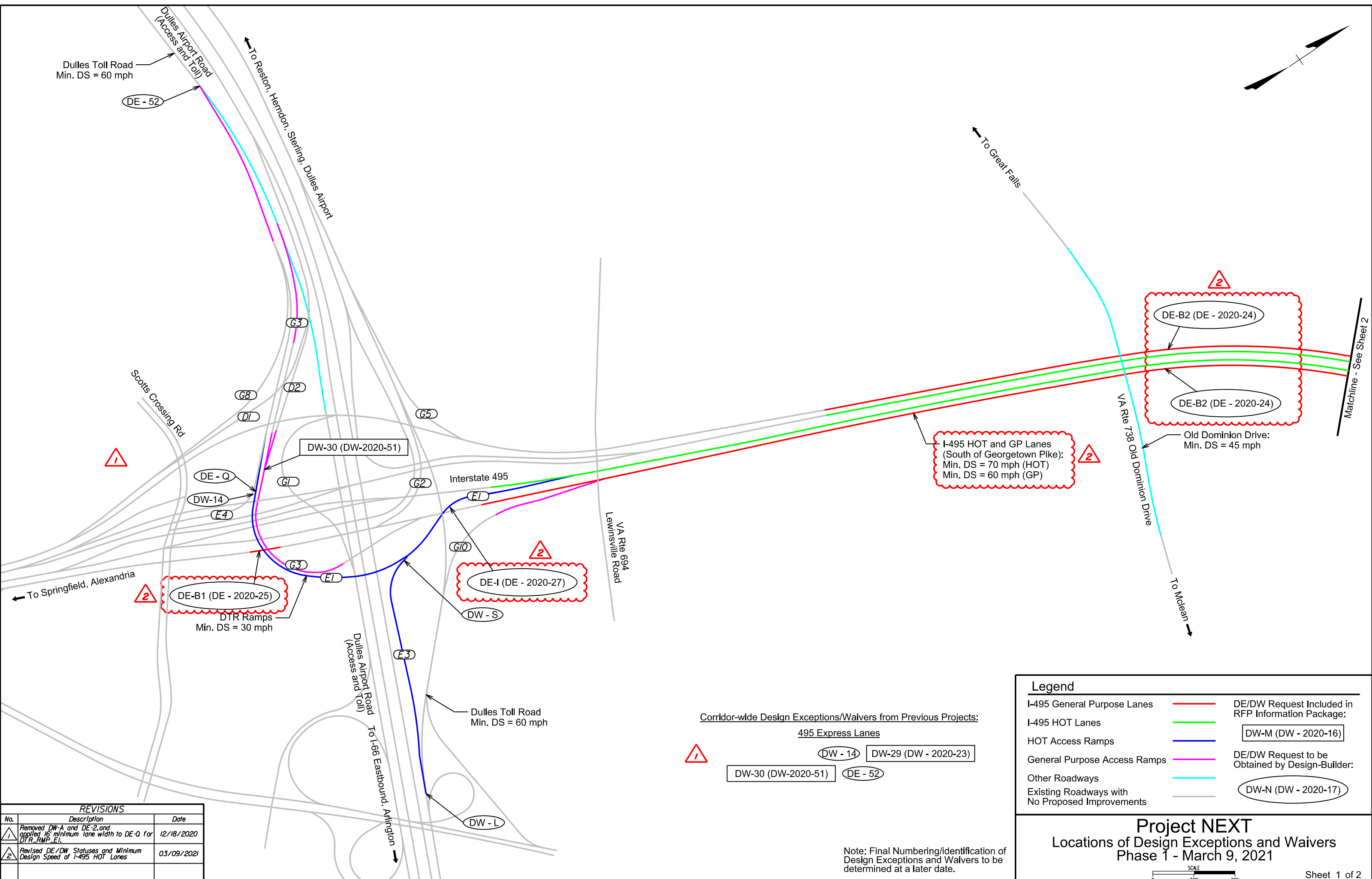
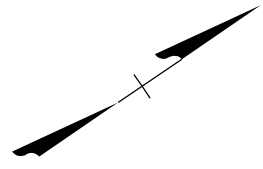


Project DE/DW No.	VDOT NOVA DE/DW No.	Roadway Name	From	To	Side	Design Feature	Proposed Design	Standard Required	Remarks	Approval Path Forward
Ex495 DE-2							No longer used			
Ex495 DW-14		I-495	Corridor-wide		N/A	Gore Area Geometry	No shoulder at recovery areas in gores	Provide full shoulder at recovery areas in gores	Application of Existing DE for removing shoulders at recovery area at gore areas (full recovery area geometry provided)	List in RFP, DB to Acquire
Ex495 DW-29	DW-2020-23	I-495	*See Appendix A		N/A	Horizontal Geometry	Mainline Compound Curves with radius ratio more than 1.5:1	Mainline Compound Curves with radius ratio shall be less than 1.5:1	Application of Existing DE for allowing tighter compound curvature	DW Approved on November 16, 2020
Ex495 DW-30	DW-2020-51	I-495	*See Appendix B		N/A	Horizontal Geometry	Ramp Compound Curves with radius ratio more than 2:1	Ramp Compound Curves with radius ratio shall be less than 2:1	Application of Existing DE for allowing tighter compound curvature	DW Approved on November 13, 2020
Ex495 DE-52		I-495	Eastbound DTR/ DTR Ramp E4		N/A	Gore Area Geometry	No Widening Transition at multi-lane exit terminals	500ft length Widening Transition shall be provided at multi-lane exit terminals	Application of Existing DE for tightening exit ramp geometry	List in RFP, DB to Acquire
DW-A							No longer used			
DE - B1	DE-2020-25	I-495	Bridge over DTR Ramps E1/G3		N/A	Superelevation	Match Existing Normal Crown	NB 3.4% (DTR)	Match superelevation of existing bridges over DTR Ramp E1/G3	List in RFP, DB to Acquire
DE - B2	DE-2020-24	I-495	Bridge over Scotts Run		N/A	Superelevation	Match Existing 2% Reverse Crown	NB min. 4.4%/ SB min. 4.3% (SR)	Match superelevation of existing bridges over Scotts Run	List in RFP, DB to Acquire
DW - C through DE - H							No longer used			
DE-I	DE-2020-27	DTR Ramp E1, DTR Ramp E3	Length of Ramp		Both	Elements that do not meet Ramp Minimum Design Speed	Elements (Curve radius, superelevation rate, stopping sight distances) that meet 30 mph minimum design speed	Elements (Curve radius, superelevation rate, stopping sight distances) that meet 35 mph min. design speed for 70 mph mainline	Use of elements correlating to a reduced ramp design speed due to geometrics/right of way	List in RFP, DB to Acquire
DE - J							No longer used			
DW-K		GWMP Ramp E21, GWMP Ramp E22	Bridges over I-495 at GWMP Interchange		N/A	Bridge Span Length	280ft - GWMP Ramp E21, 284ft - GWMP Ramp E22	240ft	Bridge span lengths in excess of 240ft	List in RFP, DB to Acquire
DW-L		DTR Ramp E3	Deceleration Lane from Westbound DTR		Both	Lane Taper, Gore Width and Deceleration Length	100ft	25:1, 300ft	Reduced space available between entrance from Route 123 and existing bridge over Route 123	List in RFP, DB to Acquire
DW-M	DW-2020-16	Balls Hill Road/ Balls Hill SUP	Length of Shared Use Path along Balls Hill Road		Both	Buffer Strip Width (Between SUP and Roadway)	2.5ft	8ft	Reduced impacts to church property. Maintains existing buffer width	DW Approved on December 15, 2020
DW-N	DW-2020-17	Georgetown Pike	Linganore Drive	Balls Hill Road	Both	Access Management			Maintain existing roadway intersections near interchange	List in RFP, DB to Acquire
DE-O							No longer used			
DW-P		I-495	North of George Washington Memorial Parkway		Median	Shoulder Width	Reduced Shoulder Width	10' Minimum Median Shoulder Width	Spot locations for Advance signage to support new Express Lanes entrance	List in RFP, DB to Acquire
DE-Q		Slip Ramp from Ramp G21 to Ramp NW/Exit onto DTR Ramp E1	Length of Ramp		Both	Lane Width	12'	16'	Reduced space available to due Power Transmission Lines, Scotts Run Nature Preserve and existing 495SB XL Bridge.	List in RFP, DB to Acquire
DW-R		I-495	Georgetown Pike	Live Oak Drive	Both	LR placement	Up to 50% of Lr into Curve	1/3 Lr into Curve	Short tangent section between curves under Georgetown Pike and Live Oak Drive bridges prevents the Lr placement per VDOT standards	List in RFP, DB to Acquire
DW-S		DTR Ramp E3	Superelevation Transition along DTR Ramp E3 Curve No.2		Both	LR placement	Up to 100% of Lr into Curve	1/3 Lr into Curve	LR is placed further back into the curve DTR_RMP_E3-2 avoid rollover concerns through the gore of DTR_RMP_E1 and DTR_RMP_E3.	List in RFP, DB to Acquire

Revision No. 2: Revised DE/DW Approval Statuses, Application Limits of DE-I, DW-M, DW-P, and DE-Q

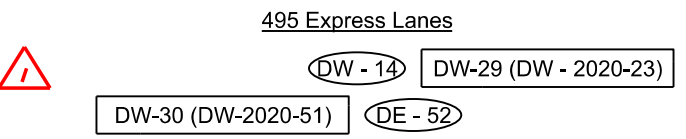


Project DE/DW No.	VDOT NOVA DE/DW No.	Roadway Name	From	To	Side	Design Feature	Proposed Design	Standard Required	Remarks	Approval Path Forward
DE/DWs for 2045 Concept (By Others)										
DE/DW - W		Dulles Toll Road WB	Route 123	Ramp G10		Interchange Ramp Spacing	Reduced Weaving Distance (On-ramp Gore to Off-ramp Gore)	2000ft (System to Service - Freeway) 1600ft (System to Service - CD Road) 1600ft (Service to Service - Freeway) 1000ft (Service to Service - CD Road)		Future DE or DW (to be obtained by Others)
		CD Road (Ramp D2/G1A/G4)	Ramp D2/G1A	Ramp D2/G4						
		CD Road (Ramp G4)	Ramp E2/G4	Ramp G4A						
		CD Road (I-495 NB)	Rte 123/G2	Ramp G2/GX						
DE/DW - X		No longer used								
DE/DW - Y		GWMP Interchange	Ramp G21/E21	Ramp E21/E24		Interchange Ramp Spacing	Reduced Gore-to-Gore Spacing (between consecutive on- or off-ramps [EN-EN or EX-EX], between off- then on- ramps [EX-EN], or on Turning Roadways [ramps merging or diverging])	1000ft (EN-EN or EX-EX Freeway) 800ft (EN-EN or EX-EX CD Road) 500ft (EX-EN Freeway) 400ft (EX-EN CD Road) 800ft (Turning Roadway System) 600ft (Turning Roadway Service)		Future DE or DW (to be obtained by Others)
		I-495 GP Lanes SB	Ramp G1	Ramp G5						
		I-495 GP Lanes SB	Ramp G5	Ramp D3						
		I-495 GP Lanes SB	Ramp D3	Ramp G6						
		CD Road (Ramp G3)	Ramp G9	Ramp G10						
		CD Road (Ramp G2)	Ramp D4	Ramp G9						
		Ramp E2	I-495 GP SB	Ramp G4						
		CD Road (Ramp G4)	Ramp D2/G1A	Ramp E2						
	CD Road (Ramp D1)	Ramp GX	I-495 GP SB							
DE/DW - Z		No longer used								



REVISIONS		
No.	Description	Date
1	Removed DW-A and DE-Z, and applied 16' minimum lane width to DE-Q for DTR_RMP_EI.	12/18/2020
2	Revised DE/DW Statuses and Minimum Design Speed of I-495 HOT Lanes	03/09/2021

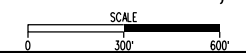
Corridor-wide Design Exceptions/Waivers from Previous Projects:

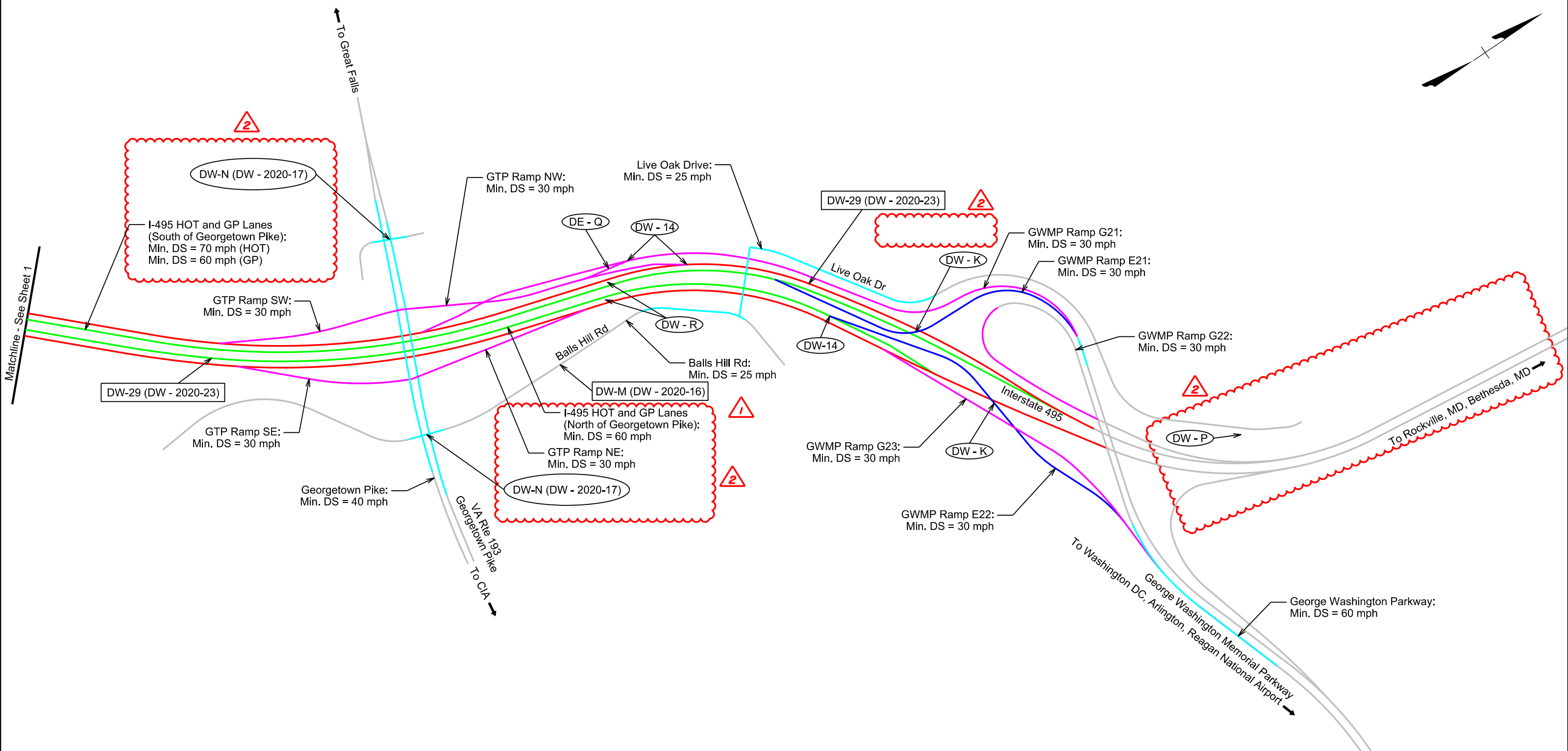
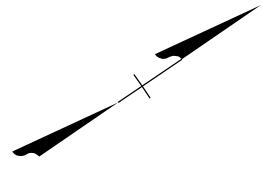


Legend	
I-495 General Purpose Lanes	Red line
I-495 HOT Lanes	Green line
HOT Access Ramps	Blue line
General Purpose Access Ramps	Magenta line
Other Roadways	Cyan line
Existing Roadways with No Proposed Improvements	Grey line
DE/DW Request Included in RFP Information Package:	
DW-M (DW - 2020-16)	Red dashed box
DE/DW Request to be Obtained by Design-Builder:	
DW-N (DW - 2020-17)	Red solid box

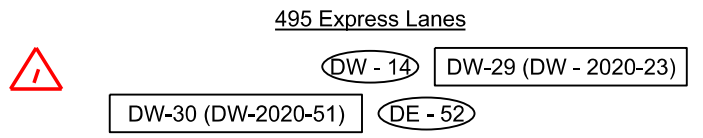
Note: Final Numbering/identification of Design Exceptions and Waivers to be determined at a later date.

Project NEXT
Locations of Design Exceptions and Waivers
Phase 1 - March 9, 2021





Corridor-wide Design Exceptions/Waivers from Previous Projects:

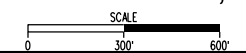


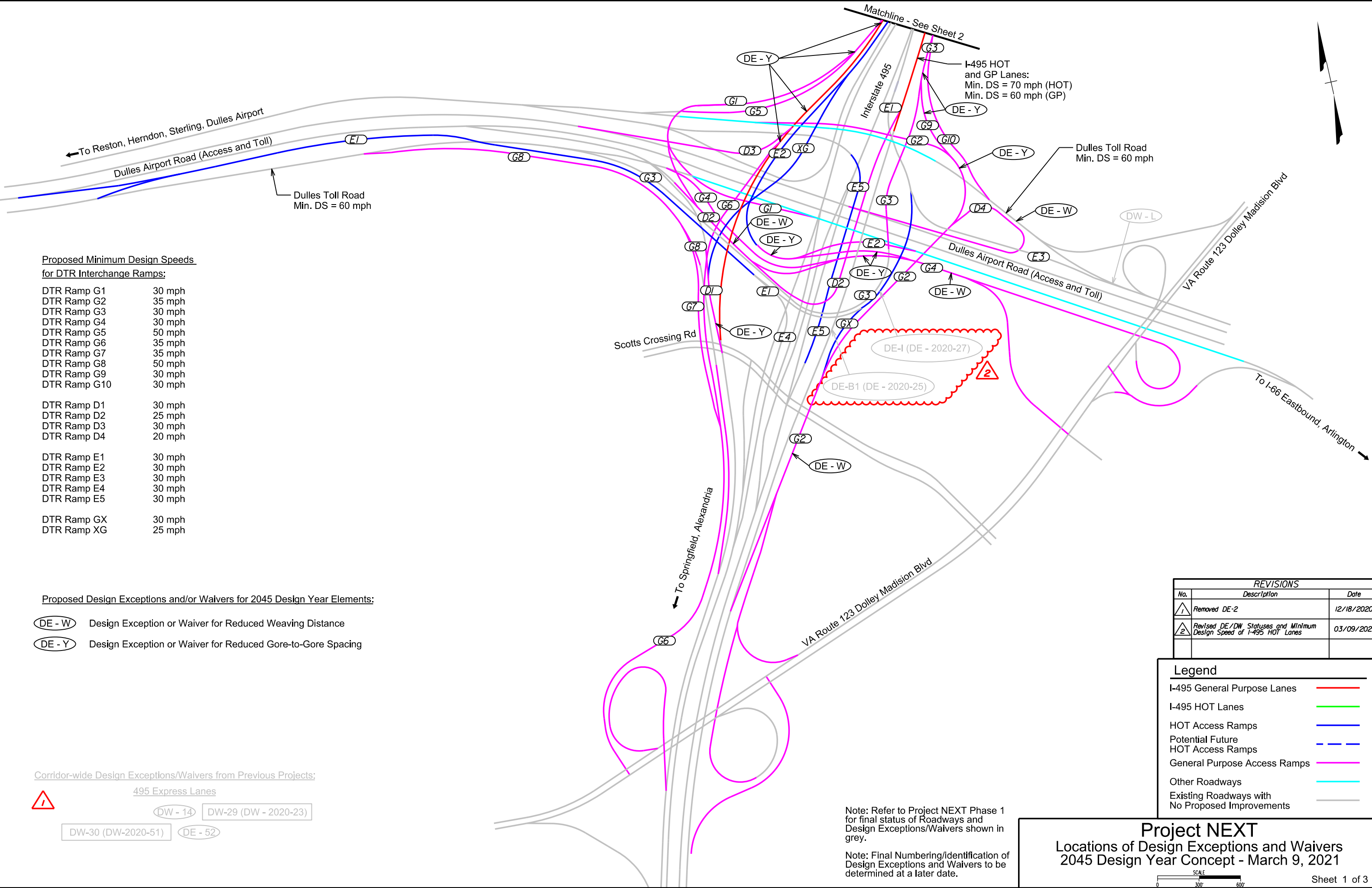
Legend	
I-495 General Purpose Lanes	DE/DW Request Included in RFP Information Package:
I-495 HOT Lanes	DW-M (DW - 2020-16)
HOT Access Ramps	DE/DW Request to be Obtained by Design-Builder:
General Purpose Access Ramps	DW-N (DW - 2020-17)
Other Roadways	
Existing Roadways with No Proposed Improvements	

REVISIONS		
No.	Description	Date
1	Removed DE-0 and DE-2	12/18/2020
2	Revised DE/DW Statuses and Minimum Design Speed of I-495 HOT Lanes	03/09/2021

Note: Final Numbering/identification of Design Exceptions and Waivers to be determined at a later date.

Project NEXT
Locations of Design Exceptions and Waivers
Phase 1 - March 9, 2021





Proposed Minimum Design Speeds for DTR Interchange Ramps:

DTR Ramp G1	30 mph
DTR Ramp G2	35 mph
DTR Ramp G3	30 mph
DTR Ramp G4	30 mph
DTR Ramp G5	50 mph
DTR Ramp G6	35 mph
DTR Ramp G7	35 mph
DTR Ramp G8	50 mph
DTR Ramp G9	30 mph
DTR Ramp G10	30 mph
DTR Ramp D1	30 mph
DTR Ramp D2	25 mph
DTR Ramp D3	30 mph
DTR Ramp D4	20 mph
DTR Ramp E1	30 mph
DTR Ramp E2	30 mph
DTR Ramp E3	30 mph
DTR Ramp E4	30 mph
DTR Ramp E5	30 mph
DTR Ramp GX	30 mph
DTR Ramp XG	25 mph

Proposed Design Exceptions and/or Waivers for 2045 Design Year Elements:

- DE - W Design Exception or Waiver for Reduced Weaving Distance
- DE - Y Design Exception or Waiver for Reduced Gore-to-Gore Spacing

Corridor-wide Design Exceptions/Waivers from Previous Projects:

- DW - 14 DW - 29 (DW - 2020-23)
- DW - 30 (DW-2020-51) DE - 52

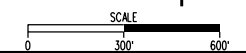
REVISIONS		
No.	Description	Date
△	Removed DE-2	12/18/2020
△	Revised DE/DW Statuses and Minimum Design Speed of I-495 HOT Lanes	03/09/2021

Legend	
I-495 General Purpose Lanes	—
I-495 HOT Lanes	—
HOT Access Ramps	—
Potential Future HOT Access Ramps	- - -
General Purpose Access Ramps	—
Other Roadways	—
Existing Roadways with No Proposed Improvements	—

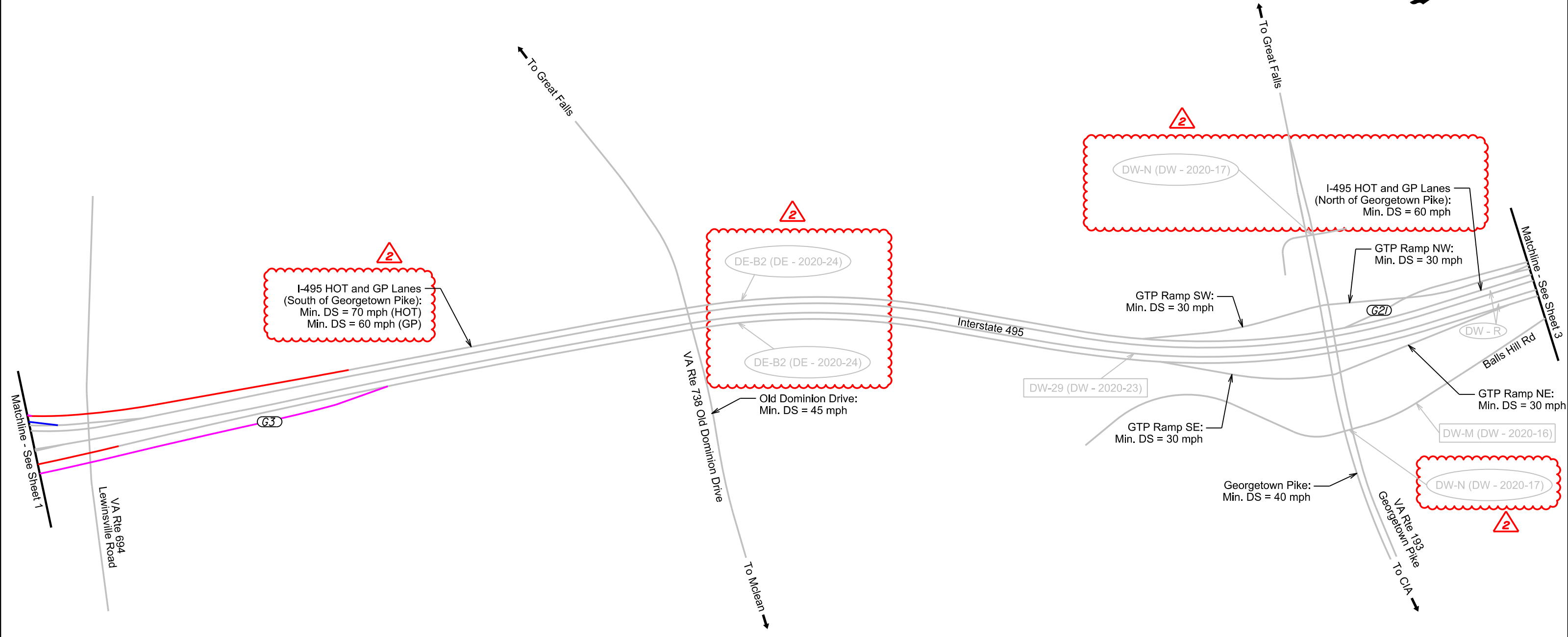
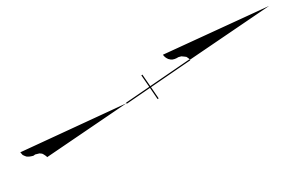
Note: Refer to Project NEXT Phase 1 for final status of Roadways and Design Exceptions/Waivers shown in grey.

Note: Final Numbering/identification of Design Exceptions and Waivers to be determined at a later date.

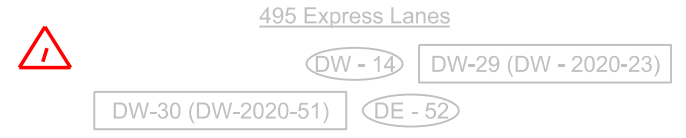
Project NEXT
Locations of Design Exceptions and Waivers
2045 Design Year Concept - March 9, 2021



REVISIONS		
No.	Description	Date
1	Removed DE-2	12/18/2020
2	Revised DE/DW Statutes and Minimum Design Speed of I-495 HOT Lanes	03/09/2021



Corridor-wide Design Exceptions/Waivers from Previous Projects:



Proposed Design Exceptions and/or Waivers for 2045 Design Year Elements:

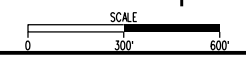
- DE - W Design Exception or Waiver for Reduced Weaving Distance
- DE - Y Design Exception or Waiver for Reduced Gore-to-Gore Spacing

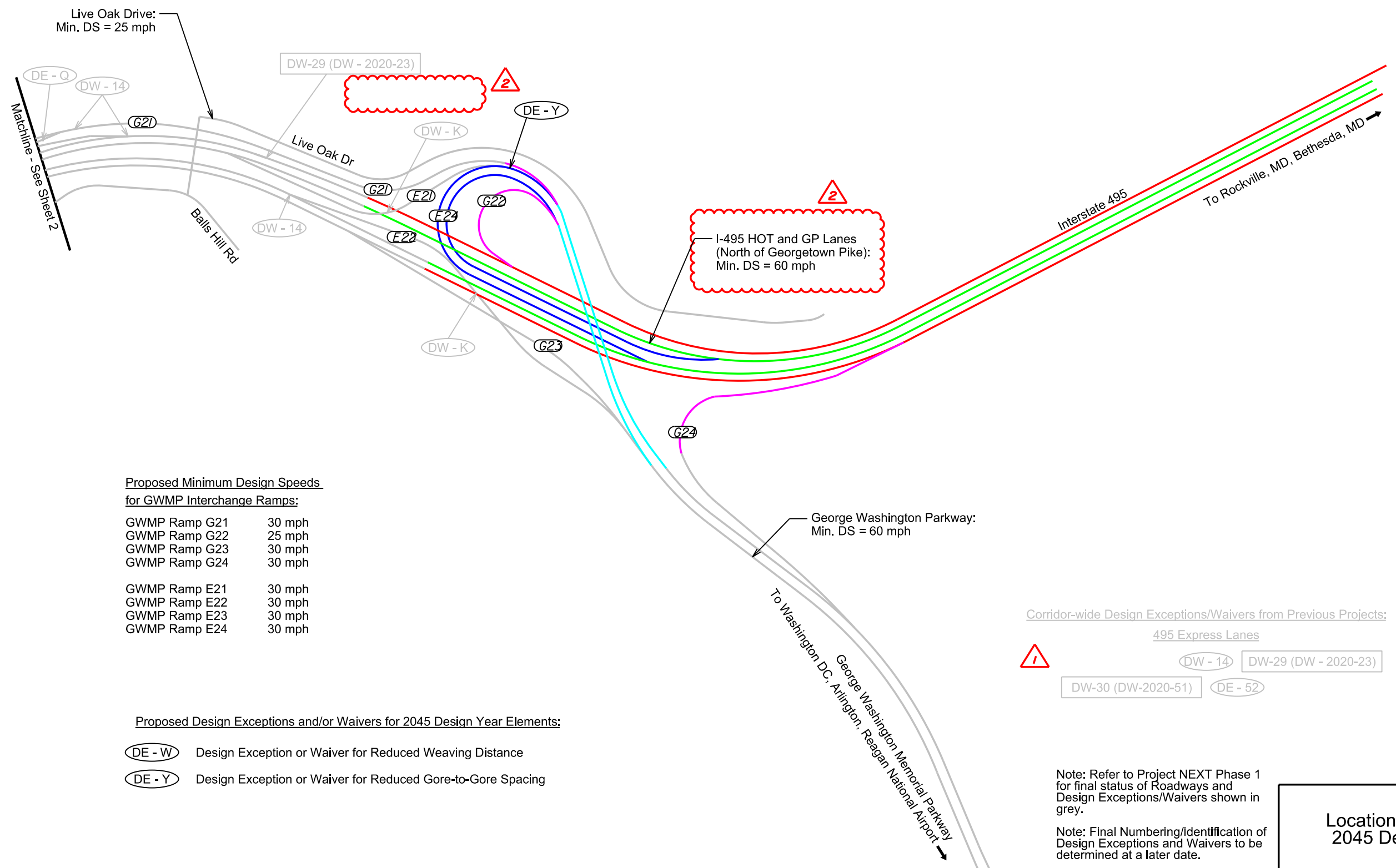
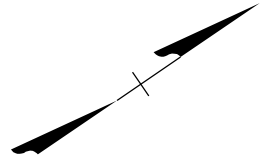
Note: Refer to Project NEXT Phase 1 for final status of Roadways and Design Exceptions/Waivers shown in grey.

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Legend	
I-495 General Purpose Lanes	—
I-495 HOT Lanes	—
HOT Access Ramps	—
Potential Future HOT Access Ramps	- - -
General Purpose Access Ramps	—
Other Roadways	—
Existing Roadways with No Proposed Improvements	—

Project NEXT
Locations of Design Exceptions and Waivers
2045 Design Year Concept - March 9, 2021





Proposed Minimum Design Speeds for GWMP Interchange Ramps:

GWMP Ramp G21	30 mph
GWMP Ramp G22	25 mph
GWMP Ramp G23	30 mph
GWMP Ramp G24	30 mph
GWMP Ramp E21	30 mph
GWMP Ramp E22	30 mph
GWMP Ramp E23	30 mph
GWMP Ramp E24	30 mph

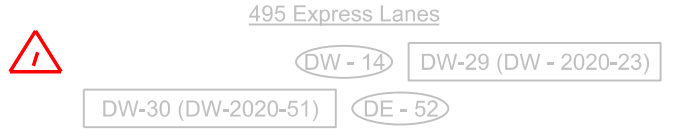
Proposed Design Exceptions and/or Waivers for 2045 Design Year Elements:

- DE - W Design Exception or Waiver for Reduced Weaving Distance
- DE - Y Design Exception or Waiver for Reduced Gore-to-Gore Spacing

REVISIONS		
No.	Description	Date
1	Removed DE-2	12/18/2020
2	Revised DE/DW Statuses and Minimum Design Speed of I-495 HOT Lanes	03/09/2021

Legend	
I-495 General Purpose Lanes	—
I-495 HOT Lanes	—
HOT Access Ramps	—
Potential Future HOT Access Ramps	- - -
General Purpose Access Ramps	—
Other Roadways	—
Existing Roadways with No Proposed Improvements	—

Corridor-wide Design Exceptions/Waivers from Previous Projects:



Note: Refer to Project NEXT Phase 1 for final status of Roadways and Design Exceptions/Waivers shown in grey.

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Project NEXT
Locations of Design Exceptions and Waivers
2045 Design Year Concept - March 9, 2021

