Appendix D: Detailed Evaluation Results Tables (by Station Terminus Combinations)

Alternative J: BWP-East (Mount Vernon WEST to Cherry Hill LR)		Guideway & Ancillary		Stations			Cherry Hill LR	Additional Station LOD Areas (Surface)					RSD (Surface)	
		(Surface)	(Tunnel)	Cherry Hill LR (Surface)	BWI Station (Tunnel)	Mount Vernon West (Tunnel)	CHLR ROW Tail Track (Surface)	MVS WEST	MVS EAST	BWI	Cherry Hill LR	Camden	MD 198 & ramps	BARC & ramps
Number of Residential Parcels in LOD (Count)		5	1117	0	0	0	0	0	N/A	0	0	N/A	2	1
Number of Commercial Parcels in LOD (Count)		20	78	2	0	4	9	3	N/A	0	11	N/A	14	0
Number of Low Income Census Block Groups in LOD (Count)		0	7	1	0	1	1	0	N/A	0	0	N/A	0	0
Number of Minority Census Block Groups in LOD (Count)		11	41	2	1	4	2	0	N/A	1	1	N/A	2	3
Number of Community Resources in LOD (Count)		0	17	0	0	0	0	0	N/A	0	0	N/A	0	0
Number of Historic Landmarks and/or Eligible National Register Sites & Districts	Maryland	10	23	1	1	0	8	0	N/A	0	1	N/A	5	5
	Washington, DC	0	4	0	0	6	0	1	N/A	0	0	N/A	0	0
Parks (State, County, Local) in LOD	(Count)	2	16	0	0	3	0	1	N/A	0	0	N/A	1	0
	(Acres)	0.75	10.86	0	0	0.92	0	0.26	N/A	0	0	N/A	0	0
National Park Service (including B-W Pkwy) (Acres)		37.42	1.51	0	0	0.92	0	0.53	N/A	0	0	N/A	4.31	2.32
Patuxent Research Refuge (Acres)		17.28	0	N/A	N/A	N/A	0	0	N/A	0	0	N/A	1.99	0
Fort George G. Meade (Acres)		12.61	2.20	N/A	N/A	N/A	0	0	N/A	0	0	N/A	18.01	0
Beltsville Agricultural Research Center (Acres)		10.55	3.79	N/A	N/A	N/A	0	0	N/A	0	0	N/A	0	241.32
NASA - Goddard Space Flight Center (Acres)		0.07	1.52	N/A	N/A	N/A	0	0	N/A	0	0	N/A	0	0
Ecological Resources (SSPRA, Critical Habitat, Forest Easements)	FIDS (Acres)	66.09	N/A	0	N/A	N/A	0	0	N/A	0	0	N/A	170.59	165.70
	NON-FIDS (Acres)	36.77	N/A	0	N/A	N/A	0	0	N/A	0	0	N/A	63.83	279.41
Wooded Areas / Forest (Acres)		85.35	N/A	1.40	N/A	N/A	0.16	0	N/A	0.007	0.62	N/A	162.14	190.58
Wetlands of Special State Concern (Acres)		7.47	N/A	0	N/A	N/A	0	0	N/A	0	0	N/A	0	29.54
Wetlands (Acres)		12.65	N/A	0	N/A	N/A	0.07	0	N/A	0	0	N/A	20.07	26.85
100 Year Floodplain (Acres)		23.80	N/A	0	N/A	N/A	2.33	0	N/A	0	0	N/A	22.88	41.48

Alternative J: BWP-East (Mount Vernon WEST to Camden)		Guideway & Ancillary		Stations			Cherry Hill LR	Additional Station LOD Areas (Surface)					RSD (Surface)	
		(Surface)	(Tunnel)	Camden (Tunnel)	BWI Station (Tunnel)	Mount Vernon West (Tunnel)	CHLR ROW Tail Track (Surface)	MVS WEST	MVS EAST	BWI	Cherry Hill LR	Camden	MD 198 & ramps	BARC & ramps
Number of Residential Parcels in LOD (Count)		5	1117	0	0	0	N/A	0	N/A	0	N/A	0	2	1
Number of Commercial Parcels in LOD (Count)		6	88	1	0	4	N/A	3	N/A	0	N/A	3	14	0
Number of Low Income Census Block Groups in LOD (Count)		0	8	0	0	1	N/A	0	N/A	0	N/A	0	0	0
Number of Minority Census Block Groups in LOD (Count)		12	45	0	1	4	N/A	0	N/A	1	N/A	0	2	3
Number of Community Resources in LOD (Count)		0	17	1	0	0	N/A	0	N/A	0	N/A	0	0	0
Number of Historic Landmarks and/or Eligible National Register Sites & Districts	Maryland	10	36	7	1	0	N/A	0	N/A	0	N/A	9	5	5
	Washington, DC	0	4	0	0	6	N/A	1	N/A	0	N/A	0	0	0
Parks (State, County, Local) in LOD	(Count)	2	17	0	0	3	N/A	1	N/A	0	N/A	0	1	0
	(Acres)	0.75	11.68	0	0	0.92	N/A	0.26	N/A	0	N/A	0	0	0
National Park Service (including B-W Pkwy) (Acres)		37.42	1.51	0	0	0.92	N/A	0.53	N/A	0	N/A	0	4.31	2.32
Patuxent Research Refuge (Acres)		17.28	0.00	N/A	N/A	N/A	N/A	0	N/A	0	N/A	0	1.99	0
Fort George G. Meade (Acres)		12.61	2.20	N/A	N/A	N/A	N/A	0	N/A	0	N/A	0	18.01	0
Beltsville Agricultural Research Center (Acres)		10.55	3.79	N/A	N/A	N/A	N/A	0	N/A	0	N/A	0	0	241.32
NASA - Goddard Space Flight Center (Acres)		0.07	1.52	N/A	N/A	N/A	N/A	0	N/A	0	N/A	0	0	0
Ecological Resources (SSPRA, Critical Habitat, Forest Easements)	FIDS (Acres)	66.09	N/A	N/A	N/A	N/A	N/A	0	N/A	0	N/A	0	170.59	165.70
	NON-FIDS (Acres)	36.77	N/A	N/A	N/A	N/A	N/A	0	N/A	0	N/A	0	63.83	279.41
Wooded Areas / Forest (Acres)		85.31	N/A	N/A	N/A	N/A	N/A	0	N/A	0.007	N/A	0	162.14	190.58
Wetlands of Special State Concern (Acres)		7.47	N/A	N/A	N/A	N/A	N/A	0	N/A	0	N/A	0	0	29.54
Wetlands (Acres)		12.65	N/A	N/A	N/A	N/A	N/A	0	N/A	0	N/A	0	20.07	26.85
100 Year Floodplain (Acres)		23.80	N/A	N/A	N/A	N/A	N/A	0	N/A	0	N/A	0	22.88	41.48

Alternative J: BWP-East (Mount Vernon EAST to Cherry Hill LR)		Guideway & Ancillary		Stations			Cherry Hill LR	Additional Station LOD Areas (Surface)					RSD (Surface)	
		(Surface)	(Tunnel)	Cherry Hill LR (Surface)	BWI Station (Tunnel)	Mount Vernon East (Tunnel)	CHLR ROW Tail Track (Surface)	MVS WEST	MVS EAST	BWI	Cherry Hill LR	Camden	MD 198 & ramps	BARC & ramps
Number of Residential Parcels in LOD (Count)		5	1117	0	0	3	0	N/A	3	0	0	N/A	2	1
Number of Commercial Parcels in LOD (Count)		20	78	2	0	17	9	N/A	16	0	11	N/A	14	0
Number of Low Income Census Block Groups in LOD (Count)		0	7	1	0	2	1	N/A	1	0	0	N/A	0	0
Number of Minority Census Block Groups in LOD (Count)		11	41	2	1	8	2	N/A	4	1	1	N/A	2	3
Number of Community Resources in LOD (Count)		0	17	0	0	0	0	N/A	0	0	0	N/A	0	0
Number of Historic Landmarks and/or Eligible National Register Sites & Districts	Maryland	10	23	1	1	0	8	N/A	0	0	1	N/A	5	5
	Washington, DC	0	4	0	0	6	0	N/A	1	0	0	N/A	0	0
Parks (State, County, Local) in LOD	(Count)	2	16	0	0	3	0	N/A	1	0	0	N/A	1	0
	(Acres)	0.75	10.86	0	0	0.92	0	N/A	0.26	0	0	N/A	0	0
National Park Service (including B-W Pkwy) (Acres)		37.42	1.51	0	0	0.50	0	N/A	0.11	0	0	N/A	4.31	2.32
Patuxent Research Refuge (Acres)		17.28	0	N/A	N/A	N/A	0	N/A	0	0	0	N/A	1.99	0
Fort George G. Meade (Acres)		12.61	2.20	N/A	N/A	N/A	0	N/A	0	0	0	N/A	18.01	0
Beltsville Agricultural Research Center (Acres)		10.55	3.79	N/A	N/A	N/A	0	N/A	0	0	0	N/A	0	241.32
NASA - Goddard Space Flight Center (Acres)		0.07	1.52	N/A	N/A	N/A	0	N/A	0	0	0	N/A	0	0
Ecological Resources (SSPRA, Critical Habitat, Forest Easements)	FIDS (Acres)	66.09	N/A	0	N/A	N/A	0	N/A	0	0	0	N/A	170.59	165.70
	NON-FIDS (Acres)	36.77	N/A	0	N/A	N/A	0	N/A	0	0	0	N/A	63.83	279.41
Wooded Areas / Forest (Acres)		85.35	N/A	1.40	N/A	N/A	0.16	N/A	0	0.007	0.62	N/A	162.14	190.58
Wetlands of Special State Concern (Acres)		7.47	N/A	0	N/A	N/A	0	N/A	0	0	0	N/A	0	29.54
Wetlands (Acres)		12.65	N/A	0	N/A	N/A	0.07	N/A	0	0	0	N/A	20.07	26.85
100 Year Floodplain (Acres)		23.80	N/A	0	N/A	N/A	2.33	N/A	0	0	0	N/A	22.88	41.48

Alternative J: BWP-East (Mount Vernon EAST to Camden)		Guideway & Ancillary		Stations			Cherry Hill LR	Additional Station LOD Areas (Surface)					RSD (Surface)	
		(Surface)	(Tunnel)	Camden (Tunnel)	BWI Station (Tunnel)	Mount Vernon East (Tunnel)	CHLR ROW Tail Track (Surface)	MVS WEST	MVS EAST	BWI	Cherry Hill LR	Camden	MD 198 & ramps	BARC & ramps
Number of Residential Parcels in LOD (Count)		5	1117	0	0	3	N/A	N/A	3	0	N/A	0	2	1
Number of Commercial Parcels in LOD (Count)		6	88	1	0	17	N/A	N/A	16	0	N/A	3	14	0
Number of Low Income Census Block Groups in LOD (Count)		0	8	0	0	2	N/A	N/A	1	0	N/A	0	0	0
Number of Minority Census Block Groups in LOD (Count)		12	45	0	1	8	N/A	N/A	4	1	N/A	0	2	3
Number of Community Resources in LOD (Count)		0	17	1	0	0	N/A	N/A	0	0	N/A	0	0	0
Number of Historic Landmarks and/or Eligible National Register Sites & Districts	Maryland	10	36	7	1	0	N/A	N/A	0	0	N/A	9	5	5
	Washington, DC	0	4	0	0	6	N/A	N/A	1	0	N/A	0	0	0
Parks (State, County, Local) in LOD	(Count)	2	17	0	0	3	N/A	N/A	1	0	N/A	0	1	0
	(Acres)	0.75	11.68	0	0	0.92	N/A	N/A	0.26	0	N/A	0	0	0
National Park Service (including B-W Pkwy) (Acres)		37.42	1.51	0	0	0.50	N/A	N/A	0.11	0	N/A	0	4.31	2.32
Patuxent Research Refuge (Acres)		17.28	0.00	N/A	N/A	N/A	N/A	N/A	0	0	N/A	0	1.99	0
Fort George G. Meade (Acres)		12.61	2.20	N/A	N/A	N/A	N/A	N/A	0	0	N/A	0	18.01	0
Beltsville Agricultural Research Center (Acres)		10.55	3.79	N/A	N/A	N/A	N/A	N/A	0	0	N/A	0	0	241.32
NASA - Goddard Space Flight Center (Acres)		0.07	1.52	N/A	N/A	N/A	N/A	N/A	0	0	N/A	0	0	0
Ecological Resources (SSPRA, Critical Habitat, Forest Easements)	FIDS (Acres)	66.09	N/A	N/A	N/A	N/A	N/A	N/A	0	0	N/A	0	170.59	165.70
	NON-FIDS (Acres)	36.77	N/A	N/A	N/A	N/A	N/A	N/A	0	0	N/A	0	63.83	279.41
Wooded Areas / Forest (Acres)		85.31	N/A	N/A	N/A	N/A	N/A	N/A	0	0.007	N/A	0	162.14	190.58
Wetlands of Special State Concern (Acres)		7.47	N/A	N/A	N/A	N/A	N/A	N/A	0	0	N/A	0	0	29.54
Wetlands (Acres)		12.65	N/A	N/A	N/A	N/A	N/A	N/A	0	0	N/A	0	20.07	26.85
100 Year Floodplain (Acres)		23.80	N/A	N/A	N/A	N/A	N/A	N/A	0	0	N/A	0	22.88	41.48

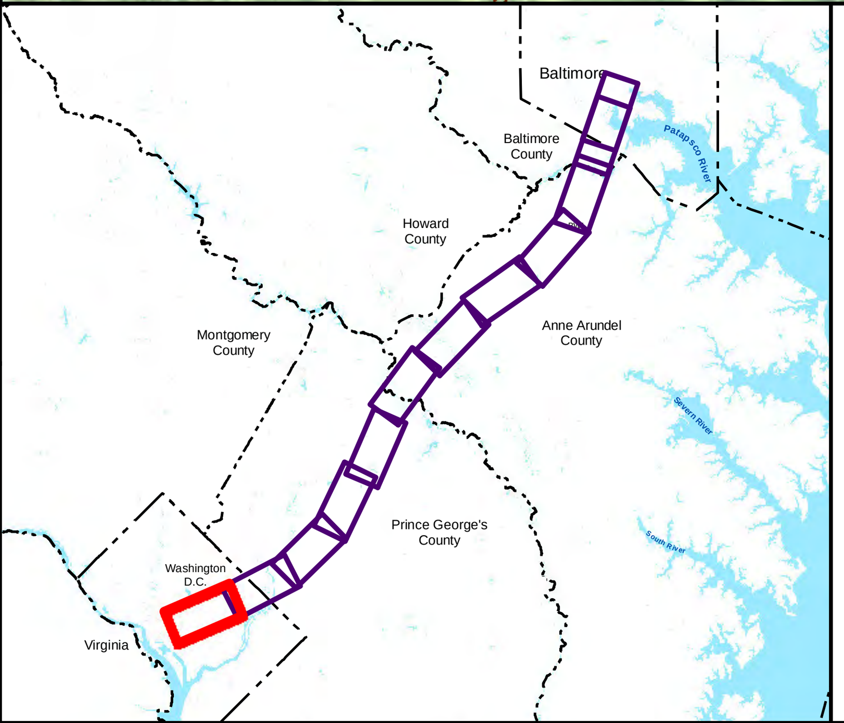
Alt. J1: BWP-West (Mount Vernon WEST to Cherry Hill LR)		Guideway & Ancillary		Stations			Cherry Hill LR	Additional Station LOD Areas (Surface)					RSD (Surface)	
		(Surface)	(Tunnel)	Cherry Hill LR (Surface)	BWI Station (Tunnel)	Mount Vernon West (Tunnel)	CHLR ROW Tail Track (Surface)	MVS WEST	MVS EAST	BWI	Cherry Hill LR	Camden	MD 198 & ramps	BARC & ramps
Number of Residential Parcels in LOD (Count)		12	1204	0	0	0	0	0	N/A	0	0	N/A	3	0
Number of Commercial Parcels in LOD (Count)		21	101	2	0	4	9	3	N/A	0	11	N/A	15	0
Number of Low Income Census Block Groups in LOD (Count)		0	8	1	0	1	1	0	N/A	0	0	N/A	0	0
Number of Minority Census Block Groups in LOD (Count)		7	44	2	1	3	2	0	N/A	1	1	N/A	4	2
Number of Community Resources in LOD (Count)		1	18	0	0	0	0	0	N/A	0	0	N/A	1	0
Number of Historic Landmarks and/or Eligible National Register Sites & Districts	Maryland	6	27	1	1	0	8	0	N/A	0	1	N/A	5	7
	Washington, DC	0	3	0	0	0	0	1	N/A	0	0	N/A	0	0
Parks (State, County, Local) in LOD	(Count)	4	19	0	0	2	0	1	N/A	0	0	N/A	0	0
	(Acres)	13.14	12.98	0	0	0.91	0	0.26	N/A	0	0	N/A	4.75	0
National Park Service (including B-W Pkwy) (Acres)		24.85	7.84	0	0	0.90	0	0.53	N/A	0	0	N/A	8.97	3.65
Patuxent Research Refuge (Acres)		0	0	N/A	N/A	N/A	0	0	N/A	0	0	N/A	0	0
Fort George G. Meade (Acres)		2.67	2.95	N/A	N/A	N/A	0	0	N/A	0	0	N/A	18.01	0
Beltsville Agricultural Research Center (Acres)		8.14	1.62	N/A	N/A	N/A	0	0	N/A	0	0	N/A	0	241.23
NASA - Goddard Space Flight Center (Acres)		0.00	0.00	N/A	N/A	N/A	0	0	N/A	0	0	N/A	0	0
Ecological Resources (SSPRA, Critical Habitat, Forest Easements)	FIDS (Acres)	36.21	N/A	0	N/A	N/A	0	0	N/A	0	0	N/A	172.65	165.96
	NON-FIDS (Acres)	25.60	N/A	0	N/A	N/A	0	0	N/A	0	0	N/A	63.83	280.02
Wooded Areas / Forest (Acres)		56.32	N/A	1.40	N/A	N/A	0.16	0	N/A	0.007	0.62	N/A	170.22	191.46
Wetlands of Special State Concern (Acres)		1.04	N/A	0	N/A	N/A	0	0	N/A	0	0	N/A	0	34.97
Wetlands (Acres)		6.77	N/A	0	N/A	N/A	0.07	0	N/A	0	0	N/A	20.00	31.02
100 Year Floodplain (Acres)		17.59	N/A	0	N/A	N/A	2.33	0	N/A	0	0	N/A	22.88	47.24

Alt. J1: BWP-West (Mount Vernon WEST to Camden Yards)		Guideway & Ancillary		Stations			Cherry Hill LR	Additional Station LOD Areas (Surface)					RSD (Surface)	
		(Surface)	(Tunnel)	Camden (Tunnel)	BWI Station (Tunnel)	Mount Vernon West (Tunnel)	CHLR ROW Tail Track (Surface)	MVS WEST	MVS EAST	BWI	Cherry Hill LR	Camden	MD 198 & ramps	BARC & ramps
Number of Residential Parcels in LOD (Count)		12	1204	0	0	0	N/A	0	N/A	0	N/A	0	3	0
Number of Commercial Parcels in LOD (Count)		10	111	1	0	4	N/A	3	N/A	0	N/A	3	15	0
Number of Low Income Census Block Groups in LOD (Count)		0	9	0	0	1	N/A	0	N/A	0	N/A	0	0	0
Number of Minority Census Block Groups in LOD (Count)		8	48	0	1	3	N/A	0	N/A	1	N/A	0	4	2
Number of Community Resources in LOD (Count)		1	18	1	0	0	N/A	0	N/A	0	N/A	0	1	0
Number of Historic Landmarks and/or Eligible National Register Sites & Districts	Maryland	7	40	7	1	0	N/A	0	N/A	0	N/A	9	5	7
	Washington, DC	0	3	0	0	5	N/A	1	N/A	0	N/A	0	0	0
Parks (State, County, Local) in LOD	(Count)	4	20	0	0	2	N/A	1	N/A	0	N/A	0	0	0
	(Acres)	13.14	13.80	0	0	0.91	N/A	0.26	N/A	0	N/A	0	4.75	0
National Park Service (including B-W Pkwy) (Acres)		24.85	7.84	0	0	0.90	N/A	0.53	N/A	0	N/A	0	8.97	3.65
Patuxent Research Refuge (Acres)		0	0	N/A	N/A	N/A	N/A	0	N/A	0	N/A	0	0	0
Fort George G. Meade (Acres)		2.67	2.95	N/A	N/A	N/A	N/A	0	N/A	0	N/A	0	18.01	0
Beltsville Agricultural Research Center (Acres)		8.14	1.62	N/A	N/A	N/A	N/A	0	N/A	0	N/A	0	0	241.23
NASA - Goddard Space Flight Center (Acres)		0	0	N/A	N/A	N/A	N/A	0	N/A	0	N/A	0	0	0
Ecological Resources (SSPRA, Critical Habitat, Forest Easements)	FIDS (Acres)	36.21	N/A	N/A	N/A	N/A	N/A	0	N/A	0	N/A	0	172.65	165.96
	NON-FIDS (Acres)	25.60	N/A	N/A	N/A	N/A	N/A	0	N/A	0	N/A	0	63.83	280.02
Wooded Areas / Forest (Acres)		56.28	N/A	N/A	N/A	N/A	N/A	0	N/A	0.007	N/A	0	170.22	191.46
Wetlands of Special State Concern (Acres)		1.04	N/A	N/A	N/A	N/A	N/A	0	N/A	0	N/A	0	0	34.97
Wetlands (Acres)		6.77	N/A	N/A	N/A	N/A	N/A	0	N/A	0	N/A	0	20.00	31.02
100 Year Floodplain (Acres)		17.59	N/A	N/A	N/A	N/A	N/A	0	N/A	0	N/A	0	22.88	47.24

Alt. J1: BWP-West (Mount Vernon EAST to Cherry Hill LR)		Guideway & Ancillary		Stations			Cherry Hill LR	Additional Station LOD Areas (Surface)					RSD (Surface)	
		(Surface)	(Tunnel)	Cherry Hill LR (Surface)	BWI Station (Tunnel)	Mount Vernon East (Tunnel)	CHLR ROW Tail Track (Surface)	MVS WEST	MVS EAST	BWI	Cherry Hill LR	Camden	MD 198 & ramps	BARC & ramps
Number of Residential Parcels in LOD (Count)		12	1204	0	0	3	0	N/A	3	0	0	N/A	3	0
Number of Commercial Parcels in LOD (Count)		21	101	2	0	17	9	N/A	16	0	11	N/A	15	0
Number of Low Income Census Block Groups in LOD (Count)		0	8	1	0	2	1	N/A	1	0	0	N/A	0	0
Number of Minority Census Block Groups in LOD (Count)		7	44	2	1	7	2	N/A	4	1	1	N/A	4	2
Number of Community Resources in LOD (Count)		1	18	0	0	0	0	N/A	0	0	0	N/A	1	0
Number of Historic Landmarks and/or Eligible National Register Sites & Districts	Maryland	6	27	1	1	0	8	N/A	0	0	1	N/A	5	7
	Washington, DC	0	3	0	0	0	0	N/A	1	0	0	N/A	0	0
Parks (State, County, Local) in LOD	(Count)	4	19	0	0	2	0	N/A	1	0	0	N/A	0	0
	(Acres)	13.14	12.98	0	0	0.91	0	N/A	0.26	0	0	N/A	4.75	0
National Park Service (including B-W Pkwy) (Acres)		24.85	7.84	0	0	0.48	0	N/A	0.11	0	0	N/A	8.97	3.65
Patuxent Research Refuge (Acres)		0	0	N/A	N/A	N/A	0	N/A	0	0	0	N/A	0	0
Fort George G. Meade (Acres)		2.67	2.95	N/A	N/A	N/A	0	N/A	0	0	0	N/A	18.01	0
Beltsville Agricultural Research Center (Acres)		8.14	1.62	N/A	N/A	N/A	0	N/A	0	0	0	N/A	0	241.23
NASA - Goddard Space Flight Center (Acres)		0.00	0.00	N/A	N/A	N/A	0	N/A	0	0	0	N/A	0	0
Ecological Resources (SSPRA, Critical Habitat, Forest Easements)	FIDS (Acres)	36.21	N/A	0	N/A	N/A	0	N/A	0	0	0	N/A	172.65	165.96
	NON-FIDS (Acres)	25.60	N/A	0	N/A	N/A	0	N/A	0	0	0	N/A	63.83	280.02
Wooded Areas / Forest (Acres)		56.32	N/A	1.40	N/A	N/A	0.16	N/A	0	0.007	0.62	N/A	170.22	191.46
Wetlands of Special State Concern (Acres)		1.04	N/A	0	N/A	N/A	0	N/A	0	0	0	N/A	0	34.97
Wetlands (Acres)		6.77	N/A	0	N/A	N/A	0.07	N/A	0	0	0	N/A	20.00	31.02
100 Year Floodplain (Acres)		17.59	N/A	0	N/A	N/A	2.33	N/A	0	0	0	N/A	22.88	47.24

Alt. J1: BWP-West (Mount Vernon EAST to Camden Yards)		Guideway & Ancillary		Stations			Cherry Hill LR	Additional Station LOD Areas (Surface)					RSD (Surface)	
		(Surface)	(Tunnel)	Camden (Tunnel)	BWI Station (Tunnel)	Mount Vernon East (Tunnel)	CHLR ROW Tail Track (Surface)	MVS WEST	MVS EAST	BWI	Cherry Hill LR	Camden	MD 198 & ramps	BARC & ramps
Number of Residential Parcels in LOD (Count)		12	1204	0	0	3	N/A	N/A	3	0	N/A	0	3	0
Number of Commercial Parcels in LOD (Count)		10	111	1	0	17	N/A	N/A	16	0	N/A	3	15	0
Number of Low Income Census Block Groups in LOD (Count)		0	9	0	0	2	N/A	N/A	1	0	N/A	0	0	0
Number of Minority Census Block Groups in LOD (Count)		8	48	0	1	7	N/A	N/A	4	1	N/A	0	4	2
Number of Community Resources in LOD (Count)		1	18	1	0	0	N/A	N/A	0	0	N/A	0	1	0
Number of Historic Landmarks and/or Eligible National Register Sites & Districts	Maryland	7	40	7	1	0	N/A	N/A	0	0	N/A	9	5	7
	Washington, DC	0	3	0	0	5	N/A	N/A	1	0	N/A	0	0	0
Parks (State, County, Local) in LOD	(Count)	4	20	0	0	2	N/A	N/A	1	0	N/A	0	0	0
	(Acres)	13.14	13.80	0	0	0.91	N/A	N/A	0.26	0	N/A	0	4.75	0
National Park Service (including B-W Pkwy) (Acres)		24.85	7.84	0	0	0.48	N/A	N/A	0.11	0	N/A	0	8.97	3.65
Patuxent Research Refuge (Acres)		0	0	N/A	N/A	N/A	N/A	N/A	0	0	N/A	0	0	0
Fort George G. Meade (Acres)		2.67	2.95	N/A	N/A	N/A	N/A	N/A	0	0	N/A	0	18.01	0
Beltsville Agricultural Research Center (Acres)		8.14	1.62	N/A	N/A	N/A	N/A	N/A	0	0	N/A	0	0	241.23
NASA - Goddard Space Flight Center (Acres)		0	0	N/A	N/A	N/A	N/A	N/A	0	0	N/A	0	0	0
Ecological Resources (SSPRA, Critical Habitat, Forest Easements)	FIDS (Acres)	36.21	N/A	N/A	N/A	N/A	N/A	N/A	0	0	N/A	0	172.65	165.96
	NON-FIDS (Acres)	25.60	N/A	N/A	N/A	N/A	N/A	N/A	0	0	N/A	0	63.83	280.02
Wooded Areas / Forest (Acres)		56.28	N/A	N/A	N/A	N/A	N/A	N/A	0	0.007	N/A	0	170.22	191.46
Wetlands of Special State Concern (Acres)		1.04	N/A	N/A	N/A	N/A	N/A	N/A	0	0	N/A	0	0	34.97
Wetlands (Acres)		6.77	N/A	N/A	N/A	N/A	N/A	N/A	0	0	N/A	0	20.00	31.02
100 Year Floodplain (Acres)		17.59	N/A	N/A	N/A	N/A	N/A	N/A	0	0	N/A	0	22.88	47.24

Appendix E: SCMAGLEV Alternatives Conceptual Plan and Profile Drawings



Guideway Tunnel Sections
Tunnel Station
Guideway Elevated Viaduct
Elevated Station
RSD Area
Parklands
Existing Rail Lines
Surface LOD Footprint
Portal Location
Water Centerlines
Vent Plant Location
Substation Location
Water Boundaries
MARC Station
WMATA Metro Station
MTA Metro Station

BALTIMORE-WASHINGTON SUPERCONDUCTING MAGLEV PROJECT

0 600 1,200 1,800 Feet

BALTIMORE-WASHINGTON SCMAGLEV PROJECT
Alternative Alignments and Ancillary Facilities
October 2018

Sheet 1 of 12

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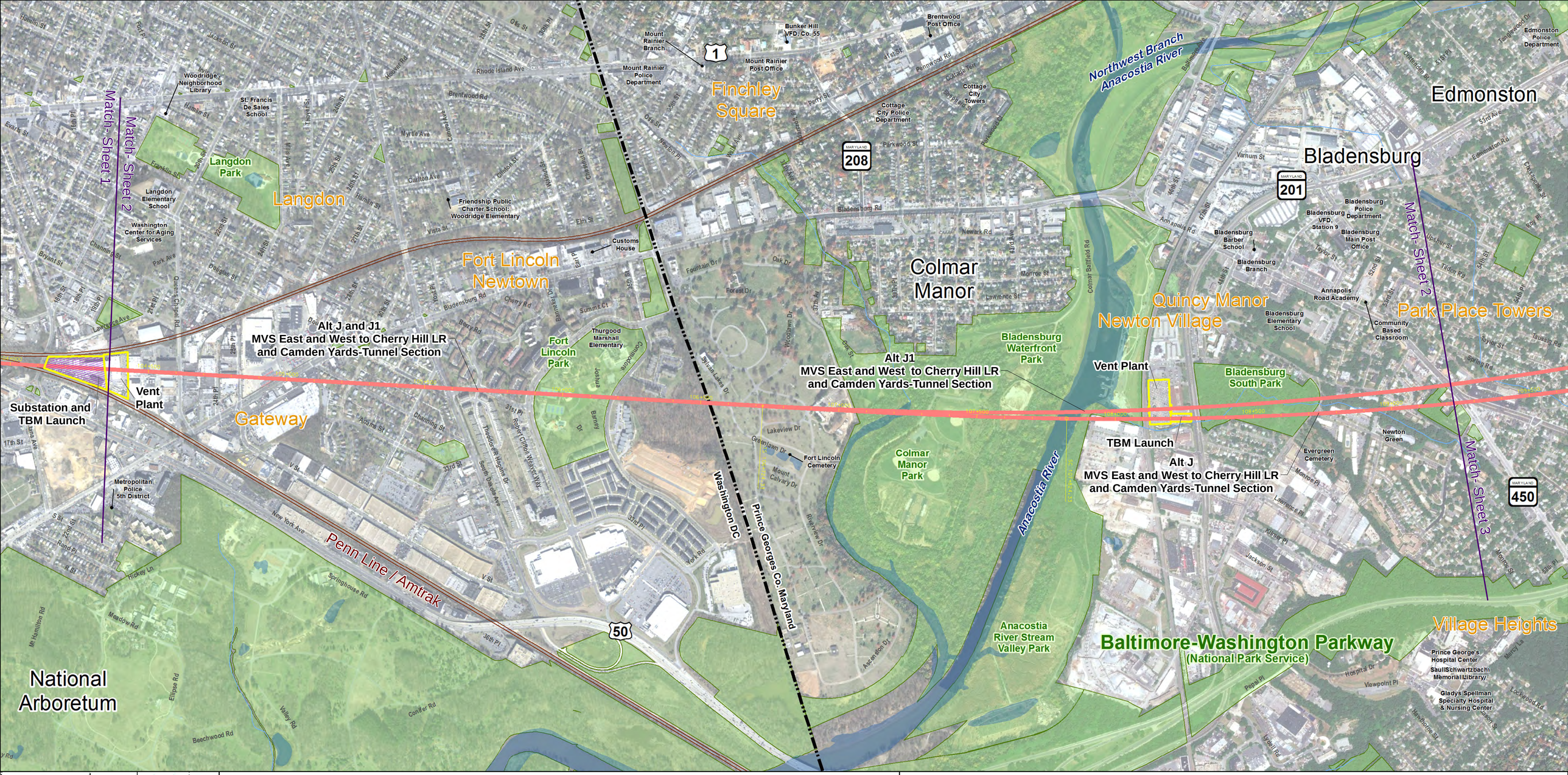

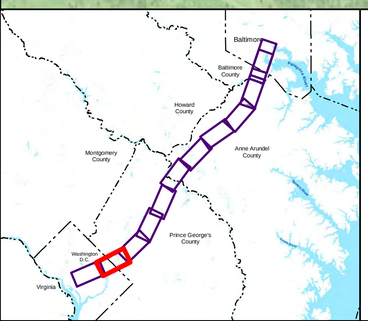

Guideway Tunnel Sections
Guideway Elevated Viaduct
Tunnel Station
Elevated Station
RSD Area
Surface LOD Footprint
Vent Plant Location
Parklands
Portal Location
Substation Location
Existing Rail Lines
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MARC Station
WMATA Metro Station
MTA Metro Station
0 600 1,200 1,800 Feet

BALTIMORE-WASHINGTON SUPERCONDUCTING MAGLEV PROJECT

BALTIMORE-WASHINGTON SCMAGLEV PROJECT

Alternative Alignments and Ancillary Facilities

October 2018

Sheet 2 of 12

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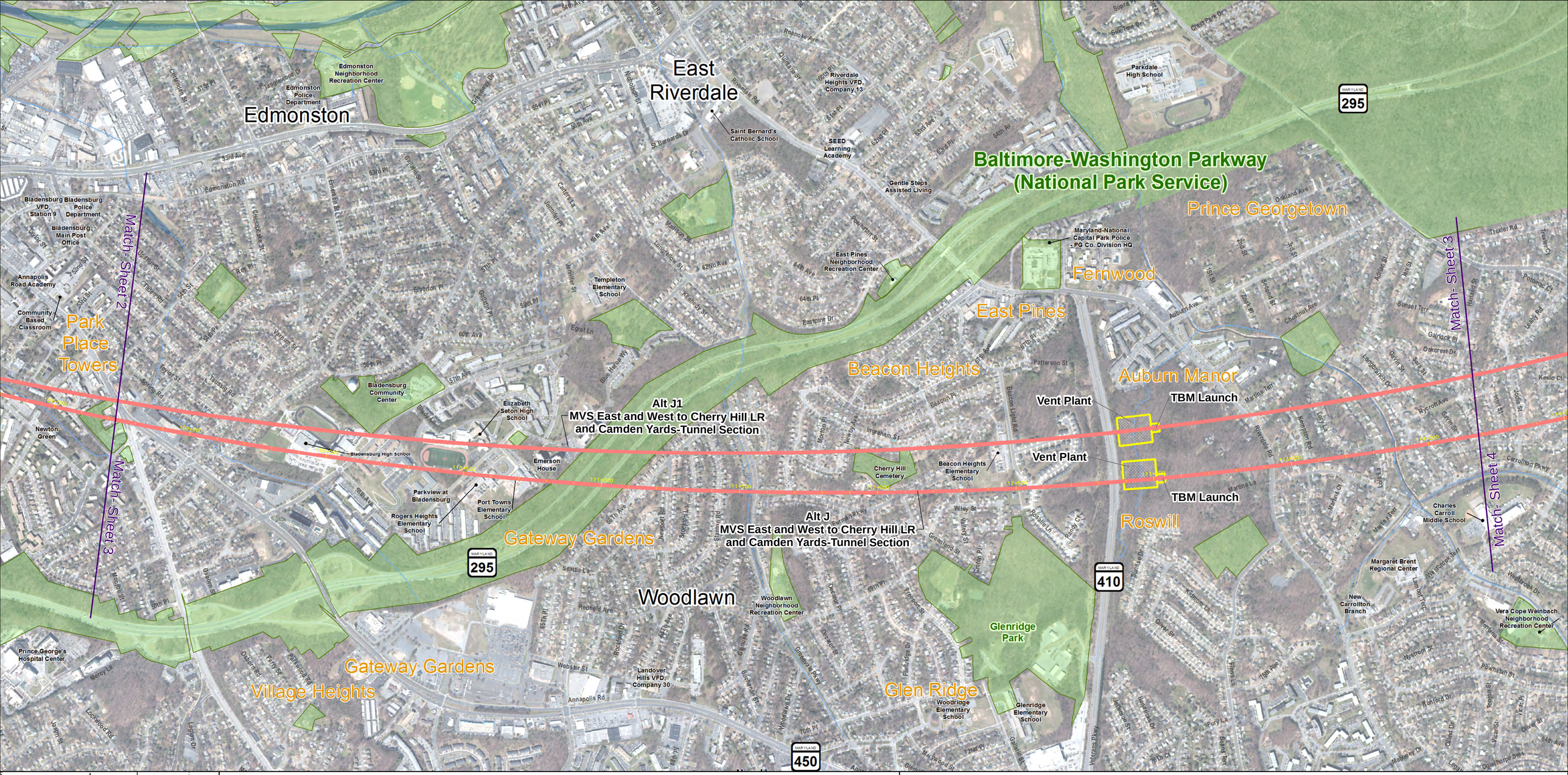

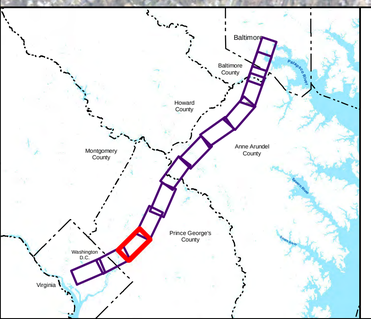

Guideway Tunnel Sections
Guideway Elevated Viaduct
Tunnel Station
Elevated Station
RSD Area
Surface LOD Footprint
Vent Plant Location
Parklands
Portal Location
Substation Location
Existing Rail Lines
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MARC Station
WMATA Metro Station
MTA Metro Station
0 600 1,200 1,800 Feet

BALTIMORE-WASHINGTON SUPERCONDUCTING MAGLEV PROJECT

BALTIMORE-WASHINGTON SCMAGLEV PROJECT

Alternative Alignments and Ancillary Facilities

October 2018

Sheet 3 of 12

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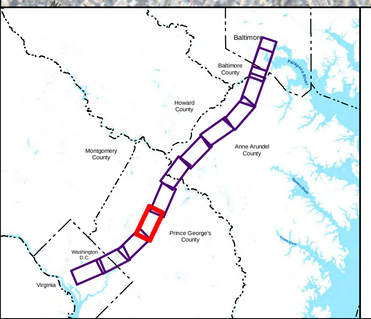

Guideway Tunnel Sections
Guideway Elevated Viaduct
Tunnel Station
Elevated Station
RSD Area
Surface LOD Footprint
Vent Plant Location
Parklands
Portal Location
Substation Location
Existing Rail Lines
Water Centerlines
Water Boundaries
MARC Station
WMATA Metro Station
MTA Metro Station

0 600 1,200 1,800 Feet

BALTIMORE-WASHINGTON SUPERCONDUCTING MAGLEV PROJECT

BALTIMORE-WASHINGTON SCMAGLEV PROJECT

Alternative Alignments and Ancillary Facilities

October 2018

Sheet 4 of 12

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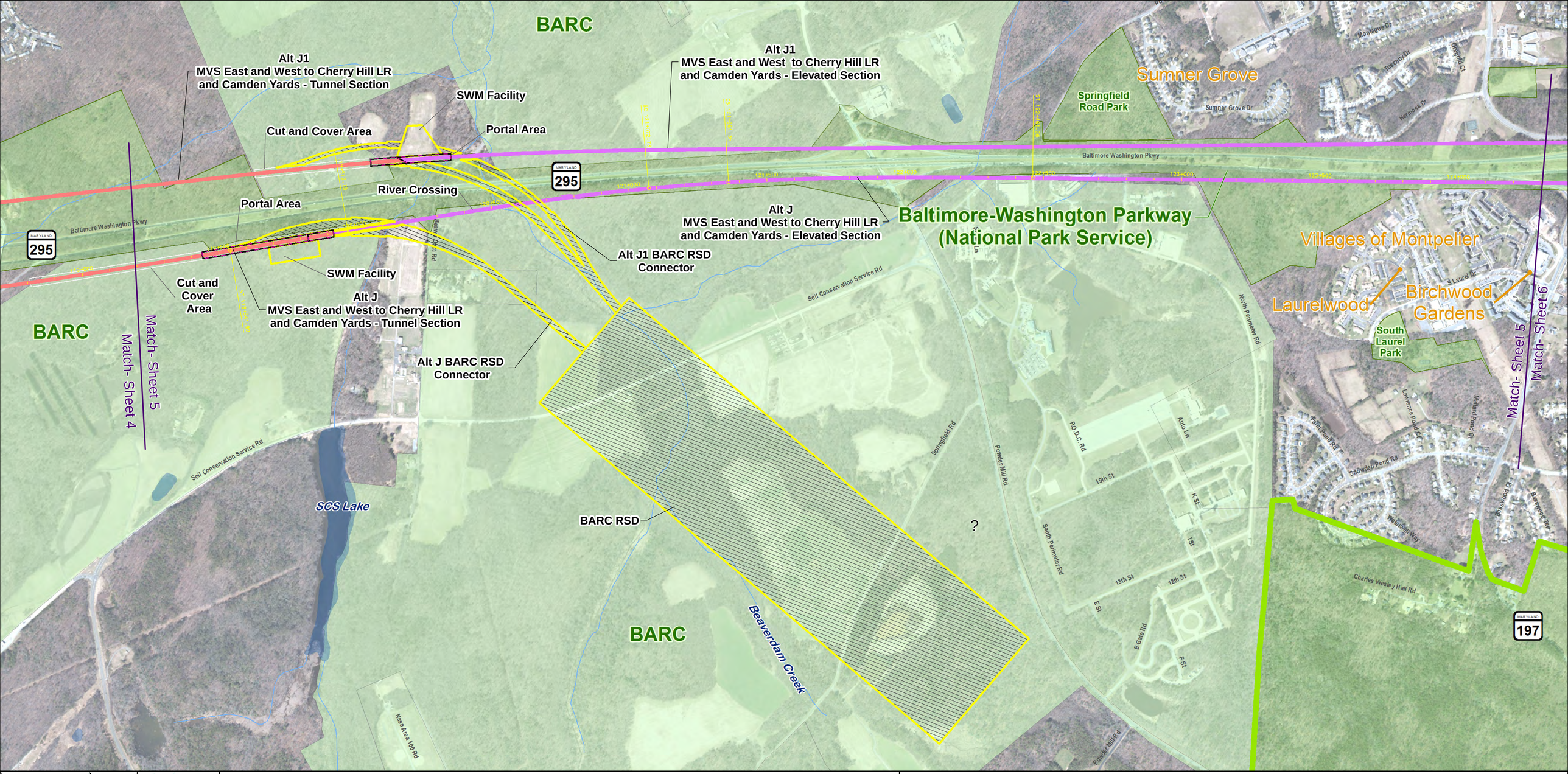

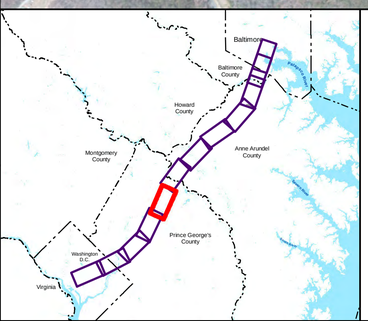

BALTIMORE-WASHINGTON SUPERCONDUCTING MAGLEV PROJECT

Guideway Tunnel Sections
Guideway Elevated Viaduct
Tunnel Station
Elevated Station
RSD Area
Surface LOD Footprint
Vent Plant Location
Parklands
Portal Location
Substation Location
Existing Rail Lines
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Water Boundaries
MARC Station
WMATA Metro Station
MTA Metro Station

0 600 1,200 1,800 Feet

N

BALTIMORE-WASHINGTON SCMAGLEV PROJECT
Alternative Alignments and Ancillary Facilities
October 2018

Sheet 5 of 12

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South Laurel

Oxford Green

Crestleigh

Alt J1
MVS East and West to Cherry Hill LR
and Camden Yards - Elevated Section

River Crossing

River Crossing

Alt J
MVS East and West to Cherry Hill LR
and Camden Yards - Elevated Section

Alt J1 MVS and NoMa to Cherry Hill LR
and Camden-Portal Area

Maryland
City Park

SWM Facility

Cut and Cover Area

Alt J1 Rt.198 RSD Connector

Alt J Rt.198 RSD Connector

Baltimore-Washington Parkway
(National Park Service)

Pheasant Run

Birchwood
Gardens

Pheasant
Run Park

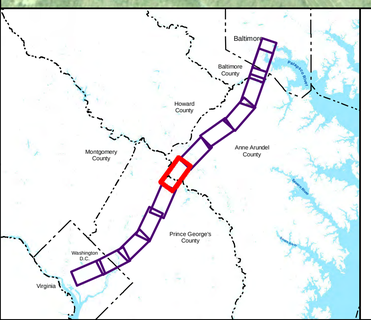
Patuxent
Research
Refuge

Patuxent
Wildlife Research
Center Library

Match- Sheet 5

Match- Sheet 6

Match- Sheet 7



Guideway Tunnel Sections
Guideway Elevated Viaduct
Tunnel Station
Elevated Station
RSD Area
Surface LOD Footprint
Vent Plant Location
Parklands
Portal Location
Substation Location
Existing Rail Lines
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MARC Station
WMATA Metro Station
MTA Metro Station

0 600 1,200 1,800 Feet

BALTIMORE-WASHINGTON SUPERCONDUCTING MAGLEV PROJECT

BALTIMORE-WASHINGTON SCMAGLEV PROJECT

Alternative Alignments and Ancillary Facilities

October 2018

Sheet 6 of 12

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Alt J1 Rt.198 RSD Connector

Centergate
Russett

Alt J1
MVS East and West to Cherry Hill LR
and Camden Yards - Tunnel Section

Dorsey Run

Baltimore-Washington Parkway
(National Park Service)

Alt J Rt.198 RSD Connector

River Crossing

Alt J
MVS East and West to Cherry Hill LR
and Camden Yards - Elevated Section

Alt J1 Vent Plant
and TBM Launch

SWM Facility

Portal Area

Alt J
MVS East and West to Cherry Hill LR
and Camden Yards - Tunnel Section

Match- Sheet 6

Match- Sheet 7

Match- Sheet 7

Match- Sheet 8

Colony Fairfield

Argonne Hills

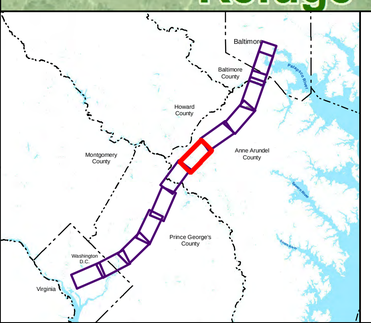
West Meade Early
Education Center

Pershing Hill
Elementary School

Rt.198 RSD

Patuxent
Research
Refuge

Midway Branch



Guideway Tunnel Sections
Guideway Elevated Viaduct
Tunnel Station
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Surface LOD Footprint
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0 600 1,200 1,800 Feet

BALTIMORE-WASHINGTON SUPERCONDUCTING MAGLEV PROJECT

BALTIMORE-WASHINGTON SCMAGLEV PROJECT

Alternative Alignments and Ancillary Facilities

October 2018

Sheet 7 of 12

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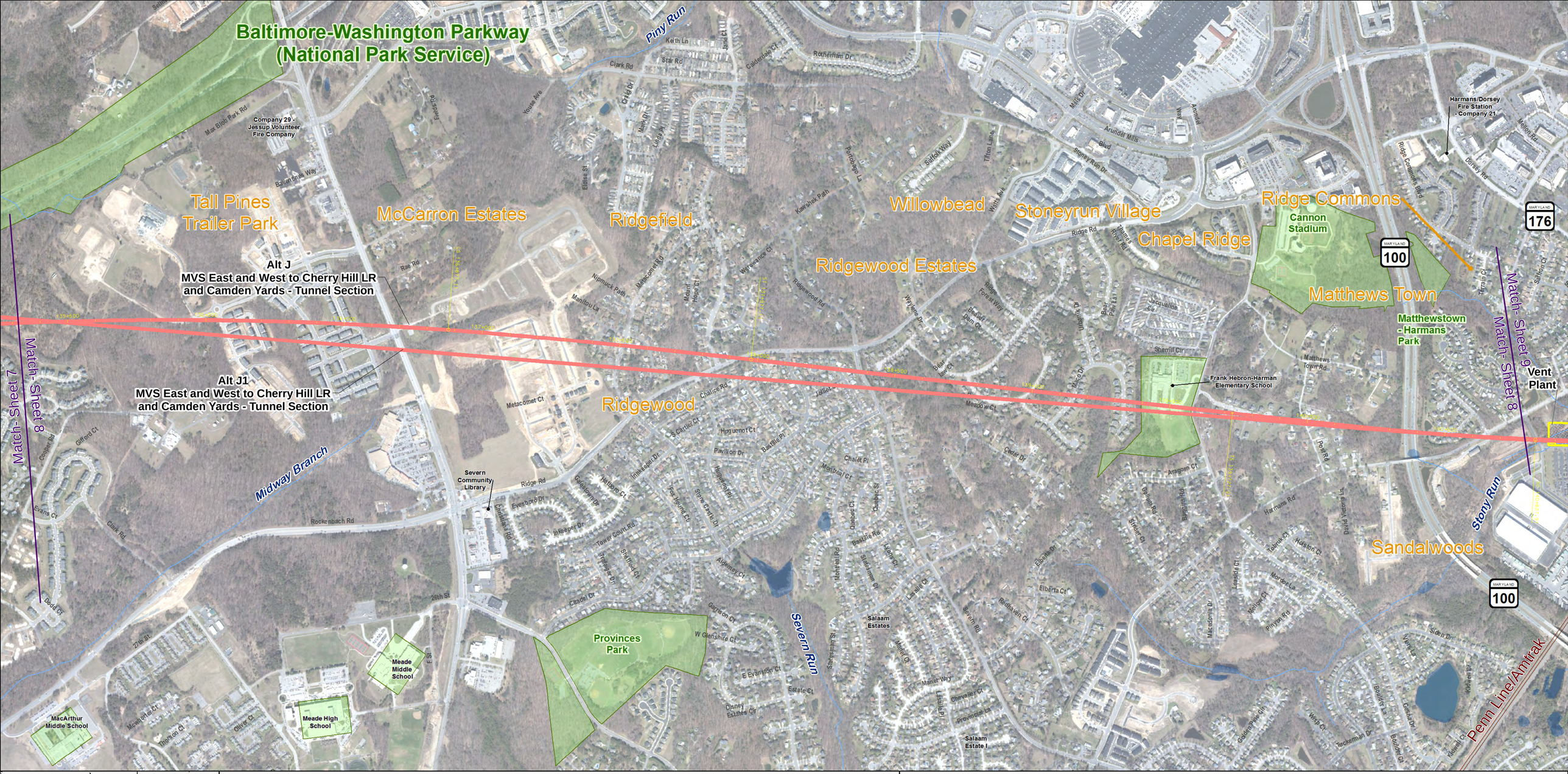

BALTIMORE-WASHINGTON
SUPERCONDUCTING
MAGLEV PROJECT

BALTIMORE-WASHINGTON SCMAGLEV PROJECT

Alternative Alignments and Ancillary Facilities

October 2018

Sheet 8 of 12

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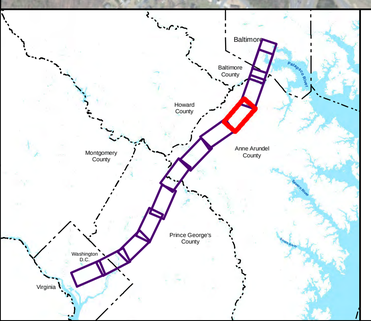

Guideway Tunnel Sections
Guideway Elevated Viaduct
Tunnel Station
Elevated Station
RSD Area
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0 600 1,200 1,800 Feet

BALTIMORE-WASHINGTON SUPERCONDUCTING MAGLEV PROJECT

BALTIMORE-WASHINGTON SCMAGLEV PROJECT

Alternative Alignments and Ancillary Facilities

October 2018

Sheet 9 of 12

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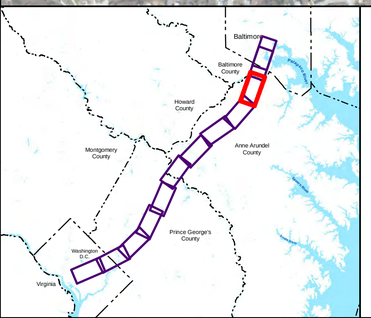
Andover Gardens
Michaelton Manor
Gapgalleon
Kingston Heights
Crestwood
Sweetser Heights
Raynor Heights
Linthicum
Shipley
Shipley Heights
Shipley Fairmounts
Orchards of Linthicum
Twin Oaks
North Linthicum
Linthicum Oaks
Woodlawn Heights
Grove Ridge
Patapsco Park
Holly Creek
Cabin Branch
Patapsco River
Match- Sheet 9
Match- Sheet 10
Match- Sheet 11
Vent Plant
TBM Launch
BWI Thurgood Marshall Airport Post Office
Lindale Middle School
Linthicum Community Library
St. Johns Nursery School of Linthic
Heart Homes At Linthicum
Overlook Elementary School
Serenity, Inc.
Linthicum Heights Post Office
Company 32 - Linthicum Volunteer Fire Company
Eldercare Gardens At Linthicum
PNJ Comfort Care Home I
St. Philip Neri School
Anne Arundel County Police, Northern District
Gentle Care
Sunshine Assisted Living Service
Lloyd W. Keaser Community Center
Alt J and J1
MVS East and West to Cherry Hill LR
and Camden Yards - Tunnel Section



Guideway Tunnel Sections
Guideway Elevated Viaduct
Tunnel Station
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0 600 1,200 1,800 Feet

BALTIMORE-WASHINGTON SUPERCONDUCTING MAGLEV PROJECT

BALTIMORE-WASHINGTON SCMAGLEV PROJECT
Alternative Alignments and Ancillary Facilities
October 2018

Sheet 10 of 12

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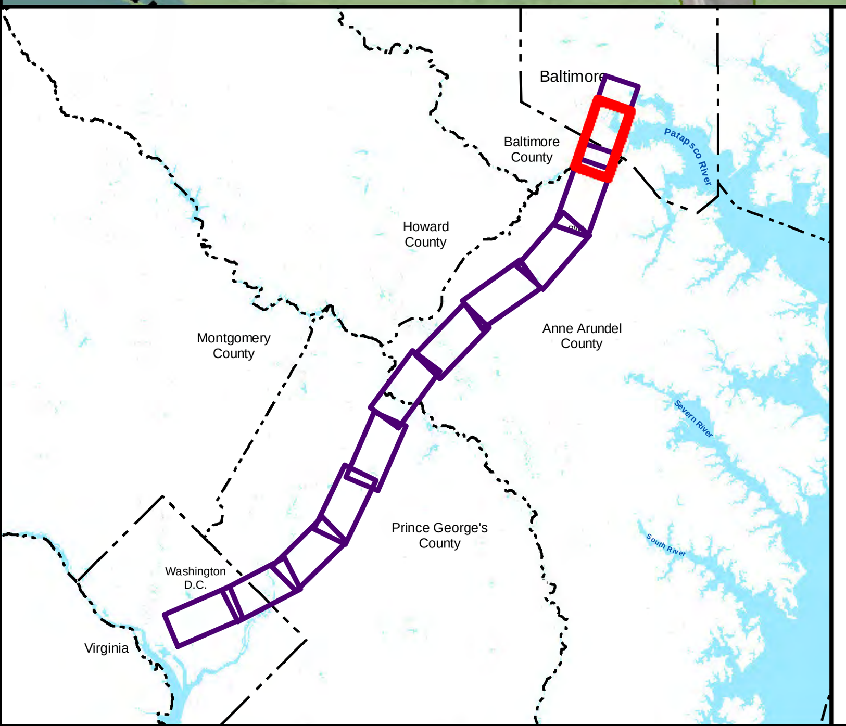

BALTIMORE-WASHINGTON SUPERCONDUCTING MAGLEV PROJECT

Guideway Tunnel Sections
Guideway Elevated Viaduct
Tunnel Station
Elevated Station
RSD Area
Surface LOD Footprint
Vent Plant Location
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MARC Station
WMATA Metro Station
MTA Metro Station

0 600 1,200 1,800 Feet

BALTIMORE-WASHINGTON SCMAGLEV PROJECT
Alternative Alignments and Ancillary Facilities
October 2018

Sheet 11 of 12

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Cut and Cover Area

Portal Area

Cherry Hill Station LOD Area

Cherry Hill Station-Surface

Cherry Hill Station LOD Area

Potential Terminal Facilities- Cherry Hill LR Station Options

Alt J and J1
MVS East and West Extension to Camden Yards - Tunnel Section

Substation

Match- Sheet 11

Match- Sheet 12

Camden Station LOD Areas

Camden Station-Tunnel

Camden Station LOD Area

English Consul

Cherry Hill

Mount Winans

Westport

Carroll-Camden Industrial Area

Carroll Park

Washington Village

Gwynns Falls

Gwynns Falls Trail South

Swann Park

Middle Branch Park

Federal Hill

Federal Hill Park

Inner Harbor

Lexington Market Metro Station (West)

Lexington Market (Metro Station (East)

Charles Center Metro Station (East)

MARC Camden

Arundel Elementary/Middle School

James McHenry Elementary/Middle School

James McHenry Recreation Center

Enoch Pratt Free Library - Washington Village Branch

George Washington Elementary School

University of Maryland School of Medicine

University of Maryland School of Dentistry

University of Maryland Medical Center

Baltimore VA Medical Center

University of Maryland School of Nursing

University of Maryland, Baltimore Library

Engine Company 23; Rescue 1; Medic 1, 22, 23; EMS 2; BC 6; Hazmat 1, 3; Critical 56, 66; AirFlex 1

Solo Gibbs Recreation Center

South Baltimore Post Office

Engine Company 2, Second Battalion

Federal Hill Preparatory School

Market Center Post Office

BCCC Harbor Business and Continuing Education Division

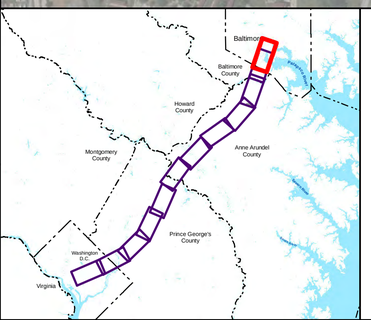
Star-Spangled Banner Flag House Association Library

Patapsco Recreation Center

Friendship Academy at Cherry Hill

Enoch Pratt Free Library - Cherry Hill Branch

New Era Academy



Guideway Tunnel Sections
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0 600 1,200 1,800 Feet

BALTIMORE-WASHINGTON SUPERCONDUCTING MAGLEV PROJECT

BALTIMORE-WASHINGTON SCMAGLEV PROJECT

Alternative Alignments and Ancillary Facilities

October 2018

Sheet 12 of 12

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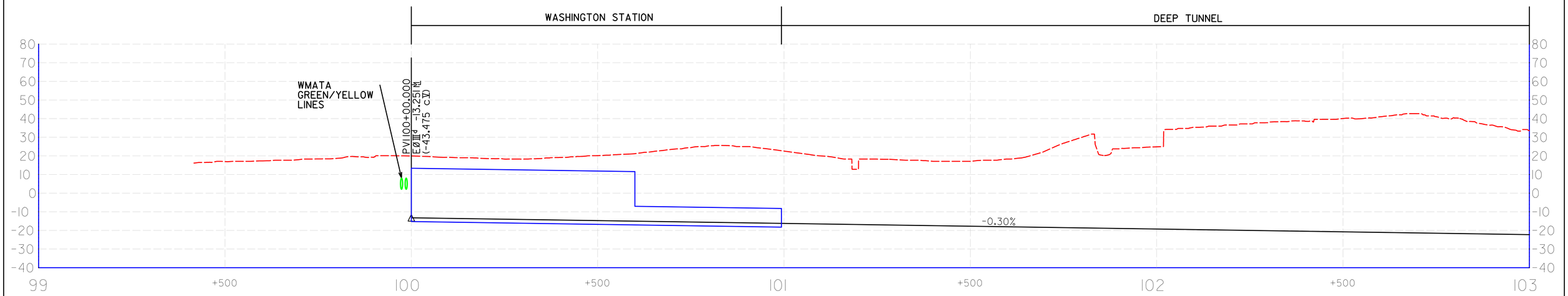


VERTICAL AXIS ELEVATIONS ARE IN METERS

PROFILE LEGEND

EXISTING GROUND	
PROPOSED GUIDEWAY PROFILE	
VERTICAL CURVE HIGH POINT	▽
VERTICAL CURVE LOW POINT	□

LOUIS BERGER
1250 23rd St. NW, Washington, DC 20037

SCALE: METERS

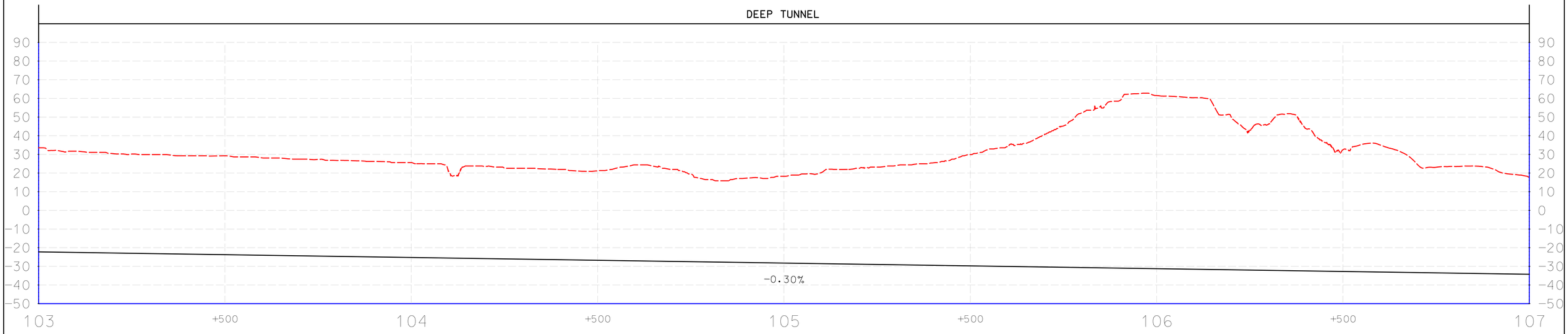
100 50 0 100 200
HORIZONTAL
20 10 0 20 40
VERTICAL

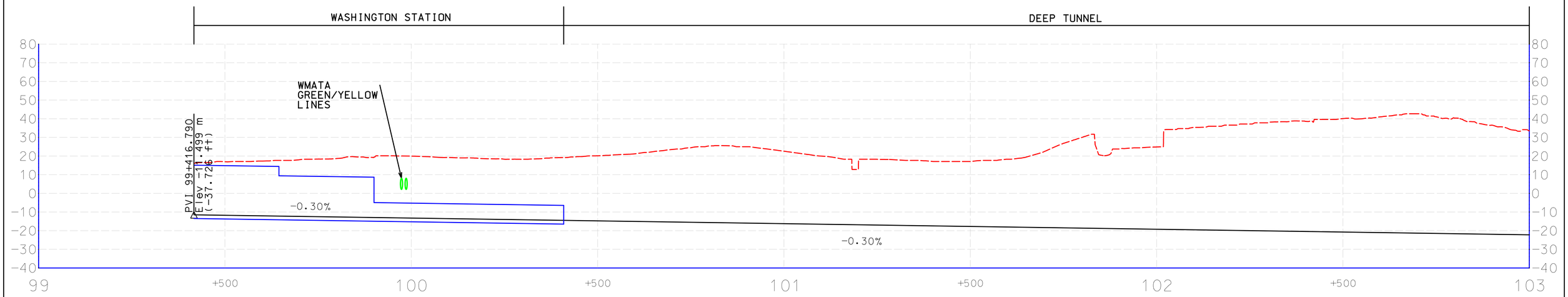
BALTIMORE-WASHINGTON SCMAGLEV
MOUNT VERNON SQUARE EAST
PROFILE STA. 100+000 TO STA. 103+000

DATE: 8/16/2018

DRAWING NO. P-01 (MVS East)

SHEET NO. 1 OF 1





VERTICAL AXIS ELEVATIONS ARE IN METERS

PROFILE LEGEND

EXISTING GROUND	----------
PROPOSED GUIDEWAY PROFILE	————
VERTICAL CURVE HIGH POINT	▽
VERTICAL CURVE LOW POINT	□

LOUIS BERGER
1250 23rd St. NW, Washington, DC 20037

SCALE: METERS

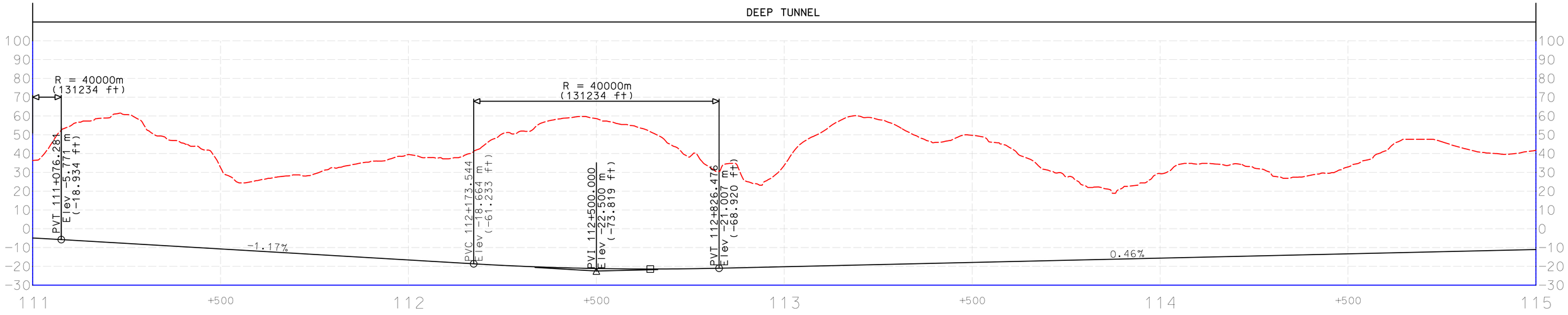
100 50 0 100 200
HORIZONTAL
20 10 0 20 40
VERTICAL

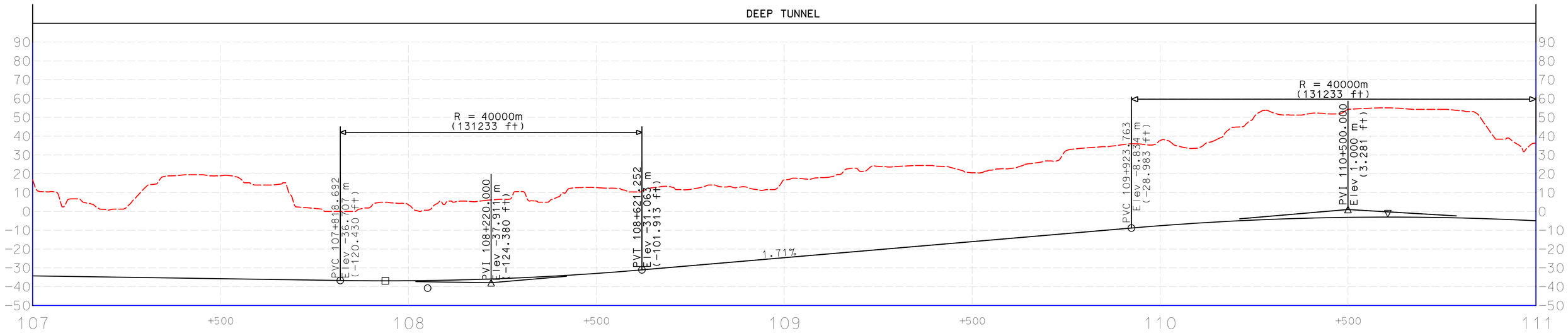
BALTIMORE-WASHINGTON SCMAGLEV
ALT J (BWP EAST) MVS TO CHERRY HILL
PROFILE STA. 99+417 TO STA. 107+000

DATE: 7/11/2018

DRAWING NO. P-01 (J)

SHEET NO. 1 OF 7





PROFILE LEGEND

EXISTING GROUND	----------
PROPOSED GUIDEWAY PROFILE	————
VERTICAL CURVE HIGH POINT	▽
VERTICAL CURVE LOW POINT	□

LOUIS BERGER
1250 23rd St. NW, Washington, DC 20037

SCALE: METERS

HORIZONTAL: 100 50 0 100 200

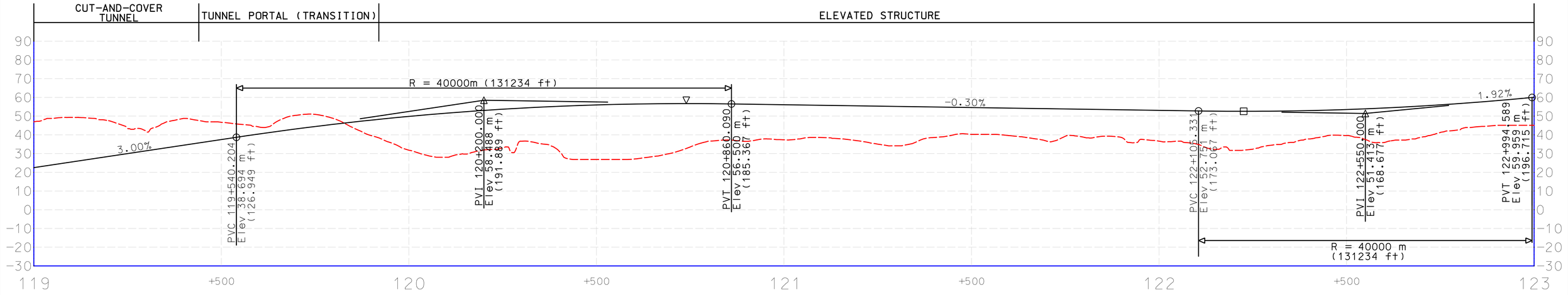
VERTICAL: 20 10 0 20 40

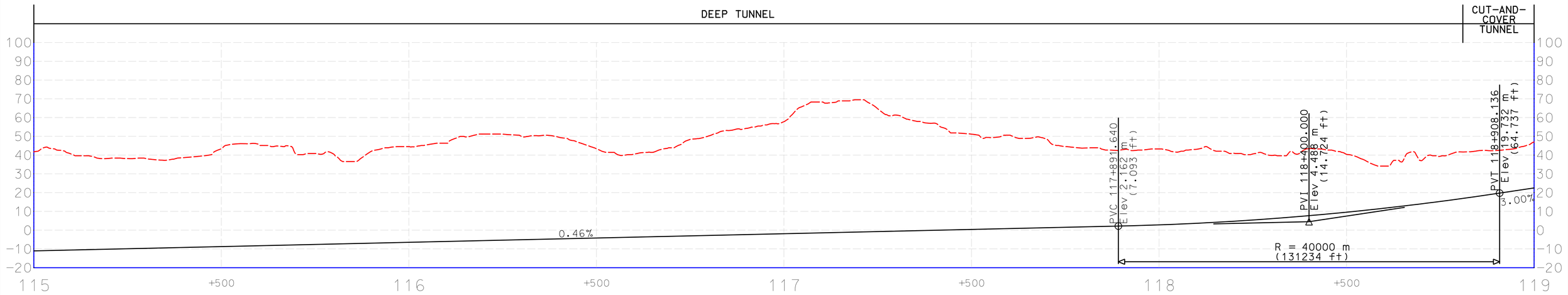
BALTIMORE-WASHINGTON SCMAGLEV
ALT J (BWP EAST) MVS TO CHERRY HILL
PROFILE STA. 107+000 TO STA. 115+000

DATE: 7/11/2018

DRAWING NO. P-02 (J)

SHEET NO. 2 OF 7





PROFILE LEGEND

EXISTING GROUND	----------
PROPOSED GUIDEWAY PROFILE	————
VERTICAL CURVE HIGH POINT	▽
VERTICAL CURVE LOW POINT	□

LOUIS BERGER
1250 23rd St. NW, Washington, DC 20037

SCALE: METERS

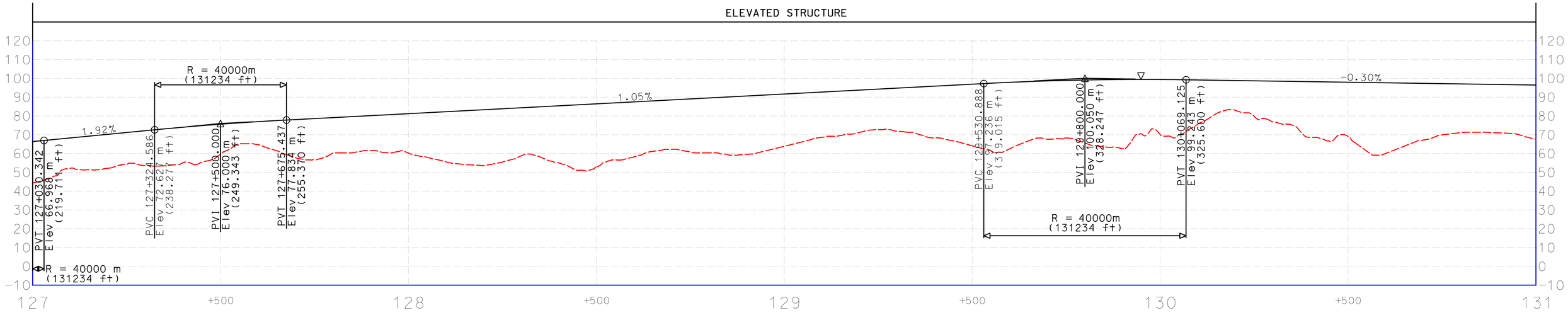
100 50 0 100 200 HORIZONTAL
20 10 0 20 40 VERTICAL

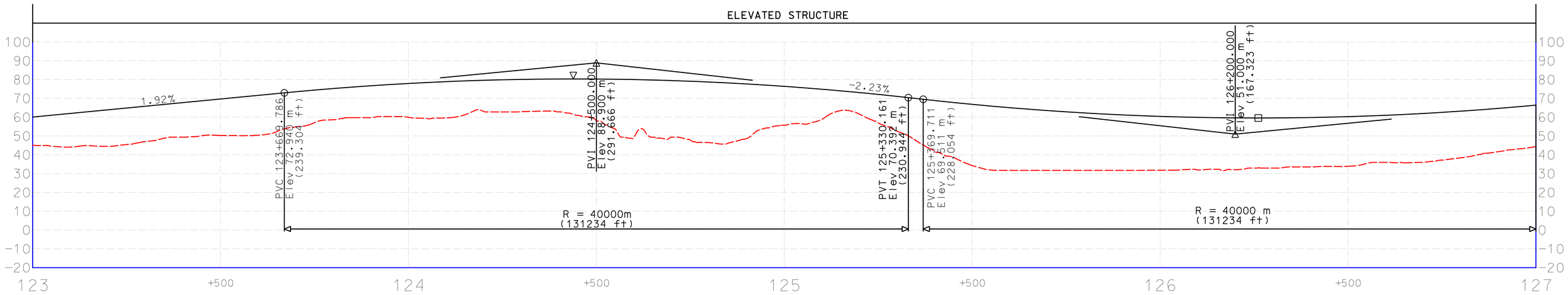
BALTIMORE-WASHINGTON SCMAGLEV
ALT J (BWP EAST) MVS TO CHERRY HILL
PROFILE STA. 115+000 TO STA. 123+000

DATE: 7/11/2018

DRAWING NO. P-03 (J)

SHEET NO. 3 OF 7





PROFILE LEGEND

EXISTING GROUND	----------
PROPOSED GUIDEWAY PROFILE	————
VERTICAL CURVE HIGH POINT	▽
VERTICAL CURVE LOW POINT	□

LOUIS BERGER
1250 23rd St. NW, Washington, DC 20037

SCALE: METERS

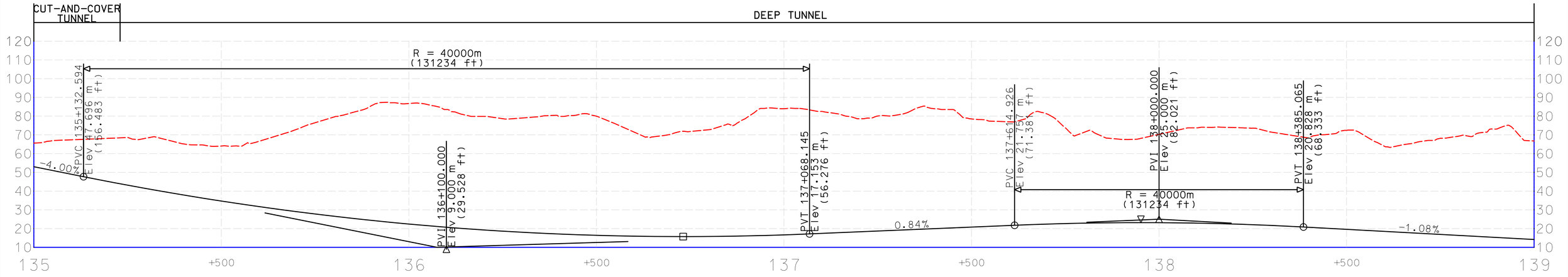
HORIZONTAL: 100 50 0 100 200
VERTICAL: 20 10 0 20 40

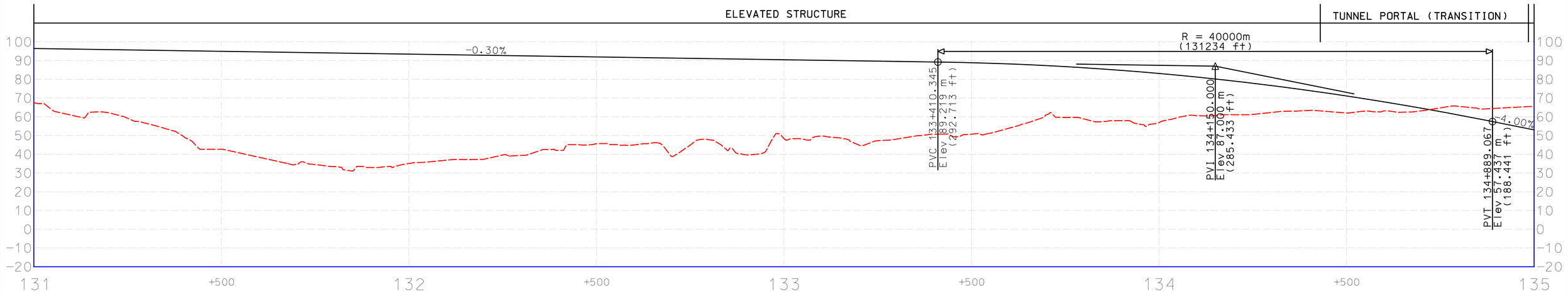
BALTIMORE-WASHINGTON SCMAGLEV
ALT J (BWP EAST) MVS TO CHERRY HILL
PROFILE STA. 123+000 TO STA. 131+000

DATE: 7/11/2018

DRAWING NO. P-04 (J)

SHEET NO. 4 OF 7





PROFILE LEGEND

EXISTING GROUND	----------
PROPOSED GUIDEWAY PROFILE	————
VERTICAL CURVE HIGH POINT	▽
VERTICAL CURVE LOW POINT	□

LOUIS BERGER
1250 23rd St. NW, Washington, DC 20037

SCALE: METERS

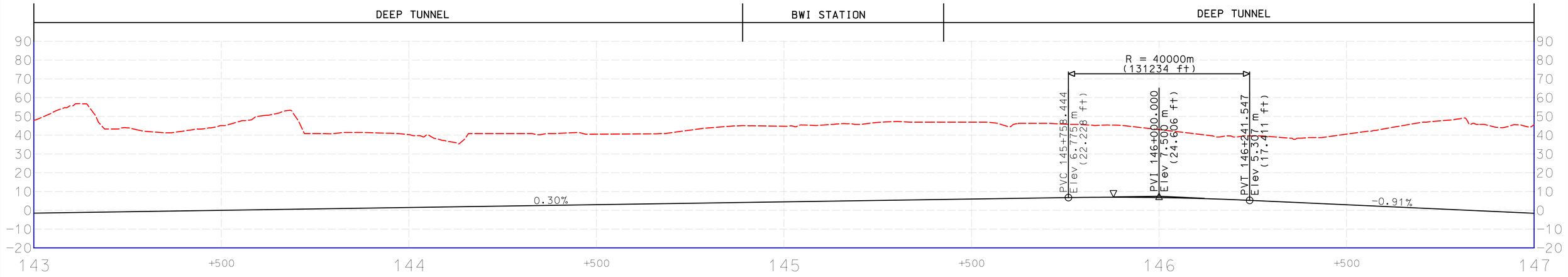
100 50 0 100 200 HORIZONTAL
20 10 0 20 40 VERTICAL

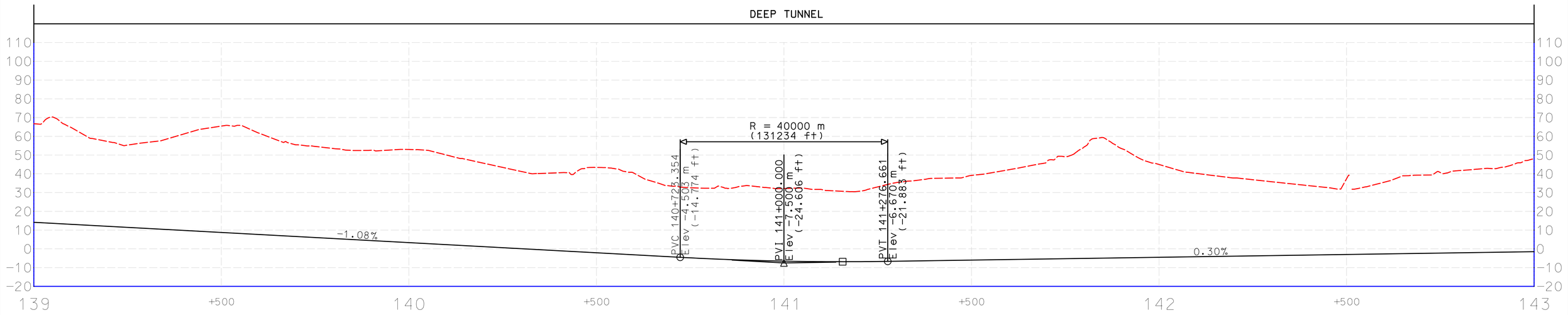
BALTIMORE-WASHINGTON SCMAGLEV
ALT J (BWP EAST) MVS TO CHERRY HILL
PROFILE STA. 131+000 TO STA. 139+000

DATE: 7/11/2018

DRAWING NO. P-05 (J)

SHEET NO. 5 OF 7





PROFILE LEGEND

EXISTING GROUND	----------
PROPOSED GUIDEWAY PROFILE	————
VERTICAL CURVE HIGH POINT	▽
VERTICAL CURVE LOW POINT	□

LOUIS BERGER
1250 23rd St. NW, Washington, DC 20037

SCALE: METERS

HORIZONTAL: 100 50 0 100 200

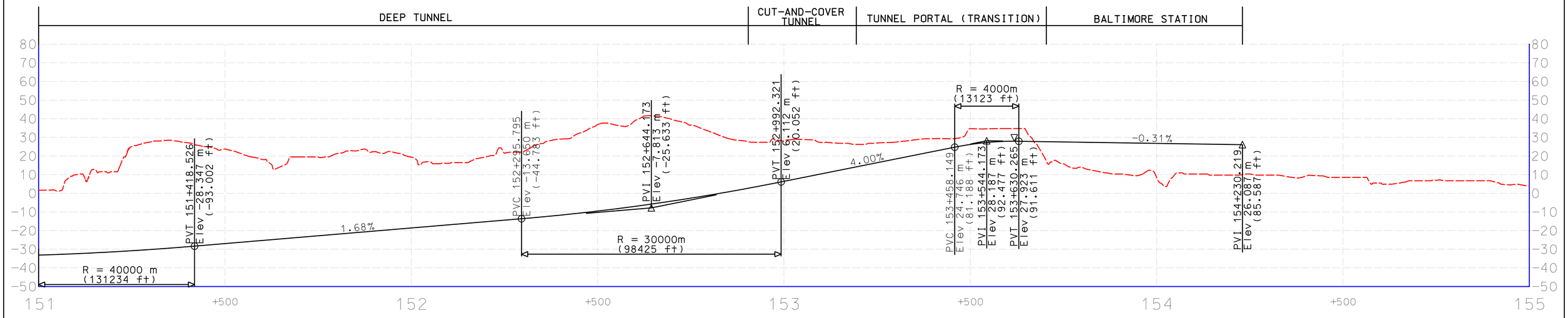
VERTICAL: 20 10 0 20 40

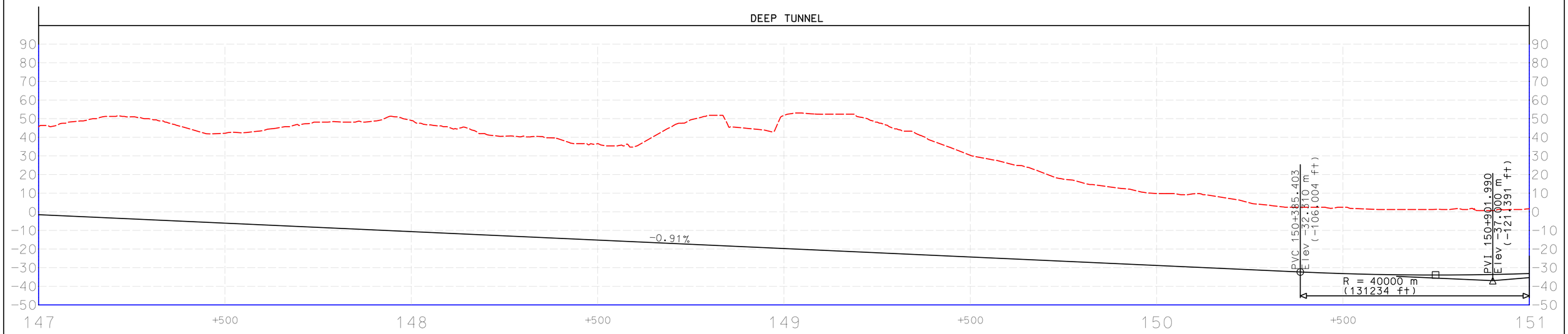
BALTIMORE-WASHINGTON SCMAGLEV
ALT J (BWP EAST) MVS TO CHERRY HILL
PROFILE STA. 139+000 TO STA. 147+000

DATE: 7/11/2018

DRAWING NO. P-06 (J)

SHEET NO. 6 OF 7





PROFILE LEGEND

EXISTING GROUND	----------
PROPOSED GUIDEWAY PROFILE	————
VERTICAL CURVE HIGH POINT	▽
VERTICAL CURVE LOW POINT	□

LOUIS BERGER
1250 23rd St. NW, Washington, DC 20037

SCALE: METERS

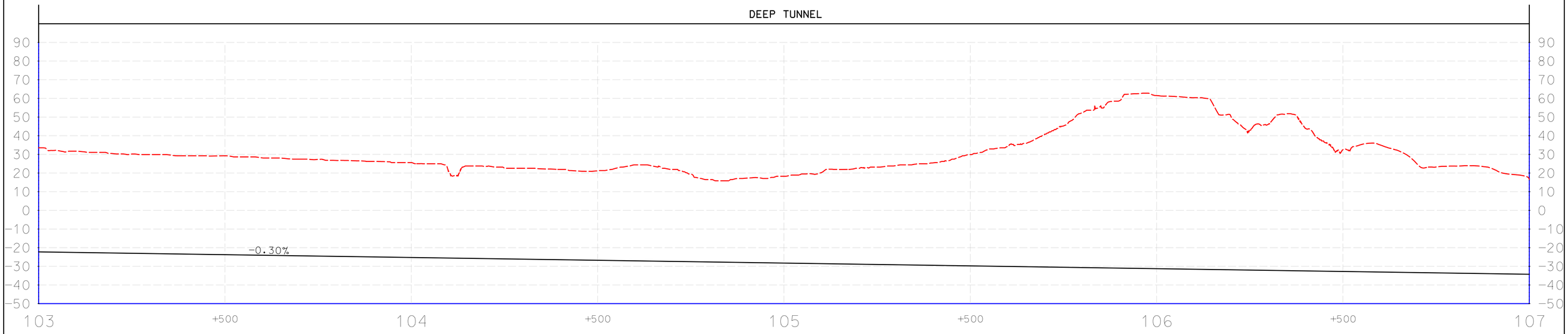
100 50 0 100 200 HORIZONTAL
20 10 0 20 40 VERTICAL

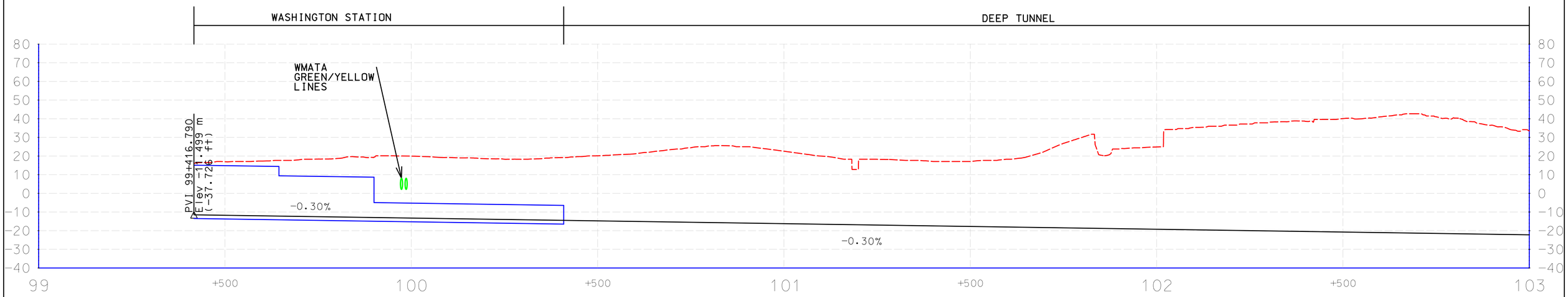
BALTIMORE-WASHINGTON SCMAGLEV
ALT J (BWP EAST) MVS TO CHERRY HILL
PROFILE STA. 147+000 TO STA. 154+230

DATE: 7/11/2018

DRAWING NO. P-07 (J)

SHEET NO. 7 OF 7





VERTICAL AXIS ELEVATIONS ARE IN METERS

PROFILE LEGEND

EXISTING GROUND	----------
PROPOSED GUIDEWAY PROFILE	————
VERTICAL CURVE HIGH POINT	▽
VERTICAL CURVE LOW POINT	□

LOUIS BERGER
1250 23rd St. NW, Washington, DC 20037

SCALE: METERS

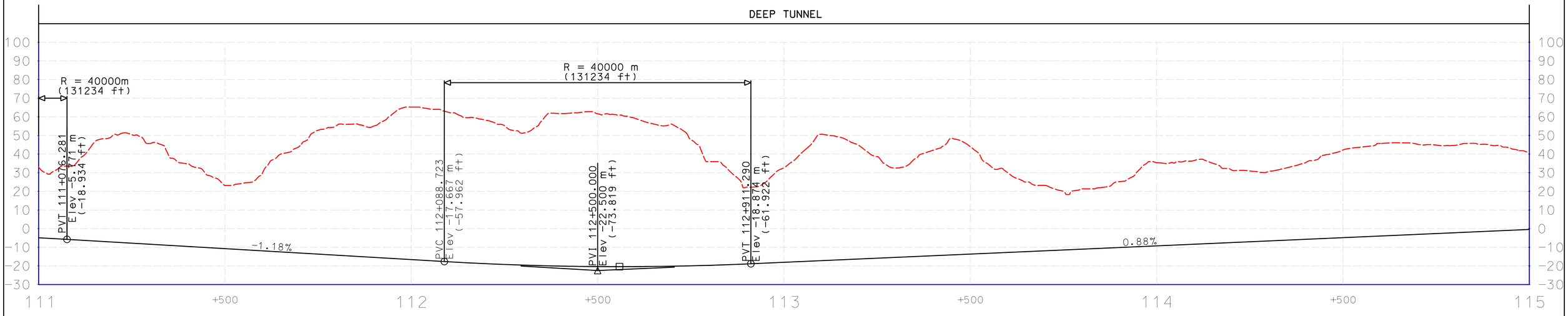
100 50 0 100 200
HORIZONTAL
20 10 0 20 40
VERTICAL

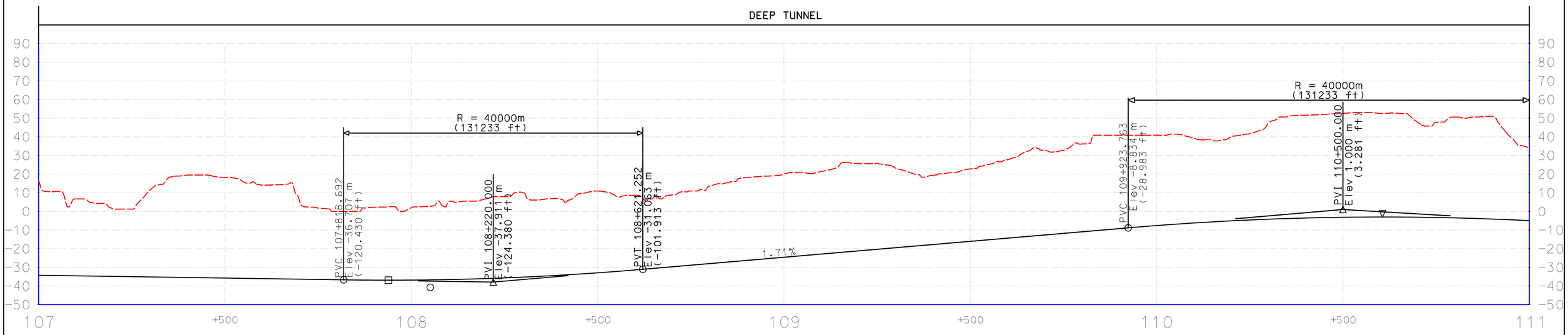
BALTIMORE-WASHINGTON SCMAGLEV
ALT J1 (BWP WEST) MVS TO CHERRY HILL
PROFILE STA. 99+417 TO STA. 107+000

DATE: 7/11/2018

DRAWING NO. P-01 (J1)

SHEET NO. 1 OF 7





PROFILE LEGEND

- EXISTING GROUND
- PROPOSED GUIDEWAY PROFILE
- VERTICAL CURVE HIGH POINT ▽
- VERTICAL CURVE LOW POINT □

LOUIS BERGER
1250 23rd St. NW, Washington, DC 20037

SCALE: METERS

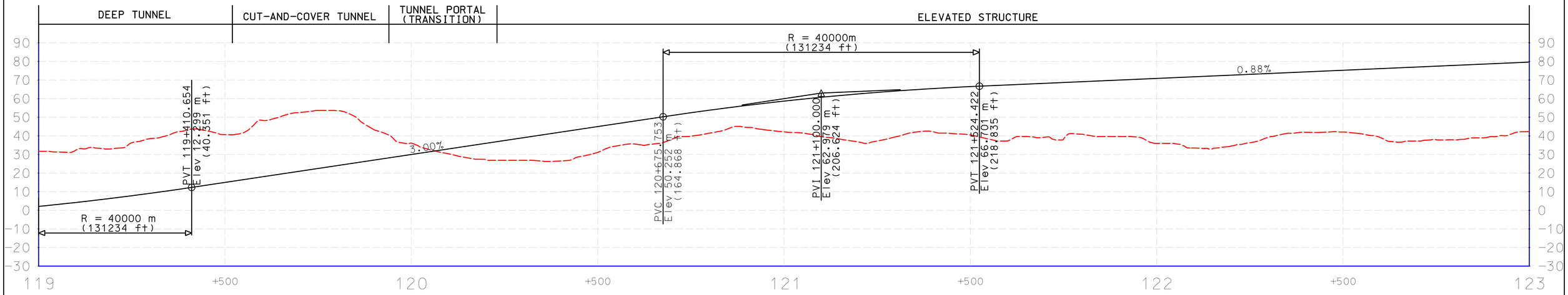
100 50 0 100 200
HORIZONTAL
20 10 0 20 40
VERTICAL

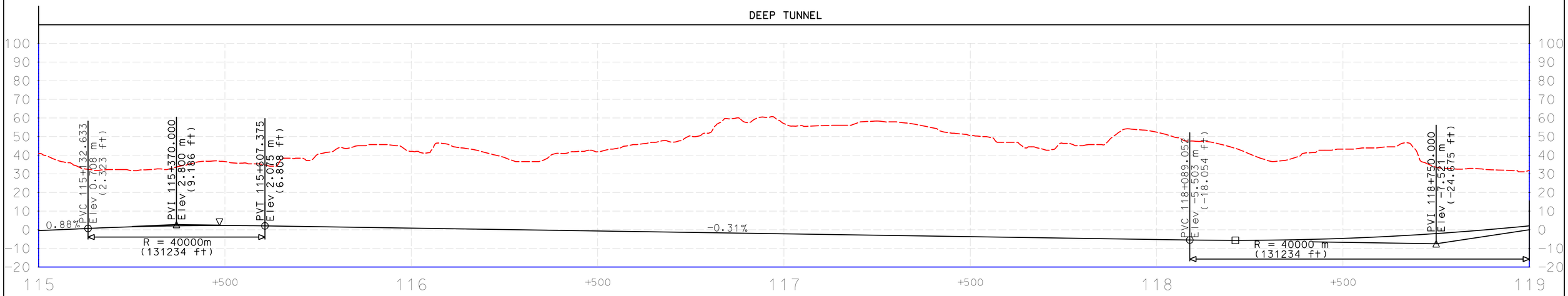
BALTIMORE-WASHINGTON SCMAGLEV
ALT J1 (BWP WEST) MVS TO CHERRY HILL
PROFILE STA. 107+000 TO STA. 115+000

DATE: 7/11/2018

DRAWING NO. P-02 (J1)

SHEET NO. 2 OF 7





PROFILE LEGEND

- EXISTING GROUND
- PROPOSED GUIDEWAY PROFILE
- VERTICAL CURVE HIGH POINT ▽
- VERTICAL CURVE LOW POINT □

LOUIS BERGER
1250 23rd St. NW, Washington, DC 20037

SCALE: METERS

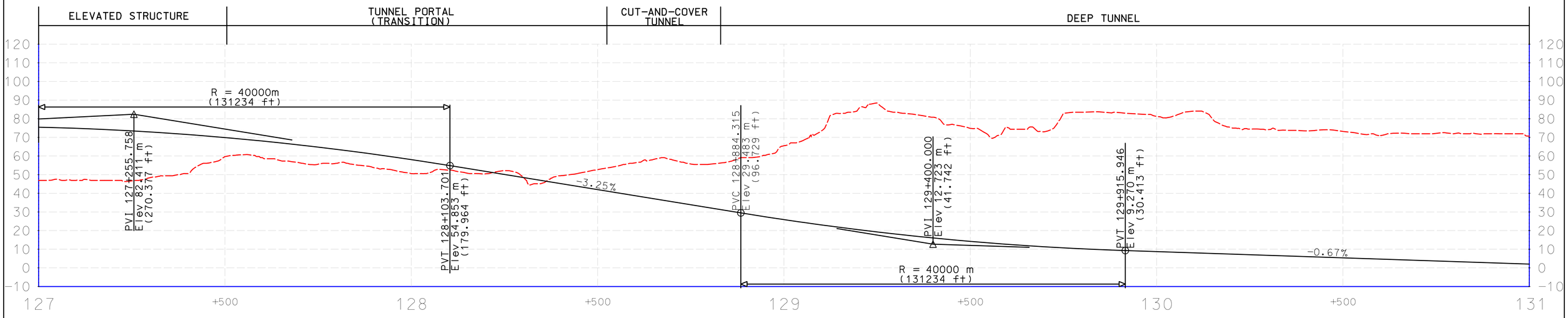
100 50 0 100 200 HORIZONTAL
20 10 0 20 40 VERTICAL

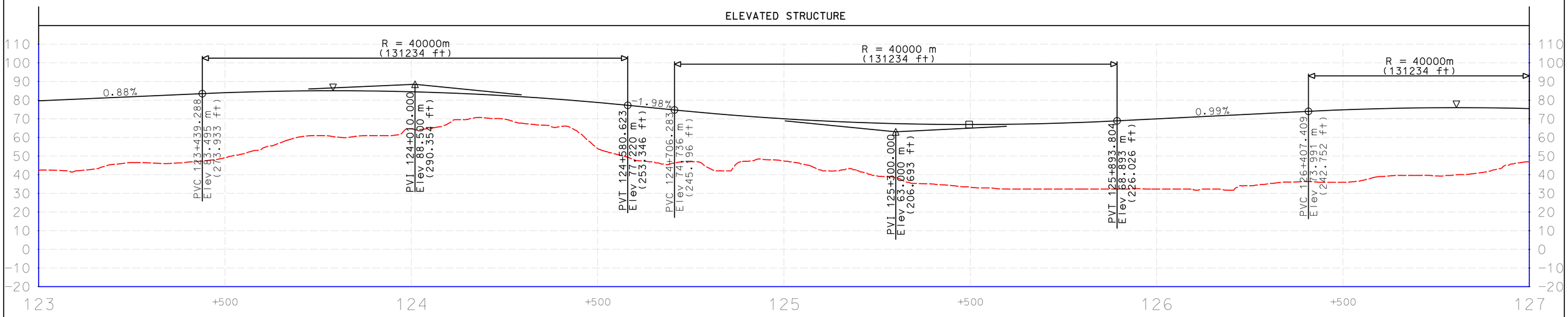
BALTIMORE-WASHINGTON SCMAGLEV
ALT J1 (BWP WEST) MVS TO CHERRY HILL
PROFILE STA. 115+000 TO STA. 123+000

DATE: 7/11/2018

DRAWING NO. P-03 (J1)

SHEET NO. 3 OF 7





PROFILE LEGEND

- EXISTING GROUND
- PROPOSED GUIDEWAY PROFILE
- VERTICAL CURVE HIGH POINT ▽
- VERTICAL CURVE LOW POINT □

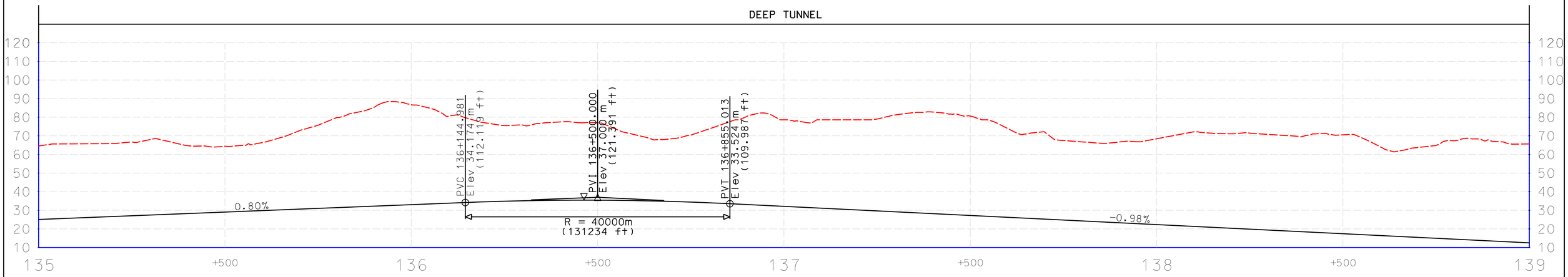
LOUIS BERGER
1250 23rd St. NW, Washington, DC 20037

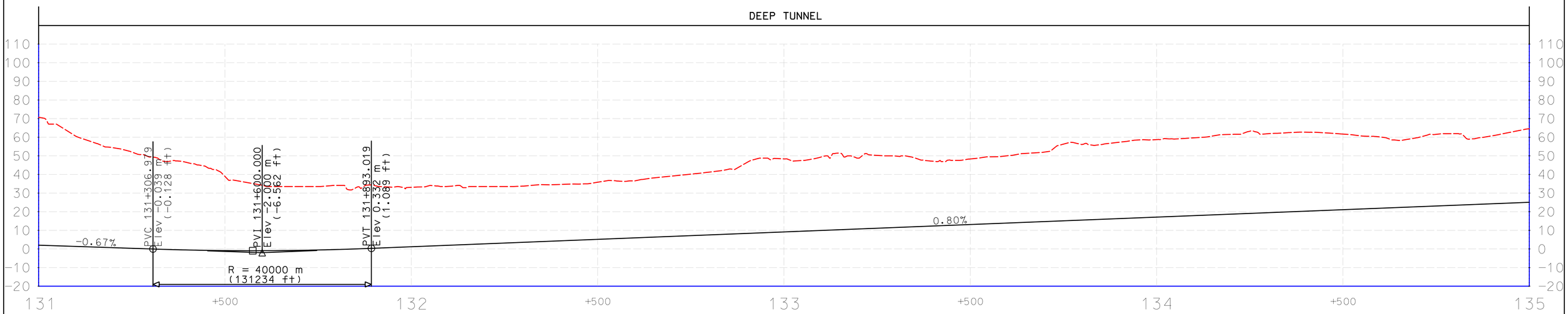
SCALE: METERS

HORIZONTAL: 100 50 0 100 200
VERTICAL: 20 10 0 20 40

BALTIMORE-WASHINGTON SCMAGLEV
ALT J1 (BWP WEST) MVS TO CHERRY HILL
PROFILE STA. 123+000 TO STA. 131+000

DATE: 7/11/2018
DRAWING NO. P-04 (J1)
SHEET NO. 4 OF 7





PROFILE LEGEND

EXISTING GROUND	----------
PROPOSED GUIDEWAY PROFILE	————
VERTICAL CURVE HIGH POINT	▽
VERTICAL CURVE LOW POINT	□

LOUIS BERGER
1250 23rd St. NW, Washington, DC 20037

SCALE: METERS

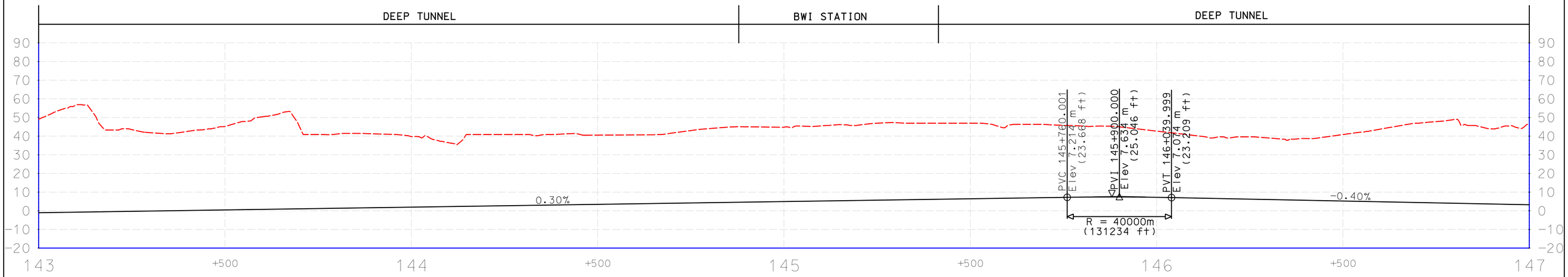
100 50 0 100 200
HORIZONTAL
20 10 0 20 40
VERTICAL

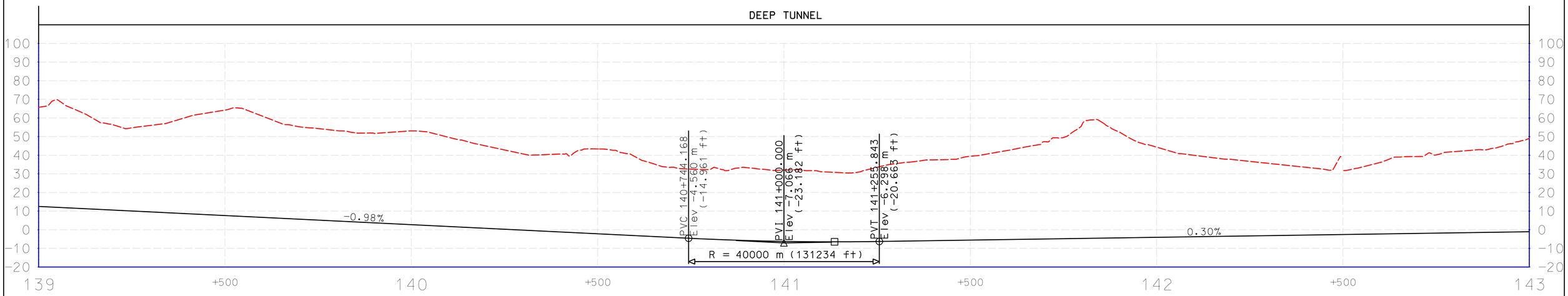
BALTIMORE-WASHINGTON SCMAGLEV
ALT J1 (BWP WEST) MVS TO CHERRY HILL
PROFILE STA. 131+000 TO STA. 139+000

DATE: 7/11/2018

DRAWING NO. P-05 (J1)

SHEET NO. 5 OF 7





PROFILE LEGEND

EXISTING GROUND	----------
PROPOSED GUIDEWAY PROFILE	————
VERTICAL CURVE HIGH POINT	▽
VERTICAL CURVE LOW POINT	□

LOUIS BERGER
1250 23rd St. NW, Washington, DC 20037

SCALE: METERS

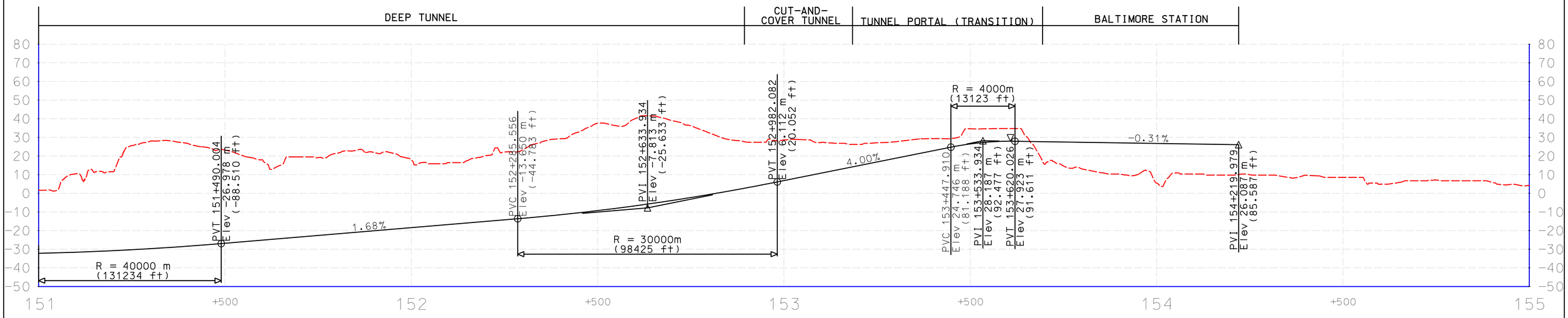
100 50 0 100 200
HORIZONTAL
20 10 0 20 40
VERTICAL

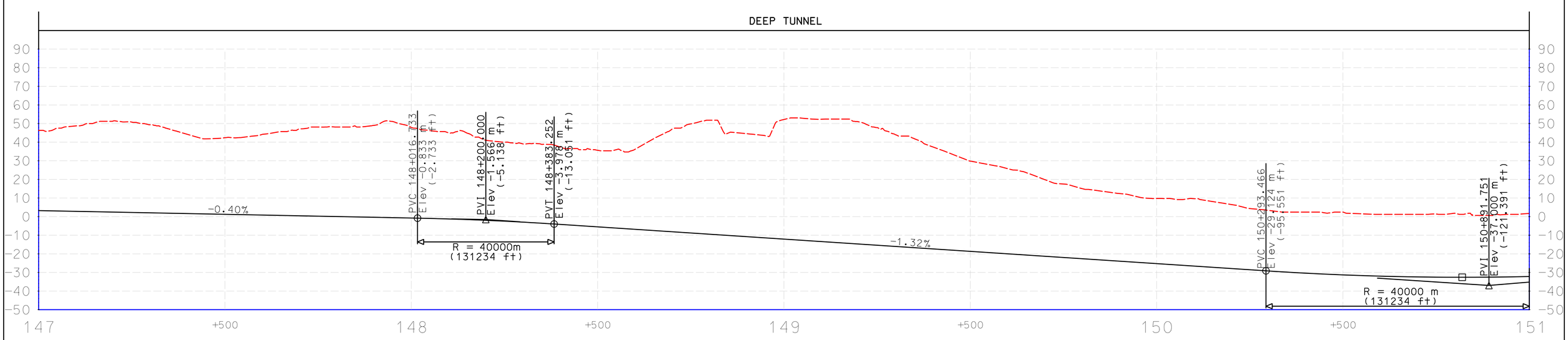
BALTIMORE-WASHINGTON SCMAGLEV
ALT J1 (BWP WEST) MVS TO CHERRY HILL
PROFILE STA. 139+000 TO STA. 147+000

DATE: 7/11/2018

DRAWING NO. P-06 (J1)

SHEET NO. 6 OF 7





PROFILE LEGEND

- EXISTING GROUND
- PROPOSED GUIDEWAY PROFILE
- VERTICAL CURVE HIGH POINT ▽
- VERTICAL CURVE LOW POINT □

LOUIS BERGER
1250 23rd St. NW, Washington, DC 20037

SCALE: METERS

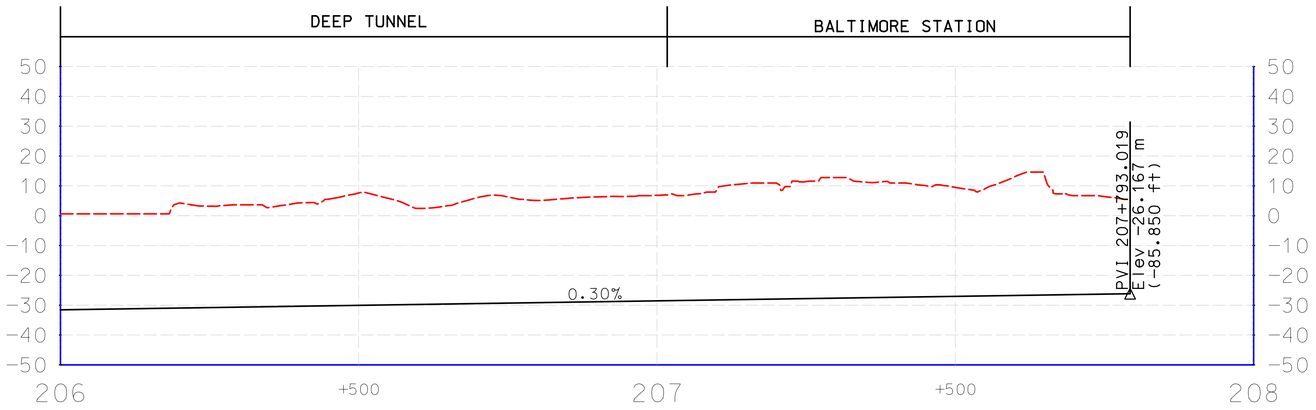
HORIZONTAL: 100 50 0 100 200
VERTICAL: 20 10 0 20 40

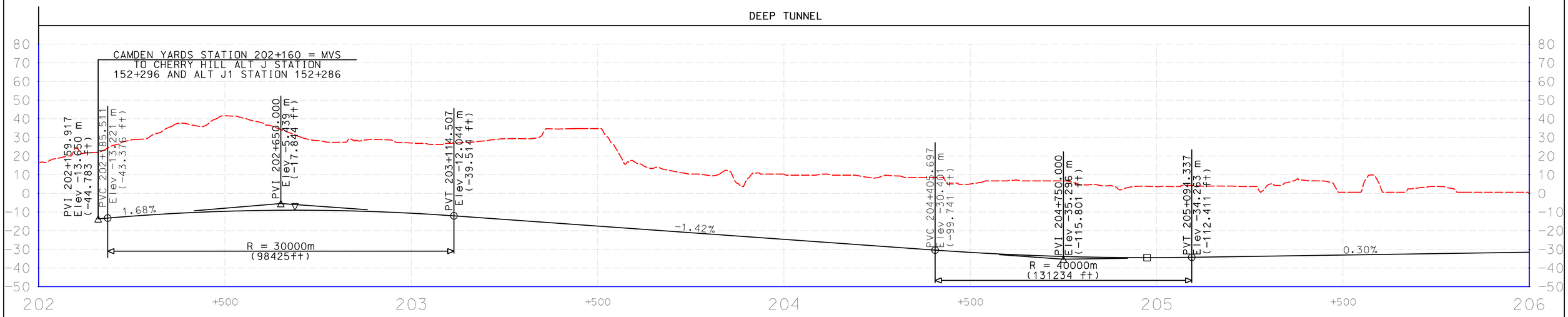
BALTIMORE-WASHINGTON SCMAGLEV
ALT J1 (BWP WEST) MVS TO CHERRY HILL
PROFILE STA. 147+000 TO STA. 154+220

DATE: 7/11/2018

DRAWING NO. P-07 (J1)

SHEET NO. 7 OF 7





VERTICAL AXIS ELEVATIONS ARE IN METERS

PROFILE LEGEND

- EXISTING GROUND
- PROPOSED GUIDEWAY PROFILE
- VERTICAL CURVE HIGH POINT ▽
- VERTICAL CURVE LOW POINT □

LOUIS BERGER
1250 23rd St. NW, Washington, DC 20037

SCALE: METERS

HORIZONTAL: 100 50 0 100 200
VERTICAL: 20 10 0 20 40

BALTIMORE-WASHINGTON SCMAGLEV
CAMDEN YARDS
PROFILE STA. 202+160 TO STA. 207+793

DATE: 6/12/2018

DRAWING NO. P-01 (CAMDEN)

SHEET NO. 1 OF 1

Appendix F: Agency Comments on the draft Alternatives Report

Agency Comments on the August 2018 Draft SCMAGLEV Alternatives Report

Last Updated: 11/01/2018

#	Agency	Comment	Response	Edits to final Document
1	Anne Arundel County Office of Transportation	No form received, but comment received: The following comments are offered from an Anne Arundel County standpoint as a result of our participation in the MAGLEV tour on 9/25/18: Alternative J (BWP East): This option will require significant buy in from both NSA/Ft. George G. Meade prior to consideration. Alternative J1 (BWP West) raises concerns from an Anne Arundel County standpoint due to impacts both during and after construction associated with existing residential neighborhoods in the Maryland City portion of the county. Likewise, environmental impacts described during the tour in the vicinity of Maryland City Park raise concerns as well. The MD 198 RSD Option needs to coordinate with the existing MD 198 NEPA Study which is supported by a signed FONSI. This document contains information with regards to the ultimate alignment of MD 198; access management along said roadway and the introduction of several internal roadways which will offer access from the rear to properties fronting MD 198	Comments noted. Potential impacts will be evaluated further in the DEIS, including community impacts. Residents are encouraged to comment and participate in the DEIS hearing when announced. Coordination has and will continue to occur with NSA/Ft. Meade. Further coordination regarding the MD 198 RSD option will be documented in the DEIS as necessary.	N/A
2A	Prince George's County Dept. of Public Works and Transportation	Comment Form received with embedded comment: In reviewing the Baltimore-Washington Superconducting MagLev (SCMagLev) Draft Alternatives Report dated August 2018, the Prince George's County Department of Public Works and Transportation (DPW&T) offers the following comments that express a number of concerns pertaining to the project and report. The focus of the concerns from the Department center around transportation, but take into consideration other important factors to the County such as impacts to communities, and the environment, as they are interwoven links that enhance sustainability and vitality efforts throughout the County. • The Alternatives Report states that the proposed Beltsville Agricultural Research Center (BARC) Rolling Stock Depot (RSD) would require realignment of Springfield Road in Laurel. If this becomes the preferred RSD location, the Department will want further details and coordination regarding this County maintained (but not owned) roadway. • The Beltsville Agricultural Research Center simultaneously serves Prince George's County as a critical environmental resource, a National Register-eligible historic site , a major employer, and a location for anticipated growth in research and development activities. County policies and regulations strongly discourage development of this area to protect its unique mission of agricultural research. The potential adverse environmental and economic impacts of locating an RSD facility at BARC far exceed the potential benefit. In fact a location for the RSD outside of Prince George's County is preferable. • The County will want further details and coordination regarding any direct or indirect impacts to County owned and/or maintained roadways through construction and operation of the project. • Any County owned roadways rerouted/reconstructed as part of this project should be reconstructed with all master-planned bicycle and pedestrian facilities. • Recommendations for critical emergency access infrastructure - access road for emergency vehicles and access portals to the tunnel for emergency ingress/egress are needed.	Comments noted. Based on further coordination/agency field visits/agency comments, the BARC RSD option is not going to be advanced any further. Continued coordination regarding impacts or the rerouting/reconstruction of County roads, as well as the access roads for emergency egress, will occur as preliminary engineering advances for the remaining project elements and will be documented in the DEIS. As discussed in the Alternatives Report, the vent plants serve as the emergency egress locations for the tunnels. Any roadway changes will be coordinated closely with the County during the EIS process; temporary or permanent changes will be mitigated in coordination with the County.	The conclusions / recommendations for the Alternatives Report will no longer advance the BARC RSD option any further. Also added a sentence in the conclusion that access roads and roadway detours/ reconstruction to be included in the DEIS analysis.

#	Agency	Comment	Response	Edits to final Document
2B	Prince George's County Dept. of Public Works and Transportation	Embedded comment Continued: • The Draft Alternatives Report states "[d]eep tunnel sections of the alignments would have no surface impacts beyond typically expected micro settlement (a slight depression that could possibly form in the existing ground above the tunnel) or heave (a slight mound/hump that could possibly form formed [sic] in the existing ground above the tunnel)." The report states that over 1,000 residences are located above the proposed tunnels. A slight depression or mound created beneath the foundation of a single-family or multifamily residence could have significant and potentially catastrophic impact. The proposed project would use new tunnel boring technology untested in the geologic environment of the study area. Boring at this depth in this environment may uncover geologic or hydrological features whose disruption may impact or destabilize areas above the tunnel. In addition to potential impacts to residences, impacts to businesses and critical infrastructure, including, the roadway network and the Anacostia River Flood Control System, must all be evaluated. • Both alternatives propose to have the above-ground viaduct constructed close to residential buildings. Alternative J proposes to construct the track 80 feet from residential structures while Alternative J1 proposes construction at 65 feet. What impacts will this have during construction and operation to the neighboring communities? • The Purple Line Light Rail project is locating its maintenance plaza along MD 410, near the proposed preliminary MagLev vent shaft location. This should be looked at and evaluated closer to avoid the perception that the Auburn Manor and the surrounding communities are the target of these type of maintenance facilities. • Noise, vibration, and visual impacts on neighborhoods abutting Alternative J1 between Beltsville and the City of Laurel should be evaluated and mitigated as appropriate. • Noise and visual impacts of proposed vent facilities along MD 201 and MD 410 should be evaluated and mitigated as appropriate. • If unavoidable, facilities to be constructed in floodplains should be built in a manner that protects against damage or inundation in a flood event. Detailed discussion will be needed on how mitigation pertaining to these and other sensitive areas will be handled.	The DEIS process will investigate and address concerns regarding the tunneling process. The selected tunneling technology is neither new nor untested, having been successfully implemented in dozens of soft ground tunneling projects in densely populated areas, domestically and internationally. Many of these projects proceeded at shallower depths than the proposed MAGLEV alignment, with equivalent to even larger diameter machines, and beneath and adjacent to critical infrastructures. Investigation and study of these projects (including tunnels underway in Washington, DC) evidence that the tunnel boring process is imperceptible at surface level for deep tunnels (0.3% to 0.5% volume loss; 1:500 typical tolerable by buildings). The design and specifications will dictate construction protocols to keep settlements and vibrations well below limits that would adversely impact homes, buildings and other infrastructure along the path. A preliminary boring program has provided results consistent with prior studies in the corridor, including investigations for multiple tunneling projects that are ongoing (i.e. Northeast Boundary Tunnel) or have been completed (i.e. Blue Plains tunnel). A thorough geological/ geotechnical investigation program along the selected alignment will be undertaken prior to the start of tunneling to obtain a full characterization of underground conditions. The EIS process will investigate and address the potential impacts to homes in neighborhoods which are already in close proximity to the Baltimore-Washington Parkway transportation corridor. Noise, vibration, visual impacts, and floodplains will all be included in the DEIS analysis. DEIS will also include the interface with the Purple Line and the environmental justice analysis. Additional information on the construction and operation will also be included in the DEIS.	Text for TBM construction regarding the potential surface disturbance from micro settlement / heave has been updated.
3A	U.S. Fish and Wildlife Service (USFWS)	Initially requested extension. Subsequently a 5 page PDF letter and two attachments received, but no form received . Please refer to the actual letter for the full comments. Highlights include: Patuxent Research Refuge (PRR) is part of the National Wildlife Refuge System (NWRS) and any proposed use of the property by third party must undergo a compatibility determination (an administrative science-based review of potential impacts). The transportation-based use of Refuge land is not compatible with NWSR mission of conserving wildlife and their habitats or with wildlife research and conservation purposes of the Refuge. Regarding the acquisition of a right-of-way easement - If a right-of-way cannot be certified as compatible it cannot be granted without authorization by congress (50 CFR 29.21(g)). if the project proponents chose to pursue a fee title exchange, per NWRS policy, must: 1) be of benefit to the United States, and 2) the lands being received by the NWRS must be of approximately equal value or values may be equalized by the payment of cash by the grantor or by the United States. SCMAGLEV project proponents would need to find a willing seller of property of interest to the Refuge adjacent to or within close proximity of an existing Refuge, and within an approved acquisition boundary. The burden of finding a willing seller would be on the project proponent and not the Refuge. Furthermore, Alternative J would impact North Tract portions of the Refuge. North Tract is part of the 8,100 acres of land added to the Refuge in 1991 and 1992 through Public Law 101-519: the Military Construction Appropriations Act, 1991, which transferred property from the Department of Defense to Department of Interior (DOI). We interpret Section 126 of the law to preclude any consideration for transfer of these lands out of refuge ownership, without a change in the public law that originally effected the transfer. Portions of the proposed MD 198 rolling stock depot site are protected by a Maryland Environmental Trust conservation easement, and so it will be helpful to map the extent of this and other permanent conservation easements located along either alternative or proposed ancillary facility locations. In addition, the proposed MD 198 rolling stock depot site is located immediately upstream of the Refuge and therefore provides many ecological benefits to Refuge resources. The federally threatened swamp pink (Helonias bullata) has been documented to occur in Piney Run and Upper Stony Run. In addition, the federally threatened northern long-eared bat (Myotis septentrionalis) may be present in the project area. The Service recommends summer surveys should be conducted to determine if they are present along the study corridor. Any potential impacts on swamp pink or northern long-eared bat should be analyzed as a part of your environmental assessment. If such impacts may occur, further Section 7 consultation with the Service may be required. Bald eagles are protected under the Bald and Golden Eagle Protection Act and are documented to nest within the project study area. Any project affecting bald or golden eagles may require development of an eagle conservation plan. The Service is concerned about our ability to concur on a Preferred Alternative/Conceptual Mitigation (PACM) at the completion of DEIS without having field-based inventories and mitigation strategies for priority resources within the Refuge. The Service strongly recommends natural resource inventories including forest stand and vernal pool delineations, surveys for rare, threatened, and endangered species, and bird and bat studies along the Patuxent River corridor be conducted during the appropriate season(s) and completed prior to seeking agency concurrence on PACM.	Comments noted. Engineering team exploring alternative MD 198 RSD configuration to reduce footprint - to be documented in the DEIS. Environmental field studies and RTE analysis to be documented in the DEIS. The project team has been advised congressional action may be needed to advance the option. USFWS may grant a right-of-way permit or easement whenever it determines that the use will not "materially interfere with or detract from" the purpose for which the Wildlife Refuge was established. An Easement is the appropriate conveyance if the use will not substantially alter the property and is long term in nature; and the use involves public utilities, rather than a purely private use; Right-of-Way permits or easements require payment of Fair Market Value for the land.	Replaced Figure to show the MET easement at MD 198 RSD site.

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3B	U.S. Fish and Wildlife Service (USFWS)	Concurrence Form with "Concurs (w/minor comments)" received from USFWS. Attached comments included: 1) July 16, 2018 letter from the Patuxent Research Refuge to MDOT MTA, granting access to the refuge for environmental fieldwork, along with questions and comments; 2) August 6, 2018 letter from MDOT MTA to the refuge addressing questions and concerns brought forth in the July 16 correspondence; 3) October 9, 2018 letter from the Chesapeake Bay Field Office (CBFO) to USDOT Federal Railroad Administration with comments on the Draft Alternatives Report, distributed to agencies for review and comment on August 31, 2018. {Summary included above in row 3A}	Concurrence with minor comments noted.	N/A
4	USDA / BARC / APHIS	Comment Form received with embedded comment: USDA/APHIS/PPQ Building 580, is a BSL-3 Containing Biological Select Agents. As a land owner within BARC we were not notified of this NEPA Study until 9/28/18 by The ARS. As Identified by ARS the alignment of the SCMAGLEV is along 295 APHIS/PPQ has no comments . If the route does not parallel 295 APHIS/PPQ does need to be notified.	Comments noted. The current alignments are paralleling 295; and BARC RSD / land nexus significantly reduced post ARDS. BARC RSD dropped from consideration.	N/A
5A	US Department of Agriculture (USDA) / Beltsville Agricultural Research Center (BARC) / Agricultural Research Service (ARS)	Form with comments as a 9 page attachment received from USDA ARS. Please refer to the actual letter for the full comments. Highlights include: These comments are specific to the proposed elevated guideway alignments segments and rolling stock yard (RSD) that would require the transfer of property and impinge on the mission of the USDA/Agricultural Research Service's Beltsville Agriculture Research Center (BARC) located in Beltsville, Maryland. * Overview Figure for Alternatives Map J and J1 misrepresents BARC's environmental land (2,880 ac. forest, 700 ac. wetlands, 30 mi. headwaters/streams, & 1,775 ac. of production and research fields) and the consolidation of all "non-environmental" government facilities into a single gray block presents and incomplete picture. * Comments BARC RSD Option: severe impact two aspects of its mission would face if BARC were selected as the site for the proposed RSD facility – Federal, state, and industry funded research, and federally required stewardship and sustainability regulatory requirements. ARS BARC Long-Term Research on Optimizing Production Inputs for Economic and Environmental Enhancement (OPE3): The proposed maintenance yard, if constructed, would destroy parts of the watersheds that ARS scientists have carefully sampled and studied for the past two decades. The cost of losing these historical watershed research plots is incalculable. A final factor regarding the proposed construction of the RSD on BARC is the impact on localized microclimates. The changes in the microclimates will not only occur from the existence of the new buildings, tracks, guideways and aboveground alignment, which are a certainty with the loss of forested land adjacent to OPE3, but also from the construction of stormwater management systems that will be necessary to control runoff from the facilities. Based on the information provided in the alternatives report and using accepted stormwater criteria, standard formulas, and conservative model assumptions related to stormwater management, an estimate has been determined for the size of a detention pond(s) necessary to service this facility both during and post construction. Based on conservative calculations, the pond(s) would have to provide a minimum retention volume of 34.4 acre-feet based on a 25-year storm event. To control the additional time for the retained storm event release and assuming an average depth of two to three feet, the surface area of the pond will need to be, at a minimum, 10 to 15 acres in area and likely more if a permanent wet pool is part of the design. The final impact of the RSD placement would be the destruction or data degradation of deployed sampling stations in the nearby streams that focus on flows, water quality, and sediment. As a location, BARC has a long and distinguished history of fostering and nurturing long-term collaborative research projects. Those projects have seen ARS team-up with other federal agencies and academic institutions to further agricultural pursuits among BARC's more than 6,600 acres. Of note is the significant agricultural endeavors that the University of Maryland (UMD) has underway in the proposed RSD. For more than 40 years, USDA has provided UMD with access to BARC fields. Regarding SWM: 1. No information is presented relating to potential impacts regarding long term research located northwest of the proposed site. 2. No information is presented related to the illumination of the site during night operation and how that would impact nearby research. 3. No information or reference is presented on how large volumes of stormwater at the RSD facility would impact this sensitive ecological system. 4. No information regarding the necessary relocation of infrastructure is provided. 5. Minimal information is presented relating to the LODs to construct RSD access to the elevated tracks. Such construction would significantly reduce forest canopy. 6. No specific information is available related to the stormwater retention pond necessary for the transitions from underground to above ground where the tunnel emerges near Beaver Dam Road. *All new construction on federal facilities for land disturbance greater than 5,000 square feet must meet, unless technically infeasible, the following Energy Independence and Security Act of 2007, Section 438 criteria. These criteria must be met if technically feasible…unrelated to cost.	Comments noted. Based on agency comments and further coordination, the BARC RSD is not advancing into the DEIS. Stormwater management is anticipated to be included in the DEIS based on preliminary engineering. LOD for the ramp spur tracks connecting the mainline guideway to the RSD is included in the 12 sheet mapping of Appendix E. RSD site illumination information to be included in the DEIS.	The conclusions / recommendations for the Alternatives Report will no longer advance the BARC RSD option any further. {Roadway detours/ reconstruction and access roads to be included in the DEIS.}

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5B	US Department of Agriculture (USDA) / Beltsville Agricultural Research Center (BARC) / Agricultural Research Service (ARS)	Highlights of BARC ARS Comments Continued: The location of the RSD is at the headwaters of the Beaver Dam Creek where an unnamed tributary of the Beaver Dam Creek forms. These headwaters are supported by a rare, natural bog, mapped as the Beltsville Bog, within the RSD. Just below the named bog, two stormwater management ponds were installed in the late 1990's as part of a mitigation require for the construction of the Washington Metropolitan Area Transit Authority (WMATA) Greenbelt Repair Facility located next to Indian Creek, also within the RSD. The Beaver Dam Creek is a MDE and MDNR Tier II reference stream used for water quality comparisons in the Anacostia Watershed. With the loss of these features, in addition to forest, wetlands and changes to the topography that will occur because of the proposed RSD the Beaver Dam Creek will see significant stream degradation impacting this reference stream. Not addressed anywhere in the Alternatives Report is the required mitigation for the loss of forest, wetland, streams, etc. MDE requires that mitigations are performed within the same watershed. There is limited land for mitigation in Prince Georges Counties. BARC has been approached and embraced projects that have placed beneficial best management practices to improve water quality leaving the BARC property. The land that was used for these projects were determined to be no longer a research resource and was reforested. BMPs and wetlands have been created on BARC. Agricultural production land and research fields were recently screened to find 150 acres for a major solar project required by Executive Order and the Energy Independence and Security Act. There is no land left for mitigation on BARC. *Additional Environmental Concerns: among globally rare, endangered forest communities include the Pine Barrens Pine – Oak community, with fewer than 20 sites known to support it. This upland pine community has apparently been unrecognized and unreported in the watershed until now. Examples of the globally rare Pine Barrens Lowland Forest were also discovered in this 2005 survey by the nonprofit NatureServe. This community is an unusual wetland type characterized by pitch pine and deciduous hardwoods in the canopy. BARC contains the Upper Beaverdam Creek subwatershed, which also supports a high number of wetlands of special state concern. Comments Elevated Guideway Alignments: Emergency Egress - 1. Based on discussions with SCMAGLEV Representatives, there are currently no proposed elevated track egress requirements for emergency access. If this changes, additional comments may be required if land is required and additional forest loss results. 2. No information is currently available on perimeter security measures related to the above ground structures or RSD. This might result in additional loss of land and forest canopy that moderates the regions temperature. 3. Lighting requirements for track maintenance and security is not identified. Evaluation Summary and Results Table -Alternative J (BWP East Side)= 1. No information about potential impacts to long term research related to the disruption of current, micro weather patterns is available. Alternative J1 (BWP West)= 1. No information about potential impacts to long term research related to disruption of current, micro meteorological weather patterns is available. 2. No information about impacts related to the possible alignment passing through two Superfund Areas of Concern under active investigation is available. Table 5: Agency Meeting Log since the PASR= 1. Missing meetings with USDA ARS and the meeting summaries a. 5/23/2018; b. 8/21/2018. *Page 63, Chapter 6. Conclusions and Next Step - "As the RSD facilities are currently positioned, the BARC RSD would have greater impacts on the USDA/BARC property and, potentially, more environmental resources as compared to the MD 198 RSD option." ARS agrees with this statement even without any additional supporting information being included in this report.	Comments noted. BARC RSD dropped from further consideration. Emergency access roads to be included in the DEIS. Mitigation information is anticipated to be covered in the DEIS. Environmental field studies and RTE analysis to be documented in the DEIS. Additional lighting and security information to be covered in the DEIS. Security measures and practices will be coordinated with applicable emergency and first responder authorities.	Additional language added regarding the long term research. Meeting summaries added to Appendix G. The conclusions / recommendations for the Alternatives Report will no longer advance the BARC RSD option any further.
6A	DC Office of Planning (DCOP)	No form received, but a 12 Page letter/attachments received from DCOP. Please refer to the actual letter for the full comments. Highlights include: After careful review of the Baltimore-Washington Superconducting Magnetic Levitation Train System (SCMAGLEV) Project Draft Alternatives Report (PDAR), DCOP has determined nonconcurrence with the PDAR. DCOP finds that the PDAR screening process is too premature and unsubstantiated to eliminate the station options in NoMa from further consideration. DCOP strongly urges FRA to carry forward all four station options to the draft EIS stage, which will ensure that appropriate technical analyses can be conducted and used to inform further option screening. In addition, DCOP in consultation with the Department of General Services (DGS), concurs with carrying forward the two Rolling Stock Depot (RSD) options in Maryland. *NoMa and Mt. Vernon Square SCMAGLEV Station Options: NoMa and Mt. Vernon Square are unique and distinctive neighborhoods in our nation's capital. Each has been carefully planned by DCOP through land use policy and design plans to help manage their growth and evolution. NoMa has experienced significant development of mixed-use projects in recent years and DCOP continues to plan for its growth. Mt. Vernon Square is among the most historically significant neighborhoods in the District and is nearly built out. A project proposal of the magnitude of SCMAGLEV has the potential to cause significant disruption to these neighborhoods as SCMAGLEV requires analysis of the District's land use policies, which was not undertaken in the PADR. In addition, FRA should refer to DDOT for transportation policies as those should also be analyzed for these neighborhoods. All four station options in the District (two at Mt. Vernon Square, and two at NoMa) should be appropriately analyzed and considered for a project of this scale, which likely will have permanent effects on the built form, economy, housing and commercial markets, demographics, resilience, and public services and infrastructure systems of our nation's capital. Carrying forward all four station options to the draft EIS stage will help ensure appropriate technical evaluations are conducted and subsequently used for appropriate comparison of options. While DCOP understands that no preferred station was selected in the PADR, the PADR screened out two station options (NoMa above-ground and underground) from further consideration. Citing current rather than future traffic and transit conditions is not an appropriate manner to exclude station locations for a project with a build year of 2028. An adequate assessment would require a transportation analysis that accounts for the future transportation network and land use inputs associated with the forecast year. Technical details for each of the stations would be necessary to determine the onerousness of station access for all four station options in the District so they can be properly compared and then evaluated for potential elimination. The PDAR contains only high-level incremental cost estimates for each of the four station options—cost estimates that are relatively similar to one another for a project of the magnitude of SCMAGLEV. The draft EIS analysis will enable FRA and stakeholders to clearly identify the impacts of each station option accounting for foreseeable growth and the adopted land use, economic, design, and infrastructure plans and policies in the District, and to then evaluate tradeoffs across the collective impacts and mitigations for each of the options to inform the elimination of one or more options from further consideration. A thorough draft EIS analysis will provide FRA with a much more robust, data-driven process for weighing benefits and costs of each of the four station options, and local and regional stakeholders to attain a far better understanding of the project, its impacts, and appropriate mitigations to assist with decision-making regarding option elimination and potential selection of a superior alternative.	Comments noted. Further coordination with the DC agencies occurred on 10/22/18 regarding the status of the NoMa station: *Elevated NoMa is fatally flawed based on criteria developed in the PASR because it would cross the Amtrak NEC. *An underground station at NoMa is not a reasonable alternative under NEPA and, therefore, was dropped from further consideration for the following reasons: (1) the station would have poor interconnectivity with the nearest fixed-guideway transit station: the Metro NoMa-Gallaudet Station because of both the relatively long horizontal distance between an SCMAGEV station and the Metro station, as well as the vertical distance between an underground SCMAGLEV station and the elevated Metro station; (2) WMATA indicated in meetings with BWRR that additional passenger loads on the Red line, which serves NoMa-Gallaudet and is the most congested of the Metro lines, would be unacceptable because the SCMAGLEV passenger loads would further exacerbate the Red line's overloading issues; (3) a NoMa SCMAGLEV station would likely provide insufficient ridership and operating revenue because it is served by only one Metro line and has insufficient development density as it abuts a relatively low density residential area to the north and west (by contrast, a Mount Vernon Square Station connects with all Metro lines and is in the most densely developed area of the District); and (4) despite efforts to address traffic flow issues in NoMa, New York Avenue in NoMa remains heavily congested due to being a gateway to the District (in contrast, a station west of Mount Vernon Square is in a relatively uncongested stretch of New York Avenue). Further coordination on SCMAGLEV station planning in the District with DCOP, DDOT, and others will occur during the DEIS.	Text regarding the NoMa station has been updated.

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6B	DC Office of Planning (DCOP)	Highlights of DCOP Comments Continued: *Rolling Stock Depot Options and Tunnel Boring Machine Staging in Maryland: The draft EIS process should take careful account of existing conditions and future plans for those properties. In consultation with the DGS, DCOP conveys the following comments for District-owned properties in Maryland: • Ensure a full inventory is assembled of District-owned properties and uses in Maryland that could be potentially affected by each of the SCMAGLEV project alternatives; • Ensure that a full technical analysis of project impacts to the above properties and uses is conducted, including impacts due to Tunnel Boring Machine (TBM) staging; general construction staging; construction of new RSD facilities and other ancillary facilities; and the placement and operation of permanent RSD and other ancillary facilities. • Ensure that impacts to existing uses and operations on these properties are fully accounted for and properly mitigated, including for ensuring continuity of operations and delivery of services that are currently located at the subject properties, which include the following: o New Beginnings Youth Development Center; o Environmental conservation easement surrounding Little Patuxent River; o DC National Guard Youth Challenge Academy; o Central Administration Building, which is used by the District of Columbia Department of Youth and Rehabilitation Services and the District of Columbia Office of Contracts and Procurement Surplus Property Division; o District of Columbia Department of Public Works Fuel Point and Vehicle Repair Shop Building; o Wings over America Raptor Sanctuary; o Forest Haven Hospital – closed hospital building(s) – class action legal action under purview of the Department of Disability Services has not concluded; o Forest Haven Cemetery; o DOL Woodland Job Corps Program; o BG&E subterranean power conduits situated along Old Portland and River Roads to cross US 32 that support the NSA; o Anne Arundel County proposal for new 3-million-gallon above-ground water storage tank and shift of utility provider; and Please see Attachment 1 for District property boundaries, land uses and program, and Attachment 2 as reference diagram provided to DGS by BWRR.	Comments noted. To be addressed in the DEIS as appropriate. Information learned during the October 2018 Forest Haven site visit will be incorporated. Project impacts to properties, including those involved in the construction and operation of support facilities will be determined during the DEIS. Mitigation measures will be coordinated through the applicable District offices.	Existing uses and operations for the property under consideration for the MD 198 RSD location were added to the report.
6C	DC Office of Planning (DCOP)	Highlights of DCOP Comments Continued: *DCOP Guiding Principles for SCMAGLEV Project: Based on preliminary review of existing District policies and plans, DCOP furnishes the following Guiding Principles to inform updates to the current PDAR: 1. Ensure continued and enhanced quality of life for those who live, work, and visit areas affected by SCMAGLEV Project: a. Provide high quality station design that is responsive to surrounding urban program; b. Provide effective vertical circulation connections from the street level to underground stations; c. Minimize spillover effects of project on local neighborhoods and ensure that unavoidable spillover impacts are appropriately mitigated; and d. Architecture: Appropriately balance contemporary architectural features of the project with those of surrounding neighborhoods, including as related to scale, detail, historic integrity, and uses in the surrounding neighborhoods. 2. Ensure effective integration of SCMAGLEV Project—including station areas, ancillary facilities, and above-ground guideways—with immediate sites, adjacent neighborhoods, and citywide context: a. Immediate Sites: effects on historic preservation, design, resilience, economic and physical impacts, and infrastructure loading and sufficiency; b. Adjacent Neighborhoods: same as above, with focus on effects on real estate markets, demographics, and disparate impacts on underserved neighborhoods; and c. Citywide Context: Ensure the project includes measures to provide expanded capacity of services and infrastructure systems to service the project demands in line with District policies and forecasts. 3. Prioritize intermodal systems effectiveness and efficiency: a. Ensure that station users can access SCMAGLEV stations through as many modes as possible in a safe, comfortable and non-congested manner; b. Maximize ease of transfer between SCMAGLEV and local transportation modes; and c. Enhance connections to local mobility systems.	Comments noted. To be addressed in the DEIS as appropriate.	N/A

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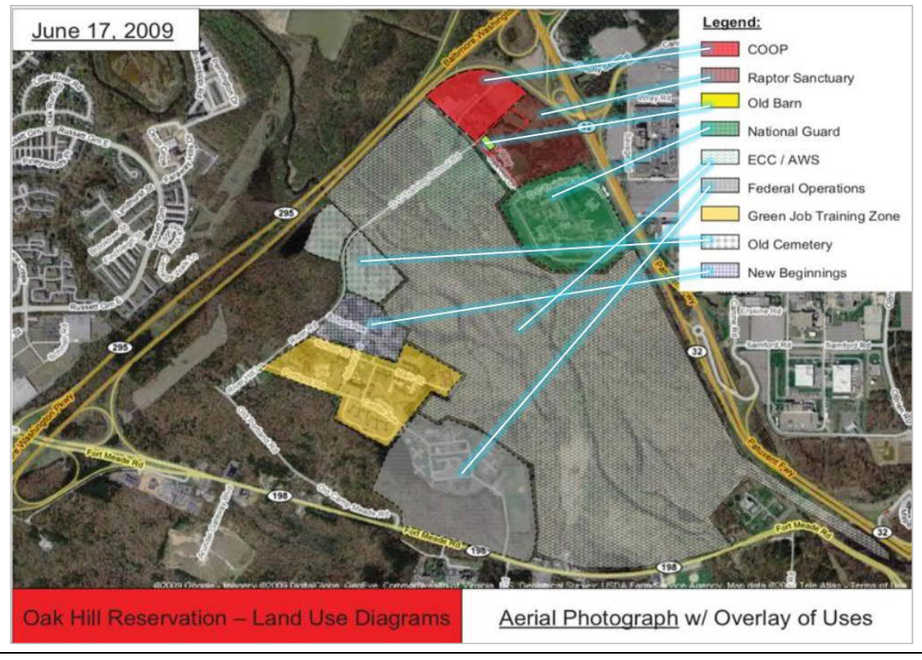
6D	DC Office of Planning (DCOP)	Highlights of DCOP Comments Continued: *DCOP Technical Comments on SCMAGLEV PDAR: Based on the above, DCOP furnishes the following technical comments to inform updates to the current PDAR: 1. Preferred Alternative: DCOP strongly supports deferral of the selection of a preferred alternative until full analysis of each of four station options (in addition to the "No Action" alternative) in the District is conducted through a draft EIS process. As stated previously, this will enable the collective impacts of each alternative to be thoroughly analyzed, tradeoffs across them to be evaluated, and appropriate mitigations to be identified, considered and formulated PRIOR TO potential selection of the PREFERRED ALTERNATIVE. DCOP strongly believes that only once a deep understanding of impacts and tradeoffs has been developed as part of the EIS process that a preferred alternative (or alternatives) can or should be identified for a project of this nature and magnitude. 2. "No Action" Alternative: this alternative should account for appropriate background development of both public and private capital projects, infrastructure, transportation projects, and urban development. 3. Full analysis of the following impact areas should be conducted for each project alternative (including affected District-owned properties in Maryland): a. Affected Environment; b. Environmental Consequences; c. Avoidance, minimization and mitigation; d. Land Acquisitions and Displacements; e. Land Use and Zoning; f. Consistency with Local Plans, including the District's Comprehensive Plan, the District's Long-Range Transportation Plan (MoveDC), and additional land use and design plans, a list of which is provided in Attachment 3 to this letter; note that these plans may be updated or new plans adopted prior to the 2028 project build year; g. Neighborhoods, Demographics, and Community Resources; h. Cultural Resources; i. Resources of Interest; j. Past, present and reasonably foreseeable future projects, including buildings and infrastructure; k. Secondary effects; and l. Cumulative impacts. 4. Onsite Impacts: DCOP is generally supportive of distributing access points across the station area in the District rather than concentrating them at one or few locations, with the intention of minimizing spillover effects on immediate neighborhoods. 5. Offsite Impacts: Impacts to immediate sites, adjacent neighborhoods and on a citywide basis that arise from spillover effects of each project alternative must be thoroughly analyzed and integrated into overall transportation and economic modelling for this effort; appropriate mitigations should be studied, including changes to project development assumptions that will minimize impacts on local neighborhoods—including disparate impacts on underserved communities. 6. Mobility: a. Identify any ancillary parking facilities that would be necessary for each project alternative; and b. Identify all impacts to local mobility infrastructure and systems across all modes, including: (i) Vehicular ingress, egress, pick-up and drop-off; (ii) Pedestrian mobility, including trip generation and the effects of pedestrian travel behavior on transportation network components, such as crosswalks, sidewalks, signal timings, etc.; and (iii)Effects on bicycle infrastructure and on-demand systems. It is important to note that any project will be evaluated by DCOP against land use policies relevant at the moment of entitlement and permit applications. In addition, please note that the District of Columbia State Historic Preservation Office (SHPO) is housed within DCOP and we are ensuring close coordination with them. The SCMAGLEV EIS project team should continue to coordinate with local communities and other District stakeholders. DCOP looks forward to continued engagement in the EIS process.	1. See response in 6A. 2. The No Action alternative will account for background development as appropriate in the DEIS. 3. Analyses to be included in the DEIS document as appropriate. 4. Comment noted. 5. To be considered in the DEIS. 6. Ancillary parking facilities will be identified for each alternative; detailed traffic analyses will identify the full range of potential impacts to transportation network across all modes in the DEIS..	Text revised regarding the elimination of NoMa.
6E	DC Office of Planning (DCOP)	Highlights of DCOP Comments Continued: *ATTACHMENT 1: District-Owned Properties in Maryland Relevant to SCMAGLEV Project (Source: District of Columbia Department of General Services) 	Comments noted. Information learned during the October 2018 Forest Haven / MD 198 site visit regarding various uses (as shown in the figure) will be incorporated into the DEIS.	N/A

#	Agency	Comment	Response	Edits to final Document
7A	District Department of Transportation (DDOT)	Comments in a 2 page attachment, truncated report file (pages 21-54), and concurrence form received from DDOT. Please refer to the actual letter for the full comments. Highlights include: After careful review of the report, the District Department of Transportation (DDOT) will not concur with the information as provided until revisions are made to the report and/or additional information is provided to more fully justify elimination of a station location at NoMa. Because the scope and potential influence of this project is substantial and far reaching, DDOT requests that a more detailed and inclusive screening process be employed to fully assess the relative merits of the NoMa station location versus the Mt. Vernon Square station location(s). We believe this is best done during the DEIS so that the full range of impacts, costs, and station location/intermodal connectivity potentials can be developed at similar levels of analysis. Such an analysis would provide the public, review agencies and other stakeholders the necessary information and understanding to make informed comments. Concerning the Mt. Vernon Square location and station options, we offer the following specific comments. A station entrance at Carnegie Library presents substantial planning, design and operational challenges for auto traffic and pedestrian circulation. The future operations of a possible streetcar or other fixed route transit mode along this corridor could also be compromised and this will require careful analysis in the DEIS. Any station entrance will need to consider pick up and drop off trip generation (both private vehicles and for-hire vehicles). DDOT strongly discourages any pick-up/drop-off activity (outside of the established taxi stand near the convention center) in this area to minimize degradation of Levels of Service at intersections and along nearby streets. DDOT prefers the west option at Mt. Vernon Square for its connectivity to other transit but understands a number of factors will be used in the DEIS to fully assess and weigh station and station entry locations. DDOT will be interested in seeing the various DEIS chapters and sections that will assess impacts of the two retained alignments, as well as the station locations. Thorough assessment of vehicular, pedestrian and bike and transit operations that are nearby the project, how they might be integrated, and their potential impacts will be of interest. In addition, integration into existing built environments will be important as the alternatives are more fully conceived in the DEIS. Intermodal connections are also important factors to consider and must be assessed in terms of time, access, ease of connection, and possible impacts. The mobility of our residents, workers and visitors is a primary concern and DDOT will work with the project team as more details are developed. The proposed vent plant and substation/TBM launch site in the triangle formed by the two MARC lines and Queens Chapel Road, NE currently houses an active bus parking facility for the DC Office of the State Superintendent of Education (OSSE). You may wish to contact Mr. Eric L. Harris (ericl.harris@dc.gov) of the DC Department of General Services (DGS) concerning this property. A replacement site for this facility (if selected) would need to be provided as mitigation, at the very least, and sites for these types of uses are extremely difficult to find in the District. We also seek information as it becomes available on other possible substation locations in the District, if more are needed. For station locations and these types of ancillary facilities, DDOT Planning and Sustainability Division (PSD) requests that FRA set up a Comprehensive Transportation Review (CTR) scoping meeting as soon as possible to discuss any changes or impacts to the transportation network and whether a CTR will need to be conducted for the project. Please reach out to Mr. Aaron Zimmerman at aaron.zimmerman@dc.gov and 202-671-2356 to set up this meeting. We are also interested in discussing the anticipated lengthy construction period and how those effects will be mitigated. For example, the use of cut and cover construction for the Mt. Vernon Station will be complicated and must be carefully planned, designed and implemented.	Comments noted. Please see response to similar comment no. 6A regarding the justification of eliminating a NoMa station from further consideration. Station trip generation in the DEIS traffic and pedestrian analyses will account for both pick up and drop off by private and for-hire vehicles. Coordination will occur with DGS on the proposed vent plant during DEIS preparation (thank you for the contact). Further coordination with DDOT regarding the local traffic/pedestrian circulation around MVS to be documented in the DEIS, as necessary. Additional information on the ancillary facilities changes to be coordinated further with DDOT and to be included in the DEIS, including the potential mitigation/replacement site for the bus parking facility if needed.	Additional language added regarding justification for eliminating NoMa.
7B	District Department of Transportation (DDOT)	Highlights of DDOT Comments Continued: In our Scoping Comment letter dated January 9, 2017, DDOT stressed the importance of including us in developing, reviewing and screening alternatives for this project to ensure that considerations of project terminus, multimodal access, visual effects, environmental justice, safety, security and other elements receive the full and due diligence of the project team. The location and potential impacts of terminal facilities, including the surrounding multi-modal transportation network, as well as the impacts of any right-of-way needed for connection to the terminal continue to be of particular interest to the District. Additionally, we encouraged FRA to conduct extensive public outreach in the potentially affected parts of the District. We believe the elimination of the NoMa station location needs more assessment, vetting and input before that decision can be made. We also recommend that, in addition to the station locations, a similar robust process be employed for support and ancillary facilities in the District. Highlights of DDOT Report Comments (from truncated report file): {p.21} MVS West UG Station -> Are all stations assumed to be 4 track? {p.23} NoMa Elevated Station -> Why would there be no additional potential terminal facilities for NoMa Elevated Station? More explanation needed regarding the 9th street bridge reconstruction. Is a southern extension of the system planned? {p.24} NoMa UG Station -> "an underground NoMa SCMAGLEV station would be less convenient than an elevated station in terms of connectivity, including the additional time required for an elevator or escalator ride from a 30m (100 foot) deep station." This needs careful vetting as all the other DC stations proposed are underground. Also, is the elevated WMATA New York Ave Station a critical intermodal link (requiring an elevated SCMAGLEV station)? Sentence regarding elevated station providing "greater visibility" than UG station - Not sure that matters given the number of underground Metro Stations. {p.24} Ancillary Facilities -> (Re: RSD) Details about what happens at the RSD need to be provided. Each building has different interior and exterior activities that need to be described. The "look" of the buildings needs to be shown, even if just massing diagrams to illustrate heights, etc. (Re: BWRR presented two conceptual options of potential RSD sites) Because of the private/public aspects of the project, more design and technology reasoning needs to be included to prove that a full range of alternatives has been considered. {p.25} Ancillary Facilities -> (Re: reduce the RSD footprint if a shorter train consist is applicable) But wouldn't you design and build for the ultimate now? {p.28} Ancillary Facilities -> (Re: MD 198 RSD Option) This is the DC owned property and should be reviewed by appropriate DC agencies such as DOEE. {p.29} Ancillary Facilities -> (Re: RSD Flyover/ Elevated Connector Ramp Spur Tracks) "elevated ramp spur tracks" rewording needed. Suggest combining the first two sentences and discussing J1 first as it is difficult to see that this key element/difference of elevated ramps over the parkway is with J1 and not J. {p.30} (MOW location) -> A site selection and screening process will need to be performed if [MOW is not co-located with RSD and is] off site. {p.33} (TBM launch site and vent plant location) -> If all actual potential sites are known, they should be shown. {p.33} (Emergency Egress) -> suggest showing sketches of how this works. {p.34} (Substations) -> "approximately three acre site" It says 7.4 acres above; {p.35} (Substations) -> what are the building heights?	Comments noted. In the District, the ancillary facilities are limited to a vent plant and a sub-stations. At the DEIS level similar robust analysis will be employed for the siting and design of these facilities. Additional information on Stations design will be in the DEIS. Tail track is not necessary for SCMAGLEV operation and was not proposed for the DC stations. At this time the future expansion is north towards New York. See previous responses regarding NoMa station. Text has been revised. Text revised regarding the RSD buildings. Additional information regarding the look of the building to be included in the DEIS. Anticipated height of tallest building in the facility was added (60' for the RSD, 50' for vent plant, 40' substations, and 40' MOW facility). Preliminary engineering to confirm and any changes will be included in the DEIS. TBM launch sites/Ventilation plant locations based on conceptual design were all shown on the 12 map sheets provided in Appendix E. Emergency egress sketches were included in Appendix B. The 3 acres was a typo. Substations text revised to say approximately 7 acres.	Report text was revised based on response to the comments.

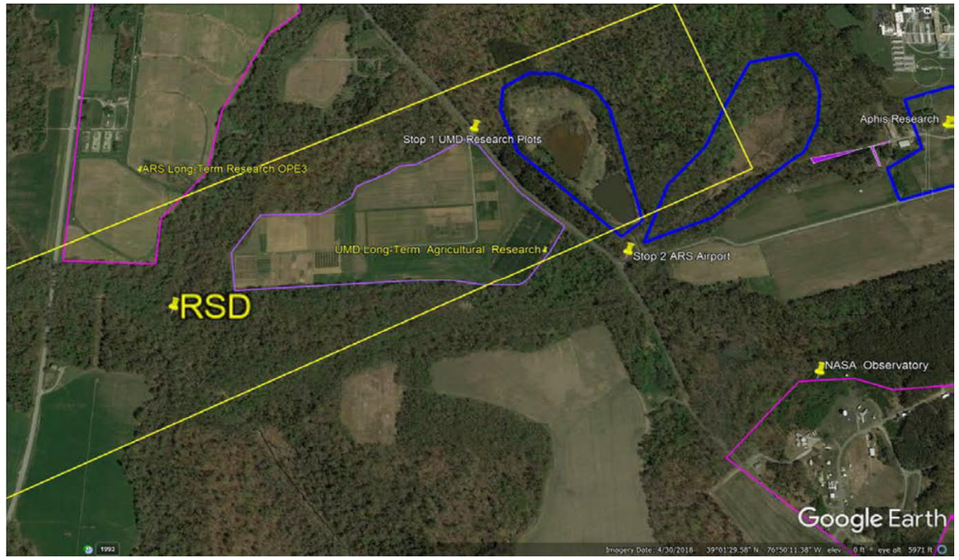
#	Agency	Comment	Response	Edits to final Document
7C	District Department of Transportation (DDOT)	Highlights of DDOT Report Comments (from truncated report file) Continued: {p.37} (permanent access roads) -> These need to fleshed out soon as they will each have site specific impacts and mitigation. {p.39} (Re: 9th Street Bridge) -> "For the NoMa elevated station option, the existing 9th Street Bridge over Amtrak/NY Avenue would require reconstruction. In order to construct a cut-and-cover tunnel at this location, two of the bridge spans would have to be temporarily removed and reconstructed and one bridge pier would need to be shifted either closer New York Avenue." = last few words need rewording but overall this needs careful explaining and factoring into the screening. It seems like a big deal but maybe not when compared to cost of underground station. {p.40} (interface with DC streetcar) -> ...as could the NoMa Station. Pedestrian interface with the proposed streetcar and stations needs to be described in more detail. {p.41} (SWM) -> The portal transition areas should be described way earlier as another project element just like the RSD or other ancillary facilities. Or include with a summary of elevate, tunnel and transition elements for the guideway itself. Graphics needed, too. {p.43} (Evaluation criteria) -> Some summary of the alignments is needed, too. {p.49} (elevated NoMa Station) -> "Ultimately, in order to remain consistent with the Phase I PASR criteria, FRA and MDOT dropped the NoMa elevated station option from further consideration since it would cross Amtrak." = much more detail on WMATA input, ATF, and design criteria challenges is needed here. {p.49} (UG NoMa Station) -> "other deficiencies" = and they are.....? {p.51} (RSD Options) -> The terminology below is not used earlier in the report when describing RSD locations, but should be. {p.51} (dropping NoMa station options) -> I don't think this is compelling enough. Was there any public input for example? {p.53} (Table 3) -> I don't see the logical rationale for dropping the NoMa Station options. Much more detail has to be provided, similar to that done for the alignments. And then, the key determinants need to be reflected in the table in red or some other method. {p.54} (Table 4) -> This table should be realigned to show each segment next to its parallel segment. For example, the J MVS West to Cherry Hill should be right next to the J1 MVS to Cherry Hill segment. That way key differences would pop out. As currently configured, it is very difficult to compare.	Comments noted. Access roads/detours/roadway relocations to be documented in the DEIS. The 9th Street Bridge reconstruction only applied in association with a NoMa station, which has been eliminated. The DEIS will fully account for portal transition areas. Report text revised based on the specific comments as appropriate.	Report text was revised based on response to the comments.
8	Maryland Department of Planning (MDP)	Form and 2 Page attachment received from MDP. Please refer to the actual letter for the full comments. Highlights include: *Planning supports retaining Alternatives J, Alternative J1, and the No—Build Alternative for detailed study. * It will be helpful to clarify the following issues: - Regarding page 47, "Camden Yards Station," please specify what the "several construction obstacles" are. Are they underpinning of existing deep building foundations and/or the demolition of buildings? On page 52, Table 3 indicates this station site would affect three downtown buildings, but it is unclear what types of impacts there may be. - It will be helpful to provide the information on the distance between the closest Metro Station and the Inner Harbor Zone Stations. - Re: Table 3 on page 52, for the Cherry Hill Station Site, it should indicate the distance between the station site and the downtown activity area. - On page 17, the report may clarify whether other potential terminal facilities, such as storage tail tracks and an MOW facility, can be considered for the Cherry Hill site even if the site would not be selected as the station. *One of the project objectives is to support local and regional economic growth. An in-depth economic effects analysis should be provided to address the objective. We assume the analysis will be conducted as part the DEIS development. The project would have an economic impact beyond the project area as defined in Appendix A, Figure A-1: Initial Alignments. A larger area should be considered for the indirect effect analysis including the economic impact assessment. *Planning will work with the Maryland Department of Transportation and the Maryland Transit Administration to address the Priority Funding Areas law application issue as the project proceeds.	Comments noted. For Camden Yards Station, the SCMAGLEV alignment is arrayed on a diagonal to the Inner Harbor street grid, which complicates the construction of the underground station. The station and approach tunnel traverse under city blocks with large buildings on them. Buildings and elevated roadways directly impacted by the construction of the deep underground station and its approach tunnel would require temporary or permanent underpinning support, including the M&T Bank Stadium, MLK Boulevard viaduct, Federal Reserve Bank of Richmond, Baltimore Convention Center, and the historic Otterbein Church. Cherry Hill is approx. 2.5 +/- miles from downtown. For additional potential terminal facilities - Underpinning would be required for the eastern end of M&T Bank Stadium, MLK Boulevard piers above the tunnel ROW, as well as the northern end of the Federal Reserve Bank, and the center section of the Convention Center. The construction of the switch chamber under the Federal Reserve Bank is of particular concern because the switch movements require a top-down construction of a cavern with large spans, severely constraining the locations of support columns. The parking lot and entrance building at the north end of the Bank site would have to be secured during construction to build an excavation pit for the switch chamber. The plaza area on the north side of the Convention Center and Pratt Street would be likewise excavated for the northern switch chamber. Should underpinning of any building prove infeasible, e.g., for structural stability, then the building would have to be demolished to accommodate construction of the station. The construction of the station would disrupt street-level activities in order to transport materials to and from the site. To be included in the DEIS as needed.	Cherry Hill access to downtown can be accomplished by a number of means: auto or free shuttle bus: 8-18 minutes via multiple routes; by light rail: the LRT is located under the SCMAGLEV station (7-8 minutes trip with trains approx. every 15 minutes).

#	Agency	Comment	Response	Edits to final Document
9A	City of Baltimore \ Department of Planning	Form with comments as a 2 page attachment received from DOP . Please refer to the actual letter for the full comments. Highlights include: Please find below, comments from the Baltimore City Department of Planning in reference to the proposed SCMAGLEV, and the two proposed station areas - Camden Yards (Underground Station), and Cherry Hill (Elevated over LRT Station), wherein only one station is to be in Baltimore City. Camden Yards (Underground Station) The Camden Station is the preferred station location, as it would serve a larger population of the city, and serve as a regional destination underneath the Baltimore Convention Center. A station at this location would also offer better pedestrian and vehicular access, multiple station access points or secondary station entrances to consider, parking at nearby garages, and connections to the Camden LRT, and MARC Line. The downtown area would also serve as a premier arrival and departure station that offers a vast array of some of Baltimore's most treasured places to visit. In addition, as Baltimore City aims to attract more residents to the downtown area with ongoing residential development, and visitors alike from throughout the region, a downtown station location would fully support the continued growth and development plans that are currently underway. Business ventures, retail, and sporting venues similarly, are major destination points that can, and will provide the essential ridership and users that are necessary for a premier and successful SCMAGLEV system (See also meeting notes from July 9th). Cherry Hill (Elevated Over LRT Station) While the proposed Cherry Hill Station offers a well suited intermodal connection to the existing Cherry Hill LRT, it offers limited access to the downtown CBD of Baltimore, which is a regional destination. This finding is of particular concern, as compared to the proposed Washington, DC station area destinations that both offer closer central city or downtown station area locations. The Cherry Hill station would not serve as a regional destination, and currently lacks convenient access for pedestrians and riders. A SCMAGLEV system should be located in an area with much higher ridership potential, and in an area that best supports both existing and future development around the station. The Cherry Hill station would primarily serve a limited population of residents who reside in South Baltimore, and be in an area that is hindered by an existing array of active CSX rail lines, and in an area that frequently is faced with traffic backups at nearby rail crossing on Waterview Avenue, and on Annapolis Road. Additionally, no traffic or ridership study was contained in the report to comment on traffic issues or travel demands to/from Baltimore City to further support this station alternative. Parking around this station is also largely non-existent, and presents additional challenges regarding commuter access. While a new parking garage is envisioned across the street for this station, access challenges would still remain to and from this area, and a station located in this area, would deter from the convenience of reaching the majority of the key destinations within Baltimore City (See meeting notes from July 9th).	Comments noted. The traffic study to be included in the DEIS. A ridership study to be included in the DEIS. Cherry Hill LR Station option is in a TOD zone with redevelopment potential, located above the existing light rail station, and is accessible to the regional highway system. Cherry Hill access to downtown (approximately 2.5 mile +/-) can be accomplished by a number of means: auto or shuttle bus: 8 - 18 minutes via multiple routes by auto; or by light rail: the LRT is located under the SCMAGLEV station (7-8 minutes travel time with LR trains approximately every 15 minutes). The station option would require the alignment to cross over and run adjacent to the existing CSX track. Consequently, ongoing discussions are required with CSX and MDOT MTA, but the elevated Cherry Hill LR station option is retained for the DEIS	Cherry Hill language added to the document.
9B	City of Baltimore \ Department of Planning	Highlights of Baltimore City DOP Comments Continued: The Cherry Hill station concept also proposes the storage of "Tail" tracks that would extend into the Westport community and serve as a holding space, or essentially a permanent site to store segments of the SCMAGLEV train. This tail area therefore, as proposed, largely impacts the development potential of this community and would create a lasting visual appearance of storage in a largely residential area. Moreover, this tail track section and the proposed substation, located in the vicinity of Clare Street and Annapolis Road, also raises concern due to this location being in a flood plain area near the Middle Branch waterway. The heights and materials used in these areas would therefore need to be built to withstand any flood conditions. The Cherry Hill Station also requires the construction of a massive portal, beginning in the vicinity of the junction of Annapolis Road and Patapsco Avenue, and extending over 1-295 to the Cherry Hill station. This site is currently a large retail area and parking lot that serves the Patapsco Flea Market, and the Patapsco Arena. A portal in this area, while suitable for what would be necessary for the arrival and departure into and out of the station, would have significant impacts on the functions of these long standing businesses, and will likely require their discontinuance and/or displacement. Construction Impacts The construction impacts of building a SCMAGLEV station in Baltimore City will also require further study of the proposed location(s) of construction staging areas, vent shafts, power stations, and LOD, etc.. The proposed Camden Station, for example, is to pass underneath the historic Otterbain Community, and will require a review of more detailed information in any such areas and any relevant impacts. Moreover, these areas should be treated in the same manner as the DC landmarks - as National Register Eligible sites. (See attached Map of Baltimore City Historic Districts and Landmarks). With that, more exact information on the storage and/or the use of any construction equipment (i.e. staging areas for materials, equipment, and trucks), if any, at either of the proposed station areas, would also be necessary for further study and station evaluations. In addition, DOP would like to know the height of the lowest finished floor of the substation and other structures involved. Our code requires the lowest finished floor to be elevated above the flood protection elevation. Otherwise, the structure will need to be dry flood proofed. Ultimately, this project will need to have site plans showing the 100 and 500 year floodplains. Also, cross sections of structures within the 100 or 500 year floodplain. The cross section must show grade and the flood protection elevation (base flood elevation plus 2 feet) in NADV88.	Comments noted. The STUB track is not for train storage but to accommodate maximum efficiency of train movements on and off the mainline for potential terminal operations. A station construction plan identifying equipment storage, laydown areas, etc. will be developed in the design phase of the station. All structures will be designed to be compliant with floodplain regulation… including those for critical facilities.	N/A

#	Agency	Comment	Response	Edits to final Document
10	Surface Transportation Board (STB)	Comment Form received with embedded comment: We note that STB has not yet received any formal filing from the project sponsor seeking authority to construct a new rail line; therefore, no action is currently pending before the STB. The Office of Environmental Analysis (OEA) is delegated the authority to ensure the STB's compliance with NEPA, consistent with STB policy (49 C.F.R. §1105.2) and offers the following comments. OEA believes that the range of alternatives to be assessed in detail in the Draft EIS is reasonable and appropriate. While retained alternatives potentially may have adverse impacts to properties under the control or jurisdiction of other federal agencies, STB defers to those agencies and their subject matter expertise regarding the characterization and mitigation of such potential impacts. OEA is still awaiting receipt of a ridership study. We'd appreciate an update on when we can expect it.	Comments noted. A formal filing with STB will be made during the DEIS phase of project.	N/A
11A	District of Columbia - Department of Energy & Environment (DOEE)	Form received as part of a 22 Page attachment from DC DOEE. Please refer to the actual attachment for the full comments. Highlights include: DOEE appreciates the opportunity to provide comments on DAR for the SCMAGLEV project. DOEE supports the comments of our other District agencies, the Office of Planning (DCOP) and District Department of Transportation (DDOT), and therefore will not concur with the information as provided until revisions are made to the report or additional information is provided as requested by DCOP and DDOT. Please note that DDOT and DCOP will submit their own comments in response to DAR with separate letters. DOEE provides the following detailed comments on DAR which pertain to the overall project and in framing impact analyses that will be undertaken as part of DEIS development. Note that the following comments are applicable to the District portion of the project as well as District-owned property located in Maryland. 1. The MD 198 Rolling Stock Depot (RSD) option is located on federal property with wetlands and streams that are regulated by the District. The current mapping in the DAR depicts wetland polygons from the National Wetland Inventory (NWI). It is likely that the wetlands are larger in size than the approximations provided in NWI maps. A wetland and stream delineation in accordance with the US Army Corps of Engineers manual and regional supplements should be performed to determine the actual extent of wetland and stream boundaries within the MD 198 RSD option and to accurately assess proposed impacts. 2. Under the District's Water Pollution Control Act, D.C. Official Code §§ 8-103.01 et seq, the discharge of pollutants (i.e., fill, dredge) to the waters of the District (e.g., wetlands and streams) is prohibited. The District regulates discharges of pollutants (i.e., dredge, fill) to District waters by issuing a state certification under Section 401 of the Clean Water Act for activities requiring a US Army Corps of Engineers (USACE) Section 404 Permit or by issuing a DOEE letter of authorization for waters that are not under USACE jurisdiction. It is the District's policy to ensure no net loss and no net gain of wetlands and/or streams and their functions. The District requires a 404/401 permit applicant to ensure impacts to District waters are avoided or minimized to the greatest extent practicable. A discharge of pollutants to District waters will not be permitted if there is a practical alternative to the project layout or location that would have less adverse impacts on the District's waters. An area not presently owned by the applicant which could be obtained, utilized, expanded or managed in order to fulfill the basic purpose of the project may be considered an alternative. if the applicant demonstrates to DOEE's satisfaction that impacts to District waters are unavoidable and necessary, DOEE will require the applicant to provide compensatory mitigation of at least a 3:1 replacement ratio. Compensatory mitigation projects for impacts to District waters must be located within the District or District-regulated land. 3. This project will trigger the following requirements from the 2013 Stormwater Rule: a. Section 520, Major Land Disturbing Activities -the size and scale of the project will disturb land area greater than 5,000 square feet. The project must calculate the Stormwater Retention Volume (SWRv) using the equation from section 520.3, and must include the total area of disturbance (including any temporary areas of disturbance). This SWRv can be captured onsite and retained using the Best Management Practices (BMPs) listed in the 2013 SW Guidebook. b. Section 540 - All land disturbing areas must plan & install erosion & sediment control practices. Approved practices & guidance can be found in 2017 ESC Manual. c. Section 545.5 - In an area along a waterbody, a buffer must be established: a. By not disturbing the land immediately adjacent to the waterbody, except to restore native vegetation; b. Of at least twenty-five feet (25 ft) on both sides of the waterbody, measured perpendicular to and horizontally from the top of bank; and c. With vegetation or other measure required by the Department to ensure that the buffer acts as a filter to trap sediment and keep it onsite.	Comments noted. Applicable SRV procedures will be followed. As the SCMAGLEV will operate interstate, its construction and operation will be regulated preemptively by the Surface Transportation Board (STB). The STB's preemption extends to environmental reviews of the construction and operation of railroads that are subject to its jurisdiction. 1) Wetland and stream delineation will be performed in accordance with USACE requirements. 2) See above. 3) See above..	text added to STORMWATER MANAGEMENT (SWM) As the SCMAGLEV will operate interstate, its construction and operation will be regulated preemptively by the Surface Transportation Board (STB). The STB's preemption extends to environmental reviews of the construction and operation of railroads that are subject to its jurisdiction.

#	Agency	Comment	Response	Edits to final Document
11B	District of Columbia - Department of Energy & Environment (DOEE)	DC DOEE Comments Continued: 4. The Baltimore-Washington SCMAGLEV Project includes aboveground viaducts (both options J and J1) and a proposed MD198 RSD that will disturb the land at the New Beginnings site, which is District-administered land in Maryland (MD) City, Anne Arundel County, MD. The proposed alternatives and MD198 RSD would traverse, impact, or destroy critical wildlife habitats on this property. The project would impact habitats for several of the District's Species of Greatest Conservation Need (SGCN) as listed in the District's State Wildlife Action Plan. Additionally, the SCMAGLEV plan would impact habitat for the federally-threatened Northern Long—eared Bat as well as other species subject to federal protections. 5. The elevated viaduct adjacent to the Baltimore-Washington (B-W) Parkway would traverse land at New Beginnings between Rt. 198 and Rt 32. The greatest impacts of the viaduct would be caused by Option J on the east side of the Parkway. The viaduct would likely destroy prime beaver habitat on the east side of the B—W Parkway forcing the Beavers into more humanly populated areas. Beavers are the SGCN in the District. Such a change may also change the hydrology of the area. Additionally, vernal pool habitats adjacent to the Little Patuxent River and mature forested riparian habitat on both sides of the parkway would be adversely affected by MAGLEV construction. The RSD site would impact approximately 120 acres of upland forest and 20 acres of emergent freshwater wetland or forested wetland. Both the mature riparian forests and the upland forest habitats are likely habitat for the federally-threatened northern long-eared bat (NLB), which is subject to the Endangered Species Act 4(d) rule. The 4(d) rule provides protections to NLB populations at specific times of the year. The following SGCN have been or are likely to be found in the project area. Permanent impacts to these species and their habitats may be subject to conservation measures. The Maryland Department of Natural Resources may have records of SGCN in Maryland and also state-listed endangered or threatened species in this area. A list of the SGCN found in the project area is attached to these comments. 6. A part of the DC-owned property in Maryland is in the 100—year floodplain and even in the floodway. The piers for the elevated track would impact the flow of water and would require regrading. A No-Rise Certification demonstrating that the changes would not cause any increase to the 100-year floodplain elevation will be required from DOEE. 7. The District of Columbia's Brownfield Revitalization Act, D.C. Code § 8631.01 et seq., gives DOEE authority to respond to releases of hazardous substances at sites in the District. Pursuant to that authority, DOEE has also performed a survey of contaminated sites in the District. While the exact location of the MAGLEV routes is not known at this time, DOEE wanted to inform you of this property survey to enable better environmental assessment. This survey is attached to these comments. MAGLEV work performed at contaminated sites may disturb contaminated soil that can exacerbate existing environmental conditions—posing threats to workers, and potentially the greater public and environment. These risks should be considered in the MAGLEV environmental impact analysis. In the event that the MAGLEV route goes through a suspect or confirmed contaminated site, DOEE recommends proper sampling, analysis, and other standard protocols be performed or followed to eliminate or minimize the impact related to disturbing contaminated soils. 8. Pursuant to the UST Regulations 20 DCMR, Chapter 55—70, October 1, 1999, a detailed environmental site assessment should be conducted to identify LUST cases and UST locations as a part of the DEIS. 9. The DEIS should include a procedure for controlling and monitoring the construction dust as per 20 DCMR§605. 10. DEIS should be consistent with the District's sustainability plans. Please note that, the plan may be updated overtime and new plans may also be adopted that could affect areas of potential impact for the SCMAGLEV Project.	Comments noted. To be considered in DEIS. Impacts on local hydrology and any needed mitigation will be analyzed in the DEIS. Information learned during the October 2018 Forest Haven / MD 198 site visit will be incorporated into the DEIS.	N/A
11C	District of Columbia - Department of Energy & Environment (DOEE)	DC DOEE Comments Continued: Remaining 17 pages of the attachment included the SCGN List and a list of Potential Brownfield Sites in District. * The SGCN that DOEE found in the project area: Birds = Wood duck, Veery, Brown creeper, Chimney swift, Yellow-billed cuckoo, Rusty blackbird, Bald eagle, American kestrel, Tree swallow, Eastern towhee, Louisiana waterthrush, Wood thrush, and Ovenbird. Amphibians = Spring Peeper, Fowler's Toad, American Toad, Gray treefrog, Cope's gray treefrog, Pickerel frog, Leopard frog, Marbled salamander, Spotted salamander, and the Red back salamander. Reptiles = Box turtle, painted turtle, northern brown snake, gater snake, worm snake, and five-lined skink Mammals = Virginia opossum, southern flying squirrel, beaver, eastern red bat, big brown bat, and eastern cottontail. (No Dragonflies or Damselflies, no Butterflies, and no Crayfish identified from the list as in the study area.) * See the original attachment file for the table of Potential Brownfield Sites in District.	Comments noted. To be considered in DEIS.	N/A

#	Agency	Comment	Response	Edits to final Document
12A	NASA - Goddard Space Flight Center (GSFC)	Form with comments as a 3 page attachment received from NASA GSFC. Please refer to the actual letter for the full comments. Highlights include: NASA Goddard Space Flight Center (GSFC) has operations that could potentially be affected by the environments created by the SGMAGLEV project during construction and operation. This includes traffic, lighting, vibrations, acoustic, radio frequency (RF), electromagnetic field (EMF), and seismic environments. As previously expressed, any impacts from the SCMAGLEV project on our science and mission would be of great concern. One area of particular concern is the Goddard Geophysical and Astronomical Observatory (GGAO). The Goddard Geophysical and Astronomical Observatory, located off of Springfield Road, is a remote facility that support a number of NASA activities that require minimal disturbances from vibration, artificial lighting, and electromagnetic interference. The site is one of the few places in the world to have all four space geodesy techniques co-located at a single location: Satellite Laser Ranging (SLR), Very Long Baseline Interferometry (VLBI), Global Navigational Satellite System (GNSS), and Doppler Orbitography and Radio-positioning Integrated by Satellite (DORIS). These systems are used to track satellites, measure the Earth's rotation and orientation in space, and establish a global reference point that is used to accurately determine the orbits of satellites and geolocate their Earth observations. The 50-year history of the site is particularly important in establishing this stable reference that is used to tie together historical and new data sets. The site also hosts several optical telescopes, an X-Ray beam-line, neutron spectroscopy experiments, and several other experimental facilities. A laser communication system is also being installed at the site to communicate with satellites using lasers. The stability of the site and the quality of the observations are essential to support a wide variety of NASA missions. The remote location of the site was chosen to protect the NASA systems from disturbances and human activities. The very close proximity of the proposed Rolling Stock Depot (RSD) has the potential for severely negatively impacting the operations of these systems and jeopardize the quality of the measurements that all satellite missions rely on. Specific potential impacts to these systems include: 1. Light pollution from artificial lighting at the Rolling Stock Depot or any nighttime lighting for construction near GGAO would negatively impact the optical systems including the 1.2 meter telescope, the SLR systems, and several optical astronomical facilities. 2. Radio Frequency Interference from Wi-Fi and any other transmitting device that operates in the 2-20GHz range at or near Rolling Stock Depot would negatively impact the VLBI observations and in some situations has the potential to damage the sensitive detector in the VLBI antenna. 3. Vibration from operational activities or construction at or near the Rolling Stock Depot would negatively impact nearly all the systems operating at GGAO. 4. The proposed rerouting of the roads near GGAO may negatively impact nearly all the systems operating at GGAO due to increased light pollution and vibration from changes in the traffic patterns. It may also impact the ease and safe access of the site to large trucks due to the limited number of other large truck-friendly roads leading to the site. 5. Significant EMF from the Rolling Stock Depot or the MAGLEV system may negatively impact the sensitive equipment used for many of the systems at GGAO.	Comments noted. The BARC RSD is dropped from consideration in the DEIS. The DEIS will develop mitigation measures for any impactful vibration, artificial light or EMF due to the construction or operation of the project. EMF from the mainline alignments will be characterized in the DEIS.	N/A
12B	NASA - Goddard Space Flight Center (GSFC)	NASA GSFC Comments Continued: GFSC's Area 300, the Spacecraft Magnetic Test Facility located off Good Luck Road, is a magnetic sensitive area. The magnetic sensors in Area 300 will detect the pulse when a train goes by. Because of this detection, the testing that is performed in Area 300 would be impacted and would have to be modified to account for this pulse. The proposed SCMAGLEV would adversely affect GSFC's Planetary Magnetosphere labs both on and off site. Magnetic fields of up to 5 tesla, 100,000 times stronger than the Earth's field, would be generated, and these would adversely affect the calibration of our magnetometers and would be a critical issue. There may be potential seismic impacts. Occasionally highly sensitive alignments and laser interferometry is performed primarily in one of GSFC buildings on the main campus. These operations can detect even the slightest seismic background, elevator operation in the building, or cars in the parking lot. Seismic activity from the project could potentially impact these optical setups. It is important that any environment that would be created by the SCMAGLEV project, such as traffic, lighting, vibration, acoustic, radio frequency, seismic, and electromagnetic, be defined and assessed in the Draft Environmental Impact Statement (DEIS) for potential impacts on our science operations and facilities. This includes both construction and operational environments. Impacts on the operations and science of the numerous other properties affected by the SCMAGLEV project also need to be thoroughly addressed in the DEIS and considered in the decision-making. For example, Beltsville Agricultural Research Center (BARC) has long-term research areas that would be impacted by the RSD and the alignment itself. The map below shows the location of BARC research areas and the Goddard Geophysical and Astronomical Observatory in relation to the RSD. Additional Comments • NASA GSFC owns property on the west side of the BW Parkway for its exit/ entrance ramp. Please confirm that the J1 alignment does not run under GSFC property. • Impacts to Soil Conservation Service Road from the RSD will affect commuters as the road is heavily used by commuters both in AM and PM. • What, if any, real property transactions would be required for tunnels under federal properties? • In the DEIS it would be beneficial if impacts to specific properties are grouped together in a way that property owners/reviewers (i.e. NASA, BARC) can understand the direct impacts to their properties. Maybe in tables or separate sections. • Need to consider cumulative impacts from the proposed Loop Project. • Chapter 3.C.4. Anticipated Construction Methods, page 36 - much of the information in this section is repeated in Appendix F. • Chapter 4.A. Evaluation Criteria, page 43, 2nd paragraph, 3rd line - update the date of completion "….which is anticipated to be completed in late summers 2018." • Chapter 5. A. Agency Coordination, p[age 57, 4th paragraph, last sentence - "In addition, an agency field meeting will be held in summers 2018." Change to Summer/Fall 2018 or update to past tense for final report. • Appendix B, Section 5 SCMAGLEV System Requirements, 4th paragraph, 2nd line - "……analysis in late Summer 2018." Update date for final report.	Comments noted. SCMAGLEV impacts, including traffic, lighting, vibration, acoustic, radio frequency, seismic and electromagnetic will be defined and assessed in the DEIS. Both temporary construction impacts and permanent operational impacts will be addressed. Alt J1 Does not run under the GSFC ramp on the west side of BW Pkwy. Real Estate impacts will be identified and addressed in the DEIS. The Loop project is a separate study with smaller diameter tunnels. If both move forward then the two engineering teams will need to coordinate the designs. A review of the Loop plans currently show no significant conflicts, SCMAGLEV is adjacent to BW Pkwy lanes in the area when the Loop project shows they are under the travel lanes. SCMAGLEV project cannot account for impacts from other projects. Appendix F was updated to be agency review comments (this table). Dates have been revised.	Updated dates and replaced the redundant Construction Methods in Appendix F with Agency Comment on Draft Alternatives Report.

#	Agency	Comment	Response	Edits to final Document
12C	NASA - Goddard Space Flight Center (GSFC)	NASA GSFC Comments Continued: The map below shows the location of BARC research areas and the Goddard Geophysical and Astronomical Observatory in relation to the RSD.  	Comments noted. The BARC RSD site has been dropped as noted in previous responses.	N/A
13A	Maryland Department of Natural Resources (DNR)	Form with comments as a 3 page attachment received from DNR. Please refer to the actual letter for the full comments. Highlights include: DNR notes that the J1 alternative has no anticipated impacts to the Patuxent Research Refuge (PRR), and in general, fewer impacts in surface LCD to sensitive terrestrial and aquatic habitats, including wooded/forest, wetlands of special state concern, wetlands, and 100 year floodplain. The J1 alternative also has a shorter viaduct length and longer deep tunnel length, which may reduce the potential for surface impacts to natural resources. DNR also recognizes that the J1 alternative proposes greater impacts in number and acreage for local, county, and state parks, and residential parcels located within the LCD. DNR encourages continued efforts in avoidance and minimization of ecological resources, as well as other components, in the selection and refining of the preferred alternative. DNR notes that the elevated spur tracks for either J1 alternative rolling stock depot (RSD) option would not cross over the PRR, while the elevated ramp spur tracks would cross the PRR for the Alternative J MD 198 RSD option. Construction/installation of elevated structures, including bridges or viaducts over sensitive resources may impact these resources within the surface LOD, as well as incur impacts due to shading. DNR recommends further study of areas with proposed elevated structures, and avoidance and minimization of elevated structure construction in the vicinity of sensitive ecological resources and habitats, including the PRR. DNR also recommends continued study of the placement of other proposed ancillary facilities, access roads, and tunnel boring machine (TBM) launch sites to avoid and minimize potential sensitive resource impacts. Please refer to the DNR fisheries and Wildlife and Heritage Service (WHS) responses sent to the project in July 2018 for more details on areas with ecologically sensitive resources and habitats. As regards stormwater management (SWM), DNR concurs with the use of best management practices to detain and/or treat on-site runoff from the viaduct and tunnel portions of the alignment, as well as from the RSD facilities. DNR looks forward to continued coordination into proposed stormwater management designs, with a focus on the treatment of stormwater runoff and reduction of thermal impacts, particularly for structures that may impact the Use IV waterways present within the project corridor, including Severn Run and Patapsco River. For tunnel construction and operation activities, DNR Maryland Geological Survey (MGS) notes that the tunnel alignment is situated at the geologic division of loose sandy/gravel coastal plain sediments and the hard, crystalline geology of the Piedmont, and as such, borings should be conducted for geologic reconnaissance, and this data should be shared with the State. MGS is concerned about potential impacts to: recharge zones of coastal plain aquifers; grouting of annulus surrounding tunnels, and; the dewatering and beneficial use of, and local market response to removed/excavated materials. Additionally, MGS requests more information on the investigations of brownfield/hazardous materials/known contaminant plumes along the proposed alignments, and the potential that any such sites may deteriorate further by construction. A more detailed comment has been provided by MGS and is included (Attachment A) to this comment letter for reference and review. In coordination with the Maryland Environmental Trust (MET), MET has noted that the Northern Maintenance Yard/RSD still appears to have potential to impact the conservation easement held by the Maryland Environmental Trust (and other land trusts) on lands owned by the Federal Government but held for the exclusive use of the Government of the District of Columbia per federal District of Columbia Appropriations Act of 1923 (Pub. L. No 67-457, 42 Stat. 1360). The southern—most portion of the easement land would be impacted by the western portion of the yard (inspection shop and factory), which would convert a field and forest stand to impermissible industrial use. The Department is available for further coordination on this matter.	Comments noted. A first stage geological reconnaissance boring program has recently been completed and has been shared with MDOT/MTA. Any potential impacts to recharge zones of coastal plain aquifers, grouting of annulus surrounding tunnels, and the removed/excavated materials will be defined during the DEIS. . Comments to be considered for the DEIS.	N/A

#	Agency	Comment	Response	Edits to final Document
13B	Maryland Department of Natural Resources (DNR)	DNR Comments Continued: As regards possible forest and/or roadside tree impacts, DNR acknowledges that detailed surveys have not been conducted to date due to ongoing property access requirements and the scale of surveying that would be required at this point in the alternatives selection process. However, DNR requests that the project coordinate with the Maryland Forest Service in order to ensure timely and efficient response and consultation on processes for obtaining permits for forestry/roadside tree impacts. Please contact Marian Honeczy, Maryland Forest Conservation Act Coordinator, at 410-260-8511, to discuss anticipated project timeframes. In coordination with Land Acquisition and Planning (LAP), LAP has noted that the proposed J and J1 alignments are in proximity to and/or have the potential to impact two waterways, the Patuxent and Severn rivers, within the Maryland Scenic and Wild Rivers program. LAP recommends minimizing any impacts to these rivers and their adjoining riparian areas, and requests continued coordination with John F Wilson, Associate Director of LAP, at 410-260-8412, as the project alternative selection and design progresses. As regards the potential for impacts to Wildlife and Heritage Service (WHS) rare, threatened, or endangered (RTE) species and habitat, please refer to the second revision of WHS comments provided to the project on September 18, 2018, and maintain coordination with Lori Byrne, WHS Environmental Wildlife Review Coordinator, at 410-260-8573. Lastly, DNR notes that the project will need to continue coordination with Natural Resource planner Shane Johnston of the Maryland Park Service, at 410-260-8387, and the Critical Area Commission contact established for this project, regarding project aspects that may impact the areas managed by these agencies.	Comments noted. Continued agency coordination throughout the DEIS is planned. Field surveys to be included for the DEIS as appropriate.	N/A
13C	Maryland Department of Natural Resources (DNR)	DNR Comments Continued: ATTACHMENT A: Maryland Geological Survey Full Comments for the SC MAGLEV draft Alternatives Report, provided via email correspondence 09/27/18. A planned tunnel following the path of Route 295 from Washington to Baltimore poses certain challenges and issues requiring consideration by the Department. The location under consideration is at the geologic division of loose sandy/gravel coastal plain sediments and the hard, crystalline geology of the Piedmont. The proposed MAGLEV alignment may encounter hard crystalline rock at the southern and northern terminus of the route, but the remainder will likely be through coastal plain sediments at the burial depths proposed. Deeper placed tunnels may begin to encounter crystalline rock. Reconnaissance through boring is recommended along the proposed routes. Sharing of this data (i.e. boring logs, cores, cuttings, hydraulic tests, geophysical logs and surveys) with the State would be appreciated and should be a condition of the permit. A tunnel at 49-260 feet depth from land surface will likely go through mostly loose, sandy, groundwater saturated coastal plain sediments. It will also intersect the recharge zone of several of the coastal plain aquifers. Issues that could possibly arise include localized groundwater declines in the area of tunneling due to dewatering for construction operations, reduced groundwater impacting local streams, vegetation, and marshes; discharge concerns of the groundwater resulting in varying water chemistry of the local streams; and the possibility of removing high pyrite soils with low pH levels (similar to acid sulphate soils from dredging). If groundwater pumping over the minimum thresholds will be required for construction, the applicant will need to apply for a water appropriation and use permit, and will need to demonstrate that their proposed withdrawal of water will not unreasonably impact the natural resources or other nearby groundwater users. Water appropriation and use permits for quantities over 10,000 gallons per day are subject to public participation requirements. For more information please see MDE's website at: https://mde.maryland.gov/programs/Permits/Documents/2008permitguide/WMA/3.15.pdf Grouting of the annulus surrounding the tunnel is of concern. The grouting needs to have a monitoring plan associated with it to ensure there are no blowouts to surface and to ensure that inadvertent grouting of the aquifer recharge areas is not being performed. The excavated material along the route should readily be used by sand and aggregate businesses operating in the State, or reutilized in the construction of the tunnel. Beneficial use of the removed material should be encouraged. Based on the two different alignments (and not including side tunnels, vents, etc.), the volume of removed material is between 9 and 10.9 Million cubic yards. This is a significant amount of material and if placed on the market could have localized economic impacts to local quarries and transportation industries. The report also discusses slurry excavation. Dewatering of the removed material has multiple concerns should the construction of the tunnel be determined to use that method. MGS does not know if there are any brownfield/hazardous materials/known contaminant plumes along the proposed route, but that should be investigated to ensure those issues are not exasperated by the construction. To MGS's knowledge, the State of MD does not own RT 295 nor the right of ways along the 295 corridors south of Rt 32 which is over half of the proposed tunnel route. While this property transfer is being evaluated, we do not believe it is complete.	Comments noted. A first stage geological reconnaissance boring program has recently been completed and has been shared with MDOT/MTA. Any potential impacts to recharge zones of coastal plain aquifers, grouting of annulus surrounding tunnels, and the removed/excavated materials will be defined during the DEIS. Tunneling methodologies and disposition of spoils will be detailed in the DEIS.	N/A

#	Agency	Comment	Response	Edits to final Document
14A	National Capital Planning Commission (NCPC)	Form with comments as a 4 page attachment received from NCPC. Please refer to the actual letter for the full comments. Highlights include: Both alternatives largely impact National Park Service (NPS) property along the Baltimore-Washington Parkway. Although construction of the J Alternative (east-side) alignment appears less feasible, with greater impacts to the Rowley Training Center, Goddard Space Flight Center, and Patuxent Research Refuge, which would require Congressional action to access. Nevertheless, NCPC staff recommends reconsideration of one or more non-Parkway routes to broaden the range of the future Environmental impact Statement {EIS} analysis. Potential Parkway impacts will have to undergo mitigation through the Section 4(f) Process, which may require additional tunneling, thereby decreasing the economic feasibility of the Parkway alignments. Consideration of another alternative(s) would be beneficial should both Parkway alignments prove to be less feasible than expected, with appropriate mitigation. *Baltimore-Washington Parkway: NCPC's Comprehensive Plan recognizes visual and physical encroachment as a threat to the scenic and pastoral qualities of our region's parkways as reflected through the following policies: 1. Maintain parkways as scenic landscape corridors. and protect their historic aspects. 2. Encourage local jurisdictions to plan for and zone development in such a way that it is not visible from pathways. 3. Encourage local jurisdictions to minimize— through planning, regulation, and careful design—the impact of development that is visible from parkways. 4. Where transportation system impacts are unavoidable, require action to minimize and mitigate these impacts to maintain parkway characteristics. In response, MDOT should maximize opportunities to protect the character of the Parkway with early adverse impact identification. We request development of viewshed studies and renderings as part of the study to show how the alternatives will visually affect the Parkway setting. The renderings should show how innovative and creative screening techniques can help mitigate impacts. Additional tunneling should not be dismissed at this point in the study if screening proves ineffective at successful mitigation under Section 4(f) standards. *James A. Rowley Training Center {United States Secret Service}: The J Alternative appears to impact Rowley Training Center property more than the J1 Alternative based on its eastern—side alignment across Training Center property. Specifically, Secret Service representatives expressed a number of concerns with the project related to security, noise/vibration, and stormwater runoff. The EIS should address each of these topic areas in enough detail to develop effective mitigation measures, with involvement from Training Center officials. *Beltsville Agricultural Research Center {United States Department of Agriculture}: Both alternatives appear to impact the Beltsville Agricultural Research (BARC), with property along both sides of the Parkway. Specifically, United States Department of Agriculture {USDA} representatives expressed concerns with project impacts to sensitive wetlands, stormwater management, and increased potential for polluted stormwater runoff. In addition to guideway impacts, a sizable area of BARC property {257 acres} is identified as a potential Rolling Stock Depot {RSD} site. The large size and placement of the RSD in the center of the BARC property may affect the centers viability as a federal research facility, with significant planning impacts. The EIS should address each of these topic areas in enough detail to develop effective mitigation measures, with involvement from USDA officials.	Comments noted. additional alignments (beyond BWP) were previously considered and eliminated (please refer to the PASR - available on the project website). There have been coordination meetings with NPS and ongoing NPS meetings will occur regarding the 4(f) process, which will be documented in the DEIS. Viewshed analysis and renderings will be developed during the DEIS process. security, noise/vibration, stormwater runoff, and mitigation will be developed during the DEIS process. The BARC RSD is dropped from consideration, but the mainline would still traverse adjacent to the BW-Parkway.	N/A
14B	National Capital Planning Commission (NCPC)	Highlights of NCPC Comments Continued: *Goddard Space Flight Center {National Aeronautics and Space Administration}: The J Alternative appears to impact the Goddard Campus more than the J1 Alternative based on its alignment along the east-side of the BW Parkway. Specifically, NASA representatives expressed a number of concerns with the project related to vibration/magnetic impacts and campus access from the Parkway. Also, with the Goddard's close proximity to BARC and RSD night-time lighting requirements, the BARC location of the RSD may affect light-sensitive research at the Goddard Campus. The EIS should address each of these topic areas in enough detail to develop effective mitigation measures, with involvement from Flight Center officials. *Maryland Stream Valley Park Development: Based on the alternatives report, it appears unlikely that either of the Parkway alignments would impact State stream valley park property acquired under the 1930 Capper-Cramton Act (CCA). However, should the MAGLEV project require physical changes to CCA property, NCPC would have approval authority over future development through the Act. NCPC review focuses on protecting the character and setting of the parks, ensuring that all development is for park-related purposes. In the past, NCPC has considered changes to accommodate regional transportation projects {i.e. the Purple Line} as park-related when accompanied by other benefits to the parkland such as multi-modal transportation access and stormwater management. Future CCA park impacts would require mitigation through the project's Record of Decision {ROD} to enable NCPC approval. *District of Columbia Station Areas: In general, NCPC staff supports a District of Columbia station location that will improve local and regional multi-modal connectivity, with fewer impacts to L'Enfant Plan and other nearby historically-significant resources. A station location that avoids impacts to the historic Carnegie Library and Mount Vernon Square is preferred, and we do not support above-grade station elements within Mount Vernon Square. Based upon our latest consultation meeting, it appears that a station to the west of the Carnegie Library is feasible. and we look forward to continuing our consultation with the study team, along with staff from NPS, the Commission of Fine Arts, and the District of Columbia. *NCPC Information Presentation: At this point in the study process, before proceeding into the NEPA study, we recommend you give a brief information presentation to our Commission about the study process, alternative alignments (eliminated and retained), funding, conceptual plans, and known impact areas. The presentation would afford Commission members with a valuable opportunity to provide comments and ask questions of the study team in a public forum. As the federal planning agency for the National Capital Region, NCPC has a variety of review and approval authorities, as well as experience in coordinating among multiple Federal and local stakeholders. It will be necessary to keep the Commission apprised of the project, and we encourage you to work with NCPC staff to arrange the presentation. In addition, you may consult the NCPC website (www.ncpc.gov) for further information on our legislative authorities, Comprehensive Plan, or project submission/review process.	Comments noted. Continued agency coordination is planned throughout the DEIS process. SCMAGLEV impacts, including traffic, lighting, vibration, acoustic, radio frequency, seismic and electromagnetic, etc., will be defined and assessed in the DEIS. As previously noted on other responses, the BARC RSD is dropped from further consideration, the DEIS will develop mitigation measures for any impactful vibration, artificial light or EMF due to the construction or operation of the system. The NEPA team will coordinate with NCPC staff on a presentation to the Commission (thank you for the suggestion).	N/A

#	Agency	Comment	Response	Edits to final Document
15A	NSA	Text comments submitted via the website as a one page email because NSA security settings regarding the official comment form: Unfortunately, due to security settings within our Internet browser, I was unable to download the comment form for the SCMAGLEV Alternatives Report; in the essence of time, I provided our comments per topic below. I will work with our IT personnel to see if there's a secure way to download the document tomorrow so that you can have our comments in an official format. Electrical: Where are the exact location of the power substations and feeder high voltage lines? EMF: What are the estimated EMF impacts, specifically: electromagnetic? Vibrational? Acoustic? Security: What type of security features will be present on/around the tracks? Security: What is the estimated standoff from NSA property lines? Security: Will any of the infrastructure be precast or will it be built on-site? Security: What kind of construction equipment will be used on-site? Security: Overall security measures for construction: access points, laydown areas, A/E security precautions I apologize again for not having it to you via the comment form document; as I continue to work this issue internally, please let me know if you have any questions or concerns.	Electrical = The power substations are shown on the 12 map sheets in Appendix E. Feeder high voltage lines are yet to be determined. BWRR is in coordination with BG&E and PEPCO. The DEIS will provide additional details on power substations and feeder lines. The DEIS will describe and assess vibration, acoustical and EMF impacts. The DEIS will describe security features around the guideways. Security = Further information regarding security to be considered in the DEIS. There will likely be a mix of precast and cast-in-place construction. For example, tunnel lining segments and viaduct girders are typically precast, while viaduct piers and portal structures are commonly cast in place. Construction methods will be defined as the design advances, considering site conditions and constraints. Best practices for construction site security will be used to control access to construction yards and right-of-ways, with consideration to local conditions and restrictions as applicable.	N/A
15B	NSA	Additional NSA text comments submitted via the website as a one email: Below are our secondary comments upon further project review: Planning: Is there future lateral expansion planned? Security: NSA asks to be engaged with partners throughout the design and construction process. Security: There is concern regarding the construction and O&M protocols. Utilities: There is concern for the impact to NSA's BGE supply yard. Utilities: We would like the project sponsor to ensure that all area-wide utility companies are contacted. Vibration: What are the estimated vibrations emitted from both construction and train operation? Alignments: According to the information that has been supplied up until today (24 October 2018), NSA has significant concerns with both alignments. Please let me know if you have any questions or concerns.	Planning = Future extension of the system to New York would be planned as a separate project/study. No lateral expansion of the SCMAGLEV project is planned in the future. Security = Agency coordination will continue in the future. Further information regarding security and O&M protocols to be considered in the DEIS. In addition, the project sponsor, BWRR, is committed to coordinating with NSA throughout design and construction. Construction and O&M protocols will be coordinated with NSA. Utilities = The project sponsor, BWRR, is coordinating with BGE on power line impacts along the corridor. The need to protect NSA's power supply is understood. The project sponsor, BWRR, will coordinate the design with all area-wide utility companies. Vibration = Vibrations from construction and operations will be described and assessed in the DEIS. Alignment concerns = An agency coordination follow up meeting could be scheduled to discuss the concerns about both alignments. Follow up would be documented in the DEIS.	N/A

#	Agency	Comment	Response	Edits to final Document
16A	National Park Service (NPS)	Form with comments as a 2 page attachment received from NPS . Comment #, Page #, Comment: 1,7, Recommend adding more detail to what considerations were taken into account during the analysis of alternatives screening, especially the potential environmental impacts. One statement says "adverse environmental impacts of reasonable alignments can potentially be mitigated." So did the analysis for potential environmental impacts really take into account those impacts, if it seems like the plan is just to come up with mitigation as opposed to avoidance? 2, 7-8, need greater explanation about screening level 2. E1, G, G1, H and I1 are dismissed due to environmental factors but not J or J1? Why? 3, 9, Alternative J - Should clarify "adjacent to the BW Parkway." Does adjacent mean adjacent to the travel lanes? Or adjacent to the boundary of the NPS land? 4, 9, how would this be implemented, with the proposed Loop project being looked at along the same alignment. 5,9, and 9,12, why can't the entire alignment be underground? 6,9, Alternative J would also go through the Baltimore Washington Parkway land administered by NPS 7,11, Recommend noting example heights from other elevated trains. How much clearance, horizontally, from the trees does the viaduct require? 8,12, Alternative J1 does not avoid the Baltimore Washington Parkway 10,26, Figure 18 - Show zoomed out view - where does this connect to the actual rail and fit within the whole proposed corridor? Show on different basemap, like a topo or regular Google maps. Hard to read since colors blend together. 11, 26, stormwater management features would be very important throughout the entire project and must be described in detail 12, 29, Beaver Dam Overpass is on the List of Classified Structures and is a contributing resource to the NR listing. 13, 29, need a better description of why it needs to be above ground. Far greater impacts to the park. 14,29, Figure 21 (but applies to other maps/figures) - Would help to have actual land boundaries for BW Parkway so we can see exactly if/where tunnel/viaduct is within NPS land. 15,31, Will property owners/Fed agencies be part of the ventilation plants locations discussion with FRA Office of Safety and local emergency authorities? 16, 31, Naps would want to know the exact location of ventilation plants - these need to be located off of NPS property 17, 31, Figure 23 - Can there be any more detail to this figure? Roads? Parking? Are those two story buildings? Three? The "Main Line" and arrows aren't clear as to where or what.	1. & 2. For further information on the preliminary screening level 1 - please refer to the PASR document available on the project website. Section 4(f) avoidance will be documented in the DEIS. 4. The Loop project is a separate study. A review of the Loop plans currently show no significant conflicts; SCMAGLEV is adjacent to BW Pkwy lanes when the Loop is under the travel lanes. 5. & 9. & 13. A requirement of the grant is that the project must be financially feasible. The higher the % of tunnel – twice as expensive as elevated viaduct – the less financially viable. A balance of tunnel and viaduct will best ensure financial viability. The DEIS will include the section 4(f) avoidance analysis. 7. The height of the viaduct varies - vertical profiles were included in Appendix E for the height at guideway level. The 72 ft. distance is the clear zone at guideway level needed, so 13 ft. clearance horizontally. 10. & 14.& 16. Please refer to the 12 sheet corridor maps for more detail and zoomed out view. All project components are included on the maps. Park land (including NPS BW-Pkwy boundary) is also shown. 11. Further SWM details will be available in the DEIS. 13. A portion of the mainline guideway and connector Ramps to the RSD site need to be above ground as the RSD is above ground. 15. & 16. Proposed Vent plant locations are shown on the 12 sheet maps in Appendix E. No vent facilities are sited on NPS property. Access roads will be documented in the DEIS. 17. Height of tallest building on MOW facility anticipated to be approx. 40 ft. tall. More precise facility details are being developed in preliminary engineering and will be documented in the DEIS. Figure 23 is just a concept level sketch of typical MOW facility components.	Text revised per comment 3, 6, 8, 17.
16B	National Park Service (NPS)	NPS Comments Continued: Comment #, Page #, Comment: 18, 34, different acreage requirements are listed for the substations, 7.4 and 3. Please clarify 19, 37, temporary access roads and permanent access roads will impact BW Parkway/NPS land with Alternatives J and J1. 20, 37, paleo and archeology considerations/mitigations during tunneling? 21, 40, Putting viaduct piers in the median of divided roadways (assuming BW Parkway, here) - this is a large Section 106 issue. 22, 41, Stormwater structures need to be located off of NPS property 23, 63, Says J and J1 are practical and feasible from a technical and economic standpoint. The document should also summarize and about what standpoints J and J1 are not practical...environmental? Or factors J and J1 didn't "score" highly on. Place it in this concluding section. * General, Still unclear how FRA plans to complete Section 4(f)	Comments noted. 19. Access roads to be documented in the DEIS. 20. & 21. & 22. To be included in the DEIS analysis. 23. Comment noted. Conclusion does point out the negatives - for example both cross NPS Baltimore-Washington Parkway property, impacts to USDA BARC property, etc. The DEIS will document the alternatives in greater detail. Regarding Section 4(f) - coordination meeting/workshop held with NPS on 10/23/18 to initiate discussions. Further coordination and Section 4(f) analysis will be documented in the DEIS.	Text revised per comment 18 to only reflect the 7.4 acres - it was and editing typo that initially read as 3 hectares (7.4 acres).

#	Agency	Comment	Response	Edits to final Document
17A	U.S. Army Corps of Engineers, Baltimore District (USACE)	No Form but comments received in email (text copied below) from USACE: The U.S. Army Corps of Engineers has received and reviewed the DRAFT Alternatives Report (Dated August 2018) for the proposed SCMAGLEV project. We Do Not Concur at this time; however, we offer the following comments: 1. Based on the conceptual drawings provided, the Calvert Light Street Station alternative will include a 400 meter platform that may impact the Inner Harbor waterway. If you are proposing any aquatic resource impacts to the Inner Harbor, we will need to issue a Department of the Army permit for the proposed impacts. Please verify whether you will have aquatic resource impacts with this proposed alternative. 2. You are proposing to construct a new building and a new planned waterfront development associated with the West port Station alternative. Please be sure to quantify all aquatic resource impacts associated with this alternative. 3. You are proposing a 5 acre development under the Baltimore International Airport (BWI). Have you coordinated with BWI regarding this station location? Does BWI have any significant concerns with your proposed conceptual development at their facility? 4. Both the J and J1 alternatives will result in a significant amount of fill material being generated. How/where are you planning on discharging the generated fill material? Have you explored alternative disposal sites? 5. Please consider splitting up the BARC RSD facilities to avoid impacting streams and wetlands. Please consider the same for other proposed RSDs where appropriate. 6. You indicate that a vent plant is required along the tunnel section approximately every 4 miles. Have you explored alternate locations for these vent plants (2 acres each) to avoid impacts to streams and wetlands? How many vent plants would be required? (8-10)? 7. I do not see impacts to streams and wetlands listed as a criteria in your Station Assessment Table (Table 3). Please explain why impacts to wetlands and streams were not considered as a criteria in this table. 8. In Table 4, you only list the acreage of wetlands and wetlands of state special concern contained within the proposed LOD of the J and J1 alternative alignments; however, you do not list the proposed impacts for streams or wetlands. In order for USACE to evaluate all alternatives, we will need to know total permanent and temporary impacts to streams and wetlands. In addition, we will also need to know the aquatic resource type (Wetlands: PEM, PSS, PFO) Streams (Ephemeral, Intermittent, Perennial). Please provide this information for all alternatives including RDSs, Stations and J and J1 alignments. 9. The Station Terminus Combinations in Appendix D also do not include stream or wetland impacts. Only Wetlands and wetlands of special concerns contained within the LOD. Please include impacts to streams and wetlands as referenced above to all tables in Appendix D. If you have any questions, please do not hesitate to contact me. Thanks for giving us the opportunity to review the DRAFT Alternatives Report. -Don Bole	1. The Calvert/Light Street option was dropped from further consideration, therefore further analysis (including analysis of potential aquatic resource impacts) is not necessary. 2. The Westport station option was dropped from further consideration, so aquatic analysis is not necessary. 3. Yes, the project team has coordinated with both MAA and FAA regarding the SCMAGLEV under BWI Marshall Airport, and will continue to coordinate as the intermediate station location would be part of any build alternative. MAA sent comment form stating "has no comments" and FAA sent the concurrence form noting they concur with minor comments. 4. Soil transport/disposal will be further addressed in the DEIS. 5. BARC RSD has been dropped from further consideration. BWRR has coordinated with the developer of SCMAGLEV technology, the Central Japan Railway Company (JRC), on the operational feasibility of splitting up RSD facility, generally. JRC recently confirmed the ability to have alternate RSD layouts that allow for flexibility in RSD layouts while meeting SCMAGLEV design criteria. Applying this updated information on the flexibility in RSD layout, BWRR reexamined the corridors abutting the J and J1 alignments and identified a potential third alternative RSD site in an area that currently contains a mix of commercial, industrial, and transportation land uses. This third alternative RSD site will need to be presented to local elected officials and the community near the site before this third alternative RSD site is factored into the DEIS. 6. Vent plant locations were shown on the 12 sheet maps included in Appendix E. Vent Plants ideally avoid streams and wetlands, otherwise impacts will be documented in the DEIS. 7. Stations were anticipated in developed areas. If there are any streams or wetlands present they will be documented in the DEIS analysis. 8. Alts. Report was desktop level analysis to guide the narrowing of alternatives. Potential impacts be documented in the DEIS. 9. Impacts to streams and wetlands by type will be in the DEIS.	See response column. Report text revised regarding the RSD facilities - BARC dropped from consideration as splitting it up would not mitigate the loss of research, etc.; however, the MD 198 site may benefit from splitting up the RSD site so it will be studied further in the DEIS - along with an alternative potential RSD site, if applicable.
17B	U.S. Army Corps of Engineers, Baltimore District (USACE)	Email received based on follow up coordination on the USACE comments noted above, Don Bole responded to the project team on 10/30/18 that "For the SCMAGLEV Alternatives Report, the U.S. Army Corps of Engineers concurs with the condition that all alternatives will be retained in the Draft Environmental Impact Statement. Thanks, Don"	Conditional concurrence noted. Both Alternative J and J1 will be retained for consideration in the DEIS.	N/A

#	Agency	Comment	Response	Edits to final Document
18A	Maryland-National Capital Park and Planning Commission, Prince George's County Planning Department, Transportation Planning Section (M-NCPPC)	No Form but comments as a 4 page attachment received from M-NCPPC. Please refer to the actual letter for the full comments. Highlights include: Communities: * The Draft Alternatives Report states "[d]eep tunnel . . . micro settlement . . . or heave . . ." This assertion needs to be proved and fully documented. The report states that over 1,000 residences are located above the proposed tunnels. If there is any risk posed to these residences by underground boring, this would be a serious concern. Reviewing agencies need to determine whether the acknowledged risk of "micro settlement" poses any risk to foundations or above-ground structures. It is our understanding that the proposed project would use new tunnel boring technology untested in the geologic environment of the study area. Boring at this depth in this environment may uncover geologic or hydrological features whose disruption may impact or destabilize areas above the tunnel. In addition to potential impacts to residences, impacts to businesses and critical infrastructure, including, but not limited to, the Anacostia River Flood Control System, should be evaluated. * Prince George's County is concerned about the passenger costs associated with riding the Maglev train. We are requesting that a fund be established (from the fares) to provide subsidies for lower—income and senior citizen residents to utilize this service. When the timing is appropriate, our staff would be pleased to work with MDOT and the selected contractor to determine the format and details of such a program. *Both alternatives propose to have the above-ground viaduct constructed close to residential buildings. Alternative J proposes to construct the track 80 feet from residential structures while Alternative J1 proposes construction at 65 feet. How will negative impacts during construction and operation be mitigated for all neighboring communities? *The Purple Line Light Rail project is locating its maintenance facility near the proposed (along MD 410) preliminary SCMAGLEV vent shaft location. This should be looked at and evaluated closer to avoid the overconcentration of these types of maintenance facilities in the Auburn Manor and surrounding communities. *Noise, vibration, and visual impacts on neighborhoods abutting Alternatives J and J1 between Greenbelt and the City of Laurel/Patuxent River should be evaluated and mitigated as appropriate. Vent Plants: *The two proposed alignments travel through, and the proposed vent facilities are located in, two communities identified by Prince George's County's Transforming Neighborhoods Initiative as facing "significant economic, health, public safety, and educational challenges," notably Woodlawn/West Lanham Hills and East Riverdale/Bladensburg. The area of Bladensburg designated for a potential vent facility features the Bladensburg Waterfront Park and residential neighborhoods surrounded by a concentration of the region's heavy and light industrial and utility facilities. We are not in favor of this location because of the potential impacts to the fragile ecosystem in the Anacostia River. new trails that connect into the District and the recreational activities that occur and are planned in the area. The proposed impacts to the residents in the area bear a disproportionate share of the region's industrial traffic and other locally-unwanted land uses. and their sensitivity to. and ability to withstand. environmental impacts should be considered. *Noise and visual impacts of proposed vent facilities along MD 201 and MD 410 should be evaluated and mitigated as appropriate. *While the Alternatives Report discusses the ventilation plant structures and emergency egress procedures. we are requesting detailed coordination between the project team and Prince George's County public safety agencies. We would like our public safety agencies to be involved in the design of the vent plant facilities as well as the emergency response plan that is needed which would involve communications in the tunnel.	Comments noted. Please refer to the response for comment #2 as the many of the comments are similar. At this early stage, fare prices haven't been fully determined and will depend on final route selection and subsequent construction costs. SCMaglev team hopes to make the SCMAGLEV available, inclusive, and beneficial to all residents of the region. The EIS team will address the interface with the Purple Line in the EIS. Noise and visual impacts of vent facilities will be evaluated and mitigation measures will be identified in the DEIS.	See comment #2.
18B	Maryland-National Capital Park and Planning Commission, Prince George's County Planning Department, Transportation Planning Section (M-NCPPC)	Highlights of M-NCPPC Comments Continued: Environmental: * The Beltsville Agricultural Research Center (BARC) simultaneously serves Prince George's County as a critical environmental and open space resource, a National Register-eligible historic resource, a major employer, and a location for anticipated growth in research and development activities. County policies and regulations strongly discourage development of this area, as its unique mission of agricultural research allows for both economic benefits and environmental preservation. The environmental and potential economic impacts of locating a rolling stock depot (RSD) facility at BARC far exceed the potential benefits of this project. A location for the RSD outside of Prince Georges County is preferable; if the BARC site is selected, the project should restore and/or enhance the current environmental features on the proposed site and/or mitigate RSD construction and operation through the acquisition and preservation of a comparably sized property in areas of the County currently slated for development. There should be no loss of BARC-related jobs due to relocation of BARC activities on the proposed site. * The BARC property is located in the designated Priority Preservation Area (PPA) of Prince George's County. The proposed BARC RSD in this location would have a large impact on the visual and physical landscape of the area as well as significant impacts to Rare. Threatened and Endangered Species. As such, the proposed RSD should not be located on the BARC lands. * If unavoidable, facilities to be constructed in floodplains should be built in a manner that protects against damage or inundation in a flood event. How will mitigation opportunities be handled in these and other sensitive areas? (One-for—one? in-kind environmental mitigation? Mitigation can not occur on M-NCPPC property.) * Consideration must be paid to the environmental and employment impact of relocating the existing WSSC vehicle maintenance facility. If the facility would be relocated as part of this project, such relocation should be considered in the overall environmental impact of the project. * Verification is recommended to determine the presence of Marlboro clay throughout the proposed corridor. Parkland: * Springfield Community Park is owned by MNCPPC. This property was transferred to MNCPPC from the National Park Service with an understanding that the 100—foot buffer along the B/W Parkway will remain available for the future expansion of the parkway. * During the September 25, 2018 field tour of the proposed alignments. project staff stated that Bladensburg South Park was considered an alternate location for a vent facility/tunnel boring machine (TBM) staging location if the site on Lloyd Drive owned by the Washington Suburban Sanitary Commission (WSSC) was unavailable or infeasible. The Bladensburg South Park protects a critical tributary of the Anacostia River. that is a key part of the Countywide Green Infrastructure Network, and is a valued asset of the adjacent residential neighborhoods. This park should not be disturbed as part of this project. Additionally. Bladensburg South Park was purchased with funding from Program Open Space. All impacts must be replaced in kind at a one to one basis. * We concur with the comments and concerns highlighted in the report pertaining to avoiding the use of all public park land and the potentially negative environmental impacts to lands in Prince George's County, especially the construction of the RSD located on the BARC property.	Should the BARC area be designated for an RSD, the DEIS will develop mitigation measures for any impacts due to the construction or operation of the RSD. However, the BARC RSD is dropped from further consideration as previously noted. SCMaglev team is working closely with WSSC to develop an acceptable work around strategy for minimizing impacts on facility operations. The mitigation of roadway impacts will include consideration of planned bicycle and pedestrian facilities. BWRR has commenced discussions with CSX regarding the transport of spoil materials. RTE analysis and potential mitigation to the documented in the DEIS. Geotechnical test borings have occurred throughout the corridor. Information on the soil conditions to be provided in the DEIS as appropriate.	The conclusions / recommendations for the Alternatives Report will no longer advance the BARC RSD option any further.

#	Agency	Comment	Response	Edits to final Document
18C	Maryland-National Capital Park and Planning Commission, Prince George's County Planning Department, Transportation Planning Section (M-NCPPC)	Highlights of M-NCPPC Comments Continued: Transportation: * Any roadway impacts as part of this project should be reconstructed with all master—planned bicycle and pedestrian facilities. * In the event that the proposed vent facility/TBM staging area in Bladensburg advance into preliminary and final engineering. the project sponsor should coordinate with CSX to transport as much spoil material as possible via rail. The cost of facilities to support rail transport of spoil material. including. but not limited to. construction of a temporary siding. should be factored into the design and potential impact of this project. A rail loading facility is preferable to truck transport of spoil material, where possible. Consideration should be given to the noise impact of spoils removal and transport to communities surrounding spoils removal locations and hauling routes. * While construction of the SCMAGLEV may not preclude the construction of a trail network adjacent to the Baltimore-Washington Parkway, such a trail system could be easily accommodated in the design and construction of emergency access roads beneath or adjacent to elevated sections. * Recommendations for critical emergency access infrastructure, access roads for emergency vehicles and access portals to the tunnel for emergency ingress/egress are needed. * Given travel times between most locations in Prince George's County and the proposed stations in the District of Columbia, at Thurgood Marshall Baltimore-Washington International Airport, and Baltimore, it is unlikely that this proposed initial segment of the system will provide time or cost—savings to Prince George's County residents or visitors. Accordingly, any expenditure of county, state, or federal money and resources towards this project should be drawn from sources other than the traditional county, state, and federal funding sources for infrastructure funding. Any diversion of state and federal transportation. environmental. or other infrastructure funding to support this project will detract from this goal. * The Draft Alternatives Report identifies connectivity to other transit modes as a key goal of this project. In consideration of the ultimate operation of the SCMAGLEV service and its competitiveness against other modes of transportation. the project sponsor should determine the range of options for a two-seat ride to served destinations and explore potential connecting services. including. but not limited to. express shuttle or bus service to a station. that would create a time-benefit for a traveler compared to existing driving. commuter rail. or intercity rail options. Some locations in Prince George's County are an hour drive to Baltimore's Inner Harbor. A two-seat ride from these locations with a shorter travel time could prove beneficial to the County and increase acceptance of the environmental impacts. As proposed, the current Maglev alignment and facilities will have significant negative impacts upon Prince George's County. but Prince George's County will not share in the economic or transportation benefits of the project because there is not station in the County. This is a major concern. In closing, we would like to request a presentation of the SCMAGLEV project to the Prince George's County Planning Board.	Comments noted. Roadway impacts and critical emergency infrastructure information will be documented in the DEIS. Bicycle and Pedestrian facilities will be documented as appropriate. Spoil transport will be further addressed in the DEIS. The project sponsor would be open to using CSX to transport spoil materials where appropriate and will continue to coordinate with CSX. Coordination with applicable safety agencies and emergency responders is part of the EIS process. Consideration of connectivity to SCMAGLEV station will include shuttle service to/from the station. The SCMAGLEV team will be pleased to make a presentation to the Prince George 's County Planning Board. The actual physical location of suburban station does not imply lack of positive impacts in Prince George's County.	Roadway text updated as previously noted.
19	Federal Aviation Administration (FAA)	Concurrence Form with minor comments and a 1 page attachment received from FAA: The Federal Aviation Administration (FAA) has reviewed the subject document, received August 31, 2018, and begun review of supplemental materials provided via e-mail on September 28, 2018. Our goal in conducting the review is to provide comments informing the full identification of the alternative(s) to be analyzed within the Environmental Impact Statement (EIS). To that end, we have no comments regarding the alternative analysis and process used to identify alternatives to be considered for further evaluation. However, we still may have comments regarding the breadth of the alternatives still under consideration. Since all alternatives that remain under consideration have the same footprint on and in the vicinity of Baltimore Washington International Airport (BWI), our comments should be considered to apply equally to each alternative. The FAA is a Cooperating Agency to the EIS as our agency has jurisdiction by law with respect to the project. Namely, the proposal would require infrastructure to be constructed above- and below-ground at BWI. The above-ground facilities would require a change to the BWI Airport Layout Plan, which is a Federal Action subject to FAA approval. We are in the process of determining if the proposal under consideration may have additional impacts to the aeronautical operation due to seismic impacts from construction or electromagnetic interference from operation. The supplemental material provided on September 28th speak to these concerns. The FAA's mission is the safe and efficient movement of aircraft. Any effect on aeronautical operation would need to be rectified, should effects be identified. Our aim in reviewing documentation during the alternatives analysis is to resolve this issue, as there is potential for the mitigation of the effect to the airspace to require modification to Navigational Aid Facilities. This would be another Federal Action for FAA approval should it be identified. In summary: • FAA has jurisdiction by law due to the requirement for FAA to review and approve changes to BWI's Airport Layout Plan; • FAA may also have jurisdiction by law due to any necessary changes to Navigational Aid Facilities resulting from the construction or operation of the preferred alternative. The potential for changes to Navigational Aid Facilities should be incorporated into the full description of the proposed action so that any decisions issued could address it and provide the necessary approvals in order to support the implementation of the selected alternative. It is premature at this point to resolve the questions regarding impact to the operation and any subsequent potential need to modify Navigational Aid facilities. These issues can be resolved and identified as the EIS impact analysis is developed. Therefore, the FAA concurs with the alternatives analysis provided that any future federal actions identified as a result of continued analysis be incorporated into the description of the proposed action.	Concurrence with minor comments noted. The project team will continue to coordinate with FAA throughout the EIS process.	N/A

#	Agency	Comment	Response	Edits to final Document
20	Maryland Aviation Administration (MAA)	Form with "Has no Comments" received from MAA	N/A	N/A
21	U.S. Environmental Protection Agency (EPA)	Concurrence Form with "Concurs (w/minor comments)" received from MAA. Embedded comments: While EPA has concurred on the proposed action alternatives (Alternatives J & J1) there are some caution that needs to be recognized as the project moves forward in the NEPA process. Both Alternatives follow similar alignments and directly or indirectly impact many of the same resources. If it is determined that one or more of these impacts are considered a fatal flaw that may affect both alternatives. EPA suggest that localized alternative options be considered to minimize the possibility of alignment fatal flaws.	Concurrence with minor comments noted.	N/A

Appendix G: Agency Coordination (Meeting Summaries)

BALTIMORE-WASHINGTON
SUPERCONDUCTING MAGLEV PROJECT

SCMAGLEV EIS Team Meeting with National Park Service (NPS)
Meeting Notes

DATE: **January 30, 2018**
10:00 am – 11:30 am

LOCATION: **National Park Service, National Capital Region, 1100 Ohio Drive SW, Washington, DC**

This is a summary of the discussion, not a direct transcript. Please notify the project manager of any changes or corrections needed. Meeting attendees are available upon request.

After introductions, Brandon Bratcher (FRA) provided the purpose of the meeting, which is to update the National Park Service (NPS) on the status of the Preliminary Alternatives Screening Report (PASR). More specifically, FRA and MDOT are now formally planning to drop the Amtrak alignment (E1).

- **Preliminary Alternatives Screening Report (PASR) Results**
  - AECOM described changes in the preliminary alternatives screening results since the five October 2017 public meetings including the reasons for eliminating Alignment E1 (Amtrak Modified) from further study in the final PASR.
  - NPS noted that the NPS opinion, as well as some other agencies, has not changed since the last meeting, and they believe the Amtrak alignment should be retained at this time.
  - NPS also asked if the project team had spoken with USFWS and received the OK to cross the Patuxent Research Refuge (PRR) property or if the answer was still "no."
  - AECOM utilized the 1"=600' scale mapping from the October 2017 open house meetings to walk through the alignments with NPS. This is the first time most of the NPS attendees have seen the drawings at this scale.
  - Starting with the Amtrak alignment (E1), AECOM presented the rationale for dropping the Amtrak alignment. It was not strictly based on public outcry; however, the human factor and environmental conditions were involved. The decision was also based on constructability issues and NEPA rationale:
    - Alignment E1 in the vicinity of Amtrak's Northeast Corridor (NEC) would require intrusion protection of SCMAGLEV from a derailment on the NEC, either through distance separation of 150 feet (or greater) or through construction of a crash wall. Moving a SCMAGLEV alignment at least 150 feet west of NEC right-of-way, while maintaining a geometry that accomplishes the SCMAGLEV operating speed would increase (not minimize) impacts of SCMAGLEV on surrounding residential communities and businesses. A crash wall could allow SCMAGLEV to be placed closer to the NEC right-of-way. However, at over 10 miles in length, the crash wall would be prohibitively expensive and undermine the SCMAGLEV's

commercial viability. The needed intrusion protection measures make placing SCMAGLEV in the vicinity of the NEC inconsistent with the Project Purpose.

- The location of the transition portal into deep tunnel section for alignment E1 would directly conflict with future Odenton Town Center Transit-Oriented Development (TOD) at the MARC Odenton station. This would be inconsistent with the Project Purpose of supporting local and regional economic growth.
- To be operationally viable, SCMAGLEV requires a rolling stock depot (RSD) adjacent to the alignment. The relatively dense development along the NEC presents difficulties in locating a RSD. The location of an RSD on alignment E1 would require placement of the tunnel portal at the MARC Seabrook station and nearby development, resulting in a displacement of the MARC Seabrook station. As such, the alignment would not meet the Project's Purpose in that it would not minimize impacts on the human environment, would not be compatible with other rail corridors, and would not support local economic growth. An RSD opposite Bowie State University would severely impact MD 197 during and after construction
- Alignment E1 also received concerns regarding impacts to natural and environmentally sensitive areas including Patuxent Research Refuge, Fran Uhler Natural Area, Saw Hill Creek, and Midland Park.
    - Preliminary alignments E1 and J (BWP Modified East) both attempted to minimize PRR impacts by clipping southern and northern boundaries respectively. However, E1 had a greater impact to PRR while alignment J has less impact at the edge and offers more opportunities to minimize impacts to PRR.
- Impacts to historic areas of "old town" Bowie, Odenton, a historic black college (Bowie State University) and surrounding areas;
- Impacts to community facilities:
    - Alignment E1 would impact Odenton Volunteer Fire Company, the only fire station in Odenton, and Bowie Assisted Living, Inc., the only proximate facility of its kind according to residents.
- Several meetings with review agencies noted that Fort George G. Meade gun range and a closed sanitary landfill would be traversed with alignment E1.
- These concerns were in addition to the number of potential impacts to residential properties, expressed as the public's top concern.

- Although not depicted on the 600' scale open house maps rolled out again at this NPS meeting, there was a brief discussion of the reasons for eliminating the Washington, Baltimore and Annapolis Trail (WB&A) alignments G and G1. These included:
    - Human factors, cost, relocations, and potential impacts to Anacostia Park and the National Arboretum.
- The discussion then switched to the BW Parkway corridor, Alignments J (BWP Modified East) and J1 (BWP Modified West) were also reviewed using the 600' scale mapping.
    - Both J and J1 presented the least potential for residential property impacts of any of the alignments. Alignment J1 has the longest tunnel section, followed by Alignment J which has the second longest tunnel section. Review agencies and

some members of the public appear to favor alignments with greater underground tunneling than those above ground.

  - Constructability and safety intrusion issues were not concerns with Alignments J and J1, since they do not conflict with NEC.
  - Alignments J and J1 would be in tunnel under Anacostia Park and both avoid the National Arboretum. Alignment J1 also avoids PRR. However, both Alignments J and J1 impact the Baltimore Washington Parkway. Potential impacts to this resource are expected to occur along the edges and mainly near interchanges and crossings. FRA and MDOT plan to continue coordinating with NPS throughout the alternatives development process.

- NPS asked if the alignments are still 150 feet off the Parkway, because this mapping does not appear to reflect that.
  - AECOM explained that is was generally the case as the alignments were initially conceived to be approximately 150 feet off the general centerline of the Parkway, and the tunnel portals still appear to reflect that. However, some of the alignment modifications have pushed the alignments closer to the Parkway in places due to geometrics of the SCMAGLEV versus the Parkway road curvature. Going forward, there may be options to reduce impacts to the Parkway during further coordination, but the bump out areas of the NPS property and the interchange areas may be unavoidable.
- NPS stated that it was hard to decipher what criteria the Project team is relying on to eliminate alternatives and expressed concern that FRA, MDOT, and AECOM are evaluating the alternatives inconsistently and not considering all impacts.
  - The NEPA team responded that the PASR will lay out the rationale and criteria to help allay NPS's concerns.
  - NPS requested that quantitative tables be included in the PASR, to which the Project team agreed.
- NPS noted that the BW Parkway is on the National Register of Historic Places and yet the PASR Screening Level 2 table lists the "Potential Impact on Federal Lands & Federal Parks" of Alternative J1 (BWP Modified-West) as Low and the potential impacts to "Historic Landmarks and Eligible National Register Sites & Districts" of Alternatives J and J1 as Low or Medium. NPS stated that the impacts should be High.
  - MDOT and AECOM responded that the PASR explains the methodology for the Low/Medium/High determinations and that the characterization of the impacts as Low is consistent with the quantitative range of impacts explained in the PASR.

o **Upcoming Alternatives Report**

- NPS reminded the project team that is looks at every parcel the same (BW Parkway is just as much a NPS resource as the Grand Canyon).
- NPS asked whether the fact that the project proponent is a private entity impacted the 4(f) analysis. FRA explained that Section 4(f) impacts and analysis are the same, no matter who the project sponsor is, as long as there is a USDOT action.
- NPS flagged for the Project team that its authority to transfer land or provide exchanges or easements is very limited. If the project affects NPS land then there would need to be a land swap discussion. NPS explained that its generally applicable land exchange authority requires that exchange parcels be located within the same state. Although NPS has a short list of several priority properties in

Maryland that it wishes to acquire from willing sellers, it may acquire those properties through earlier transactions unrelated to the SCMAGLEV Project. If so, NPS would need to identify additional properties in Maryland for possible acquisition and this may be time-consuming/challenging.

- NPS asked how Baltimore Washington Rapid Rail (BWRR) would acquire the land; FRA responded that the State of Maryland granted BWRR the old WB&A railroad franchise in November 2015, thereby giving it eminent domain authority.
- On future screening tables, NPS suggested that the project team add a column specifically for 4(f) resources to be quantified.
  - The project team noted the formal Section 4(f) evaluation would be performed in the Draft EIS on the retained alternative(s). The next phase in the alternatives development process is the Alternatives Report, which will continue to collect section 4(f) resource information and feed it into the Draft EIS.
  - NPS requested to see environmental justice (EJ) impacts called out separately. The quantity table was subsequently included in the PASR (in Appendix B), which included columns for the number of low income areas and the number of minority areas within the buffer zones of the alignments. *These two categories were not discriminating factors for the preliminary screening, but they will be revisited for the Alternatives Report*.
- The project team noted that there are still some issues with Alternatives J and J1 that may require tweaks to the alignments during the Alternatives Report. The alignments may differ as compared to the lines on the October 2017 map we are looking at today.
  - The southern portal and the observatory, potential flyover ramps for RSD in BARC, the Secret Service building/property, the various bump outs of the NPS property, flyover at MD 198 and/or potentially a tweaked northern portal.
- NPS noted that it would prefer that the project team look to maximize the use of existing BWP crossings versus creating a new crossing just for SCMAGLEV. Try to cross at or near existing overpasses if possible.
- There was a brief discussion about the need to perhaps parse out station zones and segments in the document (i.e. DC, Baltimore, PG, and AA).
- There was also a brief discussion about the potential ridership. The project team anticipates that the ridership study/information will be part of the DEIS

o **Section 4(f) Evaluation**

- NPS noted concerns over the qualitative nature of the analysis not necessarily taking Section 4(f) into full consideration while dropping alignments, which does not appear to be fully embracing NEPA.
  - The project team noted that a full-blown Section 4(f) analysis is not required at this stage in the process. The analysis will occur when we move forward into the DEIS. The DEIS will give a full examination of avoidance and minimization of the various Section 4(f) qualifying resources. The Section 4(f) analysis will look at end-to-end avoidance alternatives if any exist and will also analyze (and minimize and mitigate) impacts for <u>each</u> Section 4(f) resource if there is no feasible and prudent avoidance alternative.
- NPS requested the quantity table used in the PASR. Previous open house meetings only provided the high/medium/low tables.

- NPS questioned moving forward with the BWP Modified-East Alternative if USFW said “no!” to crossing PRR.
- NPS also asked whether the Alternative J (BWP Modified East) alignment was a true alternative or just a “straw man.” NPS wondered whether Alternative J was an alternative in name only because the Section 4(f) least harm analysis would inevitably result in the selection of Alternative J1 (BWP Modified West), which has fewer impacts to PRR and other Section 4(f) resources. NPS expressed concern that the project is now down to one build option versus the no build alternative.
  - FRA and AECOM responded that the BWP Modified-East alignment is a real alignment and that refinements will continue to be made to minimize or avoid impacts to Section 4(f) resources.
  - FRA noted that even if Alternative J cannot be tweaked out of the PRR the EIS process is allowed to consider the option based on CEQ guidance:
    - *An alternative that is outside the legal jurisdiction of the lead agency must still be analyzed in the EIS if it is reasonable. A potential conflict with local or federal law does not necessarily render an alternative unreasonable, although such conflicts must be considered. Alternatives that are outside the scope of what Congress has approved or funded must still be evaluated in the EIS if they are reasonable, because the EIS may serve as the basis for modifying the Congressional approval or funding in light of NEPA's goals and policies.*

      (https://energy.gov/sites/prod/files/G-CEQ-40Questions.pdf)
- NPS asked if SCMAGLEV could be 100% tunnel as an option in the Draft EIS. Louis Berger explained that 100% tunnel would not be financially feasible, but BWRR would be asked to provide the project team with this financial information for the Section 4(f) evaluation.
- NPS noted that there might not be enough time to adequately analyze all the options/variances regarding Section 4(f) between now and the tentative April date for the Alternatives Report.
  - FRA asked if the project team should study the various options externally and then get back with NPS to present, or if NPS would like to workshop potential tweaks or options to the J and J1 alignments.
  - NPS noted that it would probably be best for NPS to sit with the project team again and workshop/coordinate the tweaks sometime in the next few weeks.

o **Next Steps**

- NPS noted that DC wanted to join in the meeting, but NPS referred them to FRA. NPS suggested that a meeting be set up for all DC departments.
  - The project team will coordinate with DDOT to set up a combined DC meeting.
- Send the PASR and quantity table to NPS upon release by FRA and MDOT.
  - *The* quantity *table was included in the PASR (see Appendix B) which is available on the project website under Project Documents then Reports tab (http://www.bwmaglev.info/).*
- Schedule additional workshop with NPS to get input on refinements (avoidance and minimization) on proposed alternatives
- Confirm the agency review process for the Alternatives Report.
  - *Please refer to the Public/Agency Coordination Plan, updated in January 2018, which is also available on the project website under Project Documents then Reports tab (http://www.bwmaglev.info/).*

BALTIMORE-WASHINGTON
SUPERCONDUCTING MAGLEV PROJECT

SCMAGLEV EIS Team Meeting with SHA
Meeting Notes

DATE: February 20, 2018 | 10:00 am – 11:00 am

LOCATION: **SHA** (SHA Headquarters 707 N. Calvert Street, Baltimore MD)

This is a summary of the discussion, not a direct transcript. Please notify the project manager of any changes or corrections needed. Meeting attendees are available upon request.

- **Introductions**

- **Purpose of the Meeting and Project Status**
  - The project team described the purpose of the meeting and discussed the project status.
    - Currently in the early NEPA stage with recent approval from FRA and MDOT regarding the Preliminary Alternatives Screening Report (PASR) and the project team is currently meeting with agencies as the two BW Parkway alignments are the alternatives retained for detailed study in the Alternatives Report.
  - AECOM gave a brief overview of project history and noted that the *Purpose and Need* document and the *PASR* document are both on the project website.

- **Alternatives Update / Preliminary Alternatives Retained for Detailed Study**
  - AECOM and the project team provided an overview of the preliminary alternatives retained for detailed study using the 600 scale maps.
  - The maps show the October 2017 alignments along the BW Parkway, the project team made notes where updates to the alignments are under consideration for inclusion in the Alternatives Report.

- **Areas of Concern**
  - SHA asked if the project team is in coordination with MdTA? If the BW Parkway gets turned over and it would be MdTA that would be responsible for the potential new toll/managed lanes. The project team will reach out to MdTA.
  - AECOM asked if SHA anticipated the portion of 295 north of MD 175 (that is not NPS property) to be turned over to MdTA if the BW Parkway portion is turned over?
    - SHA noted that would need to be determined, but the proposed toll lanes would be new construction and not a lane conversion. Therefore, the SCMAGLEV piers should not preclude the roadway widening.
  - The project team asked if the elevated viaduct over any of the Maryland roads concerned SHA.
    - SHA noted that the anticipated 120 ft. pier spacing for SCMAGLEV should not cause a problem for any of the crossings, but would review further after potential pier locations have been identified in preliminary engineering.

- SHA noted that MD 175 is already 5 lanes wide and proposed one additional lane, but at that point SCMAGLEV would be in tunnel under MD 175 so that is not be a concern.

- **Open Discussion**
  - SHA asked about the affect that the hyperloop might have on the SCMAGLEV project, primarily concerning ridership.
    - The project team has met with the modeling people and they do not see hyperloop as a factor in the ridership study as the hyperloop is not ready to begin moving people in the near future.
    - The SCMAGLEV project is based on technology that has been proven to work and currently moves people in Japan. Except the underground crossing from the west side, SCMAGLEV is generally proposed to wither the east or west of the BW Parkway, unlike the hyperloop that is rumored to go under the roadway right-of-way.
    - The hyperloop tunnels are anticipated to be smaller and may not be as deep as the proposed SCMAGLEV tunnels, so there may not be a conflict even at the potential crossing. The team will evaluate any hyperloop information regarding alignments or depths as it becomes available.
  - SHA asked if the alignments used different design criterial at the stations since the train would not be full speed.
    - The project team noted that the full speed design criteria is applied to the entire alignment as the train can accelerate or stop very quickly, but due to the human factor the train takes two minutes to reach full speed so people do not feel they are on a roller coaster.
    - In addition, after the Washington to Baltimore SCMAGLEV is proven to be successful, the project sponsor would likely extend the system and the stations cannot preclude future expansion.
  - SHA asked if the SCMAGLEV alignments considered the Red Line in Baltimore. Even though the Red Line is currently not active, it could be a potential connection if that project becomes active in the future.
  - SHA asked if parking/garages were under consideration at the proposed stations.
    - The project team noted that the availability of existing parking, or potential space for creating parking, was a factor in evaluating the station zones feasibility. Intermodal connectivity (including highway mode) is important for riders to shift to SCMAGLEV in order to help ease congestion in the region.

- **Next Steps/ Adjourn**
  - SHA noted that the potential impact from SCMAGLEV to SHA facilities appears to be minimal, but will continue to be involved as the project moves forward.
  - The project team will continue to provide updates at the Interagency Review Meetings (IRM).

SCMAGLEV Meeting with NASA Goddard
Meeting Notes

DATE: February 27, 2018
11:00 am – 12:00 pm

LOCATION: **NASA** (8800 Greenbelt Rd, Greenbelt, MD 20771)

This is a summary of the discussion, not a direct transcript. Please notify the project manager of any changes or corrections needed. Meeting attendees are available upon request.

- **Introductions**

- **Purpose of the Meeting and Project Status**
  - Federal Railroad Administration (FRA) provided an overview of the project and the NEPA process. FRA also provided background information on the MPS grant process and history of the funding source. FRA and team are in the process of reaching out to multiple federal, state and local agencies along the alignments providing updates on alternatives following the publishing of the Preliminary Alternative Screening Report (PASR).
  - AECOM provided a background update of the NEPA steps that have been completed (NOI, Purpose and Need, and PASR) and what is upcoming (Alternatives Report, DEIS, FEIS, etc). Angela indicated all NEPA documents and schedule are on the project website. Angela provided an update on upcoming project monthly agency meetings/calls. NASA indicated they have received the invitation.
  - AECOM confirmed that NASA has responded formally as a NEPA participating agency; in response to a question from NASA regarding potentially moving to "cooperating".

- **Alternatives Update**
  - AECOM provided an overview of the alternatives using physical 600' scale roll maps and NASA specific illustrations brought to the meeting. The discussion focused on the two alternatives retained along BW Parkway (Alternatives J and J1). Angela briefly indicated the Amtrak alternative has been dropped. The focus of the maps is to show the alignment affecting the NASA property.
  - AECOM noted that the orange boxes on the illustrations indicate the temporary construction area for the tunnel portal, which would likely be cut and cover and restored after construction was completed.
  - FRA indicated the alternative alignments continue to be refined. The alternatives have gone from 40% underground to 70% since the last meeting with NASA. AECOM indicated the rolling stock depot (RSD) sites are still being refined.

- **Areas of Concern/Discussion Points**
  - How deep under the property are the tunnels? How will the tunnels be constructed? Average depth will be 80-170', but will be coming upward as approaching the NASA facility. There is a maximum 4% grade in the tunnel. A Tunnel Boring Machine (TBM) is the anticipated method to construct the tunnels. The TBM will be launched at the most logical location which includes the portal likely just north of NASA GFSC or one of the required vent plant locations to the south toward the DC Station.
  - Impacts to the ramp entering Goddard facility from BW Parkway would not be favorable as this is a major employee entrance to the facility. NASA will provide information on property line and other data. NASA can provide in GIS format.
  - NASA indicated concerns with both construction and operational impacts due to vibration. Vibration and noise studies will be a part of the study DEIS.
  - NASA is also concerned about potential magnetic impacts from the SCMAGLEV system. NASA explained they operate a magnetic sensitive area ("Area 300"), and the facility is the only one in the world. In addition, it is a National Historic Landmark.
  - Questions about timeline of construction? DEIS should be available for review in January 2019.
  - Request to provide as much information as possible on the electromagnetic spectrum and impacts.
  - Air Rights sign off for over/under NASA property? NASA legal will review it, potentially be an easement.
  - Question related to construction lay-down and staging areas. Information will be provided in the DEIS and potentially the Alternatives reports. (Need to have any information possible on staging areas).
  - Potential traffic impacts to the BW Parkway entrance and other entrances. NASA can potentially provide traffic counts for entrances.
  - Scientist and engineering impacts with vibration and magnetic fields, impacts for property easements, and potentially any environmental impacts to the facility.
  - Construction could potentially start in 2020 at the earliest, with a potential 7-year construction period.
  - Question if NASA or anyone else could build on top of the tunnel sections.
  - NASA reiterates any type of EMF or vibration impacts could impact their mission and will have concerns from their scientists and engineers. The concerns will likely vary from building to building and can change over time.

- **Action Items**
  - NASA to provide team GIS data on property.
  - NASA to provide email on potential specific impact questions related to vibration and EMF impacts to "Area 300" for SCMAGLEV team to take to engineers
  - NEPA Team to provide information on the electromagnetic spectrum and impacts of the SCMAGLEV.

BALTIMORE-WASHINGTON
SUPERCONDUCTING MAGLEV PROJECT

SCMAGLEV EIS Team Meeting with DNR
Meeting Notes

DATE: March 19, 2018 | 12:30pm- 2:30pm

LOCATION: **Maryland Dept. of Natural Resources (DNR)** (Tawes State Office Building)

In an effort to forward discussions with the Maryland Department of Natural Resources regarding potential resources within the SCMAGLEV study area, a meeting was scheduled with the various DNR departments, representatives from the state sponsor for the proposed Project, and AECOM, the consultants completing the NEPA study. The main purpose of the meeting was to address the existing data files that have been utilized thus far to complete initial screening assessments, and discuss additional information available to include in further NEPA analyses. Meeting attendees are available upon request.

Project Team Briefing

AECOM initiated introductions and provided a brief history of the Projects NEPA progress to date, beginning with the proposed build alternatives. A range of reasonable alternatives (14 total) were evaluated through a two-level screening process, which resulted in an approval of the Preliminary Alternatives Screening Report (PASR). The PASR evaluated both environmental constraints, including cultural, natural, and social resources, as well as constructability. This report resulted in two proposed build alternatives recommended to be studied further. This report is available, along with the Project Purpose and Need document, Project Coordination document, and preliminary mapping, on the Project website www.bwmaglev.info.

Several coordination meetings with federal, state, and local agencies have occurred, and the Project continues to be evaluated and alternative alignments refined. AECOM requested this meeting with DNR in response to coordination with DNR at previous agency meetings and at the suggestion that additional insight and information can be transmitted that would aid in the next steps of the process, which is preparation of the Alternatives Retained for Detailed Study (ARDS) document. The Project has been narrowed down to two alternative alignments (J and J1). Large scale mapping was laid on the tables for an overall view of the study area with these alternatives. These alternatives will be carried forward into the ARDS and further into the Draft Environmental Impact Statement (EIS).

Evaluation of the alternatives within the ARDS will consider the proposed alignments location, whether it is elevated or tunneled, and also the several support facilities that will be necessary such as the rolling stock depots (RSD) and vent plants. DNR asked if the RSD locations shown on the display mapping were determined and both planned for use, and AECOM clarified that only one of the two RSD locations shown will be selected. From approximately Washington D.C. to Greenbelt the SCMAGLEV would be tunneled, Greenbelt to Fort Meade would be elevated, and Fort Meade to Baltimore would be tunneled. Engineering design details are still being evaluated. AECOM reiterated that what is currently shown on these maps is a work in progress.

The Baltimore Washington Rapid Rail (BWRR) engineering team, Louis Berger, is currently working to tweak alignments and support structures to avoid and minimize impacts to the cultural, natural and social resources, while maintaining necessary engineering constraints and Project feasibility.

DNR provided an update to the representatives of the SCMAGLEV meetings (largely the Joint Evaluation Committee meetings) DNR has attended, and provided a reminder of the need to ensure that the team is "on the same page" because this project is very apparent in the public view. AECOM indicated that a draft of the ARDS document would likely be completed approximately 30 days after the engineering team provides final information. The larger EIS evaluation and documentation is estimated to conclude in late 2019.

Data & Methodology Review

AECOM provided an overview of the meeting goals, with the purpose to focus on the existing information utilized to date, and what information can still be attained that can provide value to the analysis of resources within the study area of the two remaining build alternatives. The Project team wanted to hear from the various DNR representatives regarding important resources and concerns.

MD State Parks

DNR provided a description of the environmental review process that would be required. He indicated that his review will generally take 30 to 45 days. It is possible that with much of the project within tunnel it may make the review easier, but it is still required. It must go through the Board of Public Works for approval for construction. This process could take up to a year, sometimes more. DNR indicated the need for the Parks Service to provide "Right" for anyone to access through their property. He reiterated that any above ground access for things such as RSDs and vent plants would also require approval through the Board of Public Works. Prior to being placed on the Board of Public Works agenda, the MDP Clearinghouse review is required (60-90 days) and followed by Department of General Services (DGS) review.

At this point in the NEPA study, no construction access is required, but access for potential field evaluations would also need to be discussed. If access is approved for the Project construction, then DNR would provide an easement to MDOT/FRA to access the property.

There was interest in the methods used to tunnel, and issues that may be associated such as spoils/soil tailings and groundwater pumping. AECOM indicated that it would be a "dry tunnel" and the anticipated tunnel construction method is by tunnel boring machines (TBM). The exact type of TBM and cutting face will be determined after soil borings are collected and analyzed later this year. However, based on preliminary geological data it is currently assumed that an earth pressure balance TBMs will be needed. These are electric self contained units that slowly bore the required diameter hole and place the tunnel lining segments as the machine progresses underground. It is this type of TBM that tunneled under the Anacostia River for the WMATA Green Line in 1985. Soil tailing/spoils are sent out of the back of the machine and collected at the tunnel launch/staging area to be sorted and hauled away during off-peak travel times,

The only state park property relevant to this study is the Patapsco State Park. There was discussion on the mapped boundary of the park and the need to ensure that AECOM has the latest and most accurate data being used. AECOM will coordinate with DNR's Land Acquisition Division, to make sure the latest GIS files are received.

Maryland Environmental Trust (MET)

DNR indicated that the only conservation easement likely an issue for the Project is the Oak Hill property, which the state currently holds as a result of an EPA mandated transaction over a water resource violation. A portion of this property is dedicated to the District of Columbia and has been a youth correctional facility. The area is located on the south side of Route 32 near NSA, north of the Patuxent River, and is within the area of a proposed RSD.

The majority of the Oak Hill property is forested and/or palustrine wetland. Portions of the property have been abandoned and are not in use, but there are areas still in use, likely connected to the corrections facilities. Project mapping identifies this property as Federal land, which will be revised to appropriately indicate it as State land.

DNR acknowledged that it may be possible to use a portion of this property for Project needs, but the team would need to show that there is a significant public safety benefit to utilizing this property. MET would need to determine if this use is allowed, and what mitigation might be required. There are other co-holders on the property; however, the state has the most influence over decisions. This property is identified in 501C Land Trusts. The review process required is similar to the Parks department, and it must go through the Board of Public Works for approval. MET would then amend the existing conservation easement if the Project is allowed to cross.

AECOM will review the DNR Lands & Conservation Easement Dataset to ensure this easement is represented. DNR will provide a plat following a formal request submitted by AECOM.

RTE Species, Habitats & Fisheries

AECOM is just approaching the stage in the NEPA process where formal requests for information regarding rare, threatened, and endangered (RTE) species, habitats and fisheries will be submitted. DNR referenced a screening she provided in April/May of 2017. AECOM will ensure that this screening has been utilized as well as any additional information provided through the formal requests. AECOM will also provide in the written request to Wildlife and Fisheries, the two alignments in shapefile formats.

DNR indicated the anadromous fish and eel concerns in the Patuxent, as well as the concern for fish passage. It does not seem as though the proposed alignments will traverse any managed fishing areas, however recreational fish and trout stocking areas will be evaluated for the Project. Wild and Scenic Rivers will also be considered. The only one of issue for the Project should be the Patuxent River.

It is anticipated that impacts to fisheries will be limited, as the Project proposes largely elevated or tunneled sections, but areas where access or support facilities are located at-grade will need to be evaluated. Any proposed temporary or permanent impacts within waters will also need to consider Time-of Year restrictions, as well as aquatic RTE's. DNR stated their preference to maintain forested stream buffers, especially in areas of RTE's. DNR may also have several suggestions for possible mitigation for fisheries resources (noted in last section). Mitigation is not likely for rare species, these areas should be avoided to the greatest extent possible.

Forest Interior Dwelling Species (FIDS) should also be considered. This evaluation will depend on several factors such as the location and height of the proposed elevated structure in relation to large tracts of forest. AECOM noted the potential 18-foot minimum height of the elevated structures. The EIS prepared for the project will evaluate the ability to have vegetation in and surrounding these structures, considering factors such as height, sun angle, and vegetation that may attract unwanted wildlife to an unsafe area.

Forest Conservation

Forest Conservation Act coordination will be necessary. AECOM will coordinate with DNR Chesapeake and Coastal Services, to request forestry and tree specific data that may not be publicly available and may require a license agreement or Non-Disclosure Agreement for use on this project.

Miscellaneous Discussion

Mitigation needs and options were discussed at several points during the meeting. DNR reminded the Project team to keep DNR in mind when evaluating and brain-storming ideas. DNR indicated the possible use of excess and/or scrap clean concrete that may result from the Project for use by other special interest groups. With the large amount of material potentially generated from construction, use of some of this material could be considered for fisheries mitigation efforts. Continued coordination with the DNR would determine if this option is feasible. All of this coordination and further discussion can aid in the development of mitigation opportunities that will be documented within the Draft EIS.

DNR noted the additional requirements relevant if dam construction is necessary. He indicated that DNR works closely with the Maryland Department of the Environment and the National Marine Fisheries Service. The DNR is also helpful when providing/updating the public regarding natural resources.

Concerns of drilling were also discussed, and the effects of groundwater changes are of interest to DNR. DNR also noted that Secondary and Cumulative Effects are always of interest to DNR. Construction staging areas, vehicle and track storage and maintenance areas are of interest. These topics will be evaluated and included in the Draft EIS.

As alternative alignments and locations of support facilities become more defined, the Project team will also reach out to the Critical Area Commission, which is a department of the Maryland DNR, but not in attendance at the meeting.

SCMAGLEV Meeting with US Secret Service
Meeting Notes

DATE: March 20, 2018 | 10:30 am – 11:30 am

LOCATION: **JJRTC - Bowman Building (9200 Powder Mill Road, Laurel, MD 20708)**

This is a summary of the discussion, not a direct transcript. Please notify the project manager of any changes or corrections needed. Meeting attendees are available upon request.

- **Purpose of the Meeting and Project Status**
  - The purpose of the meeting was to discuss the project status and understand agency concerns.
    - Preliminary Alternatives Screening Report (PASR) is now on project website.
    - Currently refining the alignments from the PASR for the upcoming Alternatives Report.

- **Alternatives Update**
  - AECOM provided a brief overview of the remaining alternatives (J and J1), and noted the modifications made on and near the U.S. Secret Service (USSS) property based on the discussions from the previous meeting in summer of 2017.
  - The USSS property boundary is adjacent to Baltimore-Washington Parkway and Alternative J (BWP-East) has been modified to avoid a direct conflict with the indoor firing range facility.
    - The currently proposed modification shifts the alignment westward but still immediately adjacent to the building, so accommodations for the interior roadway would still be needed (either roadway relocation or the use of straddle bent structure support for the guideway to allow the roadway to pass underneath).
  - Alternative J1 (BWP-West) would be preferable to the USSS as it is on the other side of the Parkway and does not directly affect the Secret Service property, but line of sight still a concern depending on the proposed elevation of the guideway.

- **Areas of Concern/Discussion Points**
  - The major USSS concern is the line of sight from the elevated guideway into the USSS property for either the east or west alternative.
  - How would the rainwater / runoff from the guideway be handled? If the runoff is concentrated it could potentially pick up lead contamination from the firing ranges/etc.
  - Instead of elevated viaduct on the east side, could the alignment remain in tunnel to avoid surface impacts to the USSS property?
  - Security and access (construction and maintenance) to the guideway is also concern (either above or below grade).
  - Noise and vibration are also a concern, as the site is a training facility. Would the high-speed train interrupt agents training with firearms?

        - It was noted that the system has been studied and is in operation in Japan, so tunnel portals have baffles to prevent sonic boom. Since the train does not have steel wheel on rail, the noise resulting from SCMAGLEV system is primarily air being displaced by the train.
        - Potential hoods to cover the elevated viaduct could be negotiated to mitigate noise or line of sight issues.
    - How many employees anticipated at the Rolling Stock Depot (RSD) facility?
        - This would be important from a traffic impact with respect to the local roadway network.
    - If the project were to go through/under the USSS property, all workers would be subject to background checks and restrictions (US Citizenship, security clearance, etc.) as any other outside vendor/contractor that works on their property.

- **Action Items**
    - Project Team to provide Noise and Vibration information, when available.
    - Secret Service to provide a sample contractor security clearance form/requirements.

BALTIMORE-WASHINGTON SUPERCONDUCTING MAGLEV PROJECT

SCMAGLEV EIS Team Meeting with Baltimore City Planning
Meeting Notes

DATE: March 26, 2018 | 11:00 am – 12:00 pm

LOCATION: 417 E. Fayette Street, 8th Floor, Baltimore MD 21202

This is a summary of the discussion, not a direct transcript. Please notify the project manager of any changes or corrections needed. Meeting attendees are available upon request.

- **Introductions**

- **Purpose of the Meeting and Project Status**
  - The project team described the purpose of the meeting and discussed the project status.
    - The project is in the early NEPA stage with recent approval from FRA and MDOT regarding the Preliminary Alternatives Screening Report (PASR). The project team is currently meeting with agencies as the two BW Parkway alignments are the alternatives retained for detailed study in the Alternatives Report.
  - AECOM gave a brief overview of project history and noted that the *Purpose and Need* document and the *PASR* document are both on the project website.
    - Next will be the Alternatives Report (anticipated late spring 2018) that defines the alternatives to be analyzed in the Draft EIS (anticipated in 2019).

- **Alternatives Update / Preliminary Alternatives Retained for Detailed Study**
  - The project team provided an overview of the two preliminary alternatives retained for detailed study using 600 scale maps.
  - The maps detailed the October 2017 alignments along the BW Parkway, the project team made notes where updates to the alignments are under consideration for inclusion in the Alternatives Report.

- **Areas of Concern / Open Discussion**
  - Baltimore City asked about funding and what is remaining in the Federal grant.
    - The current grant covers the NEPA study and Preliminary Engineering activities to support the NEPA study.
    - The grant is 80/20 split with the private project sponsor paying the 20%.
    - There are currently no construction funds for the SCMAGLEV project. Construction funding is still to be determined, but the private sponsor (BWRR) would look to use private funding, potentially look into any federal grants of funding available, and potentially outside funding pledged from Japan.
    - After construction, the SCMAGLEV system intends to be self-sufficient and not depending on government subsidies to operate.
  - Baltimore City asked about the effect that competing projects (the loop) might have on the SCMAGLEV project, primarily concerning ridership and funding.

    - The SCMAGLEV project team is currently preparing a ridership study based on travel demand models. The SCMAGLEV project is based on technology that has been proven to work and currently moves people in Japan.
    - Except the underground crossing from the west side, SCMAGLEV is proposed to be on either the east or west of the BW Parkway, unlike the loop that is shown on their website to go under the roadway right-of-way.
    - The team will evaluate any loop information regarding alignments or depths as it becomes available.
    - Not clear if the two would be competing for funding as the perceived anticipated markets are different. Loop is now anticipated at only 100 mph (approximate) versus maglev is mass transit at 311 mph.
    - SCMAGLEV is on an established path for NEPA process and permitting afterwards, but no comment on loop process as it is separate study.
- Baltimore City noted that Westport and Cherry Hill have limited access in or out of either area via MD 295. This could present a challenge for the City if the SCMAGLEV station is located at either of these locations.
- Baltimore City also questioned why a Baltimore station would be anywhere else except downtown. People want to be downtown. The Westport zone does not truly serve Baltimore in the City Planners opinion.
- Would the City be asked to help fund the station construction? The project team noted that construction funding has not been determined at this time.
- Baltimore City asked if parking/garages were under consideration at the proposed stations. In addition, what traffic analysis or traffic impacts getting to/from the station areas (especially with Westport or Port Covington) have been taken into account? Port Covington has future traffic projections that would differ from current traffic.
    - The project team noted that the availability of existing parking, or potential space for creating parking, was a factor in evaluating the station zones feasibility. Intermodal connectivity (including highway mode) is important for riders to shift to SCMAGLEV in order to help ease congestion in the region.
    - The project team met with Baltimore Metropolitan Council (BMC) and is considering future traffic projections in the models and ridership study.
    - Baltimore City noted public outreach and coordination is a big deal, even with a project going underneath properties (Baltimore and Potomac (B&P) Tunnel is a recent example).
    - The SCMAGLEV is a passenger train and not a freight train, so the issues from B&P Tunnel regarding freight do not apply to this project. The project team noted that there have been multiple public meetings already and the project website is updated when new information is available. The next public meeting is anticipated to be the DEIS public hearing.
    - Their biggest concern is the public involvement piece of this study.
- Baltimore City asked about frequency of service, noting that it could also affect other aspects (like parking). The project team noted that the operation plan is to be determined after the ridership study is completed.
- Downtown Baltimore is the City Planners recommendation for the station location since the development and other transit infrastructure is already in place. Downtown is the central business district (CBD) and the Baltimore station should serve the CBD.
- Baltimore City noted that the team might want to look at the Carroll-Camden area as well. This would be closer to existing attractions such as the casino and stadium. Parking associated with the stadium could potentially be a joint development opportunity for a station and parking garages versus the current surface parking.
- Vent facilities and emergency egress were briefly discussed, noting exact locations were still to be determined but they are typically every 3-4 miles.

- The size of the head house/station was briefly discussed and it was noted that exact configuration would be based on the final location, however there would be potential footprint of stations and typical sections presented in the Alternatives Report.
- Baltimore City asked why is now a good time for the SCMAGLEV project. The project team noted the purpose and need document is available on the website and discussed the Maglev Deployment Plan, traffic congestions, and various other factors that are in play. There are no at-grade segments and there is a lot more tunnel compared to the previous iterations as well. The team also noted construction of the SCMAGLEV in Japan by JRC and desire to construct oversees. It was also noted that Japan has offered funding and Congressional funds were allocated to study this project between Washington, D.C. and Baltimore, MD.
- The project team asked if there were any recent developments or economic data available for use in the study. City noted their website with EconView online (http://cityview.baltimorecity.gov/econview/) would be the best source of projects that are on the books.

o **Next Steps/ Adjourn**
- AECOM to provide a hardcopy plot of Sheet 6 to Baltimore City.

SCMAGLEV EIS Team Meeting with M-NCPPC and Prince George's County
Meeting Notes

DATE: March 27, 2018 | 10:00AM – 11:00AM

LOCATION: 14741 Governor Oden Bowie Drive, Upper Marlboro, Maryland 20772

This is a summary of the discussion, not a direct transcript. Please notify the project manager of any changes or corrections needed. Meeting attendees are available upon request.

- **Introductions**

- **Purpose of the Meeting and Project Status**
  - The project team described the purpose of the meeting and discussed the project status.
    - The project is in the early NEPA stage with recent approval from FRA and MDOT regarding the Preliminary Alternatives Screening Report (PASR). The project team is currently meeting with agencies to review the two BW Parkway alignment alternatives that have been retained for detailed study in the Alternatives Report.
  - AECOM gave a brief overview of project history and noted that the *Purpose and Need* document and the *PASR* document are both on the project website.
    - Next will be the Alternatives Report (anticipated late spring 2018) that defines the alternatives to be analyzed in the Draft Environmental Impact Statement (EIS), anticipated in 2019.

- **Alternatives Update / Preliminary Alternatives Retained for Detailed Study**
  - The project team provided an overview of the two preliminary alternatives retained for detailed study using the 600 scale maps.
  - The maps show the October 2017 alignments along the BW Parkway, the project team made notes where updates to the alignments are under consideration for inclusion in the Alternatives Report.

- **Areas of Concern/Discussion Points**
  - The tunnel depth and vent shafts were discussed.
    - The project team noted that the tunnel is anticipated to be typically 80-150 feet deep and there would likely be three vent shafts in the County. Actual number, location, and spacing of the vent shafts will depend on tunnel length and are still to be determined.
  - The anticipated construction method and disturbance during construction was discussed.
    - The project team noted the tunnel would be built using a tunnel boring machine (TBM).
    - The County noted that during the previous Metro construction they were blasting through rocks because it shook entire buildings.

    - The project team noted that with TBM construction there would most likely be little to no perceptible vibration. Vibration studies will be included in the DEIS. Geologic studies are to be done to determine if there is any rock present along the tunnel alignment.
- Potential noise issues were discussed.
    - The project team has been told by Baltimore Washington Rapid Rail (BWRR) that since the SCMAGLEV has no steel wheel on rail like conventional trains there is just the noise of air being displaced by the SCMAGLEV train. Actual noise studies will be included in the DEIS.
- J1 (west side) alignment is very close to some south Laurel residents and the Montpelier Hills community.
    - The project team noted that alignment modifications to refine the October alignments presented in the PASR are currently underway. The J1 alignment is being refined to avoid/minimize any residential impacts.
    - The project team asked if the Montpelier Hills planned development expansion is still active? The County noted that they review open development plans each year and extend the timelines if needed. Based on the current market climate, the County does not expect any new homes – but since the development plan was approved, the new homes could be built in the future.
    - The County also noted that the potential development near the wastewater treatment plant is not active. They also noted development is unlikely due to the odor of the treatment plant.
- The frequency and potential service headways were discussed.
    - The project team noted the exact operation plan is to be determined, but it is anticipated that the SCMAGLEV train will have more frequent service than the Acela.
- The County cannot speak for Parks, so the project team was advised to set up a separate meeting with the Parks and Recreation Department.
- The County asked about the timeline and when the next public meetings were anticipated.
    - The project team noted the coordination plan has a lot of this information, but the Alternatives Report is the next step prior to the DEIS. The next public meeting is anticipated to be the DEIS Public Hearing. Following the required comment period, the DEIS would be revised and/or finalized into the Final EIS followed by the Record of Decision (ROD) - both anticipated in 2019.
    - The project sponsor will be hosting or attending community meetings. In addition, MDOT is also coordinating with the project sponsor regarding individual community meetings as requests are made.
- The Loop project was briefly discussed.
    - The project team noted that the Loop project has not been in direct coordination with the SCMAGLEV project team. Coordination is being handled at the Federal level at this point. The Loop project is a completely separate project and is not affiliated with SCMAGLEV project.

o **Action Items**
- The project team will make sure the Prince George's County and M-NCPPC contacts are included on the invite for the next interagency review meeting.
- The project team to set up a separate meeting with the Parks and Recreation Department.

BALTIMORE-WASHINGTON
SUPERCONDUCTING MAGLEV PROJECT

SCMAGLEV EIS Workshop at National Park Service (NPS)
Meeting Notes

DATE: March 29, 2018 | 12:00-2:00 PM

LOCATION: NPS - National Capital Region, 1100 Ohio Drive SW, Washington, DC

This is a summary of the discussion, not a direct transcript. Please notify the project manager of any changes or corrections needed. Meeting attendees are available upon request.

I. Introductions

II. Project Update

After introductions, Federal Railroad Administration (FRA) leads off and thanks for time acknowledging there have been many meetings already. As noted on the agenda, the Preliminary Alternatives Screening Report (PASR) is on the project website.

a. PASR Published January 31, 2018

Now the project team is focusing on the next step, the Alternatives Report, which is schedule to come out late spring / early summer. As a follow up to the January update meeting, the project team wants to present further details in a workshop style session to get early comments on the two remaining alignments and potential modifications under consideration to become the alternatives defined in the Alternatives Report.

- The Alternatives Report will have agency review meeting after draft is issued, 30 day period, e.g. as noted in the Coordination Plan (also available on the project website http://bwmaglev.info/).
- The Alternatives Report will include more information on the ancillary facilities (Rolling Stock Depot (RSD), substations, etc.).

FRA noted that they needed to leave at 1pm for management meeting at 1:30 on Loop project, but the NEPA team will continue with the meeting and Louis Berger (LB), the engineering firm for the private sponsor Baltimore Washington Rapid Rail (BWRR), is also here to answer questions such as the type raised previously on tunneling, etc.

b. Agency Meetings

Prior to the Alternatives Report, the project team wanted further input from the agencies at this meeting and other agencies in the BW Parkway corridor as well. AECOM quickly reviewed other agency meetings.

III. Alternatives Analysis Working Session

a. Refinements to Alternatives Retained for Detailed Study

In January, the project team agreed to get NPS and USFWS input, not just show the results in the next report. For this working session, the project team will go through each alignment end to end and note the recent changes as compared to the October 2017 alignments. AECOM shows the alternatives, starting with the eastern alignment, and encouraged open discussion and questions as they arise.

Alternative J (BWP EAST)

Both of the remaining alignment would affect NPS, but the eastern alignment also affects USDA/BARC, USSS, Patuxent Research Refuge (PRR), NSA, and Fort Meade. Modifications have been made to optimize the alignment through these constraints.

- It was noted that NPS is clearing out trees approximately 30' from the edge of the parkway over the next two years as required for safety. NPS has not maintained the road as they should have, trees have fallen down adjacent to and in the parkway lanes, affecting lanes.
  - In this space there will be low-level grass and brush, 3-5' high, so Maglev will not be hidden in the woods in some sections as it may have been before.
- Responding to a question regarding the height of the viaduct, the project team noted it would be a minimum 18' over any roadway per FHWA.
- It was noted that minimizing potential PRR impact increases NPS impact.
- USFWS noted that old RT 198 RSD (south of RT 198) impacts new 9.8 acre parcel USFWS is getting (approximately at station 129+90, a rectangle, hope to acquire in the next year).
- Current RT 198 RSD (north of RT 198)
  - The project team is looking at reconfiguration of the typical RSD conceptual layout to avoid major Maryland Environmental Trust (MET) conservation easement (red on map).
  - One option may be to reshape the RSD to a "Y" configuration.
  - The easement avoids existing buildings and established to offset contamination issues on the site.
  - If the RSD were to be here, USFWS would like to know where roads would be relocated
  - There was a question on historic register sites in this area. Are the old abandoned Forest Haven buildings either listed or eligible?
  - The southern tail of the easement that crosses the RSD site is a watershed.
  - Would forests remain? Yes.
- The north transition portal was moved southward to avoid development.
- Meetings with Fort Meade?
  - Yes, there have been meeting with Fort Meade and they like the project. The project team is scheduled to go back to Fort Meade in mid-April to follow up.
- USFWS - can we talk about natural resources? Was there a DNR meeting?
  - AECOM responded yes, there was a DNR meeting, but it did not go into the alignment details yet.
  - NEPA can entertain questions USFWS has, the Alts Report will define the two remaining alternatives and provide an updated desktop analysis, but further details based on field work will be in the DEIS.
  - Alternatives Report will provide opportunity for additional comment.
  - USFWS wants to talk to DNR since they have shared resources.

- NPS noted there was a February meeting that had numbers of impacts (this was the BWRR meeting at USFWS.
    - AECOM noted that the NEPA team has not provided any impact numbers and the ones provided in February were from the project sponsor and not official NEPA values. The Alternatives Report will have updated numbers based on desktop analysis.

Alternative J1 – BWP WEST / PASR Modified Option

Option similar to the PASR alignment but the north transition portal was moved southward to minimize residential impacts.

Alternative J1 – BWP West / Option 4

This alignment option moves the north transition portal southward, but it also moves the southern transition portal northward out of the Greenbelt Forest Preserve. This alignment has also been modified to minimize/avoid residences by shifting to the east, further encroachment on NPS property but not on the BWP roadway.

- NPS reiterated that NPS/BW Parkway property is taking the hits.
- NPS - Where are the tweaks to avoid impacting BW Parkway? Why avoid houses instead of BW Parkway and NPS land?
    - AECOM noted that the PASR Modified option minimizes NPS impacts as compared to Option 4; at this point the project team is trying to get the best alignment given the numerous constraints throughout the corridor for the Alternatives Report.
    - The project team also notes that the Draft Environmental Impact Statement (EIS) will be the document that discusses the Section 4(f) analysis.
- NPS asked if Suburban Airport is still active?
    - No, it is the project team's understanding that the property is for sale.

General Discussion

Length of viaduct (elevated structure)?

- Approximately 10 km +/- (6 miles +/-) on J1
- Approximately 15 km +/- (9 miles +/-) on J

What option is preferable?

- NEPA has no preference
- BWRR prefers east side
    - Longer viaduct (approximately 1/2 the cost of tunneling)
    - The RSD connection is better and doesn't require BWP crossing

Why not tunnel under BW Parkway for access ramp to BARC RSD?

- That would require two more portals, can't get there with grade limitations
- Parkway goes over Powder Mill, but Powder Mill Rd. is partially depressed.
    - Can the connection ramp go at ground level adjacent to the depressed Powder Mill Rd.?

Why not all tunnel?

- Loop project is all underground (previously called Hyperloop)
- Cost analysis
- NPS noted that viaducts are a challenge because of the environment, visual, and land exchange hurdles.

No Action alternative?

- Yes, FRA noted that the two build alternatives to be compared against a No Build.

Ridership study?

- Currently underway, anticipated results near the end of April or early May.

Demonstration project?

- Maglev Deployment Program originally Charlotte to Boston option in Tier 1.
- This project is intended to be revenue generating SCMAGLEV system between Baltimore and Washington, DC.
- The system will be designed so future expansion in not precluded.

Loop Project?

- NPS noted he does not have any additional information, being handled at the top.
- FRA expects EA for Loop in next week and will review it.
- FRA is headed to a meeting to discuss both projects this afternoon.
- Ridership questions.
- BWRR/LB identifying conflict areas, will meet with Boring Company to discuss, or coordinate through agencies
- NPS - 30-40ft loop tunnels, but could be deeper to get under piers, etc.
- FHWA is lead agency

Programmatic EIS underway for Hot Lanes

- expansion of BWP is included, so need to work that into project team thinking

b. Status of B-W Parkway Transfer to State of Maryland

- No update on the potential BW Parkway transfer to the State

c. Other Projects Planned along the Baltimore-Washington Parkway

- MD 198 widening to 4 lanes
  - Could start construction in 3-4 years (SHA)
- MD 175 to start in 1 year
  - widen bridge over BW Parkway and add a bridge to increase capacity for Fort Meade
  - Handled by SHA
- Purple Line at MD 410 crossing underneath the BW Parkway at grade

J ALT that runs down BW Parkway Median:

- NPS would not want the median option due to visual impacts to the parkway, crossing of the roadway, and it would restrict widening of the parkway in the future if NPS no longer controls. Not a tweak to put in the Alternatives Report.
- NPS - probably keep it in as a means of avoidance to PRR (only if the western alternative is dropped since the west side avoids PRR as well).
- NPS/USFWS will provide joint comments

USDA commented on the USDA BARC RSD:

- Current RSD is at bad location due to water impacts
  - stormwater management issues,
    - two existing ponds
    - where to put RSD stormwater management
  - concern of pollutants going to Anacostia River
  - the forest is inclusive of bog, one of very few in Maryland, endangered plants
    - cannot recreate a bog
- Could the RSD be closer to BWP?
- Could the cleared land that looks like a big cross be utilized?
  - airport from 1937
  - possibility of solar project going there first, but would otherwise be an option

- **Next Steps**

  - April 17 – next all-agency call / webinar and schedule update
  - Alternatives Report will include these alternatives
    - engineering at conceptual level - alignments, facilities, LODs, environment impacts
  - USDA to provide a map of the more sensitive areas to avoid

BALTIMORE-WASHINGTON
SUPERCONDUCTING MAGLEV PROJECT

SCMAGLEV EIS Team Meeting with Anne Arundel County
Meeting Notes

DATE: April 02, 2018 | 2:00 PM – 3:00 PM

LOCATION: Heritage Complex - 2664 Riva Road

This is a summary of the discussion, not a direct transcript. Please notify the project manager of any changes or corrections needed. Meeting attendees are available upon request.

- **Introductions**

- **Purpose of the Meeting and Project Status**
  - The project team described the purpose of the meeting and discussed the project status.
    - The project is in the early NEPA stage with recent approval from FRA and MDOT regarding the Preliminary Alternatives Screening Report (PASR). The project team is currently meeting with agencies to review the two BW Parkway alignment alternatives that have been retained for detailed study in the Alternatives Report.
  - AECOM gave a brief overview of project history and noted that the *Purpose and Need* document and the *PASR* document are both on the project website.
    - Next will be the Alternatives Report (anticipated late spring 2018) that defines the alternatives to be analyzed in the Draft Environmental Impact Statement (EIS), anticipated in 2019.

- **Alternatives Update / Preliminary Alternatives Retained for Detailed Study**
  - The project team provided an overview of the two preliminary alternatives retained for detailed study using the online interactive map tool and screenshot handouts of the proposed modifications.
  - The interactive map tool is based on the October 2017 alignments along the BW Parkway, the project team noted where updates to the alignments are under consideration for inclusion in the Alternatives Report.

- **Areas of Concern / Open Discussion**
  - AA Co. noted that there is a proposed roadway alignment NEPA study for widening and shifting MD 198. See AA Co. office of transportation website or SHA link for MD 198.
  - AA Co. noted that there is planned development north of MD 198 in addition to the two planned developments south of MD 198.
    - The project team noted it was reviewing options for the potential rolling stock depot (RSD) site north of MD 198.
  - AA Co. noted that it has received many concerns from Maryland City residents. There are seniors and low income and minority populations in AA Co. that are worried about the west side option (J-1). AA Co. offered to help facilitate dedicated meetings or coordinate communications between the project and the citizens if necessary.

        - The project team noted there are modifications to the west side alignment that would minimize residential impacts. For instance, the transition portal has been shifted out of Maryland City community into the forested area to the south.
        - The County noted that the forested area was part of the Federal Lands to parks program and AA Co. regularly reports back to federal representatives on the status of the parks transferred as a part of the program.
    - AA Co. is also concerned about the ball fields south of Suburban Airport along Brock Bridge Road. The County noted that Brock Bridge Road is a very necessary road for the county and would be interested in how the viaduct/piers would potentially impact the road. There was also funding for two floodgates along the road, this is a high water area. Patuxent Environmental Science Center even does research in this location.
    - AA Co. noted that Suburban Airport is a private airport listed as a civilian air defense airport and suggested the project team coordinate with the airport regarding the viaduct and potential height restrictions.
        - The project team noted the airport property may be for sale and asked if there was a development plan on file. The representatives did not know of any development plans, but suggested the team follow up with the county office on economic development.
    - AA Co. noted that the project team needs to coordinate with Fort Meade as it took the State approximately 5 to7 years to get highway improvements completed. In addition, Fort Meade is also working on their own renovation plans. This may include approximately 40 acres for 20,000 new employees and housing
        - The project team noted on-going coordination with Fort Meade and NSA.
    - AA Co. noted that the noise during construction and operation is a concern. There is a 65 dB restriction in some areas.
        - The project team noted noise will be addressed in the DEIS.
    - AA Co. noted that the interactive map on the project website is a good tool and it should be updated to account for the potential modifications mentioned, and potentially expand the layers to include noise and other factors that are frequent questions and concerns.
        - The project team noted the alignments on the interactive map would be updated when the Alternatives Report is released, which will serve as the definition of alternatives.
    - AA Co. noted that people are very skeptical right now, so educating the public on the facts of the project will be necessary. However, when BWRR goes out to communities they should also give AA Co. a heads up so they know meetings are occurring. The County is fielding many calls regarding confusion over meetings.
        - The project team noted that BWRR, as the project sponsor, does conduct meetings, but they are not official NEPA meetings. The next NEPA meetings will be for the DEIS, which would be anticipated to be held in 2019.
    - AA Co. noted that they are getting comments that DC and Baltimore and other communities are spared by the alignment being underground or eliminated, but why not AA Co. residents.
        - The project team noted that a shift of the northern tunnel portal is under consideration to move it south of Maryland City residents. The west side alignment is undergoing tweaks to avoid or minimize residential displacements, which will be studied in the Alternatives Report.

- **Next Steps/ Adjourn**
    - The project team to follow up with MD 198 improvements.
    - The project team to follow up with the county office on economic development.

BALTIMORE-WASHINGTON
SUPERCONDUCTING MAGLEV PROJECT

SCMAGLEV DC Interagency Review Meeting (IRM)
Meeting Notes

DATE: April 3, 2018 | 10:00 AM – 12:00 PM

LOCATION: DC Department of Transportation (DDOT) - 55 M Street SE – Conf. Room 531

This is a summary of the discussion, not a direct transcript. Please notify the project manager of any changes or corrections needed. Meeting attendees are available upon request.

- **Introductions**

- **Purpose of the Meeting and Project Status**
  - FRA gave a brief introduction, described the purpose of the meeting, and discussed the project status.
    - The project is in the early NEPA stage with recent approval from FRA and MDOT regarding the Preliminary Alternatives Screening Report (PASR). The project team is currently meeting with agencies to review the two BW Parkway alignment alternatives that have been retained for detailed study in the Alternatives Report.
  - AECOM gave a brief overview of project history and noted that the *Purpose and Need* document and the *PASR* document are both on the project website.
    - Next will be the Alternatives Report (anticipated late spring 2018) that defines the alternatives to be analyzed in the Draft Environmental Impact Statement (EIS), anticipated in 2019.

- **Alternatives Update / Preliminary Alternatives Retained for Detailed Study**
  - The project team provided an overview of the two preliminary alternatives retained for detailed study using 600 scale maps.
    - Within the D.C. limits, the alternatives share the same horizontal alignment and both are in tunnel.
    - Two station zones (1/2 mile radius) were also discussed for the DC terminus station - at either Mount Vernon Square or NoMa. A single SCMAGLEV station would occur within one of these two zones.
  - The maps detailed the October 2017 alignments along the BW Parkway, the project team made notes where updates to the alignments are under consideration for inclusion in the Alternatives Report.

- **Areas of Concern / Open Discussion**
  - DDOT asked about any ancillary features (surface impacts) within DC.
    - In addition to the station location, the project team noted that the ancillary facilities (parking, vent shafts/emergency egress locations, Tunnel Boring Machine (TBM) launch sites, and potential power substations) may be located in DC, but these details are still being finalized and will be included in the upcoming Alternatives Report.

    - Additional underground uses may be considered by project proponent, including underground parking for 100 spaces, and underground retail uses adjacent to the station platform. DC Office of Planning (DCOP) noted that these should be added and studied as part of the EIS since there are implications for access/egress from surface streets as well as potential impacts to local street networks and historic preservation concerns that will need to be analyzed.
    - To the extent possible, these ancillary facilities will be located together in the same area to minimize surface impacts.
    - DDOT noted they would like an advanced look at the potential location/site to work with the project team to provide input as the process moves forward, rather than waiting until the Alternatives Report is finished.
    - DCOP encouraged the study of multiple options so that tradeoffs for overall impacts of various options (including a dispersed model vs. a co-located model) can be identified and evaluated.
- DCOP noted that we need to share the ancillary facility locations and concepts early and be transparent to the public.
- MDOT asked if there is anything about the two DC Station Zones (Mount Vernon Square or Noma-Gallaudet) that raise concerns.
    - DDOT and DCOP noted that there might need to be zoning changes for any surface impact and mentioned that the Union Station zoning was very complicated.
    - Otherwise, the project team should review relevant land use plans, which may include Small Area Plans. DCOP will provide.
- Discussion regarding intermodal connectivity occurred. It was mentioned that connections to WMATA and other modes should be discussed in the Alternatives Report.
- The Union Station buildout is not expected to be completed until 2040. If the tentative buildout of SCMAGLEV is prior to 2040, the project team needs to educate the public of the differences between the two projects. The relationship between the Union Station Expansion Project and the SCMAGLEV Project needs to be made clear to the general public, including cross-project impacts (esp. ridership forecasts and combined effects on local infrastructure systems), as well as mitigations.
- A few DC representatives were not able to make the meeting. The DC interagency review meeting (IRM) may need to be repeated.
    - The project team noted there are periodic IRMs with various agencies, but another specific DC IRM will be scheduled.
- DDOT asked if a preferred alternative is going to be selected before the DEIS?
    - The project team noted that identifying a preferred alternative would be the sponsor's choice. As currently planned the Alternatives Report is going to be a detailed definition of the alternatives with a refined desktop level analysis, but the USACE are recommending keeping both build alternatives to compare against the no build alternative in the DEIS.
    - DCOP agreed that retaining more options for analysis, both in terms of alignments and potential station locations within each of the two zones are better so tradeoffs among different sets of overall impacts and mitigations can be identified and evaluated, and so that District agencies and the public can have an opportunity to weigh in.
- FRA asked if parking in DC was a concern.
    - DDOT noted that BWRR had a meeting with them recently where they showed station typical sections that indicated underground parking would be provided as part of the station.
    - Louis Berger noted that exact parking details and stations were still to be determined.

        - DDOT noted that parking is always an issue with any project in DC.
    - DDOT asked when the next official comment period will be held.
        - The project team noted that even though we are not planning any public meetings for the Alternatives Report, comments are always welcome from the public or the stakeholders; and the cooperating agencies will be asked to provide comments, as the Alternatives Report is a concurrence step. The next official public meeting will be for the DEIS public hearing.
    - DDOT noted the construction impacts are another area of concern and would warrant a meeting specifically related to construction details. DDOT asked if the project team met with DC Water.
        - The project team noted BWRR/LB has coordinated with DC Water.
    - FRA noted that another DC IRM should be scheduled in approximately 2 months and to include the other branches of DC government since DPW and other representatives were unable to attend today.
    - Tunnel concerns were discussed, specifically regarding the type of construction: top-down or tunnel boring machine... and the importance of noting where any equipment will drop down into the tunnel.
    - DCRA may have permitting concerns.
    - DOEE mentioned groundwater concerns and depth.
    - Regarding public outreach, the project team may want to consider visiting ANCs (DC's Advisory Neighborhood Councils) approaching the DEIS.
    - Project team should explore if there is any overlap with the DC Water Tunnel.

- **Next Steps / Adjourn**
    - DCOP to share the latest land use plans.
    - The project team/DDOT to coordinate on another DC IRM in approximately 2 months.

BALTIMORE-WASHINGTON
SUPERCONDUCTING MAGLEV PROJECT

SCMAGLEV NEPA Meeting with National Security Agency
Meeting Notes

DATE: April 10, 2018 | 10:30 AM – 11:30 AM

LOCATION: National Cryptologic Museum (8290 Colony Seven Rd, Annapolis Junction, MD)

This is a summary of the discussion, not a direct transcript. Please notify the project manager of any changes or corrections needed. Meeting attendees are available upon request.

- **Introductions**

- **Purpose of the Meeting and Project Status**
  - FRA and AECOM gave a brief introduction, described the purpose of the meeting, and discussed the project status.
    - The project is in the early NEPA stage with recent approval from FRA and MDOT regarding the Preliminary Alternatives Screening Report (PASR). The project team is currently meeting with agencies to review the two BW Parkway alignment alternatives that have been retained for detailed study in the Alternatives Report.
  - AECOM gave a brief overview of project history and noted that the *Purpose and Need* document and the *PASR* document are both on the project website.
    - Next will be the Alternatives Report (anticipated late spring 2018) that defines the alternatives to be analyzed in the Draft Environmental Impact Statement (EIS), anticipated in 2019.

- **Alternatives Update/Preliminary Alternatives Retained for Detailed Study**
  - The project team provided an overview of the two preliminary alternatives retained for detailed study using 600 scale maps.
  - The maps detailed the October 2017 alignments along the BW Parkway, the project team used screenshot handouts where updates to the alignments are under consideration for inclusion in the Alternatives Report.

- **Areas of Concern/Discussion Points**
  - NSA requested 600 scale hardcopy maps with stationing so they could review. NSA noted the facility on Fort Meade is the easiest to discuss because it is an established known location. There are other locations that may be in the corridor that NSA would be concerned about as well.
  - NSA noted that they do not own property, Fort Meade owns the property and NSA has an agreement to use the space.

- Any time infrastructure is planned/built near one of the NSA facilities it is a potential security issue. NSA concerns are the same as previous coordination meeting (5/30/2017), for either a tunnel or viaduct, including:
  - Magnetic signals / interference / EMF
  - Noise and vibration (during both construction and operation)
    - NSA is very vibration-sensitive for both above / underground construction
    - Security of guideway – especially non-revenue hours when the train is not running. NSA does not want people to have a line of site or proximity access to the NSA facilities, as they want to minimize any potential threat to its facilities.
    - Concerned with maintenance and people accessing near/on/above/below their facilities. For example, vent shafts approx. every 5000 m and emergency egress approx. every 2500 m.
  - Direct line of sight from the viaduct would also be a security concern.
    - MEDCO noted that a hood over the viaduct could potentially be a mitigation element for line of sight concern.
- Radio Frequency (RF) is also a concern for NSA. If the train is autonomous then NSA would like to know the frequency range of operation.
    - Check FCC requirements (RF would be 38-40 GHz?)
- NSA would like to see the vertical alignment/profile for each alternative, if this information is not included in the Alternatives Report.
- NSA would not accept a tunnel directly under any facility. In general, NSA would prefer tunnel options, but no tunnel on property they utilize. Being elevated is also a concern.
- Currently, NSA would prefer the west side alignment (J-1) because it has a tunnel across from Fort Meade, but they are still concerned with either option as noted above, but can explore mitigation.
- NSA asked if the No Build option is still on the table.
  - FRA responded that the No Build option will be included in the DEIS along with the two build options – BW Pkwy West and BW Pkwy East.
- NSA asked about the existing Northeast Corridor (NEC) rail system.
  - The NEC is a separate corridor and not involved with the SCMAGLEV project. SCMAGLEV is a new technology and a new exclusive corridor. The SCMAGLEV guideway would not be shared with any other vehicles and would not run at-grade to avoid conflicts.
- NSA concerned about electrical interference? even with generators? shielding from electrical interference?
- Prior to the meeting, NSA submitted some questions to the project team, which were subsequently discussed as follows:

  1. Details of how the rails and train cars are powered? How much power is required to operate this system?

  Power from grid with transformation to AC at SCMAGLEV substations that will be part of the system. Estimated 450 to 500 MW for trains, stations and facilities. There have been coordination meetings with BGE and PEPCO on power requirements.

- NSA asked if the rails/guideway would be powered at all times?
  - Project team to confirm, BWRR website also has some information on the guideway and technology.

SCMAGLEV Train

- 33,000 V motive power
- 35 MW at cruising speed of 311mph
- 70 MW instantaneous peak power during acceleration
- Two trains powered from each substation, one in each direction
- 2 to 6 trains per hour for Baltimore-Washington service
- Up to 9 trains per hour when operating to New York
- Regenerative braking

2. Are the power lines constructed near the tracks?

- Four substations, 160 to 170 MW each.
- Dual and independent feeds to each substation internal to the SCMAGLEV system
- Uninterruptable power requirements
- Consider alternate power source or back-up generation

- NSA requested more information regarding spectrum effects and HERP -- Hazardous Effects of Radiation on Personnel

3. Is there any measured data on electric field emissions from the train cars and tracks?

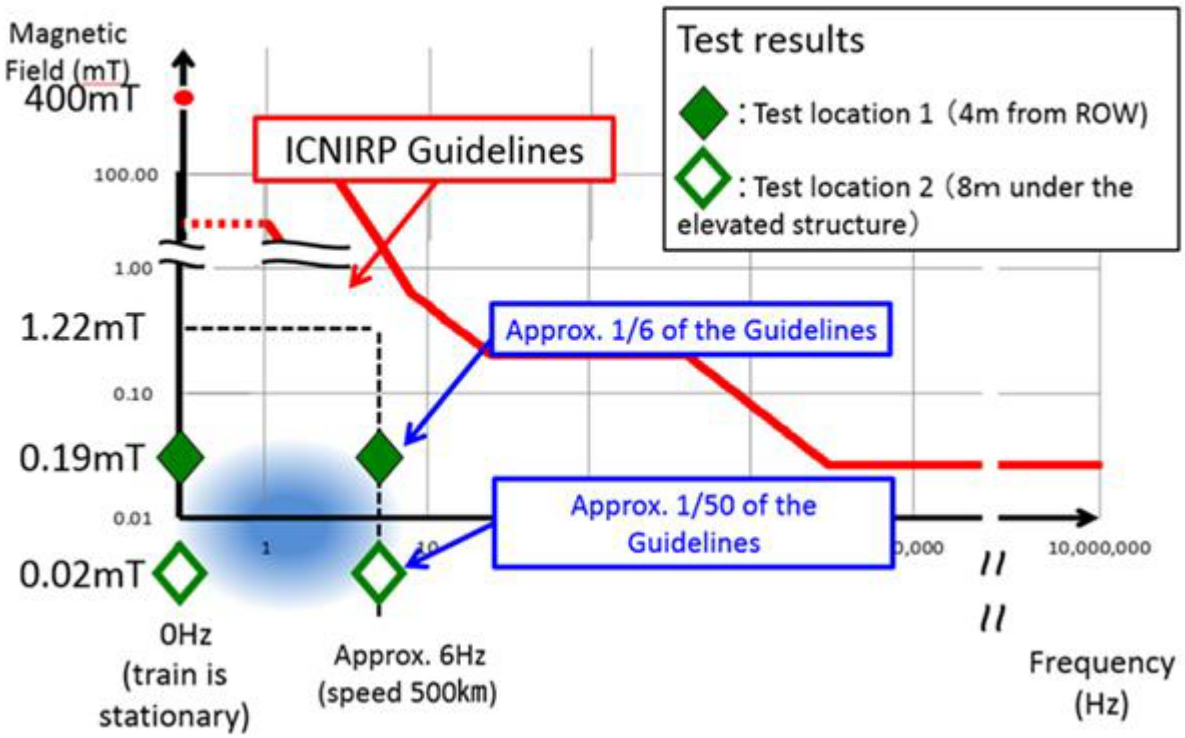
SCMAGLEV MAGNETIC FIELD STRENGTH MEASUREMENTS

	Stationary Train (0 km/h)			Passing Speed (500 km/h)		
	Field Strength (mT)	Frequency (Hz)	ICNIRP Limit (mT)	Field Strength (mT)	Frequency (Hz)	ICNIRP Limit (mT)
Test Location 1: Located 6 meters horizontally from the guideway at the same elevation	0.19	0	400	0.19	6	1.22
Test Location 2: Located 2 meters from the guideway horizontally at ground level (8 meters below the guideway)	0.02	0	400	0.02	6	1.22

An additional test location at ground level 45 meters above the guideway tunnel had a field strength reading of 0.00015 mT, which is well within applicable guidelines.

- Concern regarding EMF and potential effect on personnel reiterated.

MAGNETIC FLUX DENSITY MEASUREMENTS- EXPOSURE OF ADJACENT LAND USES



4. Will there be any RF communication systems used between the trains?

Yes. Communication system details to be provided. Will be compliant with FCC and other relevant requirements.

- Further information needed regarding Wi-Fi on train? and/or use of 2-way radio?" to fully determine the concerns NSA may have.
- Possible nexus regarding National Telecomm and Information Association?

- **Action Items**
  - Project Team to provide hardcopy mapping for NSA review.
  - Project Team to provide KMZ files for NSA review.

SCMAGLEV NEPA Update Meeting for Fort Meade
Meeting Notes

DATE: April 19, 2018 | 1:00 – 2:00 PM

LOCATION: Fort George G. Meade (FGGM)

This is a summary of the discussion, not a direct transcript. Please notify the project manager of any changes or corrections needed. Meeting attendees are available upon request.

- **Introductions**

- **Purpose of the Meeting and Project Status**
  - The project is in the early NEPA stage with recent approval from FRA and MDOT regarding the Preliminary Alternatives Screening Report (PASR). The project team is currently meeting with agencies to review the two BW Parkway alignment alternatives that have been retained for detailed study in the Alternatives Report.
  - AECOM gave a brief overview of project history and noted that the *Purpose and Need* document and the *PASR* document are both on the project website.
    - Next will be the Alternatives Report (anticipated late spring 2018) that defines the alternatives to be analyzed in the Draft Environmental Impact Statement (EIS), anticipated in 2019.

- **Alternatives Update/Preliminary Alternatives Retained for Detailed Study**
  - The project team provided an overview of the two preliminary alternatives retained for detailed study using 600 scale maps.
  - The maps detailed the alignments along the BW Parkway that are under consideration for inclusion in the Alternatives Report.

- **Areas of Concern/Discussion Points**
  - Fort Meade noted that the alignments are in the proximity to the NSA area and asked if the project team could start the discussion with concerns noted by NSA. Fort Meade owns the property and NSA is a tenant with an exclusive use agreement (EUA) to use the area.
  - The project team noted the concerns raised by NSA included:
    - Magnetic signals/interference, possible EMF
    - Noise and vibration (during both construction and operation)
    - Security of guideway – especially non-revenue hours
    - Direct line of sight from the viaduct
    - Radio Frequency (RF) and the frequency range of operation
    - NSA would not accept a tunnel directly under any facility
  - Fort Meade noted that line of sight and the other concerns are shared by FGGM.
  - Fort Meade noted the RF for communications systems would also be high on the concern list. Both spectrum and frequency management systems may be in use on the facility. So RF, EMF, microwave, etc. are all part of the spectrum.

- Fort Meade noted that the Patuxent Research Reserve (PRR) has monitoring wells and potential UXO (unexploded bombs, IEDs) as it was previously part of FGGM.
- Field people must be trained (video/waiver) and accompanied by a certified professional to conduct field studies on portions of FGGM and PRR due to the UXO and IED potential.
- There may be gravesites on FGGM or PRR. PRR may have more information on the locations.
- Fort Meade asked about the vertical alignment/profile – especially for the east alignment that has a transition portal on the property.
    - The project team noted that the elevated viaduct would be coming down and transitioning into the tunnel in the portal area noted by the rectangle on the map where the line style changes from solid to dashed lines. The adjacent rectangle is the cut/cover portion of the portal where the tunnel boring machine would be approximately one tunnel diameter below the surface (so approximately 500 foot deep) and the tunnel would continue to the typical depth of approximately 150 feet below ground the surface. The profile is anticipated to be in the Alternatives Report.
- The project team noted that the No Build option is still on the table.
- A brief discussion regarding FGGM status as a participating versus concurring agency occurred. Fort Meade has concerns of being designated a Cooperating Agency, since a private entity is involved. The project team will send the letter for FGGM to consider.
- The potential water main was in the south, so now that the Amtrak alignment is no longer under consideration the water line is not a factor for the BW Parkway. American Water would be the contractor to double check with.
- State roadway projects should be considered for MD 198, etc.
- During construction the workers would need to be vetted for FGGM, but the higher level of NSA requirements for US citizenship would only apply to areas under the EUA for NSA.
- Fort Meade said that Allan Floyd was replacing Jay Birmingham as the point of contact moving forward. Also, the environmental director position was recently designated as a rotating position and the current point of contact is Jim Ayers.

- **Action Items**
    - Project Team left hardcopy mapping for Fort Meade at the conclusion of the meeting.
    - Fort Meade to provide the FGGM boundary
    - Fort Meade to provide the west campus development map, if allowed
    - Fort Meade to provide information on the superfund sites
    - Fort Meade to see if there is a map indicating the NSA areas under the EUA they are allowed to share with the project team

BALTIMORE-WASHINGTON
SUPERCONDUCTING MAGLEV PROJECT

SCMAGLEV Meeting with MAA
Meeting Notes

DATE: May 2, 2018
1:00 – 2:00 pm

LOCATION: Assembly Room A (991 Corporate Blvd, Linthicum, Maryland 21090)

This is a summary of the discussion, not a direct transcript. Please notify the project manager of any changes or corrections needed. Meeting attendees are available upon request.

Introductions

Purpose of the Meeting and Project Status

- Federal Railroad Administration (FRA) and NEPA consultant AECOM described the purpose of the meeting and discussed the project status (there was no formal presentation).
  - The meeting was to update MAA on the preliminary alternatives screening report (PASR), which FRA and MDOT published on the project website in January 2018 (http://bwmaglev.info/), and to discuss the SCMAGLEV Station location at Baltimore/Washington International Thurgood Marshall Airport (BWI Marshall).

Alternatives Update

- Based on a recent meeting with BWRR, an update on alternatives was not needed
- Three key issues from that meeting became the focus of the discussion:
  - Station location under BWI Marshall
  - Vent plant location to the north
  - Substation and vent plant location to the south
- Regarding the station location, BWI Marshall confirmed that the east option (original concept location) was the preferred option. Project team will not pursue the option to the west any further.
- Regarding the ancillary facility locations on airport property, BWI Marshall staff are still reviewing the ideal locations and will inform the project team as soon as possible.

Other Discussion Points

- Parking is a large revenue source for BWI Marshall, and designating parking specifically for the SCMAGLEV versus the airport may not be needed as customers will decide which lot they will park in based on the price and/or availability of spaces.
- Brief discussion on automated people mover (APM) systems determined that they are not planned for installation, since they do not produce a significant return on investment.

Until more garages are built closer to the airport, shuttle buses will continue to operate in the surface parking lots.

- Discussions regarding construction funding noted the TIGER grants may be possible, since we would be connecting air/rail/auto/bus with SCMAGLEV for true intermodal travel.
    - For SCMAGLEV it was noted that the Japanese government has pledged to finance part of the construction funding and also waive the technology licensing fee. Other sources of funding are to be determined.
- BWI Marshall noted that the technical and environmental pieces need to work before the construction funding can be ironed out.
- It was noted that the station location at BWI Marshall should focus on simple and direct connectivity so patrons and passengers do not get confused. That is why the eastern/original location is preferable.
- MAA is very enthusiastic about the SCMAGLEV project and prefers the station to be near or attached to the terminal.
    - Connected actions – Assumed connected actions and temporary elements to be considered for the site are likely to include stockpiles (tunnel spoils), staging area(s), utilities (relocations and new service), haul routes (if on airport property, replacement parking, and temporary parking.
    - For example, BWI property may work as a location to stockpile some of the tunnel spoils. The current Airport Layout Plan (ALP) and Master Plan do not contain spoil stockpile locations, so they would need to be documented on the SCMAGLEV EIS.
        - Louis Berger noted that the entire volume of spoils may be more than the airport site can handle, so the SCMAGLEV team is also looking for other sites as well.
        - MAA will coordinate on the amount of spoil that BWI Marshall would be able to receive on the airport property.
        - Since the exact location and volume may not be available to analyze in the Alternatives Report, the plan will be to note the airport as a potential spoils location in the narrative of the Alternatives Report and then actually include analysis in the DEIS. Would need FAA coordination as well.
- SCMAGLEV team will coordinate with MAA on the environmental and the technical/other aspects with respect to the airport.
- Discussion on the potential construction method of the underground BWI Marshall SCMAGLEV Station with respect to the tunnel boring machine (TBM) creating the linear mainline tunnel beyond the station cavern included the following:
    - Louis Berger noted that the tunnel experts and geotechnical experts would advise on the exact construction sequence, but for now we assume the TBM would create the tunnel underneath the airport and then the station cavern would be mined.
    - Otherwise, potential top down construction for the station utilizing the area of the existing parking garage could be considered. Then the parking garage could be rebuilt later to add the additional parking capacity for the SCMAGLEV as well as airport customers.
        - BWI noted that a new replacement garage, with connecting pedestrian access, would need to be built before the existing garage could be demolished. But further coordination would be needed as a potential connected action.
- MAA overall concern is what is best for the passengers and not necessarily the construction cost.
- MAA is also concerned about the potential of the vent plants near runways affecting planes attempting to take off or land. The southern proposed vent plant is very close to

the runway and is also in an area planned for other BWI use, so that will need to be relocated. BWI to provide a suggestion for a better location as soon as possible.
- The potential vent plant to the north would take up parking, so one potential solution is to move it further north of the parking lot to the landlocked commercial facility. Again, BWI to confirm/provide a suggestion for a better location as soon as possible.
- MAA/BWI is supportive of SCMAGLEV and hope everything can be worked out with respect to ancillary facilities and a station at BWI Marshall.
- Next meeting should probably include FAA representatives as well. Andrew Brooks is the FAA contact.

Action Items

- Engineering team (Louis Berger) will analyze the eastern/original station location under the airport and drop the value engineering western station option.
- MAA to get back to the project team regarding recommendations for the substation and vent plants on the airport property.
- FRA to reach out to FAA prior to the Alternatives Report.

SCMAGLEV NEPA Meeting with EPA
Meeting Notes

DATE: May 10, 2018 | 10:00 AM – 11:30 AM

LOCATION: Environmental Science Center (701 Mapes Road, Ft Meade, Maryland)

This is a summary of the discussion, not a direct transcript. Please notify the project manager of any changes or corrections needed. Meeting attendees are available upon request.

- **Introductions**

- **Purpose of the Meeting and Project Status**
  - FRA and AECOM gave a brief introduction, described the purpose of the meeting, and discussed the project status.
    - The project is in the early NEPA stage with recent approval from FRA and MDOT regarding the Preliminary Alternatives Screening Report (PASR). The project team is currently meeting with agencies to review the two BW Parkway alignment alternatives that have been retained for detailed study in the Alternatives Report.
  - AECOM gave a brief overview of project history and noted that the *Purpose and Need* document and the *PASR* document are both on the project website.
    - Next will be the Alternatives Report (anticipated summer 2018) that defines the alternatives to be analyzed in the Draft Environmental Impact Statement (EIS), anticipated in 2019.

- **Alternatives Update/Preliminary Alternatives Retained for Detailed Study**
  - The project team provided an overview of the two preliminary alternatives retained for detailed study using 600 scale maps.
  - The maps detailed the October 2017 alignments along the BW Parkway, the project team noted where updates to the alignments are under consideration for inclusion in the Alternatives Report.

- **Areas of Concern/Discussion Points**
  - EPA asked about snow.
    - The project team described the typical viaduct cross section as a “U” shape structure that the maintenance crews could drive on to remove snow if necessary in the off hours. Alternatively, a guideway hood could be considered that would help keep snow off the viaduct.
    - The hood is not a standard component, as the visibility of the train is something people may want to see, but the hood could be considered as an option.
  - EPA asked about noise.
    - The SCMAGLEV would not have steel wheels. It would “float” on a cushion of air approximately 4 inches above the guideway by the super conducting magnetic levitation system. Noise studies will be a part of the

DEIS, but noise is anticipated to be less than any traditional train or steel wheel bullet train. The hood may be considered a noise mitigation option if needed.

- There was a brief discussion regarding tunnel spoils.
  - Preliminary disposal sites for soil from the tunnels are being developed. The MAA has noted that the BWI Marshall airport property may be a possible site for spoils. There is also a site near Baltimore that will be investigated as well. Coordination with MDE regarding their need for stable soil to mix with silty dredge spoils is also a possibility to be investigated as well.
- EPA asked about parks and 4(f) issues.
  - The project team noted that NPS is most affected by the build alternatives as they are adjacent to the BW Parkway. Coordination meetings have also occurred with NPS and other stakeholders. The DEIS will contain the 4(f) documentation.
- Brief discussion regarding vibration occurred.
  - The project team noted that the DEIS will contain more information, but the tunnel boring machines only travel about 30 feet a day, so they move very slow and at the typical depths the vibration may not be perceptible to humans. During operation the SCMAGLEV system floats on a cushion of air, so vibrations during operation are not anticipated.
- Tunnel vent shafts and other surface penetrations were discussed.
  - The project team noted that there would be vent shafts required along the tunnel portions approximately every three to four miles apart. There would need to be emergency egress access points as well (still in coordination with FRA). The surface penetrations are to be collocated as much as possible. For instance, a tunnel boring machine launch pit created during construction would also be a vent shaft during operations.

- EPA asked if the No Build option is still on the table.
  - The No Build option will be included in the DEIS along with the two build options – BW Pkwy West and BW Pkwy East.
- EPA asked about the next public meetings.
  - MDOT responded that the next official public meeting currently planned will be the DEIS public hearing.
- EPA asked about environmental justice communities.
  - The project team will document EJ in the DEIS
  - The EPA noted that Reggie Harris is a n EJ specialist the project team may want to coordinate with as well.
- It was discussed that the Patuxent Research Refuge (PRR) is still managed by the Army due to UXO and the environmental management BRAC coordinator is Steve Cardin.
- As for the wooded area on Fort Meade, it may be a Fort Meade natural resource management area. The project team will check with the Natural Resources Manager as a follow up.

Baltimore-Washington Maglev Project
Meeting Summary

DATE: May 17, 2017

LOCATION: USDA, 10300 Baltimore Ave., Beltsville, MD

ATTENDING: Meeting attendees available upon request

SUBJECT: Maglev Project Coordination

Topic	Conclusions / Action Items
Introduction	BWRR provided an introduction to Baltimore Washington Rapid Rail (BWRR) and the Baltimore-Washington Maglev project. The meeting focused on Maglev infrastructure proposed to be sited on Beltsville Agricultural Research Center (BARC) property, and possible mitigation measures. A copy of the BWRR PowerPoint presentation is available upon request.
Alignments	Two alignment alternatives have been retained as part of the alternatives analysis in the Draft Environmental Impact Statement (DEIS). Both alternatives are at least 75% in deep tunnel, with elevated viaduct portions on the east or west side of the Baltimore-Washington Parkway, depending on the alternative.
Rolling Stock Depot (RSD)	BWRR presented siting options for a rolling stock maintenance facility on BARC property east of the Baltimore-Washington Parkway. The facility would directly impact approximately 100 acres with buildings and storage tracks. The RSD layouts were developed in response to earlier USDA feedback and were offered as working concepts to generate further discussion. USDA identified several long-running research projects on BARC property that needed to be avoided. BWRR acknowledged the need to protect BARC research initiatives and requested USDA support to see if a rolling stock facility layout could be developed that avoided or minimized adverse impacts. USDA agreed to establish a working group to coordinate with BWRR and explore options for an acceptable RSD layout. BWRR noted that there is some flexibility in the arrangement of buildings on the site. Efforts will be made to reduce the impact footprint.

Topic	Conclusions / Action Items
Impacts	USDA asked questions about the Maglev system, and associated impacts. 1. Dimensions of the mainline viaduct structure, with particular concern about the wind shielding it may produce, thus impacting long term research on adjacent lands. BWRR responded that the minimum under-clearance for the viaduct would be 18 feet and that the top to bottom dimension of the viaduct was around 15 feet. 2. Wind generated by a train passing on the viaduct. BWRR will research and respond. 3. Flexibility with regard to the configuration of buildings at the RSD facility. BWRR indicated that is some flexibility subject to operations analysis. 4. Construction methods, equipment and duration. BWRR responded that conventional methods of construction are contemplated, although some methods can be deployed to minimize impacts.
Property Conveyance	BWRR proposes the use of easements for use of federal lands, similar to a utility. USDA noted that there are restrictions imposed by Congress related to the use of BARC property. Right-of-way discussions will be continued separately.
Next Steps	USDA and BWRR agreed on the following actions: 1. USDA will provide a list of questions about the maglev train system. 2. USDA will establish a task force to work with BWRR on alternatives for the RSD layout. 3. BWRR will provide additional details and dimensions for the maglev infrastructure proposed on BARC property, including impacts during construction. 4. BWRR will provide information on wind displaced by a passing train. 5. BWRR will follow up with USDA to initiate easement discussions. 6. __ is the point of contact for USDA, and __ is the technical lead. 7. __ is the point of contact for BWRR, and __ is the technical lead.

SCMAGLEV Meeting with DOI, USFWS and NPS
Meeting Notes

DATE: June 4, 2018 | 10:30 am – 12:00 pm

LOCATION: Patuxent Research Refuge - National Wildlife Visitor Center
10901 Scarlet Tanager Loop, Laurel, MD

This summary is not a direct transcript, but rather a summary of the discussion. Please notify AECOM of any changes or corrections needed. Meeting attendees are available upon request.

Introductions

- AECOM described the purpose of the meeting, which was a follow up to the 3/29/18 alternatives update meeting with USFWS/NPS/USDA. This meeting focused on the data collection and process to access land for field work. Handouts (maps and matrix) were provided to help illustrate the typical filed work anticipated.

DOI/NPS/FWS Input

- How deep is the tunnel under the Anacostia?
  - Project team responded that the typical tunnel depth ranges from 50' to 120' below the surface. The profiles would need to be checked to provide location specific depths.
  - LB noted that the tunnel boring machine requires a minimum of one tunnel diameter of earth above it, so approximately 50' would be the minimum depth under the Anacostia.
- Has the project team coordinated with USACE on a 408 permit
  - Yes, the NEPA Team and BWRR have been in close coordination with the USACE.
- NPS asked if a Phase 1A was performed to confirm shovel test pits were necessary. The project team must get the correct permit/permission to do field work.
  - No, a Phase 1A has not yet been performed.
- There may be a need for a paleontology study as the area may contain fossils.
  - Understood. The NEPA team will coordinate field methodology, location and timing with USFWS and NPS prior to property access.
- How will roads crossings be handled – Springfield Road would be impacted by the BARC RSD and USFWS utilizes that road frequently.
  - The Project team responded that the road would need to be detoured around the RSD site or relocated as appropriate. This level of detail will be completed during the preliminary engineering stage and reported for the DEIS.
- Has the project team coordinated with USDA for the BARC site and with Fort George G Meade, as representatives for those agencies are not present at the meeting.
  - Yes, the project team has met individually and will continue to coordinate.
- Is this field plan discussion going to be continued or reviewed during an IRM or JE meeting as there are other agencies that would benefit and have questions (for example DNR).
  - DNR was present today, but noted other agencies could benefit from a field plan meeting like this.

- USFWS noted that they have extensive knowledge of resources within the study area and would need to make sure to get the right personnel together with the field teams in smaller groups to help transfer the knowledge.
- The table noted no sampling/trapping of species. USFWS noted that several species require sampling/trapping in order to get accurate study information (for example, the yellow lance mussel and audio/mist netting of northern long eared bats).
  - AECOM noted it does not have this level of information yet.
  - USFWS noted that they have done studies regarding various species that are typically present in the corridor and will help determine what species need to be trapped.
- USFWS noted that a survey is needed since much of the land was cultivated in 1946, prior to a survey being completed for Item 5 of the table (Archaeology assessment methodology). USFWS also noted that the survey needs to include potential visual impacts and speed of the train.
- USFWS noted that the project team may need to consult with species experts to ensure the correct sampling is performed.
  - An example is the yellow lance mussel – a permit is needed to handle them and there is only one certified expert in the area for this particular species.
  - Swamp Pink vegetation is also tricky and consultation with a species expert is advised.
- MDOT asked if there were any recent studies/surveys available.
  - USFWS noted that most of the surveys they have simply indicate the presence (either yes/no) for species in the area.
  - USFWS noted that they have bird (FIDS) studies and some insect studies on RTE species. However, to analyze this data takes time.
  - To be considered a FIDS habitat, there needs to be at least 300' of forest away from a hard break in the treeline (edge of clearing).
  - USFWS noted that this also applies to the invasive vegetation that threatens FIDS.
- Spotted turtles may be eligible for RTE consideration.
- USFWS noted that since PRR is a refuge, they are concerned about all wildlife, not just RTE or protected species.
  - AECOM noted that the NEPA document and post-ROD activities would include ongoing coordination.
  - USFWS noted that the specific language used in the permits also dictate the activities.
- Coordination during construction will also be important. On previous projects a total of 90 days was required for the coordination interval timeframe.
- LB asked what definition of FIDS should be used.
  - FIDS is the forest acreage that is at least 300' from hard edge of treeline/forest. So long linear parks do not really have FIDS because of the edges.

MDOT/AECOM Field Work

- Data Collection – Locations
  - A set of five draft maps were provided at the meeting that indicated property boundaries with resources displayed for historic properties, wetlands, Wetlands of Special State Concern, floodplains, parks, PRR boundary, and other federal lands.
  - The project team also provided a draft matrix of Federal/State/Public lands with anticipated data collection needs and potential data collection methods.
- Data Collection – Timeframe
  - The Alternatives Report would include a desktop level evaluation that will help guide the field teams. The report will be distributed to agencies for comment in late July 2018.
  - Actual field work is TBD and pending permits/permission.
  - It was noted that the window on certain flora/fauna studies is now and may close if field work is not completed.

- AECOM noted that most of the fieldwork for NEPA could occur year round (excluding snow events). For example, wetlands and floodplains are not seasonal.
- USFWS noted that for migratory species the timing is important to match the seasonal migration patterns for the different species, some of which are now.

- Other Comments:
  - DNR noted that even if the field work is on DOI properties, if the field teams observe FIDS on adjacent properties they should be included as a note in the assessment, even if no actual delineation / field work is done on the adjacent property.
  - Even if it is out of DNR jurisdiction and they do not have the authority to comment, these are things that should be in the DEIS.
  - USFWS noted that species studies should extend beyond the federal listed and RTE, and they should include state listed and even those species not listed because the PRR is a wildlife refuge for all species.

Agency Process to Access Land

- NPS explained that the scope of fieldwork and the official paperwork for permits would be needed prior to commencing field studies.
  - The scope will be the coordination and agreement of what will be done
  - The permit will be the permission to do the field work
- The project team will flesh out the fieldwork scope.
  - Chris Guy will be the point of contact for USFWS, but will CC Brad K. and Ray Li.
  - Tammy will be the point of contact for NPS.
  - NPS requested the desktop study table with the scope.

Open Discussion / Next Steps

- USFWS noted that there are old/large trees (30" oaks, etc.) that contribute to the habitat. What protections or mitigation for loss of the trees would there be? Tree survey will probably be needed.
- The forest conservation act should apply. In addition, DNR noted that state reforestation could be required, in addition to individual landowner negotiations.
- USFWS and NPS expressed concern about loss of habitat. Reforestation with a bunch of 1" trees is not the true equivalent to the habitat lost by removal of one 30" tree.
- There are various formulas to calculate the ratio. It was noted that USACE standard may be different as well.
- Delineation will be important and species/habitat delineations are important within wetlands and forest.
- USFWS also noted that amphibians and reptiles (frogs and turtles) are also important to the refuge even though they are not on Federal/State lists.
- USFWS stated that the only way a project can go through the PRR is to:
  1) Be compatible with the mission
  2) Establish a ROW/Easement
  3) Transfer property

  - The proposed SCMAGLEV route that overlays the Patuxent Research Refuge (PRR) is not viable because a) there is a refuge system wide policy not to allow any new ROW on refuge land; and b) incompatibility with the refuge's purpose and mission (wildlife research and wildlife conservation). It would require an act of congress to make it happen.
- Even without the legislative restrictions, a land transfer in Maryland is very difficult because many projects are competing for potential lands to restore and difficult because the pool of undeveloped land is small.
  - The land would need to be adjacent or nearby and would need to be land that USFWS wants/needs/compatible.

    - USFWS noted that there are resource economics and habitat equivalency models and formulas that would eventually help guide mitigation or replacement.
    - The ratio may not be 1:1 replacement.
    - Also, mitigation onsite is the first preference before negotiating off site options.
- NPS noted that we must consider least harm option. Also, would negotiation be with each individual property?
    - LB noted that the disposition of property would be a later stage.
    - MDOT. noted that it is a private sponsor, BWRR, so negotiations could get complicated.
    - LB noted that yes; property negotiations would be handled by BWRR eventually.
- NPS asked if 4(f) was considered with respect to an all tunnel option. - Or other engineering options for avoidance?
    - AECOM noted that even with an all tunnel mainline there would still be surface requirements for the ancillary features (vent plants, RSD site, etc.) above ground somewhere. Also, the Section 4(f) evaluation will be in the DEIS, not the Alternatives Report.
- NPS noted there should be a meeting specifically on 4(f) resources.
- DOI noted that the Alternatives Report should discuss least harm even if 4(f) is not fully discussed.
- USFWS asked about the consequence to the accelerated NEPA process if the fieldwork misses some of the windows for species or if USFWS feels something should have been studied further. For some of the seasonal studies that could mean waiting until the next year when the time was right again.
- USFWS noted that an agency does not want to be the one to hold up a project, but would the USACE realistically give a permit if everything is not studied sufficiently in the DEIS?
- MDOT noted that schedule is important not only to the private sponsor, but also for MDOT and the potential next steps, in particular regarding funding sources. The project needs to get through NEPA to be eligible for potential future funding that may be on the horizon.
- DOI expressed concern that the agency comments would only be useful if they can fully understand the viability of an alternative. As it stands now, the one alternative (BWP East or J Alt) has legislative restrictions and would not be able to pass through the PRR and they would not be able to comment on that alternative.
- USFWS noted that the team has been aware of the official position with respect to PRR since early meetings and would never say it is OK to impact the refuge. However, that does not preclude the agencies from providing technical comment at this point.
- AECOM noted that the PASR explained that an alternative can advance into the DEIS even if agency questions still outstanding. The outstanding issue would then need to be addressed in the DEIS.
- DOI and NPS noted that environmentally there would be negotiations and mitigation, but the question about if they are legally allowed to comment on the eastern alternative that is not compatible with the mission is hard to get past.
- USFWS noted that from the earlier discussion about easements or transfer of lands is beyond this room, as it would require an act of congress, but you never know. For example, congress changed the policy in the arctic that actually made it part of the mission to allow drilling in the arctic.
- NPS noted that the agency view remains that the eastern option is not a viable alternative, as it does not appear to be a reasonable path forward. They still see it as a build versus no build scenario due to the PRR restrictions.
- MDOT noted that the Alternatives Report is more of a document to define the two remaining alternatives along the BWP corridor, not necessarily to eliminate one.
- FRA asked about a what if scenario?
- NPS noted that reality versus possibility is always in question.
- LB noted that the CEQ 40 FAQs allow the study to continue in the DEIS, so it is probably a discussion for agency attorneys.
- NPS noted that if the DEIS notes the only way the west is viable is an act of congress then is it actually viable? Even if the east were the least harm option, you would still need congressional action.

- MDOT noted that even though act of congress may be needed, it still could be the least harm option, so is it an Alternatives Report or DEIS issue?
- DOI and NPS noted that it would be DEIS issue, but the Alternatives Report should not ignore the legislative restriction issue.
- NPS questioned the ownership of the system, noting that private versus public ownership could also affect the agency ability to interact with a private owner.
- LB noted that the private company, BWRR, would own the infrastructure and operate the system. A discussion of infrastructure ownership could be included in the Alternatives Report, otherwise it would be in the DEIS.
- MDOT added that even if private ownership by BWRR, the property would need to be treated similar to public utility easements versus a fee simple purchase of land for the infrastructure when dealing with federal or state land.
- USFWS and DOI noted that this might be an issue with multiple agency restrictions but possibly could be something built into the permit or easement language.

Action Items

- Project Team to send updated fieldwork scope/locations/timeframe to both NPS and USFWS.
- Project Team to provide desktop study results.
- Project Team to provide profiles to USFWS
- USFWS to provide forms/paperwork for property access/permit.

BALTIMORE-WASHINGTON
SUPERCONDUCTING MAGLEV PROJECT

SCMAGLEV Meeting with FAA
Meeting Notes

DATE: June 18, 2018 | 10:00 AM – 11:30 AM

LOCATION: FRA Headquarters - W31-124 (1200 New Jersey Avenue SE, Washington, DC)

This is a summary of the discussion, not a direct transcript. Please notify the project manager of any changes or corrections needed. Meeting attendees are available upon request.

Introductions

Purpose of the Meeting and Project Status

- FRA described the purpose of the meeting and discussed the project status (there was no formal presentation):
  - The project is currently in the alternatives development stage with the Alternatives Report being reviewed by FRA. As of now, the agencies will receive the draft Alts report in August.
  - The previous preliminary alternatives screening report (PASR) is available on the project website (http://bwmaglev.info.)

Alternatives Update

- The project currently has two alternatives:
  - The Baltimore-Washington Parkway (BWP) East and the BWP West Alternatives. A map was shared with the meeting attendees.
  - Both alternatives have a station in Washington, D.C., Baltimore-Washington International Thurgood Marshall Airport, and Baltimore City.

MAA Meeting Discussion Points

- The NEPA Team met with MAA on May 2, 2018.
- Items discussed including the following:
  - Parking – If the SCMAGLEV project utilizes top down construction at the existing hourly garage site the project sponsor would constructed a replacement garage first. May not need to distinguish between parking reserved for SCMAGLEV versus Airport spaces as customers will determine which lot they want to pay for.
  - Passenger Circulation / Intermodal Center (Miami example) - The station location at BWI Marshall should focus on simple and direct connectivity so passengers do not get confused. MAA prefers the station to be near or attached to the terminal, MAA is more concerned about what is best for the passengers and not the construction cost.
  - Electromagnetic Field concerns and eager to review technical report.
  - Tunnel spoils
    - Runway placement
    - FAA FONSI

FAA Areas of Concern

- Tunnel Depth and tunnel boring launch point
- Substation locations
- Vent plan specs and locations
- Nature of boring

Open Discussion

- FAA noted that any changes to the airport fall under the airport layout plan (ALP), which is a federal action subject to NEPA.
- Air Traffic Organization (ATO), which covers air traffic control, and other groups would be interested in electromagnetic fields (EMF) and potential interference.
    - Navigational aids, including the inclement weather system (ASIF 2), and other landing aids (localizer, glide slope).
- The EMF and vibration sources are a concern for airports. FAA may need to get experts together to discuss, but it takes time to arrange and resolve.
- Technical Operations group would need to set up an agreement with the sponsor for reimbursement for assessing the impacts of the project.
- FAA asked if the existing system in Japan goes by/under any airports?
    - LB noted that LB/BWRR will check and get back to the group.
- FAA noted that 14 CFR 77 is a source to check regarding the various air surfaces for an obstruction analysis. The Terminal End Route Procedures (TERP) should also be evaluated in the obstruction analysis.
- FAA noted that any surface facilities from the SCMAGLEV system on airport property have the potential to affect airport operations.
    - LB noted that some facilities may be able to be depressed, but underground facilities cost more. BWRR/LB will work with the FAA/MAA regarding height restrictions.
- FAA noted that seismic experts and measuring may be needed.
    - LB noted that any tunnel boring machine (TBM) activity would be monitored. The stations would be top down construction to the extent possible, utilizing the existing hourly garage (so not a direct impact to runways). The garage would be rebuilt as well as a new multimodal transfer facility to connect the terminal and the SCMAGLEV station.
    - FAA noted replacing the existing garage would be a change to the APL and would require MAA to submit form 7460.
- LB noted the ongoing coordination with MAA/BWI regarding the potential power substation and vent plant on the BWI airport property. LB noted that the far end of the parking lot to the north works for both a combined substation and vent plant, which would keep BWRR from purchasing the adjacent property for separate facilities.
    - FRA noted that the team may want to check the air/wind directional flow near the proposed vent plant to make sure the exhaust fumes from the planes would not be fouling the air intake for the vent plant.
    - FAA noted that at first glance the proposed location appears to be outside the approach trapezoid for the runways, but it still may be within the vertical restriction zone, depending on the angle of analysis. Exact location will need to be evaluated further.
- FRA asked if there was any further coordination needed at this level regarding the ALP, as the project is wrapping up the alternatives development stage with the Alternatives Report.
- FAA noted that an obstruction analysis would be needed. In order to run the analysis they would need latitude and longitude for each facility and corresponding height of the

tallest point for each facility. The submittal can be done online. See the developer portal for more details.

- Anything above ground would deal with procedures and operations impacts.
- FAA would need to check if any of the BWI runways have displaced thresholds.
- Since the remaining alternatives are similar under BWI, MAA could start the ALP process now (Tom and Mindy would be contact points).
- FAA currently reviewing EA for 5 year BWI Master Plan. Since the SCMAGLEV is not in the plan, the changes needed should be studied in the SCMAGLEV DEIS and then pulled into the ALP through further coordination.
- FAA wants to make sure changes are covered moving forward. The fastest way is for SCMAGLEV to study to document in the DEIS as compared to a new MAA EA for a separate ALP. An obstruction evaluation is needed.
- It would be a good idea to get another workshop meeting scheduled for the technical groups – possibly early July. A WebEx meeting could be a potential option. Also include MAA.
    - Send any technical memos to FAA prior so they can review and have the right people attend/respond. (Mark Smith, planning and requirements branch, is the contact for technical data).
- LB noted that the final plan for the SCMAGLEV system is to extend to New York, but Baltimore is the current study limit.
- FRA noted EMF continues to come up in coordination meetings with agencies.
- LB noted that when the SCMAGLEV is in tunnel, the data from Japan indicated that the earth blocks the EMF. A technical memo was presented earlier in the year regarding EMF based on system data from Japan, but if FRA/FAA needs further data then LB could request it. However, it takes time to acquire. AECOM and LB will coordinate and get back to FRA as needed.
- FRA noted the following schedule:

Schedule as of 6/9/2018	**Date**
Project Alternative Report	**8/30/2018**
DEIS (Notice of Availability)	2/28/2019
Section 106	9/2/2019
Section 4(f)	2/28/2019
Final Environmental Impact Statement (FEIS)/ROD	12/31/2019
Record of Decision (ROD)	12/31/2019

Next Steps / Action Items

- Schedule the technical group workshop meeting (preferably after FRA releases the Alternatives Report for agency review).

BALTIMORE-WASHINGTON
SUPERCONDUCTING MAGLEV PROJECT

SCMAGLEV Meeting with MDOT MTA
Meeting Notes

DATE: June 21, 2018 | 1:30 PM – 2:30 PM
LOCATION: MDOT MTA (7th Floor - Conf. Rm. 731)

This is a summary of the discussion, not a direct transcript. Please notify the project manager of any changes or corrections needed. Meeting attendees are available upon request.

Introductions

Purpose of the Meeting and Project Status

- The meeting is to update MDOT MTA Engineering and Real Estate on the alternatives, especially the potential SCMAGLEV Passenger Station above the MDOT MTA Cherry Hill Light Rail Platform.
- The project is currently in the alternatives development stage, culminating with the Alternatives Report (currently under review by FRA prior to agency review).
- The previous preliminary alternatives screening report (PASR) was published on the project website in January (http://bwmaglev.info/) for further background.

Alternatives Update

- Alternatives Retained for Detailed Study
  - The Baltimore-Washington Parkway (BWP) East {Alt. J} and the BWP West {Alt. J1}.
  - Both alternatives are similar regarding an intermediate station at Baltimore-Washington International Thurgood Marshall Airport (BWI Marshall) but have two potential terminus station locations for Washington, DC and Baltimore respectively.
- Potential SCMAGEV Station above MDOT MTA Cherry Hill Light Rail
  - The Harbor West Elevated Station above the Cherry Hill LR would provide a direct intermodal connection to the MDOT MTA light rail system.
  - Location provides potential TOD and parking garage options
  - Good access to MD 295 and I-95

Areas of Concern

- Minimum height/clearance requirements
  - Baltimore LR requirements to be confirmed, but currently assume to be:
    - 18 ft. if no vertical restriction (or match existing)
    - 15 ft. preferred vertical clearance from top of rail to bottom of proposed structure
    - 14 ft. - 3 in. minimum vertical clearance from top of rail to bottom of proposed structure if catenary can be attached to bottom of structure.
- Other requirements/restraints
  - Horizontal and vertical clearance needed for catenary system – to be discussed in follow up meeting.

Open Discussion

- MTA-ORE asked about BWP roadway expansion – would SCMAGLEV preclude new lanes?
  - MDOT noted that there is a possibility of new lanes on BWP as part of a future traffic relief plan, but for now NPS is not planning to add additional lanes.
  - The SCMAGLEV system is outside the existing roadway (on either the east or west side of BWP), so it should not preclude roadway expansion, but there are no roadway plans to check against at this time.
- Loop project proposed in the BWP corridor as well, but differences in both horizontal location and different tunnel depths between the two projects are being coordinated to confirm no conflicts.
- Purple Line is crossing BWP on the south side of MD 410 (Riverdale Road / Veterans Parkway).
  - The SCMAGLEV is in deep tunnel under MD 410 and the potential vent plant is on the north side of Veterans Highway, so there does not appear to be a conflict with the Purple Line.
- For the DC elevated Station at NoMa, the SCMAGLEV would need to span the existing RR tracks at the wedge yard and also the WAMATA Metro Red Line tracks. Pier placement or bridge spanning the tracks could be an issue. There is also a conflict with the 9th Street Bridge.
- For the Cherry Hill LR elevated SCMAGLEV Station, the guideway would also need to cross existing CSX tracks as well as the existing MDOT MTA light rail tracks and platform. Again, pier placement may be an issue. Pier placement or structure details will be determined in preliminary engineering, so those details are not available now.
- The construction sequence would be very important with regards to light rail operations. To build the SCMAGLEV infrastructure you would need to power down the catenary, which effectively shuts down the light rail in that segment. Off hour construction may need to be considered to avoid shutting down light rail revenue service.
- There are two warehouse storage properties owned by MDOT MTA in the vicinity (1501 and 1515 Cherry Hill Road).
- MTA-ORE noted that there was a recent flyer circulating for 1700 Cherry Hill Road parcel up for sale. BWRR may want to look at this property for the potential parking garage/ancillary facilities.
- MTA noted that there are a lot of complaints and issues with people walking along the tracks and crossing the existing tracks, creating numerous safety issues. BWRR should be aware of the existing safety issues in the Cherry Hill area.
- MDOT asked about the real estate implications.
  - MTA-ORE noted that the scenario may be similar to the recent Red Line project as far as the real estate aspect. There could be a lot of challenges.
- May also want to do a lessons learned coordination meeting with Purple Line project representatives regarding working with the other transportation suppliers (WMATA, etc.)

Next Steps / Action Items

- MTA-ORE and MTA-Engineering to have a follow up meeting with BWRR/LB/AECOM representatives to discuss relevant project experience and design details further.
- MTE-Engineering to send information on design requirements to project team.

BALTIMORE-WASHINGTON
SUPERCONDUCTING MAGLEV PROJECT

SCMAGLEV Coordination Meeting with District Agencies
Meeting Notes

DATE: June 27, 2018 | 10:30 AM – 12:30 PM

LOCATION: DC Department of Transportation (DDOT) - 55 M Street SE – Conf. Room 541

This is a summary of the discussion, not a direct transcript. Please notify the project manager of any changes or corrections needed. Meeting attendees are available upon request.

Introductions

- In addition to DDOT, representatives were present from the Federal Railroad Administration (FRA), Maryland Department of Transportation (MDOT), MDOT Maryland Transit Administration (MDOT MTA), Maryland Economic Development Corporation (MEDCO), AECOM, Louis Berger (LB), DC Office of Planning (DC OP), and the District of Columbia Historic Preservation Office (DC HPO).

Update on process from SCMAGLEV EIS Lead Agencies (Timeline/Milestones):

- AECOM reviewed the project team composition, the public notification timeline, agency meeting status, cooperating agencies, coordination plan updates, the integrated NEPA/NHPA Section 106 timeline, and the next steps (PowerPoint attached).
- The DC HPO noted a lack of prior meetings within DC, during the previous screening process. DC HPO noted that several meetings were cancelled and never rescheduled by the NEPA Team. It was noted that not all parties of the NEPA Team were aware of DC HPO's meeting requests and cancellations. The NEPA Team will coordinate all meeting efforts moving forward.
- DC HPO was concerned that potential alignments within the District have been eliminated and only one alignment into DC remains. DC HPO also expressed its view that an opportunity for local input has been lost.
    - FRA noted that there was an opportunity for agencies to provide comments on the Preliminary Alternatives Screening Report (PASR), even if the in-person meeting was cancelled. DC HPO should reach out to Brandon Bratcher at FRA directly in the future.
    - AECOM noted that one of the meetings may have been cancelled because the level of engineering detail necessary for the meeting was not available. The PASR was developed based on early conceptual alignments. Even the Alternatives Report is based on conceptual engineering the preliminary engineering will not start until after FRA reviews the Alternatives Report.
    - AECOM noted that there was a NHPA Section 106 Consulting Party meeting held March 14th, 2018 that was an overview meeting. The Consulting Party Meeting #2 is still being scheduled for the July-August 2018 timeframe, but it will provide more detail and the 200' scale drawings are being developed to display the properties and the area of potential effects (APE). A letter will be coming to the DC HPO regarding the APE and the next Consulting Party meeting.
        - DC HPO requested that the next Consulting Party meeting be held in the District.

Update on project description refinements/adjustments from SCMAGLEV EIS Lead Agencies:

- Alignments
  - AECOM and LB briefly reviewed the remaining alignments, noting that the two alternatives are the same in the District with the mainline in deep tunnel. The alternatives are also the same from Baltimore/Washington International Thurgood Marshall Airport (BWI Marshall Airport) to Baltimore, which is also in deep tunnel.
  - The alternatives differ primarily between the Capital Beltway and BWI Marshall Airport, where the mainline is on viaduct running above ground along the Baltimore-Washington Parkway (BWP) corridor on either the east side (Alt. J – BWP East) or the west side (Alt. J1 – BWP West). Portal areas near Greenbelt and Fort George G. Meade are used to transition the guideway from deep tunnel to viaduct sections. AECOM used a handout to present a typical guideway section (attached).
  - There is only one underground option proposed for the intermediate station at BWI Marshall Airport, but there are two options for the terminal stations in Washington, DC and Baltimore City – one elevated and one underground for each.
  - DC HPO asked if the construction is cut and cover. It was explained that tunnel boring machines will be used for tunnel construction.

- Station Zones within the District
  - Mount Vernon Square (Underground)
    - Under New York Avenue - between 12th Street & 4th Street.
    - The handout (attached) for station zone illustration included a zoomed-in drawing of the Mount Vernon Square terminus station option, and a typical section drawing for potential underground SCMAGLEV stations.
    - Potential station construction by top down methods within New York Ave. from 12th Street to 9th Street.
    - Potential surface LOD near 12th street and near 7th street for station access (station entrance to elevators/stairs/escalators).
    - Potential surface impact for garage on existing surface lot near 9th street
      - It was noted that there is planned hotel/development that may preclude SCMAGLEV garage (unless joint development is coordinated).
    - LB noted the station entrances would be designed to fit into the area and could possibly be integrated into buildings (similar to the DDOT building that has Metro entrance at ground level). One potential entrance would be the historic Greyhound Bus Terminal building at 1100 New York Avenue, but joint development with other buildings along New York Avenue could also be possible.
    - It was noted that the entire square ("reservation") is historic – not just the building, but the square itself as the open space is historic and a contributing element within the L'Enfant Plan. Therefore, any changes to the surface or station access to the square will likely be denied by the local historic preservation board (very stringent and likely to deny any above ground presence).
      - DC HPO noted that there are public restrooms built into the hill at in the southwest corner of the square. As such, the southwest side may provide a location for a potential station entrance (Station 99+800) as compared to what is currently shown on the southeast side near 7th street.

- Project team should also coordinate with DDOT regarding the DC Streetcar project.
- DC HPO indicated that the deep tunnel does not worry the agency as much as surface impacts and/or cut/cover sections. These would need to be reviewed in greater detail.
- DC HPO asked if the potential parking is below or above ground at Mt. Vernon Square. LB said it will be above ground and DC HPO noted that the Conrad Hotel is being built on the proposed parking site.

♦ <u>NoMa (Elevated)</u>

- Proposing an elevated SCMAGLEV Station adjacent to New York Ave on north side from North Capital Street to (and over) the existing WMATA Red Line and existing rail tracks.
- Proposing a permanent transition portal between the existing RR tracks and NY Ave with a temporary cut/cover tunnel at the 9th Street Bridge (this would require reconstruction of the existing bridge).
- Approximately 30 ft. of clearance anticipated. Station height anticipated to be 50-60 ft. in air.
- The NoMa station is at the edge of the L'Enfant Plan height restriction zone, which ends at Florida Avenue. The above-ground nature of the station could be an issue as half of the station is in the Plan zone.
- DDOT and DC HPO asked why only elevated option at NoMa? DC HPO noted that NEPA/Section 106 considerations would need to be balanced when evaluating above ground versus below ground design options for NoMa (this does not apply to Mount Vernon Square because of the L'Enfant Plan height restrictions).
- DDOT and DC HPO asked why the Team did not look at Union Station? Or other areas in the District?
  - LB responded that the sponsor has been looking at Mount Vernon Square from a business standpoint. It is in relative proximity to Union Station but not on the Red Line, which WMATA has expressed concerns about overloading the Red Line and Union Station, in early coordination.
  - LB noted that it is the better business decision to go downtown core. Also, New York Avenue was at an angle to facilitate the alignment to the north and being under New York Avenue you don't have to be under any buildings.
  - It was noted that cost is the primary reason for elevated station option at NoMa. Underground could be discussed/considered further.
- DC HPO noted that there may be less historic impacts with the NoMa location, but the height may be an issue for L'Enfant Plan viewsheds.
- It was briefly discussed that the elevated option in DC limits the opportunity for southern expansion of the system in the future. An underground NoMa station may keep southern expansion open.
- DDOT noted there are a lot of land area plans around NoMa to take into consideration as well.

- Ancillary Facilities
  - ♦ Substation and Tunnel Boring Machine (TBM) launch site/Vent Plant located near Montana Avenue is the only ancillary facility in the District.
  - ♦ May need to coordinate with Virginia Railway Express (VRE) (Oscar Gonzales) for this area.

- Parking and retail structures or joint development should be considered as part of the project. DDOT and DC HPO would like to be included in discussions and coordination regarding this issue.
- DC Training facility at MD 198 is actually owned by the District, so even though it is physically located within Maryland, it will need to follow DC environmental rules.

- Construction Staging
  - To be considered in preliminary engineering but may not be fully determined until construction contractors are in place.
  - DDOT expressed that construction staging within DC needs to be planned out in advance, to the extent possible without constraining the future TBD contractor(s) unnecessarily.

Specific issue areas for the District / Group Discussion

- Project description should include underground parking and retail, if such uses are proposed since they could produce significant additional impacts.
- Direct and indirect cumulative impacts:
  - Assumptions for no-build (background development and CLRP).
  - Effects on local transportation networks and underground infrastructure (WMATA tunnels, WASA sewer and water lines and tunnels, Pepco/electrical lines and Washington Gas lines).
  - Effects on local land uses.
- Assumptions and coordination with other major infrastructure projects whose location and/or impacts may overlap (Washington Union Station Expansion Project, Maglev, Hyperloop).
- District-owned properties in MD – jurisdiction, issue areas, and coordination (USACE, MDOT, DPW, HPO, DOEE, etc.).
- List of potential District reviews and permits include the following: DDOT, NHPA Section106, DOEE, NCPC, and CFA for underground, near-surface, and surface work, and for both private and public property.
- Local community engagement in the District (communities seem unaware of EIS; also required for NHPA Section 106. AECOM will need to develop list of Consulting Parties when formal NHPA Sec 106 consultation continues).
- DDOT noted it would be helpful to have a cheat sheet with facts (tunnel depths, boring diameter, etc.) at agency meetings. They also noted that construction staging is the primary concern in the District for projects.
- DDOT noted that the Alternative Report is an important document.

Next Steps / Adjourn

- DC HPO recommended that an informal coordination meeting be scheduled with DDOT and DC HPO, to also include representatives from Commission of Fine Arts (CFA) and National Capital Planning Commission (NCPC) for overview prior to next consulting party meeting. It was recommended that LB has concepts for this meeting.
- Schedule the next NHPA Section 106 Consulting Party meeting in DC.
- Coordinate with WMATA regarding experience with flooding in their tunnels.
- LB to provide additional details on above ground concepts/graphics/renderings.
- DDOT to provide the list of concerns.

BALTIMORE-WASHINGTON
SUPERCONDUCTING MAGLEV PROJECT

SCMAGLEV EIS Team Meeting with Baltimore City Planning
Meeting Notes

DATE: July 9, 2018 | 10:00 am – 11:00 am

LOCATION: 417 E. Fayette Street, 8th Floor, Baltimore MD 21202

This is a summary of the discussion, not a direct transcript. Please notify the project manager of any changes or corrections needed. Meeting attendees are available upon request.

- **Introductions**

- **Purpose of the Meeting and Project Status**
  - This is a follow up to the March 26, 2018 NEPA meeting to present further station information prior to the release of the Alternatives Report.

- **Alternatives Update / Preliminary Alternatives Retained for Detailed Study**
  - The project team provided an overview of the two preliminary alternatives (J and J1) retained for detailed study using 600 scale maps. The maps are full size versions of what will be included in the forthcoming Alternatives Report.
  - The Baltimore terminus station options were the primary focus:
    - Cherry Hill (Elevated)
      - Proposing a permanent transition portal between the existing RR tracks and Patapsco Ave with a temporary cut/cover tunnel south of Patapsco Ave (this would potentially require raising Patapsco Ave).
      - The elev**a**ted SCMAGLEV Station would be constructed above the existing MDOT MTA Cherry Hill Light Rail platform. Vertical circulation would allow multimodal connections to the light rail system.
      - Tail track would extend to the north (adjacent to the Light Rail Westport stop) that would be used for ancillary facilities for the Baltimore-Washington SCMAGLEV Project, but would also serve as a placeholder for potential transition tunnel for future system expansion to the north.
    - Camden Yards (Underground)
      - Tunnel would extend to downtown and connect to an underground station below the existing Convention Center adjacent to Camden Yards.
      - The Downtown/Inner Harbor option is costly because mining would be involved.
  - Of the two Baltimore terminus station options under study, there would be only one ultimately constructed.
  - Although this project has limits between Washington to Baltimore, either option allows for future expansion of the system to the north.
  - The City asked if the future expansion would be underground, to which the project team responded yes.
    - If the Camden Station location is selected, it is an underground station and the tunnel could be extended underground from there.

- If the Cherry Hill Station is selected, a transition portal would be constructed in the area north of the station currently assumed for tail track storage.

- **Areas of Concern / Open Discussion**
  - Baltimore City asked about public involvement at this stage.
    - The project team responded that there are no physical public meetings scheduled for the Alternatives Report but there were three rounds of public meetings previously, the most recent was a robust set of meetings in October 2017.
    - The project team is continually accepting comments from the project website (http://www.bwmaglev.info/) and the Alternatives Report will be posted there as well. In today's electronic world there are other means of communication, such as emails, post cards, social media, and other notifications that can be utilized instead of a conventional public meeting.
    - The City asked for confirmation that there would still be a public meeting at the Draft Environmental Impact Statement (DEIS) stage, to which the project team confirmed there would be a formal public hearing for the DEIS.
  - Baltimore City asked about the elevated status of a few agencies. The project team noted that there were a few agencies that started as participating until the preliminary alternatives screening report (PASR) narrowed down the potential alignments to ones that would potentially impact their respective property and/or resource. As such, they have been elevated to official Cooperating Agency status.
  - Baltimore City noted they are not sure how marketable or who is going to buy tickets if the Baltimore terminus station is not downtown.
    - Baltimore City noted that they do not expect people would want to go to Cherry Hill. The "last mile" or more to get to downtown Baltimore from Cherry Hill would probably take as long or longer than the high speed trip from Washington to Cherry Hill, therefore you lost your speed advantage or time savings over say a MARC trip.
  - Baltimore City also noted that from a transportation planning perspective there is an access challenge from the west side to the existing Cherry Hill Light Rail platform.
    - If Cherry Hill is selected, the City would expect that the project would take the opportunity to rectify the pedestrian access issue from the west side.
  - The City asked if parking garages would be constructed for the SCMAGLEV stations.
    - BWRR noted that the ridership study is being finalized, so exact needs/size of potential parking garages are not ready at this time – but preliminary analysis indicates that daily commuters are not the sole/main ridership expected. Thus there may not need to be massive garages.
  - Baltimore City asked about further details on the Camden Yards Station.
    - BWRR briefly discussed some of the station criteria and noted that BWRR would be happy to come back and do another presentation if needed.
    - The City noted that they don't need a further meeting on criteria, just describe how the Camden Station would exist downtown.
      - The Camden Station would be underground station adjacent to Camden Yards under the Convention Center.
      - The only surface changes to downtown would be for the station entrances/access. The three potential station entrances / surface access points are noted on the maps for the Alternatives Report.
  - Baltimore City noted that the intersections downtown are limited by the water/inner harbor, so the street grid is constrained. The City would be interested in the traffic scenarios/changes that would be expected from the station entrances, parking garages, or other changes associated with the project that would affect traffic. The

City would need to be sure traffic works during and after construction of the system and that it does not make traffic pinch points worse.

- If the ridership is not based primarily on daily commuters, then the downtown infrastructure may work without a massive new garage since there are multiple transportation options to get into and out of downtown and there are multiple existing parking garages as well.
- Baltimore City noted that Cherry Hill is a peninsula and they fear commuters/travelers could be stuck behind CSX freight trains with the existing at-grade crossing with the roadway.
- Baltimore City asked about the power substation. The project team responded that the preliminary location noted on the map could serve either passenger station location. BWRR has been in coordination with BGE and PEPCO, which would supply the power to the SCMAGLEV substation – exact details have not been finalized and it is yet to be determined if the power would be supplied via overhead power lines or underground feeder lines.
    - Baltimore City noted the proposed substation location may be in a floodplain as currently shown on the map.
- Baltimore City asked if the project team has been in coordination with State agencies regarding the joint evaluation process, to which the project team responded yes.
- BWRR noted that the project is trying to avoid any residential displacements.
- MDOT asked if there were any recent developments.
    - The City noted there was a recent renovation at the corner of Waterview Ave. and Cherry Hill Rd. for a methadone clinic that is scheduled to open soon.
    - There have been no transit oriented development (TOD) drivers for the past 15+ years in Cherry Hill, so the market indicates there is no real interest. Thus, the area is behind. It is zoned as high use TOD.
    - The 2007 Middle Branch Master Plan is being updated (Cherry Hill and Waterview Ave. area).
    - The Baltimore Regional Transportation Board (BRTB) bike plan connecting to the Gwynns Falls goes through this area as well.
- There was a brief discussion on potential relocation assistance.
    - The City noted that whenever it acquires property they would provide relocation assistance. However, if a private company buys property in the City then any relocation assistance would have to be negotiated privately.
    - The City would strongly recommend that any potential businesses displaced by BWRR during private negotiations should be encouraged to remain somewhere in the City.
- The City noted possible Convention Center expansion plans are on hold for now, but eventually it would need to be updated/expanded/renovated and/or replaced.
- Current zoning is high use downtown with no height restrictions and no mandated parking requirements for new developments.
- The City noted that an SCMAGLEV terminus right at the convention center (Camden Yards) would be great.
- Baltimore City has a long list (100+) of developments in the City. Refer to EconView, an Economic and Neighborhood Development Projects-Viewer for the City of Baltimore, for the ongoing list – unfortunately there are so many projects it hasn't been updated recently, but is still a good reference to start with.
    - There are a lot of residential developments occurring – either new units or existing building conversion into residential units.
    - Pratt Street is approximately 95% occupied, so the downtown area is booming. Downtown is where the City recommends the project to have a station.

- Even though parking is not a mandated requirement, the City still encourages developers to look at their needs (in this case the ridership) and provide associated parking.
- Would the SCMAGLEV tunnel affect the city infrastructure or the B&P Tunnel?
    - Project team noted that the SCMAGLEV is anticipated to be deeper tunnel as compared to the existing infrastructure which is not anticipated to be as deep. Further study during preliminary engineering to be determined.
- How does the SCMAGLEV project overlap with the potential Loop project? What would be best for the City?
    - The City noted it will let market/other forces decide which would eventually be built (assuming one or the other, but both sound too redundant).
    - The City will need to evaluate each individually to be sure that either system works with the City, but encouraged the project team to make sure there are no conflicts just in case both systems were to move forward.
- Ridership Study – does it go to the granular level to distinguish between the potential Cherry Hill station versus the potential Camden Yards station as the terminus?
    - The ridership study is still being finalized and will be incorporated at the DEIS level as appropriate.
    - The City would be very interested to see the difference/variation between riders wanting to get off in Cherry Hill versus riders wanting to get off directly downtown. They are expecting/anticipating the results will lean towards downtown as that is where people want to be.
- If commuters are not the majority of riders, then who are the riders?
    - BWRR noted the ridership is from diverted trips from autos, tourist trips or other modes not necessarily new commuter trips.
- Did the project team consider a station outside of Washington, DC?
    - People driving from Baltimore are probably not going all the way directly downtown DC. A lot of the people are probably going to NSA, NASA, etc., and possibly even some drivers that go to Greenbelt. So the City would speculate the SCMAGLEV would probably only be getting a diversion of people from MARC who would be going to downtown DC.
- Price will be a big factor. BWRR noted that price is TBD.
- Baltimore City noted that the Baltimore Metro is far behind DC with respect to the Metro system. Maybe the SCMAGLEV will fit into the bigger picture, but would think the Baltimore Metro system needs to expand to make the City truly successful.
- BWRR noted it would like to meet again to go over station options as they finalize more details.
    - The City responded that they heard the comments and concerns today and would only need a future meeting is BWRR plans to come back with some of the answers to questions presented today – especially the ridership between the two potential station options in Baltimore.

- **Next Steps/ Adjourn**
    - City would like to review ridership information as it becomes available.

BALTIMORE-WASHINGTON
SUPERCONDUCTING MAGLEV PROJECT

SCMAGLEV Coordination Meeting with Prince George's County & MNCPPC
Meeting Notes

DATE: July 24, 2018 | 10:00 AM – 11:30 AM

LOCATION: PRA Building – 1st Floor Auditorium, 6600 Kenliworth Ave, Riverdale MD 20737

This is a summary of the discussion, not a direct transcript. Please notify the project manager of any changes or corrections needed. Meeting attendees are available upon request.

Introductions

Purpose of the Meeting

- The purpose of the meeting was to update attendees on the status of the NEPA process and present project information prior to the release of the Alternatives Report.

Project Status and SCMaglev Update

- AECOM provided an overview of the proposed project, who is involved, project study area, remaining alternatives, NEPA process and status, MNCPPC responsibilities of the project and park impacts via a PowerPoint (*attached*).
- Louis Berger (BWRR engineering team) presented the proposed ventilation shaft location(s) germane to the attendees and described the tunnel boring process and potential impacts to MNCPPC parcels (*in PPT attached*). Louis Berger noted that options include the site being a place for the tunnel boring machine to be collected OR the tunnel boring machine may be launched at this site. If launched at this site, it would serve as a location for spoil transport from the tunnel. Therefore, less impact to the site would be to collect the machine at the site.
- Louis Berger also explained the tunnel will be approximately 120 feet deep at this location. The site will have an aesthetically pleasing fence around it and the structure may be one to five stories high. Proposed daily inspections at the site (1 to 2 cars on the site) and once built, the site will be quiet beyond the normal ventilation functions it will perform.

MNCPPC Comments/Concerns/Questions

- Staff asked about the previous Maglev study. The NEPA Team noted that the previous study was a pilot project using German technology. This project utilizes the Japanese technology and is a revenue producing project.
- Staff asked if the construction of this project will preclude parkway widening. The NEPA Team noted that it does not preclude potential widening on the Baltimore Washington parkway and further analysis will be presented in the DEIS.
- Staff noted that the Council recently submitted a letter opposing the acquisition of the parkways given the potential impacts to private property.
- Staff noted the tunneling in DC will need to be at a substantial depth – approximately 120 feet given existing infrastructure.
- Staff explained that real estate issues are raised to the MNCPPC (Montgomery County and Prince George's County Boards), meaning it is a different review than impacts to

property. The NEPA team should also brief Montgomery County as the Board represents both Counties.

- MNCPPC holding an internal meeting to discuss the best path forward with the Commission and points of contact for the Coordination Plan.
- Staff noted that the Purple Line distributed documents using a management system – ease of tracking comments and sharing files. The NEPA Team noted that the DEIS will have a Document Management System in place but until that time, the Alternatives Report will be distributed using email. Comments will be sent to FRA and the NEPA Team.
- Staff noted several MNCPPC parks are missing on the list of parks. It was also noted that several properties used Capper Crampton Funds and Program Open Space funds. The historic properties are also missing from the list.
- Staff asked Louis Berger who will operate and own the system? Unsure at this time.
- Staff asked what the ventilation shaft will look like at this site. Louis Berger noted the structure will be between one to five stories, have a fence around the facility and look nice. It was also noted the tunnel will be 120 feet under the property in question. The facility will also be 100 feet by 100 feet post construction.
- It was noted the proposed location(s) are near residents. It was asked if the facility can be moved to the north – away from the SWM site and residents.
- It was also noted that the residents along the alignment (approximately 10) will push back given the history of the Purple Line.
- It was noted that they recently had a 3.3 magnitude earthquake, so the engineering team must be mindful of the fault line in addition to sea level rise and climate change.
- It was noted that a right of entry is a cleaner process.
- The staff recommended to reach out to Montgomery County to hold a similar update meeting. They noted Jai Cole oversees Stewardship and a good contact.

Next Steps / Adjourn

- MNCPPC internal meeting to discuss best path forward and POC for Coordination Plan.
- NEPA Team to reach out to Montgomery County

Baltimore-Washington Maglev Project
Meeting Summary

DATE: August 21, 2018

LOCATION: USDA, BARC, Beltsville, MD

ATTENDING: Meeting attendees available upon request.

SUBJECT: SCMAGLEV Train Project

Topic	Conclusions / Action Items	Responsible	Date
Background	The meeting was a follow-up to a May 17, 2018 meeting. At the earlier meeting, BWRR presented three alternative layouts for a rolling stock depot on BARC property east of the BW Parkway. BARC provided a sketch of an alternative arrangement that presented fewer impacts to ongoing research. Subsequent to the July meeting, in several email exchanges, BWRR provided an engineered plan of the layout proposed by BARC and responded to questions about the nature of the facility, such as building dimensions. AECOM stated that the Environmental Impact Statement (EIS) Team is evaluating two rolling stock depot location alternatives: BARC and a site north of MD-198 on the east side of the BW Parkway.		
BARC Impacts	USDA stated that a rolling stock depot may have unacceptable impacts on long-term research projects, and that it appeared to be inconsistent with the BARC mission. He noted in particular that evaporation rates on agricultural fields are susceptible to changes in wind patterns that could be introduced by the proposed rail facility buildings and elevated ramps. He noted that prevailing winds are from the west and southwest.		

Topic	Conclusions / Action Items	Responsible	Date
Alternatives Discussion	BWRR/LB suggested modificatitons to the rolling stock depot layout that could reduce impacts including: • Relocate the substation and MOW facility to another site off BARC property to reduce the overall footprint.. • Reduce the height of buildings by depressing a portion of the facilities below ground. • Develop an alternative layout that flanks the east side of the BW Parkway and is shielded by woods to minimize wind impacts. Shifting the layout southward would reduce impacts on research fields, but may require relocating a National Resource Conservation Service (NRCS) facility.		
	USDA stated that there are Superfund sites on BARC property adjacent to the BW Parkway at Powder Mill Road, noting that one is a groundwater plume. They also mentioned a NASA research facility on BARC property near the former airport site that would have to be considered for potential impacts.		
Action Items	BWRR/LB will prepare and submit for USDA's review an alternative rolling stock depot layout on BARC property that minimizes potential impacts as described above.	BWRR/LB	Aug 31, 2018

SCMAGLEV Review Agency Meeting
DRAFT Meeting Notes
September 11, 2018, 10:00 am – 12:00 Noon
DC Historic Preservation Office

This is a summary of the discussion, not a direct transcript. Please notify Project Manager of any changes or corrections needed. Meeting attendees are available upon request.

A meeting was held September 11, 2018 at the DC Historic Preservation Office. Attendees included representatives of Commission on Fine Arts (CFA), National Capital Planning Commission (NCPC), DC Historic Preservation Office (DCHPO), Federal Railroad Administration (FRA), National Park Service (NPS), DC Department of Transportation (DDOT), Maryland Department of Transportation-Maryland Transit Administration (MDOT-MTA), Louis Berger & Associates (LB), and AECOM.

After roll call of attendees, FRA briefly summarized the status of environmental review:

1. A total of 15 alternatives has been reduced to two, both of which roughly follow the Baltimore-Washington (BW) Parkway: BW-West (alternative J1) and BW-East (alternative J). Within the District of Columbia, both are underground, as much as 260 feet in some places, with the exception of one area where a substation/ventilation plant will be located. The route breaks the surface north of the Washington Beltway, but only alternative J1 will cross the BW Parkway. Two station options are proposed for Baltimore: Cherry Hill (elevated) and downtown Baltimore (underground) at Camden Yards. There are two proposed rolling stock depot (RSD) sites: BARC-USDA and at MD 198. Above-ground features include power facilities, station entrances, the proposed Cherry Hill Station, RSDs, and vent plants.
2. FRA has previously sent a link to the draft Alternatives Report. Comments on the draft alternatives report are due from the review agencies by **October 1, 2018**. AECOM will address the comments and finalize the report during the month of October. The Record of Decision (ROD) for the project is expected in the spring of 2020.
3. CFA requested that future presentations include a short description of features of MAGLEV (projected ridership, trains per hour, number of cars, route expansions, etc.).

CFA asked, within the boundaries of Washington, DC, if the Alternatives Report included only the two station locations. The response was that no, the Ivy City Vent Plant is also included in the report.

AECOM Project Manager then provided an overview of the project:

1. The Preliminary Alternatives Screening Report (PASR) determined the two routes being studied now: BW Pkwy East and West. Tunnel depths under the city would reach 260 ft. deep. It would pass under the Anacostia River and not surface until near Beaver Dam Road. The East alternative

(J) will be adjacent or passing through several federal agencies' lands: NASA Goddard, NPS (BW Pkwy), USDA Beltsville Agricultural Research Center (BARC), Secret Service, USFW Patuxent Research Refuge, and National Security Agency (NSA). The West alternative (J1) crosses fewer federal lands but backs up to residential properties. Access to both RSD sites will require an overpass over the BW Parkway. Discussions with NPS resulted in the locating of these overpasses close to existing road overpasses to minimize visual effects.

AECOM and LB then described the most recent Project developments within DC as follows:

1. Station Assessment: The PASR looked at zones for the stations. The Alts Report looked at station sites. For DC, two zones were considered: Mt. Vernon Square (MVS) and NoMa.
2. SCMAGLEV NOMA Station in DC has been removed from further consideration, based on connectivity issues with Metro and other modes of local transportation, difficulty of navigating around and over existing rail lines, visual effects of an elevated station, and the site's possible future use for Department of Labor Building. The project team met with WMATA and was told that the Red Line (the nearest Metro station at NY Ave/Gallaudet) was overloaded. There were also security concerns with the ATF headquarters.
3. Air rights over Amtrak were not considered as the Metro Red Line is overloaded and the turns to the site are too tight (need 800' at slow speeds). An underground station was initially considered as the curves could be eased, but dropped due to the overloading of the Metro Red line.
4. A MVS East (MVS-E) station has been added as an option to the already proposed MVS West station (both are underground). MVS-E station entrances could be located at multiple locations:
   1) New York Avenue between 3rd and 4th Streets to the east;
   2) between 5th/6th and L Street/New York Avenue (MPD police station);
   3) New York Avenue at 6th Street; or
   4) possibly at 7th Street with a passageway through to the Convention Center. Exact station design and details are still under development.
5. Station construction would be "top-down" requiring phased lane closures of New York Ave between 5th and 7th Streets. Due to depth of station, access from the street would be by elevator, although stairs/escalator would be required for emergency egress. Due to its location east of downtown, MVS-E has some problems with connectivity with Metro and local transport; also heavy commuter traffic along New York Avenue will make construction difficult.
6. LB stated that, based on feedback with other agencies received in July, and concerns about potential impacts on Mount Vernon Square, a new concept plan has been developed (to be analyzed and presented in the DEIS).

   Under this concept, the MVS West (MVS-W) underground station has been moved to the southwest, eliminating the proposed station entrance at Mount Vernon Square adjacent to the Central Library. CFA noted that the four reservations surrounding the square (reservations 70, 71, 175, and 176) are considered part of the Square, which is part of the L'Enfant plan. In fact, all the reservations should be considered "off-limits," except for temporary easements during

construction. The east entrance would be at or near the former Greyhound Bus terminal (1100 New York Avenue), with the terminal itself possibly serving as the station. The west entrance would be located at 14th and New York Avenue. Construction would be "top-down," requiring phased lane closures of New York Ave between 9th and 12th Streets. DCHPO/CFA both recommended siting the station within an existing building and suggested ventilation be incorporated into the existing raised New York Avenue median strip.

7. For the MVS-W Station option, there would be two tunnel bores from east to MVS. The route would then open up to four tracks west of MVS, dividing into two tracks in each of two tunnels west of 12th Street. The center two tracks would be accessed via a center platform between 9th and 12th Streets and outer tracks accessed via side platforms west of 12th Street. Two separate tunnels at end of track would be connected by short passenger tunnels. Engineers stated that it was not possible to place four tracks with two platforms together without undermining adjacent building foundations. The MVS-W station has many advantages in connectivity with several Metro stations (MVS/Convention Center, Gallery Place, and McPherson Square), but requires deep tunneling to avoid existing Metro infrastructure.
8. A substation/ventilation plant with some associated employee parking is proposed for a location on Montana Avenue in the Ivy City neighborhood.

DCHPO provided verbal comments on the Section 106 consultation letter. He stated that DC DOE forms are not required; instead a chart or table with basic information, photos, and projected effects should be sufficient. He questioned whether a 150-foot wide APE from above-ground features is sufficient to assess visual effects, particularly around the MVS-E and MVS-W Station. DCHPO recommended that the APE should be extended in places to incorporate the vistas of the NRHP-listed L'Enfant plan (New York Avenue in particular). He also requested that the project PA contain separate sections pertaining specifically to affected historic properties in MD and DC.

CFA asked that, for future meetings, LB develop a summary sheet that would include basic information regarding the proposed project, such as:

- 8 minutes DC-BWI; 3 minute stop at BWI; 15 minutes DC-Baltimore with stop
- DC-Baltimore 12-car trains 500 passengers/train; 3,500 passengers/hour at peak load
- DC-New York 16-car trains 900 passengers/train; 6,300 passengers/hour at peak load

LB representatives noted the MVW West Station would include 5 underground stories between 9th and 12th Street that could be used for commercial, retail, and/or parking. This could be connected to the Convention Center.

FRA stated that comments from agencies on Alts report are due on October 1, 2018.

CFA asked how the Alternatives Report was different the report issued in July. The response was that the Preliminary Alternatives Screening Report (PASR) was issued in January 2018, and provided more information on alternatives still under consideration at that time. The current Alternatives Report refines what was advanced from the PASR, and focuses on the two alternatives ("J" – B-W Parkway East, and "J1" – B-W Parkway West) that are still under consideration.

CFA also asked how FRA envisions structuring the PA. The response was that the PA will be structured as a single document covering DC and MD.

CFA has previously reviewed Plans for the WMATA Metro system as a whole, and would be helpful to review the Maglev system as a whole, as well.

LB also showed a series of slides that illustrated designs of various vent plants. These demonstrated that these structures can take many forms to fit into their surroundings. A representative of BWRR noted that BWRR is in process of hiring real estate specialist to facilitate discussions regarding entrances and vent plant locations.

CFA noted that the National Museum of Women in the Arts is displaying sculpture in median of New York Avenue. This may provide opportunity for Maglev and museum to work together. CFA suggested coordinating with DDOT in planning for trolley system stop.

A question was asked about power needs for the project. LB explained that Tunnel Boring Machines (TBMs) need 14 MW to operate. He also stated that the Maglev system needs an uninterrupted supply to keep superconducting magnets cool. The project plans to use existing power stations, but will supplement with backup generators.

DCHPO noted that some of the sewers in area may date to 1871. She asked how would these be supported during cut-and-cover construction. The response noted that engineers are beginning to study this issue, and that no specific information is yet available. One idea that was presented stated that pipes would probably be hung/supported in place.

The meeting ended at noon.

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Baltimore-Washington Maglev Project
Meeting Summary

DATE: October 16, 2018

LOCATION: Conference Call

ATTENDING: Representatives of FAA, FRA, MAA, MDOT, MTA, MEDCO, AECOM, Louis Berger

SUBJECT: SCMAGLEV Coordination with FAA

Topic	Conclusions / Action Items	Responsible	Date
Introduction	The call was arranged by FRA to discuss FAA comments on the SCMAGLEV system, specifically EMF, radio frequencies, vibrations and the station under BWI airport.		
Alternatives Report	FAA provided concurrence with comments on the Alternatives report. FAA explained that modification to the Airport Layout Plan (ALP) is a federal action. Any impact to navigational aids would also be a federal action that would have to be addressed in the EIS.		
Additional Comments	FAA acknowledged receipt of documentation on the SCMAGLEV project in response to an earlier request.		
	FAA will provide a list of frequencies used at the airport so that the SCMAGLEV team can advise of any potential conflicts related to SCMAGLEV operations.	FAA	Nov 2018
	FAA will provide written questions regarding any further information they may want related electromagnetic forces (EMF).	FAA	As needed

Topic	Conclusions / Action Items	Responsible	Date
	FAA asked for information on vibrations caused by a tunnel boring machine or other construction operations that could affective sensitive airport equipment and towers. LB stated that this information will be provided in the DEIS.	LB	
	FAA asked if there would be a substation along a runway. Louis Berger (LB) responded that a substation is proposed to be co-located with a ventilation plant in the parking lot at the north end of the airport.		
	FAA stated that there may be underground utilities that will be impacted by SCMAGLEV construction. MAA agreed to provide utility information to LB.	MAA	Oct 2018
Next Steps	Future meetings will be scheduled on an ad hoc basis to address FAA needs or concerns.		

DRAFT

Baltimore-Washington Maglev Project
Meeting Summary

SUBJECT: DDOT and DCOP – NoMa Station
DATE: October 22, 2018
LOCATION: DDOT HQ
ATTENDING: Available upon request.

Topic	Conclusions / Action Items
Introduction	The meeting was held to discuss DCOP and DDOT comments on the August 2018 Draft Alternatives Report.
DCOP/DDOT Comments	DCOP/DDOT discussed their comments regarding the elimination of the NoMa underground station alternative as follows: • The data, analyses and justifications presented in the August Draft Report are insufficient to support elimination of the underground NoMa Station option from further consideration in the EIS process. • Additional data and technical justifications should be provided that are based on the horizon year for the EIS rather than or in addition to current on-the-ground conditions. • Studies should be conducted that provide revenue, population, employment, and ridership assumptions, or analysis of consistency with adopted land use and transportation plans, cumulative impacts, and costs as part of the analysis. Such analyses would provide EIS and project stakeholders (including District agencies and residents) with a basis of comparison across two distinct geographies in the city. • NoMA is forecasted to grow significantly and that that growth should be identified in the EIS before ridership and revenue are used to eliminate the NoMa underground station option. • The adopted District plans, which provide guidance on future population and jobs growth as well as land use patterns, should be considered. • Methodologies for the use of MWCOG numbers in the formulation of the justifications should be disclosed. • Improvements should be considered to improve the capacity of the WMATA Red Line, such as power upgrades and platform extensions that could result in increasing capacity. • Other large-scale projects, such as the Union Station Expansion Plan, could significantly affect the project and should be considered.
Discussion	FRA mentioned the constructability factors hindering inclusion of NoMa (especially the above ground option) in the Alternatives Report.

Topic	Conclusions / Action Items
	Louis Berger (LB) presented additional reasons for dismissing the NoMa station, some of which were not mentioned in the Alternatives report: • Poor connectivity to WMATA NoMa-Galludet U Station. • WMATA opposition to a station at NoMa due to Red Line capacity constraints. • Limited ridership potential due to only one metro line connection, whereas a station at Mount Vernon Square potentially connects to all metro lines. • Limited ridership potential due to low-density development that currently exists in the areas surrounding the NoMa station area. • Heavily congested traffic on New York Avenue constraining access to a NoMa station. • The SCMAGLEV project cannot count on unfunded WMATA system investments in the Red Line in assessing ridership and revenue potential. LB concluded that station alternatives must be reasonable alternatives that are practical, feasible and economically sound. There are secondary and cumulative benefits with NoMa, but ridership and transit access are not optimal. NoMa is therefore not a reasonable alternative for BWRR.
	DDOT stated that the reasons for dismissing NoMa need to be comparable to the decisions made for Baltimore stations. LB responded that Cherry Hill and NoMa offer different positives and negatives. For example, Cherry Hill offers far superior vehicular access compared to Inner Harbor, whereas NoMa access is constrained.
	DCOP noted that from a community stakeholder engagement perspective, Mount Vernon Square is one geography (regardless of whether one or two station options are studied within it), and studying the NoMA station option would provide a more distinctly-differentiated option, enabling stakeholders (including local neighborhoods and District Agencies) to better understand the tradeoffs of collective impacts across station options and geographies. LB responded that traffic conditions, construction constraints, and metro connectivity for MVS East and MVS West options are significantly different.
Conclusions and Next Steps	DCOP and DDOT acknowledged the arguments supporting dismissal of NoMa, but stated that they nevertheless wanted to see a NoMa station evaluated in the DEIS. DDOT suggested that NoMa be added to the DEIS, or as a compromise that an additional report be developed for DCOP/DDOT review prior to publishing the Alternatives report (scheduled for October 31, 2018). FRA reinforced the need to keep the Alternatives report and DEIS on schedule, and instead proposed that the Alternatives report include additional detail to reinforce the NoMa station decision.
	FRA will confer with the NEPA team on next steps with regard to the NoMa station.
	BWRR and Louis Berger will continue to coordinate with DDOT and DCOP as the design progresses.

BALTIMORE-WASHINGTON
SUPERCONDUCTING MAGLEV PROJECT

DRAFT SCMAGLEV Workshop at National Park Service (NPS)
Meeting Notes

DATE: October 23, 2018 | 2:00 - 4:00 PM

LOCATION: NPS - National Capital Region, 1100 Ohio Drive SW, Washington, DC

This is a summary of the discussion, not a direct transcript. Please notify the project manager of any changes or corrections needed. Meeting attendees are available upon request.

The workshop meeting highlights include:

- Summarized Section 4(f) requirements and methodology – the Section 4(f) analysis will be part of the DEIS.
- Discussed NPS's role in Section 4(f) as owner/manager of specific properties as well as Section 4(f) reviewer through its Department of the Interior arm
- Reviewed lists of Section 4(f) properties in project corridor, including the several reservation properties in the L'Enfant Plan in Washington, D.C., and the Baltimore-Washington Parkway
- Clarified the intent of Section 4(f) avoidance analysis and the sequential nature of it followed by the least overall harm analysis; the latter examines alternatives that do not avoid Section 4(f) properties
- Discussed the avoidance concepts under examination, including the west and deep tunnel alternatives; key findings:
  - Difficult to avoid all Section 4(f) properties due to the size and location of the properties and the design requirements of the project (3 station mandate, and track geometry (curvature) constraints
  - Tunnel may be only avoidance option, but how can the grant mandate for an above-grade section be satisfied? And would tunneling achieve the Section 4(f) feasible and prudent criteria?
- Walked through existing alternatives J and J1, with a focus on describing the potential refinements to the design to reduce or eliminate impacts: Mount Vernon Station, RSD location, Tunnel boring machine launch sites, and Vent plan locations

NPS input:

- NPS will review list of properties and provide input
- Pleased to see avoidance analysis is underway
- Interested in seeing how the minimization strategies can be incorporated; for example, can above-ground operations be demonstrated by a more northern RSD? Can impacts to Mount Vernon Square be avoided?
- Looking forward to the next workshop discussion

Action items:

- NPS to review lists of Section 4(f) properties to determine completeness with regard to NPS-managed properties
- MTA to schedule next workshop with NPS when client input is received and design has been developed regarding the various refinements under consideration

BALTIMORE-WASHINGTON
SUPERCONDUCTING MAGLEV PROJECT

DRAFT SCMAGLEV Coordination Follow Up with Fort George G Meade (FGGM) Meeting Notes

DATE: October 30, 2018 | 11:00 AM

LOCATION: FGGM Garrison Headquarters, 4551 Llewelyn Ave, Fort Meade MD 20755

This is a summary of the discussion, not a direct transcript. Please notify the project manager of any changes or corrections needed. Meeting attendees are available upon request.

The meeting highlights include:

- Discussed the project overview and status:
  - FRA provided a brief update on the status of the project in the NEPA process was provided. The draft Alternatives Retained for Detailed Study (ARDS) report went to agencies on 8/31/2018 for comment by 10/09/2018. The report focus is on Alternatives J (BW-Parkway East) and J1 (BW-Parkway West). The plan is to publish the document tomorrow.
  - Those in attendance at the Fort did not receive hard copy of the document until today's meeting. They will not have time to review and provide comments prior to finalizing the report.
  - AECOM provided a brief overview of J and J1 alignments through the Fort Meade property, as well as the proposed vent plant, transitions, access road, etc.
  - FRA is expected to recommend a Preferred Alternative in the Draft Environmental Impact Statement (DEIS).
  - LB provided a description of the maglev technology, history of maglev studies and results, and the ultimate plan to provide this system continuing north to New York. International experience would come into play evaluating and planning and constructing a tunnel of this magnitude.
  - Questions regarding tunnel depth, height, stability, and structures were discussed.

Alternatives Retained for Detailed Study:

- Alternative J1 would be in tunnel prior to Fort Meade, but would cross under the BW-Parkway and traverse under Fort Meade on the way to the SCMAGLEV Station at BWI Marshall Airport. There is a vent plan location on Fort Meade property that would be a surface impact for Alternative J1.
- Alternative J would be on viaduct (elevated structure) along the east side on the BW-Parkway above Fort Meade property in the south. The guideway would transition into a portal structure and go into tunnel on the northwestern part of Fort Meade Property on the way to the airport station. The pier locations of the viaduct and the transition tunnel portal structure would be surface impacts to Fort Meade.

Areas of Concern:

- Secrecy and security is the real question and concern, especially when they have a tenant such as NSA. Vent plant and/or tunnel portal on Fort Meade Property is a concern.
- The issue of the vent plant needing to be staffed is another issue. LB indicated there could potentially be up to 10 employees working daily. Especially maintenance workers at night.
- Emergency access at vent plants is a concern. FGGM-DPW-ED asked if there is flexibility with the vent plant, potential to shift forward or backward along the alignment, out of the natural areas on the Fort. This is limited because of engineering constraints, as well as surrounding existing and planned development.

- Noise at the transition areas is questioned. A "hood" type of baffle system can be built around the elevated guideway to lessen the noise. It was also noted that this "hood" can be extended longer, through the Fort Meade property. Same discussions have occurred with NSA, and the significance of line of sight.
- The Fort Meade fence line would need to be moved.

Property Easement:

- Significant discussion focused on the effort to secure an easement through Fort Meade property, which is the preference of the project sponsor. Discussion included timing, Fort Meade requirements, and mitigation.

Property Access for Field Efforts:

- The majority of materials required to enter and work on Fort Meade property have already been completed. Additional coordination may be required with FGGM, should a dig permit be necessary for wetland delineations.
- FGGM-DPW-ED will provide contact information and approval to receive GIS data from the Fort.

Next Steps / Action items:

- FGGM will provide approval this week, for access onto the base.
- Upon approval, FGGM-DPW-ED will review and coordinate with AECOM on already prepared paperwork.
- AECOM will coordinate with FGGM-DPW-ED as necessary for any additional approval on site.
- AECOM will coordinate with FGGM-DPW-ED regarding project study area, description of work, GIS data, and final data results. FGGM-DPW-ED will review all of delineation materials prior to scheduling a pre-application meeting.
- Future meetings will be scheduled with Fort Meade to discuss project updates, status, and questions.