

EXECUTION VERSION

**I-95 Express Lanes - Opitz Boulevard Ramp
("Opitz") Project**

**Exhibit C-6
Technical Requirements**

**Attachment 1.5b
Design Criteria**

Geometric Design Criteria Table

I-95 Express Lanes Opitz Boulevard Access Project No: 0095-076-299, C501 UPC: 115198

No.	Design Criteria		Proposed I-95 Southbound GP to Express Lanes SB (Slip Ramp)	Proposed Express Lanes - Opitz Boulevard Connector Ramp (T Ramp)	Opitz Boulevard Eastbound to I-95 Northbound Loop	Opitz Boulevard	I-95 SB General Purpose Lanes (north of Slip Ramp)	I-95 Express Lanes (South of Slip Ramp)
1	Classification		Interchange Ramp	Interchange Ramp	Interchange Ramp	VDOT Urban Minor Arterial	Interstate	Interstate
2	Geometric Design Standard		GS-R	GS-R	GS-R	GS-6	GS-INT	GS-INT
3	Terrain		Rolling	Rolling	Rolling	Rolling	Rolling	Rolling
4	Average Daily Traffic (ADT)	Current (2019)	2,100	N/A	3,600	44,200	66,400	27,300
		Design (2045)	2,300	5,000	3,900	52,000	73,500	33,400
5	Speed (MPH)	Posted	45	45	25	45	60	65 (Note 5)
		Design	50	50	30	45 (Note 6)	70	65 (Note 5)
6	Design Vehicle		WB-67	WB-67	WB-67	WB-67	WB-67	WB-67
7	Minimum Curve Radius (ft)		760	760	215	929	1821	1821
8	Superelevation	Standard	TC-5.11R	TC-5.11R	Match Existing	TC-5.11U	TC-5.11R	TC-5.11R
		Max Rate	8.0%	8.0%	Match Existing	4.0%	8.00%	0.08
9	Maximum Grade		5.0%	5.0%	5.0%	Match Existing	4%	0.04
10	Minimum Stopping Sight Distance(ft)		425	425	200	360	730	730
11	Vertical Design Criteria	"K" Crest	84	84	19	61	247	247
		"K" Sag	96	96	37	79	181	181
12	Lanes	Number	1	1/2	1	4	3	3
		Width (ft)	16	16/12	16	12	12	12
13	Paved Shoulder Width (ft) (Note 3)	Left	6	6 (Note 4)	4	4 (if no curb)	10	10
		Right	8	8 (Note 4)	8	8 (if no curb)	10	10
14	Slopes		CS-4B	CS-4B	N/A	N/A	CS-4B	CS-4B
15	Vertical Clearance (ft)		16.5	16.5	16.5	16.5	16.5	16.5
16	Pedestrian/Bicycle		N/A	N/A	N/A	5' conc. sidewalk north side; 10' multi-use path south side (Note 7)	N/A	N/A

Notes: 1. For VDOT Standard Geometric Criteria not listed in the table above, please see the appropriate Geometric Standard in Appendix A of the current VDOT Road Design Manual

2. All MOT design on the Express Lanes and General Purpose Lanes not on Opitz Boulevard will be to Interstate criteria.

3. Paved Shoulder widths shown are minimum. When a concrete barrier is used, the paved shoulder shall be extended to the face of the barrier.

4. Shoulder width for the two-lane portion of the reversible Opitz Boulevard Connector Ramp (T-Ramp) will be 5' each side to barrier face.

5. Reference Express Lanes As-Built Plans, Project NH-0952(520), Revised 2015-02-25, Design Speed = 65 mph. Current Posted Speed = 65 mph.

6. Prince William County agrees to 45mph design speed on Opitz within project limits. Ref. October 14, 2021 PWC Correspondence and January 7, 2022 Meeting results.

7. Prince William County agrees provision of 5' sidewalk on north side of Opitz is concurrent with Comprehensive Plan; ref. August 16, 2021 PWC correspondence