



Exhibit O
DEIS Impact Summary Tables

Table D.7-15 provides acres of temporary and permanent wetland impacts by Build Alternative resulting from all types of surface disturbance, including short-term, construction-related activities. All Build Alternative impact calculations exclude published wetland data associated with the long-term construction laydown area near MD 200 and I-95 (approximately 21 acres of primarily PUB and PFO wetlands). There are no wetland impacts associated with the Mount Vernon Square East, BWI Marshall Airport, or Camden Yards Stations.

Table D.7-16 provides a summary of direct permanent wetland impacts by wetland classification and for NTWSSC associated with each Build Alternative.

Table D.7-17 provides a breakdown of NTWSSC total impacts.

Table D.7-15: Acres of Permanent and Temporary Impacts on Wetlands

Build Alternative	Alignment		Stations		TMF						Build Alternatives Total Permanent Acres of Impact
			Cherry Hill		BARC Airstrip		BARC West		MD 198		
	P	T	P	T	P	T	P	T	P	T	
J-01	11	6	<1	<1	-	-	-	-	33	<1	45
J-02	11	6	<1	<1	14	2	-	-	-	-	26
J-03	11	6	<1	<1	-	-	10	1	-	-	22
J-04	11	6	-	-	-	-	-	-	33	<1	45
J-05	11	6	-	-	14	2	-	-	-	-	25
J-06	11	6	-	-	-	-	10	1	-	-	22
J1-01	13	2	<1	<1	-	-	-	-	38	1	51
J1-02	13	4	<1	<1	13	3	-	-	-	-	27
J1-03	13	3	<1	<1	-	-	10	1	-	-	23
J1-04	13	2	-	-	-	-	-	-	38	1	51
J1-05	13	4	-	-	13	3	-	-	-	-	27
J1-06	13	3	-	-	-	-	10	1	-	-	23

Table D.7-16: Permanent Wetland Impact Summary

Build Alternative	Acres of Permanent Impact by Wetland Type				Total Wetland Impact (acres) Classified as NTWSSC*	Total Wetland Buffer Impact (acres)
	PUB	PEM	PFO	TOTAL**		
J-01	1	7	37	45	6	
J-02	1	2	22	26	19	
J-03	1	3	18	22	9	
J-04	1	7	37	45	6	
J-05	1	2	22	25	19	
J-06	1	3	18	22	9	
J1-01	<1	8	43	51	4	
J1-02	<1	3	24	27	14	
J1-03	<1	3	20	23	5	
J1-04	0	8	43	51	4	
J1-05	0	3	24	27	14	
J1-06	0	3	20	23	5	

* NTWSSC acreage is calculated separately from the total acreage, based on state-published boundaries, not field-delineated boundaries



Table D.7-17: Permanent and Temporary Impacts on NTWSSC (Acres)

Build Alternative	Alignment		TMF						Build Alternatives Total Permanent Acres of Impact
			BARC Airstrip		BARC WEST		MD 198		
	P	T	P	T	P	T	P	T	
J-01	6	2	-	-	-	-	<1	0	6
J-02	6	1	12	1	-	-	-	-	19
J-03	6	2	-	-	3	1	-	-	9
J-04	6	2	-	-	-	-	<1	0	6
J-05	6	1	12	1	-	-	-	-	19
J-06	6	2	-	-	3	1	-	-	9
J1-01	4	1	-	-	-	-	1	0	4
J1-02	3	2	11	2	-	-	-	-	14
J1-03	3	<1	-	-	2	1	-	-	5
J1-04	4	1	-	-	-	-	1	0	4
J1-05	3	2	11	2	-	-	-	-	14
J1-06	3	<1	-	-	2	1	-	-	5

Table D.7-22 provides a breakdown of anticipated permanent and temporary nontidal waterway impacts for each Build Alternative, including station and TMF options. The table provides linear feet of temporary and permanent waterway impacts by Build Alternative resulting from all types of surface disturbance, including short-term, construction-related activities. All Build Alternative impact calculations exclude published waterway data associated with the long-term construction laydown area near MD 200 and I-95 (approximately 10,500 linear feet of perennial and intermittent waterways). There are no waterway impacts associated with the Mount Vernon Square East, BWI Marshall Airport, or Camden Yards Stations.

Table D.7-23 provides a summary of direct permanent nontidal waterway impacts by waterway classification associated with each Build Alternative. Tidal waterways are not located within areas of proposed SCMAGLEV surface disturbance but are crossed underneath by proposed deep tunnel.

Table D.7-24 provides a summary of tidal waterways crossed.

Table D.7-22: Acres of Permanent and Temporary Impacts on Nontidal Waterways

Build Alternative	Alignment		Stations		TMF						Build Alternatives Total Permanent Linear Feet of Impact
			Cherry Hill		BARC Airstrip		BARC WEST		MD 198		
	P	T	P	T	P	T	P	T	P	T	
J-01	7,623	3,076	315	241					2,324	24	10,261
J-02	7,721	3,127	315	241	4,589	1,160					12,624
J-03	7,799	3,156	315	241			4,782	229			12,896
J-04	7,569	3,076							2,378	24	9,947
J-05	7,721	3,127			4,589	1,160					12,310
J-06	7,799	3,156					4,782	229			12,582
J1-01	6,981	1,314	315	241					4,714	231	12,009
J1-02	7,375	2,147	315	241	4,419	1,448					12,108
J1-03	7,323	1,728	315	241			5,021	371			12,659
J1-04	6,981	1,314							4,714	231	11,694
J1-05	7,375	2,147			4,419	1,448					11,794
J1-06	7,323	1,728					5,021	371			12,344

Table D.7-23: Permanent Nontidal Waterway Impact Summary

Build Alternative	Linear Feet of Impact by Waterway Type*			
	Ephemeral	Intermittent	Perennial	TOTAL
J-01	1,224	5,296	3,741	10,261
J-02	1,418	5,649	5,557	12,624
J-03	1,549	5,385	5,962	12,896
J-04	1,224	5,296	3,426	9,946
J-05	1,418	5,649	5,243	12,310
J-06	1,549	5,385	5,647	12,581
J1-01	814	4,526	6,669	12,009
J1-02	893	3,487	7,728	12,108
J1-03	852	3,617	8,189	12,659
J1-04	814	4,526	6,354	11,694
J1-05	893	3,487	7,414	11,794
J1-06	852	3,617	7,875	12,344

Table D.7-24: Tidal Waterway Impact Summary

Summary of LOD Crossings Under Tidal Portions of Anacostia River, Unnamed Tributary to the Anacostia River, Gwynns Falls, and Middle Branch Patapsco River						
Build Alternative	Alignment*		Camden Station*		Total*	
	LF	SF	LF	SF	LF	SF
J-01	146	15,251	0	0	146	15,251
J-02	146	15,251	0	0	146	15,251
J-03	146	15,251	0	0	146	15,251
J-04	146	15,251	1,105	50,839	1,251	66,090
J-05	146	15,251	1,105	50,839	1,251	66,090
J-06	146	15,251	1,105	50,839	1,251	66,090
J1-01	142	15,406	0	0	142	15,406
J1-02	142	15,406	0	0	142	15,406
J1-03	142	15,406	0	0	142	15,406
J1-04	142	15,406	1,105	50,839	1,247	66,245
J1-05	142	15,406	1,105	50,839	1,247	66,245
J1-06	142	15,406	1,105	50,839	1,247	66,245

Tables D.7-29 provides acres of forest impacts, including forest fragments, and FIDS impacts by Build Alternative resulting from surface disturbance noted above, including the removal of forest or FIDS for short-term, construction-related activities. There are no forest impacts associated with the Mount Vernon Square East and BWI Marshall Airport Stations, or FIDS impacts associated with any station.

Table D.7-29: Build Alternative Forest Impacts Summary (acres)

Acres of Permanent Construction Impacts on Forest Habitat by Alignment, Station, and TMF							
Build Alternative	Alignment	Stations		TMF			Build Alternatives Total Permanent Acres of Impact
		Cherry Hill	Camden Yards	BARC Airstrip	BARC West	MD 198	
J-01	250	24				147	420
J-02	259	24		99			381
J-03	260	24			167		451
J-04	249		6			147	402
J-05	259		6	99			363
J-06	260		6		167		432
J1-01	187	24				178	388
J1-02	202	24		98			324
J1-03	197	24			171		392
J1-04	187		6			178	370
J1-05	202		6	98			306
J1-06	197		6		171		374

Table 4.11-3 provides a summary of direct permanent nontidal waterway impacts by waterway classification associated with each Build Alternative. Refer to Appendix D.7 NETR for temporary impacts. With final design, all efforts will be made to span waterways underneath of viaducts by placing the support piers outside of the waterway banks. For the purpose of this analysis, though, the viaduct was counted as a permanent impact. Although ephemeral waterways are treated separately dependent upon the regulatory authority, FRA has included ephemeral waterways in this analysis. Tidal waterways are not located within areas of SCMAGLEV surface disturbance but are crossed underneath by proposed deep tunnel.

Table 4.11-3: Permanent Nontidal Waterway Impact Summary

Build Alternative	Linear Feet of Impact by Waterway Type*			
	Ephemeral	Intermittent	Perennial	TOTAL
J-01	1,224	5,296	3,741	10,261
J-02	1,418	5,649	5,557	12,624
J-03	1,549	5,385	5,962	12,896
J-04	1,224	5,296	3,426	9,946
J-05	1,418	5,649	5,243	12,310
J-06	1,549	5,385	5,647	12,581
J1-01	814	4,526	6,669	12,009
J1-02	893	3,487	7,728	12,108
J1-03	852	3,617	8,189	12,659
J1-04	814	4,526	6,354	11,694
J1-05	893	3,487	7,414	11,794
J1-06	852	3,617	7,875	12,344

* All Build Alternative impact calculations exclude published waterway data associated with the long-term construction laydown area near MD 200 and I-95.

Table 4.11-4 provides a summary of tidal waterways crossed.

Table 4.11-4: Tidal Waterway Impact Summary

Summary of LOD Crossings Under Tidal Portions of Anacostia River, Unnamed Tributary to the Anacostia River, Gwynns Falls, and Middle Branch Patapsco River						
Build Alternative	Alignment*		Camden Station*		Total*	
	LF	SF	LF	SF	LF	SF
J-01	146	15,251	0	0	146	15,251
J-02	146	15,251	0	0	146	15,251
J-03	146	15,251	0	0	146	15,251
J-04	146	15,251	1,105	50,839	1,251	66,090
J-05	146	15,251	1,105	50,839	1,251	66,090
J-06	146	15,251	1,105	50,839	1,251	66,090
J1-01	142	15,406	0	0	142	15,406
J1-02	142	15,406	0	0	142	15,406
J1-03	142	15,406	0	0	142	15,406
J1-04	142	15,406	1,105	50,839	1,247	66,245
J1-05	142	15,406	1,105	50,839	1,247	66,245
J1-06	142	15,406	1,105	50,839	1,247	66,245