

INDEX

303(d) List 48, 49, 50

A

Adverse effects 28

Air quality 21, 26, 43, 48, 69, 84, 99, 115, 131, 150, 156

carbon monoxide (CO) 21, 48, 69, 84, 99, 115, 131

fine particulate matter 48, 69, 84, 99, 115, 131

ozone 48

Air quality standard 21, 48, 69, 84, 99, 115, 131

Aquatic habitat 17-19, 26, 48, 69-70, 84, 99, 115-116, 131, 150

Archeological resources 27, 33, 152, 156-157

B

Bald eagles 26, 48, 150

Ballard Interbay Northend Manufacturing and Industrial Center (BINMIC) 10, 28, 40-41, 69, 84, 87, 89, 93, 99, 103, 104-105, 109, 141

Battery Street Flyover Detour 23, 141, 143, 144, 146, 147

Battery Street Tunnel 5-6, 8, 17, 20, 21, 23, 36-37, 43, 57, 62, 73-75, 81, 83, 87, 89, 93, 96, 98, 103, 105, 106, 109, 111, 114, 119, 121, 128, 130, 140-141, 143

Bicycles 16, 42, 62, 68, 76, 82, 89-90, 96-97, 105, 112-113, 121, 129, 147-148

BMP Approach 19, 70, 85, 100

Broad Street Detour 22-23, 141, 143, 144, 146, 147, 150

Burlington Northern Santa Fe (BNSF) Railroad 20, 22, 40-41, 145

SIG Rail Yard 22, 40-41, 61, 74, 88, 104, 120, 144-145

C

Colman Dock 42, 62, 75, 88-89, 104, 120, 139, 144, 156

Congested intersections 10-13, 40, 64-65, 78, 91-92, 107-108, 123-124

Construction

costs 7, 143

durations 21-22, 27, 135, 142, 143

noise 24, 25, 146, 148, 156

traffic 22

Contaminated sites 51-52, 70, 85, 100, 117, 132

Convey and Treat Approach 20, 116, 132

Cumulative impacts 27, 155-156

D

Displacements 20, 68, 69, 82, 83, 97, 98, 113, 114, 129, 130, 149

Duwamish industrial area 28, 40-41, 43, 46, 65, 69, 79, 93, 109, 125

Duwamish Waterway 18, 33, 48-50, 70, 85, 99-100, 116, 132

E

Economics 24, 47, 69, 83-84, 98-99, 114-115, 130-131, 147, 148, 149-150

Elliott Bay 17-18, 20, 26-27, 33, 48, 49-50, 59, 70, 85, 99-100, 115, 116, 132, 139, 151

Emergency services 26, 47, 69, 83, 98, 114, 130, 149

Endangered species 48, 69, 84, 99, 115, 131

Energy 156-157

Environmental justice 25, 46-47, 56, 68, 82, 97, 113, 129, 148

Erosion 151

Excavation 27, 100, 116, 132, 139, 151

F

Ferries 42, 62, 75, 88-89, 104, 120, 144, 156

Fire protection 8, 20, 23, 26, 47, 68, 73, 74, 75, 82, 87, 89, 97, 98, 103, 105, 113, 114, 119, 121, 129, 130, 143, 149

Fish 17-19, 26, 48, 69-70, 84, 99, 115, 131, 150

bull trout 48, 69, 84, 99, 115, 131

Chinook salmon 48, 69, 84, 99, 115, 131

Flammable materials 93, 109

Freight 7, 28, 40-41, 59, 65-66, 69, 79, 84, 93, 98-99, 109, 115, 125, 130-131, 144

G

Geology 31-36, (also see Soils)

Groundwater 21, 26, 51-52, 70, 85, 100, 116, 132, 151

H

Hazardous waste 18, 26, 51-52, 70, 85, 100, 117, 132, 139, 151-152

Historic resources 21, 31-36, 43-44, 45, 68-69, 82-83, 97-98, 113-114, 129-130, 148-149

I

Indirect effects 156

L

Lake Union 18, 20, 49-50, 51, 116, 132

Land use 12, 14, 23-24, 46, 67, 81-82, 96, 112, 128, 145, 156

M

Minority populations 25, 46-47, 148

N

National Register of Historic Places 21, 68-69, 83, 97-98, 113-114, 130

Neighborhoods 20, 25, 43-45, 46, 68, 82, 97, 113, 129, 148

No Build Alternative 3, 17, 58-59, 157

Noise 16-17, 24, 45, 67, 81, 95-96, 111-112, 127-128, 146-147

O

Open space 7, 15, 25, 44, 46, 67, 82, 96, 112, 128, 147, 155

P

Parking 12, 22, 43, 62, 66, 80, 83, 94-95, 98, 110, 112, 114, 126, 130, 145

Parks 15-17, 25, 44, 45, 46, 67, 82, 96, 112, 128-129, 146, 147-148

Pedestrians 11, 16, 42, 43, 44, 46, 62-63, 68, 76, 82, 90, 94, 96-97, 105-106, 110, 112-113, 121-122, 126, 129, 147-148

Police 47, 69, 83, 98, 114, 130

Project boundaries 3, 31

Project purpose 2, 3, 56

Public services 25-26, 47, 69, 83, 98, 114, 130, 149

Puget Sound 18, 49-51, 70, 85, 100, 116, 132

R

Recreation 15, 25, 46, 67-68, 82, 96, 112, 128-129, 147-148

Relocations 20, 68, 82, 97, 113, 129, 145

utilities 25, 149

Roadway deficiencies 43

Runoff 18, 20, 26, 49-51, 70, 85, 99-100, 116, 132, 151

S

Safety 11, 43, 57, 66, 75, 80, 83, 89, 94, 98, 105, 109-110, 114, 121, 126, 130, 140

Seattle Aquarium 16, 25, 45, 147-148

Seattle Center 145

Secondary impacts: See Indirect effects

Social resources 20, 25, 46-47, 68, 82, 97, 113, 129, 148

Soil 1, 26-27, 31-36, 50-52, 57, 70, 85, 100, 116-117, 132, 139, 151-152

Soil improvement 26-27, 61, 70, 73, 85, 87, 100, 103, 116, 119, 132, 137-140, 151-152

Stormwater 18-20, 26-27, 49-51, 70, 85, 99-100, 116, 131, 132, 151

T

tail track 220, 22, 41, 61-62, 74-75, 83, 88, 104, 120, 144

Threatened species 48

Traffic

speed 1, 8-9, 28, 40, 59, 64, 77-78, 91, 106-107, 122-123

volume 10-11, 15, 30, 38-40, 63, 65, 76, 78-79, 90, 92-93, 106, 108-109

Transit 2, 22, 28, 41, 58-59, 66, 79, 93, 109, 125, 144-145, 155

Travel time 8, 10, 27-28, 39, 59, 63, 65-66, 76-77, 79, 90, 93, 106-107, 109, 112, 122-123, 125, 144

Tribes 33

U

Utilities 25-26, 47, 59, 147, 149, 156

V

Vegetation 48, 69, 84, 99, 115, 131

Vibration 24, 45-46, 67, 81, 111, 127, 147, 148

Views 7, 12, 14-15, 23-24, 27, 43-45, 67, 81, 95, 96-97, 110-111, 126-127, 128-129, 143, 145-146, 147, 195

W

Water quality 18-20, 26-27, 49-51, 70, 85, 99-100, 116, 132, 139, 151

Wildlife 17-19, 26, 48, 69-70, 84, 99, 115, 131, 150

Subject	Chapter 1 Introduction	Chapter 2 Summary	Chapter 3 Affected Environment	Chapter 4 Developing Alternatives	Chapter 5 Rebuild	Chapter 6 Aerial	Chapter 7 Tunnel	Chapter 8 Bypass Tunnel	Chapter 9 Surface	Chapter 10 Construction	Chapter 11 Other Issues
Purpose and Need	2	3									
Unavoidable Adverse Effects		28									
Areas of Controversy		27									
Issues to be Resolved		28									
Logical Termini			31								
Scoping and Public Involvement				54-56							
Alternatives Development				54-58							
Alternatives Not Considered in Detail				56-58							
No Build Alternative		6		58-59							
Alternatives Description		3-7		58	61	73	87	103	119		
Cumulative and Indirect Effects											155-156
Irreversible Decisions & Irretrievable Resources											156-157
Short-Term Resource Uses & Long-Term Gains of Project											157
Affected Environment, Impacts, and Mitigation (in alphabetical order)											
Air Quality		21, 26	48		69	84	99	115	131		
Archaeological & Cultural Resources		27	33							152	
Economics		24	47		69	83-84	98-99	114-115	130-131	149-150	
Energy											156-157
Environmental Justice		20, 25	46-47	56	68	82	97	113	129	148	
Fish and Wildlife		17-19, 26	48		69-70	84	99	115	131	150	
Geology and Soils		26-27	31-36		70	85	100	116	132	151-152	
Groundwater		21, 26-27	51-52		70	85	100	116	132	151	
Hazardous Materials		18, 26	51-52		70	85	100	117	132	151-152	
Historic Resources		21	31-36, 43-44		68-69	82-83	97-98	113-114	129-130	148-149	
Land Use		12, 14, 23-24	46		67	81-82	96	112	128	145	
Noise		16-17, 24	45		67	81	95-96	111-112	127-128	146-147	
Parks and Recreation		15-16, 25	46		67-68	82	96-97	112-113	128-129	147-148	
Public Services and Utilities		25-26	47		69	83	98	114	130	149	
Relocations		20			68	82	97	113	129	145	
Social Resources (neighborhoods)		20, 25	46-47		68	82	97	113	129	148	
Transportation		8-13, 21-23	38-43		61-66	74-80	88-94	103-110	119-126	141-145	
Access		7, 22-23	38-39		61-62	74-76	88-90	103-106	119-122	141-142	
Ferries			42		62	75	88-89	104	120	144	
Bicycles		15, 25	42		62	76	89-90	105	121	147-148	
Pedestrians		15, 25	42-43		62-63	76	90	105-106	121-122	147-148	
Freight			40-41		65-66	79	93	109	125		
Transit		22, 28	41		66	79	93	109	125	144-145	
Safety		11	36-38, 43		66	80	94	109-110	126		
Parking		12, 22	43		66	80	94	110	126	145	
Vibration		24	45-46		67	81	95-96	111-112	127-128	147	
Visual Quality		7, 12, 14-15, 23-24	43-44		67	81	95	110-111	126-127	143, 145-146	
Water Quality and Sediments		18-20, 26-27	49-51		70	85	99-100	116	132	151	